

## SPEC BUY

Current Price \$0.08  
Valuation \$0.12

Price: **\$0.08**  
Valuation: **\$0.12**

Code: **BDC**  
Sector: **Metals and Mining**

\* All figures in AUD unless stated otherwise

Shares on Issue (M): **1,735**  
Market Cap (\$M): **135**  
Net cash (\$M Mar 21) **18**  
Enterprise value (\$M): **123**

52 wk High/Low (ps): **\$0.10** **\$0.07**  
12m av. daily vol. (Mshs): **3.58**

### Key Metrics

	FY23e	FY24e	FY25e
P/E (x)	15.2	2.3	2.6
EV/EBITDA (x)	3.7	1.0	1.0

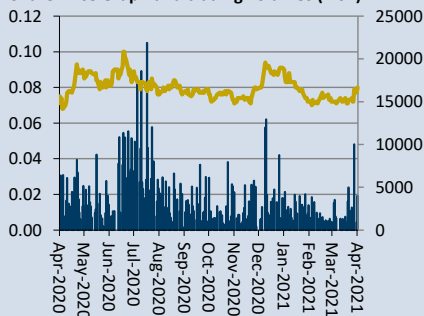
### Financials:

	FY23e	FY24e	FY25e
Revenue (\$M)	79	286	275
EBIT (\$M)	25	91	78
NPAT (A\$M)	9	60	52
Net assets (\$M)	146	189	281
Op CF (\$M)	20	93	91

### Per share data:

	FY23e	FY24e	FY25e
EPS (c)	0.5	3.5	3.0
Dividend (cps)	0.0	0.0	0.0
Yield (%)	-	-	-
CF/Share (cps)	1.2	5.3	5.2
Prod (koz Au)	33.9	122.4	117.8

### Share Price Graph and trading volumes (msh)



Please refer to important disclosures at end of the report (from page 11)

Friday, 7 May 2021

## Bardoc Gold (BDC)

### WA Gold Developer Bellwether

Analyst | Royce Haese

### Quick Read

Bardoc, with a large and prospective land holding, and a strong team with a background in developing and operating mines within the Kalgoorlie district, will be amongst the next wave of mid-tier gold producers. An increased mining inventory to draw upon is a matter of more drilling as its namesake project advances towards planned first gold in the December quarter 2022. Given a backdrop of increasing costs in WA, we present a development scenario with higher assumed capex and opex than the DFS. Despite this conservatism, our valuation is at a 50% premium to the current price and has risk to the upside. We assign a speculative buy recommendation and a valuation of \$0.12 per share.

### WA Gold Developer Bellwether

**Company Background:** Bardoc Gold was born from the merger between Spitfire Materials and Excelsior Gold in October 2018. This merger saw the consolidation of approximately 200 km<sup>2</sup> of land holdings to the north of Kalgoorlie along the Bardoc Tectonic Zone. In the past these fragmented projects relied upon toll treatment arrangements for gold production. Following some further minor land consolidation Bardoc believes it has achieved the economy of scale that warrants a standalone operation. The company presented a DFS in late March 2021. Bardoc aims to commence construction Q3 2021 with first gold expected Q4 2022.

**Rising Costs:** Bardoc's foray into mining comes at an interesting time in the industry, with inflationary pressure being seen in both commodity prices and mining inputs. The labour market is increasingly tight, and overall, the cost of inputs in construction are rising. We see Bardoc as a bellwether for WA gold developers. Delays, reduced production, and associated rising costs have been noted amongst producers in the March 2021 quarterly results. With tight labour markets impacting production of established producers there is a risk that Bardoc, as a new player, may feel these effects disproportionately.

**Argonaut's mining scenario and valuation:** However, after factoring in higher capital and operating costs than those used by Bardoc in its DFS to reflect cost pressure, we see significant value in the Bardoc gold project. Assuming a nine-year mine life with an average AISC of \$1230/oz, we estimate the Bardoc Gold project to have an NPV<sub>7</sub> of \$209M with significant exploration upside. There is additional upside if development costs are more in line with Bardoc's DFS numbers.

### Recommendation

We assign a speculative buy recommendation and a valuation of \$0.12 per share.

**Bardoc Gold****Equities Research**

Analyst: Royce Haese

**Recommendation** Speculative Buy  
**Current Price** \$0.08  
**Valuation** \$0.12

**Sector** Metals & Mining  
**Issued Capital (Mshs)** 1,735  
**Market Cap (M)** \$134  
**Friday, 7 May 2021**

Profit & loss (\$M) 30 June	2021E	2022E	2023E	2024E
Sales Revenue	0	0	79	286
+ Other income/forwards	0	0	0	0
- Operating costs	0	0	-38	-148
- Royalties	0	0	-2	-7
- Corporate & administration	-6	-6	-6	-6
<b>Total Costs</b>	<b>-6</b>	<b>-6</b>	<b>-46</b>	<b>-161</b>
<b>EBITDA</b>	<b>-6</b>	<b>-6</b>	<b>33</b>	<b>124</b>
- margin	0%	0%	42%	44%
- D&A	0	0	-9	-34
<b>EBIT</b>	<b>-6</b>	<b>-6</b>	<b>25</b>	<b>91</b>
+ Finance Income/Expense	0	-5	-9	-8
<b>PBT</b>	<b>-6</b>	<b>-11</b>	<b>15</b>	<b>82</b>
- Tax expense	0	0	-5	-25
- Impairments and other				
<b>NPAT</b>	<b>-6</b>	<b>-11</b>	<b>9</b>	<b>60</b>

Cash flow (\$M)	2021E	2022E	2023E	2024E
+ Revenue	0	0	79	286
- Cash costs	-6	-6	-46	-161
- Forwards	0	0	0	0
- Tax payments	0	0	-4	-24
+ Interest & other	0	-5	-9	-8
<b>Operating activities</b>	<b>-6</b>	<b>-11</b>	<b>20</b>	<b>93</b>
- Property, plant, mine devel.	0	-203	-4	-34
- Exploration	-2	-2	-2	-2
- Deferred Consideration	0	0	0	0
<b>Investment activities</b>	<b>-2</b>	<b>-205</b>	<b>-6</b>	<b>-36</b>
+ Borrowings	0	132	0	-40
- Dividends	0	0	0	0
+ Equity	0	88	0	0
<b>Financing activities</b>	<b>0</b>	<b>220</b>	<b>0</b>	<b>-40</b>
<b>Cash change</b>	<b>-8</b>	<b>4</b>	<b>14</b>	<b>16</b>

Balance sheet	2021E	2022E	2023E	2024E
<b>Cash &amp; bullion</b>	<b>16</b>	<b>20</b>	<b>34</b>	<b>50</b>
Other Current Assets	0	0	0	0
<b>Total current assets</b>	<b>16</b>	<b>20</b>	<b>34</b>	<b>50</b>
Property, plant & equip.	2	207	222	240
Investments/other	0	0	0	0
<b>Total non-curr. assets</b>	<b>2</b>	<b>207</b>	<b>222</b>	<b>240</b>
<b>Total assets</b>	<b>18</b>	<b>227</b>	<b>256</b>	<b>290</b>
Trade payables	1	39	6	13
Short term borrowings	0	0	40	40
Other	1	26	12	37
<b>Total curr. liabilities</b>	<b>2</b>	<b>65</b>	<b>18</b>	<b>49</b>
Long term borrowings	0	132	92	52
Other	0	0	0	0
<b>Total non-curr. liabil.</b>	<b>0</b>	<b>132</b>	<b>92</b>	<b>52</b>
<b>Total liabilities</b>	<b>2</b>	<b>197</b>	<b>110</b>	<b>101</b>
<b>Net assets</b>	<b>16</b>	<b>31</b>	<b>146</b>	<b>189</b>

Shares	2021E	2022E	2023E	2024E
New shs issued/exerciseable	0	1224	24	3
Average issue price	0.00	0.07	0.00	0.00
Ordinary shares - end	1735	2959	2984	2986
Diluted shares - end	1735	2959	0	0

Financial ratios		2023E	2024E	2025E	2026E
GCFPS	AC	1.2	5.3	5.2	2.8
CFR	X	6.6	1.4	1.5	2.8
EPS	AC	0.5	3.5	3.0	0.5
PER	X	15.0	2.2	2.6	14.6
DPS	AC	0.0	0.0	0.0	0.0
Yield	%	0.0%	0.0%	0.0%	0.0%
Interest cover	x	2.7	11.1	14.4	4.6
ROCE	%	11%	38%	32%	5%
ROE	%	11%	44%	26%	3%
Gearing	%	63%	28%	4%	0%

Operations summary	2023E	2024E	2025E	2026E
<b>Bardoc Project</b>				
Ore processed (Mt)	0.6	2.1	2.1	2.1
Head grade (g/t)	0.00	1.46	1.87	1.35
Met. recovery	0.93	0.93	0.93	0.92
Gold prodn (koz)	34	122	118	85
Cost per milled tonne (A\$/t)	60	70	68	59
Cash costs pre royalty (A\$/oz)	1177	1269	1274	1508
Sustaining capital (\$M)	1	3	3	3
All in sustaining costs (A\$/oz)	1218	1292	1312	1583
Growth capital (\$M)	24	51	39	53
CAIC (A\$/oz)	1923	1874	1654	1891

Price assumptions	2023E	2024E	2025E	2026E
AUDUSD	0.75	0.75	0.75	0.75
Gold	1750	1750	1750	1750

Valuation summary	A\$M	A\$/sh
Bardoc project 7% real after tax DR	209	0.12
Exploration	63	0.04
Corporate overheads	-56	-0.03
Cash and bullion	18	0.01
Debt	0	0.00
Tax benefit	35	0.02
Hedging	0	0.00
Option/equity dilution	-65	-0.04
<b>NAV</b>	<b>203</b>	<b>0.12</b>

Directors, management	
Tony Leibowitz	Director, Non-Executive Chairman
Robert Ryan	Chief Executive Officer
John Young	Non-Executive Director
Rowan Johnston	Non-Executive Director
Neil Biddle	Non-Executive Director
Peter Buttigieg	Non-Executive Director

Top shareholders	M shs	%
Peter Buttigieg	78.0	4.5
FIL Investment Management (Singapore)	53.3	3.1
Neil Biddle	38.3	2.2

Resources Mar '21	Mt	g/t Au	Kozs	Mkt cap/oz
<b>Bardoc Gold Project</b>	<b>54.6</b>	<b>1.80</b>	<b>3,073</b>	<b>43</b>
Measured & indicated	36.5	1.70	2,055	
Inferred	18.1	1.80	1,018	

Bardoc Mining Inventory Mar '21	Mt	g/t Au	Kozs	
<b>TOTAL INVENTORY</b>	<b>17.6</b>	<b>2.02</b>	<b>1,149</b>	<b>116</b>
Underground	4.8	3.58	556	
Open Pits	12.8	1.44	593	

## Bardoc: WA Gold Developer Bellwether

**Bardoc Gold was born from the merger between Spitfire Materials and Excelsior gold in 2018, consolidating ~200 km<sup>2</sup> of land north of Kalgoorlie**

**Historically these projects have relied upon toll treatment arrangements for gold production, Bardoc now has the economy of scale to warrant a standalone operation**

**The structure hosting mineralisation on Bardoc's ground is responsible for the gold endowment at the KCGM's Golden Mile**

### Company Background

Bardoc Gold was born from the merger between Spitfire Materials and Excelsior Gold in October 2018. This merger saw the consolidation of approximately 200 km<sup>2</sup> of land holdings to the north of Kalgoorlie along the Bardoc Tectonic Zone. Having previously merged with Aphrodite Gold in 2017, Spitfire controlled the northern half of the tenement package, with the Aphrodite deposit as the centrepiece. Excelsior controlled the southern portion, including the Excelsior, Zoroastrian and Bulletin deposits. At the time of the merger the Bardoc Gold Project had a combined Mineral Resource estimate of 2.1Moz Au.

The merger of Spitfire and Excelsior brought together current Non-Executive Directors; John Young, Neil Biddle and Peter Buttigieg from Spitfire, and Rowan Johnston from Excelsior. In March 2019 Tony Leibowitz was appointed Non-Executive Chairman and Robert Ryan was appointed Chief Executive Officer. Bradley Toms, the Exploration Manager, previously worked with Excelsior. More recently, as the company moves towards development, further key management appointments have been made:

- Helen Chernoff as Environmental and Stakeholder Manager, August 2020
- Andrew Francis as Study Manager November 2019, Chief Operating Officer, October 2020
- Mark Roberts as Project Manager, October 2020
- Oliver Mortensen as Chief Financial Officer, March 2021

In the past these fragmented projects relied upon toll treatment arrangements for gold production, but as a merged entity Bardoc believes it has achieved the economy of scale that warrants a standalone operation. Since the merger, Bardoc has continued to grow both organically and inorganically, with acquisitions adding incrementally to its landholding, and Resource extensional drilling adding to inventory. The Company has also completed a number of studies culminating in a DFS presented in late March 2021. Bardoc aims to commence construction Q3 2021 with first gold expected Q4 2022.

### Geology, Mineralisation and Exploration Potential

Bardoc's land holding is centred on 40 km's of strike along the Bardoc Tectonic Zone (BTZ). The BTZ extends over approximately 125 km of strike, hosting Paddington to the South and Ghost Rocks to the North. The BTZ is contiguous with the Boulder-Lefroy Shear Zone to the south. The Boulder-Lefroy Shear Zone is a crustal scale structure responsible for mineralisation at Goldfields' St Ives mining Camp, and Northern Star Resources' New Celebration and KCGM mines. On Bardoc's ground the BTZ converges with the Black Flag Fault, which is one interpretation as to why there is increased gold endowment at this section of the BTZ.

Mineralisation is hosted within shear-zones and stockwork vein sets within greenstones, as is typical of most Eastern Goldfields deposits. Most deposits are expected to be free-milling, with Aphrodite fresh-ore being the exception.

Bardoc has a Mineral Resource estimate of 3.1Moz Au @ 1.8 g/t Au, of which 2.1Moz is classified as Measured and Indicated. The 3.1Moz Au is spread across 16 individual deposits. Bardoc has a declared Reserve Estimate of 1.0Moz Au. In its recent DFS Bardoc assume mining of 1.15Moz from five deposits (seven open pits, two underground mines).

Table 1: Bardoc Resource estimate, as at DFS, 29/03/2021

Resources	Measured + Indicated			Inferred			Total		
	kt	g/t	kozs	kt	g/t	kozs	kt	g/t	kozs
Aphrodite OP	13,458	1.5	666	5,321	1.3	229	18,780	1.5	895
Aphrodite UG	4,156	3.7	497	2,571	3.3	271	6,726	3.6	768
Aphrodite Total	17,614	2.1	1,163	7,892	2.0	500	25,506	2.0	1,663
Zoroastrian OP	3,987	1.8	231	1,918	1.5	90	5,904	1.7	321
Zoroastrian UG	800	4.7	120	812	3.4	90	1,612	4.0	209
Zoroastrian Total	4,787	2.3	351	2,730	2.0	180	7,516	2.2	530
Excelsior	9,645	1.0	313	1,685	0.8	41	11,330	1.0	354
Mayday North	1,303	1.6	66	431	1.2	17	1,778	1.5	83
Talbot North	698	1.8	40	123	1.8	7	820	1.8	47
Bulletin South	546	2.1	36	150	2.1	10	849	2.1	57
Duke North	851	1.0	28	795	1.0	25	1,646	1.0	53
Lochinvar	423	1.8	24	57	1.6	3	480	1.7	27
El Dorado	203	1.4	9	434	2.1	29	637	1.9	39
North Kanowna Star	157	1.6	8	559	1.3	24	716	1.4	32
South Castlereagh	111	1.6	6	369	1.3	15	481	1.4	21
Mulwarrie				881	2.8	79	881	2.8	79
Nerrin Nerrin				651	1.3	26	651	1.3	26
Vetersburg South				552	1.5	26	552	1.5	26
Windanya				360	1.5	17	360	1.5	17
Grafters				319	1.3	14	319	1.3	14
Ophir				75	1.9	5	75	1.9	5
<b>Total Resources</b>	<b>36,490</b>	<b>1.7</b>	<b>2,055</b>	<b>18,063</b>	<b>1.8</b>	<b>1018</b>	<b>54,597</b>	<b>1.8</b>	<b>3,073</b>

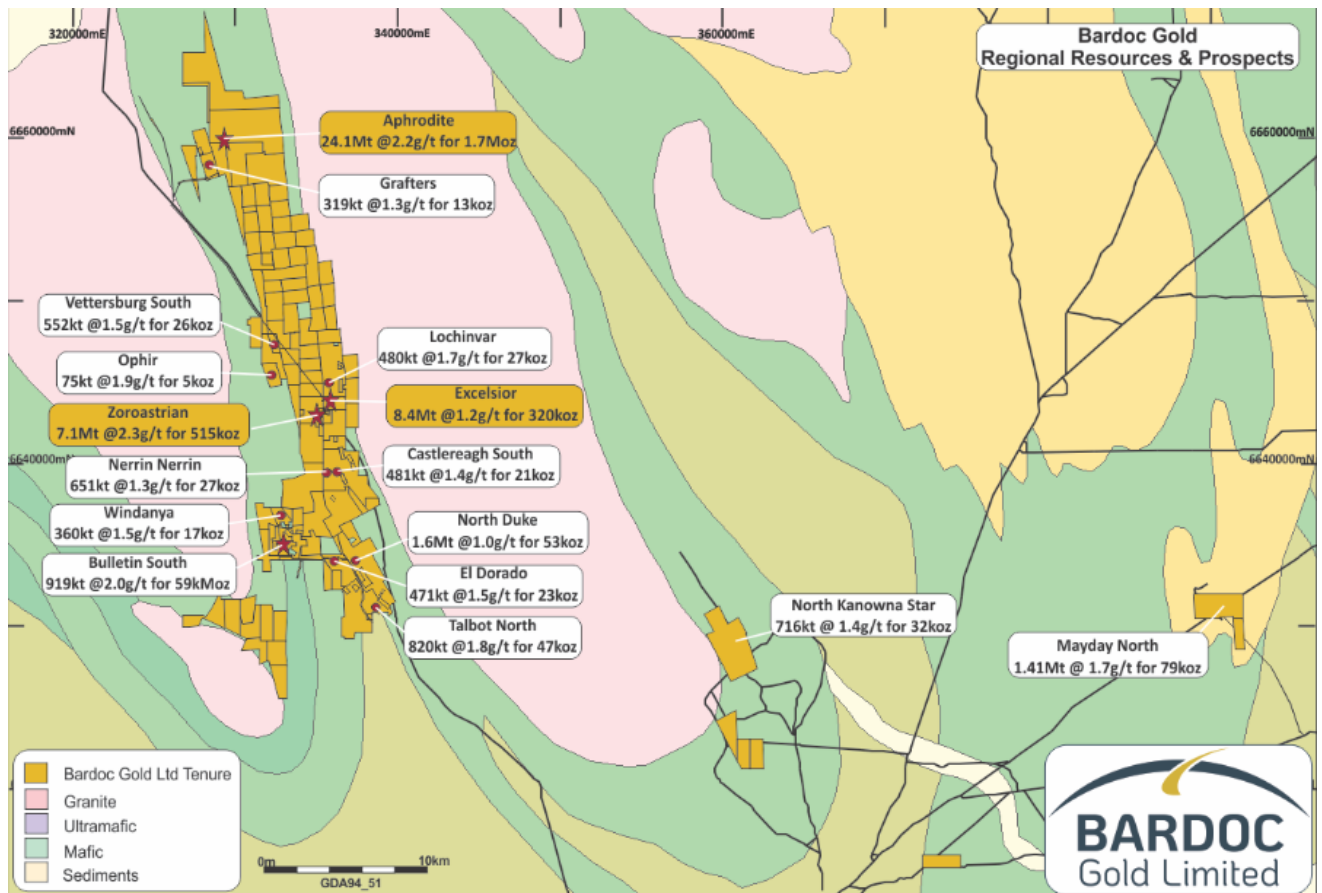
Source: BDC

Table 2: Bardoc Reserve estimate, as at DFS, 29/03/2021

Reserves	Proved			Probable			Total		
	kt	g/t	kozs	kt	g/t	kozs	kt	g/t	kozs
Excelsior OP				5,690	1.11	203	5,690	1.1	203
Zoroastrian North OP				365	2.10	25	365	2.1	25
Zoroastrian Central OP				276	1.78	16	276	1.8	16
Zoroastrian South OP				417	1.80	24	417	1.8	24
Bulletin South OP				561	1.95	35	561	2.0	35
Aphrodite Stage 1 OP				1,050	1.82	61	1,050	1.8	61
Aphrodite Stage 2 OP				2,916	1.80	169	2,916	1.8	169
Mayday OP				622	1.62	32	622	1.6	32
Zoroastrian UG				839	3.63	98	839	3.6	98
Aphrodite UG				3,139	3.41	344	3,139	3.4	344
<b>Total Reserves</b>				<b>15,874</b>	<b>2.0</b>	<b>1,007</b>	<b>15,874</b>	<b>2.0</b>	<b>1,007</b>

Source: BDC

Figure 1: Map of BDC's Tenements and Resources.



Source: BDC

**We see significant exploration upside for Bardoc...**

**... both through the addition of satellite deposits to the mine plan from the Company's large Resource base...**

**...and through extensions to underground mine lives**

We see significant exploration upside for Bardoc on two fronts; Resource conversion and extensions of regional prospects bringing further pits into the mine plan, and depth extensions of the underground projects.

Over the past two years the primary focus of Bardoc has been to shore up the Resource base leading towards the DFS. With this work now mostly completed, future exploration will be aimed at additional ounces. Over the current planned life-of-mine it is likely that existing smaller resources are expanded and consolidated, and further discoveries made.

In the DFS Zoroastrian UG is planned to be mined over a period of three years, and Aphrodite UG over a period of five. Once Bardoc has commenced mining these deposits it is more likely than not that additional inventory will be added beneath the current mine plan. On estimated costings UG ounces are notably higher margin, so it follows that these additional higher-margin ounces, if added, would improve project economics.

**Directors and Management**

**Tony Leibowitz - Director, Non-Executive Chairman**

Fellow of the Institute of Chartered Accountants. Previously Chairman of Pilbara Minerals from 2013 until 2016. At Pilbara with John Young and Neil Biddle, oversaw the growth of the Company from junior explorer to emerging developer at Pilgangoora. Was also previously Chairman at Chandler Macleod, and partner at PricewaterhouseCoopers.



**Robert Ryan – Chief Executive Officer**

WASM Mining Engineer. Extensive operational and management experience around the Kalgoorlie goldfields. Previously General Manager at Paddington Operations for Norton Gold Fields, Underground Manager for Barrick at Kanowna Belle and Kundana, Open Pit Superintendent at Kundana.

**John Young - Non-Executive Director**

Geologist. Previously Chief Executive Officer of Marenica Energy and Chief Executive Officer of Thor Mining. Also, previously Exploration Manager/Technical Director/Non-Executive Director at Pilbara Minerals

**Rowan Johnston - Non-Executive Director**

WASM Mining Engineer. Also, Non-Executive Director of Gascoyne Resources since August 2020. Previously Managing Director of Excelsior Gold and acting Chief Executive Officer of Mutiny Gold prior to its takeover by Doray.

**Neil Biddle - Non-Executive Director**

Geologist. founding Director of Pilbara Minerals and Executive Director from May 2013 to August 2016

**Peter Buttigieg - Non-Executive Director**

IT professional. Founder and Managing Director of RMS (Aust.), a business that designs IT systems for global industries. Previously Non-Executive Chairman of Aphrodite Gold and Spitfire Minerals

**Andrew Francis – Chief Operating Officer**

WASM Mining Engineer. Previously in technical and management roles with Northern Star Resources, Barrick and Byrnescut. Has been involved with several underground and open pit project start-ups and studies.

*Table 3: Bardoc board and management holdings*

	Position	Opts	Perf. rights	Shares	Exposure	%
		M	M	M	M	
Tony Leibowitz	Director		1.0	21.2	22.2	1.2%
Robert Ryan	CEO		9.0	5.2	14.2	0.8%
John Young	NED		2.0	35.4	37.4	2.1%
Rowan Johnston	NED		4.0	5.2	9.2	0.5%
Neil Biddle	NED		2.0	38.3	40.3	2.3%
Peter Buttigieg	NED		2.5	78.0	80.5	4.5%
<b>Total</b>		<b>0.0</b>	<b>20.5</b>	<b>183.3</b>	<b>203.8</b>	<b>11.4%</b>

Source: BDC

**Bardoc has an experienced management team with a track record of building and operating mines in and around Kalgoorlie**

Bardoc has an experienced management team with a track record in and around Kalgoorlie. Both Robert Ryan and Andrew Francis have previously worked on large scale projects in Kalgoorlie involving production from multiple ore-sources, from study stage through to development. This skill set matches well with Bardoc's near-term requirements.

**Bardoc's project development comes at a time of rising costs in the mining industry**

**Rising Costs of Business?**

Bardoc's foray into mining comes at an interesting time in the industry. The labour market is increasingly tight, and overall, the cost of inputs in construction are rising. We see Bardoc as a bellwether for WA gold developers. The planned construction is one of the larger, first builds for a developer in the near future. The planned Stage 1, 2.1Mtpa processing facility is by no means ground-breaking in size nor concept, however with construction ~6 months away, and EPC contracts not locked in, we see considerable risk in cost increases and build delays.

**Gold producers are reporting production impacts due to labour shortages, it is possible that Bardoc may feel these effects disproportionately**

Delays, reduced production, and associated rising costs have been noted amongst producers in the March 2021 quarterly results. Silver Lake and Ora Banda Mining both referenced tight labour markets as factors resulting in lower than expected production during the March quarter, with Ora Banda reporting that at quarter end the Company's open-pit mining crew was at 75% of the budgeted numbers. With labour shortages impacting more established miners it is likely Bardoc will feel the effects disproportionately.

During the construction phase the large number of workers required on site will mean that impact of increased labour costs will be at its highest during this crucial early phase of the project. That's assuming ability to fill all roles. It is likely these costs will be factored into EPC contracts which will ensure they are able to be considered at the financing stage, however costs will likely be higher than those estimated in Bardoc's DFS. Mining services companies are reporting strong growth outlooks and say that whilst labour shortages are an issue for them, most increased costs will be passed onto the client.

Bardoc will also be impacted by the double-edged sword that is the proximity to Kalgoorlie. Kalgoorlie has seven-year low residential rental vacancy rates, and there is intense competition for local white-collar and blue-collar workers amongst the miners. Bardoc has stated that it will aim for a residential workforce, and to achieve this Bardoc will have to compete with established miners; Northern Star Resources, Evolution, Norton Gold Fields, Goldfields St Ives and Silver Lake. The Company's strong local roots and industry connections will help with this to some degree.

**More clarity on any potential impacts to Bardoc's construction will become clear as the Company moves towards construction**

As Bardoc progresses through the financing and construction phase, updates regarding any changes to cost estimates will be released. Bardoc are negotiating contracts during a time of known labour tightness. Other prospective developers/producers will be watching closely.

*Figure 2: BDC's planned development timeline.*

	2021				2022			
	March Q1	June Q2	September Q3	December Q4	March Q1	June Q2	September Q3	December Q4
<b>DEFINITIVE FEASIBILITY STUDY</b>								
Final Report	✓							
<b>ENVIRONMENTAL PERMITTING</b>								
Clearing Permits	✓							
Mining Proposal Submitted		★						
EPA Self- Assessment			★					
<b>FINANCING</b>								
Lender Engagement								
Due Diligence								
Credit Approval			★					
<b>CONSTRUCTION &amp; MINING</b>								
Road & Rail Realignment								
Site Infrastructure Construction			★					
Open Pit Mining Commencement				★				
Processing Construction				★				
Project Commissioning								★
Gold Production								★

Source: BDC

**Argonaut has developed a mining scenario as a basis for valuation**

**We assume construction of a 2.1Mtpa CIL mill plus associated infrastructure to cost \$154M**

**We assume a treatment cost of \$18/t of CIL ore, slightly higher than Bardoc's estimate. And \$21/t for Aphrodite ore. Gold recovery of 93% for CIL and 90% for flotation**

**We assume 1.1Moz of gold production**

**Our estimated LOM AISC is \$1230/oz, slightly higher than BDC's DFS estimate**

**We value the Bardoc Gold project at \$209M, or 12cps**

**Argonaut's Mining Scenario and Valuation**

Argonaut has developed a mining scenario as a basis for valuation. Overall, most assumptions were in-line with those presented in Bardoc's DFS. The main difference being our capital expenditure estimates.

The construction of a 2.1Mtpa CIL mill plus associated infrastructure has been estimated by Argonaut to cost \$154M. This represents an increase of 15% when compared to Bardoc's DFS estimate. We anticipate that the cost of inputs and labour will be higher than estimated by Bardoc. We have also estimated an additional \$49M for open pit mining infrastructure, this includes re-alignment of the Goldfields Highway and rail to enable mining of Excelsior. This represents an increase of 15% when compared to Bardoc's DFS. This brings our total estimated pre-production capex to \$203M.

We estimate construction of the stage 2 circuit to cost \$26M, which will allow Bardoc to process Aphrodite's refractory ore and produce a concentrate. We also estimate another \$75M of capital expenditure across LOM for plant improvements and equipment replacement.

For processing we assume a treatment cost of \$18/t of ore, slightly higher than Bardoc's estimated \$15/t. We have also factored in associated costs of producing and shipping a concentrate from Aphrodite ore. Including these costs bring our estimated processing cost across LOM up to \$21/t. We estimate gold recovery of 93% for CIL and 90% for flotation ore (recovery to concentrate \* payability). Our CIL recovery is slightly conservative when compared to Bardoc's estimates.

For the purpose of the current mining scenario Argonaut has assumed a similar mining inventory and production schedule to that presented by Bardoc in its DFS. We assume Underground production of 4.8Mt @ 3.6 g/t Au for 556koz, and open pit production of 12.8Mt @ 1.4 g/t Au for 593koz. With 456koz sold as dore and 596koz sold as concentrate. We assume a nine-year mine life with first gold in the March quarter 2023.

Our estimated LOM AISC is \$1230/oz, \$1032/oz for underground ore and \$1413 for open pit ore, again, this is slightly higher than Bardoc's DFS estimates.

A \$132M debt facility and \$88M equity raise at \$0.07 subscription price have been used to fund pre-production capital in our model. This results in equity dilution in present value terms of \$65M (inclusive of dilution from options).

Argonaut has used internal gold price estimates which average to US\$1750 across the life of the project, and an AUD to USD currency conversion rate of \$0.75.

Using a 7% real after-tax discount rate we value the Bardoc Project at \$209M, or \$0.12 per share.

We have also assigned a nominal exploration valuation equal to 20% of the Bardoc Gold Project's current valuation, or \$63M. Bardoc has a large resource base currently not included in the mine plan, and relatively short planned underground mine lives at



**We have assigned a nominal exploration valuation of the project of \$63M. Risk to the upside here.**

**As a sum of parts we value Bardoc at \$203M, or 12cps**

**Our valuation is sensitive to gold price, 10% reduction in USD gold price reduces the project NPV by 39%, a 10% increase in USD gold price increases the project NPV by 72%**

**If we assume capital expenditure in-line with BDC's DFS estimate our project NPV increases 13% to \$237M**

**It is likely that Bardoc will add value to the project through further exploration**

Zoroastrian and Aphrodite. These short planned lives would be an anomaly in the Kalgoorlie region. We expect mine lives at both Zoroastrian and Aphrodite to be greater than those outlined in Bardoc's DFS and will review our model as more information becomes available. Overall, risk to the upside for exploration.

As a sum of parts Argonaut values Bardoc at \$203M, or \$0.12 per share. This valuation includes Argonaut's mining scenario for the Bardoc project, plus a nominal exploration valuation, current cash and equivalents, and future tax benefit. Corporate overheads and equity dilution are also included.

*Table 4: Bardoc Valuation Summary*

Valuation summary	A\$M	A\$/sh
Bardoc project 7% real after tax DR	209	0.12
Exploration	63	0.04
Corporate overheads	-56	-0.03
Cash and bullion	18	0.01
Debt	0	0.00
Tax benefit	35	0.02
Hedging	0	0.00
Option/equity dilution	-65	-0.04
<b>NAV</b>	<b>203</b>	<b>0.12</b>

Source: Argonaut

#### Key risks to Valuation

Argonaut's valuation of the Bardoc project is highly sensitive to gold price. A 10% reduction in USD gold price reduces the project NPV by 39%. In reality, a reduction in gold price this great would likely be buffered by a reduction in labour and equipment costs that would see both capex and opex decrease. Conversely, a 10% increase in USD gold price would see project NPV increase by 72%.

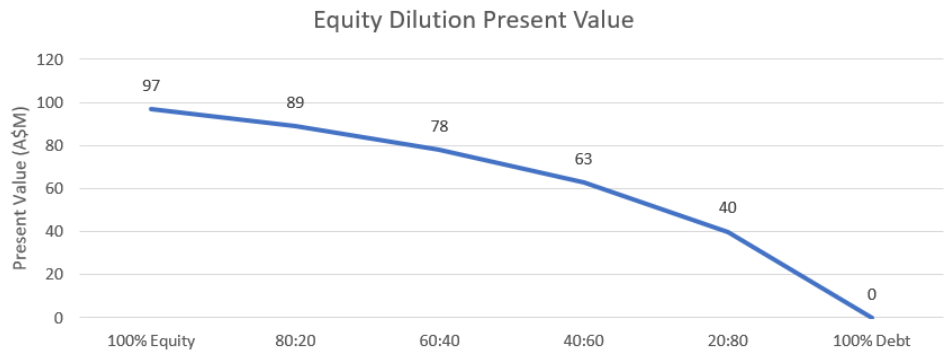
For the current valuation Argonaut utilised a conservative CIL processing recovery factor of 93%. If Bardoc were able to achieve recoveries of 95% this would result in the project NPV increasing by 6%. We have assumed gold recovery into concentrate of 95%, reducing this to 93% decreases the project NPV by 5%.

Argonaut has assumed total pre-production capital expenditure of \$203M, inclusive of plant and associated infrastructure construction, Goldfields highway and rail realignment, and other pre-mining capital. We have also assumed the processing facility Stage 2 construction to cost \$26M and a further \$75M of capex across LOM for plant replacement/improvement. Broadly this represents a 15% increase to Bardoc's DFS assumptions, which we believe is appropriate due to the current labour and construction market in WA. If we assume capex figures in-line with Bardoc's DFS our project NPV increases 13% to \$237M.

We have allocated a nominal exploration value to the project of 20% of the Bardoc projects NPV, or \$63M. The combined potential of additional satellite deposits and expanded underground mining at Aphrodite and Zoroastrian are positives for Bardoc. We see risk to the upside here.

To fund the pre-production capital expenditure Argonaut has assumed \$220M in capital required, funded by a 40:60 equity raise to debt split. If Bardoc were able to secure a higher proportion of debt funding NAV would improve.

Figure 3: Present Value of equity dilution under different finance structure scenarios.



Source: Argonaut

### Summary

As Bardoc advances its namesake project towards planned first gold December quarter 2022, key focus will be cost control amidst a backdrop of increasing labour costs and scarcity. Bardoc has a large and prospective land holding, and an increased mining inventory to draw upon is a matter of drilling. The Company has a strong team with a background in developing and operating mines within the Kalgoorlie district. Bardoc will be amongst the next wave of mid-tier gold producers. We present a development scenario with high assumed capex and opex when compared to BDC’s DFS. Despite this, valuation is a 50% premium to current price, with risk to the upside.

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