



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

August 13, 2024

John Nichols
Nichols Gravel Pit, L.L.P.
P.O. Box 285
Mesa, CO 81643

Re: Nichols Gravel Pit - File No. M-1981-013
Nichols Gravel Pit, L.L.P.
Technical Revision (TR-4)
Revise Reclamation Plan

Dear John Nichols:

On August 13, 2024 the Division of Reclamation, Mining and Safety concluded its review of the Technical Revision application submitted to the Division on July 11, 2024, addressing the following:

Minor changes to the reclamation plan. 7 Ac of the pit floor will remain graveled, scales will remain post mining, update seed mix site wide, remove tree planting and use of fertilizer until deemed necessary.

The decision reached by the Division is: approve. Approve revised reclamation plan. Bond increase required.

The terms of Technical Revision No. 4 approved by the Division are hereby incorporated into Permit No. M-1981-013. All other conditions and requirements of Permit No. M-1981-013 remain in full force and effect.

The revised liability amount exceeds the financial warranty currently held (see below), please submit additional bond or a rider to your existing bond that equals or exceeds the Revised Liability. The revision will not be final until the bond is approved by the Division.

Bond Held:	\$115,474.00
Prior Liability:	\$115,474.00
Change in Liability:	\$5,824.00
Revised Liability:	\$121,298.00
Prior Permit Acreage:	67.50
Change in Permit Acreage:	0.00



Revised Permit Acreage:	67.50
Prior Affected Acreage:	67.50
Change in Affected Acreage:	0.00
Revised Affected Acreage:	67.50

If you have any questions, please contact me by telephone at (970) 210-1272, or by email at Amy.yeldell@state.co.us.

Sincerely,



Amy C. Yeldell
Environmental Protection Specialist



August 13, 2024

John Nichols
Nichols Gravel Pit L.L.P.
P.O. Box 285
Mesa, CO 81643

RE: Nichols Gravel Pit, Permit No. M-1981-013, Reclamation Cost Estimate (TR-4)

Dear Mr. Nichols:

This reclamation cost update was in response to the site inspection conducted on May 14, 2024 and changes proposed under Technical Revision 4 (TR-4). The inspection documented reclamation work conducted on site as compared to the Divisions October 25, 2023 inspection. An initial estimate was provided on November 13, 2023. This estimate has since been updated to reflect current site conditions and changes to the Reclamation Plan.

Below is a table summarizing input values. Changes from the 2023 calculation are in red. This table does not account for price changes resulting from inflation or other RS Means cost changes. Bond calculations are based on a combination of field observations and worst case scenario based on the approved reclamation plan.

Task	Form Used	Description
01a	Dozer	Reduce all slopes to 2H:1V or less = 10,624 BCY North Slope Cut/Fill: 300 LF of 30'H 1:1, 100' push = 625 BCY Fence Corner Backfill: 400LF of 30'H 1:1, 200' push = 6,667 CCY SE Corner Cut/fill: 400 LF of 20'H Near vert, 100' push = 1,110 BCY South bench: 600 LF of 40'H 1:1, 10' push = 2,222 BCY
02a	Truck	Transport overburden (2 ft over 2.5 ac) to pit floor 8067 CCY Only 2.5 ac of lower pit floor need overburden replaced. 7ac to remain bare and graveled



02b	Dozer	Grade transported overburden 9,075 LCY, 50' push
03a	Truck	Truck approx. half of topsoil to north side of pit = 8,000 LCY 900 LF haul (19ac @ 6" = 15,327 CCY)
03b	Dozer	Spread transported topsoil 6" over 19 ac = 18,622 LCY, 100' push, partially consolidated
04a	Reveg	Reveg 19ac with revised seed mix Pit floor 9.5 ac – 7ac = 2.5 ac Pit slopes 16.5 ac
05a	DozGrade	Grade graveled pit floor area, 8 hrs with D2 dozers on site
10a	Mob	No equipment changes
10b	Mob	No equipment changes

Sincerely,



Amy Yeldell
Environmental Protection Specialist

Ec:
Travis Marshall, Senior EPS, Grand Junction DRMS

COST SUMMARY WORK

Task description: Updates Per TR4

Site: Nichols Gravel Pit

Permit Action: TR4

Permit/Job#: M1981013

PROJECT IDENTIFICATION

Task #: ACY

State: Colorado

Abbreviation: None

Date: 8/13/2024

County: Mesa

Filename: M013-000

User: ACY

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Reduce highwalls to 2H:1V	DOZER	2	10.91	\$7,051
02a	Haul overburden to pit floor	TRUCK1	1	18.32	\$10,261
02b	Grade transported overburden on 2.5 ac pit floor	DOZER	2	6.25	\$4,037
03a	Haul topsoil to north side of pit	TRUCK1	1	19.62	\$10,990
03b	Spread 6" topsoil over 19 ac	DOZER	2	13.86	\$8,958
04a	Reveg on 19 ac	REVEGE	1	25.00	\$34,984
05a	Grade graveled pit floor	DOZERGRADER	2	8.00	\$5,169
10a	Initial Mobilization	MOBILIZE	1	4.50	\$8,125
10b	Secondary Mobilization	MOBILIZE	1	4.50	\$2,098
<u>SUBTOTALS:</u>				110.96	\$91,673

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$1,852

Performance bond: 1.05

Total = \$963

Job superintendent: 55.48

Total = \$4,398

Profit: 10.00

Total = \$9,167

TOTAL O & P = \$16,380

CONTRACT AMOUNT (direct + O & P) = \$108,053

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): \$500

Total = \$500

Engineering work and/or contract/bid preparation: 4.25

Total = \$4,592

Reclamation management and/or administration: 5.00

\$5,403

CONTINGENCY: 3.00

Total = \$2,750

TOTAL INDIRECT COST = \$29,625

TOTAL BOND AMOUNT (direct + indirect) = \$121,298

BULLDOZER WORKTask description: **Reduce highwalls to 2H:1V**Site: **Nichols Gravel Pit**Permit Action: **TR4**Permit/Job#: **M1981013****PROJECT IDENTIFICATION**Task #: **01A**State: **Colorado**Abbreviation: **None**Date: **11/13/2023**County: **Mesa**Filename: **M013-01a**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D8T - 8SU**Horsepower: **310**Blade Type: **Semi-Universal**Attachment: **NA**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$173.32</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$109.71</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$0.00</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$0.00</u>	<u>0</u>
Operator Cost/Hour:	<u>\$40.04</u>	<u>NA</u>

Total unit Cost/Hour: **\$323.07**Total Fleet Cost/Hour: **\$646.13****MATERIAL QUANTITIES**Initial Volume: **10,264**Swell factor: **1.180**Loose volume: **12,112 LCY**Source of estimated volume: **Scaff Estimate**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **100 feet**Unadjusted hourly production: **852.6 LCY/hr**Materials consistency description: **Compacted fill or embankment 0.9**Average push gradient: **-25 %**Average site altitude: **5,500 feet**Material weight: **2,400 lbs/LCY**Weight description: **Clay and gravel - Dry****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	<u>0.900</u>	<u>(CAT HB))</u>
Dozing method:	<u>1.000</u>	<u>(GEN.)</u>
Visibility:	<u>1.000</u>	<u>(AVG.)</u>

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(SSD-AC)
Push gradient:	1.516	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.958	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.6509

Adjusted unit production: 554.96 LCY/hr

Adjusted fleet production: **1109.92** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost: \$0.582/LCY

Total job time: **10.91** Hours

Total job cost: **\$7,051**

TRUCK/LOADER TEAM WORKTask description: **Haul overburden to pit floor**Site: **Nichols Gravel Pit**Permit Action: **TR4**Permit/Job#: **M1981013****PROJECT IDENTIFICATION**Task #: **02A**State: **Colorado**Abbreviation: **None**Date: **8/13/2024**County: **Mesa**Filename: **M013-02a**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Shift basis: **1 per day**

Equipment Description	
Truck Loader Team -Truck:	Cat 730
-Loader:	CAT 966H
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance -Motor Grader:	NA
-Water Truck:	NA

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	NA	NA	NA
Ownership cost/hour:	\$108.67	\$57.78	NA	NA	NA	NA
Operating cost/hour:	\$66.26	\$46.25	NA	NA	NA	NA
%Utilization-ripper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA	NA	NA
Ripper op. cost/hour:	NA	\$0.00	NA	NA	NA	NA
Operator cost/hour:	\$24.82	\$56.64	NA	NA	NA	NA
Unit Subtotals:	\$199.75	\$160.67	NA	NA	NA	NA
Number of Units:	2	1	0	0	0	0
Group Subtotals:	Work: \$560.17		Support: \$0.00		Maint: \$0.00	

Total work team cost/hour: **\$560.17****MATERIAL QUANTITIES**Initial volume: **8,067**

CCY

Swell factor: **1.125**Loose volume: **9,075**

LCY

Source of estimated volume: **2.5ac @ 24"**Source of estimated swell factor: **Cat Handbook**Material Purchase Cost: **\$0.00**Total Cost: **\$0.00****HOURLY PRODUCTION****Truck Capacity:**

Truck Payload (weight) Basis:

Material weight: **2,650** Pounds/LCYDescription: **Decomposed rock - 25% Rock, 75% Earth**Rated Payload: **62,000** PoundsPayload Capacity: **23.40** LCY

Truck Bed (volume) Basis:

Struck Volume:	17.10	LCY
Heaped Volume:	22.10	LCY
Average Volume:	19.60	LCY
Adjusted Volume:	22.10	LCY

Final Truck Volume Based on Number of Loader Passes: 19.50 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	0.975	Loose material - mixed moist aggregates (95-100%) 0.975
Adjusted Capacity:	4.875	LCY

Job Condition Corrections:

Site Altitude (ft.): 5500 feet

	Truck	Loader	Source
Altitude Adj:	1.000	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.830	0.830	

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 4 passes

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: NA
 Selected Value within this Basic Rating: NA

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Material 3/4" to 6" diameter 0.00	0.000	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.080	minutes
Adjusted Loader Cycle Time:		0.420	minutes
Net Load Time per Truck:		1.360	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.600	Minutes
Truck Load Time:	1.360	Minutes	Adjusted for site altitude:	1.360	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.000	Minutes

Truck Travel (Haul & Return) Time:
penetration 4.0

Road Condition: Rutted dirt, little maintenance, no water, 1" tire

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	300.00	0.00	4.00	4.00	1774	0.359

Haul Time: **0.359** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	300.00	0.00	4.00	4.00	2855	0.272

Return Time: **0.272** minutesTotal Truck Cycle Time: **3.591** minutes

Loading Tool unit
 Production 596.94 LCY/Hour Adjusted for job efficiency: 495.46 LCY/Hour
 Truck Unit Production
325.81 LCY/Hour Adjusted for job efficiency: 270.43 LCY/Hour
 Optimal No. of Trucks: 2 Truck(s) Selected Number of Trucks: 2 Truck(s)

Adjusted hourly truck team production: 540.85 LCY/Hour
 Adjusted single truck/loader team production: 495.46 LCY/Hour
 Adjusted multiple truck/loader team production: **495.46** LCY/Hour

JOB TIME AND COSTFleet size: 1 Team(s) Total job time: **18.32** HoursUnit cost: \$1.131 /LCY Total job cost: **\$10,261**

BULLDOZER WORKTask description: Grade transported overburden on 2.5 ac pit floorSite: Nichols Gravel PitPermit Action: TR4Permit/Job#: M1981013**PROJECT IDENTIFICATION**Task #: 02BState: ColoradoAbbreviation: NoneDate: 8/13/2024County: MesaFilename: M013-02bUser: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$40.04	NA

Total unit Cost/Hour: \$323.07Total Fleet Cost/Hour: \$646.13**MATERIAL QUANTITIES**Initial Volume: 9,075Swell factor: 1.000Loose volume: 9,075 LCYSource of estimated volume: Approx. 2 ft over 2.5 acresSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 50 feetUnadjusted hourly production: 1,400.0 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push gradient: 0 %Average site altitude: 5,500 feetMaterial weight: 2,650 lbs/LCYWeight description: Decomposed rock - 25% Rock, 75% Earth**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(SSD-AC)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5187

Adjusted unit production: 726.18 LCY/hr

Adjusted fleet production: **1452.36** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost: \$0.445/LCY

Total job time: **6.25** Hours

Total job cost: **\$4,037**

TRUCK/LOADER TEAM WORKTask description: Haul topsoil to north side of pitSite: Nichols Gravel PitPermit Action: TR4Permit/Job#: M1981013**PROJECT IDENTIFICATION**Task #: 03AState: ColoradoAbbreviation: NoneDate: 8/13/2024County: MesaFilename: M013-03aUser: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

Equipment Description	
Truck Loader Team -Truck:	Cat 730
-Loader:	CAT 966H
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance -Motor Grader:	NA
-Water Truck:	NA

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	NA	NA	NA
Ownership cost/hour:	\$108.67	\$57.78	NA	NA	NA	NA
Operating cost/hour:	\$66.26	\$46.25	NA	NA	NA	NA
%Utilization-ripper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA	NA	NA
Ripper op. cost/hour:	NA	\$0.00	NA	NA	NA	NA
Operator cost/hour:	\$24.82	\$56.64	NA	NA	NA	NA
Unit Subtotals:	\$199.75	\$160.67	NA	NA	NA	NA
Number of Units:	2	1	0	0	0	0
Group Subtotals:	Work: \$560.17		Support: \$0.00		Maint: \$0.00	

Total work team cost/hour: \$560.17**MATERIAL QUANTITIES**Initial volume: 8,000

CCY

Swell factor: 1.215Loose volume: 9,720

LCY

Source of estimated volume: 19ac @ 6", half transportedSource of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck Capacity:**Truck Payload (weight) Basis:Material weight: 1,600

Pounds/LCY

Description: Top SoilRated Payload: 62,000

Pounds

Payload Capacity: 38.75

LCY

Truck Bed (volume) Basis:

Struck Volume:	17.10	LCY
Heaped Volume:	22.10	LCY
Average Volume:	19.60	LCY
Adjusted Volume:	22.10	LCY

Final Truck Volume Based on Number of Loader Passes: 19.50 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	0.975	Loose material - mixed moist aggregates (95-100%) 0.975
Adjusted Capacity:	4.875	LCY

Job Condition Corrections:

Site Altitude (ft.): 5500 feet

	Truck	Loader	Source
Altitude Adj:	1.000	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.830	0.830	

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 4 passes

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: NA
 Selected Value within this Basic Rating: NA

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Material 3/4" to 6" diameter 0.00	0.000	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.080	minutes
Adjusted Loader Cycle Time:		0.420	minutes
Net Load Time per Truck:		1.360	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.600	Minutes
Truck Load Time:	1.360	Minutes	Adjusted for site altitude:	1.360	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.000	Minutes

Truck Travel (Haul & Return) Time:
penetration 4.0

Road Condition: Rutted dirt, little maintenance, no water, 1" tire

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	600.00	0.00	4.00	4.00	1774	0.528

Haul Time: **0.528** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	600.00	0.00	4.00	4.00	2855	0.378

Return Time: **0.378** minutesTotal Truck Cycle Time: **3.866** minutes

Loading Tool unit
 Production 596.94 LCY/Hour Adjusted for job efficiency: 495.46 LCY/Hour
 Truck Unit Production
302.64 LCY/Hour Adjusted for job efficiency: 251.19 LCY/Hour
 Optimal No. of Trucks: 2 Truck(s) Selected Number of Trucks: 2 Truck(s)

Adjusted hourly truck team production: 502.38 LCY/Hour
 Adjusted single truck/loader team production: 495.46 LCY/Hour
 Adjusted multiple truck/loader team production: **495.46** LCY/Hour

JOB TIME AND COSTFleet size: 1 Team(s) Total job time: **19.62** HoursUnit cost: \$1.131 /LCY Total job cost: **\$10,990**

BULLDOZER WORKTask description: Spread 6" topsoil over 19 acSite: Nichols Gravel PitPermit Action: TR4Permit/Job#: M1981013**PROJECT IDENTIFICATION**Task #: 03BState: ColoradoAbbreviation: NoneDate: 8/13/2024County: MesaFilename: M013-03bUser: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$40.04	NA

Total unit Cost/Hour: \$323.07Total Fleet Cost/Hour: \$646.13**MATERIAL QUANTITIES**Initial Volume: 18,622Swell factor: 1.000Loose volume: 18,622 LCYSource of estimated volume: 6" topsoil over 19 acSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 100 feetUnadjusted hourly production: 852.6 LCY/hrMaterials consistency description: Partly consolidated stockpile 1.1Average push gradient: 0 %Average site altitude: 5,500 feetMaterial weight: 1,600 lbs/LCYWeight description: Top Soil**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(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:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.7877

Adjusted unit production: 671.59 LCY/hr

Adjusted fleet production: **1343.18** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost: \$0.481/LCY

Total job time: **13.86** Hours

Total job cost: **\$8,958**

REVEGETATION WORKTask description: Reveg on 19 acSite: Nichols Gravel PitPermit Action: TR4Permit/Job#: M1981013**PROJECT IDENTIFICATION**Task #: 04AState: ColoradoAbbreviation: NoneDate: 8/13/2024County: MesaFilename: M013-04aUser: ACYAgency or organization name: DRMS**FERTILIZING****Materials**

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
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.61
Total Tilling Cost/Acre	\$117.61

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Native	0.15	0.49	\$2.59
Sand Dropseed	0.05	5.97	\$0.65
Rye, Perennial Tetraploid - Tetra-Plus	2.25	12.76	\$5.12
Sandberg Bluegrass - VNS	0.15	3.19	\$2.17
Intermediate Wheatgrass - Rush	2.40	5.12	\$11.35
Pubescent Wheatgrass - VNS	2.40	4.96	\$13.55
Slender Wheatgrass - Native	1.80	6.57	\$12.72
Milk Vetch, Cicer - Monarch	0.50	1.66	\$4.78
Sainfoin - Remont	3.00	1.31	\$11.09
Flax, Lewis Blue	0.20	1.33	\$8.46

Winter Fat	0.03	0.06	\$1.17
Totals Seed Mix	12.93	43.41	\$73.65

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$236.64
Total Seed Application Cost/Acre	\$236.64

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$4.13	\$4.13
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$492.78	\$985.56
Total Mulch Materials Cost/Acre				\$989.69

Application

Description	Cost /Acre
Power mulcher (MEANS 32 91 13.16 0350)	\$157.25
Weed spray, truck, non-aquatic area, nox. [DMG]	\$83.26
Total Mulch Application Cost/Acre	\$240.51

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: 16.5 Cost /Acre: \$1,658.10
 Estimated Failure Rate: 30% Cost /Acre*: \$1,540.49
 *Selected Replanting Work Items: SEEDING,MULCHING
 Initial Job Cost: \$27,358.65
 Reseeding Job Cost: \$7,625.43
 Total Job Cost: \$34,984
 Job Hours: 25.00

DOZERGRADER WORKTask description: **Grade graveled pit floor**Site: **Nichols Gravel Pit**Permit Action: **TR4**Permit/Job#: **M1981013****PROJECT IDENTIFICATION**Task #: **05A**State: **Colorado**Abbreviation: **None**Date: **8/13/2024**County: **Mesa**Filename: **M013-05a**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D8T - 8SU**

Horsepower: _____

Blade Type: _____

Attachment: **NA**Shift Basis: **1 per day**

Data Source: _____

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$40.04	NA

Total unit Cost/Hour: **\$323.07**Total Fleet Cost/Hour: **\$646.13****JOB TIME AND COST**Fleet size: **2 Dozer(s)**Unit cost: **\$646.13/LCY**Total job time: **8.00 Hours**Total job cost: **\$5,169**

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Initial Mobilization**Site: **Nichols Gravel Pit**Permit Action: **TR4**Permit/Job#: **M1981013****PROJECT IDENTIFICATION**Task #: **10A**State: **Colorado**Abbreviation: **None**Date: **8/13/2024**County: **Mesa**Filename: **M013-10a**User: **ACY**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:	\$10.44	\$22.18	\$23.94
Operating Cost/Hour:	\$26.48	\$54.55	\$55.65
Operator Cost/Hour:	\$22.52	\$22.52	\$22.52
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$59.44	\$122.78	\$125.64

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 - 8SU	47.71	\$173.32	\$122.78	2	\$592.20	\$245.56	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$41.02	\$59.44	1	\$100.46	\$59.44	\$250.00
Power Mulcher (Bowie LD-90)	6.00	\$27.21	\$59.44	1	\$86.65	\$59.44	\$250.00
CAT 966H	25.80	\$57.78	\$59.44	1	\$117.22	\$59.44	\$250.00
Cat 730	25.19	\$108.67	\$59.44	2	\$336.22	\$118.88	\$500.00

Subtotals: **\$1,232.75** **\$542.76** **\$1,500.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Flatbed Truck, 4x2, 30K GVW	\$78.53	1	\$78.53	\$78.53
Light Duty Pickup, 4x4, 1 T. Crew	\$136.70	2	\$273.40	\$273.40

Subtotals: **\$351.93** **\$351.93**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	GRAND JUNCTION, CO	
Total one-way travel distance:	<u>25.00</u>	miles
Average Travel Speed:	<u>40.00</u>	mph
Total Non-Roadable Mob/Demob Cost *	\$7,684.89	
** two round trips with haul rig:		
Total Roadable Mob/Demob Cost **	<u>\$439.91</u>	
** one round trip, no haul rig:		

Transportation Cycle Time:

	Non- Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>0.63</u>	<u>0.63</u>
Return Time (Hours):	<u>0.63</u>	<u>0.63</u>
Loading Time (Hours):	<u>0.50</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.50</u>	<u>NA</u>
Subtotals:	<u>2.25</u>	<u>1.25</u>

JOB TIME AND COST

Total job time: 4.50 Hours

Total job cost: \$8,125

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Secondary Mobilization**Site: **Nichols Gravel Pit**Permit Action: **TR4**Permit/Job#: **M1981013****PROJECT IDENTIFICATION**Task #: **10B**State: **Colorado**Abbreviation: **None**Date: **8/13/2024**County: **Mesa**Filename: **M013-10b**User: **ACY**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:	\$10.44	\$22.18	\$23.94
Operating Cost/Hour:	\$26.48	\$54.55	\$55.65
Operator Cost/Hour:	\$22.52	\$22.52	\$22.52
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$59.44	\$122.78	\$125.64

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
Drill/Broadcast Seeder with Tractor	25.00	\$41.02	\$59.44	1	\$100.46	\$59.44	\$250.00
Power Mulcher (Bowie LD-90)	6.00	\$27.21	\$59.44	1	\$86.65	\$59.44	\$250.00

Subtotals: **\$187.11** **\$118.88** **\$500.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 1 T. Crew	\$136.70	2	\$273.40	\$273.40

Subtotals: **\$273.40** **\$273.40**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	GRAND JUNCTION, CO	
Total one-way travel distance:	25.00	miles
Average Travel Speed:	40.00	mph
Total Non-Roadable Mob/Demob Cost *	\$1,756.71	
** two round trips with haul rig:		
Total Roadable Mob/Demob Cost **	\$341.75	
** one round trip, no haul rig:		

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.63	0.63
Return Time (Hours):	0.63	0.63
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	2.25	1.25

JOB TIME AND COST

Total job time: 4.50 Hours

Total job cost: \$2,098