3200 (936.2)

October 31, 2008

NOTICE OF LANDS UNDER CONSIDERATION FOR GEOTHERMAL LEASING

The Glass Buttes Area (T. 23 S., Rgs. 21-23 and T. 24 S., Rgs. 22-23, Willamette Meridian) is under consideration for geothermal resources lease issuance. Our analysis has determined that <u>NO</u> adverse effect will occur to any significant thermal feature of Crater Lake National Park due to lease issuance in said area.

In accordance with Section 6 of Public Law 100-443 (102 Stat. 1766-1771), this Notice will be posted and our analysis will be available in the Bureau of Land Management's Oregon State Office through December 1, 2008. Any comments concerning the effect of geothermal resources leasing within the Glass Buttes Area on Crater Lake must be in writing and must be received timely in this office. No consideration will be given to any comments received after December 1, 2008.

Copies of this Notice and/or the related analysis are available upon request from the Oregon State Office. To receive future notices and/or analyses of geothermal leasing in accordance with P.L. 100-443, contact this office at the above address or call Maggie Weaver at 503-808-6008.

Christopher B. DeWitt Chief, Minerals Section

cc: Interested Parties DO

Checklist for Analyzing

POTENTIAL EFFECT ON SIGNIFICANT

THERMAL FEATURES

LEASE NO.: Associated with OR-050-08-155 LOCATION: WM T. 23S, R.21E.

WM <u>T. 23S, R.22E.</u> WM <u>T. 23S, R.23E.</u> WM <u>T. 24S, R.22E.</u> WM T. 24S, R.23E.

POTENTIALLY AFFECTED FEATURE NAME: Crater Lake National Park, Oregon

DISTANCE: <u>106-118 MI.</u>

TYPE FEATURE: Crater Lake bottom, suspected thermal flow NPS UNIT: Crater Lake National Park.

Oregon

GEOLOGIC FACTORS REVIEWED:

REMARKS:

- Extent of volcanic/magmatic system

Local

- Structural continuity

None

- Lithologic continuity

None

HYDROLOGIC FACTORS REVIEWED:

REMARKS:

- Extent of hydrologic system:

Surface

Local

Subsurface

Local

- Geochemical similarity

Unrelated

GEOPHYSICAL FACTORS REVIEWED:

REMARKS:

- Continuity of geophysical anomalies

Local

SUMMARY ANALYSIS:

The distance between Crater Lake and the Glass Buttes lease area is between 106 and 118 miles which makes hydrologic interactions insignificant under potential linear flow conditions. The geology between these two areas is complex, consisting of discontinuous, overlapping and superimposed volcanic units, many of which serve as hydrologic barriers. The presence of crosscutting structural features further serves to inhibit or prevent hydrologic flow between the two areas. Geophysical, geochronological, and geomorphic evidence indicate that the two areas are independent with unique eruptive histories, petrologies and geochemistries.

REFERENCES:

- Bacon, C.R., and Nathanson, M., 1996, Geothermal Resources in the Crater Lake Area, Oregon, U.S. Geological Survey Open-File Report 96-663, 43 p.
- Davis, D.L., Wickstrom, R., Cunningham, B., and Jeppesen, D., 1976, Environmental Analysis Record for Glass Butte Geothermal Interest Area Central Oregon, Bureau of Land Management, 188 p.
- Feuer, J., 1996, Checklist for Analyzing Potential Effect on Significant Thermal Features, Crater Lake National Park, Bureau of Land Management, 43 p.

CONCLUSION: (Check one)

- _X There is no scientific information indicating geologic or hydrologic interconnection between the lands under application for lease extension and significant thermal features in Crater Lake, and exploration, development, or utilization of the lands in the proposed leases is not reasonably likely to have any effect on any significant thermal feature.
- The scientific evidence indicates there may be a geologic or hydrologic interconnection between the lands under application for lease extension and parklands. The type, extent, and magnitude of possible effects on significant thermal features will require additional analysis.

GEOLOGIST:

MANAGEMENT:

Deborah Henderson-Norton

Foe: Prineville District Manager