0059

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Explanation:

Bond Reclamation Cost Estimate

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WILLOW CREEK MINE
BOND RECLAMATION COST ESTIMATE

1.0 INTRODUCTION

As part of the permit submittal for the Willow Creek Mine and in compliance with applicable provisions of R645-301-830, Cyprus Plateau Mining Corporation (CPMC) has calculated the estimated cost for an independent third-party contractor to complete reclamation of all mining-related disturbance for the Willow Creek Mine. The resulting total estimated reclamation cost for the Willow Creek Mine and associated surface facilities, and the Castle Gate Preparation Plant and Loadout and Crandall Canyon facilities which will be utilized in conjunction with the Willow Creek operations is $9,326,549. This is the estimated cost which the Utah Division of Oil, Gas and Mining (UDOGM) would incur, through standard contracting procedures, to implement the approved reclamation plan in the unlikely event that CPMC were unable to meet its reclamation obligations under the approved permit.

The total Willow Creek bond cost estimate is broken down as follows:

1) Willow Creek Mine	$ 2,488,869
2) Castle Gate Prep Plant and Refuse Deposal Facilities	$ 3,554,903
3) Gravel Canyon	$ 252,302
4) Crandall Canyon	$ 3,030,475
5) Total Bond Estimate	$ 9,326,549

For the Willow Creek Mine and associated surface facilities areas, the bonding cost estimate is based on the nature and extent of mining and related disturbance as described in Section 4.0 of the Willow Creek Mine - Mining and Reclamation Permit Application and specific reclamation plans and practices as described in Section 5.0 of the same document. CPMC plans to utilize the existing Castle Gate Preparation Plant, Gravel Canyon, and Crandall Canyon facilities in conjunction with the Willow Creek operations as described in Section 4.5 of the Willow Creek Mine - Mining and Reclamation Permit Application and further detailed in Exhibits 19 and 20 of the same document. Given that the Castle Gate, Gravel Canyon, and Crandall Canyon facilities are permitted facilities under the existing Castle Gate Mine Permit, these facilities are currently bonded under the approved permit. Bonding cost estimates for both the Castle Gate (including Gravel Canyon) and Crandall Canyon facilities have recently been updated and submitted to UDOGM. The Castle Gate preparation plant bond cost estimate has been approved by UDOGM, however, approval of the revised bonding cost estimate for Crandall Canyon is currently pending. Assumptions and methodologies used in calculating both the Castle Gate and Crandall Canyon bond estimates are included in the Castle Gate Permit Document. Documentation for the Castle Gate and Crandall Canyon bonding cost estimates are provided for reference in Appendices B and C, respectively of this bonding submittal.

The bonding cost estimate for the Willow Creek Mine was determined by CPMC. The methods, assumptions, and detailed calculations upon which this reclamation cost estimate is based are briefly described in the following sections and specific supporting documentation is provided in Appendix A.

2.0 METHODOLOGIES AND ASSUMPTIONS - GENERAL APPROACH

The methodology utilized in developing this bonding cost estimate focuses on selection of the most appropriate reclamation methods and equipment, and use of the most accurate and widely accepted cost and productivity references for estimating equipment, labor, and supply requirements consistent with the approved reclamation plan. The only areas in which CPMC does not use published references as the basis for calculations are those for which there is no published data. In these cases, CPMC used relevant information from previous cost estimates and contractor quotes.

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CPMC has utilized the Dataquest, Inc. - Cost Reference Guide (CRG) for estimating unit costs for heavy equipment as the best reference currently available for typical contractor equipment costs. Demolition unit costs were obtained from the approved Castle Gate bond cost estimate which was based on Means Site Work Cost Data 1995 (MCD) or directly from MCD.

3.0 METHODOLOGIES AND ASSUMPTIONS - SPECIFIC APPROACH

Determination of the bond amount necessary to provide for complete reclamation of the Willow Creek mine and associated facilities involved a series of logical steps.

- Delineation of disturbance areas and determination of reclamation volumes
- Determination and sequencing of required reclamation functions
- Determination of the unit costs for each function.
- Calculation of total costs for each reclamation function
- Development of cost estimates for project overhead and contractor profit
- Determination of the total estimated bond surety necessary to provide for complete reclamation of all disturbed areas

The following sections describe the assumptions and procedures utilized in each component of the bonding cost estimate.

3.1 Delineation of Disturbance Areas and Determination of Reclamation Volumes

All disturbance areas are described in Section 4.5.2.3 and are shown on the Surface Facilities (Proposed Configuration and Facilities) Map, (Map18B). Backfill and grading volumes are noted in Section 5.4.2.3. Soil volumes are shown on Table 4.2-1 in Section 4.2.2. Given the extent of previous site disturbance, there is some uncertainty relative the depth and volume of suitable material which would be available for use as growth media for reclamation purposes. It is anticipated that suitable material depths and recovery volumes will be evaluated in the field during actual recovery operations to obtain maximum recovery of available suitable materials. In order to address the practical uncertainties relative to suitable material volumes, CPMC has taken a very conservative approach for the bonding calculations, assuming that a maximum of 18 inches of suitable material would be replaced over all new disturbance areas within the Willow Creek surface facilities areas. All volumes were swelled by 10% to convert compacted cubic yards to loose cubic yards.

3.2 Determination and Sequencing of Reclamation Functions

Having delineated the disturbance areas and determined reclamation volumes, the next step in developing the bonding cost estimate was to determine what reclamation function or activities will be required to reclaim each disturbance area in accordance with the approved reclamation plan.

The following are the reclamation functions and sequencing for the given disturbance areas.

1) Remove structures and facilities
2) Seal portals and open boreholes
3) Backfill and regrade disturbance areas
4) Drainage control
5) Replace topsoil
6) Revegetate disturbance areas

3.3 Determination of Unit Costs for Each Function

The unit costs for demolition were obtained from the approved Castle Gate bond cost estimate which was based on Means Site Work Cost Data 1995 (MCD). If an appropriate unit cost could not be found in the Castle Gate bond estimate, CPM utilized MCD. The MCD reference numbers for the unit costs are included on the accompanying cost worksheets.

To determine the unit costs for backfilling and grading and soil replacement, the first step was to determine equipment productivities. Equipment productivities where determined using methods and guidelines from the "Caterpillar Performance Handbook" and Caterpillar's computer haulage simulation software, VEHSIM. All productivities were adjusted to reflect equipment utilization. All production inputs and results are shown in either Appendix A or on the individual cost calculation worksheets. The next step was to determine equipment unit costs. Equipment ownership and operating costs were obtained from the CRG. All equipment unit costs are based on a one (1) shift-per-day operating schedule. To determine overall unit costs, the equipment unit costs were divided by the productivity to give a cost per cubic yard. Unit cost calculations for backfilling and grading and soil replacement are shown on the accompanying cost worksheets.

Unit costs and crew costs for revegetation, drainage control, and monitoring were determined from the existing Castle Gate bond estimate. Unit seed costs were provided by Garrison Seed Company, Greeley Colorado. Unit seed costs are shown on the accompanying cost worksheets.

3.4 Calculation of Total Cost for Each Reclamation Function

Total cost for each reclamation function was calculated by multiplying unit volumes by the corresponding unit costs. Total cost, as well as the individual components used in calculating those costs are indicated on the individual bond cost estimate worksheets for each function.

3.5 Development of Cost Estimates for Overhead and Contractor Profit

Profit and overhead, engineering redesign, reclamation management and contingencies were calculated by multiplying the total direct costs by the factors shown on the attached spreadsheets. The factors were determined from the existing Castle Gate bond estimate.

3.6 Determination of Total Estimated Bond Surety

The total estimated bond surety necessary to provide for complete reclamation of mine and related disturbance areas was determined by adding all reclamation function direct and indirect costs.

4.0 SUMMARY AND CONCLUSIONS

Pursuant to the applicable UDOGM regulations, CPMC has determined that the estimated cost to reclaim all mining-related disturbance consistent with the stated assumptions and therefore the appropriate bond amount is $ 9,326,549. This amount reflects utilization of the most accurate and current information available to estimate the cost which would be incurred by the UDOGM to reclaim the Willow Creek Mine disturbance. Given that $6,877,680 of the total bond amount is currently addressed by existing reclamation surety for the Castle Gate and Crandall Canyon facilities under the approved Castle Gate Mine Permit, the total new bond surety required would be $2,488,869 for the new Willow Creek mining and facility disturbance. Costs for the individual tasks which make up the entire reclamation project are summarized by the cost summary and the accompanying cost calculation worksheets.

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Project Number: _____ Sheet: ____ Of ____
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Checked By: _____ Date: _____

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WILLOW CREEK MINE
BOND RECLAMATION COST ESTIMATE
COST ESTIMATE SUMMARY SHEETS

BOND ESTIMATE SUMMARY

Item No.	Description	Quantity	Unit	Material Costs		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	TOTAL COST SUMMARY										
1	WILLOW CREEK										$2,488,869
2	CASTLE GATE										$3,554,903
3	GRAVEL CANYON										$252,302
4	CRANDALL CANYON										$3,030,475
	TOTAL BOND ESTIMATE										**$9,326,549**

WILLOW CREEK MINE AREA
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Costs		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	DIRECT COST SUMMARY										
1	Demolition										$1,102,540
2	Sealing Mine Openings										$37,102
3	Backfill and Grading										$216,622
4	Soil Distribution										$153,562
5	Drainage Control										$68,937
6	Revegetation										$71,709
7	Monitoring										$110,000
	TOTAL DIRECT COSTS										$1,760,473
	INDIRECT COSTS										
	Mobilization/Demobilization (1%)										$17,605
	Contingencies (7%)										$123,233
	Engineering Redesign Fee (5.2%)										$91,545
	Contractor Profit and Overhead (7.8%)										$137,317
	Reclamation Management Fee (4.0%)										$70,419
	TOTAL INDIRECT										$440,118
	SUBTOTAL RECLAMATION COST										$2,200,591
	Escalation -13.1% (2.5%/yr over 5 years)										$288,277
	TOTAL RECLAMATION COST										**$2,488,869**

CASTLE GATE PREP PLANT AND REFUSE DISPOSAL FACILITY
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Costs		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	DIRECT COST SUMMARY										
1	Demolition										$701,591
2	Rough Grading Excavation Total										$486,851
3	Rough Grading Backfill Total										$120,359
4	Drainage Control Total										$206,218
5	Topsoil Distribution Total										$731,104
6	Reclamation Sedimentation Pond Removal										$40,000
7	Revegetation Total										$118,396
8	Monitoring Total										$110,000
	TOTAL DIRECT COSTS										$2,514,520
	INDIRECT COSTS										
	Mobilization/Demobilization (1%)										$25,145
	Contingencies (7%)										$176,016
	Engineering Redesign Fee (5.2%)										$130,755
	Contractor Profit and Overhead (7.8%)										$196,133
	Reclamation Management Fee (4.0%)										$100,581
	TOTAL INDIRECT										$628,630
	SUBTOTAL RECLAMATION COST										$3,143,150
	Escalation -13.1% (2.5%/yr over 5 years)										$411,753
	TOTAL RECLAMATION COST										**$3,554,903**

GRAVEL CANYON
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	DIRECT COST SUMMARY										
	Demolition Total										1,836
	Rough Grading Excavation Total										122,702
	Rough Grading Backfill Total										6,375
	Drainage Controls Total										5,835
	Revegetation Total										7,886
	Monitoring Total										20,000
	Total Direct Costs										164,634
	INDIRECT COSTS										
	Mobilization/Demobilization 1%										1,646
	Contingencies (10%)										16,463
	Engineering Redesign Fee (7.6%)										12,512
	Contractor Profit and Overhead (11.4%)										18,768
	Reclamation Management Fee (5.5%)										9,055
	Total Indirect Costs										58,445
	Subtotal Reclamation Cost										223,079
	Escalation - 13.1% (2.5%/yr over 5 yrs.)										29,223
	TOTAL RECLAMATION COST										**252,302**

CASTLE GATE CRANDALL CANYON
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Costs		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	DIRECT COST SUMMARY										
1	Demolition										$109,740
2	Permanent Shaft Seals										$116,370
3	Rough Grading Excavation Total										$557,473
4	Rough Grading Backfill Total										$171,167
5	Drainage Control Total										$288,596
6	Topsoil Distribution Total										$737,323
7	Revegetation Total										$45,215
8	Monitoring Total										$110,000
	TOTAL DIRECT COSTS										$2,135,883
	INDIRECT COSTS										
	Mobilization/Demobilization (1%)										$21,359
	Contingencies (7%)										$149,512
	Engineering Redesign Fee (5.35%)										$114,270
	Contractor Profit and Overhead (8.0%)										$170,871
	Reclamation Management Fee (4.1%)										$87,571
	TOTAL INDIRECT										$543,582
	SUBTOTAL RECLAMATION COST										$2,679,465
	Escalation -13.1% (2.5%/yr over 5 years)										$351,010
	TOTAL RECLAMATION COST										**$3,030,475**

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WILLOW CREEK MINE
BOND RECLAMATION COST ESTIMATE
COST ESTIMATE WORKSHEETS

WILLOW CREEK SURFACE FACILITIES
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Costs		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	DEMOLITION										
1	FIRE WATER TANK - 500,000 gal.										
	Metal tank cut in 6' x 12' pieces	1826	LF			$4.85	$8,856.10	$1.06	$1,935.56	$5.91	$10,792
	(20-730-10)										
	Offsite disposal of tank	2476	CY			$3.90	$9,656.40	$2.39	$5,917.64	$6.29	$15,574
	(020-608-0200)										
	Crane service	2.8	WK					$1,240.00	$3,472.00	$1,240.00	$3,472
	(016-460-2400)										
	Concrete pad w/ rebar (50' dia x 1.5'), 2945 CF	3.7	DAY			$929.00	$3,437.30	$262.00	$969.40	$1,191.00	$4,407
	(See calc's for Castle Gate)										
	On-site disposal of concrete (loose)	109	CY			$3.64	$396.76	$1.54	$167.86	$5.18	$565
	(020-754-4200)										
2	MINE WATER TANK - 200,000 gal.										
	Metal tank cut in 6' x 12' pieces	1048	LF			$4.85	$5,082.80	$1.06	$1,110.88	$5.91	$6,194
	(20-730-10)										
	Offsite disposal of tank	990	CY			$3.90	$3,861.00	$2.39	$2,366.10	$6.29	$6,227
	(020-608-0200)										
	Crane service	1.7	WK					$1,240.00	$2,108.00	$1,240.00	$2,108
	(016-460-2400)										
	Concrete pad w/ rebar (30' dia x 1.5'), 1060 CF	1.3	DAY			$929.00	$1,207.70	$262.00	$340.60	$1,191.00	$1,548
	(See calc's for Castle Gate)										
	On-site disposal of concrete (loose)	39.3	CY			$3.64	$143.05	$1.54	$60.52	$5.18	$204
	(020-754-4200)										
3	LP TANKS										
	Concrete footings (9.5'x10'x1.5')x4	570	CF			$1.01	$575.70	$1.47	$837.90	$2.48	$1,414
	(020-754-1140, see Casle Gate calc's)										
	Concrete walls (6'x4'x1')	24	CF			$1.52	$36.48	$7.90	$189.60	$9.42	$226
	(020-754-2500)										
	Concrete pad (4'x1'x1.5')6 CF	0.1	DAY			$929.00	$92.90	$262.00	$26.20	$1,191.00	$119
	(See calc's for Castle Gate)										
	On-site disposal of concrete (loose)	22.2	CY			$3.64	$80.81	$1.54	$34.19	$5.18	$115
	(020-754-4200)										
4	MINE VENT. FAN SUBSTATION										
	Concrete pad w/ mesh (20'x40'x1') 800 CF	1	DAY			$929.00	$929.00	$261.00	$261.00	$1,190.00	$1,190
	(See calc's for Castle Gate)										
	Chain link fence (7'x120')	120	LF			$0.46	$55.20	$1.13	$135.60	$1.59	$191
	(020-554-0700)										
	Disposal of non PCB transformers and switches	1	LS					$1,000.00	$1,000.00	$1,000.00	$1,000
	On-site disposal of concrete (loose)	30	CY			$3.64	$109.20	$1.54	$46.20	$5.18	$155
	(020-754-4200)										

WILLOW CREEK SURFACE FACILITIES
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Costs		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
5	MINE VENT. FAN EMERGENCY GENERATOR BUILDING										
	Metal building (20'x20' x12')	4800	CF			$0.10	$480.00	$0.06	$288.00	$0.16	$768
	(020-604-0012)										
	Concrete pad w/ mesh (20'x20'x1') 400 CF	0.5	DAY			$929.00	$464.50	$261.00	$130.50	$1,190.00	$595
	(See calc's for Castle Gate)										
	On-site disposal of concrete (loose)	15	CY			$3.64	$54.60	$1.54	$23.10	$5.18	$78
	(020-754-4200)										
6	MINE VENTILATION FAN SET										
	Metal building (24'x127'x20') and (27'x24'x50) x2	125760	CF			$0.10	$12,576.00	$0.06	$7,545.60	$0.16	$20,122
	(020-604-0012)										
	Metal elbows (12'x25'x12') x2	592	LF			$4.85	$2,871.20	$1.06	$627.52	$5.91	$3,499
	(020-730-0010)										
	Fan housing (37'x12' dia) x2	975	LF			$4.85	$4,728.75	$1.06	$1,033.50	$5.91	$5,762
	(020-730-0010)										
	Concrete footings (10'x3'x1.5") x2, 90 CF	90	CF			$1.01	$90.90	$1.47	$132.30	$2.48	$223
	(020-754-1140, see Casle Gate calc's)										
	Concrete stem wall (30'x1.5'x3') x2, 270 CF	270	CF			$1.01	$272.70	$1.47	$396.90	$2.48	$670
	(020-754-1140, see Casle Gate calc's)										
	Concrete pad w/ mesh (50'x19'x1.5') x2, 2850 CF	3.6	DAY			$929.00	$3,344.40	$261.00	$939.60	$1,190.00	$4,284
	(See calc's for Castle Gate)										
	Concrete pad w/ mesh (4'x4'x1.5') x2, 48 CF	0.1	DAY			$929.00	$92.90	$261.00	$26.10	$1,190.00	$119
	(See calc's for Castle Gate)										
	Air heaters, 2	8	TON					$385.00	$3,080.00	$385.00	$3,080
	(Heavy HVAC demo 020-718-3600)										
	On-site disposal of concrete (loose)	116	CY			$3.64	$422.24	$1.54	$178.64	$5.18	$601
	(020-754-4200)										
7	MAIN SUBSTATION										
	Concrete pad w/ mesh (12'x80'x1') 960 CF	1.1	DAY			$929.00	$1,021.90	$261.00	$287.10	$1,190.00	$1,309
	(See calc's for Castle Gate)										
	Concrete pad w/ mesh (12'x50'x1') 600 CF	0.75	DAY			$929.00	$696.75	$261.00	$195.75	$1,190.00	$893
	(See calc's for Castle Gate)										
	Concrete pad w/ mesh (10'x20'x1') x3, 600 CF	0.75	DAY			$929.00	$696.75	$261.00	$195.75	$1,190.00	$893
	(See calc's for Castle Gate)										
	Chain link fence (7'x430')	430	LF			$0.46	$197.80	$1.13	$485.90	$1.59	$684
	(020-554-0700)										
	Disposal of non PCB transformers and switches	1	LS					$5,000.00	$5,000.00	$5,000.00	$5,000
	On-site disposal of concrete (loose)	80	CY			$3.64	$291.20	$1.54	$123.20	$5.18	$414
	(020-754-4200)										

WILLOW CREEK SURFACE FACILITIES
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Costs		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
8	SHOP BUILDING										
	Metal building (110'x144'x40')	633600	CF			$0.10	$63,360.00	$0.06	$38,016.00	$0.16	$101,376
	(020-604-0012)										
	Wash bay and equipment fueling station (80'x110'x40')	352000	CF			$0.10	$35,200.00	$0.06	$21,120.00	$0.16	$56,320
	(020-604-0012)										
	Concrete slab w/ rebar (100'x110'x1') 11000 CF	13.75	DAY			$929.00	$12,773.75	$261.00	$3,588.75	$1,190.00	$16,363
	(See calc's for Castle Gate)										
	Concrete slab w/ mesh (124' x 110' x 8") 10230 CF	12.75	DAY			$929.00	$11,844.75	$261.00	$3,327.75	$1,190.00	$15,173
	(See calc's for Castle Gate)										
	On-site disposal of concrete (loose)	787	CY			$3.64	$2,864.68	$1.54	$1,211.98	$5.18	$4,077
	(020-754-4200)										
9	WAREHOUSE BUILDING										
	Metal building (60'x200'x24')	288000	CF			$0.10	$28,800.00	$0.06	$17,280.00	$0.16	$46,080
	(020-604-0012)										
	Concrete slab w/ mesh (60' x 200' x 6") 6000 CF	7.5	DAY			$929.00	$6,967.50	$261.00	$1,957.50	$1,190.00	$8,925
	(See calc's for Castle Gate)										
	Concrete pads w/ rebar (5'x5'x1') x 11, 275 CF	0.3	DAY			$929.00	$278.70	$261.00	$78.30	$1,190.00	$357
	(See calc's for Castle Gate)										
	On-site disposal of concrete (loose)	232	CY			$3.64	$844.48	$1.54	$357.28	$5.18	$1,202
	(020-754-4200)										
10	TIRE / OIL STORAGE SHED										
	Metal building (100'x 20' x10')	20000	CF			$0.10	$2,000.00	$0.06	$1,200.00	$0.16	$3,200
	(020-604-0012)										
	Concrete slab w/ mesh (100' x 20' x 6") 1000 CF	1.2	DAY			$929.00	$1,114.80	$261.00	$313.20	$1,190.00	$1,428
	(See calc's for Castle Gate)										
11	ADMINISTRATION AND BATHHOUSE BUILDING										
	Metal building (100'x165'x36')	594000	CF			$0.10	$59,400.00	$0.06	$35,640.00	$0.16	$95,040
	(020-604-0012)										
	Concrete slab w/ mesh (100' x 165' x 6") 8250 CF	10.3	DAY			$929.00	$9,568.70	$261.00	$2,688.30	$1,190.00	$12,257
	(See calc's for Castle Gate)										
	Concrete footing pads w/ rebar (5' x 5' x 1') x 54, 1350 CF	1.7	DAY			$929.00	$1,579.30	$261.00	$443.70	$1,190.00	$2,023
	(See calc's for Castle Gate)										
	On-site disposal of concrete (loose)	355	CY			$3.64	$1,292.20	$1.54	$546.70	$5.18	$1,839
	(020-754-4200)										

WILLOW CREEK SURFACE FACILITIES
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Costs		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
12	PROPANE TANKS FOR ADMIN & BATHHOUSE BUILDING										
	Concrete footings (9.5'x10'x1.5')x4	570	CF			$1.01	$575.70	$1.47	$837.90	$2.48	$1,414
	(020-754-1140, see Casle Gate calc's)										
	Concrete walls (6'x4'x1')	24	CF			$1.52	$36.48	$7.90	$189.60	$9.42	$226
	(020-754-2500)										
	Concrete pad (4'x1'x1.5')6 CF	0.1	DAY			$929.00	$92.90	$262.00	$26.20	$1,191.00	$119
	(See calc's for Castle Gate)										
	On-site disposal of concrete (loose)	22.2	CY			$3.64	$80.81	$1.54	$34.19	$5.18	$115
	(020-754-4200)										
13	POTABLE WATER TANK - 40,000 GAL.										
	Metal tank, cut in three pieces	72	LF			$4.85	$349.20	$1.06	$76.32	$5.91	$426
	(020-754-2500)										
	Offsite disposal of tank	1	LS					$2,800.00	$2,800.00	$2,800.00	$2,800
	(020-880-1029 x 3.3)										
	Metal building - valve house (5' x 5' x 5')	125	CF			$0.10	$12.50	$0.06	$7.50	$0.16	$20
	(020-604-0012)										
	Metal building - pump house (16' x 12' x 8')	1536	CF			$0.10	$153.60	$0.06	$92.16	$0.16	$246
	(020-604-0012)										
	Concrete pad w/ rebar (12' dia. x 1.5') 96 CF	0.2	DAY			$929.00	$185.80	$262.00	$52.40	$1,191.00	$238
	(See calc's for Castle Gate)										
	Concrete pad w/ mesh (5' x 5' x 6") 13 CF	0.1	DAY			$929.00	$92.90	$262.00	$26.20	$1,191.00	$119
	(See calc's for Castle Gate)										
	Concrete pad w/ mesh (16' x 12' x 6") 96 CF	0.1	DAY			$929.00	$92.90	$262.00	$26.20	$1,191.00	$119
	(See calc's for Castle Gate)										
	On-site disposal of concrete (loose)	10	CY			$3.64	$36.40	$1.54	$15.40	$5.18	$52
	(020-754-4200)										
14	CONVEYOR UG -1										
	18 - Concrete tower footings (2' x 2' x 3'), 216 CF	216	CF			$1.01	$218.16	$1.47	$317.52	$2.48	$536
	(020-754-1140, see Casle Gate calc's)										
	Belt line disposal 550 LF @ 1 ton per 20'	27.5	TON					$385.00	$10,587.50	$385.00	$10,588
	(Heavy HVAC demo 020-718-3600)										
	On-site disposal of concrete (loose)	8	CY			$3.64	$29.12	$1.54	$12.32	$5.18	$41
	(020-754-4200)										
15	STACKING TUBE AND RECLAIM TUNNEL										
	Tube dia. 15' x 66' (CMP) cut into three pieces	94	LF			$1.21	$113.74	$0.27	$25.38	$1.48	$139
	(020-754-2500) x 0.25										
	Offsite disposal of tube	1	LS					$2,800.00	$2,800.00	$2,800.00	$2,800
	(020-880-1029 x 3.3)										
	Metal building (24'x 24' x 24')	13825	CF			$0.10	$1,382.50	$0.06	$829.50	$0.16	$2,212
	(020-604-0012)										
	Reclaim tunnel (420' long x 22' wide x 20' high)	13440	SF			$3.64	$48,921.60	$19.44	$261,273.60	$23.08	$310,195
	(020-754-2500 x 2) Removing roof and 5' of the walls only										

WILLOW CREEK SURFACE FACILITIES
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Costs		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
16	CONVEYOR SC -1										
	55 - Concrete tower footings (2' x 2' x 3'), 660 CF	660	CF			$1.01	$666.60	$1.47	$970.20	$2.48	$1,637
	(020-754-1140, see Casle Gate calc's)										
	Belt line disposal 1650 LF @ 1 ton per 20'	82.5	TON					$385.00	$31,762.50	$385.00	$31,763
	(Heavy HVAC demo 020-718-3600)										
	On-site disposal of concrete (loose)	25	CY			$3.64	$91.00	$1.54	$38.50	$5.18	$130
	(020-754-4200)										
17	CONVEYOR SC - 2										
	25 - Concrete tower footings (2' x 2' x 3'), 300 CF	300	CF			$1.01	$303.00	$1.47	$441.00	$2.48	$744
	(020-754-1140, see Casle Gate calc's)										
	Belt line disposal 740 LF @ 1 ton per 20'	37	TON					$385.00	$14,245.00	$385.00	$14,245
	(Heavy HVAC demo 020-718-3600)										
	On-site disposal of concrete (loose)	11.1	CY			$3.64	$40.40	$1.54	$17.09	$5.18	$57
	(020-754-4200)										
18	CONVEYOR SC - 3										
	16 - Concrete tower footings (2' x 2' x 3'), 192 CF	192	CF			$1.01	$193.92	$1.47	$282.24	$2.48	$476
	(020-754-1140, see Casle Gate calc's)										
	Belt line disposal 470 LF @ 1 ton per 20'	23.5	TON					$385.00	$9,047.50	$385.00	$9,048
	(Heavy HVAC demo 020-718-3600)										
	On-site disposal of concrete (loose)	7.1	CY			$3.64	$25.84	$1.54	$10.93	$5.18	$37
	(020-754-4200)										
19	CONVEYOR SC - 4										
	13 - Concrete tower footings (2' x 2' x 3'), 156 CF	156	CF			$1.01	$157.56	$1.47	$229.32	$2.48	$387
	(020-754-1140, see Casle Gate calc's)										
	Belt line disposal 380 LF @ 1 ton per 20'	19	TON					$385.00	$7,315.00	$385.00	$7,315
	(Heavy HVAC demo 020-718-3600)										
	On-site disposal of concrete (loose)	5.8	CY			$3.64	$21.11	$1.54	$8.93	$5.18	$30
	(020-754-4200)										
20	CONVEYOR SC - 5										
	54 - Concrete tower footings (2' x 2' x 3'), 648 CF	648	CF			$1.01	$654.48	$1.47	$952.56	$2.48	$1,607
	(020-754-1140, see Casle Gate calc's)										
	Belt line disposal 1610 LF @ 1 ton per 20'	80.5	TON					$385.00	$30,992.50	$385.00	$30,993
	(Heavy HVAC demo 020-718-3600)										
	On-site disposal of concrete (loose)	24	CY			$3.64	$87.36	$1.54	$36.96	$5.18	$124
	(020-754-4200)										

WILLOW CREEK SURFACE FACILITIES
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Costs		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
21	CONVEYOR SC - 6										
	50 - Concrete tower footings (2' x 2' x 3'), 600 CF	600	CF			$1.01	$606.00	$1.47	$882.00	$2.48	$1,488
	(020-754-1140, see Casle Gate calc's)										
	Belt line disposal 1500 LF @ 1 ton per 20'	75	TON					$385.00	$28,875.00	$385.00	$28,875
	(Heavy HVAC demo 020-718-3600)										
	On-site disposal of concrete (loose)	22.2	CY			$3.64	$80.81	$1.54	$34.19	$5.18	$115
	(020-754-4200)										
22	BELT TRANSFER STATION										
	Metal building (35' x 35' x 20')	24500	CF			$0.10	$2,450.00	$0.06	$1,470.00	$0.16	$3,920
	(020-604-0012)										
	Concrete pad w/ mesh (35' x 35' x 8") 920 CF	1.1	DAY			$929.00	$1,021.90	$262.00	$288.20	$1,191.00	$1,310
	(See calc's for Castle Gate)										
	On-site disposal of concrete (loose)	34	CY			$3.64	$123.76	$1.54	$52.36	$5.18	$176
	(020-754-4200)										
23	OFFICE TRAILER										
	Office trailer demobilization	1	LS					$2,500.00	$2,500.00	$2,500.00	$2,500
24	ROCK DUST STORAGE TANK										
	Steel tank (11' dia. x 30') cut in two pieces	69	LF			$4.85	$334.65	$1.06	$73.14	$5.91	$408
	(20-730-10)										
	Offsite disposal of tank	1	LS					$1,530.00	$1,530.00	$1,530.00	$1,530
	(020-880-1029 x 1.8)										
	Concrete pad w/ rebar (16' x 16' x 6") 128 CF	0.2	DAY			$929.00	$185.80	$262.00	$52.40	$1,191.00	$238
	(See calc's for Castle Gate)										
	Concrete footer (2' x 3' x 1') x4	24	CF			$1.01	$24.24	$1.47	$35.28	$2.48	$60
	(020-754-1140, see Casle Gate calc's)										
	On-site disposal of concrete (loose)	5.6	CY			$3.64	$20.38	$1.54	$8.62	$5.18	$29
	(020-754-4200)										

WILLOW CREEK SURFACE FACILITIES
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Costs		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
25	CULVERT REMOVAL										
	24" CMP (765' total length)	765	LF			$0.86	$657.90	$2.10	$1,606.50	$2.96	$2,264
	(020-554-2960 x 0.5)										
	30" CMP (95' total length)	95	LF			$1.08	$102.60	$2.62	$248.90	$3.70	$352
	(020-554-2960 x 1.25 x 0.5)										
	48" CMP (525' total length)	525	LF			$1.48	$777.00	$3.64	$1,911.00	$5.12	$2,688
	(020-554-3000 x 1.3 x 0.5)										
	60" CMP (120' total length)	120	LF			$1.95	$234.00	$4.76	$571.20	$6.71	$805
	(020-554-3000 x 1.7 x 0.5)										
	96" CMP (190' long)	190	LF			$3.12	$592.80	$7.69	$1,461.10	$10.81	$2,054
	(020-554-3000 x 2.7 x 0.5)										
	Excavation for 24" culverts	170	CY			$1.41	$239.70	$1.78	$302.60	$3.19	$542
	(2' wide x 3' deep) 765' long										
	(022-554-0060)										
	Excavation for 30" culverts	32	CY			$1.41	$45.12	$1.78	$56.96	$3.19	$102
	(3' wide x 3' deep) 95' long										
	(022-554-0060)										
	Excavation for 48" culverts	263	CY			$1.41	$370.83	$1.78	$468.14	$3.19	$839
	(4.5' wide x 3' deep) 525' long										
	(022-554-0060)										
	Excavation for 60" culverts	178	CY			$1.41	$250.98	$1.78	$316.84	$3.19	$568
	(8' wide x 5' deep) 120' long										
	(022-554-0060)										
	Excavation for 96" culvert	675	CY			$1.41	$951.75	$1.78	$1,201.50	$3.19	$2,153
	(12' wide x 8' deep) 190' long										
	(022-554-0060)										
	Backfill for 24" culverts	283	CY			$0.58	$164.14	$0.70	$198.10	$1.28	$362
	(2' wide x 5' deep) 765' long										
	(022-254-3020)										
	Backfill for 30" culverts	58	CY			$0.58	$33.64	$0.70	$40.60	$1.28	$74
	(3' wide x 5.5' deep) 95' long										
	(022-254-3020)										
	Backfill for 48" culverts	612	CY			$0.58	$354.96	$0.70	$428.40	$1.28	$783
	(4.5' wide x 7' deep) 525' long										
	(022-254-3020)										
	Backfill for 60" culverts	285	CY			$0.58	$165.30	$0.70	$199.50	$1.28	$365
	(8' wide x 8' deep) 120' long										
	(022-254-3020)										
	Backfill for 96" culvert	844	CY			$0.58	$489.52	$0.70	$590.80	$1.28	$1,080
	(12' wide x 10' deep) 190' long										
	(022-254-3020)										

WILLOW CREEK SURFACE FACILITIES
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Costs		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
26	SEDIMENT POND 001										
	Valves (consider as demolition of hydrants)	1	EA					$99.50	$99.50	$99.50	$100
	(020-554-0900)										
	18" CMP 50 LF Discharge pipe	50	LF			$0.82	$41.00	$2.02	$101.00	$2.84	$142
	(020-554-2930 x 1.2 x 0.5)										
	Excavation for pipe 2' x 2' x 50'	7	CY			$1.41	$9.87	$1.78	$12.46	$3.19	$22
	(022-254-0060)										
	Onsite disposal of material	1	LS			$100.00	$100.00	$100.00	$100.00	$200.00	$200
27	SEDIMENT POND 002										
	Valves (consider as demolition of hydrants)	1	EA					$99.50	$99.50	$99.50	$100
	(020-554-0900)										
	18" CMP 30 LF Discharge pipe	30	LF			$0.82	$24.60	$2.02	$60.60	$2.84	$85
	(020-554-2930 x 1.2 x 0.5)										
	Excavation for pipe 2' x 2' x 30'	5	CY			$1.41	$7.05	$1.78	$8.90	$3.19	$16
	(022-254-0060)										
	Onsite disposal of material	1	LS			$100.00	$100.00	$100.00	$100.00	$200.00	$200
28	ASPHALT DEMOLITION										
	Road PR 1 (2400' x 55' x 6")	14666	SY			$3.03	$44,437.98	$2.09	$30,651.94	$5.12	$75,090
	Parking lots (350' x 150', 250' x 100) x 4"	8611	SY			$3.03	$26,091.33	$2.09	$17,996.99	$5.12	$44,088
	(020-554-1750)										
	On-site disposal of asphalr (loose)	3392	CY			$3.64	$12,346.88	$1.54	$5,223.68	$5.18	$17,571
	(020-754-4200)										
29	POWER POLES										
	Removing wiring	450	CLF					$7.00	$3,150.00	$7.00	$3,150
	(020-708-1870)										
	Remove fixtures and poles	45	EA			$50.00	$2,250.00	$40.00	$1,800.00	$90.00	$4,050
	On-site disposal of fixtures	1	LS			$400.00	$400.00	$500.00	$500.00	$900.00	$900
	DEMOLITION TOTAL										$1,102,540

WILLOW CREEK MINE AREA
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Costs		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	BACKFILL AND GRADING										
1	Facilities Area (Scraper Fleet)	266200	lcy			$0.65	$171,917	$0.10	$27,678	$0.75	$199,595
	(See Spreadsheet for Unit Costs))										
2	Pond 1 area (Dozer)	37400	lcy			$0.35	$12,983	0.08	$2,850	$0.42	$15,833
	(See Spreadsheet for Unit Costs))										
3	Belt Transfer Area (Dozer)	3300	lcy			$0.30	$979	0.07	$215	$0.36	$1,194
	(See Spreadsheet for Unit Costs))										
	BACKFILL AND GRADING TOTAL										$216,622
	SOIL REPLACEMENT										
1	Soil Placement (Scraper Fleet)	135500	lcy			$0.90	$121,999	0.14	$19,563	$1.04	$141,562
	(See Spreadsheet for Unit Costs))										
2	Soil Testing	30	EA					400.00	$12,000	$400.00	$12,000
	TOTAL SOIL PLACEMENT										$153,562
	REVEGETATION										
1	Soil roughening	55.8	ac			$50.96	$2,844	50.52	$2,819	$101.48	$5,663
	(029-204-3100)										
2	Seed mix	55.8	ac	$96.61	$5,391					$96.61	$5,391
	(See Spreadsheet for Unit Costs))										
3	Seeding	55.8	ac			$165.00	$9,207	159.00	$8,872	$324.00	$18,079
	(029 308 2600)										
4	Straw Mulch	55.8	ac	100				250.00	$13,950	$350.00	$19,530
5	Fertilizer	55.8	ac	56				100.00	$5,580	$156.00	$8,705
											$57,367
	Revegetation Subtotal										$14,342
	Reseeding @ 25%										
	TOTAL REVEGETATION										$71,709

WILLOW CREEK MINE AREA
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Costs		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	SEALING MINE OPENINGS										
1	Main Portals (5 entries at 25X10)										
	Concrete Block (2 layer thick)	2500	sf	$2.26	$5,650		$0	$2.27	$5,675	$4.53	$11,325
	(042 320 0550)										
	Sealant	1250	sf	$0.84	$1,050	$0.80	$1,000	$0.37	$463	$2.01	$2,512
	(033 160 0020)										
	(Backfill)	1200	cy	$0.00	$0	$0.86	$1,032	$0.86	$1,032	$1.72	$2,064
	(022 208 2420)										
2	Rock Tunnels No 1 and 2 (4 entries at 25X10)										
	Concrete Block (2 layer thick)	2000	sf	$2.26	$4,520		$0	$2.27	$4,540	$4.53	$9,060
	(042 320 0550)										
	Sealant	1000	sf	$0.84	$840	$0.80	$800	$0.37	$370	$2.01	$2,010
	(033 160 0020)										
	(Backfill)	1000	cy	$0.00	$0	$0.86	$860	$0.86	$860	$1.72	$1,720
	(022 208 2420)										
3	Ventilation Shaft										
	Forms	23	cy	$40.42	$930	$0.00	$0	$96.75	$2,225	$137.17	$3,155
	(R033-100)										
	reinforcement	23	cy	$30.94	$550	$0.00	$0	$17.85	$411	$48.79	$1,122
	(R033-100)										
	Concrete (3' thick)	23	cy	$55.00	$1,265	$0.00	$0	$18.36	$422	$73.36	$1,687
	(R033-100)										
	Backfill	52	cy	$0.00	$0	$0.86	$45	$0.86	$45	$1.72	$89
	(022 208 2420)										
	Compact	52	cy	$0.00	$0	$0.62	$32	$1.63	$85	$2.25	$117
	(022 226 8050)										
4	SEAL WELLS	8	ea	$30.00	$240			$250.00	$2,000	$280.00	$2,240
	Excavate, seal, torch, and backfill										
	TOTAL SEALING MINE OPENINGS										$37,102

WILLOW CREEK SURFACE FACILITIES
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Costs		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	DRAINAGE CONTROL										
1	Filter Material	6080	SY	1.15	6992			$0.13	$790	$1.28	$7,782
	(027-054-0100)										
2	Riprap placement	5200	TON	$10.00	$52,000	$1.06	$5,512	$0.45	$2,340	$11.51	$59,852
	(022-712-0300)										
3	Revegetation										
	Seed spreading	54.7	1000 SF			$6.00	$328	$15.85	$867	$21.85	$1,195
	(029-308-1100)										
	Seed Cost										
	(See Speadsheet)	1.3	AC	$82.78	$108					$82.78	$108
	TOTAL DRAINAGE CONTROL										$68,937
	MONITORING										
1	Vegetation Monitoring	10	year							$4,000	$40,000
2	Water Quality Monitoring	10	year							$4,000	$40,000
3	Site Maintenance	10	year							$3,000	$30,000
	TOTAL MONITORING										$110,000

TerraMatrix
Engineering & Environmental Services
P.O. Box 774018, 1475 Pine Grove Road
Steamboat Springs, Colorado 80477
Phone 970.879.6260 Fax 970.879.9048

Project Name: _____
Project Number: _____ Sheet: ____ Of ____
Prepared By: _____ Date: _____
Checked By: _____ Date: _____

Green

WILLOW CREEK MINE
BOND RECLAMATION COST ESTIMATE

APPENDIX A
SUPPORTING DOCUMENTATION

WILLOW CREEK MINE
BOND COST ESTIMATE
BACKFILL AND GRADE FACILITIES

DATE: 29-Mar-96
FILE: WCUNIT$.WB2

EQUIPMENT REQUIRED
-4 CATERPILLAR 637 SCRAPERS
-CATERPILLAR D9N DOZER
-CATERPILLAR 16G MOTOR GRADER

MATERIAL MOVEMENT

FACILITIES AREA	242,000	CCY	266,200	LCY

SCRAPER PRODUCTION (637E)

HAUL TIME	1.5	MIN.
RETURN TIME	0.8	MIN.
FIXED TIME	1.6	MIN.
TOTAL CYCLE TIME	3.9	MIN.
TRIPS PER HOUR	15.4	TRIPS/HOUR
SCRAPER CAPACITY	27	LCY
RAW PRODUCTIVITY	415	LCY/OPERATED HR
UTILIZATION (50 MIN/HR)	0.83	
ADJ. PRODUCTIVITY	345	LCY/SCH HR
FLEET PRODUCTIVITY (4 SCRAPERS)	1,379	LCY/SCH HR

SCRAPER FLEET COST

EQUIPMENT	UNITS	EQ UNIT COST	LABOR UNIT COST	TOTAL EQ UNIT COST	TOTAL LABOR UNIT COST	TOTAL COST	
SCRAPER	4	$174.95	$22.06	$699.80	$88.24	$788.04	/SCH HR
DOZER	1	$100.51	$22.06	$100.51	$22.06	$122.57	/SCH HR
MOTOR GRADER	1	$69.56	$22.06	$69.56	$22.06	$91.62	/SCH HR
WATER TRUCK	0.5	$41.53	$22.06	$20.77	$11.03	$31.80	/SCH HR
TOTAL				$890.64	$143.39	$1,034.03	/SCH HR

TOTAL UNIT COST

EQUIPMENT	$0.65	/LCY
LABOR	$0.10	/LCY
TOTAL	$0.75	/LCY

WILLOW CREEK MINE
BOND COST ESTIMATE
BACKFILL AND GRADE POND 1 AND BELT TRANSFER AREA

DATE: 29-Mar-96
FILE: WCUNIT$.WB2

EQUIPMENT REQUIRED
-4 CATERPILLAR 637 SCRAPERS
-CATERPILLAR D9N DOZER
-CATERPILLAR 16G MOTOR GRADER

MATERIAL MOVEMENT

DOZER (pond 1 area)	34,000	CCY	37,400	LCY
DOZER (belt transfer area)	3,000	ccy	3,300	LCY
TOTAL	37,000	CCY	40,700	LCY

DOZING PRODUCTION (pond 1 area)

AVG DISTANCE	250	FT
UNADJUSTED PRODUCTION	570	LCY/HR
ADJUSTMENTS		
SLOPE	0.9	
MATERIAL	1	
SLOT DOZING	1	
SPOIL FACTOR	0.8	
OPERATOR	0.85	
RAW PRODUCTIVITY	349	LCY/OPERATED HR
UTILIZATION (50 MIN/HR)	0.83	
ADJ. PRODUCTIVITY	290	LCY/SCH HR

DOZING PRODUCTION (Belt Transfer area)

AVG DISTANCE	100	FT
UNADJUSTED PRODUCTION	1200	LCY/HR
ADJUSTMENTS		
SLOPE	0.8	
MATERIAL	1	
SLOT DOZING	1	
SPOIL FACTOR	0.5	
OPERATOR	0.85	
RAW PRODUCTIVITY	408	LCY/OPERATED HR
UTILIZATION (50 MIN/HR)	0.83	
ADJ. PRODUCTIVITY	339	LCY/SCH HR

DOZER FLEET COST

EQUIPMENT	UNITS	EQ UNIT COST	LABOR UNIT COST	TOTAL EQ UNIT COST	TOTAL LABOR UNIT COST	TOTAL COST
DOZER	1	100.51	$22.06	$100.51	$22.06	122.57 /SCH HR

TOTAL UNIT COST

POND 1 AREA		
EQUIPMENT	$0.35	/LCY
LABOR	$0.08	/LCY
TOTAL	$0.42	/LCY
BELT TRANSFER AREA		
EQUIPMENT	$0.30	/LCY
LABOR	$0.07	/LCY
TOTAL	$0.36	/LCY

WILLOW CREEK MINE
BOND COST ESTIMATE
TOPSOIL FACILITIES

DATE: 29-Mar-96
FILE: WCUNIT$.WB2

EQUIPMENT REQUIRED
-2 CATERPILLAR 637 SCRAPERS
-CATERPILLAR 16G MOTOR GRADER

MATERIAL MOVEMENT

SOIL/SUBSTITUTE	73,400	CCY	135,500	LCY

SCRAPER PRODUCTION (637E)

HAUL TIME	3.1	MIN.
RETURN TIME	1.7	MIN.
FIXED TIME	1.6	MIN.
TOTAL CYCLE TIME	6.4	MIN.
TRIPS PER HOUR	9.38	TRIPS/HOUR
SCRAPER CAPACITY	30	LCY
RAW PRODUCTIVITY	281	LCY/HR
UTILIZATION (50 MIN/HR)	0.83	
JOB FACTOR	0.9	
ADJ. PRODUCTIVITY	210	LCY/SCH HR
FLEET PRODUCTIVITY (4 SCRAPERS)	840	LCY/SCH HR

SCRAPER FLEET COST

EQUIPMENT	UNITS	EQ UNIT COST	LABOR UNIT COST	TOTAL EQ UNIT COST	TOTAL LABOR UNIT COST	TOTAL COST	
SCRAPER	4	$174.95	$22.06	$699.80	$88.24	$788.04	/SCH HR
MOTOR GRADER	1	$69.56	$22.06	$22.06	$22.06	$44.12	/SCH HR
WATER TRUCK	0.5	$69.56	$22.06	$34.78	$11.03	$45.81	/SCH HR
			TOTAL	$756.64	$121.33	$877.97	/SCH HR

TOTAL UNIT COST

EQUIPMENT	$0.90	/LCY
LABOR	$0.14	/LCY
TOTAL	$1.04	/LCY

WILLOW CREEK MINE
BOND COST ESTIMATE
UPLAND SEED COST

Species		PLS lb/ac	Cost $/lb	Cost $/ac
Grasses				
	Intermediate Wheatgrass	0.5	$1.10	$0.55
	Western Wheatgrass	1	$3.35	$3.35
	Bluebunch Wheatgrass	2	$5.80	$11.60
	Slender Wheatgrass	1	$2.15	$2.15
	Indian Ricegrass	0.5	$4.50	$2.25
	Thickspike Wheatgrass	1	$5.00	$5.00
	Great Basin Wildrye	1	$8.25	$8.25
	Piaute Orchardgrass	0.5	$2.00	$1.00
Forbs				
	Blue Leaf Aster			
	Western Yarrow		$13.00	$0.00
	Lewis Flax	0.25	$9.00	$2.25
	Ladak Alfalfa	0.5	$1.75	$0.88
	Palmer Penstemon	0.25	$25.00	$6.25
	Yellow Sweet Clover	0.5	$0.47	$0.24
Shrubs				
	Prostrate Summer Cyprus		$18.50	$0.00
	Fourwing Saltbrush	3	$6.95	$20.85
	Whitestem Rubber Rabbitbruch		$31.00	$0.00
	Green Ephreda	2	$16.00	$32.00
	Basin Big Sagebrush		$31.00	$0.00
	Total	14		$96.61

WILLOW CREEK MINE
BOND COST ESTIMATE
UPLAND SEED COST

Species		PLS lb/ac	Cost $/lb	Cost $/ac
	Spreading Bentgrass	2	$6.50	$13.00
	Reed Canarygrass	2	$3.20	$6.40
	Meadow Foxtail	2	$4.15	$8.30
	Tufted Hairgrass	2	$23.00	$46.00
	Strawberry Clover	2	$4.54	$9.08
	Total	10		$82.78

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Mach. Code	Model	Ident.	Empty Weight	Payload LB.	Tire Size	Corrections Type	Speed	Alt.	O&O Cost $/Hr
C134	637E		112,088	75,000	37.25-35	E3	1.00	1.00	

Engine	FWHP	Transmission
3408	700	7/4SPD-PS

Course FACBF
Desc. FACILITIES BACKFILL

Density 2,900 LB. /BCY
Quantity 0

LOAD TIME =	0.90	LOADER =	
HAUL TIME =	1.42	PAYLOAD =	25.9 BCY
DUMP TIME =	0.70		
MANV. TIME =	0.00	PROD./60 MIN.HR. =	419.4 BCY
RETURN TIME =	0.68		
CYCLE TIME =	3.70	OPER. MIN/HOUR =	60 MIN
TRIPS/HOUR =	16.22	PROD./60 MIN.HR. =	419.4 BCY
CYCLE DIST. =	2,600		
AVG.SPEED =	8.0	OPER. HR. REQ'D. =	0
AVG.SPEED 60 MIN =	8.0	COST PER BCY =	0.000

RUN NO. 1 MODEL 637E — HAUL ROAD
INITIAL VEHICLE SPEED 3 MPH

SEG NO.	DIST FEET	ROLL RES	GRADE %	VEL LIMIT MPH	MAX SS VEL MPH	TOP VEL MPH	LAST VEL MPH	ACCUM TIME MIN
1	1,300	5.00	5.00	25.00	10.94	10.94	5.00	1.42

RUN NO. 1 MODEL 637E — RETURN ROAD
INITIAL VEHICLE SPEED 3 MPH

SEG NO.	DIST FEET	ROLL RES	GRADE %	VEL LIMIT MPH	MAX SS VEL MPH	TOP VEL MPH	LAST VEL MPH	ACCUM TIME MIN
1	1,300	5.00	-5.00	25.00	34.40	25.00	5.00	0.68

CATERPILLAR INC.
VEHICLE SIMULATION ANALYSIS

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Mach. Code	Model	Ident.	Empty Weight	Payload LB.	Tire Size	Tire Type	Corrections Speed	Corrections Alt.	O&O Cost $/Hr
C134	637E		112,088	75,000	37.25-35	E3	1.00	1.00	

Engine	FWHP	Transmission
3408	700	7/4SPD-PS

Course TOPSOIL
Desc. FACILITIES TOPSOIL

Density 2,500 LB. /BCY
Quantity 0

LOAD TIME =	0.90
HAUL TIME =	3.09
DUMP TIME =	0.70
MANV. TIME =	0.00
RETURN TIME =	1.63
CYCLE TIME =	6.32
TRIPS/HOUR =	9.49
CYCLE DIST. =	6,600
AVG.SPEED =	11.9
AVG.SPEED 60 MIN =	11.9

LOADER =		
PAYLOAD =	30.0	BCY
PROD./60 MIN.HR. =	284.8	BCY
OPER. MIN/HOUR =	60	MIN
PROD./60 MIN.HR. =	284.8	BCY
OPER. HR. REQ'D. =	0	
COST PER BCY =	0.000	

RUN NO. 3 MODEL 637E — HAUL ROAD
INITIAL VEHICLE SPEED 3 MPH

SEG NO.	DIST FEET	ROLL RES	GRADE %	VEL LIMIT MPH	MAX SS VEL MPH	TOP VEL MPH	LAST VEL MPH	ACCUM TIME MIN
1	1,400	5.00	3.00	25.00	13.63	13.63	13.63	1.26
2	300	5.00	10.00	25.00	7.22	13.63	7.22	1.66
3	800	5.00	5.00	25.00	10.94	10.94	10.94	2.53
4	800	5.00	0.00	25.00	21.32	19.36	5.00	3.09

RUN NO. 3 MODEL 637E — RETURN ROAD
INITIAL VEHICLE SPEED 3 MPH

SEG NO.	DIST FEET	ROLL RES	GRADE %	VEL LIMIT MPH	MAX SS VEL MPH	TOP VEL MPH	LAST VEL MPH	ACCUM TIME MIN
1	800	5.00	0.00	25.00	31.45	25.00	25.00	0.46
2	800	5.00	-5.00	25.00	34.40	25.00	25.00	0.83
3	300	5.00	-10.00	25.00	34.46	25.00	25.00	0.96
4	1,400	5.00	-3.00	25.00	34.02	25.00	5.00	1.63

TerraMatrix
Engineering & Environmental Services
P.O. Box 774018, 1475 Pine Grove Road
Steamboat Springs, Colorado 80477
Phone 970.879.6260 Fax 970.879.9048

Project Name: _____
Project Number: _____ Sheet: ____ Of ____
Prepared By: _____ Date: _____
Checked By: _____ Date: _____

Green

WILLOW CREEK MINE
BOND RECLAMATION COST ESTIMATE
APPENDIX B1
CASTLE GATE
COST ESTIMATE WORKSHEETS

CASTLE GATE PREP PLANT AND REFUSE DISPOSAL FACILITY
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	DIRECT COST SUMMARY										
	Demolition Total										701,591
	Rough Grading Excavation Total										486,851
	Rough Grading Backfill Total										120,359
	Drainage Controls Total										206,218
	Topsoil Distribution Total										731,104
	Reclamation Sedimentation Pond Removal										40,000
	Revegetation Total										118,396
	Monitoring Total										110,000
	Total Direct Costs										2,514,520
	INDIRECT COSTS										
	Mobilization/Demobilization (1%)										25,145
	Contingencies (7%)										176,016
	Engineering Redesign Fee (5.2%)										130,755
	Contractor Profit and Overhead (7.8%)										196,133
	Reclamation Management Fee (4.0%)										100,581
	Total Indirect Costs										628,630
	Subtotal Reclamation Cost										3,143,149
	Escalation - 13.1% (2.5%/yr over 5 yrs.)										411,753
	TOTAL RECLAMATION COST										3,554,902

CASTLE GATE PREP PLANT AND REFUSE DISPOSAL FACILITY
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	DEMOLITION										
1	TRUCK SCALE										
	Steel scale (12' X 70' X 3/4")	840	SF			0.14	117.60	0.34	285.60	0.48	403
	(020-726-1150) (a)										
	Concrete approaches w/ rebar (72' X 14' X 1'), 1008 CF	1.3	DAY			929	1208	261	339	1190	1,547
	and (68' X 14' X 1'), 952 CF										
	(Hyd. Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	12" Concrete pad w/ rebar under scale (70' X 16')	1.4	DAY			929	1301	261	365	1190	1,666
	(Hydraulic Excavator w/ 2 CY bucket), 1120 CF										
	(016-408-0300)										
	Scale house, wood (8' X 8' X 8')	512	SF			0.11	56.32	0.07	35.84	0.18	92
	(020-604-0700)										
	6" Concrete pad w/ mesh (6' X 8'), 24 CF	0.1	DAY			929	92.90	261.00	26.10	1190.00	119
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Chain link fence (8' X 6')	48	LF			0.46	22.08	1.13	54.24	1.59	76
	(020-554-0700)										
	Onsite disposal of concrete (loose)	115	CY			3.64	418.60	1.54	177.10	5.18	596
	(020-754-4200)										
2	SEDIMENTATION PONDS NO. 12A & B										
	Valves (consider as demolition of hydrants)	2	EA					99.50	199.00	99.50	199
	(020-554-0900)										
	10' Steel rails (consider as guide post)	42	EA			6.75	283.50	5.25	220.50	12.00	504
	(020-554-0860)										
	Onsite disposal of material	1	LS			100.00	100.00	100.00	100.00	200.00	200
Note:	Unless otherwise noted, no salvage value										
	was considered for any of this equipment.										
	(a) Means Heavy Construction Cost Data, 1995										

8/11/95

CASTLE GATE PREP PLANT AND REFUSE DISPOSAL FACILITY
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
3	NO. 3 BELT LINE										
	3 - Concrete footing w/ rebar (30' X 10' X 3'), 2700 CF	4.5	DAY			929	4181	261	1175	1190	5,355
	Concrete pad (20' X 15' X 3'), 900 CF	1.5	DAY			929	929	261	392	1190	1,785
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	4" Concrete pad w/ mesh (10' X 6') 3, 60 CF	0.1	DAY			929	93	261	26	1190	119
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Concrete ret. wall w/ rebar (81' X 12' X 1), 972 CF	1.2	DAY			929	929	261	313	1190	1,428
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Remove blowers and duct work	1	TON					470.00	470.00	470.00	470
	(020-718-3000)										
	Belt line disposal 400 LF @ 1 ton per 20'	20	TON					385.00	7700.00	385.00	7,700
	(Heavy HVAC demo 020-718-3600)										
	Chain link fence w/ barb wire (7' X 124')	124	LF			0.46	57.04	1.13	140.12	1.59	197
	(020-554-0700)										
	Onsite disposal of concrete (loose)	172	CY			3.64	626.08	1.54	264.88	5.18	891
	(020-754-4200)										
4	TRUCK GRIZZLY (TRUCK DUMP)										
	Concrete retaining wall w/ rebar (90' X 15' X 10")	1.5	DAY			929	1394	261	392	1190	1,785
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Metal ramp (28' X 20' X 3/4")	560	SF	0.34	190.40	0.14	78.40	0.34	190.40	0.82	459
	(020-726-1150)										
	Metal bin w/ grizzly, 3 sided (20' X 46' X 18')	2	TON					385.00	770.00	385.00	770
	(020-718-3600)										
	Concrete barrier wall w/ 1/2" rebar (20' X 15' X 1')	0.4	DAY			929	372	261	104	1190	476
	(Hydraulic Excavator w/ 2 CY bucket), 300 CF										
	(016-408-0300)										
	Metal hopper (20' X 20' X 18')	1	TON					385.00	385.00	385.00	385
	(020-718-3600)										
	Onsite disposal of concrete (loose)	53	CY			3.64	192.92	1.54	81.62	5.18	275
	(020-754-4200)										

CASTLE GATE PREP PLANT AND REFUSE DISPOSAL FACILITY
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
5	GRIZZLY BELT LINE										
	Concrete tower pad footings (2' X 2' X 2' on	212	CF			1.01	214.12	1.47	311.64	2.48	526
	3' X 3' X 5' footing, rebar reinforced) 4										
	(020-754-1140, see calcs)										
	Concrete tower footings w/ rebar (4' X 1.5' X 5') 3	90	CF			1.01	90.90	1.47	132.30	2.48	223
	Concrete tower footings w/ rebar(2' X 2' X 5' on	0.8	DAY			929	743	261	209	1190	952
	11' X 4' X 5' pad) 2, 460 CF										
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Belt line disposal 150 LF @ 1 ton per 20'	8	TON					385.00	3080.00	385.00	3,080
	(Heavy HVAC demo 020-718-3600)										
	Onsite disposal of concrete (loose)	29	CY			3.64	105.56	1.54	44.66	5.18	150
	(020-754-4200)										
6	GRIZZLY TRANSFER BLDG.										
	Metal bldg. (32' X 16' X 50' and 15' X 17' X 50')	38400	CF			0.10	3840.00	0.06	2304.00	0.16	6,144
	(020-604-0012)										
	Concrete pads										
	Stair pad (3' X 2.5' X 1.5'), 11 CF	0.1	DAY			929	93	261	26	1190	119
	Stair pad (3.5' X 3.5' X 2'), 25 CF	0.1	DAY			929	93	261	26.10	1190	119
	Tower pad (9' X 9' X 5'), 405 CF	0.7	DAY			929	650	261	182.70	1190	833
	Exhaust fan pad (3.5' X 3.5' X 6"), 6 CF	0.1	DAY			929	93	261	26.10	1190	119
	Electric switch box pad (4' X 1.5' X 1.5'), 9 CF	0.1	DAY			929	93	261	26.10	1190	119
	(All Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Onsite disposal of concrete (loose)	17	CY			3.64	61.88	1.54	26.18	5.18	88
	(020-754-4200)										

CASTLE GATE PREP PLANT AND REFUSE DISPOSAL FACILITY
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
7	BELT LINE TO BREAKER BLDG.										
	Concrete pads										
	6" Stair pad (2' X 4'), 32 CF	0.1	DAY			929	93	261	26	1190	119
	Stair footings (1.5' X 3' X 3') X 22, 297 CF	0.4	DAY			929	372	261	104	1190	476
	Tower pad (2' X 2' X 5') X 23, 460 CF	0.6	DAY			929	557	261	157	1190	714
	Tower footings (4' X 4' X 5') X 12, 960 CF	1.6	DAY			929	1486	261	418	1190	1904
	Tower pad (2' X 2' X 4'), 16 CF	0.1	DAY			929	93	261	26	1190	119
	Tower footings (3' X 3' X 5') X 8, 360 CF	0.6	DAY			929	557	261	157	1190	714
	(All Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Belt line disposal 250 LF @ 1 ton per 20'	13	TON					385.00	5005.00	385.00	5,005
	(Heavy HVAC demo 020-718-3600)										
	Onsite disposal of concrete (loose)	79	CY			3.64	287.56	1.54	121.66	5.18	409
	(020-754-4200)										
8	BREAKER BUILDING										
	Metal bldg. (26' X 74' X 60')	115440	CF			0.10	11544.00	0.06	6926.40	0.16	18,470
	(020-604-0012)										
	12" Concrete pad w/ rebar (26' X 74'), 1924 CF	2.4	DAY			929	2230	261	626	1190	2,856
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	6" Concrete pad w/ mesh (3' X 4'), 6 CF	0.1	DAY			929	93	261	26	1190	119
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Onsite disposal of concrete (loose)	72	CY			3.64	262.08	1.54	110.88	5.18	373
	(020-754-4200)										
9	RAW COAL SILO BELT LINE										
	Concrete pads										
	Tower pad (2' X 2' X 5') 6, 120 CF	120	CF			1.01	121.20	1.47	176.40	2.48	298
	Tower footings (3' X 3' X 3') 6, 162 CF	162	CF			1.01	163.62	1.47	238.14	2.48	402
	Wood Timbers (1' X 1' X 9') 50	450	LF					1.29	580.50	1.29	581
	(020-714-5500)										
	Wood Timbers (4" X 6" X 9') 14	126	LF					1.29	162.54	1.29	163
	(020-714-5500)										
	Belt line disposal 350 LF @ 1 ton per 20'	18	TON					385.00	6930.00	385.00	6,930
	(Heavy HVAC demo 020-718-3600)										
	Onsite disposal of concrete (loose)	10	CY			3.64	36.40	1.54	15.40	5.18	52
	(020-754-4200)										

CASTLE GATE PREP PLANT AND REFUSE DISPOSAL FACILITY
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
10	RAW COAL SILO										
	Silo dia. (16' X 90' X 9")										
	Topple silo	2	DAY			929.00	1858.00	261.00	522.00	1190.00	2,380
	(016-408-0300)										
	Break silo into manageable pieces	2	DAY			929.00	1858.00	261.00	522.00	1190.00	2,380
	(016-408-0300)										
	Move pieces	5	DAY			450.00	2250.00	420.00	2100.00	870.00	4,350
	(016-408-0300)										
	Concrete pad w/ rebar (16' X 82' X 3'), 3936 CF	6.6	DAY			929	6131	261	1723	1190	7,854
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Concrete pad w/ rebar (16' X 104' X 3'), 4992 CF	8.4	DAY			929	7804	261	2192	1190	9,996
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Concrete silo pad w/ 1" rebar (16' X 24' X 3'), 1152 CF	1.9	DAY			929	1765	261	496	1190	2,261
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Metal bldg. (20' X 20' x 15')	6000	CF			0.10	600.00	0.06	360.00	0.16	960
	(020-604-0012)										
	Onsite disposal of concrete (loose)	373	CY			3.64	1358	1.54	574	5	1,932
	(020-754-4200)										

CASTLE GATE PREP PLANT AND REFUSE DISPOSAL FACILITY
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
11	COAL PREPARATION PLANT BELT LINE										
	Waste discharge belt line 100 LF @ 1 ton per 20'	5	TON					385.00	1925.00	385.00	1,925
	(Heavy HVAC demo 020-718-3600)										
	Coal prep plant belt line 650 LF @ 1 ton per 20'	33	TON					385.00	12705.00	385.00	12,705
	(Heavy HVAC demo 020-718-3600)										
	Belt line culvert headwall (10' X 61' X 1') , 610 CF	0.8	DAY			929	743	261	209	1190	952
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Concrete pads										
	Tower footings (1' X 1' X 3') X 16, 48 CF	48	CF			1.01	48.48	1.47	70.56	2.48	119
	(020-754-1140, see calcs)										
	Tower pad (12' X 15' X 1.5') X 4, 1080 CF	1.4	DAY			929	1301	261	365	1190	1666
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Tower footings (14' X 3' X 3') X 4, 504 CF	504	CF			1.01	509.04	1.47	740.88	2.48	1,250
	Tower pad (2' X 2' X 5') , 20 CF	20	CF			1.01	20.20	1.47	29.40	2.48	50
	Stair footings (3.5' X 2' X 2'), 14 CF	14	CF			1.01	14.14	1.47	20.58	2.48	35
	(020-754-1140, see calcs)										
	Bag house footings (2' X 2' X 3') X 6, 72 CF	72	CF			1.01	72.72	1.47	105.84	2.48	179
	6" Concrete pad w/ mesh (12' X 7'), 42 CF	0.1	DAY			929	93	261	26	1190	119
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Prefab metal bldg. (12' X 7' X 12')	1008	CF			0.10	100.80	0.06	60.48	0.16	161
	(020-604-0012)										
	Wood shed, metal roof, dirt floor (6' X 8.5' X 8')	408	SF			0.11	44.88	0.07	28.56	0.18	73
	(020-604-0700)										
	Metal bag house (14' X 14' X 10')	2	TON					385.00	770.00	385.00	770
	(020-718-3600)										
	Metal tank 15' dia. X 15' high	1	LS					1300.00	1300.00	1300.00	1,300
	(Offsite disposal)										
	Metal air tank 3' dia. X 9' long	1	LS					200.00	200.00	200.00	200
	(Offsite disposal)										
	Onsite disposal of concrete (loose)	89	CY			3.64	323.96	1.54	137.06	5.18	461
	(020-754-4200)										
12	THICKENER OVERFLOW POND										
	Concrete discharge structure (15' X 30' X 2.3')	1.3	DAY			929	1208	261	339	1190	1547
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Concrete pillars (1' X 1' X 5') 4, 20 CF	20	CF			1.01	20.20	1.47	29.40	2.48	50
	Metal hand rail 3' tall X 75' long	1	LS					200.00	200.00	200.00	200
	Onsite disposal of concrete (loose)	39	CY			3.64	141.96	1.54	60.06	5.18	202
	(020-754-4200)										

CASTLE GATE PREP PLANT AND REFUSE DISPOSAL FACILITY
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
13	COAL PREPARATION PLANT										
	Metal bldg. (84' X 107' X 120')	1078560	CF			0.10	107856.00	0.06	64713.60	0.16	172,570
	(020-604-0012)										
	Metal tank, 8000 gal.	1	EA					600.00	600.00	600.00	600
	(020-880-1026)										
	Metal tank, 4000 gal.	1	EA					500.00	500.00	500.00	500
	(020-880-1026)										
	Masonry bldg. (42' X 17' X 15')	10710	CF			0.11	1178.10	0.07	749.70	0.18	1,928
	(020-604-0080)										
	6" Concrete pad w/ mesh (42' X 17'), 357 CF	0.5	DAY			929	465	261	131	1190	595
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	12" Concrete pad w/ mesh (84' X 107'), 8988 CF	11	DAY			929	10219	261	2871	1190	13,090
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Concrete sidewalk w/ mesh (3.5' X 60' X 4"), 70 CF	23	SY			3.36	77.28	1.37	31.51	4.73	109
	(20-554-4200)										
	Waste coal belt line 36 LF @ 1 ton per 20'	2	TON					385.00	770.00	385.00	770
	(Heavy HVAC demo 020-718-3600)										
	Concrete footing (5' X 1.5' X 5'), 38 CF	38	CF			1.01	38.38	1.47	55.86	2.48	94
	Concrete footing (2.3' X 2.3' X 1') 4, 21 CF	21	CF			1.01	21.21	1.47	30.87	2.48	52
	(020-754-1140, see calcs)										
	Concrete footing (1' X 1' X 1') 11	11	CF			1.61	17.71	2.35	25.85	3.96	44
	(020-754-1140, see calcs)										
	6" Concrete pad w/ mesh (24' X 19'), 228 CF	0.3	DAY			929	279	261	78	1190	357
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Onsite disposal of concrete (loose)	360	CY			3.64	1310.40	1.54	554.40	5.18	1,865
	(020-754-4200)										
	Onsite disposal of 25 steel plates (3' X 4' X 1/4")	1	LS			200.00	200.00	200.00	200.00	400.00	400

CASTLE GATE PREP PLANT AND REFUSE DISPOSAL FACILITY
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
14	THICKENER										
	Concrete reservoir 150 dia. X 7' ave depth with	4.1	DAY			929	3809	261	1070	1190	4,879
	1' thick walls. Assume base will be left in place.										
	(Hydraulic Excavator w/ 2 CY bucket), 3299 CF										
	(016-408-0300)										
	Metal hopper 12' dia. X 25' high	3	TON					385.00	1155.00	385.00	1,155
	(020-718-3600)										
	Metal interior rakes 4@ 70' long	1	LS			200.00	200.00	400.00	400.00	600.00	600
	Onsite disposal of concrete (loose)	122	CY			3.64	444.08	1.54	187.88	5.18	632
	(020-754-4200)										
	Onsite disposal of metal material	1	LS			200.00	200.00	200.00	200.00	400.00	400
15	TEMPORARY TRAIN LOADOUT										
	Metal coal drop structure	4	TON					385.00	1540.00	385.00	1,540
	(020-718-3600)										
	Metal train loudout tower	4	TON					385.00	1540.00	385.00	1,540
	(020-718-3600)										
	Onsite disposal of materials	1	LS			400	400	400	400	800	800
	Concrete foundation w/ 1" rebar (26' X 36' X 3') X 3, 8424 CF	14	DAY			929	13006	261	3654	1190	16,660
	Concrete foundation w/ 1" rebar (12' X 12' X 3'), 432 CF	0.7	DAY			929	650	261	183	1190	833
	Concrete foundation w/ 1" rebar (23.5' X 4' X 3') X 2, 564 CF	1	DAY			929	929	261	261	1190	1190
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Concrete foundation w/ 1" rebar (12' X 2.4' X 3'), 86 CF	86	CF			1.01	86.86	1.47	126.42	2.48	213
	Concrete foundation w/ 1" rebar (8' X 2.4' X 3'), 58 CF	58	CF			1.01	58.58	1.47	85.26	2.48	144
	Concrete foundation w/ 1" rebar (6' X 2.4' X 3'), 43 CF	43	CF			1.01	43.43	1.47	63.21	2.48	107
	Concrete pad w mesh (8' X 3' X 1.5'), 36 CF	36	CF			1.01	36.36	1.47	52.92	2.48	89
	6" Concrete pad w/ mesh (8' X 3'), 12 CF	12	CF			1.01	12.12	1.47	17.64	2.48	30
	Concrete footing w/ rebar (15' X 3' X 3'), 135 CF	135	CF			1.01	136.35	1.47	198.45	2.48	335
	(020-754-1140, see calcs)										
	Belt line disposal 480 LF @ 1 ton per 20'	24	TON					385.00	9240.00	385.00	9,240
	(Heavy HVAC demo 020-718-3600)										
	Onsite disposal of concrete (loose)	363	CY			3.64	1321.32	1.54	559.02	5.18	1,880
	(020-754-4200)										

CASTLE GATE PREP PLANT AND REFUSE DISPOSAL FACILITY
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
16	RAIL CAR TREATING AGENT STORAGE TANK										
	Fiberglass tank 14,000 gallon	1	LS					960.00	960.00	960.00	960
	(020-880-1029 x 1.2)										
	18" Concrete pad w/ mesh (14' X 14'), 294 CF	0.4	DAY			929	372	261	104	1190	476
	18" Concrete pad w/ mesh (9' X 7'), 95 CF	0.1	DAY			929	93	261	26	1190	119
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Metal bldg. 3-sided (8.5 X 6' X 8')	408	CF			0.10	40.80	0.06	24.48	0.16	65
	(020-604-0012)										
	Onsite disposal of concrete (loose)	14	CY			3.64	50.96	1.54	21.56	5.18	73
	(020-754-4200)										
17	BELT LINES TO REFUSE BINS AND										
	TRANSFER BUILDING										
	28 - Concrete tower footings (2' X 2' X 3') , 336 CF	336	CF			1.01	339.36	1.47	493.92	2.48	833
	(020-754-1140, see calcs)										
	Belt line disposal 750 LF @ 1 ton per 20'	38	TON					385.00	14630.00	385.00	14,630
	(Heavy HVAC demo 020-718-3600)										
	Onsite disposal of concrete (loose)	12	CY			3.64	43.68	1.54	18.48	5.18	62
	(020-754-4200)										
18	TRANSFER BUILDING										
	Metal Building (19' X 24' X 60')	27360	CF			0.10	2736.00	0.06	1641.60	0.16	4,378
	(020-604-0012)										
	Concrete pad w/ mesh (19' X 24' X 1'), 456 CF	0.6	DAY			929	557	261	157	1190	714
	Concrete pad w/ mesh (1.5' X 4' X 1'), 6 CF	6	CF			1.01	6.06	1.47	8.82	2.48	15
	Concrete pad w/ mesh (30' X 32' X 2'), 1920 CF	2.4	DAY			929	2230	261	626	1190	2,856
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	2 - Concrete footings (2' X 2' X 5') , 40 CF	40	CF			1.01	40.40	1.47	58.80	2.48	99
	Concrete footings (2.5' X 2.5' X 10'), 63 CF	63	CF			1.01	63.63	1.47	92.61	2.48	156
	Refuse bin (30' X 32' X 20')	3	TON					385.00	1155.00	385.00	1,155
	(020-718-3600)										
	Onsite disposal of bin	1	LS			200.00	200.00	200.00	200.00	400.00	400
	Onsite disposal of concrete (loose)	92	CY			3.64	334.88	1.54	141.68	5.18	477
	(020-754-4200)										

CASTLE GATE PREP PLANT AND REFUSE DISPOSAL FACILITY
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
19	WAREHOUSE/BATH HOUSE/SHOP										
	Metal Bldg. (70' X 116' X 20')	162400	CF			0.10	16240.00	0.06	9744.00	0.16	25,984
	(020-604-0012)										
	Metal Bldg. (70' X 26' X 20')	36400	CF			0.10	3640.00	0.06	2184.00	0.16	5,824
	(020-604-0012)										
	6" Concrete pad w/ mesh (70' X 116'), 4060 CF	5.1	DAY			929	9290	261	1331	1190	6,069
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	6" Concrete pad w/ mesh (70' X 26'), 910 CF	1.1	DAY			929	1022	261	287	1190	1,309
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	4" Concrete sidewalk w/ mesh (4' X 120'), 158 CF	53	SY			1.37	72.61	3.36	178.08	4.73	251
	(020-554-4200)										
	12" Concrete stairs w/ mesh (4' X 138'), 552 CF	61	SY			4.11	250.71	10.08	614.88	14.19	866
	(020-554-4200 X 3)										
	Concrete loading dock w/ 6" thick walls and cap										
	6" wall (16' X 6') X 2, 96 CF	0.1	DAY			929	93	261	26	1190	119
	6" wall (16' X 16'), 48 CF	0.1	DAY			929	93	261	26	1190	119
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Concrete loading dock w/ 6" thick walls and cap										
	6" wall (12.5' X 6') X 2, 75 CF	0.1	DAY			929	93	261	26	1190	119
	6" wall (12.5' X 14.5'), 91 CF	0.1	DAY			929	93	261	26	1190	119
	Metal hand rails (3' X 50')	1	LS			100.00	100.00	100.00	100.00	200.00	200
	Onsite disposal of concrete (loose)	209	CY			3.64	760.76	1.54	321.86	5.18	1,083
	(020-754-4200)										

CASTLE GATE PREP PLANT AND REFUSE DISPOSAL FACILITY
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
20	POTABLE WATER TANK										
	Metal tank, 26,000 gal, cut in two pieces	36	LF			4.85	174.60	1.06	38.16	5.91	213
	(020-730-0010)										
	Offsite disposal of tank	1	LS					1800.00	1800.00	1800.00	1,800
	(020-880-1029 x 2.2)										
	Metal bldg. - valve house (5' X 5' X 5')	125	CF			0.10	12.50	0.06	7.50	0.16	20
	(020-604-0012)										
	Metal bldg. - pump house (16' X 12' X 8')	1536	CF			0.10	153.60	0.06	92.16	0.16	246
	(020-604-0012)										
	Concrete pad w/ rebar (12' dia. X 1.5'), 170 CF	0.2	DAY			929	186	261	52	1190	238
	6" Concrete pad w/ mesh (5' X 5'), 13 CF	0.1	DAY			929	93	261	26	1190	119
	6" Concrete pad w/ mesh (16' X 12'), 96 CF	0.1	DAY			929	93	261	26	1190	119
	Onsite disposal of concrete (loose)	10	CY			929	9290	261	2610	1190	11900
	(020-754-4200)										
21	BARN CANYON WAREHOUSE										
	Wood warehouse (20' X 40' X 10')	8000	CF			0.11	880.00	0.07	560.00	0.18	1,440
	(20-604-700)										
	6" Concrete slab w/ mesh (20' X 40'), 400 CF	0.5	DAY			929	465	261	131	1190	595
	8" Concrete pad w/ mesh (14' X 16') X 2, 299 CF	0.4	DAY			929	372	261	104	1190	476
	5" Concrete w/ mesh (26' X 2'), 22 CF	0.1	DAY			929	93	261	26	1190	119
	Onsite disposal of concrete (loose)	27	CY			3.64	98.28	1.54	42	5.18	140
	(020-754-4200)										

CASTLE GATE PREP PLANT AND REFUSE DISPOSAL FACILITY
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
22	BARN CANYON SUBSTATION										
	Concrete pads w/ rebar (6' X 4' X 3') X 2, 144 CF	0.2	DAY			929	186	261	52	1190	238
	Concrete pads w/ rebar(1.5' X 1.5' X 3') X 20, 135 CF	135	CF			1.01	136.35	1.47	198.45	2.48	335
	Concrete pads w/ rebar (12' dia X 3'), 399 CF	0.6	DAY			929	557	261	157	1190	714
	Concrete pads w/ rebar (12' X 14' X 3') X 2, 1008 CF	1.7	DAY			929	1579	261	444	1190	2023
	Concrete pads w/ rebar (3.5' X 3.5' X 3') X 4, 147 CF	147	CF			1.01	148.47	1.47	216.09	2.48	365
	Concrete pads w/ rebar (6.5' X 4' X 3') X 2, 156 CF	0.3	DAY			929	279	261	78	1190	357
	Concrete pads w/ rebar (3.5' X 4' X 3') X 5, 210 CF	0.4	DAY			929	372	261	104	1190	476
	Concrete pads w/ rebar (3' X 6' X 3'), 54 CF	0.1	DAY			929	93	261	26	1190	119
	Disposal of transformers, non-PCB	1	LS					10000.00	10000.00	10000.00	10,000
	Cut metal power towers into manageable	2	DAY			500.00	1000.00	320.00	640.00	820.00	1,640
	pieces										
	Onsite disposal of towers	1	DAY			400.00	400.00	320.00	320.00	720.00	720
	Chain link fence 8' w/ barb wire	635	LF			0.46	292.10	1.13	717.55	1.59	1,010
	(020-554-0700)										
	Onsite disposal of concrete (loose)	81	CY			3.64	294.84	1.54	124.74	5.18	420
	(020-754-4200)										
23	WATER TREATMENT PLANT										
	Masonry bldg. w/ metal roof (28' X 34' X 10')	9520	CF			0.11	1047.20	0.07	666.40	0.18	1,714
	(020-604-0080)										
	Masonry bldg. w/ metal roof (pump house)	690	CF			0.11	75.90	0.07	48.30	0.18	124
	(11.5' X 7.5' X 8')										
	(020-604-0080)										
	Masonry bldg., metal roof - water storage tank	12000	CF			0.11	1320.00	0.07	840.00	0.18	2,160
	(40' X 30' X 10')										
	(020-604-0080)										
	Masonry bldg. wood roof, (11.5' X 14' X 8')	1288	CF			0.11	141.68	0.07	90.16	0.18	232
	(020-604-0080)										
	Prefab metal bldg. (6' X 12' X 6')	432	CF			0.10	43.20	0.06	25.92	0.16	69
	(020-604-0012)										
	Metal shed, 3-sided w/ metal roof , no floor	840	CF			0.10	84.00	0.07	58.80	0.17	143
	(12' X 10' X 7')										
	(020-604-0012)										
	Concrete bldg. (20' X 12' X 6')	1440	CF			0.14	201.60	0.09	129.60	0.23	331
	(020-604-0050)										

CASTLE GATE PREP PLANT AND REFUSE DISPOSAL FACILITY
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	WATER TREATMENT PLANT (cont.)										
	8" Concrete pad w/ mesh (11.5' X 7.5'), 56 CF	0.1	DAY			929	93	261	26	1190	119
	8" Concrete pad w/ mesh (7' X 34'), 159 CF	0.2	DAY			929	186	261	52	1190	238
	4" Concrete sidewalk (4' X 28'), 37 CF	12	SY			1.37	16.44	3.36	40.32	4.73	57
	(020-554-4200)										
	12" Concrete pad w/ rebar (40' X 30'), 1200 CF	1.5	DAY			929	1394	261	392	1190	1,785
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	8" Concrete pad w/ mesh (11.5' X 14'), 107 CF	1.3	DAY			929	1208	261	339	1190	1,547
	6" Concrete sump (7' X 7')	196	SF			0.32	62.72	0.82	160.72	1.14	223
	(020-754-2040)										
	Masonry stairs (4' X 12' w/ 9" cinder blocks)	18	CF			0.63	11.34	0.78	14.04	1.41	25
	(020-554-1000)										
	Metal tank 500 gal.	1	LS					200.00	200.00	200.00	200
	Open concrete ponds 400' X 6' w/ 8" walls, 5027 CF	6.3	DAY			929	5853	261	1644	1190	7,497
	w/ rebar. Assume floor left in place										
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Reinforced rubber liner	5600	SF					0.34	1904.00	0.34	1,904
	(Use 020-712-0820 Resilient sheet goods, gym)										
	Wood timber retaining wall (4' X 10' X 8")	40	SF			0.33	13.20	0.86	34.40	1.19	48
	(Use 020-754-2080)										
	Chain link fence 10' high	350	LF			0.46	161.00	1.13	395.50	1.59	557
	(020-554-0700)										
	Onsite disposal of concrete and masonry (loose)	360	CY			3.64	1310.40	1.54	554.40	5.18	1,865
	(020-754-4200)										

CASTLE GATE PREP PLANT AND REFUSE DISPOSAL FACILITY
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
24	BELT LINE TO CLEAN COAL STORAGE										
	STACKING SILO										
	Concrete footings w/ rebar (2' X 2' X 5') X 4	80	CF			1.01	80.80	1.47	117.60	2.48	198
	Concrete piers w rebar (4' X 4' X 10') X 2	320	CF			1.01	323.20	1.47	470.40	2.48	794
	Belt line disposal 400 LF @ 1 ton per 20'	20	TON					385.00	7700.00	385.00	7,700
	(Heavy HVAC demo 020-718-3600)										
	Onsite disposal of concrete (loose)	15	CY			3.64	54.60	1.54	23.10	5.18	78
	(020-754-4200)										
25	CLEAN COAL STORAGE STACKING SILO										
	Silo dia. 16' X 90' X 9"										
	Topple silo	2	DAY			929.00	1858.00	261.00	522.00	1190.00	2,380
	(016-408-0300)										
	Break silo into manageable pieces	2	DAY			929.00	1858.00	261.00	522.00	1190.00	2,380
	(016-408-0300)										
	Move pieces	5	DAY			450.00	2250.00	420.00	2100.00	870.00	4,350
	(016-408-0300)										
	Concrete pad w/ rebar (16' X 188' X 3'), 9024 CF	15	DAY			929	13935	261	3915	1190	17,850
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Concrete pad w/ rebar (16' X 104' X 3'), 4992 CF	8.3	DAY			929	7711	261	2166	1190	9,877
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Concrete silo pad w/ 1" rebar (18' X 24' X 3'), 1296 CF	2.2	DAY			929	929	261	574	1190	2,618
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Metal bldg. (20' X 20' x 15')	6000	CF			0.10	600.00	0.06	360.00	0.16	960
	(020-604-0012)										
	Onsite disposal of concrete (loose)	567	CY			3.64	2063.88	1.54	873.18	5.18	2,937
	(020-754-4200)										

CASTLE GATE PREP PLANT AND REFUSE DISPOSAL FACILITY
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
26	UNIT TRAIN LOADOUT BELT LINE										
	10" Concrete headwall w/ rebar	1	DAY			929	929	261	261	1190	1,190
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Concrete footings w/ rebar (2' X 2' X 5') X 4	80	CF			1.01	80.80	1.47	117.60	2.48	198
	Concrete footings w/ rebar (1' X 1' X 5') X 4	20	CF			1.01	20.20	1.47	29.40	2.48	50
	Concrete footings w/ rebar (1.5' X 1.5' X 5') X 2	23	CF			1.01	23.23	1.47	33.81	2.48	57
	Concrete footings w/ rebar (18' X 2' X 5') X 3	540	CF			1.01	545.40	1.47	793.80	2.48	1,339
	Concrete piers w/ rebar(4' X 2' X 10') 6	480	CF			1.01	484.80	1.47	705.60	2.48	1,190
	Belt line disposal 700 LF @ 1 ton per 20'	35	TON					385.00	13475.00	385.00	13,475
	(Heavy HVAC demo 020-718-3600)										
	Onsite disposal of concrete (loose)	68	CY			3.64	247.52	1.54	104.72	5.18	352
	(020-754-4200)										
	Metal tank, 8000 gal	1	EA					600.00	600.00	600.00	600
	(020-880-1026)										
27	UNIT TRAIN LOADOUT										
	Metal bldg. (42' X 30' X 120')	151200	CF			0.10	15120.00	0.06	9072.00	0.16	24,192
	(020-604-0012)										
	Concrete piers w/ rebar (2' X 2' X 6') X 2, 48 CF	0.1	DAY			929	93	261	26	1190	119
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Concrete pad w/ rebar (42' X 30' X 5'), 6300 CF	10.5	DAY			929	9755	261	2741	1190	12,495
	12" Concrete pad w/ mesh (45' X 54'), 2430 CF	3	DAY			929	2787	261	783	1190	3,570
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Bridge - 2 flatbed rail cars (85' X 9')	1	LS			750.00	750.00	500.00	500.00	1250.00	1,250
	Bridge abutments w/ rebar (25' X 10' X 3') 2, 1500 CF	2.5	DAY			929	2323	261	653	1190	2,975
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Onsite disposal of concrete (loose)	381	CY			3.64	1386.84	1.54	586.74	5.18	1,974
	(020-754-4200)										

CASTLE GATE PREP PLANT AND REFUSE DISPOSAL FACILITY
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
28	ELECTRIC CONTROLS BUILDING										
	Metal bldg. metal roof (16' X 16' X 10')	2560	CF			0.10	256.00	0.06	153.60	0.16	410
	(020-604-0012)										
	8" Concrete pad w/ mesh (16' X 16'), 171 CF	0.2	DAY			929	186	261	52	1190	238
	Onsite disposal of concrete (loose)	6	CY			3.64	21.84	1.54	9.24	5.18	31
	(020-754-4200)										
29	POWER POLES										
	Remove wiring	450	CLF					7.00	3150.00	7.00	3,150
	(020-708-1870)										
	Remove fixtures and poles	66	EA			50.00	3300.00	40.00	2640.00	90.00	5,940
	Onsite disposal of fixtures	1	LS			400.00	400.00	500.00	500.00	900.00	900
30	CULVERTS										
	18" CMP (CGC-1) 100 LF	100	LF			0.77	77.00	2.02	202.00	2.79	279
	(020-554-2930 X 1.2 X 0.5)										
	24" CMP (CGC-3) 300 LF	300	LF			0.86	258.00	2.10	630.00	2.96	888
	(020-554-2960 X 0.5)										
	24" CMP w/ 18" HDPE extension (CGC-4) 180 LF	180	LF			0.86	154.80	2.10	378.00	2.96	533
	(020-554-2930 X 0.5)										
	60" CMP (CGC-5) 250 LF	250	LF			1.95	487.50	4.76	1190.00	6.71	1,678
	(020-554-3000 X 1.7 X 0.5)										
	12" CMP (CGC-6) 60 LF	60	LF			0.55	33.00	1.34	80.40	1.89	113
	(020-554-2930 X 0.8 X 0.5)										
	18" CMP (CGC-7) 80 LF	80	LF			0.77	61.60	2.02	161.60	2.79	223
	(020-554-2930 X 1.2 X 0.5)										
	60" X 120" Concrete Box (CGC-8) 60 LF	60	LF			0.37	22.20	0.98	58.80	1.35	81
	12" walls w/ mesh										
	(020-754-2100 X 1.1)										
Note:	CGC-2 will be left in place after final reclamation										

CASTLE GATE PREP PLANT AND REFUSE DISPOSAL FACILITY
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	CULVERTS (cont.)										
	Excavation for culverts CGC-1, 3,4,6, & 7	160	CY			1.41	225.60	1.78	284.80	3.19	510
	2' Wide X 3' deep by 720 LF										
	(022-254-0060) 1/2 CY Loader/Backhoe										
	Excavation for culvert CGC-5	370	CY			1.41	521.70	1.78	658.60	3.19	1,180
	8' Wide X 5' Deep by 250 LF										
	(022-254-0060) 1/2 CY Loader/Backhoe										
	Excavation for culvert CGC-8	300	CY			1.41	423.00	1.78	534.00	3.19	957
	15' Wide X 7' Deep by 60 LF										
	(022-254-0060) 1/2 CY Loader/Backhoe										
	Backfill for Culverts CGC-1, 3,4,6, & 7	267	CY			0.58	154.86	0.70	186.90	1.28	342
	2' Wide X 5' deep by 720 LF										
	(22-254-3020) 1 CY Bucket F.E. Loader										
	Backfill for culvert CGC-8	667	CY			0.58	386.86	0.70	466.90	1.28	854
	15' Wide X 12' Deep by 60 LF										
	(22-254-3020) 1 CY Bucket F.E. Loader										
31	REMOVE CULVERT INLETS (CONCRETE)										
	Remove inlets	4	LS			50.00	200.00	150.00	600.00	200.00	800
	Onsite disposal of concrete (loose)	2	CY			3.64	7.28	1.54	3.08	5.18	10
	(020-754-4200)										
32	GUARD RAILS										
	Guard Rail Removal	1550	LF					3.65	5657.50	3.65	5,658
	(020-554-0800)										
	Onsite disposal	1	LS			200.00		200.00	200.00	400.00	400
33	ASPHALT DEMOLITION										
	20' X 3700' X 4" (020-554-1750)	8222	SY			3.03	24912.66	2.09	17183.98	5.12	42,097
	Onsite disposal of asphalt (loose)	2740	CY			3.64	9973.60	1.54	4219.60	5.18	14,193
	(020-754-4200)										

CASTLE GATE PREP PLANT AND REFUSE DISPOSAL FACILITY
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
34	REMOVE HYDRANTS (020-554-0900)	11	EA					99.5	1094.50	99.50	1,095
35	LOAD, HAUL, COMBUSTIBLE MATERIALS -	4000	MILE			0.27	1080.00	0.1	400.00	0.37	1,480
	20 MILE HAUL										
	Assume 10 CY Truck, 2000 CY (loose) of										
	material on 200 trips										
	(20-620-5100)										
36	SEDIMENTATION POND 011										
	Valves (consider as demolition of hydrants)										
	(020-554-0700)										
	18" CMP 58 LF Discharge pipe	58	LF			0.77	44.66	2.02	117.16	2.79	162
	(020-554-2930 X 1.2 X 0.5)										
	Excavation for pipe 2' X 3.5' X 58'	15	CY			1.41	21.15	1.78	26.70	3.19	48
	2' Wide X 3' deep by 720 LF										
	(022-254-0060) 1/2 CY Loader/Backhoe										
	Onsite disposal of material	1	LS			100.00	100.00	100.00	100.00	200.00	200
37	SEAL WELLS	10	EA	30.00	300.00			250.00	2500.00	280.00	2,800
	Excavate, seal, torch, and backfill										
	DEMOLITION TOTAL										**701,591**

CASTLE GATE PREP PLANT AND REFUSE DISPOSAL FACILITY
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	ROUGH GRADING										
	EXCAVATION										
1	300 HP Bulldozer w/ Ripper (300' haul) 40%	51200	CY			2.50	128000.00	0.68	34816.00	3.18	162,816
	(022-242-5420)										
2	200 HP Bulldozer (300' haul) 25%	32000	CY			3.13	100160.00	1.03	32960.00	4.16	133,120
	(022-242-4420)										
3	2 Cubic Yard Hyd. Excavator 35%	44800	CY			0.93	41664.00	0.37	16576.00	1.30	58,240
	(022-238-0260)										
4	5 Cubic Yard Front End Loader, 25%	32000	CY			0.64	20480.00	0.19	6080.00	0.83	26,560
	(022-238-1650)										
5	6 Cubic Yard End Dump, 25%	32000	CY			1.70	54400.00	0.83	26560.00	2.53	80,960
	(022-266-0030)										
6	Water Truck, 1/2 time operator	3	MO			2125	6375	2610	7830.00	4735	14,205
	(016-420-6900)										
7	Surveying, 1/2 time	30	DAY					365	10950.00	365	10,950
	(013-306-0950)										
	ROUGH GRADING EXCAVATION TOTAL										**486,851**
Note:	Excavation includes School House Canyon										
	Refuse Pile. Total Excavation 128,000 CY										
	Total Volume of excavation equals 128,000 CY										

CASTLE GATE PREP PLANT AND REFUSE DISPOSAL FACILITY
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	ROUGH GRADING										
	BACKFILL										
1	Soil Testing - Sampling and Evaluation	30	EA					200.00	6000.00	200.00	6,000
2	Soil Testing - Lab Work	30	EA					200.00	6000.00	200.00	6,000
3	300 HP Bulldozer, 65%	83200	CY			0.35	29120.00	0.10	8320.00	0.45	37,440
	(022-208-5020) 2 Dozers										
4	200 HP Bulldozer, 35%	44800	CY			0.38	17024.00	0.13	5824.00	0.51	22,848
	(022-208-4020) 2 Dozers										
5	Water Truck, 1/2 time operator	0.75	MO			2125	1594	2610	1958	4735	3,551
	(016-420-6900)										
6	Sheepsfoot Compactor, 60%	76800	CY			0.10	7680.00	0.05	3840.00	0.15	11,520
	(022-226-5680)										
7	5 Cubic Yard Front End Loader, 50%	64000	CY			0.36	23040.00	0.11	7040.00	0.47	30,080
	(022-216-4080)										
8	Surveying, 1/2 time	8	DAY					365.00	2920.00	365.00	2,920
	(013-306-0950)										
	ROUGH GRADING BACKFILL TOTAL										120,359
Notes:	Top 2' of backfill will not be compacted.										
	Dump truck cost is included under excavation.										
	Total volume of Backfill equals 128,000 CY, not										
	including topsoil for the refuse area.										

CASTLE GATE PREP PLANT AND REFUSE DISPOSAL FACILITY
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	TOPSOIL DISTRIBUTION										
	SCHOOL HOUSE CANYON REFUSE PILE										
1	Soil Testing - Sampling and Evaluation	12	EA					200.00	2400.00	200.00	2,400
2	Soil Testing - Lab Work	12	EA					200.00	2400.00	200.00	2,400
3	5 Cubic Yard Front End Loader, 100%	97200	CY			0.64	62208.00	0.19	18468.00	0.83	80,676
	(at Gravel Canyon, 022-238-1650)										
4	12 Cubic Yard End Dump, 100%, 10 trucks	97200	CY			4.19	407268.00	1.66	161352.00	5.85	568,620
	(from Gravel Canyon, 5 mi rnd trip,022-266-0540)										
5	300 HP Bulldozer, 65%	63180	CY			0.35	22113.00	0.10	6318.00	0.45	28,431
	(022-208-5020)										
6	200 HP Bulldozer, 35%	34020	CY			0.38	12927.60	0.13	4422.60	0.51	17,350
	(022-208-4020)										
7	Water Truck, 1/2 time operator	1	MO			2125	2125	2610	2610	4735	4,735
	(016-420-6900)										
8	5 Cubic Yard Front End Loader, 50%	48600	CY			0.36	17496.00	0.11	5346.00	0.47	22,842
	(022-216-4080)										
9	Surveying, 1/2 time	10	DAY					365.00	3650.00	365.00	3,650
	(013-306-0950)										
	TOPSOIL DISTRIBUTION TOTAL										**731,104**
Notes:	Backfill will not be compacted.										
	Dump truck cost is included under excavation.										
	Total topsoil backfill equals 97,200 CY										

CASTLE GATE PREP PLANT AND REFUSE DISPOSAL FACILITY
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	DRAINAGE CONTROLS										
	Assume channel excavations completed during rough grading										
	PREPARATION PLANT AREA										
1	Filter Material (027-054-0400)	1240	CY	18.5	22940.00	0.79	979.60	1.94	2405.60	21.23	26,325
2	Riprap Placement (022-712-0300)	4525	TON	10	45250.00	1.06	4796.50	0.45	2036.25	11.51	52,083
	SCHOOL HOUSE CANYON REFUSE AREA										
3	Filter Material (027-054-0400)	2178	CY	18.5	40293.00	0.79	1720.62	1.94	4225.32	21.23	46,239
4	Riprap Placement (022-712-0300)	7087	TON	10	70870.00	1.06	7512.22	0.45	3189.15	11.51	81,571
	DRAINAGE CONTROLS TOTAL										**206,218**
	RECLAMATION SEDIMENTATION POND REMOVAL										
1	Pond 011, 1 acre	1	LS							20,000	20,000
2	Pond 012, 1 acre	1	LS							20,000	20,000
	RECLAMATION SEDIMENTATION POND REMOVAL TOTAL										**40,000**

CASTLE GATE PREP PLANT AND REFUSE DISPOSAL FACILITY
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	REVEGETATION										
1	Soil Roughening, 74 acres	3222	MSF			1.17	3769.74	1.16	3737.52	2.33	7,507
	(029-204-3100)										
2	Seed Mix (35lb/acre)	3222	MSF	2.50	8055.00					2.50	8,055
	(029-308-1500)										
3	Hydroseeding	3222	MSF			7.15	23037.30	6.50	20943.00	13.65	43,980
	(029-308-1700)										
4	Straw mulch - 2 tons/acre	74	ACRE	50.00	3700.00			250.00	18500.00	300.00	22,200
5	Fertilizer - 200 lbs/acre	74	ACRE	56.00	4144.00			100.00	7400.00	156.00	11,544
6	Seedlings, Bareroot 6" - 10"	1000	EA	1.00	1000.00			0.43		1.43	1,430
	(029-421-0561)										
	500/acre X 2 acres										
	Revegetation Subtotal										94,717
	Reseeding and Replanting (25%)										23,679
	REVEGETATION TOTAL										**118,396**

CASTLE GATE PREP PLANT AND REFUSE DISPOSAL FACILITY
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	MONITORING										
1	Vegetation Monitoring	10	YEAR							4000.00	40,000
2	Water Quality and Pond Inspections, Quarterly	10	YEAR							4000.00	40,000
3	Site Maintenance	10	YEAR							3000.00	30,000
	MONITORING TOTAL										110,000

TerraMatrix
Engineering & Environmental Services
P.O. Box 774018, 1475 Pine Grove Road
Steamboat Springs, Colorado 80477
Phone 970.879.6260 Fax 970.879.9048

Project Name: _____
Project Number: _____ Sheet: ____ Of ____
Prepared By: _____ Date: _____
Checked By: _____ Date: _____

GCCM

WILLOW CREEK MINE

BOND RECLAMATION COST ESTIMATE

APPENDIX B2

GRAVEL CANYON

COST ESTIMATE WORKSHEETS

GRAVEL CANYON
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	DIRECT COST SUMMARY										
	Demolition Total										1,836
	Rough Grading Excavation Total										122,702
	Rough Grading Backfill Total										6,375
	Drainage Controls Total										5,835
	Revegetation Total										7,886
	Monitoring Total										20,000
	Total Direct Costs										164,634
	INDIRECT COSTS										
	Mobilization/Demobilization 1%										1,646
	Contingencies (10%)										16,463
	Engineering Redesign Fee (7.6%)										12,512
	Contractor Profit and Overhead (11.4%)										18,768
	Reclamation Management Fee (5.5%)										9,055
	Total Indirect Costs										58,445
	Subtotal Reclamation Cost										223,079
	Escalation - 13.1% (2.5%/yr over 5 yrs.)										29,223
	TOTAL RECLAMATION COST										**252,302**

GRAVEL CANYON
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	DEMOLITION										
1	ROCK RETAINING WALL										
	Rock and motar wall (6' X 150' X 1')	900	SF			0.51	459.00	1.34	1206.00	1.85	1,665
	(020-754-5160)										
	Onsite disposal of debris (loose)	33	CY			3.64	120.12	1.54	50.82	5.18	171
	(020-750-4200)										
	DEMOLITION TOTAL										**1,836**

8/11/95

GRAVEL CANYON
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	ROUGH GRADING										
	EXCAVATION										
1	300 HP Bulldozer w/ Ripper (100' haul) 40%	40720	CY			0.62	25246.40	0.17	6922.40	0.79	32,169
	(022-242-5020)										
2	200 HP Bulldozer (100' haul) 25%	25450	CY			0.69	17560.50	0.23	5853.50	0.92	23,414
	(022-242-4020)										
3	2 Cubic Yard Hyd. Excavator 35%	35630	CY			0.93	33135.90	0.37	13183.10	1.30	46,319
	(022-238-0260)										
4	Water Truck, 1/4 time operator	5	MO			2125	10625	1305	6525.00	3430	17,150
	(016-420-6900)										
5	Surveying, 10% time	10	DAY					365	3650.00	365	3,650
	(013-306-0950)										
	ROUGH GRADING EXCAVATION TOTAL										**122,702**
Note:	Total volume of excavation equals 101,800 CY										
	Net excavation of 97,200 CY will be transported										
	to the refuse disposal pile.										
	Loading and hauling are included in Refuse										
	Disposal Facility reclamation										

GRAVEL CANYON
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	ROUGH GRADING										
	BACKFILL										
1	Soil Testing - Sampling and Evaluation	2	EA					200.00	400.00	200.00	400
2	Soil Testing - Lab Work	2	EA					200.00	400.00	200.00	400
3	300 HP Bulldozer, 65%	2990	CY			0.35	1046.50	0.10	299.00	0.45	1,345
	(022-208-5020)										
4	200 HP Bulldozer, 35%	1610	CY			0.38	611.80	0.13	209.30	0.51	821
	(022-208-4020)										
5	Water Truck, 1/2 time operator	0.25	MO			2125	531	2610	653	4735	1,184
	(016-420-6900)										
6	Sheepsfoot Compactor, 60%	2760	CY			0.10	276.00	0.05	138.00	0.15	414
	(022-226-5680)										
7	5 Cubic Yard Front End Loader, 50%	2300	CY			0.36	828.00	0.11	253.00	0.47	1,081
	(022-216-4080)										
8	Surveying, 1/2 time	2	DAY					365.00	730.00	365.00	730
	(013-306-0950)										
	ROUGH GRADING BACKFILL TOTAL										**6,375**

Notes:
Top 2' of backfill will not be compacted.
Dump truck cost is included under excavation.
Total volume of backfill equals 4600 CY.

GRAVEL CANYON
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	DRAINAGE CONTROLS										
	Assume channel excavations completed during rough grading										
1	Filter Material (027-054-0400)	116	CY	18.50	2146.00	0.79	91.64	1.94	225.04	21.23	2,463
2	Riprap Placement (Table 3.3-10) (022-712-0300)	293	TON	10.00	2930.00	1.06	310.58	0.45	131.85	11.51	3,372
	DRAINAGE CONTROLS TOTAL										**5,835**

GRAVEL CANYON
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	REVEGETATION										
1	Soil Roughening	218	MSF			1.17	255.06	1.16	252.88	2.33	508
	(029-204-3100)										
2	Seed Mix (35lb/acre)	218	MSF	2.50	545.00					2.50	545
	(029-308-1500)										
3	Hydroseeding	218	MSF			7.15	1558.70	6.50	1417.00	13.65	2,976
	(029-308-1700)										
4	Straw mulch - 2 tons/acre	5	ACRE	50.00	250.00			250.00	1250.00	300.00	1,500
5	Fertilizer - 200 lbs/acre	5	ACRE	56.00	280.00			100.00	500.00	156.00	780
	Revegetation Subtotal										6,309
	Reseeding and Replanting (25%)										1,577
	REVEGETATION TOTAL										**7,886**

GRAVEL CANYON
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	MONITORING										
1	Vegetation Monitoring	10	YEAR							1000.00	10,000
2	Site Maintenance	10	YEAR							1000.00	10,000
	MONITORING TOTAL										**20,000**

TerraMatrix
Engineering & Environmental Services
P.O. Box 774018, 1475 Pine Grove Road
Steamboat Springs, Colorado 80477
Phone 970.879.6260 Fax 970.879.9048

Project Name: _____
Project Number: _____ Sheet: ____ Of ____
Prepared By: _____ Date: _____
Checked By: _____ Date: _____

Green

WILLOW CREEK MINE
BOND RECLAMATION COST ESTIMATE
APPENDIX C
CRANDALL CANYON
COST ESTIMATE WORKSHEETS

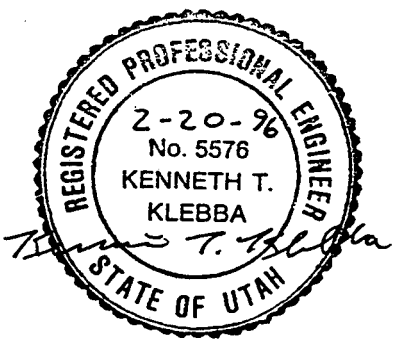
February 1996

ADDENDUM TO APPENDIX 3-2

RECLAMATION BOND COST CALCULATIONS

FOR CRANDALL CANYON

For continuity, the bond amount calculated for Crandall Canyon was made using Mr. William S. Hendrickson's guidelines as included in Appendix 3-2 of this document. Appendix 3-2 was originally submitted to the Division on August 14, 1995.



CASTLE GATE CRANDALL CANYON
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	DEMOLITION										
1	LP TANKS AND PUMP HOUSE										
	Concrete Footings (9.5' X 10' X 1.5') X 4, 570 CF	570	CF			1.01	575.70	1.47	837.90	2.48	1,414
	(020-754-1140, see calcs)										
	Concrete Wall (6' X 4' X 1')	24	CF			1.52	36.48	7.90	189.60	9.42	226
	(020-754-2500)										
	Concrete Pad (4' X 1' X 1.5') 6 CF	0.1	DAY			929.00	92.90	261.00	26.10	1190.00	119
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Concrete Pad (25' X 9' X 0.7') 158 CF	0.2	DAY			929.00	185.80	261.00	52.20	1190.00	238
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Metal bldg. (12' X 9' X 8')	864	CF			0.10	86.40	0.06	51.84	0.16	138
	(020-604-0012)										
	Compressor	1	TON					385.00	385.00	385.00	385
	(Heavy HVAC demo 020-718-3600)										
	Chain link fence (100' X 6')	100	LF			0.46	46.00	1.13	113.00	1.59	159
	(020-554-0700)										
	Onsite disposal of concrete (loose)	28	CY			3.64	101.92	1.54	43.12	5.18	145
	(020-754-4200)										
	LP Tanks to be moved to Willow Creek Site										
2	SHAFT NO. 1 AND VENTILATION SYSTEM										
	Metal bldg. (24' X 127' X 20' and 27' X 24' X 50'	100,110	CF			0.10	10011.00	0.06	6006.60	0.16	16,018
	and 15' X 45' X 10')										
	(020-604-0012)										
	Metal Elbows (12' X 25' X 12') X 2,	592	LF			1.06	627.52	4.85	2871.20	5.91	3,499
	(020-730-0010)										
	Fan housing (37' X 12' dia) X 2	975	LF			1.06	1033.50	4.85	4728.75	5.91	5,762
	(020-730-0010)										
Note:	Unless otherwise noted, no salvage value										
	was considered for any of this equipment.										
	(a) Means Heavy Construction Cost Data, 1995										

CASTLE GATE CRANDALL CANYON
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	SHAFT NO. 1 AND VENTILATION SYSTEM (cont.)										
	Concrete footings (10' X 3' X 1.5') X 2, 90 CF	90	CF			1.01	90.90	1.47	132.30	2.48	223
	(020-754-1140, see calcs)										
	Concrete stem wall (30' X 1.5' X 3') X 2, 270 CF	270	CF			1.01	272.70	1.47	396.90	2.48	670
	(020-754-1140, see calcs)										
	Concrete pad w/mesh (50' X 19' X 1.5') X 2, 2850 CF	3.6	DAY			929.00	3344.40	261.00	939.60	1190.00	4,284
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Concrete pad w/mesh (4' X 4' X 1.5') X 2, 48 CF	0.1	DAY			929.00	92.90	261.00	26.10	1190.00	119
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Air heaters, 2	8	TON					385.00	3080.00	385.00	3,080
	(Heavy HVAC demo 020-718-3600)										
	Onsite disposal of concrete (loose)	116	CY			3.64	422.24	1.54	178.64	5.18	601
	(020-754-4200)										
3	HOIST BUILDING										
	Metal bldg. (50' X 50' X 25')	62,500	CF			0.10	6250.00	0.06	3750.00	0.16	10,000
	(020-604-0012)										
	Concrete pad w/mesh (50' X 50' X 1') 2500 CF	3.1	DAY			929.00	2879.90	261.00	809.10	1190.00	3,689
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Onsite disposal of concrete (loose)	93	CY			3.64	338.52	1.54	143.22	5.18	482
	(020-754-4200)										
4	STORAGE BUILDING										
	Metal bldg. (8' X 10' X 10') 800 CF	800	CF			0.10	80.00	0.06	48.00	0.16	128
	(020-604-0012)										
	Concrete pad w/mesh (8' X 10' X 0.5') 40 CF	0.1	DAY			929.00	92.90	261.00	26.10	1190.00	119
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Onsite disposal of concrete (loose)	2	CY			3.64	7.28	1.54	3.08	5.18	10
	(020-754-4200)										
5	POWER SUBSTATION										
	Metal Building (12,000 CF)	12,000	CF			0.10	1200.00	0.06	720.00	0.16	1,920
	(020-604-0012)										
	Concrete pad w/mesh (17' X 12' X 8" and 44' X 14.5' X 8")	0.74	DAY			929.00	687.46	261.00	193.14	1190.00	881
	561 CY										
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Concrete Pad w/ mesh (6' X 10' X 1') X 3, 180 CF	0.25	DAY			929.00	232.25	261.00	65.25	1190.00	298
	Concrete Pad w/ mesh (4' X 4' X 1') X 4, 64 CF	0.1	DAY			929.00	92.90	261.00	26.10	1190.00	119
	Concrete Pad w/ mesh (4' X 10' X 1') 40 CF	0.1	DAY			929.00	92.90	261.00	26.10	1190.00	119
	Concrete Pad w/ mesh (4' X 5' X 1') 20 CF	0.1	DAY			929.00	92.90	261.00	26.10	1190.00	119
	Concrete Pad w/ mesh (3' X 1.5' X 1') 4.5 CF	0.1	DAY			929.00	92.90	261.00	26.10	1190.00	119

CASTLE GATE CRANDALL CANYON
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	POWER SUBSTATION (cont.)										
	Concrete Pad w/ mesh (4' X 10' X 1') 40 CF	0.1	DAY			929.00	92.90	261.00	26.10	1190.00	119
	Concrete Pad w/ mesh (4' X 5' X 1') 20 CF	0.1	DAY			929.00	92.90	261.00	26.10	1190.00	119
	Concrete Pad w/ mesh (3' X 1.5' X 1') 4.5 CF	0.1	DAY			929.00	92.90	261.00	26.10	1190.00	119
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Chain link fence (7' X 280'))	280	LF			0.46	128.80	1.13	316.40	1.59	445
	(020-554-0700)										
	Disposal of non-PCB Transformers and switches	1	LS					5000.00	5000.00	5000.00	5,000
	Concrete Pad w/ mesh (20' X 3' X 1') X 4, 240 CF	0.3	DAY			929.00	278.70	261.00	78.30	1190.00	357
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Sidewalk, concrete w/ mesh (4' X 95' X 4") 127 CF	42	SY			3.36	141.12	1.37	57.54	4.73	199
	(020-554-4200)										
	Onsite disposal of concrete (loose)	16	CY			3.64	58.24	1.54	24.64	5.18	83
	(020-754-4200)										
6	SLOPE PROTECTION										
	Chain link fence (6' X 600')	600	LF			0.46	276.00	1.13	678.00	1.59	954
	(020-554-0700)										
7	SUPPORT STRUCTURE										
	Metal Bldg. (14' X 48' X 10') 6720 CF	6,720	CF			0.10	672.00	0.06	403.20	0.16	1,075
	(020-604-0012)										
	Concrete Pad w/ mesh (14' X 48' X 1') 672 CF	0.9	DAY			929.00	836.10	261.00	234.90	1190.00	1,071
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Onsite disposal of concrete (loose)	25	CY			3.64	91.00	1.54	38.50	5.18	130
	(020-754-4200)										

CASTLE GATE CRANDALL CANYON
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
8	EMERGENCY HOIST										
	Metal Bldg. (20' X 16' X 12') 3840 CF	3,840	CF			0.10	384.00	0.06	230.40	0.16	614
	(020-604-0012)										
	Concrete Pad w/ mesh (20' X 16' X 1') 320 CF	0.2	DAY			929.00	185.80	261.00	52.20	1190.00	238
	Hoist pad - concrete Pad w/ mesh (5' X 5' X 1') 25 CF	0.1	DAY			929.00	92.90	261.00	26.10	1190.00	119
	Man cart pad - concrete Pad w/ mesh (5' X 5' X 1') 25 CF	0.1	DAY			929.00	92.90	261.00	26.10	1190.00	119
	(Hydraulic Excavator w/ 2 CY bucket)										
	(016-408-0300)										
	Onsite disposal of concrete (loose)	14	CY			3.64	50.96	1.54	21.56	5.18	73
	(020-754-4200)										
9	POWER POLES										
	Remove wiring	450	CLF					7.00	3150.00	7.00	3,150
	(020-708-1870)										
	Remove fixtures and poles	66	EA			50.00	3300.00	40.00	2640.00	90.00	5,940
	Onsite disposal of fixtures	1	LS			400.00	400.00	500.00	500.00	900.00	900
10	CULVERTS										
	24" CMP (CCC-1) 55 LF	55	LF			0.86	47.30	2.10	115.50	2.96	163
	(020-554-2960 X 0.5)										
	84" CMP (CCC-2) 90 LF	90	LF			2.63	236.70	6.44	579.60	9.07	816
	(020-554-3000 X 2.3 X 0.5)										
	24" CMP (CCC-3) 60 LF	60	LF			0.86	51.60	2.10	126.00	2.96	178
	(020-554-2960 X 0.5)										
	24" CMP (CCC-4) 50 LF	50	LF			0.86	43.00	2.10	105.00	2.96	148
	(020-554-2960 X 0.5)										
	24" CMP (CCC-5) 130 LF	130	LF			0.86	111.80	2.10	273.00	2.96	385
	(020-554-2960 X 0.5)										
	48" CMP (CCC-6) 205 LF	205	LF			1.49	305.45	3.64	746.20	5.13	1,052
	(020-554-3000 X 1.3 X 0.5)										
	17.5' X 10.5 Pipe Arch (CCC-7) 50 LF	50	LF			5.61	280.50	13.72	686.00	19.33	967
	(020-554-3000 X 3.5 X 0.7)										

CASTLE GATE CRANDALL CANYON
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	CULVERTS (cont.)										
	17.5' X 10.5 Pipe Arch (CCC-8) 80 LF	80	LF			5.61	448.80	13.72	1097.60	19.33	1,546
	(020-554-3000 X 3.5 X 0.7)										
	84" CMP (CCC-9) 450 LF	450	LF			2.63	1183.50	6.44	2898.00	9.07	4,082
	(020-554-3000 X 2.3 X 0.5)										
	24" CMP (CCC-10) 70 LF	70	LF			0.86	60.20	2.10	147.00	2.96	207
	(020-554-2960 X 0.5)										
	48" CMP (CCC-11) 210 LF	210	LF			1.49	312.90	3.64	764.40	5.13	1,077
	(020-554-3000 X 1.3 X 0.5)										
	48" CMP (CCC-12) 155 LF	155	LF			1.49	230.95	3.64	564.20	5.13	795
	(020-554-3000 X 1.3 X 0.5)										
	36" CMP (CCC-13) 130 LF	130	LF			1.15	149.50	2.80	364.00	3.95	514
	(020-554-3000 X 0.5)										
	18" CMP (CCC-14) 90 LF	90	LF			0.82	73.80	2.02	181.80	2.84	256
	(020-554-2930 X 1.2 X 0.5)										
	18" CMP (CCC-15) 80 LF	80	LF			0.82	65.60	2.02	161.60	2.84	227
	(020-554-2930 X 1.2 X 0.5)										
	18" CMP (CCC-16) 75 LF	75	LF			0.82	61.50	2.02	151.50	2.84	213
	(020-554-2930 X 1.2 X 0.5)										
	18" CMP (CCC-17) 70 LF	70	LF			0.82	57.40	2.02	141.40	2.84	199
	(020-554-2930 X 1.2 X 0.5)										
	24" CMP (CCC-18) 70 LF	70	LF			0.86	60.20	2.10	147.00	2.96	207
	(020-554-2960 X 0.5)										
	24" CMP (CCC-19) 60 LF	60	LF			0.86	51.60	2.10	126.00	2.96	178
	(020-554-2960 X 0.5)										
	18" CMP (CCC-20) 90 LF	90	LF			0.82	73.80	2.02	181.80	2.84	256
	(020-554-2930 X 1.2 X 0.5)										
	18" CMP (CCC-21) 75 LF	75	LF			0.82	61.50	2.02	151.50	2.84	213
	(020-554-2930 X 1.2 X 0.5)										
	18" CMP (CCC-22) 80 LF	80	LF			0.82	65.60	2.02	161.60	2.84	227
	(020-554-2930 X 1.2 X 0.5)										
	18" CMP (CCC-23) 55 LF	55	LF			0.82	45.10	2.02	111.10	2.84	156
	(020-554-2930 X 1.2 X 0.5)										
	17.5' X 10.5 Pipe Arch (CCC-24) 95 LF	95	LF			5.61	532.95	13.72	1303.40	19.33	1,836
	(020-554-3000 X 3.5 X 0.7)										
	18" CMP (CCC-25) 70 LF	70	LF			0.82	57.40	2.02	141.40	2.84	199
	(020-554-2930 X 1.2 X 0.5)										

CASTLE GATE CRANDALL CANYON
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	CULVERTS (cont.)										
	18" CMP (CCC-26) 80 LF	80	LF			0.82	65.60	2.02	161.60	2.84	227
	(020-554-2930 X 1.2 X 0.5)										
	18" CMP (CCC-27) 100 LF	100	LF			0.82	82.00	2.02	202.00	2.84	284
	(020-554-2930 X 1.2 X 0.5)										
	18" CMP (CCC-28) 140 LF	140	LF			0.82	114.80	2.02	282.80	2.84	398
	(020-554-2930 X 1.2 X 0.5)										
11	EXCAVATION FOR CULVERTS:	92	CY			1.41	129.72	1.71	157.32	3.12	287
	CCC-1, CCC-3, CCC-4, CCC-5, CCC-10, CCC-18, and										
	CCC-19. 2.5' wide X 2' deep X 495 LF										
	(022-254-0060)										
	1/2 CY Loader/Backhoe										
	EXCAVATION FOR CULVERTS:	540	CY			1.41	761.40	1.71	923.40	3.12	1,685
	CCC-2 and CCC-9, 9' wide X 3' deep X 540 LF										
	(022-254-0060)										
	1/2 CY Loader/Backhoe										
	EXCAVATION FOR CULVERTS:	285	CY			1.41	401.85	1.71	487.35	3.12	889
	CCC-6, CCC-11, and CCC-12, 4.5' wide X 3' deep X 570 LF										
	(022-254-0060)										
	1/2 CY Loader/Backhoe										
	EXCAVATION FOR PIPE ARCHES:	463	CY			1.41	652.83	1.71	791.73	3.12	1,445
	CCC-7, CCC-8,and CCC-24 18.5' wide X 3' deep X 225 LF										
	(022-254-0060)										
	1/2 CY Loader/Backhoe										
	EXCAVATION FOR CULVERT:	51	CY			1.41	71.91	1.71	87.21	3.12	159
	CCC-13, 3.5' wide X 3' deep X 130 LF										
	(022-254-0060)										
	1/2 CY Loader/Backhoe										
	EXCAVATION FOR CULVERTS:	149	CY			1.41	210.09	1.71	254.79	3.12	465
	CCC-14, CCC-15, CCC-16, CCC-17, CCC-20, CCC-21,										
	CCC-22, CCC-23, CCC-25, CCC-26, CCC-27, and										
	CCC-28. 2' wide X 2' deep X 1005 LF										
	(022-254-0060)										
	1/2 CY Loader/Backhoe										

CASTLE GATE CRANDALL CANYON
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
12	REMOVE CULVERT INLETS (CONCRETE)										
	Remove inlets	17	LS			50.00	850.00	150.00	2550.00	200.00	3,400
	Onsite disposal of concrete (loose)	42	CY			3.64	152.88	1.54	64.68	5.18	218
	(020-754-4200) (see notes below)										
13	GUARD RAILS										
	Guard Rail Removal	550	LF					3.65	2007.50	3.65	2,008
	(020-554-0800)										
	Onsite disposal	1	LS			70.00	70.00	70.00	70.00	140.00	140
14	REMOVE HYDRANTS (020-554-0900)	6	EA					99.50	597.00	99.50	597
15	LOAD, HAUL, COMBUSTIBLE MATERIALS -	600	MILE			0.27	162.00	0.11	66.00	0.38	228
	30 MILE HAUL										
	Assume 10 CY Truck, 200 CY (loose) of										
	material on 20 trips										
	(20-620-5100)										
Notes:	Assume the Following:										
	1. All pipe arches have a concrete headwall on each end.										
	2. Only one headwall on CCC-9										
	3. The 48" and 84" pipes have a headwall on each end.										

CASTLE GATE CRANDALL CANYON
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
16	SEDIMENTATION POND 014										
	Valves (consider as demolition of hydrants)	2	EA					99.50	199.00	99.50	199
	(020-554-0900)										
	18" CMP 50 LF Discharge pipe	50	LF			0.82	41.00	2.02	101.00	2.84	142
	(020-554-2930 X 1.2 X 0.5)										
	Excavation for pipe 2' X 2' X 50'	7	CY			1.41	9.87	1.78	12.46	3.19	22
	(022-254-0060) 1/2 CY Loader/Backhoe										
	Onsite disposal of material	1	LS			100.00	100.00	100.00	100.00	200.00	200
17	SEDIMENTATION POND 015										
	Valves (consider as demolition of hydrants)	2	EA					99.50	199.00	99.50	199
	(020-554-0900)										
	18" CMP 60 LF Discharge pipe	60	LF			0.82	49.20	2.02	121.20	2.84	170
	(020-554-2930 X 1.2 X 0.5)										
	Excavation for pipe 2' X 2' X 60'	9	CY			1.41	12.69	1.78	16.02	3.19	29
	(022-254-0060) 1/2 CY Loader/Backhoe										
	Onsite disposal of material	1	LS			100.00	100.00	100.00	100.00	200.00	200
18	SEAL WELLS	1	EA	30.00	30.00			250.00	250.00	280.00	280
	Excavate, seal, torch, and backfill										
19	HILFIKER WALL REMOVAL	1,000	CY			1.98	1980.00	1.69	1690.00	3.67	3,670
	Excavation of Hilfiker, 6' to 10' deep										
	(022-254-0500) 3/4 CY Hydraulic Backhoe										
	Onsite disposal of Hilfiker wire mesh	1	LS			100.00	100.00	100.00	100.00	200.00	200
	DEMOLITION TOTAL										**109,740**

CASTLE GATE CRANDALL CANYON
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	PERMANENT SHAFT SEALS										
	Air Intake Shafts (2)										
1	Concrete	41	CY	88.00	3608.00	1.65	67.65	46.50	1906.50	136.15	5,582
	(033-130-4050)										
2	I-Beams W 12 X 190	279	LF	101.00	28179.00	0.99	276.21	1.92	535.68	103.91	28,991
	(use 051-250-6580)										
3	Steel Plate 1/2" thick	17,891	LB	0.85	15207.35					0.85	15,207
	(051-230-1250)										
4	Welding	24	HR	2.76	66.24	9.70	232.80	53.50	1284.00	65.96	1,583
	(050-575-0300)										
	Shaft No. 1										
1	Concrete	76	CY	88.00	6688.00	1.65	125.40	46.50	3534.00	136.15	10,347
	(033-130-4050)										
2	I-Beams W 27 X 235	54	LF	112.00	6048.00	0.98	52.92	1.91	103.14	114.89	6,204
	(use 051-250-7900)										
3	I-Beams W 27 X 161	42	LF	81.00	3402.00	0.96	40.32	1.87	78.54	83.83	3,521
	(use 051-250-5960)										
4	I-Beams W 27 X 84	106	LF	42.50	4505.00	0.93	98.58	1.81	191.86	45.24	4,795
	(use 051-250-5800)										
5	Steel Plate 1/2" thick	17,157	LB	0.85	14583.45					0.85	14,583
	(051-230-1250)										
6	Welding	24	HR	2.76	66.24	9.70	232.80	53.50	1284.00	65.96	1,583
	(050-575-0300)										
	Shaft No. 2										
1	Concrete	43	CY	88.00	3784.00	1.65	70.95	46.50	1999.50	136.15	5,854
	(033-130-4050)										
2	I-Beams W 24 X 162	21	LF	81.00	1701.00	0.96	20.16	1.87	39.27	83.83	1,760
	(use 051-250-5960)										
3	I-Beams W 24 X 131	38	LF	77.00	2926.00	1.05	39.90	2.05	77.90	80.10	3,044
	(use 051-250-5780)										
4	I-Beams W 24 X 55	84	LF	27.50	2310.00	1.00	84.00	1.94	162.96	30.44	2,557
	(use 051-250-4900)										
5	Steel Plate 1/2" thick	10,792	LB	0.85	9173.20					0.85	9,173
	(051-230-1250)										
6	Welding	24	HR	2.76	66.24	9.70	232.80	53.50	1284.00	65.96	1,583
	(050-575-0300)										
	PERMANENT SHAFT SEALS TOTAL										**116,370**

CASTLE GATE CRANDALL CANYON
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	ROUGH GRADING										
	EXCAVATION										
1	200 HP Bulldozer (300' haul) 35%	47,982	CY			3.13	150183.66	1.03	49421.46	4.16	199,605
	(022-242-4420)										
2	2 Cubic Yard Hyd. Excavator 20%	27,418	CY			0.93	25498.74	0.37	10144.66	1.30	35,643
	(022-238-0260)										
3	5 Cubic Yard Front End Loader, 45%	61,691	CY			0.64	39482.24	0.19	11721.29	0.83	51,204
	(022-238-1650)										
4	6 Cubic Yard End Dump, 65%	89,109	CY			1.70	151485.30	0.83	73960.47	2.53	225,446
	(022-266-0030)										
5	Water Truck, 1/2 time operator	5	MO			2125.00	10625.00	2610.00	13050.00	4735.00	23,675
	(016-420-6900)										
6	Surveying, 1/2 time	60	DAY					365.00	21900.00	365.00	21,900
	(013-306-0950)										
	ROUGH GRADING EXCAVATION TOTAL										**657,473**
Note:	Total volume of excavation equals 137,091 CY										

CASTLE GATE CRANDALL CANYON
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	ROUGH GRADING										
	BACKFILL										
1	Soil Testing - Sampling and Evaluation	30	EA					200.00	6000.00	200.00	6,000
2	Soil Testing - Lab Work	30	EA					200.00	6000.00	200.00	6,000
3	200 HP Bulldozer, 100%	142,595	CY			0.38	54186.10	0.13	18537.35	0.51	72,723
	(022-208-4020)										
4	Water Truck, 1/2 time operator	5	MO			2125.00	10625.00	2610.00	13050.00	4735.00	23,675
	(016-420-6900)										
5	Sheepsfoot Compactor, 60%	85,557	CY			0.10	8555.70	0.05	4277.85	0.15	12,834
	(022-226-5680)										
6	5 Cubic Yard Front End Loader, 50%	71,298	CY			0.36	25667.28	0.11	7842.78	0.47	33,510
	(022-216-4080)										
7	Surveying, 1/2 time	45	DAY					365.00	16425.00	365.00	16,425
	(013-306-0950)										
	ROUGH GRADING BACKFILL TOTAL										**171,167**
Notes:	Top 2' of backfill will not be compacted.										
	Dump truck cost is included under excavation.										
	Total volume of Backfill equals 142,595 CY										

CASTLE GATE CRANDALL CANYON
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	TOPSOIL DISTRIBUTION										
	PHASE I										
1	Soil Testing - Labor	12	EA					200.00	2400.00	200.00	2,400
2	Soil Testing - Lab Work	12	EA					200.00	2400.00	200.00	2,400
3	5 CY Front end Loader, 100 % (022-238-1650)	115,485	CY			0.64	73910.40	0.19	21942.15	0.83	95,853
4	12 CY End Dump, 5 Trucks 100% (022-266-0400)	115,485	CY			1.96	226350.60	0.78	90078.30	2.74	316,429
5	300 HP Bulldozer, 65% (022-208-5020)	75,065	CY			0.35	26272.75	0.10	7506.50	0.45	33,779
6	200 HP Bulldozer, 35% (022-208-4020)	40,420	CY			0.38	15359.60	0.13	5254.60	0.51	20,614
7	Water Truck, 1/2 time operator (016-420-6900)	1	MO			2125.00	2125.00	2610.00	2610.00	4735.00	4,735
8	5 CY Front end Loader, 50 % (022-216-4080)	57,753	CY			0.36	20791.08	0.11	6352.83	0.47	27,144
9	Surveying (013-306-0950)	10	DAY					365.00	3650.00	365.00	3,650
	Phase I Topsoil Distribution Equipment Subtotal						364809.43				
	Phase I Topsoil Distribution Labor Subtotal								142194.38		
	Labor Burden of +53.8% (Means, 1995)								76500.58		
	Adjusted Labor								218694.96		
	TOPSOIL DISTRIBUTION- PHASE I TOTAL										583,504
Note:	Equipment and labor costs from Means, 1995.										

CASTLE GATE CRANDALL CANYON
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	TOPSOIL DISTRIBUTION (cont.)										
	PHASE II										
1	Soil Testing - Labor	4	EA					200.00	800.00	200.00	800
2	Soil Testing - Lab Work	4	EA					200.00	800.00	200.00	800
3	5 CY Front end Loader, 100 %	30,255	CY			0.64	19363.20	0.19	5748.45	0.83	25,112
	(022-238-1650)										
4	12 CY End Dump, 5 Trucks 100%	30,255	CY			1.96	59299.80	0.78	23598.90	2.74	82,899
	(022-266-0400)										
5	300 HP Bulldozer, 65%	19,666	CY			0.35	6883.10	0.10	1966.60	0.45	8,850
	(022-208-5020)										
6	200 HP Bulldozer, 35%	10,859	CY			0.38	4126.42	0.13	1411.67	0.51	5,538
	(022-208-4020)										
7	Water Truck, 1/2 time operator	1	WK			710.00	710.00	610.00	610.00	1320.00	1,320
	(016-420-6900)										
8	5 CY Front end Loader, 50 %	15,158	CY			0.36	5456.88	0.11	1667.38	0.47	7,124
	(022-216-4080)										
9	Surveying	3	DAY					365.00	1095.00	365.00	1,095
	(013-306-0950)										
	Phase II Topsoil Distribution Equipment Subtotal						95839.40				
	Phase II Topsoil Distribution Labor Subtotal								37698.00		
	Labor Burden of +53.8% (Means, 1995)								20281.52		
	Adjusted Labor								57979.52		
	TOPSOIL DISTRIBUTION- PHASE II TOTAL										153,819
	TOPSOIL DISTRIBUTION PHASE I AND PHASE II TOTAL										**737,323**
Note:	Equipment and labor costs from Means, 1995.										

CASTLE GATE CRANDALL CANYON
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	DRAINAGE CONTROLS										
	Assume channel excavations completed during rough grading										
1	Filter Material (027-054-0400)	4,942	CY	18.50	91427.00	0.79	3904.18	1.94	9587.48	21.23	104,919
2	Riprap Placement										
	Dumped, 50# ave. (022-712-0300)	682	TON	10.00	6820.00	1.06	722.92	0.45	306.90	11.51	7,850
	Dumped, 100# ave. (022-712-0350)	874	TON	14.30	12498.20	1.21	1057.54	0.51	445.74	16.02	14,001
	Dumped, 300# ave. (022-712-0370)	8,677	TON	16.65	144472.05	1.41	12234.57	0.59	5119.43	18.65	161,826
	DRAINAGE CONTROLS TOTAL										**288,696**

CASTLE GATE CRANDALL CANYON
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	REVEGETATION										
1	Soil Roughening, 28 acres	1,220	MSF			1.17	1427.40	1.16	1415.20	2.33	2,843
	(029-204-3100)										
2	Seed Mix (35lb/acre)	1,220	MSF	2.50	3050.00					2.50	3,050
	(029-308-1500)										
3	Seed spreading	1,220	MSF			7.15	8723.00	6.50	7930.00	13.65	16,653
	(029-308-1700)										
4	Straw mulch - 2 tons/acre	28	ACRE	50.00	1400.00			250.00	7000.00	300.00	8,400
5	Fertilizer - 200 lbs/acre	28	ACRE	56.00	1568.00			100.00	2800.00	156.00	4,368
6	Seedlings, Bareroot 6" - 10"	600	EA	1.00	600.00			0.43	258.00	1.43	858
	(029-521-0561)										
	300/acre X 2 acres										
	Revegetation Subtotal										36,172
	Reseeding and Replanting (25%)										9,043
	REVEGETATION TOTAL										**45,215**

CASTLE GATE CRANDALL CANYON
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	MONITORING										
1	Vegetation Monitoring	10	YEAR							4000.00	40,000
2	Water Quality and Monitoring, Quarterly	10	YEAR							4000.00	40,000
3	Site Maintenance	10	YEAR							3000.00	30,000
	MONITORING TOTAL										**110,000**

CASTLE GATE CRANDALL CANYON
BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	DIRECT COST SUMMARY										
	Demolition Total										109,740
	Permanent Shaft Seals										116,370
	Rough Grading Excavation Total										557,473
	Rough Grading Backfill Total										171,167
	Drainage Controls Total										288,596
	Topsoil Distribution Total										737,323
	Revegetation Total										45,215
	Monitoring Total										110,000
	Total Direct Costs										2,135,883
	INDIRECT COSTS										
	Mobilization/Demobilization (1%)										21,359
	Contingencies (7%)										149,512
	Engineering Redesign Fee (5.35%)										114,270
	Contractor Profit and Overhead (8.0%)										170,871
	Reclamation Management Fee (4.1%)										87,571
	Total Indirect Costs										543,582
	Subtotal Reclamation Cost										2,679,465
	Escalation - 13.1% (2.5%/yr over 5 yrs.)										351,010
	TOTAL RECLAMATION COST										**3,030,475**