

**DEMING MILL & MILL TAILINGS
DEMING, NEW MEXICO**

***Mining and Minerals Division Permit No.
LU009RE***

***Deming Mill and Mill Tailings Closeout Plan
And
Financial Assurance Proposal***

Prepared For:

Mining Act Reclamation Program
Mining and Minerals Division
New Mexico Energy, Minerals and Natural Resources Department
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MILL CLOSEOUT PLAN

1. PROJECT DESCRIPTION

This Closeout/Reclamation Plan for the Deming Mill Site (Site), Mill Tailings (Tailings) and Borrow Pit (Pit) and 79.163 acres of vacant land shown as Tracts 12 and 13 in Figure 1 (Land), previously owned by ASARCO Incorporated (ASARCO) has been prepared by GEO SOUTHWEST, LP (GEO SW) pursuant to Section (§)69-36-IIB of the New Mexico Mining Act of 1993 (Act) and the New Mexico Mining Act Rules (Rules). This Closeout/Reclamation Plan references and will be part of Permit No. LU009RE (currently in standby status) which was transferred to GEO SW by the Mining and Minerals Division (MMD) of the New Mexico Energy, Minerals and Natural Resources Department on August 5, 2014. On April 9, 2014, GEO SW purchased from the ASARCO Multi-State Custodial Trust (Trust) 1193.84 acres (Property) near Deming, New Mexico (see Figure 2, General Location Map). The Property included in the Permit Area consists of approximately 208 acres including the Site, Tailings and Land.

GEO SW purchased the Property with the intent of renovating and operating the mill to process ore. The Site is located on County Road 394 in Sections 20 and 21, Township 23 South, Range 9 West, approximately one mile northwest of Deming, New Mexico. The Site is within the Chihuahuan desert scrub habitat on the desert floor of the lower Mimbres Basin. Mesquite (*Prosopis*) and Yucca (*Yucca*) are the dominate vegetation in the immediate vicinity of the Site. A portion of the Mimbres River crosses the Property approximately 0.35 miles north of the Site. This portion of the Mimbres River is ephemeral, flowing only in response to storm events.

The purpose of this Closeout/Reclamation Plan is to establish the amount of financial assurance that will be required from GEO SW for Permit No. LU009RE.

2. SITE HISTORY & CURRENT STATUS

The Site includes an existing mill, ancillary buildings, shipping and utilities infrastructures, and paved roadways. The mill was constructed in 1949, and operated by ASARCO with periodic shutdowns until 1979. It was designed as a custom mill and used primarily for the processing of lead and zinc ores from the ASARCO Groundhog Mine located approximately 50 miles north of the mill. During the early years of operation, the Site accepted and processed ore on a custom basis from non-ASARCO mines. From May, 1989 until August, 1995, Cyprus Pinos Altos Corporation leased the Site to produce copper/zinc concentrate from ore shipped from the Cyprus Pinos Altos mine. At the time of this lease, ASARCO sold a tract of land across the road

from the Site to Cyprus for construction of a tailings impoundment.

ASARCO deeded the Property to the Trust on December 9, 2009 and provided funds for remediation of any environmental issues associated with the Site, Tailings or Land. The Trust hired ENVIRON to oversee the Property and to complete any necessary environmental remediation. ENVIRON removed contaminated driveway material from the Site and added it to the Tailings. Sand and gravel taken from the borrow pit located in the Permit Area was used to replace the removed driveway material and to cover the contaminated material added to the Tailings. This addition to the Tailings was sown to native vegetation which has become well established. ENVIRON completed remediation of all known environmental issues and this remediation has been approved by MMD. In addition, a Voluntary Remediation Program (VRP) related to the Deming Mill Windblown Tailings Site (VRP Site No. 53043001) was begun by ASARCO with the Trust completing the documentation with the New Mexico Environment Department (NMED) which issued a Covenant Not to Sue to GEO SW for contamination associated with the wind-blown tailings.

3. SITE CHARACTERISTICS

The Site is completely fenced with a 6' tall chain link fence and includes the following components:

- Rail siding
- Ore receiving (grizzly)
- Conveyor system
- Ore crushing building
- Ore transfer building
- Fine ore storage bins
- Ore sampling building
- Mill building
- Reagent mixing building
- Temporary office building (mobile)
- Machine shop
- Office and laboratory building
- Change house building
- North and south siding buildings
- Two water wells with pumps
- Water tank, tower, and distribution system
- Electrical substation
- Rail and truck scales and scale houses
- Concentrate thickeners
- Concentrate load-out slab
- Lime circulating tank
- Pole barn

These structures are presented in Figure 3, Detailed Site Plan; and Appendix B, Photographs.

4. POST-CLOSEOUT LAND USE

A. The proposed post-closeout land use for the Site is a non-mining-dependent industrial facility. Even though the Site is not a mine, the term post mining land use (PMLU) is used in this Closeout/Reclamation Plan to be consistent with MMD terminology.

The City of Deming has recently established an industrial park on land that the City owns adjoining the Property; hence, there would likely be good demand for an industrial facility at the Site location. Closeout/reclamation activities necessary to convert the Site to a non-mining-dependent industrial facility include demolition and removal of all mine-specific processing equipment and buildings.

The purpose of this Closeout/Reclamation Plan is to have the Site become a productive industrial facility and a viable addition to the City of Deming Industrial Park. The potential economic viability of the Site is based on the following: quality of construction and size of the buildings; proximity of the Site to Deming, rail lines, and Interstate 10; and existing on-site infrastructure. Details of Closeout/Reclamation activities are described in Section 5, and cost estimates are provided in Table 1 on page 15 of this document.

B. The most likely post-closeout use of the Tailings is for the grazing of livestock.

C. The most likely post-closeout use of the Land is for the grazing of livestock.

5. DESCRIPTION OF CLOSEOUT/RECLAMATION ACTIVITIES

A. Reclamation for the Site would require the removal of the following mining-specific equipment:

- Ore receiving (grizzly)
- Conveyor system
- Ore crushing building
- Ore transfer building
- Fine ore storage bins
- Ore sampling building
- Processing equipment located within mill building
- Concentrate thickeners
- Lime circulating tank

Specific components to remain at Site for industrial use include the following:

- Mill building
- Reagent mixing building
- Machine shop
- Office and laboratory building
- Temporary office building (mobile)
- Change house building
- North and south siding buildings
- Two water wells with pumps
- Water tank, tower and distribution system
- Electrical substation
- Truck and rail scales and scale houses
- Pole barn
- Concentrate load-out slab

B. Reclamation of the Tailings has been completed and native vegetation is well established. Vegetation surveys were conducted in 2019 and 2020. GEO SW has initiated the process necessary to have the Tailings released from Permit No. LU009RE. The Pit was included in the 2019 survey but not in the 2020 survey and GEO SW is not requesting the release of the Pit from Permit No. LU009RE. This will allow material from the current Pit to be used rather than developing a new borrow pit.

C. All contaminated soil at the Site was removed and replaced by ENVIRON but subsequent leaking of rainwater out of a large thickener tank containing a zinc/copper concentrate has discolored the soil south of this thickener tank. The concentrate will be removed and shipped to a refinery prior to the demolition of the thickener tank. The soil contaminated by the leakage of rainwater will be removed and disposed of in an approved waste facility and replaced by soil from the existing borrow pit. The estimated cost of removing and replacing this contaminated soil near the thickener tank is \$3,000.

D. Reclamation of the Land will require the covering of exposed tailings on (a) the north slope of the Cypress tailings, (b) an area north of the Cypress tailing and south of the Mimbres River and (c) an area north of the Mimbres River and south of the Tailings. In addition, a portion of the north bank of the Mimbres River will require removal of exposed tailings and/or stabilization and protection. Figure 4 depicts the approximate location and size of these four areas of concern as well as the soil contamination near the thickener tank. A closer view of these areas is provided by Figures 5, 6 and 7. Prior to undertaking the below outlined reclamation of the Land, test

pitting with a backhoe and hand tools will clarify the best options related to covering in place and/or some partial removal and consolidation of tailing material.

The eroded area on the north side of the Cypress tailings (approximately 3.6 acres), the area of exposed tailings between the Cypress tailing and the Mimbres River (approximately 3 acres) and the area of exposed tailings north of the river (approximately 2 acres) will be covered to a minimum depth of three feet with material taken from the existing borrow pit. The sloping area on the north side of the Cypress tailings will be graded to a slope no greater than a 3 to 1 horizontal to vertical ratio. Grading may also be necessary to allow room for three feet of cover to be placed on the top of the sloping area without crossing over GEO SW's south property line. Test pitting in this area will determine the amount of grading, if any, which will be required.

A topographical survey of where the covering material will be placed on the north slope of the Cypress tailings is shown in Figure 8. Figure 9 depicts the topography of this area after three feet of cover is added. After being covered with material from the borrow pit, all three areas will be planted to native vegetation.

If test pitting of the exposed tailings on the north bank of the Mimbres River indicates it is practical to remove them from the riverbank area and then cover them with three foot of material from the borrow pit, this will be the preferred action. If test pitting indicates removal is not practical, these tailings will be covered in place with three foot of material and then properly armored to prevent erosion. Also to be considered will be the possible use of bendway weirs, J-hooks or similar flow deflection structures to modify the flow of the river and reduce erosion of covered/armored tailings left in place.

E. Storm water has caused erosion and exposed tailings in spots along the north bank of the Mimbres River. This erosion has been made worse by ATV and 4-wheeler traffic which has been very difficult to prevent. After the tailings along the river bank are either removed or covered in place, the erosion caused by storm water and vehicle traffic will have to be addressed. A berm along the top of the river bank built with material from the borrow pit plus a vehicle barrier built with concrete riprap will be combined to prevent future erosion.

F. There were originally three monitoring wells associated with Permit No. LU009RE. Two of these were shallow wells north of the Mimbres River which no longer had any water in them.

These two wells were plug in May, 2018 by removing the casing and tubing to a depth of approximately six foot below the surface, pouring concrete into the remaining casing, pouring a concrete slab over the top of the remaining casing and then covering with soil. The third monitor well is located between the river and the Cypress tailings. It has continued to be used by Freeport McMoRan so evidently still reaches to ground water. Once this well is no longer being used, it will be plugged by the appropriate procedure for wells which reach ground water.

6. DEMONSTRATION OF PMLU IMPLEMENTATION

The following criteria have been developed to demonstrate that the PMLU has been achieved:

1. The activities outlined above (Section 5) have been completed.
2. The Site has been inspected by a certified engineer to ensure the integrity of the remaining structures.
3. MMD and NMED personnel have inspected and approved the plugging of the monitoring well, covering of exposed tailings, stabilization of the river bank and establishment of native vegetation.

Once the MMD has determined that the PMLU has been implemented, the MMD will release GEO SW from the financial assurance obligations in accordance with 19.10.12.1210 NMAC of the Rules.

7. CLOSEOUT/RECLAMATION PLAN COST ESTIMATES

A. Cost estimates for Closeout/Reclamation tasks for the Site are based upon R S Means Heavy Construction Cost Data (24th Annual Edition, 2010). The cost of \$7.61 per sq. ft. that was given for demolition of large metal bridges was consider appropriate for the type of demolition required in this plan. This cost was reduced by 50% for the removal of equipment from the mill building since the building is to be left in place. The removal and replacement of contaminated soil near a thickener tank is estimated at \$3,000.

B. Cost estimate for covering the exposed tailings on Land is \$1.10 per yard of material or \$5,325 per acre. The cost estimate for seeding native vegetation on the reclaimed areas and new borrow pit is \$350 per acre. The cost estimate for plugging the monitor well is \$2,000.

C. The cost estimate for either removing the tailings from the river bank or covering them in place and then armoring this area is \$15,000. The cost of constructing a berm to divert storm water and constructing a barrier to prevent vehicle traffic is estimated at \$3,000.

Cost estimates are detailed in Table 1 (page 15). No consideration has been given to salvage and scrap values for removed equipment and metal scrap which would likely exceed the projected demolition costs. These cost estimates were increased by 39% to provide for a number of indirect cost items including the following:

- Reclamation contract management fee – 10%
- Engineering redesign – 2%
- Mobilization and demobilization – 5%
- Contingencies – 7%
- Profit and overhead – 15%

8. ENVIRONMENTAL STANDARDS COMPLIANCE

ASARCO ceased operations at the Site in 1979, prior to requirements for permitting under New Mexico environmental protective legislation. Documentation and analysis of Site conditions pursuant to guidelines for Environmental Standards Compliance is beyond the scope of this permitting process. GEO SW will submit an Erosion Control Plan to MMD for approval 90 days prior to implementation of Closeout/Reclamation activities. The Erosion Control Plan will describe the following:

1. Containment of sediment and runoff within the disturbed area during closeout/reclamation activities.
2. Protection of surface water resources from sedimentation due to ground disturbance and other activities.
3. Protection of topsoil and closeout/reclamation materials from erosion.

In addition to upgrading Permit Number LU009RE to active status, GEO SW will need other permits in order to operate the mill including a groundwater discharge permit for a new tailings impoundment and an air quality permit for the crushing unit. Current plans include tailings impoundments below the size requiring a dam site permit.

Storm water Pollution Prevention Plan (SWPP) for the Site that outlines storm water controls will also be required. The SWPP will be modified prior to the implementation of the Closeout/Reclamation Plan and submitted to the MMD for approval. The modifications will reflect the proposed changes to the Site and ensure that surface water will be protected from activities that were or will be conducted at the Site. The SWPP will include procedures to collect samples of storm water. In addition, the SWPP will outline the actions necessary to prevent storm water from negatively affecting surface water. Surface water samples will be collected in

accordance with 40 CFR Part 136. Surface water sample analytical results will be reported to the Surface Water Quality Board of the NMED.

9. CLOSEOUT/RECLAMATION PLAN SCHEDULE

The Site will be a custom facility, not associated with any particular mine, and therefore could potentially continue to operate indefinitely. Should GEO SW choose to close the mill, the Closeout/Reclamation activities outlined for the mill proper would require from six to ten months to complete. The reclamation activities outlined for the Land will be completed in a timely manner independent of any decision to close the mill. The required site visit and test pitting will be completed within six months. The Land reclamation activities will be completed within two years.

10. CLOSEOUT/RECLAMATION PERMITTING, NOTIFICATION, APPROVALS

The Site has been annexed by the City of Deming which has issued a special use permit for operation of the mill. This area is zoned for commercial use and adjoins an industrial park recently created by the City. Depending upon the type of business that may utilize the Site and its potential impact to the environment, State as well as City permits may be required.

NMED requires notification of demolition activities 10 days prior to initiation of work. The purpose of the notification is to inform NMED of the presence or absence of asbestos. In addition, lead emissions, particulate matter and/or dust emissions, and emissions resulting from remedial activities may be governed by state and federal regulations. If potential emissions exceed the threshold levels as specified in the regulations, GEO SW may have to file a Notice of Intent and/or obtain an air quality permit.

FINANCIAL ASSURANCE (FA)

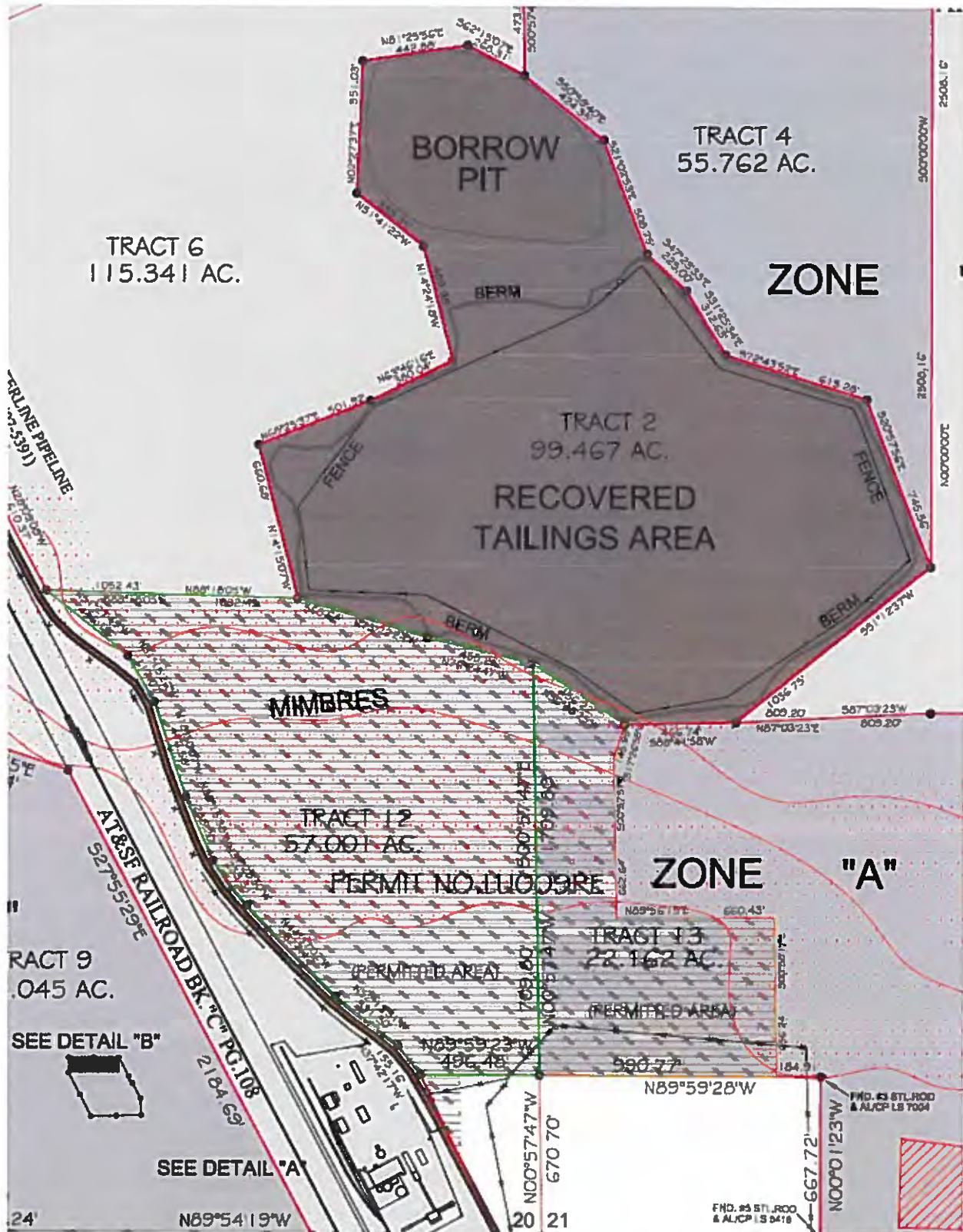
1. CLOSEOUT COST

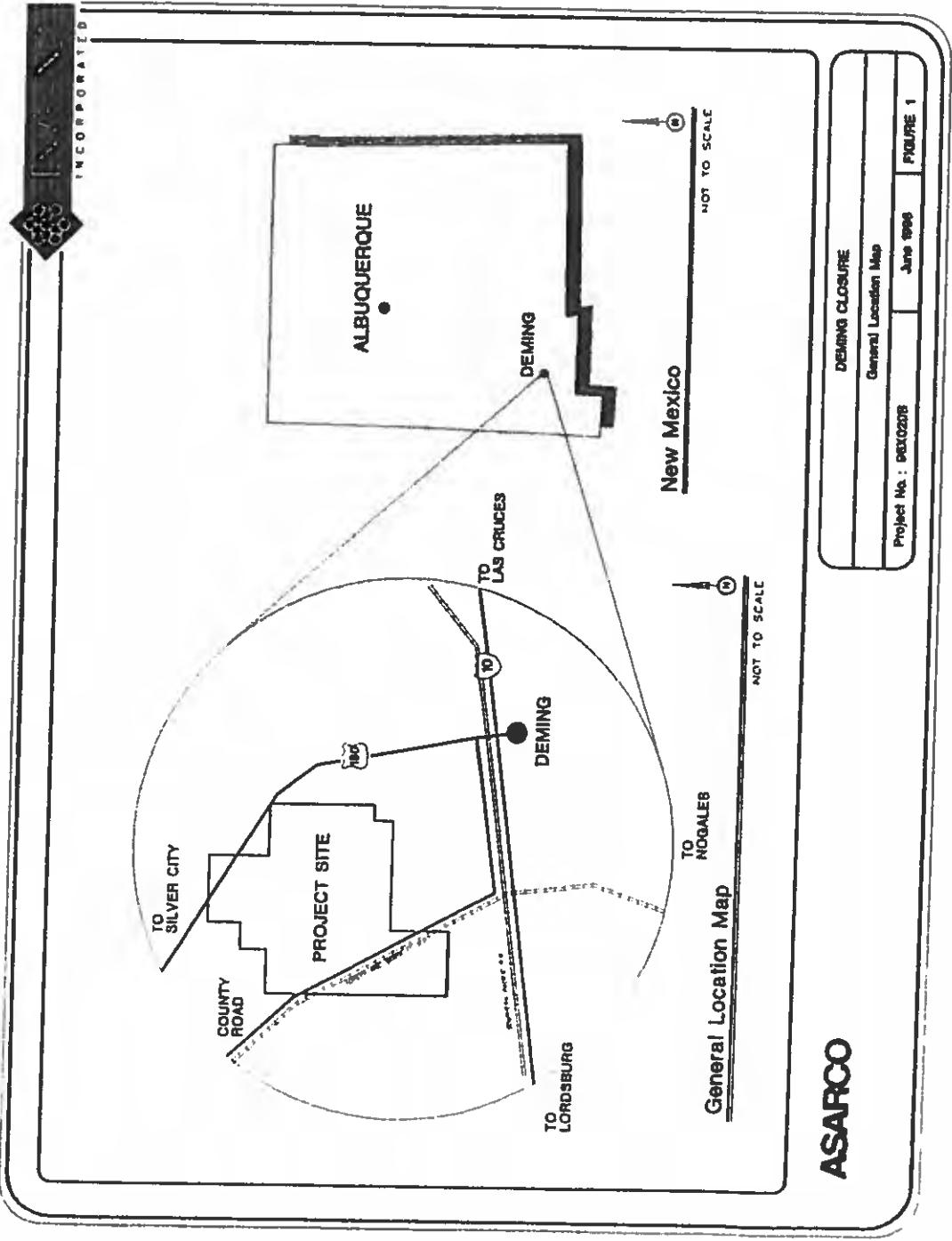
The estimated direct cost of the Closeout/Reclamation Plan for the Deming Mill Permit No. LU009RE as detailed in Table 1 (page 15) is \$201,810 plus indirect costs of \$69,295 for a total cost of \$280,517.

2. FINANCIAL ASSURANCE SUBMISSION

In conformance with Subpart 12 of the Rules, GEO SW will submit FA in excess of the \$280,517 required for accomplishing the Closeout Plan for the Site, the Land reclamation and the implementation of the PMLU for the Site. This FA shall consist of a Collateral Bond in the form of a perfected first-lien security interest in real property with a right to sell granted to the State of New Mexico. This real property is a portion of the Property purchased by GEO SW from the Trust but does not include any of the 208-acre Permit Area. The 20% margin that MMD requires for collateral bonds will increased the required value of the collateral to \$350,646.

Figure 1. Permit Area Land





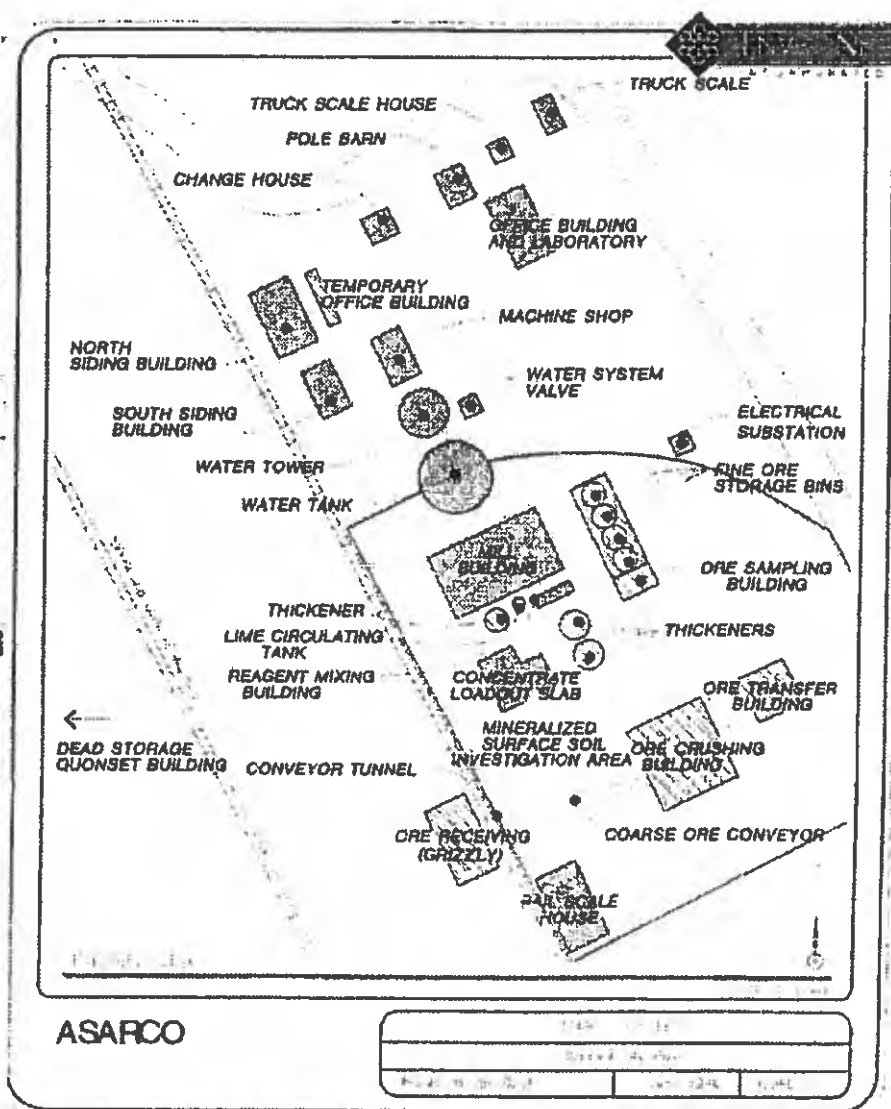




Figure 4. Areas of Concern



Figure 5. Areas of Concern near Cypress Tailings

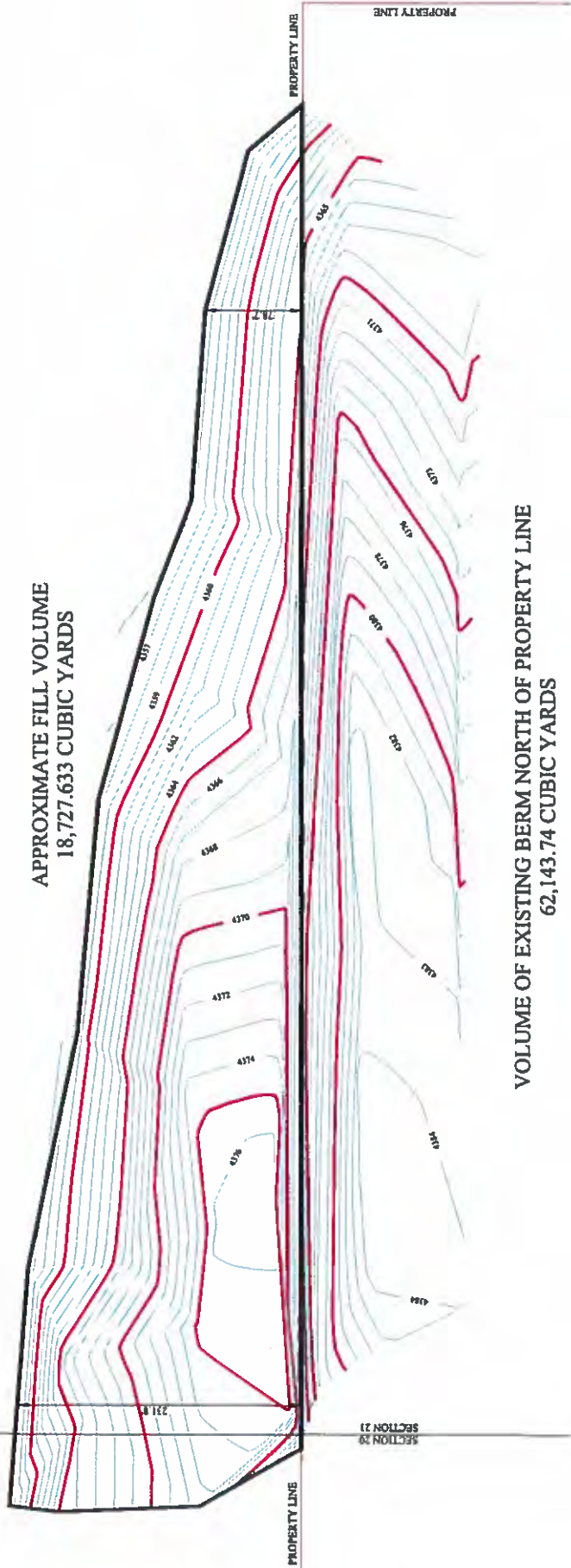


Figure 6. Areas of Concern near River



Figure 7. Area of Soil Contamination near Thickener Tank

TOPOGRAPHIC SURVEY
 BERM LOCATION IN THE SW¼ OF SECTION 21
 AND THE SE¼ OF SECTION 20, T23S, R9W, N.M.P.M.,
 LUNA COUNTY, NEW MEXICO



APPROXIMATE FILL VOLUME
 18,727.633 CUBIC YARDS

VOLUME OF EXISTING BERM NORTH OF PROPERTY LINE
 62,143.74 CUBIC YARDS

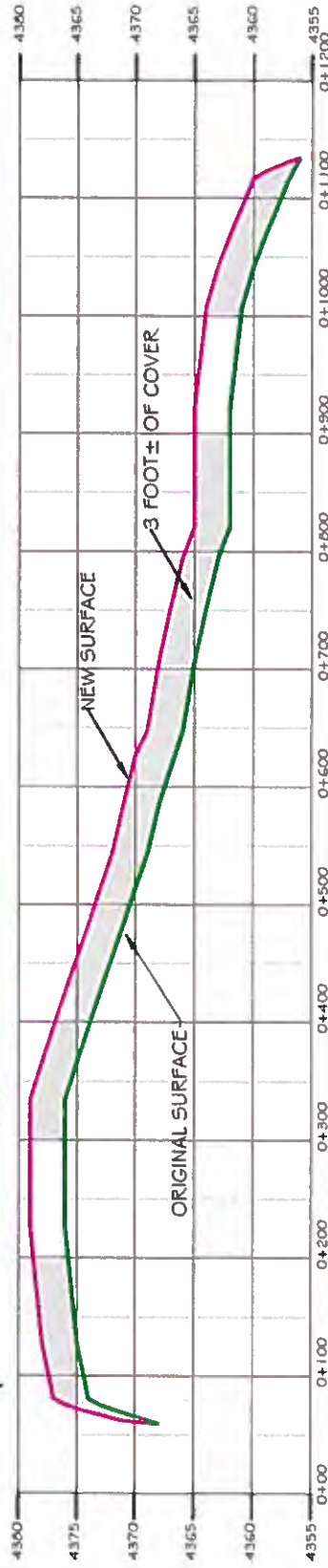
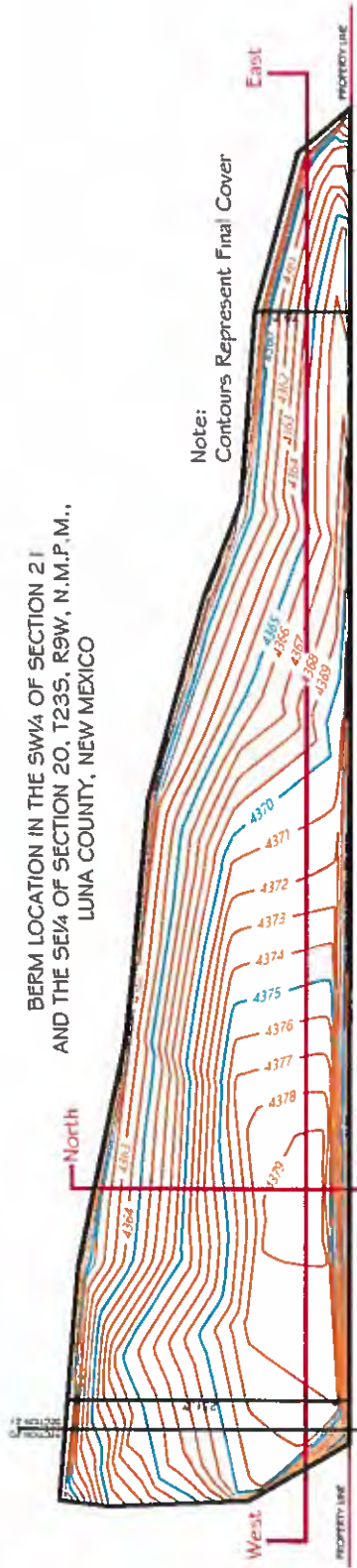
CERTIFICATION
 I, Miguel Beltramini, hereby certify that I am the Registered
 Land Surveyor who prepared this plat from notes of an actual
 survey conducted by me or under my direct supervision and
 that the same are true and correct to the best of my knowledge
 and belief. This plat meets the Minimum Requirements of the
 Standards for Land Surveys in New Mexico.
 Miguel Beltramini
 Professional Land Surveyor LS 25340



Figure 8. North Slope Cypress Tailings

GRAPHIC SCALE
 1 inch = 40 ft.
 BASSELING SURVEYING LLC
 411 CODY ROAD
 ENCLAVE, NM 87600
 (505) 772-2222
 baselingsurveying.com

BERM LOCATION IN THE SW¼ OF SECTION 21
AND THE SE¼ OF SECTION 20, T23S, R9W, N.M.P.M.,
LUNA COUNTY, NEW MEXICO



West-East Cross Section

APPROXIMATE +3 FOOT FILL VOLUME
17,436.72 CUBIC YARDS



South-North Cross Section



Parkhill.com

**NORTH SLOPE CYPRESS TAILINGS
THREE FOOT COVER**

GEO SOUTHWEST
LUNA COUNTY, NEW MEXICO



PROPOSED SITE TOPOGRAPHY

Issue: FINAL
Date: 03/23/2021
Project No: 8088.21
Sheet: FIGURE 1

**Table 1
Cost Estimates**

Direct Costs

Mill Site Closeout	Area sq ft	Demolition Costs	
		\$/sq ft	Total
Mill building equipment removal	9,000	3.805	\$ 34,245
Thickener, 36 ft diameter	1,017	7.61	7,740
Thickener, 30 ft diameter	707	7.61	5,380
Thickener, 25 ft diameter	490	7.61	3,728
Ore receiving (grizzly)	900	7.61	6,850
Conveyor systems	720	7.61	5,480
Conveyor tunnel	2,250	7.61	17,122
Ore crushing building	2,160	7.61	16,438
Ore transfer building	225	7.61	1,712
Conveyor tower building	650	7.61	4,946
4 fine-ore bins & ore sampling building	3,000	7.61	22,830
Lime circulating tank	400	7.61	3,044
Remove and replace soil near thickener tank			<u>3,000</u>
Total			\$132,515

Land	Cost
North slope of Cypress tailings (3.6 acres @ \$5,325)	\$ 19,170
Area between Cypress tailings and river (3 acres @ \$5,325)	15,975
Area north of river (2 acres @ \$5,325)	10,650
Plant native vegetation on reclaimed area (10 acres @ \$350)	3,500
Remove and cover tailings from river bank	15,000
Construct berm & traffic barrier	3,000
Plug monitoring well	<u>2,000</u>
Total	\$ 69,295

Total Direct Costs **\$201,810**

Indirect Costs

Item	%	Total
Reclamation contract management fee	10	\$ 20,181
Engineering redesign	2	4,036
Mobilization & demobilization	5	10,091
Contingencies	7	14,127
Profit & overhead	15	<u>30,272</u>

Total Indirect Costs **\$ 78,707**

Total Costs **\$280,517**

Deming Mill

(LUNA Electric Generation Plant in Background)

