

**United States Department of the Interior
Bureau of Land Management**

FINDING OF NO SIGNIFICANT IMPACT
Environmental Assessment DOI-BLM-UT-W020-2010-042-EA
March 1, 2011

**Drum Mountains and Whirlwind Valley
Geothermal Exploration Projects**

Location: T. 14 S., R. 12 W., sec. 1, 3-15, 17-31, 33-35;
T. 15 S., R. 12 W., sec. 3-9, 17, and 18;
T. 15 S., R. 11 W., sec. 4-7, 30, and 31;
T. 15 S., R. 12 W., sec. 1, 10-15, 22-27, 34, and 35;
T. 16 S., R. 11 W., sec. 4-9, 17, and 18;
T. 16 S., R. 12 W., sec. 1, 3, and 10-15.

Juab & Millard Counties, Utah

Applicant/Address: Ormat Nevada, Inc.
6225 Neil Road, Suite 300
Reno, NV 89511-1136

U.S. Department of the Interior
Bureau of Land Management
Fillmore Field Office
95 East 500 North
Fillmore, UT 84631
Phone: 435.743.3100
FAX: 435.743.3135



FINDING OF NO SIGNIFICANT IMPACT
Environmental Assessment
DOI-BLM-UT-W020-2010-042-EA
Drum Mountains and Whirlwind Valley
Geothermal Exploration Projects

INTRODUCTION:

The Bureau of Land Management (BLM) has conducted an environmental analysis (DOI-BLM-UT-W020-2010-042-EA) for a proposed action to address drilling of 27 geothermal temperature gradient, observation and/or production wells at the Drum Mountains and Whirlwind Valley lease areas; Juab and Millard Counties. The Drum Mountains lease area is located west of the Drum Mountains and east of the House Range in Swasey Bottom , T. 14 S., R. 12 W., sections 1, 3 - 15, 17 - 31, and 33 – 35; and T. 15 S., R. 12 W., sections 3 - 9, 17, and 18, Great Salt Lake Base and Meridian (GSLB&M). The Whirlwind Valley lease area is located west of the Little Drum Mountains and east of the House Range in Whirlwind Valley, T. 15 S., R. 11 W., sections 4, 5, 6, 7, 30, and 31; T. 15 S., R. 12 W., sections 1, 10 - 15, 22 - 27, 34, and 35; T. 16 S., R. 11 W., sections 4 - 9, 17, and 18; and T. 16 S., R. 12 W., sections 1, 3, and 10 - 15, GSLB&M. The project would involve construction of up to 40,300 feet of access road, 27 well pads, and 4 gravel source areas. The total maximum disturbance would be up to 153 acres. The underlying need for the proposal would be met while accomplishing the following objectives:

1. Authorize drilling of 27 temperature gradient, observation and/or production wells on BLM-administered lands within the BLM Fillmore Field Office.
2. Authorize the construction of access routes on BLM-administered lands within the BLM Fillmore Field Office.
3. Authorize up to 4 gravel pits on BLM-administered lands within the BLM Fillmore Field Office as source areas of gravel needed for the well pads and access roads.

The project area for the Drum Mountains and Whirlwind Valley Geothermal Exploration Projects is located within the Swasey Bottom of Whirlwind Valley to the west of the Drum and Little Drum Mountains. The main access is from the Weiss Highway (Sand Pass Road) to the south. The project area is within geothermal leases held by Ormat Technologies Inc. Environmental Assessment (EA) #DOI-BLM-UT-W020-2010-042-EA is attached. A no action alternative and proposed action were analyzed in the EA.

FINDING OF NO SIGNIFICANT IMPACT:

Based upon a review of the EA and the supporting documents, I have determined that the project is not a major federal action that will significantly affect the quality of the human environment, individually or cumulatively with other actions in the general area. No environmental effects meet the definition of significance in context or intensity as defined in 40 CFR 1508.27 and do not exceed those effects described in the House Range Resource Area Resource Management Plan Record of Decision Rangeland Program Summary (HRRA RMP). Therefore, an environmental impact statement is not needed.

This finding is based on the context and intensity of the project as described:

Context: The Drum Mountains and Whirlwind Valley Geothermal Exploration Projects are actions directly involving approximately 153 acres of BLM administered land that by itself does not have international, national, regional, or state-wide importance. The Whirlwind Valley is a largely uninhabited valley (basin) in the eastern portion of the Basin and Range Physiographic Province in western Utah, which is noted for numerous north-south oriented mountain ranges, separated by broad, flat valley floors. Air Quality; Invasive Species/Noxious Weeds; Livestock Grazing; Migratory Birds; Soils; Threatened, Endangered, Candidate or Special Status Animal Species; Water Resources, Water Quality (surface, drinking and ground); Vegetation (excluding USFWS designated species); and Visual Resources were identified for analysis of impacts in the EA.

Intensity: The following discussion is organized around the Ten Significance Criteria described in 40 CFR 1508.27 and incorporated into resources and issues considered (includes supplemental authorities Appendix 1 H-1790-1) and supplemental Instruction Memorandum, Acts, regulations and Executive Orders.

The following have been considered in evaluating intensity for this proposal:

- 1. Impacts may be both beneficial and adverse.** The proposed action could have potential impact to resources as described in the EA. Changes to the proposed action were incorporated to reduce impacts. None of the environmental effects discussed in detail in the EA are considered significant, nor do the effects exceed those described in the HRRR RMP.
- 2. The degree to which the selected alternative will affect public health or safety.** The proposed action is to drill geothermal temperature gradient, observation and/or production wells in the Drum Mountains and Whirlwind Valley. The EA outlines actions to be taken as part of the proposed action which would become Conditions of Approval (COA) as part of the approval of the Drum Mountains, UTU 88138, and Whirlwind Valley, UTU 88139, Notices of Intent (NOI) if the decision is to approve the NOIs. These COAs are established to mitigate impacts to public health and safety and the human environment; they would be included in all approvals associated with this proposal should they be processed in the future.
- 3. Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farm lands, wetlands, wilderness, wild and scenic rivers, or ecologically critical areas.** The following Resource Issues are not affected because they are not present in the project area: Areas of Critical Environmental Concern; Cultural Resources; Prime or Unique Farmlands; Fish Habitat; Native American Religious Concerns; Paleontology; Threatened, Endangered, Candidate or Special Status Plant Species; Wetlands/Riparian Zones; and Wild and Scenic Rivers. In addition, the following Resource Issues, although present, would not be affected by this proposed action for the reasons listed in Appendix A of the EA: Greenhouse Gas Emissions; Environmental Justice; Floodplains; Geology/Mineral Resources/ Energy Production; Lands/Access; Rangeland Health Standards; Recreation, Socio-economics; Wastes (hazardous or solid), Wilderness; Wildlife (excluding USFWS designated species); Woodland/Forestry; Wild Horses and Burros; Areas with Wilderness Characteristics; and Hydrologic Conditions. Eight Resource Issues were analyzed in detail in Chapter 4. None of these would be significantly impacted because changes to

the proposed action were incorporated to reduce impacts. None of the environmental effects discussed in detail in the EA are considered significant, nor do the effects exceed those described in the HERRA RMP.

4. **The degree to which the effects on the quality of the human environment are likely to be highly controversial.** There is no scientific controversy over the nature of the impacts.
5. **The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.** The project is not unique or unusual. The BLM has experience implementing similar actions in similar areas. The environmental effects to the human environment are fully analyzed in the EA. There are no predicted effects on the human environment that are considered to be highly uncertain or involve unique or unknown risks.
6. **The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.** The actions considered in the EA were considered by the interdisciplinary team within the context of past, present, and reasonably foreseeable future actions. Significant cumulative effects are not predicted. A complete analysis of the direct, indirect, and cumulative effects of the Proposed Action is described in Chapter 4 of the EA.
7. **Whether the action is related to other actions with individually insignificant but cumulatively significant impacts – which include connected actions regardless of land ownership.** The interdisciplinary team evaluated the possible actions in context of past, present and reasonably foreseeable actions. Significant cumulative effects are not predicted. A complete disclosure of the effects of the project is contained in Chapter 4 of the EA.
8. **The degree to which the action may adversely affect districts, sites, highways, structures, or other objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.** The project would not adversely affect districts, sites, highways, structures, or other objects listed in or eligible for listing in the National Register of Historic Places, nor would it cause loss or destruction of significant scientific, cultural, or historical resources. A Class I cultural inventory has been completed for the proposed action. Consultation with SHPO has been completed in accordance with Section 106 of the NHPA and they have concurred with a “no adverse effect” on historic properties.
9. **The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973, or the degree to which the action may adversely affect: 1) a proposed to be listed endangered or threatened species or its habitat, or 2) a species on BLM’s sensitive species list.** Mitigating measures to reduce impacts to wildlife and fisheries have been incorporated into the design of the action alternative. Although burrowing and short-eared owls are considered to be highly likely to occur within the project area, surveys of nesting migratory birds and raptors will be completed as needed and all species of migratory birds and raptors that are found during the surveys will be protected with appropriate buffer zones. A survey for sand-loving buckwheat will be

completed within the project area and occurrences of will be avoided. No known federally listed species under the Endangered Species Act are known to occur within or near the proposed action.

10. Whether the action threatens a violation of a federal, state, local, or tribal law, regulation or policy imposed for the protection of the environment, where non-federal requirements are consistent with federal requirements. The project does not violate any known federal, state, local or tribal law or requirement imposed for the protection of the environment. State, local, and tribal interests were given the opportunity to participate in the environmental analysis process. Furthermore, letters were sent to five Native American tribes concerning Native American Religious Concerns. Follow up phone calls were initiated with the tribes, and it was concluded and documented that no concerns were identified in this project. In addition, the project is consistent with applicable land management plans, policies, and programs.

Authorized Officer

Date