

Savannah Resources Plc / Index: AIM / Epic: SAV / Sector: Mining

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Savannah Resources Plc ('Savannah' or the 'Company') Testwork Confirms Broad Zones of Heavy Minerals at Jangamo Project, Mozambique

Savannah Resources plc (AIM: SAV) announces that it has received positive testwork results from follow-up analysis of samples collected from a 27 hole, 1,812m scout drilling programme (Figure 1) completed in November 2013. The results confirm broad zones of heavy minerals at its prospective 180km² Jangamo heavy mineral sands project ('Jangamo' or the 'the Project'), which is located in a world-class mineral sands province in southern Mozambique (Figure 2).

Highlights:

- Results confirm the potential for the Jangamo tenement to host a major heavy minerals system
- Assay results from heavy media separation and mineralogy test work confirm broad intersections of heavy minerals of up to 39 metres deep with total heavy minerals ('THM') of up to 3.5% including ilmenite, rutile/leucoxene and zircon
- Identified strike lengths of at least 6km and 10km with strong THM grades in three strand lines:
 - eastern finger with 18m at 3.5% THM
 - o eastern line with 24m at 3.2% THM
 - \circ $\,$ western line with 10m at 2.2% and 39m at 2.0% THM $\,$
- Initial work suggests that the mineralisation is low in slimes and the THM is ilmenite dominated with lesser magnetite, rutile/leucoxene and zircon further samples will be analysed
- Final Jangamo heavy mineral product will likely contain a high percentage of titanium dioxide ('TiO₂') minerals including ilmenite, leucoxene and rutile
- Commissioned leading mineral sands consulting group TZ Minerals International to scope out and characterise the potential of Jangamo and to outline a path for the Project through to a scoping study
- 2014 exploration programme is being designed and will comprise geophysics, further drilling and mineralogical studies to commence during Q2 2014
- World class province Jangamo is adjacent to Rio Tinto's major Mutamba¹ mineral sands deposit which, along with another licence area in Mozambique, has an exploration target of 7-12 billion tonnes at 3-4.5% THM

Savannah's CEO, David Archer said, "We are excited with the results returned from the first set of composite samples taken from our initial scout drilling campaign at our flagship Jangamo Project. Results have returned excellent concentrations of heavy minerals including ilmenite, rutile/leucoxene and zircon over some very broad intersections in two major zones, with strike lengths of at least 6km and 10km. There are excellent THM grades in three strand lines – the eastern finger with 18m at 3.5% THM, the eastern line with 24m at 3.2% and the western line with 10m at 2.2% and 39m at 2.0%. Further composite samples will be analysed in order to further prove up the resource potential but importantly, the results are consistent with the grades in the published data for Rio's Tinto's adjacent "tier one" Mutamba deposit.

"Given the early stage of the exploration programme and the large distances between our scout drill holes, in many cases over 5km, we have made excellent progress towards identifying a major heavy minerals system. The results confirm the prospectivity of the tenement and we'll now move to define the strike and lateral extents of the heavy mineral sequences. In line with this, I'm also delighted to report that we have established a close collaboration with the globally leading heavy minerals consultancy, TZ Minerals International Pty Limited, which will help guide a rigorous and effective approach to the Project."



Figure 1 – Drill Hole Locations

Project Geology

The recent scout drill programme focused on preliminary testing of three major morphological zones to determine their prospectivity to host mineral sands. First pass XRF assaying of the drilling highlighted that mineralisation was intersected in virtually all holes completed. Given the spacing between the scout drill holes, in many cases over 5km, these initial results are very encouraging. Five representative holes from the various morphological zones were chosen for the first phase of the follow up mineralogical test work. Anomalous intersections identified by the XRF analysis were then composited as follows:

- JMRC 005 0-18m
- JMRC 018 87-97m
- JMRC 023 60-71m
- JMRC 025 0-39m
- JMRC 027 0-24m

Further anomalous drill hole intervals identified by the first pass XRF analysis will be composited and subjected to mineralogical test work.

Geochemistry Testwork

The second phase of the drill hole analysis included dry screening to remove and determine the volume of slimes present in each sample followed by a heavy media separation to split the heavy minerals from the sample. The heavy minerals were then split into different mineral types using magnetic separation at various magnetic strengths and each magnetic fraction was analysed by XRF to confirm its geochemistry. A flow sheet showing the analytical process is contained in appendix 1.

Testwork has confirmed that the THM is likely to be ilmenite dominated with both primary and weathered ilmenite, with lesser rutile, leucoxene and zircon. Although the test work is preliminary in nature the material in the magnetic range is typically magnetite and titanomagnetite, the TiO_2 in the paramagnetic range is typically associated with ilmenite, while that in the weakly paramagnetic is weathered or secondary ilmenite and leucoxene, and that in the non-magnetic rutile. Considering the TiO_2 from the XRF results across the various magnetic fractions it is likely that the final product will contain a high percentage of TiO_2 minerals including ilmenite, leucoxene and rutile. It is important to note that given the preliminary nature and small sample number (five) of samples, these ranges could change as further work is completed.

Follow up testwork will require a greater mass and will seek to isolate minerals into potential products through the use conventional separation techniques. This work should give indicative grades of potential products and provide basic processing data for later flowsheet development testwork.

Slimes content for the five samples varied from 5.9% in JMRC023 to 17.9% in JMRC025 with the majority of the samples less than 10% slimes. Given the early stage of the exploration project and the very wide spacing of the drilling this is an encouraging sign.

XRF results of the various magnetic fractions have indicated low levels of deleterious elements such as chrome, uranium and thorium. Further analysis of the samples will be completed following the completion of the TZ Minerals International Pty Limited (TZMI) report (described below) to define a pathway that will support the company's objective of moving forward to defining a JORC Mineral Resource as a precursor to a scoping study on the project as soon as possible.

Next Steps

Given the encouraging results obtained from the initial scout drilling programme, Savannah is now beginning to plan the second phase of exploration including geophysics and drilling to further define the prospectivity of the Jangamo Project area. This work is due to commence in the second quarter of 2014.

Savannah has commissioned leading mineral sands consultancy TZMI to review all the currently available data including recent assay data to characterise the opportunity and determine the best path to progress the project to a scoping study level.



Figure 2 – Jangamo Project Location

Further Information

Jangamo Project - Exploration Licence 3617L

The Jangamo Project is located in Southern Mozambique within a world class mineral sands province and is highly prospective for mineral sands including zircon, ilmenite and rutile. The Project covers an area of 180km² along an extensive dune system near the village of Jangamo, about 350km to the North East of the capital, Maputo.

The Jangamo Project lies immediately to the west of Rio Tinto's ('Rio') Mutamba deposit, one of two major deposits Rio has defined in Mozambique¹, which collectively have an exploration target of 7-12Bn tonnes at 3-4.5% THM (published in 2008). Importantly, exploration work conducted at the Project to date indicates that the geology and geomorphology of Jangamo is similar to that of Rio's adjacent Mutamba deposit.

The Project area features excellent infrastructure with both grid power and the main EN1 highway cutting through the middle of the Project. The nearby town of Inhambane is serviced daily by LAMAir flights out of Maputo and there is excellent logistics in place to support operations, including a small port. The licence is valid until 10 December 2017.

Mozambique Mineral Sands

Based on extensive heavy mineral sand deposits located along most of the 2,700km long coastline, Mozambique has the potential to grow as one of the world's foremost producers of titanium and zirconium minerals. The country is currently the world's fourth largest producer of titanium feedstocks and the fifth largest producer of zircon. Furthermore, in Mozambique, FTSE 250 listed Kenmare Resources Plc has developed the producing Moma Mine, which has a Proved and Probable Ore Reserve of 869Mt @ 3.7% THM and a Measured Indicated and Inferred Mineral Resource of 7.4Bt @ 2.9% THM. Other large deposits, which further underpin Mozambique's prospectivity, includes the Chibuto heavy sands deposit, which averages 4% THM and has a reserve of 72 million tonnes of ilmenite, 2.6 million tonnes of zircon and 400,000 tonnes of rutile, and Rio Tinto's Mutamba and Mutamago deposits, which combined have an exploration target of 7-12Bn tonnes at 3-4.5% THM.

Competent Person

Dale Ferguson: The technical information related to Exploration Results contained in this Announcement has been reviewed and approved by Mr D. Ferguson. Mr Ferguson has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity to which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Ferguson is a Director of Savannah Resources plc and a Member of the Australasian Institute of Mining and Metallurgy. Mr Ferguson consents to the inclusion in this announcement of such information in the form and context in which it appears.

Notes

For further information please visit <u>www.savannahresources.com</u> or contact:

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Notes

About Savannah

Savannah Resources Plc (AIM: SAV) is a multi-commodity focussed exploration and development company. Through its 80% ownership of Matilda Minerals Limitada it operates the Jangamo exploration project in a world class mineral sands province in Mozambique which borders Rio Tinto's Mutamba deposit, one of two major deposits Rio Tinto has defined in Mozambique, which collectively have an exploration target of 7-12Bn tonnes at 3-4.5% THM (published in 2008). In addition, Savannah owns an effective 19% strategic shareholding in Alecto Minerals Plc which provides Savannah with exposure to both the highly prospective Kossanto Gold Project in the prolific Kenieba inlier in Mali and also to the Wayu Boda and Aysid Meketel gold / base metal projects in Ethiopia for which Alecto has a joint venture with Centamin Plc. Under this joint venture, Centamin Plc is committing up to US\$14m in exploration funding to earn up to 70% of each project. The Company is also evaluating additional opportunities to expand its portfolio and geographical focus.



APPENDIX 1 – SAMPLE FLOW SHEET

APPENDIX 2 – HMS RESULTS

Composite	JMRC 005 0-18m	JMRC 018 87-97m	JMRC 023 60-71m	JMRC 025 0-39m	JMRC 027 0-24m			
	Screening							
	% Mass	% Mass	% Mass	% Mass	% Mass			
Oversize	0.1	0.4	0.3	0.2	0			
Sand Fraction	92.5	88.4	93.8	82	90.9			
Slimes	7.5	11.2	5.9	17.9	9			
Total	100	100	100	100	100			
	Heavy Liquid Separation							
	% HM	% HM	% HM	% HM	% HM			
Of sand fraction	3.8	2.5	0.53	2.4	3.6			
In ground	3.5	2.2	0.5	2	3.2			
	XRF of HM							
	JMRC 005	JMRC 018	JMRC 023	JMRC 025	JMRC 027			
	%	%	%	%	%			
TiO2	36.6	35.2	37.0	35.3	36.0			
Fe2O3	49.0	51.6	39.1	52.5	48.8			
ZrO2+HfO2	2.10	2.65	3.20	2.73	2.02			
SiO2	4.8	4.8	9.7	4.4	5.1			
AI2O3	5.1	3.0	3.6	3.0	5.5			
Cr2O3	1.88	1.32	1.10	1.28	1.91			
CaO	0.12	0.06	2.46	0.04	0.19			
MgO	0.81	0.66	1.26	0.58	0.81			
MnO	0.96	1.30	2.04	1.00	0.94			
CeO2	0.08	0.07	0.28	0.08	0.08			
U + Th	244	192	497	162	250			
K20	0.03	0.08	0.13	0.04	0.02			
Nb2O5	0.05	0.05	0.05	0.05	0.05			
P2O5	0.09	0.09	0.47	0.07	0.09			
SO3	0.01	0.02	0.01	0.02	0.01			
V2O5	0.25	0.28	0.19	0.27	0.26			
LOI1000	-2.00	-1.84	-0.86	-1.92	-2.03			

	Magnetic Fractionation of HM									
	JMRC 005		JMRC 018		JMRC 023		JMRC 025		JMRC 027	
	% Distribution		% Distribution		% Distribution		% Distribution		% Distribution	
	<u>Mass</u>	<u>TiO₂</u>	<u>Mass</u>	<u>TiO₂</u>	<u>Mass</u>	<u>TiO₂</u>	Mass	<u>TiO₂</u>	Mass	<u>TiO₂</u>
Magnetics	14.0	7.1	21.8	11.1	16.1	19.8	20.4	9.7	15.3	7.9
Paramagnetic	73.1	88.3	66.5	82.2	61.3	70.0	66.5	83.2	69.7	86.0
Weakly paramagnetic	4.8	1.6	4.5	2.4	22.6*	10.3*	5.7	3.6	6.7	3.0
Non-magnetic	8.1	2.9	7.3	4.4			7.4	3.5	8.4	3.2
	100	100	100	100	100	100	100	100	100	100

- Magnetics: reporting to mags at 1000 gauss
- Paramagnetic: reporting to mags between 1000 and 5000 gauss
- Paramagnetic: reporting to mags between 1000 and 5000 gauss
- XRF analysis for TiO2, Fe2O3, ZrO2, SiO2, Al2O3, SO3, MgO, MnO, CeO2, U, Th, P2O5, V2O5, Nb2O5, CaO, K2O, Cr2O3, LOI @ 1000°C.
- Both lab and Savannah QA/QC sampling was reviewed and found to have excellent repeatability.
- **XRF:** X-Ray Florescence, a method of multi element analysis.

