FOCUSED DESERT TORTOISE SURVEY

R. HOVE FT. IRWIN PIT

CONDITIONAL USE PERMIT
P201100278
MINING CUP
AP20120011

SAN BERNARDINO COUNTY, CALIFORNIA
(USGS Lane Mountain, CA Quad. Township 12 North, Range 2 East, Section 16)

Owner/Applicant

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Project No: RCA#2013-66A

November 5, 2013

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EXECUTIVE SUMMARY

The project proponent is proposing to expand an existing mine located about 0.9-miles east of Ft. Irwin Road and Paradise Road intersection in Section 16, Township 12 North, Range 2 East in San Bernardino County. An existing mine is currently located in the northeastern portion of the site as shown on Figure 1. The total area surveyed for desert tortoises encompasses an area of about 28-acres (Figures 1 and 2). Vegetation within the 28-acre area has been disturbed by various past activities (Figure 3). Vegetation consisted of a desert scrub community dominated by creosote bush (*Larrea tridentata*), ephedra (*Ephedra nevadensis*), and burrobush (*Franseria dumosa*).

The property is located within the known distribution of the desert tortoise; therefore, focused surveys were performed for the species on October 17, 2013 from approximately 0730 to 1430 hours. Surveys were also conducted in the zone of influence, where possible, as per survey protocol. The tortoise survey was performed by Randall Arnold (Senior Biologist) and Ryan Mann (Senior Biologist) using the standard survey protocol for the species (i.e., 10-meter belt transects) as required by California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS).

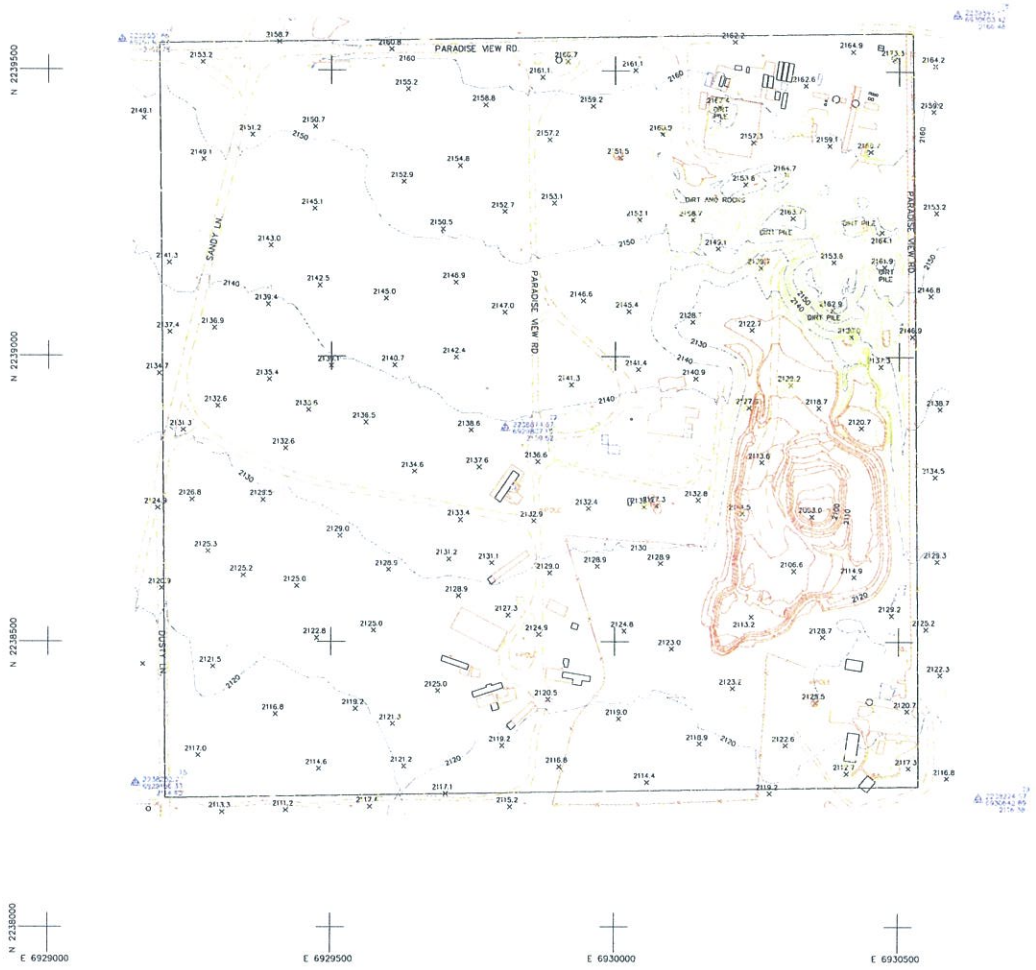
The site does not support prime suitable habitat for the desert tortoise based on past human activities; furthermore, no tortoises or tortoise sign (burrows, scats, carcasses, etc.) were observed on the site or in the zone of influence. The species has been documented in the region and tortoises were observed near the site in 2001 (Circle Mountain Biological Consultants, May 2001). Additional populations have been documented about one mile southwest of the site (CNDDB, 2013). There is a low probability that the species will move on to the site in the future; however, various measures specified in the Mining and Reclamation Plan (August 17, 2012) will be implemented which will prevent tortoises from moving onto the site.

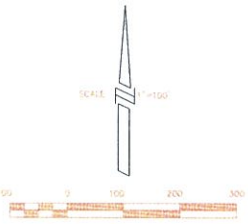
1.0 PROJECT AND PROPERTY DESCRIPTION

The property is about 40-acres in size and an existing mine is located in the northeast portion of the site; however, the proposed mine expansion will cover an area of approximately 28-acres south and west of the existing pit (Figures 1 and 2). Much of the 28-acre area shows some signs of past disturbance associated with installation of water lines, placement of existing mobile homes, and other activities (Figures 3 and 4). Various structures and buildings are located adjacent to the existing mine and various mobile homes, and other outbuildings are also located within the 28-acre area (Figure 4).

The parcel is located about 0.9-miles east of the intersection of Ft. Irwin Road and Paradise View Road in San Bernardino County (Township 12 North, Range 2 East, Section 16). Elevations of the site range from 2,120 and 2,160 feet (MSL). Soils have been disturbed in the past; however, they appear to be primarily sandy loam. No water resources were observed on the site and the USGS Paradise Range Quadrangle (1986) does not show any blueline channels on the site. No sensitive wildlife habitats, sensitive wildlife species, or wildlife corridors were associated with the site. Weather conditions during the October 17, 2013 survey consisted of winds of 0 to 5 mph, temperatures in the low 50's (AM) to low 80's (PM, °F) with clear skies.

The site is bordered on the north and east by lands managed by the U.S. Bureau of Land Management (BLM) and by vacant lands to the south and west (Figures 4). Single-family dwellings are also located at the southeast and southwest corners of the property (Figure 4). The site supports a desert scrub community typical of the area dominated by creosote bush (*Larrea tridentata*), ephedra (*Ephedra nevadensis*), and burrobush (*Franseria dumosa*). Annuals consisted of erodium (*Erodium texanum*), schismus (*Schismus barbatus*), buckwheat (*Eriogonum fasciculatum*) and brome grass (*Bromus* sp.). Section 4.0 provides a more detailed discussion of the biological resources. The site map is provided below (Figure 1), and the USGS quadrangle map is provided in Figure 2. Figure 3 provides photographs of the site.





COMPILED USING PHOTOGRAMMETRIC METHODS BY
[illegible]
2632 WALNUT AVENUE SUITE E
TUSTIN, CALIFORNIA 92780
(714) 832-2077

WORK ORDER 42562
DATE OF PHOTOGRAPHY 10/17/13
CONTOUR INTERVAL 2'

FIGURE 1

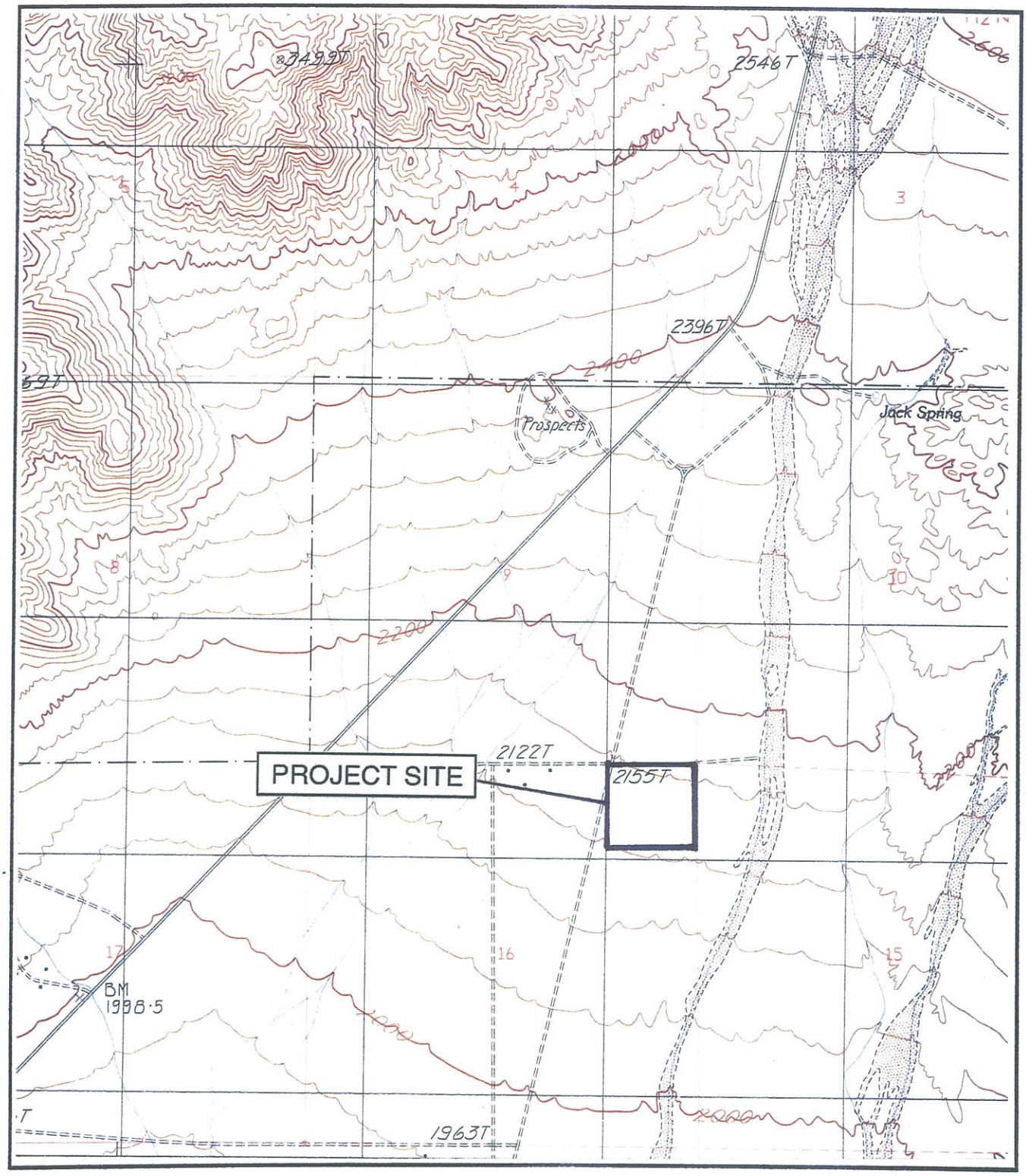
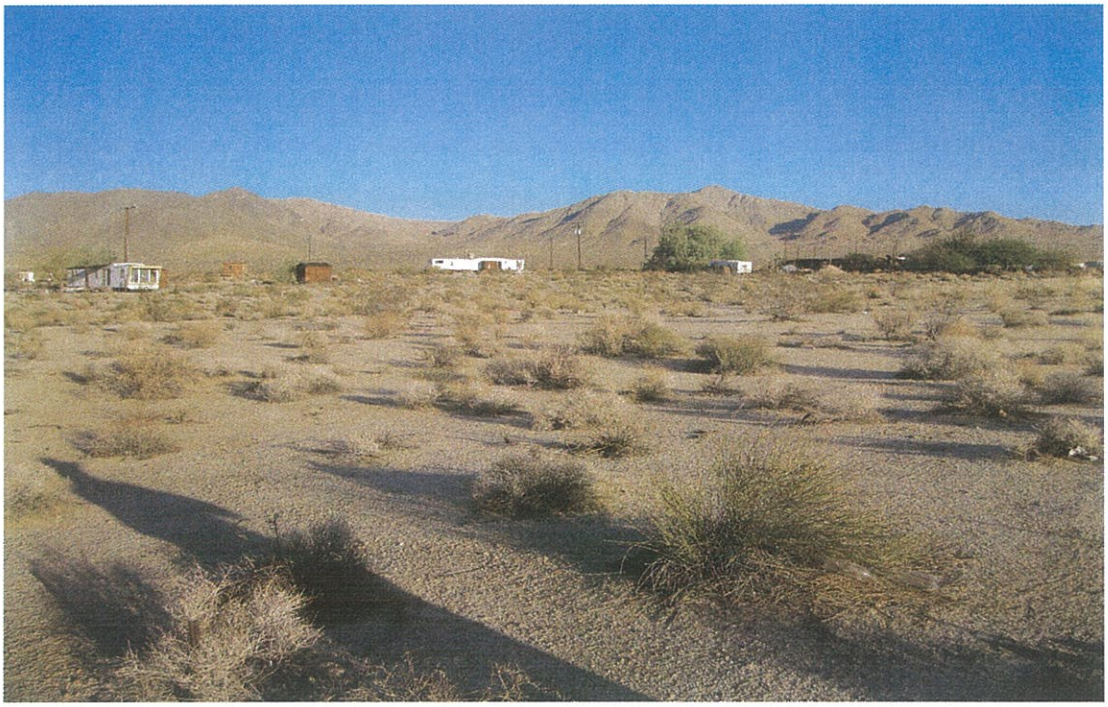


FIGURE 2
PROPERTY LOCATION
R. HOVE FT. IRWIN PIT
(Source: USGS Paradise Range, CA Quad., 1986)

NORTHEAST CORNER LOOKING SOUTHWEST



SOUTHEAST CORNER LOOKING NORTHWEST

FIGURE 3
SITE PHOTOGRAPHS
(R. HOVE FT. IRWIN PIT)

SOUTHWEST CORNER LOOKING NORTHEAST

NORTHWEST CORNER LOOKING SOUTHEAST

FIGURE 3, cont.
SITE PHOTOGRAPHS
(R. HOVE FT. IRWIN PIT)

2.0 LITERATURE AND RECORDS REVIEW - DESERT TORTOISE

As part of the environmental process, California Department of Fish and Wild (CDFW) and U.S. Fish and Wildlife Service (USFWS) data sources were reviewed prior to initiation of field surveys to determine if the tortoises have been documented on the site or in the area surrounding the property. Based on the literature review and evaluation of the CNDDB database for the Paradise Range quadrangle, it was determined that the site is located within the general distribution of the desert tortoise. Populations of desert tortoises have been identified within about one mile of the site according to CNDDB 2013). Other populations have been documented in several other locations within about six miles of the property CNDDB (2013). Tortoise population levels in the immediate area surrounding the site are low to moderate (BLM, 1990).

There are no USFWS designated critical habitats for the tortoise in the immediate area nor is there any proposed critical habitat in the area. The protocol survey results outlined in this report are valid for one year as per CDFW and USFWS requirements, and an additional survey may be required if the 12-month time limit is exceeded before mitigation measures are implemented as per the Mining and Reclamation Plan (August 17, 2012). No tortoises or tortoise sign (e.g., scats, burrows, etc.) were indentified during the October 17, 2013 surveys; however, regardless of the results of the tortoise survey, desert tortoises cannot be taken under State and Federal law. The survey report and any mitigation measures included do not constitute authorization for incidental take of the desert tortoise. If tortoises are observed during future site activities, all on-site activities should cease immediately and CDFW and USFWS should be contacted.

The desert tortoise is the largest reptile in the arid southwest United States, and it historically occupied a range that included a variety of desert communities in southeastern California, southern Nevada, western and southern Arizona, southwestern Utah, and through Sonora and northern Sinoloa, Mexico (Luckenbach, 1982). Today populations are largely fragmented and studies indicate a steady and dramatic decline over most of its former range (BLM, 1988). A highly contagious respiratory disease has infected tortoise populations over the last 20+ years, primarily in the western Mojave Desert region, which has had a very detrimental impact on population levels. Given the continued habitat loss and the rapid decline in numbers of tortoises brought about by the disease, the U.S. Fish and Wildlife Service exercised its emergency authority and determined tortoise populations north and west of the Colorado River to be an endangered species under the Endangered Species Act of 1973, as amended (USFES, 1989). The emergency rule was published in the Federal Register on August 4, 1989, and remained in effect until April 1, 1990. On April 2, 1990, the U.S. Fish and Wildlife Service officially listed the desert tortoise as a threatened species under the Endangered Species Act of 1973, as amended.

3.0 METHODOLOGY

The site was surveyed for desert tortoises by Randall Arnold and Ryan Mann on October 17, 2013 and as required by the CDFW and USFWS survey protocol, 10 meter, parallel belt transects were walked in a north-south direction until the property had been checked for tortoises and/or tortoise sign (burrows, tracks, scats, etc.). Surveys in the zone of influence (ZOI) were also conducted in the surrounding area, where possible, as per survey protocol. All transects were walked at a pace that allowed careful observations along the transect routes and in the immediate vicinity. Field notes were recorded regarding native plant assemblages, wildlife sign, and human affects in order to determine the presence or absence of suitable tortoise foraging habitat. Surveys were performed on the site and in the surrounding area from about 0730 to about 1430 hours.

USFWS and CDFW specify when surveys for tortoises can be conducted (i.e., April through May and September through October); therefore, surveys were performed on October 17, 2013. Comprehensive surveys combined with identification of the habitat on the site and in the surrounding area will provide data on the potential presence or absence of tortoises. Temperatures during the October survey were in the low 50's (AM) to low 80's (AM, °F) with wind speeds of about 0 to 5 mph (mainly from the north). Skies were clear during the survey and no precipitation was recorded during the survey.

Limitations:

(1) This report is valid for 12 months from the date of the survey as per CDFW and USFWS requirements. An updated report will be required if project activities do not occur within the next 12-month period as per CDFW and USFWS requirements.

(2) The results of this report do not constitute authorization for the "take" of the desert tortoise or any other listed or sensitive wildlife species. The authorization to impact the tortoise can only be granted by CDFW and USFWS. If desert tortoises are observed during future project activities, project activities should cease immediately and CDFW and USFWS should be contacted to discuss mitigation measures which may be required for the desert tortoise.

4.0 GENERAL BIOLOGICAL SURVEY RESULTS

The property has been disturbed by past activities, and currently supports a disturbed desert scrub community (Figure 4). Native shrubs noted during the field investigations included creosote bush (*Larrea tridentata*), ephedra (*Ephedra nevadensis*), and burobush (*Franseria dumosa*) (Figure 3). Other perennials observed included yellow-green matchweed shrubs (*Gutierrezia sarothrae*), Russian thistle (*Salsola tragus*), and buckwheat (*Eriogionum fasciculatum*). Annuals were composed primarily of erodium (*Erodium texanum*), schismus (*Schismus barbatus*), and bromus grass (*Bromus* sp.). Table 1 provides a compendium of plants observed on the property (Appendix A).

Only a few wildlife species were identified during the field investigations conducted on October 17, 20123 from 0730 to 1430 hours. Birds observed were limited to mourning doves (*Zenaida macroura*), ravens (*Corvus corax*), and song sparrow (*Melospiza melodia*). A few side-blotched lizards (*Uta stansburiana*) were observed and western whiptail lizards (*Cnemidophorus tigris*) are relatively common in the area and may occur on the property. Jackrabbits (*Lepus californicus*) were seen during the surveys and other mammals known to occur in the area include antelope ground squirrels (*Ammospermophilus leucurus*), desert cottontail rabbits (*Sylvilagus audubonii*), and Merriam's kangaroo rats (*Dipodomys merriami*). No wildlife corridors were identified on the site or in the immediate surrounding area, and no breeding activities were observed among any of the wildlife species observed. Table 2 (Appendix A) provides a compendium of wildlife species observed on the site and other species known to occur in the region.

FIGURE 4
BIOLOGICAL RESOURCES MAP
(R. HOVE FT. IRWIN PIT)

5.0 RESULTS – DESERT TORTOISE

The focused desert tortoise surveys conducted on October 17, 2013 did not identify any tortoises or tortoise sign (e.g., scats, burrows, tracks, etc.) within the boundaries of the property or in the ZOI. The site does occur within the known distribution of the species; although, much of the property has been disturbed over the last several decades by various human activities and is unlikely to support any tortoise populations in the future. The absence of tortoises or any tortoise sign on the site is a function of the disturbed habitat conditions on the property. As previously indicated, there are documented populations in the region; although, tortoises are not expected to migrate onto the site in the near future.

6.0 IMPACTS AND RECOMMENDATIONS

The proposed mining activities are not expected to have any direct or indirect impacts on tortoises or tortoise habitat based on the results of the October 17, 2013 survey. In addition, the project is not expected to disrupt any continuity of any important wildlife habitat or habitat/wildlife corridors. No additional investigations are recommended at this time; however, the survey results are only valid for 12-months, and CDFW, USFWS, and the County may require the site be re-surveyed for desert tortoise if the following mitigation measures (See Section 7.0) are not implemented in a timing fashion. In addition, if the site is modified by grading or otherwise disturbed prior to project approval, which results in the loss of desert tortoises, CDFW, USFWS, and the County Building and Safety Department should be notified. Such action prior to project approval may violate State and Federal endangered species laws and may be considered grounds for denial of the project. Mitigation and restoration plans may be required under such actions.

If tortoises are observed on the property during future activities, all on-site activities should cease immediately and CDFW and USFWS should be contacted to initiate consultations, and to discuss additional mitigation measures which may be required prior to continuation of on-site activities. CDFW and USFWS are the only agencies which can grant authorization for the "take" of the desert tortoise.

7.0 PROPOSED MITIGATION MEASURES

The site does not support tortoises at the present time and the proposed mining project is not expected to impact the species. However, a Mining and Reclamation Plan (August 17, 2012) has been approved by the County of San Bernardino which outlines various mitigation measures which should be implemented to prevent any potential impacts to the tortoise. These measures specified in the plan include the following:

1. Install a tortoise proof fence as per CDFW and USFWS requirements.

2. Conduct clearance level tortoise surveys within the boundaries of the fenced area once installation of the tortoise proof fence is completed.

3. Conduct a worker education class to inform employees about desert tortoises and ways to avoid impacting the species and its habitat.

4. Prepare a summary report for submittal to the County which summarizes: (a) monitoring activities associated with installation of the tortoise proof fence; (b) results of the clearance survey; and (c) results of worker education class. Copies of the report will be submitted to the County within 30-days of completion of the mitigation measures.

8.0 REFERENCES

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1990 California's Wildlife, Volumes 1, 2, and 3. Sacramento.

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May 2001. Biological Resource Inventory and Habitat Evaluation for Special Status on a 12.2 acre site near Fort Irwin, San Bernardino County, California. 12pp.

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San Bernardino County. August 17, 2012. Mining and Reclamation Plan (2001M-05): Prepared for Gordon Lint Mine, 91-36-0161. 15 pp.

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1989 The Desert Tortoise Emergency and Proposed Listing. Portland , OR.

U.S. Department of the Interior, Fish and Wildlife.

1989 Endangered and Threatened Wildlife and Plants; Desert Tortoise; Proposed Rule. Federal Register 50 CFR Part 17:42270-42278.

1990 Desert Tortoise Density Category Designation Maps. Maps obtained from Ray Bransfield, U.S.F.W.S. biologist, Laguna Niguel office, Laguna Niguel, CA.

TABLES

Desert Tortoise Populations in Surrounding Region (CNDDB 2013)

Table: Location of documented populations of desert tortoises in surrounding region within about six miles of the property according to data from the CNDDB (2013).

Species	Listing Status	Habitat Requirements	Presence/Absence On property.	Location of Populations.
Desert tortoise (*Gopherus agassizii*)	Fed: T State: T	Desert scrub	No tortoises or tortoise sign (Scats, burrows, etc.) were observed on the site or within the ZOI during 2013 surveys. (Note: Tortoises and tortoise sign were observed in 2001 by Circle Mountain Biological Consultants, May 2001.)	a. Occurrence #192. 1-mile southwest of property. b. Occurrence #215. 6-miles south of property. c. Occurrence #191. 3-miles northwest of property. d. Occurrence #217. 5-miles southeast of property.

FIGURES

Vicinity Map

VICINITY MAP

R. HOVE FT. IRWIN PIT
(Source: USGS Paradise Range, CA Quad., 1986)

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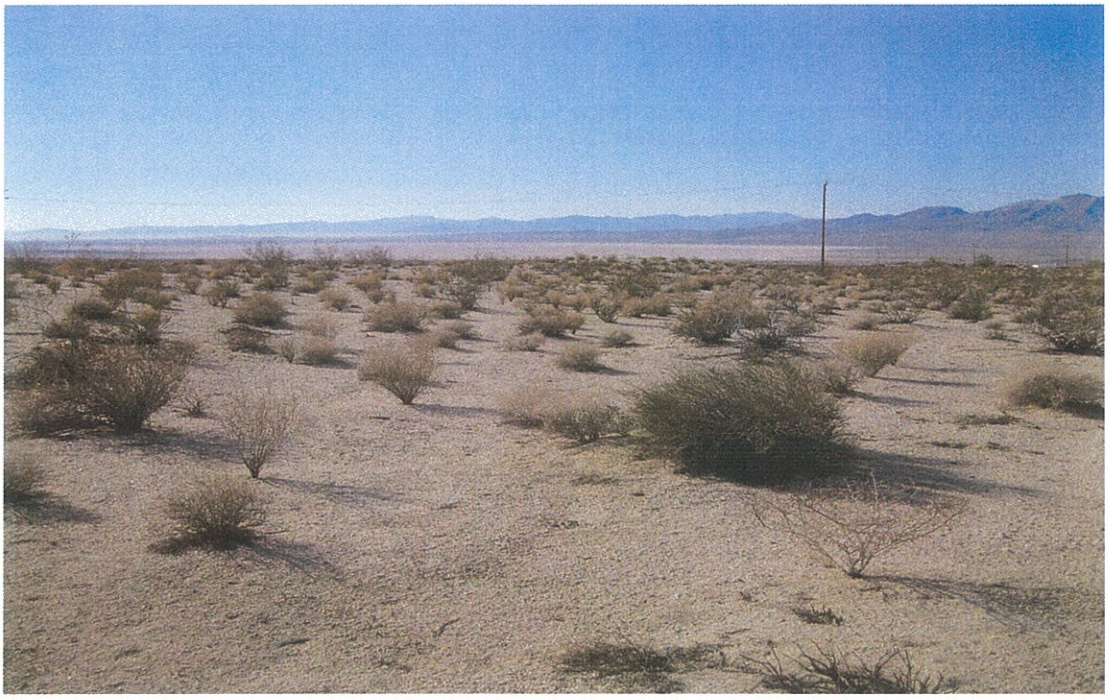
SITE PHOTOGRAPHS

CENTER OF SITE LOOKING EAST

CENTER OF SITE LOOKING NORTH

SITE PHOTOGRAPHS
(R. HOVE FT. IRWIN PIT)



CENTER OF SITE LOOKING SOUTH

CENTER OF SITE LOOKING WEST

SITE PHOTOGRAPHS
(R. HOVE FT. IRWIN PIT)

APPENDIX A

Flora and Fauna Compendia

Table 1 - Plants observed on the site and in zone of influence (ZOI).

Common Name	Scientific Name	Location
Erodium	*Erodium texanum*	On-site & ZOI.
Schismus	*Schismus barbatus*	"
Buckwheat	*E. fasciculatum*	"
Brome grass	*Bromus sp.*	"
Fiddleneck	*Amsinckia tessellate*	"
Rabbitbrush	*Chrysothamnus depressus*	"
Saltbush	*Atriplex canescens*	"
Creosote bush	*Larrea tridentate*	"
Yellow-matchweed	*Gutierrezia sarothrae*	"
Russian thistle	*Salsola tragus*	"
Ephedra	*Ephedra nevadensis*	"
Burrobush	*Franseria dumosa*	"
Deciduous trees & shrubs	*?*	Near mobile home dwellings.

Table 2 - Wildlife observed on the site and those species expected to occur in ZOI.

Common Name	Scientific Name	Location
Common raven	*Corvus corax*	Observed on-site
Song sparrow	*Melospiza melodia*	"
Morning dove	*Zenaida macroura*	"
Western kingbird	*Tyrannus verticalis*	Observed in ZOI
Western whiptail lizard	*Cnemidophorus tigris*	May occur on site
Side-blotched lizard	*Uta stansburiana*	Observed on-site and ZOI.
Antelope ground squirrel	*Ammospermophilus leucurus*	Known to occur in ZOI.
Desert spiny lizard	*Sceloporus magister*	"
California ground squirrel	*Spermophilus beecheyi*	"
Coyote	*Canis latrans*	"
Merriam's kangaroo rat	*Dipodomys mohavensis*	"

Note: The above Tables are not comprehensive lists of every plant or animal species which may occur in the area, but are a list of those common species which have been identified on the site or in the region by biologists from RCA Associates, LLC, or which are common species in the region.

CERTIFICATION FOR DESERT TORTOISE SURVEY

I hereby certify that the statements furnished above and in the 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. Fieldwork conducted for this assessment was performed by myself and biologists under my direction. I certify that I have not signed a non-disclosure or consultant confidentiality agreement with the project applicant or applicant's representative and that I have no financial interest in the project.

Date: 11-5-2013 Signed: _____
Report Author

Field Work Performed By: Randall Arnold
Senior Biologist

Field Work Performed By: Ryan Mann
Senior Biologist