

# Positive Drill results from Mahenge, Tanzania

5 May 2015

## **Highlights**

Assays confirm encouraging results from initial drill programme

Best results from Epanko North:

> RC01: 48m @ 8.4% TGC from 3-51m

> RC08: 131m @ 6.64% TGC from 3-51m (including 90m @ 7.11% TGC)

> DD03: 58m @ 7.13% TGC from 4-62m

Field programme and drilling to resume in June

Black Rock Energy Limited (ASX:BKT) is pleased to present drill assay results from its initial 2,200m drilling programme at Epanko North and Kituti prospects, Tanzania.

A total of seventeen holes were drilled at Epanko North and two holes at Kituti. Results are presented in more detail in Table 1.

This initial programme confirms that graphite mineralisation at Epanko North is an extension of Kibaran Resources Limited's (ASX:KNL) Epanko graphite ore body. Infill drilling is planned in June in order to define a JORC compliant resource and to drill the higher grade potentially higher grade eastern lode.

Fieldwork will resume in June, consisting of:

- An infill drilling programme at Epanko North, including first drilling of the higher grade eastern lode;
- · Additional mapping and drilling at Kituti prospect;
- Mapping, trenching and drilling at Cascade prospect; and
- · Sampling at Mahenge North for metallurgical testwork

### **ASX Information**

#### **ASX Code: BKT**

- Ordinary Shares 196.95m
- Options 38.87m
   (exercise prices: \$0.05 to \$0.40)
- Market Capitalisation \$10m
- Treasury \$3.0m (31 March 2015)
- Share price \$0.051
   (12 month closing range: \$0.02 to \$0.14)

#### **Board of Directors**

Non-Executive Chairman Stephen Copulos

Managing Director
Steven Tambanis

Non-Executive Directors
Gabriel Chiappini



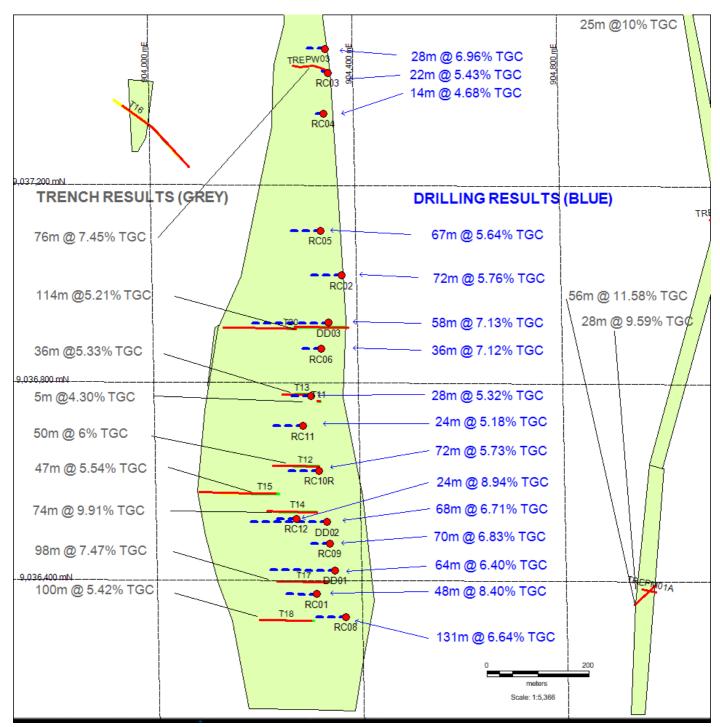


Figure 1. Summary of Drilling results from March quarter drilling (Blue font) and 2014 trenching results (Grey font). Pale green areas are the interpreted surface expression of graphite mineralised host rocks.



## Mahenge Drill Programme results

Drilling took place between 10 January and 10 March this year. A total of nineteen holes were drilled; thirteen RC holes and four diamond holes at Epanko North, and two diamond holes at Kituti. Figure 1 illustrates the trench and drill results from Epanko North within the interpreted graphite mineralised footprint (pale green). Modeling of the combined trench and drill results is underway and is expected to assist in defining higher grade zones of graphite mineralisation within the footprint area for drill verification.

Whilst abundant coarse graphite flake size (0.3mm to 2mm) was observed in all holes, representative samples will be sent for sizing analysis and metallurgical testwork to provide definitive results. One in ten drill samples submitted for graphite analysis were also analysed for forty additional elements to test for deleterious elements. Results from this analysis were positive, confirming low uranium and thorium.



Photo 1. Coarse flake graphite seen in core sample from hole DD01 drilled in January this year. Core diameter is 64mm

The two drill holes completed at the Kituti prospect indicate that graphite mineralisation is near vertical in two parallel lodes with potential for significant tonnage along the 18km strike of the structure. The upcoming field programme will focus on mapping the structure to define wider zones for drill targets.





Photo 2. Drilling the first RC hole at Epanko North, January 2015

## June drilling and exploration programme

The upcoming field programme will focus on infill drilling at Epanko North determine its bulk tonnage graphite potential.

The Eastern lode (600m east of, and parallel to Epanko North) is a narrower but higher grade graphite structure with >10% TGC trench grades. This lode will be drilled during the upcoming programme, with the objective of defining a higher grade source of graphite mineralisation in a separate pit. Like Epanko North, the eastern lode is located on top of a ridge, offering potentially low ore to waste ratios should drilling define a resource.

The 18km long Kituti structure will be traversed, mapped and trenched in more detail to determine the best drill targets for testing later in 2015. To date, this structure has not been comprehensively mapped.

The Cascade zone (3 km to the north of Epanko North) has returned a highly encouraging set of results from trenching completed in 2014. Within the **186m @ 5.95% TGC** total trench interval at trench C1, two higher grade zones were encountered: <u>24m @ 7.89% TGC from 51m</u> and <u>86m @ 8.34% TGC from 115m</u>. The Cascade prospect area is interpreted to have widths of 200–400m and will be mapped in detail, trenched, and if justified then drilled.

### Summary

"In a short six months we have reconstructed the company, raised over \$3.5m in working capital, purchased/optioned over 1,500 square km of highly prospective graphite tenure in Tanzania, assembled an excellent exploration team and completed our first round of drilling – which has consolidated the company's strategy to become a graphite explorer. I look forward to the next round of drilling that will enhance our understanding of Epanko North's graphite lodes and in particular further exploring Cascade and Kituti prospects" said Steven Tambanis, Managing Director.



The March quarter drill programme has confirmed that both Epanko North and Kituti have potential to host graphite resources, justifying an intensive follow up exploration and drilling programme. Following the successful capital raising in March, the Company is well funded to conduct this work. The June field programme will consist of:

- o An infill drilling programme at Mahenge North,
- Drilling of the eastern lode, interpreted to host narrower but higher grade mineralisation;
- o Additional mapping and drilling at Kituti prospect;
- o Mapping, trenching and if justified, drilling at Cascade prospect; and
- o Drill core and surface pit sampling at Mahenge North for metallurgical testwork

## For further information please contact:

### Mr. Steven Tambanis

## **Managing Director**

Office: +61 8 9320 7550

Email: st@blackrockmining.com.au

### **About Black Rock Mining**

Black Rock Minerals Limited is an Australian based company listed on the Australian Securities Exchange. The Company has graphite tenements in the Mahenge region, Tanzania and is supported by a strong team of local and international specialists.

The company is building a skill and knowledge base to become an explorer, developer and diversified holder of graphite resources.

Shareholder value will be added by:

- identifying and securing graphite projects with economic potential
- focussing on ground that can be commercialised quickly by converting into JORC compliant resources; and
- taking these resources into production

Our focus is on establishing a JORC resource at Epanko North, Mahenge, whilst further exploring and drilling the Kituti, Cascade and Ndololo prospects.



#### **Competent Person Statement**

The information in this report that relates to Exploration Results is based on information compiled by Steven Tambanis, who is a member of the AusIMM. He is a full time employee of Black Rock Mining Limited. Steven Tambanis has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 and 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Steven Tambanis consents to the inclusion in the report of the matters based on their information in the form and context in which it appears, including exploration target assessment. Trenching results have previously been reported in detail.

Appendix 1 - Table 1. Drilling result summary from March quarter 2015 programme.

Hole_ID	Easting_WGS84	Northing_WGS84	EOH_Depth	Intersection	Graphite TGC%	From-to	including
Reverse	Circulatio	n Holes Ep	oanko No	rth			
RC01	243959	9037548	115	48m @	8.40%	from 3-51m	
RCO2	244 <b>00</b> 8	9038193	124	72m @	5.76%	from 34-106m	38m @6.52% TGC from 52-90m
RC03	243982	9038602	45	22m @	5.43%	from 2-24m	
RC04	243973	9038520	31	14m @	4.68%	from 5-19m	
RC05	243968	9038283	113	67m @	5.64%	from 0-67m	28m @6.97% TGC from 4-32m
RCO6	243968	9038044	90.2	34m @	7.20%	from 4-38m	
RC07	243948	9037948	88	28m @	5.32%	from 15-43m	
RC08	244016	9037503	133	131m @	6.64%	from 2-133m	90m @7.11% TGC from 4-94m
RC09	243985	9037651	85	70m @	6.83%	from 6-76m	50m @7.34% TGC from 6-56m
RC10	243965	9037795	22	16m @	7.53%	from 0-16m	
RC10R	243964	9037797	133	72m	5.73%	from 0-72m	
RC11	243933	9037887	133	24	5.18%	from 0-24m	
RC12	243919	9037699	82	24m	8.94%	3-27m	
		_	1,194	•			
Diamone	d Holes Ep	anko Nori	th				
DD01	243995	9037597	239.1	64m @	6.40%	from 8-72m	
DD02	243980	9037694	232.6	68m @	6.71%	from 0-68m	
DD03	243983	9038097	237.0	58m @	7.13%	from 4-62m	
DD04B	243977	9038651	64.9	28m @	6.96%	from 6-34m	
		_	774	•			
Diamone	d Holes Ki	tuti					
DD05	247161	9018989	90.7	26m@	6.64%	from 56-82m	and 34m @ 5.17% from 2-36m
DD06	247463	9018330	152.0	22m@	8.31%	from 91-113m	

## JORC Code, 2012 Edition - Table 1 report template

## Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (eg 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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>Rock chip samples taken from outcrop of from surface float thought to be derived from shallow buried cover within 15m radius</li> <li>Trench samples were taken in 1m intervals along the floor of the trench</li> <li>Trenches range in depth from 1.0m to 2.5 with an average depth of 1.8m. Trenches have an average width of 1m</li> <li>Surface rockchip and trench samples range between 0.5kg and 2.5kg in weight</li> <li>The Company has taken all care to ensure no material containing additional carbon has contaminated the samples</li> <li>All samples are individually labelled and logged</li> <li>Drill sampling consisted of quarter core sampling of diamond core on a 2m sample interval. RC samples were riffle split on an individual 1m interval then composited as two x 1m samples per sample submitted to the laboratory.</li> </ul>
Drilling techniques	<ul> <li>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 oriented and if so, by what method, etc).</li> </ul>	<ul> <li>Both diamond core (HQ double tube) and reverse circulation (5" face sampling) drilling methods have been used</li> </ul>
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	Drill sample recoveries have been measured for all holes and found to be good
Logging	<ul> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> <li>Drill logging of diamond core and RC</li> </ul>	<ul> <li>Surface rockchip samples were described in basic terms – lithology, degree of weathering, flake size and an estimate of grade</li> <li>Trench rockchip samples were described in basic terms – lithology, degree of weathering, flake size and an estimate of grade in 1m intervals</li> <li>All drill holes have been comprehensively logged for lithology, mineralisation, recoveries, orientation, structure and RQD (core). All drill holes have been photographed. Sawn diamond core has been retained for a record in core trays. RC</li> </ul>

Criteria	JORC Code explanation	Commentary
		chips stored in both chip trays and 1-3kg individual metre samples as a record.
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>The surface rockchip samples have not undergone any field splitting or composition</li> <li>Trench samples were taken in 1m intervals with sampling techniques used to ensure representivity of the target rocktype.</li> <li>No splitting or compositing of the trench samples was undertaken</li> <li>Diamond core samples were halved with one half then quartered. A quarter core sample was taken for laboratory analysis. The remaining quarter core sample is retained for a record and a half core sample retained for metallurgical testwork.</li> <li>RC samples were collected for every down-hole metre in a separate RC bag. Each metre sample was split through a three-tier riffle splitter and a 1.5kg sample taken of each meter. Two one-metre samples, totaling 3kg in weight were composited for assay submission.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>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.</li> </ul>	<ul> <li>The samples were sent to Mwanza in Tanzania for preparation and pulps were then sent to Brisbane for TGC analysis for Total Graphitic Carbon (TGC) C-IR18 LECO Total Carbon.</li> <li>Graphitic C is determined by digesting sample in 50% HCl to evolve carbonate as CO2. Residue is filtered, washed, dried and then roasted at 425C. The roasted residue is analysed for carbon by high temperature Leco furnace with infra red detection. Method Precision: ± 15% Reporting Limit: 0.02 - 100ppm</li> <li>Some of the surface rockchip samples were analysed for Multi-elements using ME-ICP81 sodium peroxide fusion and dissolution with elements determined by ICP.</li> <li>Some of the surface rockchip samples were analysed for Multi-elements using ME-MS61 for 48 elements using a HF-HNO3-HCIO4 acid digestion, HCl leach followed by ICP-AES and ICP-MS analysis.</li> <li>Some of the surface rockchip samples were analysed for Multi-elements using ME-MS81 using lithium borate fusion and ICP-MS determination for 38 elements.</li> <li>All analysis has been carried out by certified laboratory – ALSchemex. TGC is the most appropriate method to analyse for graphitic carbon and it is total analysis. ALSChemex inserted its own standards and blanks and completed its own QAQC for each batch of samples</li> <li>BKT inserted certified standard material at a rate of 5%. BKT inserted a field duplicate at a rate of 5%</li> <li>BKT is satisfied the TGC results are accurate and precise</li> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data</li> </ul>	<ul> <li>The data has been manually updated into a master spreadsheet which is considered to be appropriate for this early stage in the exploration program</li> </ul>

Criteria	JORC Code explanation	Commentary
Location of data points	<ul> <li>storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> <li>Accuracy and quality of surveys used to locate drill holes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>A handheld GPS was used to identify the positions of the pits in the field</li> <li>The handheld GPS has an accuracy of +/- 5m</li> <li>The datum is used is ARC 1960 UTM zone 37</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>The trenches were excavated from the three general lodes of graphite mineralization outlined by first pass mapping at Epanko North</li> <li>No sample compositing has been applied.</li> <li>The project is considered too early stage for Resource Estimation</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	<ul> <li>Trenches were designed to sample across a section of the known strike of the mineralization where the cover was not too deep</li> <li>Trench samples was undertaken in general in a direction across the strike of the graphite schist apart from TREPM01 which was sub-parallel to the strike of the schist</li> <li>The representivity of the surface rock chip samples cannot be assessed given the lack of continuous outcrop in these areas. These samples are only indicative results of the local geology and no claim to the volume or extent of this sample material is made</li> <li>Additional sampling and mapping is required to fully understand the mineralization and its grades in relation to controlling structures</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>The rockchip and trench samples were taken under the supervision of an experienced geologist employed as a consultant to BKT</li> <li>The samples were transferred under BKT supervision from site to the local town of Mahenge</li> <li>The samples were then transported from Mahenge to Dar es Salaam and then transported to Mwanza where they were inspected and then delivered directly to ALSChemex process facility.</li> <li>Chain of custody protocols were observed to ensure the samples were not tampered with post sampling and until delivery to the laboratory for preparation and analysis</li> <li>Transport of the pulps from Tanzania to Australia was under the supervision of ALSChemex</li> </ul>
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	<ul> <li>Trenching and drilling information collected by BKT has been evaluated for sampling techniques, appropriateness of methods and data accuracy by an external geological consultant.</li> </ul>

## 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	<ul> <li>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.</li> <li>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.</li> </ul>	<ul> <li>The rock chip and trench sampling was undertaken on granted license PL 7802/2012</li> <li>It has an area of 293km2</li> <li>The license is under a 4 month option agreement with BKT who can earn 100% of the license</li> <li>Subsistent landowners of the affected villages were supportive of the recently completed sampling and exploration program.</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Some previous explorers completed some limited RC drilling and rockchip sampling but the original data has not been located apart from what has been announced via ASX release by Kibaran Resources during 2011 and 2013
Drill hole Information	<ul> <li>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:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>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.</li> </ul>	All drill hole information has been retained and compiled into a drilling database. At this early stage of exploration only the assay data has been released together with hole length, a plan locality map of drill holes and down hole intervals.
Data aggregation methods	<ul> <li>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.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	No data aggregation methods have been carried out on the data.
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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').</li> </ul>	<ul> <li>Due to the potentially large strike length of the mineralization the trench sampling program has been selective and trench sampling has only assessed the local grade distribution of the graphitic zones from surface to shallow depths &lt;2.5m).</li> <li>The trenches were located between 500 and 1000m along strike depending on the thickness of the surface cover</li> <li>Further additional widespread surface sampling, mapping and drilling is</li> </ul>

Criteria	JORC Code explanation	Commentary
		required to understand the geometry of the graphite mineralisation
Diagrams	<ul> <li>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.</li> </ul>	<ul> <li>Figures show plan location of trenches and drill holes, appropriately scaled and referenced.</li> </ul>
Balanced reporting	<ul> <li>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.</li> </ul>	<ul> <li>All surface and trench rock chip samples have been reported.</li> <li>All drilling results have been reported for graphite</li> </ul>
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.	<ul> <li>1 in 10 samples from the March quarter drill programme were assayed for deleterious elements using a 40 element ICP method. No deleterious elements were observed, with background levels of uranium and thorium.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>Further surface sampling techniques that may include pitting &amp; trenching with mapping and drilling (diamond core and RC). An infill and extensional drill programme is planned at Epanko north.</li> <li>Initial metallurgical testwork – flotation and particle sizing</li> <li>Data compilation and analysis, target generation and ranking prior to drilling.</li> </ul>