COLORADO
Division of Reclamation, Mining and Safety
Department of Natural Resources

MINERALS PROGRAM INSPECTION REPORT
PHONE: (303) 866-3567

The Division of Reclamation, Mining and Safety has conducted an inspection of the mining operation noted below. This report documents observations concerning compliance with the terms of the permit and applicable rules and regulations of the Mined Land Reclamation Board.

MINE NAME: Young Ranch Resource Quarry	**MINE/PROSPECTING ID#:** M-2021-009	**MINERAL:** Granite, granite gneiss and gravel	**COUNTY:** Gilpin
INSPECTION TYPE: Preoperation Inspection	**INSPECTOR(S):** Amy Eschberger, Michael Cunningham, Rob Zuber, Zach Trujillo	**INSP. DATE:** August 4, 2021	**INSP. TIME:** 09:00
OPERATOR: Young Ranch Resource LLC	**OPERATOR REPRESENTATIVE(S):** Robert Young Jr., Katie Todt	**TYPE OF OPERATION:** 112c - Construction Regular Operation	

REASON FOR INSPECTION: Preoperation Inspection	**BOND CALCULATION TYPE:** Complete Bond	**BOND AMOUNT:** No Bond Held
DATE OF COMPLAINT: NA	**POST INSP. CONTACTS:** None	**JOINT INSP. AGENCY:** None
WEATHER: Clear	**INSPECTOR'S SIGNATURE:** Amy Eschberger	**SIGNATURE DATE:** August 19, 2021

GENERAL INSPECTION TOPICS

This list identifies the environmental and permit parameters inspected and gives a categorical evaluation of each. No problems or possible violations were noted during the inspection. The mine operation was found to be in full compliance with Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for the Extraction of Construction Materials and/or for Hard Rock, Metal and Designated Mining Operations. Any person engaged in any mining operation shall notify the office of any failure or imminent failure, as soon as reasonably practicable after such person has knowledge of such condition or of any impoundment, embankment, or slope that poses a reasonable potential for danger to any persons or property or to the environment; or any environmental protection facility designed to contain or control chemicals or waste which are acid or toxic-forming, as identified in the permit.

(AR) RECORDS---------- Y	(FN) FINANCIAL WARRANTY-------- N	(RD) ROADS---------- Y
(HB) HYDROLOGIC BALANCE---------- N	(BG) BACKFILL & GRADING---------- N	(EX) EXPLOSIVES--------- N
(PW) PROCESSING WASTE/TAILING---- N	(SF) PROCESSING FACILITIES------- N	(TS) TOPSOIL---------- N
(MP) GENL MINE PLAN COMPLIANCE- N	(FW) FISH & WILDLIFE---------- N	(RV) REVEGETATION---- N
(SM) SIGNS AND MARKERS---------- N	(SP) STORM WATER MGT PLAN---- N	(RS) RECL PLAN/COMP-- N
(ES) OVERBURDEN/DEV. WASTE--------- N	(SC) EROSION/SEDIMENTATION--- N	(ST) STIPULATIONS------- N
(AT) ACID OR TOXIC MATERIALS------- N	(OD) OFF-SITE DAMAGE----------N	

Y = Inspected / N = Not inspected / NA = Not applicable to this operation / PB = Problem cited / PV = Possible violation cited

OBSERVATIONS

This was a pre-operation inspection of the Young Ranch Resource Quarry (File No. M-2021-009) conducted by Amy Eschberger, Michael Cunningham, Rob Zuber, and Zach Trujillo of the Division of Reclamation, Mining and Safety (Division). The applicant was represented by Robert Young, Jr. and Katie Todt during the inspection. The site is situated adjacent to Central City Parkway (CCP), approximately 1.25 miles north of Interstate-70. Access to the site is directly off of the CCP. **Photos 1-32** taken during the inspection are included with this report.

A 112 construction materials application was filed with our office for the Young Ranch Resource Quarry on May 17, 2021. The Division determined this application to be "complex" pursuant to Rule 1.1(12), which extended the application decision date 60 days beyond the usual 90-day period set for this type of application. This gives a current application decision date of October 14, 2021. The applicant published notice of the application once a week for four consecutive weeks as required by Rule 1.6.2(1)(d) in three separate newspapers of general circulation in the locality of the proposed mining operation, including: the Clear Creek Courant (last publication: June 23, 2021), The Mountain-Ear (last publication: July 1, 2021), and the Weekly Register-Call (last publication: July 1, 2021).

Per Rule 1.7.1(2)(a), the public comment period closed 20 calendar days after the last date for the newspaper publication, on July 21, 2021. During this period, the Division received one agency comment (from History Colorado) and 40 timely objections on the application. It should be noted, the Division has opened up an additional 20-day comment period only for the city of Idaho Springs, as they received late notice of the application (on August 2, 2021) as a municipality located within two miles of the proposed operation. The Idaho Springs comment period will close on August 22, 2021. All comments and objections received on the application thus far have been forwarded to the applicant for review. The applicant must inform the Division within the application review period how they intend to address any jurisdictional issues raised by objecting parties. Because timely objections have been filed, pursuant to Rule 1.4.9(2)(a), the Division shall schedule the permit application for a formal public hearing before the Mined Land Reclamation Board (Board). On or before the application decision date, the Division will issue a recommendation to the Board for approval, approval with conditions, or denial of the application. The Board will make the final decision on the application during the formal public hearing.

The application proposes a permit area of 469.7 acres (see enclosed Google Earth image showing approximate location of proposed permit area), with a proposed affected area of 335.4 acres. The proposed permit area straddles the boundary between Gilpin County (to the north) and Clear Creek County (to the south), and includes a section of the CCP (approximately 0.55 mile in length). The proposed affected lands are primarily owned by the applicant, with the CCP right-of-way and cut/fill areas adjacent to the parkway owned by Central City (see enclosed Figure C-1). The proposed permit area is bordered to the west by undeveloped forest (also owned by the applicant), by the CCP to the north and south, and by undeveloped forest and State Hwy 119 to the east/northeast. Adjacent landowners include Goltra West Ranch, LLC to the north and northeast, and Albert and Mary Jane Frei Irrevocable Trust to the south and southeast. Both of these adjacent landowners submitted timely objections to the application. The adjacent lands to the east and west of the proposed permit area are owned by the applicant.

The project area consists of mostly dry rangeland vegetation on the south facing slopes and evergreen forests on the north facing slopes, with an average elevation of 8,100 feet. Topography across the project area consists of steep, rocky slopes that slope downward to the north (into Gilpin County) and to the south (into Clear County County). The Gilpin/Clear Creek county line roughly follows the top of the ridgeline that extends east-west across the portion of the proposed permit area located west of the CCP. The portion of the proposed permit area

located east of the CCP includes two primary drainages. The ranch is currently used for cattle grazing.

The application proposes an open pit quarry operation to extract metamorphic rocks and the overlying gravel for use as construction materials. The operation may also mine gold as an incidental commodity (during gravel mining). The operation will utilize drill and blast techniques. On-site processing of mined material will include washing, screening, and crushing. The quarry operation will ultimately develop two large excavation areas with highwalls maintained at a benched configuration. Highwall benches will be approximately 25 feet in height and 50 feet in width. Mining will take place only west of the existing CCP. Waste material generated during operations will be placed in the two drainages located east of the existing CCP. The waste material will be placed in lifts that are approximately 50 feet in height and 50 feet in width.

The operation will advance through three primary mining phases (see enclosed Figures C-3, C-4, and C-5), with reclamation of affected lands occurring concurrently with mining, thereby minimizing the extent of unreclaimed disturbance at any given time. The application proposes realigning the section of the CCP located within the affected lands to the center of the site during the second mining phase (if the necessary approvals/permits are obtained from the city and county). An 81 acre deed restricted wildlife mitigation corridor will be maintained across the southern edge of the proposed permit area. This wildlife corridor will also serve as a viewshed buffer from the south (I-70). If the CCP realignment project is approved, an access corridor will be excavated into the southern ridge, and the wildlife mitigation corridor will be expanded to include the side slopes of this access corridor, increasing the wildlife mitigation area to 100.2 acres. The wildlife mitigation plan provided in the application proposes specific wildlife mitigation measures to be installed during each mine phase, including wildlife crossing signs along the CCP, wildlife monitoring cameras at selected locations, wildlife fencing, underpass wildlife crossings, and wildlife exit ramps. Wildlife mitigation structures will also be installed along the CCP north of the proposed permit area, between mile markers 4 through 6. No wildlife mitigation is currently present along the CCP.

The application proposes a phased bond approach in which the required bond amount would initially include costs for reclaiming phase 1 disturbance. Prior to opening up any new mining phase(s), the applicant would be required to submit a revision to update the bond amount to include costs for reclaiming any additional proposed disturbances. The proposed phase 1 disturbance includes a small quarry located adjacent to the CCP, a small processing area which will be created by placing fill in an existing basin adjacent to the CCP, two waste rock landforms (WRLs), and roads constructed to access the quarry area and WRL area. The phase 1 quarry would daylight primarily to the north with a maximum highwall height of approximately 225 feet. During mine phase 2, the operation would realign the CCP to the center of the site, open up the phase 2 quarry (west of the realigned CCP), and begin mining the phase 3 quarry area (east of the realigned CCP). The maximum highwall height of the phase 2 quarry would be approximately 500 feet (at its western/southwestern edge). The maximum highwall height in the phase 3 quarry area would be approximately 650 feet during this time. During this mine phase, the two WRLs would merge above the natural saddle separating the drainages, forming one large WRL with a maximum slope height of approximately 600 feet.

During mine phase 3, the operation would open up the phase 3 quarry (east of the realigned CCP), mining through the initial phase 1 quarry and processing areas. The maximum highwall height in the phase 3 quarry would be approximately 475 feet (at its southern edge). The WRL would be raised by an additional 200 feet during this phase, to a final elevation of 8,250 feet. The application includes an alternative mining plan which would include mining one or both of the quarries more than 300 feet deeper (in mine phases 4 and 5) to accommodate their use as water storage reservoirs. However, the Division will require the applicant to commit to one mining plan (and reclamation plan) in this application. Additionally, if the applicant is unable to provide sufficient details at this time for the proposed CCP realignment project, the mining and reclamation plans and maps will need to be adjusted to remove this proposal from the application.

The proposed post-mining land use for the site is a combination of rangeland and wildlife habitat (see enclosed Figure F-1). The proposed reclamation plan includes backfilling approximately 90% of quarry highwalls to a final slope gradient of 2H:1V, and leaving approximately 10% of the highwalls as intentionally roughened cliff faces (similar to existing natural conditions). The WRL lifts will be graded to a final slope gradient of 2.2H:1V. Quarry highwall benches and WRL lifts will be capped with coarse blasted rock to provide micro-climates for seed germination. On-contour single shank ripping to a minimum depth of 2 feet will be done at a 10-foot vertical spacing interval on WRL lifts to prevent erosion. North and west facing slopes will be revegetated with an evergreen forest mixture and south and east facing slopes will be revegetated with a dry rangeland mixture. Native grasses will be planted on all disturbed areas. Flat areas, such as the pit floors and the top of the WRLs will be retopsoiled and revegetated with the dry rangeland mixture.

At the time of the inspection, the weather was warm and dry. However, according to the operator, the area had experienced heavy precipitation events in the days leading up to the inspection. The Division observed the proposed quarry entrance off the west side of the CCP. The public notice sign required by Rule 1.6.2(1)(b) was posted on a gate (unattached to fencing) present at this entrance. The Division could not find this gate on Figure C-1 – Current Conditions, which should show the location and owner's name for all permanent, man-made structures located on or within 200 feet of the affected lands. A small graveled parking area is present at this entrance on top of a fill area which was created during the initial construction of the CCP in 2004. No existing roads were observed in this area. From this location, the Division observed the ridge immediately southwest of the CCP which would be mined during phase 1. Evergreen trees cover the north and west faces of this ridge, while the south face has fewer trees and more shrubs and cactus. Natural rock outcrops were also visible on the south face. The east face of this ridge is very steep with very limited vegetation, as this face was part of the road cut made during construction of the CCP.

The phase 1 processing area is also visible from the proposed quarry entrance location. The processing area would be constructed by placing fill in an existing basin adjacent to the CCP. The designed pad elevation will be approximately 3 feet lower than the elevation of the adjacent parkway. The application proposes modifying an existing culvert that runs beneath the CCP to divert stormwater drainage from the phase 1 processing area to the east side of the CCP. The location of the existing culvert and its owner(s) must be identified on Figure C-1.

The Division walked along the top of the southern ridge (west of the CCP) which roughly follows the Gilpin/Clear Creek County line. From this ridge top, the Division could look north across the proposed phase 2 and 3 quarry areas, which consist mainly of evergreen forest. According to the Exhibit C maps provided with the application, portions of the two quarries would extend south of the county line, essentially moving the current ridgeline to the south by approximately 400 to 1,000 feet, depending on whether or not the access corridor is created for the CCP realignment project. Therefore, the majority of the ridgeline walked during the inspection would be consumed by the mining operation. The Division also looked down the south side of the existing ridgeline across the area proposed to remain as a deed restricted wildlife mitigation corridor for the life of mine. The south side of the ridge is steeper with fewer trees and more shrubs and cactus.

From the ridgeline, the Division observed the approximate location where the access corridor would be constructed for the realigned CCP. This corridor would begin at the southern edge of the permit area where the permit boundary and existing CCP arch slightly to the north. The Division observed a few structures on the west side of the CCP (near the county line) which were not identified on Figure C-1, including a gate, a barbed wire fence, and a water intake structure (the outlet was not observed). These structures should be located and their owner(s) identified on Figure C-1.

The Division had planned to walk up the larger (east) drainage located east of the CCP, in which the application

proposes placing the WRL, from the north (Hwy 119). However, the applicant does not have access to the drainage from the north. The sliver of land between the proposed northern permit boundary and Hwy 119 is owned by Goltra West Ranch, LLC. Therefore, the Division accessed this drainage from above, from the east side of the CCP. This drainage is heavily forested except in its upper western portion where fill material was placed during the initial construction of the CCP in 2004, creating a steep scree slope with more sparse vegetative cover consisting primarily of volunteer shrubs and pine trees.

The Division noted the presence of a stormwater (manhole) drop structure in each of the drainages proposed for the WRL. These structures are located at the toe of the fill areas which were created during initial construction of the CCP in 2004. The applicant stated during the inspection these drop structures are owned by Central City and were designed to divert stormwater from the basins located west of the CCP. From the point of each drop structure, stormwater drops approximately 20 feet before discharging from a culvert. The Division was unable to observe these culverts during the inspection. The applicant indicated during the inspection the drop structures would remain in place and eventually be covered by the WRL. Additionally, the culverts would be extended beyond the toe of the proposed WRL. The details of this stormwater management plan must be provided in the application for Division review. Additionally, the location and owner's name for all existing structures, including the drop structures and associated culverts, must be shown on Figure C-1. For any structures (not owned by the applicant) that will be impacted by the operation (e.g., removed, relocated, modified, rendered inoperative), the applicant must provide a notarized agreement with the structure owner stating their acceptance of the proposed impacts to their structure(s).

During the inspection, the Division observed multiple areas within the larger (east) drainage proposed for the WRL that had saturated conditions. It was difficult to determine whether these saturated conditions were due to the recent precipitation events, to natural seeps occurring in the drainage, or potentially to both. However, the presence of riparian plant species (i.e., rushes, mosses) indicates prolonged saturation occurs in these areas. The Division observed a seep at the bottom of the drainage which had a discernible flow, with a visually estimated flow rate of approximately 1-2 gpm. The applicant indicated during the inspection the seep(s) is seasonal, and much more prominent this year with the significant amount of precipitation received in the area this spring. The applicant will need to provide more information on any seeps located within the proposed affected lands, including identifying them on the appropriate application map(s). Additionally, the applicant will need to describe how water from any seeps will be managed during operations and reclamation.

The Division walked the larger (east) drainage all the way down to the gate at the northern property line. This gate and its owner(s) will need to be identified on Figure C-1. No other existing structures were observed in this drainage. However, the Division did observe a gate and barbed wire fence at the top of the drainage, adjacent to the CCP. These structures and their owner(s) must also be included on Figure C-1. The Division did not walk the smaller (west) drainage proposed for WRL during the inspection. However, this drainage could be viewed from above off of the CCP. As with the larger drainage, any known seeps in the west drainage must be identified in the application and the location and owner name(s) of any permanent, man-made structures located in this drainage (e.g., fences, gates, stormwater control structures) must be identified on Figure C-1.

It should be noted, several patches of Canada thistle and some Common mullein plants were observed on the proposed affected lands during the inspection. Some patches of Downy brome (cheat grass) were also observed on site. These weeds are all state-listed noxious weed species. The applicant will need to ensure the proposed weed control plan submitted in the application specifically addresses any existing noxious weed species on site as well as any expected species during operations or reclamation.

The Division is currently reviewing the application and will be sending the applicant its preliminary adequacy review letter within the next few weeks. Additional Division staff are helping review the application, including

Rob Zuber (reviewing sections pertaining to surface water management) and Zach Trujillo (reviewing sections pertaining to the geotechnical stability analyses). All adequacy items identified by the review team will be included in the preliminary adequacy review letter. These items must be sufficiently addressed within the review period in order for the Division to issue a recommendation for approval.

This concludes the report.

Any questions or comments regarding this inspection report should be forwarded to Amy Eschberger at the Colorado Division of Reclamation, Mining and Safety, 1313 Sherman Street, Room 215, Denver, CO 80203, via telephone at 303-866-3567, ext. 8129, or via email at amy.eschberger@state.co.us.

PHOTOGRAPHS

Photo 1. View of proposed quarry entrance on west side of CCP. Note gate present at entrance with public notice sign posted in accordance with Rule 1.6.2(1)(b).

Photo 2. View looking southeast across area directly west of CCP proposed for Phase 1 processing area.

Photo 3. View looking south across basin directly west of CCP which will be filled to create Phase 1 processing area.

Photo 4. View looking south (from proposed quarry entrance off CCP) across forested north-facing slope of ridge to be mined during Phase 3.

Photo 5. View looking north across south-facing slope of ridge to be mined during Phase 1. Note natural rock outcrops on this slope which applicant proposes to imitate for highwall reclamation.

Photo 6. View looking west (across CCP) at east-facing slope of ridge to be mined during Phase 1, which was cut during CCP construction in 2004. This side slope is steep with very sparse vegetative cover.

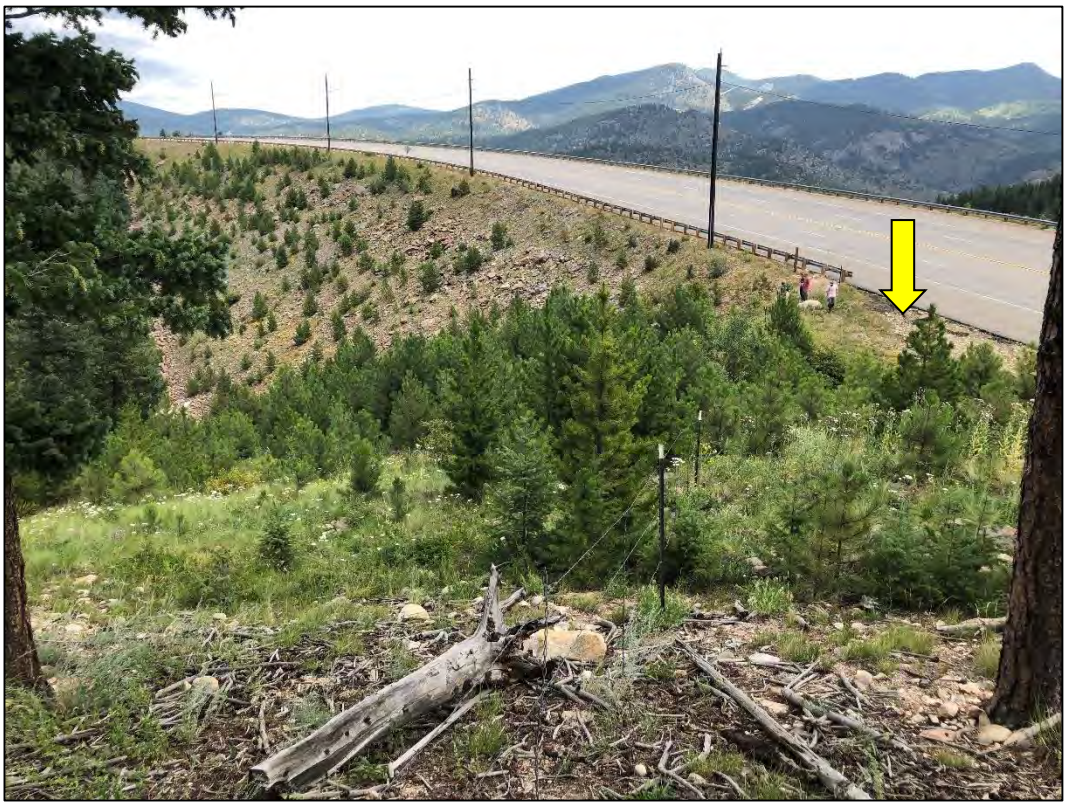


Photo 7. View looking northeast at access off CCP (indicated) to ridgeline which roughly follows Clear Creek-Gilpin County Line (west of CCP). Note barbed wire fence present in this area (in foreground).

Photo 8. View of marker delineating Clear Creek-Gilpin County Line which roughly follows ridgeline west of CCP (within proposed quarry area).

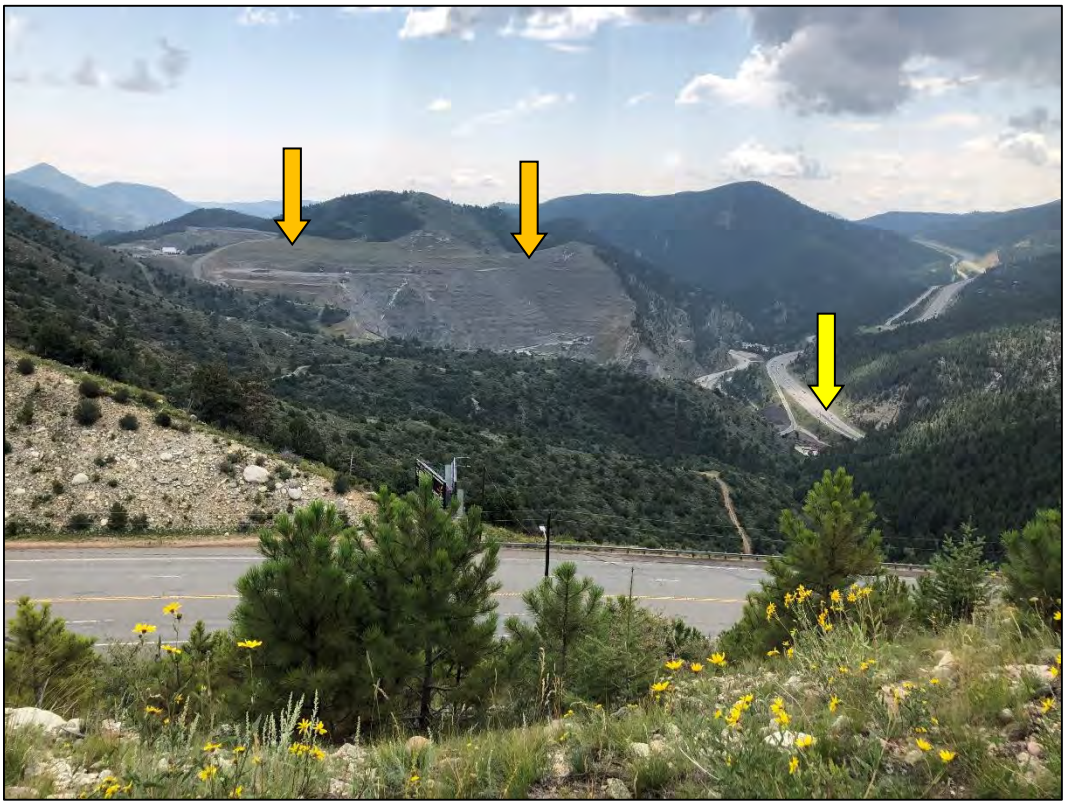


Photo 9. View looking southeast from ridgeline west of CCP, showing I-70 (indicated with yellow arrow) and Walstrum Quarry, Permit No. M-1983-033 (indicated with orange arrows) in background. Walstrum Quarry is located approximately ¾ mile SE from proposed Young Ranch Resource Quarry.

Photo 10. View looking northwest across north-facing slope of ridge west of CCP with mixed forest and grassland, to be mined during Phase 3.

Photo 11. View looking north across north-facing slope of ridge west of CCP with mixed forest and grassland, to be mined during Phase 3.

Photo 12. View looking south across south-facing slope of ridge west of CCP with primarily shrub and cactus vegetation, to be partially mined during Phase 3. This is approximate location of CCP realignment. I-70 (indicated with yellow arrow) and existing CCP (indicated with orange arrow) are visible below.

Photo 13. View looking southeast across south-facing slope of ridgeline west of CCP (indicated). The proposed CCP realignment would cross the ridge in this general area.

Photo 14. View looking northeast across forested north-facing slope of ridge west of CCP, to be mined during Phase 2.

Photo 15. View looking west across ridgeline which will be mined during Phase 2, moving ridgeline approximately 450-600 feet to the south.

Photo 16. View looking south at existing water intake structure with concrete apron (at bottom left) located directly west of CCP, near eastern edge of proposed wildlife mitigation corridor. Also note barbed wire fence present in this area.

Photo 17. Closer view of water intake structure with concrete apron shown in Photo 16.

Photo 18. View looking southwest across eastern edge of proposed wildlife mitigation corridor (directly west of CCP), which will remain undisturbed by operation throughout life of mine. Note barbed wire fence present in this area (in foreground).

Photo 19. View looking north across south-facing slope of ridge (directly west of CCP) to be mined during Phase 3.

Photo 20. View looking north across upper portion of larger (east) drainage located east of CCP proposed for WRL. Note scree slope (at left) from fill material placed in upper western portion of drainage during CCP construction in 2004.

Photo 21. View looking northeast at forested eastern side slope of larger (east) drainage located east of CCP proposed for WRL.

Photo 22. View looking southeast at larger (east) drainage located east of CCP proposed for WRL. Note Canada thistle, a noxious weed species, present in this area (visible in foreground).

Photo 23. View looking northeast at larger (east) drainage located east of CCP proposed for WRL. Note forested east side slope of drainage and less vegetated western scree slope (in foreground) from fill material placed in upper western portion of drainage during CCP construction in 2004.

Photo 24. View looking northwest at access off east side of CCP to top of larger (east) drainage proposed for WRL. Note gate present in this area (circled). A barbed wire fence is also present in this area (attached to south end of gate), but is difficult to differentiate in this photo.

Photo 25. View of stormwater (manhole) drop structure present in larger (east) drainage proposed for WRL. A similar structure was also observed in upper portion of smaller (west) drainage.

Photo 26. View of seep with discernible flow observed at base of larger (east) drainage proposed for WRL.

Photo 27. View looking north at smaller (west) drainage located east of CCP (approximate location delineated with blue dashed line) proposed for WRL. Note Hwy 119 visible in background (indicated).

Photo 28. View looking northeast at natural saddle (indicated) separating smaller (west) drainage (left of saddle) and larger (east) drainage (right of saddle) proposed for WRL. The separate WRLs will merge above this saddle during Phase 2 to create one large WRL.

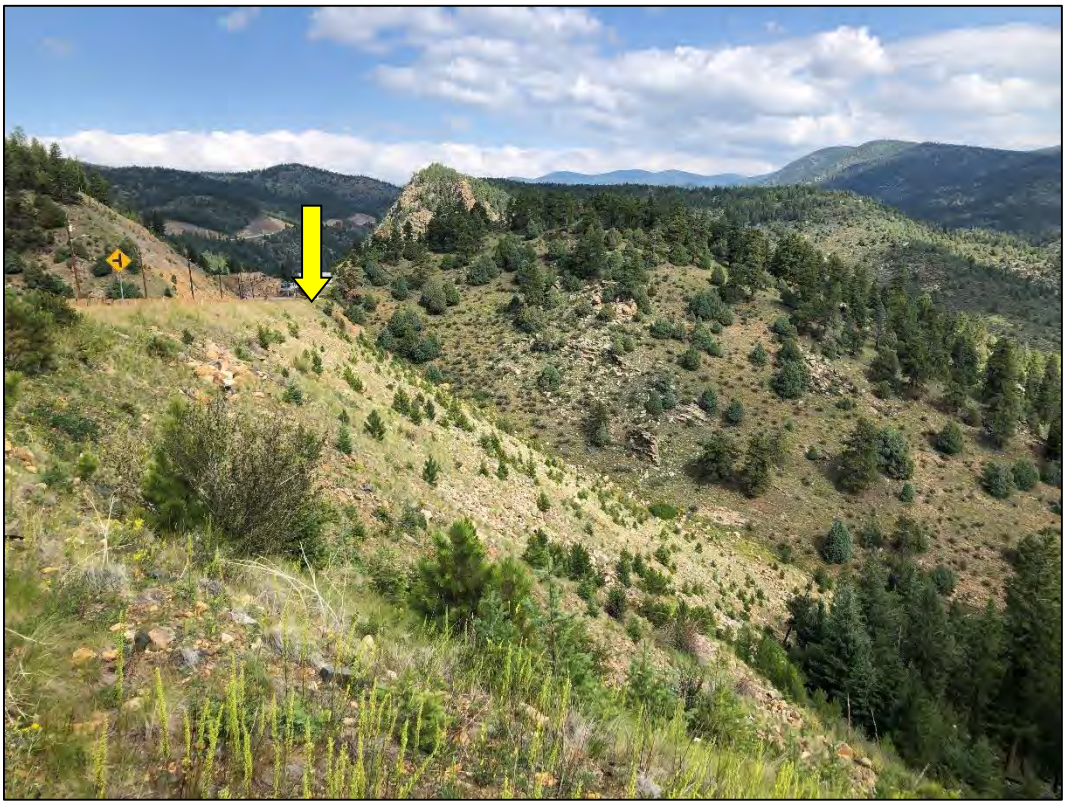


Photo 29. View looking northwest at proposed WRL entrance off east side of CCP (approximate location indicated). Note scree slope (at left) from fill material placed in drainage during CCP construction in 2004. The combined WRL will fill much of this area during Phase 2.

Photo 30. View looking northwest showing closer view of proposed WRL entrance off east side of CCP (approximate location indicated). Note existing structures present along CCP including guardrails, power line poles (in background), and billboard.

Photo 31. View looking east at drainage (oriented roughly east-west) near proposed WRL entrance off CCP in which road to WRLs will be constructed during Phase 1. The combined WRL will fill this area during Phase 2.

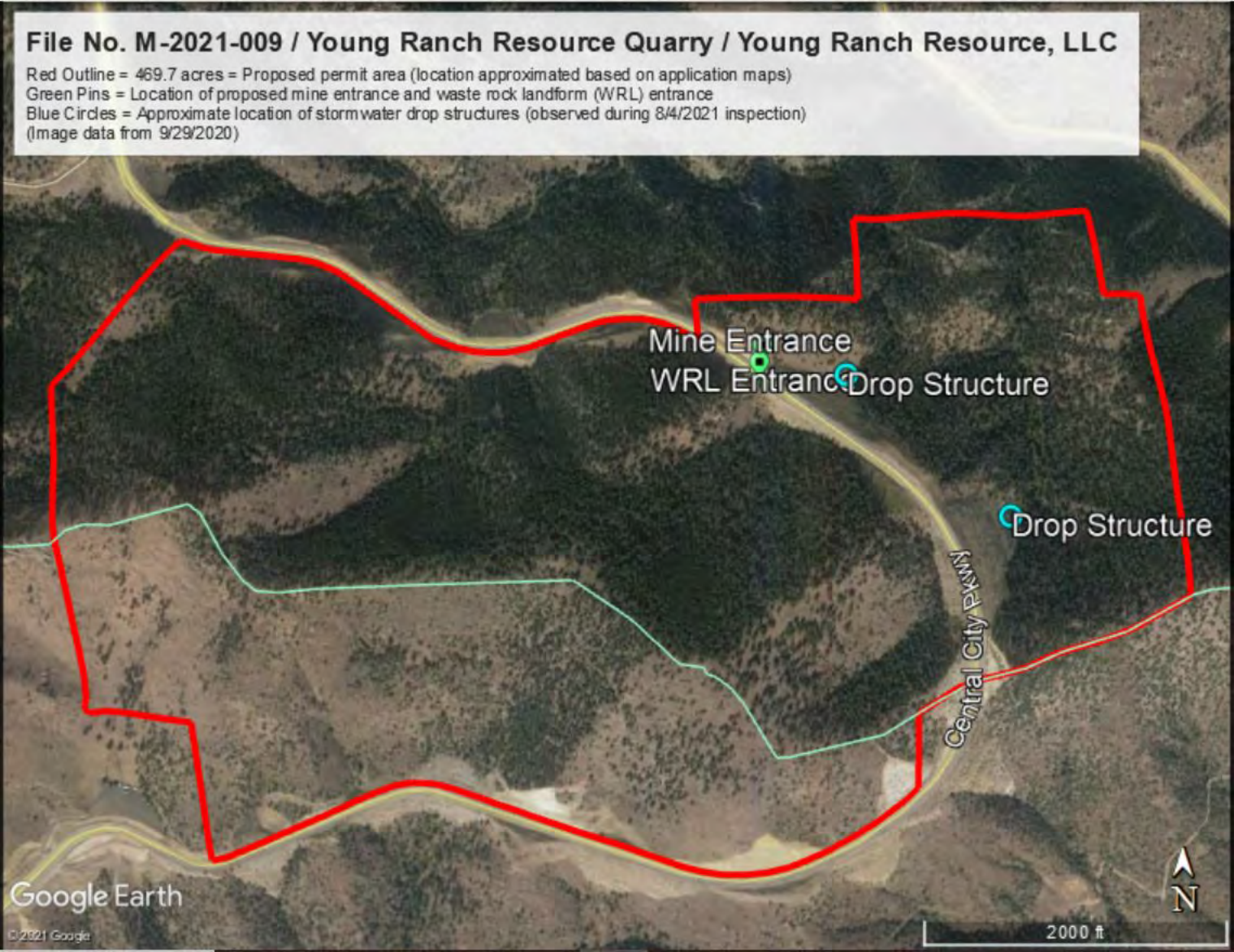
Photo 32. View looking northwest across area directly east of CCP where noxious weed species were observed, including Common mullein (visible near center) and Canada thistle (visible at bottom right).

Inspection Contact Address

Robert Young Jr.
Young Ranch Resource LLC
5455 Ulysses Street
Golden, CO 80403

Encls: Google Earth image showing approximate location of proposed permit area
Figure C-1 – Current Conditions
Figure C-3 – End of Phase 1
Figure C-4 – End of Phase 2
Figure C-5 – End of Phase 3
Figure F-1 – Reclamation
Figure G-1 – Surface Hydrology
Figure G-2 – Surface Hydrology Details

CC: Katie Todt, Lewicki and Associates, PLLC
Rob Zuber, DRMS
Zach Trujillo, DRMS
Michael Cunningham, DRMS


File No. M-2021-009 / Young Ranch Resource Quarry / Young Ranch Resource, LLC
Red Outline = 469.7 acres = Proposed permit area (location approximated based on application maps)
Green Pins = Location of proposed mine entrance and waste rock landform (WRL) entrance
Blue Circles = Approximate location of stormwater drop structures (observed during 8/4/2021 inspection)
(Image data from 9/29/2020)
Mine Entrance
WRL Entrance
Drop Structure
Drop Structure
Central City Pkwy
Google Earth
©2021 Google
N
2000 ft


LEGEND
BOUNDARIES
State or territorial
County or equivalent
Incorporated city or equivalent
BUILDINGS AND RELATED STRUCTURES
Building
Well (other than water)
Well Name
Airport, paved landing strip, runway, taxiway, or apron
Unpaved landing strip
Tanks
Located or landmark object
Feature Label
Retaining wall, jetty, or warf
Fence
LAND SURVEYS
Public Land Survey System
Range or Township line
Location approximate
Location doubtful
Protracted
Range or Township labels
R1E T2N
Section line
Location approximate
Location doubtful
Protracted
Section numbers
1-36
Found section corner
Found closing corner
Witness corner
WC
Meander corner
MC
Mining claim or property boundary
Mining claim or property monument
ROADS AND RELATED FEATURES
Highway
Light duty road, paved
Light duty road, gravel
Unimproved road
Trail
Road block, berm, or barrier
Gate on road
Cattle crossing guard
Railroad
RIVERS, LAKES, SHORELINES, AND CANALS
Perennial stream/ditch
Perennial river
Intermittent stream/ditch
Intermittent river
Dam
Perennial lake/pond
Intermittent lake/pond
Dry lake/pond
Elevated aqueduct, flume, or conduit
Buried aqueduct, flume, or conduit
Waterwell
Well Name
Spring or seep
Drainage Basin
Flood Plain
VEGETATION
Woodland
Shrubland
Orchard
Vineyard
TRANSMISSION LINES AND PIPELINES
Power transmission line; pole; tower
Power transmission line, buried
Telephone/data line, above ground
Telephone/data line, buried
Pipeline (non-water), above ground
Pipeline (non-water), buried
MINING FEATURES
DRMS Permit Boundary
200' Offset of DRMS Permit Boundary
Fixed Structures
Mobile Structures
Mining Phases
Berm/windrow
Affected Area
BASELINE CONTOURS
Index
Approximate of indefinite
Intermediate
Approximate of indefinite
Supplementary
POST-MINING CONTOURS
Index
Approximate of indefinite
Intermediate
Approximate of indefinite
Dump
C-1 CURRENT CONDITIONS
YOUNG RANCH RESOURCE
DRMS Permit Number: N/A
MSHA ID: N/A
Mine Entry Location: Latitude: 39.758942 Longitude: -105.450517
State: CO County: Gilpin
Section: 28 Township: 3S
Nearest Town: Central City
Range: 72W PM: 6th
Major Watershed: Clear Creek
Map Scale: 1":300'
0 300 600 900
N
Map Georeferencing Information: Datum: NAD88 Projection: State Plane North
Survey Source: USGS LIDAR Survey Date: 2015
Imagery Source: N/A Imagery Date: N/A
Drawn by: JAM Date: 12/14/20
Checked by: MKT & BHM Date: 01/28/21
Approved by: BEL Date: 01/30/21
File Name: Young Ranch 210113 C-1.dwg
RECEIVED
FEB 08 2021
DIVISION OF RECLAMATION MINING AND SAFETY
Greg Lewicki And Associates
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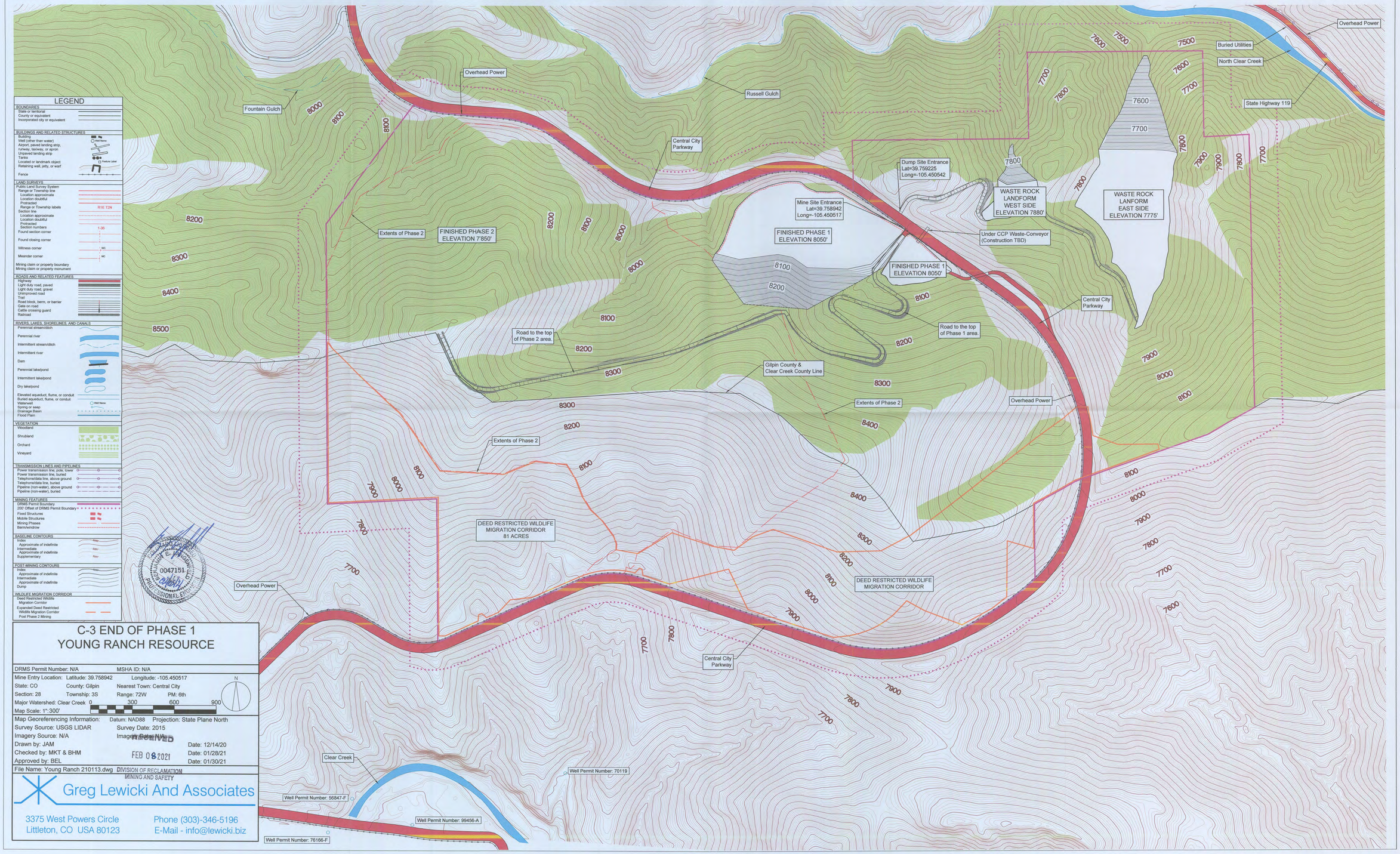
00047151
COLORADO LICENSED
PROFESSIONAL ENGINEER
Goltra West Ranch, LLC
2649 17th Street, Unit 1
Denver, CO. 80211-6464
Young Ranch, LLC
2804 Champa St.
Denver, CO. 80205
Young Ranch Resource, LLC
5455 Ulysses Street
Golden, CO. 80403
Fountain Gulch
Russell Gulch
Central City Property
Central City Property Line
Central City Parkway
Overhead Power
Buried Utilities
North Clear Creek
State Highway 119
Gilpin County & Clear Creek County Line
Affected Area 335.4 ACRES
DRMS Area 469.7 ACRES
Albert & Mary Jane Frei Irrevocable Trust
P.O. Box 700
Henderson, CO. 80640
Mystic Valley, LLC
P.O. Box 700
Henderson, CO. 80640
Clear Creek
Well Permit Number: 56847-F
Well Permit Number: 99456-A
Well Permit Number: 76166-F
Well Permit Number: 70119
A
A'
B
B'
28
29
32
33
27
34



LEGEND

BOUNDARIES
- State or territorial
- County or equivalent
- Incorporated city or equivalent

BUILDINGS AND RELATED STRUCTURES
- Building
- Well (other than water) — Well Name
- Airport, paved landing strip, runway, taxiway, or apron
- Unpaved landing strip
- Tanks — Feature Label
- Located or landmark object
- Retaining wall, jetty, or warf
- Fence

LAND SURVEYS
- Public Land Survey System
- Range or Township line
  - Location approximate
  - Location doubtful
  - Protracted — R1E T2N
- Range or Township labels
- Section line
  - Location approximate
  - Location doubtful
  - Protracted
- Section numbers — 1-36
- Found section corner
- Found closing corner
- Witness corner — WC
- Meander corner — MC
- Mining claim or property boundary
- Mining claim or property monument

ROADS AND RELATED FEATURES
- Highway
- Light duty road, paved
- Light duty road, gravel
- Unimproved road
- Trail
- Road block, berm, or barrier
- Gate on road
- Cattle crossing guard
- Railroad

RIVERS, LAKES, SHORELINES, AND CANALS
- Perennial stream/ditch
- Perennial river
- Intermittent stream/ditch
- Intermittent river
- Dam
- Perennial lake/pond
- Intermittent lake/pond
- Dry lake/pond
- Elevated aqueduct, flume, or conduit
- Buried aqueduct, flume, or conduit
- Waterwell — Well Name
- Spring or seep
- Drainage Basin
- Flood Plain

VEGETATION
- Woodland
- Shrubland
- Orchard
- Vineyard

TRANSMISSION LINES AND PIPELINES
- Power transmission line, pole, tower
- Power transmission line, buried
- Telephone/data line, above ground
- Telephone/data line, buried
- Pipeline (non-water), above ground
- Pipeline (non-water), buried

MINING FEATURES
- DRMS Permit Boundary
- 200' Offset of DRMS Permit Boundary
- Fixed Structures
- Mobile Structures
- Mining Phases
- Berm/windrow

BASELINE CONTOURS
- Index — Xxxx
- Approximate of indefinite
- Intermediate — Xxxx
- Approximate of indefinite
- Supplementary — Xxxx

POST-MINING CONTOURS
- Index — Xxxx
- Approximate of indefinite
- Intermediate — Xxxx
- Approximate of indefinite
- Dump

WILDLIFE MIGRATION CORRIDOR
- Deed Restricted Wildlife Migration Corridor
- Expanded Deed Restricted Wildlife Migration Corridor
- Post Phase 2 Mining

0047151
PROFESSIONAL ENGINEER

C-3 END OF PHASE 1
YOUNG RANCH RESOURCE

DRMS Permit Number: N/A MSHA ID: N/A

Mine Entry Location: Latitude: 39.758942 Longitude: -105.450517

State: CO County: Gilpin Nearest Town: Central City

Section: 28 Township: 3S Range: 72W PM: 6th

Major Watershed: Clear Creek

Map Scale: 1"=300'

N

0 300 600 900

Map Georeferencing Information: Datum: NAD88 Projection: State Plane North

Survey Source: USGS LIDAR Survey Date: 2015

Imagery Source: N/A Imagery Date: N/A

Drawn by: JAM Date: 12/14/20

Checked by: MKT & BHM Date: 01/28/21

Approved by: BEL Date: 01/30/21

File Name: Young Ranch 210113.dwg

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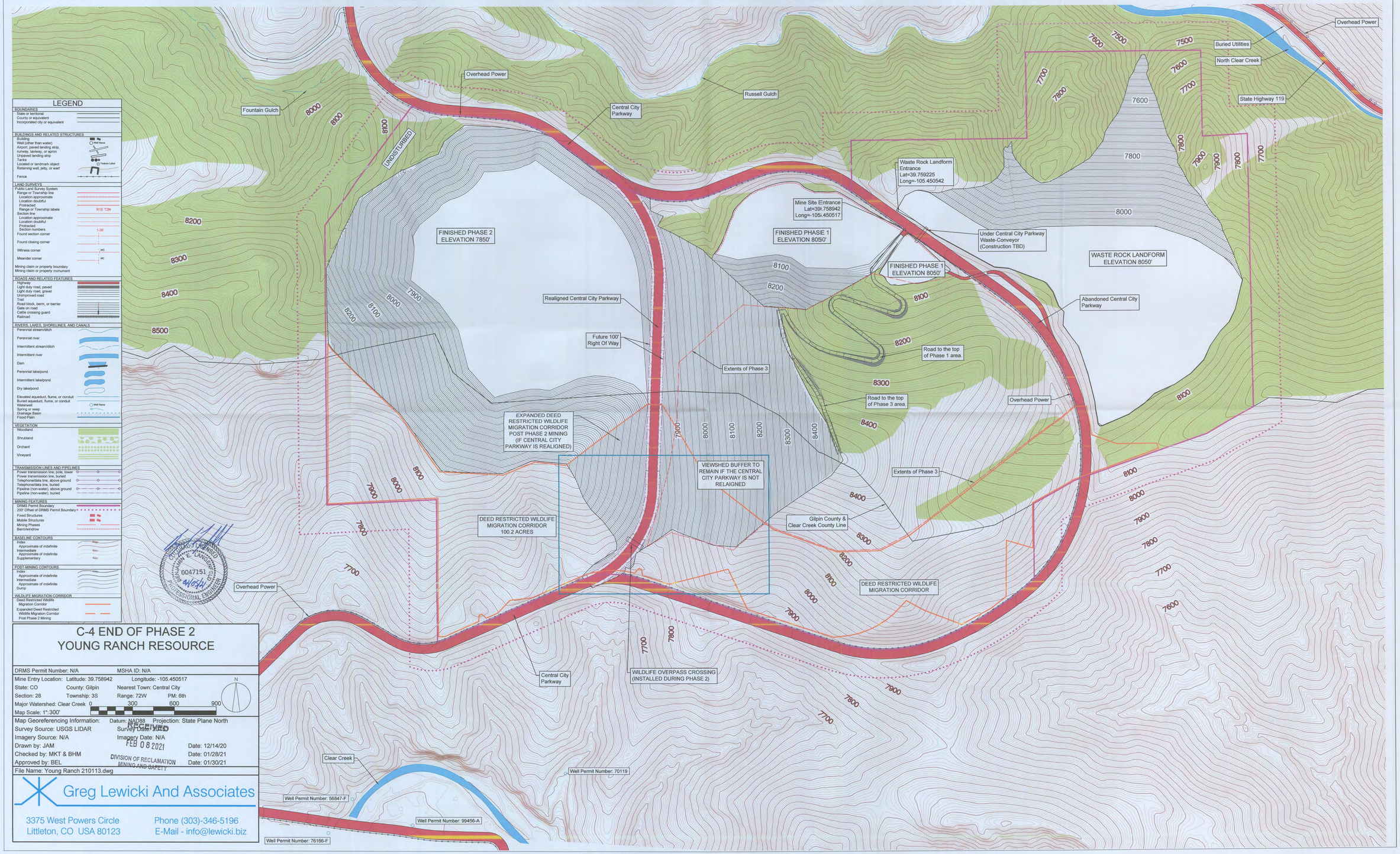

LEGEND

BOUNDARIES
- State or territorial
- County or equivalent
- Incorporated city or equivalent

BUILDINGS AND RELATED STRUCTURES
- Building
- Well (other than water) — Well Name
- Airport, paved landing strip, runway, taxiway, or apron
- Unpaved landing strip
- Tanks
- Located or landmark object — Feature Label
- Retaining wall, jetty, or warf
- Fence

LAND SURVEYS
- Public Land Survey System
- Range or Township line
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- Protracted
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- Dry lake/pond
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- Buried aqueduct, flume, or conduit — Well Name
- Waterwell
- Spring or seep
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- Flood Plain

VEGETATION
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- DRMS Permit Boundary
- 200' Offset of DRMS Permit Boundary
- Fixed Structures
- Mobile Structures
- Mining Phases
- Berm/windrow

BASELINE CONTOURS
- Index
- Approximate of indefinite
- Intermediate
- Approximate of indefinite
- Supplementary

POST-MINING CONTOURS
- Index
- Approximate of indefinite
- Intermediate
- Approximate of indefinite
- Dump

WILDLIFE MIGRATION CORRIDOR
- Deed Restricted Wildlife Migration Corridor
- Expanded Deed Restricted Wildlife Migration Corridor
- Post Phase 2 Mining

STATE OF COLORADO LICENSED JOHN E. LANGEMEIER 0047151 PROFESSIONAL ENGINEER

C-4 END OF PHASE 2
YOUNG RANCH RESOURCE

DRMS Permit Number: N/A MSHA ID: N/A

Mine Entry Location: Latitude: 39.758942 Longitude: -105.450517

State: CO County: Gilpin Nearest Town: Central City

Section: 28 Township: 3S Range: 72W PM: 6th

Major Watershed: Clear Creek

Map Scale: 1"=300' (0 300 600 900)

Map Georeferencing Information: Datum: NAD88 Projection: State Plane North

Survey Source: USGS LIDAR Survey Date: 2015

Imagery Source: N/A Imagery Date: N/A

Drawn by: JAM Date: 12/14/20

Checked by: MKT & BHM Date: 01/28/21

Approved by: BEL Date: 01/30/21

File Name: Young Ranch 210113.dwg

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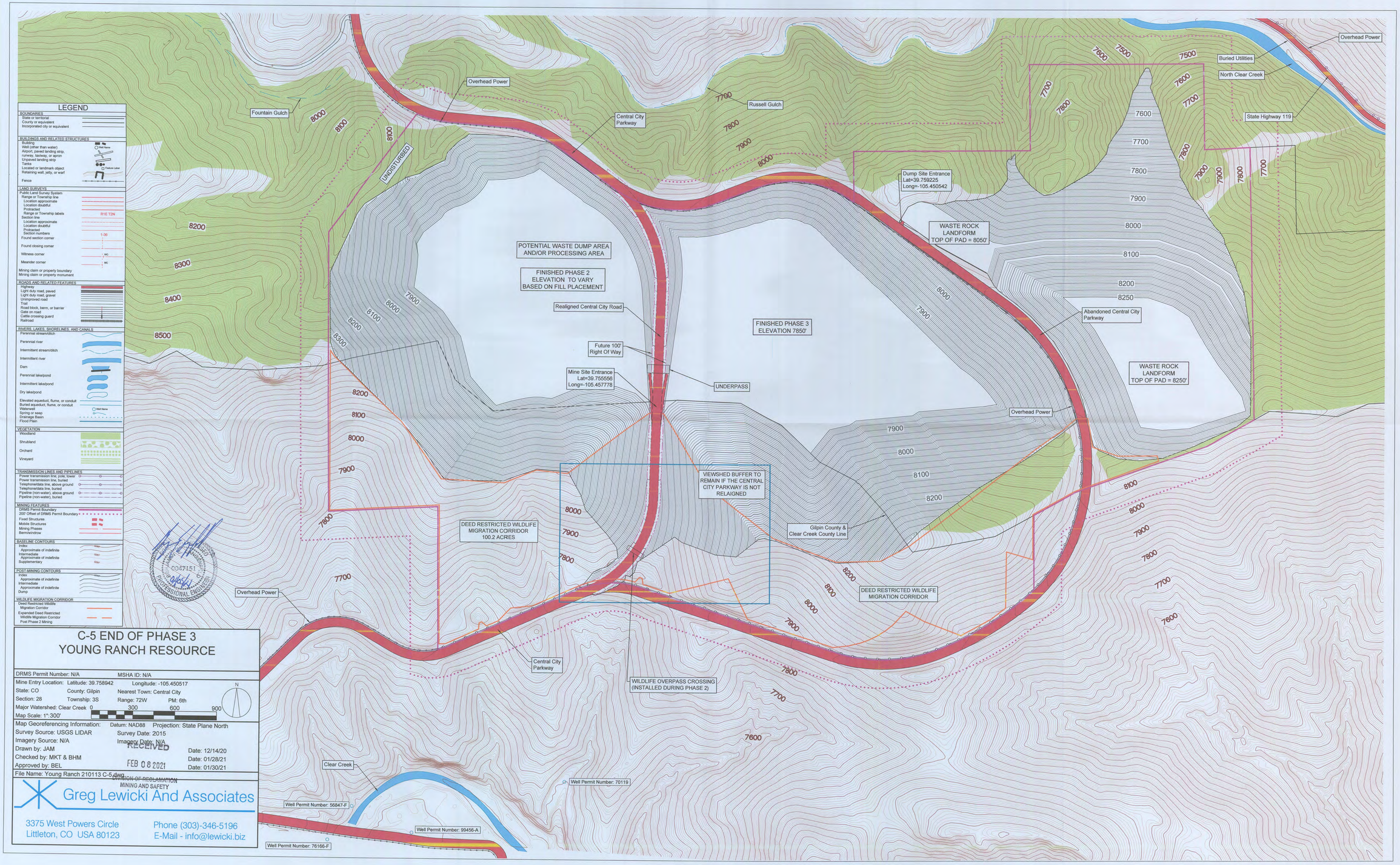

LEGEND

BOUNDARIES
- State or territorial
- County or equivalent
- Incorporated city or equivalent

BUILDINGS AND RELATED STRUCTURES
- Building
- Well (other than water)
- Airport, paved landing strip, runway, taxiway, or apron
- Unpaved landing strip
- Tanks
- Located or landmark object
- Retaining wall, jetty, or warf
- Fence

LAND SURVEYS
- Public Land Survey System
- Range or Township line
  - Location approximate
  - Location doubtful
  - Protracted
- Range or Township labels (R1E T2N)
- Section line
  - Location approximate
  - Location doubtful
  - Protracted
- Section numbers (1-36)
- Found section corner
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- Meander corner (MC)
- Mining claim or property boundary
- Mining claim or property monument

ROADS AND RELATED FEATURES
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- Dry lake/pond
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- Buried aqueduct, flume, or conduit
- Waterwell
- Spring or seep
- Drainage Basin
- Flood Plain

VEGETATION
- Woodland
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- Orchard
- Vineyard

TRANSMISSION LINES AND PIPELINES
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- Telephone/data line, buried
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- Pipeline (non-water), buried

MINING FEATURES
- DRMS Permit Boundary
- 200' Offset of DRMS Permit Boundary
- Fixed Structures
- Mobile Structures
- Mining Phases
- Berm/windrow

BASELINE CONTOURS
- Index
- Approximate of indefinite
- Intermediate
- Approximate of indefinite
- Supplementary

POST-MINING CONTOURS
- Index
- Approximate of indefinite
- Intermediate
- Approximate of indefinite
- Dump

WILDLIFE MIGRATION CORRIDOR
- Deed Restricted Wildlife Migration Corridor
- Expanded Deed Restricted Wildlife Migration Corridor
- Post Phase 2 Mining

C-5 END OF PHASE 3
YOUNG RANCH RESOURCE

DRMS Permit Number: N/A MSHA ID: N/A

Mine Entry Location: Latitude: 39.758942 Longitude: -105.450517
State: CO County: Gilpin Nearest Town: Central City
Section: 28 Township: 3S Range: 72W PM: 6th
Major Watershed: Clear Creek
Map Scale: 1"-300' 0 300 600 900

Map Georeferencing Information: Datum: NAD88 Projection: State Plane North
Survey Source: USGS LIDAR Survey Date: 2015
Imagery Source: N/A Imagery Date: N/A
Drawn by: JAM Date: 12/14/20
Checked by: MKT & BHM Date: 01/28/21
Approved by: BEL Date: 01/30/21
File Name: Young Ranch 210113 C-5.dwg

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Littleton, CO USA 80123
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0047151
PROFESSIONAL ENGINEER

F-1 RECLAMATION
YOUNG RANCH RESOURCE

DRMS Permit Number: N/A MSHA ID: N/A

Mine Entry Location: Latitude: 39.758942 Longitude: -105.450517

State: CO County: Gilpin Nearest Town: Central City

Section: 28 Township: 3S Range: 72W PM: 6th

Major Watershed: Clear Creek 0 300 600 900

Map Scale: 1":300'

Map Georeferencing Information: Datum: NAD88 Projection: State Plane North

Survey Source: USGS LIDAR Survey Date: 2015

Imagery Source: N/A Imagery Date: N/A

Drawn by: JAM Date: 12/14/20

Checked by: MKT & BHM Date: 01/28/21

Approved by: BEL Date: 01/30/21

File Name: Young Ranch 210113 F-1 RECLAMATION.dwg

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G-1 SURFACE HYDROLOGY
YOUNG RANCH RESOURCE

LEGEND

BOUNDARIES
- State or territorial
- County or equivalent
- Incorporated city or equivalent

BUILDINGS AND RELATED STRUCTURES
- Building
- Well (other than water) — Well Name
- Airport, paved landing strip, runway, taxiway, or apron
- Unpaved landing strip
- Tanks — Feature Label
- Located or landmark object
- Retaining wall, jetty, or warf
- Fence

LAND SURVEYS
- Public Land Survey System
- Range or Township line
  - Location approximate
  - Location doubtful
  - Protracted
- Range or Township labels — R1E T2N
- Section line
  - Location approximate
  - Location doubtful
  - Protracted
- Section numbers — 1-36
- Found section corner
- Found closing corner
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- Meander corner — MC
- Mining claim or property boundary
- Mining claim or property monument

ROADS AND RELATED FEATURES
- Highway
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- Light duty road, gravel
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- Trail
- Road block, berm, or barrier
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- Cattle crossing guard
- Railroad

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- Perennial lake/pond
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- Buried aqueduct, flume, or conduit
- Waterwell — Well Name
- Spring or seep
- Drainage Basin
- Flood Plain

VEGETATION
- Woodland
- Shrubland
- Orchard
- Vineyard

TRANSMISSION LINES AND PIPELINES
- Power transmission line; pole; tower
- Power transmission line, buried
- Telephone/data line, above ground
- Telephone/data line, buried
- Pipeline (non-water), above ground
- Pipeline (non-water), buried

MINING FEATURES
- DRMS Permit Boundary
- 200' Offset of DRMS Permit Boundary
- Fixed Structures
- Mobile Structures
- Mining Phases
- Berm/windrow

BASELINE CONTOURS
- Index
- Approximate of indefinite
- Intermediate
- Approximate of indefinite
- Supplementary

POST-MINING CONTOURS
- Index
- Approximate of indefinite
- Intermediate
- Approximate of indefinite
- Dump

DRAINAGE BASINS
- Basin — 1
- Area — 46.2
- Composite Curve Number — 78.8
- Drainage Direction

BASELINE CONDITIONS

Basins: 10 (10 / 70); 11 (55.3 / 70); 8 (9.3 / 70); 12 (16.9 / 70); 9 (63.9 / 70); 13 (79.3 / 70); 7 (45.3 / 70); 1 (64 / 79); 3 (63 / 79); 6 (33.3 / 79); 4 (29.1 / 79); 2 (15.1 / 79); 5 (17.2 / 79)

MINING CONDITIONS

Basins: 10 (0.6 / 79); 19 (6.5 / 70); 18 (0.6 / 70); 20 (7.1 / 70); 17 (4.5 / 70); 15 (53.2 / 89); 11 (55.3 / 79); 2 (102.9 / 89); 1 (128.6 / 89); 13 (14.1 / 89); 14 (7 / 89); 4 (53 / 79); 6 (13 / 79); 3 (21.2 / 89); 9 (9.6 / 79); 16 (1.4 / 70); 5 (14.4 / 79); 7 (5.3 / 79); 12 (18.7 / 79); 8 (17.2 / 79)

SUMPS DURING MINING (TYP.)

RECLAIMED CONDITIONS

Basins: 10 (0.6 / 70); 19 (6.5 / 70); 18 (0.6 / 70); 20 (7.1 / 70); 17 (4.5 / 70); 15 (53.2 / 70); 11 (55.3 / 79); 2 (102.9 / 79); 1 (128.6 / 79); 13 (14.1 / 70); 14 (7 / 70); 4 (53 / 79); 6 (13 / 79); 3 (21.2 / 79); 9 (9.6 / 79); 16 (1.4 / 70); 5 (14.4 / 79); 7 (5.3 / 79); 12 (18.7 / 79); 8 (17.2 / 79)

QUARRY FLOOR DRAINS OFFSITE VIA ROAD

SLOPE RIPRAP DESIGNS CAN BE FOUND ON MAP G-2

RECEIVED
FEB 08 2021
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DRMS Permit Number: N/A MSHA ID: N/A

Mine Entry Location: Latitude: 39.758942 Longitude: -105.450517

State: CO County: Gilpin Nearest Town: Central City

Section: 28 Township: 3S Range: 72W PM: 6th

Major Watershed: Clear Creek

Map Scale: 1":500' (0 – 500 – 1000 – 1500)

N

Map Georeferencing Information: Datum: NAD83 Projection: CO North

Survey Source: USGS LIDAR Survey Date: 2015

Imagery Source: N/A Imagery Date: N/A

Drawn by: JAM & BEL Date: 06/20/20

Checked by: BHM & MKT Date: 01/28/21

Approved by: BEL Date: 02/02/21

File Name: Young Ranch 210131 Hydro Maps.dwg

COLORADO LICENSED
BENJAMIN E. LANGEN
0047151
PROFESSIONAL ENGINEER
02/05/21

Well Permit Number: 70119

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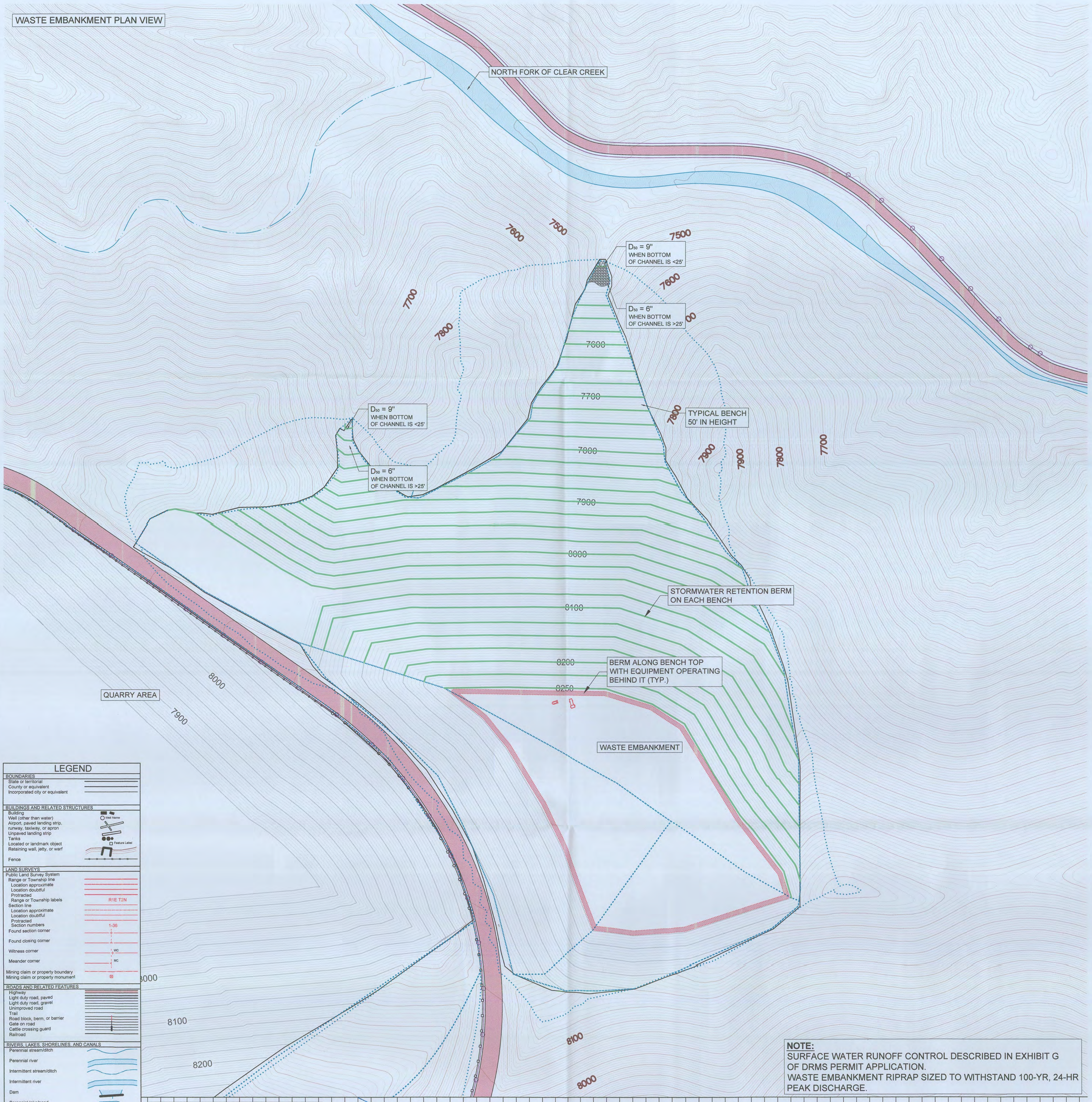
WASTE EMBANKMENT PLAN VIEW



LEGEND

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  - County or equivalent
  - Incorporated city or equivalent
- BUILDINGS AND RELATED STRUCTURES
  - Building
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  - Unpaved landing strip
  - Tanks
  - Located or landmark object — Feature Label
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  - Fence
- LAND SURVEYS
  - Public Land Survey System
  - Range or Township line
    - Location approximate
    - Location doubtful
    - Protracted
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  - Index
    - Approximate of indefinite
  - Intermediate
    - Approximate of indefinite
  - Supplementary
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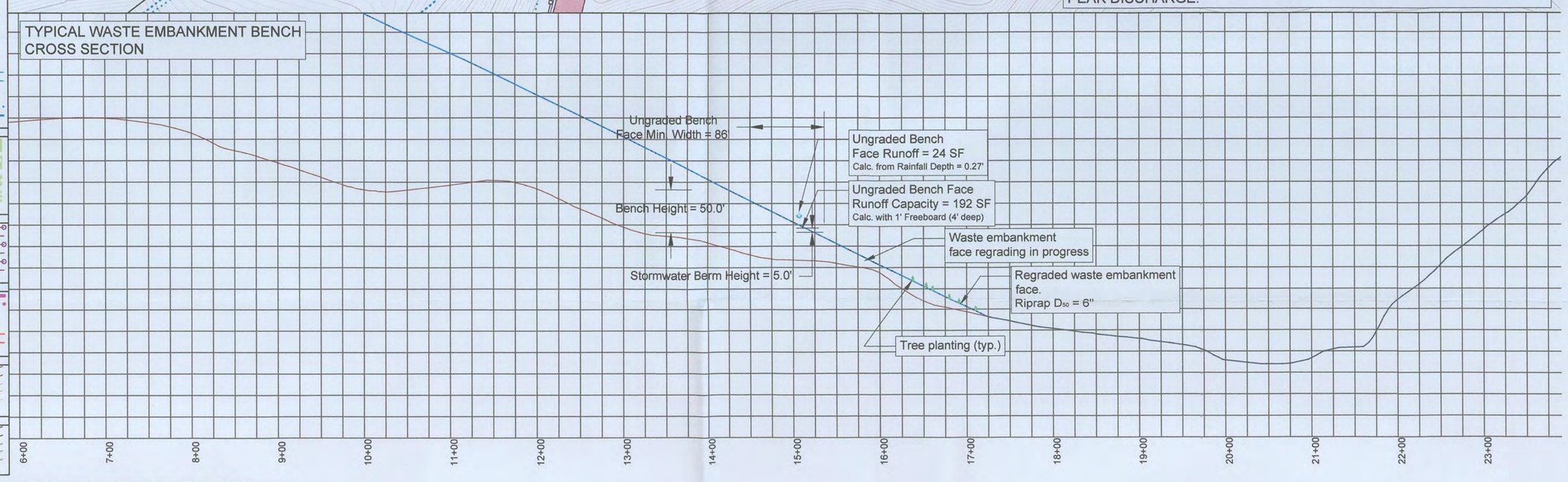
  - Index
    - Approximate of indefinite
  - Intermediate
    - Approximate of indefinite
  - Dump

NOTE:
SURFACE WATER RUNOFF CONTROL DESCRIBED IN EXHIBIT G OF DRMS PERMIT APPLICATION.
WASTE EMBANKMENT RIPRAP SIZED TO WITHSTAND 100-YR, 24-HR PEAK DISCHARGE.

TYPICAL WASTE EMBANKMENT BENCH CROSS SECTION



G-2 SURFACE HYDROLOGY DETAILS
YOUNG RANCH RESOURCE

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Section: 28 Township: 3S Range: 72W PM: 6th
Major Watershed: Clear Creek
Map Scale: 1":200' 0 200 400 600
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Map Georeferencing Information: Datum: NAD83 Projection: CO North
Survey Source: USGS LIDAR Survey Date: 2015
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COLORADO LICENSED
BENJAMIN E. LANGENFELD
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PROFESSIONAL ENGINEER
02/05/21

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