INTRODUCTION
Magma Energy (US) Corp. (MEC) proposes to drill a directional production well (41B-33) to a depth of 9,500 feet within the boundaries of the approved Soda Lake Geothermal Unit (NVN-013204X) located in Churchill County, Nevada. The well has been permitted by the Nevada Division of Minerals, API Number 27-001-90396, approved April 7, 2009 and drilling has already started as this well is situated on private fee land. The well will be drilled directionally to the west where it would intersect the subsurface of geothermal lease, NVN-53372, managed by the Bureau of Land Management, Stillwater Field Office (BLM). BLM manages the subsurface geothermal resources and the Bureau of Reclamation, Lahontan Area Basin (Reclamation) is the surface management agency. The objective of this well is to access high-temperature geothermal resource believed to be circulating in fractured rocks related to subsurface faults. Any production fluid recovered from the well would be directed through existing pipeline infrastructure to the Soda Lake power plants.

At the present time there are four wells in the Soda Lake Geothermal Unit (SLU) that produce geothermal fluids (41A-33, 32-33, 81A-33, and 81B-33), four wells that are used for injection (45-28, 77-29, 87-29, 81-33) and two power plants generating electricity, all on privately held leases and all authorized by the appropriate Nevada State agencies and local county ordinances. MEC recently completed a new production-type well, designated 45A-33 located approximately 300 yards south of the Soda Lake II power plant. It is intended that this well will provide additional geothermal fluids to permit total utilization of currently installed generation capacity.

The purpose of the proposed action is to develop the geothermal resource within the Soda Lake Geothermal Unit area. The need for the proposed action is to increase the electrical generation capacity of the power plant and respond to EO 13212, which directs the BLM to process geothermal leases in a timely manner in order to support efforts to increase energy production from federal mineral, while preserving the health of public lands.

This EA, DOI-BLM-NV-C010-2009-0018-EA, analyzes the proposed project pursuant to the national Reclamation/BLM Interagency Agreement, December 1982. The environmental analysis is not required to consider a range of alternatives in citing surface facilities because the actual location is not based on the federal geothermal lease.

The EA evaluates the impacts on the natural and human environment that could result from implementation of this exploration project on federal land. The impact analysis in the EA
characterizes the potential for impacts for each resource in the exploration project area. The determination of environmental risk is resource-specific and is based on a number of factors, including the presence and extent of resources within the proposed lease section, the extent of resources in the surrounding area, and the quality of existing data.

**PLAN CONFORMANCE AND CONSISTENCY**
The Proposed Action has been reviewed for conformance with the Carson City Field Office Consolidated Resource Management Plan (2001) and is found to be consistent with current BLM policies, plans and programs. The proposed action is consistent with Churchill County ordinances, policies and plans.

**FINDING OF NO SIGNIFICANT IMPACT DETERMINATION**
Based on the analysis of “Magma Energy Soda Lake Well 41B-33”, environmental assessment DOI-BLM-NV-C010-2009-0018-EA, I have determined that the action will not have a significant effect on the human environment and an environmental impact statement (EIS) will not be prepared. This finding is based on the context and intensity of the project as described:

**Context:**
The proposed action is to directionally drill into federal geothermal resources for the production of geothermal fluids to be utilized for electrical power generation on private lands. The federal subsurface will be encountered at depth in the wellbore. The well surface location is on an existing well pad on private land. BLM has management responsibility for the underlying geothermal resources and the surface management agency is the Bureau of Reclamation, Lahontan Basin Area (Reclamation). Reclamation has been appraised of this project and the analysis was conducted pursuant to the Reclamation/BLM Inter-Agency Agreement of 1982.

**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 are considered significant, nor do the effects exceed any known threshold of significance, either beneficial or adverse. The Proposed Action is geothermal resource development from a federal well consisting of utilization of geothermal fluids for electrical generation and production well testing of the resource.

2) *The degree to which the selected alternative will affect public health or safety.*
The Proposed Action is to drill for geothermal resources in the project area analyzed in the EA. 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 farm lands, wetlands, wilderness, wild and scenic rivers, or ecologically critical areas.**
The surface location of the well is on private lands where the obligation for protecting the private surface, environment, and the interest of the surface owner in this case remains with the surface owner, the lessee, and the state. There is no new surface disturbance to the private land or public land. There are no park lands, prime farm lands, wild and scenic rivers or ecologically critical areas in or near the sites proposed.

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

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 the EA is drilling for geothermal resources and a production well. There are no predicted effects on the human environment that are considered 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 presents a decision in principle about a future consideration.**
Development of energy generation facilities is proposed on a geothermal lease, an environmental analysis is performed to assess impacts resulting from these types of projects. The progression of the project from exploration to development is customary and expected.

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 and determined that cumulative impacts would be negligible for the proposed drilling project. Subsequent actions for geothermal resource exploration and/or development would be evaluated for cumulative impacts in associated environmental analysis 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 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.**
As described in the EA, 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 because all activity is subsurface.

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 ESA of 1973.**

As described in the EA, 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 future environmental analysis for the future project.

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. Officials from Reclamation, the State of Nevada, Churchill County, and the Fallon Paiute-Shoshone Tribe were notified of the proposal.

**DECISION**

I approve the drilling project as described in the Proposed Action of EA-NV-030-07-006. This decision is contingent on meeting all geothermal lease stipulations and monitoring requirements listed below and in EA-NV-030-07-006, as well as the Operations Plan and state permits. Due to the subsurface circumstance no Conditions of Approval are attached to this FONSI/Decision Record.

**Stipulations:**

All applicable standard operating procedures (SOPs) and Best Management Practices (BMPs) have been carried forward. SOPs, BMPs, and mitigation listed in the Magma Operations Plan are included.

**Monitoring:**

The monitoring described in the Proposed Action, in the Magma Operations Plan, SOPs and BMPs, as well as state permits is sufficient for this action.

**Rationale**

The Proposed Action meets the criteria described in the Federal Land Policy and Management Action of 1976 to prevent undue and unnecessary degradation of public land and the 43 CFR Subparts 3200 and 3250. The Proposed Action is in conformance with the Carson City Field Office Consolidated Resource Management Plan (2001) which states that the BLM desired
outcome 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 action must comply with the conditions of permit for the Nevada Division of Minerals Geothermal Resource Development Permit Application and with applicable rules and regulations of other local, state, and federal agencies.

/s/ Teresa J. Knutson   07/30/09
Teresa J. Knutson
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