

**Lowering Target Price** 

# Lotus Resources Limited Specialty Minerals and Metals

12 August 2022

Rating
SPECULATIVE BUY
unchanged

Price Target A\$0.40↓ from A\$0.45

**LOT-ASX** 

Price **A\$0.23** 

#### **Market Data**

FYE Jun

52-Week Range (A\$) :	0.14 - 0.46
Market Cap (A\$M):	272.5
Shares Out. (M) :	1,184.6
Dividend /Shr (A\$):	0.00
Dividend Yield (%) :	0.0
Enterprise Value (A\$M):	251

2020A 2021A 2022E 2023E

Sales (A\$M)	0.0	0.0	0.0	0.0
EBITDA (A\$M)	(3.9)	(5.1)	(5.2)	(5.2)↓
Previous	-	-	-	(2.6)
0.5				
0.45				
0.4			<b>\</b>	
0.35	Л	VVV	Λ.	
0.3	- WWW	. /	T <sub>k</sub> m	
0.25 W	•	WW.	h.M.	M IM
0.2				M A V

.21

Priced as of close of business 11 August 2022

Lotus Resources is focused on restarting the idled Kayelekera Uranium Project (KUP) in Malawi.

James Bullen | Analyst | Canaccord Genuity (Australia) Ltd. | jbullen@cgf.com | +61.2.9263.2728

# **DFS** delivered

LOT's definitive feasibility study (DFS) for the Kayelekera Uranium Project (KUP) has reaffirmed the robustness of the restart and, perhaps more importantly, the ability to quickly deliver pounds into a market that is clearly in deficit. With the company now focussing on accelerating engagement with nuclear energy utilities and securing offtake agreements with the necessary volumes and pricing mechanisms, plus the potential for an FID by year end, LOT will not be short of news flow, in our opinion. We retain our SPEC BUY rating but lower our price target to \$0.40ps given the current inflationary environment.

#### **Key DFS outcomes**

- Confirmed that production can be restarted within 15 months of a restart decision.
- Production of 2.4Mlb per annum for first seven years. 9.5-year LOM.
- Ore Reserve of 23Mlb at 660ppm; the mine plan is 96% based on Ore Reserves. No change in Ore Resource for Greater Kayelekera at 51.1Mlb (which incl Livingstonia)
- US\$88mn in upfront capex (US\$50mn prior) with an additional US\$11.5mn in preproduction costs.
- AISC for LOM has been lowered to US\$37.7/lb (US\$39.8/lb prior) on the back of 1) improved grade due to ore sorting; 2) lower electricity cost on the back of connection to the grid; and 3) improved acid utilisation.
- The project has significantly reduced power-related CO2 emissions by ~72% or ~21,000tpa compared to the historical operation through a number of new and innovative initiatives.

#### WNA provides opportunity to showcase KUP

With the World Nuclear Association conference scheduled for 7-9 September, the release of this DFS is opportune. This conference is the premier annual event for the global nuclear industry and is attended by all major fuel buyers. Kayelekera has previously produced 10.9Mlb of U3O8 and supplied a number of North American utilities. With a clear plan to address KUP's previous issues (particularly the mining methodology) and the DFS now complete, we expect the project to receive a positive reception from offtakers.

# We remain more bullish about the ultimate potential of Kayelekera

The current mine plan contemplates the extraction of only 20.5Mlb of U3O8 vs a Greater Kayelekera resource of 51.1Mlb. As such we believe there is significant scope for material mine life extensions through resource to reserve conversion. Our valuation of KUP is predicated on the extraction of 30.5Mlb over a 15-year mine life.

While these assumptions are more bullish than the DFS, they are in line with our constructive uranium view (higher prices = higher extraction). We value LOT's share of KUP at A\$0.26/share (80% risked), which equates to US\$7.2/lb of resource.

# **Funding thoughts**

LOT ended the JunQ with ~\$20mn in cash (\$5mn unrestricted). The company is currently evaluating its funding options, which could take the form of debt (likely to be a working cap facility) and equity. Additionally, the company has flagged that some traders would consider to pre-payments.

#### Market conditions continue to improve

The recent approval of nuclear's inclusion in the Sustainable Taxonomy draft, the potential life extension of German reactors, Japan's push to restart four incremental reactors ,the US's proposal to establish a US\$4.3bn domestic purchase program and the benefits that should flow from the Inflation Reduction Act all reinforce the role nuclear could play in decarbonisation and energy security. We view this as a clear positive for our bullish uranium thesis.

Canaccord Genuity is the global capital markets group of Canaccord Genuity Group Inc. (CF: TSX)

The recommendations and opinions expressed in this research report accurately reflect the research analyst's personal, independent and objective views about any and all the companies and securities that are the subject of this report discussed herein.



Figure 1: Financial summary

FY Jun 30	2020	2021	2022E	2023E	2024E		2020	2021E	2022E	2023E	2024E
PROFIT & LOSS (A\$mn)											
Revenue	0.0	0.0	0.0	0.0	0.0	KEY ASSUMPTIONS					
Operational Costs	0.0	0.0	0.0	0.0	0.0	U3O8 (US\$/lb)	32.0	32.8	36.8	52.3	72.5
Royalty	0.0	0.0	0.0	0.0	0.0	A\$/US\$	0.68	0.75	0.73	0.73	0.73
Other Income	0.2	0.3	0.3	0.3	0.3						
Business Devt & Expl	0.0	0.0	0.0	0.0	0.0	REALISED PRICES					
Corporate & Other	-4.0	-5.4	-5.5	-5.5	-5.6	U3O8 (A\$/lb)	0.0	0.0	0.0	0.0	0.0
EBITDA	-3.9	-5.1	-5.2	-5.2	-5.3						
DD&A	0.0	0.0	0.0	0.0	0.0	PRODUCTION FORECASTS					
Other	0.0	0.0	0.0	0.0	0.0	U3O8 (klbs)	0.0	0.0	0.0	0.0	0.0
EBIT	-3.9	-5.1	-5.2	-5.2	-5.3	Total (klbs)	0.0	0.0	0.0	0.0	0.0
Net Financing	0.0	0.2	0.5	0.4	-3.8		_				
NPBT	-3.9	-4.9	-4.7	-4.9	-9.1	NET RESERVES AND RESOURCES					
Tax	0.0	0.0	0.7	1.5	2.7	Kayelekera(M) (Mlbs)	4.1				
Normalised NPAT	-3.9	-4.9	-4.0	-3.4	-6.4	Kayelekera (M+I) (Mlbs)	31.2				
Sig Items, Discon Ops & Mins	-12.7	0.0	0.0	0.0	0.0	Kayelekera (M+I+I) (Mlbs)	37.5				
Reported NPAT	-16.6	-4.9	-4.0	-3.4	-6.4						
Effective income tax rate	0.0	0.0	0.2	30%	0.3	PER SHARE DATA	4.45	050	050	050	050
						Average Shares (Diluted, M)	145	653	959	959	959
CASHFLOW (A\$mn)						EOP Shares (Diluted, mn)	672	959	959	959	959
	0.0	0.4	0.0	0.0	0.0	Normalised EPS (A¢/sh)	-2.7	-0.8	-0.4	-0.4	-0.7
Cash receipts	0.2	0.1	0.0	0.0	0.0	CF PS (A¢/sh)	-2.6	-0.8	-0.5	-0.5	-1.0
Payments to suppliers	-1.7	-3.9	-5.5	-5.5	-5.6	FCF PS (A¢/sh)	4.4	-0.8	-0.7	-2.8	-9.5
Interest received	0.0	0.2	0.5	0.4	-0.6	DATIOS					
Interest paid Other	0.0 -2.3	0.2 -1.8	0.5 0.0	0.4	-3.8 0.0	RATIOS Dividend Yield	0%	0%	0%	0%	0%
Operating Cashflow	-2.3 - <b>3.8</b>	-1.0 - <b>5.2</b>	<b>-4.4</b>	-4.8	-10.0	PE	n/a	n/a	n/a	n/a	n/a
Payments for PP&E	0.0	0.0	0.0	0.0	0.0	PCF (Debt Adj)	n/a	n/a	n/a	n/a	n/a
Payments for Development	0.0	0.0	-2.0	-22.5	-81.5	EV / EBITDA	n/a	n/a	n/a	n/a	n/a
Payments for Exploration	-3.4	0.0	0.0	0.0	0.0	Gearing (ND / ND + E)	n/a	n/a	n/a	33%	99%
Asset Sales / (Purchases)	14.6	0.0	0.0	0.0	0.0	Coding (ND / ND 1 L)	11/4	11/4	11/4	0070	3370
Other	-1.1	0.0	0.0	0.0	0.0	Net Debt / EBITDA	n/a	n/a	n/a	-106%	n/a
Investing Cashflow	10.2	0.0	-2.0	-22.5	-81.5	Interest Cover	0.0x	0.0x	0.0x	0.0x	-1.4x
Share Issuance / (Buyback)	10.8	19.9	0.0	0.0	0.0	interest cover	0.07	0.0%	0.0%	0.07	1.17
Drawdown / (Repayment) of Debt	0.0	0.0	0.0	20.0	91.5	ROE (Reported Profit / Av Equity)	n/a	n/a	n/a	n/a	n/a
Dividends	0.0	0.0	0.0	0.0	0.0	ROIC	n/a	n/a	n/a	n/a	n/a
Other	-0.7	-0.4	0.0	0.0	0.0	ROACE	n/a	n/a	n/a	n/a	n/a
Financing Cashflow	10.1	19.5	0.0	20.0	91.5	FCF Yield	19%	-3%	-3%	-12%	-41%
Surplus / Defecit	16.4	14.3	-6.4	-7.3	0.0						
·						DIVIDEND AND FRANKING					
BALANCE SHEET (A\$mn)						Dividend (A¢/sh)	0	0	0	0	0
Current Assets	17.1	28.2	21.7	14.4	14.4	Payout ratio	0%	0%	0%	0%	0%
Non-Current Assets	65.1	58.4	60.4	82.8	164.3	Franking Balance (A\$mn)	0	0	0	0	0
Total Assets	82.2	86.5	82.1	97.2	178.7						
Current Liabilities	2.9	1.7	1.7		7.3	VALUATION	Risked				
Non-Current Liabilities	71.7	64.3	64.3	83.2	170.1	Kayelekera Restart	0.26				
Total Liabilities	74.6	66.0	66.0	85.9	177.4	Kayelekera other resources	0.08				
						Exploration	0.04				
Net Assets	7.6	20.5	16.1	11.3	1.3	EV adjustments	0.02				
Total Cash	16.5	28.2	21.7	14.4	14.4	TOTAL	0.40				
	0.0	0.0	0.0	20.0	111.4	PREMIUM/(DISCOUNT)	0.0				
Total Debt	-16.5	-28.2		5.5	97.0	PRICE TARGET	0.40				

Source: Company reports, Canaccord Genuity estimates



# DFS delivered

LOT has completed the DFS for its 85%-owned Kayelekera Uranium Project (KUP) in Malawi, an asset that was successfully produced from 2009-2014. While exposure to the rapidly deteriorating spot uranium price (-70% post Fukushima) resulted in the mine being placed in care and maintenance in 2014, KUP could be restarted within 15 months of a positive investment decision.

With over US\$200M in sunk infrastructure at KUP, the capital intensity is a low US\$37/lb/pa (9.5-year mine life per DFS) and thanks to a number of cost-saving initiatives it's opex sits comfortably in the second quartile for current and planned uranium developments.

Using a US\$75/lb price deck, we value the <u>total</u> project on an <u>unrisked</u> basis at \$450mn (NPV8), with two-year payback and \$129mn EBITDA at plateau.

## Capex increases as expected...

The re-start cost for KUP has increased to US\$88mn from the US\$50mn estimate in 2020. Despite this increase, the project still ranks as one of the lowest capital cost uranium projects globally with an initial capital intensity of US\$37/lb.

Importantly the budget includes US\$35.8mn for new plant and infrastructure to improve the project economics and plant reliability, including a new acid plant and steam turbine (US\$15.3mn), a connection to the national grid (US\$13.0mn) and upgrade to the front-end processing circuit to incorporate ore sorting (US\$6.0mn).

# ...but opex lower despite inflationary environment

LOM AISC has decreased to US\$37.7/lb (US\$39.8/lb prior) and C1 cash costs have fallen to US\$30.1/lb (US\$32.8/lb prior). This has been achievable despite cost inflation due to the following initiatives:

- 1. The benefits of ore sorting technology and how this influences the mine plan, the use of existing lower-grade stockpiles and the mill feed uranium grades which, combined, directly impact production rates and LOM;
- Seizing the opportunity to connect site to the national grid, utilisation of energy produced in the onsite acid plant and solar / battery options all of which have resulted in a lower overall energy cost;
- 3. Including acid recovery from elution, which allow increased utilisation of the acid within the process.

# The uranium market needs more supply

We continue to forecast a 25Mlb U3O8 supply deficit in 2022 and 29Mlb in 2023 (see Figure 5 for our SxD model), a situation that will likely be worse in the West, which is reducing its exposure to Russian supply. As discussed in previous <u>research</u>, we believe that a bifurcation of the uranium market is increasingly likely and that Western utilities will be willing to pay a premium for material sourced from lower-risk, friendly jurisdictions – as a former producer in Malawi with a reasonable track record of delivery to Western Utilities, KUP could fit this bill, in our opinion.

# **Next catalysts**

- Completion of negotiations with the Malawian government concerning the Kayelekera Mine Development Agreement (will set taxation/royalty parameters);
- · Offtake negotiations;
- Completion of FEED work;
- Completion of financing plan for the initial and working capital requirements for the restart of KUP.



# Valuation update

We have valued LOT using a risked sum-of-the-parts methodology, deriving a price target of \$0.40/share. We have applied a discounted cash flow (DCF) valuation for KUP and the company's corporate costs (8% discount rate). For resources not captured in our KUP DCF, we have applied a US\$4 pound in-the-ground valuation. Nominal value has been applied to exploration potential which includes the company's rare earth discovery at Milenje.

Figure 2: Sum-of-the parts valuation for LOT

Asset	Equity	Net Capacity	NPV	Risking	Riske	d NPV
	%	ktpa	A\$mn	%	A\$mn	A\$ps
PRODUCTION ASSETS		0	0	0%	0.0	0.00
Kayelekera Restart	85%	2400	378.3	80%	302.7	0.26
DEVELOPMENT ASSETS		2400			302.7	0.26
Kayelekera other resources					95.5	0.08
RESOURCES					95.5	0.08
Exploration					50.0	0.04
EXPLORATION					50.0	0.04
Net Debt, Balance sheet adj.	& corp. ov	verhead				0.02
Net Debt, Dalance Sheet auj.	a corp. o	verneau				0.02
Premium / (Discount)						0.00
Price Target						0.40

Source: Company reports, Canaccord Genuity estimates

### Kayelekera

Our unrisked NPV8 for LOT's interest in Kayelekera stands at \$378mn, which we have risked at 80% to allow primarily for pricing and funding uncertainty. Figure 3 and Figure 4 below illustrate our assumed production profile at Kayelekera, along with modelled revenue and EBITDA profile out to 2037 (15-year life used for valuation). Key model assumptions include:

- US\$88mn upfront capex
- US\$30.01/lb LOM cash costs
- US\$37.7/lb LOM AISC
- 15-year mine life (30.5Mlb U308 extracted)
- 2.4Mlb/yr plateau for seven years
- 27.5% corporate tax rate, US\$230M in tax losses, 3% State royalty, 15% carried project equity
- US\$75/t long term uranium price
- 0.73 USD:AUD exchange rate
- 8% discount rate



Figure 3: CGe production profile

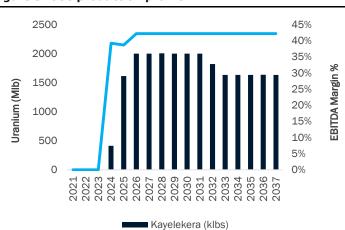
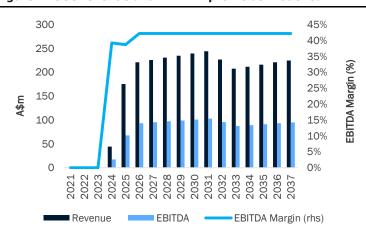


Figure 4: GGe revenue and EBITDA profile as modelled



Source: Company reports, Canaccord Genuity estimates

Source: Company reports, Canaccord Genuity estimates

In deriving our valuation, we utilise a LT U3O8 of US\$75 (inflating @ 1.0% p.a.). As discussed previously, we see a robust outlook for uranium pricing underpinned by a steady demand growth trajectory. We remain of the view that our price outlook is reasonable but note that previous uranium cycles have seen prices well in excess of this.



# Supply and demand model

Figure 5: Uranium SxD model summary

(in million lbs U3O8)	2019A	2020A	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Mine Supply												
Kazakhstan	60	51	57	56	58	59	61	62	64	63	62	62
Canada	18	10	12	19	26	29	29	36	65	71	72	72
Australia	16	16	9	12	13	15	15	15	15	15	15	15
Africa	23	24	20	19	20	22	30	29	25	25	20	19
China	4	4	5	5	5	5	5	5	5	5	5	5
Russia	8	7	8	8	8	8	8	8	8	8	8	8
RoW	12	12	13	13	13	15	17	17	19	21	22	22
Total Mine Supply	142	125	123	130	142	152	164	173	200	208	204	202
Mine Supply as a % of Demand		70%	69%	72%	72%	75%	79%	78%	87%	87%	82%	79%
YoY % Change		-12%	-1%	6%	9%	7%	8%	5%	16%	4%	-2%	-1%
Secondary Supply												
Underfeeding / Tails re-enrichment	18	17	18	15	13	12	12	12	11	10	9	5
US Government (DOE material inflows)	3	2	1	1	1	-		-		-		-
Global reprocessed uranium / MOX	6	6	5	5	7	8	8	8	8	9	9	10
Other/Mobilization of Inventory	5	5	6	5	5	5	5	5	5	5	5	5
Total Secondary Supply	31	30	30	26	26	25	25	25	24	24	23	20
Secondary Supply as a % of Demand		17%	17%	14%	13%	12%	12%	11%	11%	10%	9%	8%
Total Supply	173	155	153	157	168	177	189	197	225	232	227	222
World Nuclear Operating Consolty (CWo)	368	366	368	376	389	399	403	420	439	458	475	493
World Nuclear Operating Capacity (GWe) Reactor Capacity (GWe)	366	366	300	3/6	369	399	403	420	439	458	4/5	493
China	40	47		54						0.7	96	108
United States	46	47	50		55 98	59	64	69	77	87		
Canada	98 14	97 14	96 14	98 14	14	98 14						
Europe Russia	134 29	132 29	129 28	124 29	124 30	124 30	120 30	125 30	128 33	128 36	129 37	127 42
											-	
Japan	9	9	9	11	12	12	12	13	13	15	15	15
South Korea	23	23	23	25	27	29	29	29	29	29	29	29
India	6	6	7	8	11	11	11	13	13	15	17	18
RoW	9	11	13 368	14	18 389	23 399	25 403	28 420	33 439	37	42	42
Total Reactor Capacity - Operating (GWe)	368	366	366	376	369	399	403	420	439	458	475	493
Reactor Demand (U3O8)	176	177	178	181	188	193	195	203	212	221	230	238
Demand from Change in Tails Assay (U3O8)					9	11	14	17	17	17	18	17
			100									
Total Demand (U3O8)	176	177	178	181	197	204	208	220	229	239	247	255
YoY % Change		1%	0%	2%	8%	4%	2%	6%	4%	4%	4%	3%
Market Balance	(3)	(22)	(24)	(25)	(29)	(28)	(19)	(23)	(5)	(6)	(20)	(34)
*Excludes the impact of secondary demand and SMRs												
Domand grouth 9/		4.05	001	2%	901	401	20/	681	407	401	407	200
Demand growth %		1%	0%		8%	4%	2%	6%	4%	4%	4%	3%
Primary mine production growth %		-12%	-1%	6%	9%	7%	8%	5%	16%	4%	-2%	-1%
Secondary supply growth %		-4%	1%	-13%	0%	-6%	1%	0%	-2%	0%	-4%	-15%
China demand growth %		4%	5%	9%	1%	7%	9%	9%	11%	13%	10%	13%
Western world demand growth %		-2%	-1%	-1%	0%	0%	-2%	2%	1%	0%	0%	-1%

Source: Company reports, Canaccord Genuity estimates



# Appendix: Important Disclosures

#### **Analyst Certification**

Each authoring analyst of Canaccord Genuity whose name appears on the front page of this research hereby certifies that (i) the recommendations and opinions expressed in this research accurately reflect the authoring analyst's personal, independent and objective views about any and all of the designated investments or relevant issuers discussed herein that are within such authoring analyst's coverage universe and (ii) no part of the authoring analyst's compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed by the authoring analyst in the research, and (iii) to the best of the authoring analyst's knowledge, she/he is not in receipt of material non-public information about the issuer.

Analysts employed outside the US are not registered as research analysts with FINRA. These analysts may not be associated persons of Canaccord Genuity LLC and therefore may not be subject to the FINRA Rule 2241 and NYSE Rule 472 restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account.

#### **Sector Coverage**

Individuals identified as "Sector Coverage" cover a subject company's industry in the identified jurisdiction, but are not authoring analysts of the report.

#### **Investment Recommendation**

Date and time of first dissemination: August 11, 2022, 16:47 ET

Date and time of production: August 11, 2022, 16:47 ET

#### **Target Price / Valuation Methodology:**

Lotus Resources Limited - LOT

We value LOT using an SOTP methodology, deriving a price target of \$0.40 which has been risked for the restart of Kayelekera (80%). We have applied a discounted cash flow valuation for Kayelekera (8% WACC) and the company's corporate costs.

#### Risks to achieving Target Price / Valuation:

Lotus Resources Limited - LOT

#### Financing risks

Our analysis suggests that BOE will require additional capital to fund the development costs for Kayelekera project for which we have risked our valuation. As a pre-cashflow company, LOT is reliant on equity/debt/external capital to fund capital commitments, and there is no guarantee that accessing these markets will be achieved without dilution to shareholders. Furthermore, accurate estimates of capital costs for the project remain subject to completion and feasibility studies, which may see capital requirements exceed our model assumptions. There is no quarantee that studies will result in a positive investment decision for the project.

# **Operational risks**

Once in production, the company will be subject to risks such as plant/equipment breakdowns, metallurgical (noting flowsheet changes to address previous challenges), geological and other technical issues. An increase in operating costs could reduce the profitability and free cash generation from the operating assets and negatively impact valuation. Further, the yellow cake product specifications may differ from initial test work interpretations which can also materially impact product acceptance by customers and therefore earnings from forecast production.

#### **Market risks**

LOT's sales revenue is dependent on being able to secure term contracts for its proposed level of production and priced with the required mechanisms that will enable proactive capital and budgetary management. We note the protracted nature of negotiating uranium product offtake with the potential that timelines could be prolonged to ensure than an acceptable order book is agreed on.

# **Commodity price and currency fluctuation**

The company, as a near-term uranium producer is exposed to commodity price and currency fluctuations, often driven by macroeconomic forces including inflationary pressure, interest rates and supply and demand of commodities. These factors are external and could reduce the profitability, costing and prospective outlook for the business



#### **Distribution of Ratings:**

#### Global Stock Ratings (as of 08/11/22)

Rating	Coverag	Coverage Universe				
	#	%	%			
Buy	638	67.16%	35.11%			
Hold	132	13.89%	15.15%			
Sell	12	1.26%	16.67%			
Speculative Buy	161	16.95%	39.75%			
	950*	100.0%				

<sup>\*</sup>Total includes stocks that are Under Review

#### **Canaccord Genuity Ratings System**

BUY: The stock is expected to generate risk-adjusted returns of over 10% during the next 12 months.

**HOLD**: The stock is expected to generate risk-adjusted returns of 0-10% during the next 12 months.

**SELL**: The stock is expected to generate negative risk-adjusted returns during the next 12 months.

NOT RATED: Canaccord Genuity does not provide research coverage of the relevant issuer.

"Risk-adjusted return" refers to the expected return in relation to the amount of risk associated with the designated investment or the relevant issuer.

#### **Risk Qualifier**

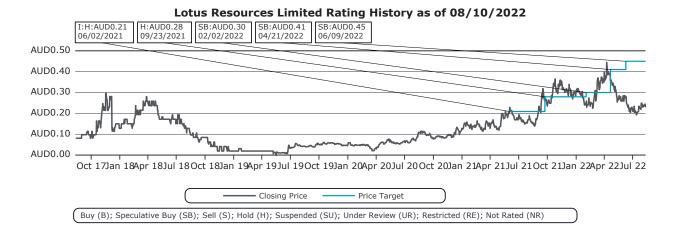
**SPECULATIVE**: Stocks bear significantly higher risk that typically cannot be valued by normal fundamental criteria. Investments in the stock may result in material loss.

#### 12-Month Recommendation History (as of date same as the Global Stock Ratings table)

A list of all the recommendations on any issuer under coverage that was disseminated during the preceding 12-month period may be obtained at the following website (provided as a hyperlink if this report is being read electronically) http://disclosures-mar.canaccordgenuity.com/EN/Pages/default.aspx

#### Required Company-Specific Disclosures (as of date of this publication)

Canaccord Genuity or one or more of its affiliated companies intend to seek or expect to receive compensation for Investment Banking services from Lotus Resources Limited in the next three months.



# Required Company-Specific Disclosures (as of date of this publication)

#### Past performance

In line with Article 44(4)(b), MiFID II Delegated Regulation, we disclose price performance for the preceding five years or the whole period for which the financial instrument has been offered or investment service provided where less than five years. Please note price history refers to actual past performance, and that past performance is not a reliable indicator of future price and/or performance.

#### **Online Disclosures**



Up-to-date disclosures may be obtained at the following website (provided as a hyperlink if this report is being read electronically) <a href="http://disclosures.canaccordgenuity.com/EN/Pages/default.aspx">http://disclosures.canaccordgenuity.com/EN/Pages/default.aspx</a>; or by sending a request to Canaccord Genuity Corp. Research, Attn: Disclosures, P.O. Box 10337 Pacific Centre, 2200-609 Granville Street, Vancouver, BC, Canada V7Y 1H2; or by sending a request by email to disclosures@cgf.com. The reader may also obtain a copy of Canaccord Genuity's policies and procedures regarding the dissemination of research by following the steps outlined above.

#### **General Disclaimers**

See "Required Company-Specific Disclosures" above for any of the following disclosures required as to companies referred to in this report: manager or co-manager roles; 1% or other ownership; compensation for certain services; types of client relationships; research analyst conflicts; managed/co-managed public offerings in prior periods; directorships; market making in equity securities and related derivatives. For reports identified above as compendium reports, the foregoing required company-specific disclosures can be found in a hyperlink located in the section labeled, "Compendium Reports." "Canaccord Genuity" is the business name used by certain wholly owned subsidiaries of Canaccord Genuity Group Inc., including Canaccord Genuity LLC, Canaccord Genuity Limited, Canaccord Genuity Corp., and Canaccord Genuity (Australia) Limited, an affiliated company that is 80%-owned by Canaccord Genuity Group Inc.

The authoring analysts who are responsible for the preparation of this research are employed by Canaccord Genuity Corp. a Canadian broker-dealer with principal offices located in Vancouver, Calgary, Toronto, Montreal, or Canaccord Genuity LLC, a US broker-dealer with principal offices located in New York, Boston, San Francisco and Houston, or Canaccord Genuity Limited., a UK broker-dealer with principal offices located in London (UK) and Dublin (Ireland), or Canaccord Genuity (Australia) Limited, an Australian broker-dealer with principal offices located in Sydney and Melbourne.

The authoring analysts who are responsible for the preparation of this research have received (or will receive) compensation based upon (among other factors) the Investment Banking revenues and general profits of Canaccord Genuity. However, such authoring analysts have not received, and will not receive, compensation that is directly based upon or linked to one or more specific Investment Banking activities, or to recommendations contained in the research.

Some regulators require that a firm must establish, implement and make available a policy for managing conflicts of interest arising as a result of publication or distribution of research. This research has been prepared in accordance with Canaccord Genuity's policy on managing conflicts of interest, and information barriers or firewalls have been used where appropriate. Canaccord Genuity's policy is available upon request.

The information contained in this research has been compiled by Canaccord Genuity from sources believed to be reliable, but (with the exception of the information about Canaccord Genuity) no representation or warranty, express or implied, is made by Canaccord Genuity, its affiliated companies or any other person as to its fairness, accuracy, completeness or correctness. Canaccord Genuity has not independently verified the facts, assumptions, and estimates contained herein. All estimates, opinions and other information contained in this research constitute Canaccord Genuity's judgement as of the date of this research, are subject to change without notice and are provided in good faith but without legal responsibility or liability.

From time to time, Canaccord Genuity salespeople, traders, and other professionals provide oral or written market commentary or trading strategies to our clients and our principal trading desk that reflect opinions that are contrary to the opinions expressed in this research. Canaccord Genuity's affiliates, principal trading desk, and investing businesses also from time to time make investment decisions that are inconsistent with the recommendations or views expressed in this research.

This research is provided for information purposes only and does not constitute an offer or solicitation to buy or sell any designated investments discussed herein in any jurisdiction where such offer or solicitation would be prohibited. As a result, the designated investments discussed in this research may not be eligible for sale in some jurisdictions. This research is not, and under no circumstances should be construed as, a solicitation to act as a securities broker or dealer in any jurisdiction by any person or company that is not legally permitted to carry on the business of a securities broker or dealer in that jurisdiction. This material is prepared for general circulation to clients and does not have regard to the investment objectives, financial situation or particular needs of any particular person. Investors should obtain advice based on their own individual circumstances before making an investment decision. To the fullest extent permitted by law, none of Canaccord Genuity, its affiliated companies or any other person accepts any liability whatsoever for any direct or consequential loss arising from or relating to any use of the information contained in this research.

# **Research Distribution Policy**

Canaccord Genuity research is posted on the Canaccord Genuity Research Portal and will be available simultaneously for access by all of Canaccord Genuity's customers who are entitled to receive the firm's research. In addition research may be distributed by the firm's sales and trading personnel via email, instant message or other electronic means. Customers entitled to receive research may also receive it via third party vendors. Until such time as research is made available to Canaccord Genuity's customers as described above, Authoring Analysts will not discuss the contents of their research with Sales and Trading or Investment Banking employees without prior compliance consent.

For further information about the proprietary model(s) associated with the covered issuer(s) in this research report, clients should contact their local sales representative.

#### **Short-Term Trade Ideas**

Research Analysts may, from time to time, discuss "short-term trade ideas" in research reports. A short-term trade idea offers a near-term view on how a security may trade, based on market and trading events or catalysts, and the resulting trading opportunity that may be available. Any such trading strategies are distinct from and do not affect the analysts' fundamental equity rating for such stocks. A short-term trade idea may differ from the price targets and recommendations in our published research reports that



reflect the research analyst's views of the longer-term (i.e. one-year or greater) prospects of the subject company, as a result of the differing time horizons, methodologies and/or other factors. It is possible, for example, that a subject company's common equity that is considered a long-term 'Hold' or 'Sell' might present a short-term buying opportunity as a result of temporary selling pressure in the market or for other reasons described in the research report; conversely, a subject company's stock rated a long-term 'Buy' or "Speculative Buy' could be considered susceptible to a downward price correction, or other factors may exist that lead the research analyst to suggest a sale over the short-term. Short-term trade ideas are not ratings, nor are they part of any ratings system, and the firm does not intend, and does not undertake any obligation, to maintain or update short-term trade ideas. Short-term trade ideas are not suitable for all investors and are not tailored to individual investor circumstances and objectives, and investors should make their own independent decisions regarding any securities or strategies discussed herein. Please contact your salesperson for more information regarding Canaccord Genuity's research.

#### For Canadian Residents:

This research has been approved by Canaccord Genuity Corp., which accepts sole responsibility for this research and its dissemination in Canada. Canaccord Genuity Corp. is registered and regulated by the Investment Industry Regulatory Organization of Canada (IIROC) and is a Member of the Canadian Investor Protection Fund. Canadian clients wishing to effect transactions in any designated investment discussed should do so through a qualified salesperson of Canaccord Genuity Corp. in their particular province or territory.

#### **For United States Persons:**

Canaccord Genuity LLC, a US registered broker-dealer, accepts responsibility for this research and its dissemination in the United States. This research is intended for distribution in the United States only to certain US institutional investors. US clients wishing to effect transactions in any designated investment discussed should do so through a qualified salesperson of Canaccord Genuity LLC. Analysts employed outside the US, as specifically indicated elsewhere in this report, are not registered as research analysts with FINRA. These analysts may not be associated persons of Canaccord Genuity LLC and therefore may not be subject to the FINRA Rule 2241 and NYSE Rule 472 restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account.

# For United Kingdom and European Residents:

This research is distributed in the United Kingdom and elsewhere Europe, as third party research by Canaccord Genuity Limited, which is authorized and regulated by the Financial Conduct Authority. This research is for distribution only to persons who are Eligible Counterparties or Professional Clients only and is exempt from the general restrictions in section 21 of the Financial Services and Markets Act 2000 on the communication of invitations or inducements to engage in investment activity on the grounds that it is being distributed in the United Kingdom only to persons of a kind described in Article 19(5) (Investment Professionals) and 49(2) (High Net Worth companies, unincorporated associations etc) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended). It is not intended to be distributed or passed on, directly or indirectly, to any other class of persons. This material is not for distribution in the United Kingdom or elsewhere in Europe to retail clients, as defined under the rules of the Financial Conduct Authority.

#### For Jersey, Guernsey and Isle of Man Residents:

This research is sent to you by Canaccord Genuity Wealth (International) Limited (CGWI) for information purposes and is not to be construed as a solicitation or an offer to purchase or sell investments or related financial instruments. This research has been produced by an affiliate of CGWI for circulation to its institutional clients and also CGWI. Its contents have been approved by CGWI and we are providing it to you on the basis that we believe it to be of interest to you. This statement should be read in conjunction with your client agreement, CGWI's current terms of business and the other disclosures and disclaimers contained within this research. If you are in any doubt, you should consult your financial adviser.

CGWI is licensed and regulated by the Guernsey Financial Services Commission, the Jersey Financial Services Commission and the Isle of Man Financial Supervision Commission. CGWI is registered in Guernsey and is a wholly owned subsidiary of Canaccord Genuity Group Inc.

#### For Australian Residents:

This research is distributed in Australia by Canaccord Genuity (Australia) Limited ABN 19 075 071 466 holder of AFS Licence No 234666. To the extent that this research contains any advice, this is limited to general advice only. Recipients should take into account their own personal circumstances before making an investment decision. Clients wishing to effect any transactions in any financial products discussed in the research should do so through a qualified representative of Canaccord Genuity (Australia) Limited or its Wealth Management affiliated company, Canaccord Genuity Financial Limited ABN 69 008 896 311 holder of AFS Licence No 239052.

# For Hong Kong Residents:

This research is distributed in Hong Kong by Canaccord Genuity (Hong Kong) Limited which is licensed by the Securities and Futures Commission. This research is only intended for persons who fall within the definition of professional investor as defined in the Securities and Futures Ordinance. It is not intended to be distributed or passed on, directly or indirectly, to any other class of persons. Recipients of this report can contact Canaccord Genuity (Hong Kong) Limited. (Contact Tel: +852 3919 2561) in respect of any matters arising from, or in connection with, this research.

#### Additional information is available on request.

Copyright © Canaccord Genuity Corp. 2022 – Member IIROC/Canadian Investor Protection Fund

Copyright © Canaccord Genuity Limited. 2022 - Member LSE, authorized and regulated by the Financial Conduct Authority.

Copyright © Canaccord Genuity LLC 2022 - Member FINRA/SIPC



Copyright © Canaccord Genuity (Australia) Limited. 2022 – Participant of ASX Group, Chi-x Australia and of the NSX. Authorized and regulated by ASIC.

All rights reserved. All material presented in this document, unless specifically indicated otherwise, is under copyright to Canaccord Genuity Corp., Canaccord Genuity Limited, Canaccord Genuity LLC or Canaccord Genuity Group Inc. None of the material, nor its content, nor any copy of it, may be altered in any way, or transmitted to or distributed to any other party, without the prior express written permission of the entities listed above.

None of the material, nor its content, nor any copy of it, may be altered in any way, reproduced, or distributed to any other party including by way of any form of social media, without the prior express written permission of the entities listed above.