



## **Acquisition of Uranium Projects in Namibia Includes Erongo District Calcrete Targets**

- GIB has acquired two uranium projects in Namibia, consisting of six Exclusive Prospecting Licenses (EPLs) covering 1,828km<sup>2</sup>

### **ERONGO PROJECT**

- GIB's Erongo Project is located in the heart of the renowned Erongo Uranium District, one of the world's foremost uranium producing areas
- The Erongo permits are highly prospective for calcrete-palaeochannel hosted uranium deposits. Similar deposits close to GIB's permits include the producing Langer Heinrich Mine (Paladin); the Tumas Deposit (Deep Yellow) and the adjacent Koppies Deposit (Elevate Uranium) as well as numerous other uranium occurrences
- The Koppies North Prospect is targeting a northerly extension to the Koppies Resource (Elevate Uranium Limited), which is truncated by the GIB permit boundary
- The Canyon Prospect is targeting calcrete uranium mineralisation within a constrained palaeo-valley, analogous in scale and setting to the Langer Heinrich uranium deposit. This target is undrilled
- Environmental and Heritage Clearance (ECC) is underway in order to gain access for exploration and drilling on both permits. This process should take 5 to 6 months

### **KUNENE PROJECT**

- The Kunene Project is located in northern Namibia and targets uranium mineralisation hosted in the Karoo Formation, which is prospective primarily for roll-front style uranium deposits. The ground is currently being assessed

### **GIB Executive Chairman Jim Richards and GIB Namibian Exploration Manager, Nico Scholtz, visiting the Erongo Uranium District**



**Figure 1: Location of GIB’s Erongo & Kunene Uranium Projects, Namibia**



**1.0 GIB Uranium Projects – Namibia, Africa**

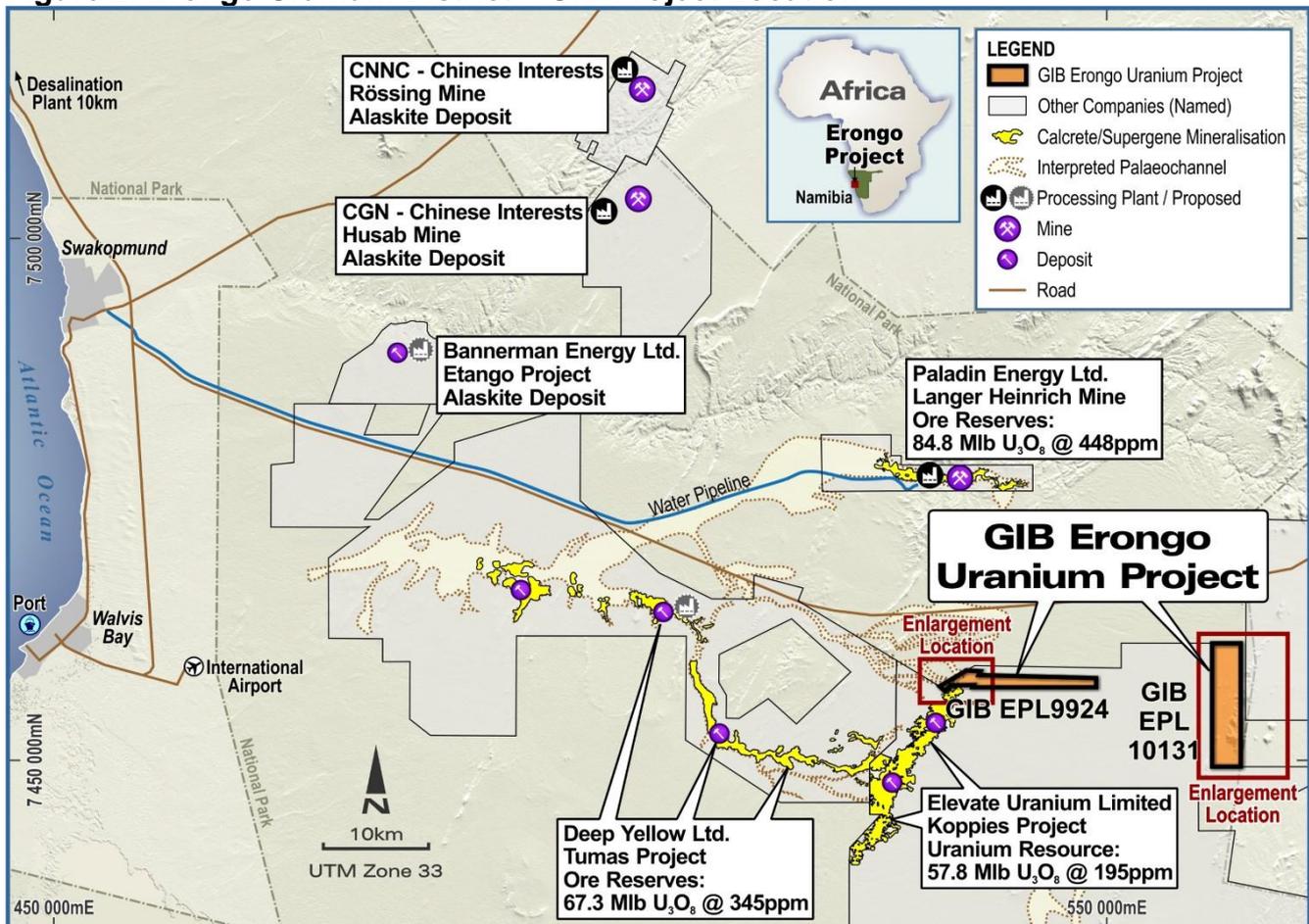
**GIB 100%**

Gibb River Diamonds Limited (‘GIB’ or the ‘Company’) is pleased to announce the acquisition of the Erongo Project (47.6 km<sup>2</sup>) and the Kunene Project (1,780km<sup>2</sup>) consisting of six Exclusive Prospecting Licenses (EPLs) in the Republic of Namibia in Africa.

**2.0 Erongo Uranium Project, Namibia**

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**Figure 2: Erongo Uranium District – GIB Project Location**



## **2.1 Erongo Project – Introduction**

GIB's Erongo Uranium Project is situated in the heart of the Erongo Uranium District of Namibia, one of the world's leading uranium producing areas. The project consists of two permit applications, EPLs 9924 and 10131 with a combined area of 47.6km<sup>2</sup>.

These EPLs are highly prospective for calcrete-palaeochannel hosted uranium deposits. There are a number of calcrete-hosted uranium deposits close or adjacent to the GIB permits, including the producing Langer Heinrich Mine (Paladin), the Tumas Deposit (Deep Yellow) and the Koppies Deposit (Elevate Uranium) as well as numerous other uranium occurrences (Figure 2).

GIB Executive Chairman Mr Jim Richards conducted an on-ground inspection of the Erongo Uranium District during a field trip that took place in the last Quarter. This visit led to the Company pegging EPLs 9924 and 10131 in the Erongo Region. The Company is keen to increase its exploration land holding in the Erongo region for calcrete hosted uranium mineralisation and is actively seeking deals within the area.

## **2.2 Erongo Project – Exploration Timings**

Under Namibian law, in order to have an EPL granted and to conduct mineral exploration (including ground access, aerial surveys and drilling etc.), an Environmental Clearance Certificate (ECC) is required. The ECC's environmental, heritage and consultation requirements have already been commissioned by GIB for the Company's Erongo permits via a well-regarded Namibian environmental consultancy and this process is already underway.

It is anticipated that the granting of the EPL leases with full ECC clearance will take 5 to 6 months from the date of this release, although these times are at the discretion of the Namibian authorities and cannot be guaranteed. After the grant of the EPLs, with ECC clearance, ground access and exploration activities, including drilling, are straightforward and fall within the authority of the ECC.

Once GIB has secured the grant of the EPLs with an ECC clearance, the Company will commence on-ground exploration activities. There is no additional permitting required for drilling, although liaison with the local authorities can be required.

## **2.3 Erongo Project – GIB Targets**

GIB's Erongo target areas are outlined below. The Company has not discovered any evidence of previous drilling on EPLs 9924 and 10131 and the targets appear to be untested.

These calcrete-hosted targets are of a significant scale with the Koppies North Target being 4km across and the Canyon Target being 11.5 km in strike. By means of comparison, the nearby calcrete-hosted Langer Heinrich Uranium Mine is of very similar proportions to the Canyon Target.

### 2.3.1 Koppies North Prospect Target Areas – EPL9924

Figure 3A: Koppies North Target Areas EPL9924 – Satellite Image

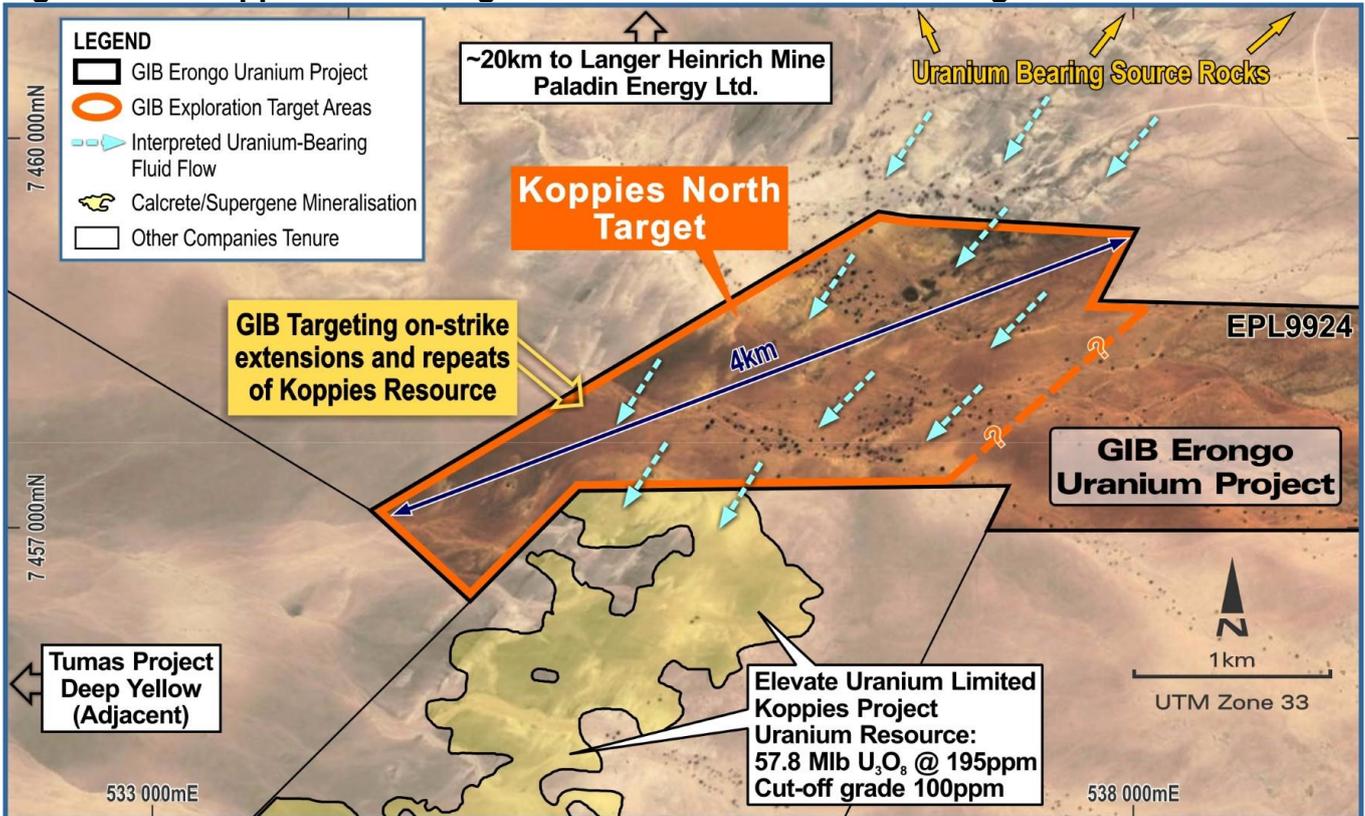
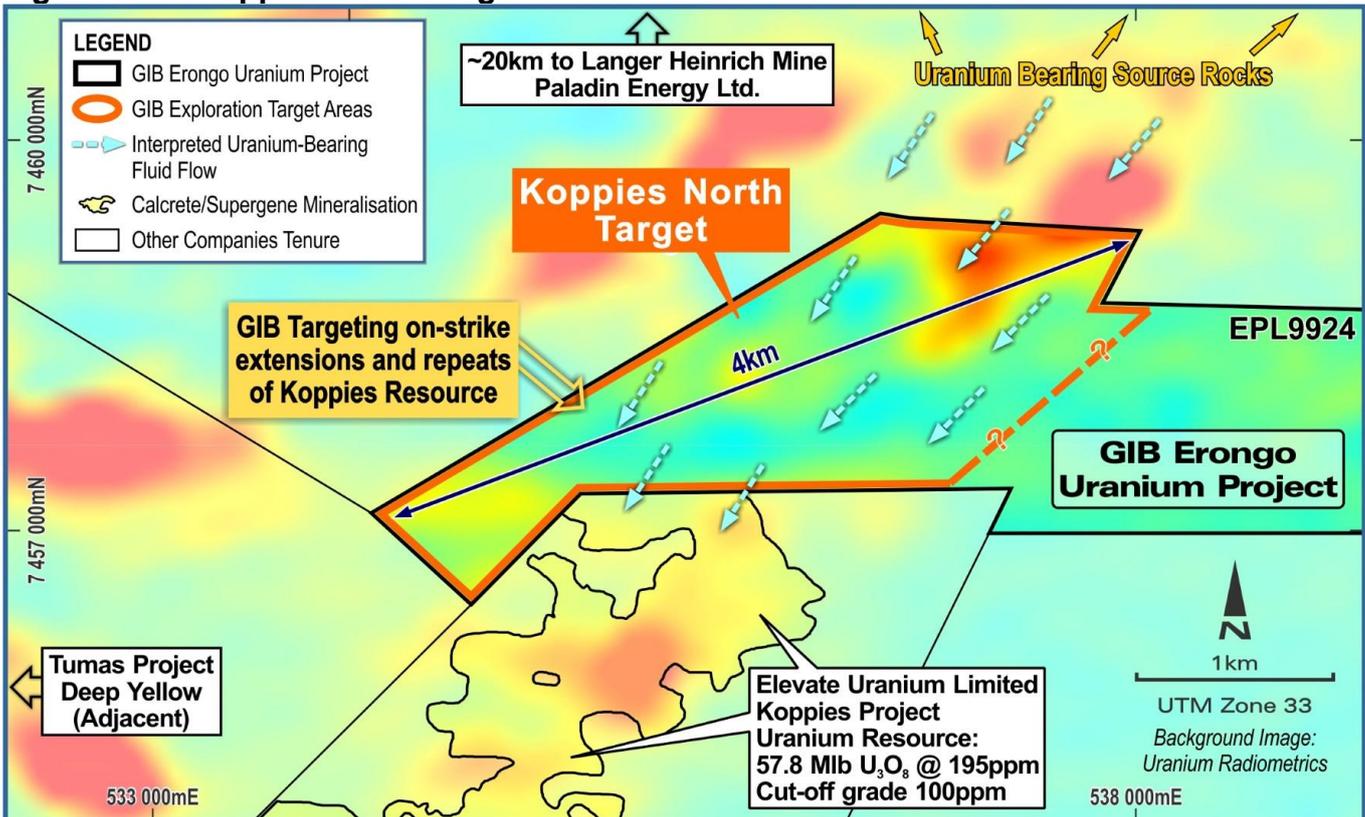


Figure 3B: Koppies North Target Areas EPL9924 – Uranium Radiometrics



The main target within EPL9924 is a northerly extension to the Koppies Resource<sup>5</sup> (Elevate Uranium Limited) which is truncated by the GIB permit boundary (Figure 3):

The Koppies resource is hosted in two lithologies:

- Uraniferous calcrete contained within palaeochannels, and
- Uranium mineralisation in weathered basement occurring at the unconformity adjacent to and beneath palaeochannels<sup>5</sup>. This is interpreted to be supergene mineralisation.

Both of these mineralisation styles are interpreted to be generated via uraniferous fluid flow from uranium-bearing granitic source rocks, both locally and regionally. Figure 3 shows an interpreted fluid flow direction which could have led (in-part) to the Koppies mineralisation. This palaeo-fluid flow runs along the same approximate strike direction as the defined Koppies Resource to the south. (The modern drainage runs more east-west and is not considered an influence in the Tertiary Koppies mineralising event.)

This same interpreted fluid flow through GIB EPL9924 gives rise to the Koppies North target. This target is further enhanced by a uranium channel radiometric target in the north of the target area (Figure 3).

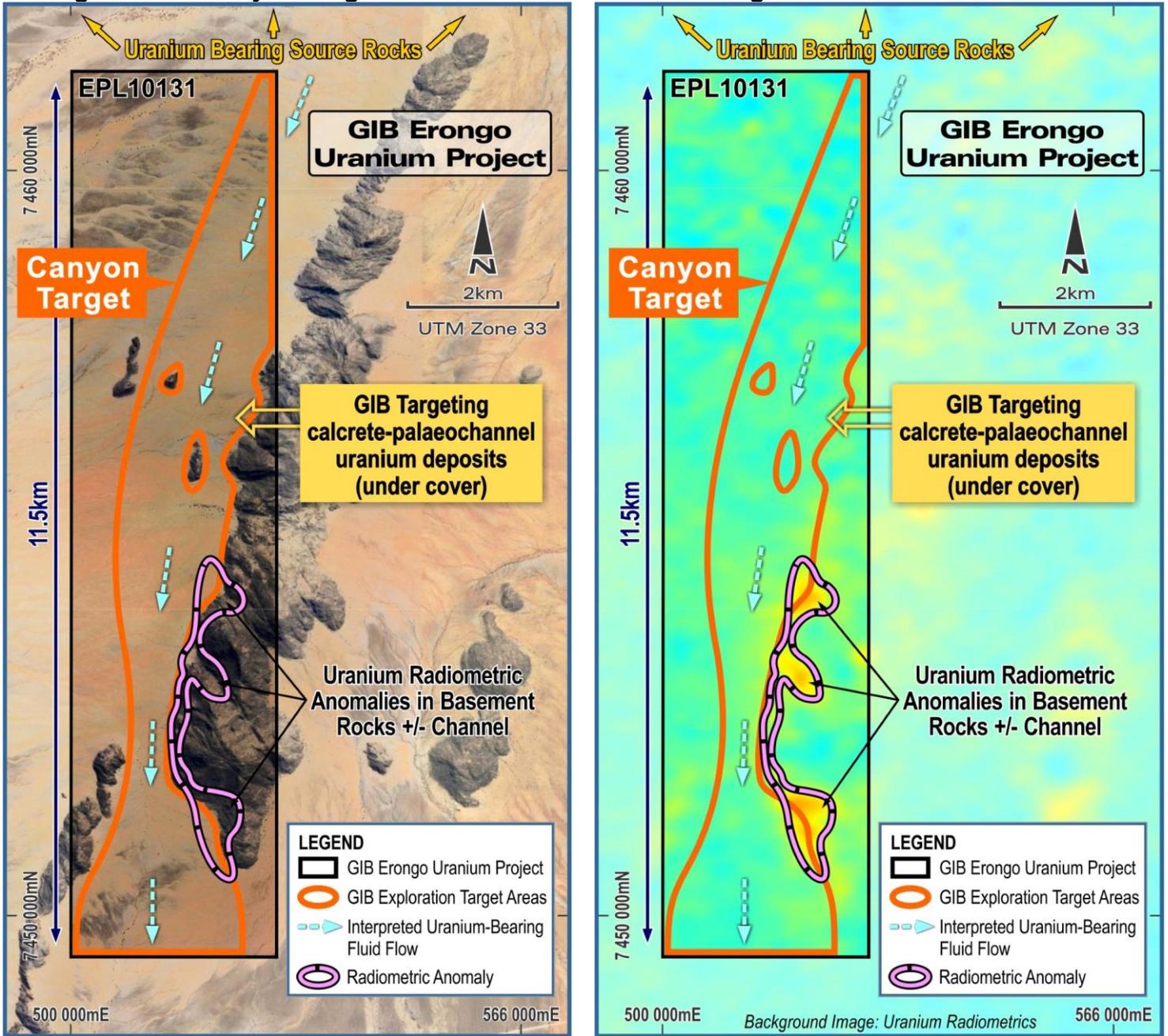
From the published Koppies Resource data<sup>5</sup>, satellite imagery, radiometrics, and the GIB exploration model outlined above, the Company believes that the uranium mineralisation defined in the adjacent Koppies Resource (Figures 2 & 3) has an excellent chance of extending into GIB's permit EPL9924 and that the western side of the permit is highly prospective for extensions of the two styles of Koppies uranium mineralisation, both outcropping and under shallow cover.

The radiometric image (Figure 3) shows that not all of Elevate Uranium's modelled uranium resource shows up as radiometrically anomalous. A likely consequence of the fact that radiometric surveys can only detect surficial uranium mineralisation and even a shallow cover of non-mineralised material can mask a radiometric anomaly. As a result of this, certain areas within GIB's ground which are not radiometrically anomalous are still prospective and do (potentially) need to be drilled.

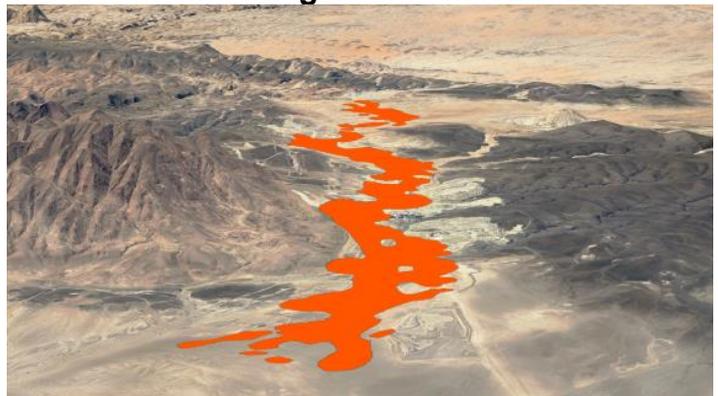
There are also possibilities for the Koppies-style mineralisation to extend under cover towards the east of GIB EPL9924.

2.3.2 Canyon Prospect Target – EPL10131

Figure 4: Canyon Target Areas EPL9924 – Satellite Image & Uranium Radiometrics



**Photo:** Langer Heinrich Uranium Mine (Paladin) ~25km north-west of GIB’s Canyon Target. Note the calcrete-hosted uranium mineralisation (partly excavated) in base of valley – this is analogous to the Canyon Target exploration model. **Satellite Image:** same with 2xVE



The main target within EPL10131 is an under cover (i.e. it is blind), Langer Heinrich-style, calcrete-palaeochannel hosted uranium deposit (Figure 4).

Many of the calcrete uranium deposits in the Erongo region contain areas which are under some kind of alluvial or wind-blown cover, this cover can prevent a measurable radiometric signature. If totally obscured these types of blind deposits would usually need to be discovered through drilling, often with the assistance of other exploration techniques such as radon-cup sampling.

The Canyon Prospect has a number of characteristics which make it a very attractive target for uranium exploration, including:

- **Location:** within in the heart of the Erongo uranium district, with nearby uranium-bearing source rocks.
- **Valley Setting:** there are constraining basement rocks on either side of the target which may represent the sides of a palaeo-valley (the Canyon Target). This setting would have allowed for mineralising palaeochannel flow to be focused within the valley. This is especially obvious in the south of the prospect, where Proterozoic basement rocks outcrop either side of the present-day cover (penultimate blue arrow from south on Figure 4). The gap between these basement rocks (500m at its narrowest) could be interpreted as an erosional feature created by an ancient channel. This setting would be similar to the nearby Langer Heinrich uranium mine; which is hosted in a similarly constrained valley setting. Subsequent to the mineralising events, the palaeo-valley could then have infilled with alluvium/aeolian cover (similar to the surrounding area) obscuring any radiometric signature.
- **Scale:** the Canyon Target has 11.5 km of strike, the Langer Heinrich mine mineralisation is of a similar scale to GIB's Canyon Target (Figure 2).
- **Cover:** the present-day alluvial or aeolian (wind-blown) cover as seen in Figure 4 (satellite image), provides a layer which can obscure any radiometric signature which would otherwise indicate a uranium deposit. The outcropping Langer Heinrich mine mineralisation for instance has an excellent radiometric signature. The Canyon Target is seeking a similar type of orebody to Langer Heinrich, but one whose radiometric signature is obscured by barren cover.
- **Untested:** Canyon is an undrilled target within a world class uranium province. GIB's research has not found any indication of other geological sampling such as soils or radon-cup sampling. This geological target is untested.

The radiometric anomalies on the eastern edge of the Canyon Target (Figure 4) are most likely derived from 'hot' (uraniferous) pegmatites or granites which are (in-part) potential source rocks. Whether some parts of these anomalies are also the thin edge of covered alluvial uranium mineralisation dipping to the west (the 'Canyon Target' itself) is speculative, but possible, and will need to be further investigated.

In summary, the Canyon Prospect represents an excellent target for uranium exploration. The location within in the heart of the Erongo uranium district, the valley setting, large scale, obscuring alluvial cover and lack of previous exploration all add together to make this an exciting target for a high-grade Langer Heinrich style uranium deposit.

## 2.4 Erongo Project – Mineralisation & Geology

GIB's Erongo permits lie in a geological setting which is prospective for calcrete-palaeochannel hosted uranium deposits and Koppies-style supergene deposits. It is these styles of mineralisation that GIB is targeting in its upcoming exploration. Close to GIB's permits are a number of uranium deposits of these styles including:

- The world class Langer Heinrich uranium mine 20km to the north of GIB's Koppies North Prospect. This mine is majority owned by Paladin Energy Limited (ASX: PDN). The published Ore Reserves<sup>3</sup> at Langer Heinrich are 84.8 Mlb (million pounds) at a grade of 448ppm U<sub>3</sub>O<sub>8</sub>.
- Deep Yellow Limited's Tumas deposit, is 7km to the south east of GIB's Koppies North Prospect. Tumas is a calcrete-palaeochannel hosted uranium deposit with an Ore Reserve<sup>4</sup> of 67.3 Mlb at a grade of 345ppm U<sub>3</sub>O<sub>8</sub>.
- Elevate Uranium Limited's Koppies Uranium Project lies directly to the south of GIB EPL9924. This project has an Inferred Mineral Resource<sup>5</sup> of 57.8 Mlb at a grade of 195ppm U<sub>3</sub>O<sub>8</sub>. The resource envelope is modelled right up to, and is truncated by, the southern boundary of GIB's EPL (Figures 2 & 3). GIB is targeting northern extensions to this resource.

There are also numerous other uranium occurrences in the Erongo District, some of which are indicated by uranium radiometric anomalies and some of which are 'blind,' i.e. they are under alluvial/aeolian cover.

As well as calcrete-palaeochannel uranium mineralisation, the Erongo Region also hosts Alaskite-style uranium mineralisation which includes the Rössing and Husab mines (both Chinese controlled) and Bannerman Energy Limited's Etango Project (Figure 2). These deposits are granitic in nature and require significant energy inputs and economy-of-scale for crushing and grinding. GIB is not targeting these Alaskite-style uranium deposits at this time.

## 2.5 Erongo Project Uranium Source Rocks

The GIB permits have proximal uranium source rocks in the form of 'hot' granites and pegmatites, which show up on uranium channel radiometrics. These have been suggested as the source of the Langer Heinrich and other district scale uranium mineralisation<sup>2</sup>.

The Erongo calcrete uranium deposits form via the weathering, transport and re-deposition of uranium from the uraniumiferous granite/pegmatite source rocks into the calcrete-in-palaeochannel host rocks. The uranium ions are transported from their granitic source in their reduced state (U<sup>4+</sup>, which is largely mobile) and are deposited in the calcrete host rocks in their oxidized state (U<sup>6+</sup>, which is largely immobile).

The Koppies-style supergene mineralisation in the district likely forms in a similar manner, influenced by uranium bearing fluids flows along impermeable unconformity boundaries, along with associated supergene enrichment.

## 2.6 Erongo Project – Work Program

The work program at the Erongo Project over the next 12 months aims to discover commercial uranium mineralisation and is planned to include:

- The environmental, heritage and consultative work required for the grant of an Environmental Clearance Certificate (ECC) for Erongo EPLs 9924 and 10131
- Concurrent with the above will be historic data compilation including analysis of existing airborne magnetics, radiometrics and planning of upcoming fieldwork
- Once the ECC is granted (or prior if MME permissions are given) exploration work will commence to identify and prioritise the best drill targets. This would include a combination of:
  - Mapping, sampling and ground truthing of drill targets
  - Radon-cup surveys. These non-invasive surveys can be an excellent method of identifying uranium targets for drill testing. Radon gas is a natural decay product of uranium and can act as an excellent pathfinder to identify below surface uranium mineralisation
- Once the targets have been identified, Phase 1 drilling will commence to identify areas with potentially commercial mineralisation
- Phase 2 drilling will infill areas which show promise from the during Phase 1 drilling

An electromagnetic (EM) geophysics survey (airborne or ground) may also be used. These surveys can indicate prospective palaeochannels through identifying conductive groundwater. However, these surveys are by no means definitive as they do not work if there is no groundwater, or no porosity, or the groundwater is pure (non-saline). Ultimately, the only surefire way of getting a definitive answer as to the presence (or not) of uranium mineralisation is to drill.

## 2.7 Erongo Project – Stakeholders

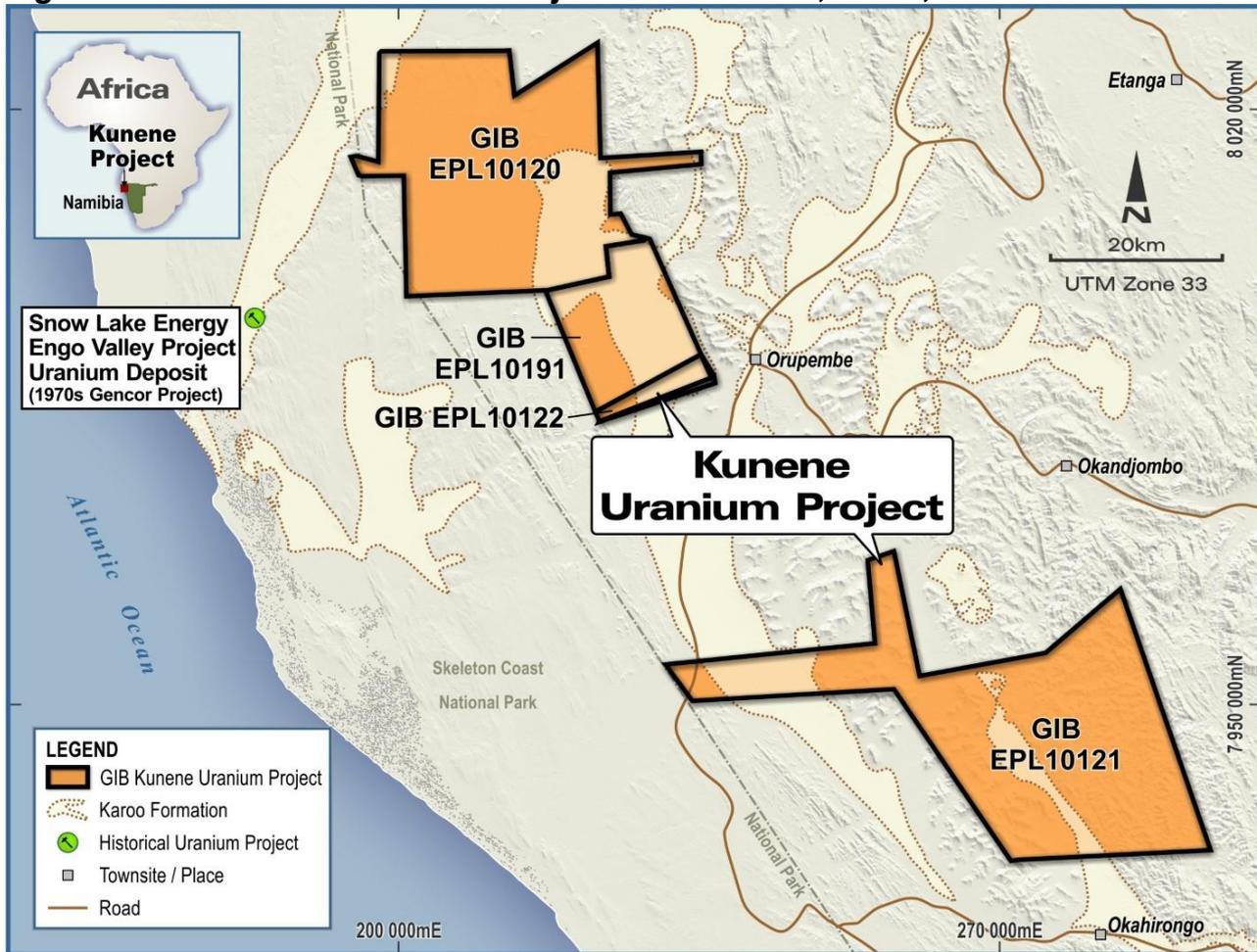
Much of the Erongo Uranium District, including the GIB Erongo project area, lies within the Namib-Naukluft National Park (most of Figure 2 lies with this very large park, as shown). The government allows uranium mining and exploration within the park boundaries providing environmental requirements and obligations have been satisfied, which includes an ECC permit.

A number of uranium mines and deposits lie within the National Park, including the producing Husab Mine (held by Chinese interests); the producing Langer Heinrich Mine (Paladin); the Tumas Deposit (Deep Yellow) and the Koppies Deposit (Elevate Uranium). This co-existence of mining/exploration and environmental requirements is well managed and is not considered to be a conflict by the authorities.

3.0 Kunene Uranium Project, Namibia

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Figure 5: GIB’s Kunene Uranium Project – EPLs 10120, 10121, 10122 and 10191



The Kunene Uranium Project is located in northern Namibia and targets uranium mineralisation hosted in the Karoo Formation, which is prospective primarily for roll-front style uranium deposits. The Company has a large ground holding in the area with four EPLs for 1,780km<sup>2</sup>, much of this area hosts Karoo Formation rocks (Figure 5).

GIB’s project areas are very large in area and are considered prospective for uranium, but highly under-explored. The nearby Engo Valley Uranium Project (operated by Canadian company Snow Lake Energy) contains significant uranium mineralisation discovered by Gencor in the 1970’s and illustrates the prospectivity of the region.

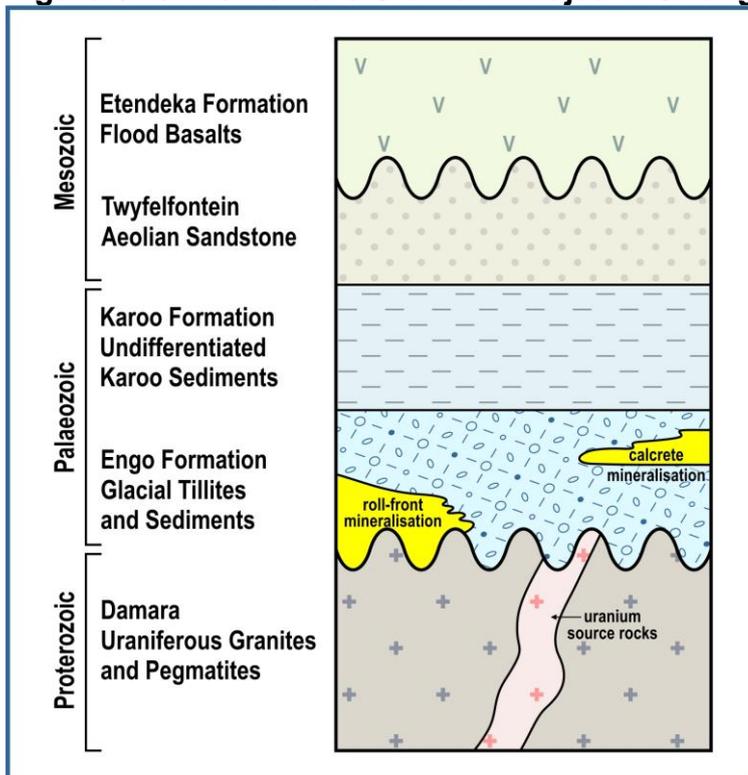
The region is remote and rugged, although accessible by helicopter and in part by 4WD vehicle. The sparsely populated region is home to a number of Indigenous people’s including the Himba; there is very little economic development in the area.

Palaeozoic Karoo aged rocks similar to those in Namibia, host some of the largest uranium resources in Southern Africa, including the Letlhakane Uranium Project in neighbouring Botswana (190.4 million pounds U<sub>3</sub>O<sub>8</sub><sup>6</sup>) and the Kayelekera Project in Malawi (46.3 million pounds U<sub>3</sub>O<sub>8</sub><sup>6</sup>) – both projects are operated by Lotus Resources Limited.

The Kunene Project is considered a grassroots exploration play with a large area of under-explored ground. The Company is currently undertaking searches of historical data and compiling information with a view to further work. Any on-ground or airborne geophysical exploration will require ECC clearance and this will be one of the factors taken into account in planning follow-up work.

The Company believes the Kunene Project has the technical merit and prospectivity for a large new greenfields uranium discovery of the roll-front type and/or calcrete-hosted type and is currently assessing various options to further develop this significant ground holding in Namibia.

**Figure 6: GIB’s Kunene Uranium Project – Stratigraphy & Mineralisation Target Style**



#### 4.0 Namibian Project Management

The Company is pleased to have secured the services of Mr Nico Scholtz *Pr. Sci. Nat. M.Sc. (Geology)*, as our Namibian Exploration Manager who will assist in the management of our in-country exploration. Mr Scholtz is a Namibian national who lives in Swakopmund approximately 70km from GIB’s Erongo Project site.

Mr Scholtz is a highly experienced geologist and uranium specialist who formerly held the role of Chief Geologist at Deep Yellow Limited. His work for Deep Yellow involved operating in the Erongo Uranium District, adjacent to GIB’s current project, and included the discovery of a number of uranium deposits.

Mr Scholtz has a Masters Degree in Geology and can act as a Competent and Qualified Person under the JORC, SAMREC and NI-43-101 codes. Mr Scholtz is also extremely knowledgeable regarding the various Namibian Ministry of Mines and Energy permitting requirements and in managing contractors.

The Company welcomes Nico to the GIB team.

## 5.0 GIB Tenure – Exclusive Prospecting Licenses (EPLs) (100% GIB)

The GIB Namibian EPLs were pegged in the name of the Company's 100% owned GIB subsidiary 'GIB Mining Namibia (Proprietary) Limited', which is incorporated in Namibia and set up by GIB for the purpose of conducting mineral exploration in Namibia.

**Table 1: GIB's Namibian Uranium Tenements**

EPL	Date Pegged	Date Granted	Area km <sup>2</sup>	Region Area Total km <sup>2</sup>	Project
9924	2-Apr-24	Application	15.35	-	Engo
10131	15-Apr-24	Application	32.27	<b>47.6</b>	Engo
10120	10-Apr-24	Application	700.80	-	Kunene
10121	10-Apr-24	Application	843.86	-	Kunene
10122	10-Apr-24	Application	35.72	-	Kunene
10191	2-May-24	Application	199.80	<b>1,780.2</b>	Kunene
<b>Total Area</b>			<b>1,827.81</b>	<b>1,827.8</b>	

In Namibia, Exclusive Prospecting Licenses (EPLs) can overlap if they are pegged for different commodities. GIB's permit applications have all been pegged for 'Nuclear Fuel Minerals' (which includes uranium). Some of the GIB permit applications include other commodities as appropriate to the circumstances.

Some of the GIB permit applications have areas of overlapping licenses held by third parties for other (non-uranium) commodities. The Company does not see this as a conflict as GIB is targeting uranium. All of the licenses and licence areas in Table 1 are held exclusively by GIB for uranium.

## 6.0 Summary

The Company is very pleased to have secured this extensive ground holding in Namibia. The Erongo permits are highly prospective for calcrete-palaeochannel hosted uranium deposits and their proximity to a number of well-known deposits enhances this prospectivity.

GIB also believes the Kunene Project has the technical merit and prospectivity for a large new greenfields uranium discovery of the roll-front type and is currently assessing options to further develop this significant ground holding in Namibia.

The Company is very pleased to have secured the services of Mr Nico Scholtz as Exploration Manage. Nico's considerable experience in Namibian uranium exploration bode well for GIB's future exploration programs.

GIB is focusing on ensuring the grant of the ECC permits for the Erongo projects progresses as swiftly as possible so that drilling can commence at the earliest opportunity. In the meantime the Company is working on target development and further potential project acquisitions in Namibia.

The Company also continues to progress its Western Australian projects with an upcoming publication of a further alluvial resource (in addition to the Lights Resource) at the Ellendale Diamond Project and the grant of the mining lease over the Company's Edjudina Gold Project (both 100% GIB). GIB recently considered a number of Western Australian uranium projects, but has decided not to pursue these opportunities in WA at this time.

Jim Richards  
Executive Chairman

Enquiries To: Mr Jim Richards +61 8 9422 9500

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## References:

<sup>1</sup>World Nuclear Association website

<sup>2</sup>Wilde, A, Towards a Mineral Systems Model for Surficial Uranium Mineralisation Based Upon Deposits in the Erongo District of Namibia; *Minerals* 2023, 13, 149.

<sup>3</sup>Annual Report 2023; Mineral Resources and Ore Reserves; Paladin Energy Limited Annual Report ASX announcement; 25 August 2023.

<sup>4</sup>Resource Drilling Grows Tumas Towards +30 Year Life-Of-Mine; Deep Yellow Limited; ASX 29 November 2023.

<sup>5</sup>Koppies Resource Expands to 57.8Mlb; Elevate Uranium Limited; ASX announcement; 9 April 2024.

<sup>6</sup>Lotus Resources Limited website; Mineral Resources and Ore Reserves; June 2024.

## Competent Persons Statements

*The information in this report that relates to GIB exploration results, GIB Mineral Resources or GIB Ore Reserves is based on information compiled by Mr Jim Richards who is a Member of The Australasian Institute of Mining and Metallurgy and a Member of the Australian Institute of Geoscientists. Mr. Richards is a Director of Gibb River Diamonds Limited. Mr. Richards has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr. Richards consents to the inclusion in the report of the matters based on the information in the form and context in which it appears. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original announcements. Third party exploration results, Mineral Resources or Ore Reserves as referenced in this report are not on GIB leases and are based upon third party information as referenced.*