APPENDIX 2715-1
TABLE 1

RECLAMATION BOND SUMMARY

			Hours	Hourly Costs	Total Costs
A	**Worst Case Pit Closure (See Table 2)**				
	Haul Truck (Cat 769D)		9,381	$ 203	$ 1,904,343
	Loader (Cat 988)		1,876	$ 180	$ 337,680
	Dozer (D9R)		1,876	$ 221	$ 414,596
	Grader (14H)		1,876	$ 152	$ 285,152
	Final Regrade (14H)		6	$ 152	$ 912
	Water Truck (4,000 gallons)		1,876	$ 135	$ 253,260
	Subtotal Pit Closure				$ 3,195,943
B	**Ancillary Reclamation Costs**				
	Removal of Facility Structures (See Table 3)				$ 183,591
	Roads (See Table 4)				
	Scraper (637G)		114	$ 251	$ 28,614
	Dozer (D9R)		38	$ 221	$ 8,398
	Grader (14H)		38	$ 152	$ 5,776
	Final Regrade (14H)		13	$ 152	$ 1,976
	Water Truck (4,000 gallons)		38	$ 135	$ 5,130
	Facilities Pad and Stockpile Areas (See Table 4)				
	Scraper (637G)		106	$ 251	$ 26,606
	Dozer (D9R)		35	$ 221	$ 7,735
	Grader (14H)		35	$ 152	$ 5,320
	Final Regrade (14H)		21	$ 152	$ 3,192
	Water Truck (4,000 gallons)		35	$ 135	$ 4,725
	Ponds and Collection Ditches (See Table 4)				
	Scraper (637G)		2,359	$ 251	$ 592,109
	Dozer (D9R)		786	$ 221	$ 173,706
	Grader (14H)		786	$ 152	$ 119,472
	Final Regrade (14H)		26	$ 152	$ 3,952
	Water Truck (4,000 gallons)		786	$ 135	$ 106,110
	Subtotal Ancillary Reclamation				$ 1,276,412
C	**Revegetation (See Table 5)**				$ 1,231,164
D	**Mobilization and Demobilization for Contractor's Equipment (See Table 6)**				$ 66,000
E	**Total Direct Costs (A, B, C)**				$ 5,703,519
F	**Contractor's Profit**	15%			$ 855,528
G	**Administration Cost**	10%			$ 570,352
H	**Contingency Allowance**	5%			$ 285,176
I	**Total Indirect Costs (D, F, G, and H)**				$ 1,777,056
	TOTAL (E and I)				**$ 7,480,574**

APPENDIX 2715-1
TABLE 2

EQUIPMENT HOURS FOR WORST CASE PIT CLOSURE

Equipment	Haulage Distance* (ft)	Length of Pit* (feet)	Volume** (cubic yards)	Productivity*** (cyds/hr)	Hauling Equipment (#)	Hours Required rounded (used in Table 1)
Worst Case Pit		2,635	1,044,091			
Haul Truck (Cat 769D)	8,875	2,635	1,044,091	111		1,876
Total Truck Hours (Cat 769D)					5	9,381
Grader (14H)	5 haul trucks, scrapers per motor grader (divide total truck hours by 5)					1,876
Dozer (D9R)	5 haul trucks, scrapers per dozer (divide total truck hours by 5), includes leveling of the non-regraded area					1,876
Loader (988)	5 haul trucks per loader (divide total truck hours by 5)					1,876
Grader (14H)	2 passes over the worst case pit area @ 1 hr / 2 ac (see Table 5 for acreage)					6
Water Truck (4,000 gallons)	5 haul trucks, scrapers per water truck (divide total truck hours by 5)					1,876

*Haulage Distance and Length of Pit can be determined from Exhibit 2715-1 (1"= 600')

** Worst case pit volume was determined using Carlson software, volumes are bank cubic yards
The surface used was the actual topography of the area (LiDAR dem data - reduced.grd)
The bottom of the pit used is the bottom of coal seam (demi.sfg.grd)
The pit design includes highwall and spoil angles described in Exhibit 2715-2
The generated volume report is below

Worst Case Pit-1 South
Bench Pit Report Fri Mar 27 12:47:33 2020
Ground Surface: G:\ENG-ENV\SurvCADD files\LiDAR Data\LiDAR dem data - 100ft grid.grd
Pit Bottom: G:\ENG-ENV\SurvCADD files\2020 March Grids\demi.sfg.grd
Lower left grid corner : 1591900.00,11599800.00
Upper right grid corner: 1630400.00,11650800.00
X grid resolution: 385, Y grid resolution: 510
X grid cell size: 100.00, Y grid cell size: 100.00

Pit Earthwork Volumes
Total Cut: 28,190,464.8 C.F., 1,044,091.29 C.Y.

APPENDIX 2715-1
TABLE 3
REMOVAL OF FACILITY STRUCTURES COSTS

Structure	Size	Units	Cost/Unit*	Cost
Office				
Modular Building	Leasing company will remove			
Footings	576	L.F.	$ 30.45	$ 17,539
Shop / Warehouse[1]				
Structure	420,000	C.F.	$ 0.280	$ 117,600
Pad with Aprons**	22,400	S.F.	$ 1.720	$ 38,528
Sheds				
Structures	Leasing company will remove			
Footings	117	L.F.	$ 30.45	$ 3,563
Wash Bay[1]	16,500	C.F.	$ 0.190	$ 3,135
Field Shop	4,675	C.F.	$ 0.280	$ 1,309
Mobile Equipment		Salvage***		
Fuel Island[1]				
Equipment		Salvage***		
Slab**	700	S.F.	$ 1.720	$ 1,204
Walls**	660	S.F.	$ 1.080	$ 713
Total				$ 183,591

* Based on R.S. Means 2013 Cost Data
** Use as rip-rap
*** Equipment is sold off, buyer is responsible for disassembly and transport
Value of equipment is not used to reduce bond amount
[1] Size based on conceptual design, amount will be updated if the as-built is more

APPENDIX 2715-1
TABLE 4

ANCILLARY RECLAMATION COSTS

Hours include cut/fill material movement, topsoil replacement, and final regrade, all volumes are loose

Roads	width (ft)	length (ft)	thickness(ft)	acres	cubic yards	cubic yards/hour (Table 7)	equipment hours	rounded equipment hours (used in Table 1)
Primary Road - Access Road[3]	30	450	1.0	0.3	500	373	1.3	
Primary Road - Haulroads[3]	70	16,260	1.0	26.1	42,156	373	112.9	
						Scraper (637G)	114.3	114
						Grader (14H)*	38.1	38
						Dozer (D9R)**	38.1	38
						Grader (14H)***	13.2	13
						Water Truck	38.1	38

Facilities Pad and Stockpile Areas	thickness(ft)	acres	cubic yards	cubic yards/hour (Table 7)	equipment hours	rounded equipment hours (used in Table 1)
Rock & Pavement Facilities Pad[1]	0.5	6.3	5,082	373	13.6	
ROM Stockpile Pad[1]	1.0	3.5	5,647	373	15.1	
Stockpile Area Pad[1]	0.5	28.7	23,185	373	62.1	
Temporary Lignite Stockpile Pad[1]	1.0	3.6	5,808	373	15.6	
				Scraper (637G)	106.4	106
				Grader (14H)*	35.5	35
				Dozer (D9R)**	35.5	35
				Grader (14H)***	21.1	21
				Water Truck	35.5	35

Ponds, Collection Ditches, Diversions, and Associated Stockpiles	acres	cubic yards	cubic yards/hour (Table 7)	equipment hours	rounded equipment hours (used in Table 1)
SP-002[1]	8.4	270,976	482	562.4	
SP-003[1]	15.5	317,190	482	658.3	
CD-2A[1]	2.7	7,066	482	14.7	
CD-2B[1]	2.9	5,854	482	12.1	
CD-3[1]	14.0	122,943	482	255.1	
SP-005[1]	8.0	251,615	298	845.0	
SP-006[4]	0.0	0	0	0.0	
CD-4[3]	0.8	2,850	482	5.9	
D-3[3]	0.6	2,600	482	5.4	
			Scraper (637G)	2,358.9	2,359
			Grader (14H)*	786.3	786
			Dozer (D9R)**	786.3	786
			Grader (14H)***	26.5	26
			Water Truck	786.3	786

*Grader (14H) 3 haul trucks, scrapers per motor grader
**Dozer (D9R) 3 haul trucks, scrapers per dozer
***Grader (14H) 2 passes over the area @ 1 hour / 2 acre

[1] As-built volumes from construction
[2] Volumes determined using Carlson software
[3] Conceptual volumes based upon general construction design parameters
[4] Permanent structure, as requested by landowner

SP-005 As-Built Report
Volumes by Triangulation (Prisms) Wed Apr 1 09:06:44 2020
Existing Surface: G:\ENG-ENV\Projects\SP-05\LiDAR (2016) Nakataka tract.tin
Final Surface: G:\ENG-ENV\Projects\SP-05\LiDAR with SP-005 design3 & as-built merged.tin

Cut volume: 6,880,591.6 C.F., 254,836.73 C.Y.
Fill volume: 86,976.1 C.F., 3,221.34 C.Y.

Area in Cut : 489,948.9 S.F., 11.25 Acres
Area in Fill: 39,822.5 S.F., 0.91 Acres
Area exactly in daylight: 455,142.8 S.F., 10.45 Acres
Total inclusion area: 984,914.2 S.F., 22.61 Acres

Average Cut Depth: 14.04 feet
Average Fill Depth: 2.18 feet
Cut to Fill ratio: 79.11
Export Volume: 251,615.4 C.Y. 448,979 CY
Elevation Change To Reach Balance: 6.898
Volume Change Per .1 ft: 3,647.8 C.Y.

Cut (C.Y.) / Area (acres): 11270.72
Fill (C.Y.) / Area (acres): 142.47

Max Cut: 34.769 at 1605950.675,11619898.928
Max Fill: 9.669 at 1605899.729,11620222.754

APPENDIX 2715-1
TABLE 5

REVEGETATION COSTS

Operation	Previously Reclaimed with Temporary Grass Cost/Acre	Reclaim with Permanent Cover Cost/Acre	Reclaim with Trees Cost/Acre	Maintenance Cost/Acre
Initial Seeding (seedbed preparation, seeding, fertilizing, mulching)	$503	$582	completed	n/a
2nd Fertilization & Clip	$98	$98	completed	$98
3rd Fertilization & Clip	$98	$98	completed	$98
4th Fertilization & Clip	$98	$98	completed	$98
Lime Application	$457	$457	completed	n/a
Reseeding (5% of initial seeding with permanent cover)	n/a	n/a	n/a	$29
Planting trees	n/a	n/a	$189	$38
Soil Testing	$95	$95	completed	n/a
Cost/Acre Total	$1,349	$1,428	$189	$361

Areas	Area Acreage	Revegetation Acres	Revegetation Cost/Acre	Maintenance Cost/Acre	Total revegetation + maintenance Cost/Acre	Total Costs rounded to whole dollars
1. Total Permit Area	1,847.0					
Undisturbed Permit Area	1,084.2					
Disturbed Permit Area	762.9					
2. Total Bond Area	1,212.3					
Undisturbed Bond Area	449.4					
Disturbed Bond Area	762.9					
3. Previously Minded Areas with Permanent Cover	294.1					
a. Reclamation Complete, Maintenance Only		294.1	$0	$361	$361	$106,214
4. Previously Mined Areas with Temporary Cover	7.0					
a. Previously Reclaimed with Temporary Grass		3.5	$1,349	$0	$1,349	$4,718
b. Reclaim with Permanent Cover		7.0	$1,428	$361	$1,789	$12,516
c. Reclaim with Trees		7.0	$189	$361	$550	$3,848
5. Non-Regraded Area	35.3					
a. Previously Reclaimed with Temporary Grass		17.6	$1,349	$0	$1,349	$23,807
b. Reclaim with Permanent Cover		35.3	$1,428	$361	$1,789	$63,146
c. Reclaim with Trees		35.3	$189	$361	$550	$19,416
6. Worst Case Pit Area	12.2					
a. Reclaim with Permanent Cover		12.2	$1,428	$361	$1,789	$21,743
b. Reclaim with Trees		12.2	$189	$361	$550	$6,685
7. Disturbed Areas	414.3					
a. Reclaim with Permanent Cover		414.3	$1,428	$361	$1,789	$741,179
b. Reclaim with Trees		414.3	$189	$361	$550	$227,892
Total						$1,231,164

APPENDIX 2715-1
TABLE 6

Reference Table for Local Contractor Rates

	Hourly Rate w/Operator*	Hourly Diesel Fuel Consumption****	Fuel Cost**	Total Cost per Hour***	Mob/Demob Total (each)*	Planned Quanity of Equipment for Bond
Scraper(637G)	$175	24	$76	$251	$6,000	3
Dozer (D9R)	$180	13	$41	$221	$6,000	3
Haul Truck (Cat 769D)	$175	9	$28	$203	$4,000	5
Loader (Cat 988)	$140	13	$40	$180	$6,000	1
Grader (14H)	$130	7	$22	$152	$3,000	1
Water Truck (4,000 gallons)	$110	8	$25	$135	$1,000	1

* Specialty Trackhoe and Dozer Service, Inc. located in Shreveport, Louisiana, from a letter dated March 17, 2020 and email dated March 18, 202

** Used average diesel fuel cost of $3.15/gallon (Hourly Diesel Fuel Consumption x $3.15/gallon)

*** Hourly Rate w/Operator + Fuel Cost

**** See pages 20-9 through 20-16 of the Caterpillar Handbook #38

Specialty Trackhoe and Dozer Service, Inc.

3/17/2020

RE: Hourly Rates for Equipment with Operator (No Fuel)

Scraper (637G or Comparable)	$175/hr
Dozer (D9 or Comparable)	$180/hr
Haul Truck (Cat 769D or Comparable)	$175/hr
Loader (Cat 988 or Comparable)	$140/hr
Grader (14H or Comparable)	$130/hr
Water Truck (4,000 gallon)	$110/hr

6600 Broadacres Road • Shreveport, LA 71119 • P.O. Box 37393 • Shreveport, LA 71133 • phone 318.636.5535 • fax 318.636.5523

Johns, Darren

From: Jonathan Fryday [redacted]
Sent: Wednesday, March 18, 2020 8:29 AM
To: Johns, Darren
Subject: RE: Hourly Rate Request

Those rates would be more than sufficient if we were mobilizing and demobilizing that equipment.

Thanks
Jonathan Fryday
Specialty Trackhoe and Dozer Service, Inc.
[redacted]

From: Johns, Darren [redacted]
Sent: Wednesday, March 18, 2020 7:42 AM
To: Jonathan Fryday [redacted]
Subject: RE: Hourly Rate Request

Hey Jonathan,

[redacted] would these mob/demob costs be sufficient or would you recommend something different?

	Mob/Demob Total (each)
Scraper(637G)	$6,000
Dozer (D9R)	$6,000
Haul Truck (Cat 769D)	$4,000
Loader (Cat 988)	$6,000
Grader (14H)	$3,000
Water Truck (4,000 gallons)	$1,000

Thanks,

Darren Johns
Demery Resources Company, LLC
[redacted]

APPENDIX 2715-1
TABLE 7

Reference Table for Equipment Production Estimates

Activity	Equipment	Design Capacity (lcy)	Adjusted Capacity (bcy)	Distance (ft) one-way	Total Resistance %	Maneuver & Load Time Minutes	Loaded Travel Minutes	Maneuver & Dump Time Minutes	Unloaded Travel Minutes	Cycle Time Minutes	Cycles per Hour	Unadjusted Production per Hour	Adjusted Production per Hour
Original Boxcut Material to Worst Case Pit	Cat 769D	31.7	27.6	8,875	6	1.20	5.90	1.20	2.80	11.10	5.41	149	111
Facilities	Scraper 637G	34.0	29.6	1,000	10	1.00	1.20	0.60	0.75	3.55	16.90	500	373
Pond/Collection Ditches (SP-002, 003, CD-2A, 2B, 3, 4, D-3)	Scraper 637G	34.0	29.6	200	10	1.00	0.75	0.60	0.40	2.75	21.82	645	482
Pond/Collection Ditches (SP-005)	Scraper 637G	34.0	29.6	1,500	10	1.00	1.75	0.60	1.10	4.45	13.48	399	298
Roads	Scraper 637G	34.0	29.6	1,000	10	1.00	1.20	0.60	0.75	3.55	16.90	500	373

Loaded Travel	Page 8-43 of the Caterpillar Handbook #38 for 637G and page 9-14 of the Caterpillar Handbook #35 for 769D
Unloaded Travel	Page 8-44 of the Caterpillar Handbook #38 for 637G and page 9-14 of the Caterpillar Handbook #35 for 769D
Cycle Time	Load time + Loaded travel + Dump time + Unloaded travel
Cycles / Hour	60 minutes / Cycle time
Hourly Production	Adjusted Capacity * Cycles/Hour
Adjusted Production	Hourly Productivity * 0.90 operator efficiency * 0.83 work hour
Design Capacity	The design capacity is referenced in the Caterpillar Handbook
Adjusted Capacity	The design capacity with a swell factor of 15%