



ASX ANNOUNCEMENT

18 April 2013

Strong Results for Tanzanian Mineral Sands Prospects

Highlights

- **8,800m of aircore drilling at the Fungoni mineral sands prospect in Tanzania has led to an Exploration Target* of 5-10 million tonnes @ 4-6% Heavy Minerals (HM)**
- **Drill results included the following:**
 - **10m @ 12.7% HM in hole CSAC0007**
 - **8m @ 16.3% HM in hole CSAC0029**
 - **16m @ 9.4% HM in hole CSAC0040**
 - **20m @ 6.6% HM in hole CSAC0016**
 - **12m @ 6.7% HM in hole CSAC0041**
- **Assemblage of the heavy minerals is exceptional with 25% zircon, 5% rutile and 44% ilmenite based on previous drilling and preliminary assessment of recent drilling**
- **Excellent potential remains for several similar discoveries in the Fungoni area given the reconnaissance nature of previous exploration and the small lateral extent of the targeted deposits**
- **On Syrah's northern Tanzanian Mineral Sands tenement block, a 4,584km aeromagnetic survey and reconnaissance field work confirmed that there are extensive medium to high grade heavy mineral accumulations with high tonnage potential particularly in the zone from South Tanga to Tajiri – a distance of 60km**
- **The northern mineralisation is dominated by ilmenite (70-80%) with up to 20% rutile plus zircon in the assemblage.**

Introduction

Syrah Resources Limited (SYR or Syrah) has a 100% interest in an extensive package of mineral sands tenements along the Tanzanian coastline which cover most of the country's known occurrences of mineral sands. The eastern coast of Africa is well known for world class mineral sands deposits, with deposits being mined in South Africa, Madagascar and Mozambique to the south, and Kenya to the north of Tanzania (Figure 1).

**The targeted tonnage and grade are conceptual in nature. There has been insufficient work to define a Mineral Resource under the JORC Code and it is uncertain if further exploration will result in the determination of a Mineral Resource.*

Syrah Resources Ltd (ABN 77 125 242 284). Level 9 - 356 Collins Street, Melbourne Victoria 3000 Australia
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ASX Code SYR

Current Corporate Structure

Ordinary Shares

Issued Shares: 147,767,623

Options

Exercisable at \$0.26: 3,101,967

Exercisable at \$2.21: 500,000

Exercisable at \$3.87: 1,000,000

Major Shareholders

HSBC Custody Nom Aust Ltd 14.63%

Basapa PL 9.55%

National Nom Ltd 7.45%

Copper Strike Ltd 7.44%

Board of Directors

Mr Tom Eadie

Non-Executive Chairman

Mr Paul Kehoe

Managing Director

Mr Michael Chester

Non-Executive Director

Ms Melanie Leydin

Company Secretary

Key Projects

Balama Graphite Project (Mozambique) and Nachingwea Graphite Project (Tanzania)

Balama is the largest and one of the highest grade flake graphite and vanadium projects globally. Balama is mainly medium to coarse flake and Nachingwea is fine to coarse flake.

Tanzania Mineral Sands

A very prospective portfolio of mineral sands licence areas, some of which have drill results up to 28% heavy minerals.

Website

www.syrahresources.com.au



Figure 1 - Major heavy mineral deposits in southern Africa

Syrah’s tenements include a package in northern Tanzania that covers almost 100km of prospective stratigraphy starting just south of Base Resources’ (ASX:BSE) Kwale mineral sand development in Kenya, and a central package located north and south of Dar es Salaam in central coastal Tanzania (Figure 2).

In the Fungoni area south of Dar es Salaam, Syrah completed an 8,800m drill programme which has outlined a small, high grade, zircon-rich deposit. The potential for several similar deposits in the immediate Fungoni area is considered to be excellent.

Syrah has recently covered most of the northern tenements with a detailed aeromagnetics survey which has confirmed several identified target areas and highlighted several other areas as highly prospective.



Figure 2 - Tanzanian coastline showing the licences in the portfolio and HM project locations

Fungoni Drilling

Syrah completed an 8800m aircore drilling programme using a Wallis drill rig at the Fungoni Prospect. Based on this programme, Syrah has established an **Exploration Target* of between 5 and 10 million tonnes containing 4-6% heavy minerals (HM). The representative assemblage of heavy minerals at Fungoni is exceptional with 25% zircon, 5% rutile and 44% ilmenite** based on previous drilling.

Fungoni is located on the lightly inhabited coastal sandy flats 30km south of Dar es Salaam. Previous exploration, which has only included 500m spaced pit sampling on lines 5 kilometres apart (see Figure 3), highlighted large areas containing >1% HM. As can be seen on the Figure, only two of these reconnaissance lines have been completed on the current tenements, leaving large areas totally unexplored.

*** The targeted tonnage and grade are conceptual in nature. There has been insufficient work to define a Mineral Resource under the JORC Code and it is uncertain if further exploration will result in the determination of a Mineral Resource.**

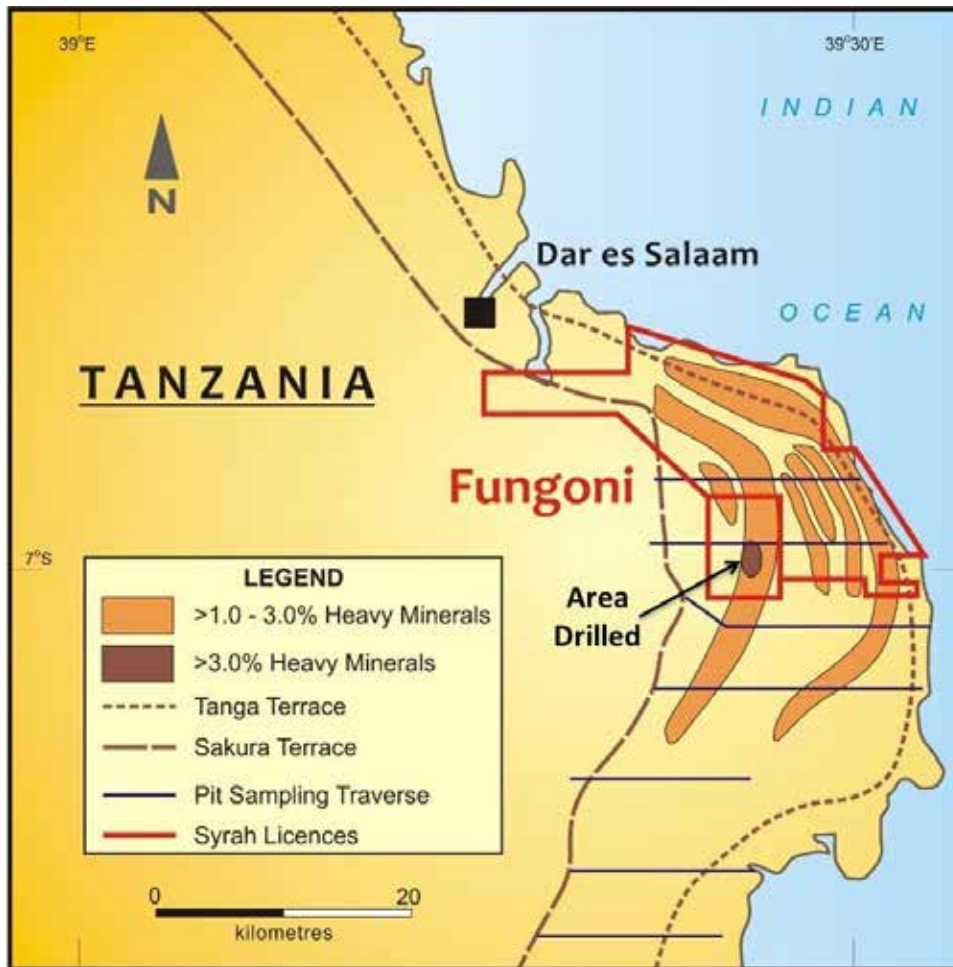


Figure 3 – Fungoni project licences showing known high grade drilled area (Fungoni prospect) and underexplored anomalous areas (>1% HM). The underexplored areas are covered by reconnaissance sampling on lines 5km apart in the south and virtually no coverage in the north of the licences.

The primary area of the drilling is shown in Figure 4a with the deposit itself extending from Line A to Line L, a distance of 1,100m. In total, 294 holes were drilled with a nominal spacing of 100m x 100m in the primary area. Some locations were missed because of swampy terrain. The best part of the deposit runs from Line B to Line K, as shown in Figure 4b which exhibits the average grade in the hole multiplied by the thickness of the intersection.

In this 900m long zone, the deposit ranges up to 20m thick at 6.6% HM (drill hole CSAC0016) and over 400m wide. Other impressive intersections in this zone include 16m at 9.4% HM in drill hole CSAC0040, 10m at 12.7% HM in drill hole CSAC0007 and 8m at 16.3% HM in drill hole CSAC0029.

Given the compact nature of the Fungoni deposit (1,100m x 400m) and the coarseness of previous exploration as shown in Figure 3 (exploration lines 5km apart with pit sampling every 500m), there is excellent potential for the discovery of many other Fungoni-like deposits in these anomalous areas. Further, more detailed sampling is planned particularly to the north and east of Fungoni.

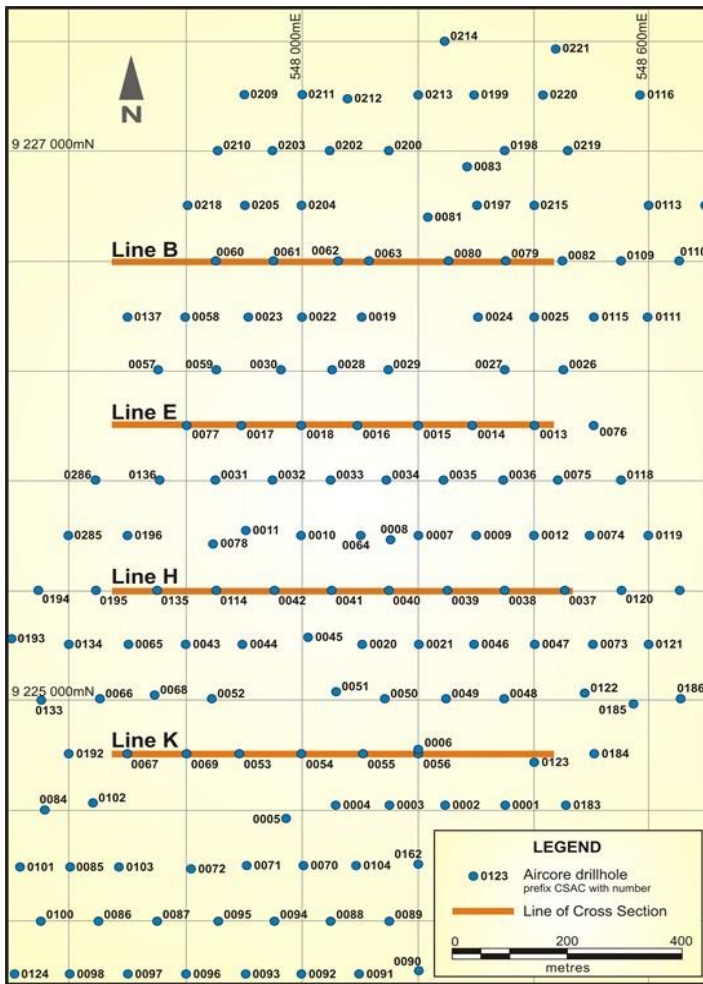


Figure 4a

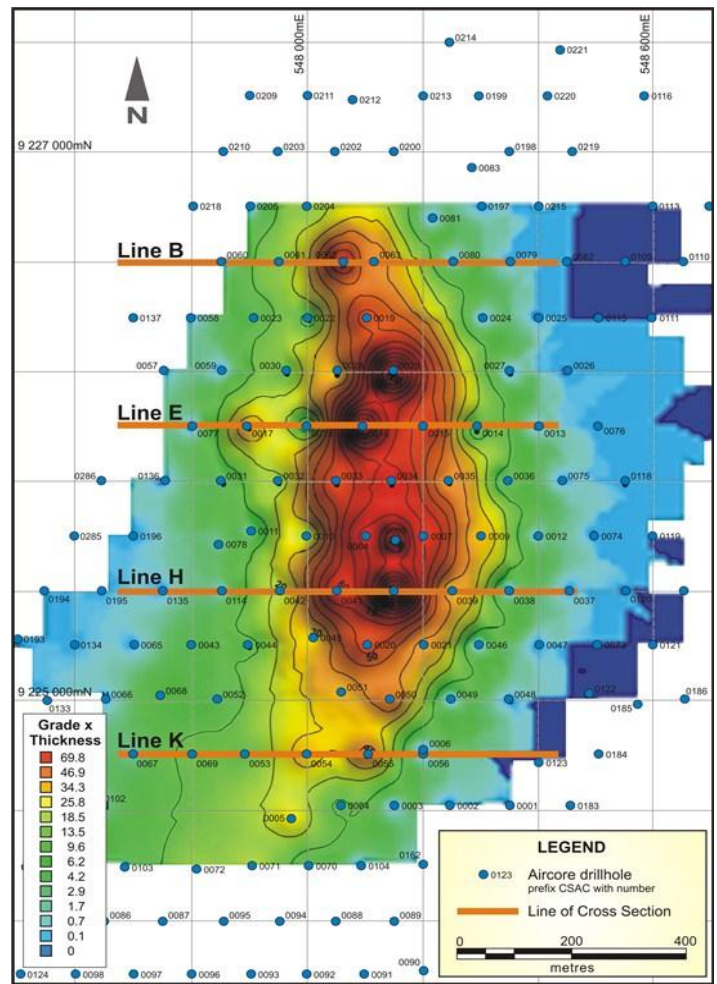


Figure 4b

Drill hole location plan (Figure 4a) and an average HM grade x thickness contour plan (Figure 4b). The locations of the cross section shown in Figure 5 are highlighted in this diagram.

The assemblage of the heavy minerals is exceptional with 25% zircon, 5% rutile and 44% ilmenite. This is based on previous drilling and field assessment of individual samples. A large selection of samples from the recent drill programme is currently undergoing assessment of composition. Magnetic separation has been completed and both chemical analysis and further physical separation are now being completed. Preliminary results show that the non-magnetic portion of the heavy minerals, which contains all of the zircon and the rutile, averages 39% across the deposit, suggesting that zircon and rutile assemblages may on average be even better than the numbers estimated above.

Detailed cross sections are shown in Figure 5. These four sections, Lines B, E, H and K, cover the best part of the deposit at a 300m spacing as shown in Figure 4b. There is a vertical exaggeration of 5 to 1 in the diagrams. The deposit is shallow and high grade, particularly in the central part. There is a suggestion of a second, deeper, lower grade zone slightly to the west on Sections B, E, H and K. This is outlined more completely when all the drilling is viewed together as is shown later on in Figure 6a.

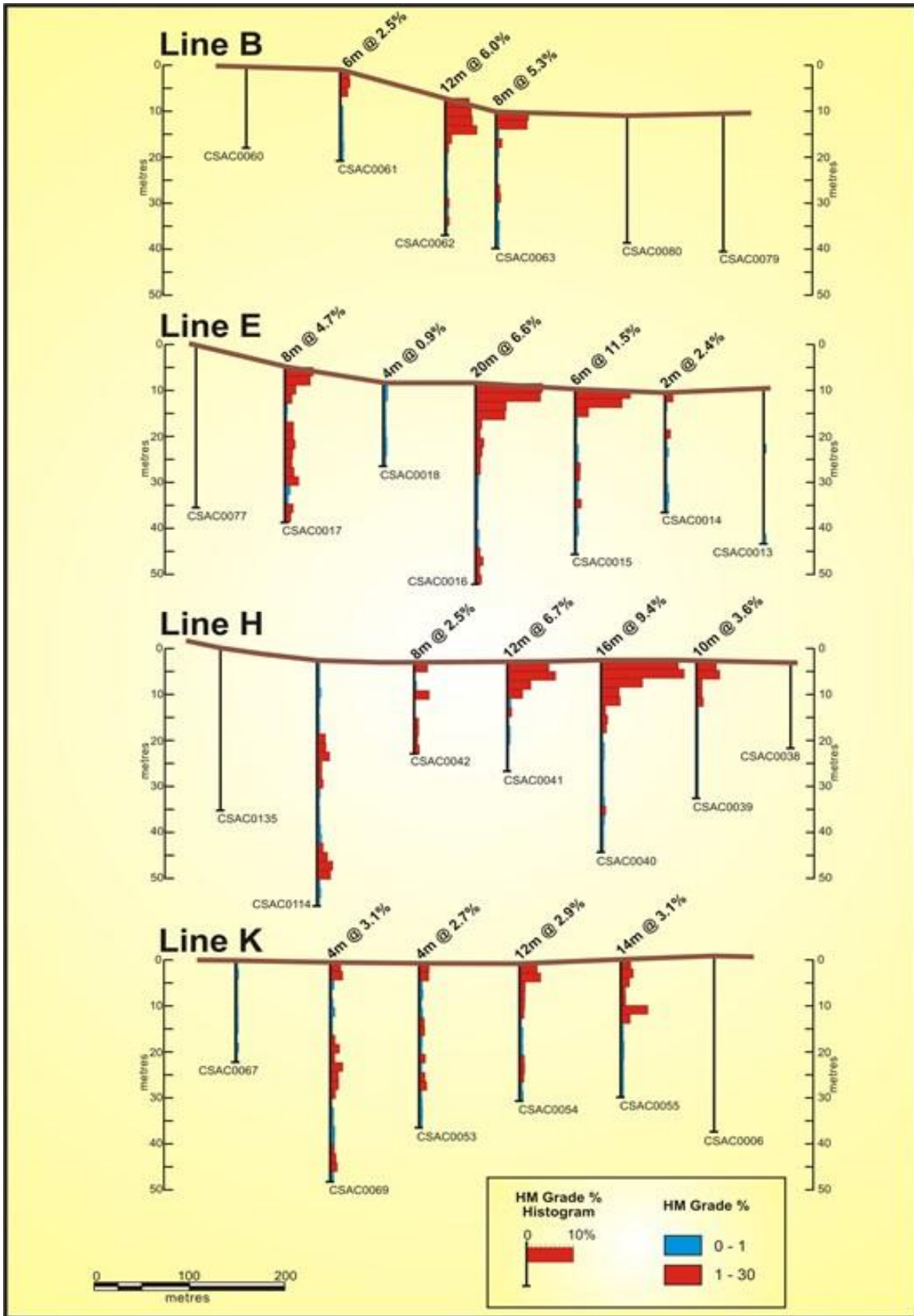


Figure 5: Cross sections B, E, H and K showing the Fungoni deposit in detail at a 300m line spacing. There is a vertical exaggeration of 5 to 1 in the drawings.

Figure 6a shows the deposit in 3-dimensions at a vertical exaggeration of 2 to 1. As well as illustrating the continuity of the deposit, the figure shows that there is a second, deeper deposit slightly offset to the west of the main deposit that is shown in orange. This zone has the potential to double the size of the Fungoni deposit, albeit at a lower grade. Figure 6b is the same information as in Figure 4b shown in 3-dimensions. It depicts the contoured product of the average grade x thickness of the mineralisation in each drill hole.

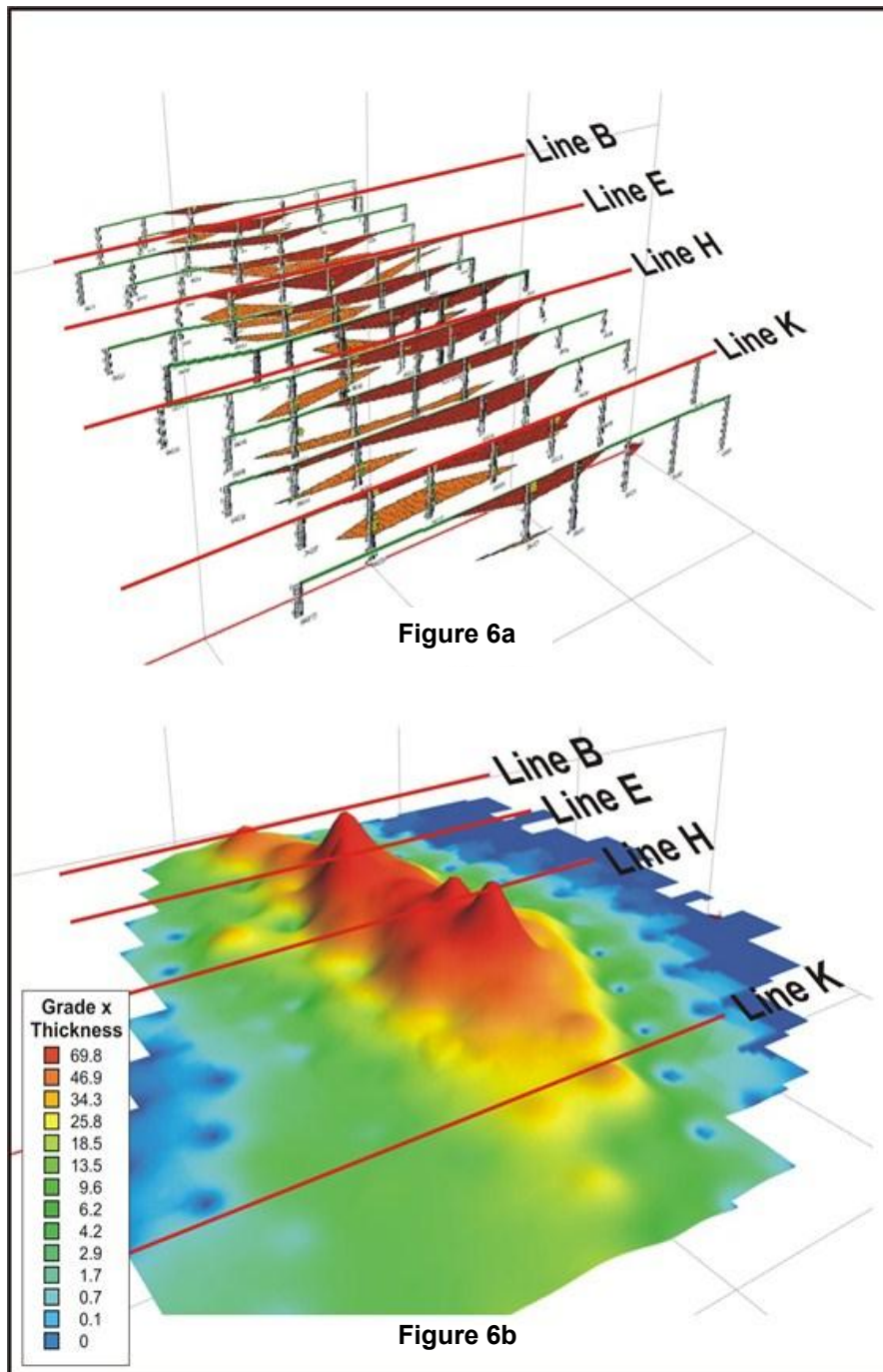


Figure 6 – Different views of the Fungoni deposit. Figure 6a shows stacked cross sections at a 2 to 1 vertical exaggeration. Note a second deeper deposit which is shown in orange. Figure 6b is a 3-dimensional depiction of the contoured of the product of the average grade x thickness of the mineralisation in each drill hole.

Northern Tenements in the Tanga area

The main area of focus for Syrah in this northern tenement package has been the four licences south of Tanga. The coastline in this area runs uniformly north northeast and has several major rivers entering the Indian Ocean over the 60km strike length of the licences. The three licences **contain several zones that have been interpreted to be >3% HM** from surface sampling, some exploration pits and some limited hand auger drilling as shown in Figure 7. Of these anomalous zones, only Tajiri has been seriously followed up with further auger drilling. Some impressive mineralisation was intersected at Tajiri in this past drilling programme including **14 m containing 9.2% heavy minerals and 9 m containing 12.3% heavy minerals**.

Activity by Syrah in this area has included an aeromagnetic survey covering the South Tanga, Tongani, Kimanga and Tajiri licences, and a field examination of the area. Both the magnetics and the field examination were aimed at testing the accuracy of this map which indicates that **the lower grade halo of the mineralisation is continuous over a 60km strike length with a width of up to 5km**. The magnetic survey had the additional objective of identifying new target areas while a second objective of the field examination was to test the mineral assemblage along the entire strike of the mineralisation.



Figure 7 – South Tanga to Tajiri trend showing key prospects and anomalous areas

The aeromagnetic survey over the South Tanga to Tajiri trend (Figure 8) had a flight height of 30m and a line spacing of 100m. In total 4,584km of aeromagnetics/radiometrics was flown. Detailed analysis of the data has confirmed that the known mineral sand deposits can be detected with this method due to their high ilmenite content, that they are more continuous than is able to be observed by geological mapping on the ground, and that there are several new areas on the licences that are high quality prospects for further heavy mineral accumulations.

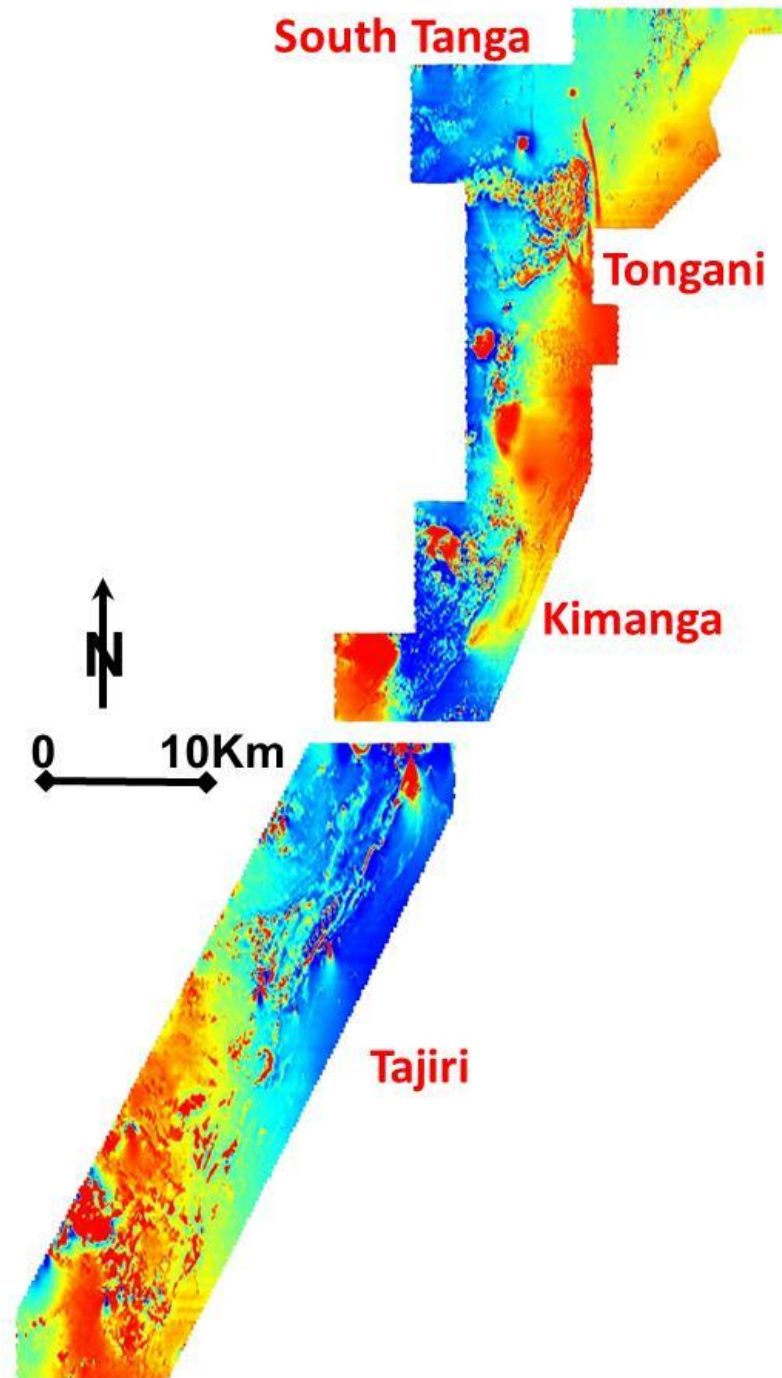


Figure 8 – Aeromagnetics covering the South Tanga to Tajiri trend. Detailed examination confirms the good continuity of the mineral sand deposits and outlines new target areas.

The field examination also showed that Figure 7 is a fairly accurate depiction of the heavy mineral content on the licences. Certainly the 1-3% HM mineralisation extends in an east-west direction from the current day beaches inland to the western edge of the Tanga Terrace. Mineralisation also extends in a north-south direction from at least South Tanga to Tajiri. The higher level Sakura Terrace was not visited on this trip.

In addition, two of the high grade areas shown on Figure 7 (Tongani and Tajiri) were inspected and both showed impressive outcropping high grade mineralisation. At Tongani, high grade mineralisation comes to surface, and is easily observable, over an area of several hundred metres by about a kilometre.



Figure 9 – Clockwise from left: Tongani high grade zone; close up of Tongani high grade zone; result of initial panning of Tongani sand showing separation of black heavy minerals.

The Tajiri zone was also impressive at surface with obvious high grade mineralisation (Figure 10), although the surface exposure observed was limited to about 300 metres along the road across the deposit. Both the Tajiri and Tongani zones appear to be dominated by ilmenite, although some zircon and rutile were observed at every site as discussed later in this report.



Figure 10 – Left: Exposure of high grade mineral sands at Tajiri and Right: Simple panning of the sand results in easy separation of the black heavy mineral content.

On the Kimanga licence, which is in between Tongani and Tajiri, the most impressive zones of mineralisation observed were on the current day beaches. Figure 11 shows that the same heavy mineral concentrating environment that was seen in old beaches at Tongani and Tajiri is still working today.



Figure 11 – Heavy mineral sand accumulations on the present day beach on the Kimanga Licence.

The assemblage of the heavy minerals was examined by hand lens at every site and samples were taken for later laboratory examination. It was clear from the field examinations that ilmenite is the dominant mineral at every location, ranging from 70 to 80% of the heavy minerals. Rutile ranged from about 5% at Tongani to over 10% at Tajiri and up to 20% in some of the Kimanga samples. Zircon appeared to be under 10% in most areas except for Tajiri where it was just over 10%. These levels of valuable heavy minerals confirm the findings of the previous explorers.

Future Mineral Sands Activity

A follow up programme of the prospective areas of the Fungoni area and the northern tenement block is now being planned. This will involve surface sampling and further drilling.

To allow Syrah to focus on its world class Balama Graphite and Vanadium Project in northern Mozambique, the Company is investigating putting all of its non-Balama assets, including the Tanzanian Mineral Sands Project, into a company that would be floated off as a separate ASX listed vehicle.

The information in this report as it relates to geology, geochemical, geophysical and exploration results was compiled by Mr Tom Eadie, FAusIMM, who is a Competent Person and Chairman of Syrah Resources Ltd. Mr Eadie has more than 20 years experience in the activities being reported on and has sufficient expertise which is relevant to the style of mineralisation and type of deposit under consideration. He consents to the inclusion of this information in the form and context in which it appears in this report.

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About Syrah Resources

Syrah Resources (ASX code: SYR) is an Australian resource company with a diversified exploration portfolio located in southeast Africa. The Company is rapidly progressing its core Balama Graphite and Vanadium Project in Mozambique to production. Balama is a 106km² granted prospecting licence located within the Cabo Delgado province in the district of Namuno in northern Mozambique. The project is approximately 265km by road west of the port town of Pemba. Pemba Port is a deep-water container port, and the third largest in Mozambique. The Balama project site is accessible by a sealed, main road, running directly from the airport and Pemba Port. The main road is located 1km from the airport.

Syrah's exploration portfolio also includes a strategic mineral sands portfolio in Tanzania, comprising eight tenement areas, some with high grade heavy mineral intersections, and the Nachingwea graphite project in Tanzania.