ASX Announcement
18 July 2017

METALLURGICAL TESTWORK CONFIRMS PRESENCE OF PREMIUM FLAKE GRAPHITE AT TOAMASINA

- Metallurgical Tests have produced very high grade concentrates (>98% Total Graphitic Carbon) from both high and low grade raw composites
- Conventional Flowsheet utilised with minimal grinding
- The high-grade sample produced a concentrate with 28% >500 µm (Super Jumbo Flake) and 65% > 180 µm (Large Flake), at an overall concentrate grade of **98.4%** Total Graphitic Carbon
- The low-grade sample produced a concentrate with 53% mass > 180 µm (Large Flake) at an overall concentrate grade of **98.3%** Total Graphitic Carbon
- Results achieved at a coarse grind size of 1 mm

Cougar Metals NL ("Cougar" or "Company") (ASX: CGM) is pleased to announce that it has received excellent results from two metallurgical samples recently submitted to Metallurgy Pty Ltd ("Metallurgy") and managed by Independent Metallurgical Operations ("IMO") in Perth, Western Australia.

Samples used were collected from selected site within the Toamasina Graphite Property in Madagascar, in which Cougar is currently earning a 50% interest.

The flotation test work, based on a standard graphite process flowsheet developed by IMO, demonstrated that coarse high purity graphite flakes can be produced from this standard flowsheet. Photos of +500 µm from the high-grade concentrate shown in Figure 1 reveal flake dimensions to be often in excess of 2 mm.

Figure 1: Micrographs of High Grade +500 µm Flake Graphite (picture 1 of 2)

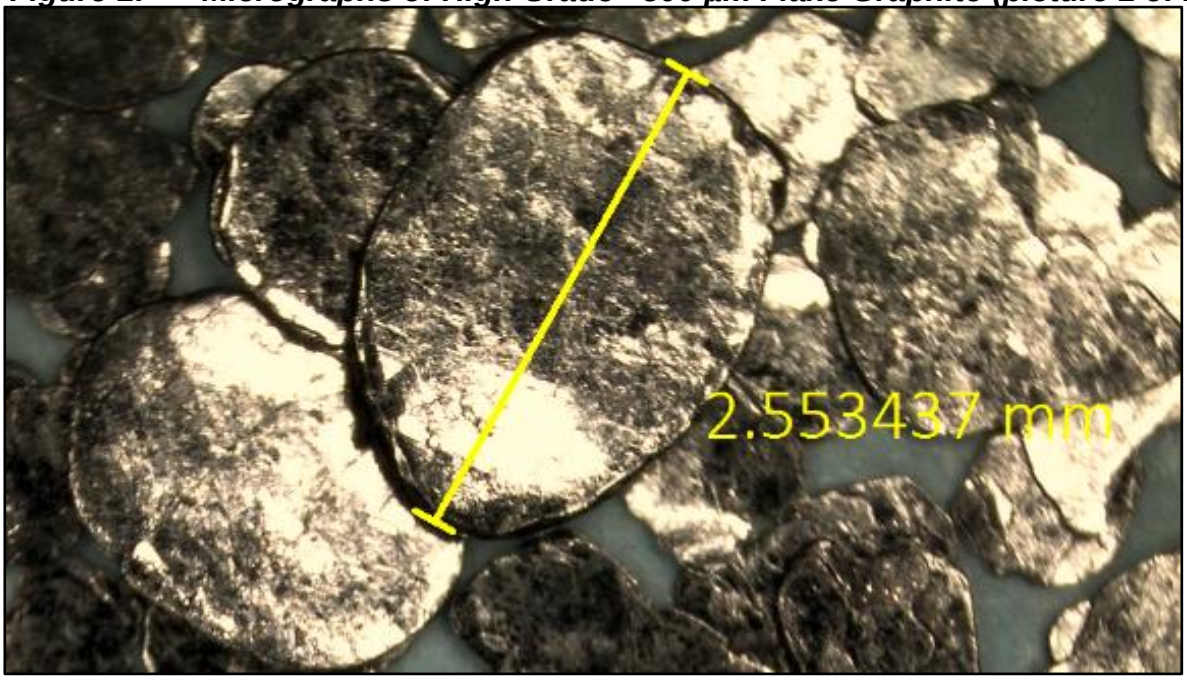
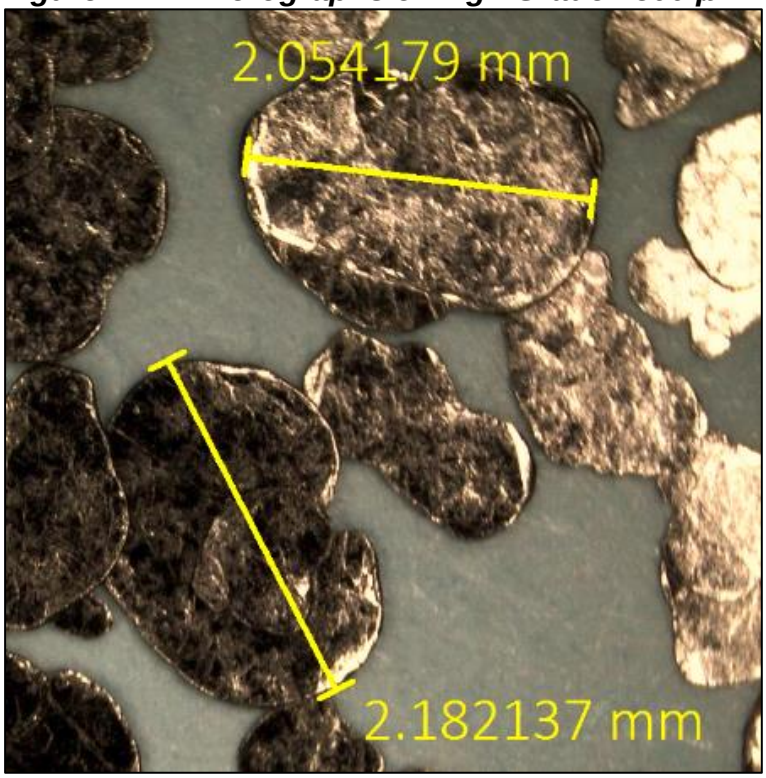


Figure 1: Micrographs of High Grade +500 µm Flake Graphite (picture 2 of 2)



The process flowsheet included rougher flotation, followed by several regrind and cleaner flotation stages.

Flotation testwork based on IMO's standard graphite process flowsheet resulted in a high-grade concentrate from both low and high-grade composites as shown in Table 1 following.

High recovery of large flake (> 180 µm) was achieved from both high grade (65% mass) and low grade (53% mass) composites showing potential for recovery of high flake bearing premium concentrates throughout the deposit. Grades of each composite are as follows:

- High Grade Composite Total Carbon Head Grade = 15.7%
- Low Grade Composite Total Carbon Head Grade = 2.6%

Table 1: Concentrates from High and Low-Grade Composites

Size Fraction	High Grade Comp			Low Grade Comp		
	Mass	TC	LOI	Mass	TC	LOI
µm	%	%	%	%	%	%
500	28.4%	98.31	99.49	1.0%	98.52	99.04
300	21.3%	98.95	99.35	21.7%	98.52	99.04
180	15.4%	98.65	99.25	30.0%	98.92	98.63
150	6.6%	99.12	99.28	12.0%	97.29	98.36
106	7.0%	98.98	99.21	10.7%	97.11	98.44
75	6.0%	99.00	99.20	7.6%	98.17	98.31
-75	15.4%	96.53	96.27	17.0%	98.17	97.48
Calc Head	100.0%	98.37	98.88	100.0%	98.26	98.45

TC = Total Carbon by LECO, LOI = Loss on Ignition at 1000oC

Comparison of total graphite carbon and total carbon assays shows that all carbon in the samples tested is present as graphite.

Open circuit total carbon recoveries from both tests were excellent at >85%; with improvement expected upon recycling of intermediate tailings streams. Total carbon losses to expected reject streams were <7%. These recoveries bode well for future testing of the current drill program samples expected to commence in Q1 FY2018 upon confirmation of drill assays.

Cougar is excited by the prospect of developing, with its partner DNI Metals, a low cost, high grade graphite product. The project is expected to have low mining costs due to the near surface and weathered nature of the mineralisation. Additionally, low processing costs are expected with minimal upfront crushing and grinding being required to liberate the graphite. The project is in a historical graphite producing jurisdiction and only 50 km to port, with the highway passing through the project.

This potential coupled with the initial prospect of a high flake bearing premium grade concentrates has the hallmarks of a world class graphite project.

We welcome enquiries for further information. Please contact the undersigned via email at r.swick@cgm.com.au .

Yours sincerely
COUGAR METALS NL

RANDAL SWICK
Executive Chairman

Forward Looking Statements

Statements contained in this release, particularly those regarding possible or assumed future performance, costs, dividends, production levels or rates, prices, resources, reserves or potential growth of Cougar Metals NL, industry growth or other trend projections are, or may be, forward looking statements. Such statements relate to future events and expectations and, as such, involve known and unknown risks and uncertainties. Actual results and developments may differ materially from those expressed or implied by these forward looking statements depending on a variety of factors.

Competent Persons Statement
The information in this release that relates to metallurgical test work is based on information compiled and / or reviewed by Mr Peter Adamini who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Adamini is a full-time employee of Independent Metallurgical Operations (IMO). Mr Adamini consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

JORC TABLE 1

Section 1 Sampling Techniques and Data

Criteria	Explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	• Surface samples were collected from areas of observed prospectivity. Samples comprised 3-5kg of representative material collected from at least 0.5m below natural surface ('BNS'). • Trenches were installed over targeted zones based on observed surface prospectivity and / or ground EM anomalism. EM results have not been subjected to interpretation. Areas of relatively stronger responses were selected in conjunction with direct surface observations and geomorphology. • Trench sampling procedures comprised channel samples along faces/walls of trenches at 1.5m intervals. Samples averaged 4-5kg when complete. • Samples were collected on measured intervals of 1.5m. No site preparation was undertaken. Samples were collected in plastic bags and riffle-split at site to an average 1.2kg, prior to being dispatched for assay.
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.).*	• Drilling is being undertaken via a towed air core drilling machine (GS01). Default method is using a blade bit; however stratified intervals require the limited use of RC hammer.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximize sample recovery and ensure representative nature of the samples.*	• Samples are collected using standard cyclone, discharging into plastic sample bags. • Equipment utilised is deemed adequate to ensure reasonable consistency in sample recovery.

	• *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.*	• Insufficient data currently exists to definitively determine any recovery-grade relationship. Given the nature of the mineralisation, it is believed that recovery variance does not impact grade
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.* • *The total length and percentage of the relevant intersections logged.*	• Trenches were logged vertically and horizontally on 1m intervals. Data have not been geocoded at this point. Mineralised horizons are strongly homogenous – varying essentially in observed graphitic carbon content. • Qualitative & quantitative • All intersections are logged. Logged intersections vary between 2 to 20m in TT.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximize representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• No core Sampling completed to date • Sampled in-situ, riffled to 1.2kg and placed in plastic bags for shipment. Samples too wet to riffle split were sampled using a 60mm PVC spear. • Sampling was designed to be representative of the actual in-situ material. Sample sizes were appropriate to the style of mineralisation under investigation. • Minimal handling, drying or splitting of the samples prior to dispatch ensured that the samples arrived at the selected laboratory in as close to in-situ condition as possible. • All sampling was conducted and dispatched under the supervision of Hendry Consulting at site.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times,*	• Assay samples from the Vohitsara project were dispatched via secure courier ex-Antananarivo Madagascar to AGAT Laboratory in Ontario Canada. AGAT are accredited ISO/IEC 17025:2005 by the Standards Council of Canada, but not for the method used to assay graphite. • Samples submitted to AGAT were analysed for graphitic carbon with

	calibrations factors applied and their derivation, etc. • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	infrared analysis to a detection limit of 0.01 percent; plus total carbon with infrared analysis and detection limit of 0.01 percent (method code 201-109). For graphitic carbon, the sample is subjected to a multistage furnace treatment to remove all forms of carbon with the exception of graphitic carbon; and for total carbon a procedure that determines the most volatile organic carbon species (Bernier et al, 2015). • Results will be delivered electronically by the laboratory direct to CGM via spreadsheet and PDF Certificate of Analysis files. Check assaying and standards were utilised internally by AGAT as standard procedure. • No additional data verification beyond that detailed above has been completed. The project is at an early stage of development. It is intended that a comprehensive Quality Assurance / Quality Control ('QA-QC') regime will be implemented from commencement of drilling at the project.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• All work was completed under supervision of Hendry Consulting. • All data was initially collected on field note books and transferred to Excel spreadsheets. • All data has been backed up to an external hard drive. • No material errors in data have been detected to date.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• Use of hand-held Garmin GPS units. Accuracy of +/-4m on average. • WGS84 UTM (Zone 39S) projection. • Topographical control is considered sufficient for the stage of project development to date.

Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• A total of three (3) trenches totalling 700 line meters of trenching have been completed. Additional trenches are underway – a total of three (3) km of trenching is currently planned • Strike length covered is currently 1.5km; planned 2.5-3.0km • Trenches were hand-dug and averaged 2m BNS final depth. A total of 42 samples have been collected so far and submitted to AGAT Laboratory as per surface sample protocols.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• Trenches are spaced an average of 300m apart and extended for an average 3-400m across strike. • Not Applicable
Sample security	• *The measures taken to ensure sample security.*	• Samples were kept in sealed bags under QP supervision until collection by secure courier.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No systematic data audits have been completed. The project is at an early stage with a comparatively simple database.

Section 2 Reporting of Exploration Results

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

Criteria	Explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any*	• Exploitation Permit 38642 is located in the Toamasina Region of Madagascar. It is granted and in good standing (July 2015 – 40-year term). • All licensing and permitting is current to allow development of the project.

	known impediments to obtaining a licence to operate in the area.	
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Madagascar consultancy Vato Consulting conducted limited surface assessment of the property in 2014.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Graphite mineralisation at the Project comprises disseminated crystalline graphite flake, hosted within low-silica meta-sediments. • The targeted mineralisation occurs within saprolitic clays representing weathered bedrock.

Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*
	  • *easting and northing of the drill hole collar*
	  • *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  • *dip and azimuth of the hole*
	  • *down hole length and interception depth*
	  • *hole length.*
	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*
		• 40 holes for 1,200m of air core have been completed to date.
		• Holes are spaced on a planned 80m x 80m grid pattern and drilled vertically.
		• Drill hole collar file is planned for inclusion with the first batch of assay results.

Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.*	• No assays currently received for current programme. These are expected shortly. • Not applicable • No metal-equivalency is applicable

	• *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.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	• The Toamasina graphite project mineralisation is hosted within weathered residual material and the principal mineralised horizons occur disseminated within this horizon (5-7 wt %); with 'bonanza' lenses of up to 35 wt % that can occur sub-horizontally at irregular intervals. • Deeper parts of the mineralised zones are being tested by drilling and assays are awaited. Visual evidence of mineralisation to 30 BNS has been directly observed.
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.*	• Plan of the mineralised areas; inclusive of trench locations is appended overleaf.
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.*	• The information contained within the announcement contains the relevant sampling and analytical data over the project.
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.*	• None to report. • Metallurgical test work will be conducted on resource drill samples as they become available. • Details of compositing procedures will be formulated upon review of resource assay data.
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).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this*	• Air core drilling will continue until at least completion of the initial pattern as outline in the attached Figure. Additional drilling will be determined by the results of the initial programme. Core drilling is also planned in conjunction with the current air core programme.

	information is not commercially sensitive.	• Too early stage to discuss extensions to mineralisation.