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Prospect Resources Ltd

Promising outlook driven by better DFS and funding deal

Share Price: A$0.23

ASX: PSC
Sector: Materials
14 January 2020

Prospect Resources Ltd (ASX:PSC) is a Perth-based miner that is currently focused on the Arcadia lithium project. PSC own an 87% stake in the project, located on the outskirts of Harare, Zimbabwe. With Afreximbank mandated to arrange US$143m debt facility for project financing, the mine is on track for commissioning in 2022. The reserve upgrade and the favourable project economics as per the latest definitive feasibility study (DFS) bode well for PSC's outlook.

Investment case – Arcadia is de-risking rapidly

The Arcadia project has considerable advantages as a lithium source, most notably its favourable mineralogy and support from the Zimbabwean government. The demand for lithium is expected to be robust driven by the battery industry as well as applications in the glass and ceramics industry. PSC has a competitive advantage in producing ultra-low-iron lithium concentrates that meet the glass and ceramics industry specifications, thus, enabling it to command premium prices in this space. The improved project dynamics (2019 DFS) and latest funding arrangements, including, potentially, with Uranium One has further de-risked the project and can drive favourable sentiment and re-rate the stock into our valuation range.

Valuation range of A$0.80–1.31 per share

We value PSC at A$0.80 per share base case and A$1.31 per share optimistic case using a DCF approach with assumptions on spodumene and petalite prices from the DFS.

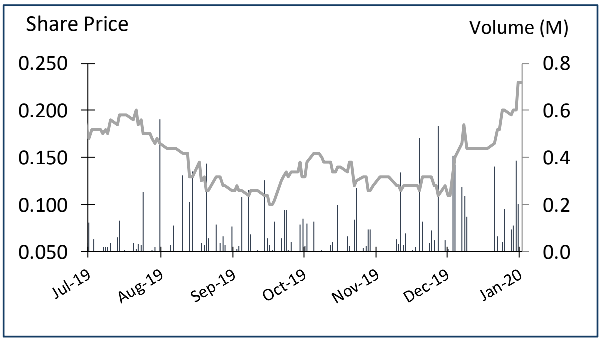
Year to June (A$)	2018A	2019A	2020F	2021F	2022F
Sales (m)	3.9	3.3	4.5	4.6	278.6
EBITDA (m) Adjusted	-5.3	-5.6	-6.9	4.2	133.5
Net Profit (m) Adjusted	-5.6	-7.0	-17.1	-12.8	109.5
Adj. EBITDA Margin (%)	nm	nm	nm	92.0%	47.9%
RoA (%)	nm	nm	nm	nm	62.6%
EPS before extr. & amort.	-3.24c	-3.52c	-5.12c	-2.92c	24.90c
DPS	na	na	na	na	na
EV/Sales	15.9x	14.0x	36.4x	66.6x	0.7x
EV/EBITDA	-11.6x	-8.3x	-23.7x	72.4x	1.5x
P/E	-12.4x	-6.4x	-4.5x	-7.9x	0.9x

Source: Company, Pitt Street Research

Market Cap. (A$ m)	55.4
# shares outstanding (m)	240.8
# share fully diluted (m)	245.3
Market Cap Ful. Dil. (A$m)	56.4
Free Float	100%
12-months high/low (A$)	0.23 / 0.10
Avg. 12M daily volume ('1000)	87
Website	prospectresources.com.au

Source: Company, Pitt Street Research

Share price (A$) and avg. daily volume (k, r.h.s.)



Source: Thomson Reuters, Pitt Street Research

Valuation metrics	
DCF fair valuation range (A$)	0.80–1.31
WACC	15.6%
Assumed terminal growth rate	None

Source: Pitt Street Research

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Profit & Loss (A$m)	2017A	2018A	2019A	2020F	2021F	2022F	2023F	2024F	2025F	2026F
Sales Revenue	**0.1**	**3.9**	**3.3**	**4.5**	**4.6**	**278.6**	**320.5**	**320.6**	**316.5**	**308.9**
Operating expenses	-12.8	-9.2	-9.0	-11.4	-0.4	-145.0	-171.3	-161.7	-161.5	-158.2
Adjusted EBITDA	**-12.7**	**-5.3**	**-5.6**	**-6.9**	**4.2**	**133.5**	**149.3**	**159.0**	**155.0**	**150.7**
Depn & Amort	-0.1	-0.1	-0.1	-0.1	-0.1	-3.7	-3.7	-3.7	-3.7	-3.7
Adjusted EBIT	**-12.8**	**-5.4**	**-5.7**	**-7.0**	**4.1**	**129.8**	**145.6**	**155.3**	**151.3**	**147.0**
Net Interest	0.0	0.0	0.0	-10.1	-16.8	-20.4	-15.8	-10.6	-5.1	0.4
Profit before tax (before exceptionals)	**-12.8**	**-5.4**	**-5.7**	**-17.1**	**-12.8**	**109.5**	**129.8**	**144.7**	**146.2**	**147.4**
Tax expense	0.0	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Abnormals + Minorities	0.8	0.1	-0.2	-0.4	-0.3	2.9	3.4	3.8	3.8	3.9
NPAT	**-12.0**	**-5.6**	**-7.2**	**-17.5**	**-13.1**	**112.4**	**133.2**	**148.5**	**150.0**	**151.3**

Cash Flow (A$m)	2017A	2018A	2019A	2020F	2021F	2022F	2023F	2024F	2025F	2026F
Profit after tax	0.0	0.0	0.0	-17.1	-12.8	109.5	129.8	144.7	146.2	147.4
Depreciation	0.0	0.0	0.0	0.1	0.1	3.7	3.7	3.7	3.7	3.7
Change in trade and other receivables	0.1	3.7	3.4	-0.1	0.0	-22.4	-3.4	0.0	0.3	0.6
Change in trade payables	-2.8	-6.9	-9.6	0.3	0.0	25.4	4.0	0.0	-0.4	-0.7
Other operating activities	-1.3	-1.6	-1.7	0.0	0.0	-4.0	1.5	0.0	0.0	0.1
Operating cashflow	**-4.0**	**-4.8**	**-7.8**	**-16.7**	**-12.6**	**112.1**	**135.5**	**148.4**	**149.8**	**151.0**
Capex (- asset sales)	-0.5	-0.9	-0.6	-90.0	-128.5	-3.7	-3.7	-3.7	-3.7	-3.7
Other investing activities	-6.7	-5.5	-9.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Investing cashflow	**-7.2**	**-6.4**	**-10.2**	**-90.0**	**-128.5**	**-3.7**	**-3.7**	**-3.7**	**-3.7**	**-3.7**
Dividends										
Equity raised (repurchased)	17.4	20.2	5.5	40.7	0.0	0.0	0.0	0.0	0.0	0.0
Debt drawdown (repaid)	-0.1	0.0	0.0	204.3	0.0	-25.0	-25.0	-25.0	-25.0	0.0
Other financing activities	-1.2	0.1	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net change in cash	**4.9**	**9.1**	**-10.9**	**138.3**	**-141.1**	**83.4**	**106.8**	**119.7**	**121.1**	**147.3**
Cash at End Period	7.3	16.4	5.5	143.8	2.7	86.1	192.9	312.6	433.7	581.0
Net Debt (Cash)	-7.3	-16.4	-5.5	60.5	201.6	93.2	-38.6	-183.3	-329.4	-476.8

Balance Sheet (A$m)	2017A	2018A	2019A	2020F	2021F	2022F	2023F	2024F	2025F	2026F
Cash	7.3	16.4	5.5	143.8	2.7	86.1	192.9	312.6	433.7	581.0
Total Assets	14.5	30.3	29.4	257.7	245.0	354.8	463.6	583.3	704.1	850.7
Total Debt	0.0	0.0	0.0	204.3	204.3	179.3	154.3	129.3	104.3	104.3
Total Liabilities	1.1	1.5	1.2	205.8	205.8	206.2	185.2	160.2	134.8	134.1
Shareholders' Funds	13.4	28.7	28.3	51.9	39.1	148.6	278.4	423.1	569.3	716.7

Ratios	2017A	2018A	2019A	2020F	2021F	2022F	2023F	2024F	2025F	2026F
Net Debt/Equity (%)	-54.8%	-57.0%	-19.4%	116.6%	515.0%	62.7%	-13.9%	-43.3%	-57.9%	-66.5%
Interest Cover (x)	nm	nm	nm	nm	0.2	6.4	9.2	14.6	29.6	nm
Return on Equity (%)	nm	nm	nm	nm	nm	119.7%	62.4%	42.3%	30.2%	23.5%

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Significant ore reserve increase at Arcadia

PSC announced a 39% increase in the ore reserve estimate to 37.4Mt

On 20 November 2019, PSC announced a significant increase in the ore reserve estimate at its flagship Arcadia lithium project. The upgraded ore reserve of 37.4Mt (Figure 1) grading 1.22% Li_2O (lithium oxide) and 121ppm Ta_2O_5 (tantalum oxide), represented a 39% increase when compared with the ore reserve estimate in December 2017. As per the latest estimate, the mine contains ~457,000 tonnes of Li_2O (1.12Mt of Lithium Carbonate Equivalent) and 10 million pounds of Ta_2O_5.

Figure 1: Latest ore reserve estimate of Arcadia lithium project

Arcadia Ore Reserve Estimate					
Category	Tonnes (Mt)	Lithium Oxide (%)	Tantalum Oxide (ppm)	Lithium Oxide (kt)	Tantalum Oxide (Mlbs)
Proved	11.3	1.28%	114	144	2.8
Probable	26.1	1.20%	124	314	7.2
Total	**37.4**	**1.22%**	**121**	**457**	**10.0**

Source: Company

We believe the reserve upgrade news is a major boost to PSC's outlook as it reduces the risks associated with grade control and orebody knowledge, with ~30% of the ore reserve in the 'proved' category. Furthermore, the higher reserve estimate has led to an increase in the mine life estimate from 12 years to 15.5 years, based on a 2.4Mtpa operation.

2019 DFS highlights more favourable project economics

The increased ore reserve and mine life estimate have led to an optimised definitive feasibility study (DFS) to reflect the revised project economics. On 12 December 2019, PSC released the outcomes of its latest DFS, which we believe, are way superior to the results of the DFS conducted in November 2018 (Figure 2).

Rapid payback period of 1.5 years highlights the superior financial strength of the project

To begin with, the rapid payback period of ~1.5 years (vs. 2.5 years) from the commencement of production (expected in 2022) highlights the superior financial strength of the project. The post-tax NPV_{10} (net present value with a 10% discount rate) improved ~41% to US$645m from US$458m in the 2018 DFS, while the post-tax internal rate of return (IRR) climbed to 70% from 42%. Moreover, the latest capex figure reduced ~2% to US$162m from US$165m in 2018 DFS.

However, the average annual product production rate for spodumene concentrates decreased ~18% to 173,000tpa in 2019 DFS. Likewise, petalite production reduced ~44% to 122,000tpa from 216,000tpa previously. This was largely due to lower head grade and recovery estimates as per the 2019 DFS. Furthermore, LOM cash operating cost estimate rose 24% to US$344/t from US$278/t in the latest DFS.

Despite the lower production rate in the 2019 DFS, the key financial feasibility metrics such as LOM revenue, EBITDA, operating margin, NPV and IRR revenues have all improved significantly. This is mainly driven by the substantial increase in the petalite concentrate price assumption to US$818/t (weighted average price of chemical and technical grade petalite concentrate) from US$457/t in the 2018 DFS. Similarly, the latest DFS assumes a higher price of spodumene (US$701/t vs. US$689/t in the 2018 DFS).

Figure 2: Arcadia Project highlights as per the last two released DFS

Particulars	2019 DFS	2018 DFS
Life of mine modelled (All open pit) (Years)	15.5	12
Average lithia head grade (%)	1.22%	1.35%
Average lithia recovery (%)	55.2%	70.0%
Average life of mine spodumene production (Ktpa)	173	212
Average life of mine petalite production (Ktpa)	122	216
Average life of mine cash operating cost (FOB) (USD/t)	344	278
LOM revenue (US$m)	3,420	2,934
Payback period (years)	1.5	2.5
Post-Tax NPV (US$m)	645	458
Post-Tax NPV IRR	70%	42%
Project capital estimate (US$m)	162	165
Average annual EBITDA (US$m)	114	109
Operating Margin	43%	38%

Source: Company

Technical grade ultra-low iron petalite prices to command a premium

In the recently concluded DFS, technical grade ultra-low iron 4% petalite concentrate (US$894/t) was assigned a price premium of 28% and 85%, respectively, over chemical-grade spodumene concentrate (US$701/t) and chemical-grade petalite concentrate (US$483/t).

PSC to focus on the glass and ceramics market owing to premium prices commanded by ultra-low iron petalite

As per a report published in July 2019 by a leading market analysis firm, Benchmark Mineral Intelligence, currently there are only two global producers of low-iron lithium concentrates that meet the glass and ceramics market specifications, thus, providing PSC with a strong competitive advantage. We expect PSC to sustain the premium pricing in the technical grade ultra-low iron petalite space as it plans to become the largest petalite producer in the world.

While PSC's management views the battery market (relates to use of spodumene) as a key driver of lithium demand growth, it plans to remain focused on the glass and ceramics market where it can establish itself as a major high-quality supplier of petalite and command premium pricing.

Key financing agreement with Afreximbank

PSC has appointed Afreximbank to arrange a US$143m project finance debt facility

PSC achieved a critical milestone in its development plan for Arcadia when it entered into a project finance debt facility with African Export-Import Bank (Afreximbank) in December 2019. Afreximbank is expected to arrange and manage the primary syndication of a US$143m project finance debt facility, out of which Afreximbank is proposing to fund US$75m of the facility. The US$143m facility should be sufficient to fund ~90% of the project costs for the Arcadia mine. Afreximbank is one of the largest African development banks with significant experience in financing projects in Zimbabwe. Importantly, this project will be the first African lithium mine to attract debt finance. Moreover, with debt funding in place, the company needs to raise limited funds through equity which will avoid further dilution for shareholders.

Another key partner in Uranium One

PSC's MoU with Uranium One may result in more offtake from Arcadia as well as funding for the project

The same day that PSC announced the updated DFS it also announced an MoU with Uranium One for potential Arcadia offtake as well as an investment in PSC. Uranium One is a Canadian uranium miner which the Russian state-owned nuclear energy company Rosatom acquired in 2013. The company is one of the world's largest uranium producers with assets in Kazakhstan, the US, Tanzania and elsewhere. The willingness of Uranium One to enter into negotiations modes well for closure of a funding back for the mine.

Figure 3: DCF valuation for PSC

Valuation (AUD)	Base case	Bull case
Present value of FCF (m)	424.9	653.9
Enterprise Value (m)	**424.9**	**653.9**
Net debt (cash) (m)	60.5	60.5
Minority interest (m)	0.6	0.6
Provisions (m)	0.0	0.0
Financial assets (m)		-
		-
Equity value (m)	363.8	592.7
Share outstanding (Diluted)	453.5	453.5
Implied price (AUD cents)	80.2	130.7
Current price (AUD cents)	23.0	23.0
Upside (%)	248.7%	468.3%

Source: Pitt Street Research

Valuation

With this update we raise our valuation from A$0.44 per share base case / $0.93 per share optimistic case to $0.80 per share base case / $1.31 optimistic case. This was achieved by using the assumptions from the new DFS into our model, as well as changing the price of the assumed additional equity capital raising to 20 cents, from 18 cents.

Our resultant DCF valuations have been summarised below (Figure 3). We believe that a stock re-rating is on the cards given the improved project dynamics as per the 2019 DFS coupled with arrangement of funding from Afreximbank.

Appendix I – Sensitivity to mineral prices

Sensitivity of intrinsic share price to spodumene prices

Average spodumene price (USD/t)	Implied Share Price (AUD cents, base case)	Change in spodumene price	Change in share price
775	69.6	24%	55%
725	59.0	16%	31%
675	48.5	8%	8%
625	**45.0**	**0%**	**0%**
575	27.4	-8%	-39%
525	16.8	-16%	-63%
475	6.3	-24%	-86%

Sensitivity of intrinsic share price to petalite prices

Average petalite price (USD/t)	Implied Share Price (AUD cents, base case)	Change in petalite price	Change in share price
935	53.7	19%	19%
885	51.2	13%	14%
835	48.7	6%	8%
785	**45.0**	**0%**	**0%**
735	43.8	-6%	-3%
685	41.3	-13%	-8%
635	36.8	-19%	-18%

Source: Pitt Street Research

Appendix II – Risks

We see four main risks related to PSC's investment thesis.

1) **Country risk**: Zimbabwe has previously experienced long periods of hyperinflation that has wrecked its economy in the past. The current political regime is favourable to PSC but political stability remains a risk. This risk is somewhat mitigated by the company's SEZ status which provides it the benefit of cost reduction and trade barriers associated with the import of raw materials and capital goods.
2) **Geological risk**: The reserves and resources figures for the Arcadia mine are estimates, and it is possible that their characteristics may differ. There could be a downside risk if a portion of reserves is re-categorised as resources at a later stage.
3) **Currency risk**: PSC will generate revenue by selling a commodity that trades in the US dollar. Also, its cost base is in US dollar but its reporting currency is Australian dollar. This risk is partially mitigated by the SEZ status that provides a significant benefit of operating without currency constraints and allows the company to hold and trade in foreign currency.
4) **Underlying commodity risk:** PSC will generate revenue by largely selling spodumene and petalite. These will further be converted to lithium and tantalum by downstream players. This exposes PSC to commodity price risk, which depends on macroeconomic factors and demand and supply dynamics of the underlying commodity, i.e., lithium.

Please see www.pittstreetresearch.com for our initiating coverage on PSC.

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