VENTUREX RESOURCES LIMITED

ASX/Media Release **10 October 2018**

SULPHUR SPRINGS FEASIBILITY STUDY CONFIRMS LONG-LIFE, HIGH-MARGIN AUSTRALIAN COPPER-ZINC MINE WITH OUTSTANDING ECONOMICS

Positive DFS on 1.25Mtpa base case project paves way for financing and development of one of the few new mid-tier base metal projects in Australia

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Highlights:

- Venturex's Board has endorsed the Definitive Feasibility Study ("DFS") for the **base case, 1.25Mtpa development of the 100%-owned Sulphur Springs Copper-Zinc Project** in the Pilbara region of Western Australia based on **new Ore Reserves**, with key life-of-mine outcomes including:

Project Revenue	**A$2,625 million**
Free Cash-Flow (pre-tax real)	**A$818 million**
Pre-Production Processing Plant and Infrastructure Capital	**A$146 million**
Pre-Tax $NPV_{8\%}$	**A$472 million**
Internal Rate of Return (pre-tax)	**51%**
Average Annual Pre-tax Cash flow	**~A$80M**

N.B: All figures are stated on a real AUD basis.

- ✓ **Average annual production of approximately 65ktpa of ~25% Copper concentrate (~15ktpa Cu payable metal) and 75Ktpa of ~50% Zinc concentrate (~35ktpa Zn payable metal)**
- ✓ **Life-of-mine payable metal of 146kt of Copper and 348kt of Zinc**
- ✓ **Increased Ore Reserve of 8.5Mt @ 1.4% Cu and 3.1% Zn (up from 7.3Mt @ 1.2% Cu and 3.5% Zn), representing a 42% increase in contained Cu metal**
- ✓ **Life-of-mine mine inventory of 12.6Mt @ 1.4% Cu and 3.6% Zn (inclusive of Reserves and Inferred Resources)**
- ✓ **Mine life of 10.3 years (post construction) averaging ~A$80M per year of free cash-flow**
- ✓ **Upfront Capital requirement of A$169M including:**
  - **A$146M for a 1.25Mtpa processing plant and other site infrastructure (which represents a significant capital cost decrease from the Feb 2017 Value Engineering Study ("VES") of A$167M for a 1Mtpa processing plant and related infrastructure)**
  - **A$23M for other pre-production costs including site access and pre-strip mining**
- ✓ **Significant improvement in project economics compared with the Feb 2017 VES utilising a conservative discount rate of 8%:**
  - **Pre-tax $NPV_{8\%}$ of A$472M (Feb 2017 VES: A$338M) and Pre-Tax IRR of (51%)**
  - **At consensus commodity prices, Pre-Tax $NPV_{8\%}$ increases by 31% to A$617 million**
  - **Post-Tax $NPV_{8\%}$ of A$310M and Post-Tax IRR of 39% (Project level)**
- ✓ **Excellent exposure to strengthening Copper and Zinc prices**
- ✓ **Further opportunities to add value through exploration and increasing plant capacity**
- ✓ **The Board is very confident in achieving finance solutions to develop Sulphur Springs due to the robust nature of the Project economics**

Cautionary Statements

The Definitive Feasibility Study (DFS) referred to in this announcement does not provide any assurance of an economic development case, does not provide certainty that the conclusions of the study will be realised, and is based on the material assumptions outlined below. These include assumptions about the availability of funding. While Venturex considers all of the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the DFS will be achieved.

To achieve the range of outcomes indicated in the DFS, funding will be required including for the purposes of meeting the upfront capital requirement disclosed above. Investors should note that there is no certainty that Venturex will be able to raise that amount of funding when needed. The Company is in discussions with potential debt and equity providers and offtake and potential development partners, and will continue these discussions to progress funding options. However, it is possible that such funding may only be available on terms that are dilutive to or otherwise affect the value of Venturex's existing shares. It is therefore possible that Venturex will pursue other 'value realisation' strategies such as a sale, partial sale or joint venture of the project. If it does, this could materially reduce Venturex's proportionate ownership of the project.

The Production Target (and the forward looking financial information based on that Production Target) contained in the DFS includes material classified as Ore Reserves and Inferred Resources. Material classified as Ore Reserves contributes ~68% of the material within the LOM Production Target and Inferred Resources contribute ~32% of material included within the LOM Production Target. The mine plan has been sequenced to ensure that the reliance on material contributed from Inferred Resources is minimised within the first 5 years and the Company is satisfied that the proportion of Inferred Resources is not a determining factor for project viability. Nonetheless, the Company notes there is a low level of geological confidence associated with Inferred Resources and there is no certainty that further exploration work will result in the determination of Indicated Resources or that the LOM Production Target insofar as it relates to the Inferred Resources will be realised.

Refer to Appendix 2 for important information regarding the forward looking information in this announcement.

Venturex Resources Managing Director, AJ Saverimutto, said the delivery of the Sulphur Springs Definitive Feasibility Study puts the Company firmly on track to become Australia's next mid-tier Copper-Zinc producer.

"What stands out from the vast amount of work completed as part of the DFS is that Sulphur Springs is a high-quality, long-life project that will generate robust margins and strong financial returns, even using relatively conservative long-term metal price assumptions," he said.

"The DFS results show a significant improvement in several key areas compared with the Value Engineering Study completed last year, including a 40 per cent increase in the project's Net Present Value to A$472 million, an increased Reserve, increased payable Copper and Zinc production and a pre-tax Internal Rate of Return of 51 per cent. At current spot prices, the NPV is in excess of half a billion dollars – a fantastic result which really underlines the scale and quality of the project.

"Importantly, we have also managed to cut the pre-production processing plant and infrastructure capital cost estimate to A$146 million, while more accurately quantifying all capital and operating costs, refining the open pit and underground mine plan and completing all metallurgical test work to a very high level of accuracy.

"This is a project which is well and truly ready to go. It's a straightforward development and mining proposition. It's located in a Tier-1 mining district, close to major iron ore and lithium operations and first-rate infrastructure. Also, the permitting process for the reconfigured open pit and underground development is now in its final stages.

"With the DFS now complete, we are confident that we will be able to move rapidly to secure an appropriate project finance package supported by strategic off-take arrangements that will allow us to start development in the near term.

"Importantly, the commodity price assumptions used in the DFS are conservative compared to market fundamentals and below current spot prices. They are also quite conservative in comparison to the average price decks used by the major institutions. With this in mind, there is huge upside to this project from improving Copper and Zinc prices in the years ahead – a view which is increasingly held by many analysts – as well as from exploration success as we begin to unlock the potential of the 27km long Panorama VMS trend."

EXECUTIVE SUMMARY

Australian base metal developer Venturex Resources Ltd (“Venturex” or “the Company”) (ASX: VXR) is pleased to announce that it has completed the Definitive Feasibility Study (DFS) on its flagship 100%-owned **Sulphur Springs Copper-Zinc Project (“Sulphur Springs” or the “Project”)** located 144km south-east of Port Hedland in Western Australia’s Pilbara region.

The results confirm the Project’s exceptionally strong financial and technical merits based on a 1.25 million tonne per annum (“Mtpa”) open pit and underground development, paving the way for Venturex to complete additional project off-take arrangements, secure project financing and commence construction.

The DFS confirms that Sulphur Springs has the potential to be a profitable base metal mine with low cash operating costs, robust margins and outstanding economic returns.

The DFS indicates that Sulphur Springs will deliver average annual production of ~65ktpa of 25% Copper concentrate (~15ktpa Cu payable metal) and 75ktpa of ~50% Zinc concentrate (~35ktpa Zn payable metal).

The project is forecast to generate life-of-mine (“LOM”) revenue of A$2.62 billion and LOM Project free Cash flow of A$800+ million over an estimated 12-year mine life (including construction).

The Sulphur Springs development will also provide a strong foundation for Venturex’s long-term growth strategy in the base metals sector, with the cash-flow generated to be utilised to progress a major exploration program along the 27km long, under-explored Panorama Volcanogenic Massive Sulphide (“VMS”) Trend aimed at discovering additional VMS deposits.

FINANCIAL SUMMARY AND KEY DFS OUTCOMES

A summary of financial model outputs and inputs is presented in Table 1, key commodity price assumptions are presented in Table 2 and key DFS outcomes are shown in Table 3 below:

Table 1: Financial Model Outputs

Description	Unit	VES (2017 Study)[2]	DFS Assumption	Spot	Consensus
Pre Tax $NPV_{8\%}$[1]	$A M	*338*	***472***	*501*	*617*
Pre-Tax IRR	%	*52%*	***51%***	*53%*	*63%*
Payback	mths	*31*	***43***	*42*	*33*
Free Cash-flow	$A M	*601*	***818***	*864*	*1,040*
Maximum Cash Down	$A M	*183*	***181***	*181*	*181*

[1] *NPV discount factors are presented on a real basis.*
[2] *Assumed 1.0 MTPA case.*

Table 2: Commodity Price Deck

Pricing Index (USD)	Copper	Zinc	Ag	Forex
DFS Assumption	6,300	2,650	19.0	0.720
VES Feb 17	6,450	2,535	19.0	0.760
Spot (4 Oct 2018)	6,309	2,695	14.6	0.708
Consensus	7,302	2,890	15.4	0.740

Table 3: Key Financial Statistics

Study Outcomes	***Base case***
Production Rate	**1.25 Mtpa**
LOM Project revenue (real)	**A$2,625 million**
LOM Free Cash flow (pre-tax real)	**A$818 million**
Infrastructure capital	A$146 million
Pre-tax NPV$_{8\%}$	**A$472million**
Post-tax NPV$_{8\%}$	**A$310 million**
Internal Pre-tax Rate of Return (IRR)	51%
Internal Post-tax Rate of Return (IRR)	39%
Max Negative Cash flow $A M	**181M**
Project payback	~3.6 years
Average Annual Free Cash flow (real)	**A$80 million**
LOM assumed revenue per tonne	A$209/tonne
Average cash operating costs[3]	A$111/tonne
Royalties	A$11/tonne
Capital Cost	A$22/tonne
Margin	A$65/tonne

[3]Cash operating costs include all mining, processing, transport, port, shipping/freight and site based general, TCRC's and concentrate charges and administration costs.

Figure 1: DFS Mining Schedule –Tonnes and Grade by Mining Location

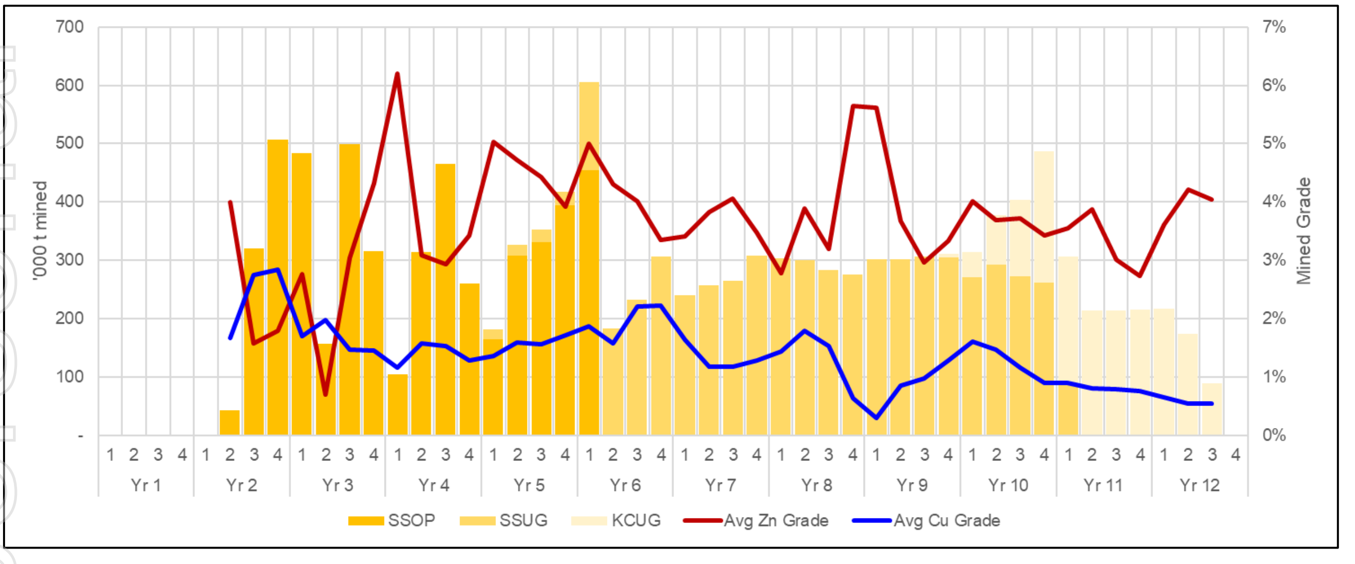


Figure 2: DFS Processing Schedule – Tonnes and Grades by Mining Location

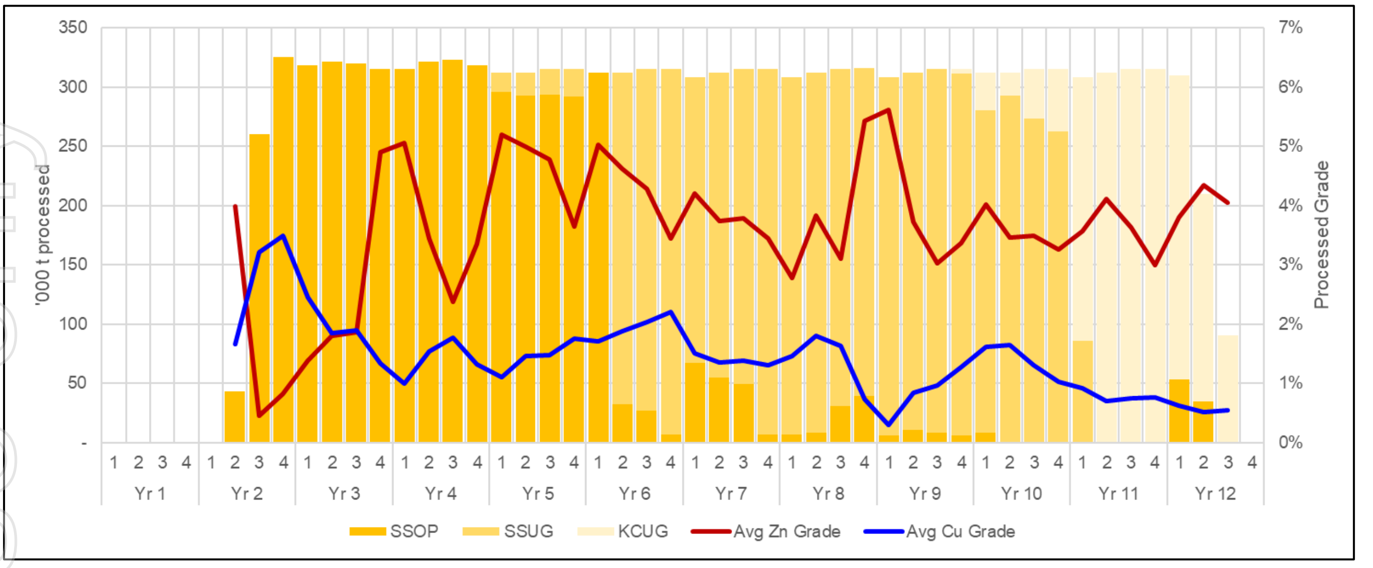


Figure 3: Pre-Tax Cash Flow – Quarterly and Cumulative

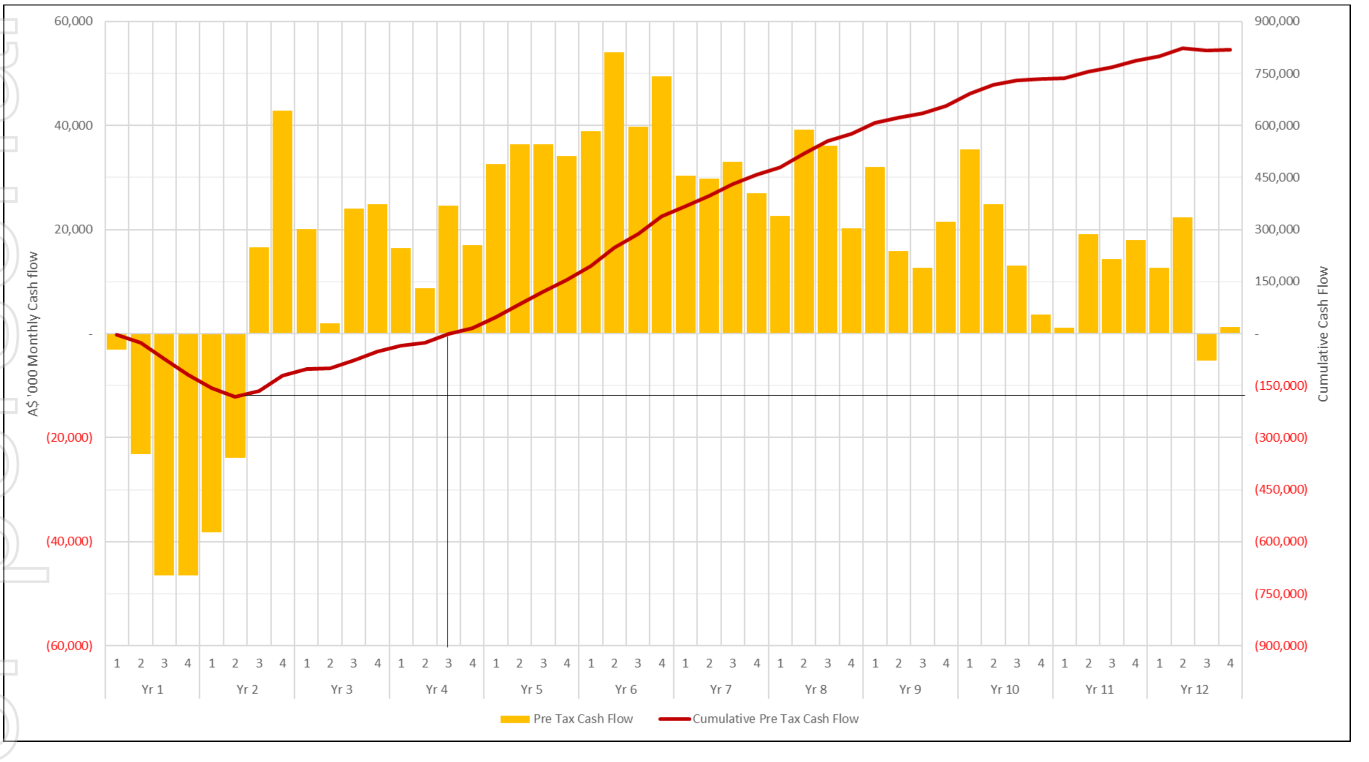


Figure 4: DFS Gross Revenue vs C1 Operating Costs

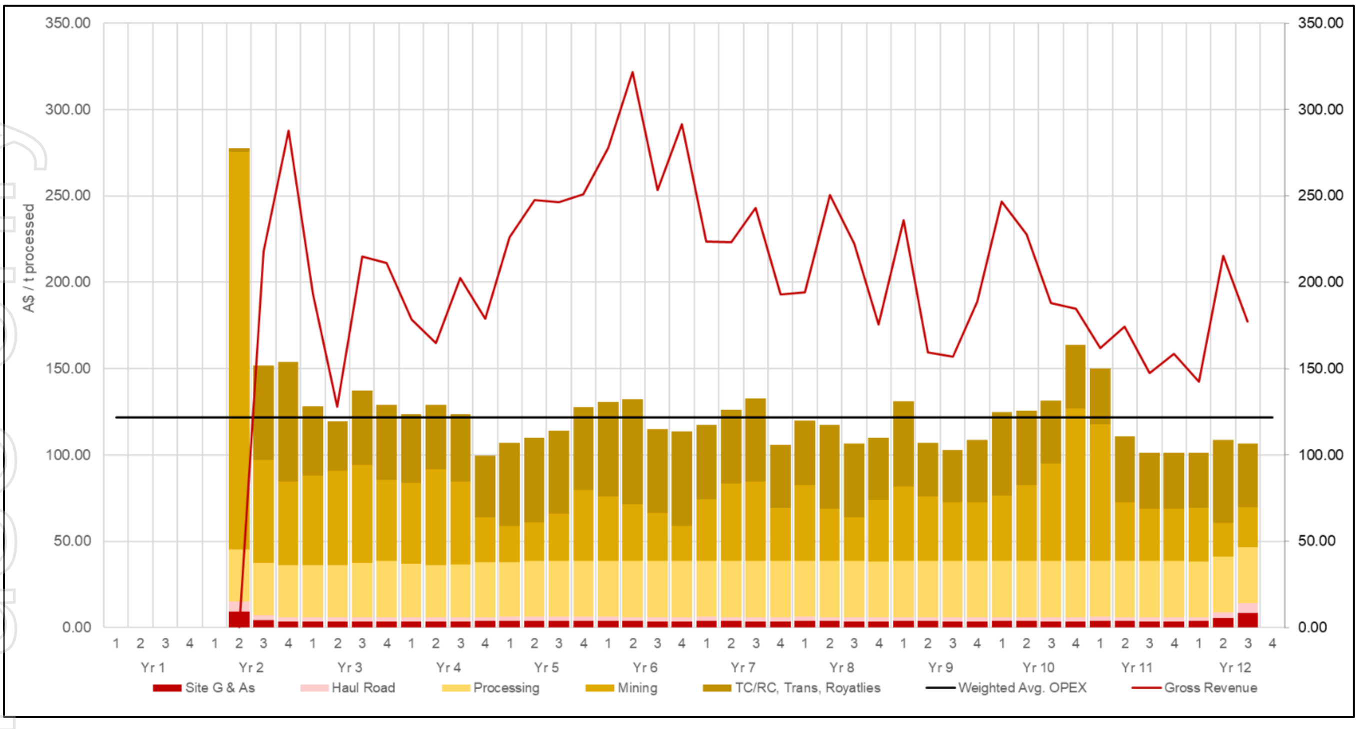
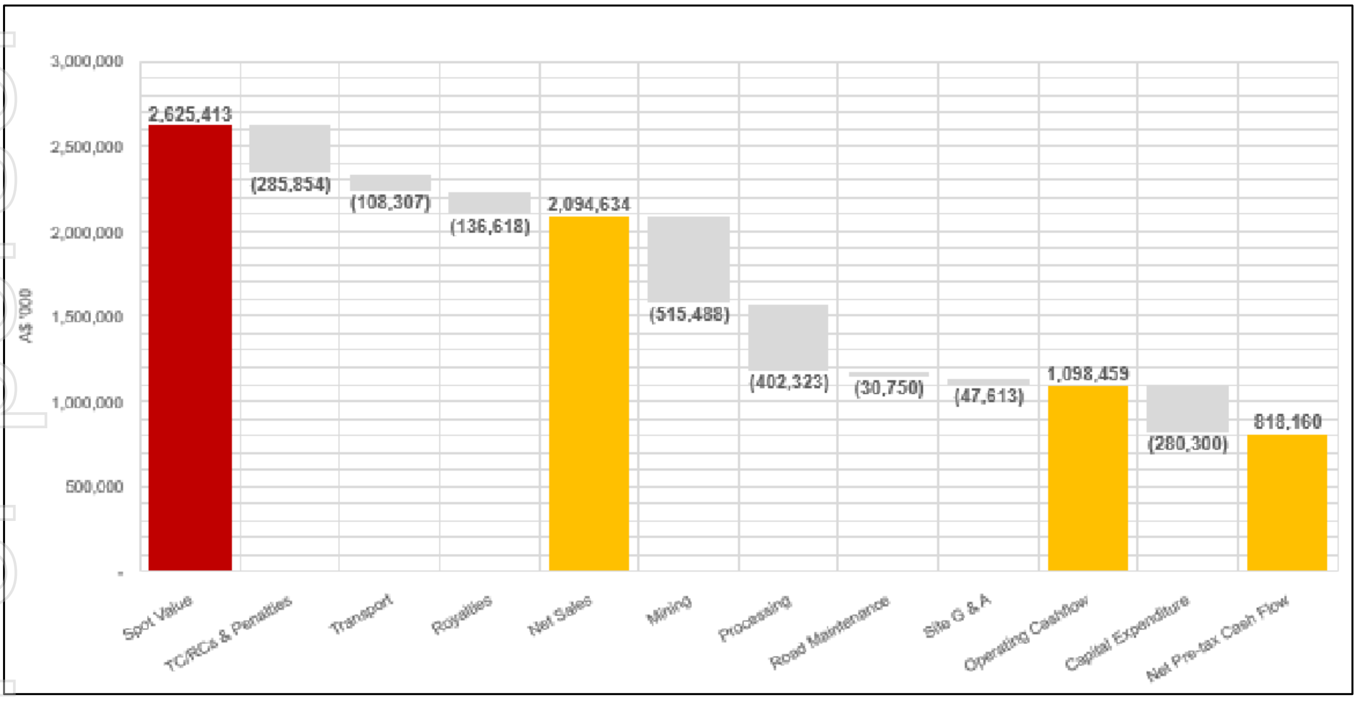


Figure 5: Project Undiscounted Cash Flow Waterfall (pre-tax)



NEXT STEPS

The Venturex Board has approved the Sulphur Springs DFS and, subject to obtaining a suitable project finance package, the Venturex Board will make a Final Investment Decision. It is expected that construction will commence shortly after project financing has been completed.

Venturex has appointed BurnVoir Corporate Finance Limited ("BurnVoir"), a leading resource specialist, as financial advisor to assist with securing debt facilities for the project.

DFS SUMMARY

Venturex's Sulphur Springs DFS work has been completed to a high standard with the assistance of a group of highly experienced independent consultants and contractors, including:

- Process Plant Infrastructure and Non-Process Infrastructure – Lycopodium Limited
- Metallurgical Test work – Lycopodium Limited and Australian Laboratory Services Limited
- Geology and Resources – Mil Min Proprietary Limited
- Mining, Mine Design and Ore Reserves – Entech Proprietary Limited
- Tailings Management Facility and Geotechnical – Knight Piesold Limited
- Financial Modelling – Entech Proprietary Limited and BurnVoir Corporate Finance Limited

The Company would like to extend its thanks to all consultants and staff that assisted during the completion of this study.

ORE RESERVES

The Ore Reserves are based on the updated Mineral Resource Estimate announced in March 2018 (see ASX release – 21 March 2018).

The Ore Reserve estimate, which was prepared by Entech Proprietary Limited ("Entech"), is presented in Table 4 below. The Ore Reserve represents a 42% increase in contained Copper metal from the previous estimate in 2016. The mine plan supporting this estimate is outlined in detail in the DFS.

Table 4: Sulphur Springs Ore Reserve (2018)

Description	Category	Tonnes	Cu (%)	Cu (t)	Zn (%)	Zn (t)	Ag(g/t)
Open pit	Proved	-	-	-	-	-	-
	Probable	3,709	1.8	65,793	3.6	133,356	17.1
	Total	**3,709**	**1.8**	**65,793**	**3.6**	**133,356**	**17.1**
Underground	Proved	-	-	-	-	-	-
	Probable	4,785	1.1	53,287	2.7	127,929	12.1
	Total	**4,785**	**1.1**	**53,287**	**2.7**	**127,929**	**12.1**
Total	Proved	-	-	-	-	-	-
	Probable	8,494	1.4	119,081	3.1	261,284	14.3
	Total	**8,494**	**1.4**	**119,081**	**3.1**	**261,284**	**14.3**

N.B: Inferred Resources contained within the Reserve design have been assigned a nil grade and dilute the reported Reserve.

PROJECT BACKGROUND

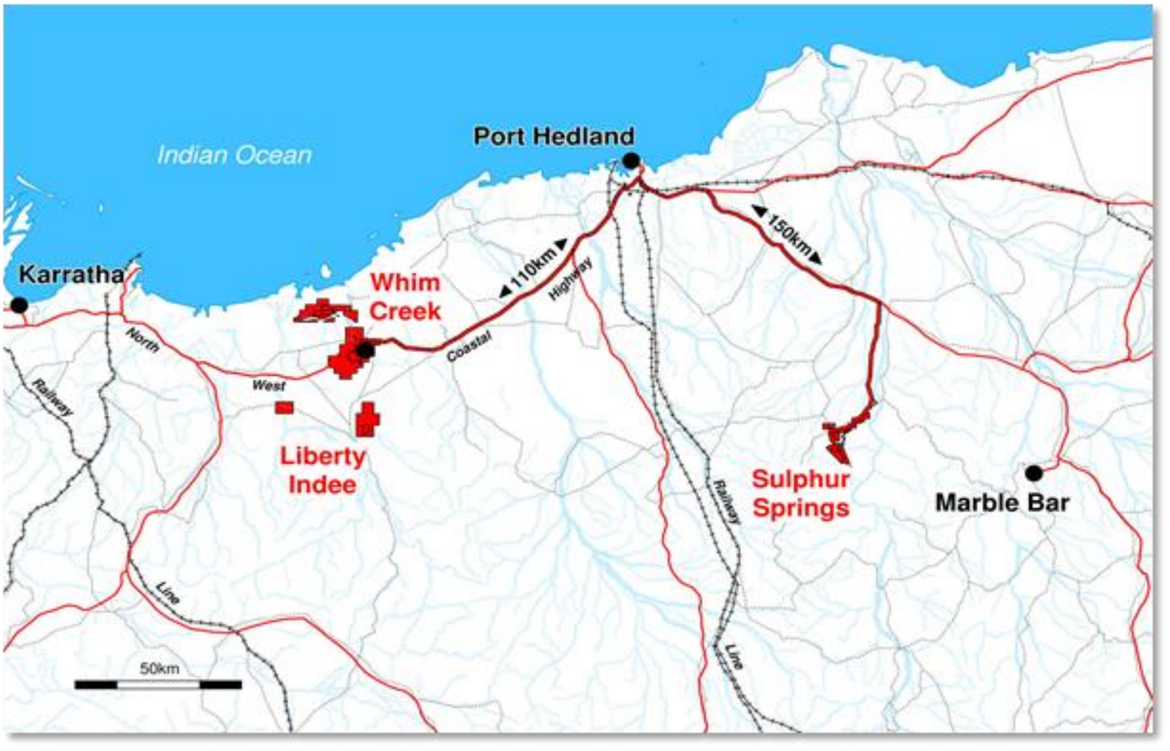
Introduction

The Sulphur Springs project is located approximately 144km south-east of Port Hedland, one of Australia's principal mining and shipping hubs. Access is via the sealed Marble Bar road and then 72km of existing haul road.

Project development will consist of an initial open pit mining operation producing approximately 5.1 million tonnes ("Mt"), followed by an underground operation producing approximately 5.6 Mt. The Sulphur Springs project also includes the adjacent Kangaroo Caves deposit, which is scheduled to produce approximately 1.8 Mt. This brings the LOM total ore mined to 12.6Mt.

The Project location is shown in Figure 6.

Figure 6: Project Location and Access



The region has been developed significantly since the Value Engineering Study was completed in early 2017, with the recent construction of Pilbara Minerals' Pilgangoora Lithium-Tantalum Project and Altura Mining's Pilgangoora Lithium Project (both now operating).

Atlas Iron's Abydos Project lies adjacent to the Sulphur Springs site.

Recent project construction in the region de-risks the Project significantly as well as providing access directly to the site through the Abydos Haul Road, which was constructed by Atlas Iron in 2013 to service the Abydos mine.

Site Access

All personnel will access site by flying to Port Hedland and then be transferred via bus or light vehicle to site. Charter flights are available through a number of providers who have quoted a return cost per person which is significantly cheaper than commercial airline options.

During the project implementation phase, options will be investigated as to whether personnel can be flown to one of the other nearby mine sites, developing a natural economy of scale with other local operators, which will be of benefit to all operators in the region.

MINERAL RESOURCE ESTIMATION

Sulphur Springs and Kangaroo Caves are VMS Zinc-Copper deposits and are located in the central east of the Archaean Pilbara Craton, in the north-west of Western Australia.

The Sulphur Springs mineral deposit is a single, strata-bound VMS mineralising event, which has been off-set into two massive sulphide lenses (East and West) by a post-mineralisation sub-vertical fault. The strike length of the deposit (East to West) is 500m with each lens dipping to the north at approximately 45-55°. Drilling has been completed to approximately 400m vertical depth, with the deposit open at depth with along strike potential, offering significant exploration upside.

A summary of the Indicated and Inferred Resources is presented in Table 5.

Table 5: Summary Indicated and Inferred Resources (March 2018 and September 2015)

Location	JORC Classification	Tonnes ('000t)	Cu %	Zn %	Pb %	Ag g/t
Sulphur Springs	Measured	-	-	-	-	-
	Indicated	9,400	1.5	3.8	0.2	17
	Inferred	4,400	1.4	3.7	0.2	18
	Subtotal	**13,800**	**1.5**	**3.8**	**0.2**	**17**
Kangaroo Caves	Measured	-	-	-	-	-
	Indicated	2,300	0.9	5.7	0.3	13.6
	Inferred	1,300	0.5	6.5	0.4	18
	Subtotal	**3,600**	**0.8**	**6**	**0.3**	**15**

ENVIRONMENTAL AND PERMITTING

The Project is undergoing formal assessment under the *Environmental Protection Act 1986* at a level of Environmental Review – No Public Review with the environmental review document submitted to the Environmental Protection Authority of Western Australia ("EPA") in June 2018. The key environmental factors identified for the project include Flora and Vegetation, Subterranean Fauna and Terrestrial and Inland Water Quality.

One declared rare flora species*, Pityrodia sp Marble Bar*, occurs within the project area and the project footprint has been designed to avoid impacts on known locations of this species. Several threatened fauna species are known to occur within the project area including the Northern Quoll, Ghost Bat, Pilbara Leaf-nosed Bat and the Olive Python, however no significant impacts on these species are anticipated and no referral under the Federal *EPBC Act 1999* is considered necessary.

Several indigenous rock engravings have been located within the project area and the infrastructure layout has been carefully designed to avoid these. Venturex also has a strong relationship with the local Indigenous Group.

Mine closure has been a key environmental matter for the project, specifically relating to the Tailings Storage Facility ("TSF"). With this in mind, the TSF has been designed to meet the highest engineering standards with a dual compacted soil and High Density Polyethylene ("HDPE") liner to minimise potential seepage and a combined water shedding and store and release cover design to reduce infiltration at closure. Consultation with key stakeholders and government agencies has been ongoing throughout the project's approval process and will continue throughout the construction, operation and closure phases.

Following the EPA's approval decision on the project, anticipated in Q4 2018, additional approvals, or amendments to existing approvals, will be required including a Mining Proposal under the *Mining Act 1978,* Works Approvals for the processing plant, TSF, landfill, sewage treatment plant and power station under Part V of the *EP Act 1986* and Water Abstraction Licence under the *Rights in Water Irrigation Act 1914*.

Other secondary approvals will be obtained as required, including Dangerous Goods Licence, Licence to Operate, building permits and sewage treatment process approvals.

GEOTECHNICAL EVALUATION

A small, dedicated diamond drilling program was designed by Entech and completed by Venturex earlier this year for the sole purpose of collecting geotechnical information. The drilling was undertaken utilising existing, and accessible, drill pads. Many drill pads exist but were not necessarily accessible within the timeframe required to undertake the drilling.

The geotechnical data collection program consisted of the drilling, geotechnical logging and sampling and materials properties testing of two dedicated diamond drill holes (SSD104 & SSD105), as well as the supplied geological and geotechnical drill hole database.

Evaluation consisted of geotechnical logging, structure logging and laboratory testing.

Rock mass conditions are generally uniform across the deposit, with footwall rock mass conditions being only slightly better than hangingwall rock mass conditions.

Rock mass conditions in the ore are generally very good in both orebodies, with the Eastern lode having better rock mass conditions than the Western lode.

Poor rock mass conditions appear to be quite discrete and are most likely associated with localised structures (i.e. narrow fault/shear zones). As with all mining projects, more knowledge will be gained once mining is underway which will allow for optimisation of geotechnical design parameters.

MINING

Venturex commissioned Entech to complete a DFS-level Mining Study on Sulphur Springs. This follows the Value Engineering Study completed by Entech in February 2017, with the resulting Ore Reserve announced by Venturex. The DFS is based on the Mineral Resource update released to the ASX on 21 March 2018.

The mining operating cost estimate accuracy is +/-15%. Mining operating costs have been provided by contractor budgeted quotes for all open pit and underground mining activities. Cost estimate studies for grade control have been completed by Venturex with a suitable allowance made on a per ore tonne basis.

During the DFS stage of work, Entech's scope of work included the work areas outlined below:

- Mine Planning Criteria
- Optimisation
- Mine Design and Scheduling
- Mine Infrastructure
- Mine Contractor Pricing
- Cost and Revenue Modelling
- Feasibility Study Reporting
- JORC (2012) Ore Reserve Reporting
- Future Works Plan

Mining of the Sulphur Springs deposit has been assumed to be by a combination of open pit and underground methods. The open pit mine life is currently projected to be approximately four years immediately followed by the underground for a further six years. The selected mining method, design and extraction sequence are tailored to suit orebody characteristics, minimise dilution and ore loss, utilise planned processing plant capacity and expedite free cash generation in a safe manner. Mining schedules have been based on realistic mining productivities with readily achievable mining rates along with consistent material movements.

Open pit mining dilution and recovery modifying factors were simulated by modelling to a Selective Mining Unit ("SMU") of 5mX x 5mY x 2.5mZ. The re-blocking technique dilutes fully into the SMU size and the resultant model is then used as a diluted model.

Key parameters used as part of the pit optimisation process included (but are not limited to):

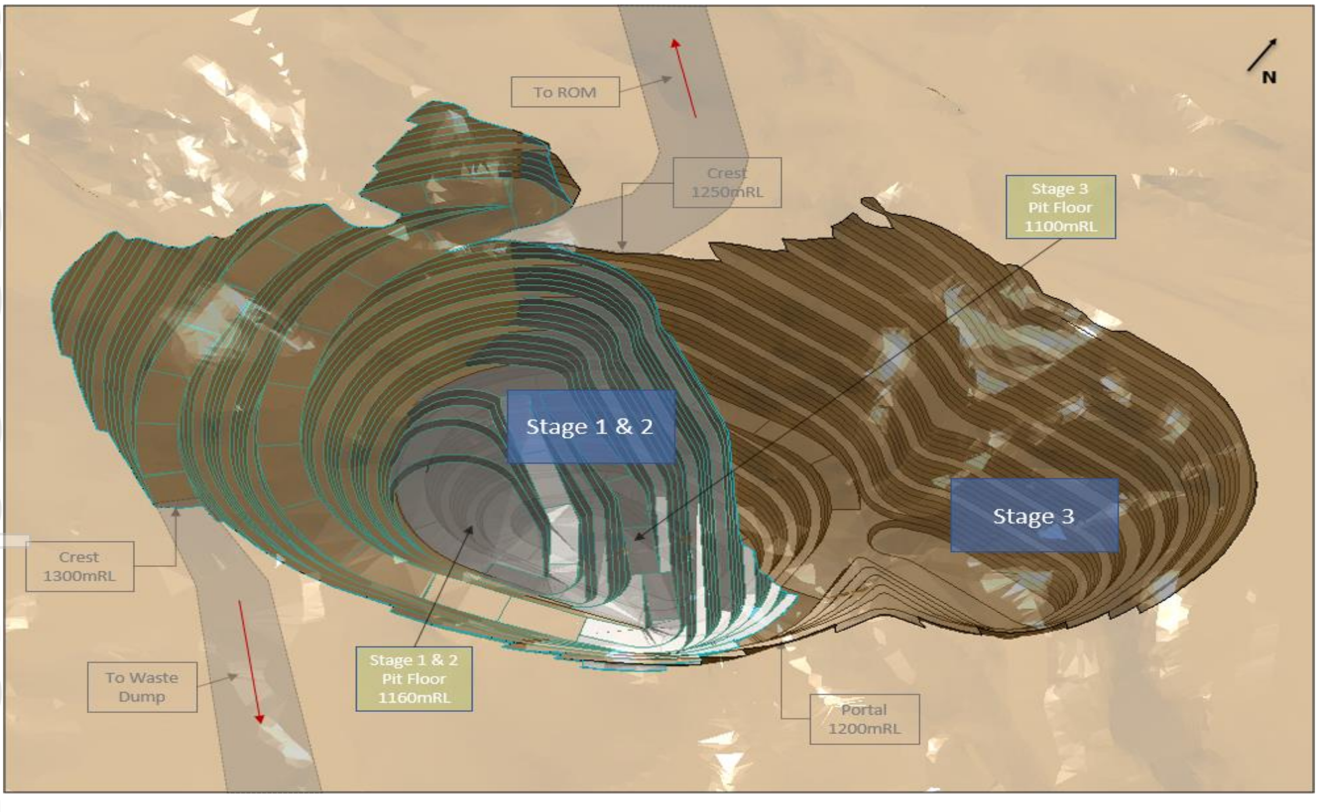
- Assumed average of 1.25Mtpa of ore processing
- Mining costs derived from submissions received from mining contractors who offered pricings for the previous study
- Metallurgical recoveries provided by Lycopodium (who completed test work in conjunction with ALS)
- Processing and infrastructure costs provided by Lycopodium (based on an updated and optimised plant design and infrastructure requirements)

The intention is to mine the Sulphur Springs deposit using hydraulic excavators (backhoe configuration) and rear dump trucks after the material has been drilled and blasted. For the first two and half years of open pit operations, the fleet will consist of 1 x Liebherr 9200 (210 t-class) plus 1 x Komatsu PC1250 (120 t-class) excavator. These will be supported by a fleet of Komatsu HD785-7 dump trucks.

During this period, overburden will be removed and the orebody exposed. After establishing the working area, the Liebherr 9200 excavator is de-mobilised and for the remainder of the open pit life mining is carried out by the Komatsu PC1250 excavator. All mining activities will be conducted by a specialist mining contractor.

The final pit design shown in Figure 7 utilises stages to maximise cash-flow with an overall stripping ratio of 7.7:1 (excluding upfront pre-strip). The overall stripping ratio is 8.7:1.

Figure 7: Sulphur Springs Open Pit



Underground mining will be completed through Modified Sub-Level Caving (“M-SLC”) techniques. Geotechnical parameters remained the same for underground mining from previous studies as no further work has been completed on the underground portion of the ore body.

The proposed mining method requires a pattern of generally evenly spaced and sized rib pillars separating the primary (core) stopes, which are connected via an overlying sill pillar.

The sill pillar separates the active mining area from the overlying mined out area, which contains waste rock fill introduced from a pass breaking through to a designated area in the floor of the pit.

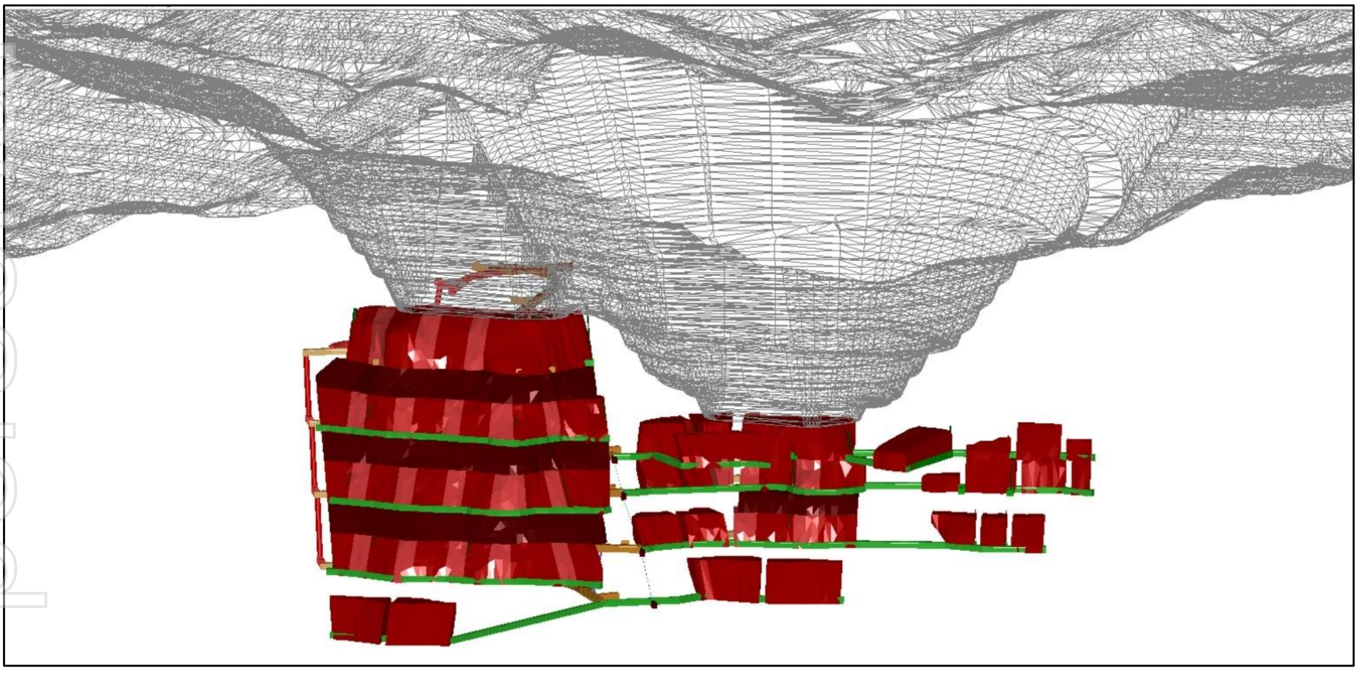
The mine is developed by a decline system with a mine portal established on the footwall side of the orebody in the open pit at the 1,200mRL. This will allow central access to the ore from the initial single heading decline, which will then allow development of a single main decline system located to the east of the Main fault. This decline will allow access to both the East and West lodes.

Detailed mine sequencing shows that a minimum mine production rate of 1.25Mtpa is suitable from a mining inventory (inclusive of Inferred classification material) of 5.6Mt grading 3.7% Zn and 1.4% Cu, an increase from the inventory presented in the VES of 4.9Mt grading 3.7% Zn and 1.3% Cu.

Underground mining will be undertaken by rubber tyred, diesel-powered equipment utilising 55-tonne haul trucks and 2900 scale boggers.

Total mining operations for the underground, including initial mine development and subsequent ore mining, will take place over a period of approximately 6.5 years.

Figure 8: Sulphur Springs Underground Mine Design



After reviewing a number of mining methods, M-SLC is still the preferred extraction method with some areas being extracted via Long Hole Open Stoping.

The same mining methods have been used for the DFS as were selected for the VES.

Due to the width of the ore body and a natural economy of scale, a bulk mining method such as M-SLC is considered appropriate in order to provide a low-cost mining methodology at the chosen production rate of 1.25Mtpa.

A review of mining methods is presented in Table 6.

Table 6: Mining Method Selection and Comparison

Mining Method	***Comments***
Modified Sub-Level Caving *(Selected mining method)*	Applicable to Sulphur Springs orebody geometry. Reduced capital and operating expense compared to other methods (reduced development, no cemented fill or fill plant required). Primary stopes extracted cleanly and unaffected by introduced fill. Stoping/pit void interaction will need to be monitored/managed – hangingwall stability in pit will likely be compromised – pit redesigned so that ramp does not access pit above glory hole. Northern and southern strike extents of hangingwall in the eastern orebody will remain unfilled. Water is allowed to ingress through the break-through into the pit and this risk will need to be managed appropriately (mud rush/inrush risk management plan). This is not a barrier to the project proceeding.
Bench Stoping with Rockfill	Generally applicable to the Sulphur Springs orebody geometry. Considered inappropriate for re-entry in stopes greater than 10-12m width. Some stoping areas are up to ~40m in width. Unacceptable levels of dilution will occur at the ore/waste interface when widths exceed 10-12m.
Open Stoping with Pastefill	Best mining method in terms of overall recovery. Flexible in terms of ability to tight-fill stopes, and open up multiple mining fronts. Higher capital and operating costs in a deposit of this size. Decision to mine the open pit greatly reduces the ore inventory for mining via u/g methods, therefore the need for a pastefill plant.

The Kangaroo Caves project has been reviewed as a high-level study considering a single simplified mining method of top-down longitudinal open stoping with rock pillars. Benchmark operating costs and mining assumptions have been applied.

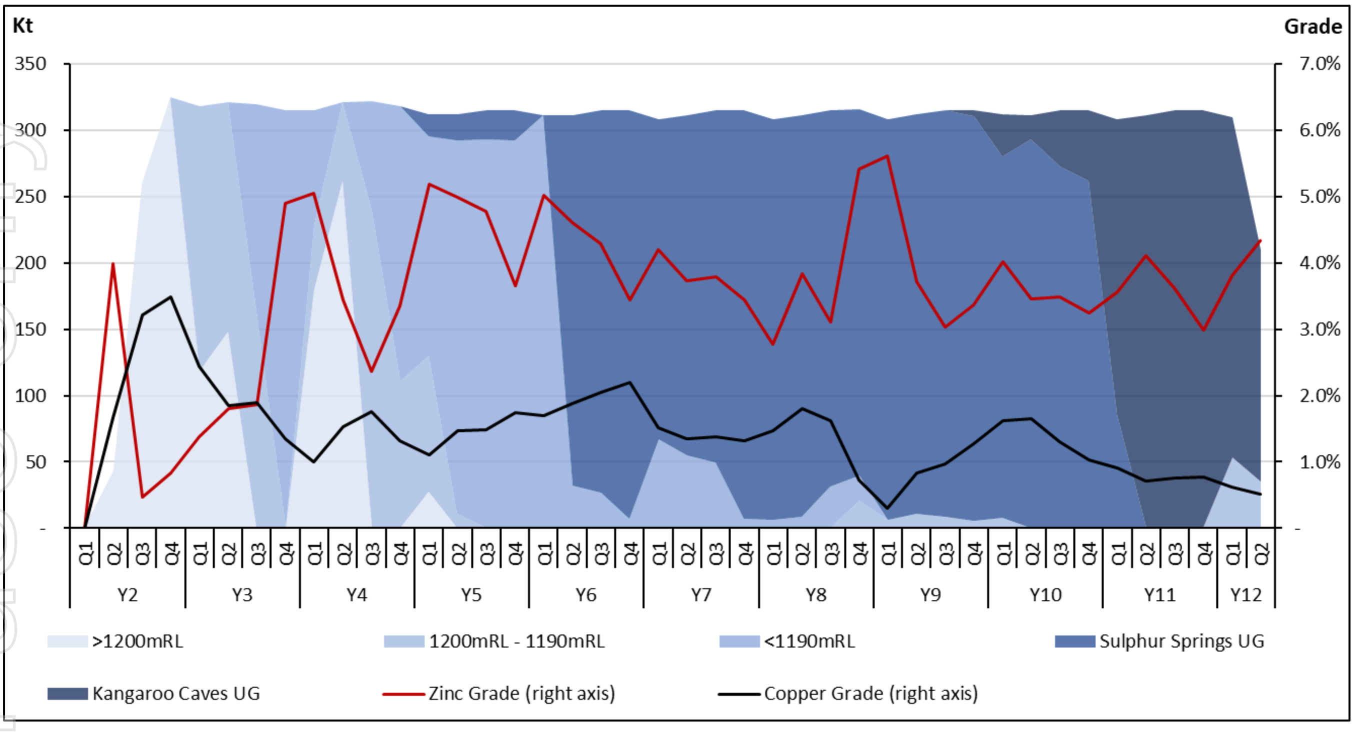
The underground operation has been assumed to be accessed from a portal location at surface (1,200mRL). Due to the flat-dipping nature of the ore body, longitudinal ore drives on 10m level intervals with two levels being mined off one level access have been selected, resulting in level accesses off the decline designed on 20m level intervals.

The ore mining schedule supplements the Sulphur Springs feed, adding a further 1.8 Mt of inventory grading 3.8% Zn and 0.7% Cu.

No further work has been completed on Kangaroo Caves since the VES and this deposit is included at the back-end of the Sulphur Springs mining schedule.

Ore production is at a rate of 1.25Mtpa for both the open pit and underground operations. The ore production profile is presented in Figure 9.

Figure 9: Sulphur Springs and Kangaroo Caves Ore Production Profile



The Mineral Resource estimates that underpin the production target within this report were first reported on 21 March 2018. The estimates were prepared by a Competent Person in accordance with JORC Code 2012.

This Ore Reserve announcement supersedes the previous Sulphur Springs Ore Reserve (see ASX release dated 28 June 2016). The Ore Reserves were prepared by a Competent Person in accordance with JORC Code 2012.

The reported Production Target is 12.6Mt @ 3.6% Zn, 1.4% Cu, 15.8g/t Ag.

Approximately 68% of the LOM Production Target is based on material classified as Ore Reserves and approximately 32% of the Production Target is based on material classified as Inferred Resources.

The relative proportion of material within the Production Target sourced from Ore Reserves and Inferred Resources is as presented in Table 7.

Table 7: Ore Reserve Proportionality to Inferred Resources

Year	*% Contribution from Reserves*	*% Contribution from Inferred Resources*
1	72%	28%
2	69%	31%
3	75%	25%
4	75%	25%
5	70%	30%
LOM	68%	32%

METALLURGICAL TESTING AND PROCESSING

The metallurgical viability of the Sulphur Springs deposit has been addressed by a number of test work programs. Previous work focused on the fresh ore, resulting in a recommendation to use selective sequential flotation to produce separate Copper and Zinc rich concentrates with high mineral recoveries at target grades.

Test work specifically completed for this DFS has focused on the Transitional and Supergene ores. Transitional ore test work was designed to take advantage of the relatively discrete occurrence of Copper and Zinc mineralisation, so that by using selective mining, the plant feed could be campaigned as either Copper-rich/Zinc-poor ore or vice versa. The Copper and Zinc ores would then be selectively floated separately.

The secondary metal can then be recovered subsequent to completion of primary ore processing.

The Supergene and Transitional ore will be recovered from the open pit with the bulk of the fresh ore being recovered using underground mining methods.

A significant advancement has been made with metallurgical test work, proving up the viability of both the Supergene and Transitional material.

Historical test work on fresh material was used in the study to determine process plant design. All material will be processed at a grind size of P80 63 microns.

A summary of metallurgical recoveries is presented in Table 8.

Table 8: Sulphur Springs Metallurgical Test Work Summary

Material Type	***Head Grade (%)***	***Recovery (%)***	***Concentrate Grade (%)***
Cu Fresh	1.41 - 1.91	86.5 – 95.3	24.7 – 26.4
Zn Fresh	3.91 - 5.83	87.5 – 93.1	53.2 – 60.2
Cu Transitional	2.97 -3.04	89.7 – 91.7	25.5 - 26.8
Zinc Transitional	1.6 – 14.6	61.4 – 95.6	17.6 – 57.4
Cu Supergene	2.61 - 2.71	88.0 – 89.5	16.0 – 16.6

Actual recoveries are presented in Table 9.

These recoveries are based on mine design and appropriate modifying factors being applied, such as dilution, mining recovery and processing recovery. Recoveries are split into primary and secondary by-product metal recoveries. Secondary by-product metal is classified as by-product ores in a dominant Copper or Zinc ore.

For example, in a Copper-rich, Zinc-poor ore, the secondary by-product would be considered Zinc and vice versa. Secondary by-product recoveries account for 11% of total Zinc metal and 6% of total Copper metal.

Table 9: Actual Metal Recoveries

Metal	***Primary Recovery (%)***	***Secondary Bi-Product Recovery (%)***
Copper	86.8	53.3
Zinc	93.6	72.1

Plant Design

The plant has been designed in accordance with accepted industry practice and the flowsheet is constructed from unit operations that are well proven in the industry and based on all previous and recent test work.

The key criteria for equipment selection are the suitability for duty and the projected mine life of the operation without unnecessarily compromising reliability and ease of maintenance.

The plant layout provides ease of access to all equipment for operating and maintenance requirements while maintaining a compact footprint to minimise construction costs.

The key project and ore specific design criteria that the plant design meets are as follows:

- 1.25 Mtpa throughput
- Crushing plant mechanical availability of 85% (7,446 h/y)
- Mechanical availability for the remainder of the plant of 91.3% (8,000 h/y) supported by crushed mineralised material storage and standby equipment in critical areas. Short-term interruptions to crushed ore flow will be possible due to the intermediate storage of coarse ore in the surge bin
- Sufficient automated plant control to minimise the need for continuous operator interface and allow manual override and control if and when required

A process design criteria document has been prepared by Lycopodium incorporating the engineering and key metallurgical design criteria derived from the results of the metallurgical test work and comminution circuit modelling. The process design criteria forms the basis for the design of the processing plant and required site services.

The Sulphur Springs process plant consists of a mineral processing flotation concentrator with associated services and ancillaries. The plant has been designed to take run-of-mine (ROM) ore from the mine and concentrate the Copper and Zinc bearing minerals to produce a Copper-bearing product, a Zinc-bearing product and a barren tail.

The process facilities involved include the following:

- Crushing
- SAG and Ball milling
- Flotation
- Thickening
- Filtration
- Product handling
- Tailings disposal
- Reagents
- Services and Ancillaries

The plant has been designed in accordance with accepted industry practice and the flowsheet has been constructed from unit operations that are well proven in industry and based on the results of current and historical test work programs.

Crushing and Coarse Ore Storage

Run-of-Mine (ROM) ore will be reclaimed from the ROM pad by a front-end loader and fed to the ROM bin with a live capacity of approximately 45m^3. The ROM bin will be fitted with a static grizzly to allow diversion of large rocks for subsequent breakage by mobile rock breaker.

Ore will be drawn from the ROM bin at a controlled rate to the vibrating grizzly via a variable speed apron feeder and will feed into a single toggle jaw crusher designed to process 1.25Mtpa of fresh ore (1.29Mtpa of Transitional ore).

The grinding circuit will consist of a Semi Autogenous Grinding (SAG) mill in open circuit followed by a ball mill in closed circuit with hydro-cyclones.

Primary crushed ore from the surge bin will be withdrawn by a single apron feeder. Variable speed control of the mill will provide processing flexibility to cater for liner wear and variations in ore grindability.

The original design basis for the Sulphur Springs process plant was based on treating fresh ore. Test work conducted on Transitional samples determined that a single product float (Copper or Zinc) is required in order to maximise the recovery and grade of the target product.

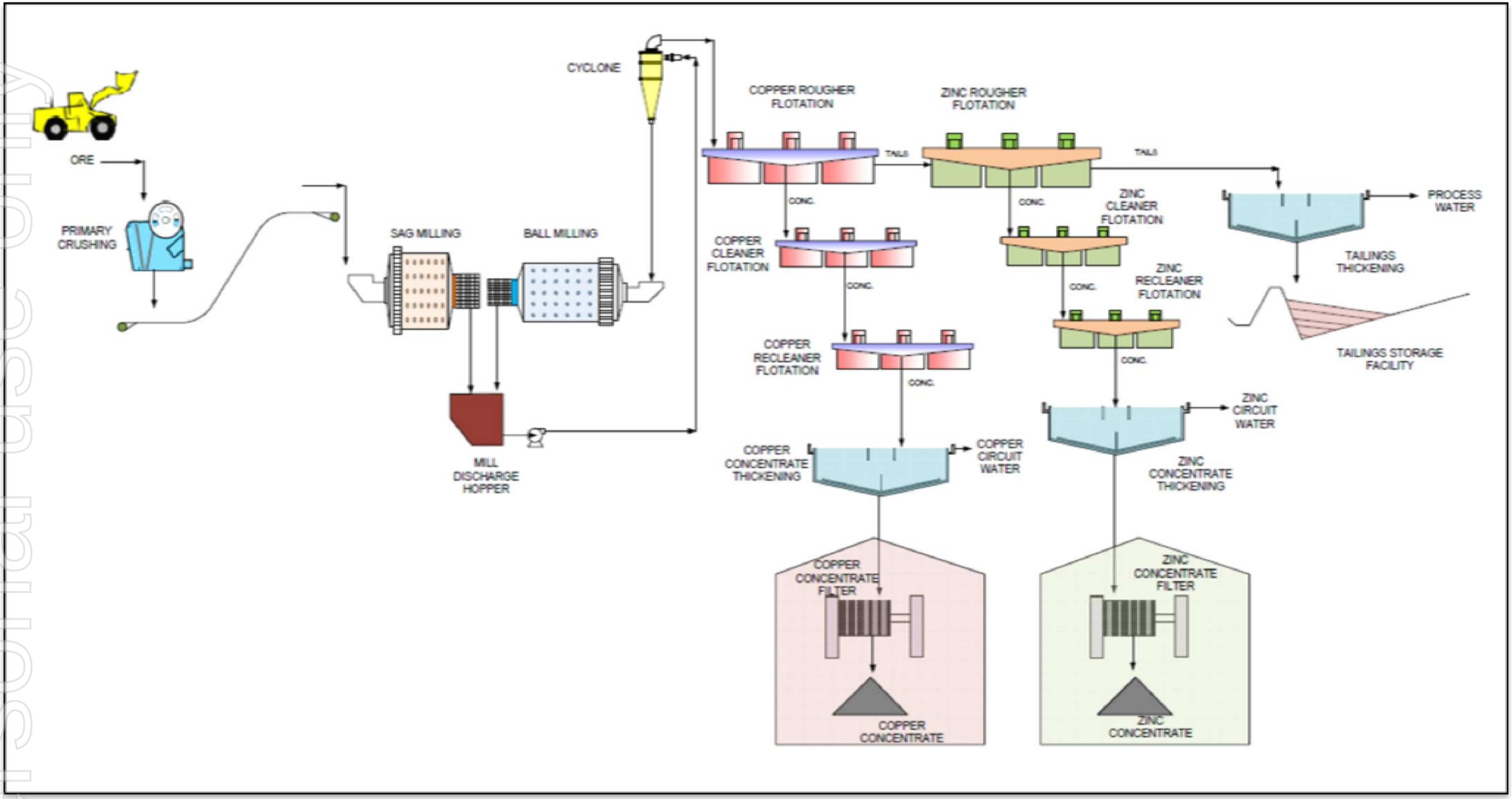
The flotation feed distribution box ahead of the flotation circuits allows the hydro-cyclone overflow to be directed to either the Copper or Zinc flotation circuits as required.

The flotation circuit will consist of sequential flotation of Copper and then Zinc sulphides.

In the first stage of flotation, chalcopyrite particles (Copper-bearing minerals) will be selectively separated from the sphalerite, pyrite and gangue minerals. In the next stage, sphalerite (Zinc-bearing minerals) will be selectively separated from the pyrite and gangue minerals. The Copper concentrate from the first stage of flotation and the Zinc concentrate from the second stage of flotation will then be separately thickened, filtered and stored prior to transport to customers.

Flow sheet design is presented in Figure 10.

Figure 10: Process Flow Diagram



HYDROLOGY

The Project area is located within the Pilbara Surface Water Management Area proclaimed under the *Rights in Water and Irrigation Act 1914*, administered by DWER and lies upstream of a proclaimed water reserve (a Priority 1 Drinking Water Source Area), which is located in the lower reaches of the De Grey River (AECOM 2018b). Water resource objectives for this aquifer include:

- Preventing saltwater intrusion into the aquifer caused by abstraction
- Maintaining water quality for the most beneficial use (potable water supply)
- Maintaining groundwater and pool levels within a target range to maintain aquatic habitat and riparian vegetation dependent on groundwater and protect values as listed in the Directory of Important Wetlands in Australia

Although it is unlikely that the project will affect this resource, it is recognised that it is in the headwaters of the catchment supporting surface water flows to the scheme area.

Mine Dewatering

Initial pit dewatering will use four strategically located vertical dewatering bore holes equipped with electric submersible pumps. As mining progresses, strategically located sub-horizontal drain holes will be drilled in the pit wall to compliment these vertical dewatering bore holes.

Two trailer-mounted, diesel-powered pit dewatering pumps will provide in-pit dewatering from sumps as required during mining of the pit. An allowance for dewatering is included in the contractor's mining rates. The contractor will be responsible for the supply and maintenance of all pumps used in the pit operations, and transfer of the water to a water dam located on the surface.

The dewatering system from the bottom of the open pit to the water dam will be maintained during and on the completion of open pit mining. This system will be designed to enable rapid dewatering during high rainfall events and to maintain water in the main pit sump at required level.

The primary means of dust suppression on site will be via watering the surface haulage roads and infrastructure areas, and separately fixed sprays as required in underground areas.

Dust management will be conducted using a dedicated water cart supplied by the open pit mining contractor. The continued availability of a water cart has been assumed following completion of open pit mining and will be operated on an ad hoc basis.

The water cart will source water from mine dewatering where appropriate, or else draw from raw service water if required for environmental reasons.

TAILINGS MANAGEMENT

Knight Piésold has completed an assessment and design for a Tails Storage Facility (TSF). A conceptual design has been proposed by Knight Piésold to suit required criteria.

The TSF will be constructed in five stages, with stage 1 being constructed within the pre-production period of mine development. TSF LOM construction and closure costs are presented in Table 10.

Table 10: Tailings Storage Facility Costs

Stage	Tonnage (Mt)	Cost	
		$AM	$A/tonne
1	1.14	3.50	3.09
Final	8.48	7.95	0.94
Closure	8.48	7.25	0.86

The following discharge concept is proposed:

- Tailings are thickened to 60% solids. Overflow from the thickener is recycled back to the plant
- Required quantity for mine backfill is split off and sent to the paste plant. Paste plant to be resized for mine backfill only. Any water generated in paste plant prior to cement addition to be recycled back to the plant
- Surplus evaporation water to be mixed with tailings stream prior to discharge to TSF (potential % solids range 45 to 60% solids)
- Tailings discharged to lined TSF facility with no recycle. Surplus water evaporated within TSF footprint. Recycle can be added retrospectively if water quality is suitable for the mine water treatment plant
- Facility to have HDPE liner and drainage system including: leakage recovery and collection system along spine of valley to intercept water seeping through liner. Water returned to TSF surface for evaporation
- Sub-base soil / clay liner (200 mm)
- HDPE liner (1.5 mm) over sub-base liner
- Underdrainage system (finger drains) across base of facility. Water returned to TSF surface for evaporation
- Closure concept to match base liner
- Compacted base layer over tailings surface (200 mm)
- HDPE liner (1.5 mm)
- HDPE protection layer (top compacted layer 300 mm)
- Rockfill / mine waste cover (500 mm) – sufficient rock within layer to form erosion resistant layer against rainfall runoff
- Topsoil layer – thickness to match topsoil recovered from basin area
- Deposition from eastern embankment and surrounding ridges to western saddle dam; spillway cut through western saddle dam to allow free draining closure surface

INFRASTRUCTURE

The infrastructure proposed for the project includes the following items which have been included in the CAPEX costings:

- Power station
- Microwave communications system
- Plant buildings
- Upgrade to the site access road
- Accommodation village
- Raw and potable water supply and mine water treatment
- Fuel storage
- Tails storage facility
- Evaporation and run off ponds
- Mobile equipment
- Concentrate transport
- Mining offices

LOGISTICS AND TRANSPORT

The Company will produce an average of approximately 65,000 tonnes of Copper concentrate and 75,000 tonnes of Zinc concentrate per annum. Concentrate will be trucked from the Sulphur Springs mine site to the Port Hedland port where it will be loaded on to ships for export to Asian smelters.

Concentrate trucking and ship loading is proposed to be completed by a licensed operator. A 'mine gate to ship' logistics cycle that is endorsed by the Port Hedland Port Authority and is similar to the approach adopted by several neighbouring companies in the Pilbara will be adopted.

The proposed container handling system is fully compliant with Class 9 transport requirements and no special bulk shipping restrictions currently apply for UN 3077 mineral concentrates.

COST ESTIMATES

Capital Cost Estimate

Capital costs are presented in Table 11 and 12 and are calculated on a first principles build up methodology. They have been calculated as at Q3 2018 (calendar year) to an accuracy of +/-15%.

Table 11: Capital Cost Estimate Summary (Q3 2018 +/- 15%)

Infrastructure Capital	***Capital (A$M)***
Treatment Plant	49.7
Reagents and Plant Services	17.0
Infrastructure	21.2
Mining	1.7
Contractor and Construction Distributables	16.7
Sub Total	**106.3**
Management Costs	16.6
Owners Project Costs	7.8
Sub Total	**130.7**
Contingency	15.3
Project Total	**146.0**

Table 12: Other Pre-Production Capital

Other Pre-Production Capital	***Capital (A$M)***
Sulphur Springs Open Pit	20.9
Haul Road	2.3
Total	**23.2**

Operating Cost Estimates

Mining and processing and all operating costs are summarised below in Table 13. Costs are shown separately for individual mining methods.

Table 13: Mining and Processing Operating Cost Summary

Operating Cost	***$AM***	***$/t***
Mining		
Sulphur Springs Open Pit Mining	189.2	36.9
Sulphur Springs Underground Mining	212.9	38.1
Kangaroo Caves Underground Mining	113.4	61.8
Cost Per Unit		
Mining	515.5	41.1
Processing	402.3	32.0
Road Maintenance	30.8	2.4
G and A	47.6	3.8
Treatment & Refining	268.9	21.4
Shipping	108.3	8.6
Penalties	17.0	1.4
C1	1,390.3	110.7
Capital	280.3	22.3
AISC	1,670.6	133.1
Royalties	136.6	10.9
Total Cost (including royalties)	**1,807.3**	**144.0**

FINANCIAL EVALUATION

The DFS financial model (the "**Financial Model**") demonstrates the robust economics of the Project.

The Sulphur Springs Mineral Resource and Ore Reserve has been used as the basis to design a detailed open pit and underground mine plan and optimised mining schedule to deliver ore grading 3.6% Zinc and 1.4% Copper on average to a 1.25 Mpta processing plant over 10.3 years in order to ship an average of 35 kt of payable Zinc metal and 15 kt of payable Copper metal per annum.

Using a bottom up approach to cost estimation, it has been determined the Project has an upfront capital requirement of A$169M including:

- A$146M for a 1.25Mtpa processing plant and other site infrastructure (which represents a significant capital cost decrease from the Feb 2017 Value Engineering Study of A$167M for a 1Mtpa processing plant and related infrastructure)
- A$23M for other pre-production costs including site access and pre-strip mining

The LOM average onsite operating cost including mining, processing, haul road maintenance and on site G and A's are A$79.35 per ore tonne processed, on a real basis.

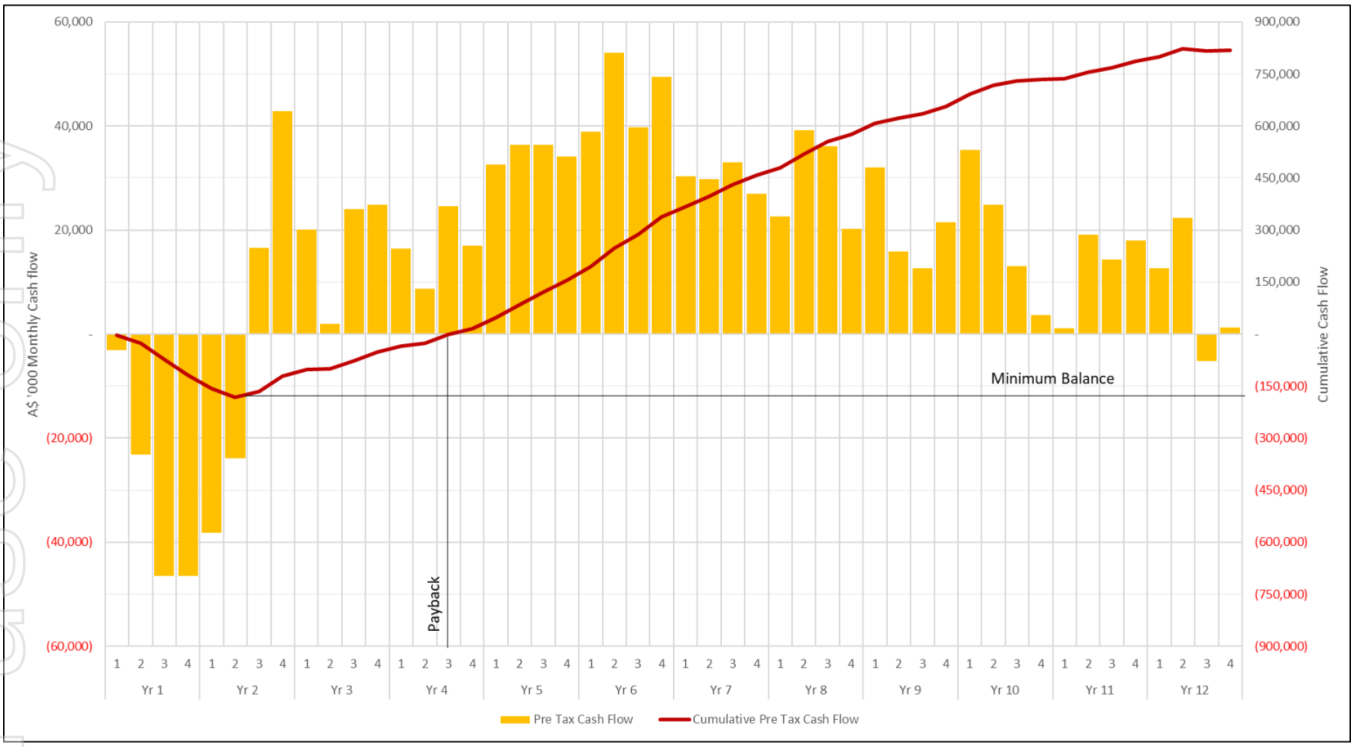
Assuming a flat Zinc price of 2,650 USD/t, flat Copper price of 6,300 USD/t and an AUD:USD exchange rate of 0.72 delivers gross revenue of A$2,625M and a net revenue of A$2,095M after TC/RC, shipping cost, royalties and silver credits giving the project a net pre-tax operating cash flow of $A1,098M and averaging A$107M per annum representing a margin of 42% per tonne processed.

On this basis, the Project has a pre-tax $NPV_{8\%}$ of A$472m and IRR of 51% and a payback period of 3.6 years.

Similarly, the post-tax $NPV_{8\%}$ stands at A$310M with an IRR of 39% and a payback period of 4.1 years.

Quarterly cash flows are represented in Figure 11 and Table 14 represents the LOM Summary.

Figure 11: Quarterly Project Cash Flow Graph



N.B: Real, pre-tax

Table 14: LOM Summary

Mining	***Unit***	***Amount***	***Per Year***
Mined Ore Tonnes	kt	12,554	-
Nominal Throughput	Mtpa	1.25	-
LOM (Mining)	Yrs	10.3	-
Processed Tonnes	kt	12,554	1,225
Avg Zn Grade	%	3.61%	-
Avg. Copper Grade	%	1.45%	-
Avg. Silver Grade	g/t	15.8	-
Payable Zinc Metal	kt	348	34
Payable Copper Metal	kt	146	14
Payable Silver Metal	koz	2,640	258
Economic Assumptions	***Unit***	***Amount***	
Avg. Zinc Price	USD/t	2,650	-
Avg. Copper Price	USD/t	6,300	-
Avg. Silver Price	USD/oz	19.0	-
Avg. Exchange Rate	AUD:USD	0.72	-
Cash Flow	***Unit***	***Amount***	***$/t ore***
Gross Revenue	A$M	2,625	209.1
TC/RC, Transport & Royalties	A$M	531	42.3
On Site Operating Costs	A$M	996	79.4
Net Operating Cash Flow Pre-Tax	A$M	1,098	87.5
Upfront CAPEX	A$M	169	13.5
- *Processing plant & Infrastructure*	*A$M*	*146*	*11.6*
- *Other Pre-Production Capital*	*A$M*	*23*	*1.9*
Sustaining CAPEX	A$M	111	8.8
Net Cash Flow Pre-Tax	A$M	818	65.2
Value Metrics	***Unit***	***Amount***	
Pre-Tax $NPV_{8\%}$	A$M	472	-
Pre-Tax IRR	%	51%	-
Pre-Tax Payback Period	Yrs	3.6	-
Post Tax $NPV_{8\%}$	A$M	310	-
Post Tax IRR	%	39%	-
Post-Tax Payback Period	Yrs	4.1	-

(All $ figures are calculated on a real basis)

SENSITIVITY ANALYSIS

The sensitivity of the pre-tax NPV and IRR was evaluated for changes in key driven variables and parameters such as:

- Exchange rate between USD:AUD
- Copper and Zinc prices
- Variable costs including: mining rates, diesel price, power cost and grade control
- Fixed costs including: site establishment, mobilisation, demobilisation, plant and equipment

Figure 12: NPV Sensitivity Analysis (+/-10%)

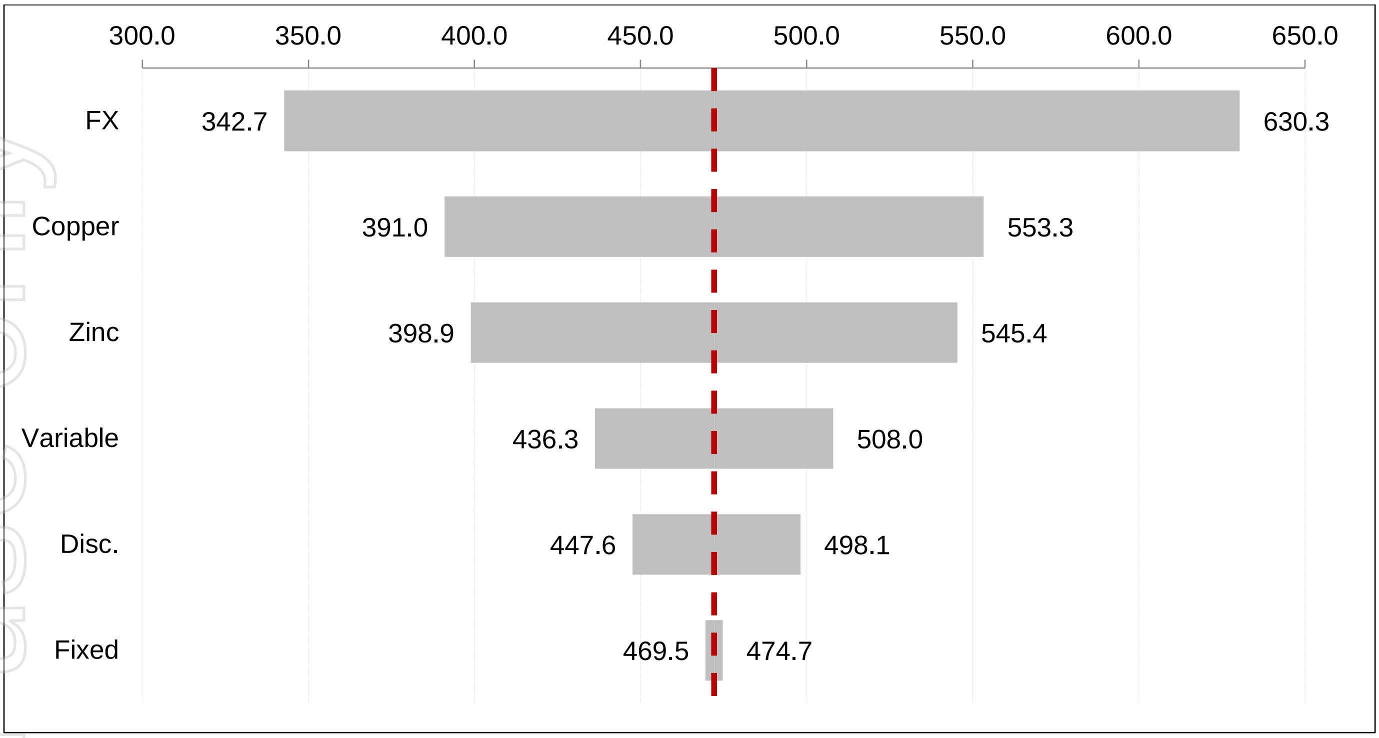


Table 15: NPV Sensitivity Analysis (+/-10%)

NPV Description	***NPV +10%***	***NPV -10%***
FX	342.7	630.3
Copper	391.0	553.3
Zinc	398.9	545.4
Variable	436.3	508.0
Disc.	447.6	498.1
Fixed	469.5	474.7

Figure 13: IRR Sensitivity Analysis (+/-10%)

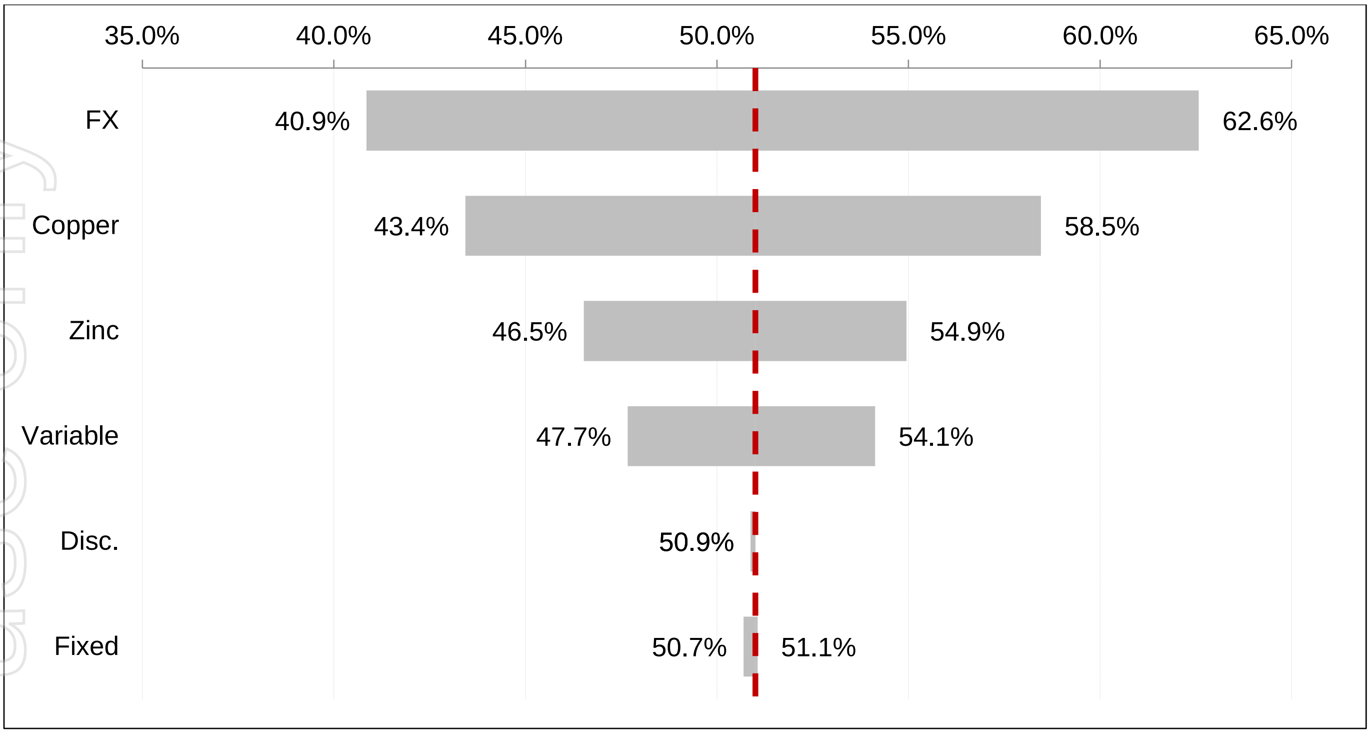


Table 16: IRR Sensitivity Analysis (+/-10%)

IRR Description	IRR +10%	IRR -10%
FX	40.9%	62.6%
Copper	43.4%	58.5%
Zinc	46.5%	54.9%
Variable	47.7%	54.1%
Disc.	50.9%	50.9%
Fixed	50.7%	51.1%

PROJECT FINANCING

To achieve the range of outcomes indicated in the DFS, external sources of funding will likely be required to meet the cost requirements of the project as set out above.

The Venturex Board believes that there is a reasonable basis to assume that funding will be available to complete all early works and finance the pre-production activities necessary to commence production on the following basis:

- The Company is considering several funding solutions in parallel to determine the most appropriate capital structure including senior secured project debt finance, pre-payment funding and conventional equity. The Company has engaged BurnVoir as its financial advisor and is currently running a project debt financing process for the development of Sulphur Springs.
- The Venturex Board has a financing track record and experience in developing mining projects directly relevant to the optimisation and development of Sulphur Springs.
- The strong production and economic outcomes delivered in the DFS are considered by the Venturex Board to be sufficiently robust to provide confidence in the Company's ability to procure debt, equity and/or offtake funding arrangements to raise the necessary funds as and when required.

- The copper and zinc price is currently trading at approximately US$2.86/lb and US$1.22/lb respectively (FX US$=0.708), which compares favourably to the project's base case price assumption US$2.85/lb and US$1.20/lb (FX US$=0.72). The current market conditions and an encouraging outlook for the global copper and zinc markets enhance the Company's view of the fundability of the project.
- The Company has previously demonstrated its ability to raise exploration funding for the Company's Pilbara zinc-copper projects. In November 2017, the Company completed a ~$4 million placement comprising approximately 222 million shares at $0.018 per share (being a 10% discount to the immediately preceding closing price of Venturex shares), which was jointly managed and underwritten by Canaccord Genuity (Australia) Limited and Euroz Securities Limited.
- The Company enjoys excellent support from its current shareholder base. In particular, the Company's 18.97% shareholder, Northern Star Resources Limited, provided the Company with an unsecured 12 month loan of $2 million at a rate of 8% per annum for the purposes of supporting the Company's completion of the DFS, the subject of this announcement.

PROJECT IMPLEMENTATION

Upon completion of the Definitive Feasibility Study the Company will complete a Project Implementation Plan, which is a detailed project execution document aimed at engaging all stakeholders in a process that ensures project construction and commissioning are completed at minimal risk to all parties and a clear pathway to production is set out and adhered to.

All project construction will adhere to the relevant Australian Standards, Acts and Regulations. All works will be completed in accordance to the Company's own systems, practices and standards with the aim to ensure that all tasks are completed safely, efficiently, within budget and that there is minimal disturbance to the environment and sites of the traditional landowners.

PROJECT MANAGEMENT

A detailed description of the Project implementation with respect to the processing plant and site infrastructure has been completed based on an EPCM project execution. Upon completion of the DFS the Company will evaluate the optimum construction method, either being EPCM or EPC.

The Company will engage a Project Manager and project management team to oversee the construction, with support from key Company staff both on site and in the Perth office.

All mining activities, both open pit and underground, will be conducted by specialist mining contractors. Costing in this Definitive Feasibility Study has been achieved through RFQs to mining contracting companies in Australia.

The tendering and contract negotiation process undertaken will be based on a conventional fixed and variable schedule-of-rates based contract which includes costs and schedules for underground mining derived from RFQs to a number of open pit and underground mine contractors.

Construction works and commissioning will be conducted to the same high safety standards required for operations. Reliable communications and emergency response and medical evacuation plans will be established before construction commences. Evacuation plans will be established for response to emergencies such as cyclones and fires. Cyclone shelters and fire defences will be established.

Health and safety officers will be appointed to assist the Company's Project Manager. Hazard identifications and work observations will be conducted.

All contractors employed will be assessed for their demonstrated capacity to perform their works safely. Tendering and contract documents will prescribe relevant safety requirements including personnel competency, systems and work procedures, equipment and, where appropriate, the inclusion of safety staff in their complement.

Temporary facilities used for the purposes of construction will be erected with due consideration of cyclones.

Coordination of activities will be important between the various work groups working on site during construction. A regime of communications, meetings and reporting will ensure that relevant safety related information is shared.

Drug and alcohol testing of personnel on site will be conducted routinely.

SITE ESTABLISHMENT, COMMISSIONING AND RAMP UP

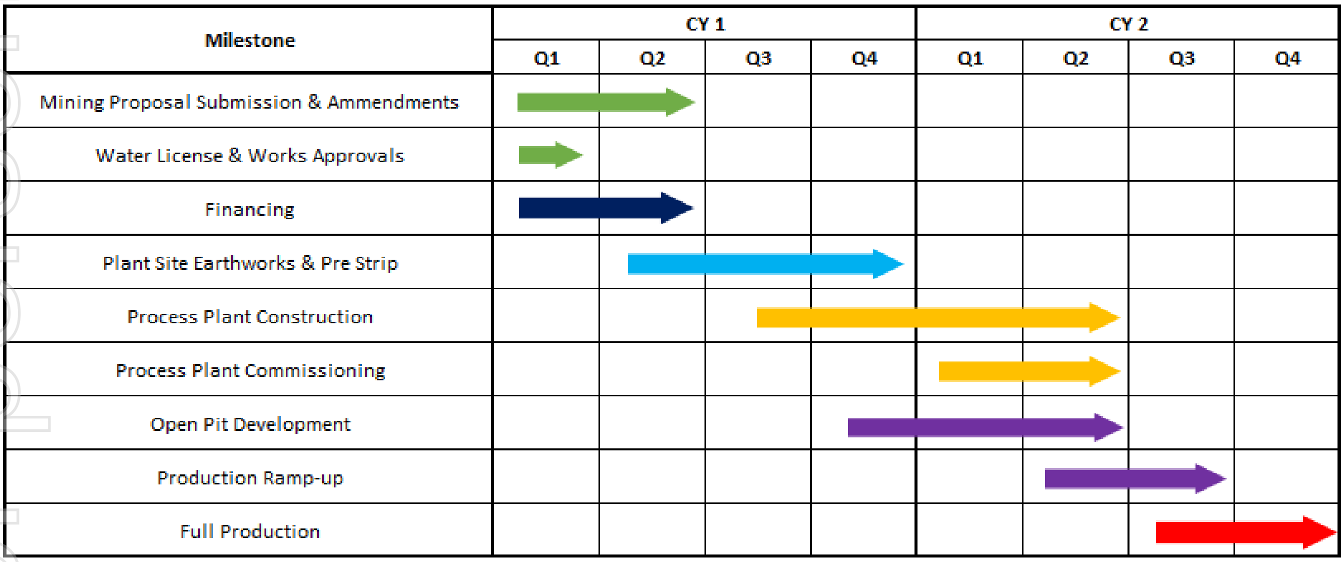
The initial site work involves the establishment of key infrastructure and services: access roads, communications, accommodation, water and power, fuel and other essential supplies and logistics. Process plant construction will take 15 months.

Ore stockpiles will begin to accumulate prior to plant wet commissioning. The orebody geometry and mining method allows for numerous production areas with a robust mine production schedule.

TIMELINE TO PRODUCTION

Project implementation timeline is presented in Figure 14.

Figure 14: Project Implementation Timeline



OPPORTUNITIES

There are a number of opportunities that have been identified as follows.

Shared Infrastructure and Services

There are two new mines within about 50km of the Project site. Both projects are of a similar size to Sulphur Springs. Once operations are in production there may be the opportunity to share services and infrastructure such as flights, power, roads, indigenous engagement and transport.

These are discussions that are yet to be opened but the Company considers that there are opportunities that could benefit all parties and the region as a whole.

There are also potential economies of scale with contractors that are performing works on nearby projects.

Gas Power versus Diesel Power

Gas power is also feasible option for the Project. This study assumes diesel power, however the opportunity to gain access to a gas pipeline about 40km from the site should be considered. There are also opportunities to truck in gas to site from reliable sources which the Company is currently exploring. Operating the site on gas power will provide a significant saving to project operating costs.

Exploration Potential

Exploration on the tenements around Sulphur Springs and along the Panorama trend are considered highly prospective for additional VMS discoveries and exploration of these areas is a key part of the Company's strategy moving forward.

The Panorama Trend represents 27km of relatively unexplored tenements and offers the Company excellent exploration upside. There are also areas within both the Sulphur Springs and Kangaroo Caves resources that are significantly under-drilled and with in-fill drilling may result in an increase in the mining inventory for these deposits.

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About Venturex Resources Limited

Venturex Resources Limited (ASX: VXR) is an exploration and development company with two advanced Copper-Zinc Projects near Port Hedland in the Pilbara region of Western Australia. The two projects are the Sulphur Springs Project which includes the Sulphur Springs Project, Kangaroos Caves Resource plus 27km of prospective tenements on the Panorama trend and the Whim Creek Project which includes the Resources at the Whim Creek, Mons Cupri and Salt Creek mines together with the Evelyn project and 18,100 ha of prospective tenements over the Whim Creek basin. Our strategy is to work with our partners Blackrock Metals to expand and extend the existing 4 tonne per day oxide Copper heap leach and SXEW operation at Whim Creek, identify other near term production options at Whim Creek, Mons Cupri and Sulphur Springs and fully optimise the Sulphur Springs Project have it shovel ready to take advantage of forecast improvements in base metal prices.

Table 17: Summary of Mine Physicals

Physicals

Mined Ore By Source

		Total / Av	Yr1	Yr2	Yr3	Yr4	Yr5	Yr6	Yr7	Yr8	Yr9	Yr10	Yr11	Yr12
Sulphur Springs Open Pit														
Zinc	%	3.4%	-	1.8%	3.0%	3.4%	4.5%	5.4%	-	-	-	-	-	-
Copper	%	1.8%	-	2.8%	1.6%	1.5%	1.6%	1.7%	-	-	-	-	-	-
Silver	g/t	16.8	-	21.0	14.8	15.2	16.4	19.7	-	-	-	-	-	-
Tonnes Mined	kt	5,126	-	871	1,457	1,143	1,200	455	-	-	-	-	-	-
Metal														
Zinc	kt	176	-	16	43	39	53	25	-	-	-	-	-	-
Copper	kt	90	-	24	23	17	19	8	-	-	-	-	-	-
Silver	koz	2,762	-	589	693	560	633	288	-	-	-	-	-	-
Sulphur Springs Underground														
Zinc	%	3.7%	-	-	-	-	4.0%	3.8%	3.7%	3.8%	3.9%	3.4%	1.9%	-
Copper	%	1.4%	-	-	-	-	1.8%	2.1%	1.3%	1.4%	0.9%	1.5%	1.6%	-
Silver	g/t	16.7	-	-	-	-	19.4	17.8	12.5	15.4	20.8	16.8	11.2	-
Tonnes Mined	kt	5,593	-	-	-	-	81	876	1,071	1,165	1,215	1,100	86	-
Metal														
Zinc	kt	207	-	-	-	-	3	33	39	45	47	37	2	-
Copper	kt	79	-	-	-	-	1	19	14	16	10	17	1	-
Silver	koz	3,000	-	-	-	-	50	502	432	577	814	594	31	-
Kangaroo Caves Underground														
Zinc	%	3.8%	-	-	-	-	-	-	-	-	4.5%	4.3%	3.5%	3.9%
Copper	%	0.7%	-	-	-	-	-	-	-	-	0.4%	0.6%	0.7%	0.6%
Silver	g/t	10.4	-	-	-	-	-	-	-	-	12.7	12.4	10.1	9.0
Tonnes Mined	kt	1,835	-	-	-	-	-	-	-	-	6	482	865	482
Metal														
Zinc	kt	70	-	-	-	-	-	-	-	-	0	21	30	19
Copper	kt	12	-	-	-	-	-	-	-	-	0	3	6	3
Silver	koz	615	-	-	-	-	-	-	-	-	2	192	281	139

Milled

		Total / Av	Yr1	Yr2	Yr3	Yr4	Yr5	Yr6	Yr7	Yr8	Yr9	Yr10	Yr11	Yr12
Ore														
SSOP	kt	5,126	-	628	1,275	1,278	1,174	378	179	86	31	8	-	89
SSUG	kt	5,593	-	-	-	-	81	876	1,071	1,165	1,215	1,100	86	-
KCUG	kt	1,835	-	-	-	-	-	-	-	-	4	145	1,164	521
Total Milled	kt	12,554	-	628	1,275	1,278	1,254	1,253	1,250	1,251	1,251	1,254	1,250	610
Grade														
Zinc	%	3.6%	-	0.9%	2.5%	3.6%	4.7%	4.3%	3.8%	3.8%	3.9%	3.6%	3.6%	4.0%
Copper	%	1.4%	-	3.3%	1.9%	1.4%	1.5%	2.0%	1.4%	1.4%	0.8%	1.4%	0.8%	0.6%
Silver	g/t	15.8	-	20.3	13.3	16.2	17.7	18.6	13.1	15.4	20.9	16.4	10.8	10.9
Metal														
Zinc	kt	453	-	6	32	45	58	54	47	47	49	45	45	25
Copper	kt	182	-	20	24	18	18	25	17	18	11	18	10	3
Silver	koz	6,378	-	410	545	666	714	750	526	618	841	662	432	214
Stockpiled														
Tonnes	kt		-	100	365	273	217	463	272	184	110	209	307	50

Recovered

		Total / Av	Yr1	Yr2	Yr3	Yr4	Yr5	Yr6	Yr7	Yr8	Yr9	Yr10	Yr11	Yr12
Recovery (Primary)														
Zinc	%	93.6%	-	64.6%	95.5%	79.6%	94.5%	95.0%	94.6%	94.2%	94.4%	94.5%	94.7%	94.0%
Copper	%	86.8%	-	88.3%	89.1%	87.7%	93.4%	92.8%	86.7%	87.2%	77.1%	86.6%	71.9%	63.6%
Silver	%	46.0%	-	46.0%	46.0%	46.0%	46.0%	46.0%	46.0%	46.0%	46.0%	46.0%	46.0%	46.0%
Recovery (Bi-Product)														
Zinc	%	72.1%	-	36.6%	65.0%	70.6%	87.8%	88.5%	91.8%	91.8%	-	-	-	-
Copper	%	53.3%	-	21.7%	56.7%	34.1%	60.6%	70.7%	79.8%	40.5%	40.5%	40.5%	-	38.8%
Silver	%	46.0%	-	46.0%	46.0%	46.0%	46.0%	-	-	-	-	-	-	-
Metal (Primary)														
Zinc	kt	367	-	0	15	19	43	49	43	43	46	42	42	23
Copper	kt	144	-	18	19	12	12	21	14	15	8	15	7	2
Silver	koz	2,815	-	187	221	241	306	345	242	284	387	304	199	98
Metal (Bi-Product)														
Zinc	kt	44	-	2	10	15	11	3	2	1	-	-	-	-
Copper	kt	8	-	0	2	2	3	1	1	0	0	0	-	0
Silver	koz	118	-	1	29	65	23	-	-	-	-	-	-	-
Metal (Total)														
Zinc	kt	411	-	2	25	34	54	51	45	45	46	42	42	23
Copper	kt	152	-	18	20	13	15	22	15	15	8	15	7	2
Silver	koz	2,934	-	188	251	306	329	345	242	284	387	304	199	98

Product

		Total / Av	Yr1	Yr2	Yr3	Yr4	Yr5	Yr6	Yr7	Yr8	Yr9	Yr10	Yr11	Yr12
Metal Sold														
Zinc	kt	348.1	-	1.9	19.6	28.3	45.3	44.4	37.4	37.4	39.3	37.4	35.1	22.1
Copper	kt	145.7	-	16.5	18.3	13.6	15.1	21.3	15.0	13.8	8.8	13.8	7.5	2.3
Silver	koz	2,640.4	-	167.2	198.6	289.3	299.2	312.8	219.9	216.0	383.6	265.0	190.2	98.7
Concentrate Shipped														
Zinc	wmt	826,171	-	5,400	48,600	75,600	108,000	102,600	86,400	86,400	91,800	86,400	81,000	53,971
Copper	wmt	700,357	-	118,800	91,800	69,127	65,298	91,800	64,800	59,400	37,800	59,400	32,400	9,733

Table 18: Summary of Project Cash Flow

Cashflow

		Total / Av	Yr1	Yr2	Yr3	Yr4	Yr5	Yr6	Yr7	Yr8	Yr9	Yr10	Yr11	Yr12
Price & Revenue														
Spot														
XR	USD/AUD	0.72	-	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
Zinc	USD/t	2,650	-	2,650	2,650	2,650	2,650	2,650	2,650	2,650	2,650	2,650	2,650	2,650
Copper	USD/t	6,300	-	6,300	6,300	6,300	6,300	6,300	6,300	6,300	6,300	6,300	6,300	6,300
Silver	AUD/oz	19	-	19	19	19	19	19	19	19	19	19	19	19
Gross Revenue	AUD M	2,625	-	150	238	232	304	359	276	263	231	265	201	107
Operating Costs														
SSOP Mining		Total												
Load and Haul	AUD M	118.1	-	27.2	42.6	35.1	10.9	2.3	-	-	-	-	-	-
Drill and Blast	AUD M	57.9	-	11.7	20.7	17.8	6.2	1.6	-	-	-	-	-	-
Overheads	AUD M	13.2	-	2.4	3.8	3.4	2.8	0.8	-	-	-	-	-	-
Subtotal	AUD M	189.2	-	41.3	67.0	56.3	19.9	4.7	-	-	-	-	-	-
SSUG Mining														
Lateral	AUD M	42.7	-	-	-	0.1	9.6	10.7	18.8	3.6	-	-	-	-
Vertical	AUD M	2.7	-	-	-	-	0.5	0.6	0.7	1.0	-	-	-	-
Stoping	AUD M	167.3	-	-	-	-	5.1	21.0	29.6	37.7	45.2	24.9	3.9	-
Subtotal	AUD M	212.8	-	-	-	0.1	15.2	32.3	49.0	42.3	45.2	24.9	3.9	-
KCUG Mining														
Lateral	AUD M	45.8	-	-	-	-	-	-	-	-	1.1	31.3	13.4	-
Vertical	AUD M	-	-	-	-	-	-	-	-	-	-	-	-	-
Stoping	AUD M	67.6	-	-	-	-	-	-	-	-	0.2	14.8	36.8	15.8
Subtotal	AUD M	113.4	-	-	-	-	-	-	-	-	1.3	46.1	50.2	15.8
Ore Costs														
Processing	AUD M	402.3	-	19.0	39.6	39.5	40.5	40.8	40.7	40.6	40.6	40.8	40.7	19.6
Road Maintenance	AUD M	30.8	-	1.8	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0
G&A	AUD M	47.6	-	2.7	4.6	4.6	4.9	4.7	4.6	4.6	4.6	4.6	4.6	3.1
Subtotal	AUD M	480.7	-	23.4	47.2	47.1	48.3	48.4	48.3	48.2	48.2	48.4	48.3	24.7
Concentrate Costs														
Treatment & Refining	AUD M	268.9	-	18.0	23.7	25.2	31.3	34.7	27.1	26.2	23.7	26.2	20.7	11.8
Shipping	AUD M	108.3	-	8.8	10.0	10.3	12.3	13.8	10.7	10.3	9.2	10.3	8.0	4.5
Royalties	AUD M	136.6	-	8.5	14.2	11.3	15.0	17.8	13.7	13.0	11.3	13.4	12.2	6.2
Penalties	AUD M	17.0	-	1.4	1.6	1.6	1.9	2.2	1.7	1.6	1.4	1.6	1.3	0.7
Subtotal	AUD M	530.8	-	36.7	49.4	48.4	60.5	68.5	53.2	51.3	45.6	51.6	42.2	23.3
Total Opex	AUD M	1,526.8	-	101.4	163.7	151.9	144.0	153.8	150.6	141.8	140.3	171.0	144.6	63.8
Capital Costs														
Activity		Total												
Site Access	AUD M	11.7	1.3	2.3	2.3	2.3	2.3	1.2	-	-	-	-	-	-
Procesing Plant	AUD M	146.0	118.1	28.0	-	-	-	-	-	-	-	-	-	-
Sustaining	AUD M	17.6	-	-	0.7	3.1	1.3	3.1	1.3	3.1	1.3	3.1	0.8	-
Mining	AUD M	92.2	-	20.9	-	7.4	17.3	18.3	3.8	0.2	7.8	14.0	2.4	-
Closure	AUD M	37.7	-	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	36.6
Residual Value	AUD M	(25.0)	-	-	-	-	-	-	-	-	-	-	-	(25.0)
Total Capex	AUD M	280.3	119.4	51.3	3.2	12.9	21.0	22.6	5.1	3.4	9.1	17.2	3.4	11.6
Project Cashflow														
Pre-tax		Total												
Free Cashflow	AUD M	818.3	(119.4)	(2.6)	71.0	66.7	139.5	182.1	120.1	118.1	82.0	77.0	52.6	31.2
Cumulative Cashflow	AUD M		(119.4)	(122.0)	(51.0)	15.7	155.2	337.3	457.4	575.5	657.5	734.5	787.1	818.3
Unit Costs														
Mining		Average	Yr1	Yr2	Yr3	Yr4	Yr5	Yr6	Yr7	Yr8	Yr9	Yr10	Yr11	Yr12
SSOP Mining	$/t SSOP Ore	36.92	-	65.73	52.57	44.08	16.98	12.34	-	-	-	-	-	-
SSUG Mining	$/t SSUG Ore	38.04	-	-	-	-	188.21	36.84	45.79	36.28	37.18	22.64	45.09	-
KCUG Mining	$/t KCUS Ore	61.77	-	-	-	-	-	-	-	-	299.08	317.48	43.12	30.26
Cost Per Unit														
Mining	$/t	41.05	-	65.73	52.57	44.13	28.00	29.45	39.23	33.78	37.15	56.63	43.25	25.87
Processing	$/t	32.05	-	30.22	31.07	30.90	32.27	32.53	32.53	32.49	32.47	32.51	32.53	32.19
Road Maintenance	$/t	2.45	-	2.79	2.35	2.35	2.39	2.39	2.40	2.40	2.40	2.39	2.40	3.28
G&A	$/t	3.79	-	4.30	3.61	3.63	3.87	3.73	3.69	3.69	3.69	3.68	3.69	5.04
Treatment & Refining	$/t	21.42	-	28.73	18.62	19.74	24.96	27.69	21.72	20.98	18.93	20.94	16.58	19.40
Shipping	$/t	8.63	-	14.03	7.81	8.04	9.80	11.00	8.58	8.27	7.35	8.25	6.44	7.41
Penalties	$/t	1.35	-	2.20	1.22	1.26	1.54	1.72	1.34	1.30	1.15	1.29	1.01	1.16
C1	$/t	110.74	-	148.00	117.26	110.04	102.82	108.52	109.50	102.92	103.14	125.70	105.90	94.35
Capital	$/t	22.33	9.51	4.08	0.25	1.03	1.67	1.80	0.41	0.27	0.73	1.37	0.27	0.92
AISC	$/t	133.07	9.51	152.08	117.51	111.07	104.50	110.33	109.91	103.19	103.87	127.07	106.17	95.28
Royalties	$/t	10.88	-	0.67	1.13	0.90	1.19	1.42	1.09	1.04	0.90	1.07	0.97	0.50
Total Unit Cost (inc. royal	$/t	143.95	9.51	152.75	118.64	111.97	105.69	111.74	111.00	104.23	104.77	128.14	107.14	95.77

Appendix 1 - Resources, Reserves and other mining information

Mineral Resources Used Within the Study

The information contained in this report that relates to Mineral Resources was previously released to the market in announcements tilted "Sulphur Springs Resource Update" and "Kangaroo Caves Resource Upgrade" on 21 March 2018 and 22 September 2015 respectively, which was compiled or reviewed by Mr David Milton, Mil Min Pty Ltd who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Milton has sufficient experience relevant to the style of mineralisation, type of deposit under consideration and to the activity being undertaking to qualify as Competent Persons as defined in the 2012 Edition of the "Australasian Code for Reporting of Mineral Resources". Mr Milton consents to the inclusion in the report of the matters based on their information in the form and context in which it appears.

The Company confirms that it is not aware of any new information or data that materially affects the information included in those market announcements and that all material assumptions and technical parameters underpinning the estimates in those market announcements continue to apply and have not materially changed.

Competent Person Statements for Ore Reserves Used Within the Study

The information in the report that relates to the Sulphur Springs Open Pit and Underground Ore Reserve is based on information compiled or reviewed by Mr Daniel Donald, of Entech who is a member of the Australasian Institute of Mining and Metallurgy. Mr Donald has sufficient experience relevant to the style of mineralisation, type of deposit under consideration and to the activity being undertaken to quality as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Mineral Reserves". Mr Donald consents to the inclusion in the report of the matters based on their information in the form and context in which it appears.

Competent Person Statement for Metallurgy

The information in the report that relates to interpretation of metallurgical test work and process plant design is based on information compiled or reviewed by Mr Mark Giddy an employee of Lycopodium Minerals Pty Ltd. Mr Ryan is a member of the Australasian Institute of Mining and Metallurgy. Mr Giddy has sufficient experience relevant to the style of mineralisation, type of deposit under consideration and to the activity being undertaken to quality as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Mineral Reserves". Mr Giddy consents to the inclusion in the report of the matters based on their information in the form and context in which it appears.

Appendix 2 – Forward Looking Statements, Disclaimers and Reasonable Basis

Statements regarding plans with respect to the Company's mineral properties are forward looking statements. There can be no assurance that the Company's plans for development of its mineral properties will proceed as expected. There can be no assurance that the Company will be able to confirm the presence of mineral deposits, that any mineralisation will prove to be economic or that a mine will successfully be developed on any of the Company's mineral properties.

Forward-looking information includes, among other things, statements with respect to pre-feasibility and definitive feasibility studies, the Company's business strategy, plans, development, objectives, performance, outlook, growth, cash flow, projections, targets and expectations, mineral reserves and resources, results of exploration and related expenses.

Generally, forward-looking information can be identified by the use of forward-looking terminology such as 'outlook', 'anticipate', 'project', 'target', 'likely', 'believe', 'estimate', 'expect', 'intend', 'may', 'would', 'could', 'should', 'scheduled', 'will', 'plan', 'forecast', 'evolve' and similar expressions. Persons reading this are cautioned that such statements are only predictions, and that the Company's actual future results or performance may be materially different. Forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause the Company's actual results, level of activity, performance or achievements to be materially different from those expressed or implied by such forward looking information.

This announcement has been prepared in compliance with the JORC Code 2012 Edition. The 'forward-looking information' contained here is based on the Company's expectations, estimates and projections as of the date on which the statements were made. The Company disclaims any intent or obligations to update or revise any forward looking statements whether as a result of new information, estimates or options, future events or results or otherwise, unless required to do so by law.

The Company believes that it has a reasonable basis for making the forward-looking statements in this announcement, including with respect to any mining of mineralised material, modifying factors, production targets, NPV, IRR and capital and operating cost estimates. The following information is specifically provided;

- The Board and Management have been responsible for the exploration and evaluation of several diverse mining and exploration projects in Australia and elsewhere in the world. In summary, the Board and Management has a sound track record of technical and financial capability to identify, discover, acquire, define and progress quality mineral assets.

- The key components of the DFS were completed by independent specialist consultants with oversight provided by the Company.

- Notwithstanding that approximately 32% of the material sourced for the LOM Production Target is comprised of Inferred Resources:
    - 68% of the material within the LOM Production Target is sourced from Ore Reserves;
    - the mine plan has been sequenced to ensure that the reliance on material contributed from Inferred Resources is minimised within the first 5 years; and
    - the Company is satisfied that the proportion of Inferred Resources is not a determining factor for project viability.

- For the reasons set out in the section title Project Financing in this announcement, the Venturex Board believes that there is a "reasonable basis" to assume that future funding will be available and securable.

Appendix 3 – JORC Competency and Compliance Statements

Notes relating to the reoptimisation study Resource and Reserve statement

Section 1 Sampling Techniques and Data

Details on resources for the Sulphur Springs Deposit has previously been announced to the market refer ASX announcement dated 21st March 2018 "Venturex Succeeds in Upgrading Supergene Copper-Zinc-Resource at Sulphur Springs" for most recent update.

(Criteria in this section apply to all succeeding sections.)

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td>Sampling techniques</td><td>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.
Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.
Aspects of the determination of mineralisation that are Material to the Public Report.
In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</td><td>Geological Sampling
The deposit was sampled with a combination of reverse circulation (RC) and diamond drill (DD) holes completed on a variable spacing across the deposit to a maximum vertical depth of depth of approximately 800 metres. The RC drill holes were sampled via an industry standard cyclone and riffle splitter system from the recovered sample. Diamond drill core was sampled using standard cut half core or where metallurgical samples taken quarter core was used.
Industry standard RC drilling produced whole meter RC drill samples split at the rig using a cone splitter producing samples of approximately 3kgs. DD completed to industry standard using predominantly NQ size core. Diamond core was orientated, aligned and cut on geologically determined intervals in the range 0.15 to 2.1 metres.
The whole samples from the drilling were individually weighed, dried, stage crushed and pulverized to nominally minus 75 microns or 200 mesh (total preparation) to produce a pulp which was sub-sample for analysis.
Metallurgical Sampling
Metallurgical samples were sourced from HQ3 and PQ3 drill core from drill holes SSD089-SSD102. These samples were selected from previously recognised mineral domains. Field based observations coupled with assay data, including sequential Copper analysis assisted in selection. The Oxide zone was represented by 1 sample, the Supergene by 10 samples, the Transition by 26 samples and the Hypogene by 5 samples.
Table shows type of sample with number of samples in brackets
<table><tr><th>OXIDE</th><th>SUPERGENE</th><th>TRANSITIONAL</th><th>HYPOGENE</th></tr><tr><td>>Mod Cu/ < Zn (1)</td><td>>Cu /Mod Zn (1)</td><td>> Cu/< Zn (3)</td><td>> Cu / < Zn (2)</td></tr><tr><td></td><td>>Cu /< Zn (2)</td><td><Cu /> Zn (9)</td><td>Mod Cu/ <Zn (3)</td></tr><tr><td></td><td><Cu /> Zn (1)</td><td>Mod Cu / < Zn (7)</td><td></td></tr><tr><td></td><td>Mod Cu/ Mod Zn (1)</td><td>< Cu / Mod Zn (1)</td><td></td></tr><tr><td></td><td>Mod Cu / < Zn (4)</td><td>< Cu / < Zn (6)</td><td></td></tr><tr><td></td><td>< Cu / < Zn(1)</td><td></td><td></td></tr></table>
Samples of half core were collected from the previously determined assay interval and placed in a calico sample bag. These samples were dispatched to ALS in Perth.</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).*	• Prior to 2002 only diamond drilling was used to evaluate mineralisation (approximately 75% of informing information comes from diamond drilling) using mostly NQ size with some BQ, TT56 and HQ size. Drill core was generally structurally orientated for geotechnical and mineralisation structural information purposes. Post 2002 a combination of RC drilling using face sampling equipment and diamond drilling has been used.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• All operators recorded diamond drill core recovery as a percentage of measured recovered core versus drilled distance. Recoveries were generally high except for cavity zones in the oxide zone. On average through the resource estimated zone core recoveries average better than 99%. • RC samples were weighed, the weights were recorded on field sheets and compared to laboratory received weights. The locations of intervals of damp or wet samples or low recovery were recorded and entered into the database. The cyclone and splitter were routinely inspected and cleaned during the drilling ensuring no excessive material build-up. Care was taken to ensure the split samples were of a consistent volume. • There are no detected or material bias or relationships of sample recovery and grade.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.* • *The total length and percentage of the relevant intersections logged.*	• Diamond drill holes were geologically logged in their entirety and photographed. Representative areas of diamond drilling were logged for geotechnical purposes. RC drill holes were all qualitatively logged and representative sieved and washed chips collected and stored in chip tray samples. • Logging by all operators was at an appropriate detailed quantitative standard to support future geological, resource, reserve estimations and technical/economic studies. • All holes were logged in full.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	**Geological Sample Preparation** • Diamond core was sawn with a diamond saw and half core samples (quarter core in some metallurgical holes) taken for assay. • 1 metre RC samples were collected and split off the drill rig using a splitter. Approximately 90% of the samples were dry in nature. In areas of no mineralization these 1m samples were composited to 4m samples. • The sampling techniques for collection of the sample to be submitted to the assay facility for both diamond drilling and RC drilling are of consistent quality and appropriate. • Venturex and previous operators had on site during drilling and sampling operations, technically competent supervision and procedures in place to ensure sample preparation integrity and quality. • Some field duplicates were taken for RC drilling but not for diamond drilled samples. • The sample sizes are considered appropriate given the relatively fine-grained nature of the sulphide mineralisation which is not nuggetty in nature, the sampling methodology and the percent assay value ranges involved. **Metallurgical Sample Preparation** 2018 metallurgical sample preparation was carried out at the ALS laboratory facilities in Balcatta, Perth following standard ore preparation procedures for metallurgical test work. All core and prepared samples were stored in the freezer at ALS to minimise sample oxidation.

Criteria	JORC Code explanation	Commentary
		Variability Composites Selected transition and Supergene samples were utilised in the preparation of 40 x composites for variability test work. The sample preparation procedure is listed below: • All of the sample bags were firstly grouped in accordance with the composite recipe provided by Venturex. • Each drill core interval was emptied into a stainless-steel tray and photographed. • The composite intervals were combined and crushed to <3.35 mm. • The crushed material was rotary blended three times and split into 1 kg test work charges. **Master Composites** Selected variability composites were utilised in the preparation of Master Composites for flowsheet optimisation and comprehensive metallurgical test work (3 Zinc rich transition master composites, #1 to #3 (high mid and lower grade), 1 Copper rich transition master composite #4 and 2 Supergene composites, #5 and 6 (mid and low grade). Each sample was prepared individually. The sample preparation procedure is listed below: • All of the sample bags were firstly grouped in accordance with the composite recipe advised by Lycopodium. • The crushed material was then rotary blended three times and split into 1 kg test work charges.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	**Geological Test Work** • Over the project life 4 different Perth based assaying facilities have been used. Analytical techniques involve either a three or a four acid digest with a multi-element suite ICP/MS finish (30g FA/AAS for precious metals). Samples were split into high sulphide and low sulphide types on submission to ensure appropriate digestion and quality analysis. Sulphur was determined by Leco methods. All methods of analysis are considered to provide “total” assay values. • No geophysical tools were used to determine any element concentrations reported. • QAQC using re submitted pulps and external check assays, blind blanks and reference standards has been applied to samples assayed. Depending on the operator between 5 and 10% of the assays relate to QA/QC procedures. An independent analysis of intra and inter laboratory bias and precision was undertaken in 2007 by CBH. The results of this and subsequent QAQC work indicate no material bias to assay results used by this report. **Metallurgical Test Work** Metallurgical test work was conducted on fresh ore samples at Optimet Laboratory in Adelaide in 2001 and 2002. Test work on the master composite determined that the mineral value could be successfully recovered following grinding with a sequential Copper-Zinc flotation flowsheet. Optimised test work conditions were determined for the master composite flotation.

Criteria	JORC Code explanation	Commentary
		The Copper flotation conditions were as follows: • Grind size (P_{80}) = 45 microns. • Copper rougher pulp density = 35%. • Lime addition to maintain pH = 6.8. • 15 minutes rougher flotation with 2,000 g/t sodium metabisulphite (MBS), 80 g/t A3894 and MIBC frother. • 10 minutes cleaning with 200 g/t MBS. • 8 minutes re-cleaner flotation with 100 g/t MBS. The Zinc flotation conditions were as follows: • Grind size (P_{80}) = 45 microns (as for Copper). • Zinc rougher pulp density = 33%. • Lime addition to achieve pH = 9.0. • CuSO4 activator 150 g/t. • Collector addition of 30 g/t SIBX • MIBC frother. • Zinc laboratory flotation times as for Copper rougher, cleaner, re-cleaner. • Three locked cycle tests (one using site water) were conducted on the master composite to account for the additional recovery when recycling the re-cleaner and cleaner tails. • Testing of the individual variability composites to demonstrate the flowsheet and optimised flotation conditions was conducted. Confirmatory testing on a similar fresh ore master composite sample was conducted at Amdel laboratory in 2012. • Two further locked cycle tests were completed following much the same flotation conditions as proposed in the original test work. A programme of test work on Supergene and Transitional ore samples was initiated following the resource extension drilling programme in 2017. • Unoptimised sequential flotation as for the fresh ore was used to characterise the metallurgical performance of the Supergene and transition samples • This programme took advantage of the ore occurring as relatively discrete Copper rich and Zinc rich ore zones to optimise the flowsheets and flotation regimes separately for these samples. • Master composites were made up for the flowsheet optimisation test work. The Supergene Copper flotation conditions were as follows: • Grind size (P_{80}) = 45 microns. Lime addition to the mill to raise pH to 6.8. • Copper rougher pulp density = 35%. • Lime addition to maintain pH = 6.8. • 15 minutes rougher flotation with 3,000 g/t MBS,80 g/t A3894 and MIBC frother. • 5 minutes cleaning with 200 g/t MBS. • 5 minutes re-cleaner flotation with 100 g/t MBS.

Criteria	JORC Code explanation	Commentary
		The transition Copper flotation conditions were much the same as those for the fresh ore as follows: • Grind size (P_{80}) = 63 microns (an economic review of the grind size determined that 63 µm was more appropriate for the project and would be applied to all ore zones except the Supergene). Lime addition to the mill to raise pH to 6.8. • Copper rougher pulp density = 35%. • Lime addition to maintain pH = 6.8. • 15 minutes rougher flotation with 2,000 g/t Sodium Metabisulphite (MBS), 80 g/t A3894 and MIBC frother. • 5 minutes cleaning with 200 g/t MBS. • 5 minutes re-cleaner flotation with 100 g/t MBS. The transition Zinc flotation conditions were as follows: • Grind size (P_{80}) = 63 microns. Lime addition to the mill to raise pH to 6.8. • Zinc rougher pulp density = 35%. • Lime addition to maintain pH = 6.8. 800 g/t $CuSO_4$ added to the mill. • 5 minutes rougher flotation with 500 g/t MBS, 80 g/t A3894 and MIBC frother. • 3 minutes cleaning with soda ash to pH 9. 800 g/t $CuSO_4$ added to cleaner. • 3 minutes re-cleaner flotation with soda ash to pH 9.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	**Geological Sample Verification** • Prior to 2011, verification procedures are not documented. However, inspection of retained core indicates that recorded locations of mineralisation are correct. Post 2011, significant intersections were checked by the senior company officers. Significant intersections are also verified/ by portable XRF data collected in the field and cross-checked against the final assays when received. • No specific twinned holes have been drilled. • A range of primary data collection methods were employed since 1989. Since 2007, data recording used a set of standard Excel templates on a data logger and uploaded to note book computer. The data is sent to Perth office for verification and compilation into an SQL database by the in-house database administrator. Full copies are stored offsite. Full data base verification of all historical information was completed in 2007 by CBH. All data is loaded and stored in DataShed data base. • The historical data (pre-2007) has been adjusted with all negative assays, representing below detection assays, were converted to positive assays of half stated assay detection limit. **Metallurgical Sample Verification** • All metallurgical testing is conducted with sufficient assays to allow a 'built-up' head to be calculated which can be verified against the assayed sample value.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.*	• A full independent resurvey of all pre-2007 hole positions was completed by a licensed surveyor for CBH in 2007. Post 2007, all hole collar coordinates have been picked up by CBH/Venturex employees using a DGPS with all co-ordinates and RL data considered reliable. • Downhole surveys were performed on all holes by either single shot Eastman camera or reflex

Criteria	JORC Code explanation	Commentary
	• *Quality and adequacy of topographic control.*	gyro readings at 10-50 metre down hole intervals. • The grid system used for the location of all drill holes is MGA_GDA94, Zone 50. • Topographic control is provided by combination of external survey control, photogrammetry analysis and DGPS reading.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	**Geological Data Distribution** • Due to access for drill sites drilling patterns vary from nominally 40m by 40m to 30m by 30m in the plane of the mineralisation. • The current spacing is adequate to assume geological and grade continuity of the mineralised domain to an Indicated and Inferred resource level. • No compositing has been applied to the exploration results. **Metallurgical Data Distribution** • Core was selected from zones within the Supergene, Transitional and Hypogene for metallurgical determination. • The current spacing is adequate to assume geological and grade continuity of the mineralised domain to an Indicated and Inferred resource level.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• The Sulphur Springs drilling azimuth is largely orientated perpendicular to the mineralised strike direction. Limitations imposed by the rugged terrain dictates that some drilling is conducted at angles not perpendicular to the dip of the mineralised system. • Given the dominantly strata bound nature of the mineralising system, no material, orientation based sampling bias has been identified in the resource estimation data.
Sample security	• *The measures taken to ensure sample security.*	• Independent audits of the data in 2002 and 2006 concluded that the sampling protocols were adequate. • Post 2011, the chain of custody is managed by Venturex. The samples are transported by Venturex personnel to Whim Creek, stored in a secure facility and collected from site by Toll IPEC and delivered to the assay laboratory in Perth. Online tracking is utilized to track the progress of batches of samples.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Independent audits of the sampling techniques and data were completed as part of previous and current feasibility studies in 2002 (McDonald Spiejers Pty Ltd), 2006 (Golders and Associates), 2008 (Zilloc Pty Ltd) and 2011 (Snowden). The studies were comprehensive and cover all industry standard issues. There does not appear to be any significant risk in accepting the data as valid.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• Sulphur Springs Deposit is located wholly within Mining Lease 45/494 and Venturex Resources Limited has a 100% interest in the tenement. • The tenement is within the Njamal Native Title Claim (WC99/8). • The tenement is subject to two third party royalties. • The tenement is a granted Mining Lease is in good standing and no known impediments exist.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Previous exploration has been conducted at Sulphur Springs by Sipa Resources Limited in conjunction with Ashling Resources, Homestake Limited and Outokumpu since 1985 under various joint ventures and CBH Resources Limited from 2005. • Historic intersections quoted are pre JORC 2012 and have not been verified back to the original laboratory certified assays.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Sulphur Springs Copper-Zinc deposit is hosted by the Kangaroo Caves Formation, a volcano-sedimentary sequence within the north-north easterly trending tectonostratigraphic domain known as the Lalla Rookh –Western Shaw Corridor (LWSC) in the central east of the Archaean Pilbara Craton. The deposit is a well-preserved example of an Archaean volcanogenic massive sulphide (VMS) style deposit in a low-grade metamorphic terrain.
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes.* • *easting and northing of the drill hole collar.* • *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar.* • *dip and azimuth of the hole.* • *down hole length and interception depth.* • *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	• Not Applicable (NA). No new exploration data being released. This report relates to only previously publicly reported and recorded information.
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• All reported assays have been length weighted. • No top cut has been applied. • High-grade massive sulphide intervals internal to broader zones of sulphide mineralisation are reported as included intervals.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	• Previous reports highlight down hole intercept and true widths.

Criteria	JORC Code explanation	Commentary
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• See long section in ASX release dated 21 March 2018.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• All representative results have been reported or publicly released.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• Previous feasibility studies (2002, 2013 and 2017) outline project geological characteristics and features with respect to possible mining methods, metallurgical characteristics, possible treatment routes, geotechnical and rock characteristics, ore densities, and potential deleterious or contaminating materials.
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive*	• Follow up testing of geophysical and geochemical anomalies are planned. These targets will be ranked for drill testing.

Section 3 Estimation and Reporting of Mineral Resources

Details on resources for the Sulphur Springs Deposit has previously been announced to the market refer ASX announcement dated 21 March 2018 "Venturex Succeeds in Upgrading Supergene Copper-Zinc-Resource at Sulphur Springs" for most recent update.

(Criteria listed in section 1, and where relevant in section 2 apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• No new mineral resources are being announced.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• No new mineral resources are being announced.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• No new mineral resources are being announced.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• No new mineral resources are being announced.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	• No new mineral resources are being announced.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• No new mineral resources are being announced.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• No new mineral resources are being announced.

Criteria	JORC Code explanation	Commentary
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• No new mineral resources are being announced.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• No new mineral resources are being announced.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfield project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• No new mineral resources are being announced.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• No new mineral resources are being announced.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• No new mineral resources are being announced.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• No new mineral resources are being announced.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• No new mineral resources are being announced.

Section 4 Estimation and Reporting of Ore Reserves

(Criteria listed in section 1, and where relevant in sections 2 and 3 apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* • *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	• This ore reserve is based entirely on the Indicated portion of the current reported Mineral Resources at the Sulphur Springs deposit (refer to ASX release 21/03/18 Sulphur Springs Resource Update Increases Copper Content). • Mineral Resources are reported inclusive of the Ore Reserves.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• The competent person has not visited the site. • The competent person is comfortable relying on reports from other independent consultants, and Entech staff who have visited site including Entech's Principal Geotechnical Engineer and Senior Mining Engineer.
Study status	• *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* • *The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.*	• The mining study supporting the Ore Reserve has been completed to a definitive feasibility level. • Modifying factors accurate to the study level have been applied. The resulting mine plan is technically achievable and economically viable.
Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	• A "Net Smelter Return" (NSR) function was modelled at the block level, based on block grades, recovery and pricing. For both open cut and underground, material was stockpiled and available for processing if NSR > Total of processing cost plus G&A unit costs plus TSF unit cost. The resulting cut-off values determined by material type are as follows: Supergene > $34.30 / t Transitional > $34.30 / t Fresh > $36.74 / t
Mining factors or assumptions	• *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).* • *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.* • *The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.* • *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* • *The mining dilution factors used.* • *The mining recovery factors used.* • *Any minimum mining widths used.* • *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.* • *The infrastructure requirements of the selected mining methods.*	• Conventional mining methods have been chosen. • Open cut operations are planned around a 210 t-class excavator and 100 t dump trucks. • Underground operations use rubber tyred diesel equipment, 1:7 decline and 55t class trucks. • Open pit and underground designs are matched to the planned equipment fleet. • The selected mining methods resulted from an analysis of previous underground feasibility studies combined with additional geotechnical analysis. • Underground production will be predominantly from longhole open stopes and sub-level cave for removal of interstitial pillars. Voids will be filled post extraction with waste rock backfill introduced from a glory hole breaking through from the pit floor. • Entech geotechnical consultants prepared the geotechnical analysis for both the open pit and underground. This analysis forms the basis of design criteria. For the open pit design, Entech's geotechnical engineer built upon the existing work to enable a feasibility level analysis of the proposed final wall locations and suitable design angles. This analysis was supported by a recent drill program to supplement historic data. For the underground design, Entech's geotechnical engineer made an in-depth review of all previous geotechnical work and data to arrive at the currently adopted set of geotechnical parameters. These include stope size, fill method and additional support installation. Only the Indicated portion of the Mineral Resource was used to estimate the Ore Reserve. • Open pit dilution and recovery modifying factors were simulated by modelling to a Selective

Criteria	JORC Code explanation	Commentary
		Mining Unit (SMU) of 5.0mX x 5.0mY x 2.5mZ. The re-blocking technique dilutes fully into the SMU size and the resultant model is then used as a diluted model. The addition of dilution results in a loss of tonnes due to a number of blocks being diluted to below the reporting cut-off value resulting in dilution of 6.7% and a recovery of 96.3%. • Underground stopes were diluted by the following factors according to stope type: o Longhole open stope – 10% o Modified SLC core – 0% (zero dilution applied as the 'core' is situated within the fully extracted stoped mass) o Modified SLC rib – 10% o Modified SLC sill – 25% o Crown pillar – 15% Underground ore development has assumed 0% dilution. • Mining Recovery of 95% was assumed for the open pit. Underground Mining Recovery factors were specified according to stope type: o Longhole open stope – 95% o Modified SLC core – 95% o Modified SLC rib – 80% o Modified SLC sill – 80% o Crown pillar – 80% A 100% mining recovery for ore development has been assumed. • Feasibility level mine designs support the Ore Reserve estimation. The Ore Reserve is technically and economically viable without the inclusion of Inferred Mineral Resource. • The following infrastructure will be required and is included in the feasibility level capital and operating cost estimate: Tailings Storage Facility; Waste Rock Landform; Administration buildings; Stores and maintenance facilities; Power generation and Reticulation; Waste water treatment facilities; Water catchment dams; Bore fields; Evaporation ponds; Accommodation village; Processing Plant; Site access road.
Metallurgical factors or assumptions	• *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* • *Whether the metallurgical process is well-tested technology or novel in nature.* • *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* • *Any assumptions or allowances made for deleterious elements.* • *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.* • *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	• The metallurgical process was developed to a feasibility level including the development of a flowsheet and capital and operating costs. • The process stages are based on well understood conventional unit processes. The plant design flow sheet uses conventional metallurgical processes for this style of ore. The technology is standard in the base metal industry and will process the varying ore types through a primary crushing and SAB grinding circuit, followed by sequential flotation of the Copper and Zinc sulphide minerals to produce saleable Copper and Zinc concentrates. • A number of feasibility study level metallurgical test work programs were completed previously in 2001 / 2002, 2006, 2012 and 2018. Metallurgical recovery factors were determined for each recovered metal in each concentrate product stream for the nominated ore zones. • The deleterious element content of each concentrate product was determined. • No bulk sample or pilot scale test work has been undertaken.
Environmental	• *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.*	• Extensive baseline environmental studies for the project area have been undertaken with most recent studies being completed in early 2018. • The project is undergoing formal assessment at a level of Environmental Review – No public review. The environmental review document was submitted in June 2018 and is currently being assessed by the Environmental Protection Authority (EPA). Key issues identified for the project include potential impacts on conservation significant flora (Pityrodia sp Marble Bar),

Criteria	JORC Code explanation	Commentary
		potential impacts of drawdown on stygofauna, long term management of potentially acid forming tailings and water management during operational and closure phases. • Infrastructure has been located and designed to minimise the project footprint and potential environmental impacts within a topographically constrained environment • The valley filled tailings dam has been designed with a dual compacted soil and HDPE liner with underdrainage systems to minimise and manage potential seepage • Potentially acid forming waste rock material has been designed to be encapsulated within the waste rock dump with non-acid forming waste rock material
Infrastructure	• *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.*	• There is currently no substantial on-site infrastructure, and the definitive feasibility study comprehensively estimates the costs for the development of all necessary infrastructure items. Haul road access to the sealed Port Hedland- Marble road has been constructed under an agreement with Atlas Iron Limited.
Costs	• *The derivation of, or assumptions made, regarding projected capital costs in the study.* • *The methodology used to estimate operating costs.* • *Allowances made for the content of deleterious elements.* • *The source of exchange rates used in the study.* • *Derivation of transportation charges.* • *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* • *The allowances made for royalties payable, both Government and private.*	• Capital and Operating costs were estimated to definitive feasibility level accuracy (+/-15%) in 3rd quarter 2018 (calendar year) based on the mechanical equipment lists, drawings and scope definition undertaken as part of the study. Process operating cost estimates were based on a breakdown of costs by discipline including consumables, power, labour and maintenance. • Mining operating costs were largely sourced from quotations provided by mining contractors along with first principles estimations and database rates by independent consultants. Processing, and general and administration operating costs were prepared by Lycopodium. • The product price has been assigned based on its full expected elemental makeup including all revenue drivers and deleterious components. • Venturex applied a fixed exchange rate of USD/AUD of 0.72 • All infrastructure components and consumables are assumed delivered to site at estimated road haulage rates. Product is considered sold upon delivery to the destination port. • TC/RC forecasts are based on analysis of independent forecasts from a range of third party providers and third party smelters. • Allowances have been made for royalties, land access payments and mine rehabilitation fund.
Revenue factors	• *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* • *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	• The revenue is a function of diluted block modelled grade, modelled comprehensively through the mining, mineral processing and transportation chain where it is expected to be delivered to an offtaker at a forecast price. • The mine planning underpinning the Ore Reserves was conducted using preliminary, fixed point product pricing that was suitable for blockmodel coding and mine design. The Ore Reserves are feasible and economic under both pricing schedules. • Metal price and foreign exchange assumptions are based on analysis of consensus forecasts from a range of third-party providers.
Market assessment	• *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* • *A customer and competitor analysis along with the identification of likely market windows for the product.* • *Price and volume forecasts and the basis for these forecasts.* • *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	• Zinc concentrate is committed under MOU to Toho Zinc Limited for the first 230,000 tonnes of contained Zinc metal. The volume and high quality of Zinc concentrate produced would attract a ready market domestically and internationally. • Based on design plant capacity and mining schedule, steady state annual production is forecast to be approximately 12,700t of Copper, 30,400t of Zinc and 230Koz of silver.
Economic	• *The inputs to the economic analysis to produce the net present value (NPV) in the study, the*	• For the purpose of estimating an Ore Reserve, an NPV was estimated at a discount rate of 8%.

Criteria	JORC Code explanation	Commentary
	source and confidence of these economic inputs including estimated inflation, discount rate, etc. • *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	The confidence in the inputs is consistent with a Probable classification of the Ore Reserve. The project has a positive NPV.
Social	• *The status of agreements with key stakeholders and matters leading to social licence to operate.*	• The plant site is located on vacant crown land. • The NJAAMAL People have Native Title Rights over the area, the Company has a mining agreement in place with the NJAAMAL People to allow development of the site.
Other	• *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves.* • *Any identified material naturally occurring risks.* • *The status of material legal agreements and marketing arrangements.* • *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility Study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	• Major construction, supply, operational, consumables supply and site service contracts remain to be committed and finalised. Zinc concentrate off-take MOU completed for first 230,000 tonnes. Copper concentrate off-take is uncommitted. • Joint Access and Haul Road Development agreement completed with Atlas Iron. • All tenements required for the construction and operation of the Project are granted and in good standing. • The mining operation is proposed to occur upon M45/494, which has been granted. There are no grounds to believe that remaining required approvals will not be successfully granted.
Classification	• *The basis for the classification of the Ore Reserves into varying confidence categories.* • *Whether the result appropriately reflects the Competent Person's view of the deposit.* • *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	• The Probable Ore Reserve is based on that portion of the Indicated Mineral Resource within the mine designs that may be economically extracted and includes an allowance for dilution and ore loss. • The result appropriately reflects the Competent Persons view of the deposit. • None of the Probable Ore Reserves have been derived from Measured Mineral Resource.
Audits or reviews	• *The results of any audits or reviews of Ore Reserve estimates.*	• No external Audits or reviews have been completed.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.* • *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• This Ore Reserve is attributed a confidence classification of "Probable" Ore Reserve in its entirety. There is a degree of uncertainty associated with the Mineral Resource estimate and the modifying factors. • The accuracy and confidence limits are based on the current mine design and cut-off grade analysis employed in the technical and economic evaluation. Material changes to the technical or economic assumptions used, including operating costs, TC/RC costs, transport charges, concentrate payability factors and metal prices may materially impact the accuracy of the estimate. • No production data is available.