STATE OF COLORADO

DIVISION OF RECLAMATION, MINING AND SAFETY
Department of Natural Resources

1313 Sherman St., Room 215
Denver, Colorado 80203
Phone: (303) 866-3567
FAX: (303) 832-8106

COLORADO DIVISION OF RECLAMATION MINING & SAFETY

CONSTRUCTION MATERIAL
REGULAR (112) OPERATION
RECLAMATION PERMIT APPLICATION PACKAGE

APPLICABILITY:

This application package is for a construction materials operation which affects 10 acres or more.
If you plan to conduct a construction materials extraction operation which meets these criteria, please follow the instructions provided in this package, in the Rules and Regulations, and in the Colorado Land Reclamation Act for the Extraction of Construction Materials, as required.

RECOMMENDATIONS PRIOR TO FILING:

The Construction Material Rules and Regulations (the Colorado Land Reclamation Act for the Extraction of Construction Materials, Section 34-32.5-101, et seq., C.R.S., and 2 CCR 407-1) and the Colorado Mined Land Reclamation Board (the "Board") regulate the permitting, operational and reclamation requirements for all construction material extraction operations in Colorado. It is your obligation to comply with the Act and Regulations. You are encouraged to obtain and review a copy of the Rules, available for $8.00 from the Division of Reclamation, Mining, and Safety (the "Office"). In order to submit your application properly, it is recommended that you review the Act and:

Rule 1.1	Definitions;
Rule 1.4.1	Application Review and Consideration Process;
Rule 1.4.5	Specific Requirements for Regular 112 Operations;
Rule 1.6	Public Notice Procedures;
Rule 3.1	Reclamation Performance Standards;
Rule 3.3.1	Operating without a Permit - Penalty;
Rule 4	Performance Warranties and Financial Warranties;
Rule 6	Permit Application Exhibit Requirements;
Rule 6.2	General Requirements of Exhibits;
Rule 6.4	Specific Permit Application Exhibit Requirements; and
Rule 6.5	Geotechnical Stability Exhibit.

It is recommended that you contact the agencies listed in the application section titled "Compliance With Other Laws" prior to submitting the application to the Office .

FILING REQUIREMENTS:

In order to apply for a Reclamation Permit for a Regular 112 Operation, please provide:

____ ° One (1) signed and notarized completed **ORIGINAL** and one (1) copy of the completed original Regular 112 Operation Application Form. **ORIGINAL SIGNATURES MUST BE DONE IN BLUE INK.**

____ ° Two (2) copies of Exhibits A-S (required sections described in Rule 6).

____ ° Two (2) copies of Addendum 1 - Notice requirements (described in Rule 1.6.2(1)(b)). A sample of this notice is attached for your use.

____ ° The Geotechnical Stability Exhibit when required by the Division.

____ ° The application fee.

The ninety (90) day period for review of the application and exhibits will **NOT** begin until all required information and fee are submitted. The Office will then review the submitted information for adequacy.

NOTICE REQUIREMENTS:

____ 1. You MUST send a notice, on a form approved by the Board, to the local board of county commissioners. A copy of this "Notice of Filing Application" form is attached for your use.

____ 2. If the mining operation is within the boundaries of a conservation district, send a notice to the board of supervisors of the conservation district, PRIOR to filing the application. A copy of this "Notice of Filing Application" form is attached for your use.

____ 3. You MUST include proof of notice #1 and #2 above with the application at the time the application is submitted to the Office for filing (Rule 1.6.2(1)(g)).

____ 4. PRIOR to filing the application, place for public review a copy of the application, less confidential items, with the clerk or recorder of the county or counties in which the affected land is located.

____ 5. You MUST include an affidavit or receipt demonstrating that the application was filed with the county clerk or recorder at the time the application is submitted to the Office for filing.

____ 6. Any changes or additions made to an application submittal MUST be filed with the county clerk or recorder. You MUST also provide the Office with an affidavit or receipt demonstrating that the change was filed with the county clerk or recorder no later than the close of business on the day the change was filed with the Office (Rule 1.8.1(2)).

____ 7. Within ten (10) days after your application is considered filed, you must publish four times in a newspaper of general circulation, in the locality of the proposed mining operation, the notice described in Rule 1.6.2(1)(d).

____ 8. In addition, after the first publication you must mail or personally serve a copy of the notice described in Rule 1.6.2(1)(d) to all owners of record of surface rights to the affected land and all owners of record of lands that are within 200 feet of the boundary of the affected land (Rule 1.6.2(1)(e)). A copy of a form which includes all required information for the notice is attached for your use.

____ 9. Prior to the Office making a decision (consideration of the application), you MUST submit a copy of the proof of publication from the newspaper and proof of all required notices. Proof of the notices may be by submitting copies of return receipts of a certified mailing or by proof of personal service (Rules 1.4.1(4), 1.4.2(4)(c), 1.6.2(1)(a)(ii), and 1.6.2(1)(g)).

The copy of the application and any changes or additons placed at the office of the county clerk or recorder shall NOT be recorded, but shall be retained there for at least sixty (60) days after a decision on the application by the Office and be available for inspection during this period. At the end of this period, the application may be reclaimed by the applicant or destroyed (Rule 1.6.2(2)).

APPLICATION REVIEW PROCEDURES:

The Office shall approve or deny the application within ninety (90) days of filing unless the date for consideration by the Office is extended pursuant to Rule 1.8. The time for consideration shall not be extended beyond ninety (90) days after the last such change submitted. For complex applications, the review period may be extended an additional sixty (60) days. Please see Rule 1.1(10) for the definition of what constitutes a complex application.

APPLICATION APPROVAL/DENIAL:

If the requirements of the Act and Mineral Rules have been satisfied, the Office will approve the application. The Act also provides for automatic approval if no action is taken by the Office by the end of the review period.

If the Act and Regulation requirements have not been satisfied, the Office will deny the application. If the Office denies the application, you may appeal to the Board for a final determination by submitting a written request for administrative appeal to the Board within 60 days of the decision date (Rule 1.4.7).

PERFORMANCE AND FINANCIAL WARRANTIES:

A performance warranty, and a financial warranty dollar amount determined during the application review process, must be submitted and approved by the Office PRIOR to permit issuance. A financial warranty should NOT be submitted until a decision on the application has been made. If the applicant is a unit of state or county government, then ONLY a performance warranty is required.

Several different types of financial warranties are allowed by the law. Please review Rule 4.0 to determine which type of financial warranty you desire to use. You may obtain the appropriate warranty forms from the Office during the application review period.

Please note that an application approval DOES NOT convey a right to begin operations. You MUST submit, and have approval of your performance and financial warranties, and receive your copy of the signed permit document PRIOR to beginning on-site mining activity.

AUTOMATIC PERMIT APPROVAL:

An automatic approval will occur where the Office fails to notify the applicant/operator that the application has been denied. This decision must be made ninety (90) calendar days from the date the application was determined to have been filed. However, the performance and financial warranties must be submitted and approved by the Office before the permit will be issued even if you receive an automatic approval. NO MINING OPERATIONS SHALL BEGIN UNTIL A PERMIT IS ISSUED (Section 34-32.5-109(1), C.R.S.).

COMPLIANCE WITH OTHER LAWS:

Compliance with the Act and Rules and Regulations of the Mined Land Reclamation Board DOES NOT relieve you of your responsibility to comply with all other applicable state and federal laws. We recommend that you contact the following agencies to determine whether you need to comply with their legal requirements:

- The Colorado State Historical Preservation Office regarding properties of historical significance including the need for an archeological survey, procedures for requesting a file search, and inventory forms to identify structures.
- Colorado Division of Water Resources with regard to water rights;
- Colorado Department of Health, Water Quality Control Division, with regard to the discharge of pollutants into the State waters;
- Colorado Department of Health, Air Pollution Control Division, with regard to the need for a fugitive dust permit;
- U.S. Bureau of Land Management or the U.S. Forest Service if the proposed operation will occur on federal lands;
- U. S. Army Corps of Engineers regarding a dredge and fill (404) permit; and
- The County Planning Department for the county or counties in which your proposed operation is located. Section 34-32.5-109(3), C.R.S, requires a mining operator to be responsible for assuring that the mining operation and the post-mining land use comply with local land use regulations and any master plan for extraction adopted pursuant to Section 34-1-304, C.R.S.

COMPLETION OF MINING:

Upon completion of any phase of reclamation, you should consult Rule 3.1 for reclamation standards and 4.16 for details on how to request a reclamation responsibility release from the Board.

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CONSTRUCTION MATERIALS
REGULAR (112) OPERATION
RECLAMATION PERMIT APPLICATION FORM

CHECK ONE: ☑ **There is a File Number Already Assigned to this Operation**

Permit # M - 1979 191 (Please reference the file number currently assigned to this operation)

☐ **New** Application (Rule 1.4.5) ☑ **Amendment** Application (Rule 1.10)

☐ **Conversion** Application (Rule 1.11)

Permit # M - 1979 - 191 - ____ (provide for **Amendments** and **Conversions** of existing permits)

The application for a Construction Materials Regular 112 Operation Reclamation Permit contains three major parts: (1) the application form; (2) Exhibits A-S, Addendum 1, any sections of Exhibit 6.5 (Geotechnical Stability Exhibit; and (3) the application fee. When you submit your application, be sure to include one (1) complete signed and notarized **ORIGINAL** and one (1) copy of the completed application form, two (2) copies of Exhibits A-S, Addendum 1, appropriate sections of 6.5 (Geotechnical Stability Exhibit, and a check for the application fee described under Section (4) below. Exhibits should **NOT** be bound or in a 3-ring binder; maps should be folded to 8 1/2" X 11" or 8 1/2" X 14" size. To expedite processing, please provide the information in the format and order described in this form.

GENERAL OPERATION INFORMATION

Type or print clearly, in the space provided, ALL information requested below.

1. **Applicant/operator or company name (name to be used on permit)**: Martin Marietta Materials, Inc
   - 1.1 Type of organization (corporation, partnership, etc.): Corporation

2. **Operation name (pit, mine or site name)**: Three Bells Mine

3. **Permitted acreage (new or existing site)**: 312.2 permitted acres
   - 3.1 Change in acreage (+): 8 acres
   - 3.2 Total acreage in Permit area: 320.2 acres

4. **Fees**:
   - 4.1 New Application: ~~$2,696.00~~ application fee
   - 4.2 New Quarry Application: ~~$3,342.00~~ quarry application
   - 4.4 Amendment Fee: $2,229.00 amendment fee
   - 4.5 Conversion to 112 operation (set by statute): ~~$2,696.00~~ conversion fee

5. **Primary commoditie(s) to be mined**: Sand Gravel Aggregate
   - 5.1 Incidental commoditie(s) to be mined: 1. - lbs/Tons/yr 2. / lbs/Tons/yr
     3. / lbs/Tons/yr 4. / lbs/Tons/yr 5. / lbs/Tons/yr
   - 5.2 Anticipated end use of primary commoditie(s) to be mined: Construction Materials
   - 5.3 Anticipated end use of incidental commoditie(s) to be mined: ____

6. **Name of owner of subsurface rights of affected land**: River Bluffs Ventures, LLC
   If 2 or more owners, "refer to Exhibit O".

7. **Name of owner of surface of affected land**: River Bluffs Ventures, LLC

8. **Type of mining operation**: ☑ Surface ☐ Underground

9. **Location Information**: The center of the area where the majority of mining will occur:

   COUNTY: Larimer

   PRINCIPAL MERIDIAN (check one): ☑ 6th (Colorado) ☐ 10th (New Mexico) ☐ Ute

   SECTION (write number): S 12

   TOWNSHIP (write number and check direction): T 6 ☑ North ☐ South

   RANGE (write number and check direction): R 68 ☐ East ☑ West

   QUARTER SECTION (check one): ☐ NE ☐ NW ☐ SE ☑ SW

   QUARTER/QUARTER SECTION (check one): ☐ NE ☐ NW ☐ SE ☑ SW

   GENERAL DESCRIPTION: (the number of miles and direction from the nearest town and the approximate elevation):
   One half mile north and three miles west of Windsor, CO, Elevation 4,800 FAMSL

10. **Primary Mine Entrance Location** (report in either Latitude/Longitude **OR** UTM):

    Latitude/Longitude:

    Example: (N) 39° 44′ 12.98″
    (W) 104° 59′ 3.87″

    Latitude (N): deg 40 min 29 sec 11.52 (2 decimal places)

    Longitude (W): deg 104 min 57 sec 31.11 (2 decimal places)

    OR

    Example: (N) 39.73691°
    (W) -104.98449°

    Latitude (N) _____._____ (5 decimal places)

    Longitude(W) _____._____ (5 decimal places)

    OR

    Universal Tranverse Mercator (UTM)

    Example: 201336.3 E NAD27 Zone 13
    4398351.2 N

    UTM Datum (specify NAD27, NAD83 or WGS 84) Nad 83 Zone 13

    Easting _____

    Northing _____

11. **Correspondence Information**:

APPLICANT/OPERATOR (name, address, and phone of name to be used on permit)

Contact's Name: **Ms. Julie Mikulas** Title: Land Manager

Company Name: Martin Marietta Materials, Inc

Street/P.O. Box: 1800 N. Taft Hill Rd. P.O. Box:

City: Fort Collins

State: Colorado Zip Code: 80521

Telephone Number: (970) - 227-4041

Fax Number: (970) - 407-3900

PERMITTING CONTACT (if different from applicant/operator above)

Contact's Name: Jeremy Deuto Title: Project Manager

Company Name: GEI Consultants, Inc.

Street/P.O. Box: 2625 Redwing Dr., Suite 370 P.O. Box:

City: Fort Collins

State: Colorado Zip Code: 80526

Telephone Number: (970) - 224-7343

Fax Number: ( ) -

INSPECTION CONTACT

Contact's Name: Jeremy Deuto Title: Project Manager

Company Name: GEI Consultants, Inc.

Street/P.O. Box: 2625 Redwing Dr., Suite 370 P.O. Box:

City: Fort Collins,

State: Colorado Zip Code: 80526

Telephone Number: (970) - 224-7373

Fax Number: ( ) -

CC: STATE OR FEDERAL LANDOWNER (if any)

Agency:

Street:

City:

State: Zip Code:

Telephone Number: ( ) -

CC: STATE OR FEDERAL LANDOWNER (if any)

Agency:

Street:

City:

State: Zip Code:

Telephone Number: ( ) -

12. **Primary future (Post-mining) land use (check one)**:

☐ Cropland(CR)	☐ Pastureland(PL)	☐ General Agriculture(GA)
☐ Rangeland(RL)	☐ Forestry(FR)	☐ Wildlife Habitat(WL)
☐ Residential(RS)	☐ Recreation(RC)	☐ Industrial/Commercial(IC)
☑ Developed Water Resources(WR)		☐ Solid Waste Disposal(WD)

13. **Primary present land use (check one)**:

☐ Cropland(CR)	☑ Pastureland(PL)	☐ General Agriculture(GA)
☐ Rangeland(RL)	☐ Forestry(FR)	☐ Wildlife Habitat(WL)
☐ Residential(RS)	☐ Recreation(RC)	☐ Industrial/Commercial(IC)
☐ Developed Water Resources(WR)		

14. **Method of Mining**: Briefly explain mining method (e.g. truck/shovel): Truck/shovel, front-end loader, haul trucks

15. **On Site Processing**: ☑ Crushing/Screening

13.1 Briefly explain mining method (e.g. truck/shovel): Truck/shovel, screening equipment

List any designated chemicals or acid-producing materials to be used or stored within permit area: None

16. **Description of Amendment or Conversion**:

If you are amending or converting an existing operation, provide a brief narrative describing the proposed change(s).

Change of permit boundary, change of reclamation plan to Developed Water Resources (WR)

Maps and Exhibits:

Two (2) complete, unbound application packages must be submitted. One complete application package consists of a signed application form and the set of maps and exhibits referenced below as Exhibits A-S, Addendum 1, and the Geotechnical Stability Exhibit. Each exhibit within the application must be presented as a separate section. Begin each exhibit on a new page. Pages should be numbered consecutively for ease of reference. If separate documents are used as appendices, please reference these by name in the exhibit.

With each of the two (2) signed application forms, you must submit a corresponding set of the maps and exhibits as described in the following references to Rule 6.4, 6.5, and 1.6.2(1)(b):

EXHIBIT A	Legal Description
EXHIBIT B	Index Map
EXHIBIT C	Pre-Mining and Mining Plan Map(s) of Affected Lands
EXHIBIT D	Mining Plan
EXHIBIT E	Reclamation Plan
EXHIBIT F	Reclamation Plan Map
EXHIBIT G	Water Information
EXHIBIT H	Wildlife Information
EXHIBIT I	Soils Information
EXHIBIT J	Vegetation Information
EXHIBIT K	Climate Information
EXHIBIT L	Reclamation Costs
EXHIBIT M	Other Permits and Licenses
EXHIBIT N	Source of Legal Right-To-Enter
EXHIBIT O	Owners of Record of Affected Land (Surface Area) and Owners of Substance to be Mined
EXHIBIT P	Municipalities Within Two Miles
EXHIBIT Q	Proof of Mailing of Notices to County Commissioners and Conservation District
EXHIBIT R	Proof of Filing with County Clerk or Recorder
EXHIBIT S	Permanent Man-Made Structures
Rule 1.6.2(1)(b)	ADDENDUM 1 - Notice Requirements (sample enclosed)
Rule 6.5	Geotechnical Stability Exhibit (any required sections)

The instructions for preparing Exhibits A-S, Addendum 1, and Geotechnical Stability Exhibit are specified under Rule 6.4 and 6.5 and Rule 1.6.2(1)(b) of the Rules and Regulations. If you have any questions on preparing the Exhibits or content of the information required, or would like to schedule a pre-application meeting you may contact the Office at 303-866-3567.

Responsibilities as a Permittee:

Upon application approval and permit issuance, this application becomes a legally binding document. Therefore, there are a number of important requirements which you, as a permittee, should fully understand. These requirements are listed below. Please read and initial each requirement, in the space provided, to acknowledge that you understand your obligations. If you do not understand these obligations then please contact this Office for a full explanation.

_____ 1. Your obligation to reclaim the site is not limited to the amount of the financial warranty. You assume legal liability for all reasonable expenses which the Board or the Office may incur to reclaim the affected lands associated with your mining operation in the event your permit is revoked and financial warranty is forfeited;

_____ 2. The Board may suspend or revoke this permit, or assess a civil penalty, upon a finding that the permittee violated the terms or conditions of this permit, the Act, the Mineral Rules and Regulations, or that information contained in the application or your permit misrepresent important material facts;

_____ 3. If your mining and reclamation operations affect areas beyond the boundaries of an approved permit boundary, substantial civil penalties, to you as permittee can result;

_____ 4. Any modification to the approved mining and reclamation plan from those described in your approved application requires you to submit a permit modification and obtain approval from the Board or Office;

_____ 5. It is your responsibility to notify the Office of any changes in your address or phone number;

_____ 6. Upon permit issuance and prior to beginning on-site mining activity, you must post a sign at the entrance of the mine site, which shall be clearly visible from the access road, with the following information (Rule 3.1.12):

a. the name of the operator;

b. a statement that a reclamation permit for the operation has been issued by the Colorado Mined Land Reclamation Board; and,

c. the permit number.

_____ 7. The boundaries of the permit boundary area must be marked by monuments or other markers that are clearly visible and adequate to delineate such boundaries prior to site disturbance.

_____ 8. It is a provision of this permit that the operations will be conducted in accordance with the terms and conditions listed in your application, as well as with the provisions of the Act and the Construction Material Rules and Regulations in effect at the time the permit is issued.

_____ 9. Annually, on the anniversary date of permit issuance, you must submit an annual fee as specified by Statute, and an annual report which includes a map describing the acreage affected and the acreage reclaimed to date (if there are changes from the previous year), any monitoring required by the Reclamation Plan to be submitted annually on the anniversary date of the permit approval. Annual fees are for the previous year a permit is held. For example, a permit with the anniversary date of July 1, 1995, the annual fee is for the period of July 1, 1994 through June 30, 1995. Failure to submit your annual fee and report by the permit anniversary date may result in a civil penalty, revocation of your permit, and forfeiture of your financial warranty. It is your responsibility, as the permittee, to continue to pay your annual fee to the Office until the Board releases you from your total reclamation responsibility.

_____ 10. <u>For joint venture/partnership operators</u>: the signing representative is authorized to sign this document and a power of attorney (provided by the partner(s)) authorizing the signature of the representative is attached to this application.

NOTE TO COMMENTORS/OBJECTORS:

It is likely there will be additions, changes, and deletions to this document prior to final decision by the Office. Therefore, if you have any comments or concerns you must contact the applicant or the Office prior to the decision date so that you will know what changes may have been made to the application document.

The Office is not allowed to consider comments, unless they are written, and received prior to the end of the public comment period. You should contact the applicant for the final date of the public comment period.

If you have questions about the Mined Land Reclamation Board and Office's review and decision or appeals process, you may contact the Office at (303) 866-3567.

Certification:

As an authorized representative of the applicant, I hereby certify that the operation described has met the minimum requirements of the following terms and conditions:

1. To the best of my knowledge, all significant, valuable and permanent man-made structure(s) in existence at the time this application is filed, and located within 200 feet of the proposed affected area have been identified in this application (Section 34-32.5-115(4)(e), C.R.S.).

2. No mining operation will be located on lands where such operations are prohibited by law (Section 34-32.5-115(4)(f), C.R.S.;

3. As the applicant/operator, I do not have any extraction/exploration operations in the State of Colorado currently in violation of the provisions of the Colorado Land Reclamation Act for the Extraction of Construction Materials (Section 34-32.5-120, C.R.S.) as determined through a Board finding.

4. I understand that statements in the application are being made under penalty of perjury and that false statements made herein are punishable as a Class 1 misdemeanor pursuant to Section 18-8-503, C.R.S.

This form has been approved by the Mined Land Reclamation Board pursuant to section 34-32.5-112,C.R.S., of the Colorado Land Reclamation Act for the Extraction of Construction Materials. Any alteration or modification of this form shall result in voiding any permit issued on the altered or modified form and subject the operator to cease and desist orders and civil penalties for operating without a permit pursuant to section 34-32.5-123, C.R.S.

Signed and dated this _____ day of _____, _____.

_____ If Corporation Attest (Seal)
Applicant/Operator or Company Name

Signed: _____ Signed: _____
Corporate Secretary or Equivalent

Title: _____ Town/City/County Clerk

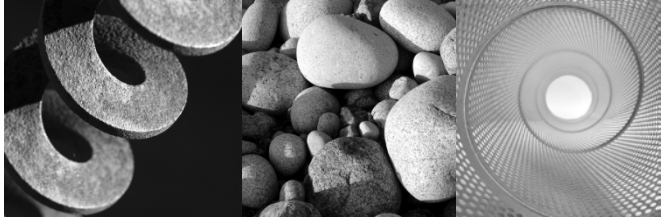
State of _____)
) ss.
County of _____)

The foregoing instrument was acknowledged before me this _____ day of _____,
____, by _____ as _____ of _____

_____
Notary Public

My Commission expires: _____

SIGNATURES MUST BE IN BLUE INK



GEI Consultants

Geotechnical
Environmental
Water Resources
Ecological

Three Bells Mine Reclamation Permit Amendment Application

Permit M-1979-191

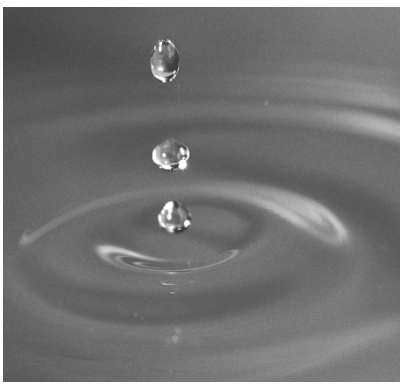
Construction Material Regular (112) Operation Reclamation Permit

Colorado Division of Reclamation, Mining, and Safety

Submitted to:
Eric Scott
Colorado Division of Reclamation, Mining, and Safety
1313 Sherman St., Room 215
Denver, CO 80203

Submitted by:
GEI Consultants, Inc.
6401 DTC Blvd., Suite 900
Denver, CO 80237

January 30, 2015
Project 140521-0



Jeremy Deuto, PG, EIT
Project Manager, Engineering Geologist

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1. Exhibit A – Legal Description

1.1 Location

The Three Bells Mine is owned by River Bluffs Ventures, LLC and operated by Martin Marietta, Inc. (MM). The mine property is located approximately one half mile north and three miles west of Windsor, Colorado, in Larimer County. The Affected Land is located in Township 6 North, Range 68 West of the 6th Principle Meridian, in Sections 11, 12, and 13, to wit:

- The southeast quarter of Section 11;
- The southwest quarter of the southwest quarter of Section 12;
- The east half of the northwest quarter of Section 13;
- The west half of the northeast quarter of Section 13

The Affected Land is subdivided into two properties: the Ditullio Property and the Veldman Property, as shown in **Figure B**. The Affected Land covers an area of approximately 320.2 acres.

A primary goal of the M-1979-191 112 Permit Amendment is to establish an up to date Permit Boundary for the Three Bells Mine. Below are the metes and bounds description of the Permit Boundary established for the Three Bells Mine. The descriptions, are presented by property, Ditullio and Veldman, that when combined together represent the Revised Permit Boundary.

The Affected Land described herein encompasses the entire Three Bells Mine, and thus should be the revised permit boundary.

1.1.1 *Ditullio*

1.1.1.1 Parcel II

That portion of the Southeast Quarter of Section 11, and a portion of the Southwest Quarter of Section 12, both being in Township 6 North, Range 68 West of the 6th P.M., Larimer County, Colorado being more particularly described as follows: Considering the East line of the Southeast Quarter of said Section 11, as bearing South 00°46'18" East and with all bearings contained herein relative thereto; BEGINNING at the East One Quarter Corner of said Section 11; thence along the East-West Centerline of said Section 12, South 88°31'55" East 30.59 feet; thence South 00°46'18" East 720.88 feet; thence North 90°00'00" West 30.56 feet to the East line of the Southeast Quarter of said Section 11; thence along said East line South 00°46'18" East 296.52 feet; thence South 44°10'10" East 1166.02 feet; thence South 35°01'46" East 853.53 feet; thence South 02°44'09" East 110.94 feet to the South line of the

Southwest Quarter of Section 12; thence along said South line North 89°12'19" West 1285.89 feet to the Southwest Corner of said Section 12; thence along the South line of the Southeast Quarter of said Section 11, South 88°27'06" West 2670.75 feet to the South One Quarter Corner of said Section 11; thence along the North-South Center- line of said Section 11, North 00°29'59" East 2652.71 feet to the Center Section Corner of said Section 11; thence along the East-West Centerline of said Section 11, North 88°33'13" East 2611.82 feet to the East One Quarter Corner of said Section 11, and the POINT OF BEGINNING. Except that portion conveyed to John D. Graves and Brenda K. Graves in deed recorded December 9, 1993 at Reception No. 93093437.

1.1.1.2 Triangular parcel along the northeast mine boundary on Parcel II

Although no meets and bounds description has been developed for this small parcel, it has been included within the revised permit boundary. Said parcel contains 1.0 acres, more or less.

1.1.1.3 Parcel III

That portion of the West One Half of the Northwest Quarter of Section 13 and the East One Half of the Northeast Quarter of Section 14, both in Township 6 North, Range 68 West of the 6th Principal Meridian, County of Larimer, State of Colorado being more particularly described as follows: The East One Half of the Northeast Quarter of said Section 14, and that portion of the West One Half of the Northwest Quarter of said Section 13, being more particularly described as follows: Considering the East-West centerline of said Section 13 as bearing South 89°48'25" West and with all bearings contained herein relative thereto; Beginning at the East One Quarter Corner of said Section 13; thence along said East-West centerline South 89°48'25" West 4021.57 feet to the TRUE POINT OF BEGINNING; thence continuing along said center- line South 89°48'25" West 1220.20 feet to the West line of the Northwest Quarter of said Section 13; thence along said West line North 00°17'21" East 2797.96 feet to the North line of said Northwest Quarter; thence along said North line South 89°12'19" East 1285.89 feet; thence South 02°44'09" East 135.83 feet; thence South 01°52' 09" West 2641.07 feet to the East-West centerline of said Section 13 and the TRUE POINT OF BEGINNING.

1.1.2 *Veldman*

1.1.2.1 Tract 1

The metes and bounds for tract 1 have not been established since a partial land release in November of 2014. The partial land release effects only tract 1 and does not affect tracts 2-4. The old metes and bounds for the Veldman property are provided as a reference and included is a brief description of the area that was released in November 2014

A parcel of land situate in the N1/2 of Section 13, Township 6 North, Range 68 West of the 6th P.M., County of Larimer, State of Colorado, being more particularly described as follows:

Considering the South line of the SE1/4 of the NE1/4 of said Section 13 as bearing N89°42'33"W and with all other bearings contained herein relative thereto;

Commencing at the E1/4 corner of said Section 13; Thence along said South line N89°42'33"W, 1300.53 feet (previously recorded as S89°48'25"W, 1300.57 feet) to East line of the W1/2 of the NE1/4 of said Section 13; Thence along said East line N00°08'25"E, 1919.94 feet (previously recorded as N00°20'37"W, 1919.94 feet); Thence N89°42'33"W, 1320.00 feet (previously recorded as S89°48'25"W, 1320.00 feet) to the True Point of Beginning; Thence N00°08'25"E, 720.06 feet (previously recorded as N00°20'37"W, 720.06 feet); Thence N89°42'33"W, 1299.18 feet (previously recorded as S89°48'25"W, 1299.00 feet); Thence S02°21'11"W, 1865.03 feet (previously recorded as S01°52'09"W); Thence N41°20'54"E, 1277.92 feet; Thence N71°28'46"E, 558.66 feet to the True Point of Beginning.

The northeast corner of tract 1, an area of 47.80 acres, was released in November of 2014 (see Figure A-1).

1.1.2.2 Tract 2

A parcel of land situate in the North Half of Section 13, Township 6 North, Range 68 West of the 6th P.M., County of Larimer, State of Colorado, being more particularly described as follows:

Considering the South line of the SE1/4 of the NE1/4 of said Section 13 as bearing N89°42'33"W and with all other bearings contained herein relative thereto;

Commencing at the East Quarter corner of said Section 13; Thence along said South line 89°42'33"W, 1300.53 feet (previously recorded as S89°48'25"W, 1300.57 feet) to the East line of the West one half of the NE1/4 of said Section 13, said point being the True Point of Beginning; Thence along said East line N00°08'25"E (previously recorded as N00°20'37"W), 1229.74 feet; Thence S90°00'00"W, 599.18 feet; Thence S46°33'40"W, 1774.96 feet to a point on the South line of the SE1/4 of the NW1/4 of said Section 13; Thence along said South line S89°43'22"E, 584.45 feet to the Center Quarter Corner of said Section 13; Thence along the South line of the SW1/4 of the NE1/4 of said Section 13, S89°42'53"E, 1300.55 feet to the True Point of Beginning.

1.1.2.3 Tract 3

A parcel of land situate in the North Half of Section 13, Township 6 North, Range 68 West of the 6th P.M., County of Larimer, State of Colorado, being more particularly described as follows:

Considering the South line of the SE1/4 of the NE1/4 of said Section 13 as bearing N89°42'33"W and with all other bearings contained herein relative thereto;

Commencing at the East Quarter corner of said Section 13; Thence along said South line N89°42'33"W, 1300.53 feet (previously recorded as S89°48'25"W, 1300.57 feet) to the East line of the West One Half of the NE1/4 of said Section 13; Thence along said East line N00°08'25"E (previously recorded as N00°20'37"W), 1229.74 feet to the True Point of Beginning; Thence continuing along said East line N00°08'25"E, 390.55 feet; Thence N89°42'27"W, 817.04 feet; Thence S62°31'43" W, 665.86 feet; Thence S45°17'33"W, 1853.53 feet to the SW corner of the SE1/4 of the NW1/4 of said Section 13; Thence along the South line of the SE1/4 of the NW1/4 of said Section 13, S89°43'22"E, 836.19 feet; Thence N46°33'40"E, 1774.96 feet; Thence S90°00'00"E, 599.18 feet to the True Point of Beginning.

LESS that portion of Parcel 3 lying within that certain parcel conveyed to Larimer County in Book 310 at Page 529, recorded September 22, 1913.

1.1.2.4 Tract 4

A parcel of land situate in the North Half of Section 13, Township 6 North, Range 68 West of the 6th P.M., County of Larimer, State of Colorado, being more particularly described as follows:

Considering the South line of the SE1/4 of the NE1/4 of said Section 13 a bearing N89°42'33"W and with all other bearings contained herein relative thereto;

Commencing at the East Quarter corner of said Section 13; Thence along said South line N89°42'33"W, 1300.53 feet (previously recorded as S89°48'25"W, 1300.57 feet) to the East line of the West One Half of the NE1/4 of said Section 13; Thence along said East line N00°08'25"E, 1919.94 feet (previously recorded as N00°20'37"W, 1919.94 feet to the True Point of Beginning; Thence N89°42'33"W, 1320.00 feet (previously recorded as S89°48'25"W, 1320.00 feet); Thence S71°28'46"W, 558.66 feet; Thence S41°20'54"W, 1277.92 feet; Thence S02°21'11"W, 777.13 feet; Thence N45°17'33"E, 1853.53 feet; Thence N62°31'43"E, 665.86 feet; Thence S89°42'27"E, 817.04 feet; Thence N00°08'25"E, 299.65 feet to the True Point of Beginning.

LESS that portion of Parcel 4 lying within that certain parcel conveyed to Larimer County in Book 310 at Page 529, recorded September 22, 1913.

The Property Descriptions, as described above, are from the Commitment for Title Insurance prepared by Stewart Title Guaranty Company (order number 959689-C-10 AMENDED, effective date: December 31, 2012).

1.1.3 *Scale House and Haul Road*

1.1.3.1 Scale House Parcel and Access

That portion of the Northwest Quarter of Section 13, Township 6 North, Range 68 West of the 6th P.M., Larimer County, Colorado being more particularly described as follows:

Considering the North line of the Northwest Quarter of said Section 13 as bearing North 88°43’49” West and with all bearings contained herein and relative thereto;
Beginning at the Northeast corner of the Northwest Quarter of said Section 13; thence along the North line of the Northwest Quarter of said Section 13 North 88°43'49" West 1334.06 feet to the TRUE POINT OF BEGINNING; thence continuing along said North line North 88°43'49" West 348.31 feet; thence departing said North line and generally along an existing fence line the following four (4) courses and distances: South 63°53'29" East 210.16 feet; thence South 70°12'41" East 62.51 feet; thence South 79°48'44" East 71.38 feet; thence South 02°38'17" West 2618.97 feet to a point on the North line of that certain parcel of land as described in Book 310 at Page 529, records of Larimer County; thence along said North line South 85°23'44" East 50.04 feet; thence departing said North line North 02°20'22" East 2605.33 feet; thence North 02°12'44" West 135.70 feet to a point on the North line of the Northwest Quarter of said Section 13 and the TRUE POINT OF BEGINNING.

Said parcel contains 3.19 acres, more or less, and is subject to all existing easements and/or rights of way.

1.1.3.2 Parcel between Scale House/Haul Road Parcel and Veldman Tract 1, Tract 3, and Tract 4

Although no meets and bounds description has been developed for this small parcel, it has been included within the revised permit boundary. Said parcel contains 3.48 acres, more or less.

1.2 Main Entrance

The main entrance to the Three Bells mine is located at:

40°29’11.52”N, 104°57’31.11”W

2. Exhibit B – Index Map

The Index Map is shown on **Figure B-1**. This figure shows the regional location of the Three Bells Mine.

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

Figures C-1 and **C-2** show the features described below.

3.1 Adjoining Surface Owners of Record

The owner of the Three Bells Mine property is River Bluff Ventures, LLC. The owners of record of adjacent land to the Three Bells Mine are:

- River Bluffs Ventures, LLC
- John D. and Brenda K. Graves
- Cache la Poudre Irrigation Company
- Kehn Don Construction
- Weiderspon
- Lone Tree Investments, LLC

This information is available on the Larimer County parcel viewer website at http://maps.larimer.org.

3.2 Geographical, Energy, and Communication Features

3.2.1 *Bodies of Water*

The Cache la Poudre River runs from north to south through the Ditullio Property, as shown on **Figure C-1**. The Greeley Number 2 Canal flows southeast from a gate on the Cache la Poudre River north of the Ditullio Property along the northeast side of the Ditullio and Veldman properties as shown on **Figure C-1**.

3.2.2 *Roads*

East Larimer County Road 32E (E CR 32E) is located along the southern border of the Veldman Property. E CR 32E is shown on **Figure C-1**.

3.2.3 *Buildings*

Buildings within 200 feet of the Affected Land:

Owner: Cache la Poudre Irrigation

- Weir on the Greeley Number 2 Canal
- Weir on the Cache la Poudre River

- Residential building

Owner: William Graves

- 2 residential farming structures

Owner: John Graves

- 2 Bridges over the Greeley No. 2 Canal

Buildings are shown on **Figure C-1**.

3.2.4 *Oil and Gas Wells*

Oil and gas wells and pipelines within 200 feet of the Affected Area include:

Operator: Bayswater Exploration and Production, LLC

- River Bluffs 10-13
- River Bluffs 18-13

Owner: DCP Midstream

- Pipeline servicing the River Bluffs wells

Oil and gas wells and pipelines are shown on **Figure C-1**.

3.2.5 *Power and Communication Lines*

One set of power lines are located on the north side of the Veldman Property and continue along the north side of the Ditullio property. A service line runs from this main line to the scale house at the southeast corner of the Ditullio Property. The second set of power lines runs north to south through the Ditullio Property. Power lines are shown on **Figure C-1**.

3.3 Existing Topography

Existing topography of the Three Bells Mine is shown on **Figure C-1**.

3.4 Area Involved in Operation

The new Affected Area (permit boundary) is described in a Meets and Bounds, which is presented in Section 1.1. The Affected land is shown in **Figures C-1 – C-3**. The reclamation area is shown in **Figure F-1 and F-2**.

The minable material within the Veldman Property has been depleted and reclamation is currently underway. The Veldman Property is designed to be a lined, below grade reservoir.

3.5 Present Vegetation

Present vegetation covering the Affected Land consists of native shrubs and grasses. Large portions of the site are currently unvegetated due to mining activities. Land around the Three Bells site is zoned FA1 for farming, and can have a variety of agricultural crops.

3.6 Water Information

A Groundwater Monitoring and Mitigation Plan is presented in Exhibit G, **Attachment A**.

3.7 Permanent Structures

Permanent man-made structures within 200 feet of the permit boundary are:

Owner: Bayswater Exploration and Production, LLC

- 2 oil/gas wells

Owner: Larimer County

- E CR 32E
- Parking lot and concrete path

Owner: South Fort Collins Sanitation District

- Pipeline
- Monitoring station

Owner: John Graves

- 2 Bridges over the Greeley No. 2 Canal

Owner: William Graves

- 2 residential farming structures

Owner: Cache la Poudre Irrigation Company

- Residential building
- Weir on the Cache la Poudre River
- Weir on the Greeley Number 2 Canal

Figure C-1 shows permanent man-made structures.

3.8 Soils Information

Subsurface information collected at the Three Bells Mine was provided to GEI by MM. Review of this information indicates subsurface conditions can be categorized into three soil units, listed from soil surface down to bedrock foundation: overburden, sand and gravel, and bedrock.

3.8.1 *Overburden*

Overburden material at the Three Bells Mine ranges primarily from sandy clays (CL) to clayey sands (SC). Laboratory testing indicates that percent passing the number 200 sieve ranges from approximately 43.1 to 86.1 percent.

Overburden was encountered in mining Phases 1, 3, and 4. Overburden material was stripped from Phase 5 and stockpiled for backfilling.

Information regarding the soil types found on the property was obtained from the Web Soil Survey, Natural Resources Conservation Service (NRCS), United States Department of Agriculture. The information is available at http://websoilsurvey.nrcs.usda.gov/. A Web Soil Survey for Three Bells has been conducted and is provided in **Attachment B**.

Table 1: NRCS Soil types of the Three Bells Mine

Soil Unit Name	Acres Soil Type	Percent Soil Type
Caruso clay loam, 0 to 1 percent slope	128.0	40.1%
Loveland clay loam, 0 to 1 percent slopes	114.5	35.8%
Paoli fine sandy loam, 0 to 1 percent slopes	3.9	1.2%
Riverwash	34.0	10.6%
Satanta Variant clay loam, 0 to 3 percent slopes	13.4	4.2%
Stoneham loam, 1 to 3 percent slopes	0.0	0.0%
Table Mountain loam, 0 to 1 percent slopes	17.8	5.6%
Water	7.9	2.5%

3.8.2 *Alluvial Sand and Gravel*

Alluvial sand, gravel, and cobble (pit run) are the primary commodity mined by MM at the Three Bells facility. The minable material within the Veldman Property has been depleted, and reclamation is ongoing.

In the Ditullio Property, the alluvial sand and gravel ranges in thickness from approximately 4 to 18 feet. The average deposit depth is 10 feet. Laboratory testing indicates the alluvial deposit typically has less than 10 percent of material passing the number 200 sieve.

3.8.3 *Bedrock*

Bedrock was previously mapped in the area as the Upper Member of the Pierre Shale Formation. Bedrock encountered in the area typically consists of sandstone and claystone. Bedrock information for this area was determined from the Geologic map of the Boulder-Fort Collins-Greeley area, Front Range Urban Corridor, Colorado (USGS MI 855-G).

4. Exhibit D – Mining Plan

4.1 Mining Methods

There is no change in mining methods from the original Three Bells permit M-1979-191.

4.2 Earthmoving

There is no change in earthmoving procedures from the original Three Bells permit M-1979-191.

Resources on the Veldman property have been depleted. Earthmoving in the Veldman property will consist of reclamation activities.

All earth moving due to mining activities will occur on the Ditullio property. Earth moving across the Cache la Poudre River will occur via a conveyor system. The west end of the conveyor bridge is located approximately 20 feet from the southeast corner of Phase 4. The east end of the conveyor bridge is located approximately 20 feet from the southwest corner of Phase 3. The approximate location of the conveyor bridge is shown on **Figure D-1**.

All site access to the Ditullio property on the east side of the Cache la Poudre River will occur via the permitted access road on the southern portion of the Three Bells Mine. All site access to the Ditullio property on the west side of the Cache la Poudre River will occur through the Kehn Don Construction Inc. site, located immediately to the west of the Ditullio property. There are no truck or equipment crossings over the Cache la Poudre River.

4.3 Water Diversions and Impoundments

There is no change in water diversions and impoundments from the original Three Bells reclamation permit M-1979-191.

4.4 Size of Work Areas

The size of the largest area in the Ditullio Property to be worked on at one time is Phase 4. The mine limit encompassing Phase 4 is approximately 69.6 acres.

The other Ditullio Phase mine limit areas are approximately:

- Phase 1: 5.8 acres
- Phase 2: 12.5 acres
- Phase 3: 16.8 acres
- Phase 5: 9.2 acres

The mine limits within the Veldman Property is approximately 137 acres. The ongoing reclamation currently taking place within the Veldman Property is being conducted in one phase.

4.5 Approximate Timetable

Reclamation in the Veldman Property is expected to complete by mid 2015, depending on construction progress, weather delays, etc. Reclamation of the various phases within the Ditullio Property is expected to occur concurrently with mining operations and be completed by December 2016, depending on product demand and market conditions. The sequence of reclamation at the Ditullio Property is expected to occur as follows:

- Phase 5
- Phase/pond 3
- Phase/pond 4
- Phase/pond 1
- Phase 2

Phase 1 is approximately 5.8 acres and is located in the south central portion of the Ditullio Property. Phase 2 is approximately 12.5 acres and is located due east of Phase 1. Phase 3 is approximately 16.8 acres and is located due north of Phase 1 and 2, in the north middle of the Ditullio Property. Phase 4 is approximately 69.6 acres and is located in the northwest corner of the Ditullio Property. Phase 5 is approximately 9.2 acres and is located due east of Phase 2, in the southeast corner of the Ditullio Property.

Phase 5 mining is complete and has been backfilled with strippings from Phase 3. Phase 4 will be partially backfilled and followed by reclamation in Phase 1. Phase 2 is to remain unlined, and will fill with fines developed over the course of mining operations.

4.6 Mining Map

Figures D-1 and D-2 show the various phases within the Ditullio Property. The deposit is approximately 4 to 18 feet thick. Overburden is approximately 0 to 10 feet thick, and is being stockpiled for backfilling. The approximate mining direction will be from southeast to northwest, as the operator deems most efficient.

The stratum beneath the alluvial sand and gravel consists of bedrock. See Section 3.8.3.

4.7 Commodities

Primary commodities mined within the Three Bells Mine are sand, gravel, and cobble aggregate for construction materials.

4.8 Incidental Products

There is no incidental product produced at the Three Bells Mine by MM.

4.9 Explosives

Explosives will not be used within the Three Bells Mine.

4.10 Stockpiles in Floodplain

Larimer County has no objections to the placement of overburden and topsoil stockpiles within the floodplain (Attachment G). The locations of the stockpiles are shown in the Ditullio mining plan map (Figure D-1).

5. Exhibit E – Reclamation Plan

5.1 Post-Mining Land Use

The anticipated reclamation activities include the lining of the pits creating below grade reservoirs. Areas anticipated to be completed as a below grade reservoirs include Phases/ponds 1, 3, and 4 within the Ditullio Property, and the entire mined out portion of the Veldman Property as shown on Figures D-1 and D-2.

The total area allocated for below grade reservoirs is approximately 92 acres within the Ditullio Property with water at or near the normal high water line (NHWL). For the reservoirs within the Three Bells min, NWHL is defined as a minimum of two feet freeboard, measured from the lowest point along the reservoir crest.

The total area allocated for below grade reservoirs is approximately 77 acres within the Veldman Property with water at or near the NHWL.

Slope liners in the Ditullio property are designed to meet SEO seepage requirements. The slope liners extend to the top of the pit highwall, which results in the construction of slope liner above the high waterline. This is done to minimize groundwater seepage into the pit.

Slope liners in the Ditullio property are designed with 10-foot wide crest sloping 2% toward the reservoir. The crest transitions into a 3:1 (H:V) slope extending to bedrock, which meets SEO stable slope requirements. Stability and seepage analyses indicate this slope configuration and crest width will be stable under existing site conditions.

Overburden obtained from the stripping on Ditullio property soil appears to meet project specifications for slope liner embankment fill. This overburden will be utilized as a borrow source during slope liner construction. If there is insufficient material on Ditullio for slope liner construction, material meeting project specifications and left over from reclamation will need to be imported from the Veldman Property.

A cutoff key is designed at the base of the liner, offset approximately 5 feet from the prepared mine highwall. The cutoff will extend five feet into the claystone bedrock extending to 7 feet in sandstone bedrock as directed by GEI during construction. The key will be approximately 12 feet wide at the base.

Approximately 1 foot of weathered bedrock will be stripped from within the slope liner footprint. Material excavated during foundation preparation including non-marketable pit run and bedrock will be placed within the footprints of the ponds or placed within the Phase 4 or 5 backfill areas. This material will not be utilized as roadway fill.

Shaping of the reservoir bottom will not encroach within 25 feet of the toe of the slope liner and reservoir floor excavation slopes, if necessary, should not exceed a slope of 6:1. The reservoirs should be graded to the bedrock low point, as noted in the construction plans.

The area between Phase 3 and Phase 2 and 5 requires backfilling as a result of historical site stripping to allow for increased storage in the Pond 3, and create a more uniform roadway. The existing material was stripped to an approximate elevation of 4804 feet, resulting in a limited storage capacity of approximately 9 acre-feet, with a normal high water surface elevation (NHWL) of 4802 feet. Backfilling the area will increase water storage in Pond 3 to approximately 94 acre-feet, with a NHWL of 4808 feet. The roadway backfill area has been designed at an elevation of 4810 feet, transitioning into Pond 3 slope liner and into Phase 2.

Figure F-1 shows the configuration of the slope liners for the Ditullio property. Figure F-2 (provided by others) shows the slope liner in the mined-out phase in the Veldman Property.

Much of the Three Bells property lies within the Cache la Poudre River flood plain. Each reservoir may have inlet-outlet structures installed during construction of the slope liners to protect from flood damage. Spillway systems within the Three Bells reservoirs will be constructed pending official clarification/requirement by the DRMS and proper flood analysis and engineering design. Larimer County does not require the installation of inlet/outlet spillways for the Three Bells Developed Water Storage (Attachment G).

Construction of reservoirs will comply with applicable Larimer County floodplain development regulations.

Phase 5 and portions of Phase 4 are to be backfilled and re-vegetated. Phase 5 and portions of Phase 4 will not be reclaimed as below-grade reservoirs with slope liners. Approximately 9.2 acres within the mine limits of these phases will be backfilled with overburden, topsoil, and spoils developed during pit reclamation. The detailed revegetation plan is presented in Section 5.4.

Phase 2 will be utilized for wash fines during the Ditullio mining operations, and will be backfilled and re-vegetated.

Areas adjacent to and in close proximity (1 mile) to the Three Bells Mine are zoned as incorporated city in Windsor, Colorado. This current land use is similar in nature to the proposed post-mining land use for Phase 5 and the Veldman Property.

The Veldman pond slope liner was completed in late 2014 and is designed to meet SEO seepage requirements. The slope liner extends to the top of the pit highwall, which results in the construction of slope liner above the high waterline. This is done to minimize groundwater seepage into the pit and has a minimum freeboard of 2 feet. The slope liner has 20-foot wide crest sloping 1% toward the reservoir. The crest transitions into a 3:1 (H:V)

slope extending to bedrock. Stability and seepage analyses indicate this slope configuration and crest width will be stable under existing site conditions.

Overburden obtained from the stripping on Veldman property soil met project specifications for slope liner embankment fill. This overburden was utilized as a borrow source during slope liner construction.

A cutoff key was used at the base of the liner, offset approximately 5 feet from the prepared mine highwall. The cutoff extended five feet into the claystone bedrock as directed during construction. The key is approximately 8 feet wide at the base.

Approximately 1 foot of weathered bedrock was stripped from within the slope liner footprint. Material excavated during foundation preparation including non-marketable pit run and bedrock was placed within the footprints of the ponds.

Shaping of the reservoir bottom did not encroach within 25 feet of the toe of the slope liner and reservoir floor excavation slopes and did not exceed a slope of 6:1. The reservoirs were graded to the bedrock low point, as noted in the construction plans.

5.2 Top Soiling

Topsoil placement, to a minimum of 6”, will occur as reclamation activities in areas that are free from mining activity. Primary areas to receive topsoil as reclamation during the mining process are low-lying areas and other areas in need of fill, such as haul roads and slope liners which lie above the normal high water level (NHWL). Site access roads will be remain in their current state through reclamation.

5.3 Wildlife

The wildlife plan will not change from the original permit issued, Permit M-1979-191.

5.4 Revegetation

Revegetation will occur concurrently with the mining process as is practical. Care will be taken to regrade and provide reclaimed slopes such that revegetation regrowth may occur to help comply with state and erosion standards. Seeding and grassing activities will take place immediately upon completion of reclaimed slopes (season permitting) whenever practical size areas become available and free from mining activity. Areas not planned for revegetation include the area below NHWL in Phases/ponds 1, 3, and 4 as they will become below-grade ponds. Based on SCS guidance for other local projects having similar surficial soils, the following revegetation procedures are anticipated:

- Grass seed will typically be planted in unfrozen soil between October 1 and April 30
- Grass seed will typically be planted with a grass drill, or where necessary, with a broadcast seeder

The proposed seed mix and application rates in pounds of pure live seed per acre are described on the following pages

Weed control practices will be implanted as required.

The above procedures may be modified as conditions dictate. Plant species anticipated to establish themselves naturally along the shorelines include cattails, willows, cottonwoods, and bulrushes. Proposed seed mixtures to be used on site where appropriate are listed below. Availability may dictate the need for substitution. The anticipated seed mix to be used for Three Bells Mine revegetation is shown in **Table 2**. A revegetation cost estimate was provided by the DRMS and is available in Attachment F.

Table 2: Seed Mix for Three Bells Mine

Species	Preferred Varieties	Rate Lbs./Acre Planted (Drilled 1)	PLS Seeded/Acre
Green needlegrass Stipa viridula	Lodorm	2.00	362,000
Indian ricegrass Achnatherum hymenoides	Paloma	2.00	376,000
Slender wheatgrass Elymus trachycaulus	Primar, Revenue	2.00	320,000
Thickspike wheatgrass Elymus lanceolatus	Critana	2.00	372,000
Western wheatgrass Pascopyrum smithii	Arriba, Barton	5.00	630,000
Lewis flax Linum lewisii	Appar	1.00	285,000
Upright prairie coneflower Ratibida columnifera	None	0.25	225,000
Totals		14.25	2,570,000 (59 seeds/sq.ft.)

5.5 Reclamation Performance Standards

5.5.1 *Establishing Post-Mining Use*

Post-mining use of the land is anticipated to be below grade reservoirs and graded areas revegetated and returned to property owners.

There will be no Substituted Land to be reclaimed, as defined in Rule 3.1.2.

Mining reclamation is expected to be completed as proposed in the design plan within the five year timeframe required in Rule 3.1.3. The anticipated schedule indicates slope liner completion and pit backfill within approximately 24 months.

5.5.2 *Public Use*

Design of the reclaimed reservoir slope liners has not anticipated public recreational use of the lined reservoirs. The crest of the slope liners is designed to slope approximately 2% into the reservoirs.

5.5.3 *Reclamation Measures – Material Handling*

Approximate final site grading at the Three Bells Mine is anticipated to occur according to the following:

3:1 (H:V) – Reclaimed, lined reservoir slopes
2% – Lined reservoir crest
0-5% – Typical reclaimed land slope

All site grading will comply with CO SEO requirements for stable slope reclamation. Maximum reclaimed slope will be 3:1 (H:V). Reclamation grading measures will comply with all local and state erosion prevention measures. Local areas will be stabilized for erosion control as needed.

Areas to be backfilled (parts of Phase 4, Phase 5, Ditullio Property) will be compacted to adequate compaction for stability.

There has been no refuse, acid-forming, or toxic producing material mined at Three Bells; no production of these materials is anticipated during the remainder of the mining process.

Drill holes and auger holes will be filled with non-combustible materials, as outlined in Rule 3.1.5(6). Three Bells Mine is a surface gravel pit and quarry. The mine has no adits or shafts that require closing.

Reclamation is not anticipated to include plans for agricultural or horticultural use.

MM does not plan to use offsite structural fill as backfill material.

All mined material to be disposed of onsite will be disposed in manner to prevent contamination of the drainage system.

No pollutants will be released to groundwater during reclamation. Any incidental chemical or fuel spills will be contained and remediated in an expedient and appropriate manner.

5.5.4 *Water – General Requirements*

Disturbances to surface water and groundwater will meet all Colorado water laws and regulations. Necessary permits will be obtained for wells and disturbances. All Colorado and

federal water quality regulations will be met both on the statewide level, and on a site-specific standard basis. Any variation will be reclaimed to mitigate water contamination.

No siltation structures on the Three Bells Mine lie in drainways.

Slope liner embankments will be constructed to impound reservoirs as discussed on the reclamation plan. The below grade reservoirs develop on the Three Bells Mine will have slope liner embankments constructed in stable configuration according to SEO requirements. Reservoir embankments will comply with water pollution laws and will be constructed with inert, low permeability materials to prevent stored water/groundwater communication

5.5.5 *Groundwater – Specific Requirements*

Groundwater quality standards will be maintained during reclamation operations. Deviations from regulated water quality standards as a result of mining operations at Three Bells Mine will be reclaimed in an expedient and appropriate manner.

The Three Bells Mine has no areas classified by the Water Quality Control Commission (WQCC) to be monitored for groundwater quality. Mining and reclamation activities in areas not classified by the WQCC will be carried out in such a manner to protect groundwater resources as outlined by the WQCC.

Groundwater disturbances and interaction is anticipated to be minimal. Measures shall be taken to preserve existing groundwater resources as reclamation commences. Points of compliance and groundwater sampling will be implemented on Three Bells Property and hydrologically downstream as appropriate and required by the Board.

MODFlow models and analyses have been created and run to demonstrate the anticipated effect of reclamation on existing groundwater resources. Models were created to estimate the effect of lined reservoirs in the reclaimed mine site on groundwater conditions and flow. Results from MODFlow modeling are available in **Attachment C**.

5.5.6 *Topsoiling*

Topsoil has been stripped from mined areas and stockpiled close to the Cache la Poudre River for use in reclamation. Stockpile locations are away from daily operations and require minimal disturbance, as per the Rules. Placement of topsoil will be done is such a manner so as to create a relatively uniform layer with a minimum depth of 6”.

Stability of any replaced topsoil will be of importance as any areas to be backfilled are planned to be used for housing development.

The primary measure for noxious weed control and removal will be mechanical control. Weeds will be mowed before they go to seed during the growing season. Russian olives and tamarisk will be pulled as they develop.

Chemical methods will be used on Larimer County noxious weed species that persist. Weeds will be sprayed by a licensed contractor with 2-4 D/Banvel Low Volite or another broadleaf herbicide that they recommend. Noxious weeds will be sprayed once or twice a year to prevent the spread.

No historic structures are located on Three Bells Mine.

A statement regarding the permit amendment with the Three Bells Mine permit number shall be posted at the entrance to the facility. A fence surrounds the affected area to mark the mine and Affected Area boundary, according to Paragraph 3.1.12(2)(b).

MM will notify DRMS of any toxic or hazardous spills which occur on Three Bells Property. MM will contain and remediate any spills which do occur, as appropriate, on an individual case basis.

6. Exhibit F – Reclamation Plan Map

See **Figure F-1 and F-2** for the Reclamation Plan Map

7. Exhibit G – Water Information

The Three Bells Mine operation is not expected to directly affect surface water. The mining is relatively shallow, typically to a depth of approximately 20 feet below ground surface.

Impact to groundwater will be minimal along the west side of the existing mine, west of the Cache la Poudre River. Any depletions to the Cache la Poudre River that are associated with mining are currently mitigated to prevent injury to the vested senior water rights by having an approved Temporary Substitute Water Supply Plan in place. This plan will remain in effect until the liners have been certified or backfilling is complete and there is no longer a need for processing water.

No toxic or hazardous chemicals or liberating agents are used for mineral extraction.

Estimated water requirements for the project vary depending on several factors including season and precipitation. Projected water usage estimates range from 75,000 – 900,000 gallons per month. Monthly water usage and future estimates provided my MM are shown in **Table 3**.

Table 3: Three Bells Makeup Water

Month	Wash Water (gallons)	Water for Dust Control and Construction (gallons)
September 2013	-	850,000
October 2013	-	600,000
November 2013	-	250,000
December 2013	-	150,000
January 2014	-	75,000
February 2014	-	75,000
March 2014	-	800,000
April 2014	-	800,000
May 2014	136,560	800,000
June 2014	131,040	900,000
July 2014	163,200	900,000
August 2014	115,920	900,000
September 2014	105,120	850,000
October 2014	193,920	600,000
November 2014	181,920	250,000
December 2014	110,400	150,000
January 2015	72,000	75,000
February 2015	132,000	75,000
March 2015	132,000	800,000
April 2015	144,000	800,000

May 2015	180,000	800,000
June 2015	180,000	900,000
July 2015	180,000	900,000
August 2015	180,000	900,000
September 2015	180,000	850,000
October 2015	180,000	600,000
November 2015	168,000	250,000
December 2015	168,000	150,000
January 2016	72,000	75,000
February 2016	132,000	75,000
March 2016	132,000	800,000
April 2016	144,000	800,000
May 2016	180,000	800,000
June 2016	180,000	900,000
July 2016	180,000	900,000
August 2016	180,000	900,000
September 2016	82,800	850,000

Note: Future values are estimated.

Groundwater infiltrating into mine areas is the source for makeup water. Water used for dust control is taken from water stored in onsite ponds.

MM has applied for and acquired a permit through the National Pollutant Discharge Elimination System (NPDES) Water Quality Control Division (permit number COG00131).

7.1 Groundwater Modeling

7.1.1 *Impacts to Groundwater*

Adverse impacts to the local groundwater aquifer have not been observed or reported during past or current mining phases on either the Veldman or Ditullio Properties within the Three Bells Mine. Adverse impacts are not anticipated to develop as a result of current or future MM reclamation in the mined out cells within the Three Bells Mine. GEI has modeled current and post reclamation groundwater conditions at the Three Bells site utilizing Visual MODFLOW (Version 2011.1, U.S. Geological Survey (USGS) 2014), and the results indicate that the Ditullio Property will see less than 1 foot of groundwater impact adjacent to the cells, with impacts lessening as the distance away from the cells increases. The Veldman Property will experience a 3.5 foot decrease in ground water immediately south of the property, with impacts lessening as the distance away from the cells increases. It is predicted that between the Veldman Property and the neighboring Kyger Property, the water table will decrease by approximately one foot. The MODFLOW results are provided in **Attachment C**.

7.2 Groundwater Monitoring and Mitigation Plan

7.2.1 *Purpose*

This Groundwater Monitoring and Mitigation plan has been developed in support of MM Permit Amendment Application to the Colorado Division of Reclamation Mining and Safety (DRMS) M-1979-191 112 Permit. The 112 Permit Amendments is being submitted to revise the reclamation plan to Developed Water Storage and to revise the Permit Boundary for the Three Bells Property.

This Plan addressed the actions developed by MM that would be implemented should adverse groundwater conditions develop during site reclamation as lined below grade reservoirs.

7.2.2 *Background*

The Three Bells Mine is owned by River Bluffs Ventures, LLC and operated by MM. The mine property is located approximately one half mile north and three miles west of Windsor, Colorado, in Larimer County. The Affected Land is located in Township 6 North, Range 68 West of the 6th Principle Meridian, in Sections 11, 12, and 13.

The mine consists of two main properties: Ditullio and Veldman. The Veldman property has reached Life of Mine and reclamation began in June 2014. The Ditullio property is expected to continue to provide pit run products until 2016. Reclamation is expected to be completed by December 2016.

During mining of the Veldman Property within the Three Bells Mine, MM mined in the dry by keeping the pit dewatered utilizing a system of ditches and pumps. The dewatering system discharged groundwater captured within the mine limits to the Cache la Poudre River (the Poudre) at discharge points established in the CDPS Discharge Permit.

MM is actively mining within the Ditullio Property within the Three Bells Mine utilizing the same methods described above.

7.2.3 *Well Inventory*

A well inventory for areas surrounding the Three Bells Property was conducted to identify registered wells within 600 feet as required by the Colorado Office of the State Engineer (SEO). There are no domestic wells within 600 feet of the Three Bells Mine boundary.

7.2.4 *Monitoring and Mitigation Plan*

There are four monitoring wells monitored by MM around the Veldman Property. Located on the perimeter of the property (Figure G-1), these monitoring wells have a single measurement during August of 2013 (Table 4). There are several monitoring wells that

were installed during the design phase of the Ditullio Property to assist in data gathering for design and mine planning. However, the location of the monitoring wells will result in their destruction during the construction of the Developed Water Storage. Five new monitoring wells were installed (Table 5) on the Ditullio Property in January 2015 and will be monitored monthly for changes in groundwater levels through the first year and then monitored quarterly for the remainder of permitted mining activities.

Table 4: Veldman observation well water level data; provided by Deere and Ault

Monitoring Well Name	**TH-6**		**TH-7**		**TH-8**		**Th-9**	
Top of PVC Casing Elevation (ft)	4810.2		4803.6		4815.8		4812.8	
Casing Stickup (ft)	2.3		1.6		2.9		3.1	
Ground Elevation of Well (ft)	4807.8		4802.0		4812.9		4809.7	
Bottom Elevation of Well (ft)	4795.8		4781.8		4784.9		4791.7	
Total Well Depth Ground-Bottom (ft)	12.0		20.2		28.0		18.0	
Date	Depth From Top of Casing (ft)	Ground Water Elevation (ft)	Depth From Top of Casing (ft)	Ground Water Elevation (ft)	Depth From Top of Casing (ft)	Ground Water Elevation (ft)	Depth From Top of Casing (ft)	Ground Water Elevation (ft)
8/23/2013	8.4	4801.8	20.7	4782.9	24.4	4791.6	16.6	4796.2

Should MM receive notification of adverse (a deviation from historic groundwater levels of +/-2 feet) groundwater conditions or a complaint from the well owner, MM will notify the DRMS and propose mitigation measures. Mitigation measures may include the following and will be done in consultation with the DRMS:

- Investigation of the notification/complaint to establish parameters and to determine if MM mining operations are the sole cause or contributing to the adverse groundwater conditions. This measure may include the installation of additional monitoring wells at strategic locations to assist in data gathering.
- In the event of adverse groundwater conditions, MM will consult with the DRMS on appropriate mitigation measures including (but not limited to) providing temporary or permanent alternative water sources to impacted well owners, repairing or deepening affected wells, installing physical measures such as perimeter drains, well points, low permeability barriers, etc. to assist in mitigation of the adverse groundwater conditions.
- Other mitigation measures may be developed in consultation with or at the request of

the DRMS.

Table 5: Ditullio piezometer information - piezometers installed 1/8/2015

Piezometer ID	B101	B102	B103	B104	B105
Latitude (deg N)	40.501222	40.498472	40.494278	40.494222	40.496083
Longitude (deg W)	104.971917	104.972250	104.972139	104.964278	104.959750
Approx ground Elev (ft)	4818	4817	4813	4809	4808
Casing Stickup (ft)	2.41	2.75	2.59	2.00	1.87
Stickup Elev (ft)	4820.4	4819.8	4815.6	4811.0	4809.9
Total well depth (ft)	17.70	17.78	21.73	17.01	11.73
Bottom Elev (ft)	4802.7	4802.0	4793.9	4794.0	4798.1
Well depth bgs (ft)	15.3	15.0	19.1	15.0	9.9
GW reading from top of casing (ft) 1/8/15	6.85	14.80	11.33	11.22	8.00
GW elevation (ft) 1/8/15	4813.6	4805.0	4804.3	4799.8	4801.9
GW depth bgs (ft) 1/8/15	4.4	12.1	8.7	9.2	6.1
Latitude (deg N)	40.501222	40.498472	40.494278	40.494222	40.496083

8. Exhibit H – Wildlife Information

There will be no change to Exhibit H – Wildlife Information from the original Three Bells Mine permit M-1979-191

9. Exhibit I – Soils Information

There will be no change to Exhibit I – Soils Information from the original Three Bells Mine permit M-1979-191

10. Exhibit J – Vegetation Information

There will be no change to Exhibit J – Vegetation Information from the original Three Bells Mine permit M-1979-191

11. Exhibit K – Climate

There will be no change to Exhibit K – Climate from the original Three Bells Mine permit M-1979-191

12. Exhibit L – Reclamation Costs

Attached are the estimated reclamation costs for the Three Bells Mine, developed to reclaim the site to Developed Water Storage. The costs have divided by mining locations and phases within the Three Bells Mine, including Veldman and Ditullio Phases/ponds 1 through 5. The quantities utilized in the reclamation costs have been developed from the actual designs for the slope liners and area fills currently being constructed (Veldman) for planned (Ditullio). The unit prices presented for the individual items have taken from Engineers Opinions of Costs (EOC) developed for MM for use in bidding the projects. The EOC was developed based on GEI staff experience in the region on similar projects, and in consultation with local earthmoving contractors.

The reclamation slope for the Veldman Property has been completed, and the estimated costs listed in Table 5 reflect the remaining portion of the reclamation plan. Earthmoving reclamation within the Ditullio portion of the site will be conducted concurrently with mining. MM filled in Phase 5 as mining commenced within Phase 3. Phases 1, 3, and 4 will be constructed from overburden material that has been stockpiled onsite or excavated during stripping operations. Phase 2 will be utilized for wash fines during the Ditullio mining operations, and will be backfilled.

The vegetation acreage has been estimated based on the areas within the permit boundary outside of the proposed Developed Water Storage (or unlined open water pond), as water levels within these areas will fluctuate (based on storage needs) and do not require vegetation.

The reclamation costs are summarized in **Table 6 and 7**:

Veldman Property Reclamation Costs					
Direct Reclamation Costs - Revegetation					
Item		**Unit**	**Quantity**	**Unit Price**	**Extension**
1	Spread Topsoil (assumes 6 inches cover)	LS	1	$ 10,000	$ 10,000
2	Maintenance and Weed Control	AC	81	$ 30	$ 2,430
3	Fertilizer	AC	81	$ 20	$ 1,620
4	Tilling/Seeding/Mulching	AC	81	$ 1,032	$ 83,592
Veldman Revegetation Subtotal					**$ 97,642**
Veldman Direct Reclamation Costs Subtotal					**$ 97,642**
Indirect Reclamation Costs					
Item		**Unit**	**Quantity**	**Unit Price**	**Extension**
1	Performance Bond	Percent	951,172	1.5%	$ 14,268
2	Administration	Percent	965,439	1.5%	$ 14,482
Veldman Indirect Reclamation Costs Subtotal					**$ 28,749**
Total Veldman Reclamation Cost					**$ 126,391**
Total Veldman Reclamation Cost per acre (137 acres)					**$ 923**

Table 6: Reclamation Costs - Veldman Reclamation

Ditullio Property Reclamation Costs					
Direct Reclamation Costs					
Phase 1					
Item		**Unit**	**Quantity**	**Unit Price**	**Extension**
1	Mobilization/Demobilizaiton	LS	1	$ 5,000	$ 5,000
2	Dewatering	LS	1	$ 18,300	$ 18,300
3	Highwall Excavation	CY	2,000	$ 2	$ 4,000
4	Foundation Preparation/Keyway Preparation	LF	1,910	$ 5	$ 9,550
7	Zone 1a Slope Liner	CY	40,000	$ 4	$ 140,000
8	Revegetation	AC	1	$ 1,032	$ 1,011
Ditullio Phase 1 Subtotal					**$ 177,861**
Phase 3					
Item		**Unit**	**Quantity**	**Unit Price**	**Extension**
1	Mobilization/Demobilizaiton	LS	1	$ 5,000	$ 5,000
2	Dewatering	LS	1	$ 18,300	$ 18,300
3	Highwall Excavation	CY	2,000	$ 2	$ 4,000
4	Foundation Preparation/Keyway Preparation	LF	4,680	$ 5	$ 23,400
6	Roadway Fill	CY	10,000	$ 4	$ 35,000
7	Zone 1a Slope Liner	CY	69,000	$ 4	$ 241,500
8	Revegetation	AC	3	$ 1,032	$ 2,952
Ditullio Phase 3 Subtotal					**$ 330,152**
Phase 4					
Item		**Unit**	**Quantity**	**Unit Price**	**Extension**
1	Mobilization/Demobilizaiton	LS	1	$ 5,000	$ 5,000
2	Dewatering	LS	1	$ 18,300	$ 18,300
3	Highwall Excavation	CY	2,000	$ 2	$ 4,000
4	Foundation Preparation/Keyway Preparation	LF	6,670	$ 5	$ 33,350
5	Phase 4 Backfill	CY	442,000	$ 2	$ 884,000
7	Zone 1a Slope Liner	CY	163,000	$ 4	$ 570,500
8	Revegetation	AC	10	$ 1,032	$ 10,588
Ditullio Phase 4 Subtotal					**$ 1,525,738**
Phase 2 Revegetation					
Item		**Unit**	**Quantity**	**Unit Price**	**Extension**
1	Backfill	CY	263,000	$ 2	$ 526,000
2	Revegetation	AC	13	$ 1,032	$ 12,900
Total Reclamation Cost for Ditullio - Phase 2					**$ 538,900**
Phase 5 Revegetation					
Item		**Unit**	**Quantity**	**Unit Price**	**Extension**
2	Revegetation	AC	9	$ 1,032	$ 9,288
Total Reclamation Cost for Ditullio - Phase 5					**$ 9,288**
Bridge & Bridge Abutment Removal		LS	1	$ 15,000	**$ 15,000**
Ditullio Direct Reclamation Costs Subtotal					**$ 2,596,939**
Indirect Reclamation Costs					
Item		**Unit**	**Quantity**	**Unit Price**	**Extension**
1	QA/QC Observation/Testing	Day	60	$ 650	$ 39,000
3	Performance Bond	Percent	951,172	1.5%	$ 14,268
4	Administration	Percent	965,439	1.5%	$ 14,482
Ditullio Indirect Reclamation Costs Subtotal					**$ 67,749**
Total Ditullio Reclamation Cost					**$ 2,664,688**
Total Ditullio Reclamation Cost per acre (183 acres)					**$ 14,561**
Total Reclamation Cost for Three Bells					**$ 2,791,080**
Total Reclamation Cost per acre (320) acres)					**$ 8,722**

Table 7: Reclamation Costs - Ditullio Reclamation

13. Exhibit M – Other Permits and Licenses

Permits and licenses required to reclaim the Three Bells Mine are:

- Well permit issued by the SEO – Well Permit Number 64818-F for Substitute Water Supply Plan (SWSP) WDID 0303023 valid through December 2014
- Well permit issued by the Colorado Division of Water Resources (CO DWR) – Well Permit 11103 – Ditullio Property
- Well permit issued by the CO DWR – Well Permit Number 54295 – Veldman Property
- Discharge permit – NPDES Permit Number COG00131
- Stormwater management plan – SEO Permit Number 500131 – **Attachment E** shows the Three Bells Stormwater Management Plan
- Air pollution permit – CDPHE Permit Number 98PO0725, 99PO0269, and 10PO1301

14. Exhibit N – Source of Legal Right to Enter

MM has a lease with the landowner, River Bluffs Ventures, LLC as the mine operator, see **Attachment D**. As the operator, MM regulates who enters and exits the mine property.

15. Exhibit O – Owner(s) of Record of Affected Land (Surface Area) and Owners of Substance to be Mined

River Bluffs Ventures, LLC is the surface and subsurface owner. Please see **Figure C-1** for property boundaries and Owners of Record for surrounding land.

16. Exhibit P – Municipalities within Two Miles

Town of Timnath
4800 Goodman Street
Timnath, CO 80547
(970)-224-3211

Town of Windsor, Colorado
301 Walnut Street
Windsor, CO 80550
(970)-674-2400

17. Exhibit Q – Proof of Mailing Notices to Board of County Commissioners and Soil Conservation District

County Commissioner and Conservation District Notices

CERTIFIED MAIL™ RECEIPT
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SULLIVAN POST OFFICE STATION
09
DENVER CO
06/03/2014

Postage	$0.49
Certified Fee	$3.30
Return Receipt Fee (Endorsement Required)	$2.70
Restricted Delivery Fee (Endorsement Required)	$0.00
Total Postage & Fees	$6.49

Sent To: Fort Collins Conservation District
Street, Apt. No.; or PO Box No. 1415 N College Ave
City, State, ZIP+4 Fort Collins, CO 80524

PS Form 3800, August 2006 — See Reverse for Instructions

7013 3020 0000 6415 8011

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Ft Collins Conservation District
1415 North College Ave
Suite #3
Fort Collins, CO 80524

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☒ Agent ☐ Addressee

B. Received by (Printed Name) | C. Date of Delivery: 6/6/14

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail® ☐ Priority Mail Express™
☐ Registered ☒ Return Receipt for Merchandise
☐ Insured Mail ☐ Collect on Delivery

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7013 3020 0000 6415 8011

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SULLIVAN POST OFFICE STATION
09
DENVER CO
06/03/2014

Postage	$0.49
Certified Fee	$3.30
Return Receipt Fee (Endorsement Required)	$2.70
Restricted Delivery Fee (Endorsement Required)	$0.00
Total Postage & Fees	$6.49

Sent To: Larimer Board of County Commissioners
Street, Apt. No.; or PO Box No. 200 W. Oak St. Po Box 1190
City, State, ZIP+4 Ft Collins CO 80522

PS Form 3800, August 2006 — See Reverse for Instructions

7011 2000 0000 3770 7001

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Larimer Board of County Commissioners
200 West Oak Street
PO Box 1190
Ft Collins CO 80522

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X D Mosher ☒ Agent ☐ Addressee

B. Received by (Printed Name) D Mosher | C. Date of Delivery: 6-4

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail® ☐ Priority Mail Express™
☐ Registered ☒ Return Receipt for Merchandise
☐ Insured Mail ☐ Collect on Delivery

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7011 2000 0000 3770 7001

PS Form 3811, July 2013 Domestic Return Receipt

18. Exhibit R – Proof of Filing with County Clerk and Recorder

Larimer County Clerk and Recorder
Notice

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

LARIMER COUNTY CLERK
AND RECORDER
200 W. OAK STREET
FIRST FLOOR
FORT COLLINS CO 80521

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☒ Agent ☐ Addressee

B. Received by (Printed Name) J DAVIS

C. Date of Delivery 1-23

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail® ☐ Priority Mail Express™
☐ Registered ☒ Return Receipt for Merchandise
☐ Insured Mail ☐ Collect on Delivery

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number
(Transfer from service label) 7014 2120 0001 8344 1033

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Certified Fee		$3.30
Return Receipt Fee (Endorsement Required)		$2.70
Restricted Delivery Fee (Endorsement Required)		$0.00
Total Postage & Fees	$	$11.75

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01/21/2015

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JAN 21 2015

Sent To Larimer County Clerk + Recorder
Street & Apt. No., or PO Box No. 200 West Oak Street First Floor
City, State, ZIP+4 Fort Collins CO 80521

PS Form 3800, July 2014 See Reverse for Instructions

19. Exhibit S – Permanent Man-made Structures

Structures within 200 feet of the Affected Area of the Three Bells Mine are:

Owner: Bayswater Exploration and Production, LLC

- 2 oil/gas wells

Owner: Cache la Poudre Irrigation

- Weir on the Greeley Number 2 Canal
- Weir on the Cache la Poudre
- Residential building

Owner: William Graves

- 2 residential farming structures

Owner: John Graves

- 2 Bridges over the Greeley No. 2 Canal

Owner: Larimer County

- E CR 32E
- Parking lot and concrete path

Owner: South Fort Collins Sanitation District

- Monitoring station
- Pipeline

Owner: DCP Midstream

- Pipeline

Owner: Poudre Valley REA

- 2 sets of power lines

Land Owner Notices

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Postage	$	$0.49	0069
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Return Receipt Fee (Endorsement Required)		$2.70	Postmark Here
Restricted Delivery Fee (Endorsement Required)		$0.00	
Total Postage & Fees	$	$6.49	07/31/2014

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Sent To / Street, Apt. or PO Box / City, State,

Cache la Poudre Irrigation
PO Box 356
Greeley, CO 80631

PS Form 3... ...ions

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GEI Consultants
4601 DTC Boulevard, Suite 900
Denver, CO 80237

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Environmental
Water Resources
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80237

Cache la Poudre Irrigation
PO Box 356
Greeley, CO 80631

NAME
1ST NOTICE
AUG 01 2014

NIXIE 802 7E 1009 0008/02/14
RETURN TO SENDER
NOT DELIVERABLE AS ADDRESSED
UNABLE TO FORWARD
BC: 80237257425 *1820-09820-31-39

80237@2574
8063203555

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Return Receipt Fee (Endorsement Required)	$2.70
Restricted Delivery Fee (Endorsement Required)	$0.00
Total Postage & Fees	$ $6.49

Postmark Here
DENVER CO 80202 JUL 31 2014
SULLIVAN
07/31/2014

Sent To
Justin and Kate Green
Street, Apt. No., or PO Box No.
6324 LCR 1
City, State, ZIP+4
Windsor, CO 80550

PS Form ... Instructions

GEI Consultants

4601 DTC Boulevard, Suite 900
Denver, CO 80237

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Water Resources
Ecological

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80237

Justin and Kate Green
6324 LCR 1
Windsor, CO 80550

AUG 01 2014

NIXIE 802 SE 1009 0008/25/14
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UNCLAIMED
UNABLE TO FORWARD
BC: 80237257425 *1720 86786 31 39

80237@2574
8055025454524

U.S. Postal Service™
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OFFICIAL USE

Postage	$0.49
Certified Fee	$3.30
Return Receipt Fee (Endorsement Required)	$2.70
Restricted Delivery Fee (Endorsement Required)	$0.00
Total Postage & Fees	$6.49

Postmark Here
SULLIVAN POST OFFICE
JUL 31 2014
DENVER, CO 80227
07/31/2014

Sent To
South Fort Collins Sanitation District
Street, Apt. or PO Box
5150 Snead Drive
City, State
Fort Collins, CO 80525

PS Form

7014 2630 0001 3104 3176

SENDER: COMPLETE THIS SECTION

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- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Robert Weiderspon
1001 W 70th Ave
Denver, CO 80221

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X
☐ Agent
☐ Addressee

B. Received by (Printed Name)
C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☐ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7013 2630 0001 3104 3169

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

7013 2630 0001 3104 3176

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Postage	$0.49
Certified Fee	$3.30
Return Receipt Fee (Endorsement Required)	$2.70
Restricted Delivery Fee (Endorsement Required)	$0.00
Total Postage & Fees	$6.49

Postmark Here
SULLIVAN POST OFFICE
JUL 31 2014
DENVER, CO 80227
07/31/2014

Sent To
Robert Weiderspon
Street, Apt. or PO Box
1001 W 70th Ave
City, State
Denver, CO 80221

PS Form

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

South Fort Collins Sanitation District
5150 Snead Drive
Fort Collins, CO 80525

COMPLETE THIS SECTION ON DELI

A. Signature
X
B. Received by (Printed Name)
C
D. Is delivery address different from item
If YES, enter delivery address below:

3. Service Type
☐ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Recei
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee)

2. Article Number (Transfer from service label) 7013 2630 0001 3104 3176

PS Form 3811, February 2004 Domestic Return Receipt

7013 2630 0001 3104 3190

U.S. Postal Service™
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Postage	$0.49
Certified Fee	$3.30
Return Receipt Fee (Endorsement Required)	$2.70
Restricted Delivery Fee (Endorsement Required)	$0.00
Total Postage & Fees	$6.49

Postmark Here
SULLIVAN POST OFFICE
JUL 31 2014
DENVER, CO 80227
07/31/2014

Sent To
William Graves
Street, Apt. or PO
6201 South County Road 3
City, State
Fort Collins, CO 80528

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

William Graves
6201 South County Road 3
Fort Collins, CO 80528

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X
☐ Agent
☐ Addressee

B. Received by (Printed Name)
C. Date of Delivery
8/1/14

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☐ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7013 2630 0001 3104 3190

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

CERTIFIED MAIL™ RECEIPT
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FORT COLLINS CO 80522
OFFICIAL USE

Postage	$ $0.49
Certified Fee	$3.30
Return Receipt Fee (Endorsement Required)	$2.70
Restricted Delivery Fee (Endorsement Required)	$0.00
Total Postage & Fees	$ $6.49

Postmark Here: SULLIVAN POST OFFICE, DENVER, CO 80237, JUL 31 2014, 0069, 14, 07/31/2014

Sent To: **Larimer County**
PO Box 1190
Fort Collins, CO 80522

7013 2630 0001 3104 3121

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Larimer County
PO Box 1190
Fort Collins, CO 80522

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Mattel [signature] ☐ Agent ☐ Addressee

B. Received by (*Printed Name*) McWhitcomb
C. Date of Delivery 8/1/14

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☐ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number *(Transfer from service label)* 7013 2630 0001 3104 3121

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

CERTIFIED MAIL™ RECEIPT
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For delivery information visit our website at www.usps.com®
FORT COLLINS CO 80528
OFFICIAL USE

Postage	$ $0.49
Certified Fee	$3.30
Return Receipt Fee (Endorsement Required)	$2.70
Restricted Delivery Fee (Endorsement Required)	$0.00
Total Postage & Fees	$ $6.49

Postmark Here: SULLIVAN POST OFFICE, DENVER, CO, JUL 31 2014, 0069, 14, 07/31/2014

Sent To: **John Graves**
6324 S County Road 3
Fort Collins, CO 80528

7013 2630 0001 3104 3091

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

John Graves
6324 S County Road 3
Fort Collins, CO 80528

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☒ Addressee

B. Received by (*Printed Name*) John Graves
C. Date of Delivery 8/1/14

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☐ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number *(Transfer from service label)* 7013 2630 0001 3104 3091

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

CERTIFIED MAIL™ RECEIPT
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For delivery information visit our website at www.usps.com®
TIMNATH CO 80547
OFFICIAL USE

Postage	$ $0.49
Certified Fee	$3.30
Return Receipt Fee (Endorsement Required)	$2.70
Restricted Delivery Fee (Endorsement Required)	$0.00
Total Postage & Fees	$ $6.49

Postmark Here: SULLIVAN POST OFFICE, DENVER, CO 80237, JUL 31 2014, 0069, 14, 07/31/2014

Sent To: **Richard Weiderspon**
PO Box 73
Timnath, CO 80547

7013 2630 0001 3104 3152

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Richard Weiderspon
PO Box 73
Timnath, CO 80547

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by (*Printed Name*) Richard Weiderspon
C. Date of Delivery 8-1-14

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☒ No

3. Service Type
☐ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number *(Transfer from service label)* 7013 2630 0001 3104 3152

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Town of Windsor
301 Walnut Street
Windsor, CO 80550

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Judy Morris ☑ Agent ☐ Addressee

B. Received by (Printed Name) Judy Morris C. Date of Delivery 8-1-14

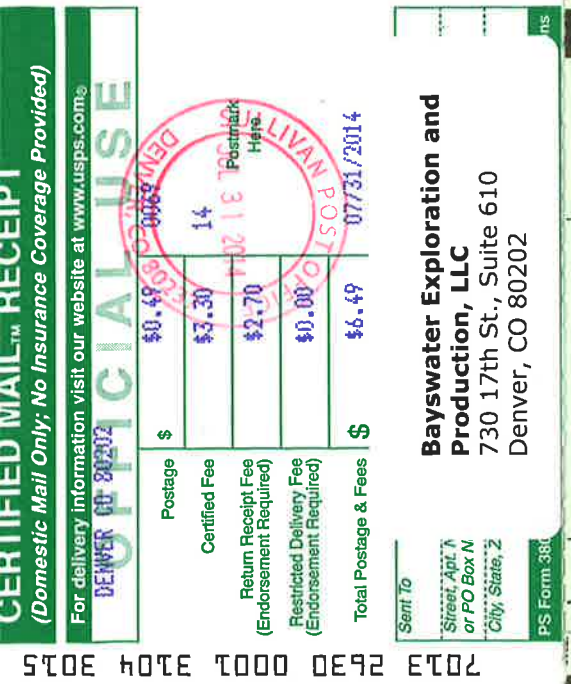
D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☐ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7013 2630 0001 3104 3183

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540



SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Bayswater Exploration and Production, LLC
730 17th St., Suite 610
Denver, CO 80202

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X ☐ Agent ☐ Addressee

B. Received by (Printed Name) C. Date of Delivery

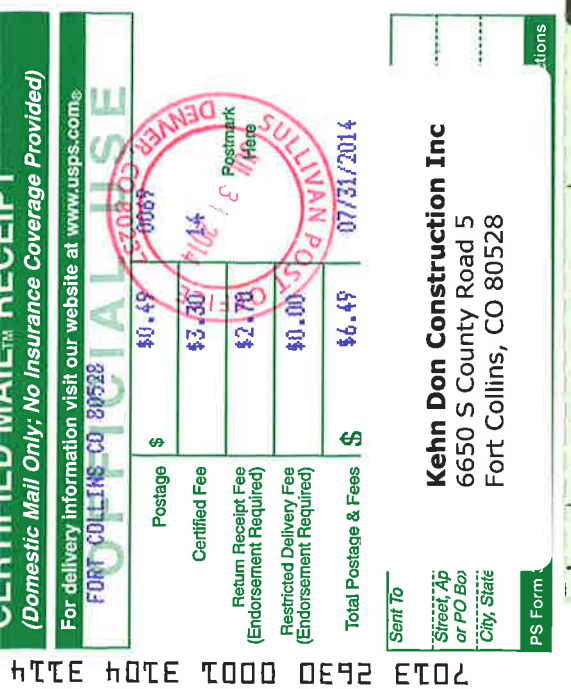
D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☐ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7013 2630 0001 3104 3015

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540



SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Kehn Don Construction Inc
6650 S County Road 5
Fort Collins, CO 80528

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X ☒ Agent ☐ Addressee

B. Received by (Printed Name) C. Date of Delivery 8/1/14

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☒ No

3. Service Type
☐ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7013 2630 0001 3104 3114

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

CERTIFIED MAIL™ RECEIPT
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GREELEY CO 80631
OFFICIAL USE

Postage	$0.49
Certified Fee	$3.30
Return Receipt Fee (Endorsement Required)	$2.70
Restricted Delivery Fee (Endorsement Required)	$0.00
Total Postage & Fees	$6.49

Postmark Here: SULLIVAN POST OFFICE, JUL 31 2014, 80631
07/31/2014

Sent To: Lone Tree Investments LLC
Street, Apt. or PO Box: 800 8th Ave, Ste. 323
City, State: Greeley, 80631
PS Form

SENDER: COMPLETE THIS SECTION
- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Lone Tree Investments LLC
800 8th Ave, Ste. 323
Greeley, 80631

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) [signature] C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

GREELEY MAIN STA
AUG 06 2014
80631

3. Service Type
☐ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7013 2630 0001 3104 3138

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

CERTIFIED MAIL™ RECEIPT
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GREELEY CO 80634
OFFICIAL USE

Postage	$0.49
Certified Fee	$3.30
Return Receipt Fee (Endorsement Required)	$2.70
Restricted Delivery Fee (Endorsement Required)	$0.00
Total Postage & Fees	$6.49

Postmark Here: SULLIVAN POST OFFICE, JUL 31 2014, DENVER CO 80231
07/31/2014

Sent To: Elmer Weiderspon
Street, Apt. or PO Box: 155 83rd Ave
City, State: Greeley, CO 80634
PS Form

SENDER: COMPLETE THIS SECTION
- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Elmer Weiderspon
155 83rd Ave
Greeley, CO 80634

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☐ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7013 2630 0001 3104 3084

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

CERTIFIED MAIL™ RECEIPT
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LOVELAND CO 80537
OFFICIAL USE

Postage	$0.49
Certified Fee	$3.30
Return Receipt Fee (Endorsement Required)	$2.70
Restricted Delivery Fee (Endorsement Required)	$0.00
Total Postage & Fees	$6.49

Postmark Here: SULLIVAN POST OFFICE, JUL 31 2014, DENVER CO 80231
07/31/2014

Sent To: Mr. Ben Ludington
Street, Apt. or PO Box: Poudre Valley REA, 4200 W County Road 14
City, State: Loveland, CO 80537
PS Form

SENDER: COMPLETE THIS SECTION
- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Ben Ludington
Poudre Valley REA
4200 W County Road 14
Loveland, CO 80537

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) [signature] C. Date of Delivery 8-15-14

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☐ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7013 2630 0001 3104 3145

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

Structure Agreements

Structure Agreement

This letter has been provided to you as the owner of a structure on or within two hundred (200) feet of a proposed mine site. The State of Colorado, Division of Reclamation, Mining and Safety ("Division") requires that where a mining operation will adversely affect the stability of any significant, valuable and permanent man-made structure located within two hundred (200) feet of the affected land, the Applicant shall either:

Provide a notarized agreement between the Applicant and the Person(s) having an interest in the structure, that the Applicant is to provide compensation for any damage to the structure; or

Where such an agreement cannot be reached, the Applicant shall provide an appropriate engineering evaluation that demonstrates that such structure shall not be damaged by activities occurring at the mining operation; or

Where such structure is a utility, the Applicant may supply a notarized letter, on utility letterhead, from the owner(s) of the utility that the mining and reclamation activities, as proposed, will have "no negative effect" on their utility. (*Construction Materials Rule 6.3.12 and Rule 6.4.19 & Hard Rock/Metal Mining Rule 6.3.12 and Rule 6.4.20)*

The Colorado Mined Land Reclamation Board ("Board") has determined that this form, if properly executed, represents an agreement that complies with Construction Materials Rule 6.3.12(a), Rule 6.4.19(a), and C.R.S. § 34-32.5-115(4)(e) and with Hard Rock/Metal Mining Rule 6.3.12(a), Rule 6.4.20(a), and C.R.S. § 34-32-115(4)(d). This form is for the sole purpose of ensuring compliance with the Rules and Regulations and shall not make the Board or Division a necessary party to any private civil lawsuit to enforce the terms of the agreement or create any enforcement obligations in the Board or the Division.

The following structures are located on or within 200 feet of the proposed affected area:

1. Road - E CR 32E – between South County Road 3 and County Line Road

2. Parking Lot – Latitude (N) 40.486364 and Longitude (W) -104.958312

3. Concrete Path – Starting at Latitude (N) 40.86125 and Longitude (W) -104.958685

The Applicant, Martin Marietta Materials does hereby certify that Larimer County shall be compensated for any damage from the proposed mining operation to the above listed structure(s) located on or within 200 feet of the proposed affected area described within Exhibit A, of the Reclamation Permit Application for Three Bells Mine, File Number M-1979-191.

This form has been approved by the Colorado Mined Land Reclamation Board pursuant to its authority under the Colorado Land Reclamation Act for the Extraction of Construction Materials and the Colorado Mined Land Reclamation Act for Hard Rock, Metal, and Designated Mining Operations. Any alteration or modification to this form shall result in voiding this form.

NOTARY FOR PERMIT APPLICANT

ACKNOWLEGED BY: Martin Marietta Materials, Inc.

Applicant [signature] Representative Name David Hagerman

Date 07/25/14 Title Regional VP/GM

STATE OF Colorado)
) ss.
COUNTY OF Jefferson)

The foregoing was acknowledged before me this 25th day of July, 2014 by David Hagerman as Regional VP/GM of Martin Marietta Materials, Inc.

[signature] My Commission Expires: 05/30/16
Notary Public

JULIE M. MIKULAS NOTARY PUBLIC STATE OF COLORADO

NOTARY FOR STRUCTURE OWNER

ACKNOWLEGED BY:

Structure Owner [signature] Name MARK R. PETERSON

Date 09/08/14 Title COUNTY ENGINEER

STATE OF Colorado)
) ss.
COUNTY OF Larimer)

TIMOTHY D MEYER
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20134034058
My Commission Expires May 31, 2017

The foregoing was acknowledged before me this 8th day of September, 2014, by Mark R. Peterson as County Engineer of Larimer County.

[signature] My Commission Expires: 5-31-2017
Notary Public

GEI Consultants

July 31, 2014
GEI Project Number: 1405210-1001

Bayswater Exploration and Production, LLC
730 17th St., Suite 610
Denver, CO 80202

Geotechnical
Environmental
Water Resources
Ecological

Re: Public Notice for Three Bells Mine Permit Amendment

Dear Bayswater Exploration and Production, LLC,

Martin Marietta Materials (applicant), whose address is 1800 N. Taft Hill Road, Fort Collins, CO, (970) 224-7343, has filed an application for Regular (112) Construction and Materials Operation Reclamation Permit Amendment with the Colorado Mined Land Reclamation Board under provision of the Colorado Land Reclamation Act for the Extraction of Construction Materials. The mine is known as the Three Bells Mine and is includes the Veldman and Ditullio properties. The Three Bells mine is located in in Township 6 North, Range 68 West of the 6th Principle Meridian, in Sections 11, 12, and 13.

The Three Bells Mine is presently operational under permit M-1979-191. Reclamation is expected to be complete by December 2014 for the Veldman Property, and by December 2015 for the Ditullio Property. The proposed future use of the land is developed water storage with the potential for residential housing development.

Additional information and a tentative decision date may be obtained from the Division of Reclamation, Mining and Safety (1313 Sherman Street, Room 215, Denver, CO 80203, (303) 866-3567), the Larimer County Clerk and Recorder's office (200 W. Oak Street, First Floor, Fort Collins, CO 80521), or from the above named applicant. A complete copy of the application is available at the Larimer County Clerk and Recorders office and at the Colorado Division of Reclamation, Mining, and Safety office.

Comments concerning the application and exhibits must be in writing and must be received by the Division of Reclamation, Mining, and Safety by 4:00 p.m. on July 31, 2014.

Please note that under the 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.

Thank you for your time and attention. Please do not hesitate to contact me with any questions by mobile phone at (303) 775-2063, office phone at (970) 224-7343, or by email at jdeuto@geiconsultants.com.

Sincerely,

RECEIVED
AUG 0 1 2014

Jeremy Deuto, PG, EIT

GEI Consultants, Inc.
4601 DTC Boulevard, Suite 900, Denver, CO 80237
303.662.0100 fax: 303.662.8757

The Applicant, Martin Marietta Materials does hereby certify that Bayswater Exploration and Production, LLC shall be compensated for any damage from the proposed mining operation to the above listed structure(s) located on or within 200 feet of the proposed affected area described within Exhibit A, of the Reclamation Permit Application for Three Bells Mine, File Number M-1979-191.

This form has been approved by the Colorado Mined Land Reclamation Board pursuant to its authority under the Colorado Land Reclamation Act for the Extraction of Construction Materials and the Colorado Mined Land Reclamation Act for Hard Rock, Metal, and Designated Mining Operations. Any alteration or modification to this form shall result in voiding this form.

NOTARY FOR PERMIT APPLICANT

ACKNOWLEGED BY: Martin Marietta Materials, Inc.

Applicant [signature] Representative Name David Hagerman

Date 07/25/14 Title Regional VP/GM

STATE OF Colorado)
) ss.
COUNTY OF Jefferson)

The foregoing was acknowledged before me this 25th day of July, 2014, by David Hagerman as Regional VP/GM of Martin Marietta Materials, Inc.

[signature] My Commission Expires: 05/30/16
Notary Public

JULIE M. MIKULAS NOTARY PUBLIC STATE OF COLORADO

NOTARY FOR STRUCTURE OWNER

ACKNOWLEGED BY: [signature]

Structure Owner Bayswater Exploration & Production, LLC Name MARK E. BROWN

Date 9/18/2014 Title Operations Manager

STATE OF Colorado)
) ss.
COUNTY OF Denver)

The foregoing was acknowledged before me this 18th day of September, 2014, by Mark E. Brown as Operations Manager of Bayswater Exploration & Production LLC,

[signature] My Commission Expires: 8-20-2017
Notary Public

NOTARY PUBLIC CORELLA R GREEN STATE OF COLORADO

STATE OF COLORADO NOTARY PUBLIC

GEI Consultants

4601 DTC Boulevard, Suite 900
Denver, CO 80237

Geotechnical
Environmental
Water Resources
Ecological

CERTIFIED MAIL™

7013 3020 0002 2269 0575

UNITED STATES POSTAL SERVICE

1000

80631

U.S. POSTAGE
PAID
FORT COLLINS.CO
80525
AUG 04, '14
AMOUNT

$6.49
00092567-12

Cache la Poudre Irrigation
PO Box 356
Greeley, CO 80631

AUG 05 2014

NAME
NOTICE

NIXIE 802 DE 1009 0008/06/14

RETURN TO SENDER
ATTEMPTED - NOT KNOWN
UNABLE TO FORWARD

BC: 80237257425 *0220-01728-04-47

80237@2574

GEI Consultants

4601 DTC Boulevard, Suite 900
Denver, CO 80237

Geotechnical
Environmental
Water Resources
Ecological

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Justin and Kate Green
6324 LCR 1
Windsor, CO 80550

AUG 05 2014

NIXIE 802 SE 1 0008/23/14

RETURN TO SENDER
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UNABLE TO FORWARD

BC: 80237257425 *1220-00820-04-47

80237@2574

Three Bells

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Postage	$	$0.49
Certified Fee		$3.30
Return Receipt Fee (Endorsement Required)		$2.70
Restricted Delivery Fee (Endorsement Required)		$0.00
Total Postage & Fees	$	$6.49

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08/04/2014
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City, S
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Instructions

Bayswater Exploration and Production, LLC
730 17th St., Suite 610
Denver, CO 80202

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GREELEY CO 80631
OFFICIAL USE

Postage	$	$0.49
Certified Fee		$3.30
Return Receipt Fee (Endorsement Required)		$2.70
Restricted Delivery Fee (Endorsement Required)		$0.00
Total Postage & Fees	$	$6.49

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Cache la Poudre Irrigation
PO Box 356
Greeley, CO 80631

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FORT COLLINS CO 80528
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Postage	$	$0.49
Certified Fee		$3.30
Return Receipt Fee (Endorsement Required)		$2.70
Restricted Delivery Fee (Endorsement Required)		$0.00
Total Postage & Fees	$	$6.49

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08/04/2014
FORT COLLINS, CO MAIN POST OFFICE USPS

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Sent To
Street, or PO
City, St
PS Form
Instructions

John Graves
6324 S County Road 3
Fort Collins, CO 80528

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WINDSOR CO 80550
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Postage	$	$0.49
Certified Fee		$3.30
Return Receipt Fee (Endorsement Required)		$2.70
Restricted Delivery Fee (Endorsement Required)		$0.00
Total Postage & Fees	$	$6.49

0196
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AUG - 4 2014
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7013 3020 0002 2269 0599

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or PO
City,
PS Form
Instructions

Justin and Kate Green
6324 LCR 1
Windsor, CO 80550

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FORT COLLINS CO 80522
OFFICIAL USE

Postage	$	$0.49
Certified Fee		$3.30
Return Receipt Fee (Endorsement Required)		$2.70
Restricted Delivery Fee (Endorsement Required)		$0.00
Total Postage & Fees	$	$6.49

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08/04/2014
FORT COLLINS, CO MAIN POST OFFICE USPS

7013 3020 0002 2269 0605

Sent
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or PO
City,
PS Form
Instructions

Larimer County
PO Box 1190
Fort Collins, CO 80522

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For delivery information visit our website at www.usps.com®
LOVELAND CO 80537
OFFICIAL USE

Postage	$	$0.49
Certified Fee		$3.30
Return Receipt Fee (Endorsement Required)		$2.70
Restricted Delivery Fee (Endorsement Required)		$0.00
Total Postage & Fees	$	$6.49

0196
Postmark Here
AUG - 4 2014
08/04/2014
FORT COLLINS, CO MAIN POST OFFICE USPS

7013 3020 0002 2269 0612

Sent To
Street, or PO
City, S
PS Form
Instructions

Mr. Ben Ludington
Poudre Valley REA
4200 W County Road 14
Loveland, CO 80537

Three Bells

7013 3020 0002 2269 0629

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FORT COLLINS CO 80525

OFFICIAL USE

Postage	$ $0.49	0196
Certified Fee	$3.30	13
Return Receipt Fee (Endorsement Required)	$2.70	Postmark Here
Restricted Delivery Fee (Endorsement Required)	$0.00	
Total Postage & Fees	$ $6.49	08/04/2014

FORT COLLINS, CO MAIN POST OFFICE AUG - 4 2014 80526 - USPS

Sent To
Street, or PO
City, St

South Fort Collins Sanitation District
5150 Snead Drive
Fort Collins, CO 80525

PS Form ... Instructions

7013 3020 0002 2269 0636

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For delivery information visit our website at www.usps.com®
FORT COLLINS CO 80528

OFFICIAL USE

Postage	$ $0.49	0196
Certified Fee	$3.30	13
Return Receipt Fee (Endorsement Required)	$2.70	Postmark Here
Restricted Delivery Fee (Endorsement Required)	$0.00	
Total Postage & Fees	$ $6.49	08/04/2014

COLLINS, CO MAIN POST OFFICE AUG - 4 2014 USPS

Sent To
Street, or PO
City, St

William Graves
6201 South County Road 3
Fort Collins, CO 80528

PS Form ... Instructions

2790 6922 2000 020E ETO2

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Ben Ludington
Poudre Valley REA
4200 W County Road 14
Loveland, CO 80537

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X ☐ Agent ☐ Addressee

B. Received by (Printed Name) Louise Wilson C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No
8-15-14

3. Service Type
☑ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number
(Transfer from service label)

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

2850 6922 2000 020E ETO2

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

John Graves
6324 S County Road 3
Fort Collins, CO 80528

A. Signature
X ☐ Agent ☐ Addressee

B. Received by (Printed Name) C. Date of Delivery 8-6

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number
(Transfer from service label)

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

5090 6922 2000 020E ETO2

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Larimer County
PO Box 1190
Fort Collins, CO 80522

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X ☑ Agent ☐ Addressee

B. Received by (Printed Name) C. Date of Delivery 8.5.14

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number
(Transfer from service label)

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Bayswater Exploration and Production, LLC
730 17th St., Suite 610
Denver, CO 80202

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X ☐ Agent ☐ Addressee

B. Received by (Printed Name) C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number
(Transfer from service label)

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

6290 6922 2000 020E ETO2

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

South Fort Collins Sanitation District
5150 Snead Drive
Fort Collins, CO 80525

COMPLETE THIS SECTION ON DEL

A. Signature
X

B. Received by (Printed Name)

D. Is delivery address different from item
If YES, enter delivery address below

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Recei
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)*

2. Article Number
(Transfer from service label)

PS Form 3811, February 2004 Domestic Return Receipt

9E90 6922 2000 020E ETO2

SENDER: COMPLETE THIS

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

William Graves
6201 South County Road 3
Fort Collins, CO 80528

A. Signature
X April L. Graves ☐ Agent ☐ Addressee

B. Received by (Printed Name)

C. Date of Delivery
8-5

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number
(Transfer from service label)

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

DCP MIDSTREAM
370 17TH ST
DENVER CO 80202

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Sonya K ☐ Agent ☐ Addressee

B. Received by (Printed Name) S. Krame
C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail® ☐ Priority Mail Express™
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ Collect on Delivery

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from s) 7014 0510 0002 2082 5623

PS Form 3811, July 2013 Domestic Return Receipt

7014 0510 0002 2082 5623

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DENVER CO 80202

OFFICIAL USE

Postage	$0.49
Certified Fee	$3.30
Return Receipt Fee (Endorsement Required)	$2.70
Restricted Delivery Fee (Endorsement Required)	$0.00
Total Postage & Fees	$6.49

0069
10
Postmark Here
SULLIVAN POST OFFICE
OCT 22 2014
DENVER, CO 80237
10/22/2014

Sent To: DCP MIDSTREAM
Street, Apt. No.; or PO Box No.: 370 17TH ST
City, State, ZIP+4: DENVER CO 80202

PS Form 3800, August 2006 See Reverse for Instructions

7014 0510 0002 2082 5616

U.S. Postal Service™
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For delivery information visit our website at www.usps.com®
FORT COLLINS CO 80525

OFFICIAL USE

Postage	$0.49
Certified Fee	$3.30
Return Receipt Fee (Endorsement Required)	$2.70
Restricted Delivery Fee (Endorsement Required)	$0.00
Total Postage & Fees	$6.49

0069
10
Postmark Here
SULLIVAN POST OFFICE
OCT 22 2014
DENVER, CO 80237
10/22/2014

Sent To: SOUTH FORT COLLINS SANITATION DISTRICT
Street, Apt. No.; or PO Box No.: 5150 SNEAD DRIVE
City, State, ZIP+4: FORT COLLINS CO 80525

PS Form 3800, August 2006 See Reverse for Instructions

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

SOUTH FORT COLLINS
SANITATION DISTRICT
5150 SNEAD DRIVE
FORT COLLINS CO 80525

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Sandra Hays ☐ Agent ☐ Addressee

B. Received by (Printed Name)
C. Date of Delivery 10/24

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail® ☐ Priority Mail Express™
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ Collect on Delivery

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Numb (Transfer from 7014 0510 0002 2082 5616

PS Form 3811, July 2013 Domestic Return Receipt

Figures

LEGEND:

LAND TO BE RELEASED

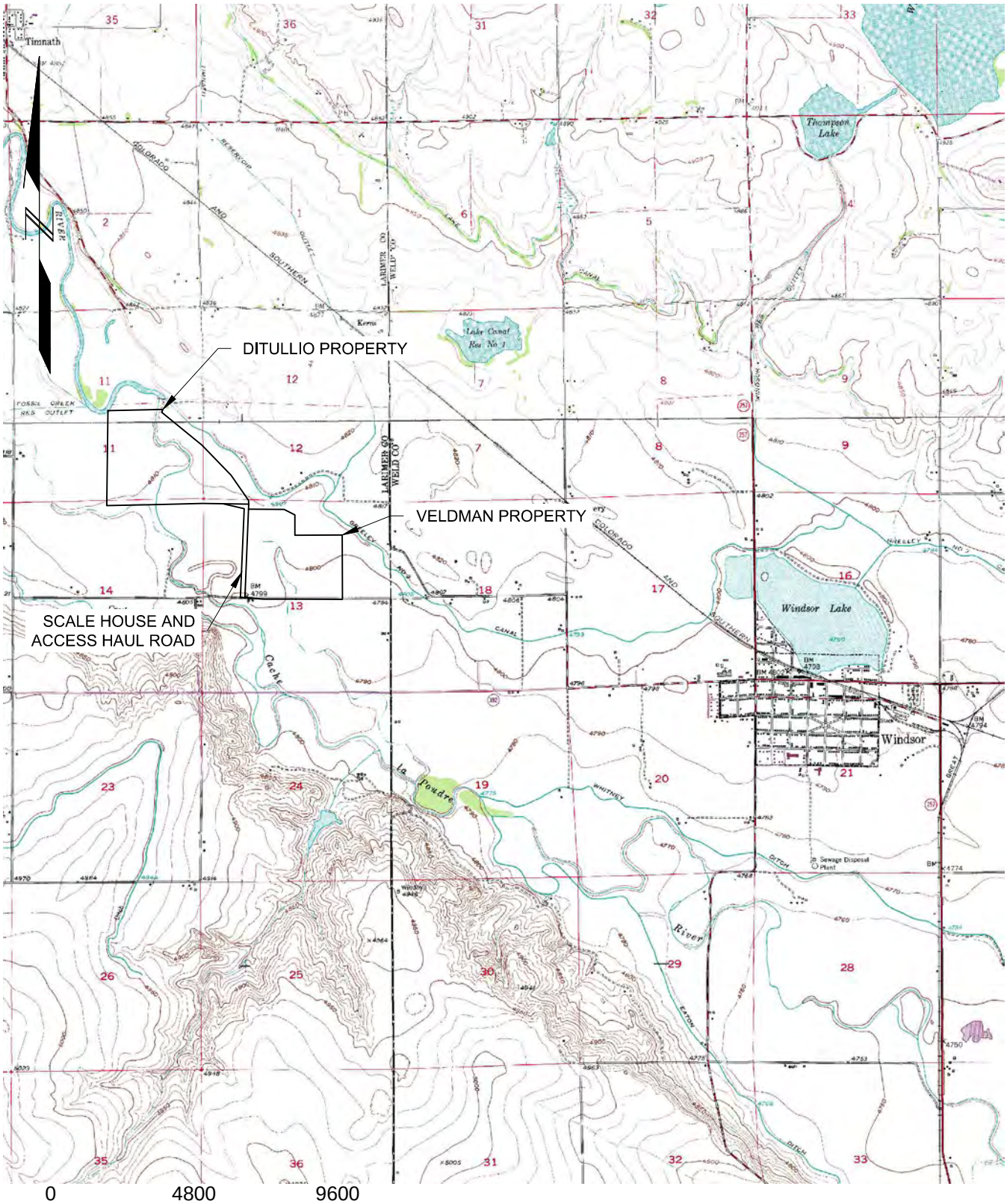
Date of Initial Preparation: December 11, 2012

STATEMENT OF LINEAR UNITS USED:
Linear Units Used for this survey – U.S. Survey Feet

COLORADO REGISTERED
STEVEN JOHN STENZEL
30462
PROFESSIONAL LAND SURVEYOR

Three Bells Mine Land Release Windsor, Colorado	GEI Consultants	VELDMAN PROPERTY PROPOSED PERMIT BOUNDARY
Martin Marietta Materials, Inc. Fort Collins, Colorado	Project 140521-0	January 2015 Figure A-1

P:\1405210 - Ditullio-Three Bells\Civil\Production Drawings\Working Drawings\ Land Release - Veldman Updated SJM.dwg Jan 2015



M-1979-191 Reclamation Permit Amendment
Application: Three Bells Mine
Larimer County

Martin Marietta Materials
Fort Collins, Colorado

GEI Consultants

Project 140521-0

THREE BELLS MINE
INDEX MAP

May 2014

Figure B

P:\1405210 - Ditullio-Three Bells\Civil\Production Drawings\Working Drawings\ Figure B - Index Map.dwg Jan 2015

Cache la Poudre Irrigation
A. Residential Structure (shed or garage)
B. Weir on Greeley No. 2 Canal
C. Weir on the Cache la Poudre

William Graves
D. Residential Farming Structure
E. Residential Farming Structure

John Graves
F. Bridge over Greeley No. 2 Canal
G. Bridge over Greeley No. 2 Canal

Bayswater Exploration and Production, LLC
H. Gas Well – River Bluffs #10-13
I. Gas Well – River Bluffs #18-13

DCP Midstream
J. Pipeline – servicing the Bayswater Exploration well pads

Larimer County
K. Road - E CR 32E – between South County Road 3 and County Line Road
L. Parking Lot
M. Concrete Path

South Fort Collins Water Sanitation District
N. Water Monitoring Station
Q. Pipeline

Poudre Valley REA
O. Powerlines – Run north to south through the Ditullio Property
P. Powerlines – Run along the north side of the Veldman and Ditullio Property, including a service line to the scale house

WEIDERSPON ELMER, ROBERT, RICHARD
CACHE LA POUDRE IRRIGATION CO
GRAVES WILLIAM J /APRIL LYNN
GRAVES JOHN B /BRENDA K
KEHN DON CONSTRUCTION INC
RIVER BLUFFS VENTURES LLC
GRAVES JOHN /BRENDA K
GEORGE J MARK /LINDA S
GRAVES BRENDA K /JOHN D
RIVER BLUFFS
LONE TREE INVESTMENTS LLC
SOUTH FORT COLLINS SANITATION DISTRICT
TOWN OF WINDSOR
COUNTY OF LARIMER
Boxelder Ditch
Greeley No 2 Canal
Cache La Poudre River
Fossil Creek
GOLD DUST RD
DIAMOND FIRE ST
SUMMERFIELD PY
CR 3
TRILBY RD
32E
CO LINE RD
JACOBY RD
WATSON DR
GALLERY DR
DARTFORD DR
LANLEY DR
KELMSLEY CT
CHAMBERLY CT
BOTLEY DR
COLMEY CT
WYCOMBE CT
AYLESBURY CT
17TH ST
WINDSHIRE DR

LEGEND:

- Parking Lot
- Concrete Path
- Farm Structure
- Residential Structure
- Water Monitoring Station
- Weir
- Bridge
- Oil and Gas Well
- DCP Midstream Pipeline
- Three Bells Mine Boundary
- Three Bells 600ft Buffer
- Three Bells 200ft Buffer
- Pond
- Stream
- Cache La Poudre River
- Road
- Parcel Boundary
- Poudre Valley REA utility line
- FCLWD/SFCSD pipeline

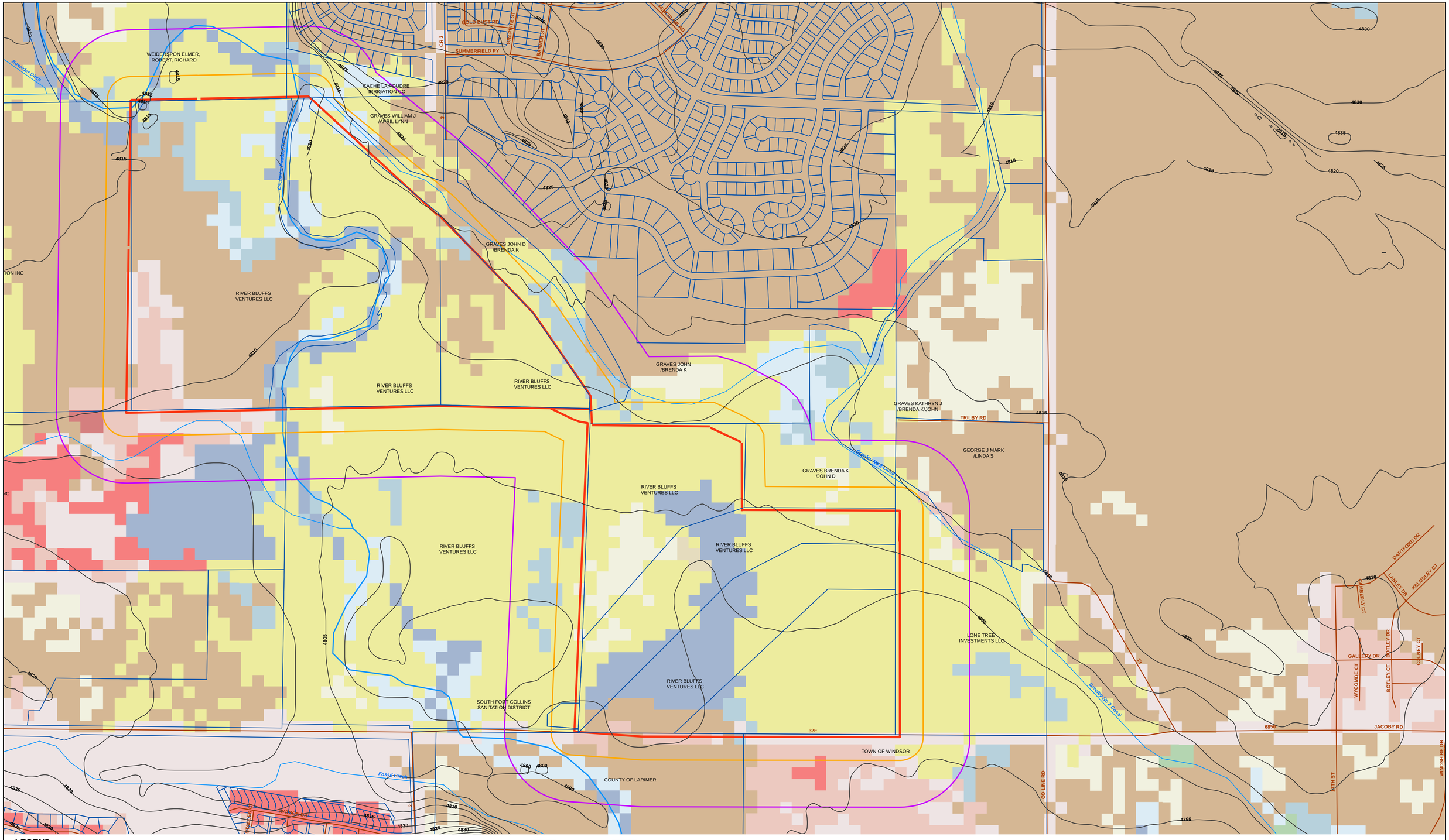
0 300 600 1,200
Feet

Source: Colorado Oil & Gas Conservation Commission, Division of Water Resources, Larimer County.

N

Designed by: D. Guth	M-1979-191 Reclamation Permit Amendment Application: Three Bells Mine Larimer County	GEI Consultants	Three Bells Mine: Premining Map - Manmade
Approved by: J. Deuto	Martin Marietta Materials Fort Collins, CO	Project 133252	August 2014 EXHIBIT C-1

V:\PROJECTS\1405210 - Ditullio-Three Bells\GIS\Exhibit_C-1.34x22.mxd



LEGEND:

- Contour lines
- Parcel Boundary
- Stream
- Cache La Poudre River
- Three Bells Mine Boundary
- Three Bells 600ft Buffer
- Three Bells 200ft Buffer
- Road
- Water
- Developed area
- Developed - Low
- Developed - Moderate
- Developed - High
- Deciduous Forest
- Shrub/Scrub
- Grassland
- Pasture/Hay
- Cropland
- Woody Wetland
- Herbaceous Wetland

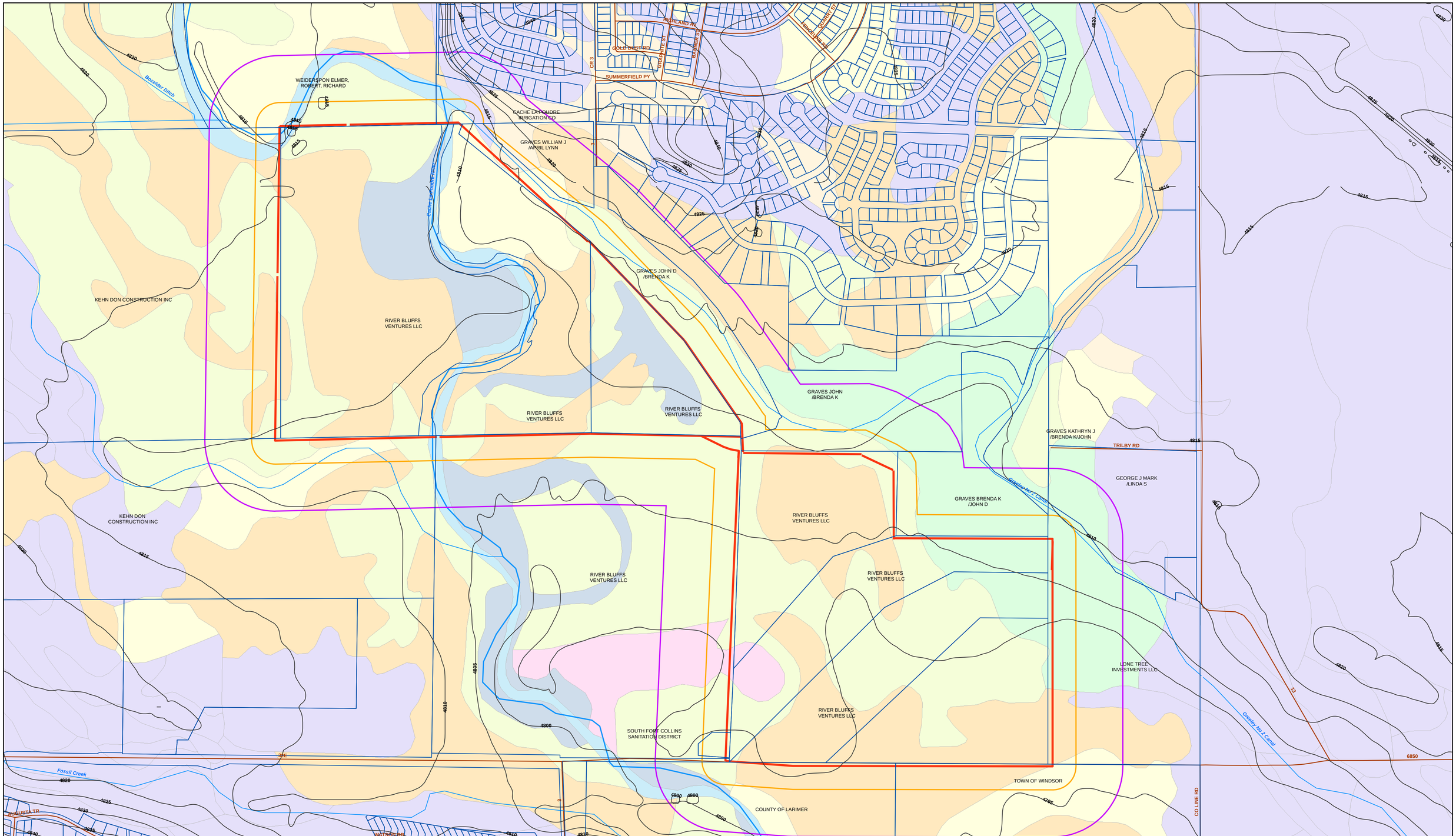
0 300 600 1,200
Feet

N

Source:
United States Geological Survey,
National Land Cover Dataset

Designed by: D. Guth	M-1979-191 Reclamation Permit Amendment Application: Three Bells Mine Larimer County	GEI Consultants	Three Bells Mine: Premining Map - Vegetative Cover
Approved by: J. Deuto	Martin Marietta Materials Fort Collins, CO	Project 133252	August 2014 EXHIBIT C-2

V:\PROJECTS\1405210 - Dibullio-Three Bells\GIS\Exhibit_C-2.34x22.mxd



LEGEND:

- Contour lines
- Parcel Boundary
- Stream
- Cache La Poudre River
- Three Bells Mine Boundary
- Three Bells 600ft Buffer
- Three Bells 200ft Buffer
- Road
- Other
- Stoneham Loam
- Table Mountain Loam
- Caruso Clay Loay
- Loveland Clay Loam
- Paoli fine Sandy Loam
- Riverwash
- Satanta Variant Clay Loam
- Water

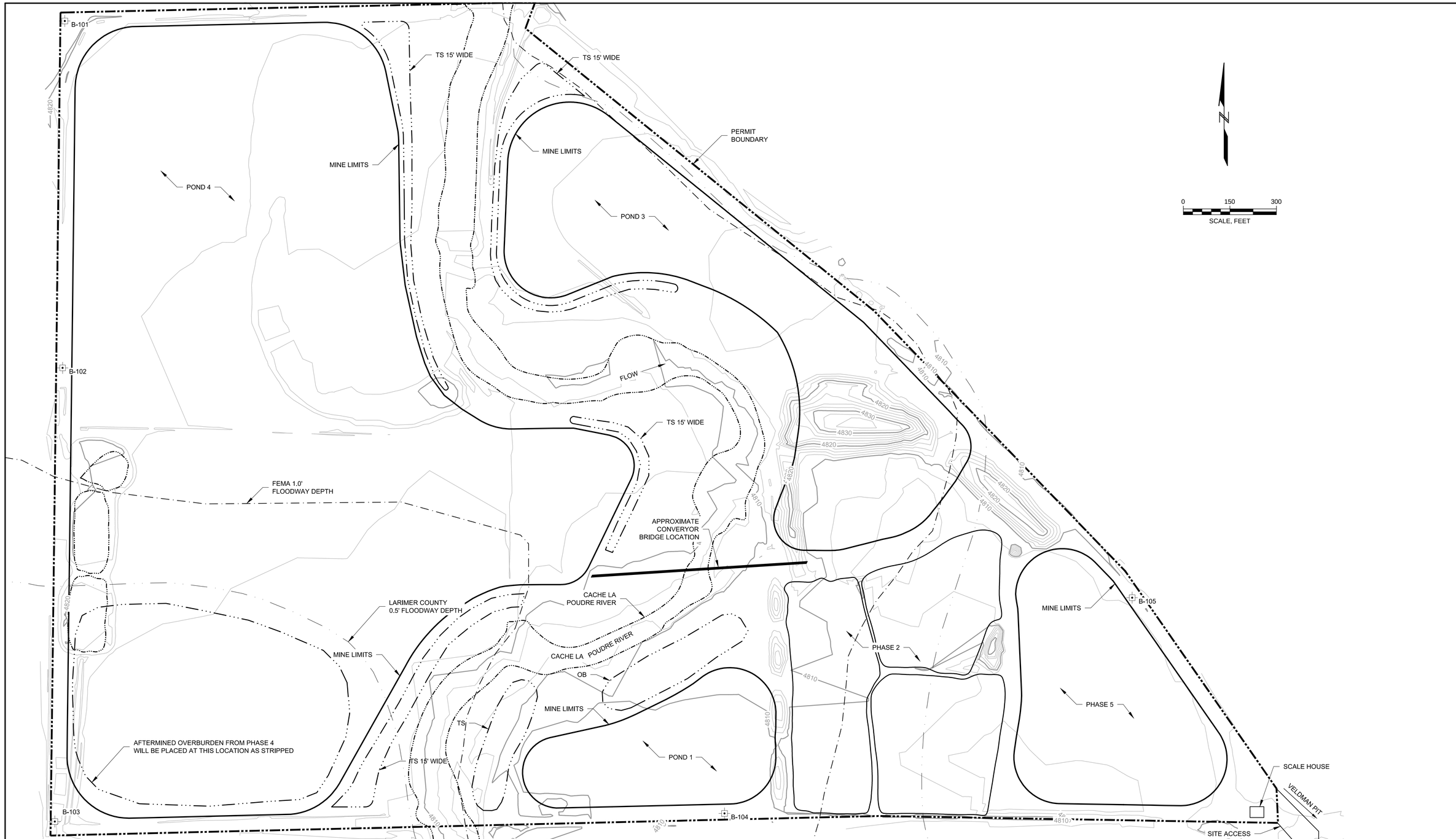
0 300 600 1,200
Feet

N

Source:
Natural Resources Conservation Service, Soil Survey

Designed by: D. Guth	M-1979-191 Reclamation Permit Amendment Application: Three Bells Mine Larimer County	GEI Consultants	Three Bells Mine: Premining Map - Soil Type
Approved by: J. Deuto	Martin Marietta Materials Fort Collins, CO	Project 133252	August 2014 EXHIBIT C-3

V:\PROJECTS\1405210 - Ditullio-Three Bells\GIS\Exhibit_C-3.34x22.mxd



LEGEND:

PIEZOMETER

APPROXIMATE STOCKPILE BOUNDARIES

NOTE:
PIEZOMETER LOCATION IS APPROXIMATE

M-1979-191 Reclamation Permit Amendment
Application: Three Bells Mine
Larimer County, Colorado

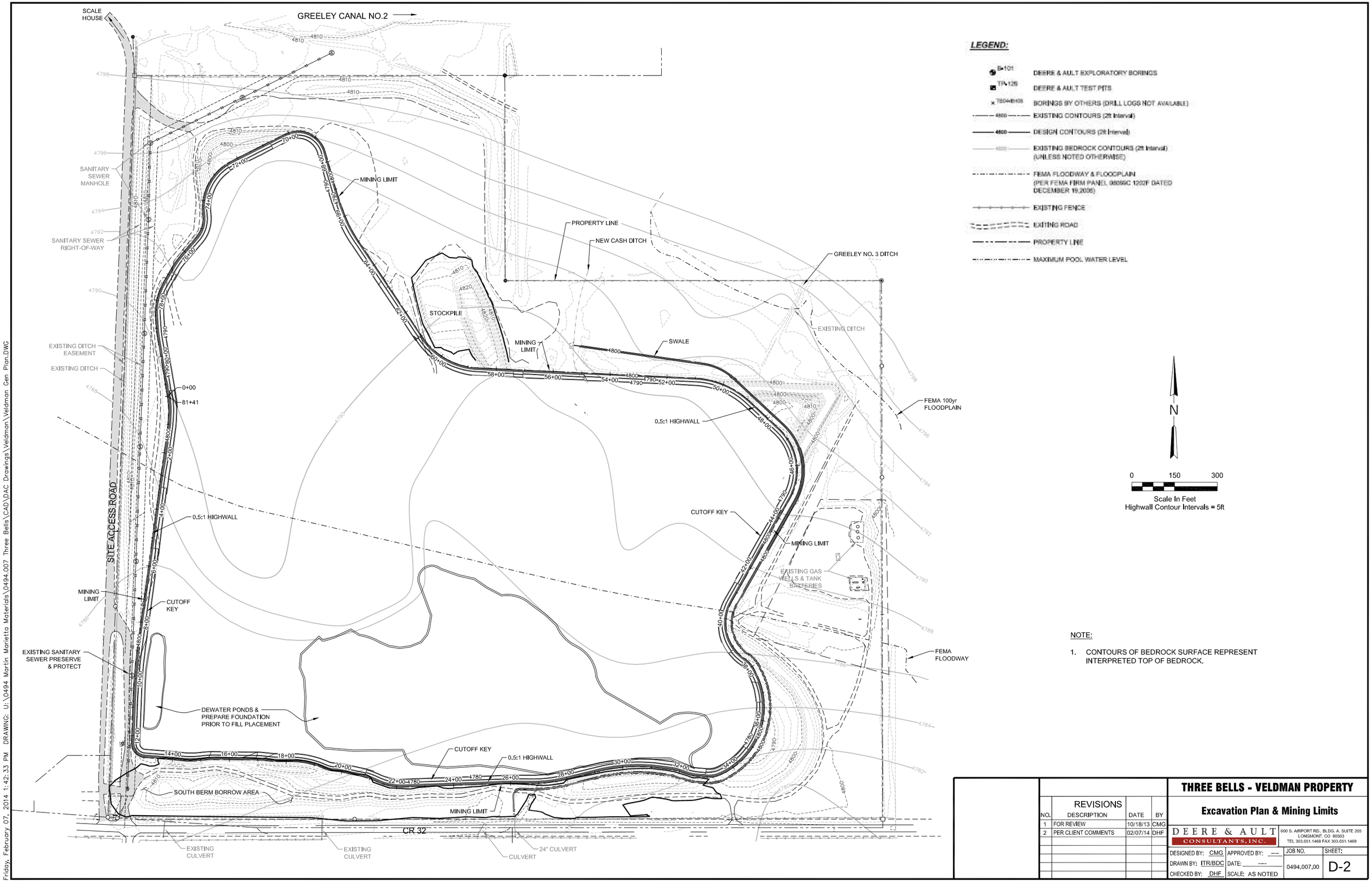
Martin Marietta Materials
Fort Collins, CO

GEI Consultants

DITULLIO MINING
PLAN MAP

Project 140521-0 | January 2015 | D-1

P:\133252 - MMM Ditullio Slope Liner\Civil\Production Drawings\Working Drawings\ Figure D-1 - Ditullio Mining Plan.dwg Jan 2015



NOTE:

1. CONTOURS OF BEDROCK SURFACE REPRESENT INTERPRETED TOP OF BEDROCK.

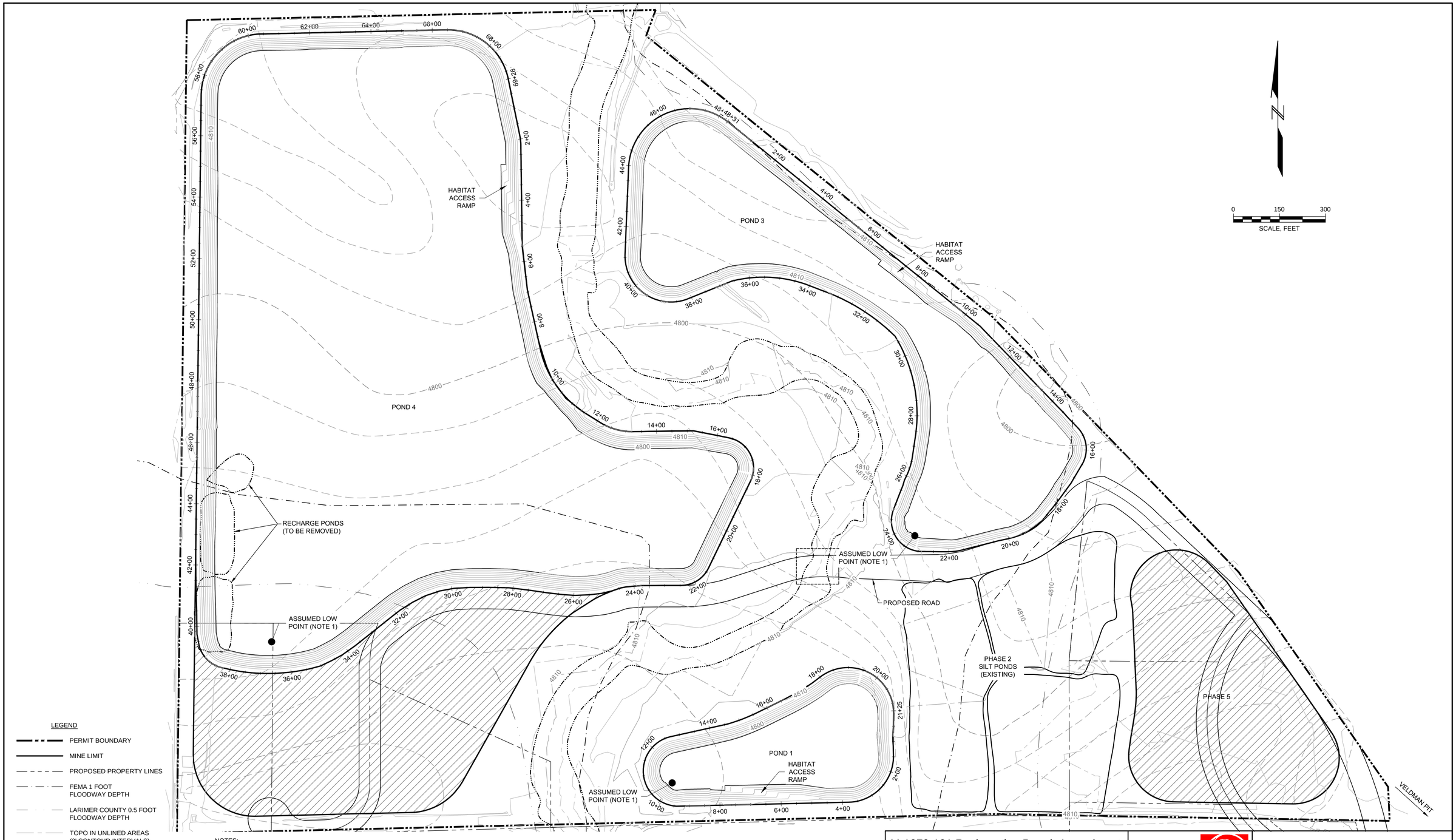
NO.	REVISIONS DESCRIPTION	DATE	BY
1	FOR REVIEW	10/18/13	CMG
2	PER CLIENT COMMENTS	02/07/14	DHF

THREE BELLS - VELDMAN PROPERTY

Excavation Plan & Mining Limits

DEERE & AULT CONSULTANTS, INC.
600 S. AIRPORT RD., BLDG. A, SUITE 205
LONGMONT, CO 80503
TEL 303.651.1468 FAX 303.651.1469

DESIGNED BY: CMG | APPROVED BY: ___ | JOB NO. 0494.007.00 | SHEET: D-2
DRAWN BY: ITR/BDC | DATE: ___
CHECKED BY: DHF | SCALE: AS NOTED



LEGEND

- PERMIT BOUNDARY
- MINE LIMIT
- PROPOSED PROPERTY LINES
- FEMA 1 FOOT FLOODWAY DEPTH
- LARIMER COUNTY 0.5 FOOT FLOODWAY DEPTH
- TOPO IN UNLINED AREAS (2' CONTOUR INTERVALS)
- ESTIMATED TOP OF BEDROCK (2' CONTOUR INTERVALS)
- SLOPE LINER CONTOURS (2' CONTOUR INTERVALS)
- BACKFILL AREA

NOTES:

1. GRADE EACH RESERVOIR FLOOR TO THE LOW POINT. ENGINEER TO FIELD VERIFY LOCATION OF LOW POINTS DURING CONSTRUCTION.
2. SITE TOPOGRAPHY PROVIDED BY INTERMILL LAND SURVEYING, INC. (SEPTEMBER 2013).

M-1979-191 Reclamation Permit Amendment
Application: Three Bells Mine
Larimer County, Colorado

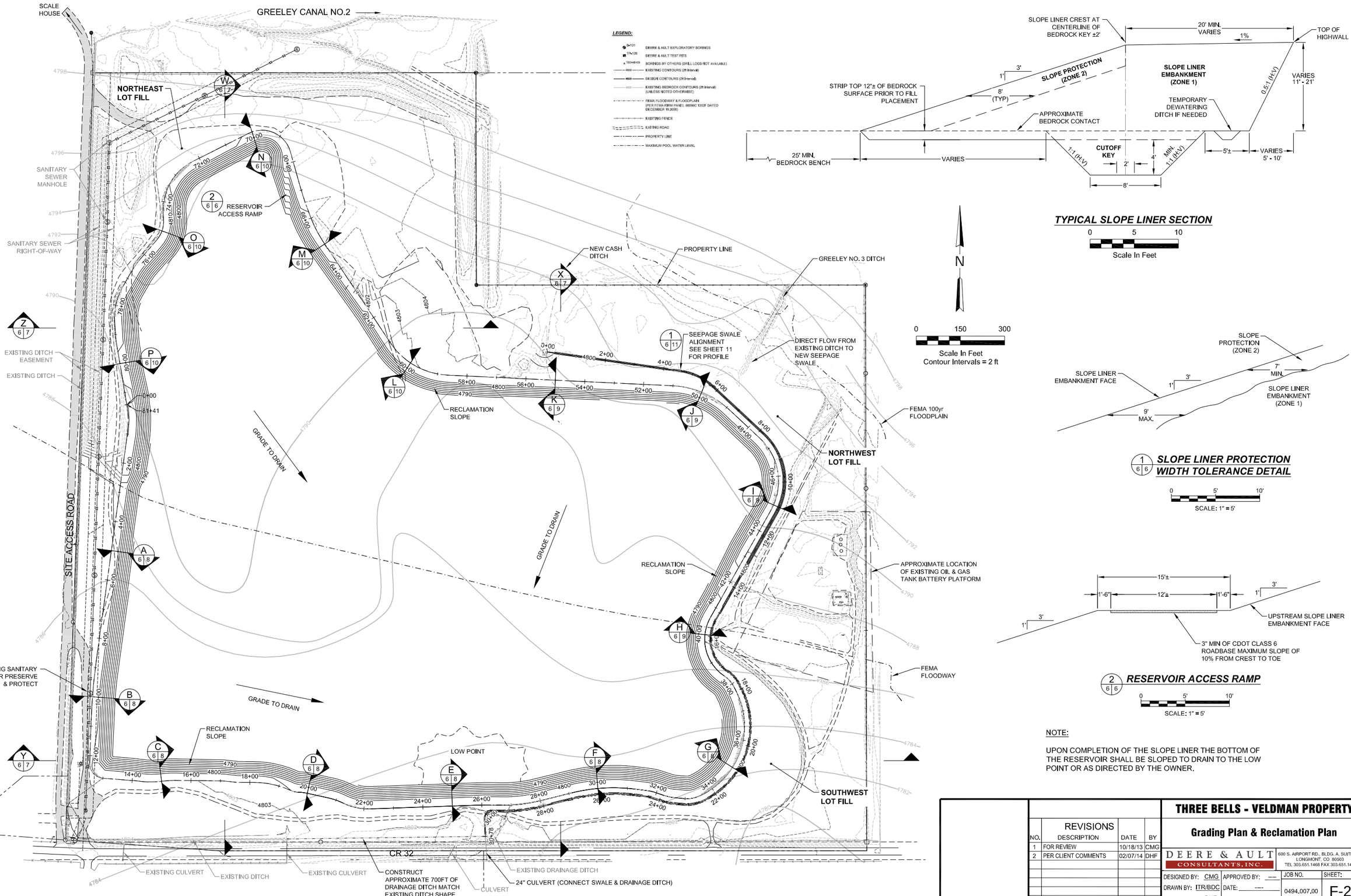
Martin Marietta Materials
Fort Collins, CO

GEI Consultants

DITULLIO RECLAMATION
PLAN MAP

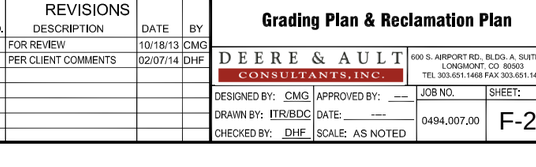
Project 140521-0 | January 2015 | F-1

P:\133252 - MMM Ditullio Slope Liner\Civil\Production Drawings\Working Drawings\ Figure F - Reclamation Plan.dwg Jan 2015



TYPICAL SLOPE LINER SECTION

0 5 10
Scale In Feet



1 6 6 SLOPE LINER PROTECTION WIDTH TOLERANCE DETAIL

0 5' 10'
SCALE: 1" = 5'

2 6 6 RESERVOIR ACCESS RAMP

0 5' 10'
SCALE: 1" = 5'

NOTE:

UPON COMPLETION OF THE SLOPE LINER THE BOTTOM OF THE RESERVOIR SHALL BE SLOPED TO DRAIN TO THE LOW POINT OR AS DIRECTED BY THE OWNER.

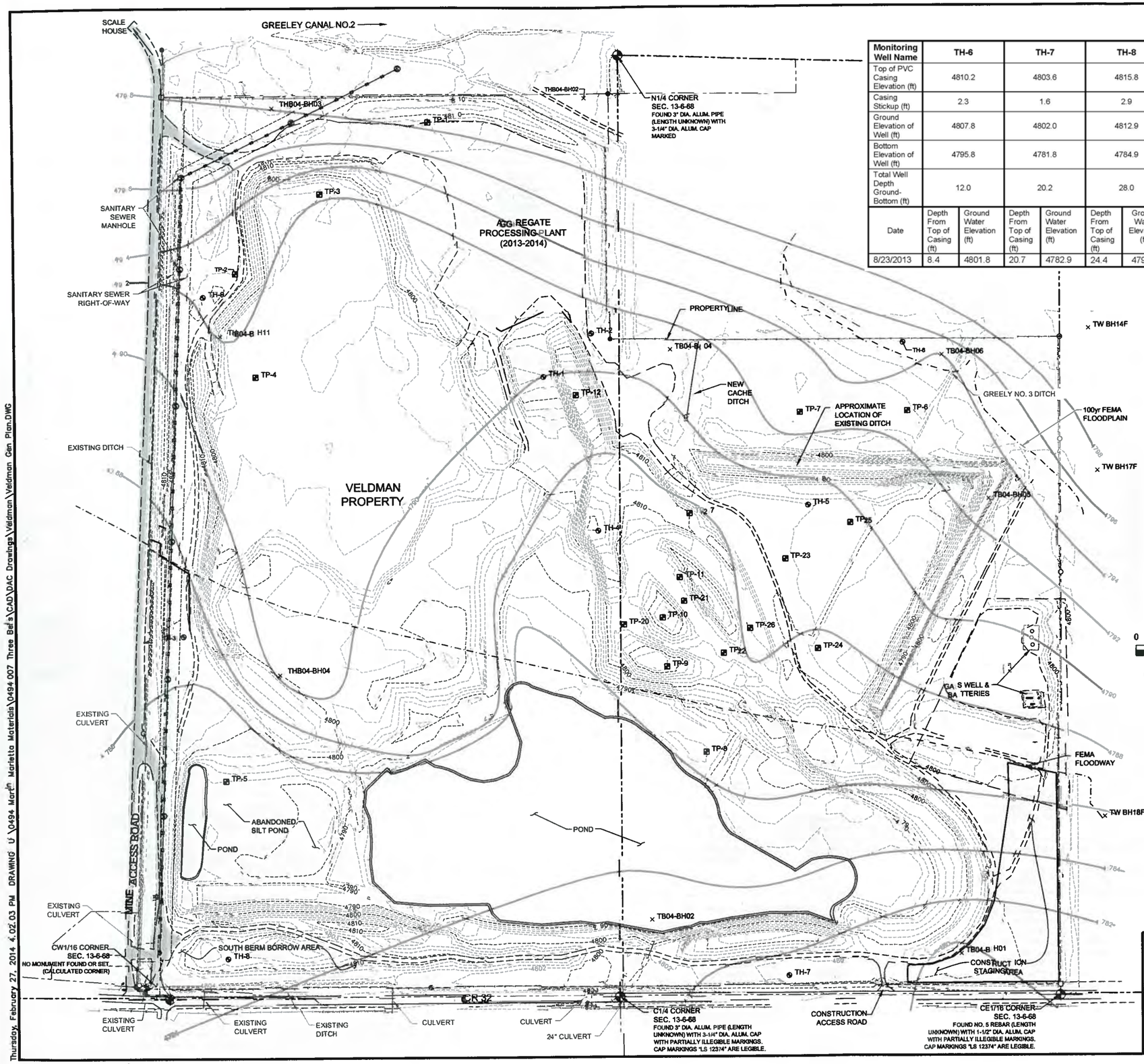
REVISIONS			
NO.	DESCRIPTION	DATE	BY
1	FOR REVIEW	10/18/13	CMG
2	PER CLIENT COMMENTS	02/07/14	DHF

THREE BELLS - VELDMAN PROPERTY

Grading Plan & Reclamation Plan

DEERE & AULT CONSULTANTS, INC.
600 S. AIRPORT RD., BLDG. A, SUITE 205
LONGMONT, CO 80503
TEL 303.651.1468 FAX 303.651.1469

DESIGNED BY: CMG | APPROVED BY: ___ | JOB NO. | SHEET:
DRAWN BY: ITR/BDC | DATE: ___ | 0494.007.00 | F-2
CHECKED BY: DHF | SCALE: AS NOTED



Monitoring Well Name	TH-6		TH-7		TH-8		TH-9	
Top of PVC Casing Elevation (ft)	4810.2		4803.6		4815.8		4812.8	
Casing Stickup (ft)	2.3		1.6		2.9		3.1	
Ground Elevation of Well (ft)	4807.8		4802.0		4812.9		4809.7	
Bottom Elevation of Well (ft)	4795.8		4781.8		4784.9		4791.7	
Total Well Depth Ground-Bottom (ft)	12.0		20.2		28.0		18.0	
Date	Depth From Top of Casing (ft)	Ground Water Elevation (ft)	Depth From Top of Casing (ft)	Ground Water Elevation (ft)	Depth From Top of Casing (ft)	Ground Water Elevation (ft)	Depth From Top of Casing (ft)	Ground Water Elevation (ft)
8/23/2013	8.4	4801.8	20.7	4782.9	24.4	4791.6	16.6	4796.2

LEGEND:

- TH-5 — DEERE & AULT EXPLORATORY BORINGS
- TP 129 — DEERE & AULT TEST PITS
- TB04-BH06 — BORINGS BY OTHERS (DRILL LOGS NOT AVAILABLE)
- 4800 — EXISTING CONTOURS (2ft Interval)
- 4800 — DESIGN CONTOURS (2ft Interval)
- 4800 — EXISTING BEDROCK CONTOURS (2ft Interval) (UNLESS NOTED OTHERWISE)
- FEMA FLOODWAY & FLOODPLAIN (PER FEMA FIRM PANEL 08069C 1202F DATED DECEMBER 19,2006)
- EXISTING FENCE
- EXITING ROAD
- PROPERTY LINE
- MAXIMUM POOL WATER LEVEL

DETAIL CALLOUT:

DETAIL NUMBER
PAGE WHERE DETAIL IS SHOWN
PAGE WHERE DETAIL IS CALLED OUT

SECTION CALLOUT:

SECTION LETTER
PAGE WHERE SECTION IS SHOWN
PAGE WHERE SECTION IS CUT

NOTES:

1. BASE MAP AND TOPOGRAPHIC INFORMATION PREPARED BY:

   INTERMILL LAND SURVEY INC.
   1301 N. CLEVELAND AVE, LOVELAND, CO 80537
   DATE OF SURVEY: AUGUST 16, 2013

2. BASIS OF BEARINGS STATEMENT:

   THE BASIS OF BEARINGS IS NORTH 00°21'34" WEST WHICH IS THE GRID BEARING BETWEEN THE NORTHEAST CORNER AND THE EAST QUARTER CORNER OF SECTION 13, TOWNSHIP 6 NORTH, RANGE 68 WEST OF THE 6TH P.M. BASED ON THE STATE PLANE COORDINATES, COLORADO NORTH ZONE, PUBLISHED BY THE CITY OF FORT COLLINS. THE MODIFIED DISTANCE BETWEEN THESE MONUMENTS IS 2670.18 FEET. ALL DISTANCES SHOWN ON THIS SURVEY ARE IN THE U.S. SURVEY FOOT BASED ON THE MODIFIED STATE PLANE COORDINATES AT A GROUND ELEVATION OF 4797' WHICH IS THE APPROXIMATE AVERAGE ELEVATION OF THE SUBJECT SITE. THE COMBINED SCALE FACTOR USED TO MODIFY THE COORDINATES OF THIS PLAT FOR THE GROUND ELEVATION IS 0.999756757.

3. PROJECT BENCHMARK:

   3-1/4" ALUMINUM CAP SET IN CONCRETE MARKED "WIN 6513 LCR 1 1997" IN THE VICINITY OF THE SW CORNER OF SECTION 7, T8N, R67W, 60' N OF MAILBOX 6513, 1.5' SE OF FENCE CORNER AND 10' S. OF WCR 72.
   NAVD 1988 ELEVATION: 4817.414
   NGVD 1929 ELEVATION: 4814.350

4. SECTION CONERS:

DESCRIPTION	NORTHING	EASTING
C1/4 CORNER SEC. 13	1420882.92	3152783.09
CE1/16 CORNER SEC. 13	1420882.88	3154083.73
CW1/16 CORNER SEC.13	1420882.82	3151462.73
E 1/6 CORNER SEC. 12	1423594.27	3154076.68
N1/4 CORNER SEC. 13	1423635.57	3152785.62

NO.	REVISIONS DESCRIPTION	DATE	BY
1	FOR REVIEW	10/18/13	CMG
2	PER CLIENT COMMENTS	02/07/14	DHF
3	FOR CONSTRUCTION	02/28/14	DHF

THREE BELLS - VELDMAN PROPERTY
Existing Conditions, Geotechnical Borings, & Survey Control

DEERE & AULT CONSULTANTS, INC.
600 S. AIRPORT RD., BLDG. A, SUITE 205 LONGMONT, CO 80503
TEL 303.651.1488 FAX 303.651.1489

DESIGNED BY: CMG | APPROVED BY: DHF | JOB NO. 0494.007.00 | SHEET: G-1
DRAWN BY: ITR/BDC | DATE: 02/28/14
CHECKED BY: DWD | SCALE: AS NOTED

Attachments

Attachment A: Groundwater Monitoring and Mitigation Plan

1. Groundwater Monitoring and Mitigation Plan

1.1 Purpose

This Groundwater Monitoring and Mitigation plan has been developed in support of Martin Marietta, Inc. (MM) Permit Amendment Application to the Colorado Division of Reclamation Mining and Safety (DRMS) M-1979-191 112 Permit. The 112 Permit Amendments is being submitted to revise the reclamation plan to Developed Water Storage and to revise the Permit Boundary for the Three Bells Property.

This Plan addressed the actions developed by MM that would be implemented should adverse (a deviation from historic groundwater levels of +/-2 feet) groundwater conditions develop during site reclamation as lined below grade reservoirs.

1.2 Background

The Three Bells Mine is owned by River Bluffs Ventures, LLC and operated by MM. The mine property is located approximately one half mile north and three miles west of Windsor, Colorado, in Larimer County. The Affected Land is located in Township 6 North, Range 68 West of the 6th Principle Meridian, in Sections 11, 12, and 13.

The mine consists of two main properties: Ditullio and Veldman. The Veldman property has reached Life of Mine and reclamation began in June 2014. The Ditullio property is expected to continue to provide pit run products until 2015. Reclamation is expected to be completed by December 2015.

During mining of the Veldman Property within the Three Bells Mine, MM mined in the dry by keeping the pit dewatered utilizing a system of ditches and pumps. The dewatering system discharged groundwater captured within the mine limits to the Cache la Poudre (Poudre) River at discharge points established in the CDPS Discharge Permit.

MM is actively mining within the Ditullio Property within the Three Bells Mine utilizing the same methods described above.

1.3 Impacts to groundwater

Adverse impacts to the local groundwater aquifer have not been observed or reported during past or current mining phases on either the Veldman or Ditullio Properties within the Three Bells Mine. Adverse impacts are not anticipated to develop as a result of current or future MMM reclamation in the mined out cells within the Three Bells Mine. GEI has modeled current and post reclamation groundwater conditions at the Three Bells site utilizing Visual MODFLOW (Version 2011.1, U.S. Geological Survey (USGS) 2014), and the results indicate less than 1 foot of groundwater impact adjacent to the cells, with impacts lessening as the distance away from the cells increases. The MODFLOW results are provided **Attachment E**.

1.4 Well Inventory

A well inventory for areas surrounding the Three Bells Property was conducted to identify registered wells within 600 feet as required by the Colorado Office of the State Engineer (SEO). GEI identified one domestic well within 600 feet of the Three Bells Property. There a no domestic wells within 600 feet of the Three Bells Mine boundary.

1.5 Monitoring and Mitigation

There are four monitoring wells monitored by MM around the Veldman Property. Located on the perimeter of the property (Figure G-1), these monitoring wells have a single measurement during August of 2013 (Table 4). There are several monitoring wells that were installed during the design phase of the Ditullio Property to assist in data gathering for design and mine planning. However, the location of the monitoring wells will result in their destruction during the construction of the Developed Water Storage. Five new monitoring wells were installed on the Ditullio Property in January 2015 and will be monitored monthly for changes in groundwater levels through the first year and then monitored quarterly for the remainder of permitted mining activities.

Should MM receive notification of adverse groundwater conditions or a complaint from the well owner, MM will notify the DRMS and propose mitigation measures. Mitigation measures may include the following and will be done in consultation with the DRMS:

- Investigation of the notification/complaint to establish parameters and to determine if MM mining operations are the sole cause or contributing to the adverse groundwater conditions. This measure may include the installation of monitoring wells at strategic locations to assist in data gathering.
- MM will consult with the DRMS on appropriate mitigation measures including (but not limited to) providing temporary or permanent alternative water sources to impacted well owners, repairing or deepening affected wells, installing physical measures such as perimeter drains, well points, low permeability barriers, etc. to assist in mitigation of the adverse groundwater conditions.
- Other mitigation measures may be developed in consultation with or at the request of the DRMS.

Attachment B: NRCS Web Soil Survey

United States Department of Agriculture

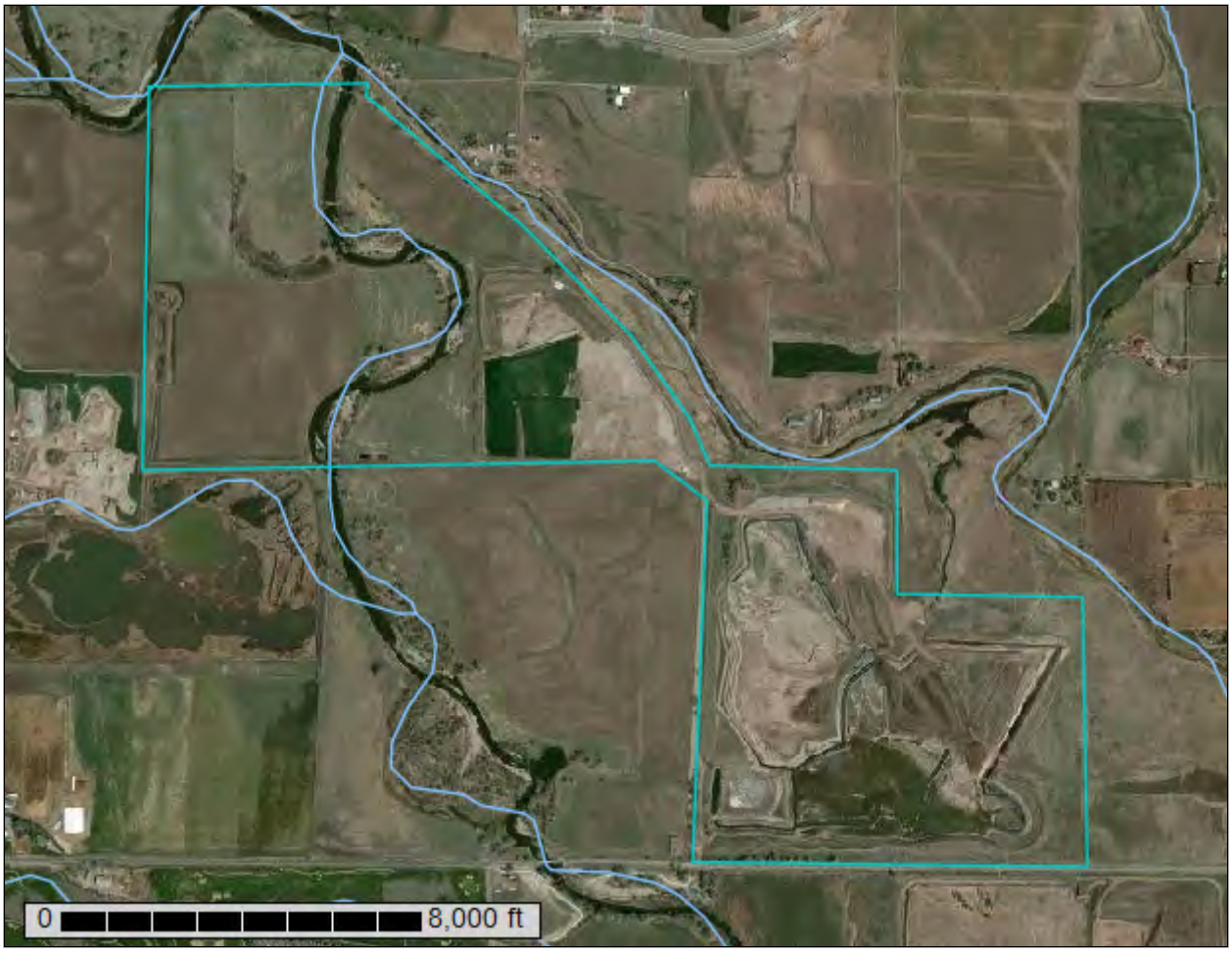
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Larimer County Area, Colorado

Three Bells



May 9, 2014

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (http://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means

for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the

individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

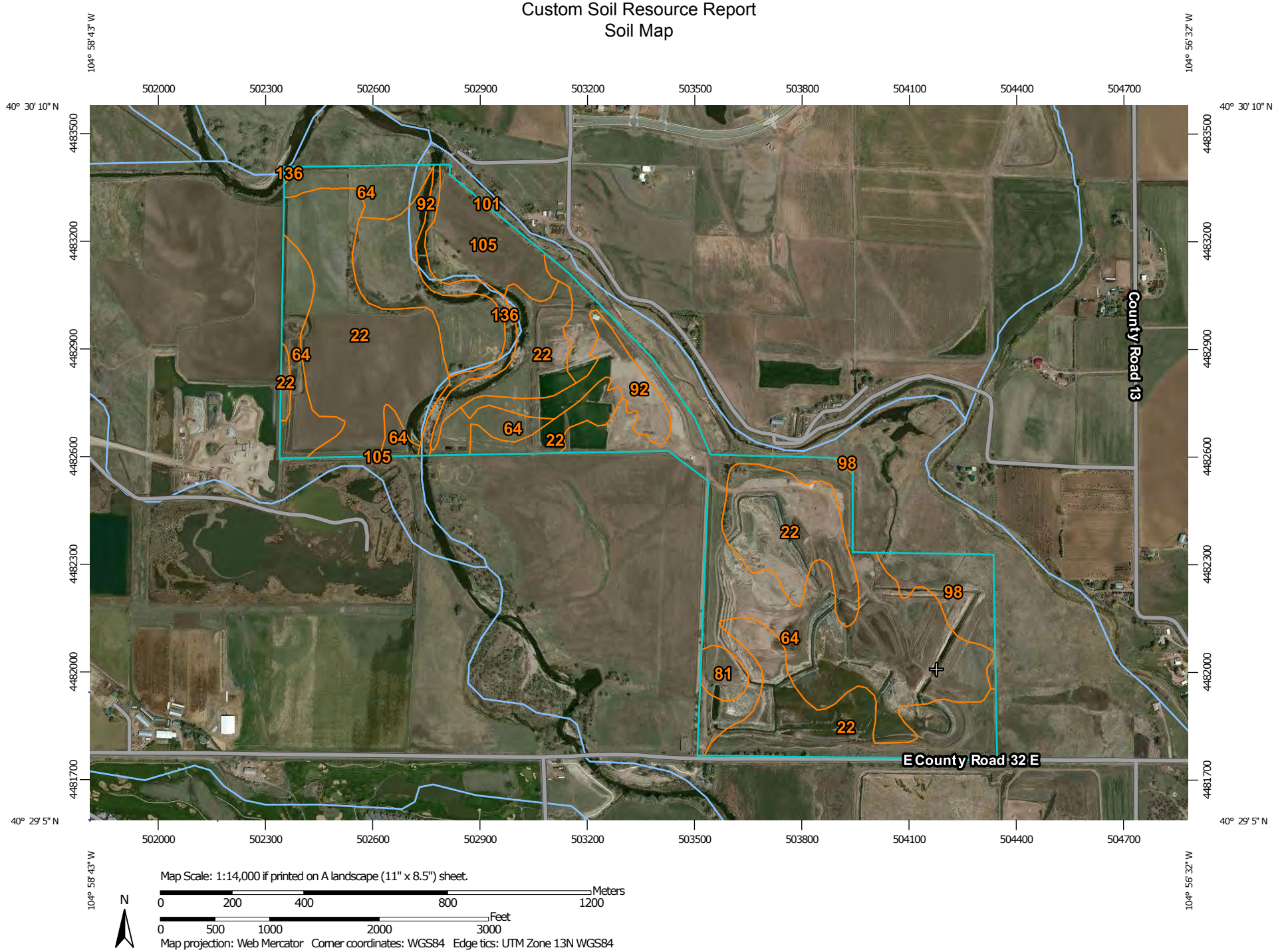
Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Larimer County Area, Colorado
Survey Area Data: Version 8, Dec 23, 2013

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 22, 2011—Nov 18, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Larimer County Area, Colorado (CO644)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
22	Caruso clay loam, 0 to 1 percent slope	128.0	40.1%
64	Loveland clay loam, 0 to 1 percent slopes	114.5	35.8%
81	Paoli fine sandy loam, 0 to 1 percent slopes	3.9	1.2%
92	Riverwash	34.0	10.6%
98	Satanta Variant clay loam, 0 to 3 percent slopes	13.4	4.2%
101	Stoneham loam, 1 to 3 percent slopes	0.0	0.0%
105	Table Mountain loam, 0 to 1 percent slopes	17.8	5.6%
136	Water	7.9	2.5%
Totals for Area of Interest		**319.5**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the

contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Larimer County Area, Colorado

22—Caruso clay loam, 0 to 1 percent slope

Map Unit Setting

Elevation: 4,800 to 5,500 feet
Mean annual precipitation: 13 to 15 inches
Mean annual air temperature: 48 to 50 degrees F
Frost-free period: 135 to 150 days

Map Unit Composition

Caruso and similar soils: 85 percent
Minor components: 15 percent

Description of Caruso

Setting

Landform: Flood-plain steps, stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mixed alluvium

Typical profile

H1 - 0 to 35 inches: moderately alkaline, clay loam
H2 - 0 to 35 inches: moderately alkaline, clay loam
H2 - 0 to 35 inches: moderately alkaline, clay loam
H3 - 0 to 35 inches: moderately alkaline, clay loam
H3 - 0 to 35 inches: moderately alkaline, clay loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 24 to 48 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Calcium carbonate, maximum in profile: 5 percent
Salinity, maximum in profile: Nonsaline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: High (about 9.8 inches)

Interpretive groups

Farmland classification: Prime farmland if irrigated
Land capability classification (irrigated): 3w
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: C

Minor Components

Loveland

Percent of map unit: 9 percent
Landform: Terraces

Fluvaquents

Percent of map unit: 6 percent
Landform: Terraces

64—Loveland clay loam, 0 to 1 percent slopes

Map Unit Setting

Elevation: 4,800 to 5,500 feet
Mean annual precipitation: 13 to 15 inches
Mean annual air temperature: 48 to 50 degrees F
Frost-free period: 135 to 150 days

Map Unit Composition

Loveland and similar soils: 90 percent
Minor components: 5 percent

Description of Loveland

Setting

Landform: Flood plains, stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Typical profile

H1 - 0 to 15 inches: strongly alkaline, clay loam
H2 - 0 to 15 inches: strongly alkaline, clay loam
H2 - 0 to 15 inches: strongly alkaline, clay loam
H2 - 0 to 15 inches: strongly alkaline, clay loam
H3 - 0 to 15 inches: strongly alkaline, clay loam
H3 - 0 to 15 inches: strongly alkaline, clay loam
H3 - 0 to 15 inches: strongly alkaline, clay loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (2.0 to 4.0 mmhos/cm)
Available water storage in profile: Very high (about 16.7 inches)

Interpretive groups

Farmland classification: Prime farmland if irrigated
Land capability classification (irrigated): 3w

Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C

Minor Components

Aquolls
Percent of map unit: 5 percent
Landform: Swales

81—Paoli fine sandy loam, 0 to 1 percent slopes

Map Unit Setting
Elevation: 4,800 to 5,600 feet
Mean annual precipitation: 13 to 15 inches
Mean annual air temperature: 48 to 50 degrees F
Frost-free period: 135 to 150 days

Map Unit Composition
Paoli and similar soils: 85 percent
Minor components: 3 percent

Description of Paoli

Setting
Landform: Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Typical profile
H1 - 0 to 30 inches: neutral, fine sandy loam
H2 - 0 to 30 inches: moderately alkaline, fine sandy loam
H2 - 0 to 30 inches: moderately alkaline, fine sandy loam
H2 - 0 to 30 inches: moderately alkaline, fine sandy loam

Properties and qualities
Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Salinity, maximum in profile: Nonsaline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Very high (about 16.5 inches)

Interpretive groups
Farmland classification: Prime farmland if irrigated
Land capability classification (irrigated): 1

Land capability classification (nonirrigated): 3c
Hydrologic Soil Group: B
Ecological site: Overflow (R067BY036CO)

Minor Components

Fluvaquentic haplustolls
Percent of map unit: 3 percent
Landform: Terraces

92—Riverwash

Map Unit Setting
Elevation: 4,000 to 8,500 feet
Mean annual precipitation: 12 to 20 inches
Mean annual air temperature: 45 to 52 degrees F
Frost-free period: 75 to 150 days

Map Unit Composition
Riverwash: 100 percent

Description of Riverwash

Setting
Landform: Flood plains, outwash terraces, overflow stream channels
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy and gravelly alluvium

Typical profile
H1 - 0 to 6 inches: moderately alkaline, very gravelly sand
H2 - 6 to 60 inches: moderately alkaline, stratified very gravelly sand to clay

Properties and qualities
Slope: 0 to 3 percent
Natural drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Frequency of flooding: Frequent
Calcium carbonate, maximum in profile: 5 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 2.0
Available water storage in profile: Very low (about 2.3 inches)

Interpretive groups
Farmland classification: Not prime farmland
Land capability classification (irrigated): 6w
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: A

98—Satanta Variant clay loam, 0 to 3 percent slopes

Map Unit Setting

Elevation: 4,800 to 5,600 feet
Mean annual precipitation: 13 to 15 inches
Mean annual air temperature: 48 to 50 degrees F
Frost-free period: 135 to 150 days

Map Unit Composition

Satanta variant and similar soils: 90 percent

Description of Satanta Variant

Setting

Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Typical profile

H1 - 0 to 9 inches: moderately alkaline, clay loam
H2 - 0 to 9 inches: moderately alkaline, clay loam
H3 - 0 to 9 inches: neutral, clay loam
H3 - 0 to 9 inches: neutral, clay loam
H3 - 0 to 9 inches: neutral, clay loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 24 to 48 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Gypsum, maximum in profile: 10 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (2.0 to 4.0 mmhos/cm)
Available water storage in profile: Very high (about 18.5 inches)

Interpretive groups

Farmland classification: Prime farmland if irrigated
Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: Overflow (R067BY036CO)

101—Stoneham loam, 1 to 3 percent slopes

Map Unit Setting

Elevation: 4,800 to 5,600 feet
Mean annual precipitation: 13 to 15 inches
Mean annual air temperature: 48 to 50 degrees F
Frost-free period: 135 to 150 days

Map Unit Composition

Stoneham and similar soils: 90 percent

Description of Stoneham

Setting

Landform: Terraces, benches
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mixed alluvium and/or eolian deposits

Typical profile

H1 - 0 to 4 inches: neutral, loam
H2 - 0 to 4 inches: neutral, loam
H2 - 0 to 4 inches: neutral, loam
H2 - 0 to 4 inches: neutral, loam
H3 - 0 to 4 inches: moderately alkaline, loam
H3 - 0 to 4 inches: moderately alkaline, loam
H3 - 0 to 4 inches: moderately alkaline, loam

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Salinity, maximum in profile: Nonsaline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Very high (about 27.5 inches)

Interpretive groups

Farmland classification: Prime farmland if irrigated
Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: Loamy Plains (R067XY002CO)

105—Table Mountain loam, 0 to 1 percent slopes

Map Unit Setting

Elevation: 4,800 to 5,600 feet
Mean annual precipitation: 13 to 15 inches
Mean annual air temperature: 48 to 50 degrees F
Frost-free period: 135 to 150 days

Map Unit Composition

Table mountain and similar soils: 85 percent
Minor components: 4 percent

Description of Table Mountain

Setting

Landform: Flood plains, stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Typical profile

H1 - 0 to 36 inches: neutral, loam
H2 - 0 to 36 inches: slightly alkaline, loam
H2 - 0 to 36 inches: slightly alkaline, loam
H2 - 0 to 36 inches: slightly alkaline, loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Salinity, maximum in profile: Nonsaline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 5.0
Available water storage in profile: Very high (about 18.0 inches)

Interpretive groups

Farmland classification: Prime farmland if irrigated
Land capability classification (irrigated): 1
Land capability classification (nonirrigated): 3c
Hydrologic Soil Group: B
Ecological site: Overflow (R049XY036CO)

Minor Components

Fluvaquentic haplustolls

Percent of map unit: 4 percent

Landform: Terraces

136—Water

Map Unit Composition

Water: 95 percent
Minor components: 5 percent

Description of Water

Setting

Landform: Rivers, lakes

Minor Components

Aquents

Percent of map unit: 5 percent
Landform: Marshes
Down-slope shape: Linear
Across-slope shape: Concave

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Attachment C: ModFlow Results

1. ModFlow Results

1.1 Impacts to Groundwater

Adverse impacts to the local groundwater aquifer have not been observed or reported during past or current mining phases on either the Veldman or Ditullio Properties within the Three Bells Mine. Adverse impacts are not anticipated to develop as a result of current or future MM reclamation in the mined out cells within the Three Bells Mine. GEI has modeled current and post reclamation groundwater conditions at the Three Bells site utilizing Visual MODFLOW (Version 2011.1, U.S. Geological Survey (USGS) 2014), and the results indicate that the Ditullio Property will see less than 1 foot of groundwater impact adjacent to the cells, with impacts lessening as the distance away from the cells increases. The Veldman Property will experience a 3.5 foot decrease in ground water immediately south of the property, with impacts lessening as the distance away from the cells increases. It is predicted that between the Veldman Property and the neighboring Kyger Property, the water table will decrease by approximately one foot. The MODFLOW results are provided in Figures 1 through 16.

1.2 Modeling Methods

Groundwater elevations in the baseline (no-liner) model were estimated based on regional topography and reported groundwater levels where available. Elevations are expressed as feet above mean sea level.

Topographic elevations across the model area range from 4830 in the north, to 4807 in the south. Model boundaries were assigned such that the water table matches the regional topographic slope, with localized flow generally toward the Poudre River and Greeley Canal. Head boundaries of 4825 and 4800 were assigned to the north and south model boundaries, respectively, to approximate a water table occurring at about 5-10 feet below grade at these locations. River boundaries were assigned along the Poudre River and Greeley Canal, with head boundaries slightly lower than surrounding land elevations. The Poudre River head boundary ranged from 4788 to 4815 from north to south. The Greeley Canal head boundary ranged from 4792 at the eastern model boundary, to 4811 where it connects with the Poudre River.

1.3 Model Results Discussion

Ditullio: Computed baseline water table elevations ranged from 4805 to 4811, with southerly flow. Observed elevations ranged from 4802 to 4814 (Ref. 1), with measurements indicating southerly flow with some localized easterly flow toward Greeley Canal. The model is shows localized flow away from Greeley Canal (i.e. losing stream). Groundwater flow toward the site is conservative for predicting the effects of a liner, because a source of water toward the liner would result in the prediction of higher mounding.

Veldman: Model-calculated baseline water table elevations ranged from 4797 to 4805, with southerly flow. Measured elevations ranged from 4782.9 to 4801.8 (Ref. 2) with elevations suggesting a southerly flow direction. The measured water table near the pond at Veldman (elev. 4782.9 at well TH-7) is appreciably lower than calculated in the model. The lower water table may be at least partially associated with the pond at Veldman, where the following may be occurring: groundwater loss to make up for excavated solids volume; evaporation; and

dewatering. No groundwater elevation data is available downgradient to confirm the natural water table gradient. However, pond effects appear likely. The regional topographic grade is about 0.2-0.25% dipping south. The local gradient at Veldman using the TH-1 measurement is 0.5%. In the predictive model with liner, the predicted change in water level should be interpreted as relative to conditions with no water loss effects initially.

N

LEGEND

EXTENT OF GROUNDWATER MODEL

IMAGE SOURCE: Google Earth

GROUNDWATER MODEL
THREE BELLS – DITULLIO LINER
WINDSOR, COLORADO

Martin Marietta Materials

GEI Consultants

MODEL LOCATION

Project 1405060-1001 | May 2014 | Figure 1

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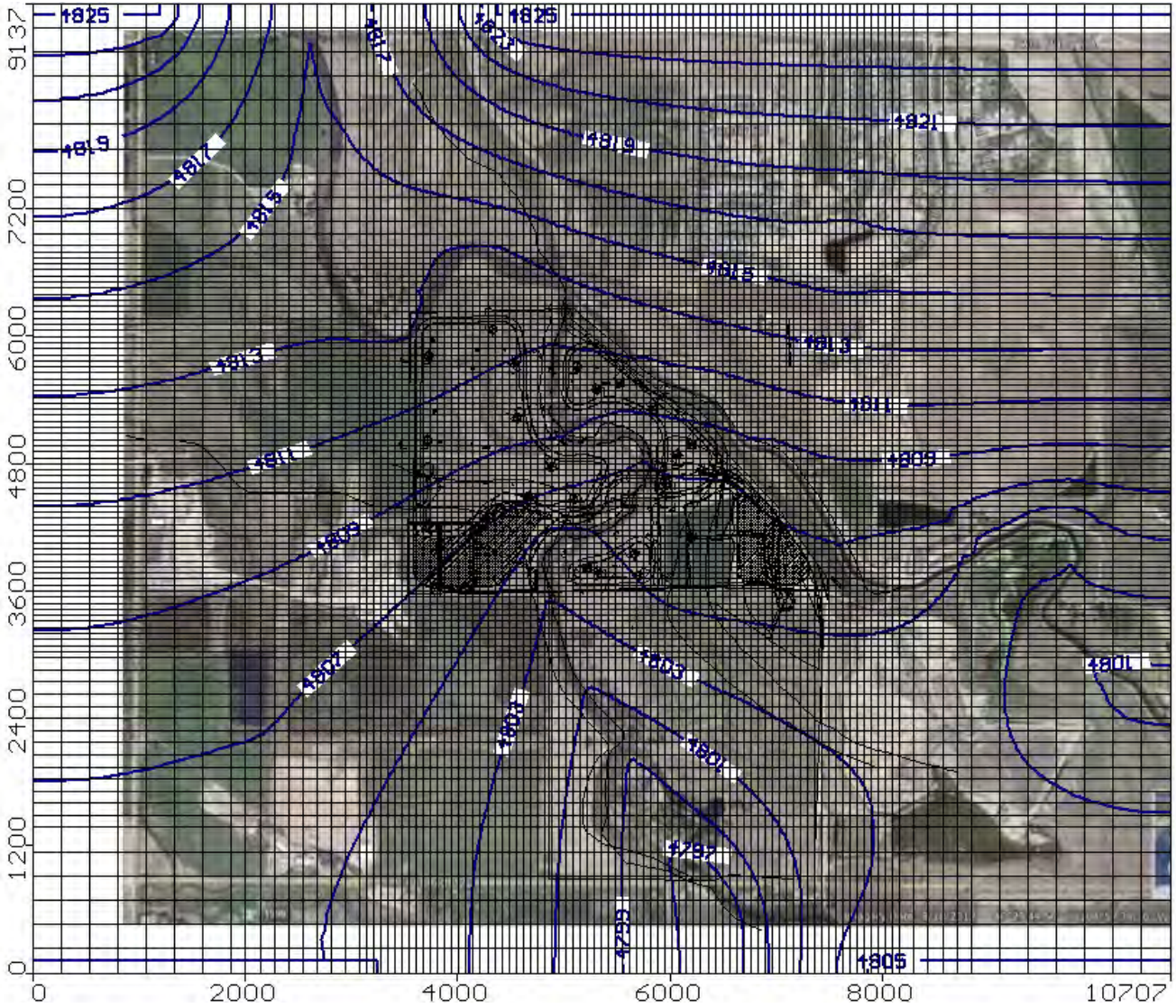

N

LEGEND

MODEL GRID LINES

4800

MODEL – COMPUTED GROUNDWATER CONTOUR

ELEVATIONS BELOW IN FT. NAVD:

TOP MODEL ELEV. = 4815

BOTTOM MODEL ELEV. = 4790

UPGRADIENT (WEST) HEAD BOUNDARY = 4825

DOWNGRADIENT (EAST) HEAD BOUNDARY = 4805

RIVER HEAD BOUNDARY =
4815 NORTH (UPSTREAM JCT WITH RIVER) TO
4795 SOUTH (DOWNSTREAM)

CANAL HEAD BOUNDARY
4812 NORTH(UPSTREAM) TO
4800 SOUTH (DOWNSTREAM)

SOIL HYD. COND. = 10^{-2} cm/s

RAINFALL RECHARGE = 3.5 in.yr.

RESERVOIRS MODELED AS HIGH – CONDUCTIVITY CELLS

GROUNDWATER MODEL
THREE BELLS – DITULLIO LINER
WINDSOR, COLORADO

Martin Marietta Materials

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MODEL DESCRIPTION

Project 1405060-1001 | May 2014 | Figure 2

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LEGEND

GROUNDWATER ELEVATION CONTOUR (FT. NAVD)

4800

GROUNDWATER MODEL
THREE BELLS – DITULLIO LINER
WINDSOR, COLORADO

Martin Marietta Materials

GEI Consultants

POTENTIOMETRIC SURFACE PRESENT CONDITIONS

Project 1405060-1001 | May 2014 | Figure 3

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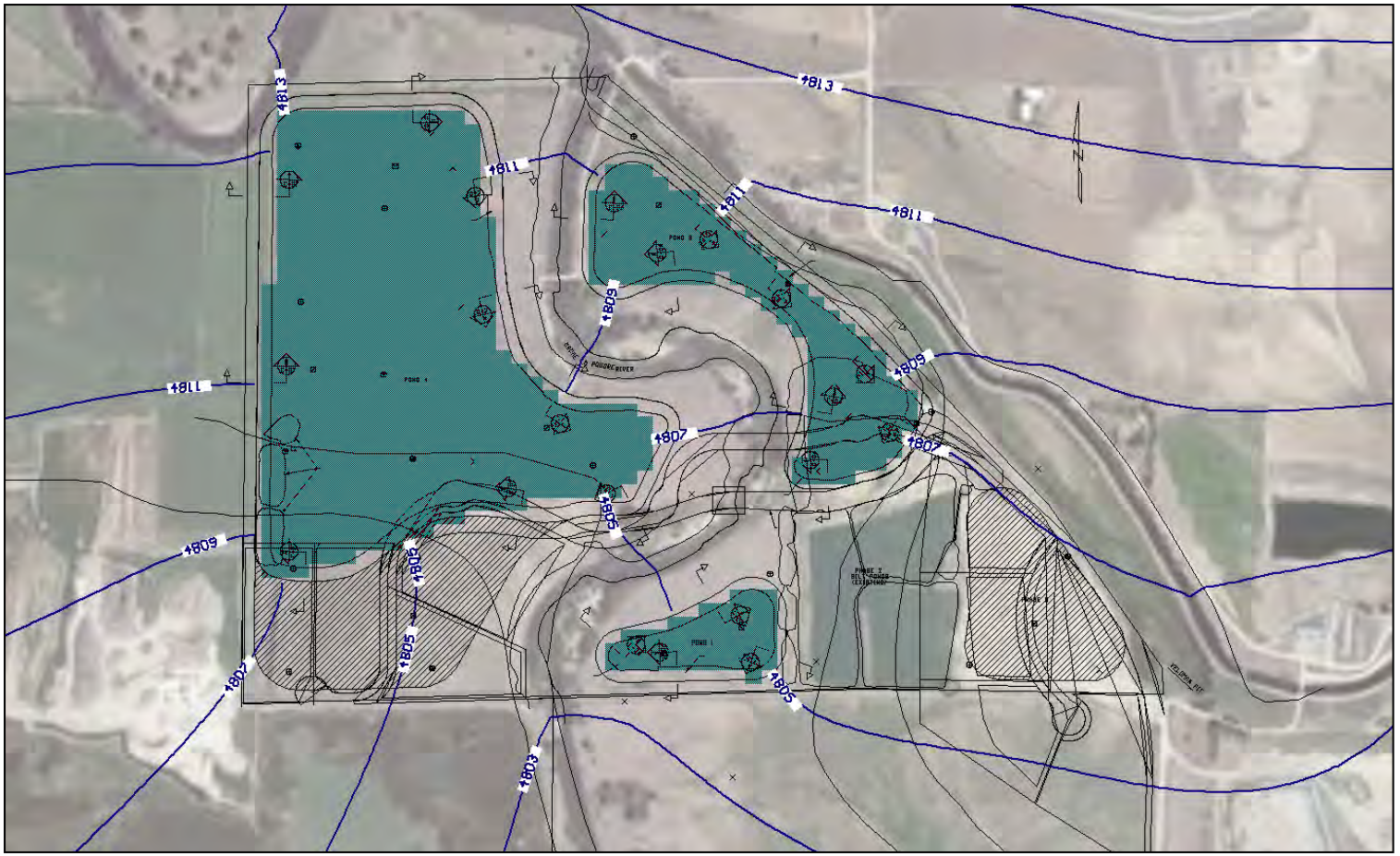

N

LEGEND

GROUNDWATER ELEVATION CONTOUR (FT. NAVD)

4800

POND LINER EXTENT (NO-FLOW BOUNDARY)

GROUNDWATER MODEL
THREE BELLS – DITULLIO LINER
WINDSOR, COLORADO

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POTENTIOMETRIC SURFACE PREDICTED WITH LINER

Project 1405060-1001 | May 2014 | Figure 4

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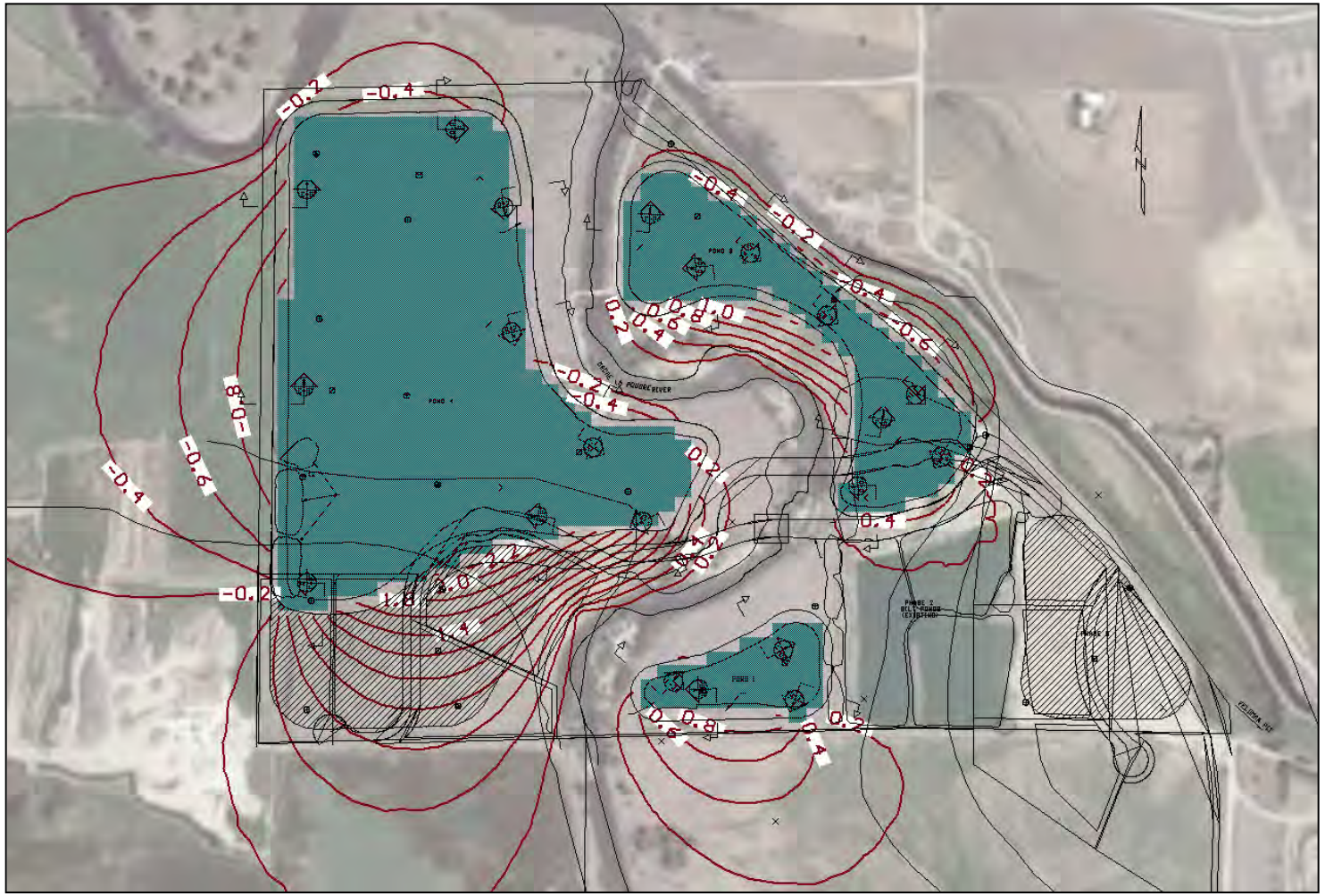

LEGEND

COMPUTED DRAWDOWN CONTOUR (FT.)(a)

0.4

(POS. = WATER LEVELS DECREASE, NEG. = WATER LEVELS INCREASE)

POND LINER EXTENT (NO-FLOW BOUNDARY)

(a) DRAWDOWN VALUE = PREDICTED (POST-LINER) ELEVATION (FT.) MINUS PRESENT-CONDITIONS WATER TABLE ELEVATION (FT.). NEGATIVE VALUES INDICATE PREDICTED RISE IN WATER TABLE (MOUNDING).

GROUNDWATER MODEL
THREE BELLS – DITULLIO LINER
WINDSOR, COLORADO

Martin Marietta Materials

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WATER TABLE DRAWDOWN PREDICTED WITH LINER

Project 1405060-1001 | May 2014 | Figure 5

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N

LEGEND

EXTENT OF GROUNDWATER MODEL

IMAGE SOURCE: Google Earth

GROUNDWATER MODEL
THREE BELLS – VELDMAN LINER
WINDSOR, COLORADO

Martin Marietta Materials

GEI Consultants

MODEL LOCATION

Project 1405060-1001 | May 2014 | Figure 6

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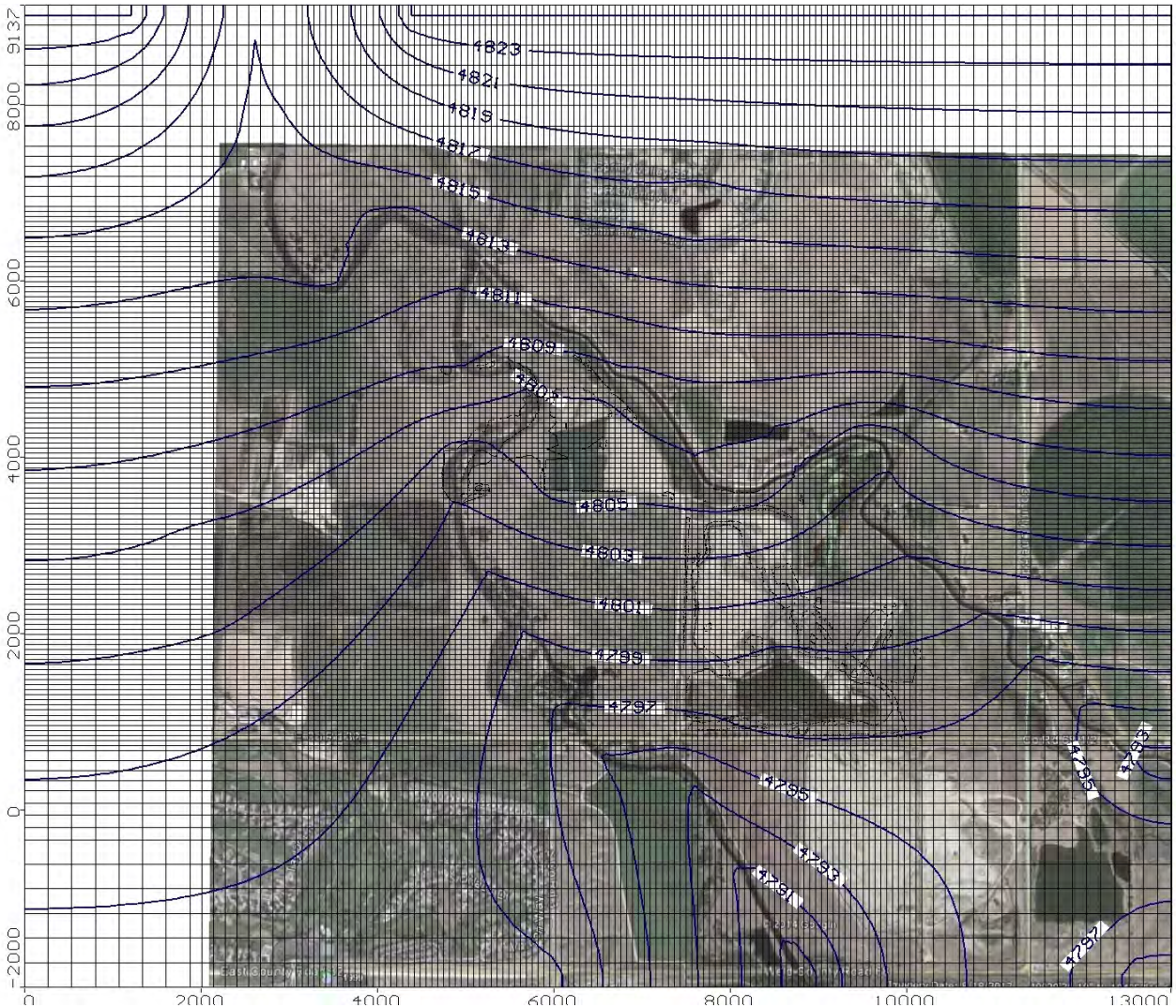

N

LEGEND

MODEL GRID LINES

—4800— MODEL – COMPUTED GROUNDWATER CONTOUR

ELEVATIONS BELOW IN FT. NAVD:

TOP MODEL ELEV. = 4815

BOTTOM MODEL ELEV. = 4780

UPGRADIENT (NORTH) HEAD BOUNDARY = 4825

DOWNGRADIENT (SOUTH) HEAD BOUNDARY = 4800

RIVER HEAD BOUNDARY =
4815 NORTH (UPSTREAM JCT WITH RIVER) TO
4788 SOUTH (DOWNSTREAM)

CANAL HEAD BOUNDARY
4812 NORTH(UPSTREAM) TO
4792 SOUTH (DOWNSTREAM)

SOIL HYD. COND. = 10^{-2} cm/s

RAINFALL RECHARGE = 3.5 in.yr.

RESERVOIRS MODELED AS HIGH – CONDUCTIVITY CELLS WITH 71 in./yr EVAPORATION

GROUNDWATER MODEL
THREE BELLS – VELDMAN LINER
WINDSOR, COLORADO

Martin Marietta Materials

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MODEL DESCRIPTION

Project 1405060-1001 | May 2014 | Figure 7

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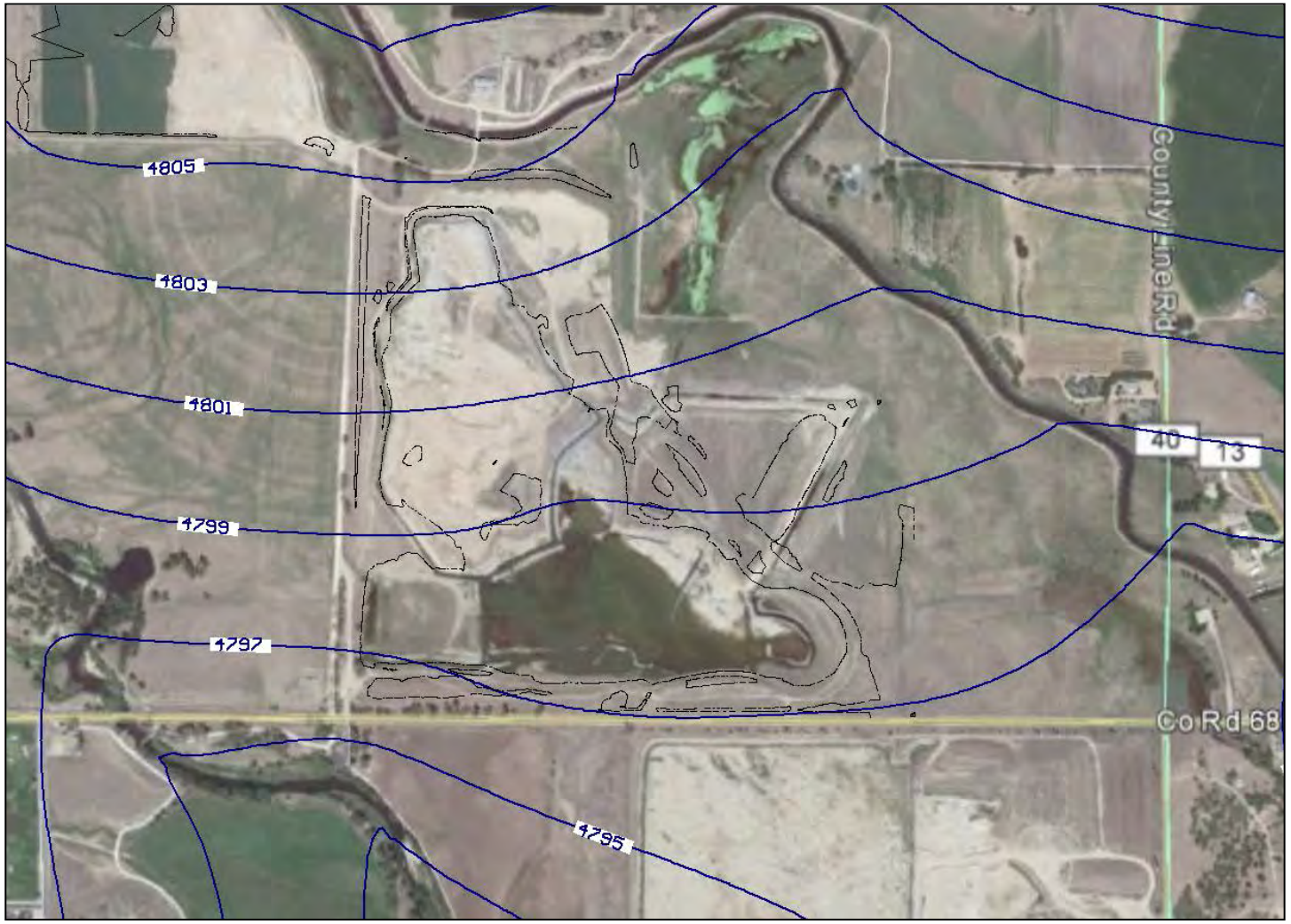

N

LEGEND

GROUNDWATER ELEVATION CONTOUR (FT. NAVD)

4800

GROUNDWATER MODEL
THREE BELLS – VELDMAN LINER
WINDSOR, COLORADO

Martin Marietta Materials

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POTENTIOMETRIC SURFACE PRESENT CONDITIONS

Project 1405060-1001 | May 2014 | Figure 8

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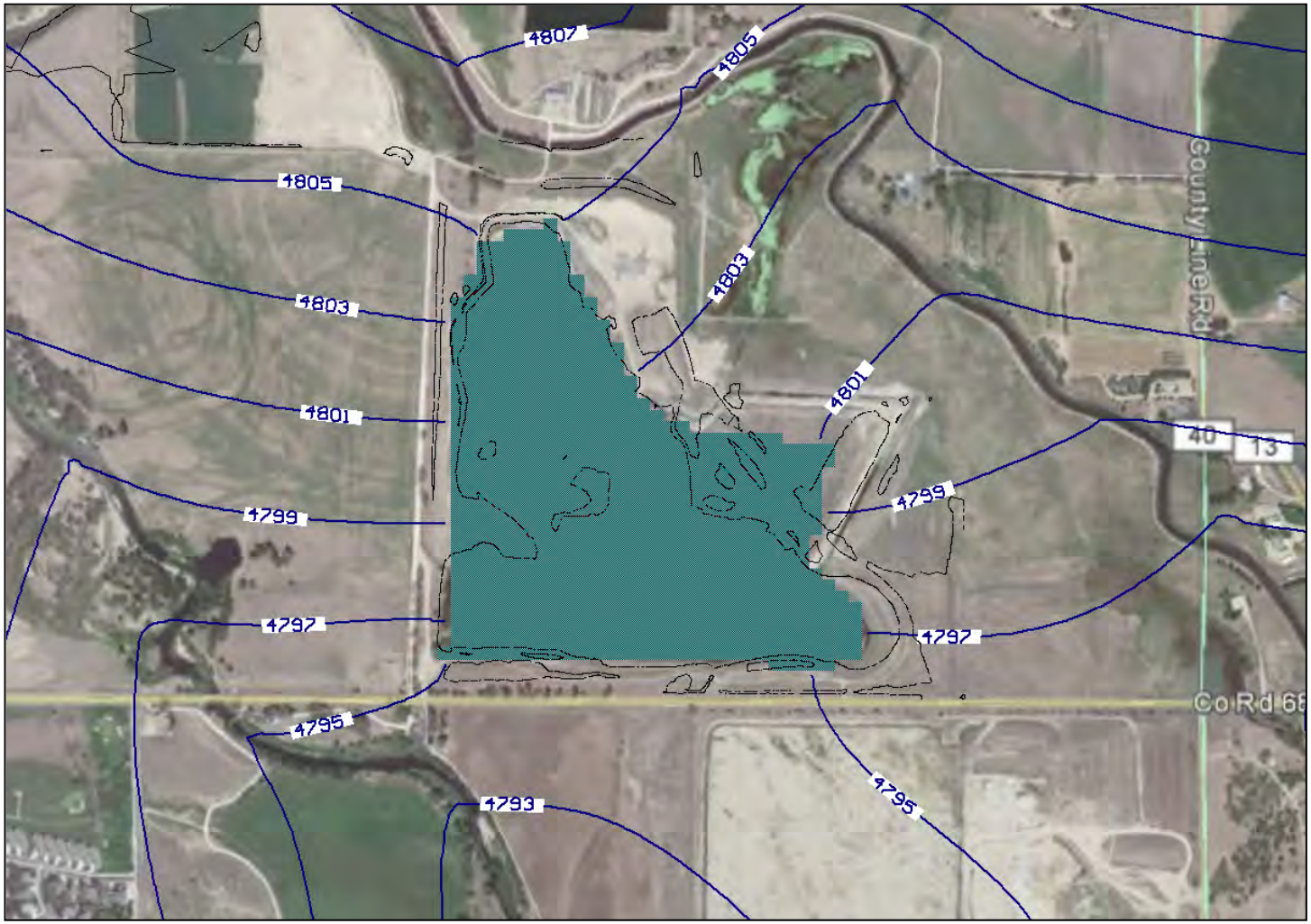

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LEGEND

GROUNDWATER ELEVATION CONTOUR (FT. NAVD)

4800

POND LINER EXTENT (NO-FLOW BOUNDARY)

GROUNDWATER MODEL
THREE BELLS – VELDMAN LINER
WINDSOR, COLORADO

Martin Marietta Materials

GEI Consultants

POTENTIOMETRIC SURFACE PREDICTED WITH LINER

Project 1405060-1001 | May 2014 | Figure 9

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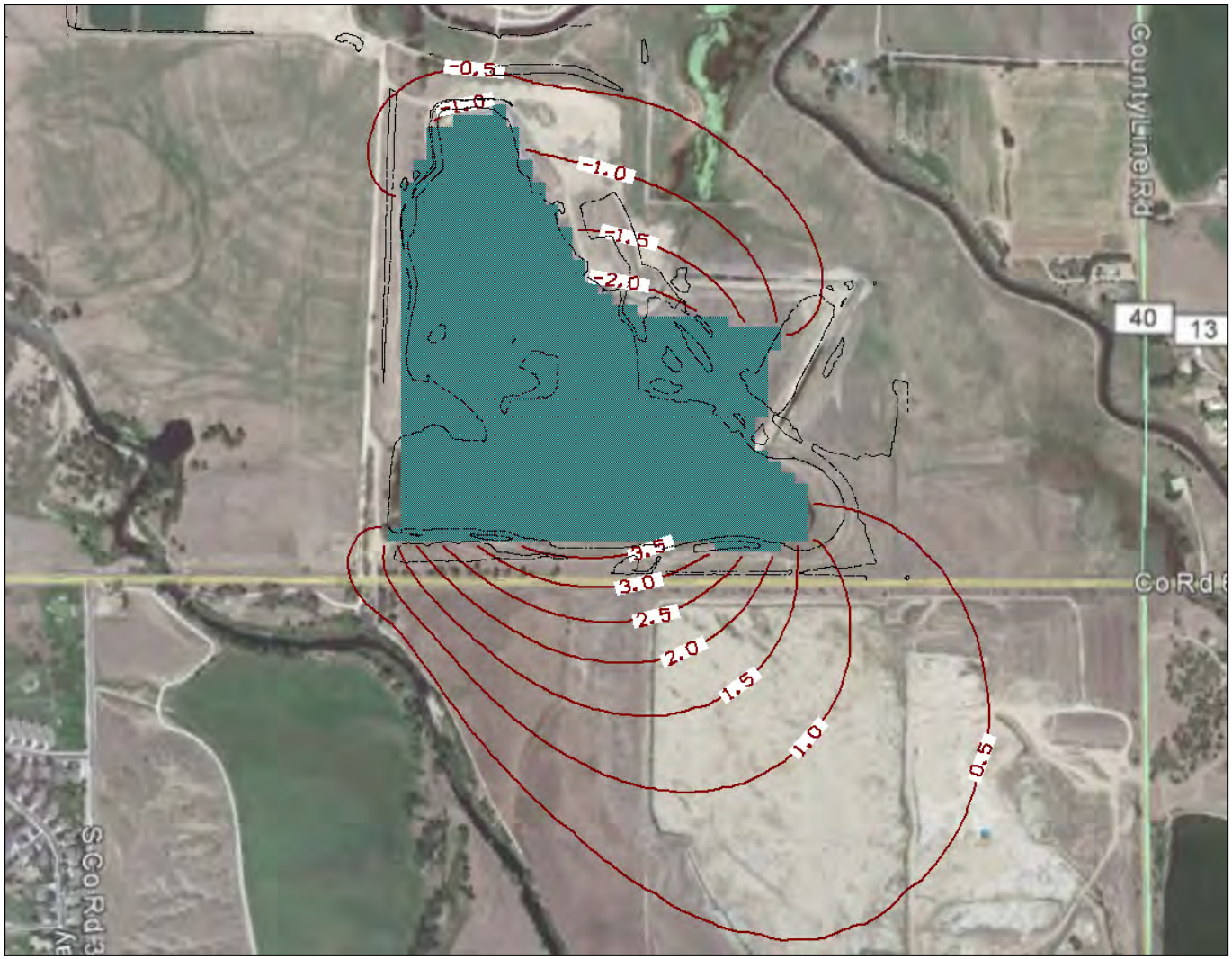

N

LEGEND

COMPUTED DRAWDOWN CONTOUR (FT.)(a)

0.4

(POS. = WATER LEVELS DECREASE, NEG. = WATER LEVELS INCREASE)

POND LINER EXTENT (NO-FLOW BOUNDARY)

(a) DRAWDOWN VALUE = PREDICTED (POST-LINER) ELEVATION (FT.) MINUS PRESENT-CONDITIONS WATER TABLE ELEVATION (FT.). NEGATIVE VALUES INDICATE PREDICTED RISE IN WATER TABLE (MOUNDING).

GROUNDWATER MODEL
THREE BELLS – VELDMAN LINER
WINDSOR, COLORADO

Martin Marietta Materials

GEI Consultants

WATER TABLE DRAWDOWN PREDICTED WITH LINER

Project 1405060-1001 | May 2014 | Figure 10

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LEGEND

GROUNDWATER ELEVATION CONTOUR (FT. NAVD)

4800

GROUNDWATER MODEL
THREE BELLS
WINDSOR, COLORADO

Martin Marietta Materials

GEI Consultants

POTENTIOMETRIC SURFACE PRESENT CONDITIONS VELDMAN AND KYGER

Project 1405060-1001 | August 2014 | Figure 11

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N

LEGEND

GROUNDWATER ELEVATION CONTOUR (FT. NAVD)

4800

POND LINER EXTENT (NO-FLOW BOUNDARY)

GROUNDWATER MODEL
THREE BELLS
WINDSOR, COLORADO

Martin Marietta Materials

GEI Consultants

POTENTIOMETRIC SURFACE PREDICTED WITH LINER VELDMAN AND KYGER

Project 1405060-1001 | August 2014 | Figure 12

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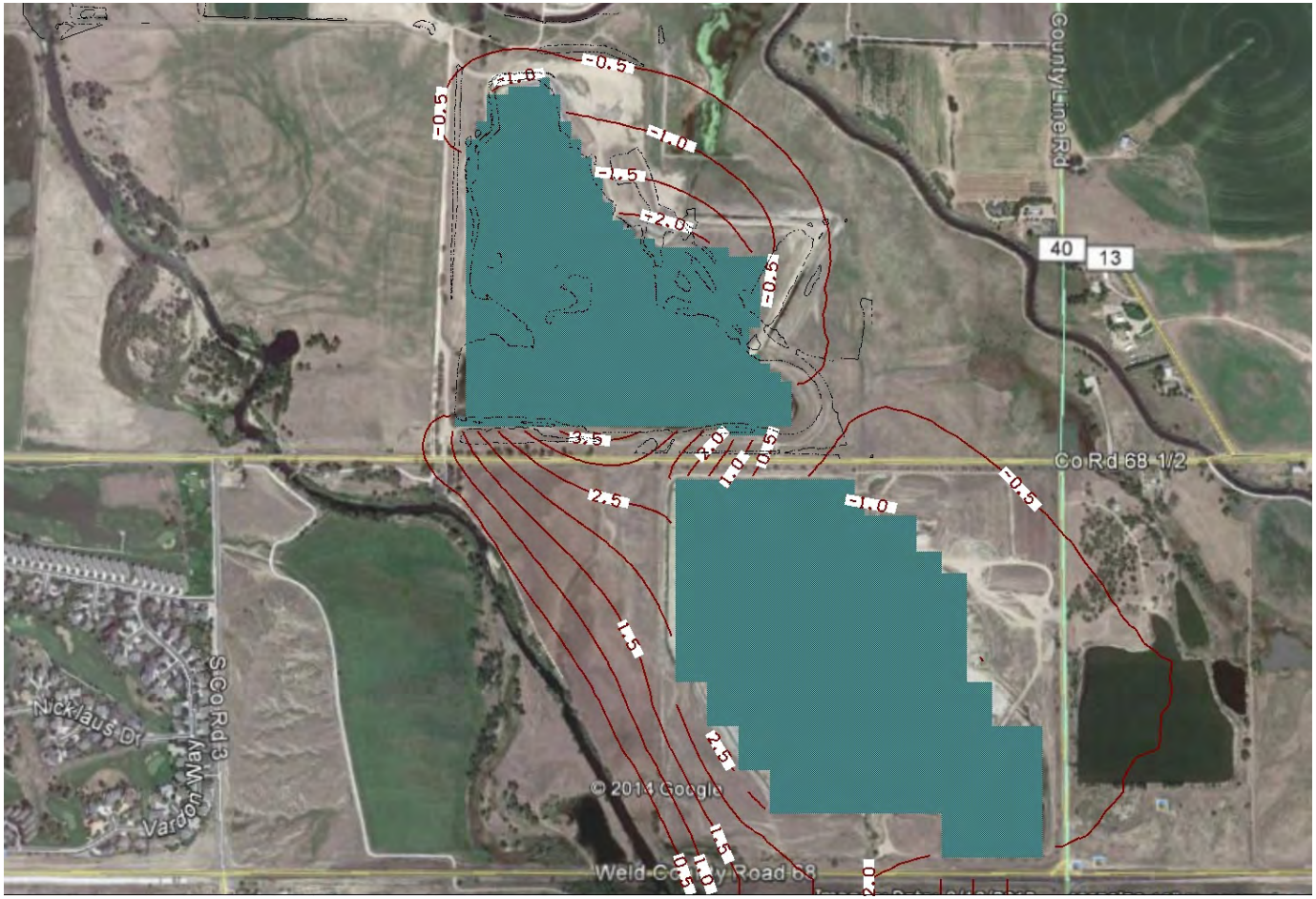

N

LEGEND

COMPUTED DRAWDOWN CONTOUR (FT.)(a)

0.4

(POS. = WATER LEVELS DECREASE, NEG. = WATER LEVELS INCREASE)

POND LINER EXTENT (NO-FLOW BOUNDARY)

(a) DRAWDOWN VALUE = PREDICTED (POST-LINER) ELEVATION (FT.) MINUS PRESENT-CONDITIONS WATER TABLE ELEVATION (FT.). NEGATIVE VALUES INDICATE PREDICTED RISE IN WATER TABLE (MOUNDING).

GROUNDWATER MODEL
THREE BELLS
WINDSOR, COLORADO

Martin Marietta Materials

GEI Consultants

Project 1405060-1001

WATER TABLE DRAWDOWN PREDICTED WITH LINER VELDMAN AND KYGER

August 2014 Figure 13

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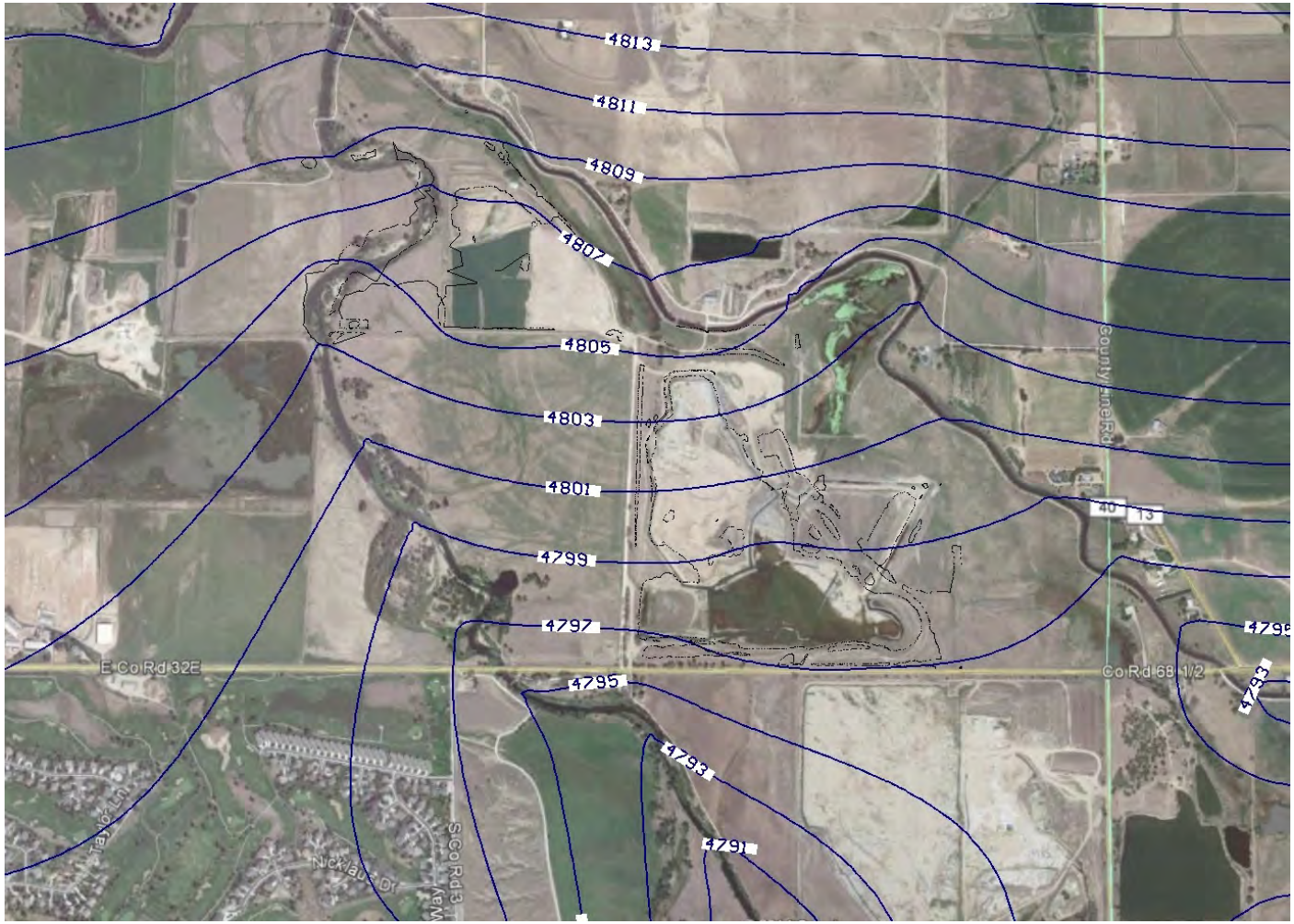

N

LEGEND

GROUNDWATER ELEVATION CONTOUR (FT. NAVD)

4800

GROUNDWATER MODEL
THREE BELLS
WINDSOR, COLORADO

Martin Marietta Materials

GEI Consultants

POTENTIOMETRIC SURFACE
PRESENT CONDITIONS
VELDMAN AND DiTULLIO

Project 1405060-1001 | August 2014 | Figure 14

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N

LEGEND

GROUNDWATER ELEVATION CONTOUR (FT. NAVD)

4800

POND LINER EXTENT (NO-FLOW BOUNDARY)

GROUNDWATER MODEL
THREE BELLS
WINDSOR, COLORADO

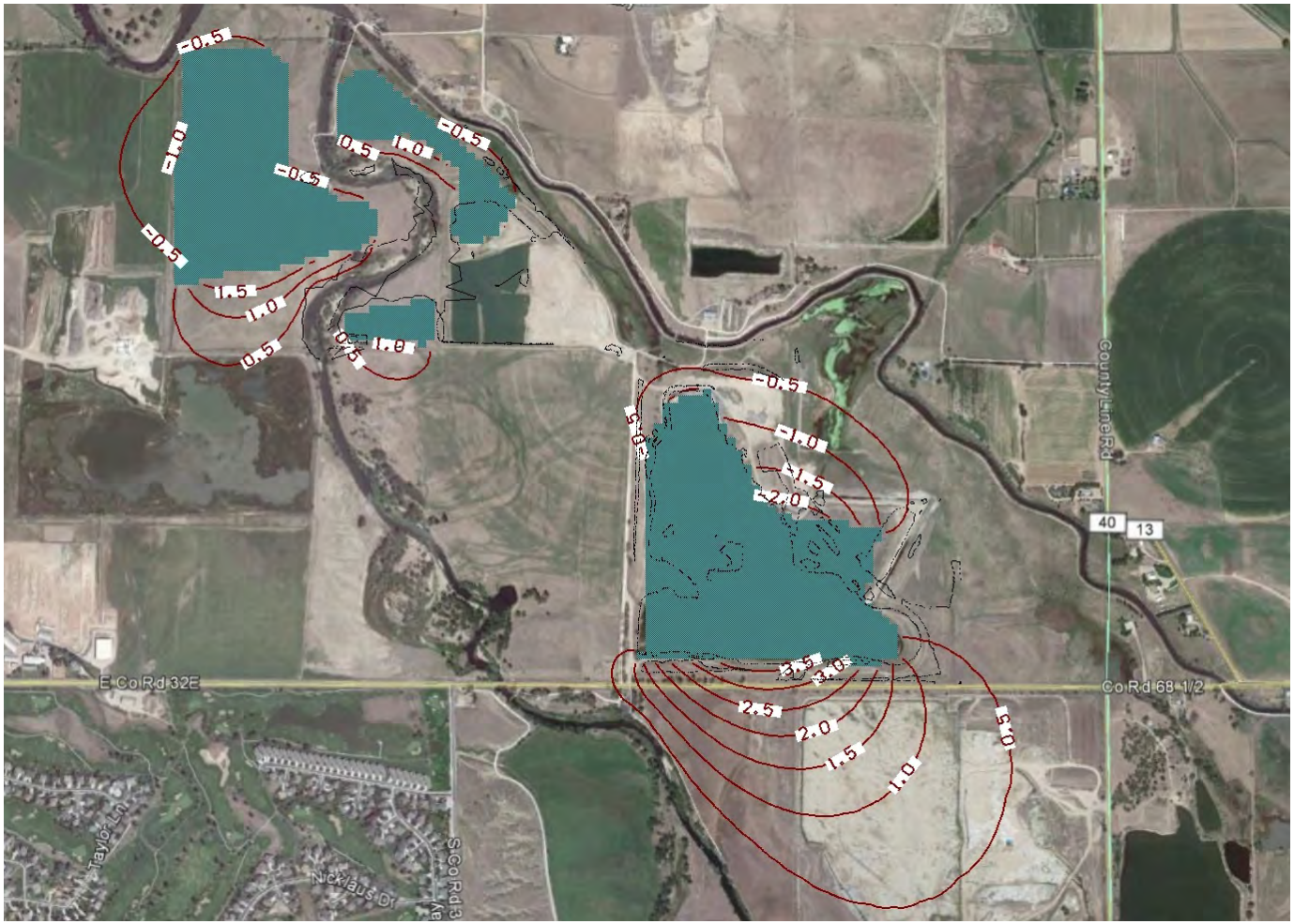
Martin Marietta Materials

GEI Consultants

POTENTIOMETRIC SURFACE PREDICTED WITH LINER VELDMAN AND DiTULLIO

Project 1405060-1001 | August 2014 | Figure 15

H:\TECH\project\Regional Modflow model\Report\Figures.pptx



N

LEGEND

COMPUTED DRAWDOWN CONTOUR (FT.)(a)

0.4

(POS. = WATER LEVELS DECREASE, NEG. = WATER LEVELS INCREASE)

POND LINER EXTENT (NO-FLOW BOUNDARY)

(a) DRAWDOWN VALUE = PREDICTED (POST-LINER) ELEVATION (FT.) MINUS PRESENT-CONDITIONS WATER TABLE ELEVATION (FT.). NEGATIVE VALUES INDICATE PREDICTED RISE IN WATER TABLE (MOUNDING).

GROUNDWATER MODEL
THREE BELLS
WINDSOR, COLORADO

Martin Marietta Materials

GEI Consultants

WATER TABLE DRAWDOWN PREDICTED WITH LINER VELDMAN AND DiTULLIO

Project 1405060-1001 | August 2014 | Figure 16

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Attachment D: Legal Right to Enter

EXHIBIT N
Legal Right to Enter

I grant Martin Marietta Materials, Inc. permission to enter the portions of my property associated with the Division of Reclamation Mining and Safety Permit No. M-1979-191

Dino DiTullio, ~~President~~ Manager
River Bluffs Ventures LLC

Parcel No. 8614105001
8613000020
8613000019
8613000018
8613000012
8611000005
8612000002

STATE OF COLORADO)
)
COUNTY OF Larimer)

The foregoing instrument was acknowledged before me this 9th day of July, 2013, by Dino DiTullio.

Witness my hand and official seal.

Notary Public

My commission expires: 5/30/16

JULIE M. MIKULAS NOTARY PUBLIC STATE OF COLORADO

Attachment E: Stormwater Management Plan

Martin Marietta Materials

Stormwater Management Plan (SWMP)

Three Bells Pit
6428 E. Larimer County Rd 32, Fort Collins, Colorado

Permit No. COG-500131

Prepared for:
Martin Marietta Materials, Inc. – Rocky Mountain Division
10170 Church Ranch Way, Suite 201
Westminster, CO 80021

Prepared by:
Tetra Tech
415 Oak Street
Kansas City, MO 64106
(816) 412-1741

The Stormwater Management Plan (SWMP) format is based on the Colorado Discharge Permit System (CDPS) General Permit for Sand and Gravel Mining and Processing (Permit No. COG-500000) (General Permit).

The SWMP identifies potential sources of pollution (including sediment) reasonably expected to affect the quality of stormwater discharges associated with the mining activity. In addition, the SWMP describes practices to be used to reduce pollutants in stormwater discharges associated with mining activity at the facility, and ensure those practices are selected and described in accordance with good engineering practices (including the requirements for installation, implementation, and maintenance). Also, the SWMP is prepared and updated in accordance with the "Stormwater Management Plan (SWMP)" section of the "Stormwater Discharges" section of the General Permit, to ensure compliance with the terms and conditions of the General Permit.

As a condition of the General Permit, facilities must implement the provisions of the SWMP as written and updated, from commencement of facility activity until completion of final reclamation.

This SWMP includes and identifies the following:

- A facility description and map
- One or more individuals (with specification of position[s] or title[s] within the mining organization) responsible for developing, implementing, maintaining, and revising the SWMP
- Potential pollutants at the facility, and materials and business practices at the facility that may lead to discharges of polluted stormwater
- Best Management Practices (BMP) that will be used to prevent potential discharges
- Other pollution prevention measures
- A preventive maintenance program that incorporates the requirements for inspection frequency and monitoring
- Good housekeeping practices
- All discharges other than stormwater.

Martin Marietta Materials, Inc.
Stormwater Management Plan
Three Bells Pit

Table of Contents

Appendices

Figures (in Appendix A)

1 PLAN CERTIFICATION

Facility Name:	Three Bells Pit (Facility #COG-500131)
Facility Type:	Construction Sand & Gravel (SIC: 1442 NAICS: 212321)
NPDES General Permit Number:	COG-500000
Date that initial operation began:	Spring 1998
Facility Address:	6428 E. Larimer County Rd 32, Fort Collins, Colorado
Emergency Contact:	Walt Wright
Phone:	303-406-8593
Operation Schedule:	12 hours per day, 6 days per week

This stormwater management plan (SWMP) was prepared in accordance with good engineering, hydrologic, and pollution control practices. This SWMP has been prepared and implemented at the Martin Marietta Materials, Inc. (Martin Marietta) facilities located at 6428 E. Larimer County Rd 32, Fort Collins, Colorado, 80525.

In compliance with the provisions of the Colorado Water Quality Control Act (25-8-101 et seq., CRS, 1973 as amended), facilities engaged in mining and processing sand and gravel and other nonmetallic minerals (except fuel) are authorized to discharge surface runoff and process water from authorized locations throughout the State of Colorado to specified surface waters of the State. Such discharges shall accord with conditions of the Colorado Discharge Permit System General Permit COG-500000. Martin Marietta is aware that implementation of the provisions in this SWMP is required under the condition of the permit.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations without disclosure of these.

David Hagerman (Vice President/*General Manager*)

David Hagerman
Signature

12-17-2013
Date

2 FACILITY DESCRIPTION

The Three Bells Pit (facility) is located at 6428 E. Larimer County Rd 32, Fort Collins, and Colorado (see Appendix A, Figure 1). A facility map showing facility-specific characteristics and best management practices (BMP) implemented at the facility appears as Figure 2 in Appendix A.

The facility consists of approximately 339 acres of land used for mining sand and gravel. Site operations include excavation of sand and gravel; material loading, unloading, and conveyance; aggregate crushing and screening; vehicle and equipment maintenance and fueling; pit dewatering; and material storage and stockpiling. During the preparation of aggregate the facility also generates wash water.

Stormwater infiltrates the ground or flows to the settling basin where it either infiltrates or evaporates. Water from the Three Bells facility flows off the property into both the Cache La Poudre River and the Boulder Ditch, which both run adjacent and through portions of the facility boundaries (see Figure 2).

The following permitted outfalls are present at the facility and are shown on Figure 2:

- **Outfall 001.** The discharge from a settling area located in the southwest portion of the site, prior to entering the Cache La Poudre River. Flow rate Avg = 1.44 MGD
- **Outfall 002.** The discharge from a settling area located in the southwest portion of the site, prior to entering the Cache La Poudre River. Flow rate Avg = 1.44 MGD
- **Outfall 003.** The discharge from a settling area located in the southwest portion of the site), prior to entering the Cache La Poudre River. Flow rate Avg = 1.44 MGD
- Outfall 004. The discharge from a settling area located in the southwest portion of the site, prior to entering the Cache La Poudre River. Flow rate Avg = 1.44 MGD

*All discharges must comply with the lawful requirements of federal agencies, municipalities, counties, drainage districts, and other local agencies regarding any discharges to storm drains systems, conveyances, or other water courses under their jurisdiction.

The facility map includes the following features (see Figure 2):

- Mining site boundaries
- Access and haul roads
- Stormwater outfalls and an outline of the drainage area of each stormwater outfall
- Estimated direction of flow
- Each existing structural control measure to reduce pollutants in stormwater runoff
- Non-structural BMPs, as applicable
- Springs, streams, wetlands, and other surface waters
- Mine drainage or any other process water
- Dedicated areas used for asphalt or concrete batch plants
- Dedicated areas used for recycling asphalt or concrete

- All areas of soil disturbance
- Locations and descriptions of all potential stormwater pollution sources, including, but not limited to, the following:
    - Materials handling areas
    - Vehicle fueling areas
    - Fertilizer or chemical storage areas
    - Areas used for storage or disposal of overburden, materials, soils, or wastes
    - Areas used for mineral milling and processing.
- Boundary of tributary area subject to effluent limitations
- Date the map was prepared.

3 DESCRIPTION OF POTENTIAL POLLUTANT SOURCES/MATERIAL INVENTORY

This SWMP identifies possible sources of pollutants (activities and materials) at the facility, and assesses the potential of these sources to contribute pollutants to stormwater discharges associated with mining activities. The SWMP also describes appropriate BMPs to reduce the potential of these identified sources to contribute pollutants to stormwater discharges. These BMPs are implemented by qualified personnel employed by Martin Marietta and participating in Martin Marietta's training program.

- **Loading and unloading operations.** The majority of manufacturing processes at the facility involve solid earthen materials with inert properties. These materials are not likely to significantly impair surface water or groundwater. The facility uses an adequate volume of water to suppress dust, but not in quantities likely to cause runoff.
- **Outdoor storage of chemicals or equipment.** The only chemicals stored outside at the facility are petroleum products that include diesel fuel and fuel additives. Heavy equipment, used and unused, is stored outside at the facility. Fuel, lubricants, coolants, battery fluids, or hydraulic fluids may be released from this equipment. These materials—in storage and in use in equipment—are covered by the facility's Spill Prevention Control and Countermeasures (SPCC) plan. Materials in storage are held in secondary containment units with a capacity of at least 110% of the container or tank capacity. Heavy equipment (with large fuel and hydraulic oil tanks) and a refueling truck jointly owned by the facility and a fuel supplier are parked in a surface depression that is expected to contain all flow on the property.
- **Crushing facilities.** The facility uses crushing equipment to prepare aggregate from quarried materials. The crushers are partially enclosed to prevent fugitive dust emissions. Dust from crushing activities is controlled by application of water, but not in quantities sufficient to generate runoff.
- **On-site waste disposal practices.** No waste is disposed of at the facility. Refuse generated at the facility is managed in roll off containers that are kept closed when not in use.
- **Stockpiles.** The majority of manufacturing processes at the facility involve solid earthen materials with inert properties. These materials are not likely to significantly impair surface water or groundwater. Areas of stockpiled materials (intermediate and finished products) are graded and bermed to direct runoff carrying suspended solids onto the facility property and

ultimately to the facility's settling ponds and permitted outfalls. In addition, runoff from other areas of the facility is channeled away from stockpiles to prevent erosion.

- **Dedicated asphalt or concrete batch plants.** The facility may have portable asphalt and/or concrete batch plants. The hot-mix asphalt plant blends together aggregate and asphalt cement to produce a hot, homogeneous asphalt paving mixture. This mixture is hauled to off-site construction projects. The aggregate used can be a single material, such as a crusher run aggregate or a pit run material, or it can be a combination of course and fine aggregates, with or without filler material. The binder material is normally asphalt cement but can also be an asphalt emulsion or one of a variety of modified materials. Various additives, including liquid and powdered materials, can be incorporated into the mixture. The additives are either stored in tanks or indoors until they are added to the mixture.
- The ready mix concrete operations mix sand, gravel, cement and water together to form ready mix concrete, which is hauled off-site to construction project. Raw materials, other than the sand and gravel, and additives are stored in tanks to protect them from exposure to moisture and temperature until they are pumped into the mixture.
- **Areas used for recycling asphalt or concrete.** Asphalt and concrete are stored and/or processed for reuse. Recycled concrete is hauled to another location for processing. The recycled asphalt and concrete are considered solid earthen materials with inert properties. These materials are not likely to significantly impair surface water or groundwater. Areas of stockpiled materials are graded and bermed to direct runoff carrying suspended solids onto the facility property and ultimately to the facility's settling ponds and permitted outfalls. In addition, runoff from other areas of the facility is channeled away from stockpiles to prevent erosion.
- **Routine maintenance activities.** The facility maintains equipment on site, and maintenance activities may generate petroleum waste, used coolants, used lubricants, and other materials that might have an impact if released, which is covered in the SPCC plan. Typical chemicals associated with maintenance, such as used oil, antifreeze, motor oil, hydraulic oil, brake fluid, etc., may be stored on site as needed. All chemicals are contained to prevent spills, exposure to elements, and mixing with stormwater.
- **Haul roads.** Dust on haul roads is controlled by application of water from water trucks, but not in quantities sufficient to generate runoff. Roads are graded to direct runoff carrying suspended solids onto the facility property and ultimately to the facility's settling ponds and permitted outfalls.
- **Disturbed areas.** Areas of active mining are disturbed. Areas of the quarry are graded and bermed to direct runoff carrying suspended solids onto the facility property and ultimately to the facility's settling ponds and permitted outfalls. Areas of disturbance that are not active are re-vegetated to prevent erosion.

In addition, the facility discharges groundwater generated during dewatering of quarry pits. This groundwater is pumped to the settling ponds before it is discharged from one of the permitted outfalls.

4 MATERIAL INVENTORY

None of the buildings at the facility that are used to store materials have floor drains. The only materials stored outside are petroleum products and stockpiles of intermediate and finished products. The petroleum products are covered by the facility's SPCC plan and stored in secondary containment. The stockpiled materials are solid earthen materials with inert properties. Areas of stockpiled materials (intermediate and finished products) are graded and bermed to direct runoff carrying suspended solids onto the facility property and ultimately to the facility's settling ponds and permitted outfalls. In addition, runoff from other areas of the facility is channeled away from stockpiles to prevent erosion.

5 STORMWATER QUALITY CONTROLS

Following is a description of stormwater quality controls and their implementation at this facility, as required by the General Permit.

5.1 SWMP Administrator

The SWMP Administrator is responsible for developing, implementing, maintaining, and revising the SWMP. The activities and responsibilities of the administrator shall address all aspects of the facility's SWMP. The SWMP Administrator leads the SWMP Administrative Team, identified in Section 5.2.

5.2 SWMP Administrative Team

Team Members	Responsibilities
Name: Tim Niesent Title: Plant Manager Phone: 970-227-4070	• Developing, implementing, maintaining and revising the SWMP • Advise Martin Marietta Resource Manager of facility changes • Conduct or oversee facility BMP inspections • Ensure employee training
Name: David Hagerman Title: VP/GM Phone:720-245-6400	• Review and certify plan
Name: Walt Wright Title: Environmental Engineer - SWMP Administrator Phone:303-406-8593	• Complete plan and maps • Update plans as informed of changes • Assist in implementation, maintenance. and revisions of the SWMP at the facility • Ensure employee training
Name: James Sharn Title: Director of Environmental Services & Land Management Phone: 513-617-6841	• Develop BMPs for regional stormwater management • Manage any significant release of pollutants • Employee training

5.3 Materials Handling and Spill Prevention

For each area or activity that poses possibility of spills, spill prevention and response procedures have been developed. This SWMP describes and locates all practices at the facility that minimize impacts from procedures or significant materials that could contribute pollutants to runoff.

Possible areas/materials/activities that could be pollutant spill sources are:

- Loading and unloading operations
- Outdoor storage of chemicals or equipment

- Crushing facilities
- Stockpiles
- Haul roads
- Disturbed areas

The location of these features is shown on Figure 2, and a more in-depth description of the activities and materials was provided in Section 3.

5.4 Erosion and Sediment Controls

This SWMP describes the BMPs to be applied for reducing erosion and preventing delivery of sediment to state waters. These include structural (such as silt fences, sediment ponds, drop structures, check dams) and nonstructural (such as mulching and re-vegetation) practices.

- Loading and unloading operations – water sprays as needed with a water truck
- Outdoor storage of chemicals or equipment – secondary containment, concrete pads, container fill alarms
- Crushing facilities – water sprays as needed
- Stockpiles – site grading, settling ponds, berming, water spray as needed
- Haul roads – water sprays as needed, site grading
- Disturbed areas – berming, settling ponds, vegetative strips

5.5 Other Pollution Prevention Measures

Section 5.4 lists all pollution prevention measures.

5.6 Preventive Maintenance

The facility has implemented a preventive maintenance program to ensure that stormwater management devices and structures (e.g., settling ponds or berms) are inspected and tested to prevent conditions that could lead to breakdowns or failures and, in turn, discharges of pollutants to surface waters.

Regular inspections of all storage and activity areas are conducted as a part of the operation. Comprehensive inspections are completed as required based on activity at the site (please see Section 8 for additional details). Inspections include at a minimum the following:

- Integrity of diesel storage tank and secondary containment
- Integrity of perimeter berms
- Fuel spills in diesel fueling area, and material spills in the silo area and mixer area.
- Open aggregate storage bins
- Air and oil leaks on machinery and equipment
- Belts, pulleys, rollers, and gates on plant equipment

Cleaning and maintenance is performed as needed and in response to inspection results. Records of these inspections are available through the plant manager or another member of the site SWMP Administration Team.

A list of devices inspected, inspection and cleaning frequencies, and items for special consideration are listed below.

Management Device	Inspection Frequency	Cleaning Frequency	Potential Failures to Observe Closely
Hydrocarbon tanks	Monthly	As needed	Adequate containment and integrity
Hydrocarbon secondary containment	Monthly	As needed	Adequate containment and integrity
Catch basins	As needed	As needed	Insufficient capacity
Settling ponds	As needed	As needed	Insufficient capacity
Containment devices (berms, ditches, etc.)	Weekly	As needed	Adequate containment and integrity
General Plant Conditions	Daily	As needed	n/a
Perimeter Erosion	Weekly	As needed	Breach
Structural BMPs	Monthly	As needed	Adequate containment and integrity/breach
Vehicles	Weekly	As needed	Leaks
Material Handling Equipment	As Needed	As needed	Leaks

5.7 Good Housekeeping

This SWMP identifies good housekeeping procedures that are part of the mining or quarrying operation. Good housekeeping involves maintenance of a clean, orderly facility, including, for example, cleaning and maintenance schedules, trash collection and disposal, and grounds maintenance.

Careful material storage practices have been implemented. Housekeeping includes prevention and reduction of spilled aggregate or other particulate material. Watering of internal roads is performed as needed to control fugitive dust.

Principal good housekeeping procedures are as follows:

- The material inventory is kept up to date, and all containers are labeled with the name and associated hazards.
- Material safety data sheets (MSDS) are available on site or through an online database to ensure that the operations staff is aware of hazards and pollution potential.
- Routine cleanup operations are ongoing and scheduled to ensure that the storage areas and maintenance areas are clean and orderly.
- Good housekeeping, including cleanup procedures and disposal requirements, are incorporated into employee training.
- Solid waste receptacles are available on site and are emptied regularly.

5.8 Identification of Discharges Other than Stormwater

The stormwater conveyance system at the facility has been evaluated for presence of discharges other than stormwater, such as sanitary waste or process water of any kind. A number of discharges other than stormwater may not require a Colorado Discharge Permit System (CDPS) Industrial Wastewater Discharge permit, and are considered Allowable Non-Stormwater Discharges.

Water stored and applied at the facility for dust abatement is periodically utilized on the yard site and the access and haul roads to suppress fugitive dust. Water is not applied in excess amounts for dust control; therefore, this does not result in an off-site discharge of liquids. Water and other liquids utilized in other peripheral uses and in the production of aggregate are contained within the plant area. Any mechanical failure with the potential to allow a surfaces release would be addressed through the site's spill response or emergency response protocols, free liquids would be isolated and adsorbed, and adsorbents properly disposed.

Type of Discharge	No Discharge	Permitted Process Water	Unpermitted	Exempt	Control Measures
Transport Discharge	X				
Equipment Wash Water	X				
Dust Control (roads)	X				
Irrigation return flows				X	
Other Agricultural discharge				X	
Fire Fighting discharges				X	
Foundation Draining (SUMP)				X	
Springs				X	
Dewatering		X			
Other					

6 BMP IMPLEMENTATION AND DESIGN STANDARDS

According to the General Permit, facilities must select, install, implement, and maintain appropriate BMPs, following good engineering, hydrologic, and pollution control practices. BMPs implemented at the facility are designed to provide control of all potential pollutant sources associated with facility activity to prevent pollution or degradation of state waters.

All BMPs meet the implementation and design standards outlined in the *Urban Storm Drainage Criteria Manual, Volume 3, and Best Management Practices*, originally published by the Urban Drainage and Flood Control District of Denver, Colorado, in September 1992 and updated in November 2010.

Pollution Prevention BMPs

- Regular clean-up, collection and containment of debris in storage areas – minimize exposure of manufacturing, processing and material storage areas to rain, snow, snowmelt and runoff by either locating industrial materials and activities inside or protecting them with storm resistant covers.
- Spill control – including regular inspection and repair of equipment and systems that may leak, spill or release pollutants; as well as monitoring, replacement and repair of control measures.
- Employee training

Treatment BMPs

- Use water truck to wet haul roads
- Water sprays – to reduce dust and particulates during plant operations
- Settling ponds – divert, infiltrate, reuse, and contain stormwater runoff to minimize pollutants in the facility discharge

Source Reduction BMPs

- Diversion dikes and berms (site grading) – using open vegetated swales and natural depressions can reduce in-stream impacts of erosive flows. Dikes, curbs and berms can be used for discharge diversions.
- Erosion and sediment controls – stabilize exposed areas and contain runoff using structural and/or non-structural control measures to minimize the onsite erosion and sedimentation.
- Vegetative covers – minimize impervious areas and infiltrate runoff on-site into the retention pond can reduce runoff and improve groundwater recharge and streams base flows in local streams
- Conserving and/or repairing riparian buffers will help protect streams from stormwater runoff and improve water quality
- Prevent or minimize discharge of spilled, aggregate and settled dust into stormwater.

7 CONSISTENCY WITH OTHER PLANS

The provisions of this SWMP are consistent with the requirements of the facility's SPCC plan and with all provisions of the facility-specific certifications under the General Permit (Facility #COG-500131).

8 FACILITY INSPECTIONS

In addition to the inspections necessary to comply with the preventive maintenance program requirements described in Section 5.6, qualified personnel conduct comprehensive inspections of the stormwater management system

Comprehensive inspections performed by qualified individuals, record keeping and internal reporting are essential activities under the SWMP and are outlined below. All records and reports are to be maintained with the plan at the facility's managing office.

Qualified personnel shall make a comprehensive inspection of the stormwater management system at least twice per year in the spring and fall. These comprehensive inspections must be documented and summarized in the Annual Report.

Material handling areas, disturbed areas, areas used for material storage that are exposed to precipitation, and other potential sources of pollution identified in the SWMP in accordance with the permit shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Structural stormwater management measures, sediment and control measures, and other structural pollution prevention measures identified in the plan shall be observed to ensure that they are operating correctly. A visual inspection of equipment needed to implement the plan, such as spill response equipment, shall be made.

Any repairs or maintenance needs identified by the inspection shall be completed within 48 hours. Based on the results of the inspection, the description of potential pollutant sources and pollution prevention measures identified in the SWMP shall be revised as appropriate. The SWMP shall be revised as appropriate as soon as practicable after such inspection. Such revisions to the SWMP shall provide for implementation of any changes to the plan in a timely manner, but in no case more than 60 days after the inspection.

A report summarizing the scope of the inspection, personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the SWMP, and actions taken as

described above shall be made and retained as part of the SWMP for at least 3 years. The report shall be signed by a SWMP Administrator.

9 SWMP AVAILABILITY

Upon request, and within time frames specified in the request, the facility will submit a copy of the SWMP to the Water Quality Control Division (Division) of the Colorado Department of Public Health and Environment (CDPHE); the Colorado Division of Reclamation, Mining, and Safety (CDRMS) (formerly the Division of Minerals and Geology [DMG]); and/or the U.S. Environmental Protection Agency (EPA); and to any local agency approving sediment and erosion plans or stormwater management plans. If submittal of the SWMP is required to any of these entities, the facility will include a signed certification in accordance with "Signatory and Certification Requirements" listed in the General Permit, certifying that the SWMP is complete and meets all permit requirements.

The SWMP also is considered a report that shall be available to the public under Section 308(b) of the CWA. The facility will make this SWMP available to members of the public upon request. The facility reserves the right to claim any portion of a SWMP as confidential in accordance with 40 *Code of Federal Regulations* (CFR) Part 2.

10 SWMP ADMINISTRATIVE REQUIREMENTS

10.1 SWMP PREPARATION AND IMPLEMENTATION

A certified version of this SWMP was submitted when the facility applied for coverage under the General Permit. It will be updated as appropriate (see Section 10.3).

10.2 SWMP RETENTION

The SWMP is maintained by the facility at the office on the Three Bells Pit property. A copy of the SWMP also will be maintained at the regional office.

10.3 SWMP REVIEW/CHANGES

10.3.1 Division Review

The facility will provide the SWMP to the Division upon request. If notified by the Division that the SWMP does not meet one or more of the minimum requirements of the General Permit, the facility will make changes to the SWMP to include the requested changes and submit the revised SWMP to the Division within 30 days.

10.3.2 Permittee Review/Change

The facility will amend the SWMP whenever a change occurs in design, construction, operation, or maintenance that significantly affects potential for discharge of pollutants to the waters of the State, or if the SWMP proves ineffective in achieving the general objectives of controlling pollutants in stormwater discharges associated with mining or quarrying activity. If existing BMPs need to be modified or if additional BMPs are necessary, the SWMP changes and implementation will be completed before the next anticipated storm, but in no case more than 60 days after either of the following:

- The change in design, construction, operation, or maintenance
- When the SWMP has been determined ineffective.

Amendments to the plan will be summarized in the Annual Report.

The facility will also notify the Colorado Division of Minerals and Geology (formerly the Mined Land Reclamation Division) of any significant changes at the facility resulting from implementation of the SWMP.

11 TRAINING AND EMPLOYEE EDUCATION

Training of personnel is conducted annually to educate employees, at all levels of responsibility, about the components and objectives of the storm water management plan for the site. Contractors and temporary personnel are informed of site specific design features and operations on their first visit to the site. Training for the SWMP typically will be held concurrently with training for the SPCC Plan.

The training scope will include the following topics:

- Spill Prevention
- Spill Response
- Good Housekeeping Techniques
- Materials Management
- Sediment & Erosion Prevention
- Definition of Process Water
- Best Management Practices in Place and Proper Maintenance

While operations are conducted on site, it will be the responsibility of the site manager or operator in charge to train appropriate on-site personnel so that the goals of the SWMP are achieved.

Various other types of environmental training are conducted at different levels of the site management. Environmental Training topics are produced for "tailgate" meetings to discuss site-specific environmental management. Site managers participate in a number of internal and industry management meetings where environmental pollution control, regulations, and responsibilities are discussed.

Records of personnel training conducted, including personnel in attendance, date of training, and scope of training are available through the facility manager.

12 TOTAL MAXIMUM DAILY LOAD

The discharges go to the Cache La Poudre River, within Segment 12 of the Cache La Poudre River Sub-Basin, South Platte River Basin, found in the Classifications and Numeric Standards for the South Platte River Basin (Regulation No. 38; last update effective March 1, 2008). Segment 12 is designated as Use Protected and is classified for the following beneficial uses: Aquatic Life, Class 1 (Warm); Recreation, Class 1a; and Agriculture.

Segment 12 of the Cache La Poudre River Sub-basin, South Platte River Basin is on the 303(d) list for Selenium with a Low priority. A total maximum daily load (TMDL) has not yet been developed or finalized, and therefore waste load allocations have not been made for this parameter. At such time as a TMDL is complete, this certification may be reopened, and limitations may be added. Until such time, monitoring and reporting for Selenium will be required.

Segment 12, below Eaton Draw, is on the 303(d) list as impaired for *E. Coli* with a designation of a Low priority. This facility discharges to the Cache La Poudre River above Eaton Draw. Also, the source of the discharge is ground water, so *E. Coli* is not expected to be present. Therefore, additional limitations and/or monitoring for *E. Coli* are not necessary at this time.

13 STORMWATER MONITORING

The facility will collect samples from permitted outfalls as described in Section 13.1, monitor flow rates as described in Section 13.2, and submit an annual report as described in Section 13.3.

13.1 ROUTINE REPORTING OF DATA

Reporting of data obtained in compliance with the "Effluent Limitations and Monitoring Requirements" of the General Permit shall be on a quarterly basis. Reporting of all data obtained shall comply with the "General Monitoring, Sampling, and Reporting Requirements" of the General Permit.

Monitoring results shall be summarized for each calendar quarter and reported on the Division-approved discharge monitoring report (DMR) forms (EPA form 3320-1). The form will be either mailed to the Division at the address listed below or by using the Division's Net-DMR service so they are received no later than the 28th day of the month following the end of the quarter. If no discharge occurs during the reporting period, "No Discharge" shall be reported.

After the DMR form has been filled out and signed, it shall be submitted to the Division at the following address:

Colorado Department of Public Health and Environment
Water Quality Control Division
WQCD-P-B2
4300 Cherry Creek Drive South
Denver, CO 80222-1530

The DMR forms will be filled out accurately and completely in accordance with requirements of this permit and the instructions on the forms. They will be signed by an authorized member of the SWMP Administrative Team (see Section 5.2). Calculations for all limitations, which require the averaging of measurements, will use the arithmetic mean.

Schedules and procedures for sampling are as follows:

Sampling Location	Pollutant Parameters to be Sampled	Monitoring Schedule	Numeric Limitations
All Outfalls	Flow, in million gallons per day, 50050	Continuous[1]	Not applicable
	pH, (Minimum-Maximum) 00400	2 days per month	6.5 to 9.0 (daily maximum)
	Oil and grease, in milligrams per liter[2], 03582	2 days per month/contingent	10 (daily maximum)
	Oil and grease visual, in milligrams per liter[2], 84066	2 days per month	10 (daily maximum)
	Total suspended solids (TSS), in milligrams per liter, 00530	2 days per month	30 (30-day average) 45 (7-day average)
	Potentially dissolved selenium in micrograms per liter, 01323	Monthly	Not applicable

1 If power is not available, flow may be measured on an instantaneous basis. In this case, the facility will monitor flow 2 days per week.

2 If a visual sheen is noticed, the facility will collect a grab sample for oil and grease.

13.2 FLOW MONITORING

A flow monitoring device has been installed at each of the facility's permitted outfalls.

13.3 ANNUAL REPORT

The facility will submit an Annual Report, covering January 1 through December 31 of each year, on the overall compliance with the SWMP. The Annual Report will contain, at a minimum:

- The facility name, address, phone number, and permit certification number.
- A report on the facility's overall compliance with the SWMP.
- A summary of each comprehensive stormwater facility inspection made, including date, findings, and action taken.
- Results and interpretation of any stormwater monitoring performed.

The report will be signed and certified for accuracy by the SWMP Administrator (see Section 5.2), including the certification language contained in the "Signatory and Certification Requirements" of the General Permit.

The Annual Report will be due to the Division on or before February 15 of each year, after the first full year of coverage under the permit. It will be sent to:

Colorado Department of Public Health and Environment
Water Quality Control Division
WQCD-P-B2
4300 Cherry Creek Drive South
Denver, CO 80222-1530

14 NOTIFICATION REQUIREMENTS

The SWMP Administrator will oversee all notifications; if the SWMP Administrator is not available, he or she will designate a member of the SWMP Administrative team as an alternate to make any necessary notifications (see Section 5.2).

All notification requirements under this section will be directed as follows:

1) **Oral Notifications, other than for spills**, during normal business hours will be to:

   Water Quality Protection Section – Industrial Compliance Program
   Water Quality Control Division
   Telephone: (303) 692-3500

2) **Spills notifications** at any time and **other notifications** after hours will be to:

   Emergency Management Program
   Laboratory and Radiation Services Division
   Telephone: (877) 518-5608

   Written notification will be to:

   Water Quality Protection Section – Industrial Compliance Program
   Water Quality Control Division
   Colorado Department of Public Health and Environment
   WQCD-WQP-B2
   4300 Cherry Creek Drive South
   Denver, CO 80246-1530

14.1 CHANGE IN DISCHARGE

The facility will notify the Division regarding changes in discharge under the following circumstances:

- The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged, OR
- The alteration or addition results in a significant change in the facility's sludge use or disposal practices, and such alteration, addition, or change may justify application of permit conditions that differ from or are absent in the existing General Permit, including notification of additional use or disposal facilities not reported pursuant to an approved land application plan.

The facility will give advance notice to the Division of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

Whenever notification of any planned physical alterations or additions to the permitted facility is required pursuant to this section, the facility will furnish the Division such plans and specifications which the Division deems reasonably necessary to evaluate the effect on the discharge, the stream, or groundwater. If the Division notifies the facility that such new or altered discharge might be inconsistent with the conditions of the permit, the facility will prepare a new or revised permit application and shall follow the procedures specified in Sections 61.5 through 61.6, and 61.15 of the Colorado Discharge Permit System Regulations.

14.2 SPECIAL NOTIFICATIONS – DEFINITIONS

- ***Bypass***: Intentional diversion of waste streams from any portion of a treatment facility.
- ***Severe Property Damage***: Substantial physical damage to property at the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. It does not mean economic loss caused by delays in production. PART II Page No. 19 Permit No. COG-500000
- ***Spill***: An incident during which flows or solid materials are accidentally or unintentionally allowed to flow or escape so as to be lost from the treatment, processing, or manufacturing system, and which may cause or threaten pollution of state waters.
- ***Upset***: An exceptional incident during which unintentional and temporary noncompliance with permit effluent limitations occurs because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

14.3 NONCOMPLIANCE NOTIFICATION

The facility will report the following circumstances **orally within 24 hours** and in **written form within 5 days** from the time it becomes aware of the following circumstances:

- Circumstances leading to any noncompliance which may endanger health or the environment regardless of the cause of the incident.
- Circumstances leading to any unanticipated bypass which exceeds any effluent limitations in the permit.
- Circumstances leading to any upset or spill which causes an exceedance of any effluent limitation in the permit.
- Daily maximum violations for any of the pollutants limited by Part I.A of this permit and specified as requiring 24-hour notification. This includes any toxic pollutant or hazardous substance or any pollutant specifically identified as the method to control any toxic pollutant or hazardous substance.

The facility will report instances of non-compliance which are not required to be reported within 24 hours when DMRs are submitted (see Section 13.1).

In all cases, written notifications will include the following information:

- A description of the discharge and cause of noncompliance.
- The period of noncompliance, including exact dates and times and/or the anticipated time when the discharge will return to compliance.
- Steps being taken to reduce, eliminate, and prevent recurrence of the noncomplying discharge.

14.4 OTHER NOTIFICATION REQUIREMENTS

The facility will notify the Division, in writing, 30 days in advance of a proposed transfer of permit as provided in the "Transfer of Ownership or Control" requirements in the General Permit.

The facility will notify the Division as soon as it knows or has reason to believe any of the following General Permit items are applicable to the facility:

- That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant not limited in the General Permit, if that discharge will exceed the highest of the following "notification levels":
    - A concentration of 100 micrograms per liter (μg/L) for constituents not otherwise specified
    - 200 μg/L for acrolein and acrylonitrile
    - 500 μg/L for 2.4-dinitrophenol and 2-methyl-4.6-dinitrophenol
    - 1 milligram per liter (mg/L) for antimony
    - Five times the maximum concentration value reported for any pollutant in the permit application in accordance with Section 61.4(2) (g). PART II Page No. 20 Permit No. COG-500000
    - The level established by the Division in accordance with 40 CFR 122.44(f).
- That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant not limited in the General Permit, if that discharge will exceed the highest of the following "notification levels":
    a) A concentration of 500 μg/L for constituents not otherwise specified
    b) 1 mg/L for antimony
    c) Ten times the maximum concentration value reported for that pollutant in the permit application
    d) The level established by the Division in accordance with 40 CFR 122.44(f).

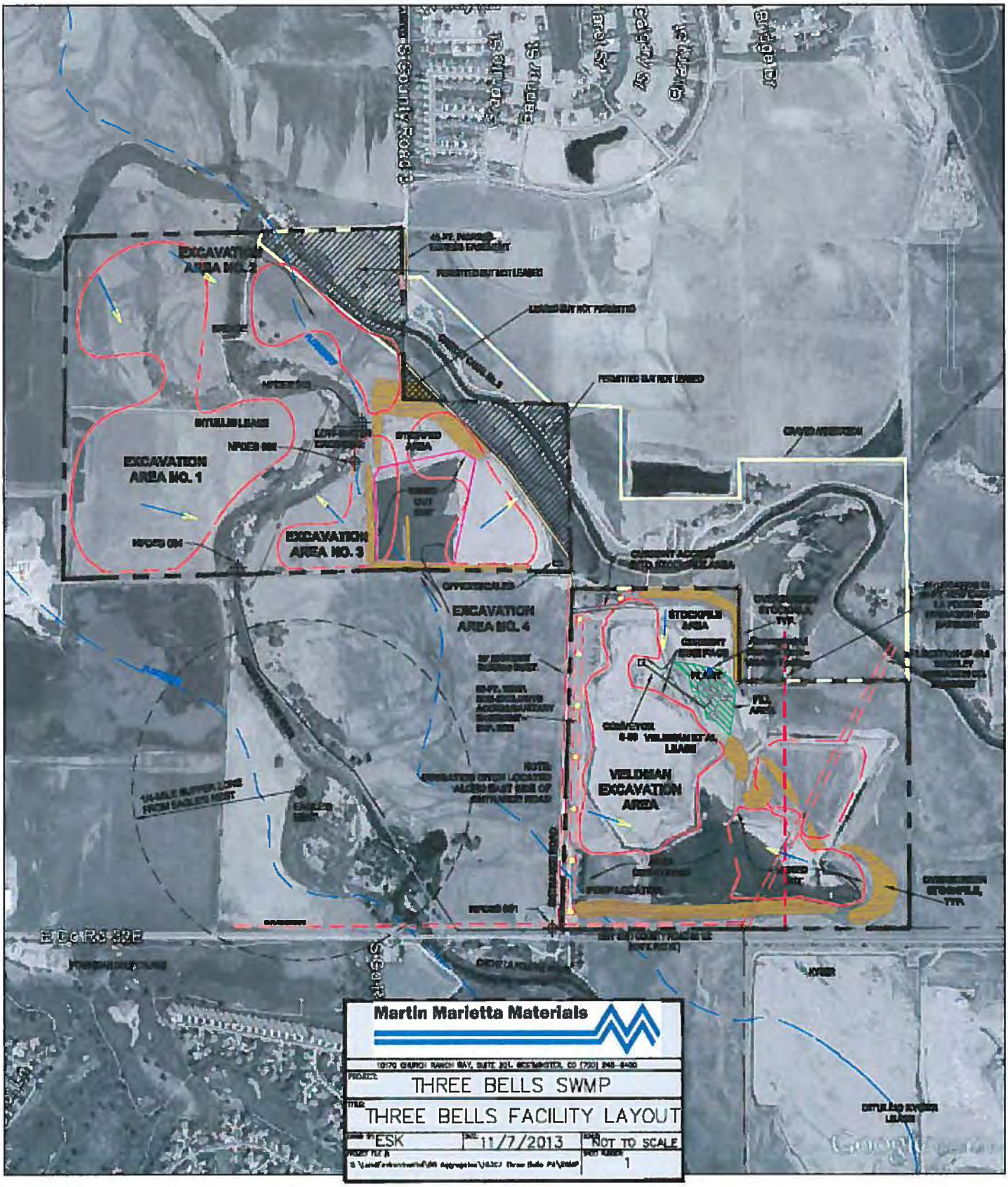
Reporting forms are included in Appendix B.

APPENDIX A

FIGURES

FIGURE 1 FACILITY LOCATION

FIGURE 2 FACILITY LAYOUT



APPENDIX B

REPORTING FORMS

Storm Water Inspection Form

Location & GL Number:_____

Inspector:_____ **Date:**_____

Site Status (circle one): Future Site Running Not Running/Idle Permanently Closed

Area Inspected	*Conditions Acceptable? (circle one)*				*Repair Needed?*			*Comments & Actions Taken*
Stockpile Area	Yes	Marginal	No	N/A	Yes	No	N/A	
Recycled Concrete Area	Yes	Marginal	No	N/A	Yes	No	N/A	
Recycled Asphalt Area	Yes	Marginal	No	N/A	Yes	No	N/A	
Bone Yard	Yes	Marginal	No	N/A	Yes	No	N/A	
Shop Area	Yes	Marginal	No	N/A	Yes	No	N/A	
Washout Pits	Yes	Marginal	No	N/A	Yes	No	N/A	
Acid Wash Area	Yes	Marginal	No	N/A	Yes	No	N/A	
Settling Ponds	Yes	Marginal	No	N/A	Yes	No	N/A	
Erosion Controls	Yes	Marginal	No	N/A	Yes	No	N/A	
Check Dams	Yes	Marginal	No	N/A	Yes	No	N/A	
Drainage Ditches	Yes	Marginal	No	N/A	Yes	No	N/A	
Admixture Storage Area	Yes	Marginal	No	N/A	Yes	No	N/A	
Fuel/oil Tanks	Yes	Marginal	No	N/A	Yes	No	N/A	
Tank Secondary Containment	Yes	Marginal	No	N/A	Yes	No	N/A	
Diversion Dikes/Swales	Yes	Marginal	No	N/A	Yes	No	N/A	
Riprap and/or Gabions	Yes	Marginal	No	N/A	Yes	No	N/A	
Spill Kit/Response Materials	Yes	Marginal	No	N/A	Yes	No	N/A	

Does evidence exist of pollutants entering storm water conveyance system or discharging from the site? **Y or N**

_____

_____

Do any existing BMPs need maintenance? **Y or N**

_____

_____

Are there any BMPs that failed to operate as designed; shown to be inadequate; need to be modified; need to be removed; or additional measures installed? **Y or N**

_____

_____

Changes or Improvements to Water Management Systems? **Y or N**

Additional Comments:

Certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations"

Authorized Certification Signature:

Title & Date Signed:

Attachment F: Revegetation Cost Estimate from DRMS

REVEGETATION WORK

Task description: **Revegetation**

Site: **Three Bells Pit** Permit Action: AM01 Permit/Job#: M1979191

PROJECT IDENTIFICATION

Task #: 002 State: Colorado Abbreviation: None
Date: 1/7/2015 County: Larimer Filename: M191-002
User: ECS

Agency or organization name: DRMS

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			$	$
			Total Fertilizer Materials Cost/Acre	**$0.00**

Application

Description	Cost /Acre
	$
Total Fertilizer Application Cost/Acre	**$0.00**

TILLING

Description	Cost /Acre
Chisel plowing {DMG}	$88.58
Total Tilling Cost/Acre	**$88.58**

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Paloma	2.00	6.47	$17.42
Slender Wheatgrass - Native	2.00	7.30	$4.50
Coneflower, Prairie	0.25	6.80	$9.11
Thickspike Wheatgrass - Critana	2.00	7.07	$10.34
Western Wheatgrass - Arriba	2.50	6.31	$9.20
Western Wheatgrass - Barton	2.50	6.31	$9.20
Needlegrass, Green - Lodorm	2.00	8.31	$10.78
Flax, Lewis Blue	1.00	6.63	$16.52
Totals Seed Mix	14.25	55.21	**$87.07**

Application

Description	Cost /Acre
Drill seeding (DRMS Cost Data)	$88.20
Total Seed Application Cost/Acre	**$88.20**

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	$265.00	$530.00
Total Mulch Materials Cost/Acre				**$530.00**

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	$65.89
Total Mulch Application Cost/Acre	**$65.89**

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					$
Totals Nursery Stock Cost / Acre					**$0.00**

JOB TIME AND COST

No. of Acres: 1 Cost /Acre: $859.74
Estimated Failure Rate: 20% Cost /Acre*: $859.74
*Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Initial Job Cost: **$859.74**
Reseeding Job Cost: **$171.95**
Total Job Cost: **$1,032**
Job Hours: **4.00**

Attachment G: Letter from Larimer County

Julie Mikulas

From: Eric Tracy <tracyel@co.larimer.co.us>
Sent: Thursday, January 15, 2015 2:47 PM
To: Julie Mikulas
Subject: 3-Bells Pit

Ms. Mikulas,

The Three Bells Pit was originally approved in April 28, 1982 by the Larimer County Board of County Commissioners. The proposed change from open lakes to lined water storage is not requiring that the project be reopened at the Larimer County level. Since this was previously approved with stockpiles shown in the floodplain, you may continue with that original mining plan.

At the time of approval in 1982, there were no requirements for inlet/outlet spillways. Since this is not being reopened, we will not require that those be added as part of a Larimer County standard.

Eric Tracy
Floodplain Administrator
Larimer County Engineering Department

Attachment H: Piezometer: Well Construction and Test Reports

FORM NO. GWS-31 4/2012

WELL CONSTRUCTION AND TEST REPORT

STATE OF COLORADO, OFFICE OF THE STATE ENGINEER
1313 Sherman St., Ste 821, Denver, CO 80203
Main (303) 866-3581 Fax (303) 866-3589 www.water.state.co.us

For Office Use Only

1. WELL PERMIT NUMBER: 053181-MH

2. WELL OWNER INFORMATION

NAME OF WELL OWNER: Martin Marietta Materials

MAILING ADDRESS: 1801 N Taft Hill Rd

CITY: Fort Collins STATE: CO ZIP CODE: 80521

TELEPHONE NUMBER w/area code: 970-221-4041

3. WELL LOCATION AS DRILLED: NW 1/4, SE 1/4, Sec., S11 Twp. 6 ☒ N or S, ☐ Range 68 ☐ E or W ☒

DISTANCES FROM SEC. LINES: _____ ft. from ☐ N or ☐ S section line and _____ ft. from ☐ E or ☐ W section line.

SUBDIVISION: N/A, LOT____, BLOCK____, FILING (UNIT) ____

Optional GPS Location: GPS Unit must use the following settings: Format must be **UTM**, Units must be **meters**, Datum must be **NAD83**, Unit must be set to **true N**, ☐ Zone 12 or ☒ Zone 13

Owner's Well Designation: B101

Easting: 502380

STREET ADDRESS AT WELL LOCATION: N/A

Northing: 4483386

4. GROUND SURFACE ELEVATION 4817.71 feet DRILLING METHOD Hollow Stem Auger

DATE COMPLETED 01/07/2015 TOTAL DEPTH 16.3 feet DEPTH COMPLETED 15.3 feet

5. GEOLOGIC LOG:

Depth	Type	Grain Size	Color	Water Loc.
0 - 5ft	ML	Silt	Dark Brown	4.5ft
5 - 6ft	SP-SM	Sand/Silt	Grayish Brown	
6 - 15ft	SW	Sand/Gravel	Lt Brown	
15 - 16.3ft	Claystone	Bedrock	Brown to Gray	

6. HOLE DIAM (in.)

	From (ft)	To (ft)
8.5	0	16.3

7. PLAIN CASING:

OD (in)	Kind	Wall Size (in)	From (ft)	To (ft)
2.375	PVC	0.1875	0	5

PERFORATED CASING: Screen Slot Size (in): 0.010

OD (in)	Kind	Wall Size (in)	From (ft)	To (ft)
2.375	PVC	0.1875	5.0	15.0

8. FILTER PACK:

Material: Silica
Size: 10/20
Interval: 3.0 - 15.3ft

9. PACKER PLACEMENT:

Type: N/A
Depth:

10. GROUTING RECORD

Material	Amount	Density	Interval	Placement
N/A				

Remarks:

11. DISINFECTION: Type N/A Amt. Used

12. WELL TEST DATA: ☐ Check box if Test Data is submitted on Form Number GWS 39 Supplemental Well Test.

TESTING METHOD N/A

Static Level_____ ft. Date/Time measured:_____, Production Rate_____ gpm.

Pumping Level_____ ft. Date/Time measured_____, Test Length (hrs)_____.

Remarks:

13. I have read the statements made herein and know the contents thereof, and they are true to my knowledge. This document is signed (or name entered if filing online) and certified in accordance with Rule 17.4 of the Water Well Construction Rules, 2 CCR 402-2. The filing of a document that contains false statements is a violation of section 37-91-108(1)(e), C.R.S., and is punishable by fines up to $5000 and/or revocation of the contracting license. If filing online the State Engineer considers entering of licensed contractor name to be compliance with Rule 17.4

Company Name:	Phone w/area code:	License Number:
GEI Consultants Inc	970-224-7342	

Mailing Address: 2625 Redwing Rd, Fort Collins, CO 80526

Sign (or enter name if filing online)	Print Name and Title	Date
	Jeremy Deuto, PE, PG / Project Manager	

FORM NO. GWS-31 4/2012

WELL CONSTRUCTION AND TEST REPORT

STATE OF COLORADO, OFFICE OF THE STATE ENGINEER
1313 Sherman St., Ste 821, Denver, CO 80203
Main (303) 866-3581 Fax (303) 866-3589 www.water.state.co.us

For Office Use Only

1. WELL PERMIT NUMBER: 053181-MH

2. WELL OWNER INFORMATION

NAME OF WELL OWNER: Martin Marietta Materials

MAILING ADDRESS: 1801 N Taft Hill Rd

CITY: Fort Collins STATE: CO ZIP CODE: 80521

TELEPHONE NUMBER w/area code: 970-221-4041

3. WELL LOCATION AS DRILLED: NW 1/4, SE 1/4, Sec., S11 Twp. 6 ☒ N or S, ☐ Range 68 ☐ E or W ☒

DISTANCES FROM SEC. LINES: _____ ft. from ☐ N or ☐ S section line and _____ ft. from ☐ E or ☐ W section line.

SUBDIVISION: N/A, LOT____, BLOCK____, FILING (UNIT) ____

Optional GPS Location: GPS Unit must use the following settings: Format must be **UTM**, Units must be **meters**, Datum must be **NAD83**, Unit must be set to **true N**, ☐ Zone 12 or ☒ Zone 13

Owner's Well Designation: B102

Easting: 502353

STREET ADDRESS AT WELL LOCATION: N/A

Northing: 4483086

4. GROUND SURFACE ELEVATION 4815.97 feet DRILLING METHOD Hollow Stem Auger

DATE COMPLETED 01/07/2015 TOTAL DEPTH 15.9 feet DEPTH COMPLETED 15.1 feet

5. GEOLOGIC LOG:

Depth	Type	Grain Size	Color	Water Loc.
0 - 3ft	ML	Silty	Dark Brown	
3 - 14ft	SW	Sand/Cobbles	Lt Brown	12.1
14 - 15.9ft	Claystone	Bedrock	Gray	

6. HOLE DIAM (in.)

	From (ft)	To (ft)
8.5	0	15.9

7. PLAIN CASING:

OD (in)	Kind	Wall Size (in)	From (ft)	To (ft)
2.375	PVC	0.1875	0	4.8

PERFORATED CASING: Screen Slot Size (in): 0.010

2.375	PVC	0.1875	4.8	15.1

8. FILTER PACK:

Material: Silica
Size: 10/20
Interval: 2.8-15.1

9. PACKER PLACEMENT:

Type: N/A
Depth:

10. GROUTING RECORD

Material	Amount	Density	Interval	Placement
N/A				

Remarks:

11. DISINFECTION: Type N/A Amt. Used

12. WELL TEST DATA: ☐ Check box if Test Data is submitted on Form Number GWS 39 Supplemental Well Test.

TESTING METHOD N/A

Static Level_____ ft. Date/Time measured:_____, Production Rate_____ gpm.

Pumping Level_____ ft. Date/Time measured_____, Test Length (hrs)_____.

Remarks:

13. I have read the statements made herein and know the contents thereof, and they are true to my knowledge. This document is signed (or name entered if filing online) and certified in accordance with Rule 17.4 of the Water Well Construction Rules, 2 CCR 402-2. The filing of a document that contains false statements is a violation of section 37-91-108(1)(e), C.R.S., and is punishable by fines up to $5000 and/or revocation of the contracting license. If filing online the State Engineer considers entering of licensed contractor name to be compliance with Rule 17.4

Company Name:	Phone w/area code:	License Number:
GEI Consultants Inc	970-224-7342	

Mailing Address: 2625 Redwing Rd, Fort Collins, CO 80526

Sign (or enter name if filing online)	Print Name and Title	Date
	Jeremy Deuto, PE, PG/Project Manager	

FORM NO. GWS-31 4/2012

WELL CONSTRUCTION AND TEST REPORT

STATE OF COLORADO, OFFICE OF THE STATE ENGINEER
1313 Sherman St., Ste 821, Denver, CO 80203
Main (303) 866-3581 Fax (303) 866-3589 www.water.state.co.us

For Office Use Only

1. WELL PERMIT NUMBER: 053182-MH

2. WELL OWNER INFORMATION

NAME OF WELL OWNER: Martin Marietta Materials

MAILING ADDRESS: 1801 N Taft Hill Rd

CITY: Fort Collins STATE: CO ZIP CODE: 80521

TELEPHONE NUMBER w/area code: 970-221-4041

3. WELL LOCATION AS DRILLED: SW 1/4, SE 1/4, Sec., S11 Twp. 6 ☒ N or S, ☐ Range 68 ☐ E or W ☒

DISTANCES FROM SEC. LINES: _____ ft. from ☐ N or ☐ S section line and _____ ft. from ☐ E or ☐ W section line.

SUBDIVISION: N/A, LOT____, BLOCK____, FILING (UNIT) ____

Optional GPS Location: GPS Unit must use the following settings: Format must be **UTM**, Units must be **meters**, Datum must be **NAD83**, Unit must be set to **true N**, ☐ Zone 12 or ☒ Zone 13

Owner's Well Designation: B103

Easting: 502362

STREET ADDRESS AT WELL LOCATION: N/A

Northing: 4482614

4. GROUND SURFACE ELEVATION 4812.62 feet DRILLING METHOD Hollow Stem Auger

DATE COMPLETED 01/07/2015 TOTAL DEPTH 19.2 feet DEPTH COMPLETED 19.2 feet

5. GEOLOGIC LOG:

Depth	Type	Grain Size	Color	Water Loc.
0 - 6ft	ML	Sandy Silt	Brown	
6 - 18ft	SW	Sand/Gravel	Lt Brown	8.8ft
18 - 19.2ft	Claystone	Bedrock	Gray	

6. HOLE DIAM (in.)

	From (ft)	To (ft)
8.5	0	19.2

7. PLAIN CASING:

OD (in)	Kind	Wall Size (in)	From (ft)	To (ft)
2.375	PVC	0.1875	0	8.8

PERFORATED CASING: Screen Slot Size (in): 0.010

2.375	PVC	0.1875	8.8	19.2

8. FILTER PACK:

Material: Silica
Size: 10/20
Interval: 6.8-19.2

9. PACKER PLACEMENT:

Type: N/A
Depth:

10. GROUTING RECORD

Material	Amount	Density	Interval	Placement
N/A				

Remarks:

11. DISINFECTION: Type N/A Amt. Used

12. WELL TEST DATA: ☐ Check box if Test Data is submitted on Form Number GWS 39 Supplemental Well Test.

TESTING METHOD N/A

Static Level_____ ft. Date/Time measured:_____, Production Rate_____ gpm.

Pumping Level_____ ft. Date/Time measured_____, Test Length (hrs)_____.

Remarks:

13. I have read the statements made herein and know the contents thereof, and they are true to my knowledge. This document is signed (or name entered if filing online) and certified in accordance with Rule 17.4 of the Water Well Construction Rules, 2 CCR 402-2. The filing of a document that contains false statements is a violation of section 37-91-108(1)(e), C.R.S., and is punishable by fines up to $5000 and/or revocation of the contracting license. If filing online the State Engineer considers entering of licensed contractor name to be compliance with Rule 17.4

Company Name:	Phone w/area code:	License Number:
GEI Consultants Inc	970-224-7342	

Mailing Address: 2625 Redwing Rd, Fort Collins, CO 80526

Sign (or enter name if filing online)	Print Name and Title	Date
	Jeremy Deuto, PE, PG/Project Manager	

FORM NO. GWS-31 4/2012

WELL CONSTRUCTION AND TEST REPORT

STATE OF COLORADO, OFFICE OF THE STATE ENGINEER
1313 Sherman St., Ste 821, Denver, CO 80203
Main (303) 866-3581 Fax (303) 866-3589 www.water.state.co.us

For Office Use Only

1. WELL PERMIT NUMBER: 053183-MH

2. WELL OWNER INFORMATION

NAME OF WELL OWNER: Martin Marietta Materials

MAILING ADDRESS: 1801 N Taft Hill Rd

CITY: Fort Collins STATE: CO ZIP CODE: 80521

TELEPHONE NUMBER w/area code: 970-221-4041

3. WELL LOCATION AS DRILLED: SE 1/4, SE 1/4, Sec., S11 Twp. 6 ☒ N or S, ☐ Range 68 ☐ E or W ☒

DISTANCES FROM SEC. LINES: _____ ft. from ☐ N or ☐ S section line and _____ ft. from ☐ E or ☐ W section line.

SUBDIVISION: N/A, LOT____, BLOCK____, FILING (UNIT) ____

Optional GPS Location: GPS Unit must use the following settings: Format must be **UTM**, Units must be **meters**, Datum must be **NAD83**, Unit must be set to **true N**, ☐ Zone 12 or ☒ Zone 13

Owner's Well Designation: B104

Easting: 503027

STREET ADDRESS AT WELL LOCATION: N/A

Northing: 4482612

4. GROUND SURFACE ELEVATION 4807.99 feet DRILLING METHOD Hollow Stem Auger

DATE COMPLETED 01/08/2015 TOTAL DEPTH 15.8 feet DEPTH COMPLETED 15.0 feet

5. GEOLOGIC LOG:

Depth	Type	Grain Size	Color	Water Loc.
0 - 14 ft	SW	Sand	Light Brown	9.2 ft
14 - 15.8 ft	Claystone	Bedrock	Gray	

6. HOLE DIAM (in.)

	From (ft)	To (ft)
8.5	0	15.8

7. PLAIN CASING:

OD (in)	Kind	Wall Size (in)	From (ft)	To (ft)
2.375	PVC	0.1875	0	4.7

PERFORATED CASING: Screen Slot Size (in): 0.010

2.375	PVC	0.1875	4.7	15.0

8. FILTER PACK:

Material: Silica
Size: 10/20
Interval: 2.7-15.0ft

9. PACKER PLACEMENT:

Type: N/A
Depth:

10. GROUTING RECORD

Material	Amount	Density	Interval	Placement
N/A				

Remarks:

11. DISINFECTION: Type N/A Amt. Used

12. WELL TEST DATA: ☐ Check box if Test Data is submitted on Form Number GWS 39 Supplemental Well Test.

TESTING METHOD N/A

Static Level_____ ft. Date/Time measured:_____, Production Rate_____ gpm.

Pumping Level_____ ft. Date/Time measured_____, Test Length (hrs)_____.

Remarks:

13. I have read the statements made herein and know the contents thereof, and they are true to my knowledge. This document is signed (or name entered if filing online) and certified in accordance with Rule 17.4 of the Water Well Construction Rules, 2 CCR 402-2. The filing of a document that contains false statements is a violation of section 37-91-108(1)(e), C.R.S., and is punishable by fines up to $5000 and/or revocation of the contracting license. If filing online the State Engineer considers entering of licensed contractor name to be compliance with Rule 17.4

Company Name:	Phone w/area code:	License Number:
GEI Consultants Inc	970-224-7342	

Mailing Address: 2625 Redwing Rd, Fort Collins, CO 80526

Sign (or enter name if filing online)	Print Name and Title	Date
	Jeremy Deuto, PE, PG/Project Manager	

FORM NO. GWS-31 4/2012

WELL CONSTRUCTION AND TEST REPORT

STATE OF COLORADO, OFFICE OF THE STATE ENGINEER
1313 Sherman St., Ste 821, Denver, CO 80203
Main (303) 866-3581 Fax (303) 866-3589 www.water.state.co.us

For Office Use Only

1. WELL PERMIT NUMBER: 0531184-MH

2. WELL OWNER INFORMATION

NAME OF WELL OWNER: Martin Marietta Materials

MAILING ADDRESS: 1801 N Taft Hill Rd

CITY: Fort Collins STATE: CO ZIP CODE: 80521

TELEPHONE NUMBER w/area code: 970-221-4041

3. WELL LOCATION AS DRILLED: SW 1/4, SW 1/4, Sec., S12 Twp. 6 ☒ N or S, ☐ Range 68 ☐ E or W ☒

DISTANCES FROM SEC. LINES: _____ ft. from ☐ N or ☐ S section line and _____ ft. from ☐ E or ☐ W section line.

SUBDIVISION: N/A, LOT____, BLOCK____, FILING (UNIT) ____

Optional GPS Location: GPS Unit must use the following settings: Format must be **UTM**, Units must be **meters**, Datum must be **NAD83**, Unit must be set to **true N**, ☐ Zone 12 or ☒ Zone 13

Owner's Well Designation: B105

Easting: 503411

STREET ADDRESS AT WELL LOCATION: N/A

Northing: 4482821

4. GROUND SURFACE ELEVATION 4809.88 feet DRILLING METHOD Hollow Stem Auger

DATE COMPLETED 01/07/2015 TOTAL DEPTH 12.0 feet DEPTH COMPLETED 9.9 feet

5. GEOLOGIC LOG:

Depth	Type	Grain Size	Color	Water Loc.
0 - 3ft	ML	Fines	Tan	
3 - 10ft	GW-GM	Gravel	Brown	6.1ft
10 - 11ft	SW	Sand	Brown	
11 - 12ft	Claystone	Bedrock	Brown to Gray	

6. HOLE DIAM (in.)

	From (ft)	To (ft)
8.5	0	12.0

7. PLAIN CASING:

OD (in)	Kind	Wall Size (in)	From (ft)	To (ft)
2.375	PVC	2.1875	0	4.5

PERFORATED CASING: Screen Slot Size (in): 0.010

2.375	PVC	0.1875	4.5	9.9

8. FILTER PACK:

Material: Silica
Size: 10/20
Interval: 2.5-9.9

9. PACKER PLACEMENT:

Type: N/A
Depth:

10. GROUTING RECORD

Material	Amount	Density	Interval	Placement
N/A				

Remarks:

11. DISINFECTION: Type N/A Amt. Used

12. WELL TEST DATA: ☐ Check box if Test Data is submitted on Form Number GWS 39 Supplemental Well Test.

TESTING METHOD N/A

Static Level_____ ft. Date/Time measured:_____, Production Rate_____ gpm.

Pumping Level_____ ft. Date/Time measured_____, Test Length (hrs)_____.

Remarks:

13. I have read the statements made herein and know the contents thereof, and they are true to my knowledge. This document is signed (or name entered if filing online) and certified in accordance with Rule 17.4 of the Water Well Construction Rules, 2 CCR 402-2. The filing of a document that contains false statements is a violation of section 37-91-108(1)(e), C.R.S., and is punishable by fines up to $5000 and/or revocation of the contracting license. If filing online the State Engineer considers entering of licensed contractor name to be compliance with Rule 17.4

Company Name:	Phone w/area code:	License Number:
GEI Consultants Inc	970-224-7342	

Mailing Address: 2625 Redwing Rd, Fort Collins, CO 80526

Sign (or enter name if filing online)	Print Name and Title	Date
	Jeremy Deuto, PE, PG/Project Manager	

Attachment I: Piezometer: Notice of Well Completion

Form No. GWS-18 5/00

STATE OF COLORADO
OFFICE OF THE STATE ENGINEER
DIVISION OF WATER RESOURCES
818 Centennial Bldg., 1313 Sherman St., Denver, CO 80203
(303) 866-3581 Fax (303) 866-3589

For Office Use Only

NOTICE OF WELL COMPLETION

For well permits issued pursuant to C.R.S. 37-90-137(4)

Insert the Well Permit Number 053181-MH

Well Owner Information:

NAME(S) Martin Marietta Materials

Mailing Address 1801 N Taft Hill Rd

City, St. Zip Fort Collins, CO 80521

Phone (970) 221-4041

WELL LOCATION: County Larimer Owner's Well Designation BH101

NW 1/4 of the SE 1/4, Sec. S11, Twp. 6 [x] N. or [ ] S., Range 68 [ ] E. or [x] W., ____ P.M.

Distance from Section Lines N/A Ft. From [ ] N. or [ ] S., _____ Ft. From [ ] E. or [ ] W. Line.

Subdivision Name N/A Lot _____, Block _____, Filing/Unit _____

Date of well completion: 01/07/2015.

Name of the Well Construction Contractor: GEI Consultants, Inc

License Number: _____.

I (we) claim and say that I (we) (are) the owner(s) of the well described above and that construction of this well was completed lawfully, under the well permit on the date indicated; and the statements made herein are true to my (our) knowledge. This notice is filed in accordance with Section 37-90-137(3)(a)(II) C.R.S.

Please print the Signer's Name & Title	Signature(s).	Date
_____	_____	
_____	_____	_____

INSTRUCTIONS:
This notice is required for wells constructed under permits issued pursuant to the provisions of Colorado Revised Statutes 37-90-137(4), and must be filed with the Division of Water Resources prior to expiration of the well permit as required by the Statewide Nontributary Ground Water Rule 7A. Please type or print neatly in black ink. This form may be reproduced by photocopy or word processing means.

For Office Use Only

Form No. GWS-18 5/00

STATE OF COLORADO
OFFICE OF THE STATE ENGINEER
DIVISION OF WATER RESOURCES
818 Centennial Bldg., 1313 Sherman St., Denver, CO 80203
(303) 866-3581 Fax (303) 866-3589

For Office Use Only

NOTICE OF WELL COMPLETION

For well permits issued pursuant to C.R.S. 37-90-137(4)

Insert the Well Permit Number 053181-MH

Well Owner Information:

NAME(S) Martin Marietta Materials

Mailing Address 1801 N Taft Hill Rd

City, St. Zip Fort Collins, CO 80521

Phone (970) 221-4041

WELL LOCATION: County Larimer Owner's Well Designation BH102

NW 1/4 of the SE 1/4, Sec. S11, Twp. 6 [x] N. or [ ] S., Range 68 [ ] E. or [x] W., ____ P.M.

Distance from Section Lines N/A Ft. From [ ] N. or [ ] S., _____ Ft. From [ ] E. or [ ] W. Line.

Subdivision Name N/A Lot _____, Block _____, Filing/Unit _____

Date of well completion: 01/07/2015.

Name of the Well Construction Contractor: GEI Consultants, Inc

License Number: _____.

I (we) claim and say that I (we) (are) the owner(s) of the well described above and that construction of this well was completed lawfully, under the well permit on the date indicated; and the statements made herein are true to my (our) knowledge. This notice is filed in accordance with Section 37-90-137(3)(a)(II) C.R.S.

Please print the Signer's Name & Title	Signature(s).	Date
_____	_____	
_____	_____	_____

INSTRUCTIONS:
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Form No. GWS-18 5/00	**STATE OF COLORADO** **OFFICE OF THE STATE ENGINEER** **DIVISION OF WATER RESOURCES** 818 Centennial Bldg., 1313 Sherman St., Denver, CO 80203 (303) 866-3581 Fax (303) 866-3589	For Office Use Only

NOTICE OF WELL COMPLETION

For well permits issued pursuant to C.R.S. 37-90-137(4)

Insert the Well Permit Number 053182-MH.

Well Owner Information:

NAME(S) Martin Marietta Materials

Mailing Address 1801 N Taft Hill Road

City, St. Zip Fort Collins, CO 80521

Phone (970) 221-4041

WELL LOCATION: County Larimer Owner's Well Designation BH103

SW 1/4 of the SE 1/4, Sec. S11, Twp. 6 [x] N. or [ ] S., Range 68 [ ] E. or [x] W., ____ P.M.

Distance from Section Lines _____ Ft. From [ ] N. or [ ] S., _____ Ft. From [ ] E. or [ ] W. Line.

Subdivision Name N/A Lot _____, Block _____, Filing/Unit _____

Date of well completion: 01/07/2015.

Name of the Well Construction Contractor: GEI Consultants, Inc

License Number: _____.

I (we) claim and say that I (we) (are) the owner(s) of the well described above and that construction of this well was completed lawfully, under the well permit on the date indicated; and the statements made herein are true to my (our) knowledge. This notice is filed in accordance with Section 37-90-137(3)(a)(II) C.R.S.

Please print the Signer's Name & Title	Signature(s).	Date
_____	_____	
_____	_____	_____

INSTRUCTIONS:
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NOTICE OF WELL COMPLETION

For well permits issued pursuant to C.R.S. 37-90-137(4)

Insert the Well Permit Number 053183-MH.

Well Owner Information:

NAME(S) Martin Marietta Materials

Mailing Address 1801 N Taft Hill Road

City, St. Zip Fort Collins, CO 80521

Phone (970) 221-4041

WELL LOCATION: County Larimer Owner's Well Designation BH104

SE 1/4 of the SE 1/4, Sec. S11, Twp. 6 [x] N. or [ ] S., Range 68 [ ] E. or [x] W., ____ P.M.

Distance from Section Lines _____ Ft. From [ ] N. or [ ] S., _____ Ft. From [ ] E. or [ ] W. Line.

Subdivision Name N/A Lot _____, Block _____, Filing/Unit _____

Date of well completion: 01/07/2015.

Name of the Well Construction Contractor: GEI Consultants, Inc

License Number: _____.

I (we) claim and say that I (we) (are) the owner(s) of the well described above and that construction of this well was completed lawfully, under the well permit on the date indicated; and the statements made herein are true to my (our) knowledge. This notice is filed in accordance with Section 37-90-137(3)(a)(II) C.R.S.

Please print the Signer's Name & Title	Signature(s).	Date
_____	_____	
_____	_____	_____

INSTRUCTIONS:
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DIVISION OF WATER RESOURCES
818 Centennial Bldg., 1313 Sherman St., Denver, CO 80203
(303) 866-3581 Fax (303) 866-3589

For Office Use Only

NOTICE OF WELL COMPLETION

For well permits issued pursuant to C.R.S. 37-90-137(4)

Insert the Well Permit Number 053184-MH.

Well Owner Information:

NAME(S) Martin Marietta Materials

Mailing Address 1801 N Taft Hill Road

City, St. Zip Fort Collins, CO 80521

Phone (970) 221-4041

WELL LOCATION: County Larimer Owner's Well Designation BH104

SW 1/4 of the SE 1/4, Sec. S12, Twp. 6 [x] N. or [ ] S., Range 68 [ ] E. or [x] W., ____ P.M.

Distance from Section Lines _____ Ft. From [ ] N. or [ ] S., _____ Ft. From [ ] E. or [ ] W. Line.

Subdivision Name N/A Lot _____, Block _____, Filing/Unit _____

Date of well completion: 01/07/2015.

Name of the Well Construction Contractor: GEI Consultants, Inc

License Number: _____.

I (we) claim and say that I (we) (are) the owner(s) of the well described above and that construction of this well was completed lawfully, under the well permit on the date indicated; and the statements made herein are true to my (our) knowledge. This notice is filed in accordance with Section 37-90-137(3)(a)(II) C.R.S.

Please print the Signer's Name & Title	Signature(s).	Date

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