

AUG 08 2023

---

# PREMIER MATERIALS GROUP COOLIDGE MINE RECLAMATION PLAN

---

Prepared for:



4025 E Presidio St.  
Mesa, AZ 85215

Submitted to

Arizona State Mine Inspector  
1700 West Washington, 4th Floor  
Phoenix, AZ 85007

Prepared by

Axelrod, Inc.  
P.O. Box 14401  
Scottsdale, Arizona 85267



Project No. 22700  
Rev 2: August 2023

**AXELROD, INC.**

# TABLE OF CONTENTS

- 1.0 INTRODUCTION..... 1
  - 1.1 SITE AND PROJECT DESCRIPTION ..... 1
  - 1.2 OPERATOR INFORMATION..... 1
  - 1.3 RESPONSIBILITY STATEMENT..... 2
- 2.0 SITE OVERVIEW ..... 3
  - 2.1 TOPOGRAPHY AND SURFACE WATER HYDROLOGY ..... 3
  - 2.2 GEOLOGY..... 3
  - 2.3 HYDROGEOLOGY..... 3
  - 2.4 FLOOD ZONE ..... 4
  - 2.5 CLIMATE ..... 4
  - 2.6 WILDLIFE / THREATENED AND ENDANGERED SPECIES ..... 4
- 3.0 PROPOSED POST MINING LAND USE..... 5
- 4.0 DESCRIPTION OF MINING UNITS & PROPOSED DISTURBANCE ..... 6
  - 4.1 GENERAL ..... 6
  - 4.2 MINING METHODS..... 6
  - 4.3 ACREAGE AFFECTED BY EACH TYPE OF SURFACE DISTURBANCE..... 7
- 5.0 MINED LAND RECLAMATION ..... 8
  - 5.1 EQUIPMENT AND MATERIALS MANAGEMENT..... 8
  - 5.2 SLOPE STABILITY ..... 8
  - 5.3 EROSION CONTROL PLAN..... 8
  - 5.4 RECONTOURING AND REVEGETATION..... 9
  - 5.5 ACCESS RESTRICTIONS..... 9
- 6.0 RECLAMATION SCHEDULE..... 10
- 7.0 RECLAMATION COST ESTIMATE ..... 11
  - 7.1 BASIS OF ESTIMATED COSTS ..... 11
  - 7.2 SUMMARY OF ESTIMATED COSTS..... 14
- 8.0 CURRENT PERMITS AND APPROVALS..... 15
- 9.0 REFERENCES..... 16

## **List of Tables**

- Table 1. Disturbance Acreage
- Tables 2 through 13 in Appendix B
- Table 2. Reclamation and Maintenance Cost Summary
- Table 3. Well Closure Costs
- Table 4. Equipment Removal Costs
- Table 5. Concrete Demo and Scrap Removal Costs
- Table 6. Pit Bench Regrading and Downdrain Cut Costs
- Table 7. Pit Slope Raking and Revegetation Costs
- Table 8. Reclaim Disturbed Areas Costs
- Table 9. Fencing and Signage Costs
- Table 10. Operation and Maintenance Costs
- Table 11. Operation and Maintenance Costs - Net Present Value
- Table 12. Labor Rates
- Table 13. Equipment Rates

## **List of Figures**

- Figure 1. Location Map
- Figure 2. Site Plan, November 2022
- Figure 3. Ultimate Pit
- Figure 4. Reclamation and Final Contours

## **List of Appendices**

- Appendix A Stability Analysis
- Appendix B Cost Tables
- Appendix C Environmental Assessment for neighboring property

## 1.0 INTRODUCTION

This report presents the Mining and Reclamation Plan (Plan) for the Coolidge Mine for submittal to the Arizona State Mine Inspector in compliance with the Mined Land Reclamation Act (MLRA). The mine is a split estate with the surface rights owned by the Premier Materials Group (PMG) and the mineral rights owned by the Bureau of Land Management (BLM).

This report has been prepared by Axelrod, Inc., on behalf of PMG for submittal to the Arizona State Mine Inspector (ASMI).

### 1.1 SITE AND PROJECT DESCRIPTION

---

The mine will be an open pit sand and gravel operation, located in Coolidge, Arizona. The mine site (Site) lies approximately 45 miles southeast of downtown Phoenix and is located north of East State Route 287 in Coolidge, Pinal County, Arizona. The Site location is presented on Figure 1.

The Site occupies 63 acres of disturbed land that has been used for past sand and gravel operations and recreational activities (golf course). Components on the past sand and gravel operation include an open pit, support roads, and a few areas where materials were processed. The mine is located entirely on private land. The Site consists of four parcels on Township 05 South; Range 08 East; Section 12, Gila and Salt River Baseline and Meridian, in Coolidge, Arizona.

The current features and layout of the Site (as of November, 2022) are shown on Figure 2.

The mine facilities will include:

- An open pit;
- Stockpiles of crushed and screened material on the west side of the pit;
- Settling ponds for screen wash water;
- Supporting infrastructure including roads, equipment, crushers, screens, scales, trailers, repair and maintenance facilities, tanks, piping, and vehicles.

### 1.2 OPERATOR INFORMATION

---

Applicant/Owner/Operator:

Premier Materials Group  
4025 E. Presidio Street  
Mesa, AZ 85215  
Joel Jondahl, Manager: Phone 480.290.5386; E-mail [jjondahl@premier-material.com](mailto:jjondahl@premier-material.com)

The operator's field representative is Mr. Todd Hall, Operations Manager for PMG, whose address and telephone number are below.

Todd Hall—Manager: Phone 602.291.4863; E-mail [thall@premier-material.com](mailto:thall@premier-material.com)

Regulatory Contact:

Joel Jondahl, Manager  
Premier Materials Group  
4025 E. Presidio Street  
Mesa, AZ 85215  
Phone 480.290.5386; E-mail [jjondahl@premier-material.com](mailto:jjondahl@premier-material.com)

### **1.3 RESPONSIBILITY STATEMENT**

---

PMG assumes responsibility for the reclamation of surface disturbances that are attributable to the entire mining unit at the Coolidge Mine, consistent with A.R.S. §§ 27-1201 through 27-1297 and A.A.C. R11-3-101 through R11-3-820. See attached cover letter from PMG for the signed responsibility statement.

## 2.0 SITE OVERVIEW

The physical characteristics of the Site, as obtained from available information are presented in the following sections.

### 2.1 TOPOGRAPHY AND SURFACE WATER HYDROLOGY

---

The 1982 USGS Florence, Arizona 7.5-minute topographic map indicates that the Site and surrounding area generally slope northwest, toward the Gila River. Parcel 209-13-002A is depicted as a gravel pit and parcel 209-12-009B is referred to as part of the Ho Ho Kam Country Club. The Site has an average elevation of approximately 1,430 feet above mean sea level.

Stormwater runoff from the Site will drain northwest toward the Gila River. An existing berm located on the south side of the Site diverts run-on flows to the east and west sides. There are two existing ponds in the northwest corner of the Site. The ponds will be used for the proposed sand and gravel operation.

### 2.2 GEOLOGY

---

The Site is in the Sonoran Desert sub-province of the Basin and Range Province. The Basin and Range Province in Arizona is characterized by alluvium-filled basins of various widths, bounded by steeply sloping, northwest-southeast trending mountain ranges that formed as a result of normal faulting related to extension of the earth's crust.

The Site area is covered with alluvium deposited by the Gila River and smaller tributaries. The geology and geomorphology of the area indicate that material has been eroded from the adjacent mountains and transported to the surrounding pediments and basins.

The Site is located south of the Gila River. Holocene-age (<100,000-year-old) alluvial sediments underlie the Site. Mountain ranges to the east (Tortilla and Dripping Springs ranges are nearest) and along the Gila River have provided alluvium for the Eloy sub-basin, which is flat and scattered with smaller isolated ranges (i.e., Sacaton, San Tan Mountains). The basin depths to bedrock range from less than 50 feet at the margins to unknown depths near the middle and consists of unconsolidated interbedded sands and gravel with deeper layers of silts, clays and sands (Arizona Department of Water Resources [ADWR] 1994). Ranges surrounding the basins are composed of metamorphic, sedimentary, and intrusive igneous rock extending beneath the alluvial fill material.

From discussion with PMG the estimated topsoil horizon ranges from 0 to 5 feet in depth.

### 2.3 HYDROGEOLOGY

---

The project area is part of the Pinal Active Management Area, which covers approximately 4,000 square miles in central Arizona. The Site is located in the Gila River Watershed, within the Eloy sub-basin. The basin floor is generally level, and there are primary and secondary channels draining to the northwest toward the Gila River.

The Eloy sub-basin contains three major alluvial aquifers with alluvium-depths that may exceed 9,600 feet. Groundwater generally flows from east to west in the northern part of the sub-basin, where the subject property is located, but the actual groundwater movement may be variable and depends on local geology and hydrologic conditions, recharge, and withdrawal (ADWR, 1994). Well yields are high in the Coolidge region, and this has attracted heavy agricultural use, causing groundwater depletion and land subsidence in many localized areas. Historically, this basin experienced a decline in groundwater levels as a result of 40 years of intensive agricultural pumping. However over the last 25 years, the depth to groundwater has begun to stabilize and the level in the Eloy basin has risen 50 to 100 feet since 1989 (Pinal County 2009). The EDR Wells Report and the state well registry (Wells55) maintained by the ADWR lists wells near the Site (ADWR 2010). Within 1 mile of the Site, groundwater is generally present at depths between approximately 80 and 275 feet below the ground surface.

## 2.4 FLOOD ZONE

---

According to flood hazard maps published by the Federal Emergency Management Agency (FEMA), it appears that the Site parcels lie within Zone X (Community Map Panel #04021C0875E). Zones C and X are flood insurance rate zones used for areas located outside of the 0.2% annual chance floodplain, where purchase of flood insurance is not required.

## 2.5 CLIMATE

---

The climate at the Coolidge Site is arid to semi-arid, typical of the Arizona Sonoran Desert. Winter low temperatures generally range between 35-45°F, albeit with a few freezes annually. Winter daytime high temperatures range from 65-75°F. Summer daytime temperature typically range between 100-110°F. Temperatures above 115°F are not uncommon. Summertime low temperatures are usually above 70°F. Average annual precipitation is 9.2 inches, falling primarily in high-intensity, short-duration events. Coolidge is affected by the North American Monsoon, which brings brief heavy downpours and gusty winds in the latter half of the summer. Severe monsoon events may cause haboobs and flash flooding.

## 2.6 WILDLIFE / THREATENED AND ENDANGERED SPECIES

---

An environmental assessment (EA) for a neighboring sand and gravel mining operation has been carried out by the BLM. The EA conclusion is a Finding of No Significant Impact (FONSI). Similar conditions to the neighboring mining operation may occur at the Site. The EA is attached to this report in Appendix C.

The Site supports habitat for common wildlife species typical for the area including collared peccary or "javelina", coyote, western diamondback rattlesnakes, jackrabbits and cottontail rabbits. In addition, multiple types of insects, including butterflies, grasshoppers, locusts, and flies are present on the Site. The Site does not support habitat for any known federal or state managed special status vegetation or wildlife species.

### **3.0 PROPOSED POST MINING LAND USE**

Post-aggregate mining use will consist of naturalized open space consistent with surrounding uses. Reclamation would return final topography of the Site for use as naturalized open space. No part of the reclaimed Site will be designated for grazing, fish/wildlife habitat, forestry, or recreation.

The following facilities will be used after mining at Coolidge Mine:

- Roads that are necessary to access the pit or to provide access for security patrols to the overall Site.



## 4.0 DESCRIPTION OF MINING UNITS & PROPOSED DISTURBANCE

The Project will include the following mining units and operations:

- Open Pit;
- Sediment ponds;
- Material stockpiles;
- Crusher and conveyors;
- Wash plant;
- Scale and scale house.

The total disturbance footprint of the mine operations is estimated to be 60 acres. A map of the facilities is presented on Figure 3.

### 4.1 GENERAL

---

PMG plans to mine the alluvial material from the Coolidge Mine to produce a variety of products including sand, gravel and aggregate over an approximate 12-year duration. The Site will be mined to the final surface configuration shown on Figure 4. It is estimated that 6.4 million tons will be mined from the pit over 12 years. The final configuration is discussed in more detail in Section 6, Reclamation.

An existing berm on the south boundary will be extended to control stormwater runoff in the pit area.

### 4.2 MINING METHODS

---

Mining at the Coolidge Mine will be performed as an open pit operation. The planned total pit depth is 80 feet, with slopes at 2 horizontal:1 vertical (2H:1V) and a 20-foot-wide bench at 40 foot depth. The pit development will be typical of sand and gravel operations and it is planned to mine material with dozers, excavators and front-end loaders. Stripping of overburden will be required because the top 5 feet of material is unsuitable for sand and gravel. It is planned to push the overburden into piles at the edges of the pit for later use during reclamation as topsoil/cover material on the slopes.

As shown on Figure 3, the pit setback from the property boundary is at least 50 feet on all sides. All disturbances will be inside the property boundary.

The materials processing plant will consist of a crusher, screens, conveyor belts, a washing plant and generators. The plant will be configured to produce a variety of products ranging from sand to cobbles. The crushed rock will be moved within the mining area as required to minimize material hauling. The material will be carried by conveyors and front-end loaders to stockpiles for removal from the Site. Boulders suitable for sale as decorative rock will be stockpiled in as-mined condition.

Stockpiles will change as material is added and removed. The stockpiles shown on Figure 3 are conceptual. Company trucks, customer trucks or contract haulers will be loaded by front-end loader from the stockpiles. The trucks are then weighed and dispatched to the customer's location. Materials remaining in stockpiles at the end of the life of the mine will be used to backfill the pit slopes or to fill in low spots on the surface.

Accumulation of water in the pit is not anticipated due to the arid climate, a deep water table and diversion of stormwater run-on by perimeter berms. The evaporation rate for the area exceeds the precipitation which will prevent accumulation of runoff water from direct precipitation on the pit.

From PMG drilling information for the Site, the permanent water table is deeper than 150 feet, more than the planned final pit depth of 80 feet.

### 4.3 ACREAGE AFFECTED BY EACH TYPE OF SURFACE DISTURBANCE

---

The area of disturbance for each unit is detailed in Table 1 below and presented on Figure 3. Surface disturbances are tentatively scheduled to begin on 02.13.2023.

Table 1: Disturbance Acreage

Mining Unit	Area of Disturbance - acres
Pit	49
Plant Area	5.3
Road	4.9
<b>TOTAL</b>	<b>59.2</b>

## 5.0 MINED LAND RECLAMATION

This section describes the reclamation for the mine. The area of disturbance at the end of operations is estimated to be 59.2 acres. PMG plan to carry out reclamation during operations (concurrent) by backfilling side slopes in mined out areas with excess material and overburden. As described in Section 4, the operational pit will be developed at 2H:1V slopes with an intermediate bench at 40 feet or mid depth.

Concurrent reclamation will include backfilling and grading as needed to obtain the final pit layout after an area is mined out and no further activities will take place there. The pit slopes will be raked to bring coarse material to the surface to reduce erosion potential and promote vegetation growth.

The reclamation measures for the mine include equipment and material management, slope stability, erosion control, recontouring, revegetation, road reclamation, access restrictions and maintenance. Post-aggregate mining use will consist of naturalized open space consistent with surrounding uses. Reclamation would return final topography of the Site similar to the neighboring sand and gravel operations.

### 5.1 EQUIPMENT AND MATERIALS MANAGEMENT

---

PMG will remove all equipment on site by loading onto trailers, towing or driving to a used equipment dealer. Similarly, concrete slabs, buildings and structures will be removed to salvage or a landfill. Concrete foundations, scrap metal, wood, tires, and other debris will be removed. All of these materials will be disposed of in an appropriate facility such as Casa Grande Landfill, a distance of about 5 miles from the mine.

Fuel and water tanks will be removed. The soil under the fuel tanks will be checked for contamination and contaminated soil removed and disposed of at an approved off-site facility. PMG will coordinate with the BLM Hazardous Materials Coordinator as to proper disposition of any hazardous materials.

Non-inert materials (e.g., switches, fluids, oils, petroleum contaminated soils, etc.) will be disposed at the Casa Grande Landfill.

Above-ground power lines on the Site will be salvaged. Buried electrical lines will be removed and salvaged.

The well will be closed as required by the Arizona Department of Water Resources unless directed otherwise by the BLM. Buried waterlines will be removed and salvaged or disposed of in a landfill. Surface waterlines will be removed and the materials salvaged.

### 5.2 SLOPE STABILITY

---

The pit will be mined at a slope suitable for safe practice. The planned slopes of the operating and reclaimed pit will be at 2H:1V. The intermediate bench at mid-slope will be re-graded to a longitudinal channel to prevent ponding and reduce erosion.

Acceptable factors of safety were estimated for the proposed slope grade of 2H:1V. The factor of safety was 1.68 which is greater than 1.5, the normally accepted minimum for static conditions. The slope stability evaluation is presented in more detail in Appendix A.

It should be noted the slope stability analyses only addresses potential deep seated failure planes. Near surface or localized failures and deformation were not addressed in the stability analyses. The slopes may be susceptible to localized surface slumping and should be periodically inspected as part of the post-closure monitoring plan.

### 5.3 EROSION CONTROL PLAN

---

Storm water drainage controls will be established as part of a Site SWPPP, which will be continually updated as conditions change. Surface water at the mine will be entirely from direct precipitation. As described in Section 5.4, the disturbed areas will be re-graded, capped with topsoil as needed, hydroseeded and swales constructed on the capped

surface to control runoff. The runoff from the regraded and capped disturbed areas will be discharged to existing drainages on the Site.

Specific erosion control measures include:

- Collection of storm water in the pit;
- Rip-rap lined discharge points where erosion control is required;
- A stormwater channel and downdrains on the pit slopes;
- Coarse material on the final pit slopes exposed by raking;
- Earthen berms to prevent storm water from flowing off site; and
- Following the SWPPP and performing site-specific best management practices.

A five-foot-high perimeter berm will be maintained during mining operations to control offsite runoff entering the pit. The berm will be refurbished during reclamation as required.

## 5.4 RECONTOURING AND REVEGETATION

---

Material remaining in stockpiles will be used as fill to smooth out the pit slopes and to backfill sediment ponds on the surface as required. The final pit slopes will remain at 2H:1V (See Figure 4).

Following removal of buildings and equipment and re-contouring, slopes and disturbed areas will be prepared for reseeding. Available topsoil will be spread as needed. In order to minimize runoff and erosion, recontoured disturbed areas will be rough-graded and ripped to leave a permeable, hummocky surface to encourage the formation of shallow ponding and increase infiltration and vegetation growth.

Topsoil material stockpiled during mining will be used to cover regraded pit slopes and disturbed areas to facilitate revegetation as recommended by *BLM Handbook H-3042-1, Solid Materials Reclamation Handbook*.

Unless directed otherwise by the BLM, roads will be recontoured to match the surroundings and prevent erosion. Revegetation will include both native and non-native species to:

- Stabilize surfaces to reduce the potential for erosion
- Blend in to the surroundings

Surfaces will be ripped, scarified (harrowed) or raked prior to applying mulch and seed.

## 5.5 ACCESS RESTRICTIONS

---

The property boundary is fenced on the north and part of the east and south sides. The fence will be extended on the south and east sides and a block wall constructed on the west side during operations to enclose the Site. The fence will be maintained during reclamation to keep people and animals away from the pit. Signs warning of the falling hazard will be posted at 300' intervals.

Unauthorized vehicle access will be prevented by adding berms and boulders on likely routes and by installing a substantial lockable gate on the entrance from Nafziger Road.

All dirt roads surrounding the Site will be closed at the boundary with "Stop - Road Closed" signage prominently displayed. Posted "No Trespassing" signage is in place at locations where people might enter the pit area. The access controls of signage and fencing/berms will be maintained post mining.

## 6.0 RECLAMATION SCHEDULE

The reclamation of the Coolidge Mine will take place during operations after an area is mined out. Final reclamation will take place after operations and production cease. As outlined in this Plan, mining activities and rock production will continue at Coolidge Mine for the next 12 years.

The final reclamation measures will be completed within six months of the cessation of mining and material production. Equipment and buildings will be removed within 90 days. Complete reclamation under this scenario will require approximately six months, except for monitoring. PMG (or its reclamation contractor) will monitor reclamation quarterly for the first year to take remedial actions that might be needed.

## 7.0 RECLAMATION COST ESTIMATE

This section presents the basis of the estimated reclamation costs for the Coolidge Mine. The costs are detailed in Tables 3 through 11.

The reclamation costs were calculated from quantities and unit rates. Quantities were obtained from an assessment of reclamation items using Site measurements and preliminary and conceptual designs. Sources used to derive unit rates are as follows:

- Empire Cat Rental Quote #Q11821 - equipment rates dated Oct. 19, 2022;
- Caterpillar (Cat) Handbook (35th edition) for equipment production rates;
- Gordian, RS Means Heavy Construction Manual (2018 Edition);
- Davis Bacon wage determinations for Heavy Dams, in Maricopa, Mohave, Pima, Pinal and Yuma Counties, Heavy Construction in Maricopa County, and Highway Construction in Coconino, Maricopa, Mohave, Pima, Pinal, Yavapai and Yuma Counties in Arizona. (2022);
- Contractor pricing: Hydroseed and Rip Rap.

Hourly equipment rates are based on monthly rates divided by 160 hours as shown on the Empire Cat quotes. A conservative cost of \$5.34/gallon of diesel has been used, which is consistent with the US Energy information for 2022.

It is assumed that the labor is local and will not be charging per diem. The items below were based on previous experience and information from a local contractor:

- Overhead and profit - 10 percent of estimated construction costs;
- General Conditions and Requirements - 21 percent of estimated construction costs;
- No escalation was included at this time as it was assumed that the interest and inflation rates at the time of bonding will cancel out.

Unit cost calculations are presented in the detailed estimate in Appendix B.

### 7.1 BASIS OF ESTIMATED COSTS

---

The reclamation costs are based on the quantities calculated from the conceptual design. The extent of the pit, ponds and roads that will be reclaimed and those that will remain for the post-mining land use are depicted on Figure 4. The final reclaimed surface contours are also shown on Figure 4. Hourly rates for labor and equipment are based on published and vendor information. See Tables 12 and 13 for details.

Information for each reclamation item are as follows:

#### 7.1.1 Remove Equipment

Equipment will be evaluated for condition and suitability for salvage or disposal at the commencement of the reclamation stage. Equipment found suitable for salvage will be disassembled, rigged onto, and hauled by tractor trailer, towed or driven to a used equipment dealer. Equipment determined to be at or beyond end of life, will be cut into acceptable sizes for disposal at nearest recycling yard or disposal site willing to accept the material based upon prior use.

An estimation of the cost to salvage/dispose of the equipment was determined utilizing the RS Means Cost Book, discussion with hauling contractors and experience with the final disposal of remnant equipment at remediated, reclaimed or abandoned facilities. Detailed cost estimates are included in Appendix B, Table 4

#### 7.1.2 Structures, Slabs, Foundations, Asphalt, Scrap and Tire Removal

Structures to be removed by demolition/salvage include containers and block buildings. Steel structures such as platforms and walkways will be evaluated for salvageability and will either be disassembled by unbolting panels, columns and beams for salvage and reuse or by hot torch cutting if determine recycling is the most logical option. Equipment used

for disassembly or disposal will include a manlift and a loader. Materials will be loaded and removed dependent on their final destination.

*Concrete slabs and foundations* to be demolished with an air hammer attachment on an excavator or backhoe and disposed of in an appropriate facility such as Casa Grande Landfill, a distance of about 5 miles from the mine.

*Asphalt* to be ripped with grader or D6 and loaded with front-end loader. Asphalt will be disposed of in an appropriate facility, as for demolished concrete slabs.

*Tires* loaded and hauled to the county Southeast Waste Tire Collection Site, 11400 E. Pecos Road, Queen Creek, or similar facility.

*Scrap metal* loaded and hauled to American Metals Company, 740 W. Broadway Rd., Mesa, or similar facility.

*Non-metal scrap:* Load onto trucks and haul to Casa Grande Landfill, or similar facility.

Detailed cost estimates are included in Appendix B, Table 5.

### 7.1.3 Reclaiming Disturbed Areas

The pit walls will be mined to a final slope of 2H:1V. Material remaining in stockpiles will be used to fill in ponds at the surface, areas on the pit floor and slopes as required. The proposed intermediate bench on the pit slope will be regraded to form a channel. Downdrains constructed in the corners of the pit will convey runoff from the channels to the pit floor. Re-grading will be accomplished by local cut-to-fill. Detailed cost estimates are included in Appendix B, Table 6.

Disturbed ground in the materials processing area will be rough-graded and ripped to leave a permeable, hummocky surface to encourage vegetation growth and minimize erosion. The disturbed surfaces will be recontoured and scarified to loosen material and allow for revegetation. Approximately 6 acres will be ripped using a Caterpillar 140HM or equivalent grader with a ripper. The production rate used for the 140 HM grader is approximately 10,000 square feet per hour.

Roads that are not needed for post mining land use will be recontoured to match the surroundings and prevent erosion. See Section 7.1.8 for more detail.

Detailed cost estimates are included in Appendix B, Table 8.

### 7.1.4 Top Soil

Place top soil 1-foot thick on the regraded areas as needed. Stockpiled material will be used for top soil. The unit cost is based on hauling the topsoil with dump trucks and spreading it to the required thickness with dozers. A grader will be used to finish grade the topsoil surface for drainage.

The purpose of the top soil is to provide a layer for vegetation growth that is erosionally stable.

### 7.1.5 Erosion Control

Rip rap will be placed in downdrains and energy dissipaters. Grout, if needed, will be obtained from readymix. The unit costs are based on using riprap from the Site. Riprap will be placed with a front end loader and shaped with a backhoe. The volume of rip rap is 100 cy.

To minimize runoff and erosion, disturbed areas excluding the pit slopes will be rough-graded and ripped to leave a permeable, hummocky surface to encourage the formation of shallow ponding and increase infiltration and vegetation growth.

### 7.1.6 Revegetate

The area for revegetation, approximately 13 acres, includes reclaimed access roads, disturbed and bare work areas, backfilled ponds, structure footprints after demolition and the top part of the pit slopes. The unit cost is based on a quote from a local vendor. Simple hydroseed will be applied on flat areas and two layers of hydroseed with tackifier on sloped surfaces to prevent erosion and enhance growth. Two unit costs have been applied to the estimated areas of flat and sloped ground to be revegetated. Detailed cost estimates are included in Appendix B, Tables 6 and 8.

Revegetation will include both native and non-native species. The non-native species will be non-invasive. Revegetation will be used to:

- Stabilize surfaces to reduce the potential for erosion;
- Blend the disturbed surfaces into the natural surroundings.

Surfaces will be ripped or scarified (harrowed) prior to applying mulch, fertilizer and seed.

#### 7.1.7 Access Restrictions

Unauthorized access will be prevented by adding fencing, berms, signs and gates.

The property boundary will be fenced or walled in on all sides during operations. Reportedly, the fencing is adequate to restrict access after closure.

The unit cost for fencing is based on a contractor quote. The costs for signs and berms are based on experience with similar projects. Detailed cost estimates are included in Appendix B, Table 9.

#### 7.1.8 Access roads

Scarify the road surface to loosen material and allow for revegetation. Road reclamation will be completed with a Caterpillar 140HM or D6 with a ripper. Due to compaction of haul roads, significant tilling will be required and will require a grader to smooth surface to be re-ripped similar to other non-compacted areas. Detailed cost estimates are included in Appendix B, Table 8.

#### 7.1.9 Post Reclamation Maintenance

Maintenance costs for the Coolidge Mine consist of inspection and repair of eroded areas, roads and fencing. It was assumed that 5 percent of the total reclaimed area would require repair due to erosion. Most of the repair work would be carried out in the first 3 years. The costs were converted to a present value for a post reclamation period of 10 years.

The annual costs were converted to a net present value using an interest rate of 2.3 percent (Bloomberg 2017). This rate was the 10-year average derived from the Bloomberg Generic Pricing source, using the US Generic Government 10-Year Yield Index. Detailed cost estimates are included in Appendix B, Table 10.

##### *7.1.9.1 Roads*

Some access roads will be maintained to allow for inspection and maintenance.

Inspection of access roads: The unit cost is based on one inspector/foreman and a four-wheel drive pick-up truck.

Maintenance of access roads. The unit cost is based on regrading with a Cat 140 HM motor grader.

##### *7.1.9.2 Soil Covers and Vegetation*

Portions of the revegetated surfaces may not initially vegetate successfully and will need to be repaired annually, at least for the first three years.

Inspection of surface and vegetation, years 1-3. The unit cost is based on one inspector/foreman and a four-wheel drive pick-up truck.

Revegetation Repair, years 1-3. The unit cost is based on using a Cat 140 HM motor grader to repair erosion and scarify the existing surface material to prepare for revegetation. Revegetation will include mulch and hydroseed.

Revegetation, years 1-3. Five percent of the total acreage initially revegetated = 1 acre.

##### *7.1.9.3 Fences and Signs*

Fences and signs will be inspected annually and maintained to ensure access is effectively restricted.

Inspection of fences and signs. The unit cost is based on one inspector/foreman and a four-wheel drive pick-up truck.



The fence will be maintained during reclamation to keep people and animals away from the pit. Signs warning of the falling hazard will be posted at 300' intervals.

## **7.2 SUMMARY OF ESTIMATED COSTS**

---

The estimated reclamation cost for the Coolidge Mine is \$ 303,740. The cost is based on Site measurements, preliminary design quantities and third-party unit rates. The estimate does include allowance for contingency. The post reclamation operating and maintenance costs amount to \$ 71,181 and are included in the above reclamation cost. The itemized costs are summarized in in Table 2.

## 8.0 CURRENT PERMITS AND APPROVALS

The Site is not located within a floodplain and will not need Floodplain Use Permit.

Operations will comply with applicable air, storm water, and hazardous/regulated materials management regulations. PMG is developing or will develop the following permits/plans:

- General Permit for Crushing and Screening Plants issued by the Arizona Department of Environmental Quality (ADEQ);
- PMG has applied for registration with the Mine Safety and Health Administration (MSHA);
- AZPDES Stormwater Multi-Sector General Permit (SWPPP);
- Mining Land and Reclamation Plan submitted to the Arizona State Mine Inspector which will include an estimate of reclamation costs for the bond;
- A Spill Prevention, Control, and Countermeasures (SPCC) Plan.

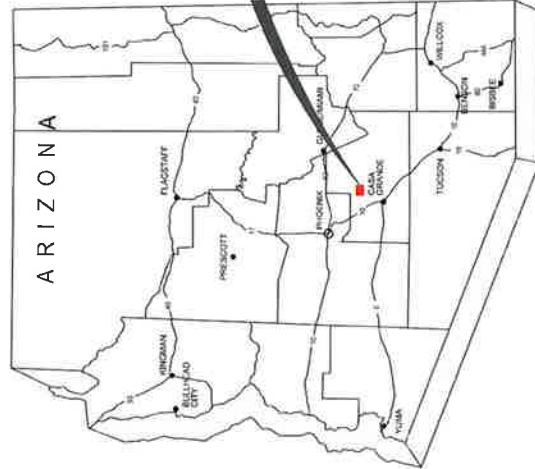
PMG has one well on the Site, registered in its name with the Arizona Department of Water Resources (ADWR) as 55-639212.

Diesel fuel will be stored in one 10,000-gallon tank with dual containment. Motor oil and grease will be stored in 5-gallon containers. Other fluids and lubricants will be kept in minor quantities in sealed containers. Oil filled operational equipment includes crushers and a lube truck. Paints, solvents and hazardous materials will be stored on the Site. Used oil will be taken off the Site by an oil- recycling firm. PMG will have a Spill Prevention, Control, and Countermeasure (SPCC) Plan on Site. The SPCC will describe the procedures to be followed by PMG to prevent, control, and mitigate releases of oil and petroleum products.

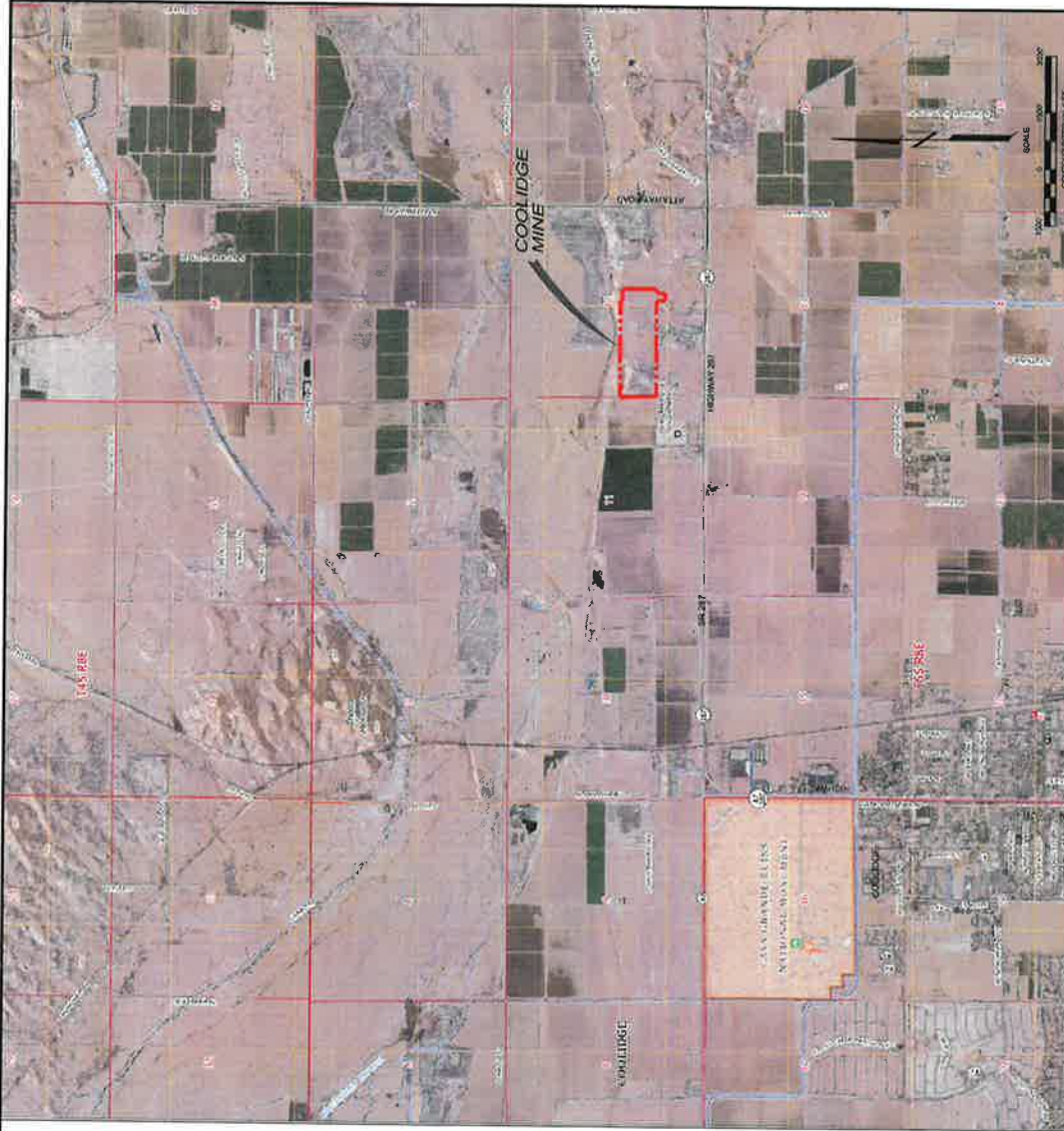
## 9.0 REFERENCES

1. CBRE, 2016. Appraisal Report, Gravel Quarry Land.
2. SWCA Environmental Consultants, 2010. Phase 1 Environmental Site Assessment for 104 Acres
3. Gordian, 2018. Heavy Construction Costs with R.S Means Data. Published by Reed Construction Data, Norwell, MA.
4. Caterpillar. 2004. Caterpillar Performance Handbook, 35th edition, Caterpillar Inc., Peoria, IL.

## FIGURES



PROJECT  
LOCATION



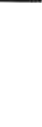
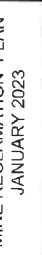
PROJECT:  
MINE RECLAMATION PLAN  
JANUARY 2023

TITLE:  
LOCATION MAP

PREPARED BY:  
**AXELROD INC.**  
PHOENIX, ARIZONA

PREPARED FOR:  
COOLIDGE MINE

SCALE: AS SHOWN DATE: 1/17/23 REVISION:  
FIGURE NO: 1





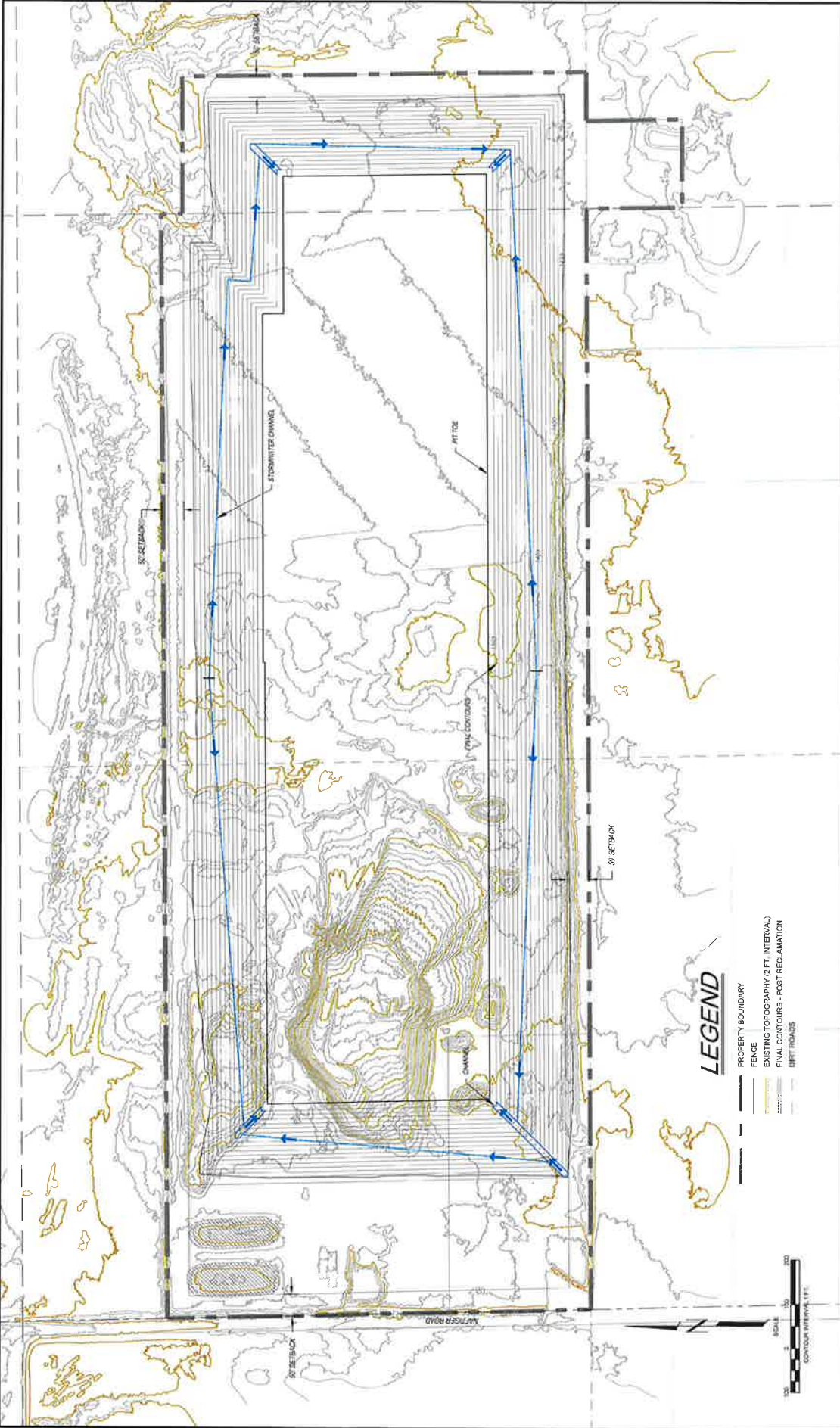
**LEGEND**

- PROPERTY BOUNDARY
- FENCE
- EXISTING TOPOGRAPHY (2 FT. INTERVAL)



PROJECT: <b>MINE RECLAMATION PLAN</b> JANUARY 2023	TITLE: <b>SITE PLAN</b> NOVEMBER 2022	PREPARED BY: <b>AXELROD INC.</b> <small>PHOENIX, ARIZONA</small>	PREPARED FOR: <b>COOLIDGE MINE</b>	SCALE: AS SHOWN	DATE: 11/02/22	REGION:
				FIGURE No. <b>2</b>		





PROJECT: <b>MINE RECLAMATION PLAN          JANUARY 2023</b>	TITLE: <b>RECLAMATION AND FINAL          CONTOURS</b>	PREPARED BY: <b>AXELROD INC.</b> <small>PROFESSIONAL ENGINEERS</small>	PREPARED FOR: <b>COOLIDGE MINE</b>	SCALE: AS SHOWN DATE: 1/13/22 SHEET NO.: <b>4</b>	NUMBER: 
--	--	--	---------------------------------------	---	--



**APPENDIX A**  
**STABILITY ANALYSIS**

# AXELROD, INC.

## TECHNICAL MEMORANDUM

<b>To:</b> Mr. J. Jondahl, Premier Materials Group	<b>Job:</b> Coolidge Pit Reclamation Plan
<b>From:</b> P. Axelrod	<b>Date:</b> November 22, 2022
<b>Subject:</b> Stability Analysis	

This memorandum summarizes the results of a preliminary stability analysis for the PMG Coolidge pit, located in Coolidge, AZ. The sections in this memorandum include the Introduction, Geotechnical Parameters, and Stability Analysis.

### 1.0 INTRODUCTION

PMG plan to develop an aggregate resource located adjacent to the Gila River, north of the Highway 87 near the town of Coolidge, Arizona. The aggregates are unconsolidated sediments and will be excavated from a pit that lies outside the floodplain of the Gila River. The planned final dimensions of the pit will be approximately 2,800 feet long by 970 feet wide and 80 feet deep.

Axelrod, Inc. is preparing and coordinating information for a Mining and Reclamation Plan of Operations (MRPO) for the site. This stability analysis is required as part of the plan.

The planned total pit depth is 80 feet, with slopes at 2 horizontal:1 vertical (2H:1V) and a 20 foot wide bench at 40 foot depth. From available information the groundwater in the area is approximately 150 feet below the ground surface.

### 2.0 GEOTECHNICAL PARAMETERS

Site specific geotechnical information was not available for the site. From available information, on-site soils consist of sand and gravel with less than 10 percent silt. For previous work at an adjacent site, an angle of friction (shear strength) of 36 degrees was used for the side slope material. The shear strength was based on empirical relationships presented in Peck, Hanson, Thornburn (1974). Dry soil density was taken as 120 pounds per cubic foot (pcf) for undisturbed soil (Winterkorn and Fang, 1975). Shear strengths of 36 to 38 degrees have been used by Axelrod, Inc. on similar projects.

For the purpose of this analysis it has been assumed that the same material exists to below the final depth of the pit.

### 3.0 STABILITY ANALYSIS

Stability analyses for the tailing impoundment were carried out using the program *Slide2* (Rocscience 2021). *Slide2* is a two-dimensional stability program for evaluating the safety factor of circular or non-circular failure surfaces in soil or rock slopes. *Slide2* analyzes the stability of slip surfaces using vertical slice or non-vertical slice

limit equilibrium methods. Individual slip surfaces can be analyzed, or search methods applied to locate the critical slip surface for a given slope.

Minimum factors of safety (FOS) are calculated using the Morgenstern-Price circular surface method. This method satisfies both horizontal and vertical force equilibrium. The method is based on the principle of limiting equilibrium, i.e., the method calculates the shear strengths that would be required to maintain equilibrium, and then calculates a FOS by dividing the available shear strength by the shear strength required to maintain stability.

The analysis for this report was conducted for the pit slope at full height stage. The stability analysis results are shown on Figure 5 and summarized in the table below.

Factors of safety lower than that presented could have been obtained for a thin layer of material sliding down the slope. However, this kind of shallow seated surface is not a significant overall slope failure.

TABLE: STABILITY ANALYSIS RESULTS

ANALYSIS	FACTOR OF SAFETY	
	STATIC	PSEUDO-STATIC
Circular	1.68	-

The results of the analysis show that a factor of safety of greater than 1.5 can be obtained for a general side slope of 2:1 or shallower.

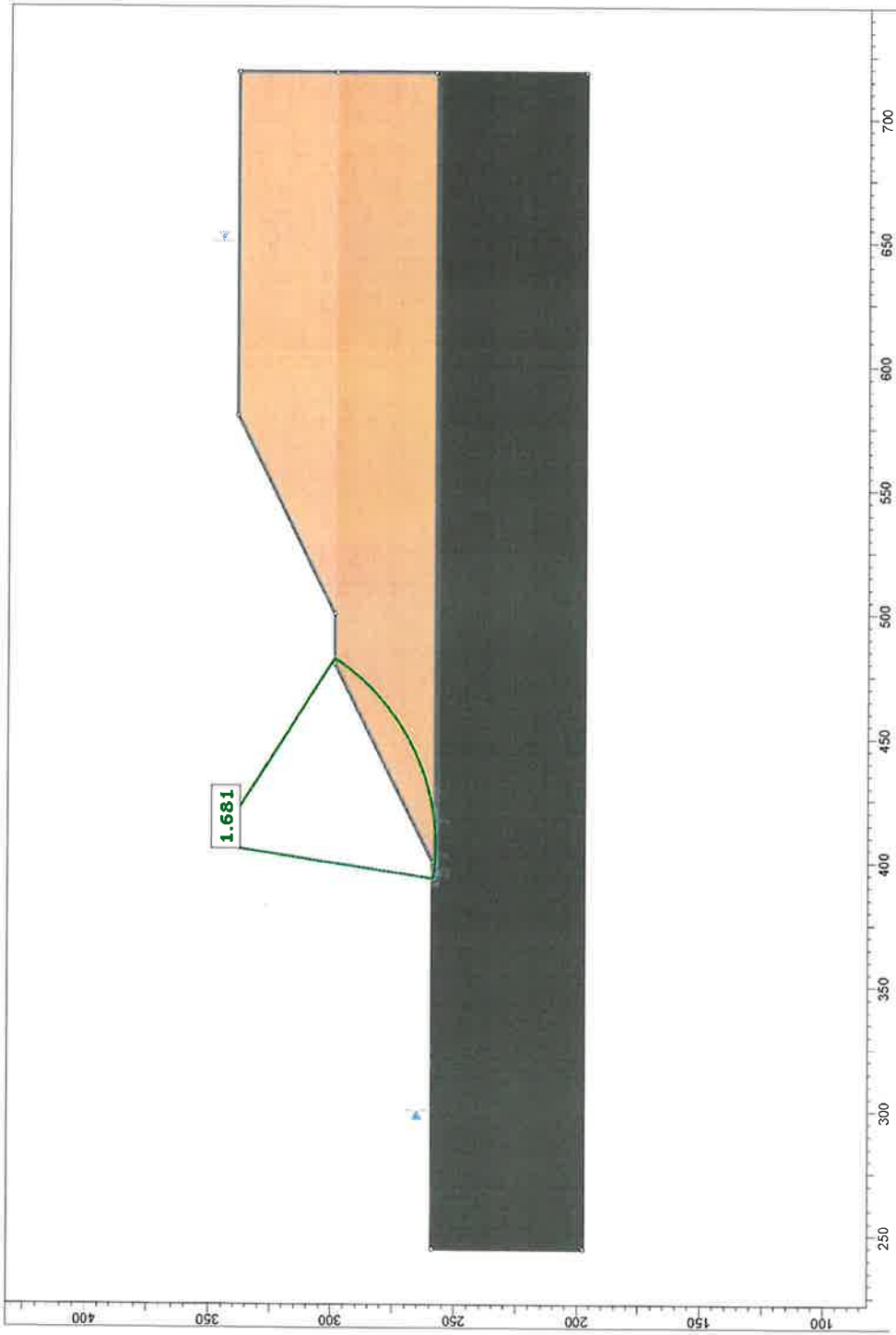
The findings of the stability analysis report are based on assumed material properties and depth to water table, and the assumption that the materials are consistent to the final depth of the pit. If there is a variation in the materials with depth or the water table is higher than used, the analysis used for this report would need to be updated. The analysis does not account for the effect of a water table in the pit. It is recommended that the analysis carried out for this report is updated using site specific data obtained from an investigation that includes a method for determining the material properties of the underlying soils on the site, to the depth to be analyzed.

The factors of safety obtained in the stability analysis are within the generally accepted range for this type of structure.

#### 4.0 REFERENCES

1. Lambe, T.W. and Whitman, R.V., Soil Mechanics, 1969. John Wiley & Sons
2. Bowles J.E., 1996. Foundation Analysis and Design, Fifth Edition, McGraw-Hill

Figure 5 - Ultimate Pit - Circle, Static



CoolidgePit1.sldm

Axelrod, Inc. 2/5/2021, 8:33:25 AM

**APPENDIX B  
COST TABLES**

## COOLIDGE MINE RECLAMATION COST ESTIMATE DETAILS

The reclamation cost estimates for the Coolidge Mine are presented below.

### RECLAMATION TASKS:

1. Remove Equipment
2. Remove Concrete Block, Slabs, Asphalt, Scrap and Tires
3. Access Restrictions and Fencing South and East of Pit
4. Regrade Pit Bench and Rake Slopes
5. Reclaim Disturbed Areas
6. Abandon Well
7. Maintenance

### TASK 1. REMOVE EQUIPMENT

Equipment to be driven onto lowboy and removed by tractor and lowboy trailer is listed in the table below. Assume trucks and trailers for all equipment removal will be from Precision Heavy Haul, 8145 W. Harrison Rd, Tolleson

Type	No.	Make/model	Size	Loads
Bulldozer	1	John Deere 1050	95,000 lb.	0.5
Loader	2	Cat 972 Wheel	10 cu yd	1
Water Truck	1	Caterpillar 613 Water Wagon	5,000 gal	1
Skid Steer	1	John Deere 324G	0.5 cy	0.5
TOTAL				3

Equipment to be loaded by crane and removed by tractor and trailer is listed below. Assume cranes will be rented from Marco Crane & Rigging, 221 S. 35<sup>th</sup> Avenue, Phoenix.

Type	No.	Make/model	Size	Loads
Containers	4	Conex	40'	4
Tank Water	1	10' x 50'	150,000 gal	1
Tank Fuel	1	Above ground	10,000 gal	1
Truck scale	1	TBD	10'x 75'	1
Wash Plant	1	Superior Portable 6203 Aggedry	275 tph	1
Screens		In the portable plants		2
Crusher	1	CRC1150S Portable Crusher	500 tph	1

Conveyors	6	Various		3
Stackers	4	Various		2
Zipline Conveyors	1	Various		1
Welder	1			1
Compressor	1			
Power washer	1			
Arc welder	1			
TOTAL				18

Equipment to be removed by towing is listed below.

Type	No.	Make/model	Size	Loads
Generator set	2	Towable Genset	625 kW	2
TOTAL				2

All hauling, driving and towing will be to used equipment dealer Ritchie Bros. Auctioneers, 5410 W. Lower Buckeye Road, Phoenix, a distance of 61 miles.

Truck hours = 5 hours per load, includes mob/demob, load, haul, unload:  
For 23 loads, time – 115 hours

Crane hours = 1 hour per load or unload, add mob/demob 8 hr., 2 cranes 16 hr.:  
For 18 pieces, loads = (18 x 2) + 16 = 52 hr.

Truck driver hours = Tow includes return to mine after unload, 4 hours per trip. Tractor trailer driver included in equipment rate.  
For 2 tows, time – 8 hours

See Table 4 for costs.

## **TASK 2. CONCRETE BLOCK, SLABS, ASPHALT, SCRAP AND TIRES**

The quantities used to estimate the costs are listed below. See Table 8 in Appendix B for costs.

### 1. Slabs

Slabs to be removed by demolition are:

Type	Make/model	Dimensions	Unit	Quantity
Office	Conex with slab	50 x 16'	sf	800
Sump	Slab on grade	40 x 30'	sf	1,200
Restroom	Block, on slab	10 x 12 x 8'	sf	960
Loading area	Slab on grade	50 x 50'	sf	2,500

Concrete slabs =  $50 \times 16 + 40 \times 30 + 10 \times 12 + 50 \times 50 = 4,620$  sf  
Assume slabs 8" thick, volume =  $4,620 \times (8/12) \times (1/27) = 114$  cy  
Masonry walls area =  $(20+24) \times 8 = 352$  sf = 235 cy for 8" wall

Unit rates from RS Means/Gordian (Ref 3)

Concrete, masonry and block – demolish and remove to landfill. Use front end loader, dozer, grader and highway dump truck. See Table 5 for costs.

2. Asphalt

Roads and shop apron 10,000 sq. ft x 3" thick = 92 cu yd.  
The unit rate is from RS Means/Gordian (Ref 4). See Table 5 for costs.

3. Tires

The number and type of used tires on site changes from time to time. Assume 20 highway vehicle tires at 100 lb./tire and 10 larger tires at 250 lb. per tire.

A loader will be used to lift tires onto the truck for hauling to the county Southeast Waste Tire Collection Site, 11400 E. Pecos Road, Queen Creek, a distance of about 30 miles. Allow 0.5 hours loader time. One load required.

See Table 5 for costs

4. Scrap Metal

Assume there will be 10 tons of scrap metal on site. A loader will be used to place scrap onto truck for hauling to American Metals Company (46 mi). Allow 1 hour loader time. One load required.

5. Non-metal Scrap

Assume there will be 5 tons of non-metal scrap and waste material on site. A loader will be used to lift scrap onto truck for hauling to Casa Grande Landfill. Allow 0.5 hours loader time. One load required.

Costs for tires, scrap metal and non-scrap metal based on equipment and labor rates as shown on Table 5. Truck hours = 4 hours per load (ave.), includes mob/demob, load, haul, unload:

For 12 loads, time = 48 hr. See Table 5 for costs.

**TASK 3. ACCESS RESTRICTIONS AND FENCING SOUTH AND EAST OF PIT**

The length of fence used = 1000'

The cost is based on published values.

All-in cost of 3-strand barbed wire fence, installed = \$3/linear ft.



Rough grading will be carried out along the east property boundary/fence line to prepare for fencing.

All dirt roads surrounding the property will be closed at the boundary with “Stop - Road Closed” signage prominently displayed. Posted “No Trespassing” signage is in place at locations where people might enter the pit area. The access controls of signage and fencing/berms will be maintained post mining.

See Table 9 for costs.

**TASK 4. REGRADE PIT BENCH AND RAKE SLOPES**

Regrade the pit bench to construct a stormwater channel. The unit cost is based on dozers pushing material along the bench to create a longitudinal slope of approximately 2 percent. Cat D6 and D9 dozers will work the bench. The quantity of material required is estimated to be 9,000 cubic yards (cy).

Volumes of cut and fill for pit bench:

	Volume (cy)	
	Cut	Fill
Cut and fill Channel length x height x width [2300+(2300x0.02) + 600+(600x0.02)]x2x20/27	4400	4400
Fill berm 2 'for channel - length x height x width [2300+600] x2x5/2x2/27		1100
Downdrain cut to shape - length x height x width 240x15x2x4/27	1000	
Total	5400	5500

The pit slopes will be raked with an attachment on an excavator bucket to bring course gravel and rocks to the surface. Area to be raked = 25 acres (1.0 M sf)

Hydroseed with tackifier will be applied to the top pf slopes after raking – approx. 7 acre  
See Table 7 for costs.

**TASK 5. RECLAIM DISTURBED AREAS**

Disturbed areas on the top surface will be regraded to remove excess low spots including sediment ponds and smooth out humps. The unit cost is based on spreading material with Cat D6 and D9 dozers. The surface will be contoured and then scarified with a Cat 140 HM Grader to prepare it for revegetation - hydroseeding.

Area to be regraded, contoured and scarified: approx. 6 acres. A grader can scarify at a rate of approximately 1 acre per hour – 10 acres per day.

See Table 8 for costs.

**TASK 6. ABANDON WELL**

It is assumed that the well on site will be abandoned and closed in accordance with ADWR requirements.

The well will be grouted closed and the surface casing and concrete pad removed, if present. Closure of the well will include administrative items, removal of injection ports and disposal of construction debris. The costs are estimated to amount to \$9,720.

The costs for closing the well are based on a quote from a previous project. See table 3 for costs.

#### **TASK 7. MAINTENANCE**

Maintenance costs for the Coolidge Pit consist of inspection and repair of eroded areas, roads, fencing and signs. It was assumed that 5 percent of the total reclaimed area would require repair due to erosion. Most of the repair work would be carried out in the first 3 years and the sediment removal on an annual basis. The costs were converted to a present value for a post reclamation period of 10 years.

The annual costs were converted to a net present value using an interest rate of 2.3 percent (Bloomberg). This rate was the 10-year average derived from the Bloomberg Generic Pricing source, using the US Generic Government 10-Year Yield Index. See table 10 for costs.

TABLE 2 - COOLIDGE MINE RECLAMATION  
RECLAMATION AND MAINTENANCE COST SUMMARY

Facility	Cost \$
Abandon Wells (Table 3)	9,720.00
Equipment Removal (Table 4)	77,683.06
Concrete Demo and Scrap and Tire Removal (Table 5)	13,014.60
Pit Bench Regrading and Downdrain Cut (Table 6)	42,209.95
Pit Slope Raking (Table 7)	36,315.49
Reclaim Areas (Table 8)	15,689.17
Fencing and Signage (Table 9)	8,030.18
Operation and Maintenance Costs: (Table 11)	71,181.00
Sub- total	264,123.45
Contingency (15%)	39,618.52
<b>TOTAL</b>	<b>303,741.97</b>

TABLE 3 - COOLIDGE MINE RECLAMATION  
WELL CLOSURE

12/21/2022

COOLIDGE WELL	Unit Cost		Quantity	
			1	
Mobilization and Demobilization	\$ 2,500.00	lump sum	1	\$ 2,500
ADWR Closure Notification	\$ 150.00	each	1	\$ 150
Pump Removal (1)	\$ 1,500.00	each	1	\$ 1,500
Abandonment of Boring with Type V Cement (5)(9)(12)	\$ 12.00	ft	200	\$ 2,400
Removal of casing 2 feet below grade (1)	\$ 250.00	each	1	\$ 250
Disposal of Construction Debris (1)	\$ 1,000.00	lump sum	1	\$ 1,000
Oversight of well abandonments by Consultant (13)	\$ 150.00	hr	10	\$ 1,500
Project management by Consultant (14)	\$ 175.00	hr	1	\$ 175
Per Diem Consultant (15)	\$ 245.00	each	1	\$ 245
				\$ 9,720
		average cost per well		\$ 9,720.00

**NOTES:**

(1) from Yellow Jacket Drilling quote

(5) It is assumed that annular materials have a porosity of 35% for grout volume calculations.

(9) assumes average well depth of xxx feet, average xxx feet of grout

(12) assumes 4-inch diameter well in 9 inch diameter borehole, 35% annular materials porosity, pro-rated cost of \$12 per foot, per cprevious experience.

(13) assumes 10 hours of oversight

(14) assumes 1 hour of project management. Includes documentation and reporting of well abandonment.

(15) assumes \$195 per well which includes per diem

(\$150) and truck rental (\$95)

COOLIDGE MINE  
RECLAMATION COSTS

Coolidge Mine Reclamation Costs

**TABLE 4 - Equipment Removal Costs**

		Qty	Production Rate	Estimated Task Duration (Days)	Estimated Task Duration (HRS)
		23	5	12	115
<b>Equipment removed by tractor and lowboy trailer, driven or towed</b>					
Description	U/M	Est. Units	Duration (HR)	Unit Cost	Total Cost
<b>Equipment + Operator</b>					
Tractor and lowboy trailer	EA	1	115	\$250.00	\$28,750.00
Crane - 240 ton	EA	2	12	\$633.00	\$15,192.00
Crane - 90 ton	EA	2	40	\$385.00	\$30,800.00
Semi for counterweight	EA	2	2	\$125.00	\$500.00
Truck/rig for towing	EA	1	8	\$115.00	\$920.00
<b>Sub-total</b>					<b>\$76,162.00</b>
<b>Labor</b>					
Driver	EA	1	8	\$34.94	\$279.52
Laborers, rigger	EA	1	46	\$26.99	\$1,241.54
<b>Sub-total</b>					<b>\$1,521.06</b>
<b>Total</b>					<b>\$77,683.06</b>
<b>Cost per cubic yard</b>					

**TABLE 5 - Concrete Demo and Scrap Removal Costs**

		Qty (sy)	Production Rate	Estimated Task Duration (Days)	Estimated Task Duration (HRS)
		600	400	2	15
<b>Masonry, concrete and asphalt demolition and dispose in landfill</b>					
Description	U/M	Est. Units	Duration (HR)	Unit Cost	Total Cost
<b>RS Means</b>					
Masonry, concrete and asphalt - demo	sy	600	15	\$3.00	\$1,800.00
Cat D6N Dozer	EA	1	12	\$198.76	\$2,385.12
140 HM Grader	EA	1	10	\$167.53	\$1,675.30
Cat 966 Front End loader	EA	1	12	\$162.16	\$1,945.92
16 cy highway dump truck	hr	1	32	\$85.44	\$2,734.08
<b>Sub-total</b>					<b>\$10,540.42</b>
<b>Labor</b>					
Laborer	EA	1	10	\$26.99	\$269.90
<b>Sub-total</b>					<b>\$269.90</b>
<b>Total</b>					<b>\$10,810.32</b>

		Qty (loads)	Production Rate (hr)	Estimated Task Duration (Days)	Estimated Task Duration (HRS)
		4	4		16
<b>Tires, scrap metal and non metal scrap</b>					
Description	U/M	Est. Units	Duration (HR)	Unit Cost	Total Cost
<b>Equipment + Operator</b>					
16 cy highway dump truck	hr	1	16	\$85.44	\$1,367.04
Cat 966 Front End loader	hr	1	3	\$162.16	\$405.40
<b>Sub-total</b>					<b>\$1,772.44</b>
<b>Labor</b>					
Laborer	EA	1	16	\$26.99	\$431.84
<b>Sub-total</b>					<b>\$431.84</b>
<b>Total</b>					<b>\$2,204.28</b>

COOLIDGE MINE  
RECLAMATION COSTS

Coolidge Mine Reclamation Costs

**Table 6: Pit Bench Regrading and Downrain Cut**

		Qty (CY)	Production Rate	Estimated Task Duration (Days)	Estimated Task Duration (HRS)
		5,500	1,000	6	55
<b>Pit Bench Regrading and Downrain Cut</b>					
Description	U/M	Est. Units	Duration (HR)	Unit Cost	Total Cost
<b>Equipment + Operator</b>					
Cat D6N Dozer	EA	1	50	\$198.76	\$9,938.00
140 HM Grader	EA	1	55	\$166.45	\$9,154.75
Cat 966 Front End loader	EA	1	40	\$166.30	\$6,652.00
621G Water Pull	EA	1	40	\$273.90	\$10,956.00
Cat vibratory roller	EA	1	35	\$97.44	\$3,410.40
<b>Sub-total</b>					<b>\$40,111.15</b>
<b>Labor</b>					
Foreman	EA	1	20	\$50.96	\$1,019.20
Laborers	EA	1	40	\$26.99	\$1,079.60
<b>Sub-total</b>					<b>\$2,098.80</b>
<b>Total</b>					<b>\$42,209.95</b>
<b>Cost per cubic yard</b>					<b>\$7.67</b>

**Table 7: Pit Slope Raking and Revegetation**

		Qty (SY)	Production Rate	Estimated Task Duration (Days)	Estimated Task Duration (HRS)
		121,000	20,000	6	61
<b>Pit Slope Raking and Revegetation</b>					
Description	U/M	Est. Units	Duration (HR)	Unit Cost	Total Cost
<b>Equipment + Operator</b>					
Cat D6N Dozer	EA	1	20	\$198.76	\$3,975.20
325 Trackhoe	EA	1	61	\$141.19	\$8,612.59
Cat 966 Front End loader	EA	1	20	\$162.16	\$3,243.20
Hydroseed incl. tackifier	AC	7	1	\$2,815.00	\$19,705.00
<b>Sub-total</b>					<b>\$35,535.99</b>
<b>Labor</b>					
Foreman	EA	1	10	\$50.96	\$509.60
Laborers	EA	1	10	\$26.99	\$269.90
<b>Sub-total</b>					<b>\$779.50</b>
<b>Total</b>					<b>\$36,315.49</b>
<b>Cost per square yard</b>					<b>\$0.30</b>

COOLIDGE MINE  
RECLAMATION COSTS

**Table 8: Reclaim Disturbed Areas**

		Qty (SF)	Production Rate	Estimated Task Duration (Days)	Estimated Task Duration (HRS)
		400,000	430,000	1	9
<b>Reclaim Disturbed Areas</b>					
Description	U/M	Est. Units	Duration (HR)	Unit Cost	Total Cost
<b>Equipment + Operator</b>					
D6 Dozer	EA	1	6	\$198.76	\$1,192.56
140 HM Grader	EA	1	9	\$167.53	\$1,507.77
621G Water Pull	EA	1	9	273.9	2465.1
Hydroseed	AC	6	1	\$1,675.00	\$10,050.00
<b>Sub-total</b>					<b>\$15,215.43</b>
<b>Labor</b>					
Foreman	EA	1	4	\$50.96	\$203.84
Laborers	EA	1	10	\$26.99	\$269.90
<b>Sub-total</b>					<b>\$473.74</b>
<b>Total</b>					<b>\$15,689.17</b>
<b>Cost per acre</b>					<b>\$1,708.55</b>

**Table 9: Fencing and Signage**

		Qty (LF)	Production Rate	Estimated Task Duration (Days)	Estimated Task Duration (HRS)
		1,000	1,000	1	10
<b>Fencing and signage</b>					
Description	U/M	Est. Units	Duration (HR)	Unit Cost	Total Cost
<b>Equipment + Operator + Material</b>					
D6 Dozer	EA	1	4	\$198.76	\$795.04
140 HM Grader	EA	1	4	\$166.45	\$665.80
621G Water Pull	EA	1	4	\$273.90	\$1,095.60
Fencing	LF	1000	1	\$3.00	\$3,000.00
Signage	LS	2	1	\$1,000.00	\$2,000.00
<b>Sub-total</b>					<b>\$7,556.44</b>
<b>Labor</b>					
Foreman	EA	1	4	\$50.96	\$203.84
Laborers	EA	1	10	\$26.99	\$269.90
<b>Sub-total</b>					<b>\$473.74</b>
<b>Total</b>					<b>\$8,030.18</b>

COOLIDGE MINE  
RECLAMATION COSTS

**Table 10: Operation and Maintenance**

						Number of Years	Task Duration (Days/year)	Estimated Task Duration (HRS)
						10	1	10
<b>Roads - Inspection and Maintenance</b>								
Description	U/M	Est. Units	Duration (HR)	Unit Cost	Total Cost			
<b>Equipment + Operator</b>								
140M Motor Grader	EA	1	10	\$166.45	\$1,664.50			
Pick-Up Truck	EA	1	10	\$12.50	\$125.00			
<b>Sub-total</b>					<b>\$1,789.50</b>			
<b>Labor</b>								
Foreman	EA	1	10	\$50.96	\$509.60			
Laborers	EA	0	0	\$26.99	\$0.00			
<b>Sub-total</b>					<b>\$509.60</b>			
<b>Total</b>					<b>\$2,299.10</b>			
<b>Cost per year</b>					<b>\$2,299.10</b>			

						Number of Years	Task Duration (Days/year)	Estimated Task Duration (HRS)
						3	1	10
<b>Covers and Vegetation - Inspection and Maintenance</b>								
Description	U/M	Est. Units	Duration (HR)	Unit Cost	Total Cost			
<b>Equipment + Operator, Task</b>								
140 HM Motor Grader	EA	1	10	\$166.45	\$1,664.50			
Pick-Up Truck	EA	1	10	\$12.50	\$125.00			
Revegetation - mulch & hydroseed	AC	1	3	\$2,815.00	\$8,445.00			
<b>Sub-total</b>					<b>\$10,234.50</b>			
<b>Labor</b>								
Foreman	EA	1	10	\$50.96	\$509.60			
Laborers	EA	1	20	\$26.99	\$539.80			
<b>Sub-total</b>					<b>\$1,049.40</b>			
<b>Total</b>					<b>\$11,283.90</b>			
<b>Cost per year</b>					<b>\$11,283.90</b>			

						Number of Years	Task Duration (Days/year)	Estimated Task Duration (HRS)
						10	1	20
<b>Fences and Signs - Inspection and Maintenance</b>								
Description	U/M	Est. Units	Duration (HR)	Unit Cost	Total Cost			
<b>Equipment + Operator</b>								
Fencing materials	EA	2	1	\$700.00	\$1,400.00			
Pick-Up Truck	EA	1	20	\$12.50	\$250.00			
<b>Sub-total</b>					<b>\$250.00</b>			
<b>Labor</b>								
Foreman	EA	1	4	\$50.96	\$203.84			
Laborers	EA	1	20	\$26.99	\$539.80			
<b>Sub-total</b>					<b>\$743.64</b>			
<b>Total</b>					<b>\$993.64</b>			
<b>Cost per year</b>					<b>\$993.64</b>			



**TABLE 11 - COOLIDGE MINE RECLAMATION  
OPERATION AND MAINTENANCE COSTS - NET PRESENT VALUE**

December 23, 2022

Construction Item	Annual Cost	Post Reclamation Period	NPV Cost (\$)
Roads	\$2,299.10	10 years	\$25,521.00
Covers and Revegetation	\$11,284.00	3 years	\$34,637.00
Fences and Signs	\$993.64	10 years	\$11,023.00
<b>TOTAL</b>			<b>\$71,181.00</b>

**NOTES**

Inflation Rate at 2.3%

Net Present Value (NPV) at 5%

Mine Operating Life: 12 Years

Mine Post Closure Activities: 10 Years except for cover and revegetation 3 years

TABLE 12 - COOLIDGE MINE RECLAMATION - LABOR RATES

<b>Labor Category - Equipment Operators Laborers</b>	<b>Hourly Base Rate</b>	<b>Fringe benefits</b>	<b>H&amp;W</b>	<b>Hourly Rate</b>
<b>Laborers</b>				
Grader Operator	30.31	11.72		42.03
Compactor Operator	30.31	11.72		42.03
Water Cannon Operator	30.31	11.72		42.03
Dozer Operator	30.31	11.72		42.03
Backhoe Operator	30.31	11.72		42.03
Crusher Operator	30.31	11.72		42.03
Excavator Operator (335)	30.31	11.72		42.03
<b>Group 3 (Excavator, Loader)</b>				
Excavator Operator (395)	31.39	11.72		43.11
Loader Operator	31.39	11.72		43.11
Grader Operator (Finish)	31.39	11.72		43.11
Grade Checker	31.39	11.72		43.11
<b>Truck Driver Group 4 (Off Highway Truck)</b>				
Haul Truck Driver	20.28	8.08	6.58	34.94
<b>Foreman (Group 3 Equipment Operator plus 25%)</b>				
Foreman	39.24	11.72		50.96
<b>Laborer</b>				
Laborer	20.93	6.06		26.99
Flagger	20.93	6.06		26.99
Spotter	20.93	6.06		26.99
Rip Rap stone man	20.93	6.06		26.99

Notes:

1. Hourly Rate and Fringe based on 2022 Davis-Bacon wage determinations for Heavy Dam Construction in Arizona.

TABLE 13 - COOLIDGE MINE RECLAMATION - EQUIPMENT RATES

19-Dec-22

Equipment	4 week 160 hr	Rental Surcharge 2.60%	Equip. Protection 16%	Tax 9.1%	Monthly plus surcharge, protection, tax	Equip. Cost/Hr \$/hr	GPH	\$5.39 /gal	Maint.	Tire Wear	incl'g Operator \$/hr
325 excavator	\$7,610.00	\$197.86	\$1,217.60	\$692.51	\$9717.97	\$60.74	6.2	\$0	\$5	\$0	\$42.03
335 excavator	\$9,900.00	\$257.40	\$1,584.00	\$900.90	\$12642.30	\$79.01	8.2	\$0	\$5	\$0	\$42.03
395 excavator	\$9,148.00	\$237.85	\$1,463.68	\$832.47	\$11682.00	\$73.01	16.6	\$0	\$5	\$0	\$43.11
950 front end	\$8,100.00	\$210.60	\$1,296.00	\$737.10	\$10343.70	\$64.65	4.2	\$0	\$5	\$3	\$43.11
966 front end	\$10,200.00	\$265.20	\$1,632.00	\$928.20	\$13025.40	\$81.41	5.5	\$0	\$5	\$3	\$43.11
D6 dozer	\$13,000.00	\$338.00	\$2,080.00	\$1,183.00	\$16601.00	\$103.76	8.9	\$0	\$5	\$0	\$42.03
D9 dozer	\$32,000.00	\$832.00	\$5,120.00	\$2,912.00	\$40864.00	\$255.40	18.9	\$0	\$5	\$0	\$42.03
621G water pull	\$19,000.00	\$494.00	\$3,040.00	\$1,729.00	\$24263.00	\$151.64	13.4	\$0	\$5	\$3	\$42.03
745 articulated off	\$19,200.00	\$499.20	\$3,072.00	\$1,747.20	\$24518.40	\$153.24	9.6	\$0	\$2	\$2	\$34.94
140 H/M Grader	\$11,200.00	\$291.20	\$1,792.00	\$1,019.20	\$14302.40	\$89.39	5.2	\$0	\$5	\$2	\$42.03
140 H/M Grader	\$11,200.00	\$291.20	\$1,792.00	\$1,019.20	\$14302.40	\$89.39	5.2	\$0	\$5	\$2	\$43.11
CB44B Smooth	\$2,543.00	\$66.12	\$406.88	\$231.41	\$3247.41	\$20.30	2.9	\$0	\$2	\$2	\$42.03
CP56 sheepfoot	\$6,200.00	\$161.20	\$992.00	\$564.20	\$7917.40	\$49.48	6.6	\$0	\$2	\$2	\$42.03
440 backhoe	\$3,600.00	\$93.60	\$576.00	\$327.60	\$4597.20	\$28.73	5.2	\$0	\$2	\$2	\$42.03
Tractor trailer heavy haul Towing											\$150.00
											\$123.00

Notes: Per Rate QUOTE from CAT EMPIRE



August 8, 2023

Mr. Paul Marsh  
Arizona State Mine Inspector  
1700 West Washington Street, Suite 403  
Phoenix, Arizona 85007

Re: Mined Land Reclamation Plan  
Coolidge Mine, Pinal County, Arizona

Dear Mr. Marsh:

In a letter dated June 26, 2023 ASMI indicated that the Reclamation Plan for the Coolidge Mine is Technically Incomplete. This letter presents responses to the June 26<sup>th</sup> letter. Premier Materials Group (PMG) was assisted by Axelrod, Inc. in preparing the responses.

Items identified in the letter that need to be addressed are presented below. The item is reproduced in italics followed by the response. The Reclamation Plan has been updated in accordance with the responses and is transmitted with this letter.

- ***Proposed Remaining Concrete, Asphalt and Buried Utilities/Infrastructure***

- o *Section 5.1*

- o *Paragraph one, sentence two proposes that concrete and demolition debris be buried on the Site.*

- o *Paragraphs three and four propose that electrical and waterlines remain buried on the Site.*

- This is not an acceptable reclamation practice and/or consistent with the proposed post-aggregate mining land use of naturalized open space. Please revise per R11- 3-601(A.1) and A.R.S. §§ 27- 1273(A.1).*

- Concrete, demolition debris, electrical and waterlines will be disposed of in an appropriate offsite facility such as Casa Grande Landfill. Section 5.1 has been updated accordingly.

- ***Wildlife/Threatened and Endangered Species***

- o *Section 2.6*

- *Accurate nomenclature of the EA conclusion is a "finding of No Significant Impact (FONSI)."*

- *While similar conditions may occur on the Site, the statement that, "The same EA and result can be used for the subject property," is technically incorrect per the limitations expressed within the EA report.*

The report has been updated accordingly.

- **Revegetation**
  - Section 7.1.6
    - *Please clarify that non-invasive species will be used for revegetation if non-native species are used.*

Section 7.1.6 has been updated as required.
- **Mined Land Acreage**
  - *Affected acreage in Section 4.3 and 5.0 are inconsistent.*

Sections 4.3 and 5.0 have been updated to be consistent.
- **Access Restrictions**
  - *Warning sign placement distances in Sections 5.5 and 7.1.9.3 are inconsistent.*

Sections 5.5 and 7.1.9.3 have been updated to be consistent.
- **Various Clerical Errors**
  - Page 1
    - *Add period after 'Figure 1' in first paragraph.*
    - *Add "Gila and Salt River Baseline and Meridian" after 'Section 12' in second paragraph, last sentence.*
  - Page 2
    - *Remove quotation marks around "the entire mining unit."*
  - Page 3
    - *Remove quotation marks around first paragraph in Section 2.1, the third paragraph in Section 2.2, and the first and second paragraphs in Section 2.3.*
  - Page 4
    - *Remove quotation marks around "FEMA".*
  - Page 11
    - Section 7.0
      - *First paragraph, should be "the Coolidge Mine."*
      - *Last paragraph missing Appendix reference.*
  - Figures
    - *Change "Coolidge Sand and Gravel Pit" to "Coolidge Mine."*
  - Tables
    - *Add "Mine" after "Coolidge" in headers.*

*Throughout*

- o *The Site is referred to as "the site" (lower case), the "subject property," and the "property." Please make consistent.*

The report has been updated in accordance with all of the above comments.

Please contact me if you have any questions or if you require additional information.

Sincerely,

Joel Jondahl  
Manager

cc: P. Axelrod, P.E., Axelrod, Inc.

Enclosure: Coolidge Mine Reclamation Plan, Revision 2

**Premier Materials Group  
Responsibility Statement for Reclamation of  
Surface Disturbances Coolidge Mine**

PMG assumes responsibility for the reclamation of surface disturbances that are attributable to "existing mining units" and/or "new mining units" at Coolidge, consistent with A.R.S. §§ 27-1201 through 27-1297 and A.A.C. R11-3-101 through R11-3-820.

Name: Joel Jondahl

Signature: 

Title: Manager

Date: 8/1/2023