

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
MALHEUR FIELD OFFICE

**Finding of No Significant Impact (FONSI)**

US Geothermal, Inc. - Neil Hot Spring Right-of-Way OR-66537  
Environmental Assessment No. DOI-BLM-OR-V040-2011-008

**BACKGROUND**

The FONSI is a document that explains the reasons why an action will not have a significant effect on the human environment and why, therefore, an EIS will not be required (40 CFR § 1508.13). This FONSI is a stand-alone document but is attached to the Environmental Assessment (EA) and incorporates the EA by reference. The FONSI does not constitute the authorizing document: the decision record is the authorizing document.

“Significance” as used in NEPA requires considerations of both context and intensity (40 CFR § 1508.27).

The proposed action is to grant a nine acre right-of-way to US Geothermal, Inc. for the construction of access roads and three (3) well pads resulting in the surface disturbance of approximately nine acres of public land. The purpose of this action is to facilitate the exploration of geothermal resources on the private sub-surface mineral estate. The applicant is currently exploring for geothermal resources on the adjacent private lands and intends to explore and develop the private mineral estate located beneath the BLM-administered surface estate.

On May 18, 2001, the President issued Executive Order (E.O.) 13212, “Actions to Expedite Energy-Related Projects,” which established a policy that federal agencies should take appropriate actions, to the extent consistent with applicable law, to expedite projects to increase the production, transmission, or conservation of energy. On August 8, 2005, the President signed into law the Energy Policy Act of 2005 (PL. 109-58). Section 211 of the Act states, “It is the sense of the Congress that the Secretary of the Interior should, before the end of the 10-year period beginning on the date of enactment of the Act, seek to have approved non-hydropower renewable energy projects located on the public lands with a generation capacity of at least 10,000 megawatts of electricity.”

Under the Federal Land Policy and Management Act (FLPMA) and its implementing regulations, BLM must respond to right-of-way applications. The BLM is also required to comply with the National Environmental Policy Act (NEPA) and the Council of Environmental Quality (CEQ) regulations. It was determined that an EA was necessary to evaluate the potential environmental impacts associated with this proposed action.

**FINDING OF NO SIGNIFICANT IMPACT**

Any land management action involving ground disturbance invariably, and by definition, entails environmental effects. I have determined, based upon the analysis of environmental impacts contained in the referenced EA (DOI-BLM-OR-V040-2011-008), that the potential impacts resulting from the

proposed action would not be significant and that, therefore, preparation of an environmental impact statement is not required.

I find that the project's affected region is localized and the effects of implementation are relevant to compliance with Federal and Oregon State law. There would be no adverse societal or regional impacts and no significant adverse impacts to the environment. I have evaluated the environmental effects, together with the proposed mitigating measures, against the tests of significance found at 40 CFR § 1508.27. Although not a condition of my determination, implementation of all Best Management Practices (BMP) of the proposed project would be critical to the success of the action.

### Context

For context, significance varies with the setting of the proposed action. For instance, for a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. For this proposed action, the effects are confined to the immediate area within the confluence of Bully Creek and Cottonwood Creek where Neil Hot Springs is located. These effects are described and analyzed in the EA.

### Intensity

Intensity refers to the severity of effect. US Geothermal Inc. will conduct the actions described using the BMPs referenced in the EA and limiting effects to the immediate vicinity of the proposed project.

I have determined the following:

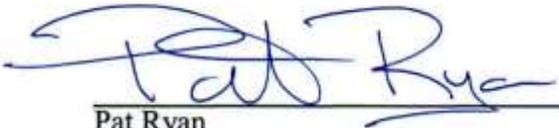
1. The proposed action would cause no significant impacts, either beneficial or adverse; all impacts would be insignificant; and the proposed activity will not have an adverse effect on water quality because the goal of geothermal resource use is to maintain long-term sustainability by balancing fluid extraction with injection back to the source depth. Oregon Administrative Rules for Geothermal Regulations (OAR 632-020-0150 and 632-020-0154) state that "injection is the preferred method for handling geothermal fluids derived from geothermal resources to conserve natural heat energy and to maintain reservoir temperature and pressure". To that end, US Geothermal, Inc. (USG) will inject all thermal waters extracted from the wells to an appropriate depth to maintain recirculation of the fluid. USG has completed a detailed subsurface analysis of the hydrogeologic characteristics of the Neal Hot Springs area to determine the most efficient sites for production and injection. Additionally, the target geothermal resource is at an approximate depth of 3,000 feet below ground surface, much deeper than water used for domestic or agricultural purposes. Well construction is regulated (OAR 632-020-0095) to insure that "a geothermal or prospect well must shut out pollution from strata containing water used for irrigation or domestic purposes and from surface water used for these purposes. The operator of a geothermal or prospect well that penetrates a usable fresh water aquifer shall be required to set casing or tubing through this formation and cement such casing or tubing from bottom to top unless the department approves a different program". To date, the previous drilling and testing of geothermal resources at Neal Hot Springs has had no documented detrimental effects to the surface water quantity or quality.

2. The proposed action would have no adverse effect on public health or safety because the USG Plan of Development (POD) for this project states that waste disposal, traffic control, safety, and fire control plans are in place for the duration of the project. The traffic plan prevents public access to the work areas. Work areas such as drill pads and access roads will be constructed to standards allowing adequate work space and widths for vehicle passage. Vehicle traffic on County roads must adhere to all County and State laws.
3. The proposed action would not affect unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, or ecologically critical areas because those unique features are generally not present in this area. The portion of this project situated on private land has been approved by the landowner and Malheur County.
4. The proposed action would have no highly controversial effects because the surface use and geothermal well construction design and operation described in the POD is established worldwide technology.
5. The proposed action would have no uncertain effects and would not involve unique or unknown risks because the potential for these effects were analyzed and determined to be insignificant in the Environmental Assessment for Department of Energy Loan Guarantee for US Geothermal's Neal Hot Springs Geothermal Facility in Vale, Oregon, December 2009 (DOE/EA-1676).
6. The proposed action is not related to any immediate action being considered by BLM because other than the USG project, there are no other projects pending or active in the immediate area.
7. The proposed action would have no adverse effect to any property listed on or potentially eligible for listing on the National Register of Historic Places because no eligible sites were identified in the project area.
8. The proposed action would not significantly adversely affect an endangered or threatened species or any habitat critical to an endangered or threatened species because BMPs would be utilized and no species were identified at the proposed project area.
9. The proposed action does not violate any law or requirement imposed for the protection of the environment because all Local, State and Federal laws and regulations will be followed and regular inspections and monitoring will occur for the life of the project.
10. The proposed action would not significantly affect air quality because impacts would be short term and localized and would not result in or contribute to non-attainment of any air quality standards. As referenced in DOE/EA-1676, should all exploration efforts have success and a geothermal power plant is constructed; CO<sub>2</sub> emissions from a geothermal plant are far less than competing sources such as coal, petroleum products, or natural gas.

11. The proposed action would not significantly adversely affect permitted livestock grazing because the Kern Creek pasture encompasses 16,450 acres and the proposed ultimate disturbance of 20 acres equates to an acreage loss of %0.12.

12. The proposed action would not adversely affect wild horses or wildlife because adequate sources of forage and water will remain available.

The proposed action is consistent with the Southeastern Oregon Resource Management Plan/Final Environmental Impact Statement (2001) and Oregon State law.



Pat Ryan  
Field Manager  
Malheur Resource Area



Date: