

Myers, Kevin, EMNRD

From: Frank Bain <frankbain7@aol.com>
Sent: Thursday, November 16, 2023 9:12 AM
To: Myers, Kevin, EMNRD
Subject: [EXTERNAL] Response to Agency Review Comments
Attachments: Kevin Lordsburg Playa Comments.docx; Lordsburg Playa 2023 RCE.xlsx

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Good Morning Kevin -

Attached please find my response to the comments made by the various agencies for my Lordsburg Playa Lithium Exploration Project and the 2023 version of the BLM's Reclamation Cost Estimate (RCE).

Please let me know if you have any questions.

I look forward to our meeting on November 29, 2023 and discussing my project with all the specialists and agencies involved.

Regards,

Frank

November 15, 2023

Frank Bain
2425 Chof Trail
Flagstaff, Arizona 86005

Mr. Kevin Myers – Hydrologist
Permit Lead, H1018EM
Mining Act Reclamation Program
New Mexico Mining and Minerals Division

**RE: Agency Review Comments and Request for Additional Information,
Lordsburg Playa Lithium Exploration Project,
Modification 23-1 Permit No. H1018EM – Hidalgo County, New Mexico**

Dear Mr. Meyer:

Thank you for forwarding the Agency Review Comments and Request for Additional Information to me for my review. Before I provide comments to the reviews, I would like for the commenting agencies to know a little about my background. I am a Registered Professional Geologist in the United States and Canada and have 47 years of professional experience in mineral exploration. During my career I have personally supervised the drilling of thousands of exploration drill holes looking for copper, gold, uranium, natural gas and lithium. I have an outstanding reputation with the BLM in many States, and as I hope you will find out, I am a great steward of the land.

Several of the commenting agencies still seem confused about the scope of my proposed exploration drilling. I sense that most of the reviewing specialists have never set foot on the Lordsburg Playa. Since my discovery of brine contained within the sedimentary layers of the playa, I have spent months studying the playa's geology and physiographic features including blowing dust and the New Mexico State Land Office reclamation efforts on State owned land on the west side of the playa that adjoins my mining claims. Another field trip to the playa to visit and discuss access routes, proposed drill sites and any other points of confusion I believe is in order for everyone who provided comments.

The price of lithium has recently taken a huge downturn and has made most lithium prospects uneconomic. As a result of reduced exploration budgets only 2 of the proposed 6 holes will be initially drilled. The total disturbance for these 2 holes is 0.15 acres. Access will be entirely on preexisting 2 track gravel roads. Lithium in brine type deposits are the one kind of lithium deposit that is still economically viable. The discovery of lithium bearing brine within the sediments of the Lordsburg Playa could become one of the greenest mines in the world and

would consist of a series of production wells, pipelines, a Direct Lithium Extraction Plant and injection wells for sending the stripped brine back to the geologic strata it originally came from. Worries about fugitive dust should not be a concern as simple modern mining practices that include the graveling of well head access roads and the application of magnesium chloride, a byproduct of brine production, may be used to suppress and control dust.

Hidalgo County is very supportive Mr. Bain's proposed lithium exploration project and would welcome the high paying jobs and tax revenue should a mine be developed as should the State of New Mexico.

One last comment regarding Mr. Bains address at the top of Mr. Myers cover letter. Mr. Bain is not affiliated with Lordsburg Resources Inc. or Arizona Lithium (LRI's new name) in any way.

COMMENTS

Bureau of Land Management, Leighandra Keeven, Geologist

The operator, Mr. Bain, is curious and would like to know just exactly how the BLM and NMMMD came up with the \$17,400 bond figure. The BLM has a form that is revised annually and used nationally, the RCE or Reclamation Cost Estimate and I believe that this form should be used to estimate the reclamation bond. A filled out copy of this form is attached. The form self-calculated that 0.15 acres of land will be disturbed for drill sites 1 and 2 and would require a \$5,910.00 bond. I currently have 5 other projects in the exploration stage on BLM land and all these projects have been bonded using this form.

There will not be a grader on site as all roads are in good condition at the present time. There will not be an outhouse on site because of the short duration of the project, rough roads and no local source to rent an outhouse. The Plan of Operations that was submitted to and approved by the BLM is correct. The Plan of Operations lists 6 drill hole locations; only 2 of which will be drilled during the initial phase of exploration. The operator requests that all 6 sites be approved by NMMMD so that the Minimal Impact Exploration Form matches the approved BLM Plan of Operations.

Dept. of Cultural Affairs, Historic Preservation Division, Richard Reycraft, Staff Archaeologist

The SHPO reviewed Mr. Bain's Plan of Operations which included a records review that showed that there are no known cultural resources within the boundary of the project area. The BLM approved the Plan of Operations that included a field inspection with the operator of sites 1 and 2 and was signed off by the BLM Staff Archaeologist.

New Mexico Dept. of Transportation, Trent Botkin, Acting Environmental Bureau Manager

Mr. Botkin has voiced his opinion previously on this issue and the mining claim owner, Mr. Bain, has attempted to correct his misconceptions with no success. First of all, Mr. Bain is not applying for a mining permit, just a Minimal Disturbance Exploration Permit. Mr. Bain has valid lode mining claims and an approved Plan of Operations from the BLM that will allow Bain to drill up to 6 exploration holes to test the brine found within the sediments of the Lordsburg Playa for lithium content. Mr. Botkin states in his first bullet point that “the development of a mining operation on the playa surface would exponentially increase the amount of soil disturbance”, Mr. Bains vision for development of the brine should a discovery be made would consist of a series of production wells, pipelines, a Direct Lithium Extraction plant, and injection wells for disposal of the stripped brine. Conventional mining techniques including open pit or underground mining for this type of deposit is not a possibility.

Concentrating the brine in evaporation ponds before extracting the brine is old school. Technology has been developed to extract the lithium directly from the brine without the need for concentrating the brine in an evaporation pond.

Shallow ground water is found in perched aquifers in the northern part of the Lordsburg / Animas Basins and is prevented from being drawn downward by a thick near surface clay layer. Mr. Bain believe that Mr. Botkins’ concerns about detrimental effects to vegetation and an increase in dust storm severity from exploration drilling are unfounded.

The drill sites Mr. Botkin is so concerned about would be approximately 100 x 100 feet in size and will not be bladed. The access to the drill sites 1 and 2 will be on preexisting two-track roads. Soil types for Drill Sites 1 and 2 and the access routes will be on alluvial sediments consisting of small rocks, gravel and sand. This soil type produces little dust when traveled on. In addition, the drill sites are located more than 4 miles north of Interstate 10 and if by chance dust should become a problem, a water truck will be on site to quickly suppress the problem. The reclamation plan for this project has been approved by the BLM and the overall disturbance is so small, 0.15 acres, that NPDES rules don’t apply as nothing will be discharged.

Modern mining practices to reduce fugitive dust would include the graveling of well head access roads and the application of magnesium chloride which will prevent dust from being a problem should this project proceed to production.

Drivers that fail to slow down on Interstate 10 and ignore warning signs during dust storms cannot be prevented, a behavior that Bain has witnessed on numerous occasions and once

again I would like to emphasize that the exploration drilling will take place more than 4 miles north of Interstate 10. Dust will not be an issue!

Secure sources of lithium for national security is vital for America, and lithium in brine deposits have the potential to be the greenest mines on the planet.

State of New Mexico Energy, Minerals and Natural Resource Dept., Erika Rowe, Biologist

All the drill site locations were selected on the basis that the site be level so no grading is required and with sparse vegetation. Drill sites 1 and 2 are on alluvial sediments where short grasses may be present. No large shrubs or cacti will be disturbed. Drill sites 3 to 6 are located on essentially barren playa type sediments and will not be drilled during the initial phase of exploration. No impact to protected plant species is anticipated by the proposed exploration drilling.

New Mexico Game and Fish Department, Matt Wunder, Environmental Planning Division

Exploration drilling on the playa will use conventional drilling methods, either compressed air or mud for the circulating medium and may include the use of mud pits for mixing bentonite based mud, containment of drill cuttings and produced water. Wildlife within the footprint of the Lordsburg Playa is sparse. Other than a few birds, lizards and an occasional ground squirrel or jack rabbit, very little wildlife is present. The drill pipe will be stored on a trailer so the Game and Fish Departments concerns about wildlife residing in the drill pipe is not a concern and the sumps will be fenced primarily to keep cattle out.

The Departments statement about migratory waterfowl using the Playa lakes as a stopover is questionable. I have observed only a very few bird species actually resting in the playa when it has water in it and none stick around very long as there is no food source available within the footprint of the playa.

The Game and Fish Departments recommendations that a BLM approved locally sourced weed free seed mix collected from the playa be used when reclaiming the drill sites would be difficult to comply with. Who's going to collect the seeds, who's going to certify them as being weed free, what species are to be collected? The 1000 square foot drill pads will be located on carefully selected, flat, sparsely vegetated terrain and it will be the goal of the operator to return the drill pads to as near as possible the condition before being disturbed by drilling activities and to let the disturbed areas be naturally reseeded. Seasonal grasses will be the only vegetation disturbed and the grasses' natural ability to produce seed will accomplish the

required revegetation. Future climatic conditions for the selection of seed species will not be taken into account, the operator prefers to let mother nature handle this.

The BLM has approved all 6 proposed drill sites in the Plan of Operations and Game and Fish had the opportunity to conduct a wildlife survey. A letter was submitted in place of the survey that essentially said there were no issues of concern and Fish and Game does not anticipate any significant impact to wildlife or the habitat.

New Mexico Office of the State Engineer, Douglas Rappuhn, Hydrology Bureau

The NMSEO has provided specific information on how to plug or abandon a mineral exploration drill hole in a saline environment. The operator will adhere to the State Engineers recommendations and will use cement to plug the drill holes and will plug the hole from the bottom up.

State of New Mexico, Commissioner of Public Lands, Dana Vackar Strang, Assistant Commissioner, Surface Resource Division

The comments from the NMSLO are taken seriously and I appreciate the opportunity to respond.

First, I have never claimed to have leased the mineral rights to State Section 16, T23S, R20W and it is not included in the BLM approved Plan of Operations. I did make an inquiry about leasing the minerals several years ago and contacted Holland Shepard who said NMMMD would study my request. I never received an answer.

Second, your time frame on the permit issued to Robert Consoni is noted. Your concerns about dust is also noted, but I believe that you have been provided incorrect information about fugitive dust being produced as a result of my proposed exploration drilling.

I will attempt to set the record straight. Only holes 1 and 2 will be drilled initially. Access to the drill sites will be entirely on preexisting 2 track roads, the same roads the NMSLO is currently using for access for dust mitigation efforts on State owned land north of Interstate -10. The portions of the 2 track roads to be used will be located on alluvial sediments that consists of a mix of small rocks, gravel and sand and produces little dust when traveled on. The 100 foot by 100 foot drill pads will also be located on alluvial sediments and except for a sump to mix mud in, contain drill cutting and contain any produced water there will be only minimal surface disturbance. Should dust become a problem at either the drill sites or on the access routes, a

water truck will be onsite and will quickly fix the problem. The drilling of 2 approximately 500 foot deep exploration holes should take less than 2 weeks to complete.

I stand by my comment that “no erosion is possible at drill locations because of the flat topography.” Has anyone from the NMSLO ever visited the proposed drill sites? I specifically selected flat terrain with sparse vegetation next to preexisting roads for the drill sites. Blowing sand and dust is a component of any desert environment and every time the wind blows across the playa tons of sediment is moved, it’s the nature of the beast. Please remember that a conventional mine is not being proposed as the recovery method. Should lithium be discovered the “mine” would consist of a series of water and disposal wells and a recovery plant. Reclamation at the drill site will also include watering down the disturbed areas to form a crust that will help prevent dust.

The NMSLO’s concern about dust blowing across Interstate 10 is taken very seriously. Once again, should lithium be discovered the mine would be permitted as a solution mine by NMMMD and I’m quite sure there would be requirements for dust prevention / mitigation in the mine plan. The New Mexico Air Quality Division has no objections to Bain’s Plan of Operations. An open pit mine, haul trucks, waste piles or evaporation ponds are not part of the plan and were never considered.

The development of a new “green” solution mine and the resulting high paying jobs and new tax revenue would be highly welcomed in Hidalgo County and should be welcomed by the NMSLO as a new source of revenue for New Mexico’s schools. Extraction of fluids via a well is very different from hard rock mining and a modern solution mine would pose little threat to the environment. Ms. Strang states that the area is already fragmented by a variety of impacts, the only impact Bain has observed is cattle ranching. The playa was closed to all other activities except for mining by the BLM many years go.

The United States Supreme Court ruled that mining claims are considered real property just like a house or car and can be bought and sold. The 1872 General Mining Law gives Bain the right to explore and develop his claims. According to New Mexico State law, access to real property when there is only one route of ingress and egress cannot be restricted by individuals or institutions who own or control the access. Bain would like to arrange a meeting with Ms. Strang and the NMSLO to discuss the access situation and the overall benefits to both parties so that exploration drilling can proceed.

The Lordsburg Lithium in Brine project is currently one of a very few lithium prospects that has a good chance of being economic in the United States. Currently the United States has only 1 producing lithium mine and obtains our supply of lithium from China, a situation that must change.

New Mexico Air Quality Division, Sufi Mustafa, Staff Manager, Air Dispersion Modeling and Emission Inventory Section, Air Quality Bureau.

One correction, only 2 holes will be drilled during the initial or first phase of exploration resulting in a total of 0.15 acres of disturbance. Your comments about fugitive dust are noted.

The Air Quality Bureau has no objection to Mr. Bain proceeding with his Plan of Operations for exploration drilling.

New Mexico Environment Department, Susan Styer, Watershed Protection Section, Surface Water Quality Bureau.

The operator intends to drill only sites 1 and 2 initially. Sites 3, 4, 5, and 6 may or may not be drilled at a future date. Total disturbance will be 0.15 acres.

Drill holes 3, 4, 5, and 6 if drilled, will not be moved out of the playa as the playa is the geologic target / host formation for lithium contained in brine.

The drill sites will not be bladed so recontouring will not be necessary.

The water found in the Lordsburg Playa is highly saline and not fit for human or wildlife consumption. It's about as bad as groundwater can get. The operator will not discharge fluids onto the surface of the playa and if necessary, will dig a bigger sump to contain any produced fluids.

NMED's recommendations for mapping, sampling and instruments to measure infiltration are noted but because of the small amount of total disturbance and the locations of holes 1 and 2 NMED's suggestions and recommendations are considered unnecessary.

New Mexico Environmental Department, Anne Maurer, Mining Act Team Leader, Mining Environmental Compliance Section

NMED Summary Comment - NMED has determined that the activities proposed in the application will be protective of the environment.

Conclusion

After reading through the comments, I concluded that most of the responding New Mexico State agencies with the exception of the New Mexico State Land Office and Department of Transportation are in favor of letting Mr. Bain proceed with his lithium exploration project. Mr. Bain thanks all the specialists for your support and looks forward to a successful project that will provide badly needed high paying jobs for Hidalgo County residents, new tax revenue for the County and State and mineral security for the United States. Mr. Bain highly recommends that all the commenting agencies attend the field trip on November 29.

November 16, 2023		Notice Level Exploration Reclamation Cost Model				SRCE 2023 Cost Data Version 3.2			
		From SRCE Cost Data with Acreage Calculators							
LORDSBURG PLAYA LITHIUM IN BRINE EXPLORATION DRILLING PROJECT									
Linear Feet of Road	Linear		Labor Cost	Manpower	Equipment	Materials	Cost/Linear Foot		Road Reclamation
On a Side Slope	Feet	Item							
<30%	0	Recontouring Cost <30%	\$0	\$0.11	\$0.19	\$0.00	\$0.30		\$0
>30%		Recontouring Cost >30%	\$0	\$0.43	\$0.75	\$0.00	\$1.18		\$0
Drill Sites and Sumps	Number			Manpower	Equipment	Materials	Cost each		Pad& Sump Reclamation
Drill Sites < 30% slopes	2	Recontouring Cost	\$58	\$29.00	\$49.80	\$0.00	\$78.80		\$158
Drill Sites > 30% slopes	0	Recontouring Cost	\$0	\$173.80	\$298.80	\$0.00	\$472.60		\$0
Drill Sites Cross Country	0	Ripping Cost	\$0	\$14.20	\$35.60	\$0.00	\$49.80		\$0
Sumps	2	Recontouring Cost	\$39	\$19.33	\$33.20	\$0.00	\$52.53		\$105
Trenches	Linear Feet			Manpower	Equipment	Materials	Cost/Linear Foot		Reclamation
Trenches	0	Recontouring Cost	\$0	\$1.19	\$2.62	\$0.00	\$3.81		\$0
Cross Country Travel	0	Ripping Cost	\$0	\$0.01	\$0.04	\$0.00	\$0.05		\$0
Revegetation	Slope Acres			Manpower	Equipment	Materials	Cost/Acre		
Total Revegetation Acres	0.16	Revegetation Cost	\$27	\$175.00	\$100.00	\$332.75	\$607.75		\$95
150 miles Mobilization		Mobilization Cost-excavator	\$844	Manpower	Equipment		Mob+Demob		
150 miles Mobilization		Mobilization Cost-dozer	\$0	\$843.64	\$990.36		\$1,834		\$1,834
				\$572.46	\$790.54		\$1,363		\$0
Drill Holes Open	#/Feet			Manpower	Equipment	Materials	Cost/Foot		Drill Hole Plugging
Feet of Open Holes - Wet	500	Plugging Cost - Wet	\$327	\$0.65	\$0.69	\$0.52	\$1.86		\$928
Feet of Open Holes - Dry	0	Plugging Cost - Dry	\$0	\$0.75	\$0.32	\$0.01	\$1.08		\$0
Feet of Casing to Pull	0	Pulling Casing	\$0	\$0.88	\$0.97	\$0.00	\$1.85		\$0
150 miles Mobilization		Mobilization Cost - Wet	\$611	Manpower	Equipment		Mob+Demob		
150 miles Mobilization		Mobilization Cost - Dry	\$0	\$610.92	\$1,086.08		\$1,697		\$1,697
				\$917.15	\$493.85		\$1,411		\$0
Disturbance Type	Total Acres	Total Linear Feet	Slope Acres						
Roads	0.00	0	0.00						
Drill Sites	0.12		0.12						
Sumps	0.03		0.03						
Trenches	0.00	0	0.00						
Cross Country	0.00	0	0.00						
total Notice acres	0.15	total slope acres	0.16						
Indirect Costs									
Contingency*							10% Total Reclamation Cost	\$0	
Insurance							1.5% Labor Cost	\$29	
Perf. And Payment Bonds*							3% Total Reclamation Cost	\$0	
Contractor Profit							10% Total Reclamation Cost	\$482	
Contract Administration							10% Total Reclamation Cost	\$482	
Indirect Costs							21% of Contract Administration Cost	\$101	
* Contingency and Performance and payment Bonds required only if total reclamation cost > \$100,000									
									Total Administration Cost
									\$1,093
									Financial Guarantee
Cost per acre									Amount
\$38,242									\$5,910
Notes:									

Bureau of Land Management Notice Level Reclamation Cost Estimation Worksheet	
Costs for this Notice Level Reclamation Cost Estimator are based on values and assumptions used in the Standardized Reclamation Cost Estimator (SRCE) Version 1.4.1.	
Cost Data are from August 1, 2023. This worksheet is simpler than the SRCE and does not allow the flexibility of entering project specific information in some situations.	
The model will generate approximately the same reclamation costs as the SRCE model if the same inputs and assumptions are applied.	
Below are the methods and assumptions used by this model to generate a Financial Guarantee Amount.	
1.	There are two side hill slope categories used for all calculations in this worksheet. All slopes under 30% (<30%) are assumed to have a slope of 20%. All slopes over 30% (>30%) are assumed to have a slope of 40% and include an additional 50% of volume for double-handling.
2.	All Roads in this worksheet are assumed to have a 14 foot wide dimension across the flat "driveable" part of the road without any safety berms.
3.	All Drill Sites in this worksheet are assumed to be 30 feet wide. For Drill Sites on slopes <30% they are 70 feet long. For Drill Sites on slopes >30% they are 83 feet long
4.	All Road and Drill Sites cut banks are assumed to have a 60 degree slope.
5.	All Road and Drill Sites fill slopes are assumed to have an angle of repose of 1.4H:1V or about 70% slope equal to a 35 degree angle.
6.	Roads are linear features and the units required for input to this worksheet are in linear feet.
7.	Recontouring for reclamation of Roads, Drill Sites, and Sumps is done with a track excavator of a Cat 320C size with a 1.57 CY bucket and productivity of 167 CY per hour.
8.	Equipment operator Manpower cost is based on Davis-Bacon wage rates for Northern Nevada . Area pay= \$0.00 per hour, FICA = 7.65%, Unemployment = 3% and Workmen's Comp= 12.0%
9.	Laborer cost is based on Davis-Bacon wage rates for Northern Nevada with FICA = 7.65%, Unemployment = 3% and Workmen's Comp= 13.5%
10.	Revegetation cost is based on the cost of use of a quad/ATV which spreads and drags the seed in on one pass.
11.	Revegetation costs are based on a per acre basis for slope acres.
12.	Drill Sites recontouring cost is based on a standard pad width and length. Drill Sites on slopes <30% and Cross Country Drill Sites are 30 feet wide by 70 feet long. Drill Sites on slopes >30% are 30 feet wide by 83 feet long. On Cross Country Drill Sites , the disturbed area is ripped by a Cat D7 size dozer.
13.	One Sump is assumed for each Drill Site . The assumed dimensions are 10 feet wide, 20 feet long and 6.75 feet deep. (50 CY) On Drill Sites <30% slopes they are assumed to be outside the Drill Site . On Drill Sites >30% slopes sumps are assumed to lie within the 30 foot * 83 foot dimension of the Drill Site .
14.	Trenches are assumed to be 14 feet wide by 5 feet deep with 10 feet extra width for the spoils pile. A D6 is used for recontour at 208 CY/ hour productivity.
15.	Recontouring earthwork for Roads Drill Sites and Sumps has an assumed swell factor of 20%. Trenches swell factor is 30%.
16.	Cross Country travel is assumed to have a disturbance of 6 feet wide by the linear feet of travel on slopes under 10%. Revegetation costs for all Cross Country disturbance is based on a 12 foot wide seeding width on one pass.
17.	Mobilization and Demobilization are based on 150 miles one way to project and are based on the 2023 Mob/DeMob worksheet. Travel times are assumed to be 2.73 hours one way to the project.
18.	Mobilization for a Cat 320C excavator will be charged for regrading of Roads, Drill Sites only. If there are any Trenches or Cross Country disturbance ; a D6 dozer will be mobilized also.
19.	All projects that propose drilling will require a minimum Drill Holes Open abandonment cost. If a drill hole will not penetrate the static water level it may be abandoned as an Open Hole - Dry . If a drill hole is drilled deeper than the static water level it is considered a wet hole and must be abandoned as an Open Hole - Wet .
20.	Mobilization for Drill Holes - Open for Open Hole - Wet will include one drill rig plus crew and support equipment.
21.	Mobilization for Drill Holes - Open for Open Hole - Dry will include one backhoe and operator, and one general laborer.
Nevada BLM, August 1, 2023	