

Copper Mountain Mining Corp. (СММС-Т, С\$1.16)

Rating	BUY	Pierre Vaillancourt 416-507-2309 pvaillancourt@haywood.com
Target Price	C\$2.00	Douglas Ibbitson, CFA 416-507-2790 dibbitson@haywood.com
Return	72%	
Overall Risk Profile	High	

New Drill Results from New Ingerbelle

Event Copper Mountain Mining announced initial results from Phase 2 drilling at the New Ingerbelle property.

Impact - Positive We believe the results could help to prove up a larger, higher grade resource at New Ingerbelle, which may eventually become a satellite deposit to the Copper Mountain mine.

- Strong grades within lower grade envelope. Copper Mountain announced initial drill results from Phase 2 of its 3-phase drilling program at the New Ingerbelle property near the present operations of Copper Mountain mine. Highlights from 7 drill holes include 1.03% CuEq over 105m, 0.91% CuEq over 63m, and 0.63% CuEq over 165m. The higher grades at New Ingerbelle reflect the fracture-controlled nature of the system with more intensively mineralized stockwork. Most of the remaining mineralized intercepts were closer to the grade of the Inferred resource of 0.31% Cu (see Figure 1). A number of key intercepts were from 60m to 240m from surface.
- Aiming for 150Mt resource. The objectives of this Phase 2 drilling program are to continue to expand the New Ingerbelle resource area and to convert Inferred Mineral Resources to the Measured and Indicated status. The current Inferred resource at New Ingerbelle is estimated at 125Mt grading 0.31% Cu. Most of the 30 holes from the Phase 2 program are complete. The Company's objective under the 3-phase program at New Ingerbelle is to outline sufficient resources to form the basis of a feasibility study on the development potential of this past producing mine (1971-1981). The Company's target is to add a minimum 150Mt of Measured and Indicated resource grading 0.34% Cu and 0.22g/t Au (0.41% CuEq) to begin the study. We also believe a more modern, large scale mining approach could help make the mine more economically viable.

Catalysts 1) Financial results on August 7th before market open, followed by a Conference Call at 10:30am EST - Dial-In, North America: 1-888-231-8191, International: 647-427-7450 & <u>Webcast</u>); 2) Bankable feasibility on the Eva Project in Q3/18; 3) Commencement of Phase 3 drilling at New Ingerbelle by Q4/18; 4) Results from the \$5M exploration program at the Cloncurry property.

Valuation and Recommendation We reiterate our BUY rating and C\$2.00/sh target price on Copper Mountain Mining. Our target is based on a 6.4x multiple of cash flow, adjusted for cash, debt, non-controlling interest and dilutive securities. In the near term, our focus on the Company will be the upcoming feasibility study for the Eva project, which could lead to a construction decision by 2019 and production in 2020, if market conditions are favourable. In addition, we believe the surrounding Cloncurry property holds significant exploration potential.

Target Price			C\$2.00	52-Week High / Low	C\$1.85 / C\$0.92	Price Performance
Current Price			C\$1.16	Shares O/S	187.9M (basic)	Copper Mountain Mining Corporation (CMMC-T)
Return			72%		203.0M (F/D)	3 Price History (C\$) Volume (M) 3 50-Day MA 200-Day MA
YTD Performa	nce		(24%)	Market Capitalization	C\$218M	2.5
Dividend / Yie	ld		Nil	Cash	C\$79M	2 2
				Debt	C\$286M	
Haywood Esti	mates			Working Capital	C\$10M	11
		<u>2018E</u>	<u>2018E</u>	Enterprise Value	C\$503M	0.5
Revenue	C\$M	335	389	YE 2018 (est.) Cash Balance	C\$98M	
EBITDA	C\$M	119	174	Daily Volume (3 month ave)	428,820	Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul 17 17 17 17 17 17 18 18 18 18 18 18 18
EPS	C\$	0.22	0.47	Website	www.cumtn.com	Source: Capital IQ and Haywood Securities
CFPS	C\$	0.54	0.79	CEO	Gil Clausen	· · ·
				Currency	US\$ unless noted	

Please see page 7 for Analyst Certification, page 7 - 10 for Important Information, Legal Disclaimers, Rating Structure, and notes.



Figure 1: Significant intercepts from the 7 completed drill holes to date at the New Ingerbelle property.

				From	То	Interval				
Hole ID	Azi	Dip	Length	(m)	(m)	(m)	Cu%	Ag g/t	Aug/t	Cu Eq%*
18IG-01	315	-48	312	33	63	30	0.33	0.45	0.31	0.54
				72	111	39	0.21	0.27	0.11	0.29
				120	141	21	0.17	0.28	0.12	0.25
				147	312	165	0.44	0.60	0.29	0.63
Incl				147	240	93	0.55	0.74	0.38	0.81
Incl				264	312	48	0.4	0.52	0.24	0.56
18IG-02	222	-45	180	0	60	60	0.47	0.98	0.33	0.70
				66	93	27	0.14	0.42	0.06	0.18
18IG-03	42	-57	348	33	96	63	0.56	0.91	0.51	0.91
				114	126	12	0.24	0.33	0.14	0.34
				198	231	33	0.11	0.21	0.06	0.15
				231	348	117	0.35	0.49	0.22	0.50
18IG-04	315	-54	273	84	207	123	0.35	0.57	0.25	0.42
18IG-05	315	-54	288	9.6	27	17.4	0.2	0.5	0.13	0.29
				27	42	15	0.11	0.29	0.04	0.14
				60	87	27	0.19	0.4	0.14	0.29
				120	138	18	0.11	0.3	0.07	0.16
				168	216	48	0.49	1.05	0.33	0.72
Incl				168	189	21	0.8	1.73	0.56	1.19
18IG-06	315	-58	303	48	120	72	0.2	0.35	0.11	0.28
				132	237	105	0.71	0.87	0.47	1.03
Incl				132	180	48	0.58	0.58	0.37	0.83
Incl				207	237	30	1.53	2.02	1.01	2.22

Source: Copper Mountain Mining



HAYWOOD	Target Pr	UY Risk: Hi	iah		Return, %	72%			F/D, million Capitalizatio			03.0 165.7
<u>SECURITIES INC</u> .	0	ice: C\$2.00	3.		52-Week High / Low, C\$	\$1.85 / \$0.92		Compar				lausen
Balance Sheet and Capitalization		V/2018E Operating Ca	ash Flow		Daily Volume (100-day avg)	428,820			Web Site	ww	w.cumtn.	com
				Q2/18E	Share Capital							
-	US\$M	US\$ / O/S Share	C\$M	C\$ / O/S Share			As of		Avg. Price	Proceeds	ITM	Expiry
Market Capitalization	\$165.7	\$0.88	\$218	\$1.16	Shares Outstanding		Jun-18	187.9M	•	•	•	•
Current Cash	\$60.0	\$0.32	\$78.9	\$0.42	Options		Apr-18	10.0M	C\$1.25	C\$12.4M	C\$1.3M	Feb-19 - Apr-2
Working Capital	\$7.8	\$0.04	\$10.3	\$0.05	Warrants		Sep-17	5.1M	C\$0.75	C\$3.8M	C\$3.8M	Apr-18 - Apr-2
Total Debt	\$217.2	\$1.16	\$285.8	\$1.52	Dilutive Securities		Sep-17	15.1M	C\$1.08	C\$16.2M	C\$5.1M	Apr-18 - Apr-2
Book Value (excluding non-controlling interest)	\$214.4	\$1.14	\$282.0	\$1.50	Fully Diluted Shares		Jun-18	202.5M	-	-	-	-
Non-Controlling Interest	\$59.6	\$0.32	\$78.4	\$0.42	*Shares outstanding reflects last reported period	(Management es	stimates the	ere are cur	rently 187.9	M shares o	utstandin	g)
Enterprise Value (EV)	\$382.5	\$2.04	\$503.2	\$2.68								
*Balance sheet figures reflect last reported period		C\$/US	\$ FX Rate:	\$1.32	Corporate NAV Summary and Sensitivity							Spot
					Forecast Copper Price, US\$/Ib		Haywood	\$ 2.00	\$ 2.50	\$ 3.15	\$ 4.00	\$ 2.76
Financial Forecast					Forecast C\$/US\$ FX Rate		Model	\$ 1.40	\$ 1.30	\$ 1.22	\$ 1.10	\$ 1.32
		2018E	2019E	2020E	Corporate Adjustments, C\$M		\$77	(\$292)	(\$139)	\$60	\$246	(\$11)
Forecast Copper Price, US\$/lb		\$3.10	\$3.20	\$3.25	Copper Mountain After-Tax Project NAV (10%), C\$M		\$607	\$312	\$425	\$580	\$721	\$536
Forecast Gold Price, US\$/oz		\$1,300	\$1,400	\$1,400	Additional Exploration Credit, C\$M		\$10	\$10	\$10	\$10	\$10	\$10
Forecast Silver Price, US\$/oz		\$18.00	\$20.00	\$20.00	Corporate NAV, C\$M		\$694	\$30	\$296	\$651	\$978	\$535
C\$/US\$ FX Rate		\$1.28	\$1.27	\$1.26	Corporate NAV, C\$ / F/D share		\$3.55	\$0.15	\$1.51	\$3.32	\$5.00	\$2.73
Shares O/S, millions		188	188	188	Target Price / Corporate NAV		0.6x	13.0x	1.3x	0.6x	0.4x	0.7x
Revenue, C\$M		\$335	\$389	\$429	2018E Attributable CFPS, C\$		\$0.54	\$0.23	\$0.34	\$0.50	\$0.65	\$0.45
Gross Profit, C\$M		\$60	\$126	\$167	2019E Attributable CFPS, C\$		\$0.79	\$0.38	\$0.54	\$0.72	\$0.86	\$0.67
Operating Income, C\$M		\$51	\$119	\$160					Model sha	ares F/D (fully	/ financed):	: 202M
Adjusted EBITDA, C\$M		\$119	\$174	\$212								
Adjusted Earnings, C\$M		\$40	\$96	\$119	Peer-Group Comparables (Haywood Securities estin	nates)						
Adjusted EPS, C\$		\$0.22	\$0.47	\$0.59				Price/	2018E	2019E	2018E	2019E
Operating Cash Flow, C\$M		\$98	\$160	\$179		Share Price	Corp NAV	Nav	P/CFPS	P/CFPS	EV/CF	EV/CF
CFPS, C\$		\$0.54	\$0.79	\$0.88	Capstone Mining Corp. (TSX:CS)	C\$0.92	US\$ 1.64	0.4x	2.2x	2.0x	4.5x	4.0x
Free Cash Flow, C\$M		\$32	\$154	\$173	Hudbay Minerals Inc. (TSX:HBM)	C\$6.79	US\$ 8.46	0.6x	2.9x	2.8x	4.3x	4.1x
FCFPS, C\$		\$0.18	\$0.76	\$0.85	Imperial Metals Corporation (TSX:III)	C\$1.55	US\$ 3.28	0.4x	1.8x	0.9x	9.6x	5.1x
CAPEX, C\$M		\$66	\$6	\$6	Lundin Mining Corporation (TSX:LUN)	C\$7.02	US\$ 7.44	0.7x	6.0x	5.5x	5.0x	4.5x
					Nevsun Resources Ltd. (TSX:NSU)	C\$4.69	US\$ 4.74	0.8x	10.6x	11.3x	10.7x	11.3x
Valuation Ratios					Sherritt International Corporation (TSX:S)	C\$0.98	US\$ 1.82	0.4x	17.3x	8.7x	37.8x	19.0x
		2018E	2019E	2020E	Taseko Mines Limited (TSX:TKO)	C\$1.25	US\$ 2.24	0.4x	3.8x	2.4x	7.5x	4.7x
EV / Revenue		1.5x	1.3x	1.2x	Trevali Mining Corporation (TSX:TV)	C\$0.82	US\$ 1.04	0.6x	2.1x	2.2x	2.4x	2.5x
EV / Adjusted EBITDA		4.2x	2.9x	2.4x	Group Average			0.5x	5.8x	4.5x	10.2x	6.9x
EV / Operating Cash Flow		5.1x	3.1x	2.8x	Group Average (excluding high/low)			0.5x	4.6x	3.9x	6.9x	5.6x
EV / Free Cash Flow		15.7x	3.3x	2.9x	Copper Mountain Mining (Haywood) (TSX:CMMC)	C\$1.16	US\$ 2.69	0.3x	2.1x	1.4x	4.4x	3.0x
P / Adjusted Earnings		5.2x	2.5x	2.0x							\$ FX Rate:	
P / Operating Cash Flow		2.1x	1.5x	1.3x								
P / NAV		0.3x			Major Shareholders							
• • • • • •		0.0A								0/S (m	illions)	O/S (%)
Copper Mountain Production Profile (100% ba	asis)				Zeta Resources Limited					19	,	10%
		2018E	2019E	RLOM	FMR LLC					12		6%
Ore Milled, tonnes millions		14.5	14.6	209.3	Vertex One Asset Management Inc.					7.		4%
Ore Milled, tonnes per operating day		39,726	40.000	38,225	Dimensional Fund Advisors L.P.					5.		3%
Strip Ratio (incl. capitalized stripping)		1.7	1.6	3.4	O'Rourke, James Calhoun					3.		2%
Copper Grade Milled, %		0.31%	0.33%	0.26%	Tulla Resources Group Pty Limited					3.		2%
Gold Grade Milled, g/t		0.09	0.33%	0.20%	Total					51		2%
Copper Recovery, %		0.09 79%	0.11 80%	0.09 80%	I VILE					51		2170
Gold Recovery, %			80% 70%		Correspondent Matel Investigation - Madel Misseshie Decom		_		_			_
		70%		70%	Corporate Metal Inventory - Model Mineable, Reserv	e, and Resource			0			D///:
Payable Copper Production, MIb		80	85	961			T	00	CuEq		0	EV/lb

	Tonnes (000's)	Cu Grade (%)	Grade (%)	Copper (MIb)	CuEq (MIb)	CuEq (US\$/Ib)
Copper Mountain P&P Reserve (100%)	184,000	0.27%	0.34%	1,095	1,370	\$ 0.279
Copper Mountain M&I Resource (100%)	166,000	0.25%	0.32%	911	1,158	\$-
Copper Mountain Inferred Resource (100%)	426,000	0.21%	0.29%	1,972	2,697	\$-
Cloncurry Copper Project P&P Reserve (100%)	85,600	0.50%	0.55%	944	1,029	\$ 0.372
Cloncurry Copper Project M&I Resource (100%)	163,100	0.59%	0.63%	2,114	2,248	\$ -
Cloncurry Copper Project Inferred Resource (100%)	126,900	0.57%	0.60%	1,595	1,667	\$-
Total Reserve and Resource (100%)	1,151,600	0.34%	0.40%	8,630	10,170	\$ 0.038

Copper Mountain 75% ownership

Source: Company Reports, Capital IQ, and Haywood Securities

27

\$10.71

\$1.85

34

\$10.25

\$1.51

423

\$7.83

\$2.01

Payable Gold Production, ounces 000's

Total Copper Cash Cost (net of credits), US\$/Ib sold

August 3, 2016 - \$7.5M bought deal financing (13.6M units @ \$0.55; 1 unit = 1 share + 0.5 warrant ex cercisable at \$0.75 for 3 years November 11, 2013 - \$34.6M bought deal financing (17.7M common shares @ \$1.70 per share + over-allotment of 2.7M shares)

Operating Cost, C\$/tonne milled

ecent Financings



Investment Thesis

- We have a BUY rating and target price of C\$2.00. After several challenging years in a low copper price environment, the Copper Mountain mine is operating smoothly, benefiting from shorter haul routes, a fully functioning secondary crusher, and better dispatch system. Our BUY rating reflects the Company's ability to benefit from a lower dollar and a rising copper price while maintaining steady-state production.
- Steady production. The Company has 2018 production guidance of 80 Mlbs (+/- 5%) of copper, between 25,000-30,000 ounces of gold and between 275,000-325,000 ounces of silver, up from 2017 production of 75.8 Mlbs of copper. Following mine expansions and mill upgrades in past years, we expect the mine to maintain a steady-state mining rate of 180 ktpd and a milling rate of 40 ktpd.
- Cash flow will help to reduce debt. At the end of Q1/18, Copper Mountain had total debt of C\$285.8 million, offset by cash of C\$78.9 million. The Company has near-term debt maturities of \$39 million in 2018, and \$41 million in 2019, of a total repayment of \$249 million to 2022 and later. We forecast free cash flow of C\$94 million this year.

Risks

Significant Investment Risks

The investment to which this report relates carries various risks, which are reflected in our Overall Risk Rating. We consider the following to be the most significant of these investment risks:

- The Copper Mountain mine is a low-grade deposit, which translates into a leveraged financial profile, where a change of US\$0.25/lb (8%) in the copper price alters our 2018E attributable CFPS by about US\$0.22 (32%).
- **Execution will be key.** Copper Mountain initiated concentrate production in Q2/11, but the operation struggled with mill throughput issues through Q1/15. Ongoing execution and profitability from this low-grade deposit will remain a focus for investors.
- High debt. Although debt is high, it is repayable over the next 9 years, and is back-end weighted. The Company remains confident that underlying covenants, including a 1.25:1 debt-coverage ratio and minimum US\$12 million debt-service account, plus capex reserve account balance, are manageable at current copper prices. We are also cognizant that the \$249 million long-term debt position is 'friendly' (arranged by its 25% project partner Mitsubishi) and could likely be adjusted on reasonable terms if necessary.

For further information on our Risk Rating please visit: http://haywood.com/what-we-offer/research/research-policy

Important Information and Legal Disclaimers

This report is neither a solicitation for the purchase of securities nor an offer of securities. Our ratings are intended only for clients of Haywood Securities Inc., and those of its wholly owned subsidiary, Haywood Securities (USA) Inc. and such clients are cautioned to consult the respective firm prior to purchasing or selling any security recommended or views contained in this report.

Estimates and projections contained herein, whether or not our own, are based on assumptions that we believe to be reasonable. The information presented, while obtained from sources we believe reliable, is checked but not guaranteed against errors or omissions. Changes in the rates of exchange between currencies may cause the value of your investment to fluctuate. Past performance should not be seen as an indication of future performance. The investments to which this report relates can fluctuate in value and accordingly you are not certain to make a profit on any investment: you could make a loss.

Haywood Securities, or certain of its affiliated companies, may from time to time receive a portion of commissions or other fees derived from the trading or financings conducted by other affiliated companies in the covered security. Haywood analysts are salaried employees who may receive a performance bonus that may be derived, in part, from corporate finance income.

Haywood Securities, Inc., and Haywood Securities (USA) Inc. do have officers in common however, none of those common officers affect or control the ratings given a specific issuer or which issuer will be the subject of Research coverage. In addition, the firm does maintain and enforce written policies and procedures reasonably designed to prevent influence on the activities of affiliated analysts.

Dissemination of Research

Research reports are disseminated either through electronic medium or in printed copy. Clients may access reports on our website, or receive publications directly via email. Haywood strives to ensure all clients receive research in a timely manner and at the same time. It is against our policy for analysts to discuss or circulate their recommendations internally prior to public distribution. This policy applies equally to recommendation changes, target changes and/or forecast revisions.

For Canadian residents: Haywood Securities Inc. is a Canadian registered broker-dealer and a member of the Investment Industry Regulatory Organization of Canada, the Toronto Stock Exchange, the Toronto Venture Exchange and the Canadian Investor Protection Fund and accepts responsibility for the dissemination of this report. Any Canadian client that wishes further information on any securities discussed in this report should contact a qualified salesperson of Haywood Securities Inc.

For U.S. residents: This investment research is distributed in the United States, as third party research by Haywood Securities (USA) Inc. Haywood Securities (USA) Inc. is a wholly owned subsidiary of Haywood Securities Inc., registered with the U.S. Securities and Exchange Commission, and is a member of FINRA and the Securities Investor Protection Corporation (SIPC). Haywood Securities (USA) Inc. as a U.S. registered broker-dealer accepts responsibility for this Research Report and its dissemination in the United States. Any U.S. client that wishes further information on any securities discussed in this report or wish to effect a transaction in these securities should contact a qualified salesperson of Haywood Securities (USA) Inc. Haywood Securities Inc. Research Analysts are considered Foreign Research Analysts to the USA and are not registered/qualified as Research Analysts with FINRA. As these analysts are considered Foreign Research Analysts *they may not be specifically subject to FINRA* (formerly NASD) Rule 2711 and FINRA (formerly NYSE) Rule 472 restrictions on communications with a Subject Company, Public Appearances and trading securities held by a Research Analyst Account.

This report may be distributed in the following states: nil. Otherwise, this report may only be distributed into those states with an institutional buyer state securities registration exemption.

Analyst Certification

I, Pierre Vaillancourt, hereby certify that the views expressed in this report (which includes the rating assigned to the issuer's shares as well as the analytical substance and tone of the report) accurately reflect my/our personal views about the subject securities and the issuer. No part of my/our compensation was, is, or will be directly or indirectly related to the specific recommendations.

Important Disclosures

Of the companies included in the report the following Important Disclosures apply:



				r				-		
	Ticker	Company	1	2	3	4	5	6	7	8
	TSX:CS	Capstone Mining Corp.			Х					
	TSX:CMMC	Copper Mountain Mining Corp. X X								
	TSX:HBM	Hudbay Minerals, Inc. X X								
	TSX:LUN	Lundin Mining Corporation			Х					
	TSX:NSU	Nevsun Resources Ltd.			Х					
	TSX:TV	Trevali Mining Corporation			Х					
1	The Analyst(s) p	reparing this report (or a member of the Anal	ysts' ho	ouseho	lds) ha	ve a fin	ancial i	nterest	t in this	5
T	company.	ompany.								
2	As of the end of	As of the end of the month immediately preceding this publication either Haywood Securities, Inc., one of its								
2	subsidiaries, its	subsidiaries, its officers or directors beneficially owned 1% or more of this company.								
3	Haywood Securi	ties, Inc. has reviewed lead projects of this co	mpany	and a	portior	of the	expen	ses for	this tra	avel
5	have been reim	bursed by the issuer.								
4	Haywood Securi	ties Inc. or one of its subsidiaries has manage	d or co	-mana	ged or j	particip	ated a	s selling	g group	o in a
4	public offering c	of securities for this company in the past 12 m	onths.							
5	Haywood Securi	ties, Inc. or one of its subsidiaries has receive	d comp	ensatio	on for i	nvestm	ient ba	nking s	ervices	5
5	from this compa	any in the past 12 months.								
6	Haywood Securi	ties, Inc. or one of its subsidiaries has receive	d comp	ensati	on for i	nvestm	ient ba	nking s	ervices	5
0	from this company in the past 24 months.									
7	Haywood Securities, Inc. or one of its subsidiaries is restricted on this company at the time of publication.									
8	Haywood Securi	ties, Inc. or one of its subsidiaries expects to r	eceive	or inte	nds to	seek co	ompens	sation f	or	
0	investment ban	king services from this company in the next 3	month	5.						
)+hor	Investment banking services from this company in the next 3 months.									

Other material conflict of interest of the research analyst of which the research analyst or Haywood Securities Inc. knows or has reason to know at the time of publication or at the time of public appearance:

n/a

Rating Structure

Each company within an analyst's universe, or group of companies covered, is assigned: (i) a recommendation or rating, usually BUY, HOLD, or SELL; (ii) a 12 month target price, which represents an analyst's current assessment of a company's potential stock price over the next year; (iii) an overall risk rating which represents an analyst's assessment of the company's overall investment risk; and (iv) specific risk ratings or risk profile parameters which in their aggregate support an analyst's overall risk rating. These ratings are more fully explained below. Before acting on our recommendation we caution you to confer with your Haywood investment advisor to determine the suitability of our recommendation for your specific investment objectives, risk tolerance and investment time horizon.

Recommendation Rating

BUY –The analyst believes that the security will outperform other companies in their sector on a risk adjusted basis or for the reasons stated in the research report the analyst believes that the security is deserving of a (continued) BUY rating.

HOLD – The analyst believes that the security is expected to perform in line with other companies in their sector on a risk adjusted basis or for the reasons stated in the research report the analyst believes that the security is deserving of a (continued) HOLD rating.

SELL – Investors are advised to sell the security or hold alternative securities within the sector. Stocks in this category are expected to under-perform other companies on a risk adjusted basis or for the reasons stated in the research report the analyst believes that the security is deserving of a (continued) SELL rating.

TENDER – The analyst is recommending that investors tender to a specific offering for the company's stock.

RESEARCH COMMENT – An analyst comment about an issuer event that does not include a rating or recommendation.

UNDER REVIEW – Placing a stock Under Review does not revise the current rating or recommendation of the analyst. A stock will be placed Under Review when the relevant company has a significant material event with further information pending or





to be announced. An analyst will place a stock Under Review while he/she awaits sufficient information to re-evaluate the company's financial situation.

COVERAGE DROPPED – Haywood Securities will no longer cover the issuer. Haywood will provide notice to clients whenever coverage of an issuer is discontinued.

Haywood's focus is to search for undervalued companies which analysts believe may achieve attractive risk-adjusted returns. This research coverage on potentially undervalued companies may result in an outweighed percentage of companies rated as BUY. Management regularly reviews rating and targets in all sectors to ensure fairness and accuracy.

For further information on Haywood Securities' research dissemination policies, please visit: http://haywood.com/what-we-offer/research/research-policy

Overall Risk Rating

Very High Risk: Venture type companies or more established micro, small, mid or large cap companies whose risk profile parameters and/or lack of liquidity warrant such a designation. These companies are only appropriate for investors who have a very high tolerance for risk and volatility and who are capable of incurring temporary or permanent loss of a very significant portion of their investment capital.

High Risk: Typically micro or small cap companies which have an above average investment risk relative to more established or mid to large cap companies. These companies will generally not form part of the broad senior stock market indices and often will have less liquidity than more established mid and large cap companies. These companies are only appropriate for investors who have a high tolerance for risk and volatility and who are capable of incurring a temporary or permanent loss of a significant loss of their investment capital.

Medium-High Risk: Typically mid to large cap companies that have a medium to high investment risk. These companies will often form part of the broader senior stock market indices or sector specific indices. These companies are only appropriate for investors who have a medium to high tolerance for risk and volatility and who are prepared to accept general stock market risk including the risk of a temporary or permanent loss of some of their investment capital

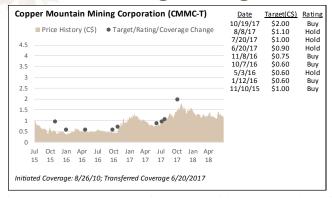
Moderate Risk: Large to very large cap companies with established earnings who have a track record of lower volatility when compared against the broad senior stock market indices. These companies are only appropriate for investors who have a medium tolerance for risk and volatility and who are prepared to accept general stock market risk including the risk of a temporary or permanent loss of some of their investment capital.

Distribution of Ratings (as of July 24, 2018)

			IB Clients
	%	#	(TTM)
Buy	76.6%	72	92.6%
Hold	12.8%	12	3.7%
Sell	1.1%	1	0.0%
Tender	1.1%	1	3.7%
UR (Buy)	0.0%	0	0.0%
UR (Hold)	0.0%	0	0.0%
UR (Sell)	0.0%	0	0.0%
Dropped (TTM)	8.5%	8	0.0%



Price Chart, Rating and Target Price History (as of July 24, 2018)



B: Buy; H: Hold; S: Sell; T: Tender; UR: Under Review Source: Capital IQ and Haywood Securities