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# INITIAL FIELD WORK RESULTS, MOZAMBIQUE GRAPHITE

## 1. Exploration Work Highlights

- Field work & sampling conducted by Balama Resources Pty Ltd in September to October 2014
- Proven graphite mineralisation on all of the Balama graphite concessions
- Initial sample results from SGS Laboratories received by OGI (LECO analysis for total graphitic content)
- Graphite outcrops discovered on 2 of the concessions (4661L &4662L) with graphite grades of 9% to 14% Total Graphitic Content ("TGC")
- Shallow test drill holes done to prove graphite mineralisation on licences 5873L & 6527L
- Test hole on 5873L intersecting 56m continuous graphite zone (4m to 60m) with up to 14% TGC returned from analysed samples
- XRF & petrography (flake size distribution) analysis of submitted samples still underway
- Graphite quality and potential well established ~ no "frontier risk" for OGI
- Adjacent Triton Minerals (ASX: TON) Nicanda Hills graphite deposit hailed the world's largest high grade graphite deposit with 1.456 billion tons @ 10.7% TGC and 0.27% V2O5
- Airborne Electromagnetic Survey planned (VTEM/SkyTEM) for Q4-2014/Q1-2015 followed by resource drilling and detailed sample analysis. Goal is to prove an initial resource as quickly and efficiently as possible

## 2. Overview

As announced to the market on 20 October 2014, OGI through the acquisition of Balama Resources Pty Ltd has acquired a portfolio of 6 highly prospective tenements in the Balama graphite province, Cabo Delgado, Mozambique. The Balama licences collectively make up >80,000ha (800sqkm) and are all underlain by the locally graphite bearing schists (green unit in the below map).

As a result of the work done by the Balama exploration team in September and October 2014 high grade graphite (high "TGC")<sup>1</sup> has been proven on the majority of the licences:

- Sample analysis on 4661L returning up to 14% TGC
- Sample analysis on 4662L returning up to 8% TGC
- Sample analysis on 5873L returning up to 14% TGC
- Sample analysis on 6527L returning up to 12% TGC

<sup>&</sup>lt;sup>1</sup> Refer to appendix 1 for table of full Leco sample results

Figure 1: Balama Graphite tenement map (licences marked as "OGI")



# 3. Graphite Outcrops on OGI Licences

*Figure 2: Mineralisation trends along strike as interpreted for the southern cluster, location of outcrops & grab samples* 





Figure 3: Outcrop GBS01 showing a quartzitic schist with graphite mineralisation.



Figure 4: Grab sample from outcrop GBS02 displaying graphite mineralisation and large flake size.

# 4. Test Drilling on 5873L & 6527L

Shallow test holes were drilled on licences 5873L & 6527L to prove mineralisation on these licences and to obtain sufficient samples. This was necessitated by the presence of a thin soil cover. Targets were carefully selected through analysis of Electromagnetic and Airborne Magnetic data. Both the boreholes were drilled on a bearing of 120° and with a dip of 60° from the horizontal in an easterly direction. The results of these test holes are very encouraging proving the presence of shallow graphite deposits of exceptional grade.





Figure 5: Test drilling on 5873L & 6527L

- Licence 5873L ("RC001"): 56m of semi-continuous shallow graphite zone intersected from 4m to 60m (open at depth). Sample analysis for 5873L returned up to 14% TGC
- Licence 6527L ("RC002"): 2m of graphite, shallower than 25m below surface. Sample analysis for 6527L returned up to 12% TGC



*Figure 6: The position of boreholes RC001 and RC002.* 

## 5. Extension of Graphite Mineralisation into licence 5873L

The graphite mineralisation along strike appears to clearly extend beyond the Syrah and Triton identified deposits as is illustrated in the below image and as is validated by the results of drill hole RC001 described above.



## 6. <u>Why invest in graphite?</u>

- Strategic & critical listed mineral by United States Geological Council
- Chinese graphite mines: Limited remaining reserves & mine closures expected (supply shortfall)
- Supply capacity falls far short of projected demand growth
- Exploration has lagged for 20years urgent catchup required!
- Current market consumption= 1.2Mt p.a
- Current graphite demand to double to >2.4Mt by 2020 (8.8% compounded annual growth).
   This excludes Graphene demand- the new wonder material.
- Supply shortfalls and demand increases requires 25 new mines within the next 6 years

#### 7. <u>The Mozambique Graphite business case</u>

- Mozambique hosting world's largest graphite deposits as announced by SYR and TON (1.2billion tons @ 10.2% TGC and 1.45billion tons @ 10.7% respectively)
- High total graphitic carbon (>10%) + large flake sizes (>150µm)
- High grades & volumes of Vanadium as by product (>0.23% V<sub>2</sub>O<sub>5</sub>)
- Overshadows small & lower grade Canadian & Australian deposits (e.g. Western Australian deposit with sub 5% TGC and less than 500,000 tons of contained graphite)
- Lower mining & transport costs reasonably expected (than Canada & Australia)
- Deposits near port infrastructure (200km) & major markets of Asia and Europe
- Mozambique graphite mines are expected to have higher profit margins due to the above factors

The OGI Board is very pleased with the preliminary results of the exploration work concluded on the Balama graphite licences which has proven mineralisation on all the licences with high grades of graphite and shallow graphite zones intersected with the test holes. Work done to date has proven that the project area is underlain by mineralised graphitic lithology and that it has the potential to contain significant amounts of flake graphite.

The Company looks forward to the further phased development of its graphite projects in Mozambique and to initiating the next phase of work as soon as possible.

For and on behalf of the Board,

R. Kitch ....

Chris Ritchie Executive Director

Information in this report that relates to Exploration Targets, Exploration results, Mineral resources or Ore reserves is based on information compiled by Mr Johan Erasmus, a Competent Person who is a registered member of the South African Council for Natural Scientific Professions (SACNASP) which is an Recognised Professional Organisation (RPO) included in a list posted on the ASX website. Mr Erasmus is a consultant of Sumsare Consulting, Witbank, South Africa who was engaged by the company to undertake this work. Mr Erasmus 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 by the 2012 Edition of the Australasian Code for reporting of Exploration Results. Mr Erasmus consents to the inclusion of the data in the form and context in which it appears.

Sample	Graphitic
Sample	carbon(%)
GBS01	13.5
GBS02	9.31
GES01	7.93
GES01	7.9
RC1 22-23	6.72
RC1 32-33	9.73
RC1 37-38	7.18
RC1 42-43	4.18
RC1 47-48	6.54
RC1 51-52	13.7
RC1 5-6	9.16
RC1 57-58	2.3
RC1 9-10	7.51
RC2 17-18	11.6
RC2 5-6	5.5

Appendix 1: Table of sample results

# JORC TABLE 1 Section 1 Sampling Techniques and Data

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

Criteria	Explanation	OGI Commentary
Sampling techniques	Nature and quality of sampling (e.g. cut	Three graphite grab samples were
	channels, random chips, or specific specialised	taken from outcrop within licences
	industry standard measurement tools appropriate	4661L and 4662L.
	to the minerals under investigation, such as down	Nine drilling chip samples on hole
	hole gamma sondes, or handheld XRF	RC001 were taken across the
	instruments, etc.). These examples should not be	following intervals;
	taken as limiting the broad meaning of sampling.	- 5 – 6 m,
	• Include reference to measures taken to	- 9 – 10 m,
	ensure sample representivity and the appropriate	- 22 – 23 m,
	calibration of any measurement tools or systems	- 32 – 33 m,
	used.	- 37 – 38 m,
	Aspects of the determination of	- 42 – 43 m,
	mineralisation that are Material to the Public	- 47 – 48 m,
	keport. In cases where industry standard work	-51-52  m,
	has been done this would be relatively simple	- 57 – 58 m.
	(e.g. Teverse circulation ariting was used to	PC002 were taken across the
	nulverised to produce a 30 a charge for fire	following intervals:
	assay') In other cases more evaluation may be	-5-6m
	required such as where there is coarse add that	- 17 - 18 m
	has inherent sampling problems. Unusual	These samples were taken to
	commodities or mineralisation types (e.a.	confirm the presence of flake
	submarine nodules) may warrant disclosure of	graphite mineralisation. The results
	detailed information.	from this sampling is not intended
		to be used in resource
		determination. OGI is confident
		that this confirms the presence of
		flake graphite in the prospecting
		licences being investigated.
		Reverse circulation drilling was
		used to collect roughly 35 kg of
		sample per metre drilled via an air
		cyclone. This was reduced to a 3 kg
		sample by riffling. The bagged 3kg
		sample was submitted to SGS in
		Johannesburg for Cg % analysis
		(LECO), as well as XRF (major
		elements) and petrographic
		description by optical microscopy.
	Drill type (e.a. core, reverse circulation	A reverse circulation rig was used
	open-hole hammer, rotary air blast, auaer.	to drill a 5.5 inch diameter hole.
	Banaka, sonic, etc.) and details (e.a. core	from which the drilling chips was
	diameter, triple or standard tube, depth of	collected for every metre drilled.
	diamond tails, face-sampling bit or other type,	The chips were collected via an air

Criteria	Explanation	OGI Commentary
	whether core is oriented and if so, by what method, etc.).	cyclone.
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>	Logging by geologist on site (Mr. Johan Erasmus). Grades allocated were based on the visual assessment. The laboratory results will be used to define the graphite content. Sampling was not done to be representative and hence only an A-sample was taken. The recovery of sample material was maximised by collecting sample in 1 metre intervals.
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> </ul>	Chip samples were geologically logged. The objective of this drilling was to prove mineralisation. Logging of the chips was done on site and was quantitative in nature. The chips were photographed. The total length of the borehole was logged. The full sequence of every metre was logged.
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>	The RC chips were riffled to reduce the sample mass from 35 kg to 3 kg. The material was mostly dry, but some of the deeper samples in RC002 was wet. The objective was to prove mineralisation of graphite flake. No standards, duplicates or blanks were inserted in the sample runs. The drilling technique used (RC) may lead to reduced flake size. Any flake size results should be conservative (i.e. flake size as reported by the laboratory should be smaller than the actual sizes).
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</li> </ul>	Laboratory analysis by SGS Laboratories in South Africa. LECO ( $\%$ C <sub>g</sub> ), Petographic thin section analysis (flake size). XRF analysis (major elements, V <sub>2</sub> O <sub>5</sub> ). No handheld instruments were

Criteria	Explanation	OGI Commentary
	used in determining the analysis including	used in determining mineralised
	instrument make and model, reading times,	content.
	calibrations factors applied and their derivation,	
	etc	
	Nature of quality control procedures	
	adopted (e.g. standards, blanks, duplicates,	internal controls. No ovternal
	external laboratory checks) and whether	approximation controls. No external
	and precision have been established.	controls were added by Odi.
Verification of sampling	The verification of significant	An independent geologist was
and assaying	intersections by either independent or alternative	used. No twinning has been
	company personnel.	conducted. This is planned for the
	• The use of twinned holes.	resource drilling programme.
	Documentation of primary data, data	Data documented by Mr. Johan
	entry procedures, data verification, data storage	Erasmus. Primary data in Access
	(physical and electronic) protocols.	format. Data stored in Mr. Erasmus'
	Discuss any adjustment to assay data.	office as well as an office in
		Pretoria, RSA.
		Assay data is reported as received
		from the laboratory. No data is
		adjusted.
Location of data points	Accuracy and quality of surveys used to	A handheld GPS was used. Garmin
	locate drill holes (collar and down-hole surveys),	62/64 model. These handsets have
	trenches, mine workings and other locations used	an inherent accuracy variance of
	In Mineral Resource estimation.	/m in the X and Y dimension. The
	• Specification of the grid system used.	elevation dimension (2) of
	• Quality and adequacy of topographic	reliable and is bance not reported
	control.	The grid used is WCS 84 and the
		datum used is UTM
		Topographic control will be done as
		a DTM during the drilling phases of
		exploration An aerial survey will be
		the most likely technique used At
		this stage no resource modelling
		has been done, since the project is
		in its infancy, and only graphite
		mineralisation has been proved.
Data spacing and	• Data spacing for reporting of Exploration	OGI is not reporting Exploration
distribution	Results.	Results yet. Graphite mineralisation
	Whether the data spacing and	has been proved, and needs to be
	distribution is sufficient to establish the degree of	investigated with an appropriate
	geological and grade continuity appropriate for	pattern of geophysical surveys and
	the Mineral Resource and Ore Reserve estimation	exploration drilling to satisfy the
	procedure(s) and classifications applied.	JORC requirements.
	Whether sample compositing has been	Sample compositing has not been
	applied.	applied.

Criteria	Explanation	OGI Commentary
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>	Both the boreholes were drilled on a bearing of 120° and with a dip of 60° from the horizontal in an easterly direction. At this stage RC drilling was used, so orientated core logging is not possible.
Sample security	• The measures taken to ensure sample security.	Samples were kept in a locked room after collection, and shipped in sealed containers by OGI to the SGS laboratory in South Africa. Sample residue will be retained by SGS for safekeeping until further analysis is needed.
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	No external audits have been undertaken for this stage of work.

Section 2 Reporting of Exploration Results (Criteria listed in the preceding section also apply to this section.)

Criteria	Explanation	
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>	The OGI project area consists of 6 exploration licences the interests in which have been acquired by OGI through an agreement with Balama Resources Pty Ltd. All statutory requirements were acquired prior to exploration work. All licences have been awarded and issued with the exception of licences 5873L and 6636L which still require the signature of the Minister of Mineral Resources prior to being considered finally issued
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	No prior exploration work done by other parties on the licence areas except for the 1:250,000 geological maps drawn up by the Government of Mozambique and regional airborne geophysical data acquisition done by the Government.
Geology	• Deposit type, geological setting and style of mineralisation.	Area predominantly underlain by Proterzoic rocks that form a number of gneiss complexes that

Criteria	Explanation	
Criteria	Explanation	range from Palaeo to Neoproterozoic in age (Boyd et al., 20 10). The project site is underlain by metamorphic rocks of the Neoproterozoic Lurio Group that are included within the Xixano Complex (Brice, 2012). The graphite layer is comprised of a sequence of metamorphosed carbonaceous pelitic and psammitic (sandstone) sediments within the Proterozoic Mozambique Belt (Brice, 2012). The sediments have been metamorphosed to graphitic schists (pelites) and graphitic sandstones (psammites).
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> <li>If the exclusion of this 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> </li> </ul>	RC001 S13° 06' 02.4" E38° 51' 34.9" RC002 S13° 04' 17.1" E38° 48' 33.7" Both the boreholes were drilled on a bearing of 120° and with a dip of 60° from the horizontal in an easterly direction. Please note that these holes were drilled as a substitute for trenching and pitting, and are not considered to be contributing towards a future resource calculation. The results from these borehole lithologies and samples will be excluded from future resource calculations. The data from these results will be used to plan the future exploration activity.

Criteria	Explanation	
Data aggregation methods	<ul> <li>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.</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>	Not applicable at this stage.
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 (e.g. 'down hole length, true width not known').</li> </ul>	Not applicable at this stage.
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.	Detailed map included in the announcement above.
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.	Complied with through Appendix 1 publication of all sample results
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.	All the data to date is reported.

Criteria	Explanation	
Further work	<ul> <li>The nature and scale of planned further work (e.g. 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>	Airborne electromagnetic survey planned for Q4-2014/Q1-2015 which will be followed by a resource drilling program in the dry season. Diagrams included in above announcement showing clearly the possible lateral extensions.