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MEMORANDUM

J.A. Chapman Mining Services tel: 604.536.8356, fax: 604.536.8351, mobile: 604.612..9438 res: 604.535.0038, Email: jacms1@telus.net

 Date:
 February 17, 2007

 To:
 Leader Mining International Inc. Directors

 From:
 John Chapman

 Re:
 Cogburn Magnesium Project Updated Pretax Cash Flows

 cc.
 Gerald Carlson, David Dreisinger, David Makepeace

The Hatch Feasibility Study dated May 2003 has been used as a reference to update the Cash Flow Model for the Cogburn Magnesium Project.

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The following activities preceded the update:

1) Hatch was asked to confirm that STI/VAMI was still the most suitable technology for processing magnesium silicate ores at Cogburn. That was confirmed by Roman Deshko via email on January 22nd;

2) Merit Consultants was asked to provide an update on labour and material costs in the form of escalators from the first quarter of 2003 to the last quarter of 2006. That information was provided by Jay Collins on February 6th and showed that labour had increased by a factor of 1.17 and materials by 1.57. It was determined that labour represented 15% of capital and operating costs and the remaining 85% was allocated to materials. This resulted in a net increase factor of 1.51 on all costs.

Applying the escalators in (2) above resulted in the following increases (all dollars in US funds):

1) Capital cost: \$1.237 billion to \$1.868 billion.

- 2) Working capital: \$61.8 million to \$94 million.
- 3) Sustaining capital: \$15.6 million to \$23.5 million.
- 4) Operating cost: \$0.703 per pound to \$1.060 per pound.



Figure 1





The analysis of the Pretax Cash Flows IRR's, at various magnesium metal prices, are presented in Figure 1. Figure 2 presents the Payback in years. Figure 3 shows Gross Revenue, Net Cash Flow and DCF-ROR10. The analysis shows that in the current cost environment it would require the magnesium metal price to be ~US\$2.50 per pound to provide a pretax 20% return and a four year payback on the \$1.868 billion investment (standard mining industry hurdle rates). The Hatch Feasibility modeled 25 years of operations while this study only used 17 years - as beyond 17 years values discounted at 10% become very small. The Cash Flow spread sheets are attached for reference.

It is important to note that by applying a Canadian/BC tax rate of 35% (65% net to Project) to the numbers presented in the figures gives an approximate after-tax number.



Figure 3

In my opinion the magnesium market is poised for a rapid expansion with a significant price increase. There has been a structural change in the markets for the following reasons:

1) The technological failure of the Magnola plant, that was to be the main supply for GM and Ford just as the autocos were moving aggressively into lightening vehicles, caused market disruption;

2) Financial troubles in the US auto industry since 2005 have caused them to shelve plans to embrace magnesium in lightening vehicles;

3) The rising supply of low cost Chinese magnesium caused the demise (shutdown and I believe dismantling) of Norsk Hydro's magnesium business (formerly the world's largest producer) in 2006. They were achieving large returns on their petroleum investments and "bleeding" in magnesium;

4) Labour shortages and rising labour costs are beginning to negatively impact China's magnesium operations (recently reported in Metals Week);

5) The global warming scare is causing California (and other jurisdictions) to drastically tighten emissions standards. This will probably cause autocos to be driven to again lighten vehicles as one method of achieving compliance;

6) The European autocos continue to expand the use of magnesium in their vehicles and supply is mainly from Israel (Dead Sea Works);

7) Japanese autocos have not embraced magnesium as yet - when they do it will become an exciting market.

In recent months there has been increased talk of allowing nuclear power expansion in Canada (speeches by Gary Lund, Federal Minister or Resources). In my opinion, nuclear at Cogburn would have a very positive impact on the Project economics (substantially reduce operating costs) as it would replace grid power, which is rapidly rising in price, and at the same time would eliminate natural gas (heat and reformation for hydrogen). Another consideration is the fact the BCHydro has failed to generate enough power to meet demand in BC and has had to import expensive power from the USA and Alberta. Also, remember that electricity and natural gas represent 40% of the US\$306 million per annum Project operating costs. The high-grade waste heat from a 250MW(e) HTGR reactor would be in the order of 350MW(h) at temperatures exceeding 500 degrees C that could be used for fluid bed dehydration and for production of hydrogen (thermo-chemical process). I intend to work with the PBMR people to determine the impact of the HTGR reactor on the Cogburn Magnesium Project economics.

Schroeter, Tom EMPR:EX

From:	John Chapman [jacms1@telus.net	t]
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Sent: Mon, February 19, 2007 4:20 PM

To: Schroeter, Tom EMPR:EX

Subject: FW: Cogburn Magnesium Project - Economics Update

Attachments: cogburn pretax cash flow \$5.50 20070215.pdf; cogburn pretax cash flow \$1.50 20070215.pdf; cogburn pretax cash flow \$2.50 20070215.pdf; cogburn pretax cash flow \$3.50 20070215.pdf; cogburn pretax cash flow \$4.50 20070215.pdf; RE: Cogburn Magnesium Project (and nickel exploration); COGBURN CASH FLOWS 20070217.pdf

Tom,

Attached is bedtime reading for you.

I have advised the EA office of the economic situation with Cogburn (see attached email).

John

From: John Chapman [mailto:jacms1@telus.net]

Sent: February 19, 2007 9:59 AM

To: chrisgulka@workingcapitalcorp.com; kurtmarty@bluewin.ch; Roland Kesselring (nascom@swissonline.ch); Wagner, Tomasz; Bob McGown (sagecroc@gmail.com)

Cc: Buddy Roach; David Dreisinger (drei@interchange.ubc.ca); David Flather (dhf@lorax.ca); Jack Butterfield ; Justin Stockwell; Roman Friedrich (rfriedrich@attglobal.net); Sandy Sveinson (info@meritminingcorp.com); Mel Smale; James Anson (janson@hatch.ca); Roger Urquhart (rurquhart@hatch.ca); Roman Deshko (rdeshko@hatch.ca); Bill MacMillan (Bill.MacMillan@BCHydro.bc.ca)

Subject: Cogburn Magnesium Project - Economics Update

Gentlemen,

Please read the file "COGBURN CASH FLOWS 20070217" first.

I plan to be in all week if you wish to set up a conference call to discuss this Cogburn economic update.

Best regards, John Chapman 604.536.8356

From: John Chapman [mailto:jacms1@telus.net]
Sent: February 18, 2007 11:11 AM
To: cgulka@workingcapitalcorp.com; gcarlson@copper-ridge.com; dmakepeace@telus.net; Sandy Sveinson
Subject: Cogburn Magnesium Project - Economics Update

Hi Folks,

Please give the file "Cogburn cash flows 20070217" a read before we send these files off to the Leader board on Monday. Comments would be appreciated as I worked alone on this with no other eyes to check.

Cheers, John

2007-02-20

COGBURN MAGNESIUM PROJ	IECT CASH F	LOWESTIN	IATE - 150,000	mt/y MAGN	IESIUM MET.	AL/ALLOY PR	RODUCTION	(cost adjuste	ed from HAT(CH 2003 Feas	ibility Study								í	by: JAC
Warning: This cash llow contains	several torwar	d looking ass	amations					ſ												18-Feb-07
All Funds in US Dollars			1																	09:34:30 AM
			1																1	
	Magnesium Price:	5.5	US\$/pound																	
			Г Г																	
																			1	
YEAR:	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2022	2023	2024	TOTAL
Production																				
Emory Zone Ore @ 24 6% Mg (mt/v)			532 520	532 520	532 520	532 520	532 520	532 520	532 520	532 520	532 520	532 520	532 520	532,520	532.520	532.520	532 520	532 520	532,520	9.052.846
Magnesium Allovs (mt/v)			131,000	131 000	131,000	131,000	131,000	131,000	131 000	131,000	131,000	131,000	131,000	131.000	131.000	131,000	131.000	131,000	131,000	2,227,000
Revenue:			10.0000																1	
Magnesium Price (\$/kg)			12.13	12.13	12.13	12.13	12.13	12.13	12.13	12.13	12.13	12.13	12.13	12.13	12.13	12.13	12.13	12.13	12.13	•••••
Magnesium Price (\$/lb)			5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	
Revenue (\$)			\$1,588,438,899	\$1.588,438,899	\$1.588,438,899	\$1,588,438,899	\$1,588,438,899	\$1,588,438,899	\$1,588,438,899	\$1,588,438,899	\$1,588,438,899	\$1,588,438,899	\$1,588,438,899	\$1,588,438,899	\$1,588,438,899	\$1,588,438,899	\$1,588,438,899	\$1,588,438,899	\$1,588,438,899	\$27,003,461,276
Revenue (\$/mt of ore processed)			\$2.983	\$2.983	\$2.983	\$2.983	\$2.983	\$2,983	\$2.983	\$2.983	\$2,983	\$2.983	\$2,983	\$2,963	\$2,983	\$2,983	\$2,983	\$2,983	\$2,983	\$2,983
Unit Costs (\$/kg metal produced):			1			1											1			
Total Operating Cost (\$/kg metal produced	4)		\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	2.337
Total Operating Cost (\$/Ib metal produced)		\$1,060	\$1,060	\$1,060	\$1,060	\$1,060	\$1,060	\$1,060	\$1,060	\$1,060	\$1,060	\$1,060	\$1,060	\$1,060	\$1,060	\$1,060	\$1,060	\$1.060	\$1,060
Costs:																				
Total Operating Cost			\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$5,204,303,446
Royalty Payments			\$13,588,373	\$13,588,373	\$13,588,373	\$13,588,373	\$13,588,373	\$13,588,373	\$13,588,373	\$13,588,373	\$13,588,373	\$13,588,373	\$13,588,373	\$13,588,373	\$13,588,373	\$13,588,373	\$13,588,373	\$13,588,373	\$13,588,373	\$231,002,337
Depreciation (20% declining balance)			373,574,000	298,859,200	239,087,360	191,269,888	153,015,910	122,412,728	97,930,183	78,344,146	62,675,317	50,140,254	40,112,203	32,089,762	25,671,810	20,537,448	16,429,958	13,143,967	10,515,173	1,825,809,307
Total Cost			\$693,297,870	\$618,583,070	\$558,811,230	\$510,993,758	\$472,739,780	\$442,136,598	\$417,654,052	\$398,068,016	\$382,399,186	\$369,864,123	\$359,836,072	\$351,813,632	\$345,395,679	\$340,261,317	\$336,153,828	\$332,867,836	\$330,239,043	\$7,261,115,090
Pretax Earnings			\$895,141,029	\$969,855,829	\$1,029,627,669	\$1,077,445,141	\$1,115,699,119	\$1,146,302,301	\$1,170,784,846	\$1,190,370,883	\$1,206,039,712	\$1,218,574,775	\$1,228,602,826	\$1,236,625,267	\$1,243,043,219	\$1,248,177,581	\$1,252,285,071	\$1,255,571,062	\$1,258,199,856	\$19,742,346,186
Pretax Operating Cash Flow;																				
Depreciation (add back)			373,574,000	298,859,200	239,087,360	191,269,888	153,015,910	122,412,728	97,930,183	78,344,146	62,675,317	50,140,254	40,112,203	32,089,762	25,671,810	20,537,448	16,429,958	13,143,967	10,515,173	1,825,809,307
Preproduction Royalty	(55,000)	(1,060,000)																	(1,115,000)
Capital Investment	(650,000,000)	(1,217,870,000)																	(1,867,870,000)
Sustaining Capital					23,663,000	23,663,000	23,663,000	23,663,000	23,663,000	23,663,000	23,663,000	23,663,000	23,663,000	23,663,000	23,663,000	23,663,000	23,663,000	23,663,000	23,663,000	354,945,000
Working Capital	(30,000,000)	(64,000,000)																94,000,000	-
Pretax Net Cash Flow	(\$680,055,000)	(\$1,282,930,000	\$1,268,715,029	\$1,268,715,029	\$1,292,378,029	\$1,292,378,029	\$1,292,378,029	\$1,292,378,029	\$1,292,378,029	\$1,292,378,029	\$1,292,378,029	\$1,292,378,029	\$1,292,378,029	\$1,292,378,029	\$1,292,378,029	\$1,292,378,029	\$1,292,378,029	\$1,292,378,029	\$1,386,378,029	\$20,054,115,493
Pretax Cumulative Cash Flow	(\$680,055,000)	(\$1,962,985,000	(\$694,269,971)	\$574,445,058	\$1,866,823,087	\$3,159,201,116	\$4,451,579,145	\$5,743,957,174	\$7,036,335,203	\$8,328,713,232	\$9,621,091,261	\$10,913,469,290	\$12,205,847,319	\$13,498,225,348	\$14,790,603,377	\$16,082,981,406	\$17,375,359,435	\$18,667,737,464	\$20,054,115,493	
Pretax Net Present Value of Project Cash Flo	w:																			
@ 5% Discount Rate		\$12,604,383,176																		
@ 10% Discount Rate		\$8,381,423,640																		
2 15% Discount Rate		\$5,822,498,582																		
Pretax DCF-ROR on Investment (%)		54.7	2																	
	l		.ll		L															
Notes:	Assume that the rea	sidual value of ase	ets at end of 17 years	would equal close	Ife costs	1		l												
	The magnesium res	source is very larg	e and would support o	perations for +100	years at similar ec	enomics to those pre	esented in this 17 or	belannd Assi Pope	ł	L										
	Cost escalation sup	plied by Merit Cor	suitants for 2003 at a	one to 2003 atr fou	rth: labour = 1.17	materials # 1.57. Th	te percentage of lab	your in the capital an	d operating costs is	15%, materials rep-	esent 35% (blende	d escalation = 1.51)	<u></u>							
	The largest impact i	on me economics	of the Project sid the	encinc power and	natural gas prices	(-40% of operating a	costs). In fills cash	now the 2.2 billion k	wh/amun of electr	ic power and the 20.	a mation cubic mets	rsismum of netural	gas nave been esc	alated nom the HA	FUH Feasibility by 1	ne 1.51 rector.				

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Warring: This cash flow contains several torward tooking assumptions				18-Feb-07
All Funds in US Dollars				09:31:44 AM
Magnesium Price: 1.50 US\$/pound		0.000.000000000000000000000000000000000		
			and a second s	
YEAR: 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 20	25 2022	2023	2024	TOTAL
Production 512 520 5120 51	520 532 520	517 520	532 520	8 052 846
	000 131,000	131 000	131,000	2 227 000
			131,000	
New New York Strategy	31 3.31	3 31	3 31	
The proving the grant the	50 1.50	1.50	1 50	
	109 5413 210 609	\$433 210 609	\$433 210 609	\$7 364 580 348
	814 \$814	\$814	\$814	\$814

Total Onesting Cost (5/in metal produced) 52 34 52 54 52 52 52 52 52 52 52 52 52 52 52 52 52	34 \$2.34	\$2 34	\$2 34	2 137
Total Operating Cost (5) metal produced) \$1060 \$	060 \$1.060	\$1.060	\$1.060	\$1,060
	•			•1,000
Total Operating Cost \$306 135 497 \$306 135 4	497 \$306 135 497	\$306 135 497	\$306 135 497	\$5 204 303 446
Rovaly Payments \$2,036,090 \$2,036	90 \$2,036,090	\$2,036,090	\$2,036,090	\$34,613,528
Detreciption (20% declining balance) 373 574 000 298 859 200 239 087 360 191 269 888 153 015 910 122 412 778 97 930 183 78 344 146 52 575 317 50 140 254 40 112 203 32 048 762 25 571 810 20 537	448 16.429.958	13.143.967	10.515.173	1.825.809.307
Total Cost \$561,745,587 5607,030,787 \$547,559,947 \$499 441 475 \$451,187,497 \$430,584 315 \$406,101,769 \$386,515,733 \$370,846,504 \$358,311,840 \$344,283,789 \$340,261,349 \$333,843,396 \$328,709,0	35 \$324.601.545	\$321,315,553	\$318,686,760	\$7.064.726.280
Pretax Earnings (\$246 534 978) (\$173 820 178) (\$114 046 338) (\$66 230 866) (\$27 876 888) \$2 526 294 \$27 108 839 \$46 594 876 \$62 351 705 \$74 898 769 \$84 926 819 \$92 949 260 \$99 367 212 \$104 501 5	74 \$108.609.064	\$111,895,055	\$114.523.849	\$299.854.068
Pretax Operating Cash Flow:	A A A A A A A A A A A A A A A A A A A			
Depreciation (add back) 373 574 000 298 859 200 239 087 360 191 269 888 153 015 910 122 412 728 97 930 183 78 344 146 52 675 317 50 140 254 40 112 203 32 089 762 25 671 810 20 537.4	48 16.429.958	13.143.967	10.515.173	1.825.809.307
Preproduction Royalty (55.000) (1.060.000)	and the second s		for the second	(1.115.000)
Capital Investment (650 000 000) (1 217 870 000)				(1.867.870.000)
Sustaining Capital 23.663.000 20.000 20.000 20.000 20.000 20.000 20.000 20.000 20.000 20.000 20.000 20.000 20.000 20.000 20.000 20.0000 20.000 20.000 20.0000 20.000 20.000 20.0	23,663,000	23,663,000	23,663,000	354,945,000
Working Capital (30.000.000) (64.000.000)			94,000,000	
Pretax Net Cash Flow (\$560,055,000) (\$1,282,330,000) \$125,033,022 \$125,033,022 \$148,702,022 \$148	22 \$148,702,022	\$148,702,022	\$242,702.022	\$611,623,374
Pretax Cumulative Cash Flow (\$5630.055.000) (\$1.952.385.000) (\$1.952.385.000) (\$1.952.385.000) (\$1.957.458.759) (\$1.712.906.3561) (\$1.712.	08 \$220,219,330	\$368,921,352	\$611.623.374	
Pretax Net Present Value of Project Cash Flow;		and the second		
© 5% Discount Rate (\$289.495.893)				
2 10% Discount Rate (\$792.634.421)				
2 15% Discount Rate (\$1.093.494.084)				
Pretax DCF-ROR on Investment (%) 2.92				
Notes: Assume that the residual value of assets at end of 17 years would equal closure costs			1	
The magnesium resource is very large and would support operations for +100 years at similar economics to those presented in this 17 operating year subset				
Cost escalaton supplied by Ment Consultants for 2003 gtr one to 2008 gtr fourth: labour = 1.17, materials = 1.57. The percentage of labour in the capital and operating costs is 15%, materials represent 35% (plended escalation = 1.51).			1	
The largest impact on the economics of the Project are the electric power and restard gas prices (-40% of operating costs). In this cash flow the 2.2 billion (Whismum of electric power and the 203 million cubic meters/amum of restard gas have been escalated from the HATCH Feasibility by the 1.51 factor.			1	

COGBURN MAGNESIUM PROJ	ECT CASH FL	OW ESTIM	ATE - 150,000	mt/y MAGNi	ESIUM META	L/ALLOY PR	ODUCTION	(cost adjuste	d from HAT(CH 2003 Feas	ibility Study									by: JAC
Warning: This cash flow contains	several forward	looking ass	umations																	18-Feb-07
All Funds in US Dollars																				09:32:56 AM
	Magnesium Price:	2.50	US\$/pound																	
			1																	
YEAR:	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2022	2023	2024	TOTAL
Production																				
Emory Zone Ore @ 24.6% Mg (mt/y)			532,520	532,520	532,520	532,520	532,520	532,520	532,520	532,520	532,520	532,520	532,520	532,520	532,520	532,520	532,520	532,520	532,520	9,052,846
Magnesium Alloys (mt/y)			131,000	131,000	131,000	131,000	131,000	131,000	131,000	131,000	131,000	131,000	131,000	131,000	131,000	131,000	131,000	131,000	131,000	2,227,000
Revenue:																				
Magnesium Price (\$/kg)			5.51	5.51	5.51	5.51	5.51	5.51	5.51	5.51	5.51	5.51	5.51	5.51	5.51	5.51	5.51	5.51	5.51	
Magnesium Price (\$/lb)			2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	
Revenue (\$)			\$722,017,681	\$722,017,681	\$722,017,681	\$722,017,681	\$722,017,681	\$722,017,681	\$722,017,681	\$722,017,681	\$722,017,681	\$722,017,681	\$722,017,681	\$722,017,681	\$722,017,681	\$722,017,681	\$722,017,681	\$722,017,681	\$722,017,681	\$12,274,300,580
Revenue (\$/mt of ore processed)			\$1,356	\$1,356	\$1,356	\$1,356	\$1,356	\$1,356	\$1,356	\$1,356	\$1,356	\$1,356	\$1,356	\$1,356	\$1,356	\$1,356	\$1,356	\$1,356	\$1,356	\$1,356
Unit Costs (\$/kg metal produced):			1)	1					,								
Total Operating Cost (\$/kg metal produced)		\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	2.337
Total Operating Cost (\$/Ib metal produced)			\$1,060	\$1,060	\$1,060	\$1,060	\$1,060	\$1,060	\$1,060	\$1.060	\$1,060	\$1,060	\$1,060	\$1,060	\$1,060	\$1,060	\$1.060	\$1,060	\$1,060	\$1.060
Costs:									And the second											
Total Operating Cost			\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$5,204,303,446
Royalty Payments			\$4,924,161	\$4,924,161	\$4,924,161	\$4,924,161	\$4,924,161	\$4,924,161	\$4,924,161	\$4,924,161	\$4,924,161	\$4,924,161	\$4,924,161	\$4,924,161	\$4,924,161	\$4,924,161	\$4,924,161	\$4,924,161	\$4,924,161	\$83,710,730
Depreciation (20% declining balance)			373,574,000	298,859,200	239,087,360	191,269,888	153,015,910	122,412,728	97,930,183	78,344,146	62,675,317	50,140,254	40,112,203	32,089,762	25,671,810	20,537,448	16,429,958	13,143,967	10,515,173	1,825,809,307
Total Cost			\$684,633,657	\$609,918.857	\$550,147,017	\$502,329,545	\$464,075,568	\$433,472,386	\$408,989,840	\$389,403,804	\$373,734,974	\$361,199,911	\$351,171,860	\$343,149,420	\$336,731,467	\$331,597,105	\$327,489,616	\$324,203,624	\$321,574,831	\$7,113,823,483
Pretax Earnings			\$37,384.024	\$112,098,824	\$171,870,664	\$219,688,136	\$257,942,113	\$288,545,295	\$313,027,841	\$332,613,878	\$348,282,707	\$360,817,770	\$370,845,821	\$378,868,262	\$385,286,214	\$390,420,576	\$394,528,065	\$397,814,057	\$400,442,850	\$5,160,477,097
Pretax Operating Cash Flow:																	······			
Depreciation (add back)			373 574 000	298 859 200	239.087.360	191 269 888	153 015 910	122 412 728	97 930 183	78 344 146	62 675 317	50,140,254	40.112.203	32,089,762	25.671.810	20.537.448	16.429.958	13.143.967	10.515.173	1.825.809.307
Preproduction Royalty	(55 000)	(1.060.000)																		(1.115.000)
Capital Investment	(650 000 000)	(1 217 870 000)																		(1.867.870.000)
Sustaining Capital					23 663 000	23 663 000	23 663 000	23 663 000	23 663 000	23 663 000	23 663 000	23 663 000	23 663 000	23 663 000	23,663,000	23.663.000	23.663.000	23.663.000	23,663,000	354,945,000
Working Capital	(30,000,000)	(64 000 000)	1								27/7/22/222								94 000 000	•
Pretax Net Cash Flow	(\$680.055.000)	(\$1,282,930,000)	\$410,958,024	\$410,958,024	\$434.621.024	\$434.621.024	\$434.621.024	\$434.621.024	\$434.621.024	\$434.621.024	\$434,621,024	\$434.621.024	\$434,621,024	\$434.621.024	\$434,621,024	\$434.621.024	\$434.621.024	\$434,621,024	\$528,621,024	\$5,472,246,404
Pretax Cumulative Cash Flow	(\$680.055.000)	(\$1,962,985,000)	(\$1,552,026,976)	(\$1,141,068,952)	(\$706.447.929)	(\$271,826,905)	\$162,794,119	\$597,415,143	\$1,032,036,166	\$1,466,657,190	\$1,901,278,214	\$2,335,899,238	\$2,770,520,261	\$3,205,141,285	\$3,639,762,309	\$4,074,383,333	\$4,509,004,356	\$4,943,625,380	\$5,472,246,404	
Pretax Net Present Value of Project Cash Flo	w:					1121.104.00.001				1.				and the second second			and I downlower		and the standard	
Ø 5% Discount Rate		\$2 933 973 874																		
Ø 10% Discount Rate		\$1 500 880 095									and the state of t									
@ 15% Discount Rate		\$635 504 082																		
Pretax DCF-ROR on Investment (%)		19 44																		and the Address of Concession
			1																	
tinte:	Assume that the resid	fual value of and	ets at end of 17 years	would equal plotter	e costs															
HOICE.	The manuscium rash	unte is very large	and would contract	merations for +100	veen at similar and	nomics to those the	sented in this 17 on	eratina year cubset												
	Cost acceleton sure	lad by Mart Con	suborts for 2013 of	ane to 2006 etc four	the labour a 1 17 m	sotarials a 157 Th	e netrantizes of kity	nur in the conital an	d constating costs is	15% materials read	asart 35% (hlends	description = 1.51)	••••••							•••••
	The lacrost impact of	the sembories	of the Project are the	electric power and	natural das orices i	wd0% of presenting a	wate) to this cash i	four the 7.7 billion in	Whiennun of electr	ic newsr and the 20	million cubic mate	mignous of estural	nos hove hean esr	alateri from the HA	TCH Fassibility by f	a 1 51 factor				
	The surgers substrate of	A THE ASSOCIATION AND A	······································	anagura 24 49, 4(2)			www	1410 1114 A.G. 1000-0-1 4	APPENDING DI BRISTO	- Postor #100 100 2.04	a manager waters fight	and a second second	gas tore veen bot	THE PARTY OF THE P	. Serve washing by a					

												1								
COGBURN MAGNESIUM PRO.	JECT CASH F	LOWESTIM	AIE - 150,000	mt/y MAGN	ESIUM META	LALLOY PH	ODUCTION	cost adjuste	d from HAT	CH 2003 reas	ibility Study									by: JAC
Warning: This cash flow contains	several forwar	d looking assi	umptions																	18-Feb-07
All Funds in US Dollars																				09:33:31 AM
			L																	L
	Magnesium Price:	3.50	US\$/pound																	
YEAR	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2022	2023	2024	TOTAL
Pre-duratia a																				
Franciscon			E22 / 220	E20 500	522 520	E22 E20	F22 F20	E22 E20	E22 E20	E32 E20	E22 E20	E23 E20	E33 E30	E22 E20	E22 E20	E22 E20	522 520	E22 E20	533 530	8 053 946
Emory Zone Cre gg 24.6% Mg (mvy)			532,520	532,520	532,520	532,520	552,520	532,520	532,520	332,320	131,000	131,000	131,000	121 000	121 000	131,000	131,000	131 000	121,000	3,032,640
Magnesium Alloys (muy)			131,000	131,000	131,000	131,000	131,000	131,000	131,000	131,000	131,000	131,000	131,000	131,000	131,000	131,000	131,000	131,000	131,000	000,124,2
Nevenue:					~ ~~		~ ~~	~ ~~			or 7	7.70		7 70	7 70	7 79	7 79	7 70	7 77	
Magnesium Price (\$/kg)			1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	7.72	1.12	7.72	1.12	1.12	1.12	1.12	7.72	
Magnesium Price (\$/10)			3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	54 040 024 754	3.50	3.50	3.50	3.50	3.50	£47 484 030 843
Revenue (5)			\$1,010,824,754	\$1,010,824,754	\$1,010,824,754	\$1,010,824,/54	\$1,010,824,754	\$1,010,824,754	\$1,010,824,754	\$1,010,824,754	\$1,010,824,754	\$1,010,824,754	\$1,010,024,/54	\$1,010,624,704	\$1,010,624,754	\$1,010,024,754	\$1,010,824,/54	\$1,010,624,754	\$1,010,824,784	\$17,104,020,812
Revenue (a/mt of ore processed)			\$ 1,830	91,898	\$1,696	\$1,030	91,690	91,030	91,030	\$ 1,030	\$1,030	\$1,030	\$1,030	\$1,030	\$1,030	41,030	\$1,030	41,690	\$1,030	\$1,030
Table Costs (s/kg metal produced):				£5.54			****			£2.24	****	62.24	£2.24	£3.34	£3.34	83.84	63.34	£3.24	t2.24	2 2 2 2 7
Total Operating Cost (s/kg metal produce	a)		\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$1.04	\$2.34	2.331
Control Operating Cost (ship metal produced			\$1,060	\$1,060	\$1,060	\$1,060	\$1,060	\$1,060	\$1,060	\$1.060	\$1,080	\$1,080	\$1,000	31,000	\$1,080	31,080	31,000	31,000	\$1,000	\$1.000
Total Operation Cost			\$305 43E 407	\$200 43E 407	1205 17E 407	\$205 125 407	\$306 43E 407	\$205 43E 487	\$100 11E 407	FINE 11E 407	\$306 19E 407	\$306 17E 407	\$206 125 487	\$305 13E 497	\$106 11E 407	\$106 115 487	\$206 136 497	\$206 135 487	\$105 175 497	SE 204 202 445
Pought Desmants			\$306,135,497	\$306,135,437	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,49/	\$306,135,437	\$7 812 224	\$7 812 221	\$7 813 334	\$7 812 221	\$7 912 221	\$7 \$12 221	\$7 812 221	\$7 812 221	\$7 812 221	\$7 812 221	\$132 807 932
Dessection (2014 destring belows)			37,012,231	\$7,012,231	37,012,231	\$7,012,231	\$7,012,231	\$7,012,231	37,012,231	37,012,231	\$7,012,231 63,675 317	50 140 254	40 112 202	22 089 762	25 671 910	20 537 449	16 429 959	12 142 067	10 515 172	1 835 800 307
Total Cash			5/3,5/4,000	290,039,200	239,067,360	191,209,000	153,013,910	122,412,720	97,930,103	10,344,140	62,673,317	50,140,234	40,112,203	\$246 037 480	£330 610 E30	£334 49E 176	\$120 277 696	\$227 AB1 685	£324 462 804	\$7 162 830 695
Protest Cost			\$667,521,728	\$612,806,928	\$553,035,088	\$505,217,616	\$466,963,639	\$436,360,406	\$411,877,911	\$352,251,874	\$576,623,045	\$304,087,382	\$354,055,931	\$546,037,450	\$335,015,536	\$534,400,170	\$530,317,000	\$527,031,055 \$C02 733 AE8	8524,402,301	\$10,021,020,000
Pretax Carting Cook Flour			\$323,303,920	\$356,011,626	\$457,765,666	\$505,607,136	\$543,001,115	\$574,464,257	\$050,340,043	4010,002,073	4034,201,703		4030,104,823		4411,445,210		*****	+++++++++++++++++++++++++++++++++++++++		(
Depresiation (add back)			373 574 000	208 950 200	220 087 200	101 200 999	152 015 010	177 417 778	07 020 192	79 344 140	62 67E 217	E0 140 2E4	40 112 202	22 089 762	75 671 810	20 537 448	16 470 058	13 143 067	10 515 173	1 825 800 307
Preseduction (add back)	(EE 000)	(4.050.000)	373,574,000	230,053,200	239,007,300	191,209,000	155,015,910	122,412,120	97,930,103	70,344,140	02,073,317	50,140,254	40,112,203	52,003,702	23,071,010	20,337,440	10,423,330	13,145,507	10,515,175	(1 115 000)
Control Investment	(55,000)	(1,000,000)																		(1 867 870 000)
Sustaining Casilal	(000,000,000)	(1,217,870,000)			22 662 000	22 662 600	22 662 000	22 662 000	22 662 000	77 667 000	22 662 000	22.663.000	22 662 000	22 662 000	22 662 000	22 662 000	22 662 000	22 662 000	23 662 000	354 945 000
Working Capital	(30 000 000)	(64 000 000)			23,003,000	23,003,000	23,003,000	23,003,000	23,003,000	23,003,000	23,005,000	23,003,000	23,003,000	20,000,000	20,000,000	23,003,000	20,000,000	20,000,000	94,000,000	004,040,000
Bratay Nat Cash Elour	(50,000,000)	(64,000,000)	\$606 977 036	\$ COC 977 076	\$730 E40 036	\$730 E40 036	\$720 E40 026	\$730 E40 036	\$730 E40 036	\$720 540 026	\$720 E40 036	\$720 640 026	\$720 640 026	\$720 540 026	\$720 540 026	\$720 540 025	\$720 540 026	\$720 540 826	\$814 540 026	\$10 332 869 414
Pretax Gumulative Cash Flow	(\$680,055,000)	(\$1,282,930,000)	161 266 107 0741	15559 210 8491	\$151 309 077	\$971 949 102	\$1 592 199 129	\$2 312 929 153	\$1,011,469,179	\$3 754 009 204	\$4 474 549 230	\$5 195 089 255	\$5 915 629 281	\$6 636 169 306	\$7 356 709 332	\$8 077 249 357	\$8 797 789 383	\$9 518 329 408	\$10 332 869 434	410,002,003,404
Pretay Net Present Value of Project Cash El	[4000,000,000]	[41,002,000]	(41,200,101,314)	(2003,200,343)	\$101,000,077	3011,040,102	\$1,002,000,120	42,012,020,100	40,000,400,110	30,104,000,204	**,***,***,200	40,100,000,200		**,***,***,***		40,011 ja 10,001	40,101,100,000	40,010,000,000	410,000,000,000	
A 5% Discount Rate		86 157 AA3 641																		
@ 10% Discount Pate		\$2 704 204 610																		
@ 15% Discount Rate		\$2 364 502 249																		
Pretay DCE-BOR on Investment (%)		12 28																		1
interest of the state of the sument [W]		32,20																		1
Notes:	Assume that the re-	sidual value of asse	ts at end of 17 years	would equal closu	re costs														-	
	The magnesium re-	source is very large	and would support o	perations for +100	years at similar eco	nomics to those pre	sented in this 17 or	ersting year subset												
	Cost escalation sup	plied by Ment Cons	suitants for 2003 atro	one to 2006 attr four	nth: labour = 1.17, n	naterials = 1.57. Th	e percentage of lab	our in the capital an	d operating costs is	i 15%, materials rep	esent 35% (blende	d escalation = 1.51).								
	The largest impact	on the economics o	f the Project are the	electric power and	natural gas prices (-40% of operating o	osis). In this cash I	low the 2.2 billion in	Whisnnum of elech	ric power and the 20	3 million cubic metr	ersisnnum of natural	gas have been est	alated from the HA	TCH Feasibility by t	te 1.51 factor.				

COGBURN MAGNESIUM PROJ	ECT CASH F	LOWESTIM	IATE - 150,00	0 mt/y MAGN	ESIUM META	L/ALLOY PR	ODUCTION	(cost adjuste	ed from HAT	CH 2003 Feas	ibility Study									by: JAC
Warning: This cash llow contains	several forwar	d looking ass	amotions																	18-Feb-07
All Funds in US Dollars		a de la companya de la	1																	09:33:57 AM
	Magnesium Price:	4.50	US\$/pound																	
			1																	
																				1
YEAR:	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2022	2023	2024	TOTAL
Production																				
Emory Zone Ore @ 24.6% Mg (mt/y)			532,520	532,520	532,520	532,520	532,520	532,520	532,520	532,520	532,520	532,520	532,520	532,520	532,520	532,520	532,520	532,520	532,520	9,052,846
Magnesium Alloys (mt/y)			131,000	131,000	131,000	131,000	131,000	131,000	131,000	131,000	131,000	131,000	131,000	131,000	131,000	131,000	131,000	131,000	131,000	2,227,000
Revenue:																				
Magnesium Price (\$/kg)			9.92	9.92	9.92	9.92	9.92	9.92	9,92	9.92	9.92	9.92	9.92	9.92	9.92	9.92	9.92	9.92	9.92	
Magnesium Price (\$/lb)			4.50	4.50	4.50	4.50	4.50	4.50	4,50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	
Revenue (\$)			\$1,299,631,826	\$1,299,631,826	\$1,299,631,826	\$1,299,631,826	\$1,299,631,826	\$1,299,631,826	\$1,299,631,826	\$1,299,631,826	\$1,299,631,826	\$1,299,631,826	\$1,299,631,826	\$1,299,631,826	\$1,299,631,826	\$1,299,631,826	\$1,299,631,826	\$1,299,631,826	\$1,299,631,826	\$22,093,741,044
Revenue (\$/mt of ore processed)			\$2,441	\$2,441	\$2,441	\$2,441	\$2,441	\$2,441	\$2,441	\$2,441	\$2,441	\$2,441	\$2,441	\$2,441	\$2,441	\$2,441	\$2,441	\$2,441	\$2,441	\$2,441
Unit Costs (\$/kg metal produced):																				
Total Operating Cost (\$/kg metal produced	1		\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	\$2.34	2.337
Total Operating Cost (\$/ib metal produced			\$1.060	\$1.060	\$1,060	\$1.060	\$1.060	\$1.060	\$1,060	\$1,060	\$1.060	\$1.060	\$1.060	\$1.060	\$1.060	\$1.060	\$1.060	\$1.060	\$1.060	\$1.060
Costs:																				
Total Operating Cost			\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$306,135,497	\$5,204,303,446
Royalty Payments			\$10,700,302	\$10,700,302	\$10,700,302	\$10,700,302	\$10,700,302	\$10,700,302	\$10,700,302	\$10,700,302	\$10,700,302	\$10,700,302	\$10,700,302	\$10,700,302	\$10,700,302	\$10,700,302	\$10,700,302	\$10,700,302	\$10,700,302	\$181,905,135
Depreciation (20% declining balance)			373,574,000	298,859,200	239,087,360	191,269,888	153,015,910	122,412,728	97,930,183	78,344,146	62,675,317	50,140,254	40,112,203	32,089,762	25,671,810	20,537,448	16,429,958	13,143,967	10,515,173	1,825,809,307
Total Cost			\$690,409,799	\$615,694,999	\$555,923,159	\$508,105,687	\$469,851,709	\$439,248,527	\$414,765,982	\$395,179,945	\$379,511,116	\$366,976,052	\$356,948,002	\$348,925,561	\$342,507,609	\$337,373,247	\$333,265,757	\$329,979,765	\$327,350,972	\$7,212,017,887
Pretax Earnings			\$609,222,027	\$683,936,827	\$743,708,667	\$791,526,139	\$829,780,117	\$860,383,299	\$884,865,845	\$904,451,881	\$920,120,710	\$932,655,774	\$942,683,824	\$950,706,265	\$957,124,217	\$962,258,579	\$966,366,069	\$969,652,061	\$972,280,854	\$14,881,723,156
Pretax Operating Cash Flow:																				
Depreciation (add back)			373,574,000	298,859,200	239,087,360	191,269,888	153,015,910	122,412,728	97,930,183	78,344,146	62,675,317	50,140,254	40,112,203	32,089,762	25,671,810	20,537,448	16,429,958	13,143,967	10,515,173	1,825,809,307
Preproduction Royalty	(55,000)	(1,060,000))																	(1,115,000)
Capital Investment	(650,000,000)	(1,217,870,000))																	(1,867,870,000)
Sustaining Capital					23,663,000	23,663,000	23,663,000	23,663,000	23,663,000	23,663,000	23,663,000	23,663,000	23,663,000	23,663,000	23,663,000	23,663,000	23,663,000	23,663,000	23,663,000	354,945,000
Working Capital	(30,000,000)	(64,000,000)	24																94,000,000	•
Pretax Net Cash Flow	(\$680,055,000)	(\$1,282,930,000)	\$982,796,027	\$982,796,027	\$1,006,459,027	\$1,006,459,027	\$1,006,459,027	\$1,006,459,027	\$1,006,459,027	\$1,006,459,027	\$1,006,459,027	\$1,006,459,027	\$1,006,459,027	\$1,006,459,027	\$1,006,459,027	\$1,006,459,027	\$1,006,459,027	\$1,006,459,027	\$1,100,459,027	\$15,193,492,463
Pretax Cumulative Cash Flow	(\$680,055,000)	(\$1,962,985,000)) (\$980,188,973)	\$2,607,054	\$1,009,066,082	\$2,015,525,109	\$3,021,984,136	\$4,028,443,163	\$5,034,902,191	\$6,041,361,218	\$7,047,820,245	\$8,054,279,272	\$9,060,738,300	\$10,067,197,327	\$11,073,656,354	\$12,080,115,381	\$13,086,574,409	\$14,093,033,436	\$15,193,492,463	
Pretax Net Present Value of Project Cash Flo	w:																			
C 5% Discount Rate		\$9,380,913,408																		
@ 10% Discount Rate		\$6,087,909,125																		
@ 15% Discount Rate		\$4,093,500,415																		
Pretax DCF-ROR on Investment (%)		43,88	B																	
		L.,,,,,	1	l																
Notes:	Assume that the re	sidual value of assi	ets at end of 17 year	rs would equal closur	re costs			L	+											
	The magnesium re	source is very large	e and would support	operations for +100	years at similar eco	nomics to those pre-	serned in this 17 or	sersung vear subse	£											
	Cost escalation su	optied by Merit Con	suitants for 2003 qb	one to 2008 gtt four	th: labour = 1.17, n	natenals = 1.5?. The	e percentage of bit	our in the capital at	na operating costs i	15%, materials rep	resent oo% (blende	α escalation = 1.51)				1.01.1				
	The largest impact	on the economics i	of the Project are the	electric power and	natural gas prices (-40% of operating o	ostaj, in this cash	now the 2.2 billion i	wehrannum of elect	no power and the 20	a mation cubic mete	resignment of requiral	gas nave been est	aning from the HA	ICH Feasibility by t	the 1.5 factor.				