



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

August 3, 2023

Bernard S. Frei
Albert Frei & Sons Inc.
P O Box 700
Henderson, CO 80640

Re: AFS - Bennett Pit - File No. M-2001-038
Albert Frei & Sons Inc.
Technical Revision (TR-2)
Increase maximum disturbance allowed from 60 acres to 100 acres.

Dear Bernard S. Frei:

On August 3, 2023 the Division of Reclamation, Mining and Safety concluded its review of the Technical Revision application submitted to the Division on July 19, 2023, addressing the following:

Request to increase the maximum allowed disturbance from 60 to 100 acres. Operator will conduct concurrent reclamation, however at a slower rate than anticipated.

The decision reached by the Division is: Awaiting Warranty.

The terms of Technical Revision No. 2 approved by the Division are hereby incorporated into Permit No. M-2001-038. All other conditions and requirements of Permit No. M-2001-038 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:	\$217,500.00
Prior Liability:	\$217,500.00
Change in Liability:	\$269,675.00
Revised Liability:	\$487,175.00
Prior Permit Acreage:	107.88
Change in Permit Acreage:	0.00
Revised Permit Acreage:	107.88



If you have any questions, please contact me by telephone at (303) 866-3567 x 8126, or by email at nikie.gagnon@state.co.us.

Sincerely,

A handwritten signature in blue ink that reads "Nikie Gagnon". The signature is written in a cursive, flowing style.

Nikie C. Gagnon
Environmental Protection Specialist

cc: Joel Bolduc

M-GR-04

COST SUMMARY WORK

Task description: Cost Summary

Site: AFS - Bennett Pit

Permit Action: Technical Revision 2

Permit/Job#: M2001038

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 5/26/2023

County: Adams

Filename: M038-000

User: NCG

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Grade all Slopes to 3H:1V	DOZER	2	22.91	\$21,463
002	Topsoil 100 acres	SCRAPER1	1	100.60	\$266,164
003	Revegetation Bennett sand and Gravel Pit No. 2	REVEGE	1	30.00	\$88,855
004	Mobilization/Demobilization	MOBILIZE	1	4.43	\$12,949
<u>SUBTOTALS:</u>				157.94	\$389,431

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02
Performance bond: 1.05
Job superintendent: 78.97
Profit: 10.00

Total = \$7,867

Total = \$4,089

Total = \$5,139

Total = \$38,943

TOTAL O & P = \$56,038

CONTRACT AMOUNT (direct + O & P) = \$445,469

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

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

Total = \$500

Engineering work and/or contract/bid preparation: 4.25

Total = \$18,932

Reclamation management and/or administration: 5.00

\$22,273

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$97,744

TOTAL BOND AMOUNT (direct + indirect) = \$487,175

BULLDOZER WORKTask description: Grade all Slopes to 3H:1VSite: Bennett Sand & Gravel Pit #2Permit Action: Technical Revision 2Permit/Job#: M2001038**PROJECT IDENTIFICATION**Task #: 001State: ColoradoAbbreviation: NoneDate: 8/3/2023County: AdamsFilename: NAUser: NCGAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D9T - 9SUHorsepower: 405Blade Type: Semi-UniversalAttachment: 3-shank ripperShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$238.76</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$162.29</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$18.32</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$8.98</u>	<u>100</u>
Operator Cost/Hour:	<u>\$40.04</u>	<u>NA</u>

Total unit Cost/Hour: \$468.39Total Fleet Cost/Hour: \$936.77**MATERIAL QUANTITIES**Initial Volume: 66,667Swell factor: 1.250Loose volume: 83,334 LCYSource of estimated volume: Proposed 4500 Foot Highwall, 40 Feet DeepSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 50 feetUnadjusted hourly production: 2,110.5 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: -15 %Average site altitude: 5,300 feetMaterial weight: 2,650 lbs/LCYWeight description: Decomposed rock - 25% Rock, 75% Earth**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	<u>1.000</u>	<u>(EXCL.)</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:	1.000	(DOZ-OC)
Push gradient:	1.329	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8617

Adjusted unit production: 1,818.62 LCY/hr

Adjusted fleet production: **3637.24** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost: \$0.258/LCY

Total job time: **22.91** Hours

Total job cost: **\$21,463**

SCRAPER TEAM WORKTask description: Topsoil 100 acresSite: Bennett Sand & Gravel Pit #2Permit Action: Technical Revision 2Permit/Job#: M2001038**PROJECT IDENTIFICATION**Task #: 002State: ColoradoAbbreviation: NoneDate: 8/3/2023County: AdamsFilename: NAUser: NCGAgency or organization name: DRMS**HOURLY EQUIPMENT**COSTShift basis: 1 per day

	Equipment Description
-Scraper:	Cat 657G
-Dozer:	Cat D9T - 9SU
Support Equipment -Load Area:	Cat D9T - 9SU
-Dump Area:	NA
Road Maintenance -Motor Grader:	CAT 14M
-Water Truck:	Water Tanker, 5,000 Gal.

Cost Breakdown:**Scraper Work Team****Support Equipment****Maintenance Equipment**

	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	0	50	NA	50	50
Ownership cost/hour:	\$390.03	\$238.76	\$238.76	NA	\$149.33	\$57.13
Operating cost/hour:	\$361.96	\$0.00	\$81.15	NA	\$46.40	\$33.25
%Utilization-ripper:	NA	0	0	NA	NA	NA
Ripper own. cost/hour:	NA	\$18.32	\$18.32	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$47.28	\$40.04	\$40.04	NA	\$46.87	\$38.91
Unit Subtotals:	\$799.27	\$297.12	\$378.26	NA	\$242.60	\$129.28
Number of Units:	2	1	1	0	1	1
Group Subtotals:	Work:	\$1,895.66	Support:	\$378.26	Maint:	\$371.88

Total work team cost/hour: \$2,645.80**MATERIAL QUANTITIES**Initial volume: 161,333

CCY

Swell factor: 1.000Loose volume: 161,333

LCY

Source of estimated volume: 1 Foot Depth for 100 acresSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION****Scraper Bowl (volume) Basis:**

Material weight: 1,600 lbs/LCY
 Material description: Top Soil
 Rated Payload: 104,000 pounds
 Payload Capacity: 65.00 LCY

Struck Volume: 32.00 LCY
 Heaped Volume: 44.00 LCY
 Average Volume: 38.00 LCY
 Adjusted Capacity: 38.00 LCY

Cycle Time:Scraper Loading Time: 1.00 MinutesManeuver and Spread Time: 0.60 MinutesJob Condition Correction:

Site Altitude: 5300 feet

	Scraper	Push Dozer	Source
Altitude Adj:	1.000	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.830	0.830	

Travel Time:Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	500.00	0.00	3.00	3.00	2883	0.43

Haul Time: 0.43 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	500.00	0.00	3.00	3.00	2958	0.33

Return Time: 0.33 minutesTotal Scraper team cycle time: 2.36 minutesAdjusted for job conditions: 801.86 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 1,603.73 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 1,603.73 LCY/HourUnadjusted unit production/hour: 966.10 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 1 Team(s)Total job time: 100.60 HoursUnit cost: \$1.650 /LCYTotal job cost: \$266,164

REVEGETATION WORKTask description: Revegetation Bennett Sand and Gravel Pit No. 2Site: Bennett Sand & Gravel Pit #2Permit Action: Technical Revision 2Permit/Job#: M2001038**PROJECT IDENTIFICATION**Task #: 003State: ColoradoAbbreviation: NoneDate: 5/26/2023County: AdamsFilename: NAUser: NCGAgency 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)	\$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
Switchgrass - Blackwell	0.50	4.47	\$5.75
Indiangrass - Holt	0.83	2.53	\$9.46
Little Bluestem - Pastura	0.35	2.09	\$4.72
Sand Bluestem - Woodward	2.40	6.23	\$50.80
Prairie Sandreed - Goshen	0.88	5.52	\$9.11
Totals Seed Mix	4.96	20.83	\$79.84

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
			\$	\$
Total Mulch Materials Cost/Acre				\$0.00

Application

Description	Cost /Acre
Weed spray, truck, non-aquatic area, nox. [DMG]	\$62.72
Total Mulch Application Cost/Acre	\$62.72

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:	100	Cost /Acre:	\$826.18
Estimated Failure Rate:	20%	Cost /Acre*:	\$311.84
*Selected Replanting Work Items:	SEEDING		
Initial Job Cost:	\$82,618.00		
Reseeding Job Cost:	\$6,236.80		
Total Job Cost:	\$88,855		
Job Hours:	30.00		

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: Mobilization/DemobilizationSite: Bennett Sand & Gravel Pit #2Permit Action: Technical Revision 2Permit/Job#: M2001038**PROJECT IDENTIFICATION**

Task #: 004 State: Colorado Abbreviation: None
 Date: 5/26/2023 County: Adams Filename: NA
 User: NCG

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 D9T - 9SU	66.13	\$257.08	\$175.95	2	\$866.06	\$351.90	\$250.00
Cat 657G	78.88	\$390.03	\$175.95	2	\$1,131.96	\$351.90	\$250.00
CAT 14M	23.57	\$149.33	\$82.29	1	\$231.62	\$82.29	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$6.73	\$82.29	2	\$178.04	\$164.58	\$500.00

Subtotals: **\$2,407.68** **\$950.67** **\$1,250.00**

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Water Tanker, 5,000 Gal.	\$162.53	1	\$162.53	\$162.53
Fuel Tanker, 6x4, 210 HP	\$93.16	1	\$93.16	\$93.16
Lube Truck, 6x4, 250 HP	\$93.16	1	\$93.16	\$93.16
Light Duty Pickup, 4x4, 3/4 T.	\$44.06	1	\$44.06	\$44.06

Subtotals: **\$392.91** **\$392.91**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	<u>BENNETT</u>	
Total one-way travel distance:	<u>6.00</u>	miles
Average Travel Speed:	<u>55.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$12,863.45</u>
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 ** two round trips with haul rig:

Total Roadable Mob/Demob Cost **	<u>\$85.73</u>
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 ** one round trip, no haul rig:

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>0.11</u>	<u>0.11</u>
Return Time (Hours):	<u>0.11</u>	<u>0.11</u>
Loading Time (Hours):	<u>1.00</u>	<u>NA</u>
Unloading Time (Hours):	<u>1.00</u>	<u>NA</u>
Subtotals:	<u>2.22</u>	<u>0.22</u>

JOB TIME AND COST

Total job time:	<u>4.44</u>	Hours
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Total job cost:	<u>\$12,949</u>
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