

**Speculative**

See key risks on page 8, and early stage company risk warning on page 11. Speculative securities may not be suitable for Retail clients.

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# Alpha HPA Ltd (A4N)

## Positive price & volume update

**Recommendation**  
**Buy** (unchanged)  
**Price**  
**\$0.985**  
**Valuation**  
**\$1.95** (previously \$1.75)  
**Risk**  
**Speculative**

**Sector**  
**Materials**

**Expected Return**

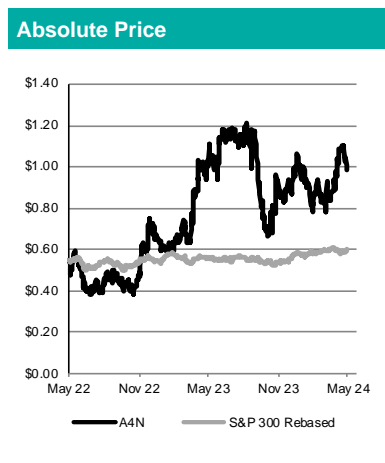
Capital growth	<b>98%</b>
Dividend yield	<b>0%</b>
Total expected return	<b>98%</b>

**Company Data & Ratios**

Enterprise value	<b>\$895m</b>
Market cap	<b>\$920m</b>
Issued capital	<b>934m</b>
Free float	<b>~87%</b>
Avg. daily val. (52wk)	<b>\$2.4m</b>
12 month price range	<b>\$0.645-\$1.25</b>

**Price Performance**

	(1m)	(3m)	(12m)
Price (A\$)	0.92	0.82	0.97
Absolute (%)	7.1	20.9	2.1
Rel market (%)	7.2	17.8	-6.4



SOURCE: IRESS

### Price discovery points to US\$20-123/kg; consultants agree

A4N has provided a comprehensive update covering its market outreach activities with references to price discovery, independent consultant views and volume demand.

**The pricing outlook is much stronger than expected:** Marketing is pointing to HPA equivalent (HPAe) average price range of US\$20-123/kg and an independent consultant's view across the same products, US\$28-125/kg. While realised pricing will also be reflective of product mix, these price ranges are materially stronger than the March 2020 DFS scenarios of US\$15-25/kg and the company's more recent expectations of US\$25-30/kg. We had assumed a basket price of US\$25/kg.

**Demand is also over-reaching planned capacity:** A4N has so far signed Letters of Intent covering 2,290tpa HPAe over 6 end users (1,290tpa added in the last 3 weeks since announcing the \$400m NAIF/EFA debt package) and has follow-up testing underway covering potential demand of more than 25ktpa. Product samples have been sent to customers with indicative total demand of over 30ktpa. Expected HPA First Project plant capacity is 10-12ktpa.

### Next steps: More LOIs; Final DFS then FID

We expect A4N to continue progressing offtake interest to LOI-level agreements over 2024 in preparation for binding sales contracts. A Final DFS is expected this quarter with updated project economics to support all required funding and ultimately a Board approved Final Investment Decision.

### Investment view – Speculative Buy, Valuation \$1.95/sh

As a result of this report we have lifted our (still conservative) basket price outlook to US\$27.50/kg (previously US\$25/kg), increasing our valuation to \$1.95/sh (previously \$1.75/sh). A4N's high purity aluminium products have value adding applications across lithium ion battery, micro-LED and semiconductor manufacturing, technologies at the forefront of the global decarbonising and reshoring themes.

**Earnings Forecast**

Year ending 30 June	2024e	2025e	2026e	2027e
Sales (A\$m)	10	19	179	448
EBITDA (A\$m)	(7)	5	117	336
NPAT (reported) (A\$m)	(9)	(6)	84	210
NPAT (adjusted) (A\$m)	(9)	(6)	84	210
EPS (adjusted) (eps)	(0.9)	(0.6)	8.4	21.2
EPS growth (%)	na	na	na	151%
PER (x)	-106.5x	-160.6x	11.7x	4.7x
FCF Yield (%)	-13%	-29%	-2%	17%
EV/EBITDA (x)	-133.5x	166.0x	7.7x	2.7x
Dividend (eps)	-	-	-	-
Yield (%)	0%	0%	0%	0%
Franking (%)	-	-	-	-
ROE (%)	-8%	-3%	30%	50%

SOURCE: BELL POTTER SECURITIES ESTIMATES

# Positive price & volume update

A4N has provided a comprehensive update covering its market outreach activities with references to price discovery, independent consultant views and volume demand.

## The pricing outlook is much stronger than expected

Market outreach is supporting an expected HPA equivalent (HPAe) average price range of US\$20-123/kg. The outreach has involved extensive technical engagement with potential end users which has matured into commercial discussions.

Importantly the results of A4N's market outreach closely aligns with independent consultant's view across the same products. These consultants (CM Group and Gerson Lehrman Group) have conducted a detailed analysis of the global HPA market, involving engagement with key market participants (current producers and customers across several geographies).

While A4N's realised basket price will also be reflective of product mix, the indicative price ranges are materially stronger than the March 2020 DFS scenarios of US\$15-25/kg and the company's more recent expectations of US\$25-30/kg. We had assumed a basket price of US\$25/kg in our modelling and valuation.

**Table 1 - Price discovery & independent consultant views US\$/kg**

Product	Alpha HPA Market Discovery US\$/kg				Independent consultants US\$/kg		
	Low	High	Demand vol weighted average	HPAe	CM Group	GLG	HPAe
5N purity Aluminium Nitrate	15.0	350.0	18.5	123.3	n/a	20 - 30	125.0
4N5+ Purity Alumina	20.0	68.5	32.0	32.0	39.3	n/a	39.3
4N5+ Purity Alumina Pucks	20.0	30.0	25.0	25.0	35.0	n/a	35.0
4N5+ Purity Gamma Alumina	13.0	30.0	20.3	20.3	27.5	n/a	27.5
4N5+ Purity Alumina Trihydrate	12.5	20.0	15.0	23.1	19.4	n/a	29.8
4N5+ Purity Nano-Alumina	33.0	44.0	43.0	43.0	50.0	n/a	50.0
<b>Average</b>				<b>44.5</b>			<b>51.1</b>

SOURCE: COMPANY DATA AND BELL POTTER SECURITIES ESTIMATES

CM Group's base case price forecast (in real terms), after adopting weightings based on A4N's intended product mix, is outlined in the following table. This outlook is based on a global outlook and before value is added for product customisation and lower jurisdiction of supply risk.

**Table 2 - CM Group Price Forecast - High Purity Aluminas (US\$/tonne)**

US\$/t HPAe	FY25	FY26	FY27	FY28	FY29	FY30
4N5+ Purity Alumina	24,631	32,875	39,344	39,625	39,625	39,625
4N5+ Purity Alumina Pucks	18,625	27,500	35,000	35,000	35,000	35,000
4N5+ Purity Gamma Alumina	18,333	21,667	27,500	27,917	27,917	28,750
4N5+ Purity Alumina Trihydrate	11,500	15,500	19,375	19,688	19,688	19,688
4N5+ Purity Nano-Alumina	45,000	50,000	50,000	50,000	50,000	50,000
<b>Average</b>	<b>23,618</b>	<b>29,508</b>	<b>34,244</b>	<b>34,446</b>	<b>34,446</b>	<b>34,613</b>

SOURCE: COMPANY DATA AND BELL POTTER SECURITIES ESTIMATES

## Demand is also over-reaching planned project capacity

A4N is actively corralling customer interest from sample testing stage into offtake LOIs. To date, A4N has LOI's covering 2,290tpa HP Ae over 6 end users. This activity has increased materially since A4N announced the HPA First Project's \$400m Northern Australia Infrastructure Facility / Export Finance Australia debt facility, with LOIs covering 1,290tpa added in the last three weeks.

The following table illustrates A4N's funnelling of potential customer interest into LOIs. Parties completing follow-up product testing represent potential demand of more than 25ktpa HP Ae; product samples have been sent to customers with indicative total demand of over 30ktpa. These volumes compare with expected HPA First Project capacity of 10-12ktpa HP Ae.

We expect A4N to continue progressing offtake interest to LOI-level agreements over 2024 in preparation for binding sales contracts. The independent consulting group engaged to conduct the detailed market analysis noted that prices for niche products like +4N HPA are typically set through confidential bilateral agreements between customers and qualified suppliers.

**Table 3 - Prospective customer funnel**

Engagement Phase	Volume indication tpa HP Ae
NDA signed	29,150
Product samples sent	30,050
Positive feedback received on samples sent	25,900
Follow-up testing underway	25,400
LOIs signed (6 end-users to date)	up to 2,290

SOURCE: A4N

## Next steps: Offtake LOIs & final DFS in lead-up to FID

In relation to the HPA First Project, over the remainder of the current quarter we expect:

- **Offtake LOIs:** A4N to secure offtake agreements in support of the NAIF/EFA funding across its target markets, including pull-through from its Alpha Sapphire subsidiary.
- **Final DFS:** A comprehensive, bankable update on project economics including guidance on product mix (across HPA, aluminium nitrate, aluminium sulphate), pricing expectations, target market split, operating costs and capital expenditure requirements.
- **FID:** Securing all required HPA First Project funding and Board approvals.

## Funding mix: Cornerstoned by NAIF/EFA debt & grants

We estimate a capital cost for the HPA First Project of around \$500m, to be covered by:

- **NAIF & EFA funding of \$320-400m (previous estimate \$300m):** As announced.
- **Commonwealth and Queensland State government grants of at least \$67m:** See Table 3 in this report.
- **Strategic investments/equity/other of \$100-150m:** We expect that strategic investors and equity markets (ORI is a 5% A4N shareholder) will be supportive of the remaining capital requirement.

## Changes to earnings estimates

We have now incorporated a HPAe basket price of US\$27.50/kg (previously US\$25/kg), leading to earnings changes as outlined in the following table.

**Table 4 - Changes to earnings estimates**

Year ending 30 June	2024e	2025e	2026e	2025e	2026e	2027e	2025e	2026e	2027e
Revenue A\$m	16	149	373	19	179	448	20%	20%	20%
EBITDA A\$m	2	87	262	5	117	336	146%	34%	29%
NPAT A\$m	-9	58	164	-6	84	210	NA	44%	28%
EPS Acps	-1	6	17	-1	8	21	NA	44%	28%
DPS Acps	0	0	0	0	0	0	-	-	-
Valuation	1.75			1.95			11%		

SOURCE: COMPANY DATA AND BELL POTTER SECURITIES ESTIMATES

# Valuation summary

Our base case A4N valuation of \$1.95/sh (previously \$1.75/sh) is based on:

- **Timing:** HPA First Project FID by mid-2024 for development over 2024-25 and first production from 2026.
- **Pricing:** HPAe basket price of US\$27.50/kg (US\$27,500/t) compared with A4N's market outreach seeing prices of US\$20-123/kg and an independent consultant assessments at US\$28-125/kg.
- **Throughput:** HPA First Project Stage 2 producing 10,000tpa HPAe compared with possible rates of 12,000tpa given revised project scope and additional product lines.
- **Opex:** US\$7/kg compared with the DFS estimate of ~US\$5.9/kg.
- **Capex & capital requirements:** Capital cost of \$530m compared with the DFS estimate of \$308m. We have assumed around \$320m will be funded by debt, \$67m from already announced government grants and around \$125m by equity, potentially from strategic investors.

Steady state HPA First Project annual EBITDA under these assumptions is ~\$330m.

- **Alpha Sapphire:** Stand-alone project consisting of 100 sapphire growth units generating US\$52-69m (\$81-109m) annual EBITDA on a conservative EBITDA multiple of 5x, less capex and with a 50% risk discount applied.

**Table 5 - Risked & diluted valuation summary**

Product price scenario	1	2	3
		<b>Base case</b>	
<b>Price - 4N HPAe basket US\$/t</b>	<b>25,000</b>	<b>27,500</b>	<b>30,000</b>
<b>HPA First Project</b>			
<b>Unrisked NPV (10% discount rate) \$m</b>	<b>1,404</b>	<b>1,685</b>	<b>1,967</b>
Risk discount %	15%		
<b>Risked NPV (10% discount rate) \$m</b>	<b>1,193</b>	<b>1,433</b>	<b>1,672</b>
Other (Canada potential, 80% risked) \$m	140	169	197
Alpha Sapphire (100 growth units, 50% risked)	170	170	170
Other (downstream & other) \$m	84	100	117
Corporate costs \$m	-50		
<b>Enterprise value \$m</b>	<b>1,537</b>	<b>1,821</b>	<b>2,105</b>
Net debt / (cash) \$m	-25		
<b>Equity valuation (risked, undiluted) \$m</b>	<b>1,562</b>	<b>1,846</b>	<b>2,130</b>
Assumed capital raise \$m	125		
Assumed raise price \$/sh	0.94		
Government grants \$m	97		
Current shares on issue m	934		
In the money options m	12		
Assumed capital raising dilution m	133		
<b>Diluted shares on issue m</b>	<b>1,079</b>		
Net debt / (cash) (including options, assumed raising & grants) \$m	-258		
<b>Equity valuation (risked, diluted) \$m</b>	<b>1,795</b>	<b>2,079</b>	<b>2,363</b>
<b>Equity valuation (risked, diluted) \$/sh</b>	<b>1.70</b>	<b>1.95</b>	<b>2.20</b>

SOURCE: COMPANY DATA AND BELL POTTER SECURITIES ESTIMATES

## HPA First Project product suite

**Table 6 - A4N's product suite & applications**

KEY APPLICATION	Lithium ion batteries			LEDs		Semi-conductors	Other
	Cathode	Separator	Anode	LED lights	Micro-LEDs (displays)		
<b>A4N PRODUCT</b>							
<b>Aluminium Precursors</b>							
Aluminium nitrate	HPA particle coating		HPA particle coating (anode active materials)	Phosphors for white LEDs	Nano-size phosphors		Catalysts & YAG laser crystals
Aluminium sulphate	Sulphate blending (NCA & NCMA)						
<b>High Purity Alumina</b>							
HPA powder (gamma phase)	High nickel cathode coating			Phosphors for white LEDs			Specialty catalysts
HPA tablets (alpha phase)				Sapphire glass wafers (substrate)	Sapphire glass wafers (substrate)		Specialty ceramics
HPA powder (nano-alumina)	High nickel cathode coating	HPA layer coating			Nano-size phosphors	Chemical-Mechanical Polishing	
5N ultra high purity alumina tri-hydrate	High nickel cathode doping						HPA precursor, direct lithium extraction, aluminate glass
HPA Powder (alpha phase)		Boehmite layer coating		LED phosphors		Thermal interface material	Specialty ceramics

SOURCE: COMPANY DATA AND BELL POTTER SECURITIES ESTIMATES

## Committed government grants

**Table 7 - A4N government grants**

Source	Program	Purpose	Announced	\$m
Commonwealth Government	Modern Manufacturing Initiative	HPA First Project	16/03/2022	45
Commonwealth Government	Critical Minerals Accelerator Initiative	Stage 1 - PPF	28/04/2022	16
Queensland Government	Industry Partnership Program	HPA First Project	5/04/2023	22
<b>Total grants</b>				<b>82</b>
Stage 1 grants				16
Stage 2 grants				67
<b>Alpha Sapphire</b>	<b>QCMETF</b>	<b>Alpha Sapphire Phase A&amp;B</b>	<b>28/09/2023</b>	<b>30</b>

SOURCE: COMPANY DATA AND BELL POTTER SECURITIES ESTIMATES

# Alpha HPA Ltd summary

## Company description

A4N's HPA First Project is aiming to supply high-purity aluminium-based products to the lithium ion battery, light emitting diode (LED) and semiconductor manufacturing sectors. The project's proprietary technology is expected to disrupt incumbent HPA production through significantly lower unit costs. Results of a March 2020 DFS outlined a 10,000tpa 4N HPA project with a capital cost of \$308m and pre-tax annual cash flow of \$133-280m at 4N HPA prices ranging US\$15,000-25,000/t.

In June 2021, a HPA First Project Stage 1 was estimated to have revenues of \$10-15m and generate free cash flow of \$1.5-5.0m from aluminium precursor production of 200tpa. This project was subsequently scaled up to produce +350ktpa aluminium nitrates and additional high purity alumina and high purity boehmite production. Production at Stage 1 commenced in late 2022.

The HPA First Project is a solvent extraction process using an aluminium chemical feedstock purchased on globally traded markets. Orica Ltd (ORI) and A4N have executed a definitive agreement for ORI's supply of process reagents and for by-product offtake. This agreement has required significant third party due diligence of the HPA First Project process. ORI is a 5% shareholder in A4N.

## ALPHA SAPPHIRE: A4N'S DOWNSTREAM SUBSIDIARY

In March 2023, A4N announced it had entered a LOI with Austrian technology providers Ebner Industrieofenbau GmbH (Ebner) and Ebner subsidiary Fametec GmbH (Fametec) to establish sapphire glass manufacturing in Australia using A4N's HPA products and Ebner-Fametec's sapphire growth technology. In June 2023, the groups announced a potential expansion and the staged rollout to over 1,000 units. This business is housed under A4N's wholly owned subsidiary Alpha Sapphire.

In September 2023, Alpha Sapphire was awarded up to \$30m in project funding to accelerate the rollout of an initial 50 sapphire growth units under the LOI with Ebner Fametec.

## Investment view – Speculative Buy, Valuation \$1.95/sh

As a result of this report we have lifted our (still conservative) basket price outlook to US\$27.50/kg (previously US\$25/kg), increasing our valuation to \$1.95/sh (previously \$1.75/sh). A4N's high purity aluminium products have value adding applications across lithium ion battery, micro-LED and semiconductor manufacturing, technologies at the forefront of the global decarbonising and reshoring themes.

## Risks

Risk to an investment in A4N include, but are not limited to:

- **Commodity price and exchange rate fluctuations.** The future earnings and valuations of development and operating assets and companies are subject to fluctuations in underlying commodity prices and foreign currency exchange rates.
- **Technology:** Projects may be reliant on commercialisation of new production processes and methodologies which have yet been proven on a large scale. Technology may be replicated by competitors resulting in a loss of market share.
- **Infrastructure access.** Projects are reliant upon access to transport and pipeline infrastructure. Access to infrastructure is often subject to contractual agreements, permits and capacity allocations. Agreements are typically long-term in nature. Infrastructure can be subject to outages as a result of weather events or the actions of third party providers.
- **Operating and capital cost fluctuations.** Markets for raw material inputs and labour can fluctuate and cause significant differences between planned and actual operating and capital costs. Key operating costs are linked to commodity and labour markets. Companies are also exposed to costs associated with future land rehabilitation.
- **Sovereign risks.** Companies' assets are subject to the sovereign risk of the country of location and may also be exposed to the sovereign risks of major offtake customers.
- **Regulatory changes.** Changes to the regulation of infrastructure and taxation (among other things) can impact the earnings and valuations of companies.
- **Environmental risks.** Companies are exposed to risks associated with environmental degradation as a result of their production processes.
- **Operating and development risks.** Companies' assets are subject to risks associated with their operation and development. Development assets can be subject to approvals timelines or weather events, causing delays to commissioning and commercial production.
- **Occupational health and safety (OH&S) risks.** Companies are exposed to OH&S risks.
- **Funding and capital management risks.** Funding and capital management risks can include access to debt and equity finance, maintaining covenants on debt finance, managing dividend payments and managing debt repayments.
- **Merger/acquisition risks.** Risks associated with value transferred during merger and acquisition activity.
- **Impact of pandemic infection such as Coronavirus disease (COVID-19).** This may have an adverse impact on the macro economic factors, including the mobility of labour, which can impact asset valuations.



Table 8 - Financial summary

Date	8/05/24							Bell Potter Securities								
Price	AS/sh	0.985							Stuart Howe (showe@bellpotter.com.au, +61 3 9235 1856)							
Valuation	AS/sh	1.95														
<b>PROFIT AND LOSS</b>												<b>FINANCIAL RATIOS</b>				
Year ending 30 June	Unit	2023a	2024e	2025e	2026e	2027e	Year ending 30 June	Unit	2023a	2024e	2025e	2026e	2027e			
Revenue	\$m	2	10	19	179	448	<b>VALUATION</b>									
Expenses	\$m	(17)	(16)	(14)	(62)	(111)	EPS	Ac/sh	(2)	(1)	(1)	8	21			
<b>EBITDA</b>	\$m	<b>(15)</b>	<b>(7)</b>	<b>5</b>	<b>117</b>	<b>336</b>	EPS growth (Acps)	%	na	na	na	na	151%			
Depreciation & amortisation	\$m	(1)	(2)	(2)	(10)	(18)	PER	x	-52.7x	-106.5x	-160.6x	11.7x	4.7x			
EBIT	\$m	(16)	(9)	4	107	319	DPS	Ac/sh	-	-	-	-	-			
Net interest expense	\$m	0	-	(10)	(19)	(19)	Franking	%	0%	0%	0%	0%	0%			
Profit before tax	\$m	(16)	(9)	(6)	88	299	Yield	%	0%	0%	0%	0%	0%			
Tax expense	\$m	-	-	-	(4)	(90)	FCF/share	Ac/sh	(2.3)	(12.5)	(28.5)	(2.1)	16.5			
<b>NPAT (reported)</b>	\$m	<b>(16)</b>	<b>(9)</b>	<b>(6)</b>	<b>84</b>	<b>210</b>	FCF yield	%	-2%	-13%	-29%	-2%	17%			
<b>NPAT (adjusted)</b>	\$m	<b>(16)</b>	<b>(9)</b>	<b>(6)</b>	<b>84</b>	<b>210</b>	EV/EBITDA	x	-59.2x	-133.5x	166.0x	7.7x	2.7x			
<b>CASH FLOW STATEMENT</b>												<b>LIQUIDITY &amp; LEVERAGE</b>				
Year ending 30 June	Unit	2023a	2024e	2025e	2026e	2027e	Net debt / (cash)	\$m	(21)	(30)	252	273	109			
<b>OPERATING CASH FLOW</b>							Net debt / Equity	%	-37%	-17%	108%	86%	21%			
Receipts from customers	\$m	0	9	19	145	394	Net debt / Net debt + Equity	%	-58%	-21%	52%	46%	17%			
Payments to suppliers and employees	\$m	(15)	(19)	(14)	(57)	(106)	Net debt / EBITDA	x	1.4x	4.5x	46.7x	2.3x	0.3x			
Tax paid	\$m	-	-	-	(4)	(90)	EBITDA / net int expense	x	35.4x	0.0x	0.6x	6.1x	17.5x			
Net interest	\$m	0	-	(10)	(19)	(19)	<b>PROFITABILITY RATIOS</b>									
Other	\$m	4	-	-	-	-	EBITDA margin	%	-932%	-70%	28%	65%	75%			
<b>Operating cash flow</b>	\$m	<b>(11)</b>	<b>(10)</b>	<b>(4)</b>	<b>64</b>	<b>179</b>	EBIT margin	%	-993%	-89%	18%	60%	71%			
<b>INVESTING CASH FLOW</b>							Return on assets	%	-26%	-7%	-2%	14%	27%			
Capex	\$m	(24)	(106)	(345)	(85)	(15)	Return on equity	%	-30%	-8%	-3%	30%	50%			
Acquisitions	\$m	-	-	-	-	-	<b>ASSUMPTIONS - Prices (nominal)</b>									
Other	\$m	16	0	67	-	-	<b>Year ending 30 June</b>	<b>Unit</b>	<b>2023a</b>	<b>2024e</b>	<b>2025e</b>	<b>2026e</b>	<b>2027e</b>			
<b>Investing cash flow</b>	\$m	<b>(8)</b>	<b>(106)</b>	<b>(278)</b>	<b>(85)</b>	<b>(15)</b>	4N HPA price	US\$/t	25,000	28,750	30,000	30,000	30,000			
<b>FINANCING CASH FLOW</b>							4N HPA price	AS/t	37,144	42,208	42,857	42,857	42,857			
Debt proceeds/(repayments)	\$m	(0)	-	320	-	-	FX	US\$/A\$	0.67	0.68	0.70	0.70	0.70			
Dividends paid	\$m	-	-	-	-	-	<b>ASSUMPTIONS - Sales (equity)</b>									
Proceeds from share issues (net)	\$m	23	125	-	-	-	<b>Year ending 30 June</b>	<b>Unit</b>	<b>2023a</b>	<b>2024e</b>	<b>2025e</b>	<b>2026e</b>	<b>2027e</b>			
Other	\$m	-	-	-	-	-	4N HPAe sales	t	-	-	-	3,726	10,000			
<b>Financing cash flow</b>	\$m	<b>23</b>	<b>125</b>	<b>320</b>	<b>-</b>	<b>-</b>	5N Al-Precursor #1 - Al-Nitrate	t	98	175	175	175	175			
<b>Change in cash</b>	\$m	<b>4</b>	<b>9</b>	<b>38</b>	<b>(21)</b>	<b>164</b>	5N Al-Precursor #2 - Al-Sulfate	t	98	175	175	175	175			
Free cash flow	\$m	(19)	(116)	(282)	(21)	164	<b>VALUATION</b>									
<b>BALANCE SHEET</b>												<b>Product price scenario</b>				
Year ending 30 June	Unit	2023a	2024e	2025e	2026e	2027e										
<b>ASSETS</b>							<b>1</b>									
Cash	\$m	21	30	68	47	211	<b>2</b>									
Receivables	\$m	2	2	2	36	90	<b>3</b>									
Inventories	\$m	1	2	1	6	11	<b>Base case</b>									
Capital assets	\$m	38	142	484	560	557	4N HPAe price US\$/t	25,000	27,500	30,000						
Other assets	\$m	6	6	6	6	6	HPA First project \$m									
<b>Total assets</b>	\$m	<b>67</b>	<b>181</b>	<b>562</b>	<b>655</b>	<b>875</b>	Unrisked NPV (8% discount rate)	1,404	1,685	1,967						
<b>LIABILITIES</b>							Risk discount	15%								
Creditors	\$m	5	3	3	12	22	Riskd NPV	1,193	1,433	1,672						
Borrowings	\$m	-	-	320	320	320	Other (Canada potential, 90% risked)	140	169	197						
Provisions	\$m	-	-	-	-	-	Alpha Sapphire (100 growth units, 50% risked)	170	170	170						
Other liabilities	\$m	6	6	6	6	6	Other (downstream & other)	84	100	117						
<b>Total liabilities</b>	\$m	<b>11</b>	<b>9</b>	<b>328</b>	<b>338</b>	<b>348</b>	Corporate costs \$m	(50)								
<b>NET ASSETS</b>							Enterprise value \$m	1,537	1,821	2,105						
Share capital	\$m	128	253	320	320	320	Net debt / (cash) \$m	(25)								
Reserves	\$m	8	8	8	8	8	<b>Equity valuation (riskd, undiluted) \$m</b>	<b>1,562</b>	<b>1,846</b>	<b>2,130</b>						
Accumulated losses	\$m	(80)	(89)	(95)	(11)	198	Assumed capital raise \$m	125								
Non-controlling interest	\$m	-	-	-	-	-	Assumed raise price \$/sh	0.94								
<b>SHAREHOLDER EQUITY</b>	\$m	<b>56</b>	<b>172</b>	<b>233</b>	<b>317</b>	<b>527</b>	Current shares on issue m	934								
Weighted average shares	m	839	927	991	991	991	In the money options m	12								
							Assumed capital raising dilution m	133								
							<b>Diluted shares on issue m</b>	<b>1,079</b>								
							Net debt / (cash) (including options & assumed raising) \$m	(258)								
							Equity valuation (riskd, diluted) \$m	1,795	2,079	2,363						
							<b>Equity valuation (riskd, diluted) \$/sh</b>	<b>1.70</b>	<b>1.95</b>	<b>2.20</b>						

SOURCE: BELL POTTER SECURITIES ESTIMATES

**Recommendation structure**

**Buy:** Expect >15% total return on a 12 month view. For stocks regarded as 'Speculative' a return of >30% is expected.

**Hold:** Expect total return between -5% and 15% on a 12 month view

**Sell:** Expect <-5% total return on a 12 month view

*Speculative Investments are either start-up enterprises with nil or only prospective operations or recently commenced operations with only forecast cash flows, or companies that have commenced operations or have been in operation for some time but have only forecast cash flows and/or a stressed balance sheet.*

*Such investments may carry an exceptionally high level of capital risk and volatility of returns.*

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