



GOLDER

LUPIN GOLD MINE COMPARISON SUMMARY

**BETWEEN KNIGHT PIESOLD'S 2016
AND GOLDER'S 2017
RECLAMATION SECURITY ESTIMATES**

April 4, 2018

Introduction: Context for Knight Piesold 2016 and Golder 2017

UNDERGROUND MINE

Lupin Mines
Incorporated

Activity	Knight Piesold 2016	Golder 2017	Difference	Comparison Summary
Access Control	\$ 464,639	\$ 464,445	\$ 194	Essentially the same

TAILINGS FACILITY

Lupin Mines
Incorporated

	Activity	Knight Piesold 2016	Golder 2017	Difference	Comparison Summary
Main Discrepancies	Rip Rap Placement	\$1,368,000	\$22,800	\$1,345,200	KP assumed upstream faces of dams would be flattened using rip rap. This is unnecessary. Golder assumed rip rap in the wave zone only with reduced water levels.
	Soil Cover	\$2,244,350	\$1,472,993	\$771,357	KP area is from 2012. Golder used smaller remaining area considering work completed on 2016-2017 and actual contracted unit cost
	Total Cost	\$6,402,466	\$4,202,397	\$2,200,069	

ROCK PILES

Lupin Mines
Incorporated

	Activity	Knight Piesold 2016	Golder 2017	Difference	Comparison Summary
Main Discrepancies	Cover Rock Piles	\$0	\$2,560,896	(\$2,560,896)	Cover of waste rock in place with 1m of borrow material (36.48 ha)
	Relocate Dumps	\$2,800,000	\$215,232	\$2,584,768	Approximate volume to be removed and disposed underground or in landfill
	Waste Rock Survey, Risk Assessment & Option Assessment	\$400,000	\$0	\$400,000	These activities were completed as part of the 2017 ESA update
	Total Cost	\$3,200,000	\$3,159,168	\$40,832	

EQUIPMENT AND BUILDINGS

Lupin Mines
Incorporated

	Activity	Knight Piesold 2016	Golder 2017	Difference	Comparison Summary
Main Discrepancies	Sleepers and Offices	\$938,112	\$329,805	\$608,307	Golder changed from a really high unit rate, (higher than RECLAIM for all buildings), using a lower rate for those facilities that are easy to dismantle etc.
	Cold Storage 2 Buildings	\$237,440	\$83,475	\$153,965	
	Grade/Contour Entire Mine Site	\$1,028,573	\$0	\$1,028,573	No longer required based on new plan. Site will be regraded and contoured as part of in place covering of waste rock (included in section Waste Pile)
	Isolate Buildings (waste, glycol, sewer)	\$310,239	\$0	\$310,239	Included in demolition based on high price (\$128/m ²) much higher than RECLAIM
Total Cost		\$6,402,466	\$4,202,397	\$2,200,069	

CHEMICALS

Main Discrepancies	Activity	Knight Piesold 2016	Golder 2017	Difference	Comparison Summary
	Fuel	\$2,813,352	\$43,000	\$2,770,352	Use existing fuel for closure. Burn leftover (assumed 100,000 L)
	Contaminated Soil Investigation	\$200,000	\$0	\$200,000	Completed in 2017 ESA update
	Building Decontamination and Haz Waste Removal	\$0	\$387,602	(\$387,602)	Based on Asbestos containing materials survey done as part of 2017 ESA update.
Total Cost		\$6,402,466	\$4,202,397	\$2,200,069	

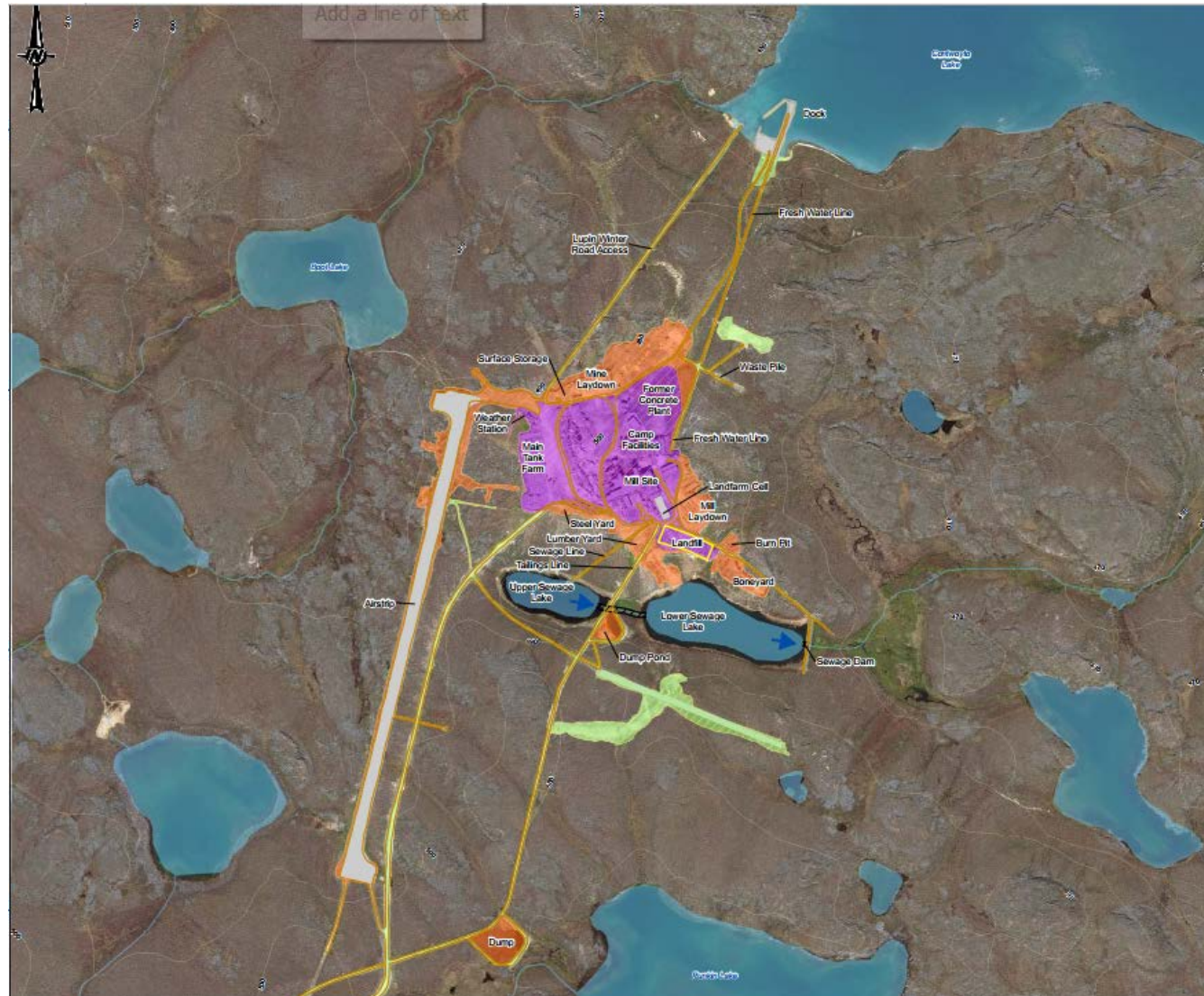
MOBILIZATION

Lupin Mines
Incorporated

	Activity	Knight Piesold 2016	Golder 2017	Difference	Comparison Summary
Main Discrepancies	Fuel	\$1,946,000	\$0	\$1,946,000	Adequate fuel is available on site, the fuel has been tests the last two years (results filed with the NWB)and it has been used at the site. LMI would provide to Contractors, or fuel could be seized and used in the case of abandonment.
	Worker Accommodations	\$1,443,750	\$489,258	\$954,492	Golder has used actual rates from a third party provider (Discovery) using the existing camp facilities.
	Total Cost	\$6,671,462	\$4,829,258	\$1,842,204	

POST CLOSURE MINE SITE

Lupin Mines
Incorporated



POST CLOSURE TAILINGS AREA

Lupin Mines
Incorporated



Lupin – Gold Mine Reclamation Timeline	2017 Q4	2018 Q1	2018 Q2	2018 Q3	2018 Q4	2019 Q1	2019 Q2	2019 Q3	2019 Q4	2020 Q1	2020 Q2
Phase 1 – Security Reduction and Approval of Final Closure Plan											
Submit \$7.1m ILOC by Sept 30, 2017 to INAC and NWB	Sept										
Submit new Estimate and Amendment Application to Reduce Security – MND to NWB	Oct										
Engage with INAC/EC/DFO on Draft Closure Plan – MND											
Engage with KIA on Final Closure Plan – MND											
Submit Final Closure Plan Application - MND to NWB – including Progressive Reclamation Security Reduction Plan											
Contractor scope of work, RFP, site visits and determination			Scope	Site visits, prop,	★						
Establish Multi-Stakeholder Working Group for Regular meetings until Final Closure											
Decision on Security Reduction from NWB to MND			★								
Implement and Complete Progressive Reclamation Work Program – MND											
Submit Application for Ice Road - Lupin to Yellowknife – MND to Contractor											



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Lupin – Gold Mine Reclamation Timeline	2017 Q4	2018 Q1	2018 Q2	2018 Q3	2018 Q4	2019 Q1	2019 Q2	2019 Q3	2019 Q4	2020 Q1	2020 Q2
Phase II – Final Reclamation and Final Security Decision											
Approval of Final Closure Plan with Progressive Security Reduction Plan – NWB to MND – 12 months						★					
Implement and Complete Reclamation Work Program - MND											
Approval for Ice Road – Contractor to MND											
Inspections Process - INAC											
Use Ice Road for Final Closure Process– Lupin to Yellowknife - MND											
Final Closure Security Decision											★
Phase 3 – Post Closure Monitoring											
Post-Closure Monitoring											



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