INTRODUCTION
Magma Energy (US) Corp. (Magma) proposed to conduct exploration drilling and testing activities within the boundaries of the Soda Lake Geothermal Unit, NVN-13204X, located in Churchill County, Nevada. They have submitted an operations plan, 2 Notices of Intent, and 9 geothermal drilling permits for their exploration drilling involving federal and private leases within the Unit. Magma proposes access road construction, existing road improvements, construction of 9 well pads, and flow testing of the wells to determine commercial potential. Up to 2 new production wells, one temperature gradient well, and one observation well could be drilled at each pad location.

BLM manages the subsurface geothermal resources and the Bureau of Reclamation, Lahontan Basin Area Office (Reclamation) is the surface management agency.

The project area has been in existence since 1977, and currently has 2 operating geothermal power production facilities on private lands. More than 80 temperature gradient, slim holes, and production wells have been drilled in the project area over the course of the nearly 30-year history of exploration and development, with depths ranging from 300 feet to more than 9,600 feet. Magma acquired the existing facilities, federal leases, and private leases in October 2008.

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-C010-2010-0008-EA, was jointly prepared by Reclamation and the BLM Carson City District Stillwater Field Office and analyzes the proposed project in keeping with the national Reclamation/BLM Interagency Agreement, December 1982. 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 “Soda Lake Geothermal Exploration Project”, 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 9 well pads, access road construction, and well drilling and testing into federal geothermal resources is to assess the power generation capability of the geothermal fluids that may exist in the project area. BLM has management responsibility for the underlying geothermal resources and the surface management agency is the Bureau of Reclamation, Lahontan Basin Area Office (Reclamation). Reclamation has been appraised of this project pursuant to the Reclamation/BLM Inter-Agency Agreement of 1982 and the analysis was jointly conducted. BLM approves the projects under the Conditions of Approval attached hereto as Exhibit B.

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 exploration consisting of construction of 9 well pads, access roads, and other associated activity as described in the EA, as well as reclamation of these disturbances when exploration and testing is completed.

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 Reclamation and 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 9 well pads, access roads, and other associated activity. Based on the cultural inventory, both agencies determined that historic properties are present in the APE and Magma shall avoid these sites. Magma shall avoid any historic properties and shall comply with the monitoring as outlined in the cultural resource report under Section 7. 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 resource. 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 presents a decision in principle about a future consideration.
As exploration advances and eventual 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 leasing to 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 exploration 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. Resource specialists from the BLM Stillwater Field office and from Reclamation, the State of Nevada, Churchill County, and the Fallon Paiute-Shoshone Tribe were notified of the proposal.

Teresa J. Knutson  
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Carson City District Office  

08/30/2010  
Date