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STATE OF NEVADA
 COMMISSION ON MINERAL RESOURCES
DIVISION OF MINERALS
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 http://minerals.nv.gov

Date Received 10/3/2024

API # 27-015-90152

County Lander

Permit Number 1615
 FOR DIVISION USE ONLY

GEOHERMAL RESOURCE DEVELOPMENT PERMIT APPLICATION

Name or Corporate/Business Name Nevada Bureau of Mines and Geology, University of Nevada, Reno

Nevada SOS Business ID Number _____

Street Address 1664 N Virginia St, MS 0178

City Reno State NV Zip Code 89557

hereby makes application for a geothermal development permit, State of Nevada, Division of Minerals.

(If applicant is a corporation, show state and date of incorporation; if a partnership, list names of partners.)

The applicant is drilling these exploration wells with the permission of the BLM on unleased lands. BLM permission attached below. These holes are being drilled as a part of the Department of Energy grant DE-EE009254-the INGENIOUS project. RESPEC is the drilling engineer and drilling services oversight for the project.

This application is for a Domestic well Commercial well Industrial well

Other, specify: Observation well Thermal Gradient well Re-entry

Note: Re-entry includes workover, deepening, or plugging back operations.

Applicant is: Land Owner Lease Holder Unleased lands

Well Name: 15-16

Lease Name/No: Argenta Rise Split Estate? Yes No

Land Type: Federal (BLM, USFS, etc.) Private State

Location of Well:

Domestic: Street: n/a

City: _____ County: _____

Commercial and Industrial:

NE _____ 1/4 of, SE _____ 1/4 in Section 15

Township 30, Range 45

UTM Northing 4479496 N; UTM Easting 508184 E (NAD83 Datum)

County Lander

(If applicable, give street address below.)

Street: n/a

City: closest city is Battle Mountain

State: Nevada Zip: _____

Operator's Name: RESPEC attn Sami Atalay 760-423-2217
Address: 77560 Enfield Ln Build E
City, St Zip: Palm Desert, CA 92211

Drilling Contractor's Name: Envirotech attn Brian Mikelson
Address: 900 East 4th Street
City, St Zip: Winnemucca, NV 89445

Rotary Rig Description: see program attached

Hole Size: max 8.5 (surface) Casing Size: max 7" Weight/Gauge: max 42 ppf

Estimated Well Head Temperature: < 100°C/212F at surface (WHT)

Size of BOP: 2000 psi 3000 psi 5000 psi BOP n/a

Planned Use of Geothermal Resource:

Size of BOP n/a. This is a research project funded by DOE to learn improved methods for finding geothermal resources hidden below the surface in the Great Basin. Wells will not (are not intended to) flow. Install un-cemented blank closed liner to TD to keep hole open for obtaining downhole temperature equilibrium measurements, filling the hole with freshwater upon completion. Drilling would stop and hole completed safely from the depth where boiling temperature is seen at surface. Hole is cooled by drilling operations enough to proceed safely until this point. See attached program for details.

Planned Disposal of Spent Geothermal Fluid:

Fluids are not expected from a TG well in this area at the proposed drilled depths. Any cuttings with water based mud materials will be captured at surface and then spread evenly over the drill site as part of the site abandonment procedure, which is planned/budgeted prior to (as a requirement of) closing of INGENIOUS grant. If freshwater aquifer is encountered, it will be managed and cemented at surface. Freshwater aquifer is deepest max 272' (83 m) in this area.

Type and Amount of Bond: n/a
(Exempt for Domestic Class)

Bond Issued by: _____ Serial No. _____

Geothermal Project Area (if applicable) Bond is waived as Operator is a state agency with confirmed P&A Plan.

The Source of the Proposed Geothermal Resource is:

Hidden system based on fault, geological and geophysical features.

(List name of hot spring, geologic formation(s) or other source.)

Total Depth to be drilled: 500 to 1500 ft depending on conditions encountered, depth of surface casing set.

Drilling will commence on or before: October 23, 2024 (timeline dependent on permit approval, weather and subcontractor agreements)

DocuSigned by:
Signature of Applicant/Agent: James E. Faulds
Date: 30 September 2024

Please attach a detailed drilling program including the following information:

- 1. Well design schematic; casing and mud programs; potential water supply; drilling rig to be used and pad layout; blow out prevention equipment diagram and testing program; directional drilling information if applicable; map of location and access roads. Additional information may be required upon review.
- 2. The required fee per NAC 534A 210 or 534A.212.

CONDITIONS OF PERMIT

1. All permittees must comply with appropriate sections of the Geothermal Rules and Regulations of the Division of Minerals and with applicable rules and regulations of other local, state, and federal agencies.
2. During the drilling of domestic geothermal wells, all water strata above the geothermal horizon being used must be sealed or separated in order to prevent their contents from passing into other strata.
3. All fresh water and water of value or possible value for other beneficial uses must be confined to their respective strata and be adequately protected by methods approved by the Division. Precautions must be taken in drilling and abandoning wells to guard against any loss of fresh water from the strata in which it occurs, and the contamination of any fresh water by objectionable water.
4. The operator of any well must shut off and exclude all water from any geothermal resource-bearing stratum to the satisfaction of the Division.
5. See attached Conditions of Approval.
6. Please send daily drilling reports to : Dustin Holcomb.....dholcomb@minerals.nv.gov
and
Crystal Cruson.....fluids@minerals.nv.gov

7. Additional Conditions/Comments

| | |
|-----------|-----------------------------------|
| A. | Sumps to be fenced on three sides |
| B. | Project Area #1615: Argenta Rise |
| C. | |

This permit does not extend the permittee the right of ingress and egress on public, private or corporate lands.

The issuance of this permit does not waive the requirements that the permit holder obtain other permits from State, Federal, and local agencies.

PERMIT APPROVAL

Approved 10/21/2024 with the conditions noted above.
Date

Permit Number 1615

Administrator
Division of Minerals