

ORMAT Technologies Inc.

Wild Rose Geothermal Project

Finding of No Significant Impact

DOI-BLM-NV-C010-2012-0050-EA

October 2012

BLM

Stillwater Field Office, Nevada



BACKGROUND

In 2011, Ormat Nevada, Incorporated (Ormat) submitted to the (US) Department of Interior (DOI), Bureau of Land Management (BLM) Stillwater Field Office, the following:

- An amended Operations Plan for exploration of several newly identified well locations in the Lease Area;
- A Plan of Utilization for the development of a geothermal power plant, well field, and associated facilities; and
- A Plan of Development for the construction of a gen-tie to connect produced power to the electric grid.

The BLM prepared Environmental Assessment (EA) DOI-BLM-NV-C010-2012-0050-EA *Wild Rose Geothermal Project* to analyze potential impacts on the human and natural environment that may result from geothermal exploration and development within the Ormat Dead Horse Wells Geothermal Unit (NVN-84239X) and from the construction and operation of an associated transmission line to bring electricity to market.

Exploration and development activities would be contained within two of the four federal geothermal leases of the Wild Rose Geothermal Unit (Unit), which is located in the western portion of Gabbs Valley, approximately 17 miles west of Gabbs, in Mineral County, Nevada. Three transmission line (gen-tie) options were also analyzed in the EA. All of the proposed exploration and development activities would occur completely on BLM-administered lands.

Exploration activities in the Unit were previously evaluated in the Gabbs Valley and Dead Horse Wells Exploration Projects EA (DOI-BLM-NV-C010-2010-0006-EA). A Finding of No Significant Impact and Decision Record were signed on January 13, 2010. Geothermal exploration activities authorized by BLM are current and ongoing in the Unit. Through these exploration activities, Ormat has acquired new information about the geothermal resource and is currently seeking authorization for four new exploration wells in addition to seeking authorizations for the development of a power plant, associated facilities, and a gen-tie.

In 2011, Ormat changed the name of activities in the Unit from Dead Horse to Wild Rose. This current proposal from Ormat is the Wild Rose Geothermal Development Project (Project). The project is located within the 13,800-acre Dead Horse Wells Geothermal Unit (NVN-84239X), which is comprised of four federal geothermal leases. Exploration and development activities would occur only in leases NVN-83929 and NVN-83931.

The purpose of the Proposed Action is to develop the geothermal resource within and adjacent to the Wild Rose Geothermal Unit area in response to EO 13212, which directs the BLM in a timely manner to support efforts to increase energy production from federal minerals, while preserving the health of public lands.

LAND USE PLAN CONFORMANCE

The proposed action and alternatives described below are in conformance with the Carson City District Office Consolidated Resource Management Plan (CRMP) of 2001.

- The desired outcome for minerals and energy management under the CRMP, page MIN-1, is to: “encourage development of energy and mineral resources in a timely manner to meet national, regional, and local needs consistent with the objectives for other public land uses”.
- The CRMP minerals and energy management direction applies the following restriction on geothermal leasing: “No drilling or storage facilities will be allowed within 650 feet of any pond, reservoir, canal, spring, or stream. Other protective areas near water may be required to protect riparian habitat and threatened and endangered species”.

In 2008, the BLM completed the Programmatic Environmental Impact Statement (EIS) for Geothermal Resources Leasing in the Western United States FES 08-44. This Programmatic EIS was the foundation for a Record of Decision (ROD) and Resource Management Plan Amendments for Geothermal Resources Leasing in the Western United States. This ROD amended BLM Resource Management Plans, including the CRMP, to identify public lands that are administratively and legally closed or open to leasing; and to develop a comprehensive list of stipulations, Best Management Practices (BMPs), and procedures to serve as consistent guidance for future geothermal leasing and development. Special stipulations developed in the ROD were applied to geothermal resource leases subsequently issued by BLM, including the federal geothermal leases issued to Ormat for Wild Rose in 2010.

The proposed action is consistent with State of Nevada and Mineral County ordinances, policies, and plans.

FINDING OF NO SIGNIFICANT IMPACT DETERMINATION

This finding and conclusion is based on the consideration of the Council on Environmental Quality’s (CEQ) criteria for significance (40 CFR 1508.27), both with regard to the context and the intensity of impacts described in the EA.

Based on the analysis of Wild Rose Geothermal Project, EA# DOI-BLM-NV-C010-2012-0050-EA, I have determined that the Proposed Action will not have a significant effect on the human environment and an EIS will not be prepared. This finding is based on the context and intensity of the project as described:

CONTEXT:

The characteristic landscape of the project area is dry and arid desert, with the Gabbs Valley Mountain Range of the central Nevada desert surrounding the proposed project site, gen-tie lines, and ancillary facilities.

The proposed alignments are approximately 31 miles long. Elevations range from approximately 4,250 feet at the Gabbs Valley Geothermal Project to 5,300 feet at the top of Nugent Wash on the Third Option and to about 4,900 feet on the Eastern Option near Powerline Rd just off Highway 361. The project area terrain is highly diverse and includes high desert valley washes, low alkali playas, steep rocky cliffs, and canyon mountain passes. The varying combinations of vegetation types, elevation, and terrain provide a wide variety of habitat for wildlife and botanical species in the region.

The areas associated with the currently proposed surface disturbances within the three project areas were biologically surveyed in the late summer of 2011 and early spring of 2012. Vegetative community map units were based on a combination. The vegetative communities in the project area consist of Salt desert shrub vegetation types (including greasewood and rabbit brush, see EA Chapter 3 for more details).

The 13,800-acre Lease Area overlaps approximately 2.5 percent of the 512,449-acre Pilot-Table Mountain Allotment. On the portion of their route outside the Lease Area the permanent 90-foot wide corridors for the three gen-tie options would overlap approximately 44.2 acres (Option 1), 50.7 acres (Option 2), or 204.5 acres (Option 3) of the Pilot-Table Mountain Allotment. These gen-tie acreages represent between 0.008 and 0.04 percent of the allotment. In addition, the western-most 1,400 feet of Gen-tie Option 2 overlaps approximately 2.9 acres or 0.002 percent of the Gillis Mountain allotment. This is the only portion of the proposed action located outside the Pilot-Table Mountain allotment.

INTENSITY:

The Council on Environmental Quality (CEQ) regulations includes the following ten considerations for evaluating intensity:

1) *Impacts that may be both beneficial and adverse.*

None of the environmental effects discussed in detail in the EA (refer to Chapter 3 Affected Environment and Environmental Consequences) are considered significant, nor do the effects exceed any known threshold of significance, either beneficial or adverse. The Proposed Action is geothermal resource development consisting of drilling and testing of up to four exploration wells; construction and operation of a 15-to 35-megawatt (MW) net rated (up to 40 MW gross) geothermal power plant facility and electrical substation; construction and operation of geothermal production and injection wells, pipelines, access roads, and support facilities; and construction and operation of a 120-kV gen-tie and switching station, as described in the EA (refer to Chapter 2, Section 2.1 Proposed Action).

2) *The degree to which the proposed action affects public health or safety.*

The Proposed Action is to drill into and develop the geothermal resources in the project area analyzed in the EA. A crew of up to seven workers would be working at the site; measures are in place to ensure their health and safety during operations. (Refer to EA sections 2.1.5.4 and 2.1.7) It is reasonable to expect further resource exploration and development which could affect public health or safety but those types of activities would be subject to further environmental analysis when considered. These types of issues could be addressed through conditions of approval for further exploration and development actions as determined by federal and state agencies.

3) *Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.*

The BLM have considered the Area of Potential Effects (APE) relative to cultural resources and historic properties, providing oversight for a full inventory of the areas that include construction of the proposed well pads, access roads, and pipelines and their associated activity. Based on the cultural inventory, it was determined that historic properties are present in the APE and Ormat's proposed activities would avoid these sites (Refer to Section 2.1.7 and 3.8.2 of the EA). There are no park lands, prime farm lands, wild and scenic rivers or ecologically critical areas in or near the proposed project activities.

4) *The degree to which the effects on the quality of the human environment are likely to be highly controversial.*

The EA was sent out on July 11, 2012 for a 30-day public comment period. The BLM received 6 individual comment submissions. These comments were submitted by different federal and state agencies. Their comments and BLMs responses are found in Appendix E of the EA. The agencies that commented were the Nevada Department of Environmental Protection, Bureau of Water Pollution Control; the Nevada Department of Transportation; the Nevada Division of Water Resources; the U.S. Environmental Protection Agency; the Nevada Department of Wildlife and the Nevada State Historic Preservation Office. No additional comments from the public were received.

The effects of the Proposed Action on the human or natural environment were determined to be negligible. Drilling for geothermal resources and its potential effects on the subsurface in this project area has been analyzed in this EA (refer to Chapters 3 and 4).

5) *The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.*

The Proposed Action is not unique or unusual. The action described in Chapter 2 of the EA is drilling for geothermal resources. There are no predicted effects on the human environment that are considered highly uncertain or involve unique or unknown risks. Public comment has been minimal.

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.*

As exploration advances and additional development of energy generation facilities is proposed on a geothermal lease, an environmental analysis may be warranted to assess impacts resulting from these types of projects. The progression of the project from leasing to exploration to development is customary and expected. This action will not establish a precedent for future actions within the area, and all future proposed actions within the project area will be analyzed under a site-specific environmental analysis and analyzed on its own merits.

7) *Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.*

Resource values, as identified in this EA, were evaluated for cumulative impacts (Refer to Chapter 4 of the EA) and determined that cumulative impacts would be negligible for the proposed project. Subsequent actions for geothermal resource exploration and/or development would be evaluated for cumulative impacts in associated environmental analysis that maybe warranted and would be addressed through mitigation of the proposed future action and conditions of approval.

8) *The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the NRHP or may cause loss or destruction of significant scientific, cultural, or historical resources.*

As described in the EA (refer to Chapter 3 and 4 of the document), the project will not adversely affect districts, sites, highways, structures, or other objects listed in or eligible for listing in the National Register of Historic Places, nor will it cause loss or destruction of significant scientific, cultural, or historical resources. Ormat's proposed activities would avoid any cultural sites (Refer to Section 2.1.7 and 3.8.2 of the EA).

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 ESA of 1973.*

As described in the EA (Refer to Chapter 3, Table 6), no known threatened or endangered species or critical habitat has been identified in the subsurface area considered in the EA. Any future exploration and development actions would be evaluated in a separate, site-specific environmental analysis on its own merits.

10) *Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.*

As described in the EA, the Proposed Action does not violate any known Federal, State, or local law or requirement imposed for protection of the environment.


Teresa J. Knutson
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Date