Vast Resources plc

Vast can see clearly now, the rain has gone

19 October, 2017

Vast is on the cusp of emerging from a transitional period. The company is close to securing funds to execute its expansion plans in Romania, which should result in significantly higher production and lower operating costs. The key to this strategy is building a new processing facility for the company's Manaila mine and developing a second open pit at the Carlibaba prospect. In Zimbabwe, the construction of the sulphide plant is almost complete, which will also boost gold production and allow higher-grade sulphide ore to be processed.

Turn-around story. New CEO, Roy Pitchford, has brought welcome focus to Vast, but it hasn't been plain sailing in Romania over the past year. Lack of funds for remedial capex has hampered optimisation to increase efficiencies and expand production at Manaila, compounded by unseasonably harsh winter conditions. However, remedial action taken plus ongoing capital expenditure is starting to produce tangible progress and the production profile has returned to a clear upwards trajectory. If Vast successfully ramps up production at Manaila, it will be well-positioned to benefit from the forecast up-tick in copper demand, driven by the global build-out of the electric vehicle industry.

New plant on the critical path. The planned new metallurgical processing facility at Manaila will help Vast realise it's strategy to expand production, whilst de-bottlenecking operations, simplifying transport and logistics and negating further cold-weather issues. Vast estimates that a new plant would reduce opex at Manaila by 25%.

Zinc and gold ramping up. Vast is steadily increasing the production of a separate zinc concentrate, and pyrite concentrate containing gold and silver. This adds another two revenue streams to Manaila, and increases the saleability of the existing copper concentrate by reducing the zinc which is a deleterious element within the copper con.

Waiting on Baita. Vast is raring to press ahead with recommissioning the high-grade Baita Plai polymetallic mine in Romania. With considerable mine infrastructure in place, Vast is targeting a low-capital intensity re-start. The execution of the final association licence now seems to be moving closer, according to Vast's update released yesterday.

Pickstone is also turning the corner. The construction of the new sulphide plant is nearing completion which will expand milling capacity by 75%, increase the milled grade from the current c.2g/t Au to between 3g/t and 4g/t Au over a 9-month period.

Strategic investment. Vast needs up to $10m in further funding to fully execute its growth strategy in Romania. The funds, provided by debt, will be directed towards the construction of a new metallurgical processing facility at Manaila, as well as providing the re-start capex for the Baita Plai mine. A number of funding options are on the table, and the company is evaluating several proposals with the aim of minimising dilution and retaining a greater proportion of the group's assets in Romania. Watch this space!!!

Valuation. We currently value Vast shares at **1p/sh** using a sum-of-the-parts valuation method. We base this on our DCF models of Vast's three main assets. This represents a material uplift of the current share price, or put another way, our indicative valuation suggests that Vast is trading at half our NAV estimate. We see scope for further value accretion if Vast delivers on its expansion plans, and on the back of higher metal prices.

Company Data

EPIC	VAST
Price	0.51p
52 week Hi/Lo	0.61p / 0.11p
Market cap	£24m
ED valuation/share	1.03p
Shares in issue	4,684m
Avg. daily volume	78m

Share Price, p

Source: ADVFN

Company Description

Vast Resources plc is an AIM-quoted resource development company that converted from an exploration company to a mining company in 2015, with two operating mines; the Manaila polymetallic mine in Romania (100%), and the Pickstone-Peerless gold mine (25%) in Zimbabwe.

Vast has several growth projects, the most important being the planned re-start of the Baita Plai polymetallic mine (80%) in Romania, which the company plans to commission shortly.

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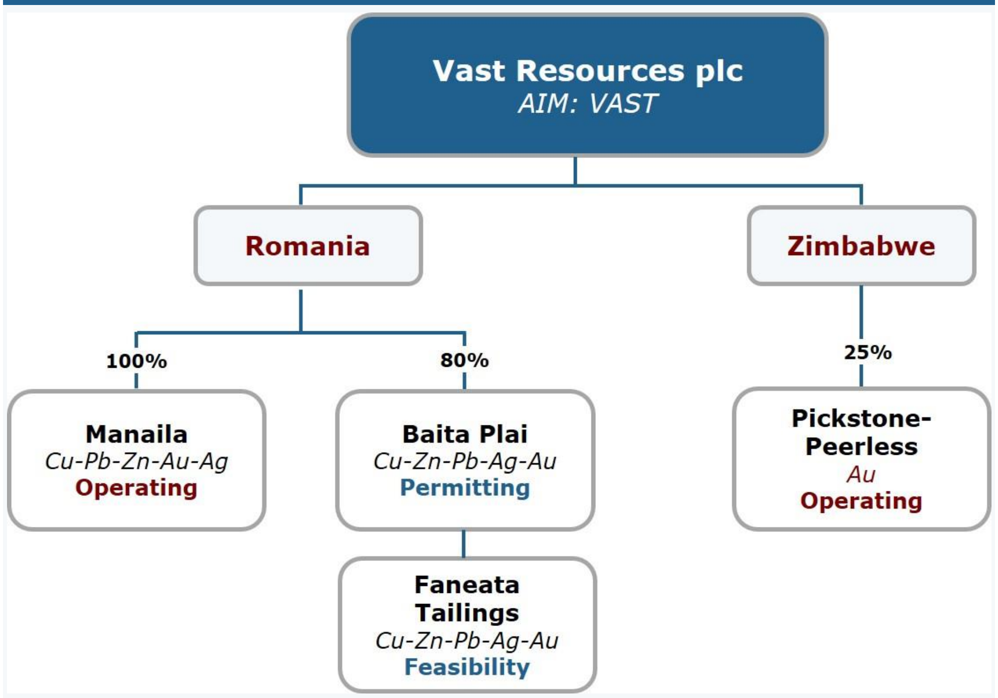
Overview and current focus issues

Vast Resources plc is an AIM-quoted resource development company with two operating mines; the Manaila polymetallic mine in Romania (100%), and the Pickstone-Peerless gold mine (25%) in Zimbabwe. Vast has several growth projects, the most important being the planned re-start of the Baita Plai polymetallic mine (80%) in Romania, which the company plans to commission shortly.

Location of Vast's two operating centres; Pickstone in Zimbabwe, Manaila and Baita Plai in Romania

Source: Vast Resources

Summarised company and project structure



Source: Vast Resources, ED

Vast is starting to move out of a tricky transitional period

After making the move from explorer to producer in 2015, Vast is emerging from a transitional period which has seen the company ramp up and optimise Manaila, progress permitting at Baita Plai, and press ahead with the commissioning of the sulphide plant at Pickstone-Peerless. After a couple of challenging quarters, production at Manaila is back on track and operations have returned to normal at Pickstone. At Baita Plai, permitting has been a longer, and more challenging process than originally envisaged but the grant of the right to mine is expected shortly. This has been a frustrating time for shareholders, but things are slowly starting to come together, and we expect the company to gain further traction over the next 6 to 12 months.

Further funding is required to execute the corporate vision

Vast needs $10m in further funding to fully execute its growth strategy in Romania. The funds will be directed towards the construction of a new metallurgical processing facility at Manaila, as well as providing the re-start capex for the Baita Plai mine, and other expansion objectives. Vast has announced various options to provide this funding including discussions with strategic investors in Romania, and with Sub-Sahara Goldia Investments in Zimbabwe.

At present, the choice of funding partner and the mechanism to achieve the funding remains unclear. However, Vast reports that as a result of the consistently positive results delivered from the drilling and development programme at the Carlibaba Deposit, in conjunction with the 2018 off-take bidding process for the concentrate production, Vast has been presented with a number of potential non-dilutionary financing options to advance its Romanian interests. This may include a non-dilutive debt component of c.$5m which will reduce the requirement from the company's other strategic investors, reducing dilution and allowing Vast to retain a greater proportion of the group's assets in Romania. Watch this space!!!

Zim provided the leverage to fund Vast's Romanian assets

The partial disposal of a non-controlling interest in Pickstone-Peerless (50% down to 25%) has allowed Vast to re-focus on the development of the company's Romanian assets. Whilst this achieves the objective of deleveraging exposure to Zimbabwe and the current economic/political turmoil and restrictive exchange controls, it more importantly allows the company to press ahead with expansion and optimisation in Romania.

Vast retains foothold in Zim, first-mover advantage in Romania

We forecast Pickstone to continue generating free-cash flow, which due to exchange controls will continue to be ploughed back into the development of the asset. It is important to note that Vast retains voting control, and in combination with the management's in-country experience, the company retains a strong foot-hold in the country. Vast also partners with a strong, well-funded co-investor in the country. Given the significant barriers to entry to operating in the country, we believe that this puts Vast in a good position to take advantage of further project acquisitions.

Vast has an incredible opportunity to press ahead with its leverage in Romania where a considerable number of mines were closed when the county joined the EU. The country has seen limited exploration using modern techniques, and there remain numerous brownfield assets that are ripe for rejuvenation. We believe that Vast has a first-mover advantage to consolidate its position in the country.

Romania and Zimbabwe could be split off

Vast's current corporate and project structure presents many challenges to the company, in our view. Fundamentally, managing two operating hubs, one in Romania and the other in Zimbabwe presents several issues in terms of logistics and management time.

Secondly, beyond the differences geographical and cultural diversity, the two jurisdictions provide exposure to a different commodity mix; Romania – predominantly base metals, and Zimbabwe – gold. On top of this, the two countries have very different risk-profiles, which in some cases, may not still well together in the same portfolio for some investment strategies.

Thus, Vast continues to review the corporate structure going forward, and in the event of a separation between the Romanian and Zimbabwe operations, Vast expects there would be individual listed entities with shareholders initially equally represented in both companies. This would enable shareholders to focus investment in either, or both companies, as they wished. No time-line has been set for this restructure, but the once the company has secured a strategic investment to fund the expansion in Romania, we expect the company to review the company structure.

Manaila

Rejuvenating a brownfields asset

The Manaila open-pit polymetallic mine is located in Suceava County, northern Romania. Manaila has a long history of mining and is thus a brownfields site with extensive infrastructure in place, including a tailings storage facility and a 20ktpm Iacobeni processing plant, located 26km away.

Brief history

Exploration commenced in the area in 1972, with initial activities undertaken by the Romanian state exploration company (Remin). This early work identified VMS mineralisation (Volcanogenic massive sulphide), similar to that being exploited at the nearby Fundu Moldovei copper mine. Mining operations at Manaila began in 1999 and ran until 2006 when Remin was put into administration. The mine was then operated by another state-entity until 2009, and then acquired by Sinarom Mining Group (SMG) in 2012 who operated the mine until July 2015 when Vast acquired a 50.1% stake in SMG. Vast assumed operational control and recommissioned operations in August 2015. Vast completed the acquisition of the remaining 49.9% of SMG in May 2017.

Geology – a high-grade VMS

Manaila is a classic VMS-type deposit, typically characterised by small tonnages but high grades and a distinct polymetallic nature. Sulphide mineralisation at Manaila is developed at the contact between a rhyolitic volcano-sedimentary sequence and metamorphosed rhyolites.

Maiden JORC-compliant resource

In September 2016, Vast reported a maiden JORC-compliant resource estimate for Manaila, amounting to 2.91Mt, containing 30.1kt of copper. The resource is split into an open pit resource and underground resource, with the cut-off between open pit and underground determined by pit optimisation using prevailing metal prices at the time in conjunction with Manaila operational efficiencies. The depth of the open pit resource shell extends down to a depth of 120m. The resource demonstrates that the copper grade remains robust, with resource estimation undertaken to internationally-recognised JORC standards, in our view.

Manaila: JORC-compliant Mineral Resources

Open Pit Resources*	Tons	Grade			Contained metal		
Category	Mt	Cu%	Pb %	Zn %	Cu (t)	Pb (t)	Zn (t)
Measured	-	-	-	-	-	-	-
Indicated	1.16	1.1	0.5	1.1	12,760	5,400	13,000
M&I	1.16	1.1	0.5	1.1	12760	5400	13000
Inferred	1.44	0.9	0.4	0.7	12,800	5,400	9,500
Total Resource	**2.60**	**1.0**	**0.4**	**0.9**	**25,560**	**10,800**	**22,500**

*Cut-off 0.25%Cu

Underground Resources**	Tons	Grade			Contain		
Category	Mt	Cu%	Pb %	Zn %	Cu (t)	Pb (t)	Zn (t)
Measured	-	-	-	-	-	-	-
Indicated	0.10	1.5	0.2	0.8	1,500	200	800
M&I	0.10	1.5	0.2	0.8	1500	200	800
Inferred	0.21	1.8	0.4	0.4	3,780	840	840
Total Resource	**0.31**	**1.7**	**0.4**	**0.5**	**5,380**	**1,040**	**1,640**

**Cut-off 100%Cu

Source: Vast Resources

Manaila is a turn-around story

Vast's acquisition of Manaila provided the company with a low-cost entry into a European-based, operating mining asset. The company's strategy has been to undertake optimisation work in order to improve operational efficiency. Although Manaila is a relatively high-grade orebody, historical mining practices have not allowed the mine to reach its potential.

For example, historical mining methods resulted in high-levels of dilution being sent to the plant, with ore being trucked 26km to Iacobeni, and tailings transferred 14km to the TSF. At the processing level, the crushing and flotation circuits were not configured to maximise recovery and lower costs. Manaila is essentially a copper mine which drives c.75% of revenues, but zinc, gold and silver are also important components.

It's not been plain sailing…

Lack of funds for remedial capex has hampered optimisation to increase efficiencies and expand production. This has also been compounded by the harsh winter conditions in Romania which froze the flotation circuits. The larger mill experienced a breakdown in March 2017, which resulted in reduced milling capacity as the single smaller-capacity mill had to be utilised.

..but optimisation work is starting to deliver

Despite some challenges, Vast has started to make significant progress with the ramp up and optimisation of operations at Manaila. Historically, Manaila produced a copper concentrate grading 13% Cu, and a 3g/t gold concentrate. On the back of extensive optimisation work, Vast has already improved on these historical figures, with the copper grade in concentrate over the last few quarters ranging up to 19.5% Cu, and largely maintained above the important 18% threshold, along with a higher mass-pull.

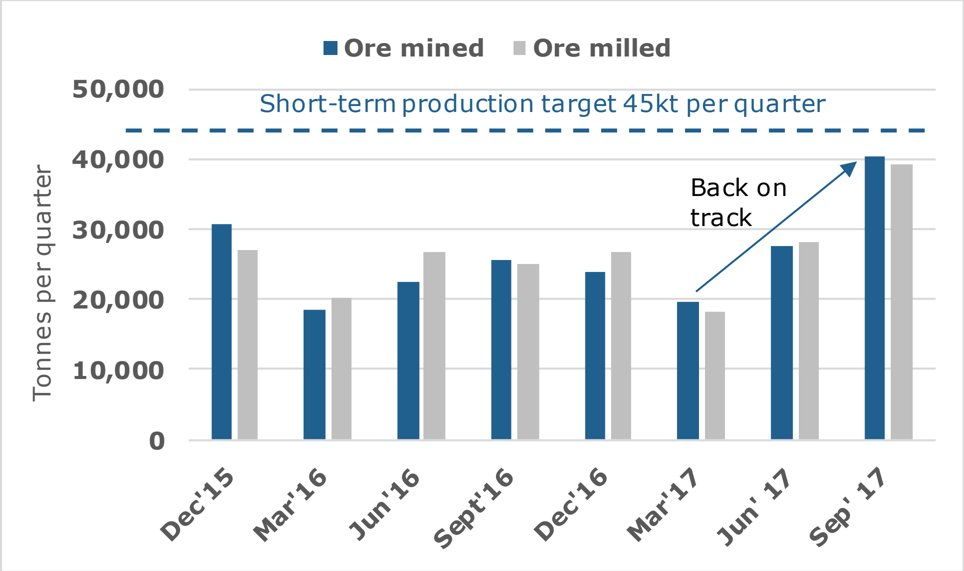
Remedial action taken in March 2017, and ongoing capital expenditure is starting to produce tangible progress, most evident in the improved operational performance between the March 2017 quarter and September 2017 quarter. The production profile has returned to a clear upwards trajectory and the company plans to deliver a consistent 15,000tpm mill feed from September onwards.

Manaila: Quarterly production summary

Mining		Dec'15	Mar'16	Jun'16	Sept'16	Dec'16	Mar'17	Jun' 17	Sep' 17
Ore mined	Tonnes	30,718	18,529	22,487	25,620	23,905	19,711	27,707	40,462
Waste mined	cubic metre	121,680	130,925	125,357	117,558	38,538	45,143	53,267	119,003
Stripping ratio	x	4	7.1	5.6	4.6	1.6	2.3	1.9	2.9
Processing									
Ore milled	Tonnes	26,913	20,259	26,847	25,092	26,786	18,262	28,082	39,135
Milled Grade – Cu		0.90%	0.96%	0.86%	0.71%	0.91%	0.79%	0.73%	0.70%
Milled Grade – Zn		0.92%	0.94%	0.84%	0.74%	0.88%	0.76%	0.74%	0.70%
Copper concentrate									
Cu Concentrate produced	Dry tonnes	745	822	727	616	889	526	828	1082
Concentrate grade (% Cu)	% Cu	20.4%	17.2%	18.8%	20.4%	19.5%	18.8%	18.2%	17.9%
Cu Concentrate sold	Dry tonnes	550	1010	461	960	889	321	995	1079
Cu Concentrate in stock at period end	Dry tonnes	266	78	344	0	0	206	38	41
Zinc concentrate									
Zn Concentrate produced	Dry tonnes	-	-	-	35	165	132	157	118
Concentrate grade (% Zn)	% Zn	-	-	-	29.6%	30%	26.3%	39.8%	42.3%
Concentrate sold – Zn	Dry tonnes	-	-	-	0	200	0	252	92
Concentrate in stock at period end – Zn	Dry tonnes	-	-	-	35	0	132	37	63
Gold concentrate									
Au Concentrate produced	Dry tonnes							5	7
Concentrate grade	g/t Au							31.4	45.0

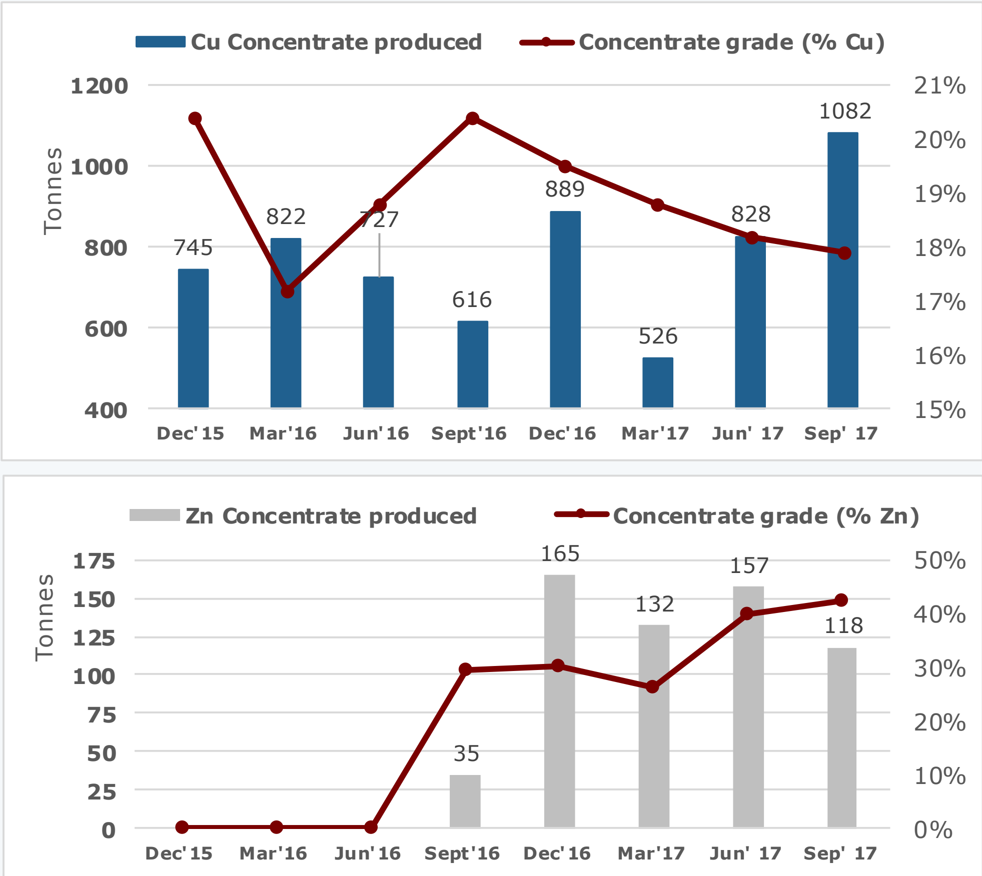
Source: Vast Resources

Manaila: Mining and processing back on track, still more work to do



Source: Vast Resources, ED

Manaila: copper concentrate production has been variable, zinc ramping up



Source: Vast Resources, ED

Focused on positive cashflow, now looking more achievable.

The company has been focused on achieving positive cash flow at Manaila, which has been a struggle as production levels during the last year fell well below the target of 15,000tpm of mill feed. This resulted in the cash cost of concentrate exceeding the realisable sales value by a wide margin. Vast's near-term target is to ramp up production to produce 450tpm of copper concentrate (based on 15,000tpm ore and 3% mass-pull) and 100tpm zinc concentrate.

Recent funding made available has allowed Vast to deploy the necessary remedial capital expenditures on the plant. We believe this makes the target of positive cash flow look more achievable if the upwards trajectory of production performance is maintained. Despite this, the trucking of ore to the Iacobeni facility continues to erode margins and the real key to unlocking value and transforming Manaila into a long-life profitable operation will be the execution of Vast's plan to build a new metallurgical facility.

Time to think Zinc

Despite thorough lab-testing, when Vast re-started production, unexpected processing efficiency issues were encountered which resulting in problems associated with separating the zinc from the copper. Thus, during the first three quarter of production up until June 2016, the company produced only a copper concentrate which contained a significant zinc content.

The inclusion of zinc within a copper concentrate reduces its saleability and attracts high-levels of penalties levied by the smelter as it is treated as a deleterious element in the concentrate. So, floating of the zinc into a separate concentrate has the double-whammy effect of increasing the saleability and price of the copper concentrate, whilst providing a second revenue stream.

This is especially important considering that we view zinc as having one of the best fundamentals of all the base-metals currently. We see a large structural deficit emerging in the zinc industry. This is underpinned by significant supply challenges due to a raft of mine closures and a lack of quality deposits in the development pipeline. LME inventories have been steadily falling and the industry has seen significant tightening in the zinc concentrate market over the last few months. This has helped drive the zinc price from a low of $0.69/lb in early 2016 to $1.52/lb currently, the highest level for 10 years.

The quality of the zinc concentrate has been steadily improving, with grades of up to 45% registered in April. In the last reported quarter (Sep 2017), 118t of zinc concentrate was produced. Our model suggests that the revenue from the zinc concentrate could average $1.3m annually over the remaining mine life.

Gold is the next cab off the rank to add 3rd revenue stream

Vast plans to utilise a Knelson gravity concentrator to produce a pyrite concentrate containing gold and silver credits. This addition is currently in the test-phase but the company reported gold concentrate production in the last two quarterlies. Positive progress has been made and work is on-going to optimise production and produce a consistent quality and quantity of concentrate. This would add a valuable third revenue stream to the operation. Our modelling of Manaila indicates that the gold stream alone could add approximately $1.7m in additional revenue annually, based on a gold price of $1,300/oz.

Winter is coming…

The improving trend operational trend at Manaila throughout the first three quarters of the 2017 financial year was disrupted in Q4 (March 2017) when operations were severely hampered by unexpected extremely cold weather. Although Q1 production is typically lower compared to the rest of the year due to the temperature, the unusually cold winter exacerbated the usual seasonal production drop off.

Mining and processing was temporarily stopped as the cold weather impacted ore deliveries from the pit, impeded the trucking of ore to the Iacobeni metallurgical complex and froze the ore-stockpile which halted ore feed to the crusher. The very low temperatures, down to -30°C at times, also disrupted flotation and the circuits were shut-down to prevent damage. Despite these abnormal conditions, VAST managed to maintain production, albeit at a lower level.

…But a planned new processing plant should drive opex down at Manaila

Vast is proposing to build a new metallurgical facility to deal with ore from Manaila and Carlibaba. This new centralised facility will be located on the Manaila licence at the Carlibaba prospect and will replace the current facility at Iacobeni which is located 34km away via road.

Naturally, this would reduce transportation costs considerably and feed through to much lower operating costs. The new facility will simplify logistics, negating the requirement to truck ore along the 34km road, which exposes the current trucking operation to considerable risk during the treacherous winter months. We view the construction of a new facility as being on the critical path for Vast, considering that transport costs currently amount to c.30% of current operating costs. Vast estimates that overall, a new plant would reduce opex by 25%.

…and provide shelter from the cold

The Carlibaba prospect is already connected to Manaila by a 2km underground drive that could potentially facilitate the transport of ore from the Manaila open cast and underground operations to the proposed new processing facility. Secondly, the new facility would be constructed to modern designs and be contained within an all-weather, controlled environment. This would allow processing operations to continue unabated all-year round, regardless of the outside temperature.

Extremely low expansion capex required

The management of Vast anticipate that a new facility with an annual throughput of 25,000tpm (300ktpa) could be constructed for c.$4.5m, with the capital investment having a two-year payback period. It is important to note that this would equate to an exceptionally low capital intensity of c.$2,250/t on a capex vs. annual copper production basis (avg 2,000tpa Cu in concentrate), even before considering intensity on a copper equivalent basis ($1,875/t). This compares to the average capital intensity of $12,000/t (LOM production basis) that we calculate for global copper development projects and recent mine-starts.

The low capex tag for the plant is a combination of the relatively low throughput requirement and cost-competitive Chinese plant and machinery, in conjunction with low Romanian input costs. We also flag that the Vast team has a good track record in building low cost processing facilities. We understand that the new plant would be modular, leaving scope for future expansion, if required. Subject to permitting and funding, Vast believes the new plant could constructed and operational within the next 18-24 months.

Vast is targeting a second open pit at Carlibaba

The company has been evaluating the Carlibaba prospect, essentially an extension to Manaila, and its potential to host a second open pit mining operation at Manaila. This would provide the opportunity to increase the overall project resource, whilst extending the Manaila mine life. Carlibaba is an important cog in the company's low-cost growth strategy for Manaila.

Preliminary drill results support development

A 2,200m diamond drilling programme is underway to confirm Carlibaba's suitability for a second open pit, and also as the location for the proposed new metallurgical plant. Results from the first 1,000m of drilling reported on 4th October, support this development plan. Key intersections include 3m at 2.93% Cu, 0.88% Pb, 1.95% Zn, 0.47g/t Au and 93.33g/t Ag, and 5.9m at 1.97% Cu, 0.30% Pb, 0.71% Zn, 0.62g/t Au and 26.29g/t Ag.

The results are encouraging and have confirmed the geological structure and geometry of the mineralised zones. The intercepts reported above demonstrate the high-grade tenor of the Carlibaba mineralisation. The company's analysis of the drill results so far, indicates that the orebody develops greater width closer to the surface, with moderate grades, whilst at depth the orebody appears to progressively thin down-dip, with a corresponding increase in grades.

Manaila Resource update in the pipeline

Phase 2 diamond drilling, amounting to 9 holes from surface to complete the 2,200m programme, is underway. This second phase of drilling will target depth extensions to mineralisation identified from historic drilling and the Phase 1 drilling, with a view to confirming the continuity of mineralisation at deeper levels. Once completed and VAST has received the assay results, the Manaila JORC-compliant mineral resource will be updated using the new drilling data in conjunction with new data obtained from historical sources.

Exploration target hints at upside

The Romanian Government has extended the company's exploration licence in the Manaila area to 1.3km^2 from 67,500m^2, an increase of over 20 times. This has allowed VAST to explore the wider area and start investigating the regional potential.

Whilst the current focus is naturally on ramping up and optimising Manaila and drilling-out Carlibaba, Vast has defined considerable open pit and underground exploration targets for Manaila area, which indicates the potential to increase the resource in areas proximal to Manaila. These exploration targets encompass the remainder of the exploration licence not covered by the current resource. If realised, these target resources would potentially make Manaila one of the largest operating copper mines in Eastern Europe.

- **Open pit target:** 4.45Mt-11.88Mt with grades ranging from 0.8%-2.3% Cu, 0.2%-0.5% Pb and 0.4%-1.1% Zinc.
- **Underground target:** 5.92Mt-15.78Mt with grades ranging from 1%-2.6% Cu, 0.7%-2% Pb and 1%-2.6% Zn.

The company believes that there is sufficient historical information available from drilling and literature with regards to further potential sulphide mineralisation in the area to justify a staged exploration programme, with a view to bringing target exploration areas within the Manaila global resource.

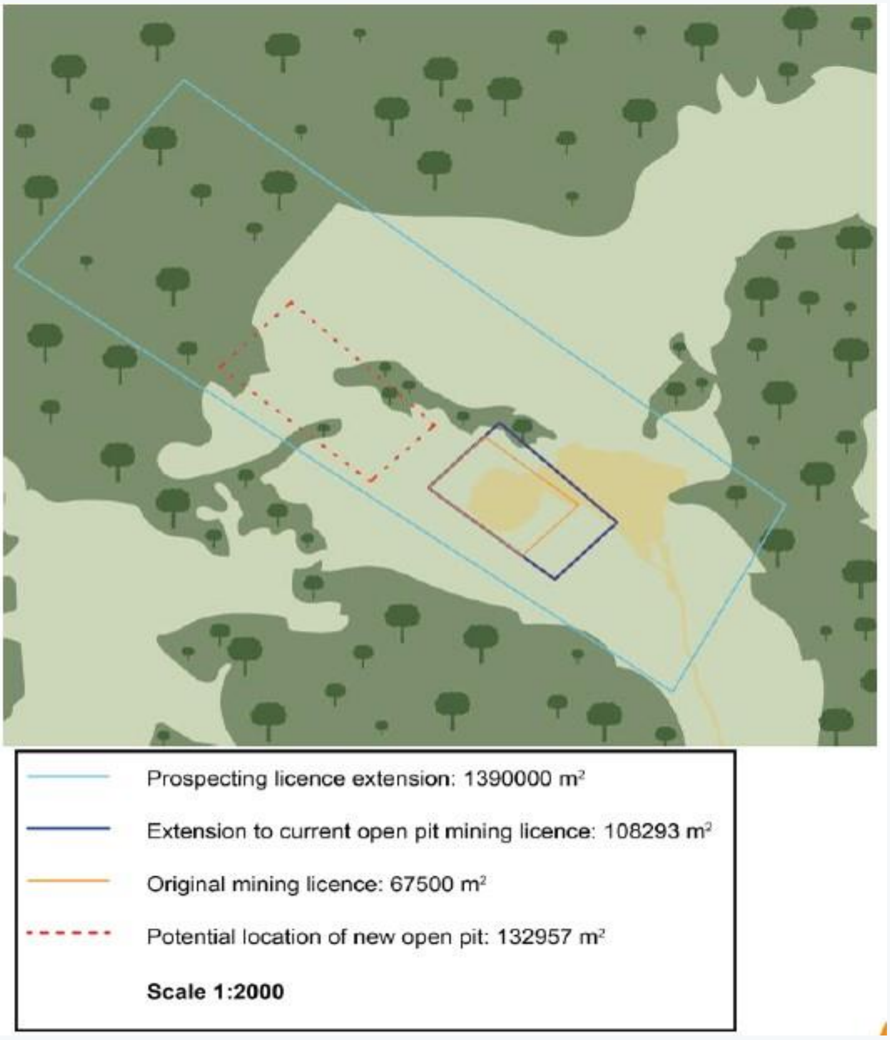
New Prospecting licences bolster regional potential

In December 2016, Vast was granted two new prospecting licences in the vicinity of the Manaila area, both of which have demonstrated polymetallic mineralisation, based on historical work. The Piciorul Zimbrului and Magura Neagra licences are located 19km and 47km away from Manaila, respectively. The acquisition of these new licences feeds into Vast's plan to explore the regional potential of the area, with a view to identifying new deposits.

The historical data is encouraging. At Piciorul Zimbrului, diamond drilling, 1,200m of underground development and trenching has identified six veins with associated copper and gold mineralisation of approximately 820m in length. At Magura Neagra, historical exploration has identified the possible presence of a porphyry copper type mineralising system together with mineralised veins containing gold, silver, molybdenum, lead and zinc.

Vast has commenced prospecting work which includes access surveys, geological mapping and demarcation of existing underground adits and infrastructure. The company plans to undertake further exploration in Q2-Q3 2018 on the back of funding that Vast believes it will have secured for the advancement of the prospects.

Expanded Manaila licence area



Source: Vast Resources

Pickstone-Peerless

Vast holds a 25% indirect interest in the Pickstone-Peerless ("Pickstone") operating gold mine in Zimbabwe, in addition to considerable mining claims surrounding the former Giant gold mine. Vast retains voting and Board control, despite its 25% indirect interest, and thus still retains a strong foot-hold in Zimbabwe.

Pickstone is located 100km south-west of Harare, in one of the most highly prospective gold mining regions in the country. Pickstone has a current JORC Resource of 62Mt at 1.8 g/t Au for 3.56Moz contained gold. Included in this Resource is an open-pittable ore reserve of 16.6Mt at 1.9 g/t Au for 1.02Moz gold.

Infrastructure was commissioned in H1 2015 and the first gold was poured in September 2015, with mining targeting the deposit's gold oxide cap, and processing ore at a rate of 10,000tpm. Current quarterly production of 4-5koz annualises at 20koa pa. Once the sulphide circuit is commissioned and higher-grade sulphide ore is processed, Vast believes that production could be increased to 50koz pa.

Production progress

After initial ramp-up, production at Pickstone has been a relatively stable. The exception to this was in the March 2017 quarter, when unseasonably high rainfall hampered open-pit mining operations, and the resultant wet-sticky ore restricted the ore feed to the crusher. In particular, the rainfall impeded access to higher-grade areas of the pit, and thus even though milled tonnes were close to budget, production for the year was 16.5koz, slightly below the 18koz target.

Bringing down cash-costs

Vast has made good progress in reducing cash costs at Pickstone. Total cash costs for the financial year ending March 2017 were $819/oz, down 39% y-o-y. However, this is not a true reflection of the mine's cost structure due to the impact of the final March quarter as described above. Cash costs were running at an average of $666/oz over the previous three quarters prior to the high-rainfall event, which demonstrates the potential for a high-margin operation.

Pickstone-Peerless: Quarterly production summary

Mining		**Dec'15**	**Mar'16**	**Jun'16**	**Sept'16**	**Dec'16**	**Mar'17**	**Jun'17**	**Sep'17**
Ore mined	Tonnes	46,285	63,825	83,035	69,500	70,930	51,660	68,659	71,533
Waste and low-grade ore mined	Tonnes	188,245	244,855	470,607	497,840	435,083	546,126	1,035,785	1,039,570
Stripping ratio	x	4.1	3.8	5.7	7.2	6.1	10.6	15.1	14.5
Processing									
Ore milled	Tonnes	46,291	54,237	61,577	65,573	61,356	51,102	58,923	68,431
Milled Grade	g/t Au	1.75	1.71	2.53	2.57	2.41	2.06	2.35	2.41
Gold produced	ozs	2,598	2,808	4,542	4,910	4,352	2,974	4,037	4,738
Gold sold	ozs	2,375	2,475	4,021	5,025	4,706	2,873	3,992	4,711
Gold in stock at period end	ozs	223	*556*	1,078	962	609	710	755	782

Source: Vast Resources

The sulphide expansion is key

The most important development at Pickstone is the ongoing construction of the sulphide processing plant which commenced in Q1 2017. The $8m plant is a critical addition to the processing circuit that will allow the sulphide resource to be exploited. Currently, the operation has only been exploiting the oxide resource, and the sulphide plant will be put in place to treat the sulphide ore (>20-year resource) which requires additional processing to extract the gold.

Vast is beefing up the grinding circuit to increase milling capacity and installing an additional 5 CIP/CIL tanks. The sulphide plant will expand milling capacity by 75% to 35,000tpm and Vast anticipates that the new plant will come on stream before the end of 2017. The plant is and will be part funded by a bank loan which is expected to be repaid out of internally generated cash flow within 12 to 18 months of the start of production.

Grade boost!

In addition to expanding throughput the sulphide plant is expected to increase the milled grade from the current c.2g/t Au to between 3g/t and 4g/t Au over a 9-month period. If achieved, this will increase gold production and lower cash costs per ounce.

Pickstone is another example of Vast's focus on low capital intensity

Vast's achievements at Pickstone have been undertaken at a very low cost, compared to similar operations in Africa and worldwide. The company has spent c.$6m on getting the oxides up and running, and with the slated $8m capex for the sulphide plant, this brings expansion capex to a mere $14m. Assuming 50kozpa over a 20-year mine life, this equates to a capital intensity of $14/oz over LOM, compared to the average of our universe of gold development project and recent mine-starts of $160/oz.

Toll-treatment plant in place

Vast commissioned a toll-treatment plant in Q1 2017 to treat ore sourced from local artisanal miners. Despite making only a modest contribution to ounces produced, the treatment plant serves to strengthen relations with both the local community and the government.

Here be Giants…

Vast is also evaluating the Giant Gold Project, a previously producing mine located 28km from Pickstone. Giant has a current JORC-compliant Inferred Resource of 500koz gold. The objective is to increase the resource base in order to justify work on an initial scoping study.

Pickstone-Peerless: Key plant and infrastructure

Source: Vast Resources

Baita Plai – 3rd mine waiting in the wings

Vast holds an 80% interest in the Baita Plai polymetallic underground mine in the Transylvania area of Romania. The project is located 50km north-west of Rosia Montana Romania's largest Au-Cu mine (>10Moz Au). Baita Plai is Vast's primary growth project in Romania and the company is at an advanced stage of completing the permitting process with the Romanian Government. The mine is currently on care and maintenance, but Vast is planning a low-cost restart to bring the mine back into production. Vast plans to ramp up production to 120ktpa ore, and produce c.6,500tpa of polymetallic concentrate. The processing plant in its current form has a capacity of 20,000tpm.

It is important to note that Vast has carried the care and maintenance overheads for Baita Plai for an extended period. Once Baita Plai is operational, the overhead costs of operating within Romania will be borne across two operating entities and should not materially increase.

A high-grade polymetallic, underground mine

Historic records indicate that Baita has a resource of 1.8Mt at 2.19% Cu, 128g/t Ag, 3.46% Zn, 3.07% Pb, and 1.41g/ Au. Baita is a polymetallic skarn deposit, containing a large suite of metals. Our modelling, (see valuation section) indicates that copper, zinc and silver will be the main contributors to revenue. A tungsten-molybdenum orebody has also been identified, but is excluded from the current mine plan.

We deem this as a high-grade resource, and to put it into economic perspective, we calculate a copper equivalent grade of 7.1% Cu, based on spot metal prices (Au $1,270/oz, Ag $17/oz, Cu $6,511/t, Pb $2,548/t, Zn $3,350/t). Note that this excludes any contribution from molybdenum or tungsten.

Baita is almost ready to rock with a little "tlc"

Baita is typical of the old Soviet-style mining operations, and the mine eventually became uneconomic due to a lack of sustaining capital investment and failure to modernise operations. The mine was put on care and maintenance in 2013. As a recently producing mine, full infrastructure remains in place, including underground, surface and processing equipment and an EU registered and operational tailings facility. The plant does need some rehabilitation as although serviceable, some of the equipment is old and Vast is keen to restart production with an efficient operation.

Baita Plai: Key plant and infrastructure

Source: Vast Resources

What are we waiting for?

In short, not much. Vast is awaiting execution of the final association licence which is subject to the normal due process which includes a Ministerial Agreement, regulatory approvals from Romania's National Agency for Mineral Resources (ANRM) and the final negotiations of the terms and conditions of the association licence.

Whilst the process has taken longer than originally envisaged, progress has been made and Vast's subsidiary was chosen to be granted the right to mine at Baita Plai as part of a competitive selection process in August 2017. The process has been hampered by the legal complexity of the process, but it is worth noting that since 2014, Vast, through its subsidiary companies, has been granted five licences all promptly and without any difficulties.

Vast now awaits the grant of the right to mine, and on 18^{th} October announced 'significant progress' regarding the license. The Board of Baita SA has now requested its shareholder, the Ministry of Economy, to approve the association on the license. The legal term for approval is 30 days, but it may be shorter.

Then what?... 6-month turnaround time to first production

As soon as the association licence is granted, Vast believes that production could be re-started in as little as 6 months. Again, the recurrent theme for Vast is its streamlined approach to capital expenditure and the company believes that the mine could be brought back into production for a small capex budget of $1.2m.

Most of the capex is ear-marked for refurbishment of the plant, including re-lining the grinding mills. In September 2017, Vast secured an interim bridging loan of $1.68m to fund a $1.6m payment that is required step to enable the process of securing the Baita Plai association on the licence to progress further without any funding delays.

Baita is another mine ripe for optimisation

Vast believes that considerable exploration potential exists within the current Baita mine area, in addition to the potential to identify satellite deposits in the near vicinity. The depth potential of the main deposit below the deepest working level 18 (350m) at Baita has only been drill-tested for about 90m, and the continuity of the skarn deposit at depth and the relationship with the underlying granite remains untested.

Furthermore, 7 skarn pipes have been identified in the deposit, but the current mine plan is based on only 2 of these. Copper grades increase with depth, which have also been found to be associated with extremely high silver grades (200-2,000g/t Ag). Previous work has postulated that the two main Antonio 1 and 2 pipes may merge at depth, forming a substantially larger orebody. Vast will investigate this potential upside as part of forward mine planning, once production has re-started.

Vast also has an opportunity to upgrade the flotation circuit to recover the molybdenum and tungsten by-products that have not previously been included in the saleable concentrate.

Faneata Tailings

Vast also holds an 80% interest in the Faneata Tailings dam, located 7km from Baita Plai. Faneata consists of more than 40 years' material from the proximal Baita Plai Polymetallic Mine. The plan is to evaluate the potential to process and extract the remnant metalliferous content of the tailings from historical operations. This, in some cases can be a lucrative strategy, as historical processing techniques were not always very efficient and significant quantities of metals would have reported to the tailings.

Processing at Baita Plai?

If Faneata gets the go-ahead, based on recent metallurgical test-work, the company's current thinking is to process the material at the existing, fully-permitted Baita metallurgical facility located 6.5km away from the Faneata Tailings storage facility.

Further metallurgical testwork is underway, and the results from this work will be critical in evaluating whether the processing of Faneata tailings is economically feasible. Once the Feasibility Study is completed, Vast will apply for a permit to operate at Faneata.

Maiden JORC-compliant resource

In March 2017, Vast released a maiden mineral resource for Faneata, amounting to 3Mt of material. The resource is based on 33 holes drilled into the dump, by Vast, in November 2016.

Faneata: JORC-compliant mineral resource

Resource	Tons	METAL GRADES							
		Au g/t	Ag g/t	Bi %	Cu %	Mo %	Pb %	W %	Zn %
Measured	2,396,889	0.053	8.81	0.012	0.092	0.006	0.109	0.017	0.163
Indicated	532,460	0.039	8.08	0.016	0.092	0.005	0.072	0.018	0.199
Total M & I	**2,929,349**	0.051	8.68	0.013	0.092	0.006	0.102	0.017	0.169
Inferred	85,477	0.048	7.63	0.021	0.094	0.004	0.054	0.02	0.225
Total	**3,014,826**	0.05	8.65	0.013	0.092	0.006	0.101	0.017	0.171

Resource	Tons	METAL CONTENT							
		Au (kg)	Ag (kg)	Bi (t)	Cu (t)	Mo (t)	Pb (t)	W (t)	Zn (t)
Measured	2,396,889	127	21,122	285	2,212	138	2,604	397	3,904
Indicated	532,460	21	4,303	83	489	24	384	97	1,060
Total M & I	**2,929,349**	**148**	**25,425**	**368**	**2,701**	**163**	**2,988**	**493**	**4,964**
Inferred	85,477	4	652	18	80	3	46	17	192
Total	**3,014,826**	**152**	**26,077**	**386**	**2,782**	**166**	**3,034**	**510**	**5,157**

Source: Vast Resources

Another revenue generator?

Vast believes that the tailings dam project looks attractive, but the company will not make a development decision until the final feasibility study results have been received. Vast expects the feasibility study to be completed during H2 2017.

Initial work by the company suggests that "an overall process recovery of 25% on the silver, copper and zinc only is required for the project to be cost neutral. Vast is targeting a 36% total processing recovery which would deliver a 44% operating cost margin", with cost estimates based on Manaila operating parameters.

Board and Management

Roy Pitchford **Chief Executive Officer (Group)**

Roy is a Chartered Accountant and past President of the Chamber of Mines in Zimbabwe. He previously managed the Freda Rebecca Mine, the largest gold mine in Zimbabwe. He also oversaw the development of the Ngezi Platinum Mine into production and the re-commission of the Selous Metallurgical Complex in 2011. At Zimplats, he created a 300Moz PGM company which was then acquired by Implats, the world's second largest producer of PGMs.

Brian Moritz **Chairman**

Brian is a Chartered Accountant and former Senior Partner of Grant Thornton UK LLP, London; he formed GT's Capital Markets Team which floated over 100 companies on AIM. He was formerly chairman of Metal Bulletin plc, African Platinum plc and Chromex Mining plc.

Roy Tucker **Finance Director**

Roy is a Chartered Accountant with 43 years' business experience. He was a founder of a London banking group, served on bank boards and was a major shareholder of a substantial London commodity house. He has substantial investments in the Romanian property sector.

Eric Diack **Non-Executive Officer**

Eric is a Chartered Accountant with experience in the mining sector. Eric is the former CEO of Anglo American Ferrous Metals Divisions, and has served on numerous major listed and unlisted company boards, mainly associated with Anglo American.

Brian Basham **Non-Executive Director**

Brian Basham has more than 25 years' experience in corporate affairs. Since 1976, Brian has founded and subsequently sold a number of successful businesses, including Broad Street Associates. He is currently the chairman of Equity Development Limited and a non-executive director of AIM-traded ADVFN plc.

Craig Harvey **Chief Operating Officer**

Craig has extensive geological, mineral resource and due diligence experience gained with Gold Fields, Harmony Gold and Simmer and Jack. Craig spent 3 years in a Principal Consultant role for Ravensgate based in Perth, Australia.

Carl Kindinger **Chief Financial Officer**

Carl has held senior financial and board level posts for over 25 years in small to mid-sized companies internationally, including AIM quoted resources entities Island Oil and Gas Plc and Fastnet Oil and Gas Plc.

Andrew Prelea **President & Executive Director Romania**

Andrew has over 25 years' experience in property development, investor and public relations. He has advised the Romanian government on social housing and economic policy and has senior experience as a mineral/metal trader and property developer.

Valuation

We currently value Vast shares at 1p/sh (rounded) using a sum-of-the-parts valuation method. We have based this on our own DCF models of Vast's three main assets. This represents an uplift of twice the current share price, or put another way, our indicative valuation suggests that Vast is trading at a 0.5x discount to NAV. We see scope for further value accretion if Vast delivers on its expansion plans, and on the back of higher metal prices.

ED value estimate

NPV	Discount Rate	US$m	£m	
Manaila (100% interest)	10%	24	18	
Baita Plai (80%)	12%	43	33	
Pickstone (25%)	12%	24	18	
Subtotal		90	69	
Risked NPV	**NAV multiple**	**US$m**	**£m**	**p/share**
Manaila (100% interest)	1.0x	24	18	0.39
Baita Plai (80%)	0.7x	30	23	0.49
Pickstone (25%)	1.0x	24	18	0.39
Subtotal		78	60	1.27
Cash		1.3	1	0.02
Interest-bearing debt		-5.7	-4.3	-0.09
Forward corporate G&A/other		-10.5	-8	-0.17
NAV VALUATION		**63**	**48**	**1.03**

Source: ED

Our DCF models use flat-forward spot metal prices; Gold $1,275/oz, Silver $17/oz, Copper $2.95/lb, Lead $1.10/lb and Zinc $1.40/lb. We use a 10% discount for Manaila, 12% discount rate for Baita Plai, and a 12% discount for Pickstone-Peerless in Zimbabwe.

We generally value advanced exploration and development companies in the range of 0.25-1.0x NAV, in line with industry averages and have applied a NAV discount multiple to our valuation. We value Manaia and Pickstone at 1x NAV as producing assets. We value Baita Plai at 0.7x NAV to reflect licencing, funding and execution risk. We have adjusted for our estimate of forward corporate G&A costs, cash and interest-bearing debt on the balance sheet at year end. We base our valuation on the 4,683m shares currently in issue, and do not factor in any potential future equity financings. We do not yet ascribe any value to Faneata Tailings, pending an update on the feasibility and viability of the operation.

Manaila

Our $NPV^{10\%}$ for Manaila is $24m, based on Vast's 100% interest. We assume that Vast ramps up ore throughput to 15,000tpm by the end of 2017 and that the new metallurgical facility is in place by mid-2019. We then model throughput increasing to 20,000tpm (240ktpa) from financial year 2020 onwards, for the remaining life of mine until 2035.

We assume LOM average grades of 1% Cu, 0.47% Zn and 0.5g/t Au. We model copper metallurgical recovery at 65% and zinc at 45%. We assume $3.5m in capital expenditure for the new metallurgical facility. We model cash operating costs at c.$40/t milled (excluding royalties) falling to c.$30-$32/t once the new plant is operational from financial year 2020 onwards. We forecast LOM average revenue of $11m, EBITDA of $3.8m, and FCF of $2.9m, on a 100%-basis.

Baita Plai

Our $NPV^{12\%}$ for Baita Plai is $43m based on Vast's 80% interest. We risk this to $30m by applying a 0.70x NAV multiple.

Vast anticipates commencing production in early 2018, but we conservatively push this back to mid-2018 (calendar) in our DCF model. We factor in a slow ramp up to steady-state throughput of 120ktpa ore by 2020 until the end of mine life in 2030.

We model the following LOM average grades; gold 1.2g/t Au, silver 109g/t Ag, Copper 1.86% Cu, Lead 2.61% Pb and Zinc 2.94% Zn. We model 60% metallurgical recovery for precious metals and 80% for base metals. We model a 5% mass-pull to produce approximately 6,600tpa of concentrate over LOM.

Note that our silver grade assumption is highly conservative and recent work by Vast indicates that silver grade reconciliation could be significantly higher in some portions of the orebody.

We model cash operating costs at $90/t which includes mining, processing, development and G&A. We forecast total cash costs including royalties at $105/t milled. We conservatively model pre-production capex at $2.5m and ongoing sustaining capex at $1.2m pa. We forecast LOM average revenue of $27m, EBITDA of $13m, and FCF of $10m, on a 100%-basis.

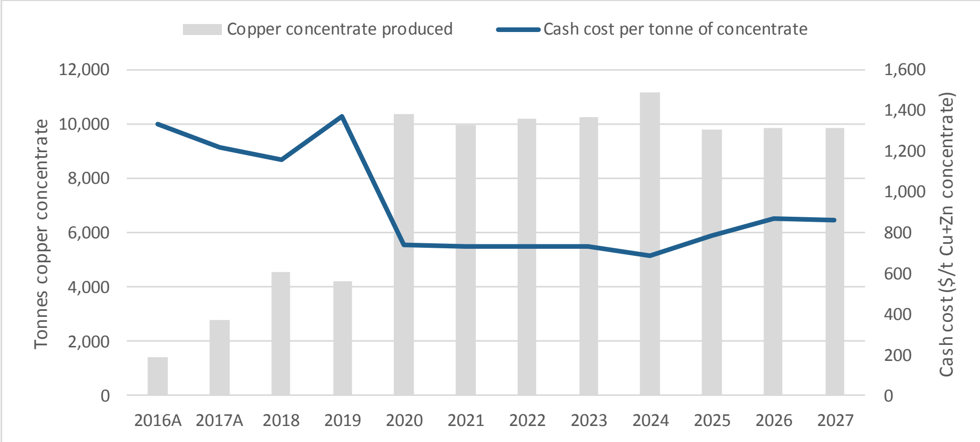
Pickstone-Peerless

Our $NPV^{12\%}$ for Pickstone is $24m based on Vast's 25% indirect interest.

We model ore throughput ramping up to 35ktpm (420ktpa) by the end of 2018 (calendar) post the commissioning of the new sulphide processing plant. We model grades increasing from the current 2-2.5g/t Au to 3g/t throughout 2019, increasing to 3.25g/t over the remaining life of mine to 2035. Note that this at the lower range of company estimates, where Vast anticipates the grade to increase to between 3-4g/t Au as the sulphide resource is exploited.

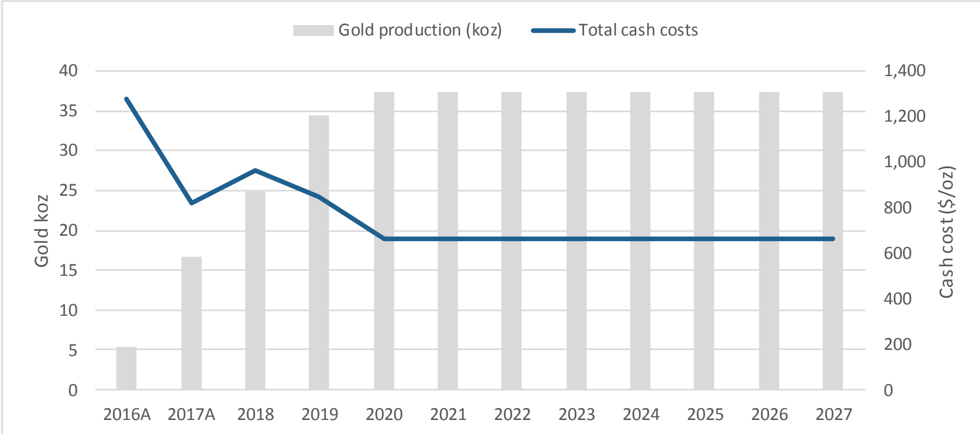
Thus, at 85% metallurgical recovery, we forecast the mine ramping up from 16koz gold in 2017 (financial year) to 37kozpa steady-state. At a head-grade of 4g/t, annual production would be 45koz. We forecast total cash costs at $660/oz over LOM, and AISC at $700/oz. We include the $8m capex for the new sulphide plant and sustaining capex of $0.9m pa. We forecast LOM average revenue of $46m, EBITDA of $21m, and FCF of $14m, on a 100%-basis.

ED's Manaila production forecast (100% basis), Financial year



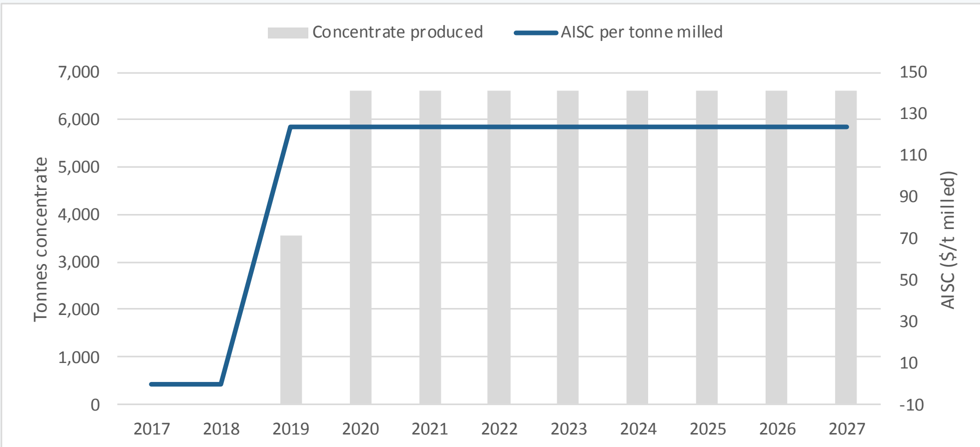
Source: Equity Development

ED's Pickstone-Peerless production forecast (100% basis), Financial year



Source: Equity Development

ED's Baita Plai production forecast (100% basis), Financial year



Source: Equity Development

Forecast Financials (March year-end), $m

Income Statement (US$)	2016A	2017A	2018F	2019F	2020F	2021F	2022F	2023F
Revenue	7	24	37	66	89	89	89	89
Cost of Sales (inc depreciation)	(8)	(20)	(33)	(46)	(50)	(49)	(49)	(49)
G&A	(4)	(4)	(2)	(3)	(3)	(3)	(3)	(3)
EBITDA	(6)	1	3	19	40	40	40	40
DD&A	(2)	(3)	(1)	(2)	(3)	(3)	(3)	(3)
EBIT	(8)	(2)	2	17	37	37	37	37
Net Interest Expense	(1)	(1)	(2)	(2)	(1)	0	0	0
PBT	(9)	(2)	0	15	36	37	37	38
Other	(9)	0	4	0	0	0	0	0
Taxes/Recovery	2	(1)	(2)	(5)	(9)	(9)	(9)	(9)
Net Profit (Loss) - attributable	(16)	(4)	(6)	2	13	14	14	15
Minority Interest	(1)	(1)	(4)	(8)	(14)	(14)	(14)	(14)
Cashflow (US$)	**2016A**	**2017A**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
PBT	(9)	(2)	0	15	36	37	37	38
DD&A	2	3	1	2	3	3	3	3
Other	5	4	2	(5)	(9)	(9)	(9)	(9)
Working Cap. Changes	(0)	(1)	0	0	0	0	0	0
Cash Flow From Operations	(2)	3	4	12	30	31	31	32
Capital Expenditure	(9)	(9)	(7)	(6)	(3)	(3)	(3)	(2)
Other	1	0	0	0	0	0	0	0
Cash Flow From Investing	(8)	(9)	(7)	(6)	(3)	(3)	(3)	(2)
Equity Issues (Net of Costs)	5	4	0	0	0	0	0	0
Net Borrowings	0	0	2	0	0	0	0	0
Other	2	2	1	0	(9)	0	0	0
Cash Flow From Financing	8	6	3	0	(9)	0	0	0
Net Change in Cash	(2)	0	(1)	6	19	29	29	29
Free Cash Flow	(10)	(6)	(3)	6	28	29	29	29
Balance Sheet (US$)	**2016A**	**2017A**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Cash & Equivalents	1	1	1	7	26	54	83	112
Total Current Assets	7	10	9	16	34	63	92	121
PP&E & Mining Interests	33	39	44	48	48	48	47	46
Deferred taxation	0	0	0	0	0	0	0	0
Other	2	0	0	0	0	0	0	0
Total Assets	41	49	54	64	83	111	139	168
Short Term Debt	3	3	5	5	0	0	0	0
Current Liabilities	11	11	13	13	8	8	8	8
Long Term Debt	1	3	4	4	0	0	0	0
Other Long Term Liabilities	1	1	1	1	1	1	1	1
Total Liabilities	13	16	18	18	9	9	9	9
Shareholder Equity	28	34	36	46	73	102	130	159
Total Liab. & S/Holder Equity	**41**	**49**	**54**	**64**	**83**	**111**	**139**	**168**
Working Capital	(4)	(1)	(4)	3	26	55	83	113
Net Debt (Cash)	**3**	**5**	**8**	**2**	**(26)**	**(54)**	**(83)**	**(112)**

Source: Equity Development

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