

REMEDIATION COSTS ESTIMATE CHIDLIAK PROJECT, NU, JULY 2012 (Updated for 2013)



Friday, 13 July 2012

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As requested, here is a cost estimate to remediate **Discovery Camp**. This is assuming all drills and heavy equipment and most of the drum fuel are off site. Site should be cleaned in summer and removed from strip in summer.

Helicopter	\$10,000.00
Fuel assume 5 Jet-B left on site to use in heli	
Twin Otter (25 trips)	\$87,500.00
Crew 15 days @\$1700/day	\$25,500.00
Crew travel	\$ 8,000.00
Crew accomm. and meals	\$ 2,500.00
Grocery costs	\$ 2,500.00
Communication	\$ 1,500.00
Total	\$137,500.00

This is an estimate, but it should cover most of the circumstances of remediation. Note: I have included the new equipment storage shed in demobe of camp equipment.

Malcolm McLean
Vice President
Discovery Mining Services Ltd



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As requested, here is a cost estimate to remediate **Sunrise Camp**. This is assuming all drills and heavy equipment and most of the drum fuel are off site. Site should be cleaned in summer and removed in winter by aircraft on skis, using the Sunrise Camp on-ice airstrip.

Helicopter	\$ 20,000.00
Fuel assume 10 Jet-B left on site to use in heli	
Twin Otter (30 trips)	\$105,000.00
Crew 21 days @\$1700/day	\$ 35,700.00
Crew travel	\$ 16,000.00
Crew accomm. and meals	\$ 5,000.00
Grocery costs	\$ 4,000.00
Communication	\$ 1,500.00
Total	\$187,200.00

This is an estimate, but it should cover most of the circumstances of remediation. Note: Travel and accommodation have doubled in cost, as I have allowed for crew to come back in winter for final demobe of camp equipment.

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 Vice President
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As requested, here is a cost estimate to remediate **Aurora Camp**; estimate assumes that currently-identified materials at this inactive camp remain on site. This also is assuming that no drills or heavy equipment are on site but that a few drums of fuel have been brought to site for final cleanup. Site should be cleaned in summer and materials removed to the Discovery airstrip in summer.

Helicopter	\$10,000.00
Fuel assume 5 Jet-B left on site to use in heli	
Twin Otter (5 trips)	\$17,500.00
Crew 7 days @\$1700/day	\$11,900.00
Crew travel	\$ 8,000.00
Crew accomm. and meals	\$ 2,500.00
Grocery costs	\$ 1,500.00
Communication	\$ 1,500.00
Total	\$52,900.00

This is an estimate, but it should cover most of the circumstances of remediation. Note: Most of the lumber can be burnt (if permission is granted) and the rest slung to Discovery Camp and flown off the strip.

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As requested, here is a cost estimate to remediate **CH-6 Camp**. This is assuming all drills and heavy equipment and most of the drum fuel are off site. Site should be cleaned in summer and materials slung to Discovery Camp airstrip and flown out in summer.

Helicopter	\$ 20,000.00
Fuel assume 10 Jet-B left on site to use in heli	
Twin Otter (30 trips)	\$105,000.00
Crew 21 days @\$1700/day	\$ 35,700.00
Crew travel	\$ 8,000.00
Crew accomm. and meals	\$ 2,500.00
Grocery costs	\$ 4,000.00
Communication	\$ 1,500.00

Total **\$176,700.00**

Shirley, this is an estimate, but it should cover most of the circumstances of remediation. Note: As the CH-6 Camp airstrip is a contingency strip, this estimate allows for slinging camp equipment to Discovery Camp strip and flying it out from there.

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Vice President
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EST. GRAND TOTAL (Removal of 4 Camps – by Air):
DISCOVERY MINING SERVICES = \$554,300.00

Note: If removal of some or most camp materials is possible in winter via the Winter-Trail Network and/or Equipment Trail to Iqaluit, costs of remediation can be greatly reduced. However, such overland haul costs are difficult to estimate in advance.

WATER AND SOIL SAMPLING ESTIMATES AT CLOSURE

(EBA ENGINEERING LTD. AND ALS ENVIRONMENTAL LABORATORY)

(Note: Estimates are based on prices likely to be in effect in 2013)

1) Water Quality Sampling - Camps:

Estimates 2 sites/camp x 4 camps + 1 duplicate = 7 water-quality grab samples

Cost for analysis (parameters under existing licence) at \$305 each: \$ 2,135.00

2) Water Sampling - Drill Sites:

Estimates 4 drillsites (4 samples) + 1 duplicate + 1 field blank + 1 travel blank = 7 water-quality grab samples.

Cost for analysis (BTEX + F1-F4) at \$200 each: \$ 1,400.00

3) Water Sampling - Potable: (spot-check of cleanup base camp + 1 other)

Estimates 8 sample locations/camp x 2 camps = 16 microbiological samples (incl. 1 duplicate + 1 field blank + 1 travel blank)

Cost for analysis (faecals, total coliforms, *E. coli*) at \$200 each \$ 3,200.00

4) Soil Sampling - Camps:

Estimates 4 locations/camp x 4 camps (16 samples) + 2 duplicates = 18 soil grab samples. Cost for analysis (BTEX + F1-F4) at \$200 each: \$3,600.00

5) Shipment of coolers (Canadian North or First Air): \$ 600.00

6) EBA Engineering - Sample Collection/Review Analytical Results/Reports

Estimated airfare (to/from EBA office, Yellowknife, NT) = \$2000 x return flight: \$ 4,000.00

Estimated hotel + meals travelling to/from Iqaluit, NU = \$350 x 1 day: \$ 350.00

Fee: 1 intermed. scientist for 55 hrs. total at chargeout of \$160/hr. (incl. 4% markup) \$8,800.00

(Note: Time estimate allows for shovel excavation of 2 minor spill sites (if encountered), re-covering/ recontouring with clean material nearby + documenting photos.)

Estimated 1/2 day assistance from Discovery Mining Services (DMS)

Crew cost of \$1700/day x 50% of day (for expediting, logistics, any manifests, etc.): \$ 850.00

Room/board at cleanup base camp for 2 days \$ 800.00

Cost estimated at \$200/person x 2 persons (scientist + DMS assistant) for 2 days: \$ 400.00

Estimated cost for Iqaluit-based assistant with firearms licence

(Peregrine direct cost at \$350/day x 2 days): \$ 700.00

Estimated EBA equipment-rental charge: \$1,500.00

7) Helicopter cost estimate - wet (same figure as used by DMS): \$ 8,000.00

Cost from centrally-located camp to 4 drillsites, 4 camps, minor holding time/location (total = 4 hrs.):

8) Fixed-wing cost estimate (same figure as used by DMS):

Cost of passage via Unaalik - Iqaluit charter, 50% of DMS flight to/from Discovery Camp: \$ 2,500.00

TOTAL: \$ 30,035.00

ASSUMPTION 1: Quote assumes 1 camp is operational by DMS, to allow overnighing at camp (room/board) for 2 days..

ASSUMPTION 2: Quote assumes availability to share fixed-wing space with Discovery Mining Services.

ASSUMPTION 3: Estimate assumes that not all camps will require a separate sampling event apart from regular

Chidiak water-quality sampling and environmental studies schedule.

EST. GRAND TOTAL, ALL REMEDIAL: = \$554,300 + \$30,035 = \$584,335