

STAFF REPORT

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R. B. Greenwood

NON-EXCLUSIVE GEOPHYSICAL EXPLORATION PERMIT

APPLICANT:

ORNI 5, LLC

AREA, LAND TYPE, AND LOCATION:

State Lands Commission, school or lieu land (owned in fee), State Reserved Mineral Interest (RMI) land, and Department of Parks and Recreation fee-owned land; Assessor's Parcel Numbers: 017-340-011, 017-340-018, 017-340-010, 017-340-003, 017-010-048, 017-970-014, 017-340-004, 017-010-016, 017-010-056, 017-010-044, 017-010-045, 017-010-017, 017-010-027, 017-050-013. All lands are within the Truckhaven Geothermal Area in Imperial County. See Exhibit A, attached to this Staff Report.

BACKGROUND:

ORNI 5, LLC (Applicant; ORNI), has applied for a 1-year Non-Exclusive Geophysical Exploration Permit (Permit) for geothermal resources. The geophysical surveys authorized under the terms of the proposed Permit are for the purpose of conducting preliminary exploration of the State-owned lands (approximately 13 square miles) that are part of a larger 23.5-square-mile survey area. The survey area includes lands managed by the Commission, California Department of Parks and Recreation, the U.S. Bureau of Land Management, and owned by private parties. The purpose of the survey is to develop three-dimensional high-resolution images of the subsurface geologic features, located within the Truckhaven Geothermal Area, to search for geothermal resources.

The survey activity is being conducted in support of the Applicant's proposed exploratory program to drill up to six geothermal wells in the Truckhaven area. The proposed drilling program is not currently before the Commission. The Applicant has a pending application for a negotiated Geothermal Lease for surface and non-surface occupancy on lands owned by the State and under the jurisdiction of the Commission and the jurisdiction of the California Department of Parks and Recreation operated as the Ocotillo Wells State Vehicular Recreational Area. The Commission is granted authority under the Public Resources Code to issue geothermal exploration permits and mineral leases over all State lands (Pub. Resources Code, §§ 6405, 6904, 6924). The application for a negotiated Geothermal Lease will be considered by the

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Commission at a future meeting.

In December 2019, Imperial County adopted a Mitigated Negative Declaration that analyzed the proposed geophysical survey activity and the six-well exploratory program (State Clearinghouse No. 2019119033).

STAFF ANALYSIS AND RECOMMENDATION:

Authority:

Public Resources Code sections 6005, 6216, 6405, 6904, 6909, 6924, and 8701; California Code of Regulations, title 2, section 2100.

State's Best Interests Analysis:

ORNI 5, a limited liability corporation incorporated in Delaware and registered in California, proposes a project consisting of two parts. The first part is the preliminary exploration of a 23.5-square-mile area to develop three-dimensional high-resolution images of the subsurface geologic features within the Truckhaven Geothermal Lease area. The second part is an exploratory program to drill up to six geothermal wells in the Truckhaven area (not part of this Permit application).

This geophysical survey involves using ~~two~~ four truck-mounted vibrators as an energy source. The vibrators will transmit vibration signals through the ground which will, in turn, be reflected and detected by receivers. The receivers will record the resulting energy wave and wirelessly transmit the information to a data collection point at the Salton Sea Airport. The surveys will verify and supplement the existing geologic data and generate a more predictive geologic model that identifies potential geothermal reservoirs of commercial quality, particularly in areas where geologic information may be absent. The surveys will also reduce the environmental footprint of any future well program by focusing well drilling on those areas where the geothermal resource is most likely present in economic quantities, thereby reducing unnecessary construction of well pads, roads, or creating other surface disturbances.

The surveys have been designed to have minimal environmental impact. Resource inventories have already been conducted for biologic, botanical, cultural, and paleontological resources. Truck-mounted vibrators will stay on predesignated routes. Approximately 3,170 receivers will be placed and retrieved by hand on the surface of the survey area by 50 to 60 crew members. The survey fieldwork is estimated to take 12 to 14 days.

Staff recommends adoption of the Mitigation Monitoring Program attached as Exhibit B, which has been included in the Permit and will, along with

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other Permit conditions, minimize environmental impacts. Applicable mitigation measures have been specified for potential biological, cultural, geological, noise, paleontological, and water quality impacts. The Permit contains restrictions that protect public rights and environmental resources; for example, the Permit would be non-exclusive and is limited to 1 year. The proposed Permit requires the permittee to provide staff with advance notice of operations and coordinate with the California Department of Parks and Recreation and the U.S. Bureau of Land Management prior to starting survey activities. Upon request, Commission staff will receive copies of all data derived from any and all surveys under this Permit.

For all the reasons above, staff believes the approval of the Permit application is in the best interests of the State. Staff recommends approval of this Non-Exclusive Geophysical Exploration Permit.

Climate Change:

As stated in *Safeguarding California Plan: 2018 Update* (California Natural Resources Agency 2018), climate change is projected to increase the frequency and severity of natural disasters related to flooding, drought, and storms. The proposed Permit area is open land with moderate to low vegetation fuels, and is vulnerable to the above events, including dust storms and flash flooding from thunderstorms, and to a lesser extent, wildland fires. The proposed Permit area and surrounding land may be vulnerable to these weather events; however, these projected climate change effects are not expected to affect the short-term (1 year) use of the lands for geophysical exploration.

Environmental Justice Analysis:

Consistent with the Commission's adopted Environmental Justice Policy, staff evaluated the location of the proposed Permit area in order to determine whether nearby communities bear a disproportionate share of environmental burdens and to engage with environmental justice communities for comments and ideas about the proposed Permit and any related impacts that can be lessened or avoided on those communities. Using the CalEnviroScreen 3.0 program, managed by the California Office of Environmental Health Hazard Assessment, staff identified the census tract covering the proposed Permit area along with adjacent tracts bearing environmental burdens, in certain categories, higher than most other census tracts in the State. Namely, the regional risks associated from transportation of hazardous materials and solid wastes contributed to a high potential for releases that could affect groundwater and air quality.

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Based on the identified environmental burdens, staff-initiated outreach to environmental justice communities seeking input on the proposed Permit and pending application for a negotiated Geothermal Lease. From March 3, 2020, to April 2, 2020, staff contacted, via letter and email, 45 different individuals and representatives of environmental justice organizations providing notification of the application and soliciting comments. As of mid-April, staff has received two comments regarding the proposed geophysical Permit and pending Geothermal lease application (to be considered later).

During a teleconference meeting on April 3, 2020, representatives of one environmental justice group, Comité Cívico Del Valle, expressed concern about associated hazardous materials and waste from the Applicant's proposed 6-well exploration program (to be considered by the Commission later) and the impact to regional air and water quality from that program. There was also a concern about the community bearing environmental burdens associated with geothermal development (e.g., traffic due to project activity, hazardous material use, and waste transportation) without receiving project benefits (e.g., employment and reduced energy rates). The organization also expressed frustration with the lack of early community engagement during the environmental review process undertaken by the County. Staff will continue to work with Comité Cívico Del Valle and other environmental justice communities to address their concerns as staff processes the Geothermal Lease application and negotiates the proposed lease terms.

TERM OF PROPOSED PERMIT:

1 year beginning April 29, 2020, through April 28, 2021.

OTHER PERTINENT INFORMATION:

1. A Mitigated Negative Declaration, State Clearinghouse No. 2019119033, and a Mitigation Monitoring Program were prepared by Imperial County and adopted on December 11, 2019, for this project. Staff has reviewed these documents.
2. This activity involves lands which have NOT been identified as possessing significant environmental values pursuant to Public Resources Code section 6370 et seq.; however, the Commission has declared that all lands are significant by nature of their public ownership (as opposed to environmentally significant). Since such declaration of significance is not based upon the requirements and criteria of Public Resources Code section 6370 et seq., use classifications for such lands have not been designated. Therefore, the finding of the project's consistency with the use

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classification as required by California Code of Regulations, title 2, section 2954 is not applicable.

3. This action is consistent with Strategy 1.1 of the Commission's Strategic Plan to deliver the highest levels of public health and safety in the protection, preservation and responsible economic use of the lands and resources under the Commission's jurisdiction.

EXHIBITS:

- A. Location Map
- B. Mitigation Monitoring Program

RECOMMENDED ACTION:

It is recommended that the Commission:

CEQA FINDINGS:

Find that a Mitigated Negative Declaration, State Clearinghouse No. 2019119033, was adopted on December 11, 2019, for this project and that the Commission has reviewed and considered the information contained therein; that in the Commission's independent judgment, the scope of activities to be carried out under the Permit to be issued by this authorization have been adequately analyzed; that none of the events specified in Public Resources Code section 21166 or the State California Environmental Quality Act (CEQA) Guidelines section 15162 resulting in any new or substantially more severe significant impact has occurred; and, therefore no additional CEQA analysis is required.

Adopt the Mitigation Monitoring Program, as contained in the attached Exhibit B.

STATE'S BEST INTERESTS:

Find that the proposed Permit is in the best interests of the State.

AUTHORIZATION:

Authorize issuance of a Non-Exclusive Geophysical Exploration Permit for the period April 29, 2020, through April 28, 2021, for lands managed by the Commission and the California Department of Parks and Recreation, as shown on Exhibit A, to ORNI 5, LLC.

Exhibit A

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Ex

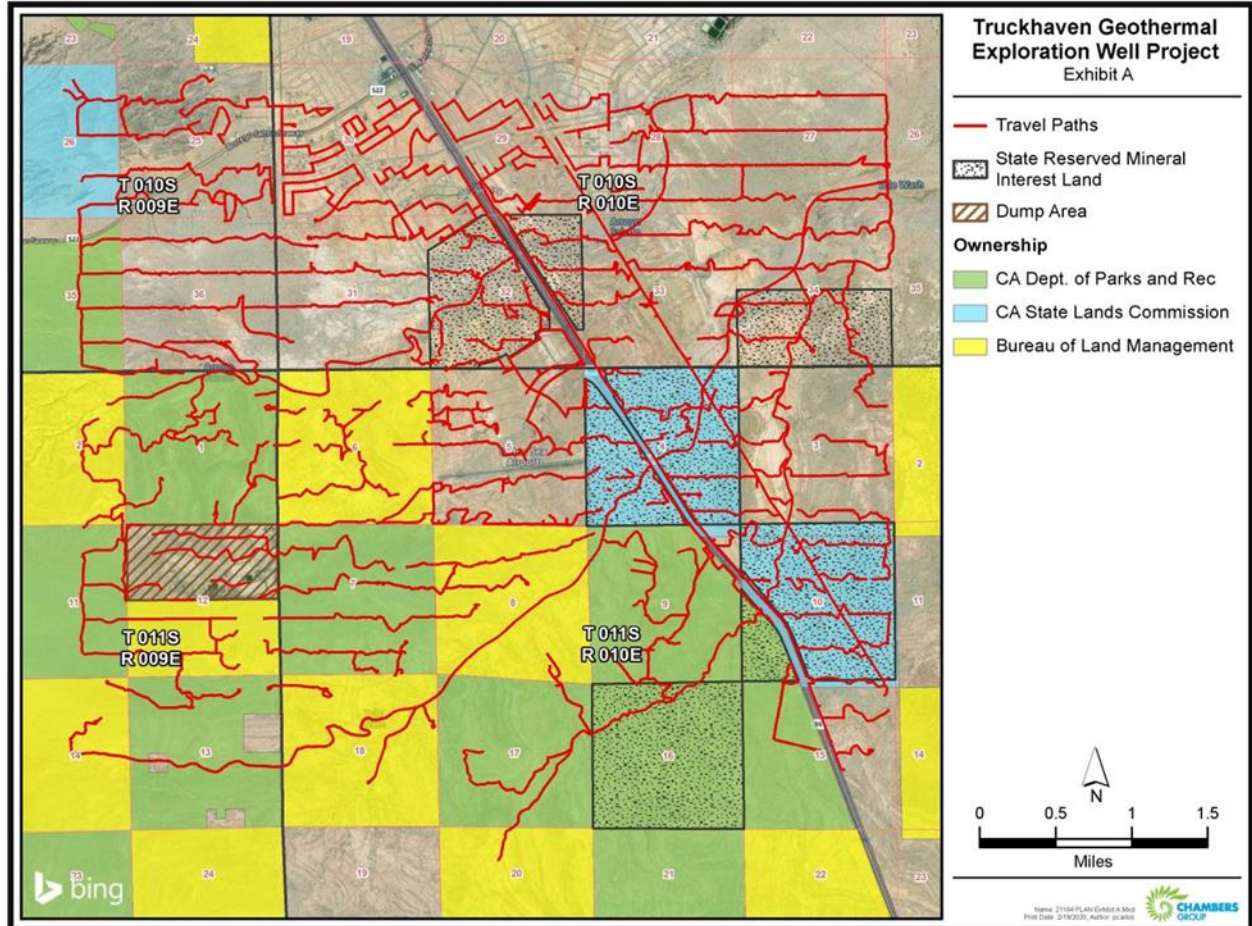


EXHIBIT B
CALIFORNIA STATE LANDS COMMISSION
MITIGATION MONITORING PROGRAM
TRUCKHAVEN GEOTHERMAL EXPLORATION WELL PROJECT
(A2079, State Clearinghouse No. 2019119033)

The California State Lands Commission (Commission or CSLC) is a responsible agency under the California Environmental Quality Act (CEQA) for the Truckhaven Geothermal Exploration Well Project (Project). The CEQA lead agency for the Project is Imperial County.

In conjunction with approval of this Project, the Commission adopts this Mitigation Monitoring Program (MMP) for the implementation of mitigation measures for the portion(s) of the Project located on Commission lands. The purpose of a MMP is to impose feasible measures to avoid or substantially reduce the significant environmental impacts from a project identified in an Environmental Impact Report (EIR) or a Mitigated Negative Declaration (MND). State CEQA Guidelines section 15097, subdivision (a), states in part:¹

In order to ensure that the mitigation measures and project revisions identified in the EIR or negative declaration are implemented, the public agency shall adopt a program for monitoring or reporting on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental effects. A public agency may delegate reporting or monitoring responsibilities to another public agency or to a private entity which accepts the delegation; however, until mitigation measures have been completed the lead agency remains responsible for ensuring that implementation of the mitigation measures occurs in accordance with the program.

The lead agency adopted an MND, State Clearinghouse No. 2019119033, adopted a Mitigation Monitoring and Reporting Program (MMRP) for the whole of the Project (see Exhibit B, Attachment B-1), and remains responsible for ensuring that implementation of the mitigation measures occurs in accordance with its program. The Commission's action and authority as a responsible agency apply only to the mitigation measures listed in Table B-1 below. The full text of each mitigation measure, as set forth in the MMRP prepared by the CEQA lead agency (Attachment B-1), is incorporated by reference in this Exhibit B. Any mitigation measures adopted by the Commission that differ substantially from those adopted by the lead agency are shown as follows:

- Additions to the text of the mitigation measure are underlined; and
- Deletions of the text of the mitigation measure are shown as ~~strikeout~~ or as otherwise noted.

¹ The State CEQA Guidelines are found at California Code of Regulations, title 14, section 15000 et seq.

Table B-1. Project Impacts and Applicable Mitigation Measures

Potential Impact ²	Mitigation Measure (MM) ³	Difference Between CSLC MMP and Lead Agency MMP
Biological		
IV (a)	MM BIO-1 to MM BIO-9	None
IV (c)	MM BIO-10	None
IV (d)	MM BIO-3	None
IV (e)	MM BIO-1 to MM BIO-9	None
Cultural		
V (a)	MM CUL-2	None
V (b)	MM CUL-3	See addition below
V (c)	MM CUL-4	None
Geology		
VII (b)	MM GEO-1	None
VII (f)	MM PAL-1, MM PAL-2, MM PAL-3	See addition below
Water Quality		
X (c)(iv)	MM BIO-10	None
Noise		
XIII (a)	MM NOI-1, MM NOI-2	None

Add to MM CUL-3:

- California State Lands Commission (Commission) staff shall be notified of any significant cultural resources discovered on lands under the jurisdiction of the Commission. The final disposition of archaeological and historical resources from such lands must be approved by the Commission.

Add to MM PAL-3:

- California State Lands Commission (Commission) staff shall be notified of any paleontological specimens discovered on lands under the jurisdiction of the Commission. The final disposition of any artifacts or specimens including, but not limited to, those of a paleontological nature from such lands must be approved by the Commission.

² Impact numbering corresponds to the Environmental Checklist Form in the MND.

³ See Attachment B-1 for the full text of each MM taken from the MMP prepared by the CEQA lead agency.

ATTACHMENT B-1

Mitigation Monitoring and Reporting Program

Adopted by Imperial County

**MITIGATION MONITORING AND
REPORTING PROGRAM
TRUCKHAVEN GEOTHERMAL
EXPLORATION WELL PROJECT**

IMPERIAL COUNTY, CALIFORNIA

Prepared for:

COUNTY OF IMPERIAL
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January 2019

SECTION 1.0 – PURPOSE

The County of Imperial would adopt this Mitigation Monitoring and Reporting Program (MMRP) in accordance with Public Resources Code (PRC) Section 21081.6 and Section 15097 of the California Environmental Quality Act (CEQA) Guidelines. The purpose of the MMRP is to ensure that the Truckhaven Geothermal Exploration Well Project (Proposed Project) complies with all applicable environmental mitigation requirements identified in the Final Mitigated Negative Declaration (MND) for the Proposed Project. The mitigation measures for the Proposed Project would be adopted by the County of Imperial, in conjunction with the adoption of the Final MND. The mitigation measures from the Final MND have been integrated into this MMRP. The MMRP provides a mechanism for monitoring the mitigation measures in compliance with the Final MND, and general guidelines for the use and implementation of the monitoring program are described below. Within this document, the approved mitigation measures are organized and referenced by subject category. The specific mitigation measures are identified, as well as the method and timing of verification and the responsible party that would ensure that each action is implemented.

The mitigation measures applicable to the Proposed Project include avoiding certain impacts altogether, minimizing impacts by limiting the degree or magnitude of the action and its implementation, and/or reducing or eliminating impacts over time by maintenance operations during the life of the Proposed Project.

Public Resources Code Section 21081.6 requires the Lead Agency, for each project that is subject to CEQA, to monitor performance of the mitigation measures included in any environmental document to ensure that implementation takes place. The County of Imperial is the designated Lead Agency for the MMRP. Lead Agency is responsible for review of all monitoring reports, enforcement actions, and document disposition. The County of Imperial would rely on information provided by the monitor as accurate and up to date and would field check mitigation measure status as required.

A record of the MMRP would be maintained at County of Imperial Planning & Development Services Department, 801 Main Street, El Centro, CA 92243. All mitigation measures contained in the MND shall be made conditions of the project as may be further described below. Revisions to the mitigation measures in response to public comment have been shown in strike-out/underline format.

SECTION 2.0 – FORMAT

The mitigation measures applicable to the project involve minimizing impacts by limiting the degree or magnitude of the action and its implementation. Within this document, the approved mitigation measure is referenced by subject category. The mitigation measure has a numerical reference. The following items are identified for the mitigation measure.

- Mitigation Language and Numbering
- Mitigation Timing
- Methods for Monitoring and Reporting
- Responsible Parties

MITIGATION LANGUAGE AND NUMBERING

Provides the language of the mitigation measure in its entirety.

MITIGATION TIMING

The mitigation measure required for the project will be implemented prior to construction and during construction.

METHODS FOR MONITORING AND REPORTING

The MMRP includes the procedures for documenting and reporting mitigation implementation efforts. As the project proponent, the County of Imperial is responsible for implementation of the mitigation measure.

RESPONSIBLE PARTIES

For the mitigation measure, the party responsible for implementation, monitoring and reporting, and verifying successful completion of the mitigation measure is identified.

Mitigation Measure	Implementation Time Frame	Monitoring Method	Implementation Responsibility	Verification Responsibility
I. Biological Resources				
<p>MM-BIO-1: A qualified biologist(s) will monitor all construction activities to ensure that standard and special- status species-specific avoidance and minimization recommendations are adhered to. The monitor will retain stop work authority in the event there is the likelihood of eminent take of special- status species.</p> <p><u>Should a special-status species be found to be present, the biological monitor will stop work and ensure avoidance of the species. Species-specific mitigation measures are provided in MM-BIO-3 through MM-BIO-7. Should an additional special-status species be discovered, the biological monitor will stop work or redirect work away from the species. An appropriate buffer will be applied in consultation with USFWS and CDFW.</u></p> <p>The biological monitor will conduct a general preconstruction survey no more than 14 days prior to the start of construction to verify that no special- status species are in the Proposed Project area or its buffers. The monitor shall also conduct a daily survey in and around work areas before activities start.</p>	Prior to and during construction	Preconstruction field survey and daily field surveys of Proposed Project area	County of Imperial and/or ORNI 5	County of Imperial
<p>MM-BIO-2: A worker education program (WEAP) will be prepared and presented to all employees working on the Proposed Project in</p>	Prior to construction	Worker education program (WEAP) presented to employees	County of Imperial and/or ORNI 5	County of Imperial

sensitive species habitat. The education program will include identification of target species and their habitats, any project mitigation measures and stipulations, reporting requirements, and penalties for failure of compliance.		working on the Proposed Project		
MM-BIO-3: Should construction activities occur between February 15 and August 15, the time period typically referenced in California for the general bird nesting season, preconstruction nesting surveys will be conducted in the Proposed Project area by a qualified biologist within two weeks of the start of construction. If no active bird nests are found within this area, no further mitigation is required. If an active nest is found, a buffer shall be instated around the nest if it belongs to a non-listed or migratory bird in coordination with USFWS and CDFW. If the nest belongs to a listed or fully-protected species, a larger buffer shall be instated around the nest, at a distance approved prior to construction activities.	Prior to construction	Nesting bird surveys of Proposed Project Area and buffers (approved prior to construction)	County of Imperial and/or ORNI 5	County of Imperial
MM-BIO-4: Avoid burrows that may be utilized by special- status wildlife species with a minimum buffer of 20-feet from burrows suitable for flat-tailed horned lizard and a minimum buffer of 30- feet from burrows suitable for burrowing owls. If burrows cannot be avoided, MM-BIO-5 and MM-BIO-6 would be implemented.	During construction	Field surveys and buffers (20-foot buffer for burrows suitable for flat-tailed horned lizards and a 30-foot buffer for burrows suitable for burrowing owls)	County of Imperial and/or ORNI 5	County of Imperial

MM-BIO-5: If flat-tailed horned lizards are observed within the construction area, the qualified biological monitor, with prior approval through project acquired permits or permissions and in consultation with CDFW, will notify CDFW and relocate the individual out of the construction area, adjacent to where it was moved from.	During construction	Field surveys and individual relocation to outside the construction area, adjacent to where it was found	County of Imperial and/or ORNI 5	County of Imperial
MM-BIO-6: If burrowing owls are observed within the Project area prior to or during construction activities, occupied burrows shall not be disturbed during the owl nesting season, February 1 and August 31. If burrows are found, the appropriate CDFW-recommended buffer, or a buffer deemed appropriate by the qualified biological monitor, shall be instated in consultation with CDFW until occupancy status is determined. If the buffer cannot be maintained during the non-breeding season, owls may be evicted from the burrows using accepted methodology as approved by resource agencies. Eviction will not occur during the breeding season.	Prior to and during construction	Field surveys and CDFW or qualified monitor recommended buffer; if buffer cannot be maintained, eviction using accepted methodology approved by resource agencies (may not occur during breeding season)	County of Imperial and/or ORNI 5	County of Imperial
MM-BIO-7: Avoid special- status plant species with a minimum buffer of 5 to 10 feet, depending on the root structure and as determined by the biological monitor.	During construction	Field surveys and buffer of 5 to 10 feet depending on root structure and as determined by the biological monitor	County of Imperial and/or ORNI 5	County of Imperial
MM-BIO-8: Access to proposed well sites and geophysical survey truck paths will be via pre-existing access routes, to the greatest extent possible, and the work area boundaries will be	Prior to and during construction	Use of pre-existing access routes, delineating work area boundaries, signs and fencing placed	County of Imperial and/or ORNI 5	County of Imperial

delineated with staking, flagging, or other comparable markings to minimize surface disturbance associated with vehicle straying. Signs and/or fencing will be placed around the Proposed Project area to restrict access to project-related vehicles.		around the Proposed Project area		
MM-BIO-9: Project-related equipment will be washed prior to entering the project area for the first time to reduce the chance of transporting noxious weed seeds from outside the area.	Prior to construction	Washing of project-related equipment prior to entering the Proposed Project area	County of Imperial and/or ORNI 5	County of Imperial
MM-BIO-10: If the California Department of Fish and Wildlife (CDFW), Regional Water Quality Control Board (RWQCB), or U.S. Army Corps of Engineers (USACE) determine that access roads associated with well sites 47-32 and 18-32 are located within waters of the State/United States <u>or any other project impact area to be determined during surveys conducted prior to project activities</u> , prior to impacts the Applicant or its contractor shall obtain, and shall comply with all mitigation and conditions associated with, one or more of the following permits, as applicable: a CDFW Lake and Streambed Alteration Agreement; RWQCB Section 401 Water Quality Certification; or Section 404 USACE permit. Permit compliance shall be met through the purchase of in-lieu credits for non-vegetated streams at an approved mitigation bank, implementation of in-kind or out-of-kind restoration, or a combination of	Prior to construction	Jurisdictional delineations	County of Imperial and/or ORNI 5	County of Imperial

these actions. The mitigation replacement ratio shall be determined by the regulatory agencies during the permitting process.				
II. Cultural Resources				
MM-CUL-1: A temporary track will be placed over the historic site within the geophysical survey vibroseis path in the three different locations the Applicant would like to cross over the historic resource. Once the need to cross the area associated with the historic resource has concluded, the temporary cover can be removed.	During construction	Temporary track over historic resource	County of Imperial and/or ORNI 5	County of Imperial
MM-CUL-2: Prior to construction, the Applicant shall prepare a mitigation and monitoring plan specific to Cultural resources. The mitigation and monitoring plan shall identify procedures for monitoring and the implementation of a discovery plan in coordination with affected Tribal groups. The mitigation and monitoring plan will incorporate a worker awareness program, stop work authority and all avoidance recommendations from the Class III report.	Prior to construction	Preparation of an MRP specific to Cultural Resources	County of Imperial and/or ORNI 5	County of Imperial
MM-CUL-3: The Applicant shall retain qualified archaeological monitors (and Tribal monitors, if requested) for all ground-disturbing activities associated with the geophysical survey and development of access roads and construction of the drill pads. If a significant cultural resource site is found during ground-disturbing activities associated with well pad or access road construction the	Prior to and during construction	Evaluation of any archaeological resources encountered during construction	County of Imperial and/or ORNI 5	County of Imperial

Project features will either be moved, or the resource will be protected in place, or data recovery will be initiated, consistent with the mitigation and monitoring plan required by MM-CUL-2. The final disposition of archaeological or historical, resources recovered on state land under the jurisdiction of the California State Lands Commission must be approved by the Commission.				
MM-CUL-4: California State law (California Health and Safety Code 7050.5) and federal law and regulations (Archaeological Resources Protection Act [ARPA], 16 United States Code [U.S.C.] 470 and 43 Code of Federal Regulations, [CFR] 7, Native American Graves Protection and Repatriation Act [NAGPRA] 25 U.S.C. 3001 and 43 CFR 10, and Public Lands, Interior 43 CFR 8365.1-7) require a defined protocol if human remains are discovered in the state of California regardless if the remains are modern or archaeological. Upon discovery of human remains, all work within a minimum of 200 feet of the remains must cease immediately, and the County Coroner must be notified. The appropriate land manager/owner or the site shall also be notified of the discovery. If the remains are located on federal lands, the federal land manager(s), federal law enforcement, and/or federal archaeologist should also be notified. If the human remains are determined by the Coroner to be prehistoric, the appropriate	During construction	Evaluation of any human remains and implantation of discovery protocol	County of Imperial and/or ORNI 5	County of Imperial

federal archaeologist must be called. The archaeologist will initiate the proper procedures under ARPA and/or NAGPRA. If the remains can be determined to be Native American, the steps as outlined in NAGPRA 43 CFR 10.6 Inadvertent Discoveries must be followed.				
III. Geology and Soils				
MM-GEO-1: Applicant will prepare a SWPPP consistent with the requirements of the California State Water Resources Control Board (SWRCB) to reduce the potential for water pollution and sedimentation from proposed Project activities. The SWPPP will be project specific and expressly address site runoff, assuring that project runoff would not affect or alter drainage patterns to sensitive habitat.	Prior to construction	Preparation of a SWPPP	County of Imperial and/or ORNI 5	County of Imperial
MM-PAL-1: All Project personnel and other onsite workers shall receive environmental awareness training on paleontological resources prior to the start or continuation of any elements of the Project that include ground-disturbing activities. The training will be conducted by a qualified, BLM- and DPR-permitted paleontologist and will provide a description of the fossil resources that may be encountered in the Project area, outline steps to follow in the event that a fossil discovery is made, and provide contact information for the Project Paleontologist. The training may be conducted concurrent with other	Prior to construction	Environmental awareness training on paleontological resources presented to employees working on the Proposed Project	County of Imperial and/or ORNI 5	County of Imperial

environmental training (e.g., cultural and natural resources awareness training, safety training, etc.) and may also be videotaped or presented in an informational brochure for future use by field personnel not present at the start of the Project. The workers should be informed that any unlawful collection of paleontological resources may be subject to a misdemeanor, a fine, or both.				
<p>MM-PAL-2: Prior to the commencement of ground-disturbing activities, a qualified professional paleontologist shall be retained to prepare and implement a Paleontological Resource Mitigation Plan (Plan) for the Project. The Plan should address the recommended approach to additional specimen collection, the specific locations and intensity of monitoring recommended for each geologic unit, and monitoring intensity.</p> <p>Paleontological monitoring will be required for all ground-disturbing activities within the previously undisturbed Arroyo Diablo Formation, Borrego Formation, Brawley Formation, Lake Cahuilla deposits, and Quaternary older alluvium, which underlies the Project area. Monitoring will entail the visual inspection of excavated or graded areas and trench sidewalls. In the event that a paleontological resource is discovered, the monitor will have the authority to temporarily divert the construction equipment around the</p>	Prior to ground breaking activities	Paleontological Resources Mitigation Plan and ground surveys in the Proposed Project area	County of Imperial and/or ORNI 5	County of Imperial

find until it is assessed for scientific significance and collected. The final disposition of paleontological resources recovered on state land under the jurisdiction of the California State Lands Commission must be approved by the Commission.				
<p>MM-PAL-3: Upon completion of fieldwork, all significant fossils collected will be prepared in a properly equipped paleontology laboratory to a point ready for curation. Preparation will include the careful removal of excess matrix from fossil materials and stabilizing and repairing specimens, as necessary. Following laboratory work, all fossils specimens will be identified to the lowest taxonomic level, cataloged, analyzed, and curated. Fossil specimens collected from BLM managed land remain the property of the Federal government and they must be placed in the approved museum repository identified on the Paleontological Resource Use Permit. Fossil specimens collected from DPR-managed land remain the property of the State of California and must also be delivered to an accredited regional museum repository for permanent curation and storage. The cost of curation is assessed by the repository and is the responsibility of the the Applicant.</p> <p>At the conclusion of laboratory work and museum curation, a final report will be prepared to describe the results of the</p>	Post-construction	Fossil preparation and preparation of a final report to describe the results of the paleontological mitigation monitoring efforts	County of Imperial and/or ORNI 5	County of Imperial

paleontological mitigation monitoring efforts associated with the Project. The report will include a summary of the field and laboratory methods, an overview of the Project area geology and paleontology, a list of taxa recovered (if any), an analysis of fossils recovered (if any) and their scientific significance, and recommendations. If the monitoring efforts produced fossils, then a copy of the report will also be submitted to the curation facility.				
IV. Noise				
MM-NOI-1: During the geophysical survey, the project applicant shall require that the Vibroseis trucks are operated a minimum of 200 feet away from any occupied home.	During geophysical survey	Noise reduction measures implementation	County of Imperial and/or ORNI 5	County of Imperial
MM-NOI-2: During construction of the exploratory wells, the project applicant shall require the well drilling contractor to implement the following noise reduction measures: <ul style="list-style-type: none"> All construction equipment shall use noise-reduction features (e.g., mufflers and engine shrouds that are no less effective than those originally installed by the manufacturer; All non-essential well drilling equipment and truck deliveries shall be limited to 	During construction	Noise reduction measures implementation	County of Imperial and/or ORNI 5	County of Imperial

<p>operating during the allowable construction times of between 7 a.m. and 7 p.m. Monday thru Friday and between 9 a.m. and 5 p.m. on Saturday;</p> <ul style="list-style-type: none">▪ The portable office and any storage containers used during the well drilling phase shall be placed between the drilling equipment and nearest home, in order to effectively act as a sound wall and provide attenuation to the nearest home.				
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