

Fundamental

Research Corp.

Investment Analysis for Intelligent Investors

May 22, 2019

Lumina Gold Corp (TSXV: LUM) - Initiating Coverage: Ross Beaty Backed 8.5 Moz Gold Project in Ecuador

Sector/Industry: Junior Resource

www.luminagold.com

Market Data (as of May 22, 2019)

Current Price	C\$0.57
Fair Value	C\$0.93
Rating*	BUY
Risk*	5
52 Week Range	C\$0.46 – C\$0.82
Shares O/S	309,529,893
Market Cap	C\$176.43 mm
Current Yield	N/A
P/E (forward)	N/A
P/B	7.6x
YoY Return	-26.0%
YoY TSXV	-22.5%

*see back of report for rating and risk definitions.

* All figures in US\$ unless otherwise specified.



Investment Highlights

- Lumina Gold Corp. (“LUM”, “company”) is advancing its 100% owned Cangrejos project in Ecuador, with an inferred resource estimate of 8.5 Moz gold (0.65 gpt) and 1.03 Blbs copper (0.11%) - making Cangrejos **one of the largest undeveloped gold deposits held by a junior globally**.
- A 2018 Preliminary Economic Assessment (“PEA”) showed an After Tax – Net Present Value (“AT-NPV”) at 5% of \$920 million at \$1,300 per oz gold, and \$528 million at \$1,170 per oz gold. The current Enterprise Value (“EV”) of Lumina is just C\$166 million.
- The total initial CAPEX has been estimated at approximately \$831 million, and a very low life-of-mine (“LOM”) cash cost of \$523 per oz.
- **We believe that, Cangrejos, with a potential to produce over 300 Koz per year gold, and CAPEX under \$1 billion, will be attractive for acquirers.**
- Recent tax reforms in Ecuador, and several other initiatives taken by the government to promote its mining industry, have resulted in a growing interest from majors to enter Ecuador.
- Lumina is in a strong cash position, with \$14.49 million in the treasury at the end of 2018.
- **Ross Beaty owns 17.2% of the outstanding shares.** Approximately 35.5% of the total outstanding shares are held by management, board members, insiders and institutions, aligning their interest with other investors.
- 2019 drilling will include 38 holes totaling 17,500 m of which, 22 holes / 11,500 m are focused on potentially delineating a satellite deposit located 1 km west of the current resource. **An updated resource estimate is expected in the second half of 2019.**
- We are initiating coverage on Lumina with a BUY rating and a fair value estimate of C\$0.93 per share.

Risks

- The value of the company is highly dependent on gold prices.
- Ecuador is a relatively new mining jurisdiction.
- Geopolitical risks.
- Lower grade / high CAPEX projects are currently out of favor.
- Viability of a smaller scale operation has yet to be proven.

Key Financial Data (FYE - Dec 31)










(US\$)	2017	2018
Cash	\$14,692,983	\$14,490,979
Working Capital	\$13,689,881	\$14,056,845
Mineral Assets	\$49,189,010	\$1,701,100
Total Assets	\$66,193,682	\$17,961,188
Net Income (Loss)	-\$13,399,425	-\$27,467,091
EPS	-\$0.06	-\$0.09

* The decline in assets in 2018 was a result of the spin-off of Luminex Resources.

Background

Lumina Gold, based out of Vancouver, Canada, was formed in 1988 as Odin Mining & Exploration Ltd. The company's focus has primarily been on the Cangrejos gold-copper project in Ecuador since 1992. **Mining magnate Ross Beaty made his first investment in the company in 2014, which resulted in the installation of a brand new management and board.** The new team, most of who have held key roles at the Lumina Group of Companies founded by Ross Beaty (such as Lumina Copper, Northern Peru Copper Corp., Regalito Copper, Global Copper Corp, etc.), is led by CEO, President and Director, Marshall Koval – a geologist, a director of Equinox Gold Corp. (TSXV: EQX / Ross Beaty is also the Chairman of EQX) and the former CEO of Northern Peru Copper Corp, and VP of Corporate Development for Lumina Copper Corp. **Lumina Copper was acquired by First Quantum (TSX: FM) in 2014 for C\$470 million, and Northern Peru Copper was acquired in 2007, by China Minmetals (SZSE:000831) and Jiangxi Copper (SEHK:358) for C\$455 million.** The following chart shows the highly successful track record, and a list of M&A transactions completed by the Lumina Group.

Lumina Group Track Record

 <p>Sold For C\$470M in 2014 Taca Taca Project – Argentina Bought by First Quantum</p>	 <p>Sold For C\$455M in 2007 Galeno Project – Peru Bought by China Minmetals / Jiangxi Copper</p>	 <p>Sold For C\$415M in 2008 Relincho Project – Chile Bought by Teck</p>
 <p>Sold For US\$137M in 2006 Regalito Project – Chile Bought by Pan Pacific Copper</p>	 <p>Sold For US\$66M in 2011 Portfolio of Royalties Bought by Franco Nevada</p>	 <p>Sold For C\$26M in 2006 Casino Project – Canada Bought by Western Copper</p>
 <p>Sold For C\$50M in 2017 Coringa & Mayanquel Projects – Brazil & Guatemala Bought by Trek Mining (Equinox Gold)</p>	 <p>Current Market Cap: ~C\$175M Cangrejos Project – Ecuador</p>	 <p>Current Market Cap: ~C\$30M Condor Project and Exploration Properties – Ecuador</p>

Source: Company

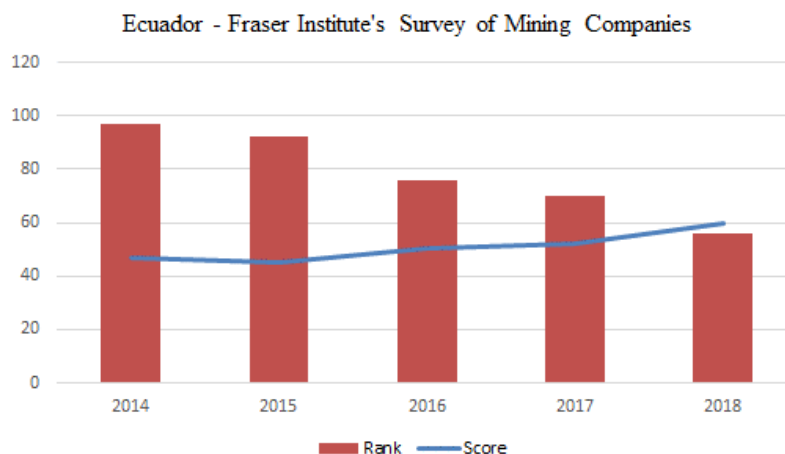
In 2016, Lumina acquired TSXV listed Ecuador Gold and Copper Corp for 70.09 million shares (valued at \$43.38 million), took control over its Condor project in Ecuador, and changed its name to Lumina Gold Corp.

In 2018, the company spun-out all of its projects (except Cangrejos) and \$5 million cash into a newly formed, Luminex Resources (TSXV: LR). Shareholders of Lumina received 0.15 Luminex shares per Lumina Gold share. Luminex's primary asset, Condor, which has 1.4 Moz gold (0.68 gpt) and 43 Mlb copper indicated and 2.5 Moz gold (0.54 gpt) and 260 Mlbs copper inferred resources, is being advanced to a PEA. Management was also successful in attracting three majors (First Quantum / TSX: FM, Anglo American / LSE: AAL, and BHP / ASX: BHP) to earn-in on three other early stage projects in Ecuador. **This is highly encouraging as these deals not only demonstrate management's M&A capabilities, but also the growing interest from majors in Ecuador.**

Lumina is currently aggressively drilling to upgrade / expand Cangrejos' already existing large resource base to position itself as a strong acquisition target.

Ecuador

With a population of approximately 17 million, Ecuador is bordered by Colombia on the north, Peru on the east and south, and the Pacific Ocean on the west. **Ecuador is the smallest producer of the Organization of the Petroleum Exporting Countries (OPEC).** According to OPEC, approximately 31% of Ecuador's exports come from petroleum products. Despite being a strong oil producer and generally considered to be mineral rich, the country is significantly **underexplored for metals**, and has limited historical production, relative to its neighbors Peru and Colombia. In addition, there was a major lack of foreign investment over the past decade due to a highly restrictive tax regime put in place by the former President, Rafael Correa, in 2008. **However, the country has been taking major initiatives in the past few years to attract explorers / miners to develop its untapped mining industry.** We believe this could be a result of the soft oil price environment and to reduce the country's dependence on the sector. Sources indicate that Ecuador is aiming to increase the contribution of its mining industry from the current 1.6% of the Gross Domestic Product ("GDP") to 4% by 2021. In 2018, Ecuador announced a major overhaul of its mining tax regime, and the removal of a prohibitive 70% windfall tax on foreign investment. Net Smelter Return ("NSR") royalties due to the government were reduced from 5% - 8%, to 3% - 8%. Capital gains tax rates were also reduced. In order to speed up development, the country also started allowing mining companies to conduct prospective drilling without applying for a full environmental license. **In addition, in March 2019, the International Monetary Fund approved a \$4.2 billion fund facility for Ecuador.** The World Bank also recently approved a \$350 million loan to Ecuador to improve social welfare services. **We believe all these changes have quickly made Ecuador a strong area of interest for miners, with larger companies entering into joint ventures or investing in juniors to gain exposure to the country.** Ecuador's ranking by the Fraser Institute Annual Survey of Mining Companies has been rising every year, as shown below.

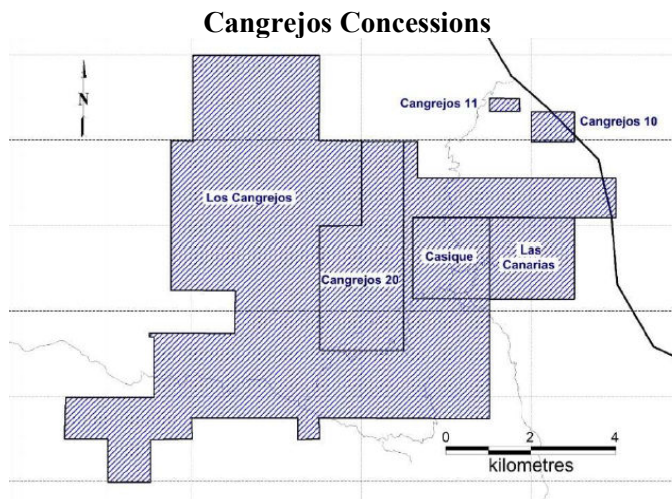


We believe Lumina, and its predecessors, operating track record in Ecuador since 1988, offers the company a major early mover advantage.

Cangrejos Gold-Copper Project

Ownership

The current land holdings of Cangrejos include six mining / exploration concessions totaling 6,374 ha, one acquired in 1994, four during 2001 – 2004, and the sixth (Cangrejos 20), was acquired in 2016, through government auctions.



Source: Company

Other than a potential 3% - 8% NSR royalty due to the Government of Ecuador, the concessions are not subject to any royalties, back-in rights, or any other encumbrances.

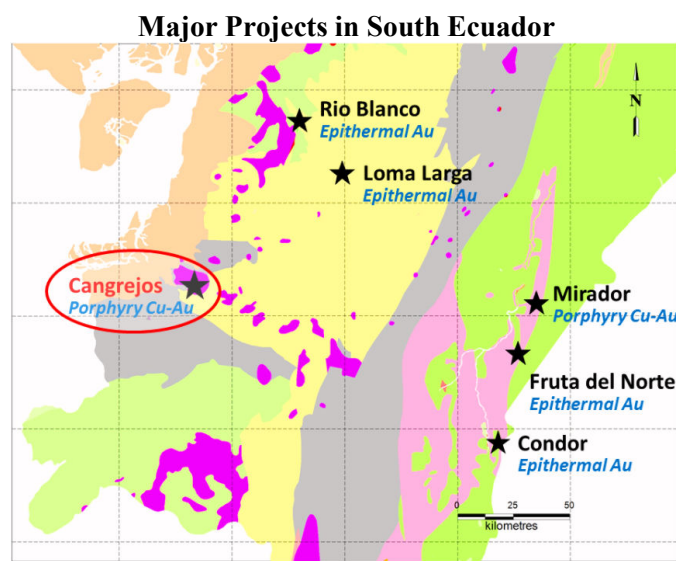
Location

The project is located in the El Oro province in a high-relief terrain in southwest Ecuador, 30 km southeast of the provincial capital of Machala (population approximately 250,000 and located along the Pan-American Highway), and **40 km from the deep water port** of Puerto Bolivar. Access to the property is via paved and gravel roads. The closest major town (Santa Rosa / population 50,000) is 30 km by road, and the nearest town is 7 km away. Both Santa Rosa and Machala have the potential to offer labor, goods, and services for mining operations. Power to the camp can be supplied from the national grid, and there are sufficient nearby offsite water sources.



Source: Company

The map below shows the major advanced stage projects in south Ecuador.



Source: Company

Among the five other projects, the Fruta del Norte gold deposit is the largest and most well-known. This deposit was discovered in 2006, and Lundin Gold (TSX: LUG) acquired it in 2014 for \$240 million. The project, which is expected to be in production later this year, will be the country's first major gold producer. Rio Blanco and Mirador, both held by Chinese entities, have been subject to delays primarily due to issues regarding local community consultation. The Mirador open pit mine (Cu-Au) is also expected to also be in production within the next year. Loma Larga (held by INV Metals / TSXV: INV) completed a Feasibility Study ("FS") in 2018.

The following table summarizes the projected economics of Cangrejos, Fruta del Norte, and Loma Larga in Southern Ecuador, and the resource estimate of an earlier stage massive Alpala gold-copper porphyry deposit held by SolGold (TSX: SOLG) in Northern Ecuador. **Compared to the other three, which are expected to be underground mines, Cangrejos holds an open-pittable deposit of higher tonnage and lower grade.** The CAPEX is also higher for Cangrejos primarily due to its large size; for example, the annual production estimate of 373 Koz for Cangrejos exceeds Fruta del Norte's expected 310 Koz. Details of Cangrejos' PEA are discussed later in the report.

	Fruta del Norte	Loma Larga	Cangrejos	Alpala
Owner	Lundin Gold	INV Metals	Lumina Gold	SolGold (85%)
Target Commodities	Gold-Silver	Gold-Silver-Copper	Gold-Copper	Gold-Copper
Location	Southern Ecuador	Southern Ecuador	Southern Ecuador	Northern Ecuador
Stage	Construction Stage / Commencing Production in Q4-2019 / Updated FS in 2019	FS completed in 2018	PEA completed in 2018	Resource
Type	Underground	Underground	Open Pit	Underground
Reserves	5 Moz at 8.7 gpt gold (7.4 Moz at 9.6 gpt resource and 2.1 Moz at 5.7 gpt inferred resource)	2.2 Moz at 4.9 gpt gold	8.5 Moz at 0.65 gpt gold (inferred resource)	5.4 Mt Cu at 0.66% and 15 Moz Au at 0.57 gpt (indicated) and 0.7 Mt Cu at 0.49% and 1.2 Moz Au at 0.26 gpt (inferred)
Feasibility Study Results			PEA Results	
Mine Life	15	12	16	
CAPEX	\$692M	\$279M	\$831M	
All-in Sustaining Costs	\$583 per oz	\$619 per oz	\$569 per oz	
Annual Production	310 Koz	206 Koz	373 Koz gold and 43 Mlbs copper	
AT-NPV @ 5%	\$786M	\$356M	\$920M	
AT - IRR	17.50%	24.70%	15.00%	
Gold Price	\$1,250	\$1,250	\$1,300	

Source: Lumina / INV / Lundin

Mineralization and Historical Work

Cangrejos holds **porphyry style gold-copper mineralization** (lower grade / bulk tonnage). Mineralization consists of disseminated, fractured, veinlet and quartz stockwork-controlled sulphide mineral. It has so far been defined by widely spaced drill holes, to be of approximately 1,000 m strike, 70 m to 600 m width, and at least 600 m depth. Metallurgical tests indicate potential for a 82% recovery for both gold and copper.

Expected Recovery Rates

Sulphide Material – 96% of Processed Material					Partially Oxidized Material – 4% of Processed Material				
	Au	Cu	Ag	Mo		Au	Cu	Ag	Mo
Gravity Concentrate	37%	-	9%	-	Gravity Concentrate	-	-	-	-
Copper Concentrate	45%	82%	69%		Copper Concentrate	65%	50%	50%	
Moly. Concentrate	-	-	-	50%	Moly. Concentrate	-	-	-	50%
Total Recovery	82%	82%	78%	50%	Total Recovery	65%	50%	50%	50%

Source: Company

Lumina's predecessor started exploring the area in 1992. In 1994, the company formed a **joint venture with Newmont (NYSE: NEM)**, and from 1994 to 2001, conducted geophysical and geochemical surveys, and drilled 29 diamond holes (7,509 m), which resulted in the discovery of porphyry-style, gold-copper mineralization associated with the Cangrejos zone. Newmont withdrew from the joint venture in 2001, because of weak gold prices. The project was relatively inactive since then until 2011, when Lumina resumed

drilling. The following points highlight the key historic drill programs on the property:

- 1999 - 2000: 27 holes / 7,200 m of drilling (JV with Newmont)
- 2011 - 2012: 17 holes / 4,698 m of drilling (Odin Mining, Lumina's predecessor)
- 2014 - 2018: 56 holes / ~23,500 m of drilling (Lumina)
- 2019 drilling to date of ~13,000 m including metallurgical and geotechnical holes (Lumina)

A maiden resource estimate was completed in early 2017, followed by an updated resource in November 2017, and a PEA in 2018.

2018 Resource Estimate – The 2018 resource estimate showed 8.5 Moz gold (0.65 gpt) and 1.03 Blbs copper (0.11%) inferred, making Cangrejos **one of the largest undeveloped gold deposits held by a junior**. As shown in the table on page 12 (which lists a number of open-pit gold deposits), Cangrejos' gold grade of 0.65 gpt is reasonably attractive, with extremely low copper / silver / molybdenum grades. **According to the PEA, revenues from gold will account for 76.5% of the project's revenues, followed by copper (22.0%), and silver / molybdenum (1.5%).**

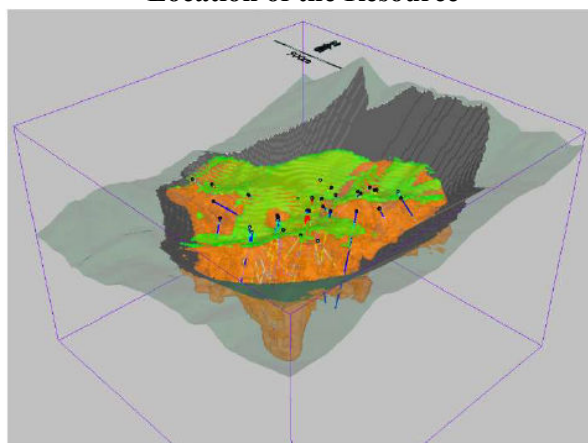
Inferred Resource Estimate (0.35 g/t Au Eq Cut-off)

Type	Million Tonnes	Average Grade					Contained Metals			
		AuEq (g/t)	Au (g/t)	Cu (%)	Ag (g/t)	Mo (ppm)	Au (Moz)	Cu (Mlbs)	Ag (Moz)	Mo (Mlb)
Oxide Material	17.7	0.77	0.61	0.09	0.6	21.9	0.3	35	0.4	0.9
Sulphide Material	390.2	0.86	0.65	0.12	0.6	25.1	8.2	998	7.4	21.6
Total	408.0	0.85	0.65	0.11	0.6	25	8.5	1,033	7.8	22.5

Sensitivity to Cut-Off Grade

Cut-Off AuEq (g/t)	Million Tonnes	Average Grade					Contained Metals			
		AuEq (g/t)	Au (g/t)	Cu (%)	Ag (g/t)	Mo (ppm)	Au (Moz)	Cu (Mlb)	Ag (Moz)	Mo (Mlb)
0.25	440.1	0.81	0.62	0.11	0.6	24	8.8	1,054	8.2	23.3
0.35	408.0	0.85	0.65	0.11	0.6	25	8.5	1,033	7.8	22.5
0.45	369.5	0.9	0.69	0.12	0.6	25.8	8.1	985	7.1	21
0.55	320.8	0.96	0.73	0.13	0.6	26.7	7.5	919	6.5	18.9

Location of the Resource



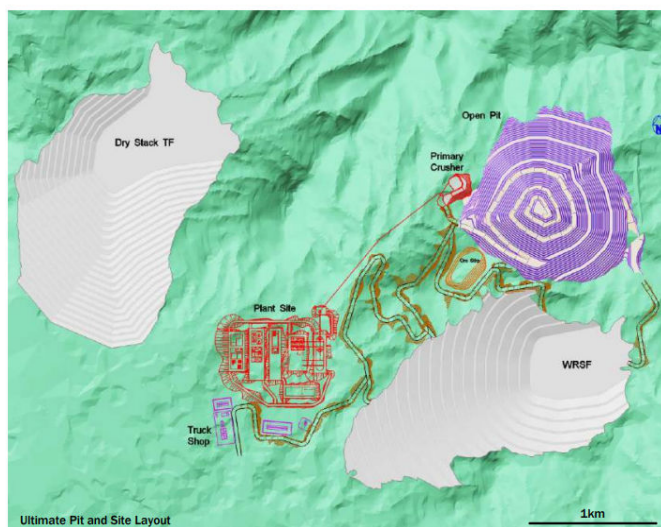
Green – oxidized/ Orange – Sulphide

Source: Company

2018 PEA

The PEA was based on an **open-pit mining operation**, followed by conventional copper-gold flotation. Processes include crushing, SAG/Ball mill grinding, gravity gold concentration, bulk copper-molybdenum flotation, and copper-molybdenum separation flotation.

Proposed Layout



Source: Company

The PEA estimates a **16 year mine life** based on a feed rate of 40,000 tpd for the first five years of operation, and 80,000 tpd from year six onwards through the addition of a second grinding line. Produced concentrates will be trucked to Puerto Bolivar and shipped to smelters and refiners for further processing. **The average projected annual production is 373 Koz gold and 43 Mlbs copper, which we believe are attractive figures for a mid-tier or major gold producer.**

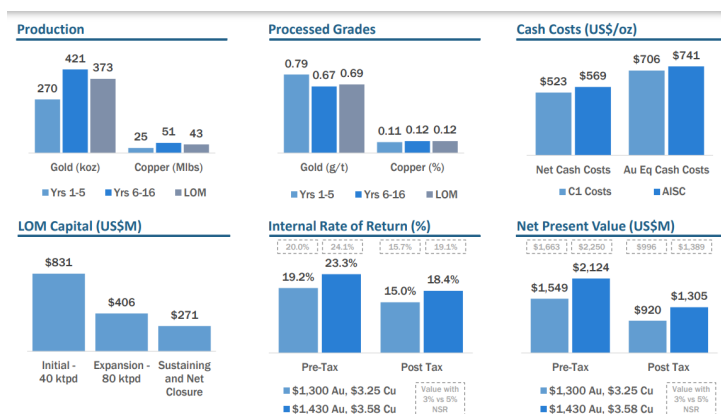
Power will be supplied by the Ecuadorian National Electric Transmission System (NTS), connected via a new 19 km transmission line. The total CAPEX for the line and substation is estimated at \$15 million, which is included in the PEA.

The total **initial CAPEX has been estimated at approximately \$831 million**, with key items including \$277 million for the processing plant / infrastructure, \$100 million for equipment, and \$89 million for contingency. The total expansion capital (mainly spent in years four and five) is estimated to be approximately \$406 million, including a \$52 million contingency.

The operating cost is estimated to be approximately \$15 / t milled (\$612 per oz cash cost) in years 1 – 5, and \$13 / t LOM (\$523 per oz cash cost); making it a **low-cost advanced stage gold project** primarily due to its access to cheaper power, and proximity to the port.

The base-case scenario showed an **AT-NPV at 5% of \$920 million**, with an AT-IRR of 15%, at \$1,300 per oz gold and \$3.25 per lb copper.

2018 PEA			
Mine Life	16 years		
Tonnage	339 Mt		
Throughput (tpd)	40 ktpd (Years 1 - 5), 80 ktpd (Years 6+)		
	Recovery	Commodity Price	Revenue Mix
Gold	82% (fresh) / 65% (partially oxidized)	\$1,300 per oz	76.50%
Copper	82% (fresh) / 50% (partially oxidized)	\$3.25 per lb	22%
Silver	78% (fresh) / 50% (partially oxidized)	\$19 per oz	1.50%
Molybdenum	50% (fresh) / 50% (partially oxidized)	\$11 per lb	
Strip Ratio (LOM)	1.13 : 1		
Annual Gold Production (oz)	373 Koz gold and 43 Mlbs copper		
Grade (LOM)	0.69 gpt gold and 0.12% copper		
Cash Cost (LOM)	\$523 per oz (\$569 per oz AISC)		
Initial CAPEX	\$831M		
Expansion CAPEX	\$406M		
AT - IRR	15.00%		
AT - NPV @ 5%	\$920M		



Source: Company

The following table shows the NPV and IRR's sensitivity to gold prices. **The project showed an AT-NPV at 5% of \$528 million, at a gold price of \$1,170 per oz.** The current EV of Lumina is just C\$162 million.

Expansion / Upgrade Drilling

Sensitivity			
Gold Price (per oz)	\$1,170	\$1,300	\$1,430
Copper Price (per lb)	\$2.93	\$3.25	\$3.58
Pre-Tax NPV (5%)	\$974M	\$1,549M	\$2,124M
Pre-Tax IRR	14.60%	19.20%	23.30%
Post-Tax NPV (5%)	\$528M	\$920M	\$1,305M
Post-Tax IRR	11.10%	15.00%	18.40%

Source: Company

Note that the PEA was based on a 5% NSR. As mentioned earlier, the NSR has been reduced from 5% - 8%, to 3% - 8%, and management expects to have Cangrejos' NSR at the lower end (3%); such a scenario will further improve the project's economics.

As with all projects, Cangrejos will also need an environmental license prior to commencement of mine construction and operation. Although we believe **management's exit strategy is to get acquired**, and not necessarily to advance the project to production (as most explorers), they believe the project can be advanced to a Pre-Feasibility Study ("PFS") by mid - 2020, **Feasibility Study ("FS") by the end of 2021 / early 2022**, followed by a construction period of three years.

In 2018, the company completed a 32 hole / 12,800 m drill program, including in-fill, step-out and deep holes, and seven holes / 2,300 m of geotechnical and metallurgical drilling. The results were encouraging as they showed long intercepts, with some returning higher grades. A few of the long intercepts are presented below.

2018 Drilling – Long Intercepts

- 1.13 g/t gold and 0.17% copper over 346 m
- 0.55 g/t gold and 0.08% copper over 222 m
- 0.88 g/t gold and 0.07% copper over 184 m
- 0.67 g/t gold and 0.18% copper over 170 m
- 1.16 g/t gold and 0.09% copper over 156 m
- 0.42 g/t gold and 0.12% copper over 130 m
- 0.86 g/t gold and 0.09% copper over 126 m

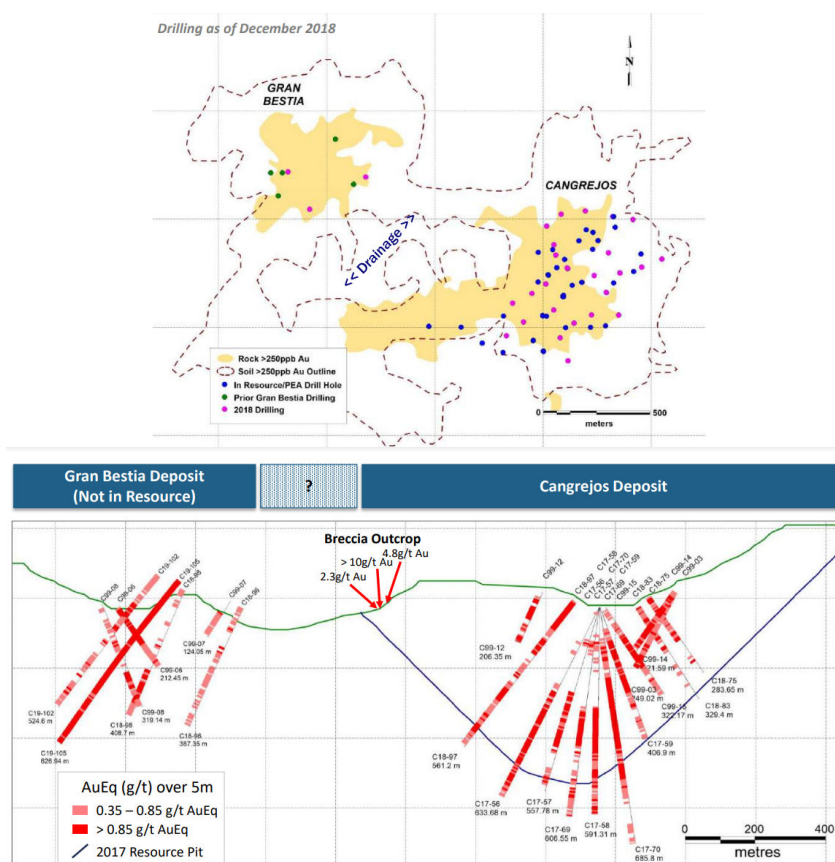
Data Source: Company

Another key highlight of the program is the **possibility of developing Gran Bestia** (located 1 km west of the current resource; see the location map below) into a **satellite deposit**. Three holes were drilled into Gran Bestia in 2018. Previously, in 1999, five holes were drilled in the region by the Newmont JV. All three holes in 2018 intersected mineralization over long intercepts, which was highly encouraging.

2018 Drilling – Gran Bestia

- 0.48 g/t gold and 0.08% copper over 142 m
- 0.93 g/t gold and 0.13% copper over 160 m, and 1.33 g/t gold and 0.15% copper over 96 m
- 0.44 g/t gold and 0.12% copper over 262 m

Data Source: Company



Source: Company

In 2019, the company is planning 16 holes / 6,000 m on the main Cangrejos deposit (in-fill and step-out), and 22 holes / 11,500 m on the Gran Bestia; we believe this clearly indicates their conviction on Gran Bestia.

To date, the company has announced results of seven holes – all from Gran Bestia. As shown below, drilling at Gran Bestia continues to return long intercepts of grades in line with the main Cangrejos deposit.

2019 Drilling – Gran Bestia

- 0.62 g/t Au and 0.11% Cu over 626 m from surface, including 86 m of 1.14 g/t Au and 0.13% Cu from 224 m to 310 m, and 86 m of 0.93 g/t Au and 0.18% Cu from 510 m to 596 m
- 0.87 g/t Au and 0.09% Cu Over 198 m, including 46 m of 2.63 g/t Au and 0.15% Cu from 114 m to 160 m
- 0.73 g/t Au and 0.09% Cu Over 106 m

Data Source: Company

**Updated
Resource in
H2-2019
Comparables**

The company expects to complete a maiden resource at Gran Bestia, and upgrade / expand the inferred resource of the Cangrejos deposit in the second half of 2019, after incorporating all of the 2018 and 2019 drilling results. In the following table, we present a list of a few of the largest undeveloped open-pittable projects in the world that are held by juniors and yet to be acquired by a major.

	Livengood (International Tower)	Donlin (NOVAGOLD / Barrick Gold)	Metates (Chesapeake)	KSM (Seabridge)	Pebble (Northern Dynasty)	Mt. Todd (Vista)	Fenix (Rio2)	Cangrejos (Lumina)
Reserves								
Gold	8.97 Moz @ 0.71 gpt	33.8 Moz @ 2.09 gpt	18.3 Moz @ 0.52 gpt	38.8 Moz @ 0.55 gpt	67 Moz @ 0.35 gpt	5.8 Moz @ 0.82 gpt	3.7 Moz @ 0.40 gpt	8.5 Moz at 0.65 gpt gold (inferred resource)
Location	Alaska	Alaska	Mexico	BC	Alaska	Australia	Chile	Ecuador
Stage	PFS in 2016	Updated FS in 2011	Updated PFS in 2016	PFS in 2016	PEA in 2011	Updated PFS in 2018	PFS in 2014	PEA in 2018
Type	Open pit	Open pit	Open pit	Open pit and underground	Open pit	Open pit	Open pit	Open pit
Throughput	52,600 tpd	53,500 tpd	90,000 tpd	130,000 tpd	84,000 tpd	50,000 tpd	80,000 tpd	80,000 tpd
Mine life	23 years	25 years	27 years	53 years	45 years	13 years	13 years	16 years
Annual Production								
Gold	378 Koz in Years 1 - 5 / LOM - 294 Koz	1.5 Moz in Years 1 - 5 / LOM - 1.1 Moz	146 Koz in Years 1 - 4 / LOM - 445 Koz	933 Koz in Years 1 - 7 / LOM - 540 Koz	673 Koz	479 Koz in Years 1 - 5 / LOM - 382Koz	301 Koz in Years 1 - 3 / LOM - 228Koz	373 Koz gold and 43 Mlbs copper
Initial CAPEX (US\$)	\$1.84B	\$6.70B	\$3.50B (Phase 1 - \$1.91B)	\$5.0B	\$4.70B	\$0.84B	\$0.40B	\$0.83B
Cash Cost (US\$/oz)	\$782 in Years 1 - 7 / LOM - \$877	\$409 in Years 1 - 5 / LOM - \$585	\$628 / -\$339 in Years 1 - 4	\$119 in Years 1 - 7 / LOM - \$277	\$1.86 / lb	\$571 in Years 1 - 5 / LOM - \$645	LOM - \$864	LOM - \$523
After-Tax NPV @ 5% (US\$)	\$165M	\$0.55B (50% share)	\$0.74B	\$1.5B	\$2.36B (7% discount)	\$0.68B	\$0.41B	\$0.92B
IRR	6.2%	6.0%	7.7%	8.0%	15.4%	20.5%	25.0%	15.0%
Payback	10.7 years	9.2 years	10.1 years	6.8 years	5.3 years	3.2 years	3.0 years	5.1 years
Gold (US\$/oz)	\$1,500	\$1,200	\$1,250	\$1,230	\$1,050	\$1,300	\$1,350	\$1,300
Ticker	TSX: ITH	TSX: NG	TSX: CKG	TSX:SEA	TSX: NDM	TSX: VGZ	TSX: RIO	TSXV: LUM
EV (C\$, M)	\$107.00	\$1,596.00	\$55.00	\$924.00	\$186.00	\$63.49	\$44.00	\$165.50
Gold Equiv. Oz	9.0	26.9	30.6	60.9	187.6	5.8	3.7	11.1
EV / oz (C\$)	\$11.93	\$59.25	\$1.80	\$15.18	\$0.99	\$10.95	\$11.76	\$14.91

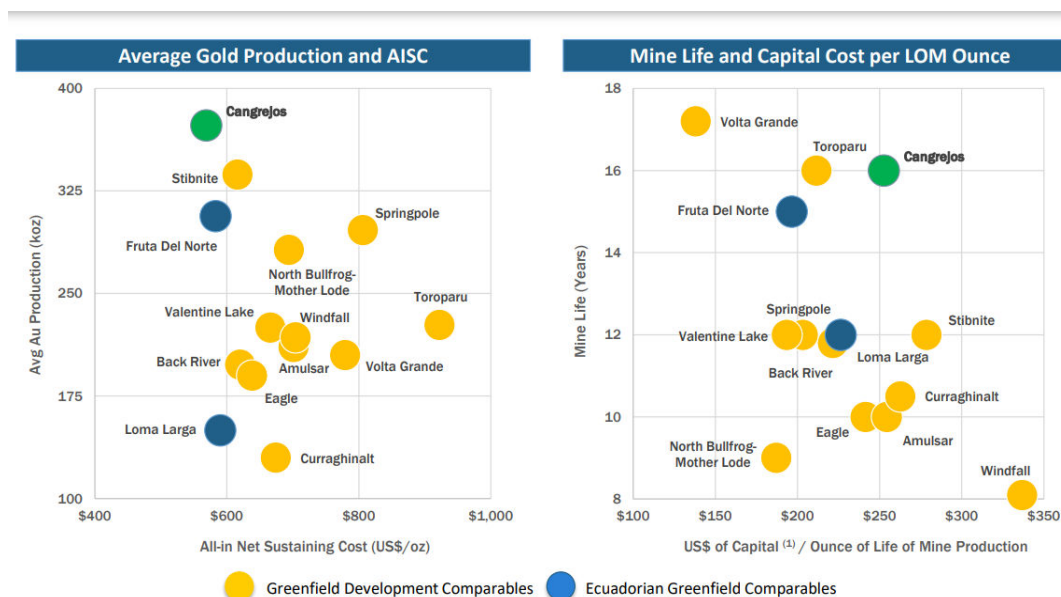
Source: FRC / Various Companies

We believe Cangrejos has the following key advantages:

- Among the highest NPV and IRR estimates.
- Higher average grade and lower operating cost than four of the seven other comparables
- Higher annual production rate relative to the total resource.
- The 2018 PEA showed robust economics.
- The typical EV / resource ratio of juniors tend to be in the \$30 - \$50 per oz range. However, the EV / reserve ratios of most of the companies in the table above are significantly lower, indicating that high CAPEX / large deposits are out of favor in the current market environment. **We believe that Cangrejos, with the potential to produce over 300 Koz per year gold, and CAPEX under \$1 billion, will be attractive for potential acquirers.**

The following charts, provided by the company, also show Lumina's strong market

positioning.



Source: Company

Management

Management and board members combined hold 10% of the total outstanding shares. CEO, Marshall Koval, is the largest shareholder among management / directors, and owns 3.8% of the total. In addition, Ross Beaty owns 17.2% and Kenosis, a company controlled by Ecuadorian businessman Michel Deller, owns 8.3%. In total, 35.5% of the total outstanding shares are held by management, board members, insiders and institutions.

Share Ownership

Name	Position	Director Since	Shares	% of Total
Marshall Koval	President, CEO & Director	2014	11,694,939	3.78%
Leo Hathaway	Senior Vice President		584,100	0.19%
Diego Benalcazar	Senior Vice President		1,275,645	0.41%
Martin Rip	CFO		3,535,000	1.14%
Lyle Braaten	VP Legal Counsel & Director	2014	5,301,290	1.71%
Scott Hicks	VP Corporate Development & Communications		91,000	0.03%
John Youle	VP Corporate Affairs		1,590,322	0.51%
Heye Daun	Independent Director	2016	-	0.00%
Donald Shumka	Independent Director	2014	1,305,000	0.42%
Michael Steinmann	Independent Director	2014	1,234,000	0.40%
Stephen W.C. Stow	Independent Director	1994	4,463,711	1.44%
			31,075,007	10.04%
Major Investors			Shares	% of Total
Ross Beaty			53,229,160	17.20%
Kenosis International Holdings Limited			25,557,242	8.26%
			78,786,402	25.45%
Total			109,861,409	35.49%

Source: Management Information Circular

Brief biographies of the management team and board members, as provided by the company, follow:

Marshall Koval - President & CEO, Director

Mr. Koval is a mining executive with approximately 40 years of corporate management, M&A, finance, mineral exploration, mine development and operations experience and has worked on mining projects in over 30 countries. He served as Chairman & CEO of Anfield Gold Corp, and is currently the CEO and a Director of Luminex Resources, is a Director of Equinox Gold and is a Director of Miedzi Copper Corp. Previously, Mr. Koval was a partner in Lumina Capital, LP and served as CEO of Northern Peru Copper Corp, VP of Corporate Development for Lumina Copper Corp, President of Pincock, Allen & Holt and held management positions with Golder Associates, BHP/Utah International, Inco, Meridian Minerals and Inspiration Consolidated Copper. Mr. Koval holds a BSc. in Geology from the University of Missouri and is a registered professional geologist in North Carolina and Washington.

Leo Hathaway - Senior Vice President

Mr. Hathaway is a geologist with extensive experience in the exploration and mining sector from grassroots to feasibility and development stage projects. He served as Chief Geological Officer for Anfield Gold Corp. He currently serves as Senior VP Exploration for Luminex Resources and EVP of Exploration at Libero Copper. Since 2004, Mr. Hathaway was the former Chief Geological Officer for Lumina Copper Corp and the former VP Exploration for Northern Peru Copper Corp, Regalito Copper Corp, Global Copper Corp and Lumina Resources Corp as well as a former partner in Lumina Capital LP. Prior to 2004 he worked for Inmet Mining in Europe, Australia, Central and South America. Mr. Hathaway holds a B.Sc. (Hons) degree in Applied Geology from the University of Plymouth, a M.Sc. in Mineral Exploration from the University of London and obtained a P.Geo from the Association of Professional Geoscientists of Ontario in 2004.

Diego Benalcazar - Senior Vice President

Mr. Benalcazar has over 25 years experience in mineral exploration, mining property evaluation and acquisitions throughout Latin America and the Caribbean. He has held managerial and consulting positions with several international mining companies, including Homestake International Minerals Ltd. He currently serves as President of Luminex Resources. As a former President and member of the Board of Directors of the Ecuadorian Chamber of Mines, Mr. Benalcazar has actively represented the mining industry in discussions with Government authorities. Mr. Benalcazar holds a BA in geology from North Carolina State University and has completed the Program for Management Development at Harvard Business School.

Martin Rip - Chief Financial Officer

Mr. Rip is a Chartered Professional Accountant (CPA, CA) with over 19 years experience in industry and public practice providing business advice to a variety of clients. Currently, Mr. Rip is CFO of Miedzi Copper Corp and Luminex Resources and the former CFO of Anfield Gold Corp, Lumina Copper Corp and Lumina Royalty Corp. In public practice, Mr. Rip worked at Grant Thornton LLP where he served as a Senior Manager in the Assurance and

Business Advisory practice. He holds a law degree from the University of Birmingham and is a member of the Chartered Professional Accountants of British Columbia and The Institute of Chartered Accountants in England and Wales. Mr. Rip has extensive experience in financial reporting and internal controls compliance for public companies.

Lyle Braaten - VP Legal Counsel & Director

Mr. Braaten is a lawyer and the President & CEO of Miedzi Copper Corp, a private company actively exploring for copper and silver in Poland. Mr. Braaten is currently a director of Ero Copper Corp, a mid-size copper producer with operations in Brazil, and an officer and director of Luminex Resources. He was previously a director and VP Legal of Anfield Gold Corp (prior to acquisition by Equinox Gold) and a director of Lumina Royalty Corp (prior to acquisition by Franco Nevada). Mr. Braaten joined the Lumina group of companies in 2008 and assisted in the creation of Magma Energy Corp., a renewable energy company. In 2011, Magma and Plutonic Power merged to create Alterra Power Corp which was acquired by Innergex Renewable Energy for \$1.1B. Mr. Braaten received a law degree from the University of British Columbia in 1989 and a Bachelor of Science from the University of Calgary in 1986. Mr. Braaten is a member of the Law Societies of British Columbia and the Yukon.

Scott Hicks - VP Corporate Development & Communications

Mr. Hicks was previously an investment banker working with RBC Capital Markets and BMO Capital Markets. He also served as VP Corporate Development and Communications of Anfield Gold Corp. He currently serves as the VP Corporate Development and Communications of Luminex Resources. Over the last decade he has worked on a variety of equity, debt and advisory assignments while working in Canada and Australia. Mr. Hicks holds a Bachelor of Commerce with Honours from the University of British Columbia.

John Youle - VP Corporate Affairs

Mr. Youle has worked as an adviser to governments and companies across Latin America since the early 1990s, initially as a Washington, DC-based corporate attorney, and subsequently as the General Manager of ConsultAndes, SA, a Lima, Peru-based firm that provides strategic counsel primarily to international natural resources companies. He currently serves as the VP Corporate Affairs for Luminex Resources. Mr. Youle was previously VP Corporate Affairs for Anfield Gold Corp and VP Corporate Affairs for Lumina Copper Corp (sold to First Quantum Minerals). He has lived in several countries, including, USA, Colombia, Ecuador and Peru. Mr. Youle is a graduate of Dartmouth College, with a Juris Doctor from Northwestern University and an M.B.A. from Columbia Business School.

Heye Daun - Independent Director

Mr. Daun is a mining engineer & MBA with over 20 years of experience with top-tier mining companies and financial groups. He is the former President and co-founder of Auryx Gold Corp. (“Auryx”) and was instrumental in leading the transformation of Auryx from initial formation as a private exploration company in 2009 through listing on the Toronto Stock Exchange's main board and eventual sale of the company to B2 Gold Corp. in a C\$160 million transaction at the end of 2011. He has extensive mine building and operating experience gained working for Rio Tinto, Anglo American and Gold Fields. He is the former

Mine Superintendent at AngloGold's Sadiola & Yatela Mines in Mali and a former Mine Manager at Goldfields Tarkwa mine in Ghana. After graduating with an MBA in 2004, Mr. Daun worked in mining finance, investment analysis and portfolio management.

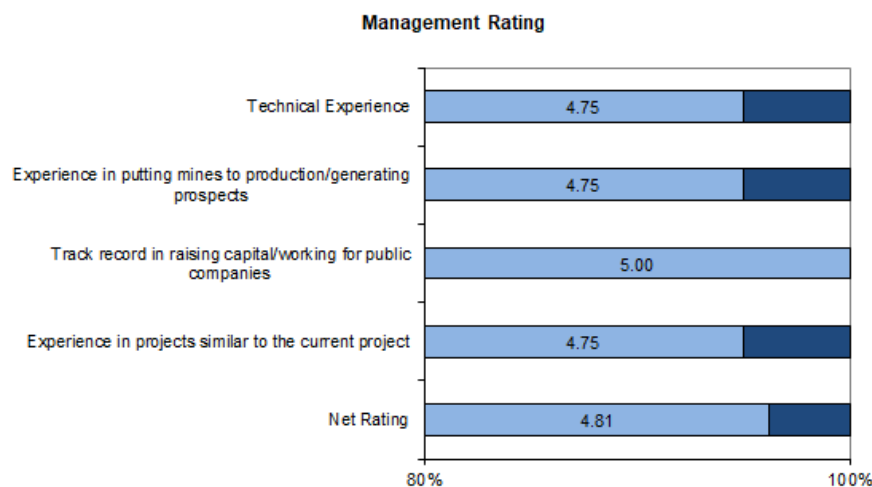
Donald Shumka - Independent Director

Mr. Shumka has more than 40 years' experience in financial roles. Former President and Managing Director of Walden Management, a consulting firm specialising in natural resources. From 1989-2004, he was Managing Director, Investment Banking with CIBC World Markets and Raymond James Ltd. Prior to 1989, Mr. Shumka was VP Finance and CFO of West Fraser Timber Co, one of Canada's largest forest products companies. Currently, he is a director of Eldorado Gold Corp and Alterra Power Corp. He holds a Bachelor of Arts Degree in Economics from the University of British Columbia and a Master of Business Administration Degree from Harvard University.

Michael Steinmann – Independent Director

Mr. Steinmann has extensive experience throughout South and Central America, Europe and Asia, in exploration, mine operations, project development and corporate M&A. He has participated in numerous mine construction projects from exploration through start-up and into continuous operation. Currently, Mr. Steinmann is President & CEO for Pan American Silver Corp. Mr. Steinmann holds a Ph.D in Geology from the Swiss Federal Institute of Technology, and a M.Sc. in Geology from the University of Zurich and a Degree in Corporate Finance from Escuela Superior de Administración y Negocios, Lima.

Our net rating on the company's management team is 4.8 out of 5.0 (see below) - one of the highest ratings we have ever assigned on a junior.



Source: FRC

The company's board has six members, of which, four are independent. The following table shows our analysis on the strength of the company's board.

Strength of Board

	Poor	Average	Good
Four out of six directors are independent			X
Directors' Share Ownership			X
The Audit committee is composed of three board members, two are independent		X	
No Compensation committee / overseen by the board		X	

Source: FRC

Financials

At the end of 2018, the company had cash and working capital of \$14.49 million and \$14.06 million, respectively. We estimate the company had a burn rate (General and Administrative expenses) of \$0.20 million per month in 2018. The following table summarizes the company's liquidity position:

(in \$)	2017	2018
Cash	\$14,692,983	\$14,490,979
Working Capital	\$13,689,881	\$14,056,845
Current Ratio	13.03	26.54
Debt	-	-
Monthly Burn Rate (G&A)	\$135,278	\$200,147
Cash spent on properties	\$11,583,296	\$12,951,117
Cash from Financing Activities	\$14,779,053	\$14,134,910

Data Source: Financial Statements

The company has a strong track record of raising capital, having raised approximately \$76.5 million since 2014.

We estimate the company currently has 15.99 million options (weighted average exercise price of \$1.01 per share) and nil warrants outstanding. At this time, 11.46 million options are in-the-money. The company can raise up to C\$5.83 million if these options are exercised.

Valuation & Rating

Our Discounted Cash Flow ("DCF") valuation model valued Lumina's shares at C\$289 million, or C\$0.93 per share. Our valuation was based on the base-case production scenario and the operating cost estimates suggested by the PEA. The key differences between our valuation and the PEA lie in our more conservative longer-term copper price forecast (\$3/lb versus the PEA's \$3.25/lb), the discount rate (11.5% versus the PEA's 5%), offset by a lower NSR payable to the Ecuadorian Government (3% instead of the PEA's 5%). **For conservatism, we have not accounted for any upside from the current exploration and**

potential for resource expansion.

DCF Valuation	
Operating Life (years)	16
Tonnage (Mt)	339
Throughput (tpd)	40 ktpd in Years 1-5, and 80 ktpd in Years 6+
Recovery Rate	82% Au and 82% Cu
Total Recovered Gold (Moz)	5.96
Total Recovered Copper (Mlbs)	686
Average Price of Au (\$/oz)	\$1,300
Average Price of Cu (\$/lb)	\$3.00
Cash Cost (LOM) in \$/oz	\$525
LT avg. exchange rate (US\$:C\$)	1.15
Initial Capital Cost (\$M)	\$831
Expansion Capital (\$M)	\$406
Discount Rate	11.5%
After-Tax Net Asset Value (C\$)	\$277,269,723
Working Capital (C\$)	\$11,620,985
Fair Value (C\$)	\$288,890,708
No. of Shares*	310,760,328
Fair Value per Share (C\$)	\$0.93

* calculated based on the treasury stock method

Source: FRC

The following tables show the sensitivity of our valuation to key inputs.

Fair Value's Sensitivity

Fair Value (C\$)		Gold Price (\$ / oz)				
		\$1,100	\$1,200	\$1,300	\$1,400	\$1,500
Copper Price (\$/lb)	\$2.50	-\$0.22	\$0.23	\$0.67	\$1.12	\$1.57
	\$2.75	-\$0.09	\$0.35	\$0.80	\$1.25	\$1.70
	\$3.00	\$0.03	\$0.48	\$0.93	\$1.38	\$1.83
	\$3.25	\$0.16	\$0.61	\$1.06	\$1.51	\$1.95
	\$3.50	\$0.29	\$0.74	\$1.18	\$1.63	\$2.08

Fair Value (C\$)		Gold Price (\$ / oz)				
C\$:US\$ - 1.1		\$1,100	\$1,200	\$1,300	\$1,400	\$1,500
Discount Rate	5.0%	\$1.75	\$2.59	\$3.43	\$4.27	\$5.11
	10.0%	\$0.29	\$0.80	\$1.32	\$1.83	\$2.34
	11.5%	\$0.03	\$0.48	\$0.93	\$1.38	\$1.83
	15.0%	-\$0.38	-\$0.05	\$0.29	\$0.62	\$0.95
	20.0%	-\$0.68	-\$0.45	-\$0.22	\$0.00	\$0.23

Fair Value (C\$)		Gold Price (\$ / oz)				
		\$1,100	\$1,200	\$1,300	\$1,400	\$1,500
NSR to the Ecuadorian Govt.	3%	\$0.03	\$0.48	\$0.93	\$1.38	\$1.83
	4%	-\$0.03	\$0.41	\$0.85	\$1.30	\$1.74
	5%	-\$0.10	\$0.34	\$0.78	\$1.22	\$1.65
	6%	-\$0.17	\$0.27	\$0.70	\$1.13	\$1.57
	7%	-\$0.24	\$0.19	\$0.62	\$1.05	\$1.48
	8%	-\$0.30	\$0.12	\$0.55	\$0.97	\$1.40

Fair Value (C\$)		Gold Price (\$ / oz)				
		\$1,100	\$1,200	\$1,300	\$1,400	\$1,500
LT Exchange Rate (US\$:C\$)	\$0.95	\$0.03	\$0.40	\$0.77	\$1.14	\$1.52
	\$1.05	\$0.03	\$0.44	\$0.85	\$1.26	\$1.67
	\$1.15	\$0.03	\$0.48	\$0.93	\$1.38	\$1.83
	\$1.25	\$0.03	\$0.52	\$1.01	\$1.49	\$1.98
	\$1.35	\$0.03	\$0.56	\$1.08	\$1.61	\$2.14

Source: FRC

Based on our review of the company's management, key shareholders, exit strategy, and Cangrejos' fundamentals, we are initiating coverage on Lumina with a BUY rating and a fair value estimate of C\$0.93 per share.

Risks

We believe the company is exposed to the following key risks (not exhaustive):

- The value of the company is highly dependent on gold prices.
- Ecuador is a relatively new mining jurisdiction.
- Geopolitical risks.
- Lower grade / high CAPEX projects are currently out of favor.
- Viability of a smaller scale operations has yet to be proven.
- Development risks.
- Exchange rate risks.

As with most junior resource companies, we rate LUM's shares a risk of 5 (Highly Speculative).

Fundamental Research Corp. Equity Rating Scale:

Buy – Annual expected rate of return exceeds 12% or the expected return is commensurate with risk

Hold – Annual expected rate of return is between 5% and 12%

Sell – Annual expected rate of return is below 5% or the expected return is not commensurate with risk

Suspended or Rating N/A— Coverage and ratings suspended until more information can be obtained from the company regarding recent events.

Fundamental Research Corp. Risk Rating Scale:

1 (Low Risk) - The company operates in an industry where it has a strong position (for example a monopoly, high market share etc.) or operates in a regulated industry. The future outlook is stable or positive for the industry. The company generates positive free cash flow and has a history of profitability. The capital structure is conservative with little or no debt.

2 (Below Average Risk) - The company operates in an industry where the fundamentals and outlook are positive. The industry and company are relatively less sensitive to systematic risk than companies with a Risk Rating of 3. The company has a history of profitability and has demonstrated its ability to generate positive free cash flows (though current free cash flow may be negative due to capital investment). The company's capital structure is conservative with little to modest use of debt.

3 (Average Risk) - The company operates in an industry that has average sensitivity to systematic risk. The industry may be cyclical. Profits and cash flow are sensitive to economic factors although the company has demonstrated its ability to generate positive earnings and cash flow. Debt use is in line with industry averages, and coverage ratios are sufficient.

4 (Speculative) - The company has little or no history of generating earnings or cash flow. Debt use is higher. These companies may be in start-up mode or in a turnaround situation. These companies should be considered speculative.

5 (Highly Speculative) - The company has no history of generating earnings or cash flow. They may operate in a new industry with new, and unproven products. Products may be at the development stage, testing, or seeking regulatory approval. These companies may run into liquidity issues, and may rely on external funding. These stocks are considered highly speculative.

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The distribution of FRC's ratings are as follows: BUY (68%), HOLD (8%), SELL / SUSPEND (24%).

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