COLORADO
Division of Reclamation, Mining and Safety
Department of Natural Resources

MINERALS PROGRAM INSPECTION REPORT
PHONE: (303) 866-3567

The Division of Reclamation, Mining and Safety has conducted an inspection of the mining operation noted below. This report documents observations concerning compliance with the terms of the permit and applicable rules and regulations of the Mined Land Reclamation Board.

MINE NAME: Tomahawk Mine	**MINE/PROSPECTING ID#:** M-1991-003	**MINERAL:** Clay (general)	**COUNTY:** Pueblo
INSPECTION TYPE: Monitoring	**WEATHER:** Clear	**INSP. DATE:** July 24, 2023	**INSP. TIME:** 08:30
OPERATOR: General Shale Brick, Inc.	**OPERATOR REPRESENTATIVE:** Jason McGraw	**TYPE OF OPERATION:** 112c - Construction Regular Operation	

REASON FOR INSPECTION: Normal I&E Program	**BOND CALCULATION TYPE:** Complete Bond	**BOND AMOUNT:** $70,685.00
DATE OF COMPLAINT: NA	**POST INSP. CONTACTS:** None	**JOINT INSP. AGENCY:** None
INSPECTOR(S): Amber Gibson	**INSPECTOR'S SIGNATURE:** 	**SIGNATURE DATE:** November 3, 2023

The following inspection topics were identified as having Problems or Possible Violations. OPERATORS SHOULD READ THE FOLLOWING PAGES CAREFULLY IN ORDER TO ASSURE COMPLIANCE WITH THE TERMS OF THE PERMIT AND APPLICABLE RULES AND REGULATIONS. If a Possible Violation is indicated, you will be notified under separate cover as to when the Mined Land Reclamation Board will consider possible enforcement action.

INSPECTION TOPIC: Explosives
PROBLEM: The current mine plan does not contain a geotechnical stability exhibit or a blasting plan, pursuant to Rules 6.4.4(i) and 6.5(4). The mine plan needs to be updated and clarified pursuant to C.R.S. 34-32.5-112 (1)(c)(VI). The Operator must provide sufficient information to describe or identify how the Operator intends to conduct the Operation.
CORRECTIVE ACTIONS: The Operator shall submit a Technical Revision, with the required $216 revision fee, to update and clarify the current approved mine plan to reflect existing and proposed blasting activities and a demonstration that blasting will not adversely affect off-site areas by the corrective action date.
CORRECTIVE ACTION DUE DATE: 2/01/24

INSPECTION TOPIC: Signs & Markers
PROBLEM: The affected area boundary markers are missing or incorrectly placed. This is a problem for failure to maintain boundary markers around the affected area as required by Section 3.1.12(2) of the rule.
CORRECTIVE ACTIONS: The Operator shall conduct a survey and replace the boundary markers in the correct location(s). The Operator shall provide proof to the Division that this has been done by the corrective action date.
CORRECTIVE ACTION DUE DATE: 12/04/23

OBSERVATIONS

The Tomahawk Mine was inspected by Amber Gibson with the Division of Reclamation, Mining and Safety (Division). The inspection was completed as part of the Division's routine monitoring inspection program. Jason McGraw, representing the Operator, accompanied me during the inspection. The weather was warm and the sky was clear.

The Tomahawk Mine is located in Pueblo County approximately 18 miles Northwest of Pueblo, Colorado. This mine is located on the Fort Carson Army Base. The Tomahawk Mine is a 240-acre 112c Construction Materials Reclamation Permit. The primary commodity mined at the site is clay. The approved post-mining land use is rangeland.

Availability of Records:
The annual report, fee, and map are current through April 2024. The 2023 annual report states that 11.9 acres have been affected to date, including mining and incomplete or unreleased reclamation. There are no outstanding infractions.

Explosives:
A sandstone caprock ranging from 0-60 feet overlays the clay seams being mined. According to the mine plan, only areas where the sandstone totals 40 feet or less is mined. The sandstone caprock is blasted and the overburden is stored and used for backfill in reclamation. The Division informed the Operator during the inspection that there is not a blasting plan on file, and that one will need to be supplied and approved before blasting can continue. This **has been cited as a problem** and will require a Technical Revision to the mine plan to include a Geotechnical Stability Exhibit and a Blasting Plan pursuant to Rules 6.4.4(i) and 6.5(4). The Operator shall submit the revision to the mine plan by the corrective action date. During the inspection, the Operator stated that they will commit to submitting a blasting plan, and waiting for its approval, prior to any future blasting. The Operator does not anticipate blasting anytime in the near future.

Financial Warranty:
The Division has estimated the reclamation liability at the site based on what is currently disturbed and found it to be $83,170-- a difference of $12,485 from the bond currently held. The Division's cost estimate is enclosed with this report. The Operator will have 14 days (November 17, 2023), from the issuance of this report to submit any questions on the cost estimate. If no questions are received, the Division may issue a surety increase notice for the difference. The Operator will have 60 days from the date of the notice to submit and obtain acceptance of the increase in financial warranty from the Division in accordance with Rule 4.2.1(2).

Gen. Compliance with Mine Plan:
Mining is being conducted from east to west across the site in Phases. According to the mining plan, of the 240 acres included in the permit, 52.9 are approved to be affected, with no more than 21 acres affected at any one time. The maximum point of disturbance is expected to be during the reclamation of Phase 1 and the beginning of mining activity in Phase 2. The Operator believes that they are still primarily within the Phase 1, however the Division requires the Operator to provide clarity on the Phase boundaries (see the discussion in the 'Signs and Markers' section below).

Three different types of clay are being extracted through the use of blasting, rippers, and excavators. The last

time active extraction occurred was in 2020. A portable screener had been used at that time, and a technical revision had been approved to incorporate its use into the mine plan. When asked, the Operator stated that when active mining begins again, they plan to rent another screener. There was no screener observed on-site during this inspection.

Activity onsite in the past few years has consisted of removing stockpiled clay material. There is currently a highwall approximately 400 feet long and 20 feet high (Photos 1-3; Map 2) in the area labeled as having major disturbance on Maps 1 and 2 and on the 2023 annual report (see Figure 2). Clay material had been removed from this pit and stockpiled in a few locations on the flat area north of the pit (Photo 4, 5 and 6: Moderate disturbance area: Maps 1-2, Figure 2). The Operator has been gradually removing the stockpiled material from this area to transport offsite. For the foreseeable future, the Operator plans to continue to transport stockpiled material offsite before extracting any more material.

The Tomahawk mine is adjacent to another one of General Shale Brick's sites, the Stone City Mine, permit number M-1990-143 (see Maps 1 and 2). The Operator intends to combine the two sites via an Amendment. Currently, the Operator is not mining at the Stone City Mine, and has applied for a second period of temporary cessation. The Operator stated that they are waiting on permission from the Army Officials on the Fort Carson Army Base before moving forward with the amendment application. The red star icon on Map 1 indicates where the Operator currently plans to extend the east boarder of the combined permits.

Right of Entry:
The Operator was asked about the right of entry lease with the State Land Board. The lease on file lists the lease as Robinson Brick Company, but the Operator stated that General Shale Brick, Inc. is operating as Robinson under a 'Doing Business As' (or DBA). The Operator stated that they will talk to the State Land Board to update the lease to state General Shale Brick, Inc. as the Lessee.

Reclamation Success:
Partial reclamation has occurred within the pre-law disturbance areas. Portions of these areas have been backfilled and graded, however no re-topsoiling or seeding has occurred. A berm of material is left separating the reclaimed disturbance from on-going disturbance (Photos 7-10: Maps 1-2). The forward edge of the mine face in Phases 2, 4, and 6 are approved to remain as vertical cliffs pursuant to the mining and reclamation plans. Along the forward facing sides of what may be Phase 1 or Phase 2 (see discussion in the Signs and Markers section below) highwalls were observed, and photos were taken of various areas in the northern extent of current disturbance (Photos 11-15: Map 2). Undisturbed areas adjacent to these cliffs are shown in Photos 16 and 17. The mine plan refers to the cliffs occurring naturally along this face as the evidence for the stability of leaving this area as vertical faces, and evidence that their presence would be cohesive with the existing topography.

Sediment Control:
In the pit, there is a small depression in the south-west corner at the base of the highwall (Photo 18: Map 2). This area serves as a sediment catchment basin when storm water enters the pit. The Operator stated that the permit area is generally very dry, and that any water infiltrates or evaporates within 72 hours. The Operator stated that they routinely clean out the sediment trapped in the catchment. The catchment acts as sort of a filter, and allows clay material carried in run-off to settle out. The settled clay is then collected and stored with the stockpiled material. The mine plan states that there are not clean water diversion structures north of the disturbance, because the water naturally runs off the land to the south-east and into the drainages. No

evidence of drainage through the northern portion of the disturbance was observed during the inspection.

Signs and Markers:
A mine sign was posted in compliance with Rule 3.1.12(1) at the entrance to the site (Photo 19, Maps 1-2). There is a discrepancy in the placement of the Phases between the approved mining plan map and the on-ground disturbance (see Figures 1-2 and Maps 1-2). The Division showed the Operator the discrepancy, that seems to indicate that mining has occurred in Phases 1, 2, 3, and 4, when the operation is approved to only be working in a maximum of two Phases at a time (one in reclamation and the other being actively mined). The Operator stated that the configuration of the Phases were constructed to avoid the drainages. During the inspection, at the southeastern-most corner of the disturbance in the 'Major disturbance' area, the drainage canyon was observed beyond the pit's containment berm to the east (Photo 20, Maps 1-2). The Operator stated that they have stayed out of the drainages. The Division and Operator believe that the approved map may not be accurately drawn to represent the topography on-site.

However, the affected land boundary was not marked on-site. The only marker observed on-site was a permit boundary marker southwest of the disturbance on-site (Photo 21: red marker on Maps 1 and 2). The absence of markers has made it unclear if the disturbance onsite is within the approved affected land boundaries. This **has been cited as a problem** for failure to maintain marked affected area boundaries pursuant to Rule 3.1.12(2). The Operator shall conduct a survey and replace the affected area boundary markers for each phase, or for each current phase, and provide photos and coordinates of the markers to the Division by the corrective action date.

Topsoil:
A topsoil berm is placed above the highwall, to the south side of the major disturbance (see Photo 22 and Map 2), out of the way of ongoing mining operations pursuant to Rule 3.1.9(3). The topsoil in the area is thin and in some areas, non-existent. The topsoil that has been salvaged appears to be in stable condition and the Division did not observe any signs of erosion (Photo 23).

Conclusion:
This concludes the Division's Inspection Report; a few maps and figures displaying topics discussed during the inspection and a subset of corresponding photographs that were taken during the time of the inspection are included below. If you need additional information or have any questions, please contact me by email at amber.gibson@state.co.us or by telephone at (720) 836-0967.

Inspection Contact Address
Jason McGraw
General Shale Brick, Inc.
1845 W. Dartmouth Ave.
Denver, CO 80110

Enclosure: 2023 Reclamation Cost Estimate Update

CC: Jared Ebert, DRMS
Brock Bowles, DRMS

GENERAL INSPECTION TOPICS

The following list identifies the environmental and permit parameters inspected and gives a categorical evaluation of each

(AR) RECORDS---------- Y	(FN) FINANCIAL WARRANTY-------- Y	(RD) ROADS---------- N
(HB) HYDROLOGIC BALANCE---------- N	(BG) BACKFILL & GRADING---------- N	(EX) EXPLOSIVES--------- PB
(PW) PROCESSING WASTE/TAILING---- N	(SF) PROCESSING FACILITIES------- N	(TS) TOPSOIL---------- Y
(MP) GENL MINE PLAN COMPLIANCE- Y	(FW) FISH & WILDLIFE---------- N	(RV) REVEGETATION---- N
(SM) SIGNS AND MARKERS---------- PB	(SP) STORM WATER MGT PLAN---- N	(RS) RECL PLAN/COMP-- Y
(ES) OVERBURDEN/DEV. WASTE--------- N	(SC) EROSION/SEDIMENTATION--- Y	(ST) STIPULATIONS------- N
(AT) ACID OR TOXIC MATERIALS------- N	(OD) OFF-SITE DAMAGE---------- N	

Y = Inspected / N = Not inspected / NA = Not applicable to this operation / PB = Problem cited / PV = Possible violation cited

PHOTOGRAPHS

Photo 1: Looking east into pit or 'major disturbance area'.

Photo 2: Looking west along the highwall, standing in the pit.

Photo 3: Looking west along the highwall where clay material is stored against it, from the southeast corner of the pit.

Photo 4: Looking west along stockpiled clay in the flat area, north of the 'major disturbance area'.

Photo 5: Looking south across the flat area, north of the 'major disturbance area'.

Photo 6: Looking east at more stockpiled clay material.

Photo 7: Looking west at backfilled and graded pre-law disturbance. A berm lines the actively disturbed area.

Photo 8: Looking west at backfilled and graded pre-law disturbance from just north of the access road. A berm lines the actively disturbed area.

Photo 9: Looking south along the berm separating the active disturbance from the pre-law disturbance.

Photo 10: Looking south-east at a backfilled and graded pre-law disturbance, and the berm separating active and past disturbance.

Photo 11: Looking north-west from the north-east corner of the flat stockpile area, at disturbance that occurred along outcropped cliffs.

Photo 12: Looking west along disturbance that occurred along outcropped cliffs.

Photo 13: Looking east along disturbance that occurred along outcropped cliffs.

Photo 14: Looking east along disturbance that occurred along outcropped cliffs.

Photo 15: Looking east along disturbance that occurred along outcropped cliffs from the north-western most corner of the disturbance on-site.

Photo 16: Looking northwest at cliff outcrops in the adjacent undisturbed land.

Photo 17: Looking northwest at cliff outcrops in the adjacent undisturbed land. The arrow indicates the eastern edge of the Operator's adjacent Stone City Mine permit.

Photo 18: Looking at the southwestern corner of the pit. Drainage within the pit settles in the catchment located at the base of the arrow.

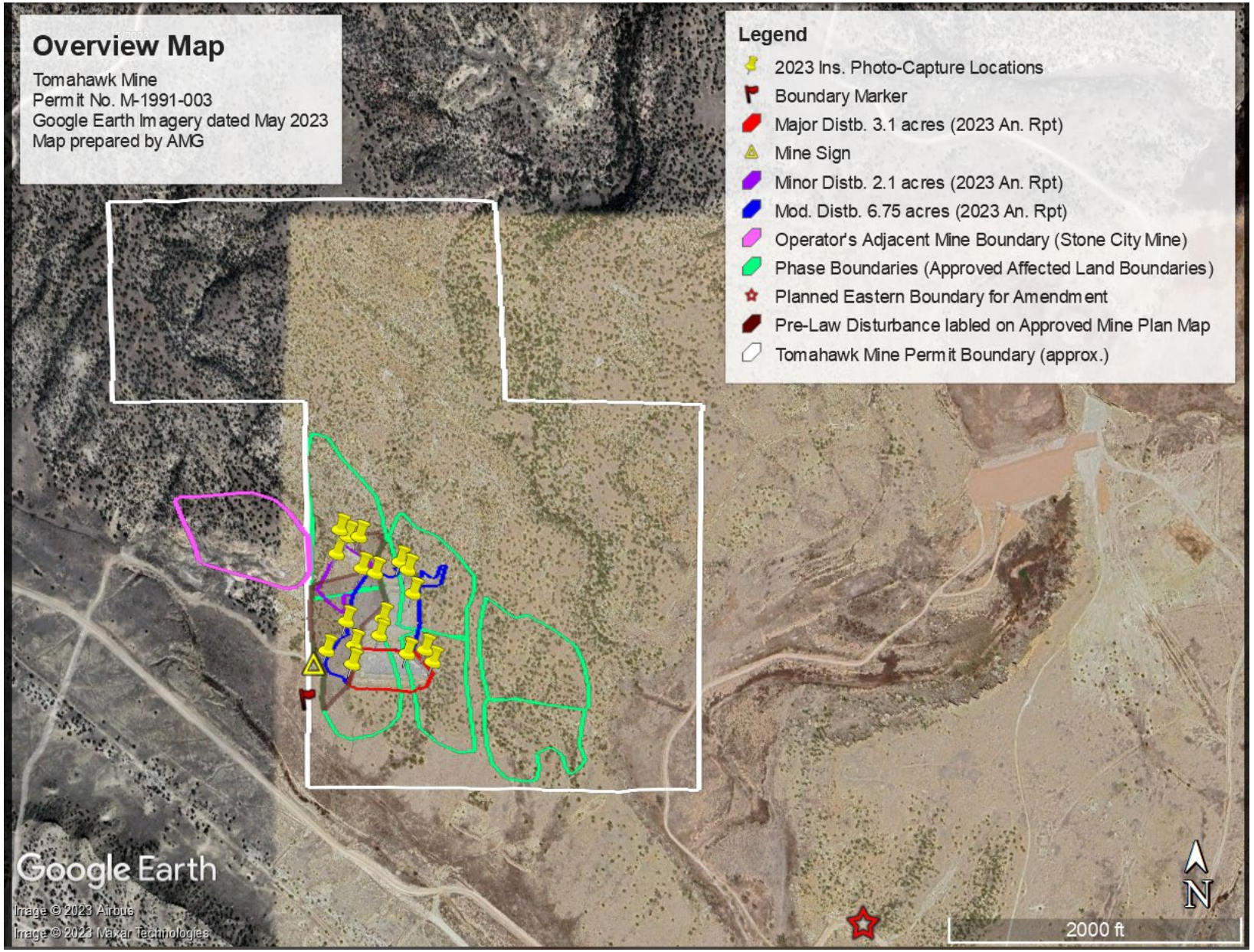
Photo 19: Mine sign posted at the entrance to the site.

Photo 20: Standing at the southeastern disturbance boundary, looking east into the drainage.

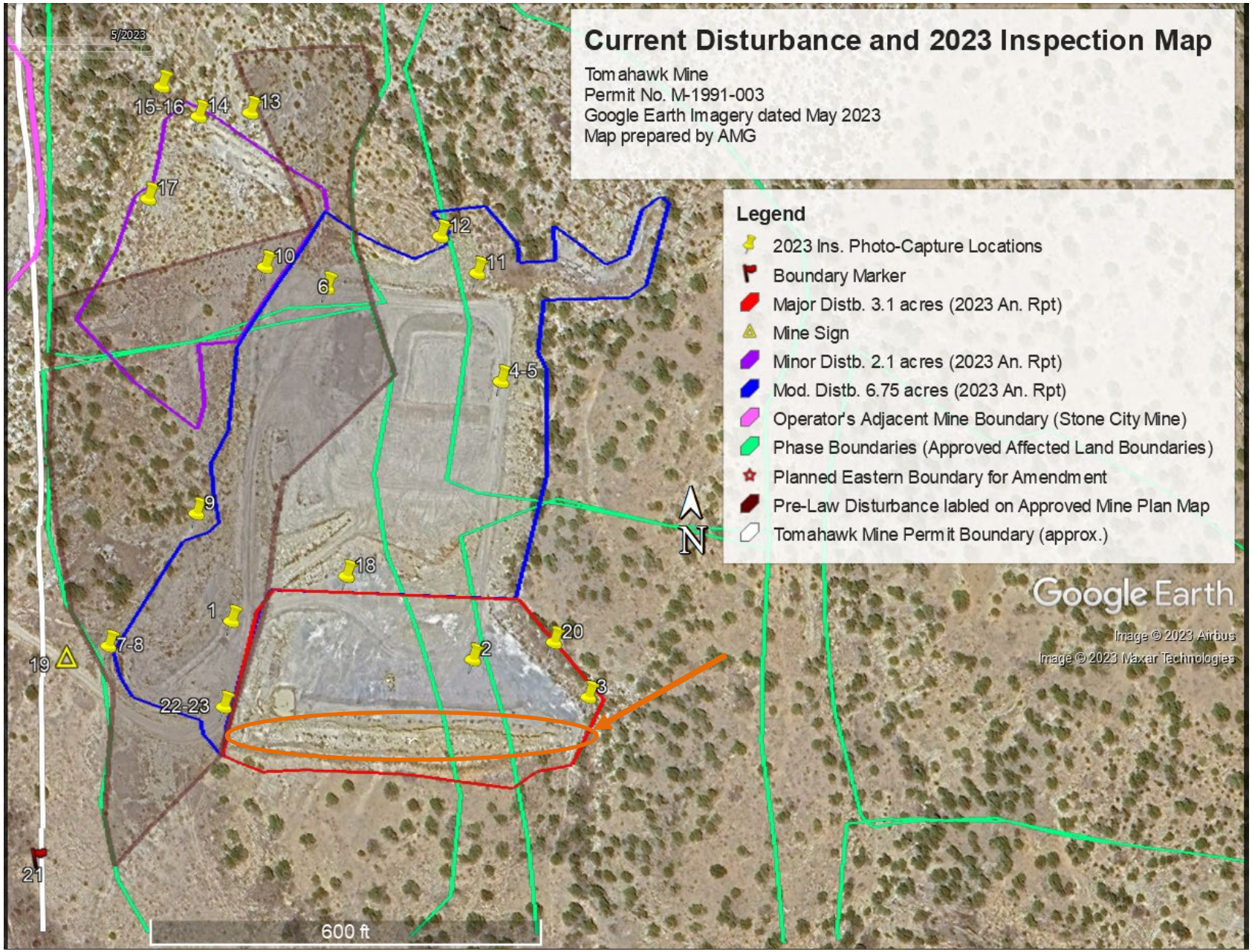
Photo 21: Looking east at a permit boundary marker.

Photo 22: Looking north-east at the topsoil berm lining the southern border of the major disturbance area.

Photo 23: Looking south-east at the vegetated topsoil berm.



Map 1: Overview of the disturbance onsite. The purple, blue, and red polygons are derived from the Operator's 2023 Annual report map. The colors represent the following categories of disturbance (purple= 'Minor Disturbance Boundary: 2.1 Acres', blue= 'Moderate Disturbance Boundary Area: 6.7 Acres', red= 'Major Disturbance Boundary Area: 3.1 Acres'). The green polygons indicate the areas approved to be affected in reference to the Phases labeled on the approved mining plan map (see Figure 1).



Map 2: Current mining disturbance onsite. The yellow pins indicate photo capture locations during the 2023 inspection. The orange oval and arrow indicate the

location of the topsoil berm.

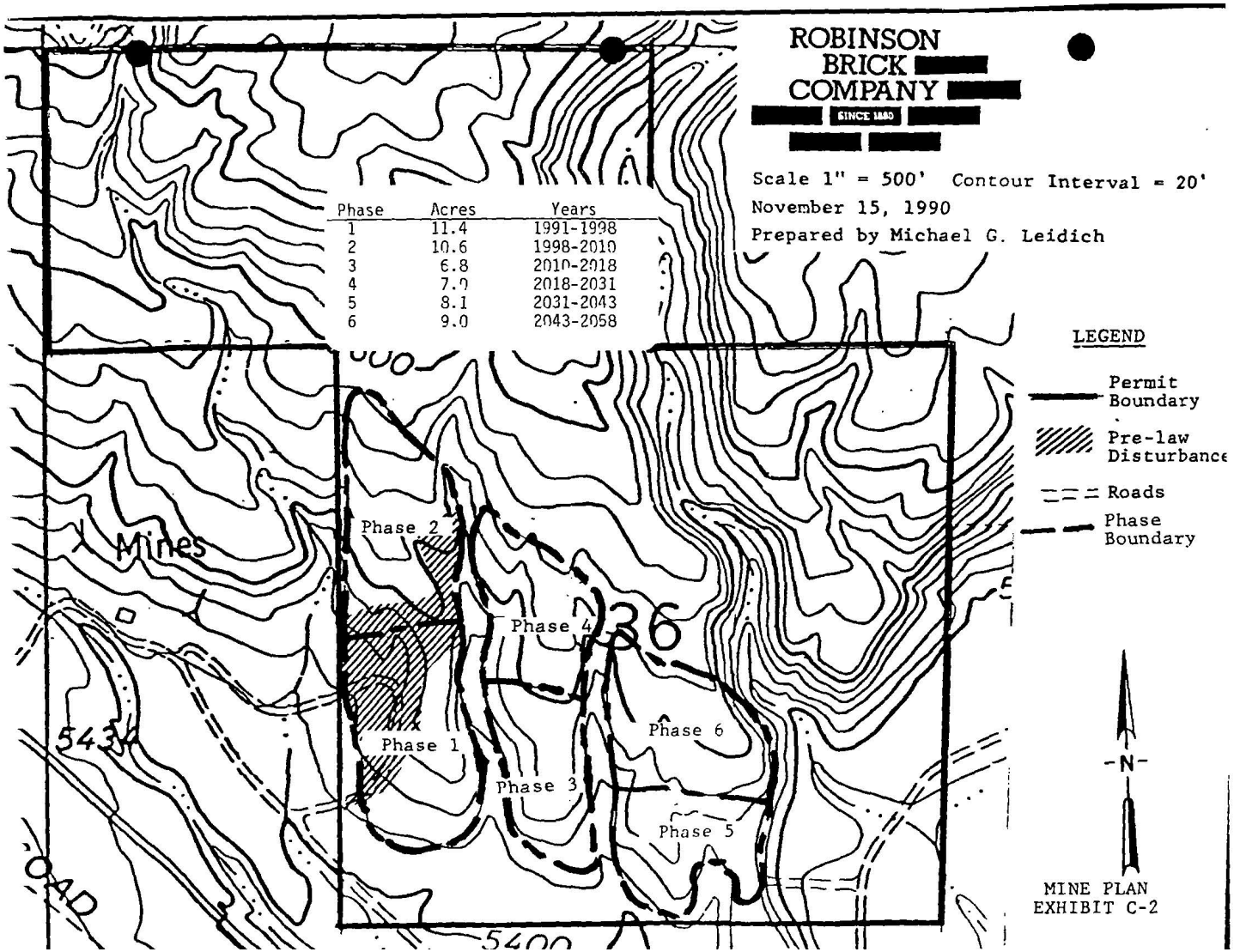


Figure 1: Approved mining plan map. The map indicates mining in six phases, separated into three oblong shapes that exclude drainage canyons running north-south through the site. Mining is to progress south to north in each of the three sections, and west to east throughout the site.

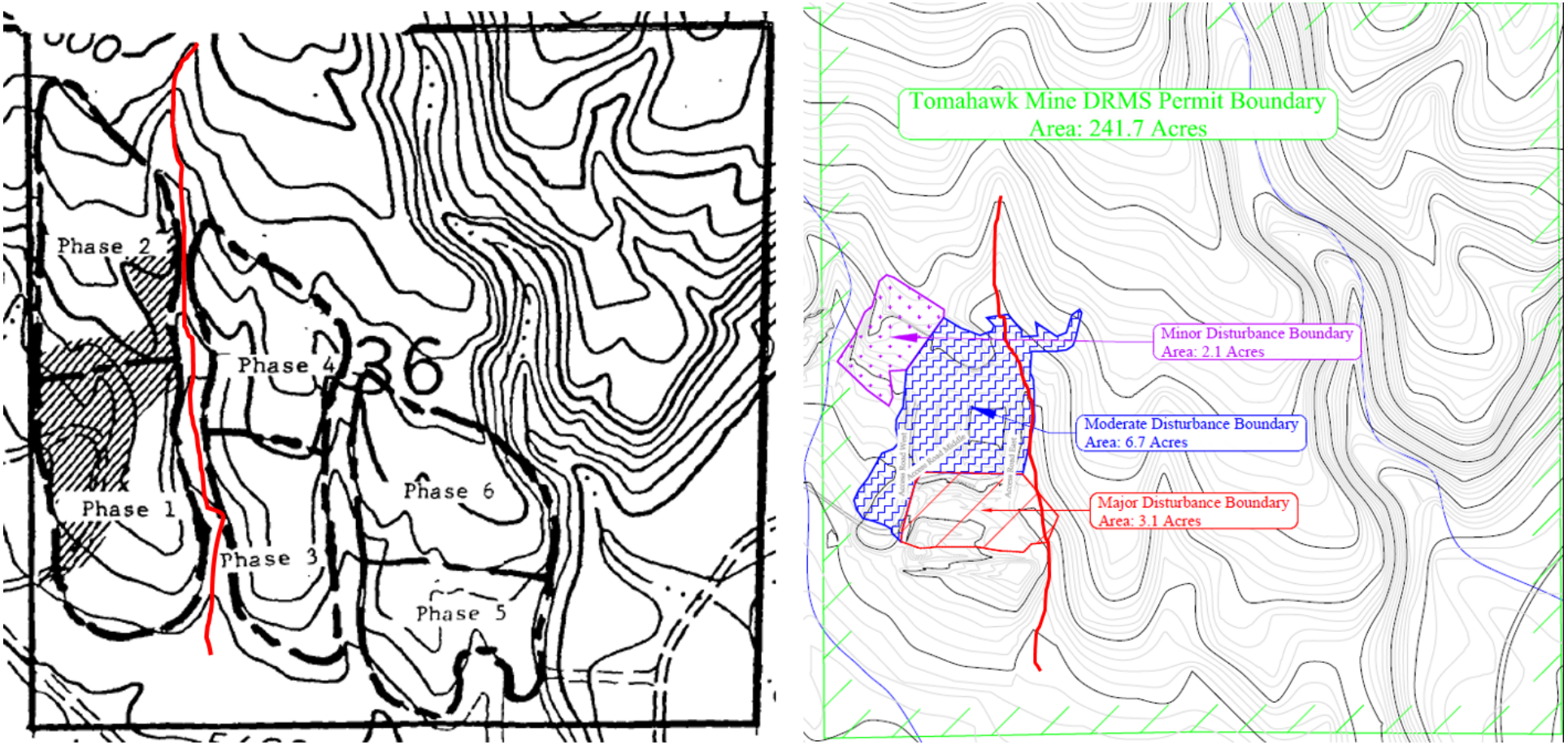


Figure 2: The image on the left was captured from the approved mining plan map, and the image on the right is from the Operator's 2023 annual report map. The red line indicates the approximate location of the drainage way. In comparison with field observations, it is unclear if disturbance has actually occurred in the drainage ways, or if the polygons on the 2023 map encompass the extent of disturbance instead of total disturbance.

COST SUMMARY WORK

Task description: **Reclamation Cost Estimate Summary**

Site: **Tomahawk Mine** Permit Action: 2023 Inspection Permit/Job#: M1991003

PROJECT IDENTIFICATION

Task #: 000 State: Colorado Abbreviation: None
Date: 11/2/2023 County: Pueblo Filename: M003-000
User: AMG

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Grade Highwall to 3H:1V	DOZER	1	8.77	$2,267
002	Spread 6 inches of topsoil over 11 acres	DOZER	1	45.56	$11,656
003	Revegetation of max. anticipated disturbance	REVEGE	1	21.00	$44,130
004	Mobilization/Demobilization	MOBILIZE	1	8.72	$6,452
	SUBTOTALS:			**84.05**	**$64,505**

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	$1,303
Performance bond:	1.05	Total =	$677
Job superintendent:	42.03	Total =	$2,735
Profit:	10.00	Total =	$6,450
		TOTAL O & P =	$11,166
		CONTRACT AMOUNT (direct + O & P) =	$75,671

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	$500	Total =	$500
Engineering work and/or contract/bid preparation:	4.25	Total =	$3,216
Reclamation management and/or administration:	5.00		$3,784
CONTINGENCY:	0.00	Total =	$0
		TOTAL INDIRECT COST =	$18,665
		TOTAL BOND AMOUNT (direct + indirect) =	**$83,170**

BULLDOZER WORK

Task description: **Grade Highwall to 3H:1V**

Site: **Tomahawk Mine** Permit Action: 2023 Inspection Permit/Job#: M1991003

PROJECT IDENTIFICATION

Task #: 001 State: Colorado Abbreviation: None
Date: 11/2/2023 County: Pueblo Filename: 001
User: AMG

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D7R DS Series II LGP
Horsepower: 240
Blade Type: Straight
Attachment: 3-shank ripper
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$114.76	NA
Operating Cost/Hour:	$91.98	100
Ripper own. Cost/Hour:	$9.06	NA
Ripper op. Cost/Hour:	$2.51	50
Operator Cost/Hour:	$40.04	NA

Total unit Cost/Hour: $258.35
Total Fleet Cost/Hour: **$258.35**

MATERIAL QUANTITIES

Initial Volume: 1,536
Swell factor: 1.430
Loose volume: **2,196** LCY

Source of estimated volume: 400 ft of highwall 20 feet vertical
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 80 feet
Unadjusted hourly production: 575.0 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: -5 %
Average site altitude: 5,500 feet

Material weight: 3,300 lbs/LCY

Weight description: Decomposed rock - 75% Rock, 25% Earth

Job Condition Correction Factor		Source
Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	1.000	(DOZ-OC)
Push gradient:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.697	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4354

Adjusted unit production: 250.36 LCY/hr

Adjusted fleet production: **250.36** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: $1.032/LCY

Total job time: **8.77** Hours

Total job cost: **$2,267**

BULLDOZER WORK

Task description: **Spread 6 inches of topsoil over 11 acres**

Site: **Tomahawk Mine** Permit Action: 2023 Inspection Permit/Job#: M1991003

PROJECT IDENTIFICATION

Task #: 002 State: Colorado Abbreviation: None
Date: 11/2/2023 County: Pueblo Filename: 002
User: AMG

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D7R DS Series II LGP
Horsepower: 240
Blade Type: Straight
Attachment: 3-shank ripper
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$114.76	NA
Operating Cost/Hour:	$91.98	100
Ripper own. Cost/Hour:	$9.06	NA
Ripper op. Cost/Hour:	$0.00	0
Operator Cost/Hour:	$40.04	NA

Total unit Cost/Hour: $255.84
Total Fleet Cost/Hour: **$255.84**

MATERIAL QUANTITIES

Initial Volume: 3,127
Swell factor: 1.250
Loose volume: **3,908** LCY

Source of estimated volume: Rec Plan avg 2", Largest Phase 11.4 acres
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 400 feet
Unadjusted hourly production: 180.4 LCY/hr

Materials consistency description: Consolidated stockpile 1.0

Average push gradient: 0 %
Average site altitude: 5,500 feet

Material weight: 2,650 lbs/LCY

Weight description: Decomposed rock - 25% Rock, 75% Earth

Job Condition Correction Factor		Source
Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.100	(50% SL)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4755

Adjusted unit production: 85.78 LCY/hr

Adjusted fleet production: **85.78** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: $2.982/LCY

Total job time: **45.56** Hours

Total job cost: **$11,656**

REVEGETATION WORK

Task description: **Revegetation of max. anticipated disturbance**

Site: **Tomahawk Mine** Permit Action: 2023 Inspection Permit/Job#: M1991003

PROJECT IDENTIFICATION

Task #: 003 State: Colorado Abbreviation: None
Date: 11/2/2023 County: Pueblo Filename: 003
User: AMG

Agency or organization name: DRMS

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	$112.82
Weed control spraying (MEANS 31 31 16.13 3100)	$338.80
Total Tilling Cost/Acre	**$451.62**

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Hachita	0.75	12.24	$11.98
Indian Ricegrass - Paloma	1.25	4.05	$13.91
Little Bluestem - Pastura	1.75	10.45	$23.60
Sideoats Grama - Vaughn	2.70	8.86	$22.61
Western Wheatgrass - Arriba	1.60	4.04	$10.40
Totals Seed Mix	8.05	39.64	**$82.50**

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	$232.00
Total Seed Application Cost/Acre	**$232.00**

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hay, delivered {MEANS 31 25 14.16 1200}	2.00	TON	$429.79	$859.57
Total Mulch Materials Cost/Acre				**$859.57**

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	$74.46

Power mulcher (MEANS 32 91 13.16 0350)	$147.67
Total Mulch Application Cost/Acre	**$222.13**

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
Pine, Pinyon	100	Small potted, 2.25 inch diameter (MEANS)	$1.75	$0.00	$175.00
				Totals Nursery Stock Cost / Acre	**$175.00**

JOB TIME AND COST

No. of Acres:	21	Cost /Acre:	$2,022.82
Estimated Failure Rate:	25%	Cost /Acre*:	$314.50
*Selected Replanting Work Items:	SEEDING		

Initial Job Cost:	**$42,479.22**
Reseeding Job Cost:	**$1,651.13**
Total Job Cost:	**$44,130**
Job Hours:	**21.00**

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description: **Mobilization/Demobilization**

Site: **Tomahawk Mine** Permit Action: 2023 Inspection Permit/Job#: M1991003

PROJECT IDENTIFICATION

Task #: 004 State: Colorado Abbreviation: None
Date: 11/2/2023 County: Pueblo Filename: 004
User: AMG

Agency or organization name: DRMS

EQUIPMENT TRANSPORT RIG COST

Shift basis: 1 per day
Cost Data Source: CRG Data

Truck Tractor Description: GENERIC ON-HIGHWAY TRUCK TRACTOR, 6X4, DIESEL POWERED, 400 HP (2ND HALF, 2006)

Truck Trailer Description: GENERIC FOLDING GOOSENECK, DROP DECK EQUIPMENT TRAILER (25T, 50T, AND 100T)

Cost Breakdown:

Available Rig Capacities	**0-25 Tons**	**26-50 Tons**	**51+ Tons**
Ownership Cost/Hour:	$20.26	$36.04	$47.05
Operating Cost/Hour:	$39.51	$76.08	$82.85
Operator Cost/Hour:	$22.52	$22.52	$22.52
Helper Cost/Hour:	$0.00	$23.53	$23.53
Total Unit Cost/Hour:	$82.29	$158.17	$175.95

NON ROADABLE EQUIPMENT:

Machine Description	Weight/ Unit (TONS)	Owner ship Cost/hr/ unit	Haul Rig Cost/hr/unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
Cat D7R DS Series II LGP	38.49	$123.82	$158.17	1	$281.99	$158.17	$250.00
Drill/Broadcast Seeder with Tractor	25.00	$6.73	$82.29	2	$178.04	$164.58	$250.00
Power Mulcher (Bowie LD-90)	6.00	$25.94	$82.29	1	$108.23	$82.29	$250.00
Subtotals:					**$568.26**	**$405.04**	**$750.00**

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x2, 1/2 T.	$87.62	1	$87.62	$87.62
Water Tanker, 2,500 Gal.	$73.18	1	$73.18	$73.18
Subtotals:			**$160.80**	**$160.80**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region: COLORADO SPRINGS
Total one-way travel distance: 35.00 miles
Average Travel Speed: 23.00 mph

Total Non-Roadable Mob/Demob Cost * $5,962.42

'* two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	$489.39
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	1.52	1.52
Return Time (Hours):	1.52	1.52
Loading Time (Hours):	0.66	NA
Unloading Time (Hours):	0.66	NA
Subtotals:	4.36	3.04

JOB TIME AND COST

Total job time: **8.73** Hours

Total job cost: **$6,452**