

TEST PLOT PROGRAM

No Aqua Mine Permit No TA005RE:

for:

IMERYS PERLITE USA INC. (IMERYS)
NO AGUA FACILITY
7.5 MILES NORTH OF TRES PIEDRAS
39360 HWY 285, TAOS COUNTY
TRES PIEDRAS, NM 87577
719-376-5484

Prepared by:



**1140 Valley Forge Road
Phoenixville, PA 19460
Montrose Project # 052753**

March 25, 2026



Contents

Revegetation/Test Plot Program

page 3

Attachments

Appendix A: Proposed Test Plot Exhibit

Appendix B: Imerys Seed Mix and El Grande Seed Mix

Appendix C: New Mexico State University SOW



Historical Revegetation/Test Plot Program

Imerys Perlite USA, Inc. (formerly Harborlite, Inc.) extracts the industrial mineral perlite at the open mine No Agua Mine just north of Tres Piedras, New Mexico. As a proactive measure to develop successful reclamation techniques, Imerys Perlite set aside three test plots areas, on disturbed ground within the mine. Each test plot represents a different type of reclamation challenge for when the mine is reclaimed. These include test plots at a fines dump, roadbed, and mine dump.

These areas were planted with a seed mix that is broadly applicable to reclamation for the region. Additionally, native tree species were planted to more accurately represent the typical mix of indigenous flora. The areas received minimal watering, care, and fertilization to mimic real reclamation conditions.

Vegetation success at the test plots was measured annually from 2001 until 2013. At that time Imerys and MMD explored the question of whether the test plots represented value going forward, as they had not attained the numerical standard for cover within the twelve year minimum monitoring window. Ultimately it was concluded that the test plot program should continue in some fashion. MMD suggested rather than simply continuing to measure the natural success of the plots, that Imerys employ an interseeding program to test this as a possible strategy for the poor performing test plots. The test plots were then interseeded in 2016. Pre-seeding and post-seeding vegetation surveys were conducted to assess the success of the seeding.

While significant improvement was observed, the test plots did not achieve cover numbers to meet the 75% of reference plot cover needed for bond release. Due to the test plots' failure to reach the coverage required for bond release in a suitable time period, the decision was made to redesign the Test Plot Program. Rather than relying on the scarce nutrients in the stockpiled cover material, it has been decided to incorporate borrow material from elsewhere on the property.

Current Revegetation/Test Plot Program

Montrose has reviewed information from prior test plot programs. An additional test plot program will be implemented with an emphasis on vegetation selection and varied soil depth. Appendix F is a matrix of seed mixes for the test plot program. A Montrose staff registered Landscape Architect reviewed the seed mixes for accuracy with the existing ecosystem. Appendix B contains both proposed seed mixes for testing. It is recognized that seed mixes are subject to material availability and substitutions may be necessary in the event that selected plant material is not available.

Montrose recommends two test plots to be constructed and monitored based on the following criteria:

Test Plot #1 – Flat Grade Condition: Plot will be located on a 'flat' topological grade (less than 3:1 slope). The test plot will be divided into four (4) quarter acre sized sub-plots. Each sub-plot will use a single seed mixture.

Test Plot #2 – Steep Slope Condition: Plot will be located on a 'steep slope' topological grade (3:1 slope). The test plot will be divided into four (4) quarter acre sized sub-plots. Each subplot will use a single seed mixture. The test plot will have a 200 ft width, perpendicular with the grade.

Both test plots will have the following sub-plot configuration:



- Sub-Plot 1: 6-inch borrow soil depth; Seed Mix #1
- Sub-Plot 2: 6-inch borrow soil depth; Seed Mix #2
- Sub-Plot 3: 10-inch borrow soil depth; Seed Mix #1
- Sub-Plot 4: 10-inch borrow soil depth; Seed Mix #2

Plant Material - Seed mixes were selected to reflect native species appropriate to site conditions and anticipated post-mining land use. Seed mix composition is provided in Appendix B. An Imerys seed mix and El Grande seed mix (from a neighboring facility) are proposed for testing.

To supplement the herbaceous seed mixes, shrub establishment will be evaluated. Shrub testing will include the New Mexico Locust (*Robinia neomexicana*), a native species known for its ability to improve soil fertility through nitrogen fixation. The inclusion of New Mexico Locust is expected to enhance soil quality, support ecological succession, and provide habitat and resources for wildlife, contributing to the overall ecological restoration of the area. The success of the New Mexico Locust or similar shrub would also reduce any potential stormwater erosion. If available the Locust Shrub will be planted as a seedling.

Soil Specifications – The soil used for the test plots will be obtain from an on-site borrow area. Each test plot will have two of the quarter acre sub-plots contain a soil depth of six inches. The remaining two sub-plots will have a 10 inch depth. Borrow soil will be applied over a loose, recently disturbed surface (~1-foot depth) and then harrowed (or disc) to incorporate existing soil. See Detail 1 in report for soil cover.

On-site soil proposed for use on the test plots and mine cap will be tested by a soil scientist. The soil scientist will provide a soil report regarding soil viability. Soil viability will determine the usage of any amendments to the soil, and any recommendation may be applied to strengthening the intended success of the test plot program.

Soil thicknesses may be adjusted based on the availability and suitability of on-site stockpiled material. Imerys is conducting a soil resource evaluation to confirm viable material sources. In 2025, Imerys advanced borings in the southern project area, including three (3) within the designated borrow area. All recovered core was retained. With an adequate recovery Imerys expects to provide representative data on soil thickness and stratigraphy. Additional subsurface information is being obtained in coordination with a consulting geologist to support a widely spaced exploratory testing program across the southern area (see appendix c). The goal, to provide data justifying the use of on-site materials sufficient to the cover needs.

Seed Dispersion Method – There will be one method for dispersing seed mixes on the test plots drill seeding. Drill seeding will result in better contact with the soil, which should help create an evenly dispersed mix within the test plots. Drill seeding should also reduce seed loss by preventing loss of seeds on the surface. All seeding will be conducted during the spring growing season to maximize germination potential and ensure the highest probability of successful plant establishment.

Construction Timeline and Life Span - The construction of the test plots will average around 2 to 3 weeks, and will involve on-site equipment to move material. The test plot areas will be prepared by using a dozer with a ripper to create a loose subsurface (roughly 1-foot depth). The Size and shape of test plots may vary due to the nature of the testing areas, but will maintain the designated required sizes. Test plots and sub-plots will be clearly delineated using durable, long-term markers such as steel T-posts. Following

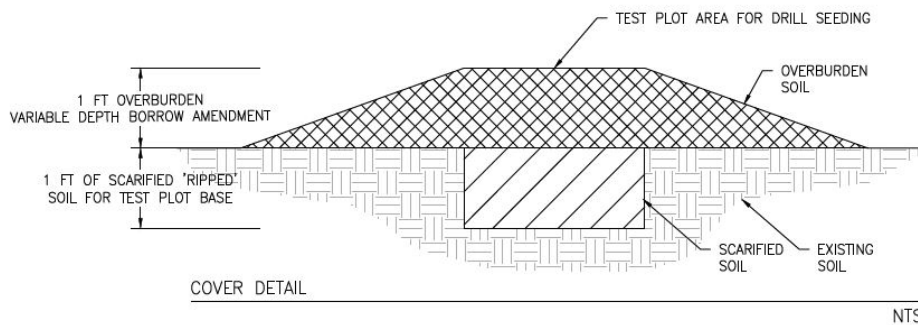


construction, an As-Built Construction Quality Assurance (CQA) Report will be submitted to MMD documenting construction methods, equipment used, and final plot layout.

Monitoring and maintenance measures of the test plots may include using temporary wildlife deterrents (e.g., noise devices, non-toxic repellents), supplemental irrigation during initial establishment, (if necessary), and erosion control repairs, as needed.

The expected test plot lifespan of the test plot program will span roughly 7 years or if test exceed standards. Routine testing will occur at years 3, 5, and 7.

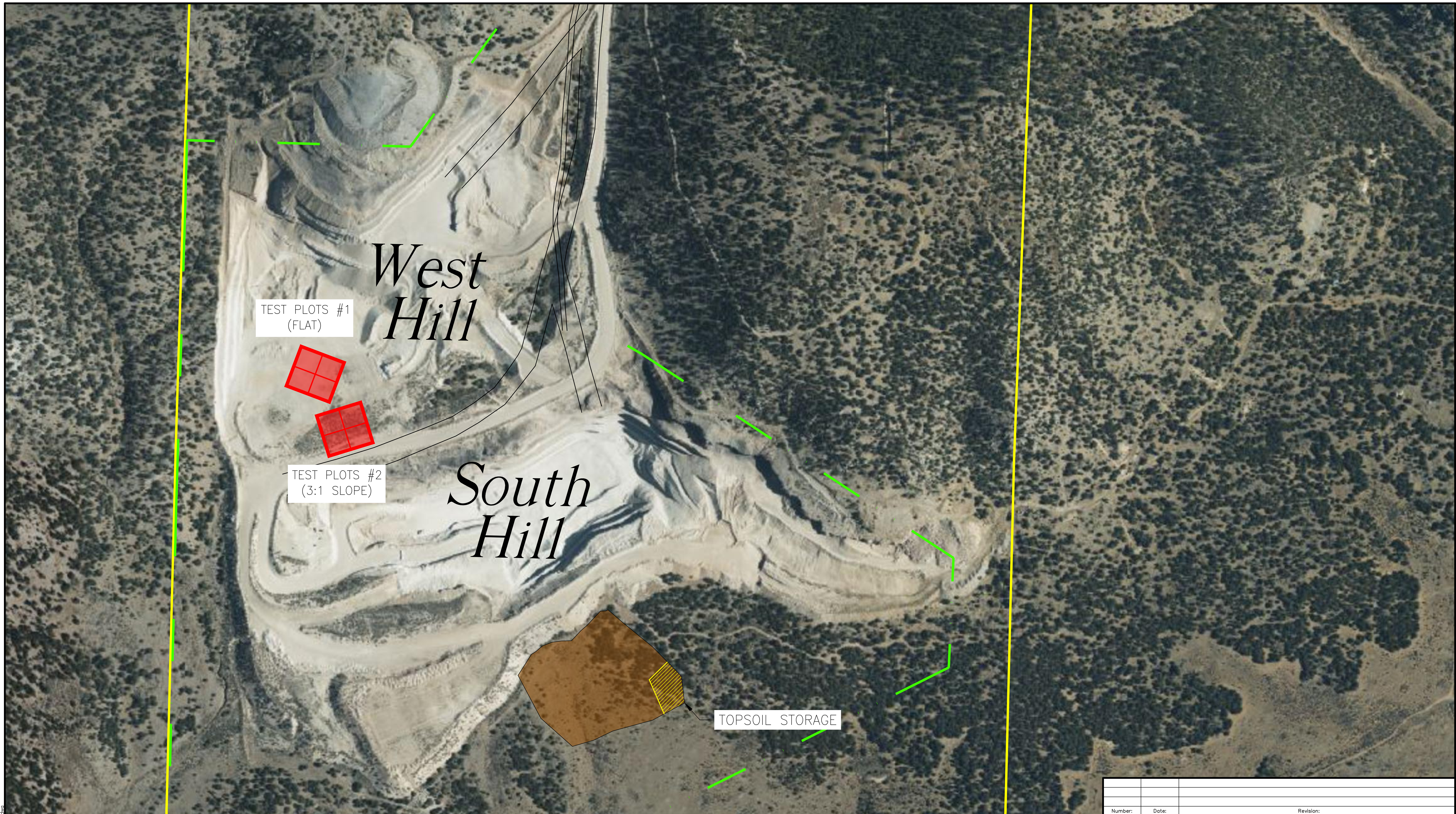
Testing Method - The testing method will include random transects, with the size of the transect to be 50 ft in length. No testing will occur in the first two years to allow for adequate vegetation coverage to establish. The mine has an obligation to have a 75% coverage (507) and 90% coverage (508). Monitoring data will be documented and shared with reviewers at test years 3, 5, and 7. The reports will provide any observations related to annual erosion and browsing by wildlife, which will also be provided on an annual basis. Results will be used to evaluate revegetation performance and, if necessary, to refine seed mixes, soil depths, or seeding methods through adaptive management and potential fencing to protect from browsing. Results from the 2021 surveyed areas will be used for a comparative for the new test.



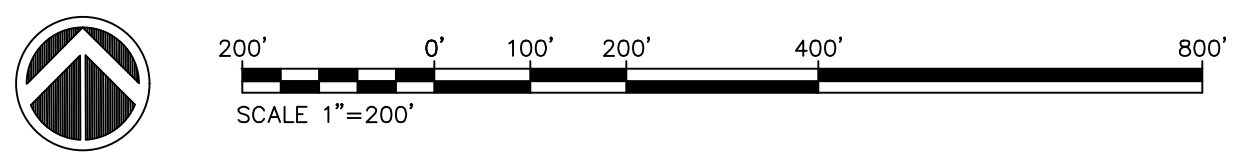
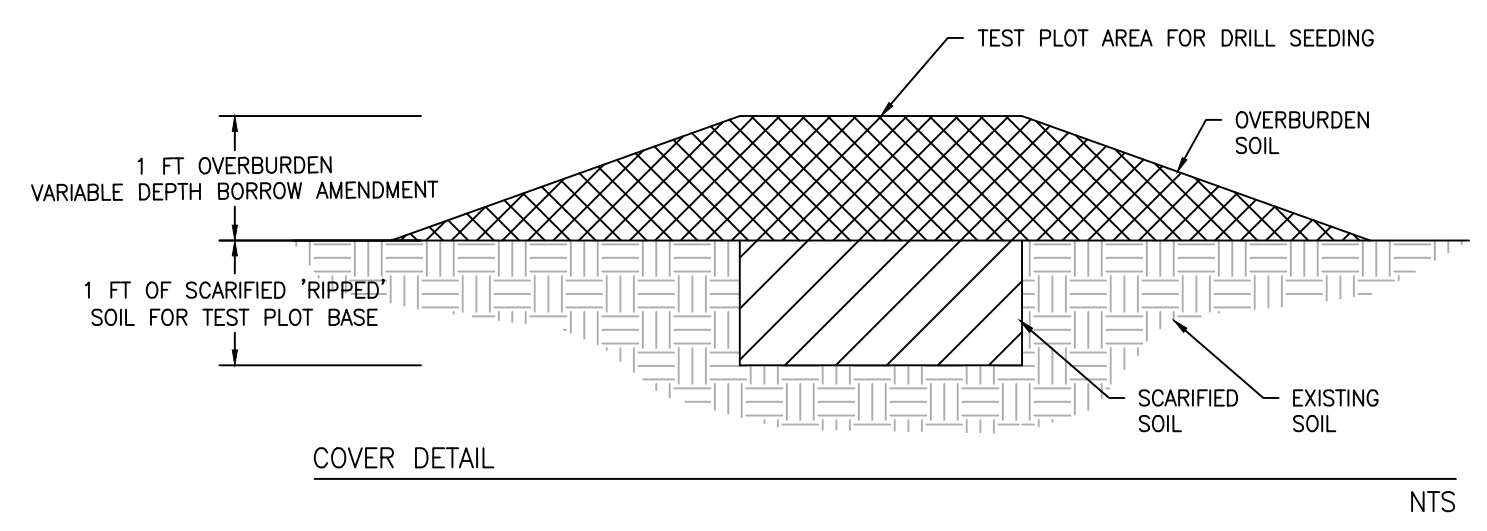
Detail 1: Demonstrate soil cover condition for Test Plots. Also visible on Test Plot Exhibit.

Attachments

Appendix A
Proposed Test Plot Exhibit



- LEGEND**
- PROPOSED TEST PLOT
 - SUBPLOTS
 - BORROW MATERIAL SOURCE
 - TOPSOIL STORAGE
 - PROPERTY BOUNDARY
 - MINING BOUNDARY



Number:	Date:	Revision:
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IMERY'S PERLITE USA, INC - NO AGUA MINE
 150 EAST MAIN, SUITE 320 FERNLEY, NEW MEXICO 89408
 PERLITE, TAOS COUNTY

PROPOSED TEST PLOT EXHIBIT

MONTROSE ENVIRONMENTAL
 MONTROSE ENVIRONMENTAL SOLUTIONS, INC.
 9100 2ND STREET NW, SUITE 200
 ALBUQUERQUE, NEW MEXICO 87114-1664
 T: 505.830.9680 montrose-env.com

Scale:	1" = 200'
Drawn By:	KDC
Checked By:	RM
Project Mgr.:	AD
Originated By:	RBP
Project No.:	052753
Drawing Date:	08/08/2025
Sheet No.:	1 OF 1
Revision Number:	0

EXHIBIT 1

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Appendix B
Imerys Seed Mix and El Grande Seed Mix

Imerys No Agua Seed Mix

Species Name	Common Name	Plant Form	Broadcast Rate (lbs./acre)
<i>Sphaeralcea coccinea</i>	scarlet globemallow	forb	0.3
<i>Artemisia frigida</i>	fringed sagebrush	forb	0.24
<i>Lupinus argenteus</i>	silvery Lupine	forb	4.5
<i>Penstemon strictus</i>	Rocky Mountain penstemon	forb	0.5
<i>Elymus elymoides</i>	bottlebrush squirreltail	grass-Cool	2
<i>Elmus trachycaulus</i>	slender wheatgrass	grass-Cool	2
<i>Hesperostipa conata</i>	needle and thread	grass-Cool	1
<i>Muhlenbergia montana</i>	mountain muhly	grass-Cool	0.38
<i>Achnatherum hymenoides</i>	Indian ricegrass	grass-Warm	5.5
<i>Bouteloua gracilis</i>	blue gramma	grass-Warm	0.5
<i>Amelanchier utahensis</i>	Utah serviceberry	shrub	1.07
<i>Ericameria nauseosa</i>	rubber rabbitbrush	shrub	0.75
<i>Vicia americana</i>	American vetch	Legume	1.5
			20.24

El Grande Mine Seed Mix

Species Name	Common Name	Pure Seed%	Total Viable%	Origin:
<i>Pascopyrum smithii</i>	Western Wheatgrass 'Rosana'	34.65%	95.00%	WY
<i>Atriplex canescens</i>	Fourwing saltbush	14.37%	97.00%	NM
<i>Rosa woodsii</i>	Woods Rose	13.52%	83.00%	UT
<i>Bouteloua curtipendula</i>	Sideoats grama 'El Reno'	11.75%	86.00%	NE
<i>Dalea purpurea</i>	Purple Prairie Clover	4.96%	93.00%	WA
<i>Linum lewisii</i>	Wild Blue Flax	4.31%	96.00%	WY
<i>Bouteloua gracilis</i>	Blue grama 'Lovington'	3.73%	94.00%	CO
<i>Penstemon strictus</i>	Rocky Mountain Penstemon 'Bandera'	1.84%	85.00%	CO
<i>Sphaeralcea munroana</i>	Munro's Globemallow	1.74%	84.00%	UT
<i>Ratibida columnifera</i>	Prairie Coneflower	1.67%	98.00%	OR
<i>Achillea millefolium</i>	Western Yarrow	0.58%	73.00%	WA
<i>Artemisia tridentata</i>	Big Sagebrush	0.49%	81.00%	UT
<i>Sporobolus cryptandrus</i>	Sand Dropseed	0.40%	92.00%	CO
<i>Elymus elymoides</i> ssp. <i>Californicus</i>	Toe Jam Creek Germplasm	0.38%	96.00%	WA
<i>Artemisia frigida</i>	Fringed Sage	0.36%	91.00%	WY

Appendix C
New Mexico State University SOW

Scope of Work

Imerys Mine Revegetation Test Plot Program

prepared by:

Dr. Owen Burney (*New Mexico State University*) – DRAFT – 10 March 2026

Introduction

Open-pit mine sites are often among the most difficult landscapes to revegetate successfully. Vegetation establishment is commonly constrained by harsh exposure, including limited shelter and few favorable microsites, as well as poor soil properties such as low water-holding capacity and low fertility. Animal damage can further reduce establishment and growth. Together, these factors restrict plant survival, physiological function, and early development. Even so, several management approaches may help address one or more of these limitations, including careful species selection, soil amendment or preparation, and targeted planting strategies.

Objective

This study will evaluate how borrow soil depth, grass and forb seed mixtures, and New Mexico locust plantings influence revegetation success on an open-pit mine site.

Project Description

The study will be conducted at two test sites, identified as Flat and Sloped. The Flat site will have a grade of less than 3:1, whereas the Sloped site will have a grade greater than 3:1. Each site will be approximately 250 ft². Within each site, treatments will be arranged as a randomized complete block design with a factorial structure. Treatments will consist of two seed mixtures that differ in grass, forb, and shrub composition, and two borrow soil depths consisting of 6 inches and 10 inches. In addition, 15 New Mexico locust seedlings (*Robinia neomexicana*) will be planted in rows in the center of each treatment replication. Seedling survival and growth will be measured to determine how plant performance responds to seed mixture and borrow soil depth.

Project Timeline

Budget

		<u>Qty</u>	<u>Cost / Unit</u>	<u>Total</u>	
Soil Survey	Labor	32	100	\$3,200	
	Lodging	2	125	\$250	
	Mileage	250	0.725	\$181	
	Per diem	4	74	\$296	
	Equipment	1	3000	\$3,000	
	Samples	20	42	\$840	\$7,767
Trees/Shrubs	Trees	550	1.56	\$858	
	Vexar	550	2.5	\$1,375	
	Labor	32	200	\$6,400	
	Lodging	2	125	\$250	
	Mileage	250	0.725	\$181	
	Per diem	4	74	\$296	\$9,360
Seed Measurements <i>one season only</i>	Labor	32	100	\$3,200	
	Lodging	2	125	\$250	
	Mileage	250	0.725	\$181	
	Per diem	4	74	\$296	\$3,927
Tree Measurements <i>one season only</i>	Labor	32	100	\$3,200	
	Lodging	2	125	\$250	
	Mileage	250	0.725	\$181	
	Per diem	4	74	\$296	\$3,927
SubTotal				\$24,982	
NMSU IDC = 25.9%				\$6,470	
Total				\$31,452	