M/47/0022
JBR-prepared bost
Estimate

Bonding Calculations

Direct Costs		
Subtotal Demolition and Removal	$7,295.00	
Subtotal Backfilling and Grading	$83,605.00	
Subtotal Revegetation	$56,567.00	
Direct Costs	$147,467.00	
Indirect Costs		
Mob/Demob	$14,747.00	10.0%
Contingency	$7,373.00	5.0%
Engineering Redesign	$3,687.00	2.5%
Main Office Expense	$10,028.00	6.8%
Project Management Fee	$3,687.00	2.5%
Subtotal Indirect Costs	$39,522.00	26.8%
Total Cost 2013	$186,989.00	
Number of years		5
Escalation factor		0.0015
Escalation	$1,407.00	
Reclamation Cost Escalated	$188,396.00	
Bond Amount (rounded to nearest $1,000) 2013 Dollars	$188,000.00	
Posted Bond		
Difference Between Cost Estimate and Bond	-$188,000.00	
Percent Difference		

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Description	Unit Cost*	Operating Cost**	Unit	Total Equip Cost	Labor Cost***	Unit	Total Operating Cost/hr	Production Rate	Units	Quantity	Units	operating hours	Total Cost
	Dozer												
Ripping Facilities area & haul roads	96.25	109.95	$/ op hr	$206.20	71.75	$/hr	$277.95	0.6030	ac/hr	47.38	acres	78.57	$ 21,839
Overburden recontouring (dozer)	96.25	109.95	$/ op hr	$206.20	71.75	$/hr	$277.95	405	lcy/hr	90000	lcy	222.22	$ 61,766
* Unit Cost is based on the monthly rate converted into an hourly rate for the duration of the earthwork.													
* and ** all costs based on use of a D8 dozer - Means 2013 (01 54 33.20 4310) with a 10% profit cost added on.													
*** Labor hourly cost = Means 2013, page 741, equipment operator, medium equipment.													
									TOTAL EARTHMOVING				**$ 83,605**

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Ref.	Description	Materials	Means Reference Number	Unit Cost	operating cost	unit	Labor Cost*	unit	Total Operating Cost/hr	unit	Production Rate	unit	Total Operating Cost/acre	unit	ACRES	unit	TOTAL REVEG COST
9.6	Seed Placement**	Dozer	see below	96.25	109.95	$/op hr	71.75	$/hr	$ 277.95	$/hr	0.83	ac/hr	334.87	$/ac	47.38	ac	$ 15,866
	Broadcast Spreader***	Seeder	see below	20.93	29.70	$/op hr	71.75	$/hr	$ 122.38	$/hr	0.83	ac/hr	147.45	$/ac	47.38	ac	$ 6,986
	Seed Mix Cost****												129.25	$/ac	47.38	ac	$ 6,124
	Fertilizer Placement**	Dozer	see below	96.25	109.95	$/op hr	71.75	$/hr	$ 277.95	$/hr	0.83	ac/hr	334.87	$/ac	47.38	ac	$ 15,866
	Broadcast Spreader***	Seeder	see below	20.93	29.70	$/op hr	71.75	$/hr	$ 122.38	$/hr	0.83	ac/hr	147.45	$/ac	47.38	ac	$ 6,986
	Fertilizer Cost*****												100.00	$/ac	47.38	ac	$ 4,738
																TOTAL	**$ 56,567**

Sources and Notes

*Labor hourly cost = Means 2013, page 741, equipment operator, medium equip.

Labor hourly cost includes wages and all overhead and profit

**All costs on this sheet are based on use of a D-8 dozer - Means 2013 (01 54 33.20 4310), with the monthly Unit Cost converted into hourly cost. A 10% profit cost has also been added on to Unit Cost and Operating Cost

***Cost for range broadcast seeder based on cost to rent/operate a 50 HP towed sheepsfoot roller (Means 2013 (01 54 33.20 3150)). A 10% profit cost has also been added on to Unit Cost and Operating Cost.

Unit cost assumes monthly rental @ 176 operating hours per month. Operating cost from same line in Means

**** Seed Cost from Granite Seed July 2013

*****Fertilizer Cost from IFA July 2013

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	T-205				30	25	14726						
	MCC- 200		25	15	15		5625						
	Admin Bldg - A		90	70	10		63000						
	Admin Bldg - B		90	50	10		45000						
Tank Farm Area - 600B	T-501				65	10	5105						
	T-502				25	10	1964						
	T-503				45	5	884						
	T-301				16	45	25447						
	T-302				14	40	17593						
	T-303				16	20	5027						
	T-304				17	30	12017						
	T-305				17	20	5341						
	T-306				11	12	1244						
	MCC-300/Control Room		40	20	15		12000						
Product & Solvent													
Recovery Area - 700	T -401				20	10	1571						
	PV-301				20	10	1571						
	H -301				40	12	4524						
	H -302		12	12	3		432						
	PV-303				40	5	785						
	E- 600		30	15	5		2250						
	E- 310				10	10	785						
	E- 305				20	10	1571						
	K- 301		55	15	15		12375						
	Structure		12	55	12		7920						
	TOTAL STRUCT VOLUME (CU FT)						**505468**						
CONCRETE FOUNDATIONS													
Tank Farm Area						sq ft							
	Concrete Foundation - 1		120	70	0.5	8400	4200						
	Concrete Foundation - 2		100	30	0.5	3000	1500						
Extraction Area	Concrete Foundation - 1		950	35	1.0	33250	33250						
	TOTAL CONCRETE FOUNDATIONS (CU FT)						38950						
	TOTAL CONCRETE FOUNDATIONS (CU YD)						**1443**						
	TOTAL CONCRETE FOUNDATIONS (Sq FT)					44650							
	TOTAL CONCRETE FOUNDATIONS (sq YD)					4961							

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Ref.	Description	Means Reference Number	Length (ft)	Width (ft)	Height (ft)	Diameter (ft)	Volume (cu ft)
Conditioning Area-100							
	FB-500		15	15	10		2250
	C-600		140	12	8		13440
	CT-101		25	10	10		2500
	T-601A				20	12	2262
	He-101		10	5	10		500
	T-602				20	5	393
	T601B				20	15	3534
	T-611				20	15	3534
Extraction Area -200&							
Centrifuge Area -400	ST -600				20	20	6283
	ST -601				20	20	6283
	T-604				20	10	1571
	CT-104		45	15	15		10125
	CT-105		45	15	15		10125
	C-101		20	5	15		1500
	CN -600						
	CN -601						
	T-101				10	10	785
Water Treatment							
Area - 300							
	TH-601				25	60	70686
	P-614 A/B		25	20	5		2500
	TH-600				27	40	33929
	P-613 A/B		25	20	5		2500
	T-608				11	5	216
	T-605				11	5	216
	Flocculent Shed		30	20	12		7200
	Trailer		35	8	8		2240
	Trailer		35	8	8		2240
Froth Settler Area - 500							
	T-607		15	15	30		6750
	CN-602		15	15	30		6750
	HE-301		5	5	10		250
	P625 A/B		15	15	20		4500
	HE-201		20	20	15		6000
	CO-201		5	5	20		500
	V-401		25	25	15		9375
	P-101 A/B		10	10	15		1500
	CO-101		10	10	15		1500
	MCC-101		30	10	15		4500
Tank Farm Area - 600A	T-201A				30	20	9425
	T-201B				30	20	9425
	T-201C				30	20	9425

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Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	cu ft	sy yd	acre/hr	acres	length	width	height	Total Cost
	General site cleanup (note 1)			54.6	$/hr			0.5	20				$ 2,184.00
	Remove Asphalt		02 41 13.17 5010	9.20	$/sy					500	10		$ 5,111.11
										Total Demolition Costs			$ 7,295.11

NOTES

1 assume laborer pickups 0.5 acre per hour
use Laborer rate $54.60 p. 741 Means 2013

2 Assume utilities abandoned in place

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