# WHIM CREEK PROJECT RESOURCE UPDATE

## Highlights

- **Re-modelling of the Mineral Resource estimate for the Salt Creek and Mons Cupri copper zinc deposits within the Whim Creek Project are now completed.**
- **The revise Salt Creek model incorporate infill drilling conducted since the previous resource estimate was calculated and also includes geological, geophysical and structural models aimed at improving the understanding of the geometry of the high-grade sulphide zones.**
- **The new models, while considered more sophisticated, has led to little change in the overall contained metal with lower grades at Salt Creek offset by increased tonnages and negligible changes in both the grades and tonnages at Mons Cupri.**
- **Salt Creek - 1.8 Mt grading 1% Cu, 4.2% Zn, 1.2% Pb and 31g/t Ag.**
- **Revised Resource at Mons Cupri is 5.1Mt grading 0.9% Cu, 1% Zn, 0.4% Pb and 21g/t Ag.**

Venturex Resources Limited (ASX: VXR) ("Venturex" or "the Company") is pleased to announce an updated Mineral Resource estimates for the Mons Cupri and Salt Creek copper-zinc deposits which form part of the Company's 100% owned Whim Creek Copper Zinc Project.

The updated Resources, which were prepared by independent consultant Hardrock Mining Consultants Pty Ltd, are the result of Venturex's decision to apply new infill drilling results, along with updated geological, geophysical and structural data to the model.

The Company is pleased to advise that despite the application of the more robust data sets, the overall result remains in line with previous estimates.

While the outcome of the revision is pleasing, Venturex's key focus remains the Sulphur Springs Project, as discussed in the Resource upgrade released on the 21st March 2018.

### Implications for Future Exploration

The revised mineral resource estimates for Mons Cupri and Salt Creek incorporate an increased focus on the distribution and geometry of the mineralisation. This provides a robust basis from which to plan future exploration targeted at the discovery of concealed high-grade VMS deposits within the Whim Creek project area.

As previously announced, Venturex was successful in securing a Government co-funded drilling grant to test for VMS mineralisation under cover south west of the Mons Cupri deposit.

**ASX Announcement**
**ASX Code: VXR**
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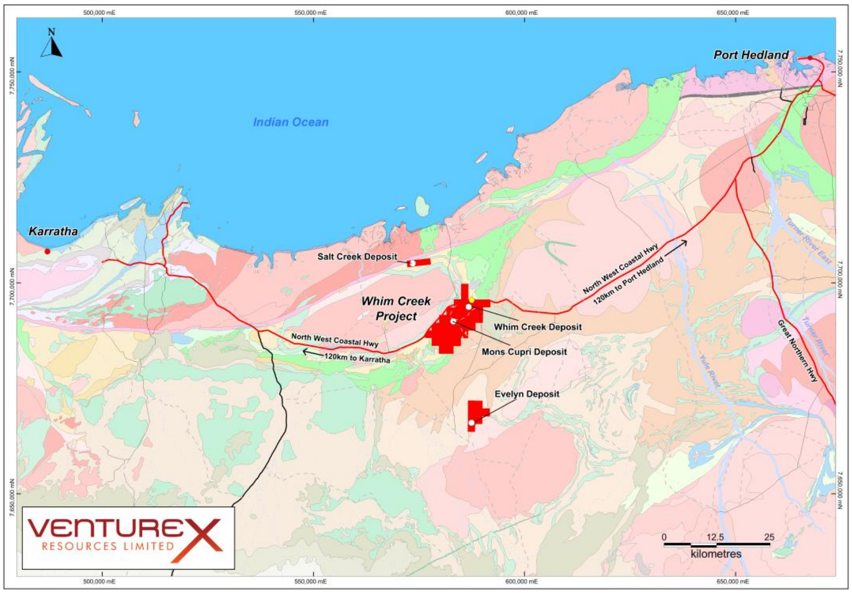
## Regional Geological Setting

The Whim Creek Copper Zinc Project contains three main deposits, Whim Creek, Salt Creek and Mons Cupri, located within the Archaean Whim Creek Greenstone Belt. The deposits are classed as volcanic massive sulphide (VMS). Both Mons Cupri and Salt Creek are hosted at a similar stratigraphic level within the upper Cistern Formation of the Bookingarra Group. Modern style exploration began in the late 1960's and drilling has been largely restricted to the deposit environments whereas much of the target stratigraphy is concealed beneath younger volcanic sequences and has not been subjected to systematic evaluation. Therefore the potential for additional discoveries in the district remains high.

**Figure 1: Whim Creek Copper Zinc Project Regional Geology and location Diagram (geology GSWA).**




## Salt Creek Deposit

The updated Salt Creek Resource estimate follows on from work completed by VXR and its consultants. This work included re logging of core from 31 diamond holes, structural modelling of the deposit by Model Earth Global Geological Services, reprocessing and modelling of historical and recent downhole geophysical data by Southern Geoscience Consultants and completion of 6 diamond drill-holes within and around the upper part of the deposit and 3 deep diamond drill-holes down plunge of the previously known resources targeted at geophysical anomalies. Please refer to the following ASX releases:

- Drilling update at the Whim Creek Zinc –Copper Project (ASX 19/09/2016)
- Drilling Results at Salt Creek. (ASX 20/10/2016)
- New Massive Sulphide Intersection Extends Eastern Lode at Salt Creek (ASX 22/11/2016)
- Thick Zone of Stringer Copper Sulphides Intersected at Salt Creek (ASX 29/11/2016)
- Drilling extends West Zinc Lode at Salt Creek (ASX 6/12/2016)
- High Grade Assays Confirm Extension of Salt Creek Zinc Copper Mineralization. (ASX12/01/2017)
- Down Hole Geophysics Update at Salt Creek. (ASX 31/05/2017)

The updated Salt Creek Resource is tabled below.

**Table 1: Salt Creek Global Resource Estimate**

| Classification | k Tonnes | Cu % | Zn % | Pb % | Ag g/t | Au g/t |
|---|---|---|---|---|---|---|
| Indicated | 1,017 | 1.2 | 3.3 | 0.9 | 20 | 0.2 |
| Inferred | 839 | 0.7 | 5.3 | 1.5 | 43 | 0.2 |
| **Grand Total** | **1,856** | **1.0** | **4.2** | **1.2** | **30** | **0.2** |

The above Resource is reported at a cut-off grade of greater than or equal to 0.4% Cu and then greater than or equal to 2% Zn but less than 0.4% Cu. Note that figures may not total due to rounding

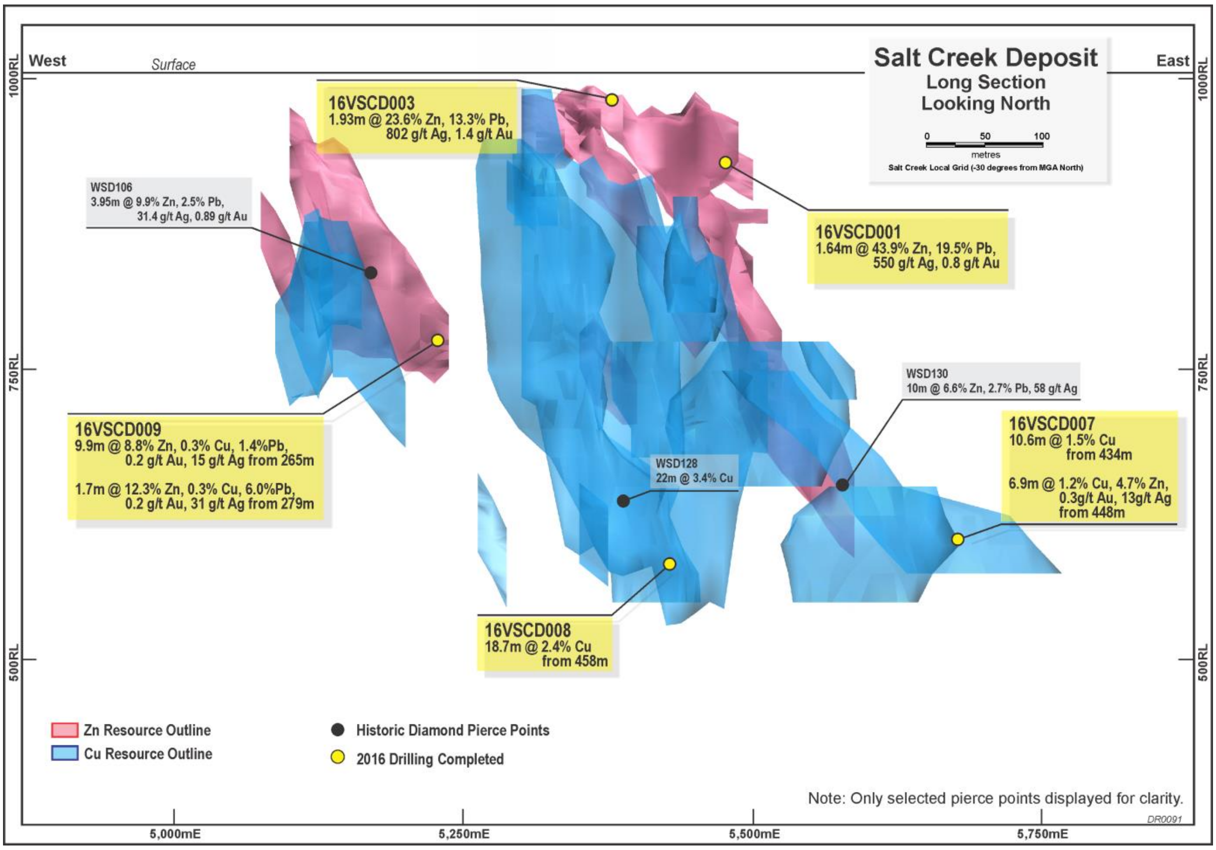
## Summary of Key Information

### Geology and geological interpretation

Salt Creek is a structurally modified VMS deposit. The deposit does not outcrop and the upper part is weathered to about 50m depth. The deposit has not been previously mined and remains open at depth.

The main massive sulphide lenses dip steeply south and plunge moderately to steeply east. The deposit is structurally overturned from its original position and is strongly elongated down plunge. The sulphide lenses are hosted in the upper parts of fine to medium grained bedded tuffaceous sediment with some massive sulphide lenses transgressing into the overlying shales and mudstones. The tuffaceous sandstone and siltstone show typical VMS zoned alteration of chlorite-pyrite and sericite which extends into the underlying rhyolitic volcanics. The alteration intensity shows a strong increase to the east and down plunge (see Figure 2).

**Figure 2: Salt Creek Long Section showing zinc resource outline in pink and copper resource outline in blue.**




### Drilling techniques

The main drilling technique used at Salt Creek is diamond drilling. Core size drilled is mostly NQ with some HQ. RC drilling with a 5.5-inch face sampling hammer has also been used.

### Sampling and analysis methods

Diamond core was cut with a diamond saw and half core sample sent for laboratory analysis. Analysis was undertaken with a four acid digest with ICP/MS finish and 30g FA/AAS for precious metals.

**Estimation Methodology**

A polygonal interpretation of stratiform copper and zinc-lead domains was undertaken on 12.5 metre sections which were then balanced in plan view at 25m level intervals. The copper wireframe used a ~0.25% cut-off, the zinc-lead wireframe uses a ~1% Zn cut-off. The estimation employed inverse distance techniques using SURPAC 6.8 software.

**Other relevant information**

The key changes between the updated Salt Creek Resource and the previous estimate are an increase in the Resource tonnage of ~850kt. The increased tonnage has resulted in the absolute Cu, Zn and Pb grades decreasing by 1%, 2.8% and 0.9% respectively, compared to the previous estimate. As a result contained Cu metal has decreased by ~1.5kt while contained Zn and Pb metal has increased by ~7.7kt and ~1.2kt respectively.

The changes are a result of increased geological understanding, which has been gained through the drilling completed over the course of 2016, structural re-interpretation and re-logging of a number of pre-existing drill holes.

The improved geological understanding provides for better definition of mineralised domains compared to the previous estimate. The improved interpretation has resulted in a greater volume of mineralisation being included within the Resource estimate and the definition of a number of sub domains which allows for the identification and modelling of this mineralisation (see Appendix 1 for detailed breakdown of domains).

## Mons Cupri Deposit

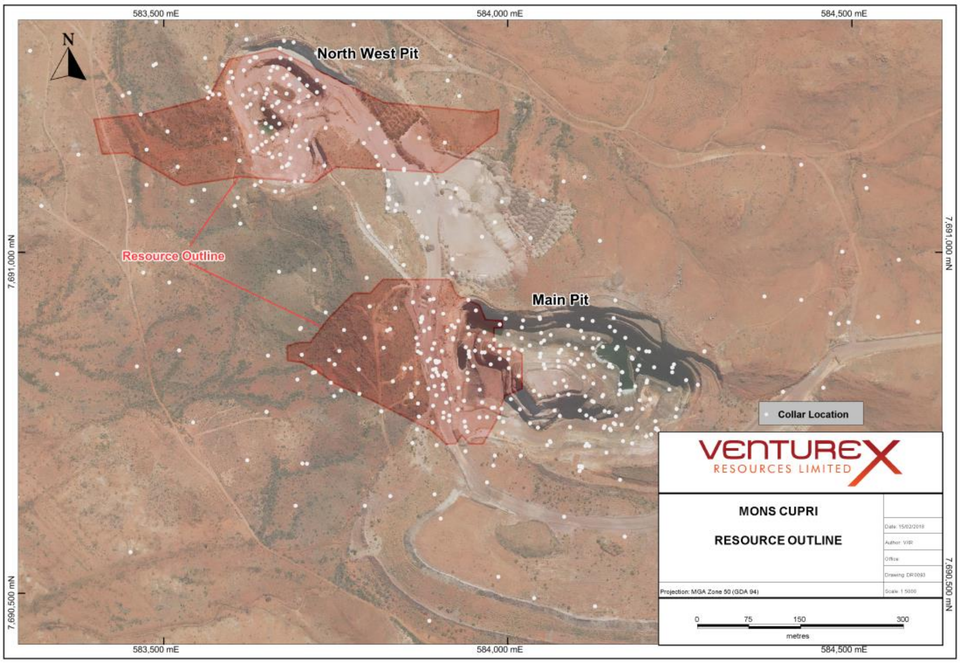
The updated Mons Cupri resource estimation was completed by independent consultant, Hardrock Mining Solutions. It follows on from work by VXR to better define the geometry and distribution of the high grade sulphide zones as part of a broader strategy to explore down plunge to the west beneath younger volcanic and sedimentary sequences. The oxide portion of the Mons Cupri deposit and the adjacent North West Mons Cupri area was mined most recently as an open pit, 2005-2009, with copper production via an SX/EW process. The current sulphide resource is located adjacent to and down plunge west of the main open pit and adjacent to the North-west pit area (Figure 3).

**Table 2: Mons Cupri Global Resource Estimation.**

| Classification | K Tonnes | Cu % | Zn % | Pb % | Ag g/t | Au g/t |
|---|---|---|---|---|---|---|
| Measured | 1,070 | 1.51 | 1.65 | 0.69 | 38 | 0.28 |
| Indicated | 3,500 | 0.8 | 0.8 | 0.3 | 17 | 0.09 |
| Inferred | 500 | 0.5 | 1.5 | 0.6 | 14 | 0.03 |
| Grand Total | 5,100 | 0.9 | 1.0 | 0.40 | 21 | 0.12 |

Resources in Main Mons Cupri and North-West Zones are reported using a cut-off grade of greater than or equal to 0.4% Cu and residual less than 0.4 % Cu and GTE greater than or equal to 2% Zn. Note that figures may not total due to rounding

**Figure 3: Mons Cupri Resource area looking North East. The previous mined oxide pits are shown.**




## Summary of Key Information

### Geology and Geological interpretation

The Mons Cupri deposit is hosted towards the upper part of the Cistern Formation and approximately 20m below the overlying Rushall Shale. The main resource broadly comprises a gently west dipping and tapering semi massive sulphide zone, 300m x 160m x 5-20m thick, overlying a steeply dipping conical shaped stringer sulphide zone, 350m x 150m x `30m thick. The global resource was divided into seven domains based on the mineralisation styles and metal ratios (See Table 4 within the Appendix).

- **Zinc Domain:** The Zinc domain is located at the top of the deposit and is broadly a gently dipping zone of semi massive zinc and lead rich sulphides with a high silver content. (>5% Zn & 1% Pb, <1% Cu).
- **Copper – Zinc domain:** This mixed zone is located immediately below the Zinc Domain. It comprises semi massive zinc lead sulphides as above with transgressive copper sulphide veins (>1% Zn & >1% Cu).
- **Copper Stringer Core Domain:** This zone immediately below the Zinc Domain and the Copper Zinc Domain is dominated by generally steeply dipping stringer style copper sulphide mineralization with low zinc and lead content (>1% Cu & <0.5%Zn).
- **Copper Stringer Domain:** Similar style to the Copper Stringer Core Domain above but is deeper with less chalcopyrite (0.5%-1% Cu, >1% Zn).
- **Zinc - Lead Stringer Domain:** This forms the outer shell of the stringer sulphide zone forming a zone around the Copper Stringer Domains (Zn & Pb ~0.5% & Cu >0.2%).
- **Mixed Stringer Domain:** Sub vertical shear controlled mixed copper-zinc and lead sulphide zones mostly below the main pit (Zn-Pb-Cu ~0.5%).
- **North West Pit:** Separate smaller VMS occurrence to the north west of the main Mons Cupri pit

**Drilling techniques**

Mons Cupri has been sampled with a combination of Reverse Circulation (RC) and diamond (DD) drill holes. The RC drill holes were sampled via standard cyclone and riffle splitter. Diamond drilling accounts for ~53% of the drilling.

**Sampling and analysis methods**

Diamond core was cut with a diamond saw and half core sample sent for laboratory analysis. Analysis was undertaken with a four acid digest with ICP/MS finish and 30g FA/AAS for precious metals.

**Estimation Methodology**

A polygonal interpretation of six domains was carried out on 20-metre sections. The interpretation honours the paragenic sequence. The resource estimate has been undertaken using inverse distance techniques using SURPAC V6.8.1 software.

**Other relevant information**

The key changes between the updated Mons Cupri Resource and the previous estimate are an increase in the Resource tonnage of ~490kt. The increased tonnage has resulted in the contained Cu metal has increasing by ~3.9kt while contained Zn and Pb metal has decreased by ~7.4kt and ~2.6kt respectively.

The changes between the updated Mons Cupri Resource and the previous estimate are the result of reinterpreting the existing available geological information. In particular a detailed review and assessment of four twinned holes (previously drilled) was undertaken and the modelled domains were aligned to previous mineralisation studies completed by Miller (1975) and then Houston (1996).

The revised geological interpretation and hence level of understanding has allowed for seven key mineralisation domains being defined (see Appendix 1 for detailed breakdown of domains). As discussed above the revised domaining has resulted in a small increase in the volume of mineralised material being included within the Resource estimate.

## Reported Whim Creek Reserves and Resources

With the release of the updated Mons Cupri Resource, it is the Company's view that it is no longer appropriate to report Reserves for the Mons Cupri and Whim Creek deposits. Therefore, the Mons Cupri and Whim Creek Reserves as reported in the Company's release of 26 October 2017 have been reclassified as Resources. The Company is currently assessing the merits of reviewing and updating the required technical work to reinstate the Reserves.

The Whim Creek Resource is restated below in Appendix 1 due a typographical error having being identified.

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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.

## Competency Statements

The information in this report that relates to Mineral Resources for Mons Cupri and Salt Creek is based on information compiled or reviewed by Mr David Milton, of Hardrock Mining Consultants Pty Ltd, 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 Exploration Results, Mineral Resources and Ore Reserves”. 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 information in this report that relates to Mineral Resources for Whim Creek is based on information compiled or reviewed by Mr Stephen Wood. Mr Wood is a member of the Australasian Institute of Mining and Metallurgy. Mr Wood has sufficient experience relevant to the style of mineralisation, type of deposit under consideration and to the activity being 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.

## Appendix 1: Resource Tables

### Resource Tables

| MONS CUPRI MINERAL RESOURCES | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Classification | K Tonnes | Cu % | Zn % | Pb % | Ag g/t | Au g/t |
| Mons Cupri | Measured | 1,070 | 1.51 | 1.65 | 0.69 | 38 | 0.28 |
| | Indicated | 3.500 | 0.8 | 0.8 | 0.3 | 17 | 0.09 |
| | Inferred | 500 | 0.5 | 1.5 | 0.6 | 14 | 0.03 |
| | **Total** | **5,100** | **0.9** | **1.0** | **0.4** | **21** | **0.12** |

| MONS CUPRI MINERAL RESOURCES REPORTED BY DOMAIN | | | | | | | |
|---|---|---|---|---|---|---|---|
| Domain | | K Tonnes | Cu % | Zn % | Pb % | Ag g/t | Au g/t |
| Zinc | Measured | 185 | 0.86 | 6.25 | 2.83 | 101 | 0.33 |
| | Indicated | 95 | 0.6 | 6.0 | 3.0 | 79 | 0.22 |
| | Inferred | 70 | 0.1 | 7.6 | 3.5 | 39 | 0.01 |
| | **Sub Total** | **350** | **0.6** | **6.4** | **3.0** | **83** | **0.24** |
| Copper - Zinc | Measured | 150 | 2.34 | 1.72 | 0.61 | 56 | 0.48 |
| | Indicated | 200 | 1.5 | 1.7 | 0.6 | 41 | 0.37 |
| | Inferred | 5 | 1.1 | 1.6 | 0.5 | 26 | 0.22 |
| | **Sub Total** | **355** | **1.8** | **1.7** | **0.6** | **47** | **0.42** |
| Copper Stringer Core | Measured | 440 | 2.10 | 0.29 | 0.13 | 21 | 0.32 |
| | Indicated | 575 | 1.5 | 0.2 | 0.1 | 14 | 0.16 |
| | Inferred | - | - | - | - | - | - |
| | **Sub Total** | **1,015** | **1.8** | **0.2** | **0.1** | **17** | **0.23** |
| Copper Stringer | Measured | 225 | 0.67 | 0.28 | 0.06 | 11 | 0.07 |
| | Indicated | 1,205 | 0.6 | 0.2 | 0.1 | 8 | 0.05 |
| | Inferred | 180 | 0.6 | 0.1 | 0.0 | 7 | 0.01 |
| | **Sub Total** | **1,610** | **0.6** | **0.2** | **0.01** | **8** | **0.05** |
| Zinc-lead stringer | Measured | 40 | 0.19 | 2.81 | 0.74 | 28 | 0.07 |
| | Indicated | 185 | 0.1 | 3.1 | 0.8 | 34 | 0.05 |
| | Inferred | 45 | 0.0 | 2.7 | 0.8 | 11 | 0.06 |
| | **Sub Total** | **270** | **0.1** | **3.0** | **0.8** | **29** | **0.06** |
| Mixed stringer (Note contains chloritic material) | Measured | 15 | 0.38 | 1.74 | 0.50 | 24 | 0.07 |
| | Indicated | 600 | 0.6 | 0.1 | 0.1 | 9 | 0.03 |
| | Inferred | 65 | 0.6 | 0.1 | 0.0 | 5 | 0.04 |
| | **Sub Total** | **680** | **0.6** | **0.2** | **0.1** | **9** | **0.03** |
| North West Pit zone | Measured | - | - | - | - | 0 | 0.00 |
| | Indicated | 585 | 0.5 | 1.3 | 0.5 | 23 | 0.06 |
| | Inferred | 195 | 0.5 | 0.8 | 0.3 | 16 | 0.05 |
| | **Sub Total** | **780** | **0.5** | **1.2** | **0.4** | **21** | **0.05** |
| **All Domains** | **Grand Total** | **5,100** | **0.9** | **1.00** | **0.40** | **21** | **0.12** |

| SALT CREEK MINERAL RESOURCES | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Classification | K Tonnes | Cu % | Zn % | Pb % | Ag g/t | Au g/t |
| Salt Creek | Measured | - | - | - | - | - | - |
| | Indicated | 1,017 | 1.2 | 3.3 | 0.9 | 20 | 0.2 |
| | Inferred | 839 | 0.7 | 5.3 | 1.5 | 43 | 0.2 |
| | **Total** | **1,856** | **1.0** | **4.2** | **1.2** | **30** | **0.2** |

| SALT CREEK MINERAL RESOURCES REPORTED BY DOMAIN | | | | | | | |
|---|---|---|---|---|---|---|---|
| Domain | Classification | K Tonnes | Cu % | Zn % | Pb % | Ag g/t | Au g/t |
| Zinc - lead | Indicated | 111 | 0.2 | 14.5 | 3 | 83 | 0.5 |
| | Inferred | 391 | 0.2 | 8.5 | 2.2 | 52 | 0.2 |
| | **Sub Total** | **502** | **0.2** | **9.8** | **2.4** | **59** | **0.3** |
| Copper | Indicated | 764 | 1.4 | 0.1 | - | 2 | 0.1 |
| | Inferred | 348 | 1.1 | 0.2 | - | 2 | 0.1 |
| | **Sub Total** | **1,112** | **1.3** | **0.1** | **-** | **2** | **0.1** |
| Mixed Zinc -copper | Indicated | 142 | 1.0 | 11.9 | 4.1 | 69 | 0.5 |
| | Inferred | 87 | 1.3 | 10.5 | 3.5 | 51 | 0.4 |
| | **Sub Total** | **229** | **1.1** | **11.4** | **3.9** | **62** | **0.5** |
| Oxide | Indicated | - | - | - | - | - | - |
| | Inferred | 13 | 0.8 | 8.9 | 5.6 | 750 | 0.6 |
| | **Sub Total** | **13** | **0.8** | **8.9** | **5.6** | **750** | **0.6** |
| All domains | Indicated | 1,017 | 1.2 | 3.3 | 0.9 | 20 | 0.2 |
| | Inferred | 839 | 0.7 | 5.3 | 1.5 | 43 | 0.2 |
| | **Grand Total** | **1,856** | **1.0** | **4.2** | **1.2** | **30** | **0.2** |

| WHIM CREEK MINERAL RESOURCES | | | | | | |
|---|---|---|---|---|---|---|
| | Classification | K tonnes | Cu% | Zn% | Pb% | Ag g/t |
| Whim Creek | **Measured** | - | - | - | - | - |
| | **Indicated** | 996 | 1.4 | 1.2 | 0.2 | 8.7 |
| | **Inferred** | 5 | 0.6 | 2.1 | 0.5 | 13.1 |
| | **Total** | **1,001** | **1.4** | **1.2** | **0.2** | **8.7** |

# APPENDIX 2

# MONS CUPRI RESOURCE STATEMENT NOTES

## 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.*<br>• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*<br>• *Aspects of the determination of mineralisation that are Material to the Public Report.*<br>• *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.* | • The deposit was sampled with a combination of Reverse Circulation (RC) and diamond (DD) drill holes. The RC drill holes are sampled via standard adjustable cyclone and riffle splitter from the recovered sample. Diamond drill core is sampled using standard cut half core.<br>• Standard RC drilling produced whole metre RC drill samples split at the rig using a cone splitter producing samples of approximately 3kgs. Diamond drilling completed to industry standard using predominantly NQ size core. Diamond core was cut on geologically determined intervals (0.25 to1.5 metres).<br>• were weighed, dried, crushed and pulverised (total prep) to produce a pulp sub-sample for analysis by four acid digests with an ICP/OES, ICP/MS or FA/AAS (Au) finish. |
| ***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.).* | • A combination of percussion (open hole and reverse circulation) and diamond drilling of various sizes over 47 years used. 53% was by diamond drilling |
| ***Drill sample recovery*** | • *Method of recording and assessing core and chip sample recoveries and results assessed.*<br>• *Measures taken to maximise sample recovery and ensure representative nature of the samples.*<br>• *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.* | • Diamond drill core recovery was recorded by all operators as a percentage of measured recovered core versus drilled distance. Recoveries were generally high.<br>• RC samples were compared to standards to estimate sample recoveries which were consistently high. Any low recovery intervals were logged and entered into the database.<br>• 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. |
| ***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.*<br>• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.*<br>• *The total length and percentage of the relevant intersections logged.* | • Diamond drill core is all qualitatively logged with wet core photographs taken over the last 8 years. RC drill holes are all were qualitatively logged and RC chip tray samples collected and stored.<br>• Logging is at an appropriate detailed quantitative standard to support future geological, resource, reserve estimations and subsequent feasibility studies.<br>• All holes were logged in full. Relogging was completed on 31 core holes in 2016/17. |

| | | |
|---|---|---|
| ***Sub-sampling techniques and sample preparation*** | • *If core, whether cut or sawn and whether quarter, half or all core taken.*<br>• *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.*<br>• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*<br>• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*<br>• *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.*<br>• *Whether sample sizes are appropriate to the grain size of the material being sampled.* | • Diamond core was sawn with a diamond saw and half core samples (quarter core in metallurgical holes) taken for assay.<br>• 1 metre RC samples were collected and split off the drill rig using a cone splitter. Approximately 90% of the samples were dry in nature.<br>• The sample preparation of the samples follows industry best practice in sample preparation involving weighing, oven drying, pulverisation of the entire sample (total prep) to a grind size of 85% passing 75 microns.<br>• Venturex and previous operators had QAQC procedures involving the use of certified standards, blanks and duplicates. The QAQC has been independently audited with no apparent issues.<br>• Field duplicates have been taken.<br>• 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. |
| ***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.*<br>• *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.*<br>• *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.* | • Various operators used analytical techniques involving a four acid digest multi-element suite with ICP/MS finish (30g FA/AAS for precious metals). The acids used are hydrofluoric, nitric, perchloric and hydrochloric acids, suitable for the dissolution of most silica based samples. The method approaches total dissolution of most minerals. Combustion furnace or Eltra "Leco" analyser assayed total sulphur.<br>• No geophysical tools are used to determine any element concentrations reported.<br>• Duplicates were taken every 25m and post 2008, every RC metre drilled is checked by two 30sec measurements using a Niton handheld XRF.<br>• |
| ***Verification of sampling and assaying*** | • *The verification of significant intersections by either independent or alternative company personnel.*<br>• *The use of twinned holes.*<br>• *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*<br>• *Discuss any adjustment to assay data.* | • Prior to 2010, verification procedures were not documented.<br>• Post 2010, significant intersections were viewed by the Exploration Manager and Managing Director. Significant intersections are also verified by portable XRF data collected in the field and cross-checked against the final assays when received.<br>• A range of primary data collection methods were employed since 1989. Since 2009, 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.<br>• Full data base verification of all historical information was completed in 2009. All data is loaded and stored in DataShed database.<br>• The historical data (pre-2010) has been adjusted with all negative assays, representing below detection assays, were converted to positive assays of 0.001ppm. |
| ***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.*<br>• *Specification of the grid system used.*<br>• *Quality and adequacy of topographic control.* | • All hole collar coordinates have been checked by Venturex using DGPS with all co-ordinates and RL data considered reliable.<br>• Downhole surveys were performed on all holes by either single shot Eastman camera or reflex gyro readings at 10-50 metre down hole intervals.<br>• The grid system used for the location of all drill holes is MGA_GDA94, Zone 50. |

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| | | • 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.*<br>• *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.*<br>• *Whether sample compositing has been applied.* | • The nominal drill spacing is generally 20m x 20m varying due to previous imperial grid pattern and more recent metric grid.<br>• The current spacing is adequate to assume geological and grade continuity of the mineralised domain.<br>• No compositing has been applied to the exploration results. |
| ***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.*<br>• *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 Mons Cupri drilling is orientated to the North West, near perpendicular to the mineralised trend. Limitations imposed by drilling conditions dictates that some drilling was vertical and orientated at a low angle to the mineralisation..<br>• Given the stratigraphic nature of the mineralising system, no orientation based sampling bias has been identified in the data. |
| ***Sample security*** | • *The measures taken to ensure sample security.* | • Independent audits of the data in 2009 concluded that the sampling protocols were adequate.<br>• Post 2010, the chain of custody is managed by Venturex. The samples are stored in a secure facility at Whim Creek, collected from site by Toll IPEC and delivered to the assay laboratory in Perth. Online tracking is utilised 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 previous and current feasibility studies in 2008 (Straits) 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.*<br>• *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.* | • Mons Cupri is located wholly within Mining Lease M47/238. Venturex Resources Limited has a 100% interest in the tenement.<br>• The tenement is within the granted Ngarluma Native Title Claim.<br>• The tenement is subject to a third party royalty.<br>• The tenement is a granted Mining Lease in good standing within previous operating permits. |
| ***Exploration done by other parties*** | • *Acknowledgment and appraisal of exploration by other parties.* | • Previous exploration has been conducted at Mons Cupri by Texas Gulf Australia, Dominion Mining Limited and Straits Resources Limited since 1968. |
| ***Geology*** | • *Deposit type, geological setting and style of mineralisation.* | • The Mons Cupri copper-zinc-lead deposit is hosted by the Cistern Formation of the Bookingarra Group (Pike et al,2006) within the Archaean Whim Creek Greenstone Belt. The Cistern Formation is an upward fining sedimentary sequence comprising conglomerates to volcaniclastic sandstones and siltstones near the top. The Cistern Formation is underlain by the Mons /Cupri dacite and is overlain by the Rushall Shale. The deposits are an 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:*<br>• *easting and northing of the drill hole collar*<br>• *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*<br>• *dip and azimuth of the hole*<br>• *down hole length and interception depth*<br>• *hole length.*<br>• *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.* | • Detailed drill hole data has been previously periodically publicly released with all relevant data appended to the release. |
| ***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.*<br>• *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.*<br>• *The assumptions used for any reporting of metal equivalent values should be* | • All reported assays have been length weighted.<br>• No top cut has been applied.<br>• For reporting exploration results, a nominal 0.25% copper and 2.0% zinc lower cut-off has been applied.<br>• High-grade massive sulphide intervals internal to broader zones of sulphide mineralisation are reported as included intervals. |

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| | *clearly stated.* | |
| ***Relationship between mineralisation widths and intercept lengths*** | • *These relationships are particularly important in the reporting of Exploration Results.*<br>• *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.*<br>• *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. |
| ***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 previous ASX Annual Reports (2010, 2011) and ASX releases. |
| ***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 results are reported. |
| ***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.* | • NA - Exploration results not being released this time. |
| ***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).*<br>• *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.* | • NA - Exploration results not being released this time. |

## Section 3 Estimation and Reporting of Mineral Resources

*(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.*<br>• *Data validation procedures used.* | • Independent audits of the sampling techniques and data integrity were completed as part of previous studies in 2008 (Straits) 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. |
| ***Site visits*** | • *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.*<br>• *If no site visits have been undertaken indicate why this is the case.* | • No site visit was made by the Competent Persons for this Resource Statement. The site is well documented and previous verification records by others are available. |
| ***Geological interpretation*** | • *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.*<br>• *Nature of the data used and of any assumptions made.*<br>• *The effect, if any, of alternative interpretations on Mineral Resource estimation.*<br>• *The use of geology in guiding and controlling Mineral Resource estimation.*<br>• *The factors affecting continuity both of grade and geology.* | • The interpretation of the deposit takes full account of all surface and subsurface geological, geochemical, structural and previous mining information contained in the database to ensure the continuity and integrity of the interpretation.<br>• No detailed alternative interpretations have been postulated.<br>• Recent detailed structural mapping and previous scientific studies are the basis of the controls on mineralisation and mineralisation styles. In the main zone at least three phases of mineralisation are recognised as strata bound zinc lead silver mineralisation, massive replacement copper and iron sulphides and disseminated iron and copper stringer zones. These styles control grade and distribution of minerals and result in six mineral domains.<br>• In the North-West Zone only stringer style mineralisation is recognised. |
| ***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.* | • The Mineral Resource covers the strata bound, massive sulphide and underlying stringer mineralisation identified by drilling. The Main Mons Cupri zone measures ~300 metres (NW) by 160 metres (NE). It is approximately 5-20 metres thick and dips to the west at 30 degrees. Its stringer zone measures 350metres (EW), 150 metres (down dip) and is generally 30 metres thick. |
| ***Estimation and modeling 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.*<br>• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.*<br>• *The assumptions made regarding recovery of by-products.*<br>• *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).*<br>• *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* | • The Mons Cupri Mineral Resource Estimate takes into account previous estimates completed by Straits Resource inverse distance techniques using SURPAC V6.8.1 software.<br>• Polygonal interpretation of six domains was done on 20-metre sections. The interpretation honoured the paragenic sequence which is Strat bound zinc lead mineralisation (Greater than 5% zinc and 1% lead with less than 1% copper, mixed copper zinc replacement domain with more than 1% copper but zinc between 1 and 5%, copper replacement with coper more than 15 but zinc less than 1%, weaker replacement copper domain with copper less than 15 but more than 0.5% , contact zinc rich stingers in stock work and stock work stringer zone with combined copper zinc and lead greater than 0.5%<br>• Gaps between high-grade domains were modelled as low-grade domains to be later incorporated as planned dilution during the mining process. Hard |

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| | • *Any assumptions behind modelling of selective mining units.*<br>• *Any assumptions about correlation between variables.*<br>• *Description of how the geological interpretation was used to control the resource estimates.*<br>• *Discussion of basis for using or not using grade cutting or capping.*<br>• *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.* | boundaries are used between domains.<br>• Parent cell measures 5 metres (X axis), 5 metres (Y) and 3 metres (Z) with sub-cells of 2.5 metres (X), 2.5 metres (Y), 1.5 metres (Z), appropriate given an average drill spacing of less than 25 metres. Depending on search ellipse the minimum samples per estimate are between 2 and 5 and the maximum samples per estimate are 9 to 20. Discretisation was set to 5(Y) X 5(X) X 3(Z).<br>• Top cuts were applied to the informing data set assays at a 98 percentile value if the coefficient of variation exceeded 1.5 for each domain.<br>• Composite length was set at 1.5 metre. The estimate also considered the distribution of deleterious elements sulphur, antimony, arsenic, bismuth, cadmium, cobalt, iron etc.) |
| ***Moisture*** | • *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.* | • Tonnages are estimated on a dry basis. Moisture content in ore is insignificant. |
| ***Cut-off parameters*** | • *The basis of the adopted cut-off grade(s) or quality parameters applied.* | • Wireframes used a 0.8% Cu cut-off and 2% Zn cut-off for high-grade domains. Low-grade domains used a 0.2% Cu cut-off. Cut off grades were determined geostatistically.<br>• The Mineral Resource estimate is reported at 0.4% Cu or 2% Zn, this being an economic cut-off for a standalone open pit operation. |
| ***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 assumption made. Previous oxide area mined successfully by open cut methods which may be applicable to the resource reported. |
| ***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.* | • Metallurgical .test demonstrate normal flotation method applicable to recovering principal economic minerals i.e. chalcopyrite and sphalerite. |
| ***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.* | • Estimate include sulphur and rock type lithologies which allow estimation of potential waste and process residue disposal options and environmental impact considerations. |

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| ***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.*<br>• *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.*<br>• *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.* | • Density have been determined from actual measurements conducted on site by the classical water immersion method, using the total core for each sample.<br>• Assigned average specific gravity values were used in the resource estimation: 2.5 g/cm$^3$ for oxide waste, 2.74 g/cm$^3$ for fresh waste, 2.86 g/cm$^3$ for the stringer zone, 2.97 g/cm$^3$ for the copper rich domains and 3.14 g/cm$^3$ for the zinc rich domains. |
| ***Classification*** | • *The basis for the classification of the Mineral Resources into varying confidence categories.*<br>• *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).*<br>• *Whether the result appropriately reflects the Competent Person's view of the deposit.* | • Mineral Resource classification into Inferred, Indicated and Measured categories is based on a combination of average weighted distance from sample points, sample density and geological interpretation confidence. |
| ***Audits or reviews*** | • *The results of any audits or reviews of Mineral Resource estimates.* | • No third party review has been carried out on this estimate. |
| ***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.*<br>• *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.*<br>• *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.* | • The resource estimate is considered robust in light of similar results obtained by different parties and estimation methods.<br>• The resource report is a global assessment of the Mons Cupri deposit.<br>• No production data for the sulphide mineralisation is available. Previous mining of the oxide copper mineralisation was conducted by Straits Resources in 2007-2009. The reconciliation information is not considered applicable to resource estimate given the different nature of the material mined. |

# SALT CREEK RESOURCE STATEMENT NOTES

## Section 1 Sampling Techniques and Data

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

| Criteria | JORC Code Explanation | Commentary |
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| ***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.*<br>• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*<br>• *Aspects of the determination of mineralisation that are Material to the Public Report.*<br>• *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.* | • The deposit is sampled with a combination of Reverse Circulation (RC) and diamond (DD) drill holes completed on 15-40 metre spacing across the deposit to a maximum vertical depth of depth of 475 metres. The RC drill holes were sampled via standard adjustable cyclone and riffle splitter from the recovered sample. Diamond drill core is sampled using standard cut half core.<br>• Standard RC drilling since 2005 produced whole metre RC drill samples split at the rig using a cone splitter producing samples of approximately 3kgs. Previous diamond drilling completed to industry standard using predominantly NQ size core. Diamond core was orientated, aligned and cut on geologically determined intervals (0.1 to 4metres).<br>• Samples were weighed, dried, crushed and pulverised (total prep) to produce a pulp sub-sample for analysis by four acid digest with an ICP/OES, ICP/MS or FA/AAS (Au) finish. |
| ***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.).* | • Diamond drilling (67%)is the main technique using mostly NQ size with some HQ sizes using a variety of rig types Drill core was generally orientated. RC drilling with a 5.5-inch face sampling hammer was used after 2005. |
| ***Drill sample recovery*** | • *Method of recording and assessing core and chip sample recoveries and results assessed.*<br>• *Measures taken to maximise sample recovery and ensure representative nature of the samples.*<br>• *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.* | • Diamond drill core recovery was recorded by all operators as a percentage of measured recovered core versus drilled distance. Recoveries were generally high and bear no relationship with grades.<br>• 2010 RC samples had estimated sample recoveries which were consistently high. Any low recovery intervals were logged and entered into the database. There is no relationship of grade to recovery.<br>• The cyclone and splitter are routinely inspected and cleaned during the drilling ensuring no excessive material build-up. Care is taken to ensure the split samples were of a consistent volume. |
| ***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.*<br>• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.*<br>• *The total length and percentage of the relevant intersections logged.* | • Diamond drill core is all qualitatively logged with wet core photographs taken over the last 8 years. RC drill holes are all were qualitatively logged and RC chip tray samples collected and stored.<br>• Logging is at an appropriate detailed quantitative standard to support future geological, resource, reserve estimations and subsequent feasibility studies.<br>• All holes are logged in full.<br>• Relogging of previous diamond drill holes to gain additional structural data was carried out in 2016 and 2017 |
| ***Sub-sampling*** | • *If core, whether cut or sawn and whether quarter, half or all core taken.* | • Diamond core was sawn with a diamond saw and half core samples (quarter |

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| **techniques and sample preparation** | • *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.*<br>• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*<br>• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*<br>• *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.*<br>• *Whether sample sizes are appropriate to the grain size of the material being sampled.* | core in metallurgical holes) taken for assay.<br>• 1 metre RC samples are collected and split off the drill rig using a cone splitter. Approximately 90% of the samples were dry in nature.<br>• The sample preparation of the samples follows industry best practice in sample preparation involving weighing, oven drying, pulverisation of the entire sample (total prep) to a grind size of 85% passing 75 microns.<br>• Samples with QAQC data were evaluated using QAQCR assay quality reporting software. QAQC data evaluation included field duplicates, lab standards, repeats and lab blank flushes. The QAQC has been independently audited with no apparent issues.<br>• Field duplicates have been taken since 2005 but only105 are in mineralised areas. The results show no issues with sampling quality.<br>• 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. |
| ***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.*<br>• *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.*<br>• *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.* | • Various operators used analytical techniques involving a four acid digest multi-element suite with ICP/MS finish (30g FA/AAS for precious metals). The acids used are hydrofluoric, nitric, perchloric and hydrochloric acids, suitable for the dissolution of most silica based samples. The method approaches total dissolution of most minerals. Combustion furnace assayed total sulphur.<br>• No geophysical tools are used to determine any element concentrations reported.<br>• Duplicates were taken every 25m and post 2010, every RC metre drilled is checked by two 30sec measurements using a Niton handheld XRF.<br>• An independent analysis of intra laboratory bias and precision was undertaken. No discernible bias was noted for samples used. |
| ***Verification of sampling and assaying*** | • *The verification of significant intersections by either independent or alternative company personnel.*<br>• *The use of twinned holes.*<br>• *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*<br>• *Discuss any adjustment to assay data.* | • Prior to 2010, verification procedures were not documented.<br>• Post 2010, significant intersections were viewed by the Exploration Manager and Managing Director. Significant intersections are also verified by portable XRF data collected in the field and cross-checked against the final assays when received.<br>• A range of primary data collection methods were employed since 1968. Since 2010, 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.<br>• Full data base verification of all historical information was completed in 2009. DataShed™ was used for drill hole and sample data storage and validation.<br>• The historical data (pre-2010) has been adjusted with all negative assays, representing below detection assays, were converted to positive assays of half the negative 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.*<br>• *Specification of the grid system used.* | • All hole collar coordinates have been checked by Venturex using DGPS with all co-ordinates and RL data considered reliable.<br>• Downhole surveys were performed on all holes by either, acid etch, tropari single shot Eastman camera or reflex gyro readings at 30 metres down hole |

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| | • *Quality and adequacy of topographic control.* | intervals.<br>• The grid system used for the location of all drill holes is MGA_GDA94, Zone 50.<br>• The resource estimate is based on a local grid system which used transformed coordinates for data.<br>• 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.*<br>• *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.*<br>• *Whether sample compositing has been applied.* | • The nominal drill spacing is generally 30m x 40m.<br>• The current spacing is adequate to assume geological and grade continuity of the mineralised domain.<br>• No compositing has been applied to the exploration results. |
| ***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.*<br>• *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 Salt Creek drilling is orientated predominantly to the northwest, near perpendicular to the mineralised trend. Given the stratigraphic nature of the mineralising system, no orientation based sampling bias has been identified in the data. |
| ***Sample security*** | • *The measures taken to ensure sample security.* | • Independent audits of the data in 2010 concluded that the sampling protocols were adequate.<br>• Post 2009, the chain of custody was managed by Venturex. The samples are stored in a secure facility at Whim Creek, collected from site by Toll IPEC and delivered to the assay laboratory in Perth. Online tracking is utilised 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 in 2008 (Straits) 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 |
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| ***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.*<br>• *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.* | • The Salt Creek deposit is located wholly within Mining Lease M47/323. Venturex Resources Limited has a 100% interest in the tenement.<br>• The tenements are part of the granted Ngarluma Native Title Claim.<br>• The tenement is subject to a third party royalty.<br>• The tenement is a granted Mining Lease in good standing. |
| ***Exploration done by other parties*** | • *Acknowledgment and appraisal of exploration by other parties.* | • Previous exploration has been conducted at Whim Creek by Texas Gulf Australia, Dominion Mining and Straits Resources Limited since 1968. Venturex purchase the project in 2010. |
| ***Geology*** | • *Deposit type, geological setting and style of mineralisation.* | • The Salt Creek copper-zinc-lead-silver(-gold) deposit consists of two mineralised zones hosted towards the top of a sequence of volcanoclastic siltstones overlain by basaltic andesite flows and mudstones and tuffs. The deposit is closely associated with a thick underlying rhyolitic pile containing a well-developed coarse lapilli unit towards the top within the north – north-easterly trending Whim Creek greenstone belt in the western Pilbara Craton. The deposit is an example of an Archaean volcanogenic massive sulphide (VMS) style deposit thus has undergone post mineralisation deformation and mineralisation remobilisation. |
| ***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:*<br>• *easting and northing of the drill hole collar*<br>• *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*<br>• *dip and azimuth of the hole*<br>• *down hole length and interception depth*<br>• *hole length.*<br>• *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.* | • Detailed drill hole data has been previously periodically publicly released with all relevant data appended to the release. |
| ***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.*<br>• *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* | • All reported assays have been length weighted.<br>• No top cut has been applied.<br>• For reporting exploration results, a nominal 0.25% copper and 2.0% zinc lower cut-off has been applied.<br>• High-grade massive sulphide intervals internal to broader zones of sulphide mineralisation are reported as included intervals. |

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| | shown in detail.<br>• *The assumptions used for any reporting of metal equivalent values should be clearly stated.* | |
| ***Relationship between mineralisation widths and intercept lengths*** | • *These relationships are particularly important in the reporting of Exploration Results.*<br>• *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.*<br>• *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. |
| ***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 previous ASX Annual Reports (2010, 2011) and previous ASX releases. |
| ***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 results are reported. |
| ***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.* | • NA - Exploration results not being released this time. |
| ***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).*<br>• *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.* | • NA - Exploration results not being released this time. |

## Section 3 Estimation and Reporting of Mineral Resources

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

| Criteria | JORC Code Explanation | Commentary |
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| ***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.*<br>• *Data validation procedures used.* | • Independent audits of the sampling techniques and data integrity were completed as part of previous and current feasibility studies in 2008 (Straits) 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. |
| ***Site visits*** | • *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.*<br>• *If no site visits have been undertaken indicate why this is the case.* | • No site visit under taken as the site is substantially rehabilitated and outcrop is minimal. Previous competent person has visited site. |
| ***Geological interpretation*** | • *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.*<br>• *Nature of the data used and of any assumptions made.*<br>• *The effect, if any, of alternative interpretations on Mineral Resource estimation.*<br>• *The use of geology in guiding and controlling Mineral Resource estimation.*<br>• *The factors affecting continuity both of grade and geology.* | • The interpretation of the deposit takes account of all surface and subsurface geological, geochemical, and structural information contained in the database to ensure the continuity and integrity of the interpretation.<br>• No detailed alternative interpretation(s) have been presented.<br>• The stratiform nature and structural aspects of the mineralisation provides a good level of geological control in the interpretation.<br>• Stringer mineralisation is broadly constrained by geology and assay boundaries. |
| ***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.* | • The Mineral Resource covers two separate mineralised zones identified by drilling over a distance of 700m east west, 150m north south and about 450m vertically. The zinc lead silver mineralisation is remobilised into a structural setting parallel to the local stretching lineation at approximately local grid direction plunge of -47 towards 101 degrees and forms zone from less than 1m to 10m true thickness. The copper mineralisation is more strata bound and has both massive and stringer type zones associated with extensive pyrite. |
| ***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.*<br>• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.*<br>• *The assumptions made regarding recovery of by-products.*<br>• *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).*<br>• *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.*<br>• *Any assumptions behind modelling of selective mining units.*<br>• *Any assumptions about correlation between variables.* | • The Salt Creek Mineral Resource Estimate considers previous estimates completed by Straits Resources (2006, 2008) and Venturex (2010).<br>• The estimation employed inverse distance techniques using SURPAC 6.8 software.<br>• Polygonal interpretation of stratiform copper and zinc-lead domains was done on 12.5 metre sections which were then balanced in plan view at 25m level intervals. The copper wireframe used a ~0.25% cut-off, the zinc-lead wireframe uses a ~1% Zn cut-off.<br>• Gaps between higher-grade domains were modelled as low grade or sulphide domains to be later incorporated as planned dilution during the mining process. Hard boundaries are used for the domains.<br>• Search ellipse parameters determined using down hole variography. Parent cell measures 12.5 metres (X axis), 5 metres (Y) and 10 metres (Z) with sub-cells of 3.125 metres (X), 1.25 metres (Y), 2.5 metres (Z), appropriate given an average drill spacing of 30 metres. Minimum samples per estimate is 5, maximum |

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| | • *Description of how the geological interpretation was used to control the resource estimates.*<br>• *Discussion of basis for using or not using grade cutting or capping.*<br>• *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.* | samples per estimate is 10. Discretisation was set to 3(Y) X 3(X) X 3(Z).<br>• No grades were cut.<br>• Composite length was set at 1 metre (79% of samples were this length). Both the copper and zinc domains were validated visually in 12.5 metre slices.<br>• The estimate also considered the distribution of deleterious elements such as sulphur, antimony, arsenic, bismuth, cadmium, iron |
| ***Moisture*** | • *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.* | • Tonnages are estimated on a dry basis. Moisture content of the rocks is insignificant. |
| ***Cut-off parameters*** | • *The basis of the adopted cut-off grade(s) or quality parameters applied.* | • Cut off grades were determined statistically.<br>• |
| ***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.* | • The mineralisation depth and shape probably prevent open pit mining and would require underground mining. |
| ***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.* | • Flotation method of recovery producing separate copper, zinc and lead concentrates has been demonstrated in preliminary sighter metallurgical test work. It is assumed the resource reported will be amenable to this processing route. |
| ***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.* | • Surface disturbance is expected to be minimal given the flat grass dominated terrain.<br>• All boxcut and underground waste rock can be returned underground as stope fill.<br>• Processing of the ore is expected to occur offsite with tailings to be stored in a conventional surface tailings facility adjacent to the nominated treatment plant.<br>• Water management will be via dedicated evaporation ponds. |
| ***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.*<br>• *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.*<br>• *Discuss assumptions for bulk density estimates used in the evaluation process of* | • A high proportion of the assayed samples have bulk density measurements determined by the water immersion technique on drill core.<br>• Assigned average specific gravity (SG) values were used in the resource estimation: 2.51 g/cm$^3$ for oxide, 2.75 g/cm$^3$ for fresh waste, 3.07 g/cm$^3$ or 4.13 g/cm$^3$for copper lenses, 2.83 or 3.75 g/cm$^3$ for the high grade zinc/lead lenses.<br>• . |

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| | *the different materials.* | |
| ***Classification*** | • *The basis for the classification of the Mineral Resources into varying confidence categories.*<br>• *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).*<br>• *Whether the result appropriately reflects the Competent Person's view of the deposit.* | • Mineral Resource classification into Inferred and Indicated categories is based on a combination of average weighted distance from sample points, sample density and geological interpretation confidence. |
| ***Audits or reviews*** | • *The results of any audits or reviews of Mineral Resource estimates.* | • No review of the resource estimate has been carried out. |
| ***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.*<br>• *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.*<br>• *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.* | • The resource estimate is considered +/- 20% given the structural complexity and given similar results obtained by other parties and estimation methods.<br>• The resource report is a global assessment of the Salt Creek deposit.<br>• No production data is available. |