




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: ZMK Gravel Pit	MINE/PROSPECTING ID#: M-1991-146	MINERAL: Sand & Gravel	COUNTY: Ouray
INSPECTION TYPE: Multi Person Inspection	INSPECTOR(S): Wallace H. Erickson, G Russell Means	INSP. DATE: August 29, 2012	INSP. TIME: 14:00
OPERATOR: SAKO Excavation, LLC	OPERATOR REPRESENTATIVE: Travis Sackman, Jeff French, Tim Pasek	TYPE OF OPERATION: 110c – In-stream	

REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: Complete Bond	BOND AMOUNT: \$3,750.00
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None
WEATHER: Cloudy	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: September 6, 2012

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.

GENERAL INSPECTION TOPICS

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

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

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

INSPECTION TOPIC: Financial Warranty

PROBLEM/POSSIBLE VIOLATION: Problem: The Division has reviewed the current cost of reclamation totaling \$8,151.48. Therefore, the existing \$3,750 financial warranty is not adequate to reclaim the site in accordance with the approved reclamation plan. This is a failure to maintain the proper financial warranty amount to complete reclamation of the affected lands pursuant to C.R.S. 34-32.5-117(4)(b) of the Act.

CORRECTIVE ACTIONS: Pursuant to Rule 4.2.1(2), the Operator shall submit adequate financial warranty, totaling not less than \$8,151.48, within 60 days, due November 5, 2012.

CORRECTIVE ACTION DUE DATE: November 5, 2012

OBSERVATIONS

This inspection occurred as part of the Division's routine monitoring of permitted operations. The ZMK Gravel Pit is approved to extract alluvial materials from the floodplain of the Uncompahgre River. The 8.72 acre permit area is located entirely within active floodplain areas. The excavation and processing areas are separated from the low-flow channel by a historic flood protection levee. The flood protection levee predates the permit. Permit conditions allow the Operator to breach a portion of the levee during high flow season and thereby allowing the river to enter the extraction area, deposit its bedload, and recharge the extraction area. After high flow season has passed the Operator restores the levee at its approximate original alignment, replacing all flow to the main channel. This report is accompanied by an updated reclamation cost estimation, totaling \$8,151.48, and six photos.

As shown in the photos, mining and reclamation activities were active. Mining and reclamation activities appeared to be confined to appropriate areas. Evidence of off-site damage was not observed. Evidence of problematic weed infestation, including regulated noxious weeds, was not observed. The operation appeared active and well maintained.

The Division has evaluated the current cost of reclamation totaling \$8,151.48. Please find enclosed nine pages of summary and task sheets utilized by the Division to calculate the current cost of reclamation. Therefore, the existing \$3,750 financial warranty appears insufficient to ensure reclamation. As noted above, the Division has identified a problem with the insufficient bond and, pursuant to Rule 4.2.1(2), has imposed a 60-day compliance deadline, due November 5, 2012, to resolve the problem.

Response to this inspection report should be addressed to Wally Erickson at the Division's office in Durango, 691 County Road 233, Suite A-2, Durango, CO 81301, phone (970) 247-5469.

Inspection Contact Address

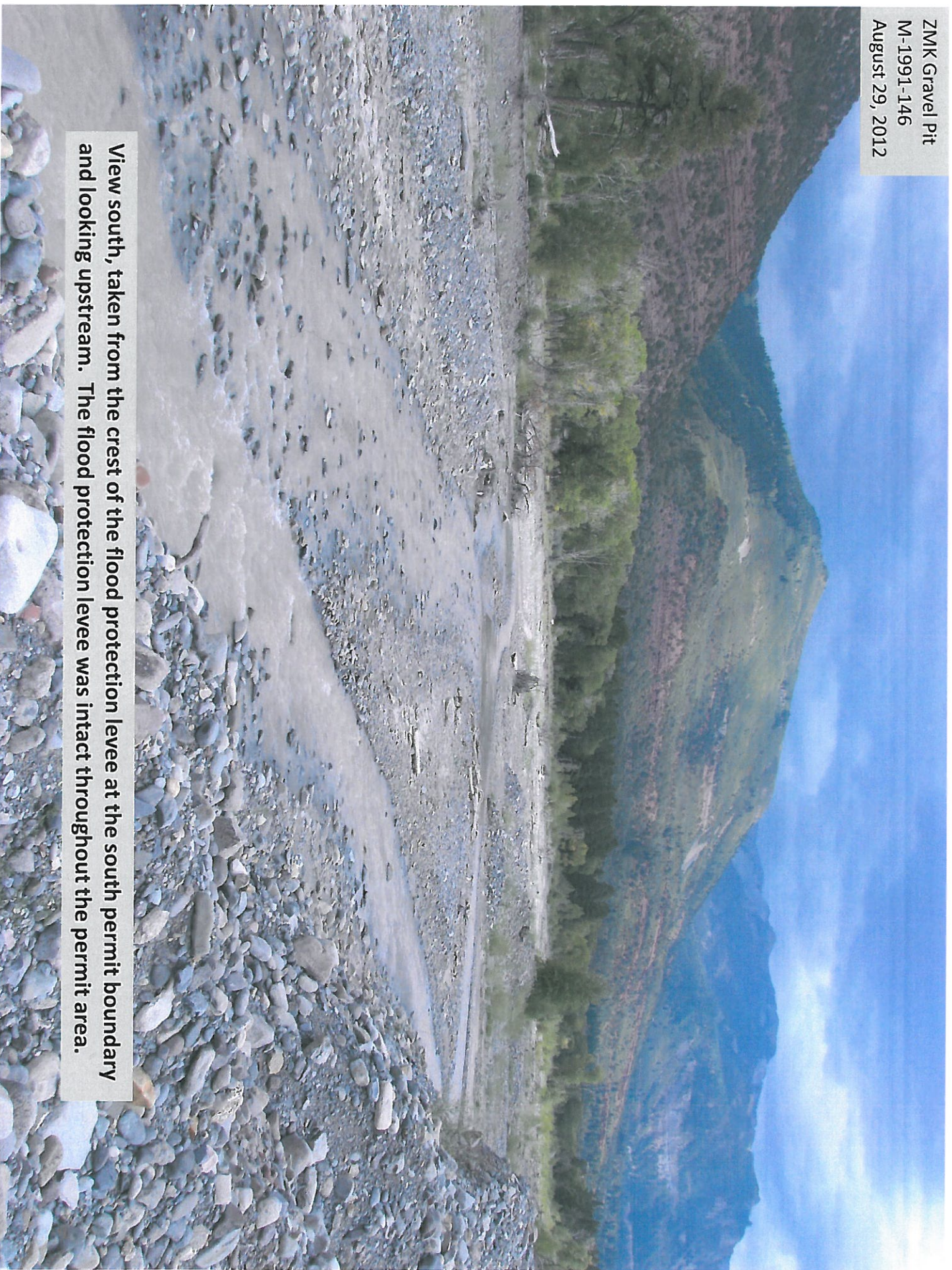
Travis Sackman
SAKO Excavation, LLC
P.O. Box 1103
Ouray, CO 81427

Enclosure: six photos and updated reclamation cost estimation totaling \$8,151.48

Ec w/enclosure: Tim Pasek and Robert Larson, Monadnock Minerals Services
Russ Means, DRMS GJFO

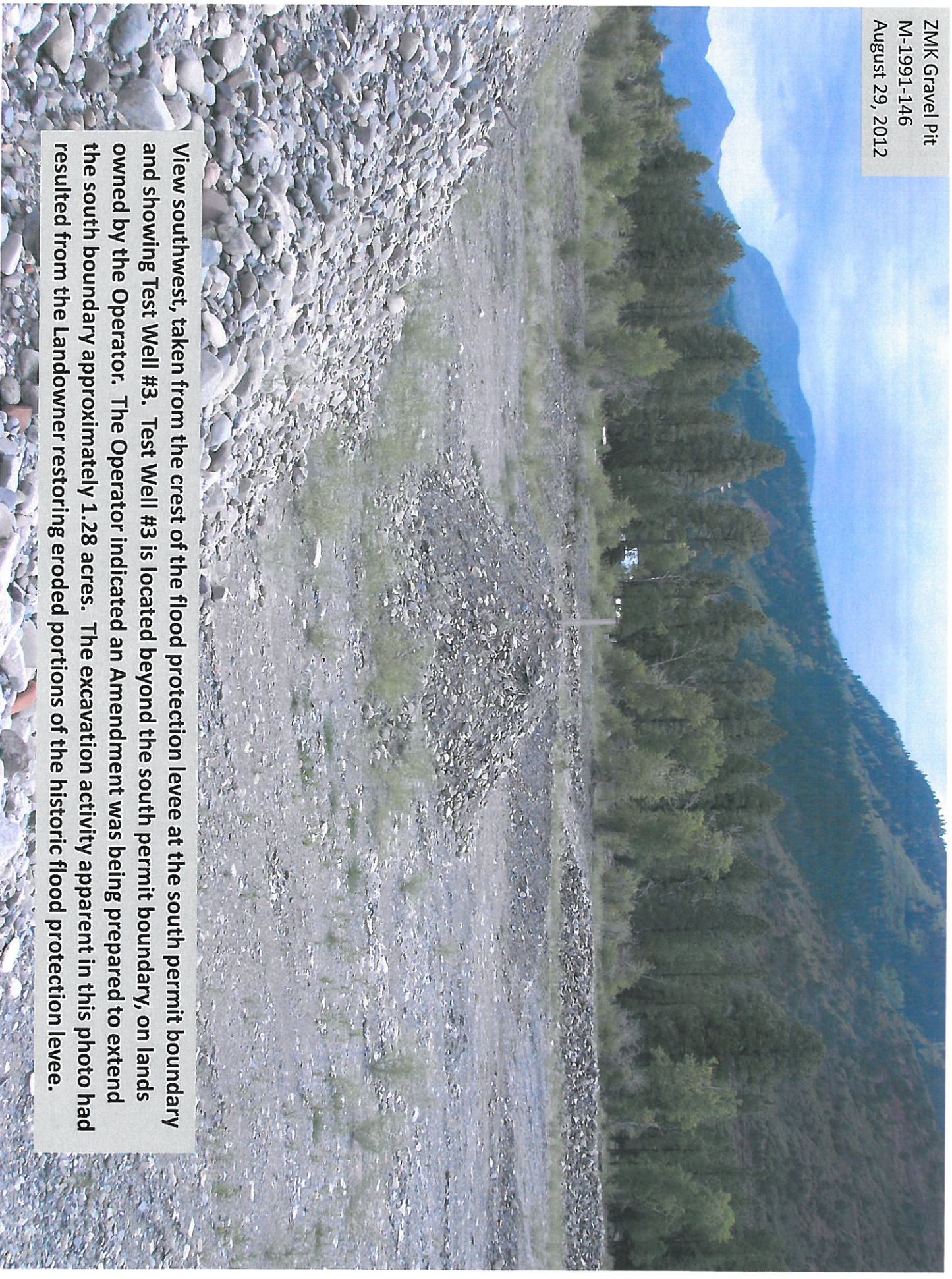
ZMK Gravel Pit
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August 29, 2012

View south, taken from the crest of the flood protection levee at the south permit boundary and looking upstream. The flood protection levee was intact throughout the permit area.



ZMK Gravel Pit
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View southwest, taken from the crest of the flood protection levee at the south permit boundary and showing Test Well #3. Test Well #3 is located beyond the south permit boundary, on lands owned by the Operator. The Operator indicated an Amendment was being prepared to extend the south boundary approximately 1.28 acres. The excavation activity apparent in this photo had resulted from the Landowner restoring eroded portions of the historic flood protection levee.

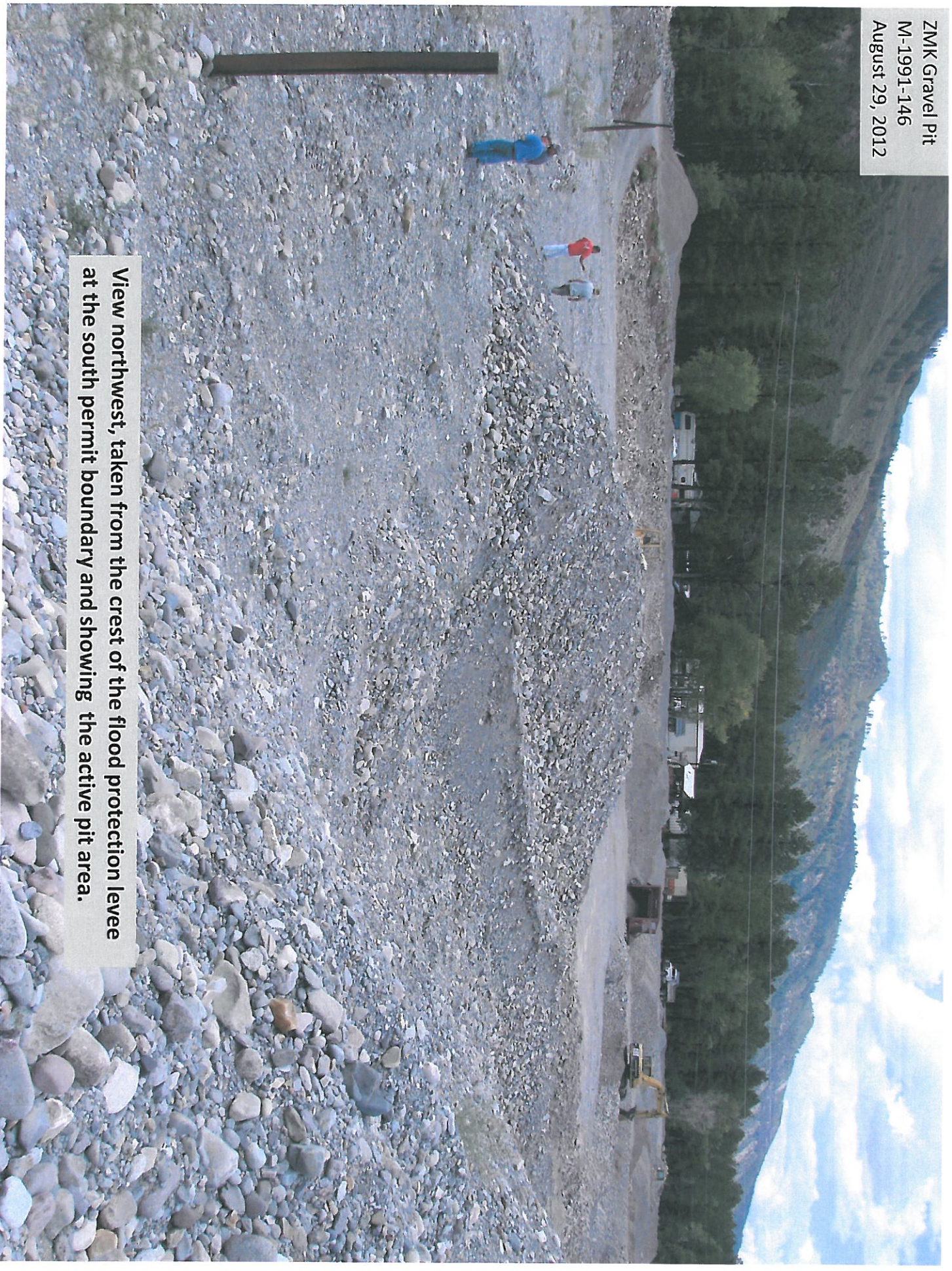


ZMK Gravel Pit
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View west, taken from the crest of the flood protection levee at the south permit boundary. The south permit boundary is delineated by the three steel posts shown in this photo. The stockpile of boulders, located above the floodplain and outside the permit boundary, appeared to have been imported by the Landowner and intended to be utilized for erosion control.

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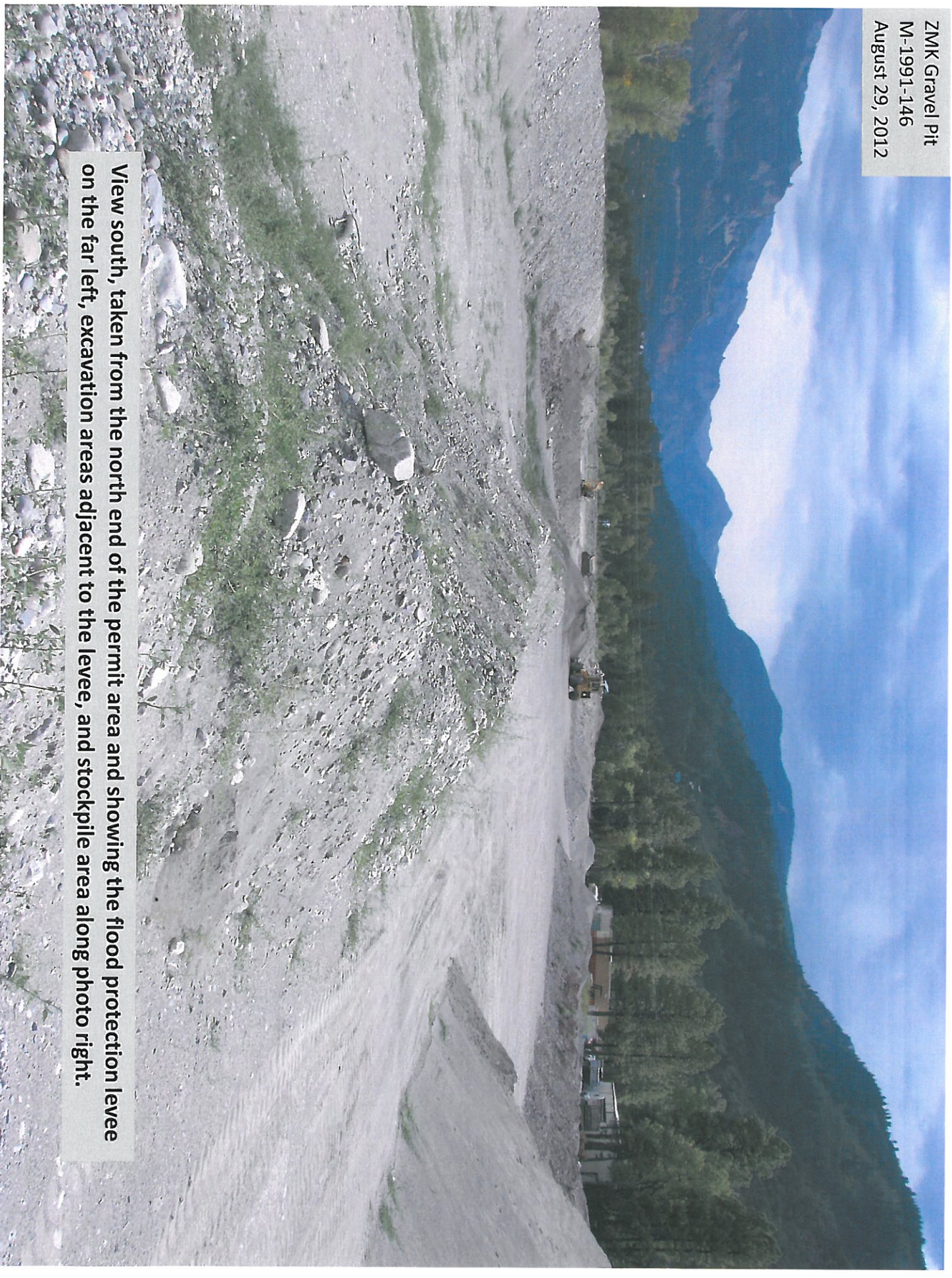
View northwest, taken from the crest of the flood protection levee at the south permit boundary and showing the active pit area.

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View north, taken from the crest of the flood protection levee at the south permit boundary.



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View south, taken from the north end of the permit area and showing the flood protection levee on the far left, excavation areas adjacent to the levee, and stockpile area along photo right.

COST SUMMARY WORK

Task description: Summary of reclamation tasks and associated costs

Site: ZMK Gravel Pit Permit Action: Routine bond update Permit/Job#: M1991146

PROJECT IDENTIFICATION

Task #: 005 State: Colorado Abbreviation: None
Date: 9/6/2012 County: Ouray Filename: M146-005
User: WHE

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	General grading to ensure 3H:1V slopes and breach berm	DOZER	1	19.36	\$4,869.92
002	Close breach, restore flood protection dike	DOZER	1	2.26	\$569.37
003	Transplant 24 cottonwood seedlings	REVEGE	1	0.00	\$144.72
004	Haul reclamation equipment to and from job site	MOBILIZE	1	2.66	\$1,014.83
<u>SUBTOTALS:</u>				24.28	\$ \$6,598.84

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	\$133.30
Performance bond:	1.05	Total =	\$69.29
Job superintendent:	0.00	Total =	\$0.00
Profit:	10.00	Total =	\$659.88

TOTAL O & P = \$862.47

CONTRACT AMOUNT (direct + O & P) = \$7,461.31

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	<u>0.00</u>	Total =	<u>0.00</u>
Engineering work and/or contract/bid preparation:	<u>4.25</u>	Total =	<u>\$317.11</u>
Reclamation management and/or administration:	<u>5.00</u>		<u>\$373.07</u>

CONTINGENCY: 0.00 Total = \$0.00

TOTAL INDIRECT COST = \$1,552.64

TOTAL BOND AMOUNT (direct + indirect) = \$8,151.48

BULLDOZER WORKTask description: General grading to ensure 3H:1V slopes and breach bermSite: ZMK Gravel PitPermit Action: Routine bond updatePermit/Job#: M1991146PROJECT IDENTIFICATIONTask #: 001State: ColoradoAbbreviation: NoneDate: 9/6/2012County: OurayFilename: M146-001User: WHEAgency or organization name: DRMSHOURLY EQUIPMENT COSTBasic Machine: Cat D9T - 9SUHorsepower: 405Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$72.40	NA
Operating Cost/Hour:	\$140.68	100
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.49	NA

Total unit Cost/Hour: \$251.56Total Fleet Cost/Hour: \$251.56MATERIAL QUANTITIESInitial Volume: 12,907Swell factor: 1.000Loose volume: 12,907 LCYSource of estimated volume: (8ac)(43560sf/ac)(1'D) / 27 = 12,906.67 cySource of estimated swell factor: NAHOURLY PRODUCTIONAverage push distance: 50 feetUnadjusted hourly production: 2,110.5 LCY/hrMaterials consistency description: Dry, non-cohesive 0.8Average push gradient: 0 %Average site altitude: 7,200 feetMaterial weight: 2,900 lbs/LCYWeight description: Sand and gravel - DryJob Condition Correction Factor

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.800	(CAT HB)
Dozing method:	1.000	(GEN.)

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:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3159

Adjusted unit production: 666.71 LCY/hr

Adjusted fleet production: **666.71** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.377/LCY

Total job time: **19.36** Hours

Total job cost: **\$4,869.92**

BULLDOZER WORKTask description: Close breach, restore flood protection dikeSite: ZMK Gravel PitPermit Action: Routine bond updatePermit/Job#: M1991146PROJECT IDENTIFICATIONTask #: 002State: ColoradoAbbreviation: NoneDate: 9/6/2012County: OurayFilename: M146-002User: WHEAgency or organization name: DRMSHOURLY EQUIPMENT COSTBasic Machine: Cat D9T - 9SUHorsepower: 405Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$72.40	NA
Operating Cost/Hour:	\$140.68	100
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.49	NA

Total unit Cost/Hour: \$251.56Total Fleet Cost/Hour: \$251.56MATERIAL QUANTITIESInitial Volume: 889Swell factor: 1.000Loose volume: 889 LCYSource of estimated volume: $((20' \text{ base} \times 8' \text{ H}) / 2) 300' \text{ L}) / 27 = 888.89 \text{ cy}$ Source of estimated swell factor: Cat HandbookHOURLY PRODUCTIONAverage push distance: 100 feetUnadjusted hourly production: 1,243.2 LCY/hrMaterials consistency description: Dry, non-cohesive 0.8Average push gradient: 0 %Average site altitude: 7,200 feetMaterial weight: 2,900 lbs/LCYWeight description: Sand and gravel - DryJob Condition Correction Factor

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.800	(CAT HB)
Dozing method:	1.000	(GEN.)

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:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3159

Adjusted unit production: 392.73 LCY/hr

Adjusted fleet production: **392.73 LCY/hr**

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.641/LCY

Total job time: **2.26 Hours**

Total job cost: **\$569.37**

REVEGETATION WORKTask description: Transplant 24 cottonwood seedlingsSite: ZMK Gravel PitPermit Action: Routine bond updatePermit/Job#: M1991146PROJECT IDENTIFICATIONTask #: 003State: ColoradoAbbreviation: NoneDate: 9/6/2012County: OurayFilename: M146-003User: WHEAgency or organization name: DRMSFERTILIZINGMaterials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
			\$
Totals Seed Mix	0.00	0.00	\$0.00

Application

Description	Cost /Acre
	\$

Total Seed Application Cost/Acre	\$0.00
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MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
Total Mulch Materials Cost/Acre				\$0.00

Application

Description	Cost /Acre
	\$
Total Mulch Application Cost/Acre	\$0.00

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
Cottonwood, Narrowleaf	24	Bare root seedling, 11-16 inch ht. (MEANS)	\$4.02	\$2.40	\$96.48
Totals Nursery Stock Cost / Acre					\$96.48

JOB TIME AND COST

No. of Acres:	1	Cost /Acre:	\$96.48
Estimated Failure Rate:	50%	Cost /Acre*:	\$96.48
*Selected Replanting Work Items:	NURSERY		
Initial Job Cost:	\$96.48		
Reseeding Job Cost:	\$48.24		
Total Job Cost:	\$144.72		
Job Hours:	0.00		

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: Haul reclamation equipment to and from job siteSite: ZMK Gravel PitPermit Action: Routine bond updatePermit/Job#: M1991146PROJECT IDENTIFICATIONTask #: 004State: ColoradoAbbreviation: NoneDate: 9/6/2012County: OurayFilename: M146-004User: WHEAgency or organization name: DRMSEQUIPMENT TRANSPORT RIG COSTShift basis: 1 per dayCost Data Source: CRG DataTruck 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 D9T - 9SU	60.01	\$72.40	\$125.45	1	\$197.85	\$125.45	\$250.00
Subtotals:					\$197.85	\$125.45	\$250.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 3/4 T.	\$34.08	1	\$34.08	\$34.08
Subtotals:			\$34.08	\$34.08

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	OURAY	
Total one-way travel distance:	5.00	miles
Average Travel Speed:	30.00	mph

Total Non-Roadable Mob/Demob Cost *	\$1,003.47
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	\$11.36
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.17	0.17
Return Time (Hours):	0.17	0.17
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.33	0.33

JOB TIME AND COST

Total job time: 2.67 Hours

Total job cost: \$1,014.83

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