

DECISION RECORD

Panamint Valley Lithium Exploration Project CACA-57756

Environmental Assessment DOI-BLM-CA-D050-2019-007-EA

Bureau of Land Management, Ridgecrest Field Office

INTRODUCTION AND BACKGROUND

Battery Minerals Resources California, Inc. seeks Bureau of Land Management (BLM) authorization to drill and obtain subsurface mineral samples from four sites on unpatented placer claims located within Panamint Valley, California. This proposal to test for lithium minerals is subject to Title 43, Subpart 3809 of the Code of Federal Regulations and is serialized as Plan Of Operations CACA-57756.

BUREAU OF LAND MANAGEMENT NEED FOR THE PROPOSED ACTION

The Bureau's need to respond to such exploration plans of operation is established by Title III, Section 302(b) of the Federal Land Policy and Management Act of 1976 (43 USC 1732(b)). This portion of FLPMA states in the pertinent part that:

“Except as provided in section 1744, section 1782, and subsection (f) of section 1781 of this title and in the last sentence of this paragraph, no provision of this section or any other section of this Act shall in any way amend the Mining Law of 1872 or impair the rights of any locators or claims under that Act, including, but not limited to, rights of ingress and egress. In managing the public lands the Secretary shall, by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the lands.”

The Federal Land Policy & Management Act (FLPMA) thus creates a need for BLM to provide legal ingress and egress for Mining Law-related actions separate from the right-of-way requirements of 43 USC 1761 and other sections of FLPMA, and at the same time creates a need for BLM to prevent unnecessary or undue degradation of public lands and resources. Surface Management regulations 43 CFR 3809 serve the purpose of satisfying both these needs. These regulations require operations to comply with applicable BLM land-use plans to the extent consistent with the mining laws (43 CFR 3809.420(a)(3)).

PROJECT AND ALTERNATIVES DESCRIPTION

Battery Mineral Resources (BMR) proposes to drill four holes vertically to a depth of 2,000 feet each using core drilling methods, those cores having diameters of approximately 3 3/8 inches. The

holes will be temporarily cased with 3-inch PVC casing. The drill rigs will be about 8 feet wide and 30 feet long. A standard drill additive, “Hydraul-ez”, will be used to assist in the drilling process, see Appendix B of environmental assessment [DOI-BLM-CA-D050-2019-0007-EA](#) for Material Safety Data Sheet. Crews of one driller and two helpers will be used, working on two shifts per day. Water consumption is expected to be about 2,000 gallons per day and will be trucked in by a locally-sourced contractor. Sumps to hold drill cuttings will be dug immediately adjacent to the drill pads. These sumps will be 10 feet wide x 20 feet long x 5 feet deep. All cuttings, muds and fluids will be placed into sumps. The anticipated total disturbance would be less than .25 acres per site. Following drilling, a snap sampler attached to a winch will be used to take brine samples of approximately two liters. A second sample of two liters will be taken approximately 10 days following the first.

Alternatives considered are described fully in the Project’s Environmental Assessment (EA)

DECISION

I have reviewed environmental assessment [DOI-BLM-CA-D050-2019-0007-EA](#), and have issued a Finding of No Significant Impact (FONSI) for the Battery Mineral Resources drilling plan of operation CACA-57756. I determine that the operations under the selected alternative will not cause unnecessary or undue degradation, as defined in the BLM’s surface management regulations at 43 CFR Part 3809. It is my decision to approve the Proposed Action Alternative as described in Chapter Two of the EA to the extent this alternative applies to BLM-managed public lands, subject to the mitigation and conservation measures described in that EA and outlined below. The selected alternative will not cause unnecessary or undue degradation, as defined in the BLM’s surface management regulations at 43 CFR Part 3809.

In accordance with 43 CFR 3809.803 and 3809.808, this Decision is in full force and effective immediately. The conditions of approval include:

ENVIRONMENTAL PROTECTION MEASURES

Performance Standards

The performance standards of 43 CFR 3809.420 apply to this operation (see Appendix A). Failure to comply with any of these performance standards is a prohibited act under 43 CFR 3809.605.

Best Management Practices, Applicant Committed Measures, and Conservation Management Actions (CMAs)

General

1. Upon completion of drilling, each drill hole will be filled with suitable clay-based abandonment material to a depth of 10 feet below the surface and the top 10 feet of the hole will be filled with concrete. Drill hole abandonment will take place immediately after completion of the drill hole. The sumps will be fenced off and netted to prevent

burros, tortoises, and bats from consuming the sump waters until the sumps dry out. At that time, the sumps will be back-filled with material originally excavated, and the sumps and disturbed areas will be contoured to match the land configuration present before the drilling activity began. The reclaimed landscape shall have characteristics that approximate the visual quality of the adjacent area with regard to location, scale, shape, color and orientation of major landscape features and meet the needs of the planned post-disturbance land use. Sump and drill site reclamation will take place as soon as possible after completion of drilling at each site. Drilling and reclamation activities are expected to overlap. However, no more than two sites will be active in one of these phases at any given time.

2. Standard noise controls will be used on the exploration equipment in accordance with CMA LUPA-BIO-12.

Design Features/Environmental Protection Measures

1. A biologist will be on-site during excavations and equipment movement as needed to ensure avoidance and minimization measures are appropriately implemented (CMA LUPA-BIO-2, LUPA-BIO-13).
2. Resources setbacks will be identified to avoid and minimize adverse effects to specific biological resources such as the edge of mapped riparian vegetation or suitable habitat for Focus and BLM special status species, if present (LUPA-BIO-3).
3. Seasonal restrictions will be implemented or visual barriers installed for activities which may impact BLM special status species, if present (LUPA-BIO-4).
4. Worker education will be implemented to cover topics including, but not limited to, biological resource identification and protections, avoidance, reporting, and protection measures; the described predator subsidy management standards would be implemented as part of the Project design including, but not limited to, controlling food subsidies, water subsidies, and breeding sites (LUPA-BIO-6).
5. Only a USFWS Authorized biologist can move desert tortoises from harm's way if halting equipment does not fully protect the desert tortoise or results in delays to project activities. The authorized biologist must move the desert tortoise the shortest distance possible into appropriate habitat to provide for its safety (LUPA-BIO-IFS-5 and 8).
6. Subsidized predator standards will be implemented. All trash and food items shall be promptly contained within closed, raven-proof containers or placed out of sight in vehicles with closed windows (LUPA-BIO-6).
7. Check under vehicles and equipment for tortoises before moving. If a tortoise is found underneath one, operator must wait until it leaves on its own accord. (LUPA-BIO-IFS-8).
8. Vehicular traffic will not exceed 15 miles per hour on BLM access roads (LUPA-BIO-IFS-9).
9. Two biological surveys of the area were conducted, see EA Appendix C for first report and DR Appendix C for second report. (LUPA-BIO-1, LUPA-BIO-PLANT-1 and LUPA-BIO-16).

10. If construction takes place from February 1 to August 31 nesting bird surveys will be implemented 3 days prior to construction. If nesting birds are detected, monitoring of active nests and or exclusion zones may be required, therefore contact the BLM immediately (LUPA-BIO-4 and LUPA-BIO-RIPWET-3).
11. Implement water and wetland dependent resource protection measures including but not limited to: construction site standard practices; equipment maintenance; drainage erosion and sediment control actions; erosion control measure inspections; Water from the sump pump will be fenced off from burros and wildlife. **The sumps will be lined with a low-permeability liner.** The top of the water shall be covered with fence panels or netting to prevent bats and birds from drinking. Any holes (i.e. bore holes) in which burros and wildlife may step or get stuck in, shall be covered or capped (LUPA-BIO-9 and LUPA-SW-1 and 6).
12. All relevant requirements of Executive Orders 11988 (Floodplain Management) and 11990 (Protection of Wetlands) will be complied with (LUPA-SW-14).
13. Construction within, or alteration of, 100-year floodplains will be avoided where possible, and permitted only when all required permits from other agencies are obtained (LUPA-SW-16).
14. The proponent will be required to follow all federal and state laws and regulations, such as California Water Code Section 13260, Water Quality Control No. 2003-0003-DWQ, and all applicable Basin Plan provisions provided by the Lahontan Regional Water Quality Control Board (LRWQCB, LUPA-SW-18).
15. Weed management practices will be implemented as part of the Proposed Action operations including but not limited to vehicle cleaning, use of weed-free materials, and monitoring for weeds (LUPA-BIO-10 and 11).
16. Nighttime lighting will be short-term and limited to only necessary use areas by directional lighting pointed downward (LUPA-BIO-14).
17. Proposed Action activities will be confined to the designated routes and drill sites (LUPA-BIO-15).
18. The described closure and decommissioning measures will be covered by the site reclamation activities (LUPA-BIO-7 and LUPA-BIO-8).
19. The operator shall obtain and adhere to the required permits or authorizations from the Great Basin Unified Air Pollution Control District (GBUAPCD). The operator would also adhere to the required GBUAPCD prohibitions including fugitive dust precautions such as road watering, particulate matter standards, and nitrous oxide emission standards. A fugitive dust control plan shall be prepared (LUPA-AIR-1, LUPA-AIR-2, and LUPA-AIR-5).
20. An emergency response plan will be prepared for the control of spills prior to Project initiation.
21. Desert pavement is within the proposed boundary of two of the drill sites (RC2 and DDH-1). The operator will avoid disturbing the pavement to the extent possible by parking all non-essential trucks on the side of the road and by use of weight distributing pads for when

- vehicles and equipment must drive over said pavement. No raking of pavement is allowed, only re-texturize broken surfaces with small rocks. Avoidance is preferred (LUPA-SW-9).
22. Road improvements and drilling activities will use state-of-the-art techniques to minimize disturbance (LUPA-BIO-15).

Cultural Resources (NLCS-CUL-1, ACEC-CUL-5, ACEC-CUL-6)

Should cultural resources be encountered the operator will abide by 43 CFR § 3809.420(b)(8), which states:

- (i) Operators shall not knowingly disturb, alter, injure, or destroy any scientifically important paleontological remains or any historical or archaeological site, structure, building or object on Federal lands.
- (ii) Operators shall immediately bring to the attention of the authorized officer any cultural and/or paleontological resources that might be altered or destroyed on Federal lands by his/her operations, and shall leave such discovery intact until told to proceed by the authorized officer. The authorized officer shall evaluate the discoveries brought to his/her attention, take action to protect or remove the resource, and allow operations to proceed within 10 working days after notification to the authorized officer of such discovery.
- (iii) The Federal Government shall have the responsibility and bear the cost of investigations and salvage of cultural and paleontology values discovered after a plan of operations has been approved, or where a plan is not involved.

AUTHORITIES

This decision is in conformance with the California Desert Conservation Area Management Plan of 1980, as amended. The approval of this action is consistent with the BLM's surface management regulations at 43 CFR 3809 and FLPMA.

DECISION RATIONALE

In the FONSI for this action, a determination was made that none of the alternatives will significantly affect the quality of the human environment and that preparation of an Environmental Impact Statement is not required. The selected alternative meets the BLM's need and is preferred over the No Action alternative because that alternative provides ingress & egress necessary to drill the appropriate locations in compliance with 43 USC 1732. The BLM has determined that the operations under the selected alternative will not cause unnecessary or undue degradation, as defined in the BLM's surface management regulations at 43 CFR 3809.

PUBLIC INVOLVEMENT

The EA for this action was placed on BLM's public ePlanning NEPA website on March 15, 2019 and the BLM accepted public comments until close of business April 15, 2019. The public

comments received by the BLM and the agency's responses are included in APPENDIX A of this decision.

CONSULTATION AND COORDINATION

The Ridgecrest Field Office informally consulted with the U.S. Fish & Wildlife Service regarding Desert Tortoise and Desert Tortoise Habitat in Panamint Valley.

APPEALS

A party adversely affected by this decision may ask the State Director of the appropriate BLM State Office to review the decision under 43 CFR 3809.800. An adversely affected party may also bypass the State Director and directly appeal to the Office of Hearings and Appeals (OHA) in accordance with the regulations contained within Part 4 Title 43 of the Code of Federal Regulations.

A request for State Director Review must be received within 30 days of the time you receive or are informed of the BLM decision. The address is:

Director
California State Office
2800 Cottage Way, Suite W-1623
Sacramento, CA 95825

Your request for State Director review must be a single package that includes a brief written statement explaining why BLM should change its decision and any documents that support your written statement. Mark your envelope "State Director Review." You must also provide a telephone or fax number for the State Director to contact you. Once the State Director issues a decision, it replaces the original BLM decision, which is no longer in effect, and you may appeal only the State Director's decision. If the State Director does not make a decision within 21 days on whether to accept your request for review, you should consider your request for State Director review declined, and you may appeal the original BLM decision to OHA. The State Director's decision will be effective immediately and remain in effect, unless a stay is granted by OHA.

An adversely affected party may appeal the State Director's decision to OHA under 43 CFR 4. An adversely affected party may also bypass State Director review and directly appeal a BLM decision to the Office of Hearings and Appeals (OHA).


In order for OHA to consider your appeal of a decision, you must file a notice of appeal in writing with the BLM office where the decision was made (the Ridgecrest Field Office). That address is:

Bureau of Land Management, Ridgecrest Field Office
300 S. Richmond Road
Ridgecrest, CA 93555


Your written appeal must contain your name, your address, and the BLM serial number of the notice or plan of operations concerning the subject of the appeal (CACA-57756). You must submit a statement of your reasons for the appeal and any arguments you wish to present that would justify reversal or modification of the decision within 30 calendar days after filing your appeal. All decisions go into effect immediately and remain in effect while appeals are pending before OHA unless OHA grants a stay of decision under 43 CFR 4.21. The burden is on the appellant to make the request for such a stay. The petition for a stay of decision must show sufficient justification based on the following:

- a. The relative harm to the parties if the stay is granted or denied,
- b. The likelihood of the appellant's success on the merits,
- c. The likelihood of immediate and irreparable harm if the stay is not granted, and
- d. Whether the public interest favors granting the stay.

Signed:



Carl B. Symons
BLM, Ridgecrest Field Manager



Date

Appendix A: Performance Standards

Surface Management Performance Standards 43 CFR §3809.420

What performance standards apply to my notice or plan of operations?

The following performance standards apply to your notice or plan of operations:

(a) *General performance standards*—(1) *Technology and practices*. You must use equipment, devices, and practices that will meet the performance standards of this subpart.

(2) *Sequence of operations*. You must avoid unnecessary impacts and facilitate reclamation by following a reasonable and customary mineral exploration, development, mining and reclamation sequence.

(3) *Land-use plans*. Consistent with the mining laws, your operations and post-mining land use must comply with the applicable BLM land-use plans and activity plans, and with coastal zone management plans under 16 U.S.C. 1451, as appropriate.

(4) *Mitigation*. You must take mitigation measures specified by BLM to protect public lands.

(5) *Concurrent reclamation*. You must initiate and complete reclamation at the earliest economically and technically feasible time on those portions of the disturbed area that you will not disturb further.

(6) *Compliance with other laws*. You must conduct all operations in a manner that complies with all pertinent Federal and state laws.

(b) *Specific standards*—(1) *Access routes*. Access routes shall be planned for only the minimum width needed for operations and shall follow natural contours, where practicable to minimize cut and fill. When the construction of access routes involves slopes that require cuts on the inside edge in excess of 3 feet, the operator may be required to consult with the authorized officer concerning the most appropriate location of the access route prior to commencing operations. An operator is entitled to access to his operations consistent with provisions of the mining laws. Where a notice or a plan of operations is required, it shall specify the location of access routes for operations and other conditions necessary to prevent unnecessary or undue degradation. The authorized officer may require the operator to use existing roads to minimize the number of access routes, and, if practicable, to construct access roads within a designated transportation or utility corridor. When commercial hauling is involved and the use of an existing road is required, the authorized officer may require the operator to make appropriate arrangements for use and maintenance.

(2) *Mining wastes.* All tailings, dumps, deleterious materials or substances, and other waste produced by the operations shall be disposed of so as to prevent unnecessary or undue degradation and in accordance with applicable Federal and state Laws.

(3) *Reclamation.* (i) At the earliest feasible time, the operator shall reclaim the area disturbed, except to the extent necessary to preserve evidence of mineralization, by taking reasonable measures to prevent or control on-site and off-site damage of the Federal lands.

(ii) Reclamation shall include, but shall not be limited to:

(A) Saving of topsoil for final application after reshaping of disturbed areas have been completed;

(B) Measures to control erosion, landslides, and water runoff;

(C) Measures to isolate, remove, or control toxic materials;

(D) Reshaping the area disturbed, application of the topsoil, and revegetation of disturbed areas, where reasonably practicable; and

(E) Rehabilitation of fisheries and wildlife habitat.

(iii) When reclamation of the disturbed area has been completed, except to the extent necessary to preserve evidence of mineralization, the authorized officer shall be notified so that an inspection of the area can be made.

(4) *Air quality.* All operators shall comply with applicable Federal and state air quality standards, including the Clean Air Act (42 U.S.C. 1857 *et seq.*).

(5) *Water quality.* All operators shall comply with applicable Federal and state water quality standards, including the Federal Water Pollution Control Act, as amended (30 U.S.C. 1151 *et seq.*).

(6) *Solid wastes.* All operators shall comply with applicable Federal and state standards for the disposal and treatment of solid wastes, including regulations issued pursuant to the Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act (42 U.S.C. 6901 *et seq.*). All garbage, refuse or waste shall either be removed from the affected lands or disposed of or treated to minimize, so far as is practicable, its impact on the lands.

(7) *Fisheries, wildlife and plant habitat.* The operator shall take such action as may be needed to prevent adverse impacts to threatened or endangered species, and their habitat which may be affected by operations.

(8) *Cultural and paleontological resources.* (i) Operators shall not knowingly disturb, alter, injure, or destroy any scientifically important paleontological remains or any historical or archaeological site, structure, building or object on Federal lands.

(ii) Operators shall immediately bring to the attention of the authorized officer any cultural and/or paleontological resources that might be altered or destroyed on Federal lands by his/her operations, and shall leave such discovery intact until told to proceed by the authorized officer. The authorized officer shall evaluate the discoveries brought to his/her attention, take action to protect or remove the resource, and allow operations to proceed within 10 working days after notification to the authorized officer of such discovery.

(iii) The Federal Government shall have the responsibility and bear the cost of investigations and salvage of cultural and paleontology values discovered after a plan of operations has been approved, or where a plan is not involved.

(9) *Protection of survey monuments.* To the extent practicable, all operators shall protect all survey monuments, witness corners, reference monuments, bearing trees and line trees against unnecessary or undue destruction, obliteration or damage. If, in the course of operations, any monuments, corners, or accessories are destroyed, obliterated, or damaged by such operations, the operator shall immediately report the matter to the authorized officer. The authorized officer shall prescribe, in writing, the requirements for the restoration or reestablishment of monuments, corners, bearing and line trees.

(10) *Fire.* The operator shall comply with all applicable Federal and state fire laws and regulations, and shall take all reasonable measures to prevent and suppress fires in the area of operations.

(11) *Acid-forming, toxic, or other deleterious materials.* You must incorporate identification, handling, and placement of potentially acid-forming, toxic or other deleterious materials into your operations, facility design, reclamation, and environmental monitoring programs to minimize the formation and impacts of acidic, alkaline, metal-bearing, or other deleterious leachate, including the following:

(i) You must handle, place, or treat potentially acid-forming, toxic, or other deleterious materials in a manner that minimizes the likelihood of acid formation and toxic and other deleterious leachate generation (source control);

(ii) If you cannot prevent the formation of acid, toxic, or other deleterious drainage, you must minimize uncontrolled migration of leachate; and

(iii) You must capture and treat acid drainage, or other undesirable effluent, to the applicable standard if source controls and migration controls do not prove effective. You are responsible for any costs associated with water treatment or facility maintenance after project closure. Long-term, or post-mining, effluent capture and treatment are not acceptable substitutes for source and migration control, and you may rely on them only after all reasonable source and migration control methods have been employed.

(12) *Leaching operations and impoundments.* (i) You must design, construct, and operate all leach pads, tailings impoundments, ponds, and solution-holding facilities according to standard engineering practices to achieve and maintain stability and facilitate reclamation.

(ii) You must construct a low-permeability liner or containment system that will minimize the release of leaching solutions to the environment. You must monitor to detect potential releases of contaminants from heaps, process ponds, tailings impoundments, and other structures and remediate environmental impacts if leakage occurs.

(iii) You must design, construct, and operate cyanide or other leaching facilities and impoundments to contain precipitation from the local 100-year, 24-hour storm event in addition to the maximum process solution inventory. Your design must also include allowances for snowmelt events and drain-down from heaps during power outages in the design.

(iv) You must construct a secondary containment system around vats, tanks, or recovery circuits adequate to prevent the release of toxic solutions to the environment in the event of primary containment failure.

(v) You must exclude access by the public, wildlife, or livestock to solution containment and transfer structures that contain lethal levels of cyanide or other solutions.

(vi) During closure and at final reclamation, you must detoxify leaching solutions and heaps and manage tailings or other process waste to minimize impacts to the environment from contact with toxic materials or leachate. Acceptable practices to detoxify solutions and materials include natural degradation, rinsing, chemical treatment, or equally successful alternative methods. Upon completion of reclamation, all materials and discharges must meet applicable standards.

(vii) In cases of temporary or seasonal closure, you must provide adequate maintenance, monitoring, security, and financial guarantee, and BLM may require you to detoxify process solutions.

(13) *Maintenance and public safety.* During all operations, the operator shall maintain his or her structures, equipment, and other facilities in a safe and orderly manner. Hazardous sites or conditions resulting from operations shall be marked by signs, fenced, or otherwise identified to alert the public in accordance with applicable Federal and state laws and regulations.

[66 FR 54861, Oct. 30, 2001]

APPENDIX B

Public Comments and Responses

Panamint Mine EA Public Comments and Responses

NEPA Analysis

Comment 1: Several comments assert that BLM should have considered that this project could lead to a large-scale mining operation that would have unacceptable major impacts to Panamint Valley's water resources, vegetation, insects, visual resources, sacred sites and/or religious experience.

Response: The Battery Minerals Environmental Assessment (EA) analyzes the environmental consequences associated with the BLM's decision whether to approve the operator's proposed plan to gather samples and explore for lithium. Analyzing a full-scale mining operation in this EA is beyond the scope of this analysis and is not related to the purpose and need. Moreover, this proposal consists of four exploratory drill sites which are anticipated to result in a total disturbance of less than 0.25 acres per drill site, with no more than 2 sites being drilled at one time (EA at p.12, 15, 35). If further exploration or development is proposed in the future, the consequences of approving such a proposal will be subject to environmental analysis at that time.

Comment 2: Commenter believes that based on the likelihood of significant impacts to Death Valley National Park's resources, an EIS would be required.

Response: In the EA, BLM analyzed the potential environmental impacts of the four exploratory drill sites and found that no resource would be adversely impacted to a degree that could not be mitigated through applicant committed voluntary environmental protections measures found in Sec. 2.1.5 of the EA. See the accompanying Finding of No Significant Impact (FONSI) for detailed information supporting the determination of why no Environmental Impact Statement is required for this proposal.

Project Description:

Comment 3: Commenter believes the EA project description fails to describe the State lands within the project footprint of the proposed mining area.

Response: State lands within the boundaries of the proposed plan of operations (CACA 57756) are shown in blue in the EA. Figure 3-1.

Comment 4: Commenter suggests the EA should have disclosed the proposal for drilling on State land south of Ballarat (State Lands Commission # PRC-9385.2).

Response: According to the State Lands Commission website, # PRC-9385.2 is a state

prospecting permit for Sec. 16, T23S, R44E that has not been authorized yet. See https://www.slc.ca.gov/Meeting_Summaries/2017_Documents/04-20-17/Items_and_exhibits/C82.pdf. This activity has been added to the list of projects under cumulative effects (EA at page 34).

Alternatives

Comment 5: Commenter believes the range of alternatives is insufficient; that the drill sites adjacent to Wingate Road should have a drill-on-road alternative.

Response: The drill-on- road alternative was not in the EA, because BLM has determined that this alternative does not warrant further consideration as it does not fit the purpose and need. The BLM worked with the proponent on the proposed action alternative, to lessen impacts and the drill sites chosen were based on that and the mineral potential. The proponent voluntarily agreed to the applicant committed protective measures (EA Sec. 2.1.5). The BLM mitigation measures of EA Sec. 4.1.7.3 (such as parking non-essential vehicles along Wingate Road) appear to be sufficient for minimizing impact to soils. Haul truck traffic makes a drill on road alternative impractical.

Baseline Conditions

Comment 6: Multiple commenters stated that the BLM must consider and share adequate baseline information before approving the project, including data from pre-construction surveys.

Response: The pre-project baseline conditions considered are adequate for this exploration project and the alternatives proposed. Preconstruction surveys were conducted and the Biological Report (Appendix C) provided the data from the pre-construction survey and this was used for analysis in Chapter 3 and Chapter 4 of the EA. In addition, please see Appendix A “Interdisciplinary Team Checklist” for determination of presence and analysis need for pertinent resources.

Comment 7: Commenter questions BLM’s use of the CNDDDB for baseline biological information.

Response: The CNDDDB is used as one source of species information relied on by the BLM in project review in California and its use was explained in the EA in section 3.3, at page 26: “Preliminary database searches provided a basis for addressing the appropriate special status resources potentially occurring near the project areas.”

Desert Renewable Energy and Conservation Plan and Conservation Management Actions

Comment 8: Lithium exploration will directly contradict the management goals of this Area of Critical Environmental Concern.

Response: The Panamint-Argus ACEC is not withdrawn from mining operations subject to the General Mining Act of 1872. Even if an action directly contradicts ACEC management goals, BLM is required to comply with all federal laws including the General Mining Act of 1872. In addition, the ACEC’s Special Unit Management Plan describes that multiple uses will be

allowed if Nationally Significant Values are protected. In particular, this plan lists the objective to “Support the national need for reliable and sustainable domestic minerals while protecting the sensitive resources in the area.” (DRECP LUPA, Appendix B). The plan further explains that new proposals will need to be analyzed on a case-by-case basis and cumulatively, to assess whether they can be accommodated within the ACEC and its management goals.

Comment 9: Multiple commenters believed the BLM failed to demonstrate compliance with Conservation Management Actions from the DRECP amendment to the CDCA plan.

Response: DRECP CMAs were referenced in multiple locations in the EA: Sections 1.4, page 13, and 2.1.5 Design Features/Environmental Protection Measures on pages 17 through 19. While BLM’s approval of the proposed exploration operations is not dependent on the operator’s compliance with the DRECPA CMAs, the Decision Record includes voluntary, applicant committed mitigation measures on pages 2-5 that are consistent with the relevant DRECP CMAs.

Comment 10: Commenter states BLM failed to comply with: LUPA-SW-10:

The extent of additional sensitive soil areas (crypto-biotic soil crusts, hydric soils, highly corrosive soils, expansive soils, and soils at severe risk of erosion) shall be mapped if it is anticipated that an activity will impact these resources. To the extent possible, avoid disturbance of desert biologically intact soil crusts, and soils highly susceptible to wind and water erosion.

Response: The only sensitive soil type found was desert pavement. Two of the drill sites are located on previously disturbed sites and there will be no additional impact to soils at those sites. EA p. 21. The remaining two sites are located on desert pavement, which falls under LUPA-SW-9. All access will be on county roads or open routes and therefore, there will be no additional impact to soils. See section 2.1.5, page 19, Design Features/Environmental Protection Measures, section 3.1, page 21, and EA- Appendix A: Interdisciplinary Checklist for the full list of soil measures.

Comment 11: Commenter states that the BLM failed to comply with LUPA-SW-35 which provides for stipulations for activities in the vicinity of Death Valley National Park, Joshua Tree National Park, or Mojave National Preserve. The provision states that the NEPA for activities involving groundwater extraction that are in the vicinity of Death Valley National Park, Joshua Tree National Park, or Mojave National Preserve shall analyze and address any potential impacts of groundwater extraction on the parks or the preserve. BLM will consult with the National Park Service on this process.

Response: The proposed explorations do not involve groundwater extraction. The only water extracted from the borehole will consist of water samples, generally four liters per borehole. The rest of the water will be trucked in by a locally sourced contractor. See EA at page 15, Sec. 2.1.1. For this reason, the BLM was not required under LUPA-SW-35 analyze impacts to National Park System lands or consult with NPS as part of this NEPA analysis.

Comment 12: Commenter states BLM failed to comply with: LUPA-SW-16: mapping of flood plain boundaries of surface water features.

Response: The BLM identified floodplain boundaries near the project. In the EA, Appendix A: Interdisciplinary Checklist, the BLM explains that “The project is primarily located in an isolated valley bottom distant from established communities. Though DDH-1, RC-2, and RC-5 are sited

in a location designated as Special Flood Hazard Area Subject to Inundation by the 1% Annual Chance Flood (Without Base Flood Elevation, Zone A), the extent of project development is not expected to influence flood hazard or be influenced by flood hazard.. No impact is expected and no additional permitting is required.”

Comment 13: BLM failed to comply with DRECP, LUPA-BIO-1: complete a vegetation map for the project.

Response: BLM used vegetation alliance and special feature mapping developed in support of the DRECP LUPA and publicly available on the DRECP Gateway at <https://drecp.databasin.org>. BLM also conducted vegetation surveys at each of the proposed borehole locations in support of LUPA-BIO-1. The vegetation report is available in Appendix C: Biological Assessment.

Comment 14: Commenter mentions a lack of toxicity data for the sump contents, fluids and cuttings and therefore, they should be placed into portable tanks and disposed offsite or impermeable liners should be required to be installed in the sumps per DRECP CMA LUPA-SW-6.

Response: Appendix B of the EA (Material Safety Data Sheet) discloses that the manufacturer of HYDRAUL-EZ (the drilling fluid) lists no ingredients as hazardous according to OSHA 29 CFR 1910.1200. On page 15 of EA: “10 feet wide x 20 feet long x 5 feet deep sumps to hold drill cuttings will be dug immediately adjacent to the drill pads” All cuttings, muds and fluids will be placed into sumps. Section 2.1.5 Design Features/Environmental Protection Measures provides that the operator will cover sumps with fence panels or other comparable obstruction to prevent burros, wildlife, bats, and birds from drinking or otherwise coming into contact with the water. The BLM revised this stipulation in the Decision Record (DR) on page 4 to state that the sumps will be lined with a low-permeability liner per LUPA-SW-6.

Comment 15: Commenter states that BLM failed to comply with CMAs: LUPA-BIO-PLANT-1: timing of plant protocol surveys and LUPA-BIO-PLANT-2: avoidance set-back.

Response: The BLM complied with LUPA-BIO-PLANT-1 by requiring two plants surveys of the project area. The first survey occurred in August and concluded the absence of special status perennials, as discussed in the EA. Because this survey was not properly timed to detect annuals, the BLM developed the EA to include environmental protection measures on page 15, which will adequately protect any additional special status species, including the requirement of a second survey to determine the presence of annual special status species.

For LUPA-BIO-PLANT-2: The proposed action will not directly impact any special status plant species. No special status plant species were detected within the survey area around the proposed action during the two surveys that occurred. Broader surveys for application of LUPA-BIO-PLANT-2 did not occur because the proposed action will not impact plant species beyond the immediate project site, therefore, preventing unnecessary and undue degradation to special status plant species. Also, application of a one-quarter mile buffer would not meet the purpose and need of the proposed action and therefore BLM would not meet its statutory requirements [43 USC 1732 (b)] to allow access and development of mining claim.

Comment 16: Commenter states that NLCS-MIN-1 and ACEC-MIN-1 requires BLM to consider resource values of lands administered for conservation purposes and determine whether mineral resource development is compatible with BLM’s conservation management.

Response: These Conservation Management Actions apply to ‘High Potential Mineral Areas.’ The EA did not discuss NLCS-MIN-1 or ACEC-MIN-1 because the proposed action is not in a recognized High Potential Mineral Area. See

https://www.drecp.org/draftdrecp/files/Appendix_R_Data_Supporting_Volumes_III_and_IV/R1_Data%20Supporting%20Volume%20III/Appx_R1.15_Minerals.pdf.

Comment 17: Commenter claims BLM failed to comply with NLC and ACEC Disturbance Caps from the DRECP (NLCS-DIST-2, and ACEC-DIST-2).

Response: See E.A. at page 35 and 37 for Disturbance Cap analysis. The EA states “The Panamint Lake Unit of this ACEC encompasses 23,197 acres and has a 1 percent ACEC disturbance cap. Current disturbance within this ACEC is at 75.6 acres, or 0.326 percent of the total area (BLM 2019). The proposed action of up to one acre of disturbance would bring the total area disturbance up to 76.6 (0.5 percent of total area) for the ACEC. This would be a negligible impact on the Panamint Lake Unit and the ACEC as a whole and would not require ground disturbance mitigation as provided in CMAs ACEC-DIST-1 and ACEC-DIST-2.”

NLC: The EA states “Panamint Unit encompasses 197,941 acres and has a 1 percent (or 1,979-acre) disturbance cap. Current disturbance within the unit is 989.45 acres, or 0.50 percent (BLM 2019). The addition of 1 acre of disturbance associated with the proposed action would bring this up to 990.45 acres, or 0.50 percent. This would be a negligible impact on the Panamint Unit and would not require ground disturbance mitigation as provided in CMA NLCS-DIST-2.”

Both the ACEC and NLCS subunits are **under** their respective disturbance caps, and this project will not cause the disturbance caps to be exceeded.

Special Status Species

Comment 18: Multiple commenters suggested the operation would have impacts on a wide range of species that were either not considered in detail or not considered at all in the EA, including several special status species such as Panamint Daisy, Inyo California towhee, Mohave ground squirrel, and Panamint Alligator Lizard.

Response: The EA did not mention Panamint Daisy, Inyo California towhee, and snowy plover because these species are not known to occur in the project vicinity.

The EA at Section 4.6 analyzed impacts to special status species that could occur. Due to the small area of disturbance and the temporary nature of the project, species descriptions and analysis for BLM sensitive species, including the Mohave ground squirrel and Panamint Alligator Lizard, were sufficient to analyze and reduce the potential impacts of the project to a less than significant level through applicant committed measures and Section 2.1.5 of the EA and Decision Record for full account of the Environment Protection Measures and design features.

Comment 19: Commenter suggests that Snowy Plovers may be impacted by changes in water levels and brine contamination.

Response: There is no Snowy Plover habitat in the vicinity of the drill sites and the closest potential habitat was surveyed and no snowy plovers were located. The surveys completed in 2001 by Laura Cunningham found one snowy plover in June at Warm Sulphur Springs and no other plovers have been noted there or on Panamint Lake since then. The 2001 survey noted a lot of coyote and burro activity in the area, which may have been a factor in the lack of presence.

Water Related Resources

Comment 20: Commenter points out that no wetland delineation was completed for this project, but that two of the sites contain *Sueda nigra*, which is listed as a wetland obligate species, and BLM is obligated to conduct an additional survey and habitat assessment for the species.

Response: Wetland delineation is conducted to determine the applicability of Section 404 of the Clean Water Act with regard to the discharge of dredged or fill material into waters of the U.S. It is the proponent's responsibility to contact the U.S. Army Corps of Engineers and the Lahontan Regional Water Quality Control Board to obtain all necessary permits before implementing the proposed action. U.S. Fish and Wildlife's National Wetlands Inventory was utilized to determine the appropriateness of drilling site locations in relation to wetlands (<https://www.fws.gov/wetlands/data/mapper.html>). All ponds, emergent/shrub wetlands, springs, and significant lake features including *Sueda nigra*, were specifically avoided during the site review process in order to prevent impacts to those resources. All surface disturbance will be limited to the footprint of each drilling pad and no additional surveys are needed

Comment 21: The proposed project location contains unique desert wetland communities.

Response: Project site locations were chosen to avoid the unique desert wetland communities and prevent impacts to those resources. See response to Comment 19 for additional information regarding the identification of wetlands and related features.

Comment 22: Commenter is concerned there is no mention of California Sustainable Groundwater Management Act (SGMA).

Response: SGMA requires governments and water agencies of high and medium priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. The Panamint Valley groundwater basin is neither a high priority nor a medium priority basin and it does not have a local water agency. The proposed action does not trigger any requirements related to SGMA.

Comment 23: Commenter stated there is no mention of any monitoring at the two springs that might be impacted by this drilling.

Response: Monitoring the springs along the periphery of Panamint Lake was not added because the amount of water removed is not significant in relation to the capacity of the groundwater basin and is unlikely to cause reduced production at the springs. The purpose of monitoring is - "to demonstrate compliance with the approved plan of operations and other Federal or State environmental laws and regulations, to provide early detection of potential problems, and to supply information that will assist in directing corrective actions should they become necessary (43 CFR 3809.401(b)). Monitoring programs are needed for "resources potentially affected and the issues identified during project review" (Section 4.3.3.4.2 of [BLM Handbook H-3809-1](#)). The project review is this present environmental assessment.

Soils

Comment 24: Commenter recommends that the desert pavement could be protected with

matting (CMA LUPA-SW-9).

Response: As noted on page 19 (See Section 2.1.5 Design Features/Environmental Protection Measures), “The operator will avoid disturbing the pavement to the extent possible by parking all non-essential trucks on the side of the road and by use of weight distributing pads for when vehicles and equipment must drive over said pavement.”

Cultural/Archaeological

Comment 25: Panamint Valley contains ancient surface rock alignments that have lasted for thousands of years, but which are incredibly vulnerable to disturbance. Moreover one of the drill pads is within 1.6 miles of an ancient rock alignment. The workers doing the drilling may well disturb the alignments. Vandalism and destruction of archaeological resources is a well known result of introducing outside workers into an area.

Response: The project area and its associated Area of Potential Effects (APE) encompasses only seven acres, almost all of it within 100 feet of existing dirt roads. None of the ancient rock alignments occur near or within the APE, and are thus, are not affected by this undertaking. The concern that employees may search for and collect or damage archeological resources is outside of the scope of this analysis.

Tribes

Comment 26: The Commenter is concerned that there was no consultation with the tribe.

Response: The BLM Ridgecrest Field Office has been in continuous government to government consultation with the Timbisha Shoshone Tribe of Death Valley for over 20 years. The first consultations took place during the mid-1990s and involved a proposal to expand the Briggs gold mine in Panamint Valley, immediately followed by a mine exploration project at Conglomerate Mesa, to the north, during 1998-1999. The Tribe has been consulted on a regular basis since then regarding possible effects that might be caused by various development applications received by the BLM to those resources that are of importance to them. The BLM Ridgecrest Field Office Manager also participates in quarterly government-government consultation meetings with the Timbisha Shoshone Tribal Council, along with the National Park Service, at the Death Valley National Park Headquarters building where the Tribe is briefed on current projects under review by the BLM that might be of concern to the Tribe. These meetings have occurred every three months since 2005, and this particular project was mentioned to the Tribal leadership during the September 18, 2018 meeting.

The Tribe has previously, starting in 1995, and with regularity since, adequately informed the BLM with detailed statements about the cultural and spiritual importance that the Panamint Valley has for Tribal members, and the BLM continues to remain informed and aware of these sensitive areas, resources, and landscapes. As a result of this previously provided information about their important areas, the BLM Ridgecrest Office management was already aware and informed of the Tribe’s concerns that were expressed in their letter of comment to this Environmental Assessment, and the Tribe’s sensitivities were taken into account by BLM management during the planning and review of this undertaking.

The BLM also takes very seriously its responsibility to maintain the confidentiality of these Tribal areas, resources, and landscapes that have been provided by the Tribe to the BLM and for the need to help protect their identity and locations from unauthorized disclosure. Thus, there is a certain amount of ambiguity written into the text of the Environmental Assessment in order to provide a measure of protection for them, rather than openly provide in detail what those resources are and where they occur.

Comment 27: The commenter requested that the Environmental Assessment include a discussion on possible impacts on water resources of the Timbisha Shoshone Tribe within Panamint Valley.

Response: The BLM knows of no Tribal-owned water resources in the project area.

Noise/Soundscapes:

Comment 28: Multiple commenters requested to know how noise will impact the quality of wilderness and park lands.

Response: The EA refers to LUPA-BIO-12 at page 13 (Sec. 1.4) of the EA and at page 2 of the Decision Record. LUPA-BIO-12 provides: Standard noise controls will be used on exploration equipment. Additional language has been added to the EA at page 20: "All other resources were determined not to have the potential for significant impacts with the addition of mitigation measures and conservation management actions." The applicability of LUPA-BIO-2 to exploration equipment reduces any noise impact to adjacent areas, including Death Valley National Park. In addition, BLM does not have a policy that requires a buffer zone between public land and NPS administered land. As noted in the EA (pages 16-17 in the revised EA), the impact from this proposed project are localized and temporary.

Visual Resources:

Comment 29: Commenter expressed concern that the Visual Resource Analysis and Key Observation Points (KOPs) were insufficient and there should be more KOPs from the Park.

Response: The EA notes that the project is located within a Class II visual resource management area with an objective of retaining the existing character of the landscape through a low level of change that does not attract attention. EA p.22, 30. The visual resource classification was established in the DRECP, due in part to its proximity to Death Valley National Park. EA, p.31. Visual resource class values are not however the sole determinant of how visual resources on public lands are managed, rather, public lands are managed for a variety of purposes. EA, p. 31. Four KOPs were identified and established by the BLM to analyze the potential for visual impacts of the proposed project, and were selected to represent the views of most visitors to the area. EA, p. 37-39. Appendix A of the EA states that impacts to Visual Resource KOPs are selected with respect to where the project is most likely to be seen by a large number of people. The only high elevation KOP that meets this criteria is Telescope Peak. A popular trail leads up to the peak from the Wildrose saddle. Most of the trail is on the back (east side) of the crest, but there is a short $\frac{3}{4}$ mile section that wraps around the west side. A visitor might be able to pick out drill site RC4 from there as well along the final (0.3 mile) pitch to the peak. However, the drill site is located more than 9 miles away and is 8,000 feet down from the

peak. It may appear as a small dot and would be indistinguishable from other small dots caused by other disturbances such as large vehicle campsites scattered across the valley floor. The other drill sites are more than twice as far away from the peak. The sites located on the east side of Panamint Valley may not even be visible from Telescope because of intervening ridgelines. Accordingly, visual impacts caused by the drill sites will be negligible.

Comment 30: Commenter asked if lights would be shut off after dark and mentioned that Death Valley National Park is recognized as an International Dark Sky Park.

Response: Impacts to night skies have been addressed and are being mitigated as reflected in the project proposal stipulations (See Section 2.1.5 Design Features/Environmental Protection Measures). Per DRECP LUPA-BIO-13, and this EA: “Nighttime lighting would be short-term and limited to only necessary use areas.” BLM revised this stipulation to state explicitly that only directional lighting would be used and will be pointed downward. (see EA at page 18 and DR page 4).

Recreation and Access:

Comment 31: Multiple commenters expressed concern that the proponent with equipment and water hauling trucks would have a direct impact to recreation and access.

Response: As outlined in the EA, Wingate Road is an Inyo County road (EA, p. 9) which would remain open and in place during and after all proposed activities. This road is wide, approximately 24 feet, with ample room for recreational vehicles to pass any large equipment that may be there. The EA notes that the proposed project will not impede travel or restrict other uses for which people recreate in the area (EA, p. 21). General recreation and access to public land recreation occur along Wingate, Indian Ranch, and Ballarat roads and include off-highway vehicle travel and historical investigation, hiking, backpacking and photography. EA, p. 34. Recreational use of these roads would be expected to continue, and opportunities for primitive and unconfined recreation would be and remain unaffected. EA, p. 35, 42. Overall, the EA indicates that impacts to recreation and access to public lands for recreation are expected to be negligible. EA, p.21.

Comment 32: Commenter believes the drilling would destroy the recreational value and the money that tourism brings in for the towns nearby like Trona and Ridgecrest.

Response: The proposed project will be short-term and small in size with only two drill holes active at any given time, resulting in .5 acres of disturbance. The project will not have a measurable effect on recreation because of the small size of sites, short duration, and open access that will remain (EA, p. 21).

Comment 33: Commenter expressed concern that the roads through Death Valley, including HWY 190, are winding roads and not appropriate for heavy truck traffic associated with mining.

Response: As shown on Figure 1-2, the access roads for this project do not traverse Death Valley National Park and are not winding (EA, p. 11).

Comment 34: Commenter wants measures to be taken to prevent unauthorized access from Off Road Vehicle Riders. All roads should be protected with gates and fences that cannot be

knocked down with vehicles.

Response: This EA analyzes a proposed project to drill 4 holes to explore for lithium. The proposed action is confined to designated routes and drill sites. EA, p. 18. The comment seeks prevention of unauthorized OHV access and is outside of the scope of this project and its analysis.

Air Quality:

Representative quote: "Dust associated with mining could adversely impact visitors, wildlife, and other resources at Death Valley National Park, etc."

Comment 35: Commenters were concerned about air quality from dust associated with operations and increased truck traffic hauling water to the site.

Response: According to the design features and environmental protection measures for this project, the operator is required to obtain and adhere to the required permits or authorizations from the Great Basin Unified Air Pollution Control District (GBUAPCD). EA, p.18, 19. The operator would also adhere to the required GBUAPCD prohibitions including fugitive dust precautions such as road watering or chemical applications for dust control, particulate matter standards, and nitrous oxide emission standards. A fugitive dust control plan would be prepared and implemented in accordance with LUPA-AIR-5.

The following is taken from the fugitive dust prevention requirements established by the GBUAPCD:

Fugitive Dust:

"GBUAPCD Rule 401 Fugitive Dust

A person shall take reasonable precautions to prevent visible particulate matter from being airborne, under normal wind conditions, beyond the property from which the emission originates. Reasonable precautions include, but are not limited to:

1. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land;
2. Application of asphalt, oil, water, or suitable chemicals on dirt roads, material stockpiles, and other surfaces which can give rise to airborne dusts;
3. Installation and use of hoods, fans, and fabric filters, to enclose and vent the handling of dusty materials. Adequate contaminant methods shall be employed during such handling operations;
4. Use of water, chemicals, chuting, venting or other precautions to prevent particulate matter from becoming airborne in handling dusty materials to open stockpiles and mobile equipment;

5. Maintenance of roadways in a clean condition."

Appendix E to the Decision Record contains an example of a Dust Control Plan issued by GBUAPCD.

Panamint Valley is an unclassified area for PM10 and an attainment area for PM2.5. Activities utilizing mechanized equipment would be geographically limited and short-term and with adherence to the Dust Control Plan no measurable offsite impacts are anticipated.

As the EA states in Section 4.3, an increase in fugitive dust during windstorms could occur due to the loosening of previously disturbed soil disturbance as a result of the Proposed Action. The anticipated total disturbance would be less than .25 acres per site. Three sites are on the edge of the dry lake bed and the other is located alongside a dirt road. The dust generated from these sites would be negligible in relation to existing dirt roads and natural dust generated from the lake bed itself.

No further conformity analysis or determination is necessary.

Comment 36: Commenter points out that there is no mention of spores containing valley fever.

Response: The Environmental Assessment did not address Valley Fever for the proposed actions because there have been no reported cases of valley fever caused by Coccidioidomycosis within Inyo County / Panamint Valley. The proponent of the project will obtain the required permits or authorizations from the Great Basin Unified Air Pollution Control District (GBUAPCD) regarding dust abatement measures identified in a Dust Control Plan which would reduce any potential threat of fungal spores or other soil irritants being released from within the soil. **Green House Gases (GHG):**

Comment 37: Commenters concerned that the EA does not include an analysis of greenhouse gas (GHG) emissions.

Response: On September 22, 2009, the US EPA issued a final regulation (40 CFR Part 98) for the Mandatory Reporting of Greenhouse Gases, which became effective on October 30, 2009 (USEPA 2009). The rule applies to direct greenhouse gas (GHG) emitters and suppliers. GHG emissions relevant to combustion sources include CO₂, methane (CH₄), and nitrous oxide (N₂O). Emissions of these gases are reported as CO₂ – equivalent (CO₂e) emissions. The CO₂e conversions are based on the global warming potential. Climate change refers to any significant change in measures of climate (temperature, precipitation, or wind) that lasts for an extended period of time (e.g., decades or longer). A number of factors may affect climate change, including natural cycles (e.g., changes in the sun's intensity or earth's orbit around the sun), natural processes within the climate system (e.g., changes in ocean circulation), and human activities that lead to changes the atmosphere's composition (e.g., burning fossil fuels), land surface (e.g., deforestation, reforestation, urbanization, and desertification), and water bodies (oceanic acidification, sea level rise, and formation of dry lakes).

California is a substantial contributor to global GHG emissions as it is the second largest contributor in the U.S. and the 16th largest in the world. (California Energy Commission (CEC). 2006. Inventory Greenhouse Gas Emissions and Sinks: 1990 to 2004. Staff Final Report (CEC-600-2006-013-SF). GHGs include:

- | | |
|--|---|
| 1. Carbon dioxide (CO ₂) | 4. Hydrofluorocarbons (HFCs) |
| 2. Methane (CH ₄) | 5. Perfluorocarbons (PFCs) |
| 3. Mono-nitrogen oxides (NO _x) | 6. Sulfur hexafluoride (SF ₆) |

According to the Intergovernmental Panel on Climate Change (IPCC) Third Assessment Report, increased atmospheric levels of CO₂ correlate with rising temperatures; concentrations of CO₂ have increased by 31 percent above pre-industrial levels since 1750. Climate models show that temperatures will probably increase by 1.4 degrees Celsius (°C) to 5.8 °C between 1990 and 2100. Much uncertainty in this increase results from not knowing future CO₂ emissions and inherent uncertainty in the assumptions that frame climate models.

The Environmental Assessment did not analyze Green House Gas in relation to the Proposed Action because the emission threshold of 25,000 metric tons of CO₂/year for reporting is clearly not met. This exploratory one time proposed action is estimated to produce 514 metric tons of CO₂/year, two percent of the threshold required for reporting to the Environmental Protection Agency.

The following information was used to calculate the estimated CO₂ produced from this project and is taken from the list of the mobile equipment proposed for use under the proposed action is found on page 16 of the EA.

Table 2-1 Proposed Action Mobile Equipment List

Equipment Type	Number of Units
Atlas Copco truck-mounted drill	1
Truck-mounted pipe carrier	1
2,000-gallon water truck	1
Backhoe	1
Light-duty pickup trucks	2
Parts trailer	1

Table 1: Equipment and published emissions

Comparable Equipment and Published Emissions

Equipment Type	Comparable Equipment Type	CO2e Emissions/Hour (pounds) ¹
Airbus Helicopter Astar AS350B2	Airbus Helicopter Astar AS350B	970.83
Schramm T450 track-mounted drill	Boring/Drill Rig	166.061
Compressor, 900 cubic feet per minute 351 psi	Pump (250 HP)	203.116
Track-mounted pipe carrier	Truck (Off-highway)	263.09
2,000-gallon water truck	Water Truck	134.88
Backhoe	Backhoe	67.193
D6 or equivalent dozer with 10-foot or less blade	Dozer (Rubber Tired)	243.383
Light-duty trucks	Pick-up truck - onroad	1.11
Parts trailer	Truck (Off-highway)	263.09
LF 70 or 90 surface Coring Fly Drill	Boring/Drill rig	166.061
Portable gas generator	Generator	62.104
Hydraulic sump pump	Generator	62.104
Diesel triplex pump	Generator	62.104
Helicopter-portable excavator	Excavator - small	75.211

¹Helicopter emission numbers are from Conklin & de Decker (<https://www.conklindd.com/CDALibrary/CO2Calc.aspx>) and the rest of the emission data is from the Medford GHG Calculator

The proposed action Greenhouse Gas Emission calculation (based on maximum use) totals less than 514 metric tons:

Equipment	CO2e Emissions/Hour (pounds)	Description of Hours	Calculated Hours of Operation	CO2e Emissions (pounds)
Atlas Copco Drill Rig	166.061	84 days at 24 hr / day	2,016	334,778.976
Backhoe	67.193	80 Hours	80	5,375.44
Truck Mounted Pipe Carrier	263.06	84 days at 24 hr /day	2,016	530,328.96

Equipment	CO2e Emissions/Hour (pounds)	Description of Hours	Calculated Hours of Operation	CO2e Emissions (pounds)
Hydraulic Sump Pump	62.104	84 days at 24 hr /day	2,016	125,201.664
Water Truck	134.88	On the average 12 hrs day for 84 days	1,008	135,959.04
Pickup Truck	1.11	On the average 8 hrs per day for 84 days	672	745.92
Pickup Truck	1.11	On the average 8 hrs per day for 84 days	672	745.92
Total (Pounds)				1,133,135.92
Total (Metric Tons)*				513.98

* 1lb CO2e = 0.000453592 Metric Tons

The Proposed Action would not impact or contribute significantly to increase GHG emissions. EA, p. 20. The EA reflects the resources with potential for adverse effect, and, with the exception of fugitive dust and particulates (which are subject to design features and environmental protection measures), air quality and GHG are not potentially affected resource warranting further discussion in the EA. EA, p. 13, 20. In accordance with policy, these resources are not further evaluated in the EA. EA, p. 23.

Lands with Wilderness Characteristics:

Comment 38: Commenter notes that the project will impact Lands with Wilderness Characteristics ("LWC").

Response: Lands with wilderness characteristics is a resource BLM determined was present with the potential for adverse effect and was carried forward for analysis in the EA. EA, p. 13. LWC is discussed beginning at page 31 of the EA. BLM explains that the project drill sites are distributed across two wilderness inventory units that have wilderness characteristics. EA, p. 31. Impact to LWC is addressed in the EA at p. 40. The EA notes that the drilling project would result in some short-term, discreet impacts, however, virtually all physical disturbances will be confined to the drilling sites themselves (each affecting no more than 0.25 acres). No more than two of these sites are going to be active at the same time, and the sites are isolated and widely dispersed within and along lakebed margins. No lasting impacts to the wilderness character of

either one of the two LWC units were identified and the overall effect to LWC was determined to be negligible. EA, p. 41.

Comment 39: Commenter states BLM failed to include LUPA-WC-3: “For inventoried lands found to have wilderness characteristics but not managed for those characteristics compensatory mitigation is required if wilderness characteristics are directly impacted. The compensation will be: 2:1 ratio for impacts from any activities that impact those wilderness characteristics, except in DFAs and transmission corridors.”

Response: The EA analyzes impacts to lands with wilderness character and only negligible, transient impacts were identified. Since impacts are negligible and transient, there are no persistent residual impacts, and no compensatory mitigation is deemed necessary.

Cumulative Impacts and Reasonably Foreseeable Future Actions:

Comment 40: Commenter believes the cumulative impacts analysis is insufficient; BLM should have included an inventory of ACEC/NCL acreages of disturbance by authorized and unauthorized vehicle tracks and burro track disturbance.

Response: The project is described as consisting of 4 bore exploration drill sites which will be located within CDNCL and ACEC lands, requires a plan of operation, and is anticipated to result in a total disturbance of less than .25 acres per drill site, with no more than 2 sites being drilled at one time. EA at p.12, 15, 35. The disturbance calculations used in the EA were taken from the DRECP index which includes authorized and unauthorized vehicle tracks and requires an analysis of whether disturbance can be seen from a 1:10,000 map scale. The EA discloses that the project site is located near or within the Panamint burro herd area (EA at p.23), that project restrictions will preclude access by burros to sumps (EA p. 16) and that burros use the Cumulative Effects Study Area (CESA), particularly around water sources and riparian vegetation, including Warm Sulphur Spring, and it is anticipated that they will continue to use the CESA notwithstanding the potential authorized drilling (p. 34, 35). With regard to ACECs, the project is located within the Panamint Lake unit of the greater Panamint/Argus ACEC, as described in the DRECP. EA, p.20, 24. Exploration for locatable minerals within the ACEC will be analyzed on a case by case basis, and cumulatively, mining will address the management goals of the ACEC. EA, p.35. The project is also located within CDNCL lands providing linkages for wildlife migration corridors, and carry a 1% disturbance cap. EA, p. 30. Disturbance of .5 acres for 2 drill sites, or 1 acre for all 4 drill sites within the larger 23,200 acre ACEC/NCL area is negligible from a cumulative impact analysis. EA, p.35.

Comment 41: Multiple commenters mention that the BLM included “mining” as a “reasonably foreseeable future action” in section 4.1.2 (page 35)

Response: BLM identified mining in the general project area in the EA. The EA notes in the section on cumulative effects that the Briggs gold mine is located to the east of the project site and still produces small amounts of gold from leach pads, and previously mined ore. EA, p.34. Reasonably foreseeable future actions, as part of the cumulative effects identified in the EA include the continuation of present actions, which include mining and exploration in the area. EA, p.35. The EA also notes that the project site is located in an area with some of the oldest

historic mining areas in California, and includes historic period mining camps. EA, p. 30, 32. As such, the EA notes that present and past mining and exploration exist in and affect the CESA (EA, p. 34), and that these activities are likely to continue. EA, p. 35. While the effects of the action added to the indirect and cumulative effects of past, present, and reasonably foreseeable future actions will occur, the small project size (less than 1 acre total disturbance over the life of the project), coupled with the environmental protection measures and project design features described in the EA (which will minimize direct, indirect and cumulative effects), the effects on public land resources are reduced to a negligible level.

Reclamation Plan:

Comment 42: Commenters claims EA inadequately addresses how sump area(s) will be restored to their previous condition.

Response: The regulatory performance standards for this action require reclamation, not restoration (see regulations 43 CFR 3809.420 and 3809.5). Reclamation of the sump area(s) is discussed in the EA at page 16. The EA notes that once the sumps dry out, they will be back-filled with material that was originally excavated, and the area (including the sumps themselves) will be contoured to match the configuration of the land as it existed before the drilling activity took place. Visual quality will be approximated, and sump and drill site reclamation will take place after drilling of each site concludes.

Land Status and Designations:

Comment 43: Commenter believes the Land Status Map is inadequate and the EA should have included Wilderness Inventory maps.

Response: Figure 3-1 shows Designated Wilderness, NLCS lands and ACECs. The ACEC designation is more restrictive than the NLCS designation and the ACEC extends over all of the area outside of designated wilderness. The map and legend is at an acceptable scale. Stand-alone maps of the two wilderness inventory units have been provided in Appendix D of Decision Record.

Comment 44: Commenter is concerned that the lands have sensitive designations, ACEC and CDNCL, and thus mining and exploration are incompatible.

Response: The DRECP designations do not eliminate multiple use, nor prohibit mining exploration, from these lands.

General Questions and Clarifications:

Comment 45: Commenter believes Daily work crews could walk to drilling site RC-4 along BLM travel route P-929 instead of driving in daily.

Response: The EA indicates that all of the proposed sites are immediately adjacent to existing county roads or BLM designated routes, most of which are in good condition and require no improvement. EA p.16. P-929 is a designated motorized route open to the public, and there are

no restrictions on these roads and routes that would preclude access to the project sites by motorized vehicles. As part of the design features, and environmental protection measures identified in the EA, activities are confined to designate routes and drill sites. EA, p.18. It is unclear the impact of concern to the commenter but dust will be controlled on routes pursuant to a dust control plan (EA, p.19), and it is a safety hazard to require crews to walk in the desert with their tools to access the project site in the summer heat.

APPENDIX C

Second Biological Assessment-Plant Survey

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April 29, 2019

Robert Wetzel
2850 Mesa Alta Ln.
Arroyo Grande, CA 93420

Subject: Letter Report, Rare Plant Pre-construction
Survey, Panamint Valley Exploration Drilling

Dear Mr. Wetzel:

At your request EREMICO Biological Services, LLC conducted a presence/absence rare plant survey at four proposed exploration drilling sites in Panamint Valley, Inyo County, California. This letter serves as the report of results of the survey.

INTRODUCTION

You, Mr. Robert Wetzel, propose to conduct exploration drilling at four sites on lands administered by the Bureau of Land Management (BLM) in the Panamint Valley. The location of each site is given below.

Table 2: locations of four drill holes

Site	Township, Range, Section, Quarter Section (MDM)	UTM (NAD27, Zone 11S)	
		Easting	Northing
BMR RC-2	T22S, R44E, Sec 27, NW ¼	480101	3983108
BMR RC-4	T21S, R44E, Sec 6, SE ¼	476681	3998855
BMR RC-5	T22S, R44E, Sec 8, SE ¼	478061	3987385
BMR DDH-1	T22S, R44E, Sec 10, SW ¼	479877	3986923

Elevation of each site is approximately 1,000 feet above mean sea level. Each drilling site will measure approximately 50 ft by 50 ft. In addition, a 5-foot deep sump measuring 10 feet by 20 feet will be dug immediately adjacent to each drilling site. A preliminary biological resources impact assessment for this project was conducted in August 2017 (Kokx 2018). This assessment identified special status plant species that may occur in the project area. Because the original survey was conducted in the summer, five annual herbs that bloom in the spring that have some potential to occur at the drilling sites could not be evaluated for their presence or absence. The five species are Clokey's cryptantha (*Cryptantha clokeyi*), Death Valley round-leaved phacelia (*Phacelia mustelina*), creamy blazing star (*Mentzelia tridentata*), Latimer's woodland

gilia (*Saltugilia latimeri*), and Hoffman's buckwheat (*Eriogonum hoffmannii* var. *hoffmannii*). Therefore, you engaged the services EREMICO Biological Services, LLC (EREMICO) to conduct a spring rare plant survey to determine the occurrence of special status plants prior to drilling.

METHODS

Prior to conducting the rare plant survey, EREMICO personnel reviewed the physical descriptions, habitat descriptions, drawings, and photographs of the five potentially occurring special status plant species. On April 28, 2019, Bruce Garlinger and I conducted the survey by walking throughout each drilling and sump locations and recorded every plant species observed. We also recorded wildlife species that were present on-site during the survey. At the request of Ms. Caroline Woods, Planning and Environmental Coordinator

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with the BLM, we also scanned the area surrounding each site, particularly the playas, for western snowy plovers (*Charadrius alexandrinus nivosus*), a California Species of Special Concern and a U.S. Fish and Wildlife Services Bird of Conservation Concern (California Department of Fish and Wildlife 2018).

The rare plant survey was floristically based, that is, we identified all plant species, whether fresh or dried, that were encountered at the drilling sites to at least genus and to the level necessary to ensure that they were not plant species of concern. We collected and later identified plants that were not readily identifiable in the field. Nomenclature throughout this report follows *The Jepson Manual, 2nd Ed.* (Baldwin et al. 2012).

RESULTS

No special status plants were observed at any of the drilling and sump locations. Other plant species that were noted during the survey are listed in Attachment 1.

The only wildlife species observed during the survey was horned lark (*Eremophila alpestris*), a common resident desert bird, near BMR RC-2. Small mammal burrows (species unknown) were noted at BMR RC-4 and BMR RC-5. No western snowy plovers were observed in areas surrounding the drilling sites.

DISCUSSION

No special status plants were found at the drilling sites. It is expected that drilling activities will have no impact on special status plants or their habitats.

LITERATURE CITED

Baldwin, B.G., D. H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D. H. Wilken, editors. 2012. The Jepson manual: vascular plants of California, second edition. University of California Press, Berkeley.

California Department of Fish and Wildlife (CDFW). 2018. Special animals list. Periodic publication. Available at: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406&inline>.

Kokx, R. 2018. Biological assessment, Panamint Valley Mineral Exploration, survey conducted for Battery Minerals, Inyo County, California. Unpublished report, Epsilon Systems Solutions, Inc., Ridgecrest, California.

If you have any questions regarding this letter report, please give me a call. It was a pleasure conducting this survey for you.

Table 3: Denise Labertiaux's signature

Sincerely,

s/n

Denise L. LaBerteaux

Attachment

1. Vascular plants that were observed during the April 28, 2019 rare plant survey at the Panamint Valley exploration drilling sites.

Attachment 1. Vascular plants that were observed during the April 28, 2019 rare plant survey at the Panamint Valley exploration drill sites.

FAMILY

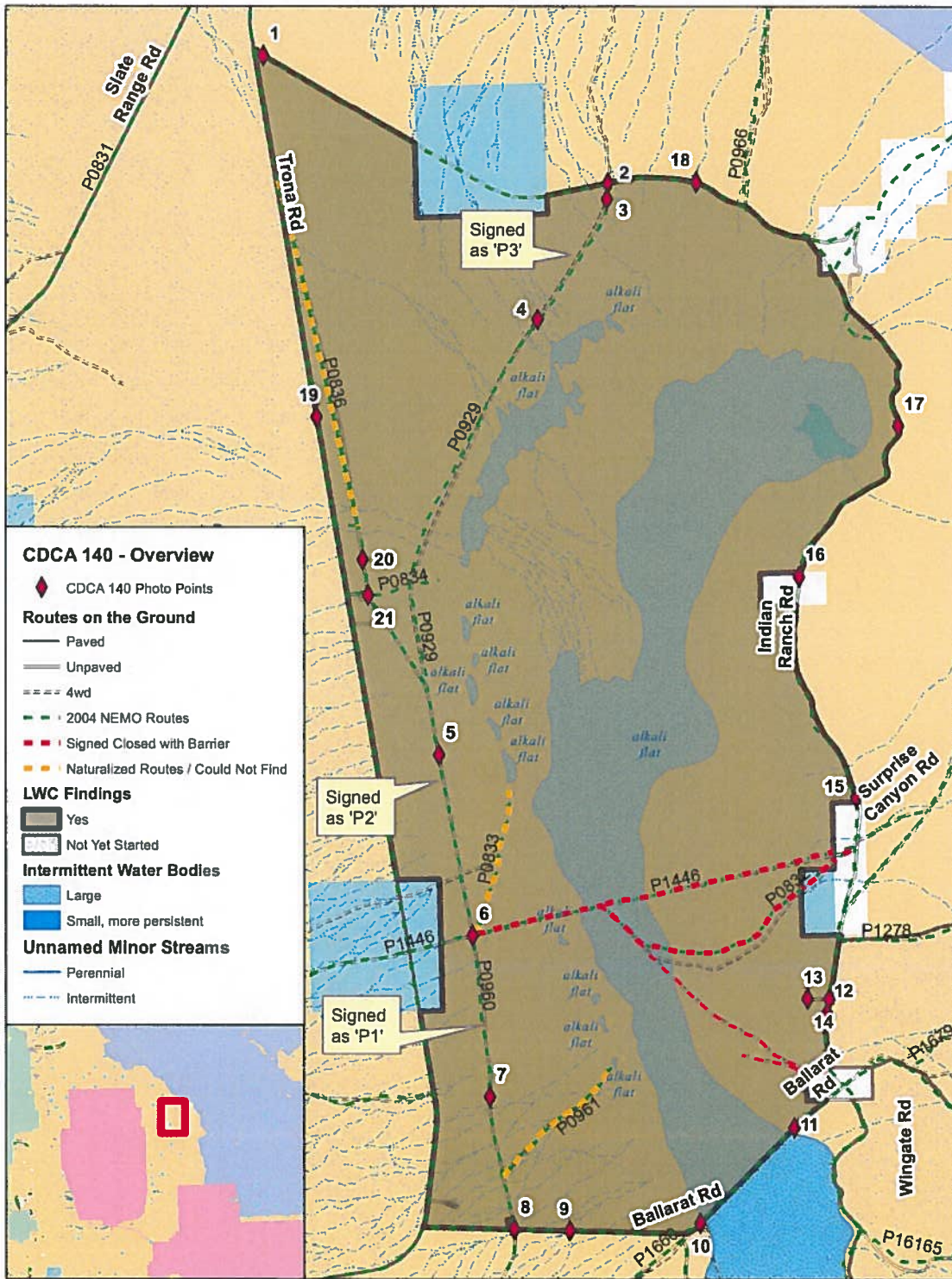
SCIENTIFIC NAME	COMMON NAME	HABIT
ASTERACEAE		
<i>Chaenactis carphoclinia</i> var. <i>carphoclinia</i>	pincushion	annual herb
<i>Geraea canescens</i>	desert-sunflower	annual herb
<i>Psathyrotes annua</i>	turtleback	annual herb
BORAGINACEAE		
<i>Cryptantha angustifolia</i>	narrow-leaved cryptantha	annual herb
<i>Nama pusillum</i>	purple-mat	annual herb
<i>Tiquilia plicata</i>	fan-leaved tiquilia	annual herb
BRASSICACEAE		
<i>Lepidium lasiocarpum</i> ssp. <i>lasiocarpum</i>	peppergrass	annual herb
CARYOPHYLLACEAE		
<i>Achyronychia cooperi</i>	frost-mat	annual herb
CHENOPODIACEAE		
<i>Allenrolfia occidentalis</i>	iodine bush	shrub
<i>Atriplex hymenelytra</i>	desert holly	shrub
<i>Atriplex polycarpa</i>	allscale	shrub
<i>Suaeda nigra</i>	bush seepweed	shrub
CONVOLVULACEAE		
<i>Cuscuta</i> sp.	dodder	holoparasitic vine
MALVACEAE		
<i>Eremalche rotundifolia</i>	desert fivespot	annual herb
ONAGRACEAE		
<i>Chylismia claviformis</i>	evening-primrose	annual herb
<i>Eremothera boothii</i> ssp. <i>condensata</i>	Booth's evening-primrose	annual herb
POLEMONIACEAE		
<i>Aliciella latifolia</i> ssp. <i>latifolia</i>	broad-leaved aliciella	annual herb
POLYGONACEAE		
<i>Chorizanthe rigida</i>	rosy-thorn	annual herb
RESEDACEAE		
<i>Oligomeris linifolia</i>	oligomeris	annual herb
ZYGOPHYLLACEAE		
<i>Larrea tridentata</i>	creosote bush	shrub
POACEAE		
<i>Schismus arabicus</i> *	Arabian schismus	annual grass

*Non-native species

APPENDIX D

Wilderness Character Unit Maps

Map 1: Overview of CDCA 140



Map 2: Wilderness Inventory Unit # CDCA 142-1 (141-133)

