

## **ASX:EAF**

27 August 2013

# Mkuju South Project Update

- Initial results of the air core drilling programme that targeted sandstone-hosted airborne uranium anomalies now compiled
- The drilling intersected oxidized sandstones with moderate uranium hang-ups at three of four locations
- Future targets include the Post and Quarto anomalies and scout drilling to locate and test the postulated redox fronts indicated by the current drilling
- Process for access to Quarto, Post and Octavo is well underway

East Africa Resources Limited ("East Africa" or "Company") (ASX: EAF) reports on recent drilling, the initial part of a 10,000m drilling program, at its joint venture project at Mkuju South which is located adjacent to Uranium One's Mkuju River Uranium deposit of 32,750 t contained U3O8 at 439ppm. Four targets have been tested to date—Foolscap, Crown, Demy and DW with the highest ranked targets of Quarto and Post (see Figure 3) remaining to be tested (subject to access permission.)

The drilling was aimed at testing airborne radiometric anomalies in sandstones of the Karroo Luwegu Basin in southern Tanzania (see Figure 2). The target model is roll-front uranium mineralization. The targets were identified as a result of the airborne survey undertaken by East Africa in 2011 and field work carried out in 2012. While the targets tested to date have been broadly anomalous no significant uranium mineralisation has been identified.

The highest ranked targets from the 2012 field work Quarto and Post remain to be tested. The process for access to Quarto, Post and Octavo is now well underway and the Company remains confident of a positive outcome. Octavo is highly prospective with a 40 km long anomalous uranium zone along strike from Uranium One's Mkuju River deposit (see Figure 1). Octavo is located on tenement PL5720/2009 which is 100% owned by East Africa Resources Ltd.

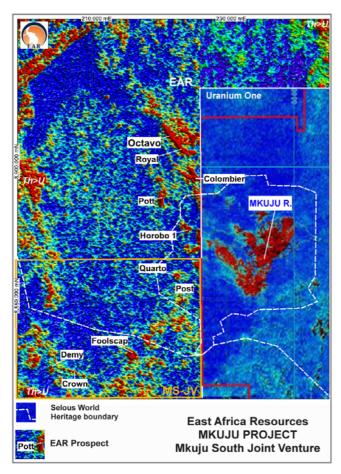


Figure 1: Airborne Radiometric Image Mkuju Area

The drilling to date has comprised of 3,415 metres of drilling; 596 m of rotary mud drilling (OCI Drilling) and 2,819 m of air core (Wallis Drilling). Table 1 summarizes the metres drilled.

Target	No. of holes	Total Metres		
Foolscap	12	1751		
Crown	6	681		
Demy	6	489		
DW	14	494		

**Table 1: Drilling Summary** 

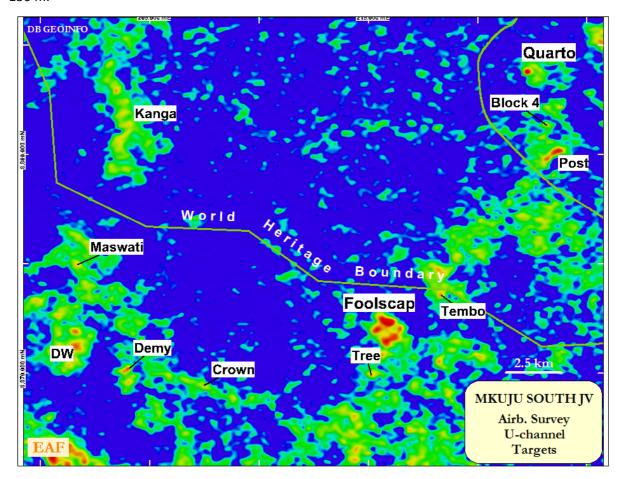
## Results

## **Foolscap**

The target here was a large prominent airborne uranium anomaly. Ground work in 2012 has proved up a uranium geochemical anomaly within weathered oxidized sandstones.

The drilling intersected oxidized sandstone with a few low order (15-40 ppm  $eU_3O_8$ ) hang-up anomalies on silt-mudstone layers. Four of the 12 holes showed hang-up clusters in the gamma-logs. Some reduced beds in the NW corner suggest a vertical step in the regional redox front of at least 140-

150 m.



**Figure 2: Location of Radiometric Targets** 

## Crown

At Crown the target was a low order linear anomaly interpreted to be part of a regional curved anomalous trend extending SW from Foolscap.

Again a completely oxidized sequence was encountered in the drilling. The sequence also contains more mud-silt units than at Foolscap. Numerous hang-up anomalies were measured in the gammalogs. The best, a 70 cm hang-up (25 ppm  $U_3O_8$ ) was intersected at the base of a mud-silt layer in MKCOH003 at a depth of 7m. Prominent hang-up clusters were intersected in 3 of the 6 holes.

### Demy

Work in 2012 had identified small discrete strong uranium response in the airborne survey that was confirmed by grab sampling.

In the drilling a strongly oxidized coarser grained sequence was found. Numerous hang-ups and broader moderate background zones were recorded in the gamma-logs; e.g. MKDOH006 where a total of 9.8 m between 0.2 and 57.6 m gave  $eU_3O_8$  values between 15-34 ppm (weighted average 19 ppm). Two of the 6 holes showed anomalous hang-up clusters.

#### DW

This target consisted of two areas of higher uranium background adjacent to the edge of the tenement.

Barren, strongly oxidized sandstones above basement rocks were located in the drilling. Basement was penetrated between 20-48 m in most of the holes. Four of the holes on the western edge of the anomaly intersected basement beneath a shallow clay regolith.

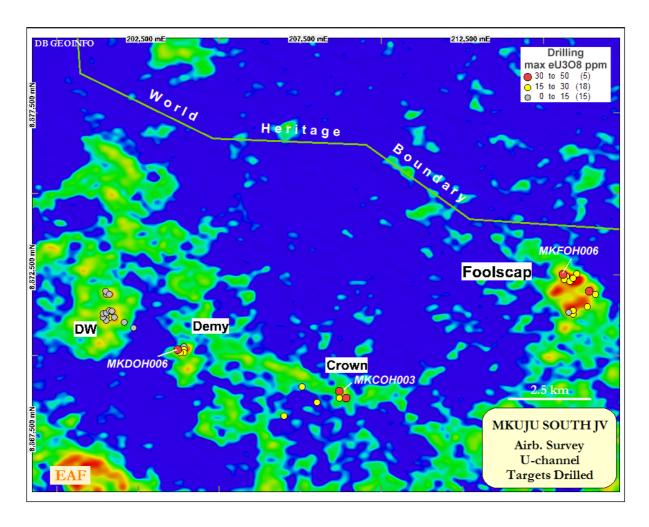
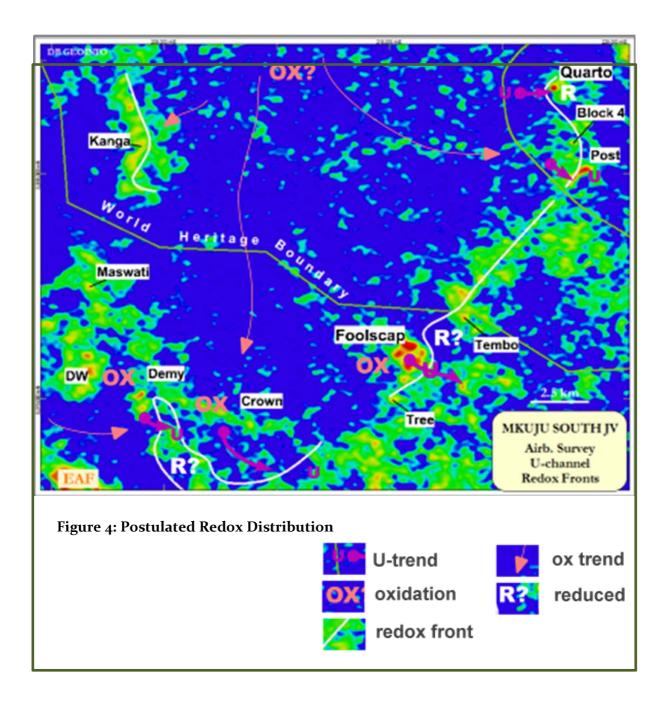


Figure 3: Targets Drilled

## **Discussion**

The results to date show the presence of a large zone of oxidized sandstone that extends from the boundary of the tenements at DW across to Foolscap. The zone shows numerous spikey hang-up anomalies indicative of the introduction and mobilizing of uranium through the sequence. Unfortunately the surface anomalies tested only reflect this geochemical trace uranium. The boundary of this oxidized zone and the associated redox front with the reduced sequences remains to be delineated but is suspected to follow the general form of the broad anomalous trend (from Demy to Quarto) shown in Figure 2. Spaced stratigraphic drilling is needed to establish the extent of the oxidized zone and if the redox front with reduced sediments in the eastern and south-eastern contains significant uranium mineralization. Figure 3 shows an overview of the suspected redox milieu.

The best targets from the 2012 field work Quarto and Post remain to be tested. This work is planned for September but depends upon permission from the Tanzanian Ministry of Natural Resources and Tourism.



# **Explanations**

Figure 5 shows schematically the features of the U-roll front mineralization mentioned in the text. In particular the remnant 'hang-up' U left behind after the passage of the redox front (boundary between orange and green) and the postulated steps in the redox. Note these hang-ups do not represent uranium mineralization but rather geochemical traces of the uranium pathways.

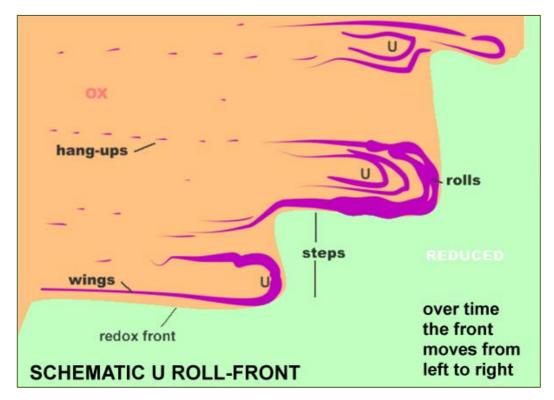


Figure 5: Schematic Roll-front

The  $eU_3O_8$  values quoted in the text are derived from the down hole gamma-logs measured inside the rods in each hole after the drilling. This value is calculated by comparing the gamma count per second readings (cps) with the U3O8 assay values in known test pits. The raw cps values are corrected for the presence of air in the holes (i.e. above the water table), differences in diameter between the drilled holes and the test sites and for the steel rods. The data is then spatially deconvoluted using the Killen-Conaway method and converted to  $eU_3O_8$  using a mathematical equation relating the cps values to assay  $U_3O_8$ . This method assumes secular equilibrium between the uranium in the rocks intersected and its daughter products. It also assumes that any spurious values derived from radon gas have been detected in the logs and have been subtracted from the cps values. On the Mkuju South project the gamma logs are run immediately upon completion of drilling which does not allow the build-up of any radon in the holes.

## Access

In July, the Company was advised that Quarto and Post are located within the Selous Game Reserve and therefore permission from the Ministry of Natural Resources and Tourism would be required to explore in the area. It is important to note that they are located outside the World Heritage Area within the area that was excised for the Mantra Mkuju River project in 2012. The Company was advised by the Ministry of Natural Resources and Tourism (MNRT) that access to the Selous Game Reserve required written permission and that the Company should complete an Environmental Impact Assessment (EIA) to support its application for access.

East Africa appointed 'Environmental Association of Tanzania Ltd' (ENATA) to prepare the EIA in early August. ENATA Ltd is the consulting arm of the Environmental Association of Tanzania, a Non-Government organisation. Subsequently, ENATA Ltd conducted a site visit as part of the scoping study and the EIA report has been submitted to the National Environment Management Council (NEMC). NEMC will produce a report which will go to the Ministry of Natural Resources and Tourism (MNRT), who will then make a decision on access.

The EIA covers the areas of Quarto, Post and Octavo. Octavo is highly prospective with a 40 km long anomalous uranium zone along strike from Uranium One's Mkuju River deposit of 32,750 t contained U3O8 at 439ppm. Octavo is located on tenement PL5720/2009 which is 100% owned by East Africa Resources Ltd.

The process for securing access to Quarto, Post and Octavo is now well underway and the Company will provide an update when further information is received.

**Table 2: Gamma Logging Summary** 

Summary of U Hang-ups measured in the Gamma Logs					
Hole	Upper (m)	Lower (m)	No. of Intervals	Wt-Ave (eU3O8 ppm)	Summed Intersections (m)
MKFOH001	31.5243	61.9851	2	21.76667	0.3
MKFOH002	87.586	125.361	2	19.30173	0.3
MKFOH005	6.1385	122.671	9	18.84471	0.9
MKFOH004	5.6519	11.5637	2	18.96667	0.3
МКГОН006	11.1905	128.224	7	22.33928	0.8
MKFOH007	18.3064	115.801	12	18.70594	1.8
MKFOH003	3.3896	135.052	3	16.23256	0.3
MKFOH008	49.5531	114.583	4	17.71978	0.5
МКГОН009	78.8743	106.229	4	17.05481	0.4
MKFOH010	15.0039	95.4645	9	17.62	1.0
MKFOH011	89.3138	107.55	2	21.57024	0.3
MKCOH001	98.5741	115.307	2	15.65005	0.2
МКСОН002	19.1213	94.5719	4	23.2	0.5
МКСОН003	6.2173	18.4417	3	23.63	1.0
МКСОН004	65.6004	125.219	5	18.68091	0.5
МКСОН005	60.2071	108.704	4	17.998	0.4
МКСОН006	61.3168	75.1444	6	19	0.6
MKDOH001	4.1051	4.5059	1	19.225	0.4
MKDOH003	0.6525	0.7527	1	20.2	0.1
MKDOH004	3.7322	4.0328	1	19.53333	0.3
MKDOH005	1.8554	2.5568	2	16.5	0.3
MKDOH006	0.254	57.6686	41	19.06633	9.8
MKDOH007	16.7644	16.8646	1	18.1	0.1
note: gamma readings (cns) are taken each 10					

note: gamma readings (cps) are taken each 10

cm

**Table 3: Drill Details** 

Hole	Area	Start	End	Easting	Northing	RL	Dip	Bearing	Depth
MKFOH001	Foolscap	12/06/2013	17/06/2013	216582	8871907	858	-90	0	150
MKFOH002	Foolscap	19/06/2013	22/06/2013	216338	8871513	838	-90	0	150
MKFOH005	Foolscap	26/06/2013	26/06/2014	215682	8872447	839	-90	0	150
MKFOH004	Foolscap	27/06/2013	27/06/2013	215623	8872353	830	-90	0	150
MKFOH006	Foolscap	27/06/2013	28/06/2013	215581	8872505	840	-90	0	150
MKFOH007	Foolscap	29/06/2013	29/06/2014	216005	8872532	860	-90	0	171
МКГОН003	Foolscap	26/06/2013	30/06/2013	215884	8871280	847	-90	0	149
MKFOH008	Foolscap	01/07/2013	01/07/2013	215891	8871407	825	-90	0	150
МКГОН009	Foolscap	02/07/2013	02/07/2013	215798	8872295	816	-90	0	120
MKFOH010	Foolscap	02/07/2013	02/07/2013	215900	8872401	834	-90	0	132
MKFOH011	Foolscap	03/07/2013	04/07/2013	216395	8871999	823	-90	0	132
MKFOH012	Foolscap	04/07/2013	07/07/2013	215762	8871336	841	-90	0	147
МКСОН001	Crown	07/07/2013	07/07/2013	208684	8868700	743	-90	0	126
МКСОН002	Crown	08/07/2013	08/07/2013	208897	8868696	740	-90	0	120
МКСОН003	Crown	08/07/2013	08/07/2013	208690	8868908	722	-90	0	60
МКСОН004	Crown	09/07/2013	09/07/2013	208005	8868558	774	-90	0	150
МКСОН005	Crown	10/07/2013	10/07/2013	207539	8869049	757	-90	0	120
МКСОН006	Crown	10/07/2013	10/07/2013	206988	8868144	806	-90	0	105
MKDOH001	Demy	11/07/2013	12/07/2013	203796	8870210	788	-90	0	96
MKDOH002	Demy	12/07/2013	12/07/2013	203898	8870298	772	-90	0	93
MKDOH003	Demy	13/07/2013	13/07/2013	203905	8870201	776	-90	0	105
MKDOH004	Demy	13/07/2013	13/07/2013	203902	8870095	767	-90	0	84
MKDOH005	Demy	14/07/2013	14/07/2013	203790	8870100	779	-90	0	48
МКДОН006	Demy	15/07/2013	15/07/2013	203705	8870203	788	-90	0	63
MKDOH007	DW	15/07/2013	15/07/2013	201599	8871197	764	-90	0	44
MKDOH008	DW	16/07/2013	16/07/2013	201500	8871194	750	-90	0	36
MKDOH009	DW	16/07/2013	16/07/2013	201762	8871188	763	-90	0	36
MKDOH010	DW	16/07/2013	16/07/2013	202072	8871044	782	-90	0	48
MKDOH011	DW	16/07/2013	16/07/2013	202357	8870864	802	-90	0	56
MKDOH012	DW	18/07/2013	18/07/2013	201505	8871101	743	-90	0	28
MKDOH013	DW	18/07/2013	18/07/2013	201408	8871196	752	-90	0	21
MKDOH014	DW	18/07/2013	18/07/2013	201413	8871298	738	-90	0	30
MKDOH015	DW	18/07/2013	18/07/2013	201513	8871325	765	-90	0	44
MKDOH016	DW	19/07/2013	19/07/2013	201601	8871409	759	-90	0	33
MKDOH017	DW	19/07/2013	19/07/2013	201685	8871383	764	-90	0	33
MKDOH018	DW	19/07/2013	19/07/2013	201503	8871904	742	-90	0	27
MKDOH019	DW	19/07/2013	19/07/2013	201489	8871992	748	-90	0	26
MKDOH020	DW	19/07/2013	19/07/2013	201598	8871901	749	-90	0	32

Note: all holes drilled air core except MKFOH001, 2, 3 & 12 which were drilled by rotary mud. Co-ordinates are in WGS84 UTM Zone 37 south. RL's are meters above sea level.

JORC TABLE 1	
COMPILATION	
CRITERIA	EXPLANATION
Section 1	
Sampling	No sampling was undertaken as no mineralization was encountered
	All holes were gamma-logged in the rods upon completion of the holes. The gamma probe used has been calibrated using the USA DOE Grand Junction test pits. An explanation of the corrections to the raw data is made in the text.
Drilling	Drilling was carried using standard NQ air core rods with central sample return. Four holes (MKFOH001, 2, 3 & 12 were drilled using NQ rotary mud
Drill Samples	Samples are collected in plastic bags via the rig cyclone. The samples are measured with a hand held scintillometer to detect uranium mineralization. Due to the soft sediments being drilled the sample quality is average to poor with a certain amount of mixing due to slumping and washing of the sample
Logging	Samples are geologically logged on site. Basic colour, grain size distribution and constituent grains are recorded for each 3m rod.
Sub-sampling	No sampling was undertaken as no mineralization was encountered
Lab Quality	No sampling was undertaken as no mineralization was encountered
Verification of results	No sampling was undertaken as no mineralization was encountered
Location of data	Drill hole co-ordinates are In WGS 84 UTM zone 37 south. They were measured using a hand held GPS unit. RL's are estimated using the DTM data from the 2011 airborne survey (250 x 25 m grid) controlled by the local topography as noted on site.
Data spacing	The drill holes are spaced at between 100-250 m which is adequate for initial testing. Reconnaissance holes were spaced between 300-1,000 m
Data Orientation	The holes are drilled vertically to intersect near horizontal sedimentary sequences. Potential uranium mineralization occurs in mainly in sub-horizontal clusters except at the nose of rolls. Vertical holes are the industry standard for sandstone uranium deposits due to the soft nature of the rocks.
Sample security	No sampling was undertaken as no mineralization was encountered
Audits/reviews	Not applicable

Section 2	
Project Details	The Mkuju South Joint Venture (MS-JV) is between East Africa Resources and Korea Resources Corporation ("KORES"). It covers the Mkuju South project which comprises two tenements in the southern part of the Mkuju Uranium Project totaling 550 km2. Under the terms of the agreement KORES has committed to a staged investment of US\$3.5 million to secure a 50% interest in the Mkuju South uranium project. The JV investment will comprise two major exploration programs at Mkuju South.
Environment	The project neighbours and overlaps the Selous World Heritage area. Discussions with the Tanzanian Ministry of Resources over access to the World Heritage area are ongoing. The area is environmentally sensitive.
Tenure	The project is held under granted tenements: PL 7959/2012 and 7657/2012 which expire in 2016.
Other parties	The project area has not been previously explored
Geology	The deposit type is sandstone hosted uranium roll front mineralization. The project is located with the sandstone sequences of the Jurassic Karroo Luwegu Basin.
Drill Hole Information	Table 3 lists the drill-hole locations. Details of the exploration model and the terms used are list under Explanations.
Data Aggregation	The eU3O8 values presented in Table 2 have been simply aggregated by compositing the values using a 15 ppm cut -off; i.e. values above 15 ppm have been identified and averaged with neighbouring samples to produce an hang-up interval that averages greater than 15 ppm eU3O8. The composited intervals have been then aggregated (summed) for each hole. The composited eU3O8 values have been averaged for each hole using a weighted average proportional to the interval thickness; i.e. the thicker intervals provide proportionally more to the resulting average than the thinner ones. Note the summed intersections are made up of multiple thin intervals and do not represent continuous material but rather it is sparsely spread between the upper and lower limits.
Intercept lengths	The intercepts (intervals) reported refer to vertical holes penetrating sub-horizontal geochemically anomalous bands. Hence the intervals reported are likely to be true widths.
Diagrams	No significant mineralization was discovered. Figure 2 shows the location of the drilling.
Reporting	No significant mineralization was discovered.
Other exploration	No other exploration was carried out.
Further work	This project is at a very early stage and the drilling program has not yet been completed. Therefore results are still preliminary. Further work is planned to test the remainder of the selected targets (esp. Quarto and Post which are the most promising of the surface targets) and to carry out reconnaissance drilling to establish the redox and sedimentary framework for the project. See Figure 4 for a preliminary interpretation.

## **Enquiries**

## The Company:

Katina Law
Executive Director/Chief Executive Officer
+61 8 9227 3270

Eva Witheridge or Ernie Myers Company Secretary +61 8 9227 3270

Email: info@eastafricaresources.com.au

## **Competent Person**

The information in this release, insofar as it relates to exploration results, is compiled under the supervision of Dr Joe Drake-Brockman. Dr Drake-Brockman is employed by Drake-Brockman Geoinfo Pty Limited. Dr Drake Brockman has sufficient experience which is relevant to the style of mineralisation and the type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves". His educational qualifications include; an Associateship in Applied Geology from WAIT (now Curtin University), a Diploma and PhD in Geology from University of Cologne (Germany) and a Graduate Diploma in Computer Studies (Murdoch University). He joined the AusIMM in 1972 as a student and has been a full Member since 2004 and a Fellow since 2013. He has worked in uranium exploration for 26 years. Dr Drake- Brockman consents to the inclusion in the reports of the matters based on his assessment of the available information in the form and context in which it appears.

### **About East Africa Resources Ltd**

East Africa Resources Ltd (EAF) has direct and joint venture interests in a portfolio of uranium exploration tenements in East Africa. The Company controls licences and applications in Tanzania that cover a total area of approximately 15,200 km2 and include sandstone-hosted roll front type uranium targets within the highly prospective Karoo-age sediments southern Tanzania (Mkuju, Mkuju South JV Project, Madaba Project and Hemedi and palaeochannel associated Project) calcrete hosted uranium targets within the Eastern Rift of Tanzania.

The Company has established an in-country exploration team in Tanzania and is implementing an aggressive exploration program, with a strong emphasis on the application of modern exploration technologies and targeted drilling, to

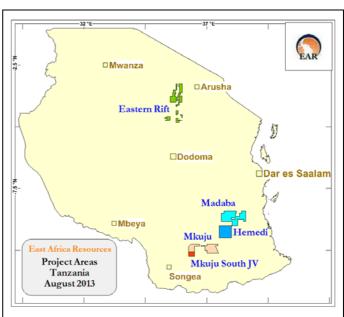


Figure 6: East Africa Resources Project Locations

evaluate the potential of its uranium exploration projects.

The Mkuju project is made up of 26 tenements (granted, offered and applications) covering 3,748 km2 in southern Tanzania and targets U-in-sandstone mineralization. The results of an airborne survey flown in 2011 include the 40 km long Octavo anomalous uranium zone which is along strike from Uranium One's Mkuju River deposit of 32,750 t contained U3O8 at 439ppm. These tenements are located within the Selous Game reserve and exploration access is presently under negotiation.

The Mkuju South Joint Venture contains two tenements which are the subject of a joint venture with Korean Resources Corporation ("KORES"). Field work in 2011-12 following on from the 2011 airborne survey has located four surface uranium anomalies and a fully funded 10,000 m drilling program is underway.

The Madaba Project consists of 27 tenements covering 4,932 km2 in the south-east of Tanzania. These tenements are highly prospective for U-in-sandstone mineralization. Work carried out between1979-82 by Uranerzbergbau GmbH identified six anomalous uranium zones. Cumulatively a strike length of approximately 30 km has been identified as being anomalous. Best down-hole intercepts from the historical drilling were 4m @1082 ppm; 7m @ 693 ppm & 11.7m @ 400 ppm U308. Thirty holes from a total of 84 holes were mineralized (better than 1m at 165 ppm U308). The drilling included; diamond core drilling (10 holes), rotary mud (13) and rotary percussion (61). Note there has not been sufficient drilling to define a resource and that further exploration may not be successful. The project is in abeyance pending negotiations with the Tanzanian Government regarding exploration access to the Selous Game Reserve.

The Hemedi Project covers an area of 3042 km2 which is largely outside the Selous Game Reserve and therefore available for exploration. The Company is currently considering options for exploring this project.