March 31, 2021

ANLEX ROCK AND MINERALS, INC.
Contact: Adam Y. Han
2225 W. Commonwealth Avenue, Suite 100
Alhambra, California 91803

SUBJECT: **Addendum to Circle Mountain Biological Consulting's 2019 General Biological Evaluation of Anlex Rock and Minerals' Newberry Wine Rock Quarry's Proposed Mining Expansion Area**

Introduction

Anlex Rock and Minerals is submitting an Amended Reclamation Plan (Amended Plan) to San Bernardino County (County) for the planned expansion of the existing Wine Rock Quarry. The development of crushed rock from this quarry will ensure the long-term viability of the Newberry Mine.

As part of the planning process to expand mining at the Wine Rock Quarry, Anlex Rock and Minerals will be submitting an application under the Surface Mining and Reclamation Act (SMARA) to San Bernardino County, the local lead agency. The reclamation plan review submittal under SMARA for the proposed expansion requires several documents be prepared, including a revegetation plan. This addendum will update and supplement a 2019 biological investigation prepared by Circle Mountain Biological Consultants (CMBC).

Project Location

The project site is generally located south of Interstate 40, southeast of the community of Newberry Springs in unincorporated San Bernardino County, California. The project site is depicted on the Newberry Springs quadrangle of the United States Geological Survey's (USGS) 7.5-minute topographic map series in portions of Sections 9 of Township 8 North, Range 3 East. Specifically, the project site is located one mile southeast of Newberry Peak in the Newberry Mountains. Refer to Exhibits 1 and 3 in attachment A.

Methodology

CMBC conducted a biological baseline survey for the site in December 2018 and released a report in January 2019. Their survey included a focused survey for Agassiz's desert tortoise (*Gopherus agassizii*) and suitability assessments for desert bighorn sheep (*Ovis canadensis nelsoni*), burrowing owl *(Athene cunicularia*) and other potentially occurring sensitive species. ELMT Consulting conducted a biological survey in March 2021 to verify and update CMBC surveys results.

Soils and Topography

The proposed mining expansion area consists of relatively steep slopes ranging in elevation from 1,885 feet to 2,290 feet. Soils are rocky throughout the area to be mined. Based on the Natural Resource Conservation

Service (NRCS) Web Soil Survey, the project site is underlain by Rock Outcrop-Lithic Torriorthents Complex (15 to 50% slopes), and Arizo gravelly loamy sand (2 to 9% slopes).

Jurisdictional Areas

No discernible drainage courses, blueline streams, inundated areas, or wetland features/obligate plant species that would be considered jurisdictional by the United States Army Corps of Engineers (Corps), Regional Water Quality Control Board (Regional Board), or CDFW were observed within the proposed expansion footprint. Based on the proposed site plan, project activities will not result in impacts to Corps, Regional Board, or CDFW jurisdictional areas and regulatory approvals will not be required.

Vegetation

A *Larrea tridentata-Ambrosia dumosa* shrubland alliance (creosote bush scrub) occurs throughout the undeveloped/undisturbed portions of the project site and is the dominant plant community within the surrounding landscape, and overall underlying plant community in the area. This alliance is dominated by creosote (*Larrea tridentata*) and occurs throughout the proposed expansion area. Plant species found within this plant community include pencil cholla (*Cylindropuntia ramosissima*), burrobush (*Ambrosia dumosa*), barrel cactus (*Echinocactus* sp.), allscale (*Atriplex polycarpa*), matchweed (*Gutierrezia californica*), sweetbush (*Bebbia juncea*), cheesebush (*Ambrosia salsola*), and brittlebush (*Encelia farinosa*).

Wildlife

Common species observed during CMBC's biological survey included three reptile, four bird and nine mammal species (refer to CMBC's 2019 report in Attachment C). Positive evidence of desert tortoise was found at the lower, more level elevations south of the proposed mining area. Based on the observed sign, CMBC judged that two and three tortoises could occur at the lower elevations. However, desert tortoises are unlikely to occur within the 24-acre mining area due to the extremely steep slopes which do not provide suitable habitat for the species. It was CMBC's conclusion that with a few protective measures, including fencing the active mining area and clearance surveys, the proposed expansion area can be mined without any impacts to desert tortoise. ELMT concurs with this conclusion.

Other special-status species assessed for their potential to occur included kit fox (*Vulpes macrotis*), burrowing owl and desert bighorn sheep. ELMT confirmed CMBC's conclusion that there is no active or inactive kit fox dens within the proposed mining area. Diagnostic scat was found peripheral to the 50-acre mine site, so kit fox occurs in the general area but not within the proposed mine expansion area. ELMT found no evidence of burrowing owl. The proposed mining area is too rocky and steep to be suitable for burrowing owl, and does not provide suitable burrows (>4 inches in diameter).

Scat from desert bighorn, a BLM sensitive species and CDFW fully protected species, was observed onsite within the proposed expansion area. Bighorn sheep do move through the proposed mining expansion area and would be expected to continue to do so. Although bighorn sheep can be wary of mining activities, the species does coexist with mining operations throughout the Mojave Desert. There is ample undisturbed mountainous habitat surrounding the proposed mining expansion area to continue to allow bighorn sheep movement opportunities through the immediate area.

San Bernardino County Development Code

San Bernardino County regulates desert native plant species. Impact to any identified desert native plants, see Chapter 88.01 Plant Protection and Management of the San Bernardino Development Code. Several species were mapped within the project site by CMBC including beavertail cactus (*Optunia basilaris*), hedgehog cactus (*Echinocereus engelmannii*), cottontop cactus (*Echinocactus polycephalus*) and pencil cholla (*Cylindropuntia ramosissima*) were confirmed by ELMT as present within the propose mining expansion area. No Joshua trees (*Yucca brevifolia*) were identified within larger mining area. Pre-construction surveys are recommended prior initiating mining in any new area to determine presence or absence of protected desert native plant species as defined by San Bernardino County. If present, coordination and permitting with San Bernardino County will be required.

Please do not hesitate to contact Tom McGill at (951) 285-6014 or tmcgill@elmtconsulting.com or Travis McGill at (909) 816-1646 or travismcgill@elmtconsulting.com should you have any questions.

Sincerely,

Thomas J. McGill, Ph.D.
Managing Director

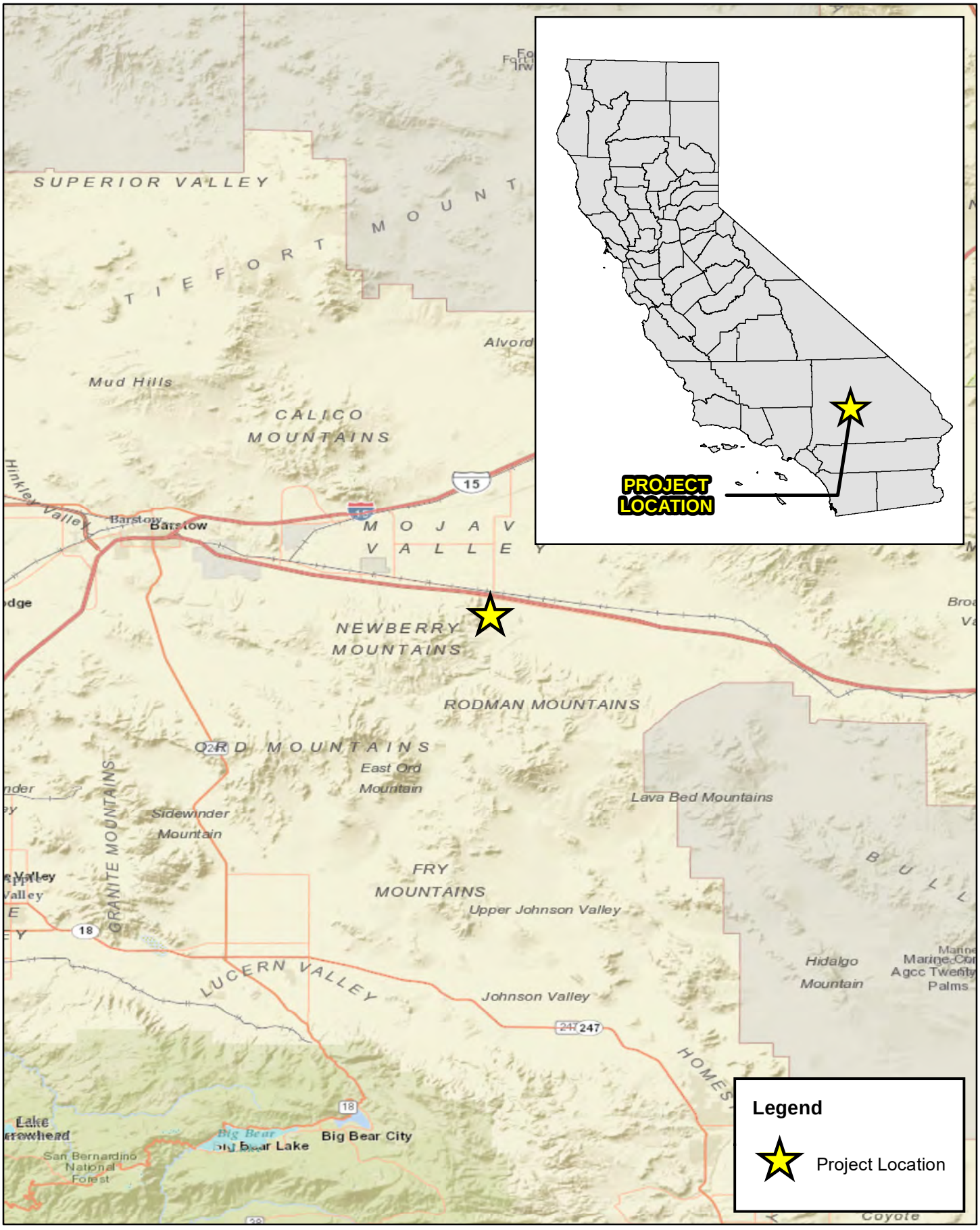
Travis J. McGill
Director

Attachments:

A. *Project Exhibits*
B. *Mining Plot Plan*
C. *CMBC's 2019 Biological Resources Report*

Attachment A

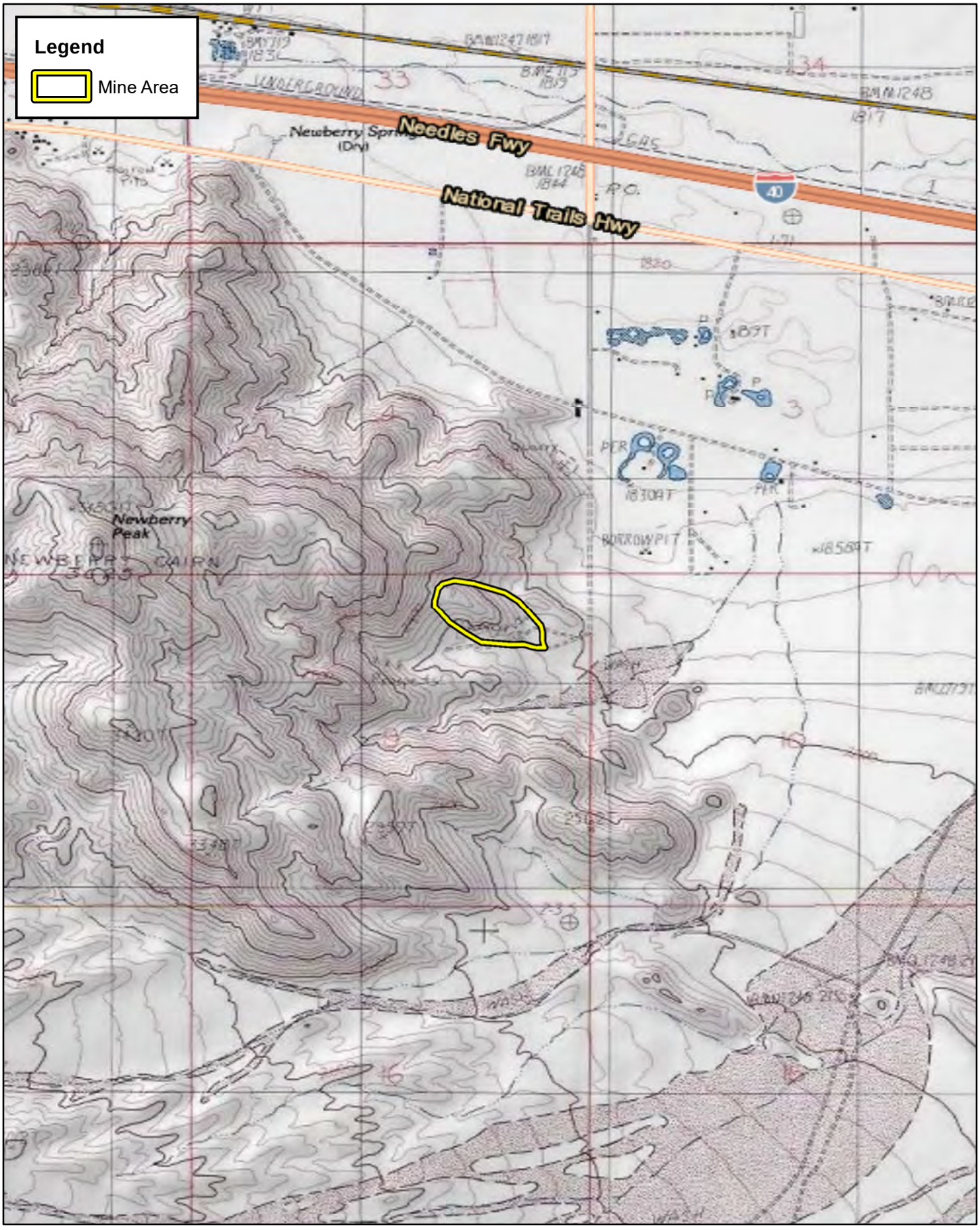
Project Exhibits



WINE ROCK QUARRY
HABITAT AND JURISDICTIONAL ASSESSMENT UPDATE

Regional Vicinity

Exhibit 1



WINE ROCK QUARRY
HABITAT AND JURISDICTIONAL ASSESSMENT UPDATE

Site Vicinity

Source: USA Topographic Map, San Bernardino County

Exhibit 2

0 125 250 500 Feet

Source: ESRI Aerial Imagery, San Bernardino County

WINE ROCK QUARRY
HABITAT AND JURISDICTIONAL ASSESSMENT UPDATE

Project Site

Exhibit 3

Attachment B

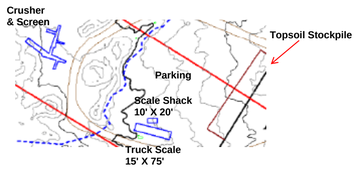
Mining Plot Plan

MINING PLOT PLAN TO RE-PERMIT THE WINE ROCK QUARRY CA MINE ID # 91-36-004

EXPLANATION OF MAP SYMBOLS

BOUNDARY OF AREA PROPOSED FOR MINING

D ——— SECTION D ——— D '
PLAN VIEW LOCATION OF CROSS-SECTIONS TO SHOW MINING



Active Mining & Staging Area Mining, crushing, sizing, temporary stockpiles, & truck loading

PL N 89° 29' 33"
160 Acre Property Surveyed Boundary with PL (Property Line) Symbol and Bearing

2050
Elevations on 50 foot Contours

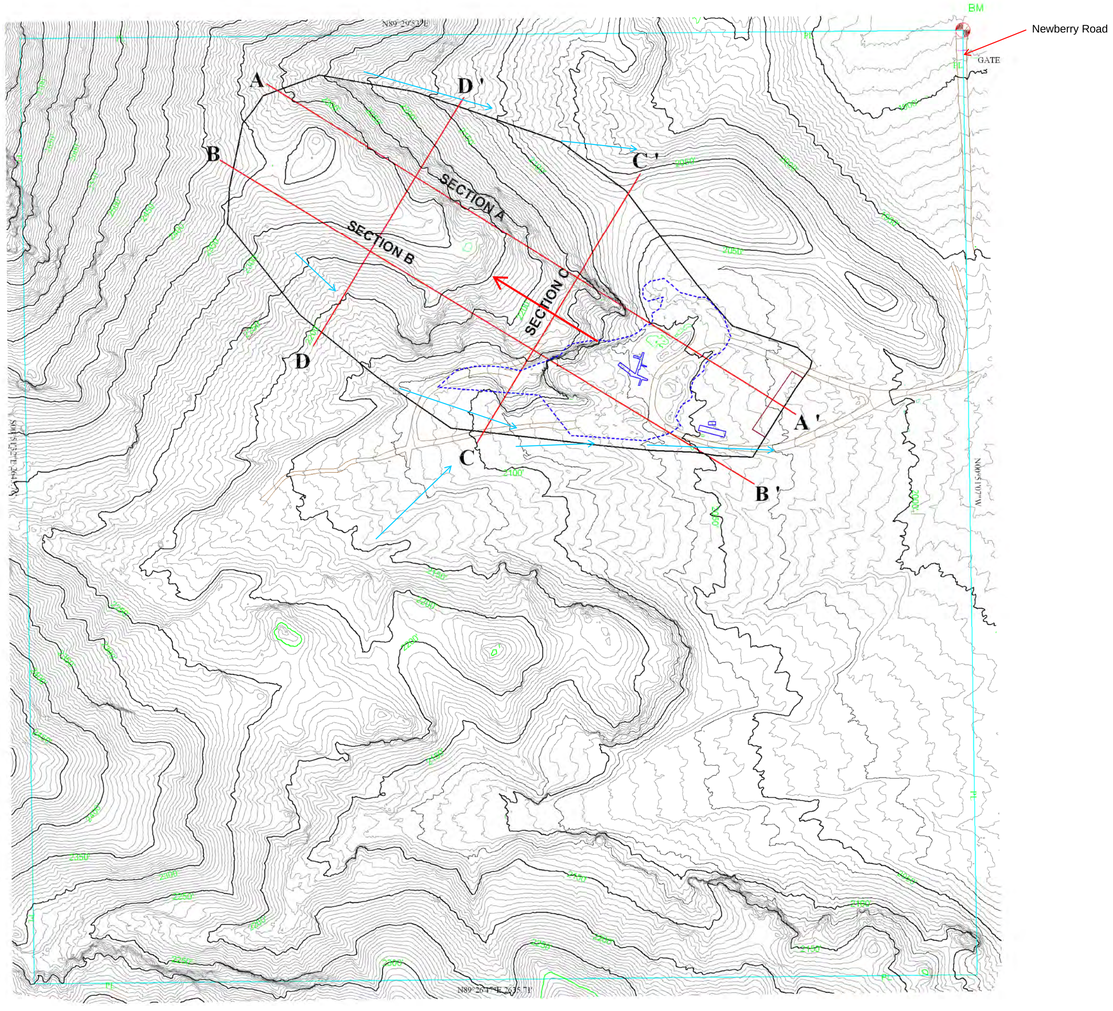
Existing Access Road to Quarry coming off of Newberry Road (Dirt graded access to Newberry Springs

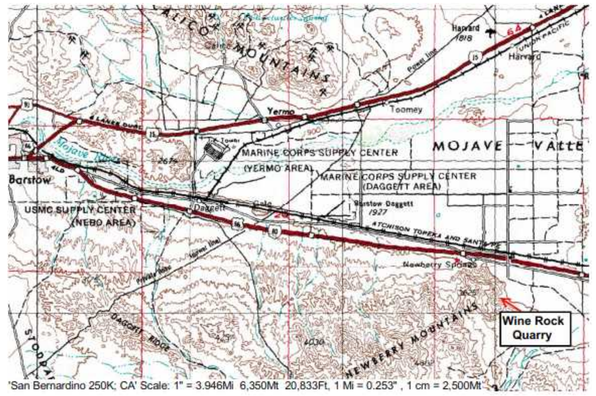
BM

Benchmark at the NE Corner of the 160 Acre Parcel (Surveyed Brass Cap)

Downhill Drainage around Mine Hill Berms along Wash to Contain

Direction of Mining Uphill SE to NW





VICINITY MAP

NOTES AND MINING INFORMATION

Land Owner / Applicant:	Anlex Rock and Minerals, Inc. 2225 W. Commonwealth Ave. Suite 100 Alhambra, CA 91803 Contact: Adam Y. Han Phone: 626-289-5000
Mine Operator:	AR Rock Quarry, LLC 13565 Palmdale Road Victorville, CA 92392 Contact: Albert Ruiz Phone: 760-221-2671
Mining Consultants Map Preparation	Industrial Mineral Developments, Corp. (IMD) Frederic Johnson PG P.O. Box 790111 Virgin, Utah 84779 Phone: 435-680-5484 Anderson Mining Group, LLC 9700 Bennett Peak St. Littleton, Colorado 80125
Surveying	Foothill Surveying, Inc. Nicholas Ellis, PLS P.O. Box 8026 Alta Loma, California 91701

No Utilities on Site: Portable Toilets, Trucked Water, and Small Generators for Heat and Lights

No Structures on Property & none planned for mining. Nearest structure is over 1/2 mile away.

No special signs. Gate will be signed

Parking SE of Mining-Staging Area away from mining on compacted surface. No Structures.

No protected or endangered trees are on the proposed mining site.

Multi-benched drill and blast will progress to the northwest from the existing southeast facing slopes where the crusher and screen are located. Cross Sections show that mining will remove the hillside down to the existing regional slope in a southwest to northeast direction (Sections C and D) and leave reclaimed benches 40 ft. wide by 20 ft. high with a 70 degree from vertical sloped face. Reclamation slope will be a 2.5 : 1 H : V with an overall 20 - 21 degree slope angle from horizontal). See Reclamation Plan and Cross-Sections. The mining slopes on the stepped floor will be approximately flat to + 1%.

Mining will be done from a lower area around 2040 Elevation above sea level (ASL) and progress to an upper 2350 ft. Elevation ASL. Disturbance supporting mining will reach from a low of 2030 (parking and topsoil area). Present lower mine bench toe is at approximately 2040 ft. ASL

Along the south side of the proposed mining area pushed up alluvial berms will be placed along the inside of existing access roads shown on map and along the outside of the ephemeral drainage. This will keep drainage out of the mining area during infrequent flood stages. The drainage direction will not be altered during mining or reclamation.

MAP PREPARATION FOR ANLEX ROCK AND MINERAL INC.

BY

Industrial Mineral Developments, Corp.

and Foothill Surveying, LLC

MAP 6

N

CONTOUR INTERVAL = 5 FEET

200 0 100 200 300 400 500
Feet

SCALE: 1:2400

CA MINE ID #91-36-004
ANLEX ROCK AND MINERALS INC
2225 W. COMMONWEALTH AVE SUITE 100
ALHAMBRA, CALIFORNIA 91803
ADAM Y HAN (626) 289-5000

MINING PLOT PLAN WINE ROCK QUARRY
DECORATIVE & CONSTRUCTION ROCK
NW 1/4 Section 9, Township 8 North, Range 3 East, SBBM
Section 9 Township 8 North Range 3 East SBBM
SB County Land Use District Map EI 11A - RL 5

29-Jan-2021

IMD & FOOTHILL
FJ & NE

Attachment C

CMBC's 2019 Biological Resources Report

Focused Survey for Agassiz's Desert Tortoise,
Habitat Evaluation for Burrowing Owl, and
General Biological Resource Assessment for a
50-acre± Site (a portion of APN 0531-051-03) and Associated Access Road in the Community of Newberry Springs, San Bernardino County, California

(U.S. Geological Survey 7.5' Newberry Springs quadrangle, Township 8 North, Range 3 East, a portion of Section 9, S.B.B.&M.)

Job#: 18-024

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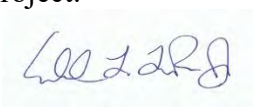
Email: loneagle1@hi-speed.us
Contact: Frederic Johnson

On Behalf of:
AR Rock Quarries, LLC
13565 Palmdale Road
Victorville, CA 92392
PH: (760) 221-2671
Contact: Albert Ruiz

I hereby certify that the statements furnished herein, including attached exhibits, present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief. Field work conducted for this assessment was performed by me or under my direct supervision. I certify that I have not signed a nondisclosure or consultant confidentiality agreement with the project applicant or applicant's representative and that I have no financial interest in the project.



Circle Mountain Biological Consultants, Inc.
Author and Field Investigator: Edward L. LaRue, Jr.

January 2019

Figure 1. Newberry Wine: Vicinity Map

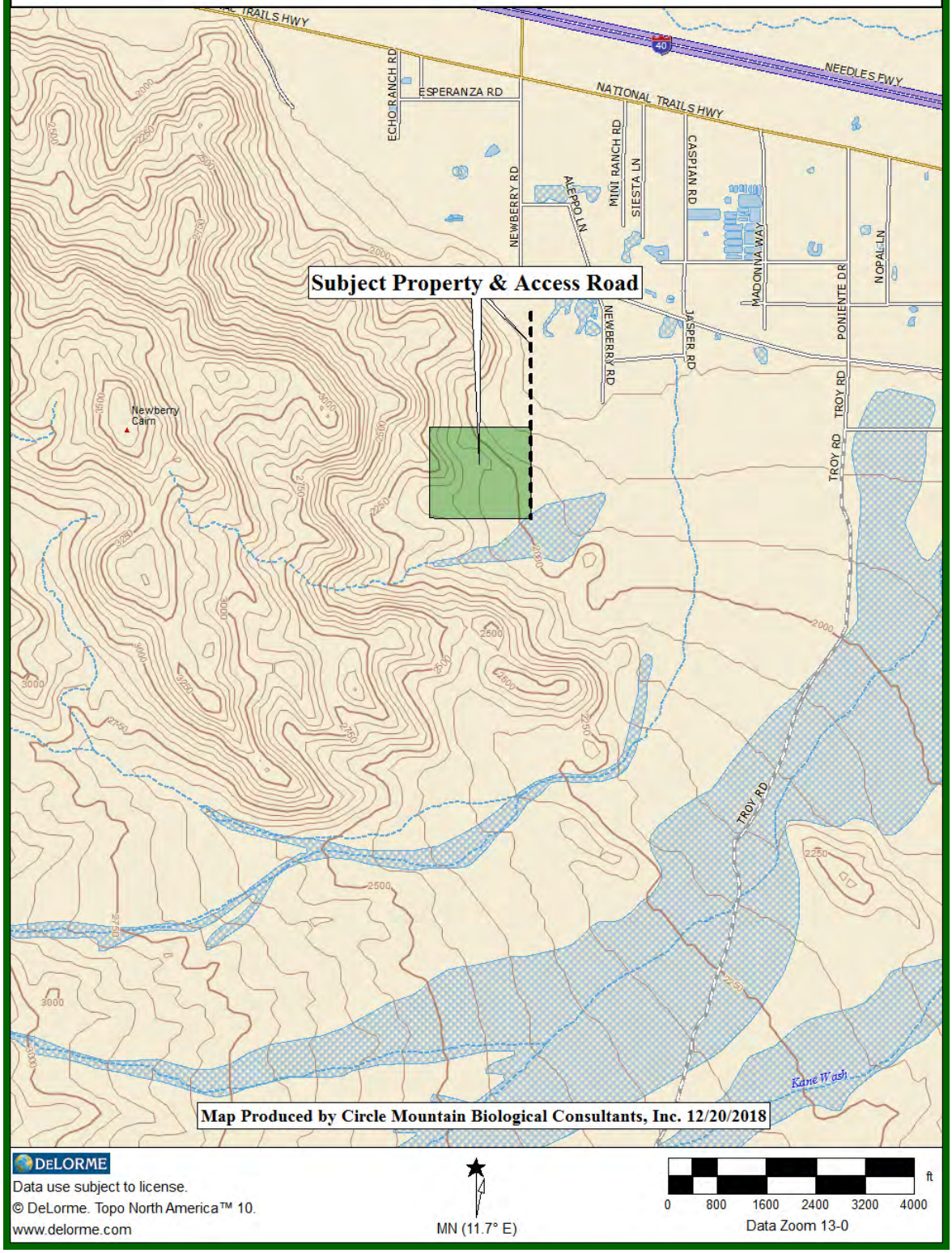


Figure 2. Newberry Wine: Site Map with Transect and Pit Locations

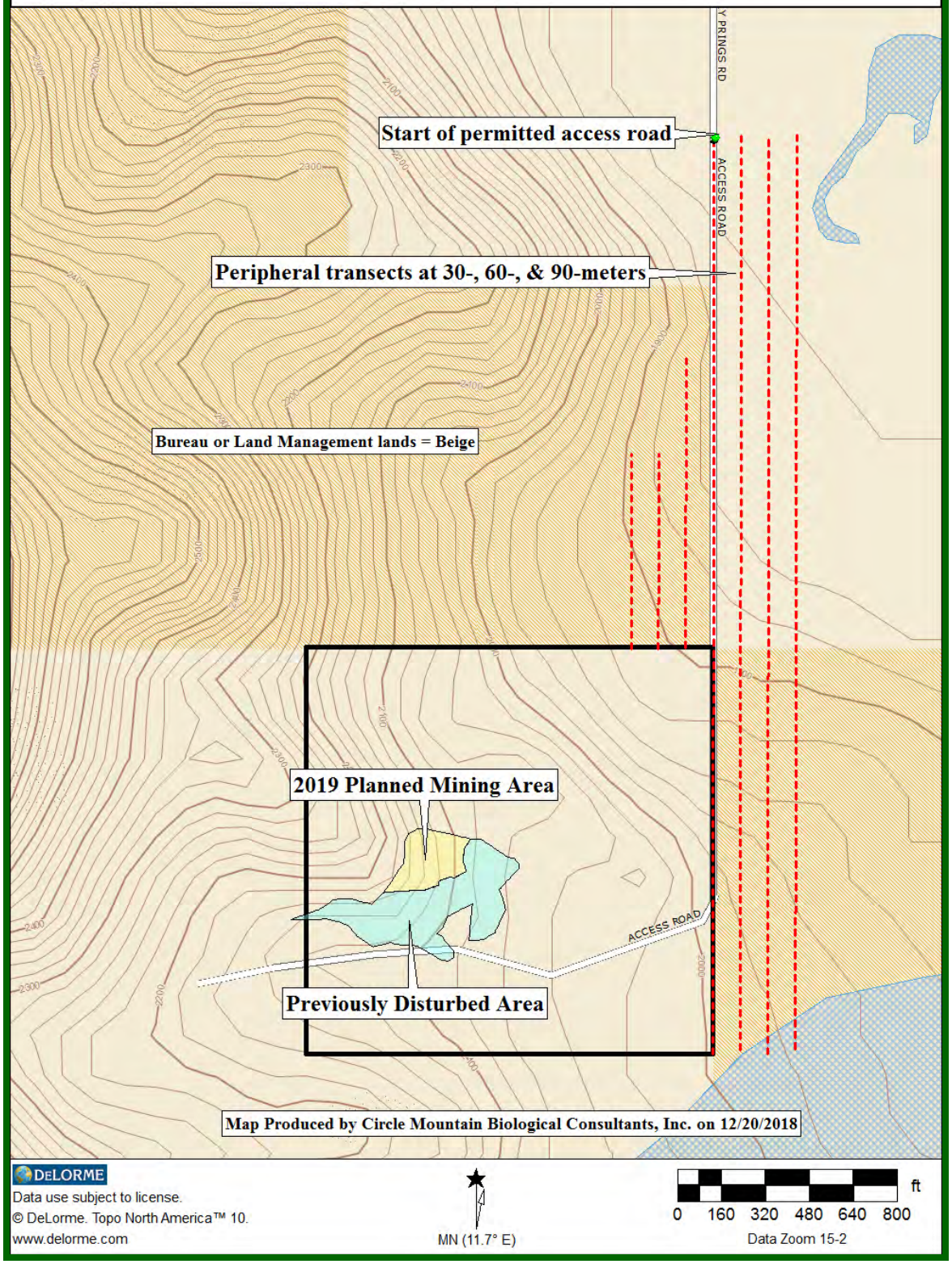


Figure 3a. Newberry Wine: Special Status Animal Locations

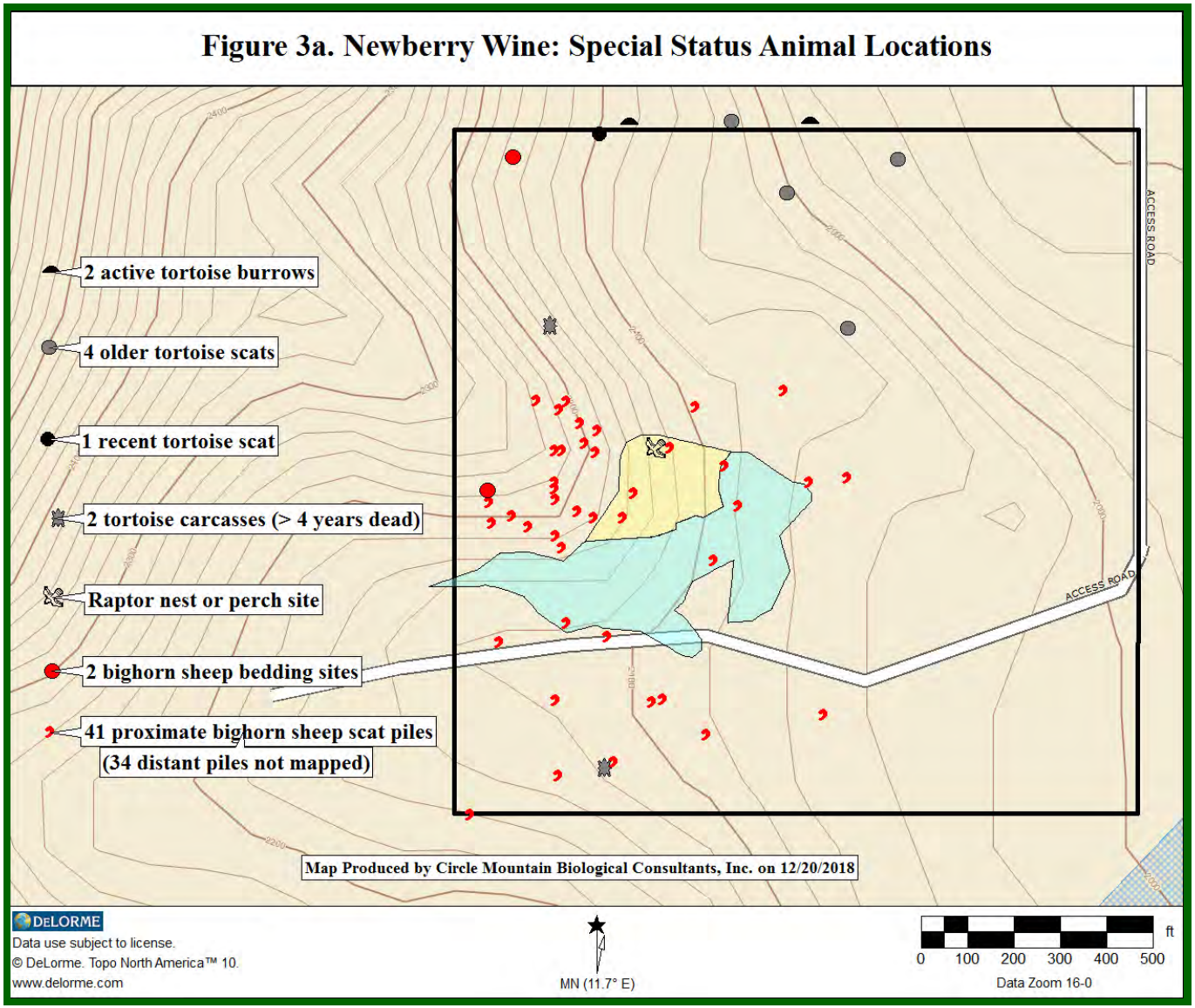


Figure 3b. Newberry Wine: Special Status Plant Locations

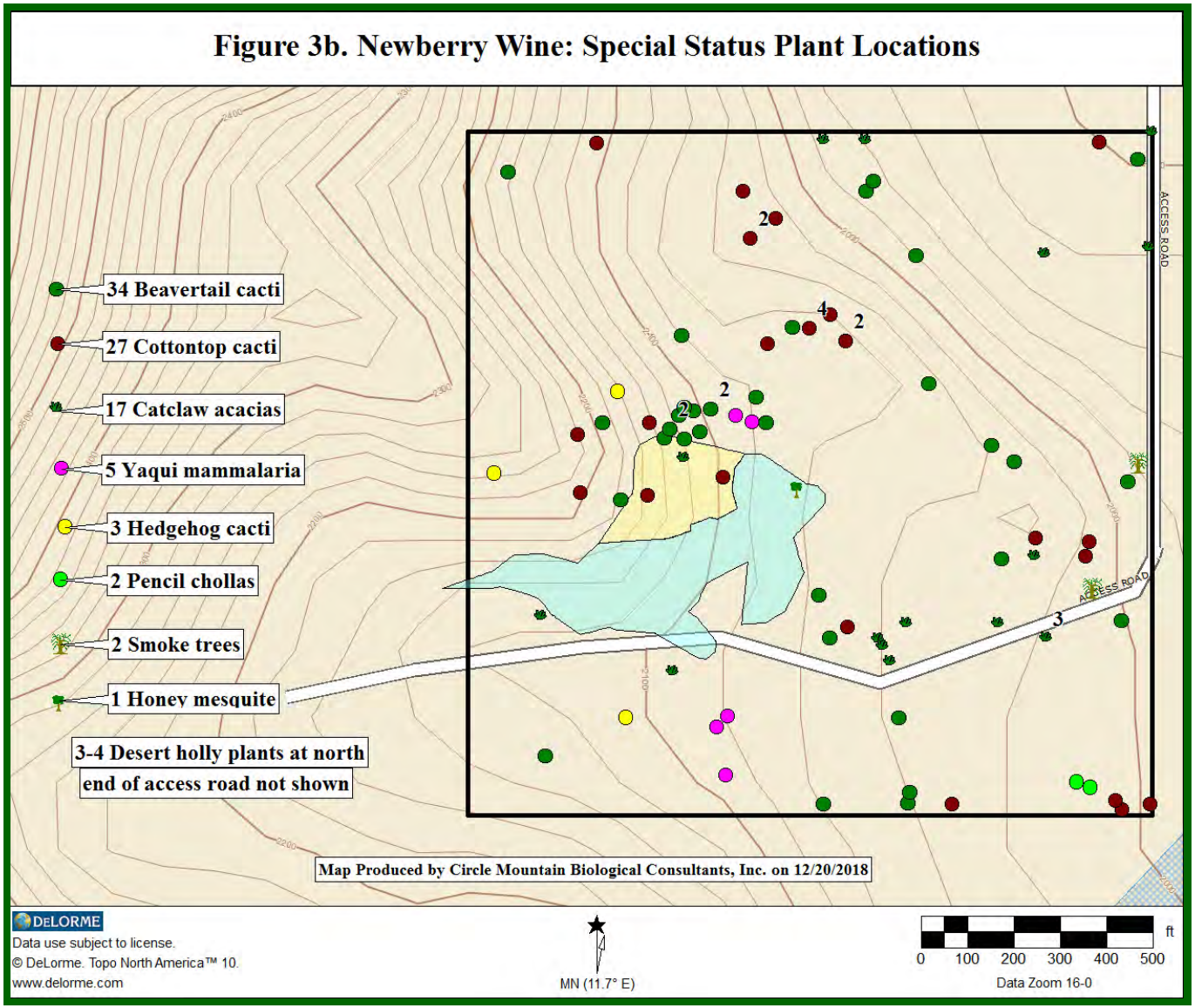


Figure 4. Results of Five Tortoise Surveys in the Area between 1996 and 2018

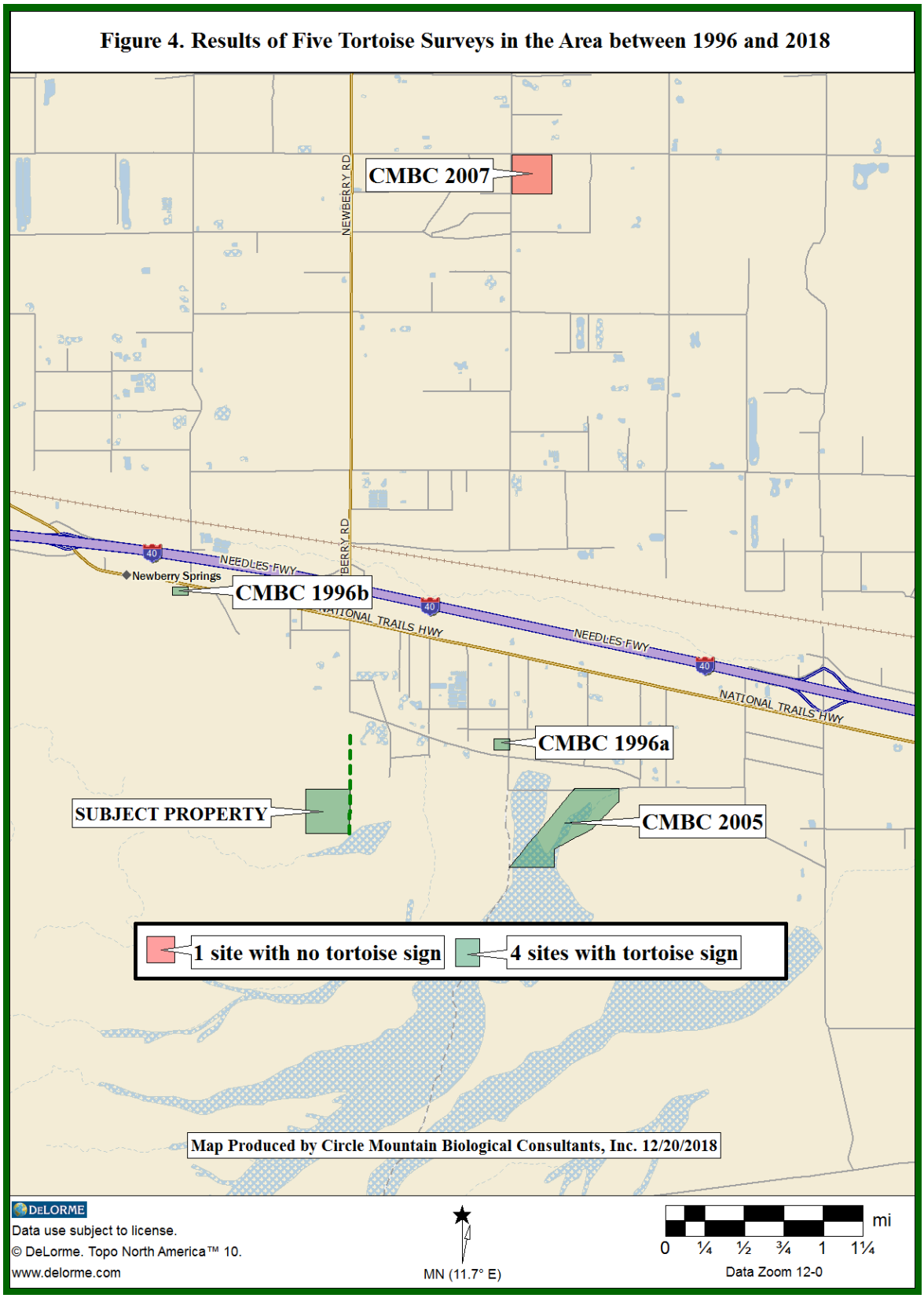
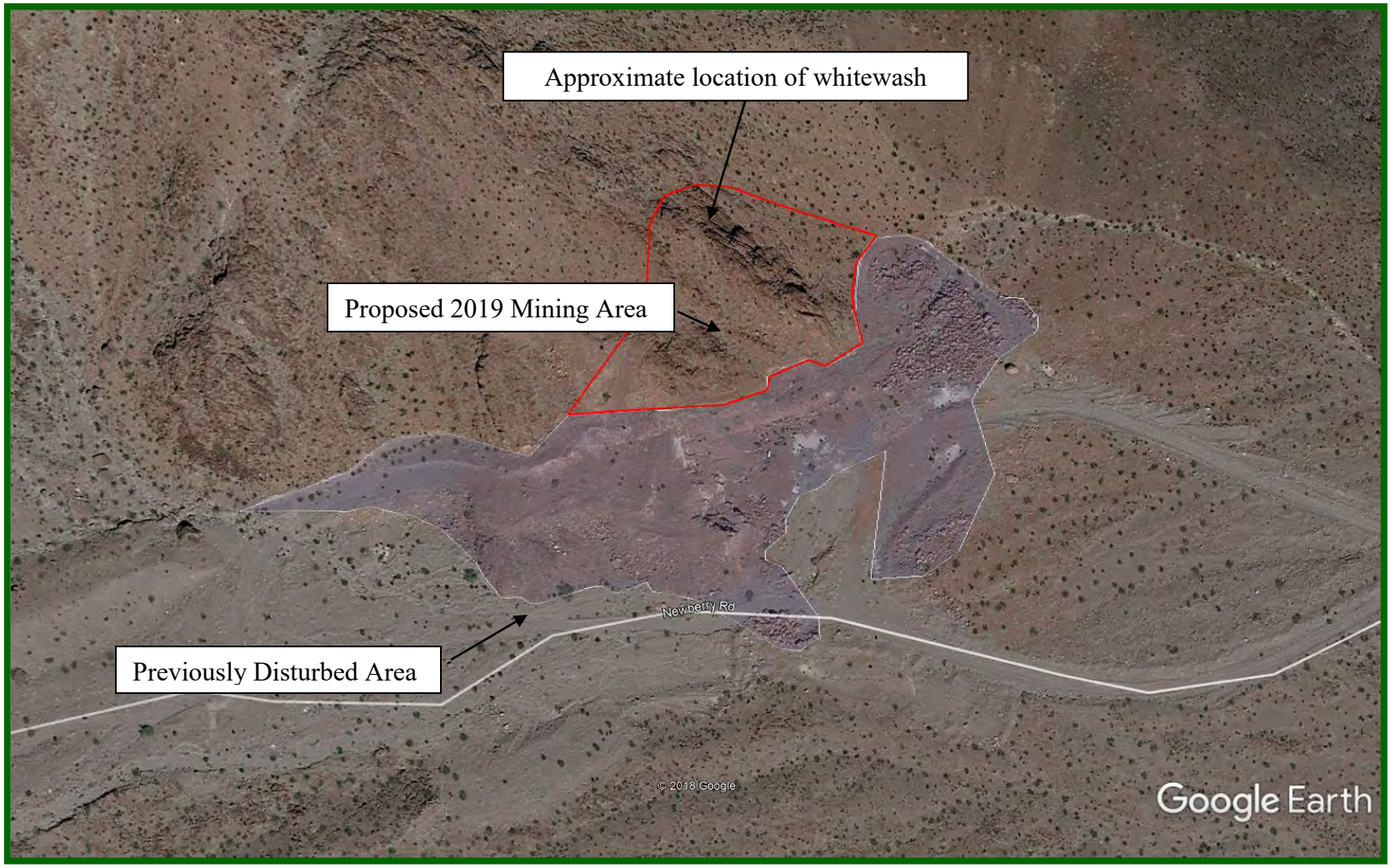


Figure 5. Newberry Wine: Aerial Photograph (©2018Google™ Earth)



Executive Summary

Circle Mountain Biological Consultants, Inc. was contracted by AR Rock Quarries, LLC to perform a focused survey for Agassiz's desert tortoise, habitat assessment for burrowing owl, and a general biological resource assessment on a 50-acre± action area encompassing a one-acre proposed mine expansion area and associated access road located in San Bernardino County, California.

APN 0531-051-03 encompasses a 50-acre± parcel located several miles south of the unincorporated community of Newberry Springs, CA. The legal description for the subject property is Township 8 North, Range 3 East, a portion of Section 9, S.B.B.&M. The Proponent intends to mine an area of approximately one acre adjacent to an existing open pit and grade an existing 30-foot by 0.9-mile access road. So, although the action area is 50 acres, the impact area is approximately one acre.

For a total of approximately 25.5 hours, between 08:30 and 17:00 on 12/13/2018 and 10.5 hours, between 09:00 and 14:15 on 12/14/2018, Ed LaRue and Sharon Dougherty of CMBC and subcontractors, Jessyka Perry and Greg Winton, surveyed the site and action area as described herein. This entailed a survey of approximately 50 transects, spaced at 10-meter intervals and oriented in a north-south direction throughout the 50-acre± parcel. Six zone of influence transects were surveyed for detection of burrowing owls at 30-meter intervals east and west of the existing access road.

Based on DeLorme Topo USA® 10.0 software, elevations on the subject property range from approximately 2,290 feet (698 meters) near the northwest corner down to 1,885 feet (574 meters) at the northeast corner. Terrain is relatively flat in several places along the southern boundary and northeastern portion of the site, and ranges from relatively steep slopes to the west and gently rolling hills through the middle. Soils are rocky to cobbly throughout with massive outcrops to the west and within the 1.0-acre± expansion area. No USGS-designated blueline streams occur on-site.

The 53 plant species identified during the survey, including 49 species onsite (within the 50 acres) and 4 species offsite, are listed in Appendix A. The prevalent plant community is Mojavean creosote bush scrub. The three reptile, four bird, and nine mammal species identified during the survey are listed in Appendix B.

Positive evidence of Agassiz's desert tortoise found during this survey included two active subadult burrows, four older adult scats, one recent adult scat, and two carcasses of adult tortoises that died more than four years ago. CMBC judges that between two and three tortoises, including one or two adult tortoises and one subadult animal, occur on the northern portions of the site or just north thereof. There is suitable tortoise habitat throughout but tortoises are more likely to occur on northern portions of the site than within the proposed expansion area, much of which is vertical and therefore too steep to comprise suitable habitat. In CMBC's professional opinion, with a few implemented protective measures, it may be possible to mine the expansion area without any direct impacts to tortoises.

Based on the field survey and habitat assessment, CMBC concludes that other than desert tortoise, Nelson's bighorn sheep is the only other special status animal species that may be affected. Sheep are likely to be wary of mine activities and maintain a safe distance, so impacts are likely to be minimal and no specific mitigation measures are recommended. With regards to the raptor nest, CMBC recommends that a few site visits be performed in the March to May timeframe to ascertain which raptor is using this site, whether the site is still active or not, and to determine whether it is a nest site or a perch site. Based on this information, determine with input from CDFW biologist(s) the appropriate course of action that would allow site development while minimizing or avoiding impacts to the affected species.

Given the absence of jurisdictional waters, no impacts are expected and no mitigation measures recommended.

This report is intended to serve as a focused survey and general resource assessment to provide necessary baseline data but does not proposed a specific program to minimize and mitigate impacts to protected native desert plants. Additional pre-disturbance surveys are recommended to identify specific locations of protected plants to be avoided or salvaged in order to be in compliance with the California Native Plant Protection Act. Catclaw acacia, smoke tree, honey mesquite, desert holly, pencil cholla, beavertail cactus, cottontop cactus, hedgehog cactus, and Yaqui mammillaria are species found on-site or along the access road that may be subject to pertinent development codes.

Table of Contents

**Focused Survey for Agassiz's Desert Tortoise,
Habitat Evaluation for Burrowing Owl, and
General Biological Resource Assessment for a
50-acre± Site (a portion of APN 0531-051-03) and Associated Access Road in the
Community of Newberry Springs, San Bernardino County, California**

1.0. Introduction

1.1. Purpose and Need for Study. Circle Mountain Biological Consultants, Inc. (CMBC) was contacted by Mr. Frederic Johnson (Industrial Mineral Development, Inc.) on behalf of AR Rock Quarries, LLC (Proponent) to perform a focused survey for Agassiz's desert tortoise (*Gopherus agassizii*), habitat assessment for burrowing owl (*Athene cunicularia*), and a general biological resource assessment on a 50-acre± site and associated access road located in San Bernardino County, California (see Figures 1 and 2). Given the location of the site in an unincorporated portion of the county, this report has been prepared, in part, according to County of San Bernardino's *Report Protocol for Biological Assessment Reports* (County of San Bernardino 2006).

As the California Environmental Quality Act (CEQA) Lead Agency, the County of San Bernardino, Public and Support Services Group, Land Use Services Department, Advance Planning Division (County) is required to complete an initial study to determine if site development will result in any adverse impacts to rare biological resources. The information may also be useful to federal and State regulatory agencies, including U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW), respectively, if the Lead Agency asks them to assess impacts associated with proposed development. Results of CMBC's focused tortoise survey, burrowing owl habitat assessment, and general biological resource assessment are intended to provide sufficient baseline information to these agencies to determine if impacts will occur and to identify mitigation measures, if any, to offset those impacts.

1.2. Project Description. APN 0531-051-03 encompasses a 50-acre± parcel located several miles south of the unincorporated community of Newberry Springs, CA (see Figures 1 and 2). The legal description for the subject property is Township 8 North, Range 3 East, a portion of Section 9, S.B.B.&M. The Proponent intends to mine an area of approximately one acre adjacent to an existing open pit (Figure 2) and grade an existing 30-foot by 0.9-mile access road. So, although the action area is 50 acres, the impact area is approximately one acre.

2.0. Methods

2.1. Literature Review. CMBC consulted materials included in our library to determine the nearest tortoise locations and other special status plant and animal species that have been reported from the vicinity of the subject property. Of particular relevance given their proximity to the subject property are four focused tortoise surveys completed on four sites, located between approximately 5,000 feet east and 3.9 miles north of the parcel, between 1996 (CMBC 1996a) and 2007 (CMBC 2007), which, along with the subject property, are mapped in Figure 4. These and other materials used in the completion of this report are listed in Section 5.0, below.

2.2. Field Survey.

2.2.1. *Survey and Habitat Assessment Protocols*. For **Agassiz's desert tortoise**, CMBC followed the presence-absence survey protocol first developed by the USFWS (1992) and recently revised (USFWS 2017). USFWS (2017) protocol recommends surveying transects at 30-foot (10-meter) intervals throughout all portions of a given parcel and its associated action area. The *action area* is defined by regulation as all areas to be affected directly or indirectly by proposed development and not merely the immediate area involved in the action (50 CFR §402.02). For this site, the action area is considered to be the 50-acre subject property, which fully encompasses the 1.0-acre± mine site expansion area. Since the site is smaller than 500 acres, it may be surveyed year round, and there is no opportunity to estimate the density of tortoises on the 50-acre subject property due to its size and the absence of observed tortoises (USFWS 2017).

For **burrowing owl**, the CDFG (2012) survey protocol recommends transects be surveyed at 100-foot (30-meter) intervals throughout a given site, with five additional transects surveyed at 30-meter intervals out to 500 feet (150 meters) in adjacent areas in potential habitat (i.e., excluding areas substantially developed for commercial, residential, and/or industrial purposes). With its narrower transect intervals, the tortoise survey is sufficient to cover the site for burrowing owl. The focus of the survey is to find and inspect all burrows sufficiently large to be used by burrowing owls. Importantly, this methodology is considered a formal *habitat assessment* for presence of burrowing owls, which can be conducted any time of the year. Had burrowing owl sign been found, which it was not, it would have then been necessary to perform breeding burrowing owl surveys during the spring and summer as outlined in CDFG (2012).

2.2.2. *Field Survey Methods*. For a total of approximately 25.5 hours, between 08:30 and 17:00 on 12/13/2018 and 10.5 hours, between 09:00 and 14:15 on 12/14/2018, Ed LaRue and Sharon Dougherty of CMBC and subcontractors, Jessyka Perry and Greg Winton, surveyed the site and action area as described herein. This entailed a survey of approximately 50 transects, spaced at 10-meter intervals and oriented in a north-south direction throughout the 50-acre± parcel. As depicted in Figure 2, six zone of influence transects were surveyed for detection of burrowing owls at 30-meter intervals east and west of the existing access road. Copies of CMBC's data sheet completed in the field and USFWS' (2017) pre-project survey data sheet are included in this report (see Appendix C).

As transects were surveyed, LaRue kept tallies of observable human disturbances encountered along each of the transects he surveyed. The results of this method provide *encounter rates* for observable human disturbances. For example, two roads observed on each of 10 transects would yield a tally of 20 roads (i.e., two roads encountered 10 times). Habitat quality, adjacent land uses, and this disturbance information are discussed below in Section 3.2 relative to the potential occurrence of Agassiz's desert tortoise and other special status species on and adjacent to the subject property.

Weather conditions as determined by a hand-held Kestrel® weather and wind speed meter and other pertinent summary data during the two survey days are given in Table 1.

Table 1. Summary Data for December 2018 Survey of Subject Property

Crew*	Date (2018)	Time begin to end (hours)	Temp, Wind, Cloud Cover (Beginning/Ending)
EL, SD, JP	12/13	08:30 to 17:00 = 25.5 hrs	44°F, calm, 10% 56°F, calm, 0%
EL, GW	12/14	09:00 to 14:15 = 10.5 hrs	41°F, 0 ↑ 2 mph, 100% 55°F, 0 ↑ 3 mph, 80%
4 biologists	**2 days**	**36 hours**	

*Crew member initials are as follows: EL = Ed LaRue, GW = Greg Winton, JP = Jessyka Perry, SD = Sharon Dougherty.

All plant and animal species identified during the survey were recorded in field notes and are listed in Appendices A and B, respectively. Garmin® hand-held, global positioning system (GPS) units were used to survey straight transects and record Universal Transverse Mercator (UTM) coordinates (North American Datum – NAD 83) for property boundaries, rare species locations, and other pertinent information (Appendix C). A digital camera was used to take representative photographs (Appendix D), with locations and directions of exhibits shown in Figure 6. ©2018Google™ Earth was accessed via the internet to provide recent aerial photographs of the subject property and surrounding areas (Figure 5).

3.0. Results

3.1. Common Biological Resources. The common plant and animal species identified during the survey are listed in Appendices A and B, respectively. Based on DeLorme Topo USA® 10.0 software, elevations on the subject property range from approximately 2,290 feet (698 meters) near the northwest corner down to 1,885 feet (574 meters) at the northeast corner. Terrain is relatively flat in several places along the southern boundary and northeastern portion of the site, and ranges from relatively steep slopes to the west and gently rolling hills through the middle. Soils are rocky to cobbly throughout with massive outcrops to the west and within the 1.0-acre± expansion area (e.g., "Proposed 2019 Mining Area" in Figure 5). Although there is a relatively large wash near the southeast corner (Figures 1, 2, and 5), no USGS-designated blueline streams occur on-site.

3.1.1. *Common Flora*. The 53 plant species identified during the survey, including 49 species onsite (within the 50 acres) and 4 species offsite, are listed in Appendix A. The prevalent plant community is Mojavean creosote bush scrub. Dominant species include creosote bush (*Larrea tridentata*), burrobush (*Ambrosia dumosa*), brittlebush (*Encelia farinosa*), cheesebush (*Ambrosia salsola*), and sweetbush (*Bebbia juncea*). Although a more detailed assessment with field measurements will likely be required for the revegetation plan, the approximate composition of these species includes about 75% creosote bush with the other four species about equally comprising the remaining 25% of the plants.

Somewhat less abundant perennials include Anderson's boxthorn (*Lycium andersonii*), Nevada joint-fir (*Ephedra nevadensis*), matchweed (*Gutierrezia sarothrae*), pygmy-cedar (*Peucephyllum schottii*), bush peppergrass (*Lepidium fremontii*), and common bedstraw (*Galium aparine*). Four species were found mostly or only in adjacent areas where a saltbush scrub community is prevalent east of the northern reaches of the access road. These species included allscale (*Atriplex polycarpa*), Torrey's sea-blight (*Suaeda moquinii*), Russian thistle (*Salsola tragus*), and salt grass (*Distichlis spicata*). Most annual species were not detectable at the time of the surveys, although about half of the species detected are annuals. Five of the 53 plant species (9.4%) are not native to California.

3.1.2. *Common Fauna*. The three reptile, four bird, and nine mammal species identified during the survey are listed in Appendix B. Side-blotched lizard (*Uta stansburiana*) was the only reptile observed and common chuckwalla (*Sauromalus obesus*) scats were observed near rocky outcrops. Other locally common reptile species that may occur include zebra-tailed lizard (*Callisaurus draconoides*), long-nosed leopard lizard (*Gambelia wislizenii*), desert horned lizard (*Phrynosoma platyrhinos*), desert night lizard (*Xantusia vigilis*), red racer (*Masticophis flagellum*), glossy snake (*Arizona elegans*), gopher snake (*Pituophis melanoleucus*), long-nosed snake (*Rhinocheilus lecontei*), and various rattlesnake species (*Crotalus* ssp.).

Common raven (*Corvus corax*) and rock wren (*Salpinctes obsoletus*) were both observed and may nest onsite (a rock wren nest was observed). A flock of Canada geese (*Branta canadensis*) flew over during surveys and phainopeplas (*Phainopepla nitens*) are eating mistletoe berries in honey mesquite bushes observed east of the access road.

Small mammals detected onsite included kangaroo rat (*Dipodomys* sp.) and desert wood rat (*Neotoma lepida*). A total of 41 wood rat middens was inspected for tortoise scats and carcass fragments. Medium-sized mammals included black-tailed hare (*Lepus californicus*) and Audubon cottontail (*Sylvilagus audubonii*), the latter of which appears to be more common east of the access road. Common predators included coyote (*Canis latrans*), kit fox (*Vulpes macrotis*), bobcat (*Lynx rufus*), and gray fox (*Urocyon cinereoargenteus*), for which scats were found in several places.

3.2. Uncommon Biological Resources.

3.2.1. *Agassiz's Desert Tortoise*. A significant paper was published in June 2011 (Murphy et al. 2011) whereby the "desert tortoise" of the Mojave Desert was split into two species, including *Gopherus agassizii*, referred to as "Agassiz's desert tortoise," and a newly described species, *G. morafkai*, referred to as "Morafka's desert tortoise," which occurs in the Sonoran Desert. According to Murphy et al. (2011), "…this action reduces the distribution of *G. agassizii* to only 30% of its former range. This reduction has important implications for the conservation and protection of *G. agassizii*, which may deserve a higher level of protection." Agassiz's desert tortoise is the threatened species that occurs in the region surrounding the subject property.

When tortoise sign is found, the County (2006) recommends that the following information be included in technical reports: (a) the number of individuals observed onsite and off-site during this survey; (b) an estimate of the total population present both on and off-site; and (c) exact locations of tortoise sign on a habitat map.

Positive evidence of Agassiz's desert tortoise found during this survey is mapped in Figure 3a and included two active subadult burrows, four older adult scats, one recent adult scat, and two carcasses of adult tortoises that died more than four years ago. The demarcation between adult and subadult tortoises is a length of approximately 180 mm, and both burrows were those of subadult tortoises, measuring 160 and 180 mm in width. The four older (e.g., less fresh) scats found on the north-central portion of the site and fresh scat near the northwest corner are too large to have been deposited by a subadult tortoise.

Given these observations and distribution of tortoise sign, CMBC judges that between two and three tortoises, including one or two adult tortoises and one subadult animal, occur on the northern portions of the site or just north thereof. There is suitable tortoise habitat throughout but tortoises are more likely to occur on northern portions of the site than within the proposed expansion area, much of which is vertical and therefore too steep to comprise suitable habitat. In CMBC's professional opinion, with a few implemented protective measures, it may be possible to mine the expansion area without any direct impacts to tortoises (see Section 4.1, below).

Encounter rates for observable human disturbances included (in descending order of prevalence) 26 shooting targets, 25 roads (two roads crossed 25 times), 14 skeet shooting targets, 10 shot gun shells, 6 mine pits/tailing piles (including the main pit), and 7 rifle shells. As shown in Figure 5, the main impacts are associated with the existing mine pit and spoil piles. These areas, in turn, have served as a focal point for recreational shooting, and there could be hunting of chukar and quail, although they were not observed during the survey, and other small game (e.g., cottontails).

In the region surrounding Barstow, including Helendale, Hinkley, Yermo, Daggett, and Newberry Springs, between 1990 and 2018 CMBC biologists and subcontractors have surveyed approximately 7,900 acres and 8.0 linear miles on 50 different sites. As depicted in Figure 4, four of these sites are located within approximately four miles of the subject property. Tortoise sign was found on all four sites located south of I-40 (green polygons in Figure 4), including the subject property and was not found on the one site located north of I-40 (red polygon in Figure 4).

With the publication of the BLM's (2016) Record of Decision, the Desert Renewable Energy Conservation Plan (DRECP) revised the 1980 California Desert Conservation Area Plan (CDCA Plan; BLM 1980) in significant ways for the conservation and recovery of desert tortoises in the California Deserts. Although desert tortoise critical habitat was not changed (USFWS 1994a), Desert Wildlife Management Areas (DWMAs; USFWS 1994b) and Multiple Use Classes on BLM lands were eliminated. In addition to critical habitat, the two main designated areas under the DRECP CDCA Plan amendment that provide for tortoise conservation and recovery are Areas of Critical Environmental Concern (ACECs) and California Desert National Conservation Lands (CDNCLs).

With regards to tortoises, the subject property is just within the eastern boundary of CDNCL-designated lands in the Pinto Lucerne Valley Eastern Slopes CDNCL subarea. As per the official DRECP website (www.drecp.org) and Appendix B, which depicts boundaries of management areas, the subject property is located just within the eastern boundary of the Ord-Rodman ACEC, which was established for desert tortoise conservation. The site is also found within the Ord-Rodman Critical Habitat Unit for desert tortoise (U.S. Fish and Wildlife Service 1994a), although that designation applies only to federal lands.

3.2.2. *Other Special Status Species*. U.S. Fish and Wildlife Service (2008), California Department of Fish and Wildlife [CDFW 2018a for California Natural Diversity Data Base; 2018b for Special Plant Species list; 2018c for Special Animal Species list; and California Native Plant Society (CNPS 2018)] maintain lists of animals and/or plants considered rare, threatened, or endangered, which are herein collectively referred to as "special status species." Special status species identified during the current survey included kit fox and Nelson's bighorn sheep. These and several other rare species reported from the area are discussed in the following sections.

Prairie falcon (*Falco mexicanus*) is designated as a Watch List species by CDFW (2018a) and a Bird of Conservation Concern by the USFWS (2008). Although not observed during the survey, prairie falcons have been reported in the region to the CNDDB (CDFW 2018a), which does not disclose the location of this species to protect nest sites. There is whitewash located in a small alcove within the expansion area on a near-vertical rock wall that suggests a raptor nest or perch site (Exhibit 4). There are numerous such sites within view of the subject property to the southwest and west, where the terrain is steeper and more rugged.

We consulted Dr. Larry LaPré who has studied golden eagles, prairie falcons, and other raptors in the immediate vicinity. He indicated in several emails that prairie falcon and golden eagle nests are common in the area, and that in the last few years a peregrine falcon, which is listed by the California Fish and Game Commission, has also nested in the area, approximately 1,700 feet west of the site, or 2,200 feet west of the whitewash found onsite. He indicated that "there has never been a falcon nest there [Subject Property], and the whitewash could be from an owl perch rather than a nest site [as] common barn owls are also known to nest in the area." CMBC recommends subsequent site visits in the March-to-May time frame to determine which species is present or if, indeed, the site is still active. Depending on the findings, the information would then be discussed with CDFW biologists to determine the best course of action.

Burrowing owl is one of the focal species specifically sought during field surveys. Diagnostic signs of this species include regurgitated pellets with small reptile and/or mammal bones, or those that are primarily composed of insect parts. There may also be distinctive feathers, zygodactyl (x-shaped) tracks, and whitewash, although fecal material deposited away from burrows may be from other bird species. Although pellets and feathers are sufficiently distinctive that they may be identified away from burrows, it is one or more of these signs at sufficiently large burrows that are the most definitive means of determining burrowing owl use of a given site.

In the case of the subject property, there was no evidence of burrowing owl. Much of the site is too rocky and steep to be suitable. Burrowing owls do not create their own burrows; rather they find existing burrows, which they may slightly modify in order to occupy. Typical existing burrows used by burrowing owls include abandoned kit fox dens, both active and inactive tortoise burrows, deeper badger digs, and inactive California ground squirrel burrows. That few such burrows were found onsite may be one of the reasons no burrowing owl sign was found.

Burrowing owls were not detected on any of the sites depicted in Figure 4. Based on the absence of sign and relative lack of suitable habitats, CMBC judges that burrowing owl is absent from the subject property, including the proposed expansion area.

Kit fox (*Vulpes macrotis*), as a fur-bearing mammal, is Fully Protected by CDFW (2018a). Kit fox is an uncommon to rare, permanent resident of arid regions of the southern half of the state, where they live in vegetation dominated by scattered brush, shrubs, and scrub. Kit foxes are typically absent from urbanizing portions of the desert; so its presence onsite is considered an indicator of relatively high habitat quality. No active or inactive kit fox dens were found in the action area or along peripheral transects. Several diagnostic scats were found along the road, so kit foxes do occur in the area.

Desert bighorn sheep (*Ovis canadensis nelsoni*) is designated as a BLM Sensitive species and a Fully Protected species by CDFW (2018a). Scat piles belonging to bighorn sheep were observed throughout the site; the 41 locations closer to the proposed expansion area are mapped in Figure 3a, and 34 additional piles were found farther away, which are not mapped. A young ram was also observed on the first day of the survey, on a ridge-top approximately a quarter mile north of the site. Also mapped in Figure 3a and shown in Exhibit 8, several sheep beds were observed and others undoubtedly occur. Given these observations, we know that bighorn sheep occur throughout the site.

3.3. Other Protected Biological Resources.

3.3.1. *Stream Courses*. Stream courses provide relatively important resources to animals and plants. In dry years, and particularly during prolonged drought, annual plants may only germinate in the vicinity of washes where the water table is relatively near the surface. Perennial shrubs adjacent to washes are often the only plants that produce flowers and fruit, which in turn are important to insects and the avian predators that feed on them. Shrubs also tend to be somewhat taller and denser alongside washes, which provides cover for medium and larger sized animals that may use them as travel corridors. Biodiversity is generally enhanced by washes, and there are often both annual and perennial plants that are either restricted to or mostly associated with wash margins. There are both anecdotal accounts and published literature on washes being important to tortoises, which use them as travel corridors and access to nearby annual forage.

Although there is a relatively large wash just southeast of the southeast corner of the 50-acre action area, there are no designated blueline streams within that area and certainly none that would be impacted by the proposed expansion. Therefore, no impacts are expected and no mitigation measures are recommended.

3.3.2. *Protected Plant Species*. At the County level, the San Bernardino County Development Code was revised and adopted on 12 April 2007. Chapter 88.01 Plant Protection and Management, Section 88.01.020 states, "The provisions of this Chapter apply to the removal and relocation of regulated trees or plants and to any encroachment (for example, grading) within the protected zone of a regulated tree or plant on all private land within the unincorporated areas of the County and on public lands owned by the County, unless otherwise specified..."

Section 88.01.060 Desert Native Plant Protection states, "This Section provides regulations for the removal or harvesting of specified desert native plants in order to preserve and protect the plants and to provide for the conservation and wise use of desert resources…"

Section 88.01.060(c) Regulated Desert Native Plants states, "The following desert native plants or any part of them, except the fruit, shall not be removed except under a Tree or Plant Removal Permit in compliance within Section 88.01.050 (Tree or Plant Removal Permits):

(1) The following desert native plants with stems two inches or greater in diameter or six feet or greater in height:
    (A) *Dalea spinosa* (smoke tree).
    (B) All species of the genus *Prosopis* (mesquites).
(2) All species of the family *Agavaceae* (century plants, nolinas, yuccas).
(3) Creosote Rings, 10 feet or greater in diameter.
(4) All Joshua trees.
(5) Any part of the following species, whether living or dead:
    (A) *Olneya tesota* (desert ironwood).
    (B) All species of the genus *Prosopis* (mesquites).
    (C) All species of the genus *Cercidium* (palo verdes)."

At the State level, the 1998 Food and Agricultural Code, Division 23: California Desert Native Plants, Chapter 3: Regulated Native Plants, Section 80073 states: The following native plants, or any parts thereof, may not be harvested except under a permit issued by the commissioner or the sheriff of the county in which the native plants are growing:

(a) All species of the family Agavaceae (century plants, nolinas, yuccas).
(b) All species of the family Cactaceae (cacti), except for the plants listed in subdivisions (b) and (c) of Section 80072 (i.e., saguaro and barrel cacti), which may be harvested under a permit obtained pursuant to that section.
(c) All species of the family Fouquieriaceae (ocotillo, candlewood).
(d) All species of the genus *Prosopis* (mesquites).
(e) All species of the genus *Cercidium* (palo verdes).
(f) *Senegalia (Acacia) greggii* (catclaw acacia).
(g) *Atriplex hymenelytra* (desert holly).
(h) *Dalea (Psorothamnus) spinosa* (smoke tree).
(i) *Olneya tesota* (desert ironwood), including both dead and live desert ironwood.

The current study was intended, in part, to serve as a baseline inventory of protected plants included in one or both of the above lists that were observed within the 50-acre action area. The locations are plotted in Figure 3b relative to the existing mine site and proposed expansion area. Protected plant species are shown in red font in Appendix A, and include catclaw acacia, smoke tree, honey mesquite, pencil cholla, beavertail cactus, cottontop cactus, hedgehog cactus, and Yaqui mammillaria. Several desert holly plants occur near the northern end of the access road and should be avoidable when the access road is graded, so long as it is not widened.

4.0. Conclusions and Recommendations

4.1. Impacts to Agassiz's Desert Tortoise and Proposed Mitigation. Based on the presence of the two active burrows and five scats, CMBC concludes that Agassiz's desert tortoise occurs or has recently occurred on the northern portions of the site. Although signs were not found throughout the site, the locations of the two carcasses, one at a higher elevation and one to the south, indicate that suitable habitat occurs throughout. No tortoise sign was found within the existing mine area, although there is potential for tortoises to hide beneath the rubble piles that occur. Tortoises are definitely absent from the steeper walls of the proposed expansion area.

In CMBC professional opinion, it should be possible to develop the site while avoiding impacts to tortoises. This would require fencing the active mine site with tortoise-proof fencing after performing clearance surveys to confirm that tortoises are absent and restricting all active mine activities to the fenced area. Additionally, mine personnel should be informed that tortoises occur in the area and that they should be watchful for tortoises crossing the access road while maintaining 15 mile per hour speed limits to and from the site.

According to USFWS (2017) pre-project survey protocol the results of this survey will remain valid for the period of one year, or until 14 December 2019, after which time, if the site has not been developed in the interim, another survey may be required to confirm the absence of tortoises on-site. Since tortoise sign was found onsite and tortoises are not likely to be eliminated within the next year, this report may serve as baseline information for a Habitat Conservation Plan and associated regulatory documents for more than one year if the agencies require formal incidental take permits. A site resurvey is only necessary to ascertain that tortoises are no longer present on the subject property. Subsequent surveys may be restricted to the impact area to ascertain that tortoises continue to be absent from that area.

Regardless of survey results and conclusions given herein, tortoises are protected by applicable State and federal laws, including the California Endangered Species Act and Federal Endangered Species Act, respectively. All activities likely to affect tortoises should cease and the County contacted to determine the next appropriate steps if a tortoise is found onsite at the time of initial site development.

Importantly, nothing given in this report, including recommended mitigation measures, is intended to authorize the incidental take of Agassiz's desert tortoises during site development. Such authorization must come from the appropriate regulatory agencies, including CDFW (i.e., authorization under section 2081 of the Fish and Game Code) and USFWS [i.e., authorization under section 10(a)(1)(B) of the Federal Endangered Species Act].

4.2. Impacts to Other Biological Resources and Proposed Mitigation.

4.2.1 *Other Special Status Species*. Based on the field survey and habitat assessment, CMBC concludes that other than desert tortoise Nelson's bighorn sheep is the only special status animal species that may be affected. Sheep are likely to be wary of mine activities and maintain a safe distance, so impacts are likely to be minimal and no specific mitigation measures are recommended.

With regards to whitewash, Proponent (Fred Johnson) indicated that blasting would occur over the relatively short period of seven to ten days with materials hauled away from the site thereafter. Initial activities would occur adjacent to the existing mine area disturbance, which is 150-to-200 feet south of the whitewash. CMBC recommends that a few site visits be performed in the March-to-May timeframe to ascertain which raptor is using this site, and to determine whether it is a nest site or a perch site. And, based on this information, determine with input from CDFW biologist(s) the appropriate course of action that would allow site development while minimizing or avoiding impacts to the affected species.

4.2.2. *Other Protected Biological Resources.*

4.2.2.a. Stream Courses. Given the absence of jurisdictional waters, no impacts are expected and no mitigation measures recommended.

4.2.2.b. Protected Plants. This report is intended to serve as a focused survey and general resource assessment to provide necessary baseline data but does not proposed a specific program to minimize and mitigate impacts to protected native desert plants. Additional pre-disturbance surveys are recommended to identify specific locations of protected plants to be avoided or salvaged in order to be in compliance with the California Native Plant Protection Act. Again, catclaw acacia, smoke tree, honey mesquite, desert holly, pencil cholla, beavertail cactus, cottontop cactus, hedgehog cactus, and Yaqui mammillaria are species found on-site or along the access road that may be subject to pertinent development codes.

4.2.2.c. Bird Nests. Sections 3503, 3503.5, and 3513 of the California Fish and Game Code prohibit take of all birds and their active nests, including raptors and other migratory nongame birds (As listed under the Migratory Bird Treaty Act). Typically, CDFW requires that vegetation not be removed from a project site between March 15 and September 15 to avoid impacts to nesting birds. If it is necessary to commence project construction between March 15 and September 15, a qualified biologist should survey all shrubs and structures within the project site for nesting birds, prior to project activities (including construction and/or site preparation).

Surveys should be conducted at the appropriate time of day during the breeding season, and surveys would end no more than three days prior to clearing. CDFW is typically notified in writing prior to the start of the surveys. Documentation of surveys and findings should be submitted to the CDFW within ten days of the last survey. If no nesting birds were observed project activities may begin. If an active bird nest is located, the plant in which it occurs should be left in place until the birds leave the nest. No construction is allowed near active bird nests of threatened or endangered species.

In addition to protecting miscellaneous passerine and other song bird nests, the potential for raptors to nest onsite is an important consideration. Given the uncertainty of the species occupying the site (i.e., it is most likely a barn owl, nests of which are still protected), it would be prudent to perform a few site visits in the March-to-May time frame to ascertain which species is present. Following those visits and depending on results, CMBC would contact CDFW for their recommendations prior to site disturbance.

5.0. Literature References

Beauchamp, R. 1986. *A Flora of San Diego County, California.* Sweetwater River Press. National City, CA.

California Department of Fish and Game (CDFG). 2009. Protocols for surveying and evaluating impacts to special status native plant populations and natural communities. California Natural Resources Agency, Department of Fish and Game, 24 November 2009. Sacramento, CA.

California Department of Fish and Game. 2012. Staff report on burrowing owl mitigation. 7 March 2012 memo replacing 1995 staff report, State of California Natural resources Agency, Department of Fish and Game. Sacramento, CA.

California Department of Fish and Wildlife (CDFW). 2018a. Electronic database of rare plant and animal species reported to the California Natural Diversity Database. Sacramento, CA.

California Department of Fish and Wildlife. 2018b. Special Vascular Plants, Bryophytes, and Lichens List. Plant species list published and periodically updated by California Natural Diversity Database. Dated January 2017. Sacramento, CA. 126 pp.

California Department of Fish and Wildlife, Natural Diversity Database. 2018c. Special Animals (914 Taxa). Animal species list published and updated by State of California, The Resources Agency, Department of Fish and Wildlife, Biogeographic Data Branch, California Natural Diversity Data Base. Dated April 2018. Sacramento, CA. 66 pp.

California Native Plant Society (CNPS), Rare Plant Program. 2018. Inventory of rare and endangered plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website http://www.rareplants.cnps.org.

Circle Mountain Biological Consultants. 1996a. Biological assessment for the proposed San Bernardino County landfill conveyance project. Unpublished report prepared by Ed LaRue on behalf of San Bernardino County Public Works Group, Planning Department and U.S. Bureau of Land Management concerning the Newberry Springs Transfer Station Site 1. Job #96-003. Wrightwood, CA.

Circle Mountain Biological Consultants. 1996b. Biological assessment for the proposed San Bernardino County landfill conveyance project. Unpublished report prepared by Ed LaRue on behalf of San Bernardino County Public Works Group, Planning Department and U.S. Bureau of Land Management concerning the Newberry Landfill. Job #96-003. Wrightwood, CA.

Circle Mountain Biological Consultants. 2005. Focused desert tortoise survey and general biological inventory on a 90-acre reclamation site, near the community of Newberry Springs, San Bernardino County, California. Unpublished report prepared by Sharon Dougherty for Sapphos Environmental, Inc. on behalf of Caltrans (Caltrans Contract No. 08A0997, Task Order 16). Job #05-029. Wrightwood, CA.

Circle Mountain Biological Consultants, Inc. 2007. Focused survey for desert tortoise and western burrowing owl and general biological resource assessment for a 40-acre± site (APN 0531-161-02) in the community of Newberry Springs, San Bernardino County, California. Unpublished report prepared by Ed LaRue on behalf of Petra Group, Inc. Job #07-004. Wrightwood, CA.

County of San Bernardino (County). 2004. Standards for assessing impacts to the desert tortoise and Mohave ground squirrel. Unpublished protocol provided by the County of San Bernardino, Public and Support Services Group, Land Use Services Department, Advance Planning Division, dated December 2004. San Bernardino, CA.

County of San Bernardino. 2006. Report protocol for biological assessment reports. Unpublished protocol provided by the County of San Bernardino, Public and Support Services Group, Land Use Services Department, Advance Planning Division, dated 31 August 2006. San Bernardino, CA.

eBird. 2018. eBird: An online database of bird distribution and abundance [web application]. Version 2. eBird, Ithaca, New York. Available: http://www.ebird.org

Hickman, J. Editor. 1993. *The Jepson Manual: Higher Plants of California.* University of California Press. Berkeley, CA.

Holland, R. 1986. Preliminary descriptions of the terrestrial natural communities of California. California Department of Fish and Game. Sacramento, CA.

Ingles, L. 1965. *Mammals of the Pacific States: California, Oregon, Washington.* Stanford University Press. Stanford, CA.

Jaeger, E. 1969. *Desert Wild Flowers.* Stanford University Press. Stanford, CA.

Munz, P. 1974. *A Flora of Southern California.* University of California Press. Berkeley, CA.

Murphy, R. W., K. H. Berry, T. Edwards, A. E. Leviton, A. Lathrop, and J. D. Riedle. 2011. The dazed and confused identity of Agassiz's desert tortoise, *Gopherus agassizii* (Testudines, Testudinidae) with the description of a new species, and its consequences for conservation. ZooKeys 113: 39–71.

Sawyer, J. and T. Keeler-Wolf. 1995. *A Manual of California Vegetation.* California Native Plant Society. Sacramento, CA.

Sibley, D. 2000. National Audubon Society, the Sibley Guide to Birds. First Edition. New York, N.Y.

Stebbins, R. 2003. *A Field Guide to Western Reptiles and Amphibians.* Third Edition. The Peterson Field Guide Series. Houghton Mifflin Company. New York, NY.

U.S. Bureau of Land Management (BLM). 2005. Final Environmental Impact Report and Statement for the West Mojave Plan, a Habitat Conservation Plan and California Desert Conservation Area Plan Amendment. Moreno Valley, CA.

U.S. Bureau of Land Management. 2006. Record of Decision: West Mojave Plan, Amendment to the California Desert Conservation Area Plan, dated March 2006. Sacramento, CA.

U.S. Bureau of Land Management. 2016. Record of Decision for the Land Use Plan Amendment to the California Desert Conservation Plan, Bishop Resource Management Plan, and Bakersfield Resource Management Plan for the Desert Renewable Energy Conservation Plan (DRECP). Dated September 2016. Sacramento, CA.

U.S. Fish and Wildlife Service (USFWS). 1992. Field survey protocol for any nonfederal action that may occur within the range of the desert tortoise. Ventura, CA.

U.S. Fish and Wildlife Service. 1994a. Endangered and threatened wildlife and plants; determination of critical habitat for the Mojave population of the desert tortoise. Federal Register 55(26):5820-5866. Washington, D.C.

U.S. Fish and Wildlife Service. 1994b. Desert Tortoise (Mojave Population) Recovery Plan. U.S. Fish and Wildlife Service, Portland, OR. Pp. 73, plus appendices.

U.S. Fish and Wildlife Service. 2008. Birds of Conservation Concern. Division of Migratory Bird Management. Arlington, VA.

U.S. Fish and Wildlife Service. 2017. Preparing for any action that may occur within the range of the Mojave desert tortoise (*Gopherus agassizii*). USFWS Desert Tortoise Recovery Office. Reno, NV.

Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White (Editors). 1990. California's Wildlife. Volume III. Mammals. California Statewide Wildlife Habitat Relationships System. State of California. The Resources Agency. Department of Fish and Game. Sacramento, California.

Appendix A. Plant Species Detected

The following plant species were identified on-site during the focus floral inventory described in this report. Protected plant species are highlighted in red and signified by "(PPS)" following the common names. The four species found only in adjacent areas are signified by "+."

GNETAE	GNETAE
Ephedraceae	**Joint-fir family**
Ephedra nevadensis	Nevada joint-fir
ANGIOSPERMAE: DICOTYLEDONES	DICOT FLOWERING PLANTS
Asclepiadaceae	**Milkweed family**
Funastrum cynanchoides var. *hartwegii*	Climbing milkweed
Asteraceae	**Sunflower family**
Ambrosia dumosa	Burrobush
Ambrosia salsola	Cheesebush
Bebbia juncea	Sweetbush
Chaenactis fremontii	Desert pincushion
Encelia farinosa	Brittlebush
Gutierrezia sarothrae	Matchweed
Perityle emoryi	Emory rock daisy
Peucephyllum schottii	Pigmy-cedar
Stephanomeria pauciflora	Desert milk aster
Boraginaceae	**Borage family**
Amsinckia tessellata	Fiddleneck
Brassicaceae	**Mustard family**
**Brassica tournefortii*	Saharan mustard
Caulanthus lasiophyllus (*Guillenia lasiophylla*)	California mustard
Descurainia pinnata	Tansy
**Descurainia sophia*	Flixweed
Lepidium fremontii	Bush peppergrass
Lepidium lasiocarpum	Sand peppergrass
Cactaceae	**Cactus family**
Cylindropuntia ramosissima	Pencil cholla (PPS)
Echinocactus polycephalus	Cottontop cactus (PPS)
Echinocereus engelmannii	Hedgehog cactus (PPS)
Mammillaria tetrancistra	Yaqui mammillaria (PPS)
Opuntia basilaris	Beavertail cactus (PPS)

Chenopodiaceae	**Goosefoot family**
+*Atriplex hymenelytra*	Desert holly (PPS)
Atriplex polycarpa	Allscale
+**Salsola tragus*	Russian thistle
+*Suaeda moquinii* (*nigra*)	Torrey's sea-blight
Cucurbitaceae	**Gourd family**
Cucurbita palmata	Coyote gourd
Fabaceae	**Pea family**
Prosopis glandulosa	Honey mesquite (PPS)
Senegalia (*Acacia*) *greggii*	Catclaw acacia (PPS)
Hydrophyllaceae	**Water-leaf family**
Pholistoma membranaceum	Sticky nama
Lamiaceae	**Mint family**
Sambucus nigra ssp. *caerulea* (*Salazaria mexicana)*	Paper-bag bush
Salvia columbariae	Chia
Loasaceae	**Stick-leaf family**
Mentzelia involucrata	Blazing star
Onagraceae	**Evening-primrose family**
Chylismia (*Camissonia*) *brevipes*	Yellow cups
Chylismia (*Camissonia*) *claviformis*	Brown-eyed primrose
Papaveraceae	**Poppy family**
Eschscholzia minutiflora	Little gold-poppy
Polemoniaceae	**Phlox family**
Eriastrum c.f. *sapphirinum*	Woolly star
Polygonaceae	**Buckwheat family**
Chorizanthe rigida	Rigid spineflower
Eriogonum deflexum	Desert skeleton weed
Eriogonum inflatum	Desert trumpet
Eriogonum nidularium	Whiskbroom
Eriogonum pusillum	Buckwheat
Nemacaulis denudata var. *gracilis*	Wooly-heads
Rubiaceae	**Madder family**
Galium aparine	Common bedstraw

Solanaceae	**Nightshade family**
Lycium andersonii	Anderson's box-thorn
Nicotiana obtusifolia	Desert tobacco
Viscaceae	**Mistletoe family**
Phorodendron californicum	Mesquite mistletoe
Zygophyllaceae	**Caltrop family**
Larrea tridentata	Creosote bush
ANGIOSPERMAE: MONOCOTYLEDONES	MONOCOT FLOWERING PLANTS
Poaceae	**Grass family**
Dasyochloa (*Erioneuron*) *pulchellum*	Low fluffgrass
+Distichlis spicata	Salt grass
Pleuraphis rigida	Big galleta
**Schismus* sp.	Split-grass

* - indicates a non-native (introduced) species.
c.f. - compares favorably to a given species when the actual species is unknown.

Some species may not have been detected because of the seasonal nature of their occurrence. Common names are taken from Beauchamp (1986), Hickman (1993), Jaeger (1969), and Munz (1974).

Appendix B. Animal Species Detected

The following animal species were detected during the general biological inventory described in this report. Special status animal species are highlighted in red and signified by "(SSA)" following the common names. Those only found in adjacent areas are signified by "+."

REPTILIA	REPTILES
Testudinidae	**Land tortoises**
Gopherus agassizii	Agassiz's desert tortoise (SSA)
Iguanidae	**Iguanids**
Sauromalus obesus	Common chuckwalla
Uta stansburiana	Common side-blotched lizard
AVES	BIRDS
Anatidae	**Ducks, geese and swans**
Branta canadensis	Canada goose
Corvidae	**Crows and jays**
Corvus corax	Common raven
Troglodytidae	**Wrens**
Salpinctes obsoletus	Rock wren
Ptilogonatidae	**Silky flycatchers**
+Phainopepla nitens	Phainopepla
MAMMALIA	MAMMALS
Leporidae	**Hares and rabbits**
Lepus californicus	Black-tailed hare
+Sylvilagus audubonii	Audubon cottontail
Heteromyidae	**Pocket mice**
Dipodomys sp.	Kangaroo rat
Cricetidae	**Rats and mice**
Neotoma lepida	Desert wood rat
Canidae	**Foxes, wolves and coyotes**
Canis latrans	Coyote
+Vulpes macrotis	Kit fox (SSA)
Urocyon cinereoargenteus	Gray fox

Felidae	**Cats**
Lynx rufus	Bobcat
Bovidae	**Sheep and goats**
Ovis canadensis	Desert bighorn sheep (SSA)

Nomenclature follows Stebbins, *A Field Guide to Western Reptiles and Amphibians* (2003), third edition; Sibley, National Audubon Society, the Sibley Guide to Birds (2000), first edition; and Ingles, Mammals of the Pacific States (1965), second edition.

Appendix C. Field Data Sheets Completed on 14 December 2018

The USFWS and County recommend that consultants include copies of the data collected in the field from which the results and conclusions given in their reports are derived. As such, below and on the following page are copies of the data sheets completed by Ed LaRue on 14 December 2018.

Date of survey: 13/14 Dec 2018 (day, month, year) Survey biologist(s): Ed LaRue, Shawn Dougherty, Jessyka Perry, Greg Winter

Site description: 30-acre action area south of Newberry Spring (project name and size; general location)

County: San Bernardino Quad: Newberry Spring Location: 530830/3851780 (NAD83) (UTM coordinates, lat-long, and/or TRS; map datum)

Transect #: Varied Transect length: Variable Type of survey: 100% pedestrian clearance of 30-acre action area (project area size to be surveyed; 100% coverage/probabilistic sampling)

GPS Start-point: 530830/3851280 (658) (easting, northing, elevation in meters) Start time: See am/pm

GPS End-point: 530330/3851280 (658) (easting, northing, elevation in meters) End time: Report am/pm

Start Temp: See °C Weather: Two days - see report

End Temp: Report °C

Live Tortoises

Detection number	GPS location Easting	Northing	Time	Tortoise location (*in burrow*: all of tortoise beneath plane of burrow opening, or *not in burrow*)	Approx MCL >160-mm? (*Yes, No or Unknown*)	Existing tag # and color, if present
1						
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting	Northing	Type of sign (*burrows, scats, carcass, etc*)	Description and comments
1	530480	3851312	Carcass	>4 year scute from large adult
2	530443	3851602	Carcass	>>4 yrs scattered adult carcass
3	530640	3851601	NTY Scat	Not this year adult
4	530609	3851693	Scat	" "
5	530673	3851712	Scat	" "
6	530563	3851737	Scat	" "
7	530476	3851728	Scat	This year fresh adult Scat
8	530615	3851736	Burrow	160mm x 1.0m deep x Good w/scat
9	530476	3851735	Burrow	180mm x 0.5m deep x Excellent

Page: ____ of ____

Date of survey: _____

Transect number: _____

JOB #/NAME	DATE	DRIVE TIME	MILES	FIELD TIME	SURVEYORS
Newberry Wine	12/13/18	TO 0600→ FROM 1730	18	BEGIN 0830 END 1700	E Lafon, S Pouyteaty, Jessica Perry

WEATHER CONDITIONS (Start/End)	UTM (NAD 83) (circle starting corner)			
TEMP: 44°F WIND X: Calm N S E W CLOUD: 10 %	NE→	NW→	(SE)→N	SW→
TEMP: 56°F WIND X: Calm N S E W CLOUD: 0 %	0830 / 1730	0380 / 1730	530830 / 3851280	0380 / 1280

	PERENNIAL PLANTS	ANNUAL PLANTS		BIRDS	HERP	MAM
(1)	LarTri	CamCla	EscMin	CORA	Chuck	KRAT
	BebJun	BriTrf	DesSap	ROWR	SBLA	W Rat
	AmbDum	DesPin	LepLas	BTSP		BTJR
	AmbSal	CrePul	EriNid			Bobcat
	EncAct	EriSa	Pho(Pen) Pek			BTHA
	LycAnd	CamBre	BreTou			Coyote
	NicObt	Nemeda	SchSp.			
420	PreFer	SalCol	MenTae	SNAIL shell		
430	KraSte	GuiLas	Che(Fre)			
	PeuSch	AmsTes				
	StePau	ChoRig				
	EphNev	PteEmo				
	GutSar	AnPus				
	SenCya	EriDef				
	LepFre	CurPal				
	AchSpe	TidOb				

Photographs

1	SE→	NW
2	NE→	SW
0578/1592	→	SW
0523/1536	RFA?	T
5	NW→	SE

OBSERVABLE HUMAN DISTURBANCES

	T#	East	North	OHV	Road	Dog	Dump	S Gun	Rifle	Target	Trash/PA	Scat
	2	0820	1280									
	5	0790	1730									
	8	0760	1280									
	11	0730	1730									
	14	0700	1280									
	17	0670	1730									
	20	0640	1730									
E edge of prt →	23	0610	1280									
	26	0580	1730								main	
	29	0550	1280								main	
missing actual grid	32	0520	1730/1520									
	35	0490	1560/1730		Outcrops							
	38	0460	1730/0460									
	41	0430	1595/1280									

0559/1510 0540/1549 0523/1522 Bed @ 0419/1713 T34 Tallied

BHSH ScatPile 0640/1503 0623/1347 0615/1500 0598/1560 0568/1484 0552/1448

~~T~~ ~~SA~~ ~~24~~ ~~0568/1749~~ T19 0476/1728

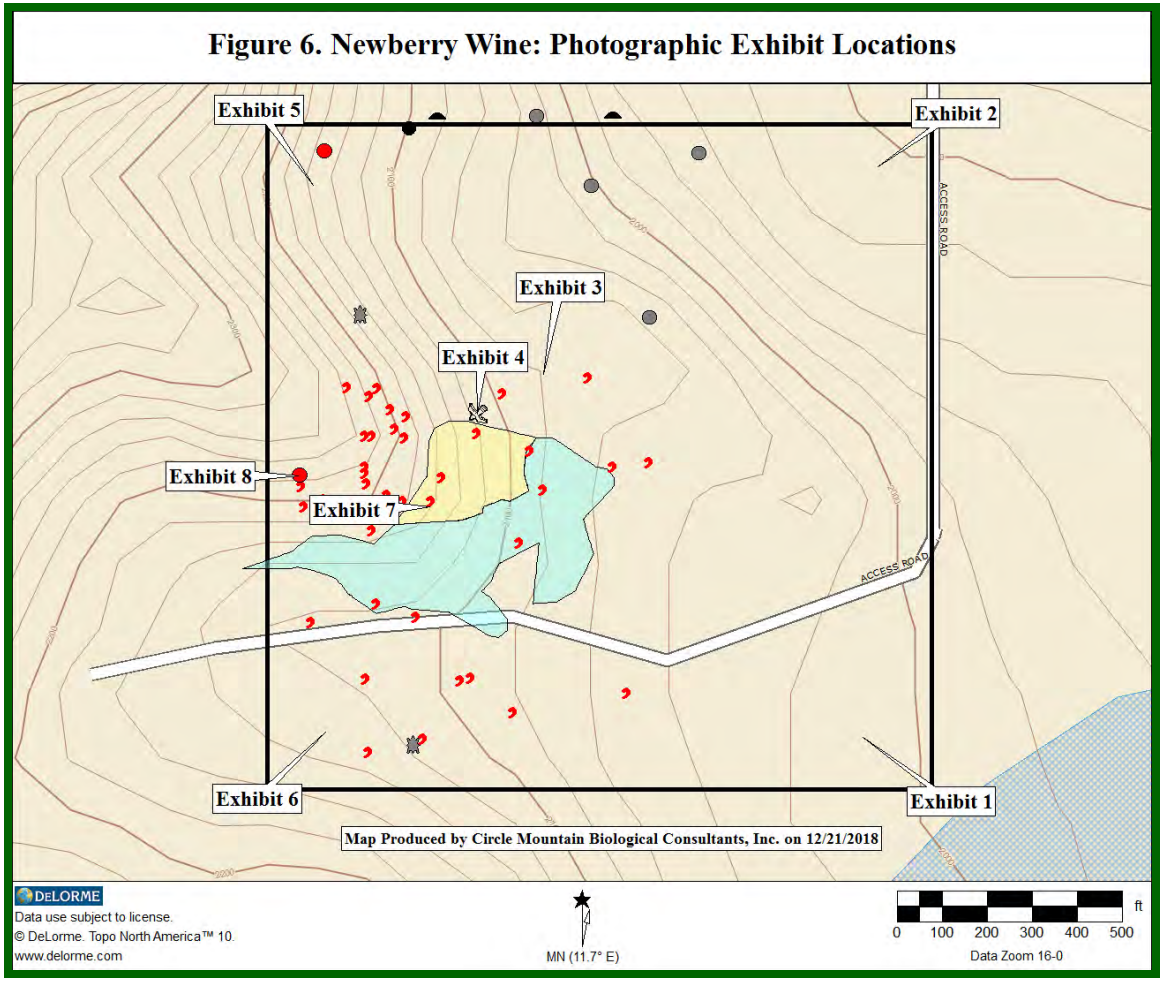
NT12 0673/1712 NT17 0640/1601 NT16 0600/1690 NT15 0563/1737

180 x 1.0 + x Good w/ NT11 0615/1736 180 x 0.5m x Exc 0496/1735

DT carcass 7 4y fragments 0443/1602

Appendix D. Photographic Exhibits

Figure 6. Newberry Wine: Photographic Exhibit Locations



Locations of the nine photographic exhibits on the next five pages are depicted in Figure 6.

Exhibit 1. View from the southeast corner of the 50-acre parcel, facing northwest (see Figure 6 for locations and directions of photographs).

Exhibit 2. View from the northeast corner of the parcel, facing southwest.

Exhibit 3. View from the north of the existing pit, facing south towards the pit.

Exhibit 4. View of raptor whitewash on rock wall within expansion area.

Exhibit 5. View from the northwest corner of the parcel, facing southeast.

Exhibit 6. View from the southwest corner of the parcel, facing northeast.

Exhibit 7. Overview of existing mine site, facing east.

Exhibit 8. Bighorn sheep beds found west of the existing mine site.

Exhibit 9. View from north end of the existing access road, facing south (not mapped in Figure 6).

APPENDIX E. Vegetation Analysis and Recommended Seed Mix

On 11 January 2019, Sharon Dougherty of CMBC and Sarah Teed, an independent contractor performed a brief vegetation analysis in the vicinity of the proposed mine site, with the intention of refining a seed mix for the 1-acre site.

Three line-intercept transects were completed to provide data on cover in herb and shrub canopy layers. Each transect was established by stretching a 50-m tape in a straight line and at each half meter point on the tape, a probe was extended downwards vertically. Plants in the herb and shrub layers that were touched by the probe were recorded for each of these 100 "points," to allow an estimate of total canopy cover and cover by species. The transects were established east of the 1-acre area planned for mining where terrain permitted and where conditions were considered representative of vegetation in the project area.

Perennial plant densities were estimated by establishing three 50-m by 2-m plots and tallying each perennial species that occurs within these plots. The plots were set up at the same locations as the linear transects described above. The center line of each density plot coincided with the linear transect, and the sample area was defined by a 1-meter measure extended to either side of the tape. The number of shrubs or trees will be determined by the convention of counting the stems emerging at ground level.

Photographs of habitat conditions were taken at each end of the transect using a digital camera. A Global Positioning System unit was used to identify the locations of transects, density plots, and photo points.

Table E.1 Percent cover

Transect	*Larrea tridentata*		*Encelia farinosa*		*Ambrosia dumosa*		Total
	Number "hits"	Percent of total	Number "hits"	Percent of total	Number "hits"	Percent of total	Percent cover
1	7.5	58%	10.5	42%	0	0%	18
2	6.5	72%	1	11%	1.5	17%	9
3	4	80%	1	20%	0	0	5
Mean	6.0	56.1%	4.2	39.3%	0.5	4.7%	10.7

Table E2. Shrub Densities

Transect	*Larrea tridentata*		*Encelia farinosa*		*Ambrosia dumosa*		Total
1	7	18%	31	82%	0	0%	38/100 m^2
2	13	62%	3	14%	5	24%	21/100 m^2
3	8	26%	11	36%	12	39%	31/100 m^2
Mean	9.3	31.0%	15.0	50%	5.7	19.0%	30/100 m^2

Plant diversity on the site is higher than indicated from these results. (See Appendix A for a complete plant species list.) No annual plants were represented in these results, due to limited sampling efforts and the timing of the work. However, since only perennials are to be included in the seed mix, the lack of annuals is not considered problematic.

Based on these findings, CMBC recommends a seed mix comprised of the above three species in the following proportions:

o *Larrea tridentata*	9 lbs. per acre
o *Encelia farinosa* (desert derived)	15 lbs. per acre
o *Ambrosia dumosa*	6 lbs. per acre
Total	30 lbs. per acre