

<b>Share Price</b>	C\$1.40	C\$0.141
<b>Pro forma valuation</b>	\$2.61	C\$0.26

**Brief Business Description:**

Vancouver based copper miner and developer

**Hartleys Brief Investment Conclusion**

Leverage to copper through production and development assets in Canada and Australia.

**Chairman & MD**

Alistair Cowden (Altona MD)

Jim O'Rourke (CMMC Director and CEO)

**Company Address**

1700-700 W Pender St

Vancouver BC

## ALTONA MINING LIMITED/COPPER MOUNTAIN MINING CORPORATION

**Hartleys is Corporate Advisor to AOH in relation to the merger with CMMC.TSX.**

### Altona merger brings copper producer to the ASX

The Copper Mountain Mining Corporation (CMMC) and Altona Mining (Altona) merger is set for likely completion in March 2018.

The merged entity will be a 35-40ktpa copper producer, with plans to double copper production by 2020 through the development of the Cloncurry project.

### Remoulding Cloncurry

The 14Mtpa Copper Mountain mine and processing facility was financed and built by CMMC in 2011. The Company's operating capabilities and access to finance will be applied to Cloncurry's development in 2018. CMMC representatives in Australia began discussion with potential service and equipment suppliers to Cloncurry upon announcement of the merger. CMMC is also examining the effects on Cloncurry's economics of an owner mining, leased equipment, and lower unit cost/bulk mining approach. Substantial inferred resources beneath the Little Eva pit may be brought into play as a consequence. Other fronts are also active; a 5 year offtake agreement with the Mt Isa smelter was signed in November 2017, and potentially significant results from regional RC drilling will be available in January 2018.

### Cash flows leveraged to copper

On Hartleys' projections, unhedged CMMC should achieve AISC of US\$1.98/lb Cu-equivalent in CY2017, generating operating cash flow of C\$100M, from production of 35kt of copper and 24koz of gold in concentrate. The company reduced net debt by C\$20M in 9mths to September 2017, with EBITDA margins improving from 25% to 40% over the course of 2017. CMMC cash flows are sensitive to the copper price, and the USDCAD exchange rate.

The Copper Mountain project has a mine life based on reserves of 16 years. Drilling underway at New Ingerbelle is aimed at verifying a historical resource which has the potential to add 10 years to the current mine life.

### Scheme terms

Under the scheme of arrangement Altona shareholders will receive 0.0974 CMMC shares, or depositary interests tradeable on the ASX for each Altona share. At scheme terms, Altona shareholders will own 28.5% of the merged entity. The scheme is subject to shareholder approvals. The CMMC board has pledged unanimous support. Altona shareholders will vote on the scheme at a meeting on 15 March 2018. Our model assumes the merger proceeds as agreed.

### Copper/gold with growth profile, international outlook

The CMMC/Altona merger will create another ASX tradeable copper producing investment option; one with more copper in reserve than its immediate peers, more geographic spread in first choice jurisdictions and more leverage to the copper price. Hartleys has no rating on Altona or CMMC, due to its advisory role in the merger.

**ALL FIGURES PRO FORMA MERGED ENTITY**
**Top Shareholders**

FMR LLC	9.8%
Vertex One Asset Management	4.1%

**Issued Capital**

188m

- fully diluted 188m

**Market Cap**

C\$263m

- fully diluted C\$263m

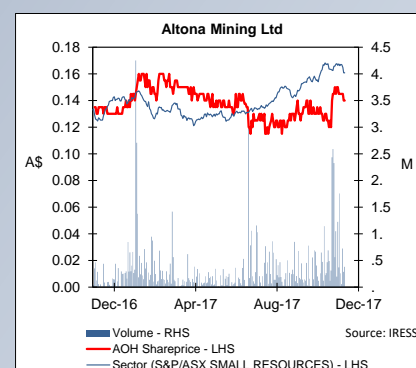
**Cash (30 September 17)** C\$74m

**Debt (30 September 17)** C\$357m

**EV** A\$546m

	Prelim. (C\$M)	CY17e	CY18e	CY19e
Prod (kt Cu equiv)	39	39	40	40
Op Cash Flw (C\$M)	99	109	122	122
Norm NPAT (C\$M)	59	39	57	57
CF/Share (cps)	53	58	65	65
EPS (cps)	27	15	30	30
P/E	5.3	9.6	4.6	4.6

	Mt	Cu %	Au g/t
<b>Resources (kt)</b>	<b>1063</b>	0.33	0.09
<b>Reserves (kt)</b>	<b>304</b>	0.32	0.09



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Hartleys has provided corporate advice within the past 12 months to Altona for which it has earned fees. Hartleys is Corporate Advisor to Altona Mining Limited in relation to the merger with Copper Mountain Mining Corporation (CMMC) for which it will receive fees.

## SUMMARY MODEL

Altona Mining/Copper Mountain Mining Corporation										
AOH/CMC										
All figures pro forma merged entity										
<b>Market Information</b>										
Share price										C\$1.40
Market Capitalisation										C\$263M
Net cash (debt)										-C\$223M
Issued Capital (fully diluted)										188M
EV										C\$486M
Valuation										C\$2.61
<b>Profit &amp; Loss</b>										
	Unit	Dec 16	Dec 17	Dec 18	Dec 19	Dec 20	Dec 21	Dec 22		
Net Revenue	CSM	254	296	305	322	579	680	592		
Forward sales	CSM									
Total Costs	CSM	-186	-198	-196	-200	-309	-358	-364		
EBITDA	CSM	68	98	109	122	269	322	228		
- margin		27%	33%	36%	38%	47%	47%	38%		
Depreciation/Amort	CSM	-52	-47	-46	-49	-74	-91	-93		
FX gain		11	24	-10	2	4		1		
EBIT	CSM	27	75	53	75	198	231	135		
Net Interest	CSM	-18	-17	-15	-18	-16	-12	-8		
Pre-Tax Profit	CSM	9	59	39	57	182	219	127		
Tax Expense	CSM					-36	-58	-34		
NPAT	CSM	9	59	39	57	146	161	94		
Abnormal Items	CSM									
Minority interest		-2	-9	-11	-13	-13	-10	-7		
Reported Profit	CSM	7	50	27	57	146	161	94		
<b>Balance Sheet</b>										
	Unit	Dec 16	Dec 17	Dec 18	Dec 19	Dec 20	Dec 21	Dec 22		
Cash	CSM	31	80	124	44	149	356	456		
Other Current Assets	CSM	75	75	75	75	75	75	75		
Total Current Assets	CSM	106	155	198	118	224	431	531		
Property, Plant & Equip.	CSM	474	516	478	825	824	744	661		
Investments/other	CSM	78	78	78	78	78	78	78		
Tot Non-Curr. Assets	CSM	552	594	556	903	902	822	739		
Total Assets	CSM	658	748	755	1021	1125	1252	1269		
Short Term Borrowings	CSM	-46	-46	-46	-46	-46	-46	-46		
Amnt payable to related party		23	43	43	43	43	43	43		
Other	CSM	38	38	38	38	38	38	38		
Total Curr. Liabilities	CSM	106	127	84	84	84	84	84		
Long Term Borrowings	CSM	334	310	268	374	292	211	111		
Other	CSM	25	25	25	25	25	25	25		
Total Non-Curr. Liabil.	CSM	359	335	293	399	317	236	136		
Total Liabilities	CSM	465	462	376	483	401	320	219		
Net Assets	CSM	193	286	378	538	725	933	1050		
Minority interest		54	63	52	52	52	52	52		
Total equity										
<b>Cashflow</b>										
	Unit	Dec 16	Dec 17	Dec 18	Dec 19	Dec 20	Dec 21	Dec 22		
Operating Cashflow	CSM	68	99	109	122	269	322	228		
Income Tax Paid	CSM									
Working capital incr.	CSM	-28								
Interest & Other	CSM	-18	-17	-15	-18	-16	-12	-8		
Operating Activities	CSM	22	82	95	104	253	310	220		
Property, Plant & Equip.	CSM	-7	-10	-8	-296	-66	-22	-20		
Exploration	CSM									
Asset sales	CSM									
Investments	CSM	1								
Investment Activities	CSM	-6	-10	-8	-296	-66	-22	-20		
Borrowings/lease	CSM	-8	-24	-43	106	-82	-81	-100		
Equity	CSM	20			5	0				
Financing Activities	CSM	12	-24	-43	111	-82	-81	-100		
Net Cash Change	CSM	29	49	44	-80	106	207	100		
<b>Shares</b>										
	Unit	Dec 16	Dec 17	Dec 18	Dec 19	Dec 20	Dec 21	Dec 22		
Ordinary Shares - End	M	133	188	188	188	188	188	188		
<b>Ratio Analysis</b>										
	Unit	Dec 16	Dec 17	Dec 18	Dec 19	Dec 20	Dec 21	Dec 22		
GCFPS	C¢	36.4	53.0	58.2	65.1	143.4	171.4	121.2		
CFR	X	3.8	2.6	2.4	2.1	1.0	0.8	1.2		
EPS	C¢	3.7	26.5	14.6	30.4	77.8	85.8	49.9		
PER	X	38.4	5.3	9.6	4.6	1.8	1.6	2.8		
DPS	%	na	na	na	na	na	na	na		
Yield	%	na	na	na	na	na	na	na		
Interest Cover	x	1.5	4.5	3.6	4.2	12.4	19.2	17.6		
ROCE	%	5%	13%	10%	8%	22%	28%	18%		
ROE	%	5%	20%	10%	11%	25%	23%	12%		
Debt/Equity		172.9%	108.4%	70.7%	69.5%	40.3%	22.6%	10.5%		
*All values fully diluted unless otherwise stated										
<b>Share Price Valuation (NAV)</b>										
		C\$m	cps							
100% Cloncurry 9% AT DR		203	1.08							
75% Copper Mountain 8% AT DR		481	2.57							
Exploration		68	0.36							
Corporate overheads		-54	-0.29							
Cash		80	0.43							
Amounts owed to related parties		-43	-0.23							
Debt		-260	-1.39							
Tax benefit/liability		18	0.10							
Hedging										
Option holder value		-4	-0.02							
Total		490	2.61							
<b>Directors</b>										
Company Information										
Jim O'Rourke (CMC Director and CEO)										
1700-700 W Pender St										
Rod Shier Director (CFO, Co Sec.)										
Vancouver BC										
John Tapics (Director)										
(604) 682 2992										
Marin Katusa (Director)										
Al Cloke (Director)										
Bruce Auger (Director)										
Carl Renzoni (Director)										
Alistair Cowden (Altona MD)										
<a href="http://www.cu.mtn.com">www.cu.mtn.com</a>										
<b>Top Shareholders</b>										
		Mshs	%							
FMR LLC		18.3	10							
Vertex One Asset Management		7.7	4							
<b>Production</b>										
		Dec 17	Dec 18	Dec 19	Dec 20	Dec 21				
<b>Copper Mountain (75%)</b>										
Throughput	Mt	14.20	14.40	14.40	14.40	14.40				
Cu head grade	%Cu	0.32	0.31	0.32	0.33	0.33				
Payable copper in concs	kt	34	33	34	35	37				
Cu equiv. AISC	kt	39	39	40	41	42				
<b>Cloncurry (100%)</b>										
Throughput	Mt				4.60	7.00				
Cu head grade	%Cu				0.65	0.65				
Payable copper in concs	kt				28	42				
Cu equiv.	kt				30	46				
<b>GROUP</b>										
Payable copper in concs	kt		34	33	34	63	79			
Cu equiv.	kt		39	39	40	71	88			
Attrib Cu equiv.	kt		29	29	30	61	77			
<b>Costs</b>										
		Dec 17	Dec 18	Dec 19	Dec 20	Dec 21				
<b>Copper Mountain (75%)</b>										
Site cost/tonne ore treated	C\$/t	12.9	13.7	13.0	13.1	13.3				
Cu equiv. AISC	US\$/lb	1.98	2.14	2.15	2.05	2.06				
<b>Cloncurry (100%)</b>										
Site cost/tonne ore treated	C\$/t				20	18				
Cu equiv. AISC	US\$/lb				1.63	1.51				
Growth capex	CSM			282	43					
<b>GROUP</b>										
Cu equiv. AISC	US\$/lb	1.98	2.14	2.15	1.87	1.78				
<b>Price Assumptions</b>										
	Unit	Dec 17	Dec 18	Dec 19	Dec 20	Dec 21				
USDCAD		1.279	1.261	1.288	1.278	1.265				
AUDUSD		0.776	0.778	0.761	0.767	0.775				
Copper	US\$/lb	2.83	3.00	3.00	3.00	2.85				
Gold	US\$/oz	1263	1303	1313	1250	1250				
<b>Sensitivity Analysis</b>										
		Valuation	FY18 NPAT							
<b>Base Case</b>										
		2.61	38.7							
US Cu price +/-10%	Sens	-10%	+10%	Sens	-10%	+10%				
		51%	1.28	3.95	64%	13.9	63.4			
US Au price +/-10%		6%	2.46	2.77	10%	34.8	42.5			
USDCAD +/- 10%	-66%	4.08	1.15	-3%	39.8	37.5				
AUDUSD +/- 10%	-4%	2.72	2.51		38.7	38.7				
2018 Cu prodn +/-10%	23%	2.01	3.21	72%	10.8	66.5				
2018 operating costs +/-10%	-32%	3.45	1.78	-82%	70.4	7.0				
<b>Unpaid Capital</b>										
		No. (M)	\$M	Avg ex.	% ord					
Expiry year										
30-Jun-18		8			4.5%					
Total		8			4.5%					
<b>Reserves &amp; Resources Dec '16</b>										
	Mt	%Cu	g/t Au	kt Cu	ozs Au					
Copper Mountain RESOURCE	776	0.23	0.11	1,806	2668					
Measured	119	0.30	0.09	357						
Indicated	231	0.24	0.11	554						
Inferred	426	0.21	0.11	895						
INCLUDES TOTAL RESERVE	218	0.25	0.09	540	631					
Proved	74	0.30	0.09	222						
Probable	110	0.24	0.09	264						
Stockpiles	34	0.16	0.09	54						
Cloncurry RESOURCE	287	0.58	0.04	1,654	369					
Measured	64	0.63	0.05	404						

## PROPOSED MERGER

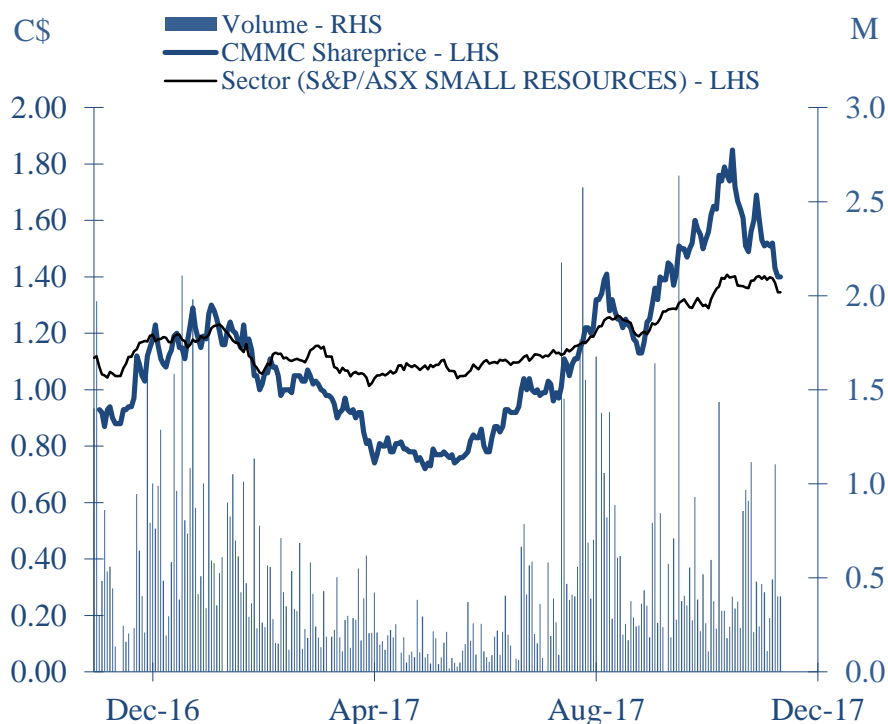
Copper Mountain Mining Corporation (TSX:CMMC) and Altona Mining have agreed to merge under a scheme of arrangement.

Under the scheme Altona shareholders will receive 0.0974 CMMC shares or depositary interests tradeable on the ASX, for each Altona share. At scheme terms, Altona shareholders will own 28.5% of the merged entity.

The scheme is subject to shareholder approvals. The CMMC board has pledged unanimous support. Altona shareholders will vote on the scheme at a meeting on 15 March 2018.

CMMC’s principal asset is 75% of the Copper Mountain Mine in British Columbia. Copper Mountain is expected to produce 34-38kt of copper in concentrate in 2017.

**Fig. 1: CMMC share price chart**



Source: IRESS

## COPPER MOUNTAIN

Copper Mountain is an alkalic porphyry copper–gold–silver system in British Columbia, Canada, 300km east of Vancouver. The area has over 100 years of production history. CMMC acquired the Copper Mountain project in 2006 and listed on the TSX later that year.

In 2008 Mitsubishi Materials Corporation (Mitsubishi) bought a 25% stake in the project for C\$29M and agreed to arrange a project loan. The Company built a 14Mtpa open pit and flotation concentrate operation at Copper Mountain in 2010 and 2011, at a cost of C\$438M, including initial earthworks and a mining fleet. Mitsubishi has a life of mine offtake agreement to purchase the project’s copper, gold, and silver in concentrate, at LME pricing with annually set, benchmarked TCRCs.

CMMC and Mitsubishi are 75/25 partners at the project level, which includes the project debt. Mitsubishi has also provided overdraft facilities to the incorporated partnership.

CMMC has a 16-year mine life at Copper Mountain with potential for extensions and a possible second pit at New Ingerbelle. In November 2017 CMMC was part way through a 5,000m drilling program at New Ingerbelle aimed at verifying a historical resource which has the potential to add 10 years to the current mine life.

During Sept qtr 2017 CMMC mined 17.4Mt of material, of which 3.8Mt at 0.32% Cu was mill feed and 3.0Mt was added to low grade stockpiles averaging about 0.16% Cu. Bulk operations (owner mined) and hydro power allow earth moving rates of C\$1.70/t material, and processing costs of about C\$4/t ore. Material movement at the current rate, and accumulation of low grade stocks will continue until at least 2024. Copper recoveries in the Sept 2017 qtr, at 77.3%, were lower than initially forecast due a coarser grind adopted to increase throughput.

The Company produced 26kt of Cu, 18koz Au and 207koz Ag in the nine months to September 2017. The Company has maintained guidance of between 34-38kt of Cu and 24koz Au for CY17.

**Fig. 2: Copper Mountain project location**



Source: CMMC.tsx

**Fig. 3: Copper Mountain Mine Layout**



Source: CMMC.tsx

## CLONCURRY

Cloncurry is an advanced +30ktpa green field open pit copper development proposal in the Mt Isa Inlier, Queensland. The Project has a completed feasibility study, granted mining leases and an approved Environmental Authority. Cloncurry's Exploration tenure covers 3,000 km<sup>2</sup> of prospective geology.

Altona updated the Cloncurry Copper project feasibility study in August 2017, accounting for changes to estimates made in the initial study completed in 2014. Subsequent reserve and resource additions, the effect of infrastructure built for Dugald River, and cost setting changes, were all incorporated in the updated study.

Key development estimates included;

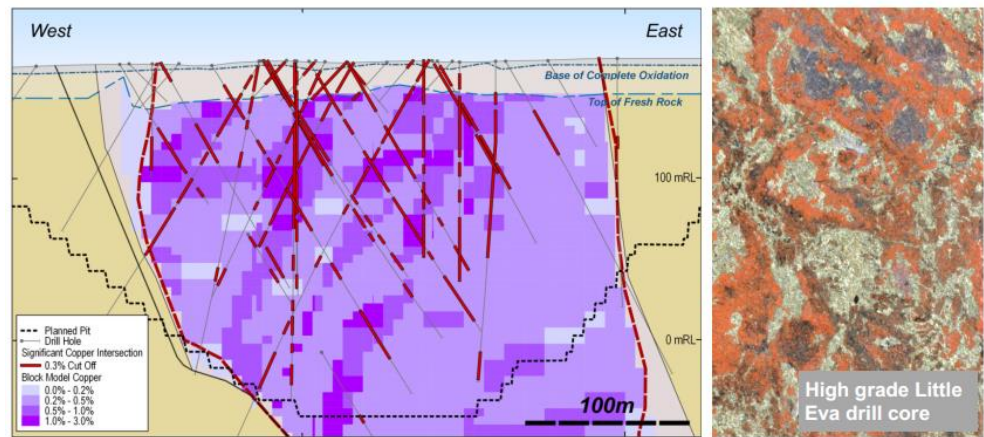
- A\$288M in pre production capex for a 7Mtpa operation, including a A\$51M mining mobilisation and pre-strip of Little Eva.
- Average annual production of 39ktpa Cu and 17kozpa Au in the first five years.
- AISC cost average of US\$1.92/lb copper in the first five years.
- Implied earthmoving rates of A\$8-9/bcm, assuming contractor mining.

The study noted upside to reserves at Little Eva and potential for improving the assumed pit design and mining selectivity. Substantial copper only (more difficult metallurgy) resources are excluded from the mine plan for now. Consultant GR Engineering reviewed capital costs, adjusting 2014 estimates for subsequent market moves.

CMMC has indicated intent to begin Cloncurry's development in 2018. CMMC will seek to own and operate the mining fleet, given its experience at Copper Mountain. In November 2017 Altona executed a 5 year offtake agreement with Glencore International A.G., under which copper gold concentrates from Cloncurry project will

be sold for smelting in Mt Isa. Sale of the concentrate to a local smelter means savings on transport costs, and a reduction in State royalty from 5% to 4% of net revenue.

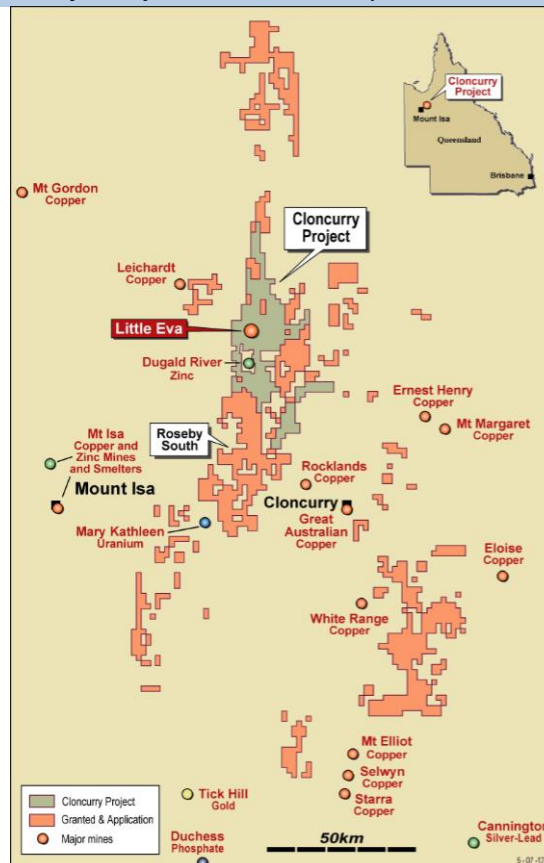
**Fig. 4: Little Eva cross section 2014**



- Large bulk IOCG style deposit similar to Ernest Henry

Source: Altona Mining

**Fig. 5: Cloncurry Project location map, 2016.**



Source: Altona Mining

## PRODUCTION

**Fig. 6: Hartleys' production forecasts.**

<b>Copper Mountain</b>		<b>C\$M</b>	<b>Dec 16</b>	<b>Dec 17</b>	<b>Dec 18</b>	<b>Dec 19</b>	<b>Dec 20</b>	<b>Dec 21</b>	<b>Dec 22</b>
Throughput	Mt		14.2	14.2	14.4	14.4	14.4	14.4	14.4
Cu head grade	%Cu		0.32	0.32	0.31	0.32	0.33	0.34	0.34
Au head grade	g/t		0.09	0.09	0.09	0.09	0.09	0.09	0.09
Combined Recovery & Payability			79%	75%	75%	75%	75%	75%	75%
Copper concs	kt		149	139	138	142	147	151	151
Payable copper in concs	kt		36	34	33	34	35	37	37
Payable gold in concs	koz		29	27	27	28	29	30	30
Cu equiv	kt		44	39	39	40	41	42	42
Mine Life	yr			13.8	12.7	11.7	10.7	9.7	8.7
Inventory tonnes	Mt		211	197	182	168	153	139	125
Inventory grade	%Cu		0.26	0.25	0.25	0.24	0.24	0.22	0.21

<b>Little Eva</b>		<b>Unit</b>	<b>Dec 16</b>	<b>Dec 17</b>	<b>Dec 18</b>	<b>Dec 19</b>	<b>Dec 20</b>	<b>Dec 21</b>	<b>Dec 22</b>
Throughput	Mt						4.60	7.00	7.00
Cu head grade	%Cu						0.65	0.65	0.52
Au head grade	g/t							0.08	0.08
Combined Cu recovery & payability							93%	93%	93%
Copper concs	kt						115	175	140
Payable copper in concs	kt						28	42	34
Payable gold in concs	koz						11	17	14
Cu equiv	kt						30	46	36
Mine Life	yr						17.7	10.6	9.6
Inventory tonnes	Mt		86.0	86.0	86.0	86.0	81.4	74.4	67.4
Inventory grade	%Cu		0.50	0.50	0.50	0.50	0.49	0.48	0.47

Source: Hartleys Research

**Fig. 7: Hartleys' cost forecasts.**

<b>Copper Mountain</b>			<b>Dec 16</b>	<b>Dec 17</b>	<b>Dec 18</b>	<b>Dec 19</b>	<b>Dec 20</b>	<b>Dec 21</b>	<b>Dec 22</b>
<b>Site cost/tonne ore treated</b>	C\$/t		12.6	13.0	12.4	12.6	12.8	13.0	13.3
<b>Sustaining capex/tonne ore</b>	C\$/t		0.3	0.7	0.6	0.5	0.5	0.4	0.3
<b>Growth capex</b>									
EBITDA / tonne milled ore	C\$/t		4.0	6.7	7.6	8.2	8.4	7.8	7.1
Cu equiv. AISC	C\$/lb Cu		2.25	2.53	2.52	2.49	2.48	2.44	2.47
	US\$/lb		1.71	1.98	1.99	1.95	1.94	1.91	1.94
	C\$/lb Cu		2.05	2.33	2.31	2.28	2.27	2.22	2.26
	US\$/lb		1.57	1.82	1.96	1.79	1.90	1.74	1.93
+ deprn & amortn	C\$/lb Cu		2.60	2.88	2.86	2.84	2.85	2.82	2.86
	US\$/lb		1.98	2.25	2.26	2.23	2.23	2.21	2.25

<b>Cloncurry</b>			<b>Dec 16</b>	<b>Dec 17</b>	<b>Dec 18</b>	<b>Dec 19</b>	<b>Dec 20</b>	<b>Dec 21</b>	<b>Dec 22</b>
<b>Site cost/tonne ore treated</b>	C\$/t						19.6	17.9	18.0
<b>Sustaining capex/tonne ore</b>	C\$/t						3.0	2.2	2.0
<b>Growth capex</b>	C\$M				282.2		43.2		
EBITDA / tonne milled ore	C\$/t						27	25	16
Cash costs incl. royalty	C\$/lb Cu						2.08	1.94	2.29
	US\$/lb						1.63	1.51	1.79
Cu equiv. cash cost	C\$/lb Cu						1.93	1.80	2.12
	US\$/lb						1.51	1.42	1.69
+ deprn & amortn	C\$/lb Cu						2.30	2.17	2.61
	US\$/lb						1.80	1.72	2.08

Source: Hartleys Research

## FINANCIAL POSITION

At the end of September 2017 US\$112M and US\$125M were drawn by the operating company (CMMC 75%) from a senior credit facility and term loan respectively. Mitsubishi has guaranteed the term loan. Interest rates on the US denominated debt are currently between 4.5% and 5.0%. Principal repayment of both facilities is scheduled in 6 monthly payments extending to mid 2023, with payments weighted to the latter years of the loan periods. The principal on the two major loans confers an exposure to the USDCAD rate. CMMC booked an unrealised gain of \$C11M in 2016 and \$C23M in the 9mths to September 2017, due to the appreciating CAD.

At the end of September 2017 Mitsubishi had advanced C\$40M to the operating company, up from C\$19M at the end of December 2016. Equipment leases and other subordinated loans made up the balance of C\$69M in debt outside the two main USD denominated facilities as at the end of September 2017.

In the nine months to September 2017 CMMC's total debt reduced from C\$380M to C\$357M (after currency changes and net repayments). Scheduled repayments on the USD denominated debt and lease payments in CY2018 are estimated at C\$43M (US\$33M). C\$40M due to Mitsubishi is included in current liabilities, but is not expected to be repaid in 2018.

CMMC had cash and cash equivalents of C\$44M at the end of September 2017. Altona had A\$34M in cash at the end of September 2017.

## PEER COMPARISON

	Mkt cap ASM	Price Last cps	Iss. Shs M f.p.	Net cash Project SAM	Other asset	EV SAM	Reserve					Resource					Ann prod					
							Mt	%Cu	g/tAu	cont Cu	cont Au	Cu equiv. kt	Mt	%Cu	kt	cont Cu	cont Au	Cu equiv. kt	kt	Cu	kozs	Cu equiv. kt
OZ Minerals	OZL	2506	839.0	299	639 Prominent Hill	1667	75	1.00	0.60	750	1447	1061	148	1.20	1776	2855	2483	95	120	125	1.60	8.5
Sandfire	SFR	1004	629.0	180	127 DeGrussa	877	10	3.90	1.40	371	428	463	10	4.60	469	525	599	65	34	73	2.60	6.3
Metals X	MLX	611	100.0	611	91 Nifty	370	14	1.71	239	238	238	42	1.50	624	624	624	40	40	40	2.44	5.9	
Copper Mountain	CMMC	292	156	187	-231 Copper Mountain, Cloncurry	523	249	0.35	0.08	872	641	1009	869	0.35	3942	2235	3523	79	36	88	2.34	11.5
Avanco Resources	AVB	223	9.1	2456	-38 Andas	186	3.0	2.64	0.58	79	56	91	33	1.95	644	531	775	16	12	19	2.79	4.8
Finders Resources	FND	179	23.5	761	-87 Wetar	266	8.6	2.30	198	198	198	9	2.40	214	214	214	25	25	25	2.50	7.9	
Aeris Resources	AIS	82	8.8	934	-131 Triton	213	10.5	1.50	158	158	158	21	1.50	315	315	315	27	27	27	3.50	5.8	
Hillgrove Resources	HGO	33	7.9	416	-1 Kanmantoo	34	22.1	0.71	0.18	157	128	184	35	0.60	207	78	226	18	7	20	3.70	9.3
Xanadu Mines	XAM	165	28.0	589	11.2 Khamagtai	154						203	0.34	690	2154	1154						
Ason Metals	AML	126	31.5	400	5.2 Walford Creek	121						7	1.25	83		83						
MOD Resources	MOD	97	5.2	1866	13.6 T3	83						22	1.30	282		282						
KGL Resources	KGL	81	36.0	226	13.0 Jervois	68						31	1.07	326		326						
Havilah Resources	HAV	39	19.0	205	3.0 Kalkaroo	36						233	0.49	1139	2766	1735						
Stavelly Minerals	SVY	24	19.5	123	1.8 Ararat/Stavelly	22						29	0.47	138	471	239						

Only fully paid ordinary shares are used in market cap and enterprise value figures.

Copper equivalence accounts for by product gold only

AUDUSD: 0.76, USDCAD: 1.27

Net cash as at Sep30 2017, adjusted for subsequent raisings

Source: Hartleys Research

CMMC stands out among its immediate peers for its extensive reserve position (870kt Cu, 640kozs Au attributable) and long mine life.

## VALUATION

The accompanying CMMC model reflects a pro forma combination of CMMC and Altona Mining assets, assuming success of the announced scheme of arrangement. The model takes into account available information including CMMC's projected group production guidance given periodically.

Modelled inventories and costs are based primarily on CMMC and Altona estimates, with some timing and cost differences. Costs are reconciled with past accounts where possible. Gold price and exchange rate forecasts are set out in summary tables on page 2.

Copper Mountain and Cloncurry are each valued by after tax discounted cash flow methods at 8% and 9% real, after tax discount rates respectively. Tax, royalty and minority interest payments are included in the modelling.



Nominal exploration value of C\$68M (36cps) is included to account for all of CMMC's exploration prospects outside of modelled inventories.

Corporate overheads of C\$10M per year, are assumed to 2032.

No future equity dilution for CMMC is assumed. We allow for \$US120M of additional debt drawn in 2019 to fund the development of Cloncurry.

## RISKS

**Fig. 8: Key assumptions and risks for valuation**

Assumption	Risk of not realising assumption	Risk to valuation if assumption is incorrect	Comment
Copper price and currency settings	Medium	High	Copper price and currency assumptions are close to present spot levels. Copper demand has proved resilient in 2017 and reform of the world's energy systems could underwrite future copper demand growth. CMMC's debt magnifies operational and markets sensitivity.
CMMC secures funding for Cloncurry at a reasonable price	Medium	Medium	Copper project funding is currently possible through either or both equity and debt.
Project costs	Medium	High	Future costs are estimated with reference to industry averages and comparable projects. Copper Mountain costs forecasts are in keeping with past performance.
Exploration upside	High	Low	Less than 10% of the asset valuation comes from exploration potential, or material outside reserves.

*Conclusion*

*CMMC is highly leveraged to commodity prices, principally copper, and operational performance.*

Source: Hartleys Research

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## Hartleys Recommendation Categories

Buy	Share price appreciation anticipated.
Accumulate	Share price appreciation anticipated but the risk/reward is not as attractive as a "Buy". Alternatively, for the share price to rise it may be contingent on the outcome of an uncertain or distant event. Analyst will often indicate a price level at which it may become a "Buy".
Neutral	Take no action. Upside & downside risk/reward is evenly balanced.
Reduce / Take profits	It is anticipated to be unlikely that there will be gains over the investment time horizon but there is a possibility of some price weakness over that period.
Sell	Significant price depreciation anticipated.
No Rating	No recommendation.
Speculative Buy	Share price could be volatile. While it is anticipated that, on a risk/reward basis, an investment is attractive, there is at least one identifiable risk that has a meaningful possibility of occurring, which, if it did occur, could lead to significant share price reduction. Consequently, the investment is considered high risk.

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