HARDING PEGMATITE MINE
SAFEGUARD PROJECT - PHASE II
DIXON, NEW MEXICO
PROJECT NO. EMNRD-MMD-2022-02

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SUBMITTED TO
NEW MEXICO ENERGY, MINERS AND NATURAL RESOURCES DEPARTMENT
1220 SOUTH ST. FRANCIS DRIVE
SANTA FE, NM 87505
PROJECT ENGINEER: MEGHAN MCDONALD P.E.
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DAVID GRIEGO
UNIVERSITY OF NEW MEXICO
PHONE: (505) 927-1895

ABANDONED MINE LAND PROGRAM
MINING AND MINERALS DIVISION
NEW MEXICO ENERGY, MINERS AND NATURAL RESOURCES DEPARTMENT

COVER SHEET
HARDING PEGMATITE MINE
SAFEGUARD PROJECT – PHASE II
DIXON, NEW MEXICO
PROJECT NO. EMNRD-MMD-2022-02

SUBMITTED BY / DESIGN ENGINEER
INTERA INCORPORATED
JAMES JOSEPH, P.E.
PHONE: (505) 294-3947

CAUTION: THIS PROJECT REQUIRES CONSTRUCTION WORK IN, AROUND, AND OVER HAZARDOUS AND CONTAMINATED MATERIALS. PERSONNEL AND EQUIPMENT OPERATORS WHO MAY BE EXPOSED TO HAZARDS MAY BE REQUIRED TO FOLLOW SPECIFIC SAFETY PROTOCOLS. PERSONNEL AND OPERATORS WHO MAY BE EXPOSED TO HAZARDS MUST FOLLOWS THE SITE CONDITIONS AND SCHEDULING EQUIPMENT, EQUIPMENT OPERATIONS, PERSONAL, AND SAFETY PROCEDURES TO PREVENT ACCIDENTS AND INJURIES.
1. The property is owned by the University of New Mexico and is open to public visitation. The safeguarding measures being constructed are being contracted by the New Mexico Abandoned Mine Land (AML) Program of the Energy, Minerals, and Natural Resources Department. The contractor's point of contact shall be the AML project manager; however, site access and visitation may be coordinated through the caretaker. Contact information and scheduling shall be arranged prior to mobilization to the site.

2. The harding mine site has high visitation (approved and trespass). Although there are gates at the entrances, they do not guarantee safety of materials, equipment, or work areas. The contractor shall secure work areas at the end of each work day and when no active safeguard work is being performed. The property owner, mine caretaker, AML, or the engineer will not be held responsible for stolen or vandalized materials, equipment, and/or work.

3. Contractor personnel shall anticipate interaction with the public during the work and should be prepared to stop heavy equipment operation in areas being visited. Please defer questions regarding the work to the caretaker or AML project manager.

4. Excess imported soil fill may be placed on roadways or other areas directed by the AML project manager.

5. This project requires construction work around, over, and (potentially) in mine features and at the base and top of an exposed vertical wall. The contractor is responsible for inspecting the site for hazards, training their personnel in safe work practices, and providing adequate personal protective equipment to prevent accidents and injuries.

6. Rock fall from the highway wall has been identified as a site hazard. Worker protection measures shall be taken when working at the base of the highway.

7. Hours for performing site work are restricted on Mondays and Fridays to accommodate travel by AML personnel. No site work shall be performed before 1000 on Mondays or after 1500 on Fridays.

Summary of Work

Safeguard measures are being constructed to address areas of subsidence and collapse into existing mine features and to add fencing above areas that pose a fall risk.

New fencing will be installed at the feature identified as the Iceberg Pit, which was an exploratory feature with no existing connection to underground mine workings.

Three subsidence areas will be repaired including:

1. Subsidence into a reopened decline adit at feature F9. The decline adit will be exposed and the safeguard measure will include filling the decline adit opening with a polyurethane foam (PUF) plug.

2. Soil piping has created an opening into the mine near the most visited portion of the mine site. The opening has been identified as benefiting bat habitat in the mine, and a vent pipe will be installed concurrent with installing a PUF plug. This feature is identified as "Sub-2".

3. A large collapse has created an open stope at feature Sub-1. The feature has created openings into the mine workings that may result in unauthorized entrance into the mine. Safeguard measures will include excavating top soil from the subsidence feature, blocking off the opening with tire plugs, and filling the feature with PUF and a soil cap. The disturbed area and travel route to feature Sub-1 shall be revegetated by applying a seed mixture.

Site controls will be enhanced by securing a gate post at the first primary access gate to the mine (Gate 1).

General Notes:

1. Feature identification markers will be provided by the AML program and come with feature information already engraved in the markers.

2. Steel pipe may be filled with QUIKRETE® play sand or equivalent to within 8" of top of pipe.

3. Embed provided marker in QUIKRETE® non-shrink grout (or approved equivalent). T-at is placed in the top 6 inches of the steel pipe.

4. Location of identification markers are shown on other sheets. If site conditions (e.g., rocky soil) prevent installation as shown, the contractor shall obtain alternated installation instructions from the AML project manager.
GENERAL NOTES:

1. EQUIPMENT ACCESS TO FEATURE SUB-1 OPEN STOPE SHALL FOLLOW A PATH FROM THE LOWER PARKING AREA, ASCENDING THE HILL, AND APPROACHING FROM THE WEST, AS DIRECTED BY THE AML PROGRAM. ALTERNATE ROUTES SHALL BE APPROVED BY THE AML PROJECT MANAGER BUT ONLY IF IT IS WITHIN THE SHOWN "AREA OF POTENTIAL DISTURBANCE" AND AFFORDS LESS IMPACT ON VEGETATION AND IMPROVED WORKER SAFETY CONDITIONS.

2. DISTURBANCE TO THE AREA SHALL BE KEPT TO A MINIMUM. TREES SHALL BE TRIMMED WHERE NECESSARY TO ALLOW ACCESS FOR LARGER EQUIPMENT. TREE CUTTING SHALL BE AVOIDED AS MUCH AS PRACTICABLE AND SHALL BE GUIDED BY THE AML PROJECT MANAGER.

3. UPPER AND LOWER PARKING AREAS SHALL BE USED FOR LAYDOWN AND STORAGE.

4. AREAS OF POTENTIAL DISTURBANCE HAVE BEEN SURVEYED FOR CULTURAL RESOURCES, EQUIPMENT OPERATION, MATERIAL STORAGE/STAGING, OFFROAD TRAVEL, AND OTHER PROJECT IMPACTS OUTSIDE OF CLEARED AREAS IS PROHIBITED.

CAUTION - THIS PROJECT REQUIRES CONSTRUCTION WORK, 100 FEET AROUND AND ABOVE HAZARDOUS AND RADIOACTIVE MATERIALS, ENTRAPMENT HAZARDS, AND OTHER HAZARDS WHICH MAY BE OPEN TO THE SURFACE OR HIDDEN FROM VIEW BY TRASH, DEBRIS, OR THIN AND UNSTABLE LAYERS OF SURFACE MATERIALS OR MUD. THE CONSTRUCTION SHALL BE CONDUCTED WITHIN THE SITE CONDITIONS AND SCHEDULED EQUIPMENT, EQUIPMENT OPERATIONS, PERSONNEL, AND SAFETY PROCEDURES TO PREVENT ACCIDENTS AND INJURIES.

ABANDONED MINE LAND PROGRAM
MINING AND MINERAL DIVISION
NEW MEXICO MINERAL, MINERALS, AND NATURAL RESOURCES DEPARTMENT

HARDING PEGMATITE MINE SAFEGUARD PROJECT - PHASE II
DIXON, NEW MEXICO
PROJECT NO. E808-MND-B08-04

SITE PLAN

REVISIONS/REMARKS: RP
DRAFTED BY: JFW
DATE: 3/2020
CHECKED BY: JFW
DATE: 3/2020

INTERA
214 LOMBARD BUILDING, 505 S. TACOMA AVE., ALBUQUERQUE, NM 87105-2890

SITE PLAN - MAIN AREA

LEGEND:
- PARKING AREA
- AREA OF POTENTIAL DISTURBANCE
- NEW FENCE ALIGNMENT
- TWO-TRACK ACCESS ROUTE
- ACCESS ROUTE TO FEATURE 51 FROM LOWER PARKING AREA
- ACCESS ROUTE TO MINE FEATURES

SCALE: 1:2000

N
0 100 200 Feet

SHEET NO. 03

PROJECT NUMBER: MINERAL-76877

PHASE III: 04/25/2019
GENERAL NOTES:
1. IMPORTED SOIL FILL SHALL MEET REQUIREMENTS PROVIDED IN THE CONSTRUCTION SPECIFICATIONS.
2. ROCK ARMORING SHALL BE ANGULAR TO SUB-ROUNDED RIPRAP SIZED IN ACCORDANCE WITH CONSTRUCTION SPECIFICATIONS.
3. CLEAR EXISTING GROUND SURFACE OF LARGE ROCKS AND ORGANIC MATERIAL IN AREAS WHERE FILL WILL BE PLACED.
4. SCARIFY AND COMPACT EXISTING GROUND SURFACE BEFORE PLACING IMPORTED FILL.
5. PLACE AND COMPACT FILL MATERIAL IN MAXIMUM OF 12-INCH LOOSE LIFTS. COMPACTION SHALL BE OBTAINED USING A RAMMER/JUMPING JACK COMPACTOR.
6. CONDITION FILL MATERIAL WITH WATER FOR OPTIMUM COMPACTION. COMPACTION TESTING IS NOT REQUIRED. BUT LIFT COMPACTION AND FINAL COMPACTION MUST BE TO PROJECT MANAGER'S SATISFACTION.
7. ENSURE THAT THE GATE LATCH AND LOCKBOX ON THE POST ALIGN AND INTERLOCK WITHOUT RUBBING OR STRAINING BEFORE PLACING FILL AROUND EXPOSED FOOTING OF THE POST. ROUTINELY CHECK ALIGNMENT DURING FILL PLACEMENT AND COMPACTION ACTIVITIES. IF ALIGNMENT IS LOST DURING STABILIZATION ACTIVITIES, PLACED SOIL SHALL BE REMOVED AND THE POST REALIGNED AT CONTRACTOR’S EXPENSE.
8. MATERIAL VOLUME ESTIMATES: SOIL FILL = 6 CUBIC YARDS; RIP RAP = 2 CUBIC YARDS.

GATE 1 STABILIZATION

EXISTING GATE POST WITH LOCK BOX
EXISTING CONCRETE ROAD SURFACE
IMPORTED SOIL FILL
EXISTING GRADE
SOIL

GATE 1 POST STABILIZATION SCHEMATIC PROFILE VIEW

1" = 6'

GATE 1 POST STABILIZATION SCHEMATIC PLAN VIEW

1" = 6'

ABANDONED MINELAND PROGRAM
MINING AND IMPRIME DIVISION
NEW MEXICO ENERGY, MINERAL AND NATURAL RESOURCES DEPARTMENT

GATE 1 STABILIZATION

HARDING PEGMATITE MINE
SAFEGUARD PROJECT - PHASE II
DIXON, NEW MEXICO
PROJECT NO. 18000-210304

CAUTION - THIS PROJECT Requires CONSTRUCTION WORK IN, AROUND, AND OVER HAZARDOUS AND UNSTABLE AREAS. OTHER WORKERS MAY BE OPEN TO THE SURFACE OF THE SITE. COMPLIANCE WITH THE SITE CONDITIONS AND SCHEDULING EQUIPMENT, EQUIPMENT OPERATIONS, PERSONNEL, AND SAFETY PROCEDURES TO PREVENT ACCIDENTS AND INJURIES.

DESIGNED BY: JPI
DRAFTED BY: LEG
CHECKED BY: JPI
DATE: 3/22/23
DATE: 3/22/23
DATE: 3/22/23

PROJECT NUMBER: 18000-210304

SHEET NO: 04
GENERAL NOTES:
1. AT FEATURE SUB-1, TEMPORARILY REMOVE EXISTING HANGING SECTION OF BARBED WIRE FENCE ACROSS THE COLLAPSE FEATURE. REPLACE REMOVED SECTION OF FENCE AFTER COMPLETION OF SAFEGUARD CONSTRUCTION ACTIVITIES. ASSUME REMOVAL AND REPLACEMENT OF 60 LINEAR FEET OF FENCE IN BOTH DIRECTIONS FROM THE CENTER OF THE COLLAPSE FEATURE (TOTAL OF 120 FEET). REMOVED FENCING SHALL BE DISPOSED OF OR SALVAGED, AS DIRECTED BY THE AML PROJECT MANAGER.
2. INSTALL APPROPRIATELY TENSIONED BARBED WIRE FENCE AND REPAIR THE FENCE AT THE OPEN STOPE. THE BARBED WIRE SHALL BE NEW, DOUBLE-STRAIGHT STEEL, 12 GAUGE OR 16 GAUGE HIGH TENSILE BARBED WIRE.
3. CONTOUR FENCING MAY BE USED WHERE A CURVED FENCE LINE AS DIRECTED. PLACE WIRES ON THE OUTSIDE OF THE POSTS SO THAT WHEN THE WIRE IS TIGHTENED IT WILL PULL AGAINST THE POSTS AND NOT THE TIES.
4. SET POSTS FOR CONTOUR FENCING LEANING OUT SEVERAL INCHES SO THAT POSTS WILL STRAIGHTEN TO A PLUMB POSITION WHEN WIRE IS TAUGHT. TIGHTEN WIRE TO A MODERATE TENSION FOR A CURVED FENCE. A SHARPENER CURVE WILL RESULT IN LESS REQUIRED TENSION.
5. RUN FENCE IN STRAIGHT LINES BETWEEN END AND CORNER POSTS, EXCEPT WHERE CONTOUR FENCING IS USED.
6. AVOID ANGLES LESS THAN 90 DEGREES AT FENCE CORNERS.
7. CORNER AND END BRACE PANELS SHALL BE PREFABRICATED "EASY FENCE" PANELS MADE BY D-C INDUSTRIES OR ENGINEER-APPROVED ALTERNATIVE.
8. ALL POST LENGTHS AND DRIVEN DEPTHS SHALL BE CONSISTENT WITH THAT SHOWN ON DETAIL 2.
9. ICEBERG FENCE LOCATION SHOWN ON SHEET 3 AND SUB-1 FENCE LOCATION SHOWN ON SHEET 8. MAINTAIN A MINIMUM SETBACK DISTANCE OF 5 FEET FROM ANY HIGHWAY. ADJUST ALIGNMENT TO MINIMIZE REMOVAL OF VEGETATION, AND PRUNE RATHER THAN REMOVE WHEN PRACTICAL.
10. CONTRACTOR SHALL STAKE THE FENCE ALIGNMENT AT THE ICEBERG PIT AND RECEIVE PROJECT MANAGER APPROVAL BEFORE DRIVING POSTS.

ICEBERG PIT
APPROXIMATE LOCATION OF END POSTS AND FENCE ALIGNMENT

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FENCING DETAILS - ICEBERG PIT AND FEATURE SUB-1

ABANDONED MINE LAND PROGRAM
MINING AND MINERALS DIVISION
NEW MEXICO DEPARTMENT OF MINING, MINERALS AND WATER RESOURCES

HARDING PEGMATITE MINE
SAFEGUARD PROJECT - PHASE II
DIXON, NEW MEXICO
PROJECT NO. 0005-00-05-05-02

SHEET 06

CAUTION: THIS PROJECT REQUIRES CONSTRUCTION WORK IN, AROUND, AND OVER HAZARDOUS AND SUBSIDENCE-ACTIVE MINING MOUNDS AND MINE HOLES, AS WELL AS OTHER OPENINGS WHICH MAY BE OPEN TO THE SURFACE OR HIDDEN FROM VIEW BY TRASH, TRASH, CORN, OR TREES AND UNSTABLE LAYERS OF SURFACE MATERIALS OR ROCK. THE CONSTRUCTION SHALL BE BUILT IN PHASES TO MINIMIZE THE DAMAGE TO THE SITE CONDITIONS AND SCHEDULING ERECTION OF STRUCTURES, EQUIPMENT OPERATIONS, PERSONNEL AND SAFETY PROCEDURES TO PREVENT ACCIDENTS AND INJURIES.

ENGINEER SEAL

JAMES JOSEPHI
NEW MEXICO PILE DRIVER
"NEW MEXICO MINE PROFESSIONAL ENGINEER" "MINED MATERIALS" "NEW MEXICO MINE PROFESSIONAL ENGINEER"
**GENERAL NOTES**

1. EXISTING SOIL SHALL BE EXCAVATED TO EXPOSE THE ENTRANCE TO THE DECLINE ADIT. MATERIAL FROM INSIDE THE ADIT SHALL BE REMOVED TO 4 FEET FROM THE ENTRANCE (AS DEFINED BY PROJECTION OF VERTICAL SECTION OF THE HIGHWALL IN THAT LOCATION).

2. CLEAN ALL ROCK SURFACES INSIDE THE ADIT ENTRANCE TO ENSURE CONTACT WITH PUF AND PREVENT FUTURE PIPING AROUND PUF PLUG.

3. PROTECTION MEASURES FOR WORKERS OPERATING AT THE BASE OF THE HIGHWALL AND DECLINE ADIT OPENING SHALL BE IMPLEMENTED TO PREVENT INJURY FROM ROCK FALL AND/OR MINE COLLAPSE.

4. THE FLOOR OF THE DECLINE ADIT MAY BE OVER OTHER MINE OPENINGS. REPORT EVIDENCE OF FLOOR COLLAPSE TO THE PROJECT MANAGER BEFORE PLACEMENT OF PUF PLUG.

5. APPLY PUF IN ACCORDANCE WITH CONSTRUCTION SPECIFICATIONS.

6. EXISTING SOIL CONSISTS OF UNCONSOLIDATED COLLUVIUM INCLUDING ROCK FRAGMENTS FROM THE HIGHWALL.

7. BACKFILL WITH EXISTING SOIL THAT IS EXCAVATED FROM THE DECLINE ADIT. BLEND SURFACE WITH SURROUNDING GRADE AND LAND, FORM TO SIMULATE NATURAL CONDITIONS.

8. THE GEOMETRY AND SIZE OF DECLINE ADIT ARE NOT WELL-DOCUMENTED. EXCAVATION SHALL BE OVERSEEN BY A COMPETENT PERSON AS DEFINED BY OSHA. IF OSHA REQUIRES, BACKFILL SHALL IMPLEMENT A PROTECTIVE SYSTEM AS REQUIRED BY 29 CFR 171 PART 126, SUBPART P.

9. APPROXIMATELY 7.5 CUBIC YARDS OF CURED-IN-PLACE PUF WILL BE NEEDED. THE CONTRACTOR SHALL CONFIRM VOLUME AFTER OPENING THE DECLINE ADIT FOR INSPECTION.
GENERAL NOTES
1. FEATURE IS A COLLAPSED OPEN STOPE. UNDERGROUND MINE WORKINGS (VOIDS) ARE PRESENT AROUND THE FEATURE. THIN BEDROCK MAY BE PRESENT AROUND THE FEATURE. CONTRACTOR SHALL SIZE EQUIPMENT AND PLAN EQUIPMENT APPROACH ACCORDINGLY.
2. SHAPE AND DIMENSIONS ON SCHEMATICS ARE APPROXIMATED BASED ON OBSERVATIONS FROM OUTSIDE THE COLLAPSE FEATURE AND DATA FROM LIDAR SURVEY. CONTRACTOR SHALL VERIFY DIMENSIONS.
3. FEATURE SUB-1 IS SECURED BY TEMPORARY CHAIN LINK FENCE PANELS ERRECTED AROUND THE FEATURE. THE CONTRACTOR SHALL REMOVE THE TEMPORARY FENCE AND TRANSPORT IT TO THE LAYDOWN AREA IN THE LOWER PARKING AREA FOR REMOVAL FROM THE SITE BY THE AML PROGRAM.
4. TEMPORARILY REMOVE SECTION OF BARBED WIRE FENCE OVER THE STOPE WHILE CONSTRUCTING SAFEGUARD MEASURES. REPLACE REMOVED FENCING AFTER FILLING OPEN STOPE IN ACCORDANCE WITH DETAILS ON SHEET 5.
5. FINAL DEPTHS OF OPEN STOPE PRIOR TO FILLING WILL BE DEPENDENT ON AMOUNT OF SOIL AND WEATHERED ROCK THAT IS EXCAVATED DURING PREPARATION FOR PLUG INSTALLS AND PUF PLACEMENT.

PLAN VIEW OF OPEN STOPE

ABANDONED MINE LAND PROGRAM
MINING AND MINERALS DIVISION
NEW MEXICO DEPARTMENT OF MINING AND MINERALS RESOURCES

FEATURE SUB-1, OPEN STOPE — SCHEMATICS OF EXISTING CONDITIONS

HARDING PEGMATITE MINE
SAFEGUARD PROJECT - PHASE II
DIXON, NEW MEXICO
PROJECT NO. 30004000002

DRAWN BY: LEI DATE: 3/30/22
CHECKED BY: JF DATE: 3/30/22

INTERA MINING AND MINERALS DIVISION
NEW MEXICO DEPARTMENT OF MINING AND MINERALS RESOURCES DEPARTMENT
GENERAL NOTES

1. ENTRANCE INTO THE OPEN STOPE BY EQUIPMENT AND/OR PERSONNEL SHALL BE LIMITED, AS MUCH AS POSSIBLE. ALL INDIVIDUALS WORKING IN, OR AT THE EDGE OF, THE OPEN STOPE OR THE EDGE OF THE NEARBY HIGHWAY SHALL BE EQUIPPED WITH FALL RESTRAINT AND RECOVERY EQUIPMENT IN ACCORDANCE WITH THE CONTRACTOR’S HEALTH AND SAFETY PLAN. AN ATTENDANT MUST BE PLACED OUTSIDE OF THE OPEN STOPE AT ALL TIMES WHEN WORKERS ARE IN THE COLLAPSE FEATURE.

2. CONTRACTOR SHALL USE FIELD JUDGMENT IN SELECTION OF NUMBER OF TIRES AND CONFIGURATION TO BEST CLOSE OFF OPENINGS INTO THE MINE.

3. ASSUME APPROPRIATE QUANTITY OF 85 TIRES NEEDED FOR TOROID PLUGS. USED PASSENGER VEHICLE TIRES OF CONSISTENT SIZE SHALL BE USED FOR TOROID TIRE PLUGS BASED ON COMMON TIRE SIZE (225/65R17).

4. PERMITS MUST BE OBTAINED FROM THE SOLID WASTE BUREAU (SWB) OF THE NEW MEXICO ENVIRONMENT DEPARTMENT FOR USE OF SCRAP TIRES IN THIS CONSTRUCTION. NO TIRES SHALL BE PROCURED OR DELIVERED TO THE SITE UNLESS THE PERMIT IS IN PLACE. CONTRACTOR MUST BE REGISTERED WITH THE STATE OF NEW MEXICO TO HANDLE SCRAP TIRES OR HAVE THE TIRES DELIVERED BY A REGISTERED SCRAP TIRE Hauler. THE CONDITIONS OF THE TIRE USE PERMIT MAY REQUIRE THAT THE SWB BE ALLOWED TO INSPECT THE TIRE PLUGS BEFORE BURYING. COORDINATION OF THE INSPECTION SHOULD BE MADE AS SOON AS POSSIBLE TO AVOID CONSTRUCTION DELAYS.

5. STACKED TIRES SHALL BE COMPRESSED WITH EXCAVATION EQUIPMENT AND TEMPORARILY BANDED BEFORE PLACING IN THE OPEN STOPE. ONCE THE TIRES ARE SATISFACTORILY PLACED, THE BANDS SHALL BE REMOVED TO ALLOW TIRES TO FALL IN AND CONTACT THE TOP OF THE OPENING (AS SHOWN IN SECTION 3). TIRES PLACED VERTICALLY (RESTING ON THE TREAD INSTEAD OF THE SIDEWALL OF THE TIRE) SHALL BE WEIGHED INTO THE TARGETED VOID BY USING A THUMB ATTACHMENT ON THE EXCAVATION EQUIPMENT TO WEDGE THE TIRE INTO PLACE.

6. ONCE TOROID TIRE PLUGS ARE PLACED, COVER THE EXPOSED TIRES SURFACES WITH NONWOVEN GEOTEXTILE FABRIC TO PREVENT PUP FROM ENTERING THE MINE OPENING BEHIND THE TIRES. THE FABRIC SHALL BE PLACED IN A MANOR TO OPTIMIZE THE CONTACT SURFACE AREA OF THE PUP TO THE ROCK WALL. ANY OPENINGS IN THE TIRE PLUGS GREATER THAN 1 FOOT IN ANY DIMENSION SHALL BE SUPPORTED USING WIRE MESH BEORE APPLICATION OF THE GEOTEXTILE FABRIC. SEE SHEET 10 FOR Fabric PLACEMENT.

7. LOOSE SCF, VEGETATION, AND WEATHERED ROCK SHALL BE EXCAVATED FROM THE OPEN STOPE PRIOR TO INSTALLING PLUGS OVER OPENINGS.

ABANDONED MINE LAND PROGRAM
MINING AND MINERALS DIVISION
NEW MEXICO DEPARTMENT OF MINING AND MINERALS
SAFEGUARD PROJECT - PHASE II
DIXON, NEW MEXICO
PROJECT NO. 10001331-001-02

FEATURE SUB-1, OPEN STOPE – SCHEMATICS OF TOROID TIRE PLUGS

302030 2020 SAFEGUARD MEASURES  0RG

DRAWN BY:   LGM DATE: 3/2/20
CHECKED BY:  LGM DATE: 3/2/20

JAMES JOSEPH, P.E.
INTERA CORPORATION
GENERAL NOTES:
1. PRIOR TO PLACING THE POLYURETHANE FOAM (PUF) PLUG MATERIAL, SOIL AND WEATHERED ROCK WILL BE EXCAVATED FROM INSIDE OF OPEN STOPE TO EVIDENCE OF AMPHIBOLITE RUBBLE. REMOVED MATERIAL SHALL BE STOCKPILED FOR LATER USE IN CAP MATERIAL.
2. THE NEW MEXICO ENVIRONMENT DEPARTMENT SHALL BE GIVEN THE OPPORTUNITY TO INSPECT TORDOID TIRE PLUGS PRIOR TO APPLYING GEOSYNTHETIC FABRIC AND COVERING WITH PUF.
3. APPLY PUF IN ACCORDANCE WITH CONSTRUCTION SPECIFICATIONS.
4. PLACE PUF AGAINST CLEAN, DRY VERTICAL SURFACES.
5. LARGE Voids WILL BE BRIDGED WITH TORDOID TIRE PLUGS, GEOSYNTHETIC FABRIC, AND/OR WIRE MESH SECURED TO TIRES.
6. USE METAL STAPLES TO SECURE GEOSYNTHETIC FABRIC TO TIRES.
7. EXCAVATED MATERIAL AND IMPORTED SOIL FILL WILL BE USED TO COVER PUF IN A 2 FOOT LAYER (MINIMUM) AND MOUNDED TO PROMOTE DRAINAGE AWAY FROM SINKHOLE.
8. USE WATER TO TREAT SOIL FILL FOR COMPACTION. COMPACT SOIL WITH MECHANICAL TAMPER. DO NOT USE WHEELED OR TRACKED EQUIPMENT FOR SOIL COMPACTION. OPERATION AND TURNING OF HEAVY EQUIPMENT OVER THE RECLAIMED OPEN STOPE COULD CAUSE SURFACE COLLAPSE OF OTHER SECTIONS OF THE MINE.
9. REPAIR FENCING AS DESCRIBED IN SHEET 05.
10. INSTALL FEATURE IDENTIFICATION MARKER IN CENTER OF OPEN STOPE, OR IN A LOCATION DIRECTED BY THE AMI PROJECT MANAGER. SEE SHEET 2 FOR SPECIFICATIONS.
11. ONLY TOP SOIL REMOVED FROM INSIDE THE COLLAPSED FEATURE SHALL BE USED FROM ANYWHERE ELSE ON SITE, INCLUDING AREAS AROUND THE EDGES OF FEATURE SUB-1.

APPROXIMATE FILL VOLUMES

SALVAGED TOP SOIL = 4 CUBIC YARDS
IMPORTED SOIL FILL = 25 CUBIC YARDS
PUF (CURLED-IN-PLACE) = 54 CUBIC YARDS
SAFEGUARD MEASURES AT FEATURE SUB-2 INCLUDE THE INSTALLATION OF A MINE VENT TO ENHANCE BAT HABITAT IN THE MINE WORKINGS. GENERAL CONSTRUCTION NOTES FOR SUB-2 SAFEGUARD MEASURES ARE PROVIDED ON SHEET 12.