COLORADO DIVISION OF RECLAMATION, MINING AND SAFETY
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: Stones Ranch Grav Pt	**MINE/PROSPECTING ID#:** M-1991-080	**MINERAL:** Gravel	**COUNTY:** Teller
INSPECTION TYPE: Surety-Related Inspection	**INSPECTOR(S):** Timothy A. Cazier	**INSP. DATE:** July 7, 2015	**INSP. TIME:** 13:30
OPERATOR: Russ Van Egmond	**OPERATOR REPRESENTATIVE:** Russ & Cathleen Van Egmond	**TYPE OF OPERATION:** 110c - Construction Limited Impact	

REASON FOR INSPECTION: Surety Related	**BOND CALCULATION TYPE:** Complete Bond	**BOND AMOUNT:** $5,089.00
DATE OF COMPLAINT: NA	**POST INSP. CONTACTS:** None	**JOINT INSP. AGENCY:** None
WEATHER: Cloudy	**INSPECTOR'S SIGNATURE:**	**SIGNATURE DATE:** July 9, 2015

GENERAL INSPECTION TOPICS

This list identifies the environmental and permit parameters inspected and gives a categorical evaluation of each. No problems or possible violations were noted during the inspection. The mine operation was found to be in full compliance with Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for the Extraction of Construction Materials and/or for Hard Rock, Metal and Designated Mining Operations. Any person engaged in any mining operation shall notify the office of any failure or imminent failure, as soon as reasonably practicable after such person has knowledge of such condition or of any impoundment, embankment, or slope that poses a reasonable potential for danger to any persons or property or to the environment; or any environmental protection facility designed to contain or control chemicals or waste which are acid or toxic-forming, as identified in the permit.

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

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

OBSERVATIONS

This inspection was conducted to discuss specifics related Technical Revision TR-02 in order to discuss clarifications to the mining and reclamation plans. Russ and Cathleen Van Egmond were present for the inspection, representing the Operator. This is a 110c gravel mine. The mine operated intermittently during the inspection, picking boulders from a stockpile, loading in a truck and hauling off site.

The Stones Ranch Gravel Pit entrance is located approximately 5.5 miles northwest of Cripple Creek, off County Road 1.

Inspection: Permit signs were displayed on either side of the access road at the site entrance (see **Photo 1**). The permit boundary was fenced along the entire perimeter (see **Photo 2**). Mr. Van Egmond indicated the truck scale and the office are both portable. As such, the demolition of either structure is NOT included in the reclamation cost estimate.

Mine Plan: Mr. Van Egmond explained blasting is performed in such that benches are 12 feet high and roughly 30 feet wide (see **Photo 3**). He also indicated the subsurface material is highly variable: ranging from clay, to rippable material and competent rock (requiring blasting). They have clay stockpiles (see **Photo 4**) to be blended in as a binder for the gravel material as needed. Backfill material was being pushed from the southern permit boundary towards the pit floor for (see **Photos 5** and **6**) for sale as well as later reclamation.

Reclamation Plan: Mr. Van Egmond asked about reclamation of the rock outcrops or benches. This inspector stated the bench faces can be left as is, but that at least a foot of combined backfill and growth media should be placed on top of the bench. Stormwater management was discussed for reclamation as well – controlling erosion is important for reclamation.

The Operators have stated that approximately one third of the 10-acre site will require revegetation. This will be the sloped southern portion of the pit, which was confirmed during the inspection to be no steeper than 3H:1V incompetent material (i.e., anything that does NOT require blasting for removal). It should be noted that the aforementioned overall mine bench configuration (30H:12V) is slightly steeper at an actual 2.5H:1V than the required 3:1, but is expected to be stable as it is mostly competent rock. The Division will work with the Operator as the mine progresses and make reclamation recommendations with respect to slope stability for reclamation, if necessary. At 2.5H:1V, a geotechnical slope stability analyses for competent rock is not considered necessary at this time.

Based on site observations during the inspection, this inspector estimated only 2.5 acres might need revegetation work for reclamation (allowing for competent rock that cannot be reasonably revegetated). This is reflected in the enclosed revised bond estimate. Further, only the pit's east and west highwalls (see **Photo 3**) will need to be backfilled to 3H:1V. Backfill volume estimates are enclosed and are based on measurements shown on **Figure 1**.

Records: The Division has received the annual fee and map for 2014 (due in October), but not the annual report. This inspector left a blank copy of the 2014 annual report with Cathleen Van Egmond to complete and mail to the Division. She indicated she would.

Current Stipulations:
None.

Bond:
The current bond has not been updated since 2005. This inspection was for the purpose of helping the Operator facilitate a viable reclamation plan for TR-02 that is consistent with the post-mine land use modified in TR-01. A revised bond calculation is attached.

Summary and Recommendations:

1. The Division confirmed with the Operator that backfill of the pit slopes will be at 3H:1V. This applies to all slopes of incompetent material.
2. Based on this inspection and the clarification stated within this report, the Division will recommend approval of TR-02. You will be notified of the approval under separate cover.
3. A revised bond estimate is enclosed. Please contact the Division if you have comments or questions.
4. The Operator must submit the 2014 annual report to the Division as soon as possible.

Please contact Tim Cazier (303-866-3567, ext. 8169) if you have any questions regarding the require TR or this report.

PHOTOGRAPHS

Photo 1. Permit sign displayed on right side of the access road at the site entrance.

PHOTOGRAPHS (cont.)

Photo 2. Fenced permit boundary (looking SE).

Photo 3. Southern end of pit, *Note benches* (looking south).

PHOTOGRAPHS (cont.)

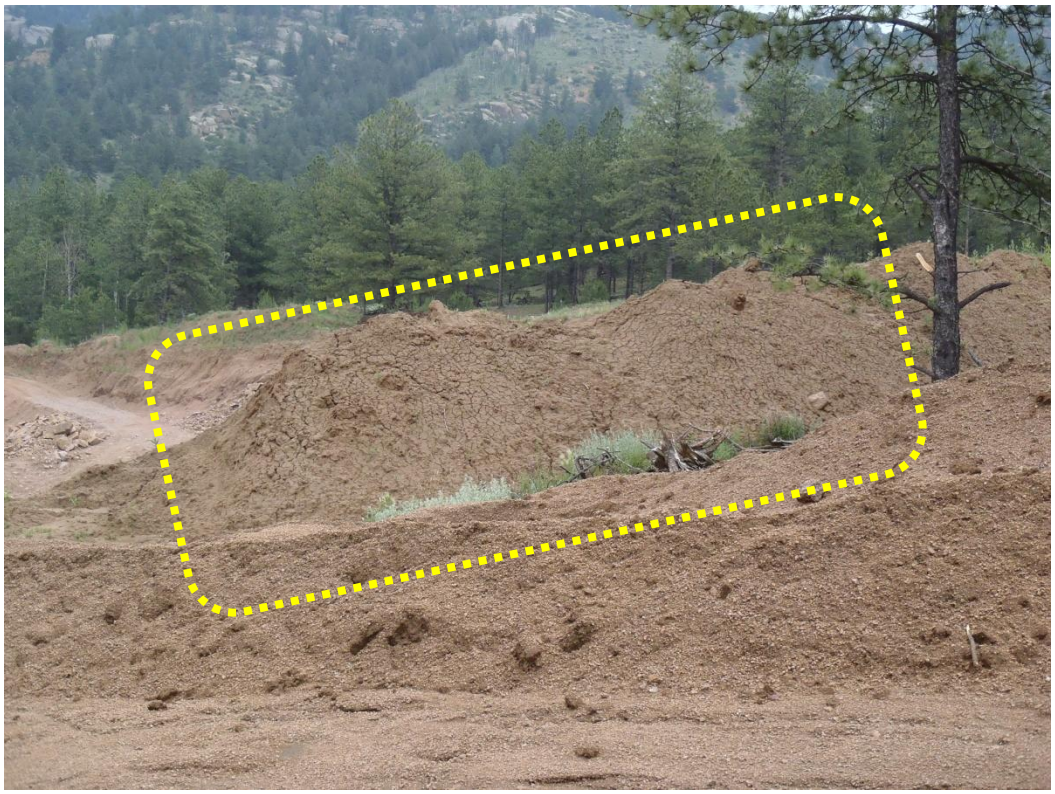


Photo 4. Clay stockpiles (looking NE).

Photo 5. Backfill material being pushed down towards the pit floor (looking north).

PHOTOGRAPHS (cont.)

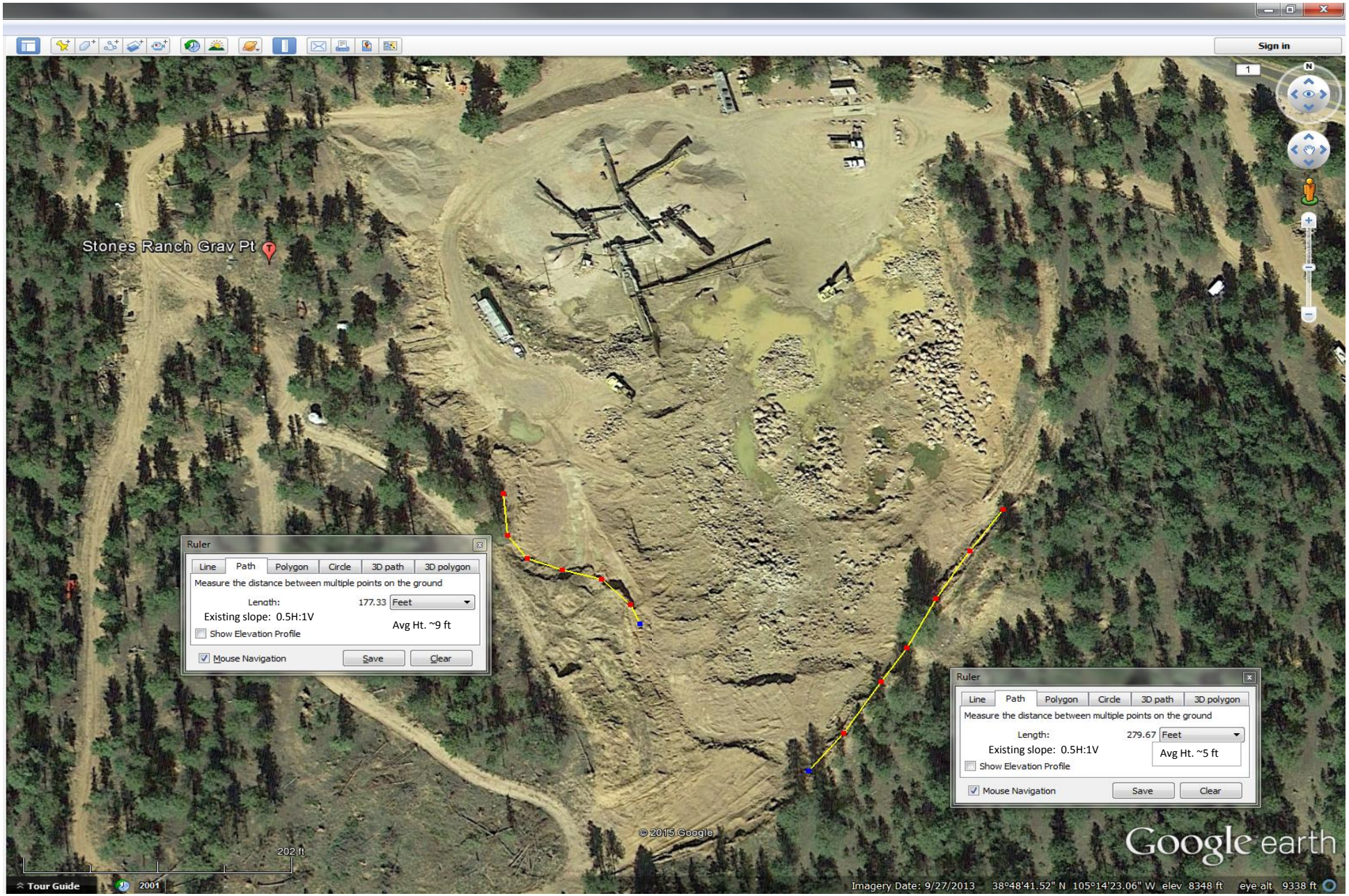
Photo 6. Backfill material being pushed down from the southern permit boundary (looking north). *Note boundary fence posts*.

Inspection Contact Address
Russ & Cathleen Van Egmond
Russ Van Egmond
546 Doe Valley Rd.
Guffey, CO 80820

Enclosures

CC: Wally Erickson, DRMS
DRMS file

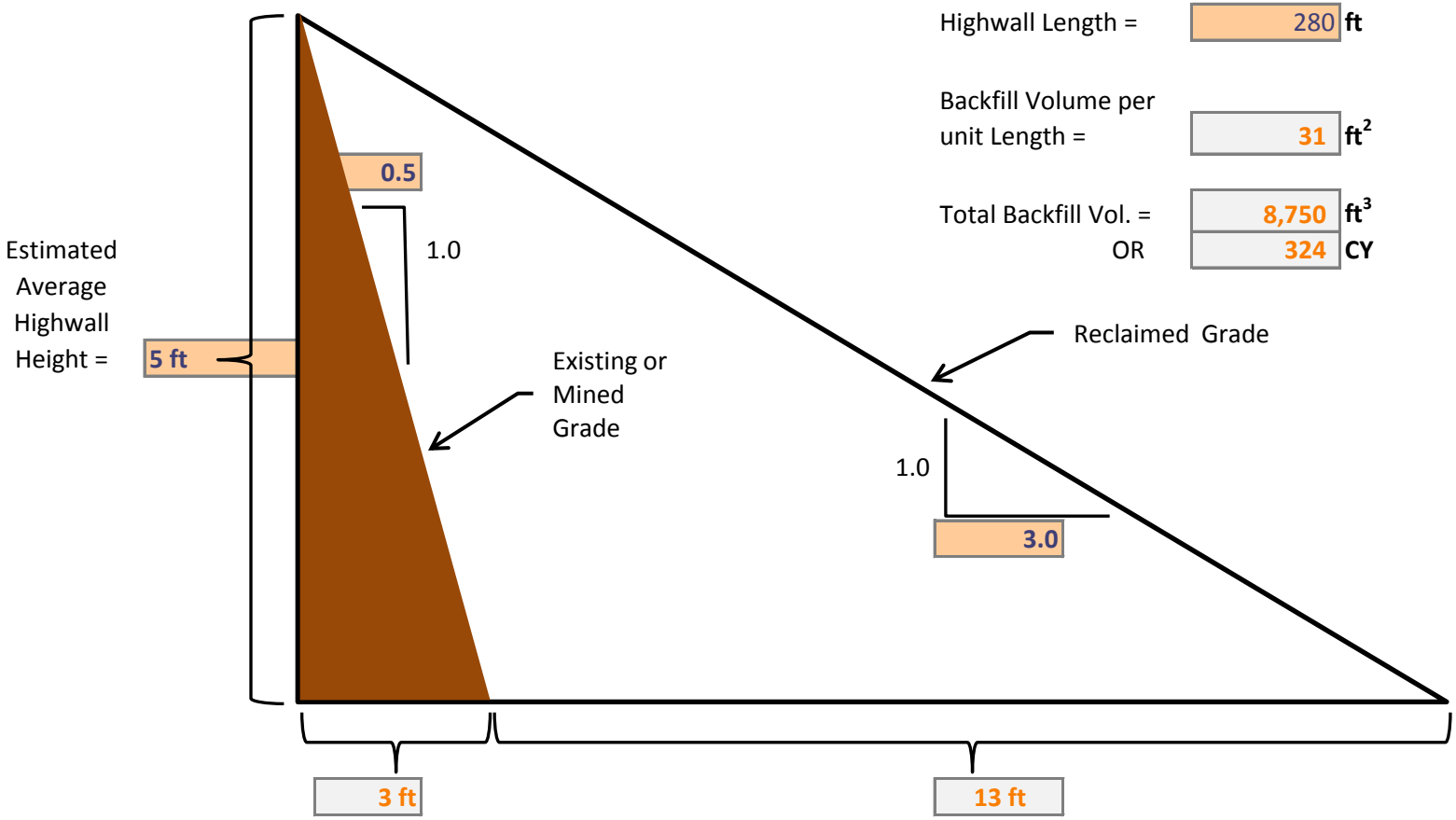
FIGURE 1. STONES RANCH HIGHWALLS



VOLUME CALCULATION
SHEET 1 OF 2

PROJECT: Stones Ranch Grav Pt
PERMIT No.: M-1991-080
HIGHWALL LOCATION: East Side

LEGEND
Input
Result



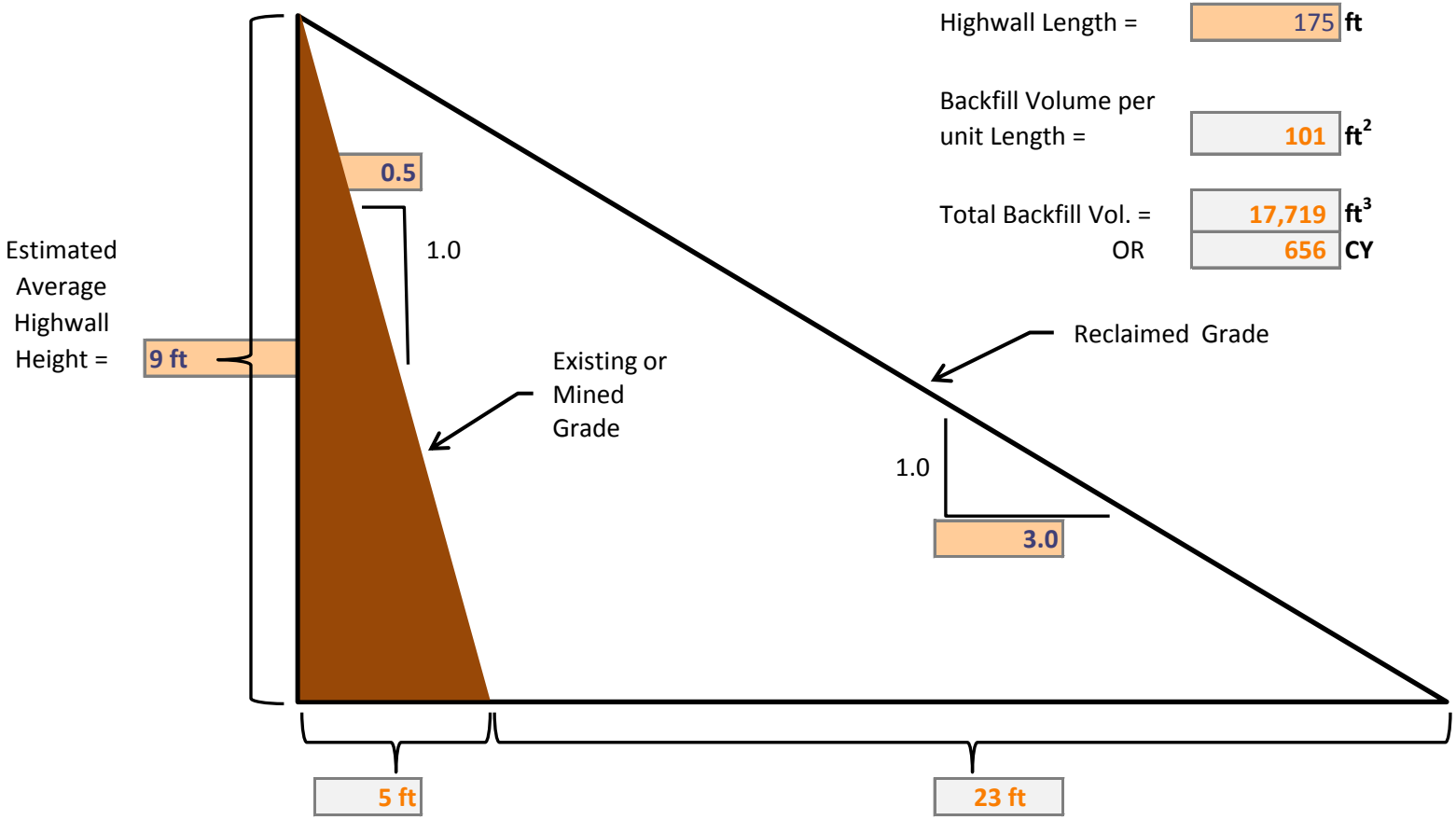
Highwall Length =	280	ft
Backfill Volume per unit Length =	31	ft^2
Total Backfill Vol. =	8,750	ft^3
OR	324	CY

HIGHWALL BACKFILL VOLUME ESTIMATE

VOLUME CALCULATION
SHEET 2 OF 2

PROJECT: Stones Ranch Grav Pt
PERMIT No.: M-1991-080
HIGHWALL LOCATION: West Side

LEGEND
Input
Result



HIGHWALL BACKFILL VOLUME ESTIMATE

COST SUMMARY WORK

Task description: **Cost Summary**

Site: **Stones Ranch Grav Pt** Permit Action: TR-02 Permit/Job#: M1991080

PROJECT IDENTIFICATION

Task #: 000 State: Colorado Abbreviation: None
Date: 7/9/2015 County: Teller Filename: M080-000
User: TC1

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Backfill Side Pit Walls to a 3H:1V Slope	DOZER	1	5.47	$1,142.00
002	Apply 4 inches of Growth Medium over 2.5 Ac	DOZER	1	4.04	$843.00
003	Revegetate 2.5 Acres (incl. old Task 005-weed control)	REVEGE	1	10.00	$4,172.00
006	Mob/demob Equipment	MOBILIZE	1	1.60	$795.00
		SUBTOTALS:		**21.11**	**$6,952**

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02%	Total =	$140.43
Performance bond:	1.05%	Total =	$73.00
Job superintendent:	14.03 hrs	Total =	$1,054.49
Profit:	10.00%	Total =	$695.20
		TOTAL O & P =	$1,963.12
		CONTRACT AMOUNT (direct + O & P) =	$8,915.12

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	0.00	Total =	0.00
Engineering work and/or contract/bid preparation:	0.00%	Total =	$0.00
Reclamation management and/or administration:	5.00%		$445.76
CONTINGENCY:	0.00	Total =	$0.00
		TOTAL INDIRECT COST =	$2,408.88
		TOTAL BOND AMOUNT (direct + indirect) =	**$9,360.88**

BULLDOZER WORK

Task description: **Backfill Side Pit Walls to a 3H:1V Slope**

Site: **Stones Ranch Grav Pt** Permit Action: TR-02 Permit/Job#: M1991080

PROJECT IDENTIFICATION

Task #: 001 State: Colorado Abbreviation: None
Date: 7/9/2015 County: Teller Filename: M080-001
User: TC1

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D8T - 8U
Horsepower: 310
Blade Type: Universal
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$62.67	NA
Operating Cost/Hour:	$108.22	100
Ripper op. Cost/Hour:	$0.00	0
Operator Cost/Hour:	$38.01	NA

Total unit Cost/Hour: $208.90
Total Fleet Cost/Hour: **$208.90**

MATERIAL QUANTITIES

Initial Volume: 980
Swell factor: 1.000
Loose volume: **980** LCY

Source of estimated volume: 7/7/15 Inspection photos
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 150 feet
Unadjusted hourly production: 685.7 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 20 %
Average site altitude: 8,500 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% Earth

Job Condition Correction Factor

		Source
Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.200	(SLOT)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)

Spoil pile:	0.900	(SSD-FC)
Push gradient:	0.545	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.2615

Adjusted unit production: 179.31 LCY/hr
Adjusted fleet production: **179.31** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: $1.165/LCY

Total job time: **5.47** Hours
Total job cost: **$1,142**

BULLDOZER WORK

Task description: **Apply 4 inches of Growth Medium over 2.5 Ac**

Site: **Stones Ranch Grav Pt** Permit Action: TR-02 Permit/Job#: M1991080

PROJECT IDENTIFICATION

Task #: 002 State: Colorado Abbreviation: None
Date: 7/9/2015 County: Teller Filename: M080-002
User: TC1

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D8T - 8U
Horsepower: 310
Blade Type: Universal
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$62.67	NA
Operating Cost/Hour:	$108.22	100
Ripper op. Cost/Hour:	$0.00	0
Operator Cost/Hour:	$38.01	NA

Total unit Cost/Hour: $208.90
Total Fleet Cost/Hour: **$208.90**

MATERIAL QUANTITIES

Initial Volume: 1,344
Swell factor: 1.000
Loose volume: **1,344** LCY

Source of estimated volume: 4 inches from TR-02 over 2.5 acres
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 250 feet
Unadjusted hourly production: 400.0 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: -20 %
Average site altitude: 8,500 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:	0.900	(CAT HB))
Dozing method:	1.200	(SLOT)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)

Spoil pile:	1.000	(DOZ-OC)
Push gradient:	1.426	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8322

Adjusted unit production: 332.88 LCY/hr
Adjusted fleet production: **332.88** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: $0.628/LCY

Total job time: **4.04** Hours
Total job cost: **$843**

REVEGETATION WORK

Task description: **Revegetate 2.5 Acres (incl. old Task 005-weed control)**

Site: **Stones Ranch Grav Pt** Permit Action: TR-02 Permit/Job#: M1991080

PROJECT IDENTIFICATION

Task #: 003 State: Colorado Abbreviation: None
Date: 7/9/2015 County: Teller Filename: M080-003
User: TC1

Agency or organization name: DRMS

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Ammonium nitrate, 33-0-0	40.00	pound	$0.36	$14.36
Potassium nitrate, 13-46-0	40.00	pound	$1.25	$49.84
			Total Fertilizer Materials Cost/Acre	**$64.20**

Application

Description	Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)	$52.71
Total Fertilizer Application Cost/Acre	**$52.71**

TILLING

Description	Cost /Acre
Chisel plowing {DMG}	$88.58
Total Tilling Cost/Acre	**$88.58**

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Smooth Brome - Lincoln	26.00	86.55	$34.58
Pubescent Wheatgrass - Luna	28.00	57.85	$62.72
Sheep Fescue - Covar	8.00	124.89	$26.80
Totals Seed Mix	62.00	269.28	**$124.10**

Application

Description	Cost /Acre
Broadcast seeding [DMG]	$261.28

Total Seed Application Cost/Acre	**$261.28**

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	$265.00	$530.00
Total Mulch Materials Cost/Acre				**$530.00**

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	$65.89
Power mulcher (MEANS 32 91 13.16 0250)	$86.68
Weed spray, truck, non-aquatic area, nox. [DMG]	$61.49
Total Mulch Application Cost/Acre	**$214.06**

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					$
				Totals Nursery Stock Cost / Acre	**$0.00**

JOB TIME AND COST

No. of Acres: 2.5 Cost /Acre: $1,334.93
Estimated Failure Rate: 25% Cost /Acre*: $1,334.93
*Selected Replanting Work Items: FERTILIZING,TILLING,SEEDING,MULCHING

Initial Job Cost: **$3,337.33**
Reseeding Job Cost: **$834.33**
Total Job Cost: **$4,172**
Job Hours: **10.00**

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description: **Mob/demob Equipment**

Site: **Stones Ranch Grav Pt** Permit Action: TR-02 Permit/Job#: M1991080

PROJECT IDENTIFICATION

Task #: 006 State: Colorado Abbreviation: None
Date: 7/9/2015 County: Teller Filename: M080-006
User: TC1

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:	$16.63	$18.37	$22.33
Operating Cost/Hour:	$44.38	$46.13	$50.07
Operator Cost/Hour:	$27.66	$27.66	$27.66
Helper Cost/Hour:	$0.00	$25.39	$25.39
Total Unit Cost/Hour:	$88.67	$117.55	$125.45

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 D8T - 8U	48.33	$62.67	$117.55	1	$180.22	$117.55	$250.00
Subtotals:					**$180.22**	**$117.55**	**$250.00**

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Drill/Broadcast Seeder with Tractor	$52.78	1	$52.78	$52.78
Power Mulcher (Reinco M90)	$26.19	1	$26.19	$26.19
Subtotals:			**$78.97**	**$78.97**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	CRIPPLE CREEK	
Total one-way travel distance:	7.00	miles
Average Travel Speed:	35.00	mph

Total Non-Roadable Mob/Demob Cost *	$763.28
'* two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	$31.59
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.20	0.20
Return Time (Hours):	0.20	0.20
Loading Time (Hours):	0.20	NA
Unloading Time (Hours):	0.20	NA
Subtotals:	0.80	0.40

JOB TIME AND COST

Total job time:	**1.60**	Hours
Total job cost:	**$795**	