Administrative Permit Application North Valley Geothermal Groundwater Monitoring Wells

Submitted to Washoe County
November 8, 2024

Prepared for

ORNI 36, LLC 6884 Sierra Center Parkway Reno, NV 89511



North Valley Geothermal Groundwater Monitoring Wells

Administrative Permit

Table of Contents

Section 1

Washoe County Development Application

Section 2

- Project Description
 - Executive Summary
 - Background
 - Washoe County Master Plan and Zoning
 - Project Request
 - Project Description
 - Grading
 - Traffic and Parking
 - Landscaping
 - Neighborhood Meeting
- Administrative Permit Findings

- Maps
 - Vicinity Map
 - Aerial Map
 - Master Plan Map
 - Zoning Map
 - Proposed Well Locations
 - Reduced Civil Plans

Washoe County Development Application

Your entire application is a public record. If you have a concern about releasing personal information, please contact Planning and Building staff at 775.328.6100.

•			
Project Information	S	staff Assigned Case No.:	
Project Name: North Vall	ey Geotherm	al Groundwater Mor	nitoring Wells
	nents to existing or co	uction/installation of five groundwa nstruction of new access roadways	
Project Address:			
Project Area (acres or square fee	et): ~58,880 acres, ~3.73 a	cres of total disturbed area for well pads and	12.9 miles of access roads
Project Location (with point of re	ference to major cross	streets AND area locator):	
The project is located within two par PLPT owned land, accessed from the		ach and northeast of Pyramid Lake, d 17.	irectly northeast of
Assessor's Parcel No.(s):	Parcel Acreage:	Assessor's Parcel No.(s):	Parcel Acreage:
071-030-06	38,205		
074-290-06	20,676		
Indicate any previous Washo	e County approval	s associated with this applica	tion:
Case No.(s).			
Applicant Info	ormation (attach	additional sheets if necess	sary)
Property Owner:		Professional Consultant:	
Name: Bureau of Land Manager	ment	Name: Wood Rodgers, Inc	
Address: 5100 E Winnemucca E	Blvd	Address: 1361 Corporate Blvd	
Winnemucca, NV	Zip: 89445	Reno, NV	Zip: 89502
Phone:	Fax:	Phone:	Fax:
Email:		Email: shuggins@woodrodgers	.com
Cell:	Other:	Cell: 775-250-8213	Other:
Contact Person:		Contact Person: Stacie Huggin	S
Applicant/Developer:		Other Persons to be Contac	ted:
Name: ORNI 36, LLC		Name:	
Address: 6884 Sierra Center Pa	rkway	Address:	
Reno, NV	Zip: 89511		Zip:
Phone: (775) 356-9029	Fax:	Phone:	Fax:
Email: efreese@ormat.com		Email:	
Cell:	Other:	Cell:	Other:
Contact Person: Erica Freese		Contact Person:	
	For Office	Use Only	
Date Received:	Initial:	Planning Area:	
County Commission District:		Master Plan Designation(s):	
CAB(s):		Regulatory Zoning(s):	

Administrative Permit Application Supplemental Information

(All required information may be separately attached)

1. What is the type of project or use being requested?

Groundwater monitoring wells for associated geothermal operation

What section of the Washoe County code requires the Administrative permit required?

110.328.05

3. What currently developed portions of the property or existing structures are going to be used with this permit?

The parcels are primarily undeveloped with the exception of some existing dirt roads, which may be used to access the well pads where feasible.

4. What improvements (e.g. new structures, roadway improvements, utilities, sanitation, water supply, drainage, parking, signs, etc.) will have to be constructed or installed and what is the projected time frame for the completion of each?

Improvements/grading will be limited to not more than 5 well pads and access roads in accordance with the approved EA from BLM. Applicant anticipates beginning construction of the first well pad in Q1 2025.

5. Is there a phasing schedule for the construction and completion of the project?

N/A

6. What physical characteristics of your location and/or premises are especially suited to deal with the impacts and the intensity of your proposed use?

The various well pad sites are located in areas away from existing development on sites strategically identified by the BLM and PLPT to be optimal for ground water monitoring.

7. What are the anticipated beneficial aspects or effect your project will have on adjacent properties and the community?

Data from the groundwater monitoring wells will be used to determine future impacts, if any, on groundwater resources.

8. What will you do to minimize the anticipated negative impacts or effect your project will have on adjacent properties?

To reduce impacts associated with noise or dust, wells will be drilled one at a time and water trucks will apply water to roads as needed to reduce fugitive dust. Refer to Project Description in Section 2 for additional information.

9. Please describe any operational parameters and/or voluntary conditions of approval to be imposed on the administrative permit to address community impacts.

N/A		
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Given the type of propose	d use, no perman	ent parking spaces are a	inticipated to be needed
What types of landscaping (indicate location on site plar		fencing, painting scheme	, etc.) are proposed? (P
N/A			
What type of signs and ligl width, construction material of each sign and the typica plan.)	s, colors, illuminat	ion methods, lighting inte	nsity, base landscaping,
N/A			
Are there any restrictive co the area subject to the admi			
☐ Yes		☑ No	
Utilities:			
a. Sewer Service	N/A		
b. Water Service	N/A		
For most uses, the Washo Requirements, requires the and quantity of water rights	dedication of wat	er rights to Washoe Cou	nty. Please indicate the
c. Permit #		acre-feet per year	
d. Certificate #		acre-feet per year	
e. Surface Claim #		acre-feet per year	
f. Other, #		acre-feet per year	
Title of those rights (as file Department of Conservation			n of Water Resources o



North Valley Geothermal Groundwater Monitoring Wells Administrative Permit Project Description

PROJECT DESCRIPTION

Executive Summary

Commission District #: 5, Jeanne Herman Applicant: ORNI 36, LLC

APN Numbers: 071-030-06 and 074-290-06

Request: A request has been made for Administrative Permit to:

1) allow for groundwater monitoring wells per Article 328

Location: The project area is located 21 miles southwest of Gerlach, 8 miles northeast of

Pyramid Lake, and 4.3 miles west of Highway 447.

Background

The Applicant is proposing to construct and maintain groundwater monitoring wells (Project) as part of the North Valley Geothermal Development Project located in the San Emidio Desert, Washoe County. The Project, as planned, will include drilling of 5 groundwater monitoring wells and construction of new access roads and improvement to existing access roads. The wells and road works proposed as part of the Project are located on public lands managed by BLM.

As part of the North Valley Geothermal Development Project, the BLM approved an Environmental Assessment (EA) which analyzed the environmental impacts of the Applicant's North Valley Geothermal facility. In May of 2021, the BLM issued a Decision Record and Finding of No Significant Impact (FONSI) for the geothermal facility. The Decision Record required the Applicant to develop and implement a BLM and Pyramid Lake Paiute Tribe (PLPT) approved hydrological monitoring plan near the geothermal project. In January of 2022, the monitoring plan was approved by the BLM and PLPT, and the current request is a necessary step in implementation of the approved hydrological monitoring plan.

Washoe County Master Plan and Zoning

The project area spans 2 parcels within Washoe County totaling approximately 58,880 acres; however, the specific Area of Interest (AOI) is limited to approximately 5 square miles (sq mi). The entire project area has a master plan designation of Rural (R) and a zoning designation of General Rural (GR) and is located within the High Desert Area Plan (Refer to Vicinity Map, Site Aerial, Existing Master Plan Map, and Existing Zoning Map in Section 3 of this submittal packet).

Project Request

Included with this application is an Administrative Permit for groundwater monitoring wells associated with an existing geothermal plant in accordance with Section (§) 110.328.15 of the Washoe County Development Code (WCDC). Specifically, the project includes 5 groundwater monitoring wells and associated roads to access well sites.

Project Description

The applicant is proposing 5 groundwater monitoring wells, all located on public lands managed by the BLM in the AOI (refer to Proposed Well Locations Exhibit in Section 3).

As designed, the project anticipates temporary surface disturbance for 5 well pads all located on public lands administered by the BLM. Each well pad will be slightly less than 1 acre in size, with a total disturbed area for the 5 well pads of approximately 3.73 acres. Additionally, pads will be graded to match the physical and environmental characteristics of each well site to minimize disturbance. Once drilling is complete, the shoulders of the pad will be reclaimed, however, the majority of the pad would be kept clear for ongoing operations and/or the potential to redrill the well.

Wells will be drilled at varying depths to allow collection of depth to groundwater measurements, water quality measurements, and water quality samples. Note that the wells will be nonconsumptive to the water supply as they are designed to monitor groundwater.

In terms of employees, during construction of the well pads, there could be up to 10 workers at each active drill site for the duration of the well drilling, approximately 90 days. Personnel will sleep in a self-contained portable trailer on the active drill site while the well is being drilled. This is needed to ensure safety of the equipment and the well pad site as well as to gather data about the well site. Exploration drilling activities require a 24-hour operation and supervision to ensure a safe drilling environment at all times and to allow for immediate action during drilling activities and for the safety of the drill rig personnel.

Grading

Grading activities include well pads, improvements to existing roads or ground clearing for new roads. Specifically, each drill pad would be prepared to create a level pad for the drill rig and a graded surface for the support equipment. Each pad will include a reserve pit to contain and temporarily store stormwater runoff, drilling cuttings, and circulating drilling mud. The reserve pits would be fenced on three sides during drilling. Once drilling is complete, the fourth side will be fenced to prevent access by people, wildlife and/or livestock. The fencing will be built according to rangeland management specifications and will remain in place until reserve pit reclamation begins. To further prevent people, wildlife and/or livestock from accessing the reserve pits, walls on one side of the reserve pit will be sloped at an approximate 30 percent incline.

Other grading activities include new roads and/or improvements to existing roads providing access to the well pads. Where feasible, existing roads (aka "two tracks") will be used to access well pads, however, even existing roads will require an additional 10 feet width of surface disturbance for road improvements. Where new roads are necessary, they will require a 20 ft wide surface in order to accommodate a 15 ft wide drivable roadbed. As proposed, approximately 12.9 miles of roadways (new or improved) will be required to access the proposed well pads. It is worth noting that all roads will be constructed pursuant to BLM design criteria.

Traffic and Parking

Minimal traffic is anticipated once drilling is complete. A majority of the traffic will occur during construction of the well pads. A temporary drilling crew of approximately 10 workers will be at the active drill site for the duration of the well drilling (approximately 90 days). The drilling crew, consisting primarily of Ormat staff and contractors, will travel to the Project site daily for grading and drilling activities. To minimize dust, a water truck will be used to apply water to roads, as needed.

North Valley Geothermal Groundwater Monitoring Wells Administrative Permit – Project Description

As a part of the project, the Applicant is requesting a waiver to eliminate requirements associated with parking and maneuvering areas being paved. The applicant is requesting that this requirement be waived since paved parking is generally intended for the urban environment and the location of the well pads is very remote and does not include services like stormwater utilities including curb and gutter which are generally included with the installation of pavement.

Landscaping

The proposed project does not include any formal landscaping, and the applicant is requesting to waive all the provisions of Article 412 given the nature of the groundwater monitoring well pads. This is proposed in an attempt to support the Envision Washoe 2040 Master Plan, specifically Land Use (LU) Principal 3 (Support development that respects natural resources) and associated Policy 3.2 which states:

"Promote landscaping that is consistent with best practices for resource sustainability, habitat preservation and enhancement, and natural hazard resilience."

Following this policy, rather than providing landscaping, the applicant would prefer to keep the area looking natural and undisturbed. Efforts in grading when clearing the land, including preserving the topsoil, will help to ensure the success of re-establishing the native vegetation after it has been disturbed by grading processes. No formal landscaping is proposed as it will not reflect the character of the High Desert Planning Area. It is also worth noting that the Applicant will be required to comply with BLM requirements to reclaim disturbed sites to the pre-disturbed condition, which would be counter-intuitive to providing landscaping.

As a part of the project, the Applicant is requesting that the requirements associated with landscaping and screening be waived to help the project meet the standards envisioned in the High Desert Planning Area. Proposing formal landscaping including trees and screening shrubs in accordance with WCDC §110.412 would have a negative visual impact on the area and take away from the character of the area since the native vegetation does not include plant types typically found in more formal landscaping, including the use of trees. While no formal landscaping is proposed, the applicant will meet Washoe County (and BLM) standards for revegetation and stabilization of disturbed areas.

Neighborhood Meeting

As required, the applicant hosted a Neighborhood Meeting on October 22, 2024, from 5:30 – 6:30pm to discuss the project prior to this application. Postcards were mailed to 36 property owners within 750 feet of the project site. Given the location of the project, the meeting was hosted virtually and 5 people participated. An overview of the project was presented, and questions were asked related to monitoring well locations, impacts to water sources, ground water contamination, and next steps. The pre-application meeting materials, including a recording of the Neighborhood Meeting presentation, were uploaded to the Washoe County HUB website.

FINDINGS

Administrative Permit Findings

Prior to approving an application for an Administrative Permit, the Planning Commission, Board of Adjustment, or a hearing examiner shall find that all of the following are true:

(a) Consistency. The proposed use is consistent with the action programs, policies, standards and maps of the Master Plan and the applicable area plan;

Response: The project area is designated as Rural and in accordance with WCDC, monitoring wells are an allowed use through the approval of an Administrative Permit. The proposed project has been designed to meet goals and policies within the Envision Washoe 2040 Master Plan; specifically, Adaptation and Resiliency (AR) Principle 3 (Mitigate the impacts of climate change on residents) and associated Policy 3.4 which states that Washoe County will: "Encourage development of alternative and renewable energy generation and infrastructure, including but not limited to solar, wind, and geothermal to benefit the community/County." The impotence of the current request is installation of associated geothermal infrastructure (groundwater monitoring wells) to ensure nearby geothermal activity is not affecting the long-term sustainability of the groundwater, consistent with AR Policy 3.4.

(b) Improvements. Adequate utilities, roadway improvements, sanitation, water supply, drainage, and other necessary facilities have been provided, the proposed improvements are properly related to existing and proposed roadways, and an adequate public facilities determination has been made in accordance with Division Seven;

<u>Response:</u> Access to the proposed well pad sites will utilize existing roads where feasible, however, new roads may also be necessary. As proposed, there is approximately 12.9 miles of existing roadways to be improved or new roadways to be constructed, with a total disturbance estimated to be 31 acres which accounts for a 20 ft wide road section with 15 ft drivable roadbed. Given the type and temporary nature of the project proposed, no utility services are anticipated.

(c) Site Suitability. The site is physically suitable for the type of development and for the intensity of development;

<u>Response:</u> As previously stated, the project area is an area that has been previously identified as an appropriate area for groundwater monitoring by the BLM and PLPT, therefore suggesting it is physically suitable for this type of development (i.e. – monitoring wells). In terms of topography, the proposed well pads are located in areas that are relatively flat and with slopes generally less than 30%.

(d) Issuance Not Detrimental. Issuance of the permit will not be significantly detrimental to the public health, safety or welfare; injurious to the property or improvements of adjacent properties; or detrimental to the character of the surrounding area; and

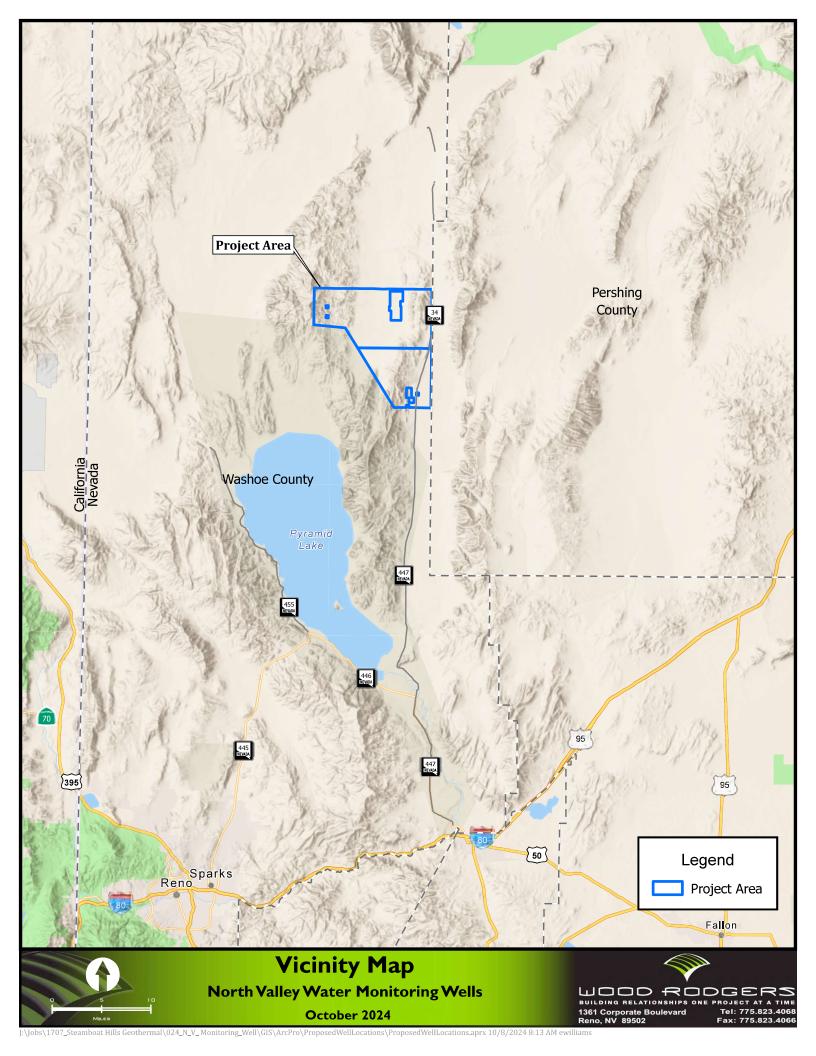
<u>Response:</u> The proposed project (up to 5 well pads for monitoring purposes) will not be detrimental to public health, safety or welfare or to the character of the surrounding area.

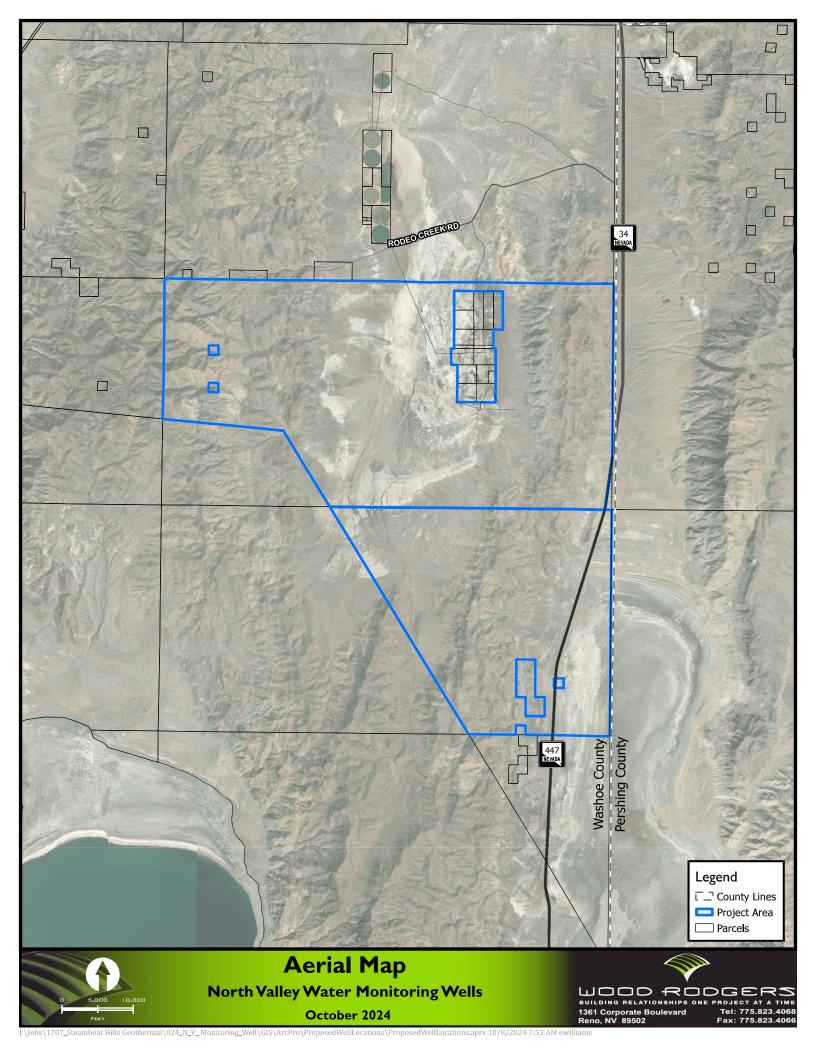
North Valley Geothermal Groundwater Monitoring Wells Administrative Permit – Project Description

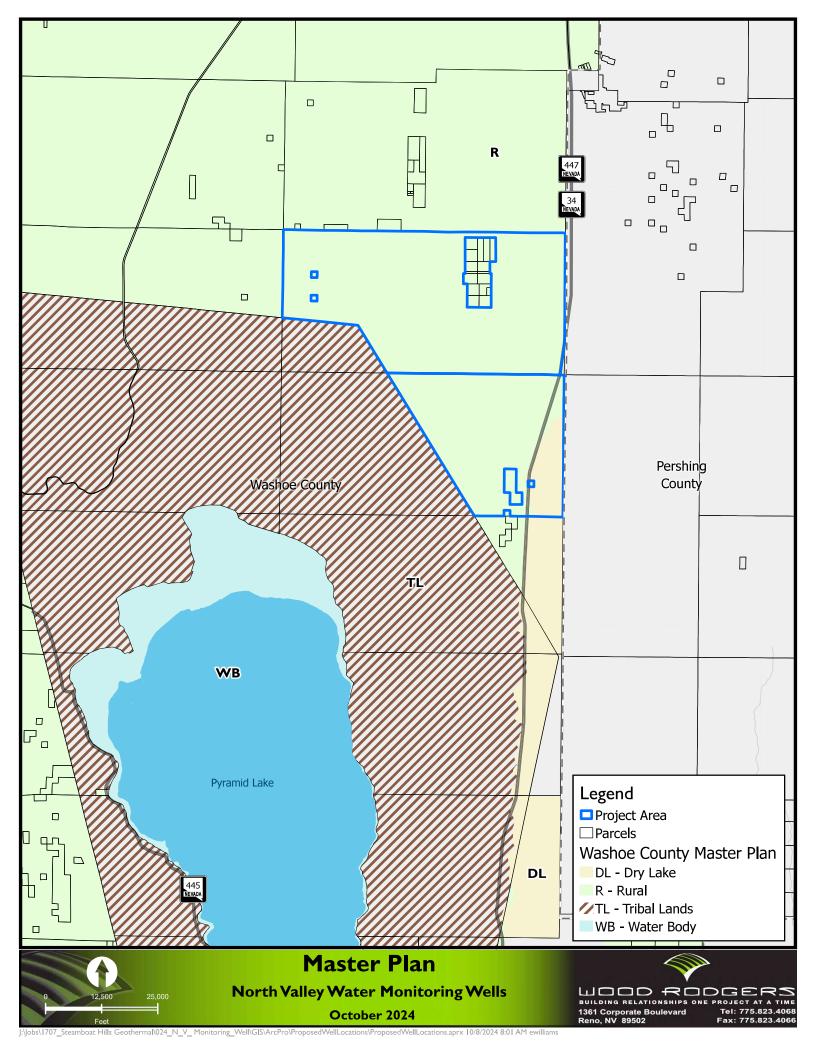
It is also worth noting that prior to the submittal of this Administrative Permit, the BLM approved the Environmental Assessment (EA) for the North Valley Geothermal Development Project. The EA analyzed the environmental impacts of the Applicant's North Valley Geothermal Project. The BLM issued a Decision Record and FONSI in May of 2021, and the Decision Record required the Applicant to develop and implement a BLM and PLPT approved hydrological monitoring plan, which was concurrently approved in January of 2021. The current request is a necessary action in implementation of the approved hydrological monitoring plan.

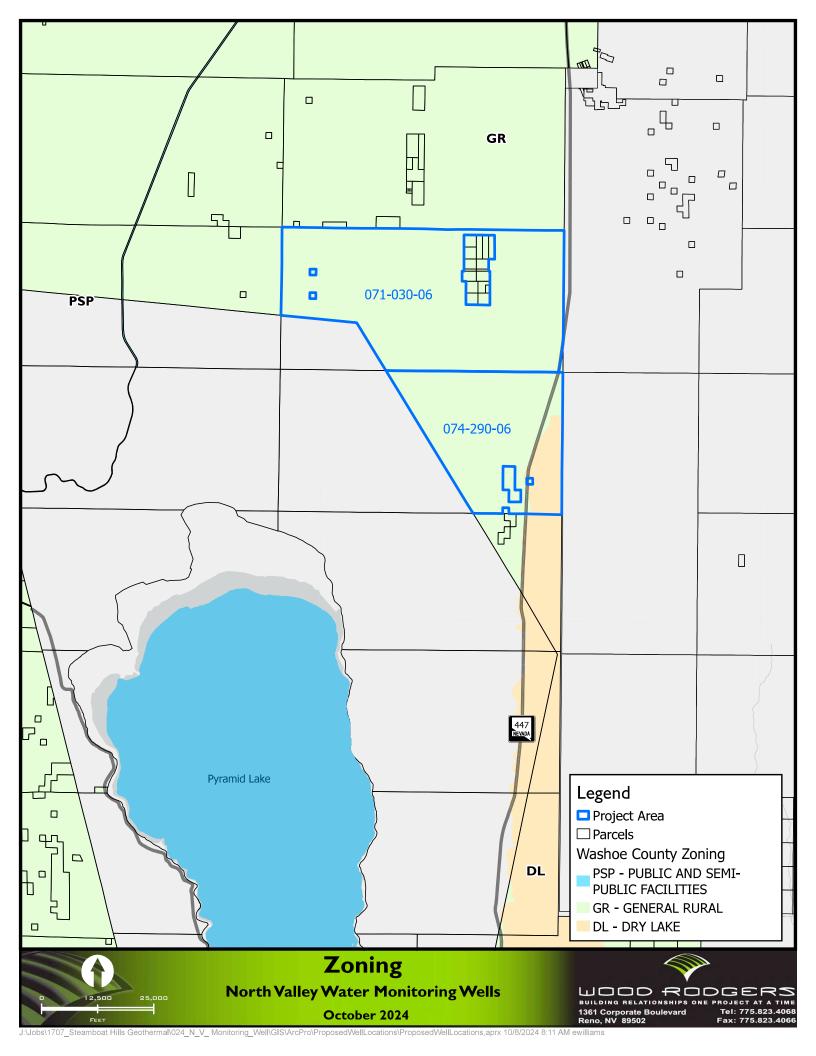
(e) Effect on a Military Installation. Issuance of the permit will not have a detrimental effect on the location, purpose or mission of the military installation.

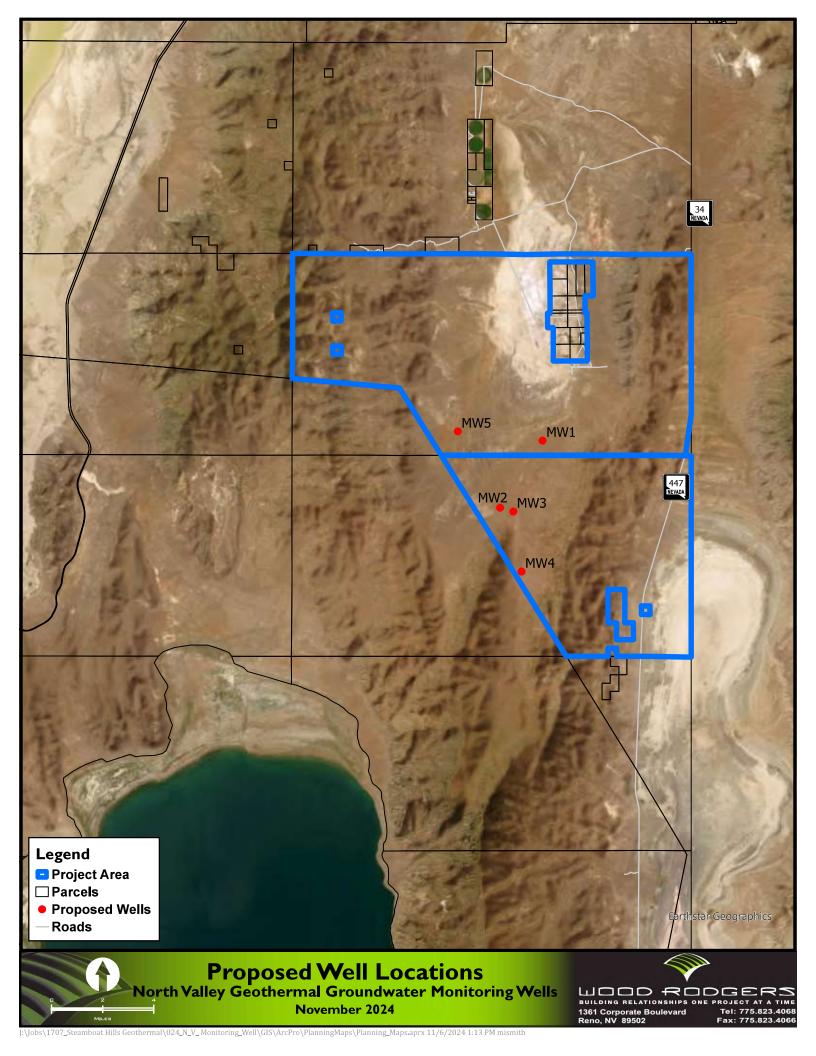
Response: N/A











NORTH VALLEY GEOTHERMAL MONITORING WELLS

ADMINISTRATIVE PERMIT TITLE SHEET

DEVELOPER:

ORMAT TECHNOLOGIES INC. 6884 SIERRA CENTER PARKWAY RENO. NV 89511

BASIS OF BEARING:

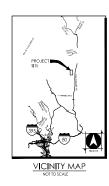
NEVADA STATE PLANE COORDINATE SYSTEM, NEVADA WEST ZONE 27/13, NORTH AMERICAN DATUM OF 1983 (NAD. 1983 CONUS MOCIODISCY), AD SERVINED USING SEAL TIME KINDMATIC (RTI) GES OBSERVATIONS WITH CALL DIMENSIONS SHOWN ARE GROUD DISTANCES, GRID TO GROUND COMBINED FACTOR = 1,0002288552

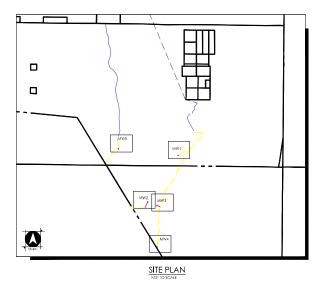
BASIS OF ELEVATION:

U.S. GEOLOGICAL SURVEY, 2017. 1/SRD ARC-SECOND DIGITAL ELEVATION MODELS [DEMS] - USGS NATIONAL MAP 3DEP DOWNLOADABLE DATA COLLECTION: U.S. GEOLOGICAL SURVEY.

THE IX A TILD COLLECTION OF THE 3D EXAMIDATION STORY.

BESTURDUMED BY DAYLAND AND STORY OF THE S





SITE INFORMATION:

SITE PLAN STATISTICS

SITE AREA: ~58,880 AC DISTURBED AREA (12,9 MILES OF ROADWAYS); ~31.0 AC DISTURBED AREA (WELL PADS); ~3.7 AC

PROJECT LOCATIO

KOLELI DUCATION.
SAN EMIDIO UNIT AREA IN ALL OR PORTIONS OF SECTIONS 19-22 AND 27-34, TOWNSHIP 30 NORTH, RANGE 23 EAST; SECTIONS 3-10, 15-22, AND 27-34, TOWNSHIP 29 NORTH, RANGE 23 EAST (129N, R238), MOUNT DIABLO BASELINE AND MERIDIAN (MDBBAM).

ENGINEERS STATEMENT:

I. TODD GAMMILL, DO HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED BY ME OR UNDER MY SUPERVISION AND WAS COMPLETED ON THE 8th DAY OF NOVEMBER, 2024.

TODD GANNAL P.E. #13693



SHEET INDEX

SHT No. DWG ID		DRAWING DESCRIPTION		
1	FI	ITTE SHEET		
2	S-1	PRELIMINARY SITE PLAN		
3	G-1	PRELIMINARY GRADING PLAN		
4	G-2	PRELIMINARY GRADING PLAN		
5	G-3	PRELIMINARY GRADING PLAN		
6	G-4	PRELIMINARY GRADING PLAN		
7	G-5	PRELIMINARY GRADING PLAN		
8	D-1	DETAIL SHEET		

NORTH VALLEY
GEOTHERMAL MONITORING
WELLS
TITLE SHEET



1861 Corporate Boulevard

7004

NOVEMBER 2024

SHEET T-1 OF 8

NORTH VALLEY GEOTHERMAL MONITORING WELLS

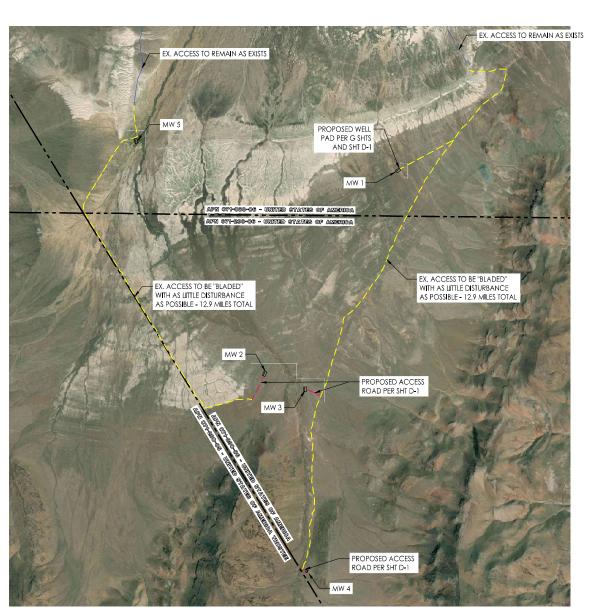
ADMINISTRATIVE PERMIT OVERALL SITE PLAN

LEGEND

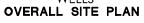
EX. DIRT ROAD TO REMAIN EX. DIRT ROAD TO BE IMPROVED

PROPOSED NEW DIRT ROAD MONITORING WELL

PROPOSED WELL PAD









Reno, NV 89502

NOVEMBER 2024

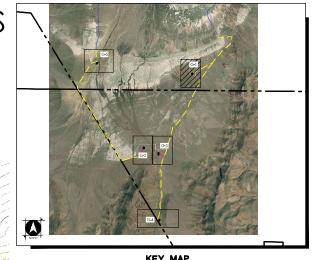
SHEET S-1OF8

NORTH VALLEY GEOTHERMAL MONITORING WELLS ADMINISTRATIVE PERMIT **GRADING PLAN**

3:1 FILL SLOPE

EXISTING ACCESS ROAD TO -"BLADED" (SEE SHEET S-1)

3:1 GUT SLOPE WITH V-DITCH



KEY MAP

LEGEND



PARCEL LINE EX. DIRT ROAD TO REMAIN EX. DIRT ROAD TO BE IMPROVED PROPOSED NEW DIRT ROAD MONITORING WELL

PROPOSED WELL PAD



NORTH VALLEY GEOTHERMAL MONITORING

WELLS

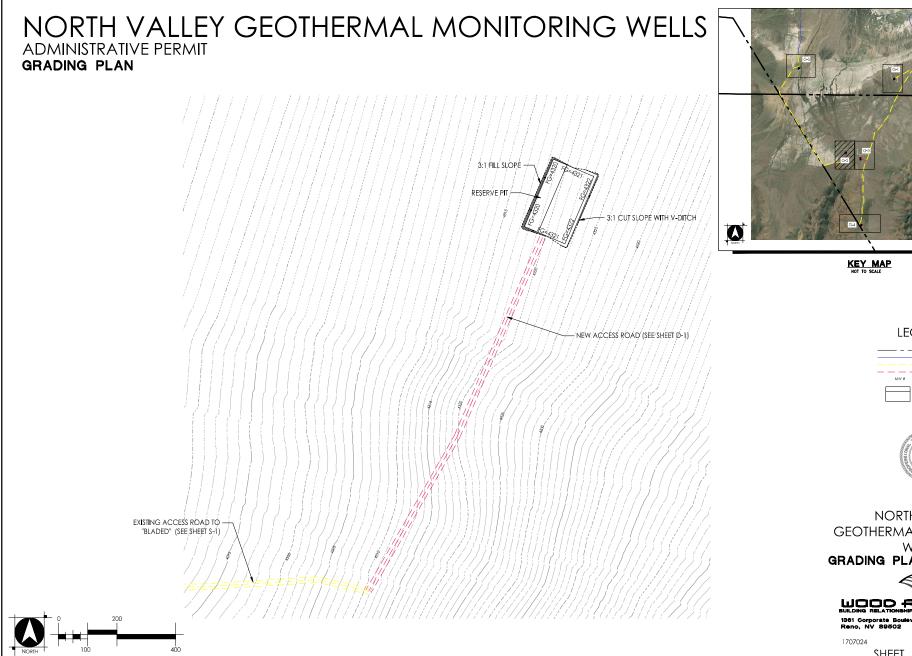
GRADING PLAN - PAD MW1

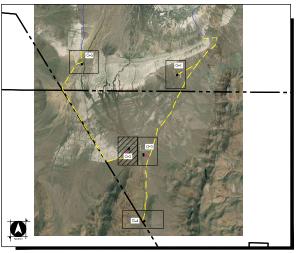


NOVEMBER 2024

SHEET G-1OF 8







LEGEND

EX, DIRT ROAD TO REMAIN EX. DIRT ROAD TO BE IMPROVED MONITORING WELL



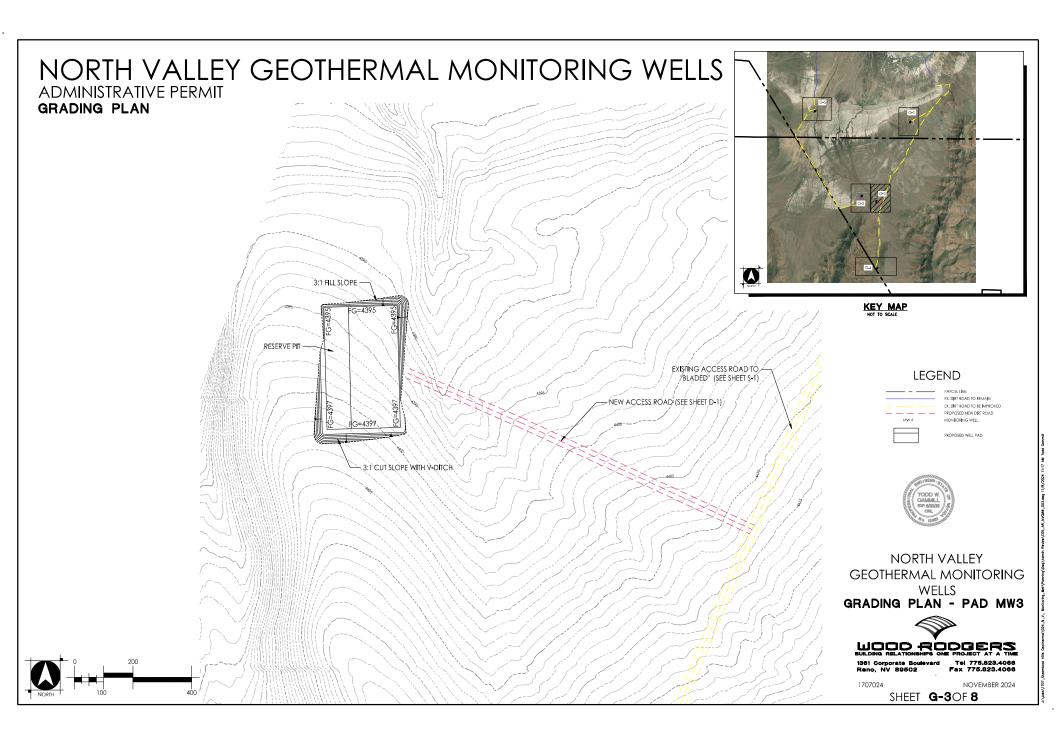
NORTH VALLEY GEOTHERMAL MONITORING **WELLS**

GRADING PLAN - PAD MW2



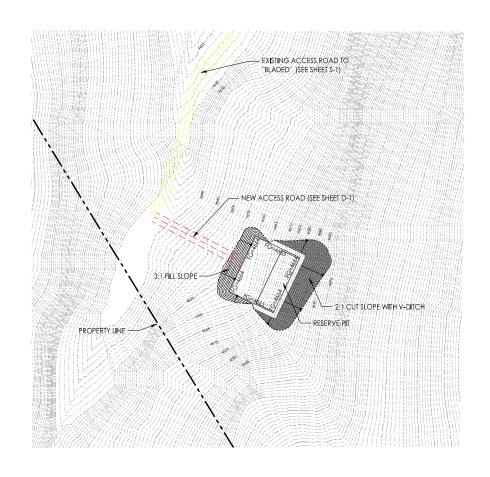
NOVEMBER 2024

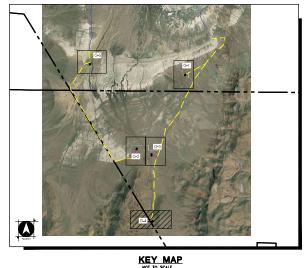
SHEET G-2OF 8



NORTH VALLEY GEOTHERMAL MONITORING WELLS ADMINISTRATIVE PERMIT

GRADING PLAN





LEGEND

EX. DIRT ROAD TO REMAIN EX. DIRT ROAD TO BE IMPROVED. PROPOSED NEW DIRT ROAD MONITORING WELL PROPOSED WELL PAD



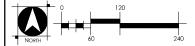
NORTH VALLEY GEOTHERMAL MONITORING **WELLS**

GRADING PLAN - PAD MW4



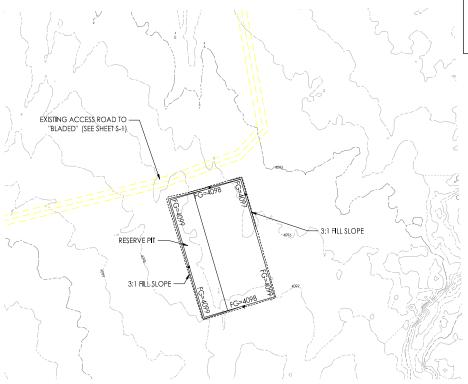
NOVEMBER 2024

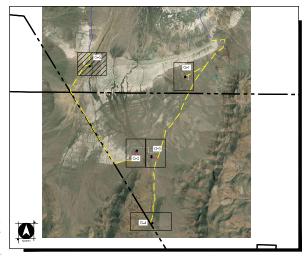
SHEET G-4OF8



NORTH VALLEY GEOTHERMAL MONITORING WELLS ADMINISTRATIVE PERMIT

GRADING PLAN





KEY MAP

LEGEND



PROPOSED WELL PAD



NORTH VALLEY GEOTHERMAL MONITORING

WELLS

GRADING PLAN - PAD MW5



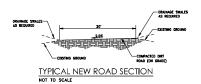
NOVEMBER 2024

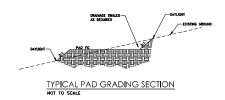
SHEET G-5OF 8

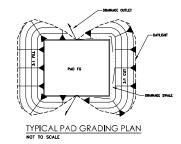


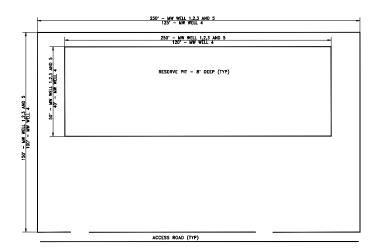
NORTH VALLEY GEOTHERMAL MONITORING WELLS

ADMINISTRATIVE PERMIT **DETAIL SHEET**









TYPICAL MONITORING WELL PAD LAYOUT NOT TO SCALE



NORTH VALLEY
GEOTHERMAL MONITORING
WELLS
DETAIL SHEET



Reno, NV 89502

Tel 775.823.4068 Fax 775.823.4066

1707024

NOVEMBER 2024

SHEET D-1OF8