

APPENDIX 4.1-1

TABLE 1

DOZER, LOADER & MOTOR GRADER PRODUCTIVITY

EQUIPMENT	RECLAMATION ACTIVITY	TYPE	CORRECTION FACTOR													UNCORR. PROD. <sup>4</sup>	UNITS	ADJUSTED PRODUCTION	ACRES/HOUR	YARDS	HOURS	
			AVERAGE DOZER PUSH	JOB EFF (50 MINUTE/HOUR) <sup>1</sup>	OPERATOR EXPERIENCE <sup>2</sup>	MATERIAL TYPE	MATERIAL CORRECTION <sup>3</sup>	GRADE		WEIGHT CORRECTION	ALT.	VISIBILITY	SLOT DOZING	LOAD FACTOR	TOTAL CORRECTION FACTOR							
								% GRADE	FACTOR													
Cat D11 Dozer, SU Blade	Dozer Push Region 1	Spoil	350	0.84	0.75	Stockpiled spoil material that has been ripped or blasted, Density 2250 lbs./LCY	1.1	-4%	1.08	1.0	0.96	1.0	1.2	-	0.88	400	LCY/Hour	353	-	148,928	422	
Cat D11 Dozer, SU Blade	Dozer Push Region 2	Spoil	350	0.84	0.75	Stockpiled spoil material that has been ripped or blasted, Density 2250 lbs./LCY	1.1	-4%	1.08	1.0	0.96	1.0	1.2	-	0.88	400	LCY/Hour	353	-	334,366	948	
Cat D11 Dozer, SU Blade	Dozer Push Region 3	Spoil	350	0.84	0.75	Stockpiled spoil material that has been ripped or blasted, Density 2250 lbs./LCY	1.1	-4%	1.08	1.0	0.96	1.0	1.2	-	0.88	400	LCY/Hour	353	-	197,596	560	
Cat D11 Dozer, SU Blade	Main Access Road	Roads	150	0.84	0.75	Compacted material Density 2650 lbs./LCY	0.8	0%	1.00	1.0	0.96	0.9	1.0	-	0.45	1200	LCY/Hour	534	-	75,926	142	
Cat D11 Dozer, SU Blade	Site Access Road	Roads	150	0.84	0.75	Compacted material Density 2650 lbs./LCY	0.8	0%	1.00	1.0	0.96	0.9	1.0	-	0.45	1200	LCY/Hour	534	-	119,196	223	
Cat D11 Dozer, SU Blade	MRH 1	Roads	150	0.84	0.75	Compacted material Density 2650 lbs./LCY	0.8	0%	1	1.0	0.96	0.9	1.0	-	0.45	1200	LCY/Hour	534	-	184,586	346	
Cat D11 Dozer, SU Blade	MRH 2 (00+00 to 39+50)	Roads	150	0.84	0.75	Compacted material Density 2650 lbs./LCY	0.8	0%	1	1.0	0.96	0.9	1.0	-	0.45	1200	LCY/Hour	534	-	63,529	119	
Cat D11 Dozer, SU Blade	Section Line Road - Between Sections 21 & 22	Roads	150	0.84	0.75	Compacted material Density 2650 lbs./LCY	0.8	0%	1	1.0	0.96	0.9	1.0	-	0.45	1200	LCY/Hour	534	-	2,731	5	
Cat D11 Dozer, SU Blade	Section Line Road - Between Sections 27& 28	Roads	150	0.84	0.75	Compacted material Density 2650 lbs./LCY	0.8	0%	1	1.0	0.96	0.9	1.0	-	0.45	1200	LCY/Hour	534	-	3,102	6	
Cat D11 Dozer, SU Blade	Section Line Road - Section 27	Roads	150	0.84	0.75	Compacted material Density 2650 lbs./LCY	0.8	0%	1	1.0	0.96	0.9	1.0	-	0.45	1200	LCY/Hour	534	-	3,532	7	
Cat D11 Dozer, SU Blade	Section Line Road - Between Section 33 & 34	Roads	150	0.84	0.75	Compacted material Density 2650 lbs./LCY	0.8	0%	1	1.0	0.96	0.9	1.0	-	0.45	1200	LCY/Hour	534	-	2,737	5	
Cat D11 Dozer, SU Blade	Facilities Area	Misc	150	0.84	0.75	Compacted material Density 2650 lbs./LCY	0.8	0%	1.00	1.0	0.96	0.9	1.0	-	0.45	1200	LCY/Hour	534	-	32,033	60	
Cat D11 Dozer, SU Blade	Explosive Materials Storage Access Road	Misc	150	0.84	0.75	Compacted material Density 2650 lbs./LCY	0.8	0%	1.00	1.0	0.96	0.9	1.0	-	0.45	1200	LCY/Hour	534	-	36,950	69	
Cat D11 Dozer, SU Blade	SPGM Stockpile 13	SPGM	350	0.84	0.75	Stockpiled spoil material that has been ripped or blasted, Density 2250 lbs./LCY	1.1	-4%	1.08	1.0	0.96	1.0	1.2	-	0.88	400	LCY/Hour	353	-	13,425	38	
Cat D11 Dozer, SU Blade	Suitable OVB Stockpile 10	SPGM	350	0.84	0.75	Stockpiled spoil material that has been ripped or blasted, Density 2250 lbs./LCY	1.1	-4%	1.08	1.0	0.96	1.0	1.2	-	0.88	400	LCY/Hour	353	-	27,785	79	
Cat D11 Dozer, SU Blade	Overburden Stockpile 1	SPGM	350	0.84	0.75	Stockpiled spoil material that has been ripped or blasted, Density 2250 lbs./LCY	1.1	-4%	1.08	1.0	0.96	1.0	1.2	-	0.88	400	LCY/Hour	353	-	172,481	489	
Cat D11 Dozer, SU Blade	Pond 1	Ponds/Ditches	150	0.84	0.75	Compacted material Density 2650 lbs./LCY	0.8	0%	1.00	1.0	0.96	0.9	1.0	-	0.45	1200	LCY/Hour	534	-	4,616	9	
Cat D11 Dozer, SU Blade	Pond 2	Ponds/Ditches	150	0.84	0.75	Compacted material Density 2650 lbs./LCY	0.8	0%	1.00	1.0	0.96	0.9	1.0	-	0.45	1200	LCY/Hour	534	-	6,041	11	
Cat D11 Dozer, SU Blade	Pond 3	Ponds/Ditches	150	0.84	0.75	Compacted material Density 2650 lbs./LCY	0.8	0%	1.00	1.0	0.96	0.9	1.0	-	0.45	1200	LCY/Hour	534	-	6,504	12	
Cat D11 Dozer, SU Blade	Collection Ditch 1A	Ponds/Ditches	150	0.84	0.75	Compacted material Density 2650 lbs./LCY	0.8	0%	1.00	1.0	0.96	0.9	1.0	-	0.45	1200	LCY/Hour	534	-	474	1	
Cat D11 Dozer, SU Blade	Collection Ditch 2A	Ponds/Ditches	150	0.84	0.75	Compacted material Density 2650 lbs./LCY	0.8	0%	1.00	1.0	0.96	0.9	1.0	-	0.45	1200	LCY/Hour	534	-	14,053	26	
Cat 657G Scraper	Place Spoil Material/Growth Medium		-	0.84	0.75	Stockpiled spoil material that has been ripped or blasted, Density 2250 lbs./LCY	0.8	-4.0	1.2	1.0	0.96	1.0		0.8	0.49	See Scraper & Truck Productivity Table						
Cat 777F Trucks	Place Spoil Material/Growth Medium		-	0.84	0.75	Stockpiled spoil material that has been ripped or blasted, Density 2250 lbs./LCY	-	-	-	1.0	0.96	1.0		0.9	0.54	See Scraper & Truck Productivity Table						
<i>Subtotal Dozer</i>																					967,297	3,578
MOTOR GRADER PRODUCTIVITY			OPERATOR SPEED (MPH)	EFF. BLADE LENGTH @ 30° (FT)	WIDTH OF OVERLAP (FT)	AREA COVERED (SQ. FT/HR)	ACRES/HR	JOB EFF (50 MIN/HR)	OPER. EXP.	MATERIAL TYPE	MATERIAL CORRECTION	ALTITUDE	TOTAL CORRECTION FACTOR	UNCORR. PROD. <sup>4</sup>	UNITS	ADJUSTED PRODUCTION (ACRES/HR)						
Cat 16M Motor Grader	Blade Growth Medium to Final Surface		3.3	13	5	139,392	3.20	0.83	0.85	Scraper Dumped Growth Medium (Loose Stockpile)	1.2	0.96	0.82	3.20	Acres/Hour	2.61						
Cat 16M Motor Grader	Soil Preparation, Rip & Scarify		2.4	12.00	0	152,064	3.49	0.83	0.85	Scraper Dumped Growth	1.2	0.96	0.82	3.49	Acres/Hour	2.85						
REVEGETATION PRODUCTIVITY																						
Agricultural Tractor with Seeder			3.3	15.00	3	209,088	6.80	0.83	0.85	Loose & Prepared	1.2	0.96	0.82	6.80	Acres/Hour	5.55						
<i>Subtotal Motor Grader Hours</i>																						5,692
WHEEL LOADER PRODUCTIVITY			AVERAGE LOADER CYCLE	MATERIAL HANDLER	MATERIAL	MATERIAL TYPE	PILE	PILE TYPE	COMMON OWNER	CONSTRUCTION OPERATOR	TRUCK EXCHANGE	TOTAL CYCLE TIME (MIN)	CYCLES / HR	JOB EFF (50 MIN. / HR)	REALIZED CYCLES PER HR	RATED BUCKET SIZE (CYD)	RATED TRUCK CAPACITY (CYD)	NO. OF PASSES TO LOAD TRUCK	NO. OF TRUCKS / HR			
Cat 993 Loader	Load 777 Trucks Growth Medium Material from Stockpile		0.65	-0.05	0.02	Mixed	0.02	Truck Dumped	-0.04	-0.04	0.7	0.82	73	0.83	61	22	60	3	22			
Cat 993 Loader	Load 777 Trucks from Spoil Material Stockpile		0.65	-0.05	0.02	Mixed	0.02	Truck Dumped	-0.04	-0.04	0.7	0.82	73	0.83	61	22	60	3	22			
<i>Subtotal Loader Hours</i>																						4,935

Notes:  
 1. Job Effectiveness (50 Minute/Hour) = North Dakota Production Factors: Job Eff = 0.84  
 2. Operator Experience = North Dakota Production Factors; Average Operator = 0.75  
 3. Material Correction = North Dakota production Factors: Material (Loose Spoils or Highwall) = 1.10  
 4. Uncorrected production factor from CAT handbook, edition 38.  
 LCY = Loose cubic yard  
 Lbs = Pounds  
 FT = Feet  
 BCU = Bank cubic yard  
 MIN = Minute  
 MPH = Miles per hour

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TABLE 2

SCRAPER & TRUCK PRODUCTIVITY

Scraper Productivity - Calculation of Average Cycle Times																			
TASK DESCRIPTION	HAULAGE AREA	MAX. CAP. (CYD)	EFFECT. CAP. (CYD)	ROLLING RESIST.	GRADE RESIST.	EFFECT RESIST.	AVERAGE HAUL DISTANCE (FT)	LOADED HAUL TIME (MIN.)	RETURN HAUL TIME (MIN)	LOADING TIME (MIN)	DUMP, SPREAD, & MAN. (MIN.)	TOTAL CYCLE TIME (MIN)	MAX. PROD. (CYD / HR.)	TOTAL CORRECTION FACTOR	ADJ. PROD. (LCY/HR)	FLEET SIZE <sup>1</sup>	ADJ. FLEET PROD. (LCY/HR)	AREA VOLUME (LCY)	TOTAL HOURS
<b>SCRAPER SPGM REPLAMENT</b>																			
Place Growth Medium on Pit 1 (See Note 3)	Pit 1	44	35	10%	0%	10%	1,500	1.53	0.95	1.10	0.6	4.18	632	0.49	312	2	625	1,301,706	2,084
Place Suitable Overburden Material	Pit 1	44	35	10%	0%	10%	1,500	1.53	0.95	1.10	0.6	4.18	632	0.49	312	2	625	1,301,706	2,084
Place Suitable Overburden Material	Stockpile to Pond 1	44	35	10%	0%	10%	1,500	1.53	0.95	1.10	0.6	4.18	632	0.49	312	2	625	68,405	109
Place Suitable Overburden Material	Stockpile to Pond 2	44	35	10%	0%	10%	1,500	1.53	0.95	1.10	0.6	4.18	632	0.49	312	2	625	56,789	91
Place Suitable Overburden Material	Stockpile to Pond 3	44	35	10%	0%	10%	1,500	1.53	0.95	1.10	0.6	4.18	632	0.49	312	2	625	26,459	42
Place Suitable Overburden Material	Stockpile to Collection Ditch 1A	44	35	10%	0%	10%	1,500	1.53	0.95	1.10	0.6	4.18	632	0.49	312	2	625	27,749	44
Place Suitable Overburden Material	Stockpile to Collection Ditch 2A	44	35	10%	0%	10%	1,500	1.53	0.95	1.10	0.6	4.18	632	0.49	312	2	625	2,581	4
<b>Subtotal Pit 1</b>																		<b>2,785,396</b>	<b>4,458</b>
Place Growth Medium on Facilities	Stockpile to Facilities Area	44	35	10%	0.0%	10%	1,000	1.10	0.75	1.10	0.6	3.55	744	0.49	368	1	368	32,033	87
<b>Subtotal Facilities</b>																			87
<b>TOTALS</b>																		<b>2,817,429</b>	<b>4,546</b>
<b>TRUCK AND LOADER PRODUCTIVITY</b>																			
		MAX. CAP. (CYD)	EFFECT. CAP. (CYD)	ROLL. RESIST.	GRADE RESIST.	EFFECT RESIST.	AVE. HAUL DIST. (FT)	LOADED HAUL TIME (MIN.)	RETURN HAUL TIME (MIN)	LOADING TIME (MIN)	DUMP, SPREAD, & MAN. (MIN.)	TOTAL CYCLE TIME (MIN)	MAX. PROD. (CYD / HR.)	TOTAL CORR. FACTOR	ADJ. PROD. (LCY/HR)	FLEET SIZE <sup>1</sup>	ADJ. FLEET PROD. (LCY/HR)	AREA VOLUME (LCY)	
<b>TRUCK AND LOADER BACKFILL</b>																			
<b>Rippable Material to Backfill Pit</b>																			
Spoil Material to Backfill Pit 1	Truck Haul	79	55	10%	0%	10%	11,400	8.84	4.09	2.96	1.1	16.99	278	0.73	203	4	813	2,486,404	3,060
Spoil Material to Backfill Pit 1 Region 1	Truck Haul	79	55	10%	0%	10%	500	4.25	2.10	2.96	1.1	10.41	454	0.73	332	4	1,326	1,967,013	1,483
Spoil Material to Backfill Pit 1 Region 2	Truck Haul	79	55	10%	0%	10%	500	4.25	2.10	2.96	1.1	10.41	454	0.73	332	4	1,326	475,645	359
Spoil Material to Backfill Pit 1 Region 3	Truck Haul	79	55	10%	0%	10%	500	4.25	2.10	2.96	1.1	10.41	454	0.73	332	4	1,326	43,746	33
<b>Subtotal Truck/Loader Backfill</b>																		<b>4,972,808</b>	<b>4,935</b>
<b>TOTALS</b>																		<b>4,972,808</b>	<b>4,935</b>

Notes:

- Fleet size is calculated by dividing the total cycle time by push cycle time. Push Cycle Time = 0.6 maneuver and dump + 1.1 Load Time + 1.04 return = 2.74 minutes
- Average Acres/hour is based on a nominal 4 foot of thickness.
- For the purposes of the bond calculation, it was assumed that the redistribution of growth material over all areas will be optimized to achieve a maximum haul distance of 1,500 feet.
- Max. = Maximum
- Effect. = Effective
- Cap. = Capacity
- Resist. = Resistance
- CYD = Cubic yard
- FT = Feet
- MIN. = Minute
- HR. = Hour
- PROD. = Production
- ADJ. = Adjusted
- LCY = Loose cubic yard

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TABLE 3

EARTHMOVING HOURS AND COSTS SUMMARY

DESCRIPTION	EARTHMOVING HOURS				
	SCRAPER (657G)	DOZER (D11T)	LOADER (993K)	TRUCK (777F)	DOZER (D9T)
SPGM Respread Mining Area	2,084				
SPGM Respread Associated Disturbance	87	735			
Normal Spoil Grading			4,935	3,060	4,935
Final Pit (Spoil Side)	2,084	1,931		1,875	
Pit Ramp and Haul Road Grading		830			
Public Road Regrading		23			
Ponds and Diversion Grading	291	59			
<b>Subtotal Area Bond</b>	<b>4,546</b>	<b>3,578</b>	<b>4,935</b>	<b>4,935</b>	<b>4,935</b>

DESCRIPTION	EARTHMOVING COSTS SUMMARY						
	SCRAPER (657G)	DOZER (D11T)	LOADER (993K)	TRUCK (777F)	DOZER (D9T)	GRADER (16M)	WATER WAGON
Total Equipment Hours	4,546	3,578	4,935	4,935	4,935	5,338	379
Total Estimated Hourly Costs <sup>1</sup>	\$ 316.72	\$ 318.65	\$ 279.67	\$ 233.02	\$ 189.98	\$ 143.56	\$ 143.56
<i>Subtotal Equipment Operating Costs</i>	<i>\$ 1,439,658</i>	<i>\$ 1,140,257</i>	<i>\$ 1,380,091</i>	<i>\$ 1,149,887</i>	<i>\$ 937,497</i>	<i>\$ 766,292</i>	<i>\$ 54,380</i>
<b>Total Equipment Cost</b>							<b>6,868,062</b>

Notes:

1. Estimated Hourly Costs from North Dakota Reclamation Division, Policy Memorandum No. 16 to Mine Operators - Reclamation Estimating Guidelines July 22, 2010.

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TABLE 4

REVEGETATION COSTS SUMMARY

Seed Mixtures					
	SPECIES	POUNDS OF PURE LIVE SEED	\$/PLS POUND <sup>1</sup>	EXT. AMOUNT	
	<b>Native Grassland</b>				
	Western Wheatgrass	4.0	\$2.50	\$10.00	
	Slender Wheatgrass	1.0	\$1.50	\$1.50	
	Green Needlegrass	4.0	\$2.50	\$10.00	
	Sideoats Grama	4.0	\$6.75	\$27.00	
	Switchgrass	2.0	\$1.50	\$3.00	
	Big Bluestem	1.0	\$3.75	\$3.75	
	Little Bluestem	1.0	\$9.00	\$9.00	
	Blue Grama	1.0	\$7.50	\$7.50	
	Buffalo Grass	1.0	\$12.00	\$12.00	
	Prairie Sandreed	1.0	\$7.00	\$7.00	
	Canada Wildrye	0.0	\$3.75	\$0.00	
	Indian Grass	0.0	\$5.00	\$0.00	
	Sand Bluestem	0.0	\$12.00	\$0.00	
	Thickspike Wheatgrass	0.0	\$4.00	\$0.00	
	Prairie Junegrass	0.0	\$30.00	\$0.00	
	Source: ND Reclamation Cost Guidelines				
	<b>Subtotal Native Grassland</b>	<b>20.0</b>		<b>\$90.75</b>	
	SPECIES	POUNDS OF PURE LIVE SEED	\$/PLS POUND <sup>1</sup>	EXT. AMOUNT	
	<b>Pre-cropland, Cropland, &amp; Pastureland</b>				
	Russian Wildrye	4.0	\$3.25	\$13.00	
	Intermediate Wheatgrass	7.0	\$1.25	\$8.75	
	Pubescent Wheatgrass	7.0	\$1.30	\$9.10	
	Alfalfa	3.0	\$2.25	\$6.75	
	Crested Wheatgrass	0	\$2.35	\$0.00	
	Reed Canarygrass	0.0	\$3.00	\$0.00	
	Smooth Bromegrass	0.0	\$1.25	\$0.00	
	Tall Wheatgrass	0.0	\$2.75	\$0.00	
	Source: ND Reclamation Cost Guidelines				
	<b>Subtotal Pre-cropland, Cropland, &amp; Pastureland</b>	<b>21.0</b>		<b>\$37.60</b>	
WOODLAND					
	MATERIALS	\$/100 FT PLANTED	\$/TREE PLANTED	EXT. AMOUNT	
	Trees \$20/100 ft of trees	\$20.00	\$1.44		
	Fabric \$50/100 ft of fabric	\$50.00			
	SPECIES	STOCKING RATE TREES/ACRE			
	American Plum	430.0		\$620.14	
	Silver Buffaloberry	225.0		\$324.49	
	Western Serviceberry	325.0		\$468.71	
	Common Chokecherry	225.0		\$324.49	
	Hawthorn	100.0		\$144.22	
	Redosier Dogwood	100.0		\$144.22	
	Silverberry	215.0		\$310.07	
	Woods Rose	110.0		\$158.64	
	Western Snowberry	110.0		\$158.64	
	Green Ash	370.0		\$533.61	
	Box Elder	100.0		\$144.22	
	Bur Oak	15.0		\$21.63	
	<b>Subtotal Woodland</b>	<b>2325.0</b>		<b>\$3,353.09</b>	
	Source: Stark County Soil Conservation District				
Revegetation Factors					
	Type of Work	ACRES	PERCENT OF TOTAL ACRES	\$/ACRE	EXT. AMOUNT
	Tillage or Seed Bed preparation	584.0	100%	\$16.02	\$9,355.68
	Rockpicking	559.1	96%	\$50.00	\$27,955.00
	Seeding - Pasture/Pre-cropland mixture	559.1	96%	\$9.53	\$5,328.22
	Seeding - Rangeland mixture	24.9	4%	\$14.30	\$355.95
	Mulching - slopes 0 to 10 percent	570.9	98%	\$100.00	\$57,090.00
	Mulching - slopes 10 percent and greater	13.1	2%	\$150.00	\$1,965.00
	<b>Subtotal</b>			<b>339.85</b>	<b>\$102,049.85</b>
	Source: ND Reclamation Cost Guidelines				
Custom Farm Work Rates					
	Type of Work	ACRES	\$/ACRE	EXT. AMOUNT	
	Deep Chiseling	584.0	\$8.01	\$4,677.84	
	Small Grain Seeding	559.1	\$9.53	\$5,328.22	
	Application of Dry Fertilizer	584.0	\$4.54	\$2,651.36	
	<b>Subtotal</b>		<b>22.08</b>	<b>\$12,657.42</b>	
	Source: ND Reclamation Cost Guidelines				
Weighted Average Cost					
		ACRES	COST PER ACRE	PERCENT USED	PERCENT X COST PER ACRE
	Fertilizer (per lb) 11-52-0	584.0	\$0.30	100%	\$0.30
	Native Grassland	74.8	\$90.75	13%	\$11.62
	Pre-cropland, Cropland, & Pastureland	484.3	\$37.60	83%	\$31.18
	Woodland	24.9	\$3,353.09	4%	\$142.97
	Revegetation Factors	584.0	\$339.85	100%	\$339.85
	Custom Farm Work	584.0	\$22.08	100%	\$22.08
	Weighted Average for Seed Mix				\$548.00
	Total Acres of Revegation				584.00
	<b>Total Revegation Costs</b>				<b>\$320,029.18</b>

Notes:

1. Average Seed price from North Dakota Reclamation Division, Policy Memorandum No. 16 to Mine Operators - Reclamation Estimating Guidelines July 22, 2010.

Lbs = Pounds

PLS = (Pure live seed)



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TABLE 5

FACILITY DEMOLITION AND REMOVAL COSTS

AREA/FACILITY/COMPONENT	DESCRIPTION	QUANTITY	UNITS	COSTS/UNIT	DEMOLITION COST	COMMENTS
<b>ADMISTRATION BUILDING</b>						
<b>Owners Offices</b>						
Main Building Structure		5,478.0	S.F.	\$ 0.27	\$ 1,479	
Main Building Concrete		2,739.0	C.F.	\$ 4.06	\$ 11,120	Assumes concrete will be broken down to existing grade and buried in-place.
<b>Contractors Offices</b>						
Main Building Structure		3,200.0	S.F.	\$ 0.27	\$ 864	
Main Building Concrete		1,600.0	S.F.	\$ 4.06	\$ 6,496	
<b>Fire Plugs</b>	fireplug	1.0	Ea.	\$ 540.00	\$ 540	
<b>Water Main Manhole</b>	manhole	1.0	Ea.	\$ 105.00	\$ 105	
<b>Parking Area</b>						
Gravel Parking Area Owners Offices		8,262.0		\$ 4.17	\$ 34,453	
Gravel Parking Area Contractors Office		7,416.0		\$ 2.58	\$ 19,133	
Gravel Entrance Road		6,000.0		\$ 4.17	\$ 25,020	
<b>SUBTOTAL-ADMINISTRATIVE AREA</b>					<b>\$ 99,210</b>	
<b>MINE MAINTENANCE AREA</b>						
<b>Mine Warehouse Restroom/Change Room</b>						
Main Building Structure		1,297.0	S.F.	\$ 0.27	\$ 350	
Main Building Concrete		1,297.0	C.F.	\$ 4.06	\$ 5,266	
Concrete Porch Structure		317.0	S.F.	\$ 0.27	\$ 86	Assume reinforced concrete structure. Quantity is volume of structure.
Concrete Porch-Concrete		104.7	C.F.	\$ 4.06	\$ 425	
Fire Plugs	fireplug	1.0	Ea.	\$ 4.06	\$ 4	
			S.Y.	\$ 4.17	\$ -	
<b>Warehouse</b>						
Main Building Structure		5,793.0	S.F.	\$ 0.27	\$ 1,564	
Main Building Concrete		1,912.0	C.F.	\$ 0.28	\$ 535	
<b>Coal Laboratory</b>						
Main Building Structure	concrete footers		C.F.	\$ 4.06	\$ -	Assumes concrete will be broken down to existing grade and buried in-place.
Main Building Concrete	concrete footers	195.0	C.F.	\$ 4.06	\$ 792	Assumes concrete will be broken down to existing grade and buried in-place.
<b>Truck Shop</b>						
Main Shop Building-structure		12,907.0	S.F.	\$ 0.27	\$ 3,485	
Main Shop Building-concrete		19,360.0	C.F.	\$ 4.06	\$ 78,602	Assumes concrete will be broken down to existing grade and buried in-place.
Warehouse Building-structure		18,700.0	S.F.	\$ 0.27	\$ 5,049	
Warehouse Building-concrete		9,350.0	C.F.	\$ 4.06	\$ 37,961	
Main Shop		8,067.0	C.F.	\$ 4.06	\$ 32,752	Assumes concrete will be broken down to existing grade and buried in-place.
Main Shop		8,067.0	C.F.	\$ 4.06	\$ 32,752	Assumes concrete will be broken down to existing grade and buried in-place.
Oil Tank - 8,000 gallons		1,069.0	C.F.	\$ 0.90	\$ 962	Volume based on nominal volume of tank.
Used Oil Tank - 8,000 gallons		1,069.0	C.F.	\$ 0.90	\$ 962	Volume based on nominal volume of tank.
Lube Tank - 8,000 gallons		1,069.0	C.F.	\$ 0.90	\$ 962	Volume based on nominal volume of tank.
Hydraulic Fluid Tank - 8,000 gallons		1,069.0	C.F.	\$ 0.90	\$ 962	Volume based on nominal volume of tank.
Anti-Freeze Tank - 2,000 gallons		267.0	C.F.	\$ 0.90	\$ 240	Volume based on nominal volume of tank.
Fuel Island Area		6,384.0	L.F.	\$ 3.06	\$ 19,535	
Diesel Fuel Island	Concrete	6,384.0	C.F.	\$ 4.06	\$ 25,919	
Diesel Fuel Tank - 9,500 gallons	12 foot diameter tank	1,270.0	C.F.	\$ 0.90	\$ 1,143	Volume based on nominal volume of tank.
Sludge Removal Associated w/Surface Tanks	12 foot diameter tank		C.F.	\$ 0.90	\$ -	Volume based on nominal volume of tank
15,000 gallon Water Tank	10 foot diameter tank	1.0	Ea.	\$ 985.00	\$ 985	
15,000 gallon Water Tank	10 foot diameter tank	1.0	Ea.	\$ 985.00	\$ 985	
Water Tank # 1 - 60,000 gallons - Culinary Water	18 foot diameter tank	2,005.0	C.F.	\$ 0.50	\$ 1,003	Volume based on nominal volume of tank.
Water Tank # 2 - 50,000 gallons - Wash Bay/Shop	18 foot diameter tank	2,005.0	C.F.	\$ 0.90	\$ 1,805	Volume based on nominal volume of tank.
ANFO Bin # 1 - 50,000 pounds	Structure	100.0	S.F.	\$ 0.90	\$ 90	Assume steel bin.
ANFO Bin # 1 - 50,000 pounds (foundation)	Concrete	600.0	C.F.	\$ 4.06	\$ 2,436	Assumes concrete will be broken down to existing grade and buried in-place.
ANFO Bin # 1 - 50,000 pounds (concrete apron)	Concrete	600.0	C.F.	\$ 4.06	\$ 2,436	Assumes concrete will be broken down to existing grade and buried in-place.
Explosive Material Shed #1	Structure	144.0	S.F.	\$ 0.90	\$ 130	
Explosive Material Shed #1	Concrete	72.0	C.F.	\$ 0.27	\$ 19	Assumes concrete will be broken down to existing grade and buried in-place.
Explosive Material Shed #2	Structure	144.0	S.F.	\$ 0.90	\$ 130	
Explosive Material Shed #2	Concrete	72.0	C.F.	\$ 0.27	\$ 19	Assumes concrete will be broken down to existing grade and buried in-place.
<b>SUBTOTAL-MINE MAINTENANCE AREA</b>					<b>\$ 260,345</b>	
<b>TOTAL DEMOLITION</b>					<b>\$ 359,556</b>	

**APPENDIX 4.1-1**

**TABLE 6**

**FINAL COSTS SUMMARY**

<b>Item</b>			
BOND AMOUNT SUBTOTAL:			
TOTAL EARTH MOVING COSTS:			\$6,868,062
Revegetation Costs:			\$320,029
Culvert and Gravel for Public Road Reconstruction			\$72,612
1% Add-on for Pumping and Miscellaneous Costs			\$72,607
<i>Subtotal Earth Moving, Revegetation, Roads, Pumping, and Misc Costs</i>			\$ 7,333,310
DEMOLITION AND REMOVAL COSTS			
Facilities Demolition and Removal			\$359,556
<i>Subtotal Demolition and Removal Costs</i>			\$ 359,560
ENGINEERING AND DESIGN COSTS:	Costs/Acre	Acres	Total
Preparation of pre-reclamation topographic map (Permitted Acreage).	\$10.00	4581.4	\$45,814
Preparation of plans and specifications for the reclamation plan (Graded Acreage).	\$25.00	584.0	\$14,599
Preparation of a final topographic map (Permitted Acreage).	\$5.00	4581.4	\$22,907
Comparison of final topographic map to pre-reclamation topographic map for calculating earthwork moved (Grade Acreage).	\$10.00	584.0	\$5,840
<i>Subtotal Engineering and Design Cost</i>			\$89,160
Direct Field Supervision and Administrative	10% of first \$200,000 in reclamation cost		\$20,000
	1% of additional \$200,000 in reclamation cost		\$66,681
<i>Subtotal Supervision and Administrative Cost</i>			\$86,680
<b>TOTAL COSTS</b>			<b>\$7,868,710</b>