



**Lhoist North America  
Mathis Lime Plant  
Grant County, New Mexico**

**Lime Plant Reclamation Plan**

**Initial Submittal, April 2020**

**Revised, August 2020**

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## SECTION 1

# MILL SITE RECLAMATION PLAN

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Lhoist North America (LNA) owns the Mathis Quarry (Facility), a limestone quarry and lime manufacturing operation (mill site), located near Hanover, NM. The Facility operates pursuant to Permit No. GR030ME (Permit) issued by the Mining and Minerals Division (MMD) of the New Mexico Energy, Minerals and Natural Resources Department (EMNRD). LNA maintains a lease with the U.S Department of Agriculture – Forest Service (USFS) which includes access to the mining rights for continued operation of the Facility within the Gila National Forest.

As required by both MMD (letter dated March 2, 2020) and USFS (letter dated March 5, 2020), LNA has prepared the following reclamation plan for the Facility mill site, Claim No. 86551.

### 1.1 Objectives

LNA's reclamation objective for the Facility mill site is to reclaim all disturbed areas of the plant (See Figure 3 in Appendix A) to a condition as good as or better than the pre-mining surface. The reclaimed areas will be a self-sustaining ecosystem blending with the undisturbed ecosystem surrounding the operation over time.

All reclaimed areas will be stable and exhibit none of the following characteristics:

- Large rills or gullies (greater than 3 inches wide or deep);
- Perceptible soil movement or head cutting in any drainages; and,
- Slope instability on or adjacent to the reclaimed area.

### 1.2 Visual Resource Standards

The reclaimed landscape will approximate the visual quality of adjacent and surrounding areas regarding surface contour, drainage patterns, vegetation, and visual texture. All facilities, infrastructure, equipment and resources, and general debris associated with the operation will be removed from the mill site. Disturbed surfaces and access roads will be restored to as near-natural contours as feasible according to this reclamation plan. All disturbed areas to be reclaimed are identified in Figure 3 of Appendix A. All identified disturbed areas will be revegetated using plant species appropriate to the site (Table 1-2).

### 1.3 Reclamation Bond

As Part of the MMD Mining Permit and the USFS Lease Agreement, a Financial Assurance (FA) estimate from the mine operator is required. This estimate is based on the cost of reclaiming the site by a third party. The FA bond will be placed jointly in the name of the State of New Mexico EMNRD-MMD and the USFS. Applicable bonding methods include a Surety Bond, CD, or cash

account. MMD requires a minimum 12-year period after reclamation for withholding release of the FA for third-party re-vegetation costs.

A reclamation bond estimate is provided in Appendix B. The estimate is for a reclamation area of approximately 16.3 acres, which is the approximate acreage of the mill site and surrounding disturbed areas. LNA has prepared the reclamation bond estimate using the Nevada Standardized Reclamation Cost Estimator, Version 1.4.1 (SRCE). The updated SRCE increases the FA estimate from an existing value of \$40,243 to a proposed value of \$612,293. This includes an approximate value of \$223,000 to remove trash, debris, temporary structures, etc. from the mill site (note this value is listed in the cost estimation sheet under Section D – Other User Costs, with the remaining portion found within the Indirect Costs).

## **1.4 Reclamation Sequence**

### **1.4.1 Initial Reclamation**

LNA previously completed partial reclamation of the mill site by removing the majority of the lime manufacturing equipment, including, but not limited to: crusher, lime kiln, conveying equipment, fuel tanks, etc. Additional site work is still needed before any earth work and revegetation efforts can be made. This will be the focus of the remainder of this reclamation effort.

### **1.4.2 Ongoing Reclamation**

With lime manufacturing no longer occurring at the Facility, LNA plans to remove the remaining structures and mining debris that remains at the mill site. This includes the demolition and removal of the temporary office trailer, demolition and removal of scale house, removal of debris piles (e.g. kiln brick, scrap metal, tires, etc.), removal of drums and associated liquids, etc. For those structures that contain components suitable for reclamation efforts (e.g. concrete foundations, limestone fines, lime spoils pile, etc.), LNA plans to excavate the soil to at least 6 inches below the existing grade. If necessary, the structure will be removed from the foundation at this level, and any remaining concrete will be buried in place under a minimum 2 foot cover and following the procedures of this reclamation plan. Any slabs of concrete and lime spoils will be broken into manageable pieces and hauled to the mine site to be used as backfill material.

With all structures and debris removed from the mill site, reclamation of disturbed areas within the mill site will occur as follows:

- **Surface Re-Contouring and Seedbed Preparation**
  - Backfill of excavated areas with stockpiled subsurface overburden materials
  - Rip areas of compacted soils and limestone fines
  - Contouring of reclaimed subsurface to 3H:1V or flatter
  - Even placement of stockpiled topsoil over area to be reclaimed
  - Harrowing of final topsoil grade for seedbed preparation
- **Seeding and Mulching**

- Seed application by broadcast seeding
- Application of mulch
- Monitoring
  - Determination of Vegetation Reference Area
  - Inspection of reclaimed areas to determine success of revegetation efforts
- Invasive/Noxious Species Control until release of bond

**Table 1-1: Mill Site Reclamation Progress Plan**

Phase	Approx. Acres	Pre 2020	Q3 2020	Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021	Post 2021
Removal of lime manufacturing equipment (e.g. crusher, lime kiln, conveyors, etc.)	0.2	C							
Removal of remaining structures, debris, etc.	0.2		P	P					
Earthwork, (backfill, rip compacted soils, contour, etc.)	16.3				P	P			
Application of seed and mulch	16.3					P	P		
Continued inspections (invasive species, monitoring of vegetation, erosion controls, etc.)	16.3						P	P	P

C = Phase completed

P = Proposed timeframe for completion of phase

Final reclamation for the mill site will include final grading, soil preparation, seeding, mulching, and erosion control of the areas identified within the mill site. Earthen berms will be created at access roads leading to the reclaimed areas to prevent vehicle traffic from entering.

The Permit requires at least 30 days notice prior to the commencement of reclamation activities approved in this Reclamation Plan.

## 1.5 Reclamation Activities

### 1.5.1 Surface Re-contouring

Existing facilities and structures will be demolished and removed from the mill site. Existing foundations below the surface level will be broken up and buried in place with a minimum 2 foot cover. Existing material piles with reclamation properties (e.g. limestone fines, lime spoils, etc.) will be utilized within the Facility. Excavated areas will be backfilled with stockpiled subsurface materials only; topsoil will not be placed as backfill. Subsurface soils will then be contoured (graded) to match original slopes as closely as practicable, with no slopes exceeding 3H:1V. The final contour will ensure positive drainage from the Facility and will ensure there is no substantial ponding of stormwater within the reclaimed area.

### 1.5.2 Seedbed Preparation

Areas of compacted subsoils and limestone fines will be ripped to a depth of 12 inches, followed by disking to a depth of 6 inches before placement of topsoil. The topsoil layer

at the mill site is relatively thin and stockpiled quantities are limited; therefore, approximately 4 inches of stockpiled topsoil will be placed evenly over the re-graded subsurface soils. Please note that LNA may choose to conduct limited studies measuring the depth of the existing topsoil within undisturbed areas of the Facility. Results of these studies, if conducted, will be shared with MMD. Once top soil is placed, the surface will then be tine- or chain-harrowed to break up any soil clumps, smooth the surface grade, and prepare the soil for seeding.

No soil amendments or fertilizers will be applied to reclamation areas. The MMD does not support the use of chemical fertilizers in reclaimed areas, as they generally promote the growth of weedy annual species that may suppress the establishment of native perennial species.

### 1.5.3 Seeding

Seed will be sowed across the mill site reclamation areas using broadcast seeding methods. Hydroseeding is not recommended for native seed due to poor seed-soil contact percentage and the tendency of the seed to self-sort by weight and size; therefore, resulting in uneven distribution during application. The seed will be applied using a “cyclone” hand seeder or similar broadcast seeder. Seed will then be raked-in so that it is planted approximately one-half inch below the surface. The recommended seed mix and seeding rate is provided in Table 1-2.

**Table 1-2: Reclamation Seed Mix and Application Rate**

Botanical Name	Common Name	Grass/Shrub/Forb	PLS Rate (Pounds Per Acre)	PLS Rate (PLS/ft <sup>2</sup> )
<i>Hilaria berlanderi</i>	Curly Mesquitegrass	Grass	2	0.76
<i>Aristida purpurea</i>	Purple Threeawn	Grass	4	1.41
<i>Baileya multiradiata</i>	Desert Marigold	Forb	1	1.49
<i>Bouteloua curtipendula</i>	Sideoats Grama	Grass	8	2.15
<i>Leptochloa Dubis</i>	Green Sprangletop	Grass	4	3.03
<i>Bouteloua gracilis</i>	Blue Grama	Grass	5	5.81
<i>Sphaeralcea ambigua</i>	Desert Globemallow	Shrub	1	0.70
<i>Sporobolus cryptandrus</i>	Sand Dropseed	Grass	3	23.66
<i>Poa Pratensis</i>	Kentucky Bluegrass	Grass	3	5.92
<i>Festuca arundinacea</i>	Tall Fescue	Grass	10	3.52
<i>Ambrosia artemisiifolia</i>	Common Ragweed	Forb	2	0.15
<i>Gaillardia pulchella</i>	Indian Blanket	Forb	2.5	0.46
<i>Atriplex canescens</i>	Four Wing Saltbush	Shrub	15	1.55
<b>Total Rate</b>			<b>60.5</b>	<b>50.6</b>

Any seed mixture used in reclamation or erosion control activities will be certified weed-free, with no primary or secondary noxious weeds in the seed mixture. Documentation from each type of seed will be retained and made available to the USFS staff for inspection during seeding activities.

Seeding will be repeated if a satisfactory stand has not established as determined by the USFS's authorized officer following evaluation after the second growing season, or as determined by the MMD representative for release of the FA bond.

#### **1.5.4 Mulching**

The addition of mulch benefits the seeding effort by reducing evaporation of soil moisture, reducing wind desiccation, limiting soil erosion, insulating the surface from temperature extremes, and increasing the infiltration rate of precipitation by protecting the soil surface from surface sealing. It may further aid revegetation by trapping windblown seeds and soil.

Straw mulch will be applied by hand broadcasting or blowing to a uniform depth of approximately 2 to 3 inches, at a minimum rate of 2 tons per acre. When applied properly, approximately 20 to 40 percent of the original ground surface can be seen. Only certified weed-free straw will be used for mulching.

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#### **1.5.5 Reclamation Protection**

During and following all reclamation activities, LNA will monitor and protect the landscape to help ensure reclamation is successful. Earthen berms will be created at access roads leading to the reclaimed areas to prevent vehicle traffic from entering. Success of reclamation activities will be evaluated during routine inspections as required by Section 9.D of the Permit.

### **1.6 Final Reclamation of Haul Roads**

LNA has identified roads within and near the mill site that are no longer needed and will prepare them for final reclamation. These are identified in Figure 3 of Appendix A. Haul roads will be ripped to a minimum depth of 12 inches. After ripping, water bars will be installed using natural materials. The haul road alignments will then be harrowed using a tine- or chain-harrow to break up any soil clumps, smooth the surface grade, and prepare the soil for seeding.

Seed and mulch will be applied as directed for Reclamation Activities (see Sections 1.5.3, Seeding and 1.5.4 Mulching).

Following seeding and mulching of the haul roads, an earthen barricade will be constructed from the main haul road to deter future vehicle access to the reclaimed mill site.

Invasive and noxious species control requirements as described below will be applicable to reclamation of all haul roads in addition to all reclaimed mining areas.

## **1.7 Invasive/Noxious Species Control**

The USFS has implemented guidelines for the management of invasive species, including the development of weed management plans. One objective of these programs is to detect invasive plant species populations, prevent the spread of new invasive populations, manage existing populations using the tools of integrated weed management, and eradicate invasive populations using the safest environmental methods available. Preventing the introduction of noxious weeds into an area is the most effective and economical means of weed control and management.

A list of invasive, non-native plant species of concern and the New Mexico Noxious Weed List are provided in Appendix C.

LNA will take all reasonable precautions to prevent the introduction, establishment, and spread of noxious weeds on lands covered by this project and on adjacent lands. Noxious weed treatment and control will be done as necessary to promote revegetation with native plants and prevent the spread of noxious weeds. Prevention methods will be implemented during and after reclamation activities of the mill site to reduce the spread of noxious weeds or the invasion of disturbed areas by undesirable plant species. These prevention methods include:

- Removing mud, dirt, and plant parts from off-road equipment used at other projects before moving them into the mill site
- Using defined and established travel routes to minimize soil disturbance
- Using weed-free seed and mulch to protect establishing vegetation

The mine operator will be responsible for weed identification and control on disturbed and reclaimed areas within the limits of the mill site and associated roads. The mine operator is responsible for consultation with the USFS and/or local authorities for acceptable weed control methods. During reclamation activities, any noxious or invasive species observed within the mill site area will be treated in a manner consistent with the USFS standards.

Use of pesticides and herbicides will comply with applicable federal/state laws. Prior to the use of pesticides or herbicides, the mine operator will obtain from the USFS written approval of a plan showing the type and quantity of material to be used, pest(s) to be controlled, method of application, location of storage and disposal of containers, and any other information deemed necessary. Emergency use of pesticides or herbicides will be approved in writing by the USFS prior to use.

## **1.8 Revegetation Monitoring**

Revegetation monitoring will occur throughout the bonding period.

### **1.8.1 Vegetation Reference Area**

The Vegetation Reference Area will be used as a standard of comparison for determining revegetation success for perennial vegetation cover. The Vegetation Reference Area is identified in Figure 3 of Appendix A and consists of a 1-acre area that has not been



disturbed during operations. It is located immediately south east of the mill site and contains established native vegetation cover equivalent to the undisturbed areas of the mill site. Upon final approval of the location by the MMD, the Vegetation Reference Area will be staked to designate the area. The quantification of vegetation in this area will be provided under a separate cover.

### **1.8.2 Methodology and Success Criteria**

Reclamation revegetation monitoring will be completed using the Line Interception methodology for cover. Data gathered from the Vegetation Reference Area will constitute the basis of performance standards for determining reclamation success. Revegetation monitoring locations, methods, and success criteria will be approved by the MMD prior to monitoring commencement.

#### **1.8.2.1 Line Interception (Overall Vegetation)**

Vegetation cover monitoring will be conducted by Line Interception, a vegetation monitoring technique used to determine the vegetative cover in sparse, low-growing vegetation. The data obtained from Line Interception within an area of ongoing reclamation will be compared to vegetative cover in a pre-designated reference area (the Vegetation Reference Area).

Line Interception consists of determining the percent cover by summing the relative lengths of a transect that is covered, including vegetation, litter, rock, and bare ground. Transects will be randomly placed within the reclamation area and are expected to be 10 to 100m in length. Points along each transect may be located randomly or systematically at one or half-meter intervals. Total vegetation cover is determined by the first interception or hit (i.e., vegetation, rock, litter, etc.). Each transect with a minimum of 50 sample points is counted as one sampling unit. A minimum of 15 transects will be included within the reclamation area.

#### **1.8.2.2 Success Criteria**

Revegetation success criteria is based on professional judgment of reasonable expectations for revegetation on the southern edge of the Gila National Forest over the course of a 12-year FA bonding period. An inspection of the reclaimed areas will be conducted on an annual basis and will include vegetative cover and monitoring of erosional features. Success criteria may be revised by the USFS or the MMD based on agency-specific requirements.

Vegetation cover at the mill site will be considered successfully attained if the native vegetative species in the reclamation area equals at least 75% percent of the vegetation cover in the Vegetation Reference Area and invasive species percent cover does not exceed that of the Vegetation Reference Area.

Shrub cover/density per acre will be considered successfully attained if the reclaimed area shrub density per acre equals at least 35 percent of the shrub density of the Vegetation Reference Area.

### **1.8.3 Bond Release**

Once the FA bond period is attained and the vegetative success criteria standards are met, LNA will prepare and submit a letter requesting the BLM and MMD release LNA from financial responsibility for the mining area. MMD requires a minimum 12-year period after reclamation for withholding release of FA for third-party revegetation costs.

## **1.9 Other Regulatory Requirements**

LNA has evaluated the need to obtain alternative permit coverage during reclamation activities. Each of these are addressed further below.

### **1.9.1 Air Permit**

LNA has addressed the need to acquire an air quality permit prior to starting reclamation activities. LNA has determined that the potential emission rates from the reclamation activities described in this Plan are below the threshold values for which an air permit is required (10 pounds per hour or 25 tons per year of any regulated air contaminant), as well as a Notice of Intent (10 tons per year of any regulated air contaminant or 1 ton per year of lead). LNA will apply appropriate dust control measures to ensure fugitive emissions are minimized during reclamation activities.

### **1.9.2 Stormwater Discharge Permit**

LNA has reviewed the need to acquire a stormwater discharge permit prior to starting reclamation activities at the Facility. LNA will submit a Notice of Intent (NOI) to apply for stormwater coverage through the National Pollutant Discharge Elimination System (NPDES) prior to starting this work.

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## SECTION 2

### MINE SITE RECLAMATION PLAN

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Section 1 of this Reclamation Plan addresses the recalamtion activities that are expected to occur at the Facility Mill Site. Section 1 does not address reclamation activites that are expected to occur at the Facility mining operations shown in Figure 4. These are briefly described within Section 2 of this document.

#### 2.1 Facility Mining Operations

LNA anticipates that a separate reclamation plan, or a revision to this Plan, will need to be made in order to address reclamation within the mining operations. LNA believes that many of the same recalamtion practices described within this Plan will also be applicable to the mining operations.

According to the September 1996 Plan of Operations, the mining operations located within the Facility have different properties and different uses. Figure 5 shows a closeup image of the identified quarries within the Facility. The table below provides a characterization of each pit and the previously determined expectations for reclamation.

**Table 2-1: Quarry Areas**

<b>Quarry ID</b>	<b>Material Type</b>	<b>Reclamation Required</b>	<b>Comments</b>
LP1	Limestone	No	To be left for use by USFS
LP2	Limestone	No	To be left for use by USFS
LP3	Limestone	Yes	
LP4	Limestone	Yes	
LP5	Limestone	Yes	
LP6	Limestone	No	To be left for use by USFS
LP7	Limestone	No	To be left for use by USFS

LNA proposes that reclamation of the mining operations would begin in 2022 and would apply to the applicable quarries listed above.

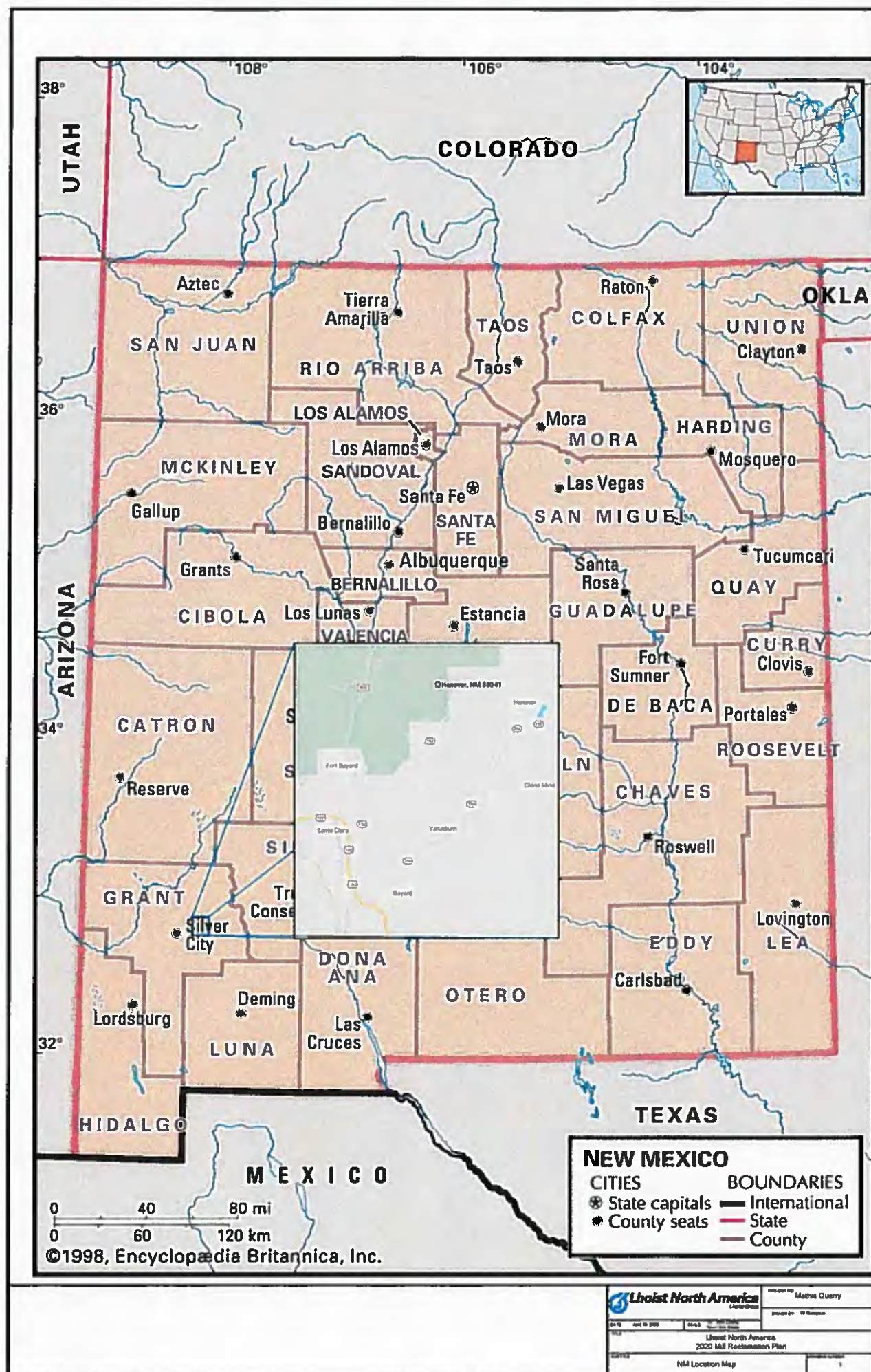
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**APPENDIX A**  
**FACILITY MAPS**

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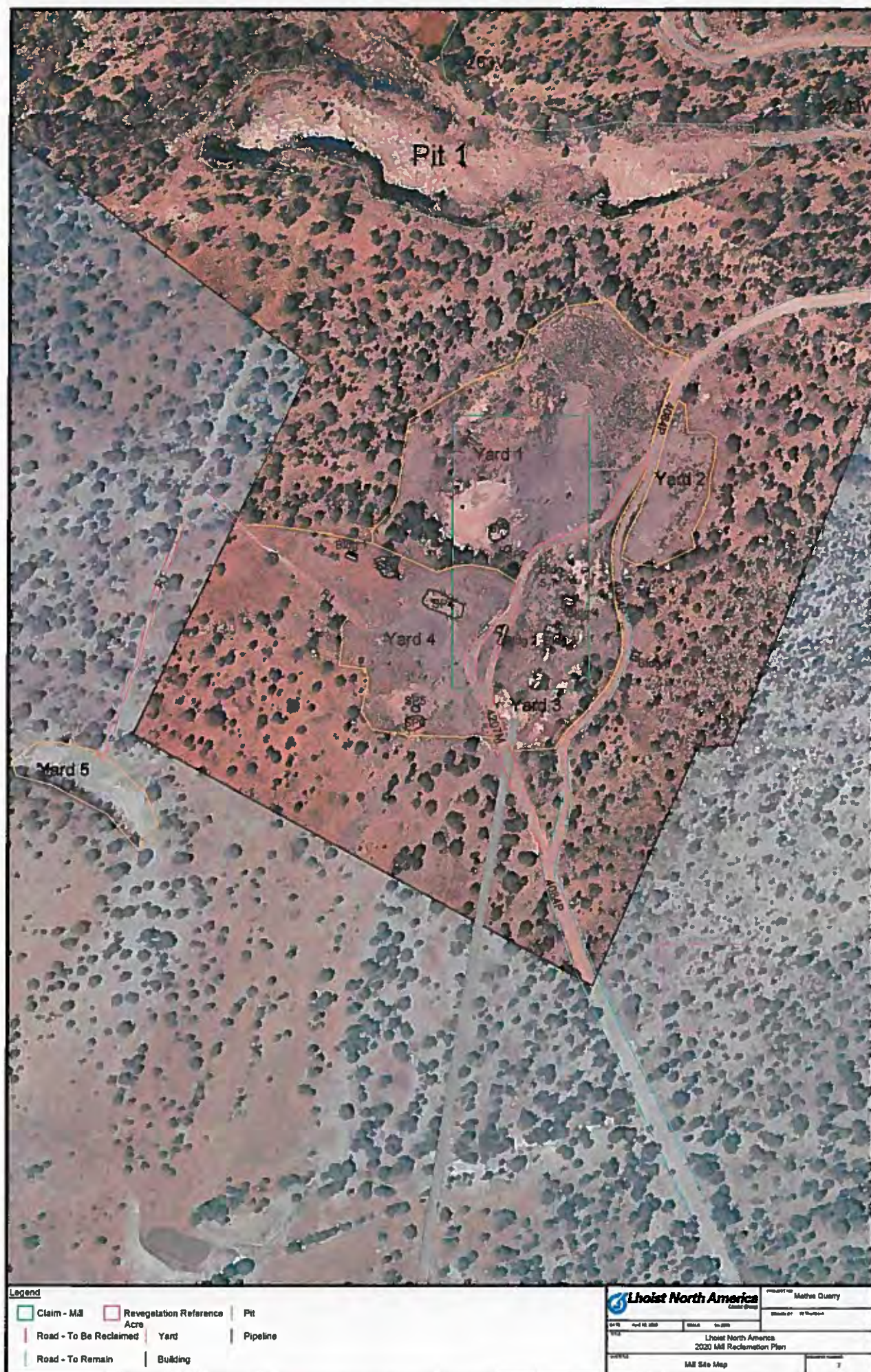


# Legend

<span style="border: 1px solid blue; padding: 2px;"> </span> Claim - Placer	<span style="border: 1px solid red; padding: 2px;"> </span> Revegetation Reference Area	<span style="border: 1px solid black; padding: 2px;"> </span> Pit	<span style="border: 1px solid black; padding: 2px;"> </span> Pipeline
<span style="border: 1px solid green; padding: 2px;"> </span> Claim - Mill	<span style="border: 1px solid red; padding: 2px;"> </span> Road - To Be Reclaimed	<span style="border: 1px solid black; padding: 2px;"> </span> Yard	
<span style="border: 1px solid red; padding: 2px;"> </span> Claim - Lode	<span style="border: 1px solid green; padding: 2px;"> </span> Road - To Remain	<span style="border: 1px solid black; padding: 2px;"> </span> Building	

		480-257-1400 Matthe Quarry	
		20000 00' W 1000000' N	
Date: April 10, 2020 Scale: 1:50000	Lhoist North America 2020 Mill Reclamation Plan		
2.0000 Full Matthe Site Map		2	







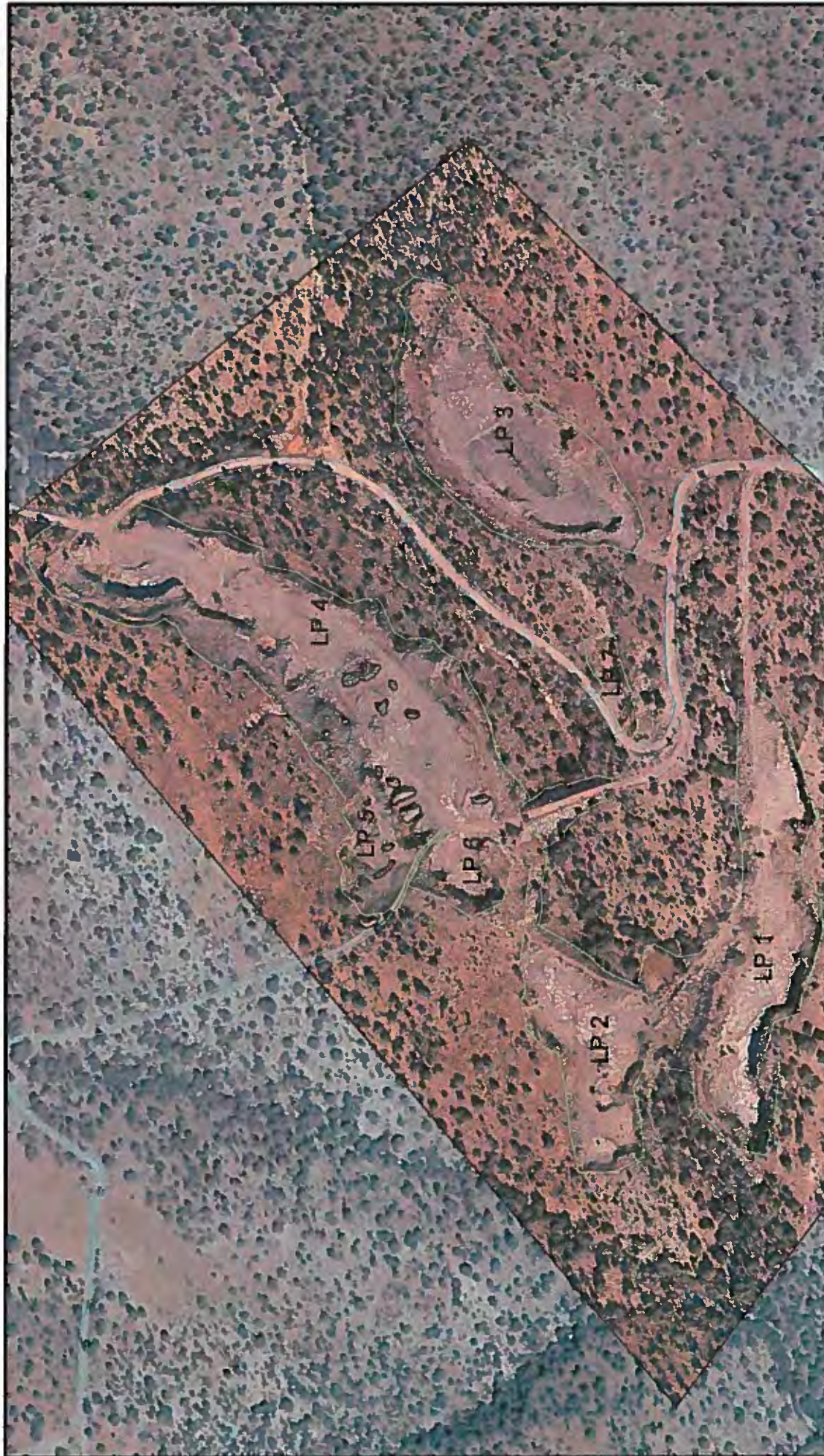


# **Legend**

<span style="border: 1px solid blue; padding: 2px;"> </span> Claim - Placer	<span style="border: 1px solid pink; padding: 2px;"> </span> Revegetation Reference Acre	Limestone Pit	Pipeline
<span style="border: 1px solid green; padding: 2px;"> </span> Claim - Mill	<span style="border: 1px solid red; padding: 2px;"> </span> Road - To Be Reclaimed	Yard	
<span style="border: 1px solid red; padding: 2px;"> </span> Claim - Lode	<span style="border: 1px solid blue; padding: 2px;"> </span> Road - To Remain	Building	

		200001100 Madras Quarry	
		200001100 200001100	
200001100	200001100	Lhoist North America 2000 Mill Reclamation Plan	
200001100		Full Madras Site Map	2





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<div> <div>Scale</div> <div>August 1, 2020</div> <div>1:10,000</div> </div>	<div> <div>Client</div> <div>Lhoist North America</div> </div>	<div> <div>Page</div> <div>4</div> </div>
<div> <div>Legend</div> <div> <div>PI</div> <div>Road - To Be Reclaimed</div> <div>Road - To Remain</div> </div> </div>		<div> <div>Project</div> <div>Mathias Quarry</div> </div>
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## **APPENDIX B**

### **RECLAMATION COST ESTIMATE**

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Closure Cost Estimate  
Property Information

Enter Data Below in Green and Blue Spaces

STANDARDIZED RECLAMATION COST ESTIMATOR

Version 1.4.1

Build 017b (Revised 16 May 2019)

Approved for use in Nevada, August 1, 2012

COST DATA FILE INFORMATION	
File Name:	200423_LNA_MathisSRCE_Version_1_4_1_017_NVb.xlsm
Cost Data File:	SRCE_Cost_Data_File_1_12_Std_2019.xlsm
Cost Data Date:	August 1, 2019
Cost Data Basis:	User Data Data Cost Units: Imperial
Author/Source:	Nevada Division of Environmental Protection (NDEP) & NV BLM

PROJECT INFORMATION	
Property/Mine Name:	Lhoist North America of AZ Inc Property Code:
Project Name:	Mathis Quarry
Date of Submittal:	April 30, 2020 Average Altitude: 6500 ft.
Select One:	<input type="radio"/> Notice or Sm Exploration Plan <input type="radio"/> Lg Exploration Plan <input checked="" type="radio"/> Mine Operation
Select One:	<input checked="" type="radio"/> Private Land <input type="radio"/> Public or Public/Private
Cost Estimate Type:	Surety
Cost Basis Category:	Northern Nevada -
Cost Basis Description:	Churchill, Douglas, Elko, Eureka, Humboldt, Lander, Lyon, Mineral, Pershing, Storey, Washoe, and White Pine Counties

**Closure Cost Estimate  
Cost Summary**

Project Name: Mathis Quarry  
Project Date: April 30, 2020  
Model Version: Version 1.4.1

File Name: 200423\_LNA\_MathisSRCE\_Version\_1\_4\_1\_017\_NVb.xlsm

<b>A. Earthwork/Recontouring</b>	<b>Labor <sup>(1)</sup></b>	<b>Equipment <sup>(2)</sup></b>	<b>Materials</b>	<b>Total</b>
Exploration	\$0	\$0	\$0	\$0
Exploration Roads & Drill Pads	\$0	\$0	\$0	\$0
Roads	\$758	\$1,912	\$0	\$2,668
Well Abandonment	\$0	\$0	\$0	\$0
Pits	\$0	\$0	N/A	\$0
Quarries & Borrow Areas	\$0	\$0	\$0	\$0
Underground Openings	\$0	\$0	\$0	\$0
Process Ponds	\$0	\$0	\$0	\$0
Heaps	\$0	\$0	\$0	\$0
Waste Rock Dumps	\$0	\$0	\$0	\$0
Landfills	\$0	\$0	\$0	\$0
Tailings	\$0	\$0	\$0	\$0
Foundation & Buildings Areas	\$1,344	\$3,543	\$0	\$4,887
Yards, Etc.	\$6,107	\$15,249	\$0	\$21,356
Drainage & Sediment Control	\$0	\$0	\$0	\$0
Generic Material Hauling	\$2,058	\$5,061	\$0	\$7,119
Other User Costs (from Other User sheet)	\$0	\$0	\$0	\$0
Other**				\$0
<b>Subtotal</b>	<b>\$10,265</b>	<b>\$25,765</b>	<b>\$0</b>	<b>\$36,030</b>
Mob/Demob if included in Other User sheet	\$0	\$0	\$0	\$0
Mob/Demob		\$14,307		\$14,307
<b>Subtotal "A"</b>	<b>\$10,265</b>	<b>\$40,072</b>	<b>\$0</b>	<b>\$50,337</b>
<b>B. Revegetation/Stabilization</b>	<b>Labor <sup>(1)</sup></b>	<b>Equipment <sup>(2)</sup></b>	<b>Materials</b>	<b>Total</b>
Exploration	\$0	\$0	\$0	\$0
Exploration Roads & Drill Pads	\$0	\$0	\$0	\$0
Roads	\$200	\$78	\$1,086	\$1,364
Well Abandonment			N/A	
Pits	\$0	\$0	\$0	\$0
Quarries & Borrow Areas	\$0	\$0	\$0	\$0
Underground Openings			N/A	
Process Ponds	\$0	\$0	\$0	\$0
Heaps	\$0	\$0	\$0	\$0
Waste Rock Dumps	\$0	\$0	\$0	\$0
Landfills	\$0	\$0	\$0	\$0
Tailings	\$0	\$0	\$0	\$0
Foundation & Buildings Areas	\$800	\$228	\$824	\$1,452
Yards, Etc.	\$1,524	\$579	\$15,653	\$17,756
Drainage & Sediment Control	\$0	\$0	\$0	\$0
Generic Material Hauling	\$300	\$114	\$312	\$726
Other User Costs (from Other User sheet)	\$0	\$0	\$0	\$0
Other**				\$0
<b>Subtotal "B"</b>	<b>\$2,624</b>	<b>\$997</b>	<b>\$17,677</b>	<b>\$21,298</b>
<b>C. Detoxification/Water Treatment/Disposal of Wastes**</b>	<b>Labor <sup>(1)</sup></b>	<b>Equipment <sup>(2)</sup></b>	<b>Materials</b>	<b>Total</b>
Process Ponds/Sludge				\$0
Heaps				\$0
Dumps (Waste & Landfill)				\$0
Tailings				\$0
Surplus Water Disposal				\$0
Monitoring				\$0
Miscellaneous				\$0
Solid Waste - On Site	\$0	\$0	N/A	\$0
Solid Waste - Off Site				\$960
Hazardous Materials				\$0
Hydrocarbon Contaminated Soils	\$0	\$0	\$0	\$0
Other User Costs (from Other User sheet)	\$0	\$0	\$0	\$0
Other**				\$0
<b>Subtotal "C"</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$960</b>
<b>D. Structure, Equipment and Facility Removal, and Misc.</b>	<b>Labor <sup>(1)</sup></b>	<b>Equipment <sup>(2)</sup></b>	<b>Materials</b>	<b>Total</b>
Foundation & Buildings Areas	\$49,442	\$8,759	\$0	\$58,201
Other Demolition	\$0	\$0	\$0	\$0
Equipment Removal	\$0	\$0	\$0	\$0
Fence Removal	\$0	\$0	\$0	\$0
Fence Installation	\$0	\$0	\$0	\$0
Culvert Removal	\$0	\$0	N/A	\$0
Pipe Removal	\$0	\$0	N/A	\$0
Powerline Removal	\$0			\$0
Transformer Removal	\$0			\$0
Rip-rap, rock lining, gabions	\$0	\$0	\$0	\$0
Other Misc. Costs	\$0	\$0	\$0	\$0
Other User Costs (from Other User sheet)	\$0	\$0	\$155,688	\$155,688
Other**				\$0
<b>Subtotal "D"</b>	<b>\$49,442</b>	<b>\$8,759</b>	<b>\$155,688</b>	<b>\$213,889</b>
<b>E. Monitoring</b>	<b>Labor <sup>(1)</sup></b>	<b>Equipment <sup>(2)</sup></b>	<b>Materials</b>	<b>Total</b>
Reclamation Monitoring and Maintenance	\$22,540	\$2,983	\$1,189	\$26,692
Ground and Surface Water Monitoring	\$0	\$0	\$0	\$0

**Closure Cost Estimate  
Cost Summary**

Project Name: Mathis Quarry  
Project Date: April 30, 2020  
Model Version: Version 1.4.1

File Name: 200423 LNA MathisSRCE Version 1 4 1 017 NVb.xlsm

Other User Costs (from Other User sheet)	\$0	\$0	\$0	\$0
<b>Subtotal "E"</b>	<b>\$22,540</b>	<b>\$2,963</b>	<b>\$1,189</b>	<b>\$26,692</b>
<b>F. Construction Management &amp; Support</b>	<b>Labor</b>	<b>Equipment <sup>(2)</sup></b>	<b>Materials</b>	<b>Total</b>
Construction Management	\$18,000	\$3,054	N/A	\$19,054
Construction Support	\$0	\$432	\$0	\$432
Road Maintenance	\$13,382	\$20,637	\$50,000	\$84,019
Other User Costs (from Other User sheet)	\$0	\$0	\$0	\$0
Other**				\$0
<b>Subtotal "F"</b>	<b>\$29,382</b>	<b>\$24,123</b>	<b>\$50,000</b>	<b>\$113,505</b>
<b>Subtotal Operational &amp; Maintenance Costs</b>	<b>Labor <sup>(1)</sup></b>	<b>Equipment <sup>(2)</sup></b>	<b>Materials <sup>(3)</sup></b>	<b>Total</b>
<b>Subtotal A through F</b>	<b>\$114,253</b>	<b>\$76,914</b>	<b>\$234,554</b>	<b>\$426,681</b>

\*\* Other Operator supplied costs - additional documentation required

Indirect Costs	Include?	Total
1. Engineering, Design and Construction (ED&C) Plan (7)		\$34,134
2. Contingency (8)		\$42,668
3. Insurance (9)	\$1,714	\$1,714
4. Performance Bond (10)		\$12,800
5. Contractor Profit (11)		\$42,668
6. Contract Administration (12)		\$42,668
7. Government Indirect Cost (13)		\$8,960
<b>Subtotal Add-On Costs</b>		<b>\$185,612</b>
Total Indirect Costs as % of Direct Cost		44%
<b>GRAND TOTAL</b>		<b>\$612,293</b>

**Administrative Cost Rates (%)**

	Cost Ranges for Indirect Cost Percentages			
	<=	<=	<=	>
1. Engineering, Design and Construction (ED&C) Plan (7)	\$1,000,000	\$25,000,000	\$25,000,000	Small Plan
Variable Rate	8%	6%	4%	0%
2. Contingency (8)	\$500,000	\$5,000,000	\$50,000,000	\$50,000,000
Variable Rate	10%	8%	6%	4%
3. Insurance (9)	1.5% of labor costs			
4. Bond (10)	3.0% of the O&M costs if O&M costs are >\$100,000			
5. Contractor Profit (11)	10% of the O&M costs			
6. Contract Administration (12)	\$1,000,000	\$25,000,000	\$25,000,000	
Variable Rate	10%	8%	6%	
Government Indirect Cost (13)	21% of contract administration			

**RECLAMATION COST ESTIMATION SUMMARY SHEET FOOTNOTES**

- Federal construction contracts require Davis-Bacon wage rates for contracts over \$2,000. Wage rate estimates may include base pay, payroll loading.
- The reclamation cost estimate must include the estimated plugging cost of at least one drill hole for each active drill rig in the project area. Where the
- Miscellaneous items should be itemized on accompanying worksheets.
- Fluid management should be calculated only when mineral processing activities are involved. Fluid management represents the costs of maintaining proper
- Handling of hazardous materials includes the cost of decontaminating, neutralizing, disposing, treating and/or isolating all hazardous materials used, produced,
- Any mitigation measures required in the Plan of Operations must be included in the reclamation cost estimate. Mitigation may include measures to avoid,
- Engineering, design and construction (ED&C) plans are often necessary to provide details on the reclamation needed to contract for the required work. To
- A contingency cost is included in the reclamation cost estimation to cover unforeseen cost elements. Calculate the contingency cost as a percentage of the
- Insurance premiums are calculated at 1.5% of the total labor costs. Enter the premium amount if liability insurance is not included in the itemized unit costs.
- Federal construction contracts exceeding \$100,000 require both a performance and a payment bond (Miller Act, 40 USC 270et seq.). Each bond premium is
- For Federal construction contracts, use 10% of estimated O&M cost for the contractor's profit.
- To estimate the contract administration cost, use 6 to 10% of the operational and maintenance (O&M) cost. Calculate the contract administration cost as a
- Government indirect cost rate is 21% of the contract administration costs.

# Closure Cost Estimate Other User

Project Name: Matha Quarry - Reclamation Plan  
 Date of Submission: April 30, 2020  
 File Name: 200423\_LMA\_MathasRCE\_Version\_1.4\_1\_017\_MVB.dam  
 Model Version: Version 1.4.1  
 Cost Data: User Data  
 Cost Data File: SRCE\_Cost\_Data\_File\_1\_12\_Sid\_2019.dam  
 Cost Estimate Type: Surety Cost Basis: Northern Nevada

Other Cost Items Calculated Elsewhere

ID Code	Description (required)	Facility Type	Quantity	Units	Total Capital Cost	Material Unit Cost	Labor Unit Cost	Equipment Operating Unit Cost	Cost Type	Total Cost	Comments
1	Shed 0.5' x 10' x 10' (Required)	Shed	1	Job	216,000	0	0	0	Material & Equipment	216,000	115,000 is only provided for BAA for removal of existing building and equipment
					216,000					216,000	

Note: Capital cost is lump sum & is not multiplied by the quantity.  
 Material, Labor and Equipment/Operating costs are unit costs (i.e. multiplied by the quantity).





# Closure Cost Estimate Roads

Project Name: Mathis Quarry - Reclamation Plan  
 Date of Submittal: April 30, 2020  
 File Name: 200423\_LNA\_MathisSRCE\_Version\_1\_4\_1\_017\_NVb.xlsm  
 Model Version: Version 1.4.1  
 Cost Data: User Data  
 Cost Data File: SRCE\_Cost\_Data\_File\_1\_12\_Sid\_2019.xlsm  
 Cost Estimate Type: Surety Cost Basis: Northern Nevada

Roads - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$0	\$0	N/A	\$0
Cover Placement Cost	\$616	\$1,482	N/A	\$2,078
Ripping/Scarifying Cost	\$1,401	\$2,550	N/A	\$3,950
Subtotal Earthworks	\$2,017	\$3,912		\$5,929
Revegetation Cost	\$200	\$76	\$1,088	\$1,364
<b>TOTALS</b>	<b>\$2,217</b>	<b>\$3,988</b>	<b>\$1,088</b>	<b>\$7,332</b>

Roads - User Input									
Facility Description					Physical (1) - MANDATORY				
					User Overrides				
Description (required)	ID Code	Type	Underlying Ground Slope % grade	Ungraded Slope H:V	Cut Slope degrees	Road Width ft	Road Length ft	Slope Replacement Percent %	Regrade Volume (if calculated elsewhere) cu yd
1 4207M		Project Road	8.0	12.0	1.0	25.0	1,285	0%	
2 R1		Access Road	2.0	10.0	1.0	15.0	1,152	0%	

Notes:  
 1. All Physical parameters must be input even if manual overrides for volume or area are used.  
 2. If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)  
 3. Because the work required for building roads with a dozer is similar to that required to regrade a road with a dozer, this sheet could be used to provide a rough estimate of road construction costs if a dozer is selected as the grading fleet.

Roads - User Input (cont.)				
Haul Road Safety Berms				
Description (required)	Berm Length ft	Berm Height ft	Berm Base Width ft	Number of Berms (2) (1 or 2 sides)
1 4207M				
2 R1				

(2) Enter 1 if berm on only one side of road, 2 if both sides of road are bermed.

Roads - User Input (cont.)									
Grading					Growth Media				
					Revegetation				
Description (required)	Regrading Material Condition (select)	Regrading Material Type (select)	Regrading Equipment Fleet (select)	No. of Excavators if grade >30% (select)	Growth Media Material Type (select)	Cover Placement Equipment Fleet (select)	Maximum Fleet Size (user override)	Seed Mix (select)	Mulch (select)
1 4207M	0.8	L3 - crushed	Med Excavator		Topsoil	Small Truck		User Mix 1	Straw Mulch
2 R1	0.8	L3 - crushed	Med Excavator		Topsoil	Small Truck		User Mix 1	Straw Mulch

Notes:  
 1. Material Types are used for density correction based on material densities in Caterpillar Performance Handbook material density table  
 2. If original slope >30% only excavators are allowed.

Roads - Calculations				
Regrading Volume and Footprint Volume				
Safety Berm Volume Calculation				
<div> <div></div> <div> <div></div> <div></div> </div> </div>				
<div> <div></div> <div> <div></div> <div></div> </div> </div>				

# Closure Cost Estimate Roads

Project Name: Mathis Quarry - Reclamation Plan  
 Date of Submittal: April 30, 2020  
 File Name: 200423\_LNA\_MathisSRCE\_Version\_1\_4\_1\_017\_NVb.xlsm  
 Model Version: Version 1.4.1  
 Cost Data: User Data  
 Cost Data File: SRCE\_Cost\_Data\_File\_1\_12\_Std\_2019.xlsm  
 Cost Estimate Type: Surety Cost Basis: Northern Nevada

Roads - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$0	\$0	N/A	\$0
Cover Placement Cost	\$618	\$1,482	N/A	\$2,078
Ripping/Scarifying Cost	\$140	\$450	N/A	\$590
Subtotal Earthworks	\$758	\$1,932		\$2,690
Revegetation Cost	\$200	\$178	\$1,088	\$1,302
<b>TOTALS</b>	<b>\$958</b>	<b>\$2,110</b>	<b>\$1,088</b>	<b>\$4,156</b>

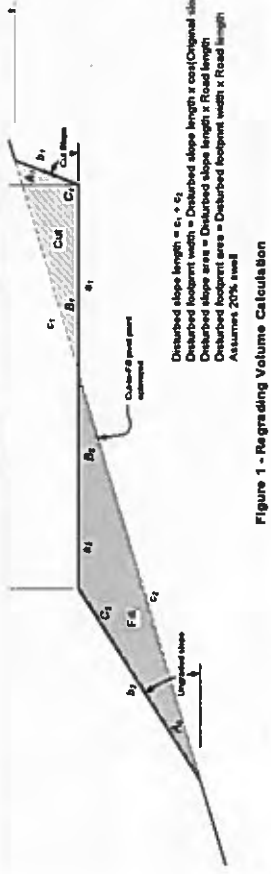


Figure 1 - Regrading Volume Calculation

We will not allow for slopes greater than 30%  
 For dozer regrading push distance = road width  
 Assumes dozer push is uphill  
 Assumes minimum push distance of 100 ft

## Ripping/Scarifying Calculations

Minimum 1 hr ripping/scarifying time per area  
 Number of passes = Final slope length ÷ Grader width  
 Travel distance = Number of passes x Road length  
 Total hours = (Travel distance ÷ Grader productivity) ÷ (Number of passes x Grader maneuver time)  
 For dozer regrading assumes push distance = 3 x road width

## Revegetation Calculations

Minimum of 1 acre crew time per area

## Roads - Regrading Costs

Description (required)	Regrading Volume (cy)	Recontouring Fleet	Fleet Productivity (cy/hr)	Total Fleet Hours (hr)	Total Labor Cost (\$)	Total Equipment Cost (\$)	Total Regrading Cost (\$)
1 4207M	0				\$0	\$0	\$0
2 R1	0				\$0	\$0	\$0

## Roads - Growth Media Costs

Description (required)	Growth Media Volume (cy)	Growth Media Replacement Fleet	Fleet Productivity (cy/hr)	Number of Tractor Scrapers	Total Fleet Hours (hr)	Total Labor Cost (\$)	Total Equipment Cost (\$)	Total Growth Media Cost (\$)
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4/27/2020

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# Closure Cost Estimate Roads

Project Name: Mathis Quarry - Reclamation Plan  
 Date of Submittal: April 30, 2020  
 File Name: 200423\_LNA\_MathisSRCE\_Version\_1\_4\_1\_017\_NVb.xlsm  
 Model Version: Version 1.4.1  
 Cost Data: User Data  
 Cost Data File: SRCE\_Cost\_Data\_File\_1\_12\_Std\_2019.xlsm  
 Cost Estimate Type: Surety Cost Basis: Northern Nevada

Roads - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$0	\$0	N/A	\$0
Cover Placement Cost	\$616	\$1,462	N/A	\$2,078
Ripping/Scarifying Cost	\$140	\$440	N/A	\$580
Subtotal Earthworks	\$756	\$1,902		\$2,658
Revegetation Cost	\$200	\$16	\$1,088	\$1,304
TOTALS	\$956	\$1,918	\$1,088	\$4,032
1 4207M	360	725068GOTR	508	4
2 R1	204	725068GOTR	475	4
	564			

1	\$308	\$731	\$1,039
2	\$308	\$731	\$1,039
	\$616	\$1,462	\$2,078

## Roads - Scarifying/Revegetation Costs

	Description (required)	Total Surface Area acres	Final Slope Length ft	Ripping/Scarifying Fleet	Ripping Hours hrs	Ripping Labor Costs \$	Ripping Equipment Cost \$	Total Ripping Costs \$	Revegetation Labor Cost \$	Revegetation Equipment Cost \$	Revegetation Material Cost \$	Total Revegetation Cost \$
1 4207M		0.67	23.0	DDR	1	\$70	\$225	\$295	\$100	\$38	\$694	\$832
2 R1		0.30	14.0	DDR	1	\$70	\$225	\$295	\$100	\$38	\$394	\$532
		1.06			2	\$140	\$450	\$590	\$200	\$76	\$1,088	\$1,344

# Closure Cost Estimate Haul Material

Project Name: Mathis Quarry - Reclamation Plan  
Date of Submittal: April 30, 2020  
File Name: 200423\_LVA\_MathisSRCE\_Version\_1\_4\_1\_017\_NWb.xlsm  
Model Version: Version 1.4.1  
Cost Data: User Data  
Cost Data File: SRCE\_Cost\_Data\_File\_1\_12\_Sld\_2019.xlsm  
Cost Estimate Type: Surety Cost Basis: Northern Nevada

Generic Material Hauling - Cost Summary			
	Labor	Equipment	Materials
Hauling/Crushing/Screening/Compaction	\$27.1	\$2,133	\$3,117
Cover Placement Cost	\$0	\$0	\$0
Total Placement Cost	\$27.1	\$2,133	\$3,117
Replanting/Scarification Cost	\$115	\$1,075	\$1,190
Revegetation Cost	\$122	\$114	\$118
TOTALS	\$234.5	\$3,322	\$5,425

Generic Material Hauling - User Input																		
Facility Description																		
Physical			Hauled Material			Crushing & Screening				Cover		Growth Media						
Description (required)	ID Code	Type	Final Surface Area (square feet)	Average Replanting Distance (feet)	Material Volume Required (cubic yards)	Distance from Borrow Source (feet)	Slope to Borrow Source (%)	Crush Material	Screen Material	Loss to Crushing/Screening (%)	Distance to Placement Location (ft)	Slope to Placement Location (%)	Cover Thickness (inches)	Distance to Cover Borrow Source (feet)	Slope to Cover Borrow Source (%)	Growth Media Thickness (inches)	Distance to Growth Media Borrow Source (feet)	Slope to Growth Media Borrow Source (%)
1 BP1		Stockpile	0.04	60	2.1	3,400	-4.0	No	No	0%	0	0.0	0	0	0.0	0	4,500	0.0
2 BP2		Stockpile	0.04	50	5	3,400	-3.5	No	No	0%	0	0.0	0	0	0.0	0	4,800	0.0
3 BP3		Stockpile	0.03	50	5	3,400	-3.5	No	No	0%	0	0.0	0	0	0.0	0	4,800	0.0

- Notes:
- Input distance to crusher if material to be crushed
  - Input distance from crusher to placement if material to be crushed
  - If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of light travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)

Generic Material Hauling - User Input (cont.)													
Facility Description													
Description (required)	Hauling Material			Cover		Growth Media		Revegetation					
	Haul Material Type (select)	Material Hauling Plant Size (user override)	Each Plant Size (square feet)	Compact After Placement?	Cover Placement Plant Type (select)	Maximum Plant Size (user override)	Growth Media Equipment Type (select)	Maximum Plant Size (user override)	Seed Mix (select)	Match Type (select)	Fertilizer Type (select)	Specify/Map RT (select)	Specify/Map Paving Prod (select)
BP1	Stems - crushed Small Truck	Small Truck	No	No	Small Truck	Small Truck	Small Truck	Upper Mix 1	Screen Match	None	Yes	Small Decar	Small Decar
BP2	Stems - crushed Small Truck	Small Truck	No	No	Small Truck	Small Truck	Small Truck	Upper Mix 1	Screen Match	None	Yes	Small Decar	Small Decar
BP3	Stems - crushed Small Truck	Small Truck	No	No	Small Truck	Small Truck	Small Truck	Upper Mix 1	Screen Match	None	Yes	Small Decar	Small Decar

- Notes:
- Material Types are used for density correction based on material densities in Caterpillar Performance Handbook material density table

Generic Material Hauling - Load, Haul, Place and Grade									
Facility Description									
Material Haulage					Crush and/or Compact				
Description (Required)	Material Volume to Crusher (cubic yards)	Final Material Volume (cubic yards)	Material Haulage Plant (select)	Number of Trucks/Scrapers	Total Hauling Hours	Hauling Equipment Cost (\$)	Crush/Screen Equipment Cost (\$)	Compaction Equipment Cost (\$)	Total Cost (\$)
1 BP1	221	221	7250000DTR	8	1	\$306	\$731	\$0	\$1,037
2 BP2	9	9	7250000DTR	475	1	\$306	\$731	\$0	\$1,037
3 BP3	85	85	7250000DTR	475	1	\$306	\$731	\$0	\$1,037
TOTALS	285	285			3	\$924	\$2,163	\$0	\$3,087

Note: Final Material Volume includes allowance for additional material needed to crush/screening plant based on Loss to Crushing/Screening input above.

Generic Material Hauling - Cover and Growth Media Costs									
Facility Description									
Cover Placement					Growth Media Placement				
Description (Required)	Cover Volume (cubic yards)	Cover Placement Plant (select)	Cover Plant Productivity (cubic yards per hour)	Total Covering Hours	Total Covering Cost (\$)	Growth Media Volume (cubic yards)	Growth Media Placement Plant (select)	Growth Media Plant Productivity (cubic yards per hour)	Total Growth Media Cost (\$)
1 BP1					\$0	2	7250000DTR	475	\$1,037
2 BP2					\$0	475	7250000DTR	475	\$1,037
3 BP3					\$0	18	7250000DTR	475	\$1,037
TOTALS					\$0	43			\$3,117

Generic Material Hauling - Scarifying/Revegetation Costs									
Facility Description									
Description (Required)	Scarifying Volume (cubic yards)	Scarifying Plant (select)	Plant Productivity (cubic yards per hour)	Total Scarifying Hours	Total Scarifying Cost (\$)	Revegetation Volume (cubic yards)	Revegetation Plant (select)	Plant Productivity (cubic yards per hour)	Total Revegetation Cost (\$)
1 BP1					\$0				\$0
2 BP2					\$0				\$0
3 BP3					\$0				\$0
TOTALS					\$0				\$0

Closure Cost Estimate  
Haul Material

Project Name: Mathis Quarry - Reclamation Plan  
Date of Submittal: April 30, 2020  
File Name: 200423\_LVA\_MathisSRCE\_Version\_1.4\_1\_017\_NVb.xlsm  
Model Version: Version 1.4.1  
Cost Data: User Data  
Cost Data File: SRCE\_Cost\_Data\_File\_1\_12\_Sud\_2018.xlsm  
Cost Estimate Type: Surety Cost Basis: Northern Nevada

Generic Material Hauling - Cost Summary									
	Labor	Equipment	Materials	Totals					
Hauling/Quarry/Screen/Compact	\$22.4	\$2,100	N/A	\$3,117					
Cover Placement Cost	\$0	\$0	N/A	\$0					
Total Placement Cost	\$22.4	\$2,100	N/A	\$3,117					
Ripping/Scarfing Cost	\$210	\$875	N/A	\$1,085					
Subtotal Earthworks	\$232.4	\$3,075	\$0	\$7,119					
Revegetation Cost	\$302	\$114	\$372	\$728					
<b>TOTALS</b>	<b>\$534.4</b>	<b>\$4,189</b>	<b>\$372</b>	<b>\$7,255</b>					

Description (Required)	Total Surface Area (acres)	Ripping/Scarfing Plant	Scarfing/ Ripping Hours	Scarfing/ Ripping Equipment Cost \$	Total Scarfing/ Ripping Cost \$	Revegetation Material Cost \$	Revegetation Equipment Cost \$	Total Revegetation Cost \$
1 BP1	0.10	D6R	0	\$70	\$225	\$100	\$38	\$242
2 BP4	0.10	D6R	0	\$70	\$225	\$100	\$38	\$242
3 BP4	0.10	D6R	0	\$70	\$225	\$100	\$38	\$242
	0.30			\$210	\$675	\$300	\$114	\$728

Closure Cost Estimate  
Foundations & Buildings

Project Name: Mathis Quarry - Reclamation Plan  
Date of Submission: April 30, 2020  
File Name: 2004123\_LMA\_MathisSRCE\_Version\_1.4\_1\_017\_MVD.shtm  
Model Version: Version 1.4.1  
Cost Date: User Data  
Cost Data File: SRCE\_Cost\_Data\_File\_1.12\_Srd\_2019.shtm  
Cost Estimate Type: Runny  
Cost Basis: Northern Nevada

Buildings & Foundation Demolition Cost Summary				
Building Demolition Cost	Labor	Equipment	Materials	Totals
Building Demolition Cost	\$3,235	\$2,300	N/A	\$5,535
Wall Demolition Cost	\$4,510	N/A	N/A	\$4,510
Slab Demolition Cost	\$710	\$2,710	N/A	\$3,420
Other Removal Cost	\$40,225	N/A	\$0	\$40,225
Other Foundation Cost	\$0	\$3,180	N/A	\$3,180
Other Foundation Cost	\$0	\$1,700	N/A	\$1,700
Other Foundation Cost	\$1,241	\$3,141	N/A	\$4,382
Other Foundation Cost	\$0	\$2,200	N/A	\$2,200
Other Foundation Cost	\$0	\$1,534	N/A	\$1,534
Other Foundation Cost	\$0	\$1,534	N/A	\$1,534

Buildings & Foundation - User Input									
Physical - MANDATORY									
You must fill in ALL green cells and relevant blue cells in this section for each building or facility									
Description (required)	Code	Type	Length ft	Width ft	Elev Height ft	Slab Thickness in	Foundation Wall Thickness in	Foundation Wall Height ft	Average Building Area Sq Ft (including surrounding landscape)
1 Slab 1	Concrete	Slab & Building	33	33	10	0	0	10	0.00
2 Slab 2	Concrete	Slab & Building	33	33	10	0	0	10	0.00
3 Slab 3	Concrete	Slab & Building	33	33	10	0	0	10	0.00
4 Slab 4	Concrete	Slab & Building	33	33	10	0	0	10	0.00
5 Slab 5	Concrete	Slab & Building	33	33	10	0	0	10	0.00
6 Slab 6	Concrete	Slab & Building	33	33	10	0	0	10	0.00
7 Slab 7	Concrete	Slab & Building	33	33	10	0	0	10	0.00
8 Slab 8	Concrete	Slab & Building	33	33	10	0	0	10	0.00
9 Slab 9	Concrete	Slab & Building	33	33	10	0	0	10	0.00
10 Slab 10	Concrete	Slab & Building	33	33	10	0	0	10	0.00
11 Slab 11	Concrete	Slab & Building	33	33	10	0	0	10	0.00
12 Slab 12	Concrete	Slab & Building	33	33	10	0	0	10	0.00
13 Slab 13	Concrete	Slab & Building	33	33	10	0	0	10	0.00
14 Slab 14	Concrete	Slab & Building	33	33	10	0	0	10	0.00
15 Slab 15	Concrete	Slab & Building	33	33	10	0	0	10	0.00
16 Slab 16	Concrete	Slab & Building	33	33	10	0	0	10	0.00
17 Slab 17	Concrete	Slab & Building	33	33	10	0	0	10	0.00
18 Slab 18	Concrete	Slab & Building	33	33	10	0	0	10	0.00
19 Slab 19	Concrete	Slab & Building	33	33	10	0	0	10	0.00
20 Slab 20	Concrete	Slab & Building	33	33	10	0	0	10	0.00
21 Slab 21	Concrete	Slab & Building	33	33	10	0	0	10	0.00
22 Slab 22	Concrete	Slab & Building	33	33	10	0	0	10	0.00
23 Slab 23	Concrete	Slab & Building	33	33	10	0	0	10	0.00
24 Slab 24	Concrete	Slab & Building	33	33	10	0	0	10	0.00
25 Slab 25	Concrete	Slab & Building	33	33	10	0	0	10	0.00
26 Slab 26	Concrete	Slab & Building	33	33	10	0	0	10	0.00
27 Slab 27	Concrete	Slab & Building	33	33	10	0	0	10	0.00
28 Slab 28	Concrete	Slab & Building	33	33	10	0	0	10	0.00
29 Slab 29	Concrete	Slab & Building	33	33	10	0	0	10	0.00
30 Slab 30	Concrete	Slab & Building	33	33	10	0	0	10	0.00
31 Slab 31	Concrete	Slab & Building	33	33	10	0	0	10	0.00
32 Slab 32	Concrete	Slab & Building	33	33	10	0	0	10	0.00
33 Slab 33	Concrete	Slab & Building	33	33	10	0	0	10	0.00
34 Slab 34	Concrete	Slab & Building	33	33	10	0	0	10	0.00
35 Slab 35	Concrete	Slab & Building	33	33	10	0	0	10	0.00
36 Slab 36	Concrete	Slab & Building	33	33	10	0	0	10	0.00
37 Slab 37	Concrete	Slab & Building	33	33	10	0	0	10	0.00
38 Slab 38	Concrete	Slab & Building	33	33	10	0	0	10	0.00
39 Slab 39	Concrete	Slab & Building	33	33	10	0	0	10	0.00
40 Slab 40	Concrete	Slab & Building	33	33	10	0	0	10	0.00
41 Slab 41	Concrete	Slab & Building	33	33	10	0	0	10	0.00
42 Slab 42	Concrete	Slab & Building	33	33	10	0	0	10	0.00
43 Slab 43	Concrete	Slab & Building	33	33	10	0	0	10	0.00
44 Slab 44	Concrete	Slab & Building	33	33	10	0	0	10	0.00
45 Slab 45	Concrete	Slab & Building	33	33	10	0	0	10	0.00
46 Slab 46	Concrete	Slab & Building	33	33	10	0	0	10	0.00
47 Slab 47	Concrete	Slab & Building	33	33	10	0	0	10	0.00
48 Slab 48	Concrete	Slab & Building	33	33	10	0	0	10	0.00
49 Slab 49	Concrete	Slab & Building	33	33	10	0	0	10	0.00
50 Slab 50	Concrete	Slab & Building	33	33	10	0	0	10	0.00
51 Slab 51	Concrete	Slab & Building	33	33	10	0	0	10	0.00
52 Slab 52	Concrete	Slab & Building	33	33	10	0	0	10	0.00
53 Slab 53	Concrete	Slab & Building	33	33	10	0	0	10	0.00
54 Slab 54	Concrete	Slab & Building	33	33	10	0	0	10	0.00
55 Slab 55	Concrete	Slab & Building	33	33	10	0	0	10	0.00
56 Slab 56	Concrete	Slab & Building	33	33	10	0	0	10	0.00
57 Slab 57	Concrete	Slab & Building	33	33	10	0	0	10	0.00
58 Slab 58	Concrete	Slab & Building	33	33	10	0	0	10	0.00
59 Slab 59	Concrete	Slab & Building	33	33	10	0	0	10	0.00
60 Slab 60	Concrete	Slab & Building	33	33	10	0	0	10	0.00
61 Slab 61	Concrete	Slab & Building	33	33	10	0	0	10	0.00
62 Slab 62	Concrete	Slab & Building	33	33	10	0	0	10	0.00
63 Slab 63	Concrete	Slab & Building	33	33	10	0	0	10	0.00
64 Slab 64	Concrete	Slab & Building	33	33	10	0	0	10	0.00
65 Slab 65	Concrete	Slab & Building	33	33	10	0	0	10	0.00
66 Slab 66	Concrete	Slab & Building	33	33	10	0	0	10	0.00
67 Slab 67	Concrete	Slab & Building	33	33	10	0	0	10	0.00
68 Slab 68	Concrete	Slab & Building	33	33	10	0	0	10	0.00
69 Slab 69	Concrete	Slab & Building	33	33	10	0	0	10	0.00
70 Slab 70	Concrete	Slab & Building	33	33	10	0	0	10	0.00
71 Slab 71	Concrete	Slab & Building	33	33	10	0	0	10	0.00
72 Slab 72	Concrete	Slab & Building	33	33	10	0	0	10	0.00
73 Slab 73	Concrete	Slab & Building	33	33	10	0	0	10	0.00
74 Slab 74	Concrete	Slab & Building	33	33	10	0	0	10	0.00
75 Slab 75	Concrete	Slab & Building	33	33	10	0	0	10	0.00
76 Slab 76	Concrete	Slab & Building	33	33	10	0	0	10	0.00
77 Slab 77	Concrete	Slab & Building	33	33	10	0	0	10	0.00
78 Slab 78	Concrete	Slab & Building	33	33	10	0	0	10	0.00
79 Slab 79	Concrete	Slab & Building	33	33	10	0	0	10	0.00
80 Slab 80	Concrete	Slab & Building	33	33	10	0	0	10	0.00
81 Slab 81	Concrete	Slab & Building	33	33	10	0	0	10	0.00
82 Slab 82	Concrete	Slab & Building	33	33	10	0	0	10	0.00
83 Slab 83	Concrete	Slab & Building	33	33	10	0	0	10	0.00
84 Slab 84	Concrete	Slab & Building	33	33	10	0	0	10	0.00
85 Slab 85	Concrete	Slab & Building	33	33	10	0	0	10	0.00
86 Slab 86	Concrete	Slab & Building	33	33	10	0	0	10	0.00
87 Slab 87	Concrete	Slab & Building	33	33	10	0	0	10	0.00
88 Slab 88	Concrete	Slab & Building	33	33	10	0	0	10	0.00
89 Slab 89	Concrete	Slab & Building	33	33	10	0	0	10	0.00
90 Slab 90	Concrete	Slab & Building	33	33	10	0	0	10	0.00
91 Slab 91	Concrete	Slab & Building	33	33	10	0	0	10	0.00
92 Slab 92	Concrete	Slab & Building	33	33	10	0	0	10	0.00
93 Slab 93	Concrete	Slab & Building	33	33	10	0	0	10	0.00
94 Slab 94	Concrete	Slab & Building	33	33	10	0	0	10	0.00
95 Slab 95	Concrete	Slab & Building	33	33	10	0	0	10	0.00
96 Slab 96	Concrete	Slab & Building	33	33	10	0	0	10	0.00
97 Slab 97	Concrete	Slab & Building	33	33	10	0	0	10	0.00
98 Slab 98	Concrete	Slab & Building	33	33	10	0	0	10	0.00
99 Slab 99	Concrete	Slab & Building	33	33	10	0	0	10	0.00
100 Slab 100	Concrete	Slab & Building	33	33	10	0	0	10	0.00

Notes:  
1 Foundation cover only calculated to cover slab. Growth media estimated over entire footprint area.  
2 4 Slope from facility to borrow source as 2:1, covered spread time may be underestimated due to limitation of uphill travel time curves and downhill spread tables from CAT Handbook (see Probable Spread).

Buildings & Foundation - User Input (cont.)											
You must fill in ALL green cells and relevant blue cells in this section for each building or facility											
Description (required)	Construction Materials				Slab Demolition		Foundation Cover		Growth Media		Permeation
	Building Type (select)	Foundation Type (select)	Slab Demolition Method (select)	Slab Demolition Equipment (select)	Cover Material Type (select)	Cover Placement Equipment (select)	Growth Media Material Type (select)	Maximum Flood Size (enter number)	Seed Size (select)	Media (select)	
1 Slab 1	See, concrete	Cover 1 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
2 Slab 2	See, concrete	Cover 2 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
3 Slab 3	See, concrete	Cover 3 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
4 Slab 4	See, concrete	Cover 4 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
5 Slab 5	See, concrete	Cover 5 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
6 Slab 6	See, concrete	Cover 6 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
7 Slab 7	See, concrete	Cover 7 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
8 Slab 8	See, concrete	Cover 8 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
9 Slab 9	See, concrete	Cover 9 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
10 Slab 10	See, concrete	Cover 10 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
11 Slab 11	See, concrete	Cover 11 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
12 Slab 12	See, concrete	Cover 12 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
13 Slab 13	See, concrete	Cover 13 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
14 Slab 14	See, concrete	Cover 14 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
15 Slab 15	See, concrete	Cover 15 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
16 Slab 16	See, concrete	Cover 16 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
17 Slab 17	See, concrete	Cover 17 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
18 Slab 18	See, concrete	Cover 18 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
19 Slab 19	See, concrete	Cover 19 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
20 Slab 20	See, concrete	Cover 20 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
21 Slab 21	See, concrete	Cover 21 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
22 Slab 22	See, concrete	Cover 22 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
23 Slab 23	See, concrete	Cover 23 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
24 Slab 24	See, concrete	Cover 24 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
25 Slab 25	See, concrete	Cover 25 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
26 Slab 26	See, concrete	Cover 26 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
27 Slab 27	See, concrete	Cover 27 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
28 Slab 28	See, concrete	Cover 28 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
29 Slab 29	See, concrete	Cover 29 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
30 Slab 30	See, concrete	Cover 30 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
31 Slab 31	See, concrete	Cover 31 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
32 Slab 32	See, concrete	Cover 32 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
33 Slab 33	See, concrete	Cover 33 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
34 Slab 34	See, concrete	Cover 34 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
35 Slab 35	See, concrete	Cover 35 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
36 Slab 36	See, concrete	Cover 36 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
37 Slab 37	See, concrete	Cover 37 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
38 Slab 38	See, concrete	Cover 38 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
39 Slab 39	See, concrete	Cover 39 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
40 Slab 40	See, concrete	Cover 40 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
41 Slab 41	See, concrete	Cover 41 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
42 Slab 42	See, concrete	Cover 42 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
43 Slab 43	See, concrete	Cover 43 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
44 Slab 44	See, concrete	Cover 44 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
45 Slab 45	See, concrete	Cover 45 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
46 Slab 46	See, concrete	Cover 46 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
47 Slab 47	See, concrete	Cover 47 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
48 Slab 48	See, concrete	Cover 48 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
49 Slab 49	See, concrete	Cover 49 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
50 Slab 50	See, concrete	Cover 50 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
51 Slab 51	See, concrete	Cover 51 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
52 Slab 52	See, concrete	Cover 52 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
53 Slab 53	See, concrete	Cover 53 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
54 Slab 54	See, concrete	Cover 54 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
55 Slab 55	See, concrete	Cover 55 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
56 Slab 56	See, concrete	Cover 56 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
57 Slab 57	See, concrete	Cover 57 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
58 Slab 58	See, concrete	Cover 58 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
59 Slab 59	See, concrete	Cover 59 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
60 Slab 60	See, concrete	Cover 60 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
61 Slab 61	See, concrete	Cover 61 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
62 Slab 62	See, concrete	Cover 62 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
63 Slab 63	See, concrete	Cover 63 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
64 Slab 64	See, concrete	Cover 64 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
65 Slab 65	See, concrete	Cover 65 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
66 Slab 66	See, concrete	Cover 66 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
67 Slab 67	See, concrete	Cover 67 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
68 Slab 68	See, concrete	Cover 68 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
69 Slab 69	See, concrete	Cover 69 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
70 Slab 70	See, concrete	Cover 70 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
71 Slab 71	See, concrete	Cover 71 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
72 Slab 72	See, concrete	Cover 72 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
73 Slab 73	See, concrete	Cover 73 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
74 Slab 74	See, concrete	Cover 74 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
75 Slab 75	See, concrete	Cover 75 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
76 Slab 76	See, concrete	Cover 76 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
77 Slab 77	See, concrete	Cover 77 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
78 Slab 78	See, concrete	Cover 78 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
79 Slab 79	See, concrete	Cover 79 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
80 Slab 80	See, concrete	Cover 80 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
81 Slab 81	See, concrete	Cover 81 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
82 Slab 82	See, concrete	Cover 82 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
83 Slab 83	See, concrete	Cover 83 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
84 Slab 84	See, concrete	Cover 84 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
85 Slab 85	See, concrete	Cover 85 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
86 Slab 86	See, concrete	Cover 86 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
87 Slab 87	See, concrete	Cover 87 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
88 Slab 88	See, concrete	Cover 88 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
89 Slab 89	See, concrete	Cover 89 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
90 Slab 90	See, concrete	Cover 90 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
91 Slab 91	See, concrete	Cover 91 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
92 Slab 92	See, concrete	Cover 92 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
93 Slab 93	See, concrete	Cover 93 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
94 Slab 94	See, concrete	Cover 94 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
95 Slab 95	See, concrete	Cover 95 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
96 Slab 96	See, concrete	Cover 96 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
97 Slab 97	See, concrete	Cover 97 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
98 Slab 98	See, concrete	Cover 98 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
99 Slab 99	See, concrete	Cover 99 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes
100 Slab 100	See, concrete	Cover 100 in 160 mm thick	Break & Carry	Break & Carry	Concrete	Concrete	Gravel	Gravel	Gravel	Gravel	Yes

Project Name: Mathis Quarry - Reclamation Plan  
Date of Submission: April 30, 2020  
File Name: 200423\_LVA\_MathisSRCE\_Version\_1\_4\_1\_017\_MVB.xlsx  
Model Version: Version 1.4.1  
Cost Data: User Data  
Cost Data File: SRCE\_Cost\_Data\_File\_1\_12\_2019.xlsx  
Cost Estimate Type: Surety Cost Basis: Northern Nevada

Buildings & Foundations Demolition Cost Summary				
	Labor	Equipment	Materials	Totals
Building Demolition Cost	\$3,235	\$2,500	N/A	\$5,735
Wall Demolition Cost	\$4,010	\$4,150	N/A	\$8,160
Site Demolition	\$700	\$2,210	N/A	\$2,910
Subtotal Demolition	\$7,945	\$8,760	\$0	\$16,705
Cover Placement Cost	\$0	\$0	N/A	\$0
Gravel Filling Placement Cost	\$0	\$0	N/A	\$0
Rock Riprap Cost	\$4,500	\$1,300	N/A	\$5,800
Subtotal Earthwork	\$4,500	\$1,300	\$0	\$5,800
Revegetation Cost	\$600	\$225	\$0	\$825
TOTALS	\$13,045	\$10,285	\$0	\$23,330

Total cover (cover + growth needed) equals value entered in "Minimum thickness of cover over foundation slab" cell above

#### Replanting/Seeding Calculations

Flat area width = Flat bed area / Average long dimension  
Number of passes = Flat area width / Cover width  
Travel distance = Number of passes \* Average long dimension  
Total hours = (Travel distance \* Grade productivity) \* (Number of passes \* Grade maneuver time)

#### Revegetation

Minimum 1 acre revegetation cover time per area

# Closure Cost Estimate Foundations & Buildings

Project Name: Mathis Quarry - Reclamation Plan  
 Date of Submission: April 30, 2020  
 File Name: 200453\_LMA\_MathisSRCE\_Version\_1.4\_1\_017\_MVB.slm  
 Model Version: Version 1.4.1  
 Cost Data User Data  
 Cost Data File: SRCE\_Cost\_Data\_File\_1\_12\_Sld\_2019.sld  
 Cost Estimate Type: Summary Cost Basis: Northern Nevada

## Buildings & Foundation Demolition Cost Summary

	Building	Equipment	Materials	Totals
Building Demolition Cost	\$1,533	\$2,300	NA	\$3,833
Wall Demolition	\$4,156	NA	NA	\$4,156
Sub Demolition	\$1,015	\$2,310	NA	\$3,325
Ground Removal	\$4,719	NA	NA	\$4,719
Cover Placement Cost	NA	NA	NA	NA
Growth Media Placement Cost	NA	NA	NA	NA
Scarfing/Revegetation Cost	\$1,226	\$1,283	NA	\$2,509
Revegetation Cost	\$1,226	\$1,283	NA	\$2,509
	\$17,133	\$17,133	\$17,133	\$51,400

## Building & Foundation Demolition Costs

Item	Description (Required)	Building Demolition				Wall Demolition				Sub Demolition				Total Costs					
		Building Footprint (sq area)	Building Volume (cu ft)	Wall Length (ft)	Wall Area (sq ft)	Slab Demolition Price	Slab Volume (cu ft)	Total Labor Cost \$	Total Equipment Cost \$	Total Building Demolition Cost \$	Total Labor Cost \$	Total Equipment Cost \$	Total Wall Demolition Cost \$	Total Labor Cost \$	Total Equipment Cost \$	Total Sub Demolition Cost \$	Total Labor Cost \$	Total Equipment Cost \$	Total Demolition Cost \$
1	Blow 1	700	7000	110	110	3450	13	\$1,910	\$2,000	\$3,910	\$1,910	\$2,000	\$3,910	\$1,910	\$2,000	\$3,910	\$21,374	\$3,425	\$24,798
2	Blow 2	700	7000	110	110	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$21,418	\$3,425	\$24,843
3	Blow 3	620	6,200	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,955	\$3,425	\$24,380
4	Blow 4	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
5	Blow 5	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
6	Blow 6	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
7	Blow 7	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
8	Blow 8	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
9	Blow 9	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
10	Blow 10	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
11	Blow 11	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
12	Blow 12	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
13	Blow 13	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
14	Blow 14	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
15	Blow 15	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
16	Blow 16	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
17	Blow 17	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
18	Blow 18	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
19	Blow 19	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
20	Blow 20	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
21	Blow 21	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
22	Blow 22	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
23	Blow 23	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
24	Blow 24	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
25	Blow 25	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
26	Blow 26	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
27	Blow 27	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
28	Blow 28	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
29	Blow 29	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
30	Blow 30	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
31	Blow 31	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
32	Blow 32	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
33	Blow 33	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
34	Blow 34	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
35	Blow 35	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
36	Blow 36	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
37	Blow 37	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
38	Blow 38	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
39	Blow 39	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
40	Blow 40	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
41	Blow 41	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
42	Blow 42	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
43	Blow 43	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
44	Blow 44	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
45	Blow 45	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
46	Blow 46	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
47	Blow 47	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
48	Blow 48	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
49	Blow 49	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
50	Blow 50	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
51	Blow 51	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
52	Blow 52	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
53	Blow 53	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
54	Blow 54	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
55	Blow 55	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
56	Blow 56	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
57	Blow 57	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
58	Blow 58	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
59	Blow 59	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
60	Blow 60	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
61	Blow 61	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
62	Blow 62	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424
63	Blow 63	640	6,400	100	100	3450	12	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$1,458	\$1,731	\$3,189	\$20,999	\$3,425	\$24,424



# Closure Cost Estimate Yards, Etc.

Project Name: Mathis Quarry - Reclamation Plan  
 Date of Submission: April 30, 2020  
 File Name: 200423\_LNA\_MathisSRCE\_Version\_1\_4\_1\_017\_NWB.xlsm  
 Model Version: Version 1.4.1  
 Cost Data File: SRCE\_Cost\_Data\_File\_1\_12\_Sld\_2019.xlsm  
 Cost Estimate Type: Surety Cost Basis: Northern Nevada

Yards, Etc. - Cost Summary			
	Labor	Equipment	Materials
Regrading Cost	\$0	\$0	\$0
Cover Placement Cost	\$0	\$0	\$0
Growth Media Placement Cost	\$5,271	\$12,553	\$17,824
Regrading/Scarfing Cost	\$8,583	\$2,668	\$3,532
Revegetation Cost	\$1,107	\$18,248	\$21,350
TOTALS	\$15,961	\$39,469	\$32,706

Yards, Etc. - User Input									
You must fill in ALL green cells and relevant blue cells in this section for each building or facility									
Physical			Cover			Growth Media			
Description (required)	ID Code	Type	Area (sq ft)	Volume (cubic yards)	Distance from Facility to Barrier Area (ft)	Distance from Facility to Stockpile (ft)	Growth Media Thickness (in)	Seed Mts (lb/1000 sq ft)	Replanting Plant (select)
1 Yard 1	Yard	Yard	8,07	723	0	0	4	4,300	0.0
2 Yard 2	Yard	Yard	1,11	330	0	0	4	4,300	0.0
3 Yard 3	Yard	Yard	2,31	668	0	0	4	4,300	0.0
4 Yard 4	Yard	Yard	3,89	208	0	0	4	4,300	0.0
5 Yard 5	Yard	Yard	8,39	343	0	0	4	4,300	0.0

Notes:  
 1. All Physical parameters must be input even if manual overrides for volume or area are used.  
 2. If slope from facility to barrier area is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)

Yards, Etc. - User Input (cont.)									
You must fill in ALL green cells and relevant blue cells in this section for each building or facility									
Grading			Cover			Growth Media			
Description (required)	Regrading Material Condition (select)	Regrading Equipment Type (select)	Cover Material Type (select)	Cover Placement Equipment Type (select)	Maximum Plant Size (sq ft)	Growth Media Equipment Type (select)	Seed Mts (lb/1000 sq ft)	Fertilizer (lb/1000 sq ft)	Replanting Plant (select)
1 Yard 1	0.8 - crushed	Med	Grass	Small Truck	0.5	Small Truck	Used Mts 1	None	Med Grass
2 Yard 2	0.8 - crushed	Med	Grass	Small Truck	0.5	Small Truck	Used Mts 1	None	Med Grass
3 Yard 3	0.8 - crushed	Med	Grass	Small Truck	0.5	Small Truck	Used Mts 1	None	Med Grass
4 Yard 4	0.8 - crushed	Med	Grass	Small Truck	0.5	Small Truck	Used Mts 1	None	Med Grass
5 Yard 5	0.8 - crushed	Med	Grass	Small Truck	0.5	Small Truck	Used Mts 1	None	Med Grass

Notes:  
 1. Material Types are used for density correction based on material densities in Caterpillar Performance Handbook material density table

Yards, Etc. - Calculations	
Grading Calculations	
Average push distance assumed to be 2/3 of the 800 feet maximum from Caterpillar Handbook or 400 feet Material assumed to be loose stockpile (1.2 productivity factor) Slope assumed to be 0 to 5% (1.0 productivity factor)	
Cover Volume Calculations	
Yard area x cover thickness	
Regrading/Scarfing Calculations	
Flat area width = Final flat area - Average long dimensions Number of passes = Flat area width / Grader width Travel distance = (Number of passes x Average long dimensions) Total hours = (Travel distance x Grader productivity) / (Number of passes x Grader maneuver time)	

Closure Cost Estimate  
Yards, Etc.

Project Name: Mathis Quarry - Reclamation Plan  
Date of Submission: April 30, 2020  
File Name: 200423\_LNA\_MathisSRCE\_Version\_1.4\_1\_017\_NWB.xlsm  
Model Version: Version 1.4.1  
Cost Data: User Data  
Cost Data File: SRCE\_Cost\_Data\_File\_1\_12\_Sld\_2019.xlsm  
Cost Estimate Type: Surety Cost Basis: Northern Nevada

Yards, Etc. - Cost Summary				
	Labour	Equipment	Materials	Subtotal
Regrading Cost	\$0	\$0	N/A	\$0
Cover Placement Cost	\$0	\$0	N/A	\$0
Growth Media Placement Cost	\$5,271	\$12,553	N/A	\$17,824
Ripping/Scarifying Cost	\$8,598	\$2,065	N/A	\$10,663
Subtotal Earthworks	\$13,869	\$14,618		\$28,487
Revegetation Cost	\$1,524	\$570	\$15,653	\$17,747
<b>TOTALS</b>	<b>\$15,393</b>	<b>\$15,188</b>	<b>\$15,653</b>	<b>\$46,234</b>

Minimum 1 hr ripping/scarifying per area

Revegetation

Minimum 1 acre revegetation crew time per area

Yards, Etc. - Regrading Costs Productivity = Dozer Productivity x Grade Correction x Density Correction x Operator (0.75) x Material x Visibility x Job Efficiency (0.33) x (Slope/Slide-by-Side)											
	Description (Required)	Regrading Volume (cy)	Grading Distance (see above) ft	Unexcavated Dozer Productivity (cy/hr)	Grade Correction	Density Correction	Total Hourly Productivity (cy/hr)	Total Dozer Hours (hr)	Total Labor Cost (\$)	Total Equipment Cost (\$)	Total Regrading Cost (\$)
1	Yard 1										
2	Yard 2										
3	Yard 3										
4	Yard 4										
5	Yard 5										

Yards, Etc. - Cover and Growth Media Costs											
	Description (Required)	Cover Volume (cy)	Topsoil Replacement (see above) ft	Plant Productivity (LCY/hr)	Total Plant Hours	Total Labor Cost (\$)	Total Equipment Cost (\$)	Total Cover Cost (\$)	Growth Media Volume (cy)	Growth Media Plant Cost (\$)	Total Growth Media Cost (\$)
1	Yard 1										
2	Yard 2										
3	Yard 3										
4	Yard 4										
5	Yard 5										

Yards, Etc. - Scarifying/Revegetation Costs											
	Description (Required)	Surface Area (acres)	Area Long Dimension (ft)	Ripping/Scarifying Plant Productivity (LCY/hr)	Scarifying Ripping Plant Hours	Scarifying Ripping Labor Cost (\$)	Scarifying Ripping Equipment Cost (\$)	Total Scarifying Ripping Costs (\$)	Revegetation Equipment Cost (\$)	Revegetation Material Cost (\$)	Total Revegetation Cost (\$)
1	Yard 1	0.07	725	0.04	5	\$248	\$1,125	\$1,473	\$253	\$4,905	\$7,626
2	Yard 2	1.11	430	0.04	3	\$120	\$425	\$545	\$111	\$1,182	\$1,723
3	Yard 3	2.01	430	0.04	2	\$60	\$212	\$272	\$42	\$1,182	\$1,454
4	Yard 4	3.68	305	0.04	3	\$226	\$774	\$1,000	\$139	\$3,779	\$4,918
5	Yard 5	0.88	305	0.04	3	\$170	\$226	\$396	\$38	\$811	\$1,049
		15.12			12	\$824	\$2,866	\$3,690	\$579	\$13,853	\$17,758



## Closure Cost Estimate Waste Disposal

Project Name: Mathis Quarry - Reclamation Plan  
 Date of Submittal: April 30, 2020  
 File Name: 200423\_LNA\_MathisSRCE\_Version\_1\_4\_1\_017\_NVb.xlsm  
 Model Version: Version 1.4.1  
 Cost Data: User Data  
 Cost Data File: SRCE\_Cost\_Data\_File\_1\_12\_Std\_2019.xlsm  
 Cost Estimate Type: Surety Cost Basis: Northern Nevada

Waste Disposal - Cost Summary				
	Labor	Equipment	Fees	Totals
Solid Waste - On Site	\$0		N/A	\$0
Solid Waste - Off Site				\$960
Hazardous Materials				\$0
Hydrocarbon Contaminated Soils	\$0		\$0	\$0
<b>TOTALS</b>	\$0	\$0	\$0	\$960

Waste Disposal - User Input - Solid Waste									
					Landfill (Bulk) Disposal			Dumpster	
	Description (required)	ID Code	Waste Type (select)	Disposal Method (select)	Quantity cy	Distance to Landfill ft	Slope to Landfill % grade	Number of Trucks (user override)	Months Dumpster Rental months
1	Waste Disposal		Waste Mgmt & Disposal	Dumpster	16				2

Notes:  
 1. All Physical parameters must be input even if manual overrides for volume or area are used.  
 2. If Slope from facility to borrow source is > 20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)

Waste Disposal - User Input - Hazardous Materials									
	Description (required)	ID Code	Waste Type (select)	Container Type (select)	Vacuum Truck Size (select)	Liquid Quantity gallons	Solid Quantity cy	One Way Travel Distance to Disposal Site mi	One Way Travel Time to Disposal Site hr

Notes:  
 1. Use Other Demo & Equip Removal Sheet for tank removal

Waste Disposal - User Input - Hydrocarbon Contaminated Soils					
	Description (required)	ID Code	Waste Type (select)	Disposal Method (select)	Quantity cy

# Closure Cost Estimate Waste Disposal

Project Name: Mathis Quarry - Reclamation Plan  
 Date of Submittal: April 30, 2020  
 File Name: 200423\_LNA\_MathisSRCE\_Version\_1\_4\_1\_017\_NVb.xlsm  
 Model Version: Version 1.4.1  
 Cost Data: User Data  
 Cost Data File: SRCE\_Cost\_Data\_File\_1\_12\_Std\_2019.xlsm  
 Cost Estimate Type: Surety Cost Basis: Northern Nevada

Waste Disposal - Cost Summary				
	Labor	Equipment	Fees	Totals
Solid Waste - On Site	\$0	\$0	N/A	\$0
Solid Waste - Off Site				\$960
Hazardous Materials				\$0
Hydrocarbon Contaminated Soils	\$0	\$0	\$0	\$0
<b>TOTALS</b>	\$0	\$0	\$0	<b>\$960</b>

Notes:  
 1. Use Yards or Landfills Sheets for bioremediation facility reclamation

## Waste Disposal - Assumptions & Calculations

### Solid Waste Disposal

Off site disposal assumes use of average rolloff dumpster (30 cy (m3), 10 ton (tonne))  
 On site disposal assumes use of small loader/truck fleet for haulage  
 Average density for on site disposal = 2,600 lb/cy (1,540 kg/m3)  
 For on site disposal only 1 truck is required unless total truck hours > 8, only 2 trucks unless total truck hours are > 16

### Hazardous Materials Disposal

Assumes all hazardous materials are known  
 Enter EITHER solid or liquid quantity each line.  
 If container type = 55 gallon (200 liter) drum then solid waste hauling costs apply  
 Average density for solids assumed to be 2,600 lb/cy (1,540 kg/m3)  
 Vacuum truck sizes: small = 2,200 gal (~8,300 litres), large = 5,000 gal (~19,000 litres)  
 Vacuum truck on site for 4 hours for each load

### Hydrocarbon Contaminated Soils Disposal

Assumes all hazardous materials are known  
 On site disposal assumes biopad treatment  
 Excavation productivity = 45 cy/hr (35 m3/hr) (Means Heavy Construction, 2006: 02315-424-0360)

## Waste Disposal - Solid Waste Disposal

	Description (required)	Waste Volume cy	Number of Off Site Dumpster Loads	Landfill Fleet Equipment	Landfill Fleet Productivity LCY/yr	Number of Trucks	Total Fleet Hours	Total Dumpster Cost \$	Total Labor Cost \$	Total Equipment Cost \$
1	Waste Disposal	15	1					\$960	\$0	\$0
										\$0

4/27/2020

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Project Name: Mathis Quarry - Reclamation Plan  
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Model Version: Version 1.4.1  
Cost Data: User Data  
Cost Data File: SRCE\_Cost\_Data\_File\_1\_12\_Std\_2019.xlsm  
Cost Estimate Type: Surety  
Cost Basis: Northern Nevada

Waste Disposal - Cost Summary				
	Labor	Equipment	Fees	Totals
Solid Waste - On Site	\$0	\$0	N/A	\$0
Solid Waste - Off Site				\$960
Hazardous Materials				\$0
Hydrocarbon Contaminated Soils	\$0	\$0	\$0	\$0
<b>TOTALS</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$960</b>
	15			

Waste Disposal - Hazardous Materials Disposal								
Description (required)	Liquid Waste Volume gallons	Solid Waste Volume cy	Number of Truck Loads	Tons of Waste Tons	Pick-up Fees \$	Transport Fees \$	Disposal Fees \$	Total Hazardous Material Cost \$
					\$0	\$0	\$0	\$0

Waste Disposal - Hydrocarbon Contaminated Solids									
Description (required)	Quantity CY	Disposal Equipment Fleet	Total Fleet Hours	Treatment Cost \$	Transport Fees \$	Disposal Fees \$	Total Labor Cost \$	Total Equipment Cost \$	Total Waste Disposal Cost \$
					\$0	\$0	\$0	\$0	\$0

Closure Cost Estimate  
Monitoring

Project Name: Mathis Quarry - Reclamation Plan  
Date of Submittal: April 30, 2020  
File Name: 200423\_LNA\_MathisSRCE\_Version\_1.4\_1\_017\_MWh.xlsx  
Model Version: Version 1.4.1  
Cost Data: User Data  
Cost Data File: SRCE\_Cost\_Data\_File\_1\_12\_Sld\_2019.xlsx  
Cost Estimate Type: Surety Cost Basis: Northern Nevada

Reclamation Monitoring & Maintenance - Cost Summary									
Description	Total Reclamation Surface Area (1.2) acres	% Area Requiring Reclamation	Seed Mix (lb/acre)	Area Requiring Reclamation acres	Seed Stems	Labor Stems	Equipment Stems	Totals \$	Totals \$
Reclamation Maintenance	17	10%	1000 lbs/acre	1.7	\$600.42	\$100.00	\$38.00	\$738.42	\$738.42
Erosion Maintenance									
Reclamation Monitoring									
Water Quality Monitoring									
TOTAL MONITORING									
TOTAL MONITORING									\$38,000.00

Reclamation Maintenance									
Description	Total Reclamation Surface Area (1.2) acres	% Area Requiring Reclamation	Seed Mix (lb/acre)	Area Requiring Reclamation acres	Seed Stems	Labor Stems	Equipment Stems	Totals \$	Totals \$
Reclamation Maintenance	17	10%	1000 lbs/acre	1.7	\$600.42	\$100.00	\$38.00	\$738.42	\$738.42
Erosion Maintenance									
Reclamation Monitoring									
Water Quality Monitoring									
TOTAL MONITORING									
TOTAL MONITORING									\$38,000.00

Reclamation Monitoring									
Description	Hrs/Dry	Days/Year	Number of Years	Rate \$/hr	Volume Requiring Reclamation cu yd	Labor (assume 25%) Stems	Equipment (assume 75%) Stems	Total \$	Total \$
Field Work									
Field Geologist/Engineer	1	1	1	\$100.00	100.00			\$100.00	\$100.00
Range Scientist	1	1	1	\$150.00	150.00			\$150.00	\$150.00
Reporting									
Field Geologist/Engineer	1	1	1	\$100.00	100.00			\$100.00	\$100.00
Range Scientist	1	1	1	\$150.00	150.00			\$150.00	\$150.00
Travel									
Travel	1	1	1	\$30.00	30.00			\$30.00	\$30.00
TOTAL									
TOTAL RECLAMATION MONITORING									\$480.00

Project Name: Mathia Quarry - Reclamation Plan  
Date of Submission: April 30, 2020  
File Name: 200423\_LNA\_MathiaSRCE\_Version\_1\_4\_017\_NWB.xlsm  
Model Version: Version 1.4.1  
Cost Data: User Data  
Cost Data File: SRCE\_Cost\_Data\_File\_1\_12\_Bld\_2019.xlsm  
Cost Estimate Type: Surety  
Cost Basis: Northern Nevada

Reclamation Monitoring & Maintenance - Cost Summary			
	Labor	Equipment	Labor & Materials
Reclamation Maintenance	\$173	\$25	\$142.25
Erosion Maintenance	\$0	N/A	\$0
Reclamation Monitoring	\$27,369	\$2,688	\$25,681
Soil/air Reclamation Monitoring	\$22,466	\$2,413	\$24,879
Water Quality Monitoring	\$22,546	\$2,953	\$19,593
<b>TOTAL MONITORING</b>			<b>\$11,188</b>

[illegible]

Notes: Sampling labor cost = No. Samplers x Years x Events/year x Days/event x Hour/Day x Labor Rate  
Sampling equipment costs include 1 pickup truck for every two samplers

<b>Ground &amp; Surface Water Monitoring</b>					
<b>Pump Cables</b>	Description	No. of units	Years	Cost \$	Total Field Work
<b>Pumps (purchase)</b>		Replacement period (yrs.)			
					\$0
					\$0

Notes: Replacement period = frequency of pump replacement.

**Reporting**

Description	This Event	Last Year	Cost \$
Field Coordinator/Engineer			
	Subtotal Reporting		
Notes:			



**Closure Cost Estimate  
Constr. Mgmt**

Project Name: Mathis Quarry - Reclamation Plan  
Date of Submittal: April 30, 2020  
File Name: 200423\_LNA\_MathisSRCE\_Version\_1\_4\_1\_017\_NVb.xlsm  
Model Version: Version 1.4.1  
Cost Data: User Data  
Cost Data File: SRCE\_Cost\_Data\_File\_1\_12\_Std\_2019.xlsm  
Cost Estimate Type: Surety Cost Basis: Northern Nevada

Construction Management & Road Maintenance - Cost Summary				
	Labor	Equipment	Materials	Totals
Construction Management	\$16,000	\$3,054	N/A	\$19,054
Construction Support		\$432		\$432
Road Maintenance	\$13,382	\$20,637	\$60,000	\$94,019
<b>TOTAL CONSTRUCTION MANAGEMENT</b>	<b>\$29,382</b>	<b>\$24,123</b>	<b>\$60,000</b>	<b>\$113,505</b>

Construction Management							
Construction Management Staff							
Description	Duration mo.	Hours/ Month hr.	Number of Supervisors	Supervisor Rate \$/hr	Labor Cost \$	Equipment Cost <sup>(1)</sup> \$	Totals \$
Active Reclamation	2	80	1	\$100.00	\$16,000	\$3,054	\$19,054
Monitoring & Maintenance					\$0	\$0	\$0
<b>Total Staff</b>					<b>\$16,000</b>	<b>\$3,054</b>	<b>\$19,054</b>
Construction Management Support							
Description	Duration mo.	Number of Units		Rental Rate \$/mo	Generator Cost \$/mo	Equipment Cost <sup>(1)</sup> \$	Totals \$
Temporary Office Rental						\$0	\$0
Temporary Trailers	2	1		\$216		\$432	\$432
<b>Total Support</b>						<b>\$432</b>	<b>\$432</b>
Notes: Office rental assumes only 1 generator required for every 4 trailers							
<b>Total Construction Management</b>							<b>\$19,486</b>

Road Maintenance							
Description	Fleet Size (select)	Number	Duration mo.	Hours/ Month hr.	Labor Cost \$	Equipment Cost \$	Totals \$
<b>Active Reclamation</b>							
Water Truck	Small	1	2	160	\$13,382	\$20,637	\$34,019
Grader					\$0	\$0	\$0
<b>Monitoring &amp; Maintenance</b>							
Water Truck					\$0	\$0	\$0
Grader					\$0	\$0	\$0
Description	Gallons/ Day	Days/ Month	Duration mo.	Cost/ Gallon \$			Totals \$
<b>Water Fees</b>							
Water Fees	10000	20	2	0.15			\$60,000
<b>Total Project Maintenance</b>					<b>\$13,382</b>	<b>\$20,637</b>	<b>\$94,019</b>
Notes: 1) Supervisor equipment = pickup truck							

## Closure Cost Estimate Labor Rates

Project Name: Mathis Quarry - Reclamation Plan  
 Date of Submittal: April 30, 2020  
 File Name: 200423\_LNA\_MathisSRCE\_Version\_1\_4\_1\_017\_NVb.xlsm  
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Color Code Key	
User Input - Direct Input	Direct Input
User Input - Pull Down List	Pull Down Selection
Program Constant (can override)	Alternate Input
Program Calculated Value	Locked Cell - Formula or Reference

ZONE ADJUSTMENTS		
Cost Basis/Project Region	Northern Nevada	Churchill, Douglas, Elko, Eureka, Humboldt, Lander, Lyon, Mineral, Pershing, Storey, Washoe, and White Pine Counties
Power Equipment Operators	0-50 miles	\$0.00
Truck Drivers	0-50 miles	\$0.00
Laborers	0-50 miles	\$0.00
INDIRECT COSTS		
Unemployment (%)	3.00%	
Retirement/SS/Medicare (%)	7.65%	
Workman's Compensation (%)	8.90%	
Other Indirects		
State Payroll Tax (13),(15),(17),(1)		
Total Other Indirects	0.00%	

HOURLY LABOR RATE TABLE										
EQUIPMENT TYPE (1) OR JOB DESCRIPTION	Labor Group	Base Rate (\$/hr)	Zone Adjustment (\$/hr)	Hourly Wage (\$/hr)	Fringe (\$/hr)	Retirement/Medicare (\$/hr)	Unemployment Insurance (\$/hr)	Workman's Compensation (\$/hr)	Other Indirect Costs (\$/hr)	Total (\$/hr)
<b>Equipment Operators (\$/hr) (2)</b>										
<b>Bulldozers</b>										
D6R		\$37.51	\$0.00	\$37.51	\$24.80	\$1.13	\$2.87	\$3.34	\$0.00	\$69.64
D6R w/ Winch					\$24.80					
D7R		\$37.51	\$0.00	\$37.51	\$24.80	\$1.13	\$2.87	\$3.34	\$0.00	\$69.64
D8R		\$37.51	\$0.00	\$37.51	\$24.80	\$1.13	\$2.87	\$3.34	\$0.00	\$69.64
D9R		\$37.51	\$0.00	\$37.51	\$24.80	\$1.13	\$2.87	\$3.34	\$0.00	\$69.64
D10R		\$37.51	\$0.00	\$37.51	\$24.80	\$1.13	\$2.87	\$3.34	\$0.00	\$69.64
D11R		\$37.51	\$0.00	\$37.51	\$24.80	\$1.13	\$2.87	\$3.34	\$0.00	\$69.64
<b>Wheeled Dozers</b>										
824G					\$24.80					
834G					\$24.80					
844					\$24.80					
854G					\$24.80					
<b>Motor Graders</b>										
120H		\$38.37	\$0.00	\$38.37	\$24.80	\$1.15	\$2.94	\$3.41	\$0.00	\$70.67
14G/H		\$38.37	\$0.00	\$38.37	\$24.80	\$1.15	\$2.94	\$3.41	\$0.00	\$70.67
16G/H		\$38.37	\$0.00	\$38.37	\$24.80	\$1.15	\$2.94	\$3.41	\$0.00	\$70.67
24M					\$24.80					
<b>Track Excavators</b>										
312C		\$38.37	\$0.00	\$38.37	\$24.80	\$1.15	\$2.94	\$3.41	\$0.00	\$70.67
320C		\$38.37	\$0.00	\$38.37	\$24.80	\$1.15	\$2.94	\$3.41	\$0.00	\$70.67
325C		\$38.37	\$0.00	\$38.37	\$24.80	\$1.15	\$2.94	\$3.41	\$0.00	\$70.67
330C		\$38.37	\$0.00	\$38.37	\$24.80	\$1.15	\$2.94	\$3.41	\$0.00	\$70.67
345B		\$38.37	\$0.00	\$38.37	\$24.80	\$1.15	\$2.94	\$3.41	\$0.00	\$70.67
365BL					\$24.80					
365BL		\$38.37	\$0.00	\$38.37	\$24.80	\$1.15	\$2.94	\$3.41	\$0.00	\$70.67
<b>Scrapers</b>										
631G		\$37.51	\$0.00	\$37.51	\$24.80	\$1.13	\$2.87	\$3.34	\$0.00	\$69.64
637G		\$38.37	\$0.00	\$38.37	\$24.80	\$1.15	\$2.94	\$3.41	\$0.00	\$70.67
<b>Wheeled Loaders</b>										
924G		\$37.51	\$0.00	\$37.51	\$24.80	\$1.13	\$2.87	\$3.34	\$0.00	\$69.64
928G		\$37.51	\$0.00	\$37.51	\$24.80	\$1.13	\$2.87	\$3.34	\$0.00	\$69.64
950G		\$37.51	\$0.00	\$37.51	\$24.80	\$1.13	\$2.87	\$3.34	\$0.00	\$69.64
966G		\$38.37	\$0.00	\$38.37	\$24.80	\$1.15	\$2.94	\$3.41	\$0.00	\$70.67
972G		\$38.37	\$0.00	\$38.37	\$24.80	\$1.15	\$2.94	\$3.41	\$0.00	\$70.67
980G		\$38.37	\$0.00	\$38.37	\$24.80	\$1.15	\$2.94	\$3.41	\$0.00	\$70.67
988G		\$38.37	\$0.00	\$38.37	\$24.80	\$1.15	\$2.94	\$3.41	\$0.00	\$70.67
990					\$24.80					
992G		\$38.37	\$0.00	\$38.37	\$24.80	\$1.15	\$2.94	\$3.41	\$0.00	\$70.67
994D					\$24.80					
L2350					\$24.80					
<b>Shovels</b>										
PC2000					\$24.80					
PC3000					\$24.80					
PC4000					\$24.80					
PC5500					\$24.80					
PC8000					\$24.80					
<b>Hydraulic Hammers</b>										



## Closure Cost Estimate Labor Rates

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User Input - Direct Input	Direct Input
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ZONE ADJUSTMENTS		
Cost Basis/Project Region	Northern Nevada	Churchill, Douglas, Elko, Eureka, Humboldt, Lander, Lyon, Mineral, Pershing, Storey, Washoe, and White Pine Counties
Power Equipment Operators	0-50 miles	\$0.00
Truck Drivers	0-50 miles	\$0.00
Laborers	0-50 miles	\$0.00
INDIRECT COSTS		
Unemployment (%)	3.00%	
Retirement/SS/Medicare (%)	7.65%	
Workman's Compensation (%)	8.90%	
Other Indirects		
State Payroll Tax (13),(15),(17),(1)		
Total Other Indirects	0.00%	

HOURLY LABOR RATE TABLE										
H-120 (fits 325)										
H-160 (fits 345)										
H-160 (fits 365/385)										
Demolition Shears										
S340 (fits 322/325/330)										
S365 (fits 330/345)										
S390 (fits 365/385)										
Demolition Grapples										
G315 (fits 322/325)										
G320 (fits 325/330)										
G330 (fits 345/365)										
Other Equipment										
420D 4WD Backhoe		\$38.37	\$0.00	\$38.37	\$24.80	\$1.15	\$2.94	\$3.41	\$0.00	\$70.67
428D 4WD Backhoe		\$38.37	\$0.00	\$38.37	\$24.80	\$1.15	\$2.94	\$3.41	\$0.00	\$70.67
C5533E Vibratory Roller		\$36.92	\$0.00	\$36.92	\$24.80	\$1.11	\$2.82	\$3.29	\$0.00	\$68.94
C5633E Vibratory Roller					\$24.80					
CP533E Sheepsfoot Compactor					\$24.80					
CP633E Sheepsfoot Compactor					\$24.80					
Light Truck - 1.5 Ton					\$24.80					
Supervisor's Truck					\$24.80					
Flatbed Truck					\$24.80					
Air Compressor + tools		\$35.46	\$0.00	\$35.46	\$24.80	\$1.08	\$2.71	\$3.16	\$0.00	\$67.19
Welding Equipment		\$38.37	\$0.00	\$38.37	\$24.80	\$1.15	\$2.94	\$3.41	\$0.00	\$70.67
Heavy Duty Drill Rig		\$37.51	\$0.00	\$37.51	\$24.80	\$1.13	\$2.87	\$3.34	\$0.00	\$69.84
Pump (plugging) Drill Rig		\$37.51	\$0.00	\$37.51	\$24.80	\$1.13	\$2.87	\$3.34	\$0.00	\$69.84
Concrete Pump					\$24.80					
Gas Engine Vibrator		\$36.92	\$0.00	\$36.92	\$24.80	\$1.11	\$2.82	\$3.29	\$0.00	\$68.94
Generator 5KW					\$24.80					
HDEP Welder (pipe or liner)					\$24.80					
5 Ton Crane		\$38.37	\$0.00	\$38.37	\$24.80	\$1.15	\$2.94	\$3.41	\$0.00	\$70.67
20 Ton Crane		\$38.37	\$0.00	\$38.37	\$24.80	\$1.15	\$2.94	\$3.41	\$0.00	\$70.67
50 Ton Crane		\$38.37	\$0.00	\$38.37	\$24.80	\$1.15	\$2.94	\$3.41	\$0.00	\$70.67
120 Ton Crane					\$24.80					

### NOTES:

(1) Equipment Type	Compiller model or equivalent LeTourneau
(2) Equipment Operator Source	C-6 NV20190002 7/5/2019
(3) Zone Basis	From Washoe Co. Courthouse

Truck Drivers (\$/hr) (4)										
725	Truck Driver > 25 yds	\$31.50	\$0.00	\$31.50	\$4.18	\$0.95	\$2.41	\$2.80	\$0.00	\$41.82
730	Truck Driver > 25 yds	\$31.50	\$0.00	\$31.50	\$4.18	\$0.95	\$2.41	\$2.80	\$0.00	\$41.82
735	Truck Driver > 25 yds	\$31.50	\$0.00	\$31.50	\$4.18	\$0.95	\$2.41	\$2.80	\$0.00	\$41.82
740	Truck Driver > 25 yds	\$31.50	\$0.00	\$31.50	\$4.18	\$0.95	\$2.41	\$2.80	\$0.00	\$41.82
769D	Truck Driver > 25 yds	\$31.50	\$0.00	\$31.50	\$4.18	\$0.95	\$2.41	\$2.80	\$0.00	\$41.82
773E					\$4.18					
777D	Truck Driver > 60 yds	\$31.50	\$0.00	\$31.50	\$4.18	\$0.95	\$2.41	\$2.80	\$0.00	\$41.82
785C					\$4.18					
793C					\$4.18					
797B					\$4.18					
613E (5,000 gal) Water Wagon	Truck > 2,500 gal	\$31.50	\$0.00	\$31.50	\$4.18	\$0.95	\$2.41	\$2.80	\$0.00	\$41.82
621E (8,000 gal) Water Wagon	Truck > 2,500 gal	\$31.50	\$0.00	\$31.50	\$4.18	\$0.95	\$2.41	\$2.80	\$0.00	\$41.82
777D Water Truck					\$4.18					
785C Water Truck					\$4.18					
Dump Truck (10-12 yds)	Truck Driver > 8 yds	\$31.50	\$0.00	\$31.50	\$4.18	\$0.95	\$2.41	\$2.80	\$0.00	\$41.82



### Closure Cost Estimate

#### Labor Rates

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## ZONE ADJUSTMENTS

Cost Basis/Project Region	Northern Nevada	Churchill, Douglas, Elko, Eureka, Humboldt, Lander, Lyon, Mineral, Pershing, Storey, Washoe, and White Pine Counties
Power Equipment Operators	0-50 miles	\$0.00
Truck Drivers	0-50 miles	\$0.00
Laborers	0-50 miles	\$0.00

## INDIRECT COSTS

Unemployment (%)	3.00%
Retirement/SS/Medicare (%)	7.85%
Workman's Compensation (%)	8.90%

### Other indirects

State Payroll Tax (13),(15),(17),(18)	
<b>Total Other Indirects</b>	<b>0.00%</b>

### HOURLY LABOR RATE TABLE

**NOTES:**

(4) Truck Driver Source: D-B 3/14/2014-014 3/15/2014  
(5) Zone Beels: From Washoe Co. Courthouse

**Laborers (\$/hr) (6.7)**

General Laborer	Group 1	\$25.45	\$0.00	\$25.45	\$10.56	\$0.76	\$1.95	\$2.27	\$0.00	\$40.99
Skilled Laborer	Group 4	\$25.95	\$0.00	\$25.95	\$10.95	\$0.78	\$1.99	\$2.31	\$0.00	\$41.58
Driver's Helper	Group 3	\$25.70	\$0.00	\$25.70	\$10.58	\$0.77	\$1.97	\$2.29	\$0.00	\$41.28
Rodmen (reinforcing concrete)	Group 1	\$25.45	\$0.00	\$25.45	\$10.56	\$0.76	\$1.95	\$2.27	\$0.00	\$40.99
Cement finisher	Group 3	\$25.70	\$0.00	\$25.70	\$10.58	\$0.77	\$1.97	\$2.29	\$0.00	\$41.28
Carpenter		\$38.73	\$0.00	\$38.73	\$14.29	\$1.16	\$2.95	\$3.45	\$0.00	\$80.59

**NOTES:**

(6) Laborer Source:	C-8 SURV2011-008 10/1/2010
(7) Carpenter Source:	C-8 Projected from Southern Nevada
(8) Zone Basis:	From Washoe Co. Courthouse

**Project Management and Technical Labor (\$/hr) (9)**[illegible]

**NOTES:**

(9) Project Manager	R.L. Moore 2018 Q2 (01/31/31) 1320 0000 Total Incl O&P -10% Adjusted for Elan, NV
(9) Foreman Source	R.L. Moore 2018 Q2 (01/31/31) 1320 0000 Total Incl O&P -10% Adjusted for Elan, NV
(9) Technical Labor Source	GRK Consulting 2018 (Total Incl O&P -10%) Adjusted for Zoro, Yee and Inc.
Other Labor Source	
Other Labor Source	
(Additional User Markup)	
(These are added by the user to the base rate to account for site-specific conditions or corporate requirements)	

## Closure Cost Estimate

### Equipment Costs

Project Name: Mathis Quarry - Reclamation Plan  
 Date of Submittal: April 30, 2020  
 File Name: 200423\_LNA\_MathisSRCE\_Version\_1\_4\_1\_017\_NVb.xlsm  
 Model Version: Version 1.4.1  
 Cost Data: User Data  
 Cost Data File: SRCE\_Cost\_Data\_File\_1\_12\_Std\_2019.xlsm  
 Monthly Rental Basis: 180 hrs month

EQUIPMENT RENTAL RATE TABLE				
EQUIPMENT TYPE (1)	Monthly Owner/Rental Rate	Equipment Hourly Rate	Fuel/Lube/ Wear	Total Rate
<b>Bulldozers</b>				
D6R	\$10,400.00	\$85.00	\$28.89	\$93.89
D6R w/ Winch			\$16.44	\$16.44
D7R	\$11,350.00	\$70.94	\$32.18	\$103.11
D8R	\$21,800.00	\$135.00	\$43.19	\$178.19
D9R	\$26,100.00	\$163.13	\$61.52	\$224.64
D10R	\$40,000.00	\$250.00	\$79.01	\$329.01
D11R	\$64,000.00	\$400.00	\$115.46	\$515.46
<b>Wheeled Dozers</b>				
824G			\$28.27	\$28.27
834G			\$33.14	\$33.14
844			\$39.45	\$39.45
854G			\$49.97	\$49.97
<b>Motor Graders</b>				
120H	\$9,600.00	\$60.00	\$30.82	\$90.82
14G/H	\$13,500.00	\$84.38	\$45.17	\$129.54
16G/H	\$21,000.00	\$131.25	\$56.44	\$187.69
24M			\$40.77	\$40.77
<b>Track Excavators</b>				
312C	\$5,275.00	\$32.97	\$13.10	\$46.07
320C	\$5,955.00	\$37.22	\$21.84	\$59.16
325C	\$6,350.00	\$52.19	\$27.66	\$79.85
330C	\$10,800.00	\$67.50	\$33.47	\$100.97
345B	\$14,280.00	\$89.25	\$41.80	\$131.05
365BL			\$34.72	\$34.72
385BL	\$22,500.00	\$140.83	\$65.46	\$206.08
<b>Scrapers</b>				
631G	\$24,800.00	\$155.00	\$68.42	\$223.42
637G	\$35,000.00	\$218.75	\$98.53	\$317.28
<b>Wheeled Loaders</b>				
924G	\$4,500.00	\$28.13	\$18.40	\$46.52
928G	\$5,200.00	\$32.50	\$20.80	\$53.30
950G	\$7,600.00	\$47.50	\$28.58	\$76.08
966G	\$10,900.00	\$68.13	\$37.72	\$105.85
972G	\$13,800.00	\$86.25	\$42.51	\$128.76
980G	\$13,800.00	\$86.25	\$48.09	\$134.34
988G	\$23,000.00	\$143.75	\$68.77	\$212.52
990			\$44.71	\$44.71
992G	\$60,000.00	\$375.00	\$129.34	\$504.34
994D			\$94.68	\$94.68
L2350			\$173.58	\$173.58
<b>Shovels</b>				
PC2000			\$97.31	\$97.31
PC3000			\$131.50	\$131.50
PC4000			\$184.10	\$184.10
PC5500			\$312.97	\$312.97
PC8000			\$391.87	\$391.87
<b>Hydraulic Hammers</b>				
H-120 (fits 325)	\$5,700.00	\$35.63	\$5.57	\$41.20
H-160 (fits 345)	\$12,000.00	\$75.00	\$10.86	\$85.86
H-180 (fits 365/385)	\$18,200.00	\$101.25	\$12.87	\$114.12
<b>Demolition Shears</b>				
S340 (fits 322/325/330)				\$0.00

4/27/2020

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## Closure Cost Estimate

### Equipment Costs

Project Name: Mathis Quarry - Reclamation Plan

Date of Submittal: April 30, 2020

File Name: 200423\_LNA\_MathisSRCE\_Version\_1\_4\_1\_017\_NVb.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: SRCE\_Cost\_Data\_File\_1\_12\_Std\_2019.xlsm

S365 (fits 330/345)				\$0.00
S390 (fits 365/385)				\$0.00
<b>Demolition Grapples</b>				
G315 (fits 322/325)				\$0.00
G320 (fits 325/330)				\$0.00
G330 (fits 345/365)				\$0.00
<b>Other Equipment</b>				
420D 4WD Backhoe	\$2,650.00	\$16.56	\$16.32	\$32.88
428D 4WD Backhoe	\$3,400.00	\$21.25	\$16.21	\$37.46
CS533E Vibratory Roller	\$8,140.00	\$50.88	\$9.86	\$80.74
CS633E Vibratory Roller			\$12.49	\$12.49
CP533E Sheepsfoot Compactor			\$9.86	\$9.86
CP633E Sheepsfoot Compactor			\$12.49	\$12.49
Light Truck - 1.5 Ton	\$4,158.00	\$25.99	\$4.21	\$30.19
Supervisor's Truck	\$2,591.80	\$16.20	\$2.89	\$19.09
Flatbed Truck	\$4,158.00	\$25.99	\$13.80	\$39.79
Air Compressor + tools	\$4,300.58	\$26.88	\$2.63	\$29.51
Welding Equipment	\$2,039.40	\$12.75	\$5.26	\$18.01
Heavy Duty Drill Rig	\$56,780.00	\$354.75	\$31.56	\$386.31
Pump (plugging) Drill Rig	\$56,780.00	\$354.75	\$26.30	\$381.05
Concrete Pump	\$17,974.00	\$112.34	\$26.30	\$138.64
Gas Engine Vibrator	\$584.98	\$3.53	\$2.63	\$6.16
Generator 5KW	\$711.92	\$4.45	\$3.95	\$8.39
HDEP Welder (pipe or liner)	\$8,628.40	\$53.93	\$5.26	\$59.19
5 Ton Crane	\$5,535.20	\$34.60	\$7.89	\$42.49
20 Ton Crane	\$12,408.00	\$77.55	\$10.52	\$88.07
50 Ton Crane	\$12,408.00	\$77.55	\$12.38	\$89.91
120 Ton Crane			\$13.68	\$13.68
<b>Trucks</b>				
725	\$15,000.00	\$93.75	\$38.71	\$130.46
730	\$15,000.00	\$93.75	\$38.03	\$131.78
735	\$15,000.00	\$93.75	\$51.85	\$145.60
740	\$15,000.00	\$93.75	\$53.00	\$146.75
769D	\$21,000.00	\$131.25	\$41.02	\$172.27
773E	\$33,000.00	\$206.25	\$53.99	\$260.24
777D	\$54,000.00	\$337.50	\$77.02	\$414.52
785C			\$63.78	\$63.78
793C			\$109.80	\$109.80
797B			\$154.51	\$154.51
613E (5,000 gal) Water Wagon	\$8,500.00	\$40.63	\$23.86	\$64.49
621E (8,000 gal) Water Wagon	\$11,000.00	\$68.75	\$42.58	\$111.33
777D Water Truck			\$44.05	\$44.05
785C Water Truck			\$63.78	\$63.78
Dump Truck (10-12 yd <sup>3</sup> )	\$12,078.00	\$75.49	\$14.66	\$90.15

**NOTES:**

(1) Power Equipment Source:	
(2) Power Equipment Type:	Caterpillar model or equivalent, LeTourneau loader, Komatsu shovels
(3) Drilling Equipment Source:	RS Means Heavy Construction (2019 Q2)
(4) Other Equipment Source:	RS Means Heavy Construction (2019 Q2)
(5) Drill rig includes support (pipe) truck	



## Closure Cost Estimate Equipment Costs

Project Name: Mathis Quarry - Reclamation Plan  
 Date of Submittal: April 30, 2020  
 File Name: 200423\_LNA\_MathisSRCE\_Version\_1\_4\_1\_017\_NVb.xlsm  
 Model Version: Version 1.4.1  
 Cost Data: User Data  
 Cost Data File: SRCE\_Cost Data File 1 12 Std 2019.xlsm

FUEL, LUBE AND WEAR CALCULATIONS						
EQUIPMENT TYPE	PM Cost Per Hour <sup>(1)</sup>	Under carriage or Tires <sup>(2)</sup>	G.E.T Consumption <sup>(3)</sup>	Fuel Use Rate gal/hr (4)	Cost@ 2.63/gal	Total Hourly Equipment Cost
<b>Bulldozers</b>						
D6R	\$7.41		\$5.04	6.25	\$16.44	\$28.89
D6R w/ Winch				6.25	\$16.44	\$16.44
D7R	\$7.41		\$5.04	7.50	\$19.73	\$32.18
D8R	\$7.82		\$9.73	9.75	\$25.64	\$43.19
D9R	\$8.91		\$15.13	14.25	\$37.48	\$61.52
D10R	\$10.49		\$21.18	18.00	\$47.34	\$79.01
D11R	\$14.29		\$31.47	26.50	\$69.70	\$115.46
<b>Wheeled Dozers</b>						
824G		\$0.00		10.75	\$28.27	\$28.27
834G		\$0.00		12.60	\$33.14	\$33.14
844		\$0.00		15.00	\$39.45	\$39.45
854G		\$0.00		19.00	\$49.97	\$49.97
<b>Motor Graders</b>						
120H	\$4.50	\$5.36	\$10.44	4.00	\$10.52	\$30.82
14G/H	\$5.61	\$8.03	\$15.09	6.25	\$16.44	\$45.17
16G/H	\$5.86	\$10.24	\$20.61	7.50	\$19.73	\$56.44
24M				15.50	\$40.77	\$40.77
<b>Track Excavators</b>						
312C	\$4.23		\$3.93	1.88	\$4.94	\$13.10
320C	\$4.51		\$4.54	4.90	\$12.89	\$21.94
325C	\$4.57		\$5.73	6.60	\$17.36	\$27.66
330C	\$5.60		\$6.30	8.20	\$21.57	\$33.47
345B	\$7.47		\$6.45	10.60	\$27.88	\$41.80
365BL				13.20	\$34.72	\$34.72
385BL	\$6.23		\$13.20	17.50	\$46.03	\$66.46
<b>Scrapers</b>						
631G	\$7.52	\$13.20	\$8.25	15.00	\$39.45	\$66.42
637G	\$12.49	\$13.20	\$10.37	23.75	\$62.46	\$98.53
<b>Wheeled Loaders</b>						
924G	\$3.74	\$3.09	\$4.34	2.75	\$7.23	\$18.40
928G	\$4.02	\$3.09	\$4.49	3.50	\$9.21	\$20.80
950G	\$5.00	\$4.71	\$8.35	4.00	\$10.52	\$28.58
966G	\$5.21	\$6.91	\$10.48	5.75	\$15.12	\$37.72
972G	\$5.89	\$8.91	\$13.27	6.25	\$16.44	\$42.51
980G	\$5.89	\$9.20	\$13.27	7.50	\$19.73	\$48.09
988G	\$11.04	\$11.69	\$14.22	12.10	\$31.82	\$66.77
990				17.00	\$44.71	\$44.71
992G	\$12.23	\$23.97	\$32.65	23.00	\$60.49	\$129.34
994D				36.00	\$94.68	\$94.68
L2350				66.00	\$173.58	\$173.58
<b>Shovels</b>						
PC2000				37.00	\$97.31	\$97.31
PC3000				50.00	\$131.50	\$131.50
PC4000				70.00	\$184.10	\$184.10
PC5500				119.00	\$312.97	\$312.97
PC8000				149.00	\$391.87	\$391.87
<b>Hydraulic Hammers</b>						
H-120 (fits 325)	N/A		\$5.57			\$5.57
H-160 (fits 345)	N/A		\$10.86			\$10.86
H-180 (fits 365/385)	N/A		\$12.87			\$12.87
<b>Demolition Shears</b>						
S340 (fits 322/325/330)	N/A					\$0.00
S365 (fits 330/345)	N/A					\$0.00

## Closure Cost Estimate Equipment Costs

Project Name: Mathis Quarry - Reclamation Plan  
 Date of Submittal: April 30, 2020  
 File Name: 200423\_LNA\_MathisSRCE\_Version\_1\_4\_1\_017\_NVb.xlsm  
 Model Version: Version 1.4.1  
 Cost Data: User Data  
 Cost Data File: SRCE\_Cost\_Data\_File\_1\_12\_Std\_2019.xlsm

S390 (fits 365/385)	N/A					\$0.00
<b>Demolition Grapples</b>						
G315 (fits 322/325)	N/A					\$0.00
G320 (fits 325/330)	N/A					\$0.00
G330 (fits 345/365)	N/A					\$0.00
<b>Other Equipment</b>						
420D 4WD Backhoe	\$4.18	\$0.78	\$3.49	3.00	\$7.89	\$16.32
428D 4WD Backhoe	\$3.94	\$0.78	\$3.60	3.00	\$7.89	\$16.21
CS533E Vibratory Roller			N/A	3.75	\$9.86	\$9.86
CS633E Vibratory Roller			N/A	4.75	\$12.49	\$12.49
CP533E Sheepsfoot Compactor			N/A	3.75	\$9.86	\$9.86
CP633E Sheepsfoot Compactor			N/A	4.75	\$12.49	\$12.49
Light Truck - 1.5 Ton		\$0.26	N/A	1.50	\$3.95	\$4.21
Supervisor's Truck		\$0.26	N/A	1.00	\$2.63	\$2.89
Flatbed Truck		\$1.44	N/A	4.70	\$12.36	\$13.80
Air Compressor + tools			N/A	1.00	\$2.63	\$2.63
Welding Equipment			N/A	2.00	\$5.26	\$5.26
Heavy Duty Drill Rig			N/A	12.00	\$31.56	\$31.56
Pump (plugging) Drill Rig			N/A	10.00	\$26.30	\$26.30
Concrete Pump			N/A	10.00	\$26.30	\$26.30
Gas Engine Vibrator			N/A	1.00	\$2.63	\$2.63
Generator 5KW			N/A	1.50	\$3.95	\$3.95
HDEP Welder (pipe or liner)			N/A	2.00	\$5.26	\$5.26
5 Ton Crane			N/A	3.00	\$7.89	\$7.89
20 Ton Crane			N/A	4.00	\$10.52	\$10.52
50 Ton Crane			N/A	4.70	\$12.36	\$12.36
120 Ton Crane			N/A	5.20	\$13.68	\$13.68
<b>Trucks</b>						
725	\$7.44	\$13.78	\$3.13	4.70	\$12.36	\$36.71
730	\$7.44	\$13.78	\$3.13	5.20	\$13.68	\$38.03
735	\$7.44	\$21.95	\$3.13	7.35	\$19.33	\$51.85
740	\$7.44	\$23.10	\$3.13	7.35	\$19.33	\$53.00
769D	\$6.14	\$7.05	\$3.50	9.25	\$24.33	\$41.02
773E	\$7.59	\$11.56	\$3.93	11.75	\$30.90	\$53.99
777D	\$10.67	\$17.71	\$4.39	16.75	\$44.05	\$77.02
785C				24.25	\$63.78	\$63.78
793C				41.75	\$109.80	\$109.80
797B				58.75	\$154.51	\$154.51
613E (5,000 gal) Water Wagon	\$4.45	\$3.64		6.00	\$15.78	\$23.86
621E (8,000 gal) Water Wagon	\$6.29	\$8.02		10.75	\$28.27	\$42.58
777D Water Truck				16.75	\$44.05	\$44.05
785C Water Truck				24.25	\$63.78	\$63.78
Dump Truck (10-12 yd3 ) (5)	N/A	\$0.98	N/A	5.20	\$13.68	\$14.66
<b>Notes:</b>						
(1) PM Source:	Cashman Equipment Company (July 2019) unless noted					
(2) Undercarriage Source:	Purecell Tire Quote: June 2019					
(3) G.E.T. Source:	Cashman Equipment Company (July 2019) unless noted					
(4) Fuel Use Source:	Caterpillar Handbook, Edition 35, Ch. 20; or estimated average for smaller vehicles					
(5) Dump Truck Oper. Cost Source:	Means Heavy Construction (2008)					

## Closure Cost Estimate Equipment Costs

Project Name: Mathis Quarry - Reclamation Plan  
 Date of Submittal: April 30, 2020  
 File Name: 200423\_LNA\_MathisSRCE\_Version\_1\_4\_1\_017\_NVb.xlsm  
 Model Version: Version 1.4.1  
 Cost Data: User Data  
 Cost Data File: SRCE\_Cost\_Data\_File\_1\_12\_Std\_2019.xlsm

TIRE COST TABLES						
Equipment	Tire Size	# of Tires Per Piece of Equipment	Cost Per Tire	Tire Cost <sup>(1)(2)</sup>	Life Expectancy Hours (Low/Zone A) <sup>(3)</sup>	Tire Cost per Hour
<b>Bulldozers</b>						
D6R			N/A			
D6R w/ Winch			N/A			
D7R			N/A			
D8R			N/A			
D9R			N/A			
D10R			N/A			
D11R			N/A			
<b>Wheeled Dozers</b>						
824G	29.5R25	4		\$0.00	3,500	\$0.00
834G	35/65-R33	4		\$0.00	3,500	\$0.00
844	45/65-R39	4		\$0.00	3,500	\$0.00
854G	45/65-R45	4		\$0.00	3,500	\$0.00
<b>Motor Graders</b>						
120H	13PR24	6	\$3,126.20	\$18,757.20	3,500	\$5.36
14G/H	20.5R25	6	\$4,685.30	\$28,111.80	3,500	\$8.03
16G/H	23.5R25	6	\$5,874.20	\$35,245.20	3,500	\$10.24
24M	23.5R25	6		\$0.00	3,500	
<b>Track Excavators</b>						
312C			N/A			
320C			N/A			
325C			N/A			
330C			N/A			
345B			N/A			
365BL			N/A			
385BL			N/A			
<b>Scrapers</b>						
631G	37.25R35	4	\$13,202.70	\$52,810.80	4,000	\$13.20
637G	37.25R35	4	\$13,202.70	\$52,810.80	4,000	\$13.20
<b>Wheeled Loaders</b>						
924G	17.5R25	4	\$3,471.10	\$13,884.40	4,500	\$3.09
928G	17.5R25	4	\$3,471.10	\$13,884.40	4,500	\$3.09
950G	26.5R25	4	\$5,300.40	\$21,201.60	4,500	\$4.71
966G	26.5R25	4	\$7,771.60	\$31,086.40	4,500	\$6.91
972G	26.5R25	4	\$7,771.60	\$31,086.40	4,500	\$6.91
980G	29.5R25	4	\$10,355.60	\$41,422.40	4,500	\$9.20
988G	35/65-33	4	\$13,151.10	\$52,604.40	4,500	\$11.69
990	41.25/70-39	4		\$0.00	4,500	
992G	45/65R45	4	\$26,967.62	\$107,870.48	4,500	\$23.97
994D	55/85R57	4		\$0.00	4,500	
L2350	55/85R57	4		\$0.00	4,500	
<b>Shovels</b>						
PC2000			N/A			
PC3000			N/A			
PC4000			N/A			
PC5500			N/A			
PC6000			N/A			
<b>Hydraulic Hammers</b>						
H-120 (fits 325)			N/A			
H-160 (fits 345)			N/A			
H-180 (fits 365/385)			N/A			
<b>Demolition Shears</b>						
S340 (fits 322/325/330)			N/A			



## Closure Cost Estimate Equipment Costs

Project Name: Mathis Quarry - Reclamation Plan  
 Date of Submittal: April 30, 2020  
 File Name: 200423\_LNA\_MathisSRCE\_Version\_1\_4\_1\_017\_NVb.xlsm  
 Model Version: Version 1.4.1  
 Cost Data: User Data  
 Cost Data File: SRCE\_Cost\_Data File 1 12 Std 2019.xlsm

S365 (fits 330/345)			N/A			
S390 (fits 365/385)			N/A			
<b>Demolition Grapples</b>						
G315 (fits 322/325)			N/A			
G320 (fits 325/330)			N/A			
G330 (fits 345/365)			N/A			
<b>Other Equipment</b>						
420D 4WD Backhoe	340/80R18-19.5LR24	2	\$1,162.96	\$2,325.92	3,000	\$0.78
428D 4WD Backhoe	340/80R18-16.9R28	2	\$1,162.96	\$2,325.92	3,000	\$0.78
CS533E Vibratory Roller			N/A			
CS633E Vibratory Roller			N/A			
CP533E Sheepsfoot Compactor			N/A			
CP633E Sheepsfoot Compactor			N/A			
Light Truck - 1.5 Ton		4	196.4	\$785.60	3,000	\$0.26
Supervisor's Truck		4	196.4	\$785.60	3,000	\$0.26
Flatbed Truck		22	196.4	\$4,320.80	3,000	\$1.44
Air Compressor + tools			N/A			
Welding Equipment			N/A			
Heavy Duty Drill Rig		4		\$0.00	3,000	
Pump (plugging) Drill Rig		4		\$0.00	3,000	
Concrete Pump			N/A			
Gas Engine Vibrator			N/A			
Generator 5KW			N/A			
HDEP Welder (pipe or liner)			N/A			
5 Ton Crane		4		\$0.00	3,000	
20 Ton Crane		4		\$0.00	3,000	
50 Ton Crane		6		\$0.00	3,000	
120 Ton Crane		6		\$0.00	3,000	
<b>Trucks</b>						
725	23.5R25	6	\$4,594.57	\$27,567.42	2,000	\$13.78
730	23.5R25	6	\$4,594.57	\$27,567.42	2,000	\$13.78
735	26.5R25	6	\$7,315.27	\$43,891.62	2,000	\$21.95
740	29.5R25	6	\$7,701.12	\$46,206.72	2,000	\$23.10
769D	18.00R33	6	\$7,054.80	\$42,328.80	6,000	\$7.05
773E	24.00R35	6	\$9,637.30	\$57,823.80	5,000	\$11.56
777D	27.00R49	6	\$14,756.80	\$88,541.40	5,000	\$17.71
785C	33.00R51	6		\$0.00	4,000	
793C	40.00R57	6		\$0.00	4,000	
797B	40.00R57	6		\$0.00	4,000	
613E (5,000 gal) Water Wagon	23.5R25	6	\$3,838.27	\$21,817.62	6,000	\$3.64
621E (8,000 gal) Water Wagon	33.25R29	6	\$10,688.90	\$64,133.40	8,000	\$8.02
777D Water Truck	27.00R49	6		\$0.00	5,000	
785C Water Truck	33.00R51	6		\$0.00	4,000	
Dump Truck (10-12 yd3)		10	\$590.40	\$5,904.00	6,000	\$0.98
<b>Notes:</b>						
(1) Unit Cost Basis:	Cost per set					
(2) Cost Basis:	Total cost for all required tires.					
(3) Tire Cost Source:	Purecell Tire Quote: June 2019					
(4) Tire Wear Source:	Caterpillar Handbook, Edition 35, Ch. 20					

## Closure Cost Estimate Material Costs

Project Name: Mathis Quarry - Reclamation Plan  
 Date of Submittal: April 30, 2020  
 File Name: 200423\_LNA\_MathisSRCE\_Version\_1\_4\_1\_017\_NVb.xlsm  
 Model Version: Version 1.4.1  
 Cost Data: User Data  
 Cost Data File: SRCE\_Cost\_Data\_File\_1\_12\_Std\_2019.xlsm  
 Cost Estimate Type: Surety      Cost Basis: Northern Nevada

Revegetation Materials			
Seed Mixes			
Seed Mix	Description	Cost/Acre	
None			
Mix 1	Basins	\$302.50	
Mix 2	Low Hills	\$332.75	
Mix 3	Uplands	\$363.00	
Mix 4	Riparian or Custom	\$393.25	
User Mix 1	Mathis Mix	\$696.42	
User Mix 2			
User Mix 3			
User Mix 4			
	Cost/lb      lbs/Acre	Cost/Acre	
User Mix 5 (from Seed Mix sheet)	\$30.28      \$23.00	\$696.42	
Notes:			
Mulch			
Item	Cost/lb	lbs/Acre	Cost/Acre
None			
Straw Mulch	\$0.17	2000	\$338.89
Hydro Mulch	\$0.25		
Timber Mulch			
Notes:			
	Granite Seed \$500 per Ton in 50 lb bag Wood (Hydro) Mulch (June 2019)		
Amendments			
Item	Cost/lb	lbs/Acre	Cost/Acre
None			
Organic Matter	\$0.70		\$0.00
Treated Sludge			
Chemical	\$0.59		\$0.00



### Closure Cost Estimate

#### Material Costs

Project Name: Mathis Quarry - Reclamation Plan  
Date of Submittal: April 30, 2020  
File Name: 200423\_LNA\_MathisSRCE\_Version\_1\_4\_1\_017\_NVb.xlsm  
Model Version: Version 1.4.1  
Cost Data: User Data  
Cost Data File: SRCE\_Cost\_Data\_File\_1\_12\_Std\_2019.xlsm  
Cost Estimate Type: Surety      Cost Basis: Northern Nevada

	Notes:	Western Nevada Supply \$29.34 per 50 lb. bag 15-15-15 (June 2018)	

## Well Abandonment Materials

Description	Cost/50lb bag	Units	Cost/unit*
Cement	\$7.57	cy	\$36.07
Grout (Low Grade Bentonite)	\$8.65	cy	\$41.19
Inert Material/Cuttings		cy	
		cy	
		cy	
(1) Jentech Drilling Supply quote (June 2019) Type I,II Cement at \$14.24 per 94 lb. bag			
(2) Jentech Drilling Supply (June 2019) 3/8 in. Chunk Bentonite Hole Plug at \$8.65 per 50 lb. bag (5.75 cf/bag at 1.25 sp.gr.)			
* Assumes 1 bag mixes with water to make 0.21 y3 or 0.16 m3 of grout/cement slurry.			

## Monitoring Costs

[illegible]

### Closure Cost Estimate

#### Material Costs

**Project Name: Mathis Quarry - Reclamation Plan**  
**Date of Submittal: April 30, 2020**  
**File Name: 200423\_LNA\_MathisSRCE\_Version\_1\_4\_1\_017\_NVb.xlsm**  
**Model Version: Version 1.4.1**  
**Cost Data: User Data**  
**Cost Data File: SRCE\_Cost\_Data\_File\_1\_12\_Std\_2019.xlsm**  
**Cost Estimate Type: Surety      Cost Basis: Northern Nevada**

(1) WET Lab, Reno, Nevada (June 2019)		
Well pump and Sample supply costs adjusted to 2019.		
Original source unknown.		

[illegible]

## Closure Cost Estimate Material Costs

Revegetation Method				
Slopes				
Disturbance Type	Seed Application Method	Labor Cost/Acre	Equipment Cost/Acre	Total Cost/Acre
Waste Rock Dumps	Mechanical Broadcast	\$100.00	\$38.00	\$138.00
Heap Leach	Mechanical Broadcast	\$100.00	\$38.00	\$138.00
Tailings	Hand Broadcast	\$140.00	\$50.00	\$190.00
Quarries & Borrow Pits	Mechanical Broadcast	\$100.00	\$38.00	\$138.00
Flat Areas and Undifferentiated				
Disturbance Type	Seed Application Method	Labor Cost/Acre	Equipment Cost/Acre	Total Cost/Acre
Exploration Trenches	Mechanical Broadcast	\$100.00	\$38.00	\$138.00
Exploration Roads	Mechanical Broadcast	\$100.00	\$38.00	\$138.00
Waste Rock Dumps	Mechanical Broadcast	\$100.00	\$38.00	\$138.00
Heap Leach	Mechanical Broadcast	\$100.00	\$38.00	\$138.00
Tailings	Mechanical Broadcast	\$100.00	\$38.00	\$138.00
Quarries & Borrow Pits	Mechanical Broadcast	\$100.00	\$38.00	\$138.00
Roads	Mechanical Broadcast	\$100.00	\$38.00	\$138.00
Pits	Mechanical Broadcast	\$100.00	\$38.00	\$138.00
Haul Material	Mechanical Broadcast	\$100.00	\$38.00	\$138.00
Foundations & Buildings	Mechanical Broadcast	\$100.00	\$38.00	\$138.00
Sediment & Drainage Control	Mechanical Broadcast	\$100.00	\$38.00	\$138.00
Process Ponds	Mechanical Broadcast	\$100.00	\$38.00	\$138.00
Landfills	Mechanical Broadcast	\$100.00	\$38.00	\$138.00
Yards, Etc.	Mechanical Broadcast	\$100.00	\$38.00	\$138.00
Revegetation Maintenance	Mechanical Broadcast	\$100.00	\$38.00	\$138.00





2019 MOB/DEMOB using R.S. MEANS and SRCE equipment and DAVIS-BACON wages									
blue font is for project specific user input				Miles from Washoe County Courthouse to project, one way		176			
				Miles from equipment rental yard to project, one way (9)		100			
Mathis Quarry				Hours travel time @ 55 MPH		1.82			
Equipment	Mobilization \$/hour (1)	\$ Flat Rate load & unload (2)	\$/hour Deadhead (empty return cost (3))	Disassembly and assembly (4)	Permit cost \$ (5)	Pilot car costs	# of units	One Way Mob Cost	Total Mob and Demob Cost
<b>Bulldozers</b>									
D6R	\$ 97	\$ 97	\$ 97	\$ -	\$ -	\$ -		\$ -	\$ -
D7R	\$ 131	\$ 131	\$ 131	\$ -	\$ 25	\$ 171	1	\$ 804	\$ 1,609
D8R	\$ 153	\$ 153	\$ 153	\$ -	\$ 25	\$ 342		\$ -	\$ -
D9R	\$ 153	\$ 153	\$ 153	\$ -	\$ 25	\$ 342	1	\$ 1,077	\$ 2,154
D10R	\$ 153	\$ 153	\$ 153	\$ 63,720	\$ 25	\$ 514		\$ -	\$ -
D11R (two transports) (7)	\$ 153	\$ 153	\$ 153	\$ 135,720	\$ 25	\$ 342		\$ -	\$ -
<b>Motor Graders</b>									
14G/H	\$ 102	\$ 102	\$ 102	\$ -	\$ -	\$ -		\$ -	\$ -
16G/H	\$ 131	\$ 131	\$ 131	\$ -	\$ 25	\$ 171		\$ -	\$ -
<b>Track Excavators</b>									
320C	\$ 131	\$ 131	\$ 131	\$ -	\$ -	\$ -		\$ -	\$ -
325C	\$ 131	\$ 131	\$ 131	\$ -	\$ -	\$ -		\$ -	\$ -
345B	\$ 153	\$ 153	\$ 153	\$ -	\$ 25	\$ 342	1	\$ 1,077	\$ 2,154
365BL	\$ 153	\$ 153	\$ 153	\$ 44,880	\$ 25	\$ 342		\$ -	\$ -
<b>Scrapers</b>									
631G	\$ 153	\$ 153	\$ 153	\$ -	\$ 25	\$ 342		\$ -	\$ -
637G PP	\$ 153	\$ 153	\$ 153	\$ -	\$ 25	\$ 342		\$ -	\$ -
<b>Wheeled Loaders</b>									
928G	\$ 102	\$ 102	\$ 102	\$ -	\$ -	\$ -		\$ -	\$ -
966G	\$ 102	\$ 102	\$ 102	\$ -	\$ -	\$ -	1	\$ 473	\$ 940
972G	\$ 131	\$ 131	\$ 131	\$ -	\$ -	\$ -		\$ -	\$ -
988G	\$ 131	\$ 131	\$ 131	\$ -	\$ 25	\$ 171		\$ -	\$ -
992G (two transports) (7)	\$ 153	\$ 153	\$ 153	\$ 74,160	\$ 25	\$ 342		\$ -	\$ -
<b>Hydraulic Hammers</b>									
H-120 (fits 325) no charge, mobilize with machine	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -	\$ -
H-180 (fits 345) no charge, mobilize with machine	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -	\$ -
H-180 (fits 365/385) no charge, mobilize with machine	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -	\$ -
<b>Other Equipment</b>									
420D 4WD Backhoe	\$ 102	\$ 102	\$ 102	\$ -	\$ -	\$ -		\$ -	\$ -
C9563E Vibratory Roller	\$ 102	\$ 102	\$ 102	\$ -	\$ -	\$ -		\$ -	\$ -
Light Truck - 1.5 Ton	\$ 67	\$ 67	\$ -	\$ -	\$ -	\$ -		\$ -	\$ -
Supervisor's Truck	\$ 63	\$ 63	\$ -	\$ -	\$ -	\$ -	1	\$ 176	\$ 353
Air Compressor + tools	\$ 79	\$ 79	\$ 79	\$ -	\$ -	\$ -		\$ -	\$ -
Welding Equipment	\$ 79	\$ 79	\$ 79	\$ -	\$ -	\$ -		\$ -	\$ -
Heavy Duty Drill Rig	\$ 397	\$ 397	\$ -	\$ -	\$ -	\$ -		\$ -	\$ -
Pump (plugging) Drill Rig	\$ 402	\$ 402	\$ -	\$ -	\$ -	\$ -		\$ -	\$ -
Concrete Pump	\$ 79	\$ 79	\$ 79	\$ -	\$ -	\$ -		\$ -	\$ -
Gas Engine Vibrator	\$ 79	\$ 79	\$ 79	\$ -	\$ -	\$ -		\$ -	\$ -
Generator 5KW	\$ 79	\$ 79	\$ 79	\$ -	\$ -	\$ -		\$ -	\$ -
HDEP Welder (pipe or liner)	\$ 79	\$ 79	\$ 79	\$ -	\$ -	\$ -		\$ -	\$ -
5 Ton Crane Truck	\$ 107	\$ 107	\$ -	\$ -	\$ -	\$ -		\$ -	\$ -
25 Ton Crane	\$ 146	\$ 146	\$ -	\$ -	\$ -	\$ -		\$ -	\$ -
<b>Trucks</b>									
725	\$ 102	\$ 102	\$ 102	\$ -	\$ -	\$ -	6	\$ 2,837	\$ 5,674
740	\$ 131	\$ 131	\$ 131	\$ -	\$ 25	\$ 171		\$ -	\$ -
789D	\$ 131	\$ 131	\$ 131	\$ -	\$ 25	\$ 342		\$ -	\$ -
777D (two transports) (8)	\$ 153	\$ 153	\$ 153	\$ 71,280	\$ 25	\$ 514		\$ -	\$ -
613E (5,000 gal) Water Wagon	\$ 153	\$ 153	\$ 153	\$ -	\$ -	\$ -	1	\$ 709	\$ 1,419
621E (8,000 gal) Water Wagon	\$ 153	\$ 153	\$ 153	\$ -	\$ 25	\$ 342		\$ -	\$ -
Dump Truck (10-12 yd <sup>3</sup> )	\$ 116	\$ 116	\$ 116	\$ -	\$ -	\$ -		\$ -	\$ -
<b>Miscellaneous</b>									
Equipment for dry hole abandonment (420D 4W)	\$ 102	\$ 102	\$ 102	\$ -	\$ -	\$ -		\$ -	\$ -
Pilot car (Light Truck)	\$ 63	\$ 63	\$ 63	\$ -	\$ -	\$ -		\$ -	\$ -
Truck Tractor + Lowbed Trailer 75 ton	\$ 153	\$ 153	\$ 153	\$ -	\$ -	\$ -		\$ -	\$ -
Truck Tractor + Flatbed Trailer 40 ton	\$ 131	\$ 131	\$ 131	\$ -	\$ -	\$ -		\$ -	\$ -
Light Truck + Flatbed Trailer 25 ton	\$ 79	\$ 79	\$ 79	\$ -	\$ -	\$ -		\$ -	\$ -
							12	\$ 14,307	
Footnotes and explanations of assumptions									
(1) The sum of the cost of equipment from either the SRCE or RSM equipment lab plus Davis-Bacon labor lab									
(2) Assumes minimum of 30 minutes load and secure and 30 minutes unsecure and unload machine.									
(3) No "Deadhead" (empty) charge for Mob up to 50 miles. More than 50 miles the cost of deadhead same rate as loaded miles.									
(4) Only large equipment requires disassembly for transport. Includes cost of mechanic + mechanic's truck + crane operator + crane									
(5) Nevada Dept. of Transportation oversized permits are \$25 per trip or \$60 per year.									
(6) Sum of mobilization plus all ancillary costs for one way loaded and return empty.									
(7) Two transports are required but the second transport does not need pilot cars or permits or a heavy duty trailer									
(8) Two transports required with both requiring full complement of pilot cars and permits.									
(9) For large mining operations, mobilization may be required from more than one location. For example, the Elko yard may not have four 631 scrapers. Additional equipment may need to mobilize from Reno, Las Vegas, or Salt Lake City. Input the further distance here.									
(10) Pilot Car costs based on SRCE light truck costs and Davis-Bacon wages									
(11) SRCE costs based on July 2019 vendor quotes									
(12) RS Means costs based on R.S. Means Heavy Construction Cost Data, 2019, Q2									
(13) Davis Bacon wages based on 2019 determination.									

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**APPENDIX C**  
**NEW MEXICO NOXIOUS WEED LIST**

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New Mexico Department of Agriculture

Noxious Weed List Update (October 19, 2016)

<http://www.nmda.nmsu.edu/wp-content/uploads/2016/11/Weed-List-memo-and-weed-list-2016.pdf>

### **Class A Species**

Class A species are currently not present in New Mexico, or have limited distribution.

Preventing new infestations of these species and eradicating existing infestations is the highest priority.

<b><u>Common Name</u></b>	<b><u>Scientific Name</u></b>
Alfombrilla	<i>Drymaria arenariodes</i>
Black henbane	<i>Hyoscyamus niger</i>
Brazilian egeria	<i>Egeria densa</i>
Camelthorn	<i>Alhagi psuedalhagi</i>
Canada thistle	<i>Cirsium arvense</i>
Dalmation toadflax	<i>Linaria dalmatica</i>
Diffuse knapweed	<i>Centaurea diffusa</i>
Dyer's woad	<i>Isatis tinctorial</i>
Giant salvinia	<i>Salvinia molesta</i>
Hoary cress	<i>Cardaria spp.</i>
Leafy spurge	<i>Euphorbia esula</i>
Oxeye daisy	<i>Leucanthemum vulgare</i>
Purple loosestrife	<i>Lythrum salicaria</i>
Purple starthistle	<i>Centaurea calcitrapa</i>
Ravenna grass	<i>Saccharum ravennae</i>
Scentless chamomile	<i>Matricaria perforate</i>
Scotch thistle	<i>Onopordum acanthium</i>
Spotted knapweed	<i>Centaurea biebersteinii</i>
Yellow starthistle	<i>Centaurea solstitialis</i>
Yellow toadflax	<i>Linaria vulgaris</i>

### **Class B Species**

Class B Species are limited to portions of the state. In areas with severe infestations, management should be designed to contain the infestation and stop any further spread.

<b><u>Common Name</u></b>	<b><u>Scientific Name</u></b>
African rue	<i>Peganum harmala</i>
Bull thistle	<i>Cirsium vulgare</i>
Chicory	<i>Cichorium intybus</i>
Halogeton	<i>Halogeton glomeratus</i>
Malta starthistle	<i>Centaurea melitenis</i>
Perennial pepperweed	<i>Lepidium latifolium</i>
Poison hemlock	<i>Conium maculatum</i>

Quackgrass	<i>Elytrigia repens</i>
Russian knapweed	<i>Acroptilon repens</i>
Spiny cocklebur	<i>Xanthium spinosum</i>
Teasel	<i>Dipsacus fullonum</i>

### **Class C Species**

Class C species are wide-spread in the state. Management decisions for these species should be determined at the local level, based on feasibility of control and level of infestation.

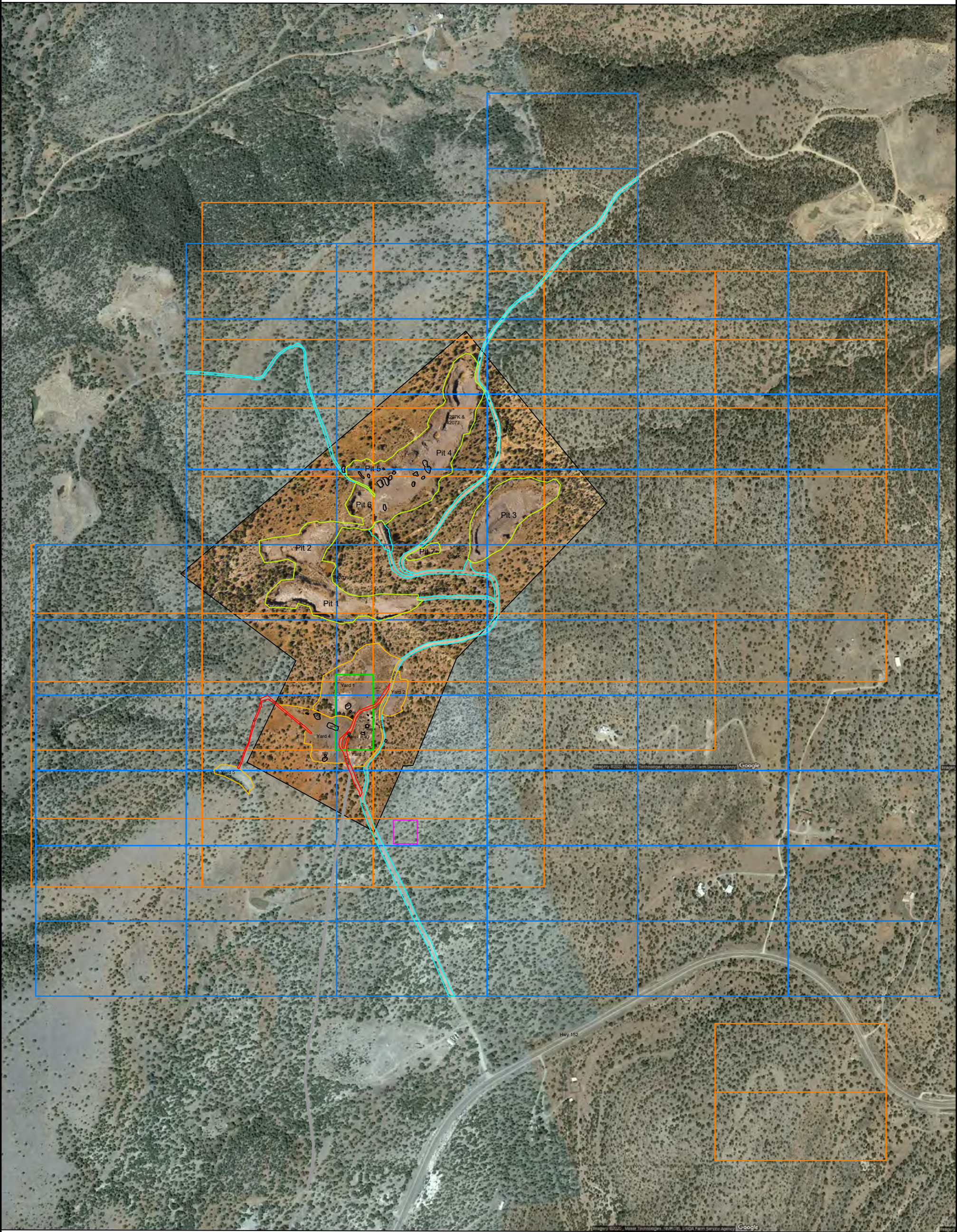
<b><u>Common Name</u></b>	<b><u>Scientific Name</u></b>
Cheatgrass	<i>Bromus tectorum</i>
Curlyleaf pondweed	<i>Potamogeton crispus</i>
Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
Giant cane	<i>Arundo donax</i>
Hydrilla	<i>Hydrilla verticillata</i>
Jointed goatgrass	<i>Aegilops cylindrica</i>
Musk thistle	<i>Carduus nutans</i>
Parrotfeather	<i>Myriophyllum aquaticum</i>
Russian olive	<i>Elaeagnus angustifolia</i>
Saltcedar	<i>Tamarix spp.</i>
Siberian elm	<i>Ulmus pumila</i>
Tree of heaven	<i>Ailanthus altissima</i>

### **Watch List Species**

Watch List species are species of concern in the state. These species have the potential to become problematic. More data is needed to determine if these species should be listed. When these species are encountered, please document their location and contact appropriate authorities.

<b><u>Common Name</u></b>	<b><u>Scientific Name</u></b>
Crimson fountain grass	<i>Pennisetum setaceum</i>
Meadow knapweed	<i>Centaurea pratensis</i>
Myrtle spurge	<i>Euphorbia myrsinites</i>
Pampas grass	<i>Cortaderia sellonana</i>
Sahara mustard	<i>Brassica tournefortii</i>
Syrian beancaper	<i>Zygophyllum fabago L.</i>
Wall rocket	<i>Diploaxis tenuifolia</i>



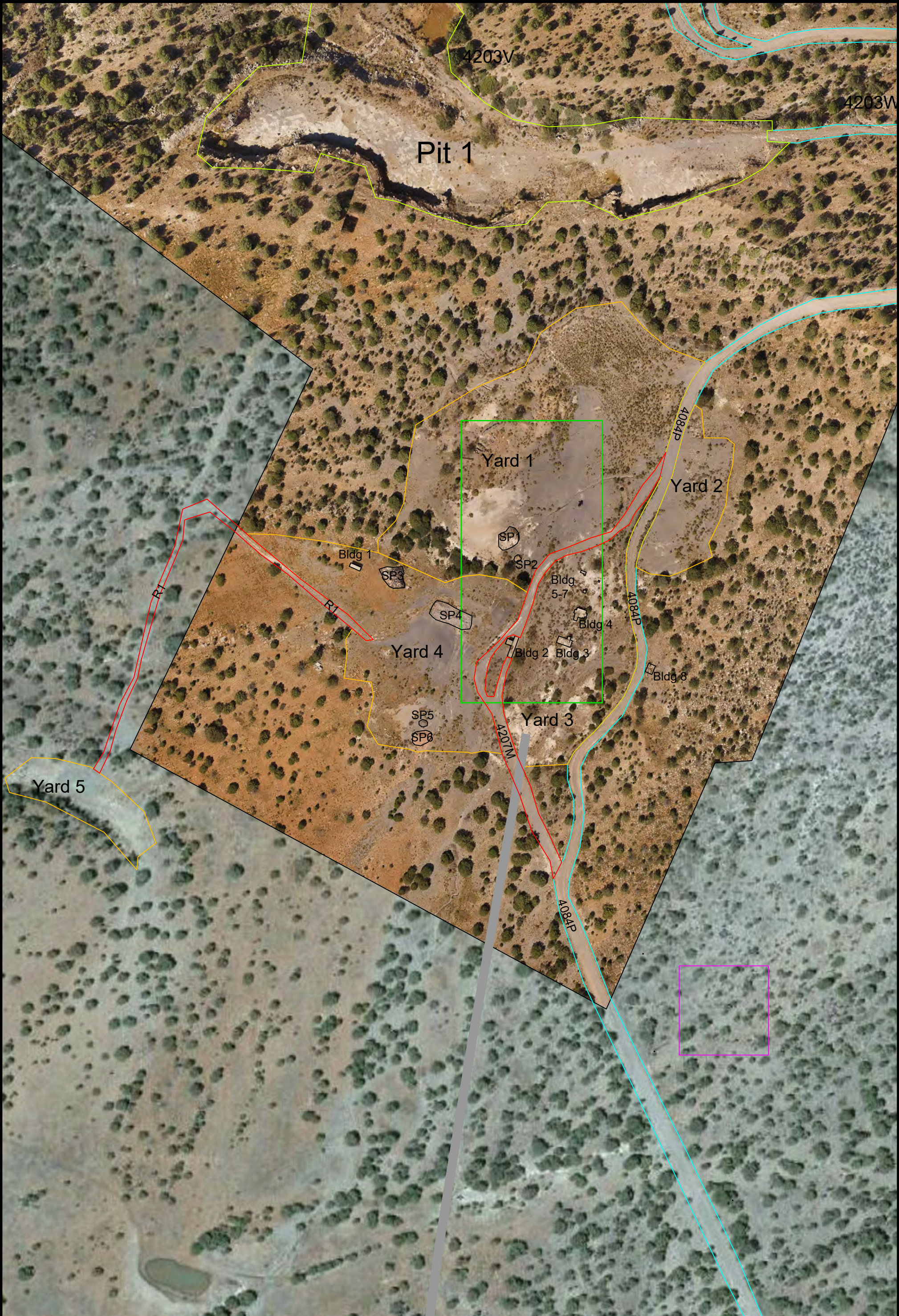


Legend

- |                            |   |                      |                      |
|----------------------------|---|----------------------|----------------------|
| <div></div> Claim - Placer | <div></div> Revegetation Reference Acre | <div></div> Pit      | <div></div> Pipeline |
| <div></div> Claim - Mill   | <div></div> Road - To Be Reclaimed      | <div></div> Yard     |                      |
| <div></div> Claim - Lode   | <div></div> Road - To Remain            | <div></div> Building |                      |

		PROJECT NO. Mathis Quarry	
DATE: April 30, 2020		SCALE: 1in=800ft	
DRAWN BY: W Thompson			
TITLE: Lhoist North America 2020 Mill Reclamation Plan			
SUBTITLE: Full Mathis Site Map			DRAWING NUMBER 2





Legend

Claim - Mill

Revegetation Reference Acre

Pit

Road - To Be Reclaimed

Yard

Pipeline

Road - To Remain

Building



Lhoist North America

Lhoist Group

PROJECT NO:

Mathis Quarry

DATE:

April 30, 2020

SCALE:

1in=200ft

TITLE:

Lhoist North America  
2020 Mill Reclamation Plan

SUBTITLE:

Mill Site Map

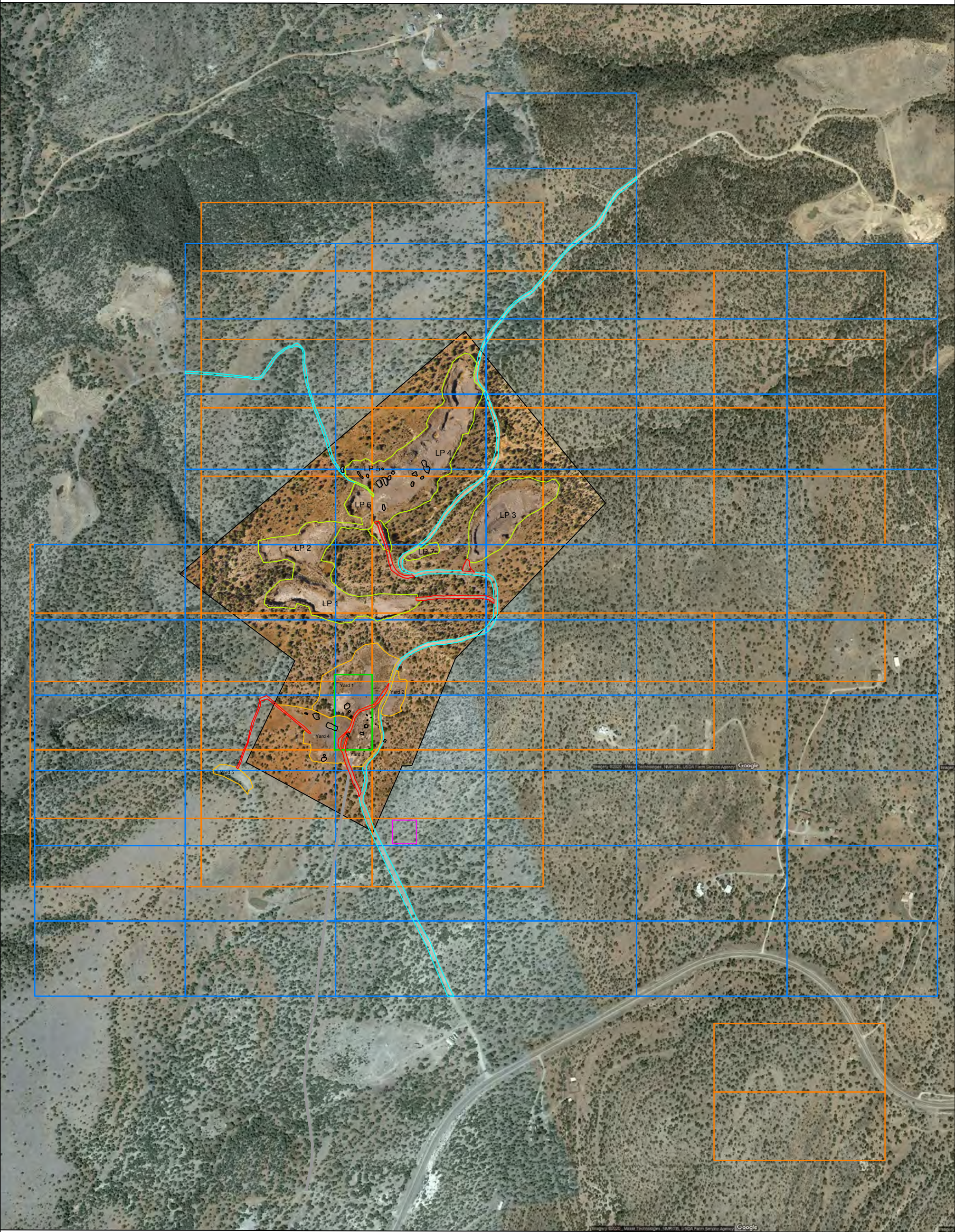
DRAWN BY:

W Thompson

DRAWING NUMBER

3





Legend

- |                            |                                    |                           |                      |
|----------------------------|------------------------------------|---------------------------|----------------------|
| <div></div> Claim - Placer | <div></div> Revegetation Reference | <div></div> Limestone Pit | <div></div> Pipeline |
| <div></div> Claim - Mill   | <div></div> Road - To Be Reclaimed | <div></div> Yard          |                      |
| <div></div> Claim - Lode   | <div></div> Road - To Remain       | <div></div> Building      |                      |

		PROJECT NO: Mathis Quarry	
DATE: April 30, 2020		DRAWN BY: W Thompson	
TITLE: Lhoist North America 2020 Mill Reclamation Plan			
SUBTITLE: Full Mathis Site Map			DRAWING NUMBER 2





Legend

- Pit
- Road - To Be Reclaimed
- Road - To Remain



PROJECT NO: Mathis Quarry

DRAWN BY: W Thompson

DATE: August 8, 2020

SCALE: 1in.260ft

TITLE: Lhoist North America  
2020 Reclamation Plan

SUBTITLE: Quarry Site Map

DRAWING NUMBER  
4