Knight Piésold
CONSULTING

MEMORANDUM

Date:	October 24, 2007	File. No.:	NB102-181/10-A.01
To:	Mr. Derek Chubb	Cont. No.:	NB07-00898
cc:	Steven Aiken		
From:	Reagan McIsaac		
Re:	Mary River Project Bulk Sampling Program – RECLAIM Model Results		

Derek,

As required by the Nunavut Water Board (NWB) General Conditions of Licence 2BB-MRY0710 dated July 27, 2007, a supplemental reclamation cost assessment for the abandonment and restoration of Baffinland's Mary River project following completion of the proposed bulk sampling program was completed using the RECLAIM model (version 5.1).

The RECLAIM modeling was based on the June 2007 Abandonment and Restoration Plan (A&R Plan, Knight Piesold Ref. No. NB102-00181/6-7, Rev. 1 dated 13-June-2007). This plan was written with a view to address all project-related activity and infrastructure related to the existing exploration and geotechnical drilling as well as the bulk sampling program. As described in the A&R Plan, final abandonment will include removing all equipment and materials either off-site or into the on-site landfill (for inert materials), and restoring much of the site to near original conditions as appropriate. Anything requiring removal off-site will be transported overland to Milne Inlet and then to Montreal via a sealift where the materials will be salvaged or properly disposed.

The RECLAIM model cost estimate is based on a number of assumptions. For example, although most of the equipment returning to Montreal will have residual value or can be relocated to other exploration projects, the salvage value for items has not been incorporated into the model. In addition to the models 10% contingency cost, a separate contingency cost item accounting for the unlikely potential to remediate acid generation (ARD) and/or metal leaching (ML) arising from the bulk sample pits and weathered ore stockpile as per the A&R Plan has been incorporated into the model. It is also assumed that the equipment that is on site for the bulk sampling program is used to complete the remediation work and the cost to remove this equipment is included as part of the bulk sampling program operational costs.

The estimated cost to complete the final abandonment work using the RECLAIM model is $3,543,748. The results of the RECLAIM model are attached.

The NWB Licence conditions under Part H (items 8, 10, 12 and 14) are not consistent with the A&R Plan and therefore have not been included in the RECLAIM modeling. In addition the A&R plan does not include the removal of all the culvert crossings along the bulk sampling road as outlined in item 9 of the Part H requested conditions, but it does include the removal of 10 navigatable water crossings along the road as is required under separate approvals. The A&R Plan was distributed for review by the NWB and Baffinland is not aware of any comments or concerns having been filed.

The estimated cost to complete the final abandonment work included in the A&R Plan was $5,407,000 (includes contingency for remediation of ARD/ML at pits and weathered ore stockpile). This cost was determined based on Baffinland's experience operating in North Baffin Island and Knight Piesold's experience with abandonment work in Canada and internationally. Confirmation of the reasonableness of the civil works aspects of the A&R Plan cost estimate was also provided by an experienced northern contractor.

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The costs presented in the A&R Plan are higher than those calculated using the RECLAIM model. The costs presented in the A&R Plan are therefore considered conservative.

Signed: _____
Reagan McIsaac, Ph.D., E.I.T.

Approved By: _____
Ken Embree, P. Eng., Managing Director

Attachments:

- RECLAIM model (version 5.1) cost estimate (13 pages)

SUMMARY OF COSTS

Capital Costs

COMPONENT TYPE	COMPONENT NAME	TOTAL COST	Land Liability	Water Liability
OPEN PIT	2 Bulk Sample Pits	$22,322.00	$22,322	$0
~~UNDERGROUND MINE~~	0	NO UNDERGROUND MINE		
~~TAILINGS~~	0	NO TAILINGS FACILITY		
ROCK PILE	Remnant Ore	$28,040.00	$28,040	$0
BUILDINGS AND EQUIPMENT	0	$591,310.80	$483,388	$107,923
CHEMICALS AND SOIL MANAGEMENT	Camps and Operatio	$168,842.00	$168,842	$0
WATER MANAGEMENT	Bulk Sample Progran	$780.00	$0	$780
POST-CLOSURE SITE MAINTENANCE		$593,105.53	$444,357	$148,749
SUBTOTAL		**$1,404,400**	**$1,146,949**	**$257,452**
		Percentages		
MOBILIZATION/DEMOBILIZATION	0	$1,825,686		
MONITORING AND MAINTENANCE	0	$149,000		

PROJECT MANAGEMENT - Project Management costs have already been included in the Monitoring and Maintenance costs

ENGINEERING	3 %	$42,132
CONTINGENCY	10 %	$122,530
GRAND TOTAL - CAPITAL COSTS		**$3,543,748**

1 **Open Pit Name:** *2 Bulk Sample Pits* **Pit #** *1*

ACTIVITY/MATERIAL	Units	Quantity	Cost Code	Unit Cost	Cost	% Land	Land Cost	Water Cost
A OBJECTIVE: CONTROL ACCESS								
• Controlled access is not required.								
B OBJECTIVE: STABILIZE SLOPES								
Drill and blast pit crests	m3	500	DBh	22	$11,000	100%	$11,000	$0
Buldoze/trim overburden at crest	m3	500	DRh	1.95	$975	100%	$975	$0
Runoff diversion berms around tops of both open pits	m3	100	SB2h	5.97	$597	100%	$597	$0
C OBJECTIVE: COVER/CONTOUR SLOPES								
• Weathered shallow bulk sample pit will not require capping. If visual observations or runoff water analyses (SEE POST CLOSURE COSTS) suggest otherwise a contingency plan (SEE POST CLOSURE COSTS) will be implemented to mix the weathered ore with neutralizing material and to reroute up-gradient surface runoff around the pile.								
OBJECTIVE: SPILLWAY								
• Spillway is not required at this site as pits are self-draining.								
E OBJECTIVE: FLOOD PIT								
• Shallow pit is self draining and thus will not be flooded.								
F RECLAIM QUARRIES								
• Borrow areas will be progressively reclaimed as part of operations, including maintaining stable side slopes and restoration of natural drainage.								
Recontour borrow areas	m3	5000	DRh	1.95	$9,750	100%	$9,750	$0
H OTHER ITEMS								
Subtotal					$22,322	100%	$22,322	$0
					Total Pits	Percent Land	Total Land	Total Water

1 **Tailings Impoundment Name: _____ Impoundment # *1***

ACTIVITY/MATERIAL	Units	Quantity	Cost Code	Unit Cost	Cost	% Land	Land Cost	Water Cost
A OBJECTIVE: CONTROL ACCESS								
Fence	m		#N/A	0	$0		$0	$0
. Signs	each		#N/A	0	$0		$0	$0
. Ditch, mat'l A	m3		#N/A	0	$0		$0	$0
. , mat'l B	m3		#N/A	0	$0		$0	$0
. Berm	m3		#N/A	0	$0		$0	$0
. Block roads	m3		#N/A	0	$0		$0	$0
. Other			#N/A	0	$0		$0	$0
B OBJECTIVE: STABILIZE EMBANKMENT								
. Toe buttress, drain mat'l	m3		#N/A	0	$0		$0	$0
. , fill mat'l A	m3		#N/A	0	$0		$0	$0
. , fill mat'l B	m3		#N/A	0	$0		$0	$0
. Rip rap	m3		#N/A	0	$0		$0	$0
. Vegetate	ha		#N/A	0	$0		$0	$0
. Raise crest	m3		#N/A	0	$0		$0	$0
. Flatten slopes	m3		#N/A	0	$0		$0	$0
. Other			#N/A	0	$0		$0	$0
C OBJECTIVE: COVER TAILINGS								
. Soil cover	m3		#N/A	0	$0		$0	$0
. Rip rap			#N/A	0	$0		$0	$0
. Vegetate			#N/A	0	$0		$0	$0
. Other			#N/A	0	$0		$0	$0
D OBJECTIVE: FLOOD TAILINGS								
. Ditch, mat'l A			#N/A	0	$0		$0	$0
. , mat'l B			#N/A	0	$0		$0	$0
. Raise crest	m3		#N/A	0	$0		$0	$0
. Other			#N/A	0	$0		$0	$0
E OBJECTIVE: TREAT SUPERNATANT								
. Pump water	m3		#N/A	0	$0		$0	$0
. Supply reagents	tonne		#N/A	0	$0		$0	$0
. Operate treatment plant	m3		#N/A	0			$0	
. Other			#N/A	0	$0		$0	$0
F OBJECTIVE: UPGRADE SPILLWAY								
. Excavate channel, mat'l A	m3		#N/A	0	$0		$0	$0
. , mat'l B	m3		#N/A	0	$0		$0	$0
. Concrete	m3		#N/A	0	$0		$0	$0
. Rip rap	m3		#N/A	0	$0		$0	$0
. Other			#N/A	0	$0		$0	$0
G OBJECTIVE: STABILIZE DECANT SYSTEM								
. Remove	m3		#N/A	0	$0		$0	$0
. Plug/backfill	m3		#N/A	0	$0		$0	$0
. Other			#N/A	0	$0		$0	$0
H OBJECTIVE: REMOVE TAILINGS DISCHARGE								
. Cyclones	m3		#N/A	0	$0		$0	$0
. Pipe	m3		#N/A	0	$0		$0	$0
. Other			#N/A	0	$0		$0	$0
I SPECIALIZED ITEMS								
.			#N/A	0	$0			$0
Subtotal					$0 Total Tailings	#DIV/0! Percent Land	$0 Total Land	$0 Total Water

NO U/G MINE

1 **Underground Mine Name** ______ **UG Mine #** *1*

	ACTIVITY/MATERIAL	Units	Quantity	Cost Code	Unit Cost	Cost	% Land	Land Cost	Water Cost
A	OBJECTIVE: CONTROL ACCESS								
	Fence	m		#N/A	0	$0		$0	$0
.	Signs	each		#N/A	0	$0		$0	$0
.	Ditch, mat'l A	m3		#N/A	0	$0		$0	$0
.	, mat'l B	m3		#N/A	0	$0		$0	$0
.	Berm	m3		#N/A	0	$0		$0	$0
.	Block adits	m3		#N/A	0	$0		[illegible]	$0
.	Cap shaft	m3		#N/A	0	$0		[illegible]	$0
.	Cap raise #1	m3		#N/A	0	[illegible]		[illegible]	$0
.	Cap raise #2	m3		#N/A	0	[illegible]		[illegible]	$0
.	Backfill adits	m3		#N/A	0	[illegible]		$0	$0
.	Backfill shaft	m3		[illegible]	0	[illegible]		[illegible]	$0
.	Backfill raise #1	m3		[illegible]	0	[illegible]		$0	$0
.	Backfill raise #2	[illegible]		[illegible]	0	[illegible]		$0	$0
.	Backfill open stopes			[illegible]	0	[illegible]		$0	$0
.	Other			[illegible]	0	$0		$0	$0
B	OBJECTIVE: STABILIZE GROUND SURFACE								
.	Backfill mine	[illegible]		#N/A	0	$0		$0	$0
.	Collapse crown pillar			#N/A	0	$0		$0	$0
.	Contour, mat'l A	m3		#N/A	0	$0		$0	$0
.	, mat'l [illegible]	m3		#N/A	0	$0		$0	$0
.	Maintain de[illegible] "M[illegible]TOR[illegible]/MAINTENANCE" costing component)			#N/A	0	$0		$0	$0
.	Other			#N/A	0	$0		$0	$0
C	OBJECTIVE[illegible]LOO[illegible]NE								
.	Plug adits	m3		#N/A	0	$0		$0	$0
.	Plug drillholes to surface	each		#N/A	0	$0		$0	$0
.	Grouting	m3		#N/A	0	$0		$0	$0
.	LIme addition, kg/m3 of water	tonne		#N/A	0	$0		$0	$0
.	Lime, purchase and shipping	tonne		#N/A	0	$0		$0	$0
D	OBJECTIVE: HAZARDOUS MATERIALS								
.	remove hazardous materials	each		#N/A	0			$0	$0
.	remove/decontam. equipment	each		#N/A	0	$0		$0	$0
.	Other			#N/A	0	$0		$0	$0
E	SPECIALIZED ITEMS								
.				#N/A	0	$0		$0	$0
	Subtotal					$0 Total U/G	#DIV/0! Percent Land	$0 Total Land	$0 Total Water

1 **Rock Pile Name: *Remnant Or* Rock Pile #: *1***

ACTIVITY/MATERIAL	Units	Quantity	Cost Code	Unit Cost	Cost	% Land	Land Cost	Water Cost
A OBJECTIVE: STABILIZE SLOPES								
• The weathered ore stockpile will be constructed with 2H:1V side slopes and to a height of approx. 4 m which will be be physically stable in the long term. Inspection during post-closure site visits will verify this.								
B OBJECTIVE: COVER DUMP								
• No cover planned.								
C OBJECTIVE: RELOCATE DUMPS								
• Remnant ore at the ore/pad interface will be left in place and covered with approximately 1.0 meter of borrow material (SEE BELOW).								
• Any remnant ore from the temporary crusher feed ore stockpiles at Mary River upon final abandonment will be left in place and covered with approximately 1.0m of borrow material (SEE BELOW).								
• The potential for the weathered ore stockpile to produce poor quality run-off is considered low. Progressive reclamation as part of operations include a perimeter berm and rerouting of up-gradient surface runoff around the pile with shallow drainage paths. If visual observations or runoff water analyses (SEE POST CLOSURE COSTS) suggest otherwise a contingency plan (SEE POST CLOSURE COSTS) will be implemented to mix the weathered ore with neutralizing material.								
Buldoze/trim remnant crusher feed ore stockpiles at Mary River	m3	6500	DSI	0.78	$5,070	100%	$5,070	$0
Apply 1.0m borrow cover over regraded remnant crusher feed ore stockpiles at Mary River	m3	1000	SB4h	8.95	$8,950	100%	$8,950	$0
Buldoze/trim the ore stockpiles at Milne Inlet.	m3	6500	DSI	0.78	$5,070	100%	$5,070	$0
Apply 1.0m borrow cover over regraded remnant ore stockpiles at Milr	m3	1000	SB4h	8.95	$8,950	100%	$8,950	$0
D OBJECTIVE: COLLECT AND TREAT								
• If visual observations or runoff water analyses (SEE POST CLOSURE COSTS) suggest otherwise a contingency plan (SEE POST CLOSURE COSTS) will be implemented to mix the weathered ore with neutralizing material.								
E OBJECTIVE: DEVELOP WETLAND								
• Not applicable.								
F SPECIALIZED ITEMS								
• Not applicable.								
Subtotal					$28,040	100.0%	$28,040	$0
					Total for Rock Pile	Percent Land	Total Land	Total Water