



DIRECTOR AND SECRETARY
TO THE COMMISSION
Michael B. Sloane

STATE OF NEW MEXICO
DEPARTMENT OF GAME & FISH

One Wildlife Way, Santa Fe, NM 87507

Tel: (505) 476-8000 | Fax: (505) 476-8180

For information call: (888) 248-6866

www.wildlife.state.nm.us

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16 February 2024

Carmen Rose, Permit Lead
Mining Act Reclamation Program
Mining and Minerals Division (MMD)
1220 South St. Francis Drive
Santa Fe, NM 87505

RE: New Minimal Impact Exploration Permit Application, Sugarloaf Exploration Project, Grant County, New Mexico. Permit No. GR092EM; NMDGF Project No. NMERT-2891.

Dear Ms. Rose,

The New Mexico Department of Game and Fish (Department) has reviewed the above referenced exploration project submitted by Bonaventure Nevada, Inc. (Bonaventure). Bonaventure is proposing to drill 12 exploratory holes at 12 drill pad sites. Hole depths will be approximately 300 feet. The exploration project will be located in Sections 18 and 19 in Township 19S, Range 15W. The total area that will be disturbed by proposed activities is approximately 4.3 acres. Staff from the Department, MMD, New Mexico Environment Department, and Bonaventure conducted a site inspection on 13 February 2024.

The Department recommends that, to the maximum extent feasible, large mature trees are left undisturbed during road and drill pad construction. Tree species that should be left undisturbed include alligator juniper (*Juniperus deppeana*), piñon pine (*Pinus* spp.), and all species of oak (*Quercus* spp.).

In the permit application, it states that Bonaventure will use air drilling techniques for the bore holes. However, during the site inspection, when Department staff asked for more details about the drilling system, the Operator described a system that would utilize mud pits. The Department requests that Bonaventure clarify if they will be using air, mud/fluid, or a closed loop drilling system. The Department strongly recommends the use of a closed loop drilling system. Closed loop systems eliminate the need to build fences or install netting to exclude wildlife from mud pits, reduce the amount of surface disturbance associated with the drill pad site, and consume significantly less water. If Bonaventure ultimately uses mud pits, the Department recommends netting or covering fenced mud pits to exclude birds and bats. If netting is used, the Department recommends extruded plastic, knit, or woven netting with a mesh size of three eighths of an inch to exclude smaller animals. The Department does not support the use of monofilament netting due to its tendency to ensnare wildlife, usually resulting in injury or death. Netting material must be held taught over a rigid and adequately supportive frame to prevent sagging into the mud pits.

It is important to prevent wildlife from entering and becoming trapped in stockpiled pipes used in the drilling process. The Department recommends capping drill pipes as the most effective way to prevent wildlife entry. At a minimum, each section of pipe should be visually inspected prior to use to verify that no wildlife, including small mammals or reptiles, are inside.

To minimize the likelihood of adverse impacts to migratory bird nests, eggs, or nestlings during road and drill pad construction activities, the Department recommends that ground disturbance and vegetation removal activities be conducted outside of the primary breeding season. This breeding is 1 March – 1 September for migratory songbirds and most raptors; for golden eagle (*Aquila chrysaetos*) and great horned owl (*Bubo virginianus*) it is 1 January – 15 July. If ground disturbing and clearing activities must be conducted during the breeding season, the area should be surveyed for active nest sites (with birds or eggs present in the nesting territory) and avoid disturbing active nests until young have fledged. For active nests, establish adequate buffer zones to minimize disturbance to nesting birds. Buffer distances should be a minimum of 100 feet from songbird and raven nests; 0.25 miles from most raptor nests; and 0.5 miles for American goshawk (*Accipiter atricapillus*), golden eagle, peregrine falcon (*Falco peregrinus*), and prairie falcon (*Falco mexicanus*) nests. Active nest sites in trees or shrubs that must be removed should be mitigated by qualified biologists or wildlife rehabilitators. Department biologists are available to consult on nest site mitigation and can facilitate contact with qualified personnel.

Drill site #8 will require road development up a steep ravine and associated installation of adequate erosion control features. Access to drill site #11 will require substantial earthwork directly above an extremely steep highwall that was created by historic mining activity. The Department recommends that site #11 be moved to a safer location that avoids crossing above the highwall. Drill site #12 is located at the bottom of a drainage and should be moved to be at least 75 feet outside of the drainage area.

For site reclamation, Bonaventure proposes to use a specified U.S. Forest Service seed mix. The Department recommends that only native plant species are used and that the reclamation seed mix is designed to enhance local pollinator habitat. The Department also recommends that only certified weed-free seed be used to avoid inadvertently introducing non-native species to the reclamation site. Any alternate plant species, used to substitute for primary plant species that are unavailable at the time of reclamation, should also be native. When possible, the Department recommends using seeds that are sourced from the same region and habitat type as the reclamation site and suggests including seeds from a region that represents potential future climatic conditions at the site.

Thank you for the opportunity to review and comment on the proposed exploration project. If you have any questions, please contact Ron Kellermueller, Mining and Energy Habitat Specialist, at (505) 270-6612 or ronald.kellermueller@dgf.nm.gov.

Sincerely,

Matt Wunder, Ph.D.
Chief, Ecological and Environmental Planning Division
cc: USFWS NMES Field Office