

**Bureau of Land Management
Winnemucca District Office**

Field Office(s): HRFO BRFO

**Categorical Exclusion
Team Review**

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|--|
| Applicant: Geothermal Technical Partners |
| Proposal: McGee Mountain Temperature Gradient Holes |
| CX#: DOI-BLM-NV-W010-2010- 0043-CX |

Prepared By: Raquel Minky

Date: November 10, 2010

| Name /Title | Resource/Agency Represented | Signature/Date | Comments (Attach if more room is needed) |
|-----------------------|--|---|---|
| Mark E Hall | Cultural Resources | <i>Mark E Hall</i> | <i>none</i> |
| Nancy Spencer-Morris | T&E (plants and animals) | <i>Nancy Spencer-Morris</i> 11/10/2010 | |
| <i>Ashley Whitman</i> | <i>Wild Horse & Burreo Specialists</i> | <i>Ashley Whitman</i> | <i>11/10/10</i> |

Continue the list of specialties as necessary

**Bureau of Land Management
Winnemucca District Office
Categorical Exclusion/Cultural Resources Inventory Needs Assessment Form**

| | | |
|---|--------------------------------------|--|
| <input checked="" type="checkbox"/> HRFO (1000) | <input type="checkbox"/> BRFO (3000) | <input type="checkbox"/> District () |
|---|--------------------------------------|--|

| | |
|--|---------------------------------------|
| CX#: DOI-BLM-NV-W010-2010-0050-CX | Date: September 20, 2010 |
| File Code (43 CFR) : 43 CFR 3250 | Lease / Case File / Serial #: N088791 |

1. BLM District Office: Winnemucca District Office
2. Name of Project Lead: Raquel Minky
3. Project Title: McGee Mountain Temperature Gradient Holes
4. Applicant: Geothermal Technical Partners, Inc., or Caldera Geothermal Inc.
5. Project Description: (briefly describe who, what, when, where, why, how) Caldera Geothermal Incorporated is proposing to complete drilling on nine temperature gradient holes in order to assess the geothermal resource of the McGee Mountain project area. The project will entail air drilling nine temperature gradients holes to total depths of 750 feet. Each drill site will be accessible by existing road or by tracks requiring no road building equipment.

The well sites will be accessed on existing dirt roads, and/or tracks that extend to the drill sites without the use of any road building equipment. All access roads used during the project will be maintained so that road conditions remain the same or are superior to existing road conditions prior to entry. All vehicles will remain on designated access roads during the operation. Approximately 5.9 km of overland tracks are proposed. If small boulders are encountered on access routes they will be removed by hand. Well sites are proposed to be 100 feet by 75 feet. Approximately 0.17 acres will be disturbed by each well site and 3.43 acres will be disturbed by overland travel. The total disturbance for the entire project will be 4.96 acres. The proposed well site layout includes a 10 feet by 6 feet by 6 feet deep sump to catch drill fluids and cuttings. Drilling water will be obtained from private sources, including the Gridley Lake warm spring. The Gridley Lake warm spring water rights are controlled by Alder Creek Denio Ranch LLC.

Drilling of each hole and mobilization to the next hole is proposed to take approximately 4 days. Each drill shift will be 12 hours, centered on daylight hours, and crews will lodge offsite overnight. The crew will consist of two drillers and one geologist; supervisors for the drilling company and/or Caldera may make occasional visits. Vehicles will consist of the drill, water and pipe truck, two pickup trucks, and an ATV.

Wells will be drilled by a truck mounted rotary drilling rig using an air circulating system. This rig will be equipped with diesel engines, storage tanks, mud pumps, air compressors and other typical auxiliary equipment. A 12 ¼ inch hole will initially be drilled to 60 feet during the drilling operation. An 8 inch conductor will then be set and cemented in place for the initial 60 feet of hole. A gate valve will be installed on the 8 inch casing in order to control the well in the event of an encounter with an unexpected artesian well. Lastly a 7 7/8 inch hole will be drilled to 750 feet with air. When total depth is reached the hole will be conditioned to run approximately 2 inch steel tubing. This tubing will then be capped at the bottom and filled with clear water for completion. In the event flow line temperatures exceed 150 degree Fahrenheit during the air drilling process, the circulating medium will then be converted to mud. If temperatures within

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the flow lines continue to exceed 150 degrees Fahrenheit with conversion to mud, then a mud cooling system will be installed to maintain flow line temperatures below 150 degrees Fahrenheit. A small portion of drill cuttings will be sampled in both chip trays and cloth bags that will be removed from the project site. The remaining drill cutting will be directed to the sump, which will be reclaimed after hole completion. A temporary staging area will be set up at the west end of the E-W road leading to the Painted Hills Mine at a wide road junction. This is a previously disturbed area and all staging activity will be limited to it. Drilling equipment, fluids, and cement will be stored at the staging site during the duration of the drilling program. Tarps will be laid out to prevent soil contamination by drilling fluids or cement. The well will then be observed and monitored through use of temperature log recordings taken at various points in time after the completion of the well. Temperature logs will be measured from the hole for a period of time until the temperatures stabilize, up to six months after hole completion. Access to each well for monitoring will be done by 4 wheel drive vehicles remaining on existing roads or overland tracks. Several measurements will be made per hole over this six month period to ensure reliability.

All CALDERA GEOTHERMAL, INC and drilling contractor personnel will be informed of policy regarding undue degradation of the environment and several measures will be taken in order to prevent all unacceptable impacts from occurring as result of the drilling operations. Roads will not be constructed for this project. Solid waste materials will be deposited at an authorized dump by a disposal contractor. Topsoil will be stockpiled and used for reclamation. Disturbed areas will be returned to original topography, topsoil will be replaced, and the area will be rehabilitated in accordance with BLM recommendations (re-seeding etc.). All cellars, rat holes and other bore holes unnecessary for further lease operations will be immediately backfilled immediately after the drilling rig is released. Immediately upon completion of drilling, the location and surrounding area will be cleared of all debris and material.

Project dimensions: 100 feet x 75 feet well site (approximately 0.17 acres), 9 well sites. 5.9 km of overland travel (approximately 3.43 acres) Acreage: 4.96 acres

Will the project result in new surface disturbance? Yes

Has the project area been previously disturbed? Yes, approximately 2 %, there are existing roads in the area.

6. Legal Description: T. 45 N., R. 27 E., sections 14, 23, 27, 34 & 35

USGS 24k Quad name: McGee Mountain, Alder Creek Ranch

100k map name: Denio

Land Status: BLM

7. Maps Attached

8. To be completed by Cultural Resource Specialist (CR):

Area of Potential Effect:

APE Acreage: 1.5 acres

Records Check:

Records Examined: CR2-3111(P)

Results: 5 isolates and 1 non-eligible site were found in the proposed project area.
One drilling site was moved to avoid the 1 non-eligible site.

Inventory Type Needed:

None

Categorical Exemption (Number _____)

Reconnaissance _____

Class I _____

Class II _____

Class III _____

Architectural _____

Rationale for Inventory Type determination: A Class I and III was done for the area of potential effect.

Tribal Notification/Consultation Needs: none

Rationale: No sites are affected and the amount of disturbance is small.

Tribe(s) to be contacted: none

Public Notification Needs: none

Rationale: No sites are affected and the amount of disturbance is small.

Person(s), group(s) to be contacted: none

CRS Approval: *Mark S Hall*

Date: *11/09/2010*

Field or other appropriate Manager Concurrence:

[Signature]

Date: *11-9-10*

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Part I: Plan Conformance Review

The proposed Action is subject to the:

- Paradise-Denio Management Framework Plan
- Sonoma-Gerlach Management Framework Plan
- Black Rock Desert-High Rock Canyon Emigrant Trails NCA and Associated Wilderness and Other Contiguous Lands in Nevada RMP

(The Proposed Action has been reviewed for conformance with this plan (43 CFR 1610.5, BLM Manual 1617.3).

Part II: NEPA Review

Categorical Exclusion Review: This Proposed Action qualifies as a categorical exclusion under:

43 CFR 46.210 DOI Implementation of NEPA of 1969, Listing of Departmental Categorical Exclusions (*formerly 516 DM2 Appendix 1*) (e) Nondestructive data collection, inventory (including field, aerial, and satellite surveying and mapping), study, research, and monitoring activities.

516 DM11.9, (BLM) (B) Oil, Gas and Geothermal Energy (6) Approval of Notices of Intent to conduct geophysical exploration of oil, gas, or geothermal, pursuant to 43 CFR 3150 or 3250, when no temporary or new road construction is proposed.

ESA and BLM Sensitive Status Species

| Evaluation Criteria | Yes | No |
|--|-------------------------------------|-------------------------------------|
| 1. Are species listed under the Endangered Species Act likely to occur in the project area? If yes, list the species in Table 1 below. Verify with USFWS or use approved list. | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Are BLM NV Sensitive Species, based upon the current IM, likely to occur in the project area? If yes, list the species in the Table 1 below. | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Could the proposed action result in "take" under the Migratory Bird Treaty Act? If yes, attach appropriate mitigation measures. | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Table 1. Special Status Species that may occur in the project area:

| ESA | BLM | Common (<i>Scientific</i>) Name | May Be Affected? | Mitigation for BLM Sensitive Species (<i>Attach ESA Section 7 Compliance to Form</i>) |
|--------------------------|-------------------------------------|--|--|---|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Loggerhead Shrike (<i>Lanius ludovicianus</i>) BLM: Special Sensitivity Federal Listing: Species of Concern | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Please see mitigation stipulations for migratory birds. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Vesper Sparrow (<i>Pooecetes gramineus</i>) BLM: Sensitive Species Federal Listing: Species of concern | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Please see mitigation stipulations for migratory birds. |

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|--------------------------|-------------------------------------|---|--|---|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Ferruginous Hawk (<i>Buteo regalis</i>) | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | " " |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Golden Eagle (<i>Aquila chrysaetos</i>) | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | " " |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Bighorn Sheep (<i>Ovis Canadensis</i>) | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | The six westernmost proposed drill sites are in occupied Bighorn sheep habitat (see attached map). Restrict off-road vehicle use during lambing season in these areas February 1 – May 31. Report any lambing activity to BLM biologists. |

Table 2 Migratory Bird Treaty Act Consideration

| Potential MBTA Species w/in the Project Area Common (<i>Scientific</i>) Name | May Be Affected? | Proposed Mitigation |
|---|--|---|
| Gray flycatcher (<i>Epidonax wrightii</i>) Sage thrasher (<i>Oreoscoptes montanus</i>) Brewer's sparrow (<i>Spizella breweri</i>) Sage sparrow (<i>Amphispiza belli</i>) Black-throated sparrow (<i>Amphispiza bilineata</i>) Canyon wren (<i>Catherpes mexicanus</i>) Rock wren (<i>Salpinctes obsoletus</i>) Green-tailed towhee (<i>Pipilo chlorurus</i>) Brewer's blackbird (<i>Euphagus cyanocephalus</i>) Red-tailed hawk (<i>Buteo jamaicensis</i>) | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <p>Species listed in this document are representative, but not exclusive of migratory birds typically associated with the habitats. With the application of the attached mitigation measures and stipulations, the proposed project will not negatively affect these species. Please note: These mitigation measures are more restrictive than the standard terms and conditions.</p> <p>There are a variety of topographical features in the area which provide habitat for many migratory species. The applicant needs to be particularly aware of the potential for ground-nesting birds and raptors.</p> <p>Prior to any planned disturbance in potential migratory bird nesting habitat from April 1 to July 31 (the approximate nesting season for the majority of migratory birds in the area), a field survey for migratory birds, their nests, eggs, or young should be performed, in order to prevent violation of the Migratory Bird Treaty Act (MBTA). This survey should be performed no longer than 10 days prior to the proposed activity. Rock wrens are of particular concern in this area because they are soil/rock ground nesters. If any nests, eggs, or young are found all disturbance activities will stop and the BLM biologists will be notified. In consultation with the BLM biologists, the project will either be delayed until the birds have completed their nesting and brood rearing activities or the project will be re-designed (disturbance</p> |

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|--|--|---|
| | | buffer zones established) so as to not harm migratory birds, their nests, eggs, or young and to prevent alteration of reproductive and brood rearing behavior. Potential migratory bird nesting habitat is any habitat that may provide nesting opportunity for any species of migratory bird. Any violation of the MBTA can incur penalties up to \$15,000 or 6 months imprisonment, or both per individual offence. Any questions about the Migratory Bird Treaty Act should be referred to the Reno Office of the U.S. Fish and Wildlife Service at (775) 861-6300, or email at "asknevada@fws.gov". |
|--|--|---|

The Proposed Action has been reviewed to determine if any exceptions described in 43 CFR 46.215 Categorical Exclusions: Extraordinary Circumstances (See attached page)

Mitigation Measures/Remarks: See Attached

Part III: DECISION: I have reviewed this plan conformance and NEPA compliance record and have determined that the proposed project is in conformance with the approved land use plan and that no other environmental analysis is required. It is my decision to implement the project, as described, with the mitigation measures identified above.

Remarks reserved for authorized officer:

Authorized Official

(Signature)

Date: 12-2-10

Administrative Review or Appeal Opportunities

See 43 CFR 4.401(a) Part 4 for general rules relating to procedures and practice involving appeals.

43 CFR 46.215
Categorical Exclusions: Extraordinary Circumstances

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- | <u>Yes</u> | <u>No</u> | | |
|--------------------------|-------------------------------------|-----|--|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | (a) | Have significant impacts on public health or safety |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | (b) | Have significant impacts on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (Executive Order 11990); floodplains (Executive Order 11988); national monuments; migratory birds; and other ecologically significant or critical areas. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | (c) | Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources [NEPA Section 102(2)(E)]. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | (d) | Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | (e) | Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | (f) | Have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | (g) | Have significant impacts on properties listed, or eligible for listing, on the National Register of Historic Places as determined by the bureau. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | (h) | Have significant impacts on species listed, or proposed to be listed, on the List of Endangered or Threatened Species, or have significant impacts on designated Critical Habitat for these species. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | (i) | Violate a Federal law, or a State, local, or tribal law or requirement imposed for the protection of the environment. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | (j) | Have a disproportionately high and adverse effect on low income or minority populations (Executive Order 12898). |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | (k) | Limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (Executive Order 13007). |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | (l) | Contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act and Executive Order 13112). |

All of the above questions must be answered negatively before the Categorical Exclusion may be approved. This checklist is taken from 43 CFR 46.215

Prepared By: Raquel Minky

Date: November 15, 2010

Effective 11/15/08
Replaces 6/21/05 #3612