

VENTUREX DELIVERS OUTSTANDING RESULTS FROM PILBARA COPPER-ZINC PROJECT OPTIMISATION STUDY

Study confirms robust project economics with a significant reduction in capital cost and increased mine life

- ▼ **Optimisation Study confirms robust financial and technical outcomes for the Pilbara Copper-Zinc Project in WA, significantly enhancing the key metrics compared to the December 2012 Feasibility Study:**
 - **28% reduction in pre-production capital to \$202M**
 - **Mine life increased to 11 years**
 - **Payback of 2.1 years from production start**
 - **Forecast copper production of 12,500tpa and increased zinc production of 32,200tpa**
 - **Life-of-mine C1 cash costs to A\$0.84/lb of payable copper after by-product credits**
 - **Strong life-of-mine net cash-flow of A\$568M**
 - **Pre-tax NPV_{8%} of A\$307M**
- ▼ **Inclusion of Kangaroo Caves deposit in the mining inventory provides strongly leveraged exposure to a rising zinc price**
- ▼ **Project permitting for revised mine plan targeted for completion by mid-2017, providing the opportunity to secure project funding**
- ▼ **Excellent potential to further extend the mine life, with significant near-mine and regional exploration upside**

Venturex Resources Limited (ASX: VXR – “Venturex”) is pleased to announce the results of the recently completed Optimisation Study for its flagship 100%-owned **Pilbara Copper-Zinc Project**, located 162km south of Port Hedland in Western Australia.

The Optimisation Study delivers a number of significantly enhanced outcomes compared with the December 2012 Feasibility Study, providing a strong foundation for Venturex to advance the Project towards financing and development whilst continuing to address the significant exploration potential to extend mine life.

These include a 28% reduction in the estimated pre-production capital cost to A\$202 million (from \$279 million previously), a 30% increase in the mine life to 11 years and a 46% reduction in forecast life-of-mine C1 cash operating costs to A\$0.84/lb after by-product credits. This underpins robust financial outcomes including forecast life-of-mine net cash-flow of A\$568 million and a substantial increase in pre-tax NPV_{8%} to A\$307 million.

The Optimisation Study identified the opportunity to utilise an open pit mining operation to extract the top portion of the Sulphur Springs deposit before moving to underground mining. This has resulted in a significant reduction in the estimated capital costs of the underground mine and deferred these costs until year 4 of the project. Open pit mining is cheaper

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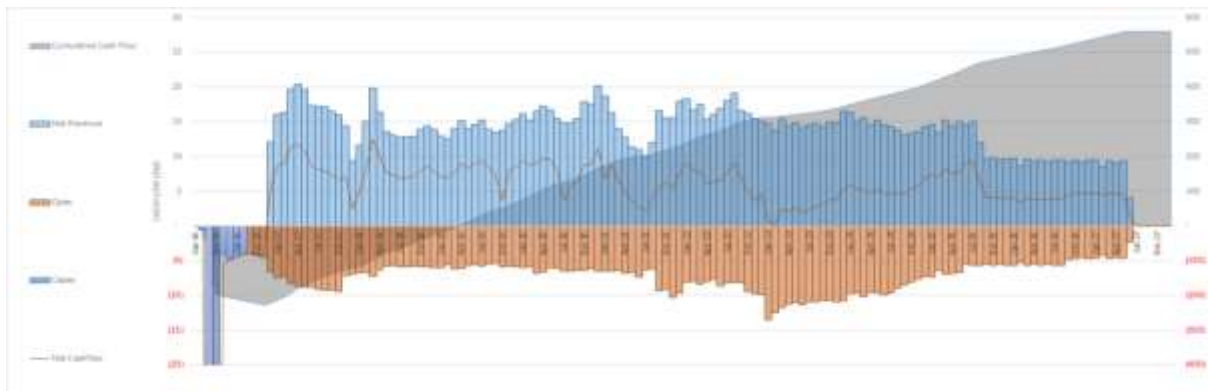
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than underground mining and significantly reduces the technical and start-up risks associated with the project.

The improved recovery of the Resource via the initial open pit mining operation – together with the inclusion of the Kangaroo Caves deposit in the mining inventory – has delivered an increase in both mine life and zinc metal production. As a result, the project now offers significant exposure to the strong long-term market outlook for zinc.

Ore will be processed at a 1Mtpa conventional processing plant located adjacent to the Sulphur Springs deposit to produce both copper and zinc concentrates. Concentrates will then be trucked to Port Hedland and shipped to Asian customers.

The key outcomes of the 2015 Optimisation Study are summarised in the attached background document and represented pictorially in the figure below:



A preliminary assessment of the permitting requirements for the revised project has identified that it will need to be re-submitted to regulators to determine the level of assessment. The time taken to complete the permitting process will therefore depend on the level of assessment nominated.

This permitting period will allow Venturex to fully assess funding options for the Project. In addition, with the viability of the Pilbara Copper-Zinc Project now confirmed the Company will also be able to fully assess the significant exploration potential of its extensive land-holding in the Pilbara region – where it controls most of the horizons with potential for VMS deposits including the Whim Creek basin and the Panorama trend.

VMS-style deposits typically occur in clusters. Six potentially economic resources have already been discovered within these two provinces plus a further seven advanced targets and prospects that have returned drill intersections of ore grade copper-zinc mineralisation from wide-spaced drilling that require further investigation and follow-up.

There is also significant exploration potential along the Panorama trend, where Venturex has tenure over approximately 27 strike kilometres and has recently identified a graben or basin structure that appears to control the mineralisation at Sulphur Springs. This model will be tested over the remainder of the trend.

The Whim Creek basin (including the historical Whim Creek and Mons Cupri mines) has already produced approximately 67,000 tonnes of copper from mining near- surface oxide ores. Venturex believes there is excellent potential for both down-plunge extensions to these existing VMS-style deposits as well as the discovery of additional resources within the sub-basins.

Venturex's Managing Director, Mr John Nitschke, said the Optimisation Study outlined a compelling financial and technical development opportunity, with highlights including a significant reduction in upfront capital and operating costs and a greatly reduced risk profile.

"We are very pleased with the results, which have confirmed the potential for a financially robust, long-life mining development at the Pilbara Project, with significant upside," he said.

"The addition of Kangaroo Caves into the mine plan is particularly pleasing as it will increase our leverage to the zinc price, which everyone is getting bullish about. There are sections of this deposit that have relatively poor drilling coverage – particularly close to the surface – and these offer excellent potential for further additions to the Resource.

"While the revised mine plan requires additional permitting, this time will be purposefully spent on promoting the Project and securing project finance. It will also allow us to push forward with our assessment of the exploration potential to unlock the next chapter of VMS discoveries in this under-explored region."

Forward Work Program

The Optimisation Study has presented a compelling case for the development of the Pilbara Copper-Zinc Project, and Venturex now intends to progress the Project towards development based on the following conceptual development timeline:




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Managing Director

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About Venturex Resources Limited

Venturex Resources Limited (ASX: VXR) is an exploration and development company with a significant portfolio of base metal projects in the Western Pilbara. Venturex owns or controls significant resources of copper, zinc, lead, silver and gold at Sulphur Springs, Kangaroo Caves, Whim Creek, Mons Cupri, Salt Creek and Liberty-Indee. The Company is committed to a strategy of consolidating VMS projects in the Western Pilbara and developing a centralised processing hub at Sulphur Springs.

ATTACHMENT

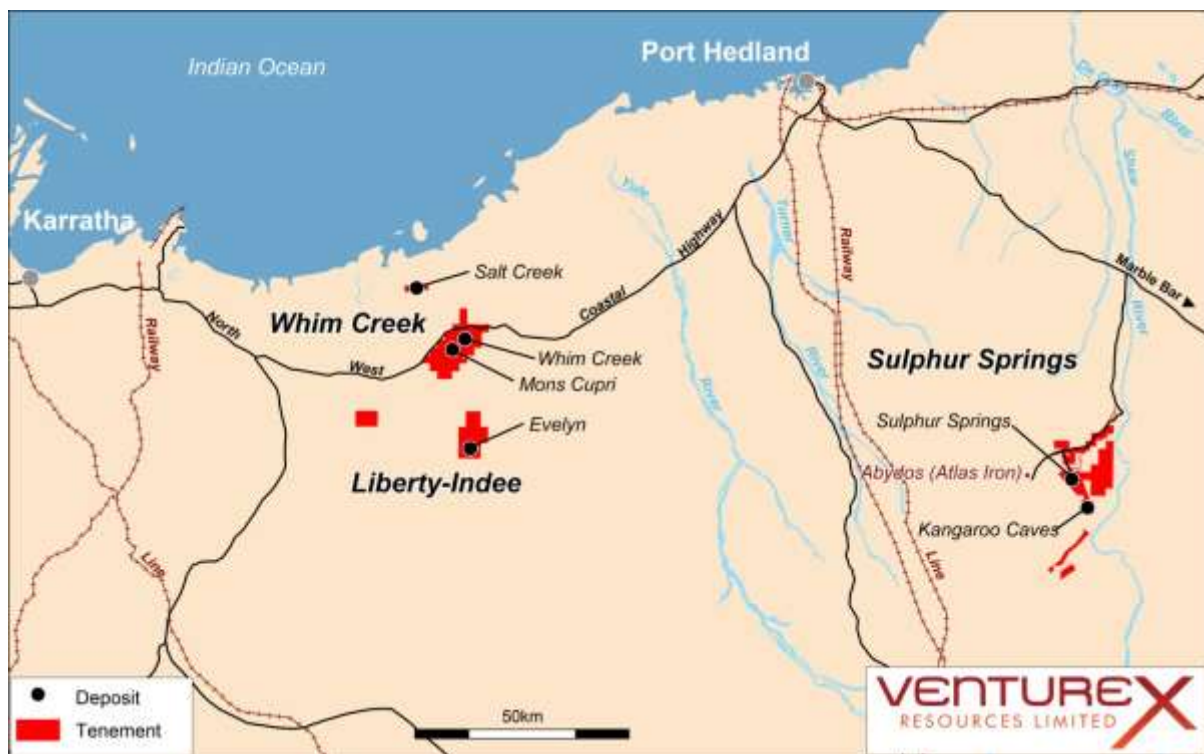
PILBARA COPPER ZINC PROJECT OPTIMISATION STUDY BACKGROUND INFORMATION

Location

The Pilbara Copper Zinc Project includes four deposits located in the Pilbara region of Western Australia. These include the Sulphur Springs and adjacent Kangaroo Caves deposits located 162 km by road south east of Port Hedland, accessible from the Atlas Abydos all weather haul road, and the Whim Creek and nearby Mons Cupri deposits located 110 km by sealed road to the west of Port Hedland.

The town of Port Hedland is a major mining centre with well established mining service providers and a skilled workforce. It is a major export port for iron ore and access for the export of concentrates produced by the Project.

All project deposits are Volcanogenic Massive Sulphide (VMS) copper-zinc-lead-silver systems with the main deposits being Sulphur Springs discovered in 1984 and the nearby Kangaroo Caves discovered in 1990. Near surface copper oxide ore was mined from the Whim Creek and Mons Cupri deposits in the 1920's to produce 11,500 tonnes of copper metal. Between 2005 and 2009 Straits Resources recovered approximately 55,500 tonnes of copper metal using a heap leaching, solvent extraction and electrowinning operation.



Map of Project Locations

Tenure

All deposits included in the mining inventory for the Optimisation Study are located on granted Mining Leases and are covered by agreements with traditional landowners as determined by the National Native Title Tribunal.

The tenure is shown in the table below.

Tenement Table

Project	Tenement	Deposits
Sulphur Springs	M45/494	Sulphur Springs
	M45/653	Planned Infrastructure
	M45/1001	Midway
	M45/587	Kangaroo Caves
Whim Creek	M47/236	Whim Creek
	M47/237	Infrastructure
	M47/238	Mons Cupri, Mons NW
	M47/443	Whim Creek

In addition to these tenements Venturex Resources holds an extensive and highly prospective land holding covering of 7,314 ha covering the majority of the Panorama trend at Sulphur Springs and 9,929 ha covering the Whim Creek basin.

Mineral Resources

The Mineral Resource Statement for Kangaroo Caves was updated in August 2015 (VXR ASX release 22 September 2015). The Mineral Resource Statement for the other resources included in the Project are unchanged (VXR ASX release 17 May 2013). The Statements are shown below.

The Sulphur Springs Mineral Resource estimate is based on 169 drill holes for 41,078m of which approximately 70% was drilled by diamond core. Drilling is on a nominal spacing of 40 metres by 20 metres.

The Kangaroo Caves Mineral Resource estimate is based on 93 drill holes for 23,063m of which 75% was drilled by diamond core. Drilling is on a nominal spacing of 40 metres by 40 metres. Drill density in some portions of the Kangaroo Caves deposit, including that section near the surface, is low due to access limitations and it is believed that infill drilling will increase the resource in these portions. This deposit is also open at depth.

PROJECT MINERAL RESOURCES

Location	Cut-Off Grade	JORC Classification	Tonnes '000 t	Cu wt%	Zn wt%	Pb wt%	Ag g/t	Au g/t
Sulphur Springs	0.4% Cu	Measured	-	-	-	-	-	-
	Or 2% Zn	Indicated	8,300	2.0	5.5	0.3	22.0	-
		Inferred	4,531	0.7	1.5	0.1	9.0	-
		Sub-total	12,831	1.5	4.2	0.2	17.6	-
Kangaroo Caves	0.4% Cu	Measured	-	-	-	-	-	-
	Or 2% Zn	Indicated	2,250	0.9	5.7	0.3	13.6	-
		Inferred	1,300	0.5	6.5	0.4	18.0	-
		Sub-total	3,550	0.8	6.0	0.3	15.2	-
Whim Creek	0.4% Cu	Measured	-	-	-	-	-	-
	Or 2% Zn	Indicated	996	1.4	1.2	0.2	8.7	0.1
		inferred	5	0.6	2.1	0.5	13.1	0.1
		Sub-total	1,001	1.4	1.2	0.2	8.7	0.1
Mons Cupri	0.4% Cu	Measured	1,538	1.6	1.9	0.8	34.4	0.3
	Or 2% Zn	Indicated	3,914	0.6	0.6	0.2	11.9	-
		inferred	49	0.5	4.2	1.7	27.3	0.1
		Sub-total	5,500	0.9	1.0	0.4	18.3	0.1
All locations		Measured	1,538	1.6	1.9	0.8	34.4	0.3
		Indicated	13,085	1.5	3.7	0.2	18.0	-
		Inferred	4,212	0.7	1.5	0.1	9.2	-
		Sub-total	19,332	1.3	3.1	0.3	17.3	-

Notes

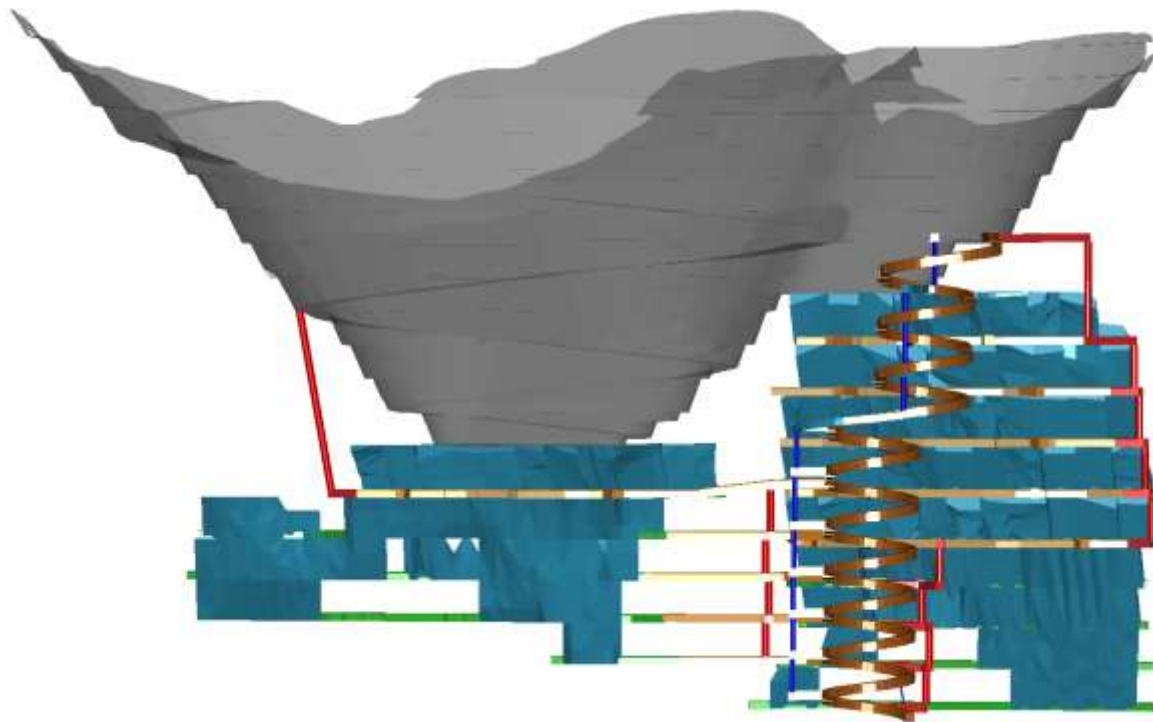
1. All Mineral Resources tonnes have been rounded to the nearest one thousand tonnes and grade to the nearest 1/10th percentage.
2. Mineral Resources include massive sulphide and stringer sulphide mineralisation which have been defined on the basis of geology and copper cut off grades
3. Mineral Resources are inclusive of Ore Reserves
4. The Competent Persons Statement is incorporated in the JORC 2012 Competent Persons Statement section of this report.
5. See VXR's ASX Releases dated 8th October 2013 and 22 September 2015 for JORC (2012) Table 1 Parameters

Mining Method

The top portion of the Sulphur Springs deposit will be mined using an open pit. The open pit will be developed in two stages with the first stage providing access to ore in the top of the western lode of the deposit and the second stage taking the pit to its final limit and providing access to portal and ventilation shaft positions. A contractor supplied and operated mining fleet consisting of 190 tonne excavators, 100 tonne trucks and ancillary drilling equipment will be used.

The lower portion of the deposit will be mined using conventional mechanised sublevel open stoping with cemented paste fill as the primary mining method. A portal located at 1190mRL in the open pit will provide access into the underground mine. The collars of the main exhaust raises and paste fill hole will also be located on this level. The mining fleet will consist of a contractor supplied and operated development jumbo, production drill rig, 17 tonne capacity loaders and 50 tonne articulated haul trucks.

Ground conditions in the Sulphur Springs underground mine are good to very good and water ingress is estimated to be modest. Gaining access via the open pit has eliminated much of the start up risk associated with the underground mine and significantly reduced the development requirements to bring the underground mine into production.



Long Section of Sulphur Springs Mine

The Kangaroo Caves deposit will also be mined underground using mechanised sublevel stoping leaving remnant pillars to support the hanging wall. A decline will be developed to access the deposit. A similar mining fleet will be used to mine this. Ore will be hauled 6 km to the processing plant located at Sulphur Springs.

Ore Reserves

An updated Ore Reserve estimate has been completed as part of the Optimisation Study. It has been estimated on a Net Smelter Return (NSR) basis with payable metals being copper, zinc and silver.

Ore Reserves Table

			Copper		Zinc		Silver	
Deposit	Classification	Ore Tonnes	%	T contained	%	T contained	%	g/t contained
Open Pit								
Sulphur Springs	Probable	3,444,300	1.9	65,000	4.3	149,000	17.8	1,967,000
Underground								
Sulphur Springs	Probable	4,125,000	1.5	64,000	4.3	178,000	16.9	2,240,000
Total								
Sulphur Springs	Probable	7,569,000	1.7	128,230	4.3	326,000	17.3	4,207,000

Note:

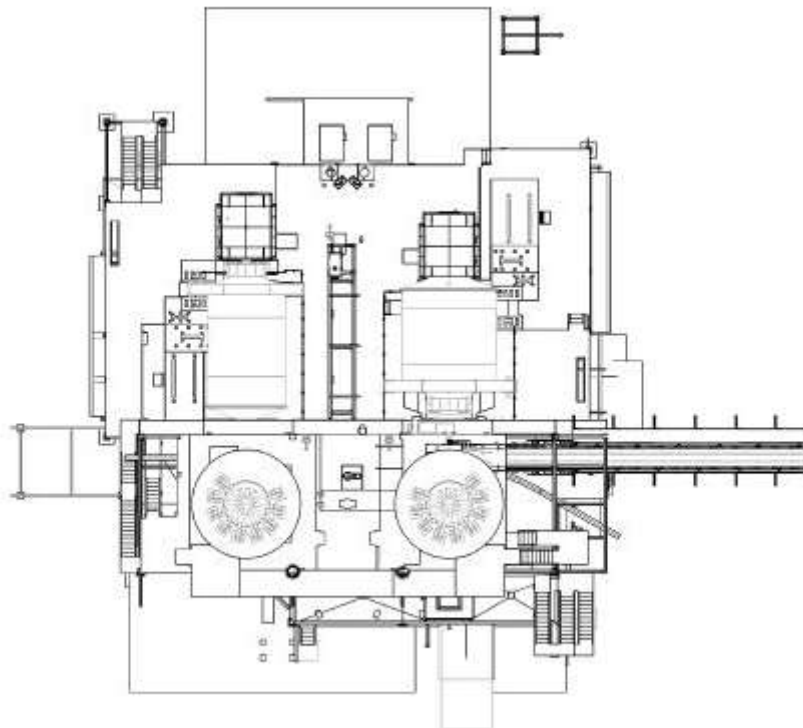
- All ore reserve tonnes are rounded to the nearest one hundred thousand tonnes, and grade to the nearest 1/10th of a percentage of ore per tonne.
- The Competent Persons Statement is provided to under the Competent Persons section at the end of the report.
- JORC (2012) tables and checklist of Assessment and Reporting Criteria is attached in Appendix 1 of this release.

At this stage insufficient work has been completed on the geological resources for the Kangaroo Caves Deposit to convert them into Ore Reserves. Material from the Kangaroo Caves Deposit has been included in the schedule as mining inventory.

Metallurgy and Processing

The processing plant will be located adjacent to the Sulphur springs deposit and have a nominal throughput rate of 1 Million tonnes per annum. It will be a conventional processing plant producing copper and zinc concentrates using the following processes:

- Single stage crushing plant
- SAG and ball mill
- Differential copper- zinc flotation circuit
- Concentrate thickening and filtration
- Containerised transport to Port Hedland with loading into bulk ships
- Tailings thickening and disposal into a conventional tailings storage facility (TSF) with a high density polyethylene (HDPE) liner and underdrainage system designed to limit leakage into the environment



General Arrangement of SAG Ball Milling Circuit

A paste fill plant will need to be constructed for the Sulphur Springs underground when it commences production in year 5 of the Project.

The grind size (P80 < 65 micron) required to liberate the copper and zinc minerals from other barren components of the ore has allowed the use of a SAG/ball mill circuit to grind the ore.

The flotation circuit will use standard industry processes to separately float the copper bearing chalcopyrite and zinc bearing sphalerite minerals. Conventional rougher/scavenging produces saleable copper and zinc concentrates without the need for regrind of the intermediate flotation products.

Extensive metallurgical test work on Sulphur Springs deposit has been undertaken over a number of years. Recovery to concentrate on the Sulphur springs ore is estimated to be 90% for copper and 93% for zinc. Silver is recovered as a by product in both the copper and zinc concentrates.

The zinc concentrate produced from Sulphur Springs will have a high grade of 55% zinc with low iron and will be particularly attractive in the market. The copper concentrate produced will have a grade of 26% copper with low arsenic and halide contents.

Test work has confirmed that the concentrates have good thickening, filtration and materials handling characteristics. It has also indicated that the tailings can be classified and thickened to sufficient density to use as underground paste backfill without the significant expense of dewatering filters.

No metallurgical test work has been carried out on material from the Kangaroo Caves deposit. For the purpose of this study it has been assumed to have similar metallurgical performance to the nearby and mineralogically similar Sulphur Springs deposit.

Infrastructure

The Sulphur Springs site is located 6.1 km from the haul road to the Atlas Iron Abydos mine. An agreement is in place for Venturex to use the haul road for access and trucking concentrate upon payment of a share of the capital cost and ongoing maintenance on the road. The capital contribution is limited to \$9 million.

Power will be generated onsite via an build own operate (BOO) diesel fired power station with 12 MW of installed capacity.

Water from mine dewatering will initially be highly acidic and contain dissolved metals. It will be treated through a water treatment facility and then used in the process plant. The water from mine dewatering will be supplemented by return water from the TSF, which will require treatment through the water treatment facility, and water from a bore field. Several production bores have already been developed within 2.5 km of the process plant. The Project site will be designed such that any contaminated water runoff or seepage will be collected and pumped to the TSF which is designed to contain a 1 in 100 year rainfall event.

Administration offices, ablution blocks, workshops and store buildings located at Whim Creek and already owned by Venturex will be relocated to Sulphur Springs.

A 200 room permanent village will be established on site. A 200 man camp will be rented to supplement this during construction. The Project will be operated on a drive-in/drive-out basis out of Port Hedland. It is expected that a significant portion of the workforce will live in Port Hedland with the remainder commuting from Perth and other centres.

An assessment of the prevailing and expected market for transportable buildings and light vehicles has indicated that good quality second hand options exist for their supply. It has been assumed that these items will be purchased second hand for the Project.

Permitting

A Definitive Feasibility Study on the Project was completed in 2013. This study was based on all of the Sulphur Springs deposit being mined using underground mining methods and proposed the use of dry stacking of tailings. In 2014, a Clearing Permit, Mining Proposal and Mine Closure Plan for the Project were approved by the Department of Mines and Petroleum of Western Australia (DMP).

The use of an open pit to mine the top portion of the Sulphur Springs deposit together with reversion to a conventional tailings dam will result in :-

- storage of waste rock materials on the surface that may have to be managed with regard to contained acid forming minerals;
- an increased project footprint that may impact on conservation significant flora and fauna;
- changes to the site water balance; and
- a post closure pit lake.

An amended Mining Proposal, application for Native Vegetation Clearing Permit and Mine Closure Plan for Sulphur Springs will be prepared to address these issues and submitted to the EPA and DMP for consideration and approval. The time taken to achieve these approvals will be determined by the level of assessment required by regulators.

Venturex has received competent advice that with the application of good industry practice supported by appropriate investigation and design, and on the basis of recent projects approved by the regulators, that approval of the amended project is likely to be achieved.

Works Approvals to allow construction and an Environmental Licence to operate the plant and infrastructure are required from the Department of Environmental Regulation. These will be obtained in parallel with the approval process.

Similar approval processes will ultimately be required for the Kangaroo Caves, Whim Creek and Mons Cupri operations.

Closure

All waste rock will be assessed for its potential to form acidic (PAF) before it is mined. PAF waste that cannot be disposed of in the underground workings or the open pit will be encapsulated within the body of the waste dump as it is mined. The waste dump will be constructed as a long term stable land form. Surface treatment upon completion will reflect the ongoing land use.

The TSF will be decommissioned and enclosed with an engineered cover incorporating a HDPE liner that will be designed to shed water and limit the ingress of water into the sulphide tailings.

A lake will in time form in the open pit after closure. While the water in this lake will be low in pH due to contact with pit wall mineralisation, previous modelling has indicated that this lake will function as an evaporative sump with limited outflows to the environment.

All of the industrial plant will be removed and the site returned to a land use agreed with the local stakeholders and DMP.

Appropriate closure arrangements will be put in place for the Kangaroo Caves, Whim Creek and Mons Cupri operations.

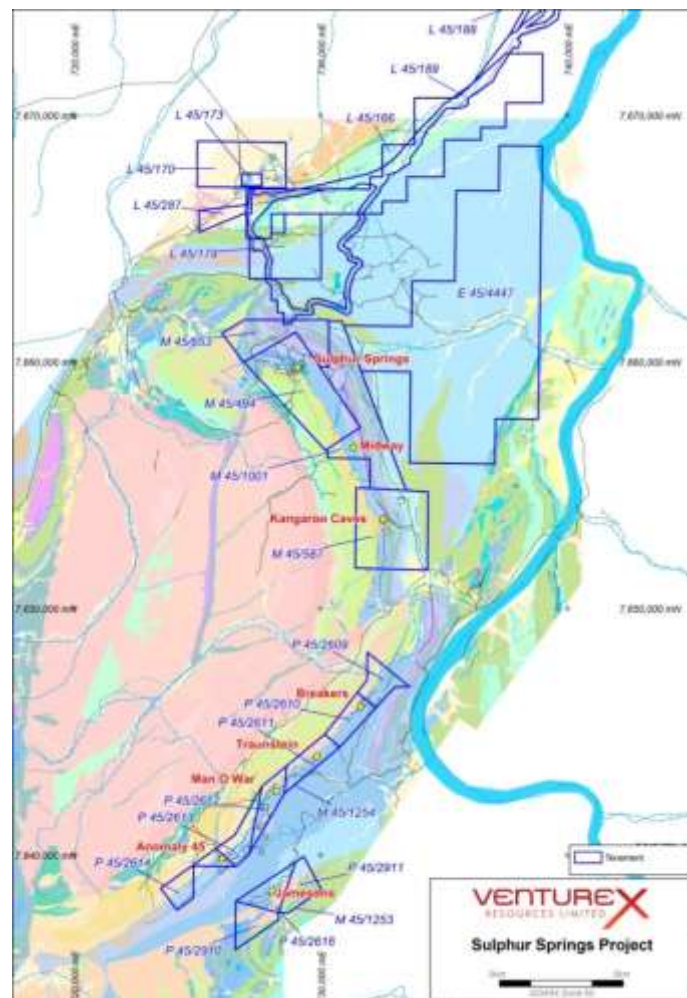
Exploration

Venturex has exploration tenements covering most of the horizons with potential for VMS deposits in the Pilbara including the Whim Creek basin and the Panorama trend.

VMS style deposits typically occur in clusters. There are already six potentially economic Resources within these two provinces being the Sulphur Springs, Kangaroo Caves, Whim Creek and Mons Cupri deposits included in this optimisation study. In addition the company holds the Evelyn deposit located 30 km south of Whim Creek and Salt Creek deposit located 12 km north of Whim Creek.

In addition there are a further seven advanced targets and prospects that have returned drill intersections of ore grade copper zinc mineralisation from wide spaced drilling that require more investigation and follow up.

Significant exploration also potential exists along the Panorama trend. The Company has tenure over approximately 27 strike kilometres of this trend. The Company has recently identified a graben or basin structure that appears to control mineralisation on the Sulphur Springs deposit with additional exploration down plunge along this structure the Company is hopeful of additional discoveries. In addition to the existing deposits at Sulphur Springs and Kangaroo Caves advanced targets at Breaker, Man O'War, Anomaly 45 and Jamesons have returned ore grade copper and zinc mineralisation.



Map of the Panorama Trend

The Whim Creek basin including the historical Whim Creek and Mons Cupri mines and Salt Creek has already produced approximately 67,000 tonnes of copper from the mining near surface oxide ores.

Geology

Felsic Volcanics	High-Mg Basalt	Quartzite	Pyroxenite, magnetite	Monzogranite	Felsic Rocks	Argillite	Basalt and unidentified volcanic rocks	Devle (alt. siliceous pyroxenite)	Tuffaceous siltstone	Siltstone Litho. conglomerate	Coarse to very coarse crystalline agglomerate, volcanic breccia	Serpentine and talc soil alteration	Shale	Dolerite	
Nice schist	Gabbro, pyroxenite, peridotite	Aphanite	Rhyolite	Basalt	Gneiss	Volcanics	Monzogranite	Magnetite monzogranite, mafic	Granite and granite gneiss	Pyroxenite	Gabbro	Peridotite cumulate, coarse gabbro	Serpentine	Monzogranite	Amphibolite

Whim Creek Project

0km 2km
Geological Map Scale 50

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Capital Costs

The basis of the capital estimation includes the following:

- The capital cost estimate for the process plant and infrastructure was developed by Lycopodium using quoted pricing on major pieces of equipment and services with the balance from their data base. The stated accuracy is $\pm 25\%$.

The total cost estimate for the Sulphur Springs open pit and the underground mines at Sulphur springs and Kangaroo Caves were developed by Entech based on detailed design of the mines and indicative pricing from open cut and underground mining contractors specifically for the study. Standard accounting principles were used to allocate costs between capital and operating. Pre-production costs include both capital and operating costs carried out prior to the production of first product from the respective mines.

The table below shows a breakdown of the life of mine capital estimation for the Optimisation Study compared to the 2013 study.

Capital Costs	Units	2015 OS	2013 FS
Treatment Plant	\$M	100	110
Lead Circuit	\$M	-	4
Infrastructure (inc TSF & Haul Road)	\$M	78	107
Mining Sulphur Springs Open Pit	\$M	3	-
Mining Sulphur Springs Underground	\$M	39	87
Mining Kangaroo Caves Underground	\$M	15	-
Mining Whim Creek & Mons Cupri	\$M	-	10
Sustaining Capital (inc TSF lifts)	\$M	35	-
Rehabilitation & other	\$M	37	14
Owner's costs up to production	\$M	12	-
Owner's Contingency	\$M	10	-
Total Capital	\$M	329	332
Pre-Production Capital	\$M	202	279
Maximum cash draw down	\$M	226	297

Operating Costs

The life of mine average operating costs for the Pilbara Project including the Sulphur Springs open cut and underground together with the Kangaroo Caves underground is \$129 per tonne of ore. The process and general and administration operating costs were estimated by Lycopodium based on power and reagent consumptions indicated by test work, mechanical and electrical equipment components of the plant and prevailing labour costs.

Open pit and underground mine operating costs for Sulphur Springs and Kangaroo Caves were developed by Entech as set out above.

The breakdown for both the 2013 Feasibility Study (2013 FS) and 2015 Optimisation Study (2015 OS) are shown in the table below.

Operating Costs	Units	2015 OS	2013 FS
Mining Sulphur Springs Open Cut	\$/t ore	38.44	
Mining Sulphur Springs Underground	\$/t ore	48.11	51.98
Mining Kangaroo Caves Underground	\$/t ore	58.24	
Mining Whim Creek & Mons Cupri inc Haulage	\$/t ore		86.72
Processing & TSF	\$/t ore	35.58	40.73
Owner's Contingency	\$/t ore	2.00	
G & A	\$/t ore	4.17	6.07
Sub total on-site	\$/t ore	87.82	96.20
Concentrate Road haulage & handling	\$/t ore	4.78	12.43
Shipping	\$/t ore	4.49	inc
Treatment charges / Refining charges	\$/t ore	30.96	20.19
Sub total off-site	\$/t ore	40.23	32.62
Total Operating Cost	\$/t ore	129.01	128.82

Project Business Case

The Pilbara Copper Zinc Project represents a substantial base metals project producing metals that are in demand and forecast to be in supply deficit in coming years. It has a life in excess of 10 years with a C1 cash cost of AUD\$0.84 per pound copper after by product credits.

The opportunity to mine the top portion of the Sulphur Springs deposit using open pit methods over the first four years of the Project has significantly reduced pre-production expenditure and operating costs and resulted in a simpler more robust project with a much lower risk profile.

The Project is located in a mining friendly jurisdiction in a location well endowed with skilled service providers and a potential workforce.

The Project is almost shovel ready with approved Mining Leases and Native Title Agreements and advanced environmental approvals.

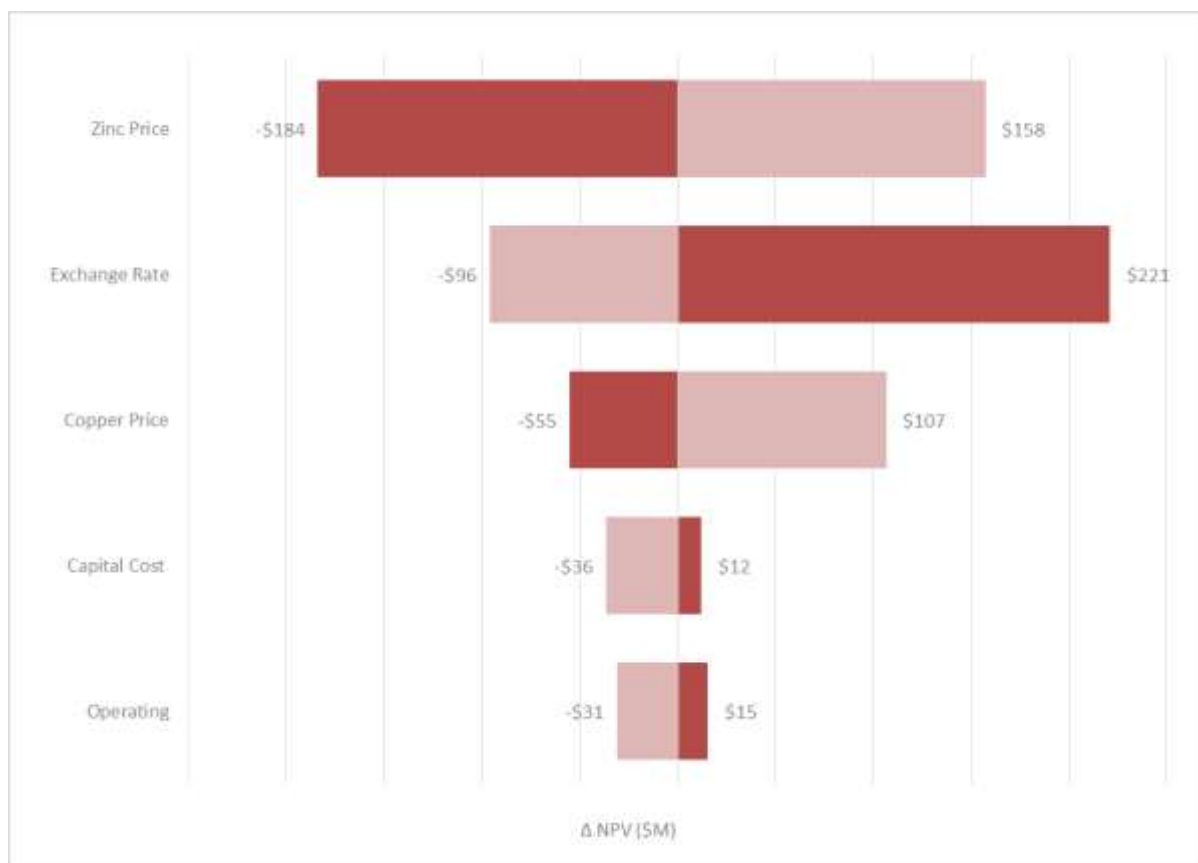
There is a large tenure package covering the largest known copper zinc VMS deposits in the Pilbara region of NW Australia with significant exploration potential.

Financial analysis of the mining, trucking and treatment of ore from Whim Creek and Mons Cupri indicated that it is not currently viable to treat this ore at Sulphur Springs. Extending the Resource base and working with Blackrock Minerals Pty Ltd who are in Joint Venture with the Company on the heap leaching operation at Whim Creek to both extend and potentially expand this operation are priorities for this project.

Sensitivity

The Project economics are most sensitive to revenue inputs (metal prices, exchange rate, TC/RCs) and capital cost as shown in the graph below. The Project is very highly leveraged to the future rising zinc price forecast by most industry analysts.

Description	Units	Lower	Base	Upper
Zinc Price	\$/t	1,700	2,400	3,000
Copper Price	\$/lb	2.80	3.04	3.50
Exchange Rate	AU:US	0.65	0.74	0.8
Capital Expenditure	%	-5%	-	+15%
Operating Expenditure	%	-5%	-	+10%



Sensitivity Table

Forward Work Program

The optimisation study has presented a compelling case for the development of the Pilbara Copper Zinc Project.

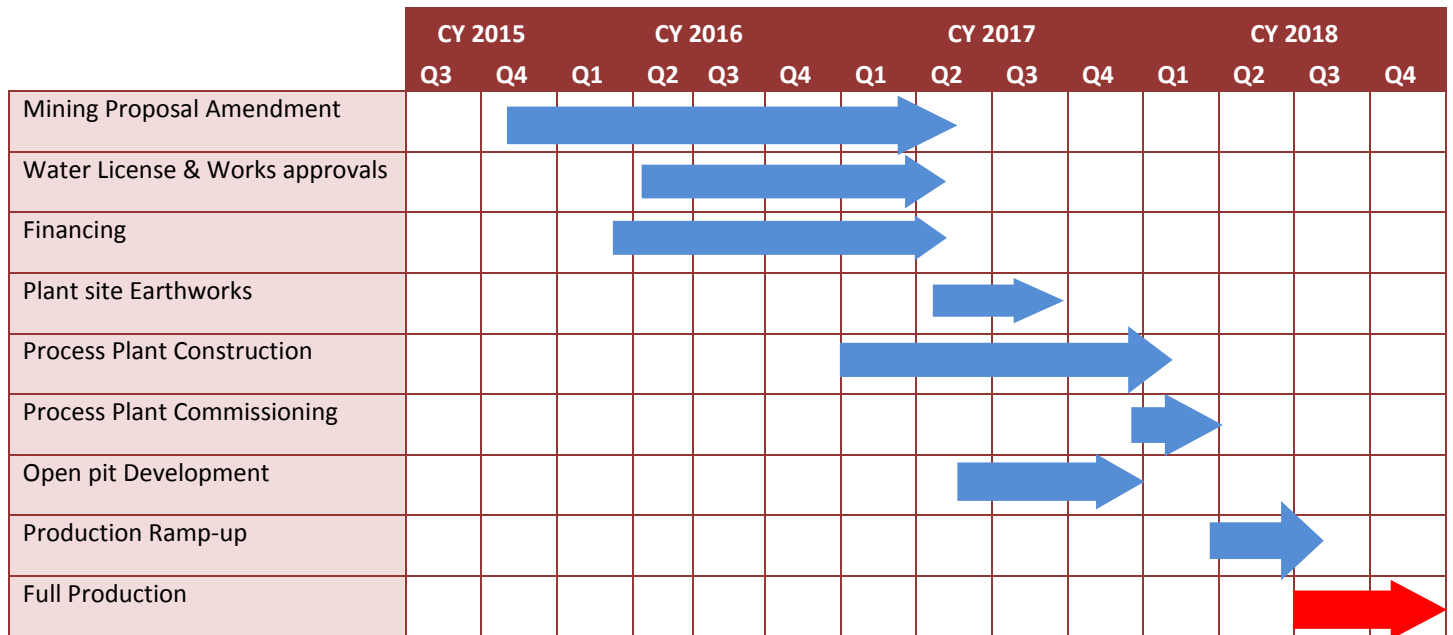
The schedule below shows the potential development timeline in the event that the project is assessed by the EPA as requiring a Public Environmental Review level of assessment. This is the most conservative estimate of the time required for permitting the project. In the event that the project is assessed as a mining proposal by the DMP then the time required for approval will be 6 to 9 months.

Works Approvals and a Water License will be required in either case. The application process for these can run in parallel with the environmental permitting process.

Key focus will be on getting certainty on the level of environmental assessment of the project and will require;

- Consultation with the DMP, EPA and other stakeholders
- Refinement of the project concept outlined in the optimisation study
- Preparation of a referral document to allow the level of assessment to be determined

- Development and submission of appropriate documentation for the level of assessment process determined.



Conceptual Project Delivery Timeline

Work on the other approvals and progressing the project will be carried out in parallel to the permitting process as the certainty of the time line to achieving approval increases and funding allows.

Priority will also be given to extending and expanding the potential at Whim Creek and Mons Cupri as outlined above.

The ongoing collation and analysis of the geological data sets for the mining and exploration tenements has highlighted many new opportunities including;

- The potential to extend the Resource at Sulphur springs
- Previously unknown data sets from exploration in the Whim Creek Basin
- The application of modern geophysical techniques to exploration at Sulphur Springs and elsewhere along the Panorama trend

These opportunities will be pursued as funding permits.

Key Project Data Table

Physicals	Units	Total	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Years 12
Sulphur Springs Open Pit - Ore	'000t	4,277	118	1,051	985	950	992	181	-	-	-	-	-	-
Copper Grade	%	1.7	3.0	1.8	1.8	1.4	1.5	1.8	-	-	-	-	-	-
Zinc Grade	%	4.0	3.9	3.5	2.8	4.7	5.1	4.3	-	-	-	-	-	-
- Waste	'000t	39,917	13,719	17,159	5,313	2,752	970	4	-	-	-	-	-	-
Sulphur Springs Underground	'000t	4,334	-	-	-	-	64	694	1,095	1,099	988	394	-	-
Copper Grade	%	1.6	-	-	-	-	1.5	1.9	1.7	1.2	1.3	2.0	-	-
Zinc Grade	%	4.3	-	-	-	-	4.4	3.3	4.5	5.4	4.5	2.3	-	-
Development	m	13,385	-	-	-	516	3,236	3,659	3,678	2,296	-	-	-	-
Kangaroo Caves Underground	'000t	1,835	-	-	-	-	-	-	25	387	441	425	423	134
Copper Grade	%	0.7	-	-	-	-	-	-	0.5	0.6	0.7	0.8	0.6	0.5
Zinc Grade	%	3.8	-	-	-	-	-	-	4.6	4.4	4.1	3.0	3.7	4.1
Development	m	10,134	-	-	-	-	-	-	1,435	5,445	3,254	-	-	-
Ore Processed	'000t	10,447	-	909	1,000	1,000	1,002	1,000	1,000	1,000	1,002	1,000	1,000	533
Copper Grade	%	1.4	-	2.2	1.8	1.3	1.6	1.6	1.8	1.2	1.3	1.4	0.7	0.6
Zinc Grade	%	4.1	-	4.2	2.7	4.4	5.1	3.4	4.4	5.3	4.8	3.3	3.7	3.7
Capital	\$'000	329	186	15	1	10	29	20	24	15	9	5	4	11 *
Operating Costs	\$	921	38	95	70	65	71	88	99	134	105	69	59	28
Concentrate Produced and Shipped														
Cu concentrate produced / shipped	'000 wmt	563	-	75	67	50	59	61	67	46	49	51	26	12
Zn concentrate produced / shipped	'000 wmt	784	-	69	50	81	93	62	81	96	87	61	68	36
Payable Cu in Cu concentrate	'000t	131	-	17	15	12	14	14	16	11	11	12	6	3
Payable Zn in Zn concentrate	'000t	340	-	30	22	35	40	27	35	42	38	26	29	16
Revenue	\$'000	1,798	-	204	169	171	200	171	202	180	176	153	115	57
EDITDA	\$'000	568	(202)	94	98	95	99	62	78	30	62	79	52	21

Note:

The LoM schedule is derived from a mining inventory of which 67% is Indicated Resources and 33% is Inferred Resources, the LoM mining inventory does not constitute an Ore Reserve. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target itself will be realised.

* There is a \$18.8M allowance is for salvage.

Key Project Financial Data

Item	Material	Units	Opt Study 2015
Financials			
Net operating cashflow	pre-tax	\$M	878
Internal Rate of Return (IRR)	pre-tax	%	42
Average annual operational cashflow	pre-tax	\$M	79.8
LOM net cashflow (after capital)	pre-tax	\$M	568
Payback period	start of processing	Years	2.1
NPV 10%	pre-tax	\$M	264
NPV 8%	pre-tax	\$M	307
C1 - cash cost	net of by-products	A\$/lb Cu	0.84
Metal Prices			
Average LOM Cu	USD	t	6,700
Average LOM Zn	USD	t	2,400
Average LOM Ag	USD	oz	16
Exchange rate	ratio	AUD:USD	0.74
Treatment & refining charges (LOM)			
Copper conc. - treatment charge	USD	dmt conc.	92.5
Copper conc. - refining charge	USD	lb payable	0.09
Zinc - treatment charge	USD	dmt conc.	235
Silver - refining charge	USD	oz payable	3.50

Note

The LoM schedule is derived from a mining inventory of which 67% is Indicated Resources and 33% is Inferred Resources, the LoM mining inventory does not constitute an Ore Reserve. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target itself will be realised.

Competent Persons Statements

The information in this report that relates to the Sulphur Springs Kangaroo Caves Mineral Resources is based on information reviewed by Mr James Guy who is a member of the AUSIMM. Mr Guy is a consultant to the Company. Mr Guy has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration, and the activity which he is undertaking, to qualify as a Competent Person is defined in the 2012 edition of the JORC Code. Mr Guy consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to the Sulphur Springs and Kangaroo Caves Ore Reserves is based on information compiled by Mr Dan Donald and Mr Stuart Swapp. Both Messrs Donald and Swapp are consultants employed by Entech Pty Ltd and are Members of the Australasian Institute of Mining and Metallurgy. Messrs Donald and Swapp have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Messrs Donald and Swapp consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Forward Looking Statements

This document may include forward looking statements. Forward looking statements include, but are not limited to, statements concerning Venturex Resources Limited planned exploration program and other statements that are not historical facts. When used in this document, the words such as "could", "plan", "estimate", "expect", "intend", "may", "potential", "should", and similar expressions are forward looking statements. Although Venturex Resources Limited believes that its expectations reflected in these forward looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that actual results will be consistent with these Forward Looking statements.

NOTES RELATING TO THE REOPTIMISATION STUDY RESOURCE AND RESERVE STATEMENT

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	- 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.	No new results are being released in this announcement
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.).	No new results are being released in this announcement
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.	No new results are being released in this announcement.
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.	No new results are being released in this announcement
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.	No new results are being released in this announcement.

Criteria	JORC Code explanation	Commentary
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.	No new results are being released in this announcement.
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.	No new results are being released in this announcement
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. - Quality and adequacy of topographic control.	No new results are being released in this announcement
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.	No new results are being released in this announcement
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.	No new results are being released in this announcement
Sample security	The measures taken to ensure sample security.	No new results are being released in this announcement
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No new results are being released in this announcement

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. - Kangaroo Caves Deposit is located wholly within Mining Lease M45/587. - Whim Creek Deposit is located on Mining Leases M47/236 and M47/443 and freehold lot 71 Dep Plan 251827. - Mons Cupri Deposit is located wholly within Mining Lease 47/238. - The Mining Leases and Freehold titles are held in 100% owned subsidiaries of Venturex Resources Limited. - The Sulphur Springs and Kangaroo Caves Deposits lie within lands belonging to the Njamal traditional owners. - The Whim Creek and Mons Cupri Deposits lie within lands belonging to the Ngarluma traditional owners. - Venturex Resources Limited has agreements in place with both groups to allow for mining. - Sulphur Springs Deposit is situated on vacant crown land. Kangaroo Caves Deposit is partially on Vacant Crown Land and partially on Hillside Pastoral Lease. - Whim Creek Deposit is located within the Mallina Pastoral Lease. - Mons Cupri Deposit straddles the boundary between the Mallina and Sherlock Pastoral Leases. - M45/587 is subject to a royalty payable to Sipa Resources Limited - On the Whim Creek and Mons Cupri Deposits, Straits Resources Limited are entitled to be paid a fee of \$3M dollars on the resumption of mining operations, - The tenements are all on granted Mining Lease, which are in good standing and no known impediments exist.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	- At the Sulphur Springs and Kangaroo Caves Deposits previous exploration has been conducted by Sipa Resources Limited in conjunction with Outokumpu Zinc Australia Limited and CBH Resources Limited since 1985 under various joint ventures. - The Whim Creek and Mons Cupri Deposits have had extensive mining and exploration history. Both deposits were mined via underground techniques up until the 1920's, and by open cut techniques between 2005 to 2009. Exploration and development work has been undertaken by a number of companies including Australian Inland Exploration Pty Ltd, TexasGulf Australia Pty Ltd, Dominion Mining NL and Straits Resources Limited. - Venturex Resources Limited have held ownership of the Sulphur Springs Deposit since January 2011, the Kangaroo Caves Deposits since November 2012 and the Whim Creek and Mons Cupri deposit since February 2010

Criteria	JORC Code explanation	Commentary
Geology	Deposit type, geological setting and style of mineralisation.	- All the deposit are located within the Archaean aged Pilbara Craton. - The Sulphur Springs and Kangaroo Caves Deposits are located within the Sulphur Springs Group, a sequence of acid to intermediate volcanic's, polymitic breccia's and cherts. - The Whim Creek and Mons Cupri Deposits are located within the Whim Creek Group at or on the contact between the Whim Creek Group and the Bookingarra Group. The Whim Creek Group comprises a sequence of dacite and rhyolite volcanic's and volcanic derived breccias. The Bookingarra Group comprises a basal sequence of polymitic conglomerates overlain by slates and shales and basalt volcanics. - All the deposits are examples of 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.	There are no exploration results being reported with the optimisation study results
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.	There are no exploration results being reported with the optimisation study results
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').	There are no exploration results being reported with the optimisation study results
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 diagrams in body of report
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.	There are no exploration results being reported with the optimisation study results

Criteria	JORC Code explanation	Commentary
<i>Other substantive exploration data</i>	<i>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.</i>	There are no exploration results being reported with the optimisation study results
<i>Further work</i>	<i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i> <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive</i>	The company is currently reprocessing and interpreting historical down hole geophysical data from holes drilling within the Sulphur Springs and Kangaroo Caves Deposits to define conductor plates that may constitute future drill targets

Section 3 Estimation and Reporting of Mineral Resources

Details on resources for the Sulphur Springs, Whim Creek and Mons Cupri Deposits have been previously announced to the market refer ASX announcement dated 8th October 2013 “Company Resource and Reserve Statement 30 September 2013 (Amendment)”

Details on the Kangaroo Caves Deposit have previously been announced to the market refer ASX announcement dated 22 September 2015 “Kangaroo Caves Resource Upgrade”

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

Criteria	JORC Code explanation	Commentary
<i>Database integrity</i>	<i>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.</i> <i>Data validation procedures used.</i>	No new mineral resources are being announced
<i>Site visits</i>	<i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i> <i>If no site visits have been undertaken indicate why this is the case.</i>	No new mineral resources are being announced
<i>Geological interpretation</i>	<i>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</i> <i>Nature of the data used and of any assumptions made.</i> <i>The effect, if any, of alternative interpretations on Mineral Resource estimation.</i> <i>The use of geology in guiding and controlling Mineral Resource estimation.</i> <i>The factors affecting continuity both of grade and geology.</i>	No new mineral resources are being announced
<i>Dimensions</i>	<i>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.</i>	No new mineral resources are being announced

Criteria	JORC Code explanation	Commentary
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
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

Criteria	JORC Code explanation	Commentary
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 8 October 2013 – Company Resource and Ore Reserve Statement 30 September 2013). - 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 other Entech staff, who have visited site and other operations in the area respectively.
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 pre-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 >\$AUD46 (total of processing cost plus G&A).
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 190t-class excavator and 100t dump trucks. Underground operations use rubber tyred diesel equipment, 1:7 decline, 50t 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 with post extraction paste or rock backfill. - Independent consultants prepared the geotechnical analysis. This forms the basis of pit design criteria. Also, underground design parameters including stope size, fill method and additional support installation have been analysed with the resulting analysis used in mine design.

Criteria	JORC Code explanation	Commentary
		- Only the Indicated portion of the Mineral Resource was used to estimate the Ore Reserve. - Open pit mining blocks were diluted by 10%. Underground stopes were diluted by the following factors according to stope type: - Crown pillar – 15% - Longhole open stope (left open) – 10% - Longhole open stope (rockfilled) – 10% - Transverse primary stope – 12% - Transverse secondary stope – 14% 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: - Crown pillar – 79% - Longhole open stope (left open) – 72% (includes rib pillar) - Longhole open stope (rockfilled) – 85% (includes rib pillar) - Transverse primary stope – 92% - Transverse secondary stope – 88% A 100% mining recovery for ore development has been assumed. - Pre-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 pre-feasibility capital and operating cost estimate: backfill plant⁹ as deferred capital); 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; airstrip; processing plant; site access road

Criteria	JORC Code explanation	Commentary
<i>Metallurgical factors or assumptions</i>	<i>The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.</i> <i>Whether the metallurgical process is well-tested technology or novel in nature.</i> <i>The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.</i> <i>Any assumptions or allowances made for deleterious elements.</i> <i>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.</i> <i>For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?</i>	- The metallurgical process was developed to a pre-feasibility level including the development of a flowsheet and capital and operating costs. - The flow sheet consists of the following: Primary crushing, SAG/ball milling, copper flotation, zinc flotation, concentrate thickening and filtration, concentrate storage. The facility includes all required reagents and services. - The process stages are based on well understood conventional unit process. The plant design flow sheet uses confirmed metallurgical processes for this style of ore. The technology is standard in the base metal industry and will process a variety of ore types through a single stage crushing and SAG/ball grinding circuit, followed by sequential flotation of copper, and zinc sulphide minerals to produce a saleable copper and zinc concentrates. - Considerable feasibility level metallurgical test work programs were completed previously in 2001 and 2006. A further program of confirmatory test work was completed in 2011-2012 including some testing of composited geological domains. A range of metallurgical recovery factors were determined for copper and zinc in concentrates. - The deleterious element content of each concentrate product was determined and profiled against typical concentrate specifications sourced from third party purchasers. - No bulk sample or pilot scale test work has been undertaken
<i>Environmental</i>	<i>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.</i>	- Extensive baseline environmental studies for the project area were completed in 2006 by CBH for a previous feasibility study. Further baseline studies have been conducted by Venturex in 2011-12 to add to this. Extensive materials (waste rock and tailings) characterisation studies have been undertaken. - Venturex have reviewed the issues arising from the Public Environmental Review process partially completed for the Panorama Copper-Zinc Project submitted by CBH Sulphur Springs Pty Ltd in November 2007. - Key issues identified for the project are impacts on conservation significant flora, long term management of potentially acid forming waste materials (waste rock and tailings) and water management. - Approvals received in 2013-14 for ore processing, underground mining and development of supporting infrastructure are considered to remain valid for the revised project. Additional approvals required for the revised project

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		design have been identified. These relate to development of a small open pit with an associated waste rock landform, changed tailings storage method and location and the resultant increase in project footprint. Information needs to prepare application documents including a revised mine closure plan have been identified, scheduled and costed. The project has carefully designed its footprint to minimise environmental impacts. Final design options were selected to minimise the disturbed area within landform constraints imposed by rugged topography.
Infrastructure	<i>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.</i>	The site is remote. There is currently no substantial on-site infrastructure, and the pre-feasibility study comprehensively estimates the costs for the development of all necessary infrastructure items. Haul road access to the sealed Port Hedland- Marble Bar road has been constructed under an agreement with Atlas Iron Limited.
Costs	<i>The derivation of, or assumptions made, regarding projected capital costs in the study.</i> <i>The methodology used to estimate operating costs.</i> <i>Allowances made for the content of deleterious elements.</i> <i>The source of exchange rates used in the study.</i> <i>Derivation of transportation charges.</i> <i>The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.</i> <i>The allowances made for royalties payable, both Government and private.</i>	- Capital and operating costs were estimated to pre-feasibility level accuracy (+/-25%) in 3rd quarter 2015 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 built up on standard industry cost profiles. - 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 0.74 cents/USD - 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.

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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 block model coding and mine design. In the final financial analysis, revenue from Ore deliveries were then recalculated using an updated, time series based pricing model. 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 production is forecast to be approximately 12,500t of copper, 32,200t of Zinc and 95,400t of silver.
Economic	- The inputs to the economic analysis to produce the net present value (NPV) in the study, the 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.	For the purpose of estimating an Ore Reserve, an NPV was estimated at a discount rate of 8%. 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. Copper concentrate off-take is uncommitted. - Joint Access and Haul Road Development agreement completed. - 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.

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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.