



KLOHN-CRIPPEN

October 25, 1994

B.Y.G. Natural Resources Inc.
208-3190 St. John Street
Port Moody, British Columbia
V3H 2C7

Mr. Jim Smith

Dear Mr. Smith:

**Mt. Nansen Gold Project
Carmacks, Yukon
Tailings Dam Cost Estimate**

*YUKON ENERGY, MINES
& RESOURCES LIBRARY
PO BOX 2703
WHITEHORSE, YUKON Y1A 2C3*

We have completed a preliminary cost estimate for the Mt. Nansen tailings dam, near Mayo, Yukon. The cost estimate includes construction of the main dam, the seepage collection dam, and necessary water control structures including the Dome Creek diversion ditch and the emergency spillway. Other tailings management facilities such as pipelines, water reclamation systems, etc. are not included in this estimate. This estimate is based on a feasibility design report by Klohn-Crippen dated September 30, 1994, with refinements to volumes based on a more recent detailed survey of the site.

Initially, the estimate was carried out using costs for equipment, labour and materials based on Klohn-Crippen's library of costs for B.C. In this, our normal manner of estimating, labour rates are based on published B.C & Yukon labour agreements and include all base rates and fringe benefits. Equipment rates in this method are based on operating and depreciation costs, and include operator costs. Also associated with this method were significant indirect costs including daily travel time to and from the site and accommodations in Carmacks for all crews. The estimated total cost for the job, based on our standard methods is \$1.34 million.

At your request, we have also produced an estimate to reflect costs reportedly available from Yukon contractors. Equipment costs were quoted verbally by an engineer with the Transportation Engineering Branch, Government of the Yukon. These rates are from a compilation of rates quoted by various contractors as rates at which they are prepared to rent equipment, when and as required. Specific contractors can not be named, but the rates quoted are understood to be representative of rates available from Yukon contractors for equipment in their possession. The rates include operators, fuel, mileage, travel time, room and board and insurance. Mobilization and demobilization is extra.

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October 25, 1994

Because of the lower equipment costs, and the reduction in indirect costs (room and board, travel time, etc.) the resulting cost estimate is approximately 15% lower. The estimated total cost from this method is \$1.13 million.

Other salient points concerning the estimate follow:

- ▶ No allowance is made for GST in the cost estimate.
- ▶ All quantities are order-of-magnitude and may require refinements in the future. In particular, the excavation volumes for the diversion ditch and spillway may vary depending on the depth to bedrock in the abutment.
- ▶ Some cost savings may be possible by using some of the diversion channel and spillway excavation spoil as construction material for the dam. However, not enough is known about these materials at this time to confirm their suitability for construction materials.
- ▶ Some cost savings may be achievable by building part of the downstream shell of the dam from mine waste rock. This assumes that the rock would be delivered directly to the site from the open pit to avoid rehandle.
- ▶ No consideration has been made for possible effects of exceptional conditions as a result of permafrost conditions.
- ▶ No dewatering is assumed in the estimate and no costs for dewatering have been included. It is anticipated that dewatering costs will be minimal.
- ▶ Reclamation costs for the spoil area are assumed to include only spreading of material with a dozer.
- ▶ Engineering costs are not included, with the exception of the contractor's field engineer.
- ▶ No contingency allowances have been included in the cost estimate.
- ▶ The indirect costs for this project, using the conventional method, are about 82% of the total direct costs. About 50% of these indirect costs are for daily travel time, food and lodging.
- ▶ Start date of June 01, 1995 on the schedule is arbitrary.



B.Y.G. NATURAL RESOURCES INC.
Tailings Dam Cost Estimate

October 25, 1994

Detailed printed information from the schedule and estimate is attached. We trust that this information meets your needs at this time. Please call if you have any questions.

Yours truly,

KLOHN-CRIPPEN CONSULTANTS LTD.



Blair S. Trenholme, P.Eng.
Project Manager

BST:fh

Attachments

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B.Y.G. NATURAL RESOURCES INC.
Tailings Dam Cost Estimate

APPENDIX I

Schedule

(Applies to Both Cost Methods)



ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	ORIG DUR	1995											
				JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mobilization, Including Road Into Site	1JUN95	8JUN95	6												
Clearing and Grubbing	9JUN95	30JUN95	16												
Left Bank Channels Excavation/Lining															
Main Dam Strip/Fill	19JUN95	11AUG95	40												
Dome Creek Diversion	3JUL95	15SEP95	55												
Seepage Collection Dam Strip/Fill	14AUG95	14AUG95	1												
Demobilize	25SEP95	26SEP95	2												

Plot Date 25OCT94
 Data Date 19OCT94
 Project Start 19OCT94
 Project Finish 26SEP95
 (c) Primavera Systems, Inc.

Activity Bar/Early Dates Critical Activity Progress Bar Milestone/Filing Activity

BYG NATURAL RESOURCES INC.
 MT. NANSEN GOLD PROJECT
 TARGET CONSTRUCTION SCHEDULE

Sheet 1 of 1

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Date Revision Checked Approved

B.Y.G. NATURAL RESOURCES INC.
Tailings Dam Cost Estimate

APPENDIX II

(Cost Estimate Assuming "Open Shop")



BYG Natural Resources Inc.
Mt. Nansen Gold Project

Summary of Indirect Costs (Open Shop Conditions)

Mobilization/Demobilization (mainly equipment), including labour	40,000
Direct labour travel time (1 hr each day at time and a half -> 196 mandays x 1 hrs x \$40/hr)	8,000
Direct labour lodging (\$100/day x 7 days / 5 days = \$140/day x 196 mandays)	27,000
Initial travel in/out, turnarounds,	0
General Foreman/Superintendent, including travel time, lodging, and pickup truck	40,000
Site Staff (office administrator, field engineer, survey crew), including food/lodging	80,000
Temporary facilities for 17 weeks (trailers, toilets, radios, power, etc.)	25,000
Mechanic's truck, two crew cabs, for 17 weeks	20,000
Small tools	3,000
Insurance and bonds, say	12,000
Contractor Profit	61,240
Total indirect costs	316,240

Mt. Nansen Gold Project (NANSEN N)
Worksheet #: 02 - Upgrade Access Road

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Number:	02 Operation: Upgrade Access Road		
Quantity:	1.50	Unit: KM	
Prod.:	0.200 KM/Hr	Dur.:	7.500 HR
Estimator:	SC	Revised:	10/18/94 Rev. Num:
Field	Code	WORK CODE	Description
LOCATION:	5	ACCESS ROAD	ACCEESS ROADS AND BRIDGES
DIVISION:	1550		

<u>Notes</u>	
Access to dam assumed from the east, along an existing "trail"	running parallel to Dome Creek.
Allowed one day of dozer time to upgrade the road.	
Assumed no clearing/grubbing required.	

Line	Group/Code	Description	Quantity	UOM	Manhours	Labour	Const. Equip.	Job Supplies	Perm. Matl.	Sub-Contr.	Total Cost	Unit Cost
1.00	LAB1 /LA1031755	LABOURER S/S 7.5HRS/D 5DAYS/W	1	Each	8	201					201	26.79
2.00	EQCP /0D08N	CAT D8N DOZER C/W U-BLADE & WINCH	1	Each	10	329	616	180			1,125	150.00
3.00		Subtotal Hourly Cost (\$1.00)										
(1.00)			8	Hours	17	530	616	180				
4.00	SPR /MU	Contractor Indirects and Profit Worksheet Totals:	39 %		207	240	70				1,326	176.79
					17	736	856	251				
											1,843	

Mt. Nansen
Klohn-Crippen
Gold Project (NANSEN N)
Worksheet #: 04 - Clear/Grub All Areas

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04 Operation: Clear/Grub All Areas			
Quantity:	12.00	Unit:	HA
Proj:	0.100 HA/Hr	Dura:	120.000 HR
Estimator:	SC	Revised:	10/18/94 Rev. Num:
Field	Code	WORK CODE	Description
LOCATION:	02100	ALL AREAS CLEARING AND GRUBBING	

Notes	
Areas include main dam, seepage dam, diversion and emergency channels, and borrow pit.	
Assumed sparsely treed areas. Trees and brush will be piled and burned on site.	

Line	Group/Code	Description	Quantity	UOM	Manhours	Labour	Const. Equip.	Supplies	Perm. Matl.	Sub-Contr.	Total Cost
1.00	LAB1 /LA1031755	LABOURER S/S 7.5HRS/D 5DAYS/W	3	Each	360	9,644					9,644
2.00	EQCP /0ID08N	CAT D8N DOZER C/W U-BLADE & WINCH	1	Each	158	5,260	9,856	2,885			18,000
3.00		Subtotal Hourly Cost {1.00}									150.00
(1.00)											
4.00	JS /9000	Burning Supplies	12	HA							230.37
5.00		Subtotal Supplies {4.00}	1								
(4.00)											
6.00		Grand Subtotal {1.00}	1		518	14,904	9,856	4,085			28,844
(1.00)											
7.00	SPR /MU	Contractor Indirects and Profit	39 %		5,813	3,844	1,593				28,844.40
		Worksheet Totals:			518	20,717	13,699	5,678			11,249
											40,094

Klohn-Crippen
Mt. Nansen Gold Project (NANSEN N)
Worksheet #: 06 - Left Bank Channel(s) - Soil

Page 1

06 Operation: Left Bank Channels - Soil					
Quantity:	26	Unit:	M3	Prod:	500.00 \$3/HR
Estimator:	SC	Dur:	212.000 HR	Rev. Num:	10/18/94
Field	Code	WORK CODE	Description		
LOCATION:	27	<u>DIVERSION/EMERGENCY CHANNELS</u>			
DIVISION:	2201	<u>OVERBURDEN EXCAVATION</u>			

Notes					
Trapezoidal channel sections, 2 to 3m deep, 11 to 17m wide. Permafrost is assumed to not pose a problem at this depth.					
Much deeper section near left abutment where some drilling and blasting work will be required. This worksheet covers the overburden removal costs only for this location.					
Material assumed spoiled near the borrow area northeast of the dam site, where a D7 dozer spreads it.					

Line	Group/Code	Description	Quantity	UOM	Manhours	Labour	Const. Equip.	Supplies	Job Suppl.	Perm. Matl.	Sub-Contr.	Total Cost	Unit Cost
1.00	LAB1 /LA1031755	LABOURER S/S 7.5HRS/D 5DAYS/W	1	Each	212	5,679						5,679	26.79
2.00	EQCP /04235CBH	CAT 235C BACKHOE C/W 2.2 M3 BUCKET	1	Each	297	9,892	8,639	6,909				25,440	120.00
3.00	EQCP /05D25D	CAT D25D ART.DUMP TR.23T/14 M3 CAP.	2	Each	509	16,820	35,540	11,240				63,600	150.00
4.00	EQCP /01D07H	CAT D7H DOZER C/W S-BLADE	1	Each	278	9,216	15,779	4,685				29,680	140.00
5.00	Subtotal Hourly Cost		(1.00)										
			(1.00)		212 Hours	1,295	41,607	59,958	22,835			124,399	586.79
6.00	SPR /MU	Contractor Indirects and Profit	39 %			16,227	23,384	8,905				48,516	
Worksheet Totals:					1,295	57,834	83,341	31,740				172,915	

Klohn-Crippen
Mt. Nansen Gold Project {NANSEN N}
Worksheet #4: 08 - Left Bank Channels - Rock

Page 1

Number:	08 Operation: Left Bank Channels - Rock
Quantity:	5,000.00 Unit: M3
Prod. /M3/HR	Dura:
Estimator: 100.000	Revised: 10/18/94 Rev. Num:
Field	WORK CODE Description
LOCATION: 27	DIVERSION/EMERGENCY CHANNELS
DIVISION: 2211	ROCK EXCAVATION - DRILL/BLAST

Notes
This worksheet covers drilling and blasting work required for channel near the left dam abutment.
Material assumed spoiled near the borrow area northeast of the dam site, where a D7 dozer spreads it.

Line	Group/Code	Description	Quantity	UOM	Manhours	Labour	Const. Equip.	Job Supplies	Perm. Matl.	Sub-Contr.	Total Cost	Unit Cost	
1.00	LAB1 /LA1021755	LABOURER FOREMAN S/S 7.5HRS/D 5DAYS/W	1	Each	50	1,479					1,479	29.57	
2.00	LAB1 /LA1031755	LABOURER S/S 7.5HRS/D 5DAYS/W	1	Each	50	1,340					1,340	26.79	
3.00	LAB1 /LA1101755	LABOURER AIR TRAC DRILL S/S 7.5H/D 5D/W	2	Each	100	2,687					2,687	26.87	
4.00	LAB1 /LA1041755	LABOURER DRILLERS HELPER S/S 7.5H/D 5D/W	1	Each	50	1,343					1,343	26.85	
5.00	EQCP /09AIRTR2	AIR TRAC DRILL TO 4" DIA.	2	Each	10	354	1,635	1,767			3,756	37.56	
6.00	EQCP /60CPD075	COMPRESSOR DIESEL 750 C.F.M.	2	Each	6	212	1,044	2,631			3,887	38.87	
7.00	EQCP /10POWD2	POWDER TRUCK P/UP 1 TON CAP.	1	Each	51	1,643	269	197			2,109	42.18	
8.00	EQCP /04235CBH	CAT 235C BACKHOE C/W 2.2 M3 BUCKET	1	Each	70	2,333	2,038	1,630			6,000	120.00	
9.00	EQCP /03D25D	CAT D25D ART.DUMP TR.23T/14 M3 CAP.	2	Each	120	3,967	8,382	2,651			15,000	150.00	
10.00	EQCP /01D07H	CAT D7H DOZER C/W S-BLADE	1	Each	66	2,174	3,722	1,105			7,000	140.00	
11.00	Subtotal Hourly Cost {1.00}				50 Hours	573	17,530	17,089	9,981			44,600	892.00
12.00	JS /2206	DRILLING SUPPLIES-2.00"DIA.HOLES				1,150 M			1,035			1,035	0.90
13.00	JS /DRILL	DRILLING SUPPLIES-1 KG/M3 POWDER FACTOR				5,000 M3			20,000			20,000	4.00
14.00	Subtotal Job Supplies (12.00)					1			21,035			21,035	21,035.00
15.00	Grand Subtotal {1.00}												
16.00	SPR /MU	Contractor Indirects and Profit	39 %			6,837	6,665	12,096				65,635	65,634.75
		Worksheet Totals:				573	24,366	23,754	43,113			25,598	
												91,232	

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Mt. Nansen Gold Project (NANSEN N)
Worksheet #: 10 - Left Bank Channels - Riprap

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10 Operation: Left Bank Channels - Riprap			
Number:	Quantity:	Unit:	Rev. Num:
	4,800.00	M3	
Estimator:	SC	Dur.:	10/18/94
Field	Code	WORK CODE	Description
LOCATION:	2220	DIVERSION/EMERGENCY CHANNELS	
		ROCK FILL	

Notes			
Assumed 300m of the emergency spillway would require riprap.			
Assumed riprap obtained from owner's quarry, preblasted and piled on the quarry floor.			
Material passed through a grizzly, then loaded onto trucks.			

Line	Group/Code	Description	Quantity	UOM	Manhours	Labour	Const. Equip.	Suppl. Matl.	Perm. Matl.	Sub-Contr.	Total Cost
1.00	LAB1 /LA1031755	LABOURER S/S 7.5HRS/D 5DAYS/W	1	Each	64	1,715					1,715
2.00	EQCP /02980F	CAT 980F F.E.L. 4.0 M3 CAP.ROCK BUCK.	1	Each	76	2,488	4,104	1,088			26.79
3.00	EQCP /03025D	CAT D25D ART.DUMP TR.23T/14 M3 CAP.	2	Each	154	5,078	10,729	3,393			7,680
4.00	EQCP /GRIZZLY	GRIZZLY	1	Each		22	1,920	256			120.00
5.00	EQCP /01D07H	CAT D7H DOZER C/W S-BLADE	1	Each	84	2,782	4,764	1,414			19,200
6.00	Subtotal Hourly Cost {1.00}										150.00
(1.00)			64	Hours	378	12,085	21,516	6,152			34,35
7.00	SPR /MU	Contractor Indirects and Profit	39 %		4,713	8,391	2,399				8,960
Worksheet Totals:					378	16,798	29,907	8,551			140.00
											55,257
											621.14
											39,753
											621.14
											15,504
											55,257

Mt. Nansen Kohn-Crippen Gold Project (NANSEN N)
 Worksheet #: 12 - Culverts Across New Channel

Page 1

Number:	12 Operation: Culverts Across New Channel		
Quantity:	1.00	Unit:	LS
Prod:	0.133 LS/HR	Dura:	7.519 HR
Estimator:	SC	Revised:	10/18/94 Rev. Num:
Field	Code	WORK CODE	Description
LOCATION:	27	DIVERSION/EMERGENCY CHANNELS	
	1563	TEMPORARY WATER CONTROL	

<u>Notes</u>	
Need culverts across the newly diverted channel to maintain access to the dam site. Assumed work accomplished in one day.	

Line	Group/Code	Description	Quantity	UOM	Manhours	Labour	Const. Equip.	Supplies	Perm. Matl.	Sub-Contr.	Total Cost	Unit Cost
1.00	LAB1 /LA1031755	LABOURER S/S 7.5HRS/D 5DAYS/W	2	Each	15	403					403	26.79
2.00	EQCP /04235CBH	CAT 235C BACKHOE C/W 2.2 M3 BUCKET	1	Each	11	351	306	245			902	120.00
3.00	(1.00)	Subtotal Hourly Cost {1.00}									1,305	173.58
4.00	PM /2430	C.S.P.CULVERTS GALV. 1.6M DIA. 3.5G	20	M					7,160		7,160	358.00
5.00	(4.00)	Subtotal Materials {4.00}	1						7,160		7,160	7,160.00
6.00	(1.00)	Grand Subtotal {1.00}	1		26	754	306	245	7,160		8,465	8,465.32
7.00	SPR /NU	Contractor Indirects and Profit	39 %		294	120	96	2,792		3,301		
		Worksheet Totals:			26	1,048	426	341	9,952		11,767	

Number:	14 Operation: Divert Dome Creek		
Quantity:	1.00	Unit: LS	
Prod:	0.133 LS/Hr	Dur:	7.519 HR
Estimator:	SC	Revised:	10/18/94 Rev. Num:
Field	Code	WORK CODE	Description
LOCATION:	27	DIVERSION/EMERGENCY CHANNELS	
	1563	TEMPORARY WATER CONTROL	

Notes
 Assumed some riprap stockpiled nearby from rock excavation work in the emergency channel. Other material for the diversion obtained from near the diversion site.
 Assumed diversion accomplished over one shift, and that all material could be simply dozed into place.

Line	Group/Code	Description	Quantity	UOM	Manhours	Labour	Const-Equip.	Supplies	Job	Perm-Matt.	Sub-Contr.	Total Cost	Unit Cost
1.00	LAB1 /LA1031755	LABOURER S/S 7.5HRS/D 5DAYS/W	1	Each	8	201						201	26.79
2.00	EQCP /01D08N	CAT D8N DOZER C/W U-BLADE & WINCH	1	Each	10	330	618	181				1,128	150.00
3.00	Subtotal Hourly Cost (1.00\$)												
	(1.00)		8 Hours		17	531	618	181				1,329	176.79
4.00	SPR /MU	Contractor Indirects and Profit	39 %			207	241	71				518	
	Worksheet Totals:				17	738	858	251				1,848	

Number:	16 Operation: Strip Left Bank - Main Dam		
Quantity:	3,200.00	Unit:	M3
Prog:	125,000 M3/HR	Dura:	25,600 HR
Estimator:	SCC	Revised:	10/18/94 Rev. Num:
Field	Code	WORK CODE	Description
LOCATION:	15		DAM STRIPPING
DIVISION:	2113		

Notes	
Assumed 0.3m of overburden removed and area proof rolled.	
Excavated material spoiled near borrow area, where a D7 dozer spreads it.	
Work includes sculpting small diversion ditches on downstream side of the dam.	

Line	Group/Code	Description	Quantity	UOM	Manhours	Labour	Const. Equip.	Supplies	Job Supplies	Perm. Matl.	Sub-Contr.	Total Cost	Unit Cost
1.00	LAB1 /LA1031755	LABOURER S/S 7.5HRS/D 5DAYS/W	1	Each	26	686						686	26.79
2.00	EQCP /04235CBH	CAT 235C BACKHOE C/W 2.2 M3 BUCKET	1	Each	36	1,195	1,043	834				3,072	120.00
3.00	EQCP /03D25D	CAT D25D ART.DUMP TR.23T/14 M3 CAP.	2	Each	61	2,031	4,292	1,357				7,680	150.00
4.00	EQCP /01D07H	CAT D7H DOZER C/W S-BLADE	1	Each	34	1,113	1,905	566				3,584	140.00
5.00	EQCP /07BW172	BOMAG BW172D SMOOTH DRUM VIB.ROLLER	1	Each	31	1,013	1,393	153				2,560	100.00
6.00	Subtotal Hourly Cost		(1.00)		26 Hours	187	6,038	8,634	2,911			17,582	686.79
7.00	SPR /MU	Contractor Indirects and Profit	39 %			2,355	3,367	1,135				6,857	
Worksheet Totals:					187	8,392	12,001	4,046				24,439	

Klohn-Crippen
Gold Project (NANSEN N)
Worksheet #:
Mt. Nansen 18 - Strip Right Bank - Main Dam

Page 1

18 Operation: Strip Right Bank - Main Dam			
Number:	Quantity:	Unit:	Dura:
	13 150.00	M3	105-200 HR
Prod:	125.000 M3/HR		Revised: 10/18/94 Rev. Num:
Estimator:	SCC		
Field	Code	WORK CODE	Description
LOCATION:	15	DAM	STRIPPING
DIVISION:	2113		

Notes	
Depth of stripping greater than on the left bank because of ice lenses in the soil. Area does not require proof rolling.	
In order to not allow the subgrade to thaw, stripping will occur intermittently as the dam earthfill schedule requires.	
Assumed 1.5m of overburden to be removed.	
Added a dozer to the equipment fleet due to frozen soil on this bank.	
Excavated material spoiled near borrow area, where a D7 dozer spreads it.	

Line	Group/Code	Description	Quantity	UOM	Manhours	Labour	Const. Equip.	Suppl. Job	Perm. Matl.	Sub-Contr.	Total Cost	Unit Cost
1.00	LAB1 /LA1031755	LABOURER S/S 7.5HRS/D 5DAYS/W	1	Each	105	2,818					2,818	26.79
2.00	EQCP /04235CBH	CAT 235C BACKHOE C/W 2.2 M3 BUCKET	1	Each	147	4,909	4,287	3,428			12,624	120.00
3.00	EQCP /03D25D	CAT D25D ART.DUMP TR.23T/14 M3 CAP.	2	Each	252	8,347	17,636	5,578			31,560	150.00
4.00	EQCP /01D07H	CAT D7H DOZER C/W S-BLADE	1	Each	138	4,573	7,830	2,325			14,728	140.00
5.00	EQCP /01D08NR	CAT D8N DOZER C/W U-BLADE & RIPPER	1	Each	147	4,909	9,153	2,770			16,832	160.00
6.00	Subtotal Hourly Cost {1.00}		105	Hours	790	25,555	38,906	14,101			78,562	746.79
7.00	SPR /MU	Contractor Indirects and Profit	39 %		790	35,522	54,080	19,600			30,639	
Worksheet Totals:												
											109,202	

Number:			20 Operation: Main Dam Fill		
Quantity:	88,000.00	Unit:	M3	Prod.:	88,000 ft ³ /HR
Estimator:	SC	Dura:	352,000 HR	Revised:	10/18/94 Rev. Num:
Field	Code	WORK CODE	Description		
LOCATION:	15	DAM	DAM		
DIVISION:	2215	GRAVEL FILL	GRAVEL FILL		

Notes
 To maintain high loader productivity, assigned a dozer full time to the loading operation.
 This dozer may also be required to deal with any permafrost problems at the borrow area.

Line	Group/Code	Description	Quantity	UOM	Manhours	Labour	Const. Equip.	Suppl. Job	Perm. Matl.	Sub-Contr.	Total Cost	Unit Cost
1.00	LAB1 / LA1031755	LABOURER S/S 7.5HRS/D 5DAYS/W	1	Each	352	9,430					9,430	26.79
2.00	EQCP /01008N	CAT D8N DOZER C/W U-BLADE & WINCH	2	Each	929	30,856	57,820	16,924			105,600	150.00
3.00	EQCP /02980F	CAT 980F F.F.L. 4.0 M3 CAP.ROCK BUCK.	1	Each	415	13,686	22,570	5,984			42,240	120.00
4.00	EQCP /03D30D	CAT D30D ART.DUMP TR.27T/17 M3 CAP.	3	Each	1,278	42,272	98,620	33,348			174,240	165.00
5.00	EQCP /07BW172	BOMAG BW172D SMOOTH DRUM VIB.ROLLER	1	Each	422	13,932	19,159	2,108			35,200	100.00
6.00	EQCP /99WATER1	WATER TRUCK 3600 GAL.CAP.	1	Each	394	12,714	4,182	4,224			21,120	60.00
7.00	Subtotal Hourly Cost (1.00)		352	Hours	3,791	122,890	202,351	62,589			387,830	1,101.79
8.00	SPR /MU	Contractor Indirects and Profit	39 %		47,927	78,917	24,410				151,254	
		Worksheet Totals:			3,791	170,817	281,268	86,999			539,084	

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Number: 22 Operation: Main Dam Riprap
 Quantity: 1500.00 Unit: M3
 Prod: 75.000 M3/hr Dura: 20.000 HR
 Estimator: SC Revised: 10/18/94 Rev. Num:

Field	Code	WORK CODE	Description
LOCATION:	15	DAM	
DIVISION:	220	ROCK FILL	

Notes
 Assumed riprap obtained from owner's quarry, preblasted and
 piled on the quarry floor.
 Material passed through a grizzly, then loaded onto trucks.

Line	Group/Code	Description	Quantity	UOM	Manhours	Labour	Const. Equip.	Supplies	Job Permt. Matl.	Sub-Contr.	Total Cost	Unit Cost
1.00	LAB1 /LA1031755	LABOURER S/S 7.5HRS/D 5DAYS/W	1	Each	20	536					536	26.79
2.00	EQCP /02980F	CAT 980F F.E.L. 4.0 M3 CAP.ROCK BUCK.	1	Each	24	778	1,282	340			2,400	120.00
3.00	EQCP /03D25D	CAT D25D ART.DUMP TR.23T/14 M3 CAP.	2	Each	48	1,587	3,353	1,060			6,000	150.00
4.00	EQCP /GRIZZLY	GRIZZLY	1	Each		7	600	80			687	34.35
5.00	EQCP /01D07H	CAT D7H DOZER C/W S-BLADE	1	Each	26	869	1,489	442			2,800	140.00
6.00	subtotal Hourly Cost (1.00)											
7.00	SPR /MU	Contractor Indirects and Profit	39 %		118	3,777	6,724	1,922			12,423	621.14
	Worksheet Totals:											
					118	5,249	9,346	2,672			17,268	

24 Operation: Strip Seepage Collection Dam		
Quantity:	2,625.00	Unit: M3
Prod:	125.000 M3/HR	Dura: 21.000 HR
Estimator:	SC	Revised: 10/18/94 Rev. Num:
Field	Code	WORK CODE
LOCATION:	20	SEEPAGE COLLECTION POND
DIVISION:	2113	STRIPPING

Notes
 Assumed 0.3m of overburden removed and area proof rolled.
 Excavated material spoiled near borrow area, where a D7 dozer spreads it.

Line	Group/Code	Description	Quantity	UOM	Manhours	Labour	Const. Equip.	Supplies	Job Mater.	Perm. Contr.	Total Cost	Unit Cost
1.00	LAB1 /LA1031755	LABOURER S/S 7.5HRS/D 5DAYS/W	1	Each	21	563					563	26.79
2.00	EQCP /04235CBH	CAT 235C BACKHOE C/W 2.2 M3 BUCKET	1	Each	29	980	856	684			2,520	120.00
3.00	EQCP /03025D	CAT D25D ART.DUMP TR 23T/14 M3 CAP.	2	Each	50	1,666	3,520	1,113			6,300	150.00
4.00	EQCP /01D07H	CAT D7H DOZER C/W S-BLADE	1	Each	28	913	1,563	464			2,940	140.00
5.00	EQCP /07BW172	BOMAG BW172D SMOOTH DRUM VIB.ROLLER	1	Each	25	831	1,143	126			2,100	100.00
6.00	Subtotal Hourly Cost {1.00}		21	Hours	154	4,953	7,082	2,388			14,423	686.79
7.00	SPR /MU	Contractor Indirects and Profit	39 %		1,932	2,762	931				5,625	
Worksheet Totals:					154	6,884	9,844	3,319			20,047	

Mt. Nansen Gold Project (NANSEN N)
Worksheet #: 26 - Seepage Collection Dam Fill

Page 1

Number:	26 Operation: Seepage Collection Dam Fill		
Quantity:	3,000.00	Unit:	M3
Prod:	200.00 M3/Hr	Dura:	15,000 HR
Estimator:	SC	Revised:	10/18/94 Rev. Num:
Field	Code	WORK CODE	Description
LOCATION:	20	SEEPAGE COLLECTION POND	
DIVISION:	2215	GRAVEL FILL	

Notes	
To maintain high excavator productivity, assigned a dozer full time to the loading operation.	
This dozer may also be required to deal with any permafrost problems at the borrow area.	

Line	Group/Code	Description	Quantity	UOM	Manhours	Labour	Const-Equip.	Supplies	Job	Perm-Mat.	Sub-Contr.	Total Cost	Unit Cost
1.00	LAB1 / LA1031755	LABOURER S/S 7.5HRS/D 5DAYS/W	1	Each	15	402						402	26.79
2.00	EQCP /01D08N	CAT D8N DOZER C/W U-BLADE & WINCH	2	Each	40	1,315	2,464	721				4,500	150.00
3.00	EQCP /02980F	CAT 980F F.E.L. 4.0 M3 CAP. ROCK BUCK.	1	Each	18	583	962	255				1,800	120.00
4.00	EQCP /03D30D	CAT D30D ART.DUMP TR 27T/17 M3 CAP.	3	Each	54	1,801	4,203	1,421				7,425	165.00
5.00	EQCP /07BW172	BOMAG BW172D SMOOTH DRUM VIB.ROLLER	1	Each	18	594	816	90				1,500	100.00
6.00	EQCP /99WATER1	WATER TRUCK 3600 GAL.CAP.	1	Each	17	542	178	180				900	60.00
7.00	Subtotal Hourly Cost (1.00)		15	Hours	162	5,237	8,623	2,667				16,527	1,101.79
8.00	SPR /MU	Contractor Indirects and Profit	39 %		2,042	3,363	1,040					6,445	
Worksheet Totals:					162	7,279	11,986	3,707				22,972	

28 Operation: Seepage Collect Dam Membrane			
Quantity:	1,250.00	Unit:	M2
Prod.:	55,000 ft ² /HR	Unit:	ft ²
Estimator:	Revised: 10/20/94	Rev. Num:	22,727 HR
Field	Code	WORK CODE	Description
LOCATION:	20	SEEPAGE COLLECTION POND	
DIVISION:	2273	GEO/TEXTILE FABRICS	

Notes			
<u>Assumed 3 days total to install the liner:</u>			
- 1 day for the trench (including all dam fill equipment for load, haul, and place of trench backfill).			
- 2 days for the dam liner portion (matches seepage dam fill duration).			
Added 10% to liner quantity for waste and overlap.			
Installation of sump pump intake and piping by others and thus no costs are included here.			

Line	Group/Code	Description	Quantity	UOM	Manhours	Labour	Const. Equip.	Job Supplies	Perm. Matl.	Sub-Contr.	Total Cost	Unit Cost
1.00		TRENCH PORTION (allow 1 day)										
2.00	LAB1 / LA1031755	LABOURER S/S 7.5HRS/D 5DAYS/W	3	Each	23	603					603	26.79
3.00	EQCP /04235CBH	CAT 235C BACKHOE C/W 2.2 M3 BUCKET	1	Each	11	350	306	2444			900	120.00
4.00	EQCP /07WACKER	WACKER PLATE TAMPER	2	Each		16	17	26			59	3.92
5.00	EQCP /01D08N	CAT D8N DOZER C/W U-BLADE & WINCH	2	Each	20	657	1,232	361			2,250	150.00
6.00	EQCP /02980F	CAT 980F F.E.L. 4.0 M3 CAP.ROCK BUCK.	1	Each	9	292	481	128			900	120.00
7.00	EQCP /03D30D	CAT D30D ART.DUMP TR 27T/17 M3 CAP.	3	Each	27	901	2,101	711			3,713	165.00
8.00		Subtotal Hourly Trench Cost (2.00)										
		(2.00)										
9.00		DAM PORTION (allow 2 days)										
10.00	LAB1 / LA1031755	LABOURER S/S 7.5HRS/D 5DAYS/W	3	Each	46	1,224					1,224	26.79
11.00		Subtotal Hourly Dam Cost (10.00)										
		(10.00)										
12.00	/9000	IMPERVIOUS MEMBRANE										
13.00		Subtotal Materials (12.00)										
		(12.00)										
14.00		Grand Subtotal (2.00)										
		(2.00)										
15.00	SPR /MU	Contractor Indirects and Profit	39 %		1,577	1,613	573	1,609			5,372	
		Worksheet Totals:			135	5,619	5,750	2,042	5,734		19,145	

Mt. Nansen Gold Project ("NANSEN")
Klohn-Crippen
01 - COST SUMMARY ("OPEN SHOP" CONDITIONS)

Page 1

Sheet	Operation	Quantity	UOM	Manhours	Labour	Const. Equip.	Supplies	Perm. Matl.	Sub-Contr.	Total Cost	Unit Cost
02	Upgrade Access Road		2 KM	17	736	856	251			1,843	1,228.70
04	Clear/Grub All Areas	12 HA	518	20,717	13,699	5,678				40,094	3,341.14
06	Left Bank Channels - Soil	26,500 M3	1,295	57,834	83,341	31,740				172,915	6.53
08	Left Bank Channels - Rock	5,000 M3	573	24,366	23,754	43,113				91,232	18.25
10	Left Bank Channels - Riprap	4,800 M3	378	16,798	29,907	8,551				55,257	11.51
12	Culverts Across New Channel	1 LS	26	1,048	426	341	9,952			11,767	11,766.79
14	Divert Dome Creek	1 LS	17	738	858	251				1,848	1,847.94
16	Strip Left Bank - Main Dam	3,200 M3	187	8,392	12,001	4,046				24,439	7.64
18	Strip Right Bank - Main Dam	13,150 M3	790	35,522	54,080	19,600				109,202	8.30
20	Main Dam Fill	88,000 M3	3,791	170,817	281,268	86,999				539,084	6.13
22	Main Dam Riprap	1,500 M3	118	5,249	9,346	2,672				17,268	11.51
24	Strip Seepage Collection Dam	2,625 M3	154	6,884	9,844	3,319				20,047	7.64
26	Seepage Collection Dam Fill	3,000 M3	162	7,279	11,986	3,707				22,972	7.66
28	Seepage Collect Dam Membrane	1,250 M2	135	5,619	5,750	2,042	5,734			19,145	15.32
Grand Total:		8,161	362,000	537,116	212,310	15,686				1,127,112	

B.Y.G. NATURAL RESOURCES INC.
Tailings Dam Cost Estimate

APPENDIX III

(Cost Estimate Assuming "Union Conditions")

Mt. Nansen Gold Project (NANSEN U)
01 - COST SUMMARY
Klohn Crippen
CONDITIONS

Page 1

Sheet Operation	Quantity	UOM	Manhours	Labour	Const. Equip.	Supplies	Job	Perm. Matl.	Sub-Contr.	Total Cost	Unit Cost
02 Upgrade Access Road	2	KM	17	1,042	684	614				2,340	1,560.14
04 Clear/Grub All Areas	12	HA	518	30,128	10,951	12,006				53,085	4,423.75
06 Left Bank Channels - Soil	26,500	M3	1,295	79,549	67,672	65,842				213,063	8.04
08 Left Bank Channels - Rock	5,000	M3	573	34,473	21,326	62,177				117,975	23.60
10 Left Bank Channels - Riprap	4,800	M3	378	23,020	21,675	18,365				63,060	13.14
12 Culverts Across New Channel	1	LS	26	1,511	878	754	13,031			16,175	16,174.50
14 Divert Done Creek	1	LS	17	1,045	686	616				2,346	2,346.43
16 Strip Left Bank - Main Dam	3,200	M3	187	11,499	8,905	8,548				28,953	9.05
18 Strip Right Bank - Main Dam	13,150	M3	790	48,814	44,039	42,073				134,926	10.26
20 Main Dam Fill	88,000	M3	3,791	232,232	194,665	188,866				615,763	7.00
22 Main Dam Riprap	1,500	M3	118	7,194	6,773	5,739				19,706	13.14
24 Strip Seepage Collection Dam	2,625	M3	154	9,433	7,305	7,012				23,751	9.05
26 Seepage Collection Dam Fill	3,000	M3	162	9,896	8,295	8,048				26,240	8.75
28 Seepage Collect Dam Membrane	1,250	M2	135	7,994	4,560	4,354	7,508			24,415	19.53
Grand Total:			8,161	497,829	398,414	425,015	20,539			1,341,798	

**BYG Natural Resources Inc.
Mt. Nansen Gold Project**

Summary of Indirect Costs (Union Conditions)

Mobilization/Demobilization (mainly equipment), including labour	40,000
Direct labour travel time (2 hrs each day at double time - > 1088 mandays x 2 hrs x \$60/hr)	131,000
Direct labour lodging (\$100/day x 7 days / 5 days = \$140/day x 1088 mandays)	152,000
Initial travel in/out, turnarounds, etc (say 20 trips x \$250)	5,000
General Foreman/Superintendent, including travel time, lodging, and pickup truck	50,000
Site Staff (office administrator, field engineer, survey crew), including food/lodging	85,000
Temporary facilities for 17 weeks (trailers, toilets, radios, power, etc.)	25,000
Mechanic's truck, two crew cabs, for 17 weeks	23,000
Small tools	5,000
Insurance and bonds, say	15,000
Contractor Profit	73,548
Total indirect costs	604,548

Mt. Nansen Gold Project (NANSEN U)
Worksheet #: 02 - Upgrade Access Road

Page 1

02 Operation: Upgrade Access Road			
Quantity:	1.50	Unit:	KM
Prod:	0.200 KM/HR	Dura:	7.500 HR
Estimator:	SC	Revised:	10/18/94 Rev. Num:
Field	Code	WORK CODE	Description
LOCATION:	5	ACCESS ROAD	ACCESS ROADS AND BRIDGES
DIVISION:	1550		

Notes						
Access to dam assumed from the east, along an existing "trail" running parallel to Done Creek.						
Allowed one day of dozer time to upgrade the road.						
Assumed no clearing/grubbing required.						

Line	Group/Code	Description	Quantity	UOM	Manhours	Labour	Const. Equip.	Job Supplies	Perm. Matl.	Sub-Contr.	Total Cost	Unit Cost
1.00	LAB1 /LA1031755	LABOURER S/S 7.5HRS/D 5DAYS/W	1	Each	8	231					231	30.81
2.00	EQCP /01D08N	CAT D8N DOZER C/W U-BLADE & WINCH	1	Each	10	341	376	337			1,055	140.63
3.00	Subtotal Hourly Cost (1.00)											
			8	Hours	17	572	376	337			1,286	171.44
4.00	SPR /MU	Contractor Indirects and Profit	82 %		469	308	277				1,054	
Worksheet Totals:					17	1,042	684	614			2,340	

Mt. Nansen Gold Project (NANSEN U)
 Worksheet #: 04 - Clear/Grub All Areas

Page 1

04 Operation: Clear/Grub All Areas			
Quantity:	12.00	Unit:	HA
Prod:	0.100 HA/HR	Dura:	5DAYS/W
Estimator:	SC	Revised:	10/18/94 Rev. Num:
Field	Code	WORK CODE	Description
LOCATION:	0	ALL AREAS CLEARING AND GRUBBING	
DIVISION:	2100		

Notes	
Areas include main dam, seepage dam, diversion and emergency channels, and borrow pit. Assumed sparsely treed areas. Trees and brush will be piled and burned on site.	

Line	Group/Code	Description	Quantity	UOM	Manhours	Labour	Const. Equip.	Job Supplies	Perm. Matl.	Sub-Contr.	Total Cost	Unit Cost
1.00	LAB1 /LA1031755	LABOURER S/S 7.5HRS/D		3 Each	360	11,092					11,092	30.81
2.00	EQCP /01D08N	CAT D8N DOZER C/W U-BLADE & WINCH		1 Each	158	5,462	6,017	5,397			16,876	140.63
3.00		Subtotal Hourly Cost {1.00}			120 Hours	518	16,554	6,017	5,397		27,968	233.06
(1.00)												
4.00	JS /9000	Burning Supplies		12 HA			1,200				1,200	100.00
5.00		Subtotal Supplies {4.00}										
(4.00)												
6.00		Grand Subtotal {1.00}		1	518	16,554	6,017	6,597			29,168	29,167.56
(1.00)												
7.00	SPR /MU	Contractor Indirects and Profit		82 %		13,574	4,934	5,409			23,917	
		Worksheet Totals:			518	30,128	10,951	12,006			53,085	

Klondike-Crippen Gold Project (NANSEN U)
Worksheet #: 06 - Left Bank Channels - Soil

Page 1

Number:	06 Operation: Left Bank Channels - Soil		
Quantity:	26,500.00	Unit:	M3
Prod:	125.000 \$3/HR	Dur:	212.000 HR
Estimator:		Revised:	10/18/94 Rev. Num:
Field	Code	WORK CODE	Description
LOCATION:	27	DIVERSION/EMERGENCY CHANNELS OVERBURDEN EXCAVATION	
DIVISION:	2201		

Notes						
Trapezoidal channel sections, 2 to 3m deep, 11 to 17m wide. Permafrost is assumed to not pose a problem at this depth.						
Much deeper section near left abutment, where some drilling and blasting work will be required. This worksheet covers the overburden removal costs only for this location.						
Material assumed spoiled near the borrow area northeast of the dam site, where a D7 dozer spreads it.						

Line	Group/Code	Description	Quantity	UOM	Manhours	Labour	Const. Equip.	Job Supplies	Perm. Matl.	Sub-Contr.	Total Cost	Unit Cost
1.00	LAB1 /LA1031755	LABOURER S/S 7.5HRS/D 5DAYS/W	1	Each	212	6,532					6,532	30.81
2.00	EQCP /04235CBH	CAT 235C BACKHOE C/W 2.2 M3 BUCKET	1	Each	297	10,341	13,602				35,626	168.05
3.00	EQCP /03D25D	CAT D25D ART.DUMP TR.23T/14 M3 CAP.	2	Each	509	17,270	14,615	16,163			48,048	113.32
4.00	EQCP /01D07H	CAT D7H DOZER C/W S-BLADE	1	Each	278	9,565	8,965	8,331			26,862	126.71
5.00	Subtotal Hourly Cost (1.00)		212	Hours	1,295	43,708	37,183	36,177			117,067	552.21
6.00	SPR /MU	Contractor Indirects and Profit	82 %		35,841	30,490	29,665				95,995	
Worksheet Totals:					1,295	79,549	67,672	65,842			213,063	

Kløhn-Crippen
Mt. Nansen Gold Project (NANSEN U)
Worksheet #: 08 - Left Bank Channels - Rock

Page 1

Number:	08 Operation: Left Bank Channels - Rock		
Quantity:	5,000.00	Unit: M3	
Prod:	100,000 M3/HR	Dura:	50,000 HR
Estimator:	SC	Revised:	10/18/94
Field	Code	WORK CODE	Description
LOCATION:	27	DIVERSION/EMERGENCY CHANNELS	
DIVISION:	2211	ROCK EXCAVATION - DRILL/BLAST	

Notes
This worksheet covers drilling and blasting work required for channel near the left dam abutment.
Material assumed spoiled near the borrow area northeast of the dam site, where a D7 dozer spreads it.

Line	Group/Code	Description	Quantity	UOM	Manhours	Labour	Const. Equip.	Job Supplies	Perm. Mat.	Sub-Contr.	Total Cost	Unit Cost
1.00	LAB1 /LA1021755	LABOURER FOREMAN S/S 7.5HRS/D 5DAYS/W	1	Each	50	1,700					1,700	34.00
2.00	LAB1 /LA1031755	LABOURER S/S 7.5HRS/D 5DAYS/W	1	Each	50	1,541					1,541	30.81
3.00	LAB1 /LA1101755	LABOURER AIR TRAC DRILL S/S 7.5H/D 5D/W	2	Each	100	3,090					3,090	30.90
4.00	LAB1 /LA1041755	LABOURER DRILLERS HELPER S/S 7.5H/D 5D/W	1	Each	50	1,544					1,544	30.88
5.00	EQCP /09AIRTR2	AIR TRAC DRILL TO 4" DIA.	2	Each	10	407	1,635	1,767			3,809	38.09
6.00	EQCP /60CPD075	COMPRESSOR DIESEL 750 C.F.M.	2	Each	6	244	1,044	2,631			3,919	39.19
7.00	EQCP /10P0WD2	POWDER TRUCK P/UP 1 TON CAP.	1	Each	51	1,648	269	197			2,114	42.28
8.00	EQCP /04235CBH	CAT 235C BACKHOE C/W 2.2 M3 BUCKET	1	Each	70	2,439	3,208	2,755			8,402	168.05
9.00	EQCP /03D25D	CAT D25D ART.DUMP TR.23T/14 M3 CAP.	2	Each	120	4,073	3,447	3,812			11,332	113.32
10.00	EQCP /01D07H	CAT D7H DOZER C/W S-BLADE	1	Each	66	2,256	2,115	1,965			6,335	126.71
11.00	Subtotal Hourly Cost (1.00)				50 Hours	573	18,941	11,718	13,128		43,787	875.73
12.00	JS /2206	DRILLING SUPPLIES-2.00"DIA.HOLES		M	1,150 M		1,035				1,035	0.90
13.00	JS /DRILL	DRILLING SUPPLIES-1 KG/M3 POWDER FACTOR		M3	5,000 M3		20,000				20,000	4.00
14.00	Subtotal Job Supplies (12.00)				1							
15.00	Grand Subtotal (1.00)						21,035				21,035	21,035.00
16.00	SPR /MU	Contractor Indirects and Profit	82 %			15,532	9,608	28,014				
	Worksheet Totals:					573	34,473	21,326	62,177			117,975

Klond-Crippen
Mt. Hansen Gold Project (NANSEN U)
Worksheet #: Hansen Left Bank Channels - Riprap

Page 1

Number: 10 Operation: Left Bank Channels - Riprap			
Quantity: 4,800.00	Unit: M3	Prog: M3/Hr	Estimator: SC
		Dur: 64.000 HR	Rev. Num: 10/18/94
Field	Code	WORK CODE	Description
LOCATION:	27		DIVERSION/EMERGENCY CHANNELS
DIVISION:	2220		ROCK FILL

Notes	
Assumed 300m of the emergency spillway would require riprap.	
Assumed riprap obtained from owner's quarry, preblasted and piled on the quarry floor.	
Material passed through a grizzly, then loaded onto trucks.	

Line	Group/Code	Description	Quantity	UOM	Manhours	Labour	Const. Equip.	Supplies	Job Permt. Matl.	Sub-Contr.	Total Cost	Unit Cost
1.00	LAB1 / LA1031755	LABOURER S/S 7.5HRS/D 5DAYS/W		1 Each	64	1,972					1,972	30.81
2.00	EQCP / 02980F	CAT 980F F.E.L. 4.0 M3 CAP.ROCK BUCK.		1 Each	76	2,549	2,870	2,440			7,860	122.81
3.00	EQCP / 03025D	CAT D25D ART.DUMP TR.23T/14 M3 CAP.		2 Each	154	5,213	4,412	4,879			14,505	113.32
4.00	EQCP / GRIZZLY	GRIZZLY		1 Each		26	1,920	256			2,202	34.41
5.00	EQCP / 010D07H	CAT D7H DOZER C/W S-BLADE		1 Each	84	2,888	2,707	2,515			8,109	126.71
6.00	Subtotal Hourly Cost (1.00)			64 Hours	378	12,648	11,909	10,091			34,648	541.38
7.00	SPR /MU	Contractor Indirects and Profit	82 %		10,372	9,765	8,274				28,411	
Worksheet Totals:				378	23,020	21,675	18,365				63,060	

Mt: Nansen Gold Project (NANSEN U)
 Worksheet #: 12 - Culverts Across New Channel

Page 1

Number:		
Quantity:	1.00	Unit: LS
Prod:	0.133 LS/HR	Dura:
Estimator:	SC	Rev. Num:
Field	Code	WORK CODE
LOCATION:	27	DIVERSION/EMERGENCY CHANNELS
DIVISION:	1563	TEMPORARY WATER CONTROL

Notes
 Need culverts across the newly diverted channel to maintain access to the dam site.
 Assumed work accomplished in one day.

Line	Group/Code	Description	Quantity	UOM	Manhours	Labour	Const. Equip.	Job Supplies	Perm. Mat.	Sub-Contr.	Total Cost	Unit Cost
1.00	LAB1 / LA1031755	LABOURER S/S 7.5HRS/D 5DAYS/W	2	Each	15	463					463	30.81
2.00	EQCP /04235CBH	CAT 235C BACKHOE C/W 2.2 M3 BUCKET	1	Each	11	367	482	414			1,264	168.05
3.00	Subtotal	Hourly Cost (1.00)			8 Hours	26	830	482	414		1,727	229.67
4.00	PM /2430	C.S.P.CULVERTS GALV. 1.6M DIA. 3.5G	20	M			7,160				7,160	358.00
5.00	Subtotal	Materials (4.00)			1						7,160	7,160.00
6.00	Grand Subtotal (1.00)		1		26	830	482	414	7,160		8,887	8,887.09
7.00	SPR /MU	Contractor Indirects and Profit	82 %		681	396	340	5,871			7,287	
		Worksheet Totals:			26	1,511	878	754	13,031		16,175	

Mt. Nansen Gold Project (NANSEN U)
 Worksheet #: 14 - Divert Dome Creek

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Number:	14 Operation: Divert Dome Creek		
Quantity:	1.00	Unit: LS	Prod: 0-133 LS/HR
Prod:	SC	Dura:	7.519 HR
Estimator:	SC	Revised:	10/18/94 Rev. Num:
Field	Code	WORK CODE	Description
LOCATION:	27	DIVERSION/EMERGENCY CHANNELS	
DIVISION:	1563	TEMPORARY WATER CONTROL	

Notes

Assumed some riprap stockpiled nearby from rock excavation work in the emergency channel. Other material for the diversion obtained from near the diversion site.

Assumed diversion accomplished over one shift, and that all material could be simply dozed into place.

Line	Group/Code	Description	Quantity	UOM	Manhours	Labour	Const. Equip.	Suppl. Job	Perm. Mat'l.	Sub-Contr.	Total Cost	Unit Cost
1.00	LAB1 /LA1031755	LABOURER S/S 7.5HRS/D 5DAYS/W	1	Each	8	232					232	30.81
2.00	EACP /01D08N	CAT D8N DOZER C/W U-BLADE & WINCH	1	Each	10	342	377	338			1,058	140.63
3.00	Subtotal Hourly Cost (1.00)											
			8 Hours		17	574	377	338			1,289	171.44
4.00	SPR /MU	Contractor Indirects and Profit	82 %		471	309	277				1,057	
Worksheet Totals:					17	1,045	686	616			2,346	