PART 3
MINIMAL IMPACT EXPLORATION OPERATION

PERMIT APPLICATION

Accompanying instructions for this permit application are available from MMD, and on MMD webpage:
http://www.emnrd.state.nm.us/MMD/MARP/MARPApplicationandReportingForms.htm

Send 6 copies of the completed application to:

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
Telephone: (505) 476-3400
Webpage: www.emnrd.state.nm.us/MMD/index.htm

CHECK OFF LIST TO DETERMINE YOUR PROJECT'S STATUS AS A MINIMAL IMPACT EXPLORATION OPERATION:

☐ Yes X No My project **will exceed 1000 cubic yards of excavation**, per permit (drill pads, mud pits, and roads will not be counted in excavated materials).

☐ Yes X No Surface disturbances for constructed roads, drill pads and mud pits **will exceed 5 acres** total for my project.

☐ Yes X No My project is located in or is expected to have a direct surface impact on wetlands, springs, perennial or intermittent streams, lakes, rivers reservoirs or riparian areas.

☐ Yes X No My project is located in designated critical habitat areas as determined in accordance with the federal Endangered Species Act of 1973 or in areas determined by the Department of Game and Fish likely to result in an adverse impact on an endangered species designated in accordance with the Wildlife Conservation Act, Sections 17-2-37 through 17-2-46 NMSA 1978 or by the State Forestry Division for the Endangered Plants Act, section 75-6-1 NMSA 1978.

☐ Yes X No My project is located in an area designated as Federal Wilderness Area, Wilderness Study Area, Area of Critical Environmental Concern, or an area within the National Wild and Scenic River System.

☐ Yes X No My project is located in a known cemetery or other burial ground.

☐ Yes X No My project is located in an area with cultural resources listed on either the National Register of Historic Places or the State Register of Cultural Properties.

☐ Yes X No My project will or is expected to have a direct impact on ground water that has a total dissolved solids concentration of less than 10,000 mg/L, except exploratory drilling intersecting ground water may be performed as a minimal impact operation.

☐ Yes X No My project is expected to use or using cyanide, mercury amalgam, heap leaching or dump leaching in its operations.

☐ Yes X No My project is expected to result in point or non-point source surface or subsurface releases of acid or other toxic substances from the permit area.

☐ Yes X No My project requires a variance from any part of the Mining Act Rules as part of the permit application.

If you answer yes to any of the above questions, your project does not qualify as a minimal impact exploration operation.

Confidential Information

☐ Yes X No Is any of the information submitted in this application considered by the applicant to be confidential in nature? If yes, please provide this information separately and marked as "confidential."

Timeline

- Exploration applications must be provided no less than 45 days prior to the anticipated date of operations desired by the applicant.
- Renewal applications shall be filed at least 30 days preceding expiration of the current permit. Permits are valid for one year.
- Approved permit is valid for one year from the date of approval.

SECTION 1 – OPERATOR INFORMATION (§304.D.1)

Project Name: Lordsburg Playa Lithium in Brine Exploration Project

Nearest Town Too Project: Lordsburg, NM

Applicant Name and Contact Information (entity obligated under the Mining Act):

Name: Frank Bain

Address: 2425 Chof Trail, Flagstaff, AZ 86005

Office Phone: _____ Cell Phone: 307-231-1404

Fax Number: _____ Email: frankbain7@aol.com

Name of On-Site Contact, Representative, or Consultant:

Name: Frank Bain

Address: 2425 Chof Trail, Flagstaff, AZ 86005

Office Phone: _____ Cell Phone: 307-231-1404

Fax Number: _____ Email: frankbain7@aol.com

SECTION 2 – RIGHT TO ENTER INFORMATION (§302.D.1)

A. Describe or attach copies of documents that give the applicant the right to enter the property to conduct the exploration and reclamation, include: lease agreements, access agreements, right of way agreements, surface owner agreements, and claim numbers, if applicable.

Bureau of Land Management Mining Claim Numbers – NMMC 199211 to NMMC 199270

Kinder Morgan Pipeline Co – Pending, Contact Mary Martino at 719-520-4510

New Mexico State Land Department Right of Way Division – Pending, Contact Conrad Kegel at 505-827-5789

Attachment _____

B. List the names and addresses of surface and mineral ownership within the proposed permit area. If the mineral is federal mineral, indicate as federal mineral, but provide the name of the claim holder or lease holder.

Surface Estate Owner(s): Federal Minerals -

Name	Address	Phone #
X U.S. BLM	Frank Bain 2425 Chof Trail, Flagstaff, AZ 86005	307-231-1404
☐ U.S. Forest Service		
☐ State of NM		
☐ Private/Corporate Name: _____		
☐ Other		

Name: _____ _____

Lease Holder(s) of Surface Estate (if applicable):

Name	Address	Phone #
_____	_____	_____
	_____	
_____	_____	_____
	_____	

Mineral Estate Owner(s): Federal Minerals -

Name	Address	Phone #
X ☐ Bureau of Land Management	New Mexico State Office	
	301 Dinosaur Trail, Santa Fe, NM 87508	
☐ US Forest Service	_____	_____
	_____	
☐ State of NM	_____	_____
	_____	
☐ Claim/Lease Holder	_____	_____
Name: _____	_____	
Claim Numbers: _____		
X ☐ Claim/Lease Holder	Frank Bain 2425 Chof Trail_____	_____
	Flagstaff, AZ 86005_____	

Claim Numbers: NMMC 199211 to NMMC 199270

☐ Other

Name:

C. Has a Cultural Resource Survey been performed on the site?

X☐ Yes ☐ No If yes, please provide the author, title, date and report number, and include a copy of the survey with this application, if possible:

Bob Estes- Dept. of Cultural Affairs, Historic Preservation Division, Lordsburg Playa Lithium Project – H1018EM

Attachment Yes

D. Has a wildlife survey or vegetation survey been performed for the permit area?

X☐ Yes ☐ No If yes, please provide the author, title, date and report number, and include a copy of the survey with this application, if possible:

Chuck Hayes, State of New Mexico Dept. of Game and Fish, Lordsburg Playa Lithium Project – NMDGF 18073

Attachment Yes

SECTION 3 – MAPS AND PROJECT LOCATION (§302.D.2)

A. Project Location*:*

Township 23S Range 20W Section 7,8,17,18

Township _____ Range _____ Section _____

Township _____ Range _____ Section _____

List the drill hole/exploration name and the GPS coordinates for each site.

I.D. Number	Northing / Latitude	Easting / Longitude
1	3577525 N	694625 E
2	3575990 N	693243 E
3	3577575 N	695800 E
4	3576210 N	695525 E
5	3574425 N	695400 E
6	3577860 N	696920 E

I.D. Number	Northing / Latitude	Easting / Longitude

Coordinate system used to collect GPS data points:

☐ NAD83 Geographic
☐ NAD83 UTM Zone 13 (or 12)
☐ WGS 1984
☐ NAD27 Geographic
X☐ NAD27 UTM Zone 13 (or 12)
☐ Other:_____

Attachment - None__ (for listing additional boreholes)

B. Maps (see application form instructions for examples of maps to be included):

Are topographic maps included with the application that show the following items:

X☐ Yes – The boundary of the proposed exploration project Permit Area

X☐ Yes – The proposed exploration locations (i.e., borehole locations)

X☐ Yes – Existing roads, new roads and overland travel routes

X☐ Yes ☐ N/A – Areas of proposed road improvement

Attachments _____

Are maps or figures included with the application showing the approximate dimensions and locations of drill pads and other disturbances:

X☐ Yes – Drill pad dimensions and constructed drill pad locations

Attachments _____

C. Provide detailed driving directions to access the site: Get off Interstate Highway 10 at the Steins Exit, Mile Post 3 and proceed north across the railroad tracks and travel on County Road A0-012 for approximately 10 miles to where the Kinder Morgan Pipeline Right of Way crosses the county road. Turn right or east and proceed for approximately 2 miles to a white BLM / KM gate. This gate marks the west boundary of the LBP Claim Block. Proceed approximately .5 miles to where a north -south two track road crosses the ROW. Turn north

and follow the pink flagging to the first drill location.

SECTION 4 – EXPLORATION DESCRIPTION (§302.D.3 & 4)

A. Anticipated exploration: Start Date: October 1, 2018 End Date: November 15, 2018

B. List the mineral(s)/element(s) to be explored for: Lithium

C. Proposed method(s) of exploration:

☐ **Air drilling (air rotary, coring, etc.):**

_____# of holes _____Depth (ft.) _____Diameter (in.)

_____# of drill pads _____Length (ft.)_____Width (ft.)

Will drill pads be graded/bladed or overland: ☐ Graded/bladed ☐ Overland

Will drill pads need some mechanical leveling (grading/blading): ☐ Yes ☐ No

Approx. Weight of Drill Rig (lbs.)_____ Number of Axles: _____

Total length of drill stem that can be carried on the rig:_____

Is a support pipe truck anticipated? ☐ Yes ☐ No _____Weight (lbs.)

Weight of support compressor (lbs.):_____Trailer mounted?_____

Anticipated Drilling Contractor:_____ License No._____

X☐ **Mud/fluid drilling:**

6 # of holes 300 to 500 Depth (ft.) 5 Diameter (in.)

6 # of drill pads 50 Length (ft.) 30 Width (ft.)

Will drill pads be graded/bladed or overland: ☐ Graded/bladed X☐ Overland

Will drill pads need some mechanical leveling (grading/blading): ☐ Yes X☐ No

Will a closed loop system be used or will mud/fluid pits be used? Mud pits

Six drill holes are proposed, only 2 will be drilled initially.

If mud/fluid pits are proposed:

6 # of pits 10 Length (ft.) 15 Width (ft.) 10 Depth (ft.)

Anticipated excavating equipment: Backhoe

How will excavating equipment be transported to the site (i.e., driven, low-boy, etc.):

Equipment will be walked in from where County Road AO-012 meets the Kinder Morgan pipeline right of way.

Will mud pits be lined? ☐ Yes X☐ No

If yes, proposed material to line the mud pits: NA

Approx. Weight of Drill Rig (lbs.)25,000 pounds _____Number of Axles: 2

Anticipated Drilling Contractor: Harrison Drilling / Tom Holman Drilling
License No. Please see attachment.

☐ **Test pits / exploratory trenches:** None

_____# of pits _____Length (ft.) _____Width (ft.) _____Depth (ft.)

Anticipated excavating equipment:

How will excavating equipment be transported to the site (i.e., driven, low-boy, etc.):

X **Other methods of exploration** (i.e., cuts, shafts, tunnels, adits, declines, blasting, etc.). Indicate method and details: Geophysical surveys including gravity and magnetotelluric, soil sampling.

TOTAL ACREAGE TO BE DISTURBED DUE TO DRILL PADS = .075 acres
(to convert to acres, multiply total square footage of drill pads by 0.0000229)

D. Disposal of drill cuttings

If this exploration project is for uranium or other radioactive elements/minerals, applicant agrees to perform a gamma radiation survey at each drill site prior to, and after, exploration activities. Applicant/Owner/Operator agrees to restore gamma radiation levels at each drill site to pre-exploration levels. ☐ Yes ☐ No X☐ N/A

Will excess drill cuttings be buried at each drill site location or within a single disposal pit?
☐ At each drill pad location X☐ Within a single disposal pit

If a single disposal pit is proposed, please provide the following:

Description or GPS coordinates of the proposed cuttings disposal pit location:
Disposal pits will be located within 10 feet of the GPS collar location for the proposed drill holes

Dimensions of the single proposed cuttings disposal pit (length, width, and depth):

15 Length (ft.) 10 Width (ft.) 10 Depth (ft.)

TOTAL ACREAGE TO BE DISTURBED DUE TO DISPOSAL PIT = .006 acres
(to convert to acres, multiply total square footage of disposal pit by 0.0000229)

E. Other Supporting Equipment (check all that apply):

X	4x4 Trucks/Vehicles	Quantity:	2
X	Water Truck	Weight (lbs.):	26,000 lbs.
X	Geophysical Truck	Weight (lbs.):	10,000 lbs.
X	Pipe Truck (rig support)	Weight (lbs.):	15,000 lbs.
☐	Bulldozer	Type:	
X	Backhoe	Type:	Case or Cat
☐	Trackhoe	Type:	
☐	Scaper/Grader	Type:	
☐	Trailers	Quantity/Type:	
☐	Portable Toilet	Quantity:	1?
☐	Other	List:	

F. Roads and Overland Travel:

List of new roads to be constructed for this exploration project:

Description of *NEW* Roads	Length (ft.)	Width (ft.)	Total Acres (length x width x 0.0000229)
None			

TOTAL ACRES DISTURBED BY NEW ROAD CONSTRUCTION :			None

Describe how new roads will be constructed: _____

List for extension or widening of existing roads:

Description of Modification to *EXISTING* Roads	Length (ft.)	Width (ft.)	Total Acres (length x width x 0.0000229)
None, Repair of 2 washouts on pipeline ROW will be necessary			
TOTAL ACRES DISTURBED BY ROAD IMPROVEMENTS :			**None**

Describe how existing roads will be extended or widened: _____

List for routes of overland travel:

Description of *OVERLAND TRAVEL* Routes	Length (ft.)	Width (ft.)	Total Acres (length x width x 0.0000229)
1 overland route may be necessary to access drill site 3, 4, 5, or 6. Shown on attached map	5000	10	1.145 Acres

TOTAL ACRES DISTURBED BY OVERLAND TRAVEL:			1.145

G. Support Facilities

Describe (location and size) any support facility disturbances (equipment staging, equipment and material storage and/or lay down areas, vehicle parking, temporary housing and/or trailers) to be created or situated on the site during exploration operations.

None

H. **TOTAL ACREAGE TO BE DISTURBED BY PROJECT = ~ 1.25 acres**
(include all disturbed acreage from drill pads, cuttings disposal pit, new roads, improved roads and overland travel routes)

SECTION 5 – CHEMICAL USE (§302.D.4)

A. Check any and all chemicals that will be used for this project.

X Drilling Mud (i.e., EZ Mud) Type/Quantity: 10 bags / hole

X Diesel Fuel Quantity: 80 Gallons

☐	Down-hole Lubricants	Type/Quantity:	
☐	Lost Circulation Materials	Type/Quantity:	
X	Oils/Grease	Quantity:	10 Gallons
X	Gasoline	Quantity:	80 Gallons
☐	Hydraulic Fluid	Quantity:	
☐	Ethylene Glycol	Quantity:	
X	Cement	Type/Quantity:	5 bags / hole
X	Water	Source:	City of Lordsburg
X	Bentonite	Quantity:	20 bags of Abandonite / hole
☐	Fertilizer	Type/Quantity:	
☐	Other	Type/Quantity:	

B. Describe, in detail, a plan for the containment, use and disposal of all chemicals listed above:

Chemicals will be stored on onsite equipment when possible or on plastic sheeting if stored on the ground. Chemicals will be used in accordance with manufactures recommendations. Hazardous chemicals will be disposed of offsite when necessary in an appropriate facility.

C. Describe where equipment fueling/refueling will occur:

Fueling will occur onsite for the drill and associated equipment. Absorbent pads will used when fueling to catch any spills or drips.

D. Describe how hazardous material spills/leaks will be handled:

Any hazardous material spills will be immediately cleaned up and the contaminated soil will be disposed of at an appropriate location.

E. Identify spill cleanup materials that will be kept on-site (check all that apply):

- ☐ Bentonite clay or cat litter
- X Adsorbent pads, rolls, mats, socks, pillows, dikes, etc.
- ☐ Drum or barrel for containing contaminated soil/adsorbent materials
- X Other/list: Trash bags for containing contaminated material
- ☐ Other/list: _____
- ☐ Other/list: _____

F. Applicant/owner/representative agrees to immediately notify the State of New Mexico immediately of any spills of hazardous materials (see page 1 of this application for phone numbers to notify): X Yes ☐ No

SECTION 6 – GROUNDWATER/SURFACE WATER INFORMATION (§302.D.5)

A. Provide an estimate of depth to ground water and the total dissolved solids (TDS) concentration.

Depth to groundwater (ft.): 150 feet_____ TDS concentration (mg/L): very high____

_____

Describe the source of this information: Extreme salt content – State Engineers Office Well Report Number A-675 or 3-14096

_____

_____

B. Will dewatering activities be conducted: ☐ Yes X☐ No

If yes, please describe:_____

_____

_____

C. Is groundwater anticipated to be encountered during exploration: X☐ Yes ☐ No

If YES:

Have you completed Form WR-07 (Application for permit to drill a well with no consumptive use of water) and mailed it to the District Office of the State Engineer? ☐ Yes - Pending

Have you completed Form WD-08 (Well plugging plan of operations) and mailed it to the District Office of the State Engineer? ☐ Yes – Pending

Attachment _____ (copies of the completed WR-07 and WD-08 forms)

NMSEO advised applicant to file these reports when the project is within 30 days of actually being drilling.

D. Exploration Borehole Abandonment

Dry Boreholes

☐ Dry hole abandonment (option 1): 100% bentonite pellets/chips (i.e. HOLEPLUG® manufactured by Baroid Industrial Products), dropped from surface then hydrated in place according to the manufacturer's recommendations, emplaced from total depth to within 12 feet of the original ground surface, followed by 10 feet of neat cement, followed by 2 feet of topsoil/topdressing.

☐ Dry hole abandonment (option 2): Neat cement slurry, mixed according to the manufacturer's recommendations, emplaced with a tremie pipe from total depth to within 2 feet of the original ground surface, followed by 2 feet of topsoil/topdressing.

☐ Dry hole abandonment (option 3): Cement + 6% bentonite slurry, mixed according to the manufacturer's recommendations, emplaced with a tremie pipe from total depth to within 2 feet of the original ground surface, followed by 2 feet of topsoil/topdressing.

☐ Dry hole abandonment (option 4): High-density bentonite clay (≥ 20% active solids; i.e. QUIK-GROUT® manufactured by Baroid Industrial Products), mixed according to the manufacturer's recommendations, emplaced with a tremie pipe from total depth to within 12 feet of the original ground surface, followed by 10 feet of neat cement, followed by 2 feet of topsoil/topdressing.

☐ Dry hole abandonment (option 5): Other materials / describe and justify use:

_____

_____

Wet Boreholes

☐ Wet hole abandonment (option 1): Neat cement slurry, mixed according to the manufacturer's recommendations, emplaced with a tremie pipe from total depth to within 2 feet of the original ground surface, followed by 2 feet of topsoil/topdressing.

X Wet hole abandonment (option 2): High-density bentonite clay (≥ 20% active solids; i.e. QUIK-GROUT® manufactured by Baroid Industrial Products), mixed according to the manufacturer's recommendations, emplaced with a tremie pipe from total depth to within 12 feet of the original ground surface, followed by 10 feet of neat cement, followed by 2 feet of topsoil/topdressing.

☐ Wet hole abandonment (option 3): Other sealing material approved by the Office of the State Engineer. Describe and include well plugging plan approval by the State Engineer:

_____

_____

_____

D. Applicant agrees to contain any water produced from the exploration borehole at the drill site and acknowledges that discharge of this water to a watercourse may be a violation of the Federal Clean Water Act: X Yes ☐ No

E. Is any drilling proposed to occur within the channel of any perennial, intermittent, or ephemeral streams? ☐ Yes X No

F. Is any drilling anticipated to occur within 100 feet of any perennial, intermittent, or ephemeral streams? ☐ Yes X No

SECTION 7 – RECLAMATION & OPERATION PLAN (§302.D.6 AND 302.I.K)

A. Salvage/Preservation of Topsoil

Before any grading/blading or similar activities occur in relation to this project, operator agrees to salvage and preserve all topsoil and topdressing for use in future reclamation of this project ☐ Yes X No

Describe how topsoil will be salvaged prior to initiation of exploration activities (check all that apply):

X N/A – no construction work will occur, therefore no soil salvage is needed.

☐ Excavated from drill pads and stored at each drill pad

☐ Excavated from road improvements/construction and stored adjacent to road

☐ Excavated from mud/fluid pits and storage at each pit

☐ Other, describe: _____

_____

B. Erosion Control

Describe the best management practices that will be implemented to control erosion:

☐ Silt fencing Location: _____

☐ Straw waddles Location: _____

☐ Straw bales Location: _____

☐ Ditches/swales Location: _____

☐ Berms/dikes/dams Location: _____

☐ Sediment basins Location: _____

X Other or N/A Type/Location: No erosion control including water bars will be constructed at request of BLM

C. Wildlife Protection / Noxious Weed Prevention

Will the perimeter of drill pits be fenced to prevent wildlife entrapment? XYes ☐ No

Proposed pit perimeter fence material: Plastic or wire fencing,

Describe how the pit perimeter fencing will be installed and secured (i.e., T-posts, wooden stakes, etc.):
T-Posts and zip ties

Will at least one side of the interior of the drill pits be sloped at 3:1 as a ramp for wildlife escape? X Yes ☐ No

If No, will another type of constructed escape ramp be installed? Describe:

Applicant/Owner/Operator commits to pressure-washing or steam-clean all equipment prior to entering the permit area: X Yes ☐ No

D. Reclamation Details

Describe in general how re-contouring or re-establishment of the surface topography will be restored:
Recontouring will not be necessary as the playa surface is essentially flat

Describe how the reclamation of portals, adits, drilling fluid/mud and/or waste pits, shafts, ponds, roads and other disturbances will be performed: NA

Is seeding of the reclaimed areas proposed: ☐ Yes X No

If no, provide a justification as to why no revegetation is needed:
Drill sites are located on a playa surface with little or no vegetation except for sparse grasses.

Plant mix to be used in the re-establishment of vegetation:

☐ US Forest Service specified mix applied through broadcast at their recommended rate
☐ BLM specified mix applied through broadcast at their recommended rate
☐ Other:

Plant Name	Seeding Rate (lbs./acre)
NA	

Broadcast applied or drill-seeded: ☐ Broadcast ☐ Drill-seeded

Scarification Methods (check all that apply):
☐ Primary tillage to greater than 6-inches depth of all constructed drill pads and roads
☐ Secondary tillage of all constructed drill pads and roads, and/or overland travel routes
☐ Chain drag or tire drag over seeds in areas used for overland travel
☐ Light raking of soil over seeds in areas used for overland travel
X None
☐ Other/describe:_____

_____

Mulch Use:
☐ Certified weed-free straw mulch will be placed over areas that have been tilled/disced or ripped at a rate of 2 tons per acre, and will be crimped in place
X No mulch is proposed

E. Reclamation Timeline

Applicant/Owner/Operator commits to reclamation of the disturbed area as soon as possible following the completion or abandonment of the exploration operation, unless the disturbed area is included within a complete permit application for a new mining permit:
X Yes ☐ No

Anticipated Start of Reclamation:

X 0-30 days after completion of drilling
☐ 31-60 days after completion of drilling
☐ Other/specify: _____

SECTION 8 – PERMIT FEES AND FINANCIAL ASSURANCE (§302.I.2 AND 5)

A. Financial assurance must be posted with Mining and Minerals Division prior to approval of this application. The acceptable forms of financial assurance are surety bonds, letters of credit, and certificates of deposit. Provide an estimate of, and an instrument for, the proposed financial assurance required by Subpart 3.

X Surety Bond
☐ Letter of Credit
☐ Cash Account / Certificate of Deposit

☐ Estimated amount of financial assurance: 12,000.00

Or

X Applicant will provide the amount of financial assurance calculated by MMD and agreed upon by the applicant and the BLM

B. Attach the permit fees as determined pursuant to Subpart 2. The application fee for a minimal impact exploration permit is $500.00.

☐ Money Order/Cashier's Check
☐ Check

Check Number : NA – fees previously paid with original application.

Financial Institution:

SECTION 9 – CERTIFICATION REQUIREMENT (§302.I.3 & 4)

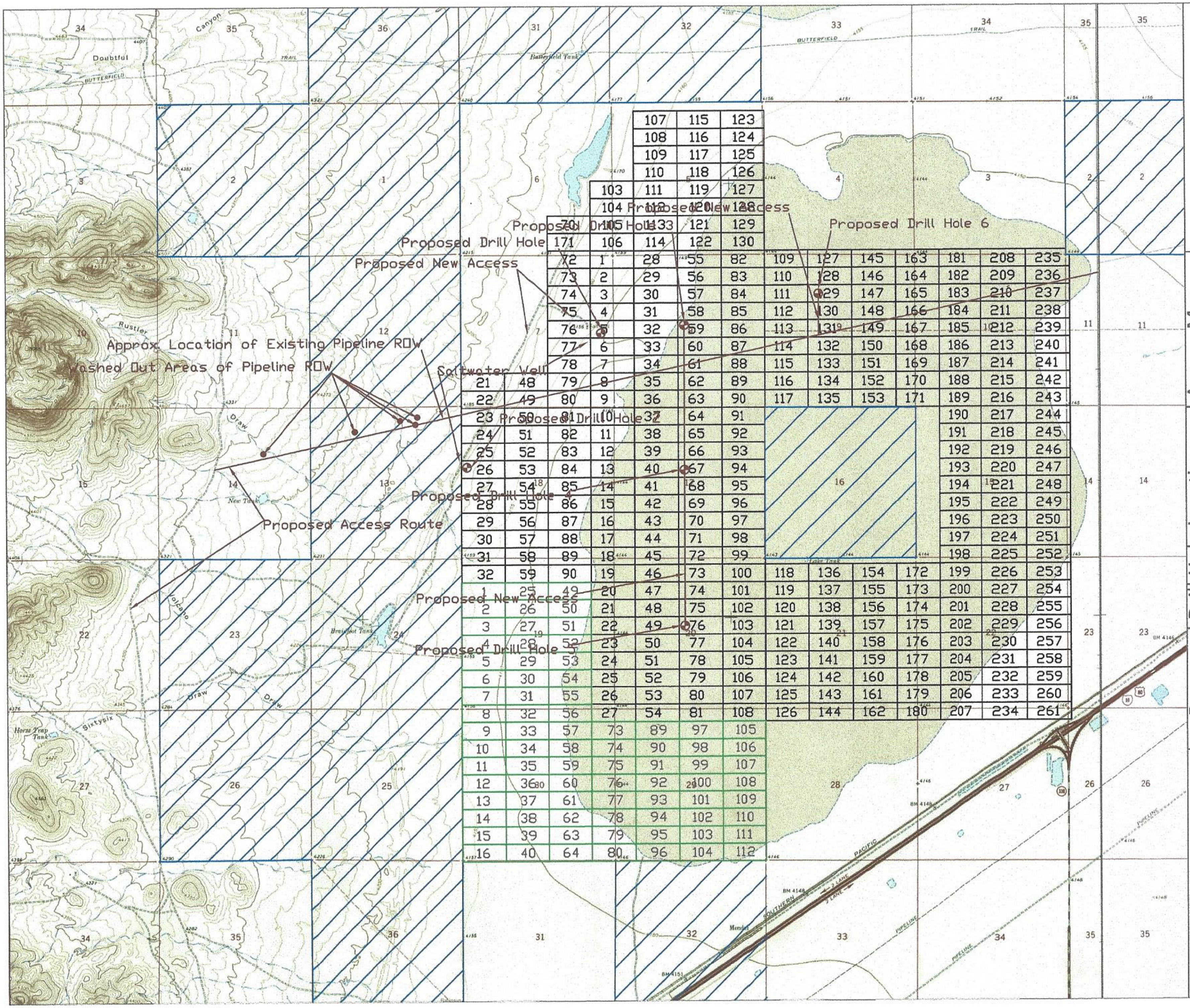
I certify that I have personally examined and am familiar with the information submitted herein, and based on my inquiry of those individuals responsible for obtaining the information; I believe the submitted information is true, accurate, and complete. I agree to comply with the reclamation requirements set forth in this permit application and related correspondence, the New Mexico Mining Act and the Rules. Further, I certify that I am not in violation of any other obligation under the New Mexico Mining Act or the Rules adopted pursuant to that Act and I allow the Director to enter the permit area, without delay, for the purposes of conducting inspections during exploration and reclamation.

Signature of Permittee or Authorized Agent: Electronic Signature, Frank Bain

Name (type or print): Frank Bain

Title/Position: Claim Owner / Project Manager

Date: August 21, 2018



Proposed Drill Hole Location and Access Map
LBP Claim Block
T. 23 S, R. 20 W
Hidalgo County, New Mexico
Scale: 1" = 4,300'

Date:
7-15-2018