

February 28, 2024

State of New Mexico  
Energy, Minerals and Natural Resources Department  
Director Mining and Minerals Division  
1220 South Saint Francis Drive  
Santa Fe, New Mexico 87505

Dear Samantha Rynas, Reclamation Specialist:

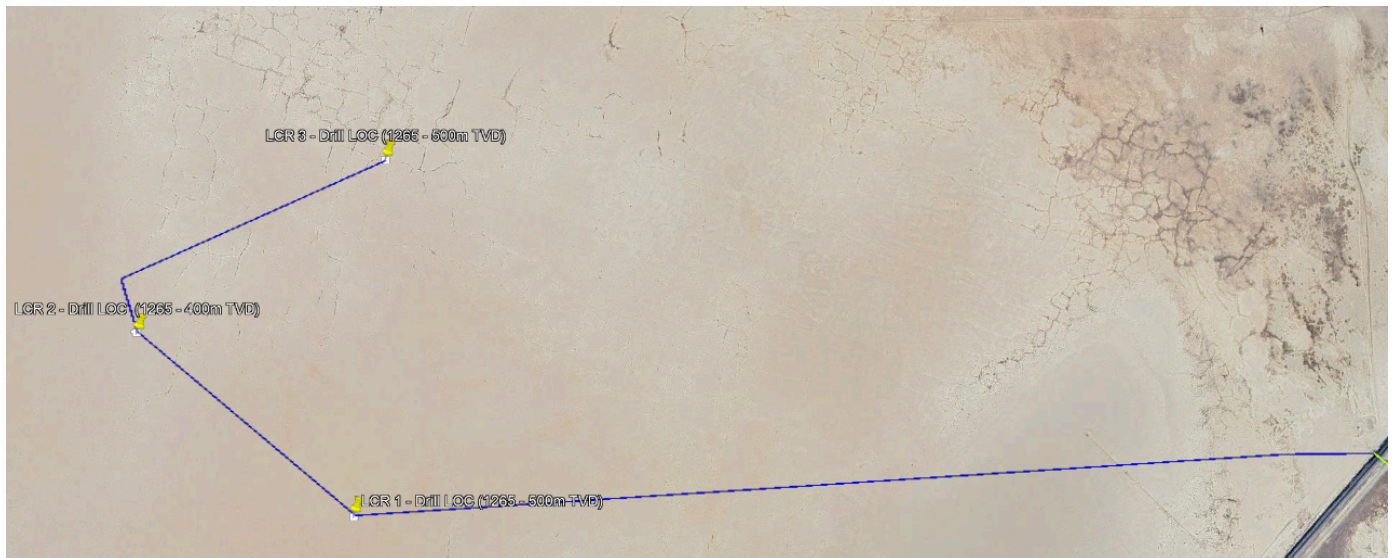
**Re: Alkali Flats Lithium Brine Exploration – Agency Response**

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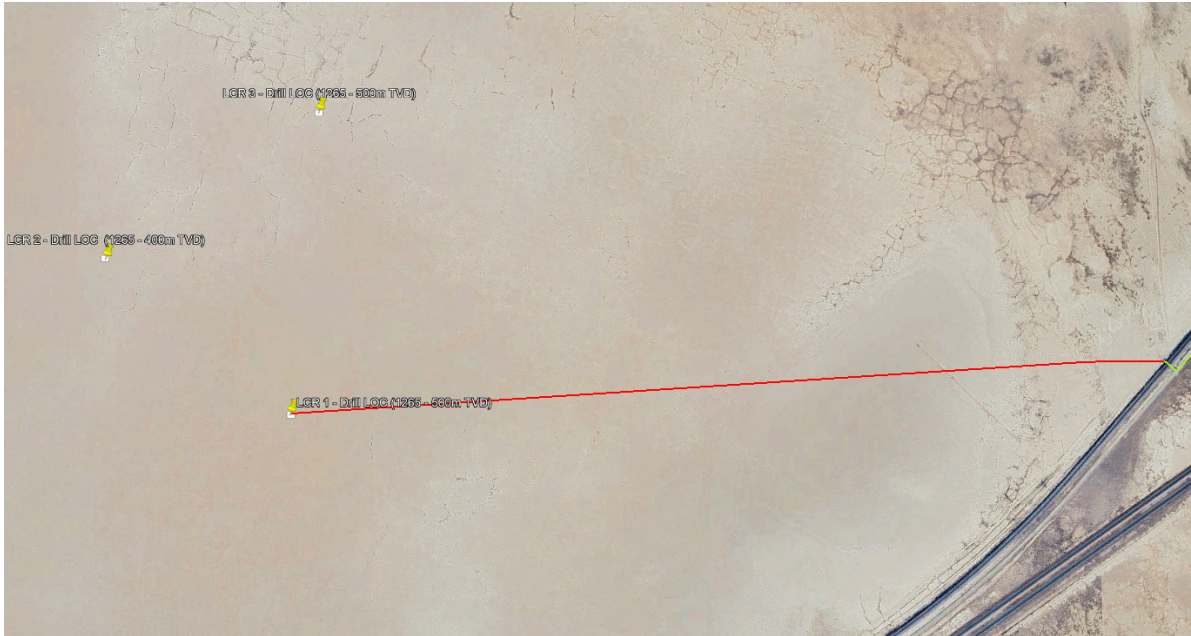
Hello Ms. Rynas, Lancaster Resources (LCR) is providing a response to the Agency comment letters received by email on February 14, 2024 and February 28, 2024.

**Attachment A: MMD Technical Comments**

1. Section 2(D)
  - a. See response to Forestry Division.
2. Section 3(C)
  - a. The access road paralleling the rail tracks is a public road. LCR will not be
3. Section 3(B)



- a. As per the application the map shown above shows an ~8' road to the 3 proposed drilling locations. In addition, it has 3 wells pads at 50'x75'.
- b. Estimated disturbance is as follows
  - Well Pads: 50' x 75' x 3pads = 0.26ac
  - Access Route: 8' x 15,050' (entire overland route) = 2.76ac
4. Section 4(C)
  - a. Mud pit dimensions are estimated at 30' x 10' on the well pad.
  - b. See NM Environment Department (Surface Water) response
5. Section 4(D)
  - a. Drill cuttings will be disposed of at each pad
6. Section 6(D)
  - a. LCR commits to following NMED and OSE requirements for cement and wet hole abandonments
  - b. See comments under New Mexico Environment Department (Mining Compliance)
7. Section 6(F)
  - a. Drilling type has not been confirmed yet (pits vs closed loop). LCR commits to ensuring all regulations are required to prevent any surface soil or water contamination from drilling operations.
  - b. See NM Environment Department (Surface Water) response
8. Section 7(B)
  - a. LCR has committed to all of the requests.
9. Section 7(D)
  - a. LCR has committed to reseeded as per BLM / MMD requirements
10. Section 8(A)
  - a. LCR is requesting that the financial assurance requirements be reduced and staged as drilling operations proceed. At this point in time, with the downturn in lithium markets and ability to raise capital, LCR will likely only drill 1 well (LCR-1). LCR is proposing to submit financial assurance for this well only. Once the well is completed and abandoned as per MMD and OSE requirements, the financial assurance would be "transferred" to the next well, if it gets drilled. Additional financial assurance would also be placed for additional access routing at that time.
    - i. Overland route to LCR-1 only: ~9360' x 8' = 1.72ac



- b. LCR is proposing a blanket \$25,000 financial assurance for the overland route to LCR-1, well pad, and drilling of LCR-1 only. This is based on commitments LCR has made to ensure no vegetation would be damaged, not performing operations during wet/rain events to minimize rutting, the hard pack and lack of top soil of the playa surface, and additional commitments made below and in the BLM Plan of Operations application to ensure a minimal impact is made to the playa. Additional support for this lower request would also be from BLM and State archeological review that found nothing of note in the proposed areas and a “low probability of occurrence of the State Endangered” plants being found in the playa.

**New Mexico Environment Department (Surface Water) - February 14, 2024**

- LCR commits to informing NMED of any spills
- No hazardous chemicals will be stored in flood prone areas, pits, drill holes, or other non-standard approved containers
- Clean up materials will be on-hand during all operations
- No process, drilling fluid, waters, or other fluids will be discharged onto the playa or outside of closed-loop systems or lined pits
- Work will be delayed if soils are saturated enough to cause 3” or greater ruts as per BLM Plan of Operations
- Reclamation will happen immediately with segregated layers being separated and returned to original conditions.
- Photographic documentation will be done pre-construction and post-reclamation
- LCR will notify SWQB (Davena Crosley), along with MMD, for pre-project mobilization and final reports for reclamation.

**New Mexico Forestry Division - February 14, 2024**

- LCR commits to avoiding all vegetation during the construction and siting of equipment. Flagging will occur to ensure that no/minimal vegetation is damaged during the construction or overland travel.
- Based on site visit there is minimal to no vegetation on the playa for the proposed route or pads.

**New Mexico Cultural Affairs Division - February 14, 2024**

- No comment.

**New Mexico Department of Game & Fish - February 14, 2024**

- LCR will be using either closed loop or mud pits, but this has not been determined yet. If pits are used, LCR will ensure fencing or extruded plastic netting will be used to protect wildlife.
- LCR will use a native seed mix as per BLM Plan of Operations approval conditions and appropriate for the alkaline soil conditions (TBD)

**New Mexico Department of Transportation - February 14, 2024**

- LCR wishes to correct the assumptions of the process being developed by modern lithium brine solution projects. LCR Alkali Flats is **NOT**, and never will be, a mining operation. Typical mining operations where you would have open pits or strip mining for lithium are used for hard rock deposits in Quebec, Canada or Australia. Alkali Flats is also **NOT** proposing a similar Clayton Valley brine project that uses solar evaporation and surface ponds for concentrating lithium.
- The proposed commercial development of the brine opportunity at Alkali Flats playa would utilize conventional oil and gas style drilling to access the sub surface reservoir, pipelines to collect and reinject produced brine, and modern direct lithium extraction technology to concentrate and extract the lithium. Alkali Flats will also be reinjecting all produced water (“waste water”) back into the same reservoirs. We do not want to drawdown the reservoir as this can have negative impacts on the production of the lithium. This would dramatically lower any impact to the playa, produce next to no dust under normal operations, and ensure the sustainability and economic development in Hidalgo county.
- This proposed project is an **EXPLORATION** project that will be used to gather vital data, samples, and geologic information that will be used to further refine follow on exploration and potential commercial development programs. The 3 proposed wells are **NOT** production wells.
- Alkali Flats will not use evaporation ponds.
- LCR also wants to correct the assumption that these wells are going to produce fluids. They will produce negligible volumes (5 – 15m<sup>3</sup>) to be used for sampling and analysis. There will be no material impact to groundwater levels from the proposed wells.
- LCR commits, as per the application, to stop all activities should a dust storm start to not add to the adverse effects of the lowering visibility.

- LCR commits to following all drilling best practices to ensure that groundwater and soils are protected at all times
- LCR commits to lower vehicle speed on playa to lower potential dust and air quality concerns
- LCR is also willing to have an introductory meeting with NMDOT (Trent Botkin) to discuss the proposed future development and commercial operations should LCR encounter significantly high lithium concentrations within Alkali Flats. However, this call should not further delay approval of this Phase 1 drilling application as per the aforementioned comments.

**New Mexico Environment Department (Air Quality) - February 14, 2024**

- LCR commits to lower vehicle speed on playa to lower potential dust and air quality concerns.
- Watering of on-playa routes will occur should dust become a concern during operations

**New Mexico Environment Department (Mining Compliance) - February 14, 2024**

- LCR understands that groundwater is 150'bgs with high TDS
- LCR commits to reviewing plugging product with the NMOSE and drilling contractor to ensure proper sealing, isolation, and abandonment of the wellbore(s)
- Option 1 will be used for high TDS and wet hole abandonment

**New Mexico Office of State Engineer (Hydrology Bureau) - February 28, 2024**

- LCR commits to submitting exploratory permit to OSE District III office in Deming, NM
- LCR commits to Dry Borehole and Wet Borehole requirements as per comments, including the use of high sulfate resistant cements.

Please let us know if you have further questions.

Yours sincerely,



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Andrew Watson  
Vice President Engineering and Operations  
[Andrew@LancasterLithium.com](mailto:Andrew@LancasterLithium.com)  
(403) 710-1284  
**Lancaster Resources Inc.**