

For NDOM Use Only

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By: CPL Date: 9/16/22

STATE OF NEVADA
 COMMISSION ON MINERAL RESOURCES
DIVISION OF MINERALS
 400 W. King Street, Suite 106
 Carson City, Nevada 89703
 (775) 684-7040 | Fax (775) 684-7052
 http://minerals.nv.gov

Date Received 6/12/22

API Number 27-009-90095

County Esmeralda

Permit Number 1541
 FOR DIVISION USE ONLY

GEOHERMAL RESOURCE DEVELOPMENT PERMIT APPLICATION

Name or Corporate/Business Name Ormat Nevada, Inc.

Street Address 6140 Plumas Street

City Reno State NV Zip Code 89519

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.)

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

Well Name: 74-31

Lease Name/No: NVNV105724979 (old lease No. NVN98645) Split Estate? Yes No

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

Location of Well:

Domestic: Street: _____

City: _____ County: _____

Commercial and Industrial:

SE _____ ¼ of, NE _____ ¼ in Section 31

Township 01 North, Range 37 East

UTM Northing 4194246 N; UTM Easting 420992 E (NAD83 Datum)

County Esmeralda

(If applicable, give street address below.)

Street: _____

City: _____

State: _____ Zip: _____

Operator's Name: Ormat Nevada, Inc.
Address: 6140 Plumas Street
City, St Zip: Reno, NV 89519

Drilling Contractor's Name: _____
Address: _____
City, St Zip: _____

Rotary Rig Description: Wireline coring rig

Hole Size: 6.125 Casing Size: 4.5-inch Weight/Gauge: 12.6# HWT

Estimated Well Head Temperature: 200 F

Size of BOP: 2000 psi 3000 psi 5000 psi

Planned Use of Geothermal Resource:

Evaluate geologic structure and measure temperature gradients.

Planned Disposal of Spent Geothermal Fluid:

Sumpless drilling and all drilling mud and cuttings will be contained in portable mud tanks.

Type and Amount of Bond: BLM Nationwide Bond
(Exempt for Domestic Class)

Bond Issued by: _____ Serial No. _____

The Source of the Proposed Geothermal Resource is:

Lone Mountain Prospect

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

Total Depth to be drilled: 3,280 feet

Drilling will commence on or before: Quarter 3 or Quarter 4 2022; Pending BLM approval

Signature of Applicant/Agent: Kim Carter

Date: 4/21/22

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 : Cortney Luxford.....cluxford@minerals.nv.gov
and
Valerie Kneefel.....vkneefel@minerals.nv.gov

7. Additional Conditions/Comments

A.	
B.	
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 9/12/2022 with the conditions noted above.
Date

Permit Number 1541



Administrator
Division of Minerals



STEVE SISOLAK
Governor

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MICHAEL VISHER
Administrator

Las Vegas Office: 375 E. Warm Springs Rd. Ste 205, Las Vegas, NV 89119
Phone: (702) 486-4343. Fax: (702) 486-4345

**GEOHERMAL CONDITIONS OF APPROVAL
FOR TEMPERATURE GRADIENT WELL**

Submit forms and correspondence to: Nevada Division of Minerals
400 West King Street
Suite 106
Carson City, NV 89703

Operator: Ormat Nevada, Inc
Lease Name: BLM NVN-105724979 (old lease No. NVN-98645)
Well: Lone Mountain 74-31

Communications with the Division shall be directed to:

Cortney Luxford, Fluid Minerals Program Manager

Office 775-684-7045 Email cluxford@minerals.nv.gov
Cell 775-721-1774
Fax 775-684-7052

Michael Visher, Division Administrator

Office 775-684-7044 Email mvisher@minerals.nv.gov
Cell 775-721-7625
Fax 775-684-7052

Dustin Holcomb, Field Specialist - Geologist

Office 775-684-7046 Email dholcomb@minerals.nv.gov
Cell 775-721-2726
Fax 775-684-7052

Voicemail is available on all cell phones and office phones. Please leave a message if you are unable to speak to someone and we will return your call as quickly as possible.

By provision of the current Memorandum of Understanding between NDOM and BLM, you may contact the following individuals for information or approvals. Approvals under the MOU apply to Fee and Federal lease locations.

John Menghini, Fluid Minerals Team, Petroleum Engineer, Reno
Office 775-861-6573 Email jmenghin@blm.gov
Cell 775-223-1359
Fax 775-861-6711

Alex Jensen, Fluid Minerals Team, Acting Branch Chief, Reno
Office 775-861-6564 Email aajensen@blm.gov
Cell 775-560-2191
Fax 775-861-6711

Michael Erickson, PET, Reno
Office 775-861-6641 Email merickson@blm.gov
Cell 775-686-8351
Fax 775-861-6711

YOUR APPLICATION TO DRILL THE LONE MOUNTAIN 74-31 TEMPERATURE GRADIENT WELL, PERMIT 1541, IS APPROVED SUBJECT TO THE FOLLOWING PERMIT CONDITIONS

- 1. These conditions shall be posted at the well site and read by all company personnel associated with the subject wells.**
2. The operator shall give notification at least **48 hours prior** to spudding. These notifications may be by telephone or email. Please refer to the contacts list on page one of this notice.
3. Operator will monitor temperature of mud returns continuously. If temperature exceeds 150 degrees Fahrenheit, drilling operations must cease and the division contacted to review the drilling program. BOPE may be necessary to continue to TD.
4. Maintain daily drilling records and submit these to the Division with completion reports. The Completion Report shall include the name of the licensed water well driller and the driller's license number.
5. The operator in the event of a serious accident, blow out, oil spill or fire, lightning strike, break, leak, or overflow to notify the Division of Minerals immediately. In

the event of a spill of hydrocarbons of 25 gallons or more, you must contact NDEP at 1-888-331-NDEP (6337). You will be advised on clean up and disposal procedures.

6. Samples – NAC 534A.310 requires samples of cuttings or splits of core shall be collected and submitted to the Nevada Bureau of Mines and Geology (NBMG). Division conditions of approval further require a minimum of 30-foot intervals from surface to the total depth, unless otherwise approved in the permit. Core shall be submitted in skeletonized format.
 - a. TWO separate sets of cuttings, and one split of core, are to be sent prepaid to the Great Basin Science Sample and Records Library, Nevada Bureau of Mines and Geology, 2175 Raggio Parkway, Reno, Nevada 89512. For more information phone 775-682-8766 or e-mail [nbmg@unr.edu](mailto:nbmng@unr.edu).
 - b. EACH SET of cuttings is to consist of at least 15 milliliters of cuttings per sampling interval that must be cleaned, dried, and placed into 3"x5" sample envelopes. The envelopes are to be placed in order by interval into common drill cutting boxes with approximate dimensions of 3"x5"x20". The envelopes are to be identified by the Division permit number, well name/number as noted on the Geothermal Resource Development Permit Application, and interval.
 - c. The samples are to be PROPERLY IDENTIFIED as follows: Each box is to have legibly written on one end the name of the operator and well, as noted on the Geothermal Resource Development Permit Application, Division permit number, total interval (missing intervals noted), and set number.
 - d. NOTE: the samples are not to be sent to the Division of Minerals, rather they should be sent directly to the NBMG. **The samples are due within 30 days of completion of the well.** The operator will be responsible for the cost of any further handling of your samples by the NBMG required to meet the standards set out in this permit condition.
7. Pursuant to NAC 534A.465 a well that is inactive for 2 years must be plugged and abandoned. Temperature gradient wells must be plugged and abandoned in accordance with NAC 534A.480. Hole must be backfilled with mud, granulated bentonite, or bentonite/cement mix and 50 lineal feet of cement placed to surface. Surface must be restored as near as practicable to its original condition.

8. A plugging report must be filed within 30 days of the completion of plugging operations.

SUNDRY NOTICES
OIL, GAS AND GEOTHERMAL

Verbal approval for the following work may be given by the Division:

1. Any emergency work necessary to prevent or control blow outs or other situations with significant potential to result in injury to the crew or damage to the environment or resource.
2. Any kick-offs necessary to by-pass bad hole or fish left in hole.
3. Changes in casing points due to bad hole.
4. Deepening, attempting to encounter resource.
5. Drilling equipment failure.
6. Squeeze or plug backs to prevent any injected geothermal or oil field waters from contaminating other water zones.

The operator is required to file a written sundry notice with the division subsequent to verbal approval. Verbal approvals will not be given for any work that can be planned in advance, such as acidizing, changes in casing points or completion, etc., reentry of a well, remedial work, production or injection testing.