FREEPORT-McMoRan

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July 28, 2022

Certified Mail #70211970000136946981

Mr. John Rhoderick, Deputy Director
Water Protection Division
New Mexico Environment Department
P.O. Box 5469
Santa Fe, New Mexico 87502

Dear Mr.Rhoderick:

Re: Bayard Canyon Interim Removal Action Completion Report
Hanover/Whitewater Creek Investigation Unit – Chino AOC

Freeport-McMoRan Chino Mines Company (Chino) submits under separate cover the *Completion Report for the Bayard Canyon Area Interim Removal Action (IRA), Hanover/Whitewater Creek Investigation Unit* (HWCIU) under the Chino Administrative Order on Consent (AOC). This report documents the IRA activities and results as well as the data collected, analyzed, and validated for the material removal performed by Chino. The Bayard Canyon IRA was performed as a supplemental action to, and in accordance with the 2018 HWCIU IRA Workplan as per approval provided by New Mexico Environment Department (NMED) in an email dated April 12, 2021. This report was submitted today to Mr. David Mercer, NMED AOC Project Manager.

Please contact Ms. Pam Pinson at (575) 912-5213 with any questions or comments concerning this completion report.

Sincerely,

Sherry Burt-Kested
Manager, Environmental Services

SBK:pp
20220725-001

c: (via email)
Joseph Fox, NMED
David Mercer, NMED
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ARCADIS Design & Consultancy for natural and built assets

Freeport-McMoRan – Chino Mines Company

BAYARD CANYON SUPPLEMENTAL INTERIM REMOVAL ACTION COMPLETION REPORT

Hanover Whitewater Creek Investigation Unit
Vanadium, New Mexico

July 2022

Lisa Gonzales, P.E.
Principal Engineer

Oscar Sorensen
Project Manager

INTERIM REMOVAL ACTION COMPLETION REPORT

Hanover Whitewater Creek Investigation Unit
Vanadium, New Mexico

Prepared for:
Freeport-McMoRan Chino Mines Company

Prepared by:
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Our Ref.:
30084766

Date:
July 2022

CONTENTS

TABLES

EXHIBITS

FIGURES

APPENDICES

ACRONYMS AND ABBREVIATIONS

AOC	Administrative Order on Consent
Arcadis	Arcadis U.S., Inc.
BMP	Best management practice
CCP	Closure/Closeout Plan
CGP	Construction General Permit
Chino	Freeport-McMoRan Inc. Chino Mines Company
FMI	Freeport-McMoRan Inc.
GNSS	Global Navigation Satellite System
HWC	Hanover and Upper Whitewater Creek
HWCIU	Hanover and Whitewater Creek Investigation Unit
IRA	Interim Removal Action
CR	Completion Report
NAD83	North American Datum of 1983
NAVD88	North American Vertical Datum of 1988
NMED	New Mexico Environment Department
NPDES	National Pollutant Discharge Elimination System
SOP	Standard Operating Procedure
SWPPP	Stormwater Pollution and Prevention Plan
the site	Chino Mines located in Vanadium, New Mexico
TMDL	Total Maximum Daily Load
USEPA	United States Environmental Protection Agency
WP	Workplan

1 INTRODUCTION

Freeport-McMoRan Inc. (FMI) Chino Mines Company (Chino) conducted an interim removal action (IRA) in Bayard Canyon in the second quarter of 2021 under the Hanover Whitewater Creek Investigation Unit (HWCIU). The HWCIU IRA Workplan (WP, Arcadis 2018), was approved by the New Mexico Environment Department (NMED) in June 2018 under the Chino Administrative Order on Consent (AOC). NMED and Chino entered into the AOC on December 23, 1994 to investigate and to address environmental risk within the Investigation Area (IA) that may have occurred due to historical mining operations. The HWCIU is one of six investigation units within the IA.

This Supplemental IRA Completion Report (CR) describes construction activities performed within Bayard Canyon as a follow-up to the 2019 HWCIU IRA, with its Completion Report (Arcadis 2021a) approved by NMED in November 2021. The Bayard Canyon supplemental IRA, approved by NMED to address under the WP on April 12, 2021 (**Appendix A**), included the mass removal of legacy stockpiles associated with the Groundhog Mine and old, small mine workings or prospect pits to ameliorate sources of lead to surface water and subsequent backfill to reestablish the stormwater runoff surface.

1.1 Site Setting

Chino operates the Santa Rita Mines in southeast Grant County, New Mexico (**Figure 1**). Nearby towns include Hanover, Vanadium, Bayard, North Hurley, and Hurley.

Hanover Creek begins in the Pinos Altos Range at an elevation of approximately 7,500 to 8,000 feet above sea level and flows to the south in a narrow valley for 8 miles at a slope of approximately 2 percent to the confluence with Whitewater Creek. Whitewater Creek originates near the former Chino Precipitation Plant and flows west approximately 3,000 feet at a grade of approximately 1.7 percent to its confluence with Hanover Creek. Downstream of the confluence, Hanover and Upper Whitewater Creek (HWC) flows for 7 miles to the south-southwest through a wide valley towards the Town of Hurley.

Bayard Canyon begins approximately 1 ½ miles northeast of the town of Bayard at an elevation of approximately 6,100 feet above sea level. An unnamed, ephemeral drainage follows the canyon bottom and discharges into HWC on the east side of Bayard at an elevation of approximately 5,790 feet above sea level. The Lucky Bill Canyon ephemeral drainage confluences with Bayard Canyon on its southeast wall.

The topography for the area ranges from mountainous in the north to flat plains in the south. The hillslopes are steep in the north, ranging from 10 percent slope to vertical cliffs, and are gentle in the south, ranging from 0 to 3 percent slopes. Elevation, steepness, and ruggedness generally decrease from north to south.

Climate data are taken from two meteorological stations: the Santa Rita Station and the Hurley Station. The Santa Rita Meteorological Station is located near the mine at an elevation of approximately 6,200 feet. The Hurley Meteorological Station is located near the former Hurley Smelter at an elevation of 5,700 feet. The average annual precipitation for the Santa Rita and Hurley Stations between 1985 and 1999 were 19.18 and 15.69 inches, respectively; however, average annual precipitation fluctuates significantly, ranging from approximately 6 to 30 inches per year. The frost-free period is from late April to mid-October and is approximately 165 to 190 days. Spring and late fall months are generally dry (Golder 1998).

Approximately half of the annual precipitation occurs in July, August, and September in high-intensity, short-duration rain events.

1.2 Site History

Bayard Canyon is a northeast-southwest trending canyon located east of Hanover-Whitewater Creek and south of the Santa Rita Mine. Mining activity associated with an exposed lead-bearing jasperoid vein historically occurred along the Groundhog Fault, which is on strike with Bayard Canyon along the eastern edge of the canyon's ephemeral drainage (Golder 2009) (see **Exhibit 1)**.

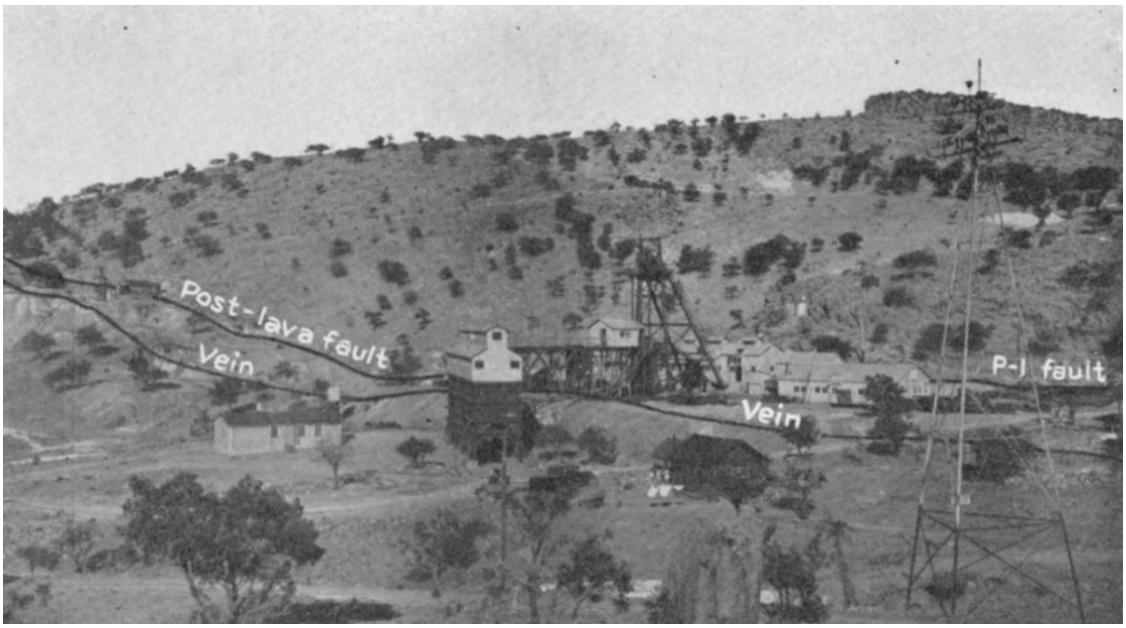

Exhibit 1 - San Jose Shaft at the Groundhog Mine looking east. Trace of Groundhog Fault and vein are also depicted (Lasky, 1936)

Jasperoid is a rare metasomatic alteration and occurs in two main forms: sulfidic jasperoids and hematitic jasperoids. Jasperoid veins are defined as a dense, usually gray, chert-like siliceous rock, in which chalcedony or cryptocrystalline quartz has replaced the carbonate minerals of limestone or dolomite; the result of this mineral replacement is a silicified limestone. Hematitic jasperoid has a red-to-purple, to purple-black color due to the presence of hematite. This jasperoid variety typically develops as the gangue of metasomatic sulfide deposits of the lead-zinc type, such as those of Missouri, Oklahoma, and Kansas (mindat.org). North of Bayard Canyon, the Groundhog Mine was an extensive underground lead mine located in the valley of a north-flowing unnamed tributary to Whitewater Creek, before it was reclaimed in 2008 using a combination of stockpile removal, grading, and revegetation (Golder 2009). The Groundhog Mine area was last operated by Asarco until 1977 but was previously owned by a number of other companies with mine operations beginning in 1933. Chino obtained the property from Asarco in 1994. Prior to transferring the property, Asarco relocated several stockpiles from Bayard Canyon and

combined them with several stockpiles associated with the Groundhog operations (Golder 2001). Groundhog Stockpile No. 5, located in Lucky Bill Canyon, was regraded in 2006 and reclamation of the site was completed in 2021 (Telesto 2021) (see **Figure 2**). Associated with the Groundhog Mine, jasperoid vein debris from the closed No. 1 Lucky Bill Shaft (Shaft 3) and Shaft 1, both located in Bayard Canyon and upgradient of the confluence with Lucky Bill Canyon (**Figure 2**), was determined in 2019 to be residual stockpile material that was separate from the natural background vein float material historically noted in the canyon. The main vein of the northeast trending Groundhog fault-system outcrops at the mouth of Lucky Bill Canyon as well as the head of Bayard Canyon (Lasky, 1936), where mine workings Shaft 1 and No. 1 Lucky Bill Shaft (Shaft 3) are located. A geologic map of the canyon dated 1967 (**Exhibit 2**) has been updated with visual confirmations of the Lasky, 1936 paper as well as geologic mapping completed during the IRA by a Chino geologist (**Exhibit 3**).

In addition to the above-described activities at the Groundhog Mine and Lucky Bill Canyon, small-scale prospecting and mining operations historically occurred along the eastern side of Bayard Canyon that involved lead ore extraction from the same jasperoid vein partially exposed along the Groundhog Fault (**Exhibits 1 through 3**). Surface expressions of these small-scale operations consist of filled mine workings and prospect pits identified by the mining-related detritus and small spoil piles from the mouth of Lucky Bill Canyon extending southwest approximately 2,300-feet along an ephemeral unnamed tributary to Hanover-Whitewater Creek (See **Exhibit 2**, **Figure 2**, and **Appendix B**).

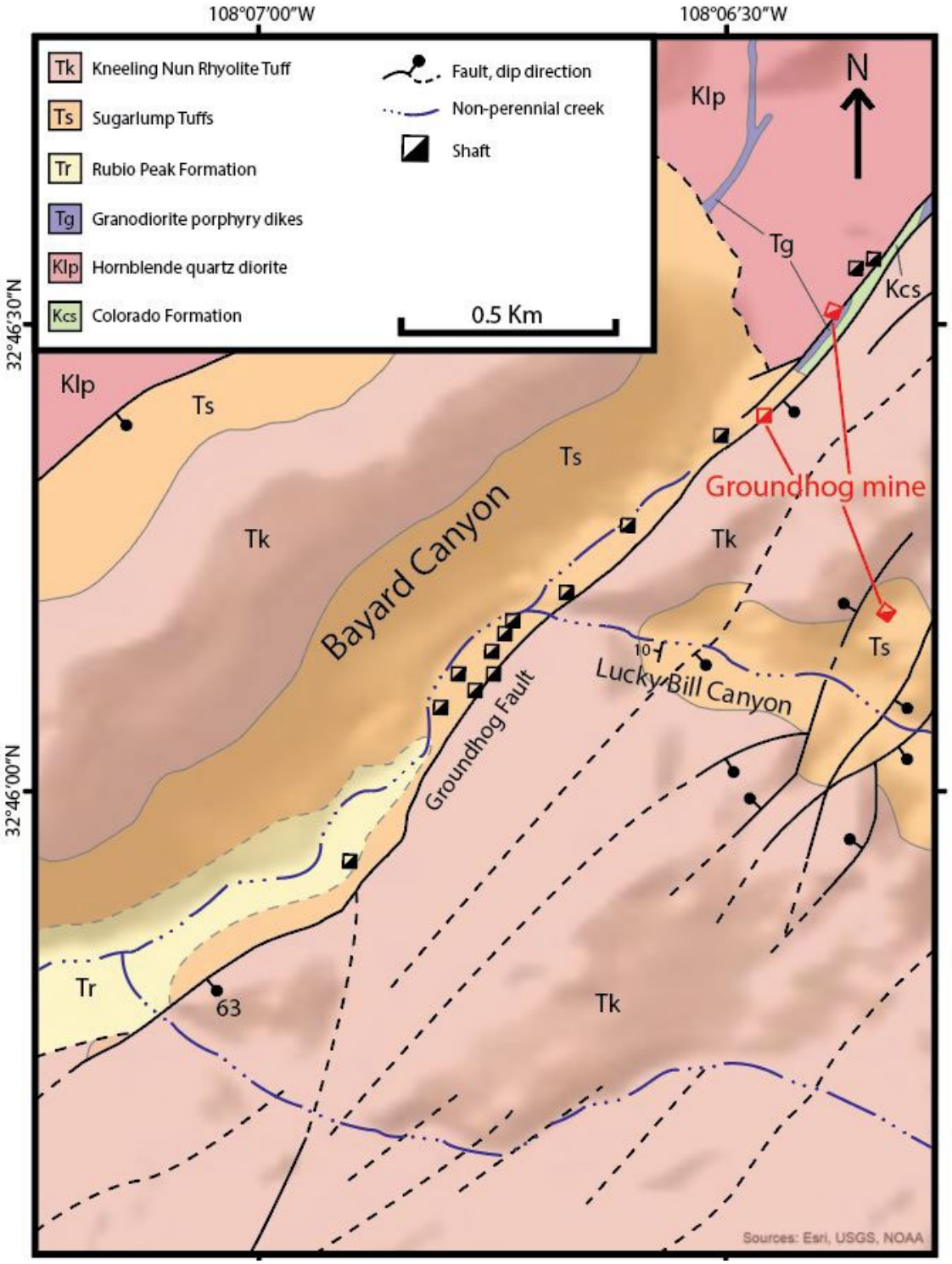

Exhibit 2 – Geologic Map of Bayard Canyon Area.
Groundhog mine shafts are highlighted in red (Adapted from Jones, 1967).

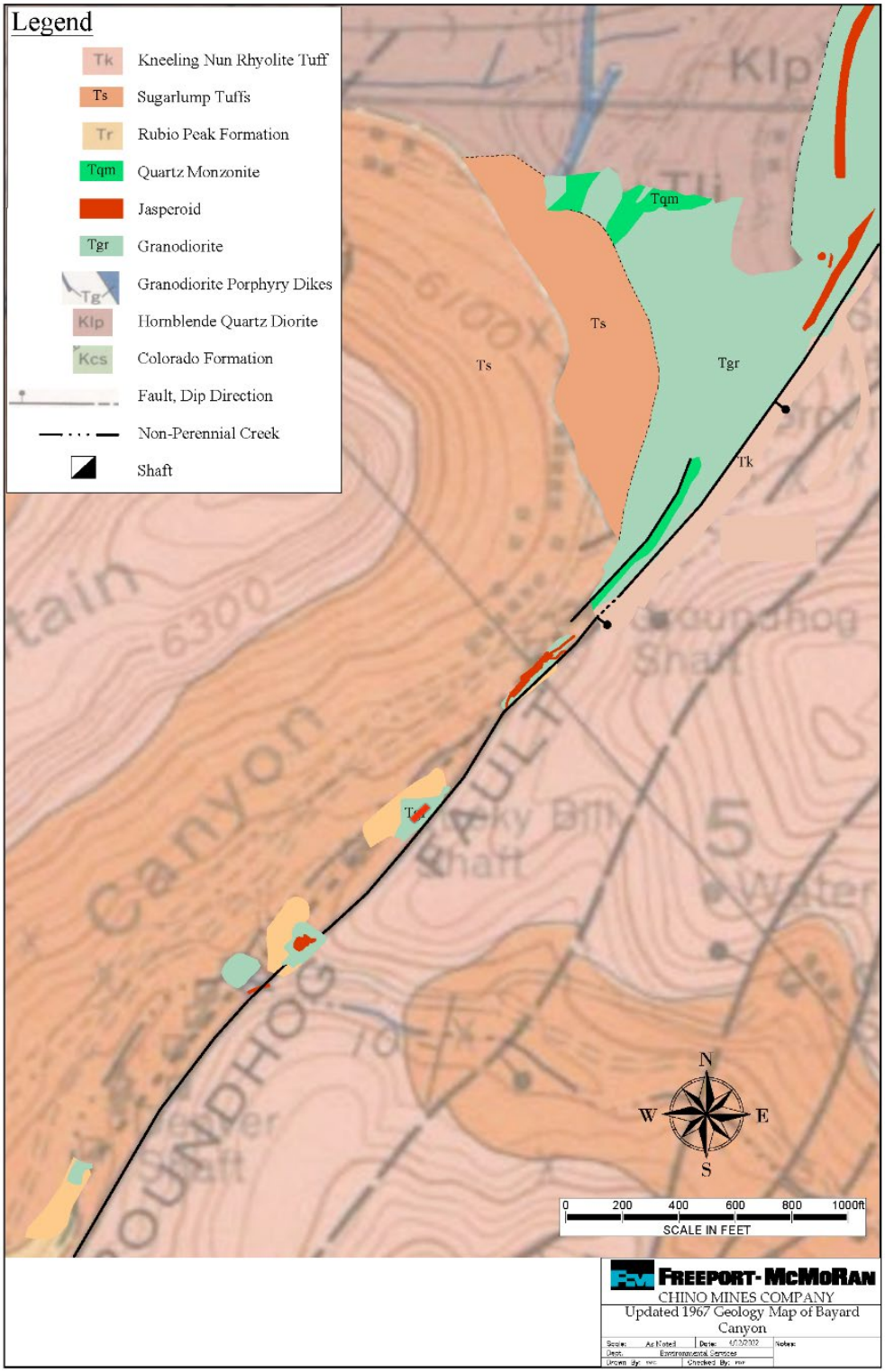

Exhibit 3 – Updated Geologic Map of Bayard Canyon Area (Chino, 2021).

1.3 Purpose

The purpose of this IRA was to perform visual mass removal of legacy stockpiles in Bayard Canyon, in line with the NMED approved WP, to reduce potential sourcing of metals to Whitewater Creek. These stockpiles, along with the natural background mineralization sourcing from the exposed jasperoid vein, provided a source of lead, as well as zinc and copper, minerals to surface water and sediment. Once the removals were completed, Chino backfilled the excavated areas to maintain grade for stormwater runoff into Bayard Canyon Creek.

1.4 Background

Lead concentrations in Bayard Canyon and downstream in Whitewater Creek, as identified in the 2000 HWCIU RI (Golder 2000), were originally thought to be directly attributable to the exposed Groundhog Fault jasperoid vein in Bayard Canyon. However, following the completion of the HWCIU IRA in 2019, Chino visually identified remnant legacy stockpiles extracted from the vein located at old, small mine workings and prospect pits that were likely the more dominant source of lead to surface water and sediment than the exposed jasperoid vein outcrops. Due to the mineralized nature of jasperoid, both its outcrops and stockpile material are a similar source of metal sulfides to the canyon soils and sediments, whether in the Groundhog Mine area or in Bayard Canyon. Metal concentrations in this site are similar for background as well as legacy sources. These small mining-impacted areas are identified on **Figure 2** and ranged in size from approximately 75 to 18,700 square feet. The criteria used to identify the areas included:

- A hematite red color characteristic of the jasperoid vein that contrasted with surrounding, tannish-colored soils and rocks from erosion of the site from surrounding rhyolite formations as noted in **Exhibit 4** below.

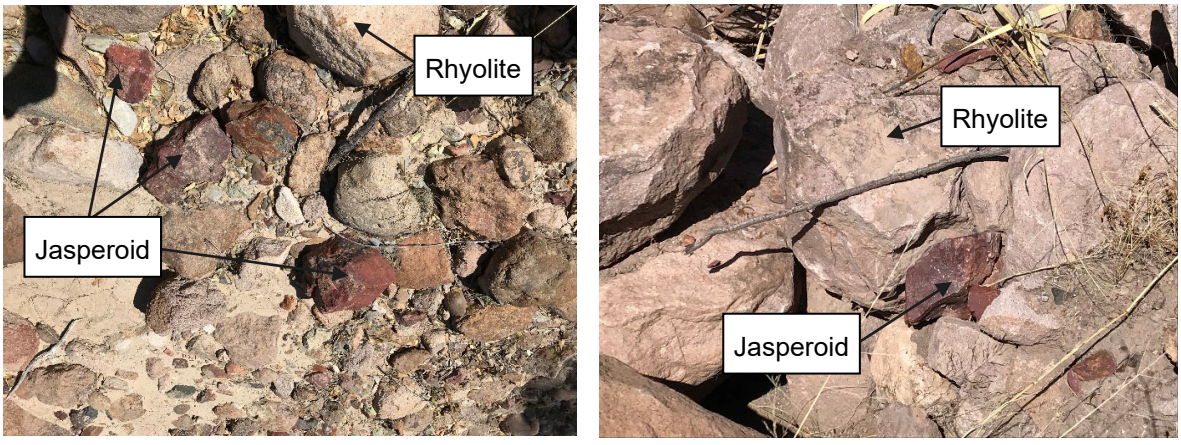

Exhibit 4 – Photographs illustrating visual difference in jasperoid and rhyolite characteristics.

- Lack of vegetation, which may indicate the presence of mine waste,
- Presence of red colored rock and gravel waste piles, evidence of historical diggings, legacy posts and fences used to prevent access, and the presence of historical collars and timbers.
- Geologic map of Bayard Canyon Area (Jones, 1967) (**Exhibit 2**).

- Evidence of the former Asarco Groundhog Mine Stockpiles

1.5 Document Organization

The remaining sections of this CR are organized as follows:

- *Section 2 – Supplemental Interim Removal Action Summary.* This section summarizes IRA construction activities.
- *Section 3 – Construction Documentation.* This section references the tables and figures showing the final limits and extents of the work, presents photograph documentation of construction, and post-construction aerial surveys conducted using a drone.
- *Section 4 – Supplemental Interim Removal Action Sampling*. This section presents the results of sampling conducted as part of the Supplemental IRA.
- *Section 5 – Summary.* This section presents a summary of the project.
- *Section 6 – References.* This section provides references for documents cited within this CR.

2 SUPPLEMENTAL INTERIM REMOVAL ACTION SUMMARY

This section describes completed construction activities associated with the Supplemental IRA. The general elements of the IRA are listed below:

- Preconstruction activities including:
  - Obtain necessary approvals and permits.
  - Mobilize Chino equipment.
- Establish site access, construction staging areas, and temporary facilities.
- Establish traffic control and traffic patterns, identify/locate existing utilities, protect existing utilities.
- Install best management practices (BMPs) for erosion and sediment control.
- Perform targeted, visual mass stockpile material removal.
- Construct and maintain temporary stockpile in coordination with Chino Mines.
- Backfill removal areas.
- Perform site restoration with grading, followed by seed and mulch application.
- Demobilize equipment.

A photographic log is provided in **Appendix B** as well as a daily log detailing site activities in **Appendix C**.

2.1 Removal Action Implementation Team

The roles and responsibilities for the construction of the Supplemental IRA were developed and defined under construction contract documents. The following parties fulfilled the requirements of the project roles and responsibilities:

- **Owner:** Freeport-McMoRan Chino Mines Company is the Owner and managed the construction effort.
- **Design Engineer:** Arcadis was the Design Engineer.
- **Field & Quality Assurance Engineer:** Daniel B. Stephens & Associates (DBS&A) was on site as the Field and Quality Assurance Engineer.
- **Removal, Haulage, and Site Restoration:** Chino Shared Services performed the excavation, temporary material staging, haulage, and site restoration work. Seed and mulch for revegetation was performed by contractor, Rocky Mountain Reclamation.

2.2 Permitting

Before construction, the following permits were obtained:

- **Discharge Permit 526 (DP-526)**: NMED provided in an email dated April 28, 2021, temporary permission under Discharge Permit-526 (DP-526) to place 6,000 cubic yards (yd^3) of removed material from Bayard Canyon on an approved location on the West Stockpile within Chino operations (**Appendix D**).
- **Blue Stake Permit:** The Blue Stake Permit is an FMI-specific utility locating requirement. Chino Shared Services obtained and maintained Blue Stake Permit(s) applicable to the IRA throughout construction, including the New Mexico One Call program where applicable. This permit process also determines property boundary lines.

2.3 Mobilization and Site Preparation

Chino mobilized heavy equipment to Bayard Canyon to begin construction in April 2021. Construction activities made use of existing access roads to the extent possible. Before and concurrent with construction, removal areas were cleared of vegetation by grubbing shrubs and cutting trees. Utility locate procedures were completed in accordance with FMI's Blue Stake Policy.

2.4 Environmental and Site Controls

Chino Shared Services constructed erosion and sediment control best management practices (BMPs) around removal areas, temporary material stockpiles, borrow areas, staging area, and other areas related to construction activities. Chino and DBS&A conducted inspections throughout construction to verify that Chino Shared Services BMPs for erosion and sediment control were in accordance with the mine's stormwater pollution prevention plan. An onsite water truck was used to control dust generation from haul roads and excavation areas.

2.5 Stockpile Material Removal and Backfill

Stockpile material removal limits were visually determined, using the criteria described in Section 1.4. Delineation of removal area footprints was directed by Chino and DBS&A with input and concurrence from Chino Shared Services. Focus was paid to areas with reddish rocks and soil characteristic of the canyon jasperoid vein that differed from the surrounding, tannish oil and rock resulting from erosion from the surrounding volcanic rhyolite formations (see **Exhibit 4** and **Appendix B**). In total, eleven historical mine workings and prospect pits (hereafter referred to as "shafts"), an adit, and an unnamed mining-related feature along with waste material presumably originating from the adjacent mined areas were identified along an approximate 2,300-foot length of Bayard Canyon (**Figure 2**). Stockpile material within the Removal Areas was excavated until the targeted reddish rocks, gravel, and soil was removed, or until bedrock was encountered. Removal Areas associated with each historical mine shaft, listed from north to south, are described below and depicted on **Figure 2**:

- Shaft 1 – An area approximately 18,673 square feet (ft^2) in size and an average depth of 4 feet (approximately 2,766 yd^3) was removed in the vicinity of this shaft. Reddish material exposed through excavation on the west side of the drainage was observed to be within the active mine operations high-density polyethylene pipeline corridor located west of Shaft 1 (see **Exhibit 5a**). This area was determined by a Chino geologist to be an outcrop of the jasperoid vein covered by

stockpile material (**Exhibit 5b**). The remaining stockpile was not removed due to concerns of undermining the pipeline corridor. Instead, the outcrop and remaining stockpile materials were covered with clean backfill.

Exhibit 5a – Photograph showing the remaining stockpile left in place under the stockpile and pipeline corridor.

Exhibit 5b – Photograph showing the jasperoid vein outcrop (marked by bold, black line) under the stockpile and pipeline corridor.

- Shaft 2 – An area approximately 14,666 ft^2 in size and an average depth of 0.5 feet (approximately 272 yd^3) was removed in the vicinity of this shaft. See **Exhibit 6a** of site prior to stockpile removal. An outcropping of jasperoid vein was noted following removal of debris and stockpile. See **Exhibit 6b** of jasperoid vein outcrop following removal and prior to soil cover placement.

Exhibit 6a – Photograph showing jasperoid stockpile material at Shaft 2.

Exhibit 6b – Photographs showing exposed outcrop of jasperoid vein following stockpile removal.

- Mining-Related Feature– An area approximately 598 ft^2 in size and an average depth of 1 foot (approximately 22 yd^3) was removed in the immediate vicinity of this feature. An additional area approximately 7,652 ft^2 in size and an average depth of 0.5 feet (approximately 142 yd^3) was removed approximately 100 feet to the west of this feature.
- Shaft 3 and Adit 1 – Ten areas ranging from 75 ft^2 to 15,519 ft^2 in size and between 0.5 and 6 feet deep were removed in the vicinity of these two features, including areas inside and outside of the adjacent drainage. In total, approximately 4,718 yd^3 was removed from this area. The excavation of stockpile material exposed a prominent ridge of the jasperoid vein at the mouth of Lucky Bill Canyon on its north wall, as discussed in Lasky, 1936 (see **Exhibit 7** below and Photograph 18, **Appendix B**).

Exhibit 7 – Ridge of Jasperoid outcrop (black outline) at mouth of Lucky Bill Canyon following stockpile removal.

- Shafts 4 through 6 – Six areas ranging from 181 ft^2 to 3,026 ft^2 in size and between 2 and 4 feet deep were removed in the vicinity of these three features. In total, approximately 1,315 yd^3 was removed from this area.
- Shafts 7 and 8 – Six areas ranging from 3,051 ft^2 to 12,973 ft^2 in size and between 2 and 6 feet deep were removed in the vicinity of these three features, including the drainage bank. In total, approximately 2,690 yd^3 was removed from this area.
- Shafts 9 and 10 – No waste material was observed in the vicinity of these two shafts. Waste associated with these two features was likely stockpiled in one of the nearby Removal Areas.
- Removal Area Between Shafts 10 and 11 – A small area approximately 459 ft^2 in size and an average depth of 1 foot (approximately 17 yd^3) was removed in from this area.

- Shaft 11 – No stockpile material was located at this closed mine working. An area approximately 7,636 ft^2 in size and an average depth of 0.5 foot (approximately 141 yd^3) was removed from this area as part of a suspected old road.

The dimensions of each Removal Area summarized above are provided in **Table 1** based on banked material removed. A total of approximately 12,000 yd^3 of excavated stockpile material was hauled to the West Stockpile as waste based on truck load counts.

Backfill was placed in each Removal Area after post-removal sampling was completed to reestablish the stormwater runoff surface. Locally sourced large rhyolite boulders were placed along the toes of newly-formed slopes for backfill stabilization and to reinforced banks along and above the canyon drainage. Boulders from removal activity were also used as backfill material to stabilize the banks along the creek at the mouth of Lucky Bill Canyon, with compaction of local borrow material (See Section 2.6) to establish a smooth surface. To protect the reclaimed mine workings, the creek flow from Lucky Bill Canyon was redirected into its original drainage pattern to the confluence with Bayard Canyon. An old drill road had caused head cutting such that the creek was eroding into the east upland bank in a new path to confluence with Bayard Canyon. No backfill was placed within the active channel in the remaining removal areas. The excavated access road was built on top of the Shaft 3 stockpile, leading into Lucky Bill Canyon. The road was rebuilt with approximately the same dimensions as the pre-removal dimensions but was elevated slightly so as to prevent damage from stormwater runoff. The reddish material present near the intersection of the Lake One Haul Road and the access road to Lucky Bill Canyon could not be completely removed to maintain stability of the pipeline corridor. The access road was also rebuilt adjacent to the pipeline corridor to provide additional stabilization. The excavated mine workings were crowned slightly during backfilling to prevent pooling and to promote drainage. **Table 1** summarizes final removal volumes, backfill volumes, and backfill types by removal area.

2.6 Borrow Sources

Rhyolitic boulders used for stabilization and bank reinforcement purposes and the material used to backfill the removal areas were sourced from within Bayard Canyon. Two borrow areas were used, one to the south of Lucky Bill Canyon, and one to the north of Lucky Bill Canyon adjacent to the staging area for the project (**Figure 2**). The borrow material consisted of soil, sand, and gravel eroded from nearby rhyolite formations and was tan in color.

The north and south borrow sources were both sampled prior to use as backfill. The north borrow area provided fill material as well for the Groundhog Mine IRA with analytical results provided within its completion report (Telesto 2006). Analytical results for the two samples are included in **Appendix E**.

2.7 Transportation and Stockpile Staging Area

A temporary staging area for excavated stockpile material was located and maintained by Chino Shared Services adjacent to the Lake One Haul Road at the north end of Bayard Canyon. Runoff from the staging area was contained with a BMP consisting of 2-foot-high soil berms sourced from the nearby Groundhog borrow pit stockpile material. A water truck provided dust control on the access road and staging area. Material from the temporary stockpile was loaded and transported to the West Stockpile for final placement in the same locale as the 2019 HWCIU IRA material by Chino Shared Services. See

Appendix D for placement location. Once the approximately 12,000 yd^3 of Bayard Canyon stockpile material was hauled to the West Stockpile, Chino Shared Services removed the containment berms and the top 3-6 inches of native soil beneath the stockpile and transported the material to the West Stockpile. Placement of excavated materials on the West Stockpile met the temporary permission requirements provided by NMED under DP-526 (NMED 2018).

2.8 Restoration

The Supplemental IRA was performed in a manner that mitigated sources of lead to surface water and sediment. Disturbed areas were graded to reestablish the stormwater runoff surface. Excavated mine workings were crowned slightly during backfilling to prevent pooling and to promote drainage. Reseeding was completed via drill seeding using the approved seed mix for use under the Closure/Closeout Plan (CCP, Chino 2007), presented in **Table 2**. Temporary features, such as access roads, equipment staging areas, and clean backfill stockpile areas were removed and restored to match the surrounding conditions. All material from the temporary stockpile was transferred to the West Stockpile. Construction activities for the Supplemental IRA were completed in June 2021.

Table 2 Seed Mix

Common Name	Percent Pure
Seed Mix Type 1	
Sideoats Grama	28.74
Indian Ricegrass	22.99
Saltbush, Fourwing	13.04
Clover, Purple Prairie	5.69
Clover, White Prairie	4.60
Coneflower, Yellow Prairie	4.55
Blue Flax	3.49
Green Sprangletop	3.39
True Mountain Mahogany	2.37
Fairyduster	2.21
Total	**91.07%**
Seed Mix Type 2	
Winterfat	36.50
Sand Dropseed	16.73
Alkali Sacaton	15.14
James' Galleta	5.52
Rabbitbrush, Rubber	3.97
Blue Grama	3.42
Desert-Willow	1.40
Total	**82.68%**

Table 2 Seed Mix

Common Name	Percent Pure

Notes:

1 In addition to the seed types listed, seed mixtures contained inert matter, weed seed, and other crops not specified.

3 CONSTRUCTION DOCUMENTATION

This section summarizes construction documentation, including survey, backfill testing results, photographic documentation, and a post-construction aerial survey. Post-removal sampling results are discussed in Section 4.

During construction, removal areas were mapped following each removal to document post-removal conditions and to calculate removal volumes for each area. Removal areas were mapped using ESRI ArcGIS Collector on a tablet linked to a portable Trimble R1 Global Navigation Satellite System (GNSS) Receiver to improve position accuracy. Map data are referenced to the North American Datum of 1983 (NAD83) New Mexico State Plane North Coordinates and the North American Vertical Datum of 1988 (NAVD88). Survey results reflecting extents and limits of the Supplemental IRA are presented in **Figures 1 and 2.**

Appendix B presents a photographic log featuring photographs taken prior to, during, and/or after removal and backfill activities were conducted at each removal area. An aerial photographic survey of the completed extents of the Supplemental IRA was conducted in July 2021 using an unmanned aerial vehicle (drone). Results of the aerial photographic survey are included as **Appendix F**.

4 POST-REMOVAL SAMPLING

4.1 Sample Collection and Analysis

4.1.1 Sample Collection

The IRA WP (Arcadis 2018) described a sampling program which included collecting soil samples to document post-removal conditions. Upon excavation to the removal limits for each removal area, one floor (excavation bottom) sample was to be collected per every 0.25 acre of excavation, one sidewall sample was to be collected per 250 feet perimeter (minimum 4 samples); and no sidewall samples for any area < 250 square feet. During initiation of the Supplemental IRA, this proposed sampling plan was adjusted such that individual removal areas were grouped based on proximity to each other. Grouped removal areas were treated as one large removal area and sampled using the procedure described above. Post-removal Sampling Groups are described in **Table 3** and sampling locations are shown on **Figure 4**.

Post-removal samples were collected following procedures established in the AOC RI Standard Operating Procedure (SOP)-22 “Surface Soil Sampling” (Chino 1997). Soil samples were sealed in plastic bags and shipped in coolers. Samples were handled and shipped in accordance with SOP-4 “Sample Custody Procedures” and SOP-5 “Packaging and Shipping of Environmental Sample Containers.” Laboratory samples were submitted under chain-of-custody to SVL Laboratory in Kellogg, Idaho.

4.1.2 Sample Sieving and Laboratory Analysis

Samples were dried and sieved by SVL in preparation for analysis. Consistent with previous HWCIU investigations, samples were sieved to size fractions relevant to evaluation of risk to ecological and human receptors. SVL split each sample into two aliquots: the first aliquot sieved to <2,000 µm, which represents the size fraction most likely to be ingested by wildlife receptors and therefore used for evaluation of ecological risk (Formation Environmental [Formation] 2015) and the second aliquot sieved to <250 µm, the size fraction that best represents the fraction that adheres to human skin and therefore most relevant to evaluation of risk to human receptors (Golder 2000).

SVL performed the following analyses on each dried and sieved sample:

- Arsenic via United States Environmental Protection Agency (USEPA) method 6020
- Cadmium via USEPA method 6010
- Chromium via USEPA method 6010
- Copper via USEPA method 6010
- Iron via USEPA method 6010
- Lead via USEPA method 6010
- Manganese via USEPA method 6010
- Zinc via USEPA method 6010

- pH via USEPA method 9045D
- Moisture content (air dried)
- Total organic carbon via EPA 600/2-78-054

Analytical results for post-removal samples are reported in **Appendix E**.

4.1.3 Data Analysis and Summary Statistics

Four analytical datasets were generated from the post-removal samples: edge samples sieved to <250 µm, edge samples sieved to <2,000 µm, removal area floor samples sieved to <250 µm, and removal area floor samples sieved to <2,000 µm. Floor and edge samples were evaluated separately, as floor samples were taken in areas that were subsequently covered by clean material taken from borrow areas and will thus be buffered from direct contact with stormwater runoff. Edge samples therefore represent current surface soil conditions in Bayard Canyon.

Table 4.

Sample Type	Sieved to <250 µm	Sieved to <2000 µm
Floor	17	17
Edge	39	39
Total	**56**	**56**

Summary statistics were calculated for each COPC, including sample count (N), minimum (min) concentration, maximum (max) concentration, arithmetic average (average), standard deviation (SD), and 95 percent upper confidence level on the mean (95UCL) (**Table 5**). The 95UCL is defined as the value that, when calculated repeatedly for randomly drawn subsets of data, equals or exceeds the true mean 95 percent of the time (USEPA 1992). Use of the 95UCL (as representative of the average concentration) is recommended instead of the maximum concentration because it is unlikely that a receptor will be exposed to a single (e.g., maximum) concentration over the entire exposure duration. Rather, a receptor will likely be exposed to a range of concentrations in the exposure area (EA), from not detected to the maximum concentration, over the entire exposure period.

Typically, at least five detected concentrations and 10 total samples are necessary to calculate UCLs on the mean concentration (i.e., 95UCLs; USEPA 2015a). For the Bayard Canyon IRA dataset, at least 17 samples with at least five detected concentrations were available for each COPC in each dataset; therefore, a conservatively based 95UCL was estimated using the USEPA-released statistical software ProUCL Version 5.1 (ProUCL 5.1; USEPA 2015a, 2015b, 2015c). ProUCL 5.1 employs statistical methods to evaluate both full environmental datasets without non-detected (ND) values and datasets with below detection limit or ND values (also known as left-censored datasets) without the use of proxy values. Where ProUCL 5.1 recommended two or more potential 95UCLs, the estimate that best represented the dataset was selected based on the most appropriate 95UCL method.

Summary statistics for edge and floor samples are presented in **Table 5**. Statistics are provided for arsenic, cadmium, copper, iron, lead, manganese, pH, and zinc sieved to <250 µm for human receptors and for copper, pH, and pCu sieved to <2,000 µm for ecological receptors. The pCu for each sample was calculated using the upland pCu equation developed for the HWCIU ERA (Formation 2015) (Equation 1), even if copper concentrations were below 327 milligram per kilogram (mg/kg):

$$pCu = 7.34+(0.93*pH)-(1.15*\ln[Cu_{tot}]) \qquad \text{Equation 1}$$

Appendix E provides the pCu results for the complete dataset.

As presented in **Table 5**, concentrations of lead in edge samples observed a 95UCL of 3,605 mg/kg in samples sieved to <250 µm and 6,100 mg/kg in samples sieved to <2,000 µm. Concentrations of copper in edge samples observed a 95UCL of 454.4 mg/kg in samples sieved to <250 µm and 381.4 mg/kg in samples sieved to <2,000 µm. The mean pCu in edge samples sieved to <2,000 µm was 7.38 (**Table 5**).

Lead was detected in edge samples at higher concentrations than those included in the ERA (Formation 2015). This is not unexpected given the lead is associated with a mineralized vein of jasperoid in the vicinity of the removals and is thus an anomalous source of lead at Chino. However, given the small size and discrete nature of the removal areas, the residual lead concentrations are not expected to pose a population-level risk to ecological receptors.

5 POST-REMOVAL MONITORING

This section presents the post-removal monitoring plan for the Bayard Canyon IRA site. The plan includes monitoring the vegetation on the disturbed areas and surface water sampling. The IRA site will remain under the oversight of the Chino AOC until the Record of Decision for the Hanover and Whitewater Creeks Investigation Unit has been approved by NMED.

5.1 Erosion and Vegetation Monitoring

Quarterly inspections will be conducted for five years following seeding to confirm that vegetation is sufficiently established for erosion. Following the completion of the construction phase of the IRA, the revegetated areas and surface-water controls have been visually monitored for erosion on a quarterly basis for the past year to determine the initial success of the seeding. After five growing seasons following re-seeding, Chino will submit a vegetation monitoring report to NMED with recommendations to either continue or cease monitoring, based on vegetation success. An IRA objective is to return these areas to a post-mining beneficial use, such as wildlife habitat or grazing with the understanding that these areas are not isolated from mining activities. Chino will evaluate the remediated sites relative to the success targets consistent with the Vegetation Success Standards of Appendix C in the New Mexico Energy, Minerals and Natural Resources Department, Mining and Minerals Division (MMD) Revision 01-1 to Permit GR009RE. The MMD vegetation success standards for Chino are based on canopy cover, shrub density, and plant diversity compared to an undisturbed reference site.

5.2 Surface Water Sampling

Surface water downgradient of the Bayard Canyon IRA site will be sampled annually if water is present to monitor changes in surface water quality over time. Metals concentrations in Bayard Canyon Creek are expected to decrease following the completion of the IRA and associated reduction in legacy source metals. Accordingly, one sample will be collected from Bayard Canyon Creek just before the confluence with Whitewater Creek to monitor the effectiveness of the IRA using the automatic sampler associated with the Hanover/Whitewater Creek High Flow Surface Water Monitoring Work Plan (Arcadis 2021b). Surface-water monitoring will continue annually for five years following the completion of the IRA and the results of the monitoring will be reported in the annual report described in Section 5.1. Chino proposes to monitor the surface water for the following suite of analytes: copper, iron, manganese, lead, zinc, pH, and sulfate.

6 SUMMARY

The purpose of the Bayard Canyon IRA was to perform visual mass removal of legacy stockpiles associated with historical mine workings that provided a source of lead to surface water and sediment, and to backfill the excavated areas to reestablish and promote stormwater runoff. The IRA construction activities occurred between April 2021 and June 2021. These activities resulted in the removal of approximately 12,000 cubic-yards of stockpile material with metal sulfide mineralization, a legacy of historical mining activities in Bayard Canyon from various minor mine workings and prospects along the eastern side of Bayard Canyon. With the exposure of outcrops beneath removed stockpile material, the 1967 Jones, et. al. map presented in **Exhibit 2** has been updated with recent geologic mapping by a Chino geologist as provided in **Exhibit 3**. Due to the mineralized nature of jasperoid, both its outcrops and stockpile material are a similar source of metal sulfides to the canyon soils and sediments whether in the Groundhog Mine area or in Bayard Canyon (**Exhibit 5b**). Metal concentrations in this site are similar for background in Bayard Canyon as well as legacy sources. Visual mass removal of stockpile material is a practical approach as an interim action to address these historic legacy sources for metals, where natural background from which the stockpiles were mined is also sourcing the same metals. Annual monitoring of total metal concentrations in the creek surface water runoff will document any changes that should occur from the mass removal of legacy historic stockpiles.

Following excavation and prior to backfilling, samples were collected at 45 locations along the perimeter of the removal areas and 20 samples were collected from the floors of the excavations and analyzed for metals to document post-removal conditions. Floor and edge samples were evaluated separately, as floor samples were taken in areas that were subsequently covered by clean material taken from borrow areas and will thus be buffered from direct contact with stormwater runoff. Edge samples therefore represent current surface soil conditions in Bayard Canyon. Concentrations of lead in edge samples observed a 95UCL of 3,605 mg/kg in samples sieved to < 250 µm and 6,100 mg/kg in samples sieved to <2,000 µm while concentrations of copper in edge samples observed a 95UCL of 454.4 mg/kg in samples sieved to < 250 µm and 381.4 mg/kg in samples sieved to <2,000 µm. The mean pCu in edge samples sieved to <2,000 µm was 7.38 (**Table 5**).

Following sample collection, disturbed areas were graded to reestablish the stormwater runoff surface and excavated mine workings were crowned slightly during backfilling to prevent pooling and to promote drainage. The mounding on these mine workings also acts as a safety feature in discouraging trespassers from accessing these sites as well. Reseeding was completed via drill seeding using the approved seed mix.

7 REFERENCES

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TABLES

Table 1
Removal and Backfill Volume Summary
Bayard Canyon Supplemental Interim Removal Action Completion Report
Hanover Whitewater Creek Investigation Unit

	Removal Area (ft^2)	Removal Depth (ft)	Removal Volume (yd^3)
Shaft 1	18,673	4	2766
Shaft 2	14,666	0.5	272
Mining-Related Feature	598	1	22
	7652	0.5	142
Shaft 3 and Adit 1	6327	6	1406
	1477	2	109
	1765	4	261
	11832	1	438
	2615	2	194
	5161	0.5	96
	4101	6	911
	15,519	2	1150
	75	0.5	1
	1361	3	151
Shafts 4 through 6	1879	3	209
	181	2	13
	1113	4	165
	3026	4	448
	1067	4	158
	2896	3	322
Shafts 7 and 8	3051	3	339
	12,973	2	961
	2872	3	319
	4818	6	1071
Shafts 9 and 10	N/A	N/A	N/A
Between Shafts 10 and 11	459	1	17
Shaft 11	7636	0.5	141
Estimated Removal Volume			**12,083**

Table 3
Post Removal Sampling Area Groups
Bayard Canyon Supplemental Interim Removal Action Completion Report
Hanover Whitewater Creek Investigation Unit

Post-Removal Sampling Group	Removal Area ID	Area (ft^2)	Depth(-)/Thickness (+) of Fill
A	BC1	7635	-0.5'
B	BC2	459	-1'
C	BC3	12,971	-2'
	BC5	2871	+3'
	BC6	3050	+3'
	BC4	4816	-6'
D	BC7	2895	+3'
	BC8	1067	-4'
	BC9	1113	-4'
	BC10	1879	-3'
	BC11	3025	+4'
E	BC12	181	+2'
F	BC13	6326	-6'
	BC14	1477	-2'
	BC17	1765	-4'
	BC18	2615	-2'
	BC19	11,830	-1'
	BC21	5160	-0.5'
	BC22	1361	-3'
	BC20	4115	-6'
G	BC15	75	-0.5'
H	BC16	15,517	-2'
I	BC24	7650	-0.5'
J	BC23	598	-1'
K	BC25	14,664	-0.5'
L	BC26	18,670	-4'

Notes
1. All results are in units of milligram per kilogram (mg/kg), except for pH (pH units) and pCu in units of moles (M).
2. The 95% UCLs were calculated using ProUCL 5.1.002 (USEPA 2016).
3. The EPC is the 95% UCL if available, otherwise the maximum detection.

% - percent
EPC - exposure point concentration
FOD - frequency of detection
max - maximum
min - minimum
NA - not available
UCL - upper confidence limit

References
USEPA. 2016. Statistical Software ProUCL 5.1.002 for Environmental Applications for Data Sets with and without Nondetect Observations. May.

Table 5. Descriptive Statistics

Constituent	Sample Count	Detects	Mean	Standard Deviation	Min Detect[1]	Max Detect[1]	95% UCL[1,2]	95% UCL Method
Samples Sieved to < 250 µm								
Floor Soil Statistics								
Arsenic	17	17	10.28	8.655	1.7	30.1	20.61	95% H-UCL
Cadmium	17	16	2.966	4.339	0.17	18	6.412	Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50 but k<=1)
Chromium	17	17	8.838	2.424	4.41	13.7	9.864	95% Student's-t UCL
Copper	17	17	526.3	429.8	58.2	1590	708.3	95% Student's-t UCL
Iron	17	17	23212	7542	10400	35000	26405	95% Student's-t UCL
Lead	17	17	7047	8358	323	33900	12823	95% Adjusted Gamma UCL
Manganese	17	17	653.8	424.2	131	1670	833.4	95% Student's-t UCL
pH	17	17	5.924	1.359	3.65	7.77	6.5	95% Student's-t UCL
Zinc	17	17	914.3	1711	48.8	7400	2723	95% Chebyshev (Mean, Sd) UCL
Edge Soil Statistics								
Arsenic	39	39	5.663	6.074	0.88	36.1	7.215	95% Adjusted Gamma UCL
Cadmium	39	39	2.163	3.649	0.17	21.8	3.114	95% H-UCL
Chromium	39	39	9.487	5.534	3.71	36.3	11.06	95% Modified-t UCL
Copper	39	39	354.6	315.6	32.5	1300	454.4	95% Adjusted Gamma UCL
Iron	39	39	19718	9020	10200	60400	22051	95% Adjusted Gamma UCL
Lead	39	39	2544	2658	50.6	11700	3605	95% Adjusted Gamma UCL
Manganese	39	39	668.5	264.3	301	1210	749.2	95% Adjusted Gamma UCL
pH	39	39	6.497	1.097	3.89	8.32	6.793	95% Student's-t UCL
Zinc	39	39	699.5	1760	44.7	11100	930.2	95% H-UCL
Samples Sieved to Sieve < 2000 µm								
Floor Soil Statistics - <2000 µm								
Copper	17	17	410.8	341	41.1	1270	555.2	95% Student's-t UCL
pCu	17	17	6.348	2.13	2.795	10.31	7.25	95% Student's-t UCL
Lead	17	17	6555	7898	180	28900	12590	95% Adjusted Gamma UCL
pH	17	17	5.919	1.364	3.6	7.79	6.496	95% Student's-t UCL
Zinc	17	17	859.4	1613	37.4	6910	1646	95% Adjusted Gamma UCL
Edge Soil Statistics - <2000 µm								
Copper	39	39	293.2	280	23.6	1160	381.4	95% Adjusted Gamma UCL
pCu	39	39	7.38	1.905	3.804	11.38	-	-
Lead	39	39	3914	6803	33.8	31200	6100	95% Adjusted Gamma UCL
pH	39	39	6.549	1.091	3.9	8.3	6.843	95% Student's-t UCL
Zinc	39	39	611.9	1460	35.1	9180	865.8	95% H-UCL

Notes
1. All results are in units of milligram per kilogram (mg/kg), except for pH (pH units) and pCu in units of moles (M).
2. The 95% UCLs were calculated using ProUCL 5.1.002 (USEPA 2016).
3. The EPC is the 95% UCL if available, otherwise the maximum detection.

% - percent
EPC - exposure point concentration
FOD - frequency of detection
max - maximum
min - minimum
NA - not available
UCL - upper confidence limit

References
USEPA. 2016. Statistical Software ProUCL 5.1.002 for Environmental Applications for Data Sets with and without Nondetect Observations. May.

FIGURES

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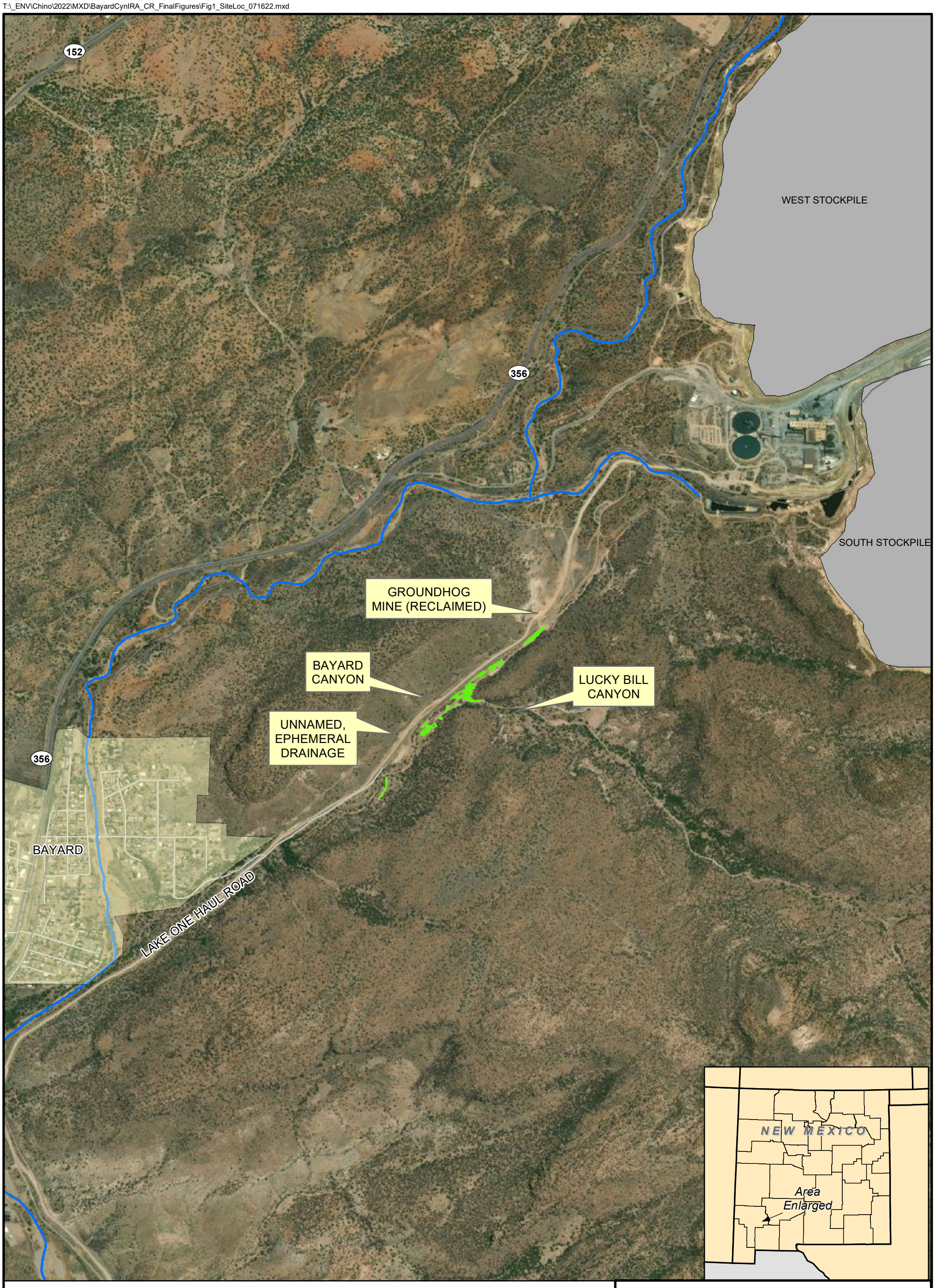

Legend

- Hanover-Whitewater Creek
- Bayard Canyon Removal Areas
- Stockpiles
- City Areas
- Major Roads
- Railroad
- Town Roads

N

0 0.25 0.5

Scale in Miles

Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

FREEPORT-MCMORAN -- CHINO MINES COMPANY
VANADIUM, NM
BAYARD CANYON SUPPLEMENTAL INTERIM REMOVAL ACTION

SITE OVERVIEW

ARCADIS

FIGURE
1

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GROUNDHOG MINE
(RECLAIMED)

Shaft 1
BC26
BC25
Shaft 2
BC24
BC23
Unmarked
Mine Feature
BC21
BC22
BC20
BC18
Unmarked adit
BC19
BC17
BC16
Shaft 3
BC13
BC15
BC14
Piles from
Shaft 4 & 5
BC12
BC11
BC10
Shaft 4
BC8
BC9
Shaft 5
BC7
Shaft 6
Mound of
Shaft 8
BC6
Shaft 7
BC4
BC5
BC3
Shaft 7
Workings
Shaft 8
Shaft 9
Shaft 10
BC2
BC1
Material from
Shaft 11
Shaft 11

Legend

- Removal Areas
- Bayard Cyn Borrow Pit
- Borrow Pit/Stockpile
- Staging Area
- Bayard Mine Workings

N

Aerial Basemap: ESRI ArcGIS Online World Imagery Map Service, accessed via ESRI ArcGIS Desktop on 7/18/2022.

0 100 200
Feet

FREEPORT-MCMORAN -- CHINO MINES COMPANY
VANADIUM, NM
BAYARD CANYON SUPPLEMENTAL INTERIM REMOVAL ACTION

BAYARD CANYON STOCKPILE STAGING, BORROW, AND REMOVAL AREAS

ARCADIS

FIGURE
2

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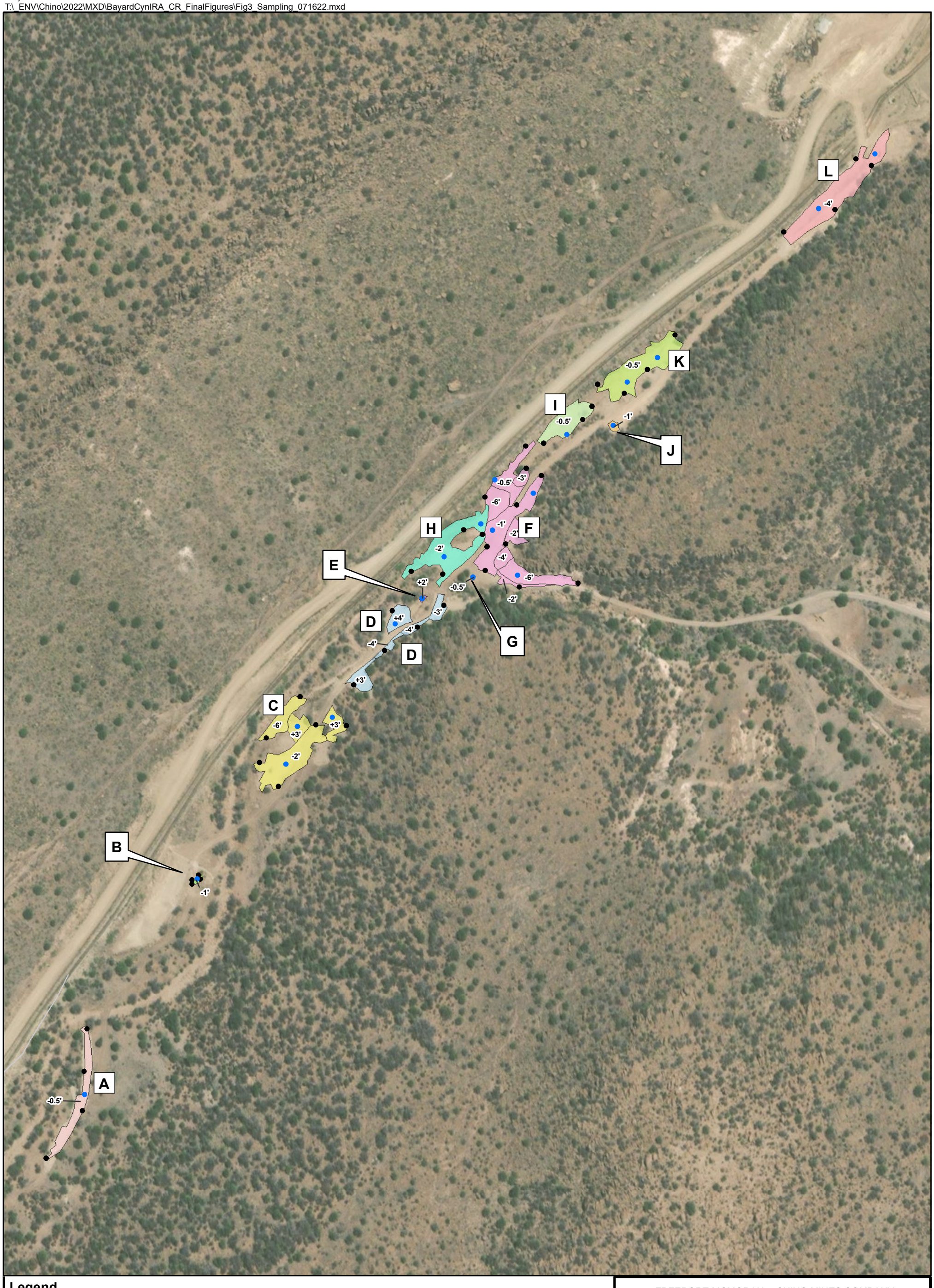


Legend

- Removal Areas
  (-) Depth of material removed below ground surface
  (+) Thickness of material removed above ground surface
- A — Removal Area Group
- Floor Confirmation Sample
- Sidewall Confirmation Sample

N

Aerial Basemap: ESRI ArcGIS Online World Imagery Map Service, accessed via ESRI ArcGIS Desktop on 7/18/2022.

0 100 200
Feet

FREEPORT-MCMORAN -- CHINO MINES COMPANY
VANADIUM, NM
BAYARD CANYON SUPPLEMENTAL INTERIM REMOVAL ACTION

POST-REMOVAL SAMPLING

ARCADIS

FIGURE
3

APPENDIX A

NMED IRA Approval Letter

Gonzales, Lisa

From: Steward, Michael <msteward@fmi.com>
Sent: Monday, April 12, 2021 2:21 PM
To: Gonzales, Lisa
Cc: Sorensen, Oscar; Pinson, Pam D.
Subject: FW: Bayard Canyon IRA proposal

Lisa,
NMED approval for Bayard Canyon for your records.
Thanks,
Mike

Michael Steward
Freeport Minerals Corporation
Mobile: 520-437-3005
msteward@fmi.com

From: Mercer, David, NMENV <David.Mercer1@state.nm.us>
Sent: Monday, April 12, 2021 2:17 PM
To: Steward, Michael <msteward@fmi.com>; Fox, Joseph, NMENV <Joseph.Fox@state.nm.us>
Cc: Pinson, Pam D. <ppinson@fmi.com>; Petra Sanchez <sanchez.petra@epa.gov>
Subject: [External] Re: Bayard Canyon IRA proposal

Caution: External Email

Good afternoon Mike,

Joe and I have looked over the information you provided and the related previous work plan for IRA removal action. We approve the Bayard Canyon IRA project as you described.

Please let us know when you expect work to begin, and I will plan on coming out to observe.

Thank you,
David

From: Steward, Michael <msteward@fmi.com>
Sent: Friday, April 9, 2021 9:42 AM
To: Fox, Joseph, NMENV <Joseph.Fox@state.nm.us>; Mercer, David, NMENV <David.Mercer1@state.nm.us>
Cc: Pinson, Pam D. <ppinson@fmi.com>; Petra Sanchez <sanchez.petra@epa.gov>
Subject: [EXT] Bayard Canyon IRA proposal

Joe and David,
As discussed February 2020 in the location of Bayard Canyon where it confluences with Lucky Bill Canyon, Chino has identified remnant legacy stockpiles located at old small mine workings/prospect pits. Please see attached location figure. Note that Bayard Canyon confluences with Whitewater Creek to the south in the town of Bayard. These piles are

a source of lead from the galena mineral found in the red jasperiod massive vein that also naturally surfaces along Bayard Canyon on the uplands on the east side of the canyon drainage. This red jasperoid vein is carried in the Groundhog fault that runs on strike with Bayard Canyon and is at or near the ground surface until only the southerly dipping overlying younger volcanic formations is exposed. Lead concentrations in Bayard Canyon and downstream Whitewater Creek as identified in the 2000 HWCIU RI, was originally thought to be attributable to the exposed Groundhog Fault vein in Bayard Canyon. There are 11 old mine working or digging sites into the vein that are located on the 1951 USGS map (see attachment). Chino proposes to utilize the 2018 HWCIU Whitewater Creek IRA workplan 20180524-001.pdf (fcx.com) for removal/remediation objectives which addresses impacted sites that can source into the creek. Similar site soil/rock borrow material will backfill these sites to re-establish stormwater runoff surface. A similar approach was previously used for the Tenderfoot and Groundhog sites as documented in the 2008 IRA completion reports. These objectives include post removal sampling and lab analysis, as well as photo documentation of post removal sites to be submitted in a supplemental completion report to the Whitewater Creek IRA completion report and in adherence to the 2018 workplan. The supplemental completion report will also propose as follow up to the hot spot removals, sampling of Bayard Canyon drainage sediment to document any attenuation of lead concentrations over time to levels that are more representative of background values that also source to the drainage from the mineralized Groundhog fault.

Removed material will be hauled to the Chino Mine's West Stockpile site as part of the Whitewater Creek IRA process. Chino will coordinate approval to place materials in the mine's stockpile with NMED GWQB. The targeted removal sites are small allowing revegetation from the surrounding vegetation community to provide propagules.

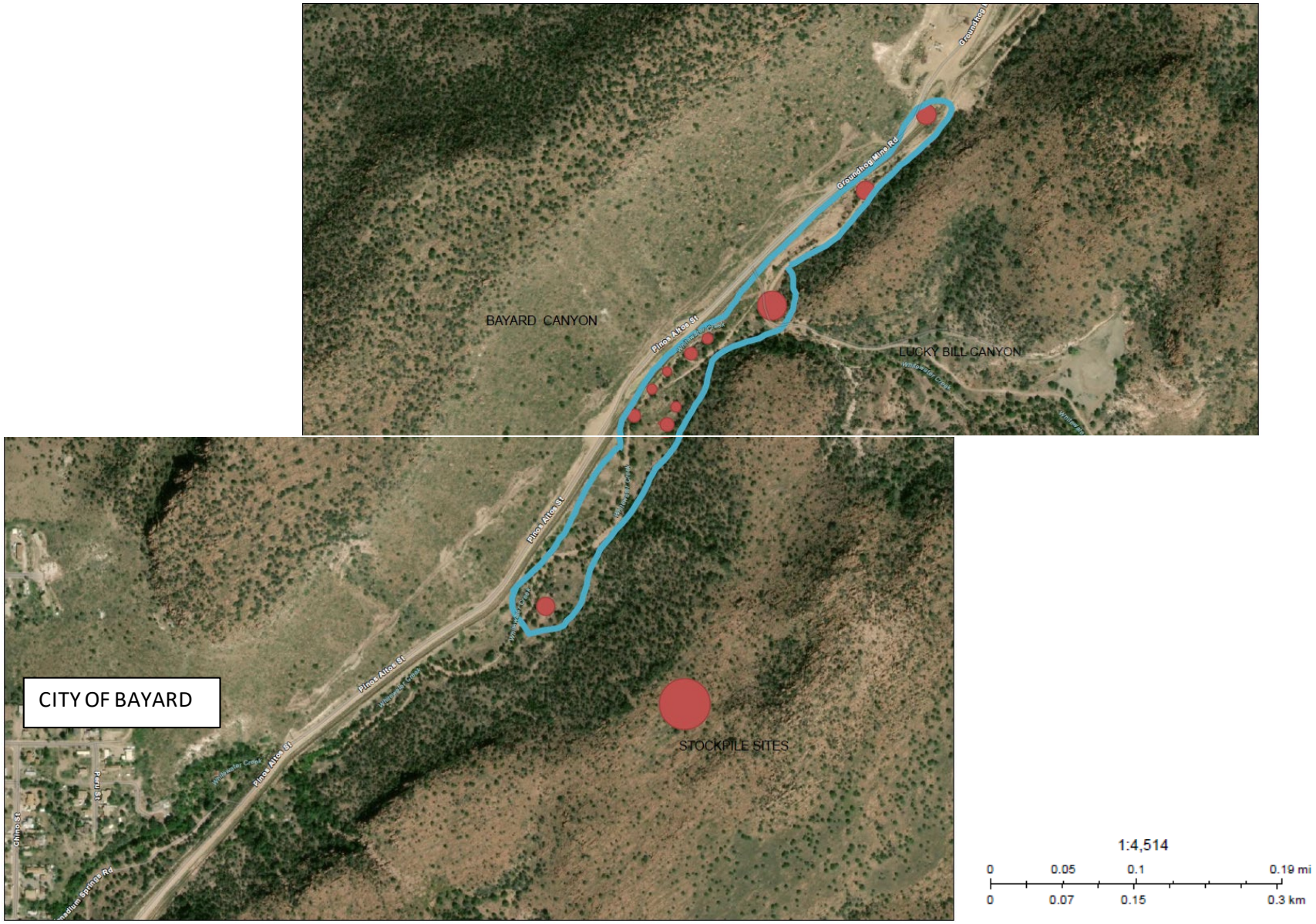
Chino requests approval to complete this work and looks forward to receiving your response.

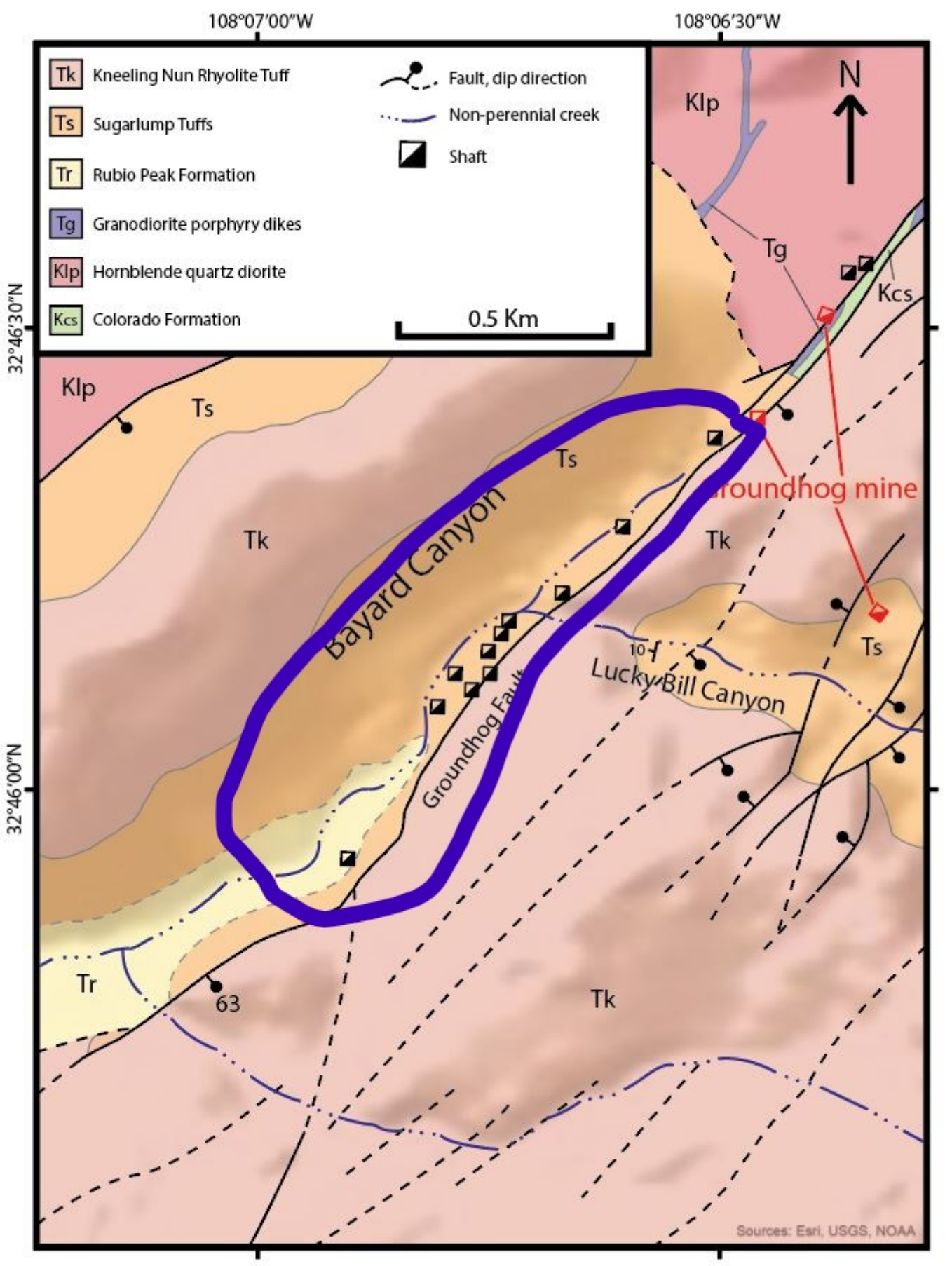
Thank you,

Mike

Michael Steward
Freeport Minerals Corporation
Mobile: 520-437-3005
msteward@fmi.com

BAYARD CANYON REMOVAL ACTION SITE




108°07'00"W
108°06'30"W
32°46'30"N
32°46'00"N
Tk Kneeling Nun Rhyolite Tuff
Ts Sugarlump Tuffs
Tr Rubio Peak Formation
Tg Granodiorite porphyry dikes
Klp Hornblende quartz diorite
Kcs Colorado Formation
Fault, dip direction
Non-perennial creek
Shaft
0.5 Km
N
Klp
Tg
Kcs
Ts
Tk
Bayard Canyon
Groundhog mine
Lucky Bill Canyon
Groundhog Fault
Tr
63
Sources: Esri, USGS, NOAA

APPENDIX B

Construction Photographic Log

Photograph Log

BAYARD CANYON INTERIM REMOVAL ACTION COMPLETION REPORT
Hanover Whitewater Creek Investigation Unit
Appendix B – Construction Photographic Log

Photograph: 1

Description:
BC1c

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 4/21/2021

Photograph: 2

Description:
BC2

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 4/21/2021

Photograph Log

BAYARD CANYON INTERIM REMOVAL ACTION COMPLETION REPORT
Hanover Whitewater Creek Investigation Unit
Appendix B – Construction Photographic Log

Photograph: 3

Description:
BC3f

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 4/26/2021

Photograph: 4

Description:
BC3g

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 4/26/2021

Photograph Log

Photograph: 5

Description:
BC4c

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 4/26/2021

Photograph: 6

Description:
BC4e

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 4/26/2021

Photograph Log

BAYARD CANYON INTERIM REMOVAL ACTION COMPLETION REPORT
Hanover Whitewater Creek Investigation Unit
Appendix B – Construction Photographic Log

Photograph: 7

Description:
BC5b

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 4/26/2021

Photograph: 8

Description:
BC6b

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 4/26/2021

Photograph Log

Photograph: 9

Description:
BC6c

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 4/26/2021

Photograph: 10

Description:
BC7a

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 4/27/2021

Photograph Log

Photograph: 11

Description:
BC7d

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 4/27/2021

Photograph: 12

Description:
BC8a

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 4/27/2021

Photograph Log

Photograph: 13

Description:
BC8b

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 4/27/2021

Photograph: 14

Description:
BC9

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 5/6/2021

Photograph Log

Photograph: 15

Description:
BC10

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 5/6/2021

Photograph: 16

Description:
BC11b

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 5/6/2021

Photograph Log

Photograph: 17

Description:
BC12

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 5/6/2021

Photograph: 18

Description:
BC13a

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 5/5/2021

Photograph Log

Photograph: 19

Description:
BC14

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 5/5/2021

Photograph: 20

Description:
BC16c

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 5/6/2021

Photograph Log

Photograph: 21

Description:
BC16e

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 5/6/2021

Photograph: 22

Description:
BC17a

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 5/6/2021

Photograph: 23

Description:
BC17b

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 5/6/2021

Photograph: 24

Description:
BC18a

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 5/6/2021

Photograph Log

Photograph: 25

Description:
BC18b

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 5/6/2021

Photograph: 26

Description:
BC19b

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 5/19/2021

Photograph Log

Photograph: 27

Description:
BC19c

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 5/19/2021

Photograph: 28

Description:
BC20

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 5/19/2021

Photograph: 29

Description:
BC20c

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 5/19/2021

Photograph: 30

Description:
BC21

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 5/19/2021

Photograph: 31

Description:
BC21b

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 5/19/2021

Photograph: 32

Description:
BC22b

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 5/19/2021

Photograph Log

Photograph: 33

Description:
BC23

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 5/20/2021

Photograph: 34

Description:
BC25

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 5/20/2021

Photograph Log

Photograph: 35

Description:
BC25d

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 5/20/2021

Photograph: 36

Description:
BC26

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 5/20/2021

Photograph: 37

Description:
BC26b

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 5/20/2021

Photograph: 38

Description:
BC26c

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 5/20/2021

Photograph: 39

Description:
BC26d

Location:
Vanadium, New Mexico

Photograph taken by:
York Morgan of Daniel B Stephens & Associates

Date: 5/20/2021

APPENDIX C

Daily Reports

DBS&A
Daniel B. Stephens & Associates, Inc.

Chino–Bayard Canyon Daily Report

Date: April 12, 2021 ☐S ☒M ☐T ☐W ☐T ☐F ☐S
Prepared by: York Morgan, Senior Field Scientist

Weather: Cloud cover: 0%
Wind: 10-15 mph
Precipitation: 0
Temperature: 45-65°F

Visitors on Site

- None

Equipment on Site

- 1 Haul Truck (30 ton) - CAT 730
- 1 Excavator – CAT 329E
- 1 Haul Truck (25 ton) - CAT 725
- 1 Loader – CAT 980G

Summary of Shared Services Activities

- 1st day of construction
- Started on south end of site and removed reddish material from ground surface in large, shallow area. Target material was encountered only in thin layer on ground surface. Figure 2.
- Tracked north to central area and began removing surface material in large area below Shaft 8. Target material encountered at varying depths. Figure 1, Photo 2.

Summary of Meetings/Discussions/Issues

- Pam Pinson, Travis Wilmes (Shared Services) and York Morgan walked most of site – discussing each area and removal strategies. Identified areas where additional removal is required at south end where crew started. Crew will backfill each area after removal and post-removal sampling is complete.

Safety Issues/Discussions

- JSA. Use radio tuned to Lake One channel to request permission before entering work area.
- Drive on right-hand side of road until further notice.
- Slips, trips. Snakes.
- Dust. Asked crew to leave all concrete in place. Chino will sample for asbestos and dispose of appropriately.

Figures/Photographs

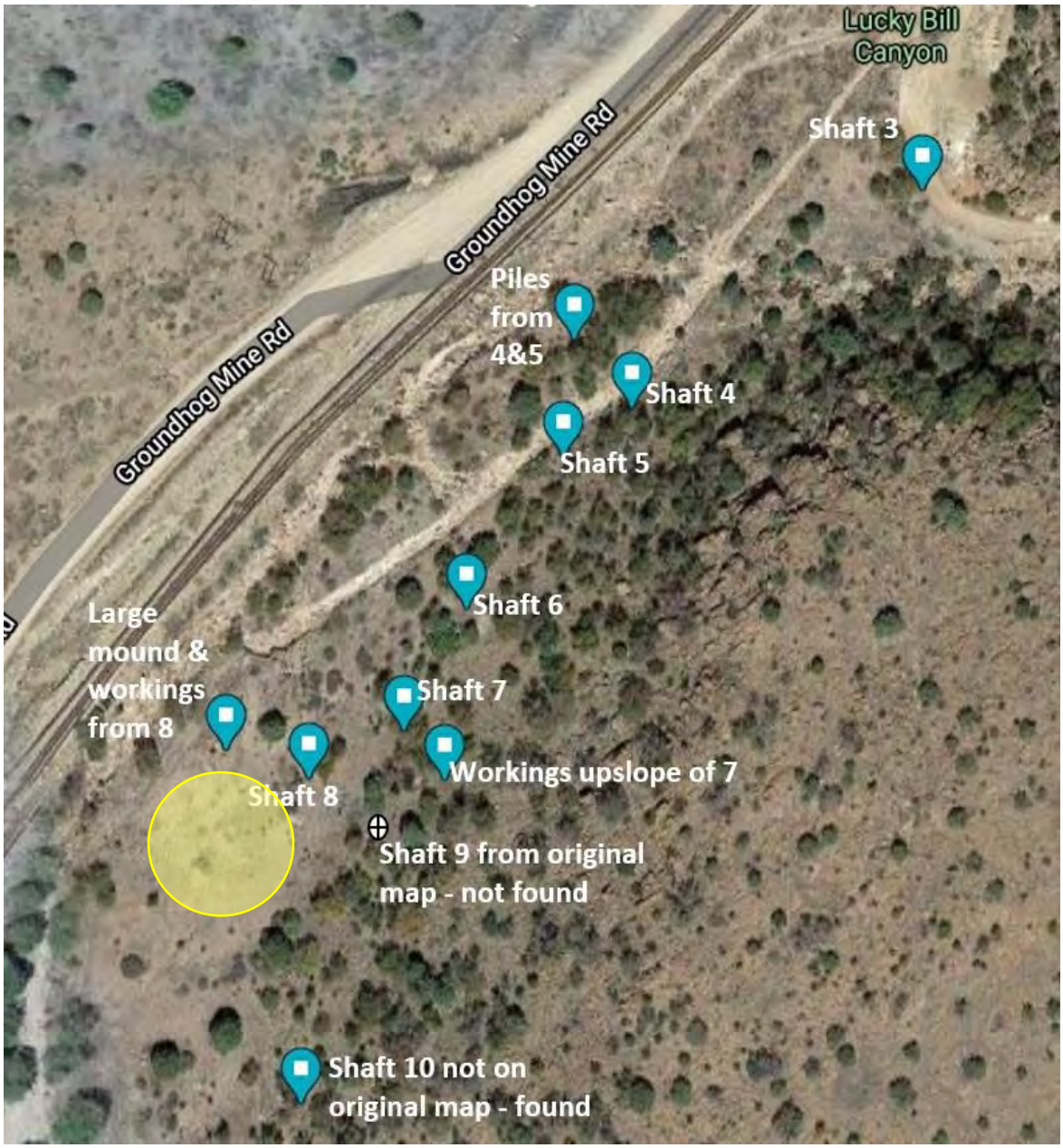


Figure 1: Central portion of site. Shared Services began excavation of surface material in broad area south of Shaft 8 and large mound.

Figure 2: Southern portion of site. Shared Services removed soil from a broad shallow area at southernmost end.

Photo 1: Shared Services removed red material from varying depths across broad area in central portion of jobsite.

DBS&A
Daniel B. Stephens & Associates, Inc.

Chino–Bayard Canyon Daily Report

Date: April 14, 2021 ☐S ☐M ☐T ☒W ☐T ☐F ☐S

Prepared by: York Morgan, Senior Field Scientist

Weather

Cloud cover: 30%
Wind: 10-15 mph
Precipitation: 0
Temperature: 45-75°F

Visitors on Site

- David Mercer - NMED

Equipment on Site

- 1 Haul Truck (30 ton) - CAT 730
- 1 Excavator – CAT 329E
- 1 Water Truck – 4,000-gallon
- 1 Haul Truck (25 ton) - CAT 725
- 1 Loader – CAT 980G

Summary of Shared Services Activities

- Expanded the large, open area near center of site to depths up to 3-feet below original ground surface. See Figure 1 and Photo 1.
- Returned to several small areas that were identified during walk-through 4/13/21 and removed additional material as requested.
- Removed material and timbers associated with Shaft 8. Figure 1.
- Removed more of a large earthen mound and soil beneath/around it. Figure 1 and Photo 2.
- Began moving material associated with Shaft 7. Figure 1.
- Used water truck for dust suppression on haul road and on stockpiles.

Summary of Meetings/Discussions/Issues

- Pam Pinson and York Morgan walked site with David Mercer, discussing scope of work and inspecting areas where removal is complete or underway. No substantial issues were identified, but David identified 2 small areas on the east creek bank that require removal.
- Met with excavator operator (Miguel) to point out several small areas that require additional removal.

Safety Issues/Discussions

- JSA before inspections with NMED.
- Shared Services will use water truck to suppress dust on stockpiled soils throughout day.

Figures/Photographs

Figure 1: Central portion of site. Shared Services expanded boundaries and depth of primary excavation within large circle. Crew also removed soil associated with Shaft 7, Shaft 8, a large earthen mound, and a small reddish area east of Shaft 8.

Photo 1: Shared Services expanded boundaries and depth of large, central area.

Photo 2: Material beneath a former mound was removed.

DBS&A
Daniel B. Stephens & Associates, Inc.

Chino–Bayard Canyon Daily Report

Date: April 15, 2021 ☐S ☐M ☐T ☐W ☒T ☐F ☐S

Prepared by: York Morgan, Senior Field Scientist

Weather: Cloud cover: 20%
Wind: 10-20 mph
Precipitation: 0
Temperature: 45-70°F

Visitors on Site

- None

Equipment on Site

- 1 Haul Truck (30 ton) - CAT 730
- 1 Excavator – CAT 329E
- 1 Water Truck – 4,000-gallon
- 1 Haul Truck (25 ton) - CAT 725
- 1 Loader – CAT 980G

Summary of Shared Services Activities

- Scraped east bank of creek at 3 small areas identified by NMED previous day. Upon removing outer edge, found area with reddish material along bank was larger than predicted. Cleaned bank so Pam can inspect Monday. See Figure 1 (oval) and Photo 1.
- Finished removing the large mound in its entirety after determining most of it contained target material. Removed underlying material to depth of 2 feet BGS. Figure 1.
- Removed rusty drum and reddish material from small area SE of Shaft 8. Figure 1.
- Finished removing target material from Shaft 7 area. Figure 1.
- Began removing material from Shaft 6 area. Figure 1 and Photo 2.
- Used water truck for dust suppression on haul road and on stockpiles.

Summary of Meetings/Discussions/Issues

- York Morgan met Shared Services and inspected creek bank where volume of reddish material was unexpectedly high after surface scraping completed. Excavated additional material to estimate extent of reddish material. Discussed armoring strategies. Will inspect Monday.

Safety Issues/Discussions

- Reminded crew to avoid driving/walking over former shafts to avoid potential cave-in hazards.
- Asked crew to leave all concrete in place. Chino will sample for asbestos and dispose of appropriately.

Weekly Haulage Pending

Figures/Photographs

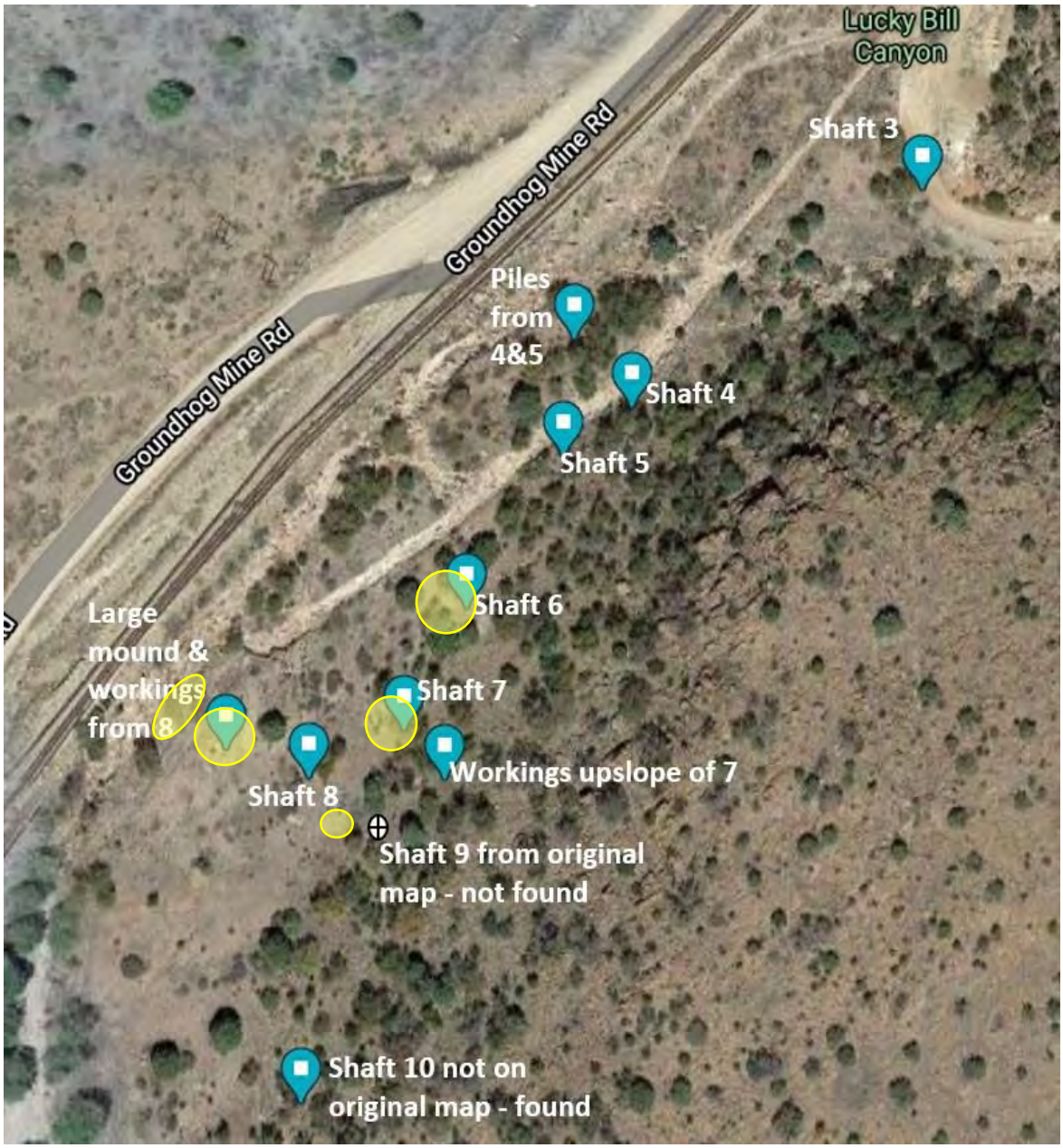


Figure 1: Central portion of site. Shared Services excavated 3 small areas identified by NMED along creek bank (oval) plus additional material encountered beneath bank surface. Finished removing material around Shaft 7, and a small reddish area SE of Shaft 8. Removed entire mound and area beneath it. Started removing material at Shaft 6.

Photo 1: Shared Services removed red material from east bank of creek, adjacent to former mound

Photo 2: Material from above and around Shaft 6 was removed 4/15/21.

DBS&A
Daniel B. Stephens & Associates, Inc.

Chino–Bayard Canyon Daily Report

Date: April 19, 2021 ☐S ☒M ☐T ☐W ☐T ☐F ☐S

Prepared by: York Morgan, Senior Field Scientist

Weather

Cloud cover: 10%
Wind: 10-15 mph
Precipitation: 0
Temperature: 35-68°F

Visitors on Site

- None

Equipment on Site

- 1 Haul Truck (30 ton) - CAT 730
- 1 Excavator – CAT 329E
- 1 Water Truck – 4,000-gallon
- 1 Haul Truck (25 ton) - CAT 725
- 1 Loader – CAT 980G

Summary of Shared Services Activities

- Finished removing material around Shaft 6. Figure 1.
- Used excavator and loader to begin removing material associated with Shafts 4 and 5 along east edge of access road. Figure 1 and Photo 1.
- Removed multiple small stockpiles of reddish, rocky material located among oaks west of Shafts 4 and 5. Did not encounter shafts or any mine works. Figure 1 and Photos 1 and 2.
- Returned to creek bank west of Shaft 8 and continued removing large volume of red material. Figure 1 and Photo 2.
- Used water truck for dust suppression on haul road and on stockpiles.

Summary of Meetings/Discussions/Issues

- Pam Pinson and York Morgan met to discuss large area of red material on east creek bank near Shaft 8. With excavator operator (Miguel), requested removal of material and outlined strategy.
- Pam pointed out several small areas that require additional removal in central portion of site, which York flagged and relayed request to Miguel.
- Miguel suggested using large boulders and clean material to block fork in creek near Lucky Bill confluence, thereby channeling surface water through original creek bed. Pam authorized.

Safety Issues/Discussions

- Discussed safety concerns including slips and trips on steep, rocky terrain.

Figures/Photographs

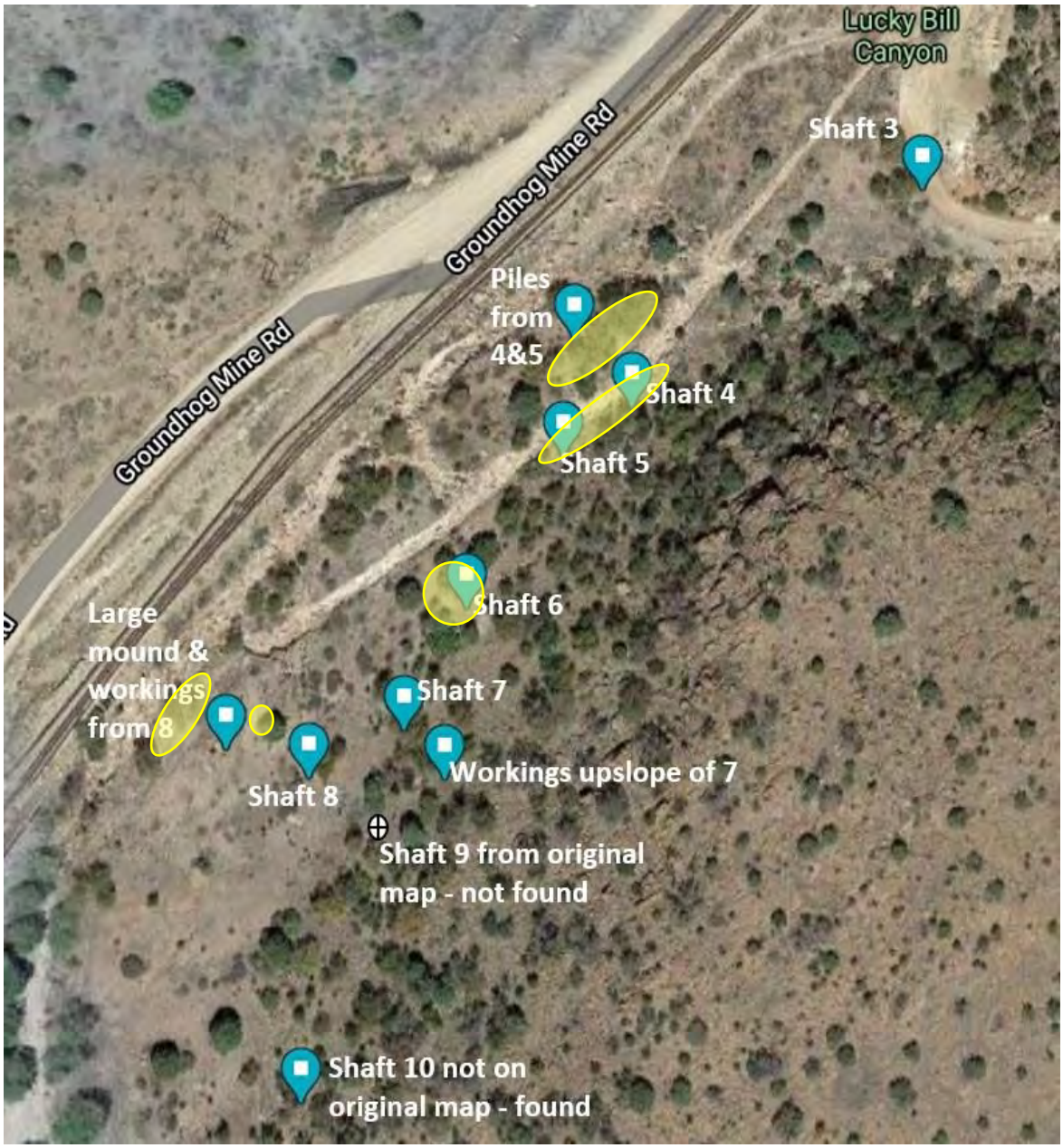


Figure 1: Central portion of site. Shared Services:

- Finished excavation around Shaft 6.
- Used excavator and loader to remove material east of access road around Shafts 4 and 5.
- Removed reddish material from multiple small stockpiles across from Shafts 4 and 5.
- Removed small area near Shaft 8 that had reddish material at surface.
- Returned to area along creek bank west of Shaft 8 and continued moving large area of red material identified by Pam as requiring additional excavation.

Photo 1: Shared Services removed stockpiled material east of access road (left) while also removing material from around Shafts 4 and 5 on west side of access road (right).

Photo 2: Small stockpiles east of Shafts 4 and 5 were gathered for removal.

Photo 3: Red material from the creek bank west of Shaft 8 was removed.

DBS&A
Daniel B. Stephens & Associates, Inc.

Chino–Bayard Canyon Daily Report

Date: April 20, 2021 ☐S ☐M ☒T ☐W ☐T ☐F ☐S

Prepared by: York Morgan, Senior Field Scientist

Weather

Cloud cover: 10%
Wind: 10-15 mph
Precipitation: 0
Temperature: 38-75°F

Visitors on Site

- Arcadis – Lisa Gonzales, Oscar Sorensen
- Freeport – Pam Pinson, Mike Steward
- DBS&A – York Morgan

Equipment on Site

- 1 Haul Truck (30 ton) - CAT 730
- 1 Excavator – CAT 329E
- No Water Truck – in shop
- 1 Haul Truck (25 ton) - CAT 725
- 1 Loader – CAT 980G

Summary of Shared Services Activities

- Spent full day removing red material from east bank of creek, west of Shaft 8.

Summary of Meetings/Discussions/Issues

- Arcadis, FMI, and DBS&A walked entire site with Travis Wilmes (Shared Services) to refine removal strategy and sampling plan.
- Team agreed that additional excavation of red material was needed along east creek bank where excavator worked all day. Shared Services will continue removing red material until bank is pulled back far enough to enable substantial cap/armoring or until red material subsides.
- Team agreed on strategy to redirect creek at Lucky Bill confluence so it follows channel where it formerly flowed.

Safety Issues/Discussions

- Tailgate safety/JSA with team prior to site reconnaissance.

Total Haulage

	4/12/21	4/13	4/14	4/15	4/19	4/20	**Total to date**
Loads	31	33	31	33	23	32	**183**
CY (approx.)	527	561	527	561	391	544	**3,111**

Figures/Photographs

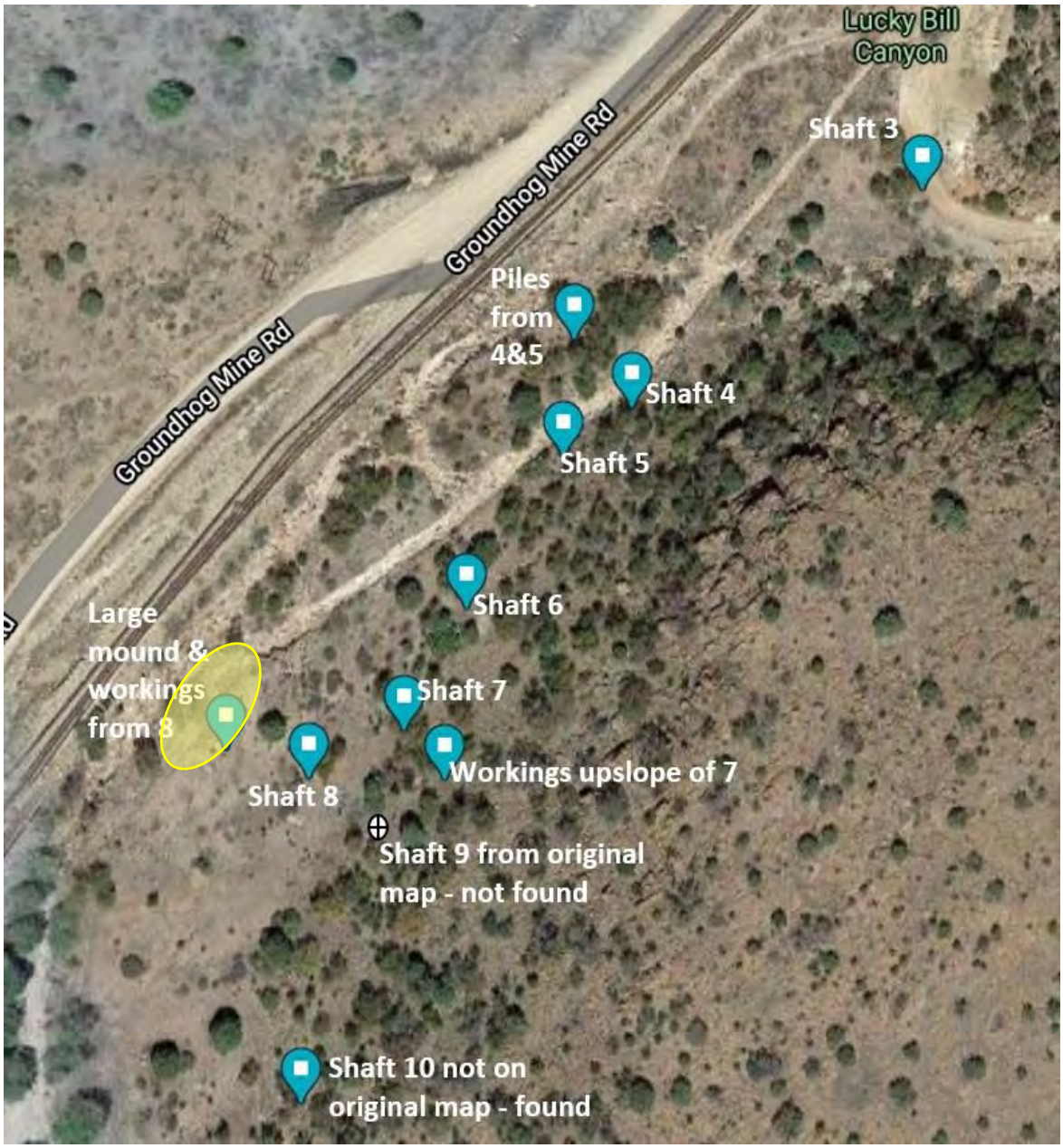


Figure 1: Central portion of site. Shared Services:

- Continued removing red material from area along creek bank west of Shaft 8.

Photo 1: Shared Services continued removing red material from creek bank west of Shaft 8.

Photo 2: After full day of removing red material from same location along creek bank, red material was beginning to taper off.

DBS&A
Daniel B. Stephens & Associates, Inc.

Chino–Bayard Canyon Daily Report

Date: April 21, 2021 ☐S ☐M ☐T ☒W ☐T ☐F ☐S

Prepared by: York Morgan, Senior Field Scientist

Weather

Cloud cover: 10%
Wind: 5-10 mph
Precipitation: 0
Temperature: 44-72°F

Visitors on Site

- None

Equipment on Site

- 1 Haul Truck (30 ton) - CAT 730
- 1 Excavator – CAT 329E
- No Water Truck – in shop
- 1 Haul Truck (25 ton) - CAT 725
- 1 Loader – CAT 980G
- 1 Dozer – CAT D8T

Summary of Shared Services Activities

- See Figures 1 & 2.

Summary of Meetings/Discussions/Issues

- Closely inspected removal area adjacent to creek (west of Shaft 8) with excavator operator – Miguel. Concluded that nearly all of the red material had been removed after cutting approximately 30 feet east of original bank. Agreed to clean surface, use boulders at toe for stabilization, and grade slope.
- Used iPad and R1 Trimble antennae to enter boundaries of southernmost removal areas onto Collector map. Entered photos from iPad to Collector.

Safety Issues/Discussions

- Tailgate safety. Communicate with truck drivers (Jeff and Josh) to be sure road is open into and out of work areas before attempting access.

Figures/Photographs

Figure 1: Central Area. Today, Shared Services:

A. Completed excavation of red material along creek bed west of Shaft 8. Red material tapered off after substantial excavation to east and north from initial location. Graded a ~4:1 slope toward creek and placed existing boulders at toe for stabilization of eventual backfill.
B. Removed reddish material from ground surface in several small areas flagged by Pam and York previous day.
C. Removed stockpiles of reddish material located NE of Shafts 4 & 5.

Figure 2: Southern Area. Shared Services used dozer to stockpile backfill material from designated borrow source onsite.

Photo 1: D8 dozer stockpiling backfill material at borrow source as shown in Figure 2.

Photo 2: Primary focus of day was removing red material from creek bank west of Shaft 8 and placing existing boulders along toe of new slope for backfill stabilization.

Photo 3: Using loader to remove stockpiles of reddish material across from Shafts 4 & 5.

DBS&A
Daniel B. Stephens & Associates, Inc.

Chino–Bayard Canyon Daily Report

Date: April 22, 2021 ☐S ☐M ☐T ☐W ☒T ☐F ☐S

Prepared by: York Morgan, Senior Field Scientist

Weather

Cloud cover: 20%
Wind: 5-10 mph
Precipitation: 0
Temperature: 40-71°F

Visitors on Site

- None

Equipment on Site

- 1 Haul Truck (30 ton) - CAT 730
- 1 Excavator – CAT 329E
- Water Wagon
- 1 Haul Truck (25 ton) - CAT 725
- 1 Loader – CAT 980G
- 1 Dozer – CAT D8T

Summary of Shared Services Activities

- See Figure 1 and photos.

Summary of Meetings/Discussions/Issues

- Water truck is still being repaired at shop, so Travis arranged to get water wagon from Tailings. Wagon suppressed dust on stockpile and main haul road.
- Excavator operator (Miguel) skipped over several small areas that require detailed work in order to focus on larger area along former road into Lucky Bill. He is digging to bedrock and then using tree branches with grabber of excavator to sweep dirt from bedrock face into piles to be excavated.
- In borrow area near south end of site, dozer operator encountered yellowish material and stopped pushing. Overall, stockpiled borrow material looks good – no yellow material was pushed into mix.

Safety Issues/Discussions

- Tailgate safety. Crew will use excavator to block road over weekend to be sure no vehicles attempt to enter Lucky Bill via former road that was excavated today.

Figures/Photographs

Figure 1: Central Area. Today, Shared Services worked full day adjacent to Shaft 3 at confluence with Lucky Bill Canyon – removing red, yellow, and gray soil to depths of 10', down to bedrock.

Photo 1: Excavation is complete in large area and creek bank near Shaft 8.

Photo 2: Primary focus of day was removing material at Lucky Bill confluence.

Photo 3: Removal of red, yellow, and gray material comprising road into Lucky Bill Canyon.

DBS&A
Daniel B. Stephens & Associates, Inc.

Chino–Bayard Canyon Daily Report

Date: April 26, 2021 ☐S ☒M ☐T ☐W ☐T ☐F ☐S

Prepared by: York Morgan, Senior Field Scientist

Weather

Cloud cover: 50%
Wind: 15-25 mph
Precipitation: 0
Temperature: 45-75°F

Visitors on Site

- None

Equipment on Site

- 1 Haul Truck (30 ton) - CAT 730
- 1 Excavator – CAT 329E
- 1 Water Truck – 4000 gallons
- 1 Haul Truck (25 ton) - CAT 725
- 1 Loader – CAT 980G
- 1 Dozer – CAT D8T

Summary of Shared Services Activities

- See Figure 1 and photos.

Summary of Meetings/Discussions/Issues

- Excavator operator (Miguel) returned to several small areas south of the Lucky Bill confluence and removed small piles of reddish material. York walked areas and flagged several small piles that require additional removal.
- Miguel encountered numerous huge boulders in excavation adjacent to Shaft 3. He pushed them out of way as possible to enable removal of underlying material.
- In borrow area near south end of site, dozer operator again encountered yellowish material that appeared to be stained native material.

Safety Issues/Discussions

- Discussions with Shared Service about controlling overhead hazards (large boulders on steep slope) at present work area. Crew will knock down loose rocks when possible, scrape gently on bedrock, and keep excavator back away from potentially-falling rocks.

Figures/Photographs

Figure 1: Central Area. Today, Shared Services:

- Worked a second full day adjacent to Shaft 3 at confluence with Lucky Bill Canyon – removing red, yellow, and gray soil to depths of 10', down to bedrock. Large yellow circle above.
- Removed small piles where reddish material was previously observed and flagged. Two smaller circles above.
- Built containment berm for new stockpile of removal soil near original stockpile adjacent to Groundhog. Began hauling to new stockpile. Not on map.
- Used recently-repaired water truck for dust control on haul roads and stockpiles.
- Used D8 dozer to continue pushing borrow material into pile near south end of site. Not on map.

Photo 1: Shared Services continued removing material from the road near Shaft 3 at the confluence with Lucky Bill Canyon.

Photo 2: Shared Services built containment berms for a new stockpile and began hauling to it.

Photo 3: Recently-repaired water truck was used for dust suppression on haul roads and both stockpiles.

DBS&A
Daniel B. Stephens & Associates, Inc.

Chino–Bayard Canyon Daily Report

Date: April 27, 2021 ☐S ☐M ☒T ☐W ☐T ☐F ☐S

Prepared by: York Morgan, Senior Field Scientist

Weather

Cloud cover: 70%
Wind: 10-15 mph
Precipitation: 0
Temperature: 40-65°F

Visitors on Site

- None

Equipment on Site

- 1 Haul Truck (30 ton) - CAT 730
- 1 Excavator – CAT 329E
- 1 Water Truck – 4000 gallons
- 1 Haul Truck (25 ton) - CAT 725
- 1 Loader – CAT 980G
- 1 Dozer – CAT D8T

Summary of Shared Services Activities

- Shared Services was called to another job around 12:00 today. Did not return to Bayard Canyon in afternoon.
- See Figure 1 and photos.

Summary of Meetings/Discussions/Issues

- Operator of loader and water truck was the only Shared Services personnel onsite when York arrived in afternoon. He said crew was expected to resume work at Bayard Canyon tomorrow.
- York flagged several small areas along access road that require additional removal.

Safety Issues/Discussions

- Watch for slips/trips/falls when walking around removal areas during mapping.

Figures/Photographs

Figure 1: Central Area. Today, Shared Services:

- Worked 2/3 of a day adjacent to Shaft 3 at confluence with Lucky Bill Canyon – removing soil to depths of 10', down to bedrock. Large yellow circle above. Then, most of crew was called to alternate work site at Chino for final 3.5 hours of day.
- Used loader to build an outer containment berm around the first stockpile of removal material. The stockpile's footprint encroached on the original containment berm, making a breach possible with rain in the forecast.
- Used water truck for dust control on haul roads and stockpiles.

Photo 1: Shared Services continued removing material from the former road near Shaft 3 at the confluence with Lucky Bill Canyon.

Photo 2: Shared Services used water truck for dust suppression on stockpiles and haul roads.

Photo 3: Shared Services built an outer berm (right) for better containment of the original stockpile.

DBS&A
Daniel B. Stephens & Associates, Inc.

Chino–Bayard Canyon Daily Report

Date: April 28, 2021 REVISED ☐S ☐M ☐T ☒W ☐T ☐F ☐S
Prepared by: York Morgan, Senior Field Scientist

Weather

Cloud cover: 70-100%
Wind: 10-15 mph
Precipitation: 0.2" snow and rain
Temperature: 35-56°F

Visitors on Site

- None

Equipment on Site

- 1 Haul Truck (30 ton) - CAT 730
- 1 Excavator – CAT 329E

Summary of Shared Services Activities

- Shared Services had only a 2-man crew onsite today because personnel were needed on other projects.
- See Figure 1 and photos.

Summary of Meetings/Discussions/Issues

- Met with excavator operator (Pete) to discuss excavation strategy and project requirements since the usual operator (Miguel) was working elsewhere. Explained that no excavation is needed when there is 1' of clean cover over red material. Visual cleanup criterion means any reddish or yellowish material on ground surface must be removed.
- No water truck needed today due to snow and rain.
- Full crew expected back onsite tomorrow.

Safety Issues/Discussions

- Asked crew to repair excavated access road to enable light vehicle (pickup) access tomorrow.

Figures/Photographs

Figure 1: Central Area. Thursday, Shared Services:

- Had only 2 workers: 1 excavator and 1 haul truck onsite.
- Returned to location of former piles NW of Shafts 4 & 5 to remove additional material flagged by York. Removed an additional 1′ of material. (Southernmost yellow oval – above.)
- While removing reddish surface material along access road at 5 separate locations flagged by York, excavator uncovered additional reddish material that required deeper excavation than expected. Excavator re-graded road after removing 2-3′ of material in some areas. (Yellow circle – above.)

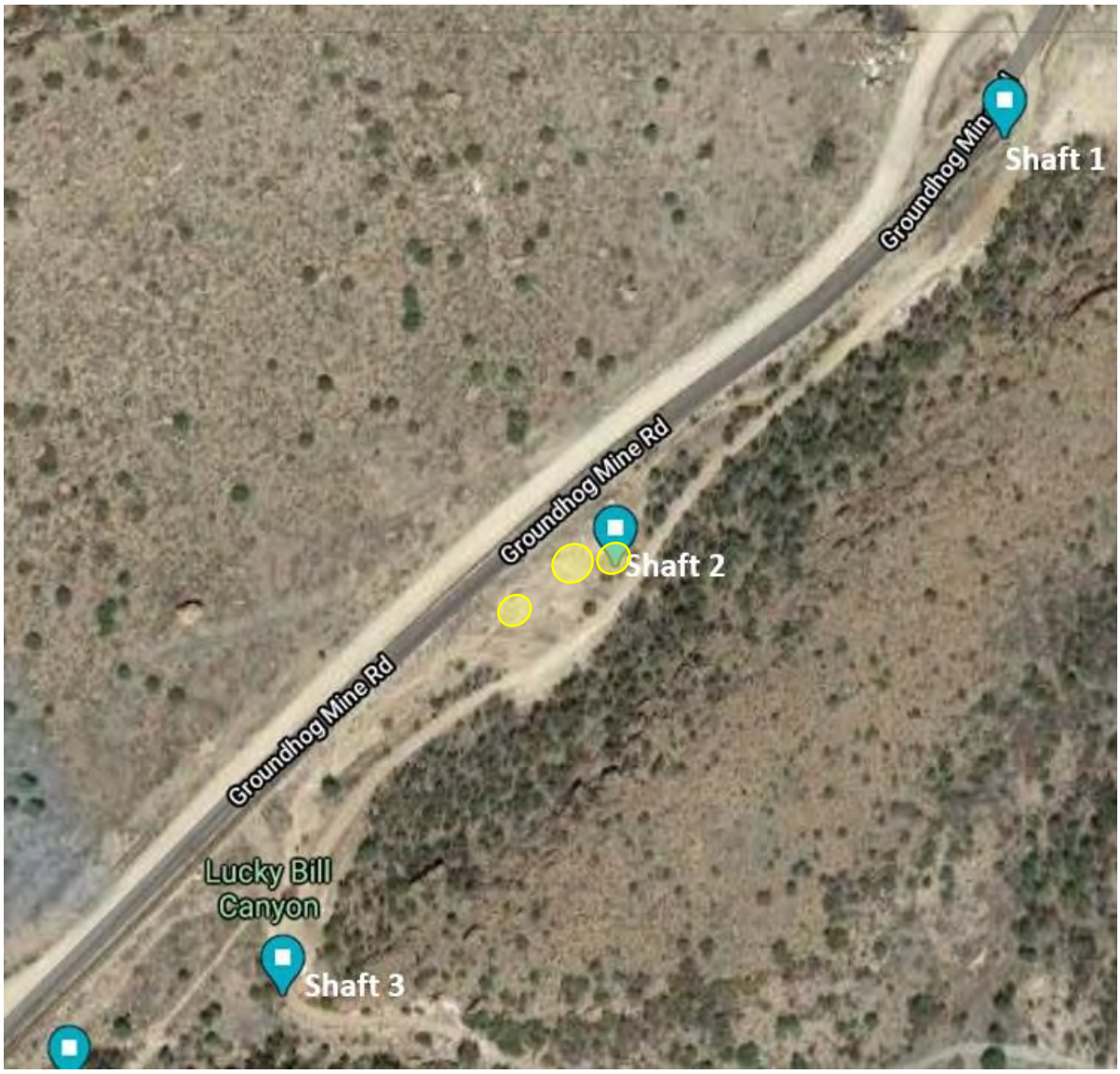


Figure 2: Northern Area. Shared Services removed 5-6 loads (85 – 102 cy) of material from the creek bed upgradient of Lucky Bill confluence. One area was a concentration of reddish material surrounding a large boulder in the creek. The other areas were adjacent to- and downgradient of Shaft 2.

Photo 1: Shared Services removed 1 load of reddish material from the creek bed that had deposited around this large boulder.

Photo 2: Shared Services removed reddish material from the creek below Shaft 2.

Photo 3: While removing surface material from small flagged locations along access road, Shared Services encountered unexpectedly thick layers of reddish material.

Photo 4: Shared Services rebuilt the access road after removing ~2 feet of reddish material.

DBS&A
Daniel B. Stephens & Associates, Inc.

Chino–Bayard Canyon Daily Report

Date: April 29, 2021 ☐S ☐M ☐T ☐W ☒T ☐F ☐S

Prepared by: York Morgan, Senior Field Scientist

Weather

Cloud cover: 50 -100%

Wind: 10-15 mph

Precipitation: Approx. 0.2" rain in a.m.

Temperature: 35-60°F

Visitors on Site

- David Mercer - NMED

Equipment on Site

- 1 Haul Truck (30 ton) - CAT 730
- 1 Excavator – CAT 329E
- 1 Loader – CAT 980G

Summary of Shared Services Activities

- Shared Services had only a 2-man crew onsite again today because personnel were needed on other projects and the usual excavator operator was on PTO.
- See Figure 1 and photos.

Summary of Meetings/Discussions/Issues

- Met with excavator operator (Pete) to discuss excavation strategy again. Suggested that he move to Shaft 3, which has a straightforward approach (remove all red material down to depths of up to 10'.) Prior to York's arrival, excavator had been removing material from locations below Lucky Bill confluence where removal strategy had not yet been discussed.
- Walked removal areas with Pam, David (NMED), Travis (Shared Services), and York (DBS&A). Pam pointed out areas that require additional removal and some that are complete already. Identified area around Shaft 2 where mounding will be necessary for safety around former mine features.
- Identified additional shaft location not on USGS maps. Location is on slope adjacent to- and east of haul road, southeast of Shaft 2. Will require combination of removal and mounding. See Figure 2.
- No water truck needed today due to rain.
- Full crew expected back onsite Monday.

Safety Issues/Discussions

- Slip/trips on wet ground. Reminded crew to be aware of potential mine features beneath excavator tracks at Shaft 3.

Figures/Photographs

Figure 1: Central Area. Thursday, Shared Services:

- Had only 2 workers again: 1 excavator and 1 haul truck onsite.
- Excavator moved to 2 areas below (SW of) Shaft 3 where flagging had been placed as a reminder that discussion was needed. Pam, Travis, and York agreed that it would be preferable for the substitute operator to work near Shaft 3 and leave trickier areas to Miguel when he returns.
- Crew spent 2nd half of day removing material from deep interval along former roadway at Shaft 3 – Lucky Bill confluence.
- Travis used loader to consolidate new stockpile of removal material.

Figure 2: Northern Area. An additional shaft location was identified (above) where removal and mounding will be required.

Photo 1: David Mercer (NMED) and Travis Wilmes (Shared Services) inspected concrete foundation at Shaft 2 where partial removal was completed previous day.

Photo 2: Shared Services focused on Shaft 3 removal during 2nd half of day.

Photo 3: Shared Services consolidated material at new stockpile.

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Chino–Bayard Canyon Daily Report

Date: May 03, 2021 ☐S ☒M ☐T ☐W ☐T ☐F ☐S

Prepared by: York Morgan, Senior Field Scientist

Weather

Cloud cover: 10 -20%

Wind: 20-30 mph w/ 40 mph gusts

Precipitation: None

Temperature: 42-73°F

Visitors on Site

- None

Equipment on Site

- 1 Haul Truck (30 ton) - CAT 730
- 1 Excavator – CAT 329E
- 1 Water Truck – 4000 gallons
- 1 Haul Truck (25 ton) - CAT 725
- 1 Loader – CAT 980G
- 1 Dozer – CAT D8T

Summary of Shared Services Activities

- Shared Services had full crew back on job today.
- See Figure 1 and photos.

Summary of Meetings/Discussions/Issues

- Met with excavator operator (Miguel) to discuss excavation strategies and areas for upcoming week. Lined out enough work for Miguel to stay busy over the next 2-3 days at/near Shaft 3 and area above confluence with creek from Lucky Bill Canyon. Identified areas where additional excavation is needed.

Safety Issues/Discussions

- Warmer weather this week – snakes on the move. Watch foot and hand placement.

Figures/Photographs

Figure 1: Central Area. Thursday, Shared Services:

- Excavator focused removal effort most of day at Shaft 3 and 2 areas below it. Surface areas that Pam and York flagged last week for removal below Shaft 3 turned out to be relatively shallow lenses of red material.
- Water truck used throughout day for dust control on roads and stockpiles.
- Dozer and loader used for stockpile consolidation.

Photo 1: Shared Services continued removal from deep area on road leading into Lucky Bill Canyon.

Photo 2: Excavator operator (Miguel) using tree limbs to sweep soil from rocky slope to toe for removal.

Photo 3: Flagged areas below Shaft 3 had relatively shallow lenses of red material.

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Chino–Bayard Canyon Daily Report

Date: May 05, 2021 ☐S ☐M ☐T ☒W ☐T ☐F ☐S

Prepared by: York Morgan, Senior Field Scientist

Weather

Cloud cover: 10 -20%
Wind: 10-15 mph
Precipitation: None
Temperature: 45-78°F

Visitors on Site

- None

Equipment on Site

- 1 Haul Truck (30 ton) - CAT 730
- 1 Excavator – CAT 329E
- 1 Water Truck – 4000 gallons
- 1 Haul Truck (25 ton) - CAT 725
- 1 Loader – CAT 980G
- 1 Dozer – CAT D8T

Summary of Shared Services Activities

- See Figure 1 and photos.

Summary of Meetings/Discussions/Issues

- York was out yesterday – no daily report for 5/4/2021 – but Pam coordinated with crew and helped inform removal decisions.
- Met with excavator operator (Miguel) today. Crew made faster progress than expected in triangular area near confluence of creeks. Concerned about potential mine features in steep bank north of Shaft 3.

Safety Issues/Discussions

- Potential former adit identified on slope near Shaft 3. Use care driving and walking over it.

Haulage Update

	Total thru 4/20	4/21	4/22	4/26	4/27	4/28	4/29	5/3	**Total thru 5/3**
Loads	183	30	36	43	7	0	26	49	**374**
CY (approx.)	3,111	510	612	731	119	0	442	833	**6,358**

Figures/Photographs

Figure 1: Central Area. Thursday, Shared Services:

- Removal effort focused most of today on working platform adjacent and northwest of Shaft 3 – yellow circle above. Crew used dozer to push piles of reddish material, that were loaded into 2 haul trucks with loader.
- Yesterday, crew finished removal of access road into Lucky Bill, toe below access road, small surface area south of toe, and broad area that includes creek bed and banks. Green circles above.
- Water truck used throughout day for dust control on roads and stockpiles.

Photo 1: Shared Services focused removal on platform near entrance to Lucky Bill Canyon.

Photo 2: Crew used dozer to push piles of reddish material at removal platform.

Photo 3: Broad areas SW of Lucky Bill where removal was completed 5/4/21

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Chino–Bayard Canyon Daily Report

Date: May 06, 2021 ☐S ☐M ☐T ☐W ☒T ☐F ☐S

Prepared by: York Morgan, Senior Field Scientist

Weather

Cloud cover: 50%
Wind: 5-10 mph
Precipitation: None
Temperature: 86-52°F

Visitors on Site

- David Mercer (NMED) visited with Pam.

Equipment on Site

- 1 Haul Truck (30 ton) - CAT 730
- 1 Excavator – CAT 329E
- 1 Water Truck – 4000 gallons
- 1 Haul Truck (25 ton) - CAT 725
- 1 Loader – CAT 980G
- 1 Dozer – CAT D8T

Summary of Shared Services Activities

- See Figure 1 and photos.

Summary of Meetings/Discussions/Issues

- Pam walked removal areas with NMED and Miguel (excavator operator). Pam asked Miguel to continue excavating into 8'-deep layer of yellowish material on working platform NW of Lucky Bill entrance previously believed to be stained bedrock – granodiorite. Upon closer inspection Pam determined it was mine waste within the creek bed.
- Pam pointed out an area near the toe of the former road going into Lucky Bill that requires additional excavation.
  York also met with Miguel and discussed depths of removal areas and overall progress.

Safety Issues/Discussions

- Flagged a steel post jutting from road – potential tire hazard.

Haulage Update

	Total thru 5/3	**5/4/21**	**5/5/21**	**5/6/21**	**Total thru 5/6**
Loads	374	43	48	53	**518**
CY (approx.)	6,358	731	816	901	**8,806**

Figures/Photographs

Figure 1: Central Area. Thursday, Shared Services:

- Removal effort focused mostly on working platform adjacent and northwest of Shaft 3 – yellow oval above. Crew used dozer to push piles of reddish material, that were loaded into 2 haul trucks with loader.
- After Pam arrived with NMED, crew used excavator to remove yellowish material from upper left portion of yellow oval – above. Target material was found in creek bed at thickness of up to 8'.
- Excavator cleared material from slope on right side of yellow oval – above.
- Excavator also cleared area of original creek bed going east to west from Lucky Bill into Bayard Canyon – see blue rectangle above. Plan is to re-establish creek flow into its original footprint to prevent it following construction access road south. Crew will leave a ramp across re-established creek so seeding crew can access southern end of site in June.
- Water truck used throughout day for dust control on roads and stockpiles.

Photo 1: Shared Services began removing 8′-thick layer of yellowish material from platform in creek bed near entrance to Lucky Bill Canyon.

Photo 2: Crew encountered lumber amid yellowish waste material at location shown in Photo 1.

Photo 3: Crew re-established original creek channel from Lucky Bill into Bayard – using boulders (left – above) to reinforce bank.

Photo 4: Crew finished excavation of slope leading into Lucky Bill Canyon.

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Chino–Bayard Canyon Daily Report

Date: May 10, 2021 ☐S ☒M ☐T ☐W ☐T ☐F ☐S

Prepared by: York Morgan, Senior Field Scientist

Weather

Cloud cover: 30%
Wind: 10-15 mph
Precipitation: None
Temperature: 80-47°F

Visitors on Site

- None

Equipment on Site

- 1 Haul Truck (30 ton) - CAT 730
- 1 Excavator – CAT 329E
- 1 Water Truck – 4000 gallons
- 1 Haul Truck (25 ton) - CAT 725
- 1 Loader – CAT 980G
- 1 Dozer – CAT D8T

Summary of Shared Services Activities

- See Figure 1 and photos.

Summary of Meetings/Discussions/Issues

- York met with excavator operator (Pete) filling in for Miguel who was needed on another project. Pete thinks Miguel will return either Tuesday or Wednesday. York lined Pete out with enough straightforward excavation to keep busy for one more day. The trickier areas will be left for Miguel since he has attended many meetings and walk-throughs with Pam and York.

Safety Issues/Discussions

- Avoid undermining concrete pads along haul road. Remove concrete only if possible to do so without breaking. Concrete must be wetted with water truck prior to removal and must be stacked in separate area near soil stockpiles.

Haulage Update

	Total thru 5/6/2021
Loads	**518**
CY (approx.)	**8,806**

Figures/Photographs

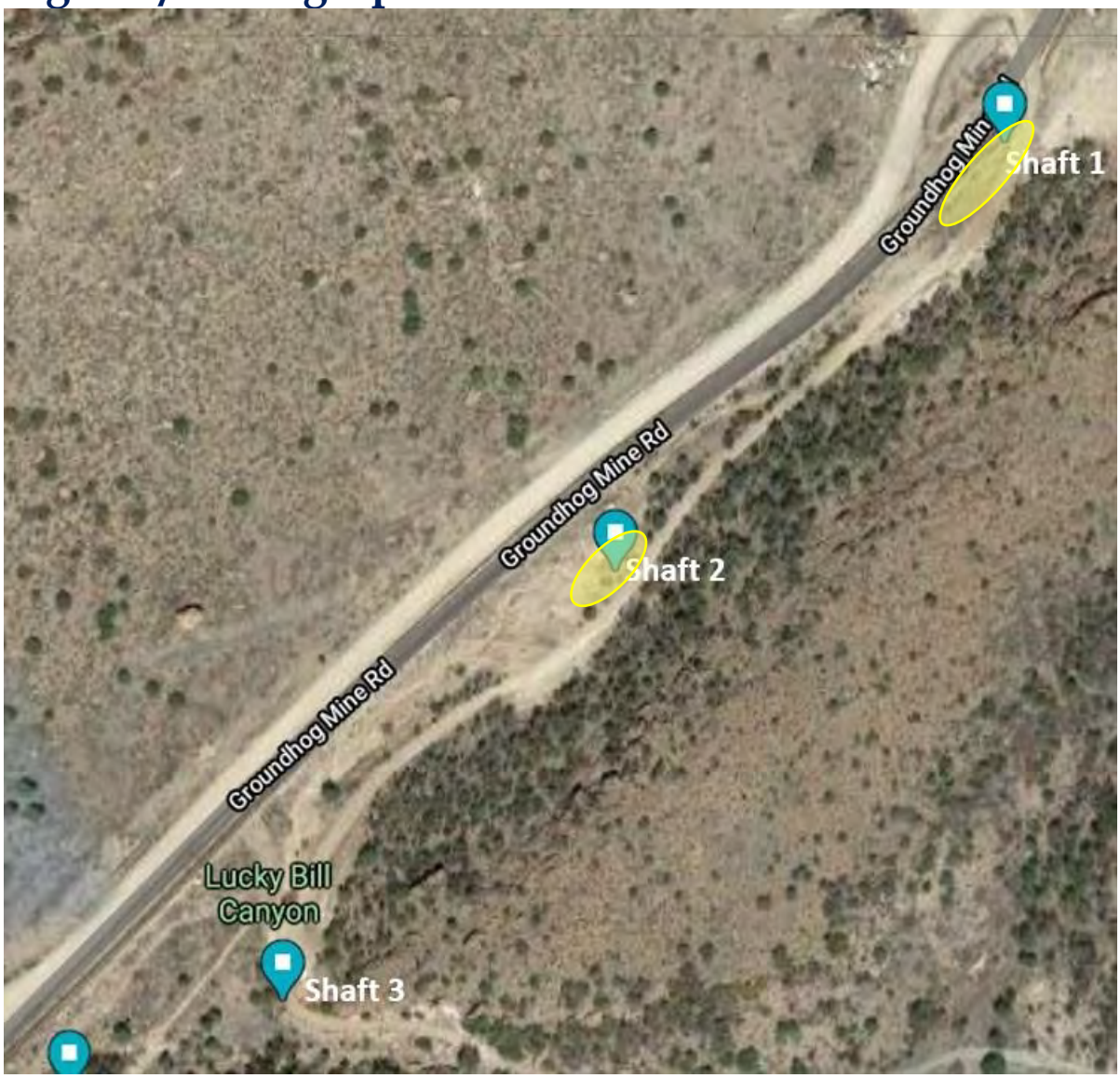

Figure 1: Northern Area. Today:

- With primary operator (Miguel) gone, Shared Service's removal effort focused mostly on red material on ground surface near Shafts 1 and 2. This straightforward effort kept the crew busy without going into tricky areas.
- Excavator operator (Pete) did a good job of consolidating red material around Shaft 2 without undermining the concrete pads and former mine features. York flagged a few small areas that require additional surface removal.
- Consolidation of 2nd stockpile on pass was completed with loader.
- Water truck used throughout day for dust control on roads and stockpiles.

Photo 1: Shared Services removed red material at Shaft 1 along access road.

Photo 2: Crew removed red material near Shaft 2. Could not remove concrete without breaking it.

Photo 3: Second stockpile boundary will need to be expanded in the next day or 2 to accommodate additional removal material.

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Chino–Bayard Canyon Daily Report

Date: May 11, 2021 ☐S ☐M ☒T ☐W ☐T ☐F ☐S

Prepared by: York Morgan, Senior Field Scientist

Weather

Cloud cover: 0%
Wind: 10-15 mph
Precipitation: None
Temperature: 80-50°F

Visitors on Site

- None

Equipment on Site

- 1 Haul Truck (30 ton) - CAT 730
- 1 Excavator – CAT 329E
- 1 Water Truck – 4000 gallons
- 1 Haul Truck (25 ton) - CAT 725
- 1 Loader – CAT 980G
- 1 Dozer – CAT D8T

Summary of Shared Services Activities

- See Figure 1 and photos.

Summary of Meetings/Discussions/Issues

- York met with excavator operator (Pete) filling in for Miguel who was needed on another project. Pete thinks Miguel will return Wednesday.

Safety Issues/Discussions

- Avoid undermining HDPE lines running above creek bed where excavator is currently working.

Haulage Update

	Total thru 5/6/2021
Loads	**518**
CY (approx.)	**8,806**

Figures/Photographs

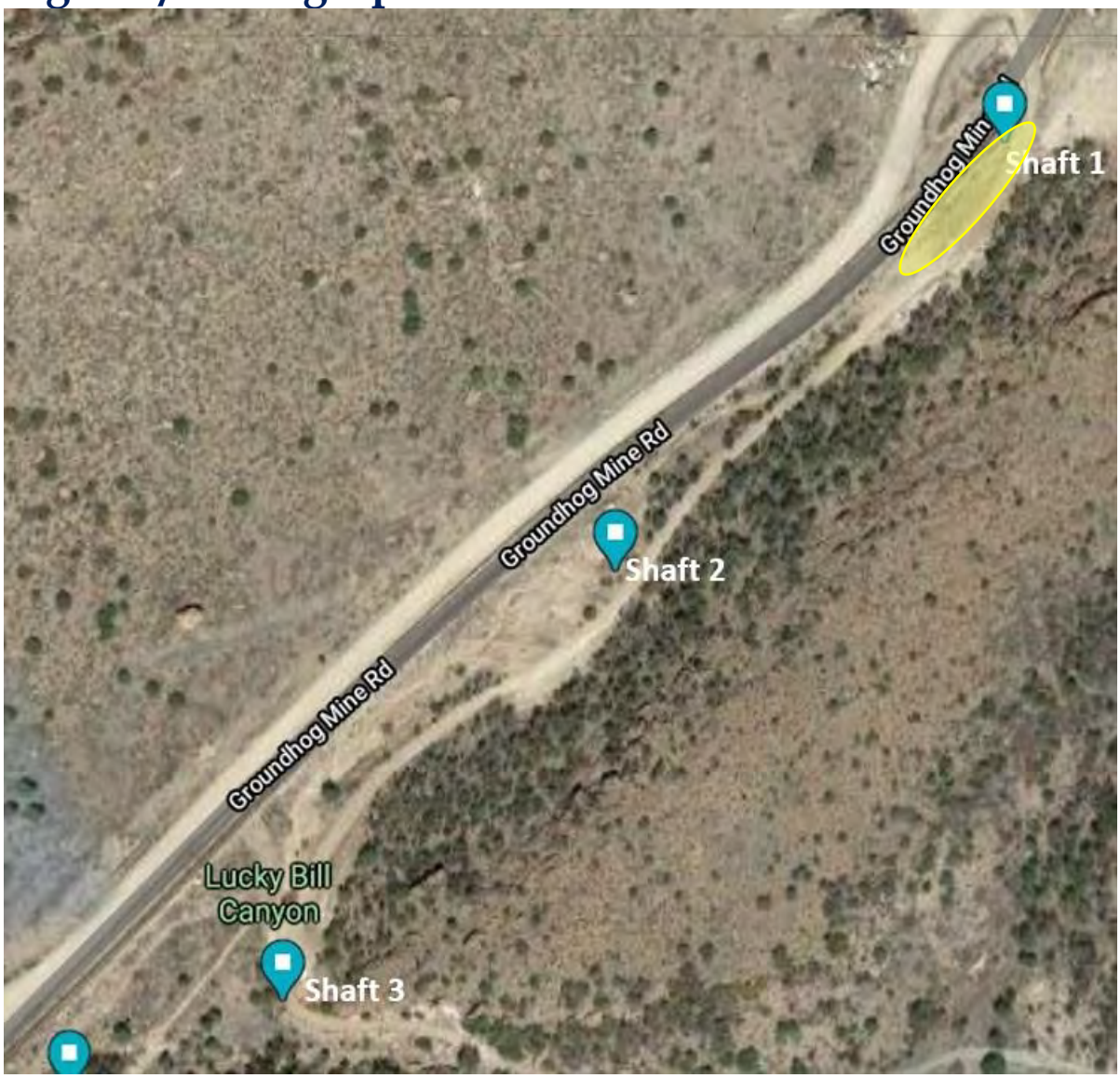

Figure 1: Northern Area. Today:

- With primary operator (Miguel) gone, Shared Service's removal effort focused mostly on red material near Shaft 1. Material found in creek bed at depths of up to 10'.
- Excavator operator (Pete) avoiding undercutting pipeline corridor to west – he is not removing material on the west bank of the creek.
- York noted a few areas downstream of primary red mound of soil where material is yellowish. These areas will likely require removal. Crew will wait to talk to Pam.
- Expanded second stockpile berm to accommodate additional material.
- Water truck used throughout day for dust control on roads and stockpiles.

Photo 1: Shared Services removed red material at Shaft 1 along access road.

Photo 2: Crew removed red material near Shaft 1. Yellow material will be removed also.

Photo 3: Second stockpile boundary was expanded to accommodate additional removal material.

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Daniel B. Stephens & Associates, Inc.

Chino–Bayard Canyon Daily Report

Date: May 17, 2021 ☐S ☒M ☐T ☐W ☐T ☐F ☐S

Prepared by: York Morgan, Senior Field Scientist

Weather

Cloud cover: 20%
Wind: 10-20 mph
Precipitation: None
Temperature: 73-47°F

Visitors on Site

- None

Equipment on Site

- 1 Haul Truck (30 ton) - CAT 730
- 1 Excavator – CAT 329E
- 1 Water Truck – 4000 gallons
- 1 Haul Truck (25 ton) - CAT 725
- 1 Loader – CAT 980G
- 1 Dozer – CAT D8T

Summary of Shared Services Activities

- See Figure 1 and photos.

Summary of Meetings/Discussions/Issues

- Pam covered for York 2 days last week. She walked jobsite with NMED and Shared Services – flagging areas that require additional removal.
- Travis checked with Elmo Gomez to determine how near the pipeline corridor the excavation can encroach on the north end of the project area. Currently a thick layer of red material is visible on the west creek bank, but the crew is reluctant to excavate this material due to the risk of undermining the pipelines. Shared Services is waiting for word from Elmo.
- Travis said Miguel (initial excavator operator) is working at Cobre and likely won't return to Bayard Canyon. Pete will finish the job on excavator and will be available to walk areas with Pam and York to finalize removal effort.
- Pete said he removed additional soil from several areas Pam marked last week.
- Pam said the remaining yellowish areas near the Lucky Bill confluence are weathered bedrock (granodiorite) that does not require removal.
- Pete said Shared Services is planning to rebuild the access road so it is adjacent to the pipeline corridor at Shaft 1, which will move the creek bed slightly to the east away from the wall and reddish material. The rebuilt haul road will cap any red material that must be left in place to ensure pipeline stability.

Safety Issues/Discussions

- Avoid undermining HDPE lines running above creek bed where excavator is currently working.
- Keep a close eye on portion of access road where Pam noted subsidence during last visit. Could be underground workings.

Haulage Update

	5/10	5/11	5/12	5/13	**Total thru 5/13/2021**
Loads	40	47	18	37	**660**
CY (approx.)	680	799	306	629	**11,220**

Figures/Photographs

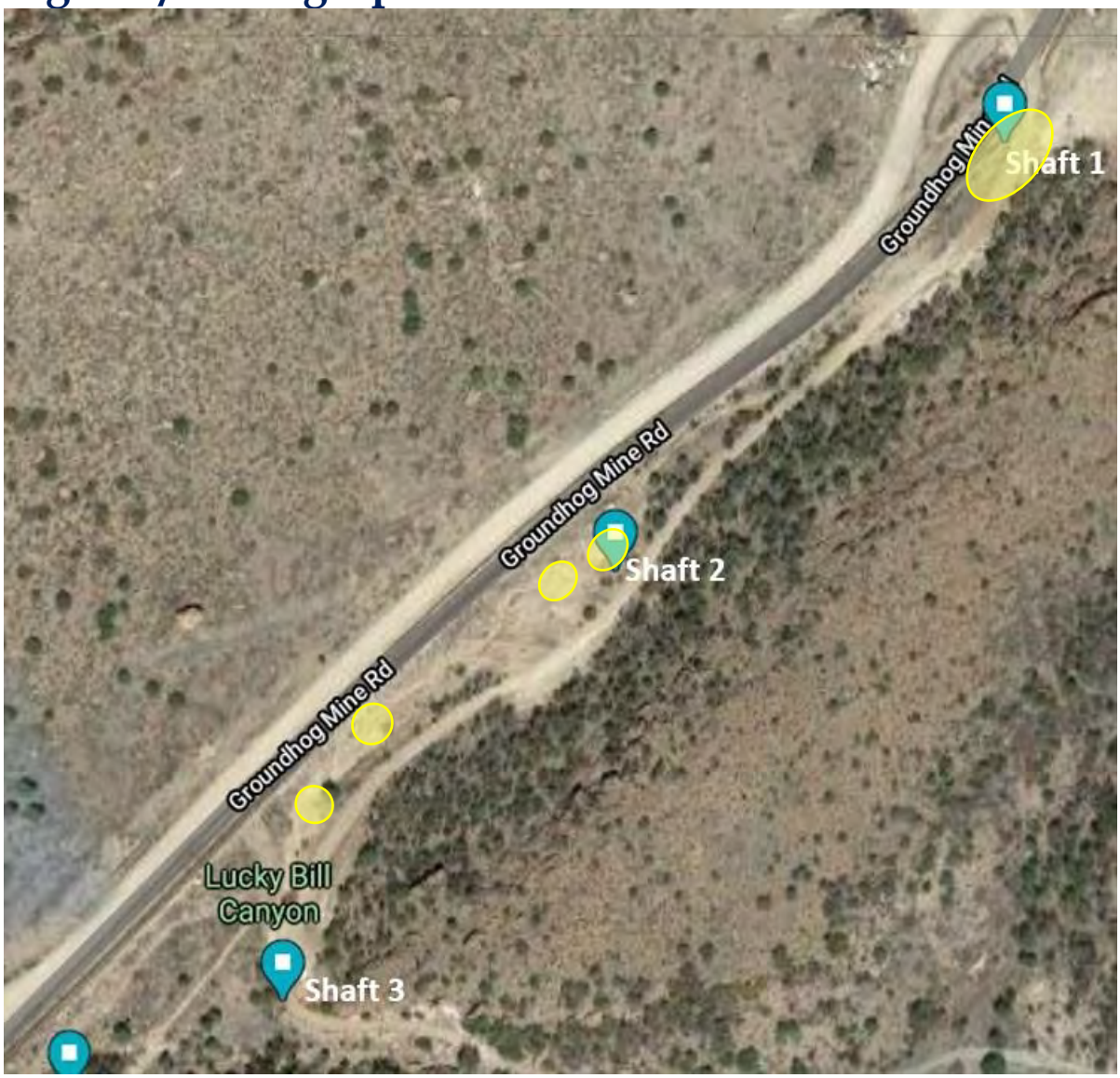


Figure 1: Northern Area. During past 3 days:

- Shared Service's removal effort focused mostly on red material near Shaft 1. Material found in creek bed at depths of up to 10'. Effort extended to area beneath and east of access road.
- Excavator operator (Pete) avoiding undercutting pipeline corridor to west – he is not removing material on the west bank of the creek.
- Pam and York flagged a few small areas near and below Shaft 2 that require additional removal.
- Crew returned to several small areas (small yellow circles above) and removed additional material.
- Water truck used throughout day for dust control on roads and stockpiles.
- Dozer used to consolidate stockpile and push red material to excavator. Also used dozer to rebuild access road so York could drive in for sampling.

Figure 2: Post-Removal Sampling Map.

York collected post-removal samples from Areas A, B, and C today. These areas are ready for backfill.

Photo 1: Over past 3 work days, Shared Services removed nearly all remaining red material at Shaft 1 east, west, and beneath access road.

Photo 2: Crew did not remove red material along pipeline corridor near Shaft 1 out of concern for undermining. Checking with Elmo Gomez to determine how much further excavation can safely go.

DBS&A
Daniel B. Stephens & Associates, Inc.

Chino–Bayard Canyon Daily Report

Date: May 18, 2021 ☐S ☐M ☒T ☐W ☐T ☐F ☐S

Prepared by: York Morgan, Senior Field Scientist

Weather

Cloud cover: 50%
Wind: 5-15 mph
Precipitation: None
Temperature: 77-50°F

Visitors on Site

- None

Equipment on Site

- 1 Haul Truck (30 ton) - CAT 730
- 1 Excavator – CAT 329E
- 1 Water Truck – 4000 gallons
- 1 Haul Truck (25 ton) - CAT 725
- 1 Loader – CAT 980G
- 1 Dozer – CAT D8T

Summary of Shared Services Activities

- See Figure 1 and photos.

Summary of Meetings/Discussions/Issues

- NMED walk-through that was scheduled for today was rescheduled per request of Joe Fox.
- Pam, York and Pete (Shared Services excavator operator) walked entire work area north of Lucky Bill confluence, creating a final punch-list for excavation activities. Team flagged numerous small areas for additional excavation. Team also discussed grading strategies for ensuring creek flow from Lucky Bill follows original channel instead of flowing onto access road at confluence.
- Shared Services determined that the excavation at northern end of jobsite could not encroach any nearer to pipeline corridor without potentially undermining it.
- Arcadis answered questions from SVL (lab) re: analyses for post-removal samples. First round of samples will be shipped this week.

Safety Issues/Discussions

- Continue to avoid undermining HDPE lines running above creek bed.
- Continue vigilant dust suppression.

Haulage Update

	5/10	5/11	5/12	5/13	**Total thru 5/13/2021**
Loads	40	47	18	37	**660**
CY (approx.)	680	799	306	629	**11,220**

Figures/Photographs

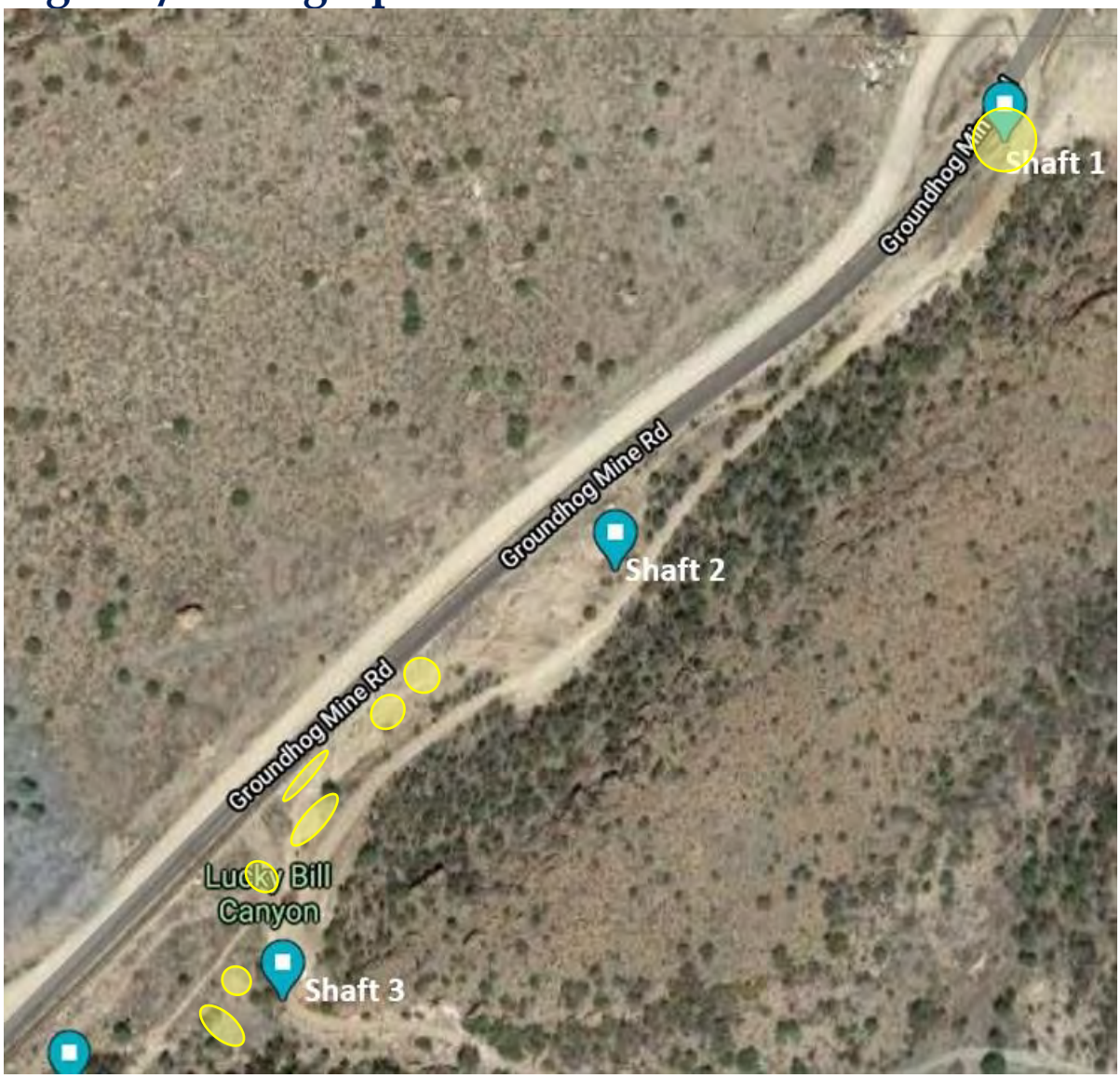


Figure 1: Northern Area. Today:

- Shared Services completed the removal effort near Shaft 1 at northernmost end of site.
- Excavator operator (Pete) returned to numerous small areas around Lucky Bill Confluence to remove reddish material as flagged during punch-list walk-through.
- Water truck used throughout day for dust control on roads and stockpiles.
- Dozer used to consolidate stockpile and maintain ramp at Shaft 1.

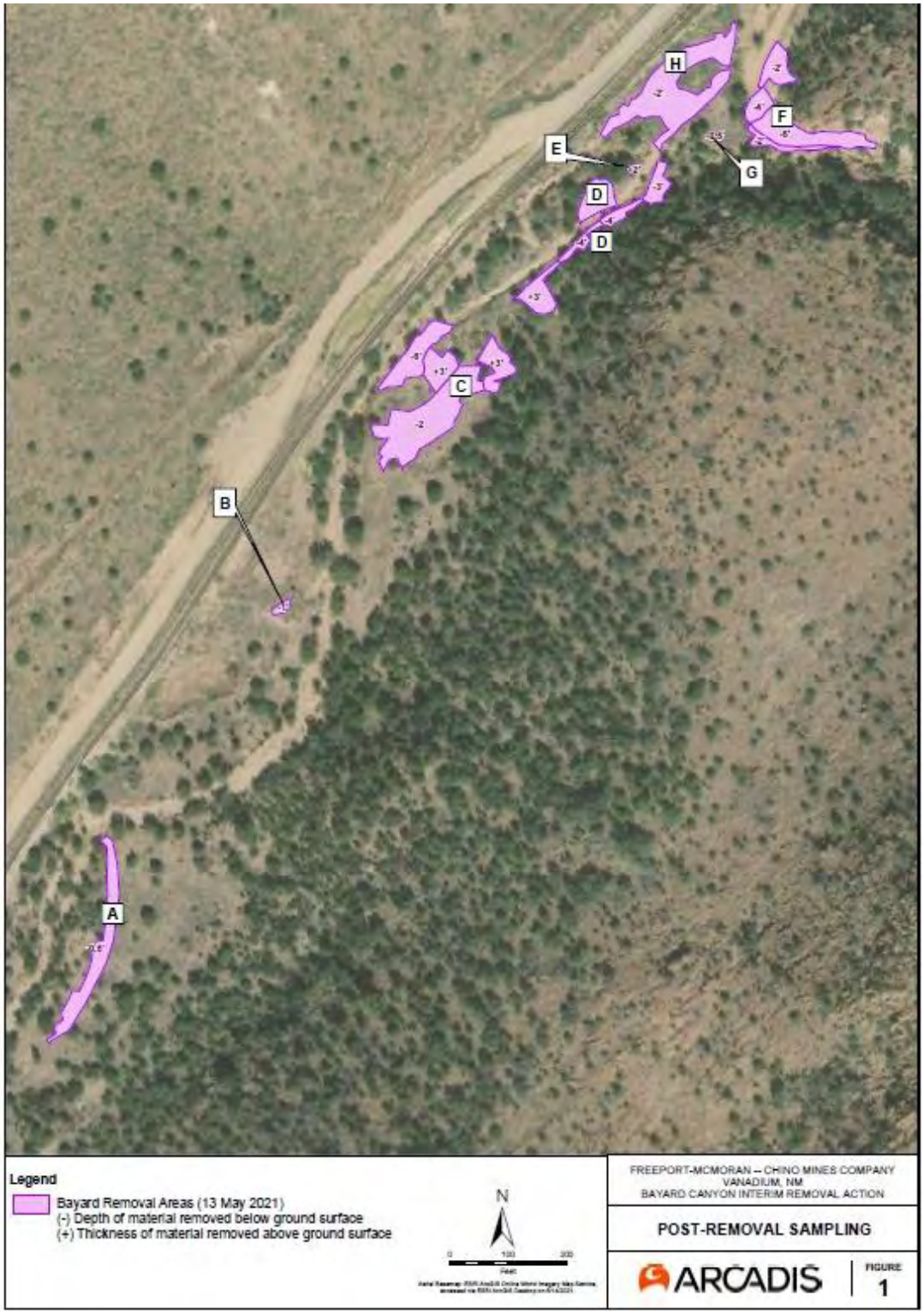


Figure 2: Post-Removal Sampling Map.
York collected post-removal samples from Areas D, E, G, & H today. These areas are ready for backfill.

Photo 1: Chino, Shared Services, and DBS&A walked northern half of work area and compiled final punch-list for excavation activities.

Photo 2: Wall adjacent to pipeline corridor where reddish material (native and stockpiled) remains will be capped with clean, import material.

Photo 3: After completion of excavation at north end of jobsite, Shared Service returned to Lucky Bill confluence and removed reddish material from numerous small areas flagged for punch-list.

DBS&A
Daniel B. Stephens & Associates, Inc.

Chino–Bayard Canyon Daily Report

Date: May 19, 2021 ☐S ☐M ☐T ☒W ☐T ☐F ☐S

Prepared by: York Morgan, Senior Field Scientist

Weather

Cloud cover: 50%
Wind: 10-20 mph
Precipitation: None
Temperature: 83-51°F

Visitors on Site

- None

Equipment on Site

- 1 Haul Truck (30 ton) - CAT 730
- 1 Excavator – CAT 329E
- 1 Water Truck – 4000 gallons
- 1 Loader – CAT 980G
- 1 Dozer – CAT D8T

Summary of Shared Services Activities

- 99% finished with excavation. Started backfill today. See Figures 1-3 and photos.

Summary of Meetings/Discussions/Issues

- Pete (lead operator) finished excavating all punch-list removal areas except portion at northernmost tip adjacent to ramp.
- Pam said NMED meeting is on for tomorrow morning.
- York entered more polygons on Collector map.
- York delivered 19 samples from Areas A, B, and C to Chino for shipping to SVL.

Safety Issues/Discussions

- Dust control – use water truck throughout day as needed.
- Watch for fire. Shared Services reported a small fire started earlier in week when excavator bucket evidently caused spark on rock surface that spread to grass. Was extinguished immediately.
- Use caution on steep ramp entering Bayard Canyon.

Haulage Update

	Total thru 5/13/2021
Loads	**660**
CY (approx.)	**11,220**

Figures/Photographs

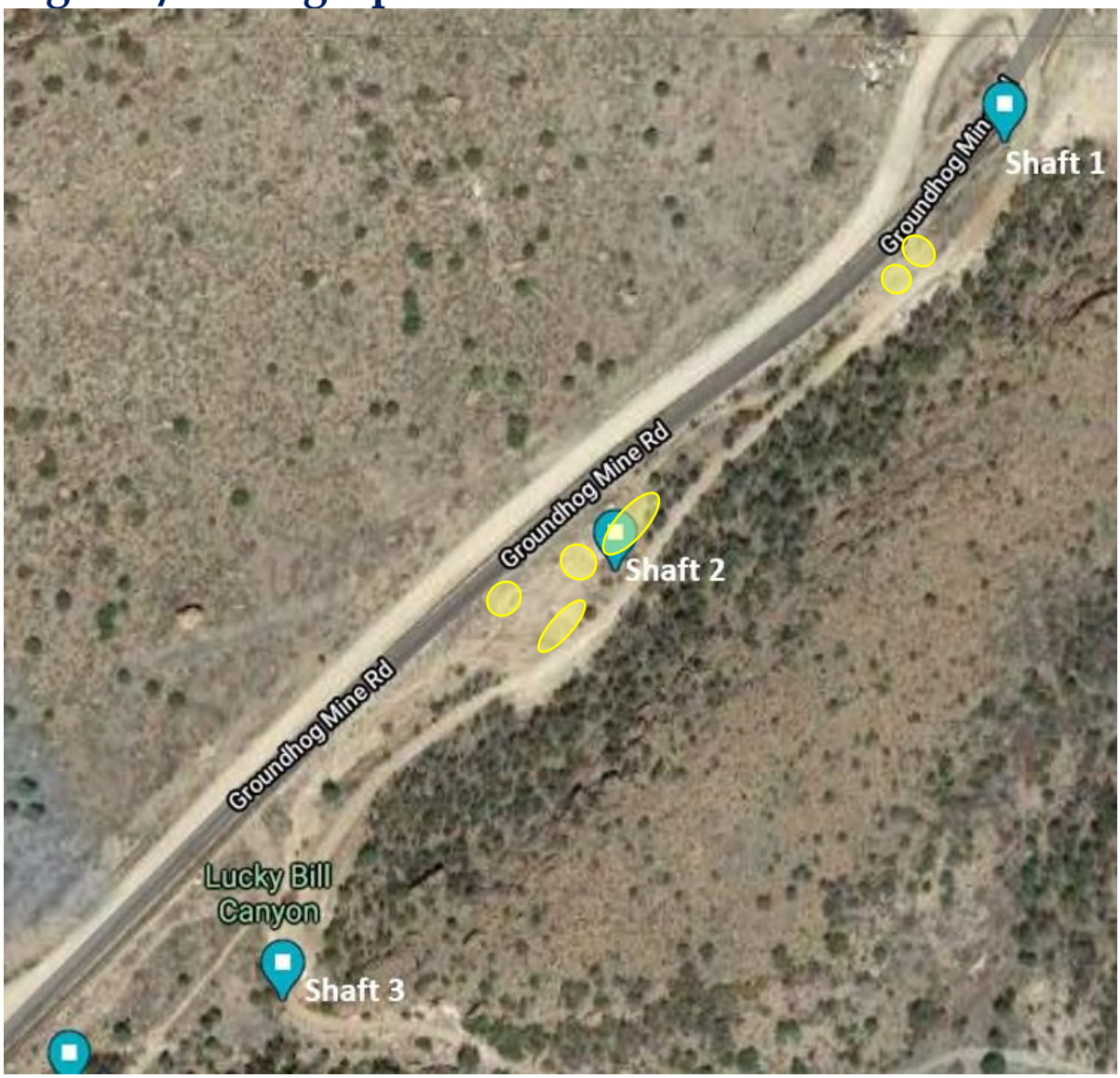


Figure 1: Northern Area Removal. Today:

- Shared Services completed excavation of all punch-list removal areas flagged by Pam and York yesterday. Only area remaining to be excavated is at northern tip above Shaft 1 next to ramp.
- Water truck used throughout day for dust control on roads and stockpiles.

Figure 2: Southern Area Backfill Map:
Shared Services started and finished backfill at the 2 southernmost removal areas (blue ovals) today. Borrow area for backfill materials is shown in red oval.

Figure 3: Central Area Backfill Map:
Shared Services also started backfill at a large central removal area (blue oval) today.

Photo 1: Shared Services hauled backfill material from borrow area to 3 southernmost removal areas.

Photo 2: Crew used dozer to grade backfill material into excavated areas.

Photo 3: Backfill and final grading was completed quickly at the south end of the site.

DBS&A
Daniel B. Stephens & Associates, Inc.

Chino–Bayard Canyon Daily Report

Date: May 20, 2021 ☐S ☐M ☐T ☐W ☒T ☐F ☐S

Prepared by: York Morgan, Senior Field Scientist

Weather

Cloud cover: 30%
Wind: 5-15 mph
Precipitation: None
Temperature: 85-57°F

Visitors on Site

- Joe Fox, David Mercer - NMED

Equipment on Site

- 1 Haul Truck (30 ton) - CAT 730
- 1 Excavator – CAT 329E
- 1 Water Truck – 4000 gallons
- 1 Loader – CAT 980G
- 1 Motor Grader – CAT16M
- 1 Dozer – CAT D8T

Summary of Shared Services Activities

- 99% finished with excavation. Backfill well underway. See Figure 1 and photos.

Summary of Meetings/Discussions/Issues

- Pam, Travis, and York met with NMED's Joe Fox and David Mercer for thorough walk-through of entire site plus review of former work areas in Lucky Bill Canyon. State did not mention any concerns.
- York entered remaining polygons on Collector map.
- Arcadis produced re-grouped areas for post-removal sampling.
- Shared Service's water truck broke down at the end of the day. Repairs needed.

Safety Issues/Discussions

- Watch for NMED visitors onsite.
- Hydration. Heat.

Haulage Update

	Total thru 5/13/2021
Loads	**660**
CY (approx.)	**11,220**

Figures/Photographs

Figure 1: Central Area Backfill Map:
Shared Services focused full day on backfilling removal areas (blue ovals).

Photo 1: NMED toured entire project area today.

Photo 2: Crew loaded backfill material into haul truck at borrow area.

Photo 3: Large areas in the central portion of the site were backfilled and graded.

DBS&A
Daniel B. Stephens & Associates, Inc.

Chino–Bayard Canyon Daily Report

Date: May 21, 2021 ☐S ☐M ☐T ☐W ☐T ☒F ☐S

Prepared by: York Morgan, Senior Field Scientist

Weather

Cloud cover: 100%
Wind: 5-15 mph
Precipitation: None
Temperature: 77-52°F

Visitors on Site

- None

Equipment on Site

- 1 Haul Truck (30 ton) - CAT 730
- 1 Excavator – CAT 329E
- 1 Water Truck – 4000 gallons
- 1 Loader – CAT 980G
- 1 Motor Grader – CAT16M
- 1 Dozer – CAT D8T

Summary of Shared Services Activities

- 99% finished with excavation. Approximately 50% finished with backfill. See Figure 1 and photos.

Summary of Meetings/Discussions/Issues

- Lead operator (Pete) said Shared Services has focused backfill effort so far on easier-to-reach areas. Will go back and focus on trickier areas later.
- Crew worked only 8 hours today.
- York collected post-removal samples (13) from Area F today.

Safety Issues/Discussions

- Continue to be vigilant about not driving or walking over buried, former workings.

Haulage Update

	Total thru 5/13/2021
Loads	**660**
CY (approx.)	**11,220**

Figure 1: Central Area Backfill Map:
Shared Services focused full 8-hour day on backfilling removal areas (blue ovals). Backfill effort is progressing quickly.

Photo 1: Partially-backfilled areas along creek bank at central portion of jobsite.

Photo 2: Crew used excavator above Lucky Bill confluence to backfill along access road.

DBS&A
Daniel B. Stephens & Associates, Inc.

Chino–Bayard Canyon Daily Report

Date: May 24, 2021 ☐S ☒M ☐T ☐W ☐T ☐F ☐S

Prepared by: York Morgan, Senior Field Scientist

Weather

Cloud cover: 10%

Wind: 5-15 mph

Precipitation: None

Temperature: 83-50°F

Visitors on Site

- None

Equipment on Site

- 1 Haul Truck (30 ton) - CAT 730
- 1 Excavator – CAT 329E
- 1 Loader – CAT 980G
- 1 Motor Grader – CAT16M
- 1 Dozer – CAT D8T

Summary of Shared Services Activities

- 99% finished with excavation. Approximately 60% finished with backfill. See Figure 1 and photos.

Summary of Meetings/Discussions/Issues

- Lead operator (Pete) will coordinate with Travis to plan footprint of replacement road accessing LuckyBill Canyon. Pete used dozer to move large boulders to outer edge of removal area for armoring of road and creek interface.

Safety Issues/Discussions

- Fire season – watch dry vegetation and potential for fires.

Haulage Update

	5/17/21	5/18/21	5/19/21	5/20/21	5/21/21	**Total thru 5/21/2021**
Removal Loads	42	19	4	0	0	**725**
Removal CY (approx.)	714	323	68	0	0	**12,325**
Backfill Loads	0	0	37	51	32	**120**
Backfill CY (approx.)	0	0	629	867	544	**2,040**

Figure 1: Central Area Backfill Map:
Shared Services focused most of day backfilling and re-building road leading into Lucky Bill Canyon. Dozer pushed large boulders to area between road and creek for armoring.

Photo 1: Crew backfilled area and rebuilt road leading into Lucky Bill Canyon.

Photo 2: Crew mounded cover material in areas where former mine workings potentially persist.

DBS&A
Daniel B. Stephens & Associates, Inc.

Chino–Bayard Canyon Daily Report

Date: May 25, 2021 ☐S ☐M ☒T ☐W ☐T ☐F ☐S

Prepared by: York Morgan, Senior Field Scientist

Weather

Cloud cover: 30%

Wind: 5-15 mph

Precipitation: None

Temperature: 83-55°F

Visitors on Site

- None

Equipment on Site

- 1 Haul Truck (30 ton) - CAT 730
- 1 Excavator – CAT 329E
- 1 Loader – CAT 980G
- 1 Motor Grader – CAT16M
- 1 Dozer – CAT D8T

Summary of Shared Services Activities

- 99% finished with excavation. Approximately 65% finished with backfill. See Figure 1 and photos.

Summary of Meetings/Discussions/Issues

- Travis and Miguel said road leading into Lucky Bill should be built to approximately the same footprint and height as pre-removal to ensure it is high enough to avoid damage when creek flows. Also, oversized boulders between road and creek should help armor. Road will not be compacted.
- York collected 13 post-removal samples from groups in northern portion of site.

Safety Issues/Discussions

- Use care moving rounded boulders – rolling and damage to trucks possible.

Haulage Update

	Total thru 5/21/2021
Removal Loads	**725**
Removal CY (approx.)	**12,325**
Backfill Loads	**120**
Backfill CY (approx.)	**2,040**

Figure 1: Central Area Backfill Map:

- Shared Services continued backfilling and re-building road leading into Lucky Bill Canyon.
- Crew also began backfilling creek bank in area where deep removal occurred. Crew is using cover material from 2nd borrow area at Groundhog (vs. material in southern borrow area) because it is rockier and should armor the creek bank better than the other material.
- Crew hauled 2 large boulders from central area to stockpile because boulders were stained red with a crust of red soil.

Photo 1: Pete continued dozing and stockpiling cover material at southern borrow area.

Photo 2: Crew mounded rocky cover material from Groundhog borrow area at creek bank.

Photo 3: Crew continued backfilling entrance into Lucky Bill Canyon.

Photo 4: Crew hauled red-stained boulders to stockpile from central removal area.

DBS&A
Daniel B. Stephens & Associates, Inc.

Chino–Bayard Canyon Daily Report

Date: May 26, 2021 ☐S ☐M ☐T ☒W ☐T ☐F ☐S

Prepared by: York Morgan, Senior Field Scientist

Weather

Cloud cover: 30%
Wind: 5-15 mph
Precipitation: None
Temperature: 86-54°F

Visitors on Site

- David Mercer - NMED

Equipment on Site

- 1 Haul Truck (30 ton) - CAT 730
- 1 Excavator – CAT 329E
- 1 Loader – CAT 980G
- 1 Motor Grader – CAT16M
- 1 Dozer – CAT D8T

Summary of Shared Services Activities

- 99% finished with excavation. Approximately 70% finished with backfill. See Figure 1 and photos.

Summary of Meetings/Discussions/Issues

- David, Pam, and York toured jobsite – focusing on recently-backfilled areas. Pam pointed out former mine workings that require additional mounding. York talked with Pete (operator) about the need for more cover on former workings – they agreed to walk site later for backfill punch-list items.
- NMED had no substantial comments regarding recent work.
- Shared Services will import rip rap armoring for base of creek bank now that cover is complete.

Safety Issues/Discussions

- Hot and dry weather – drink plenty of water.

Haulage Update

	Total thru 5/21/2021
Removal Loads	**725**
Removal CY (approx.)	**12,325**
Backfill Loads	**120**
Backfill CY (approx.)	**2,040**

Figure 1: Central Area Backfill Map:

- Shared Services continued backfilling and re-building road leading into Lucky Bill Canyon. Today, they used rocky material from borrow area located at pass north of Bayard Canyon.
- Crew also graded cover material along creek bank farther south.

Photo 1: Shared Services spent most of day continuing to rebuild road going into Lucky Bill.

Photo 2: Cover material was loaded from borrow source near former Groundhog Mine.

Photo 3: A well-graded slope was achieved using cover material on the creek bank that was excavated during removal. Large boulders at the toe (left) serve as armoring.

DBS&A
Daniel B. Stephens & Associates, Inc.

Chino–Bayard Canyon Daily Report

Date: May 27, 2021 ☐S ☐M ☐T ☐W ☒T ☐F ☐S

Prepared by: York Morgan, Senior Field Scientist

Weather

Cloud cover: 10%

Wind: 10-15 mph

Precipitation: None

Temperature: 87-54°F

Visitors on Site

- None

Equipment on Site

- 1 Haul Truck (30 ton) - CAT 730
- 1 Excavator – CAT 329E
- 1 Loader – CAT 980G
- 1 Motor Grader – CAT16M
- 1 Dozer – CAT D8T

Summary of Shared Services Activities

- 99% finished with excavation. Approximately 80% finished with backfill. See Figures 1 & 2, and photos.

Summary of Meetings/Discussions/Issues

- Crew not working Friday or Monday – Memorial Day weekend.
- York noted spot along creek at Lucky Bill confluence where more armoring is needed to be sure creek stays within original channel and does not flow on access road. Will show crew during punch-list walkthrough next week.

Safety Issues/Discussions

- Watch for subsidence on rebuilt roads.

Haulage Update

	5/24/21	5/25/21	5/26/21	5/27/21	Total thru 5/21/2021
Removal Loads		**1**			**726**
Removal CY (approx.)		**17**			**12,342**
Backfill Loads	**53**	**22**	**38**	**38**	**271**
Backfill CY (approx.)	**901**	**374**	**646**	**646**	**4,607**

Figure 1: Central Area Backfill Map:

- Shared Services continued backfilling and re-building road leading into Lucky Bill Canyon. Road appears to be complete unless it subsides.
- Crew also placed "ant hill" mounds over 2 former mine workings per direction from Pam.

Figure 2: Northern Area Backfill Map:

- Shared Services began backfilling above Lucky Bill confluence including partial fill of deep area that formed during soil excavation (bottom circle), shallow areas along creek (oval), and a "new" mine feature south of Shaft 2 where an "ant-hill" mound was placed.

Photo 1: Shared Services nearly finished reconstructing road into/out of Lucky Bill.

Photo 2: Crew nearly finished filling hole from deep excavation along creek above Lucky Bill.

Photo 3: "Ant-hill" mounds were constructed above former workings south of Lucky Bill.

Photo 4: "Ant-hill" mound was placed above former working south of Shaft 2.

DBS&A
Daniel B. Stephens & Associates, Inc.

Chino–Bayard Canyon Daily Report

Date: June 01, 2021 ☐S ☐M ☒T ☐W ☐T ☐F ☐S

Prepared by: York Morgan, Senior Field Scientist

Weather

Cloud cover: 50% - 100%
Wind: 10-15 mph
Precipitation: Trace
Temperature: 82-53°F

Visitors on Site

- None

Equipment on Site

- 2 Haul Trucks (25-30 ton) CAT 725-730
- 1 Excavator – CAT 329E
- 1 Water Truck (4000 gallons)
- 1 Loader – CAT 980G
- 1 Motor Grader – CAT16M
- 1 Dozer – CAT D8T

Summary of Shared Services Activities

- 99% finished with excavation. Approximately 85% finished with backfill. See Figures 1 & 2, and photos.

Summary of Meetings/Discussions/Issues

- Crew did not work Friday or Monday – Memorial Day weekend.
- Pete (lead operator) walked central portion of site with York. York identified 3 workings that require "ant-hill" mounds on top. Pete will use additional rock/soil to stabilize creek bank and encourage flow to travel down original creek bed vs. haul road.
- Pete will check with Travis regarding need for rip rap armoring on creek bank further south.

Safety Issues/Discussions

- Red Alerts today – watch for lightning. Listen for Alerts on radio. Follow Freeport SOPs.

Haulage Update

	Total thru 5/27/2021
Removal Loads	**726**
Removal CY (approx.)	**12,342**
Backfill Loads	**271**
Backfill CY (approx.)	**4,607**

Figure 1: Central Area Backfill Map:

- Shared Services finished backfilling and re-building road leading into Lucky Bill Canyon. Crew mounded area where former workings apparently exist.
- Crew also reinforced bank of creek with boulders and cover soil to force stormwater into original creek bed. Additional reinforcement pending.
- Area along east edge of haul road was backfilled with more cover material.
- Rocky cover material from Groundhog area at pass is depleted. Crew using soil from south borrow area now.

Figure 2: Northern Area Backfill Map:

- Shared Services finished filling deep area that formed during soil excavation (bottom circle), and other nearby areas (ovals).

Photo 1: Shared Services finished filling large excavation above Lucky Bill confluence. Mechanics were onsite repairing a/c in excavator.

Photo 2: Crew added mounds of material (left) along former workings going into Lucky Bill.

Photo 3: Material was added to reinforce creek bank.

Photo 4: Additional backfill was completed along haul road below Lucky Bill.

DBS&A
Daniel B. Stephens & Associates, Inc.

Chino–Bayard Canyon Daily Report

Date: June 02, 2021 ☐S ☐M ☐T ☒W ☐T ☐F ☐S

Prepared by: York Morgan, Senior Field Scientist

Weather

Cloud cover: 20% - 80%
Wind: 5-15 mph
Precipitation: None
Temperature: 85-57°F

Visitors on Site

- None

Equipment on Site

- 2 Haul Trucks (25-30 ton) CAT 725-730
- 1 Excavator – CAT 329E
- 1 Water Truck (4000 gallons)
- 1 Loader – CAT 980G
- 1 Motor Grader – CAT16M
- 1 Dozer – CAT D8T

Summary of Shared Services Activities

- 99% finished with excavation. Approximately 90% finished with backfill. See Figures 1 & 2, and photos.

Summary of Meetings/Discussions/Issues

- Pam reminded Travis and York that stormwater control BMPs like straw wattles must be installed at appropriate locations along the jobsite.

Safety Issues/Discussions

- Haul road safety. Keep roadway free of rock and debris. Watch for light vehicles using road.

Haulage Update

	Total thru 5/27/2021
Removal Loads	**726**
Removal CY (approx.)	**12,342**
Backfill Loads	**271**
Backfill CY (approx.)	**4,607**

Figure 1: Central Area Backfill Map:

- Shared Services returned to areas along the access road below Lucky Bill, placed mounds over former workings, covered bare areas, and regraded spots that were cut to build the road.

Figure 2: Northern Area Backfill Map:

- Shared Services finished filling the low area northwest of the Lucky Bill confluence and then cut a channel through it to control creek flow (lower oval).
- Cover and mounds were placed in broad area around Shaft 2.
- Numerous loads of cover material were placed along the red wall at Shaft 1.

Photo 1: Shared Services placed cover material with mounds over former workings along access road below Lucky Bill.

Photo 2: Crew re-cut a channel in the creek bed above Lucky Bill.

Photo 3: Cover and a mound were placed over Shaft 2.

Photo 4: Substantial progress was made backfilling along red wall at north end of jobsite.

DBS&A
Daniel B. Stephens & Associates, Inc.

Chino–Bayard Canyon Daily Report

Date: June 03, 2021 ☐S ☐M ☐T ☐W ☒T ☐F ☐S

Prepared by: York Morgan, Senior Field Scientist

Weather

Cloud cover: 20% - 100%

Wind: 5-15 mph

Precipitation: None

Temperature: 85-57°F

Visitors on Site

- None

Equipment on Site

- 1 Haul Truck (30 ton) CAT 730
- 1 Excavator – CAT 329E
- 1 Water Truck (4000 gallons)
- 1 Loader – CAT 980G
- 1 Motor Grader – CAT16M
- 1 Dozer – CAT D8T

Summary of Shared Services Activities

- 100% finished with excavation. Approx. 95% finished with backfill. See Figure 1 and photos.
- Crew made new cover material at Groundhog borrow source for use at north ramp into site.

Summary of Meetings/Discussions/Issues

- Pam and Travis are looking for straw wattles in current inventory. Pam will order them if necessary. York and Pam discussed linear feet needed to cover site.
- Travis has several punch-list items for crew next week, when earthwork is expected to end.
- Pam confirmed armoring is sufficient along creek bank where boulders and rocky cover material (from Groundhog borrow) were used.

Safety Issues/Discussions

- Flash floods. Move personnel and equipment away from creek channels when storms are nearby.

Haulage Update

	6/1/21	**6/2/21**	**6/3/21**	**Total thru 5/27/2021**
Removal Loads				**726**
Removal CY (approx.)				**12,342**
Backfill Loads	**24**	**34**	**53**	**382**
Backfill CY (approx.)	**408**	**578**	**901**	**4,607**

Figures/Photographs

Figure 1: Northern Area Backfill Map:

- Shared Services spent most of the day rebuilding the ramp and road going into the north end of Bayard Canyon.

Photo 1: Shared Services hauled 53 loads of cover material to ramp at north end into site.

Photo 2: With new grading plan at north end of site, the road (right) will ramp in along east bank and creek will flow along former road (left).

Photo 3: Boulders and rocky cover material armoring creek bank where deep cut was excavated

Photo 4: Covered area above Lucky Bill confluence.

DBS&A
Daniel B. Stephens & Associates, Inc.

Chino–Bayard Canyon Daily Report

Date: June 07, 2021 ☐S ☒M ☐T ☐W ☐T ☐F ☐S

Prepared by: York Morgan, Senior Field Scientist

Weather

Cloud cover: 20% - 70%, smoky
Wind: 5-15 mph
Precipitation: None
Temperature: 89-56°F

Visitors on Site

- None

Equipment on Site

- 1 Haul Truck (30 ton) CAT 730
- 1 Excavator – CAT 329E
- 1 Water Truck (4000 gallons)
- 1 Loader – CAT 980G
- 1 Motor Grader – CAT16M
- 1 Dozer – CAT D8T

Summary of Shared Services Activities

- 100% finished with excavation. Approx. 97% finished with backfill. See Figure 1 and photos.

Summary of Meetings/Discussions/Issues

- Travis and Pete noted several small areas where touch-up work is planned.
- Travis looking for wattles in stock to use as BMPs. Need to meet with Pam to discuss placement

Safety Issues/Discussions

- Dust – dry conditions require extra effort for dust control. Stay inside equipment when winds pick up and dust is airborne.
- Smoke from nearby forest fires. Stay in cabs when possible.

Haulage Update

	Total 6/3/2021
Removal Loads	**726**
Removal CY (approx.)	**12,342**
Backfill Loads	**382**
Backfill CY (approx.)	**4,607**

Figures/Photographs

Figure 1: Northern Area Backfill Map:

- Shared Services spent most of the day continuing to rebuild the ramp and road going into the north end of Bayard Canyon.
- Crew used rocky material from borrow source near Groundhog for most of base material on ramp and then placed several loads of finer material from the lower borrow area on top to reduce rockiness on the surface.
- Crew began covering eastern slope at north end of work area – adjacent to ramp, where stormwater will be channeled.

Photo 1: Shared Services continued working on ramp at north end of work area. Dozer spread layer of fine material on top of rocky material that makes up most of ramp.

Photo 2: Crew imported cover material for placement on east bank (left) at north end of site.

DBS&A
Daniel B. Stephens & Associates, Inc.

Chino–Bayard Canyon Daily Report

Date: June 08, 2021 ☐S ☐M ☒T ☐W ☐T ☐F ☐S

Prepared by: York Morgan, Senior Field Scientist

Weather

Cloud cover: 20%, smoky
Wind: 5-10 mph
Precipitation: None
Temperature: 88-56°F

Visitors on Site

- None

Equipment on Site

- 1 Haul Truck (30 ton) CAT 730
- 1 Excavator – CAT 329E
- 1 Water Truck (4000 gallons)
- 1 Loader – CAT 980G
- 1 Motor Grader – CAT16M
- 1 Dozer – CAT D8T

Summary of Shared Services Activities

- 100% finished with excavation. 100% finished with backfill. Stormwater BMPs pending. See Figures 1 and 2, and photos.

Summary of Meetings/Discussions/Issues

- Travis found a pallet of wattles that were delivered with stakes to the work area.
- Christian Krueger gave guidance for wattle placement.
- Pam scheduled final walk-through with NMED for tomorrow morning.
- Matt Gutierrez said that his seeding crew (Rocky Mountain) was finally able to find seed and will be able to re-seed the area this month as planned.

Safety Issues/Discussions

- Dehydration and overheating – drink plenty of water and take breaks when needed, especially while installing BMPs on foot.

Haulage Update

	Total 6/3/2021
Removal Loads	**726**
Removal CY (approx.)	**12,342**
Backfill Loads	**382**
Backfill CY (approx.)	**4,607**

Figures/Photographs

Figure 1: Northern Area Backfill Map:

- Shared Services finished reconstruction of the ramp leading into the north end of the jobsite. This work also included covering the east bank with borrow material and constructing features that will keep stormwater flowing in the designated channel.

Figure 2: Central Area Backfill Map:

- Shared Services removed soil and boulders from creek in an effort to encourage flow from Lucky Bill into its original channel (blue arrow above).
- Crew built a 3′-4′-high berm (green rectangle above) across the access road in line with the creek channel. This should enable the seeding crew to cross the creek while keeping flow within the banks.
- Crew added boulders and a levee of cover material along creek bank (tan oval above) at spot where creek from Lucky Bill previously jumped bank.

Photo 1: Shared Services finished reconstruction of ramp at north end of work area.

Photo 2: A newly-constructed berm (red line) will help keep creek flow from following access road.

Photo 3: Boulders and sediment were removed from channel from Lucky Bill to Bayard Canyon creek

Photo 4: A new berm on the access road will enable seeding crew entry and keep creek in channel.

DBS&A
Daniel B. Stephens & Associates, Inc.

Chino–Bayard Canyon Daily Report

Date: June 09, 2021 ☐S ☐M ☐T ☒W ☐T ☐F ☐S

Prepared by: York Morgan, Senior Field Scientist

Weather

Cloud cover: 20%, smoky
Wind: 5-15 mph
Precipitation: None
Temperature: 89-56°F

Visitors on Site

- NMED – David Mercer
- Chino Summer Intern – Lindsey Hayter

Equipment on Site

- 1 Haul Truck (30 ton) CAT 730
- 1 Excavator – CAT 329E
- 1 Water Truck (4000 gallons)
- 1 Loader – CAT 980G
- 1 Motor Grader – CAT16M
- 1 Dozer – CAT D8T

Summary of Shared Services Activities

- Final day of construction. 100% finished with excavation. 100% finished with backfill. See Figures 1, 2, and 3: and photos.
- Demobed all equipment from creek area.

Summary of Meetings/Discussions/Issues

- Pam identified one location that could be a former mine feature adjacent to- and east of the north ramp. She asked crew to place a mound of cover material over it. Done.
- During walk-through, NMED expressed no concerns about work completed.
- York will attend NMED walk-through next week while Pam is out of town.

Safety Issues/Discussions

- Wildlife – watch for bears, mountain lions, elk, snakes, etc. – especially while working on foot.

Haulage Update

	6/7/21	6/8/21	6/9/21	Final Total 6/9/2021
Removal Loads				**726**
Removal CY (approx.)				**12,342**
Backfill Loads	**37**	**11**	**1**	**431**
Backfill CY (approx.)	**629**	**187**	**17**	**7,327**

Figures/Photographs

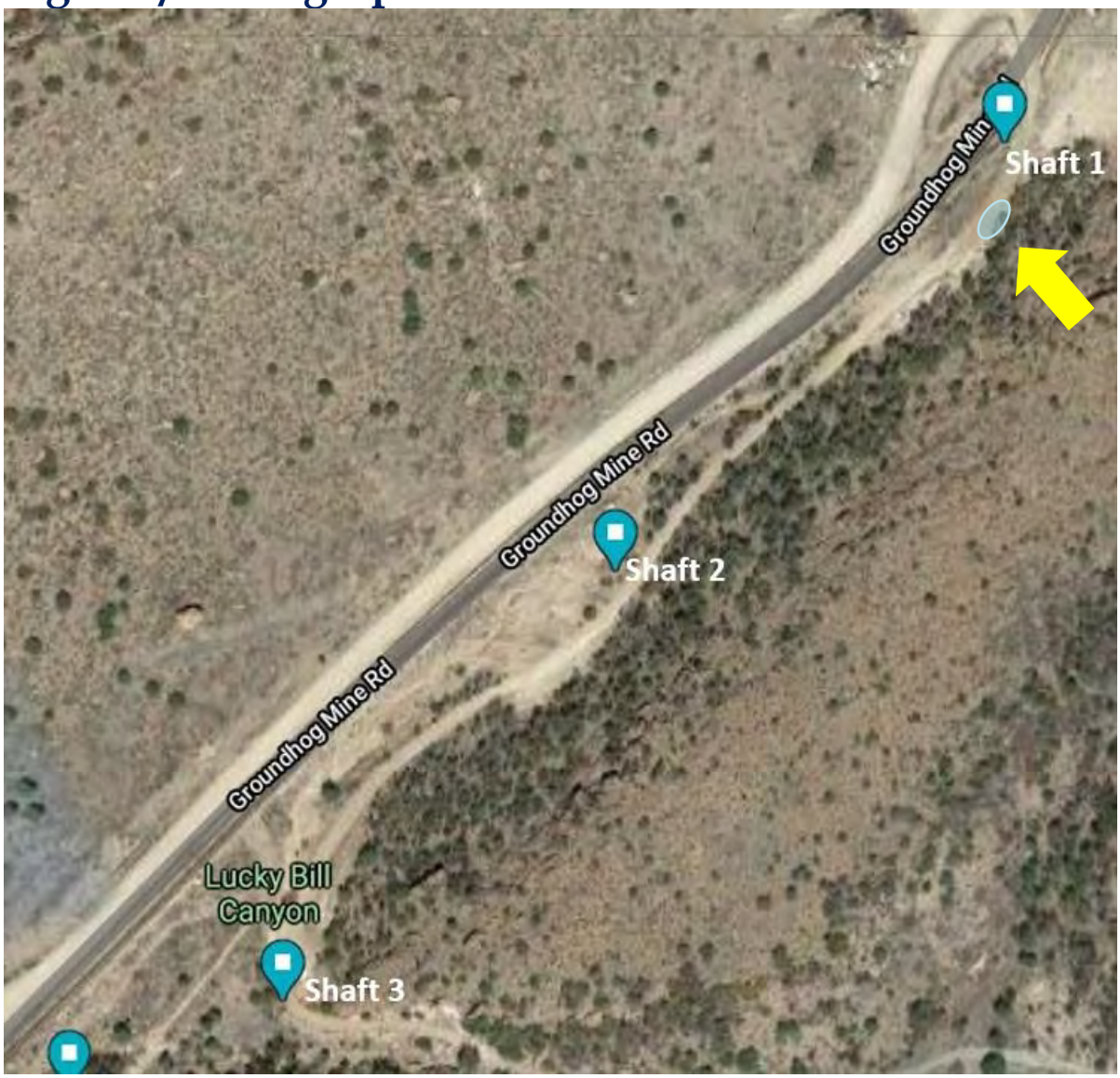


Figure 1: Northern Area Backfill Map:

- Shared Services mounded one load of cover material at Pam's request over a location that could be a former mine working located at north end of jobsite. (See blue oval above.)

Figure 2: Central Area Backfill Map:

- Crew constructed stormwater control berms along creek bank where ground was too rocky for staking wattles – blue lines above.
- Crew installed straw wattles along portions of creek where practicable – red lines above.
- Crew used boulders and cobbles to construct a filter dike (yellow line) across the Bayard Canyon creek slightly upgradient of creek's confluence with Lucky Bill creek.

Figure 3: Southern Area Backfill Map:

- Crew installed straw wattle (green line) at downgradient edge of removal area (blue oval) adjacent to creek bank.
- Crew constructed substantial berms (yellow lines) at the upgradient edge of the southern borrow area (red oval) to prevent stormwater from entering and filling the low area and also to prevent stormwater from following access road south.

Photo 1: Chino ENV and NMED completed final walk-through of work areas.

Photo 2: Straw wattles installed along creek bank – boulders and stakes used to secure.

Photo 3: A stout berm along edges of the southern borrow area to prevent stormwater entry.

Photo 4: Berms at southern borrow area also prevent stormwater from following access road.

APPENDIX D

NMED West Stockpile Placement Approval

From: Reid, Brad, NMENV
To: Pinson, Pam D.; kurt.vollbrecht
Cc: Steward, Michael; Krueger, Christian; Sokulsky, Kariann; Mercer, David, NMENV; Fox, Joseph, NMENV
Subject: RE: Request for Placement of Chino AOC HWCIU IRA Material - Discharge Plan 526 (DP-526)
Date: Wednesday, April 28, 2021 12:37:49 PM

Pam,

NMED is in receipt of your email request with supporting documentation. In accordance with DP-526 and as described in your request below, placement of approximately 6,000 cubic yards of residual stockpile material from Bayard Canyon onto the leached portion of the West Stockpile is approved.
Please report volumes and final placement locations in quarterly monitoring reports in accordance with DP-526. Let me know if you have questions or concerns. Thanks, Brad

Brad Reid, Geologist
Mining Environmental Compliance Section
Ground Water Quality Bureau
New Mexico Environment Department
1190 St. Francis Dr., Suite N2200
Santa Fe, NM 87502
(505) 372-8533 (work cell)
brad.reid@state.nm.us
https://www.env.nm.gov/

From: Pinson, Pam D. <ppinson@fmi.com>
Sent: Wednesday, April 14, 2021 1:36 PM
To: Reid, Brad, NMENV <brad.reid@state.nm.us>; Vollbrecht, Kurt, NMENV <kurt.vollbrecht@state.nm.us>
Cc: Steward, Michael <msteward@fmi.com>; Krueger, Christian <ckrueger@fmi.com>; Sokulsky, Kariann <ksokulsk@fmi.com>; Mercer, David, NMENV <David.Mercer1@state.nm.us>; Fox, Joseph, NMENV <Joseph.Fox@state.nm.us>
Subject: [EXT] Request for Placement of Chino AOC HWCIU IRA Material - Discharge Plan 526 (DP-526)

Hi, Brad,
As discussed earlier today, this email provides a request just below to the NMED GWQB to place additional material onto the West Stockpile, as an extension of the 2019 Whitewater Creek Interim Removal Action (IRA) and its material placement. The string of emails below are a combination of this material placement history as well as the NMED AOC approved supplemental IRA to the Whitewater Creek IRA. Supporting documentation is provided as attachments for IRA site; NMED approval of extended IRA (attached email and also below), Location figures, DP 526 material placement location, and HWCIU soil characterization data (2000 AOC HWCIU RI).

> Pursuant to DP-526, Condition No. 5, Freeport-McMoRan Chino Mines Company (Chino) requests permission to place approximately 6,000 cubic yards of material from Bayard Canyon, a tributary to Whitewater Creek and part of the HWCIU, on the West Stockpile. The material will be removed in accordance with the 2018 Whitewater Creek Interim Removal Action (IRA) Workplan for the Hanover/Whitewater Creek Investigation Unit (HWCIU) under the Chino Administrative Order on Consent (AOC). The material will be temporarily staged at the Groundhog Mine Site section of haul road, as used for the Whitewater Creek IRA staging, to consolidate for haulage to the West Stockpile by larger haul trucks. Chino proposes to place this material on the West Stockpile in the same location as the Whitewater Creek IRA material. In Bayard Canyon, Chino has identified additional hot spots for mass removal at old prospect pits located on the attached 1951 USGS map cutout. The residual stockpile material is comprised of distinctive silicified jasperoid massive vein material mineralized with copper, lead and zinc minerals. This canyon is characterized in the 2000 HWCIU Remedial Investigation and the 2006 draft HWCIU IRA workplan. The transport of materials is scheduled to begin in late May 2021 and is anticipated to be completed in early June 2021. New Mexico Environment Department's Ground Water Quality Bureau AOC Group provided approval of this additional removal action as continuation of the Whitewater Creek IRA on April 14, 2021.
>
> Pursuant to the requirements in Condition No. 5 of DP-526, Chino is enclosing the following information:
> - The total metal analyses for Bayard Canyon samples from the Chino AOC Phase 1 Risk Investigation Report for the HWCIU acid/base accounting and SPLP data provided from the DP 526 Condition 5 placement request letter from Chino Mines for the Whitewater Creek IRA material.
> - A location map for the proposed placement of these materials on the West Stockpile.
> - Link to the 2018 HWCIU IRA Workplan
>   - https://www.fcx.com/sites/fcx/files/documents/chino/2018/20180524-001.pdf
> - Additionally, Chino will report monthly volumes and update placement location in the quarterly monitoring report for DP-526.

Due to the scale of Chino's West Stockpile and the relative small quantity of the IRA material, the proposed stockpile material will not change the overall chemistry of the West Stockpile.

For any questions, please contact me, or David Mercer.
Thanks,
Pam

From: Reid, Brad, NMENV <brad.reid@state.nm.us>

Sent: Friday, November 16, 2018 11:55 AM
To: Pinson, Pam D. <ppinson@fmi.com>; Mercer, David, NMENV <David.Mercer1@state.nm.us>; Fox, Joseph, NMENV <Joseph.Fox@state.nm.us>; Vollbrecht, Kurt, NMENV<kurt.vollbrecht@state.nm.us>
Cc: Krueger, Christian <ckrueger@fmi.com>; Sokulsky, Kariann <ksokulsk@fmi.com>
Subject: RE: DP526 Request for Placement of Chino AOC

Pam,
Thank you for the update to the submittal. Changes to the proposal as described in your e-mail and attached figure are approved.
As stated before, please report volumes and final placement locations in quarterly monitoring reports in accordance with DP-526.

Brad Reid, Geologist
Mining Environmental Compliance Section / PO Box 5469 / Santa Fe, NM / 87502
(505) 827-2963 / brad.reid@state.nm.us

From: Pinson, Pam D. <ppinson@fmi.com>
Sent: Monday, November 12, 2018 1:57 PM
To: Reid, Brad, NMENV <brad.reid@state.nm.us>; Mercer, David, NMENV <David.Mercer1@state.nm.us>; Fox, Joseph, NMENV <Joseph.Fox@state.nm.us> **Cc:** Krueger, Christian <ckrueger@fmi.com>; Sokulsky, Kariann <ksokulsk@fmi.com> **Subject:** [EXT] RE: DP526 Request for Placement of Chino AOC

Brad,
As discussed last Thursday, the earlier approved placement site for the Whitewater Creek IRA material can no longer be used due to adjacent Lee Hill Pit slope wall issues. Please find attached the new proposed placement site(s) which are also covered under DP 526. The material will be blended with rock at the current active Estrella Pit shovel area and hauled to the South Stockpile for leaching. The other two sites targeted on the West Stockpile per the provided figure are contingency backup sites if or when the shovel pit area is not accessible. As per an earlier communication, the IRA volume estimate has increased to over 100,000 cubic yards. Chino will report volumes and final placement locations in quarterly monitoring reports in accordance with DP-526 .
Thank you, Pam

Pam Pinson
Senior Environment Engineer Chino Mines Company
575-912-5213
ppinson@fmi.com

From: Reid, Brad, NMENV <brad.reid@state.nm.us>
Sent: Thursday, August 30, 2018 10:58 AM

Pinson, Pam D. <ppinson@fmi.com>; Mercer, David, NMENV <David.Mercer1@state.nm.us>; Fox, Joseph, NMENV <Joseph.Fox@state.nm.us>; Vollbrecht, Kurt, NMENV <kurt.vollbrecht@state.nm.us>
Cc: Voss, Alicia <avoss@fmi.com>; Krueger, Christian <ckrueger@fmi.com>; Sokulsky, Kariann <ksokulsk@fmi.com>; Shepherd, Christa <cshepher@fmi.com>
Subject: RE: DP526 Request for Placement of Chino AOC

Pam,
Thank you for the submittal; NMED received a hard copy of the request on August 17, 2018. Placement of approximately 75,000 cubic yards of Chino AOC HWCIU IRA material from Whitewater Creek on the West Waste Rock Stockpile is approved.
Please report volumes and final placement locations in quarterly monitoring reports in accordance with DP-526.

Brad Reid, Geologist
Mining Environmental Compliance Section / PO Box 5469 / Santa Fe, NM / 87502
(505) 827-2963 / brad.reid@state.nm.us

From: Pinson, Pam D. <ppinson@fmi.com>
Sent: Friday, August 10, 2018 2:23 PM
To: Reid, Brad, NMENV <brad.reid@state.nm.us>; Mercer, David, NMENV <David.Mercer1@state.nm.us>; Fox, Joseph, NMENV <Joseph.Fox@state.nm.us>
Cc: Voss, Alicia <avoss@fmi.com>; Krueger, Christian <ckrueger@fmi.com>; Sokulsky, Kariann <ksokulsk@fmi.com>; Shepherd, Christa <cshepher@fmi.com>
Subject: DP526 Request for Placement of Chino AOC

Brad,
Please find the attached letter provided under DP 526, with required information pursuant to Condition 5 for placement of Whitewater Creek IRA material on the West Stockpile. The certified letter will follow shortly through USPO. For any questions, please contact me or David.
Thanks Pam

Pam Pinson
Senior Environment Engineer Chino Mines Company
575-912-5213
ppinson@fmi.com

From: Mercer, David, NMENV <David.Mercer1@state.nm.us>
Sent: Monday, April 12, 2021 3:17 PM

To: Steward, Michael <msteward@fmi.com>; Fox, Joseph, NMENV <Joseph.Fox@state.nm.us>
Cc: Pinson, Pam D. <ppinson@fmi.com>; Petra Sanchez <sanchez.petra@epa.gov>
Subject: [External] Re: Bayard Canyon IRA proposal

Caution: External Email

Good afternoon Mike,

Joe and I have looked over the information you provided and the related previous work plan for IRA removal action. We approve the Bayard Canyon IRA project as you described.

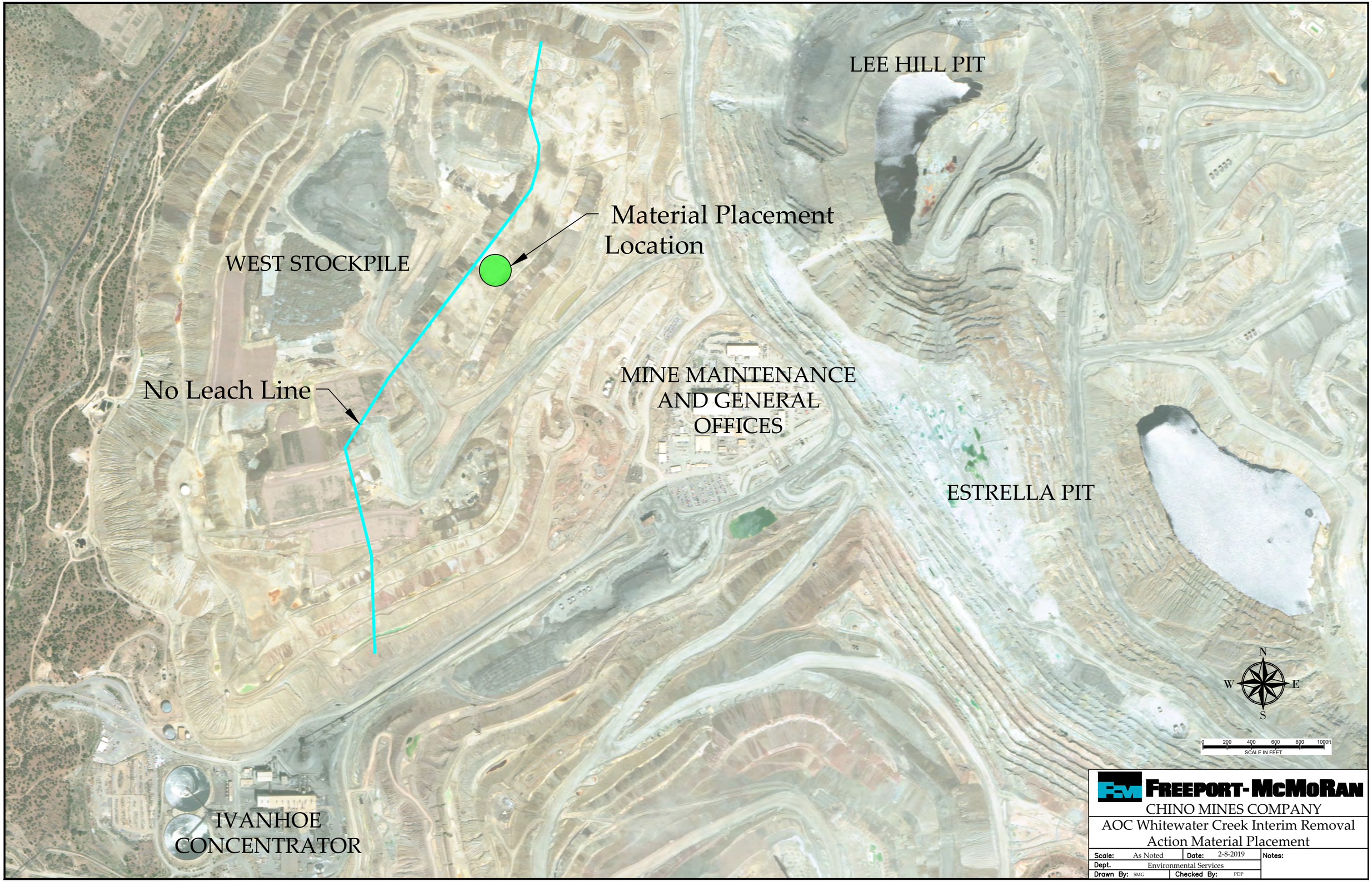
Please let us know when you expect work to begin, and I will plan on coming out to observe.

Thank you,
David

From: Steward, Michael <msteward@fmi.com>
Sent: Friday, April 9, 2021 9:42 AM
To: Fox, Joseph, NMENV <Joseph.Fox@state.nm.us>; Mercer, David, NMENV <David.Mercer1@state.nm.us>
Cc: Pinson, Pam D. <ppinson@fmi.com>; Petra Sanchez <sanchez.petra@epa.gov>
Subject: [EXT] Bayard Canyon IRA proposal

Joe and David,
As discussed February 2020 in the location of Bayard Canyon where it confluences with Lucky Bill Canyon, Chino has identified remnant legacy stockpiles located at old small mine workings/prospect pits. Please see attached location figure. Note that Bayard Canyon confluences with Whitewater Creek to the south in the town of Bayard. These piles are a source of lead from the galena mineral found in the red jasperiod massive vein that also naturally surfaces along Bayard Canyon on the uplands on the east side of the canyon drainage. This red jasperoid vein is carried in the Groundhog fault that runs on strike with Bayard Canyon and is at or near the ground surface until only the southerly dipping overlying younger volcanic formations is exposed. Lead concentrations in Bayard Canyon and downstream Whitewater Creek as identified in the 2000 HWCIU RI, was originally thought to be attributable to the exposed Groundhog Fault vein in Bayard Canyon. There are 11 old mine working or digging sites into the vein that are located on the 1951 USGS map (see attachment). Chino proposes to utilize the 2018 HWCIU Whitewater Creek IRA workplan 20180524-001.pdf (fcx.com) for removal/remediation objectives which addresses impacted sites that can source into the creek. Similar site soil/rock borrow material will backfill these sites to re-establish stormwater runoff surface. A similar approach was previously used for the Tenderfoot and Groundhog sites as documented in the 2008 IRA completion reports. These objectives include post removal sampling and lab analysis, as well as photo documentation of post removal sites to be submitted in a supplemental completion report to the Whitewater Creek IRA completion report and in adherence to the 2018 workplan. The supplemental completion report will also propose as follow up to the hot spot removals, sampling of Bayard Canyon drainage sediment to document any attenuation of lead concentrations over time to levels that are more representative of background values that also source to the drainage from the mineralized Groundhog fault.
Removed material will be hauled to the Chino Mine's West Stockpile site as part of the Whitewater Creek IRA process. Chino will coordinate approval to place materials in the mine's stockpile with NMED GWQB. The targeted removal sites are small allowing revegetation from the surrounding vegetation community to provide propagules.
Chino requests approval to complete this work and looks forward to receiving your response.
Thank you,
Mike

Michael Steward
Freeport Minerals Corporation
Mobile: 520-437-3005
msteward@fmi.com



FREEPORT-McMoRan

CHINO MINES COMPANY

AOC Whitewater Creek Interim Removal Action Material Placement

Scale: As Noted	Date: 2-8-2019	Notes:
Dept. Environmental Services		
Drawn By: SMG	Checked By: PDP	

ARCADIS BBL

Attachment 4

SPLP Data (Golder 2006)

TABLE 4
SPLP RESULTS FOR BAYARD CHANNEL

DISCHARGE PERMIT 526
CHINO MINES COMPANY - HWC

Sample ID	Easting	Northing	Sample Date	Ag	Al	Total Alkalinity as CaCO3	Bicarbonate as CaCO3	Carbonate as CaCO3	As	B	Ba	Be	Ca	Cd	Cl-	Co	Cr	Cu	Fe
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
BAY-2006-TP01 0-4'	2,632,940.4	640,392.5	4/3/2006	< 0.005	< 0.03	27.3	27.3	< 1	< 0.025	< 0.04	0.0118	< 0.002	25.4	< 0.002	0.43	< 0.006	< 0.006	< 0.01	< 0.06
BAY-2006-TP04 0-2'	2,632,574.5	639,600.3	4/4/2006	< 0.005	0.04	37.6	37.6	< 1	< 0.025	< 0.04	0.0105	< 0.002	25.4	< 0.002	0.86	< 0.006	< 0.006	< 0.01	< 0.06
BAY-2006-TP08 0-1.5'	2,632,836.2	641,036.7	4/6/2006	< 0.005	< 0.03	27.4	27.4	< 1	< 0.025	< 0.04	0.0239	< 0.002	118	< 0.002	0.2	< 0.006	< 0.006	< 0.01	< 0.06
BAY-2006-TP09 0-1.5'	2,632,668.8	641,398.3	4/6/2006	< 0.005	< 0.03	40.4	40.4	< 1	< 0.025	< 0.04	0.015	< 0.002	90.8	< 0.002	1.25	< 0.006	< 0.006	< 0.01	< 0.06
BAY-2006-TP11 0-2.5'	2,632,534.0	642,930.9	4/7/2006	< 0.005	0.11	25.9	25.9	< 1	< 0.025	< 0.04	0.0025	< 0.002	11.3	< 0.002	0.46	< 0.006	< 0.006	< 0.01	< 0.06

TABLE 4
SPLP RESULTS FOR BAYARD CHANNEL

DISCHARGE PERMIT 526
CHINO MINES COMPANY - HWC

Sample ID	F-	Hardness	Hg	K	Li	Mg	Mn	Mo	Na	Ni	Pb	pH	Se	Specific Conductance	SO4	TDS	V	Zn
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	s.u.	mg/L		mg/L	mg/L	mg/L	mg/L
BAY-2006-TP01 0-4'	0.547	67.2	< 0.0001	1.26	< 0.02	0.9	< 0.004	< 0.008	0.55	< 0.01	< 0.0075	5.46	< 0.003	152	39.6	84	< 0.005	< 0.01
BAY-2006-TP04 0-2'	0.629	71.6	< 0.0001	1.18	< 0.02	1.96	< 0.004	< 0.008	1.06	< 0.01	< 0.0075	6.26	< 0.003	156	32.4	86	< 0.005	< 0.01
BAY-2006-TP08 0-1.5'	0.442	308	< 0.0001	1.98	< 0.02	3.07	< 0.004	< 0.008	1.31	< 0.01	< 0.0075	6.10	< 0.003	585	260	404	< 0.005	< 0.01
BAY-2006-TP09 0-1.5'	0.194	231	< 0.0001	1.3	< 0.02	1.14	< 0.004	< 0.008	0.89	< 0.01	< 0.0075	4.46	< 0.003	473	191	324	< 0.005	< 0.01
BAY-2006-TP11 0-2.5'	0.23	32.2	< 0.0001	1	< 0.02	0.97	< 0.004	0.011	2.22	< 0.01	< 0.0075	6.86	< 0.003	78.4	11	31	< 0.005	< 0.01

TABLE 4.2-12a

MEASURED SEDIMENT DATA FOR <250 um SIZE FRACTION FROM IU TRIBUTARIES

Sample No.	Size Fraction (um)	Sample Type	Depth Interval (inches)	Mass (g)	Aluminum (Al)			Antimony (Sb)			Arsenic (As)			Barium (Ba)			Beryllium (Be)			Boron (B)			Cadmium (Cd)			Chromium (Cr)			Cobalt (Co)			Copper (Cu)			Iron (Fe)		
					Conc. (mg/kg)	Rept. Limit (mg/kg)	Qualifier	Conc. (mg/kg)	Rept. Limit (mg/kg)	Qualifier	Conc. (mg/kg)	Rept. Limit (mg/kg)	Qualifier	Conc. (mg/kg)	Rept. Limit (mg/kg)	Qualifier	Conc. (mg/kg)	Rept. Limit (mg/kg)	Qualifier	Conc. (mg/kg)	Rept. Limit (mg/kg)	Qualifier	Conc. (mg/kg)	Rept. Limit (mg/kg)	Qualifier	Conc. (mg/kg)	Rept. Limit (mg/kg)	Qualifier	Conc. (mg/kg)	Rept. Limit (mg/kg)	Qualifier	Conc. (mg/kg)	Rept. Limit (mg/kg)	Qualifier	Conc. (mg/kg)	Rept. Limit (mg/kg)	Qualifier
Whitewater Creek (Tributaries - P1)																																					
U 02 - 5 1 00	< 250	TTC	0 to 6	348.8	7,550	5.22	—	4.95	9.9	UJ	14.5	1.2	—	96.5	0.6	—	0.7	0.08	J	14.6	5.54	—	7.5	0.82	—	25.6	1.38	—	21.2	1.44	—	263	1.08	—	58,600	4.12	—
U 02 - 5 1 01	< 250	TTC	0 to 6	287.2	6,190	5.22	—	4.95	9.9	UJ	24.1	1.5	—	175	0.6	—	0.195	0.39	UJ	25.1	5.54	—	4.1	0.82	J	23.7	1.38	—	4.2	1.44	J	364	1.08	—	88,300	4.12	—
U 02 - 5 1 02	< 250	TTC	0 to 6	264.6	17,100	5.22	—	4.95	9.9	UJ	7.9	0.6	—	179	0.6	—	1.2	0.08	—	12.3	5.54	—	5	0.82	—	20.5	1.38	—	15.3	1.44	—	336	1.08	—	33,500	4.12	—
U 02 - 5 1 03	< 250	TTC	0 to 6	331.4	22,300	5.22	—	4.95	9.9	UJ	12.8	0.9	—	119	0.6	—	2.2	0.08	—	24.2	5.54	—	5.2	0.82	J	26.8	1.38	—	18.7	1.44	—	2,050	1.08	—	58,300	4.12	—
U 02 - 5 1 04	< 250	TTC	0 to 6	327.6	17,300	5.2	—	4.95	9.9	UJ	2.7	0.3	—	176	0.6	—	0.43	0.86	UJ	14	5.5	J	1.9	0.8	—	13.8	1.4	—	12.8	1.4	—	224	1.1	—	30,600	4.1	—
U 02 - 5 1 05	< 250	TTC	0 to 6	411.9	10,900	5.2	—	4.95	9.9	UJ	4.5	0.3	—	117	0.6	—	0.27	0.54	UJ	13.1	5.5	J	1.1	0.8	J	12.6	1.4	—	14	1.4	—	476	1.1	—	42,200	4.1	—
U 02 - 5 1 08	< 250	TTC	0 to 6	253.0	11,100	5.2	—	4.95	9.9	UJ	3	0.3	—	118	0.6	—	0.335	0.67	UJ	7.5	5.5	J	2.8	0.8	—	12.7	1.4	—	13.6	1.4	—	446	1.1	—	30,200	4.1	—
U 02 - 5 1 09	< 250	TTC	0 to 6	354.2	17,600	5.22	—	4.95	9.9	UJ	1.2	0.3	J	141	0.6	—	0.32	0.64	U	10.3	5.54	—	1.9	0.82	J	15.5	1.38	—	9.3	1.44	—	177	1.08	—	28,100	4.12	—
U 02 - 5 1 10	< 250	TTC	0 to 6	289.0	10,100	5.22	—	4.95	9.9	UJ	0.9	0.3	—	136	0.6	—	0.25	0.5	U	10	5.54	—	0.41	0.82	UJ	11.4	1.38	—	8.7	1.44	—	300	1.08	—	22,900	4.12	—
U 02 - 5 1 11	< 250	TTC	0 to 6	209.0	6,550	5.22	—	10.2	9.9	J	3.1	0.3	—	94.3	0.6	—	0.54	0.08	—	15.5	5.54	—	2.3	0.82	J	12.9	1.38	—	17.1	1.44	—	2,500	1.08	—	32,900	4.12	—
Whitewater Creek (Tributaries - P2)																																					
U 03 - 5 2 00	< 250	TTC	0 to 6	220.1	8,750	5.22	—	4.95	9.9	UJ	0.95	1.9	U	138	0.6	—	0.6	0.08	—	7.9	5.54	—	1.3	0.82	—	11	1.38	—	15.2	1.44	—	1,080	1.08	—	27,000	4.12	—
U 03 - 5 2 01	< 250	TTC	0 to 6	190.5	16,100	5.2	—	10.8	9.9	J	8.1	0.6	—	168	0.6	—	0.65	1.3	UJ	9	5.5	J	9.5	0.8	—	9.9	1.4	—	27.7	1.4	—	2,300	1.1	—	29,700	4.1	—
Whitewater Creek (Bayard Canyon - P0)																																					
U 03 - 1 0 00	< 250	TTC	0 to 6	178.7	5,960	5.2	—	4.95	9.9	UJ	6.5	0.6	—	239	0.6	—	0.265	0.53	U	2.75	5.5	U	2.7	0.8	—	6.1	1.4	—	4.6	1.4	—	392	1.1	—	10,900	4.1	—
U 03 - 1 0 01	< 250	TTC	0 to 6	186.1	8,460	5.2	—	4.95	9.9	UJ	4.7	0.6	—	161	0.6	—	0.29	0.58	U	2.75	5.5	U	3	0.8	—	7.4	1.4	—	5.7	1.4	—	414	1.1	—	13,500	4.1	—
U 03 - 1 0 02	< 250	TTC	0 to 6	141.8	27,700	5.2	—	4.95	9.9	UJ	3.4	0.3	—	207	0.6	—	1.1	0.1	—	10.5	5.5	—	1.3	0.8	—	13.9	1.4	—	6.4	1.4	—	224	1.1	—	19,400	4.1	—
U 03 - 3 0 03	< 250	SP	0 to 6	741.5	4,070	5.2	—	4.95	9.9	UJ	2.3	0.3	—	90.5	0.6	—	0.29	0.58	U	2.75	5.5	U	0.9	0.8	—	4	1.4	—	4.2	1.4	—	222	1.1	—	5,610	4.1	—
U 03 - 3 0 04	< 250	SP	0 to 6	157.4	6,610	5.22	—	4.95	9.9	UJ	4	0.3	J	125	0.6	—	0.55	0.08	—	2.75	5.5	U	1.7	0.82	—	6.1	1.38	—	6.2	1.44	—	551	1.08	—	10,300	4.12	—
Whitewater Creek (Tributaries - P5)																																					
U 03 - 5 5 00	< 250	SP	0 to 6	600.1	13,400	5.2	—	4.95	9.9	UJ	1.2	0.3	—	191	0.6	—	0.47	0.1	—	6.1	5.5	—	1.5	0.8	—	19.7	1.4	—	14	1.4	—	354	1.1	—	17,600	4.1	—
U 03 - 5 5 01	< 250	SP	0 to 6	231.0	10,900	5.2	—	4.95	9.9	UJ	4.7	0.3	—	174	0.6	—	0.91	0.1	—	0.56	5.5	U	7.5	0.8	—	13.6	1.4	—	11.6	1.4	—	2,160	1.1	—	22,200	4.1	—
U 03 - 5 5 02	< 250	SP	0 to 6	245.9	16,600	5.2	—	4.95	9.9	UJ	5.2	0.6	—	195	0.6	—	0.93	0.1	—	0.56	5.7	U	6.2	0.8	—	16.9	1.4	—	8.6	1.4	—	2,310	1.1	—	28,600	4.1	—
U 03 - 5 5 03	< 250	SP	0 to 6	247.3	31,400	5.2	—	4.95	9.9	UJ	4.5	0.6	—	226	0.6	—	1.5	0.1	—	0.56	8.8	U	7.1	0.8	—	45.1	1.4	—	14	1.4	—	2,730	1.1	—	77,900	4.1	—

TABLE 4.2-12a (Continued)

MEASURED SEDIMENT DATA FOR <250 um SIZE FRACTION FROM IU TRIBUTARIES

Sample No.	Size Fraction (um)	Sample Type	Depth Interval (inches)	Mass (g)	Lead (Pb)			Manganese (Mn)			Mercury (Hg)			Molybdenum (Mo)			Nickel (Ni)			Selenium (Se)			Silver (Ag)			Thallium (Tl)			Vanadium (V)			Zinc (Zn)		
					Conc. (mg/kg)	Rept. Limit (mg/kg)	Qualifier	Conc. (mg/kg)	Rept. Limit (mg/kg)	Qualifier	Conc. (mg/kg)	Rept. Limit (mg/kg)	Qualifier	Conc. (mg/kg)	Rept. Limit (mg/kg)	Qualifier	Conc. (mg/kg)	Rept. Limit (mg/kg)	Qualifier	Conc. (mg/kg)	Rept. Limit (mg/kg)	Qualifier	Conc. (mg/kg)	Rept. Limit (mg/kg)	Qualifier	Conc. (mg/kg)	Rept. Limit (mg/kg)	Qualifier	Conc. (mg/kg)	Rept. Limit (mg/kg)	Qualifier	Conc. (mg/kg)	Rept. Limit (mg/kg)	Qualifier
Whitewater Creek (Tributaries - P1)																																		
U 02 - 5 1 00	< 250	TTC	0 to 6	348.8	408	13.8	—	4,300	0.32	—	0.025	0.05	U	8	2.66	—	16.8	6.34	—	1.5	0.26	—	0.35	0.7	U	1.1	2.2	UJ	24.3	1.66	J	3,130	0.72	—
U 02 - 5 1 01	< 250	TTC	0 to 6	287.2	202	13.8	—	470	0.32	—	0.025	0.05	U	22.1	2.66	—	3.15	6.3	U	5.3	0.26	—	0.35	0.7	U	1.1	2.2	UJ	26.9	1.66	J	1,720	0.72	—
U 02 - 5 1 02	< 250	TTC	0 to 6	264.6	197	13.8	—	2,710	0.32	—	0.06	0.05	—	7.9	2.66	—	11.6	6.34	—	1	0.26	J	0.35	0.7	U	0.11	0.22	UJ	31.4	1.66	—	2,060	0.72	—
U 02 - 5 1 03	< 250	TTC	0 to 6	331.4	397	13.8	—	4,010	0.32	—	0.1	0.05	—	21.1	2.66	—	14.8	6.34	—	1.4	0.26	—	0.35	0.7	U	1.1	2.2	UJ	38.8	1.66	—	2,370	0.72	—
U 02 - 5 1 04	< 250	TTC	0 to 6	327.6	289	13.8	—	2,360	0.3	—	0.025	0.05	U	1.35	2.7	U	8.65	17.3	U	0.45	0.3	J	0.8	1.6	U	0.11	0.22	UJ	25.8	1.7	—	699	0.7	—
U 02 - 5 1 05	< 250	TTC	0 to 6	411.9	181	13.8	—	1,590	0.3	—	0.025	0.05	U	15.4	2.7	—	6.3	12.6	UJ	1.1	0.3	J	1.15	2.3	UJ	0.11	0.22	UJ	29	1.7	—	690	0.7	—
U 02 - 5 1 08	< 250	TTC	0 to 6	253.0	165	13.8	—	1,900	0.3	—	0.025	0.05	U	12.7	2.7	—	9.95	19.9	U	0.76	0.3	J	0.95	1.9	U	0.11	0.22	UJ	27.6	1.7	—	1,290	0.7	—
U 02 - 5 1 09	< 250	TTC	0 to 6	354.2	143	13.8	—	1,970	0.32	—	0.025	0.05	U	9.4	2.66	—	3.15	6.3	U	0.13	0.26	U	0.35	0.7	U	0.11	0.22	UJ	37.4	1.66	—	720	0.72	—
U 02 - 5 1 10	< 250	TTC	0 to 6	289.0	192	13.8	—	1,300	0.32	—	0.025	0.05	U	15.6	2.66	J	3.15	6.3	U	0.76	0.26	J	0.35	0.7	U	0.11	0.22	UJ	34.5	1.66	—	401	0.72	—
U 02 - 5 1 11	< 250	TTC	0 to 6	209.0	131	13.8	—	901	0.32	—	0.025	0.05	U	16.6	2.66	—	9.2	6.34	—	1.8	0.26	—	0.35	0.7	U	0.11	0.22	UJ	25.7	1.66	—	585	0.72	—
Whitewater Creek (Tributaries - P2)																																		
U 03 - 5 2 00	< 250	TTC	0 to 6	220.1	348	13.8	—	2,180	0.32	—	0.025	0.05	U	19.1	2.66	—	3.15	6.3	U	1.2	0.26	J	0.95	1.9	U	0.11	0.22	UJ	24.4	1.66	—	494	0.72	—
U 03 - 5 2 01	< 250	TTC	0 to 6	190.5	1,430	13.8	—	2,830	0.3	—	0.09	0.1	—	17.6	2.7	—	11.3	22.6	U	0.62	0.3	—	4.8	0.7	—	1.1	2.2	UJ	26.4	1.7	—	5,690	0.7	—
Whitewater Creek (Bayard Canyon - P0)																																		
U 03 - 1 0 00	< 250	TTC	0 to 6	178.7	1,930	13.8	—	686	0.3	—	0.025	0.05	U	12.4	2.7	—	3.15	6.3	U	0.13	0.26	U	1.9	0.7	J	0.11	0.22	UJ	36.9	1.7	—	717	0.7	—
U 03 - 1 0 01	< 250	TTC	0 to 6	186.1	1,750	13.8	—	703	0.3	—	0.05	0.1	—	10	2.7	—	3.15	6.3	U	0.13	0.26	U	1.8	0.7	J	0.11	0.22	UJ	37.7	1.7	—	823	0.7	—
U 03 - 1 0 02	< 250	TTC	0 to 6	141.8	518	13.8	—	488	0.3	—	0.025	0.05	U	2.7	2.7	—	9.6	6.3	—	0.13	0.26	U	1.2	0.7	J	0.11	0.22	UJ	37	1.7	—	338	0.7	—
U 03 - 3 0 03	< 250	SP	0 to 6	741.5	496	13.8	—	457	0.3	—	0.025	0.05	U	6.3	2.7	—	3.15	6.3	U	0.13	0.26	U	0.35	0.7	UJ	0.11	0.22	UJ	17.5	1.7	—	191	0.7	—
U 03 - 3 0 04	< 250	SP	0 to 6	157.4	1,160	13.8	—	573	0.32	—	0.025	0.05	U	7.1	2.66	—	3.15	6.3	U	0.27	0.26	J	0.88	0.7	—	0.11	0.22	U	28.8	1.66	—	389	0.72	—
Whitewater Creek (Tributaries - P5)																																		
U 03 - 5 5 00	< 250	SP	0 to 6	600.1	24.8	1.1	—	363	0.3	—	0.025	0.05	U	7.2	2.7	—	12.7	6.3	—	0.28	0.56	U	0.375	0.75	U	0.11	0.22	UJ	28.3	1.7	—	96	0.7	—
U 03 - 5 5 01	< 250	SP	0 to 6	231.0	88.1	13.8	—	182	0.3	—	0.025	0.05	U	40.1	2.7	—	12.7	6.3	—	2.6	0.3	—	0.35	0.7	U	0.22	0.2	J	18.9	1.7	—	144	0.7	—
U 03 - 5 5 02	< 250	SP	0 to 6	245.9	77.3	14	—	156	0.3	—	0.08	0.1	—	42.2	2.7	—	8.8	6.3	—	2	0.3	—	1.4	0.7	—	0.11	0.22	UJ	19.8	1.7	—	137	0.7	—
U 03 - 5 5 03	< 250	SP	0 to 6	247.3	94.7	14	—	263	0.3	—	0.06	0.1	—	81.3	2.7	—	19.5	6.3	J	3.1	0.5	—	0.9	0.7	J	0.11	0.22	UJ	35.8	1.7	—	193	0.7	—

U The analyte was analyzed for, but was not detected above the level of the asociated value. The associated value is either the sample quantitation limit or the sample detection limit. 1/2 the reporting limit was substituted for calculations.
J The associated value is an estimated quantity.
UJ The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R The data are unusable. (Note: Analyte may or may not be present.)

SP Surface Point
TTC Tributary Transect Composite

— No result or qualifier

APPENDIX E

Analytical Laboratory Results

Table E-1: Appendix E
Post-Removal Sample Laboratory Results
Bayard Canyon Supplemental Interim Removal Action Completion Report
Hanover Whitewater Creek Investigation Unit

Sample ID	Location	Sample Date	Removal Area Group	Sieve Size (µm)	Sample Taken	Sample Depth (in)	Total Organic Carbon (%)	pH	pCu*	Arsenic (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Iron (mg/kg)	Lead (mg/kg)
BC-A-01_05172021-10	BC-A-01	5/17/2021	A	2000	Sidewall	0-6	0.848	6.46	6.50	2.31 D	0.53	4.11	384	12100	2390
BC-A-01_05172021-60	BC-A-01	5/17/2021	A	250	Sidewall	0-6	0.798	6.43	6.22	3.07 D	0.67	4.93	482	13500	2920
BC-A-02_05172021-10	BC-A-02	5/17/2021	A	2000	Sidewall	0-6	0.889	6.5	8.08	1.75 D	0.47	3.04	101	10000	1990
BC-A-02_05182021-60	BC-A-02	5/18/2021	A	250	Sidewall	0-6	1.03	6.42	7.72	2.18 D	0.54	3.71	129	10300	2290
BC-A-03_05172021-10	BC-A-03	5/17/2021	A	2000	Sidewall	0-6	0.409	7.09	9.66	1.19 D	0.17 J	4.52	41.2	9500	98.1
BC-A-03_05172021-60	BC-A-03	5/17/2021	A	250	Sidewall	0-6	0.617	6.99	9.23	1.18 D	0.17 J	5.48	55.1	10200	130
BC-A-04_05172021-10	BC-A-04	5/17/2021	A	2000	Sidewall	0-6	0.705	6.67	8.15	1.99 D	0.4	4.26	109	10100	941
BC-A-04_05172021-60	BC-A-04	5/17/2021	A	250	Sidewall	0-6	0.907	6.7	7.86	2.47 D	0.44	5.09	144	10700	1200
BC-A-05_05172021-10	BC-A-05	5/17/2021	A	2000	Sidewall	0-6	0.81	6.69	8.18	1.5 D	0.49	3.45	108	9970	1100
BC-A-05_05172021-60	BC-A-05	5/17/2021	A	250	Sidewall	0-6	0.898	6.63	7.82	1.7 D	0.56	4.41	140	10400	1410
BC-B-01_05172021-10	BC-B-01	5/17/2021	B	2000	Sidewall	0-6	1	7.5	8.48	3.01 D	1.1	4.39	160	12200	838
BC-B-01_05172021-60	BC-B-01	5/17/2021	B	250	Sidewall	0-6	1.08	7.42	7.70	4.61 D	1.66	8.04	295	15900	1500
BC-B-02_05172021-10	BC-B-02	5/17/2021	B	2000	Sidewall	0-6	0.907	6.29	7.05	2.5 D	1.04	5.19	208	12000	449
BC-B-02_05172021-60	BC-B-02	5/17/2021	B	250	Sidewall	0-6	1.05	6.2	6.89	3.07 D	1.1	7.33	222	14300	617
BC-B-03_05172021-10	BC-B-03	5/17/2021	B	2000	Sidewall	0-6	0.2	8.25	11.38	1.13 D	< 0.40 U	8.05	23.6	15000	110
BC-B-03_05172021-60	BC-B-03	5/17/2021	B	250	Sidewall	0-6	0.436	8.18	10.45	1.54 D	0.23 J	11.5	50	17300	166
BC-B-04_05172021-10	BC-B-04	5/17/2021	B	2000	Sidewall	0-6	0.307	8.3	10.94	1.22 D	0.2 J	5.74	35.9	11400	39.8
BC-B-04_05172021-60	BC-B-04	5/17/2021	B	250	Sidewall	0-6	0.504	8.32	10.74	1.32 D	0.2 J	7.45	43.6	11800	50.7
BC-B-05_05172021-10	BC-B-05	5/17/2021	B	2000	Floor	0-1	0.798	7.02	8.22	1.99 D	0.58	6.99	136	15000	361
BC-B-05_05172021-60	BC-B-05	5/17/2021	B	250	Floor	0-1	0.998	6.71	7.45	2.45 D	0.73	9.01	207	17500	514
BC-D-01_05182021-10	BC-D-01	5/18/2021	D	2000	Sidewall	0-6	2.22 D	7.75	8.44	2.17 D	1.49 JD	8.16 D	202 D	18700 D	1510
BC-D-01_05182021-60	BC-D-01	5/18/2021	D	250	Sidewall	0-6	2.52 D	7.82	8.36	2.43 D	0.93	8.98	230	17500	1670 D
BC-D-02_05182021-10	BC-D-02	5/18/2021	D	2000	Sidewall	0-6	2.79 D	6.16	7.73	1.28 D	0.33 J	5.16	104	11300	45.9
BC-D-02_05182021-60	BC-D-02	5/18/2021	D	250	Sidewall	0-6	2.45 D	6.08	7.30	1.28 D	0.36 J	6.11	141	12100	63.3
BC-D-03_05182021-10	BC-D-03	5/18/2021	D	2000	Sidewall	0-6	2.1 D	7.26	6.92	30.5 D	0.53	5.94	510	21000	13900 E
BC-D-03_05182021-60	BC-D-03	5/18/2021	D	250	Sidewall	0-6	2.56 D	7.33	6.85	36.1 D	0.62	6.62	576	19700	11700 E
BC-D-04_05182021-10	BC-D-04	5/18/2021	D	2000	Sidewall	0-6	2.03 D	6.93	8.34	1.81 D	0.66	5.43	114	12300	265
BC-D-04_05182021-60	BC-D-04	5/18/2021	D	250	Sidewall	0-6	2.43 D	6.96	8.01	2.01 D	0.76	7.69	156	12400	268
BC-D-05_05182021-10	BC-D-05	5/18/2021	D	2000	Sidewall	0-6	1.74 D	6.53	7.27	6.08 D	0.29 J	6.1	209	12500	4070
BC-D-05_05182021-60	BC-D-05	5/18/2021	D	250	Sidewall	0-6	2.17 D	6.5	7.02	8.56 D	0.4	8.35	253	14400	4390
BC-D-06_05182021-10	BC-D-06	5/18/2021	D	2000	Floor	0-1	1.54 D	7.23	7.60	13 D	0.8	7.16	277	18200	19700 E
BC-D-06_05182021-60	BC-D-06	5/18/2021	D	250	Floor	0-1	2.22 D	7.17	7.32	18.3 D	0.68	9.82	337	18300	11500 E
BC-E-01_05182021-10	BC-E-01	5/18/2021	E	2000	Floor	0-1	2.11 D	5.89	6.61	13.6 D	0.38 J	6.82	221	18800	7870
BC-E-01_05182021-60	BC-E-01	5/18/2021	E	250	Floor	0-1	2.42 D	6.28	6.70	19.1 D	0.46	9.06	280	18400	9680
BC-F-01_05212021-10	BC-F-01	5/21/2021	F	2000	Sidewall	0-6	< 1.50 UD	6.63	6.71	8.08 D	19	5.76	368	24200	2630
BC-F-01_05212021-60	BC-F-01	5/21/2021	F	250	Sidewall	0-6	< 1.50 UD	6.59	6.23	10 D	21.8	7.19	541	24900	3020
BC-F-02_05212021-10	BC-F-02	5/21/2021	F	2000	Sidewall	0-6	1.55 D	7.49	8.38	8.01 D	2.16	5.55	173	17000	14200 D
BC-F-02_05212021-60	BC-F-02	5/21/2021	F	250	Sidewall	0-6	1.73 D	7.19	7.69	8.06 D	2.84	8.67	247	16500	4100
BC-F-03_05212021-10	BC-F-03	5/21/2021	F	2000	Sidewall	0-6	< 1.50 UD	8.1	9.17	14.2 D	0.66	6.86	142	14200	31200 D
BC-F-03_05212021-60	BC-F-03	5/21/2021	F	250	Sidewall	0-6	1.65 D	7.92	8.94	9.79 D	0.59	8.8	150	15400	4880
BC-F-04_05212021-10	BC-F-04	5/21/2021	F	2000	Sidewall	0-6	< 1.50 UD	7.11	8.23	11.7 D	1.55	5.48	145	15800	8300
BC-F-04_05212021-60	BC-F-04	5/21/2021	F	250	Sidewall	0-6	< 1.50 UD	7.07	7.88	15.8 D	1.8	6.53	190	17700	9010
BC-F-05_05212021-10	BC-F-05	5/21/2021	F	2000	Sidewall	0-6	< 1.50 UD	6.74	8.28	4.81 D	0.98	9.57	103	23000	2140
BC-F-05_05212021-60	BC-F-05	5/21/2021	F	250	Sidewall	0-6	< 1.50 UD	6.69	7.93	6.72 D	0.95	10.9	134	24200	2930
BC-F-06_05212021-10	BC-F-06	5/21/2021	F	2000	Sidewall	0-6	1.82 D	6.61	6.96	4.76 D	0.49	6.1	293	16900	1800
BC-F-06_05212021-60	BC-F-06	5/21/2021	F	250	Sidewall	0-6	< 1.50 UD	6.53	6.66	5.46 D	0.49	6.31	355	16300	2080
BC-F-07_05212021-10	BC-F-07	5/21/2021	F	2000	Sidewall	0-6	2.71 D	7.27	7.01	6.16 D	6.65	6.67	477	20700	3310
BC-F-07_05212021-60	BC-F-07	5/21/2021	F	250	Sidewall	0-6	< 1.50 UD	7.3	6.86	8.49 D	7.53	6.15	558	19000	4220
BC-F-08_05212021-10	BC-F-08	5/21/2021	F	2000	Sidewall	0-6	0.499 D	4.66	4.60	3.12 D	2.75	11.7	471	23700	949
BC-F-08_05212021-60	BC-F-08	5/21/2021	F	250	Sidewall	0-6	0.504 D	4.37	4.08	2.7 D	3.33	13.4	581	24800	1230
BC-F-09_05212021-10	BC-F-09	5/21/2021	F	2000	Sidewall	0-6	2.62 D	5.34	5.44	6.65 D	3.8 JD	8.44 D	391 D	21000 D	1420 D
BC-F-09_05212021-60	BC-F-09	5/21/2021	F	250	Sidewall	0-6	2.44 D	5.17	5.13	7.15 D	4.08 D	8.92 D	449 D	22900 D	1730 D
BC-F-10_05212021-10	BC-F-10	5/21/2021	F	2000	Sidewall	0-6	0.601 D	6.21	8.18	3.77 D	1.14	7.49	73.1	18800	1220
BC-F-10_05212021-60	BC-F-10	5/21/2021	F	250	Sidewall	0-6	0.697 D	6.17	7.64	5.12 D	1	7.63	113	17600	1800
BC-F-11_05212021-10	BC-F-11	5/21/2021	F	2000	Floor	0-1	0.697 D	6.93	7.41	22.8 D	2.66	7.86	255	22700	6700
BC-F-11_05212021-60	BC-F-11	5/21/2021	F	250	Floor	0-1	0.783 D	6.99	7.08	18.4 D	1.84	10.7	358	26900	9700
BC-F-12_05212021-10	BC-F-12	5/21/2021	F	2000	Floor	0-1	1.29 D	6.65	7.04	13.3 D	4.72 D	6.15 D	281 D	23500 D	11700 D
BC-F-12_05212021-60	BC-F-12	5/21/2021	F	250	Floor	0-1	0.492 D	6.59	6.75	16.5 D	3.53 JD	6.94 D	345 D	24500 D	14200 D
BC-F-13_05212021-10	BC-F-13	5/21/2021	F	2000	Floor	0-1	1.2 D	5.39	7.38	5.81 D	0.26 J	6.96	75.2	16400	1250
BC-F-13_05212021-60	BC-F-13	5/21/2021	F	250	Floor	0-1	1.58 D	5.38	7.11	4.48 D	0.27 J	6.5	94.5	14100	1750
BC-F-14_05252021-10	BC-F-14	5/25/2021	F	2000	Floor	0-1	1.39 D	6.4	6.00	13.2 D	18.2 D	16.9 D	569 D	30900 D	2430 D
BC-F-14_05252021-60	BC-F-14	5/25/2021	F	250	Floor	0-1	2.3 D	6.38	5.85	16.8 D	18 D	11.6 D	636 D	35000 D	3100 D
BC-G-01_05182021-10	BC-G-01	5/18/2021	G	2000	Floor	0-1	< 1.50 UD	7.79	10.31	1.64 D	< 0.40 U	6.58	41.1	10700	469

Table E-1: Appendix E
Post-Removal Sample Laboratory Results
Bayard Canyon Supplemental Interim Removal Action Completion Report
Hanover Whitewater Creek Investigation Unit

Sample ID	Location	Sample Date	Removal Area Group	Sieve Size (µm)	Sample Taken	Sample Depth (in)	Total Organic Carbon (%)	pH	pCu*	Arsenic (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Iron (mg/kg)	Lead (mg/kg)
BC-G-01_05182021-60	BC-G-01	5/18/2021	G	250	Floor	0-1	< 1.50 UD	7.77	9.89	2.03 D	0.17 J	8.16	58.2	12200	590
BC-H-01_05182021-10	BC-H-01	5/18/2021	H	2000	Sidewall	0-6	< 1.50 UD	6.19	6.20	12.8 D	2.45	8.96	402	22700	11600 D
BC-H-01_05182021-60	BC-H-01	5/18/2021	H	250	Sidewall	0-6	< 1.50 UD	6.14	6.28	7 D	2.89	9.66	359	22100	2840
BC-H-02_05182021-10	BC-H-02	5/18/2021	H	2000	Sidewall	0-6	< 1.50 UD	6.04	6.91	2.83 D	1.7	7.76	192	17000	710
BC-H-02_05182021-60	BC-H-02	5/18/2021	H	250	Sidewall	0-6	< 1.50 UD	6.32	7.02	3.22 D	1.54	7.89	219	16400	983
BC-H-03_05182021-10	BC-H-03	5/18/2021	H	2000	Sidewall	0-6	3 D	6.51	5.28	14.7 D	4.07	9.66	1160	24300	6920
BC-H-03_05182021-60	BC-H-03	5/18/2021	H	250	Sidewall	0-6	3.2 D	6.51	5.19	10.7 D	4.37	11.6	1250	23900	7050
BC-H-04_05182021-10	BC-H-04	5/18/2021	H	2000	Sidewall	0-6	2.27 D	5.6	4.50	7.72 D	4.2	8.77	1090	33000	25200 D
BC-H-04_05182021-60	BC-H-04	5/18/2021	H	250	Sidewall	0-6	2.63 D	5.48	4.19	9.7 D	5.12	11	1300	27200	7500
BC-H-05_05182021-10	BC-H-05	5/18/2021	H	2000	Floor	0-1	1.54 D	7.31	6.83	33.9 D	1.85	7.93	575	27900	28900 D
BC-H-05_05182021-60	BC-H-05	5/18/2021	H	250	Floor	0-1	< 1.50 UD	7.35	6.55	30.1 D	2.35	10.2	758	34300	33900 D
BC-H-06_05182021-10	BC-H-06	5/18/2021	H	2000	Floor	0-1	< 1.50 UD	6.16	6.22	11.5 D	2.41	8.38	385	23000	7430
BC-H-06_05182021-60	BC-H-06	5/18/2021	H	250	Floor	0-1	1.72 D	6.17	5.99	18.2 D	2.78	8.83	474	22700	7180
BC-I-01_05252021-10	BC-I-01	5/25/2021	I	2000	Sidewall	0-6	2.79 D	6.27	6.53	5.07 D	1.08	5.77	321	18000	2650
BC-I-01_05252021-60	BC-I-01	5/25/2021	I	250	Sidewall	0-6	2.52 D	6.39	6.42	7.15 D	1.2	6.72	389	18400	3020
BC-I-02_05252021-10	BC-I-02	5/25/2021	I	2000	Sidewall	0-6	< 1.50 UD	4.67	3.80	4.71 D	1.29	7.06	945	21300	4660
BC-I-02_05252021-60	BC-I-02	5/25/2021	I	250	Sidewall	0-6	< 1.50 UD	4.7	3.76	4.64 D	1.35	7.14	1010	20100	4990
BC-I-03_05252021-10	BC-I-03	5/25/2021	I	2000	Sidewall	0-6	< 1.50 UD	5.14	6.25	3.16 D	1.83	7.83	165	18700	504
BC-I-03_05252021-60	BC-I-03	5/25/2021	I	250	Sidewall	0-6	< 1.50 UD	5.08	5.95	2.59 D	1.71	7.92	204	16000	696
BC-I-04_05252021-10	BC-I-04	5/25/2021	I	2000	Sidewall	0-6	< 1.50 UD	7.09	9.06	2.27 D	0.41	17.6	69.4	31600	59.2
BC-I-04_05252021-60	BC-I-04	5/25/2021	I	250	Sidewall	0-6	< 1.50 UD	6.99	8.59	2.08 D	0.49	19.9	95.8	32400	67.2
BC-I-05_05252021-10	BC-I-05	5/25/2021	I	2000	Floor	0-1	< 1.50 UD	4.13	3.27	4.66 D	2.37	8.39	969	32600	9390
BC-I-05_05252021-60	BC-I-05	5/25/2021	I	250	Floor	0-1	< 1.50 UD	4.18	3.01	4.67 D	2.36	8.62	1270	27900	8440
BC-J-01_05252021-10	BC-J-01	5/25/2021	J	2000	Floor	0-1	< 1.50 UD	3.95	2.79	6.42 D	< 4.00 U	4.79 JD	1270 D	28600 D	10200 D
BC-J-01_05252021-60	BC-J-01	5/25/2021	J	250	Floor	0-1	< 1.50 UD	3.98	2.56	6.92 D	< 4.00 U	5.11 JD	1590 D	30600 D	11900 D
BC-K-01_05252021-10	BC-K-01	5/25/2021	K	2000	Sidewall	0-6	< 1.50 UD	7.98	9.95	1.34 D	0.35 J	7.24	65.5	12200	129
BC-K-01_05252021-60	BC-K-01	5/25/2021	K	250	Sidewall	0-6	< 1.50 UD	7.87	9.58	1.39 D	0.51	9.8	82.8	14300	150
BC-K-02_05252021-10	BC-K-02	5/25/2021	K	2000	Sidewall	0-6	< 1.50 UD	4.23	3.90	4.39 D	0.54	7.43	609	27500 D	2520
BC-K-02_05252021-60	BC-K-02	5/25/2021	K	250	Sidewall	0-6	< 1.50 UD	4.08	3.36	4.94 D	0.89	9.56	862	32400	3530
BC-K-03_05252021-10	BC-K-03	5/25/2021	K	2000	Sidewall	0-6	< 1.50 UD	8.09	9.45	1.69 D	0.83	7.91	111	13800	345
BC-K-03_05252021-60	BC-K-03	5/25/2021	K	250	Sidewall	0-6	< 1.50 UD	7.77	8.88	1.64 D	0.96	10.5	141	15800	367
BC-K-04_05252021-10	BC-K-04	5/25/2021	K	2000	Sidewall	0-6	< 1.50 UD	5.61	5.07	8.76 D	5.16	31.6	673	58500 D	1950
BC-K-04_05252021-60	BC-K-04	5/25/2021	K	250	Sidewall	0-6	< 1.50 UD	5.48	4.85	7.92 D	5.41	36.3	735	60400 D	2710
BC-K-05_05252021-10	BC-K-05	5/25/2021	K	2000	Sidewall	0-6	< 1.50 UD	6.87	8.49	3.3 D	0.47	8.36	95.2	18600	1690
BC-K-05_05252021-60	BC-K-05	5/25/2021	K	250	Sidewall	0-6	< 1.50 UD	7.04	7.99	5.43 D	0.85	12.1	169	25400	2660
BC-K-06_05252021-10	BC-K-06	5/25/2021	K	2000	Floor	0-1	< 1.50 UD	4.07	3.88	2.22 D	3.76	9.2	546	15100	180
BC-K-06_05252021-60	BC-K-06	5/25/2021	K	250	Floor	0-1	< 1.50 UD	3.97	3.47	1.98 D	4.46	13.7	717	21300	323
BC-L-01_05282021-10	BC-L-01	5/28/2021	L	2000	Sidewall	0-6	< 1.50 UD	7.19	8.21	2.9 D	0.79	19.9	157	30800	177
BC-L-01_05282021-60	BC-L-01	5/28/2021	L	250	Sidewall	0-6	< 1.50 UD	7.3	7.93	2.4 D	0.96	20.5	220	32300	268
BC-L-02_05282021-10	BC-L-02	5/28/2021	L	2000	Sidewall	0-6	< 1.50 UD	5.78	6.14	2.48 D	3.09	7.35	303	16900	741
BC-L-02_05282021-60	BC-L-02	5/28/2021	L	250	Sidewall	0-6	< 1.50 UD	5.79	5.90	2.14 D	3.55	8.82	377	18500	1010
BC-L-03_05282021-10	BC-L-03	5/28/2021	L	2000	Sidewall	0-6	< 1.50 UD	3.9	4.38	3.64 D	3.46	7.45	306	17500	625
BC-L-03_05282021-60	BC-L-03	5/28/2021	L	250	Sidewall	0-6	< 1.50 UD	3.89	3.91	3.34 D	0.68	8.66	457	27300	2000
BC-L-04_05282021-10	BC-L-04	5/28/2021	L	2000	Sidewall	0-6	< 1.50 UD	7.27	10.28	1.08 D	0.19 J	6.75	27.7	11600	33.8
BC-L-04_05282021-60	BC-L-04	5/28/2021	L	250	Sidewall	0-6	< 1.50 UD	7.25	10.08	0.88 D	0.24 J	8.23	32.5	12100	50.6
BC-L-05_05282021-10	BC-L-05	5/28/2021	L	2000	Floor	0-1	< 1.50 UD	4.54	3.92	4.17 D	5.21	7.02	770	22100	1000
BC-L-05_05282021-60	BC-L-05	5/28/2021	L	250	Floor	0-1	< 1.50 UD	4.47	3.55	3.45 D	6.05	8.09	1000	22000	1460
BC-L-06_05282021-10	BC-L-06	5/28/2021	L	2000	Floor	0-1	< 1.50 UD	3.6	3.77	4.24 D	2.16	6.63	410	28300	1060
BC-L-06_05282021-60	BC-L-06	5/28/2021	L	250	Floor	0-1	< 1.50 UD	3.65	3.56	4.33 D	2.37	7.39	513	33100	1500

Table E-1: Appendix E
Post-Removal Sample Laboratory Results
Bayard Canyon Supplemental Interim Removal Action Completion Report
Hanover Whitewater Creek Investigation Unit

Sample ID	Location	Sample Date	Removal Area Group	Sieve Size (µm)	Sample Taken	Sample Depth (in)	Manganese (mg/kg)	Zinc (mg/kg)
BC-A-01_05172021-10	BC-A-01	5/17/2021	A	2000	Sidewall	0-6	467	186
BC-A-01_05172021-60	BC-A-01	5/17/2021	A	250	Sidewall	0-6	528	209
BC-A-02_05172021-10	BC-A-02	5/17/2021	A	2000	Sidewall	0-6	431	136
BC-A-02_05182021-60	BC-A-02	5/18/2021	A	250	Sidewall	0-6	455	152
BC-A-03_05172021-10	BC-A-03	5/17/2021	A	2000	Sidewall	0-6	432	39.7
BC-A-03_05172021-60	BC-A-03	5/17/2021	A	250	Sidewall	0-6	419	44.7
BC-A-04_05172021-10	BC-A-04	5/17/2021	A	2000	Sidewall	0-6	436	90.5
BC-A-04_05172021-60	BC-A-04	5/17/2021	A	250	Sidewall	0-6	433	98.2
BC-A-05_05172021-10	BC-A-05	5/17/2021	A	2000	Sidewall	0-6	494	124
BC-A-05_05172021-60	BC-A-05	5/17/2021	A	250	Sidewall	0-6	470	147
BC-B-01_05172021-10	BC-B-01	5/17/2021	B	2000	Sidewall	0-6	487	242
BC-B-01_05172021-60	BC-B-01	5/17/2021	B	250	Sidewall	0-6	598	336
BC-B-02_05172021-10	BC-B-02	5/17/2021	B	2000	Sidewall	0-6	469	241
BC-B-02_05172021-60	BC-B-02	5/17/2021	B	250	Sidewall	0-6	523	265
BC-B-03_05172021-10	BC-B-03	5/17/2021	B	2000	Sidewall	0-6	203	44.4
BC-B-03_05172021-60	BC-B-03	5/17/2021	B	250	Sidewall	0-6	311	79.7
BC-B-04_05172021-10	BC-B-04	5/17/2021	B	2000	Sidewall	0-6	508	42.3
BC-B-04_05172021-60	BC-B-04	5/17/2021	B	250	Sidewall	0-6	537	49
BC-B-05_05172021-10	BC-B-05	5/17/2021	B	2000	Floor	0-1	411	132
BC-B-05_05172021-60	BC-B-05	5/17/2021	B	250	Floor	0-1	587	194
BC-D-01_05182021-10	BC-D-01	5/18/2021	D	2000	Sidewall	0-6	1660 D	810 D
BC-D-01_05182021-60	BC-D-01	5/18/2021	D	250	Sidewall	0-6	1210 D	711 D
BC-D-02_05182021-10	BC-D-02	5/18/2021	D	2000	Sidewall	0-6	533	35.1
BC-D-02_05182021-60	BC-D-02	5/18/2021	D	250	Sidewall	0-6	619	45.6
BC-D-03_05182021-10	BC-D-03	5/18/2021	D	2000	Sidewall	0-6	722	123
BC-D-03_05182021-60	BC-D-03	5/18/2021	D	250	Sidewall	0-6	768	142
BC-D-04_05182021-10	BC-D-04	5/18/2021	D	2000	Sidewall	0-6	429	146
BC-D-04_05182021-60	BC-D-04	5/18/2021	D	250	Sidewall	0-6	493	173
BC-D-05_05182021-10	BC-D-05	5/18/2021	D	2000	Sidewall	0-6	344	82.5
BC-D-05_05182021-60	BC-D-05	5/18/2021	D	250	Sidewall	0-6	364	97.6
BC-D-06_05182021-10	BC-D-06	5/18/2021	D	2000	Floor	0-1	401	246
BC-D-06_05182021-60	BC-D-06	5/18/2021	D	250	Floor	0-1	493	210
BC-E-01_05182021-10	BC-E-01	5/18/2021	E	2000	Floor	0-1	401	140
BC-E-01_05182021-60	BC-E-01	5/18/2021	E	250	Floor	0-1	398	165
BC-F-01_05212021-10	BC-F-01	5/21/2021	F	2000	Sidewall	0-6	1090	9180 D
BC-F-01_05212021-60	BC-F-01	5/21/2021	F	250	Sidewall	0-6	1210	11100 D
BC-F-02_05212021-10	BC-F-02	5/21/2021	F	2000	Sidewall	0-6	793	843
BC-F-02_05212021-60	BC-F-02	5/21/2021	F	250	Sidewall	0-6	778	1000
BC-F-03_05212021-10	BC-F-03	5/21/2021	F	2000	Sidewall	0-6	479	181
BC-F-03_05212021-60	BC-F-03	5/21/2021	F	250	Sidewall	0-6	553	226
BC-F-04_05212021-10	BC-F-04	5/21/2021	F	2000	Sidewall	0-6	1040	436
BC-F-04_05212021-60	BC-F-04	5/21/2021	F	250	Sidewall	0-6	1130	510
BC-F-05_05212021-10	BC-F-05	5/21/2021	F	2000	Sidewall	0-6	786	270
BC-F-05_05212021-60	BC-F-05	5/21/2021	F	250	Sidewall	0-6	999	302
BC-F-06_05212021-10	BC-F-06	5/21/2021	F	2000	Sidewall	0-6	493	92.3
BC-F-06_05212021-60	BC-F-06	5/21/2021	F	250	Sidewall	0-6	515	97.4
BC-F-07_05212021-10	BC-F-07	5/21/2021	F	2000	Sidewall	0-6	703	643
BC-F-07_05212021-60	BC-F-07	5/21/2021	F	250	Sidewall	0-6	889	793
BC-F-08_05212021-10	BC-F-08	5/21/2021	F	2000	Sidewall	0-6	663	634
BC-F-08_05212021-60	BC-F-08	5/21/2021	F	250	Sidewall	0-6	726	742
BC-F-09_05212021-10	BC-F-09	5/21/2021	F	2000	Sidewall	0-6	980 D	1320 D
BC-F-09_05212021-60	BC-F-09	5/21/2021	F	250	Sidewall	0-6	991 D	1550 D
BC-F-10_05212021-10	BC-F-10	5/21/2021	F	2000	Sidewall	0-6	796	188
BC-F-10_05212021-60	BC-F-10	5/21/2021	F	250	Sidewall	0-6	842	195
BC-F-11_05212021-10	BC-F-11	5/21/2021	F	2000	Floor	0-1	760	1070
BC-F-11_05212021-60	BC-F-11	5/21/2021	F	250	Floor	0-1	959	857
BC-F-12_05212021-10	BC-F-12	5/21/2021	F	2000	Floor	0-1	1010 D	1600 D
BC-F-12_05212021-60	BC-F-12	5/21/2021	F	250	Floor	0-1	941 D	1330 D
BC-F-13_05212021-10	BC-F-13	5/21/2021	F	2000	Floor	0-1	194	78
BC-F-13_05212021-60	BC-F-13	5/21/2021	F	250	Floor	0-1	197	78
BC-F-14_05252021-10	BC-F-14	5/25/2021	F	2000	Floor	0-1	1660 D	6910 D
BC-F-14_05252021-60	BC-F-14	5/25/2021	F	250	Floor	0-1	1670 D	7400 D
BC-G-01_05182021-10	BC-G-01	5/18/2021	G	2000	Floor	0-1	453	37.4

Table E-1: Appendix E
Post-Removal Sample Laboratory Results
Bayard Canyon Supplemental Interim Removal Action Completion Report
Hanover Whitewater Creek Investigation Unit

Sample ID	Location	Sample Date	Removal Area Group	Sieve Size (µm)	Sample Taken	Sample Depth (in)	Manganese (mg/kg)	Zinc (mg/kg)
BC-G-01_05182021-60	BC-G-01	5/18/2021	G	250	Floor	0-1	499	48.8
BC-H-01_05182021-10	BC-H-01	5/18/2021	H	2000	Sidewall	0-6	781	643
BC-H-01_05182021-60	BC-H-01	5/18/2021	H	250	Sidewall	0-6	717	829
BC-H-02_05182021-10	BC-H-02	5/18/2021	H	2000	Sidewall	0-6	608	351
BC-H-02_05182021-60	BC-H-02	5/18/2021	H	250	Sidewall	0-6	565	343
BC-H-03_05182021-10	BC-H-03	5/18/2021	H	2000	Sidewall	0-6	774	972
BC-H-03_05182021-60	BC-H-03	5/18/2021	H	250	Sidewall	0-6	811	1090
BC-H-04_05182021-10	BC-H-04	5/18/2021	H	2000	Sidewall	0-6	818	1080
BC-H-04_05182021-60	BC-H-04	5/18/2021	H	250	Sidewall	0-6	981	1360
BC-H-05_05182021-10	BC-H-05	5/18/2021	H	2000	Floor	0-1	1230	508
BC-H-05_05182021-60	BC-H-05	5/18/2021	H	250	Floor	0-1	1410	719
BC-H-06_05182021-10	BC-H-06	5/18/2021	H	2000	Floor	0-1	695	678
BC-H-06_05182021-60	BC-H-06	5/18/2021	H	250	Floor	0-1	725	770
BC-I-01_05252021-10	BC-I-01	5/25/2021	I	2000	Sidewall	0-6	608	177
BC-I-01_05252021-60	BC-I-01	5/25/2021	I	250	Sidewall	0-6	535	212
BC-I-02_05252021-10	BC-I-02	5/25/2021	I	2000	Sidewall	0-6	350	816
BC-I-02_05252021-60	BC-I-02	5/25/2021	I	250	Sidewall	0-6	301	567
BC-I-03_05252021-10	BC-I-03	5/25/2021	I	2000	Sidewall	0-6	388	314
BC-I-03_05252021-60	BC-I-03	5/25/2021	I	250	Sidewall	0-6	316	329
BC-I-04_05252021-10	BC-I-04	5/25/2021	I	2000	Sidewall	0-6	838	141
BC-I-04_05252021-60	BC-I-04	5/25/2021	I	250	Sidewall	0-6	906	140
BC-I-05_05252021-10	BC-I-05	5/25/2021	I	2000	Floor	0-1	581	810
BC-I-05_05252021-60	BC-I-05	5/25/2021	I	250	Floor	0-1	552	893
BC-J-01_05252021-10	BC-J-01	5/25/2021	J	2000	Floor	0-1	164 D	356 D
BC-J-01_05252021-60	BC-J-01	5/25/2021	J	250	Floor	0-1	131 D	373 D
BC-K-01_05252021-10	BC-K-01	5/25/2021	K	2000	Sidewall	0-6	467	115
BC-K-01_05252021-60	BC-K-01	5/25/2021	K	250	Sidewall	0-6	511	142
BC-K-02_05252021-10	BC-K-02	5/25/2021	K	2000	Sidewall	0-6	325	313
BC-K-02_05252021-60	BC-K-02	5/25/2021	K	250	Sidewall	0-6	378	446
BC-K-03_05252021-10	BC-K-03	5/25/2021	K	2000	Sidewall	0-6	365	211
BC-K-03_05252021-60	BC-K-03	5/25/2021	K	250	Sidewall	0-6	414	241
BC-K-04_05252021-10	BC-K-04	5/25/2021	K	2000	Sidewall	0-6	976	1700
BC-K-04_05252021-60	BC-K-04	5/25/2021	K	250	Sidewall	0-6	938	1670
BC-K-05_05252021-10	BC-K-05	5/25/2021	K	2000	Sidewall	0-6	216	135
BC-K-05_05252021-60	BC-K-05	5/25/2021	K	250	Sidewall	0-6	301	258
BC-K-06_05252021-10	BC-K-06	5/25/2021	K	2000	Floor	0-1	160	733
BC-K-06_05252021-60	BC-K-06	5/25/2021	K	250	Floor	0-1	239	873
BC-L-01_05282021-10	BC-L-01	5/28/2021	L	2000	Sidewall	0-6	959	259
BC-L-01_05282021-60	BC-L-01	5/28/2021	L	250	Sidewall	0-6	986	294
BC-L-02_05282021-10	BC-L-02	5/28/2021	L	2000	Sidewall	0-6	942	349
BC-L-02_05282021-60	BC-L-02	5/28/2021	L	250	Sidewall	0-6	969	380
BC-L-03_05282021-10	BC-L-03	5/28/2021	L	2000	Sidewall	0-6	854	368
BC-L-03_05282021-60	BC-L-03	5/28/2021	L	250	Sidewall	0-6	401	260
BC-L-04_05282021-10	BC-L-04	5/28/2021	L	2000	Sidewall	0-6	462	49.6
BC-L-04_05282021-60	BC-L-04	5/28/2021	L	250	Sidewall	0-6	450	58.1
BC-L-05_05282021-10	BC-L-05	5/28/2021	L	2000	Floor	0-1	766	577
BC-L-05_05282021-60	BC-L-05	5/28/2021	L	250	Floor	0-1	1020	626
BC-L-06_05282021-10	BC-L-06	5/28/2021	L	2000	Floor	0-1	488	476
BC-L-06_05282021-60	BC-L-06	5/28/2021	L	250	Floor	0-1	523	601

Table E-2: Appendix E
Backfill Material Analytical Laboratory Results
Bayard Canyon Supplemental Interim Removal Action Completion Report
Hanover Whitewater Creek Investigation Unit

Backfill Source	Lab Sample ID	Sample Date	Analyte	Result
Groundhog Mine Borrow	X1D0234-01	4/8/2021	Arsenic (mg/kg)	3.68
			Cadmium (mg/kg)	0.75
			Chromium (mg/kg)	21.1
			Copper (mg/kg)	82.2
			Iron (mg/kg)	22900
			Lead (mg/kg)	153
			Manganese (mg/kg)	1570
			Zinc (mg/kg)	297
			ABP (TCaCO3/kT)	17.1
			AGP (TCaCO3/kT)	<0.3
			ANP (TCaCO3/kT)	17.1
			Non-extractable Sulfur (%)	<0.04U
			Non-Sulfate Sulfur (%)	<0.04U
			Pyritic Sulfur (%)	<0.04U
			Sulfate Sulfure (%)	<0.04U
			Total Sulfur (%)	<0.04U
Bayard Canyon Borrow	X1D0234-02	4/8/2021	Arsenic (mg/kg)	<2.5U
			Cadmium (mg/kg)	<0.4U
			Chromium (mg/kg)	17.6
			Copper (mg/kg)	43.8
			Iron (mg/kg)	12600
			Lead (mg/kg)	45.8
			Manganese (mg/kg)	417
			Zinc (mg/kg)	50.4
			ABP (TCaCO3/kT)	3.2
			AGP (TCaCO3/kT)	<0.3
			ANP (TCaCO3/kT)	3.2
			Non-extractable Sulfur (%)	<0.04U
			Non-Sulfate Sulfur (%)	<0.04U
			Pyritic Sulfur (%)	<0.04U
			Sulfate Sulfure (%)	<0.04U
			Total Sulfur (%)	<0.04U

APPENDIX F

Post-construction Aerial Survey (Drone)

Photograph Log

BAYARD CANYON INTERIM REMOVAL ACTION COMPLETION REPORT
Hanover Whitewater Creek Investigation Unit
Appendix F - Post-construction Aerial Photographic Survey (Drone)

Photograph: 1

Description:
BC-26; looking southwest

Location:
Bayard Canyon,
Vanadium, New Mexico

Photograph taken by:
Chino Mines Company

Date: July 2021

Photograph: 2

Description:
BC-25; looking southwest

Location:
Bayard Canyon,
Vanadium, New Mexico

Photograph taken by:
Chino Mines Company

Date: July 2021

Photograph Log

Photograph: 3

Description:
BC18 through BC20 (Removal Group F); looking southwest

Location:
Bayard Canyon, Vanadium, New Mexico

Photograph taken by:
Chino Mines Company

Date: July 2021

Photograph: 4

Description:
BC3-BC6 (Removal Group C); looking southwest

Location:
Bayard Canyon, Vanadium, New Mexico

Photograph taken by:
Chino Mines Company

Date: July 2021

Photograph Log

Photograph: 5

Description:
Groundhog Mine Area; looking northeast

Location:
Bayard Canyon, Vanadium, New Mexico

Photograph taken by:
Chino Mines Company

Date: July 2021

Photograph: 6

Description:
Entrance to Lucky Bill Canyon and BC8-BC12 (Removal Group D); looking southeast

Location:
Bayard Canyon, Vanadium, New Mexico

Photograph taken by:
Chino Mines Company

Date: July 2021

Photograph Log

Photograph: 7

Description:
BC2; looking east

Location:
Bayard Canyon,
Vanadium, New Mexico

Photograph taken by:
Chino Mines Company

Date: July 2021

Photograph: 8

Description:
BC3-BC6 (Removal Group C); looking northeast

Location:
Bayard Canyon,
Vanadium, New Mexico

Photograph taken by:
Chino Mines Company

Date: July 2021

Photograph Log

Photograph: 9

Description:
Entrance to Lucky Bill Canyon/ BC8-BC12 (Removal Group D), BC15; looking northeast

Location:
Bayard Canyon, Vanadium, New Mexico

Photograph taken by:
Chino Mines Company

Date: July 2021

Photograph: 10

Description:
Entrance to Lucky Bill Canyon; looking east

Location:
Bayard Canyon, Vanadium, New Mexico

Photograph taken by:
Chino Mines Company

Date: July 2021

Photograph Log

Photograph: 11

Description:
BC23, BC24, and BC25; looking north

Location:
Bayard Canyon, Vanadium, New Mexico

Photograph taken by:
Chino Mines Company

Date: July 2021

Photograph: 12

Description:
Bayard Canyon; looking southwest

Location:
Bayard Canyon, Vanadium, New Mexico

Photograph taken by:
Chino Mines Company

Date: July 2021

Photograph Log

Photograph: 13

Description:
BC26; looking northeast

Location:
Bayard Canyon,
Vanadium, New Mexico

Photograph taken by:
Chino Mines Company

Date: July 2021

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