

APPENDIX D: BIOLOGICAL SURVEY.



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June 26, 2009

Ms. Cynthia Parnow
Knight Piésold and Company
1580 Lincoln Street, Suite 1000
Denver, Colorado 80203

**Re: Biological Surveys
Paramount Project – Bodie Hills, California
JBR Project Number B.A08067.00**

Dear Ms. Parnow:

At the request of Knight Piésold and Company, JBR Environmental Consultants, Inc. (JBR) conducted neotropical migratory bird nesting surveys for eight proposed drill pad locations and their associated access roads. Additionally, JBR conducted biological surveys for the following species: pygmy rabbit (*Brachylagus idahoensis*), American pika (*Ochotona princeps*), Yosemite toad (*Bufo canorus*), and mountain yellow-legged frog (*Rana muscosa*). Sound monitoring equipment was also placed near the historic Paramount Mine to identify the presence of bats. This request came in preparation for permitting exploration of the above-mentioned sites. Figure 1 identifies the surveyed areas.

The project is located in the Bodie Hills approximately eight miles east of Bridgeport, California. The upland sites occur within the following two vegetative community types: Mountain big sagebrush (*Artemisia tridentata ssp. vaseyana*) community with antelope bitterbrush (*Purshia tridentata*), and low sagebrush (*Artemisia arbuscula*) community. The riparian sites are dominated by sedge (*Carex spp.*), Baltic rush (*Juncis balticus*), and quaking aspen (*Populus tremuloides*).

Josh Vittori, a biologist/ecologist with JBR, conducted the surveys on June 10 through 12, 2009. Conditions were warm and windy. A 500-foot radius around each proposed drill hole and a 150-foot corridor on each side of the access roads was surveyed. The surveys were conducted by traversing the area using 10-meter transect intervals and listening and watching for birds and/or their nests in the vicinity of the proposed area of disturbance. This included

examination of trees, shrubs, and grass clumps for ground and stick nests. If any birds were observed, their behavior was noted for indication of territory establishment or nest building. Proposed drill pads and access roads were assessed for American pika and pygmy rabbit even when habitat conditions were less than favorable. Burrows were assessed using known characteristics to determine which species was likely using the burrow. Specifically, burrows were assessed for the presence of droppings and dropping size, soil depth and composition, and burrow location. When American pika habitat was encountered, the area was observed for a period of 30 minutes. Surveys consisted of listening for calls and looking for grass piles, droppings, and urine stains. Methods described in Ulmschneider et. al. (2004) were used during the survey. A photograph of the surveyed habitat is included in Appendix A.

Amphibian surveys we conducted at spring locations identified as being within the project area. Surveys consisted of traversing each site using ten meter transects through all moist areas and especially areas that had surface water present. A net was used to dip into any deep running water as well as any pools. When rodent holes were present, they were surveyed for any amphibians seeking refuge within them.

Bat surveys were conducted near the historic Paramount Mine workings for two consecutive nights. An AnaBat II detector was placed near the mouth of the only two remaining open mine shafts identified to record bats using the area for hunting and especially roosting. The recorded calls were then sent to Michael O'Farrell, a well qualified mammalogist, to identify the species based on the recordings.

During the Neotropical migratory bird nesting surveys the following species were observed:

- golden crowned kinglet (*Regulus satrapa*);
- western meadowlark (*Sturnella neglecta*);
- horned lark (*Eremophila alpestris*);
- American robin (*Turdus migratorius*);
- Brewer's blackbird (*Euphagus cyanocephalus*);
- violet-green swallow (*Tachycineta thalassina*); and
- northern flicker (*Colaptes auratus*).

A total of seven nests were observed during surveying. Four of the observed nests (Nest-1, Nest-2, Nest-6, and Nest-7) were deemed pertinent to the proposed drill pad locations or their associated access roads. Three of these nests were determined to be inactive and the species that built/used them is unknown. One location, Nest-6, was active with one American robin hatchling and two remaining eggs present. Nest-6 is located approximately 300 feet above the Aurora Canyon road within the project study area. The only other active nest, Nest-3, is located in a quaking aspen tree near Seep F. A mating pair of violet-green swallows was observed entering and exiting this nest. Both Nest-4 and Nest-5 were in close proximity to Nest-3 but were determined to be inactive. Photographs of each nest are included in Appendix A. Figure 1 shows all pertinent nest locations. Typically, nesting surveys are valid for a period of two weeks from the date of the survey. Should the scheduled date of disturbance coincide with the

nesting seasons set forth by the Bureau of Land Management's Bishop Field Office, JBR recommends resurveying the area. Sage grouse (*Centrocercus urophasianus*) were also observed roosting within the survey area near the following drillholes: Paxix-1, Paxix-16, Paxix-26, Paxix-29, Paxix-33, and Paxix-36.

The remaining biological surveys proved to have negative findings with the exception of bats. No evidence of use by American pika was observed during the survey. The species was looked for in all other biological survey areas but the habitat conditions were only appropriate at the point identified in Figure 1 as "Pika Survey Location". Surveys for pygmy rabbits identified no evidence of use by this species within the survey area. Amphibian surveys of the spring/seep locations identified no evidence that either the Yosemite toad or the western yellow-legged frog are present within the riparian areas surveyed. The AnaBat equipment was able to capture a small amount of bat activity in the area. The long-eared myotis (*Myotis evotis*) was the only species recorded with only a low number of calls, indicating there is likely not a colony in the area.

Should you have questions or need any additional surveys, please contact me at (775) 738-8766.

Sincerely,

JBR ENVIRONMENTAL CONSULTANTS, INC.



Joshua Vittori
Biologist/Ecologist

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