

**UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
NEVADA STATE OFFICE**

FINDING OF NO SIGNIFICANT IMPACT

Gerlach Geothermal Exploration Project for Resource Confirmation

DOI-BLM-NV-W030-2022-0001-EA

Based on the analysis of potential environmental impacts contained in the environmental assessment (EA) documents and considering the significance criteria in 40 Code of Federal Regulations (CFR) 1508.27, I have determined that the action does not constitute a major federal action having a significant effect on the human environment. An environmental impact statement is, therefore, not required.

RATIONALE:

Context: ORNI 26, LLC, a subsidiary of Ormat Nevada, Inc. (hereinafter collectively referred to as Ormat), is proposing the Gerlach Geothermal Exploration Project for Resource Confirmation (Proposed Action). The project is within an area of interest in Washoe County about one mile west of Gerlach, NV on lands administered by the Bureau of Land Management (BLM), Winnemucca District Office, Black Rock Field Office (BRFO).

The proposed action includes the construction of up to 19 geothermal wells, access roads, an aggregate pit, and temporary ancillary facilities within a project area that encompasses approximately 2,724 acres, for the purpose of geothermal resource confirmation activities. Data collected during the life of the project will be used to determine the parameters and capabilities of the geothermal resource located within the Gerlach Geothermal Unit, NVNV105376888 (Legacy serial number NVN088151X, unitized April 29, 2011), which includes leases NVNV105522415 (Legacy serial number NVN055718, issued 1992), and NVNV105441665 (Legacy serial number NVN075528, issued 2001), and the unincorporated leases NVNV105723448 (legacy serial number NVN098640, issued 2019), NVNV105724214 (legacy serial number NVN098641, issued 2019), and NVNV105517566 (Legacy serial number NVN100029, issued 2020), all held by Ormat. The leased area totals 5,704 acres of BRFO-administered public lands and private lands surrounding the town of Gerlach in Washoe County, Nevada, in all or portions of Sections 3, 4, 9, 10, and 13-21, Township 32 North, Range 23 East, and in all or portions of Sections 25, and 31-36, Township 33 North, Range 23 East, Mount Diablo Baseline and Meridian. Proposed temporary surface disturbance is 49.3 acres, and the proposed surface disturbance after reclamation is 29.4 acres. All proposed facilities are located on public lands managed by BLM. Ormat holds a lease with split estate minerals (lease NVNV105522415 within unit NVNV105376888), the surface is privately owned, and the mineral rights are held by the federal government. The geothermal lease gives Ormat rights to the fluid minerals, however no surface disturbance activities will take place on these privately owned lands.

The BLM's purpose for the federal action is to respond to Ormat's application to confirm geothermal energy resources on public lands surrounding the town of Gerlach, NV through the construction, data collection and monitoring of the target geothermal resource.

The need for the action is established by the BLM's responsibility under the Mineral Leasing Act of 1920 et al., the Geothermal Steam Act of 1970 et al., Secretarial Order 3285 (Renewable Energy Development by the Department of the Interior), the implementing regulations provided under 43 CFR 3200, and Section 302 (b) in the Federal Land Policy and Management Act of 1976.

Intensity: The intensity of effects was considered in terms of the following:

1. Impacts that may be both beneficial and adverse: Based on the issue-based analysis presented in the EA, no significant impacts were identified—either specific to the project or cumulatively when combined with the reasonably foreseeable future actions. The BLM has considered both beneficial and adverse impacts of geothermal resource confirmation activities in the project area vicinity. Interested parties have expressed concerns related to the potential impacts on nearby hydrologic resources, especially hot springs and groundwater. They have also expressed concerns about potential impacts on noise, night skies, cultural resources, socioeconomics, environmental justice, and recreation.

In addition to the issues identified through public input, potential impacts on greenhouse gas emissions, mineral interests, lands with wilderness characteristics, migratory birds, soils, vegetation, and wildlife, were identified through analysis and consultation. Mitigation measures have been developed to reduce or offset potential adverse impacts and minimize overall impacts.

2. Public health and safety: There will be no significant effects on public health and safety. Public health and safety were not identified as an issue during the scoping process. Two potential affects for project workers were identified through analysis: exposure to the fungus *Coccidioides* which is known to live in soils in the Black Rock Desert playa, and exposure to H₂S. It was determined that the temporary nature of potential exposure to the fungus would limit the overall risk. The H₂S concentrations are anticipated to be lower than the threshold requiring abatement; nevertheless, Ormat has prepared a H₂S contingency plan that, when implemented, would reduce risk of exposure. There are no specific issues related to the safety and welfare of the public. The proposed well locations, have very low negative impacts to the health and safety of the public.

3. Unique characteristics of the geographic area: There will be no significant effects on unique characteristics of the area. The closest wilderness area is approximately 15 miles away, wilderness study areas are approximately 2 miles away and the NCA boundary is approximately 4 miles from the project. There are wetlands and lands with wilderness characteristics located near the project. Ormat has committed to environmental protection measures and the EA outlines BLM-required stipulations to reduce potential affects to these areas.

4. Degree to which effects are likely to be highly controversial: The effects on the quality of the human environment are not likely to be highly controversial. The effect on the quality of the human environment from confirmation of geothermal fluid resources is well known and documented in northern Nevada and specifically within the jurisdiction of the Black Rock Field Office. Effects of the Proposed Action are expected to be generally consistent with those of

comparable projects in other states with similar settings. Public concerns were raised regarding conflicts with special recreation events on the NCA and effects on recreational use of the surrounding area due to visual and noise intrusions and access issues. The analysis determined that effects were not unique for the area and were of a temporary nature. Further, when creating the NCA, Congress made it explicit that the NCA was not to be buffered.

5. Degree to which effects are highly uncertain or involve unique or unknown risks: The Proposed Action is not unique or unusual. The confirmation of geothermal resources for the production of electricity is specifically regulated and follows accepted standard operating procedures and best management practices. The BLM has previous experience implementing similar actions in similar areas and have found the effects to be reasonably predictable.

Developing and implementing a groundwater monitoring and reporting program, that is implemented before drilling begins, will reduce the potential that vested and other water rights, including those available for geothermal development, in the vicinity could be indirectly affected. This is because appropriate corrective measures, as determined by Ormat in coordination with the BLM Authorized Officer and other affected stakeholders, will be applied if determined to be necessary as a result of monitoring results. Corrective measures could include modifying or temporarily suspending project operations until discharge rates return to appropriate levels.

The interdisciplinary team conducting the analysis found there were no substantial risks due to uncertain, unique, or unknown consequences on the human environment.

6. Consideration of whether the action may establish a precedent for future actions with significant impacts: The action may establish a precedent for future actions with significant effects. This is because geothermal resource confirmation activities have been proposed to determine if the geothermal resource in the Gerlach area is viable for the development of commercial power production facilities. A Plan of Development for a transmission line right-of-way could also be expected as a future action.

7. Consideration of whether the action is related to other actions with cumulatively significant impacts: The cumulative impacts are not significant. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. The EA included analysis of the cumulative effects of the reasonably foreseeable future actions identified in Section 3.3.7 of the EA. The BLM concluded the action would not result in any adverse, significant impacts on the environment. The analysis was accurate and based on reasonable consideration of cumulative impacts. Until the geothermal resource is confirmed, development of a geothermal powerplant is not a reasonably foreseeable future action.

8. Scientific, cultural, or historical resources, including those listed in or eligible for listing in the National Register of Historic Places: All NRHP-eligible and unevaluated sites in the APE will be avoided during construction and maintenance, and an archaeological monitor will be present during ground-disturbing activity within 30 meters (98 feet) of NRHP-eligible and unevaluated sites to ensure sites are not disturbed. Direct effects from ground disturbance on eligible or unevaluated sites are not expected to occur.

Two of the lease parcels included within the area of interest, NVNV105724214 and NVNV105517566, which were leased under the 2019 and 2020 Geothermal Lease Sales (DOI-BLM-NV-W000-2020-0002-DNA and DOI-BLM-NV-W000-2019-0001-DNA), contain no surface occupancy (NSO) stipulations for trails, as required under the Winnemucca RMP. Six proposed wells (86-16, 67-16, 45-16, 37-16, 62-20, and 11-21) are proposed to occur in these NSO areas and would require a waiver to proceed. Additionally, proposed wells 37-16 and 62-20, which have a trails NSO stipulation, are in areas marked NSO due to NRHP-eligible sites. These wells would also require another waiver for surface use due to the NSO stipulations. These wells would not be permitted without a waiver and a further impact analysis. For these reasons, these wells would not be authorized under this decision.

Lease areas NVNV105441665 (2001) and NVNV105522415 (1992) were leased much earlier and do not maintain the same stipulations and requirements as parcels leased later. Due to valid and existing rights, the pads in these areas would not have the same visual stipulations and requirements of visual effects that are addressed in the current RMPs (the 2004 Black Rock Desert-High Rock Canyon Emigrant Trails National Conservation Area and Associated Wilderness and Other Contiguous Lands in Nevada RMP, and the 2015 Winnemucca District RMP) or BLM Trail Manual 6280 (2012). The remaining proposed wells are within these lease areas; as a result, they would not be subject to the trail NSO stipulation. However, the plan does provide the BLM discretion to stipulate restrictions for surface use in direct conflict with cultural resources eligible for listing on the NRHP. Previously proposed well 83-16 would be located directly on such a resource and would not be permitted. Ormat has elected to relocate the well approximately 600 feet to the south to avoid the eligible resource; the well has been renamed 84-16.

There is the potential for temporary, visual, adverse effects on the setting, feeling, and association of eligible or unevaluated sites, including the NHT, Gerlach Cemetery, and Great Boiling Spring. Temporary adverse effects would occur from the visual and noise intrusion of construction activity during well drilling, which typically would last up to 45 days per well. There is also the potential for temporary, indirect, adverse effects on the setting, feeling, and association from anticipated changes in the ALAN, radiance, and sky glow due to nighttime drilling. While temporary changes in the visual and noise baseline conditions of the area would occur, these would be resolved upon completion of the exploration drilling and reclamation of the well pad.

Ormat will educate employees, contractors, and suppliers would be instructed that all cultural resources are protected, and that if previously undiscovered resources are encountered, they will be left in place and reported to the BLM by the responsible Ormat representative.

This Finding of No Significant Impact assumes implementation of geothermal lease stipulations, applicant-committed environmental protection measures, and mitigation specified in the EA. All of these together are sufficient to mitigate the adverse effects to the NRHP-eligible and unevaluated resources in the vicinity of the Project Area.

9. Threatened or endangered species and their critical habitat: There will be no effects on federally threatened and endangered species or critical habitat, as such species and critical habitat are not present in the project area.

10. Any effects that threaten a violation of federal, state, or local law or requirements imposed for the protection of the environment: The action will not violate federal, state, and local laws or requirements for the protection of the environment. Applicable laws and regulations were considered in the EA. The action is consistent with the BLM Winnemucca District Resource Management Plan, as amended. The Proposed Action meets the requirements of the National Environmental Policy Act, the Clean Air Act, the Clean Water Act, and the National Historic Preservation Act.

SIGNATURE OF AUTHORIZED OFFICIAL:

S//Mark E. Hall

Mark E. Hall
Field Manager
Black Rock Field Office

DATE SIGNED:

October 21, 2022

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