

POGO MINE

SUMMARY OF ESTIMATED CLOSURE COSTS, POGO ACCESS ROAD AND TRANSMISSION LINE

24-Dec-10

Pogo Access Road and Transmission Line - Estimated Closure Cost							
		Phase I	Phase II	Phase III	Phase IV	Phase V	Total
Direct Cost		\$ -	<u>\$ 13,666</u>	\$ -	<u>\$ 2,478,500</u>	\$ -	\$ 2,492,167
Site Management Cost		\$ -	<u>\$ 128</u>	\$ -	<u>\$ 582,645</u>		\$ 582,773
Subtotal Direct Cost		\$ -	\$ 13,794	\$ -	\$ 3,061,145	\$ -	\$ 3,074,940
Indirect Costs % of Subtotal							
Mobilization/Demobilization	6.5%	\$ -	\$ 897	\$ -	\$ 198,974	\$ -	\$ 199,871
Subtotal		\$ -	\$ 14,691	\$ -	\$ 3,260,119	\$ -	\$ 3,274,811
Contractor Overhead and Profit	15.0%	\$ -	\$ 2,204	\$ -	\$ 489,018	\$ -	\$ 491,222
Subtotal		\$ -	\$ 16,895	\$ -	\$ 3,749,137	\$ -	\$ 3,766,032
Performance Bond	3.0%	\$ -	\$ 507	\$ -	\$ 112,474	\$ -	\$ 112,981
Insurance	1.5%	\$ -	\$ 253	\$ -	\$ 56,237	\$ -	\$ 56,490
Subtotal		\$ -	\$ 17,655	\$ -	\$ 3,917,849	\$ -	\$ 3,935,504
Contract Administration	4.0%	\$ -	\$ 706	\$ -	\$ 156,714	\$ -	\$ 157,420
Engineering Re-Design	4.0%	\$ -	\$ 706	\$ -	\$ 156,714	\$ -	\$ 157,420
Contingency	10.0%	\$ -	\$ 1,766	\$ -	\$ 391,785	\$ -	\$ 393,550
1 year holding cost			<u>\$ 41,000</u>				\$ 41,000
Total Indirects		\$ -	\$ 48,038	\$ -	\$ 1,561,916	\$ -	\$ 1,609,955
Total directs and indirects		\$ -	\$ 61,833	\$ -	\$ 4,623,061	\$ -	\$ 4,684,894
Inflation Proofing	2.66%	\$ -	\$ 1,645	\$ -	\$ 122,973	\$ -	\$ 124,618
Total Closure Cost		\$ -	\$ 63,478	\$ -	\$ 4,746,035	\$ -	\$ 4,809,513
Rounded							\$ 4,810,000

2008/8/21 Estimate

5,439,615

Change -

630,103

The current labor rates in use are for AlaskanContractor

Phase II													
Area Code	Area	Activity	Description	Status	Total Mhrs	Labor Cost	Material Cost	Equipment Cost	Fuel Consumed (gal)	Fuel Cost	Activity Total	Area Subtotal	Source / Comments
CLOSURE COSTS - DIRECT													
Access Road Culverts												\$0	
		Demobilization/Demolition											
		Recontouring/Reshaping											
		Spread Growth Media											
		Enhanced recovery											
		Install											
		Monitoring											
Access Road Embankment												\$0	
		Demobilization/Demolition											
		Recontouring/Reshaping											
		Spread Growth Media											
		Enhanced recovery											
		Install											
		Monitoring											
Bridge Treatments												\$0	
		Demobilization/Demolition											
		Recontouring/Reshaping											
		Spread Growth Media											
		Enhanced recovery											
		Install											
		Monitoring											
Repeater Road												\$0	
		Demobilization/Demolition											
		Recontouring/Reshaping											
		Spread Growth Media											
		Enhanced recovery											
		Install											
		Monitoring											
Material Sites												\$13,666	
		Demobilization/Demolition			41	2,877		6,203	2,079	1	11,159		
		Recontouring/Reshaping											
		Spread Growth Media											
		Enhanced recovery			3	156		2,332	19	518	2,507		
		Install											
		Monitoring											
Transmission Line												\$0	
		Demobilization/Demolition											
		Recontouring/Reshaping											
		Spread Growth Media											
		Enhanced recovery											
		Install											
		Monitoring											
Subtotal Direct Costs					43	\$3,033		\$8,535	2,099	\$ 519	\$13,666	<u>\$13,666</u>	

CLOSURE COSTS - Site Management Cost											
Administration center 1 if item is required, 0 if not required										\$	128
0	Worker's compensation	1	Man-months	x		\$	-	per person per month			\$0
1	equip. Insurance (10% of equipment cost)	2%			of		\$8,535	Equipment Cost			\$128
0	Office Supplies	0.50	months		x		\$100	/month			\$0
0	Communications	0.50	months		x		\$1,000	/month			\$0
0	Heating Fuel (avg. 400 gal per month)	0.50	months		x		400	gal/month x	\$ 3.23	/ gallon	\$0
0	Misc. Supplies	0.50	months		x		\$500	/month			\$0
0	Camp Operation	0	Man-days		x		\$67	per day per person			\$0
Field support											
0	Supervisor #1	20	days		x	12	hrs/day	Turnarounds	Total hours	unit	rate
0	Administrative Assistant #1	20	days		x	12	hrs/day	1	230	hr	\$ -
0	Field Support Vehicles	20	days		x	0	trucks		0	day	\$ 303.37
0	Turnaround costs - Admin	1	trips		x		\$ -				\$0
Field crew											
0	Foreman #1	3	days		x	12	hrs/day	0	34.5	hr	\$ -
0	Foreman #2	3	days		x	12	hrs/day	0	34.5	hr	\$ -
0	Foreman #3	3	days		x	12	hrs/day	0	34.5	hr	\$ -
0	Foreman #4	3	days		x	12	hrs/day	0	34.5	hr	\$ -
0	Mechanic #1	3	days		x	12	hrs/day	0	34.5	hr	\$ -
0	Mechanic #2	3	days		x	12	hrs/day	0	34.5	hr	\$ -
0	Survey Field Manager	3	days		x	12	hrs/day	0	34.5	hr	\$ -
0	Survey Crew (Surveyor + helper)	3	days		x	12	hrs/day	0	34.5	hr	\$ -
0	Field Support Vehicles	3	days		x	1	trucks				\$ 303.37
0	Turnaround costs - Crew	0	trips		x		\$ 1,192.63	/trip			\$0
Contract Administration and QA/QC											
0	Resident Engineer #1	20	days		x	12	hrs/day	1	230	hr	\$ -
0	Resident Engineer #2	20	days		x	12	hrs/day	1	230	hr	\$ -
0	Engineering Technician #1	20	days		x	12	hrs/day	1	230	hr	\$ -
0	Engineering Technician #2	20	days		x	12	hrs/day	1	230	hr	\$ -
0	Laboratory and Material Testing Costs	1	months		x		\$1,000	/month			\$0
0	Field Support Vehicles	20	days		x	1	trucks		20	day	\$ 303.37
0	Turnaround costs - QA/QC	1	trips		x		\$ -				\$0
Other											
0	Helicopter support		hours		x		\$ 1,323	/hour			\$0
0	Freight costs	12%			of		\$0	Material Costs			\$0
0	Allowance for haul road maintenance	-	yr								\$0
Subtotal Site Management Cost											\$128
CLOSURE COSTS - TOTAL											
Total direct and management costs											\$13,794

Administrative Crew size	0 Crew Size
Project duration	12.8 days + 10 for pre/post job work
Field crew assumption calculations	0 months
expected duration	0 months
Expected work hours per month per man	322 mhr/month
Total work hours for the project per man	32.2 hrs
Crew size	1 people
Camp rotation is every 30 days	2.8 days
Required supervision	
Forman 1-5 men	
Forman 1-10 men	
Forman 1-20 men	
Forman 1-30 men	

The current labor rates in use are for AlaskanContractor

Phase IV													
Area Code	Area	Activity	Description	Status	Total Mhrs	Labor Cost	Material Cost	Equipment Cost	Fuel Consumed (gal)	Fuel Cost	Activity Total	Area Subtotal	Source / Comments
CLOSURE COSTS - DIRECT													
Access Road Culverts												\$68,069	
		Demobilization/Demolition			22	1,559	17,600	2,023	1,196	1,017	22,379		
		Recontouring/Reshaping			237	16,683		21,925	7,082	33	45,691		
		Spread Growth Media											
		Enhanced recovery											
		Install											
		Monitoring											
Access Road Embankment												\$508,915	
		Demobilization/Demolition						250,603	82,079	26	476,276		
		Recontouring/Reshaping			2,034	143,594							
		Spread Growth Media											
		Enhanced recovery			33	1,957		29,249	240	518	31,446		
		Install			6	408		580	205	2	1,193		
		Monitoring											
Bridge Treatments												\$135,573	
		Demobilization/Demolition			544	36,253	56,327	35,635	6,730	2,051	134,945		
		Recontouring/Reshaping			2	162		369	97	2	628		
		Spread Growth Media											
		Enhanced recovery											
		Install											
		Monitoring											
Repeater Road												\$14,277	
		Demobilization/Demolition			40	2,407				60	2,407		
		Recontouring/Reshaping			55	3,896		4,821	1,543	4	10,260		
		Spread Growth Media											
		Enhanced recovery			2	100		1,498	12	518	1,610		
		Install											
		Monitoring											
Material Sites												\$149,532	
		Demobilization/Demolition						61,488	20,014	6	124,618		
		Recontouring/Reshaping			611	43,117							
		Spread Growth Media											
		Enhanced recovery			8	483		7,213	59	2,072	7,755		
		Install											
		Monitoring			4	30	17,130			1,325	17,159		
Transmission Line												\$1,602,134	
		Demobilization/Demolition			9,730	807,729	24,000	680,439	75,689	3,005	1,587,858		
		Recontouring/Reshaping			20	1,402		3,103	976	4	2,407		
		Spread Growth Media									10,260		
		Enhanced recovery			1	42		624	5	518			
		Install									1,610		
		Monitoring											
Subtotal Direct Costs					13,348	\$1,059,822	\$115,057	\$1,099,568	195,930	\$ 11,163	\$2,478,500	\$2,478,500	

CLOSURE COSTS - Site Management Cost											
Administration center 1 if item is required, 0 if not required										\$	132,448
0	Worker's compensation	60	Man-months	x		\$ -	per person per month				\$0
1	equip. Insurance (10% of equipment cost)	2%			of	\$1,099,568	Equipment Cost				\$16,494
0	Office Supplies	6.40	months		x		\$100 /month				\$0
0	Communications	6.40	months		x		\$1,000 /month				\$0
0	Heating Fuel (avg. 400 gal per month)	6.40	months		x		400 gal/month x \$ 3.23 / gallon				\$0
0	Misc. Supplies	6.40	months		x		\$500 /month				\$0
1	Camp Operation	1,731	Man-days		x		\$67 per day per person				\$115,955
Field support											
								Turnarounds	Total hours	unit	rate
0	Supervisor #1	190	days		x	11.5	hrs/day	14	2185	hr	\$ -
0	Administrative Assistant #1	190	days		x	11.5	hrs/day	14	2185	hr	\$ -
0	Field Support Vehicles	190	days		x	0.0	trucks		0	day	\$ 303.37
Field crew											
								Turnarounds	Total hours	unit	rate
1	Foreman #1	180	days		x	11.5	hrs/day	13	2070	hr	\$ 60.17
1	Foreman #2	180	days		x	11.5	hrs/day	13	2070	hr	\$ 60.17
0	Foreman #3	180	days		x	11.5	hrs/day	13	2070	hr	\$ -
0	Foreman #4	180	days		x	11.5	hrs/day	13	2070	hr	\$ -
1	Mechanic #1	180	days		x	11.5	hrs/day	13	2070	hr	\$ 66.95
0	Mechanic #2	180	days		x	11.5	hrs/day	13	2070	hr	\$ -
0	Survey Field Manager	180	days		x	11.5	hrs/day	13	2070	hr	\$ -
0	Survey Crew (Surveyor + helper)	180	days		x	11.5	hrs/day	13	2070	hr	\$ -
1	Field Support Vehicles	180	days		x	4.0	trucks				\$ 37.46
Contract Administration and QA/QC											
								Turnarounds	Total hours	unit	rate
0	Resident Engineer #1	190	days		x	11.5	hrs/day	14	2185	hr	\$ -
0	Resident Engineer #2	190	days		x	11.5	hrs/day	14	2185	hr	\$ -
0	Engineering Technician #1	190	days		x	11.5	hrs/day	14	2185	hr	\$ -
0	Engineering Technician #2	190	days		x	11.5	hrs/day	14	2185	hr	\$ -
0	Laboratory and Material Testing Costs	6	months		x		\$1,000 /month				\$0
0	Field Support Vehicles	190	days		x	1.0	trucks		190	day	\$ 303.37
Other											
											\$
0	Helicopter support		hours		x	\$ 1,323	/hour	x			\$0
1	Turnaround cost	14	trips		x	\$ 1,600	/trip				\$21,714
1	Freight costs	12%			of	\$115,057	Material Costs				\$13,807
0	Allowance for haul road maintenance	-	yr							\$ 10,000.00	\$0
Subtotal Site Management Cost											\$582,645
CLOSURE COSTS - TOTAL											
Total direct and management costs											\$3,061,145

Administrative Crew size	3 Crew Size
Project duration	190.0 days + 10 for pre/post job work
Field crew assumption calculations	6.3 months
expected duration	6 months
Expected work hours per month per man	345 mhr/month
Total work hours for the project per man	2,070 hrs
Crew size	6 people
Camp rotation is every 14 days	180.0 days
Required supervision	
Forman 1-5 men	
Forman 1-10 men	
Forman 1-20 men	
Forman 1-30 men	

Pogo Access Road and Transmission Line		
One year holding costs		
Security		
	lock Pogo gate	1,000
	maintain access control at TAPS during caribou and moose hunting seasons	35,000
	respond to road access issues as required	5,000
	Total	41,000

Phase	WBS	Item	Area Description	Activity	Task	Status	Quantity	Unit	Quantity	Unit	Cost Code	Unit Mhrs	Total Mhrs	Labor Rate/Unit	Labor Cost	Unit Material	Material Cost	Unit Equip.	Equipment Cost	Unit Fuel	Fuel Consumed (L)	Fuel Consumed (Gal)	Fuel Cost	Total Unit Cost	Activity Total	Source / Comments
	Access Road Culverts																								\$68,069	
Phase IV	Access Road Culverts	44		Recontouring/Reshaping	Remove culverts and restore drainage 44		4,444 cy		3398	m3	R.009	0.02	64	\$ 1.33	\$ 4,509.02	0.00	\$ -	1.744	\$ 5,925.67	\$ 1	695	593	\$ 1,914.18	\$ 3.63	\$12,349	
Phase IV	Access Road Culverts	213		Recontouring/Reshaping	Remove culverts and restore drainage 213		1,333 cy		1019	m3	R.009	0.02	19	\$ 1.33	\$ 1,352.71	0.00	\$ -	1.744	\$ 1,777.70	\$ 1	208	178	\$ 574.25	\$ 3.63	\$3,705	
Phase IV	Access Road Culverts	910		Recontouring/Reshaping	Remove culverts and restore drainage 910		1,333 cy		1019	m3	R.009	0.02	19	\$ 1.33	\$ 1,352.71	0.00	\$ -	1.744	\$ 1,777.70	\$ 1	208	178	\$ 574.25	\$ 3.63	\$3,705	
Phase IV	Access Road Culverts	961		Recontouring/Reshaping	Remove culverts and restore drainage 961		1,333 cy		1019	m3	R.009	0.02	19	\$ 1.33	\$ 1,352.71	0.00	\$ -	1.744	\$ 1,777.70	\$ 1	208	178	\$ 574.25	\$ 3.63	\$3,705	
Phase IV	Access Road Culverts	997		Recontouring/Reshaping	Remove culverts and restore drainage 997		1,333 cy		1019	m3	R.009	0.02	19	\$ 1.33	\$ 1,352.71	0.00	\$ -	1.744	\$ 1,777.70	\$ 1	208	178	\$ 574.25	\$ 3.63	\$3,705	
Phase IV	Access Road Culverts	1052		Recontouring/Reshaping	Remove culverts and restore drainage 1052		1,333 cy		1019	m3	R.009	0.02	19	\$ 1.33	\$ 1,352.71	0.00	\$ -	1.744	\$ 1,777.70	\$ 1	208	178	\$ 574.25	\$ 3.63	\$3,705	
Phase IV	Access Road Culverts	1080		Recontouring/Reshaping	Remove culverts and restore drainage 1080		1,333 cy		1019	m3	R.009	0.02	19	\$ 1.33	\$ 1,352.71	0.00	\$ -	1.744	\$ 1,777.70	\$ 1	208	178	\$ 574.25	\$ 3.63	\$3,705	
Phase IV	Access Road Culverts	1158		Recontouring/Reshaping	Remove culverts and restore drainage 1158		2,000 cy		1529	m3	R.009	0.02	29	\$ 1.33	\$ 2,029.06	0.00	\$ -	1.744	\$ 2,666.55	\$ 1	313	267	\$ 861.38	\$ 3.63	\$5,557	
	Access Road Culverts	1213		Recontouring/Reshaping	Remove culverts and restore drainage at station 1213		2,000 cy		1529	m3	R.009	0.02	29	\$ 1.33	\$ 2,029.06	0.00	\$ -	1.744	\$ 2,666.55	\$ 1	313	267	\$ 861.38	\$ 3.63	\$5,557	
Phase IV	Access Road Culverts			Demobilization/Demolition	Remove culverts to Fairbanks for recycling		22 ea		22	ea	C2.21	1.00	22	\$ 70.86	\$ 1,558.86	800.00	\$ 17,600.00	91.970	\$ 2,023.34	\$ 54	434	370	\$ 1,196.36	\$ 1,017.21	\$22,379	
	Access Road Embankment																								\$508,915	
	Access Road Embankment	AC01		Recontouring/Reshaping	Remove fill and geotextile from flat wetland fills. Grade for runoff control, install water bars as necessary, scarify or rip, and spread growth media in uplands. The Goodpaster River bridge and abutment fills will be removed.		23,515 cy		17979	m3	R.001	0.0321	578	\$ 2.25	\$ 40,503.53	0.00	\$ -	2.535	\$ 45,580.34	\$ 1	5,338	4,554	\$ 14,711.01	\$ 5.61	\$100,795	
Phase IV	Access Road Embankment	AC02		Recontouring/Reshaping	Remove fill and geotextile from flat wetland fills. Grade for runoff control, install water bars as necessary, scarify or rip, and spread growth media in uplands. Not feasible to restore wetland due to marginal hydrology.		13,455 cy		10287	m3	R.002	0.0214	220	\$ 1.51	\$ 15,533.54	0.00	\$ -	1.868	\$ 19,219.89	\$ 1	2,232	1,904	\$ 6,150.23	\$ 3.98	\$40,904	
Phase IV	Access Road Embankment	AC02		Recontouring/Reshaping	Reshape road prism where appropriate to 3:1 crossfall		20,867 cy		15954	m3	R.010	0.0094	150	\$ 0.67	\$ 10,641.72	0.00	\$ -	0.948	\$ 15,116.87	\$ 0	1,943	1,658	\$ 5,355.60	\$ 1.95	\$31,114	
	Access Road Embankment	AC03		Recontouring/Reshaping	Grade for runoff control, install water bars as necessary, scarify or rip, and spread growth media in uplands. Remove culverts and associated fill in small drainages. Not feasible to restore wetland due to marginal hydrology.		1,646 cy		1258	m3	R.003	0.00	2	\$ 0.10	\$ 122.69	0.00	\$ -	0.294	\$ 369.73	\$ 0	42	36	\$ 115.68	\$ 0.48	\$608	
Phase IV	Access Road Embankment	AC03		Recontouring/Reshaping	Reshape road prism where appropriate to 3:1 crossfall		40,951 cy		31309	m3	R.010	0.0094	295	\$ 0.67	\$ 20,884.52	0.00	\$ -	0.948	\$ 29,667.06	\$ 0	3,814	3,254	\$ 10,510.43	\$ 1.95	\$61,062	
	Access Road Embankment	AC04		Recontouring/Reshaping	Remove fill and geotextile from flat wetland fills. Grade for runoff control, install water bars as necessary, scarify or rip, and spread growth media in uplands.		2,951 cy		2256	m3	R.004	0.02	48	\$ 1.51	\$ 3,406.25	0.00	\$ -	1.868	\$ 4,214.60	\$ 1	489	418	\$ 1,348.64	\$ 3.98	\$8,969	
Phase IV	Access Road Embankment	AC05		Recontouring/Reshaping	Grade for runoff control, install water bars as necessary, scarify or rip, and spread growth media in uplands. Remove culverts and associated fill in small drainages. Not feasible to restore wetland due to marginal hydrology.		9,196 cy		7031	m3	R.005	0.00	19	\$ 0.20	\$ 1,371.25	0.00	\$ -	0.420	\$ 2,956.06	\$ 0	360	307	\$ 991.03	\$ 0.76	\$5,318	
Phase IV	Access Road Embankment	AC05		Recontouring/Reshaping	Reshape road prism where appropriate to 3:1 crossfall		20,533 cy		15699	m3	R.010	0.0094	148	\$ 0.67	\$ 10,471.73	0.00	\$ -	0.948	\$ 14,875.39	\$ 0	1,912	1,632	\$ 5,270.04	\$ 1.95	\$30,617	
Phase IV	Access Road	AC06		Recontouring/Reshaping	Remove fill and geotextile from flat wetland		18,478 cy		14127	m3	R.006	0.00	65	\$ 0.32	\$ 4,573.19	0.00	\$ -	0.698	\$ 9,858.59	\$ 0	1,307	1,115	\$ 3,602.01	\$ 1.28	\$18,034	
Phase IV	Access Road	AC07		Recontouring/Reshaping	Road will remain in place for public use.		0 cy		0	m3	R.007	0.02	0	\$ 1.51	\$ -	0.00	\$ -	1.868	\$ -	\$ 1	-	-	\$ -	\$ 3.98	\$0	
Phase IV	Access Road	RD01		Enhanced recovery	Seed Access road		150 acre		61	hec	C4.02	0.54	33	\$ 32.24	\$ 1,956.85	0.00	\$ -	481.833	\$ 29,248.64	\$ 4	87	74	\$ 240.21	\$ 518.03	\$31,446	
Phase IV	Access Road	RD01		Recontouring/Reshaping	Rip/scarify access road		484,000 cy		370045	m3	R.003	0.00	509	\$ 0.10	\$ 36,085.62	0.00	\$ -	0.294	\$ 108,744.58	\$ 0	12,345	10,534	\$ 34,024.38	\$ 0.48	\$178,855	
Phase IV	Access Road Embankment	RD01		Install	Install berm to restrict access on the before Shaw creek		800 cy		612	m3	R.010	0.01	6	\$ 0.67	\$ 407.99	0.00	\$ -	0.948	\$ 579.56	\$ 0	74	64	\$ 205.33	\$ 1.95	\$1,193	
	Bridge Treatments																								\$135,573	
Phase IV	Bridge Treatments	Bridge 1		Demobilization/Demolition	Remove Goodpaster Bridge abutments		300 cy		229	m3	R.006	0.00	1	\$ 0.32	\$ 74.25	0.00	\$ -	0.698	\$ 160.06	\$ 0	21	18	\$ 58.48	\$ 1.28	\$293	
Phase IV	Bridge Treatments	Bridge 1		Demobilization/Demolition	Remove Good paster Bridge piles		40 hr		40	hr	C1.09	2.00	80	\$ 131.03	\$ 5,241.29	0.00	\$ -	168.740	\$ 6,749.60	\$ 19	272	232	\$ 750.80	\$ 318.54	\$12,742	
Phase IV	Bridge Treatments	Bridge 2		Demobilization/Demolition	Remove Shaw Creek Bridge and transport to Fairbanks		72 ft		22	m	C2.13	3.28	72	\$ 219.38	\$ 4,814.36	400.00	\$ 8,778.24	203.268	\$ 4,460.83	\$ 42	333	284	\$ 918.00	\$ 864.48	\$18,971	
Phase IV	Bridge Treatments	Bridge 2		Recontouring/Reshaping	Remove Shaw Creek Bridge abutments		500 cy		382	m3	R.006	0.00	2	\$ 0.32	\$ 123.75	0.00	\$ -	0.698	\$ 266.77	\$ 0	35	30	\$ 97.47	\$ 1.28	\$488	
Phase IV	Bridge Treatments	Bridge 2		Demobilization/Demolition	Remove Goodpaster Bridge and transport to Fairbanks		390 ft		119	m	C2.13	3.28	390	\$ 219.38	\$ 26,077.78	400.00	\$ 47,548.80	203.268	\$ 24,162.84	\$ 42	1,804	1,539	\$ 4,972.50	\$ 864.48	\$102,762	
Phase IV	Bridge Treatments	Bridge 3		Demobilization/Demolition	Remove Gilles Creek Bridge and transport to Fairbanks		72 ft		22	m	C2.12	0.00	0	\$ 0.32	\$ 7.02	0.00	\$ -	0.857	\$ 18.82	\$ -	-	-	\$ -	\$ 1.18	\$26	
Phase IV	Bridge Treatments	Bridge 3		Demobilization/Demolition	Remove Gilles Bridge and transport to Fairbanks		390 ft		119	m	R.006	0.00	1	\$ 0.32	\$ 38.48	0.00	\$ -	0.698	\$ 82.95	\$ 0	11	9	\$ 30.31	\$ 1.28	\$152	
Phase IV	Bridge Treatments	Bridge 3		Recontouring/Reshaping	Remove Goodpaster Bridge abutments		390 ft		119	m	C2.12	0.00	1	\$ 0.32	\$ 38.00	0.00	\$ -	0.857	\$ 101.92	\$ -	-	-	\$ -	\$ 1.18	\$140	
	Repeater Road																								\$14,277	
	Repeater Road	REP01		Recontouring/Reshaping	Repeater access road. Remove fill and geotextile from flat wetland fills. Grade for runoff control, install water bars as necessary, scarify or rip, and spread growth media in uplands.		3,375 cy		2580	m3	R.007	0.02	55	\$ 1.51	\$ 3,896.22	0.00	\$ -	1.868	\$ 4,820.85	\$ 1	560	478	\$ 1,542.64	\$ 3.98	\$10,260	
Phase IV	Repeater Road	REP01		Demobilization/Demolition	Remove repeater and equipment		40 hr		40	hr	C1.08	1.00	40	\$ 60.17	\$ 2,407.00	0.00	\$ -	0.000	\$ -	\$ -	-	-	\$ -	\$ 60.17	\$2,407	estimated
Phase IV	Repeater Road	REP01		Enhanced recovery	Seed repeater road area		8 acre		3	hec	C4.02	0.54	2	\$ 32.24	\$ 100.20	0.00	\$ -	481.833	\$ 1,497.70	\$ 4	4	4	\$ 12.30	\$ 518.03	\$1,610	estimated

Phase	WBS	Item	Area Description	Activity	Task	Status	Quantity	Unit	Quantity	Unit	Cost Code	Unit Mhrs	Total Mhrs	Labor Rate/Unit	Labor Cost	Unit Material	Material Cost	Unit Equip.	Equipment Cost	Unit Fuel	Fuel Consumed (L)	Fuel Consumed (Gal)	Fuel Cost	Total Unit Cost	Activity Total	Source / Comments
	Material Sites																								\$163,198	
Phase IV	Material Sites	Site 07		Recontouring/Reshaping	Reclaim Material site 7 reshape soil slopes to a maximum 2:1		36,849	cy	28173	m3	R.009	0.02	530	\$ 1.33	\$ 37,383.90	0.00	\$ -	1.744	\$ 49,129.25	\$ 1	5,758	4,913	\$ 15,870.30	\$ 3.63	\$102,383	Assumed 50% of original area
Phase IV	Material Sites	Site 07		Enhanced recovery	Seed Material site 7		6	acre	3	hec	C4.02	0.54	1	\$ 32.24	\$ 83.49	0.00	\$ -	481.833	\$ 1,247.94	\$ 4	4	3	\$ 10.25	\$ 518.03	\$1,342	
Phase IV	Material Sites	Site 15		Recontouring/Reshaping	Reclaim Material site 15 reshape soil slopes to a maximum 2:1		9,648	cy	7376	m3	R.005	0.00	20	\$ 0.20	\$ 1,438.61	0.00	\$ -	0.420	\$ 3,101.27	\$ 0	377	322	\$ 1,039.71	\$ 0.76	\$5,580	Assumed 50% of original area
Phase IV	Material Sites	Site 15		Enhanced recovery	Seed Material site 15		12	acre	5	hec	C4.02	0.54	3	\$ 32.24	\$ 156.03	0.00	\$ -	481.833	\$ 2,332.09	\$ 4	7	6	\$ 19.15	\$ 518.03	\$2,507	
Phase IV	Material Sites	Site 16		Recontouring/Reshaping	Reclaim Material site 16 reshape soil slopes to a maximum 2:1		19,295	cy	14752	m3	R.005	0.00	41	\$ 0.20	\$ 2,877.23	0.00	\$ -	0.420	\$ 6,202.54	\$ 0	754	644	\$ 2,079.43	\$ 0.76	\$11,159	Assumed 50% of original area
Phase II	Material Sites	Site 16		Enhanced recovery	Seed Material site 16		12	acre	5	hec	C4.02	0.54	3	\$ 32.24	\$ 156.03	0.00	\$ -	481.833	\$ 2,332.09	\$ 4	7	6	\$ 19.15	\$ 518.03	\$2,507	
Phase II	Material Sites	Site 18		Recontouring/Reshaping	Reclaim Material site 18 reshape soil slopes to a maximum 2:1		17,940	cy	13716	m3	R.005	0.00	38	\$ 0.20	\$ 2,675.15	0.00	\$ -	0.420	\$ 5,766.91	\$ 0	701	599	\$ 1,933.38	\$ 0.76	\$10,375	Assumed 50% of original area
Phase IV	Material Sites	Site 18		Enhanced recovery	Seed Material site 18		12	acre	5	hec	C4.02	0.54	3	\$ 32.24	\$ 155.24	0.00	\$ -	481.833	\$ 2,320.39	\$ 4	7	6	\$ 19.06	\$ 518.03	\$2,495	
Phase IV	Material Sites	Site 23		Recontouring/Reshaping	Reclaim Material site 23 reshape soil slopes to a maximum 2:1		10,858	cy	8301	m3	R.005	0.00	23	\$ 0.20	\$ 1,619.04	0.00	\$ -	0.420	\$ 3,490.23	\$ 0	425	362	\$ 1,170.11	\$ 0.76	\$6,279	Assumed 50% of original area
Phase IV	Material Sites	Site 23		Enhanced recovery	Seed Material site 23		7	acre	3	hec	C4.02	0.54	1	\$ 32.24	\$ 87.80	0.00	\$ -	481.833	\$ 1,312.29	\$ 4	4	3	\$ 10.78	\$ 518.03	\$1,411	
Phase IV	Material Sites	Site 23		Monitoring	Annual inspection of revegation and BMP's		32	acre	13	hec	C4.04	0.30	4	\$ 2.29	\$ 29.66	1322.75	\$ 17,129.57	0.000	\$ -	\$ -	-	-	\$ -	\$ 1,325.04	\$17,159	
	Transmission Line																								\$1,594,010	
	Transmission Line	T01		Demobilization/Demolition	Remove transmission power poles (cut off at surface)including insulator and x-arms, guys, anchor removal to .5' below surface		800	ea	800	ea	C3.03	8.00	6400	\$ 653.03	\$ 522,421.41	0.00	\$ -	674.960	\$ 539,968.00	\$ 75	21,793	18,596	\$ 60,064.00	\$ 1,403.07	\$1,122,453	
Phase IV	Transmission Line	T01		Demobilization/Demolition	Remove transmission power line conductor		682,800	ft	208117	m	C3.02	0.02	3330	\$ 1.37	\$ 285,307.68	0.00	\$ -	0.675	\$ 140,470.95	\$ 0	5,669	4,838	\$ 15,625.46	\$ 2.12	\$441,404	
Phase IV	Transmission Line	T01		Recontouring/Reshaping	Remove fill from wetlands in transmission footprint		548	cy	419	m3	R.008	0.02	9	\$ 1.51	\$ 632.54	0.00	\$ -	1.868	\$ 782.65	\$ 1	91	78	\$ 250.44	\$ 3.98	\$1,666	
Phase IV	Transmission Line	T01		Recontouring/Reshaping	Rips/scarify disturbance for transmission line removal		10,325	cy	7894	m3	R.003	0.00	11	\$ 0.10	\$ 769.83	0.00	\$ -	0.294	\$ 2,319.88	\$ 0	263	225	\$ 725.85	\$ 0.48	\$3,816	Assumed 10% of the area will
Phase IV	Transmission Line	T01		Enhanced recovery	Seed disturbance from transmission line removal		3.2	acre	1	hec	C4.02	0.54	1	\$ 32.24	\$ 41.75	0.00	\$ -	481.833	\$ 623.97	\$ 4	2	2	\$ 5.12	\$ 518.03	\$671	
Phase IV	Transmission Line	T01		Demobilization/Demolition	Haul transmission poles and line oriole to Fairbanks		15	ea	15	ea	C5.01	0.00	0	\$ -	\$ -	1600.00	\$ 24,000.00	0.000	\$ -	\$ -	-	-	\$ -	\$ 1,600.00	\$24,000	
Costs												23.57	13391	\$ 1,644.34	\$ 1,062,854.84	2922.75	\$91,056.61	5238.14	\$ 1,108,102.42	\$ 276	71851	61309	\$198,028.11	\$ 10,081.64	\$2,484,042	

Table 16. Access Road Restoration

Sec.	Description	Station	Wetland Fill (yd³)	Wetland Acres		assumed depth	removal cy	Rip/scarify area cy	Created	Reclamation Comments
				Disturbed	Restored					
AC01	Goodpaster River Fl	0 to 65	23,515	3.9	3.9		23,515.0		0.0	Remove fill and geotextile from flat wetland fills. Grade for runoff control, install water bars as necessary, scarify or rip, and spread growth media in uplands. The Goodpaster River bridge and abutment fills will be removed. Areas included in road footprint
	Goodpaster River Flats - Wood Slash		3,627							
AC02	Wolverine Creek Fla	65 to 378	40,622	39.9	1.4	6	13,455	124,162	0.0	Remove fill and geotextile from flat wetland fills. Grade for runoff control, install water bars as necessary, scarify or rip, and spread growth media in uplands. Not feasible to restore wetland due to marginal hydrology. Areas included in road footprint
	Wolverine Creek Flats - Wood Slash		59,874							
AC03	Ridge Top	378 to 920	61,016	14.6	0.2	6	1,646	46,593	0.0	Grade for runoff control, install water bars as necessary, scarify or rip, and spread growth media in uplands. Remove culverts and associated fill in small drainages. Not feasible to restore wetland due to marginal hydrology. Areas included in road footprint
	Ridge Top - Wood Slash		21,793							
AC04	Shaw Creek Flats	920 to 927	2,951	0.9	0.9		2,950.5	0	0.0	Remove fill and geotextile from flat wetland fills. Grade for runoff control, install water bars as necessary, scarify or rip, and spread growth media in uplands. Areas included in road footprint
	Shaw Creek Flats - Wood Slash		0							
AC05	Upper Shaw Creek F	927 to 1389	19,295	4.1	1.3	6	12,294	9,196	0.0	Grade for runoff control, install water bars as necessary, scarify or rip, and spread growth media in uplands. Remove culverts and associated fill in small drainages. Not feasible to restore wetland due to marginal hydrology. Areas included in road footprint
	Upper Shaw Creek Dunes - Wood Slash		8,315							
AC06	Gilles Creek Flats	1389 to 1409	18,478	2.7	2.7		18,478.0		0.0	Remove fill and geotextile from flat wetland fills. Areas included in road footprint
	Gilles Creek Flats - Wood Slash		0							
AC07	Gilles Creek to Shaw	1409 to 2623	76,172	16.7	0.0		0.0	0	0.0	Road will remain in place for public use. Areas included in road footprint
	Gilles Creek to Shaw Creek Road - Wood		36,209							
Subtotal			392,430	86.0	10.3				0.0	

Table 15. Shaw Creek Hillside Road - Drainage Structures

ID	Basin Information			Flows			Drainage Structure	Erosion Control	Fill removal associated with each culvert	Assumed Depth
	Drainage Name	Mileage at Intersection Sta. (ft)	Drainage Area (mi ²)	Q2 (cfs)	Q50 (cfs)	Q100 (cfs)	Bridge Concept	Culvert Concept ¹	Footprint of Projected Area ² (ft ²)	
Bridge 4	Rosa Creek 1	2635+00	15.5	200	795	934	65' span			
		2600+75	2.5	40	200		(3) 48"		3,600	
	Rosa Creek 2	2567+90	13.8	180	710	834	65' span			
	West Fork Keystone	2388+40	11.8	160	630	742	65' span			
		2348+00	0.4	10	50		(1) 48"		1,200	
		2314+00	3.5	60	250		(4) 48"		4,800	
		2271+60	2.2	40	170		(3) 48"		3,600	
		2252+00	0.8	20	80		(2) 48"		2,400	
		2186+60	0.7	20	80		(2) 48"		2,400	
	Caribou Creek	2040+80	24.8	300	1,110	1,285	72' span			
Bridge 3		1910+00	1.9	40	160		(3) 48"		3,600	
		1638+50	8.7	110	480		(8) 48"		9,600	
	Gilles Creek	1404+30	42.0	430	1,570	1,820	65' span			
	1213	1213+10	2.0	40	160		(3) 48"		3,600	2,00015
	1158	1158+60	2.3	40	170		(3) 48"		3,600	2,00015
	1080	1080+30	0.7	20	80		(2) 48"		2,400	1,33315
	1052	1052+50	1.5	30	130		(2) 48"		2,400	1,33315
	997	997+30	1.3	30	130		(2) 48"		2,400	1,33315
	961	961+30	1.0	20	80		(2) 48"		2,400	1,33315
	910	Shaw Creek	910+68	510	1,830	2,115	72' span			
Bridge 2	Wolverine Creek	288+70	1.7	30	130		(2) 48"		2,400	1,33315
	213	213+60	1.0	20	90		(2) 48"		2,400	1,33315
	44	44+00	4.0	69	285		(4) 48"		4,800	4,44425
Bridge 1	Goodpaster River	11+95	677.0	5,800	14,500	16,000	6 ea 65' span			

1. Additional culverts will be installed in small drainages as required.
2. Inlet and outlet protection will be installed where necessary to minimize undue erosion of the natural ground surface, ditches, or road embankment.

Table 17. Material Sites Footprint

ID	Access Road Station	Fill (yd ³)	Total Acres Disturbed	Any portion Jurisdictional?	Construction Comments
Site 03	Sta 2494 to 2501	25,617	15.9	Yes	Material site encompasses a gently sloping sand terrace. Site is approx. 875' x 1,000'. Approx 100,000 cy to be mined.
Site 05	Sta 2320 to 2335	208,090	25.8	No	Quarry site with outcrop of gneiss. Approx. 130' of elevation relief. Site is approx. 1,050' x 1,350'. Approx 150,000 cy to be mined.
Site 06	Sta 2083 to 2088	144,369	17.9	No	Quarry site with outcrop of gneiss. Approx. 150' of elevation relief. Site is approx. 775' x 1,275'. Approx 100,000 cy to be mined.
Site 07	Sta 2098 to 2120	184,174	22.8	No	Quarry site with outcrop of gneiss. Approx. 150' of elevation relief. Site is approx. 950' x 1,350'. Approx 150,000 cy to be mined.
Site 08	Sta 1998 to 2005	10,329	6.4	No	Eolian sand deposit with thin blanket of loess. Gentle slope to the southeast. Site is approx. 450' x 675'. Approx 45,000 cy to be mined.
Site 09	Sta 1905 to 1910	43,987	5.5	No	Eolian sand deposit. Site is approx. 475' x 550'. Approx 45,000 cy to be mined.
Site 15	Sta 964 to 970	9,647	6.0	No	Eolian sand deposit with thin blanket of loess. Gentle slope to the southeast. Site is approx. 550' x 650'. Approx 85,000 cy to be mined.
Site 16	Sta 902 to 909	96,447	12.0	Yes	Quarry site with outcrop paragneiss. Site is approx. 750' x 875'. Approx 100,000 cy to be mined.
Site 18	Sta 532 to 545	71,799	11.1	Yes	Quarry site with outcrop of orthogneiss. Site is approx. 550' x 1,250'. Approx. 200,000 cy to be mined.
Site 19	Sta 488 to 500	76,866	11.9	Yes	Quarry site with outcrop of orthogneiss. Site is approx. 650' x 1,175'. Approx. 160,000 cy to be mined.
Site 20	Sta 274 to 281	42,858	5.3	No	Quarry site on steep slope with thin soil cover and rubble crop. Site is approx. 375' x 675'. Approx. 45,000 cy to be mined.
Site 23	Sta 14 to 17	54,206	6.7	Yes	Quarry on steep slope with outcrop of orthogneiss. Site is approx. 625' x 750'. Approx. 60,000 cy to be mined.
Subtotal		1,366,128	218.5		

Table 18. Material Sites Restoration

ID	Access Road Station	Wetland Fill (yd³)	Wetland Acres			Comments
			Disturbed	Restored	Created	
Site 07	Sta 2098 to 2120	184,174	0.0	0.0	0.0	Site will be shaped to a maximum 2:1 slope and spread with overburden.
Site 15	Sta 964 to 970	9,647	6.0	0.0	0.0	Soil slopes will be shaped to a maximum 2:1 slope and spread with overburden. Rock slopes will remain benched.
Site 16	Sta 902 to 909	50,676	3.0	0.0	0.0	Soil slopes will be shaped to a maximum 2:1 slope and spread with overburden. Rock slopes will remain benched.
Site 18	Sta 532 to 545	3,917	0.6	0.0	0.0	Soil slopes will be shaped to a maximum 2:1 slope and spread with overburden. Rock slopes will remain benched.
Site 23	Sta 14 to 17	13,154	0.3	0.0	0.0	Soil slopes will be shaped to a maximum 2:1 slope and spread with overburden. Rock slopes will remain benched.
Subtotal		136,148	10.4	0.0	0.0	

Table 30. Transmission Line Structures and Construction Footprint Restoration

Sec.	Station	Wetland Fill (yd³)	Wetland Acres			Reclamation Comments
			Disturbed	Restored	Created	Removed cy
1	00 to 65	445	0.4	0.4	0.0	444.6 Poles cut to ground level. Anchors trimmed below ground level. Significant disturbances will be graded for runoff control. Fill will be removed from wetlands.
2	65 to 236	3,969	2.2	0.0	0.0	Poles cut to ground level. Anchors trimmed below ground level. Significant disturbances will be graded for runoff control. Access stubs will be graded for runoff control, ripped or scarified, and spread with growth media.
3	236 to 258	10	0.0	0.0	0.0	Poles cut to ground level. Anchors trimmed below ground level. Significant disturbances will be graded for runoff control. Access stubs will be graded for runoff control, ripped or scarified, and spread with growth media.
4	258 to 777	1,304	2.1	0.0	0.0	Poles cut to ground level. Anchors trimmed below ground level. Significant disturbances will be graded for runoff control. Access stubs will be graded for runoff control, ripped or scarified, and spread with growth media.
5	777 to 801	83	0.1	0.1	0.0	83.3 Poles cut to ground level. Anchors trimmed below ground level. Significant disturbances will be graded for runoff control. Fill will be removed from wetlands.
6	801 to 1695	170	0.1	0.0	0.0	Poles cut to ground level. Anchors trimmed below ground level. Significant disturbances will be graded for runoff control. Access stubs will be graded for runoff control, ripped or scarified, and spread with growth media.
7	1695 to 1740	10	1.6	1.6	0.0	10.0 Poles cut to ground level. Anchors trimmed below ground level. Significant disturbances will be graded for runoff control. Fill will be removed from wetlands.
9	1775 to 1895	10	0.7	0.7	0.0	10.0 Poles cut to ground level. Anchors trimmed below ground level. Significant disturbances will be graded for runoff control. Fill will be removed from wetlands.
10	1895 to 2276	379	0.5	0.0	0.0	Poles cut to ground level. Anchors trimmed below ground level. Significant disturbances will be graded for runoff control. Access stubs will be graded for runoff control, ripped or scarified, and spread with growth media.
Subtotal		6,380	7.7	2.8	0.0	

Repeater Access Road

Segment	JDWET_CODE	Cut/Fill Area			Fill Volume		Comments
		Total (ft²)	Total (acres)	Wetlands (acres)	Total (yd³)	Wetlands (yd³)	
1	U_25	397.28	0.01	0.00	19.00	4.75	Within SCHR cut/fill boundary
2	W	21.06	0.00	0.00	1.01	1.01	Within SCHR cut/fill boundary
3	U_25	3.20	0.00	0.00	0.15	0.04	Cut/fill road construction - to be reclaimed
4	W	5250.83	0.12	0.12	251.10	251.10	Overlay road construction - to be restored
5	U_25	3748.76	0.09	0.02	179.27	44.82	Cut/fill road construction - to be reclaimed
6	U_10	46976.62	1.08	0.11	2246.49	224.65	Cut/fill road construction - to be reclaimed
7	U_25	4767.65	0.11	0.03	228.00	57.00	Cut/fill road construction - to be reclaimed
8	U_25	45709.62	1.05	0.26	2185.90	546.47	Cut/fill road construction - to be reclaimed
9	U	77390.70	1.78	0.00	3700.93	0.00	Cut/fill road construction - to be reclaimed
10	U_10	229.55	0.01	0.00	10.98	1.10	Cut/fill road construction - to be reclaimed
11	W_40	78207.13	1.80	1.08	3739.97	2243.98	Cut/fill road construction - to be reclaimed
12	U	71876.19	1.65	0.00	3437.22	0.00	Cut/fill road construction - to be reclaimed
Total:		7.68	1.62	16000.00	3374.92		

Table 20. Site Management Cost Inputs

Cost Code	Category	Rate Used in Estimate	Unit	Source/Comments
A.01	Camp Operation	\$67.00	USD/day/man	ESS
A.02	Communications	\$1,000	Month	Assuming Iridium phone
A.03	Freight	12%		Of Material Costs
A.04	Heating Fuel	400	gal/month	
A.05	Equipment Insurance	2%		Of Equipment Costs
A.06	Laboratory/Material Testing	\$1,000.00	Month	Estimated
A.07	Misc. Admin Supplies	\$500.00	Month	Estimated
A.08	Office Supplies	\$100.00	Month	Estimated
A.09	Turnaround Costs	\$1,600.00	USD/trip	By Bus This includes round trip in and out for 50 passengers to Delta Junction
A.10	Workers' Compensation	\$0.00	USD/person/month	This cost is included in the labor rate.

Table 18. Relocation Unit Costs

Relocation Tables

								Productivities			Unit Rates					
Cost Code	Area	Activity	Material	Source	Area used Code	Destination	Code	Loose (LCY³/hr)	Loose (Lm³/hr)	Bank (Bm³/hr)	Total Loose Unit Rate (\$/Lm3)	Total Bank Unit Rate (\$/Bm3)	Man-hours (hrs/Bm3)	Labor Cost (\$/Bm3)	Equipment Cost (\$/Bm3)	Fuel Cost (\$/Bm3)
R.001	Remove fill from wetlands from section 1	Load, haul, dump, place	Sand & Gravel	AC01	AC01	Material site 23		270	206.1	186.7	\$5.08	\$5.61	0.032	\$ 2.25	\$ 2.54	\$ 0.82
R.002	Remove fill from wetlands from section 2	Load, haul, dump, place	Sand & Gravel	AC02	AC02	Road embankment		270	206.1	186.7	\$3.60	\$3.98	0.021	\$ 1.51	\$ 1.87	\$ 0.60
R.003	General	Ripping/scarifying	Sand & Gravel	General	AC03	In place		2098	1604.3	1453.2	\$0.44	\$0.48	0.001	\$ 0.10	\$ 0.29	\$ 0.09
R.004	Remove fill from wetlands from section 3	Load, haul, dump, place	Sand & Gravel	AC04	AC04	Material site 15		270	206.1	186.7	\$3.60	\$3.98	0.021	\$ 1.51	\$ 1.87	\$ 0.60
R.005	General	Ripping/scarifying	Sand & Gravel	General	AC05	In place		1049	802.2	726.6	\$0.69	\$0.76	0.003	\$ 0.20	\$ 0.42	\$ 0.14
R.006	general excavator reshaping/culvert removal	Reshaping (cut/fill)	Sand & Gravel	Access road		MS 11 - Gilles Creek		632	483.3	437.8	\$1.16	\$1.28	0.005	\$ 0.32	\$ 0.70	\$ 0.25
R.007	Reshape repeater road	Load, haul, dump, place	Sand & Gravel	Repeater road		In place		270	206.1	186.7	\$3.60	\$3.98	0.021	\$ 1.51	\$ 1.87	\$ 0.60
R.008	Remove fill from wetlands from Transmission line area	Load, haul, dump, place	Sand & Gravel	Transmission line		Closes sidehill cut		270	206.1	186.7	\$3.60	\$3.98	0.021	\$ 1.51	\$ 1.87	\$ 0.60
R.009	Remove culvert and restore drainage	Load, haul, dump, place	Sand & Gravel	General	Access Road Culverts	Short haul (1000')		307	234.5	212.5	\$3.29	\$3.63	0.019	\$ 1.33	\$ 1.74	\$ 0.56
R.010	Reshape embankment cut/fill for 3:1 cross slope	General cut/fill	Sand & Gravel	General				307	234.5	212.5	\$1.77	\$1.95	0.009	\$ 0.67	\$ 0.95	\$ 0.34

Table 18.

	Loader					Excavator					Truck					Dozer 1				
Cost Code	Qty	Model	Equipment Rate (\$/hr)	Fuel Cost (\$/hr)	Operator Wage (\$/hr)	Qty	Model	Equipment Rate (\$/hr)	Fuel Cost (\$/hr)	Operator Wage (\$/hr)	Qty	Model	Equipment Rate (\$/hr)	Fuel Cost (\$/hr)	Operator Wage (\$/hr)	Qty	Model	Equipment Rate (\$/hr)	Fuel Cost (\$/hr)	Operator Wage (\$/hr)
R.001						1	CAT 345 L	\$91.97	\$35.61	\$70.86	3	CAT 740	\$84.59	\$24.18	\$70.10	1	CAT D7R	\$87.67	\$27.65	\$70.86
R.002						1	CAT 345 L	\$91.97	\$35.61	\$70.86	2	CAT 740	\$84.59	\$24.18	\$70.10	1	CAT D7R	\$87.67	\$27.65	\$70.86
R.003																2	CAT D10	\$213.53	\$66.81	\$70.86
R.004						1	CAT 345 L	\$91.97	\$35.61	\$70.86	2	CAT 740	\$84.59	\$24.18	\$70.10	1	CAT D7R	\$87.67	\$27.65	\$70.86
R.005						1	CAT 345 L	\$91.97	\$35.61	\$70.86						1	CAT D10	\$213.53	\$66.81	\$70.86
R.006						1	CAT 365 L	\$91.97	\$44.81	\$70.86						1	CAT D10	\$213.53	\$66.81	\$70.86
R.007						1	CAT 345 L	\$91.97	\$35.61	\$70.86	2	CAT 740	\$84.59	\$24.18	\$70.10	1	CAT D7R	\$87.67	\$27.65	\$70.86
R.008						1	CAT 345 L	\$91.97	\$35.61	\$70.86	2	CAT 740	\$84.59	\$24.18	\$70.10	1	CAT D7R	\$87.67	\$27.65	\$70.86
R.009						1	CAT 345 L	\$91.97	\$35.61	\$70.86	2	CAT 740	\$84.59	\$24.18	\$70.10	1	CAT D8T	\$109.34	\$35.71	\$70.86
R.010						1	CAT 345 L	\$91.97	\$35.61	\$70.86						1	CAT D8T	\$109.34	\$35.71	\$70.86

Table 18.

						Production calculations										Haul Route Information					
						Truck Production rate		Dozer 1 Production		Loader Production		Compactor Production		Excavator Production		Total travel time	Segment 1	Segment 2	Segment 3	General short	Load&Dump, Maneuver
Cost Code	Qty	Model	Equipment Rate (\$/hr)	Fuel Cost (\$/hr)	Operator Wage (\$/hr)	LHD LCy/hr	m³/hr	Cy/hr	m³/hr	Cy/hr	m³/hr	Sy/hr	m²/hr	Cy/hr	m³/hr		Round trip (min)	Round trip (min)	Round trip (min)	Round trip (min)	per Trip (min)
R.001	1	CAT CP563	\$39.93	\$16.97	\$68.60	1,875	1,431	270	206			1,174	897	549	420	7.4	2.4			5	
R.002	0	CAT CP563	\$39.93	\$16.97	\$68.60	1,100	840	270	206			1,174	897	549	420	7.7		2.7		5	
R.003								1,264	967							0.0					
R.004	0	CAT CP563	\$39.93	\$16.97	\$68.60	769	587	270	206			1,174	897	549	420	8.9			3.9	5	
R.005								632	483					549	420	0.0					
R.006	0	CAT CP563	\$39.93	\$16.97	\$68.60			632	483			1,174	897	533	407	0.0					
R.007	0	CAT CP563	\$39.93	\$16.97	\$68.60	682	520	270	206			1,174	897	549	420	9.4			4.4	5	
R.008	0	CAT CP563	\$39.93	\$16.97	\$68.60	682	520	270	206			1,174	897	549	420	9.4			4.4	5	
R.009	0	CAT CP563	\$39.93	\$16.97	\$68.60	682	520	307	235			1,174	897	549	420	9.4			4.4	5	
R.010	0	CAT CP563	\$39.93	\$16.97	\$68.60			307	235			1,174	897	549	420	0.0					

Table 17. Unit Rate Inputs

A. Equipment Rates

Adjustment Factors									
Adjustment Factor for ownership/maintenance cost vs Blue Book				1.00					
Equipment Rates Used:				AlaskanContractor					
Exchange Rate: 1USD =				1.000		CAD			
Include Operator?				No		Avg. Wage (\$/hr)			
Include Equipment Owner Overhead?				No		Owner OH Rate:			
Include Equipment Owner Profit?				No		Profit rate:			
Include Fuel Cost?				No		Fuel Cost pe liter:			
						Fuel (USD/g)			
						\$ 3.23			

Model	HP	Operator Details		Rates Used in Estimate				Cominco Equipment Rate Breakdown			Contractor Cost Breakdown							2006 BC Blue Book Cost Breakdown							Preferred
		# of Operators	Operator Type	Operator Rate (US \$/hr)	Equipment Rate (US \$/hr)	Fuel Rate (US \$/hr)	Equipment Rate Source	TC Equipment Rate (USD/hr)	Fuel Operating Cost (USD/hr) ⁽⁴⁾	Equipment Rate (incl. repairs) (USD/hr)	NC Machinery Rental Rates 2006 ⁽¹⁾ (USD/hr)	Ownership Cost (USD/hr)	Maintenance/Repair Cost (USD/hr) ⁽³⁾	Rental+Maintenance/Repair Cost (\$/hr)	Fuel Operating Cost (\$/hr)	Overhead Cost (USD/hr)	Profit (USD/hr)	BC Blue Book Rate 2006 (CAD/hr)	BC Blue Book Rate 2006 (CAD/hr)	Ownership/ Maintenance Cost (USD/hr)	Operators Wage 2006 (USD/hr)	Fuel Operating Cost 2006 (USD/hr)	Contractor Overhead Cost (USD/hr)	Contractor Profit (USD/hr)	
Compactor																									
CAT CP563	153	1	Power Equipment Operator - Group 3	\$68.60	\$39.93	\$16.97	SOA 2009 Rate				\$29.75	\$24.34	\$2.98	\$32.73	\$16.97	\$2.70	\$2.70	\$96.90	\$102.71	\$76.04	\$6.86	\$1.99	\$8.49	\$9.34	
Sheepsfoot (72 in, 2 drums)	0	0																							
Walk-behind vibrating (30 in)	12	1	Laborers - Group 1	\$60.17	\$3.72	\$1.33	SOA 2009 Rate				\$4.50	\$3.68	\$0.45	\$4.95	\$1.33	\$0.41	\$0.41	\$36.60	\$38.80	\$25.89	\$6.02	\$0.16	\$3.21	\$3.53	
Dozer																									
D6N LGP	140	1	Power Equipment Operator - Group 1	\$70.86	\$46.80	\$16.13	Alaskan Contractor				\$39.00	\$31.91	\$7.80	\$46.80	\$16.13	\$3.55	\$3.55	\$176.95	\$187.57	\$146.04	\$7.09	\$1.89	\$15.50	\$17.05	
CAT D7R	240	1	Power Equipment Operator - Group 1	\$70.86	\$87.67	\$27.65	SOA 2009 Rate				\$72.50	\$59.32	\$14.50	\$87.00	\$27.65	\$6.59	\$6.59	\$177.95	\$188.63	\$145.56	\$7.09	\$3.24	\$15.59	\$17.15	
CAT D8T	310	1	Power Equipment Operator - Group 1	\$70.86	\$109.34	\$35.71	SOA 2009 Rate				\$90.00	\$73.64	\$18.00	\$108.00	\$35.71	\$8.18	\$8.18	\$207.80	\$220.27	\$170.76	\$7.09	\$4.19	\$18.20	\$20.02	
CAT D9T	410	1	Power Equipment Operator - Group 1	\$70.86	\$157.27	\$47.23	SOA 2009 Rate				\$135.00	\$110.45	\$27.00	\$162.00	\$47.23	\$12.27	\$12.27	\$272.45	\$288.80	\$226.05	\$7.09	\$5.54	\$23.87	\$26.25	
CAT D10	580	1	Power Equipment Operator - Group 1	\$70.86	\$213.53	\$66.81	SOA 2009 Rate				\$180.00	\$147.27	\$36.00	\$216.00	\$66.81	\$16.36	\$16.36	\$345.10	\$365.81	\$287.40	\$7.09	\$7.83	\$30.23	\$33.26	
CAT D11	850	1	Power Equipment Operator - Group 1	\$70.86	\$375.22	\$97.91	SOA 2009 Rate											\$392.80	\$416.37	\$325.54	\$7.09	\$11.48	\$34.41	\$37.85	
Drill																									
Air track rig (900cfm)	215	2	Power Equipment Operator - Group 1	\$70.86	\$85.18	\$23.85	SOA 2009 Rate											\$234.05	\$248.09	\$195.15	\$7.09	\$2.80	\$20.50	\$22.55	
Air Rotary, 200 cfm compressor	196	2	Power Equipment Operator - Group 1	\$70.86	\$107.64	\$21.74	SOA 2009 Rate											\$302.45	\$320.60	\$255.32	\$7.09	\$2.55	\$26.50	\$29.15	
Excavator																									
CAT 330 L	247	1	Power Equipment Operator - Group 1	\$70.86	\$56.45	\$27.40	SOA 2009 Rate				\$59.50	\$48.68	\$5.95	\$65.45	\$27.40	\$5.41	\$5.41	\$151.50	\$160.59	\$122.42	\$7.09	\$3.21	\$13.27	\$14.60	
CAT 365 L	404	1	Power Equipment Operator - Group 1	\$70.86	\$91.97	\$44.81	SOA 2009 Rate				\$110.00	\$90.00	\$11.00	\$121.00	\$44.81	\$10.00	\$10.00	\$246.45	\$261.24	\$203.56	\$7.09	\$5.25	\$21.59	\$23.75	
CAT 345 L	321	1	Power Equipment Operator - Group 1	\$70.86	\$91.97	\$35.61	SOA 2009 Rate				\$77.50	\$63.41	\$7.75	\$85.25	\$35.61	\$7.05	\$7.05	\$227.65	\$241.31	\$188.17	\$7.09	\$4.17	\$19.94	\$21.94	
CAT 330 Grapple	247	1	Power Equipment Operator - Group 1	\$70.86	\$110.36	\$27.40	SOA 2009 Rate				\$71.50	\$58.50	\$7.15	\$78.65	\$27.40	\$6.50	\$6.50	\$246.85	\$261.66	\$205.95	\$7.09	\$3.21	\$21.62	\$23.79	
CAT 330 Hammer	247	1	Power Equipment Operator - Group 1	\$70.86	\$149.90	\$27.40	SOA 2009 Rate				\$120.75	\$98.80	\$12.08	\$132.83	\$27.40	\$10.98	\$10.98	\$261.75	\$277.46	\$219.01	\$7.09	\$3.21	\$22.93	\$25.22	
CAT 330 Shear	247	1	Power Equipment Operator - Group 1	\$70.86	\$133.09	\$27.40	SOA 2009 Rate				\$120.75	\$98.80	\$12.08	\$132.83	\$27.40	\$10.98	\$10.98	\$254.95	\$270.25	\$213.05	\$7.09	\$3.21	\$22.33	\$24.57	
Grader																									
CAT 16H	220	1	Power Equipment Operator - Group 1	\$70.86	\$80.33	\$26.28	SOA 2009 Rate				\$114.00	\$93.27	\$11.40	\$125.40	\$26.28	\$10.36	\$10.36	\$151.00	\$160.06	\$122.12	\$7.09	\$3.08	\$13.23	\$14.55	
Lifting																									
Crane (Cable Boom), 100T	220	1	Power Equipment Operator - Group 1A	\$73.52	\$168.74	\$18.77	SOA 2009 Rate				\$86.00	\$70.36	\$10.00	\$96.00	\$18.77	\$7.82	\$7.82	\$289.65	\$307.03	\$244.19	\$7.35	\$2.20	\$25.37	\$27.91	
Crane (Cable Boom), 150T	220	1	Power Equipment Operator - Group 1A	\$73.52	\$236.93	\$18.77	SOA 2009 Rate				\$330.00	\$270.00	\$33.00	\$363.00	\$18.77	\$30.00	\$30.00	\$381.00	\$403.86	\$324.22	\$7.35	\$2.20	\$33.38	\$36.71	
Forklift CAT 924G	114	1	Power Equipment Operator - Group 3	\$68.60	\$21.84	\$9.73	SOA 2009 Rate				\$18.00	\$14.73	\$1.80	\$19.80	\$9.73	\$1.64	\$1.64	\$98.95	\$104.89	\$78.68	\$6.86	\$1.14	\$8.67	\$9.54	
Loader																									
CAT 966H	0	1	Power Equipment Operator - Group 1	\$70.86	\$70.12	\$0.00	SOA 2009 Rate				\$58.75	\$48.07	\$8.81	\$67.56	\$0.00	\$5.34	\$5.34	\$147.75	\$156.62	\$122.35	\$7.09	\$0.00	\$12.94	\$14.24	
CAT 980H	0	1	Power Equipment Operator - Group 1A	\$73.52	\$90.20	\$0.00	SOA 2009 Rate				\$79.98	\$65.43	\$12.00	\$91.97	\$0.00	\$7.27	\$7.27	\$243.15	\$257.74	\$205.66	\$7.35	\$0.00	\$21.30	\$23.43	
CAT 988H	0	1	Power Equipment Operator - Group 1A	\$73.52	\$128.82	\$0.00	SOA 2009 Rate				\$105.00	\$85.91	\$15.75	\$120.75	\$0.00	\$9.55	\$9.55	\$343.00	\$363.58	\$293.13	\$7.35	\$0.00	\$30.05	\$33.05	
Truck																									
Light Truck (3/4T) 4x2	200	1	Truck Drivers - Group 5	\$65.07	\$26.38	\$11.08	SOA 2009 Rate																		
CAT 735	317	1	Truck Drivers - Group 1	\$70.10	\$84.59	\$17.58	SOA 2009 Rate				\$70.00	\$57.27	\$7.00	\$77.00	\$17.58	\$6.36	\$6.36	\$163.00	\$172.78	\$133.72	\$7.01	\$2.06	\$14.28	\$15.71	
CAT 740	436	1	Truck Drivers - Group 1	\$70.10	\$84.59	\$24.18	SOA 2009 Rate				\$83.75	\$68.52	\$8.38	\$92.13	\$24.18	\$7.61	\$7.61	\$163.00	\$172.78	\$132.95	\$7.01	\$2.83	\$14.28	\$15.71	
CAT 777D	938	1	Truck Drivers - Group 1A	\$71.98	\$189.79	\$52.02	SOA 2009 Rate											\$268.70	\$284.82	\$222.09	\$7.20	\$6.10	\$23.54	\$25.89	

1. Hourly rate for a monthly rental based on 10 hour shifts.

2. Price increase of 6% based on average increase in equipment costs noted from BC BlueBook between 2004 and 2006.

3. Minor Maintenance costs not otherwise included in third party rental rates, i.e. ground engaging tools, lubricants, routine preventative maintenance, minor repairs.

Misc. Equipment	Rate (USD/hr)	Est. Fuel Rate	Source
Crusher (200 Tons/hr)	\$2,638		Quote from Brice, note: fuel consumption was estimated
Helicopter	\$1,322.75		Estimated
Hydro-seeder truck	\$121.00		Estimated
Spreader: Dozer attachment (3m width)	\$4.28		BCBlue book 2005-06
Screen Plant (200 Tons/hr)	\$107.00		Estimated

B. Labor Rates

a. Labor Rates				0.2516					0.21									
				Contractor Labor Rates					Teck Cominco Labor Rates									
Cost Code	Category	Rate Used in Estimate	Unit	Basic Hourly Rate	Fringes	Over time	burden	Contractor Total Unit Cost	Basic Hourly Rate	Loading Rate (102.11%)	Teck Cominco Unit Cost	Alaska Labor Code	Contractor Source					
P.01	Laborers Group 1	\$60.17	USD/hr	\$28.74	\$16.65	\$7.23	\$7.55	\$60.17	\$17.13	\$17.49	\$34.62	N1201	See reference					
P.02	Carpenter (journeyman)	\$70.69	USD/hr	\$34.33	\$18.70	\$8.64	\$9.02	\$70.69	\$28.96	\$29.57	\$58.53	N0301	See reference					
P.03	Electrician	\$89.73	USD/hr	\$44.60	\$22.19	\$11.22	\$11.72	\$89.73	\$36.20	\$30.55	\$66.75	A0704	See reference					
P.04	Engineer	\$115.87	USD/hr	\$60.00	\$25.00	\$15.10	\$15.77	\$115.87	\$36.20	\$30.55	\$66.75		Estimated					
P.05	Engineering Technician	\$76.11	USD/hr	\$42.00	\$12.50	\$10.57	\$11.04	\$76.11	\$34.56	\$29.16	\$63.73		Estimated					
P.06	Foreman	\$75.58	USD/hr	\$40.00	\$15.00	\$10.06	\$10.51	\$75.58	\$37.50	\$31.64	\$69.14		Prior contract pricing					
P.07	Environmental Laborer	\$60.17	USD/hr	\$28.74	\$16.65	\$7.23	\$7.55	\$60.17	\$21.41	\$18.07	\$39.48	N1201	See reference					
P.08	Health and Safety Supervisor	\$75.58	USD/hr	\$40.00	\$15.00	\$10.06	\$10.51	\$75.58	\$27.65	\$23.33	\$50.98		Prior contract pricing					
P.09	Laborers - Group 1	\$60.17	USD/hr	\$28.74	\$16.65	\$7.23	\$7.55	\$60.17	\$21.41	\$18.07	\$39.48	N1201	See reference					
P.10	Laborers - Group 2	\$61.58	USD/hr	\$29.67	\$16.65	\$7.46	\$7.80	\$61.58	\$24.63	\$20.78	\$45.40	N1202	See reference					
P.11	Laborers - Group 3	\$62.84	USD/hr	\$30.50	\$16.65	\$7.67	\$8.02	\$62.84	\$29.26	\$24.69	\$53.95	N1203	See reference					
P.12	Laborers - Group 3A	\$67.41	USD/hr	\$33.52	\$16.65	\$8.43	\$8.81	\$67.41	\$17.13	\$14.45	\$31.58	N1204	See reference					
P.13	Laborers - Group 4	\$45.62	USD/hr	\$19.13	\$16.65	\$4.81	\$5.03	\$45.62	\$32.48	\$27.40	\$59.88	N1205	See reference					
P.14	Mechanic	\$70.86	USD/hr	\$36.19	\$16.05	\$9.11	\$9.51	\$70.86	\$36.20	\$30.55	\$66.75	A2103	See reference					
P.15	Millwright (journeyman)	\$66.95	USD/hr	\$33.39	\$16.38	\$8.40	\$8.78	\$66.95	\$36.20	\$30.55	\$66.75	A1252	See reference					
P.16	Power Equipment Operator - Group 1	\$70.86	USD/hr	\$36.19	\$16.05	\$9.11	\$9.51	\$70.86	\$21.41	\$18.07	\$39.48	A1601	See reference					
P.17	Power Equipment Operator - Group 1A	\$73.52	USD/hr	\$37.95	\$16.05	\$9.55	\$9.97	\$73.52	\$19.70	\$16.62	\$36.32	A1602	See reference					
P.18	Power Equipment Operator - Group 2	\$69.69	USD/hr	\$35.42	\$16.05	\$8.91	\$9.31	\$69.69	\$24.63	\$20.78	\$45.40	A1603	See reference					
P.19	Power Equipment Operator - Group 3	\$68.60	USD/hr	\$34.70	\$16.05	\$8.73	\$9.12	\$68.60	\$29.26	\$24.69	\$53.95	A1604	See reference					
P.20	Power Equipment Operator - Group 4	\$59.20	USD/hr	\$28.49	\$16.05	\$7.17	\$7.49	\$59.20	\$36.20	\$30.55	\$66.75	A1605	See reference					
P.21	Site Clerk / Medic	\$60.17	USD/hr	\$28.74	\$16.65	\$7.23	\$7.55	\$60.17	\$29.26	\$24.69	\$53.95		Prior contract pricing					
P.22	Superintendent	\$76.11	USD/hr	\$42.00	\$12.50	\$10.57	\$11.04	\$76.11	\$43.75	\$36.92	\$80.67		Prior contract pricing					
P.23	Survey Field Manager	\$74.84	USD/hr	\$39.91	\$14.40	\$10.04	\$10.49	\$74.84	\$34.56	\$29.16	\$63.73		Prior contract pricing					
P.24	Survey Crew (Surveyor and Helper)	\$132.69	USD/hr	\$68.60	\$28.80	\$17.26	\$18.03	\$132.69	\$41.81	\$35.28	\$77.09	A2004	See reference					
P.25	Truck Drivers - Group 1A	\$71.98	USD/hr	\$38.02	\$14.40	\$9.57	\$9.99	\$71.98	\$21.41	\$18.07	\$39.48	A2101	See reference					
P.26	Truck Drivers - Group 1	\$70.10	USD/hr	\$36.78	\$14.40	\$9.25	\$9.67	\$70.10	\$19.70	\$16.62	\$36.32	A2102	See reference					
P.27	Truck Drivers - Group 2	\$67.95	USD/hr	\$35.36	\$14.40	\$8.90	\$9.29	\$67.95	\$24.63	\$20.78	\$45.40	A2103	See reference					
P.28	Truck Drivers - Group 3	\$67.04	USD/hr	\$34.76	\$14.40	\$8.75	\$9.14	\$67.04	\$29.26	\$24.69	\$53.95	A2104	See reference					
P.29	Truck Drivers - Group 4	\$66.21	USD/hr	\$34.21	\$14.40	\$8.61	\$8.99	\$66.21	\$32.48	\$27.40	\$59.88	A2105	See reference					
P.30	Truck Drivers - Group 5	\$65.07	USD/hr	\$33.46	\$14.40	\$8.42	\$8.79	\$65.07	\$19.70	\$16.62	\$36.32	A2106	See reference					
P.31	Tunnel Labor Group 1	\$64.46	USD/hr	\$31.57	\$16.65	\$7.94	\$8.30	\$64.46	\$17.13	\$14.45	\$31.58	N2201	See reference					
P.32	Tunnel Labor Group 2	\$66.02	USD/hr	\$32.60	\$16.65	\$8.20	\$8.57	\$66.02	\$19.70	\$16.62	\$36.32	N2202	See reference					
P.33	Tunnel Labor Group 3	\$67.41	USD/hr	\$33.52	\$16.65	\$8.43	\$8.81	\$67.41	\$23.41	\$19.75	\$43.16	N2203	See reference					
P.34	Tunnel Labor Group 3A	\$72.44	USD/hr	\$36.84	\$16.65	\$9.27	\$9.68	\$72.44	\$25.98	\$21.92	\$47.90	N2204	See reference					
P.35	Tunnel Labor Group 3B	\$73.73	USD/hr	\$37.69	\$16.65	\$9.48	\$9.91	\$73.73	\$28.96	\$24.44	\$53.40	N2206	See reference					

Notes: Alaska Dep. Of Labor - Laborers' & Mechanics Min. Rate of Pay, Pamphlet No. 600, Issue 15 (Sept. 1, 2009) are N1201-N1206 classification

\$51.85

C. Material Costs

Cost Code	Item	Unit Cost (USD)	Unit	Source
M.01	Bentonite	\$264.55	tonnes	Quote: Apr. 2006
M.02	Dust Suppressant	\$0.03	m2	estimated
M.03	Electricity	\$0.178	kW	June, July, Aug. rates starting June 1st for Pogo Mine (consumed rate)
M.04	Electricity - Overhead electrical conductors	\$1.24	m	RSMeans 2005 (20 02 0302)
M.05	Electricity - Pole mounted transformer	\$7,878.31	each	RSMeans 2005 (20 02 0101)
M.06	Electricity - Treated Power Poles (40' class 3)	\$287.44	each	RSMeans 2005 (20 02 0403)
M.07	Explosives (for rip-rap production)	\$13.86	m3	unit is in per Bm3 of rock; Source:RSMeans (17 03 0309)
M.08	Fertilizer	\$0.88	kg	JBrodie
M.09	Flocculent	\$2,689.26	tonne	Red Dog 2003 annual budget
M.10	Fuel: Diesel	\$56.30	Litre	Cost set in cell J12 above
M.11	Fuel: Diesel	\$213.11	Gallon	Cost set in cell J12 above
M.12	Geosynthetic Clay Liner	\$11.03	m2	Quote: Layfield Sept. 2007, added 50% for Freight costs
M.13	Geotextile	\$3.09	m2	Quote: Yukon Pump Aug. 2004
M.14	Groundwater Pump: 6" Submersible Pump (56-95 GPM)	\$6,033.51	each	RSMeans 2005 (33 23 0558)
M.15	Groundwater Pump: 6" Submersible Pump (681-1400 GPM)	\$24,633.40	each	RSMeans 2005 (33 23 0591)
M.16	HDPE liner	\$8.45	m2	Quote: Yukon Pump Aug. 2004
M.17	HDPE pipe: 100mm	\$5.33	m	RSMeans 2005 (33 26 0512)
M.18	HDPE pipe: 150mm	\$7.66	m	RSMeans 2005 (33 26 0513)
M.19	HDPE pipe: 150mm, insulated	\$137.43	m	Quote : Wolseley Engineered Pipe Group (Feb, 2006 - PM)
M.20	HDPE pipe: 300mm	\$124.12	m	Quote: KWH Pipe - Wolseley Eng. (GD)
M.21	HDPE pipe: 350mm, insulated	\$264.55	m	Dana (Faro)
M.22	HDPE pipe: 650mm SDR9	\$614.81	each	Quote: KWH Pipe - Wolseley Eng. (GD)
M.23	Heat trace electrical thermostat	\$903.88	each	Quote : Wolseley Engineered Pipe Group (Feb, 2006 - PM)
M.24	Heat trace Power Feed Kit	\$349.95	each	Quote : Wolseley Engineered Pipe Group (Feb, 2006 - PM)
M.25	Heat trace: constant watt cables	\$18.80	m	Quote : Wolseley Engineered Pipe Group (Feb, 2006 - PM)
M.26	Lime	\$277.62	tonne	Red Dog 2003 annual budget
M.27	Lumber: 2x4 Stud framing	\$1.31	m	RSMeans 2005 (16 01 9916)
M.28	Native seed	\$6.01	kg	JBrodie
M.29	Plants: live shrub cuttings	\$1,675.49	hec	DH
M.30	Plywood: 1/2"	\$5.82	m2	RSMeans 2005 (16 01 9916)
M.31	Precast manhole: 4' dia. Per linear vertical meter	\$296.45	m	RSMeans 2005 (19 02 0210)
M.32	Pump: 250PSI pump with motor	\$1,612.87	each	RSMeans 2005 (33 29 0601)
M.33	Pump: Maintenance cost (per event)	\$1,322.75	each	Estimated
M.34	Pump house	\$4,409.17	each	Estimated
M.35	Pumping well protective housing	\$1,763.67	each	Estimated
M.36	Quick lime	\$70.37	tonne	Quote: 2006
M.37	Riparian Area vegetation (willow)	\$8.82	kg	Estimated
M.38	Sodium Sulphide	\$916.05	tonne	Red Dog 2003 annual budget
M.39	Steel Pipe: 200mm dia. Sched. 20	\$59.04	m	Melanie Cadieux, Napsteel, Van. (GD)
M.40	Steel Pipe: 400mm dia. Sched. 20	\$135.17	m	Melanie Cadieux, Napsteel, Van. (GD)
M.41	Steel Pipe: 550mm dia. Standard wall	\$408.29	m	Marija Jarcevic SRK Reno (GD)
M.42	Steel Pipe: 600mm dia. Sched. 20	\$209.05	m	Melanie Cadieux, Napsteel, Van. (GD)
M.43	Sump: 2m dia. HDPE perforated sump	\$1,697.53	each	RSMeans 2005 (19 04 0622)
M.44	Well Casing, 150mm Stainless Steel	\$205.11	m	RSMeans 2005 (33 23 0123)
M.45	Well Cover: steel protective well cover	\$145.10	each	RSMeans 2005 (33 23 2217)
M.46	Well Screen, 150mm Stainless Steel	\$205.11	m	RSMeans 2005
M.47	Quick crete (sack concrete) well closure	\$400.00	m3	estimated
M.48	Incineration of hydrocarbon soils	\$135.77	ton	Quote: OIT
M.49	Borough landfill cost	\$118.00	ton	Fairbanks out of borough rates
M.50	Haulage to Fairbanks	\$1,600.00	each	(estimated)

Table 3: Closure Equipment Rates

Operator Details		Equipment Rates (\$/hr)				
Model	HP	# of Operators	Operator Type	Teck-Cominco	Contractor	Fuel Rate (\$/hr)
Compactor						
CAT CP563	153	1	ipment Operato	\$0.00	\$32.73	\$16.97
Sheepsfoot (72 in. d	0	0		\$0.00	\$8.17 *	\$0.00
Walk-behind vibratio	12	1	aborers - Group	\$0.00	\$3.08 *	\$1.33
Dozer						
CAT D7	240	1	ipment Operato	\$0.00	\$87.00	\$27.65
CAT D8	310	1	ipment Operato	\$0.00	\$108.00	\$35.71
CAT D9	410	1	ipment Operato	\$0.00	\$162.00	\$47.23
CAT D10	570	1	ipment Operato	\$0.00	\$216.00	\$66.81
CAT D11	850	1	ipment Operato	\$0.00	\$175.19 *	\$97.91
Drill						
Air track rig (900cfm	215	2	ipment Operato	\$0.00	\$94.63 *	\$23.85
Air Rotary, 200 cfm	196	2	ipment Operato	\$0.00	\$150.79 *	\$21.74
Excavator						
CAT 325	165	1	ipment Operato	\$0.00	\$65.45	\$27.40
CAT 350	428	1	ipment Operato	\$0.00	\$121.00	\$44.81
CAT 345	321	1	ipment Operato	\$0.00	\$85.25	\$35.61
CAT 345 Grapple	321	1	ipment Operato	\$0.00	\$78.65	\$27.40
CAT 345 Hammer	321	1	ipment Operato	\$0.00	\$132.83	\$27.40
CAT 345 Shear	321	1	ipment Operato	\$0.00	\$132.83	\$27.40
Grader						
CAT 16H	220	1	ipment Operato	\$0.00	\$125.40	\$26.28
Lifting						
Crane (Cable Boom	220	1	ipment Operator	\$0.00	\$176.36 *	\$18.77
Crane (Cable Boom	220	1	ipment Operator	\$0.00	\$248.43 *	\$18.77
Forklift CAT 924G	114	1	ipment Operator	\$0.00	\$19.80	\$9.73
Loader						
CAT 966F	235	1	ipment Operato	\$0.00	\$67.56	\$0.00
CAT 988F	430	1	ipment Operator	\$0.00	\$91.97	\$0.00
CAT 992D	800	1	ipment Operator	\$0.00	\$151.88 *	\$0.00
Truck						
Light Truck (3/4T) 4	200	0	ck Drivers - Grou	\$0.00	\$26.97 *	\$11.08
CAT 735	365	1	ck Drivers - Grou	\$0.00	\$77.00	\$17.58
CAT 777D	938	1	k Drivers - Grou	\$0.00	\$125.15 *	\$52.02

1. NC Machinery rates not available, BC Blue Book Rate used.

2. Hourly rate for a long term rental based on 10 hour shifts.

3. Maintenance costs from Western Mine Engineering Inc. Mine and Mill Equipment Costs 2005 (equal to the total hourly operating cost minus the Fuel cost)

4. Fuel Operating cost used to determine the Bare Equipment Rate based on fuel cost at site of \$1.85 USD/gal.

Table 5: Closure Task Unit Rates
Table 19. Tasks Unit Costs

		Metric		US Standard		Rates						Laborers/Trades			Equipment Operators			Equipment Details					Material Details						Task		
Cost Code	Item	Unit	Productivity (unit/hr)	Unit	Productivity (unit/hr)	Total Unit Cost	Manhours per Unit (hrs/Unit)	Labor Cost Per Unit (\$/Unit)	Material Cost Per Unit (\$/Unit)	Equipment Cost Per Unit (\$/Unit)	Fuel Cost Per Unit (\$/Unit)	Power Cost Per Unit	Qty	Description	Rate (USD/hr)	Qty	Description	Rate (USD/hr)	Equipment Type	Equipment Model	# of Equipment	Equipment Rate (\$/hr)	Fuel Cost (\$/hr)	Cost Code	Item	Unit Rate	Unit	Multiplier	Multiplier Comments	Comments/Productivity Sources	
Demolition																															
C1.01	Excavator: CAT 330 w/ grapple attachment	hrs	1	hrs	1	\$ 208.62	1.000	\$ 70.86	\$ -	\$ 110.36	\$ 27.40					1.0	Power Equipment Operator - Group 1	\$70.86	Excavator	CAT 330 Grapple	1	\$110.36	\$27.40								
C1.02	Excavator: CAT 330 w/ hammer attachment	hrs	1	hrs	1	\$ 248.16	1.000	\$ 70.86	\$ -	\$ 149.90	\$ 27.40					1.0	Power Equipment Operator - Group 1	\$70.86	Excavator	CAT 330 Hammer	1	\$149.90	\$27.40								
C1.03	Excavator: CAT 330 w/ shear attachment	hrs	1	hrs	1	\$ 231.35	1.000	\$ 70.86	\$ -	\$ 133.09	\$ 27.40					1.0	Power Equipment Operator - Group 1	\$70.86	Excavator	CAT 330 Shear	1	\$133.09	\$27.40								
C1.04	Truck: CAT 735	hrs	1	hrs	1	\$ 172.27	1.000	\$ 70.10	\$ -	\$ 84.59	\$ 17.58					1.0	Truck Drivers - Group 1	\$70.10	Truck	CAT 735	1	\$84.59	\$17.58								
C1.05	Dozer: CAT D9	hrs	1	hrs	1	\$ 275.36	1.000	\$ 70.86	\$ -	\$ 157.27	\$ 47.23					1.0	Power Equipment Operator - Group 1	\$70.86	Dozer	CAT D9T	1	\$157.27	\$47.23								
C1.06	Dozer: CAT D8T	hrs	1	hrs	1	\$ 215.91	1.000	\$ 70.86	\$ -	\$ 109.34	\$ 35.71					1.0	Power Equipment Operator - Group 1	\$70.86	Dozer	CAT D8T	1	\$109.34	\$35.71								
C1.07	Dozer: CAT D7	hrs	1	hrs	1	\$ 186.18	1.000	\$ 70.86	\$ -	\$ 87.67	\$ 27.65					1.0	Power Equipment Operator - Group 1	\$70.86	Dozer	CAT D7R	1	\$87.67	\$27.65								
C1.08	General Labor	hrs	1	hrs	1	\$ 60.17	1.000	\$ 60.17	\$ -	\$ -	\$ -		1.0	Laborers - Group 1	\$60.17																
C1.09	Crane dismantling (100 T)	hrs	1	hrs	1	\$ 318.54	2.000	\$ 131.03	\$ -	\$ 168.74	\$ 18.77		1.0	Laborers - Group 1	\$60.17	1.0	Power Equipment Operator - Group 1	\$70.86	Lifting	Crane (Cable Boom), 100T	1	\$168.74	\$18.77								
Earthworks																0.0															
C2.01	Crusher: screen materials	m3	200	yd3	261.6	\$ 15.34	0.010	\$ 0.74	\$ -	\$ 14.51	\$ 0.09					2.0	Power Equipment Operator - Group 1A	\$73.52	Misc. Equipment	Screen Plant (200 Tons/hr)	1	\$2,638.00									Estimated production/cost/ fuel usage Assumed a conversion factor of 1.3tn/cy
																			Loader Truck	CAT 980H CAT 735	2 1	\$90.20 \$84.59	\$0.00 \$17.58								
C2.02	Drilling and blasting	m³	500	yd³	654.0	\$ 32.69	0.007	\$ 0.47	\$ 31.97	\$ 0.22	\$ 0.04		1.5	Laborers - Group 2	\$61.58	2.0	Power Equipment Operator - Group 1	\$70.86	Drill	Air Rotary, 200 cfm compressor	1	\$107.64	\$21.74	M.07	Fuel: Diesel	\$213.11	Cost set in cell J12 above	0.15		Material Cost from RSMeanS 2005	
C2.03	Drilling: Air Rotary 8" dia.	m	1.5	yd	1.6	\$ 231.47	2.000	\$ 145.21	\$ -	\$ 71.76	\$ 14.49		1.0	Engineering Technician	\$76.11	2.0	Power Equipment Operator - Group 1	\$70.86	Drill	Air Rotary, 200 cfm compressor	1	\$107.64	\$21.74								
C2.04	Grading: roads, ramps, etc.	m²	460	yd²	550.2	\$ 0.39	0.002	\$ 0.15	\$ -	\$ 0.17	\$ 0.06					1.0	Power Equipment Operator - Group 1	\$70.86	Grader	CAT 16H	1	\$80.33	\$26.28								
C2.05	Landfarm: operate	hrs	1	hrs		\$ 335.53	2.000	\$ 131.03	\$ -	\$ 157.27	\$ 47.23		1.0	Laborers - Group 1	\$60.17	1.0	Power Equipment Operator - Group 1	\$70.86	Dozer	CAT D9T	1	\$157.27	\$47.23								
C2.06	Rip-Rap: Drill, Blast and Stockpile	m³	100	yd³	130.8	\$ 219.30	0.045	\$ 3.05	\$ 213.11	\$ 2.42	\$ 0.71		1.5	Laborers - Group 2	\$61.58	2.0	Power Equipment Operator - Group 1	\$70.86	Drill Dozer	Air track rig (900cfm) CAT D9T	1 1	\$85.18 \$157.27	\$23.85 \$47.23	M.07	Fuel: Diesel	\$213.11	Cost set in cell J12 above	1			
C2.07	and Stockpile	m³	50	yd³	65.4	\$ 9.55	0.040	\$ 2.89	\$ -	\$ 5.72	\$ 0.94					1.0	Power Equipment Operator - Group 1A	\$73.52	Loader	CAT 988H	1	\$128.82	\$0.00								
																1.0	Power Equipment Operator - Group 1	\$70.86	Dozer	CAT D9T	1	\$157.27	\$47.23								
C2.08	and Stockpile	m³	35	yd³	45.8	\$ 13.65	0.057	\$ 4.13	\$ -	\$ 8.17	\$ 1.35					1.0	Power Equipment Operator - Group 1A	\$73.52	Loader	CAT 988H	1	\$128.82	\$0.00								
																1.0	Power Equipment Operator - Group 1	\$70.86	Dozer	CAT D9T	1	\$157.27	\$47.23								
C2.09	Rip-Rap rock placement	m³	80	yd³	104.6	\$ 1.93	0.013	\$ 0.89	\$ -	\$ 0.71	\$ 0.34					1.0	Power Equipment Operator - Group 1	\$70.86	Excavator	CAT 330 L	1	\$56.45	\$27.40								see unit rate calcs; excavator cost only
C2.10	Road: Reshape and Scarify Shoulders	m	50	yd	54.7	\$ 3.55	0.020	\$ 1.42	\$ -	\$ 1.61	\$ 0.53					1.0	Power Equipment Operator - Group 1	\$70.86	Grader	CAT 16H	1	\$80.33	\$26.28								
C2.11	Capping wells: remove projecting pipe, plug	hrs	0.3	hrs	0.300	\$ 1,276.25	10.000	\$ 646.75	\$ 350.00	\$ 188.17	\$ 91.33		2.0	Laborers - Group 2	\$61.58	1.0	Power Equipment Operator - Group 1	\$70.86	Excavator	CAT 330 L	1	\$56.45	\$27.40	M.47	Delivered pre-mixed concrete	\$350.00	\$350.00	1			
C2.12	Cover sand production for drystack (screen plant)	m³	230	yd³	300.8	\$ 1.18	0.004	\$ 0.32	\$ -	\$ 0.86	\$ -					1.0	Power Equipment Operator - Group 1A	\$73.52	Loader	Screen Plant (200 Tons/hr) CAT 980H	1 1	\$107.00 \$90.20	\$0.00								Fuel rate was included in estimate for screen plant
C2.13	Bridge demolition	m	1.524	ft	5.0	\$ 864.48	3.281	\$ 219.38	\$ 400.00	\$ 203.27	\$ 41.83		1.0	Laborers - Group 1	\$60.17	3.0	Power Equipment Operator - Group 1	\$70.86	Excavator	CAT 330 L	1.0	\$56.45	\$27.40	M.50	Haulage to Fairbanks	\$1,600.00	\$1,600.00	0.25			
													1.0	Laborers - Group 2	\$61.58				Truck Lifting	CAT 735 CAT 735 Crane (Cable Boom), 100T	1 1	\$84.59 \$168.74	\$17.58 \$18.77								
C2.14	Growth media placement (short haul)	Bm3	170	Byd³	222.4	\$ 3.02	0.018	\$ 1.25	\$ -	\$ 1.35	\$ 0.43					1.0	Power Equipment Operator - Group 1	\$70.86	Excavator	CAT 330 L	1	\$56.45	\$27.40								
																1.0	Truck Drivers - Group 1	\$70.10	Truck	CAT 735	1.0	\$84.59	\$17.58								
																1.0	Power Equipment Operator - Group 1	\$70.86	Dozer	CAT D7R	1.0	\$87.67	\$27.65								
C2.15	Transport to Borough landfill	each	1	each	1	\$ 2,714.00			\$ 2,714.00							1.0	Power Equipment Operator - Group 1	\$70.86	Loader	CAT 966H	1.0	\$70.12	\$0.00	M.49	Borough landfill cost	\$118.00	\$118.00	23	Assumed 23tn per load	estimated	
C2.16	Remove fuel tanks	each	1	each	1	\$ 1,600.00			\$ 1,600.00				1.0	Laborers - Group 1	\$60.17	1.0	Power Equipment Operator - Group 1	\$70.86	Loader	CAT 966H	1.0	\$70.12	\$0.00	M.50	Haulage to Fairbanks	\$1,600.00	\$1,600.00	1	Assumed 2 tanks per load	estimated, does not include sampling, included emptying tanks	
C2.17	Remove electrical cables	m	100	ft	160.9	\$ 0.60	0.010	\$ 0.60	\$ -	\$ -	\$ -		1.0	Laborers - Group 1	\$60.17																
C2.18	Labor (reshape soils)	m²	3	yd²	3.6	\$ 72.69	1.000	\$ 60.17	\$ 0.03	\$ 8.79	\$ 3.69		3.0	Laborers - Group 1	\$60.17																
C2.19	Remove above ground piping	m²	40	yd²	47.8	\$ 11.30	0.100	\$ 4.51	\$ -	\$ 5.63	\$ 1.15		3.0	Laborers - Group 1	\$60.17	1.0	Power Equipment Operator - Group 1	\$70.86	Excavator	CAT 330 L	1	\$56.45	\$27.40								
C2.20	Install concrete plug in portal	m²	5	yd²	6.0	\$ 1,175.28	0.800	\$ 50.27	\$ 1,050.00	\$ 67.50	\$ 7.51		4.0	Laborers - Group 3	\$62.84																

Table 5: Closure Task Unit Rates

		Metric		US Standard		Rates							Laborers/Trades			Equipment Operators			Equipment Details					Material Details						Task		
Cost Code	Item	Unit	Productivity (unit/hr)	Unit	Productivity (unit/hr)	Total Unit Cost	Manhours per Unit (hrs/Unit)	Labor Cost Per Unit (\$/Unit)	Material Cost Per Unit (\$/Unit)	Equipment Cost Per Unit (\$/Unit)	Fuel Cost Per Unit (\$/Unit)	Power Cost Per Unit	Qty	Description	Rate (USD/hr)	Qty	Description	Rate (USD/hr)	Equipment Type	Equipment Model	# of Equipment	Equipment Rate (\$/hr)	Fuel Cost (\$/hr)	Cost Code	Item	Unit Rate	Unit	Multiplier	Multiplier Comments	Comments/Productivity Sources		
C3.13	HDPE pipe: 150mm, insulated; supplied and installed (6")	m	14.5	yd	15.9	\$ 31.25	0.207	\$ 12.45	\$ 18.80	\$ -	\$ -		3.0	Laborers - Group 1	\$60.17									M.19	Heat trace: constant watt cables	\$18.80	Wolseley Engineered Pipe Group (Feb. 2006 - PM)	1				
C3.14	HDPE pipe: 350mm, insulated; supplied and installed	m	13	yd	14.2	\$ 15.19	0.231	\$ 13.89	\$ 1.31	\$ -	\$ -		3.0	Laborers - Group 1	\$60.17									M.21	Lumber: 2x4 Stud framing Riparian Area vegetation (willow)	\$1.31	2005 (16 01 9916)	1				
C3.15	Heat trace: constant watt cables, installed	m	50	yd	54.7	\$ 13.77	0.060	\$ 4.20	\$ 8.82	\$ 0.53	\$ 0.22		1.0	Electrician	\$89.73				Truck	Light Truck (3/4T) 4x2	1	\$26.38	\$11.08	M.25	Quick lime Pumping well protective housing	\$70.37	Quote: 2006	1				
C3.16	Heat trace Power Feed Kit	each	0.5	each	0.5	\$ 429.31	4.000	\$ 358.94	\$ 70.37	\$ -	\$ -		2.0	Laborers - Group 1 Electrician	\$60.17 \$89.73									M.24	Sump: 2m dia. HDPE perforated sump	\$1,763.67	Estimated	1				
C3.17	Heat trace electrical thermostat	each	2	each	2	\$ 1,853.40	1.000	\$ 89.73	\$ 1,763.67	\$ -	\$ -		2.0	Electrician	\$89.73									M.23	Well Casing, 150mm Stainless Steel	\$205.11	RSMeans 2005 (33 23 0123)	1				
C3.18	Manholes: Precast 12' deep: supplied and installed	each	0.25	each	0.25	\$ 8,194.78	16.000	\$ 1,069.25	\$ 6,790.12	\$ 225.80	\$ 109.60		1.0	Engineering Technician	\$76.11	1.0	Power Equipment Operator - Group 1	\$70.86	Excavator	CAT 330 L	1	\$56.45	\$27.40	M.31	Steel Pipe: 200mm dia. Sched. 20	\$59.04	Melanie Cadieux, Napsteel, Van. (GD)	100				
C3.19	Pump: Install large seepage pump	each	0.25	each	0.25	\$ 969.94	12.000	\$ 764.83	\$ 205.11	\$ -	\$ -		1.0	Mechanic	\$70.86									M.32	Steel Pipe: 600mm dia. Sched. 20	\$209.05	Melanie Cadieux, Napsteel, Van. (GD)	45				
C3.20	Pumping well protective housing	each	0.15	each	0.15	\$16,853.14	20.000	\$ 1,292.38	\$ 15,311.02	\$ 175.87	\$ 73.87		1.0	Carpenter (journeyman)	\$70.69				Truck	Light Truck (3/4T) 4x2	1	\$26.38	\$11.08	M.27	Spreaders: Dozer attachment (3m width)	\$4.28	each	1				
C3.21	Well Casing, 150mm Stainless Steel, supplied and installed	m	20	yd	21.9								2.0	Laborers - Group 2	\$61.58																estimated truck cost information from Mine department	
C3.22	Well Cover: steel protective well cover	each	1.5	each	1.5																										This is 68% solids cost are calculated in US standard	
C3.23	Transport/incinerate hydrocarbon soils	m³	10.0	Cy	7	\$ 1,250.00	0.000	\$ -	\$ 4.28	\$ -	\$ -																				Quote from OIT	
C3.24	Install paste underground	tonnes	122.5	ton	135	\$ 1.11	0.016	\$ 0.91	\$ 0.20	\$ -	\$ -		2.0	Laborers - Group 2	\$61.58																	
C3.25	Install paste piping underground	m	50.2	ft	60	\$ 54.96	0.040	\$ 1.52	\$ 53.44	\$ -	\$ -		2.0	Laborers - Group 4	\$45.62																	
Revegetation																																
C4.01	Seeding/Fertilizing: Application by Hydroseeder	hec	1	acre	2.5	\$ 288.77	2.000	\$ 130.28	\$ 0.04	\$ 147.38	\$ 11.08		1.0	Laborers - Group 1	\$60.17				Other Truck	Hydroseeder truck	1.0	\$121.00		M.28	Native seed	\$6.01	JBrodie	0.006	60kg per square meter			
C4.02	Seeding/Fertilizing: Application by Helicopter	hec	2.8	acre	6.9	\$ 518.03	0.536	\$ 32.24	\$ -	\$ 481.83	\$ 3.96		1.0	Truck Drivers - Group 1	\$70.10																	
C4.03	Planting (shrubs, seedlings, etc.): By hand	hec	0.032	acre	0.1	\$ 4,931.56	62.500	\$ 3,760.93	\$ -	\$ 824.38	\$ 346.25		1.5	Laborers - Group 1	\$60.17				Other Truck	Helicopter	1.0	\$1,322.75										
C4.04	Annual inspection of vegetation and erosion controls	hec	50.6	acre	125	\$ 1,325.04	0.300	\$ 2.29	\$ 1,322.75	\$ -	\$ -		2.0	Laborers - Group 1	\$60.17				Truck	Light Truck (3/4T) 4x2	1.0	\$26.38	\$11.08									
C4.04	Annual inspection of vegetation and erosion controls	hec	50.6	acre	125	\$ 1,325.04	0.300	\$ 2.29	\$ 1,322.75	\$ -	\$ -		1.0	Engineer	\$115.87																	
Relocations																																
C5.01	Demobilization to Fairbanks	each	1	each	1	\$ 1,600.00			\$ 1,600.00	\$ -	\$ -													M.50	Haulage to Fairbanks	\$1,600.00	(estimated)	1	500kg per hectare			