

May 6, 2021



Colleen Garcia (submitted electronically via INF website)
Inyo National Forest
351 Pacu Lane, Suite 200
Bishop, CA 93514

Re: Long Valley Exploration Drilling Project #59294

Dear Ms. Garcia:

We are writing to express our concerns about the proposed Long Valley Exploration Drilling Project (Project) in the Inyo National Forest (INF).

KORE USA Ltd.'s draft Plan of Operation (POO) states that this exploration drilling project has a target beginning date of June 2021 and is expected to be completed in 160 days (i.e., November 2021). KORE proposes to construct a total of 14 drilling pads, measuring 30 feet by 50 feet each (1,590 square feet). Boring will range from 580 to 1,424 feet and access to these drill pads will require constructing roughly a third of a mile of roads for the duration of the project.

The INF's scoping letter states that it anticipates that this proposed action can be completed under a Categorical Exclusion (CE) established under 36 CFR § 220.6(e)(8), because it is a "short term (1 year or less) mineral investigation and incidental support activities". We believe that extraordinary circumstances exist that require the preparation of an Environmental Impact Statement (EIS), or at the very minimum an Environmental Assessment (EA), pursuant to 36 CFR § 220.6(c).

Road construction/surface disturbance

The POO states that drilling operations will access the property by means of existing public roads and by the construction of temporary access roads. The POO states that KORE will use roads that were previously used for exploratory drilling operations so as to "minimize the Projects effects on the vegetative community and ensure no significant disturbance resources". In addition, KORE states that for the temporary access roads will not exceed 10 feet in width.

As the POO correctly points out, various operators engaged in exploratory mining activities in the 1980s and 1990s. However, these temporary non-Forest system roads were reclaimed in the 1990s (about 25-30 years ago) and are now covered in mature, tall, healthy sagebrush and bitterbrush. Given that these temporary roads were reclaimed, KORE's characterization of their road construction as a re-opening of previously used roads is incorrect.

There will likely be far more impacts to the vegetative community and disturbance of resources than is suggested by KORE. In addition, proposed drill sites 9-13 were not previously worked; the road segments leading to those sites will be completely new disturbance to this Project area. Proposed drill sites 9-13 are also on slopes and will therefore have more overburden for the road segments and

the drill pads than the other proposed drill sites. The road to proposed drill sites 9-13 may also need to be widened beyond 10 feet for turnaround areas.

As such, the 0.93-acre total disturbance that is set forth in the draft POO is very likely an underestimate of the surface disturbance; the actual disturbance is very likely one acre or more. The California Surface Mining and Reclamation Act (SMRA) applies to a mining operation "if the prospecting for or extraction of minerals for commercial purposes results in removal of overburden or product of more than 1000 cubic yards in any one location or the total surface area disturbed is greater than one acre". Under SMARA, Mono County may require a reclamation plan, mining operations permit, and/or California Environmental Quality Act compliance, depending on the project scope and scale. These plans/permits would need to be approved by the Mono County Planning Commission.

KORE acknowledges that grading of pads and roads will be necessary. This surface disturbance will make it easier for invasive species such as cheatgrass to establish itself, well before any native grasses in the proposed reclamation seed mix do.

The INF needs to conduct further environmental review with regard to the impacts that would be caused by new road construction and other surface disturbance and whether or not KORE has underestimated the surface disturbance and is subject to SMARA.

Water/Groundwater

The POO states that water will be utilized as the primary drilling fluid and that water will also be used for dust abatement. The POO also states that the proposed Project is anticipated to use 8,000 gallons of water per day, but does not provide any information about a willing seller of this water. The draft POO merely states that KORE will negotiate an agreement with a private party or purchase water from the town of Mammoth Lakes. The public needs additional information about this water source in order to be able to meaningfully and adequately comment on this aspect of the proposed Project.

Los Angeles Department of Water and Power is prohibited from selling water outside of its service area. While Mammoth Community Water District (MCWD) is not, due to the fact that the region in which the proposed Project lies is currently experiencing severe drought, MCWD is imposing drought restrictions and will not sell water outside of its service area this year. Local ranchers need water for their own operations. Due to the fact that the POO does not provide enough specific information about the source(s) of the water for this proposed Project, the INF is not able to determine if the proposed action may have a significant effect on the environment, and as such must prepare an EA.

The POO states that prior studies found that the depth of groundwater in the area is estimated to be between 200 and 300 feet. Given that boring will range from 580 to 1,424 feet, the proposed Project will undoubtedly impact groundwater. Further analysis of these potential impacts should be analyzed in an EA, at a minimum.

Eligible Wild and Scenic Rivers

The POO acknowledges that Hot Creek is approximately .55 miles from the nearest proposed drilling pad. However, the POO fails to mention that segments of three nearby streams – Hot Creek, Little Hot Creek, and Mammoth Creek – were determined eligible for National Wild and Scenic River protection in the 2016 Inyo National Forest Plan. The BLM found one mile of Hot Creek downstream of the National Forest to be eligible as well. BLM and Forest Service guidelines require the agencies to protect the free-flowing character, specific outstandingly remarkable values, and maximum potential classification of eligible rivers. In addition, National Environmental Policy Act (NEPA) guidelines require an EIS to assess possible project impacts on wild and scenic rivers.

Although the proposed drilling sites are not located in the Recreational River segments of these eligible creeks, the test drilling could adversely impact the flows of the streams and their outstandingly remarkable values. Flows in Mammoth Creek, Hot Creek, and Little Hot Creek are fed by snow melt and in the case of Hot and Little Hot Creeks, groundwater heated by hot rock near cooling magma beneath the Inyo Craters and Domes, 10 miles west of Hot Creek. According to the POO, the drilling bores could be as deep as 1,476 feet. The USGS monitors a 330 foot deep well (CH-10B) located 0.6 mile south of the Hot Creek Gorge. Water temperature in the monitoring well follow changes in temperature in the upstream hot springs.¹ This indicates that the surface water features in this area are inter-connected by groundwater.

The POO raises the issue of artesian flows potentially encountered during drilling. Although past drilling in this area has not resulted in artesian flows, they cannot be ruled out. This suggests that the project proponents anticipate that their bore holes will likely pierce the groundwater aquifer. The Forest Service needs to ascertain through an EIS or detailed EA how the test drilling could impact groundwater that contributes to flows in the eligible stream segments, and particularly thermal flows from the hot springs that feed Hot Creek and Little Hot Creek, before authorizing the project. Given their research history in the Long Valley Caldera, the United States Geological Survey should be consulted. In addition, the BLM should be notified of potential impacts on their eligible segment of Hot Creek and provided the opportunity to comment.

Eligible Wild and Scenic Rivers in The Vicinity of The KORE Long Valley Project

ELIGIBLE SEGMENT	OUTSTANDING VALUES
Hot Creek – <i>Headwaters to Forest Boundary—12.9 miles (USFS segment)</i> <i>Forest Boundary to LADWP boundary—1 mile (BLM segment)</i>	<i>National Forest Values –</i> <u>Scenery</u> : Highly scenic creek corridor with dramatic views of the Sierra Crest, scenic geological formations. <u>Recreation</u> : Geology—Unique geological features and hot springs, unique recreational setting in Long Valley Caldera. <u>Fish</u> : Wild Trout Water, world-class blue-ribbon fishery. <u>History</u> : High concentration of documented historic sites.

¹ U.S. Geological Survey, U.S. Forest Service, Boiling Water at Hot Creek – The Dangerous and Dynamic Thermal Springs in California’s Long Valley Caldera (fact sheet).

	<u>Prehistory</u>: Dense concentration of prehistoric sites. <u>Other/Botany</u>: Moist meadow in upper segment, extensive meadows and alkali flats, meadow hawksbeard (rare plant). <i>BLM Values:</i> <u>Geology</u>: Good example of eastern Sierra surface thermal flow and thermal features. <u>Fish</u>: Excellent naturally reproducing wild trout fishery offering quality recreation opportunities. <u>Wildlife</u>: Exceptionally high value riparian area, diversity of other streamside habitats, adjacent meadows. <u>Other/Hydrology</u>: More flow from Hot Creek springs than all of Long Valley combined, greatest annual discharge of all streams in south Lahontan region.
Little Hot Creek – <i>Antelope Spring to Forest Boundary— 3.9 miles</i>	<u>Geology</u>: Unique geological features, hot springs, thermally altered volcanic rocks. <u>Prehistory</u>: Dense concentration of prehistoric sites. <u>Botanical</u>: Extensive alkali flats, Inyo phacelia (rare plant).
Mammoth Creek – <i>Wilderness Boundary to Hot Creek— 10.46 miles</i>	<u>Recreation</u>: Highly concentrated and popular recreational sites and activities. <u>History</u>: High concentration of documented historical sites. <u>Prehistory</u>: Dense concentration of documented prehistoric sites.

Exploratory drilling up to a depth of 1,424 feet could adversely impact flows in Hot Creek and Little Hot Creek and their outstanding geology. Flows changes could result in adverse impacts on Hot Creek outstanding scenery and recreation values. The POO states that drill pads are “mostly” screened from view by terrain, shrub vegetation, and distance, but drilling activities will be visible from Forest Service roads. A review of the Old Mammoth 7.5” topo map shows the drilling area to generally be 7,200 feet in elevation. The rim of nearby Hot Creek appears to be lower in elevation, which means that drilling activities could be seen from the popular Hot Creek recreation area. The project area is divided into “Medium” and “High” Scenic Integrity Objectives. The project EIS or EA should provide a visual analysis of what drilling activities can be seen or not seen from the Hot Creek and Mammoth Creek Recreational River corridors, and whether the scenery impacts of the Project comply with the Scenic Integrity Objectives established in the Inyo National Forest Land Management Plan (Sep. 2019).

The POO fails to note the two rare plants that constitute outstanding botanical values for the eligible streams, including the meadow hawksbeard on upper Hot Creek and Inyo phacelia on Little Hot Creek. Similarly, mention of the wet meadows and alkali flats that contribute to the outstanding botanical value of the eligible streams are also absent from the POO. Botanical surveys should be conducted when plants are likely to be found. The outstanding riparian habitat along Hot Creek likely attracts migratory neo-tropical songbirds. Studies show that night light pollution affects the timing of bird songs and may disrupt night migration. The POO states that drilling will occur 24/7 and as such, the potential impacts of night lighting on birds and other riparian dependent species needs to be assessed.

The eligibility findings document a high concentration of historic and prehistoric sites in the region. We agree with the conclusion in the POO to survey for cultural resources given that surveys have not been completed in the area in many years.

Fish Hatchery/Resort

The proposed Project is located at little less than a mile from the Hot Creek State Fish Hatchery. The proposed Project may impact the Hatchery, given its close proximity to the same. The POO only briefly mentions the nearby Hatchery but does not mention how any potential impacts to the same would be mitigated. As such, it is uncertain whether the proposed action may have a significant effect on the environment and the INF needs to minimally prepare an EA to analyze these potential impacts.

There are at least two hot springs located within a half mile and 1.25 miles from the proposed Project. In addition, the hot springs at Hot Creek Ranch are located approximately 1.75 miles from the proposed Project. The POO does not mention these hot springs and only briefly mentions Hot Creek Ranch as a “small fishing resort” and does not mention how any potential impacts to these springs or resort would be mitigated. Moreover, visitors to Hot Creek Ranch would be subject to 24/7 drilling, with lights and noise throughout the night for at least the months of June-November (during peak months for visitors). As such, it is uncertain whether the proposed action may have a significant effect on the environment and the INF needs to minimally prepare an EA to analyze these potential impacts.

Biological resources

KORE's POO does not provide sufficient information to meaningfully comment on the biological survey that KORE had completed for this proposed Project. The POO merely states that the survey was completed in 2019. It would be important to know the month(s) in which the survey was completed as plants would only be encountered during certain months and species such as mule deer and Bi-State Sage Grouse (BSSG) would be more likely encountered in certain months. It is our understanding that another biological survey will be completed – the same comments hold true for that survey. Moreover, the survey should not merely be completed by someone doing minimal on-line research and preparing a “survey” without field visits during the month(s) species are most likely to be present.

As mentioned above, the POO does not mention the fact that at least two rare plants are likely to be encountered in the proposed Project area –meadow hawksbeard and Inyo phacelia. The new biological survey needs to be conducted when these plants are most likely to be found.

The proposed Project will undoubtedly have an impact on other wildlife, especially on the BSSG, a Forest Service sensitive species. GPS collared data from USGS shows BSSG use this area and several known leks are nearby (within about one mile). BSSG scat has recently been seen in the immediate vicinity of drill site 6 and at drill site 14. The early BSSG mating, nesting, brood rearing season in Long Valley is from February to mid-July. However, there are both early and late BSSG nesters in this area -- late nesters brood until mid-September. The BSSG in Long Valley are in decline – in fact, their population has declined 67 percent over the past 50 years. The Long Valley population started declining in the last 17 years.

KORE proposes to begin drilling on an unspecified date in June, well within both the early and late nesting/brood rearing seasons. Moreover, the POO merely mentions that the BSSG has the “potential to occur” at the proposed Project site (rather than acknowledging their existence and the existence of the nearby leks) and fails to provide any mitigation efforts that would be put into place to address impacts to that sensitive species. As such, the proposed Project may have a significant environmental effect on the Long Valley population of BSSG, thus necessitating the INF to prepare an EIS pursuant to 36 CFR § 220.6(b)(1)(i) and (c).

Tribal consultation

It is not clear from the POO or the INF scoping letter whether or not meaningful tribal consultation has taken place. The fact that exploratory operations took place at this location 25 to 30 years ago does not mean that there are not important or significant cultural resources that could be impacted by the proposed Project. Moreover, the proposed new, western drill sites have not been drilled before and have therefore not been previously surveyed for cultural resources. As mentioned above, we agree with the conclusion in the POO to survey for cultural resources given that surveys have not been completed in the area in many years.

In addition, generally speaking, all water sources, especially hot springs, are important to local tribes, especially those in desert locales. Moreover, the Utu Utu Gwaitu Tribe will be impacted by drilling, 24/7 for at least 160 days, with lights and noise throughout the night. Given the uncertainty about whether the proposed Project will have a significant impact on any cultural resources, in particular hot springs or water sources in this area, the INF needs to minimally prepare an EA to analyze these potential impacts.

Miscellaneous impacts

The proposed Project will undoubtedly cause air pollution, dust, light pollution, and perhaps water pollution from potential spills of fuel, oils, antifreeze, and other solvents, despite all of KORE's proposed mitigation efforts. All of these potential impacts should be further analyzed with an EA, at a minimum.

We thank the INF for the opportunity to comment on the Long Valley Exploration Drilling Project. We urge the INF to prepare an Environmental Impact Statement due to the fact that the Project

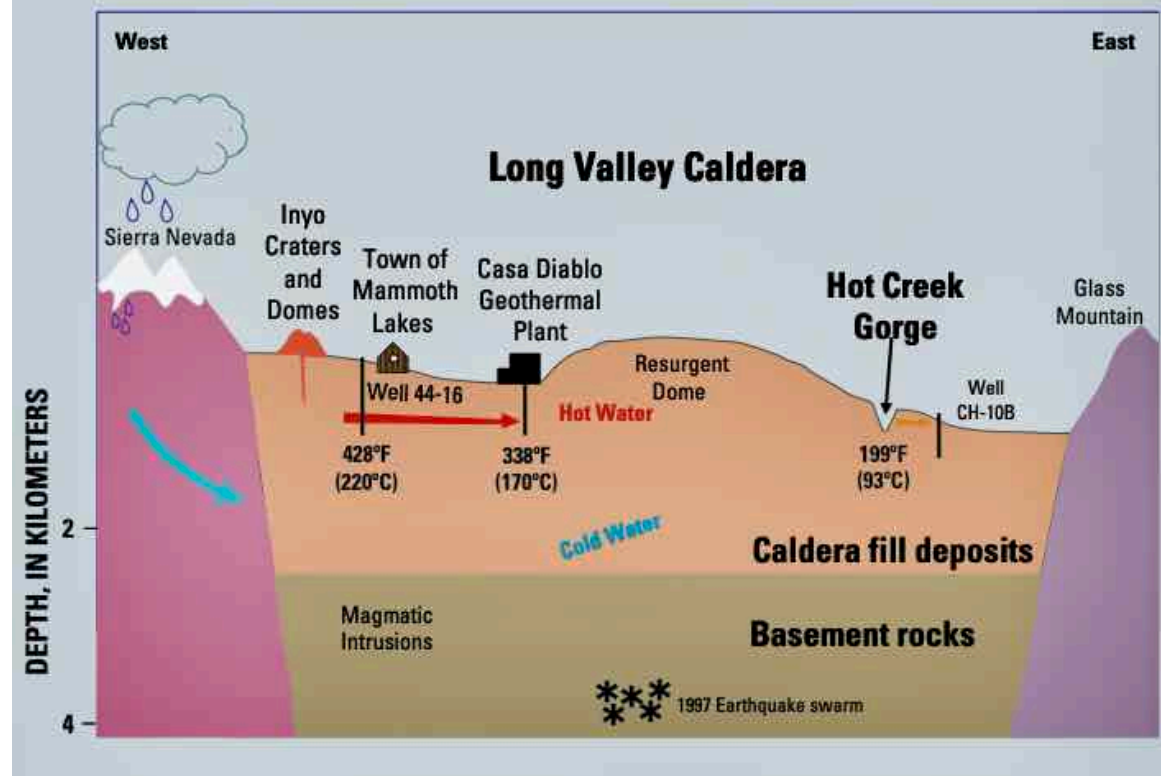
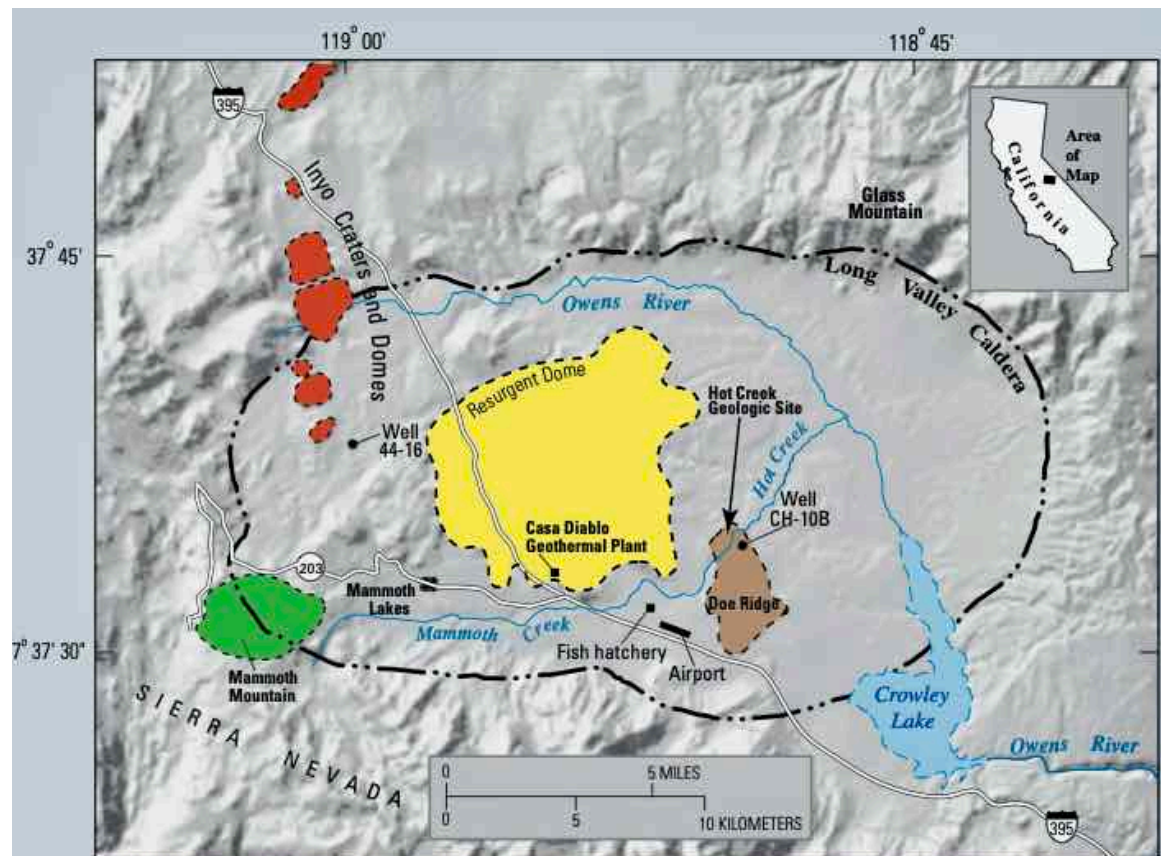
would likely impact a Forest Service sensitive species, or at a minimum, an Environmental Assessment. Please provide the undersigned with any future public communications or notices on this proposed Project.

Sincerely,

A handwritten signature in dark ink, appearing to read "Linda Castro". The signature is fluid and cursive, with the first name "Linda" and last name "Castro" clearly distinguishable.

Linda Castro
Assistant Policy Director
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(760) 221-4895

cc: Lesley Yen, INF Supervisor



KORE Drilling Sites

Appendix C: Wild and Scenic Rivers Evaluation for the Inyo National Forest

