



# ASX ANNOUNCEMENT



5 August 2015

## ACQUISITION OF AN ADVANCED GRAPHITE PROJECT

**Sayona Mining Limited (ASX: SYA) ("Sayona" or "The Company")** is pleased to announce it has signed a Term Sheet to acquire the Itabela large flake graphite project in Brazil. The Term Sheet provides Sayona with an exclusive four month option-to-purchase and due diligence period.

Itabela is an advanced stage graphite project with a substantial catalogue of drilling and pilot scale test work. The Company believes the project can be fast tracked towards production by completion of a Feasibility Study, permitting and securing off-take partners.

The key attractions of Itabela, include:

- **Extensively drilled** - approximately 8,000 metres of auger drilling in ~1000 holes. An internal non-JORC compliant mineral resource will be converted to a JORC compliant resource during the due diligence period by a Sayona Competent Person;
- **Simple process flowsheet** - Itabela has been subject to bench and more than 30 tonnes of pilot scale metallurgical test work. The pilot testing confirms high recoveries and concentration grades can be achieved using proven, straightforward flotation technology;
- **Simple deposit** - the deposit oxidised zone extends from surface down to a minimum of 40 metres depth, is friable and is expected to be mined without the use of explosives;
- **Large mineral rights package** – 13 mineral rights totalling 13,316 hectares located in the largest graphite producing district in the world outside of China. Itabela is located near three open-cut graphite mines in operation and a history of over 60 years of continuous graphite production;
- **Excellent infrastructure** - close to established infrastructure including port, power, water, labour, roads and an airport. The Company expects the well-established infrastructure will assist in delivering low operating and capital costs; and
- **Low tax jurisdiction & financing incentives** – The state of Bahia has very attractive tax incentive schemes for new mineral project developments.

The Company will commence an immediate detailed due diligence review of the project including the preparation of a JORC compliant Mineral Resource and detailed review of all the metallurgical data produced through the bench and pilot studies.

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## Itabela Project Overview

### Ownership and mineral rights

Brasil Grafite S.A. ("Brasil Grafite"), is a privately owned Brazilian exploration and development company which owns 100% of the Itabela graphite project ("Itabela"), comprising 13 exploration permits with a total area of 13,316 hectares.

### Location and infrastructure

Itabela is located in the north-eastern state of Bahia, Brazil, 800 kilometres north of Rio de Janeiro and 500 kilometres south of the state capital, Salvador. The nearest town, Itabela, is situated 5 kilometres to the south-east and has an estimated population of 28,500.

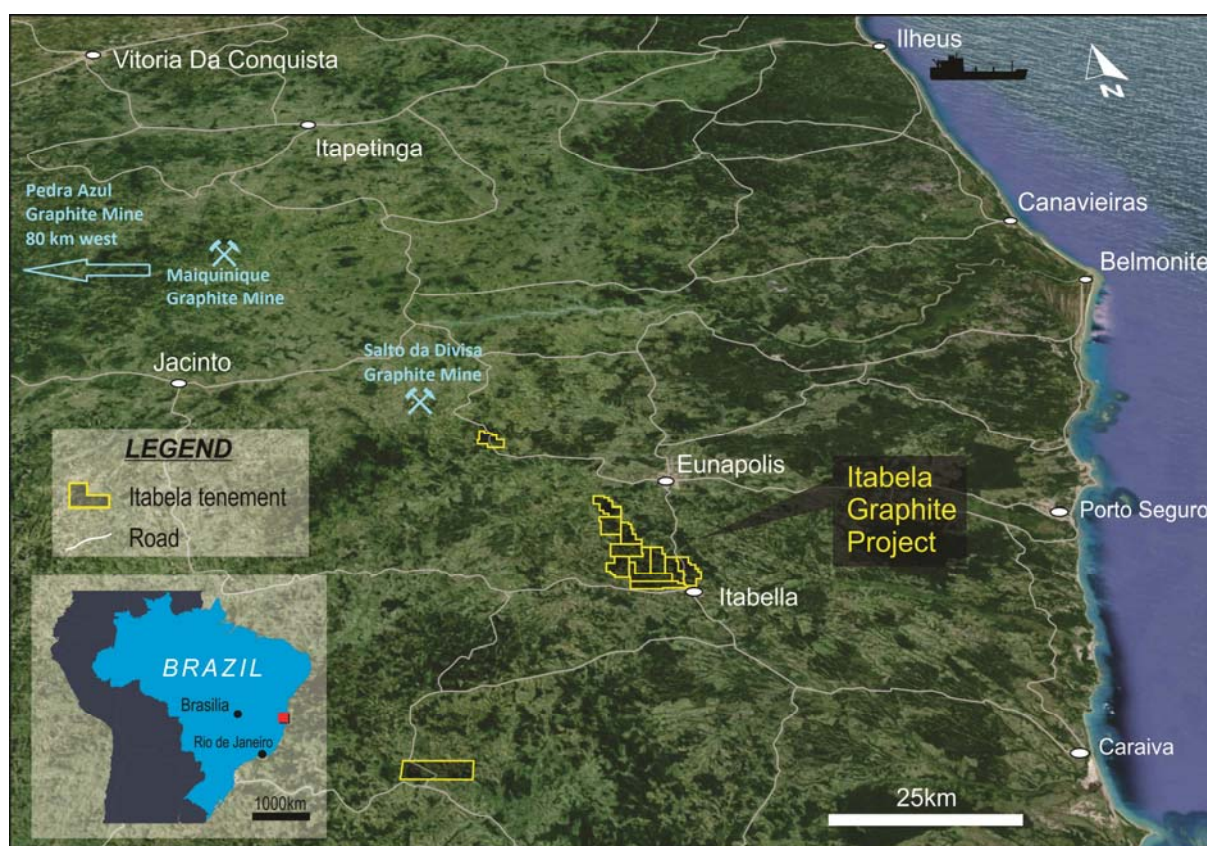


Figure 1: Itabela location

Itabela is located in a major graphite district with three operating graphite mines. Brazil is the second largest graphite producer in the world and home to the largest producer of high quality graphite outside of China with a history of over 60 years of continuous production.

The district has a well-developed mining culture and excellent project development infrastructure, including:

- 90 kilometres by sealed road to an international airport at Porto Seguro;

- 270 kilometres by sealed road to the deep-water port of Ilheus (export for final product); and
- Power, labour, water and gas within 5 kilometres of the project area.

### **Exploration and drilling summary**

Itabela is well explored with extensive mapping, sampling, geophysics, drilling and technical studies. Key aspects of these programs, include:

- Geophysics programs using resistivity methods totalling approximately 1 kilometre have been completed. The geophysics has demonstrated strong correlations with interpreted geological cross sections and known anomalies;
- Approximately 8,000m of drilling has been undertaken at Itabela by Brasil Graphite out of which approximately 4,000m are used for an internal resource estimation. The average hole depth is 9 metres with a maximum depth to 44 metres. A current established non-JORC compliant resource is planned to be converted to a JORC compliant resource by a Sayona Competent Person; and
- An internally prepared Preliminary Economic Study has been prepared along Canadian N43-101 guidelines although it is a non-compliant report. The study was based on an internal resource estimate and bench-scale metallurgical test work. The report provided an estimate of capital and operating costs which Sayona will reaffirm as part of a Feasibility Study post acquisition.

### **Geology and mineral targets**

Itabela is located in the Araçuaí Orogen, in the central eastern portion of Brazil. The main graphitic mineralization is hosted in the sector called Central Core, where pelitic sediments' deposits overlaid synkinematic granites during the Neoproterozoic and early Cambrian age. Itabela is a sedimentary deposit that shows high levels of strong metamorphism along with a high degree of foliation. Mineralization appears in the soft zones with partial anatexis oriented along the north-south to east-west strike with high degree of dip (sub-vertical to vertical).

In general, mineralization is structurally controlled by the shearing zone along the regional fault. Mineralization is easily identified visually, showing the presence of graphite flakes.

The project consists of two main target areas, São Rubens and São Manuel, and 8-10 secondary and satellite targets within a continuous structure over strike length 7.5 kilometres long.





**Figure 2:** Graphite samples and drilling at Itabela

### **Metallurgy and process flow sheet development**

The Itabela project has been the subject of extensive metallurgical testing at bench and pilot scale. More than 30,000 kilograms (30 tonnes) of representative sample has been pilot tested at Fundação Gorceix, a major mineral research centre located in Ouro Preto, State of Minas Gerais, and home of the oldest mining school in Brazil. Several other major Brazilian graphite and mining companies utilize Fundação Gorceix as a pilot plant testing facility.

The metallurgical test work was managed by a team of professionals that have over 30 years of experience solely on graphite mining, processing, product quality and marketing. The vast past experience includes roles with the Nacional de Grafite Ltda (world's biggest graphite producer), including production supervision, plant construction, optimization and operation as well as graphite sales, concentrate quality and distribution.

#### ***Bench scale test work***

Metallurgical and process test work was performed in February 2013 at the Centro de Desenvolvimento da Tecnologia Nuclear (CDTN) located at the Federal University of Minas Gerais in Belo Horizonte, Brazil. Preliminary process test work was also conducted at Lyndtek Inc. in Lakewood, Colorado, USA. Grade testing performed at Hazen Research Inc in Denver, Colorado and SGS-Geosol in Belo Horizonte.

Five bench scale tests were performed through end to the end of August 2013. A process flow sheet consisting of material homogenisation, segregation, grinding, conditioning, flotation, drying and packing was developed and tested. The flow sheet is similar to the nearby Nacional de Grafite Salto da Divisia operation.



**Figure 3:** Bench scale test work

### *Pilot planting testing*

Pilot plant test work was completed during 2014 and early 2015. A sample of 30 tonnes of material believed to be representative of the deposit was collected in 3 different points.

A simple process flow sheet comprising crushing, screens, milling and flotation was developed. Several optimizations to test retention times, reagents and milling times was completed.



**Figure 4:** Pilot scale test work

### **Development plan**

Sayona intends to fast track Itabela towards production by completing a Feasibility Study and the necessary environmental approvals which is expected to take 12 to 18 months.

### **Transaction terms**

Sayona has signed a four-month, exclusive binding term sheet to acquire the Itabela project. Key terms include:

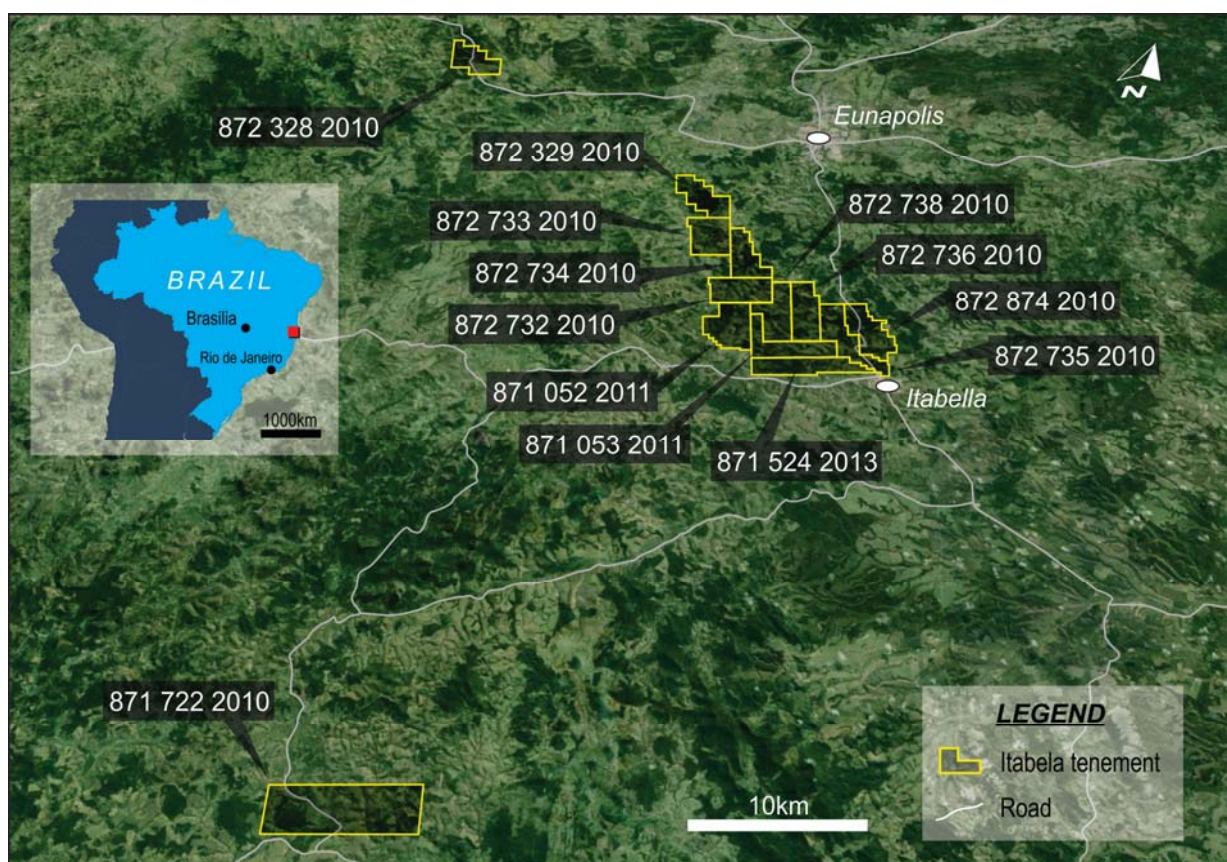
- Monthly option payment of US\$15,000 during the four month due diligence period;



- US\$3.5 million purchase price should Sayona elect to acquire Itabela; and
- Vendor retains a 2% NSR over all mineral rights.

During the due diligence period, Sayona intends to complete independent technical reviews of the drilling and resource, and metallurgical test work.

The Company will investigate a number of different financing options to fund the acquisition price, including strategic investment in the project by potential product off-takers, equity, royalty streams, and other finance options that may be available in Brazil.



**Figure 5:** Itabela 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.

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