



# ASX ANNOUNCEMENT



31 July 2015

June 2015 Quarterly Report

## HIGHLIGHTS

- **Assessment of value adding projects results in a strategic entry into the graphite market**
- **Appointment of a Chief Executive Officer.**

**Sayona Resources Limited (ASX: SYA) ("Sayona" or the "Company")** is pleased to report that subsequent to the end of the quarter, it has appointed a Chief Executive Officer and completed a strategic entry into the graphite market.

### Appointment of Chief Executive Officer

Mr Nolan is an experienced public company director and senior executive with more than 23 years' experience in advisory, commercial and business development roles focused on the acquisition, funding, and development of resource projects.

Most recently, Mr Nolan was Managing Director (Feb 2014 – May 2015) of ASX/AIM listed Leyshon Resources Limited, and Executive Director (Oct 2013 – Jan 2014) and Managing Director (Sept 2009 – Sept 2013) of ASX listed, Elementos Limited. In 2011, Elementos completed a merger to become an advanced developer of tin and tungsten resources in Tasmania, Australia. Mr Nolan was instrumental in the identification, negotiation, due diligence, structuring and execution of the merger.

From 2006 to 2009, Mr Nolan was Business Development and Commercial Manager for Aviva Corporation, responsible for the identification, evaluation and negotiation of coal and energy related acquisition and merger opportunities in Australia and Southern Africa.

Mr Nolan commenced his career in the financial services industry as a resources equities analyst at firms including Wilson HTM and Morgan Stanley, and as a Director of the Corporate Finance practice of global advisory firm PWC.

Mr Nolan's qualifications include a Bachelor of Commerce, and a Masters Degree in Mineral and Energy Economics. Mr Nolan is also a graduate of the Australian Institute of Company Directors.

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ASX Code: **SYA**



## Strategic Entry into the Graphite Market

Subsequent to the end of the quarter, the Company announced a strategic entry into the large flake graphite market by securing a large ground position in the East Kimberley region of Western Australia. The Kimberley region is a proven province for high purity, large flake graphite.

The market for large and jumbo flake graphite is highly concentrated and potential synthetic graphite substitutes are comparatively very expensive to produce. Both the US and EU Governments have classified graphite as a “critical material” for industrial and national security purposes.

The East Kimberley project offers an attractive entry into the graphite market:

- Proven district for high carbon purity, large flake graphite;
- The significant scale (up to 20 kilometres strike extent) of the Corkwood graphite target identified from geological and geophysical anomalies;
- Situated in a well-established mining district, 240 kilometres south of an export port at Wyndham;
- The region has excellent infrastructure including roads, airports, and labour;
- First world country with stable tax and royalties, and mining law; and
- Low cost entry via tenement applications and option-to-purchase agreements.

The East Kimberley project is located within the East Kimberley region of Western Australia, 240 kilometres south of Wyndham Port and 220 kilometres south-south-west of the regional centre, Kununurra.

The Company’s East Kimberley project includes one granted tenement and three separate tenement applications, subject to two option-to-purchase agreements. The project covers 278 km<sup>2</sup> and comprises two areas, Keller and Corkwood (See Figure 1). These areas have never been previously explored for their graphite potential.

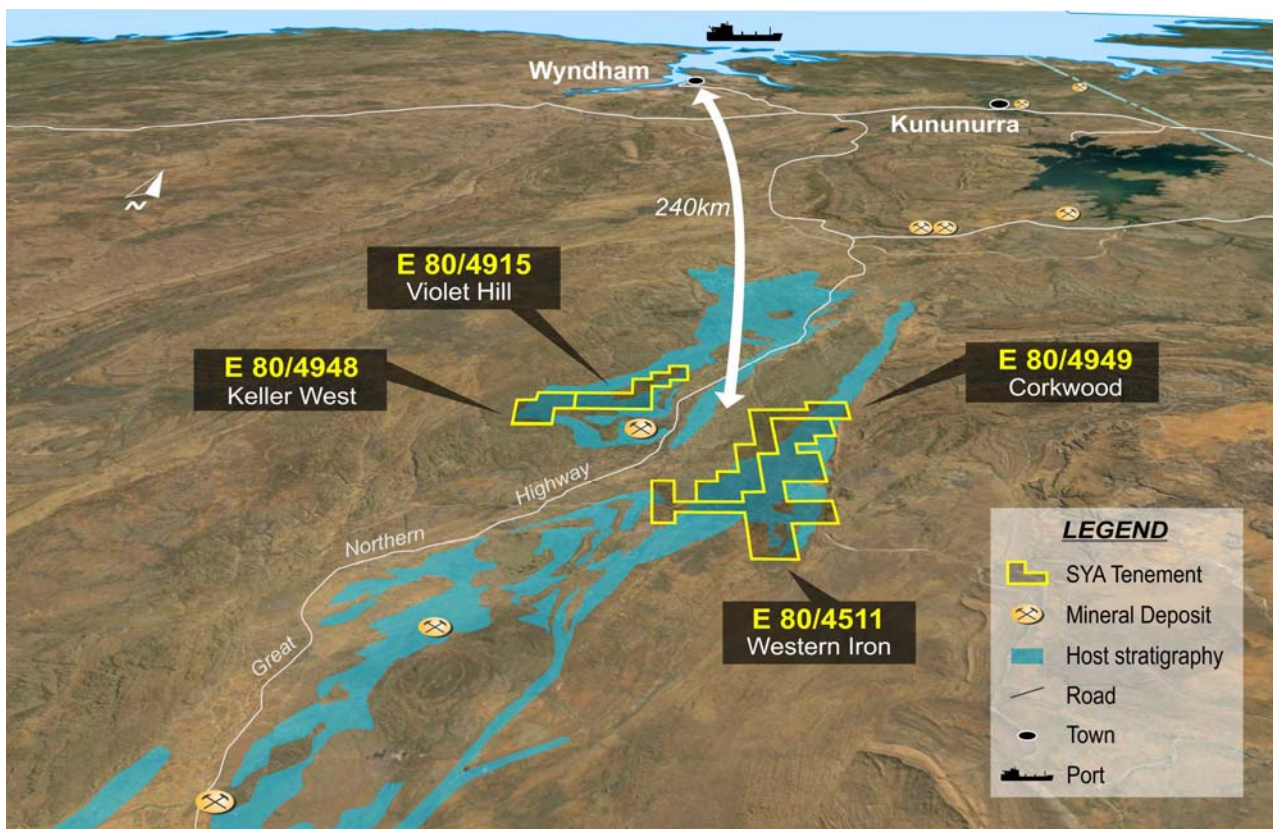
Terms of the two option-to-purchase agreements, include:

- Attgold Pty Ltd (“Attgold”) – SYA paid Attgold \$5,000 on signing and is required to make payments of \$30,000 within 6 months and \$170,000 within 18 months of signing of the agreement, respectively, to acquire a 100% interest in the tenements E80/4915, E80/4948 and E80/4949; and
- Western Iron Pty Ltd (“Western Iron”) – SYA paid Western Iron \$5,000 on signing and is required to pay \$200,000 on or before the six month agreement anniversary to exercise its option to acquire 100% of the graphite interests in tenement E80/4511. Western Iron will also receive a 1% gross production royalty. Western Iron retains a Back-in Right to the nickel, copper and iron mineralisation by the payment of \$100,000 within 12 months.



Table 1: East Kimberley Project Tenements				
Tenement	Name	Status	Area	Vendor*
E80/4915	Keller North	Applied 17 October 2014	14 blocks	Attgold
E80/4948	Keller West	Applied 17 March 2015	9 Blocks	Attgold
E80/4949	Corkwood	Applied 17 March 2015	21 Blocks	Attgold
E80/4511	Western Iron	Granted 28/12/2011	42 Blocks	Western Iron

\*Option-to-Purchase agreement subject to Attgold and Western Iron agreements



**Figure 1:** East Kimberley project location, tenement boundaries and infrastructure

The Company's initial field reconnaissance has identified a number of graphite outcrops which closely correspond with geophysical targets reported in search literature. The graphite has a recessive weathering profile and poorly outcrops.

Geological and geophysical information in the Corkwood area has defined graphite prospective anomalism along a 20 kilometre strike extent. An initial field reconnaissance program has confirmed the prospectivity of the area with the discovery of graphite mineralisation at surface.



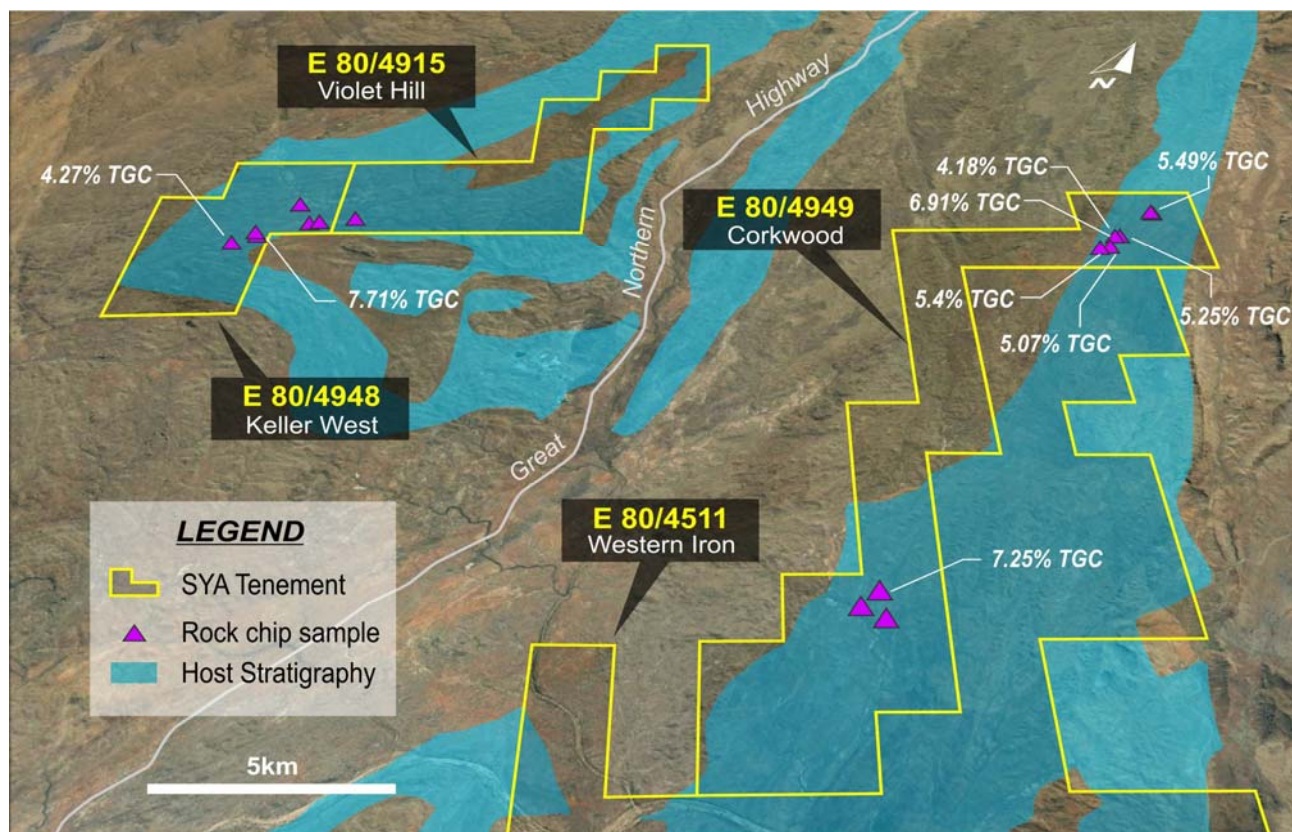
A total of 19 rock grab samples were collected and submitted for graphite analysis, with 9 returning higher than 5% TGC (total graphitic carbon) including a peak assay of 7.71% TGC (see Table 2).

The Corkwood graphitic horizon has limited outcrop but in road cuttings and creek exposures, is commonly 10 metres or more, and ranges up to 35 metres in true thickness. The broad thickness, extensive strike extent and good grade highlights the potential for significant graphite mineralisation within the project area.

**Table 2: Rock Sample Assay Results**

Sample	East	North	Area	% TGC
SK555101	413672	8087805	Corkwood North	5.49
SK555102	413673	8087808	Corkwood North	4.03
SK555103	412343	8086479	Corkwood North	2.96
SK555104	412060	8086194	Corkwood North	4.18
SK555105	412065	8086190	Corkwood North	5.25
SK555106	412032	8086143	Corkwood North	6.91
SK555107	411817	8085943	Corkwood North	5.40
SK555108	404458	8073524	Corkwood South	7.25
SK555109	404448	8073514	Corkwood South	2.26
SK555110	404288	8073154	Corkwood South	1.13
SK555111	404795	8072854	Corkwood South	0.68
SK555112	387531	8086373	Keller	4.27
SK555113	388069	8086767	Keller	7.71
SK555114	388144	8086760	Keller	1.49
SK555115	389506	8087322	Keller	0.77
SK555116	389747	8087359	Keller	1.65
SK555117	389019	8088344	Keller	2.40
SK555118	390723	8087502	Keller	1.71
SK555119	412004	8086018	Corkwood North	5.07
SK555120*	413636	8087735	Corkwood North	n/a
Note: co-ordinates are MGA zone 52 (GDA94)				





**Figure 2:** Initial reconnaissance sample locations

## Geophysical Surveying

The Company has completed a review of historical exploration data in the district, including airborne and ground electromagnetic surveying ("EM") targeting conductive base metal mineralisation. Graphite is also strongly conductive and many explorers interpreted graphite as the likely cause of the identified anomalism.

Geophysics in the Corkwood area has defined a conductive anomaly over a 20 kilometre strike length, which correlates with surface graphite mineralisation recently discovered in the tenement). Surface rock samples collected from the geophysical anomaly area, as shown in Figure 2, include:

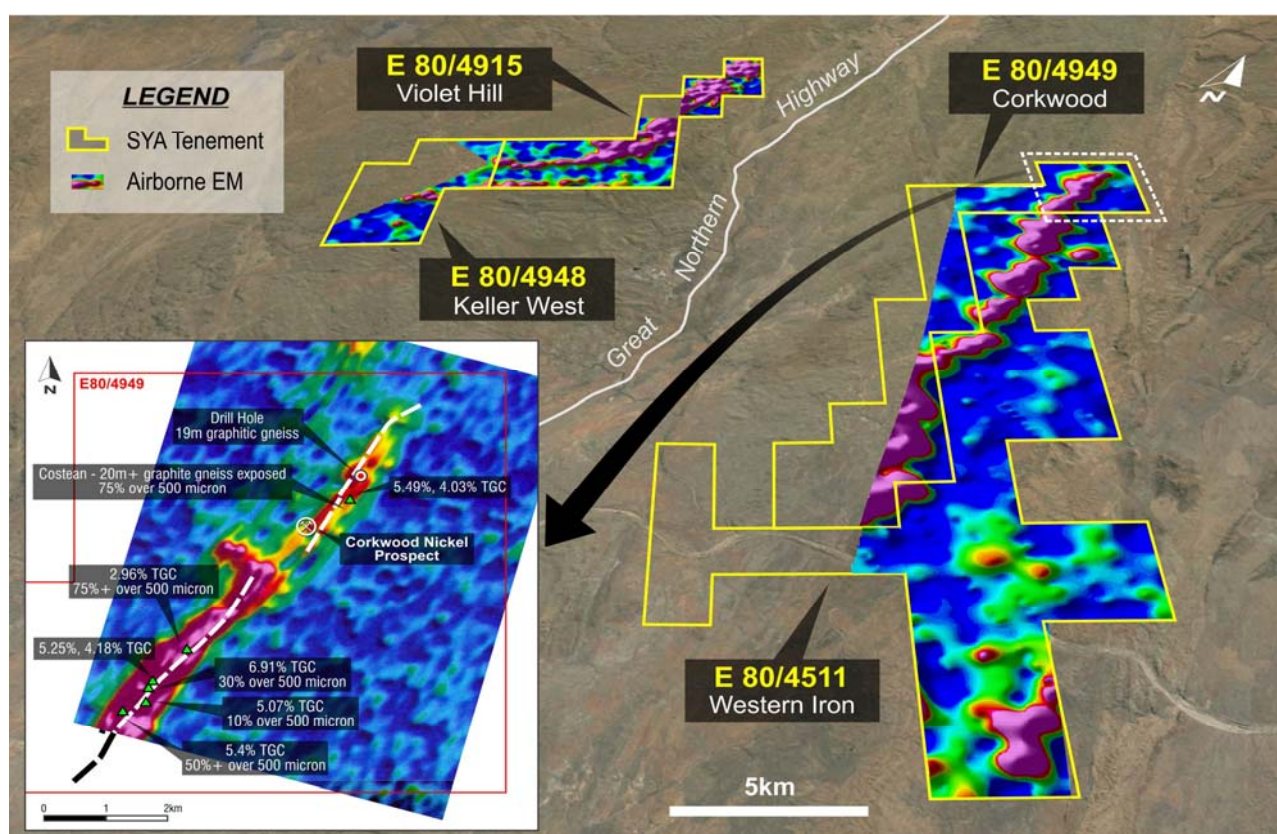
- Northern Area – up to 6.91% TGC<sup>1</sup>; and
- Southern Area – up to 7.25% TGC.

<sup>1</sup> Total Graphitic Carbon ("TGC")



Geophysics in the Keller area has also defined several conductive anomalies, including one over 5 kilometres in strike extent, coincident with several high-grade graphite occurrences.

The geophysical data represents a low-cost exploration methodology for identifying conductive anomalism in the district. Further geophysical surveying is being planned to assist with further exploration and drill targeting.



**Figure 3: Geophysical Survey Results**

## Petrography

Prices for graphite vary based on parameters including carbon purity, size, impurities and shape. Flake size is one of the critical elements of graphite pricing, especially for use in the new technology sectors. Jumbo and large flake sizes attract premium pricing and are expected to be in strong demand, driven by the growing use in new technologies such as lithium-ion batteries and super capacitors.

Table 1 demonstrates the premium pricing for graphite flakes above 300 micron.



Table 3: Flake Size				
Graphite Product	Carbon Content %	Mesh Size	Graphite Size Micron	Approximate Price US\$/t*
<i>Jumbo Flake</i>	94 – 97%	+48	>300	\$2,000
<i>Large Flake</i>	94 – 97%	-48 to +80	180 – 300	\$1,300
<i>Medium Flake</i>	94 – 97%	-80 to +100	150 – 180	\$1,100
<i>Fine Flake</i>	94 – 97%	-100 to +200	75 – 150	\$750
<i>Amorphous</i>	80 – 85%	-200	=<75	\$450
<i>Synthetic</i>	99.95%			+\$7,000
Source: Various				

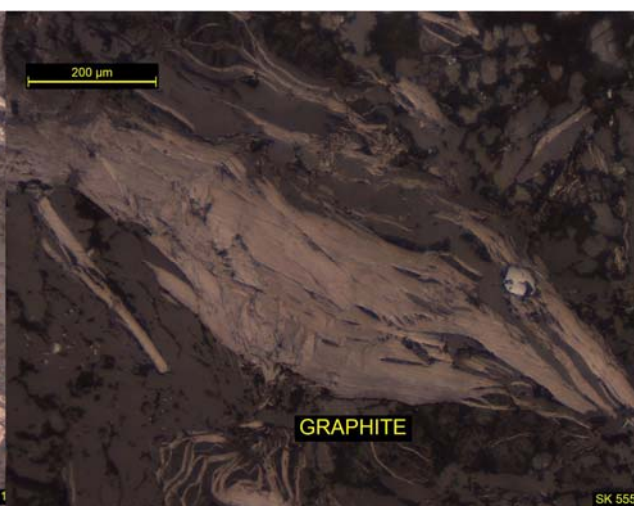
Other important economic considerations of large flake graphite include:

- Widest range of end uses when compared to finer and amorphous graphite;
- Substitution is expensive; synthetic graphite prices are substantially more expensive than jumbo flake prices; and
- Larger flake graphite is more amendable to processing into value-added graphite products like expandable and spherical graphite.

Seven East Kimberley project surface rock samples were submitted to Townend Mineralogy Laboratory for polished thin section preparation and petrographic description. Five of the samples were collected from the northern portion of the Corkwood lease, one from the southern portion and one from the Keller area. Sample locations in the Corkwood North area are outlined in Table 2 and sample locations displayed in Figure 2.



**Figure 4:** Sample SK555108 which assayed 7.25%TGC with 75% of the graphite flakes over 500 micron in length with 10% over 1,000 micron



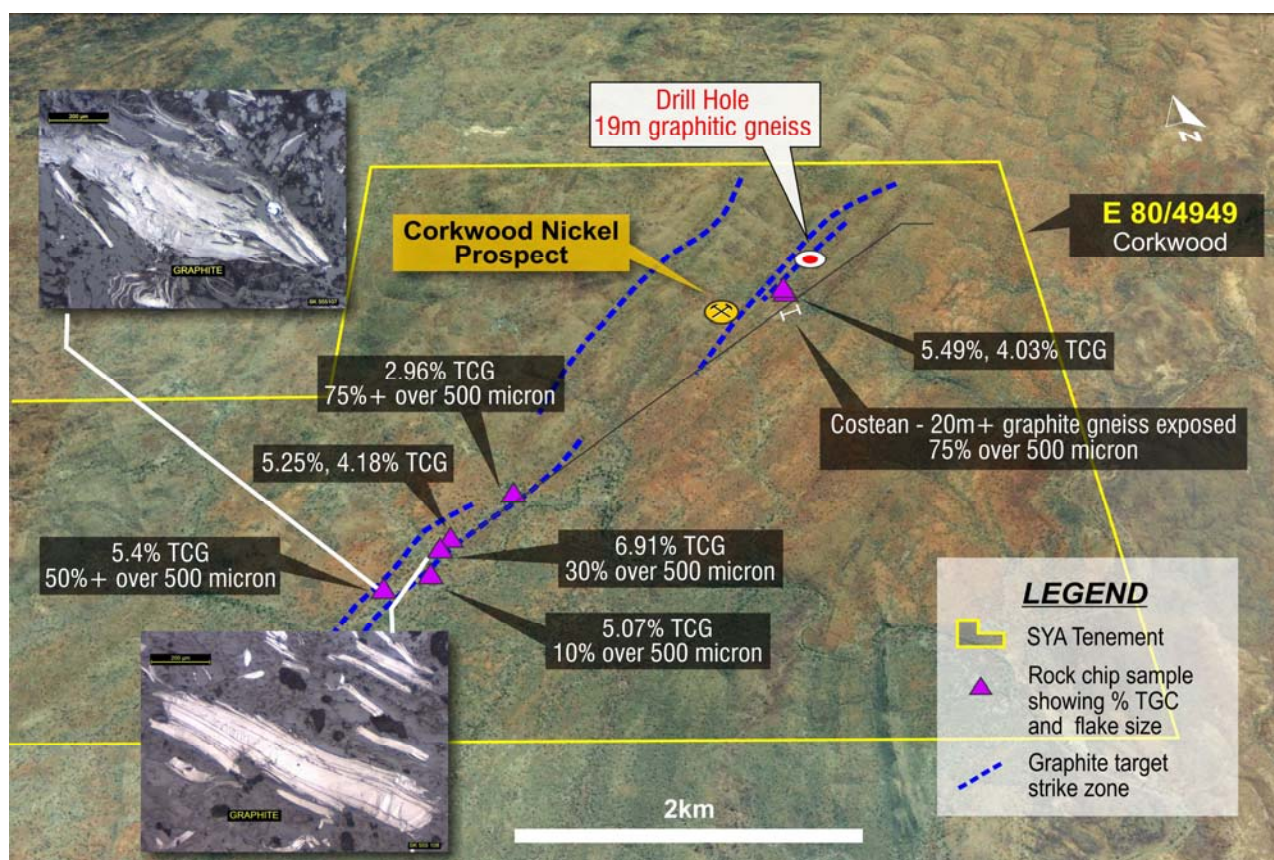
**Figure 5:** Sample SK555107 which assayed 5.4%TGC with 50% of the graphite flakes over 500 micron in length



**Table 4 – Summary Graphite Assay and Petrographic Description**

Sample	Area	Assay TGC	Graphite Flake Form
SK555103	Corkwood (North) 412343E 8086479N	2.96%	<ul style="list-style-type: none"> <li>Over 75% is +500 micron length 10% is over 1000 micron (1mm) in length</li> </ul>
SK555106	Corkwood (North) 412032E 8086143N	6.91%	<ul style="list-style-type: none"> <li>Over 30% is +500 micron length</li> </ul>
SK555107	Corkwood (North) 411817E 8085943N	5.4%	<ul style="list-style-type: none"> <li>Over 50% is +500 micron length</li> <li>Remainder commonly 200 micron+</li> </ul>
SK555108	Corkwood (South) 404458E 8073524N	7.25%	<ul style="list-style-type: none"> <li>Over 75% is over +500 micron in length</li> <li>10% is over 1000 micron in length (1mm)</li> </ul>
SK555117	Keller Creek 389019E 8088344N	2.4%	<ul style="list-style-type: none"> <li>Fine flake, rarely longer than 100 micron</li> </ul>
SK555119	Corkwood (North) 412004E 8086018N	5.07%	<ul style="list-style-type: none"> <li>30% is over 500+ micron in length</li> </ul>
SK555120	Corkwood (North) 413636E 8087735N	n/a	<ul style="list-style-type: none"> <li>Over 75% is +500 micron length 10% are 1mm or longer (1000 micron)</li> </ul>

Note: co-ordinates are MGA zone 52 (GDA94) The graphite flake size is a visual estimate of the graphite morphology



**Figure 6:** Petrography sample locations, Corkwood North



The Corkwood rocks are classed as graphite marbles, with the calcite as a replacement mineral of metasomatic origin and related to alteration during weathering. Original feldspar, mica and sulphide have also changed during weathering causing the graphite flakes to be disrupted. The graphite shows good orientation with flakes frequently in excess of 500 micron in length and with widths typically up to 50 micron or more, with a population of finer material within the marble.

The Keller lease sample is a quartz arenite with fine flake graphite identified in the one sample tested.

## **Next Steps**

The Company is planning to drill test the prospective Corkwood leases during the fourth quarter, calendar 2015. A staged exploration approach to target the most prospective areas is planned, including:

- Geological mapping and sampling (with further assaying and petrology) along the graphite target horizons;
- Identification of those areas with larger graphite flake size – high purity and or grade/ thickness;
- Acquisition of available digital electromagnetic geophysical data and interpretation and modelling;
- Planning for a VTEM survey over the southern Corkwood area where little prior geophysical work appears to have been carried out;
- Drill testing of priority targets to define thickness and grade of mineralisation, once statutory and Native Title requirements have been completed; and
- Test work on drill and other samples to determine the grade, recovered flake size and purity of the graphite and its suitability for high technology use.

The Company also continues to progress the evaluation of other project acquisition opportunities

## **Tenement Schedule**

The Company currently has no interest in any mining tenements.

### **For more information, please contact:**

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Sayona Mining Limited is an Australian, ASX-listed, company focused on sourcing and developing high purity flake graphite for use in the rapidly growing new technology sectors.

Please visit us as at [www.sayonamining.com.au](http://www.sayonamining.com.au)



## **Competent Person Statement**

The information in this report that relates to Exploration Results is based on information compiled by Mr Simon Attwell, a Competent Person, and who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Attwell is an employee of Attgold Pty Ltd ("Attgold") which provides geological services to Sayona. Mr Attwell is a financial beneficiary, being a director and shareholder of Attgold if Sayona exercises its option to purchase the East Kimberley Graphite project.

Mr Attwell has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Attwell consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

## **Previous Disclosure - 2012 JORC Code**

Certain Information relating to Mineral Resources, Exploration Targets and Exploration Data associated with the Company's projects in this June 2015 Quarterly Report has been extracted from the following ASX Announcements:

- 8 July 2015 – Strategic Entry into the Graphite market
- 9 July 2015 – Geophysics Highlights Prospective Targets
- 10 July 2015 – Jumbo and Large Flake Graphite Identified at East Kimberley project
- 20 July 2015 – Drill Target and Metallurgy Program

Copies of these reports are available to view on the Sayona Mining Limited website [www.sayonamining.com.au](http://www.sayonamining.com.au). These reports were issued in accordance with the 2012 Edition of the JORC Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement