NI 43-101 TECHNICAL REPORT
ON EPL-8084, NAMIBIA

FOR PURANIUM ENERGY LIMITED

Prepared by Odikwa Geoservices CC
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Effective date: December 5, 2023
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1 Summary (Item 1)

1.1 Introduction

Puranium Energy Limited (formerly Monterey Minerals Inc) – which has its head office at 401 Bay Street, Suite 2702; Toronto; Ontario; M5H 2Y4 – signed an agreement with the licence holder to acquire an 85% interest in EPL-8084.

The aim of this Technical Report is to outline the exploration potential of EPL-8084. The report does not contain any reference to a mineral resource, mineral reserve or project valuation and is purely a description of the property status, infrastructure and exploration potential.

The author of this report is Mary Barton, an independent consulting geologist who is a Qualified Person as defined by NI 43-101 through her qualifications, experience and professional registration.

1.2 Property Description and Location

EPL-8084 is located in the west of Namibia in the Erongo region, 106 km southeast of the town of Swakopmund, 120 km to the northeast of the Walvis Bay Seaport and 150 km west of the capital Windhoek. The property covers an area of 19989.4680 ha. The eastern part of EPL-8084 overlies Farm Onanis No.121 and Emeritus No. 123 while the western portion overlies the Namib Naukluft National Park (NNNP). The property is located 30 km east of the Langer Heinrich Uranium mine (Mining Licences No. 140 and 172) and 45 km northeast of Elevate Uranium's Koppies deposit. The renewal of EPL-8084 was filed in November 2023 and included a licence size reduction to 15093 ha.

Surface rights are separate from mineral rights. The property is located on private farmland, namely, farms Onanis and Emeritus, and in a National Park. Access agreements with the landowners will be required prior to the commencement of any exploration activities.

Royalties

The property will be subject to a corporate tax rate of 37.5%, a royalty of 3% and an export levy at 0.25% of the gross uranium revenue.

Environmental liabilities and permits

EPL-8084 has the western part located in the Namib Naukluft Park – a national conservation area. In May 2023, the Namibian Ministry of Environment, Forestry and Tourism approved the Environmental Management Plan and subsequently issued an Environmental Clearance Certificate (ECC) for EPL-8084 which authorizes the Issuer to carry out exploration and drilling activities until May 2026.

Accessibility, Climate, Local Resources, Infrastructure and Physiography

EPL-8084 is accessed from the east–west running C28 unpaved road connecting Windhoek – the capital city of Namibia – to the coastal town of Swakopmund via the Bosua Pass and the Namib-

Naukluft National Park. The Property can also be accessed via the B2 highway, a tarred road connecting Windhoek to the coastal towns. From the B2 road, the property is accessed via the unpaved C28 road. The turn-off from the B2 highway is located 38 km from Walvis Bay and 130 km along the C28 to the project area.

In and around the Namib Naukluft National Park, the summers are brief, warm, and generally clear, while the winters are cool, marked by winds and clear skies, and the region remains dry throughout the year. High temperatures in the project area are predominantly observed from September to April, while the lowest temperatures occur in July. February-March sees the peak average rainfall, while May to August have little to no rainfall. The climate has little or no effect on the length of the operating season; exploration activities can be carried out all year. The topography of the Property varies greatly. It includes ephemeral grassy plains, river valleys, a few rocky outcrops, and the associated drainage areas.

The Property is located 120 km to the northeast of the Walvis Bay Seaport, Namibia's largest commercial port. The central coastal area is supplied with electricity through the national grid by a ring feed connecting the country's interior region (capital city of Windhoek) and the northern area, which provides much of the country's supply. The Langer Heinrich mine currently receives its electricity supply from the NamPower Kuiseb substation via a 50 km 66 kV powerline, providing a capacity of approximately 16.6 MVA. The Property is located 10 kilometres away from the Langer Heinrich mine and can leverage the existing infrastructure by connecting to the electrical line at the mine. Plans are currently underway to establish renewable energy infrastructure and green hydrogen plants in the region. There exists a NamWater, the national water utility company, pipeline (and related infrastructure) that runs above ground alongside the C28 for about 50km up until the neighboring Langer Heinrich Mine.

1.3 Geological setting and mineralization

EPL-8084 is situated within the Damara Orogen, which is part of the network of Neoproterozoic orogenic belts surrounding and intersecting Africa. The inland branch of the Orogen, the Damara Belt stretches across central Namibia, northern Botswana, connecting to the Zambezi Belt and further extending to the Mozambique Belt. The Damara Belt, progressing from north to south, is further subdivided into the Northern Platform, Northern Margin, Northern Zone, Central Zone, Southern Zone, and Southern Margin Zones.

Structurally, EPL-8084 lies within the north-east trending Okahandja Lineament Zone west of the Great Escarpment of Namibia. Throughout the Cenozoic era, continuous erosion of elevated plateaus and an eastward migration of the Great Escarpment occurred, resulting in the development of contemporary ephemeral drainage basins south of the Swakop River and the deposition of fluvial and alluvial deposits to the west of the Great Escarpment. The Property is characterized by outcrops of granitic basement and Swakop group units with incised gorges, some of which are covered by calcrete terraces.

Paleochannels within the basins south of the Swakop river are associated with five of the larger surficial or calcrete-hosted paleochannel uranium deposits of the region – Langer Heinrich, Tumas, Tubas, Aussinanis and Koppies. The paleochannels tend to be buried with little or no obvious surface expression to identify them. There is a notable, though unquantified, presence of uranium in the underlying basement rocks. This includes occurrences such as carnotite-rich seams located along open fractures within the schist of the Tinkas Formation such as is found at the neighboring Langer Heinrich mine and the Koppies deposit.

1.4 Exploration

Current exploration is at an immature stage. Since the acquisition of the licence, Puranium conducted reconnaissance exploration on EPL-8084. This work consisted mainly of airborne radiometric data interpretation and a remote sensing study. The interpretation airborne radiometric data indicates the presence of radiometric anomalies coinciding with the historically identified paleochannels – Tinkas, Springbok water and Donkerhuk. During the two-day visit to the Property Ms. Barton observed that:

- The Tinkas paleochannel is covered by calcrete terraces that are at least 2 metres thick based on the incised gorges. Background counts per second (cps) taken with a hand-held scintillometer average around 120 cps. Anomalous cps range between 300 and 900 cps.
- The Donkerhuk paleochannel has very shallow sediment fill. Most of the area has granite or schist outcrops with sand at the bases. The calcrete terraces in the Donkerhuk paleochannel are mainly exposed near the Namib Park I mineral occurrence.
- The Bloedkoppie Granites, manifesting as distinctive short ridges, exhibit the highest and most consistently elevated levels of radioactivity. Consequently, it represents a plausible source for secondary uranium mineralization.

A remote sensing and spectral processing survey by Perry Remote Sensing LLC included the processing, analysis and interpretation of ASTER and Landsat Satellite data over the Property and over areas surrounding the Property with known occurrences of a similar target mineralization style including the Langer Heinrich and Koppies deposits. The study produced four main essential components which together delineated appropriate target sites for further exploration:

- mineral models based on spectral matches for mineralized calcretes
- paleochannel interpretation
- perched water table documentation during dry and wet seasons
- geological structures

Based on the interpretation, a 13 square km high priority target area in the western portion of the exploration licence was delineated. Within this target area, the mineral maps indicate the potential for a 2.5km long mineralized paleochannel coinciding with location of the Tinkas paleochannel and a strong airborne radiometric signature.

Puranium has not performed any drilling on the Property. Record of drilling by Zhonge Resources indicates that 39 drillholes were drilled in the Tinkas paleochannel in 2019. Documentation of the drilling is incomplete.

1.5 Interpretation and Conclusions

- EPL-8084 is located within the highly prospective drainage basin south of the Swakop River and upstream of known similar and significant deposits.
- Prospectivity is increased by the presence of appropriate source rocks upstream of the Property.
- Mineral mapping targets coincide with airborne radiometric anomalies.
- The property is easily accessible via the national road network. The well-maintained gravel road to the site is sufficient to be used for an exploration program.
- The Namibian Ministry of Environment, Forestry and Tourism has issued a three-year Environmental Clearance Certificate (ECC) for EPL-8084. The ECC authorizes Puranium to carry out exploration and drilling activities.
- There are no significant risks or uncertainties that could affect the reliability or confidence of the exploration information in the technical report.

1.6 Recommendations

The following exploration work is recommended for EPL-8084:

- Initial reconnaissance exploration of the remote sensing targets
  - Reconnaissance field mapping and sampling of target areas
  - Hyperspectral analysis of target host rock samples
- Detailed mapping and sampling
- Electromagnetic survey of paleochannels to determine channel depths
- Bulk or pit sampling
- Regional drilling contingent on positive results
- Closed spaced drilling

2 Introduction (Item 2)

2.1 Overview

EPL-8084 was initially issued to Otjiwa Mining and Prospecting CC (Otjiwa) on November 20, 2020, for the exploration of nuclear fuel minerals. Puranium Energy Limited (formerly Monterey Minerals Inc) – which has its head office at 401 Bay Street, Suite 2702; Toronto; Ontario; M5H 2Y4 – signed an agreement with the licence holder to acquire an 85% interest in EPL-8084 (see the news release published by Monterey Minerals Inc. on March 24, 2022). In July 2022, Namibian regulators approved the transfer of EPL-8084 to Clary Sage Investments (PTY) Ltd whose ownership reflects the 85% interest of Puranium Energy Limited (Puranium or the Issuer). The licence was valid until November 15, 2023, and a renewal application was submitted to the Namibian Ministry of Mines and Energy (MME). As per the Namibian renewal regulations, the licence was reduced in size by 24.5%. The initial licence area remains valid until the Issuer receives communication from MME. This report will be formulated on the basis of the current licence area whereas the exploration plans will be based on the adjusted license area, operating under the assumption that the proposed size reduction will be accepted by the Namibian regulators.

The aim of this Technical Report is to outline the exploration potential of EPL-8084. The report does not contain any reference to a mineral resource, mineral reserve or project valuation and is purely a description of the property status, infrastructure and exploration potential.

Odikwa Geoservices CC is an independent exploration and mining consulting firm based in Oranjemund, Namibia.

2.2 Report responsibility and Qualified Persons

The Technical Report was prepared by Mrs. Mary Barton, from Odikwa Geoservices CC. She is an independent and Qualified Person, as defined by national instrument NI 43-101.

Mrs. Barton is a member in good standing of the Geological Society of South Africa and a registered Professional Natural Scientist (PrSciNat) with the South African Council for Natural Scientific Professions (SACNASP, membership number 117747). She is the author of the entire Technical Report.

The Qualified Person does not have, nor has she previously had, any material interest in the issuer or its related entities. The relationship with the issuer is solely a professional association between the issuer and the independent consultant.

2.3 Sources of information

This Technical Report is based in part on historical reports and maps obtained by Puranium Energy Limited (Puranium) from the Namibian Ministry of Mines and Energy (MME), technical correspondence, press releases and public information, as listed in Item 27. The Qualified Person has independently verified the legal status of the licence at the MME Office and on the official

mining cadastre. The present status of EPL-8084 is pending renewal. The report has been prepared on the assumption that the tenement will prove lawfully accessible for evaluation.

The author reviewed and appraised the information used to prepare this report and believes that such information is valid and appropriate considering the status of the project and the purpose for which this report is prepared. All statements and opinions expressed in this document are given in good faith and in the belief that such statements and opinions are neither false nor misleading at the date of the report.

2.4 Site visit

Mrs. Mary Barton, a Qualified Person under the regulations of NI 43-101, conducted a site visit to the property on November 1-2, 2022. The author was accompanied by Mr. Emmanuel Shilongo (former Exploration Geologist at Valencia Uranium and Ancash Investments (Pty) Ltd), a consultant geologist to Puranium.

2.5 Units and currency

All measurements in this report are presented using International System of Units metric units, including metric ton (tonne or t) or gram (g) for weight, metre (m) or kilometre (km) for distance, hectare (ha) for area, and cubic metre (m^3) for volume. All monetary amounts are stated as Canadian dollars (C$)

A list of the abbreviations, acronyms and symbols used in this Technical Report is provided in Table 2-1.

Table 2-1: Abbreviations used in the report.

Description	Abbreviation
Canadian dollars	C$
Counts per second	cps
Degrees Celcius	°C
Environmental Clearance Certificate	ECC
Exclusive Prospecting Licence	EPL
General Mining & Finance Corporation Ltd	GMF
Gram	g
Hectares	ha
Kilometres	km
Kilovolts	kV
Megavolt-amperes	MVA
Metres	m
Million pounds	Mlb
Mining licence	ML
Ministry of Mines and Energy of Namibia	MME
Namibia Water Corporation	NamWater
Percent	%
South African Council for Natural Scientific Professions	SACNASP
Square kilometres	km²
Tonnes (metric tons)	t
Uranium	U

3 Reliance on Other Experts (Item 3)

To verify title and ownership of the Project, the author has relied on the information provided by Puranium. The author has been provided with scans of tenement/permit documents; and the author has also independently verified the status of, and the legal titles relating to, the mineral concession with the Ministry of Mines and Energy, Namibia.

This report is intended to be used by Puranium Energy Limited as a Technical Report with Canadian Securities Regulatory Authorities pursuant to provincial securities legislation. In addition, this report is for use by the Canadian authorities. Except for the purposes contemplated under provincial securities laws, any other use of this report by any third party is at the party's sole risk.

4 Property Description and Location (Item 4)

4.1 Namibia overview

Namibia is a sparsely populated country in south-west Africa with approximately 2.5 million inhabitants. It is bordered by Botswana to the east, South Africa to the south and Angola and Zambia to the north. Namibia's entire western border is the Atlantic Ocean. With a total surface area of approximately 825,000km², the country is divided into 14 regions, which are used as first-level subnational administrative divisions. In 1884, Namibia became a German protectorate. After World War I, it was mandated to South Africa in 1920. Namibia obtained full independence from South Africa on March 21, 1990, and has maintained a stable multiparty parliamentary democracy since then. Namibia's official language is English but various indigenous and European languages are also used.

In 2023, the Fraser Institute Survey of Mining Companies ranked Namibia as the 3rd most favourable jurisdiction in Africa on the Policy Perception Index and 6th out of 16 African jurisdictions surveyed on overall investment attractiveness. Namibia's economy is highly dependent on mining and the extractive industry. In 2022, the mining industry contributed 12.2% to gross domestic product and had a turnover of C$ 3.4 billion. Its mineral resources include diamonds, uranium, copper, gold, zinc and industrial minerals like salt, graphite, and dimension stone. The country is among the world's top 10 gem-quality diamond producers, with mines on land and offshore. Metal ores are currently produced from two gold mines, one iron ore mine, one lead-zinc mine and one copper mine. Namibia has two active uranium mines and is the world's fourth-largest producer of uranium. It has a long history of uranium mining with exploration and mining activities focused on the central Namib. Current production in the region is from the Rössing Uranium Mine (production since 1976) and the Husab Mine (production since 2016). Other significant properties in the region include the Langer Heinrich Mine (care and maintenance), Valencia uranium's Noras project, the Tumas-Tubas project, Capri deposit, Koppies deposit and Hirabeb deposit. At present, there are more than ten companies actively mining and/or exploring for uranium in the region.

4.2 Property location

EPL-8084 is located in the west of Namibia in the Erongo region, 106 km southeast of the town of Swakopmund, 120 km to the northeast of the Walvis Bay Seaport and 150 km west of the capital Windhoek. The property covers an area of 19989.4680 ha. The eastern part of EPL-8084 overlies Farm Onanis No.121 and Emeritus No. 123 while the western portion overlies the Namib Naukluft National Park (NNNP). The property is located 30 km east of the Langer Heinrich Uranium mine (Mining Licences No. 140 and 172) and 45 km northeast of Elevate Uranium's Koppies deposit. The renewal of EPL-8084 was filed in November 2023 and included a licence size reduction to 15093 ha.

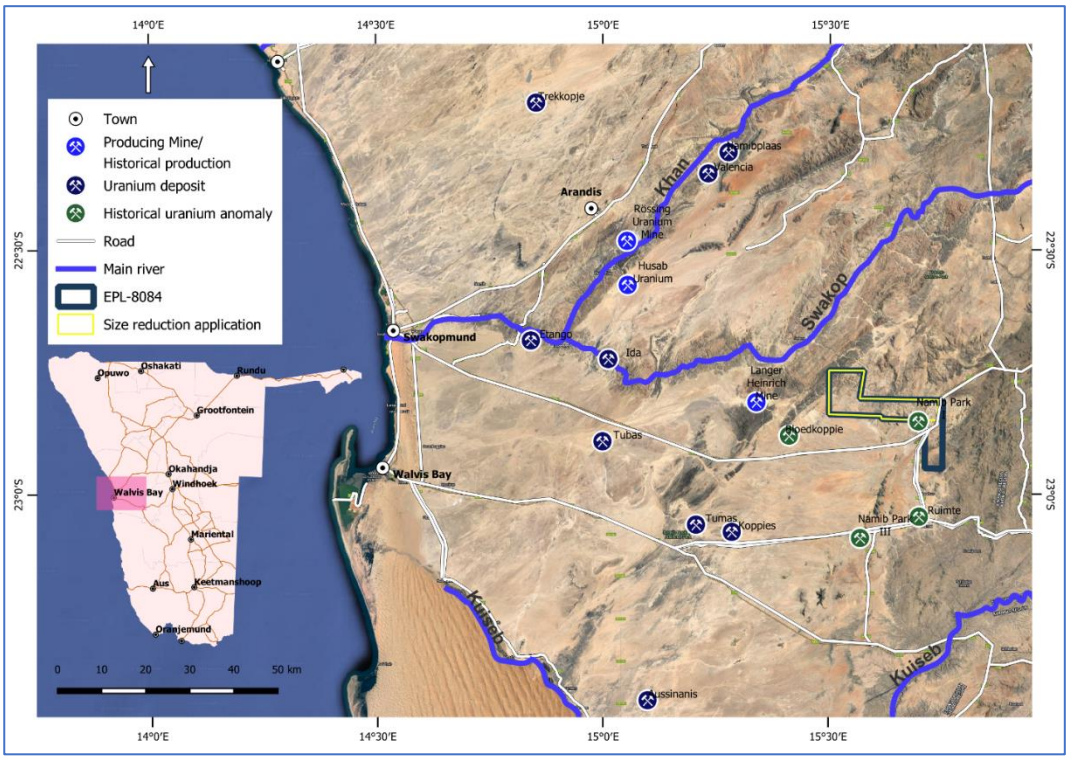

Figure 4-1: Location of EPL-8084 and known uranium deposits/occurrences in the Erongo region.

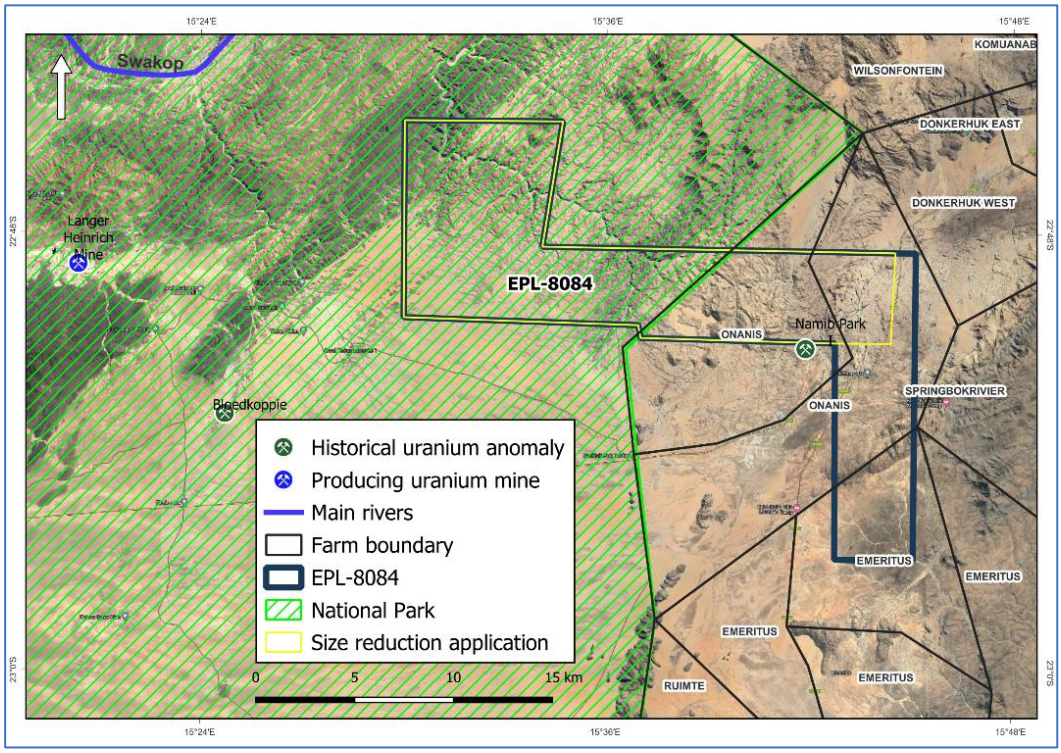

Figure 4-2: Recognized surface rights holders.

4.3 Permits and Agreements

Surface rights in the project area all belong either to private freehold farm owners or to the Government of Namibia (Figure 4-2). Puranium does not own or hold any title to the surface rights of any land in the area. To gain access to all farmland within the project area, Puranium is required to enter into written land-access agreements with each farm owner. In general, a fee is paid to the landowner as compensation for exploration activities on the specific farm.

4.4 Property and title in Namibia

The information in this section is summarized from the Minerals Act 1992 and the Ministry of Mines and Energy (2018). All mining-related activities in Namibia are regulated by the Minerals (Prospecting and Mining) Act of 1992. The Ministry of Mines and Energy (MME) is responsible for the granting, monitoring, and governance of mineral rights. Mining and exploration companies can obtain three types of mineral rights:

- Reconnaissance licence: Intended mainly for non-invasive, geophysical, or remote sensing regional exploration activities, reconnaissance licences are valid for six months and are non-renewable.
- Exclusive prospecting licences: These licences allow the right holder to carry out detailed exploration activities. They are valid for three years and may be extended twice for two-year periods. Further renewal is at the discretion of the Mining Commissioner.
- Mining licences: These licences grant the right holder exclusive mining rights for a maximum of 25 years. The licence can be renewed for 15-year periods after the initial award.

4.5 Surface rights

Surface rights are separate from mineral rights. The property is located on private farmland, namely, farms Onanis and Emeritus. Access agreements with the landowners will be required prior to the commencement of any exploration activities.

4.6 Royalties

The 1981 Minerals (Prospecting and Mining) Act sets out levies on mining companies of between 2% and 10% of the market value of the extracted commodity. The current royalty on nuclear fuel is 3%. Additionally, the 2016 Export Levy Act imposes a levy at 0.25% of the gross uranium revenue.

4.7 Environmental liabilities and permits

EPL-8084 has the western part located in the Namib Naukluft Park – a national conservation area. The potential impacts that are anticipated from the proposed project activities were identified, described, and assessed in the Environmental Management Plan commissioned by the Issuer.

In May 2023, the Namibian Ministry of Environment, Forestry and Tourism approved the Environmental Management Plan and subsequently issued an Environmental Clearance Certificate

(ECC) for EPL-8084. The ECC authorizes the Issuer to carry out exploration and drilling activities. The permit is valid for three years and expires in May 2026.

4.8 Significant risk factors

The two main risks to the future of the project are access agreements with the private landowners and the acceptance of the licence renewal application by MME.

5 Accessibility, Climate, Local Resources, Infrastructure and Physiography (Item 5)

5.1 Accessibility

EPL-8084 is accessed from the east–west running C28 unpaved road connecting Windhoek – the capital city of Namibia – to the coastal town of Swakopmund via the Bosua Pass and the Namib-Naukluft National Park. The Property can also be accessed via the B2 highway, a tarred road connecting Windhoek to the coastal towns. From the B2 road, the property is accessed via the unpaved C28 road. The turn-off from the B2 highway is located 38 km from Walvis Bay and 130 km along the C28 to the project area. The international airports in Windhoek and Walvis Bay offer frequent flights to many African and European countries. Windhoek and Walvis Bay are also linked by rail. The nearest rail siding to EPL-8084 is located in the town of Swakopmund.

5.2 Climate

In and around the Namib Naukluft National Park, the summers are brief, warm, and generally clear, while the winters are cool, marked by winds and clear skies, and the region remains dry throughout the year. High temperatures in the project area are predominantly observed from September to April, averaging 30.25°C, with the lowest temperatures occurring in July at an average of 12.03°C. February-March sees the peak average rainfall at 29.21 mm, while May to August have little to no rainfall. Additionally, February witnesses the highest humidity at 78.61%, whereas July experiences lower humidity levels at 53.87%. The climate has little or no effect on the length of the operating season; exploration activities can be carried out all year.

Figure 5-1: Average monthly rainfall the Namib-Naukluft area, where EPL-8084 is located. ©meteoblue.

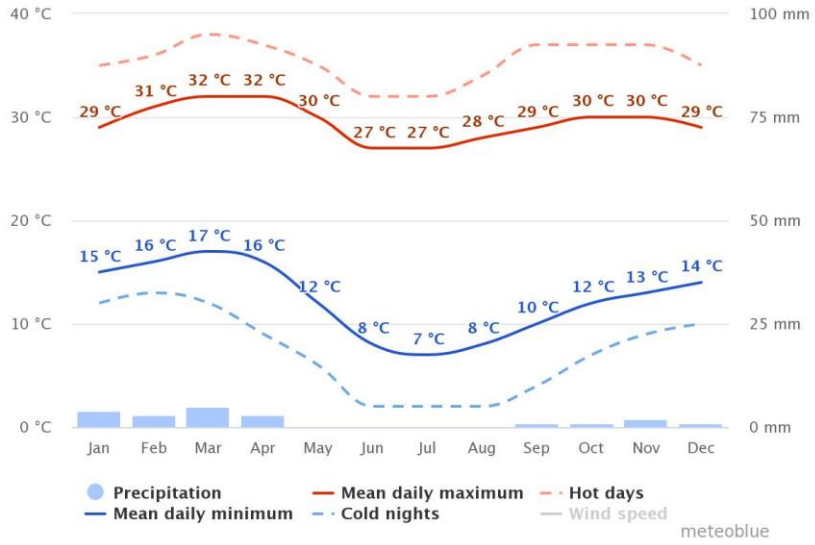

Figure 5-2: Average high and low temperatures in the Namib-Naukluft area, where EPL-8084 is located. ©meteoblue

5.3 Topography, elevation, and vegetation

The topography of the Property varies greatly. It includes ephemeral grassy plains, river valleys, a few rocky outcrops, and the associated drainage areas. Water erosion from the Onanis River and its tributary streams which cut through the EPL have created drainage-related topography with a highly rough surface texture, encompassing rugged rock formations and large boulders down to small pebbles and gravel. The project area has a sparse cover of natural vegetation, including shrubs, trees, temporary grasses, and forbs.

Figure 5-3: Flat, grassy plains within the Property.

5.4 Infrastructure

5.4.1 Port of Walvis Bay

Strategically located halfway down the coast of Namibia, with direct access to principal shipping routes, Walvis Bay is a natural gateway for international trade, located 120 km from the project area. Walvis Bay is Namibia's largest commercial port, receiving approximately 3,000 vessel calls each year and handling about 5 million tonnes of cargo. The port handles container imports, exports and transshipments, as well as bulk and break-bulk of various commodities. It serves a wide range of industries, including petroleum, salt, mining, and fisheries (Namport, 2023).

5.4.2 Power supply

The Namibian market currently operates on a single buyer model: the national electric power utility company Namibia Power Corporation (NamPower) is the generator as well as the single buyer of electricity. The central coastal area is supplied with electricity through the national grid by a ring feed connecting the country's interior region (capital city of Windhoek) and the northern area, which provides much of the country's supply. The Langer Heinrich mine currently receives its electricity supply from the NamPower Kuiseb substation via a 50 km 66 kV powerline, providing a capacity of approximately 16.6 MVA. The proposed project, located 10 kilometres away from the Langer Heinrich mine, aims to leverage the existing infrastructure by connecting to the electrical line at the mine. Plans are currently underway to establish renewable energy infrastructure and green hydrogen plants in the region.

5.4.3 Water supply

Water in the central Namib is sourced from fog, direct summer rainfall, and surface water runoff during the rainy season in the rivers running from the interior of the country through the central Namib, groundwater, and seawater. The four main ephemeral rivers flowing through the central Namib all contain intermittent surface flows following rain, but most of the time, water "flows" below the surface in the sediments of the riverbed. The groundwater resources in the lower reaches of both the Omaruru and the Kuiseb Rivers provide most of the domestic and industrial water supplies at the coast (MME, 2010). Orano Resources Namibia, which owns the Trekkopje mine, has installed a 20 gigalitre per annum desalination plant located 30km north of Swakopmund. Orano is currently supplying water to a number of uranium projects while its project is on care and maintenance. There exists a NamWater pipeline (and related infrastructure) that runs above ground alongside the C28 for about 50km up until the neighboring Langer Heinrich Mine. NamWater, the national water utility company, has appointed consultants to commence a feasibility study to consider the future supply of water to the Central Coast and central areas of Namibia, and even as far as Botswana (NamWater, 2023)

6 History (Item 6)

6.1 Prior ownership and ownership changes

This section summarises the ownership history of the license area based on the available information. Ms. Barton does not deem any gaps in the ownership history as materially significant to the current ownership situation.

Exploration in the area dates back to the 1970's. General Mining & Finance Corporation Ltd carried out exploration work over the licence area under concession 584 between 1970 and 1983. Odikwa is not aware of the status of the licence area between July 1983 and 2005. Records indicate that very little or no uranium exploration occurred during this time due to depressed uranium prices. Between 2005 and 2006, a portion of the area was held by Bannerman Resources Ltd (formerly Turgi Investment (Pty) Ltd) under the licences EPL-3346 and EPL-3347. From 2006 to July 2019, the north-western portion of the area was held by Zhonghe Resources under EPL-3600.

6.2 Previous exploration and development results

Exploration work by General Mining & Finance Corporation Ltd (GMF) included geological mapping, open- and closed-system radon gas surveys and geochemical sampling. Various portions of EPL-8084 are covered by geological mapping at a 1:50 000 and also 1: 100 000 scales. Special emphasis was given to the occurrences of Bloedkoppie Granite and the areas of surficial calcrete cover. For the farms Onanis-121 and Emeritus-123, in the eastern portion of EPL-8084, isopachs of calcrete thickness were produced. The radon gas survey by GMF covered a limited area of EPL-8084. In general, GMF only conducted cursory exploration on EPL-8084 due in part to their discover of the Langer Heinrich deposit in 1973.

Previous tenement holders have identified the presence of three paleochannels in EPL-8084. The Tinkas paleochannel, the Springbok water paleochannel and the Donkerhuk paleochannel. Reports obtained from the Ministry of Mines and Energy indicate that in 2019 Zhonge Resources completed 39 drill holes in the Tinkas paleochannel (Figure 6-1), which delineated 838,200 tons of U_3O_8 and outlined significant potential for resource expansion. Zhonge Resources licence renewal request was denied by MME.

6.3 Production history

No records of historical production in the project area are known to the author and no evidence of any mining production was observed during the site visit.

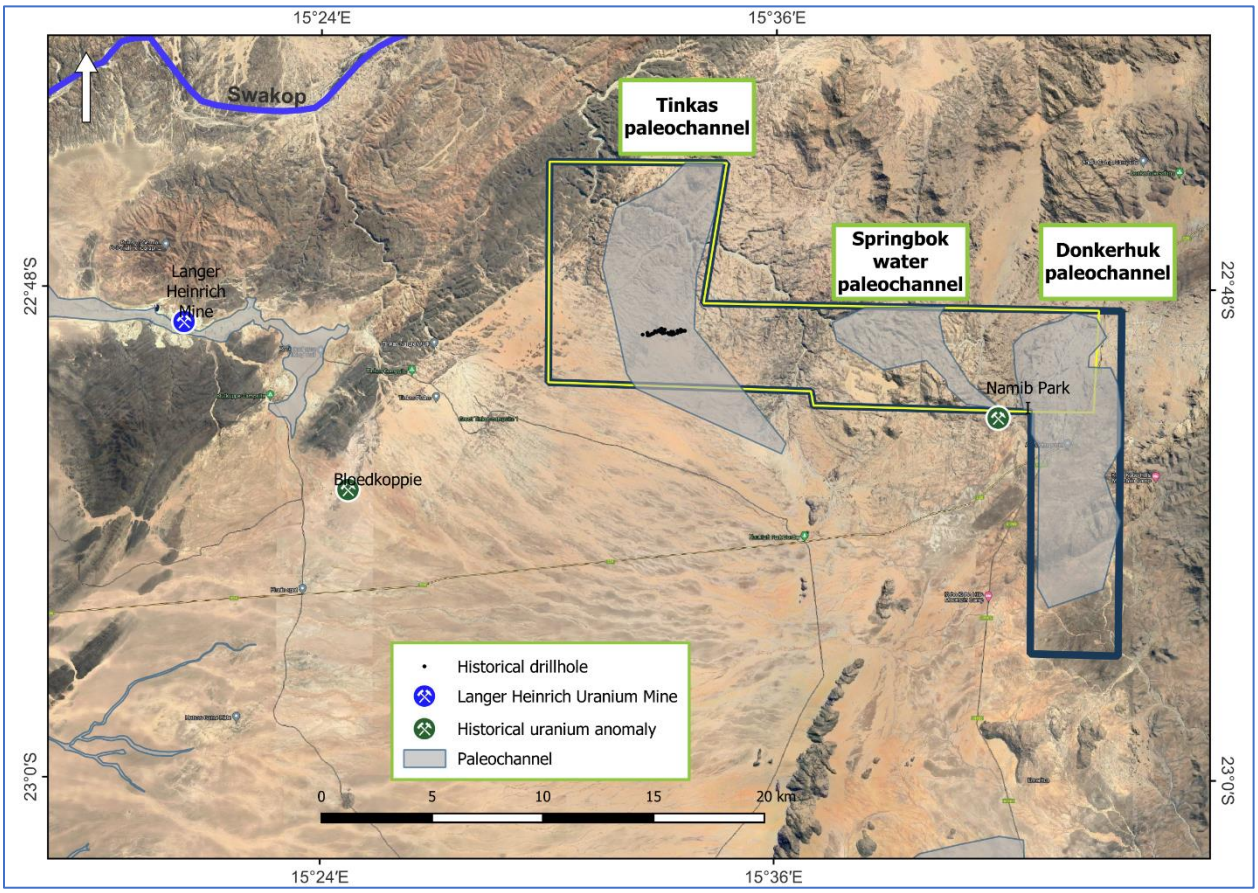

Figure 6-1: Historical drillholes and delineated paleochannels in the Property.

7 Geological Setting and Mineralization (Item 7)

7.1 Regional Geology

EPL-8084 is situated within the Damara Orogen, which is part of the network of Neoproterozoic orogenic belts surrounding and intersecting Africa. This orogenic system originated from the collision between the Kalahari Craton in the south and the Congo Craton in the north. The Orogen comprises two main arms: the NNW-trending coastal arm known as the Kaoko Belt, extending into Angola and progressing northward, and the NE-trending arm called the Damara Belt. The Damara Belt stretches across central Namibia, northern Botswana, connecting to the Zambezi Belt and further extending to the Mozambique Belt. The southwestern termination of the Damara Belt curves southward, merging with the Gariep Belt.

These three belts underwent phases of intracontinental rifting, spreading, subduction, and continental collision between 800–900 Ma and 460 Ma (Miller, 2008), converging at a triple junction centered approximately at Swakopmund. The belts have been compartmentalized into various zones, demarcated by significant linear structures such as faults or lineaments, exhibiting a pronounced aeromagnetic expression (refer to Figure 7-1). The Damara Belt, progressing from north to south, is further subdivided into the Northern Platform, Northern Margin, Northern Zone, Central Zone, Southern Zone, and Southern Margin Zones.

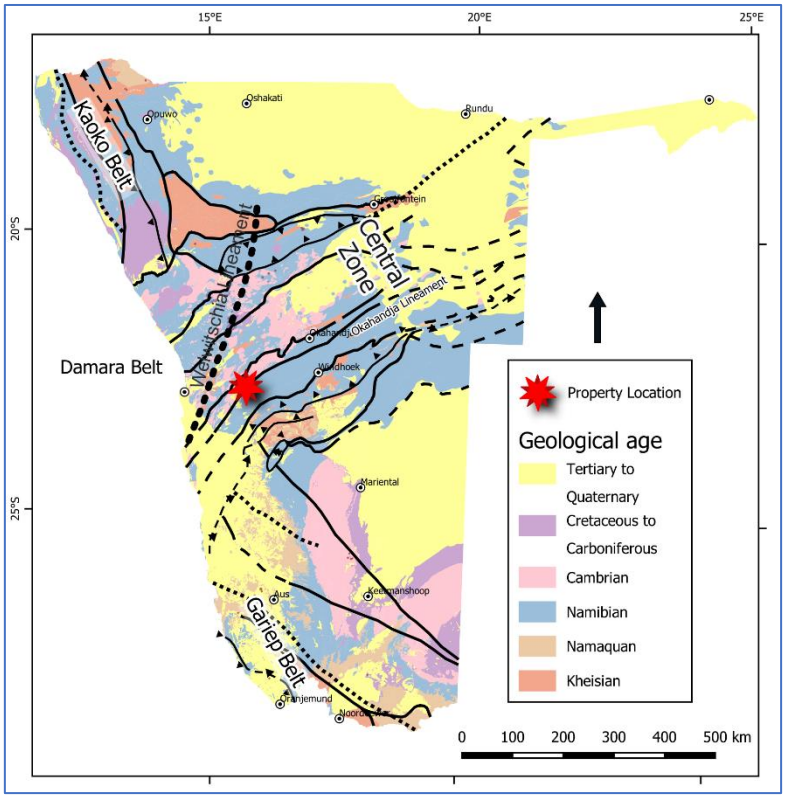

Figure 7-1: The Damara Orogen represented by the three inland belts and separated into zones by major structural lineaments. The Property is located in the Okahandja Lineament zone which separates the southern Central Zone and Southern Zone.

7.2 Local and Property Geology

The property is located approximately 15 km east of the Langer Heinrich Mine and overlies the Namib Park I Uranium occurrences (Figure 7-2). Also in proximity are the historical Bloedkoppie, Namib Park III and Ruimte uranium anomalies and the Tubas, Tumas, Koppies and Hirabeb deposits. The Property is bordered to the south by EPL-7646 – also owned by Puranium.

Structurally, EPL-8084 lies within the north-east trending Okahandja Lineament Zone, characterized by significant intrusions of the syn- to post-tectonic Donkerhoek Granite Suite which exhibits naturally elevated uranium concentrations. This zone serves as a prominent delineation between the southern Central Zone and Southern Zone within the Damara Mobile Belt. The Late Jurassic breakup of Gondwana induced rift-related uplift, causing surface denudation of Proterozoic rock units. This geological process led to the retreat of the Great Escarpment in Namibia. Throughout the Cenozoic era, continuous erosion of elevated plateaus and an eastward migration of the Great Escarpment occurred, resulting in the deposition of fluvial and alluvial deposits to the west of the Great Escarpment. The Property is characterized by outcrops of granitic basement and Swakop group units with incised gorges some of which are covered by calcrete terraces.

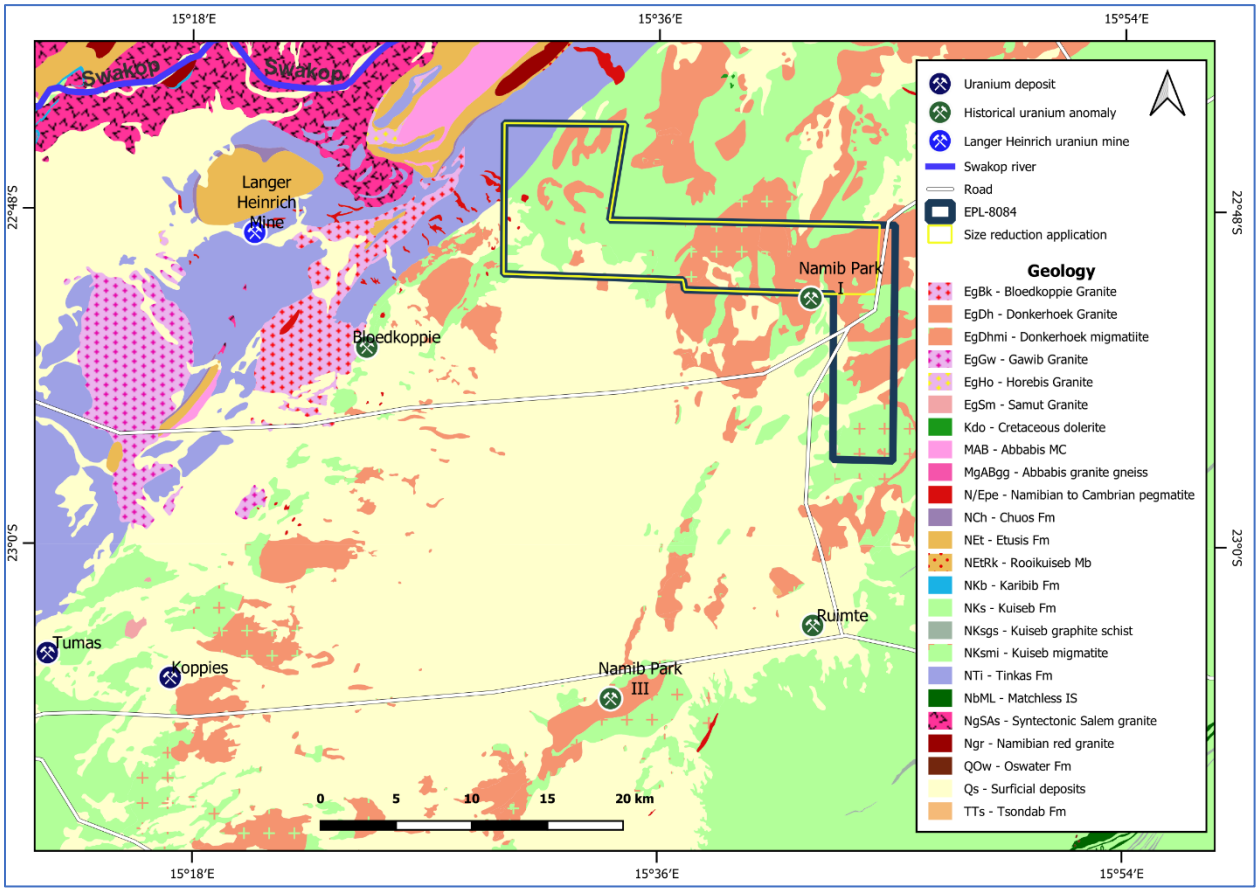

Figure 7-2: Local geology of the Property and the location of calcrete-hosted uranium deposits within the same basin.

7.3 Mineralization

EPL-8084 is located within the contemporary ephemeral drainage basins south of the Swakop River. Paleochannels within these basins are associated with five of the larger surficial or calcrete-hosted uranium deposits of the region – Langer Heinrich, Tumas, Tubas, Aussinanis and Koppies. The paleochannels tend to be buried with little or no obvious surface expression to identify them. Known uranium mineralization in the project area is likely to occur in calcrete. In deposits such as the Langer Heinrich, mineralization commonly spans extensive distances along the palaeochannel, displaying an irregular morphology characterized by quasi-tabular bodies that elongate in the flow direction of the host palaeochannel. There is a notable, though unquantified, presence of uranium in the underlying basement rocks. This includes occurrences such as carnotite-rich seams located along open fractures within the schist of the Tinkas Formation such as is found at the neighboring Langer Heinrich mine and the Koppies deposit.

8 Deposit Type (Item 8)

The target deposit type in EPL-8084 is calcrete-hosted uranium. Additionally, basement-hosted uranium is characterized by mineralization occurring as veins within weathered schist, with the uranium mineralization being closely associated with calcium carbonate precipitates (calcrete) in sediment-filled channels and near-surface weathered basement rocks. Calcrete-hosted uranium deposits form when uranium is leached by groundwater from uranium-rich granites and is transported in groundwater through permeable sediments in paleo valleys. In arid areas, intense evaporation can cause changes in the chemical composition of the water and result in the precipitation of the uranium bearing mineral carnotite.

9 Exploration (Item 9)

Since the acquisition of the licence, Puranium conducted reconnaissance exploration on EPL-8084. This work consisted mainly of airborne radiometric data interpretation and a remote sensing study.

9.1 Geophysical

Puranium energy obtained airborne geophysics and radiometric data from the Namibian Ministry of Mines and Energy. The interpretation highlights radiometric anomalies coinciding with the historically identified paleochannels – Tinkas, Springbok water and Donkerhuk (Figure 9-1). Field verification is required to confirm the target host rocks.

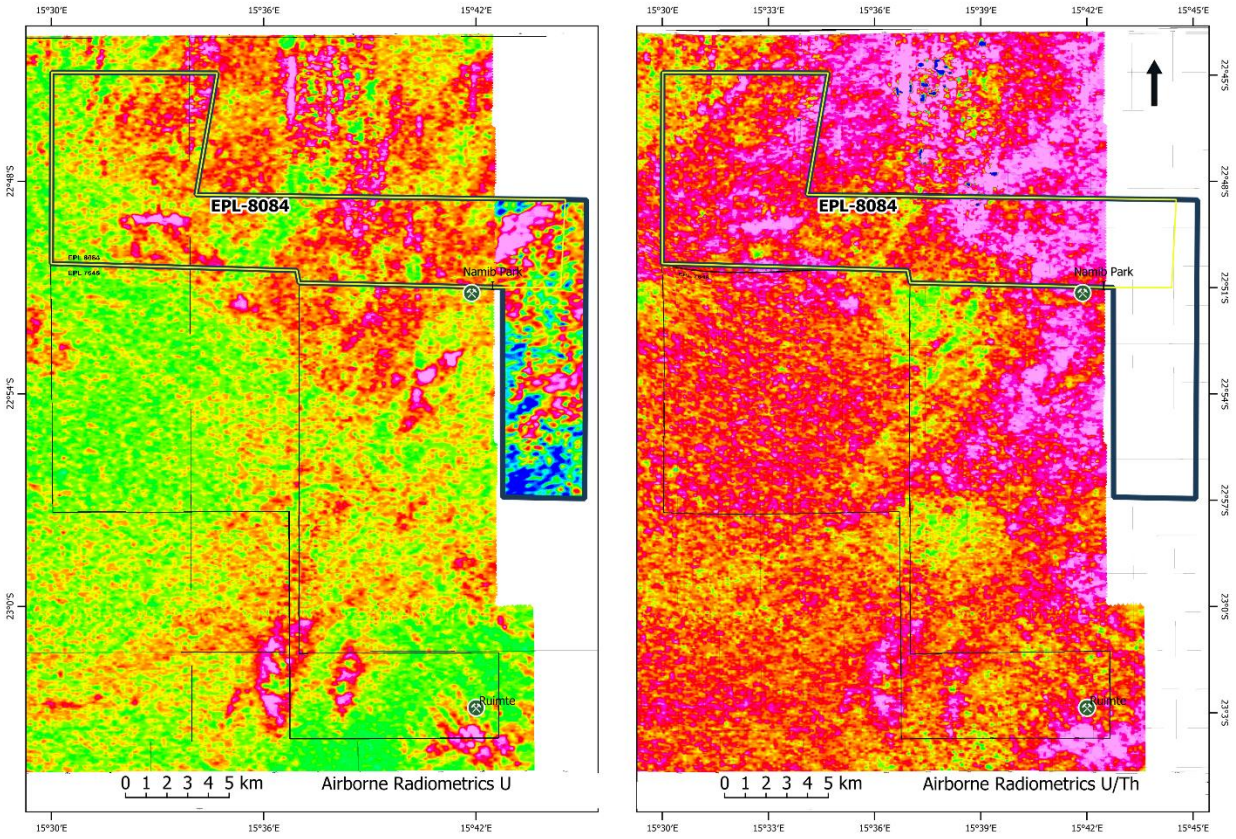

Figure 9-1: Airborne radiometric signatures over the Property. The deep purple to pink represents radiometric anomalies.

9.2 Field visit and geological verification

The two-day visit to the Property aimed at confirming the location of the historical drillholes, and the existence of calcrete in historically mapped paleochannels. Ms. Barton observed that the Tinkas paleochannel is covered by calcrete terraces that are at least 2 metres thick based on the incised gorges. The terraces cover an extensive spatial area. The calcrete terraces had various facies including thinly laminated, gritty and conglomeritic. Background counts per second (cps) taken

with a hand-held scintillometer average around 120 cps. Anomalous cps range between 300 and 900 cps. Only 5 of the historical 39 drillholes in that channel were found. The drillholes appeared to have been drilled in areas of radiometric highs (300 – 900 cps). The Donkerhuk paleochannel has very shallow sediment fill. Most of the area has granite or schist outcrops with sand at the bases. The calcrete terraces in the Donkerhuk paleochannel are mainly exposed near the Namib Park I mineral occurrence. The Bloedkoppie Granites, manifesting as distinctive short ridges, exhibit the highest and most consistently elevated levels of radioactivity. Consequently, it represents a plausible source for secondary uranium mineralization (Figure 9-2).

Figure 9-2: Geological features and historical drillholes observed on the Property. A: Bloedkoppie granites; B: Calcrete terrace with shallow stream incision. C: Historical drillhole casing.

9.3 Remote sensing

In October 2022, the issuer appointed Perry Remote Sensing LLC (Perry) to conduct a property-wide remote sensing and spectral processing survey. The remote sensing work included the processing, analysis and interpretation of ASTER and Landsat Satellite data over the Property and over areas surrounding the Property with known occurrences of a similar target mineralization style including the Langer Heinrich and Koppies deposits.

Perry used the neighbouring Langer Heinrich mine as a model site for calcrete hosted uranium deposits in the region. The study produced four main essential components which together would delineate appropriate target sites for further exploration:

- mineral models based on spectral matches for mineralized calcretes
- paleochannel interpretation
- perched water table documentation during dry and wet seasons
- geological structures

The interpreted essential components are summarised in Figure 9-3.

The Koppies deposit which is approximately 34km southwest of EPL-8084 was used as a test site and the approach has been successful in identifying strong spectral matches for mineralized calcretes, paleochannels and perched water tables. Based on the interpretation, a 13 square km high priority target area in the western portion of the exploration licence was delineated (Figure 9-4). Within this target area, the mineral maps indicate the potential for a 2.5km long mineralized paleochannel coinciding with location of the Tinkas paleochannel and a strong airborne radiometric signature.

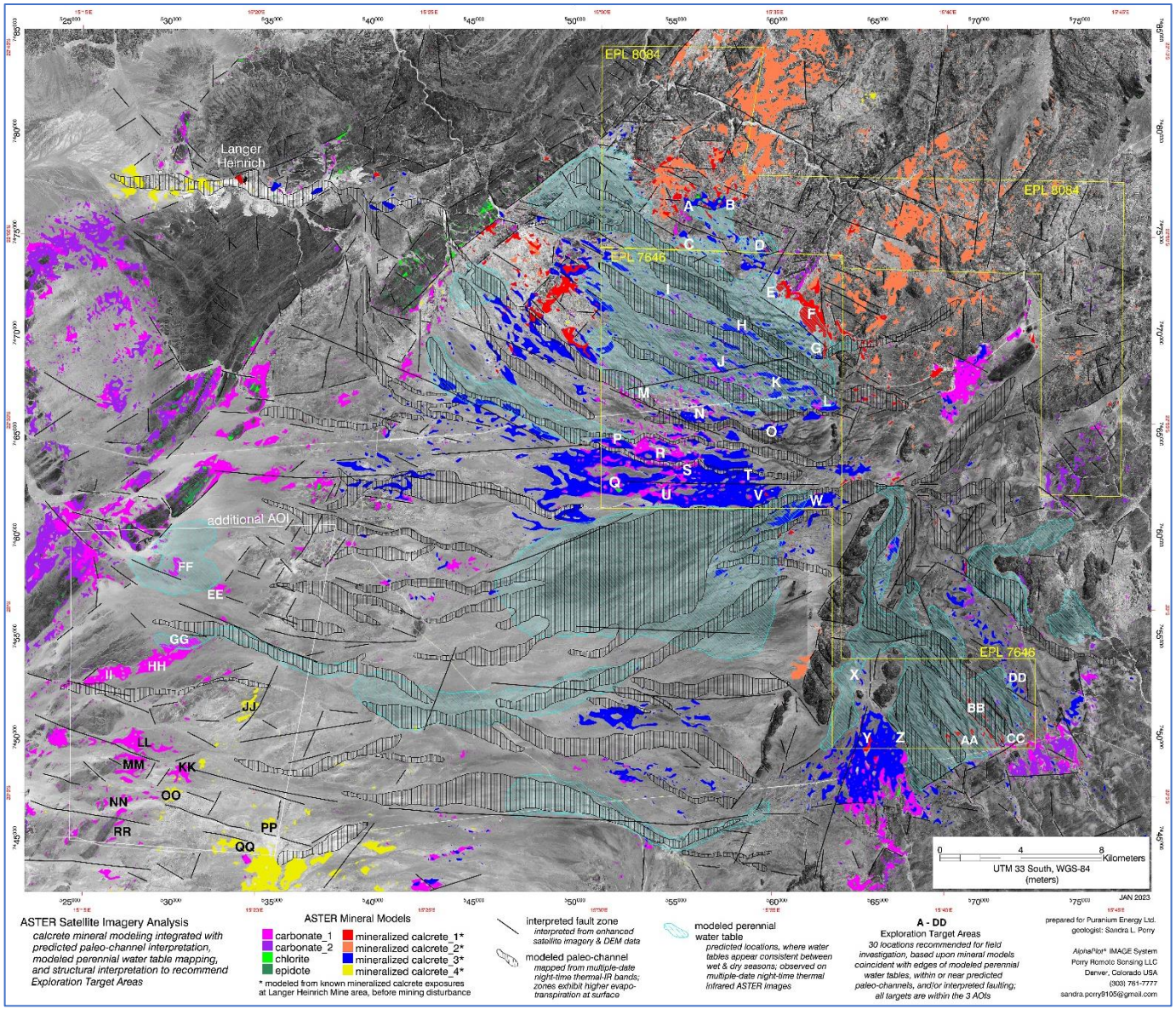

Figure 9-3: Image synthesis map with interpreted essential components for calcrete hosted uranium mineralization. Source: Perry.

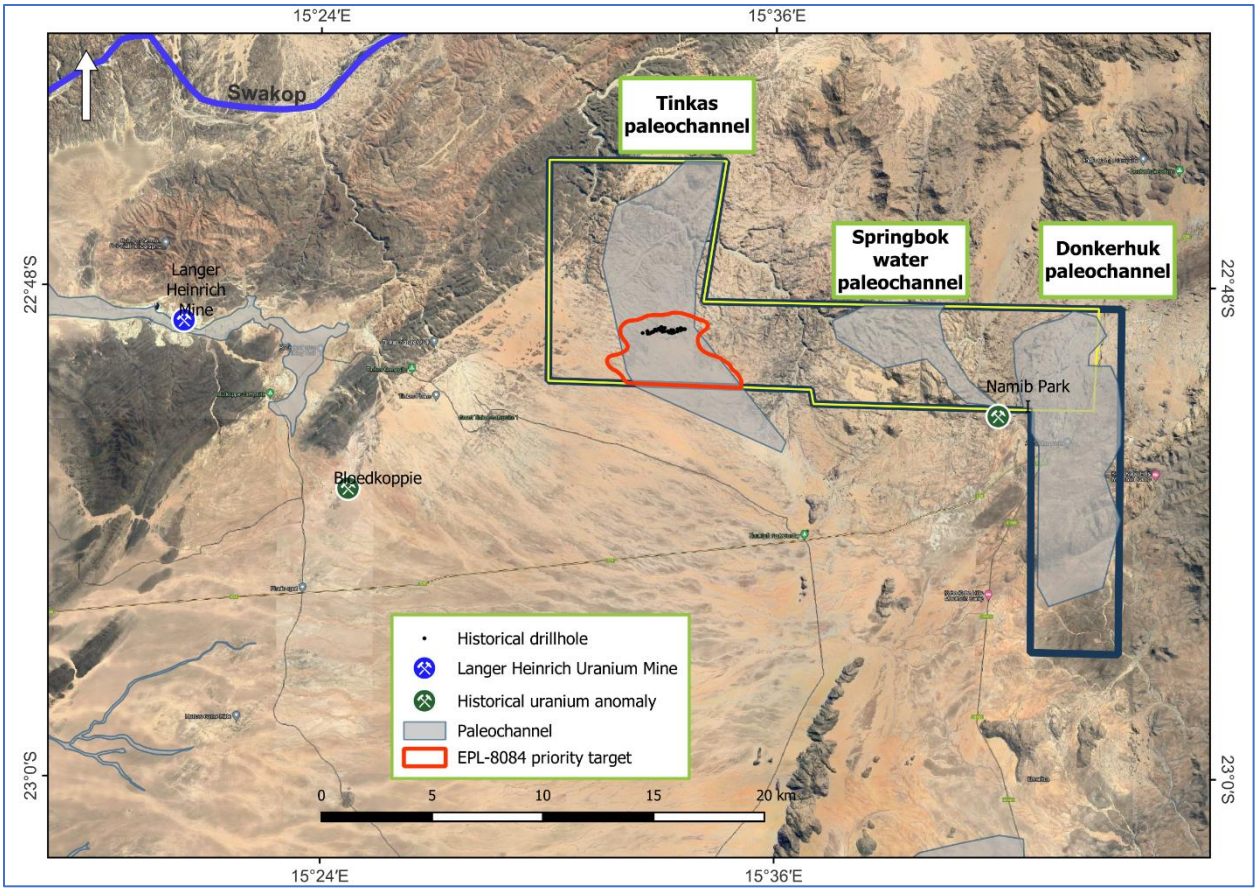

Figure 9-4: Priority target generated from remote sensing study.

10 Drilling (Item 10)

Puranium has not performed any drilling on the Property. Record of drilling by Zhonge Resources indicates that 39 drillholes were drilled in the Tinkas paleochannel in 2019. Documentation of the drilling is incomplete.

11 Adjacent Properties (Item 23)

EPL-8084 lies in the drainage basin south of the Swakop River which hosts significant calcrete-hosted uranium deposits such as the Langer Heinrich Mine (care and maintenance), the Tumas-Tubas project, Koppies deposit, and Hirabeb deposit (Figure 7-2).

All the information pertaining to the adjacent properties is disclosed publicly by the owner or operator of the adjacent properties through their websites. The Qualified Person has not been able to verify all of the information with respect to the adjacent properties contained in this report. The information on the adjacent properties is not necessarily indicative of the mineralization at EPL-8084 that is the subject of this report.

11.1 Langer Heinrich

Langer Heinrich Uranium is owned by Paladin Energy Australia (75%), and China Nuclear Corporation Overseas Uranium Holding Limited (25%), a subsidiary of China Nuclear Corporation. The uranium deposit at Langer Heinrich is near the surface, ranging from 1m to 30m thick and 50m to 1,100m wide, contingent on the width of the paleo-valley. The Mine has a JORC and NI 43-101 compliant measured and indicated resource of 34,785 tonnes U at 0.042% and inferred resource of 3454 tonnes U at 0.04%. Mining operations commenced in August 2006, achieving nameplate production in December 2007. The Deposit was put on care and maintenance in 2018 due to low uranium prices but is scheduled to restart in 2024. EPL-8084 is located 15km from the Langer Heinrich Mine.

11.2 Koppies

The Koppies project is owned by Elevate Uranium under the licence EPL-6987. The Project has a JORC complaint (November 2023) resource of 48 Mlb U_3O_8. Koppies is one of the world's shallowest uranium resources, with approximately 95% of the resource located within 15 meters of the surface and around 50% within 6 meters of the surface. The company has discovered the mineralization extends to the northeast and south in a continuous zone of mineralization spanning over 20 kilometers. The Property is located 45km northeast of the Koppies project.

11.2 Historical occurrences

11.2.1 Bloedkoppie

The Bloedkoppie Granite which is south of the EPL contains uranium concentrations ranging from 10 to 15 (g/t), reaching a maximum of 100 g/t U_3O_8. Percussion holes were used for drilling into calcrete channels within the northern, eastern, and southern sections of the granted area. The calcrete was determined to have an average thickness of 7 meters, and two drill holes yielded assay values exceeding 100 g/t U_3O_8, as reported by Hartleb in 1981. The Bloedkoppie Granite also contains several radioactive narrow zoned pegmatites with concentrations of magnetite close to their cores.

11.2.2 Ruimte 125

In the central-northwestern region of this farm, an anomaly covering an area of 3.3 million square meters was identified. Surface chip samples collected from this area were analyzed and revealed uranium concentrations ranging from 340 to 540 grams per ton (g/t) U_3O_8, as documented by Kotzé in 1978. This farm is located southeast of the EPL-8084.

12 Interpretation and Conclusions (Item 25)

The main conclusions drawn from the information available are as follows:

- At this stage it is too early to evaluate the potential of the Property as little work has been carried out in the past and/or there is little documentation of the historical work. In addition, current exploration is at an immature stage. Regardless, EPL-8084 is located within the highly prospective drainage basin south of the Swakop River and upstream of known similar and significant deposits.
- Prospectivity is increased by the presence of appropriate source rocks upstream of the Property.
- Then remote sensing study identified targets within the Property with similar characteristics as deposits of the same target mineralization style.
- Mineral mapping targets coincide with airborne radiometric anomalies.
- The property is easily accessible via the national road network. The well-maintained gravel road to the site is sufficient to be used for an exploration program.
- The Namibian Ministry of Environment, Forestry and Tourism has issued a three-year Environmental Clearance Certificate (ECC) for EPL-8084. The ECC authorizes Puranium to carry out exploration and drilling activities.
- There are no significant risks or uncertainties that could affect the reliability or confidence of the exploration information in the technical report.

Ms. Barton believes the property is prospective for calcrete-hosted uranium mineralization and warrants systematic exploration. Available data is insufficient to define continuity of mineralisation or to support a mineral resource estimate, mineral reserves, or to infer potential economic outcomes. Sufficient data is available to indicate that the Property is prospective for calcrete-hosted uranium mineralization.

13 Recommendations (Item 26)

The following exploration work is recommended for EPL-8084:

- Initial reconnaissance exploration of the remote sensing targets
  - Reconnaissance field mapping and sampling of target areas
  - Hyperspectral analysis of target host rock samples
- Detailed mapping and sampling
- Electromagnetic survey of paleochannels to determine channel depths
- Bulk or pit sampling
- Regional drilling contingent on positive results
- Closed spaced drilling

Estimated time and cost to complete the recommended exploration program have been summarised in Table 13-1.

Table 13-1: Proposed exploration budget for the next license tenure.

Exploration programme and budget first year (2023-2024)	**Time frame**	**Expenditure**
Reconnaissance mapping and sampling	0.5 months	200,000.00
Detailed geological mapping and sampling	1 months	400,000.00
Sample analysis/geochemistry	2 months	120,000.00
Electromagnetic survey and interpretation	1 months	300,000.00
Regional drilling 400m spacing	2 months	1,000,000.00
Downhole Geophysics	1 month	1,000,000.00
Environmental/permitting		100,000.00
Administrative		200,000.00
Total:	**11 months**	**3,320,000.00**
Exploration programme second year (2024-2025)	**Time frame**	**Expenditure**
Review of local targets	1 month	200,000.00
Closed spaced drilling 1000m	3 months	2,600,000.00
Downhole Geophysics	2 months	2,000,000.00
Bulk/pit sampling (dependent on drill results)	3 months	2,000,000.00
Preliminary petrography, petrology, and metallurgical test work (dependent on drill results)	2 months	1,000,000.00
Environmental/permitting		100,000.00
Administrative/travelling		300,000.00
Total:	**12 months**	**8,200,000.00**

14 References (Item 27)

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CERTIFICATE OF QUALIFIED PERSON

Certificate of Qualified Person – Mary Barton

In connection with the Technical Report entitled "NI 43-101 Technical Report on EPL-8084" with an effective date of December 5, 2023, I, Mary Barton, do hereby certify that:

1. I am a Principal Consultant of Odikwa Geoservices CC (9 Sixth Avenue, Oranjemund, Namibia; telephone: +264 81 147 0381; email: mary.barton@ogsnam.com).
2. The Technical Report to which this certificate applies is titled "NI 43-101 Technical Report on EPL-8084" and has an effective date of December 5, 2023.
3. I hold an MSc in International Mineral Resource Management from the University of Dundee (Scotland), an MSc in Geology from Curtin University (Australia), a BSc (Hons) in Geology from the University of Cape Town (South Africa) and a BSc degree in Computer Science and Geology from the University of Namibia.
4. I am a member in good standing of the Geological Society of South Africa and a registered Professional Natural Scientist (PrSciNat) with the South African Council for Natural Scientific Professions (SACNASP, membership number 117747). I am familiar with NI 43-101 and, by reason of education, past relevant work experience in exploration and mineral resource development, and professional registration, I fulfill the requirements of a Qualified Person as defined in NI 43-101.
5. I visited the project site from November 1-2, 2022.
6. I have prepared this Technical Report and take responsibility for all the sections contained herein.
7. I am independent of the issuer as described in Section 1.5 of NI 43-101.
8. I have had no prior involvement with the property that is the subject of this Technical Report.
9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.
10. As of the effective date of the Technical Report, to the best of my knowledge, information, and belief, the Technical Report contains all scientific and technical information that is required to be disclosed and to not make the report misleading.
11. I consent to the filing of the Technical Report with any applicable securities regulatory authorities, stock exchanges and other regulatory authorities, as the case may be, and any publication for regulatory purposes, including electronic publication in the public company files and websites for stock exchanges and applicable regulatory authorities, including on SEDAR and the Issuer's website, accessible to the public for all or any extracts from this Technical Report.

Signed and dated this 8th day of December 2023.

Mary Barton, MGSSA, PrSciNat
Principal Consultant
Odikwa Geoservices CC