

# ATTACHMENT A

## Detailed Cost Comparison of the Active Versus Natural Flooding Scenarios

FORTUNE MINERALS LIMITED NICO DEVELOPER'S ASSESSMENT REPORT  
Information request responses

**Table 1: Unit Costs**

Item	Description	Unit	Unit Cost (\$ Cdn)
-	<b>Discount Rate</b>	%	3
-	<b>Mine Life</b>	years	18
-	<b>Years to Pit Overflow - with Pumping (Accelerated Scenario)</b>	years	7
-	<b>Years to Pit Overflow - without Pumping (Non-accelerated Scenario)</b>	years	120
<b>1000</b>	<b>Accelerated Pit Flooding</b>		
<b>1100</b>	<b>Construction of Pit Flooding Pipeline and Pump house</b>		
1110	Total Plant Direct Costs	L.S.	2,138,000.00
1120	Indirect Costs (EPCM, Permits, Commissioning) - 15%	L.S.	320,700
1130	Contingency (20% of Direct plus Indirect)	L.S.	491,740
1140	Total CAPEX		2,950,440
<b>1200</b>	<b>Annual OPEX for Pit Flooding</b>		
1210	Power (350 HP/year for 6 months @ \$ 0.49/kw-hr)	yr	563,378
1220	Labour (12 hrs shift x 6 months @ \$45)	yr	98,550
1230	Pump and Pipeline Maintenance (3% of Direct CAPEX)	each	64,140
1240	Total Annual OPEX		726,068
<b>2000</b>	<b>Post-Closure Care &amp; Maintenance</b>		
<b>2100</b>	<b>Water Quality Monitoring</b>		
2110	Peanut Lake Final Effluent (Chemical)	sample	300
2120	Peanut Lake Final Effluent (Toxicity)	sample	400
2130	Co-disposal Facility	sample	125
2140	Receiving Waterbody	sample	300
2150	Groundwater quality	sample	300
2160	Laboratory shipping	yr	1,500
<b>2200</b>	<b>Post-Overflow Water Treatment (ETF OPEX)<sup>a</sup></b>		
2210	ETF CAPEX	L.S.	6,828,000
2220	Re-commissioning ETF (25% of Actual CAPEX)	L.S.	1,707,000
2230	Labour	yr	129,600
2240	Power (6 months per year)	yr	325,620
2250	Maintenance/repairs	yr	82,000
2260	Chemicals	yr	8,559

<sup>a</sup> Effluent Treatment Facility calculations are based on IX system and not the current RO system.

CAPEX = estimated capital cost; OPEX = operating costs; ETF = Effluent Treatment Facility

L.S. = Lump Sum cost; yr = year

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Table 2: Post-Closure Costs

Cost Item	Description	Unit	Unit Cost (\$ Cdn)	Option 1			Option 2			Option 3			Option 4		
				Q	Annual Cost (\$ Cdn)	NPV (\$ Cdn)	Q	Annual Cost (\$ Cdn)	NPV (\$ Cdn)	Q	Annual Cost (\$ Cdn)	NPV (\$ Cdn)	Q	Annual Cost (\$ Cdn)	NPV (\$ Cdn)
	Post Closure Years Required to Fill the Open Pit (assumed)	yr			120			120			7			7	
	Post Closure Water Quality Monitoring Years (Assumed)	yr			1,000			127			1,000			14	
	Post Overflow years of Water Treatment	yr			1,000			0			1,000			0	
1000	Accelerated Pit Flooding														
1100	Construction of Pit Flooding Pipeline and Pump house														
1140	Total CAPEX	L.S.	2,950,440	0	0	0	0	0	0	1	2,950,440	1,409,147	1	2,950,440	1,409,147
1200	Annual OPEX for Pit Flooding														
1240	Total Annual OPEX	yr	726,068	0	0	0	0	0	0	1	726,068	2,160,501	1	726,068	2,160,501
	<b>Sub-Total</b>					<b>0</b>			<b>0</b>			<b>3,569,647</b>			<b>3,569,647</b>
2000	Post-Closure Care & Maintenance														
2100	Water Quality Monitoring														
2110	Peanut Lake Final Effluent (Chemical)	sample	300	4	1,200	677	4	1,200	661	4	1,200	19,104	4	1,200	6,474
2120	Peanut Lake Final Effluent (Toxicity)	sample	400	4	1,600	903	4	1,600	881	4	1,600	25,472	4	1,600	8,632
2130	Co-Disposal Facility	sample	125	4	500	282	4	500	275	4	500	7,960	4	500	2,698
2140	Receiving Waterbody	sample	300	4	1,200	677	4	1,200	661	4	1,200	19,104	4	1,200	6,474
2150	Groundwater quality	sample	300	20	6,000	3,384	20	6,000	3,305	20	6,000	95,521	20	6,000	32,370
2160	Laboratory shipping	yr	1,500	1	1,500	846	1	1,500	826	1	1,500	23,880	1	1,500	8,093
	<b>Sub-Total</b>					<b>6,769</b>			<b>6,610</b>			<b>191,042</b>			<b>64,741</b>
2200	Post-Overflow Water Treatment (ETF OPEX) <sup>a</sup>														
2220	Re-commissioning ETF (25% of Actual CAPEX)	L.S.	1,707,000	1	1,707,000	28,887	0	0	0	1	1,707,000	815,273	0	0	0
2230	Labour	yr	129,600	1	129,600	73,105	0	0	0	1	129,600	2,063,256	0	0	0
2240	Power (6 months per year)	yr	325,620	1	325,620	183,676	0	0	0	1	325,620	5,183,931	0	0	0
2250	Maintenance/repairs	yr	82,000	1	82,000	46,255	0	0	0	1	82,000	1,305,455	0	0	0
2260	Chemicals	yr	8,559	1	8,559	4,828	0	0	0	1	8,559	136,261	0	0	0
	<b>Sub-Total</b>					<b>336,750</b>			<b>0</b>			<b>9,504,176</b>			<b>0</b>
	<b>TOTAL</b>					<b>343,519</b>			<b>6,610</b>			<b>13,264,865</b>			<b>3,634,388</b>

<sup>a</sup> Effluent Treatment Facility calculations are based on IX system and not the current RO system.

CAPEX = estimated capital cost; OPEX = operating costs; ETF = Effluent Treatment Facility

L.S. = Lump Sum; NPV = net present value; yr = year