

DEC 0 3 2020

DIVISION OF MINERALS

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 /2/3/2020
API Number <u>27-0/9-90050</u>
County LYON
Permit Number 1502 FOR DIVISION USE ONLY
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#### GEOTHERMAL RESOURCE DEVELOPMENT PERMIT APPLICATION

Name or Corpo	orate/Bus	iness Name							
Whitegrass No	. 1, LLC								
Street Address	3451	N. Triumph B	lvd.						
City	Lehi				State UT		Zip Code	84043	
hereby make	es applic	ation for a g	eothermal de	velopment p	ermit, State	e of Neva	ida, Divis	ion of Minerals.	
(If applicant i	is a cor <u>p</u>	oration, sho	w state and d	ate of incor	poration; if a	a partner:	ship, list r	names of partne	rs.)
Organization of	hart on fi	le with NDON	1.						
		·							
This applicat	tion is fo	ra 🔲	Domestic we	I	Comm	ercial we	ell	Industrial v	vell
Oth	er, speci	fy:	Observation	well	■ Therm	al Gradie	ent well	Re-entry	
Note: Re-er	ntry inclu	des workove	er, deepening	, or plugging	g back oper	ations.			
Applicant is:		nd Owner	☐ Lease H	older					
Applicant is:	_	vame:	TG-B	oldei					
			Homestretch,				Split Est	ate? Tyes	■ No
	Land		☐ Federal		S. etc.)	Priv	•	State	
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Location of V									
	Street:								,
	City:				C	County: _			
Commercial a	and Indu	etrial:							
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Ť	ownship	15 N	-		 , Range	25E			
Į.	JTM Nod	hing 43371	53.8 N;	UTM Ea	sting 3114	57.1	E (NAD	 083 Datum)	
		g <u></u>	,		<u> </u>		,,,,,,,		
C	ounty	Lyon							
(1	f applica	ble, give str	eet address b	elow.)					
	treet:	21 Julian Ln							
C	ity:	Yerington							
	state:	Nevada					Zip: <u>894</u>	47	

Operator's Name: Whitegrass No. 1, LLC
Address: 3451 N. Triumph Blvd.
City, St Zip: Lehi, UT 84043
Drilling Contractor's Name: TBD (e.g., Welsco Drilling Corp.)
Address: TBD
City, St Zip: TBD
Rotary Rig Description: Rotary or core rig of suitable capacity to drill to 2,000ft.
Hole Size: 6 1/8" Casing Size: 2 7/8" Weight/Gauge: 6.5 lb/ft, J-55
Estimated Well Head Temperature: 60 degF
Size of BOP: 2000 psi ■ 3000 psi 5000 psi
Planned Use of Geothermal Resource:
Thermal gradient wells to measure heat flow. If developed, the geothermal resource will be used for power generation and possibly direct use applications.
Planned Disposal of Spent Geothermal Fluid:
No fluids will be produced.
Type and Amount of Bond: \$50,000 \$10,000 chshris ched. # 8420378 (Exempt for Domestic Class)
Bond Issued by: Lexon insurance Company Serial No. Bond#: 1151513
The Source of the Proposed Geothermal Resource is:
Tertiary Volcanic and/or Triassic Meta-sedimentary Rocks.
(List name of hot spring, geologic formation(s) or other source.)
Total Depth to be Drilled: 2,000
Drilling will Commence On or Before: August 1, 2020 December 3, 2020
Signature of Applicant/Agent: Date: 7/21/2020

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:	Lowell Pricelprice@minerals.nv.gov
		and
		Valerie Kneefelvkneefel@minerals.nv.gov

7. Additional Conditions/Comments

A.		
B.		
C.	U.	

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
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Approved  $\frac{12/3/2020}{Date}$  with the conditions noted above.

Permit Number <u>1502</u>

Administrator **Division of Minerals** 



# 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/



Michael Visher *Administrator* 

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

# GEOTHERMAL CONDITIONS OF APPROVAL FOR TEMPERATURE GRADIENT WELL TG-B, PERMIT 1502

Submit forms and correspondence to:

Nevada Division of Minerals

400 West King Street

Suite 106

Carson City, NV 89703

Communications with the Division shall be directed to:

Lowell Price, Fluid Minerals Program Manager

Office 775-684-7045 En

Email lprice@minerals.nv.gov

Cell 775-721-1774 Fax 775-684-7052

Courtney Brailo, Oil, Gas and Geothermal Program Manager

Office 775-684-7046

Email cbrailo@minerals.nv.gov

Cell 775-721-2726 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

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

Jose Rios, Fluid Minerals Team, Petroleum Engineer Technician, Reno

Office 775-861-6641

Email jrios@blm.gov

Cell 775-335-5934 Fax 775-861-6711

# YOUR APPLICATION TO DRILL THE **TG-B** TEMPERATURE GRADIENT WELL, PERMIT **1502**, 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.
- 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. Temperature gradient wells must be plugged and abandoned in accordance with NAC 534A.480 within 2 years of the drilling completion date. 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.
- 7. 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.

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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.