

## **Finding of No Significant Impact**

Glass Buttes Geothermal Exploration EA

DOI-BLM-OR-P040-2011-0021-EA

US Department of the Interior, Bureau of Land Management

Prineville Field Office and Burns District Office, Oregon

### **Introduction**

The Bureau of Land Management (BLM) has completed an Environmental Assessment (EA) entitled Glass Buttes Geothermal Exploration DOI-BLM-OR-P040-2011-0021-EA. This EA was completed in response to operations plans, drilling programs, and geothermal drilling permit applications submitted to the BLM by Ormat Nevada Inc. (“Proponent”) in September 2010. The BLM analyzed three alternatives in the EA including the proponent proposed action, briefly described below, one that responded to issues raised during scoping regarding sage-grouse and other wildlife, and a no action alternative.

Located approximately 70 miles southeast of Bend, Oregon and 50 miles northwest of Burns, Oregon, the proposed Projects would involve the maintenance and temporary construction of access roads, construction of two quarries, and drilling, testing, and monitoring of up to 13 geothermal exploratory wells on public lands administered by the Bureau of Land Management (BLM) and up to 3 geothermal exploratory wells on private lands located near Glass Buttes, Oregon. The objective of the proposed Projects is to evaluate the potential for the geothermal resources in the Glass Buttes area.

The Council on Environmental Quality (CEQ) regulations state that the significance of impacts must be determined in terms of both context and intensity (40 CFR 1508.27).

### **Context**

Given that the physical effects of the projects would be limited to the local geographic area, many of the design features of the projects are common to both action alternatives, and the Habitat Mitigation Plan includes direction on improving at least twice as much sage-grouse habitat as the projects would disturb, I find that the EA has not identified any direct, indirect, or cumulative effects of sufficient size or duration to be significant at the local, regional, or national level.

## Intensity

I have considered the potential intensity and severity of the impacts anticipated from implementation of a Decision on this EA relative to each of the ten areas suggested for consideration by the CEQ. With regard to each:

**1. Would any of the alternatives have significant beneficial or adverse impacts (40 CFR 1508.27(b)(1)? No.**

**Rationale:** The action alternatives would impact resources as described in Chapter 3 and Appendix A of the EA. Impacts identified in the EA include possible impacts to recreation (EA, p. 3-6), biological resources (EA, p. 3-17), visual resources (EA, p. 3-37), cultural resources and traditional practices (EA, p. 3-48), wilderness characteristics (EA, p. 3-50), public safety (EA, p. 3-51), wetlands (EA, p. 3-52), biological soil crust (A-3), and groundwater and water rights (EA, p.3-55). The design features of the projects were incorporated in the design of the action alternatives to reduce potential adverse impacts to these resources and to ensure that the effects do not rise to a level considered significant. None of the environmental effects analyzed and discussed in detail in the EA are considered significant due to the design features of the projects.

**2. Would any of the alternatives have significant adverse impacts on public health and safety (40 CFR 1508.27(b)(2)? No.**

**Rationale:** The EA identifies two potential impacts that the proposed projects could have on public health and safety – release of solids and natural gas during drilling and remaining in the reserve pits after liquids were evaporated (EA, p. 3-51). With respect to the release of natural gas, the Hazardous Gas Contingency Plan (EA, p. 2-41), which includes Lower Explosion Limit monitoring, minimizes the risk to worker safety from the presence of natural gas. Solids remaining in reserve pits, which typically consist of non-hazardous, non-toxic drilling mud and rock cuttings, would be sampled for pH, metals, and total petroleum hydrocarbons for confirmation of non-toxicity and non-hazardousness. The non-hazardous solids would then be mixed with the excavated rock and soil and buried by backfilling the reserve pit. If the material is determined to be hazardous per The Gold Book, then the material would be removed from the site with post-removal site testing to confirm that all hazardous material was removed. Therefore, the risk of the projects exposing the public to any hazardous and/or toxic chemicals would be minimal.

**3. Would any of the alternatives have significant adverse impacts on unique geographic characteristics (cultural or historic resources, park lands, prime and unique farmlands, wetlands, wild and scenic rivers, designated wilderness or wilderness study areas, or ecologically critical areas (ACECs, RNAs, significant caves)) (40 CFR 1508.27(b)(3)? No.**

**Rationale:** There are no park lands, prime and unique farmlands, wild and scenic rivers, designated wilderness or wilderness study areas or ecologically critical areas that would be affected directly or indirectly from the proposed projects. There are wetlands identified in the National Wetland Inventory in Ormat's leased areas, but these wetlands are located in areas that would not experience disturbance from projects activities.

The projects are designed to avoid disturbance to all cultural resources eligible or potentially eligible and those currently unevaluated for listing the National Register of Historic Properties (EA, p. 3-48). Additionally, any new discoveries of cultural resources would temporarily stop activities related to the projects and a cultural resources specialist would be contacted. The projects would resume upon completion of assessment and coordination.

The projects would not limit Indian tribal members' access to the projects area and would not physically prevent tribes from practicing their traditional activities. Through multiple Consultation discussions (which included person to person meetings, phone calls, email exchanges, and field trips with the Klamath Tribes and the Confederated Tribes of the Warm Springs council members and staff to the projects area) the BLM has been informed by Tribal staff that the proposed Projects, even though they would occupy only a very small portion of the overall Glass Buttes area, would destroy "sacred and holy" areas; however, the tribes have not demonstrated how the Projects would do so. The tribes have not provided the BLM with a method to quantify or mitigate effects of the Projects to sacred and holy areas. The tribes have also not shown that the Projects would coerce tribal members to act contrary to their religious beliefs. Therefore, the BLM cannot find that there would be significant effects to historic structures or cultural resources as a result of the projects, and thus concludes that there are no significant effects to historic structures or cultural resources as a result of the projects.

**4. Would any of the alternatives have highly controversial effects (40 CFR 1508.27(b)(4)? No.**

**Rationale:** Geothermal exploration drilling, temporary road construction, road improvements, quarry operation, and water well drilling are activities whose effects have been well documented and studied. A full suite of BLM and contract specialists (EA, p. 5-1) with expertise and knowledge on all of the proposed activities provided input on the analysis of effects (EA, Chapter 3) and have not identified any anticipated effects from the proposed activities that are undocumented and/or unstudied, thus the projects would not have highly controversial effects.

**5. Would any of the alternatives have highly uncertain effects or involve unique or unknown risks (40 CFR 1508.27(b)(5)? No.**

**Rationale:** There are no parts of these projects that involve any new technology or that would use existing technology in a manner that it has not already been used. Due to this, there are no uncertain effects or unique or unknown risks associated with these projects.

**6. Would any of the alternatives establish a precedent for future actions with significant impacts (40 CFR 1508.27(b)(6)? No.**

**Rationale:** No alternative would establish a precedent for future actions. Any further proposals for geothermal exploration and/or development would be analyzed as a completely separate action in a new environmental analysis.

**7. Are any of the alternatives related to other actions with potentially significant cumulative impacts (40 CFR 1508.27(b)(7)? No.**

**Rationale:** The BLM evaluated the proposed projects in the context of past, present, and reasonably foreseeable future actions within the defined geographic scope for the proposed projects (EA Section 3.12).

**8. Would any of the alternatives have significant adverse impacts on scientific, cultural, or historic resources, including those listed or eligible for listing on the National Register of Historic Resources (40 CFR 1508.27(b)(8)?**

**Rationale:** The projects are designed to avoid disturbance to all cultural resources eligible or potentially eligible and those currently unevaluated for listing the National Register of Historic Properties (EA, p. 3-48). Additionally, any new discoveries of cultural resources would temporarily stop activities related to the projects and a cultural resources specialist would be contacted. The projects would resume upon completion of assessment and coordination.

**9. Would any of the alternatives have significant adverse impacts on threatened or endangered species or their critical habitat (40 CFR 1508.27(b)(9)?**

**Rationale:** No listed fish, animal, or plant species or their critical habitat occurs within the range of direct or indirect effects of the projects.

**10. Would any of the alternatives have effects that threaten to violate Federal, State, or local law or requirements imposed for the protection of the environment (40 CFR 1508.27(b)(10)? No.**

**Rationale:** The projects would follow all of the laws and requirements specifically listed in the EA (EA Section 1.5.3) as well as any other Federal, State, or local law or requirement imposed for the protection of the environment.

## **Finding**

On the basis of the information contained in the EA, the consideration of intensity factors described above, all other information available to me, it is my determination that: (1) implementation of the alternatives would not have significant environmental impacts beyond those already addressed in the Brothers/La Pine and Three Rivers Resource Management Plan EISs; (2) the alternatives are in conformance with the Brothers/La Pine and Three Rivers Resource Management Plans; and (3) neither alternative would constitute a major federal

action having a significant effect on the human environment. Therefore, an EIS or a supplement to the existing EIS is not necessary and will not be prepared.

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Carol Benkosky  
District Manager, Prineville District

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Date

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Brendan Cain  
District Manager, Burns District

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Date