

**MEMORANDUM OF AGREEMENT
BETWEEN THE
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT WINNEMUCCA DISTRICT OFFICE
AND THE
NEVADA STATE HISTORIC PRESERVATION OFFICER
REGARDING THE
ORNI 52 LLC/ORMAT
BALTAZOR GEOTHERMAL DEVELOPMENT
AND BALTAZOR TRANSMISSION LINE PROJECT
HUMBOLDT COUNTY**

WHEREAS, the United States Department of the Interior, Bureau of Land Management, Winnemucca District (BLM) plans to issue a permit to Orni 52 LLC, a subsidiary of Ormat Technologies Inc. (collectively, Ormat) for the proposed Baltazor Geothermal Development and Baltazor Transmission Line Project (hereinafter known as the Project) situated in Humboldt County, Nevada, thereby making the Project an undertaking subject to review under the National Historic Preservation Act, codified at 54 U.S.C. § 306101 et seq., and its implementing regulations at 36 CFR Part 800 et seq. (hereinafter known as Section 106); and

WHEREAS, the Project will construct 11 geothermal wells, approximately 2 miles of access road, approximately 2 miles of pipeline, a 5-acre gravel pit, an electrical substation, and up to 2 geothermal power plant facilities. The Project will also upgrade approximately 3 miles of an existing electrical transmission line from a 14.4-kilovolt capacity to a 115-kilovolt capacity to connect the geothermal development to the electrical grid (Project description in Appendix A); and

WHEREAS, the Project is an undertaking subject to review under Section 106 and is a standalone undertaking unconnected to any other undertakings; and

WHEREAS, BLM has determined the Project's Direct Area of Potential Effects (APE) as an area approximately 3 miles long and 0.25 mile wide, totaling 166 acres, and the Indirect APE as a one-mile buffer around the geothermal development area totaling 2,307 acres immediately surrounding the Direct APE. The Direct and Indirect APEs cover public and private lands in Pueblo Valley north of Continental Lake between the Pueblo Mountains and the Pine Forest Range in Humboldt County, Nevada, located in Township 46 North, Range 28 East, sections 1, 11, 12, 13, and 14; Township 47 North, Range 29 East, sections 13, 24, and 25; and Township 47 North, Range 30 East, sections 18 and 19; and

WHEREAS, BLM, in consultation with the Nevada State Historic Preservation Officer (SHPO), has determined that implementation of the Project will have adverse effects on two (2) historic properties eligible for listing in the National Register of Historic Places (NRHP) under the Secretary of Interior's Significance Criterion identified after the Smithsonian number 26HU7305 (Criterion A) and 26HU2210 (Criterion D) and will require the monitoring of seven (7) historic properties and unevaluated cultural resources (26HU6858, 26HU7296, 26HU7297, 26HU7300, 26HU8263, 26HU8264, and 26HU8276) located within the APE; and

WHEREAS, the BLM is currently analyzing and publicly disclosing the potential impacts of the Project as required by the National Environmental Policy Act (NEPA), and may choose to authorize the Project at the conclusion of the NEPA analysis; and

WHEREAS, the Advisory Council on Historic Preservation (ACHP) has not been invited to participate in this undertaking because the BLM has determined that it does not meet the regulatory requirements for ACHP participation as stipulated in Component 5 of the 2012 *Programmatic Agreement Among the Bureau of Land Management, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers Regarding the Manner in Which BLM Will Meet Its Responsibilities Under the National Historic Preservation Act*; and

WHEREAS, the BLM has notified the following Native American tribes in the area about the Project—the Fort McDermitt Paiute and Shoshone Tribe and the Summit Lake Paiute Tribe—(collectively hereinafter known collectively as the Tribes and individually by their name) and BLM has offered the Tribes the opportunity to be concurring parties to this Memorandum of Agreement (MOA); and

WHEREAS, the BLM has coordinated public participation for the undertaking through the NEPA process, and has determined that there are no interested members of the public who might have concerns regarding the effect of the Project on historic properties; and

WHEREAS, the BLM has consulted with Ormat regarding the effects of the Project on historic properties and has invited Ormat to sign this MOA as an invited signatory; and

WHEREAS, jointly BLM, the SHPO, and Ormat will be called the signatories and individually as signatory or by their name; and

WHEREAS, the definitions given the 2014 State Protocol Agreement regarding the identification, evaluation, and treatment of historic properties on lands managed by the Nevada BLM are applicable throughout this MOA;

NOW, THEREFORE, it is mutually agreed by BLM and the SHPO that the Project will be implemented in accordance with the following stipulations in order to take into account the effects of the Project on the historic properties.

STIPULATIONS

BLM shall ensure that the following stipulations are implemented:

I. Historic Properties Treatment Plan (IPTP) Implementation

- A. The BLM, in consultation with the SHPO, has developed a HPTP (Appendix B, Stoner 2020) for the historic properties that will be adversely affected by the Project.

- B. Ormat shall ensure completion of the HPTP and that a qualified (as determined by the BLM through the cultural resource use permitting process, in addition to meeting the Secretary of the Interior's qualifications in archaeology) cultural resource management firm (hereinafter known as the cultural contractor) completes the tasks and treatments outlined in the HPTP. All deliverables such as reports will be written or reviewed by a Principal Investigator qualified for the resource type and location according to the cultural contractor's BLM cultural resource use permit. All monitoring will be conducted by a Principal Investigator or Crew Chief qualified for the resource type and location according to the cultural contractor's BLM cultural resource use permit.
- C. The schedule for completion of treatment tasks is outlined in the HPTP. If changes are needed after the start date due to any unforeseen circumstances associated with the Project and the schedule, the dates will be revised accordingly by Ormat and the cultural contractor and submitted to the BLM for review and approval by the BLM. The BLM shall provide the revised schedule to the SHPO for review and comment no later than five (5) working days from BLM approval. This revision may not require an amendment to the MOA per Stipulation VII.

II. Notifications and Notices to Proceed

- A. In the event that the Project design or layout is modified in any way after the date of execution of this MOA—including but not limited to modifications to well pad locations, rerouting of pipelines or roads, or changes to the construction techniques of the transmission line—Ormat shall notify the BLM authorized officer in writing within one (1) business day. All ground disturbing activity associated with the Project modification(s) shall not be implemented until the BLM has reviewed the modifications, confirmed that historic properties would not be adversely affected, and issued a Notice to Proceed (NTP). BLM will provide the SHPO with all documentation related to the Project modifications within five (5) working days of the issuance of an NTP.

If after review of the notification the BLM determines that historic properties would be adversely affected by the Project modification(s) the BLM will notify the SHPO and the Tribes, as appropriate, and initiate the development of an amendment per Stipulation VII for the HPTP and this MOA as necessary.

- B. Ormat or the cultural contractor shall notify the BLM archaeologist via email and phone call at least one (1) business day prior to the implementation of ground disturbing activity within 30 meters of any of the historic properties that require archaeological monitoring (26HU6858, 26HU7296, 26HU7297, 26HU7300, 26HU8263, 26HU8264, and 26HU8276). The notification will at a minimum include information including dates and locations of ground disturbing activities, and the name of the cultural contractor and specific staff who will be conducting the monitoring.
- C. The BLM may issue Notices to Proceed (NTP) to Ormat after the BLM and the SHPO have had the opportunity to review the following to ensure conformance with the HPTP:

1. Ormat shall not begin any ground disturbing activity within one mile of sites 26HU7305 and 26HU2210 until the BLM issues an NTP. In the event that all proposed ground disturbing activities do not occur concurrently, the BLM may issue separate NTPs specifying the locations where ground disturbing activities may occur.
2. Ormat shall ensure that the cultural contractor provides the BLM with a summary of the fieldwork (e.g., photo-documentation, mapping, etc.) for each historic property after it is completed. Ormat shall ensure the work summaries are submitted to the BLM within five (5) business days of completion of the work.
3. BLM shall complete their review of work summaries within ten (10) business days of receipt. The BLM will determine if the fieldwork satisfies the requirements of the HPTP. Ormat shall ensure that the cultural contractor addresses any comments raised by the BLM within ten (10) business days of receipt and resubmit the field summary for BLM review.
4. BLM will forward the fieldwork summary and the BLM's intention to issue a NTP to the SHPO and request concurrence from the SIPO.
5. The SIPO will complete their review within ten (10) business days. If the SHPO does not respond within the ten (10) business days, the BLM may issue the NTP.
6. If the SIPO identifies any concerns, the BLM will work with them to resolve the issues and submit the updated work summary to the SHPO. If the SHPO does not respond within five (5) business days from date of receipt of the updated summary, the BLM may issue the NTP.

III. Review of IPTP Mitigation Deliverables

- A. BLM shall ensure that Ormat, through its cultural contractor, submits drafts of all mitigation products and deliverables (e.g., photo documentation, professional paper, updated IMACS forms; hereinafter referred to as mitigation documents) described in the IPTP to BLM either individually or as a single submission within twelve (12) months of the completion of the fieldwork as outlined in the HPTP.
 1. BLM shall review the draft mitigation documents and either accept or reject the draft mitigation documents. Upon BLM acceptance of the draft mitigation documents, BLM shall provide the draft mitigation documents to the SHPO for review and comment.
 2. BLM may provide comments on the draft mitigation documents to improve technical quality or compliance with BLM guidelines and standards. Ormat, through its cultural contractor, will revise the draft mitigation documents to address BLM comments.
 3. The SIPO will have thirty (30) calendar days from receipt to provide comments on the draft mitigation documents. If the SHPO does not respond within thirty (30) calendar days of receipt, the BLM may finalize the draft mitigation documents.

4. BLM will address all SHPO comments on the draft mitigation documents. BLM will direct Ormat, or the cultural contractor, to make the necessary changes to the draft mitigation documents.
5. BLM will submit the updated draft final mitigation documents to the SHPO.
6. The SHPO will have fifteen (15) calendar days from receipt to provide comments on the draft final mitigation documents. If the SHPO does not respond within fifteen (15) calendar days of receipt, the BLM may finalize the mitigation documents.

IV. Post- Review Discoveries and Unanticipated Adverse Effects to Historic Properties

- A. Inadvertent discoveries or unanticipated adverse effects to historic properties during implementation of the HPTP will be addressed in accordance with the process outlined in the HPTP (Appendix B, Chapter 5). In the event that inadvertent discoveries are made, or unanticipated adverse effects are determined that cannot be addressed by the HPTP, then the processes outlined in 36 CFR § 800.13(b)(2) or the NAGPRA regulations at 43 CFR § 10.3 and 43 CFR § 10.4, as appropriate, will be implemented.
- B. Human remains and associated grave goods discovered on public lands will be addressed in accordance with the Native American Graves Protection and Repatriation Act and the processes outlined in the HPTP. Human remains and associated grave goods discovered on private land will be addressed in accordance with the process outlined in the HPTP following the provisions of Nevada Revised Statutes 383. This MOA is intended to meet the terms found in NRS 383.121 as amended (Chapter 523, Statutes of Nevada 2017, page 3544) for an “existing agreement with a federal agency that was executed pursuant to federal law and that relates to the discovery of prehistoric native Indian human remains or a funerary object.” Execution of this MOA means that the provisions for notification found in NRS 383.121, as amended, do not apply. Standard notification requirements found in NRS 383.150 to NRS 383.190, as amended, do apply.

V. Post-Construction Monitoring

Ormat will ensure that the 7 historic properties requiring monitoring during construction (26HU6858, 26HU7296, 26HU7297, 26HU7300, 26HU8263, 26HU8264, and 26HU8276) are periodically monitored after construction to ensure that any operations or maintenance activities do not cause inadvertent damage or disturbance. Ormat will ensure that a cultural resources contractor meeting the qualifications described in Stipulation I.B monitors the 7 sites at intervals of 3, 6, and 9 years from the issuance of the NTP. The results of the monitoring will be provided to the BLM in writing and must include photographs of the sites and discussions of changes to each site or lack thereof.

VI. Dispute Resolution

- A. Should any signatory object to any proposed actions or to the manner in which the terms of this MOA are implemented, the BLM shall consult with the objecting party to resolve

the objection. If either the objecting party or the BLM determines the objection cannot be resolved, the following actions may be taken:

1. The BLM shall forward all the documentation relevant to the dispute to the ACHP. The ACHP shall provide the BLM and the objecting party its advice on resolution of the objection within 30 days of receipt of adequate documentation. Prior to reaching a final decision on the dispute, the BLM shall prepare a written response that takes into account the advice provided by the ACHP and any comments from signatories or concurring parties to this MOA. The BLM shall provide the written response to all signatories and concurring parties. The BLM shall then proceed according to its final decision.
2. If the ACHP does not provide advice regarding the dispute within 30 days, the BLM may make a final decision provided it has taken into account the comments provided by the signatories and concurring parties. The BLM shall provide all parties and ACHP with the final written decision and proceed accordingly.
3. BLM's responsibility to carry out all other actions subject to the terms of this MOA that are not the subject of a dispute will remain unchanged.

VII. Amendments

This MOA may be amended with the written consent of the signatories. Any amendment will be effective on the date a copy is signed by all the signatories. The BLM shall provide a copy to the ACHP.

VIII. Termination

If any signatory to this MOA determines that its terms will not or cannot be carried out, that signatory shall immediately consult with the other signatories to attempt to develop an amendment per Stipulation VII, above. If within thirty (30) days (or another time period agreed to by all signatories) an amendment cannot be reached, any signatory may terminate the MOA upon written notification to the other signatory and invited signatory.

If the MOA is terminated, and prior to work continuing on the undertaking, the BLM must either (a) execute an MOA pursuant to 36 CFR § 800.6, or (b) request, take into account, and respond to the comments of the ACHP under 36 CFR § 800.7. The BLM shall notify the signatories as to the course of action it will pursue.

IX. Duration

This MOA will become effective upon execution by the BLM and the SHPO and will expire if its stipulations are not carried out within ten (10) years from the date of full execution or unless it is terminated under Stipulation VIII. At such time, and prior to work continuing on the Project, BLM shall either (a) execute a MOA pursuant to 36 CFR § 800.6, or (b) request, take into account, and respond to the comments of the ACHP under 36 CFR § 800.7. Prior to such time, BLM may consult with the SHPO and Ormat to

reconsider the terms of the MOA and amend it in accordance with Stipulation VII. above. BLM shall notify the SHPO and Ormat as to the course of action it will pursue.

X. Transfer

If the Project is sold or otherwise transferred to another operator or entity, all provisions of this MOA will remain in effect unless the MOA is amended or terminated following the stipulated processes. BLM will notify the signatories in writing within sixty (60) days of learning of any Project sale or transfer.

XI. Execution

EXECUTION of this MOA by the BLM and the SHPO, and implementation of its terms evidence that the BLM has taken into account the effects of the Project on historic properties.

This MOA may be executed in counterparts, each of which shall constitute an original, and all of which shall constitute one and the same agreement.

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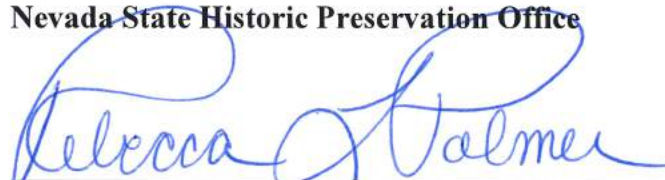
SIGNATORIES:

Department of the Interior, Bureau of Land Management, Winnemucca District



Nathaniel L. Arave, Acting Humboldt River Field Manager
Date: 10/23/2020

Nevada State Historic Preservation Office



Rebecca L. Palmer, Nevada State Historic Preservation Officer
Date: 10/29/2020

INVITED SIGNATORY:

Ormat Technologies Inc.

Date:

CONCURRING PARTIES:

Fort McDermitt Paiute and Shoshone Tribe

Tildon Smart, Chairman
Date:

Summit Lake Paiute Tribe

Randi Lone Eagle, Chairwoman
Date:

LIST OF APPENDICES

Appendix A: Project Proposal and Figures

Appendix B: *A Historic Properties Treatment Plan for the Proposed Ormat Technologies, Inc. Baltazor Geothermal Development Project in Humboldt County, Nevada*

**APPENDIX A:
PROPOSED ACTION
AND
PROJECT FIGURES**

UTILIZATION PLAN

BALTAZOR
GEOHERMAL DEVELOPMENT PROJECT
HUMBOLDT COUNTY, NEVADA

October, 2019

Project Applicant:

ORNI 52 LLC
6140 PLUMAS ST
RENO, NV 89519

**ORNI 52 LLC
BALTAZOR
GEOTHERMAL DEVELOPMENT PROJECT**

**UTILIZATION PLAN
43 CFR 3272.11 AND 3272.12**

ORNI 52 LLC (Ormat) is proposing to construct, operate, and maintain the Baltazor Geothermal Development Project (Project). The Project would include the construction and operation of energy generation facilities, geothermal fluid production and injection well pads and wells, access roads, geothermal fluid pipelines, and ancillary support facilities. The Project is located in Humboldt County, Nevada (see Figure 1).

The Project is located within the Baltazor Geothermal Unit (NVN-92225X), which is comprised of federal geothermal leases NVN-86871, NVN-86874, NVN-91820, and NVN-91821 (Project Area). The Baltazor unit area encompasses approximately 10,355 acres of public lands in all or portions of Sections 1, 12, 13, 14, 22, 23, and 24, Township 46 North, Range 28 East (T46N R28E), Sections 13, 24, 25, and 36, Township 47 North, Range 29 East (T47N R29E), and Sections 7, 8, 17, 18, 19, and 20, Township 47 North, Range 30 East (T47N R30E), Mount Diablo Baseline and Meridian (MDB&M), (see Figure 2). Temporary disturbance totals from project construction would be 72 acres, and after interim reclamation permanent disturbance for the geothermal development project would be 67.6 acres.

Principal access to the Project area is from State Route 140, which runs adjacent to the Project area. The Project area is traversed by numerous roads and “two tracks.”

The contents of this Utilization Plan are organized as requested in 43 CFR 3272.11 and 43 CFR 3272.12, as detailed below.

§ 3272.11 How should I describe the proposed utilization facility?

Your description must include:

(a) A generalized description of all proposed structures and facilities, including their size, location, and function;

Energy Plants

The Baltazor energy plants would each be approximately 24 MW net rated (30 MW gross) energy generation facilities. The proposed energy plants would each be located on approximately 15-acre sites within Sections 13 and 14, Township 46 North, Range 28 East (T46N R28E). (see Figures 4 and 5). An approximate 0.50 acre substation, used to transform generated low voltage electrical energy to the higher voltage required for interconnecting to a transmission line, would be constructed within the energy plant boundary (see Figure 6).

The most prominent features of the energy plant, both in height and mass, are the air-cooled condensers. They range between 28 and 35 feet in height and are about two-thirds the length of the site. The balance of the plant is an array of pipes and a small building to house electrical equipment. The perimeter of the site is fenced with chain link to prevent unauthorized entry.

Ancillary facilities and energy plant components that would be constructed on the energy plant site include offices, restrooms, the electrical room and control room, maintenance building, condensing fan equipment, geothermal fluids containment basin, electrical substation and other smaller ancillary structures.

All buildings housing the offices, electrical room, control room and auxiliary buildings would be a rigid, steel-frame, pre-engineered structure with steel panel walls and a steel roof. The exterior of the building would be painted consistent with BLM visual color guidelines to blend in with surrounding areas.

Two (2) 500-gallon diesel and one (1) 500-gallon unleaded above ground storage tanks will be located within the power plant footprint. These above ground fuel storage tanks will be double walled construction and will be placed in concrete secondary containment basins.

A chain link fence would be installed around the main facility area in order to prevent unwarranted access to the facility by the public and the entering of wildlife into the facility/electrical generation area. The chain link fence would be equipped with controlled-entry gates to allow vehicle egress/ingress as necessary.

Well Field

The number of geothermal production and injection wells required for the Project is principally dependent on the productivity (or injectivity) of the wells and the temperature and pressure of the produced geothermal fluid. Production wells flow geothermal fluid to the surface. Injection wells are used to inject geothermal fluid from the energy plant into the geothermal reservoir. Injection ensures the longevity and renewability of the geothermal resource.

Ormat is proposing 11 production and injection wells, all located within the Baltazor Unit on public lands managed by the Bureau of Land Management (BLM). Figures 4 and 5 show the locations of these proposed production and injection wells, and Table 1 lists the name and approximate location of each of these production and injection wells.

Table 1: Baltazor Production and Injection Wells

Well Name (Kettleman No.)	Lease Number	Legal Description ¹ (Section Number & Aliquot Part)	Approximate UTM Coordinates (NAD83)	
			Easting (m)	Northing (m)
18-12	N-86871	SW ¼, SW ¼, Section 12	357868.63	4643240.49
25-12	N-86871	NW ¼, SW ¼, Section 12	358058.60	4643832.10
27-12	N-86871	SW ¼, SW ¼, Section 12	358061.25	4643435.23
33-12	N-86871	SE ¼, NW ¼, Section 12	358176.71	4644074.80
38-12	N-86871	SE ¼, SW ¼, Section 12	358204.12	4643199.75
41-12	N-86871	NE ¼, NW ¼, Section 12	358503.95	4644511.55
44-12	N-86871	SE ¼, NW ¼, Section 12	358467.56	4643968.23
46-12	N-86871	NE ¼, SW ¼, Section 12	358333.77	4643496.08
21A-13	N-86871	NW ¼, NW ¼, Section 13	357911.90	4642965.00
55-14	N-86871	NW ¼, SE ¼, Section 14	357075.16	4642217.04

Well Name (Kettleman No.)	Lease Number	Legal Description ¹ (Section Number & Aliquot Part)	Approximate UTM Coordinates (NAD83)	
			Easting (m)	Northing (m)
83-14	N-86871	SE ¼, NE ¼, Section 14	357592.93	4642554.16
¹ All wells are located in Township 46 North, Range 28 East, Mount Diablo Baseline and Meridian				

The production and injection well locations are tentative and may need to be adjusted as additional geologic, geophysical, and geothermal reservoir information is obtained as new wells are drilled and tested.

Permanent surface disturbance for the 11 proposed well pads would be 2.1 acres per pad, or 23.1 acres in total (11 well pads * 2.1 acres/pad).

Drill pad preparation activities would include clearing, earthwork, drainage and other improvements necessary for efficient and safe operation and for fire prevention. Only those drill pads scheduled to be drilled would be cleared. Clearing would include removal of organic material, stumps, brush and slash, which would be either be removed and taken to an appropriate dump site, or left onsite. Topsoil would be stripped (typically to the rooting depth) and salvaged during the construction of all pads, as feasible. Salvaged topsoil (and cleared organic material, stumps, brush and slash, if saved) would be stockpiled for use during final reclamation of the disturbed areas.

Each drill pad would be prepared to create a level pad for the drill rig and a graded surface for the support equipment. Storm water runoff from undisturbed areas around the constructed drill pads would be directed into ditches surrounding the drill pad and back onto undisturbed ground, consistent with best management practices for storm water. The pad surface would be graded to prevent the movement of storm water off of the constructed site but rather into the reserve pit, and has been designed for a 100-year storm.

Reserve pits would be constructed in accordance with best management practices identified in the “Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development (The Gold Book)” (Fourth Edition – Revised 2007) on each pad for the containment and temporary storage of water, drill cuttings and circulating drilling mud during drilling operations. Geothermal fluid produced from the well during flow testing will also drain to the reserve pit.

The reserve pits would be fenced with an enclosure fence on three sides and then fenced on the fourth side once drilling has been completed to prevent access by persons, wildlife or livestock. The fence would remain in place until pit reclamation begins. For the drilling of each well, the reserve pit would measure approximately 75 feet by 200 feet by 10 feet deep. To prevent livestock, wildlife, and persons from becoming entrapped, one side of the reserve pit walls will be sloped at an approximate 30% incline.

Once a well is drilled and well head completed, an industrial grate would be placed over the hole to prevent humans and wildlife from falling into the cellar. The approximate 2.1 acre well pads will be fenced on all four sides to limit access.

Each of the production wells would be equipped with a lineshaft pump to bring the geothermal fluid to the surface under pressure. The electricity to power the wellhead pump motors would be supplied via an insulated electric conductor installed from the power plant to the wellheads along the connecting pipelines.

kV interconnection transmission line. The electrical generator would be connected to the substation via 13.8 kV line(s).

Interconnection Line

Ormat would connect the proposed electrical substation to the electrical grid in the project area via a 115 kV transmission line operated by Harney Electric Cooperative (Harney). The tap to the existing Harney line will occur on ORNI 52's leases.

(b) A generalized description of proposed facility operations, including estimated total production and injection rates; estimated well flow rates, pressures, and temperatures; facility net and gross electrical generation; and, if applicable, interconnection with other utilization facilities. If it is a direct use facility, send us the information we need to determine the amount of resource utilized;

The 24 MW net (30 MW gross) Baltazor energy plant would utilize a binary design with an air-cooled heat rejection system.

The geothermal fluids for the binary energy plant would be produced from the production wells by pumping. Once delivered to the energy plant, the heat in the geothermal fluid would be transferred to the "binary" (or secondary) fluid in multiple stage non-contact heat exchangers. The binary turbine units would use pentane (C₅H₁₂), a flammable but non-toxic hydrocarbon, as the binary fluid, which circulates in a closed loop. The heat from the geothermal fluid vaporizes the binary fluid, which turns the binary turbine and electrical generator to make electricity.

The vaporized binary fluid exits the turbine and is condensed back into a liquid in a shell-and-tube, non-contact, air-cooled condenser. The condensed binary fluid is then pumped back to the heat exchangers for re-heating and vaporization, completing the closed cycle.

The residual geothermal fluid from the heat exchangers is pumped under pressure out to the geothermal injection wells through the injection pipelines and injected back into the geothermal reservoir. The geothermal fluid would flow through the binary energy plant in a closed system, with no emissions of non-condensable gases to the atmosphere.

During normal well field operations, total geothermal fluid production rates are expected to be approximately 15,150 gallons per minute (gpm) at 280°F. Individual production well flow rates are expected to be approximately 2,165 gpm with a wellhead pressure of about 220 pounds per square inch gauge (psig).

Geothermal fluid injection rates are approximately 15,150 gpm. Individual injection wells are expected to receive approximately 2,165 gpm of 170°F geothermal fluid with wellhead injection pressures of about 300 psig.

(c) A contour map of the entire utilization site, showing production and injection well pads, pipeline routes, facility locations, drainage structures, and existing and planned access and lateral roads;

Please see Figure 5.

(d) A description of site preparation and associated surface disturbance, including the source for site or road building materials, amounts of cut and fill, drainage structures, analysis of all site evaluation studies prepared for the site(s), and a description of any additional tests, studies, or surveys which are planned to assess the geologic suitability of the site(s);

Upon BLM approval, initial site preparation would commence with grubbing and clearing of the utilization area. Following grubbing and clearing, topsoil would be removed and stockpiled for later use in revegetation and reclamation. Subsequently, cutting of slopes would be required where necessary.

As much as possible, native materials (derived from grading to balance cut and fill) would be used for site and road building materials. Approximately 55,000 cubic yards of surfacing material may be needed for energy plant and pipeline construction.

A new aggregate pit, encompassing approximately 5 acres, is proposed to be located adjacent to the proposed 18-12 drill site (see Figures 4 and 5). In the event this aggregate pit cannot fulfill the Project needs, additional material would be obtained from the Denio Junction community pit located off of State Route 140, approximately 6.5 miles east of the Project area. While utilizing the Denio Junction community pit for aggregate material is unlikely, in the event it was to be expanded to fulfill the Project needs the pit would be surveyed. The location of the aggregate sources is shown in Table 2.

Drill pads and access roads were selected to minimize the need for aggregate application. At most, each drill pad (exclusive of the reserve pit) would be covered with up to 6 inches of gravel. Total aggregate required for well pad construction is estimated at 18,700 cubic yards (approximately 1,700 cubic yards/pad * 11 pads totals 18,700 cubic yards).

New access roads would be covered with up to 4 inches of gravel, as necessary to create an all-weather surface and to prevent the formation of ruts. Total aggregate required for new access road construction is estimated at 2,200 cubic yards (approximately 8,709 feet of new access roads * 20-foot width * 4 inches depth totals 2,150 cubic yards).

Total aggregate required for the well pads, new access road construction, and improving existing roads is estimated at 21,000 cubic yards (18,700 cubic yards for pad construction plus 2,200 cubic yards for new road construction totals 20,900 cubic yards).

Table 2: Aggregate Sources

Aggregate Source Area	Township, Range, Section	<u>Easting</u> <u>Northing</u>
New aggregate pit near 18-12	T46N, R28E, Section 12	357809 4643382
Denio Junction community pit	T47N, R30E, Section 22	365712 4643255

Pipeline Construction

Pipeline construction would begin by vertically auguring nominal 24-inch diameter holes into the ground about three to five feet deep at approximately 30-foot intervals along the pipeline route (twin holes for two supports may be drilled at the pipeline anchor points, which would be located at the center of each expansion loop and in between each expansion loop). Dirt removed from the holes would be cast on the ground adjacent to each hole. The steel pipe “sleeper” would be placed in the hole and concrete poured to fill the hole slightly above the ground surface. The steel pipe sleeper would extend above the concrete, averaging approximately one foot above ground surface.

Prior to placement, pipe would be staged on the closest well pad. While the concrete is curing, the approximately 30-foot long steel pipe sections would be delivered and placed along the construction corridor. A small crane would lift the pipe sections onto the pipe supports and temporary pipe jacks so that they could be welded together into a solid pipeline. Once welded and the welds tested, the pipe would be jacketed with insulation and an aluminum sheath (appropriately colored, likely covert green, to blend with the area).

When completed, the top of the new geothermal pipelines would average three feet above the ground surface. However, a number of pipeline lengths could be up to six feet in height to accommodate terrain undulations and to facilitate movement of wildlife and livestock through the wellfield.

Electrical power and instrumentation cables for the wells would then either be installed in steel conduit constructed along the same pipe sleepers or hung by cable from pipe along the pipeline route.

The pipelines would be constructed across roads to allow continued vehicle access. This would typically use the cut-and-fill method, where a trench would be cut through the road, a prefabricated, “U”-shaped, oversized pipe sleeve (containing the fabricated geothermal fluid pipeline with the insulation and metal cladding in place) installed in the trench, the excavated dirt backfilled and compacted around and above the oversize pipe sleeve, and the roadbed material repaired or replaced. Alternatively, the pipelines could be constructed across the roads on sleepers (as described above) and the roadbed run up and over the pipeline. This would entail constructing a concrete conduit over a pipeline where it crosses a road, then compacting dirt on either side of the conduit sufficient to ramp the roadbed up and over the conduit to allow traffic to travel over the pipeline.

Energy Plant Construction

Construction activities would be the same at either energy plant site. Preparation activities would begin with clearing, earthwork, drainage and other improvements necessary for commencement of construction. Clearing would include removal of organic material, stumps, brush and slash.

A portion of the energy plant site and adjacent well pads would be devoted as staging areas for equipment and materials laydown, storage, construction equipment parking, small fabrication areas, office trailers and parking. Equipment and materials laydown space is required for large turbine parts, structural steel, piping spools, electrical components, switchyard apparatus, and building parts. Mobile trailers or similar suitable facilities (e.g., modular offices) would be brought to the site to be used as construction offices for owner, contractor, and subcontractor personnel. Travel trailers would be used for construction management to reside on the site and would provide for 24 hour management and emergency response. Parking would be provided for construction workers and visitors within the energy plant area.

Temporary utilities would be provided for the construction offices, the laydown area, and the energy plant site. Temporary construction energy would be supplied by a temporary generator and, if available at the site, by utility-furnished power. Area lighting would be provided for safety and security. Drinking water would be imported and distributed daily. Portable toilets would be provided throughout the site, office and travel trailers and would connect to temporary septic holding systems.

Consistent with safety requirements, energy plant buildings, structures, pipe, etc. would each be painted an appropriate color (likely covert green) to blend with the area and minimize visibility.

Access Road Construction

New access roads with a 20-foot wide road bed would be constructed using a dozer and/or road grader. New access roads would be required as follows (see Figures 4 and 5):

- Approximately 1,587 feet of new road would be constructed to 18-12;
- Approximately 4,407 feet of new road would be constructed from the gravel pit to 41-12;
- Approximately 146 feet of new road would be constructed to 33-12;
- Approximately 693 feet of new road would be constructed to 44-12;
- Approximately 421 feet of new road would be constructed to 25-12;
- Approximately 279 feet of new road would be constructed to 38-12;
- Approximately 943 feet of new road would be constructed to 46-12;
- Approximately 242 feet of new road would be constructed to 27-12.

The total estimated area of surface disturbance required for new access road construction would be approximately 5.0 acres (8,709 feet of road * 25-foot-wide surface disturbance totals 4.99 acres).

Constructed access roads crossing existing drainages may require installation of culverts. Culvert installation would follow BLM design criteria and would be constructed pursuant to standards established in the Gold Book (Fourth Edition - Revised 2007).

(e) The source, quality, and proposed consumption rate of water used during facility operations, and the source and quantity of water used during facility construction;

Water required for well drilling could range up to as much as 30,000 gallons per day. Water requirements for grading, construction, and dust control would average substantially less. One or more portable water tank(s) holding a combined total of at least 10,000 gallons would be maintained on the well sites during drilling operations.

Water required for construction activities would be obtained from geothermal fluid, an established private ranch source and trucked to each construction or drill site, or a shallow water well(s) drilled from one or more of the proposed drill sites as approved by the BLM. As necessary, temporary construction water pipeline would be utilized and laid on the side of the existing roads and no additional surface disturbance is anticipated.

Up to approximately 325 gallons of water will be consumed per day for the facility operations (0.37 acre-feet per year). This water, used for septic purposes, will be obtained from the sources identified above and will be trucked to the power plant and stored onsite. Drinking water will be purchased from a commercial bottled water source.

Water quality information would be known prior to its usage.

(f) The methods for meeting air quality standards during facility construction and operation, especially standards concerning non-condensable gases;

There would be no non-condensable gas emissions during normal operations. However, some of the binary working fluid would be released to the atmosphere from rotating seals and flanges. Also during normal operations, a small quantity of air enters the pentane loop in the air-cooled condenser. This air leaked into the pentane loop is discharged back to the atmosphere through a stack, along with a small quantity of pentane. During major maintenance activities on the pentane side of the binary power plant units, the liquid pentane would first be transferred to the pentane storage tank. However, not all of the pentane can be removed in this manner, and the residual pentane would be discharged to the atmosphere when the binary power plant unit is opened. All of these releases, estimated to average about 12 tons per year, are regulated through a permit issued by BAPC to ensure that these emissions do not result in ambient concentrations of ozone (which can be created from the reaction of ambient concentrations of hydrocarbons and NO_x) in excess of the applicable Ambient Air Quality Standards.

Ormat would continue to maintain its Surface Area Disturbance (SAD) permit with the Nevada Department of Environmental Protection – Bureau of Air Pollution Control (NDEP-BAPC), and continue to implement the required actions to minimize fugitive dust emissions, during the well drilling and construction phases of the project. Once the plant is operational, the SAD regulation would continue as a part of the Project NDEP-BAPC Air Quality Operating permit.

(g) An estimated number of personnel needed during construction and operation of the facility;

Project construction would likely require a maximum of up to 50 workers, with an average of 20 to 30 workers after grading and excavation. Once operating, the Project would have a staff of approximately 15-20 employees. The power plant would be staffed and approximately 1-2 employees may be onsite at a given time.

(h) A construction schedule;

Construction of the energy plant and well field facilities would take approximately 8 months once all permits are obtained and equipment orders are scheduled.

(i) A schedule for testing of the facility and/or well equipment, and for the start of commercial operations;

Flow, temperature and pressure would be continuously monitored. Well integrity would be tested every five years. Commercial operations are anticipated to commence in late 2020.

(j) A description of architectural landscaping or other measures to minimize visual impacts; and

The energy plant, pipelines, wellheads, pump motors and motor control buildings would each be painted consistent with BLM visual guidelines to blend with the area and minimize visibility. The fence constructed around each of the production well sites would also be painted an appropriate color to blend with the area.

(k) Any additional information or data which we may require.

Ormat would provide appropriate additional information upon request.

§ 3272.12 How do I describe the environmental protection measures I intend to take?

(a) Describe, at a minimum, your proposed measures to:

(1) Prevent or control fires;

All construction and operating equipment would be equipped with applicable exhaust spark arresters. Fire extinguishers would be available on the site. Water that is used for construction and dust control would be available for firefighting. Personnel would be allowed to smoke only in designated areas, and they would be required to follow applicable BLM regulations regarding smoking. The following fire contingency plan is provided below:

Fire Contingency Plan

1. Any small fires which occur around the well pad during drilling and/or testing operations should be able to be controlled by rig personnel utilizing on-site firefighting equipment.
2. The BLM Winnemucca District Office (775.623.1500) would be notified of any wildland fire, even if the available personnel can handle the situation or the fire poses no threat to the surrounding area. Additionally, the Central Nevada Interagency Dispatch Center would be notified at 775.623.3444.
3. A roster of emergency phone numbers would be available onsite so that the appropriate firefighting agency can be contacted in case of a fire.
4. All vehicles shall carry at a minimum a shovel and five gallons of water (preferably in a backpack pump), in addition to a conventional fire extinguisher.
5. Adequate firefighting equipment (a shovel, a pulaski, standard fire extinguisher(s), and an ample water supply) shall be kept readily available at each active drill site.
6. Vehicle catalytic converters (on vehicles that would enter and leave the drill site on a regular basis) shall be inspected often and cleaned of all flammable debris.
7. All cutting/welding torch use, electric-arc welding, and grinding operations shall be conducted in an area free, or mostly free, from vegetation. An ample water supply and shovel shall be on hand to extinguish any fires created from sparks. At least one person in addition to the cutter/welder/grinder shall be at the work site to promptly detect fires created by sparks.
8. Personnel would be responsible for being aware of and complying with the requirements of any fire restrictions or closures issued by the BLM Winnemucca District Office, as publicized in the local media or posted at various sites throughout the field office district.

(2) Prevent soil erosion;

BLM best management practices for storm water would be followed, as applicable, on public lands as described below.

Cut and fill activities would be minimized through the selection of the energy plant site and pipeline routes. Off-site storm water would be intercepted in ditches and channeled to energy dissipaters as necessary to minimize erosion around the energy plant. To minimize erosion from storm water runoff, access roads would be maintained consistent with the best management practices to development roads.

(3) Protect surface or ground water;

Exclusive of short- and long-term flow testing wherein fluids would be discharged to the reserve pit, geothermal fluids would not be discharged to the ground under normal operating conditions. Further, geothermal wells are cased to prevent co-mingling of the geothermal fluids with underground aquifers.

(4) Protect fish and wildlife;

Erosion control measures after construction will include revegetation and periodic maintenance. Disturbed areas that will not be used after construction will be revegetated with the proper seed mixture and planting procedures prescribed by the BLM. Any topsoil enriched in organic material may be stockpiled on previously disturbed areas and applied to enhance areas to be reclaimed by revegetation.

To prevent undue degradation and removal of habitat, cover and food, existing roads will be used whenever possible and cross country travel will be restricted to designated construction areas or to BLM-approved temporary overland pipelines. Speed limits of 35 mph would be observed on all unpaved roads in the project area in order to minimize dust and avoid collision and incidental death of local wildlife.

Additionally, once the well is drilled and well head completed, an industrial grate is placed over the hole to prevent humans and wildlife from falling into the cellar.

There is no known fish habitat within the proposed project area.

(5) Protect cultural, visual, and other natural resources;

Cultural resource surveys have been conducted over the proposed project area. In consultation with BLM and with SHPO concurrence, any proposed areas of disturbance which contain cultural resources eligible for inclusion on the National Register of Historic Places (NRHP), would be mitigated or “treated” and recorded as appropriate.

Ormat employees, contractors, and suppliers would be reminded that all cultural resources are protected and if uncovered, the resource shall be left in place, work would cease and notification would be made to

the Ormat representative and the appropriate BLM authorized office, by telephone, with written confirmation to follow, immediately upon such discovery.

(6) Minimize air and noise pollution; and

Ormat would comply with any air quality requirements prescribed by the NDEP-BAPC. Water would be applied to the ground during the construction and utilization of the drill pads and access roads as necessary to control fugitive dust.

Ormat would obtain a Surface Area Disturbance (SAD) permit with the NDEP-BAPC, and implement the required actions to minimize fugitive dust emissions, during the well drilling and construction phases of the project.

To abate noise pollution, mufflers would be used on all drilling rig engines. Each well pad may have one rock muffler. Rock mufflers are approximately 30 feet tall with a diameter of 10 feet and are used to attenuate steam venting noise during well testing.

(7) Minimize hazards to public health and safety during normal operations.

Construction and operation activities would be conducted in a manner to avoid creating any hazards to public health and safety. The project is remotely located and would not likely cause hazards to public health and safety. A power plant operations and maintenance manual would be developed in parallel with site construction. This manual would be available onsite once the plant commences operations.

Additionally, a spill or discharge contingency plan is provided below:

Spill or Discharge Contingency Plan

1. Potential Sources of Accidental Spills or Discharges
 - a. Geothermal Fluid
Accidental geothermal fluid spills or discharges are very unlikely because the hole would be cased and blowout prevention equipment would be utilized. However, accidental discharges or spills could result from any of the following:
 - (1) Loss of well control (blowout);
 - (2) Pipeline leak or rupture;
 - (3) Leakage from test tank
 - b. Drilling Muds
Muds are a mixture of water, non-toxic chemicals and solid particles used in the drilling operations to lubricate and cool the bit in the hole, to carry cuttings out of the hole, to maintain the hole condition and to control formation pressure. Drilling muds are prepared and stored in metal tanks at the drilling site. Waste drilling mud and cuttings are discharged into the reserve pit, which is open and is adequately sized to hold the volume necessary for the operation. Accidental discharges of drilling mud are unlikely, but could occur by:
 - (1) overflow of the reserve pit;
 - (2) reserve pit wall seepage or wall failure;
 - (3) discharge from equipment failure on location; or
 - (4) shallow lost circulation channeling to the surface.

- c. **Lubricating or Fuel Oils and Petroleum Products**
A discharge of this type would probably be very small and be from equipment used in the field. To minimize the potential for spills, all petroleum products on site are labeled, stored and handled in conformance with applicable federal and state requirements. All materials except diesel fuel are stored in the original shipping containers. Diesel fuel is stored in on-board tanks on the drill rig and replenished from a bulk tank truck using an electric transfer pump and hard lines. Supervisors trained in spill prevention, containment and clean-up are on-site 24 hours a day. Potential locations for accidental spills are:
(1) drilling equipment and machinery at and around the drilling location;
(2) other miscellaneous equipment and machinery at well site and roads;
(3) storage areas; and
(4) equipment servicing areas.
- d. **Construction/Maintenance Debris**
Trash shall be contained on-site and hauled to an approved landfill. Burial of trash on-site shall not be permitted.

2. **Plan for Cleanup and Abatement**

In the event of discharge of formation fluids, drilling muds or petroleum products, the person responsible for the operation would make an immediate investigation, then contact the Drilling Supervisor and advise him of the spill. The Drilling Supervisor would in turn call out equipment, regulate field operations, or do other work as applicable for control and cleanup of the spill, as follows:

- a. **Action - Small, Containable Spill**
If the spill is small (i.e., less than 25 gallons) and easily containable without endangering the watershed, the Drilling Supervisor would direct and supervise complete cleanup and return to normal operations.
- b. **Action - Large or Uncontainable Spill**
If the spill is larger than 25 gallons, or is not easily contained, or endangers, or has entered, the watershed, the Drilling Supervisor would proceed to take necessary action to curtail, contain and clean up the spill, as above, and notify personnel as listed below.
- c. **Notification**
(1) The Drilling Supervisor would, as quickly as practicable:
 - Call out contractor(s), as required.
 - Notify the Ormat Project Manager.
 - Notify the local and state law enforcement agencies if the public safety is threatened.
(2) The Ormat Project Manager would notify the following as soon as practical and work closely with them in all phases of the curtailment, containment and cleanup operations:

Division of Minerals
State of Nevada
400 W. King
Carson City, NV 89703
775.684.7040

NDEP - Division of Emergency Management
775.688.2830 or 888.331.6337
901 S. Stewart Street
Carson City, NV 89706

BLM, Winnemucca District Office
(within 24 hours of the knowledge of a reportable release)
5100 East Winnemucca Blvd.
Winnemucca, NV 89445
775.623.1500

National Response Center
800.424.8802

The Drilling Supervisor would also advise local population and affected property owners if spill affects residents or property.

d. Specific Procedures

(1) For geothermal fluid spills:

- Contain spillage with dikes if possible and haul to disposal site by vacuum or water trucks or dispose of in a manner acceptable to the Division of Minerals and BLM.

(2) For drilling mud:

- Repair reserve pit or contain with dikes. Haul liquid to another reserve pit, available tanks or approved disposal site.

(3) For petroleum products:

- Contain spill with available manpower. Use absorbents and dispose of same in approved disposal area.
- Spills of petroleum products in excess of 25 gallons must be reported to the Nevada Division of Environmental Protection as soon as possible, but no later than the end of the first working day of the release at:
 - In-state: 888-331-6337
 - Out of state: 775-687-9485

For (1) through (3) above, Ormat would have the source of spill repaired at the earliest practical time, and continue working crews and equipment on cleanup until all concerned agencies are satisfied.

e. Confirm telephone notification to agencies and regulatory bodies. Telephone notification shall be confirmed by the Ormat Project Manager in writing within two weeks of telephone notification. Written confirmation would contain:

- (1) Reason for the discharge or spillage.
- (2) Duration and volume of discharge or spillage.
- (3) Steps taken to correct problem.
- (4) Steps taken to prevent recurrence of problem.

(b) If we require, you must also describe how you would monitor your facility operations to ensure they comply with the requirements of 43 CFR 3200.4, and noise, air, and water quality standards at all times. We will consult with another involved surface management agency regarding monitoring requirements. You must also include provisions for monitoring other environmental parameters we may require.

Ormat would provide compliance measures upon request.

(c) Based on what level of impacts your operations may cause, we may require you to collect data concerning existing air and water quality, noise, seismicity, subsidence, ecological systems, or other environmental information for up to one year before you begin operating. We must approve your data collection methodologies, and will consult with any other surface managing agency involved.

Ormat would collect and provide appropriate, additional environmental data if required.

(d) You must also describe how you will abandon utilization facilities and restore the site, to comply with the requirements of 43 CFR 3200.4.

The estimated life of the Project is 50 years.

During the operations phase of the project, the 2.1 acre well pads will be fenced on all four sides to limit access, and in most cases the sump will remain on the pad to be used if a well needs to be flowed.

At the end of Project operations the wells would be plugged and abandoned as required by Nevada Division of Minerals (NDOM) regulations. Abandonment typically involves filling the well bore with clean, heavy abandonment mud and cement until the top of the cement is at ground level, which is designed to ensure that fluids would not move across these barriers into different aquifers. The well head (and any other equipment) would then be removed, the casing cut off well below ground surface and the hole backfilled to the surface.

Reclamation of the roads would include recontouring the road back to the original contour, seeding, controlling noxious weeds and may include other techniques to improve reclamation success, such as ripping, scarifying, replacing topsoil, pitting and mulching.

Pipeline reclamation would include removing all pipeline and supports, and breaking up the foundations and burying them. Final reclamation will also include compacting the fill over the buried foundations, regrading cut-and-fill slopes to restore the original contour, replacing topsoil and revegetating the areas with a BLM approved seed mixture.

The end goal of the final reclamation will be to return the site as close as possible to the conditions prior to geothermal development. All other above-ground facilities will be completely removed from the site, and the concrete foundations will be broken and buried in place. All areas of surface disturbance associated with the geothermal development project would be recontoured and reseeded with a BLM approved seed mixture.

Ultimately, Ormat would prepare for NDOM approval for the plugging and abandoning of the wells, and then implement a final site reclamation plan. The plan would address restoring the surface grades, surface

drainage and revegetation of cleared areas largely as described above. Stormwater diversion would remain in place until successful revegetation is attained.

(e) Finally, submit any additional information or data which we may require.

Ormat would provide appropriate additional information upon request.

- Figure 1: Project Location Map
- Figure 2: Project Area Map
- Figure 3: Project Well Pad Layout and Design
- Figure 4: Project Overview (Aerial)
- Figure 5: Project Overview (Topo)
- Figure 6: Project General Power Plant Arrangement

Figure 1: Project Location Map

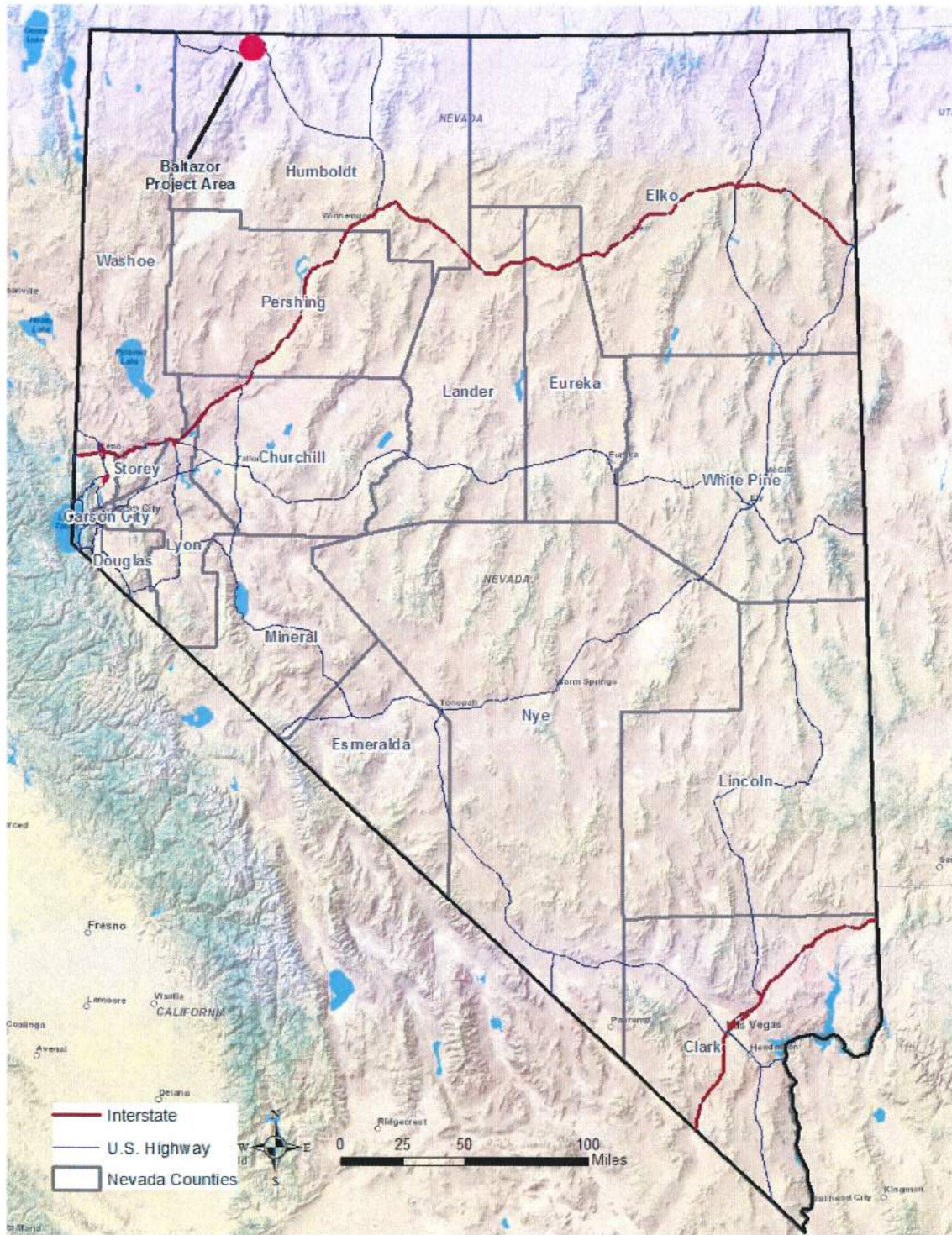


Figure 2: Project Area Map

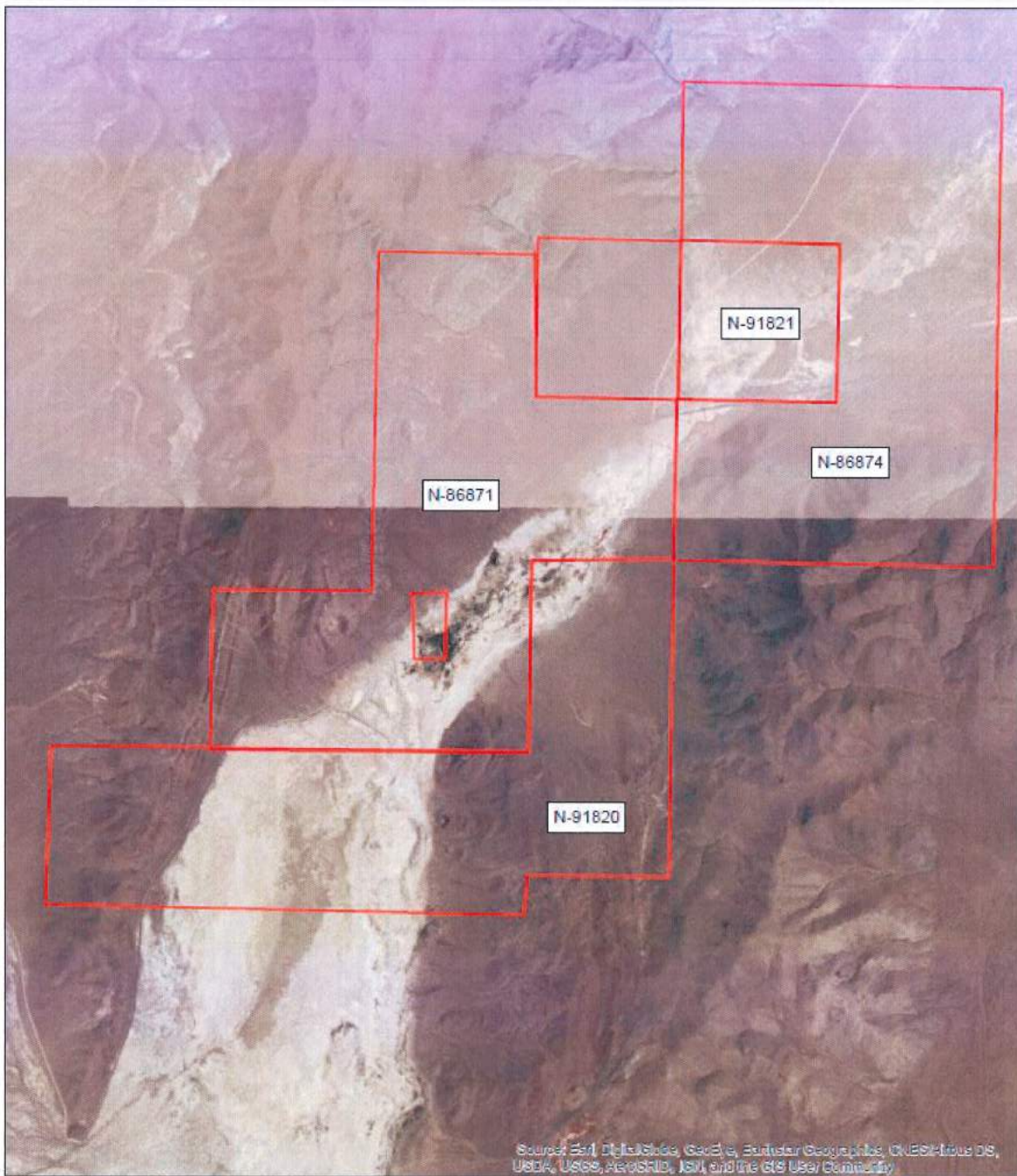


Figure 2: Project Area Map

 Leases

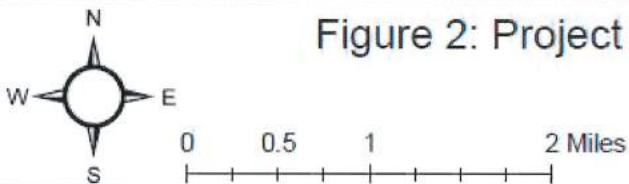


Figure 3: Project Well Pad Layout and Design

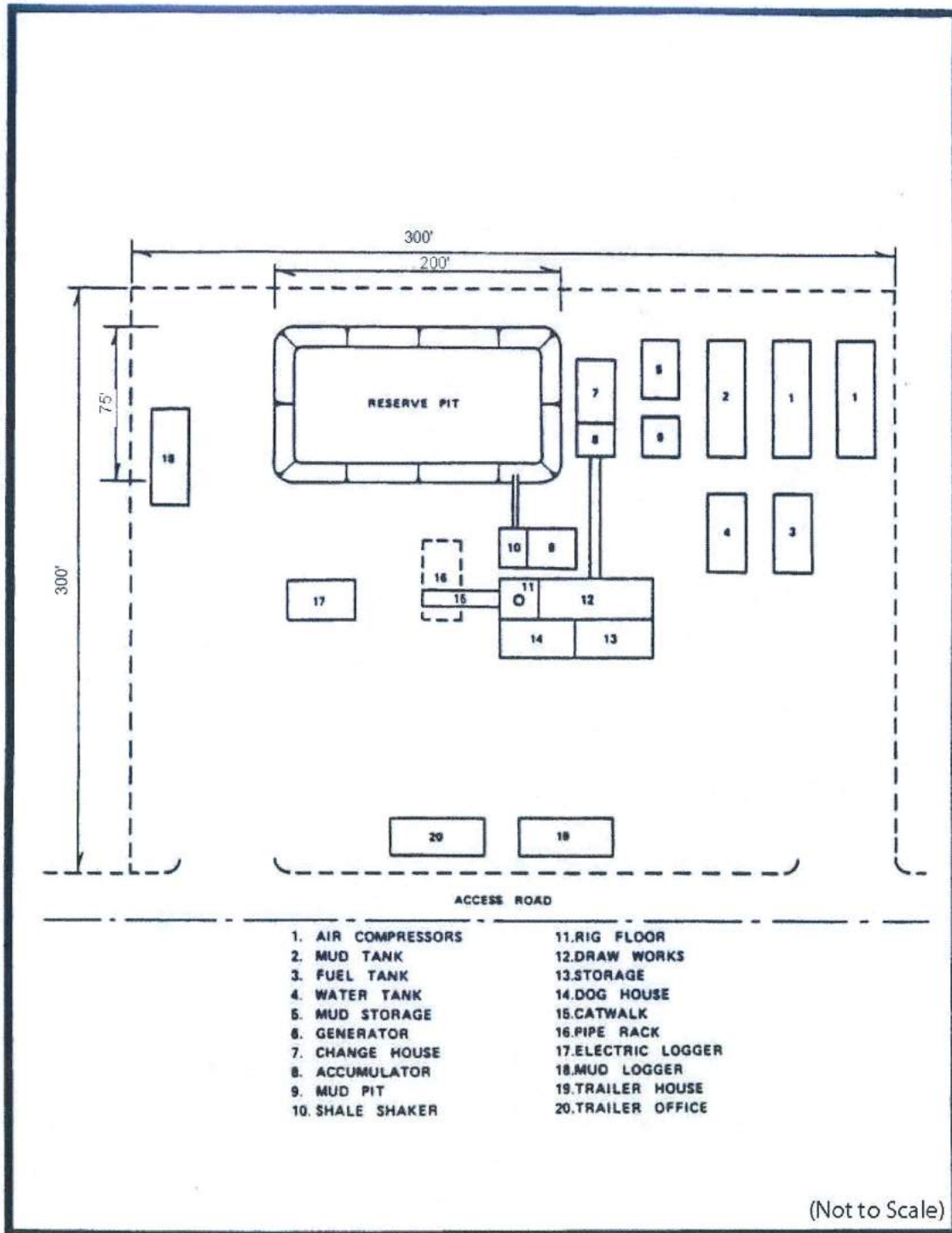


Figure 3: Typical Full-Size Well Site Layout

Figure 4: Project Overview (Aerial)

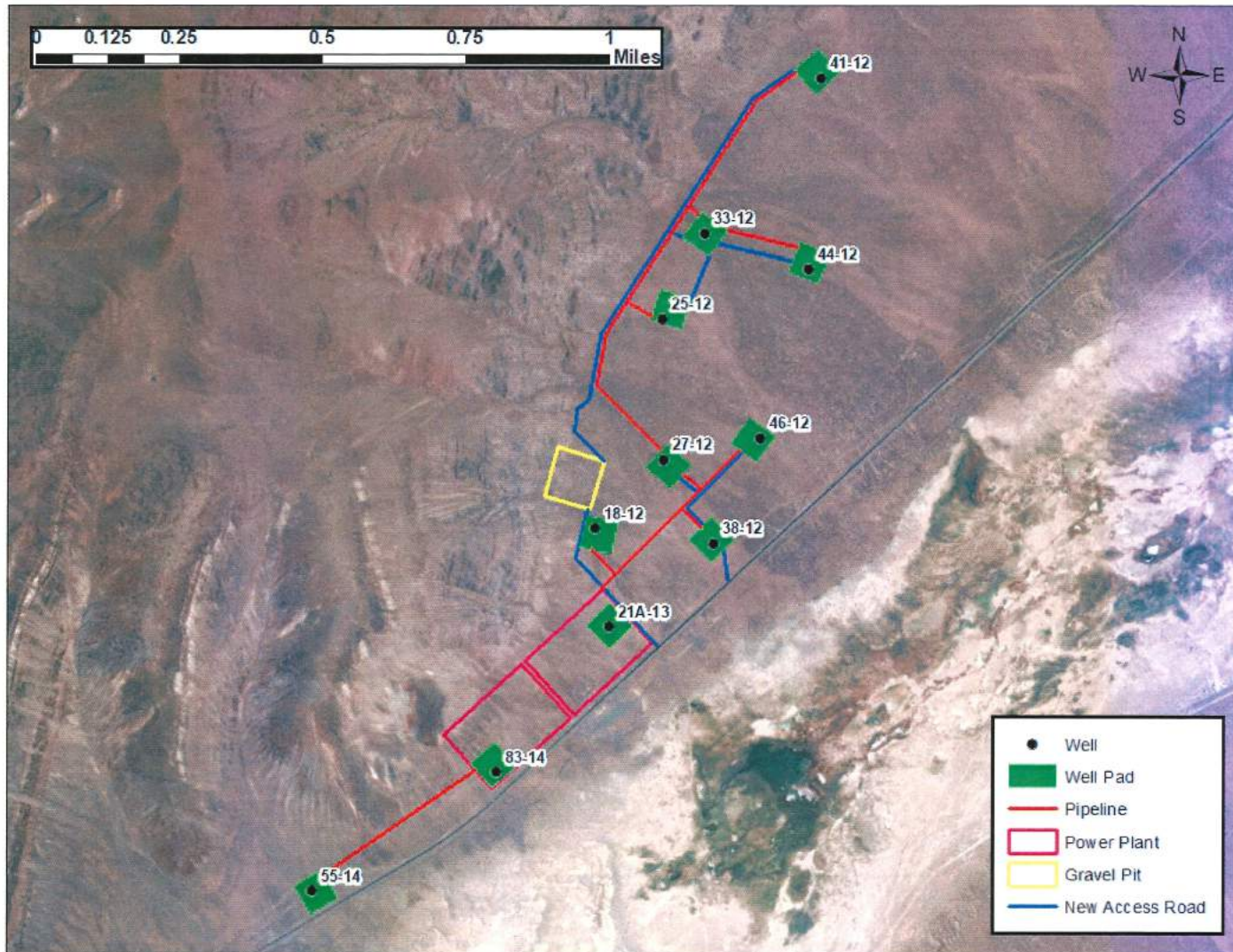


Figure 5: Project Overview (Topo)

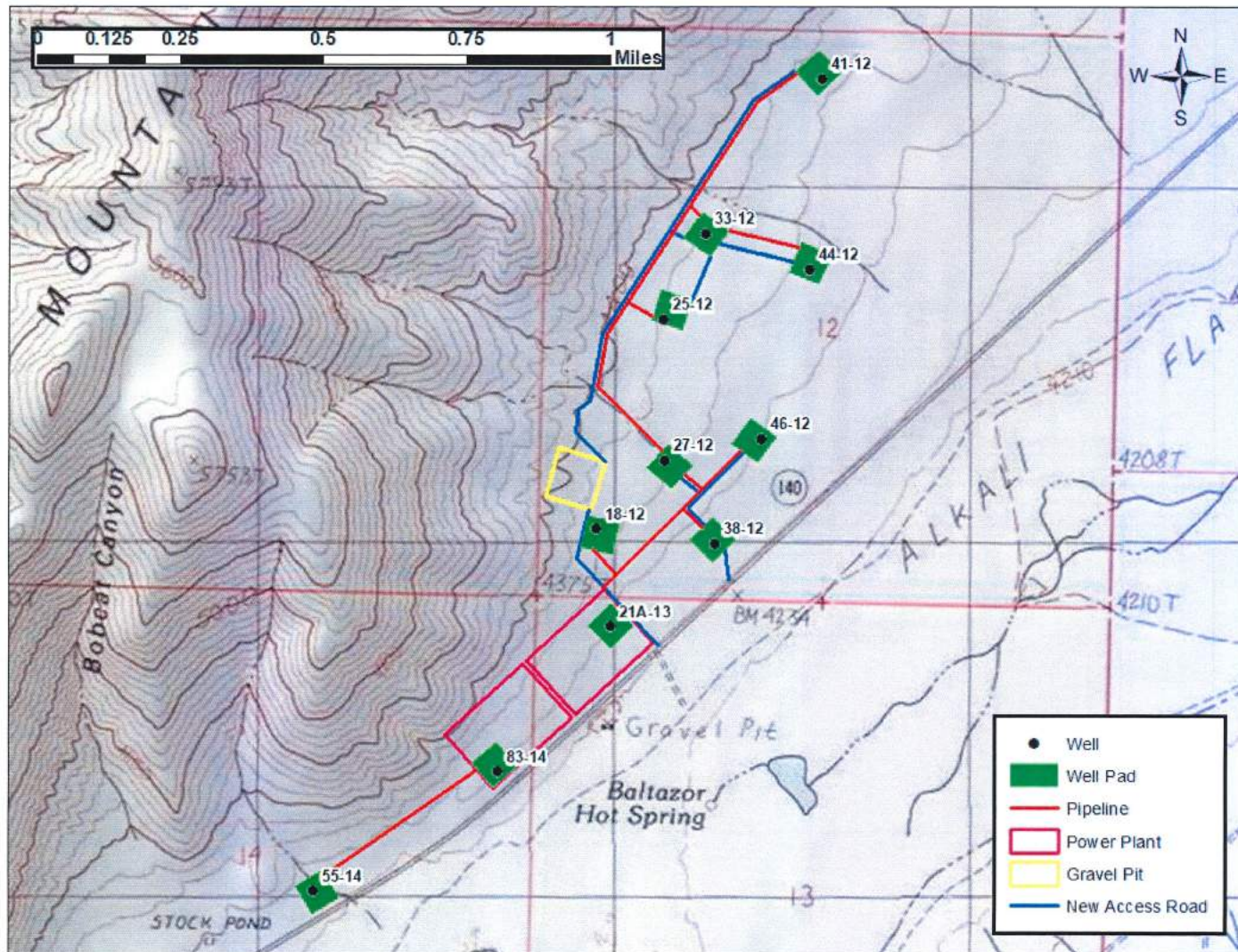
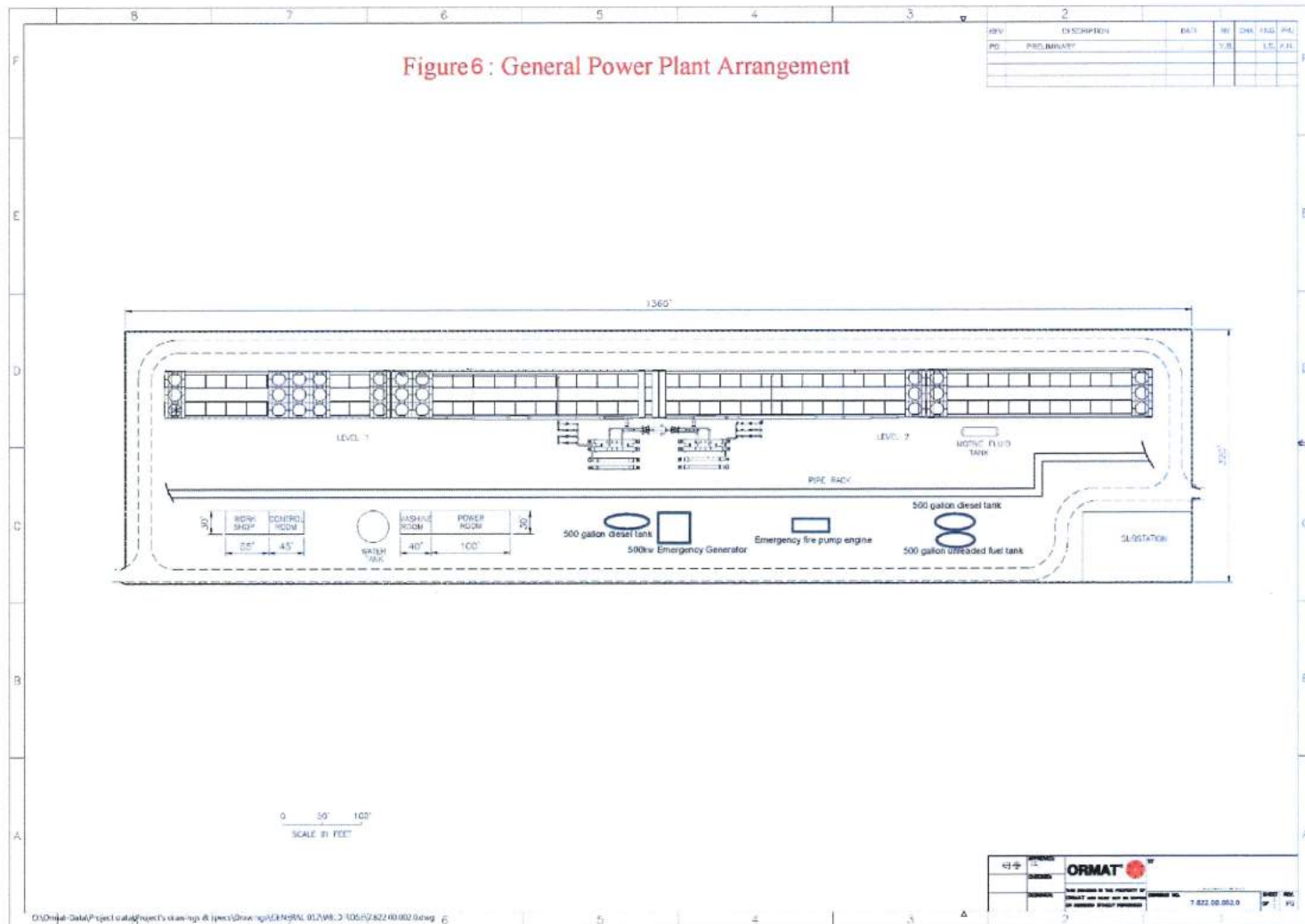


Figure 6: Project General Power Plant Arrangement



APPLICATION # _____

PLAN OF DEVELOPMENT

ORNI 52 LLC
BALTAZOR TRANSMISSION
LINE
HUMBOLDT COUNTY, NEVADA



ORNI 52 LLC
6140 Plumas St
Reno, Nevada 89519

May 2019

1. OVERALL PROJECT DESCRIPTION

1.1 INTRODUCTION

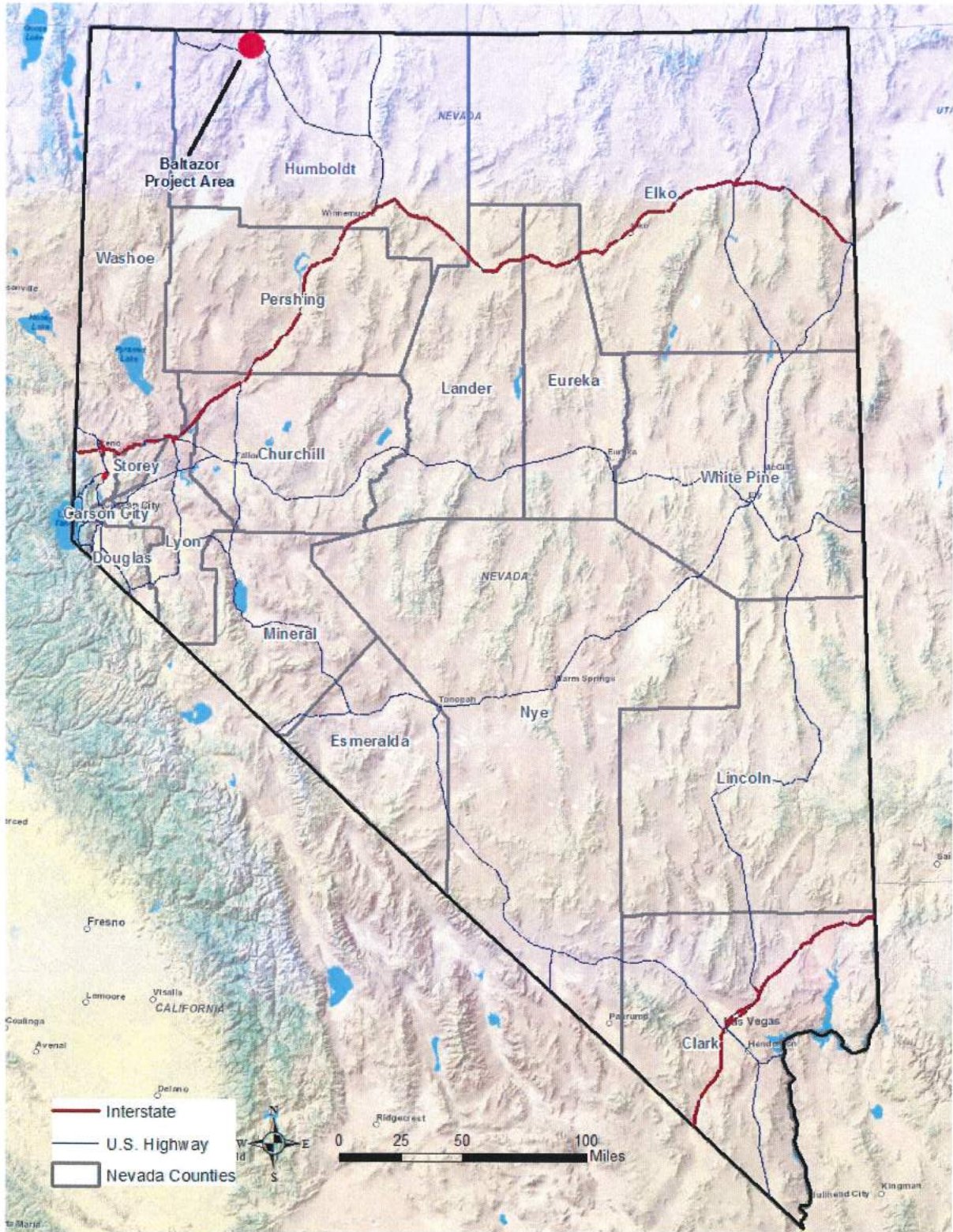
ORNI 52 LLC, a subsidiary of Ormat Technologies, Inc., has compiled this Plan of Development (POD) to guide the construction and operation of the Baltazor Interconnection Project. The project is located in Humboldt County, Nevada (Figure 1). This POD includes details of the construction and operation of an overhead 115-kilovolt (kV) generation tie (gen-tie) line that will replace an existing 14.4 kV distribution line, wholly owned, operated, and maintained by Harney Electric Cooperative, Inc. (HEC). The gen-tie route will originate at the site of the proposed Alum substation adjacent to the proposed power plant and will tie into the HEC power grid at Denio Junction, Nevada.

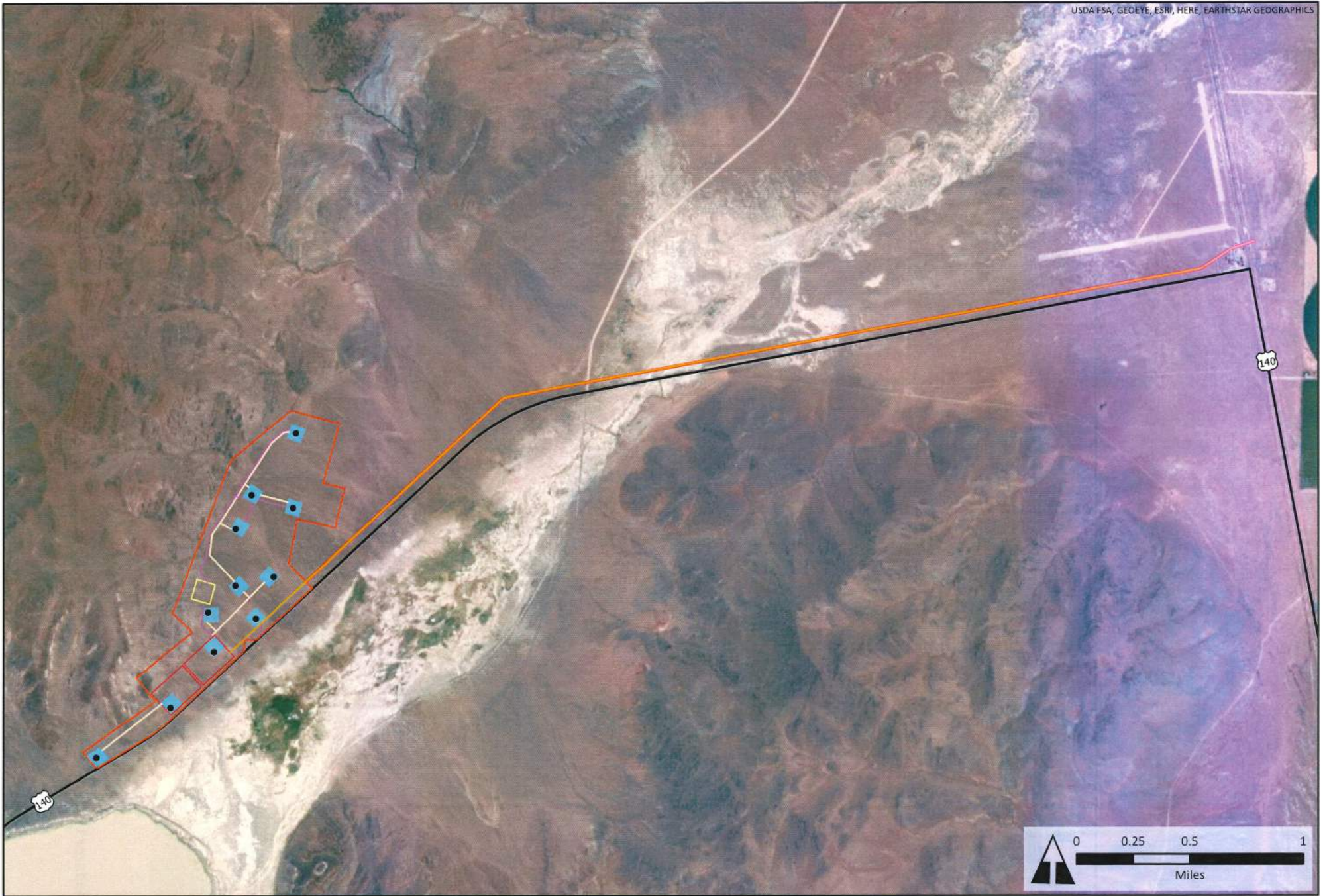
The project is required to connect renewable energy produced by the proposed Baltazor Geothermal Development Project into the power grid for distribution to retail customers. Electrically, ORNI 52 LLC needs to connect into the HEC energy grid to deliver the generated power to consumers. The transmission line route will cross approximately 5 miles of land managed by the Bureau of Land Management (BLM), Winnemucca District Office. Figure 2 shows the approximate location of the gen-tie route.

The gen-tie will support an approximately 48 MW net rated geothermal power generating project, operated by ORNI 52 LLC and located on BLM-administered land. The power plant will utilize air cooled binary technology to produce electricity from the geothermal resource. Geothermal production and injection wells, pipelines, and associated facilities, including roads, will be constructed to support the power generation project.

In October of 2018, HEC submitted an application/POD for a portion of the proposed upgrade route to amend existing authorization N-94930 (see Attachment A).

Figure 1: Project Location Map





- Legend**
- Wells
 - Well Pads
 - Aggregate Pit
 - Power Plant
 - Pipelines
 - New Access Roads
 - Harney Electric Corp. Transmission Line (Connected Action)
 - Baltazor Project Area
 - State Route 140

PROPOSED ACTION
BALTAZOR GEOTHERMAL DEVELOPMENT PROJECT

Figure 2.1-1
Ormat Technologies



APPENDIX B:
HISTORIC PROPERTIES TREATMENT PLAN

This attachment contains information that may be exempt from Freedom of Information Act Requests.

Please consult the appropriate federal agency to obtain this information.