

# SIGNIFICANT MAIDEN HIGH GRADE URANIUM MINERAL RESOURCE

## Highlights

- **Saraya uranium project** is located in Senegal, West Africa and **covers a total area of 1,650km<sup>2</sup>**
- Mineral Resource Estimate (MRE) at first prospect (Saraya), yielded maiden **Inferred Mineral Resource of 16Mlbs of eU<sub>3</sub>O<sub>8</sub> (7,300t) at a grade of 587ppm** (250ppm cut-off) – **Resource covers only 0.2km<sup>2</sup> of permit area**
- Uranium resource contains large (13Mlbs eU<sub>3</sub>O<sub>8</sub>) higher grade (641 ppm) potentially open-pitatable component within 160m of the surface
- Mineralisation open along strike, down-dip and down-plunge
- MRE based on a database containing data from 541 historical drillholes, together with data from Haranga's 2022 drill campaign
- **Significant exploration upside exists** across the large permit area, where the Company has already defined at least six additional uranium radiometric and coincident geochemical uranium anomalies
- Several of the regional **anomalies defined to date are significantly larger than the footprint of the Saraya resource mineralisation** – example Diobi prospect five times larger than Saraya
- Company awaiting sampling results across the southern half of the permit, where historic radiometric anomalies have presented as the largest on the permit

Zone	Classification	Tonnage	Grade	Contained eU <sub>3</sub> O <sub>8</sub>	
		Mt	eU <sub>3</sub> O <sub>8</sub> ppm	Mlbs	tonnes
+30RL	Inferred	9.40	641	13.29	6 000
-30RL	Inferred	3.05	419	2.82	1 300
<b>Total</b>	<b>Inferred</b>	<b>12.5</b>	<b>587</b>	<b>16.1</b>	<b>7 300</b>

**Table 1: Saraya Mineral Resource Estimate – 250ppm cutoff, Indicator Kriging**  
(30RL is a depth measurement – approximately 160m below the topographic surface)

**Haranga Resources Ltd (ASX:HAR; FRA:65E0; “Haranga” or “the Company”)** is pleased to announce a maiden global mineral resource estimate for the Saraya Uranium Deposit located in Eastern Senegal, West Africa.

**Managing Director of Haranga, Mr Peter Batten stated,** *“Haranga is very pleased with both the size and the grade of this initial Mineral Resource Estimate. This marks a significant milestone for the Company and was based on solid work by our professional team in digitizing, translating and validating existing data, a fitting reward for their efforts. The deposit size and grade, place it at the forefront of junior exploration companies. The Saraya permit has a real prospect of significant growth through the Saraya deposit extensions, the six surrounding geochemical and radiometric coincident anomalies already identified and the radiometric anomalism that sits in the 60% of the permit yet to be explored.”*

The JORC 2012 Inferred Resource includes **an estimated 16.1 Mlbs (7,300t) of eU<sub>3</sub>O<sub>8</sub> at an average grade of 587ppm using a 250ppm eU<sub>3</sub>O<sub>8</sub> cut-off.** The reported Mineral Resource Estimate was prepared by A. Gillman of Odessa Resources Pty Ltd in accordance with the 2012 JORC Code and was based primarily on historical diamond and RC drilling, together with recent validation drilling by Haranga.

In 2022 Haranga announced<sup>1</sup> an Exploration Target of between 4 and 35 Mlb of eU<sub>3</sub>O<sub>8</sub> at an estimated grade of 350 to 750ppm. The tonnage and contained eU<sub>3</sub>O<sub>8</sub> estimated in the MRE fall at the midway point of the ranges reported in the Exploration Target, whilst the estimated grade falls towards the upper end of the Exploration Target grade range.

The uranium mineralisation at Saraya is shear hosted in a NNE structural corridor affected by sodic metasomatism and episyenitisation within the felsic granitic batholith of Saraya. Mineralisation is almost exclusively constrained in the episyenites. Haranga is targeting several NNE extensions with subsequent soil exploration to define new drilling targets and possible resource extension.

## **Project Overview and History**

The Saraya Uranium Deposit is located in Eastern Senegal, West Africa (Figure 1). Haranga Resources Ltd entered a joint venture with Mandinga Resources SARL (Mandinga), 100% holders of the Saraya Permit, with the purchase of 70% of Mandinga. The remaining 30% in Mandinga becomes dilutionary following a positive PFS and will convert to a 2% net-smelter royalty if it should dilute below 6%.

The uranium potential of the Saraya prospect was first flagged by the French Atomic Energy Commission (Commissariat à l'Énergie Atomique, CEA) in the late 1950s, from large-scale aerial surveys and subsequent ground radiometric mapping and trenching.



**Figure 1: Saraya Permit Location**

By the mid-1970s, COGEMA (previously Compagnie Générale des Mines) extended reconnaissance-level field radiometric mapping followed by 452 drillholes at the Saraya main prospect. Gamma probes were used to determine eU grades. COGEMA established that uranium mineralisation at Saraya was an episyenite-affiliated target structurally controlled by fault intersections. By the mid-1980s, COGEMA's interest shifted to their new Niger discoveries and Saraya was mothballed.

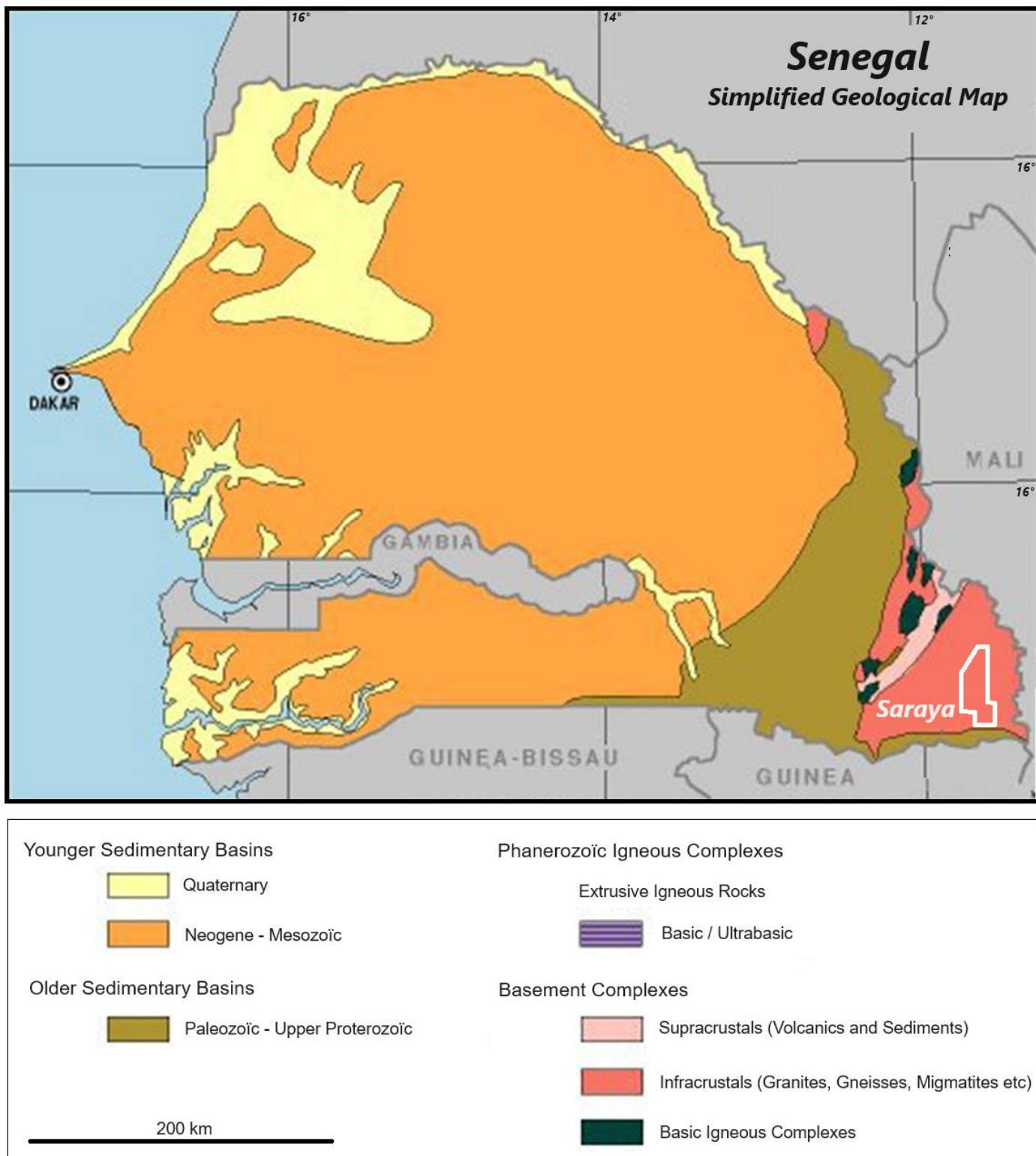
Areva (now Orano), previously known as COGEMA, re-engaged with the Saraya Project in 2008, fueled by global uranium prices. Their comprehensive review of the geophysical data highlighted a boundary of the deuteric alteration within the granites associated with Saraya. Subsequent drilling of 141 holes across various prospects including 72 in the Saraya Prospect Area. Areva linked the significant uranium mineralisation with brecciated corridors within Episyenite in a sodic metasomatism context. Areva proposed a comprehensive exploration program at Saraya, but withdrew from Senegal following the Fukushima incident.

Haranga, through Mandinga Resources, took over exploration activities at the Saraya prospect in 2022. Haranga's initial diamond drill program included 22 diamond drill holes for 3,021 meters aimed at validating the geological model, corroborating historical drill data and seeking extensions to the known uranium mineralisation. Drilling was executed by IDC (International Drilling Company-West Africa) and downhole radiometric logging was handled by Terratec Geophysical Services (Germany).

Company	Exploration Period	Hole Type	No. Holes	Metres	Average Length (m)	Deepest Hole (m)
<b>Cogema Exploration</b>	1970-1980's	percussion	442	49 122	111	353
<b>Areva</b>	2009-2011	percussion	77	13 153	171	390
<b>Haranga</b>	2022-2023	diamond core	22	3 018	137	221
<b>Total</b>			<b>541</b>	<b>65 292</b>		

**Table 2: Drillholes used for the MRE**

The Saraya permit covers a portion of the Paleoproterozoic Kedougou-Kenieba Inlier in the West African Craton (Figure 2). The Saraya uranium deposit is hosted by the late Eburnean composite batholite of Saraya which intruded Birimian greenstone formations. The structural disposition of the batholith suggests a diapiric ascent with remnants of Birimian greenstones appearing in between these rising magmatic bodies. The northern-most pluton of the Saraya batholite, host to the known uranium mineralisation, is marked by a medium to coarse-grained leucocratic granite composition, whereas the southern plutons reveal a finer biotite granite composition.



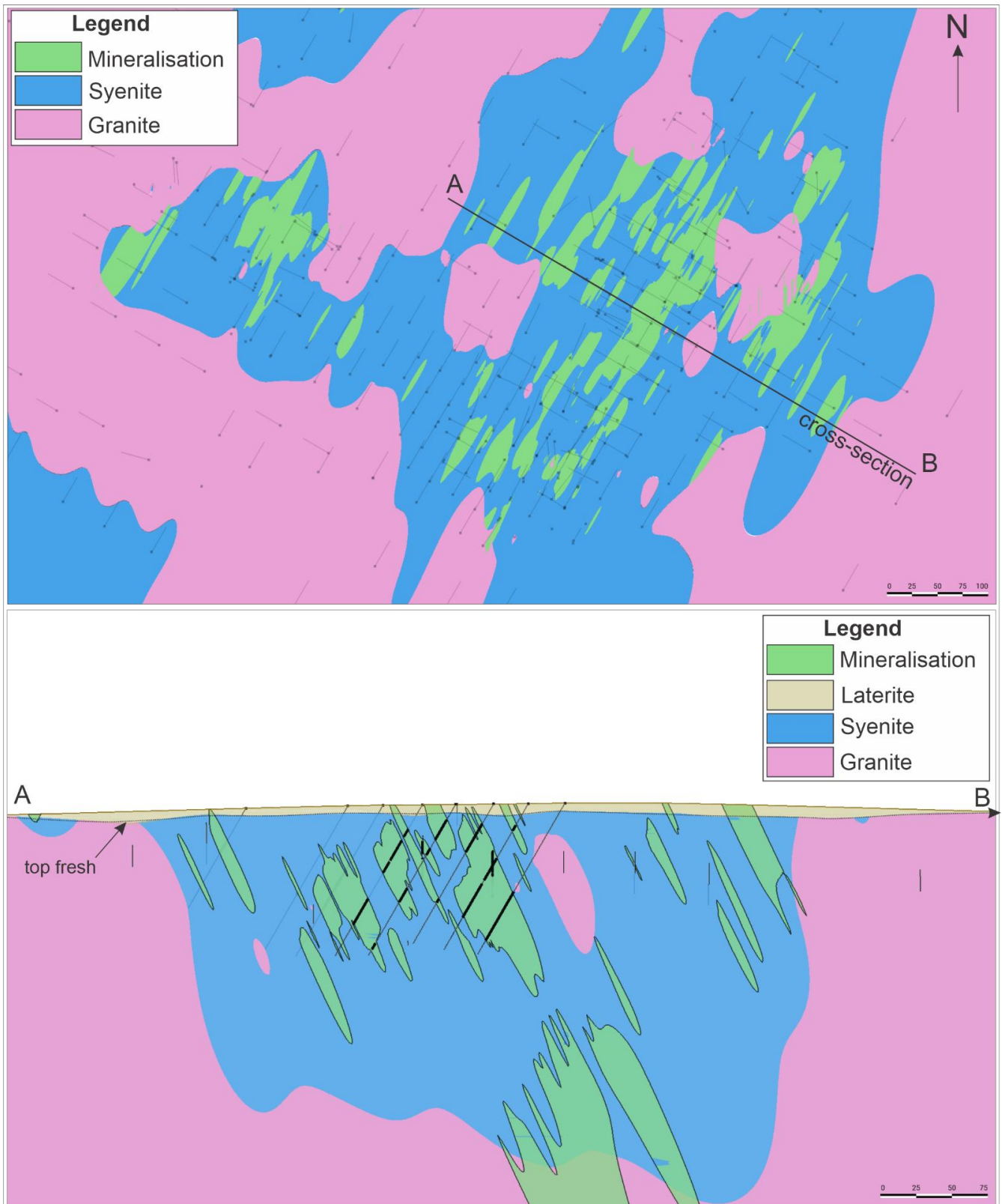
**Figure 2: Senegal Geology**

The eastern edge of Saraya Granite is characterised by a NNE trending subvertical shear zone at the interface with the Dalema Basin sediments. Parallel shear systems are developed within the granite, possibly directing the Na-metasomatism and consequent episyenites. Possible extensions of these NNE shears may be developed in the southern Saraya plutons, masked by thicker laterite to the south.

**Summary of the Mineral Resource Estimation**

A geological model of the deposit, probably the first established in the project area, was developed by Odessa Resources Pty Ltd by numerically interpolating the logging codes of both historical and recent drilling (Figure 3).

The Saraya Uranium Deposit predominantly comprises two primary lithologies: Syenite and Granite. The mineralisation is almost exclusively housed within the syenite formation. A weathering model was also constructed showing a relatively shallow (6-15m) top of the fresh rock.



**Figure 3: Plan View and Cross section of the geological model showing the two main lithologies and the mineralisation**

Mineralised domains were delineated using an indicator radial bias function (RBF) model based on uncomposed  $eU_3O_8$  interval data. This model identifies volumes likely to exceed a 200ppm  $eU_3O_8$  cut-off. The model's boundaries have then been visually validated against the 200ppm/250ppm  $eU_3O_8$  grade intervals on drillhole traces.

A total of 757 bulk density measurements were taken by Haranga on recently drilled and mineralised core at 0.5m intervals: this remains consistent with depth. An overall bulk density of 2.62t/m<sup>3</sup> was used for tonnage computation.

The eU<sub>3</sub>O<sub>8</sub> grade intervals were composited to 0.25m lengths inside the RBF hard boundary, from which the grade distribution histogram and log probability of the composited eU<sub>3</sub>O<sub>8</sub> were extracted. Ordinary Kriging (OK) was utilised for grade estimation - a method that employs covariances and a Gaussian process for interpolation between measured data points, rather than relying on inverse distance or nearest neighbor estimates. A two-stage estimation strategy was used. Due to the dataset's skewed nature, a log-normal transformation was used to refine the variogram, and then back-transformed for accurate resource estimates.

Pass	Ellipsoid Ranges			Ellipsoid Directions			No. of Samples	
	Max	Inter	Min	Dip	Dip Azi.	Pitch	Min	Max
1	30	20	15	65	120	90	4	10
2	90	60	30	65	120	90	4	10

Table 3: Search Ellipse Dimensions

Based on the geology and variography, a rotated block model was set up (Figure 4). Estimated grades were validated using visual block grade comparisons to downhole data and swath plots comparing kriged grades to inverse distance squared grades and composite grades. Validations across different axes revealed consistent correlation between the two estimation methods. Both showed no systematic grade over-estimation, indicating a reliable estimation process.

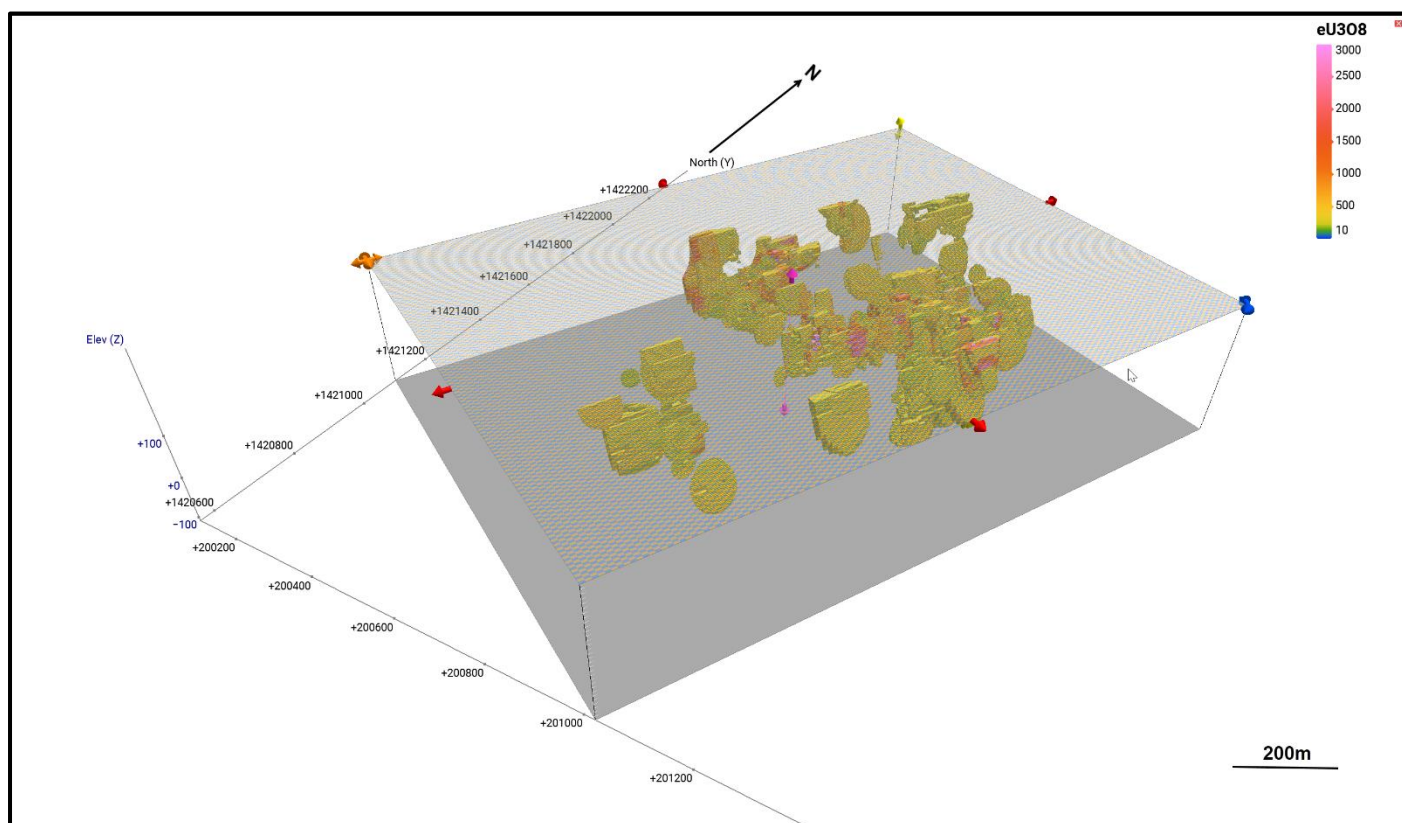


Figure 4: Saraya Ore Block Model – Oblique view populated blocks



The Saraya mineral resource is fully classified as Inferred only due to a lack of extractive chemistry testwork and also due to the relatively limited recent QAQC data to validate the deeper historical grades. This resource is split into two confidence levels: Higher Confidence located above the 30RL mark (approximately 160m vd) and Base Confidence, both above and below this point, based on the Pass 1 and Pass 2 search ellipses respectively. Most of the resource, representing 72% of tonnage and 80% of contained eU<sub>3</sub>O<sub>8</sub>, spans from the surface to 160m deep, suitable for shallow open pit mining.

Zone	Classification	Tonnage	Grade	Contained eU <sub>3</sub> O <sub>8</sub>	
		M t	eU <sub>3</sub> O <sub>8</sub> ppm	Mlb	Tonnes
<b>Total</b>	<b>Inferred</b>	<b>12.5</b>	<b>587</b>	<b>16.1</b>	<b>7 300</b>

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Table 4: Saraya Mineral Resource Estimate – 250ppm eU<sub>3</sub>O<sub>8</sub> cutoff

one	Classification	Tonnage	Grade	Contained eU <sub>3</sub> O <sub>8</sub>	
		M t	eU <sub>3</sub> O <sub>8</sub> ppm	Mlb	Tonnes
<b>Total</b>	<b>Inferred</b>	<b>17.1</b>	<b>488</b>	<b>18.4</b>	<b>8 300</b>

Zone	Classification	Tonnage	Grade	Contained eU <sub>3</sub> O <sub>8</sub>	
		M t	eU <sub>3</sub> O <sub>8</sub> ppm	Mlb	Tonnes
+30RL	Inferred	12.22	545	14.69	6,600
-30RL	inferred	4.86	346	3.70	1,700
<b>Total</b>	<b>Inferred</b>	<b>17.1</b>	<b>488</b>	<b>18.4</b>	<b>8 300</b>

Table 5: Saraya Mineral Resource Estimate – 200ppm eU<sub>3</sub>O<sub>8</sub> cutoff

## Exploration Potential

The Saraya permit, spanning 1,650 km<sup>2</sup>, is entirely located on the Saraya Granite, the source of uranium mineralisation. Approximately 85% of the permit area is obscured by regolith, including laterite and colluvial deposits, concealing the granite and any potential mineralisation. Cogema and Areva successfully identified surface mineralisation in the exposed 15% of the area, they acknowledged the challenges of exploring the covered portions.

Haranga has undertaken a comprehensive termite mound sampling strategy across the entire permit at intervals of 1,000m x 100m, narrowing to 200m x 50m for infill areas. This technique leverages the termite's natural tendency to burrow deep, bringing elements from the concealed granites to the surface, cutting through the colluvial and lateritic cover. The samples obtained from this cost-effective and rapid method are analyzed with a handheld XRF device, modified for enhanced uranium detection and calibrated for the site and the sample type.

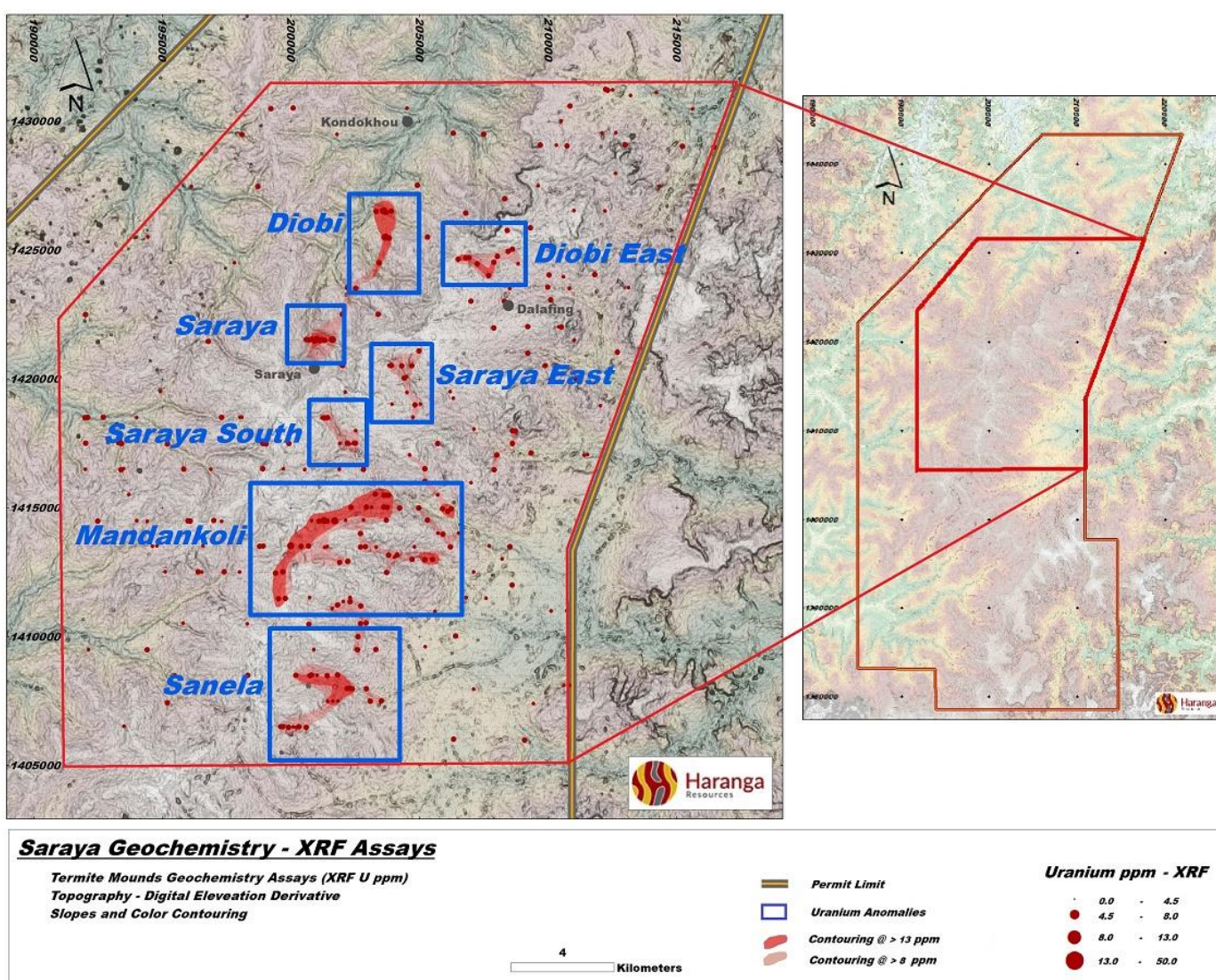


Figure 5: Saraya line of radiometric and geochemical anomalism

To date, about 70% of the permit area has been surveyed with 11,200 termite mound samples collected out of a planned 16,000. Additionally, six anomalies have been further investigated with 9,930 infill samples collected, out of a planned 12,100. Early results, particularly from the Diobi and Sanela prospects, have revealed strong uranium anomalism and new extensions to the known Saraya deposit mineralisation.

Given these promising preliminary findings, ongoing sampling and analysis are expected to hasten drill targeting.

### **ASX Listing Rule 5.8.1 Summary**

The following summary presents a fair and balanced representation of the information contained within the Mineral Resource Estimation Technical Report for the Saraya Uranium Project:

- Uranium mineralisation at Saraya occurs within the Episyenites of the Saraya Batholith with brecciated corridors within Episyenite in a sodic metasomatism context.
- Equivalent uranium grades ( $eU_3O_8$ ) were recorded using a downhole scintillometer and calculating the grade based on the response. The quality of the drilling, sampling methodology and analysis for this method was assessed by the Competent Person and is of an acceptable standard for the use in a Mineral Resource Estimation publicly reported in accordance with the JORC 2012 Edition Guidelines. (ASX LR 5.8.1 Sampling & Drilling)
- Major and trace elements have been analyzed using a four-acid digestion method followed by combined Inductively Coupled Plasma Mass Spectrometry and Atomic Emission Spectrometry (ICP-MS and AES) analysis by ALS Vancouver laboratory. An extra 5% of samples have been assayed by complete fusion followed by X-Ray Fluorescence (XRF) analysis, to assess for resistive minerals holding Uranium.
- Mineral Resources were estimated by the use of a 3D wireframe of the geology based on drillhole logging and constrained by a DTM surface. Saprolite and laterite hardcap was excluded from the resource on the basis of it being unmineralised, very thin and stripped prior to mining. (ASX LR 5.8.1 Estimation Methodology)
- Grade estimation was completed using ordinary kriging with hard boundaries applied between identified layers. The estimate was undertaken using two bottom grade cuts of 200ppm and 250ppm respectively and a top cut of 10,000ppm. (ASX LR 5.8.1 Estimation Methodology)
- For reporting purposes, a  $eU_3O_8$  cutoff grade of 250ppm was selected. There is, within the data, a natural cutoff at between 200ppm and 250ppm and this reflects the homogeneous nature of the Saraya episyenites. The use of a natural cutoff ensures all portions of the deposit are represented in the resource,
- The Mineral Resource categorised as Inferred despite the spacing of the data being sufficient for higher categories. This is a reflection of the lack of drillholes below 30RL and the absence of extractive metallurgical testwork. (ASX LR 5.8.1 Classification)
- The Mineral Resource Estimation is classified as Inferred on the basis of the drill hole logging, drill hole sampling analytical results, drill spacing, statistical analysis and the confidence in geological continuity. (ASX LR 5.8.1 Classification)

This announcement is approved for release by the Board of the Company.

**Investor inquiries**

**Haranga Resources**

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**COMPETENT PERSON'S STATEMENT**

The information in this report that relates to technical assessment of the Mineral Resource Estimate and Exploration Target for the Saraya Uranium Project is based on, and fairly represents, information and supporting documentation prepared by Mr Alfred Gillman BSc(Hons), a Competent Person who is a Fellow of the Australasian Institute of Mining and Metallurgy. Mr Gillman is an employee of Odessa Resources Pty Ltd. Mr Gillman has sufficient experience that is relevant to the technical assessment of the mineral assets under consideration, the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.

Mr Gillman consents to the inclusion of the matters based on his information in the form and context in which it appears in this Presentation and has not withdrawn his consent before lodgment of this report.

**Disclaimer:**

Forward-looking statements are statements that are not historical facts. Words such as "expect(s)", "feel(s)", "believe(s)", "will", "may", "anticipate(s)", "potential(s)" and similar expressions are intended to identify forward-looking statements. These statements include, but are not limited to statements regarding future production, resources or reserves and exploration results. All of such statements are subject to certain risks and uncertainties, many of which are difficult to predict and generally beyond the control of the Company, that could cause actual results to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements. These risks and uncertainties include, but are not limited to: (i) those relating to the interpretation of drill results, the geology, grade and continuity of mineral deposits and conclusions of economic evaluations, (ii) risks relating to possible variations in reserves, grade, planned mining dilution and ore loss, or recovery rates and changes in project parameters as plans continue to be refined, (iii) the potential for delays in exploration or development activities or the completion of feasibility studies, (iv) risks related to commodity price and foreign exchange rate fluctuations, (v) risks related to failure to obtain adequate financing on a timely basis and on acceptable terms or delays in obtaining governmental approvals or in the completion of development or construction activities, and (vi) other risks and uncertainties related to the Company's prospects, properties and business strategy. Investors are cautioned not to place undue reliance on these forward-looking statements that speak only as of the date hereof, and the Company does not undertake any obligation to revise and disseminate forward-looking statements to reflect events or circumstances after the date hereof, or to reflect the occurrence of or non-occurrence of any events.

JORC CODE, 2012 EDITION – TABLE 1

**SECTION 1 SAMPLING TECHNIQUES AND DATA**

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

Criteria	JORC Code explanation	Commentary
<p><i>Sampling techniques</i></p>	<ul style="list-style-type: none"> <li>• <i>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</i></li> <li>• <i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li>• <i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li>• <i>In cases where ‘industry standard’ work has been done this would be relatively simple (eg ‘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 (eg submarine nodules) may warrant disclosure of detailed information.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Drilling Results used as the basis for the Mineral Resources Estimation are extracted from the report entitled “Significant Historical Drilling Results at Saraya” created on 8th August 2022 and available to view on <a href="https://haranga.com/investors/asx-announcements/">https://haranga.com/investors/asx-announcements/</a>.</li> </ul> <p><b>Historical Sampling</b></p> <ul style="list-style-type: none"> <li>• Uranium grades were estimated using downhole gamma probes operated by COGEMA (pre-1985), Areva (2009), with the following probes:                             <ul style="list-style-type: none"> <li>- ST31 and ST22-2t probes pre-1985,</li> <li>- DHT27 in 2009.</li> </ul>                             Gamma data (as counts per second) from calibrated probes were converted into equivalent uranium oxide values (eU3O8) using appropriate calibration factors (K factor) and all other applicable correction factors.                         </li> <li>• No samples from the COGEMA drilling are known to have been collected for laboratory analysis. Core/chips from the Areva drilling (seven holes with diamond tails) were reportedly sampled and assayed; however, no assay results have been found in the records obtained by Haranga.</li> </ul> <p><b>Haranga Sampling</b></p> <ul style="list-style-type: none"> <li>• Uranium grades were estimated using downhole gamma probes operated by Terratec Geophysics GmbH with the following probe :                             <ul style="list-style-type: none"> <li>- UEP42 from Electromind in 2022</li> </ul>                             Gamma data (as counts per second) from calibrated probes were converted into equivalent uranium oxide values (eU3O8) using appropriate calibration factors (K factor) and all other applicable correction factors, by Terratec Geoservices and reviewed by Haranga geologists and RSC consultant.                         </li> <li>• Geochemical analyses have been performed on Haranga DD core to verify gamma ray downhole probe calculated grades.                             <ul style="list-style-type: none"> <li>- A total of 758 samples have been selected on significant intervals. Each sample consist of 50cm half core.</li> <li>- Hand spectrometer measurements have been taken on the core (10cm spacing) to ensure proper match with downhole probe measurements.</li> <li>- Samples have been prepared (see below), 108 QAQC samples have been added (blanks, duplicates, CRMs), samples have been properly packed and sent to ALS Vancouver laboratory for ICP MS and AES multi-element analyses.</li> <li>- Some 45 samples (+5 QAQC), taken from the 758 samples have been re-assayed using a Fusion + XRF technique for Quality Control and resistive mineral assessment on two different laboratories (ALS Vancouver, MSALab Vancouver).</li> </ul> </li> </ul>

Criteria	JORC Code explanation	Commentary
<p><i>Drilling techniques</i></p>	<ul style="list-style-type: none"> <li>• <i>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).</i></li> </ul>	<p><b>Historical Drilling</b></p> <ul style="list-style-type: none"> <li>• Drilling comprised rotary, RC and diamond exploratory drilling conducted by COGEMA from 1979–1984 and Areva in 2009, comprising: <ul style="list-style-type: none"> <li>- 3 DD from COGEMA (1979) totaling 411.5 m</li> <li>- 26 DD from COGEMA (1981) totaling 2,310.4 m</li> <li>- 277 Rotary holes from COGEMA (1982–1983) totaling 29,838.7 m</li> <li>- 125 Rotary holes from COGEMA (1984) totaling 14,282.75 m</li> <li>- DD from COGEMA (1984) totaling 1994.15 m</li> <li>- 76 RC (including 7 holes with diamond tails) from Areva (2009) totalling 5,672.7 m</li> <li>- 22 DD from Mandinga/Haranga (2022)</li> </ul> </li> <li>• The diameter of the holes varies from PQ, HQ, NQ to BQ for diamond drilling and from OD to 64mm for Rotary/RC.</li> </ul> <p><b>Recent drilling – Haranga</b></p> <ul style="list-style-type: none"> <li>• Haranga (2022) drilling technique was DD drilling: <ul style="list-style-type: none"> <li>- 22 Holes totalling 3021m</li> </ul> </li> <li>• Drilling at collar is HQ drilling and casing diameter until bedrock (from 6 to 15m) followed by NQ drilling.</li> <li>• Average depth of hole is 140m with holes depth from 80 to 220m. Holes are drilled a 60° angle from surface at different azimuth.</li> </ul>
<p><i>Drill sample recovery</i></p>	<ul style="list-style-type: none"> <li>• <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li>• <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li>• <i>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.</i></li> </ul>	<p><b>Historical Drilling</b></p> <ul style="list-style-type: none"> <li>• There are no records available regarding sample recovery from either COGEMA or Areva. However, recovery is not relevant for equivalent analysis by gamma probe.</li> </ul> <p><b>Recent drilling – Haranga</b></p> <ul style="list-style-type: none"> <li>• Haranga properly recorded DD recovery data from all drillholes (2022). Recoveries are excellent (+99%) due to the hard rock nature of the core. Samples taken from the core are representative of the mineralized sections.</li> </ul>
<p><i>Logging</i></p>	<ul style="list-style-type: none"> <li>• <i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<p><b>Historical Drilling</b></p> <ul style="list-style-type: none"> <li>• All chip and core samples were geologically logged and used to assist in the interpretation of the resistivity and gamma-ray logs from the downhole geophysical probes. The logging is appropriate to support basic geological domaining and to support the present Mineral Resource Estimation and classification.</li> <li>• The geological logging completed was both qualitative (rock type, mineralogy, colour, degree of oxidation, etc.) and quantitative (recording of specific depths and various geophysical data)</li> <li>• Most historical core (COGEMA and Areva) and chips have been discarded. Some historical core has been obtained; however, storage was inadequate and the source holes and depths are unable to be established. Logging is mainly qualitative. There are no records of sample photographs from the COGEMA programme. Core from seven of the Areva drillholes was photographed, however, some photographs are out of focus and there are inconsistencies in the labels. There is no evidence that the historical DD core was geotechnically logged. Most of the historical holes were logged with downhole geophysical probes.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p><b>Recent drilling – Haranga</b></p> <ul style="list-style-type: none"> <li>• All core from Haranga have been logged (100%) geologically and geotechnically to provide full support of the MRE.</li> <li>• The geological logging completed was both qualitative (rock type, mineralogy, colour, degree of oxidation, etc.) and quantitative (recording of specific depths and various geophysical data) :               <ul style="list-style-type: none"> <li>- 100% of the core has been orientated and surveyed (azim, dip)</li> <li>- all boxes have been properly photographed and photos are of proper quality.</li> <li>- all core are stored in Haranga field facilities</li> <li>- all DD holes from Haranga have been logged with downhole geophysical probes</li> </ul> </li> </ul>
<p>Sub-sampling techniques and sample preparation</p>	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<p><b>Historical Drilling</b></p> <ul style="list-style-type: none"> <li>• No samples from the COGEMA drilling are known to have been collected for laboratory analysis. Core/chips from the Areva drilling were reportedly sampled and assayed; however, no sampling procedures or assay records have been obtained by Haranga.               <ul style="list-style-type: none"> <li>- Core and chips have not been suitably preserved from historical programmes by COGEMA or Areva.</li> <li>- Rotary drilling does not provide a sufficiently clean sample geochemical assaying (because it involves an open hole with no control on contamination or smearing of the sample between meters) and, as such, no samples were collected from the COGEMA rotary holes for geochemical assay. However, this type of drilling does allow the passage of geophysical probes which can provide an equivalent value for uranium mineralisation.</li> <li>- The Competent Person is not aware of the sampling and quality control procedures implemented by COGEMA or Areva.</li> <li>- There are no records of any field duplicates or other quality control sub-sampling methods being applied.</li> <li>- The relevance of sample size to grain size has not been investigated at this stage and is not relevant to results obtained from downhole probes.</li> </ul> </li> </ul> <p><b>Recent drilling – Haranga</b></p> <ul style="list-style-type: none"> <li>• A total of 758 samples have been collected by Haranga on mineralized intervals:               <ul style="list-style-type: none"> <li>- 50 cm core have been sampled using core saw, samples cut along the orientation line, same half sampled for all samples.</li> <li>- All samples have been weighted in air and water to provide elementary density measurements.</li> <li>- Samples have been crushed by jaw crusher at 2mm aperture.</li> <li>- Samples have been divided into 250gr sub-samples using riffle splitters; some samples have been duplicated for QAQC purposes and to assess splitting.</li> <li>- 250gr samples have been grinded to 75µ pulps in ALS sample prep facilities in Kedougou. Sub sample of 50gr have been split at ALS Kedougou for shipment to ALS Vancouver</li> <li>- Analyses have been executed on 50gr pulp samples by ALS Vancouver</li> </ul> </li> </ul>

Criteria	JORC Code explanation	Commentary
<p>Quality of assay data and laboratory tests</p>	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<p><b>Historical Drilling</b></p> <ul style="list-style-type: none"> <li>Analytical (Gamma Ray counts per second “ACP”) results were obtained from downhole geophysical gamma logging using an ST31 and ST22-2t probes pre-1985 and a DHT27 probe in 2009, each equipped with two counting devices, crystal (scintillometer) and two Geiger-Muller (GM) tubes. <ul style="list-style-type: none"> <li>Only CPS recorded by the GM tubes were used for grade evaluation, logging upward at speed of 1m/minute.</li> <li>The probe parameters are not specified in the records; however, former COGEMA and Areva staff reported that they used standard procedures and parameters.</li> <li>The standard DHT27 probe parameters are dead time: 45µs (2 tubes Philips Z100), Diameter: 27mm, and Coefficient corrected CPS to eU ppm (cAVP): 24.500.</li> <li>The standard ST22-2t probe parameters are dead time: 40µs (2 tubes Philips Z100), Diameter: 22mm, and Coefficient corrected CPS to eU ppm (cAVP): 26.500. Attenuation using a coefficient of absorption of metal casing (0.0430) and of mud (0.0047).</li> <li>The detail of quality control procedures is not known. Former COGEMA and Areva staff have reported that they defined the K factor in the Bessine dedicated sites using seven drums (stabilized U grades: 0, 500, 1000, 1900, 2900, 4800, 9700 ppm) and that daily control of probe counting occurred at the beginning and end of each shift using cylindrical certified sources (one low, one high).</li> <li>An intra-probe coefficient of calibration was reportedly used by COGEMA to ensure a correct correspondence of the data acquired with each of the probes. Radon control reportedly involved logging immediately after the end of drilling and clear water circulation for 30 minutes. Highly mineralised holes were relogged 3 days later. No radon problems were experienced at the project.</li> <li>No samples from the COGEMA drilling are known to have been collected for laboratory analysis. Core/chips from the Areva drilling (seven holes with diamond tails) were reportedly sampled and assayed, however, no assay procedures or results have been found in the records obtained by Haranga.</li> </ul> </li> </ul> <p><b>Recent drilling – Haranga</b></p> <ul style="list-style-type: none"> <li>All holes from Haranga (2022) have been probed using the services of Terratec Geoservices Gmbh of Germany. Analytical (equivalent uranium oxide eU3O8) results were obtained from downhole geophysical gamma logging using an UEP42 probe from Electromind with two counting devices, crystal (PM scintillometer) and Geiger-Muller (GM) tubes. <ul style="list-style-type: none"> <li>Gamma probes have been certified by Orano at their Bessines site in France, using Uranium mixed concrete drums of different grades resulting in a Coefficient used to calculate the equivalent U3O8. Calibration certificates have been received.</li> <li>One hole drilled during the campaign (22-SAR-DD-005) has been used as a control drillhole with 3 quality control downhole survey carried out during the campaign to ensure the status of the probes throughout the campaign.</li> </ul> </li> </ul>



Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>The 758 samples sent to ALS Canada have been sent with duplicates, blanks and standards. The QAQC samples is totalling 108 samples.                             <ul style="list-style-type: none"> <li>Duplicate data:                                     <p>A total of 40 pairs of duplicate samples was introduced in the samples. The scatter and QQ plots below show good comparison for duplicate sample pairs but for one sample that most probably resulted in an inversion of sample number. HT precision of the duplicate data set is good with 1.21%.</p> <div data-bbox="831 533 1477 860"> </div> </li> <li>Blank data:                                     <p>A total of 43 samples uncertified blank material sourced locally was used as blank material. Overall, the U concentration in the blank samples is very low with 2 to 6ppm. Three samples show three peak values of 7, 11 and 14 ppm U, some of which follow higher-grade samples. It is unclear if this is due to contamination due to the very small number of samples affected and, even if it was contamination, the effect of it is so small that it doesn't materially affect the overall results.</p> </li> <li>CRM data:                                     <p>A total of 25 CRM samples have been introduced in the samples assayed. The CRM samples are Oreas 102a with a reference value of 638ppm U (95% 615-662ppm U) for 4 Acid Digestion methods and 662ppm for Fusion methods (95% 638-685ppm U). The CRM data show a step change starting with sample 22-DD-002-0429C, where the process mean drops from 641 ppm U to 607 ppm U (~5% less). The data set is too small to carry out a statistically significant assessment it is hard to tell if this has something to do with the analytical process or the CRM samples themselves. Irrespective of the cause, this change does not affect the validity of the dataset from ALS.</p> <div data-bbox="831 1541 1445 1957"> </div> </li> </ul> </li> <li>About 5% (45 samples) of the set of samples assayed by ALS</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>Vancouver was reassayed at ALS Vancouver and MSALab Vancouver using a different assaying technique of Fusion with XRF finish. This technique was used to assess the possible resistive mineral content in the samples.</p> <ul style="list-style-type: none"> <li>- Blank samples: Two blank samples have been re-assayed by Fusion/XRF, both showing -0.01% results.</li> <li>- Duplicate samples: Three duplicate samples pairs have been assayed by Fusion/XRF showing identical results for two samples (0.03 to 0.03ppm U for both) and one mismatch (0.03 to 0.07ppm U).</li> <li>- CRMs: Only one CRM sample has been assayed showing 0.06% for 662ppm value.</li> </ul> <ul style="list-style-type: none"> <li>• ALS 4-Acid vs ALS Fusion Correlation between ALS 4-Acid/ICP method and ALS Fusion/XRF finish show good correlation for Uranium assays as per scatter plot below. Meanwhile, Fusion method shows a consistent +15% in assaying values, most probably accounting for Uranium in resistive minerals. Note: CRM Oreas CRM datasheet state for a +10% difference between the two methods for Oreas 102a.</li> </ul> <div data-bbox="981 987 1326 1330" data-label="Figure"> </div> <ul style="list-style-type: none"> <li>• ALS Vancouver Fusion/XRF vs MSALab Fusion/XRF All results from ALS and MSA Lab are in % with precision to the thousand for ALS and to the hundred for MSALab. MSALab and ALS lab assay do correlate as per scatter plot below. MSALab data show a slightly higher assay grade of +8% to the ALS data but number of points and precision of the figures do limit conclusions.</li> </ul> <div data-bbox="963 1563 1342 1944" data-label="Figure"> </div>
<p>Verification of sampling</p>	<ul style="list-style-type: none"> <li>• The verification of significant intersections by either independent or alternative company personnel.</li> <li>• The use of twinned holes.</li> <li>• Documentation of primary data, data entry</li> </ul>	<p><b>Historical Drilling</b></p> <ul style="list-style-type: none"> <li>• Full details on data documentation and entry protocols are not known. However, RSC consulting company has reviewed</li> </ul>

Criteria	JORC Code explanation	Commentary
<p>and assaying</p>	<p><i>procedures, data verification, data storage (physical and electronic) protocols.</i></p> <ul style="list-style-type: none"> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	<p>scanned copies of hand-written paper logs from COGEMA, scanned paper and electronic logs by Areva and a digital database of drillholes from the Saraya Prospect compiled by Areva and observes that:</p> <ul style="list-style-type: none"> <li>- Verification of significant intersections have been executed during the drilling programmes and recorded on paper logs named “Economical logs”, consisting of “+300ppm eU” intercepts</li> <li>- COGEMA gamma ray and grade probe data were measured for the entire hole length but the database and digital logs collected by Areva only include results from anomalous/mineralised zones recorded as “Economical logs”.</li> <li>- Cogema data reporting was done daily on paper logs. All radiometric logs were recorded on a Nagra magnetophone.</li> <li>- The COGEMA drillhole paper log header files have incomplete elevation data.</li> <li>- No twinned holes were drilled during the historical programmes.</li> <li>- For the Areva drilling, continuous probe measurements (including radiometry and resistivity, calliper, and deviation) are recorded for the entire hole.</li> <li>- There are no records currently available regarding the equivalent uranium grade calculation from the raw probe data. All probe and drillhole log parameters have been recorded in monthly Areva reports, stating for all measurements condition for each individual holes. Areva data takes into consideration all the corrections involved (background and K-factor of the probe, casing, water or dead-time).</li> <li>- The potential issue of disequilibrium is not addressed in the historical reports neither from COGEMA nor Areva. However, former COGEMA and Areva staff have noted that they used standard procedures and parameters, as detailed in the previous sections of this table.</li> <li>- When necessary, eU grades were converted to eU<sub>3O8</sub> for intercept reporting using the standard conversion multiplier of 1.179.</li> </ul> <p><b>Recent drilling – Haranga</b></p> <ul style="list-style-type: none"> <li>• Gamma probe data and derived eU<sub>3O8</sub> grades have been reviewed by Haranga’s consultants for complete check. It is established that: <ul style="list-style-type: none"> <li>- Geochemical analysis by a certified laboratory have been compared with downhole gamma probe data.</li> <li>- No twin holes have been drilled by Haranga, on Haranga holes to date. Out of 22 holes, Haranga twinned 9 holes of historical Areva/Cogema for grade comparison.</li> <li>- Downhole gamma data are provided as LAS files directly after survey at drill site by Terratec. A copy of the data is sent to the head office of the contractor in Germany for processing and eU<sub>3O8</sub> grade calculation. Data is then recovered by Haranga for storage on Haranga’s hard drive and sharing with consulting company for control.</li> <li>- No adjustments are made to any assay data.</li> </ul> </li> </ul>
<p>Location of data points</p>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	<p><b>Historical Drilling</b></p> <ul style="list-style-type: none"> <li>• Original paperlogs and digital data shows: <ul style="list-style-type: none"> <li>- COGEMA (pre-1986): all historical collar locations were measured by topographic surveying (fixed grid, baseline).</li> </ul> </li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>• <i>Specification of the grid system used.</i></li> <li>• <i>Quality and adequacy of topographic control.</i></li> </ul>	<p>The location accuracy (x,y) is not known but is expected to be ±5–10 m. Downhole survey (deviation) measurements using an Eastman photo compass were recorded in logs and summary reports for ~50 of the 450 drillholes. The COGEMA drillholes have incomplete elevation data in the original logs.</p> <ul style="list-style-type: none"> <li>- Areva (2009): Records indicate that collar positions (z,y,z) were measured by GPS, however, it is unclear whether a handheld or differential method was used. Former Areva staff have indicated that dGPS was in use by Areva in 2009, however, the exact method used at Saraya is still to be confirmed. Areva also verified ~50% of the COGEMA drillhole collars at Saraya (using the same GPS). A gyroscopic tool was used to measure downhole surveys in the Areva program (Geovista probe).</li> <li>- Holes were drilled vertically or inclined at 60° with four main directions (040; 310, 122 and 220)</li> </ul> <ul style="list-style-type: none"> <li>• Elevations in the historical drilling database (compiled by Areva and used by Haranga) were assigned by projection onto the area’s Satellite DEM (Shuttle Radar Topographic Mission, SRTM) then verified against DGPS elevation value). <ul style="list-style-type: none"> <li>- The grid system used in this report is Universal Transverse Mercator, zone 29N (WGS 84 datum).</li> <li>- Drillhole elevations in the drilling database have been projected onto the Satellite DEM (SRTM), the reference topographic surface for the area, which has a 30 m resolution in z.</li> </ul> </li> <li>• Haranga Validation of historical data included: <ul style="list-style-type: none"> <li>- Approximately 20% of COGEMA collars have been located in the field and collar surveyed by an independent surveyor using a DGPS, including elevation.</li> <li>- Approximately 70% of the Areva holes have been located in the field and collar surveyed by an independent surveyor using a DGPS, including elevation.</li> <li>- COGEMA and Areva collar location information have been plotted against DGPS values and show extremely good correlation.</li> </ul> </li> </ul> <p><b>Recent drilling – Haranga</b></p> <ul style="list-style-type: none"> <li>• All (100%) of Haranga collars have been surveyed in the field by an independent surveyor using a DGPS, including elevation. The grid system is Universal Transverse Mercator, zone 28N (WGS84).</li> <li>• A gyroscopic tool was used to measure downhole surveys during the drilling program (Reflex tool) as well as during the downhole probing (included in the UEP42 probe).</li> </ul>
<p><i>Data spacing and distribution</i></p>	<ul style="list-style-type: none"> <li>• <i>Data spacing for reporting of Exploration Results.</i></li> <li>• <i>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.</i></li> <li>• <i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Drillholes are irregularly spaced across the Project. Holes are on a relatively close spacing around the main mineralised zones, around 25 m X 25 m in the main mineralisation zones.</li> <li>• The Competent Person considers that following the planned validation drilling and database updates, the data spacing and distribution of the historical drillholes is sufficient to imply continuity as required for future Mineral Resource Estimation and classification.</li> <li>• No sample compositing has been reported to have been applied to historical probe data. No sample compositing has been applied to Haranga probe data nor chemical assay data.</li> </ul>
<p><i>Orientation of data in</i></p>	<ul style="list-style-type: none"> <li>• <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the</i></li> </ul>	<ul style="list-style-type: none"> <li>• Mineralisation is interpreted to be structurally controlled, dominantly striking ~040 and dipping ~80° to 130. A second</li> </ul>

Criteria	JORC Code explanation	Commentary
<p><i>relation to geological structure</i></p>	<p><i>extent to which this is known, considering the deposit type.</i></p> <ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<p>perpendicular mineralised structure is speculated and may be evidenced by results from several drillholes oriented to intersect this ESE-WNW striking structure. From this interpretation, it is clear that some of the drillholes dip within, or partly within, the mineralisation. This is unavoidable in areas where the two perpendicular orientations are both present.</p> <ul style="list-style-type: none"> <li>Any possible bias in the probe data from the drilling orientations is unknown at this stage.</li> </ul>
<p><i>Sample security</i></p>	<ul style="list-style-type: none"> <li><i>The measures taken to ensure sample security.</i></li> </ul>	<p><b>Historical Drilling</b></p> <ul style="list-style-type: none"> <li>No samples from the COGEMA drilling are known to have been collected. Core/chips from the Areva drilling were reportedly sampled and assayed, however, no records of assay results have been obtained by Haranga. Security and storage of the historical core and chips are largely unknown. While some historical core has been obtained, storage was inadequate and the source drillholes and depths are unable to be established.</li> <li>Haranga sampling has been secured by chain of custody during the different steps of the sample preparation and transport operation.</li> </ul> <p><b>Recent drilling – Haranga</b></p> <ul style="list-style-type: none"> <li>Haranga DD core are properly stored in core boxes in the workshop at Saraya camp facility, under responsibility of the camp managers and camps security. Core boxes are store outside to avoid possible Radon concentration in confined spaces.</li> <li>Sample rejects from Jaw Crusher 2mm crushing as well as 200gr pulp rejects have been recovered and are stored for sample security purposes.</li> </ul>
<p><i>Audits or reviews</i></p>	<ul style="list-style-type: none"> <li><i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>Haranga is not aware of any external audits or reviews of the historical sampling techniques or data other than the high-level review of Haranga auditors: <ul style="list-style-type: none"> <li>RSC audited the drilling database and deemed it appropriate for exploration targeting.</li> <li>Odessa audited the drilling database and deemed it appropriate for Mineral Resource Estimation after Haranga field validation. Further validation and verification drilling are required to be able to adopt better classification categories (indicated, measured).</li> </ul> </li> </ul>

**SECTION 2 REPORTING OF EXPLORATION RESULTS**

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

Criteria	JORC Code explanation	Commentary
<p><i>Mineral tenement and land tenure status</i></p>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i></li> </ul>	<ul style="list-style-type: none"> <li>The Saraya Project is a joint venture between Haranga and Mandinga Resources SARL and relates to a single active licence, PR 02208 which covers 1,650 km<sup>2</sup> in Senegal.</li> <li>Haranga has earned a 70% interest from Mandinga Resources. Mandinga has a 30% free carry-through to PFS. After PFS, Mandinga will have to contribute to costs or dilute to royalty.</li> <li>The granted licence is in good standing with no known impediments, having been recently renewed for a second term (further 3 years).</li> </ul>
<p><i>Exploration done by other parties</i></p>	<ul style="list-style-type: none"> <li><i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>A compilation of historical exploration work has been completed. Historical work included reports, rock sampling, geochemistry (hydrogeochemistry, emanometry) geological mapping, geophysical surveys, drilling, and estimates of exploration potential by COGEMA and Areva.</li> <li>Haranga’s ASX Release from 8<sup>th</sup> August 2022 summarises the material exploration drilling undertaken at the Saraya prospect. Historical drillholes reported here were undertaken by COGEMA and Areva at the Saraya Prospect. Additional historical drilling has been undertaken at minor prospects but is not considered material to this release.</li> <li>A regional airborne survey was carried out in 2007 by an international cooperation programme (Agence Française pour le Développement, AFD, and EU Programme de Renforcement du Secteur Minière, PDRSM, and operated by FUGRO), the SYSMINE Project, started in 2004.</li> </ul>
<p><i>Geology</i></p>	<ul style="list-style-type: none"> <li><i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>The Saraya Project is situated within the Paleoproterozoic Kedougou-Kenieba Inlier (KKI) of the West African Craton. In Senegal, the KKI contains two major units separated by a major shear zone, the Main Transcurrent Zone (MTZ); the Mako NE-trending volcanic belt in the west and the Dialé-Daléma metasedimentary basin in the east. The MTZ strikes northeast in the south and rotates to a northwesterly trend as it crosses the Falémé River into Mali.</li> <li>Both the Mako volcanic belt and the Diale-Dalema sedimentary series are intruded by granitoids of variable ages and geochemical signatures. The most voluminous are the plutons of the Saraya batholith, probably emplaced around 2.1 Ga. The Saraya batholith occurs as an N30 axis. The northern half of the batholith is characterized by deuteric alteration marked by a coarse-grained muscovite-rich leucogranite. The complex is poorly faulted, mainly affected by quite late N120 and N30–40 structures, typically pegmatite veins and dolerite dikes respectively.</li> <li>Uranium mineralisation at Saraya is understood to be structurally controlled with uranium being mobilised during a sodic hydrothermal event (Na-metasomatism) and precipitated in episyenitic structural conduits. Mineralisation is found preferentially in brecciated lenses (up to 100-m long) within the episyenite but further investigation into the geological controls on mineralisation is required.</li> <li>A geological model has been constructed by Odyssey based on geological logging. Two major lithologic entities have been recorded and 3D mapped: Saraya leucocratic Granite and Saraya Episyenite.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>A mineralisation model appears to support a dominant orientation of ~040 and dipping SE at ~80°. A second perpendicular (WNW striking) mineralised structure is speculated. However, alternative orientations have not been completely ruled out.</li> </ul>
<p><i>Drill hole information</i></p>	<ul style="list-style-type: none"> <li>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"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Drilling Results used as the basis for the MRE are extracted from the report entitled “Significant Historical Drilling Results at Saraya” created on 8th August 2022 and available to view on <a href="https://haranga.com/investors/asx-announcements/">https://haranga.com/investors/asx-announcements/</a>.</li> <li>Appendix 2 within the 8<sup>th</sup> August 2022 release includes all drillhole information used as the basis of the Mineral Resource Estimation reported here.</li> </ul>
<p><i>Data aggregation methods</i></p>	<ul style="list-style-type: none"> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>Drilling Results used as the basis for the Mineral Resource Estimation are extracted from the report entitled “Significant Historical Drilling Results at Saraya” created on 8th August 2022 and available to view on <a href="https://haranga.com/investors/asx-announcements/">https://haranga.com/investors/asx-announcements/</a>.</li> <li>No metal equivalents are reported.</li> </ul>
<p><i>Relationship between mineralisation widths and intercept lengths</i></p>	<ul style="list-style-type: none"> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg ‘down hole length, true width not known’).</li> </ul>	<ul style="list-style-type: none"> <li>Mineralisation is interpreted to be structurally controlled striking approximately 040 and dipping ~80° to 130. From this interpretation, it is clear that some of the historical drillholes dip within, or partly within, the mineralised syenite.</li> <li>Only downhole intercept lengths are reported as true width is not known.</li> </ul>
<p><i>Diagrams</i></p>	<ul style="list-style-type: none"> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul style="list-style-type: none"> <li>Maps and sections are included in the body of the report.</li> </ul>
<p><i>Balanced reporting</i></p>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Appendix 2 within the 8<sup>th</sup> August 2022 release includes all drillhole information used as the basis of the Exploration Target reported here.</li> <li>No relevant information has been omitted from this report.</li> </ul>
<p><i>Other substantive exploration data</i></p>	<ul style="list-style-type: none"> <li>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;</li> </ul>	<ul style="list-style-type: none"> <li>The regional geophysical radiometric data was collected in 2007 within the Sysmine framework.</li> <li>Additional historical exploration data exists including drilling by COGEMA and Areva at several other prospects (Diobi, Dalafin, Fanta Diama, Badioula, Samecouta and Kanta Fanta),</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i>	petrography, mineralogy and metallogeny, however, these data are still being reviewed. If considered material, they will be reported in future.
Further work	<ul style="list-style-type: none"> <li><i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>Haranga has undertaken termite mound geochemistry sampling surveys across the entire permit at intervals of 1,000m x 100m, and to 200m x 50m for infill areas. The samples are analyzed with a handheld XRF device. To date: <ul style="list-style-type: none"> <li>about 70% of the permit area has been surveyed (11,200 samples collected out of 16,000).</li> <li>9,930 infill samples have been collected, out of a planned 12,100 samples on infill grids over anomalies.</li> </ul> </li> </ul> <p>Early results reveal strong uranium anomalism.</p> <ul style="list-style-type: none"> <li>Haranga is planning several drilling campaigns on the newly discovered surface anomalies (Aircore followed by RC drilling).</li> <li>Haranga is planning DD drilling on the known Saraya project and lateral extension for further resource delineation.</li> </ul>

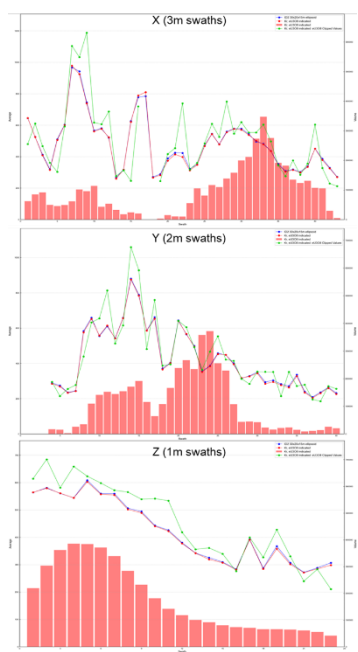
### SECTION 3 ESTIMATION AND REPORTING OF MINERAL RESOURCES

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

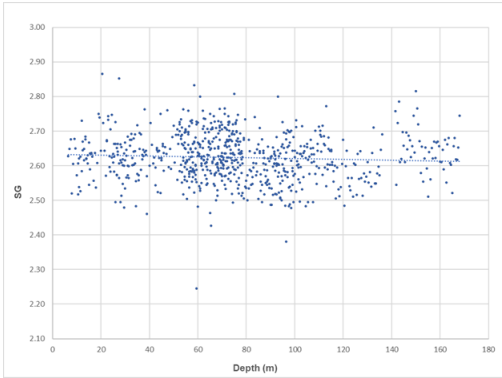
Criteria	JORC Code explanation	Commentary
Database integrity	<i>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. Data validation procedures used.</i>	<ul style="list-style-type: none"> <li>Downhole probe-data, on which the estimate is based, was processed for Haranga by Terratec Geoservices.</li> <li>Sufficient comparative QAQC checks between historic and 2022 data have been carried out such that it is considered to be of adequate quality on which an estimate of grade and tonnes can be made.</li> <li>Both Haranga and Odessa Resources are satisfied that an appropriately comprehensive multiple phase checking process has been employed, upon which the Mineral Resource Statement is based. for Mineral Resource estimation was that no obvious errors were detected.</li> <li>Drill data is stored in a Microsoft Access database and exported to text prior to importing into to Leapfrog Geo 2023.1.1. The error checking capabilities of the software were used to correct errors such as overlapping intervals, missing intervals, etc.</li> </ul>
Site visits	<i>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.</i>	<ul style="list-style-type: none"> <li>The Mineral Resource Competent Person has not visited the site due to budget considerations. However, a site visit is likely to occur in the future.</li> <li>The Competent Person has reviewed the 2023 sampling procedures and is satisfied that they have been performed in a professional manner and no material issues were identified.</li> </ul>



Criteria	JORC Code explanation	Commentary
<i>Geological interpretation</i>	<p><i>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</i></p> <p><i>Nature of the data used and of any assumptions made.</i></p> <p><i>The effect, if any, of alternative interpretations on Mineral Resource estimation.</i></p> <p><i>The use of geology in guiding and controlling Mineral Resource estimation.</i></p> <p><i>The factors affecting continuity both of grade and geology.</i></p>	<ul style="list-style-type: none"> <li>• There is a good confidence level in the geological interpretation of the mineral deposits.</li> <li>• The fresh, transition and oxide zones were modelled from geological logging data.</li> <li>• Two main lithology codes contained within the database comprise: <ul style="list-style-type: none"> <li>• Syenite (episyentite)</li> <li>• Granite</li> </ul> Lesser rock types include dolerite and pegmatite. Mineralisation is almost entirely contained within syenite. A geological (rock) model was constructed by numerical interpolating the logging codes of both the syenite and enclosing granite. A weathering model was also created. However, the top of fresh boundary is quite shallow (1-3m).</li> <li>• Mineralised domains are defined by an indicator radial bias function (RBF) interpolant (or model) of the eU3O8 uncomposited interval data. An indicator RBF interpolant defines a volume that encloses the values that are likely to be above a cut-off threshold, in this case a cut-off of 200ppm eU3O8. The boundaries of the resulting model are visually checked against the grade of 200ppm eU3O8 on drillhole traces. It is considered unlikely that alternative interpretations would have a substantial impact on the Mineral Resource estimates.</li> <li>• The dip and strike of the mineralised domain is consistent with historic geological interpretations.</li> <li>• Both the mineralised zones and the oxidation boundaries were treated having as hard boundaries during grade estimation.</li> </ul>
<i>Dimensions</i>	<p><i>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.</i></p>	<ul style="list-style-type: none"> <li>• The resource area measures approximately 1200m along strike from southwest to north east and 700m across strike with a vertical extent of 415m.</li> <li>• Sections have been drilled at 25m spacing at ninety degrees to the strike with spacing along the sections averaging 25m.</li> <li>• The peripheral parts of the deposit are drilled on a 50mx50m grid and outside the resource the drill lines spread to 100m spacing.</li> </ul>
<i>Estimation and modelling techniques</i>	<p><i>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 extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</i></p> <p><i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i></p> <p><i>The assumptions made regarding recovery of by-products.</i></p>	<ul style="list-style-type: none"> <li>• Modelling and estimation work was carried out using Leapfrog Geo/Edge 2023.1.1</li> <li>• eU3O8 grades intervals were composited 0.25m within the hard-boundary RBF domain</li> <li>• Grade estimation was carried using ordinary Kriging (Kr or OK) which is a method of interpolating estimates for unknown points between measured data. Kriging is considered to be the preferred industry-accepted technique.</li> <li>• A two pass estimation strategy was adopted to assist in determining classification.</li> <li>• The average downhole gamma-probe measurement interval is 0.10m. For estimation purposes samples were composited to 0.25 metre lengths.</li> <li>• The deposit remains unmined, so there are no production records for reconciliation.</li> <li>• Saraya is considered primarily a uranium project with no associated mineral credits. Metallurgical test work has not yet been undertaken on the Saraya mineralisation, however there several analogous alaskite-hosted uranium deposits, including Rossing in Namibia, which are in production. These suggest that the Saraya deposit is likely amenable to a similar processing methodology.</li> <li>• There are no estimates for potentially deleterious elements</li> <li>• No SMU study was carried out. However, the parent block sizes are divisible by a factor of either 2 or 5 to so that the resulting sub-blocks can be consistent with</li> </ul>

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	<p><i>Estimation of deleterious elements or other non-grade variables of economic significance (eg 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, and use of reconciliation data if available.</i></p>	<p>future commonly used SMU's.</p> <ul style="list-style-type: none"> <li>Several runs were made using various block sizes. However, due to the almost imperceptible differences in the resultant estimations a 5mx10mx10m blocks was selected for faster processing and reporting.</li> <li>A rotated block model was set up using the following parameters:</li> </ul> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Blocks</th> <th style="text-align: center;">X</th> <th style="text-align: center;">Y</th> <th style="text-align: center;">Z</th> </tr> </thead> <tbody> <tr> <td>Parent block size:</td> <td style="text-align: center;">5</td> <td style="text-align: center;">10</td> <td style="text-align: center;">10</td> </tr> <tr> <td>Sub-block count:</td> <td style="text-align: center;">4</td> <td style="text-align: center;">4</td> <td style="text-align: center;">4</td> </tr> <tr> <td>Minimum size:</td> <td style="text-align: center;">1.25</td> <td style="text-align: center;">2.5</td> <td style="text-align: center;">2.5</td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Extents</th> <th style="text-align: center;">X</th> <th style="text-align: center;">Y</th> <th style="text-align: center;">Z</th> </tr> </thead> <tbody> <tr> <td>Base point:</td> <td style="text-align: center;">200100.00</td> <td style="text-align: center;">1421100.00</td> <td style="text-align: center;">200.00</td> </tr> <tr> <td>Boundary size:</td> <td style="text-align: center;">1065.00</td> <td style="text-align: center;">1440.00</td> <td style="text-align: center;">310.00</td> </tr> <tr> <td>Azimuth:</td> <td style="text-align: center;">30.00</td> <td colspan="2" style="text-align: right;">degrees</td> </tr> <tr> <td>Dip:</td> <td style="text-align: center;">0.00</td> <td colspan="2" style="text-align: right;">degrees</td> </tr> <tr> <td>Pitch:</td> <td style="text-align: center;">0.00</td> <td colspan="2" style="text-align: right;">degrees</td> </tr> <tr> <td>Size in blocks:</td> <td colspan="3" style="text-align: center;">213 × 144 × 31 = 950,832</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>Grade cutting or capping of 10,000ppm was applied.</li> <li>The estimates were validated by several methodologies – visual and swath plots of block and drill hole composite grades:</li> </ul> 	Blocks	X	Y	Z	Parent block size:	5	10	10	Sub-block count:	4	4	4	Minimum size:	1.25	2.5	2.5	Extents	X	Y	Z	Base point:	200100.00	1421100.00	200.00	Boundary size:	1065.00	1440.00	310.00	Azimuth:	30.00	degrees		Dip:	0.00	degrees		Pitch:	0.00	degrees		Size in blocks:	213 × 144 × 31 = 950,832		
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Moisture	<p><i>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</i></p>	<ul style="list-style-type: none"> <li>Tonnages and grades were estimated on a dry basis.</li> </ul>																																												
Cut-off parameters	<p><i>The basis of the adopted cut-off grade(s) or quality parameters applied.</i></p>	<ul style="list-style-type: none"> <li>A reporting cut off of 200ppm and 250ppm eU3O8 in keeping with the typical industry standard</li> </ul>																																												
Mining factors or assumptions	<p><i>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or,</i></p>	<ul style="list-style-type: none"> <li>The mining method is currently assumed to be all open pits.</li> <li>The estimate is reported as undiluted. The Z value of 10m allows for sub-blocking to either 5m or 2.5m which corresponds with common mining bench dimensions.</li> </ul>																																												

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	<p><i>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><i>Metallurgical factors or assumptions</i></p>	<p><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></p>	<ul style="list-style-type: none"> <li>• No metallurgical test work has been carried out to date</li> <li>• Uraninite and coffinite are the identified uranium minerals present within a syenite host rock.</li> <li>• Saraya is characterised as Na-Metasomatism uranium deposit within episyenite in a hard-rock felsic granite.</li> <li>• No quantitative assumptions have been made with respect to the Saraya recoveries other than the recoveries are expected to be similar to other Na Metasomatism deposits that are currently being mined and operated (Michurinske, Centraline, Vatutinske and Novokostantynivka all in Central Ukrainian Uranium Province, Michelin in Labrador Canada).</li> </ul>
<p><i>Environmental factors or assumptions</i></p>	<p><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</i></p>	<ul style="list-style-type: none"> <li>• Nothing undertaken or reported.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>should be reported with an explanation of the environmental assumptions made.</i>	
<i>Bulk density</i>	<p><i>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.</i></p> <p><i>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.</i></p>	<ul style="list-style-type: none"> <li>• Specific gravity measurements were determined on site by Haranga personnel using an unsealed water immersion method.</li> <li>• A total of 757 specific gravity measurements were carried out on Haranga core at 0.5m intervals through mineralised sections. There is little variation in SG with depth. A resource-wide SG of 2.62 has been adopted for the tonnage calculation.</li> </ul>  <p style="text-align: center;">Variation in SG with Depth</p>
<i>Classification</i>	<p><i>The basis for the classification of the Mineral Resources into varying confidence categories. Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data). Whether the result appropriately reflects the Competent Person's view of the deposit.</i></p>	<ul style="list-style-type: none"> <li>• The resource is classified as 100% inferred.</li> <li>• Appropriate account has been taken of all relevant factors, including the relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data.</li> <li>• The geological and grade continuity of the deposit has been demonstrated and the quality of the assay data is adequate as shown by the quality control analysis.</li> <li>• The reported Mineral Resources appropriately reflect the Competent Person's view of the Saraya deposit.</li> </ul>
<i>Audits or reviews</i>	<i>The results of any audits or reviews of Mineral Resource estimates.</i>	<ul style="list-style-type: none"> <li>• Internal review has been undertaken and no material issues were identified.</li> </ul>
<i>Discussion of relative accuracy/ confidence</i>	<i>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</i>	<ul style="list-style-type: none"> <li>• The relative accuracy and confidence level in the Mineral Resource estimates are considered to be in line with the generally accepted accuracy and confidence of the nominated Mineral Resource categories. This has been determined on a qualitative, rather than quantitative, basis, and is based on the Competent Person's experience with similar deposits around the world. The factors that could affect the relative accuracy and confidence of the estimate include: <ul style="list-style-type: none"> <li>- The completeness and accuracy of the database; and</li> <li>- The accuracy of the historic assay methods.</li> <li>- The Competent Person is of the opinion that the scope for variations is minimal, and if any, the impact on the Mineral Resource estimate is unlikely to be significant.</li> </ul> </li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>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.</i></p> <p><i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></p>	<ul style="list-style-type: none"> <li>• The estimates are localised to model blocks of a size considered appropriate for local grade estimation.</li> <li>• No production data is available as the deposit currently remains unmined.</li> </ul>