



## SEMI-MASSIVE SULPHIDES INTERSECTED IN FIRST HOLE JOUMBIRA ZINC PROJECT, NAMIBIA

### Highlights

- Semi-massive sulphide mineralisation intersected from 65m in first hole (JBDD001).
- Visual observations indicate sphalerite (zinc) and galena (lead) as the sulphide minerals present.
- Consistent with historic drilling observations which described shallow, zinc-lead bearing sphalerite and galena.
- Assay's for JBDD001 are expected to be available in approximately four weeks.
- Occurrence of semi-massive sulphides confirms the potential for a high grade mineralised system.
- No exploration has been completed in the previous 16 years with the region remaining largely unexplored.

Tanga Resources Ltd (“Tanga” or the “Company”) (ASX: TRL) is pleased to announce encouraging developments from diamond drilling at the Joubira Zinc Project (“Joubira” or “the Project”) in Namibia, with semi-massive sulphides being intersected in the first diamond drill hole (JBDD001) of the initial drilling programme **targeting shallow, high grade zinc-lead mineralisation**.

Drill hole JBDD001 was positioned as a twin hole to the historical hole J017, drilled by Messina Transvaal Development Co. Ltd (refer to ASX announcement released on 5 December 2017). Host stratigraphy (limestone and calc-silicate) was intersected between 56.5 metres and 81.5 metres, **with substantial semi-massive sulphides intersected** between 67.1 metres to 71.0 metres and 76.1 metres to 77.82 metres, with **visually identified sphalerite (zinc) and galena (lead)**.



**Figure 1.** JBDD001 Semi-massive sulphide intersection containing approx. 25% total sulphides (sphalerite + galena), based on visual estimation of sulphide in ore.

These latest **visual observations of drill core in which sphalerite and galena are the dominant sulphide minerals** (refer to Figure 2) support the reported historical observations at Joubira. No exploration has been completed on either the immediate target area or surrounding area for over 16 years, and no modern exploration or assay methods have been applied.



**Figure 2.** JBDD001 (NQ) - Semi-massive galena (grey) and sphalerite (purple) hosted in fine grained matrix.

The geology and style mineralisation at Joubira appears to be semi-massive sulphide hosted by brecciated wall rocks and intruded by a late granite of unknown age. Wall rocks are likely to be Damaran calc silicate rocks, marble, and chlorite-biotite schists under a relatively thin cover of transported sands, gravels and calcrete.

Interval (m)	Mineralisation Description	Host rock
56.5-65.35 (8.85m)	Traces of fine grained sulphide throughout, <1% total sulphide (Sphalerite + Galena)	Brecciated limestone with fine grained sulphidic infill
65.35-67.1 (1.75m)	Traces of sphalerite + galena (<5%)	Brecciated limestone with fine grained sulphidic infill
67.1-71.0 (3.9m)	Semi-massive sulphide comprising 25% total sulphide (sphalerite and galena, with sphalerite the dominant sulphide)	Calc-silicate - chlorite, biotite, epidote alteration, carbonate veining
76.1-77.82 (1.72m)	Semi-massive sulphide 10% total sulphide (pyrite + sphalerite + galena)	Calc-silicate - chlorite, biotite, epidote alteration, carbonate veining
78.61-81.53 (2.92m)	Occasional pyrite blebs + traces of sphalerite + galena, 5%	Calc-silicate ,chlorite/biotite alteration, carbonate veining

**Table 1.** Summary of mineralised intervals in JBDD001

Note: Percentages are based on visual estimation of sulphide in ore.

A second drill hole, JBDD002 (refer to Figure 3), is currently in progress, and aims to intersect the same sphalerite-galena mineralised horizon, down dip to the west.

This preliminary drill program of approximately 600m aims to assess the potential of previously described high grade zinc-lead mineralisation hosted in calc-silicate rocks.

Core from the drilling programme will be cut prior to being transported to the Intertek Sample Preparation Facility at Tschudi for sample preparation, and then sent to Australia for assay. **Results for JBDD001 are expected in approximately four weeks.**

Due diligence on Joubira continues and the Company looks forward to providing further updates in the coming weeks.

For additional information on the acquisition, please refer to the ASX announcement on 5 December 2017 and 21 February 2018.

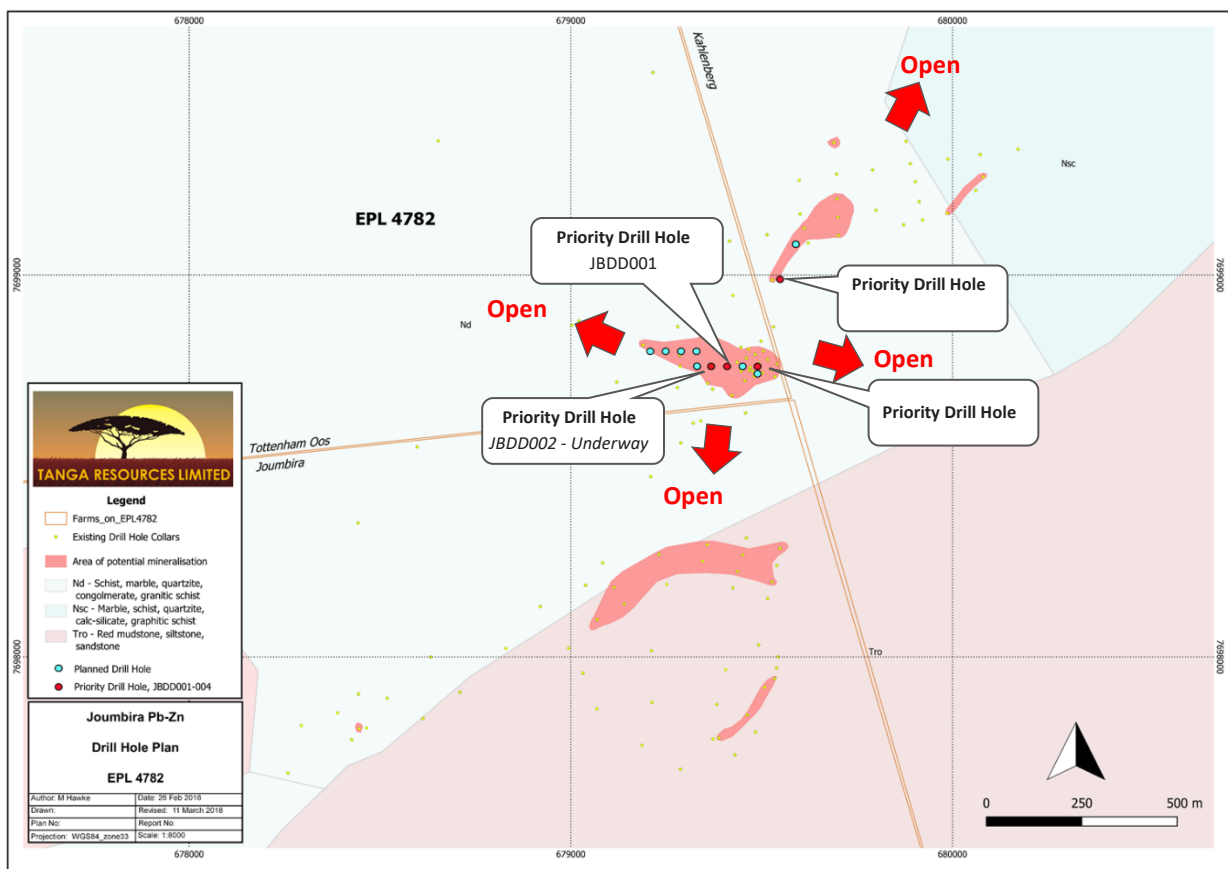


Figure 3. Initial priority (red) and planned (blue) diamond holes at Joubira.

Drill hole	Easting (mE)	Northing (mN)	Elev	Azi (mag)	Dip	Total Depth	Start Date	End Date	COMMENTS
JBDD001	679409	7698759	1575	90	-70	89.46	3-Mar-18	9-Mar-18	Completed
JBDD002	679367	7698761	1575	90	-70	62.09	9-Mar-18		In progress

Table 2: Drill Hole Table





## About the Joubira Zinc Project

Joubira is an advanced, high grade zinc-lead project, located in the highly prospective and well endowed Damaran Belt, Namibia.

Joubira is located in central Namibia, approximately 190km by sealed road from the capital, Windhoek and 400km from the port of Walvis Bay. The Project has excellent infrastructure with the major service town Otjiwarongo located 50km to the north with existing grid power and the national railway line is in close proximity.

The Project has had no modern day exploration, with the majority of historical exploration undertaken during the late 1970's and some limited follow up work in 2002.

Tanga has an option to acquire Coldstone Investments (Pty) Ltd, which has a joint venture agreement with Namibian government owned, Epangelo Mining Company (Pty) Ltd to earn in up to 80% (with the ability to increase to 90%) of Joubira.

For additional information on Tanga and the Company's project please visit: [www.tangaresources.com.au](http://www.tangaresources.com.au)

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## Competent Person Statement

The information in this report that relates to the exploration results, geology and geophysical interpretation was based on material compiled by John Stockley. Mr Stockley is a Member of the Australian Institute of Geoscientists and is a Director of Tanga Resources Limited. Mr Stockley has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which was being undertaken to qualify as Competent Person as defined in the 2012 Edition of the JORC "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (the JORC Code). Mr Stockley consents to the inclusion in this report of the matters based on his information in the form and content in which it appears.

## APPENDIX 1

### Section 1: Sampling Techniques and Data

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

Part	Criteria	Explanation	Comment
1-1	<b>Sampling Techniques</b>	<i>Nature and quality of sampling (eg cut channels, random chips, or 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.</i>	<ul style="list-style-type: none"> <li>No samples yet collected.</li> </ul>
		<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	<ul style="list-style-type: none"> <li>Standard diamond drilling methods are used.</li> </ul>
		<i>Aspects of the determination of mineralisation that are Material to the Public Report.</i>	<ul style="list-style-type: none"> <li>Geological observations by the Tanga geologists indicate sphalerite and galena as the Zn and Pb bearing sulphides. Mineralisation is hosted within calc-silicate rocks.</li> <li>Percentage sulphide in core is visually estimated by the Tanga geologists on site.</li> </ul>
	<b>Drilling Techniques</b>	<i>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is orientated and if so, by what method, etc).</i>	<ul style="list-style-type: none"> <li>Diamond drilling using Bohrmeister DC drill machine NR18 model</li> <li>HQ and NQ triple tube diamond drill holes</li> <li>Diamond drill core orientated using Reflex ACT III Orientation Tool where possible.</li> </ul>
1-2	<b>Drill Sample Recovery</b>	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	<ul style="list-style-type: none"> <li>RQD completed and all measurements of core length, core loss and gain recorded</li> <li>Core trays photographed wet and dry.</li> </ul>
		<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	<ul style="list-style-type: none"> <li>All care taken to obtain 100% core recovery although ground conditions are frequently broken.</li> </ul>
		<i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to</i>	<ul style="list-style-type: none"> <li>Not known at this stage: more drilling is required to establish if there is any sample bias.</li> </ul>

Part	Criteria	Explanation	Comment
		<i>preferential loss/gain of fine/coarse material.</i>	
1-3	Logging	<i>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.</i>	<ul style="list-style-type: none"> <li>All core is geologically logged. The percentage of visible sulphides (sphalerite and galena) is estimated for NQ diamond core.</li> <li>The level of detail currently available would be insufficient to support mineral resource information</li> </ul>
		<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	<ul style="list-style-type: none"> <li>Logging is qualitative. Geology, oxidation, alteration, mineralization and structural measurements are recorded.</li> <li>All HQ/NQ3 drill core is photographed wet and dry, core recovery calculated; core marked up along the orientation line, and logged by experienced (+10 years) Namibian geologists.</li> </ul>
		<i>The total length and percentage of the relevant intersections logged.</i>	<ul style="list-style-type: none"> <li>100% of drill core is logged.</li> </ul>
1-4	Sub-Sampling Techniques and Sample Preparation	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	<ul style="list-style-type: none"> <li>No samples yet collected</li> </ul>
		<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	<ul style="list-style-type: none"> <li>Only core samples collected.</li> </ul>
		<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	<ul style="list-style-type: none"> <li>No samples yet collected</li> </ul>
		<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	<ul style="list-style-type: none"> <li>No samples yet collected</li> </ul>
		<i>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.</i>	<ul style="list-style-type: none"> <li>No samples yet collected</li> </ul>
		<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	No samples yet collected
1-5		<i>The nature, quality and appropriateness of the assaying and laboratory</i>	<ul style="list-style-type: none"> <li>No samples yet submitted for analysis.</li> </ul>

Part	Criteria	Explanation	Comment
	<b>Quality of Assay Data and Laboratory Tests</b>	<i>procedures used and whether the technique is considered partial or total.</i>	
		<i>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.</i>	<ul style="list-style-type: none"> <li>No geophysical methods used for drilling or sampling yet available.</li> </ul>
		<i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i>	<ul style="list-style-type: none"> <li>Not yet available. No samples yet submitted for analysis.</li> </ul>
<b>1-6</b>	<b>Verification of Sampling and Assaying</b>	<i>The verification of significant intersections by independent or alternative company personnel.</i>	<ul style="list-style-type: none"> <li>Verification of significant intersections are observed by multiple company geologists.</li> </ul>
		<i>The use of twinned holes.</i>	<ul style="list-style-type: none"> <li>No twinned holes for the current drilling program, although drilling aims to duplicate historical results.</li> </ul>
		<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	<ul style="list-style-type: none"> <li>Geological logging is entered into excel spreadsheets or Logchief, before being validated and stored in a database – Maxwell's Datashed</li> </ul>
		<i>Discuss any adjustment to assay data.</i>	<ul style="list-style-type: none"> <li>Not applicable. No samples yet submitted for analysis and no assays returned.</li> </ul>
<b>1-7</b>	<b>Location of Data Points</b>	<i>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.</i>	<ul style="list-style-type: none"> <li>Drill hole locations collected by hand held Garmin GPS (<math>\pm 3m</math> horizontal, up to 12m vertical error).</li> </ul>
		<i>Specification of the grid system used.</i>	<ul style="list-style-type: none"> <li>Grid: WGS84, Zone 33S</li> </ul>
		<i>Quality and adequacy of topographic control.</i>	<ul style="list-style-type: none"> <li>Hand held Garmin GPS (<math>\pm 3m</math> horizontal, up to 12m vertical error). Topographic controls are not adequate at this time.</li> </ul>
<b>1-8</b>	<b>Data Spacing and Distribution</b>	<i>Data spacing for reporting of Exploration Results.</i>	<ul style="list-style-type: none"> <li>Only one drill hole completed. Not applicable at this time.</li> </ul>

Part	Criteria	Explanation	Comment
		<i>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.</i>	<ul style="list-style-type: none"> <li>• Drill hole spacing is inadequate to fully evaluate the extents of the mineralization present.</li> <li>• The first four drill holes aim to assess the nature of the mineralization along a E-W section.</li> <li>• Based on present day drilling, this will be inadequate to accurately determine the complete nature of geological and grade continuity.</li> <li>• Closer spaced drillholes are located where mineralisation is closer to surface. There is little drilling between known ore lenses so continuity between lenses is unknown.</li> </ul>
		<i>Whether sample compositing has been applied.</i>	<ul style="list-style-type: none"> <li>• No samples yet collected. No sample compositing proposed.</li> </ul>
1-9	<b>Orientation of Data in Relation to Geological Structure</b>	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i>	<ul style="list-style-type: none"> <li>• Historical information indicates the mineralization to be a curved body that attains maximum thickness near (but not at) surface. The mineralization then appears to dip away to the east and west.</li> <li>• Drilling is angled -70 towards 090 or 270 dependent on the underlying stratigraphic and mineralization trends.</li> </ul>
		<i>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.</i>	<ul style="list-style-type: none"> <li>• Geological interpretations suggest that drilling is oriented to intercept mineralisation and/or stratigraphy at a steep angle. This is not considered to introduce a sampling bias.</li> </ul>
1-10	<b>Sample Security</b>	<i>The measures taken to ensure sample security.</i>	<ul style="list-style-type: none"> <li>• Core is transported from site to the core shed by company personnel. All samples are kept on security accessed Kahlenberg station. Samples are transported to Interteck, Tschudi by company personnel.</li> </ul>
1-11	<b>Audits or Reviews</b>	<i>The results of any audits or reviews of sampling techniques and data.</i>	<ul style="list-style-type: none"> <li>• No audits have been carried out at this stage.</li> </ul>



## Section 2: Reporting of Exploration Results

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

Part	Criteria	Explanation	Comment
2-1	<b>Mineral Tenement and Land Tenure Status</b>	<p><i>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.</i></p>	<ul style="list-style-type: none"> <li>• Exclusive Prospecting License (EPL) 4782 is located in the Otjiwarongo District, in the north-central part of Namibia, and is registered to Epangelo Mining Company (Pty) Ltd a company wholly owned by the Government of the Republic of Namibia. Tanga Resources is in an option agreement with Coldstone to acquire equity in the Joubira Property.</li> <li>• The license area covers three farm properties – Joubira, Kahlenberg and Tottenham Oos. The area of currently planned drilling is on Tottenham Oos and Kahlenberg.</li> <li>• No other known overriding royalties, historical sites, wilderness or national park exist.</li> </ul>
		<p><i>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.</i></p>	<ul style="list-style-type: none"> <li>• No known impediments.</li> </ul>
2-2	<b>Exploration Done by Other Parties</b>	<p><i>Acknowledgment and appraisal of exploration by other parties.</i></p>	<ul style="list-style-type: none"> <li>• A total of 128 diamond and percussion drillholes were completed in the project area between 1972 and 2000 by Messina Transvaal Development Co. Ltd., and Iscor Limited. This work is non-JORC compliant with no known QAQC, and no core present.</li> </ul>
2-3	<b>Geology</b>	<p><i>Deposit type, geological setting and style of mineralisation.</i></p>	<ul style="list-style-type: none"> <li>• The EPL is underlain by rocks of the Damaran Orogenic Belt to the north and northwest, which are juxtaposed onto younger Waterberg Sandstones of Karoo age which cover the south-eastern corner. Mineralisation is hosted in calc-silicate rocks within a thick succession of quartz-biotite-schist with cross cutting Karoo aged granitic dykes and sills.</li> </ul>
2-4	<b>Drill Hole Information</b>	<p><i>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:</i></p> <ul style="list-style-type: none"> <li>• <i>Easting and northing of the drill hole collar;</i></li> <li>• <i>Elevation or RL (Reduced Level – elevation above sea level in metres) of the drill collar;</i></li> <li>• <i>Dip and azimuth of the hole;</i></li> </ul>	<ul style="list-style-type: none"> <li>• See Table 1 and 2 in the ASX announcement</li> </ul>

Part	Criteria	Explanation	Comment
		<ul style="list-style-type: none"> <li>Down hole length and interception depth;</li> <li>Hole length</li> </ul> <p>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract for the understanding of the report, the Competent Person should clearly explain why this is the case.</p>	
2-5	<b>Data Aggregation Methods</b>	<p>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</p>	<ul style="list-style-type: none"> <li>No data aggregation methods have been used.</li> </ul>
		<p>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.</p>	<ul style="list-style-type: none"> <li>Not applicable. Geochemical sampling in progress.</li> </ul>
		<p>The assumptions used for any reporting of metal equivalent values should be clearly stated.</p>	<ul style="list-style-type: none"> <li>No metal equivalent values used in this study.</li> </ul>
2-6	<b>Relationship Between Mineralisation Widths and Intercept Lengths</b>	<p>These relationships are particularly important in the reporting of Exploration Results.</p>	<ul style="list-style-type: none"> <li>Drill holes are angled -70 degrees east due to historical results indicating this is the most perpendicular to stratigraphic and mineralization trends in the prospect area.</li> </ul>
		<p>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</p>	<ul style="list-style-type: none"> <li>Drilling is angled -70 towards 090 or 270 dependent on the underlying stratigraphic and mineralization trends. Historical information indicates mineralization as a curved body that attains maximum thickness near (but not at) surface. The mineralization then appears to dip away to the east and west.</li> </ul>
		<p>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</p>	<ul style="list-style-type: none"> <li>Insufficient information. Intervals reported indicate downhole depths, true width not known.</li> </ul>
2-7	<b>Diagrams</b>	<p>Appropriate maps and sections (with scales) and tabulations of intercepts</p>	<ul style="list-style-type: none"> <li>Refer ASX announcement of 5 Dec 2017 for cross section details.</li> </ul>

Part	Criteria	Explanation	Comment
		<i>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.</i>	
2-8	<b>Balanced Reporting</b>	<i>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.</i>	<ul style="list-style-type: none"> <li>Balanced reporting has been applied</li> </ul>
2-9	<b>Other Substantive Exploration Data</b>	<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>	<ul style="list-style-type: none"> <li>Geological observations by the Tanga geologists indicate sphalerite and galena as the Zn and Pb bearing sulphides. Mineralisation is hosted within calc-silicate rocks.</li> <li>Percentage sulphide in core is visually estimated by the Tanga geologists on site.</li> <li>Ground is broken, with some significant faulting present.</li> <li>Bulk density, magsus, and geotechnical details are not yet available.</li> </ul>
2-10	<b>Further Work</b>	<i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i>	<ul style="list-style-type: none"> <li>Additional diamond drilling is ongoing and planned to infill the lateral and depth extensions to mineralisation, as well as to target untested geophysical chargeability anomalies.</li> <li>Geological, including structural mapping at surface and downhole logging.</li> <li>Metallurgical test work as a follow up to preliminary work completed by Kumba Resources.</li> <li>Petrophysics studies on the rocks to constrain the geophysical data.</li> <li>Preliminary resource estimates following planned drilling and assay data collection.</li> </ul>
		<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>	<ul style="list-style-type: none"> <li>See maps and sections provided in ASX</li> </ul>