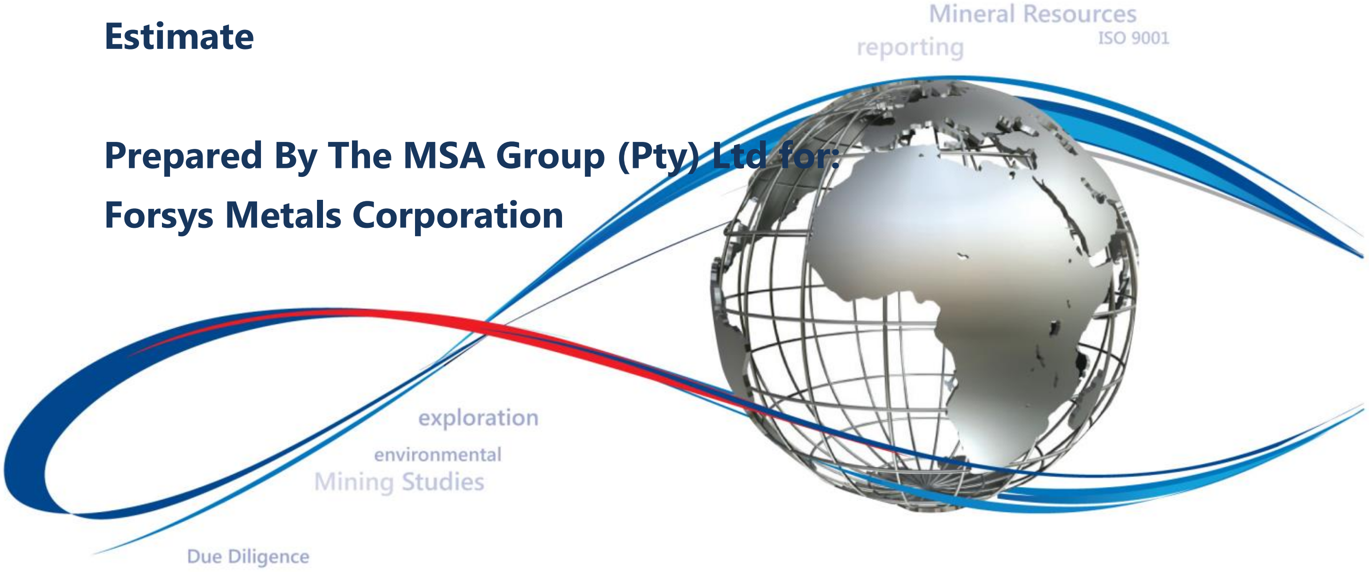
Specialist Consultants to the Mining Industry

Forsys Metals Corporation
Norasa Project
Namibia

NI 43-101 Technical Report 14 May 2024 Mineral Resource Estimate



Prepared By The MSA Group (Pty) Ltd for:
Forsys Metals Corporation

Prepared By:

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Aveshan Naidoo	MBA, BSc., Pr. Eng., MSAIMM

Effective Date: 14 May 2024
Report Date: 27 June 2024

MSA Project No.: J4743

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IMPORTANT NOTICE

This report was prepared as a National Instrument NI 43-101 Technical Report for Forsys Metals Corp. (Forsys) by The MSA Group (Pty) Ltd (MSA), South Africa. The quality of information, conclusions and estimates contained herein is consistent with the level of effort involved in MSA's services, based on: i) information available at the time of preparation, ii) data supplied by outside sources, and iii) the assumptions, conditions, and qualifications set forth in this report. This report is intended for use by Forsys subject to the terms and conditions of its contract with MSA. Except for the purposes legislated under Canadian provincial securities law, any other uses of this report by any third party is at that party's sole risk.

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CERTIFICATE OF QUALIFIED PERSON

I, Guy George Freemantle, Pr. Sci. Nat., FGSSA, MSEG, do hereby certify that:

1. I am Geology Operations Manager of:

   The MSA Group
   Henley House, Greenacres Office Park
   Rustenburg and Victory Roads
   Victory Park
   South Africa
   2195

2. This certificate applies to the technical report titled "**Forsys Metals Corporation, Norasa Project, Namibia. NI 43-101 Technical Report 14 June 2024 Mineral Resource Estimate**, which has an effective date of 14 May 2024 and a report date of 27 June 2024 (the Technical Report).
3. I graduated with a B.Sc. Honours degree in Geology from the University of the Witwatersrand in 2006. In addition, I have obtained a Ph.D. at the Economic Geology Research Institute, University of the Witwatersrand, South Africa.
4. I am a fellow of the Geological Society of South Africa, a member of the Society of Economic Geologists and a Registered Professional of the South African Council for Natural Scientific Professions.
5. I have worked as a geologist for a total of 14 years since my graduation from university.
6. I have read the definition of "qualified person" set out in National Instrument 43–101 ("NI 43–101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43–101) and past relevant work experience, I fulfil the requirements to be a "qualified person" for the purposes of NI 43–101.
7. I visited the Valencia project site on the 1st of September 2023 for 1 day and observed sampling activities at the Valencia Camp and I visited a viewpoint of the Namibplaas deposit on EPL-3638 property.
8. I am responsible for the preparation of sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 23, 25, 26, 27 of the technical report.
9. I have had prior involvement with the Valencia Project. The nature of my prior involvement is academic; the geology and mineralogical studies of the deposit are topics within my Ph.D. dissertation, submitted to the University of the Witwatersrand in 2015.

10. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
11. I am independent of the issuer according to the definition of independence described in section 1.5 of National Instrument 43-101.
12. I have read National Instrument 43–101 and Form 43–101F1, and the Technical Report has been prepared in compliance with that instrument and form.
13. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated this 26th of June 2024.

“Signed and Stamped”

Dr Guy G. Freemantle – Qualified Person

THE MSA GROUP

Specialist Consultants to the Mining Industry

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CERTIFICATE OF QUALIFIED PERSON

I, Aveshan Naidoo, MBA, BSc, Pr. Eng., MSAIMM, do hereby certify that:

1. I am a Specialist Engineer: Hydromet and Economics of:

    DRA South Africa Projects (Pty) Ltd
    Building 33
    Woodlands Office Park
    20 Woodlands Drive
    Woodlands
    Sandton
    2080

2. This certificate applies to the technical report titled “Forsys Metals Corporation, Norasa Project, Namibia. NI 43-101 Technical Report 21 June 2024 Mineral Resource Estimate, which has an effective date of 14 May 2024 and a report date of 27 June 2024 (the Technical Report).
3. I am a registered Professional Engineer with the Engineering Council of South Africa (Registration No. 20130523). I graduated from the University of KwaZulu-Natal, South Africa, with a Bachelor of Science in Chemical Engineering and a Master of Business Administration at the University of Witwatersrand.
4. I am a member of the Southern African Institute of Mining and Metallurgy (Membership No. 706079).
5. I have practised my profession continuously since 2008.
6. I have read the definition of “qualified person” set out in National Instrument 43–101 (“NI 43–101”) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43–101) and past relevant work experience, I fulfil the requirements to be a “qualified person” for the purposes of NI 43–101.
7. I visited the property during the month of February 2024 for 1 day.
8. I am responsible for the preparation of sections 1, 2, 13, 17, 25 and 26 of the technical report.
9. I have not had prior involvement with the property that is the subject of the Technical Report.
10. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
11. I am independent of the issuer applying all of the tests in section 1.5 of National Instrument 43–101.
12. I have read National Instrument 43–101 and Form 43–101F1, and the Technical Report has been prepared in compliance with that instrument and form.

13. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.[1]

Dated this 21st day of June 2024.

<u>"Signed and Stamped"</u>

Aveshan Naidoo – Qualified Person

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1 SUMMARY

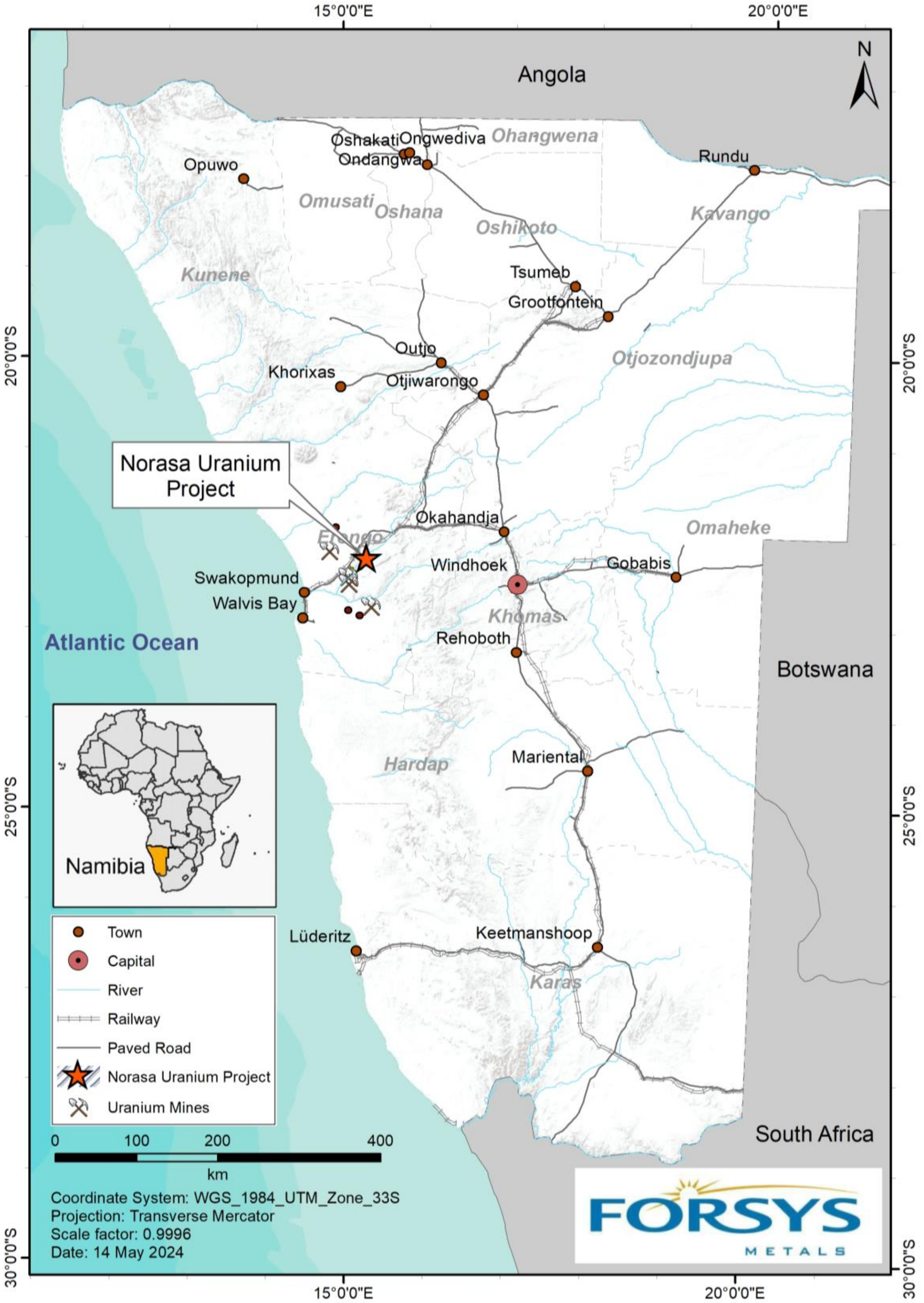
This National Instrument 43-101 (NI 43-101) Technical Report describes the Mineral Resource for Forsys' Norasa Uranium Project and includes updated Mineral Resource Estimates (MREs) for the Valencia and Namibplaas Uranium deposits.

The Norasa project comprises two uranium deposits of the alaskite type at Valencia and at Namibplaas in central western Namibia, 75 km southwest of the town of Usakos. It is accessible by highway B2 via a 26 km dedicated unsealed road that crosses the Khan River. Namibplaas and Valencia are approximately 7.5 km apart and are geologically situated on a fold structure 23 km northeast, along strike, from the type locality uranium mine at Rössing (Figure 1-1). The project licences are owned by Forsys' wholly owned subsidiary, Valencia Uranium Limited and have been explored for uranium by the company since 2005.

A statement on the updated Mineral Resource estimate for the Norasa Project was reported on 14 May 2024 (Forsys Metals, 2024). The statement includes a comprehensive review and update of all the parameters for a Mineral Resource Estimate (MRE) using recent drill results together with the 2005-2011 data that informed the October 2013 Norasa MRE.

The Mineral Resources are reported in Table 1-1 above a cut-off grade of 40 ppm U_3O_8 for the Valencia and Namibplaas deposits and are classified as Measured, Indicated and Inferred Resources in accordance with the 2014 CIM Definition Standards for Mineral Resources and Mineral Reserves.

Figure 1-1
Norasa Project Location in the Erongo Region, Namibia



Source: *Forsys, 2014, updated May 2024.*

Table 1-1

Norasa Mineral Resource estimates as of 14 May 2024

Class	Deposit	Tonnes millions	Average Grade eU_3O_8 (ppm)	Material Content U_3O_8 Mlbs	Contained Metal U tonnes
Measured	Valencia East Valencia Main Namibplaas	7.6	171	2.9	1,099
	Total Norasa	**7.6**	**171**	**2.9**	**1,099**
Indicated	Valencia East Valencia Main Namibplaas	144.3	134	42.6	16,368
	Total Norasa	**144.3**	**134**	**42.6**	**16,368**
Measured & Indicated	Valencia East Valencia Main Namibplaas	151.9	136	45.4	17,467
	Total Norasa	**151.9**	**136**	**45.4**	**17,467**
Inferred	Valencia East	1	114	0.3	97
	Valencia Main	4.7	121	1.3	487
	Namibplaas	218.7	85	41.1	15,817
	Total Norasa	**224.5**	**86**	**42.6**	**16,401**

Notes:

1. *All tabulated data have been rounded and as a result minor computational errors may occur.*
2. *Mineral Resources, which are not Mineral Reserves, have no demonstrated economic viability. There is no guarantee that that all or any part of the Mineral Resource will be converted into a Mineral Reserve. The estimate of Mineral Resources may be materially affected by geology, environment, permitting, legal title, taxation, socio-political, marketing, or other relevant issues.*
3. *Mt = Million tonnes, Mlbs = Million Pounds*
4. *The Mineral Resource Statement for Norasa as of 14 May 2024 is reported at a cut-off grade of 40ppm U_3O_8 from within a conceptual pit-shell using the following assumed parameters:*
    - *Base Uranium Price –USD/lb U_3O_8: $120*
    - *Average Mining Cost at reference elevation (AISC) USD/tonne: Valencia Main $2.38; Valencia East $2.13; Namibplaas $2.29"*
    - *Average Processing Cost USD/tonne processed: $7.55*
    - *Average G&A Overheads USD/tonne processed: $1.04*
    - *Process Overall Recovery % U3O8 Recovery: 85.0 %*
    - *Selling Cost Transport USD/lb U_3O_8: $1.29*
5. *From the assumed parameters, a 40 ppm U_3O_8 cut-off grade was calculated, which together with the conceptual pit shell demonstrates reasonable prospects for eventual economic extraction (RPEEE) for the Mineral Resource. The assessment to satisfy the criteria of RPEEE is a high-level estimate and is not an attempt to estimate Mineral Reserves.*

1.1 Permitting

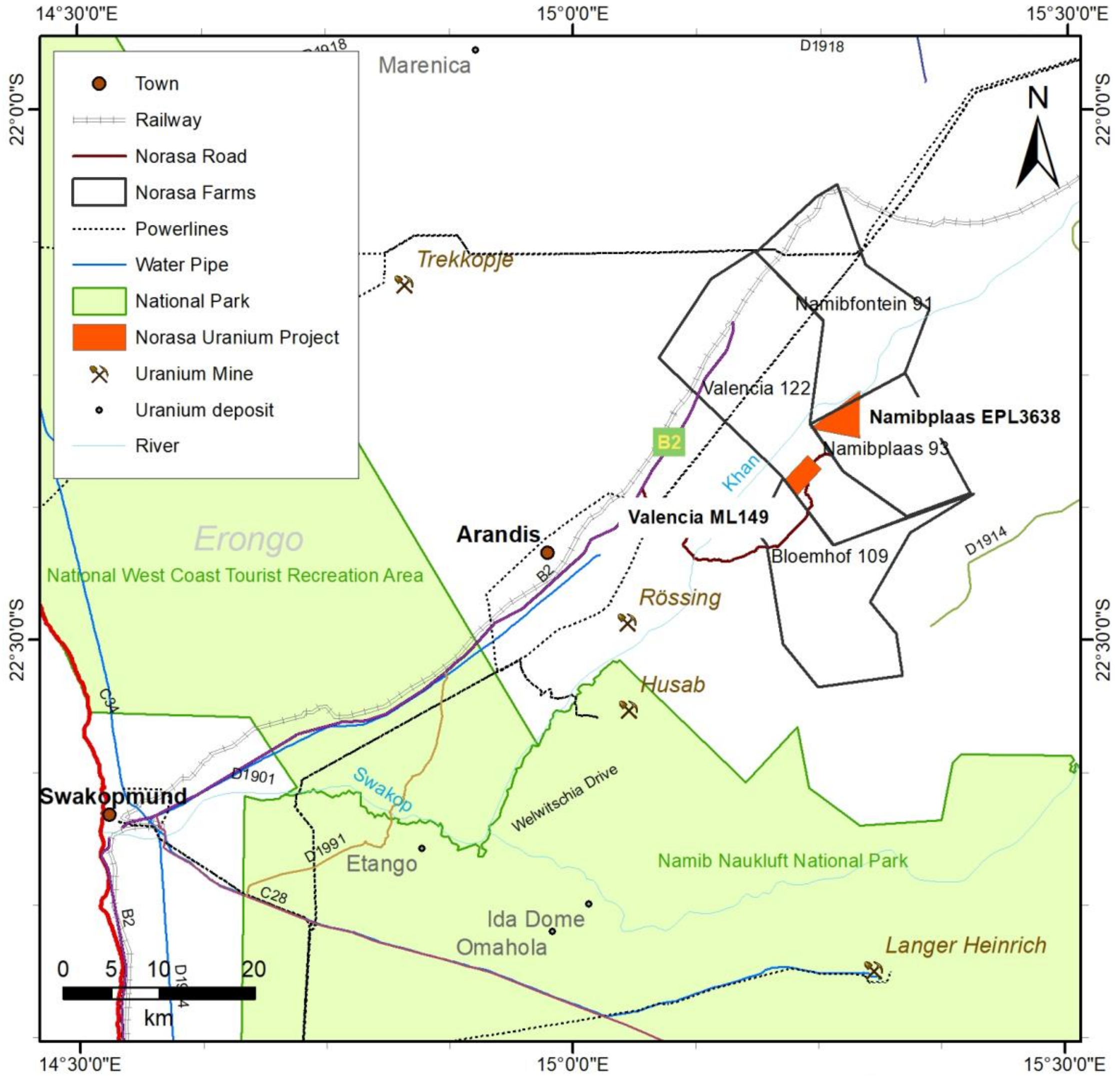
Valencia Uranium Limited (VUL) was granted its Mining Licence (ML) 149 in respect of the Nuclear Fuel Group of Minerals, effective from 23 June 2008 and valid for a period of 25 years; after 25 years the licence can be renewed. As the Valencia Licence area is situated on private land, agreement with the landowner is required prior to the mine development. This agreement was signed on 30 April 2009, giving Valencia unrestricted access to 3,327 hectares of the Farm Valencia. In addition, on 8 May 2009 Valencia acquired a servitude within the neighbouring Farm Bloemhof for an area of 594 hectares, granting Valencia the right to construct any works related to the mine development and operation (Accessory Works). Compensation has been paid, making the agreement binding for a period equal to that for the Mining Licence (Figure 1-2).

VUL currently holds the Exclusive Prospecting Licence (EPL) 3638, which is in good standing and currently valid until 01 February 2026. The Namibian Ministry of Environment and Tourism (MET) has also approved the combination of the projects from an environmental perspective and the Valencia Environmental Impact Assessment (EIA) and/or Environmental Management Plan (EMP) is currently being updated for final clearance to also include Namibplaas. In the meantime, Namibplaas continues to operate with an environmental clearance for prospecting activities. All legal and permitting requirements have been met for the development of Norasa within the Valencia licence area.

VUL was issued a renewal of the Environmental Compliance Certificate (ECC) on the 23rd of May 2023 for the envisaged mine development and operations at Valencia and at Namibplaas. The permit, which is valid for three years from date of issue, is also valid for the exploration activities on these licences.

Figure 1-2

Norasa Project Licences and Associated Farm Boundaries



Coordinate System: WGS_1984_UTM_Zone_33S
Projection: Transverse Mercator
Scale factor: 0.9996
Date: 14 May 2024

Source: *Forsys, 2014, updated May 2024.*

1.2 Geology and Mineralisation

The Norasa Project uranium deposits fall within the Pan African Damara Orogen on the inland branch (the Damara Belt) which stretches from the Namibian coast north-eastwards through to Zambia. The Inland Branch has been divided into zones from north to south along NE-SW trending tectono-stratigraphic lineaments.

Metamorphic gradients vary between these zones and are highest (granulite facies) in the southern portion of what is termed the Central Zone. The Zone is deeply eroded toward the coastal region in the west, exposing Proterozoic basement rocks and the alaskite type uranium deposits.

Primary uranium mineralisation of economic significance is limited to this southern Central Zone. Large volumes of U-bearing leucogranite intrude a limited stratigraphic range, occasionally cross-cutting into basement rocks but mainly cross-cutting into stratigraphic units directly above and below the Nosib Group and Swakop Group unconformity.

The uranium mineralisation at Valencia is hosted only by alaskites, and occasionally in a narrow halo within the immediate country rock contacts. The alaskites, which comprise massive stock-like bodies, dykes and sills of varying thickness, and narrow veins, are either conformable with or transgressive to the metamorphic fabric in the metasedimentary host rocks.

Uranium mineralisation at Valencia has been identified over an area of 1,100 m north-south by 500 m east-west. The mineralisation dips at approximately 35° to the south and has been identified by diamond (DDH) drilling to a depth of 499 m below surface (drillhole VA26-152). Approximately 6 km to the northeast, the Namibplaas deposit extends approximately 2,500 m along a NE-SW trend and is exposed on surface with a width of approximately 400 m.

Uranium minerals are predominantly uraninite, typically $(U,Th)O_2$, and secondary uranium (IV) minerals, coffinite, $U(SiO_4)_{1-x}(OH)_{4x}$. The near surface ore mineral population includes the uranium (VI) phases uranophane, $Ca(UO_2)2SiO_2.7H_2O$ and uranothallite ($Ca_2U(CO_3)_4.10H_2O$). Trace betafite, $(Ca,U)_2(Ti,Nb,Ta)_2O_6$, and brannerite, $(Th,U,Ca)Ti_2(O,OH)_6$, have been observed at Valencia and documented in Freemantle (2015). Uranium phosphate minerals are not observed at Valencia or Namibplaas.

1.3 Exploration Status

An exploration programme is underway on ML 149 comprising a total of 60 drillholes for 8,512 m of combined percussion and diamond drilling . Drilling commenced in March 2023 and is ongoing. A total of 3,470 metres were completed in 2023 at the Valencia Main deposit. Six areas of potential mineralisation were delineated from exploration work including: aerial photograph interpretation; geological mapping; aeromagnetic surveys; airborne radiometric and ground scintillometer surveys; and a review of historic drilling data. Two of the areas are intended to extend the current resource. A recommended 60-hole drill project commenced in quarter 1 of 2024 at six identified areas in the vicinity of the Valencia and Valencia East deposits. The results of this drilling project were not available as at the effective date of this report.

1.4 Recommendations

1.4.1 Exploration Drilling

Conversion of Mineral Resources from the Indicated to Measured Mineral Resource categories could be bolstered by infill drilling, with samples assayed by XRF and by gamma probe eU_3O_8.

Potential exists for the extension of the known mineralisation to the immediate south of the Valencia main MRE pit shell at depth and down dip; this should be tested. There is further additional potential for mineralisation in the vicinity of the Valencia Main and Valencia East MRE pit shells[1]

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[1] Current 40 ppm U_3O_8 cut-off pit for constraining the mineral resource estimate.

which should be tested by drilling. The area to the west of the main MRE pit shell is characterised by favourable Swakop Group stratigraphy and alaskite intrusives.

The current understanding of the Namibplaas deposit indicates that there is potential for mineralisation down dip, along the southeastern edge of the deposit. A phased approach to recommended resource drilling at Namibplaas to reduce drill spacing in certain areas and to increase the number of laboratory U assays across the deposit. The drill programme should aim at upgrading suitable portions of the estimated Inferred Mineral Resource to the Indicated Mineral Resource category. Surficial mapping and radiometric sampling also indicate potential for mineralisation to the north and northeast of the current estimated Mineral Resource at Namibplaas and should be considered as potential future exploration targets.

1.4.2 Metallurgical Testwork

Metallurgical studies should focus on areas of untested mineralised material, namely the lower-grade (~60 ppm U_3O_8) and higher-grade ranges (>300 ppm U_3O_8), and the marginal material of varied, untested composition. Metallurgical testing should expand on processing variables such as crushing regimens, leach times and temperatures, reagent dosages and irrigation, and binder types. Mineralogical information of feed and residue material should supplement interpretation of the new testwork results and information.

2 INTRODUCTION

The MSA Group (Pty) Ltd (MSA) was commissioned by Forsys Metals Corp (Forsys) to complete an independent NI 43-101 technical report for the Norasa Uranium Project (Norasa or The Project).

The Norasa Project is an exploration project that comprises two project areas at Valencia on Mining Licence ML 149 and at Namibplaas on Exclusive Prospecting Licence EPL 3638. The Project is located in the Erongo Region of Namibia, approximately 93 km by road from the town of Swakopmund which is located on the Atlantic coast.

The uranium mineralisation is hosted in Pan African age alaskitic granite pegmatite sheets and veins that intruded a package of Damaran metasediments. The Valencia and Namibplaas deposits are primary uranium deposits of the Intrusive Type according to the International Atomic Energy Agency (IAEA) classification scheme for uranium deposits. They are both situated on a regional geological structure, the Khan Syncline, approximately 21 km northeast, along strike, from the Rössing and Husab deposits, both of which are major, operational open pit mines.

2.1 Corporate Structure

Forsys Metals Corp. (Forsys or The Company) principal focus is to become an emerging uranium producer with its 100 % ownership of the Norasa Project. Forsys has held interest in the Valencia Project since 2005 when Valencia Uranium Limited (VUL) was acquired by Forsys. Forsys initially acquired 90 % of the VUL in 2005 and the remaining 10 % in 2007. The Company has retained ownership of ML 149, through VUL, since 27 June 2008.

Forsys held a 70 % ownership of Dunfield Mining Company (Pty) Ltd from November 2005, acquiring the remaining 30 % in January 2013. The licence has been 100 % held by VUL continuously since January 2013.

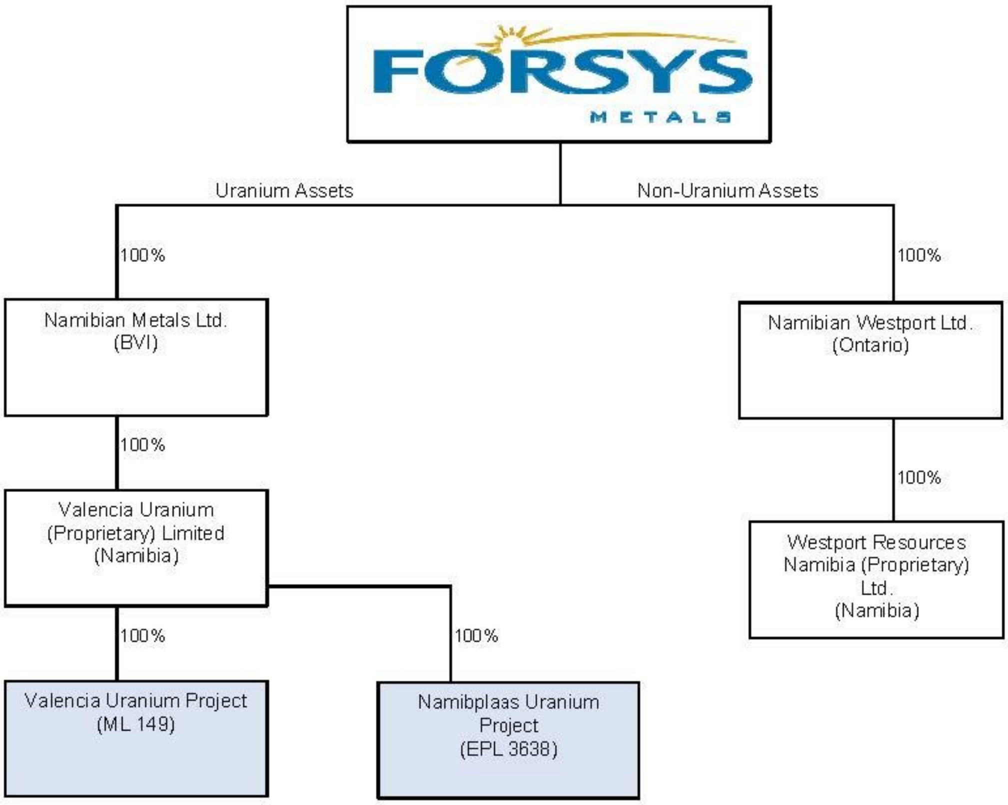
Forsys' principal wholly owned subsidiaries relating to the Valencia and Namibplaas uranium projects are Namibian Metals Ltd., a British Virgin Islands based holding company, which owns 100% of the ordinary shares of Valencia Uranium (Proprietary) Limited, a Namibia based exploration company, which in turn holds a 100% interest in the Valencia Uranium Project and the Namibplaas Uranium Project.

The Company is incorporated under the Business Corporations Act (Ontario) and the primary listing of its common shares is on the Toronto Stock Exchange (TSX), with secondary listings on the Namibian Stock Exchange and Frankfurt Stock Exchange.

The Company's registered office is at 20 Adelaide Street East, Suite 200, Toronto, Ontario, Canada, M5C 2T6.

The Forsys corporate structure is indicated in Figure 2-1, which sets out all of the Company's material subsidiaries, which are unchanged as at the 14th of May 2024, their respective jurisdictions of incorporation, the Company's direct and indirect voting interest in each and the respective licenses held by each subsidiary.

Figure 2-1
Forsys Metals Corp. Structure



Source: *Forsys Metals Corp*

2.2 Scope of Work

MSA has been commissioned by Forsys to provide an Independent Technical Report on the Company’s Norasa Uranium Project, located in the Erongo Region of Namibia.

This Independent Technical Report has been prepared to comply with disclosure and reporting requirements set forth in the Toronto Stock Exchange (TSX) Corporate Finance Manual, Canadian National Instrument 43-101 (NI 43-101), Companion Policy 43-101CP, Form 43-101F1, the ‘Standards of Disclosure for Mineral Projects’ (the Instrument) and the Mineral Resource and Reserve classifications adopted by CIM Council in May 2014.

2.3 Principal Sources of Information

MSA has based this Technical Report for the Norasa Uranium Project on information provided by Forsys along with other relevant published and unpublished data.

The Technical Report has been prepared on information available up to and including 01 May 2024, with the Mineral Resource having an Effective Date of 14 May 2024. The data used to estimate the Norasa Project Mineral Resources represents the entire database for the drilling completed. There is no known material information outstanding as of the effective date of this report.

A personal inspection to the Valencia property on ML 149 in the Erongo Region, Namibia was undertaken by the Qualified Person, Dr Guy G. Freemantle from the 1st to the 2nd of September 2023. MSA has endeavoured, by making all reasonable enquiries, to confirm the authenticity and completeness of the technical data upon which the Independent Technical Report is based. A final draft of the Report was also provided to Forsys, along with a written request to identify any material errors or omissions prior to lodgement.

All monetary figures expressed in this report are in United States of America dollars (US$/$) unless otherwise stated.

The locations of all maps are referenced to WGS 84, UTM Zone 33S, or GCS_WGS_1984 for graticule map grids, unless otherwise stated.

2.4 Personal Inspection

Refer to Table 2-1 for the current personal inspection dates.

Table 2-1
Current Personal Inspection

Qualified Person	Date	Location	Responsible Items
Guy Freemantle	01 September 2023	Valencia Project ML149	Items 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 23, 25, 26, and 27
	02 September 2023	TEA Assay Lab, Swakopmund	
Aveshan Naidoo	01 February 2024	Valencia Project ML149	Items 1, 2, 13, 17, 25 and 26

2.5 Qualifications, Experience and Independence

MSA is an exploration and resource consulting and contracting firm, which has been providing services and advice to the international mineral industry and financial institutions since 1983.

This report has been compiled by Dr Guy Freemantle, who is a professional geologist with 14 years' experience, the majority of which has involved the exploration and evaluation of uranium properties, primarily within southern Africa, including a role in the Husab uranium deposit in Namibia that involved geological research and exploration geology between 2008 and 2017. He is a Consultant - Uranium with MSA, a Fellow of the Geological Society of South Africa (FGSSA), a Member of the Society of Economic Geologists (MSEG), and a Professional Natural Scientist (Pr. Sci. Nat.) registered with the South African Council for Natural Scientific Professions. Dr Freemantle has the appropriate relevant qualifications, experience, competence and independence to act as a "Qualified Person" as that term is defined in National Instrument 43-101 (Standards of Disclosure for Mineral Projects).

Neither MSA, nor the author of this report, has or has had previously, any material interest in Forsys or the mineral properties in which Forsys has an interest. Our relationship with Forsys is solely one of professional association between client and independent consultant. This report is prepared in return for professional fees based upon agreed commercial rates and the payment of these fees is in no way contingent on the results of this report.

3 RELIANCE ON OTHER EXPERTS

Forsys' Namibian projects through VUL consist of two granted Licences; Mining Licence ML 149 and Exclusive Prospecting Licence EPL 3638 on Farm Valencia 122 and the privately held Farm Namibplaas 93 respectively. Namibplaas is situated ~7.5 km northeast of Valencia.

MSA has not independently verified, nor is it qualified to verify, the legal status of these concessions. The present status of tenements listed in this report is based on information and copies of documents provided by Valencia Uranium, and the report has been prepared on the assumption that the tenements will prove lawfully accessible for evaluation.

Similarly, neither MSA nor the authors of this report are qualified to provide comment on environmental issues associated with Valencia Uranium's Projects.

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4 PROPERTY DESCRIPTION AND LOCATION

The Norasa Project comprises two mineral deposits on two licence areas, the Valencia deposit on ML149 and the Namibplaas deposit in EPL3638. The licence areas are situated on two privately held farms, ML149 on Farm Valencia 122 and EPL3638 on Farm Namibplaas 93. The Norasa Project also has access to Farm Bloemhof 109 for accessory works and servitudes.

4.1 Location

The Valencia Main and Valencia East deposits are located on the farm Valencia 122, which is located approximately 75 km southwest of the town of Usakos in central-west Namibia (Figure 4-1). The Namibplaas Project is located 7.5 km northeast of the Valencia deposits on Farm Namibplaas 93.

The Valencia Exploration Camp is situated approximately 1 km south of the Valencia Deposit (approximately 22°21′ S and 15°14′ E).

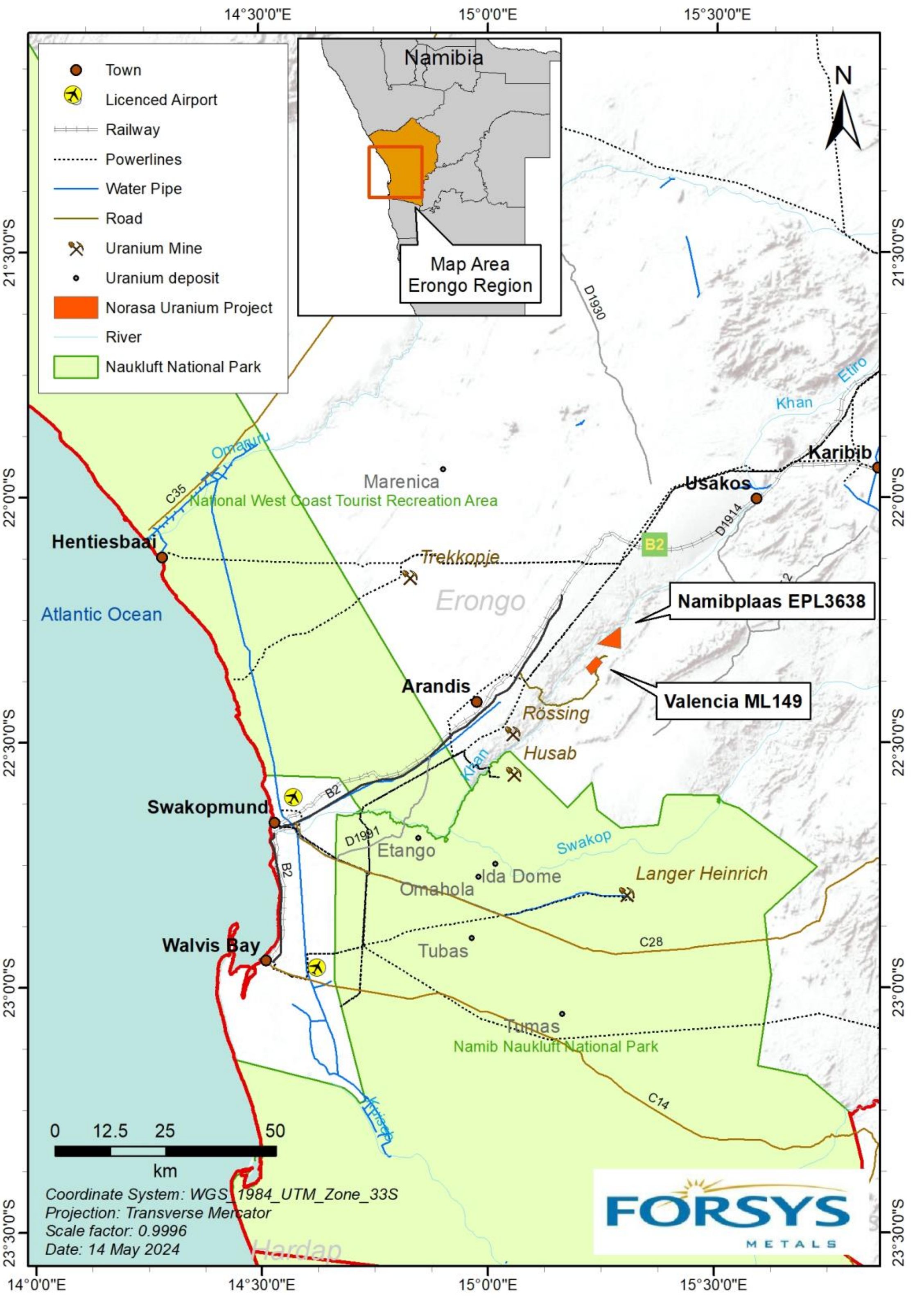
4.2 Mineral Tenure, Permitting, rights and Agreements

The Valencia Main and Valencia East deposits occur within ML149, which is valid until 22 June 2033 and covers an area of 735.6 ha and is registered in the name of Valencia Uranium (Pty) Ltd (VUL). ML149 is fully permitted to allow for the commencement of construction and mining operations. There are no other requirements for VUL to commence operations; neither legal, administrative nor environmental. The licence boundary is shown in Figure 4-2 and coordinates of the ML 149 licence area are provided in Table 4-1. ML 149 was converted from EPL 1496 on 27 June 2008 and is valid for 25 years from date of issue by the Namibian Ministry of Mines and Energy (MME); the licence is renewable.

Namibplaas lies within Exclusive Prospecting Licence 3638 (EPL3638). The EPL was first granted to Dunefield Mining Company (Pty) (Dunefield) on 07 November 2006 and has been renewed continuously since that date. Dunefield was 70 % owned by Forsys until 26 March 2012 when the remaining 30 % was acquired by Forsys, who presently own 100 % of the Namibplaas Uranium Project through Valencia Uranium (Proprietary) Limited (Namibia). EPL3638 is currently valid to 01 February 2026 and covers an area of 1,266.374 ha. The coordinates of the licence area are listed in Table 4-2 and the licence area is also shown in Figure 4-2.

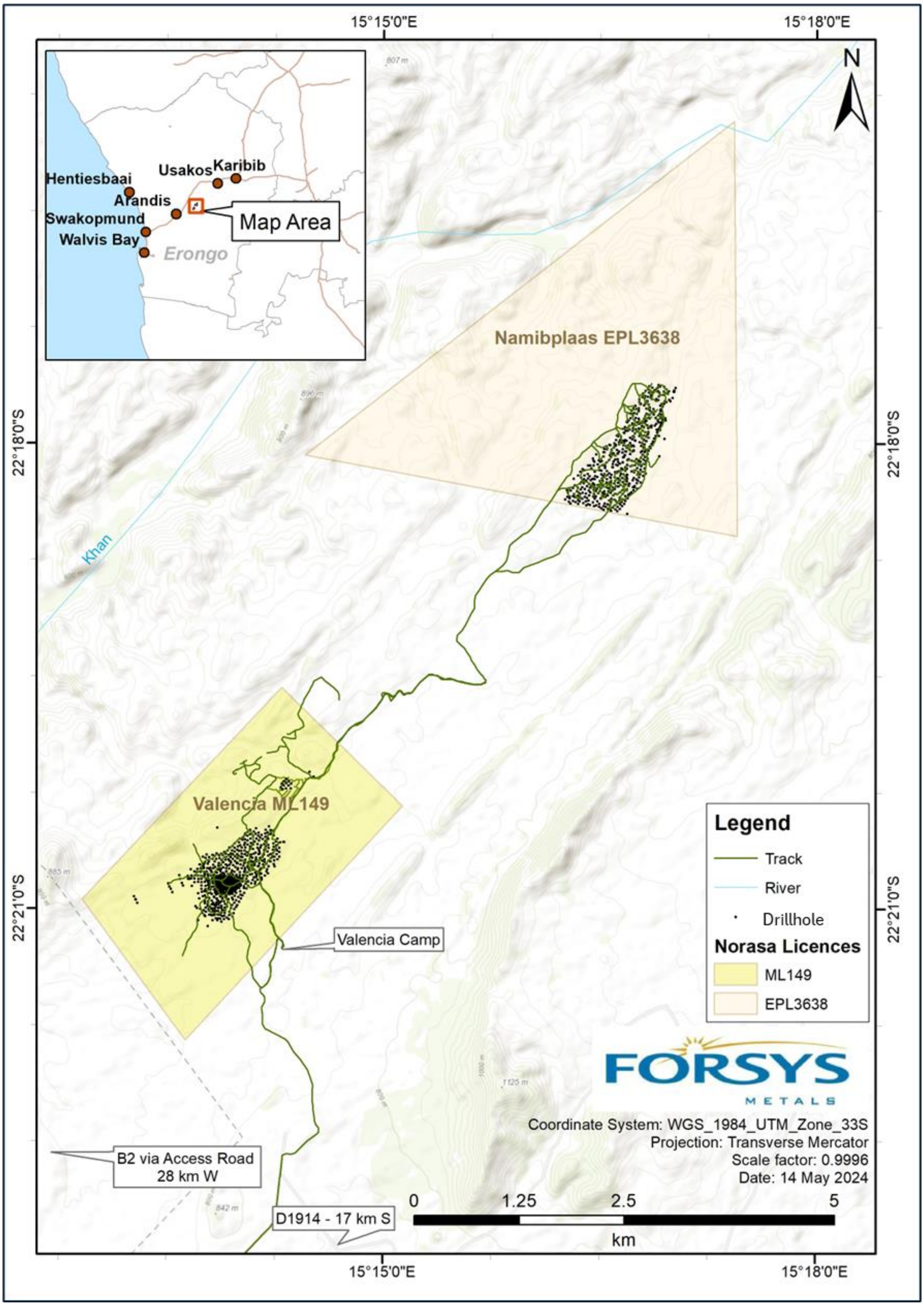
Figure 4-1

Regional locality of the Valencia and Namibplaas licence areas



Source: *Forsys,2024, Namibia MME, Namibia MET.*

Figure 4-2
Locality map of Valencia ML 149 and Namibplaas EPL 3836



Source: *Forsys, May 2024.*

Table 4-1
Corner coordinates for ML 149 – Valencia Project

Corner[1]	Longitude	Latitude
1	15.23828368	-22.32625528
2	15.25225024	-22.33894483
3	15.22720250	-22.36416441
4	15.21527297	-22.34900956

Note: [1]*Bessel 1841 Spheroid*

Table 4-2
Corner coordinates for EPL 3638 – Namibplaas Project

Corner[1]	Longitude	Latitude
1	15.24122697	-22.30105521
2	15.29048586	-22.26535988
3	15.30613676	-22.29588070
4	15.30077411	-22.31163411

Note: [1]*Bessel 1841 Spheroid*

The Valencia and Namibplaas licence areas are located on privately held farmland. As required by law, an agreement must be entered into between a mineral licence holder and the landowner to allow exploration activities. In April 2009, VUL entered into a compensation agreement with the owner of the farm Valencia 122 in relation to Section 52 of the Minerals Act of 1992, granting Valencia unrestricted use of the land on and around ML 149, covering an area of 3,327 hectares. A similar agreement was reached with the owners of the neighbouring farm Bloemhof to the south (for an area of 594 ha), for the construction of additional infrastructure and for primary access to the Valencia site. Namibplaas is accessed through the Valencia Licence via an established track that links Farm Valencia 122 to Farm Namibplaas 93. There is currently an access agreement in place with the landowner of Namibplaas to allow prospecting activities to continue as required.

The above agreements are in place until 2033 and have allowed Valencia to fully plan for the necessary infrastructure required to support mining operations. The proposed infrastructure for the Valencia Project has been approved by the MME as to the operation's Accessory Works and includes *inter alia* the main pit, waste dumps, tailings dump, pipeline, power lines, roads, process plant explosive magazines, etc. The proposed construction camp/ cum operations village has also been approved. Environmental clearance was obtained for all operations relating to exploration and drilling aspects of the Norasa Project. To take the Namibplaas Project into the development and then construction phases, an EIA and/or EMP needs to be completed, a compensation agreement entered into with the landowner, and approval received for Accessory Works

A detailed EIA and EMP were compiled by Digby Wells & Associates (DWA) in 2007 to 2008, with subsequent environmental audits and some additional revisions made to maintain the validity of the Environmental Clearance Certificate (ECC) to the present date, for Valencia, but excludes Namibplaas at this stage. The VUL team has embarked on an Amendment to the EIA for the revised Norasa project development which includes Namibplaas. The most recent renewal of the Environmental Compliance Certificate (ECC) was issued on 23 May 2023 for the envisaged mine development and operations at Valencia and Namibplaas, and also includes the exploration activities on the ML149 and EPL3638 licences. The ECC is valid for three years.

Environmental studies completed for Namibplaas include baseline monitoring of groundwater, air quality and noise studies. This work was done as part of the Norasa Project in the form of an amendment to the original Valencia EIA and/or EMP and has been approved by the Ministry of Environment and Tourism. There are no previous environmental liabilities for either the Valencia or Namibplaas properties.

A list of permits received for the Norasa Project (including the Valencia ML and the Namibplaas EPL) is provided in Table 4-3.

Table 4-3
Permits received for the Norasa project

Permit	Issued By	Date received	Expiry Date
Mining Licence (ML 149)	Ministry of Mines and Energy	23-Jun-08	22-Jun -33
Exclusive Prospect Licence (EPL 3638)	Ministry of Mines and Energy	07-Nov-11	01-Feb- 26
Accessory Works ML 149[1]	Ministry of Mines and Energy	29-May-09	
Environmental Clearance	Ministry of Environment and Tourism	11-Apr-13	23 -May -26
Petroleum Consumer Installation	Ministry of Mines and Energy	12-Oct-12	23 -Jun- 26

Note: *[1]Temporary: Certificate dated CI /2851/2023. Amend / update with new plans as and when available.*

4.3 Environmental Liabilities

There are no Environmental Liabilities to report.

4.4 Major Risks

There are no Major Risks to report.

4.5 Royalty Terms and Agreements

Valencia was granted its Mining Licence No. 149 (ML 149) in respect of the Nuclear Fuel Group of Minerals, effective from June 23, 2008. The Mining Licence is valid for a period of 25 years from the date of issue by the MME and is renewable. The royalty rate payable to the Government of Namibia for Nuclear Fuels is currently 3% of revenue. There are no royalties payable to other third parties.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 Accessibility

The Norasa Project is accessed from the main east-west B2 Highway, a tarred road linking the coastal towns of Walvis Bay and Swakopmund with the capital city of Windhoek in the interior (Figure 1-1). From the B2 Highway, VUL has constructed a 28 km industrial gravel road to the Norasa site. The turn-off from the highway is located 68 km from Swakopmund, travelling east on the B2 highway from Swakopmund (Figure 4-1). Windhoek and Walvis Bay have international airports with daily flights to many other African and European destinations. Windhoek and Walvis Bay are also linked by rail. The nearest rail siding is at the town of Arandis, approximately 45 km by road from the Norasa site.

5.2 Climate and Physiography

The climate of the Project area and the surrounding region is desert with an annual rainfall of between 14 mm and 150 mm per annum, mostly in late summer (i.e. February through to March) (Labuschagne, 1979). Rainfall of short duration and a high intensity may occur. Vegetation is sparse, with stunted grasses and small trees. The topography is relatively rugged with an average elevation of 725 m above mean sea level, with an approximate 40 m range in elevation around the Valencia and Namibplaas deposits. Temperatures recorded in the area range between 4 °C and 40 °C (Berning, 1986). The operating season is 12 months of the year.

Water is mainly found only as sub-flow beneath the streambeds of the larger streams, e.g. the Khan River located approximately 4.5 km to the north of the Valencia ML. In some cases, dissolved salts render the water non-potable. During the 1973 to 1977 drilling campaign conducted by Trekkopje Exploration, water was extracted from a fountain in the Khan River, and. potable water was obtained from a drillhole at the Valencia farmhouse, which is situated 4.5 km to the south-east (Labuschagne, 1979).

5.3 Port Facility - Walvis Bay

Located halfway down the coast of Namibia, with direct access to principal shipping routes, Walvis Bay is the export terminal for all of the Erongo Region’s uranium production. It is located 140 km from the Norasa Project, via the project access road and the paved B2 highway. The Walvis Bay Port Expansion Project was completed in 2019 and included the construction of a new container terminal incorporating an additional 40 hectares of land with a quay length of 2,100 m. It is a sheltered deepwater harbour with an in-port depth of up to 16.5 metres and benefits from a temperate, year-round climate.

Walvis Bay is Namibia's largest commercial port, capable of handling approximately 3,000 vessels per year, and currently receiving approximately 1,636 vessel calls in 2023. The port presently handles 7.7 million tonnes of total cargo, which is below its capacity limit. Containerised cargo in 2023 was approximately 160,000 TEU's[2]. The container terminal is 40 ha in area can accommodate ground slots for 3,875 containers, with provision for 482 reefer container plug points. The terminal can host about 837,000 containers per annum (from Namport, 2024).

5.4 Water Supply

The Orano Group Namibia (formerly AREVA Resources Namibia) built the first seawater desalination plant in Southern Africa. Located at Wlotzkasbaken, 30 km north of Swakopmund, it was intended to supply all the water that will be consumed at the Trekkopje Mine, located about 40 km from the desalination plant, in the Namib Desert. However, since the completion of the plant, the Trekkopje operation has been put on care and maintenance for an indefinite period. Inaugurated in April 2010, the plant was designed to produce 20 Mm^3 of potable water per year using rotary filters, multi-stage ultrafiltration, reverse osmosis, and chemical treatment. The Erongo desalination plant will continue to operate during the Trekkopje Mine's care and maintenance programme. Part of the water produced is being sold to the National water distribution company, NamWater, to supply potable water to local industries in the Erongo Region.

The nearest bulk water supply point to Norasa is located 24 km to the west-southwest at the Rössing Mine reservoirs. Although this infrastructure belongs to NamWater, it does provide Rössing with their only local water storage facility and is essentially dedicated to the Mine. The pipeline supplying these reservoirs extends 55 km from the main Swakopmund reservoirs, which are the main water distribution point in the central coastal area. VUL has been informed that although the pipeline itself can handle enough water to provide Norasa with its water requirements in addition to its current customers, the pumping system will need to be upgraded.

5.5 Power Supply

The central coastal area is supplied with electricity through the national grid operated by NamPower, via a ring feed connecting the country's interior region (capital city of Windhoek) and the north of the Country. Two main 220 kV transmission lines (recently upgraded since 2011 to meet the growing demand of the coastal area) pass within 10 km to the northwest of the Norasa site. The nearest power off-take point that can supply Norasa is the Khan Substation, located 25 km to the north. A transmission route of nearly 30 km has been laid out by NamPower. Power distribution to the mine is planned to be a 220 kV transmission line which forms part of the regional expansion of the national grid, aimed at strengthening the coastal power supply.

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[2] Twenty-foot equivalent units.

6 HISTORY

The Valencia and Namibplaas, uranium deposits were originally identified from an airborne survey in 1973, and the first detailed exploration project was conducted between 1973 and 1983 by Trekkopje Exploration and Mining Company which carried out detailed geophysical surveys and surface mapping. Between 1974 and 1984, Trekkopje Exploration drilled 97 diamond drillholes (DDH) totalling approximately 25,000 m. Drill holes were planned to intersect the mineralisation at a high angle, azimuth and inclination are varied in accordance with the known orientations. The core was predominantly BXM size (core diameter 41.7 mm), with a lesser amount of NXM size core (core diameter 54.5 mm) that was drilled through the first few metres of weathered surface rock.

6.1 Chronology of Ownership prior to Valencia Uranium Pty Ltd (VUL)

This section summarises the ownership history of the Norasa Project based on the available information. The summary below is taken from Peters and Kullmann (2009). Any missing periods in the ownership history are not considered to be of material significance to the current ownership status. No information regarding ownership of prospecting licences for the Norasa Project area prior to 1972 was available for review for this report. Prior to the VUL ownership, the project was known as the Valencia Project.

Gold Fields of South Africa Limited (GFSA) was granted the Prospecting Grant M46/3/499 in October 1972. This grant covered portions of the farms Vergenoeg 92 (19,852 ha), Namibfontein 91 (292 ha), Namibplaas 93 (660 ha), Valencia 122 (2,085 ha) and Trekkopje 120 (5,150 ha). In total, 28,039 ha were included in the Prospecting Grant. The grant was valid for a period of two years, with an option to renew.

In June 1973 GFSA ceded the grant to Trekkopje Exploration and Mining Company (Pty) Ltd (Trekkopje Exploration), a wholly owned subsidiary of Gold Fields Mining and Development Ltd. Trekkopje Exploration likely maintained the grant and renewed it every two years for at least 9 years, as the last available information regarding the Prospecting Grant M46/3/499 is a report by Trekkopje Exploration in support of a renewal application dated 20 July 1982 (Bertram, 1982B).

The status of the Prospecting Grant for the Valencia Project between July 1982 and October 1988 could not be confirmed, however information on an approval by the Department of Economic Affairs for a renewal application by Trekkopje Exploration, dated 25 October 1988 was obtained (Dept. Econ. Affairs, 1988). This renewal was for Prospecting Grant M46/3/1496 and was for a further period of two years starting from 29 November 1988. Due to the upcoming change in the mining legislation that was promulgated in 1992 (GRN[3], 1992) and the lack of economic viability of the Valencia Project.

The Prospecting Grant was considered too large by the Namibian Ministry of Mines and Energy (MME). It was suggested by the MME that the grant should be reduced in area in order to be accommodated under a “holding grant” or a Mineral Deposit Retention Licence (MDRL). Prior to

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[3] Government of the Republic of Namibia.

finalisation of the legislation, the MME suggested a smaller area of 500 ha and included a waiver of any expenditure or work obligation on the condition that:

- Gold Fields Namibia submitted a project prospectus.
- Gold Fields Namibia actively promoted third party interest in the project, and kept the government informed of any progress in this matter (GRN, 1991a).

The MME approved the licence renewal for a further two years for Prospecting Grant M46/3/1496 from 29 November 1990 and included a waiver of any expenditure or work obligation (GRN, 1991b). It was not indicated whether the renewal was for the reduced area or the original application area. The status of the prospecting grant between November 1990 and November 1994 could not be confirmed. MDRL 1496 was granted to Tsumeb Corporation Limited (TCL) in November 1994 for a period of five years; this was transferred to Ongopolo Mining Limited (Ongopolo) in March 2000 and again in June 2005 to Tsumeb Exploration Company Limited.

MDRL 1496 was converted by Tsumeb Exploration Company Limited to EPL 1496 on 20 February 2007. Tsumeb Exploration Company Limited changed their name to Valencia Uranium Pty Ltd (VUL) in November 2007. EPL 1496 was converted to ML 149 on 27 June 2008.

6.2 Historical Namibplaas Exploration and Drilling

Airborne uranium anomaly maps, produced by the Namibian Geological Survey in 1997, indicated the presence of two prominent uranium anomalies on farm Namibplaas; one in the Abbabis basement and the other in Damaran metasediments.

GFSA drilled seven diamond drillholes on the property in the late 1970s and early 1980s (drillholes NA24-001 to NA24-007), for a total of 1,665.9 m. The drilling completed by GSFA was the last phase of exploration undertaken at Namibplaas until VUL commenced drilling in 2008. No historic Mineral Resource estimates of the Namibplaas deposit were undertaken prior to 2008.

Exploration data derived from the Trekkopje Exploration era, up to and including 1984, have not been verified by the QP and therefore were not utilised in this Mineral Resource Estimate.

7 GEOLOGICAL SETTING AND MINERALISATION

The Norasa Project is located in the Central Zone of the Damara Orogen which is a Pan African-aged result of a "Wilson Cycle" collision between the Kalahari Craton in the south and the Congo Craton in the north. It comprises a coastal branch along Namibia's north coast into Angola, The Kaoko Belt, and an inland branch (the Damara Belt) stretching from the Namibian coast north-eastwards through to Zambia. The oblique collision closed an ancient seaway, the Damara Ocean, forcing together a varied collection of depositional environments. The sequence of tectonic and deformational periods which, followed by erosion, produced the strongly zoned remnants of a continent-continent mountain chain root that we see today (Kröner, 1984; Brandt, 1985).

7.1 Regional Geology

The Inland Branch of the Damara Orogen has been divided from north to south along NE-SW trending tectono-stratigraphic lineaments. These boundaries divide the Orogen into SW-NE trending zones (Figure 7-1). Metamorphic gradients vary between these zones and increase to granulite facies in the Central Zone, toward the more deeply eroded coastal region in the west (Goscombe *et al.*, 2004).

The main Zones are as follows:

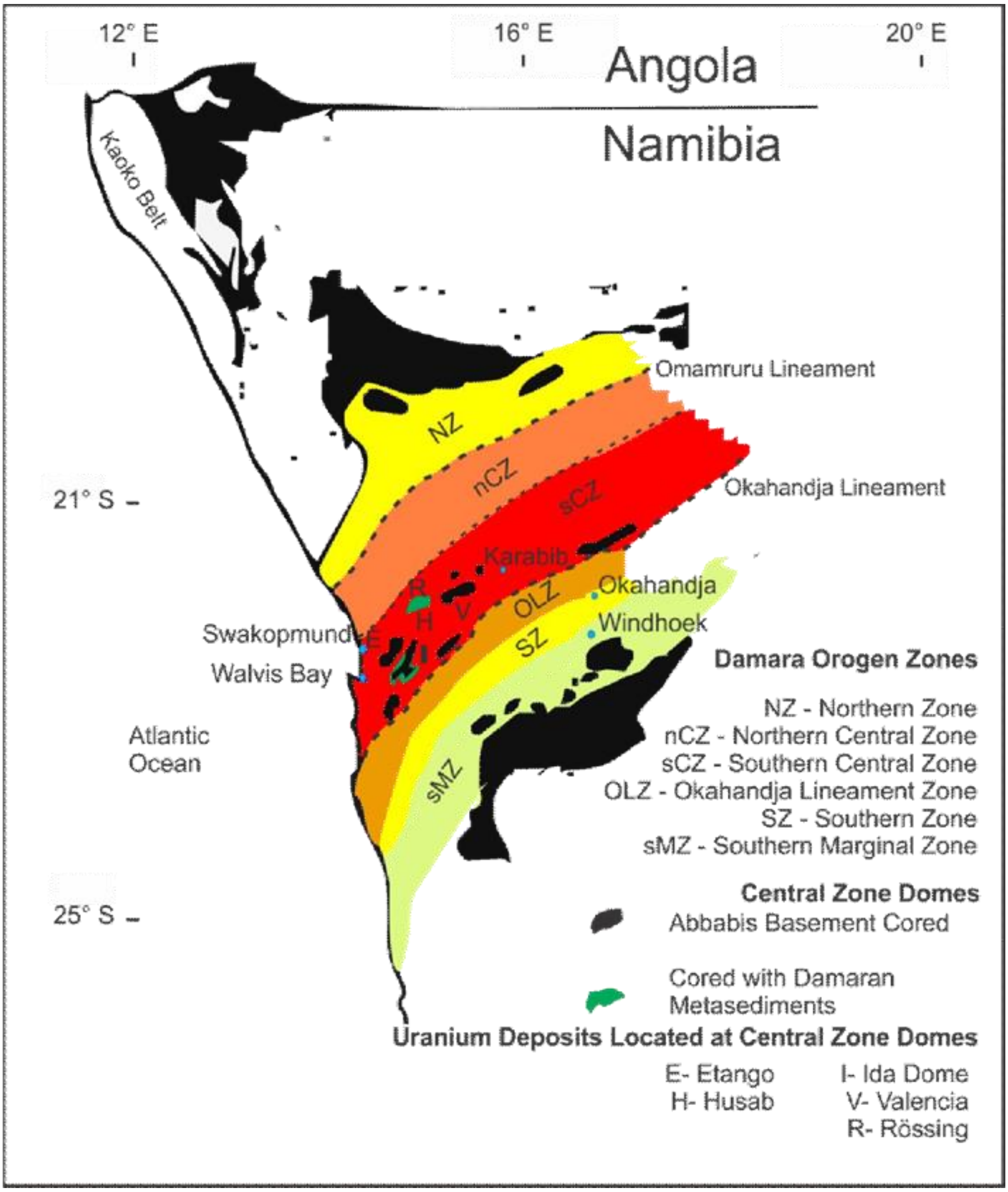
- A Northern Platform (containing the foreland basin of the Orogen).
- The Northern Zone (NZ).
- Central Zone (CZ).
- Okahandja Lineament Zone (OLZ).
- Southern Zone (SZ).
- Southern Marginal Zone (SMZ).
- Southern Foreland (SF).

Primary uranium mineralisation of significance is limited to the Central Southern Zone (sCZ) which hosts all of Namibia's economically prospective primary uranium occurrences known today.

Large volumes of U-bearing leucogranite intrude a limited stratigraphic-range, occasionally cross-cutting into basement but mainly into stratigraphic units directly above and below the Nosib-Swakop Group contact (Table 7-1). It is at this stratigraphic level where the largest uranium deposits in Namibia are found; the Husab Mine, the Rössing Mine, the Valencia Project and the Etango deposit at Goanikontes, to name the most significant ones (Figure 7-1).

Figure 7-1

The Pan African Damara Orogen of Central Namibia



Note: *The regional orogeny is divided into a number of tectono-stratigraphic zones, bound by strong lineaments. Valencia (V) is shown in relation to the other three deposits of significance. The deposits occur consistently around prominent, Central Zone dome-like structures.*

Source: *After Miller (1983, 2008); Kinnaird and Nex (2007); Freemantle (2015)*

Table 7-1
Stratigraphy summary of the Damara Sequence in the southern Central Zone

Group	Subgroup	Formation	Max Thickness	Lithologies
Swakop	Khomas	Kuiseb	>3000	Pelitic and semi-pelitic schist and gneiss, migmatite, calc-silicate rock, quartzite.
		Karibib	1000	Marble, calc-silicate rock, pelitic and semi-pelitic schist and gneisses
		Arandis Member	~50	Carbonates, mafic and sulphidic schists, calcsilicates, gneiss
		Chuos	700	Diamictite, calcsilicate rock, pebbly schists, quartzite, ferruginous quartzite, migmatite
	Discordance SLG Intrusion			
	Ugab	Rössing	200	Marble, pelitic schist and gneiss, biotite-hornblende schist, migmatite, calc-silicate rock, quartzite, meta-conglomerate.
Discordance SLG Intrusion				
Nosib		Khan	1100	Migmatite, banded and mottled quartzo-feldspathic-clinopyroxene-amphibolite gneiss, quartzite, meta-conglomerate.
		Etusis	3000	Quartzite, meta-arkose & -conglomerate, pelitic and semi-pelitic schist and gneiss, calc-silicate rock, meta-rhyolite.
Major Unconformity				
Abbabis Complex			Basement	Gneissic granite, augen gneiss, pelitic schist and gneiss, migmatite, quartzite, marble, calc-silicate rock, amphibolite.

Source: *Nash (1971); Nex and Kinnaird (2007); Freemantle (2015)*

7.1.1 Structural Setting

The Central Zone is marked by Dome-and-Basin structures and is separated from the Southern Zone by the Okahandja lineament (Figure 7-1). The Omaruru lineament in turn separates the Central Zone from the Transition Zone in the north. The extensive granite emplacement associated with the domes in the Central Zone is not seen north of the Omaruru lineament.

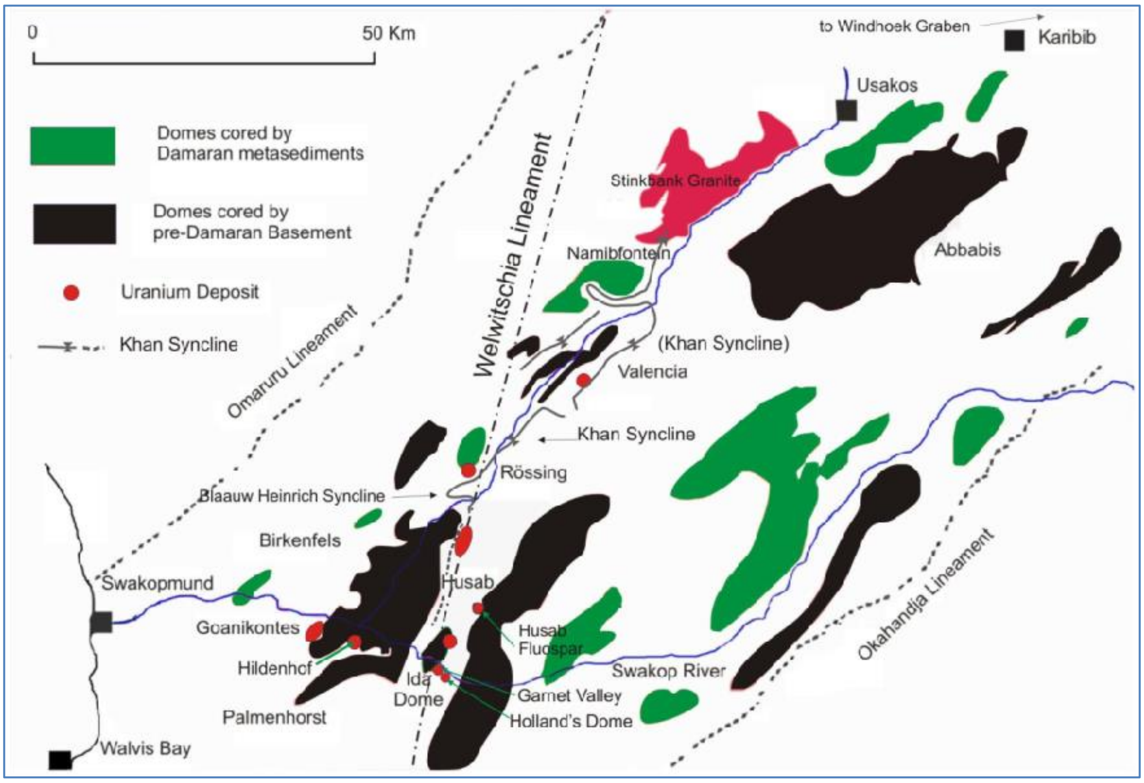
Several phases of deformation are recognised in the Central Zone and are indicated by fold interference patterns such as that of the Rössing Mountain structure (Smith 1965). The main structural grain is now north-east and is due to an intense (F3) deformation. This was preceded by one or possibly two periods of folding. The early phases of folding produced overturned and recumbent structures and were accompanied by thrusting and shearing. The trend of early fold axial planes was roughly north-westerly. The later northeasterly F3 folds are upright but become overturned to the south-east as the Okahandja lineament is approached.

The basement (Abbabis Complex) has been deformed by ductile shearing in lower metamorphic grade areas and has taken part in the folding in higher grade zones. A number of later, less intense fold phases occurred after F_3 and produced folds oriented between north-east and north-west.

Of particular significance to the emplacement of the uraniferous granites is a post-F_3 phase, F_4 folding phase oriented north-north-east (Corner, 1982) which manifests itself in a prominent north-northeasterly-trending magnetic lineament which is termed the Welwitschia lineament (Figure 7-2). To the east of the Welwitschia lineament, the trend of fold axial planes of structures within the belt is mostly north-east. To the west, however, these structural directions are both north-east and north-north-east, with the latter direction prevailing as the coast is approached.

Figure 7-2

Schematic of Domes of the Central Zone and associated primary uranium deposits



Note: *The regional orogeny is divided into a number of tectono-stratigraphic zones, bound by strong lineaments. Valencia (V) is shown in relation to the other three deposits of significance. The deposits occur consistently around prominent, Central Zone dome-like structures.*

Source: *Freemantle, 2015. Compiled after Corner (1981, 1983); Eberle et al. (1995); Anderson and Nash (1997); Basson and Greenway (2004) and Kinnaird and Nex (2007).*

Corner (1982) considered this north-north-easterly direction to have an important bearing on the emplacement of the uraniferous alaskitic granites since firstly, the currently known occurrences are all located within the vicinity of the Welwitschia lineament and, secondly, the major fold axes of the domes and structures with which these occurrences are associated are parallel to this lineament rather than to the general north-easterly trend of the Central Zone (Figure 7-2).

Dome and basin structures are a feature of the southern Central Zone, but their origin remains controversial. Smith (1965) ascribed them to interference folding whereas Jacob (1974), Sawyer (1978) and Barners and Hambleton-Jones (1978) believed that they have formed as a result of diapiric uprise at about the time of, and following, F3 deformation.

7.1.2 Metamorphism

More than one period of metamorphism occurred in the Central Zone (Kröner *et al.*, 1978; Sawyer, 1978). An early metamorphic event at 665 + 34 Ma precedes early, widespread Damaran granite magmatism and produced migmatites that accompany the early periods of Damaran deformation (D1, D2). According to Sawyer (1978), this was followed by another period of metamorphism accompanying the F3 fold-producing deformation, and was, in turn, followed by intrusion of various granitic rocks whose ages are of the order of 550 Ma.

A late- to post-tectonic thermal event accompanying the F4 deformation, around 470 Ma, in the Central Zone is indicated by Rb-Sr dating of gneisses of the Khan Formation and the Rössing Mine alaskites (Kröner *et al.*, 1978), and it is possible that K-Ar biotite ages of 520-450 Ma also reflects this event. This late even post-dates the uraniferous intrusives.

7.1.3 Uraniferous Granites

Economically important uranium mineralisation occurs in the late- to post-tectonic granitic rocks referred to as either pegmatite (Smith, 1965); potash granite (Nash, 1971); alaskite (Berning *et al.*, 1976); and Metamorphic Pegmatitic Granite (Cuney, 1980) in the literature. The current, more commonly used terms are now alkaline leuko-granites or more commonly alaskite. These granites are found only in the Central Zone and are confined to the areas of highest metamorphic grade. They are situated along the Abbabis Swell and are often associated with the older Red Granite Suite. They also occur preferentially in- and around D_3 anticlinal and dome structures and intrude portions of the Proterozoic Basement, the Nosib Group and lower Swakop Group. Concentrating mainly below the prominent marbles of the Karibib Formation.

Kinnaird and Nex (2007) defined six different types of these alaskites. They distinguish between three pre-tectonic (A, B and C type) and three syn- to post-tectonic variations (D, E and F type), of which only the latter three are enriched in uranium. below summarises alaskite characteristics in terms of their texture and mineralogy.

Figure 7-3
Nex classification of uraniferous leucogranites

Types	Colour	Texture and Mineralogy
A	Pale pink to white	Irregular, some with boudinage, folded by D3, weak S3 foliation at margins, occur in high-strain zones. They are homogeneous, saccharoidal and fine grained. Intrude the upper Swakop Group metasediments at Valencia.
B	White	Often with boudinage, inhomogeneous with variable grainsize from aplitic to pegmatitic and form parallel sided tabular intrusions. Typically garnetiferous, infrequent abundant biotite and tourmaline. Common in the Kuiseb Formation at Norasa (may be partial melts derived from Kuiseb schists).
C	White to pink	Occasionally with boudinage, emplaced in F3 flexures. Medium to pegmatitic grainsizes, hypersolvus formation with clear quartz, minor biotite, magnetite, ilmenite, and subordinate tourmaline. Predominantly intrude the Nosib Group metasediments, typically below the horizons intruded by D types at Valencia.
D	White	Coarse to very coarse grained, rarely pegmatitic. High quartz content, smoky quartz is diagnostic of U enrichment, feldspar is white, microcline is abundant, plagioclase has higher Ca than other types, often with albite rims. Biotite is coarse, but minor and occurs at granite margins. Intrude upper Nosib and lower Swakop Group rocks, tend to be foliation parallel at Valencia and Namibplaas.
E	Variable	Characteristic oxidation halos, highly variable grainsize and colour, exhibit post- or late-stage crystallisation associated alteration features. Are uraniferous, but with highly variable U content. Visible at Valencia, but not as pronounced as at other deposits.
F	Red	Post-kinematic, have parallel sides and crosscut all preexisting structures. They have coarse-pegmatitic grain sizes, contain perthitic K-feldspars up to 30 cm long, milky quartz, and interstitial biotite, they are almost albite free.

Source: *After Nex and Kinnaird (1995) and Nex et al. (2001), and Freemantle (2015).*

7.2 Project Geology

The Valencia and Namibplaas deposits are situated in the same regional structural setting; the so-called Khan Syncline which is underlain by Karibib marbles located just west of the Khan River and east of Valencia and west of the Khanberge. The structure is stretching over 50km from beyond the Rössing Mine in the southwest up to close to Usakos in the far northeast. The general trend is NE-SW and stretching parallel to the Khan River. The synclinorium is up to 9 km wide (Figure 7-4).

The Valencia and Namibplaas deposits lie adjacent to the tightly folded Abbabis inlier (old “Joly zone” or Valencia North on Valencia, and Area A on Namibplaas). In both areas, the Damaran sequence is the most complete stratigraphic column and comprises substantially attenuated Etusis, Khan, Rössing, Chuos, Karibib and Kuiseb Formations (Freemantle, 2015, Table 7-1).

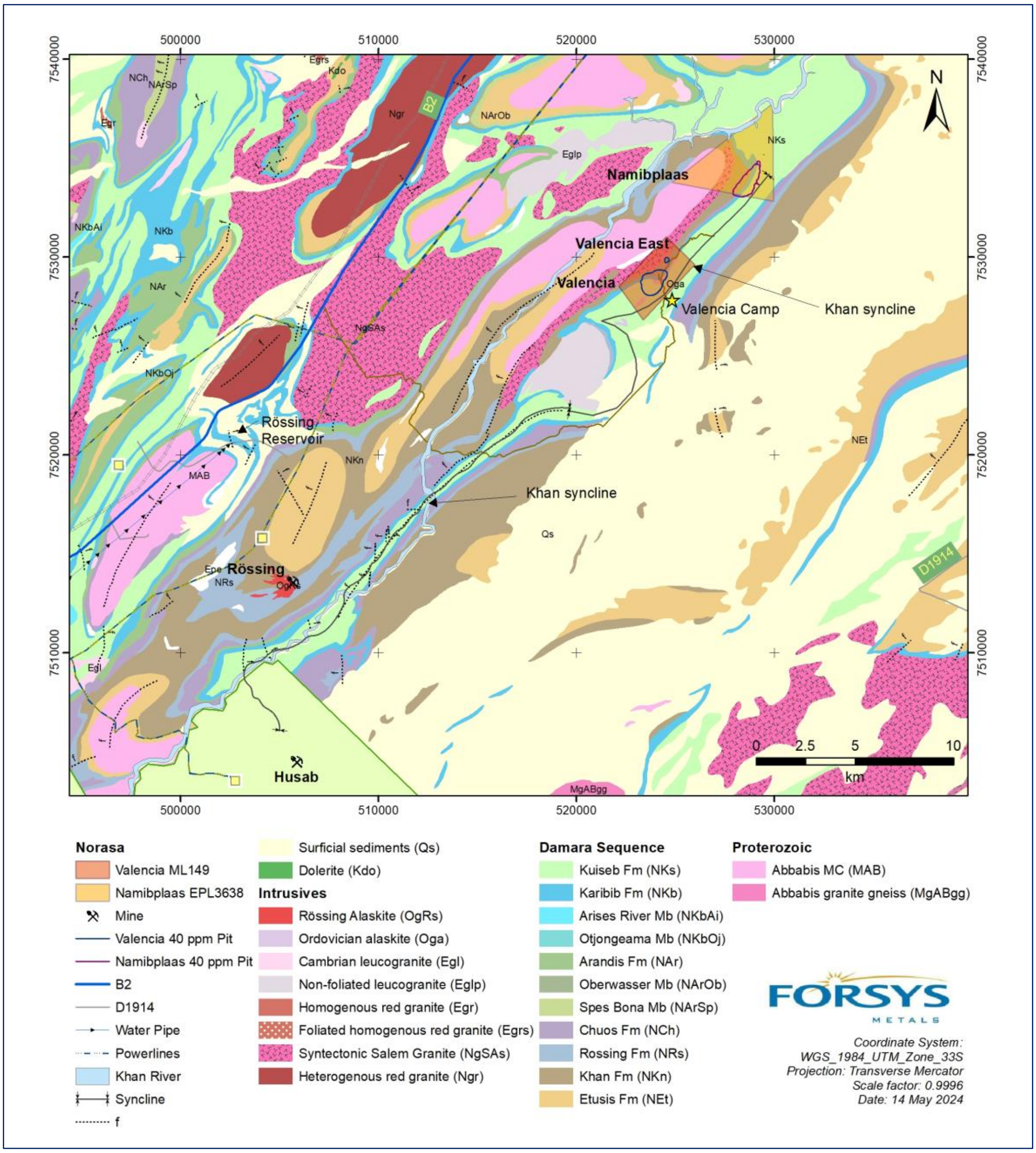
7.2.1 Valencia Deposit

The Valencia deposit (or Valencia Main) is approximately 4 km southeast of the Khan River Valley and approximately 23 km northeast of the Rössing Mine (Figure 7-4). U-mineralisation is hosted in leucogranites that have invaded the local Damara succession in stockwork-like fashion along NNE/SSW structural weakness zones, preferential utilising the fold plane of a characteristic Z shape fold (Figure 7-5).

The syncline is a regional scale fold with a core of refolded Kuiseb schists. The fold hinge trending NE-SW. The synform is refolded south of the Rössing deposit where the hinge trend changes to roughly N-S. The eastern limb of the syncline at Valencia is attenuated and a secondary fold provided the weakness pathway for the mineralised intrusives in a saddle-reef style.

Figure 7-4

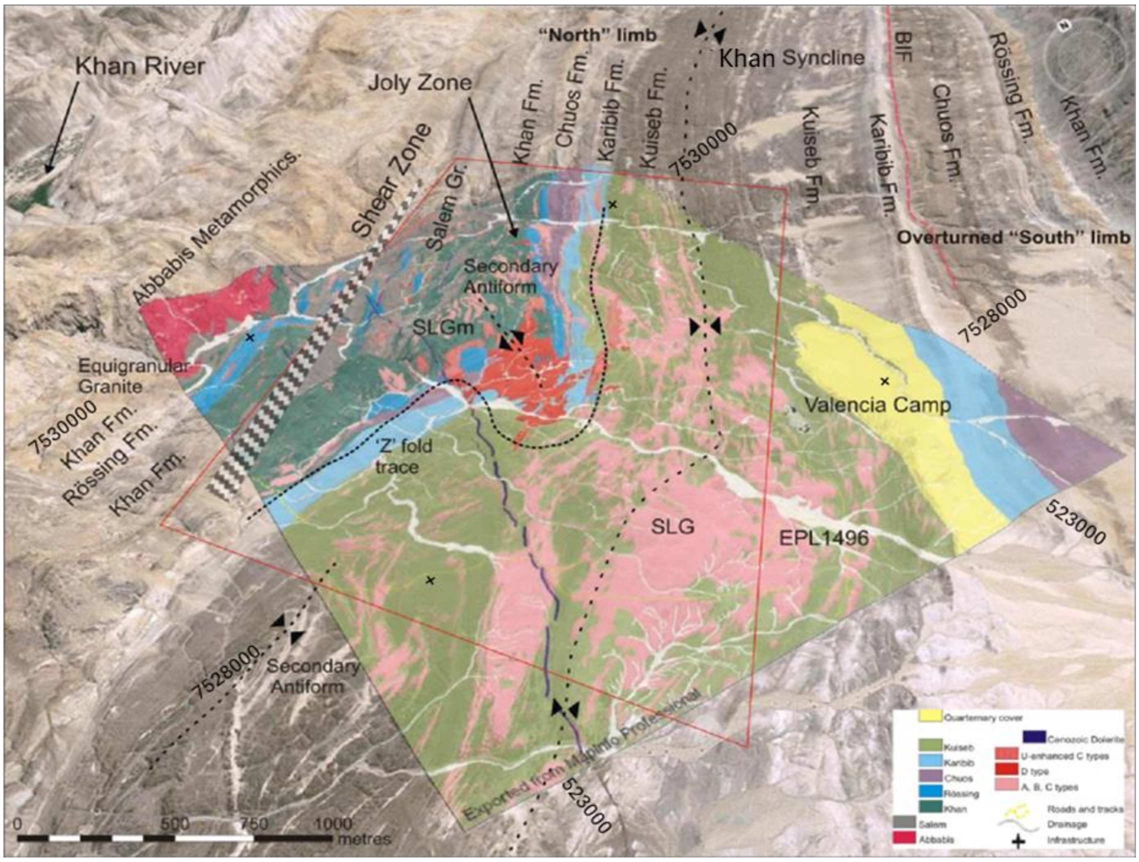
Regional Geology (Formations) and position/extent of the Khan Synclinorium



Source: *Geological Survey of Namibia, Walvis Bay Map Sheet 2214, Forsys, 2024.*

Figure 7-5

Schematic showing the local geology and structural features of the Valencia area. View down axis of Khan Syncline



Note: *Secondary antiform exposing D-type alaskites in its core (Freemantle, 2015).*

7.2.1.1 Country-rock Lithology at Valencia

There are at least six Central Damara stratigraphic formations represented in the vicinity of Valencia, and Namibplaas. At the base the Etusis Formation is largely absent to the north of the deposits but is present on the overturned southern limb of the Khan Syncline. The Khan formation is roughly continuous along strike from Valencia to Namibplaas. The Swakop Formation of the Nosib Group is less continuous and the cyclic carbonate packages form 100 m-scale boudins along the strike between the two deposits. A thick package of Chuos Formation is present on both limbs of the Khan Syncline, with the less-deformed southern limb preserving the diagnostic turbidite and diamictite packages, along with the capping carbonate sequence of the Arandis Member. The Karibib marbles and dolomites are present more continuously than the Rossing Formation along the northern limb strike extent. The core of the syncline is characterised by Kuiseb Formation schists, refolded and sheared top accommodate the closure of the syncline. Local lithological descriptions of the country rocks most closely associated with mineralisation are below:

The **Etusis Formation** is represented by a sequence of metamorphosed quartzites and arkoses often showing mylonitic textures on the Northern limb when in contact to Salem Suite granites.

The **Khan Formation** metasediments follow as well with local mylonitisation still evident. They occur typically as dark grey-blue- to green-coloured banded gneisses. The succession shows upward trends of increasing calcareous and diopsidic composition. The Khan Formation appears better preserved on its Southern limb which is in contrast to the more strained and thinned out deformed Northern limb.

The **Rössing Formation** follows discontinuous and is attenuated in plus/minus 100 m-scale boudins all stretching along strike on the Northern limb:

- The calcareous unit comprises two marble units (an upper and a lower) separated by cordierite gneiss between them. The unit shows attenuation as well but in principle occurs continuously along the entire Southern limb. An upper quartzite (pyritic) is present and in direct contact to the overlying Chuos Formation.
- The upper marble unit contains serpentine with pelitic gneiss and some schistose units. The lower marble also containing serpentine however carries lenses of grey-coloured marble/limestone with a thin conglomerate layer at its base. The latter forms a good marker in the field. This sequence closely equates to the upper *Rössing package* of Nash (1971) whereby the lower garnet – biotite granofels as described for the Rössing Mine stratigraphy being mostly absent at Valencia.

7.2.1.2 *Structural Controls and Alaskite Intrusion at Valencia*

The Khan Syncline is an inclined fold where the axial plane dips SE and the southern limb of the fold is overturned (Figure 7-5). The Valencia deposit has formed in the core of an eroded near-upright (Valencia) antiform; a km-scale parasitic fold structure which has a southwest plunging axis and steep SE-dipping axial plane. The limbs of the fold structure vary from shallow south dipping to upright or overturned, in line with the Khan Syncline's SE dip and northwest vergence. Isoclinal folding on the south-eastern limb of the Valencia antiform, as well as over the central portion of the adjoining synform, which is also recumbent.

In summary the uraniferous alaskite intruded into the northwestern limb with the emplacement of alaskite clearly controlled by a younger north-north-westerly to south-south-westerly trending antiformal structure cutting through the older folding at almost right angles (Figure 7-6). The alaskites vary from aplitic, through fine and medium-grained phases to pegmatitic.

At least eight phases of alaskite have been identified in the Noras project area, these are based on the six types identified by Nex (1997) at the Etango (formerly Goanikontes) area. Textural characteristics, structural setting, intrusion location in the stratigraphy, and uranium content are the primary characterising elements. These phases are interpreted to be separate pulses of intrusion. The different grain size phases are usually all leucocratic, with biotite content often increasing with increasing grain size.

The conformable nature of relatively thin veins in tight isoclinally folded schist sequences suggests a pre or early syntectonic genesis for these veins, however, the strongly transgressive nature of some dyke-like bodies suggest a separate later syn to post-tectonic history for some of these bodies (Labuschagne, 1979).

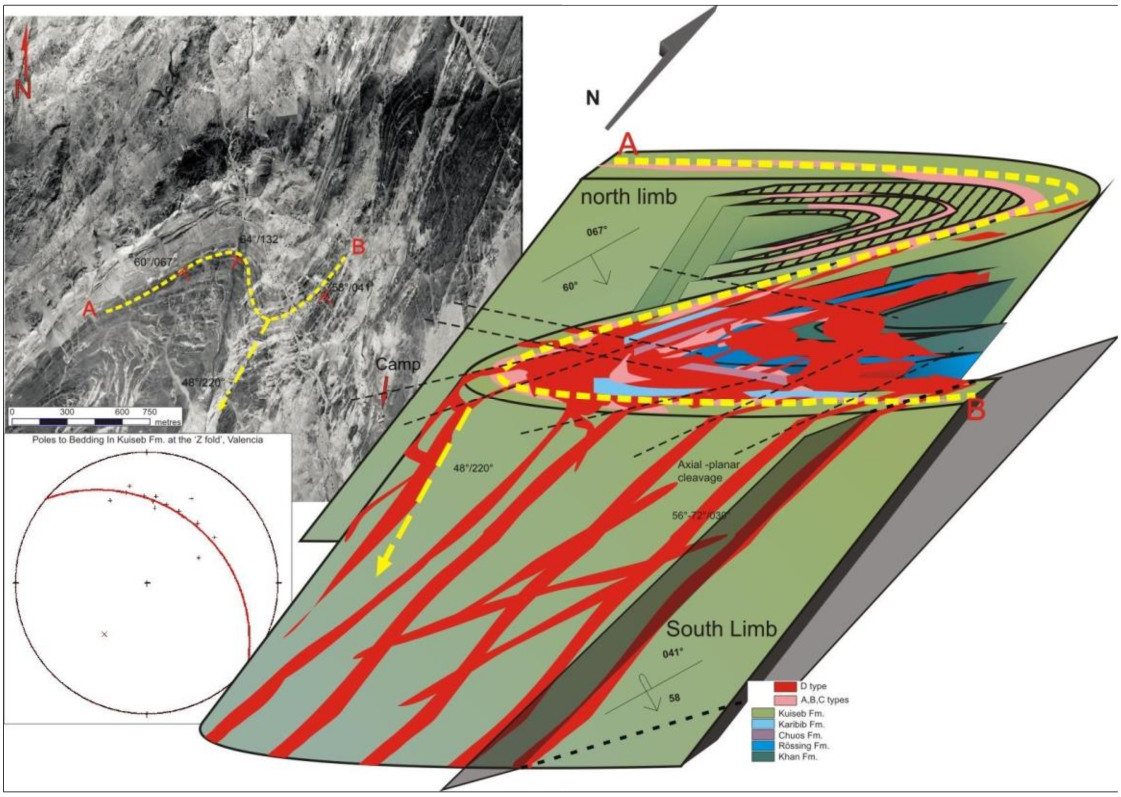
The general composition of the alaskite is quartz and alkali feldspar with or without biotite. Accessory minerals such as tourmaline, apatite, garnet and iron and copper sulphides may become so abundant in places that they form a major constituent of the alaskites (Roesener and Schreuder, 1992). The alaskites contain xenoliths of host rocks in which they were emplaced and these xenoliths range in size from tiny fragments to bodies several tens of metres long. They have conformable relationship with the local structure, with their strikes and dips not varying significantly from those of the country rock.

A number of dolerite dyke-like bodies occur in and around the Valencia deposit. They dip from fairly flat to almost vertical and strike north to south or southwest to northeast. These dykes only rarely exceed a few metres in thickness.

Younger pneumatolitic pegmatites and quartz veins occur throughout the area. They are usually relatively thin and short and do not form conspicuous outcrops.

Figure 7-6

Valencia structural and emplacement model



Note: *Schematic of the large 'Z' folds into which the majority of mineralised granite has intruded. The attenuation of the marble formations, the Chuos and the Khan has allowed the sheets to invade the Kuiseb. Disharmonic folding has duplicated the Kuiseb and created voids at the hinge into which granite has coalesced in a saddle reef fashion.*

Source: *Freemantle, 2015*

7.2.2 Valencia East

Valencia East deposit is an addition to the Valencia deposit which forms geologically an isolated alaskite sheet which is part of the main Valencia mineralisation event. It is less than 1 km away from the main deposit NE, along strike and references to Valencia in this report are inclusive of the satellite deposit unless otherwise noted.

In the area, two types of alaskite (C and D type) are intruding in sheet-like bodies into a sequence of NE striking, steeply SE dipping Khan, Rössing and Chuos Formation rocks. The main intrusion follows the general strike and crosscuts in places to the contact of Rössing Formation lower marble. In places a NNE/SSW linear is indicative of late stage to post-tectonic emplacement.

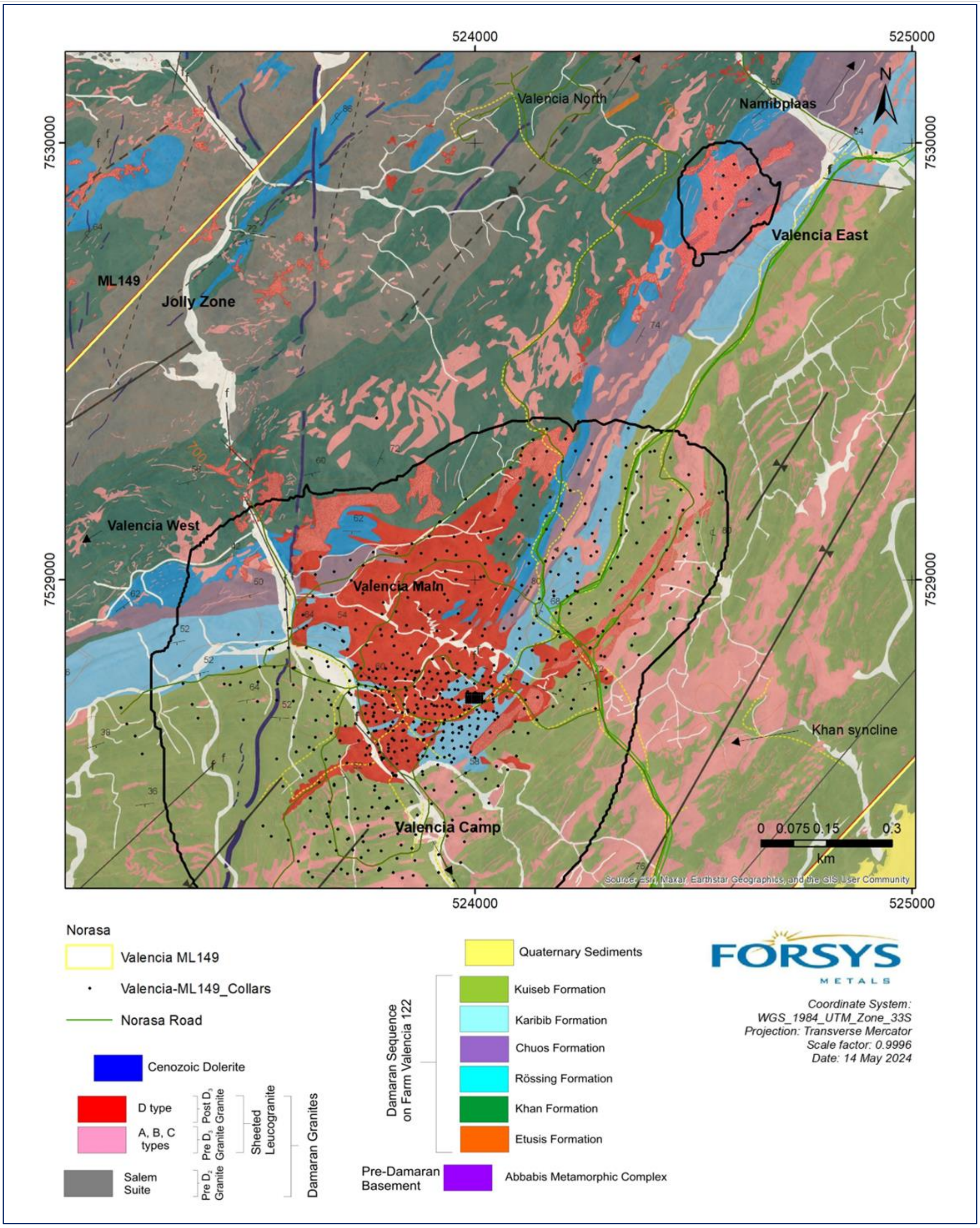
indicated in steep SSW trending lineaments (Figure 7-7). Figure 7-8 provides a general impression of the steep running strata looking from Valencia East westwards towards Valencia Main in the far left (text “SLG” above “Karibib”). The cross section in Figure 7-9 for Valencia East illustrates the steep dipping country rocks and associated steeply oriented alaskite sheets.

The marble itself is clearly attenuated along NE-SW with indication of dextral rotation into NNE/SSW isolated marble boudins. Earlier interpretations considered the Valencia East alaskite to be a plain C-type; this was corrected, and drilling confirmed the D-type components. The preferential intrusion path is along structural weakness zones which similar to the main deposit are.

The marble itself is clearly attenuated along the NE-SW strike direction, with indications of dextral rotation into NNE/SSW isolated marble package boudins. Earlier interpretations considered the Valencia East alaskite to be a plain C-type; this was corrected, and drilling confirmed the D-type components. The preferential intrusion path is along structural weakness zones which similar to the main deposit are indicated in steep SSW trending lineaments (Figure 7-7). Figure 7-8 shows the steep -dipping strata looking from Valencia East westwards towards Valencia Main in the far left (text “SLG” above “Karibib”). A cross section in Figure 7-9 for Valencia East illustrates the steeply dipping country rocks and associated steeply oriented alaskite sheets.

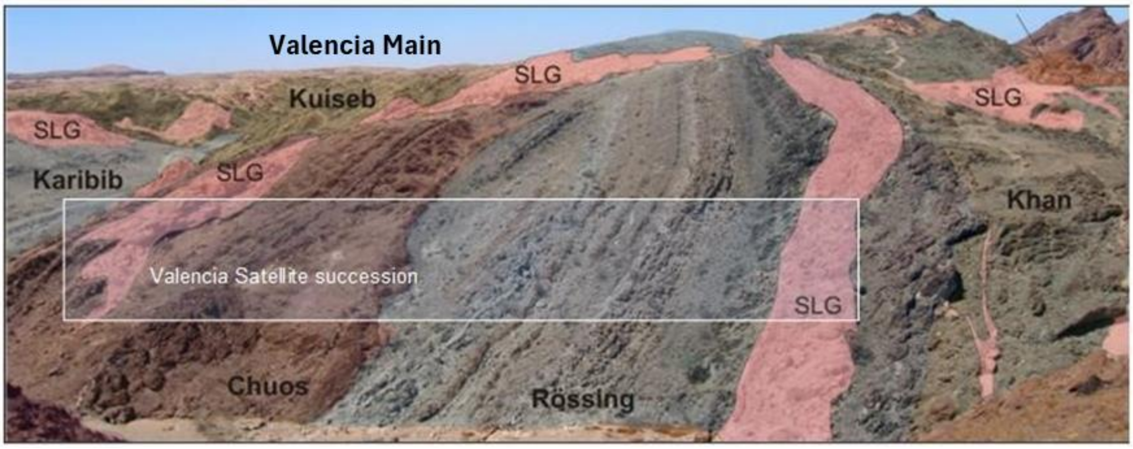
Figure 7-7

Combined geology plan of Valencia East & Valencia Main on ML 149



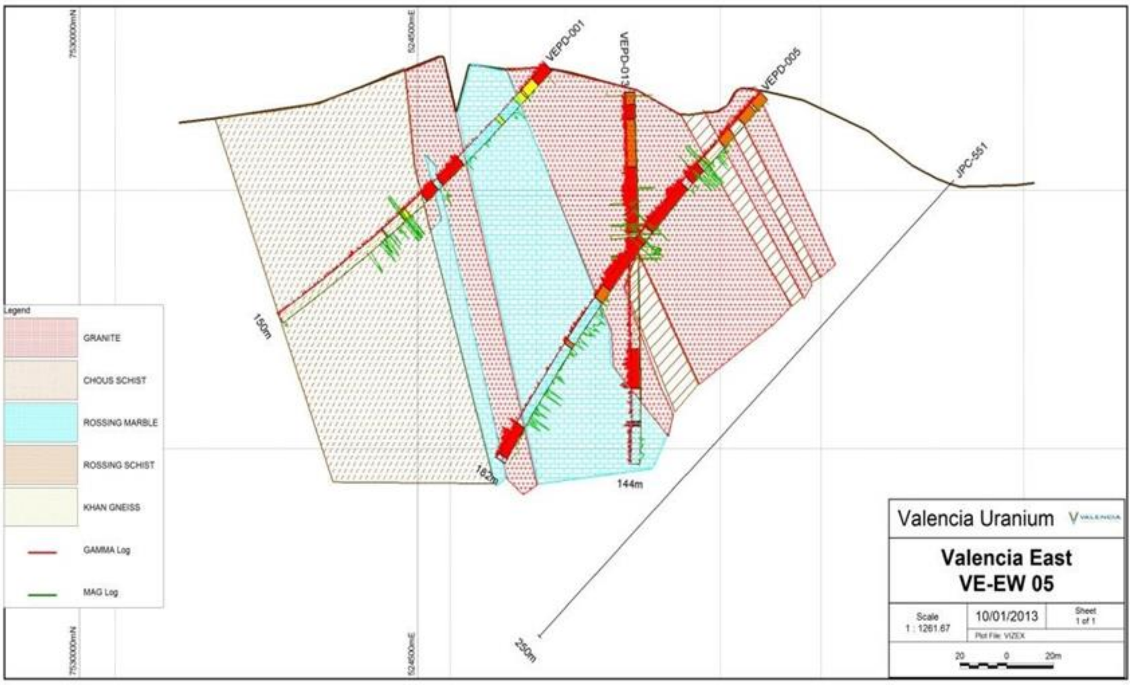
Note: *Pit limits for $120/lb U_3O_8 at 40 ppm U_3O_8 cut-off constrain the May 2024 Resource Estimate. '*

Figure 7-8
Valencia East lithostratigraphic succession on ML 149



Note: *Normal succession (upwards; from right to left) with mineralised sheeted leucogranite/alaskite (SLG) along and crosscuts into Rössing Formation.*

Figure 7-9
Valencia East lithostratigraphic succession on ML 149



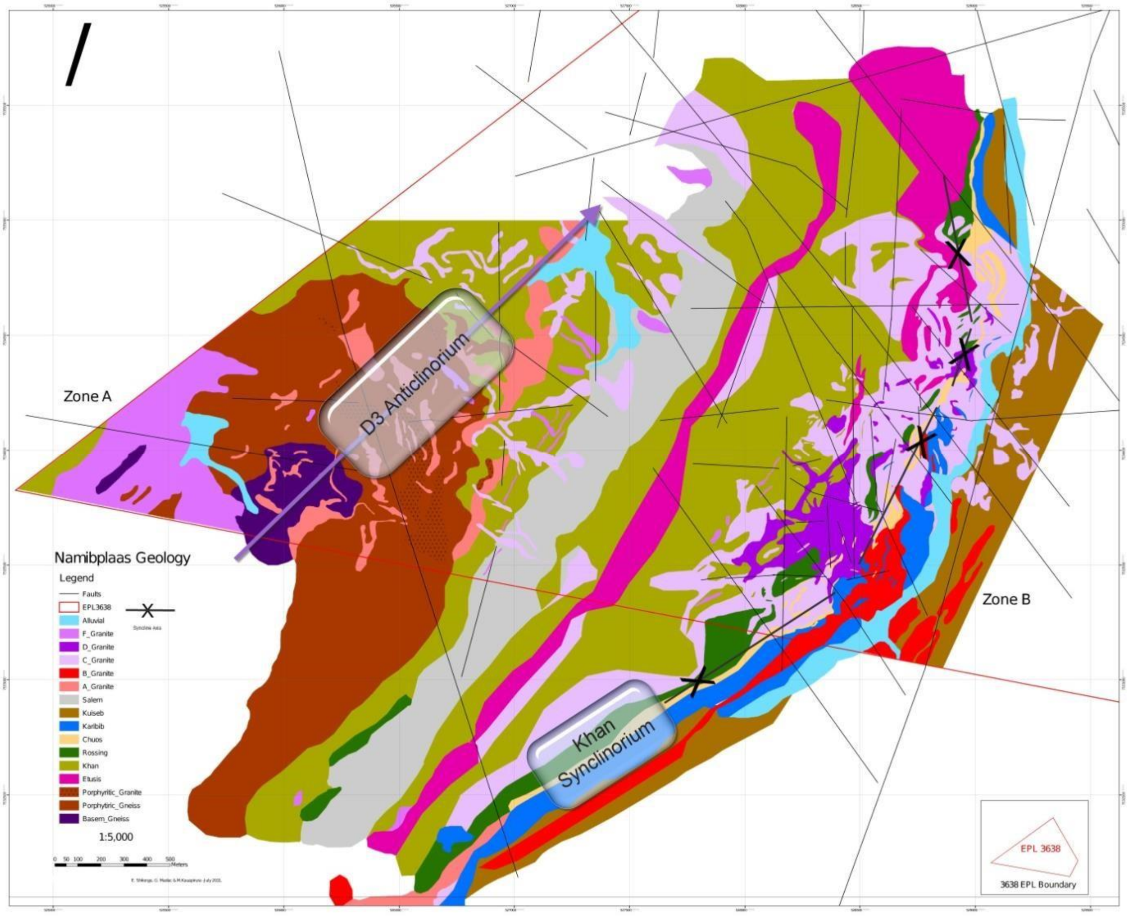
Source: *VUL, 2014.*

7.2.3 Namibplaas

Airborne uranium anomaly maps, produced by the Namibian Geological Survey in 1997 pointed out the presence of two prominent uranium anomalies on farm Namibplaas; one in Abbabis basement and the other in Damaran metasediments.

Ground scintillometer surveys confirmed these two anomalies (see Zone A and B in Figure 7-10) but also confirmed significant differences in U/Th ratios between the two. A detailed ground spectrometer survey revealed high Thorium ratios for Area A which led to the exploration activities having moved to Area B. Exploration and then resource drilling focussed on the Area B target, which was mapped in detail by Shilongo and Laine (2011) as shown in Figure 7-10. The current geological model is informed by the historic drilling undertaken up to 2011 at Namibplaas, as well as the surface mapping produced by VUL geologists. The cross section in Figure 7-11 illustrates the east dipping trend of the country rocks and associated alaskite sheets. As is expected uranium mineralisation occurs where the alaskite sheets have intruded within or near to the Rössing Formation rocks.

Figure 7-10
Geology of Namibplaas with schematic of structural key features[1]



Source: *Forsys 2014; geology map from Laine and* ***Shilongo, 2011***

7.2.3.1 *Country-rock Lithology at Namibplaas*

Similar to at the Valencia deposit area, the lowermost Damaran unit present at Namibplaas is the Etusis formation. The Etusis, Khan, Rössing, Chuos, Karibib and Kuiseb formations are present throughout with the Khan formations and the Kuiseb formations bordering the anomaly along the regional SW-NE strike of the country rocks. The Khan formation forms the surface geological limit on the northwestern part of the radiometric anomaly and the Kuiseb on the southeastern part.

The Karibib formation (±130 m thick) comprises three main units; a marble, a calc-silicate rock and a dark grey biotite schist. The marble is grey, medium to coarse grained and occurs in several bands - at least seven packages of the marble alternating with calcsilicate rock are observed. The biotite schist is fine-grained, thinly foliated to massive with black biotite, white feldspar and quartz. The calc-silicate rock is tan to grey, fine grained, massive and banded and is cut by quartz-calcite veins and calcite-filled fractures. The Karibib overlays the Chuos diamictite schist and the contact between the two is seen as a barrier underneath which some mineralised sheeted alaskites are observed.

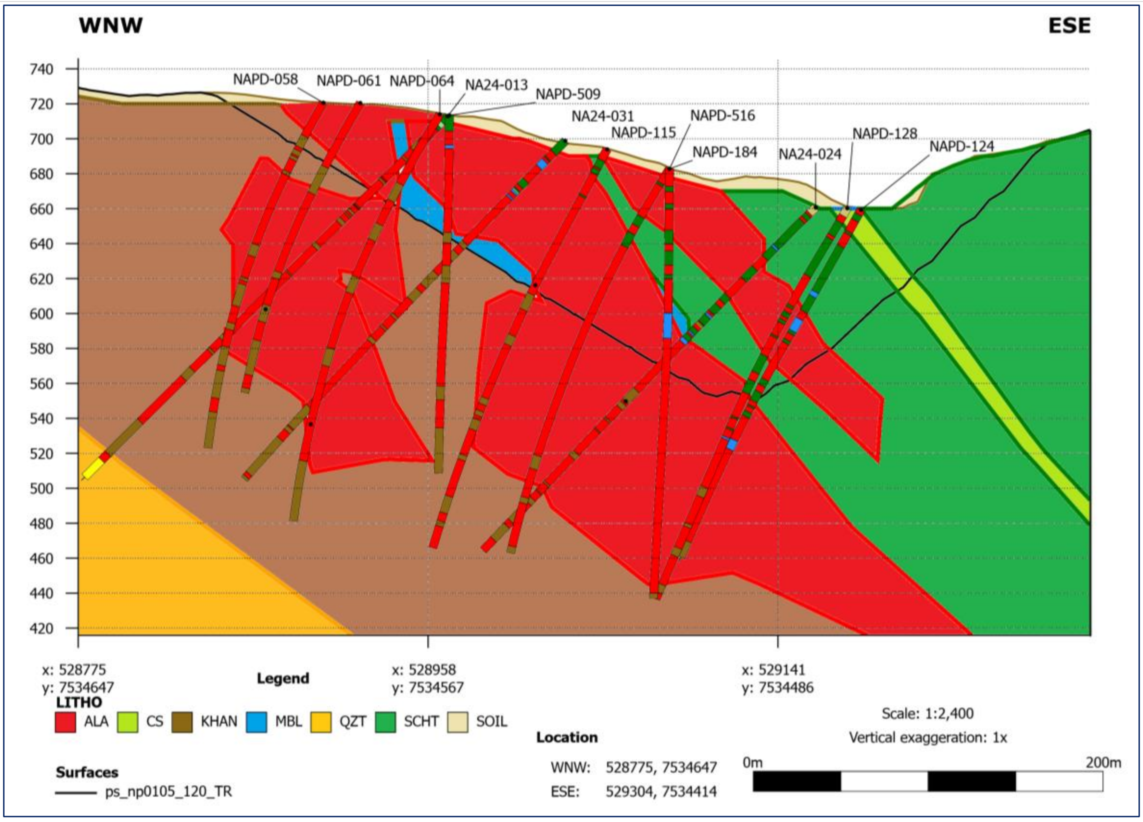
Chuos diamictite schists lie above the Rössing Formation and are +-70 m thick and are actually metamorphosed tillites. This unit is characterised by quartzo-felspathic drop stones in a grey quartz-mica schistose groundmass and magnetite layers.

The Rössing, Chuos and Karibib formations occur as elevated, sporadic, discontinuous outcrops along strike within the anomaly. Numerous alaskite sheets intrude the whole metamorphic series. The Rössing formation is only 50 m thick and is characterized by an impure marble, discontinuous along strike. The marble is white, coarse-grained and crystalline and is associated with a quartzite, porphyroblastic cordierite-biotite schist, a calc-silicate rock and a meta-conglomerate. The quartzite is white to grey, weathered to pink, massive and fine grained.

The Khan formation is finer-grained and represents sedimentation within a basin environment. The Kahn formation (+/-260 m thick) can be subdivided into Ferruginous banded foliated gneiss, a meta-arkose, a biotite banded foliated gneiss, and mottled calcsilicate gneiss.

The Etusis Formation is about 150 m thick and is represented by magnetite and diopside bearing quartzites. These quartzites have a highly recrystallized texture and are well bedded. The quartzites are dark grey, fine to medium grained.

Figure 7-11
Namibplaas Cross-section as modelled for the 2024 MRE



Note: *WNW/ESE section showing attenuated Damara host rocks surrounded by sheeted alaskite*

Source: *Reconstructed with guidance from Laine and Shilongo, 2011; and Hartmann Geoservices, 2023.*

7.2.3.2 Structural Controls and Alaskite Intrusion at Namibplaas

The regional structure of the Namibplaas deposit is characterised by the gentle warp of the eastern limb of the Khan anticline which is striking SW-NE in the south-west turning towards N-S in the far north. Dip on foliation and bedding is intermediate remaining at ±45 degrees SE.

The western limb of the antiform is slightly overturned and lies just east of Area A (Zone A, Figure 7-10); the eastern limb of the anticline with slightly folded Khan Syncline lies over Area B (Zone B, Figure 7-10). A major fault separates the Nosib Supergroup formations from the Abbabis complex in Area A. The core of the D3 antiform is made up of Etusis quartzite and forms the elevated crests.

Dip and strike of the strata is general NE-SW; overall dip 40-45 degrees to SE-directions; attenuation along strike and down dip is frequently observed.

7.2.3.3 Alaskite intrusions at Namibplaas

The Area A anomaly in the western portion of EPL368 comprises mylonite, porphyritic granites and basement gneisses; no alkaline leucogranites (alaskites) occur.

The Area B anomaly is confined to the Damara lithologies, with the Khan and Kuiseb Formations being predominant, with some attenuated Rössing marbles also present. Alaskites are common with D-type granite occurring mainly in the south of the anomaly and C and B type granites dominating the northern part of the anomaly. C-type alaskites often carry embedded lenses of Chuos and Karibib marble (Hinojosa, 2008).

The alaskites at Namibplaas may represent contaminated varieties of syn-tectonic D-type alaskites which have absorbed significant amounts of country rock during the anatexis phase. Freemantle (2015) proposed this interpretation from similar observations in other parts of the Damaran Belt.

The A-type alaskite intrudes the Kuiseb and the Karibib formations, the B-type intrudes along the contact between the Karibib and Chuos formations, and the C-type tourmaline leucogranite intrudes the Chuos and the Rössing formations, whereas the C-type magnetite leucogranite preferentially intrudes the Khan Formation, while tourmaline bearing varieties tend to intrude rocks that are higher up in the stratigraphic sequence.

Most of the leucogranites appear as sills which are concordant to and/or slightly crosscut the stratigraphy. The general dip is 40 to 50 degrees to the east.

The B-type alaskite is more abundant in the southern portion of the Norasa project area, while the C-type is most abundant to the north at Namibplaas. At Valencia the B type leucogranite can reach over 100 m in thickness, while at Namibplaas the B-type thicknesses vary from 5 m to 40 m.

7.3 Mineralisation

The uranium mineralisation throughout the prospect is hosted by sheeted leucogranites, ostensibly the D-type granite (Nex, 1997, Freemantle, 2015). Their appearance ranges from aplitic veins to leucogranite pegmatites to massive intrusive granites. In places, late-stage alteration associated with final granite crystallisation has overprinted and led to additional enrichment of uranium in the form of secondary mineralisation phases.

The mineral uraninite is the dominant uranium mineral throughout the deposits. Uraninite forms small subhedral to euhedral crystals ranging in size from a few microns to 500 µm, although the crystals commonly average 30-50 µm in size. Uraninite is generally black and resinous in lustre. It occurs typically between microcline or plagioclase, or at crystal boundaries between feldspar, quartz, and biotite. Very fine-grained uraninite (<10 µm) is also observed between the sheets of biotite books. It is often surrounded by alteration zones and radial cracks emanating from damage to the host mineral due to the expansion of the metamict uranium mineral. According to Jacob *et al*. (1983), uraninite at Rössing displays a preferential association with biotite and zircon; the latter appearing as inclusions within uraninite grains or as clusters of grains attached to them. Freemantle (2015) observed much of the same mineralisation characteristics at Valencia, and among other alaskite deposits in the region. Many uraninite crystals are altered in their core to thorite and jarosite.

Other primary uranium minerals include carnotite, titanite (including brannerite) and betafite. A variety of secondary uranium minerals exit, many of which are brilliantly coloured and fluorescent, including gummite, autunite, saleeite, torbernite, coffinite, uranophane and sklodowskite.

Late-stage alteration of all alaskite types is observed and comprises kaolinisation, illitisation and silicification.

7.3.1 Valencia Project Mineralisation

Uranium mineralisation at the Valencia Project has been identified over an area of 1,100 m north-south by 500 m east-west. Towards the northeast, a separate mineralisation pulse is identified stretching over an area of 600 m northeast-southwest by 500 m northwest-southeast (Valencia East) The mineralisation generally dips at approximately 35° to 40° to the south and has been identified by DDH drilling to a depth of 380 m below surface.

A significant number of drillholes end in mineralised alaskite, supporting the assumption of mineralisation continuing at depth beyond the current drillhole cover. The uranium mineralisation is hosted by alaskites that comprise massive stock-like bodies, dykes of varying thickness, and veins and veinlets. No primary uranium is found in the surrounding country rocks. The Valencia granites vary from white to pink in colour; they are medium- to coarse-grained, and homogeneous to inhomogeneous in texture. Mymerkites, perthites and sericitisation of K-feldspar are common. The leucogranites typically contain a high percentage of alkali feldspar and a very low percentage of biotite, indicating that a relationship between uranium occurrence and biotite content, as well as apatite, seems to exist.

Accessory minerals present include magnetite, garnet, zircon, monazite, apatite and biotite. The uranium is generally associated with medium-grained homogeneous textured leucogranites that have a high content of smoky quartz.

The uranium mineralisation is present as uraninite (UO_2) and the secondary uranium minerals as uranophane ($Ca\ (UO_2)\ 2SiO_2.7H_2O$) and uranothallite ($Ca_2U(CO_3)_4.10H_2O$).

The uraninite is usually fresh with only sporadic, very minor alteration rims. The secondary uranium minerals occur as yellow coatings on exfoliation planes and joints. They form specks and tiny flakes on feldspar, quartz, biotite and apatite.

The uranium mineralisation predominantly occurs in the finer-grained alaskite and to a lesser extent in the coarse-grained pegmatitic phases.

7.3.2 Namibplaas Mineralisation

At Namibplaas, mineralisation is confined to syn- to post-tectonic leucogranites which are similar in texture and mineralogy to the ones at the Valencia deposit.

In addition to the usual D-type mineralised alaskite, Namibplaas has mineralised magnetite rich C-type alaskites. This type is confined to the northern portion of the deposit and locally unique.

Uranium mineralisation remains similar to Valencia and occurs as uraninite (UO_2) mineralisation and the secondary uranium minerals, uranophane ($Ca(UO_2)2SiO_2.7H_2O$) and uranothallite ($Ca_2U(CO_3)_4.10H_2O$. Minor betafite $(U,Ca)(Ti,Ta,Nb)_3O_9$ has also been observed (Forsys, 2014).

8 DEPOSIT TYPES

The International Atomic Energy Agency (IAEA) currently places uranium deposits into fifteen sub-types and recognises at least nineteen historical classification schemes. The variety of classifications are simplified into three environment classes: Surficial; Basinal; and Orogenic, by Kreuzer *et al*. (2010). The Valenica deposit and its peers at Rössing, Husab, Etango, and the deposits at the Ida Dome are classified by the current IAEA system as being Intrusive (Type 1) deposits and are formed within an orogenic setting. The Valencia deposit, and its peers, are composed of variably uraniferous alaskite intrusives that form massive stock-like bodies, dykes of varying thickness, sill-like bodies and veins. The intrusive rocks can be either conformable with or transgressive to the prevailing Damaran fabric in the metasedimentary host rocks. Included in this type are those deposits associated with intrusive rocks including alaskites, granites, pegmatites and monzonites. Globally, major deposits include the Bancroft District (Canada);Tasermiut Area (Greenland); Poços de Caldas (Brazil); and Palabora (South Africa).

The Valencia and Namibplaas uranium deposits fall into the same category of alaskite-hosted (primary) deposits as the nearby Rössing (type locality) and Husab deposits, both of which are exploited by conventional open pit mining. These alaskite deposits are classified as ‘Intrusive Type’ by the International Atomic Energy Agency (IAEA, Bruneton, 2014).

Primary uranium deposits formed by granitic magmas can be classified based on a petrologic process of ore formation and/or their tectonic occurrence.

The processes of ore formation can be subdivided as follows:

1. syngenetic, orthomagmatic disseminations.
2. high-temperature, late-magmatic deposits.
3. contact metasomatic deposits, including occurrences of garnetiferous skarns around pegmatite-alaskite bodies; high-temperature vein deposits, commonly associated with quartz-fluorite veins; and auto-metasomatic[4] deposits, including many of the disseminated and local concentrations in albite-riebeckite granites; and
4. local pegmatites formed by in situ melting of country rocks.

The Norasa deposits of Valencia and Namibplaas all fall into category 2 of the list above, i.e., high-temperature, late magmatic or “intrusive type” uranium mineralisation.

The sub-types at Valencia and Namibplaas resemble pegmatite stage deposits, such as the pegmatite-alaskite deposits of nearby Rössing and Husab, or similar to the Crocker Well Uranium deposit in South Australia. Included in this type are those deposits associated with intrusive rocks including alaskite, granite, pegmatite and monzonites. All of these uranium deposits are associated with alkaline leucogranites that comprise massive stock-like bodies, dykes of varying thickness, sill-

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[4] Autometasomatism relates to the alteration of an igneous rock mass by its own late H2O-rich liquid fraction trapped within the rock, generally by an impermeable chilled border, Lindgren (1928).

like bodies or veins and veinlets, which can be either conformable with or transgressive to their host rocks.

The Valencia and Namibplaas deposits form part of these leucogranite-hosted uranium deposits. Nex *et al*. (2001) developed a detailed classification scheme and recognised the importance of the orogenic timing of the emplacement. Nex *et al.* (2001) subdivided the alaskites into six granite types based on appearance, structural setting, mineralogy, and petrology referred to as A, B, C, D, E and F type. Types A, B and C intruded pre-F3, and the D, E and F types are syn- to post-F3 with the D type being the most importance for uranium enrichment.

9 EXPLORATION

The Valencia uranium deposit was originally identified from an airborne survey in 1973. The first detailed exploration project was conducted between 1973 and 1983 by Trekkopje Exploration and Mining Company. Trekkopje Exploration and Mining Company carried out detailed geophysical surveys, surface mapping and drilled 97 diamond drilling holes (DDH) of approximately 25,000 m of in this period.

9.1 Previous Valencia Project Exploration

VUL commenced activities in the area in 2005 and started drilling in 2006, adding an initial 44 diamond drillholes for over 12,832 m of drilling to the 97 historical (drilled prior to VUL ownership) diamond drillholes totalling 24,790 m of drilling. Until 2009 a further 148 reverse circulation percussion (RC) drillholes were added which were drilled along a tight grid measuring 20 m by 20 m and drilled to an average depth of 300 m across the anomaly (from Forsys Metals, 2014).

9.1.1 Re-logging and probing of historical drillholes

VUL ran confirmatory program was conducted to validate the accuracy of the historical 97 holes. This involved a re-survey all historical drillhole collars and re-logging of drill holes for which no drill hole logs were available. The historic holes were re-probed where possible. These holes were not used in the Mineral Resource Estimate.

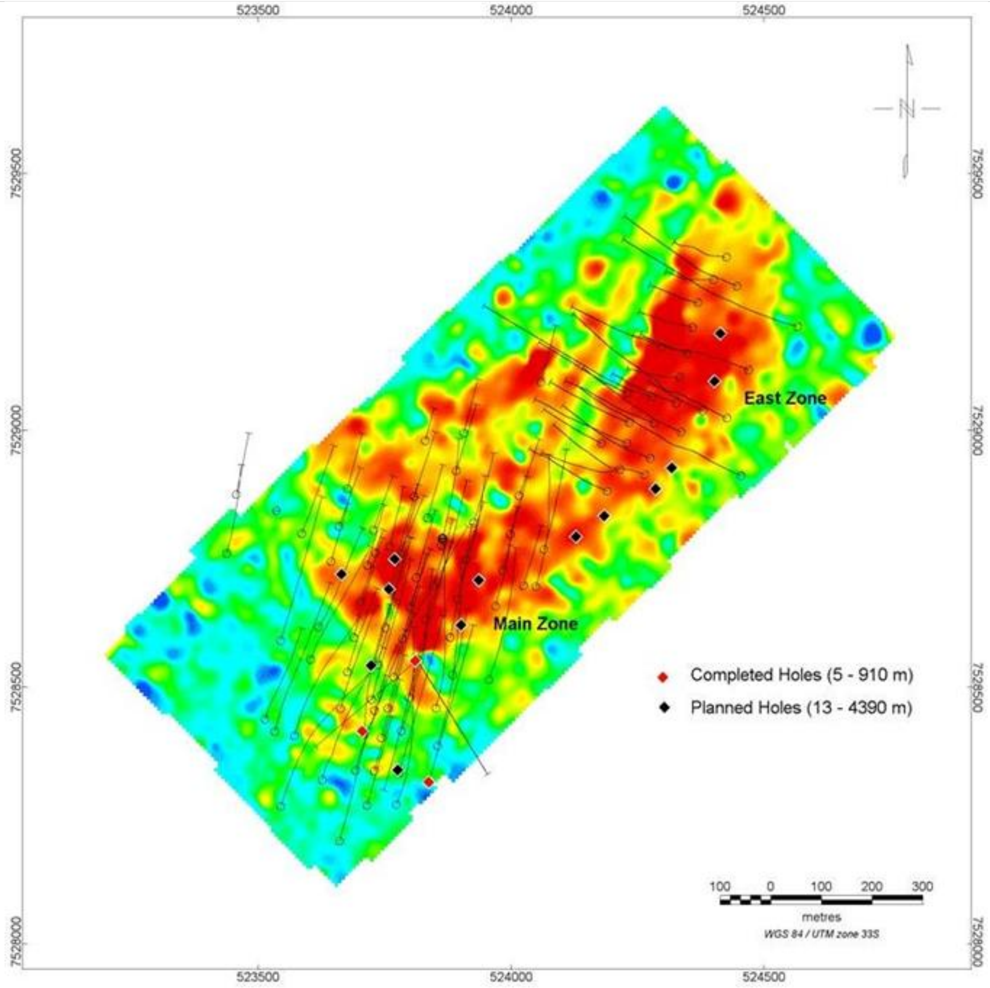
9.1.2 Spectrometer and scintillometer survey

A handheld ground radiometric survey was completed in February 2006 by Forsys geologists. A Pico-Envirotech Spectrometer Model GIS s15 instrument was used to measure gamma ray readings for total counts, uranium, thorium and potassium. Readings were taken at intervals of approximately 1.5m on northwest to southeast oriented lines spaced at 50m apart (from Forsys Metals, 2014).

A second handheld ground radiometric survey was completed in December 2007 to January 2008. Readings were taken at intervals of approximately 5m on northwest to southeast oriented lines spaced at 10m apart. The contoured results of the scintillometer survey for uranium are shown in Figure 9.1. The anomalous areas of radioactivity coincide with the outcrops of alaskite and provided targets for drill testing (from Forsys Metals, 2014).

Figure 9-1

Namibplaas Cross-section as modelled for the 2024 MRE



Note: *Map segment contains planned and completed boreholes from the 2007 to 2008 period at VUL.*

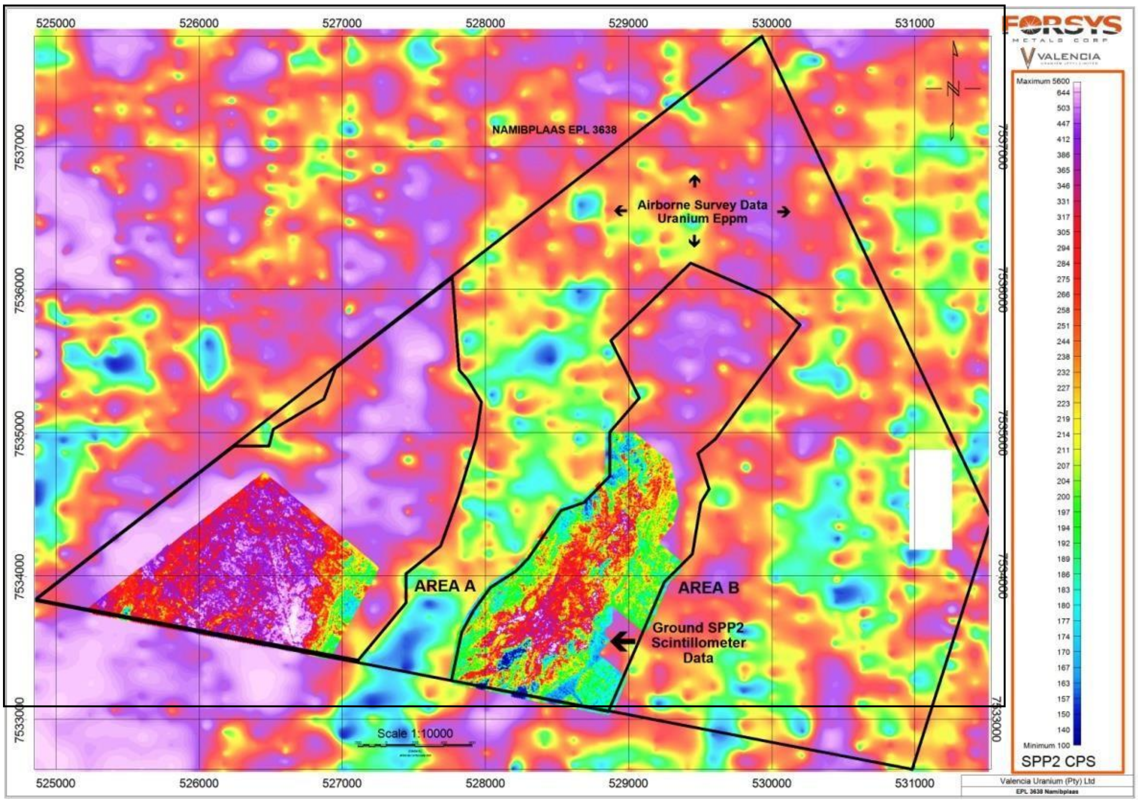
Source: *Forsys Metals, 2014*

9.2 Previous Namibplaas Exploration

Ground scintillometer surveys conducted by VUL from 2009 confirmed the two anomalies (see Areas A and B in Figure 9-2) and confirmed significant differences in U/Th ratios between the two.

A detailed ground spectrometer survey revealed high Thorium ratios for Area A which led to exploration activities focussing on Area A.

Figure 9-2
Namibplaas ground radiometry overlain onto the GRN airborne radiometric survey map from 1997



Source: *Forsys, 2014*

9.3 2023 Exploration at the Valencia Uranium Project

Current exploration aims to expand and upgrade the Valencia Mineral Resources:

In June 2023 the company Strydom Land Surveyors from Windhoek conducted an air borne lidar and ortho imagery survey. The new data are utilised in the current Mineral Resource estimate and geological model.

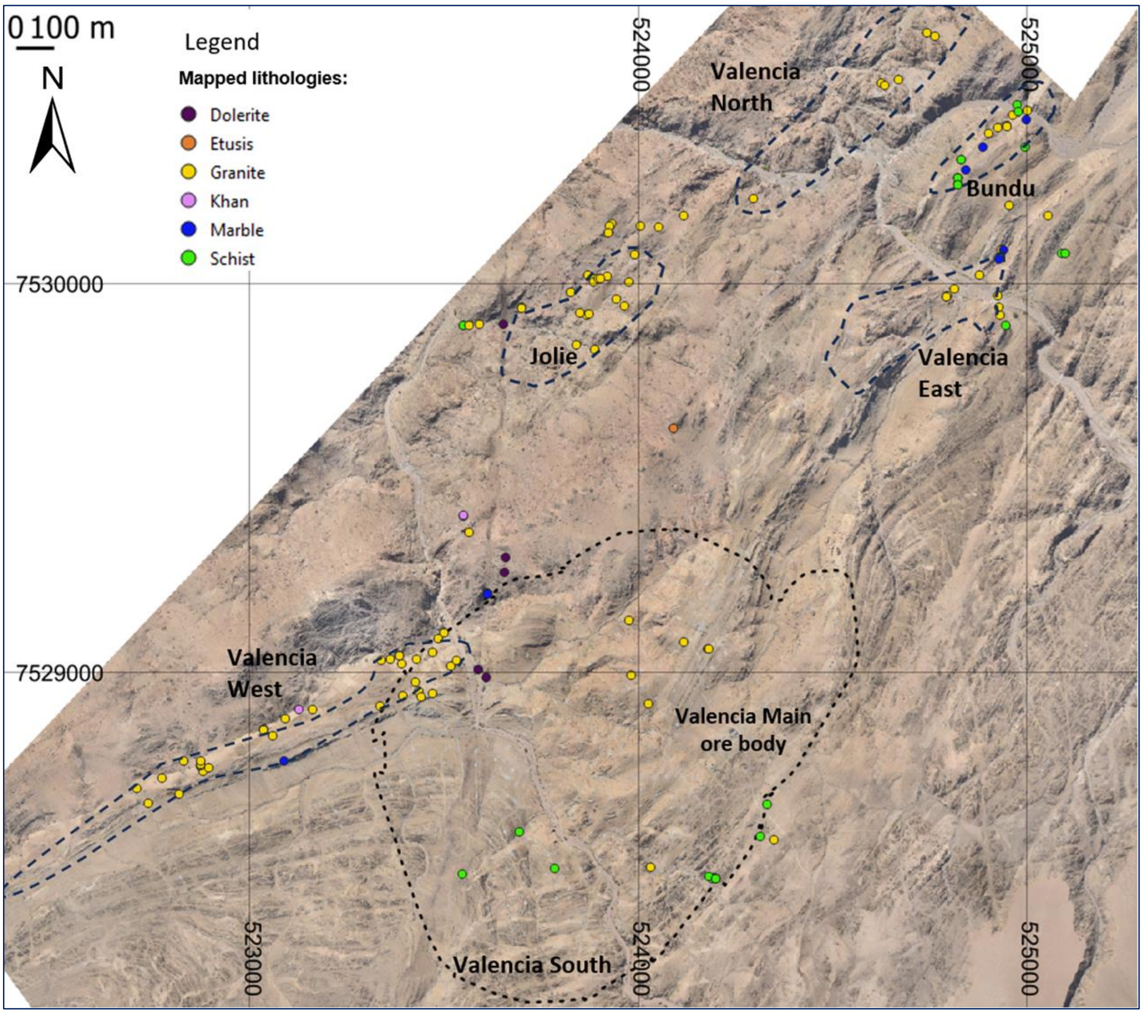
Surface geological mapping between 2023 and 2024 by Hartmann Geoservices, focussed on structural mapping, aimed at guiding the location and orientation of exploration drilling and identification of any major structures which could affect the stability of future pit slopes. The mapping was conducted with hand-held GPS, structural compass and scintillometer (Figure 9-3).

Six areas of mineralisation potential were delineated from ground scintillometer surveys, aerial photo interpretation, geological mapping, and a review of historic drilling data.

Exploration activities at Namibplaas are on hold presently, while VUL focusses on the targets around the Valencia Main and East deposits.

Figure 9-3

Valencia 2023 mapping points [1]



Note: [1] *Valencia Uranium reconnaissance sites for scouting 2024 exploration drillhole positions*

Source: *Hartmann Geoservices, 2024.*

10 DRILLING

Recent drilling constitutes VUL drilling project undertaken from 2023 onwards. Previous drilling refers to drilling undertaken by the issuer (VUL) between 2005 and 2013.

10.1 Previous Valencia Project Drilling

Valencia Uranium Limited (VUL) commenced activities in the area in 2005 and started drilling in 2006 adding an initial 44 diamond drillholes totalling 12,832 m to the 97 historical diamond drillholes totalling 24,790 m. Until 2009. a further 148 reverse circulation percussion (RC) drillholes were added which were drilled on a tight grid measuring 20 m by 20 m, to an average depth of 300 m across the anomaly. Drilling was carried out by R.A. Longstaff Namibia (Pty), Major Drilling, Erongo Drilling, Van Rhyn, Roburgh, and Hard Rock Drilling, with logging and sampling conducted by Valencia staff. In 2015 the Norasa Project (Valencia and Namibplaas included) was suspended due to low uranium price levels.

10.1.1 Previous Valencia Project Drilling

A further 44 DDH totalling 12,832 m were drilled by VUL from 2008 to 2009.

148 RC drillholes totalling 11,101 m, covering an area of 300 m by 200 m and drilled to a depth of 105 m below surface were completed to support increased confidence in the Mineral Resource. Figure 7-7 shows the position of the drillholes in relation to the Valencia main MRE pit shell.

Percussion drilling (PD) was the main type of exploration drilling undertaken after DDH and RC drilling provided for the geological guidance and establishment of the correlation coefficient from gamma probing to equivalent uranium conversion. A total of 410 percussion drillholes were drilled up until 2011.

10.1.2 Previous Valencia East Drilling

During 2012 and 2013, exploration efforts moved to a small area close to the main Valencia anomaly which had not been included in previous property evaluations; this project area is referred to as Valencia East (formerly Valencia Satellite) and is characterised by a higher-grade surface signature, measuring 500 m by 400 m on surface.

VUL decided to drill test the area to test mineralisation at depth. Fifty-two percussion holes were drilled to shallow depths and the programme succeeded in confirming higher grade mineralisation at depth, close to the Valencia main anomaly, and a decision was made to incorporate the results into the combined Mineral Resource statement of March 2014, Forsys (2014).

10.1.3 Previous Namibplaas Percussion Drilling

VUL drilled a total of 288 percussion holes totalling 63,093.7 m. The PD drillholes were not physically sampled but were subject to downhole probing using two radiometric counters calibrated against assayed DDH drillholes (from Optiro, 2011).

10.2 Previous Namibplaas Diamond Drilling

19 DDH holes were drilled (NA24-008 to 026) commencing in July 2010, with a total of 4,667 m drilled by the end of 2020, and a further 14 DDH holes (NA24-027 to 040) were drilled in 2011, totalling 3,561 m. The resulting total DDH dataset, including the historical GFSA drillholes covers 9,894 m of drilling, with the results used for correlation and estimation work (Optiro, 2011).

10.3 Previous Grade Information for the Norasa Project

Previous grade information at the Norasa Project was derived from geophysical logging at 0.1 m intervals with the gamma readings empirically converted into a U_3O_8 grade. The probing protocol and procedures applied are consistent with applications employed during previous probing projects at both Valencia and Namibplaas.

The geophysical probe data is collected at 0.1 m intervals downhole and converted into grade thickness (GT) using a correlation coefficient which Dr Roger Laine developed in 2008.

Calibration of the probe was undertaken on a daily basis using a fixed source and on a weekly basis, running the probe down a reference drillhole that had been fully sampled down the hole. Allowance was also made for the presence of radon, and holes were re-probed until the results were consistent.

Uranium assays of drill core and RC chips were undertaken using the XRF analytical method; sampling, QAQC and laboratory results have been reviewed at various times in the project history and are described for Valencia in Snowden (2007) and Peters and Kullman (2009) and for Namibplaas in Optiro (2011).

10.4 Valencia 2023 Drilling

Following on from the Updated Mineral Resource estimate released in 2015 (Forsys, 2015), drilling at Valencia proceeded in two phases.

In 2023, drilling included seven geotechnical holes, two infill holes and five large diameter holes for metallurgical test work. During 2024, drilling focussed on resource extension drilling, additional sampling for metallurgical test work and drilling the location for a planned box cut for bulk sampling purposes. Drilling took place on ML149 at the Valencia deposit, and in target areas in the vicinity of the deposit. Stewardship Drilling undertook all the drilling activities.

Seven geotechnical holes, two infill drillholes and five large diameter drillholes for metallurgical test work were drilled in 2023 (Table 10-1). The results of these drillholes (Table 10-2) are included in the revised Mineral Resource estimate of 2024 (Item14). Positions of the 2023 drill collars are shown in Figure 10-1 relative to the May 2024 40 ppm U_3O_8 cut-off pit shell.

Table 10-1
2023 drill project; completed drillholes

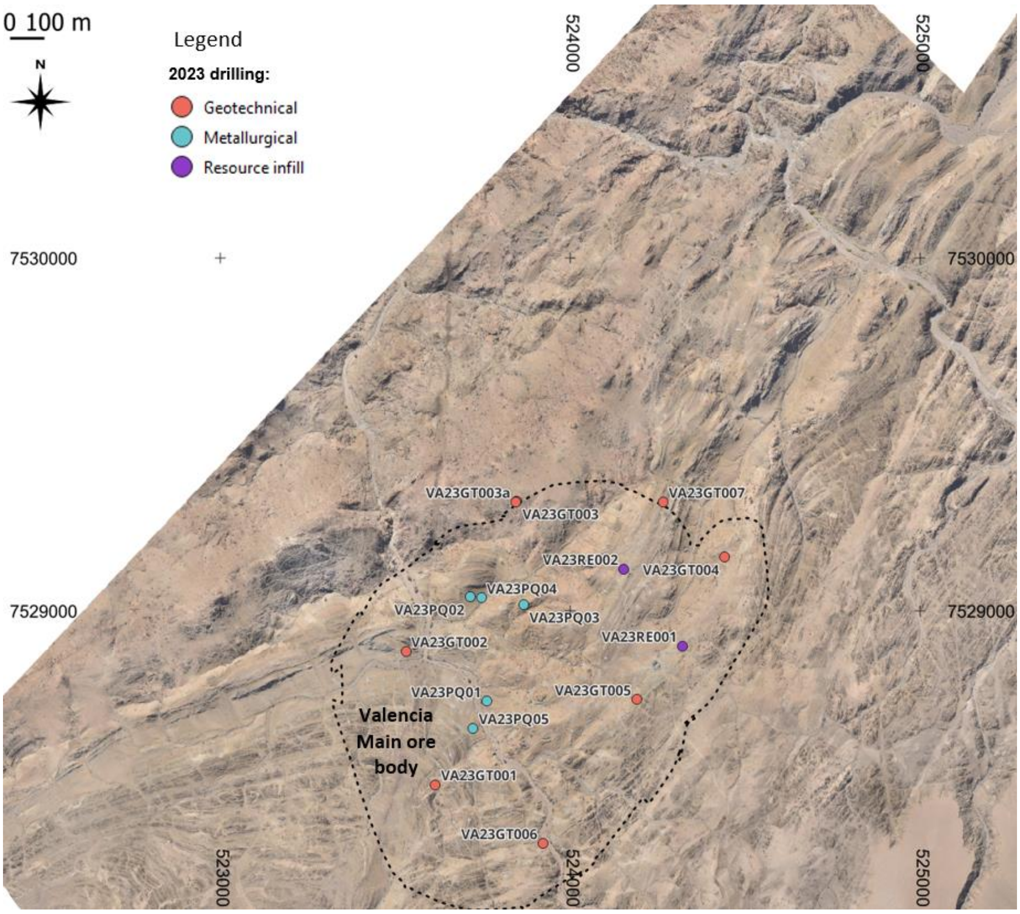
BHID	Easting	Northing	EOH	RC	CORE	Purpose
VA23GT001	523614	7528507	222		222	Geotechnical
VA23GT002	523530	7528886	203.8	102	100	Geotechnical
VA23GT003	523847	7529311	102	102		Geotechnical
VA23GT003a	523845	7529309	227.28		225	Geotechnical
VA23GT004	524440	7529153	152.26	50.26	102	Geotechnical
VA23GT005	524190	7528749	275.47	102	173	Geotechnical
VA23GT006	523921	7528342	225.14	100	125	Geotechnical
VA23GT007	524266	7529309	275.35	102	168	Geotechnical
VA23RE001	524320	7528900	419.72	102	318	Resource infill
VA23RE002	524153	7529118	296.21	102	153	Resource infill
VA23PQ01	523762	7528744	60		59.95	Metallurgical
VA23PQ02	523714	7529040	23.7		23.7	Metallurgical
VA23PQ03	523867	7529018	60.27		60.27	Metallurgical
VA23PQ04	523746	7529037	59		59	Metallurgical
VA23PQ05	523722	7528668	80		80	Metallurgical

Table 10-2
2023 drill project; highlights reported from completed drillholes

Target	BHID	From (m)	To (m)	Width (m)	U_3O_8 (ppm)	Purpose
Valencia Main	VA23GT-002	105.3	149	43.7	152	Geotechnical
Valencia Main	VA23GT-004	1	103.2	102.2	164	Geotechnical
Valencia Main	VA23GT-005	244.77	272	27.23	184	Geotechnical
Valencia Main	VA23PQ-004	30	37.5	7.5	229	Metallurgy
Valencia Main	VA23PQ-005	3.96	81.3	77.37	439	Metallurgy
Valencia Main	VA23RC-001	128.73	178	49.27	201	Resource infill
	and	190	237	47	253	Resource infill
	and	302.75	414	111.25	134	Resource infill
Valencia Main	VA23RC-002	95	124.1	29.1	271	Resource infill
	and	129.7	152	20	162	Resource infill

Figure 10-1

Overview map of the 2023 drill programme, Valencia Project



Source: Hartmann, 2023 for VUL.

11 SAMPLE PREPARATION, ANALYSES AND SECURITY

VUL have not undertaken any sampling and assay work on the Norasa Project between 2015 and 2023. Previous reports detailing sampling, preparation, analyses, and security for the bulk of samples on the Norasa project are filed on the SEDAR+ website. These include Snowden (2007); Snowden (2009); Optiro (2011); Forsys Metals (2014); and AMEC Foster Wheeler (2015).

VUL undertook new drilling at Valencia in 2023 at 21 locations on ML149; samples from eight of these drillholes occur within the Valencia Mineral Resource and were physically sampled for uranium assay by XRF and probed for equivalent uranium assays.

11.1 Previous Norasa Project Sampling and Assays and QAQC Assessments (2005-2015)

All previous diamond drill half core and RC samples collected by VUL were assayed at the Setpoint Technology (Setpoint) laboratory in Johannesburg, South Africa. Setpoint was accredited with the South African Accreditation System (SANAS), accreditation number T0223, and was also an ISO17025 accredited laboratory.

Setpoint crushed and pulverised the samples for analysis of U_3O_8 using the XRF pressed pellet method.

The VUL protocols for the QAQC were as follows:

- CRMs inserted at a frequency of at least one per 20 samples.
- Blanks inserted at a frequency of at least one per 50 samples.
- Duplicates taken at a frequency of at least one per 20 samples.

The Setpoint laboratory included appropriate quality assurance and quality control (QAQC) procedures during the analysis of the VUL samples by including its own certified reference standards (CRM), blanks and duplicates.

VUL percussion holes were not physically sampled. Datasets were derived from two downhole probes that were calibrated against the XRF sample assays.

Snowden reviewed the assay results from Setpoint for the Valencia deposits in 2007[5] and in 2009[6] for the purposes of Mineral Resource estimation and considered the QAQC results to be of a high standard of precision, unbiased and accurate.

Optiro reviewed the assay results from Setpoint for the Namibplaas deposit in 2011 and considered that the results of the QAQC indicate a high level of precision with no bias, no significant contamination and a high degree of accuracy (from Snowden 2009 and Optiro 2011[7]).

11.2 Previous Downhole Probing at Norasa

Calibration of the downhole probe was undertaken on a daily basis by the contractor using a fixed source and on a weekly basis, running the probe down a reference drillhole that had been fully

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[5] Forsys Metals Corp: Valencia Project, Namibia, Technical Report, June 2007.

[6] Valencia Uranium (Pty) Ltd. Valencia Project Namibia Technical Report, Snowden, 2009.

[7] Forsys Metals Corp. Technical Report on the Namibplaas Deposit, Namibia, Optiro, 2011

sampled and assayed down the hole. Allowance is also made for the presence of radon accumulation, and holes are re-probed until the successive probe run results are repeatable. The geophysical probe data is collected at 0.1 m intervals and composited to 1 m intervals to match the sample intervals of the XRF assays.

11.3 2023 Sampling

Sampling of the drillholes completed in 2023 was undertaken on site using the available equipment at the Valencia Camp. The sampling procedure was explained to the QP by the Geologist on site, Mr. Nyasha Mungomeza, as follows:

- Diamond drillholes for resource drilling purposes are drilled with an RC pre-collar where possible to reduce time and costs that boring with a diamond drill incur. The pre-collar stops when granitic material is expected, from the available geological model data. Samples are marked on a metre basis continuously through the mineralised intersections. The start and end of sample runs in a hole are guided a handheld scintillometer.
- Internal waste intervals vary between mineralised intercepts, narrow waste intervals (nominally <1 m) are counted in the sample run. Broad waste intervals, approximating to an anticipated 5 m to 7 m bench height, are excluded from sampling runs. Sampling optimisation is intended to reduce wasteful laboratory assays.

VUL intend collecting downhole gamma probe equivalent assays in current and future drill programmes; the probe data can then inform accurate and effective sample run intervals.

11.4 2023 Probing Method

The current probing method is undertaken in the same manner downhole as was previously done at the Valencia and then Norasa Project.

Calibration of the probe is undertaken on a daily basis by the contractor using a fixed source and on a weekly basis, running the probe down a reference drillhole that had been fully sampled and assayed down the hole. Allowance is also made for the presence of radon accumulation, and holes are re-probed until the results are consistent. The geophysical probe data is collected at 0.1 m intervals and composited to 1 m intervals to match the sample intervals of the XRF assays.

Downhole probing activities were not underway during MSA’s site visit on 01 September 2023 and therefore not observed. Previously Snowden observed probing activities in 2007 and in 2009.

11.4.1 Gamma Probe Quality Assurance and Quality Control

The probing protocol and procedures applied are consistent with those undertaken during previous probing projects at Valencia and Namibplaas. Previous and current downhole probing activities are undertaken by Terratec Geophysical Services (Terratec) out of their Windhoek, Namibia facilities. Terratec make use of reference holes and calibration pads on site at the Valencia Project.

11.5 Gamma Probe Equivelent Assay Conversion Factors

Grade information is derived from downhole geophysical (radiometric) logging at 0.1 m intervals with the gamma readings empirically converted into a U_3O_8 grade.

11.5.1 Previous Gamma Probe Equivelent Assay Conversion

Prior to 2015 the downhole probe data were converted into grade thickness (GT) using a correlation coefficient which Dr Laine developed in 2008. Previous drillhole data from used a conversion formula of eU_3O_8 = 19.8 x Gamma, to convert the downhole gamma readings to eU_3O_8.

Review of the previous database for the Norasa Project revealed disparity between the converted/processed gamma data eU_3O_8 assays and the population of XRF assays, specifically within the diamond drill sample population at Valencia. This disparity was not evident to any concerning extent in other drill data assay populations. The previous conversion factor was found to have poor correlation with the diamond drillhole XRF assay population at Valencia, particularly in the sub-150 ppm U_3O_8 grades. The grade frequency curves in Figure 11-1 illustrate the difference between the eU_3O_8 and the U_3O_8 by XRF assays in the Valencia deposit diamond drill sample population. A series of exercises, which included re-probing previous holes that have XRF assay paired data, were undertaken. By; determining relationships between the previous probe data and XRF data and processing downhole data into composite intervals, a suitable factor for re-estimating probe equivalent U_3O_8 (eU_3O_8) assays was determined.

A revised probe equivalent conversion factor was determined through establishing a conversion factor that more consistently defines the relationship between XRF assay values and corresponding total gamma counts.

As a result, previous eU_3O_8 has been re-calculated from the previous diamond hole gamma probe data population that is paired with previous XRF assays using the factor below:

$$\mathbf{eU_3O_8 = -0.07*gamma*gamma+20.3*gamma-14}$$

and the current, 2023, gamma equivalent assays are determined by:

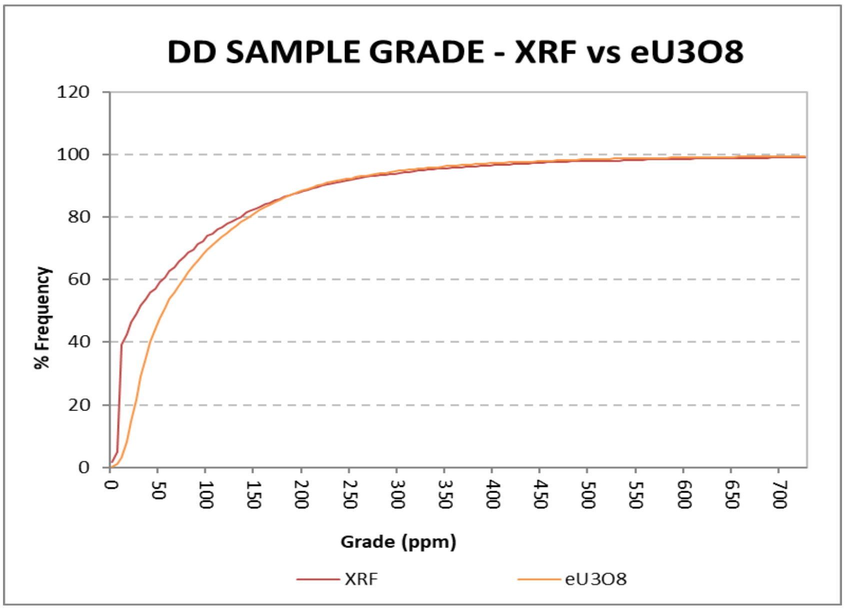
$$\mathbf{e\ U_3O_8 = (gamma-78)/6.06}$$

The improved alignment of eU_3O_8 and corresponding U_3O_8 (XRF) has contributed to improving the accuracy of the Mineral Resource Estimate at Valencia.

The sections below summarise the method and steps taken by VUL to improve the correlation between the previous diamond hole XRF assays and corresponding gamma probe eU_3O_8.

Figure 11-1

Grade frequency curves for previous DD XRF assay and eU_3O_8.



11.5.2 Previous Gamma probe equivalent U_3O_8 vs Previous XRF assays

VUL analysed the previous gamma probe equivalent assays (eU_3O_8) as part of the exploratory data analysis step in estimating the updated Mineral Resource for 2024. The investigation determined that correlation between eU_3O_8 values and XRF assays, particularly of the diamond drill sample population at Valencia, should be revised.

Correlation between previous RC drillhole samples' XRF assays and the previous probe equivalent assays are acceptable at Valencia and at Namibplaas and did not warrant any reworking.

11.5.3 Re-calculating the Previous Valencia Gamma Probe Equivalent Assay Conversion Factor for Diamond Drill Holes

In comparing eU_3O_8 from gamma scans with laboratory results (Figure 11-2), at a conversion formula of $e\ U_3O_8 = 19.8 \times$ gamma, the results for gamma logging of diamond drillholes are on average 19% higher than the assay results of selected drill core (Hartmann, 2023). This discrepancy is apparent at Valencia but not at Namibplaas.

To address this VUL deployed a new probe through Terratec Geophysical Services to undertake the probing of ten previous drillholes and five of the exploration and resource drillholes drilled in 2023. Drillholes drilled prior to 2005 could not be tested as the hole diameter (BQ) is not suited to the modern probe.

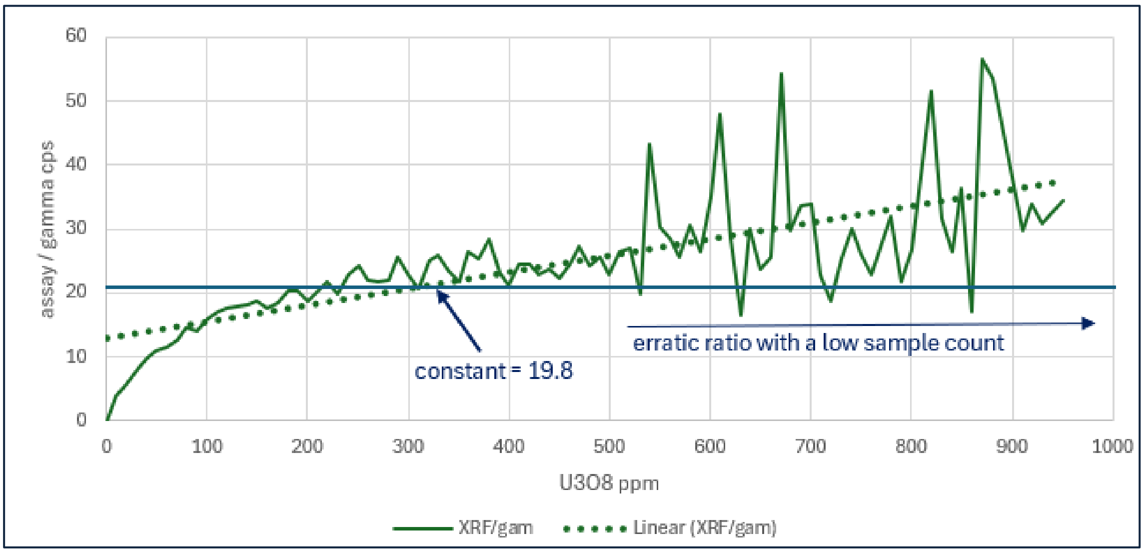
In addition to the re-probing, data from fifty-eight of the previous diamond drill (DD) drillholes were included in the exercise of determining a new correlation factor for the previous diamond drillhole population. These 58 holes at Valencia include probe and corresponding XRF values.

11.5.4 New Conversion Factor for Previous Valencia Gamma Probe Equivelent Assays

Drillholes containing assay grades of over 180 ppm have assay/gamma ratios that are on average higher, using the previous conversion of e U_3O_8 = 19.8 x gamma. However, the low average assay grades (<100 ppm) have a much lower assay/gamma ratio, implying that the gamma results are over-estimated at lower grades and under-estimated at higher grades (Figure 11-2).

Figure 11-2

U_3O_8 (XRF) vs. XRF assay/gamma cps for 10 m composites



Source: *Hartmann, 2023*

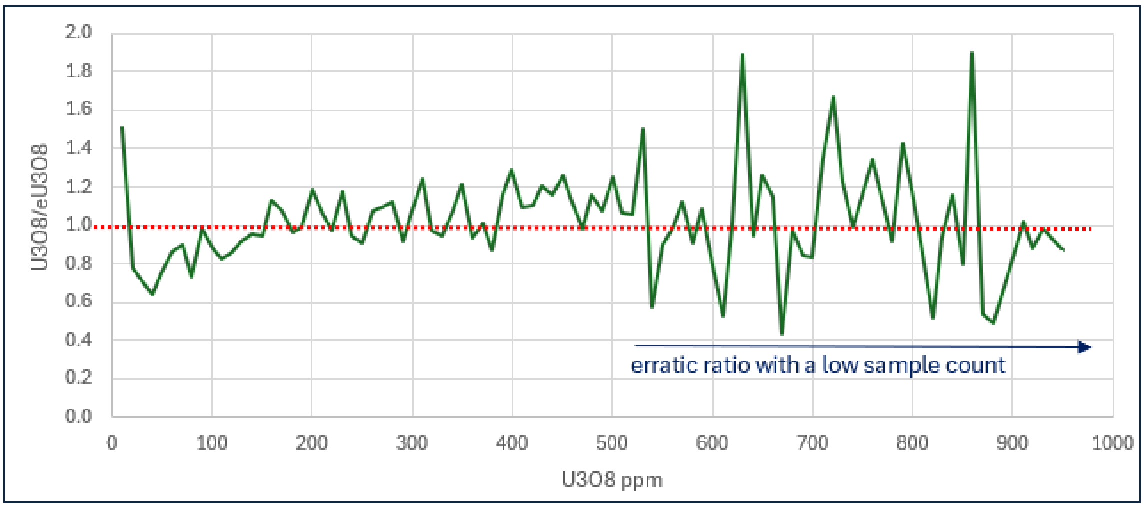
A linear conversion formula consists of a multiplier and a constant. Conceptually, from cumulative frequency graphs (Figure 11-1), about 30 ppm should be subtracted, as a constant, from eU_3O_8 to correct the previous multiplier of 19.8. Although there was some improvement in the eU_3O_8/U_3O_8 ratio, the formula "e U_3O_8 = 19.8 x gamma – 30" does not produce a satisfactory conversion formula.

Analyses of previous probe and assay data trend lines and empirical adjustments have determined a revised non-linear conversion formula for the previous diamond drillhole population. This formula is eU_3O_8 = (-0.07 x gamma) x (gamma + 20.3) x (gamma – 14). Applying the revised formula to the previous data yields average grades of 89 ppm for both eU_3O_8 and U_3O_8. This effect is tested to a reasonable degree by applying the conversion formula to 10 m-composited sample intervals (Figure 11-3). The revised formula improves the correlation between eU_3O_8 and assays across all depths compared to the 2015 multiplier (Figure 11-4).

The downhole scintillometer senses gamma radiation some distance from a source. There is thus a smearing effect of the gamma counts, which is noticeable for a metre adjacent to high grade results. The correlation coefficient within individual drillholes is thus typically below 0.85. Two drillholes (VA26-124 and VA26-135), had a poor correlation between gamma and assay results, which suggested an error in the gamma results. These two holes were excluded from the dataset used the calculation of a conversion factor and re-scanned during 2023. The new gamma counts result in a good match with the assay results.

Figure 11-3

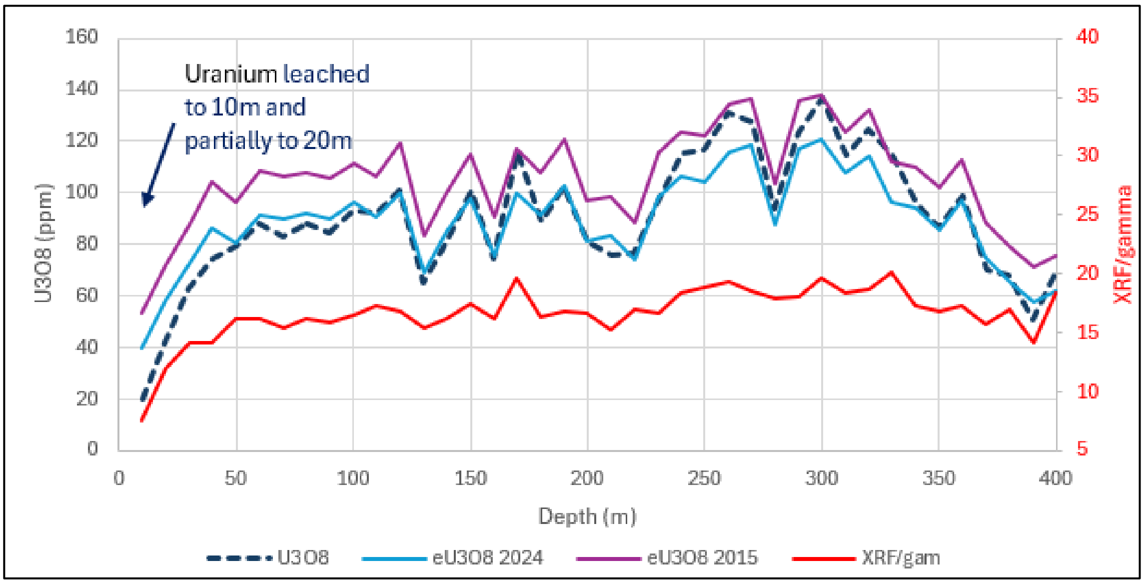
U_3O_8 (XRF) vs XRF assay/gamma cps for 10 m composites



Source: *Hartmann, 2023*

Figure 11-4

U_3O_8 and eU_3O_8 vs drillhole depth, eU_3O_8 = (-0.07 x gamma) x (gamma + 20.3) x (gamma – 14)



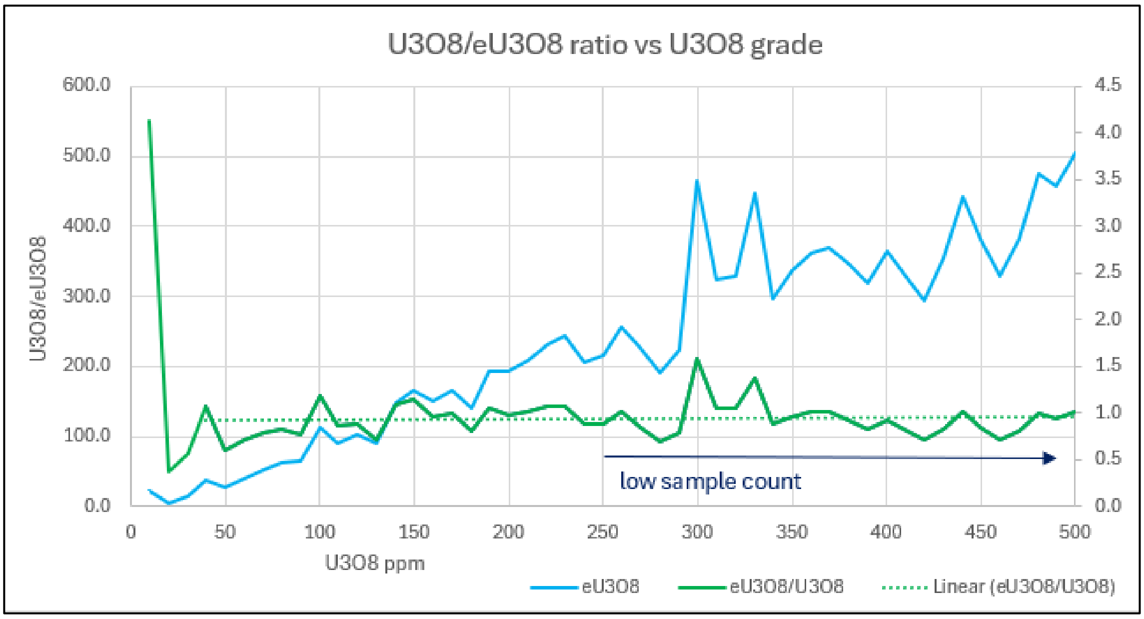
Source: *Hartmann, 2023*

11.5.5 2023 Gamma Probe Equivelent Assay Conversion Factor

Processing of probing data from ten previous and five holes drilled in 2023 has yielded a conversion factor of eU_3O_8 = (gamma cps – 78)/6.06, the larger negative constant being necessary because of the modern probe's greater sensitivity and count rates. By the application of this formula, the average grade of eU_3O_8 and U_3O_8 are equal at 181 ppm and a ratio of approximately 1:1 (green line on Figure 11-5).

Figure 11-5

U_3O_8 and eU_3O_8 vs drillhole depth, using eU_3O_8=(gamma-4)x35



Source: *Hartmann, 2023*

11.6 2023 Assay Laboratory

Samples were taken from the diamond drill cores and RC chips for geochemical assay guided by the routine downhole radiometric probe results and sent to Trace Elements Analysis Laboratories (Pty) Ltd ("TEA Labs") at Swakopmund for sample preparation and analyses by XRF. For internal quality control purposes, TEA Labs has weekly round robins with independent laboratories at Rosh Pinah, Swakop Uranium and Langer Heinrich mines.

The TEA laboratory facility in Swakopmund was visited by the QP on the 2nd of September 2023, see Item 12.3 for assay laboratory details.

11.7 2023 XRF Assays

VUL employs a QAQC programme with Certified Reference Materials (CRMs), blanks, coarse duplicates and pulp duplicates inserted into each batch of samples. The inserts were deployed in the drilling programme as reported on in Item 10.

11.7.1 QAQC Insert Rate

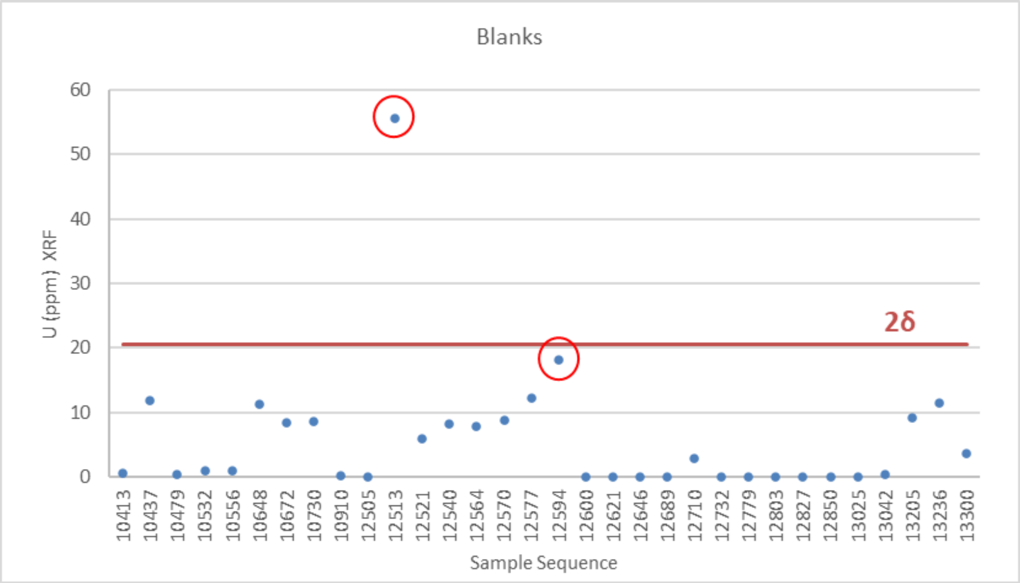
The QAQC insert rate comprises 4 % CRMs using three CRM types with different grades of U_3O_8; 4 % blanks and 8 % to 10 % duplicates.

11.7.2 Blanks

Certified blank sample material was purchased from African Mineral Standards (AMIS0439), consisting of silica chips. Blank samples were inserted at a frequency rate of approximately one in every twenty samples, although a lower, irregular frequency was used in the early stages of the exploration programme. A total of 20 blank samples were analysed at Australian Laboratory Services (ALS) in Johannesburg and 104 at Societe Generale de Surveillance S.A. (SGS) in Randfontein.

The blank samples were subjected to the same sample preparation and analytical processes and were within the same sample stream as the routine field samples. Graphical representations of the blank sample results for uranium are shown in Figure 11-6. Two sample swaps were identified, and the batches were re-assayed on VUL instruction. The blank samples all plot below 2 SD of the mean and are therefore acceptable.

Figure 11-6
Blank Inserts from the 2023 Valencia Drill Project.



Note: [1] *assay results of circled inserts (sample swaps) and associated batches were excluded from the resource database and substituted with downhole probe equivalent* U_3O_8 *assays.*

11.7.3 Certified Reference Material

The CRM’s used for the current exploration and resource extension drilling programme are listed in Table 11-1. The CRM material was sourced from storage at the Valencia Camp, a total of six reference materials were inserted at a rate of 4 %.

Table 11-1
CRM Inserts for VUL 2023-2024 Exploration

CRM	n	U (ppm)	Th (ppm)	Cert value (U ppm)	SD	2 SD	3 SD	95% CI ppm	Issuer
BL-1	5	219.3		220	48	95	143	20	CANMET 1977
BL-2a	6	3,047.2	59.6	4260	25	50	75		CANMET 1982
BL-4	6	1,506.9		1730	241	483	724	40	CANMET 1977
BL-4a	3	1,138.5	64.6	1248	7	14	21		CANMET 1982
DL-1a	4	151		116	26	52	78	3	CANMET 1980
RL-1	4	2,139.3	51.7	2010	151	301	602	60	CANMET 1985

11.7.4 Duplicates

RC sample batches have three types of duplicates; a field duplicate split at the drill rig; a coarse duplicate split at prescribed intervals at the laboratory; and pulp duplicates, also split at the laboratory. Core samples only have coarse and pulp duplicates split at the laboratory. A single quarter-core split was submitted as an observation sample.

11.7.4.1 External Laboratory Duplicates

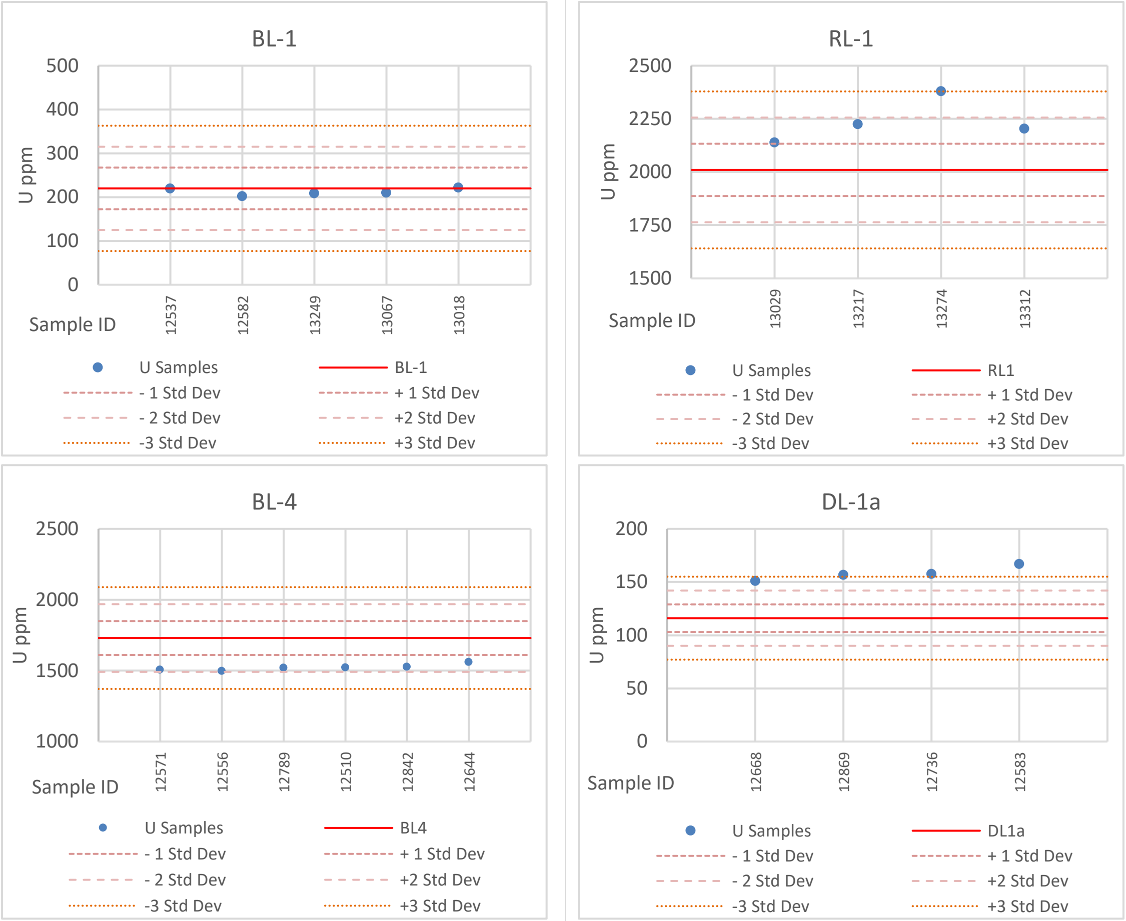
Four percent of the samples sent to TEA Labs are sent for check analyses at SGS Laboratories (SGS) in South Africa, which serves as the independent accredited laboratory. The sample results are further validated by comparison with the radiometric scans.

VUL have included 28 certified reference material (CRM) inserts in laboratory assay submissions to date. The certified reference inserts are all manufactured by the Canada Center for Mineral and Energy Technology (CANMET).

11.7.5 Certified Reference Material Insert Performance

Four of six CRM inserts, BL-1, BL-4, RL-1, DL-1a returned results within three standard deviations (3 SD) of the expected reference mean (Figure 11-7). BL1 returned results closest to the mean, BL-4 and RL-1 inserts reported below and above the mean, but within or on 3 SD; DL-1a inserts reported close to +3 SD with one sample reporting above 3 SD.

Figure 11-7
CRM performance of BL-1, BL-4, RL-1 and DL-1a inserts.



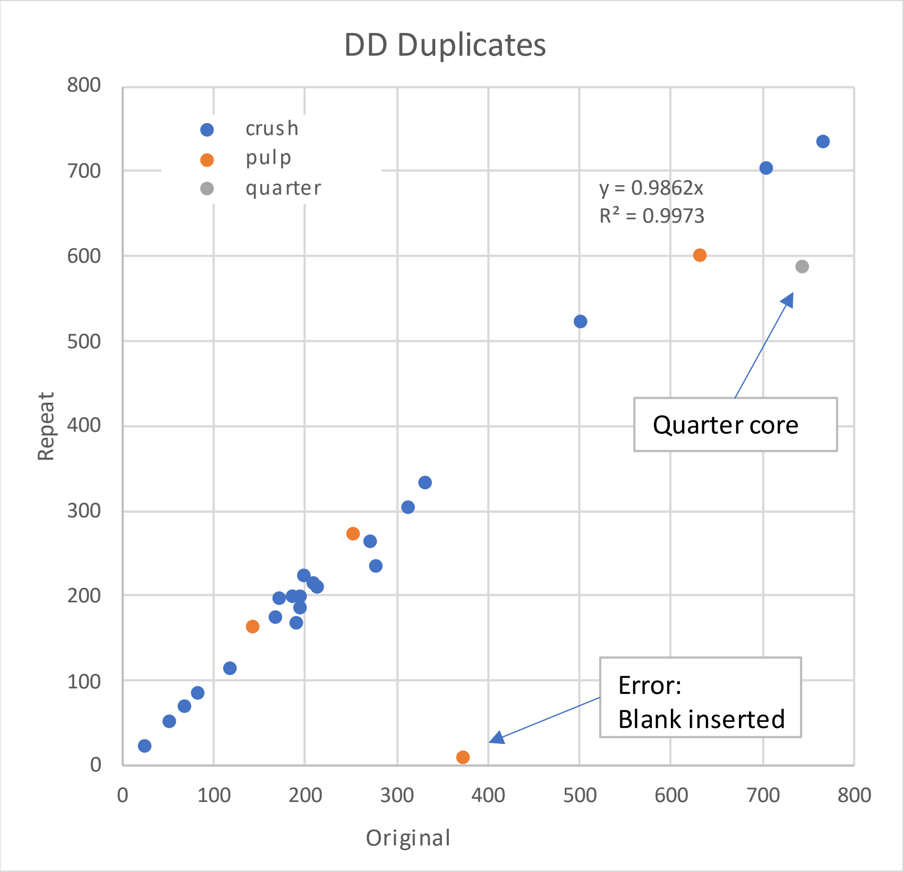
The BL-2a and BL-4a inserts reported values substantially below the expected mean (Figure 11-8), indicative of an incorrect mean value expectation. VUL do have not determined why these two inserts in particular have reported as they have and are in the process of investigating.

Figure 11-8
CRM performance of BL-2a and BL-4a inserts

11.7.6 Duplicates

Duplicates inserted into the laboratory submission stream by VUL showed good repeatability among the coarse crush splits of drill core. A single quarter core split does not indicate any meaningful information but does plot away from the main groupings on the 1:1 line. Pulp splits plot with good correlation between pairings (Figure 11-9). One sample swap was observed, and the results discarded by VUL.

Figure 11-9
Coarse split, pulp split duplicates and a quarter core duplicate submitted to the TEA lab from the 2023 drilling programme



11.7.7 2023 QAQC Assessment

The CRM insert performance is adequate for BL-1, BL-4, and RL-1 with RL-1 bias high in the ~2,000 ppm U range relative to the bias low in BL-1 and BL-4 (220 ppm U and ~1 730 ppm U, respectively). CRM DL-1a has three of four results within or close to +3 SD of the expected mean (116 ppm) and indicative of a bias high in this range. CRM BL-2a and BL-4a are interpreted as incorrectly labelled or as having incorrectly assigned mean values. The six results for BL-2a and BL-4a are well below the expected mean, but reasonably consistent; BL-2a results have a range of 292 ppm about a mean of 3,198 ppm, and a standard deviation of 90.5 ppm. The three results for BL-4a have an average of 1,168 ppm and a range of just 45 ppm.

There are 64,543 assays >40 ppm U_3O_8 in the Valencia Resource Estimate (kriging) and 749 samples represented by the 28 CRM inserts of the 2023-2024 drill programme. The nine CRMs in the BL-2a and BL-4a results population account for approximately 241 samples or 0.37 % of the assays >40 ppm U_3O_8.

It is recommended that future sampling efforts exclude the BL-2a and BL-4a CRM material from the QAQC insert list and replace with alternative references that are matrix matched and at appropriate grades for the deposits at Valencia and Namibplaas.

Certified references that were on hand at the Valencia camp were surplus stock from previous projects (pre-2015). These CRMs represent a broader range of grades, 116 ppm U to 4,260 ppm U mean values, than what is expected at Norasa (all assays are <1,500 ppm). In addition, these CRMs are all derived from Canadian uranium deposits and are approximate matrix matches being derived from granite related vein-type deposits. The 'DL-1' and 'RL-1' CRMs however are derived from palaeoplacer and unconformity type deposits, respectively, and both of these CRMs are out for the expected range for the Norasa Project deposits.

The logging and sampling process was observed and was conducted satisfactorily in the conditions at hand. QAQC inserts were done on site for the certified reference material CRMs and blanks, while coarse and pulp duplicate sample intervals were prescribed to the lab, except where ¼ core was submitted as a field duplicate.

CRM inserts are adequate, but three of the six in use are out of the range of the expected grades at Norasa, and two of the CRMs are not matrix matched, being derived from a palaeoplacer and from an Athabasca unconformity type deposit.

The QAQC insert ratio and procedure were adequate for the purposes of the programme in 2023.

11.8 Qualified Person's Opinion of the QAQC Measures

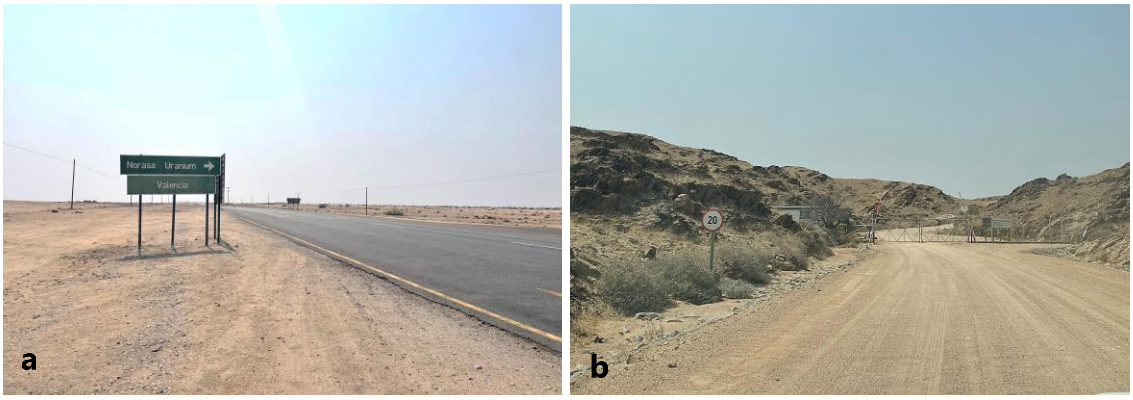
It is the QP's opinion that the QAQC measures and results demonstrate that the data for the 2023 drilling project are suitable for Mineral Resource Estimation.

Having reviewed the previous Technical Reports and associated data the QP is confident that the previous data (2005-2013) are suitable for Mineral Resource Estimation.

12 DATA VERIFICATION

A “Current Personal Inspection” was conducted the Qualified Person for the Mineral Resource, on the 1st and 2nd of September 2023. The Norasa Project was visited on the 29th of September and the designated assay laboratory, Trace Elements Analysis Laboratories’ (TEA Lab) Swakopmund facility was inspected on the 30th of September. The site is accessible from the B2 highway between Windhoek and Swakopmund and is clearly signposted in both directions (Figure 12-1a). VUL maintains the access road which crosses the Khan River via causeway, which helps to maintain site access during times of episodic river flooding. Entrance to the project area is controlled by a gate on the south side of the Khan River (Figure 12-1b). Alternatively, the site may be accessed by ‘D’ roads to the east of the project, from the towns of Karibib or Usakos.

Figure 12-1
Norasa Project road sign and Khan River access gate, ML 149, 01 September 2023



Note: ***(a) Norasa Project sign posting in both directions of the B2 highway. (b) The Norasa project Khan River gate.Norasa Project Site Inspection***

No drilling activity was underway at the time of the site inspection due to an end of month driller’s break. VUL laid out two sampled NQ drillhole cores (VA23RE-001 and -002) from the current 2023-2024 drilling project for inspection.

A Thermo Scientific RADEYE personal radiation detector (PRD) was used to inspect the mineralised portions of the drill core. The collar positions of both drillholes were located, along with a previous percussion hole, PD-325, a representative from a previous resource drilling programme.

Legacy, pre-2005, and previous, 2005-2013, drillhole core are stored in an open air yard, comprising rows of steel racks (Figure 12-2a), with legacy drill core in either wooden boxes or in trays of galvanised corrugated sheeting with wooden ends (Figure 12-2b). Previous VUL drill cores from the Valencia and Namibplaas deposits are stored in galvanised sheet steel trays (Figure 12-2c). Core tray markings have been maintained to varying degrees, and some have scribed aluminium label tags (Figure 12-2d). Previous laboratory pulp aliquots are stored in locked, forty-foot containers (Figure 12-2e) and arranged in labelled boxes on steel shelving (Figure 12-2f).

Figure 12-2

Norasa Project Core Yard at the Valencia Camp, ML 149, 01 September 2023

Notes: ***(a) Core shelving in the open-air core yard at Valencia Camp, ML 149. (b) Legacy core storage in trays of galvanised corrugated sheeting. (c) Previous VUL drill core stacked in the yard. (d) Previous core trays are labelled in various ways, some with scribed tags for posterity. (e) Sample assay aliquots among other items are stored in two forty-foot sealed and locked containers. (f) Boxes of sample pulp aliquots are stored in labelled boxes on shelving in the containers.***

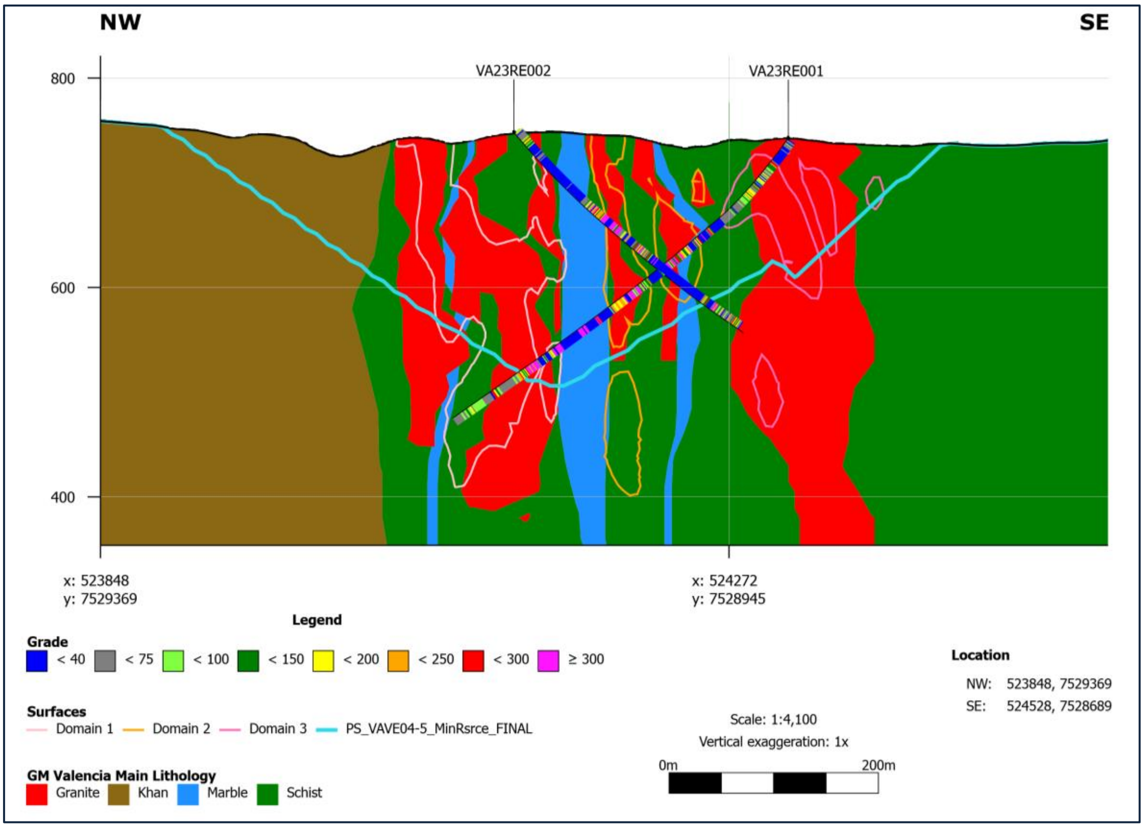
12.1 Logging and Markup

The Hartmann Geoservices on site geologist confirmed that lithological logging and sampling procedures were in line with previous lithological logging protocols in order to ensure integration of new data into the existing database.

The diamond drillholes being processed at the time of the visit included Va23-RE001 and Va23-RE002, Metallurgical drillholes PQ001 and PQ003 were also on display for observation purposes. Both holes have an RC drill pre-collar drilled toward the anticipated depth of the alaskite hanging wall contact. This contact depth is guided by data from the surrounding resource drillholes and the geological model (Figure 12-3). Core logging is undertaken by the geologist using a printed log sheet that carries the protocols over from the previous Valencia programmes. Important contacts (Formations) and the prominent modelled lithological units are logged, along with conventional mineral, alteration and ore mineral observations.

RC chips are logged on printed logging sheet on a metre basis. Major rock units and contacts are recorded for modelling purposes. Conventional mineral, alteration and ore mineral identification and logging is undertaken throughout the drilled interval.

Figure 12-3
Traces of the VA23-RE001 and VA23-RE002 DD holes at Valencia



Note: *Pit shell is the 2024 40 ppm, \$120/lb* U_3O_8 *pit shell. Outlines are the 2024 MRE model domains. Geology from K Hartmann, 2023.*

12.2 Diamond Drill Core Sampling

Diamond drill core sampling starts at the first alaskite contact and runs on a metre-length basis within single lithologies. Sample runs stop in country rock (waste) where the length to the next alaskite contact exceeds 1 metre. The last sample in the hole stops at the footwall contact with the lowermost alaskite, in the holes on display this is the Khan Formation contact. The sampling is also guided by a handheld scintillometer, to assist with differentiating between barren granite pegmatites, and the mineralised alaskites, as well as to identify areas where mineralisation ingress into the country rock may occur (marble contact in PQ-001, Figure 12-4b).

Diamond drill cores are marked for sampling on a metre basis and split in half by means of a diamond blade portable rock splitter. At the time temporarily mounted on a rack at the core yard. Sample identification is marked on both halves of the split core (marked core in RE001, Figure 12-4b). Mineralised core is recognisable visually by a distinctive white feldspar coloration and dark smoky quartz, the smoky quartz being a diagnostic indicator of radiation (from uranium).

Figure 12-4

Mineralised core intersections at marble contact VA23-RE001, and core marked for sampling, VA23-PQ001

Note: ***Observations of drill core from hole Va23-RE001 (a) Elevated counts (>1,000 cps vs 65 cps background) on the PRD indicate the presence of uranium mineralisation at a reactive country rock contact. (b) Typical mineralised alaskite material with grey coloured smoky quartz. Smoky quartz is caused by radiation damage and therefore indicative of uranium mineralisation. (c) Run (124 m) of diamond core showing three D-type alaskite veins (white) and pink C type alaskite at the base.***

12.2.1 QAQC Inserts

Forsys employs a QAQC programme with Certified Reference Materials (CRMs), blanks, coarse duplicates and pulp duplicates inserted into each batch of samples. The QAQC insert rate comprises 4 % CRMs using three CRM types with different grades of U_3O_8; 4 % blanks and 8 % to 10 % duplicates. RC sample batches have three types of duplicates; a field duplicate split at the drill rig; a coarse duplicate split at prescribed intervals at the laboratory; and pulp duplicates, also split at the laboratory. Core samples only have coarse and pulp duplicates split at the laboratory. CRMs in use at the time of the visit are shown in Figure 12-5.

Four percent of the samples sent to TEA Labs are sent for check analyses at SGS Laboratories (SGS) in South Africa, which serves as the independent accredited laboratory. The sample results are further validated by comparison with the radiometric scans.

Drilled collar positions for the resource holes VA23-RE001 and RE002 were visited, and positions noted. Collar positions of previous percussion holes were also observed (Figure 12-6).

Figure 12-5
CIM certified uranium references for QAQC insert

Note: ***Certified reference material jars in use at the time of the QP personal inspections site visit (a) CANMET BL-2a CRM, 4,260 ppm U (b) CANMET BL-4 CRM, 1,730 ppm U (c) CANMET DL-1a CRM, 116 ppm U.***

Figure 12-6
2023 collar position fro VA23-RE001, and historic PD collar PD-325

Note: ***(a) Collar position of VA23-RE002, Valencia Main deposit, ML 149. (b) Historic hole PD-325 collar position, Valencia Main deposit, ML 149.***

12.3 Trace Element Analysis Laboratory Inspection

The Trace Element Analysis Laboratories (TEA) facility in Swakopmund was visited on the 2nd of September 2023. The facilities are a new setup in the town and at the time of the visit, a laboratory information management system (LIMS) was not yet in place. The sample receipt area was clean and neatly arranged, a delivery of samples was made at the time of the visit and the sample receipt, sample sequence collating, and job registering were observed.

The sample preparation takes place in a separate building on the premises (Figure 12-7a) and includes a jaw crusher (Figure 12-7b), a rotary splitter for coarse fraction (Figure 12-7c), two swing mills (Figure 12-7d), sieve stacks (Figure 12-7e), and a drying oven (Figure 12-7f).

The laboratory’s analytical facility includes a sample receipt bay (Figure 12-8a and b) equipment for preparing and weighing pulverised aliquots (Figure 12-8c) and two Shimadzu Z200 XRF analysers (Figure 12-8d). The facility can run 24 XRF pellets at a time between the two analysers.

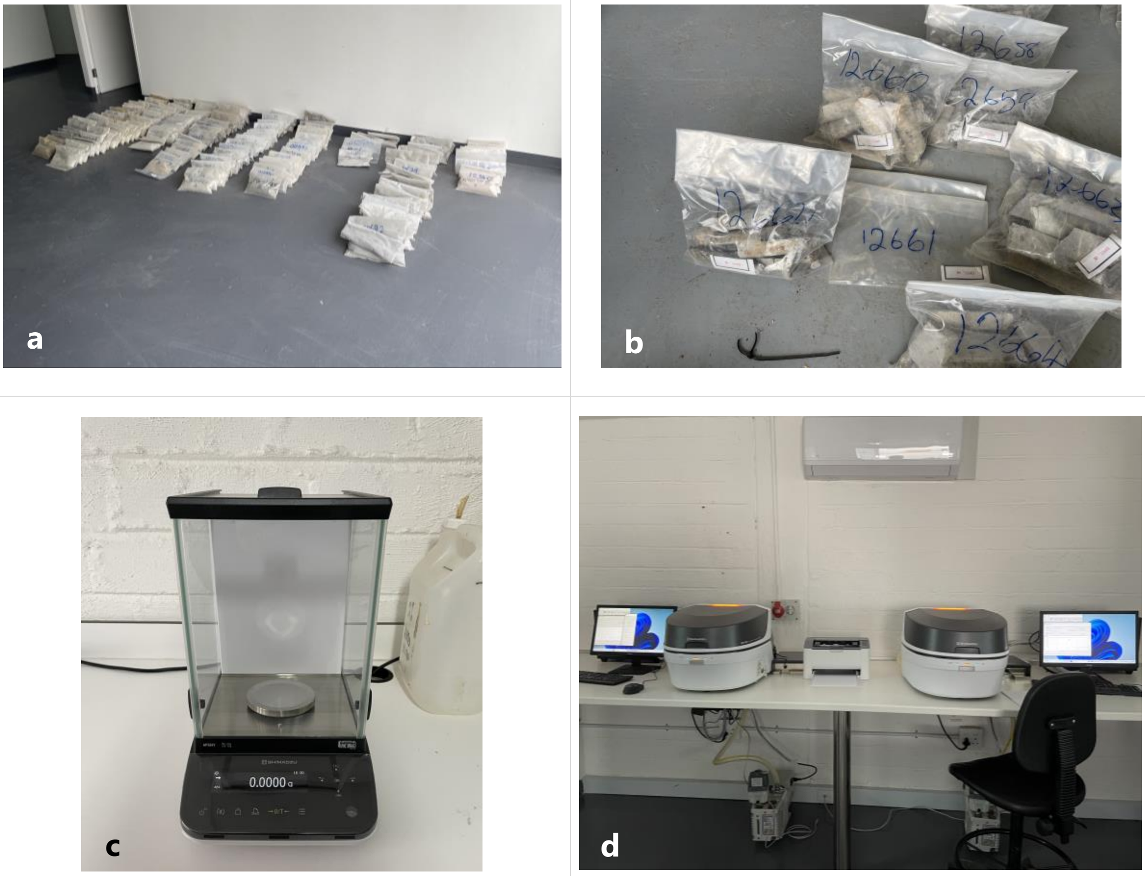
The laboratory makes use of the Swakop Uranium and Langer Heinrich mine laboratories for external round robin check assays as part of its QAQC programme.

Figure 12-7

Crushing and milling apparatus at the TEA Laboratory, Swakopmund, 02 September, 2023

Note: ***(a) External sample preparation facility (b) Jaw crusher. (c) Coarse rotary splitter. (d) One-pot swing mill. (e) Sieve stack. (f) Drying rack and oven.***

Figure 12-8
Crushing and milling apparatus at the TEA Laboratory, Swakopmund, 02 September, 2023



Note: ***(a) Sample receipt area. (b) VUL core samples as received by the laboratory. (c) Digital balance for pulps. (d) TEA Labs' two desktop XRF analysers (both Shimadzu EDX 7200).***

12.4 Qualified Person's Opinion of the QAQC Measures

As a result of the verification work undertaken by the QP, the QP considers that the VUL data is adequate for Mineral Resource Estimation.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 Introduction

Metallurgical testwork has previously been conducted by SGS Randfontein and the South African Council for Mineral Technology (Mintek) across numerous programmes, primarily focusing on flowsheet development for a tank leach configuration. The results are documented in the Technical Reports of June 2009 and March 2014. With the subsequent adoption of a heap leach processing route, more recent and relevant testwork performed at SGS Laboratories (SGS) in Johannesburg, South Africa, is discussed in the sub-sections below.

13.2 Testwork Approach and Sample Selection

The initial laboratory scale testwork campaign aimed to gauge the amenability of the mineralised material for a heap leach application. This campaign was divided into two distinct phases, taking into account the different lithologies and operating parameters:

- Phase 1 focused primarily on testing predominantly alaskite samples from the Valencia deposit.
- Phase 2 of the campaign entailed testing a composite of alaskite, marble, and schist samples, from the Valencia deposit representing the approximate blend of mineralised material over the life of mine.

The bulk samples comprised fresh rock material from diamond drillhole cores. The initial leach test sample for phase 1 of the column leach testing was composed of alaskite material only. The second sample for phase 2 of the column leach testing was made up of mineralised material and country rock types in proportions of approximately 72 % alaskite / granite lithologies, 13 % marble and calc-silicate rock, and the remaining 15 % comprising different types of unmineralised schists and gneisses. This campaign was developed and conducted to inform an initial understanding of uranium recoveries, acid consumption and leach cycle time required for a heap leach processing route. These testwork outcomes serve as a basis for advancing into a more detailed and comprehensive laboratory testwork phase and eventually establishing a piloting facility on site.

13.3 Column Leach Testwork Discussion

13.3.1 Scope of Testwork

Leaching testwork at SGS has been comprised of bottle roll testing, followed by column leach testing. The column dimensions used in the tests were 2 m high by 150 mm in diameter with 25 L bottles used for the bottle roll tests.

Thirty-four bottle roll leach tests were completed to guide conditions for the column testing programme during phases 1 and 2 of the campaign.

Phase 1 of the testwork programme focused on a composite sample primarily hosted in alaskite, with a head grade of approximately 187 ppm U_3O_8. Various crush sizes were examined after preparation in a laboratory-scale cone crusher to achieve a targeted particle size distribution (PSD). Crush sizes assessed included top sizes of 4.75mm, 6.7mm and 8mm.

Subsequently, the second phase evaluated three distinct mineralised samples sourced from different locations within the Valencia deposit, characterised by varying lithologies. These samples exhibited head grades ranging from 136 ppm U_3O_8 to 201 ppm U_3O_8, with an increased presence of marbles, schists, and country rock lithologies. Crush sizes assessed ranged from a top size of approximately 6.7 mm to 8 mm.

13.3.2 Additional Quality Assurance Checks

In addition to quality assurance and control measures established by SGS Randfontein and their standard operating processes, numerous repeat assays and external laboratory assays were completed during the programmes to interrogate the data set and critique accountabilities. Phase 2 column leach tests were conducted in duplicates for repeatability.

13.4 Testwork Results

The testwork results have yielded varying recoveries and sulphuric acid consumptions as a function of the operating parameters tested:

- Phase 1: Six column leach tests (including duplicates) were completed on predominantly alaskite samples, yielding uranium extractions ranging from 77% to 87% (average of solid and solution-based recovery) with acid consumption rates ranging from 17 kg/t up to 22 kg/t on the varying crush sizes tested. A leach cycle duration of up to 45 days was tested. Redox potential and pH targets were kept the same for all the tests.
- Phase 2: A further ten column leach tests (including duplicates) were completed on samples sourced from various parts of the mineralised material at Valencia, encompassing country rock and marbles. During these tests, uranium extractions ranged from 69% to 85% (average of solid and solution-based recovery) dependant on leach operating conditions at a leach cycle duration of 30 days. Acid consumption ranged from 23 kg/t up to 38 kg/t on varying crush sizes. Redox potential and pH targets were kept the same for all the tests. Acid irrigation rates and the use of flocculant as binder were included in the variables tested.

In addition to the outcomes mentioned above, the testwork campaign yielded the following observations and inferences:

- Enhanced leach kinetics were noted in the latter part of the programme, attributed to the acid curing procedure conducted prior to sample introduction into the columns.
- Comparative tests carried out at higher irrigation rates demonstrated improved leach kinetics and recoveries.
- Preliminary evaluation of using flocculant as a binder warrants further investigation, potentially contributing to enhanced leach kinetics and recoveries.
- The impact of crush size remains inconclusive at present. While some comparative tests indicate that finer crush sizes result in higher uranium extractions, others show no discernible effect. This aspect will be further investigated in the subsequent phase of the programme, with particular emphasis on the utilisation of high-pressure grinding roll (HPGR) crushing.

Existing literature suggests a potential increase of between 4% to 6% in metal extractions in heap leach operations with HPGR crushing compared to conventional crushing methods.

- The grade-recovery relationship remains partly defined, but preliminary observations suggest a correlation between grade and its subsequent impact on recovery. Initial tests indicate that lower grades result in lower recovery rates, although the precise extent of this relationship is planned for further investigation in the next phase of the campaign.
- The acid consumption for the alaskite samples averaged approximately 17 kg/t for coarser crush sizes, with higher consumption observed for finer sizes. In the second part of the test programme, acid consumption increased to up to 38kg/ton with the marble-containing samples. Optimisation of acid consumption, acid strength, irrigation rates, cycle duration and crush size are all planned for the next phase of the campaign.
- Uranium grading analyses conducted on the alaskite sample leach residues revealed a higher proportion of uranium remaining in the coarser end of the size range, whereas the finer end of the size spectrum exhibited minimal uranium content. This suggests a potential liberation challenge, which will be investigated further in the next phase of the campaign, particularly with the utilisation of an HPGR crushed product.

14 MINERAL RESOURCE ESTIMATES

The Mineral Resources are presented herein, with an effective date of 14 May 2024. The results are reported from recent remodelling of previous drilling data (2005-2013) and recent (2023) drilling results. It is the QP's opinion that the drilling data were collected in accordance with The Canadian Institute of Mining, Metallurgy and Petroleum (CIM) "Exploration Best Practices Guidelines", 2018. To the best of the QP's knowledge there are currently no title, legal, taxation, marketing, permitting, socio-economic or other relevant issues that may materially affect the Mineral Resource described in this Technical Report.

The Mineral Resource was estimated using the 2019 CIM "Best Practice Guidelines for Estimation of Mineral Resources and Mineral Reserves" and classified in accordance with the "2014 CIM Definition Standards". It should be noted that Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.

The Mineral Resource estimate was conducted using Datamine Studio RM and Leapfrog Geo software. The Mineral Resource estimation was carried out by Mr. Michael Rohwer of Quantity Mine and reviewed and accepted by the QP.

14.1 Previous Mineral Resource Estimates

Mineral Resource Estimates for the Valencia deposit on ML149 were reported by the current owner in Technical Reports in 2007 and 2009 (Snowden, 2007, 2009) A Mineral Resource was estimated for the Namibplaas Uranium Project in 2011 (Optiro, 2011). Forsys produced a Mineral Resource Estimate in October 2013 for the Valencia deposit and the Namibplaas deposit which was included in the 27 March 2014 Technical Report (Forsys, 2014). AMEC Foster Wheeler reported an updated Mineral Resource Estimate for the Norasa Project in March 2015, including what was then the Valencia Satellite deposit (now referred to as Valencia East). The updated estimate included a revised classification reporting Inferred and Measured and Indicated Mineral Resources at 100 ppm U_3O_8 with sensitivities illustrated at 60 ppm U_3O_8, and 140 ppm U_3O_8.

The Mineral Resource Estimate as at 14th May 2024 supersedes all previous Mineral Resource Estimates for the Norasa Project.

14.2 Mineral Resource Estimation Database

The database informing the Mineral Resource estimate consists of:

- Percussion, Reverse Circulation (RC) and diamond drillhole data, including:
  - Collar surveys.
  - Downhole surveys.
  - XRF Assay data.
  - Gamma Probe uranium equivalent data.
  - Geology logs.
- Topographic LiDAR survey in the WGS84 / UTM 33S coordinates system.

The database consists of separate .csv files and a drilling summary report provided by the Project Geologist, Mr. K. Hartmann, with file names as presented in Table 14-1.

Table 14-1
Valencia and Namibplaas database files

Project	Files Received
ALL	2023_230526_BH grade KH draft memo.docx
Valencia Main	VA_Collar_Feb23.csv
	VA_Survey_Feb23.csv
	VA_Grade_Feb23.csv
	VA_gamma_1m.csv
	VA_Assay_Feb23.csv
	VA_Litho_Feb23.csv
Valenica East	VE_Collar_Feb23.csv
	VE_Survey_Oct22_Feb23.csv
	VE_gamma1m_Feb23.csv
	VE_Litho__Oct22_Feb23.csv
Namibplaas	NA_Collar_Feb23.csv
	NA_Survey_Feb23.csv
	NA_Grade_Feb23.csv
	NA_Litho_Feb23.csv

A combined total of 787 drillholes were drilled at Valencia Main and Valencia East; 498 percussion holes (PC), 141 diamond drillholes (DD) and 148 reverse circulation drillholes (RC). A total of 570 drillholes were drilled at Namibplaas; 530 percussion holes and 40 diamond drillholes.

A summary of the drilling is provided in Table 14-2.

Table 14-2
Valencia and Namibplaas drillholes

Project	Drilling Type	Number of Drillholes	Lithology Intervals	Surveys	Gamma Assays (e U_3O_8)	XRF Assays (U_3O_8)
Valencia Main	PC	446	18 515	11 883	109 386	0
	DD	141			17 130	19 584
	RC	148			10 200	11 077
Valencia East	PC	52	688	739	6 513	0
	DD	0			0	0
	RC	0			0	0
Namibplaas	PC	530	11 808	11 774	104 869	0
	DD	40			8 827	3 809
	RC	0			0	0

Note: *PC =* ***Percussion; DD = Diamond Drilling; RC = Reverse Circulation***

The position and type of drillhole is shown for Valencia Main and Valencia East in Figure 14-1 and the same for Namibplaas in Figure 14-2.

Figure 14-1
Drillholes completed at Valencia Main and Valencia East

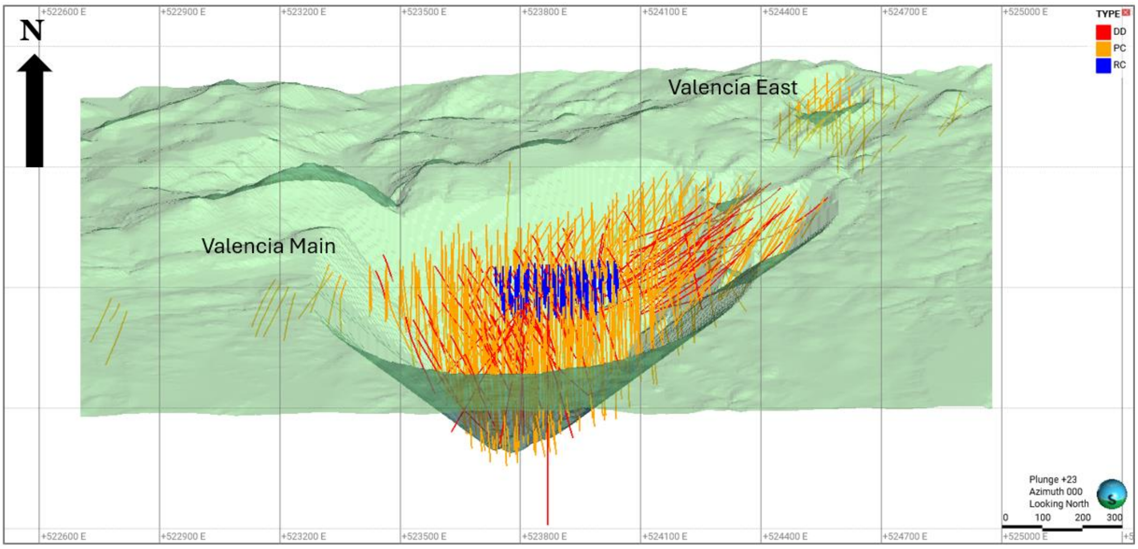
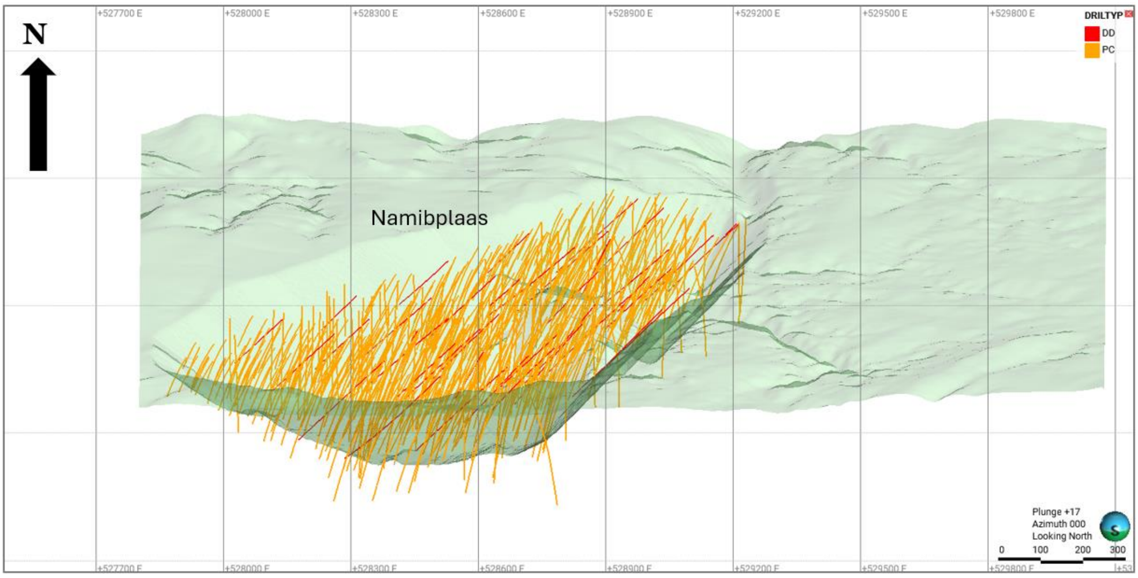


Figure 14-2
Drillholes completed at Namibplaas



The Valencia Main drilling includes close-spaced RC drilling in the higher-grade central region of the deposit. No RC drilling was completed at Valencia East or Namibplaas.

14.3 Exploratory Analysis of the Raw Data

The dataset consisted of sampling and logging data from diamond drillholes, RC and percussion drillholes.

14.3.1 Data Validation

A high-level validation process included the following checks for both the Valencia and Namibplaas data:

- Examining the sample assay, collar survey, down-hole survey and geology data to ensure that the data are complete for all the drillholes.
- Examining the de-surveyed data in three dimensions to check for spatial errors.
- Examination of the assay and density data to ascertain whether they are within expected ranges.
- Checks for “FROM-TO” errors, to ensure that the sample data do not overlap one another or that there are no unexplained gaps in the sampling.

14.3.1.1 Valencia Main and East Data Validation Results

No survey data were available for the zero interval for several holes at Valencia Main (VA26134, VA26135, VA26136, VA26137, VA26138, VA26139, VA26140 and VA26141). This interval was corrected to reflect the information of the consecutive interval.

Eighteen minor overlapping samples were identified in the Valencia Main data and were corrected after consultation with Mr. K. Hartmann. The corrections were applied to the “FROM” field. One “FROM / TO” error was corrected in the probe assay data. One duplicate “FROM / TO” interval was removed from the XRF assay data.

Extreme assays were checked, and no errors were found.

No errors were found in the Valencia East database.

14.3.1.2 Namibplaas Data Validation Results

There are no unresolved errors relating to missing intervals, duplicates and any overlaps in the drillhole logging data.

Two drillholes, NA24-041 and NA24-042, were removed from the database as no collar or grade information was available despite there being downhole survey data for both holes.

Examination of the drillhole data in three dimensions shows that the collars of the drillholes plot in their expected XY spatial positions. The drillholes collars were projected vertically onto the topographic surface to ensure there were no minor discrepancies between the topography and drilling elevations.

Extreme assays were checked, and no errors were found.

14.3.2 Statistics of the Raw Sample Data

14.3.2.1 Sample Lengths

Drillhole sample lengths vary from 0.01 m to 6.54 m at Valencia with a mean of 0.96 m. At Namibplaas, sample lengths vary from 0.01 m to 5.4 m with a mean of 0.97 m. The majority of the RC samples and percussion samples were collected in 1 m intervals. Samples were therefore composted to 1 m within each mineralised domain.

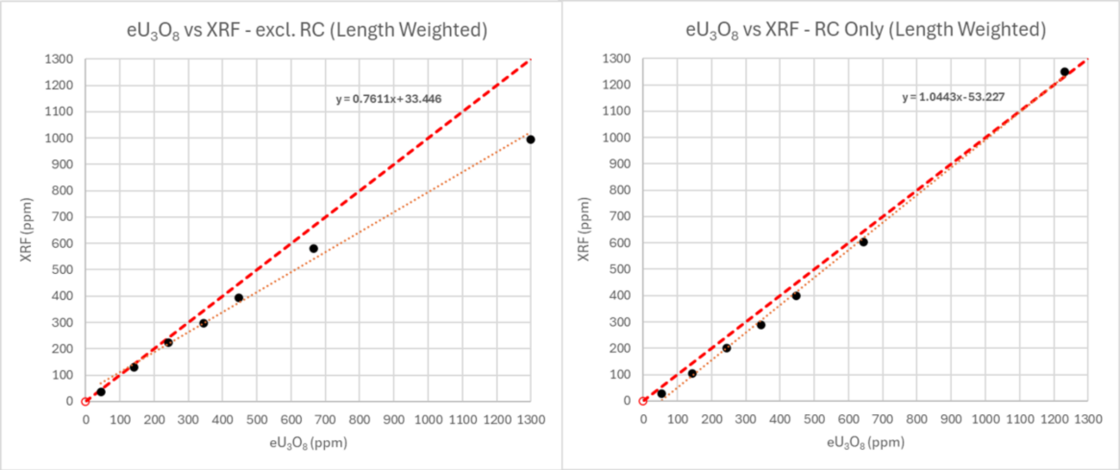
14.3.3 Bias Tests

14.3.3.1 Valencia Main and East Bias Test

The probe-derived U_3O_8 equivalent (eU_3O_8) and XRF sample values (U_3O_8) of 25,352 data pairs were compared statistically. The eU_3O_8 equivalent values show consistent, systematic, high-grade bias relative to the chemically assayed XRF values and are typically in the order of 10% to 20% higher than the XRF values.

Figure 14-3 (left) indicates that the diamond drilling has a closer correlation between XRF and eU_3O_8 at lower grades compared to higher grades. Observation of the RC drilling data only, shown in Figure 14-3 (right), indicates closer correlation at higher grades and poorer correlation at lower grades.

Figure 14-3
Scatterplot of the eU_3O_8 vs XRF DD data (left) and XRF RC data (right)



A conversion was calculated using the 2023 data that had pairs of XRF assay data and eU_3O_8 values to determine representative values for the gamma probe only data. The same conversion was applied to the 2005-2011 probe data that did not have XRF assays. The updated conversion reconciles the eU_3O_8 values with the XRF data over the typical grade range of the deposit. The conversion equation is as follows:

$$eU_3O_8 = (gamma - 78) / 6.06$$

The XRF and calculated equivalent grade (eU_3O_8) fields were combined to create a "best value" column (GRD). The "best value" was preferentially assigned the XRF value and the eU_3O_8 value was only assigned to the "best value" field in the absence of XRF data. At Valencia, approximately 25% of the assay data is XRF data.

14.3.3.2 Namibplaas Bias Test

A comparison between the percussion and diamond drilling data at Namibplaas was undertaken to determine the presence of any systematic differences between the datasets. The cumulative frequency distributions of the eU_3O_8 data indicate similar distributions and the summary statistics also indicates similar global statistics (Table 14-3) between the two types of drilling data.

Table 14-3
Summary statistics of percussion and diamond drilling

Drilling Type	Number of Samples	Minimum eU_3O_8	Maximum eU_3O_8	Mean eU_3O_8	Variance	CV
DD	10,025	1.61	773.26	53.52	3,125.02	1.04
Percussion	106,338	1.52	13,504.29	56.37	6,566.46	1.44

The cumulative frequency distributions for eU_3O_8 and XRF data pairs of the diamond drilling were plotted for comparison. Differences in grades are more apparent below 75 ppm, as shown in Figure 14-4, with the eU_3O_8 grades being typically higher than the associated XRF grades within the 0 ppm to 75 ppm range.

Figure 14-4
Cumulative frequency distributions of eU_3O_8 and XRF in diamond drillholes

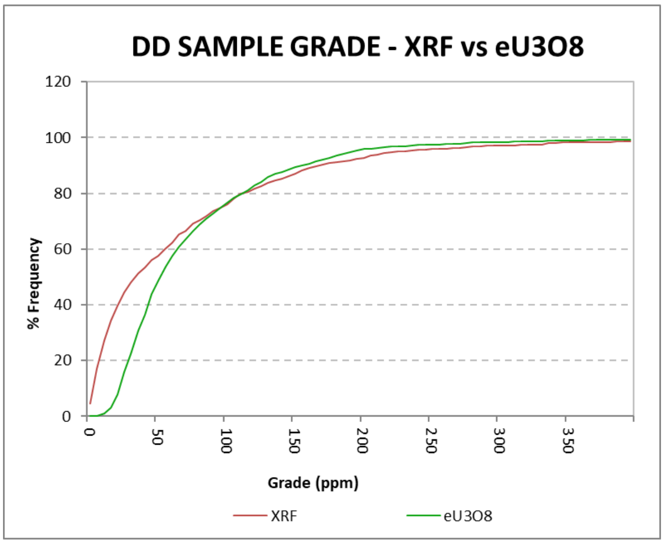


Table 14-4 presents a comparison of the eU_3O_8 and XRF data pairs in the diamond drillhole data, where both XRF and probe data are available.

Table 14-4
Summary statistics comparing eU_3O_8 and XRF data in diamond drillholes

Drilling Type	Number of Samples	Minimum eU_3O_8	Maximum eU_3O_8	Mean eU_3O_8	Variance	CV
XRF	3,044	2.00	1,990.00	81.11	12,107.32	1.36
eU_3O_8	3,044	7.02	773.26	84.04	5,489.75	0.88

Uranium is typically partially leached from the near-surface weathered zone while other elements such as thorium, are not amenable to leaching. The gamma readings in the weathered zone are therefore typically skewed by these other elements which contribute to a higher eU_3O_8 value than the corresponding XRF reading. As a result, the samples from the weathered material (up to 50 metres below surface (mbs)) were removed from the data which results in an improved correlation between the two analyses with only 1.8 ppm difference in the mean values (Figure 14-5 and Table 14-5), however a low bias in the XRF data remains for the lower grade data and a high bias in the higher grade data relative to eU_3O_8.

Figure 14-5

Cumulative frequency distributions of eU_3O_8 and XRF in diamond drillholes (excluding data from 0 to 50 mbs)

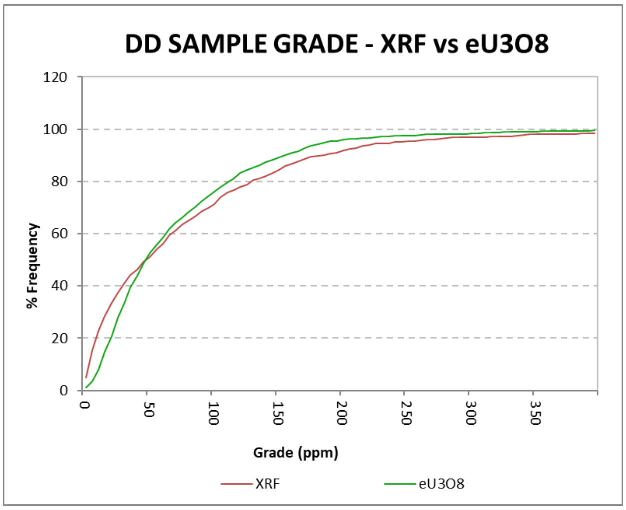


Table 14-5

Summary statistics comparing eU_3O_8 and XRF data in diamond drillholes (excluding data from 0 to 50 mbs)

Drilling Type	Number of Samples	Minimum eU_3O_8	Maximum eU_3O_8	Mean eU_3O_8	Variance	CV
XRF	2,355	2.00	1,990.00	92.83	13,295.39	1.24
eU_3O_8	2,355	10.25	773.26	91.03	6,022.20	0.85

At Namibplaas, approximately 3.5% of the assay data is composed of XRF data. The majority of the data used for estimation is composed of equivalent uranium grades (eU_3O_8), which are applied to the “best value” field (GRD) in the absence of XRF data.

14.4 Geological Modelling

Wireframe interpretations of the major lithologies were provided by Mr. K Hartmann. The lithologies modelled include:

Etusis:	Rock Type 1
Khan:	Rock Type 3
Marble:	Rock Type 4
Schist:	Rock Type 5
Granite:	Rock Type 6.

The mineralised domains were not constrained by the geological wireframes. A structural trend model was derived from the geological interpretation applied to the modelling of the mineralised domains. The structural trends modelled at Valencia Main and East is shown in Figure 14-6, and the structural trend at Namibplaas is shown in Figure 14-7. Densities were applied to the block model per rock type.

Figure 14-6
Structural trend at Valencia Main in plan (top) and section view (bottom)

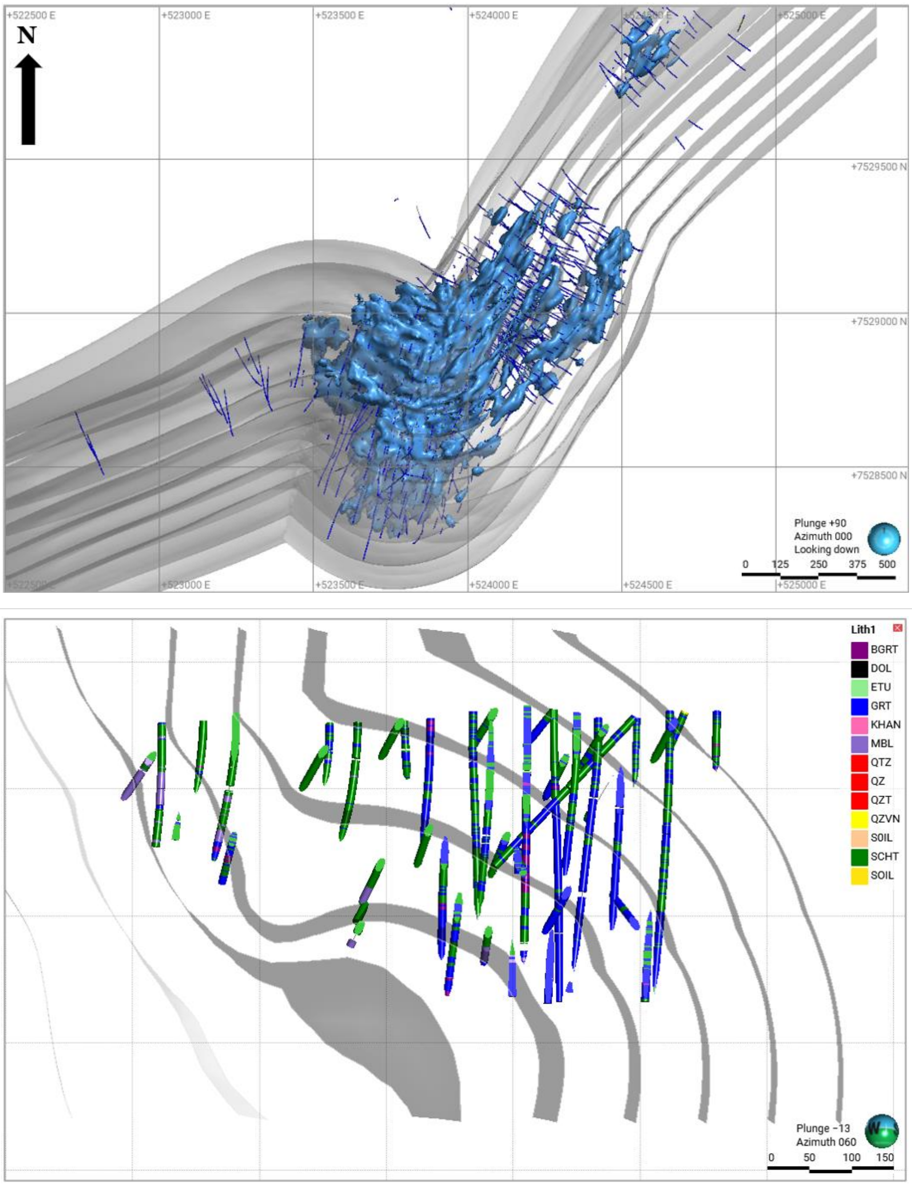
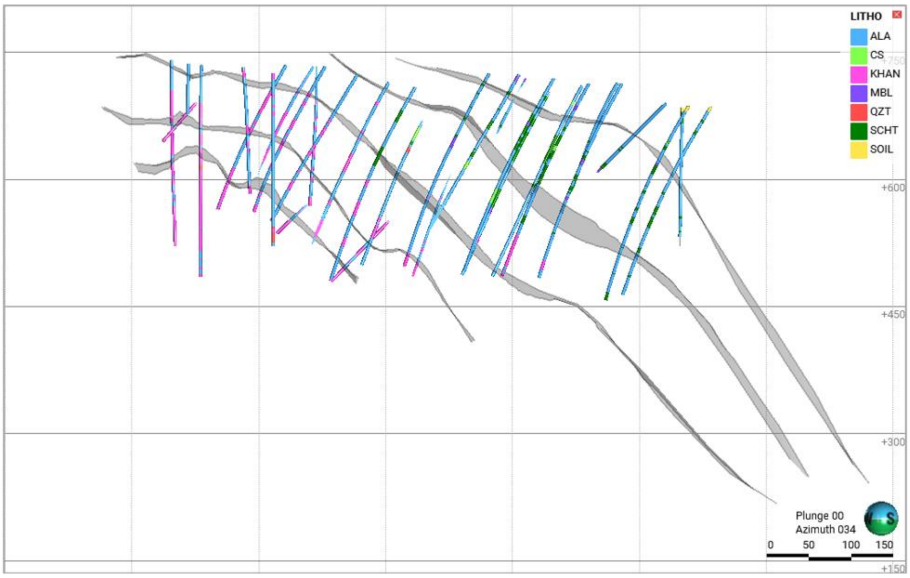


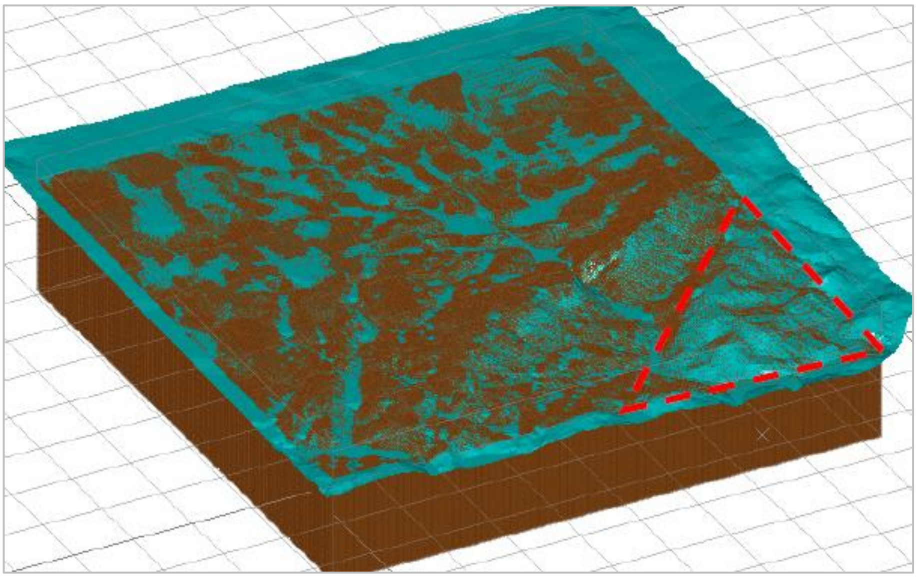
Figure 14-7
Structural trend at Namibplaas in section view



14.4.1 Topography

In 2023, an aerial topographic LiDAR survey was conducted over the Project area in the WGS84 / UTM 33S coordinate system. A small portion of the Project area was omitted from the 2023 surface (Figure 14-8) and this section was updated using the previous topographic surface to ensure the full extents of the block model were covered.

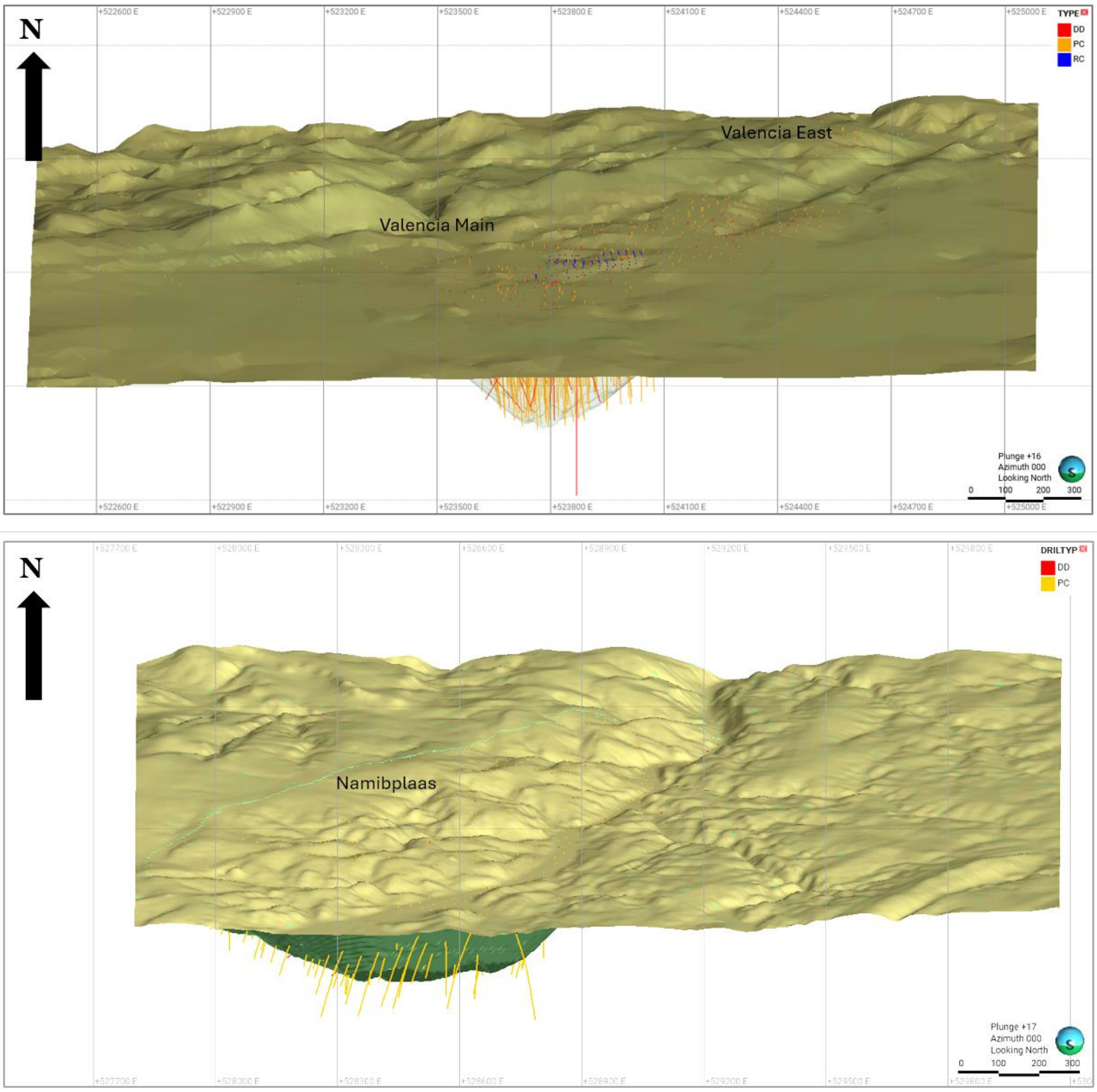
Figure 14-8
Topographic surface



The surveyed drillhole collars were projected onto the topographic surface to ensure there are no discrepancies between the high-resolution LiDAR surface and the drillhole collar positions. The topographic surfaces of Valencia Main and Namibplaas as shown in Figure 14-9.

Figure 14-9

Topographic surface of Valencia Main and Namibplaas



14.4.2 Mineralised Zones

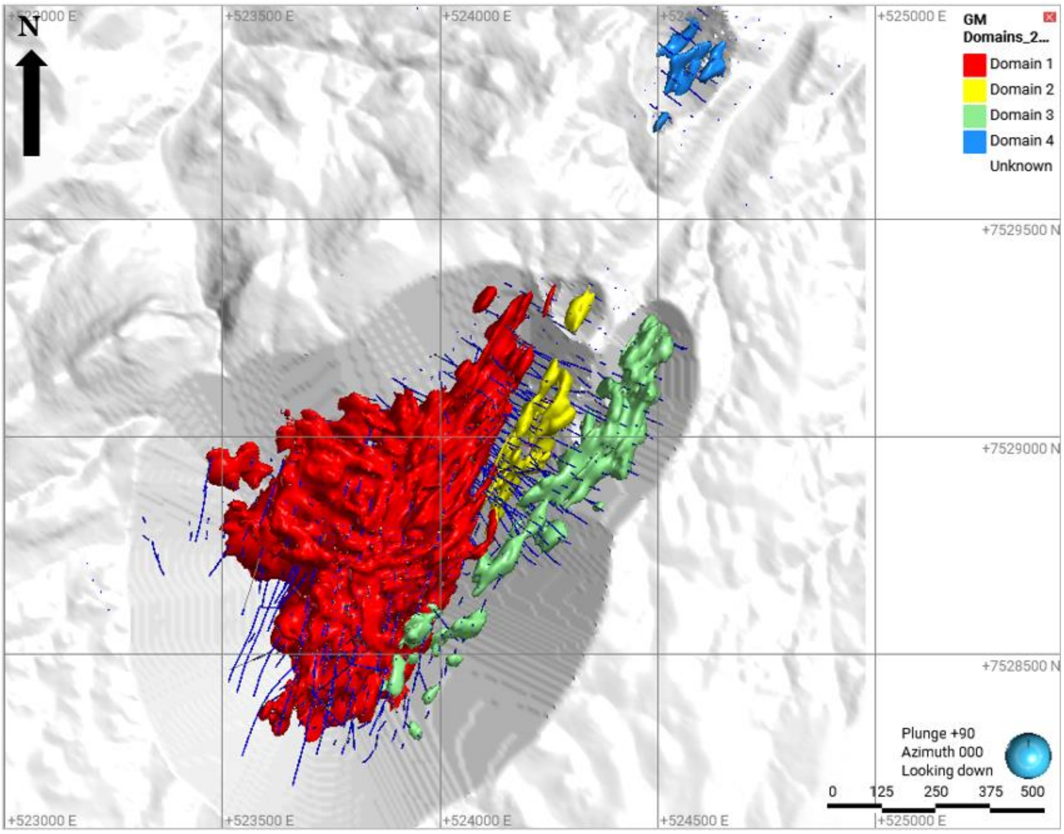
14.4.2.1 Valencia Mineralised Zones

Four mineralised domains at Valencia were defined using grade shells at a 40 ppm U_3O_8 threshold and guided by several explicit surfaces orientated along the direction of greatest continuity (Figure 14-10). The surfaces modelled include:

- A surface along a cross-cutting plunge direction in the axial planar region of the fold nose in the centre of the deposit (Domain 1).
- Along the strike and dip direction of the host metasediments. Three narrow, continuous marble bands were used to guide the orientation of the local strata. Strings interpreted along the marble unit's midpoints were digitised and used as a guide for the wireframe surfaces (Domains 2 to 4).

These surfaces combined were used to guide the grade shell modelling and estimation using the Datamine process of "Dynamic Anisotropy".

Figure 14-10
Valencia Main and East mineralised domains



Domain 1 (red) is the largest mineralised domain and is centred within the fold nose. Domains 2 and 3 (yellow and green), to the northeast of Domain 1, are narrow, stratigraphically parallel and steeply dipping. Domain 4 (blue) also known as Valencia East, occurs to the northeast of Valencia Main as a narrow, stratigraphically parallel, steeply dipping deposit.

14.4.2.2 Namibplaas Mineralised Zones

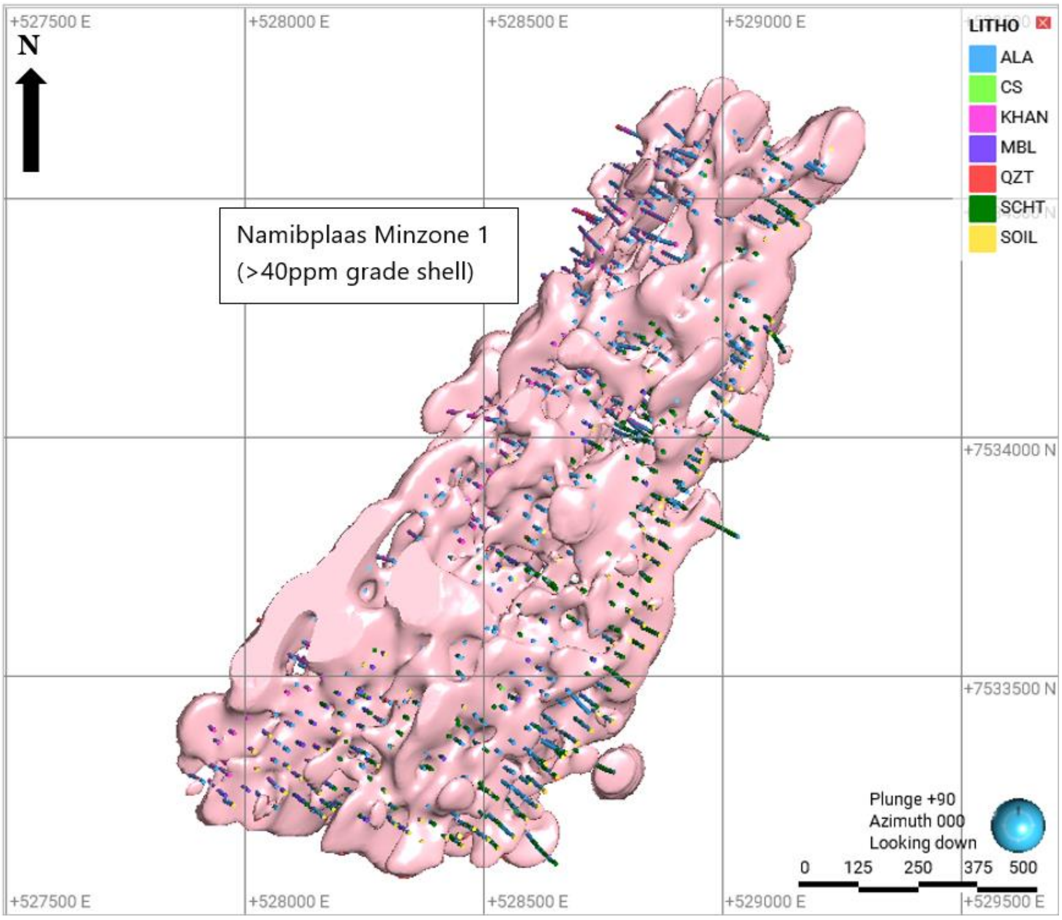
The mineralisation at Namibplaas is strongly associated with the granitic intrusions. A series of string interpretations of the mid-points of the stratigraphically parallel intrusions were digitized in cross-section. The strings were linked to create median surfaces of each of the alaskite intrusions

(Figure 14-11). The surfaces of the intrusions were then used to guide the orientation of the grade estimate through the Datamine process of "Dynamic Anisotropy".

Two domain volumes were created:

- a mineralised zone - Minzone 1; and
- an unmineralised or waste domain - Minzone 99.

Figure 14-11
Namibplaas mineralised domain Minzone 1



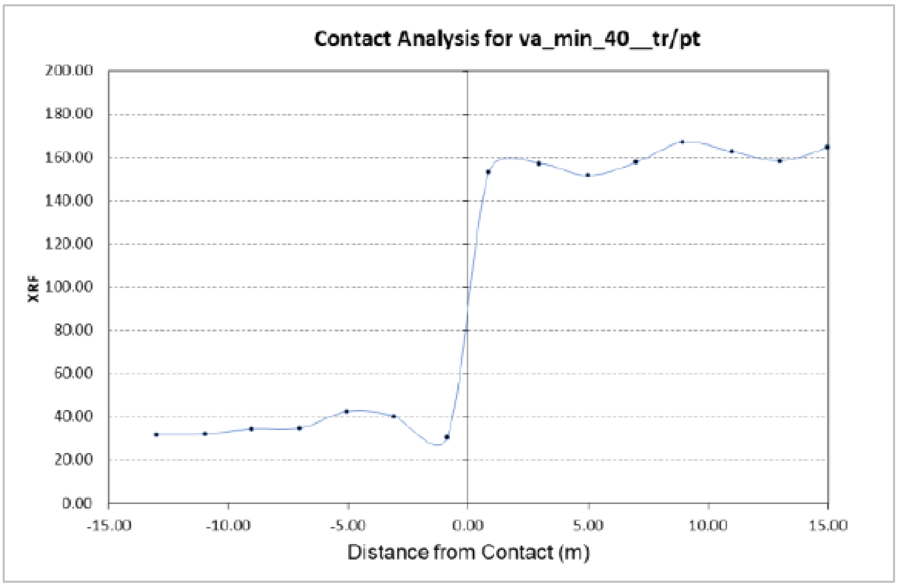
The "unmineralised" Minzone 99 fill the volume of blocks around the Minzone 1 domain.

14.4.3 Boundary Analysis

14.4.3.1 Valencia Boundary Analysis

A boundary analysis exercise was conducted to show the mean grade change at the contact of the mineralised domains (Domains 1, 2, 3 and 4) with the enclosing unmineralised / weakly mineralised domain (Domain 99). The sharp change in mean grade across the boundary indicates that a hard boundary is appropriate to use for estimation between the mineralised and unmineralised domains (Figure 14-12).

Figure 14-12
Valencia Main boundary analysis at the 40 ppm U_3O_8 contact

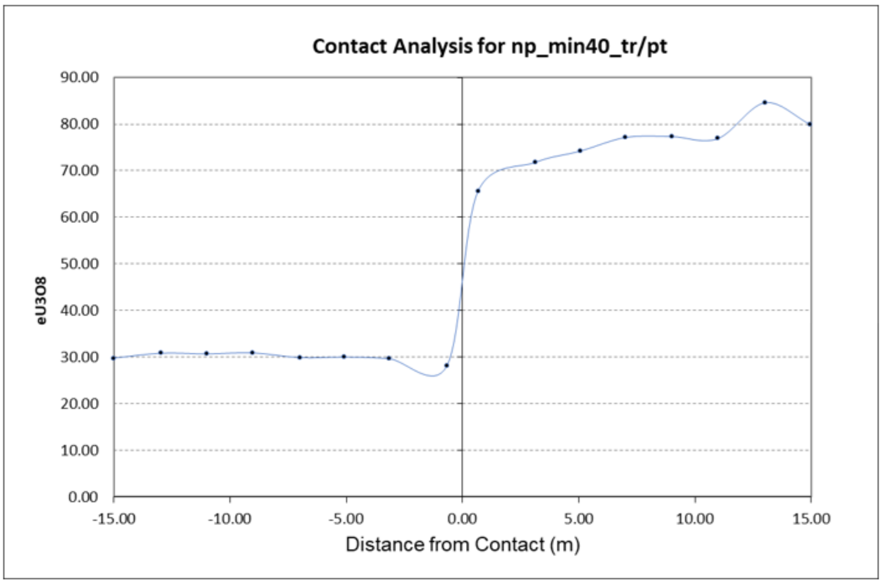


Source: *Rohwer, 2024*

14.4.3.2 Namibplaas Boundary Analysis

A boundary analysis exercise was conducted to show the mean grade change at the contact of the two domains (Minzone 1 and Minzone 99). The sharp change in mean grade indicates that a hard boundary between the two domains is appropriate for estimation (Figure 14-13).

Figure 14-13
Namibplaas boundary analysis at the 40 ppm U_3O_8 contact



Source: *Rohwer, 2024*

14.4.4 Oxidation / Weathering Surface

Uranium is typically partially leached near surface. This leach zone is considered to extend to an approximate depth of 50 m below surface at Namibplaas and Valencia. An oxidation surface has not been modelled to determine the exact depth of oxidation. The current available sample and logging data is not sufficient to model an oxidation or weathering surface.

14.5 Statistical Analysis of the Composite Data

14.5.1 Valencia Statistical Analysis

Samples were composited to one metre lengths based on the dominant sample interval. Compositing was carried out inside the mineralised domain and statistics were analysed for the "best value" (GRD) samples.

The following observations were made (Table 14-6):

- The log transformed distributions for the GRD grades are slightly positively skewed for Domain 1 and Domain 4, and near normal for Domain 2 and Domain 3. The waste Domain 99 is positively skewed.
- The mean values for the Domains 1 and 2 are significantly higher than Domain 3 and 4. Domain 99 is the waste domain and has a composite mean value of 25 ppm U_3O_8.

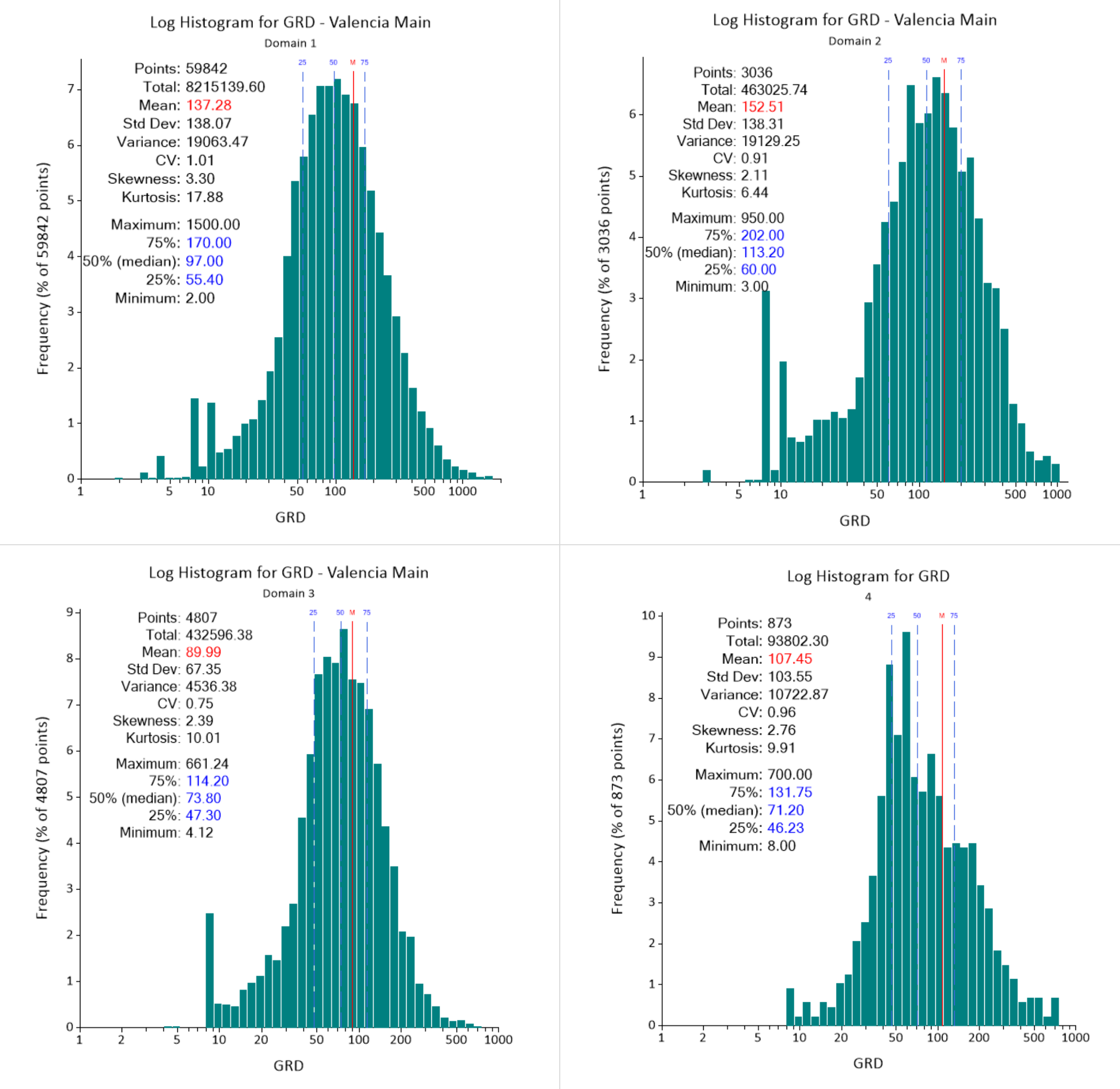
Table 14-6

Summary statistics of the Valencia Main and East best value (GRD) U_3O_8 ppm composites

Domain	Number of Samples	Minimum (U_3O_8)	Maximum (U_3O_8)	Mean (U_3O_8)	Skewness	Variance	CV
1	19,842	2.0	1,500	137	3	19,063	1.0
2	3,036	3.0	950	153	2	19,129	0.9
3	4,807	4.1	661	90	2	4,536	0.8
4	873	8.0	700	107	3	10,723	1.0
99	97,792	1.0	1,500	25	10	2,204	1.9

Log histograms of the composites for GRD ppm are shown for Domain 1 to Domain 4 in Figure 14-14.

Figure 14-14
Log histograms of the composite data for Domain 1 to 4



14.5.2 Namibplaas Statistical Analysis

Samples were composited to one metre lengths based on the dominant sample interval. Compositing was carried out inside the mineralised domain (Minzone 1) as well outside the mineralised domain (Minzone 99) and statistics were analysed for the "best value" (GRD) samples.

The following observations were made (Table 14-7):

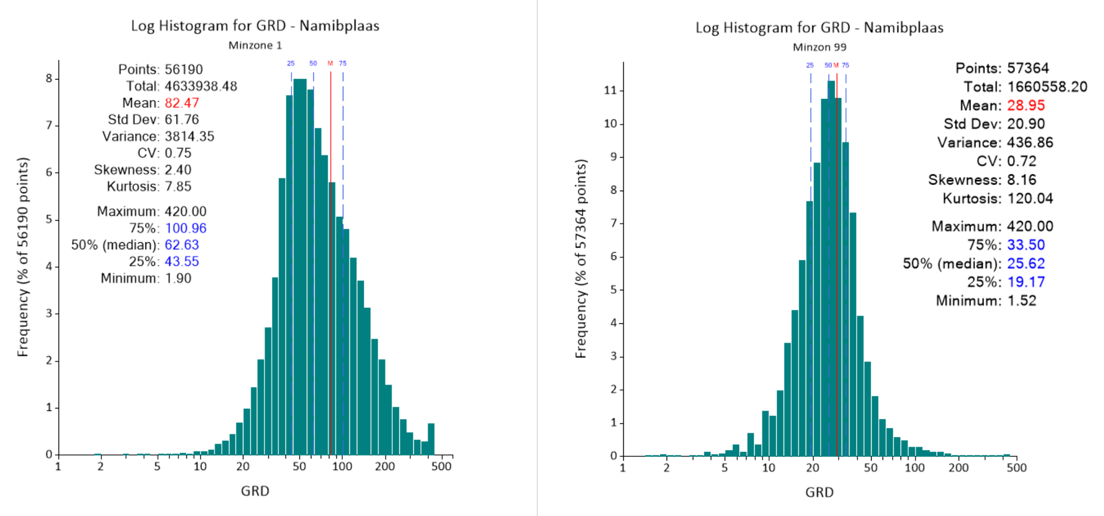
- The log transformed distributions for the GRD grades are slightly positively skewed for Minzone 1 and positively skewed for Minzone 99.
- The mean values for the two domains are significantly different. Minzone 1 has a mean value of 82.47 ppm and Minzone 99 has a mean value of 28.95 ppm.

Table 14-7
Summary statistics of Namibplaas best value (GRD) U_3O_8 ppm composites

Minzone	Number of Samples	Minimum (U_3O_8)	Maximum (U_3O_8)	Mean (U_3O_8)	Skewness	Variance	CV
1	56,190	1.9	420	83	2	3,814	0.8
99	57,364	1.5	420	29	8	437	0.7

Log histograms of the composites for GRD ppm are shown for Minzone 1 and Minzone 99 in Figure 14-15.

Figure 14-15
Log histograms of the composite data for Minzone 1 and Minzone 99



14.5.3 Cutting and Capping

An outlier analysis was completed on the composite data for the individual mineralised domains and capping was applied where applicable. The top cap at Valencia was applied as follows:

- Domain 1: 1,500 ppm
- Domain 2: 950 ppm
- Domain 3: 700 ppm
- Domain 4: 700 ppm
- Domain 99: 1,500 ppm.

At Namibplaas, a capped value of 420 ppm U_3O_8 was applied to both Domains 1 and 99. The capping impacted 352 samples in Minzone 1 and 45 samples in Minzone 99.

14.5.4 Geostatistical Analysis

14.5.5 Semivariograms

Experimental semivariograms were calculated on the normal scores transformed composite data for the eU_3O_8 data using Datamine software. Normalised semivariograms were calculated so that the sum of the variance is equal to one. Semivariograms were modelled using only the Domain 1 composites at Valencia and only the Minzone 1 composites at Namibplaas (Table 14-8).

The variogram model for Valencia Domain 1 was applied to Domains 2, 3 and 4 at Valencia, and Namibplaas Minzone 1 was applied to Minzone 99 at Namibplaas.

Table 14-8
Semivariogram parameters for Domain 1 (Valencia Main) and Minzone 1 (Namibplaas)

Area	Rotation Angle			Rotation Axis			Nugget Effect (C0)	Sill 1 (C1)	Range of First Structure (m)			Sill 2 (C2)	Range of Second Structure (m)		
	1	2	3	1	2	3			1	2	1		1	2	3
Domain 1	180	50	0	Z	X	Z	0.231	0.526	60	60	4	0.243	180	180	15
Minzone 1	180	50	0	Z	X	Z	0.083	0.078	11	27	6	0.135	34	59	46

14.6 Block Modelling

Block models were generated for each project using 30 m by 30 m blocks in the X (easting) and Y (northing) directions and 5 m blocks in the Z (elevation) direction. The block model was not rotated.

Sub-celling was applied to optimally fill the modelled wireframes, resulting in a minimum sub-cell of 7.5 m x 7.5 m x 2.5 m in X, Y and Z, respectively.

The origins for the block models for Valencia and Namibplaas are shown Table 14-9.

Table 14-9
Block model origins for Valencia and Namibplaas

Area	Easting (m)	Northing (m)	Elevation (m)
Valencia Main and East	522,700	7,527,800	280
Namibplaas	527,800	7,532,910	300

14.6.1 Estimation Parameters

The search distance and rotation angles were based on the semivariogram. Kriging Neighbourhood Analysis (KNA) was used to determine the minimum and maximum number of samples to be included in the search neighbourhood and the appropriate number of discretisation points to be used in parent cell estimation. The KNA exercise looked at Kriging Efficiency as a metric of estimation quality and slope of regression was used to quantify the level of conditional bias when selecting the optimal parameters.

The search parameters are shown in Table 14-10 for Valencia Main and Valencia East.

Table 14-10
Search parameters for Valencia Main and Valencia East

Area	Domain	Rotation Angles			Rotation Axis			Search Distance (m)			Number of Composites		Max Key
		1	2	3	1	2	3	1	2	3	Min	Max	
VM	1	180	50	0	Z	X	Z	144	144	12	10	40	8
VM	2	120	90	0	Z	X	Z	144	144	12	10	60	10
VM	3	120	90	0	Z	X	Z	144	144	12	10	60	10
VE	4	120	90	0	Z	X	Z	144	144	12	10	60	10
VM & VE	99	120	90	0	Z	X	Z	144	144	12	10	40	8

Note: *VM = Valencia Main; VE = Valencia East. Max Key is the maximum number of* ***samples allowed to be selected from a single drillhole.***

The estimation search parameters are shown in Table 14-11 for Namibplaas.

Table 14-11
Search parameters for Namibplaas

Minzone	Rotation Angles			Rotation Axis			Search Distance (m)			Number of Composites	
	1	2	3	1	2	3	1	2	3	Min	Max
1	180	50	0	Z	X	Z	34	59	46	6	100
99	120	90	0	Z	X	Z	34	59	46	6	100

Block grades were estimated in three passes, with the first pass using the search parameters shown in Table 14-11. The second search was twice the distance as the first search. The Datamine Max Key function, restricting the number of samples per drillhole used for estimation, was applied to all domains at Valencia but was not applied at Namibplaas. Blocks not estimated during the second search pass were assigned the mean composite sample grade for the respective domain.

Ordinary Kriging (OK) was used for the estimation of the GRD grade for Domains 1 to 3, and Minzone 1 and 99. The modelled semivariogram and search parameters were applied to the GRD grade. Estimates were completed for each individual domain at Valencia Main using a discretisation of 7 x 7 x 5. Estimates were completed for each individual Minzone at Namibplaas using a discretisation of 7 x 7 x 6.

Inverse distance squared (IDW2) was used to estimate Domain 4 at Valencia East.

Dynamic Anisotropy was used to align the search ellipsoids to account for local changes in the orientation of the mineralised zones along strike and dip. The dynamic search for each zone was orientated using the trend surfaces created in Leapfrog Geo.

14.6.2 Densities Applied

Densities were provided by K Hartmann for each lithology modelled (Table 14-12). Densities were not interpolated into the block models but assigned as an average value per lithology / stratigraphic unit.

Table 14-12
Densities applied

Area	Etuis (g/cm^3)	Khan (g/cm^3)	Marble (g/cm^3)	Schist (g/cm^3)	Granite (g/cm^3)
Valencia	2.67	2.79	2.79	2.76	2.64
Namibplaas	2.67	2.67	2.72	2.72	2.60

14.7 Estimate Validation

The models were validated by:

- Comparison of the global estimates against the average composite sample grades.
- Swath plot validation.
- Visual examination of the input data against the block model estimates.

14.7.1 Valencia Estimate Validation

The average grade of the block model for each individual zone was validated against the GRD sample grades. Globally, the estimated block grades compare favourably to the input data with relative differences ranging from -14% to 4% (Table 14-13). Domain 4 has the lowest number of samples with a few high-grade samples that were smoothed during estimation.

Table 14-13
Global statistical block model validation - Valencia

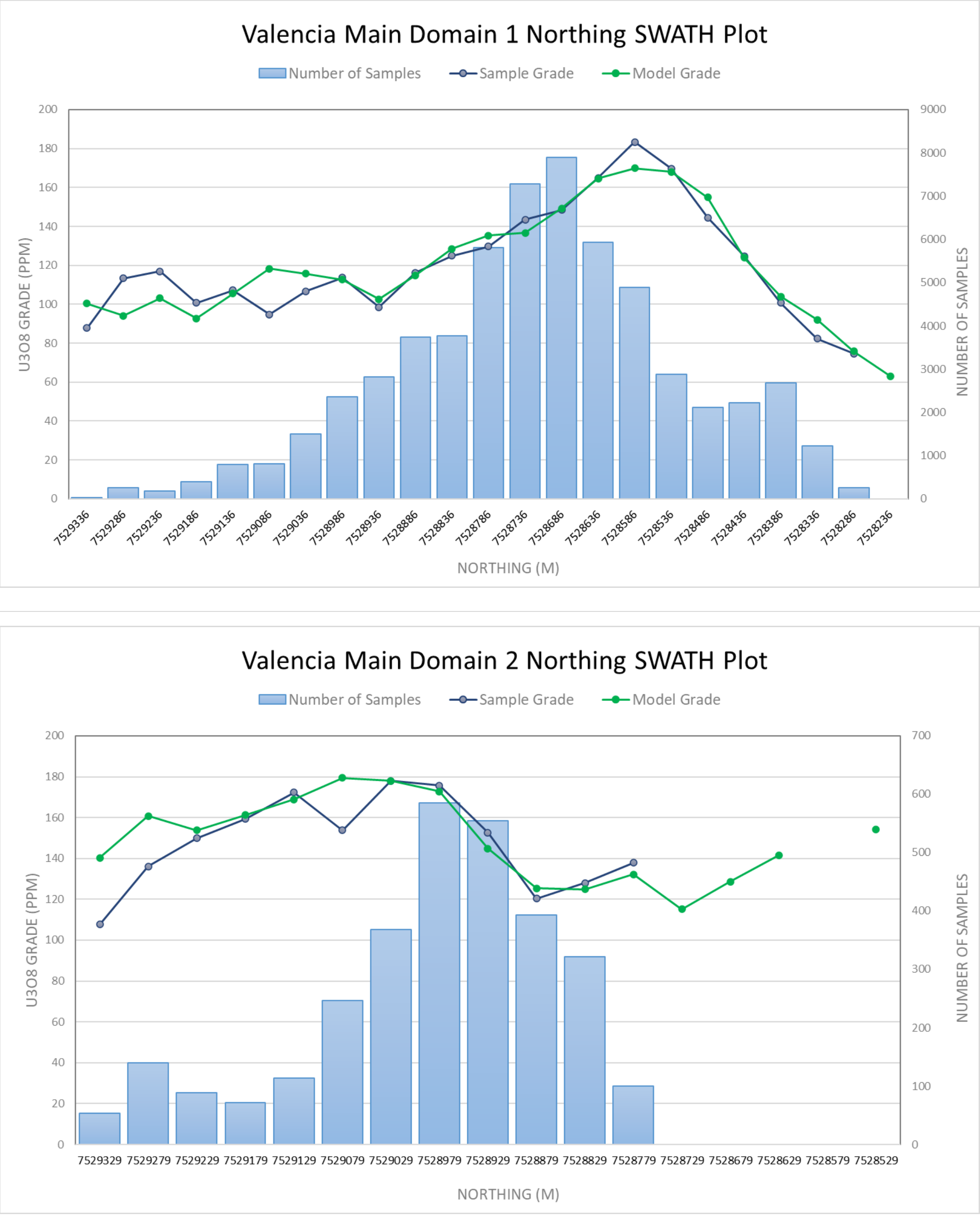
Domain	Drillholes			Blocks			Difference (%)
	Min	Max	Mean	Min	Max	Mean	
1	2	1,500	136	8	807	131	-4
2	4	950	146	12	376	152	4

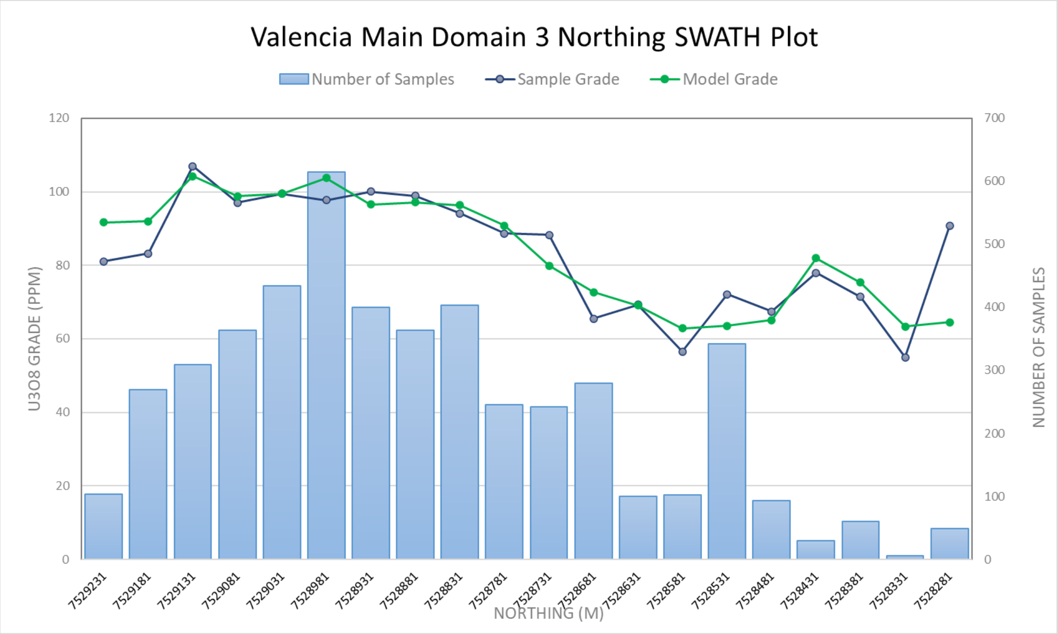
Domain	Drillholes			Blocks			Difference (%)
	Min	Max	Mean	Min	Max	Mean	
3	2	694	85	35	202	83	-1
4	2	700	83	13	297	72	-14
99	0.3	1,500	30	1.9	516	27	-10

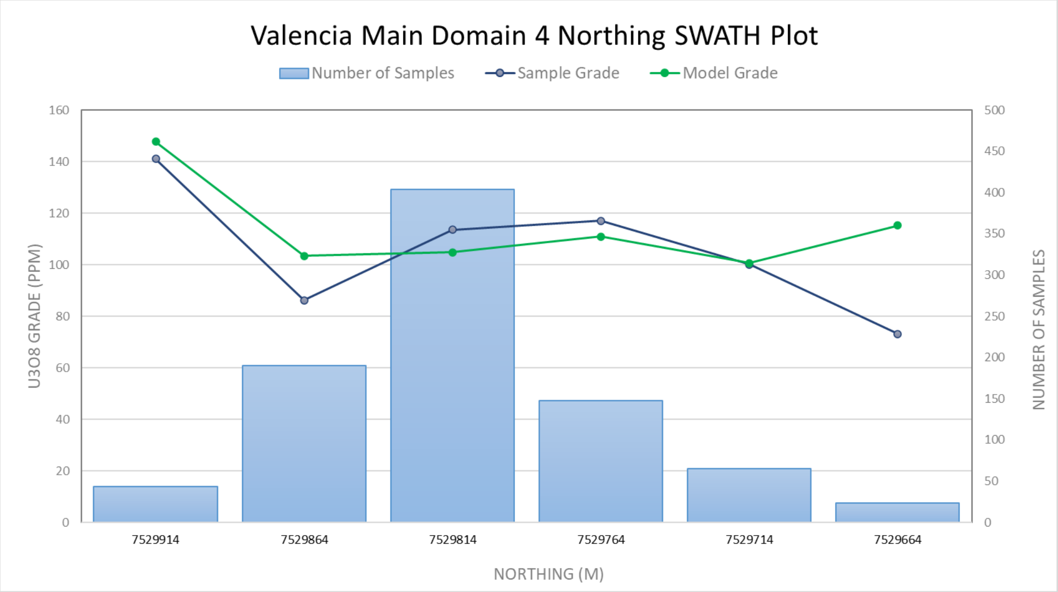
Swath plot validations in the X, Y and Z directions were used to locally validate the block estimates against the sample composites. No material biases in the estimates of the individual elements were identified. Swath plot validations for Domain 1 to 4 are shown Figure 14-16 for the northing direction.

Figure 14-16

Northing Swath Plot Validation for Valencia Main GRD in Domain 1 to 4







The block model was examined visually to ensure that the drillhole grades were locally well represented by the model and it was found that the block grades validated reasonably well against the data. An example of this validation for GRD U_3O_8 ppm is illustrated for Valencia Main's combined domains in Figure 14-17, comparing the block model grades above 20 ppm with the composite sample grades. The Valencia East block model was also validated visually against the drillhole intersections (Figure 14-18).

Figure 14-17

Valencia Main cross-section block model, drillholes and pit shell

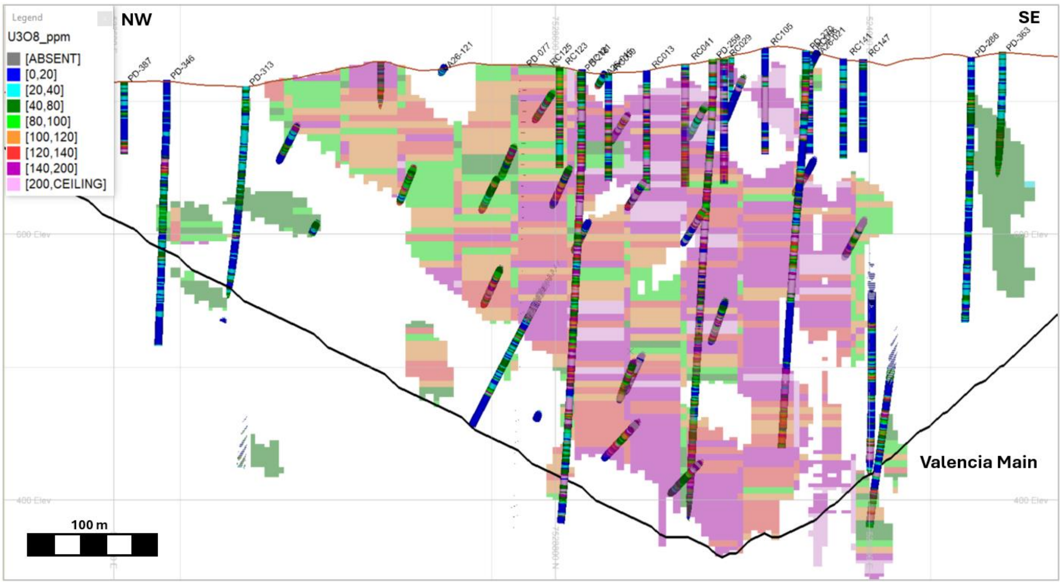
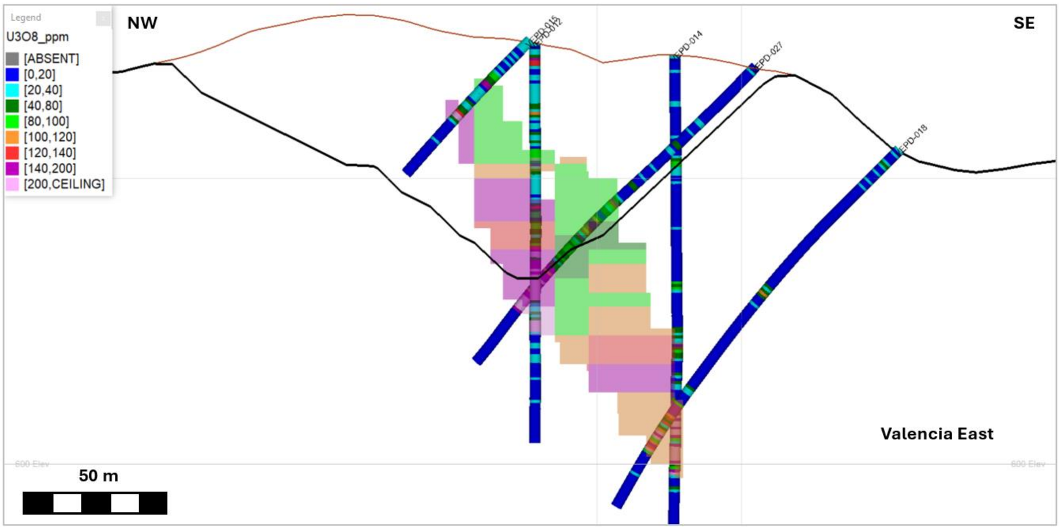


Figure 14-18

Valencia East cross-section block model, drillholes and pit shell



14.7.2 Namibplaas Estimate Validation

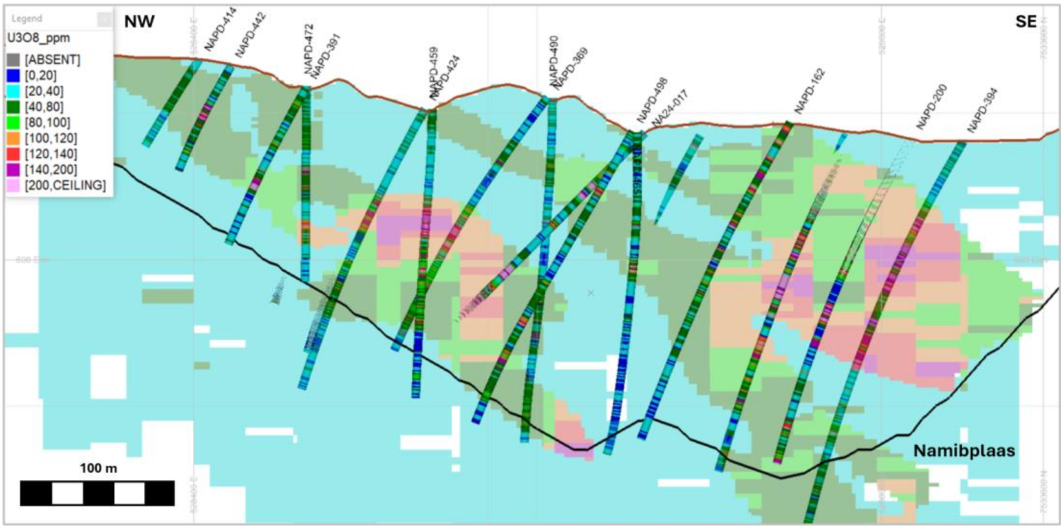
Globally, the estimated block grades compare favourably to the input data, with relative differences of less than two percent for both Minzone 1 and 99 at Namibplaas (Table 14-14).

Table 14-14
Global statistical block model validation - Namibplaas

Minzone	Drillholes			Blocks			Difference (%)
	Min	Max	Mean	Min	Max	Mean	
1	1.9	420	82	29	300	83	0
99	1.5	420	29	4.6	154	28	-2

The block model was examined visually to ensure that the drillhole grades were locally well represented by the model and it was found that the block grades validated reasonably well against the data. An example of this validation for GRD U_3O_8 ppm is illustrated for Namibplaas in Figure 14-19, which displays the block model grades above 20 ppm and the composite sample grades.

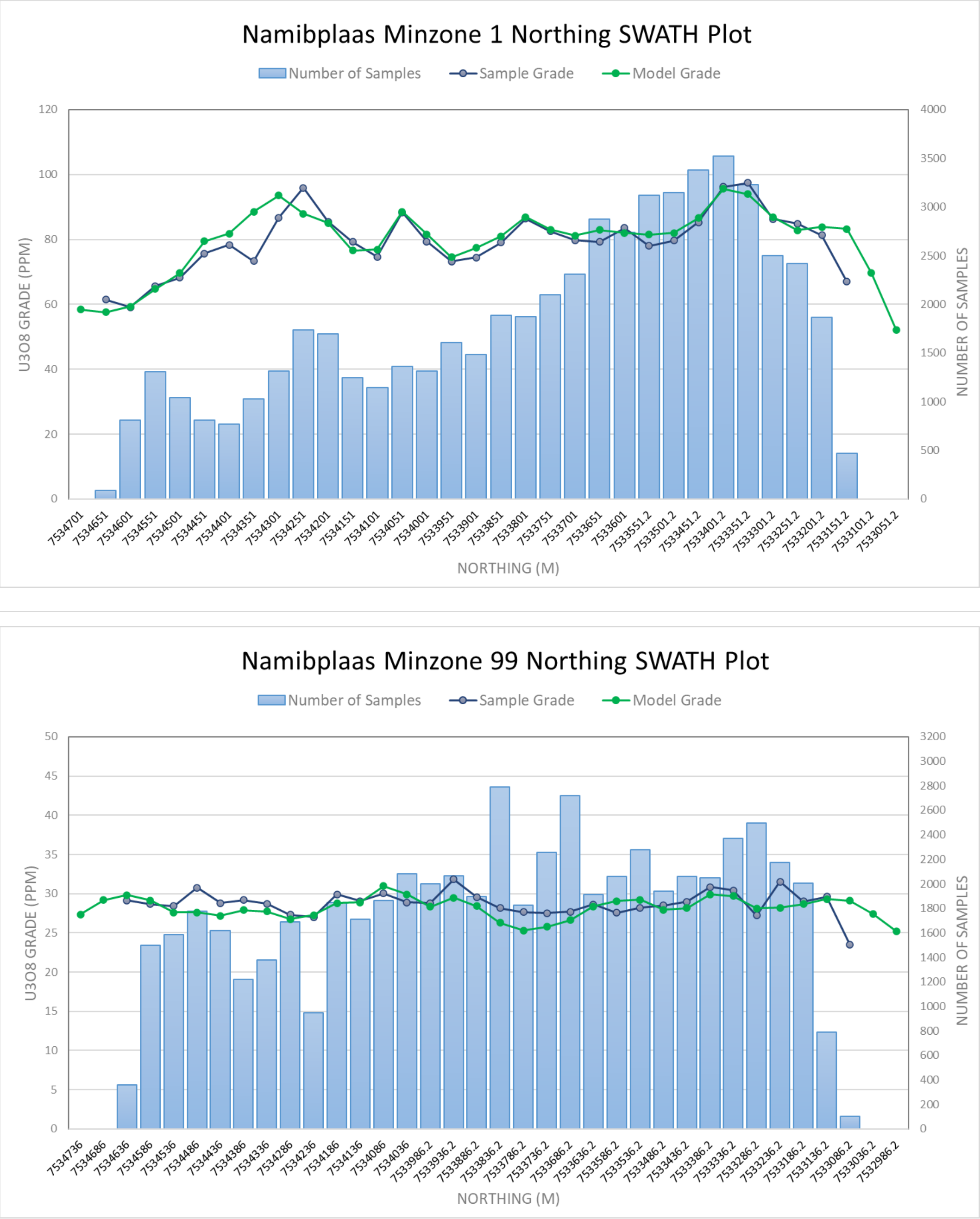
Figure 14-19
Namibplaas cross-section with block model, drillholes and pit shell



Swath plot validations in the X, Y and Z directions were used to locally validate the block estimates against the sample composites. No material biases in the estimates of the individual elements were identified. Swath plot validations for Minzone 1 and Minzone 99 are shown Figure 14-20 for the northing direction.

Figure 14-20

Northing swath plot validation for Namibplaas GRD in Minzone 1 and 99



14.8 Mineral Resource Classification

Classification of the Valencia Main, Valencia East and Namibplaas Mineral Resource was based on the degree of geological uncertainty, grade continuity and variability, frequency of the drilling data and the confidence in the data.

The main considerations in the classification are as follows:

- Whether the geological model is robust, and the grade shells exhibit good continuity with low variability within and between drilling sections.
- Whether the semivariogram ranges for the attributes are more than the general drillhole spacing in most areas.
- Whether the sample grades are well represented by the model grades.
- Whether the probe data is sufficiently supported by XRF assay results.

The Mineral Resources could be affected by further infill drilling, which may result in increases or decreases in subsequent Mineral Resource estimates. Inferred Mineral Resources are higher-risk estimates that may change with additional sampling data. It cannot be assumed that all or part of an Inferred Mineral Resource will necessarily be upgraded to an Indicated Mineral Resource due to continued exploration. The Mineral Resources may also be affected by subsequent assessments of mining, environmental, processing, permitting, taxation, socio-economic and other factors.

14.8.1 Valencia Mineral Resource Classification

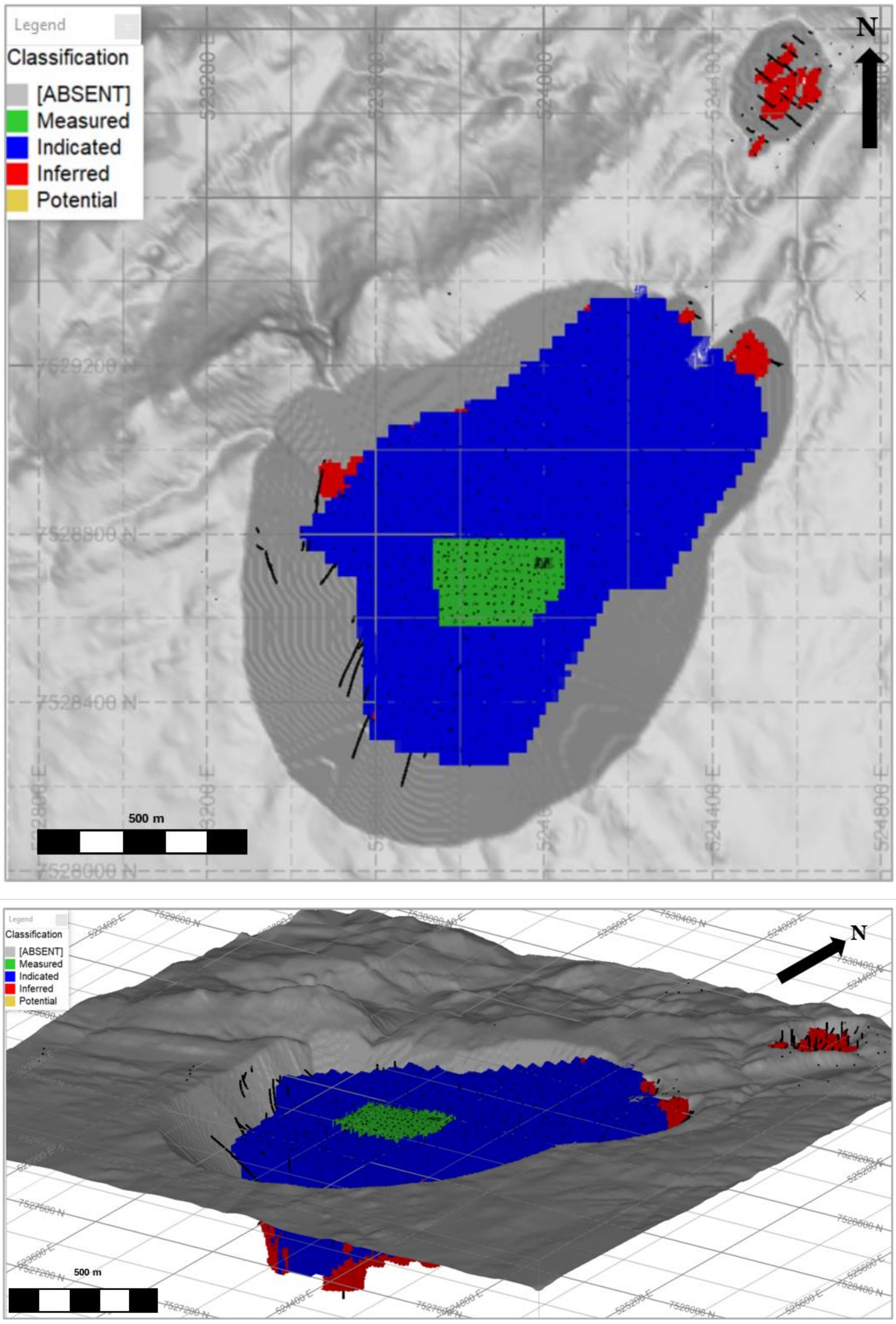
Given the aforementioned factors, the Mineral Resources for Valencia Main have been classified using the following criteria for Valencia Main:

- The Mineral Resource was classified as Measured where the level of confidence in the estimates is high. This is underpinned by data on a drilling grid of 20 m spacing or less, where the estimate is primarily informed by XRF data. Only the area with closely spaced RC drilling data met these criteria.
- The Indicated Mineral Resource is underpinned by data on a drilling grid of approximately 40 m spacing and a fairly high slope of regression.
- The Inferred Mineral Resource was classified where the confidence for the estimates is low. At Valenica Main, all estimated blocks within the grade shells outside the Measured and Indicated Resource were classified as Inferred.

The Valencia East Mineral Resource was classified as Inferred, as the confidence for the estimates is low due to the limited number of samples and the absence of XRF assays.

A plan view and oblique view of the classified Valencia Main and Valencia East block models are shown Figure 14-21.

Figure 14-21
Valencia Main classified block model with pit shell and drillhole collars

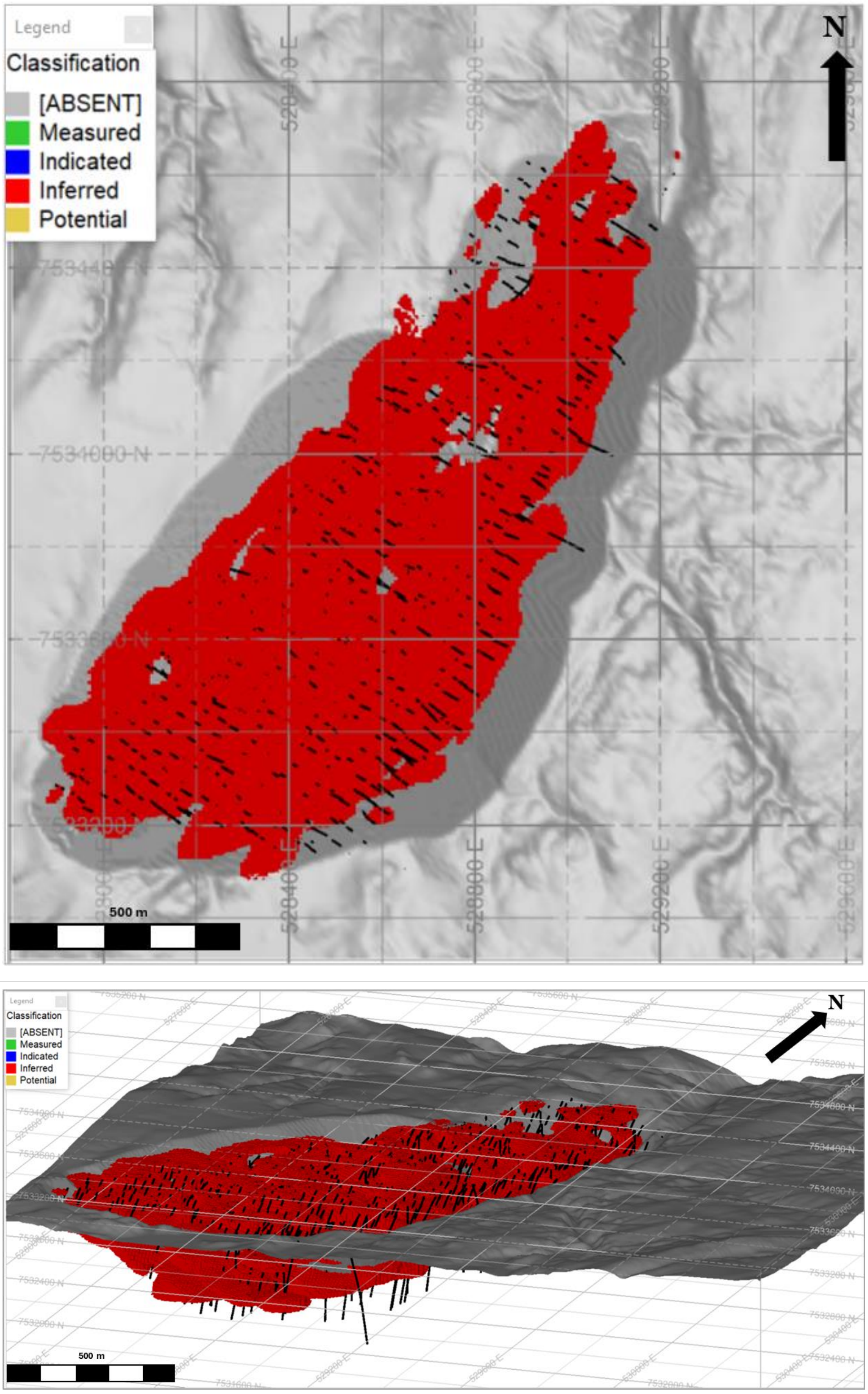


14.8.2 Namibplaas Mineral Resource Classification

The Mineral Resource at Namibplaas has been classified as Inferred. Although the average drillhole spacing of approximately 30 m provides dense coverage, the predominance of the probe-derived eU_3O_8 assays warrants a confidence level of Inferred. Grade continuity is reasonably established and confirmation of more sample intervals with XRF assays is likely to improve the classification at Namibplaas. A plan view and oblique view of the classified Namibplaas block model is shown Figure 14-22.

Figure 14-22

Namibplaas classified block model with pit shell and drillhole collars



14.9 Mineral Resource Statement

The Mineral Resource estimate as of 14 May 2024 is presented in Table 14-15 for both Valencia and Namibplaas. The Mineral Resource is stated at a cut-off grade of 40 ppm U_3O_8 and is reported from within a Whittle optimised pit-shell.

In the QP's opinion, the Mineral Resources reported herein at the selected cut-off grade have "reasonable prospects for eventual economic extraction" (RPEEE), taking into consideration mining and processing assumptions.

Table 14-15
Mineral Resource Estimate for Norasa project as at 14 May 2024 at a 40 ppm U_3O_8 cut-off

Category	Deposit	Tonnes millions	Average Grade eU_3O_8	Content of U_3O_8 (Mlbs)	Content of U (tonnes)
Measured	Valencia East	-	-	-	-
	Valencia Main	7.6	171	2.9	1,099
	Namibplaas	-	-	-	-
	Total	**7.6**	**171**	**2.9**	**1,099**
Indicated	Valencia East	-	-	-	-
	Valencia Main	144.3	134	42.6	16 368
	Namibplaas	-	-	-	-
	Total	**144.3**	**134**	**42.6**	**16,368**
Measured & Indicated	Valencia East	**-**	**-**	**-**	**-**
	Valencia Main	151.9	136	45.4	17 467
	Namibplaas	**-**	**-**	**-**	**-**
	Total	**151.9**	**136**	**45.4**	**17,467**
Inferred	Valencia East	1.0	114	0.3	97
	Valencia Main	4.7	121	1.3	487
	Namibplaas	218.7	85	41.1	15,817
	Total	**224.5**	**86**	**42.6**	**16,401**

Notes:

1. *All tabulated data have been rounded and as a result minor computational errors may occur.*
2. *Mineral Resources, which are not Mineral Reserves, have no demonstrated economic viability. There is no guarantee that that all or any part of the Mineral Resource will be converted into a Mineral Reserve. The estimate of Mineral Resources may be materially affected by geology, environment, permitting, legal title, taxation, socio-political, marketing, or other relevant issues.*
3. *Mt = Million tonnes, Mlbs = Million pounds*
4. *The Mineral Resource Statement for Norasa as of 14th May 2024 is reported at a cut-off grade of 40ppm U3O8 from within a conceptual pit-shell using the following assumed parameters:*
    - *Base Uranium Price –USD/lb U3O8: $120*
    - *Average Mining Cost at reference elevation (AISC) USD/tonne: Valencia Main $2.38; Valencia East $2.13; Namibplaas $2.29"*
    - *Average Processing Cost USD/tonne processed: $7.55*
    - *Average G&A Overheads USD/tonne processed: $1.04*
    - *Process Overall Recovery % U3O8 Recovery: 85.0 %*
    - *Selling Cost Transport USD/lb U3O8: $1.29*
5. *From the assumed parameters, a 40 ppm U3O8 cut-off grade was calculated, which together with the conceptual pit shell demonstrates reasonable prospects for eventual economic extraction (RPEEE) for the Mineral Resource. The assessment to satisfy the criteria of RPEEE is a high-level estimate and is not an attempt to estimate Mineral Reserves.*

14.10 Assessment of Reasonable Prospects for Eventual Economic Extraction (RPEEE)

In assessing "reasonable prospects for eventual economic extraction" (RPEEE) the Mineral Resource was reported from within a Whittle optimised pit shell using the following assumed parameters and a cut-off grade of 40 ppm U_3O_8:

Uranium price:	USD 120 /lb U_3O_8
Mining will be by open-pit methods:	
Average mining cost at a reference elevation (AISC) USD/tonne:	
○ Valencia Main:	USD 2.38
○ Valencia East:	USD 2.13
○ Namibplaas:	USD 2.29
Average processing costs:	USD 7.55 / tonne processed
Average G&A overheads cost:	USD 1.04 / tonne processed
Process overall recovery:	85% U_3O_8 recovery
Selling cost (transport):	USD 1.29 /lb U_3O_8.

The reader is advised that the assessment of economic potential that is incorporated in the Mineral Resource is a high-level assessment and is solely for the purpose of reporting Mineral Resources and does not represent an attempt to estimate Mineral Reserves.

Figure 14-23 and Figure 14-24 show the USD120 / lb U_3O_8 pit shells and block model grades above 20 ppm at Valencia Main and East, and Namibplaas respectively.

The waste portion of the Namibplaas pit shell extends beyond the southwestern boundary of EPL3638, (Figure 14-25) and an application has been accepted for the neighbouring EPL and it is assumed this will be granted.

Figure 14-23
Oblique view of Valencia block model and the USD120 / lb U_3O_8 pit shell

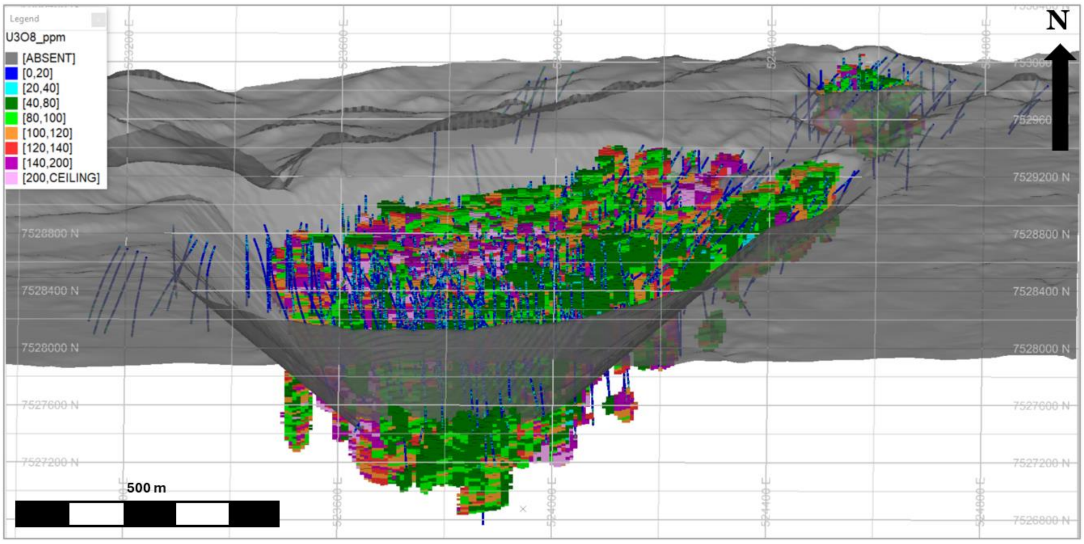


Figure 14-24

Oblique view of Namibplaas block model and the USD120 / lb U_3O_8 pit shell

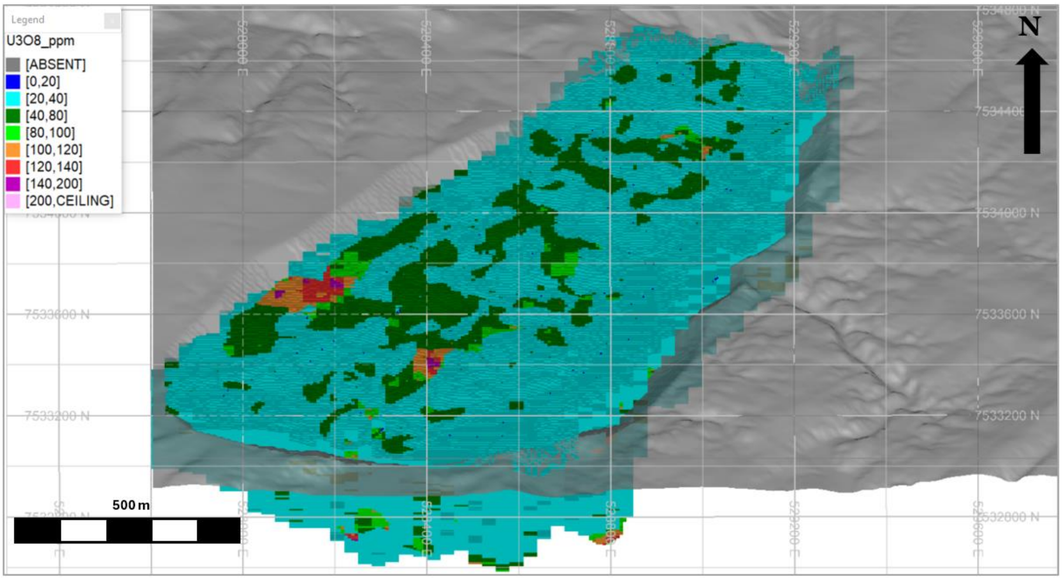
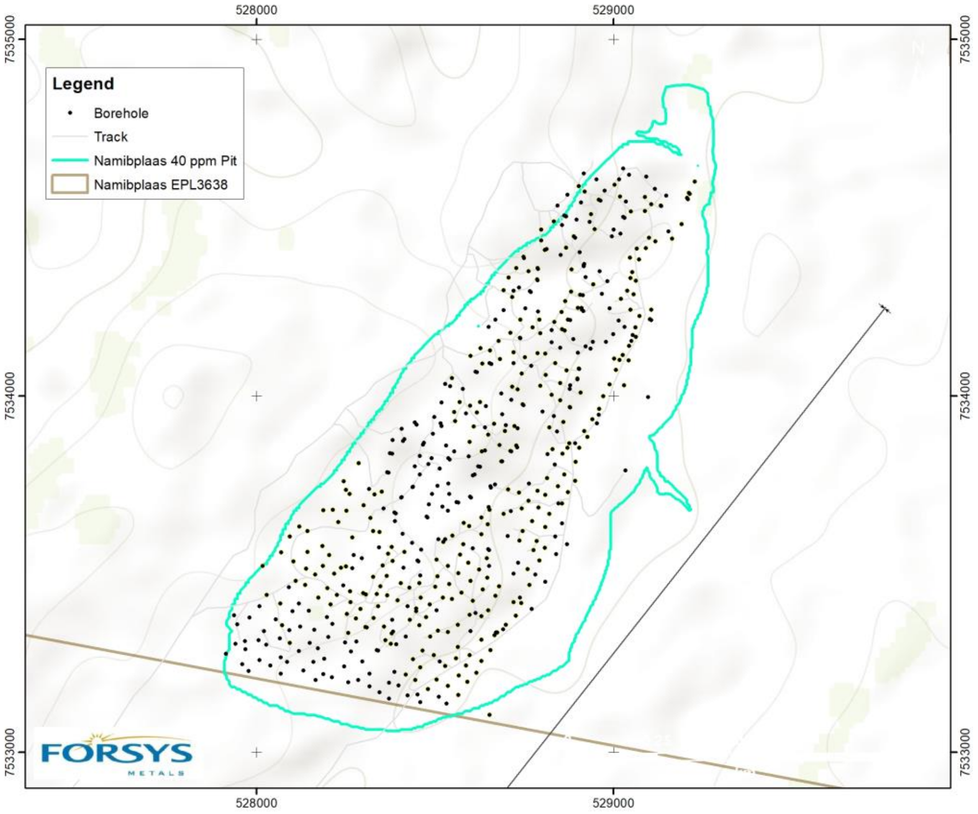


Figure 14-25

Namibplaas EPL3638 and the USD120 / lb U_3O_8 pit shell



15 MINERAL RESERVE ESTIMATES

Not applicable.

16 MINING METHODS

Not applicable.

17 RECOVERY METHODS

Not applicable.

18 PROJECT INFRASTRUCTURE

Not applicable.

19 MARKET STUDIES AND CONTRACTS

Not applicable.

20 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

Not applicable.

21 CAPITAL AND OPERATING COSTS

Not applicable.

22 ECONOMIC ANALYSIS

Not applicable.

23 ADJACENT PROPERTIES

The information presented below for the various operations was obtained from the World Nuclear Association (WNA), which references the IAEA, from Company websites and Company produced information documents. Notice should be taken of the ownership of the various companies described and the reporting obligations due to the nature of that ownership.

Rössing Uranium's major shareholder is China National Uranium Corporation CNUC at 68.6 %, followed by the Iranian Foreign Investment Co. with 15 %, the Industrial Development Corporation of South Africa with 10 % and 3 % held by the Namibian government. Rössing has nominal capacity of 4,000 tU/y (10.4 Mlbs/y) and to the end of 2017 had supplied 112,453 tU in total (292.4 Mlbs). Rio Tinto completed the sale of its entire interest (~69 %) in the Rössing uranium mine in Namibia to China National Uranium Corporation Limited (CNUC) in November 2018. Rio Tinto had operated the mine, uninterrupted, since its inception in 1976.

Langer Heinrich Uranium was wholly owned by Paladin Energy Ltd from 2002 until early 2014; In January 2014 China National Nuclear Corporation's subsidiary CNNC Overseas Uranium Holding Limited (CNNC Overseas) bought a 25% joint venture equity stake in the mine entitling it to that share of output. Paladin Energy Ltd is listed on the Australian Securities Exchange the Toronto Stock Exchange and the Namibian Stock Exchange.

The Husab Uranium Mine (Swakop Uranium) is owned by Taurus Minerals Limited of Hong Kong, which has a 90% stake in the company, and the Namibian state-owned company Epangelo (10%). Taurus is an entity owned by China General Nuclear Power Company (CGNPC) Uranium Resources Co Ltd and the China Africa Development Fund. Until April 2012, Swakop Uranium was 100% owned by Extract Resources, an Australian company listed on the Australian Securities Exchange, the Toronto Stock Exchange.

The Etango Project is 100 % owned by Bannerman Mining Resources (Namibia) (Pty) Ltd, which in turn is 95 % owned by ASX-listed Bannerman Energy Ltd.

The Tumas and Omahola projects are owned by Reptile Mineral Resources and Exploration (Pty) Ltd (RMR) which is a wholly owned member of the ASX-listed Deep Yellow Limited Group of Companies.

The Qualified Persons of this report state for all project reported in this section that:

- the operational information is all publicly disclosed by the owners or operators of those operations.
- the Qualified Persons have been unable to verify all of the information.
- the information is not necessarily indicative of the mineralisation on the Valencia property.

23.1 Rössing Uranium Mine

Information on the Rössing Uranium Mine (RU) is included as it situated approximately 35 km to the southwest of the Norasa Project and has operated on ML 28 since 1976. The Rössing Uranium life-of-mine extension ("LoME") from 2027 to 2036 was the focus of a Feasibility Study undertaken from June 2021. The Ministry of Mines and Energy approved the extension of the RUL Mining

License by 15 years to July 2036, which covers the timeline required for the execution of the LoME (Rössing, 2022).

The Rössing uranium deposit occurs in a highly deformed zone in which uraniferous alaskites were intruded into metasedimentary rocks of the Khan and Rössing Formations. The alaskitic rocks range from small quartzo-feldspathic lenses, to large intrusives and replacement bodies varying widely in texture, size and emplacement habit (Roesener and Schreuder, 1992). Rössing is the type locality for the alaskite hosted uranium deposits of Namibia.

Mining is done by conventional blasting, loading and hauling in 180 tonne haul trucks from the main open pit, referred to as the SJ Pit, before the uranium-bearing rock is processed to produce uranium oxide. The open pit currently measures ~3 km long, ~1.5 km wide and is over 400 m deep. Additional satellite orebodies have been identified, some of which are included within the mine's ore reserves.

Blasted ore is hauled to surface to be crushed and then ground with rod mills. A combined leaching and oxidation process takes place in tanks by an acidic solution under atmospheric pressure. Cyclones, roto-scoops and counter current decantation separate the uranium bearing solution from the granular tailings, which is pumped in slurry form to the tailings dam. Continuous ion exchange and solvent extraction purify and concentrate the uranium solution (OK liquor) and the barren solution is returned to the circuit. The uranium is precipitated out of solution as uranium diuranate, thickened and calcined (roasted) into the final product of uranium oxide.

Rössing's reserves at the end of 2018 were 23,810 tU probable, at 0.033% U in ore and no resource figures were published (WNA, 2023). Its uranium is sold to power utilities in Central Europe, North America and Southeast Asia including China. Resources were declared in 2017, prior to the ownership change to CNNC in 2018 (Table 23-1).

The Rössing Uranium Mine commenced production in 1976 and since then has produced an average of 3,200 tonnes of U_3O_8 per year (6.9 Mlbs/y).

Table 23-1
Mineral Resources and Reserves at Rössing Uranium Mine, 2018

Category	Cut-off Grade U_3O_8 (ppm)	Ore (M) tonnes	Grade U_3O_8 (ppm)	Contained U_3O_8 (Mlbs)
Inferred Resources	100	0.7	160	
Indicated Resource	100			
Measured Resource	100			
Measured+Indicated+Inferred Resources[1]	**100**	**104.3**	**160**	**0.25**
Probable Reserves[2]	**100**	**72**	**390**	**61.9**

Sources: *[1]Rio Tinto Annual Report, 2017, [2]World Nuclear Association, 2023.*

23.2 Langer Heinrich Uranium Mine

The Langer Heinrich Mine (LHM) is located on the western side of central Namibia, Southern Africa. It lies 80 km east of Walvis Bay and the coastal town of Swakopmund, ~50 km south southeast of Valencia. The mine is operated on ML140 and ML172, valid to 25 July 2030 and 23 June 2040, respectively. The mine is majority owned by Paladin Energy which is listed on the Australian Securities Exchange and on the OTC Markets Group (ASX:PDN OTCQX:PALAF). The project is operated by Langer Heinrich Uranium (Pty) Ltd., a company that is 75% owned by Paladin Energy Ltd. ("Paladin") and 25% owned by CNNC Overseas Uranium Holding Limited, a wholly owned subsidiary of the China National Nuclear Corporation.

Paladin purchased the project in 2002 and commenced mining operations in late 2006. The first uranium mine in Namibia to be brought online since Rössing in 1976, and in over a decade globally.

The mine curtailed production in 2017 and transitioned to Care and Maintenance in 2018, due to depressed prices and outlook. A restart plan announced in mid-2020 had a cost estimate of US$ 81 million and a 17 year mine life supported by Ore Reserves of 84.8 Mt with an average grade of 448 ppm U_3O_8 and a Life of mine production target of 77.4 Mlbs of U_3O_8. Paladin drummed its first product in March 2024 after the restart.

Uranium mineralisation at Langer Heinrich is associated with the calcretisation of valley-fill fluvial sediments in an extensive tertiary palaeodrainage system. Mineralisation is near surface, 1 m to 30 m thick and is 50 m to 1,100m wide depending on the width of the palaeovalley. Calcrete is a chemically precipitated limestone that forms under arid to semi-arid climatic conditions. Uranium mineralisation occurs as carnotite, $K_2(UO_2)_2(VO_4)_2{\cdot}3H_2O$, an oxidised uranium and vanadium secondary mineral. The deposit extends over a 15 km length in seven higher grade pods within a lower grade mineralised envelope. The carnotite occurs as thin films lining cavities and fracture planes and as grain coatings and disseminations in the calcretised sediments. The present day Gawib River has dissected and modified both the calcrete and associated mineralisation. In places, this prevailing ephemeral drainage system has blanketed the deposit with up to 8m of river sands and scree.

With the uranium being present as a coating on the sediments, it is not necessary to grind the material finer, but only to remove the surface layer from the individual grains. The process employs crushing and scrubbing to break down agglomerates into individual grains and to remove the uranium minerals from the grain surfaces. Cyclones and screens are then employed to separate the high-grade fines (leach feed) from barren discard material. Typically, the barren solids will contain 40-50% of the solids mass but only 5-10% of the uranium in the ROM feed.

After thickening, the leach feed slurry is conditioned with sodium carbonate and bicarbonate, heated and pumped to the leach circuit. After leaching and heat recuperation, the slurry is fed through a Counter Current Decantation (CCD) circuit in which the high-grade uranium solution is removed from the solids. This solution undergoes further clarification before being pumped through both fixed bed and continuous NIMCIX[8] ion exchange vessels where the uranium is

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[8] The NIMCIX contactor is a continuous ion-exchange (CIX) column developed by. Mintek South Africa (then the National Institute for Metallurgy - NIM)

recovered onto resin. Uranium is stripped from the resin and precipitated as Sodium Diuranate (SDU) then redissolved using sulphuric acid before being re-precipitated with hydrogen peroxide. This product is dewatered, dried and drummed as UO_4.

The Mineral Resources (Table 23-2) and Ore Reserves (Table 23-3) are quoted at a cut-off grade of 0.025 % U_3O_8 (250 ppm U_3O_8) and conform to both the JORC (2012) and NI 43-101 guidelines. The Mineral Resources are inclusive of Ore Reserves as of end 2022, and as of early 2024 the mine is operating following a successful restart and depleting of Ore Reserves.

Table 23-2
Mineral Resources at Langer Heinrich Uranium Mine, 2022

Category	Cut-off Grade U_3O_8 (ppm)	Ore (M) tonnes	Grade U_3O_8 (ppm)	Contained U_3O_8 (Mlbs)
Inferred Resources In-situ	250	11	345	5.8
Indicated Resource In-situ	250	23.5	375	18
Measured Resource	250			
In-situ		79.1	450	78.6
MG ROM Stockpiles[1]		6.3	510	7.1
LG ROM Stockpiles2		20.2	325	14.5
Total Measured Resources		**105.6**	**430**	**100.2**
Measured+Indicated+Inferred Resources[1]	250	140.1	420	128.1

Note: *Resources are reported inclusive of Ore Reserves at 250 ppm U_3O_8 cut-off grade.*

[1] Medium Grade Stockpiles

[2] Low Grade Stockpiles

Source: *Paladin Energy Annual Report, 2022.*

Table 23-3
Ore Reserves at Langer Heinrich Uranium Mine, 2022

Reserve Category	Ore (M) tonnes	Grade U_3O_8 (ppm)	Contained U_3O_8 (Mlbs)
Proved	48.3	488	52
Probable	66.2	490	71.9
Stockpiles[1]	4.7	520	5.4
Total	**84.8**	**448**	**83.8**

Note: *Figures may not add due to rounding. Ore Reserves reported at a 250 ppm U_3O_8 cut-off grade. Mineral Resources and Ore Reserves quoted on a 100% basis. Mineral*

Source: *Paladin Energy Annual Report, 2022.*

Reserve Category	Ore (M) tonnes	Grade	U_3O_8 (ppm)	Contained U_3O_8 (Mlbs)
Proved	48.3		488	52
Probable	66.2		490	71.9
Stockpiles	4.7		520	5.4
Total	**84.8**		**448**	**83.8**

Source: *Paladin Energy Annual Report, 2022. Figures may not add due to rounding. Ore Reserves reported at a 250ppm* U_3O_8 *cut-off grade. Mineral Resources and Ore Reserves quoted on a 100% basis. Mineral*

23.3 Husab Uranium Mine

The Husab Uranium Mine (Husab) is located within a zone characterised by basement domes, regional folding, faulting, and late Damaran intrusive rocks. The mine is ~30 km south southwest of the Valencia Main deposit, and is essentially on strike, being situated on the eastern limb of the Khan Syncline, Valencia being on the western limb approximately 25 km to the northeast. The mine, along with variably explored resources to the south of the current pits, is situated on ML171 which was granted in November 2011 and is valid to November 2036, covering 11,010 ha. Husab is 90 % owned by China General Nuclear (CGN) through Taurus Minerals (Taurus), and 10 % by the Namibian Government’s Epangelo Mining Company. The corporate history of the project since ownership changed from Extract Resources in 2011 is complex, and is summarised below:

The two-stage takeover by Taurus/CGN-URC was complex. Kalahari Minerals PLC owned 42.74% of Extract Resources. In March 2010 Itochu Corp[9] bought a 14.94% stake in Kalahari for U$92 million, and in May Hong Kong-listed APAC Resources bought 7.1% of Kalahari for US$44.6 million. In March 2011 China Guangdong Nuclear Power Uranium Resources Co (CGN-URC) notified a possible US$1.22 billion cash offer for the whole of Kalahari Minerals PLC, but this was withdrawn in May. It was then renewed, and in December a GBP 632 million (US$ 984 million) bid by Taurus Minerals, a Hong Kong company 60% owned by CGN-URC and 40% by the China-Africa Development Fund, was unanimously recommended by Kalahari directors. It then acquired some 90% of Kalahari, including Rio Tinto's 11.5% and Itochu's 14.9% stake, requiring it to make a US$2.2 billion downstream cash offer for Extract shares.

Extract directors recommended acceptance, and the takeover was completed in April 2012. CGN-URC became CGNPC-Nuclear Fuel Co (CGNPC-NFC) in February 2012. In November 2012 the Namibian government’s Epangelo Mining Company agreed to buy a 10% interest in Swakop Uranium for US$213 million, funded by the vendor and to be repaid from dividends[10]. While CGN-URC is majority shareholder, some of the production will be sold on world markets.

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[9] Through Nippon Uranium Resources (Australia) Pty Ltd., Itochu's wholly owned Australian subsidiary. Also, Itochu had a 10.3% direct stake in Extract

[10] Epangelo had for some years been a potential partner in the project. A joint task force announced in May 2010 comprising Russia's ARMZ and Epangelo Mining Ltd with US$ 1 billion funding was reported to be "aimed at Rössing South", but Extract received assurance from the government that its leases were secure, and Namibia's international reputation supported this.

The Husab Mine geology is dominated by a series of north-northeast to northeast trending regional scale antiforms and synforms, which make up the main structural architecture of the entire Central Zone of the Damara Orogenic Belt (DOB). These meta-sedimentary folds or dome-like structures of the DOB are cored by gneissic and metasedimentary rocks of the Abbabis Formation. The basement rocks are covered to the northeast and south by stranded cover sequences of flat-lying calcrete and alluvial deposits, which are associated with a broad northeast trending valley marginal to the Khan River.

The Husab prospect area represents a 15 km target zone, most of which is covered by the Namib Desert (aeolian sand and gravels) with the prospective target zone defined by the magnetic trend that can be verified in outcrop and then traced beneath the desert sands. Drilling completed to date at Husab Mine and to the south of the current operation has followed a trend of uraniferous alaskites that crop out at the northern end of ML171, covered by progressively deeper under Namib sands to the south, for a distance of at least nine kilometres. Five deposits, Zone 1 in the north to Zone 5 in the south have been delineated with Zone 1 and Zone 2 currently being mined in two open pits.

Construction at Husab commenced in November 2012 and first production was delivered towards the end of 2016 (Rösener *pers. comm.*). The mine is an open-pit operation utilising diesel and electric powered shovels to load 327-tonne haul trucks. The haul trucks use a trolley assist system to haul rock out of the pit. The planned production rate is 15 Mtpa ore treated at a life-of-mine average strip ratio of 6.2.

Comminution consists of crushing and milling (SAG and ball) to feed atmospheric leach tanks using sulphuric acid and pyrolusite to extract the uranium. Counter current decantation using the NIMCIX technology and conventional solvent is used to separate the solids and the liquids with the tailings' slurry pumps to the tailings dam. The uranium rich solution passes through continuous ion-exchange and conventional solvent extraction process upgrading and refinement. The uranium is then precipitated and calcined to produce the final product of uranium oxide.

The mineralised alaskites are associated with calc-silicate, metasediments, gneiss and biotite schist lithologies of the Khan, Rössing and Chuos Formations. The Rössing Formation is the dominant host into which the uraniferous granites have intruded.

The following Mineral Resources and Ore Reserves are quoted at a cut-off grade of 100 ppm and conform to both the JORC (2004) and NI 43-101 guidelines for a 20 year mine life and are the last publicly available, code compliant (JORC, 2004, NI43-101) estimates available for the mine. Mineral Resources prior to the start of mining are tabled in Table 23-4 and Mineral Reserves in Table 23-5. The World Nuclear Association published Measured and Indicated Mineral Resources for Husab, Zone 1 and Zone 2 combined, of 143 740 tU (373.7 Mlbs U_3O_8) and Probable Mineral Reserves of 40 130 tU (104.3 Mlbs U_3O_8).

Table 23-4
Husab Mineral Resources (June 2011)

Category	Cut-Off Grades (U_3O_8)	Tonnes (M)	U_3O_8 (ppm)	U_3O_8 Mlbs
Zone 1 Inferred	100	41.3	420	37.8
Zone 2 Inferred	100	26.8	520	30.5
Total Inferred		**68.1**		**68.3**
Zone 1 Indicated	100	122.2	450	120.1
Zone 2 Indicated	100	118.8	520	136.9
Total Indicated		**241.0**		**257.0**

Note: *Extract Resources, 2011***. *100 ppm U_3O_8 at the time was considered the lower cut-off.***

Table 23-5
Husab Mineral Reserves (June 2011)

Probable Reserves	Cut-Off Grades (U_3O_8)	Tonnes (M)	U_3O_8 (ppm)	U_3O_8 Mlbs
Zone 1	148	97.1	477	102.2
Zone 2	138	107.8	515	122.5
Probable		**205**	**497**	**224.8**

Note: *Extract Resources, 2011 and include ore dilution and mining loss allowances.*

23.4 Adjacent Alaskite Uranium Projects

The Norasa project is in the vicinity of a number of large alaskite type uranium deposits, prominent among these are two advanced projects, 56 km southwest at Etango (Bannerman Energy) and ~50 km to the south-southwest at the Omahola Project (Deep Yellow).

23.4.1 Etango Project

Bannerman Energy holds ML 250 through Bannerman Mining Resources (Namibia) (Pty) Ltd (Bannerman). The mining licence was converted from Mineral Deposit Retention Licence (MDRL) 3345 (formerly EPL3345) and the company announced the awarding of the mining licence on the 15th of December 2023 (awarded 31 October 2023).

Bannerman originally held 80% of the Etango project and in December 2015 acquired the balance of it. In July 2011 China's Sichuan Hanlong group made a conditional A$144 million takeover offer for Bannerman, but this did not proceed. In July 2017 the One Economy Foundation in Namibia became a 5% loan-carried shareholder in the project, as a "key pillar" in Bannerman's corporate social responsibility.

In August 2020 the company announced its Etango-8 Scoping Study, reducing throughput to 40% of that previously envisaged in the Definitive Feasibility Study and focused on shallow, higher-grade ore. In addition to the Etago-8 scoping study, Bannerman have put forward medium-term (16 years) and long-term (27 years) mining scenarios for the project. The key metrics of the Etango DFS mining scenarios are in Table 23-6. These are named the Etango-XP and Etango-XT cases. The Scoping Study evaluation of the Etango-XP and Etango-XT cases has been undertaken to demonstrate the potential technical and economic viability of subsequent expansion and/or life extension options for Etango, post successful construction and ramp-up of Etango-8. A Definitive Feasibility Study completed in 2022 has confirmed capital costs U$ 317 million, and final cash operating cost (apart from royalties) to US$ 35/lb. Production would be 1,346 tU (3.5 Mlbs U_3O_8) per year over 15 years. This at a base price of US$ 65/lb U_3O_8.and a US$ 75/lb U_3O_8 pit. The option of subsequent expansion to the levels of the Definitive Feasibility Study remains. The latest iteration of the three mining scenarios is built on the back of JORC (2012) compliant resources (Table 23-7) that were updated in November 2021.

Table 23-6
Etango 2022 DFS Mining Scenarios (December, 2022)

Parameter	Etango-8	Etango-XP	Etango-XT
LoM U_3O_8 output	52.6 Mlbs over 15 years	95.2 Mlbs over 16 years	95.2 Mlbs over 27 years
Annual Ave. U_3O_8 output	3.5 Mlbs	6.7 Mlbs (after plant expansion)	3.5 Mlbs
Expansion Capex	US$ 0	US$ 325	US$ 0
Sustaining cash cost	US$ 38.1/lb of U_3O_8	US$ 42.5/lb of U_3O_8	US$ 45.3/lb of U_3O_8

Note: *DFS base pricing (US$65/lb* ***$U_3O_8$) generates US$209M NPV8% (post-tax, real, ungeared) and 17% IRR (same basis).***

DFS upside pricing (US$ 80/lb U_3O_8) generates US$ 436 million NPV 8% and 25% IRR (all same ***basis).***

Table 23-7
Etango Mineral Reserves (November, 2021)

Category	Cut-Off Grades (U_3O_8)	Tonnes millions	U_3O_8 (ppm)	U_3O_8 Mlbs
Etango Inferred 55 ppm	55	140.6	200	62
Etango Inferred 100 ppm	100	112.5	230	57.1
Etango Indicated 55 ppm	55	345.7	195	148.5
Etango Indicated 100 ppm	100	276.9	223	136.4
Etango Measured 55 ppm	55	32.4	201	14.3
Etango Measured 100 ppm	100	112.5	226	13.3
Total Resources 55 ppm	**55**	**540.2**	**197**	**224.9**
Total Resources 100 ppm	**100**	**4287**	**225**	**206.8**

Note: *From Bannerman Energy, 2023, and 2011. 100 ppm* U_3O_8 *at the time was considered the lower cut-off.*

Note: *100 ppm* U_3O_8 *at the time was considered the lower cut-off.*
The November 2021 Etango Project Mineral Resource estimate model has been reported within a US$75/lb optimal pit

Source: [1] *Extracted from Bannerman Energy, 2023, 2011.*

23.4.2 Deep Yellow Uranium Projects

Reptile Mineral Resources and Exploration (Pty) Ltd (RMR), a wholly owned subsidiary of Deep Yellow Limited, manages the Namibian project portfolio, which is held by its subsidiary, Reptile Uranium Namibia (Pty) Ltd (RUN). A local Namibian partner, Oponona, has a right to 5% of the project. Paladin held 15% of Deep Yellow until December 2016. In Namibia, Reptile manages and operates a group of Namibian subsidiary companies which hold the following interests:

- EPLs 3496, 3497 and 3498, strategically located amongst the major uranium mines in the Erongo region covering an area of more than 1,100 km^2 in total.
- A 65% interest in the Nova Joint Venture (JV) Project (EPLs 3669 and 3670). The JV partner is JOGMEC, the minerals exploration arm of the Japanese government, funding N$ 45 million over a 4-year period.

Deep Yellow is listed on the Australian and Namibian Stock Exchanges and the OTCQX in the USA. The Company's alaskite type uranium deposits are collectively in the Omahola Project, and the major palaeochannel type deposits are collectively the Tumas project, which was awarded a Mining Licence, ML237, on the 22nd of September 2023. Shortly following the release of the Tumas DFS Re-Costing Study, the Namibian Ministry of Mines and Energy issued the mining licence for the Tumas Project. The licence is valid for 20 years from date of issue (22 September 2023) and allows Deep Yellow to progress the Project towards production, establishing Tumas as the 4th uranium mine in Namibia.

23.4.2.1 Omahola Alaskite Uranium Project

Omahola occupies a 35 km x 14 km northwest-southeast trending zone within the 'Alaskite Alley' corridor which, informally, links Norasa, Rossing, Husab, Etango, the Ida Dome and Omahola deposit areas. Uranium mineralisation at Omahola occurs across three deposits including Ongolo, MS7 and Inca and amounts to a Measured, Indicated and Inferred Resource base of 125.3 Mlb U_3O_8 at 190 ppm. Uranium mineralisation is associated with sheeted leucogranites, known locally as alaskites, and hydrothermal skarn formation, the deposits of the Omahola project include the INCA skarn type mineralisation, and the more conventional alaskite deposits of the Ongolo and MS7 deposits. Resources from Deep Yellow's February 2023 DFS are summarised in Table 23-8.

Table 23-8
Omahola Project Mineral Resources (February, 2023)

Deposit	Category	Cut-off	Tonnes (M)	Grade U_3O_8 (ppm)	Mlbs (U_3O_8)
INCA	Indicated	100	21.4	260	12.3
INCA	Inferred	100	15.2	290	9.7
Ongolo	Measured	100	47.7	185	19.7
Ongolo	Indicated	100	85.4	170	31.7
Ongolo	Inferred	100	94	175	36.3
MS7	Measured	100	18.6	220	9.1
MS7	Indicated	100	7.2	185	2.9
MS7	Inferred	100	8.7	190	3.7
Total Measured + Indicated			**180.3**		**75.7**

Source: *Extracted from Deep Yellow Limited (2014) updated 27 March 2024.*

23.4.2.2 Tumas and Tubas paleochannel/calcrete

The paleochannel/calcrete-type uranium mineral resource base includes the Tumas 1, 1E, 2 and 3 and Tubas deposits and the overlying Red Sands mineral resource. The major paleochannel has several zones stretching over approximately 38 km, south and southeast of the Omahola alaskites. The company announced a maiden ore reserve of 11,900 tU of probable reserves for Tumas in February 2021. Between September 2021[11] and November 2023[12] as part of a definitive feasibility study it updated JORC figures for all Tumas deposits to 47,350t U_3O_8 (104.4Mlbs U_3O_8) total Indicated Resources. In October 2021 it announced probable ore reserves of 26,300 tU.30,550t U_3O_8 (67.3 Mlbs U_3O_8). Deep Yellow released an updated definitive feasibility study In February 2023, indicating a production capacity at a proposed Tumas plant of 1,385 tU per year, with throughput believed to be at 4.15 Mt per year (WNA, 2024). The Tumas Definitive Feasibility Study (DFS) completed in February 2023 was undertaken during a period of significant inflationary and supply logistical volatility. Given the unique factors and environment in which the 2023 DFS faced and ahead of key development activities at Tumas, Deep Yellow, along with Ausenco Services Pty Ltd

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[11] ASX Release 02 Sep 2021 'Tumas Delivers Impressive Indicated Mineral Resource'

[12] ASX Release 29 Nov 2023 'Resource Drilling Grows Tumas Towards Plus 30 Year LOM'.

(Ausenco) (DFS Engineers), considered it prudent to re-cost the Project as global market conditions settled. A comprehensive market re-evaluation of the CAPEX and OPEX one year after the initial DFS pricing study was published in December 2023. A final investment decision was anticipated in the first half of 2024.

The Tubas Sand deposit is a westward extension of Tumas 3 km and 10 km south of the Omahola alaskites. It comprises the shallow aeolian Tubas Red Sand (TRS) deposit immediately south of the Tubas palaeochannel. It has Inferred Resources of 3,900t U_3O_8 (8.6 Mlbs U_3O_8) and Indicated Resources of 1,900t U_3O_8 (4,900 tU as carnotite.1 Mlbs U_3O_8). The primary uranium phase is carnotite, which can be readily beneficiated to 0.05% using a German-derived hydrocyclone technology. There are also 2,765 t U_3O_8 calcrete ores (as carnotite) in the Tubas palaeochannel. Development of the Tubas ore deposits would be with Tumas. Mineral Resource and Mineral Reserves published in the December 2023 Tumas Project DFS update are summarised in Table 23-9 and Table 23-4, respectively.

Table 23-9
Tumas Project Resources (February, 2023)

Deposit	Category	Cut-off U_3O_8 ppm	Tonnes (M)	Grade U_3O_8 (ppm)	Mlbs (U_3O_8)
Tumas and Tubas	Indicated	100	184.4	260	108.5
	Inferred	100	69.7	230	31.2

Source: *Extracted from Deep Yellow Limited (2014) updated 27 March 2024.*

Table 23-10
Tumas Project Resources (February, 2023)

Deposit	Category	Cut-off U_3O_8 ppm	Tonnes (M)	Grade U_3O_8 (ppm)	Mlbs (U_3O_8)
Tumas and Tubas	Probable Reserves	150	88.7	345	67.3

Source: *Extracted from Deep Yellow Limited (2014) updated 27 March 2024.*

24 OTHER RELEVANT DATA AND INFORMATION

Not applicable.

25 INTERPRETATION AND CONCLUSIONS

25.1 Gamma Probe Data Conversion

VUL have re-assessed the conversion factors for previous probe data to eU_3O_8 and previous assay databases. It was found that probe data from the drillholes drilled prior to 2015 should have a revised gamma cps to eU_3O_8 conversion factor, which improves upon the factor derived in 2009 and is more globally applicable across the total project drillhole population.

Comparison of probe data from 5 drillholes drilled and assayed in 2023 produced a conversion factor that best fits the relationship between U_3O_8 assay and the modern probe tool's crystal sensitivity.

25.1.1 Previous Gamma Probe Data Conversion for Diamond Drill Holes

The revised conversion factor is derived from the comparison between probe and assay pairs representing ~18,6445 m of diamond drill samples.

Application of the revised conversion factor reduces the disparity of approximately 30 ppm between eU_3O_8 and U_3O_8 (XRF) paired assay data points within the diamond drill database in the <150 ppm assay population (~77 % of the assay population). This conversion factor provides eU_3O_8 with the lowest possible overestimation relative to the available XRF U_3O_8 assay population.

VUL geologists have derived the formula below for all drillholes that contain gamma probe data only:

$$\mathbf{eU3O8 = (-0.07 \times gamma) \times (gamma + 20.3) \times (gamma - 14)}$$

The factor produces an approximate 1:1 correlation across all the observed drillholes that average >50 ppm U_3O_8.

Previous drillholes that contain XRF assay data should preferentially use the laboratory assay data in grade estimation and interpretation or modelling work.

It is the QP's opinion that the revised gamma count conversion factor adequately addresses the apparent potential for overestimating uranium grades in the gamma data set. The revised conversion factor is a closer match to the corresponding XRF assay data points than what was previously employed.

25.1.2 Current Gamma Probe Data

Fourteen drillholes from VUL's 2023 drilling programme were probed with a modern downhole tool with greater sensitivity than what was used in prior drilling projects at the Norasa Project. The dataset represents 2,376 metres of drilling. The conversion factor that produces the lowest bias between eU_3O_8 and XRF derived U_3O_8 is given below:

$$\mathbf{eU_3O_8 = (gamma-78) / 6.06}$$

It is the QP's opinion that the method utilised to derive the conversion factor is suitable in the absence of other radiation constant data, such as that derived from Th. The conversion factor aligns paired eU_3O_8 with corresponding XRF U_3O_8. The conversion equation should be subject to monitoring and revision as additional drillholes and assays are added to the database.

IT is the QP’s opinion that the current gamma probe data is being collected and converted in line with best practices, and VUL have adequately considered all available data in deriving the current probe data conversion factor.

25.2 Drilling and Sampling

The 2023 drilling programme was exploratory in nature and conducted to gather geological and grade data in two diamond drill resource holes, seven geotechnical core holes and five PQ diameter holes for metallurgical sampling purposes. XRF and gamma probe assay data were collected from all fourteen holes. Sampling of the drill core was undertaken with the same lithological and descriptive nomenclature as in the previous dataset. Sampling for assay by XRF was guided by geological observation (alaskite recognition) and scintillometer scanning of the core to focus the sampling run on the mineralised intervals.

It is the QP’s opinion that drilling and sampling were carried out in a manner consistent with the procedures employed at Norasa Project prior to 2023, and that the level of attention to quality assurance and quality control in the 2023 drilling and sampling programme are sufficient for the purposes of the programme.

The Assay laboratory was able to rectify queries raised by the VUL Geologist and the performance of QAQC inserts is satisfactory, as failed assay batches are superseded by the corresponding downhole probe eU_3O_8 assay.

25.3 Mineral Resource Estimate

On behalf of Norasa, MSA reviewed the Mineral Resource modelling and estimation completed by Michael Rohwer for the Valencia Main, Valencia East and Namibplaas projects.

The Mineral Resource is reported as Measured, Indicated and Inferred Mineral Resources as shown in Table 25-1 for Valencia Main, Valencia East and Namibplaas combined. The Mineral Resource was estimated using The Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Best Practice Guidelines (2019) and is reported in accordance with the 2014 CIM Definition Standards, which have been incorporated by reference into National Instrument 43-101 – Standards of Disclosure for Mineral Projects (NI 43-101).

In the QP’s opinion, the Mineral Resources reported herein at the selected cut-off grade have “reasonable prospects for eventual economic extraction”, taking into consideration mining and processing assumptions. The Mineral Resource was reported within a Whittle optimised pit shell at a cut-off grade of 40 ppm U_3O_8.

The Valencia Main, Valencia East (previously referred to as Valencia satellite) and Namibplaas Mineral Resources have reduced from the previous Mineral Resource estimate reported in March 2015. The Mineral Resources compare more favourably with the 2008 Optiro Mineral Resource estimation which was constrained with more appropriate estimation parameters, compared to the 2015 estimation, which was largely unconstrained.

The Mineral Resource risk is reduced by the infill drilling and sampling completed, as well as the additional testwork done on previous drillholes to confirm accuracy in the results at Valencia Main. The infill drilling and sampling planned at Namibplaas is considered to increase confidence and reduce risk in the Mineral Resources.

Table 25-1
Mineral Resource Estimate for Norasa project as at 14 May 2024 at a 40 ppm U_3O_8 cut-off grade

Category	Deposit	Tonnes millions	Average Grade eU_3O_8	Content of U_3O_8 (Mlbs)	Content of U (tonnes)
Measured	Valencia East	-	-	-	-
	Valencia Main	7.6	171	2.9	1,099
	Namibplaas	-	-	-	-
	Total	**7.6**	**171**	**2.9**	**1,099**
Indicated	Valencia East	-	-	-	-
	Valencia Main	144.3	134	42.6	16,368
	Namibplaas	-	-	-	-
	Total	**144.3**	**134**	**42.6**	**16,368**
Measured & Indicated	Valencia East	**-**	**-**	**-**	**-**
	Valencia Main	151.9	136	45.4	17,467
	Namibplaas	**-**	**-**	**-**	**-**
	Total	**151.9**	**136**	**45.4**	**17,467**
Inferred	Valencia East	1.0	114	0.3	97
	Valencia Main	4.7	121	1.3	487
	Namibplaas	218.7	85	41.1	15,817
	Total	**224.5**	**86**	**42.6**	**16,401**

Notes:

1. *All tabulated data have been rounded and as a result minor computational errors may occur.*
2. *Mineral Resources, which are not Mineral Reserves, have no demonstrated economic viability. There is no guarantee that that all or any part of the Mineral Resource will be converted into a Mineral Reserve. The estimate of Mineral Resources may be materially affected by geology, environment, permitting, legal title, taxation, socio-political, marketing, or other relevant issues.*
3. *Mt = Million tonnes, Mlbs = Million pounds*
4. *The Mineral Resource Statement for Norasa as of 14th May 2024 is reported at a cut-off grade of 40ppm U3O8 from within a conceptual pit-shell using the following assumed parameters:*
    - *Base Uranium Price –USD/lb U3O8: $120*
    - *Average Mining Cost at reference elevation (AISC) USD/tonne: Valencia Main $2.38; Valencia East $2.13; Namibplaas $2.29"*
    - *Average Processing Cost USD/tonne processed: $7.55*
    - *Average G&A Overheads USD/tonne processed: $1.04*
    - *Process Overall Recovery % U3O8 Recovery: 85.0 %*
    - *Selling Cost Transport USD/lb U3O8: $1.29*
5. *From the assumed parameters, a 40 ppm U3O8 cut-off grade was calculated, which together with the conceptual pit shell demonstrates reasonable prospects for eventual economic extraction (RPEEE) for the Mineral Resource. The assessment to satisfy the criteria of RPEEE is a high-level estimate and is not an attempt to estimate Mineral Reserves.*

25.4 Metallurgical Testwork

The current testwork campaign involved two phases of column leach tests on uranium-bearing samples:

- Phase 1: Alaskite samples were tested, yielding uranium extractions ranging from 77% to 87% with acid consumption rates between 17 kg/t and 22 kg/t.
- Phase 2: Tests on samples from various parts of the orebody (including country rock and marbles) resulted in uranium extractions from 69% to 85%. Acid consumption ranged from 23 kg/t to 38 kg/t.

General observations and inferences include:

- Enhanced leach kinetics due to acid curing before sample introduction.
- Improved kinetics and recoveries at higher irrigation rates pending further investigations.
- Preliminary evaluation of using flocculant as a binder warrants further investigation, potentially contributing to enhanced leach kinetics and recoveries.
- Inconclusive impact of crush size; further investigation planned.
- Inconclusive correlation between grade and recovery observed and needs to be further investigated.
- Higher acid consumption was observed for the marble-containing samples.
- Potential Liberation challenge identified in finer size fractions. To be investigated further in the next phase of the campaign, particularly with the utilisation of an HPGR crushed product.

26 RECOMMENDATIONS

26.1 Mineral Resource Development

There are opportunities to extend the resources at Valencia Main, and further developing the Valencia East domain of the 2024 MRE. Sixty drillholes are planned across six target areas, with the programme scheduled to be completed in 2024, the location of the six areas and collar positions are shown in Figure 26-1 over a government radiometric background. Planned positions for collars to be drilled for the remainder of 2024 given in Table 26-1. A budget estimate, based on 2023 rates for the 2024 drilling work is summarised in Table 26-2.

There is also potential to upgrade a portion of the Namibplaas Inferred Mineral Resources to the Indicated Mineral Resources category, as a second phase of resource drilling. Namibplaas drilling work includes infill drilling where drill spacing currently exceeds 50 m, and by increasing the proportion of XRF assays in the Project database by assaying new drill samples. The down-dip and southeastern margin of the Namibplaas Mineral Resource has potential for improving confidence and testing the extent of down dip mineralisation. A concept level drill plan is recommended and based on the available drill data and the current(2024) Mineral Resource Estimate. The recommend collar positions and depths are summarised in Table 26-3. An estimated budget, based on 2023 rates, is summarised in Table 26-4 with recommended positions of infill and down dip drill collars are in Figure 26-2. Sixty drillholes are scheduled to complete the drill phase, for a planned total of ~7,000 m of drilling. The exploration planning for the target areas includes:

- The drilling of two rows of four drillholes each, aligned with the previous drilling grid at the **Valencia South** target, in the immediate vicinity of the Mineral Resource estimated in 2024 (this report).
- The drilling of 24 drillholes along an E-W strike length at the **Valencia West** target, located in proximity the current main MRE pit shell drillhole.
- Seven drillholes in the **Jolie Zone,** approximately 600 m north of the Valencia main MRE pit shell.
- Fourteen drillholes at the **Valencia East** deposit, located approximately 500 m northeast of the Valencia main MRE pit shell. The drilling programme is aimed at identifying potential additional mineralisation and improving drill cover of the existing Mineral Resource (Domain 4 of the MRE, Item 14).
- Mineralised granite was recently identified approximately 1 km northeast of the Valencia main MRE pit shell. The target is currently named the **Bundu Zone.** Four drillholes are planned at this location.
- The **Valencia North** prospect is located about 1 km north of the Valencia MRE pit shell and will be tested with three drillholes.

Table 26-1
2024 Valencia drill project planned drillholes

Drillhole Status	Target	Position UTM 33S		Planned Depth (m))
		Easting	Northing	
planned	Bundu	524849	7530295	60
planned	Bundu	524970	7530347	160
planned	Bundu	524999	7530422	100
planned	Bundu	524999	7530422	150
planned	Jolie	523936	7530025	60
planned	Jolie	523888	7529973	150
planned	Jolie	523937	7529977	80
planned	Jolie	524016	7529957	150
planned	Valencia East	524931	7529940	100
planned	Valencia East	524562	7529790	100
planned	Valencia East	524587	7529790	132
planned	Valencia East	524527	7529795	60
planned	Valencia East	524577	7529870	100
planned	Valencia East	524604	7529904	100
planned	Valencia East	524622	7529950	66
planned	Valencia East	524550	7529818	66
planned	Valencia East	524942	7530087	100
planned	Valencia East	524930	7530062	100
planned	Valencia South	523796	7528300	300
planned	Valencia South	523876	7528300	360
planned	Valencia South	523956	7528300	380
planned	Valencia South	523876	7528489	380
planned	Valencia South	523956	7528500	380

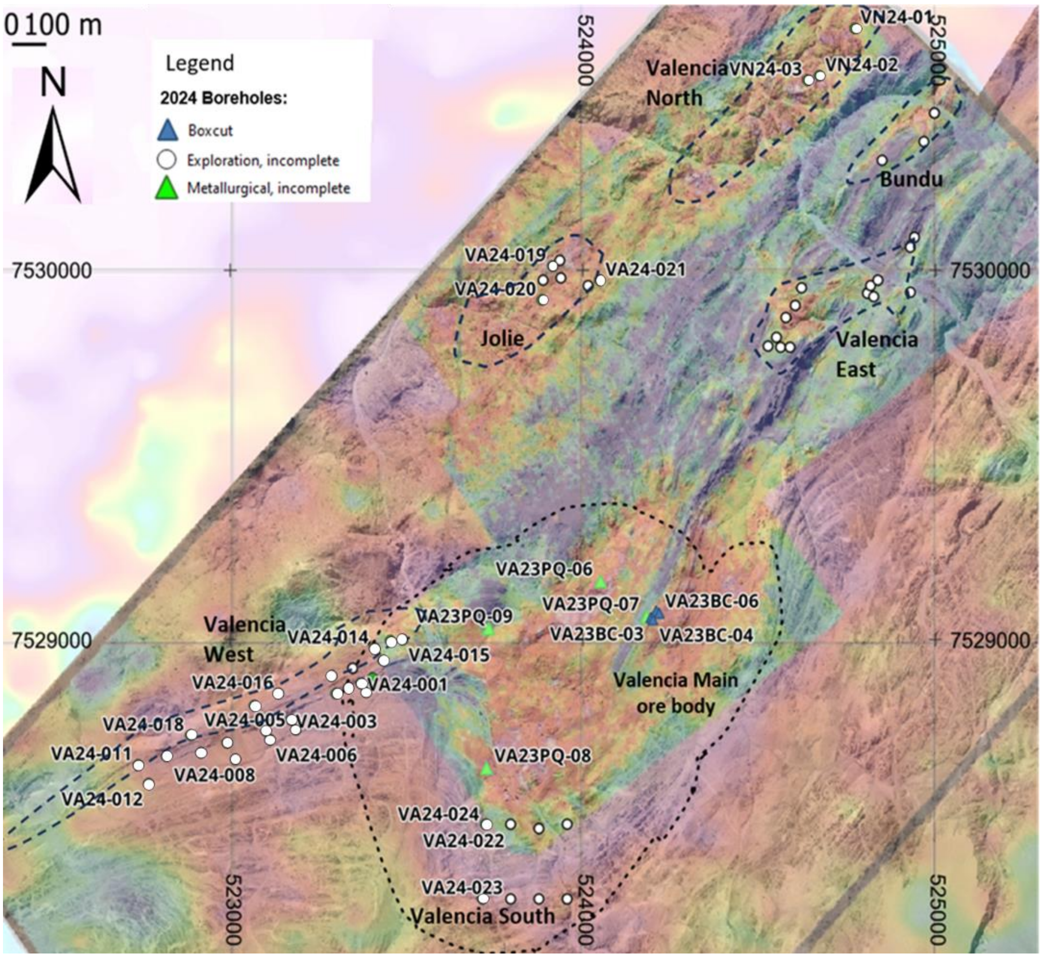
Note: [1] ***Accurate as of 16 May 2024***

Table 26-2
Budget estimation for recommneded drilling work at Valencia

Item	Total (USD)[1]
Diamond Drilling (2,850 m)	$268,000
RC Drilling (16,000 m)	$330,000
Metallurgical (PQ) Drilling (1,250 m)	$86,500
Downhole Probing (including processing) (8,000 m)	$28,000
Assays (6,000, including shipping)	$206,000
Mobilisation, Pad and Access prep, Other Costs	$25,000
Project and Consulting Services	$350,000
Total (including 15% contingency)	**$1,487,525**

Note: [1] *Figures are rounded to US$ 1,000, based on 2023 BOQ provided by VUL.*

Figure 26-1
Overview map of the 2024 drill programme as of 16 May 2024 for Valencia



Note: *Ground scintillometer U-survey over GSN airborne Radiometric U data.*

Source: *VUL, 2009*

Table 26-3
2024 Namibplaas drill project planned drillholes

Drillhole Status	Target	Position UTM 33 S		Planned Depth (m)
		X	Y	
Planned	Namibplaas	528635	7533457	342
Planned	Namibplaas	528749	7533477	369
Planned	Namibplaas	528746	7533624	294
Planned	Namibplaas	528872	7533732	168
Planned	Namibplaas	528420	7534038	168
Planned	Namibplaas	528887	7533770	293
Planned	Namibplaas	528914	7533800	262
Planned	Namibplaas	529031	7534059	273
Planned	Namibplaas	529048	7534144	232
Planned	Namibplaas	528932	7534223	148
Planned	Namibplaas	528980	7533997	244
Planned	Namibplaas	529042	7534003	287
Planned	Namibplaas	528743	7533868	175
Planned	Namibplaas	528853	7533648	383
Planned	Namibplaas	528859	7533692	182
Planned	Namibplaas	528785	7533549	390
Planned	Namibplaas	528774	7533895	96
Planned	Namibplaas	528967	7533860	199
Planned	Namibplaas	528961	7533913	191
Planned	Namibplaas	529038	7534102	217
Planned	Namibplaas	529078	7534172	294
Planned	Namibplaas	528930	7534272	110
Planned	Namibplaas	528960	7533962	268
Planned	Namibplaas	529116	7534291	229
Planned	Namibplaas	529083	7534362	176
Planned	Namibplaas	529129	7534331	225
Planned	Namibplaas	528951	7534451	171
Planned	Namibplaas	529094	7534403	153
Planned	Namibplaas	529144	7534369	205
Planned	Namibplaas	529099	7534448	263
Planned	Namibplaas	528789	7534271	133
Planned	Namibplaas	528578	7534172	71
Planned	Namibplaas	528438	7533978	144
Planned	Namibplaas	528672	7533819	274
Planned	Namibplaas	528421	7533651	212
Planned	Namibplaas	528702	7533363	270
Planned	Namibplaas	528183	7533716	84
Planned	Namibplaas	528479	7533418	305
Planned	Namibplaas	528192	7533613	148
Planned	Namibplaas	528113	7533666	51
Planned	Namibplaas	527947	7533440	62
Planned	Namibplaas	528170	7533193	205
Planned	Namibplaas	528009	7533205	138
Planned	Namibplaas	528245	7533190	227

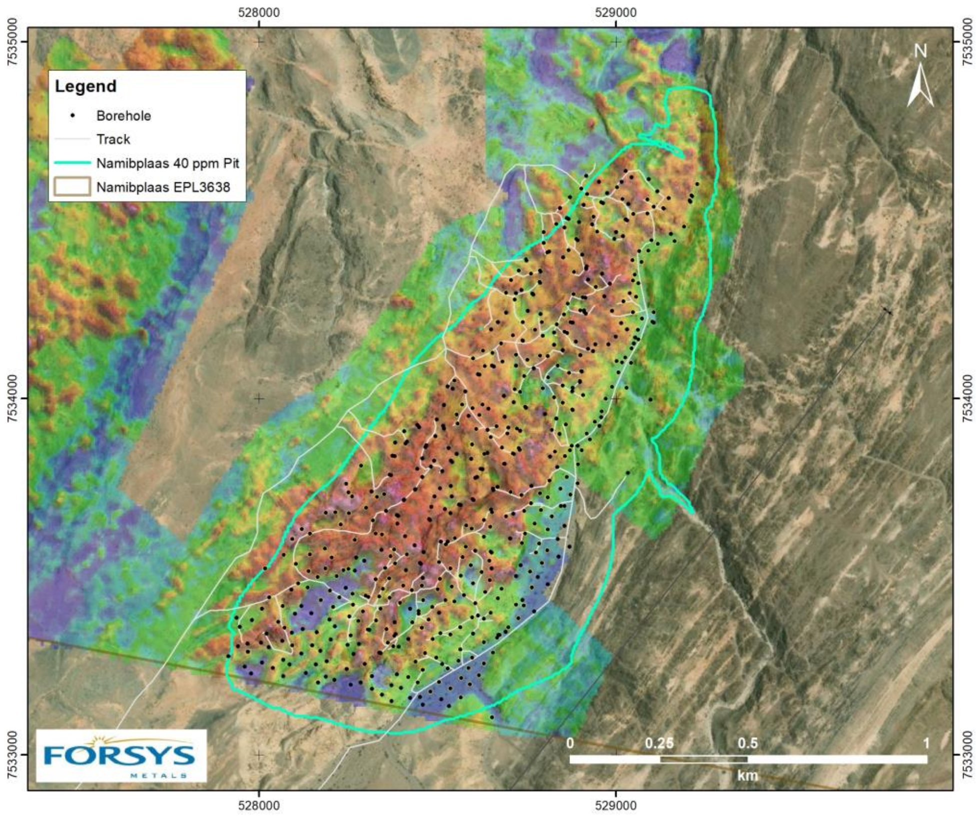
Note: [1] ***Accurate as of 16 May 2024***

Table 26-4
Budget estimation for recommneded drilling and MRE work at Namibplaas

Item	Total (USD)
Diamond Drilling (4,000 m)	$525,000
RC Drilling (8,000 m)	$156,000
Downhole Probing (including processing) (10,000 m)	$13,000
Assay (including shipping)	$96,000
Mobilisation, Pad and Access prep, Other Costs	$25,000
Consulting Services and MRE update	$240,000
Total (including 15% contingency)	**$1,213,250**

Note: *Figures are rounded to US$ 1,000, based on 2023 BOQ provided by VUL.*

Figure 26-2
Overview map of the recommended drilling at Namibplaas



Note: *Ground scintillometer U-survey (VUL, 2009) over ESRI World Imagery basemap.*

26.2 Metallurgy

In the next phase of follow-up testwork, a comprehensive column leach programme will be conducted. This programme aims to enhance efficiency by testing a wider range of head grades, including lower cut-off grades from ±60 ppm U_3O_8 to higher grades, ±300 ppm U_3O_8. Variables such as crushing methods (conventional vs. HPGR), curing time, acid dosage strength, irrigation rates, and binder type will be explored. Mineralogical studies of feed and residues will guide data interpretation, with the goal of optimising ore extraction potential and preliminary process design information.

The estimated cost for completing the follow-up metallurgical testwork is ~US$345,000.

27 REFERENCES

AMEC Foster Wheeler, 2015. Norasa Uranium Project Definitive Feasibility Study National Instrument 43-101 Technical Report Forsys Metals Corp.

Anderson, H., Nash, C., 1997. Integrated Lithostructural Mapping of the Rossing Area, Namibia using High Resolution Aeromagnetic, 28, 185–191.

Bannerman Energy, 2023. Investor Presentation November 2023. Web portal https://bannermanenergy.com/wp-content/uploads/2023/11/231122-BMN-Presentation-FINAL.pdf, accessed May 2024.

Barnes, J.F.H., Hambleton-Jones, B.B., 1978. A review of the Geological and Geochemical Setting of Uraniferous Granites in the Damara Orogen. Unpublished Lecture to the International Atomic Energy Agency Working Group Meeting, Nancy, France

Basson, I.J. Greenway, G., 2004. The Rössing Uranium Deposit: a product of late-kinematic localization of uraniferous granites in the Central Zone of the Damara Orogen, Namibia. Journal of African Earth Sciences. 38, 413–435

Berning, J., Cooke, R., Hiemstra, S.A., and Hoffman,1976. The Rössing uranium deposit, South West Africa. Economic Geology. 71, 351368.

Berning, J. 1986. The Rössing Uranium Deposit, South West Africa/ Namibia. Mineral Deposits of Southern Africa, p 1819-1832. Vol II. Geol. Soc. S.Afr.

Bertram, N.G.E. 1982a. Annual Report on prospecting activities for the period ending December 1981. Trekkopje Exploration and Mining Company (Pty) Limited, Prospecting Grant M46/3/449. February 1982.

Bertram, N.G.E. 1982b. Report in support of the application for renewal of Prospecting Grant M46/3/449. Trekkopje Exploration and Mining Company (Pty) Limited, Prospecting Grant M46/3/449. 20 July 1982.

Brandt, R. (1985) Preliminary Report on the Stratigraphy of the Damara Sequence and the Geology and Geochemistry of Damaran Granites in an Area between Walvis Bay and Karibib. Communications of the Geological Survey of Namibia 1. 31-43.

Bruneton, P.,Cuney, M., Dahlkamp, F., and Zaluski, G., 2014. IAEA geological classification of uranium deposits, International Symposium on Uranium Raw Material for the Nuclear Fuel Cycle (URAM 2014), June 2014

CIM, 2005. CIM DEFINITION STANDARDS - For Mineral Resources and Mineral Reserves. Prepared by the CIM Standing Committee on Reserve Definitions Adopted by CIM Council on December 11, 2005

Corner, B. (1981) 'An Interpretation of the Aeromagnetic Data Covering Portions of the Damara Orogenic Belt with Special Reference to the Occurrence of Uraniferous Granite', PhD thesis, University of the Witwatersrand, Johannesburg, South Africa.

Corner, B. 1982 An interpretation of the aeromagnetic data covering portion of the Damara Orogenic Belt with special reference to the occurrence of uraniferous granite. NUCOR PER- 95, 115 pp.

Corner, B. (1983) An Interpretation of the Aeromagnetic Data Covering the Western Portion of the Damara Orogen in South West Africa/Namibia. Special Publications of the Geological Society of South Africa, 11. pp 339-354

Cuney, 1980a Preliminary Results on the Petrology and the Fluid Inclusions of the Rössing Uraniferous Alaskites. Trans. Geol. Soc. S. Afr., 83, 39-46.

Cuney, 1980b Petrography Geochemistry and Fluid Inclusion Studies of the Rössing Alaskites and Surrounding Gneisses. Nancy, Centre de Recherches sur la Geologie de l'uranium.: 58.

Deep Yellow Limited, 2024. JORC Mineral Resources – Namibia, 27 March, 2024.

Dept. Econ. Affairs. 1988 Application for extension of Prospecting Grant M.46/3/1496: Trekkopje Exploration and Mining. Letter from Department of Economic Affairs to The Chief Geologist, Gold Fields Prospecting, Windhoek. Dated 25 October 1988.

Digby Wells & Associates, 2008. Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) for the Valencia Uranium Project, April 2008.

Eberle, D., Andritzky, G., Wackerle, R., 1995 The New Magnetic Data Set of Namibia: Its Contributions to the Understanding of Crustal Evolution and Regional Distribution of Mineralisation. Communications of the Geological Survey of Namibia 10, 141–150.

Forsys Metals Corp., 2014. Norasa Uranium Project, NI 43-101 Technical Report, 27 March 2014.

Forsys Metals Corp., 2024. Forsys Reports Updated Mineral Resource Estimate for its Norasa Project in Namibia, TSX News Release, 14 may 2024.

Freemantle, G. G., 2015. Primary uranium mineralisation of the central Damara Orogen, Namibia: a petrographic, geochemical and mineralogical account of the granite - hosted uranium deposits situated along the Swakop- and Khan River valleys. Unpublished, PhD Thesis, University of the Witwatersrand, South Africa, 701 p.

Goscombe, B.D., Gray, D. and Hand, M. 2004 Variation in Metamorphic Style along the Northern Margin of the Damara Orogen, Namibia. Journal of Petrology. 45. No. 6. pp 1261-1295.

Hartmann, K. 2023. Determination of conversion formulae from gamma counts per second to eU_3O_8 at Valencia, Norasa Project Internal report 09 April 2024.

Hartmann, K. (2023) drillhole data and lithological wireframing at Valencia, Valencia East and Namibplaas for resource estimation purposes. Internal Report. 25 May 2023. Ref: 2023_230526_BH grade KH draft memo.docx

Hartmann, K. (2024) Determination of conversion formulae from gamma counts per second to eU_3O_8 at Valencia. Internal Report. 9 April 2024. Ref: 240409_NOR_VAL_eU3O8ConversionFomula.docx

Hinojosa, D., 2008 Annual Technical Report, Namibplaas, unpublished.

Jacob, R.E., Corner, B., and Brynard, H.J., 1986. The Regional geological and structural setting of the uraniferous granitic provinces of Southern Africa. Minerals deposits of Southern Africa, 2, 1807 – 1818.

Jacob, R.E. 1974 The radioactive mineralisation in part of the central Damara Belt, South West Africa, and its possible origin. Report PIN-234(BR), Pelindaba, Atomic Energy Board, South Africa.

Jacob, R.E., Snowden, P.A., Bunting, F.J.L., 1983. Geology and Structural Development of the Tumas Basement Dome and its Cover Rocks. In: Miller, R.McG. (Ed.), Evolution of the Damara Orogen of South West Africa. Special Publication of the Geological Society of South Africa 11.

Kinnaird, J.A., Nex, P.A.M. 2007 A review of geological controls on uranium mineralisation in sheeted leucogranites within the Damara Orogen, Namibia. Applied Earth Science, 116, 2

JORC, 2004. Australasian Joint Ore Reserves Committee. Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, December 2004.

Kröner, A., 1984 Dome Structures and Basement Reactivation in the Pan-African Damaran Belt of Namibia. In: Kröner, A., Greiling, R. (Eds.), Precambrian Tectonics Illustrated. Schweizerbarth, Stuttgart, pp. 191–206.

Kröner, A., Halpern, M., Jacob, R.E., 1978. Rb–Sr Geochronology in Favour of Polymetamorphism in the Pan-African Damara Belt of Namibia (South West Africa). Geologische Rundschau 67, 688– 706.

Labuschagne, A. N. 1979 The Anomaly 26 Uranium Prospect and its Environment – Valencia 122. Trekkopje Exploration and Mining Company (Pty) Limited, Prospecting Grant M46/3/449. January 1979.

Laine, R., and Shilongo, E., 2011. Geology of Namibplaas, Internal Report June 2011.

Lindgren, W., 1928. Mineral Deposits, 3rd edn. New York: McGraw-Hill.

Miller, R.McG. 1983 The pan-African Damara Orogen of South west Africa/Namibia. Evolution of the Damara Orogen of South West Africa/Namibia.11, 431- 515.

Miller, R. McG. 2008 The Geology of Namibia, Vols. 1 & 2. Geological Survey of Namibia Special Publication.

Namport, 2023. Namport Integrated Annual Report, 145 p.

Nash, C.R. 1971 Metamorphic Petrology of the SJ Area, Swakopmund District, South West Africa. Bulletin of the Precambrian Research Unit, University of Cape Town 9. Optiro, 2011. Technical Report on the Namibplaas Deposit, Namibia – September 2011, Optiro Pty Limited, 17 October 2011.

Nex, P.A.M., Kinnaird, J.A., 1995. Granites and their mineralisation in the Swakop River area around Goanikontes, Namibia. Communications of the Geological Survey of Namibia. 10.

Nex, P.A.M. 1997 Tectono-Metamorphic Setting and Evolution of Granitic Sheets in the Goanikontes Area, Namibia. Ph.D. Thesis (Unpubl.). National University of Ireland.

Nex, P. A.M., Kinnaird J.A., Oliver G.J.H., 2001. Petrology, geochemistry and uranium mineralisation of post-collisional magmatism around Goanikontes, southern Central Zone, Damaran Orogen, Namibia. Journal of African Earth Sciences, 33, 481–502.

Ontario Securities Commission, 2011. NI 43-101 Standards of Disclosure for Mineral Projects, Form 43-101F1 Technical Report and Related Consequential Amendments, OSC Bulletin Volume 34, Issue 25, June 24, 2011.

Paladin Energy, 2022. 2022 Annual Report to Shareholders, 22 August.

Peters, J. and Kullmann, D., 2009. Valencia Uranium (Pty) Ltd: Valencia Project, Namibia. Technical Report. Snowden, 98 p.

Rio Tinto, 2017. Rio Tinto Annual Report, 2017. Web portal https://www.riotinto.com/-/media/content/documents/invest/reports/annual-reports/2017/rt-annual-report-2017.pdf, accessed May 2024.

Rösener, H. and Schreuder, C.P. 1992. Uranium. The Mineral Resources of Namibia, p 7.1-1 to 7.1-55. Published by the Ministry of Mines and Energy, and the Geological Survey, Republic of Namibia.

Rohwer, M. (2024) Namibplaas Modelling Summary. Internal Report. 3 April 2024. 19 pages.

Rohwer, M. (2024) Valencia Modelling Summary. Internal Report. 1 March 2024. Updated 11 March 2024. 37 pages.

Rössing Uranium, 2022. Rössing Uranium's 2022 Sustainability and Performance Report officially launched (6 June 2023). Web portal https://www.rossing.com/bullet/rossing-sustainability-report.htm, accessed May 2024.

Sawyer, E.W., 1978. Damaran Structural and Metamorphic Geology of an Area Southeast of Walvis Bay, S.W. Africa/Namibia. M.Sc. Thesis (Unpubl.). University of Cape Town.

Shilongo, E., 2011. Internal Reports and Thesis Proposal.

Smith, D. A. M. 1965 The Geology of the area around the Khan and Swakop Rivers in Namibia. Memoir 3, Geological Survey, Department of Mines, South Africa.

Snowden, 2009. Valencia Uranium (Pty) Ltd: Valencia Project, Namibia; Technical Report, Project 7516, June 2009.

Snowden, 2007. Forsys Metals Corp: Valencia Project, Namibia, Technical Report, June 2007.

Snowden 2009a Valencia Uranium (Pty) Ltd: Valencia Project, Namibia; Technical Report, Project 7480, January 2009.

Snowden 2009b Valencia Uranium (Pty) Ltd: Valencia Project, Namibia; Technical Report, Project 7516, June 2009.

World Nuclear Association (WNA), 2023. Uranium in Namibia, web portal: https://world-nuclear.org/information-library/country-profiles/countries-g-n/namibia, accessed May 2024.

APPENDIX 1: Glossary of Technical Terms

Glossary of Technical Terms

aeolian	Formed or deposited by wind.
airborne magnetic surveys	Surveys flown by helicopter or fixed wing aircraft to measure the magnetic susceptibility of rocks at or near the earth's surface.
alaskite	The meaning of Alaskite is a leucocratic granite of medium or fine grain composed chiefly of quartz and alkali feldspars.
alkaline rocks	Rocks containing an excess of sodium and or potassium.
Archaean	The oldest rocks of the Precambrian era, older than about 2,500 million years.
autometasomatism	Relates to the alteration of an igneous rock mass by its own late H2O-rich liquid fraction trapped within the rock, generally by an impermeable chilled border
basalt	A dark, fine-grained volcanic rock of low silica (<55%) and high iron and magnesium composition, composed primarily of plagioclase and pyroxene.
basement	The igneous and metamorphic crust of the earth, underlying sedimentary deposits.
brecciated	Condition applied to an intensely fractured body of rock.
carbonate	A rock, usually of sedimentary origin, composed primarily of calcium, magnesium or iron and CO_3. Essential component of limestones and marbles.
carbonatite	An alkaline, carbonate-rich magmatic rock.
conglomerate	A rock type composed predominantly of rounded pebbles, cobbles or boulders deposited by the action of water.
continental crust	Thicker and less-dense crust underlying continents.
craton	Large, and usually ancient, stable mass of the earth's crust comprised of various crustal blocks amalgamated by tectonic processes. A cratonic nucleus is an older, core region embedded within a larger craton.
Cretaceous	Applied to the third and final period of the Mesozoic era, 141 to 65 million years ago.
diamond drilling	Method of obtaining cylindrical core of rock by drilling with a diamond set or diamond impregnated bit.
dolomite	A mineral composed of calcium and magnesium carbonate; a rock predominantly comprised of this mineral is also referred to as dolomite or dolostone.
dyke	A tabular body of intrusive igneous rock, crosscutting the host strata at an oblique angle.
eluvium	Incoherent material resulting from the chemical decomposition or physical disintegration of rock in situ.
eU_3O_8	Equivelent uranium assay determined by estimating U_3O_8 concentration by applying a conversion factor to a gamma probe count rate.
evaporite	Sediment, including various salts, deposited from aqueous solution as a result of evaporation.
fault	A fracture or fracture zone, along which displacement of opposing sides has occurred.
felsic	Light coloured rocks containing an abundance of feldspars and quartz.
fluvial	Pertaining to streams and rivers.
fold	A planar sequence of rocks or a feature bent about an axis.
GPS	An instrument used to locate or navigate, which relies on three or more satellites of known position to identify the operator's location.
gneiss	A coarse grained, banded, high grade metamorphic rock.
granitoid	A generic term for coarse grained felsic igneous rocks, including granite.
gravity survey	Recording the specific gravity of rock masses in order to determine their distribution.
ilmenite	An iron, magnesium and titanium oxide ($(Fe,Mg)TiO_3$). The magnesium-rich ilmenite in kimberlite is called picro-ilmenite.

imaging	Computer processing of data to enhance particular features.
joints	Regular planar fractures or fracture sets in massive rocks, usually created by unloading, along which no relative displacement has occurred.
JORC	The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves
JORC 2004	The 2004 version of the JORC Reporting Code
JORC 2012	The 2012 version of the JORC Reporting Code
Landsat imagery	Photographs of the earth's surface, collected by satellite, and taken at different wavelengths of light, processed to enhance particular features.
lead isotope dating	A method of dating rocks containing lead by quantifying the relative ratio of lead isotopes.
limestone	A sedimentary rock containing at least 50% calcium or calcium-magnesium carbonates.
lineament	A significant linear feature of the earth's crust.
lithosphere	Mass of the mantle attached to the base of the crust that has a geological history related to that of the overlying crust, and that is cold and rigid relative to the deeper parts of the mantle.
Ma	Million years.
mafic	Descriptive of rocks composed dominantly of magnesium and iron rock-forming silicates.
Mesoproterozoic	Middle Proterozoic era of geological time, 1,600 to 1,000 million years ago.
metamorphism	Alteration of rock and changes in mineral composition, most generally due to increase in pressure and/or temperature.
mobile zone/belt	An elongate belt in the earth's crust, usually occurring at the collision zone between two crustal blocks, within which major deformation, igneous activity and metamorphism has occurred.
Neoproterozoic	Late Proterozoic era of geological time, 1,000 to 545 million years ago.
NI43-101	The National Instrument 43-101 is a document for the Standards and Disclosure for Mineral Projects within Canada
Ordovician	The second of the periods comprising the Palaeozoic area, 490 to 434 million years ago.
orogeny	A deformation and/or magmatic event in the earth's crust, usually caused by collision between tectonic plates.
Palaeozoic	An era of geologic time between the Late Precambrian and the Mesozoic era, 545 to 251 million years ago.
Precambrian	Pertaining to all rocks formed before Cambrian time (older than 545 million years).
Proterozoic	An era of geological time spanning the period from 2,500 to 545 million years before present.
Qualified Person	This Qualified Person, in the spirit of the National Instrument, is required to be a reputable professional who is knowledgeable of the mineral property concerned, and who has sufficient experience and qualifications to make the statements which are made within the report.
RC drilling	(Reverse Circulation) A percussion drilling method in which the fragmented sample is brought to the surface inside the drill rods, thereby reducing contamination.
replicate sampling	Sampling programme initiated to validate previous sampling results.
reversely polarised	A negative magnetic anomaly reflecting a body of magnetic igneous rock emplaced and crystallised when the earth's magnetic poles were reversed.
sandstone	A sedimentary rock composed of cemented or compacted detrital minerals, principally quartz grains.

schist	A crystalline metamorphic rock having a foliated or parallel structure due to the recrystallisation of the constituent minerals.
Semivariogram	Depicts the spatial autocorrelation of the measured sample points.
silicic	Containing an abundance of silica; rocks which have been extensively replaced by silica are referred to as silicified.
siltstone	A rock intermediate in character between a shale and a sandstone. Composed of silt sized grains.
spinel	A group of oxide minerals of various compositions, $(Mg,Fe,Mn)(Al,Fe,Cr)_2O_4$, commonly occurring as an accessory in basic igneous rocks.
strike	Horizontal direction or trend of a geological structure.
syenite	An intrusive igneous rock composed essentially of alkali feldspar, with little or no quartz and ferromagnesian minerals.
tectonic	Pertaining to the forces involved in, or the resulting structures of, movement in the earth's crust.
trough	A large sediment-filled and fault-bounded depression resulting from extension of the crust.
U_3O_8	**Triuranium octoxide** is a compound of uranium. It is present as an olive green to black, odorless solid. It is one of the more popular forms of yellowcake and is shipped between mills and refineries in this form.
ultramafic	Igneous rocks consisting essentially of ferromagnesian minerals with trace quartz and feldspar.
vegetation anomaly	An area of vegetative growth inconsistent with the surrounding vegetation, usually caused by an unusual drainage characteristic, soil type or trace element chemistry.
Xenocryst	Applies to mineral crystals in igneous rocks that are foreign to the body of rock in which they occur.
Yellow Cake	Yellowcake (also called urania) is a type of uranium concentrate powder obtained from leach solutions, in an intermediate step in the processing of uranium ores. It is a step in the processing of uranium after it has been mined but before fuel fabrication or uranium enrichment

APPENDIX 2: Abbreviations

ASX	Australian Securities Exchange
CANMET	Canada Centre for Mineral and Energy Technology referring to the Canadian Certified Reference Materials Project
CIM	The Canadian Institute of Mining, Metallurgy and Petroleum
cps	gamma counts per second
CRM	Certified Reference Material
CRM	Certified Reference Material
DFS	Definitive Feasibility Study
ECC	Environmental Compliance Certificate
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EPL	Exclusive Prospecting Licence
ha	Hectares
HG	High grade ore
IAEA	International Atomic Energy Agency
JORC	The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves
JORC 2004	The 2004 version of the JORC Reporting Code
km	Kilometres
LG	Low grade ore
LoM	Life of Mine
LoME	Life of Mine Extension
MDRL	Mineral Deposit Retention Licence
MG	Medium grade ore
ML	Mining Licence
Mm^3	Million cubic metres
MRE	Mineral Resource Estimate
Namibia MET	Namibia Ministry of Environment and Tourism
Namibia MME	Namibia Ministry of Mines and Energy
NamPower	Namibia Power Corporation
NamWater	The Namibia Water Corporation
NI43-101	National Instrument 43-101
OTC	Over the Counter Market
PFS	Preliminary Feasibility Study
ppm	Parts Per Million
Pty Ltd	Proprietary Limited
QAQC	Quality Assurance and Quality Control
QP	Qualified Person
SD	Standard Deviation

Technical Report	National Instrument 43-101 Technical Report
TSX	Toronto Stock Exchange
VUL	Valencia Uranium Limited