TECHNICAL MEMORANDUM

To:	Andrew Conover
From:	Marcus Erdmann
Reviewed B	y: Ryan T. Baker, P.E.
Project:	Summit Mine DMS Slide Corrective Action
Project No:	475.0386.000
Subject:	Summit Mine QA/QC Report
Date:	25 January 2019



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1.0 INTRODUCTION

NewFields was contracted by Pyramid Peak Mining, LLC (PPM) to provide Engineer of Record (EOR) duties during the construction of the Development Material Slide Corrective Action Plan and associated project components. These duties included performing design modifications and engineering analysis, preparing Issued for Construction (IFC) drawings, Quality Assurance/Quality Control (QA/QC) inspections, answering engineering design questions, addressing construction issues, and performing an EOR site visit to inspect the construction progress. This report documents the construction and QA/QC activities performed during the completion of the development stockpile slide corrective action.

1.1 Project Description

The Summit Mine is located in western New Mexico, approximately 20 miles northeast of Duncan, Arizona in Greenlee County. The Summit Mine is located within of Sections 35 and 36, Township 16 South, Range 21 West and is entirely on private land. A general layout of the overall site and surrounding area is shown on the Drawings. The underground gold and silver mine has been in care and maintenance since late 2013. The operation includes an underground mine, mill facility (located in Lordsburg), an existing tailings storage facility (located in Lordsburg), and a development material stockpile.

In 2017 slope failures on the existing stockpile resulted in development material encroaching onto public land administered by the Bureau of Land Management (BLM). As a result, a Corrective Action Plan (CAP) was developed at the request of the New Mexico Energy, Minerals

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and Natural Resources Department, Mining and Minerals Division (MMD) to address safety concerns. The CAP included work elements which would provide long-term stabilization of the development material stockpile, remove material that encroached on public land and protect downgradient drainages.

Work items completed during the construction of the Summit Mine Development Material Slide Corrective Action included the following:

- Clearing and stripping of topsoil materials south of the existing development stockpile. Topsoil was temporarily stockpiled prior to placement on the regraded stockpile slope.
- Construction of a temporary access road for the removal of development material along the toe of the failed slope.
- > Construction of the buttress.
- > Removal of spilled development material from public land.
- > Regrading the development material stockpile slope.
- Grading the mine pad located on top of the development stockpile to allow drainage toward the south and east. This included grading in a drainage ditch along the crest of the east slope, draining to the south.
- > Topsoil placement on the southernmost slope.
- > Hydroseeding of the regraded stockpile slope.

1.2 Parties Involved

The Summit Mine Corrective Action was completed by several parties. Responsible parties involved in the project are listed below:

- > TG McCauley Construction (TGM) was contracted by PPM to perform the earthworks;
- > Curtis Landscaping and Irrigation (CLI) was contracted by PPM to perform the hydroseeding;
- Engineering evaluation and design services were performed by SRK Consulting (U.S.), Inc., and
- > Construction engineering and QA/QC services were provided by NewFields.

1.3 Project Schedule

Construction activities began in November 2018 with the removal of vegetation and the stockpiling of stripped topsoil within the project area. Major construction activities were



completed and the project was considered substantially complete on January 9th, 2019. The following list presents the primary construction activities and schedules.

- > 11/27/18 Removal of Vegetation and stockpiling of stripped topsoil
- > 11/28/18 to 12/11/18 Removal of Slide Material
- > 12/11/18 to 12/14/18 Construction of Buttress
- > 12/17/18 to 12/19/18 Removal of Spilled Development Material
- > 12/19/18 to 1/8/19 Regrading the East Slope
- > 12/19/18 to 1/8/19 Regrading the Mining pad and Drainage Ditch
- > 1/8/19 Topsoil placed on Finished Slope
- > 1/14/19 to 1/16/19 Stockpile Slope Hydroseeded

1.4 Design Drawings and Specifications

The project was constructed in compliance with the Design Drawings and Technical Specifications from the report titled Summit Mine DMS Corrective Action Project issued by SRK Consulting, on July 2nd, 2018 with a final revision by NewFields on December 18th, 2018. Revisions to the approved design made during construction are summarized in Section 4 of this report.

1.5 Use of this Report

This report has been prepared exclusively for PPM. This report is based on information provided by PPM and their contractors and collected by NewFields. Information presented herein is considered reliable to the extent that information received from others is accurate. No third party shall be entitled to use this report without written approval from PPM and NewFields.

2.0 QUALITY ASSURANCE/QUALITY CONTROL

NewFields performed QA/QC inspections for the duration of the project. QA/QC inspections were completed and documented daily. An aerial survey of the project was completed weekly to provide volumetric and photographic data to PPM. The results of the QA/QC inspections are described in the following sections of this report.



3.0 EARTHWORKS CONSTRUCTION AND QA/QC ACTIVITIES

3.1 Clearing and Grubbing

Clearing and grubbing consisted of removing vegetation and the upper soil materials down to bedrock. The area that was cleared and grubbed included the southern area of the development material stockpile, where the footprint has been expanded, and below the buttress area where excavation activities were required. This work was performed with a bulldozer and the vegetation and surface topsoil materials were stockpiled on the property for reclamation use. Care was taken to minimize erosion and excessive sediment runoff from the work areas.

3.1.1 QA/QC Performed on Clearing and Stripping

QA/QC performed on the clearing and stripping operations consisted of visual inspection of areas to confirm that adequate unsuitable soil removal had been accomplished. Upon approval of the clearing and stripping work activity, the work areas were ready for further excavation or fill placement.

3.2 Development Material Removal

Development material was required to be removed along the toe of the failed slope down to bedrock to allow for the construction of the buttress. A loader, excavator, and bulldozer were used to accomplish the necessary excavation. Material was removed from both the toe and crest of the slope and slide area in order to achieve the required slope grading and buttress construction.

Excavated material was placed in the previously cleared and stripped area located at the southern end of the stockpile. Prior to placement of the excavated material, a bulldozer ripped exposed the bedrock to roughen the surface of the stripped ground. Material was then placed in one foot lifts and track walked a minimum of four times by the bulldozer, weighing approximately 44 tons.

Development material that slid onto BLM administered land was removed using an excavator. Some material was out of reach of the excavator and required the use of laborers to move the material within the excavator reach. BLM approved a 20-foot easement from the property boundary to perform the necessary work to remove spilled development material. The excavator did not track outside of the property boundary.



3.2.1 QA/QC Performed on Development Material Removal

QA/QC performed on the development material removal consisted of monitoring and documenting excavation activities and identification of exposed weathered bedrock at the base of the excavation. QA/QC observed and assisted laborers in the removal of development material that were outside of the excavator reach. Pictures were taken of the completed work and provided to PPM for approval. The excavator was observed to not cross the property boundary.

3.3 Buttress Construction

The bulldozer ripped competent bedrock to create a level base for the buttress. Coarse development material was placed in one foot lifts and track walked using a D8T bulldozer (weighing approximately 44 tons), making at least four passes. The number of lifts placed was variable per section of the buttress as the height of the buttress fill varies. The buttress was considered built to the appropriate height when it properly tied into the slope.

Fill material placed within the buttress was ripped bedrock and coarse development material. All topsoil and fine-grained materials that were below the development material in the buttress area were removed and placed in the southern portion of the stockpile that had been cleared and grubbed.

3.3.1 QA/QC Performed on Buttress Construction

QA/QC observed the excavation of the buttress into the bedrock to verify sufficient width and length was achieved and all fine-grained materials had been removed. During the placement of the buttress fill material in lifts visual inspections were performed to ensure appropriate material was used and proper compaction of each lift was achieved. The buttress excavation and fill placement was performed in accordance with the design.

3.4 Development Material Slope Regrading

Two bulldozers, a loader, and an excavator were used to grade the east slope of the development material stockpile and the top surface for the mining pad. Starting from the northernmost slope and advancing toward the south, the bulldozers and excavator cut development material and reshaped the slope to approximately 2.5:1 (horizontal:vertical). The excavated materials were relocated to the southern portion of the stockpile that had been cleared and grubbed. The southern portion of the stockpile was graded with an exterior slope of approximately 2.25:1. The regraded slope was tied into the buttress by placing the material on the buttress fill in one foot lifts and track walking a minimum of four times.



Excavated development material from the east slope was also placed on the surface of the mine pad to regrade the surface and promote stormwater drainage off the mine pad. Due to buildings and mining equipment along the west side of the mine pad, TGM was unable to grade the west side of the mine pad to drain east. To facilitate stormwater drainage of this area, a small swale was graded from the lowest elevation along the west side of the mining pad to the east drainage ditch. The east drainage ditch is positioned near the crest of the stockpile slope and flows from north to south. The ditch is connected to the county road at the south end of the development material slope.

3.4.1 QA/QC Performed on the East Slope Regrade

QA/QC consisted of monitoring grading activities. With the assistance of TGM, the regraded slope and mine pad was surveyed to ensure it met the design requirements and stormwater drainage was conveyed away from the regraded slope and that ponding of water did not occur.

3.5 Topsoil Placement and Hydroseeding

Two bulldozers were used to place topsoil over the finished southern slope. The topsoil was placed from the southern extent of the stockpile, advancing north, until the topsoil stockpile was depleted. The extent of the topsoil placement is shown on the Drawings. After regrading and topsoil placement activities were complete, CLI hydroseeded the entire regraded stockpile slope.

3.5.1 QA/QC Performed on Topsoil Placement and Hydroseeding

QA/QC activities consisted of monitoring the placement of topsoil on the regraded southern slope and documenting the extents of the hydroseeding.

4.0 DESIGN MODIFICATIONS AND DEVIATIONS

During the course of construction, some minor revisions were made to the approved design as described below.

After inspection of the slide area and buttress foundation area by NewFields, the buttress design was modified to facilitate construction. The modification of the design was supported by slope stability analyses performed by NewFields on not only the portion of the stockpile that had previously failed, but also the northern slope which had been constructed at angle of repose. The overall slope of the stockpile was maintained (2.5H:1V above the buttress and 2H:1V in the southern portion) although the localized 1.5H:1V steepened slope above the buttress area was removed and the northern slope was flattened to 2.5H:1V. The other change was the width of the buttress excavation into the bedrock was narrowed. The



slope stability analyses used to support the design modifications is attached to this memo. The analyses have been updated to reflect as-built conditions.

- > The bedrock within the southern stockpile area, which was grubbed and cleared, was ripped to provide a roughed foundation on which the development material was placed.
- > All development material was placed in one foot lifts and track walked at least four times.
- The stormwater drainage channel originally proposed resulted in a deep rock excavation, on the order of 15 feet, and encroached on existing buildings and infrastructure. The constructed drainage ditch and mine pad swale still collect drainage from the pad area and convey it to the southern limits of the stockpile where it transitions to the county road.

5.0 RECORD OF CONSTRUCTION DRAWINGS

NewFields performed sUAS (small unmanned aerial system) flight operations and photogrammetric data processing during and post-construction to document the completed work. NewFields used this data to prepare the Drawings issued for Record of Construction which are included in the Drawings section of this report.

6.0 ENGINEER'S OPINION

NewFields certifies that the project was constructed in general accordance with the approved design, based on the construction activities observed, surveying and inspections performed.

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RECORD OF CONSTRUCTION DRAWINGS



LEGEND:	
~	EXISTING GROUND CONTOURS
\sim	AS-BUILT REGRADING CONTOURS
in-1	EXISTING ROADS/TRAILS
	PROJECT BOUNDARY

- STORMWATER FLOW DIRECTION

---- LIMITS OF HYDROSEEDING

- NOTES:

					APPROVED BY: RTB	DISCLAIMER NEWFIELDS PRODUCED THE INFORMATION PRESENTED		NewFields ELKO MININ	IG GROUP, LLC
-					CHECKED BY: NTR	ON THIS DRAWING THROUGH THE USE OF AVAILABLE TECHNICAL INFORMATION AND EXPERIENCE. RECEIVING THIS DRAWING DOES NOT GUARANTEE ANY	PROJE	SUMMIT MINE DMS SLIDE CORRECTIVE	ACTION PROJECT
1	01/25/19	ISSUED FOR RECORD OF CONSTRUCTION	ACH	RTB	DESIGNED BY:	EXPERIENCE. ANY MODIFICATION OR ADAPTATION OF	TITLE		FILENAME
0	12/18/18	ISSUED FOR CONSTRUCTION	ACH	RTB	DRAWN RY	THE DATA OR DRAWING SHALL BE AT USER'S RISK		PLAN VIEW	DRAWING NO. REVISION
RE	DATE	DESCRIPTION	TECH	ENG	ACH	RESPONSIBILITY TO NEWFIELDS.			A010 1

AREAS WHERE THE DUMP WAS EXPANDED WERE CLEARED AND GRUBBED OF ALL VEGETATION AND SURFACE SOILS TO COMPETENT ROCK.
 FIELD INSPECTION OF ROCK FILL BUTTRESS SHEAR KEY WAS CONDUCTED TO CONFIRM IN-SITU SOIL THICKNESS AND TO VERIFY THE ROCK MASS QUALITY IN KEYWAY.
 THE THICKNESS OF EACH LIFT OF THE ENGINEERED ROCK BUTTRESS LIFT WAS NOT LESS THAN 1 FOOT AND DID NOT EXCEED 3 FEET.
 EACH LAYER OF ROCKFILL WAS COMPACTED BY AT LEAST FOUR PASSES OVER THE ENTIRE SURFACE BY A TRACK OF A CRAWLER-TYPE TRACTOR WEIGHING 44 TONS (CAT D8T).
 CONSTRUCTION OBSERVATION WAS COMPLETED BY A QUALIFIED INDEPENDENT MATERIAL TESTING LABORATORY

CONSTRUCTION OBSERVATION WAS COMPLETED BY A GUALPTED INDEPENDENT MATERIAL TESTING LABORATORY.
 COORDINATES ARE PRESENTED IN THE LOCAL MINE GRID. TO CONVERT THE COORDINATES TO NEW MEXICO STATE PLANE NAD 83, SHIFT THE NORTHING BY 600,000 FEET AND THE EASTING BY 2,300,000 FEET.

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PICTURES





11.27.18 Waste Rock Removal



12.4.18 Waste Rock Removal





12.11.18 D8T Compacting Buttress Lift



12.13.18 Waste Rock Spill





12.18.18 Laborers Removing Waste Rock



01.04.19 Slope Tied into Buttress





01.08.19 Completed Waste Dump Regrade



SLOPE STABILITY ANALYSIS

TECHNICAL MEMORANDUM



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To:Andrew Conover, Senior Project ManagerFrom:Nick Owens and Nicholas Rocco, Ph.D., P.E.Reviewed By:Ryan T. Baker, P.E.Project:Summit Mine DMS Slide Corrective ActionProject No.:475.0386.000Date:23 January 2019

1.0 INTRODUCTION

This technical memorandum presents the stability analysis results for the Summit Mine Development Material Stockpile (DMS) Slide Corrective Action Project. A Corrective Action Plan (CAP) was designed and implemented to remediate the impacts of slope failures that occurred in 2017. During mining activity at the Summit Mine the DMS was constructed by end dumping development material from the portal pad. This construction resulted in angle of repose slopes.

1.1 Project Background

Pyramid Peak Mining, LLC (PPM) retained Axelrod, Inc. (Axelrod) to carry out a site reconnaissance, subsequent stability analysis and the conceptual design of corrective measures for the DMS slope in late 2017 and results of the work were published in early 2018¹. Axelrod completed two hand dug test pits to limited depth at the toe of the slide to visually classify the subgrade materials encountered, and subsequently obtain an undisturbed sample for laboratory testing. Index and one consolidated undrained triaxial compression tests were completed on the samples obtained, and the near surface subgrade at the toe of the slide investigation and laboratory tests to estimate the strength of the clay subgrade, a stability analysis was completed to evaluate options for buttressing and slope re-grading of portions of the failed slope as well as adjacent sections of the slope that had not experienced movement.

¹ Axelrod, Inc. (2018). Summit Mine Waste Rock Stockpile, Stability Analysis and Corrective Measures Design, Draft, January.



Subsequent to the work performed by Axelrod, PPM commissioned SRK Consulting (U.S.), Inc. (SRK) in mid-2018 to re-evaluate the slope stability and provide a detailed design for slope regrading and installation of a toe buttress². SRK completed a back-analysis of the slide to estimate a residual shear strength of the underlying clay subgrade, with the estimated shear strength similar to the Axelrod laboratory data. SRK's stability analysis resulted in recommendations for a proposed CAP requiring a buttress to be constructed at the base of the slide. Detailed drawings for the slope rehabilitation were prepared.

PPM retained NewFields in late-2018 to provide construction quality control (QC) services during the execution of the CAP project. As construction initiated in early December, there were concerns with the constructability of the detailed design and two different site visits were performed by Senior Engineers to observe existing conditions. The result of these site visits were to re-evaluate the stability of both temporary over-steepened slope conditions that were likely to develop during excavation of the slide toe and construction of the buttress, as well as some concerns with the non-failed slope directly north of the slide. Preliminary stability analyses were performed during construction to provide guidance for the on-going work, with the plan to complete a final stability analysis of the re-constructed slope after all earthworks were complete and as-build topography became available.

The following sections describe the final, as-built slope stability evaluation.

2.0 FINAL STABILITY EVALUATION

The stability evaluation of the final, as-built DMS slopes was completed for static and pseudostatic conditions using the computer program SLIDE v.8 by Rocscience. SLIDE is a twodimensional slope stability program for evaluating circular or noncircular failure surfaces in soil or rock using limit equilibrium methods. Spencer's procedure, which is accurate for all slope geometries and soil profiles was utilized within the stability model. Acceptable minimum factors of safety for static and pseudostatic conditions for development material stockpiles were established as 1.3 and 1.1, respectively, and are consistent with industry standards.

2.1 Design Ground Motions

To assess the stability of slopes during seismic loadings, a pseudostatic approach was utilized in which the potential sliding mass is subjected to an additional, destabilizing horizontal force representing the effects of earthquake motions. Very simply, the seismic force is the weight of the sliding mass multiplied by a horizontal earthquake coefficient (k_h), which is related to the peak ground acceleration (PGA).

² SRK Consulting (2018), Analysis of Summit Mine DMS Dump Instability and Proposed Remediation Plan, 17 July.



The horizontal seismic coefficient is typically considered as a portion of the PGA, because during an actual earthquake the acceleration within the potential sliding mass is cyclic and varies over the duration of the earthquake. Therefore, an average horizontal seismic coefficient was considered to be one-half the PGA.

The PGA for Summit Mine was defined using the United States Geological Survey (USGS) online Unified Hazard Tool. For this analysis, the design seismic event was conservatively assumed to be a 2,475 year return event, with an associated PGA of 0.108g, as documented in **Attachment A**.

2.2 Model Development

Stability was analyzed for three sections of the DMS; Sections C, D, and E as presented in **Drawing A010, Rev. 1.** In general, slopes that likely have natural clay subgrade remaining below the development rock were regraded to approximately 2.5H:1V, whereas slopes were regraded to a maximum of approximately 2H:1V if the foundation was stripped to rock prior to placing development rock during slope rehabilitation.

- Section C is south of the original slide, in an area that was stripped of clay prior to placement of development rock from regrading of the slopes to the north.
- Section D is through the slide area. In this area, the clay subgrade was removed only along the toe of the slope prior to construction of the stability buttress.
- Section E is north of the original slide where slopes were the natural clay subgrade likely remains below the development rock.

2.3 Material Properties

Material properties used for the stability analysis are summarized in **Table 2.1**. The current stability evaluation did not include an additional sampling and testing of materials, and thus the material properties discussed and utilized by Axelrod and SRK were reviewed and considered for this analysis. In general, the strength parameters are relatively consistent with previous analyses.

Material	Bulk Unit Weight (lb/ft ³)	Cohesion (lb/ft ²)	φ (deg)
Development Rock	130	0	35
Clay Soil	125	50	23
Bedrock	160	500	40
Engineered Fill	135	0	38

TABLE 2.1 – SUMMARY OF MATERIAL PROPERTIES



2.4 Results

The results of the stability evaluation are presented in **Table 2.2** and output graphics from the stability program are included in **Attachment B**.

The stability analysis resulted in acceptable factors of safety for both static and pseudostatic conditions. Based on these results, were believe the DMS slopes will remain stable under both static and dynamic conditions given the current understanding of the clay foundation and asbuilt geometry.

Stability Section	Static	Pseudostatic (2,475 Yr. Return)
Section C	1.55	1.35
Section D	1.57	1.35
Section E	1.60	1.38

TABLE 2.2 – STABILITY RESULTS

Attachments: Attachments A and B

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ATTACHMENT A – USGS UNIFIED HAZARD TOOL

U.S. Geological Survey - Earthquake Hazards Program

Unified Hazard Tool

Please do not use this tool to obtain ground motion parameter values for the design code reference documents covered by the <u>U.S. Seismic Design Maps web tools</u> (e.g., the International Building Code and the ASCE 7 or 41 Standard). The values returned by the two applications are not identical.

∧ Input	
Edition	Spectral Period
Dynamic: Conterminous U.S. 2014 (v4.1.	Peak ground acceleration
Latitude	Time Horizon
Decimal degrees	Return period in years
32.872736	2475
Longitude	
Decimal degrees, negative values for western longitudes	
-108.968898	
Site Class	
760 m/s (B/C boundary)	



Deaggregation

Component



Summary statistics for, Deaggregation: Total

Deaggregation targets	Recovered targets
Return period: 2475 yrs Exceedance rate: 0.0004040404 yr ⁻¹ PGA ground motion: 0.1082819 g	Return period: 2521.1724 yrs Exceedance rate: 0.00039664086 yr ⁻¹
Totals	Mean (for all sources)
Binned: 100 %	r: 24.46 km
Residual: 0 %	m: 6.12
Trace: 0.87 %	ε ₀ : 0.31 σ
Mode (largest r-m bin)	Mode (largest & bin)
r: 11.52 km	r: 9.55 km
m: 5.1	m: 5.1
ε ο: 0.49 σ	ε ₀ : 0.24 σ
Contribution: 7.62 %	Contribution: 2.44 %
Discretization	Epsilon keys
r: min = 0.0, max = 1000.0, Δ = 20.0 km	ε0: [-∞2.5)
m: min = 4.4, max = 9.4, Δ = 0.2	ε1: [-2.52.0)
ε: min = -3.0, max = 3.0, Δ = 0.5 σ	ε2: [-2.01.5)
	ε3: [-1.51.0)
	ε4: [-1.00.5)
	ε5: [-0.5 0.0)
	ε6: [0.00.5)
	ε7: [0.51.0)
	ɛ8: [1.0 1.5)
	ε9: [1.52.0)
	ε10: [2.02.5]
	ε11: [2.5+∞]

Deaggregation Contributors

Source Set 🕒 Source	Туре	r	m	ε ₀	lon	lat	az	%
EXTmap_2014_fixSm.ch.in (opt)	Grid							35.10
PointSourceFinite: -108.969, 32.913		6.89	5.61	-0.79	108.969°W	32.913°N	0.00	2.62
PointSourceFinite: -108.969, 33.003		14.37	5.84	0.03	108.969°W	33.003°N	0.00	2.39
PointSourceFinite: -108.969, 32.940		8.95	5.67	-0.51	108.969°W	32.940°N	0.00	2.10
PointSourceFinite: -108.969, 32.949		9.69	5.69	-0.42	108.969°W	32.949°N	0.00	2.0
PointSourceFinite: -108.969, 32.967		11.22	5.73	-0.25	108.969°W	32.967°N	0.00	1.7
PointSourceFinite: -108.969, 32.985		12.78	5.78	-0.10	108.969°W	32.985°N	0.00	1.4
PointSourceFinite: -108.969, 33.102		23.03	6.14	0.51	108.969°W	33.102°N	0.00	1.3
PointSourceFinite: -108.969, 33.066		19.90	6.03	0.37	108.969°W	33.066°N	0.00	1.2
PointSourceFinite: -108.969, 33.012		15.16	5.86	0.09	108.969°W	33.012°N	0.00	1.0
PointSourceFinite: -108.969, 33.156		27.68	6.29	0.68	108.969°W	33.156°N	0.00	1.0
PointSourceFinite: -108.969, 33.129		25.36	6.22	0.60	108.969°W	33.129°N	0.00	1.0
	Grid							23.8
PointSourceFinite: -108.969, 32.913		6.89	5.61	-0.79	108.969°W	32.913°N	0.00	1.7
PointSourceFinite: -108.969, 33.003		14.37	5.84	0.03	108.969°W	33.003°N	0.00	1.6
PointSourceFinite: -108.969, 32.940		8.95	5.67	-0.51	108.969°W	32.940°N	0.00	1.4
PointSourceFinite: -108.969, 32.949		9.69	5.69	-0.42	108.969°W	32.949°N	0.00	1.3
PointSourceFinite: -108.969, 32.967		11.22	5.73	-0.25	108.969°W	32.967°N	0.00	1.1
EXTmap_2014_fixSm.gr.in (opt)	Grid							17.5
PointSourceFinite: -108.969, 32.913		6.89	5.61	-0.79	108.969°W	32.913°N	0.00	1.3
PointSourceFinite: -108.969, 33.003		14.37	5.84	0.03	108.969°W	33.003°N	0.00	1.2
PointSourceFinite: -108.969, 32.940		8.95	5.67	-0.51	108.969°W	32.940°N	0.00	1.0
PointSourceFinite: -108.969, 32.949		9.69	5.69	-0.42	108.969°W	32.949°N	0.00	1.0
XTmap_2014_adSm.gr.in (opt)	Grid							11.9
XTmap_2014_fixSm_M8.in (opt)	Grid							6.4
XTmap_2014_adSm_M8.in (opt)	Grid							4.3



ATTACHMENT B – SLOPE STABILITY OUTPUT GRAPHICS





Ground Surface prior to Corrective Action Unit Weight Cohesion Phi Water Material Name Color Strength Type Ru (lbs/ft3) (psf) (deg) Surface **Development Rock** 130 Mohr-Coulomb 0 35 0 None 5550 Clay Soil 0 125 Mohr-Coulomb 50 23 None Bedrock 160 Mohr-Coulomb 500 40 0 None 0 **Engineered Fill** 135 Mohr-Coulomb 0 38 None Min 5500 Method Name FS 1.57 Spencer GLE / Morgenstern-Price 1.57 5400 50 100 150 200 250 300 350 400 Summit Mine DMS Slide Corrective Action Plan NewFields Analysis Description Section D - Static Condition Scale Company Drawn By N. Owens 1:500 NewFields Date Printed File Name 1/23/2019 AsBuilt Cross Sections.slmd SLIDEINTERPRET 8.021

5650

5600

5450



5650



▶ 0.055 JWWw 5625 5600 Ground Surface prior to Corrective Action Unit Weight Cohesion Phi Water **Material Name** Color Strength Type Ru (lbs/ft3) (psf) (deg) Surface **Development Rock** Mohr-Coulomb 35 130 0 None 0 Clay Soil 125 Mohr-Coulomb 50 23 0 None 5575 Bedrock 160 Mohr-Coulomb 500 40 None 0 Min Method Name FS Spencer 1.39 5550 GLE / Morgenstern-Price 1.38 5525 5500 220 280 40 60 80 100 120 140 160 180 200 240 260 Summit Mine DMS Slide Corrective Action Plan NewFields Analysis Description Section E - Pseudostatic Conditions Scale Company Drawn By NewFields N. Owens 1:300 Date Printed File Name 1/23/2019 AsBuilt Cross Sections.slmd SLIDEINTERPRET 8.021



DAILY REPORTS

Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 November 27th 2018



FIELD DAILY PROGRESS REPORT

Project(s): Summit Mine Wa	ste Fa	acilit	y Slide	1				
NewFields Project Number: 475.0386.000								
Site: Elko Mining Group, LLC								
Date: 11/27/18								
Shift: Day								
	S	Μ	т	W	Th	F	S	

Temperature: Low: 36°F to High: 68°F

Weather: Sunny

I. CONTRACTOR ACTIVITIES DURING SHIFT

TG McCauley Activity:

- A D8T bulldozer cut and grubbed cover soil down to bedrock south of the slide material to approximately 25' inside the property boundary.
- The excavator removed wood and metal waste from the stockpile on top of the slope, on the south section of the property. The waste was deposited with like waste along the west side of the property.

II. MINE ACTIVITIES DURING SHIFT

• Riley (Engineer) and Eric (Environmental) were on site for the project kickoff meeting.

III. NEWFIELDS QA/QC ACTIVITIES

A walkthrough of the site was completed. The drone (Phantom 4) was used for aerial observation of the slide as well as the cutting and grubbing of the southeastern section of the property.

IV. MEETINGS AND COMMUNICATIONS

- > Kickoff Meeting, attended by Elko Mining Group, NewFields, and TG McCauley:
 - There is evidence of water pooling at the top of the slope, Rusty McCauley recommended grading the area to allow for better drainage. The designed spillway at the top of the slope would then need to be built to fit rather than built from the drawings. The plan was OK'd by Eric (Environmental) and Riley (Engineer) of Elko Mining Group, LLC
 - BLM (Bureau of Land Management) has given TG McCauley 20' past the property boundary to perform necessary work.



- Wood and metal waste has been dumped on a stockpile on the south section of the mine property, on top of the slope. It is to be removed from the stockpile and deposited with similar waste along the west side of the property boundaries
- TG McCauley will begin cutting the failed material near the toe of the slide to check for instability. Assuming the material is stable enough for work, the slide material will be cut across the slope to the spillage onto BLM owned land.
- It is suspected that the failure of the waste pushed most of the topsoil to the bottom of the slope, leaving the failure material on bedrock.



1D8T Grubbing and Cutting




Ponding on Mining Pad





Moisture at the Toe of the Slope





Spilled Slide Material on BLM Land





Bulldozer Used for Project





Loader Used for Project





Excavator Used for Project

Name	Project Number	Hours	Comments
Marcus Erdmann	475.0386.000	8.0	Field Supervision, Kickoff Meeting

If you have any questions or require additional information, please contact us at your convenience.

Sincerely,

NewFields Mining Design & Technical Services

Prepared by:

Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 November 28th 2018



FIELD DAILY PROGRESS REPORT

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roject(s): Summit wine waste Facility Slide											
NewFields Project Number: 475.0386.000											
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Temperature: Low: 36°F to High: 68°F

Weather: Sunny

I. CONTRACTOR ACTIVITIES DURING SHIFT

TG McCauley Activity:

- The D8T bulldozer built a road using fines waste (located just south of the mine entrance) across the previously cut and grubbed area. The road was used by the excavator and loader to access the lower section of the slide material.
- The excavator dug out the toe of the slide material down to bedrock to the south to test stability. The slope was found to be stable with upslope material occasionally sluffing downslope. Approximately 4 feet of topsoil was found at the toe of the slide before hitting competent bedrock.
- The loader cut slide material near the toe of the slope to create a path to the slide material on BLM owned land. The cut material was dumped on the cut and grubbed area south of the slide, placed below the road.

II. MINE ACTIVITIES DURING SHIFT

- Eric and Riley sent copies of the design plans to NewFields QAQC.
- Eric and Riley were on site for inspection and a meeting with Nick Rocco (NewFields).

III. NEWFIELDS QA/QC ACTIVITIES

- > A drone survey was completed (Phantom 4) of the Summit Mine property.
- Nick Rocco (Engineer) arrived on site in the afternoon to assess the likelihood of more movement. Nick recommended ripping the grubbed area upslope of the road to allow for placement of cut slide material. Concern was raised on the ability of the D8T bulldozer to rip the bedrock to create a level area for construction of the buttress.



Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 November 28th 2018

IV. MEETINGS AND COMMUNICATIONS

Riley and Eric (Elko Mining Group) will be discussing various questions and concerns with Elko Mining Group engineers to provide solutions and clarity.



Road Progress End of Day (11/28)





Completed Grub and Clear Area with Stockpiled Topsoil





Excavator Testing Slope Stability





Loader Cutting Slide Material

Name	Project Number	Hours	Comments
Marcus Erdmann	475.0386.000	9.5	Field Supervision, Aerial Survey

If you have any questions or require additional information, please contact us at your convenience.

Sincerely,

NewFields Mining Design & Technical Services

Prepared by:

Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 November 29th 2018



FIELD DAILY PROGRESS REPORT

Project(s): Summit Mine Waste Facility Slide									
NewFields Project Number: 475.0386.000									
Site: Elko Mining Group, LLC									
Date: 11/29/18									
Shift: Day									
	S	М	т	w	Th	F	S		

Temperature: Low: 44°F to High: 71°F

Weather: Sunny

I. CONTRACTOR ACTIVITIES DURING SHIFT

TG McCauley Activity:

- The loader cut slide material near the toe of the slope to create a path to the slide material on BLM owned land. The cut material was dumped on the cut and grubbed area south of the slide, placed below the road. Near the north side of the slide material, the excavator pulled the slide material down before the loader picked it up to prevent the material from being pushing onto BLM land.
 - The bulldozer pushed the dumped material downhill in the afternoon
- The bulldozer graded the mine pad at the top of the slope to allow drainage to the south.

II. MINE ACTIVITIES DURING SHIFT

• No work was performed by Elko Mining group on site.

III. NEWFIELDS QA/QC ACTIVITIES

- > A drone survey was completed (Phantom 4) of the Summit Mine property.
- Lath was placed on tension cracks found along the crest of the slope to monitor movement.
- Observation of the cut along the toe of the slide material was completed to ensure stability of the slope.

IV. MEETINGS AND COMMUNICATIONS

- > Drone survey information has been sent off to be processed.
- A meeting has been scheduled for tomorrow (11/30) to discuss Nick Rocco's (NewFields) thoughts on the project.





Lath Used to Measure Tension Crack Movement





Road Cut along the Toe of Slide Material





Loader Dumping Waste Material Below Road





D8T Grading Mining Pad

Name	Project Number	Hours	Comments
Marcus Erdmann	475.0386.000	8.0	Field Supervision, Aerial Survey

If you have any questions or require additional information, please contact us at your convenience.

Sincerely,

NewFields Mining Design & Technical Services

Prepared by:

Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 November 30th 2018



FIELD DAILY PROGRESS REPORT

Project(s): Summit Mine Wa	iste Fa	acility	Slide				
NewFields Project Number:	475.0	386.0	00				
Site: Elko Mining Group, LLC	2						
Date: 11/30/18							
Shift: Day							
	S	Μ	т	W	Th F	S	

Temperature: Low: 38°F to High: 56°F

Weather: Rain

I. CONTRACTOR ACTIVITIES DURING SHIFT

TG McCauley Activity:

- > McCauley excavator cut the crest of the slope to create a path for the D8T.
- The D8T pushed off the crest downslope towards the spilled slide material. The D8T pushed slide material into the road for the Loader to scoop and dump at the previously grub and cleared area.
- > Work on site ended early (2:00pm) due to weather conditions.

II. MINE ACTIVITIES DURING SHIFT

• No work was performed by Elko Mining group on site.

III. NEWFIELDS QA/QC ACTIVITIES

- > The drone was not used today due to weather.
- Observation of the cut along the toe and crest of the slide material was completed to ensure stability of the slope.

IV. MEETINGS AND COMMUNICATIONS

- Meeting from Nick Rocco's (NewFields) visit:
 - Rusty (McCauley Construction) will be given drawing files and the site will be staked.
 - The drawing files will also be sent to NewFields to give considerations for a possible redesign of the buttress.





D8T Pushing Down From Crest





D8T Pushing Down Slide Material





Loader Dumping Slide Material

Name	Project Number	Hours	Comments
Marcus Erdmann	475.0386.000	8.0	Field Supervision, Aerial Survey

If you have any questions or require additional information, please contact us at your convenience.

Sincerely,

NewFields Mining Design & Technical Services

Prepared by:

Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 December 3rd 2018



FIELD DAILY PROGRESS REPORT

Project(s): Summit Mine Waste Facility Slide										
NewFields Project Number: 475.0386.000										
Site: Elko Mining Group, LLC										
Date: 12/3/18										
Shift: Day										
S	Μ	т	W	Th	F	S				

Temperature: Low: 30°F to High: 57°F

Weather: Clear

I. CONTRACTOR ACTIVITIES DURING SHIFT

TG McCauley Activity:

- > McCauley operator Abel was not on site today.
- The D8T built a road to the topsoil stockpile located at the bottom of the southern slope of the property. The loader moved the topsoil from the lower stockpile to the mining pad, along the east side of the pad. The D8T assisted with the loading of topsoil at the lower stockpile.

II. MINE ACTIVITIES DURING SHIFT

• No work was performed by Elko Mining group on site.

III. NEWFIELDS QA/QC ACTIVITIES

Observation of the D8T and loader was completed as the moved the topsoil stockpile to the mining pad.

IV. MEETINGS AND COMMUNICATIONS

McCauley and NewFields discussed the possibility of canceling work on Friday due to the incoming storm. It will likely be a 'day of' decision by Rusty McCauley.





Topsoil Stockpile Location on Mining Pad





Lower Stockpile

Name	Project Number	Hours	Comments
Marcus Erdmann	475.0386.000	8.5	Field Supervision

If you have any questions or require additional information, please contact us at your convenience.

Sincerely,

NewFields Mining Design & Technical Services

Prepared by:

Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 December 4th 2018



FIELD DAILY PROGRESS REPORT

Project(s): Summit Mine Waste Facility Slide										
NewFields Project Number: 475.0386.000										
Site: Elko Mining Group, LLC										
Date: 12/4/18										
Shift: Day										
	S	Μ	т	W	Th	F	S			

Temperature: Low: 40°F to High: 62°F

Weather: Clear

I. CONTRACTOR ACTIVITIES DURING SHIFT

TG McCauley Activity:

- The loader and D8T completed moving the topsoil from the south of the property to the east side of the mining pad.
- > The D8T ripped the southern slope, above the built road.
 - o Difficult ripping resulted in about 3 feet of bedrock removed
- D8T pushed slide material downhill onto the built road for the loader to pick up. The loader dumped the slide material on the ripped section of the southern slope. Dumped material was track rolled and wheel rolled 4+ times, each.

II. MINE ACTIVITIES DURING SHIFT

> No work was performed by Elko Mining group on site.

III. NEWFIELDS QA/QC ACTIVITIES

Observation of the D8T and loader was completed as they moved the topsoil stockpile to the mining pad and continued excavation of the slide material.

IV. MEETINGS AND COMMUNICATIONS

- Rusty McCauley and NewFields discussed the building and design of the buttress to be built.
- > Rusty requested the work site to be staked.







Compacted Waste Rock







D8T Cutting Slide Material





D8T Track-Rolling Waste Rock





D8T Ripping South Slope

Name	Project Number	Hours	Comments
Marcus Erdmann	475.0386.000	9.0	Field Supervision

If you have any questions or require additional information, please contact us at your convenience.

Sincerely,

NewFields Mining Design & Technical Services

Prepared by:

Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 December 5th 2018



FIELD DAILY PROGRESS REPORT

Project(s): Summit Mine Waste Facility Slide										
NewFields Project Number: 475.0386.000										
Site: Elko Mining Group, LLC	2									
Date: 12/5/18										
Shift: Day										
	S	Μ	т	W	Th	F	S			

Temperature: Low: 40°F to High: 60°F

Weather: Clear

I. CONTRACTOR ACTIVITIES DURING SHIFT

TG McCauley Activity:

- D8T pushed slide material downhill onto the built road for the loader to pick up. The loader dumped the slide material on the ripped section of the southern slope. Dumped material was track rolled and wheel rolled 4+ times, each.
 - Bedrock was reached at the general location of the buttress. The slope of the bedrock appears to be more shallow compared to uphill.

II. MINE ACTIVITIES DURING SHIFT

> No work was performed by Elko Mining group on site.

III. NEWFIELDS QA/QC ACTIVITIES

- Observation of the D8T and loader was completed as they continued excavation of the slide material.
- > The survey conducted on the week of 11/30 was sent to Elko Mining Group.
- > A survey was conducted using the drone (Phantom 4).

IV. MEETINGS AND COMMUNICATIONS

- > Phone meeting with NewFields and Elko Mining Group:
 - Stakes will be placed on site towards the end of the week pending NewFields redesign.
 - McCauley Construction should have enough work for a couple days.
- Rusty McCauley and NewFields discussed the stability of the slope north of the dive road. It has visible cracks that appear larger every day. The material that can potentially slide



seems minimal, and therefore not a significant danger to operators. Precautions will be taken with operators working in the area.



Slide Material Cut to Bedrock at Toe of the Slope





Movement in Previously Failed Slope





Loader Dumping Cut Slide Material





D8T Cutting Slide Material

Name	Project Number	Hours	Comments				
Marcus Erdmann	475.0386.000	9.0	Field Supervision, Aerial Survey				

If you have any questions or require additional information, please contact us at your convenience.

Sincerely,

NewFields Mining Design & Technical Services

Prepared by:

Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 December 6th 2018



FIELD DAILY PROGRESS REPORT

Project(s): Summit Mine Waste Facility Slide													
NewFields Project Number: 475.0386.000													
Site: Elko Mining Group, LLC	2												
Date: 12/6/18													
Shift: Day													
	S	Μ	т	w	Th	F	S						

Temperature: Low: 45°F to High: 65°F

Weather: Clear

I. CONTRACTOR ACTIVITIES DURING SHIFT

TG McCauley Activity:

- D8T pushed slide material downhill onto the built road for the loader to pick up. The loader dumped the slide material on the ripped section of the southern slope. Dumped material was track rolled and wheel rolled 4+ times, each.
 - Bedrock was reached at the general location of the buttress. The slope of the bedrock appears to be more shallow compared to uphill.
- > D8T was pulled out of buttress cut due to the instability of the slope.
- > Operators performed maintenance on equipment.
- > Surveyors staked the crest of the slope.
 - All stakes stated a fill of 2-5 feet along the crest.
- The excavator pushed scarp along the crest downslope. D8T pushed down the southern slope, with the intention of moving north to clear of the driving material.

II. MINE ACTIVITIES DURING SHIFT

> No work was performed by Elko Mining group on site.

III. NEWFIELDS QA/QC ACTIVITIES

- Observation of the D8T and loader was completed as they continued excavation of the slide material.
- > A survey was conducted using the drone (Phantom 4).

IV. MEETINGS AND COMMUNICATIONS

> The north slope showed significant movement throughout the morning, forcing McCauley to remove the D8T from the buttress cut. After discussion with EMG and



NewFields, it was determined necessary to remove the driving force on the slope by removing uphill material, along the tension cracks.



Excavator Pushing Down Scarp





Buttress Cut
Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 December 6th 2018





Slide Movement





Movement through Cut Road





Significant Cracking North of Cut Road





Tension Cracks in Central Section of Slide

Name	Project Number	Hours	Comments
Marcus Erdmann	475.0386.000	9.0	Field Supervision, Aerial Survey

If you have any questions or require additional information, please contact us at your convenience.

Sincerely,

NewFields Mining Design & Technical Services

Prepared by:

Marcus Erdmann, El Staff Engineer 702.469.7662 Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 December 7th 2018



FIELD DAILY PROGRESS REPORT

Project(s): Summit Mine Wa	ste Fa	acility	Slide					
NewFields Project Number:	475.0	386.0	00					
Site: Elko Mining Group, LLC	1							
Date: 12/7/18								
Shift: Day								
	S	М	т	W	Th	F	S	

Temperature: Low: 38°F to High: 59°F

Weather: Rain

I. CONTRACTOR ACTIVITIES DURING SHIFT

TG McCauley Activity:

- > McCauley operator Abel was not on site today
- Upon site inspection, McCauley elected to not work today due to the weather and instability of the slope.

II. MINE ACTIVITIES DURING SHIFT

> No work was performed by Elko Mining group on site.

III. NEWFIELDS QA/QC ACTIVITIES

Discussion of the stability of the slope was done with Rusty McCauley. NewFields recommended use of the D8T to remove the driving material of the slide.

IV. MEETINGS AND COMMUNICATIONS

The north slope showed significant movement throughout the morning. Sounds of cracking and popping were heard from the slope. With the addition of rain overnight and throughout the day today, McCauley has elected to not mobilize equipment on site today.





Continued Movement in Slope



Cracking in Slope



Name	Project Number	Hours	Comments
Marcus Erdmann	475.0386.000	4.5	Field Supervision

If you have any questions or require additional information, please contact us at your convenience.

Sincerely,

NewFields Mining Design & Technical Services

Prepared by:

Marcus Erdmann, El Staff Engineer 702.469.7662 Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 December 10th 2018



FIELD DAILY PROGRESS REPORT

S

Project(s): Summit Mine V	Vaste	Facilit	y Slid	е				
NewFields Project Number: 475.0386.000								
Site: Elko Mining Group, L	LC							
Date: 12/10/18								
Shift: Day								
	S	Μ	т	W	Th	F		

Temperature: Low: 38°F to High: 61°F

Weather: Clear

I. CONTRACTOR ACTIVITIES DURING SHIFT

TG McCauley Activity:

- McCauley operator Abel was not on site today
- > D8T pushed slide material downhill to remove driving forces from the slope.
- D8T continued cut through the toe of the failed slope. The loader removed cut material and dumped in the grub and cleared section on the south of the property, uphill of the road.

II. MINE ACTIVITIES DURING SHIFT

> No work was performed by Elko Mining group on site.

III. NEWFIELDS QA/QC ACTIVITIES

- > Senior Engineer Mark Doehring was on site today.
- Supervised the D8T as it cut the driving material from the slide to ensure the slope did not continue to fail as the D8T worked.
 - Notable movement was seen in the lower area of the northern slope.
- With the use of an aerial image and GPS with a phone, markers were placed for the ends of the buttress.

IV. MEETINGS AND COMMUNICATIONS

NewFields QAQC and NewFields Denver discussed the project. Denver office will be sending out a redesign of the project end of day today (12/10). Some portions of the design will require a field fit. A cross section running the length of the buttress was requested by QAQC from the Denver office.



- NewFields requested the surveyors to be on site tomorrow (12/11) as early as possible to allow the contractors to continue work on the buttress.
- NewFields and McCauley discussed the construction plan moving forward. Construction of the buttress will start at the northern end, and move south. Work at the north end of the buttress will be done away from the slope for safety.



Driving Force Removed from Slope





Movement in Northern Slope





Continued Failed Slope

Name	Project Number	Hours	Comments
Marcus Erdmann	475.0386.000	4.5	Field Supervision

If you have any questions or require additional information, please contact us at your convenience.

Sincerely,

NewFields Mining Design & Technical Services

Prepared by:

Marcus Erdmann, El Staff Engineer 702.469.7662



FIELD DAILY PROGRESS REPORT

Project(s): Summit Mine Waste Facility Slide								
NewFields Project Number: 475.0386.000								
Site: Elko Mining Group, LLC								
Date: 12/10/18								
Shift: Day								
S	Μ	т	W	Th	F	S		

Temperature: Low: 38°F to High: 61°F

Weather: Clear

Left hotel at 5:45am, onsite 7:00am (Marcus Erdmann and Mark Doehring, NewFields). Met with TG McCauley Contractor (Rusty and Ray). Site operations:

 Off loaded the top of slope pushing/cutting material from the north crest to the southeast (photo 1). Work completed by 10:00am. Equipment: Cat D8T dozer and Cat 988F loader.

Tension cracking observed at the toe of the north end of the failure mass (photo 2).

- 2) Cleaned up the construction access road leading to the buttress key way south end. Work completed 11:00am. Equipment: Cat D8T dozer and Cat 988F loader.
- 3) Started excavation of waste rock above the south keyway. Equipment: Cat D8T dozer and Cat 988F loader. Waste rock hauled up slope and placed in grub and clear area south of the failure area (photo 3). Section excavated to native (clayey gravel) (photo 4). Operations temporary halted at 3:00pm, since a GPS reading of control point C17 and a visual review of Elko Mining Group Summit DMS Contour Design (20181016) indicated that our keyway excavation did not align with the southeast end of the buttress area.

We contracted Ryan Baker (NewFields) and requested that he contact the owner to have survey on site to set the keyway outer edge.

The excavation does align approximately with the layout between sections A/A010 and D/A010, Summit Mine DMS Corrective Action Project Draft. Draft plan available at the end of the day 12 December 2018.

Due to the lack of survey and new excavation plan was developed by all parties. The keyway will be excavated from the north end moving south. The keyway way in this are runs along the staked property line. The road cut in front of this section is ~30 feet wide in front of the area with tension cracks (see item 1, photo 2). With a 10-foot wide keyway, this leaves 20 feet of offset from the slope. Shallow rock is exposed in the existing road cut. Coarse rock on the outer edge of the south keyway will be back hauled



to fill the north keyway when completed. (This limits hauling the material to a stockpile up slope.)

Contractor spent the rest of the day off hauling material that had been pushed up at the south key excavation, prior to the stoppage, to the grub and clear area and cleaned up the equipment access to the north keyway area.

Left site 4:00pm, back in town at 6:00pm. Stopped to call Nick Rocco NewFields on today's activities. Completed daily.

Name	Project Number	Comments
Mark Doehring	475.0386.000	Engineer

If you have any questions or require additional information, please contact us at your convenience.

Sincerely,

NewFields Mining Design & Technical Services

Prepared by:

Mark Doehring, P.E. Senior Engineer 755.3796585



Photo 1: Offloading top of slope





Photo 2: Cracking of the north slope toe.



Photo 3: Placement of waste rock in grub and clear area.





Photo 4: Native soils (clayey gravel) exposed at south keyway excavation.



FIELD DAILY PROGRESS REPORT

Project(s): Summit Mine Waste Facility Slide								
NewFields Project Number: 475.0386.000								
Site: Elko Mining Group, LLC								
Date: 12/11/18								
Shift: Day								
S	М	Т	W	Th	F	S		

Temperature: Low: 40°F to High: 60°F

Weather: Cloudy

Left hotel at 6:00am, onsite 7:30am (Marcus Erdmann and Mark Doehring, NewFields). Site operations:

 7:30 am met with TG McCauley Contractor (Rusty and Ray). Rusty decided to start on the south end of the buttress keyway, instead of the north end as discussed on 10 December 2018.

Started removing clayey gravel and clay (photo 1) along the anticipated alignment per Summit Mine DMS Slide Corrective Action Program, A010, Draft. Clayey soils stockpiled up slope in the grub and clear area (photo 2). Equipment: Cat D8T dozer, Cat 988F loader and Cat excavator. No survey available.

- 8:30am spoke with Ryan Baker, NewFields regarding the surveyor's schedule. No information available. Ryan provided a copy of the buttress alignment over the site aerial map. The map was used to estimate the start of the south end of the buttress keyway.
- 3) 11:40am rock excavation started at the south end of the buttress keyway. Ripping initiated using the Cat Loader and completed using the D8T dozer with three ripper teeth.
- 4) 2:30pm approximately 60 lineal feet of keyway, 15 to 18 feet wide completed. The first 30 feet backfilled with ~2 feet of angular gravel, cobbles and boulders (two 1 foot lifts). The second 30 feet backfilled with ~1 foot of angular gravel, cobbles and boulders (one lift). Rock tracked into place. Minimum of four passes (down and back) using the D8T dozer. The upslope native soils have yet to be graded to 1:1H:V per detail A/A020. Ripping of the rock continued to the north. Depth to rock decreases to the north.
- 5) 3:30pm Equipment: Waste rock partially excavated from the east slope, outside of site boundary; additional rock still needs to be removed. Clean rock placed in south buttress keyway. Clayey gravel removed to the grub and clear stockpile. Cat D8T dozer



and Cat excavator. Called Nick Rocco, NewFields and informed him of the day's progress.

Contractor spent the rest of the day off hauling material that had been pushed up at the south key excavation to the grub and clear area. Surveyors to be onsite on Weds. Left site 4:00pm, back in town at 5:30pm.

Name	Project Number	Hours	Comments
Mark Doehring	475.0386.000	8.5	Engineer

If you have any questions or require additional information, please contact us at your convenience.

Sincerely,

NewFields Mining Design & Technical Services

Prepared by:

Mark Doehring, P.E. Senior Engineer 755.3796585



Photo 1: Removing clay soils along the buttress keyway alignment.





Photo 2: Clay soil stockpile.

Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 December 11th 2018



FIELD DAILY PROGRESS REPORT

S

Project(s): Summit Mine Waste Facility Slide									
NewFields Project Number: 475.0386.000									
Site: Elko Mining Group, LLC									
Date: 12/11/18									
Shift: Day									
	S	Μ	Т	W	Th	F			

Temperature: Low: 36°F to High: 60°F

Weather: Clear

I. CONTRACTOR ACTIVITIES DURING SHIFT

TG McCauley Activity:

- > McCauley operator Abel was not on site today
- D8T and excavator cut topsoil at the toe of the failed slope down to bedrock. The loader was used to remove topsoil and dump it at the top of the built road, just below the county road. Once bedrock was reached, the excavator attempted to grade bedrock to level.
- The D8T ripped bedrock to create a level foundation for the buttress. Competent rock (gravel-boulder) was placed on level bedrock with the D8T in 1ft lifts and track rolled approximately 10 times per lift.
 - 1, 1-foot lift was placed from the south end of the buttress approximately 80ft north. A second lift was placed from the south end of the buttress approximately 30 feet north.
 - Buttress was built with a width of approximately 15' due to the size of equipment used.
- The excavator began removing spilled slide material from BLM land at the southernmost spill area.

II. MINE ACTIVITIES DURING SHIFT

> No work was performed by Elko Mining group on site.

III. NEWFIELDS QA/QC ACTIVITIES

- > Senior Engineer Mark Doehring was on site today.
- > Drone survey was not completed due to technical issues with the drone.
- Supervised the removal of topsoil along the toe of the slope and the construction of the buttress.





- Supervision of cut to bedrock and leveling of bedrock was completed.
- Use of handheld GPS (accuracy plus/minus 20 feet) and aerial images of the site, flags were placed to give contractors an estimate of the buttress location.

IV. MEETINGS AND COMMUNICATIONS

- Meeting with NewFields Denver, Elko Mining Group, and NewFields QAQC was missed by NewFields QAQC.
- > Surveyors will be on site tomorrow (12/12) to stake key points.
- The new construction plan discussed between NewFields QAQC and McCauley Construction is to begin building the buttress from the south end moving north. When cutting to bedrock along the spilled material, the excavator will remove it, using competent rock as buttress material and disposing of waste rock.



Buttress Progress End of Day

Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 December 11th 2018





Graded and Compacted Buttress (1st Lift)

Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 December 11th 2018





D8T Ripping Bedrock to Grade





Excavator Cutting Topsoil to Bedrock

Name	Project Number	Hours	Comments
Marcus Erdmann	475.0386.000	8.5	Field Supervision

If you have any questions or require additional information, please contact us at your convenience.

Sincerely,

NewFields Mining Design & Technical Services

Prepared by:

Marcus Erdmann, El Staff Engineer 702.469.7662



FIELD DAILY PROGRESS REPORT

Project(s): Summit Mine Waste Facility Slide									
NewFields Project Number: 475.0386.000									
Site: Elko Mining Group, LLC									
Date: 12/12/18									
Shift: Day									
	S	Μ	т	W	Th	F	S		

Temperature: Low: 40°F to High: 64°F

Weather: Cloudy

Left hotel at 6:00am, onsite 7:30am (Marcus Erdmann and Mark Doehring, NewFields). Cat D8T dozer, Cat excavator and Cat 988F loader.

Site operations:

- 7:30 am Rusty and Ray (TG McCauley: Contractor) removing clayey gravel and clay along the center of the estimated alignment per Summit Mine DMS Slide Corrective Action Program, A010, Draft. Clayey soils stockpiled up slope in the grub and clear area. Equipment: No survey available.
- 2) 8:30am Contractor laying back slope above the southern and center portion of the buttress keyway, ~ 1:1H:V to 1.5:1 H:V. For ~12 linear feet on the south end of the buttress keyway, the adjacent slope is vertical for approximately 4 feet high below the laid-back slope due to the limited reach of the excavator. However, the keyway in this area is 18 feet wide, so the total rocked up buttress up to the top of the vertical clay section is wider than the design section detail A/A020 (photo 1).
- 9:30am Contractor top feeding clean rock (angular gravel, cobbles and boulders) to the buttress keyway, south end (photo 2). Rock spread in ~ 1-foot lifts and tracked in placed, minimum of four passes (back and forth per pass).
- 12:00pm nine lifts in place on the south end of the buttress keyway (photo 3). Contractor began removing waste rock outside of the property line from ~ center of the estimated buttress keyway.
- 5) 1:00pm Surveyor onsite but they did not have the coordinates buttress alignment. They set out points F through J in the vicinity per Summit Mine DMS Slide Corrective Action Program, A010, Draft. We (NewFields) setup to flags, one at the south end and one at the north end centerlines for the estimated buttress keyway alignment and had them surveyed. The locations the locations are as followed North end N:683055.241, E



2374684.928 and South end N:682854.710, E 2374781.601. The buttress keyway is being constructed to these coordinates.

- 6) 2:00pm Contractor started ripping of the bedrock along the north and center sections of the buttress keyway (photo 4).
- 7) 2:30pm Contractor completed ripping, depth ~ 2 feet along the upslope side. Completed rock surface (photo 5). Contractor returned to removing waste rock outside of the property line from ~ center of the estimated buttress keyway. Contractor only able to reach down approximately ½ of the slope height (photo 6). Waste rock dumped into the center and southern buttress keyway.
- 8) 3:30pm Waste rock dozed into place.
- 9) 4:00pm Left message with Ryan Baker, NewFields on the day progess.

Left 4:00pm, back in town at 5:30pm.

Name	Project Number	Hours	Comments
Mark Doehring	475.0386.000	8.5	Engineer

If you have any questions or require additional information, please contact us at your convenience.

Sincerely,

NewFields Mining Design & Technical Services

Prepared by:

Mark Doehring, P.E. Senior Engineer 755.3796585





Photo 1: South end, buttress keyway alignment, exposed vertical clay surface to the left.



Photo 2: Top feed for south buttress alignment.





Photo 3: South end buttress rock fill. 9th lift, with surveyor taking south end, buttress, centerline location.



Photo 4: Bedrock ripping, north end.

Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 12 December 2018





Photo 5: North and center rock surface



Photo 6: Remove of waste rock beyond the property line.

Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 December 12th 2018



FIELD DAILY PROGRESS REPORT

Project(s): Summit Mine Waste Facility Slide								
NewFields Project Number: 475.0386.000								
Site: Elko Mining Group, LLC								
Date: 12/12/18								
Shift: Day								
	S	Μ	т	W	Th	F	S	

Temperature: Low: 27°F to High: 60°F

Weather: Clear

I. CONTRACTOR ACTIVITIES DURING SHIFT

TG McCauley Activity:

- > McCauley operator Abel was not on site today
- > D8T and loader removed topsoil from the buttress building site. Cut topsoil was dumped at the top of the built road, just below the county road.
- Excavator laid back the slope of slide material just upslope of the buttress to a 1:1 angle. Competent, angular cobble was dumped on the buttress by the excavator and loader. The D8T graded the dumped cobble to 1 foot lifts. Each lift was compacted a minimum of 4 times.
 - Buttress construction was from the south end approximately 50 feet north, with 9 total lifts being completed.
- > The excavator continued removal of spilled slide material onto BLM land.
- D8T ripped bedrock from the north end of the buttress to the partially constructed end. Difficult ripping resulted in 1-3' of bedrock removed to level or sloping into the existing slope.

II. MINE ACTIVITIES DURING SHIFT

> No work was performed by Elko Mining group on site.

III. NEWFIELDS QA/QC ACTIVITIES

- > Senior Engineer Mark Doehring was on site today.
- > Drone survey was not completed due to technical issues with the drone.
 - Efforts to repair/replace the drone are ongoing
- > Supervised the construction of the buttress.





- Supervision of cut to bedrock and leveling of bedrock was completed.
- Use of handheld GPS (accuracy plus/minus 20 feet) and aerial images of the site, flags were placed to give contractors an estimate of the buttress location and property line.

IV. MEETINGS AND COMMUNICATIONS

- > Surveyors were on site to stake grading boundaries.
 - Surveyors were asked to take points at the rough center point of the north and south ends of the buttress. Those coordinates were sent to NewFields Denver.
- > Drone survey and volume estimates were sent to Elko Mining Group.



Excavator Removing Spilled Material





Level Bedrock for Northern Buttress





D8T Ripping Bedrock





South Buttress

Name	Project Number	Hours	Comments
Marcus Erdmann	475.0386.000	8.0	Field Supervision

If you have any questions or require additional information, please contact us at your convenience.

Sincerely,

NewFields Mining Design & Technical Services

Prepared by:

Marcus Erdmann, El Staff Engineer 702.469.7662 Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 December 13th 2018



FIELD DAILY PROGRESS REPORT

Project(s): Summit Mine Waste Facility Slide									
NewFields Project Number: 475.0386.000									
Site: Elko Mining Group, LLC									
Date: 12/13/18									
Shift: Day									
	S	Μ	т	W	Th	F	S		

Temperature: Low: 27°F to High: 60°F

Weather: Clear

I. CONTRACTOR ACTIVITIES DURING SHIFT

TG McCauley Activity:

- > McCauley operator Abel was not on site today
- The excavator removed slide material from the upslope and dumped on the buttress. The D8T graded the dumped material to 1 foot lifts and track rolled each lift 4+ times.
 - Note that the bedrock material changed from a cobble with gravel to a sandy gravel with cobble.
- The excavator cleared slide material that spilled onto BLM land to the extent of the equipment.
- Construction of the buttress was nearly completed (missing a few lifts to tie into the regraded slope). Slope regrading is to begin tomorrow. Once slope is tied in with the buttress, the last lifts of the buttress will be placed and compacted.

II. MINE ACTIVITIES DURING SHIFT

> No work was performed by Elko Mining group on site.

III. NEWFIELDS QA/QC ACTIVITIES

- > Drone survey was not completed due to technical issues with the drone.
 - Efforts to repair/replace the drone are ongoing
- > Supervised the construction of the buttress and removal of waste rock from BLM land.
- > Pictures of the waste rock spill were sent to Elko Mining Group for evaluation.

IV. MEETINGS AND COMMUNICATIONS

Pictures of waste rock spill were evaluated by Elko Mining Group. They require all spill material to be removed, and will be in communication for further instruction. Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 December 13th 2018



> There has been notable movement in the slope, likely due to construction of the buttress. Regrading, to take place tomorrow (12/14), should resolve the issue.



D8T Building Buttress





Remaining Spilled Material




Spilled Material Removed



Buttress



Name	Project Number	Hours	Comments
Marcus Erdmann	475.0386.000	9.5	Field Supervision

If you have any questions or require additional information, please contact us at your convenience.

Sincerely,

NewFields Mining Design & Technical Services

Prepared by:

Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 December 14th 2018



FIELD DAILY PROGRESS REPORT

Project(s): Summit Mine Wa	ste F	acility	y Slide	e					
NewFields Project Number:	475.	0386.0	000						
Site: Elko Mining Group, LLC									
Date: 12/14/18									
Shift: Day									
	S	М	т	W	Th	F	S		

Temperature: Low: 30°F to High: 57°F

Weather: Clear

I. CONTRACTOR ACTIVITIES DURING SHIFT

TG McCauley Activity:

- > McCauley operator Abel was not on site today
- The D8T began regrading the failed slope, starting directly upslope from the north end of the buttress to the south end of the slope. 9

II. MINE ACTIVITIES DURING SHIFT

> No work was performed by Elko Mining group on site.

III. NEWFIELDS QA/QC ACTIVITIES

- > Drone survey was not completed due to technical issues with the drone.
 - Efforts to repair/replace the drone are ongoing
- > Supervised the regrading of the failed slope.

IV. MEETINGS AND COMMUNICATIONS

> Construction ended early due to McCauley construction not having finished grade plans.





D8T Regrading Slope

Name	Project Number Hours		Comments
Marcus Erdmann	475.0386.000	6.5	Field Supervision

If you have any questions or require additional information, please contact us at your convenience.

Sincerely,

NewFields Mining Design & Technical Services

Prepared by:

Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 December 17th 2018



FIELD DAILY PROGRESS REPORT

S

Project(s): Summit Mine Wa	iste F	acility	/ Slide	2			
NewFields Project Number:	475.0	0386.0	000				
Site: Elko Mining Group, LLC	2						
Date: 12/17/18							
Shift: Day							
	S	Μ	т	W	Th	F	

Temperature: Low: 30°F to High: 55°F

Weather: Rain

I. CONTRACTOR ACTIVITIES DURING SHIFT

TG McCauley Activity:

- > McCauley laborer Amelio was on site today.
- > The D8T cut a road through the built buttress to the spilled waste rock.
- Laborer Amelio and operators Ray and Abel removed spilled rock by hand and placed it within the excavator's reach. The excavator removed spilled rock and dumped it on the built buttress. Rusty (owner) assisted with the hand removal of rock when not operating the excavator.
- A mining bucket was brought to site to be used for the removal of the spilled rock. It was not needed for today's removal.

II. MINE ACTIVITIES DURING SHIFT

> No work was performed by Elko Mining group on site.

III. NEWFIELDS QA/QC ACTIVITIES

- > A new drone arrived on site (Mavic Pro), but was unable to take a survey due to the rain.
- > NewFields QAQC assisted in the removal of waste rock from BLM land.

IV. MEETINGS AND COMMUNICATIONS

> The drone survey done before the project began was sent to NewFields.

Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 December 17th 2018





Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 December 17th 2018





Laborers removing Waste Rock





Laborers Removing Waste Rock





Mining Bucket to be Used

Name	Project Number	Hours	Comments				
Marcus Erdmann	475.0386.000	8.5	Field Supervision				

If you have any questions or require additional information, please contact us at your convenience.

Sincerely,

NewFields Mining Design & Technical Services

Prepared by:

Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 December 18th 2018



FIELD DAILY PROGRESS REPORT

S

Project(s): Summit Mine Wa	ste F	acility	y Slide	9		
NewFields Project Number:	475.0	386.	000			
Site: Elko Mining Group, LLC						
Date: 12/18/18						
Shift: Day						
	S	М	т	W	Th	F

Temperature: Low: 31°F to High: 55°F

Weather: Clear

I. CONTRACTOR ACTIVITIES DURING SHIFT

TG McCauley Activity:

- > McCauley laborer Amelio was on site today.
- Laborer Amelio and operators Ray and Abel removed spilled rock by hand and placed it within the excavator's reach. The excavator removed spilled rock and dumped it on the built buttress. Rusty (owner) assisted with the hand removal of rock when not operating the excavator.
- The excavator cut a road to reach lower spilled material through mine property and into the BLM easement land.
- > Removal of spilled material was completed.

II. MINE ACTIVITIES DURING SHIFT

> No work was performed by Elko Mining group on site.

III. NEWFIELDS QA/QC ACTIVITIES

- A drone survey was completed using the Mavic Pro. Survey data was uploaded and sent to NewFields Denver for processing.
- > NewFields QAQC assisted in the removal of waste rock from BLM land.

IV. MEETINGS AND COMMUNICATIONS

> Results of McCauley cleaning the spilled material have been sent to Elko Mining Group.

Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 December 18th 2018









Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 December 18th 2018









Spilled Material Beginning of Day

Name	Project Number	Hours	Comments
Marcus Erdmann	475.0386.000	9.0	Field Supervision

If you have any questions or require additional information, please contact us at your convenience.

Sincerely,

NewFields Mining Design & Technical Services

Prepared by:

Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 December 19th 2018



FIELD DAILY PROGRESS REPORT

Project(s): Summit Mine Wa	aste F	acility	Slide	9			
NewFields Project Number:	475.0)386.0	00				
Site: Elko Mining Group, LLC	2						
Date: 12/19/18							
Shift: Day							
	S	Μ	т	W	Th	F	S

Temperature: Low: 30°F to High: 65°F

Weather: Clear

I. CONTRACTOR ACTIVITIES DURING SHIFT

TG McCauley Activity:

- > McCauley laborer Amelio was on site today.
- The D8T and excavator removed material from the BLM easement land and rebuilt the buttress where needed. The buttress was built in 1-foot lifts and track rolled at least 4 times. The excavator built a 3-foot berm on the buttress to act as a rock catch when grading the slope.
- > A D7 bulldozer was mobilized on site
- > Operator JT arrived on site.
- D8T began cutting the v-ditch from the south end. The D7 began grading the northernmost slope, pushing cut material onto the mining pad. The loader moved cut material around the pad as needed.
- The mining bucket to be used for the removal of spilled material was demobilized from site.

II. MINE ACTIVITIES DURING SHIFT

> No work was performed by Elko Mining group on site.

III. NEWFIELDS QA/QC ACTIVITIES

- > Supervised the rebuilding of the buttress
- Supervised the cutting of the v-ditch and the grading of the mining pad.

IV. MEETINGS AND COMMUNICATIONS

McCauley is having difficulty with finding a location for the topsoil stockpile that will not interfere with grading on the mining pad. The location is to be determined at a later date.



Cleaning effort on the spilled material onto BLM land was approved by Elko Mining Group.



Fill on North Pad





Cut Ditch





Mobilized D7 Bulldozer





Rebuilt Buttress



Approved Spilled Cleanup



Name	Project Number	Hours	Comments
Marcus Erdmann	475.0386.000	9.0	Field Supervision

If you have any questions or require additional information, please contact us at your convenience.

Sincerely,

NewFields Mining Design & Technical Services

Prepared by:

Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 December 20th 2018



FIELD DAILY PROGRESS REPORT

Project(s): Summit Mine Wa	aste F	acility	Slide	9					
NewFields Project Number:	475.0	0386.0	00						
Site: Elko Mining Group, LLC	2								
Date: 12/20/18									
Shift: Day									
	S	Μ	т	w	Th	F	S		

Temperature: Low: 36°F to High: 70°F

Weather: Clear

I. CONTRACTOR ACTIVITIES DURING SHIFT

TG McCauley Activity:

- D7 cut the north slope of the mining pad to the new grade. The loader removed the cut material and dumped it as needed at the north fill of the mining pad. The rest of the cut material was dumped at the south fill site.
- D8T cut the v-ditch from the south end. Once the v-ditch was to grade, the D8T assisted the D7 in regrading the slope.
- D8T pushed the south topsoil stockpile to the built access road. The loader cut from the north topsoil stockpile and dumped at the moved topsoil stockpile located at the built access road.

II. MINE ACTIVITIES DURING SHIFT

> No work was performed by Elko Mining Group on site.

III. NEWFIELDS QA/QC ACTIVITIES

- > Supervised the grading of the mining pad and slope.
- > Supervised the cutting of the v-ditch and the grading of the mining pad.

IV. MEETINGS AND COMMUNICATIONS

- > Surveyors are to be on site tomorrow (12/21) afternoon.
- McCauley and Elko Mining Group have decided to cut the channel deeper than planned to allow for less fill required for proper drainage.





Cut Topsoil Stockpile and North Fill





D8T Regrading Slope





Cut Ditch

Name	Project Number	Hours	Comments
Marcus Erdmann	475.0386.000	9.0	Field Supervision

If you have any questions or require additional information, please contact us at your convenience.

Sincerely,

NewFields Mining Design & Technical Services

Prepared by:

Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 December 21th 2018



FIELD DAILY PROGRESS REPORT

Project(s): Summit Mine	e Waste	Facilit	y Slid	е				
NewFields Project Num	ber: 475	.0386.	000					
Site: Elko Mining Group	, LLC							
Date: 12/21/18								
Shift: Day								
	S	М	т	w	Th	F	S	

Temperature: Low: 37°F to High: 63°F

Weather: Clear

I. CONTRACTOR ACTIVITIES DURING SHIFT

TG McCauley Activity:

- > D7 graded the north fill to allow for drainage into the v-ditch.
- > D8T cut material to grade the south slope and pushed the cut material in the south fill.
- > Loader moved the north topsoil stockpile to the south topsoil stockpile.
- > A fuel truck was on site to refuel the diesel tank.
- > D7 assisted the D8T in grading the slope by pushing material south.

II. MINE ACTIVITIES DURING SHIFT

> No work was performed by Elko Mining Group on site.

III. NEWFIELDS QA/QC ACTIVITIES

> Supervised the grading of the mining pad and slope.

IV. MEETINGS AND COMMUNICATIONS

- > Surveyors staked the crest of the slope and key points on site.
- McCauley Holiday schedule: McCauley will be taking Christmas Eve and Christmas day off, as well as 12/26. The 26th is to be used as a remobilization day.





Slope Cut



D8T Grading Slope





D7 Grading Slope

Name	Project Number Hou		Comments				
Marcus Erdmann	475.0386.000	9.0	Field Supervision				

If you have any questions or require additional information, please contact us at your convenience.

Sincerely,

NewFields Mining Design & Technical Services

Prepared by:

Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 December 27th 2018



FIELD DAILY PROGRESS REPORT

Project(s): Summit Mine Wa	ste F	acility	Slide	2					
NewFields Project Number:	475.(0386.0	00						
Site: Elko Mining Group, LLC									
Date: 12/27/18									
Shift: Day									
	S	Μ	т	w	Th	F	S		

Temperature: Low: 29°F to High: 48°F

Weather: Overcast

I. CONTRACTOR ACTIVITIES DURING SHIFT

TG McCauley Activity:

- > D7 is down due to mechanical issues.
- > D8 graded the mining pad to allow drainage to the south and east.
- > D9 has been mobilized to the site
- > D9 pushed material at the south slope into the south fill.
- D8 pushed material south along the north slope. The D8 cut the slope to an approximate 2:1. D9 would move farther north to remove material as needed.
- The excavator graded the north most slope. Cut material was stockpiled for the D8 to push south.
- > The excavator laid back the slope along the cut ditch to the south.

II. MINE ACTIVITIES DURING SHIFT

> No work was performed by Elko Mining Group on site.

III. NEWFIELDS QA/QC ACTIVITIES

> Supervised the grading of the mining pad and slope.

IV. MEETINGS AND COMMUNICATIONS

- McCauley Construction wanted to grade the mining pad to allow drainage to the west and south, but was corrected to drain east and south by NewFields.
- Once the D8 graded the mining to allow for proper drainage, NewFields QAQC and McCauley discussed the issue of filling along the west of the property in the buildings and equipment. There is approximately 8 inches to 1 foot of fill along the west without a clear was to tie it into the existing ground. (See picture below)





North Graded Slope



Mobilized D9 Bulldozer





End of Fill



Graded Mining Pad



Name	Project Number	Hours	Comments
Marcus Erdmann	475.0386.000	9.5	Field Supervision

If you have any questions or require additional information, please contact us at your convenience.

Sincerely,

NewFields Mining Design & Technical Services

Prepared by:

Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 December 28th 2018



FIELD DAILY PROGRESS REPORT

Project(s): Summit Mi	ne Waste	Facilit	y Slid	е				
NewFields Project Nur	mber: 475	.0386.	000					
Site: Elko Mining Grou	ıp, LLC							
Date: 12/28/18								
Shift: Day								
	S	М	т	W	Th	F	S	

Temperature: Low: 10°F to High: 31°F



I. CONTRACTOR ACTIVITIES DURING SHIFT

TG McCauley Activity:

- > D9 pushed material at the south slope into the south fill.
- D8 pushed material south along the north slope. The D8 cut the slope to an approximate 2:1. D9 would move farther north to remove material as needed.
- The excavator graded the north most slope. Cut material was stockpiled for the D8 to push south.

II. MINE ACTIVITIES DURING SHIFT

> No work was performed by Elko Mining Group on site.

III. NEWFIELDS QA/QC ACTIVITIES

> Supervised the grading of the mining pad and slope.

IV. MEETINGS AND COMMUNICATIONS

McCauley Construction will not be working next Monday (12/31) and Tuesday (1/1) due to holiday.





South Fill





North Cut





D8 Cutting North Slope

Name	Project Number	Hours	Comments
Marcus Erdmann	475.0386.000	8.0	Field Supervision

If you have any questions or require additional information, please contact us at your convenience.

Sincerely,

NewFields Mining Design & Technical Services

Prepared by:

Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 January 2nd 2019



FIELD DAILY PROGRESS REPORT

Project(c): Summit Mine W	acta E	la cilita	, clid	•				
Project(s): Summit wine wa	азіе г	aciiity	/ 5110	e				
NewFields Project Number:	475.	0386.0	000					
Site: Elko Mining Group, LL	C							
Date: 1/2/19								
Shift: Day								
	S	Μ	т	W	Th	F	S	

Temperature: Low: 12°F to High: 34°F



I. CONTRACTOR ACTIVITIES DURING SHIFT

TG McCauley Activity:

- > D9 pushed material at the south slope into the south fill.
- D8 pushed material south along the north slope. The D8 cut the slope to an approximate
 2:1. D9 would move farther north to cut material as needed.
- > The excavator graded the north most slope. Cut material was stockpiled for the D8 to push south.
- > The loader was used at the south fill to place material where needed.

II. MINE ACTIVITIES DURING SHIFT

> No work was performed by Elko Mining Group on site.

III. NEWFIELDS QA/QC ACTIVITIES

- > Supervised the grading of the mining pad and slope.
- > Drone survey was unable to run due to weather.

IV. MEETINGS AND COMMUNICATIONS

McCauley Construction and NewFields QAQC discussed the grading of the mining pad, and concluded it will be completed after the snow has melted.




South Fill





North Cut

Name	Project Number	Hours	Comments
Marcus Erdmann	475.0386.000	9.5	Field Supervision

If you have any questions or require additional information, please contact us at your convenience.

Sincerely,

NewFields Mining Design & Technical Services

Prepared by:

Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 January 3rd 2019



FIELD DAILY PROGRESS REPORT

Project(s): Summit Mine Wa	iste Fa	acility	Slide						
NewFields Project Number:	475.0	386.0	00						
Site: Elko Mining Group, LLC	2								
Date: 1/3/19									
Shift: Day									
	S	Μ	т	w	Th	F	S		

Temperature: Low: 16°F to High: 44°F

Weather: Clear

I. CONTRACTOR ACTIVITIES DURING SHIFT

TG McCauley Activity:

- > D9 pushed material at the south slope into the south fill.
- D8 pushed material south along the north slope. The D8 cut the slope to an approximate 2:1.
- The excavator graded the north most slope. Cut material was stockpiled for the D8 to push south.

II. MINE ACTIVITIES DURING SHIFT

> No work was performed by Elko Mining Group on site.

III. NEWFIELDS QA/QC ACTIVITIES

- > Supervised the grading of the mining pad and slope.
- > Drone survey was unable to run due to weather.

IV. MEETINGS AND COMMUNICATIONS

- > Elko Mining Group Andrew Conover will be on site Wednesday (1/9).
- > NewFields Ryan Baker will be on site Wednesday (1/9).





End of Day Progress





Graded Slope

Name	Project Number	Hours	Comments
Marcus Erdmann	475.0386.000	9.5	Field Supervision

If you have any questions or require additional information, please contact us at your convenience.

Sincerely,

NewFields Mining Design & Technical Services

Prepared by:

Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 January 4th 2019



FIELD DAILY PROGRESS REPORT

Project(s): Summit Mine Waste Facility Slide									
NewFields Project Number: 475.0386.000									
Site: E	lko Mining Gro	oup, LLC							
Date:	1/4/19								
Shift:	Day								
		S	Μ	т	W	Th	F	S	

Temperature: Low: 23°F to High: 53°F

Weather: Clear

I. CONTRACTOR ACTIVITIES DURING SHIFT

TG McCauley Activity:

- > Operator Abel was not on site today.
- > D9 graded the south slope to a 2:1. Part of the south fill was cut to use a slope material.
- D8 graded the north slope to a 2:1. The toe of the slope was tied into the buttress. Two additional lifts were added to the buttress, each lift being 1 foot thick and track rolled at least 4 times.
- > D8 graded the mining pad to allow for better drainage from the west to the east.
- > D9 grub and cleared for the toe of the south slope.

II. MINE ACTIVITIES DURING SHIFT

> No work was performed by Elko Mining Group on site.

III. NEWFIELDS QA/QC ACTIVITIES

- > Supervised the grading of the mining pad and slope.
- > Drone survey was completed.

IV. MEETINGS AND COMMUNICATIONS

> McCauley Construction plans to mobilize a grader this weekend, dependent on weather.

Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 January 4th 2019





South Slope





Graded Slope





Grub and Cleared Area for South Slope





Slope Tied into Buttress

Name	Project Number	Hours	Comments
Marcus Erdmann	475.0386.000	8.5	Field Supervision

If you have any questions or require additional information, please contact us at your convenience.

Sincerely,

NewFields Mining Design & Technical Services

Prepared by:

Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 January 7th 2019



FIELD DAILY PROGRESS REPORT

Project(s): Summit Mine Waste Facility Slide							
NewFields Project Number: 475.0386.000							
Site: Elko Mining Group, LLC							
Date: 1/7/19							
Shift: Day							
S	М	т	W	Th	F	S	

Temperature: Low: 33°F to High: 54°F

Weather: Clear

I. CONTRACTOR ACTIVITIES DURING SHIFT

TG McCauley Activity:

- > Operators Abel and JT were not on site today.
- > Operator Bill was on site today.
- > A Grader has been mobilized on site
- > Grader repaired the county road where previously mobilized equipment has destroyed it.
- > D9 grades the south slope to a 2:1.
- > D8 graded and finished the north slope to a 2:1.
- D8 cut the south slope to define a crest that will properly line of up with toe stakes. Cut material was used to tie into the northern slope.
- Grader graded the mining pad to allow for proper drainage. A v-ditch was cut along the crest of the slope.

II. MINE ACTIVITIES DURING SHIFT

> No work was performed by Elko Mining Group on site.

III. NEWFIELDS QA/QC ACTIVITIES

- > Supervised the grading of the mining pad and slope.
- > Drone survey data was sent to NewFields Denver for processing.

IV. MEETINGS AND COMMUNICATIONS

The southern slope of the project did not line up with the toe stakes properly. NewFields and McCauley discussed corrective action, which involved using the D8 to properly define a crest by cutting the slope.





D8 Cutting South Slope





D9 Grading South Toe





Mobilized Grader





Current Toe of Southern Slope





Finished Northern Slope

Name	Project Number	Hours	Comments
Marcus Erdmann	475.0386.000	9.5	Field Supervision

If you have any questions or require additional information, please contact us at your convenience.

Sincerely,

NewFields Mining Design & Technical Services

Prepared by:

Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 January 8th 2019



FIELD DAILY PROGRESS REPORT

Project(s): Summit Mine Waste Facility Slide							
NewFields Project Number: 475.0386.000							
Site: Elko Mining Group, LLC							
Date: 1/8/19							
Shift: Day							
	S	Μ	т	W	Th	F	S

Temperature: Low: 34°F to High: 57°F

Weather: Clear

I. CONTRACTOR ACTIVITIES DURING SHIFT

TG McCauley Activity:

- > Operators Abel and JT were not on site today.
- D8 graded and finished the south slope to a 2:1. Cut topsoil was placed back over the toe of the slope. A small stockpile of topsoil was not able to be replaced on the finished slope without tracking through undisturbed land, and was therefore left.
- D9 pushed the topsoil stockpile onto the south slope. The D8 assisted in grading the topsoil across the finished slope.
- The grader graded the mining pad to allow proper drainage. The excavator was used to grade areas where the grader cannot reach.
 - Due to the high moisture content in the material, compaction was not possible at this time.
- D8 cut the drainage ditch south to the end location. A berm was placed between the county road and worksite.
- > D7 was demobilized.

II. MINE ACTIVITIES DURING SHIFT

> No work was performed by Elko Mining Group on site.

III. NEWFIELDS QA/QC ACTIVITIES

> Supervised the grading of the mining pad and slope.

IV. MEETINGS AND COMMUNICATIONS

The southern slope of the project did not line up with the toe stakes properly. NewFields and McCauley discussed corrective action, which involved using the D8 to properly define a crest by cutting the slope.





Finished Slope





South Completed Toe

Name	Project Number	Hours	Comments
Marcus Erdmann	475.0386.000	9.0	Field Supervision

If you have any questions or require additional information, please contact us at your convenience.

Sincerely,

NewFields Mining Design & Technical Services

Prepared by:

Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 January 9th 2019



FIELD DAILY PROGRESS REPORT

Waste	Facilit	y Slid	е				
er: 475	.0386.	000					
LLC							
S	Μ	т	W	Th	F	S	
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Temperature: Low: 33°F to High: 54°F

Weather: Overcast

I. CONTRACTOR ACTIVITIES DURING SHIFT

TG McCauley Activity:

- > Operators Abel and JT were not on site today.
- > The excavator was demobilized.
- > A walkthrough was completed with Elko Mining Group and NewFields.
- The drainage ditch was cut using the excavator to now report out onto the county road, previously daylighting out at the south crest of the slope. A diversion berm was built to allow drainage onto the road.

II. MINE ACTIVITIES DURING SHIFT

> Engineers Andrew Conover and Riley Swanston were on site for the final walkthrough.

III. NEWFIELDS QA/QC ACTIVITIES

- > Engineer Ryan Baker was on site for the final walkthrough.
- > A survey was completed.

IV. MEETINGS AND COMMUNICATIONS

- The final walkthrough of the project was completed. Elko Mining Group requested the drainage ditch report out to the county road. The stockpile of topsoil at the toe of the south slope will be left.
- > Seeders will be mobilizing to site this weekend. They will begin working Monday (1/14).

Elko Mining Group, LLC Summit Mine Waste Facility Slide 475.0386.000 January 9th 2019





Cut ditch to County Road





Diversion Berm

Name	Project Number	Hours	Comments
Marcus Erdmann	475.0386.000	8.0	Walkthrough, Survey

If you have any questions or require additional information, please contact us at your convenience.

Sincerely,

NewFields Mining Design & Technical Services

Prepared by: