

CALIDUS RESOURCES LTD (CAI)

Calidus has exceeded to magic million

Last month, Calidus Resources Limited (CAI) published an updated resource for its Warrawoona Gold Project in the Pilbara region of WA. The resource has increased by an impressive 75% and stands at 21.2Mt @ 1.83g/t Au for 1.25Moz (indicated and inferred), up from the previous 712koz. Maiden resources for Klondyke Underground as well as the Coronation satellite deposit have been declared and complement the exiting, but increased Klondyke (now designated as open pit), Copenhagen and Fieldings Gully resources.

As expected, the overall grade has dropped below 2g/t but we are encouraged to see a high-grade, 0.8g/t cut off, component comprising 14.6Mt @ 2.4g/t Au for 1.1Moz contained wholly within Klondyke. We await to see if the higher-grade component optimises positively as it could avoid mining the satellite deposits (trucking), and the higher grades may bode well for costs.

Our model was anticipating this resource update and centred around a resource of 1Moz at 1.9g/t, so the update exceeds our expectation in terms of overall ounces; now 1.25Moz. However, we model a grade of 1.8g/t for a potential operation at Warrawoona and have lowered our conversion rate of resource to reserve to 50% given the simple optimisations undertaken by CAI at A\$2,000/oz and A\$2,500/oz depict pits to 100mRL (~200m below surface). We previously modelled 65%. The result on our model is net neutral as the resource has grown in overall ounces.

PFS commenced with GNG appointed

CAI is targeting a PFS for completion in the SepQ 2019 with a BFS to commence shortly after. It has appointed GR Engineering (GNG.asx) to undertake the PFS, which we expect to contemplate a standard CIL plant in the order of 1.5Mtpa throughput and pre-production capital of ~A\$120M.

Maintain Speculative Buy with a Price Target of 4.5cps

We maintain our Speculative Buy recommendation. The resource increase is positive for CAI and there is potential for substantial increases going forward; but the reduction in grade and our lower assumed conversion of resource to reserve has had a net neutral impact on our assumed mine inventory and therefore our valuation. However, the CAI share price has come off slightly, meaning our preliminary valuation has lowered to 5.3cps (from 6.1cps) and consequently, our 12-month price target is now 4.5cps (down from 4.8cps). As well as the PFS, CAI will commence an initial reconnaissance drilling program on regional targets to augment the Warrawoona resource in 2019. We look forward to news flow of potential new discoveries in the region.

Fig. 1: Warrawoona Resource

Resources	OLD			NEW			Diff Oz	
	Mt	g/t Au	Moz	Mt	g/t Au	Moz	Moz	%
Klondyke O/P	9.9	2.06	0.65	17.8	1.6	0.93	0.3	42%
Klondyke U/G	-	-	-	2.2	3.1	0.22	0.2	-
Copenhagen	0.2	6.12	0.04	0.3	4.1	0.04	0.003	8%
Coronation	-	-	-	0.5	2.2	0.03	0.03	-
Fieldings Gully	0.4	1.65	0.02	0.5	1.6	0.03	0.00	14%
Total- Resources	10.5	2.12	0.71	21.2	1.83	1.25	0.5	75%

Source: Hartleys' Research

4 Mar 2019

Share Price	\$0.024
Preliminary Valuation	\$0.053
Price Target (12 month)	\$0.045

Brief Business Description:
Single asset, WA gold explorer.

Hartleys Brief Investment Conclusion

Gold explorer focussed on the Warrawoona project near Marble Bar in WA. Targeting production of ~100kozpa in the next 18-24 months.

Chairman & MD

Mark Connelly (Non-Exec Chairman)
David Reeves (MD & CEO)

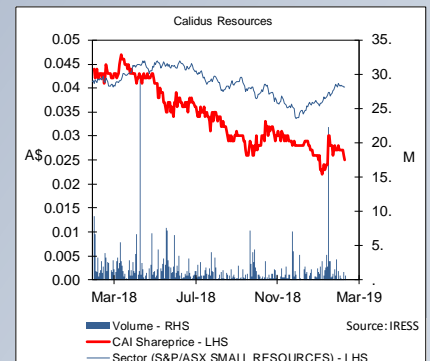
Top Shareholders

Keras Resources Plc	32.3%
Alkane Resources Limited	10.2%

Company Address

Suite 12, 11 Ventnor Ave
West Perth WA 6005

Issued Capital	1420.7m
- fully diluted	1961.1m
Market Cap	A\$34.1m
- fully diluted	A\$47.1m
Cash and Bullion (31 Dec 2018)	A\$3.9m
Debt (31 Dec 2018)	A\$0.0m
EV	A\$30.2m
EV/Resource oz	A\$24/oz
EV/Reserve oz	-
Resources (koz)	1,248
Reserves (koz)	-



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Resources Analyst
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Hartleys has a beneficial interest in 2 million escrow ed options in CAI. Hartleys has beneficial interest in 2.5 million escrow ed shares in CAI.

SUMMARY MODEL

Calidus Resources Limited CAI		Share Price \$0.024		4 March 2019 Speculative Buy	
Key Market Information					
Share Price					\$0.024
Market Capitalisation					\$34.1m
Net Cash (debt)					\$3.9m
Issued Capital - current					1420.7m
Issued Capital - diluted ITM options					1961.1m
Options					540.4m
Issued Capital - fully diluted all options					1961.1m
EV					
- current					\$30.2m
- diluted ITM					\$35.8m
- diluted fully					\$35.8m
12Mth Price Target					\$0.045
Projects					
	Interest	Location	Commodity		
Warraw oona	100%	WA	Gold (Au)		
Resources					
	M t	Grade (Au)	M oz (Au)	Lower Cut	
Klondyke O/P	17.8	1.62	0.9	0.5g/t Au	
Klondyke U/G	2.2	3.13	0.2	2g/t Au	
Copenhagen	0.3	4.13	0.04	0.5g/t Au	
Coronation	0.5	2.19	0.03	0.5g/t Au	
Fieldings Gully	0.5	1.63	0.03	0.5g/t Au	
Measured	-	-	-	-	
Indicated	13.5	1.8	0.8		
Inferred	7.7	1.8	0.5		
Total	21.2	1.8	1.25		
P&L					
		FY2017A	FY2018F	FY2019F	
Net Revenue	A\$m	n/a	n/a	n/a	
Total Costs	A\$m	n/a	n/a	n/a	
EBITDA	A\$m	n/a	n/a	n/a	
Deprec/Amort	A\$m	n/a	n/a	n/a	
EBIT	A\$m	n/a	n/a	n/a	
Net Interest	A\$m	n/a	n/a	n/a	
Pre-Tax Profit	A\$m	n/a	n/a	n/a	
Tax Expense	A\$m	n/a	n/a	n/a	
NPAT	A\$m	loss	loss	loss	
Abnormal Items	A\$m	n/a	n/a	n/a	
Reported Profit	A\$m	loss	loss	loss	
Directors & Management					
Mark Connelly (Non-Exec Chairman)			Suite 12, 11 Ventnor Ave		
David Reeves (MD & CEO)			West Perth WA 6005		
Adam Methke (Non-Exec Director)			+61 8 6245 2050		
Julia Beckett (Co. Sec.)					
Jane Allen (Geology Manager)			www.calidus.com.au		
Substantial Shareholders (est)					
	m shs	%			
Keras Resources Plc	458.4	32.3			
Alkane Resources Limited	144.6	10.2			
Directors and Management	77.8	5.5			
Investment Summary					
First company to consolidate the tenure of the historic Warraw oona Mining Centre near Marble Bar, WA. Mineralisation remains open at depth and along strike with just 2.6km of 12.5km of the high grade Klondyke Shear defined in a resource. Regional upside exists on parallel shears and further afield. Updated resource to 21Mt @ 1.8g/t Au for 1.25Moz in Q1 CY19.					
Newsflow					
Q2 CY17	ASX Listing: 22 June 2017	-			
Q3 CY17	Maiden drill results	Warraw oona			
Q3 CY17	A\$10M Capital Raise	-			
Q4 CY17	74% Resource increase to 712koz	Warraw oona			
Q2 CY18	Klondyke metallurgical results - 96% recovery	Warraw oona			
Q2 CY18	30,000m resource drilling commences	Warraw oona			
Q3 CY18	St George Shear drilling discovery	Warraw oona			
Q3 CY18	ALK.asx invests \$3.7m in CAI	-			
Q4 CY18	Deep drilling at Klondyke demonstrates u/g potential	Warraw oona			
Q1 CY19	75% Resource increase to 1.25Moz	Warraw oona			
Q3 CY19	PFS completion	Warraw oona			
2H CY19	DFS to commence	Warraw oona			
Unpaid Capital					
<u>Year Expires</u>	<u>No. (m)</u>	<u>\$m</u>	<u>Avg. Price</u>	<u>% ord</u>	
30-Jun-19	86.9	2.2	0.025	6%	
30-Jun-20	116.5	3.7	0.032	8%	
30-Jun-21	62.0	1.5	0.024	4%	
30-Jun-22	0.0	0.0	0.000	0%	
TOTAL	265.4	7.4	0.028	19%	
Comments					
Gold explorer focussed on the Warraw oona project near Marble Bar in WA. Targeting production of ~100kozpa in the next 18-24 months.					
Analyst: Paul Howard Phone: +61 8 9268 3045				Last Updated: 04/03/2019	
Sources: IRESS, Company Information, Hartleys Research					

RESOURCE UPDATE

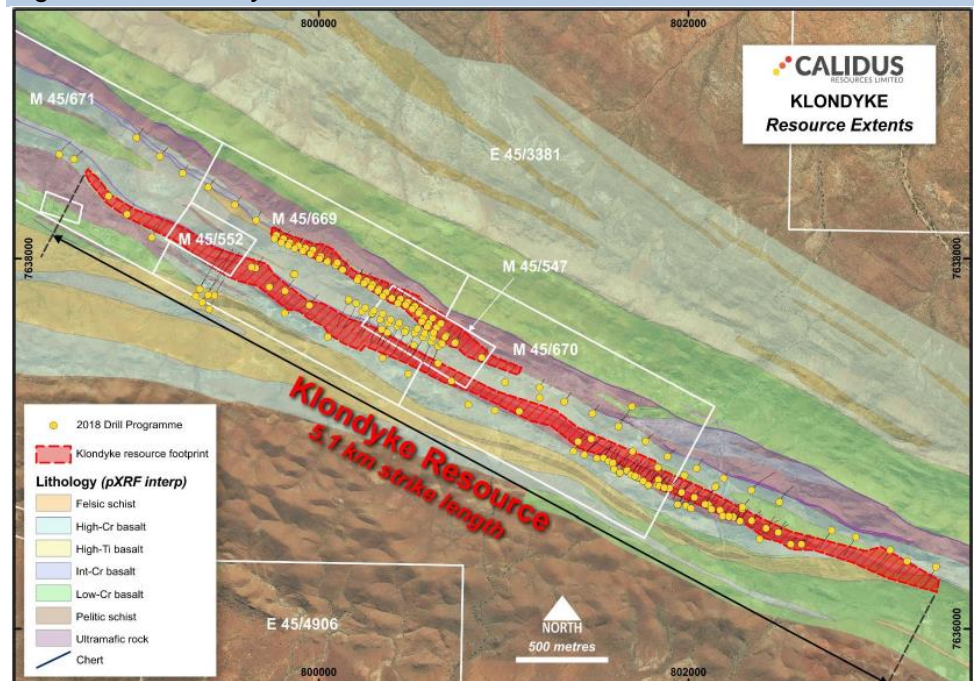
Fig. 2: Warrawoona Resource

Deposit	Cut-off Au g/t	Indicated		Inferred		Total				
		Mt	g/t Au	Ozs	Mt	g/t Au	Ozs	Mt	g/t Au	Ozs
Klondyke Open Pit	0.5	12.3	1.69	670,000	5.5	1.47	260,000	17.8	1.62	930,000
Klondyke Underground	2.0	0.8	3.3	80,000	1.4	3.03	140,000	2.2	3.13	220,000
Copenhagen	0.5	0.2	5.27	36,000	0.1	1.84	3,000	0.3	4.65	39,000
Coronation	0.5				0.5	2.19	34,000	0.5	2.19	34,000
Fieldings Gully	0.5	0.2	1.65	9,000	0.3	1.62	16,000	0.5	1.63	24,000
Total		13.5	1.83	795,000	7.7	1.81	453,000	21.2	1.83	1,248,000

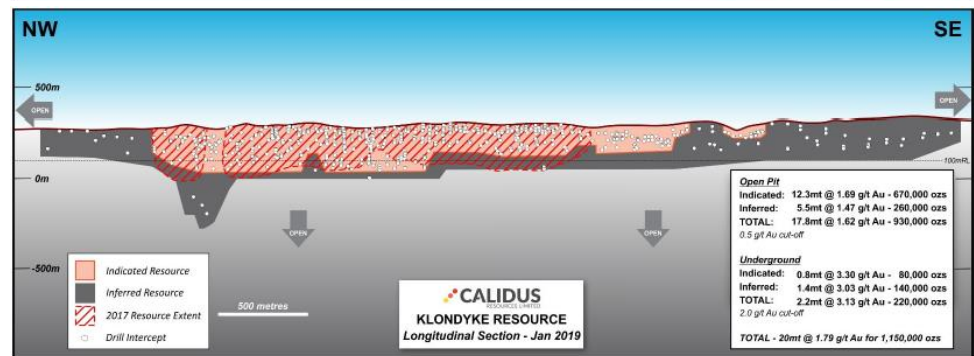
The Warrawoona global resource has been increased by 75% to 1.25Moz

Source: Calidus Resources Limited

Fig. 3: Klondyke resource extents



The region remains underexplored with plenty of exploration upside still to come



The new resource demonstrates potential for underground production

Source: Calidus Resources Limited

VALUATION

Our CAI valuation and price target is considered highly speculative given the lack of published studies.

We now model production of ~80kozpa over a 7-year mine life from a 1.5Mtpa gravity and CIL plant.

We use the recently updated 1.25Moz resource as the basis for our CAI model. Assuming 1.4Bn additional shares to issue to fund the project, we model a potential 625koz operation (assuming 50% conversion of the 1.25Moz resource to reserve), using estimated opex and capex based largely on comparable operations, and a LOM strip ratio of 8:1 (waste:ore). We model production of ~80kozpa recovered gold over a 7-year mine life from a 1.5Mtpa gravity and CIL plant. Modelled recoveries are 94%. A head grade of 1.8g/t has been used (lowered from our previous 1.9g/t on account of the new resource grade).

We stress that this is highly speculative and assumes the project can be successfully funded into production. Even if development studies are fast tracked, we suspect first production would not be until late 2H20. Calidus is very much an explorer with a gold project which may be commercially viable. A discount rate of 14% is used, since it is pre-study.

A head grade of 1.8g/t has now been assumed.

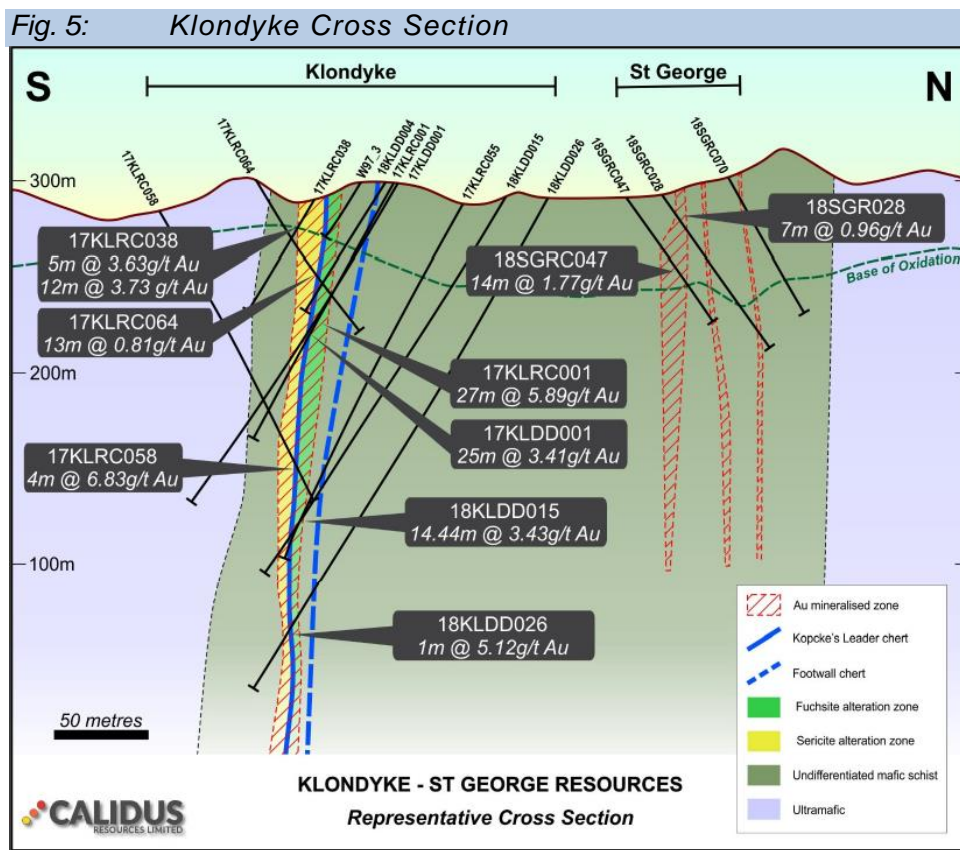
Our preliminary, fully diluted price target of 4.5cps is derived from a blended scenario comprised of a discounted cashflow analysis of a gold operation at Warrawoona. Our updated base case scenario is centred around the new 1.25Moz resource. We run scenarios where CAI defines an additional ~250koz to bring the global Warrawoona resource to ~1.5Moz with underground potential, a base case at consensus and spot pricing, a net cash banking case and a new scenario where the Company experiences construction/commissioning delays and a requiring for additional capital, as this risk has materialised for other ASX gold developers of late.

Fig. 4: Hartleys CAI Price Target

Price Target Methodology	Weighting	Spot	12 mth out
Warrawoona Gold Project (NPV14) - risked +1.25Moz @ 1.8g/t Au o/p - simulation	25%	\$0.053	\$0.057
0.7x NAV	40%	\$0.037	\$0.040
Additional resources defined: Increase to ~1.5Moz with u/g potential	10%	\$0.060	\$0.065
NPV at spot commodity and fx prices	5%	\$0.053	\$0.057
Commissioning delays - 6 months (+ \$20M additional capital requirement)	10%	\$0.045	\$0.049
Net cash banking	10%	\$0.003	\$0.003
Risk weighted composite		\$0.041	
12 Months Price Target		\$0.045	
Shareprice - Last		\$0.024	
12 mth total return (% to 12mth target)		88%	

Source: Hartleys' Research

Our 12-month price target is 4.5cps



Source: Calidus Resources Limited

RISKS

Key risks for Calidus include establishing resources which can be converted to reserves, development studies and funding future development.

Fig. 6: Key assumptions and risks for valuation

Assumption	Risk of not realising assumption	Risk to valuation if assumption is incorrect	Comment
~80kozpa for ~7 years	High	Very high	We assume further exploration success at Warrawoona to further upgrade and convert the current 1.25Moz resource to reserve
Metallurgy	Low	Meaningful	While previous work suggests the metallurgy is relatively benign, it is a key consideration with all gold projects. Note that some occurrences of course gold exist.
Exploration Upside	Moderate	Small	We assume exploration upside for CAI. We have assumed a \$50m value on the exploration potential of the region
Gold Price	Moderate	High	Our gold price forecasts are in line with sell side consensus
Funding	Moderate	High	We assume a 80kozpa operation at Warrawoona could be funded through a debt:equity ratio of 50:50.
Conclusion	<i>The assumptions we have made have a low to moderate risk of not being realised. If resources cannot be increased, it will have a large impact on our valuation.</i>		

Source: Hartleys' Research

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Note: personal email addresses of company employees are structured in the following manner: *firstname.lastname@hartleys.com.au*

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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Hartleys has a beneficial interest in 2 million escrowed options in Calidus Resources Limited. Hartleys has beneficial interest in 2.5 million escrowed shares in Calidus Resources Limited.

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