

Lotus increases Kayelekera Uranium Mineral Resource by 31%

Lotus Resources Limited (LOT, Lotus or the **Company**) is pleased to announce a 31% increase to the Mineral Resource at its Kayelekera Uranium Project in Malawi. Kayelekera's Total Mineral Resources is now 37.5Mlb of contained U₃O₈, up from 28.7 Mlb U₃O₈ previously reported by Lotus (refer ASX announcement 24 June 2019). Lotus completed the acquisition of Kayelekera from Paladin Energy earlier this month.

Highlights

- **Kayelekera's total JORC 2012 endowment increases to 37.5Mlb (27.1Mt @ 630 ppm U₃O₈ – refer Table 1)**
 - Measured: 2.3Mt @ 830ppm U₃O₈ for 4.1 Mlb U₃O₈
 - Indicated: 18.7Mt @ 660ppm U₃O₈ for 27.1 Mlb U₃O₈
 - Inferred: 6.1Mt @ 470ppm U₃O₈ for 6.3 Mlb U₃O₈
- **31% increase in reported endowment**
- **83% of the Mineral Resource classified as Measured or Indicated**
 - 20.9Mt @ 680ppm U₃O₈ for 31.2 Mlb U₃O₈
- **Mineral Resource area is on a granted Mining License with processing plant and infrastructure**
- **Lotus has identified multiple exploration targets, which it is assessing**
- **Increase in Kayelekera's Mineral Resources has potential to positively impact the life of mine**
- **Kayelekera has more than \$200M invested in modern plant and infrastructure; it produced uranium from 2009 to 2014**



Figure 1 - Kayelekera uranium project in Malawi was in production from 2009 to 2014



The March 2020 Mineral Resource Estimate update of 37.5Mlb U₃O₈ (27.1Mt @ 630 ppm U₃O₈ – refer Table 1) represents a 31% increase on the reported global metal content to the previous Mineral Resource of 28.7 Mlb U₃O₈ (18.9Mt @ 700ppm U₃O₈) stated by Lotus on 24 June 2019.

The primary driver for the resource increase is the identification and inclusion of a previously unmodelled high-grade basal arkose unit beneath the pit, and inclusion of existing Run of Mine ('RoM') and low-grade stockpiles created while Kayelekera was in production from 2009 to 2014. The stockpiles have already been mined and sit near the processing plant.

The updated Mineral Resource utilised the same modelling techniques as the previous estimate and will form the basis for future mining studies at Kayelekera. These studies will focus on cost improvements of mining and processing, including the potential use of beneficiation and sorting techniques.

The next stage of the Kayelekera project includes assessment of regional exploration for both uranium and other minerals, and the initiation of a restart study to allow Kayelekera to recommence production when the uranium price has recovered.

Kayelekera Mineral Resource Update

The 2020 Mineral Resource update (Table 1, Figures 1 and 2) has been reported in accordance with the JORC Code (2012) and is based upon a process of ongoing technical review undertaken by site geologists since the previous estimate was undertaken by Paladin (re-stated by Lotus on 24 June 2019). The estimate utilised the same methodology as the previous Mineral Resource estimate with modelling of individual arkose units within the deposit (Figures 3 and 5) and also included a previously unmodelled lower arkose unit. The Mineral Resource update also incorporates mining and processing depletion.

The current update represents a 31% increase on the reported global metal content to the previous Mineral Resources stated by the company in June 2019 (18.9Mt @ 700ppm U₃O₈ of 28.7 Mlb of contained U₃O₈) and is shown in Table 2 for comparison.

The March 2020 Mineral Resource is summarised in Table 1 below with 11% (by metal content) classified as Measured, 72% classified as Indicated and 17% classified as Inferred. The in-situ Mineral Resources were estimated at several cut-off grades using Multiple Indicator Kriging with block support correction (refer Table 3 for in-situ pit resources exclusive of stockpiles). The primary model panel dimensions are 20mE x 20mN x 2mRL. The estimates assume that final grade control sampling at approximately 3.5mE x 3.2mN x 1mRL spacing will be available prior to final mining and a selective mining unit of approximately 3mE x 3mN x 2mRL. Stockpile values were taken from surveyed stockpiles with average grades based upon grade control tracking.

In all tables where Mineral Resource estimates are detailed, metal content is based on contained metal in the ground and take no account of mining or metallurgical recoveries, mining dilution or other economic parameters.



Table 1: Kayelekera Updated Mineral Resource - March 2020¹
Reported above a 300ppm U₃O₈ lower cut-off for in-situ material; and a 200ppm U₃O₈ lower cut-off for the low-grade stockpiles

	Mt	Grade (U₃O₈ ppm)	U₃O₈ (M kg)	U₃O₈ (M Lb)
Measured	0.7	1,010	0.7	1.5
Measured - RoM Stockpile ¹	1.6	760	1.2	2.6
Indicated	18.7	660	12.3	27.1
Inferred	3.7	590	2.2	4.8
Total	24.6	660	16.3	36.0
Inferred - LG Stockpile ²	2.4	290	0.7	1.5
Total All Material	27.1	630	17.0	37.5

¹ RoM stockpile has been mined and located near mill facility. Low-grade material was mined and placed on the low-grade stockpile and are considered potentially feasible for blending or beneficiation, with studies planned to further assess this optionality. Figures have been rounded. Grade has been determined from a combination of XRF and downhole logging derived eU₃O₈ grades. In-situ Mineral Resources are depleted for mining to 31 December 2013 when mining ceased; Stockpiles have been depleted to the end of processing in June 2014. Metal contents are based on contained metal in the ground and take no account of mining or metallurgical recoveries, mining dilution or other economic parameters. An in-situ bulk density of 2.29g/cm³ was applied for Arkose material and 2.20g/cm³ for mudstone material to all blocks within the model

Table 2: Kayelekera Previous Superseded Mineral Resource (note: JORC 2004)¹
Reported above a 300ppm U₃O₈ cut-off (note: figures have been rounded)

	Mt	Grade (ppm U₃O₈)	Mlb U₃O₈
Measured	0.7	1,010	1.7
Indicated	12.7	700	19.6
Inferred	5.4	620	7.4
Total	18.9	700	28.7

¹ Announced 24 June 2019 by Lotus. The Company has not repeated the Resource estimate previously reported by Paladin for stockpiles at the Kayelekera mine as they were not then reported under recognised JORC categories



Table 3: 2020 Kayelekera Mineral Resource In-situ Pit Resource¹
Reported above various U₃O₈ cut-offs (note: figures have been rounded)

cut-off ppm	Measured Mineral Resource			Indicated Mineral Resource			Inferred Mineral Resource			Total In-situ Pit Material;			
	Mt	Grade (U ₃ O ₈ ppm)	M kg U ₃ O ₈	Mt	Grade (U ₃ O ₈ ppm)	M kg U ₃ O ₈	Mt	Grade (U ₃ O ₈ ppm)	M kg U ₃ O ₈	Mt	Grade (U ₃ O ₈ ppm)	M kg U ₃ O ₈	Mlb U ₃ O ₈
100	1.2	660	0.8	49.7	360	17.7	20.6	240	4.9	71.5	330	23.3	51.4
200	0.9	840	0.7	28.3	520	14.6	7.2	420	3.0	36.3	510	18.4	40.5
300	0.7	1,010	0.7	18.7	660	12.3	3.7	590	2.2	23.0	660	15.1	33.4
400	0.5	1,170	0.6	13.2	790	10.4	2.4	720	1.7	16.1	790	12.7	28.0
500	0.5	1,310	0.6	9.7	910	8.8	1.6	840	1.4	11.8	920	10.8	23.8
600	0.4	1,440	0.6	7.3	1,030	7.5	1.2	960	1.1	8.9	1,030	9.2	20.3
700	0.3	1,550	0.5	5.7	1,140	6.4	0.9	1,060	0.9	6.9	1,150	7.9	17.4
800	0.3	1,660	0.5	4.4	1,250	5.5	0.7	1,160	0.8	5.4	1,260	6.8	14.9
1000	0.2	1,880	0.4	2.7	1,470	4.0	0.4	1,360	0.5	3.4	1,480	5.0	10.9
1200	0.2	2,100	0.4	1.7	1,680	2.9	0.2	1,550	0.3	2.1	1,710	3.6	8.0
1500	0.1	2,390	0.3	0.9	2,020	1.7	0.1	1,830	0.2	1.1	2,050	2.2	4.9
2000	0.1	2,810	0.2	0.3	2,590	0.8	0.0	2,320	0.0	0.4	2,620	1.1	2.3

¹ These figures only include in-situ pit mineral resources; no existing RoM stockpiles are included. Figures have been rounded. Grade has been determined from a combination of XRF and downhole logging derived eU₃O₈ grades. In-situ Mineral Resources are depleted for mining to 31 December 2013 when mining ceased. Metal content based on contained metal in the ground and takes no account of mining or metallurgical recoveries, mining dilution or other economic parameters.

Summary notes on the resource are included below, refer to Appendix 1 for additional details:

- The entire drill hole dataset used consisted of 903 diamond, percussion and RC holes for 30,300m. Kayelekera deposit has been drilled using combination of diamond core ("DD") and percussion ("P") drill holes. Holes were drilled on a nominal 50m x 25m grid spacing for total 213 holes for 18,106m up to the end of 1990. Since then in 2004, 20 holes (2 DD and 18 P); in 2005, 11 twin holes drilled for metallurgical purposes; later in 2005, reverse circulation ("RC") drilling for a total of 120 holes; in 2007, an extensive RC program to convert Inferred Mineral Resource within the pit design for a total of 132 holes. Further grade control drilling of 620 RC holes by 12.5x12.5m pattern was drilled in 2007.
- Deconvolution and disequilibrium factors for the more recent Paladin drilling were determined by Barrett Geophysical from XRF analysis of RC drill samples and radiometric down hole logging undertaken by Paladin. Disequilibrium figures utilised included 1.07 to 1.11 for oxidised arkose (e.g. eU₃O₈/1.07); 0.83 for reduced arkose and 0.71 for mudstone (e.g. eU₃O₈/0.71). It is the opinion of the Competent Person that these factors were acceptable and able to be applied to the current and historical radiometrically derived U₃O₈ grades to produce a unified dataset with XRF derived grades. XRF grade data was ranked above eU₃O₈ grade data in the resource dataset wherever a complete XRF dataset was available and considered robust



- The Mineral Resource estimate is based on a combined sample dataset from original historical drilling and drilling conducted by Paladin between 2003 and 2011. Except for a limited number of geotechnical holes all holes were drilled vertical.
- The Kayelekera deposit consists of a sequence of alternating arkose units (up to seven in total) and intervening mudstone units. The arkose/mudstone sequence is well defined and appears to be fault bounded on the eastern side, with an east-west trending fault intersecting the sequence within the northern portion of the package. As the mineralisation is flat lying and all drilling included in the resource estimation is vertical the mineralised intercepts can be considered to represent true widths
- Individual arkose units were modelled in three dimensions utilising Micromine software to domain the estimate.
- The estimate was undertaken by MIK utilising Hellman & Schofield's GS3 software with a parent cell of 20mE by 20mN and 2mRL and reported at various cut-off utilising a SMU of 3mE x 3mN x 2mRL utilising a variance adjustment factor and information effect.
- Separate variography and MIK estimates were undertaken to each modelled domain utilising 1m grade composites
- An in-situ bulk density of 2.29g/cm³ was applied for Arkose material and 2.20g/cm³ for mudstone material to all blocks within the model
- The resources were classified as Measured, Indicated and Inferred on the basis of drilling density throughout the deposit as well as the validity of the underlying data. The Competent Person considered all relevant factors when determining the Mineral Resource classification.

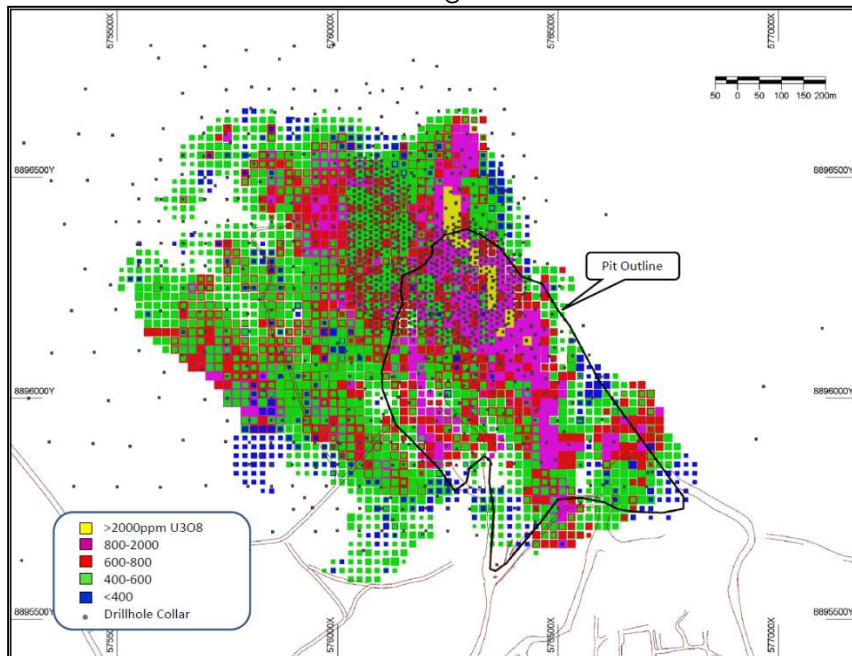


Figure 2: Remaining Mineral Resource showing grade distribution (block size is relative to proportion of block > 300ppm U₃O₈)



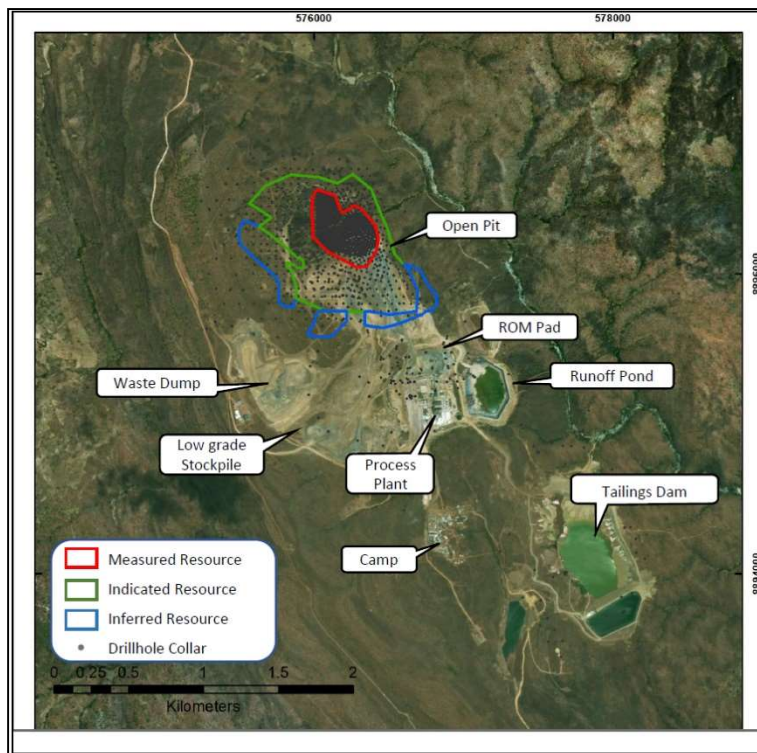


Figure 3: Mineral Resource showing summary classification

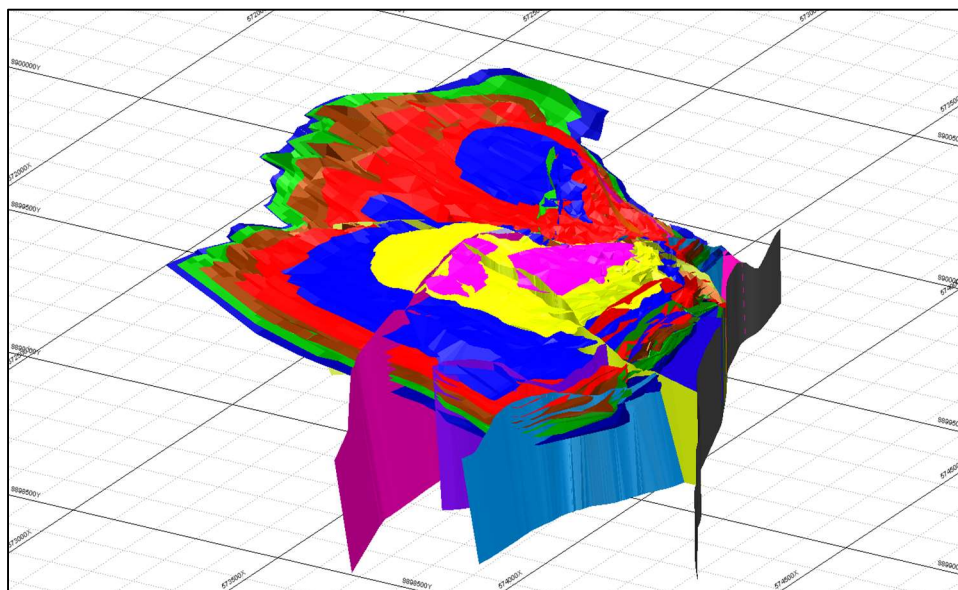


Figure 4: 3D Model of Arkose Layers and Faults



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Geology and Mineralisation

Kayelekera is situated close to a major tectonic boundary between the Ubendian and the Irumide domains. The Ubendian domain consists of medium to high-grade metamorphic rocks and intrusions cut by major NW-SE dextral shear zones and post-tectonic granitoid intrusions dated at 1.86 Ga. These shear zones may well have been reactivated during and after deposition of the Karoo sequence, since many major brittle faults that offset the Karoo-aged rocks have the same orientation.

Uranium mineralisation at Kayelekera is hosted in several arkose units which are adjacent to the Eastern Boundary Fault zone (**Error! Reference source not found.**5). The mineralisation forms more or less tabular bodies restricted to the arkoses, except where it is adjacent to the NS strand of the Eastern Boundary fault at the eastern extremity of the pit. Here, mineralisation also occurs in mudstones in the immediate vicinity of the fault. It can be seen that the highest grades correspond to the intersection of the eastern and Champanji faults. Mineralisation grade and tonnage declines with lateral distance from these faults.



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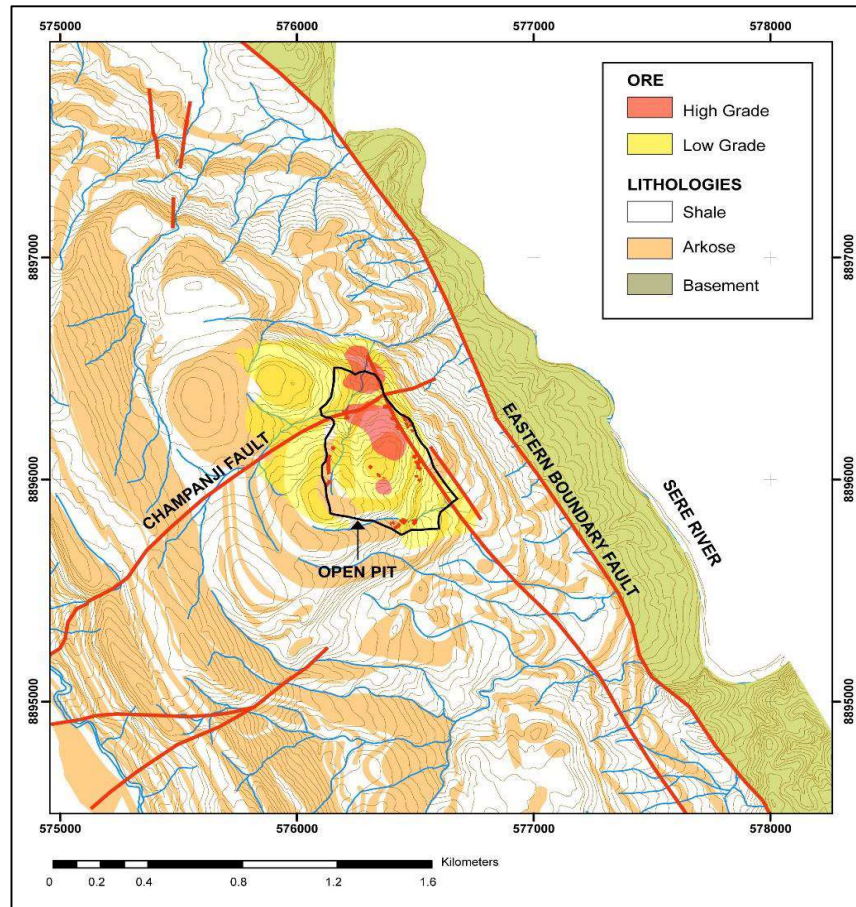


Figure 5: Kayelekera Local Geology

Primary reduced (i.e. carbon and pyrite-bearing) arkose mineralisation accounts for 40% of the total mineralisation. About 30% of the mineralisation is hosted in secondary oxidised arkose (i.e. lacking carbon and pyrite), 10% of mineralisation is termed “Mixed Arkose” and exhibits characteristics of both primary and secondary arkose mineralisation types. Uranium in primary mineralisation is present as coffinite, minor uraninite and a U-Ti mineral, tentatively referred to as brannerite.

Modes of occurrence include disseminated in matrix clay, included in detrital mica grains and intimately intergrown with carbonaceous matter. Individual grains are extremely fine, typically <10 µm. Coffinite and uraninite also show an association with a TiO₂ phase, possibly rutile after detrital ilmenite. It is possible that uranium deposition was accompanied by leaching of Fe from detrital ilmenite and precipitation of a TiO₂ polymorph.



A further 20% of primary mineralisation is hosted by mudstone and is termed “mudstone mineralisation”. Most uranium in mudstone mineralisation is present as coffinite with lesser uraninite in a matrix of clay minerals. Secondary mineralisation tends to be concentrated in vertical fractures and along the contacts between mudstone and arkose and is restricted to the upper parts of the orebody. Figure 5 below presents a representative cross-section of the orebody.

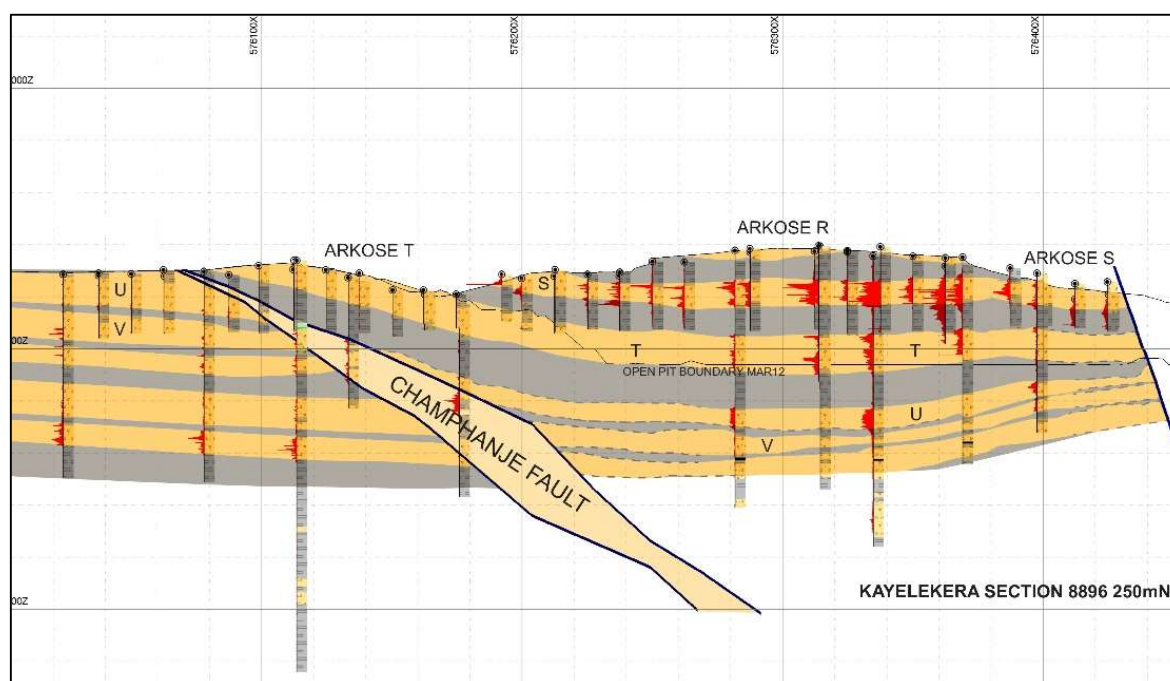


Figure 6: Typical cross-section of Kayelekera showing tabular nature of mineralisation

Exploration Potential

Numerous radiometric anomalies have been identified over the broader project region. Although several have been previously tested, targets remain open in the Mwankeja South, Livingstonia and Chilumba prospect areas based on untested radiometric anomalies as well as structural targets in the Nthalire areas (**Error! Reference source not found.6**). No geophysical techniques other than radiometric and magnetic surveying have been employed previously and opportunities exist for alternative methods to be employed; and for exploration over areas under surficial cover.



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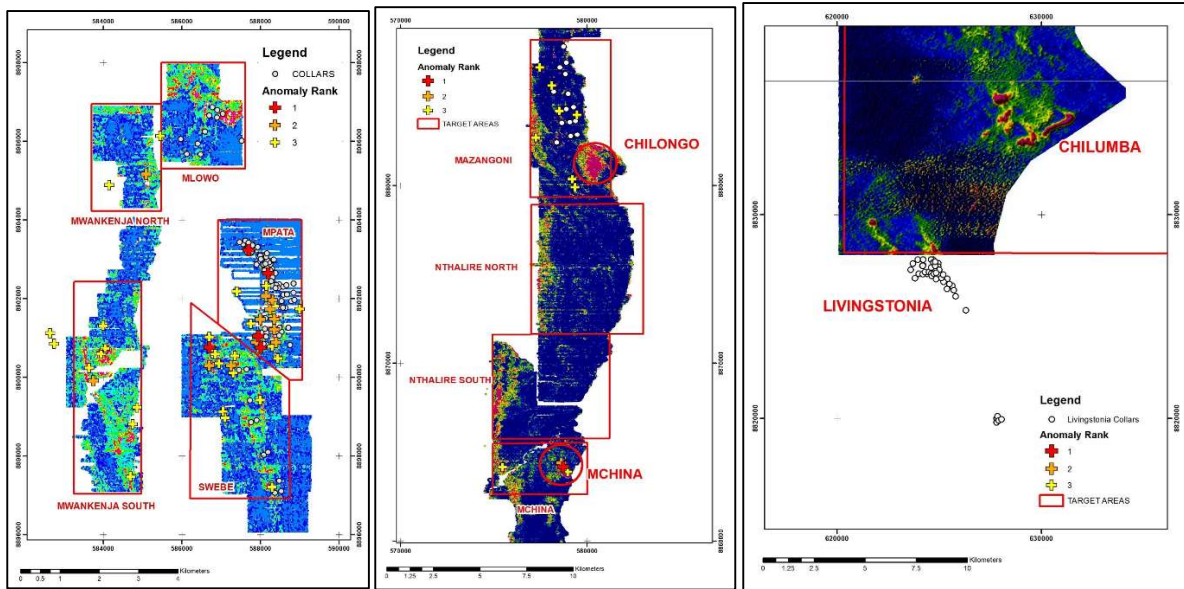


Figure 7: Kayelekera Project Exploration Target Areas



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Competent Persons' Statements

The Mineral Resource estimates for the Kayelekera deposit were prepared by David Princep of Gill Lane Consulting. David Princep visited the Kayelekera Project on numerous occasions since 2003 with the most recent being in October 2013 just before the project was placed on care and maintenance. Mr. Princep is a Fellow of the Australasian Institute of Mining and Metallurgy and a Chartered Professional Geologist. Mr. Princep has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration 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 (JORC 2012). Mr. Princep approves of, and consents to, the inclusion of the information in this announcement in the form and context in which it appears.

The information in this document that relates to Exploration Data is based on information provided by Mr. Neil Inwood, who is a Fellow of the AUSIMM. Mr Inwood is a consulting geologist and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity undertaken to qualify as Competent Persons as defined in the 2012 edition of the "Australasian Code for Reporting of Mineral Resources and Ore Reserves". Mr. Inwood has consented to the inclusion of this information in this document in the form and context in which it appears. An entity associated with Mr Inwood has shares in Lotus Resources Ltd.

About Lotus Resources

Lotus Resources Limited (LOT:ASX) is a minerals exploration and development company. The Company recently entered into an agreement with Paladin to acquire a 65% interest in the Kayelekera Uranium Project in Malawi. Lotus's owned asset is the Hylea Cobalt Project in the Fifield District of NSW. The Project represents a significant cobalt, platinum, nickel and scandium exploration target in both scale and grade potential, as demonstrated by the Company's 2018 drilling program.

Appendix 1: JORC Code, 2012 Edition – Kayelekera deposit 2020

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma 	<ul style="list-style-type: none"> The Kayelekera deposit has been drilled using combination of diamond core ("DD") percussion ("P") and Reverse Circulation ("RC") drill holes. Holes were drilled on a nominal 50m x 25m grid spacing for total 213 holes for 18,106m up to the end of 1990. Since then in 2004, 20 holes (2 DD and 18 P); in 2005, 11 twin holes drilled for metallurgical purposes; later in 2005, RC drilling for a total of 120 holes; in 2007, an extensive RC program to convert Inferred Mineral Resource within the pit design



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Criteria	JORC Code explanation	Commentary
	<p>sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</p> <ul style="list-style-type: none"> • Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. • Aspects of the determination of mineralisation that are Material to the Public Report. • In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information. 	<p>for a total of 132 holes. Further grade control drilling of 620 RC holes by 12.5x12.5m pattern was drilled in 2007.</p> <ul style="list-style-type: none"> • The Mineral Resource estimate is based on a combined sample dataset from original CEGB drilling and drilling conducted by Paladin Africa ('PDN') between 2003 and 2011. Except for a limited number of geotechnical holes all holes were drilled vertical. • Sampling protocol for historical drilling up to 1990 is unknown and it is believed that those holes were designed to test different commodities such as uranium, coal and limestone. • For 2004 drilling: samples were split to 3cm long pieces of 100g to maximum 300g weight. Each of these core pieces was numbered and weighed. The gamma radiation of each piece was measured by a SPP2 scintillometer over a 30 second period in a lead castle and measurements recorded in the database. Drillholes were downhole gamma logged by a Geotron R3000 logger and a R300 probe from Geotron Systems (Pty) Ltd in South Africa • For 2005 drilling: all holes were geologically logged and down hole gamma logged. Equivalent uranium values were calculated for each 5cm interval. Samples were collected over a sample length of 40cm, each sample weighing approx. 2.5-3kg. Samples were packed and sealed in airtight bags. Ten samples were combined into larger bags and all samples were frozen on site and later transferred into a freezer at PDN's office in Karonga. Five 500 litre chest freezers were acquired and these were filled with a total of 854 individual samples. • For later 2005 to 2013 drilling: RC samples were collected via a cone splitter at 1m intervals. All samples were collected and contained in poly-weave or plastic bags. • The nominal drill diameter was 5 inches and all drill samples were bagged from the cyclone and weighed to provide some assessment of the average drill sample recoveries. Majority of drill intervals weighed achieved a better than 80% recovery which was considered to be good. • All sampling was carried out under PDN's sampling protocols and QA/QC procedures as per industry best practice. • All samples were riffle split into 80/20 proportions. Larger rejects (>20kg) were stored on site if they appeared mineralised or gave a count value of larger than 750cps on the scintillometer. All smaller (approx. <5kg) samples were bagged and stored in the Karonga office of PDN for future reference.



Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> A further 200-500g sub-sample was precision riffle split from the 5kg sample for assay of U₃O₈. Certified standards, duplicates and blanks were also inserted in the sample batches. All samples analysed using pressed powder XRF methods in either Setpoint Laboratory in Johannesburg or ALS Chemex Laboratory in Brisbane Samples were driven by PDN personnel to Lilongwe and air freighted by South African Airways to Johannesburg
Drilling techniques	<ul style="list-style-type: none"> Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc). 	<ul style="list-style-type: none"> The Kayelekera deposit has been drilled using combination of DD, P (historical) or RC drilling. All RC drilling has utilised Warman 250 RC rig mounted on a Unimog truck supported by separate truck mounted Atlas Copco 3000 psi compressor to provide additional air capacity and a 9 tonne Mercedes Benz flatbed support ruck with drill bit size of 5 inches. Diamond drilling has utilised conventional wireline drill rig with core size of HQ.
Drill sample recovery	<ul style="list-style-type: none"> Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material. 	<ul style="list-style-type: none"> No core recovery information was available. For RC drilling, the nominal drill hole size was 5 inches and all drill samples were bagged from the cyclone and weighed to provide some assessment of the average drilling sample recoveries. The average weight of the 1,978 metres checked was 25.04kg per sample against an expected 29kg for 100% recovery. The majority of poor recovery samples were within the first metre of the drill hole, with these removed, the average weight was 25.25kg for an average recovery of 87%. The vast majority of drill intervals weighed achieved a better than 80% recovery and this is considered to be a good result. All RC drilling is conducted to industry best practice and PDN QA/QC protocols whereby the hole is cleaned at the end of every metre interval by raising the bit slightly and blowing out the hole before drilling the next metre, and ensuring water ingress into the hole whilst drilling is minimised. No relationship between sample recovery and grade has been observed; studies to date show no correlation exists.
Logging	<ul style="list-style-type: none"> Whether core and chip samples have been geologically and 	<ul style="list-style-type: none"> All holes have been geologically logged (RC on 1m intervals, and DD on 1m intervals or to geological contacts) with recording of lithology, grain size and



Criteria	JORC Code explanation	Commentary
	<p><i>geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i></p> <ul style="list-style-type: none"> • <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i> • <i>The total length and percentage of the relevant intersections logged.</i> 	<p>distribution, sorting, roundness, alteration, oxidation state, and colour, and stored in the database. All holes were logged to a level of detail sufficient to support Mineral Resource estimation, and metallurgical investigations.</p> <ul style="list-style-type: none"> • No routine geotechnical or structural data has been logged or recorded. A limited number of geotechnical holes were drilled by CEGB and these were structurally logged in full. • Oxidation, colour, alteration, roundness, sorting, sphericity, alteration and mineralisation are logged qualitatively. All other values are logged quantitatively. All holes (core and chips) have been photographed and stored in a database. All photographs are of wet samples only. • All holes have been logged over their entire length (100%) including any mineralised intersections.
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> • <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i> • <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i> • <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i> • <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i> • <i>Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance duplicate/second-half sampling.</i> • <i>Whether sample sizes are appropriate to the grain size of the</i> 	<ul style="list-style-type: none"> • All sampling was carried out using PDN's sampling protocols and QA/QC procedures as per industry best practice. • All RC samples were riffle split into 80/20 proportions. Larger rejects (>20kg) samples were stored on site if they appeared mineralised or gave a count value of larger than 750cps on the scintillometer. All smaller (approx. <5kg) samples were bagged and stored in the Karonga office of PDN for future reference. • A further 200-500g sample was precision riffle split from the 5kg sample for assay of U₃O₈. Certified standards, duplicates and blanks were also inserted within the sample batches. • All samples went through pressed powder XRF analysis in either Setpoint Lab in Johannesburg or ALS Chemex Lab in Brisbane. • Samples were driven by PDN personnel to Lilongwe and air freighted by South African Airways to Johannesburg. • Core samples were split to 3cm long pieces of 100g to maximum 300g weight. Each of these core pieces was numbered and weighed. The gamma radiation of each piece was measured by a SPP2 scintillometer over a 30 second period in a lead castle and measured data is used stored in the database. • In 2005, equivalent uranium values were calculated for each 5cm interval from gamma log. Samples were collected over a sample length of 40cm, each sample weighing approx. 2.5-3kg. Samples were packed and sealed in airtight bags. Ten samples were combined into larger bags and all samples were frozen on site and later transferred into freezer at PDN's office in Karonga. Five



Criteria	JORC Code explanation	Commentary
	material being sampled.	<p>500 litre chest freezers were acquired and these were filled with total of 854 individual samples.</p> <ul style="list-style-type: none"> From 2006 all drill holes have been routinely logged using calibrated downhole radiometric logging equipment – from 2008 this equipment was owned and calibrated by PDN. Due to the disequilibrium identified in Oxidised Arkose material, all Oxidised Arkose samples (along with representative Reduces Arkose and Mudstone) were sent for laboratory analysis.
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established. 	<ul style="list-style-type: none"> It is known that CEGB drill core was assayed by X-ray fluorescence methods, historical reports available indicate that the sampling and analysis of this core was carried out in a manner comparable to modern standards. The XRF data was used for comparison with the down-hole logging of radiometric values, particularly in an effort to determine the disequilibrium characteristics of the different arkose units. This information covers casing attenuation factors, as the holes were logged inside rods where practicable, instrument dead time and deconvolution. In all cases the factors applied by the CEGB were found to be appropriate by Wrights (Wrights, 1989). However, there is no mention of either Water Factor (Hole Size) or Formation Factors being applied to the logged values, this may be because they have been considered as not being significant or may have been accounted for when subsequently applying disequilibrium factor (Barrett, 2005). Deconvolution and disequilibrium factors for the more recent PDN drilling were determined by Barrett Geophysical from XRF analysis of RC drill samples and radiometric down hole logging undertaken by PDN. It is the opinion of author that these factors are acceptable and are able to be applied to the current and historical radiometrically derived U₃O₈ grades to produce a unified dataset with XRF derived grades. Field QAQC procedures include the insertion of both field duplicates and certified reference 'standards'. Assay results have been satisfactory and demonstrate an acceptable level of accuracy and precision. Laboratory QAQC involves the use of internal certified reference standards, blanks, splits and replicates. Analysis of these results also demonstrates an acceptable level of precision and accuracy.
Verification of sampling	<ul style="list-style-type: none"> The verification of significant intersections by either independent 	<ul style="list-style-type: none"> Significant intersections were visually field verified by company and consultant geologists.



Criteria	JORC Code explanation	Commentary
and assaying	<p>or alternative company personnel.</p> <ul style="list-style-type: none"> The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	<ul style="list-style-type: none"> A comparison was conducted between the original CEGB analyses and those completed by PDN during the 2005 drilling campaign. As the purpose of the 2005 drilling was to replace those CEGB drill holes that passed through oxidised arkose zones but had no XRF analyses, there were only a very limited number of direct twin holes with analyses from both CEGB and PDN drilling. As a consequence, the comparison of XRF values had to be undertaken on nearest neighbour pairs, within a radius of 25m (nominal drill spacing) with a 1m vertical limit. The results show that there is a reasonable comparison between the two assay datasets with very little systematic bias. Assay values that were below detection limit were adjusted to equal half of the detection limit value.
Location of data points	<ul style="list-style-type: none"> Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control. 	<ul style="list-style-type: none"> All drill hole collars were surveyed with DGPS equipment in the MMG Zone 36 South grid. Historical collars were also surveyed where collar identity is recognisable. All holes were drilled vertical. Down-hole probe surveys have been undertaken on most of the holes to validate the down-hole measurements. Topographic surveys have been carried out several times and the latest pit survey was conducted in early 2015. A 0.1m resolution was used for Mineral Resource estimation and is considered appropriate.
Data spacing and distribution	<ul style="list-style-type: none"> Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied. 	<ul style="list-style-type: none"> Initial exploration by various operators prior to 1990 was mostly designed for regional exploration designed for coal and limestone exploration. CEGB holes targeted uranium mineralisation and were mostly drilled on an initial nominal 50m by 50m spacing. PDN's extensive drilling program designed for infill to increase confidence in the Mineral Resource classification. In addition, grade control drilling on a 12.5m by 12.5m spacing was conducted by PDN. The mineralised domains have sufficient continuity in both geology and grade to be considered appropriate for the Mineral Resource and Ore Reserve estimation procedures and classification applied under the 2012 JORC Code. Samples were composited to 1m prior to the estimation.



Criteria	JORC Code explanation	Commentary
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material. 	<ul style="list-style-type: none"> Drilling sections are orientated perpendicular to the strike of the mineralised host rocks at Kayelekera, All Mineral Resource definition holes are drilled vertical, which is approximately perpendicular to the flat dip of the stratigraphy. No orientation-based sampling bias has been identified in the data.
Sample security	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	<ul style="list-style-type: none"> Chain of custody was managed by PDN. Samples were driven by PDN personnel to Lilongwe and air freighted by South African Airways to Johannesburg and samples analysed at Setpoint Lab.
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> Data was validated by PDN whilst loading into database. Any errors within the data are returned to site geologist for validation.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to 	<ul style="list-style-type: none"> The Kayelekera Uranium Project is located in Malawi, in East Africa. The project site is located within the Kyungu Chieftainship, in the Karonga District of Northern Malawi about 35km from the local centre of Karonga and 650km north of the national capital of Lilongwe. A formal and detailed Development Agreement for the Kayelekera Uranium Project was approved by the Government of Malawi and executed on 22nd February 2007. The Development Agreement provides a stable fiscal regime for at least 10 years from the commencement of production. The Kayelekera deposit is covered by a single licence, Mining Licence (ML) 152, of 55.5 square kilometres granted on 9th April 2007 for an initial term of fifteen



Criteria	JORC Code explanation	Commentary
	obtaining a licence to operate in the area.	<p>years renewable for further 10-year periods. The current term expires on 9th April 2022.</p> <ul style="list-style-type: none"> The tenement is in good standing and no known impediments exist.
Exploration done by other parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> The tenement area has been previously explored by numerous companies. In 1983 The Central Electricity Generating Board ("CEGB") were granted two Reconnaissance Licences, RL004 and RL005. In April 1984 RL004 was converted to and Exclusive Prospecting Licence, EPL002, which was renewed in April 1987 as EPL 002 R1, and again in 1990 for two years as EPL 002/90 R2, covering a reduced area. RL 005 was renewed in both 1984 and 1985 before being dropped due to poor results. In 1983 regional gamma-ray spectrometry was carried out and identified 12 anomalies for ground follow-up. Surface investigations, including geological mapping and scintillometer surveys, of the known mineralisation at Kayelekera were carried out. In 1984 further ground surveys were completed delineating targets for more detailed investigation. A limited drill program (510m) was undertaken at Kayelekera to investigate mineralisation at depth, whilst trenches were dug to study near surface occurrences. In 1985 a total of 3,994m of drilling was completed outlining a deposit containing 7,500t of U3O8. Heliborne surveys (magnetics, gamma-ray spectrometry for U, Th and K were completed and identified some new targets and a better defined existing target areas for ground follow-up and drilling in 1986. During 1986, a further 3,821m of drilling was completed on Kayelekera, increasing the resource to 9,300t of U3O8. Seven other targets were drilled (2,503m) although no significant mineralisation was discovered. In 1987, 7,665m of drilling was carried out to infill the existing drilling to 50m by 50m. A number of pits were dug and some preliminary geotechnical holes drilled. Scout drilling on other targets failed to intersect any radiometrically anomalous strata but a 2m thick coal seam was intersected 1km north of the Kayelekera village at Nhkachira. In 1988 no drilling was completed on the uranium deposit at Kayelekera but a total of 1,180m were drilled on various scout targets. One hundred and seventeen metres were drilled to evaluate limestone deposits in the Mwesia basin, for lime that will be



Criteria	JORC Code explanation	Commentary
		<p>needed in the uranium extraction process. In addition, 289m were drilled to test the coal seams previously identified. During the latter part of 1988, the British Civil Uranium Procurement Organisation ("BCUPO") received competitive tenders for the execution of a detailed feasibility study for the Kayelekera project. Wright Engineers Limited ("Wright") of Vancouver, Canada was selected to produce the feasibility study which commenced in March 1989 and was completed by June 1990.</p> <ul style="list-style-type: none"> In 1989, a further 2,017m of drilling was drilled into the deposit and its margins for structural, hydrogeological, geotechnical and metallurgical purposes. An independent evaluation confirmed an in-situ resource of >9,000t of contained U₃O₈. A further 1,805m of drilling was completed to evaluate the Nhkachira coal deposit, which was shown to comprise several thousand tonnes of coal in a single 2m thick seam. Since 2002, PDN conducted extensive drilling programs in 2004, 2005, 2008-2011. Mining at the project was commenced in 2008.
<p>Geology</p>	<ul style="list-style-type: none"> <i>Deposit type, geological setting and style of mineralisation.</i> 	<ul style="list-style-type: none"> Kayelekera is situated close to a major tectonic boundary between the Ubendian and the Irumide domains. The Ubendian domain consists of medium to high-grade metamorphic rocks and intrusions cut by major NW-SE dextral shear zones and post-tectonic granitoid intrusions dated at 1.86Ga (Lenoir et al., 1995). These shear zones may well have been reactivated during and after deposition of the Karoo sequence, since many major brittle faults that offset the Karoo-aged rocks have the same orientation. Mineralisation at Kayelekera is hosted in several arkose units where they are adjacent to the Eastern Boundary Fault zone. The mineralisation forms more or less tabular bodies restricted to the arkoses, except adjacent to the NS strand of the Eastern Boundary fault at the eastern extremity of the pit. Here, mineralisation also occurs in mudstones in the immediate vicinity of the fault. It can be seen that the highest grades correspond to the intersection of the eastern and Champanji faults. Mineralisation grade and tonnage declines with lateral distance from these faults. Secondary mineralisation tends to be concentrated in vertical fractures and along the contacts between mudstone and arkose and is restricted to the upper parts of the orebody Primary reduced (i.e. carbon and pyrite-bearing) arkose ore accounts for 40% of the total ore. About 30% of the mineralisation is hosted in



Criteria	JORC Code explanation	Commentary
		<p>oxidised arkose (i.e. lacking carbon and pyrite) and is called oxidised ore. 10% of mineralisation is termed "Mixed Arkose" and exhibits characteristics of both primary and secondary arkose mineralisation types.</p> <ul style="list-style-type: none"> Uranium in primary ore is present as coffinite, minor uraninite and a U-Ti mineral, tentatively referred to as brannerite. Modes of occurrence include: disseminated in matrix clay, included in detrital mica grains and intimately intergrown with carbonaceous matter. Individual grains are extremely fine, typically <10µm. Coffinite and uraninite also show an association with a TiO₂ phase, possibly rutile after detrital ilmenite. It is possible that uranium deposition was accompanied by leaching of Fe from detrital ilmenite and precipitation of a TiO₂ polymorph.
<p>Drill hole Information</p>	<ul style="list-style-type: none"> A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length. If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case. 	<ul style="list-style-type: none"> Information on previous drilling can be found in the 2005 and 2009 NI43-101 Technical reports submitted by PDN.



Criteria	JORC Code explanation	Commentary
Data aggregation methods	<ul style="list-style-type: none"> In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated. 	<ul style="list-style-type: none"> Exploration results are not being reported. Not applicable as a Mineral Resource is being reported. Metal equivalent values have not been used.
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known'). 	<ul style="list-style-type: none"> Due to the use of vertical drilling and the horizontal, layered nature of the deposit all drill intercepts can be considered to represent the true width of the mineralisation.
Diagrams	<ul style="list-style-type: none"> Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery 	<ul style="list-style-type: none"> See included plans and section.



Criteria	JORC Code explanation	Commentary
	being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	
Balanced reporting	<ul style="list-style-type: none"> Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results. 	<ul style="list-style-type: none"> Not applicable as no exploration results are reported.
Other substantive exploration data	<ul style="list-style-type: none"> Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances. 	<ul style="list-style-type: none"> The deposit has previously been the subject of extensive drilling, metallurgical, hydrogeological, pre-feasibility and definitive feasibility studies.
Further work	<ul style="list-style-type: none"> The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main 	<ul style="list-style-type: none"> Additional exploration work is being planned and will be announced when appropriate.



Criteria	JORC Code explanation	Commentary
	<i>geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i>	

Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
Database integrity	<ul style="list-style-type: none"> Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. Data validation procedures used. 	<ul style="list-style-type: none"> The data used in this estimate is based on a combined sample dataset from the original CEGB drilling and that conducted by PDN between 2005 and 2011. This data has been validated as much as possible by reference to original CEGB graphical drill logs, sample submission sheets and analytical reports. The original CEGB drill holes have been re-surveyed where possible and those positions incorporated into the sample dataset. For historical and PDN's drilling, geological and field data is collected using Field Marshall software on tablet computers. Historical drilling data has been captured from historical drill logs. The data is verified by company geologists before the data is sent for further validation and compilation into an SQL Server database. Historic data has been verified by checking historical reports on the project. The drilling data was received in the form of a number of Micromine data files which were compiled into an SQL Server database. This database was then used for data validation, checking for sample overlaps, lithological consistency etc. Due to uncertainty about the previous history of the data files and what calibrations had been applied to the data the drill holes were compared visually against the data displayed in the CEGB Ore Reserve Assessment report. Previous drill and sampling logs were also examined to provide a direct check on the consistency and veracity of the dataset available. Disequilibrium calibrations were developed using factors supplied by Barrett Geophysical and comparison to those used in the previous resource estimation



Criteria	JORC Code explanation	Commentary
Site visits	<ul style="list-style-type: none"> Comment on any site visits undertaken by the Competent Person and the outcome of those visits. If no site visits have been undertaken indicate why this is the case. 	<ul style="list-style-type: none"> Numerous site visits by the Competent Person from PDN have occurred during exploration and mining activity. The most recent site visit was in late 2013 coinciding with the site being placed on care and maintenance due to persistent low uranium prices.
Geological interpretation	<ul style="list-style-type: none"> Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. Nature of the data used and of any assumptions made. The effect, if any, of alternative interpretations on Mineral Resource estimation. The use of geology in guiding and controlling Mineral Resource estimation. The factors affecting continuity both of grade and geology. 	<ul style="list-style-type: none"> The confidence in the geological interpretation is considered to be good and is based on previous mining history and visual confirmation in outcrop and within the Kayelekera open pit. Geochemistry and geological logging were used to assist identification of lithology and mineralisation. The Kayelekera deposit consists of a sequence of alternating arkose units (up to seven in total) and intervening mudstone units. The arkose/mudstone sequence is well defined and appears to be fault bounded on the eastern side, with an east-west trending fault intersecting the sequence within the northern portion of the package. As the mineralisation is flat lying and all drilling included in the resource estimation is vertical the mineralised intercepts can be considered to represent true widths. Infill drilling has confirmed geological and grade continuity.
Dimensions	<ul style="list-style-type: none"> The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource. 	<ul style="list-style-type: none"> The Kayelekera Mineral Resource area extends over a strike length of 1,600m (from 8,895,300mN – 8,896,900mN) and includes the 300m vertical interval from 1,000mRL to 700mRL.
Estimation and modelling techniques	<ul style="list-style-type: none"> The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of 	<ul style="list-style-type: none"> Using parameters derived from modelled variograms, Multiple Indicator Krigging ("MIK") was used to estimate average block grades using Hellman & Schofield's GS3 software. The basic unit of an Indicator Kriging block model is a large block (normally referred to as a panel) that has the dimensions of the average drill hole spacing in the horizontal plane. The panel should be large enough to contain a reasonable number of blocks, or Selective Mining Units ("SMU's"). The SMU is the smallest volume



Criteria	JORC Code explanation	Commentary
	<p>extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</p> <ul style="list-style-type: none"> The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. The assumptions made regarding recovery of by-products. Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation). In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. Any assumptions behind modelling of selective mining units. Any assumptions about correlation between variables. Description of how the geological interpretation was used to control the resource estimates. Discussion of basis for using or not using grade cutting or capping. The process of validation, the checking process used, the comparison of model data to drill hole data, 	<p>of rock that can be mined separately as ore or waste and is usually defined by a minimum mining width. At Kayelekera the dimensions of this volume have been set at 3mE x 3mN x 2mRL.</p> <ul style="list-style-type: none"> The goal of Indicator Kriging is to estimate the tonnage and grade of mineralisation that would be recovered from each panel if the panel were mined using the block as the minimum selection criteria to distinguish between ore and waste. To achieve this goal, the following steps are performed; Estimate the proportion of each geological domain within each panel. This can be achieved by Kriging of indicators of domain classifications of sample data points or by passing a template model through wireframes and calculating proportions of panels inside and outside of each wireframe. A combined kriging approach was used for Kayelekera, each panel being assigned a proportion of one, or a combination, of domains. Whilst this step was completed an explicit geological model developed in Micromine was applied to the Mineral Resource estimate. Estimate the histogram of grades of sample-sized units within each domain within each panel using MIK. MIK actually estimates the probability of the grade within each panel being less than a series of indicator threshold grades. These probabilities are interpreted as panel proportions. For each domain, and for each panel that receives an estimated proportion greater than 0ppm U₃O₈, implement a block support correction (variance adjustment) on the estimated histogram of sample grades in order to achieve a histogram of grades for SMU-sized blocks. This step incorporates an explicit adjustment for the Information Effect. At Kayelekera the total block support correction was set at between 0.07 and 0.24 for individual domains. This is a moderate correction factor, however in the experience of the author these orders of adjustments are commonly seen in deposits with mineralisation styles similar to that present at Kayelekera. Calculate the proportion of each panel estimated to exceed a set of selected cut-off grades, and the grades of those proportions. Apply to each panel, or portion of a panel below surface, an in-situ bulk density (ISBD) to achieve estimates of recoverable tonnages and grades for each panel. Apart from the consideration of adjusting Mineral Resource classification according to block



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	<p>and use of reconciliation data if available.</p>	<p>proportions, completes construction of the resource model. The estimates of block support corrected resources for each panel may be combined to provide an estimate of global recoverable resources for the deposit.</p> <ul style="list-style-type: none"> • The parent block dimensions used were 20m NS by 20m EW by 2m vertical and no sub-cells were used. • A bulk density of 2.29t/m³ for Arkose and 2.20t/m³ for mudstone was applied to all blocks within the model which was subsequently trimmed to a topography created from data contained within the geological database. • A domain geometry model was constructed in Micromine using the previously created arkose unit wireframes. Panel proportions for each arkose unit were then exported and used to produce a third-party geological domain model for use in GS3 as this was believed to produce a more representative geological model. • The size of the variance adjustment needed to obtain the variance of the block grade distribution within a panel can be calculated using the rule of additivity of variances, which in the case of block support adjustments is often called Krige's Relationship: Var(samples in a panel) = Var(samples in a block) + Var(blocks in a panel) • The variance of sample grades in a panel and the variance of samples within a block can be directly calculated from the variogram of uranium grades for a particular domain. The ratio of Var(blocks in panel) to Var(samples in panel) is that required to implement the block support adjustment. • Variance adjustment ratios applied in estimating the Kayelekera recoverable uranium resources are listed in the table below. These ratios have been applied using a Direct Lognormal Correction method (i.e., incorporating symmetrization of block grade distributions). Selective Mining Unit (SMU) dimensions of 3mE x 3mN x 2mRI have been assumed along with grade control spacing of 3.5mE x 3.2mN x 1mRI. • The current Mineral Resource estimate at Kayelekera reported a total of 0.67Mt at 1,010ppm U₃O₈ for 681 tonnes U₃O₈ in the Measured Mineral Resource category and 18.7Mt at 660ppm U₃O₈ for 12,277 tonnes U₃O₈ for Indicated and Inferred Mineral Resources of 3.7Mt at 585ppm U₃O₈ for 2,178 tonnes all at a cut-off grade of 300ppm U₃O₈. These Mineral Resources are depleted for mining, an additional



Criteria	JORC Code explanation	Commentary
		<p>1.6Mt at 755ppm U₃O₈ for 1,199 tonnes is held as ROM stockpiles.</p> <ul style="list-style-type: none"> No recovery of by-products is anticipated. Only U₃O₈ was interpolated into the block model. There are no known deleterious elements within the deposits. Selective mining unit assumptions were based on the size of the mining equipment to be used and the expected blast hole spacing. The deposit mineralisation was constrained by wireframes representing the different geological units. The wireframes were applied as hard boundaries in the estimate. The drill hole database was intersected with the mineralisation model and the results were coded into the drill hole database. From this mineralised drill hole intercepts were produced, and these were subsequently composited to 1m intervals and used in the grade estimation process. Statistical analysis and variogram analysis were carried out on data from various arkose units R to X along with one derived for all mudstone and deeper arkose units. Comparison between the current estimate and the previous Mineral Resource is very good when constrained to similar spatial extents. This Mineral Resource has been extended to the west due to additional drilling.
Moisture	<ul style="list-style-type: none"> Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content. 	<ul style="list-style-type: none"> Tonnages and grades are estimated dry.
Cut-off parameters	<ul style="list-style-type: none"> The basis of the adopted cut-off grade(s) or quality parameters applied. 	<ul style="list-style-type: none"> The Statement of Mineral Resources has been constrained by the mineralisation solids and reported above a cut-off grade of 300ppm U₃O₈. The cut-off grade was estimated based on parameters derived from internal mining studies. It should be noted that additional studies are required to confirm economic viability at current uranium prices.
Mining factors or assumptions	<ul style="list-style-type: none"> Assumptions made regarding possible 	<ul style="list-style-type: none"> It is assumed that the mineralisation is likely to be extracted by open pit mining techniques. As the



Criteria	JORC Code explanation	Commentary
	<p><i>mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</i></p>	<p>mineral resource estimation technique is MIK no additional dilution or recovery adjustments have been made over those contained in the original estimation. Refinement of the MIK variance adjustment have been undertaken over and above the calculated values based on mining experience since 2008.</p>
<p>Metallurgical factors or assumptions</p>	<ul style="list-style-type: none"> • <i>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</i> 	<ul style="list-style-type: none"> • While mineral processing and metallurgical test studies were carried out on mineralisation from the Kayelekera deposit as part of the CEGB feasibility study it was felt that the results from these studies were not appropriate for the current economic climate or state of uranium processing technology. As a consequence, new mineral processing and metallurgical testing studies were carried out on the deposit both during and subsequent to the FS. • The initial FS test work program was conducted by Mintek in Johannesburg under the supervision of GRD Minproc. Subsequent investigations were conducted by the Australian Nuclear Science and Technology Organisation ("ANSTO") in Sydney. Samples for metallurgical test work were sourced from throughout the ore body and separated into Oxidised Arkose, Reduced Arkose and Mudstone. A portion of the work undertaken by Mintek and ANSTO was on composite samples conforming to the expected proportions of individual rock types in the processing stream. It is the opinion of the author that the samples selected for metallurgical test work are representative of both the mineralisation and the anticipated feed proportions of each rock type.



Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> Based on the test work results a treatment plant has been designed comprising: single stage crushing, SAG milling, pre-leach thickening, sulphuric acid leaching, resin in pulp (RIP), resin elution, gypsum precipitation and UO precipitation. This is followed by washing, liquid solid separation, drying and packaging of the UO₄ product for export.
Environmental factors or assumptions	<ul style="list-style-type: none"> <i>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</i> 	<ul style="list-style-type: none"> Historical mining has occurred at the Kayelekera deposit. Mining commenced in May 2008 and ceased in December 2013. During the operating period 9.1Mbcm of material (of which 3.0Mbcm was ore) was removed from the open pit, at an average monthly rate of nearly 130,000bcm/month, resulting in a strip ratio of 2:1. PDN aimed to minimise its impact on the environment through effective environmental management across all aspects of its operations; preventing, minimising, mitigating and remediating any adverse impacts of its operations on the environment; and achieving continuous improvement in environmental performance. Environmental Management Plans (EMP's) have been prepared for the Construction, Operational and C&M phases of KM. The Environmental Management Plan currently in place is the C&M EMP. However, upon Restart the Operational EMP will be revised for the re-establishment of operations. A comprehensive environmental monitoring programme was conducted during the pre-mining, construction, operational and is continuing through the C&M phase of the KM. The programme includes monitoring of: Surface Water, Groundwater, Dust, SO₂, Environmental Radiation, Aquatic invertebrates, Rehabilitation. The monitoring programme is regularly reviewed based on the monitoring outcome and any changes to the operations or the environment. The monitoring requirements are outlined in the EMPs and detailed monitoring schedules have been prepared for each stage of the operation. Environmental inspections and audits are undertaken by KM site personnel on a regular basis. Environmental inspections of the component areas of the site are conducted in accordance with the EMP and the Environmental Inspection Schedule. Audits of compliance with the EMP are also undertaken by KM personnel.



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		<ul style="list-style-type: none"> Corporate environmental audits were conducted on at least an annual basis to assess compliance, conformance and environmental performance of the operations.
Bulk density	<ul style="list-style-type: none"> Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples. The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit. Discuss assumptions for bulk density estimates used in the evaluation process of the different materials. 	<ul style="list-style-type: none"> A bulk density of 2.29t/m³ for Arkose and 2.20t/m³ for mudstone was applied to all blocks within the model which was subsequently trimmed to a topography created from data contained within the geological database. Density is measured using the water immersion technique. Moisture is accounted for in the measuring process and measurements were separated for lithology, mineralisation and weathering.
Classification	<ul style="list-style-type: none"> The basis for the classification of the Mineral Resources into varying confidence categories. Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology) 	<ul style="list-style-type: none"> The Mineral Resource has been classified on the basis of drilling density throughout the deposit as well as the validity of the underlying data. All relevant factors have been taken into account when determining the Mineral Resource classification. The current classification of the deposit reflects the opinion of the Competent Person.



Criteria	JORC Code explanation	Commentary
	<p>and metal values, quality, quantity and distribution of the data).</p> <ul style="list-style-type: none"> Whether the result appropriately reflects the Competent Person's view of the deposit. 	
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of Mineral Resource estimates. 	<ul style="list-style-type: none"> The mineral resource estimate was reviewed by PDN specialists and the current values reflect this review.
Discussion of relative accuracy/confidence	<ul style="list-style-type: none"> Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. 	<ul style="list-style-type: none"> Based on the current understanding of the deposit it is believed that the Mineral Resource estimate reasonably reflects the accuracy and confidence levels within the deposit. Due to the nature and style of the mineralisation it is expected that additional, detailed, infill drilling will locally modify grades and thicknesses however the global tonnages and grades are expected to remain consistent. The lode geometry and continuity has been adequately interpreted to reflect the applied level of Measured, Indicated and Inferred Mineral Resource. The data quality is good and the drill holes have detailed logs produced by qualified geologists. A recognised laboratory has been used for all analyses. The Mineral Resource statement relates to global estimates of tonnes and grade. The current Mineral Resource estimate at Kayelekera reported a total of 0.67Mt at 1,010ppm U₃O₈ for 681 tonnes U₃O₈ in the Measured Mineral Resource category and 18.7Mt at 660ppm U₃O₈ for 12,277 tonnes U₃O₈ for Indicated and Inferred Mineral Resources of 3.7Mt at 585ppm U₃O₈ for 2,178 tonnes all at a cut-off grade of 300ppm U₃O₈. These Mineral Resources are depleted for mining, an additional 1.6Mt at 755ppm U₃O₈ for 1,199 tonnes is held as ROM stockpiles/



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	<ul style="list-style-type: none">• <i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i>	



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