Twin Hills Gold Project, Namibia

NI 43-101 Technical Report

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Certificates of Qualified Persons

Certificate of Qualified Person – Anton Geldenhuys

In connection with the Technical Report entitled "Twin Hills Gold Project, Namibia – NI 43-101 Technical Report" with an effective date of 1 April 2022, I, Anton Geldenhuys, do hereby certify that:

1) I am a Principal Consultant of CSA Global South Africa (Pty) Ltd, Woodlands Office Park, Woodlands, Sandton, Gauteng, 2148, South Africa (telephone: +27 11 798 4300, email: info@csaglobal.com).
2) The Technical Report to which this certificate applies is titled "Twin Hills Gold Project, Namibia – NI 43-101 Technical Report" and has an effective date of 1 April 2021.
3) I hold a BSc (Hons) degree in Geology from Rand Afrikaans University (South Africa) and an MEng from the University of the Witwatersrand (South Africa). I am a Member in good standing of the Geological Society of South Africa and a registered Professional Natural Scientist (PrSciNat) with the South African Council for Natural Scientific Professions (SACNASP, membership number 400313/04). I am familiar with NI 43-101 and, by reason of education, experience in exploration, mineral resource development and the evaluation of mining projects, and professional registration, I fulfill the requirements of a Qualified Person as defined in NI 3-101. My experience includes 20 continuous years in the exploration and mining industry. This experience includes a significant amount of geological modelling and Mineral Resource estimation, carried out on a variety of commodities and mineralisation styles globally. Specific orogenic gold Mineral Resource estimation experience includes work in West Africa and Southern Africa, including Namibia.
4) I have visited the project from 28 to 31 March 2021 and 2 February 2022.
5) I am responsible for the following sections of this Technical Report: Sections 1 to 12, and Sections 14 to 29.
6) I am independent of the issuer as described in section 1.5 of NI 43-101.
7) I have had no prior involvement with the properties that are the subject of this Technical Report.
8) I have read NI 43-101 and the parts of the Technical Report I am responsible for, and the parts of the Technical Report that I am responsible for have been prepared in compliance with NI 43-101.
9) As of the effective date of the Technical Report, to the best of my knowledge, information, and belief, the parts of the Technical Report, that I am responsible for, contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 14th day of April 2022

"signed and sealed"

Anton Geldenhuys, MGSSA PrSciNat
Principal Consultant
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Certificate of Qualified Person – Glenn Bezuidenhout

In connection with the Technical Report entitled "Twin Hills Gold Project, Namibia – NI 43-101 Technical Report" with an effective date of 1 April 2022, I, Glenn Bezuidenhout, do hereby certify that:

1) Since July 2021, I have been a Senior Process Consultant of Lycopodium Minerals Canada Ltd at Suite 400, 5060 Spectrum Way, Mississauga, ON, L4W 5N5, Canada (telephone +1-905-206-2600, but based in Johannesburg, South Africa.
2) I am a Fellow Member of the South African Institute of Mining and Metallurgy (FSAIMM nr. 705704).
3) I graduated from the Witwatersrand Technicon of Johannesburg, South Africa with a National Diploma in Extractive Metallurgy (1979).
4) I am a practising process engineer and have practised in my profession continuously since 1979, and my relevant experience for the purposes of this Technical Report is as follows:
   - 29 years of engineering involvement on 18 mineral processing and mining projects and 13 years of operations experience.
   - Seven continuous years of gold operational experience in South Africa including refractory ore processing in Barberton and conventional CIL and heap leaching on the Witwatersrand.
   - Since 2012, gold study experience in Central and West Africa as a process consultant on Essasa, Obitan, Ahafo South in Ghana, New Liberty and Dugbe in Liberia, Kibali in the Democratic Republic of Congo, Yaramoko in Burkina Faso, Kalana and Fekola in Mali, including B2 Gold's Otjikoto Gold Plant in Namibia (2013).
   - Gold project experience as a lead process engineer and commissioning manager on the Perseus Edikan Project in Ghana (2011) and the Aureus New Liberty Gold Project in Liberia (2015).
5) I have read the definition of "Qualified Person" set out in National Instrument 43-101 (NI 43-101) and by reason of my education, affiliation with a professional association (as defined in NI 43-101), and past work experience, I fulfill the requirements of a Qualified Person as defined in NI 43-101.
6) I have not yet to date personally visited the Twin Hills Gold Project in Namibia.
7) I am responsible for the following sections of this Technical Report: Section 2 (Introduction), Section 13 (Mineral Processing and Metallurgical Testing), Section 25 (Interpretation and Conclusions), and Section 26 (Recommendations).
8) I am independent of the issuer as described in section 1.5 of NI 43-101.
9) I have had no prior involvement with the properties that are the subject of this Technical Report.
10) I have read NI 43-101, and the parts of the Technical Report that I am responsible for have been prepared in compliance with NI 43-101.
11) As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the parts of the Technical Report that I am responsible for, contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 14th day of April 2022

"signed and sealed"

Glenn Bezuidenhout, Nat Dip (Ex Met), FSAIMM
Senior Process Consultant
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Disclaimers

Purpose of this Document

This report was prepared exclusively for Osino Resources Corporation ("the Client") by CSA Global South Africa (Pty) Ltd ("CSA Global"), an ERM Group company. The quality of information, conclusions, and estimates contained in this report are consistent with the level of the work carried out by CSA Global to date on the assignment, in accordance with the assignment specification agreed between CSA Global and the Client.

Notice to Third Parties

CSA Global has prepared this report having regard to the needs and interests of the Client, for the purposes of the Client's reporting in accordance with NI 43-101 (as defined herein).

Results are Estimates and Subject to Change

The interpretations and conclusions reached in this Report are based on current scientific understanding and the best evidence available to the authors at the time of writing. It is the nature of all scientific conclusions that they are founded on an assessment of probabilities and, however high these probabilities might be, they make no claim for absolute certainty.

The ability of any person to achieve forward-looking production and economic targets is dependent on numerous factors that are beyond CSA Global's control and that CSA Global cannot anticipate. These factors include, but are not limited to, site-specific mining and geological conditions, management and personnel capabilities, availability of funding to properly operate and capitalize the operation, variations in cost elements and market conditions, developing and operating the mine in an efficient manner, unforeseen changes in legislation, and new industry developments. Any of these factors may substantially alter the performance of any mining operation.

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1 Executive Summary

Osino Resources Corporation ("Osino") commissioned CSA Global South Africa (Pty Ltd) ("CSA Global"), an ERM Group company, to compile a Technical Report on the Twin Hills Gold Project ("the Project") in Namibia. The Project comprises 14 exclusive prospecting licences ("EPLs") and has been systematically explored by Osino since 2016. This report covers the exploration conducted by Osino to date and presents the updated Mineral Resource estimate (MRE) that has been declared for the Project. This includes updated estimates for Bulge, Twin Hills Central and Clouds deposits, and maiden estimates for Oryx, Kudu, Twin Hills North, and Clouds West deposits. This report is prepared in accordance with the reporting requirements set forth in National Instrument 43-101 – Standards for Disclosure for Mineral Projects (NI 43-101), Companion Policy 43-101CP, and Form 43-101F1.

The Twin Hills Project was the subject of a Preliminary Economic Assessment (PEA), published by Osino on 30 November 2021. Osino is now working towards the preparation of a Prefeasibility Study (PFS) for the Project.

CSA Global has relied on information provided by Osino concerning legal, political, environmental or tax matters relating to the Project. CSA Global has been provided scans of tenement/permit documents; however, CSA Global has not independently verified the status of, nor legal titles relating to, the mineral concessions.

1.1 Location and Tenure

The Project is owned by Osino through a range of local subsidiary companies. The Project comprises 14 EPLs which are held over a combined area of 153,658 ha in and around the regional towns and settlements of Usakos, Karibib, Omaruru, and Wilhelmstal in the Erongo region of Namibia.

The Project area is located in arid to semi-arid shrub land, arid savannah and grassland, and is characterized by moderate relief with local elevations ranging from 900 m to 1,500 m above sea level. Local elevations or hills in the Project area are generally associated with marble outcrops and granitic intrusions. The primary economic activities in the Project area are agricultural (cattle ranching and game farming). The Project is accessible via Namibia's extensive, sealed, and well-maintained secondary gravel road networks and is 150 km (approximately two to three hours' drive) from the capital city, Windhoek, by road. Within the Project area, access is provided on a series of non-maintained roads and cross-country four-wheel drive tracks.

The area is characterized by hot summers and winters with cold night-time and warm day-time temperatures. Average rainfall is 240 mm per year and is generally associated with short intense thunderstorms during the summer months. There are several ephemeral streams at the Project. The climate offers no impediment to exploration in the Project area, except for difficult road access conditions during the peak rainfall periods in certain areas.

Namibia is a country with a long and successful mining, exploration and project development history. Skilled workers may be contracted out from smaller regional centres (e.g. Karibib) or the capital city, Windhoek. Electrical power is readily available from the national grid. Surface water is scarce and current planning considers the construction of several storage dams on ephemeral water courses.

1.2 Geology and Mineralization

The Project is located in an area of known gold deposits hosted within the inland arm of the Pan African Neoproterozoic Damara Belt, a northeast-striking Neoproterozoic fold, thrust, and metamorphic belt. It reflects a Neoproterozoic rifting-accretionary event between the Congo Craton to the north and the Kalahari Craton to the south. Peak deformation within the Damara Belt occurred between 500 Ma and 530 Ma. The Damara Belt comprises a gently folded Northern Zone, a Central Zone, and a Southern Zone. The Central Zone consists predominantly of calcareous and pelitic sediments that were deposited in a back-arc environment. The Southern Zone is considered to represent the suture zone and was intensely deformed, at high pressures and low temperatures, by a series of southeast-verging thrusts. A range of syn- and post-tectonic intrusives are present and these range from mafic to acid (i.e. gabbros to granites). Of these, the early syn-tectonic to late tectonic I-type Salem granites are the most abundant. These were followed by post-tectonic I-type granites. A much later Jurassic to Cretaceous event led to the emplacement of various alkaline ring complexes and granitic batholiths, as well as flood basalt provinces.

Geologically, the Project lies in the Southern Central Zone of the Damara Belt, lying to the south of a prominent regional scale lineament (the Omaruru lineament) and 20–55 km east-northeast of the Navachab gold mine. The north-eastern part of the Project area is largely underlain by undifferentiated syn-tectonic Salem-type granite. The balance of the Project area is underlain by meta-sedimentary rocks of the Swakop Group. This Group comprises the Arandis Formation (biotite schist, minor quartz schist calc-silicate rock and amphibolite), the Karibib Formation (dominantly dolomitic and calcitic marbles), and the overlying Kuiseb Formation (schistose quartz feldspar mica meta-greywacke and meta-pelite).

The sediments underwent polyphase deformation and metamorphism during the Damara Orogen. The larger earlier folds have northeast-southwest striking axial planes, parallel to the Omaruru lineament. These were subsequently deformed into open basin and dome structures about fold axes with northwest-southeast orientations. Later crosscutting lineaments are also evident in the area. The Swakop Group sediments were intruded by a series of syn-, late-syn- and post-tectonic granite and pegmatite bodies. Both generations of folds are recognized in drill core. Later during the Damara Orogen, the crustal scale Karibib Fault Zone (KFZ) on the southern margin of the Karibib Basin was reactivated as a dextral fault with associated secondary and tertiary structures.

The structural geology of the Project area in the Twin Hills area is dominated by features typical of the Southern Central Zone of the Damara Belt; Basement and/or basal Damara meta-sedimentary rocks in the cores of dome and anticlinal structures and regional synclinal structures with thick packages of Kuiseb Formation schists "filling" these synclines.

The geology of the Goldkuppe prospect, 20 km northeast of the Twin Hills deposit, is dominated by a series of interbedded marble and dolomite units belonging to the Karibib Formation. The marbles are folded into a first-order overturned anticline, which plunges gently to the northeast and verges towards the northwest. Small, medium and large scale, tight to isoclinal reclined folds and sheath folds, with steep to sub-vertical fold axes and fold axial planes, dominate the structure in the Goldkuppe target area.

Osino has made a series of gold discoveries along the KFZ, which was originally interpreted from regional magnetic data to have a strike length of over 100 km. Osino's licences cover more than 70 km of this strike extent. The KFZ is manifested as a belt of very high strain, intense silicification, and partial remelting. The calcrete covered central portion of the KFZ has been the most prospective to date and is where the Twin Hills deposit is located. Twin Hills is a cluster of gold mineralized zones associated with schists of the Kuiseb Formation. Gold mineralization is closely associated with arsenopyrite and pyrrhotite, and the deposits and occurrences are classified as orogenic.

Orogenic gold deposits are generally hosted by volcanic and turbiditic sequences that have been metamorphosed to greenschist or less commonly amphibolite facies. The deposits are generally interpreted to form late in the orogenic cycle from mid- to lower-crustal metamorphic fluids. Gold mineralization develops syn-kinematically with at least one stage of the major deformation of the country rocks and they inevitably have a strong structural control involving faults or shear zones, folds, and other areas of competency contrasts. Mineralization along the KFZ has been located, by Osino, for over 20 km of strike to date, with the main target area at Twin Hills being associated with a structural jog along the KFZ. At a deposit scale, mineralization is associated with shearing in the greywacke/turbidite sequence, parallel to the axial planes of isoclinal folds and occurs in millimetre-scale veinlets as well as in more disseminated forms.

At Goldkuppe, 3 km of mineralized strike has been defined, with mineralization occurring in several discontinuous plunging shoots located predominantly within a dolomitic marble horizon. Mineralization is typically associated with secondary fold noses, small-scale saddle reefs and limb faults and occurs in association with massive or semi-massive sulphides (chalcopyrite-pyrite and subordinate pyrrhotite). Low-grade mineralization is also associated with pervasive skarn alteration adjacent to intrusive bodies.

Osino used an orogenic gold, mineral systems approach to select and prioritize its regional exploration targets, with the KFZ considered the priority regional structure.

1.3 Project History and Exploration

Parts of the Project area were explored historically by Anglo American, as part of their regional exploration campaign associated with the development of the Navachab gold mine. This work includes stream sediment and soil geochemical surveys, as well as limited rotary air blast (RAB) and diamond drilling. From 2008 onwards, Bafex Exploration (Bafex) undertook soil geochemical sampling, reverse circulation (RC), and diamond drilling over Twin Hills East, Goldkuppe, and Albrechtshöhe. Additionally, Bafex also carried out several geophysical campaigns (induced polarization (IP), electromagnetics (EM), and gravity) over Goldkuppe.

Osino has actively and systematically explored the Project since 2016. Soil geochemical surveys have been used to good effect to identify potentially mineralized areas, and the geochemical surveys were later extended to calcrete-covered areas too. The soil and calcrete sampling campaigns have been augmented with rock chip sampling and limited trenching. Osino has used government regional aeromagnetic data, and carried out a detailed ground magnetic survey, and IP surveys to define drill-ready targets. In addition to Bulge, Twin Hills Central, Clouds, and Twin Hills West (Kudu and Oryx lobes), numerous other targets along the KFZ and related structures have been identified.

Osino has carried out a combination of diamond drill core (DD), RC and percussion drilling at the Project. A total of 410 DD holes have been drilled for 106,514 m and 516 RC holes for 78,452 m. Total drilling amounts to 926 drillholes for 184,966 m, of which approximately 90% has been at Bulge, Twin Hills Central, Clouds, and Twin Hills West; the balance has taken place at Goldkuppe, Oasis, and Wedge on the northern margin of the Karibib Basin and at various soil anomalies along the Karibib Fault including Dropstone and Okapawe. Drilling, logging, sampling and the fire assay method used for the determination of gold grades are all in accordance with industry-standard practices. CSA Global has undertaken a review of the quality assurance/quality control (QAQC) program and resulting QAQC data and is satisfied that the data are suitable for Mineral Resource estimation and reporting. The sample preparation and primary assay facilities have been inspected by CSA Global with no significant concerns.

1.4 Metallurgy and Processing

Following the completion of the PEA report in 2021, Lycopodium Minerals Africa (Pty) Ltd (LMA) was contracted by Osino Resources Corp. to initiate and oversee further metallurgical test work on samples from the Twin Hills gold deposit in Namibia. These results would be used to design, size and cost a flowsheet for use in a PFS.

Samples received were from core drilling and included Twin Hills Central (THC), Bulge, Clouds (a new deposit) and Transition material from the deposit as selected and designated by the client Geologist. New names were given to the pits in the PEA, Twin Hills East was changed to Twin Hills Central and Twin Hills West was changed to Bulge. However, the drilling of the Twin Hills West (THW) satellite target was taking place at the same time Bulge was named Twin Hills West. The PEA metallurgical samples for Bulge had already been sent under the Twin Hill West name rather than Bulge. Twin Hills West has been widely used for resource estimates and in press releases.

The plant throughput in the PEA was set at 3.5 Mtpa. Following further geological modelling for the PFS design the Clouds deposit has been added to the resource. Samples of Twin Hills West were received at Maelgwyn Laboratories on 5th March 2022 and the test work results will be reported in the Definitive Study Report.

The Twin Hills gold plant design is based on a flowsheet that comprises 3 stages crushing, milling, gravity recovery, a carbon-in-leach (CIL) circuit, carbon elution, and a gold recovery circuit. CIL tails will be treated in cyanide destruction before thickening and filtration, for transfer as filter cake on an overland conveyor for disposal at the dry tailings storage facility (TSF).

PFS test work on the Fresh composite samples resulted in gold recoveries of 93.7% for Bulge, 94.6% for Twin Hills Central, 89.9% for Clouds and 92.8% for the Transition composite.

1.5 Mineral Resource Estimate

The Mineral Resource was estimated for the Twin Hills deposit which includes several target areas. The three primary targets: Bulge; Twin Hills Central; and Clouds, were updated from infill drilling, while four smaller targets have been modelled and estimated for the first time.

The database was established by the collection, validation, recording, storing, and processing of data and forms the foundation for the MRE. A QAQC program was established to govern the collection of all data.

The Mineral Resource is based on geological premises, facts, interpretations, and technical information. The appropriate estimation methods, parameters, and criteria were used for the deposit under consideration.

Mineral Resources were classified as either Inferred or Indicated. Indicated Mineral Resources were generally classified where the interpretation and estimate were informed by 35 m x 35 m spaced infill drilling, such that the data were sufficient to assume geological and grade continuity between points of observation. Indicated Mineral Resources were only classified at Bulge, Twin Hills Central, and Clouds, as these domains were covered by infill drilling.

Areas supported by 50 m x 50 m spaced drilling were generally classified as Inferred Mineral Resources, as evidence was sufficient to imply, but not necessarily verify, geological and grade continuity. It is reasonable to expect that majority of the Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued infill drilling.

The Mineral Resource meets the minimum requirement of reasonable prospects for eventual economic extraction (RPEEE) as defined by "CIM Definition Standards - For Mineral Resources and Mineral Reserves". To satisfy the requirement of RPEEE by open pit mining, reporting pit shells were determined based on conceptual parameters and costs. Gold recovery would likely be achieved using conventional crushing, milling, gravity, pre-oxidation, and carbon-in-leach (CIL) circuit.

The Mineral Resource is that material within the conceptual RPEEE pit shell above a 0.5 g/t Au cut-off grade. The MRE has an effective date of 1 April 2022.

Table 1-1: Mineral Resource for the Twin Hills Gold Project at a 0.5 g/t Au cut-off as of 1 April 2022

Mineral Resource category	Tonnes (Mt)	Grade (g/t Au)	Troy ounces (Moz)
Indicated	65.0	1.00	2.10
Inferred	20.7	0.93	0.62

Notes:

- *Figures have been rounded to the appropriate level of precision for the reporting of Mineral Resources.*
- *Mineral Resources are stated as in situ dry tonnes; figures are reported in metric tonnes.*
- *The Mineral Resource has been classified under the guidelines of the CIM Definition Standards for Mineral Resources and Mineral Reserves and adopted by the CIM Council, and procedures for classifying the reported Mineral Resources were undertaken within the context of the Canadian Securities Administrators NI 43-101.*

- *The Mineral Resource is reported within a conceptual pit shell determined using a gold price of US$1,700/oz and conceptual parameters and costs to support assumptions relating to reasonable prospects for eventual economic extraction.*
- *Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.*
- *The exclusive exploration licences on which the Mineral Resource is reported are 90%, 100%, 95% and 90% owned by Osino. As a result, the blended ownership of the total reported gold ounces attributable to Osino is 94.66%.*

The estimated block model was tabulated at various cut-off grades. This tabulation does not represent a Mineral Resource in any way and only serves to illustrate the nature of the mineralization and sensitivity to various cut-offs.

Table 1-2: Classified block model within the conceptual RPEEE pit shell at various cut-off grades

Cut-off grade (g/t Au)	Indicated			Inferred		
	Tonnes (Mt)	Grade (g/t Au)	Troy ounces (Moz)	Tonnes (Mt)	Grade (g/t Au)	Troy ounces (Moz)
0.4	66.2	0.99	2.11	21.3	0.92	0.63
0.5	**65.0**	**1.00**	**2.10**	**20.7**	**0.93**	**0.62**
0.6	60.5	1.04	2.01	18.5	0.97	0.58
0.7	52.3	1.10	1.84	14.8	1.05	0.50
0.8	42.4	1.18	1.60	11.2	1.15	0.41
0.9	32.9	1.27	1.35	8.4	1.25	0.34
1.0	25.2	1.37	1.11	6.3	1.35	0.27

1.6 Interpretation, Conclusions and Recommendations

Systematic exploration along the KFZ by Osino has led to the generation of the Mineral Resource reported herein, as well as the identification of numerous other gold occurrences along more than 20 km of strike length that warrant further exploration. No reliance has been placed on historical drilling data, although a moderate amount of historical exploration was undertaken in the Project area and immediate surrounds by Anglo American and Bafex. A review of the QAQC results associated with the data generated by Osino coupled with a review of Osino’s drilling, logging, sampling, and assay practices and procedures, indicates the data are acceptable for use in the MRE.

A substantial amount of metallurgical testwork has been carried out by Osino and demonstrates potential gold recoveries of 80% to >90% using CIL coupled with gravitational gold recoveries, with additional potential recovery upside through the introduction of a pre-oxidation stage.

Although not currently evident, environmental, permitting, legal, title, taxation, socio-economic and political risk issues could potentially affect access, title, or the right to perform the work recommended in this report.

CSA Global considers the exploration risk at the Project to be moderate overall, given the volume of work carried out to date and the largely Inferred classification of the Mineral Resource at the Twin Hills deposit. Other occurrences within the Project area carry higher exploration risk, in common with other exploration projects. The geological setting of mineralization is well-understood, and the success of the targeting rationale used by Osino has, to some extent, reduced the risk associated with these other occurrences.

1.6.1 Mineral Resource Risk

Most of the Mineral Resources reported for the Project are classified as Inferred. An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply, but not verify, geological and grade continuity. Inferred Mineral Resources have the lowest level of confidence of all the categories.

The quantity and grade of the Inferred Mineral Resource would likely change with the addition of infill drilling, as mineralization (volume) could be added or removed from the current interpretation based on the additional data.

1.6.2 Opportunities

The numerous targets and occurrences identified by Osino present additional discovery potential along the KFZ within the Project area. Many of these are not yet drill tested and, essentially, the entire length of the KFZ in the Project area is considered prospective, with the Twin Hills deposit (including Twin Hills West) essentially being open along strike in both directions. Furthermore, the conceptual pit shell used to report the Mineral Resource in order to satisfy RPEEE, resulted in the majority of the block model being reported as Mineral Resource. This suggests that undrilled material below the current RPEEE pit shell could potentially satisfy RPEEE requirements and that the deposit is effectively open at depth. Metallurgical testwork has highlighted the potential to further increase gold recoveries through the addition of a pre-oxidation stage to the CIL circuit.

1.6.3 Future Work Programs

Ongoing drilling is recommended at the Project, both to advance the many additional prospects identified by Osino and to infill existing drilling, with the aim to increase confidence in the MRE and ultimately support economic study work. A further 24,000 m of infill drilling is planned, together with an additional 14,000 m of exploration drilling. A total budget of approximately C$5.2 million will be required to undertake this work.

In addition, Osino are currently working towards preparing a PFS for the Project, with an estimated total cost of C$1.5 million. This includes provision for consulting fees, metallurgical testwork, civil engineering testwork, ongoing environmental studies, hydrogeological and geotechnical drilling and testwork.

A total budget of C$6.7 million is required to execute all of the contemplated workstreams.

2 Introduction

2.1 Context, Scope, and Terms of Reference

CSA Global was commissioned by Osino to prepare a Technical Report for the Twin Hills Gold Project in Namibia, Southern Africa, in accordance with NI 43-101, Companion Policy 43-101CP, and Form 43-101F1. This Technical Report discloses a material change to the Project in the form of a newly updated MRE.

The Twin Hills Gold Project is a gold exploration project situated in central Namibia, 20–55 km along strike east of the 5 Moz Navachab gold mine. The Project was initiated by Osino in late 2016 with a review of the nearby Goldkuppe gold occurrence and regional mapping, structural interpretation, and soil sampling. Follow-up sampling programs, geophysical surveys, and scout drilling led to the discovery of the Twin Hills gold deposit in August 2019. An intense drill program was launched in October 2019 and has continued, largely uninterrupted, to the effective date of this Technical Report. These drilling data have been used to generate the MRE reported in this Technical Report. Maiden MREs are reported for the Oryx, Kudu, Twin Hills North, and Clouds West targets, whereas updated MREs are reported for Twin Hills Central, Bulge, and Clouds.

The MRE has been prepared in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves as per NI 43-101 requirements. No Mineral Reserves have been reported.

The effective date of this report is 1 April 2022, and the report is based on technical information known to the authors and CSA Global at that date.

The Twin Hills Project was the subject of a PEA, published by Osino on 30 November 2021. The PEA is considered obsolete, given the material changes to the Mineral Resources used in the PEA, the footprint of the planned operations and numerous other input parameters and assumptions. Osino is now currently working towards the preparation of a PFS for the Project.

Osino has reviewed draft copies of this report for factual errors and omissions. Any changes made as a result of these reviews did not include alterations to the interpretations and conclusions made. Therefore, statements and opinions expressed in this document are given in good faith and the belief that such statements and opinions are not false and misleading at the date of this report.

2.2 Cautionary Notes

2.2.1 Independence

This report has been authored by Mr Anton Geldenhuys and Mr Glenn Bezuidenhout. Mr Geldenhuys is a CSA Global employee who has no material present or contingent interest in the outcome of this report, nor do they have any pecuniary or other interest that could be reasonably regarded as being capable of affecting their independence in the preparation of this report. CSA Global has prepared this report 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. No member or employee of CSA Global is or is intended to be, a director, officer, or other direct employee of Osino. No member or employee of CSA Global has or has had, any shareholding in Osino. Furthermore, there is no formal agreement between CSA Global and Osino as to CSA Global providing further work for Osino.

Mr Bezuidenhout is a Lycopodium employee who has no material present or contingent interest in the outcome of this report, nor does he have any pecuniary or other interest that could be reasonably regarded as being capable of affecting his independence in the preparation of this report. Lycopodium has contributed to this report 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. No member or employee of Lycopodium is, or is intended to be, a director, officer, or other direct employee of Osino. No member or employee of Lycopodium has, or has had, any shareholding in Osino. Furthermore, there is no formal agreement between Lycopodium and Osino as to Osino providing further work for Lycopodium.

The Qualified Persons for this report are Mr Geldenhuys (Sections 1 to 12, Section 14, Sections 23 to 2629) and Mr Bezuidenhout (Sections 2,13, 25 and 26).

2.2.2 Element of Risk

The interpretations and conclusions reached in this report are based on current geological theory and the best evidence available to the author at the time of writing. It is the nature of all scientific conclusions that they are founded on an assessment of probabilities and, however high these probabilities might be, they make no claim for absolute certainty. Any economic decisions which might be taken on the basis of interpretations or conclusions contained in this report will therefore carry an element of risk.

2.3 Sources of Information

Sources of information for the work conducted are listed in Section 27 (References) and from information provided by Osino. CSA Global has undertaken its own review of the technical aspects contained in this report. Based on the data supplied by Osino, CSA Global has prepared an MRE for the Property. CSA Global has made all reasonable endeavours to confirm the authenticity and completeness of this data.

2.4 Data Conventions

The following units and conventions are used in this technical report:

- Coordinate system: WGS_1984_UTM_Zone_33S.
- Datum: D_WGS_1984.
- Units of measurement: Metric.
- Gold grade: grams per tonne (g/t).
- Width of mineralized intersections: Apparent (true widths not known).
- Reported intersections: Unconstrained (contain internal waste).
- Currency: Canadian dollars (C$) and Namibian dollars (N$). The exchange rate used in the report is C$1 = N$11.51.

2.5 Qualified Person Property Inspection

A site visit was conducted by the Qualified Person, Mr Anton Geldenhuys (Principal Resource Consultant at CSA Global), from 28 to 31 March 2021 and 2 February 2022. During the trip, the following sites were visited:

- Operating drill rig in the vicinity of Karibib
- Core processing facility in Omaruru
- Actlabs sample preparation facility in Windhoek
- Osino head office in Windhoek.

The site visit is further detailed in Section 12.

3 Reliance on Other Experts

CSA Global is relying on information provided by Osino concerning legal, political, environmental, or tax matters relating to the Project. This information has been supplied to CSA Global through personal communications with Osino staff, provision of technical information and data, and the uploading of relevant information to a project data room, over the period 2020 to 2022. Technical conversations via email and online teleconferencing have been held with various Osino staff, primarily Edwin Daweti, Wynand Slabbert and Charles Creasy from January to April 2022. CSA Global has been provided scans of tenement/permit documents; however, CSA Global has not independently verified the status of, nor legal titles relating to, the mineral concessions. CSA Global notes that several of the EPLs that constitute the Project will expire imminently but has sighted the renewal documentation. Osino asserts that it is fully compliant with the legal requirements for these permits to be renewed, although this has not been independently verified by CSA Global. It is furthermore understood that EPLs remain active in the event of renewal submissions.

CSA Global has also not independently verified nor undertaken any due diligence regarding the legal and tax aspects relating to the Project and neither the authors, nor CSA Global, are qualified to provide comment on any legal issues associated with title to the Project.

4 Property Description and Location

4.1 Location of Property

The Project is located in central Namibia approximately 150 km northwest of the capital city of Namibia, Windhoek (Figure 4-1). The Project covers an area in and around the regional towns and settlements of Usakos, Karibib, Omaruru and Wilhelmstal in the Erongo region of Namibia (Figure 4-2).

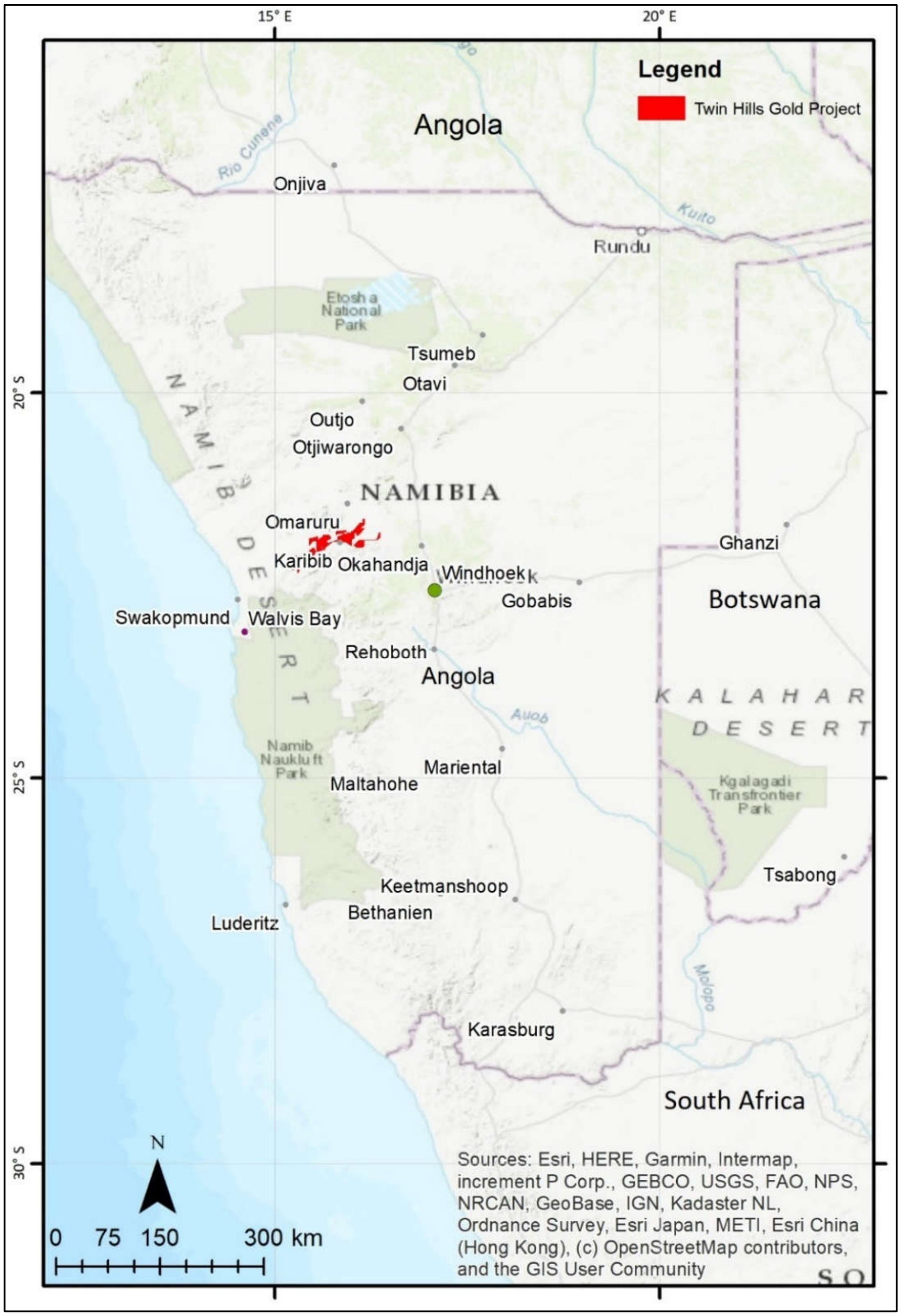


Figure 4-1: Project location map
Source: CSA Global

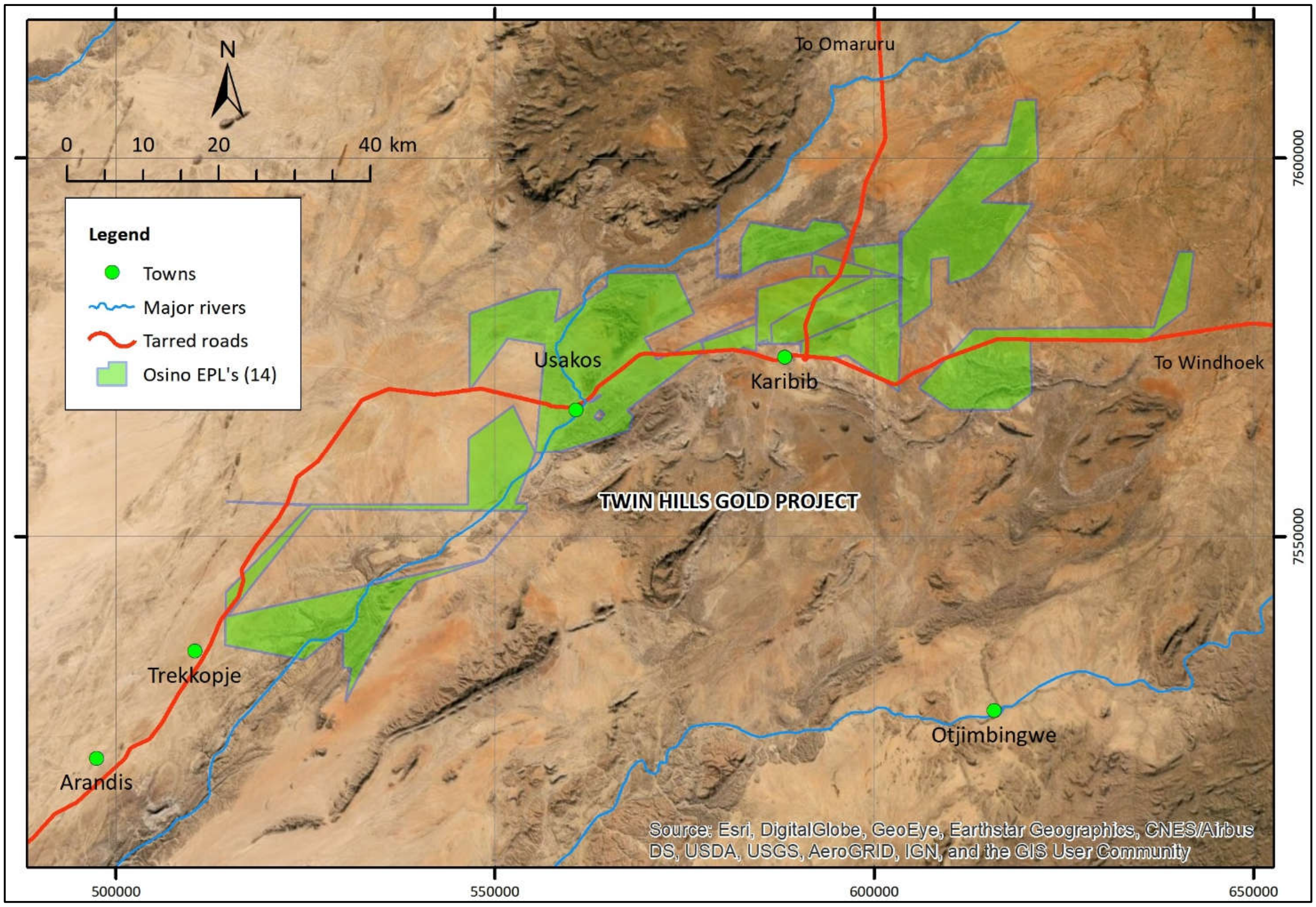


Figure 4-2: Location of the EPLs which make up the Twin Hills Gold Project area
Source: CSA Global

4.2 Mineral Tenure

4.2.1 Overview of Namibian Mineral Law

Mineral rights in Namibia are currently administered in terms of the *Minerals Act of 1992 (Namibia)*. This Act stipulates that the rights in relation to the reconnaissance or prospecting for, the mining and sale or disposal of, and the exercise of control over, any mineral or group of minerals vests, notwithstanding any right of ownership of any person in relation to any land in, on or under which any such mineral or group of minerals is found, in the State. The following types of licences are granted by the State:

- Non-Exclusive Prospecting Licences
- Mining Claims
- Reconnaissance Licences
- Exclusive Prospecting Licences (EPLs, as defined before)
- Mineral Deposit Retention Licences
- Mining Licences.

The duration of the EPLs are normally three years maximum, and as may be determined by the Minister at the time of granting of such licences. Further periods can be renewed, but not exceeding two years at a time. According to the Minerals Act, EPLs shall not be renewed on more than two occasions, unless the Minister deems it desirable in the interest of the development of the mineral resources of Namibia that an EPL be renewed in any particular case on a third or subsequent occasion.

The requirements for renewal of EPLs are as follows:

- Renewal applications will be made not later than 90 days before the date on which such licence will expire.
- 25% of the licence area needs to be relinquished with every renewal application. A motivation needs to accompany the application if this requirement is not met, and it will be to the Minister's discretion to approve such a licence.
- Renewal applications must be accompanied by a geological report in duplicate prepared in respect of the immediately preceding period of such a licence, detailing all the exploration work undertaken, including reporting results of all these studies and expenditures incurred. Proposed future work on the licences must also be included.

4.2.2 Project Tenure

Osino, through various locally held and majority-owned subsidiaries, holds 14 EPLs, including an earn-in agreement to acquire a majority interest in EPL 5641 in central Namibia. These 14 EPLs cover a surface area of 153,658.07 ha which make up the Twin Hills Gold Project (Table 4-1). The relationship of the various subsidiaries, in relation to Osino, is shown in Figure 4-3.

Table 4-1: Details of the 14 active EPLs that constitute the Project

EPL	Osino subsidiary (% owned)	Date (from)	Date (to)	Area (ha)	Comments
EPL 3739	Osino Gold Exploration (Pty) Ltd (95%)	11 Sep 2007	15 Aug 2023	22,235.61	
EPL 5196	Osino Namibia Minerals Exploration (Pty) Ltd (90%)	9 Apr 2014	8 Apr 2023	2,062.89	
EPL 5533	Richwing Exploration (Pty) Ltd (Osino 80%)	4 Feb 2014	17 Oct 2023	17,503.82	Base and rare metals application
EPL 5641	Flocked Consultancy Services (Pty) Ltd (Osino 51%)	17 Oct 2016	19 Jul 2022	5,667.07	
EPL 5649	Osino Namibia Minerals Exploration (Pty) Ltd (90%)	30 Sep 2014	27 Jan 2024	1,304.66	
EPL 5658	Terrace Minerals Exploration (Pty) Ltd (Osino 100%)	23 Sep 2014	19 Oct 2022	19,905.80	
EPL 5880	Osino Namibia Minerals Exploration (Pty) Ltd (90%)	4 Oct 2016	21 Nov 2023	39,589.19	
EPL 6167	Osino Gold Exploration (Pty) Ltd (95%)	23 Feb 2017	13 Jul 2022	1,422.3854	
EPL 6953	Osino Gold Exploration (Pty) Ltd (95%)	13 Jun 2018	12 Jun 2023	513.92	
EPL 7301	Osino Namibia Minerals Exploration (Pty) Ltd (90%)	13 Aug 2019	12 Aug 2022	12,911.80	
EPL 7344	Osino Namibia Minerals Exploration (Pty) Ltd (90%)	13 Aug 2019	12 Aug 2022	29,957.96	
EPL 7426	Osino Namibia Minerals Exploration (Pty) Ltd (90%)	25 Apr 2019	24 Apr 2022	40.01	Renewal submitted
EPL 7427	Osino Namibia Minerals Exploration (Pty) Ltd (90%)	25 Apr 2019	24 Apr 2022	419.97	Renewal submitted
EPL 7439	Osino Namibia Minerals Exploration (Pty) Ltd (90%)	25 Apr 2019	24 Apr 2022	122.98	

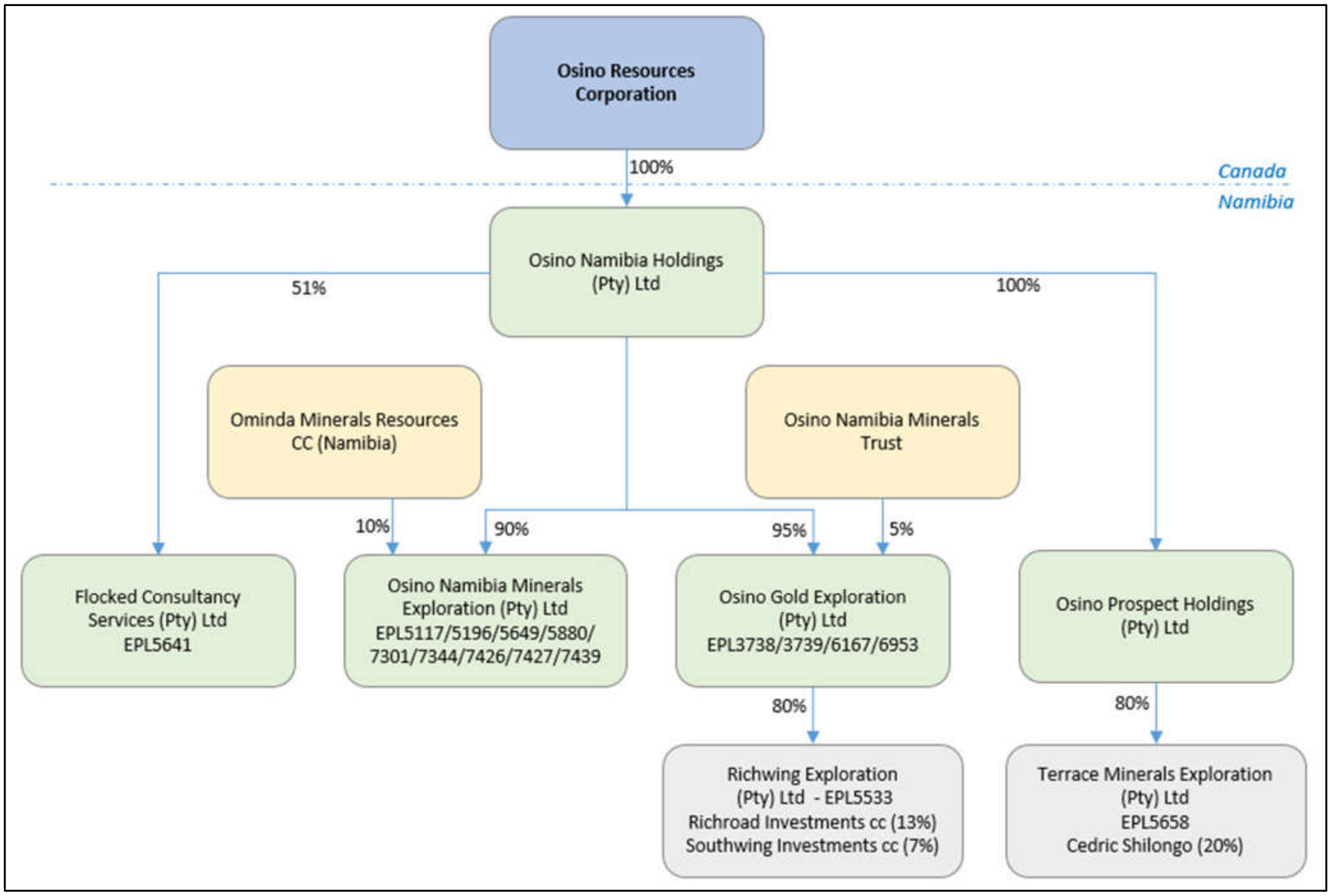


Figure 4-3: Relationship of local subsidiaries to Osino
Source: Osino

4.3 Tenure Agreements and Encumbrances

The right to the EPL is administered by the State of Namibia in terms of the approved Exploration Plan provided on the application for the original EPL or the most recent renewal application of the EPL. The EPL expires on the date as stated in Table 4-1 unless an application has been lodged for a renewal or mining licence.

4.3.1 Surface Rights, Legal Access

Surface rights in the Project area all belong to either private freehold farm owners or the Government of Namibia. Osino does not own or hold any title to the surface rights of any land in the area.

To gain access to all farmland within the Project area, Osino is required to enter into written land access agreements with each individual farm owner. In general, a compensation fee is paid to the landowner as compensation for exploration activities on the specific farm. Compensation generally ranges between N$1,000 and N$10,000 (C$87 and C$870) per month for the farm access agreements currently in place.

Table 4-2 shows a summary of the land access agreements currently in place, which provide access to the relevant farms listed, and where they are relative to specific target areas or areas of interest within the Project area. The farms to which Osino has signed access agreements represent approximately 80% of the main areas of interest within the Project at the time of this report.

There are no other significant royalties, payments or agreements or risks that may affect access, title, or the right or ability to perform exploration work on the Project.

Table 4-2: Farm access agreements

Farm name	General terms (see notes below)	EPL	Targets/Areas of interest
Dobbelsberg	Access granted (1)	3739, 5658	Dobbelsberg and Puff Adder
Twinhill	Access granted (1)	3739	Twin Hills East (Courser)/KFZ
Okawayo	Access granted (1)	3739, 5658, 6953, 6167	Twin Hills Central/West, Clouds, Barking Dog
Otjimbojo West	Access granted (1)	3739	OJW/KFZ
Otjimbojo Ost	Access granted (5)	3739	Goldkuppe, Calidus, Oasis, Wedge, Dropstone
Klein Okawayo	Access granted (1)	3739, 5117, 5196	North Contact, North Bend
Rheinsheim	Access granted (5)	3739	Okapawe/KFZ
Ovikenga	Access agreement unlikely to be needed (4)	3739	
Omapyu Sud I	Access granted (5)	3739	North End, Bulls Eye
Omapyu Sud II	Access granted (1)	3739	
Otjakatjongo	Access granted (1)	3739	Goldkuppe, Dead Oryx, Spang
Wag 'n Bietjie	Access granted (5)	3739	
Noitgedag	Access granted (5)	3739	
Neubrunn	Access granted (5)	3739, 5533	KFZ
Albrechtshöhe	Access granted (5)	5533	Cheshire Cat, B1, Leatherman
Okakoara	Access granted (5)	5533	Dobbels South
Okatji	Access granted (1)	5533, 5658	Dobbels South
Karlsbrunn	Access granted (5)	5533	
Karibib	Access granted (1)	5658, 5649	Dobbels West
Beenbreek, Daheim, Spes Bona	Access granted (1)	5658, 5196	Kuiseb Deeps
Kranzberg South and North	Access granted (5)	5880	
Klein Aukas	Access granted (1)	5880	Klein Aukas

General terms and notes:

(1) *Access agreements in place, monthly compensation paid only when active on the farm.*

(2) *Access agreements in place, monthly compensation paid monthly while relevant EPL(s) are valid.*

(3) *Access agreements being negotiated; permission to work is likely in following three months (none fit this description at present).*

(4) *Access agreement negotiations yet to begin or unlikely to be needed.*

(5) *Access granted, agreement has expired and will require renewal if access is needed again. Renewal expected without delays with the same or similar conditions.*

4.4 Environmental Risks, Liabilities and Permitting

CSA Global has not conducted a detailed review of environmental risks, liabilities or permitting requirements, either current or potential, associated with the Project and has relied on representations provided by Osino and its consultants (ECC) pertaining to these matters. Permits are in place to carry out exploration on all the EPLs that make up the Project. In addition to the EPL documentation and related permits, which grant the right to explore for the relevant commodity groups, Osino is also required to enter into Environmental Contracts for each EPL with the Ministry of Environment and Tourism (MET). This contract is concluded when the MET issues an Environmental Clearance Certificate for each EPL granted to Osino. In order for drilling to take place, a "Notice of Intention to Drill" is submitted to the Ministry of Mines and Energy (MME) in advance of drilling.

Environmental Clearance Certificates have been granted for all the EPLs which make up the Project. The Environmental Clearance Certificate is granted after submission to the MET of a scoping study and environmental impact assessment for the planned exploration activities on the relevant EPLs. The Project and its constituent 14

EPLs have no recognized environmental liabilities, and to maintain good standing, Osino must submit environmental progress reports every six months documenting work carried out, any environmental impact, and remedial actions and rehabilitation carried out.

Osino has standard operating procedures, which adhere to environmental rehabilitation related to exploration programs including rehabilitation of drill sites, pits, and trenches.

4.4.1 High Level Desktop Environmental Risk Assessment

ECC has undertaken a high-level, predominantly desktop, study of the biophysical and socio-economic issues likely to be encountered in the study area (ECC, 2021). The available information has been used to highlight gaps in the environmental baseline data and to indicate potential impacts that may be of consequence to the Project in the transition of the Project from exploration to full-scale mining. Further details were included in the 2021 PEA, which is summarized in Section 24 (Other Relevant Data and Information).

The high-level environmental risk assessment evaluated potential issues for the proposed project and provides potential mitigation measures. Through the process, it was determined that the diversion of the Okawayo River will require focused attention. The size of the proposed mine footprint should be restricted as early as possible, and strict access control and monitoring measures must be implemented before and during construction and operational phases, as well as in the closure phases.

Stakeholder Engagement

Public perception of the Project is expected to be mixed, but no significant opposition is anticipated from the currently identified interested and affected parties. However, the proposed river diversion may meet with some opposition from water users downstream of the mine. In addition, the proposed road diversion will directly impact neighbouring farms.

The existing list of known stakeholders will be expanded, through advertising of the proposed project in local and national newspapers, and stakeholders will be invited to comment, and/or attend public meetings where the Project will be presented. Meetings will be held in the nearby towns (Karibib and Omaruru), Windhoek, and Swakopmund.

Important stakeholders include the landowners that are directly and indirectly affected by the Project and its associated linear infrastructure corridors. In particular, the landowners downstream of the proposed river diversion, and those affected by the proposed road diversion, must be consulted. Focus meetings will be held with directly affected stakeholders.

There are minerals claims for dimension stone held over some parts of the Project area (marble ridge) and Osino is currently negotiating with owners to achieve an amicable working relationship. Cognisance should be taken of the cumulative and joint liabilities for long-term remediation and rehabilitation.

The Karibib Air Force base, in proximity to the planned mine, is unique to this project, and security issues and civil aviation requirements must be taken into consideration during the mine site layout planning and positioning of tall infrastructure.

Significant Impacts Identified

The most significant potential environmental impacts identified were:

- Impact on riparian vegetation from the altered river course
- Surface water and local aquifer water impacts arising from the river diversion
- Impacts on road users and farms with road diversion
- Impacts on endemic biodiversity species

- Visual impacts on the sense of place (from B2 and Erongo Mountain)
- Cumulative dust impacts from earthworks, blasting, crushing, haul roads, the tailings storage facility, and neighbouring quarries
- Groundwater impacts from drawdown created by the open pits, and possible seepage from the tailings storage facility and waste rock dump
- Social impacts on nearby towns during construction, during operations, and after closure.

From the desktop study information, the site is part of a relatively sensitive area of biodiversity, and detailed studies are needed to verify the extent of this.

4.4.2 Environmental Permits and Legal Requirements

The *Environmental Management Act, No. 7 of 2007* (EM Act) and its associated regulations guide the environmental and social assessment processes in Namibia. A scoping study is done as a first step toward developing the full ESIA report and its objective is to allow for wide public consultation and information gathering, to ensure that the most applicable aspects and associated impacts are identified for the ESIA.

The EM Act also stipulates that an Environmental Clearance Certificate is required to undertake any of the listed activities identified in the act and its associated regulations. While these have been granted for the EPLs, development of the Project will trigger the requirement for new Environmental Clearance Certificates. Potential listed activities triggered by the Project are listed in Table 4-3 and will be included in the ESIA process.

Table 4-3: Listed activities potentially triggered by the Project

Listed activities	Description	Relevance to the Project
Energy Generation, Transmission and Storage Activities	• The generation of electricity • the transmission and supply of electricity.	The proposed project will need to generate and/or transmit electricity for its operations.
Waste Management, Treatment, Handling and Disposal Activities	• The construction of facilities for waste sites, treatment and disposal of waste. • Any activity entailing a scheduled process referred to in the *Atmospheric Pollution Prevention Ordinance, 1976*.	The proposed project will require waste sites for the disposal of mineralized and non-mineralized waste. Hazardous waste may also be disposed of on site in a specifically designed facility. Induction furnace (generally covered under the mine accessory works permit).
Mining and Quarrying Activities	• The construction of facilities for any process or activity which requires a licence, right or other form of authorization, and the renewal of a licence, right or other form of authorization, in terms of the *Minerals (Prospecting and Mining Act), 1992*.	The potential Twin Hills mine and associated infrastructure.
Forestry Activities	• The clearance of forest areas, deforestation, afforestation, timber harvesting, or any other related activity that requires authorization in term of the *Forest Act, 2001 (Act No. 12 of 2001)* or any other law.	Large areas of vegetation will need to be removed prior to earthworks and construction and mining.
Hazardous Substance Treatment, Handling and Storage	• The manufacturing, storage, handling, or processing of hazardous substances defined in the *Hazardous Substances Ordinance, 1974*. • The storage and handling of dangerous goods, including petrol, diesel, liquid petroleum gas, or paraffin, in containers with the combined capacity of more than 30 m^3 at one location. • Construction of filling stations or any other facility for the underground and aboveground storage of dangerous goods, including petrol, diesel, liquid, petroleum, gas, or paraffin.	The mining operations and proposed process plant trigger this activity as both fuel and hazardous substances are required for mining and processing. Bulk fuel storage facilities will be required for the onsite generation of electricity, and for fuelling the mining fleet. Consumer installation certificates are required for bulk fuel storage and dispensing.

Listed activities	Description	Relevance to the Project
Land Use and Development Activities	The re-zoning of land from: • Agricultural use to industrial use.	Current land use is predominately agricultural.
Water Resource Developments	• The abstraction of ground or surface water for industrial or commercial purposes. • The abstraction of groundwater at a volume exceeding the threshold authorized in terms of the law relating to water resources. • Construction of canals and channels including the diversion of the normal flow of water in a riverbed and water transfer schemes between water catchments and impoundments. • Construction of dams, reservoirs, levees, and weirs. • Construction of industrial and domestic wastewater treatment plants and related pipeline systems. • Construction and other activities in watercourses within flood lines. • Construction and other activities within a catchment area.	The proposed project requires water for mining and processing; if either surface or ground water is to be used, abstraction permits must be obtained. Discharge permits are required for industrial effluent and wastewater discharge. The diversion of the Okawayo River and any other significant streams affected on site needs approval. Dams may be required as part of the water supply and the proposed river diversion. The sewage treatment plant, pollution control dams, processing ponds, etc. require approvals. The Twin Hills open pit straddles a water course, and the mine and related infrastructure are situated in the lower reaches of a large catchment area.
Infrastructure	The construction of: • Public roads. • Cableways including towers, telecommunication, and marine telecommunication lines and cables. • masts of any material or type and of any height, including those used for telecommunication broadcasting and radio transmission. • The route determination of roads and design of associated physical infrastructure where – ○ it is a public road; (b) the road reserve is wider than 30 m; or (c) the road caters for more than one lane of traffic in both directions.	Powerlines and telemetry for water and tailings pumping arrangements will likely be constructed as part of the Project. Cell phone and radio communications towers. Road diversion.
Forestry Activities	• The clearance of forest areas, deforestation, afforestation, timber harvesting, or any other related activity that requires authorization in terms of the *Forest Act, 2001 (Act No. 12 of 2001)* or any other law.	Land clearing will be necessary for the Project infrastructure and mining landforms. Protected species that are to be removed will require a permit.

A list of permits, licences, and clearances that are likely to be required for the Project are provided in Table 4-4, together with the estimated time required to secure the necessary approval.

Table 4-4: Permits, licences and clearances potentially required for the Project and related approval period

Permit or licence	Act/regulation	Related activities requiring permits	Relevant authority	Timeframe for approval
Environmental Clearance Certificate (for Mining Activities)	*Environmental Management Act, No. 7 of 2007*	Required for all listed activities listed in Table 4-3.	MET	Approval timeframes vary depending on government workload and priorities. The typical timeframe is between 3 and 9 months, depending on project complexity. Environmental Clearance Certificates must be renewed after 3 years.
Mining Licence	Section 90 (2) (a)	Written permission from Mining Commissioner.	MME	6–12 months.

Permit or licence	Act/regulation	Related activities requiring permits	Relevant authority	Timeframe for approval
Surface Rights Agreements (mine, infrastructure corridors)	Section 52(1)(a) of the *Minerals Act 33 of 1992*	Included in the Mining Licence Application. Also required in application of accessory works areas.	MME	Undetermined.
Exclusive Prospecting Licences	Section 68 (2) (a) of the *Minerals Act 33 of 1992*	Written permission from Mining Commissioner before prospecting can commence.	MME	2 months.
Accessory Work Permit	Section 90(3) of the *Minerals Act 33 of 1992*	Written permission from Mining Commissioner before Accessory Works can be erected on an EMP or Mining Licence area.	MME	2–3 months.
Permit for Boreholes (exploration and water boreholes)	Permit is issued under the *Water Act, No. 54 of 1956* (enforced)	Required before the drilling of boreholes for exploration and abstraction of water.	Ministry of Agriculture, Water and Land Reform (MAWLR)	3–4 months.
Tailings Waste Disposal Permit	Permit is issued under the *Water Act, No. 54 of 1956* (enforced) The *Water Resources Management Act, No. 11 of 2013* (not enacted)	Required for disposal of tailings, effluent and wastewater.	MAWLR	3–4 months.
Wastewater Discharge Permit	Permit is issued under the *Water Act, No. 54 of 1956* (enforced) but forms of the *Water Act, No. 24 of 2004* are used.	Required for discharge of sewage and/or excess industrial or mine wastewater.	MAWLR	3–4 months.
Permit for Construction of River Diversion	Permit is issued under the *Water Act, No. 54 of 1956* (enforced) The *Water Resources Management Act, No. 11 of 2013* (not enacted)	Construction of canals and channels including the diversion of the normal flow of water in a riverbed and water transfer schemes between water catchments and impoundments.	MAWLR	Unknown.
Permit for the Clearing of Land	*Forest Act, 2001 (Act No. 12 of 2001)*	Removal of vegetation within 100 m of a water course, or removal of more than 15 ha of woody vegetation, or Removal of any protected plant species.	MAWLR	Permit only valid for 3 months therefore must be applied for in advance of clearing activities.
Permit for Destruction of Heritage Objects and Artefacts	The *Heritage Act, No. 27 of 2004*	Interference with heritage artifacts during the project life. Heritage sites could potentially be located within proposed mining landform footprints, or along proposed pipeline or powerline routes.	National Heritage Council	Undetermined.

Permit or licence	Act/regulation	Related activities requiring permits	Relevant authority	Timeframe for approval
Certificate for Bulk Fuel Storage	Petroleum Products Regulations	Consumer installation certificate for bulk fuel storage and dispensing.	MME	60 days is indicated in the Guideline.
Licence for Explosives Magazine	*Minerals (Prospecting and Mining) Act 33 of 1992*, Mine Safety Regulations	Also covered under accessory works application.	MME	1 Month.
Permit for Storage and Use of Explosives, plus burning of packaging	*Minerals (Prospecting and Mining) Act 33 of 1992*, Mine Safety Regulations	Part X (10), explosives and blasting.	MME	Unknown.
Emissions stack(s) and towers	*Civil Aviation Act 6 of 2016*	55 Regulations relating to safety and security near aerodromes.	Civil Aviation Authority	Unknown.
Helipad	*Civil Aviation Act 6 of 2016* Section 90(3) of the *Minerals Act 33 of 1992*	Also covered under accessory works application.	Civil Aviation Authority	Unknown.

5 Accessibility, Climate, Local Resources, Infrastructure and Physiography

5.1 Topography, Elevation and Vegetation

The Project area is located in arid to semi-arid shrubland in the southwest, with a gradational change to arid savannah and mixed woodland in the northeast. Relief is moderate with elevation ranging from approximately 900 m above sea level in the southwest to 1,500 m above sea level in the northeast. The significant hills are generally associated with marble outcrop and granitic plugs above subdued plains. The area in general supports dryland cattle ranching and game-farming as the principal agricultural activities.

5.2 Access to Property

The Project areas are accessible via Namibia's extensive sealed and well-maintained secondary gravel road networks (Figure 4-2). Generally, travel time from Windhoek (the Project is approximately 150 km northwest of Windhoek) is between three and four hours by road to the Project area. Within the Project area, access is provided on a series of non-maintained roads and cross-country four-wheel drive tracks. As noted above, Table 4-2 shows a summary of the land access agreements currently in place, which provide access to approximately 80% of the main areas of interest within the Project at the time of this report, which is presently sufficient for exploration and potential mining operations. CSA Global is not aware of other significant risks that may affect access, title, or the right or ability to perform exploration work on the Project.

5.3 Climate

The coldest temperatures typically occur in the winter months between the beginning of June and the end of August. Minimum temperatures are commonly below 0°C, but generally in the range between 5°C and 25°C (41°F and 77°F) in winter. The highest temperatures occur in summer between late October and the end March when average temperatures range between 20°C and 35°C (68°F and 95°F) (Figure 5-1).

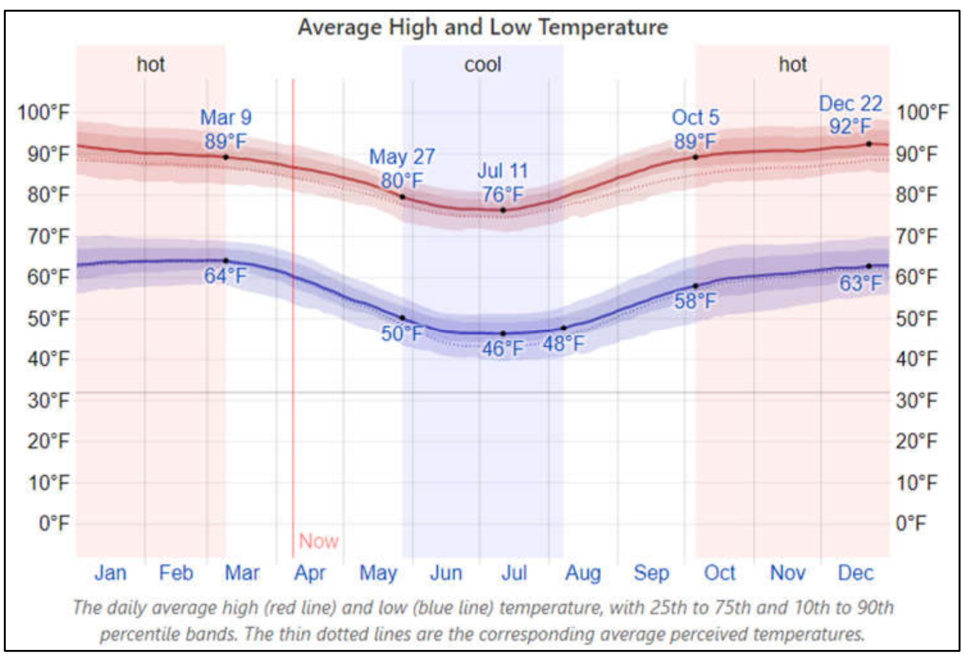


Figure 5-1: Annual temperature variation at Karibib
Source: www.weatherspark.com

Rainfall varies from southwest to northeast, with average annual rainfall of approximately 239 mm per year (9 inches) in the Karibib area (www.en.climate-data.org). Most rainfall is associated with short, but intense thunderstorms. During the rainy season from November to March, many of the ephemeral rivers flow for short periods (hours) or even months (Figure 5-2). Major rivers within the Project area include the Khan River, located in the southwest of the Project area, the Omaruru River which flows through the town of Omaruru, and the Ugab River in the north. All three of these rivers drain southwest towards the Atlantic coastline.

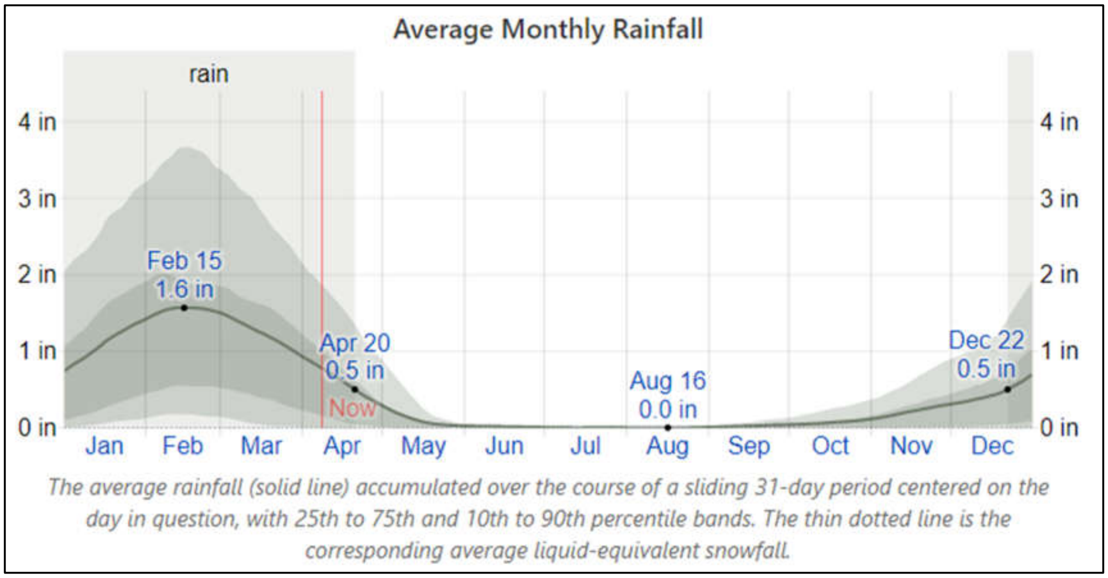


Figure 5-2: Annual rainfall variation at Karibib
Source: www.weatherspark.com

The climate is not an impediment to exploration in the Project area, except for difficult road access conditions during the peak rainfall periods in certain areas. Mineral exploration activities are possible year-round. Namibia is a country with a long and successful mining, exploration, and project development history. Skilled workers may be contracted out from smaller regional centres, e.g. Karibib or the capital city Windhoek, located generally less than a four-hour drive from all parts of the Project area.

5.4 Infrastructure

Windhoek has a population of 322,500 based on a 2011 census and was expected to grow to beyond 400,000 by 2017 and includes a sufficient source of potential labour for the Project's mining personal requirements.

Several regional towns and settlements are located within the general Project area, including Karibib in the southwest, and in a north-easterly direction, Omaruru. In the last published consensus (2011), the population of Karibib was 5,132 and Omaruru was 6,300, which could also provide an additional source of suitable labour.

5.4.1 Sources of Power

Electrical power is readily available from Nampower in the Project area, and the current strategy will be for plant power to be sourced from the national grid. An offer letter from Nampower has been accepted to supply a load connection to the Project with 16 MW of power with the option to increase this as the final requirement is defined. The Navachab gold mine is currently linked to the grid by 66 kV transmission at Karibib. The proposed Twin Hills plant site would require a 19 km transmission line from the proposed Erongo substation which is planned to be built near Karibib. Further studies are underway which are evaluating trade-offs to assess the viability of solar power options to be integrated into a hybrid system.

5.4.2 Water

Surface Water

As part of the surface water appraisal, SLR consultancy has completed a preliminary assessment of the sand storage dams which have been evaluated at two positions along the Khan River to the north of the Project area. A sand storage dam consists of a weir-type structure placed across an ephemeral watercourse, behind which layers of sand are deposited by successive floods. Potential dam yield was also calculated by considering numerous parameters that influence the inflow yield of a dam. Final volumes and cost evaluation is currently underway as part of the PFS.

The Twin Hills Gold Project is located within the greater Khan River catchment. The Khan River catchment is approximately 8,400 km^2 (SLR, 2020), and the Okawajo River in which the Twin Hills Gold Project falls is 92 km^2, (KP, 2021a) which is 1% of the total Khan catchment area. The preliminary model predicted volumes to flow into the pit and ultimately be used by the mine, approximates 25% of the model's domain budget, which equates to less than 0.25% of the Khan River catchment. It is therefore anticipated at this stage that the mine workings will have a very low risk of impact on the Khan River volumes and that will therefore not be listed as a receptor.

The water channel that runs through the proposed mine boundary is predominantly dry and is only fed by direct precipitation and flash floods. There is assumed to be no groundwater baseflow to the Okawajo River in this area, but likely along portions of the Khan River to the northwest. The vegetation in the region includes scrubs and small trees which are assumed to receive water through direct recharge.

Calculation of a high-level water balance is planned, to obtain an idea of how the Project will behave over time, considering input factors for the area.

Groundwater

The Phase 1 scope of work included a desktop level study, development of an integrated hydro-stratigraphic Leapfrog Geo® model based on geological, geotechnical, geophysical, and hydrogeological data (lithology, penetration rates, water strikes, blowout test results), identification of potential water supply and water monitoring sites and the development of a preliminary FEFLOW numerical groundwater model inclusive of the pit area.

The hydrogeological conceptual model that was generated in Leapfrog Works® was used to generate a three-dimensional (3D) hydrogeological numerical model in DHI's FEFLOW 7.4 software and constructed using all available data and information regarding geology and groundwater parameters.

The main objective of the numerical groundwater flow model is to develop a representation of the actual groundwater status and flow conditions in the project area. This model is then utilized to simulate future stresses on the groundwater due to the mining activities and to determine inflow rates into the open pit development during the life of mine (LOM) as well as post-mining and rehabilitation period.

At this stage, the model can be classified as indicative due to the limited data and information that was available during the model construction and calibration process. Future updates with any additional data will yield a more accurate quantitative numerical groundwater flow model and improve the confidence level of the model predictions (Figure 5-3 and Figure 5-4).

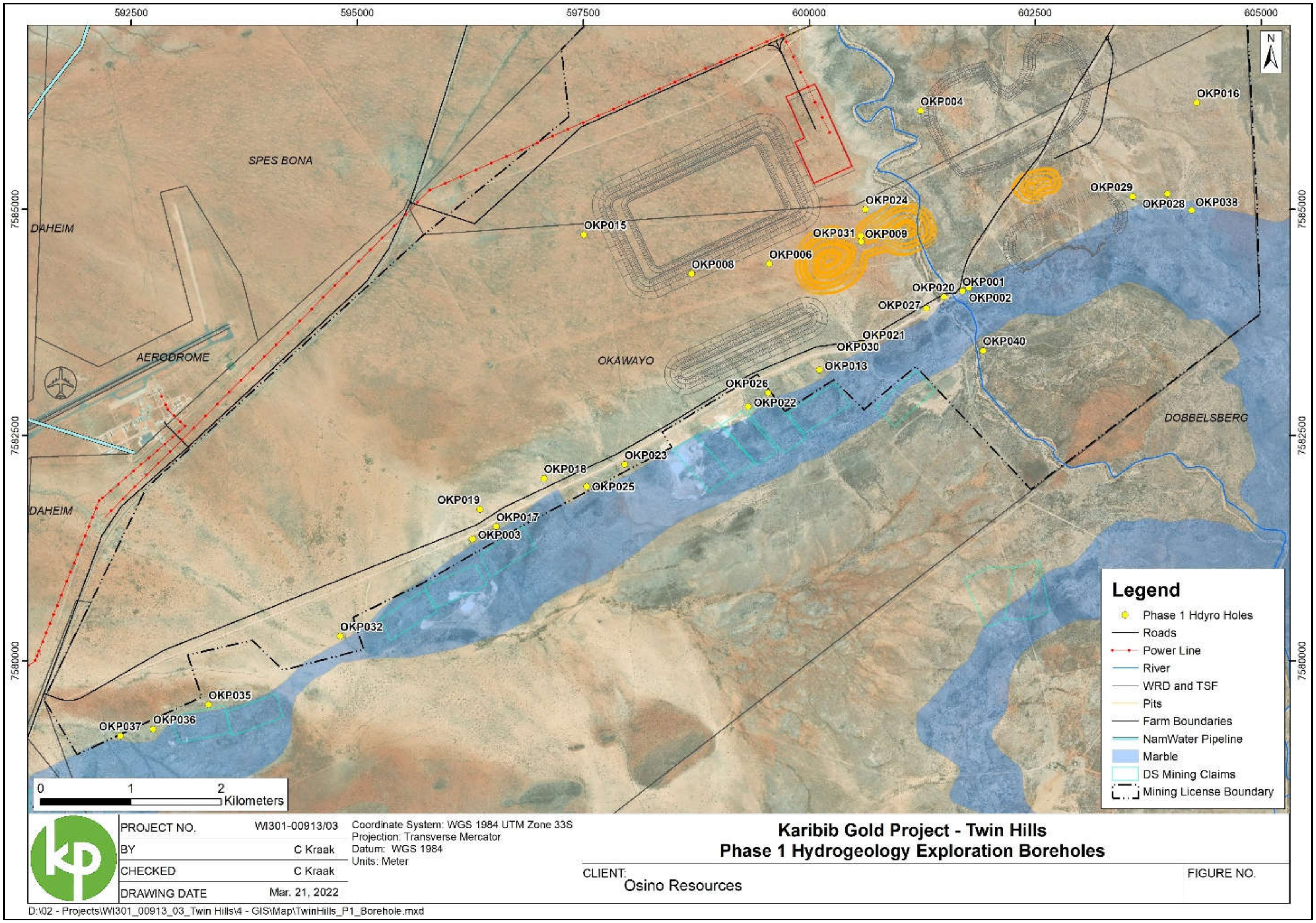


Figure 5-3: Plan view of completed hydrogeological drillhole positions
Source: Osino

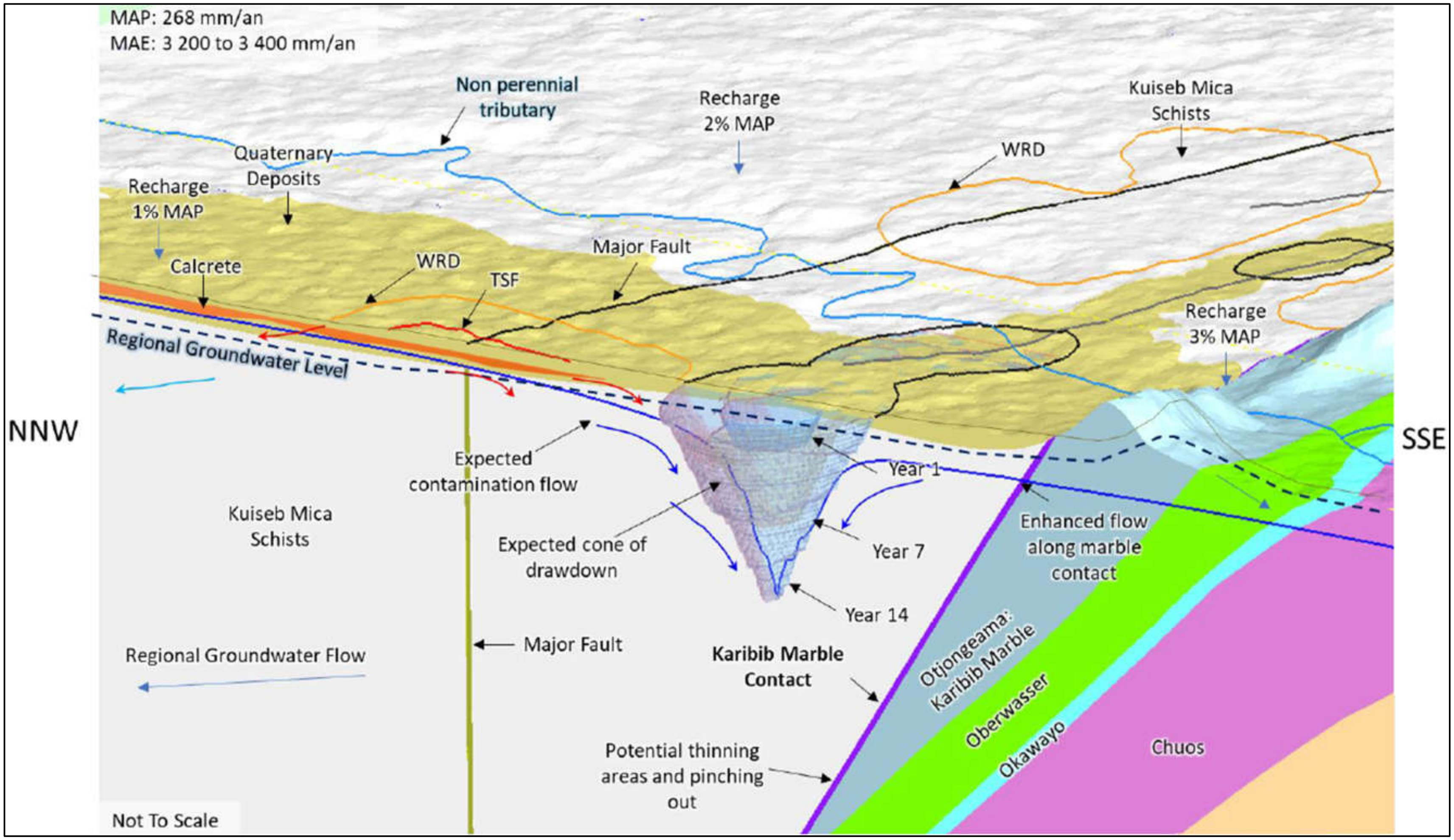


Figure 5-4: Hydrogeological conceptual model including cross section of the pit area and predicted groundwater flows
Source: Osino

5.4.3 Conceptual Site Layout

The area surrounding the Twin Hills Central and Clouds open pits has relatively flat topography to the east and west of the Okawayo River course. Potential waste rock dump locations exist in the footwall and hangingwall of both pits providing a flexible waste rock dumping strategy through the course of the mine life.

A potential plant site location is situated to the north of the Twin Hills Central open pit in an area of flat ground covered by Kalahari sands. The open area designated for the plant site is situated optimally for the transportation of majority of the ore tonnes to be mined from the Twin Hills Central open pit.

The buildings required on the Project site will generally be prefabricated buildings transported to site either as fully assembled units or as panels and assembled on site onto concrete block or strip footings. Buildings of this type will typically include:

- Main administration office
- Clinic and emergency response
- Gatehouse and access control
- Security
- Ablutions, change house, meals
- Plant canteen
- Plant laboratory
- Mining facility building – general, change house
- Mining administration.

If practical, the electrical switch-rooms and control room will also be prefabricated with the motor control centres pre-installed. The tailings storage facility will comprise of a downstream-type facility, constructed from the waste rock excavated from the open pit. It is envisaged that the tailings facility will accommodate filtered tailings inside the waste rock embankments with the transportation of tailings undertaken by conveyors (Figure 5-5).

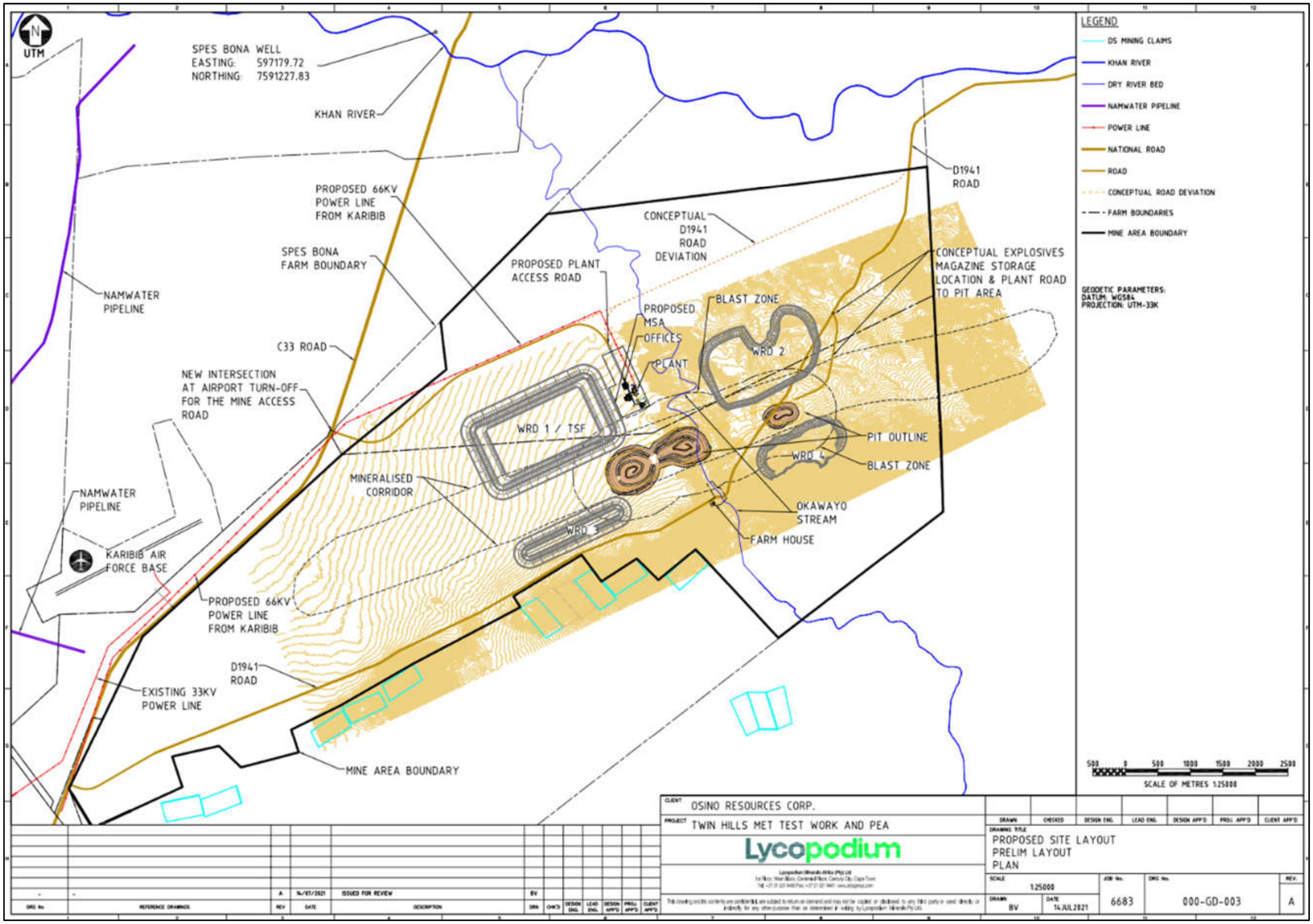


Figure 5-5: Preliminary site infrastructure layout
Source: Lycopodium (2021)

6 History

6.1 Property Ownership

The gold-bearing district in the region of the Project hosts the Navachab gold mine, as well as the historical Onguati copper-gold, and Goldkuppe small-scale gold diggings. After the discovery of the Navachab gold deposit in 1984, Anglo American carried out a regional exploration program primarily using stream sediment sampling, targeting similar stratigraphic horizons and basement domes as found at Navachab.

The Anglo American exploration included the following:

- EPL 5658 – Stream sediment sampling, soil sampling, RAB, and diamond drilling
- EPL 3739 – Stream sediment sampling, soil sampling, and drilling of historical gold occurrence at Goldkuppe
- EPL 3738 – Stream sampling, soil sampling, and drilling on the farm Albrechtshöhe.

Bafex took ownership of EPL 3739 and EPL 3738 in 2008 and follow-up exploration was carried out initially under a joint venture agreement by Desert Minerals Exploration and later by Bafex itself. The exploration included the following:

- EPL 3739 – Detailed soil sampling of Goldkuppe historical gold occurrence and strike extensions to the north and south. RC and diamond drilling of soil anomalies.
- EPL 3739 – Detailed sampling of Twin Hills East and area to the south.
- EPL 3738 – Detailed soil sampling and RC drilling on the farm Albrechtshöhe.

6.2 Project Results – Previous Owners

6.2.1 EPL 3739

Bafex conducted two stream sediment sampling programs totalling 414 samples, covering approximately 88 km^2 (Figure 6-1).

The initial stream sediment sampling was conducted in the vicinity of the Twin Hills target in the south-eastern part of EPL 3739. A total of 90, -212 µm stream sediment samples (50–100 g), including QAQC samples, were collected. In 2013, a larger-scale stream-sediment sampling program was conducted over the northern portion of EPL 3739 including the Goldkuppe area. A total of 322 samples (including QAQC samples) were taken. All stream sediment samples were bagged, sealed and then shipped to ACME Analytical Laboratories in Vancouver, Canada. The samples were analyzed by aqua regia digestion followed by inductively coupled plasma with mass spectroscopy (ICP-MS) analyses, (30 g 1DX method).

Bafex subsequently carried out soil sampling programs over various stream sediment anomalies, including the Goldkuppe target area and surrounding targets (Figure 6-2). A small soil grid was sampled just to the east of Twin Hills in the southwest corner of EPL 3739.

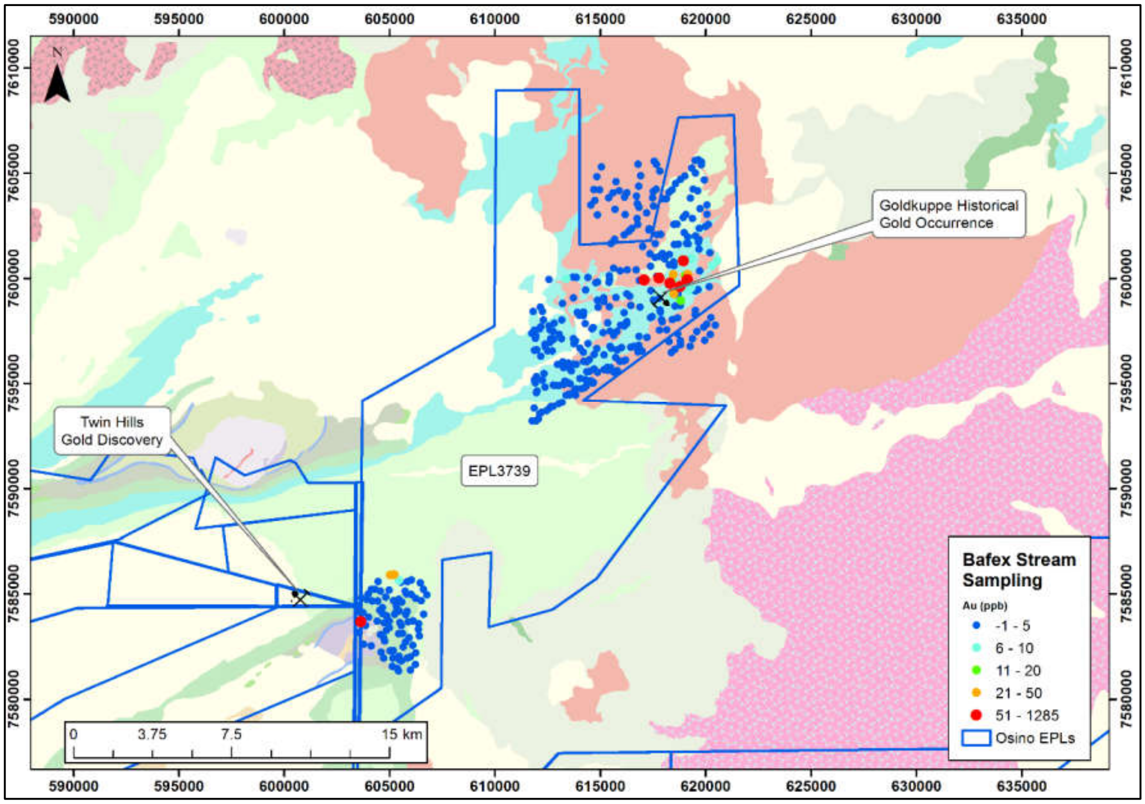


Figure 6-1: Bafex stream sediment sampling
Source: Osino

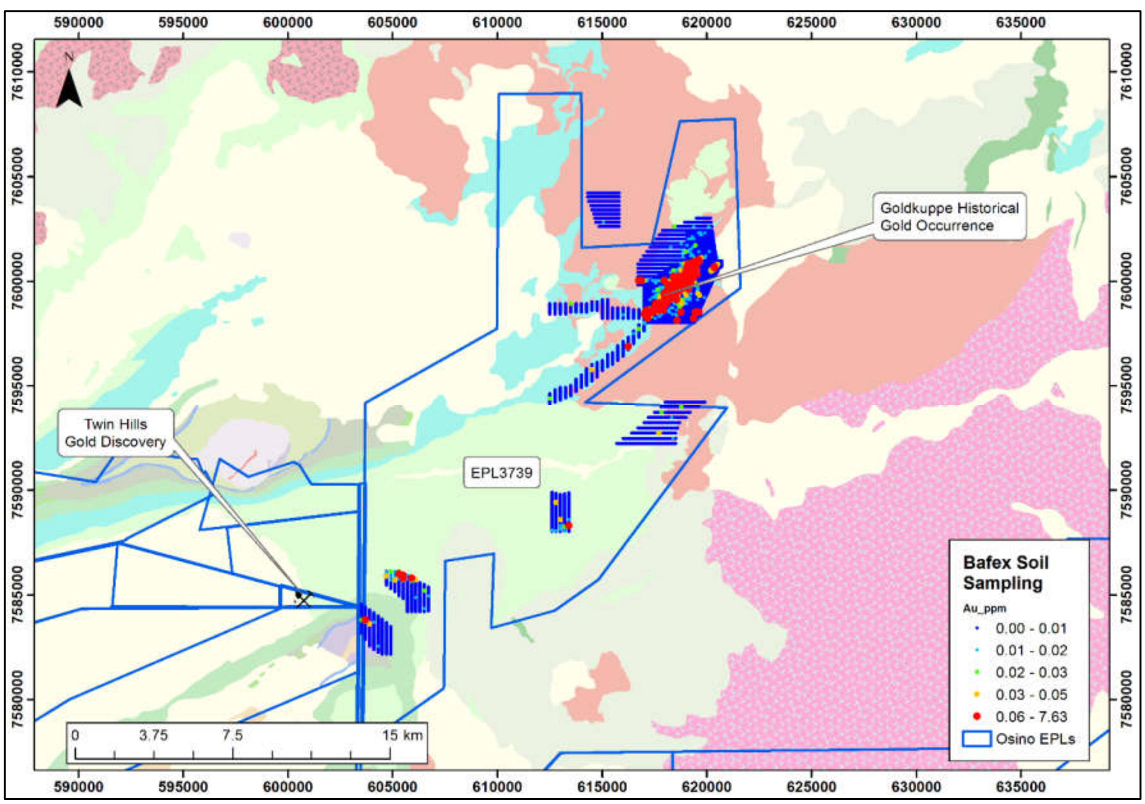


Figure 6-2: Bafex soil sampling
Source: Osino

Bafex also carried out several geophysical programs over the Goldkuppe prospect including a 50 m spaced pole-dipole IP and 25 m spaced ground magnetic surveys. These surveys confirmed the presence of numerous areas with sizeable IP chargeability anomalies, including, amongst others, the Calidus target to the north of Goldkuppe.

A minor fixed loop EM survey was conducted by Bafex over the massive sulphide target at Goldkuppe but failed to identify a sizeable anomaly. Downhole EM and magnetics were also conducted on selected drillholes (limited by the fact that some of the preferred holes had collapsed slightly or were obstructed) and identified anomalies for further testing. Finally, an orientation gravity survey was conducted over the core of the anomaly, centred on the massive sulphide target, and this confirmed that gravity anomalies underlie known gold mineralization.

Over the period 1984 to 2013, the three historical operators at the Goldkuppe target on EPL 3739 (Otjimbojo licence), Anglo American, Desert, and Bafex have conducted geochemical, geophysical, RC, and diamond drilling campaigns. The cumulative total of RC and diamond drilling is almost 17,000 m (see Table 6-1 below). No gold, silver, or base metal mineral resources have yet been declared for the Goldkuppe target, but a variety of geological, geophysical and geochemical datasets indicate that gold, in significant grades and widths, has been encountered.

Table 6-1: Historical drilling at Goldkuppe

Company	Drill type	No. of holes	Total metres
Anglo American	Diamond	24	2,226
	RC	50	3,353
Bafex	Diamond	14	1,519
	RC	170	9,890
Cumulative total		**258**	**16,988**

6.2.2 EPL 3738

Rock Chip Samples

A total of 285 rock chip samples were collected by Anglo American on the licence which returned a range of values from 0.025 g/t Au to 20.7 g/t Au with a median of 0.05 g/t Au and an average of 0.339 g/t Au. A total of 22 rock chip samples were collected by Bafex on the licence and analyzed by Bureau Veritas in Swakopmund. The samples returned values with a range of 0.25 g/t Au to 46 g/t Au with a median of 0.25 g/t Au and an average of 2.65 g/t Au.

Stream Sediment Sampling

Bafex conducted a regional stream sediment sampling program over the southern part of the Project's Wilhelmstal property (EPL 3738), on the farm Johann Albrechtshöhe, to identify anomalous drainages for follow-up soil sampling work. A total of 404 stream sediment samples were collected. Figure 6-3 shows the position of the samples. Sample size was 50–100 g and the -212 µm size fraction was used. Samples were bagged, sealed and then shipped to ACME Analytical Laboratories in Vancouver, Canada, where they were analyzed by ICP-MS following an aqua regia digestion (Oliver, 2014).

The stream sediment sample positions and anomalous values are shown in Figure 6-3 with respect to the respective catchment areas.

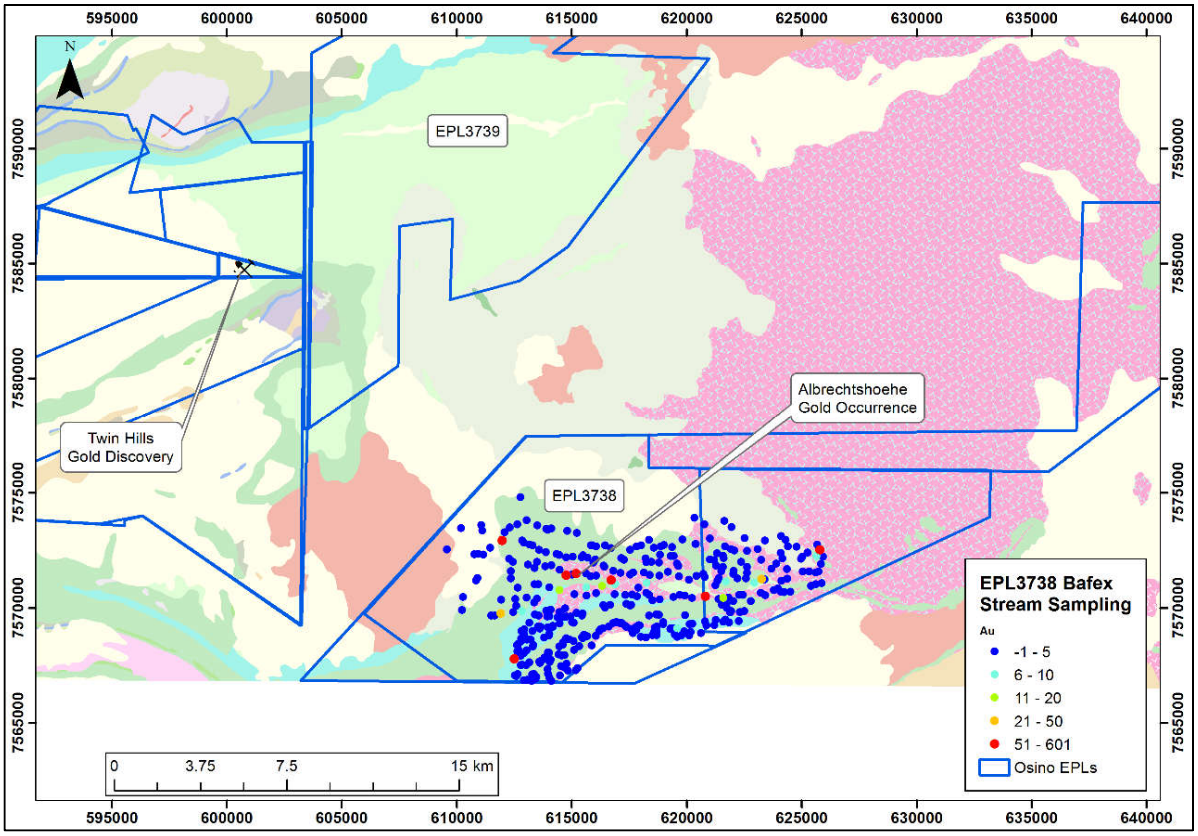


Figure 6-3: Bafex stream sediment sampling
Source: Osino

Soil Geochemistry

Anglo American collected a total of 2,141 soil samples on the farm Albrechtshöhe to follow up on their regional stream sediment sampling program and known gold occurrences. The soils were collected on a spacing of 50 m x 50 m and analyzed for gold and copper. Several gold anomalies were found on Albrechtshöhe which were later followed up with percussion drilling (Figure 6-4).

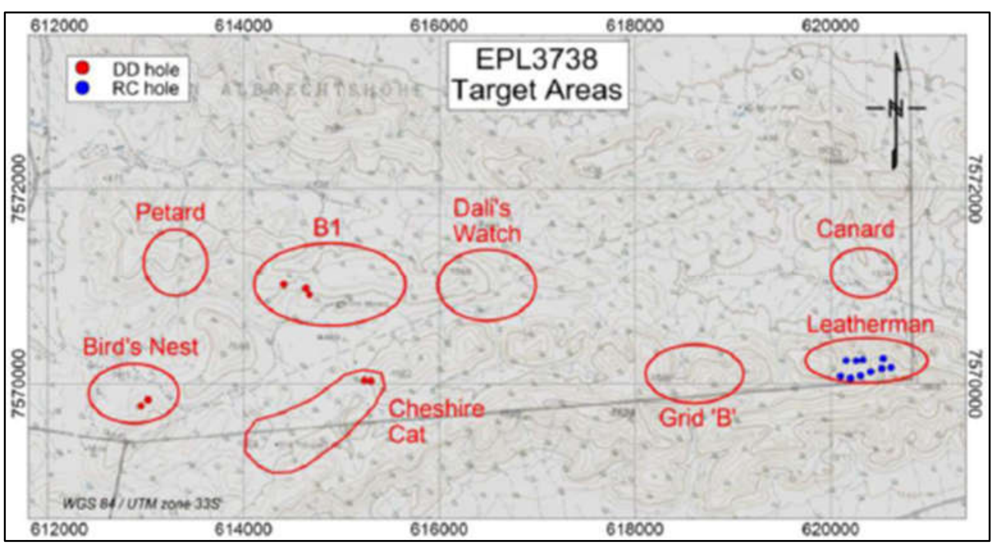


Figure 6-4: Bafex drillholes on Albrechtshöhe, EPL 3738
Source: Osino

Bafex collected a total of 545 soil samples (-500 µm size fraction, including quality control samples) on the Leatherman target. Samples were shipped to ACME Analytical Laboratories in Vancouver, Canada, where they were analyzed by ICP-MS (aqua regia digestion). A gold ± arsenic ± copper ± iron ± tungsten anomaly was outlined which trends east-northeast to west-southwest and is 800 m long and up to 70 m wide, as defined by the 30 ppb Au contour. The anomaly is open to the east along strike. Four samples within the anomaly have values over 500 ppb Au. The anomaly is underlain by sulphidized tremolite-skarn alteration within carbonates. Anglo American previously carried out a channel sampling program consisting of 17 channel samples varying in length from 1 m to 20 m. The metre assays ranged from 0.025 g/t Au to 11.3 g/t Au with a median of 0.025 g/t Au and an average of 0.149 g/t Au (Figure 6-5).

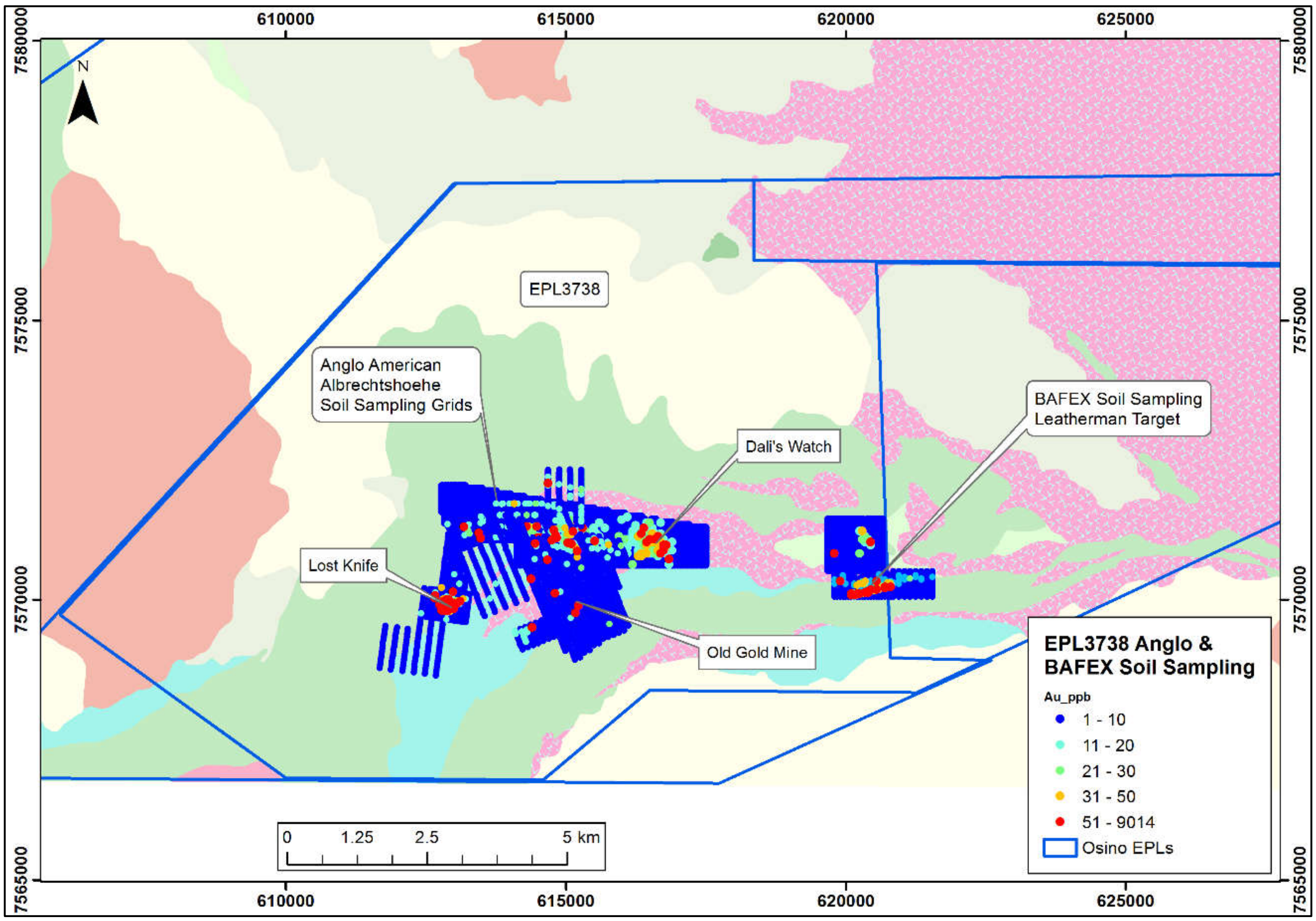


Figure 6-5: Soil sample grids on EPL 3738 by Anglo American and Bafex, Anglo American drill targets
Source: Osino

IP surveys at Cheshire Cat/Old Gold Mine confirmed that the mineralized horizon identified in soil and rock sampling is underlain by a coincident chargeability anomaly, indicating the presence of disseminated sulphides. The IP anomaly is over 600 m long and is open along strike.

IP surveys conducted over the B1 grid resulted in the identification of a chargeability anomaly, with a coincident gold-copper soil anomaly. The northeast trending anomaly covers approximately 1,000 m x 250 m.

Following its initial rock chip and soil sampling programs, Anglo American drilled two anomalies in 1988. The Old Gold Mine/Cheshire Cat anomaly was drilled with 17 holes for 430 m. Seven of the holes returned mineralized intercepts with a best of 7 m at 2.81 g/t Au in KEP8. The other intercepts were 3 m at 0.83 g/t Au (KEP3), 2 m at 2.3 g/t Au (KEP4), 2 m at 1.75 g/t Au (KEP7), 2 m at 0.55 g/t Au (KEP11), 2 m at 0.85 g/t Au (KEP12) and 3 m at 0.47 g/t Au (KEP16). The Birds Nest anomaly was drilled with 27 holes for 1,383 m. Only two of the 27 holes returned mineralized intercepts with a best of 8 m at 2.87 g/t Au in hole KLP13. The other intercept was 2 m at 1.28 g/t Au (KLP21). (A mineralized intercept here is defined as 2 m or more of continuous mineralization with a cut-off grade of 0.4 g/t Au and no more than 2 m of internal dilution.)

During 2005, following another campaign of soil sampling, Anglo American drilled six RC holes over a gold anomaly in marbles named Dali's Watch. The results were disappointing, and no further work was done (Figure 6-4).

Bafex subsequently carried out a drill program on four target areas on the Albrechtshöhe farm on EPL 3738. Eight DD holes (496.4 m) and 12 RC holes (1,386 m) were drilled. The positions of the drillholes in the selected targets are shown in Figure 6-4.

Eight DD holes were drilled at Birds Nest, Cheshire Cat and B1 to test surface anomalies. Twelve RC holes were drilled (1,386 m) to confirm gold mineralization at the Leatherman target. Table 6-2 and Table 6-3 provide the significant intercepts.

Table 6-2: All drill intercepts >0.4 ppm at B1, Cheshire Cat, and Birds Nest targets

Hole no.	From	Length	Au (ppm)
WID001	52	1	0.5
WID006	27	3	1.1
	34	1	0.5
	41	1	0.5
WID007	22	1	0.6
	29	1	0.8
WID008	2	2	0.5
	28	1	4.0

Note: The relationship between true thickness and intercept length is not known.

Table 6-3: All drill intercepts >0.4 ppm at the Leatherman target

Hole no.	From	Length	Au (ppm)
WIR001	30	2	2.2
WIR002	12	2	0.6
WIR005	34	2	9.4

Note: The relationship between true thickness and intercept length is not known.

Drilling Pattern and Density

The drilling done by Anglo American and Bafex was of an exploratory nature and the drill pattern was not designed to delineate a Mineral Resource.

6.3 Historical Mineral Resource Estimates

There are no previous MREs for the property.

7 Geological Setting and Mineralization

7.1 Regional Geology

The Project is in an area of known gold deposits hosted within the inland arm of the Pan African Neoproterozoic Damara Belt (Miller, 2008). The Damara Belt (Figure 7-1) is defined by a northeast striking Neoproterozoic fold, thrust, and metamorphic belt. It reflects a Neoproterozoic rifting-accretionary event between the Congo Craton to the north and the Kalahari Craton to the south. Related orogenic belts occur along the coast of Namibia and are represented by the north trending Kaoko Belt, and the Gariep Belt to the south. These rifting-accretionary cycles begin at 800–750 Ma and are largely concluded by 600 Ma (Hoffman, et al., 1996; De Kock et al., 2000). Peak deformation differs within the three belts with peak deformation in the Kaoko Belt at 550–580 Ma, in the Gariep Belt deformation culminated at 530–545 Ma and in the Damara Belt, deformation peaked between 500 Ma and 530 Ma.

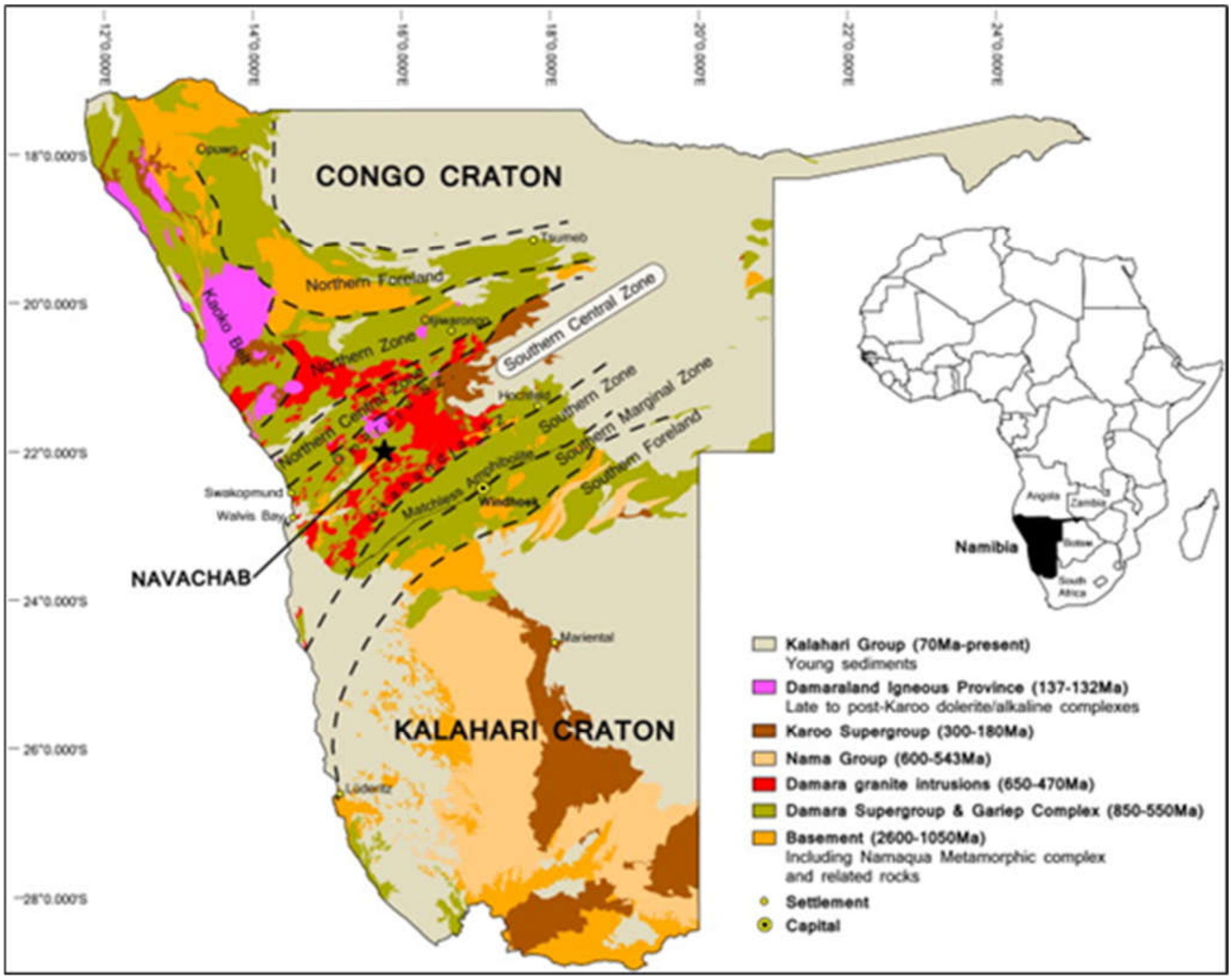


Figure 7-1: Tectonic map of Namibia
Source: Vollgger et al. (2015)

As in many younger cordilleran environments, the Neoproterozoic collisional environments of the Damara Orogen have been divided into three major belts:

- The North Zone comprising an openly folded foreland basin of low metamorphic grade

- Calcareous and pelitic meta-sediments, and minor volcanic rocks, of the Central Zone which were initially deposited in a back arc, passive continental margin resting on pre-Damaran basement rocks
- The Southern Zone defines the suture zone of the Damaran Orogen that is defined by a series of southeast verging thrust belts cutting pelitic sediments, and which have been deformed under high P/low T metamorphic conditions (Miller, 1983 and 2008).

The Damara Belt was intruded by a suite of plutonic rocks during and after the Damara orogenic cycle. The intrusive rocks range from gabbro to diorite and various types of granite. Of these, the early syn-tectonic to late tectonic I-type Salem granites are by far the most abundant. These were followed by post-tectonic I-type granites. A much later Jurassic to Cretaceous event led to the intrusion of various alkaline ring complexes and granitic batholiths, as well as flood basalt provinces.

Burnett (1992) summarizes the various known gold occurrences known at that time in Namibia. Gold was discovered in Namibia during the German colonial period (1850s) in the Sinclair Formation in the Rehoboth district in southern Namibia. The deposits were small and led to only minor exploitation. The discovery in 1917, of more significant gold mineralization in the Ondundu area, lead to the mining of 614.4 kg of gold from mainly alluvial sources until closure in 1963 (Burnett, 1992). The Ondundu area is approximately 150 km from the Project but occurs within the same geological and tectonic belt. From 1937 to 1943, alluvial sources were mined at Epako-Otjua in the Omaruru district and yielded 46.9 kg of gold (Oliver, 2014). The Epako area is 65 km north of the Twin Hills deposit and is within another of Osino's EPLs.

7.2 Prospect and Local Geology

The Project lies in the Southern Central Zone of the Damara Orogen in Namibia. The Project's principal assets are the newly discovered Twin Hills deposit and the Goldkuppe-Oasis-Wedge Cluster of prospects which are about 60 km south of the Omaruru Lineament and between 20 km and 55 km east-northeast of the Navachab gold mine (Figure 7-2). The northeast part of the Project area is largely underlain by undifferentiated syn-tectonic Salem-type granite. The bulk of the Project area is underlain by meta-sedimentary rocks of the Swakop Group, comprising the Arandis Formation (biotite schist, minor quartz schist calc-silicate rock, and amphibolite), the Karibib Formation (dominantly dolomitic and calcitic marbles), and the overlying Kuiseb Formation (schistose quartz feldspar mica meta-greywacke and meta-pelite) (Figure 7-3). The stratigraphic position of other known gold deposits in the central zone of the Damara Orogen is shown in Table 7-1.

The sediments were deformed during poly-phase deformation and metamorphosed. In this area, the larger earlier folds have fold axes with northeast-southwest axial trends, parallel to the Omaruru lineament, and these were subsequently deformed into open basin and dome structures about fold axes with northwest-southeast axial trends. Later crosscutting lineaments parallel to the Welwitschia lineament are also evident in the area.

The Swakop Group sediments were intruded by a series of syn-, late-syn- and post-tectonic granite and pegmatite bodies. The pegmatite bodies host both black and coloured varieties of tourmaline, some of which are gem-quality and are mined by small-scale miners in the area.

At least two deformation events are observed at Twin Hills primarily in the drill core. An early north-northwest to south-southeast compressional phase which resulted in tight to isoclinal folding overturned to the south or upright. The phase of folding is accompanied by flexural slip along the fold limbs which is particularly prominent in the interbedded meta-greywacke unit. A later northwest-southeast compressional phase resulted in the refolding of early folds and the formation of doubly plunging folds or domes. As the system locked up, the crustal scale KFZ on the southern margin of the Karibib Basin was re-activated as a dextral fault with associated secondary and tertiary structures.

Significant previously unknown or recorded gold mineralization has been discovered by Osino along the KFZ (Figure 7-2). The KFZ was originally interpreted from regional magnetic data to have a strike length of over 100 km. Osino's licences cover more than 70 km of this strike extent. The KFZ has been mapped in the field by

Osino geologists in the eastern and western parts of the Project area where it is manifested as a belt of very high strain, intense silicification, and partial remelting. It is the calcrete covered central portion of the KFZ where Osino discovered the most significant new gold mineralization to date at Twin Hills. Twin Hills is a cluster of gold mineralized zones associated with schists of the Kuiseb Formation. These schists are variably magnetic (due to pyrrhotite), and gold mineralization is intimately associated with arsenopyrite and pyrrhotite.

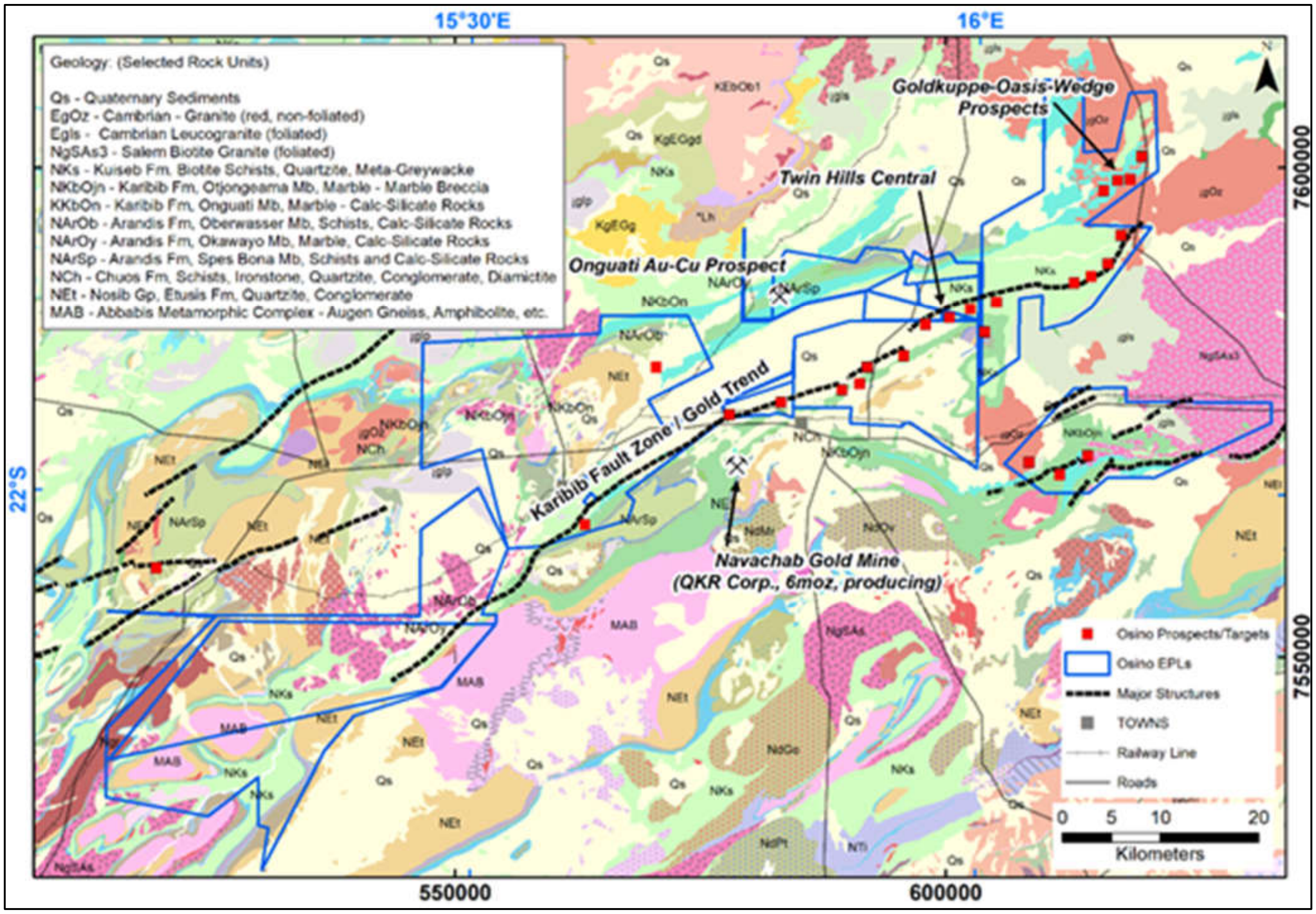


Figure 7-2: Twin Hills Gold Project geology with the location of priority prospects and Navachab gold mine
Source: Geological Survey of Namibia, 1:250,000 geological maps for Sheets 2114, 2116, 2214 and 2216

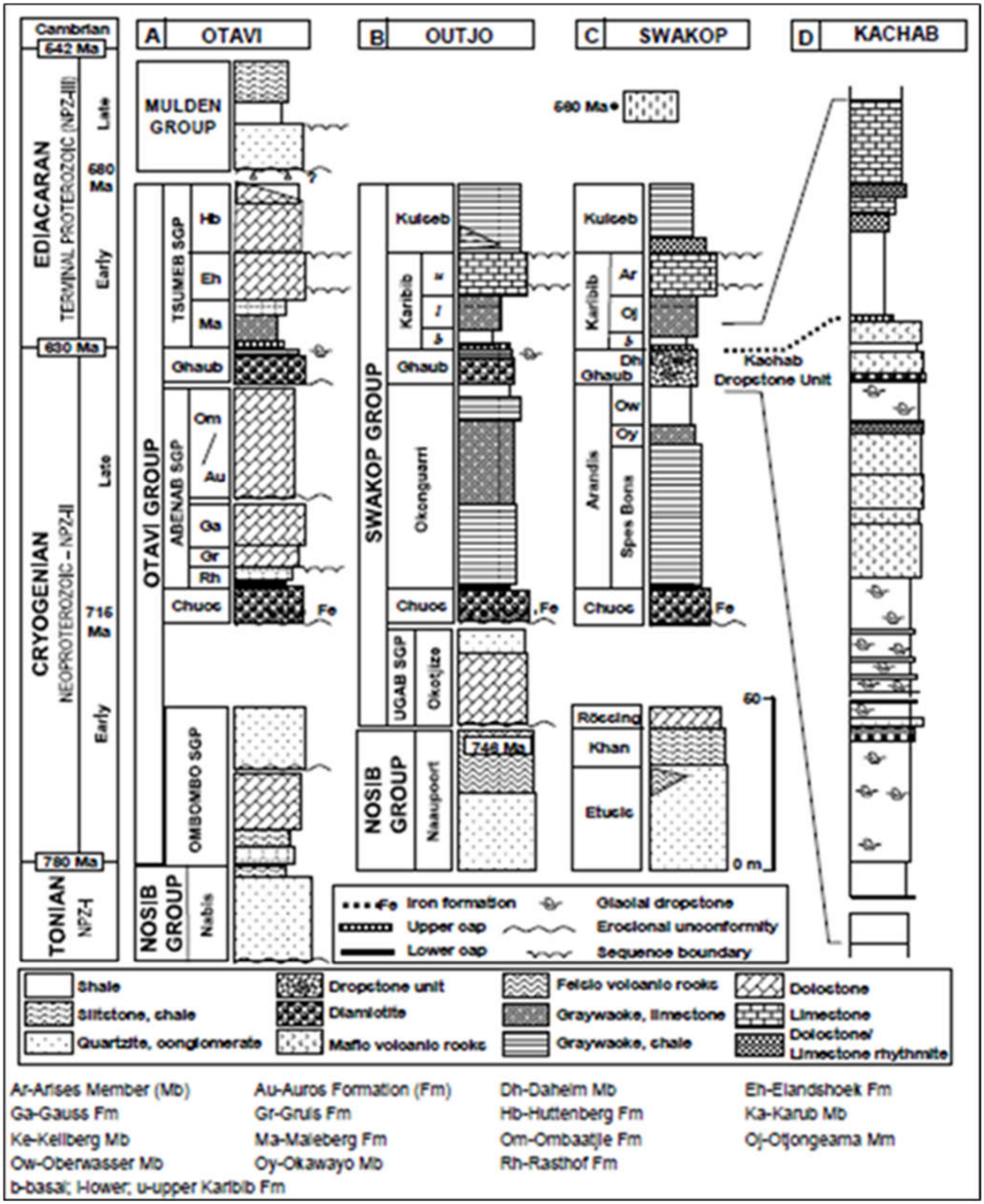


Figure 7-3: Lithostratigraphy of the Damara Supergroup; the Project is within the "Swakop Zone" or Central Zone (of the Damara Orogen)

Source: Hoffmann et al. (2004)

Table 7-1: General stratigraphy of the Damara Supergroup in the Central Zone of the Damara Belt with selected significant gold occurrences noted

Group	Formation	Member	Lithologies	Gold occurrences
Swakop	Kuiseb		Metaturbidites and biotite schists, minor calc-silicate rocks and marble	Okawayo 146, Ondundu, Sandamap Noord 115, Twin Hills prospects
	Karibib	Onguati	Quartzite, schist, calc-silicate rock, marble	
			Calcitic and dolomitic marble, minor calc-silicate rocks and schist	Navachab 58 (Grid A), Goldkuppe, Onguati, Albrechtshöhe 44
		Otjongeama	Dolomitic calcite marble, calcitic marble and dolomite, calc-silicate rocks, biotite schists	
	Ghaub	Omusema	Amphibolites (only in SCZ)	
		Daheim	Continental mafic volcanic rocks (only present in SCZ)	Daheim 106
		Kachab	Phyllitic schist/dropstone-bearing siliciclastic rocks	
	Arandis	Oberwasser	Biotite schist, calc-silicate rocks, very minor felsic volcanic rocks	Navachab Mine, Epako 38
		Okawayo	Calcitic marble	Navachab Mine, Kranzberg South 113
		Spes Bona	Biotite schist, calc-silicate rocks and very minor felsic volcanic rocks	Navachab 58 (Eastern Zones)
	Chuos		Glaciogenic mixtite, banded iron formation	
	Rössing		Dolomitic marble, minor calc-silicate rocks and calcitic marble	
Nosib	Khan		Pyribole calc-silicate rocks, minor biotite schist, graphite schist and marble	
	Etusis		Feldspathic quartzite, grit and minor calc-silicate rocks and schist	Nordenburg 76

Source: Compiled from Steven et al. (1994), Steven et al. (2008), Miller (2008), and published Geological Survey of Namibia, 1:250,000 geological maps for Sheets 2114 and 2214.

The structural geology of the Twin Hills Project area is dominated by features typical of the Southern Central Zone of the Damara Belt; basement and/or basal Damara meta-sedimentary rocks in the cores of dome and anticlinal structures and regional synclinal structures with thick packages of Kuiseb Formation schists “filling” these synclines. A cross-section through the Karibib Basin from Twin Hills in the south to the Onguati Dome in the north illustrates the large-scale folding and the basement or granite cored anticlinal domes (Figure 7-4).

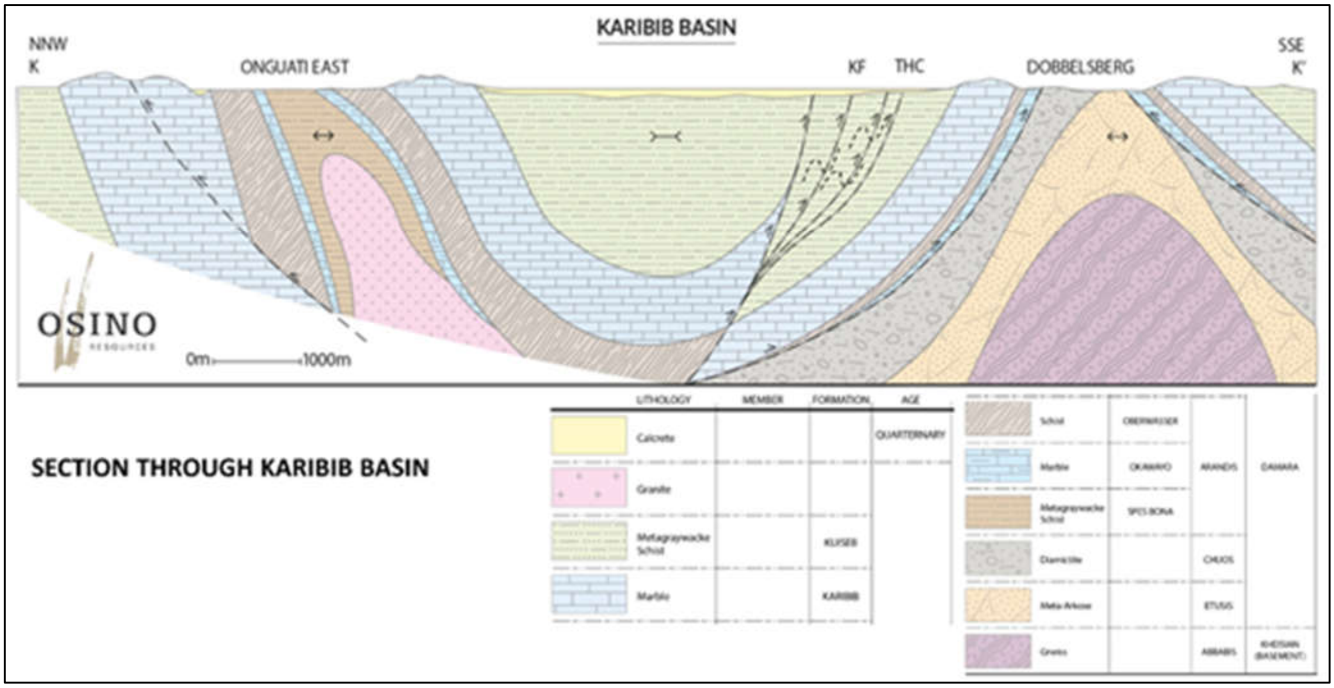


Figure 7-4: Section through the Karibib Basin at Twin Hills
KF – Karibib Fault Zone. THC – Twin Hills Central.
Source: Osino

The geology of the Goldkuppe prospect is dominated by a series of interbedded marble and dolomite units belonging to the Karibib Formation (Figure 7-5). The marbles are folded into an anticline, which plunges gently to the northeast with beds dipping to the southeast with the northwest limb of the fold overturned (verging to the northwest). These marbles are underlain by biotite schists which occur in the anticline approximately 1 km towards the southwest in the Oasis and Wedge area and which outcrop further to the southwest at Wedge South.

Rare outcrops of quartz-rich schist and calc-silicate rock are found in the core of the Goldkuppe fold, where the structure opens towards the southwest. These rocks belong to the Oberwasser Member of the Arandis Formation. In the area southwest of Wedge, large areas of Kuiseb Formation biotite schists are exposed to the north and south of the Khan River.

At least two phases of folding appear to be present in the Goldkuppe target area. Small-, medium- and large-scale, tight to isoclinal reclined folds and sheath folds, with steep to sub-vertical fold axes and fold axial planes, dominate the structure in the Goldkuppe target area. The fold axial plane of the initial dominant large-scale folding is sub-vertical, striking approximately northeast-southwest. The later folding event has north-south or north-northeast axial planes with fold axes plunging steeply to the south.

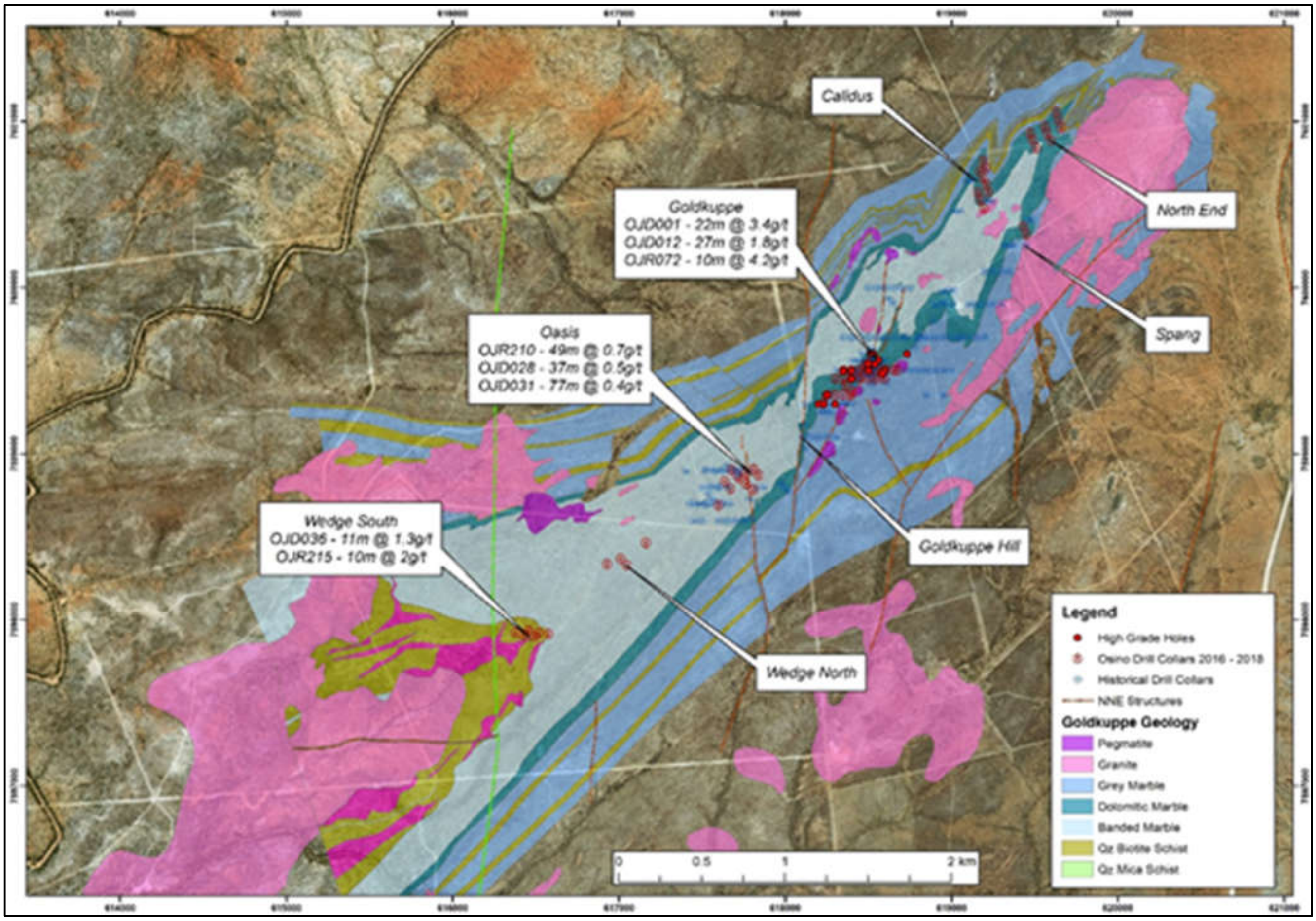


Figure 7-5: Geology of the area around Goldkuppe-Oasis and Wedge
Source: Osino

8 Deposit Types

8.1 Mineralization Styles

8.1.1 General Characteristics of Orogenic Deposits

Orogenic gold deposits occur in Archaean to Tertiary aged metamorphic belts where accretion or collision has added to or thickened continental crust (see Figure 8-1). The deposits are generally hosted by volcanic and turbiditic sequences that have been metamorphosed to greenschist or less commonly amphibolite facies. The deposits are generally interpreted to form late in the orogenic cycle from mid to lower-crustal metamorphic fluids. The gold ores develop syn-kinematically with at least one stage of the major deformation of the country rocks. They inevitably have a strong structural control involving faults or shear zones, folds, and other areas of competency contrasts. The deposits show vertical dimensions up to 1–2 km with strong lateral zonation of wall-rock alteration, normally potassium, arsenic, antimony, large-ion lithophile elements, CO_2, and sulphur, with additions of sodium or calcium particularly in rocks of amphibolite facies. Proximal wall-rock alteration varies from sericite-carbonate-pyrite at high crustal levels through biotite-carbonate-pyrite, to biotite-amphibolite-pyrrhotite and biotite/phlogopite-diopside-pyrrhotite at deeper crustal levels. Quartz ± carbonate veins are ubiquitous and commonly gold-bearing, although in many systems it is the sulphidized, high iron/iron + magnesium +c alcium wall-rocks adjacent to the veins which contain most ore (Groves et al., 2003).

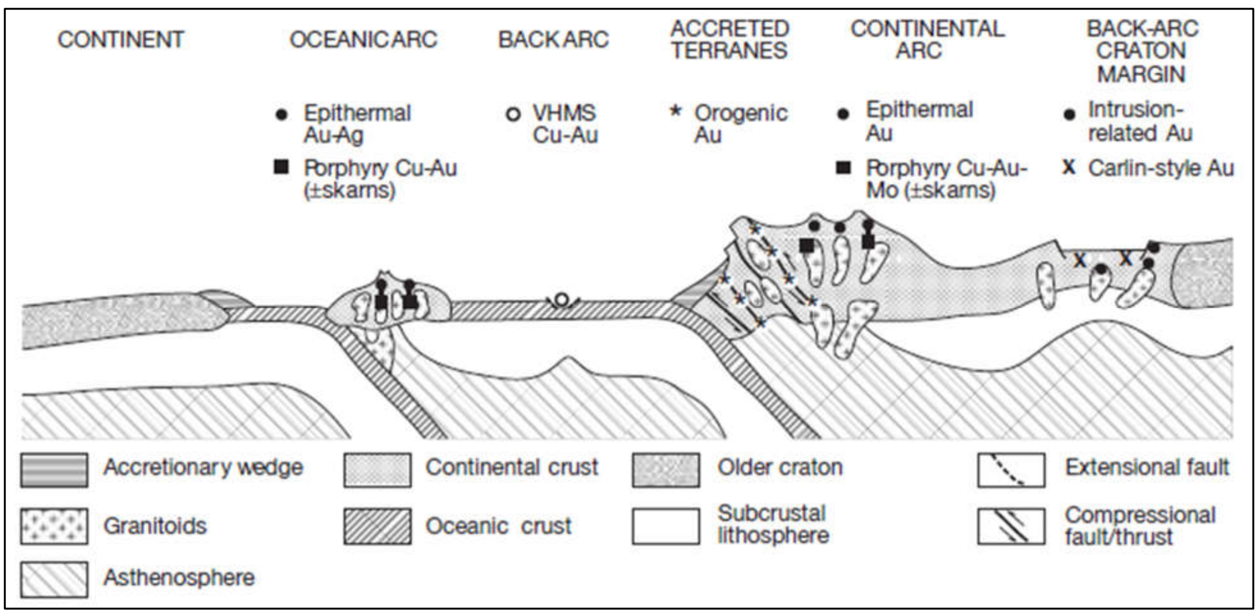


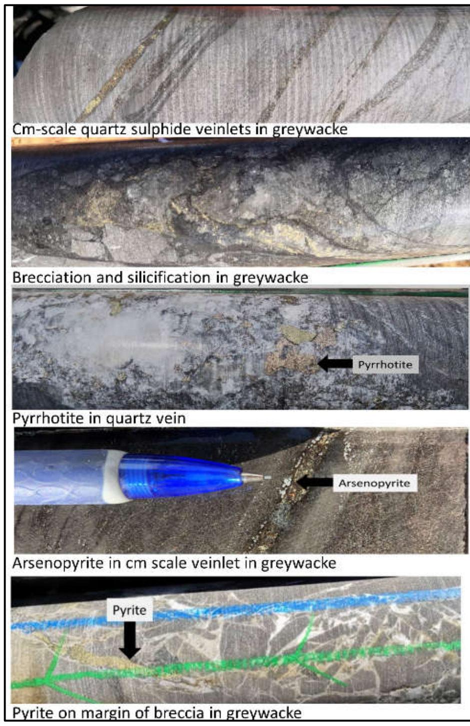
Figure 8-1: Tectonic setting of gold-rich mineral deposits
Source: Groves et al. (2003)

8.1.2 Twin Hills

The gold mineralization style at the Twin Hills Gold Project can be broadly categorized as orogenic, related to the Damaran Orogeny 550–500 Ma. The Twin Hills deposit and associated targets are located along a crustal-scale lineament (KFZ), on the southern margin of a turbidite basin folded into a tight syncline during the Damara Orogen (see Figure 7-4). The mineralization in the Twin Hills area has a defined strike extent of 11 km long, part of more than 20 km strike length of anomalous geochemistry along the KFZ and associated with splays and second and third-order structures to the south of the KFZ. The lithologies at Kudu and Oryx are tightly to isoclinally folded and overturned towards the north. The lithologies at Bulge, Twin Hills Central and Clouds are tightly folded and overturned towards the south. In general the folding becomes more open towards the east.

The priority portion of the Twin Hills area is a structural jog along the KFZ on the margin of the Dobbelsberg anticline. Three splay structures off the KFZ are visible in the magnetic data and are coincident with anomalous gold assays in bedrock and the calcrete cover above the bedrock.

The gold mineralization at Twin Hills is hosted by meta-greywackes which can be divided into interbedded and massive units. At a deposit scale, the mineralization is associated with shearing within the greywackes parallel to the axial plane of the tightly folded package. The gold mineralization is closely associated with arsenopyrite mineralization in millimetre-scale veinlets as well as fine-grained disseminate. Gold is associated to a lesser extent with pyrrhotite which has a much larger footprint and also occurs in units not well mineralized with gold. Selvages to the sulphide-quartz veinlets are characterized by potassic alteration (biotite) and higher-grade zones have often been silicified (Figure 8-2).



- Thick package of turbidites and calcareous sediments were buried and deformed during the late Proterozoic Damara orogeny.
- Metal bearing brines were expelled from the deep sedimentary basin and driven towards the southern margin which is defined by a basement cored anticline
- Hydrothermal fluids were channelled upwards in the basin margin fault and out into the lower stress, splay structures
- Gold deposition mainly in shear zones along fold limbs and associated with parasitic folding of interbedded meta-greywacke packages
- Host rocks are a turbiditic sequence which has been metamorphosed into a series of interbedded and massive meta-greywackes
- Gold mineralisation is closely associated with arsenopyrite and to a lesser extent with pyrrhotite
- Pyrite occurs primarily as a late stage alteration overprint associated with calcite and breccia
- Several zones of pervasive alteration and replacement by silica-rich fluids and sulphides have been intersected. These replacement zones appear to host higher gold grades

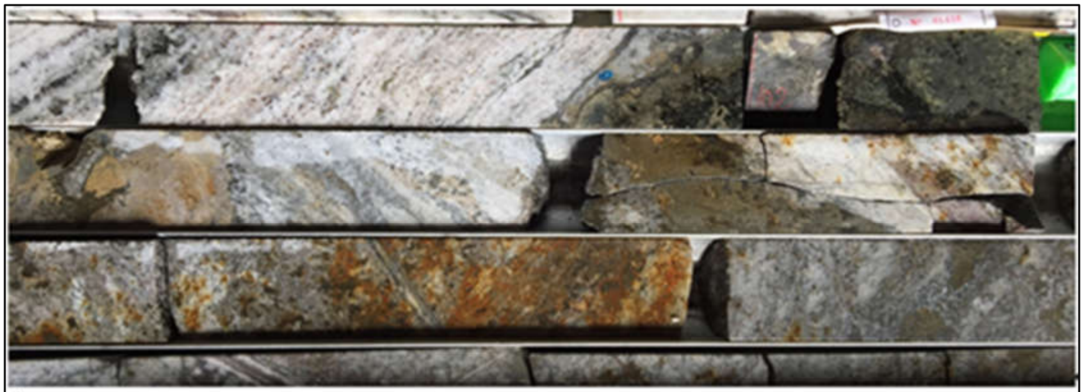
Figure 8-2: Mineralization styles at Twin Hills Central
Source: Osino

8.1.3 Goldkuppe

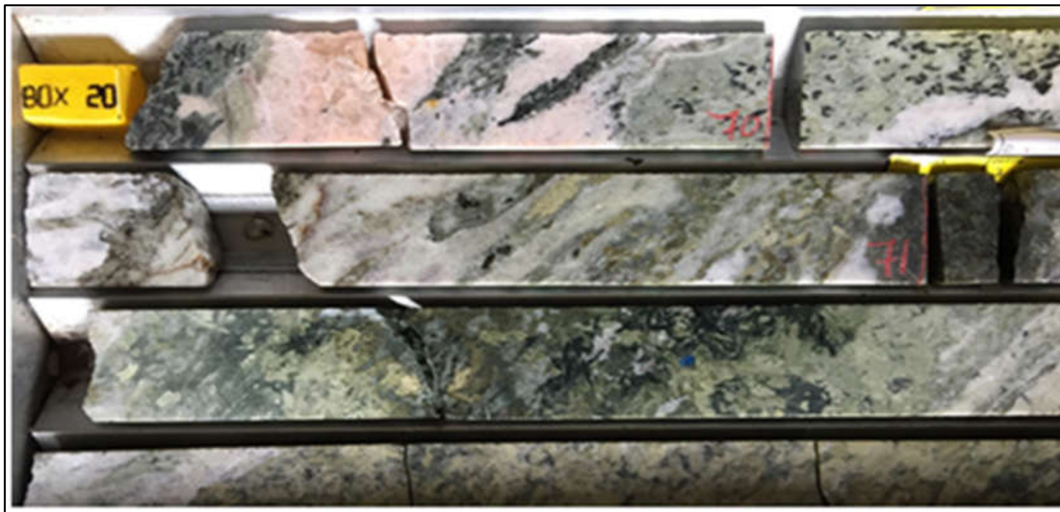
Goldkuppe is a 3 km long mineralized system with gold occurring in several discontinuous, plunging shoots hosted in (or on the contact of) a brown dolomitic marble unit. The brown colour on the surface of the marble is due to the weathering and oxidation of common disseminated sulphides. The sedimentary package, including this brown dolomitic marble, is deformed into a large anticlinal structure which was mapped in detail by Kasch in 2017 (Figure 7-5). The dolomitic marble is overlain by grey marble (hangingwall) and underlain by coarse and banded white marble (footwall). These carbonate rocks belong to the Karibib Formation.

Mineralization is associated with secondary fold noses as small-scale saddle reefs and limb faults. Massive or semi-massive sulphide concentrations with annealed textures, often with strong copper and gold grades, comprise coarse-grained aggregates of chalcopyrite-pyrite and lesser pyrrhotite. In addition, there is low-grade mineralization associated with pervasive skarn alteration adjacent to the intrusive bodies around Goldkuppe. The skarn altered areas contain diopside, biotite-phlogopite, and tremolite ± actinolite. Less abundant, reddish-brown garnet is also present. Some of these skarn zones may have a distal weak iron-magnesium carbonate envelope, which is particularly obvious in oxidized older drill core.

Examples of the mineralized zones are shown in Figure 8-3.



OJD013 [102 – 103m]: Au 8.9 g/t, Ag 26g/t, As 2860 ppm, Cu 1190 ppm



OJD013 [69 – 77m]: Au 0.86g/t, Ag 0.28g/t, As 893 ppm, Cu 28ppm

OJD-12 [56 – 64m]: Au 5.1 g/t, Cu 1060 ppm

Figure 8-3: Examples of Goldkuppe mineralization

Top: Sulphide mineralization with high gold and silver grades at the contact between banded marble (above) and dolomitic marble below. Middle: Oxidized massive sulphide mineralization composed of pyrite and chalcopyrite. Bottom: Low-grade gold mineralization associated with skarn alteration of banded marble (tremolite – green, diopside – black).

Source: Osino

At Oasis to the south of Goldkuppe, gold mineralization is hosted by banded marbles where the banding is created by thin calc-silicate layers. Gold is associated with north-south striking quartz veins with pyrrhotite and arsenopyrite mineralization.

8.2 Conceptual Models

Osino based the district exploration on the broad orogenic gold model which had not been used as a driver for much of the historical exploration in Namibia. The key regional features of the orogenic gold model, and how they relate to the Damara Orogenic Belt setting, are:

- Very large, long-lived fault structures, e.g. Omaruru and Okahandja lineaments and the KFZ. These structures were initiated during the rift phase and deposition of the sediments and subsequently re-activated during orogeny as steep reverse and transpressional structures.
- Large sedimentary (schist) basins as a source of fluids and metals.
- Compressional tectonics, required for pumping the fluids out of the basins and through the large structures.
- Zones of structural complexity and remobilization of older structures.
- Multiple associated gold occurrences on second or third-order structures.

All Osino's Project areas, and the licences within these areas, were selected based on these high-level criteria. The KFZ is regarded as the priority regional, fertile structure in the Twin Hills Project area, and based on soil and rock chip sampling, there is evidence of gold mineralization along this fault for more than 50 km (see Figure 7-2).

9 Exploration

The summary of exploration activities and results included in this section includes exploration as described in the July 2021 Technical Report (effective date July 14, 2021) for EPLs 3739, 5117, 5196, 5641, 5649, 5658, 5880, 6167, 6953, 7344, 7426, 7427, 7439, and 3738 as well as the work done since then on these EPLs. EPL 7426, EPL 7427, and EPL 7439 are very small slithers (<5 ha) between the other licences EPL 5658, EPL 6953, and EPL 3739, and a description of exploration is included in that of surrounding licences. The intention is to merge these small licences with the larger ones. EPL 7344 is considered immaterial at this time as no work has been carried out on the ground or permissions obtained for farm access.

EPL 3739 (Otjimbojo property) was explored to some extent in the past by Bafex with most of the focus being on the Goldkuppe prospect and the surrounding area. EPL 5880 and EPL 5641 have also been explored by various companies historically, as detailed in Table 6-2. The other licences have very little or no exploration history.

9.1 Geochemistry

Osino carried out a series of sampling programs on EPL 3739, which included stream sediment, soil, calcrete, and rock chip sampling.

9.1.1 Soil Sampling Surveys

Starting in 2017, Osino carried out extensive regional soil sampling programs covering most of the prospective Damara meta-sedimentary rock units in EPL 3739. The sampling was carried out on 400 m spaced lines with samples taken along the lines at 50 m intervals. The lines were generally orientated north-northwest to south-southeast, which is roughly perpendicular to the regional strike of the sedimentary layering in the area. Most of EPL 3739 is covered by skeletal residual soils and standardized soil sampling as described below is considered adequate for geochemical assessment.

During 2017 and 2018, Osino collected 18,521 soil samples within EPL 3739 including the follow-up sample grids. The samples were collected by sieving to the -212 µm fraction in the field and bagging up approximately 100 g sample weight in a brown paper sample packet. The packets were submitted to the ALS Global sample preparation laboratory in Swakopmund (Namibia) and then the prepared sample was shipped to the ALS Global Laboratory in Johannesburg, South Africa (ALS Global). Samples were analyzed using the ME-ICP61 method, which analyses for a suite of 33 elements, using a four-acid digest followed by inductively coupled plasma with optical emission spectrometry (ICP-OES). Gold is analyzed by the Au-AA24 method which is a fire assay of 50 g with an atomic absorption (AA) finish.

The regional soil sampling results identified numerous areas with above background gold (and associated elements, e.g. arsenic, copper in particular). Follow-up soil sampling, covering areas with above background gold (and associated elements) values, was carried out in several areas on 100 m or 50 m line spacing and 50 m or 25 m sample spacing along lines. The regional grids, anomalous sample areas, and identified target areas are shown in Figure 9-1.

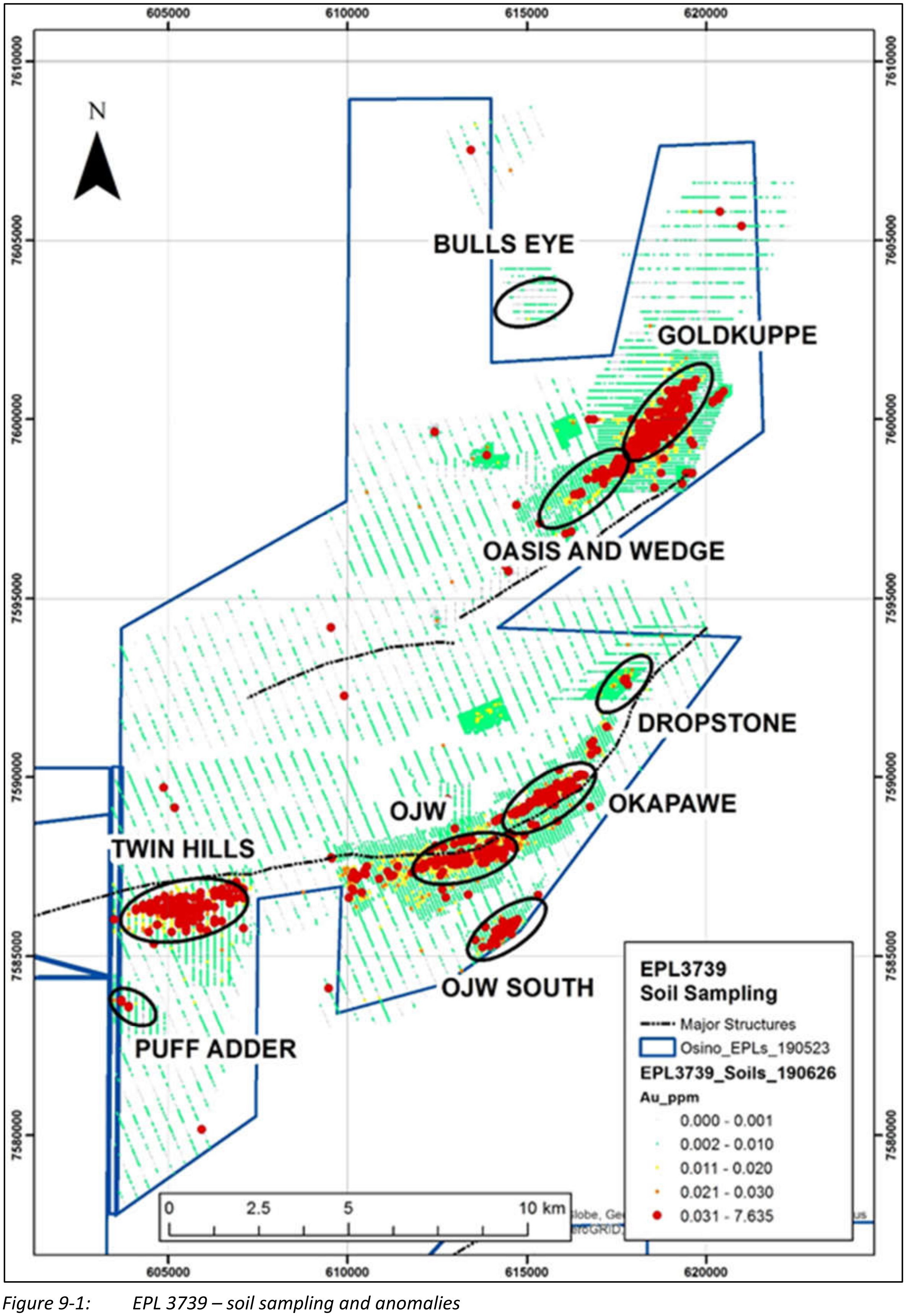


Figure 9-1: EPL 3739 – soil sampling and anomalies
Source: Osino

Four new, large-scale gold anomalies were identified (Figure 9-2) situated along the KFZ. The most significant of these anomalies is Twin Hills (Figure 9-2), located mainly to the south of the KFZ. As a result of this soil program, the licences to the west of EPL 3739 (along the south-westerly extension of the KFZ) were secured by Osino, including EPLs 5196, 6953, 6167, 7426, 7427, and 5658. Other anomalous areas associated with the interpreted position of the KFZ were identified at OJW, Okapawe, and Dropstone (Figure 9-2).

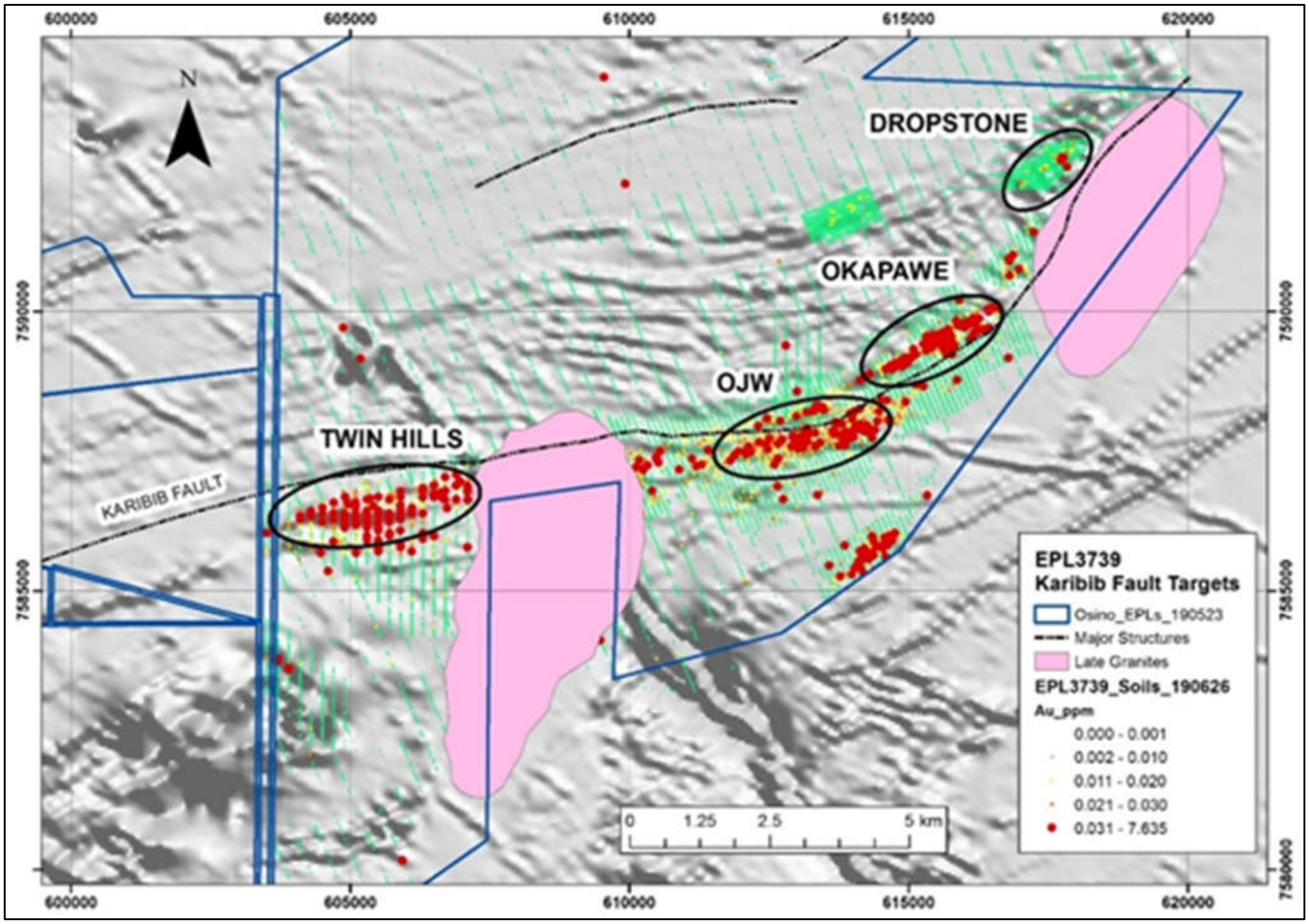


Figure 9-2: EPL 3739 – Geochemical targets along the KFZ
Source: Osino

In May 2018, Osino embarked on a calcrete sampling program to explore the licences to the west of EPL 3739 which are all covered by a thick layer of valley-fill calcrete. After conducting a promising orientation study, the KFZ strike was sampled for 8 km to the southwest of Twin Hills on a grid of 400 m x 100 m (Figure 9-3). The calcrete becomes buried progressively deeper under windblown sand to the southwest and pits were excavated to access the calcrete in the sand-covered areas.

The Twin Hills calcrete sampling program resulted in the definition of a well-defined, high tenor gold anomaly, the Twin Hills target. The gold assays indicated a coherent linear trend following splays to the main Karibib Fault. The results contain 27 assays over 30 ppb Au with a peak value of 145 ppb. The complete Twin Hills gold anomaly is 11 km long and at Twin Hills Central is over 300 m wide (Figure 9-3). The gold anomalies coincide with a magnetic anomaly due to the presence of pyrrhotite.

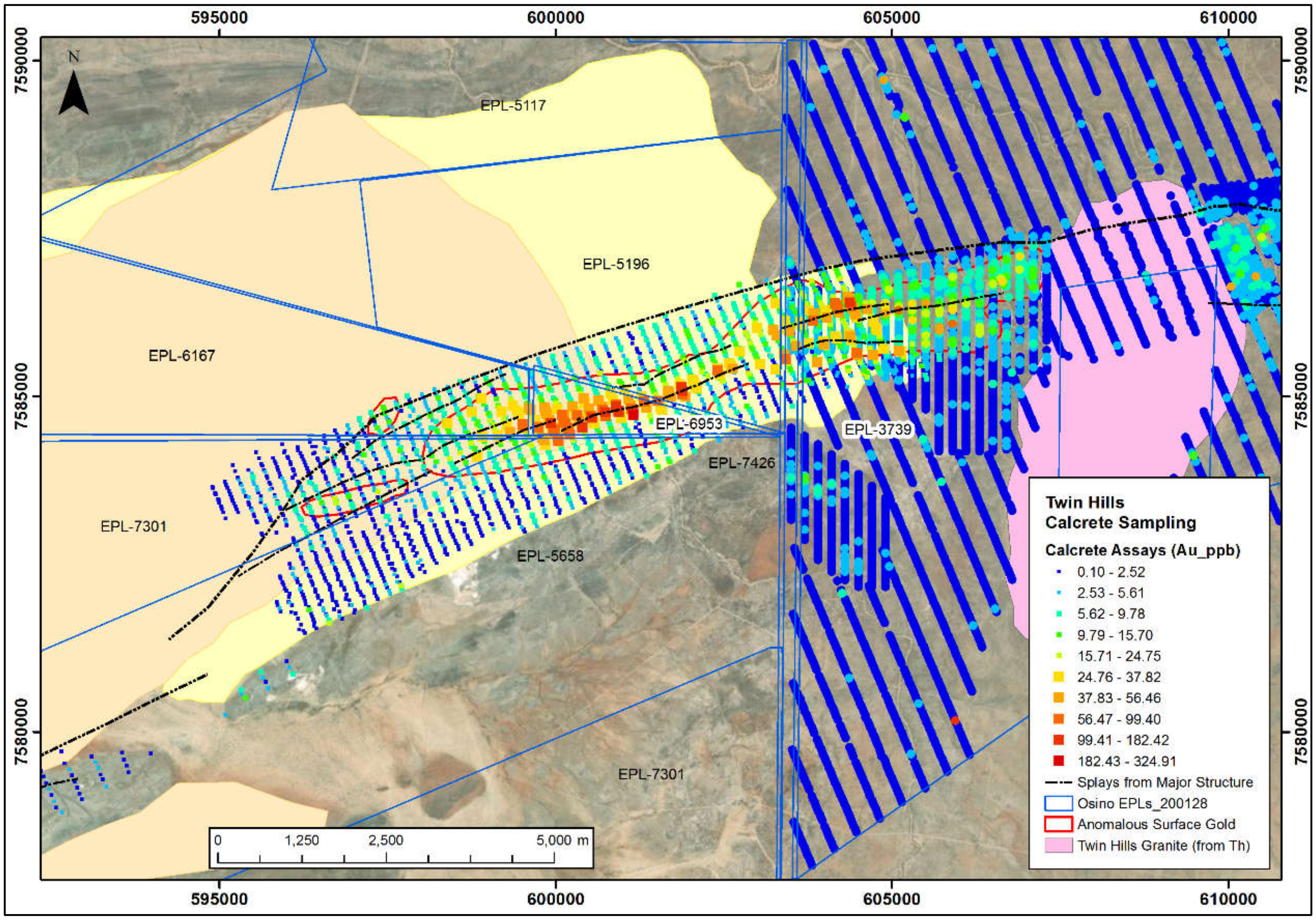


Figure 9-3: Calcrete sampling southwest of Twin Hills
Source: Osino

During Q4 2018, Osino sampled the continuation of the KFZ from the southwest of Twin Hills to the Navachab mine. This program made use of a percussion drill rig to sample the top of the calcrete layer where it is covered by windblown sand up to 3 m in depth. Vertical holes were drilled on fence lines spaced at 800 m and 100 m hole spacing (see Figure 9-4). Several deeper holes were also drilled to determine the regolith thickness along the KFZ, which increases from Twin Hills towards the southwest. Three samples were collected from each hole and submitted for analysis, one sample above the sand-calcrete contact and one sample each from the top 2 m of calcrete. In addition, surface calcrete samples were collected along the contact between schist and marble to the south and southwest of Twin Hills.

In 2020, soil and calcrete sampling were carried out on EPL 5880 and EPL 5641 on the portions considered most prospective in terms of geology and structure. EPL 5880 is centred around the Kranzberg Dome which has a core of Nossob sandstone. The prospective schist formations have been squeezed and thinned around the margins of the dome in a similar manner to Navachab and Twin Hills. Initial sampling has produced an anomaly in soil and calcrete to the northeast of the dome on strike from the historical Onguati copper-gold mine. Sampling to the south of the dome and along KFZ has produced two anomalies, one exactly along the postulated trace of the main Karibib Fault, and a second anomaly south of the Karibib Fault (potentially a splay, part of the KFZ) on the boundary of the Navachab exploration licence to the south (Figure 9-4).

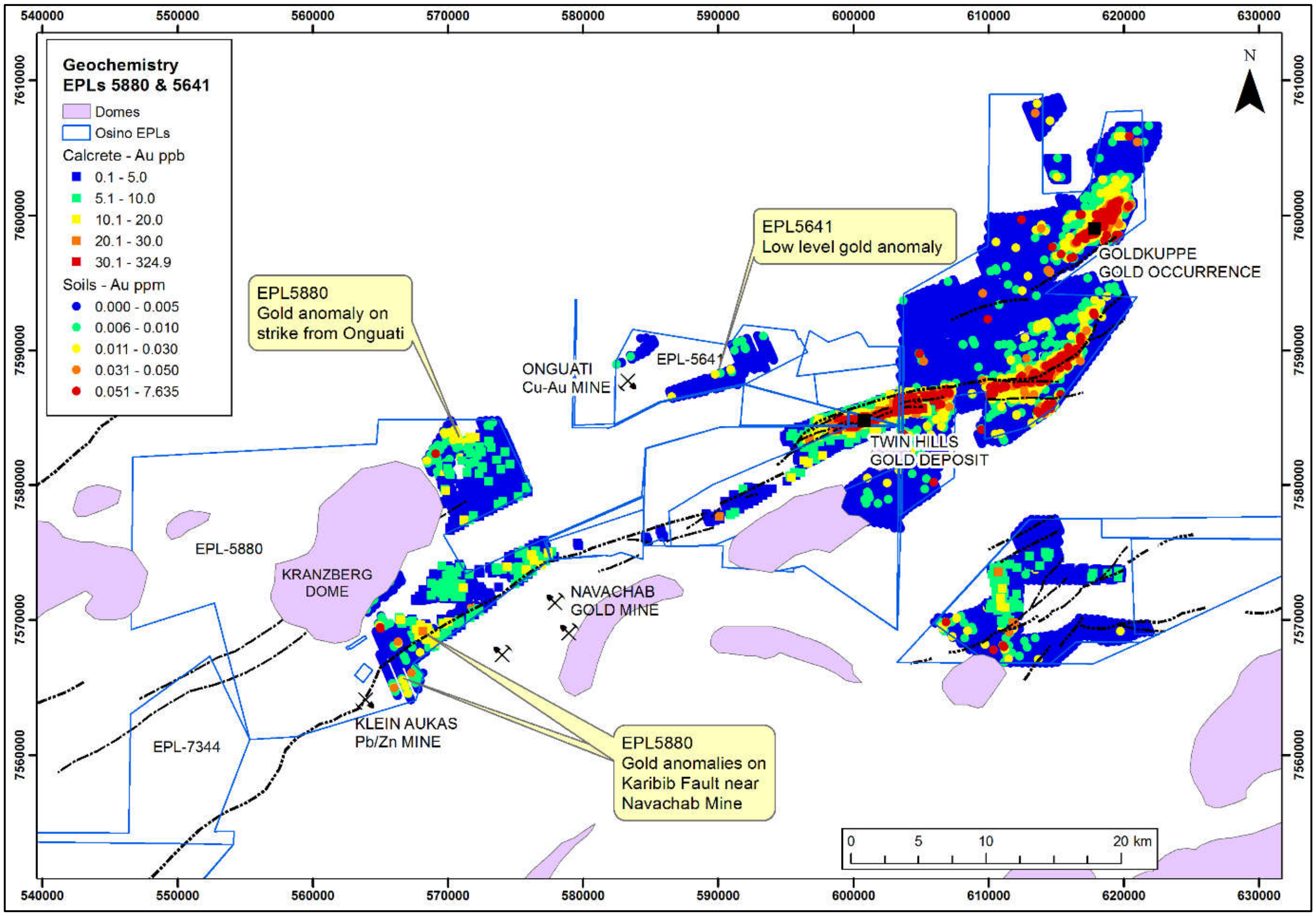


Figure 9-4: Sampling of EPL 5880 and EPL 5641
Source: Osino

The central portion of EPL 5641 is underlain by outcropping marble which is not considered prospective for large-scale mineralization. Soil sampling was carried out over the schist lithologies to the north and south of the marble and a low-level anomaly was detected near the contact between schist and marble.

No work has been carried out on EPL 7344 to date.

During H2 of 2021, Osino started a soil and calcrete sampling program around the Dobbelsberg Dome on EPL 5658 south of the Twin Hills deposit (Figure 9-5). The sampling was focussed on the Arandis Formation (consisting of schist and marble) which hosts the gold mineralization at Navachab 20 km to the southwest. Most of this formation in the Dobbelsberg area is covered by calcrete and a thin layer of wind-blown sand and was therefore sampled by collecting surface calcrete samples or by digging through the sand to the top of calcrete. This is the same methodology which was highly successful at Twin Hills. In areas where there is no calcrete, samples were collected of the skeletal soils present.

To date, a total of 1,501 calcrete and 187 soil samples have been collected and submitted for assay. Results have been received for most of the samples, with just a small number of results outstanding from the southwestern portion of the Okawayo farm. Portions of the farms Okajimakuyu and Usakos South remain to be sampled during H1 2022.

There are a number of gold-in-calcrete anomalies which will be followed up by RAB drilling for bedrock samples as well as diamond drilling on the highest priority anomaly at Fold Nose on the farm Dobbelsberg (Figure 9-5).

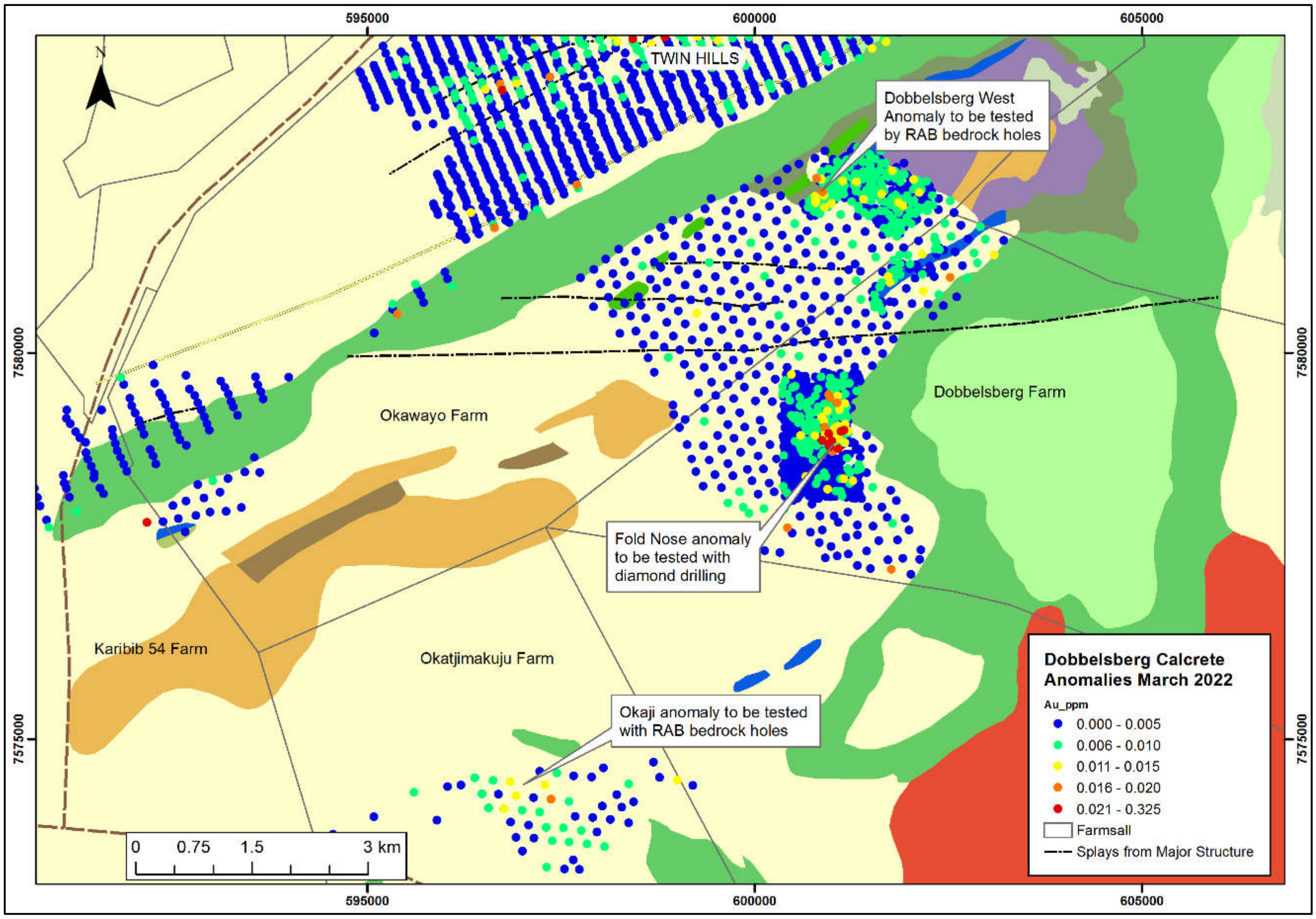


Figure 9-5: Gold assay results for calcrete samples at Dobbelsberg with follow-up targets
Source: Osino

9.1.2 Osino Geochemical Sampling on EPL 3738

During 2019, Osino carried out soil and calcrete sampling on the areas surrounding the historical soil sampling at Albrechtshöhe (Figure 9-6). The soil samples were collected on a grid of 400 m x 50 m with the closely spaced samples perpendicular to the strike of the geology and the calcrete samples were collected at approximately 200 m x 200 m. The areas not sampled are underlain by large-scale granite intrusives and basement which are generally not considered prospective for gold at the Project.

The assay results produced several small-scale anomalies which were checked on the ground. No further work was recommended.

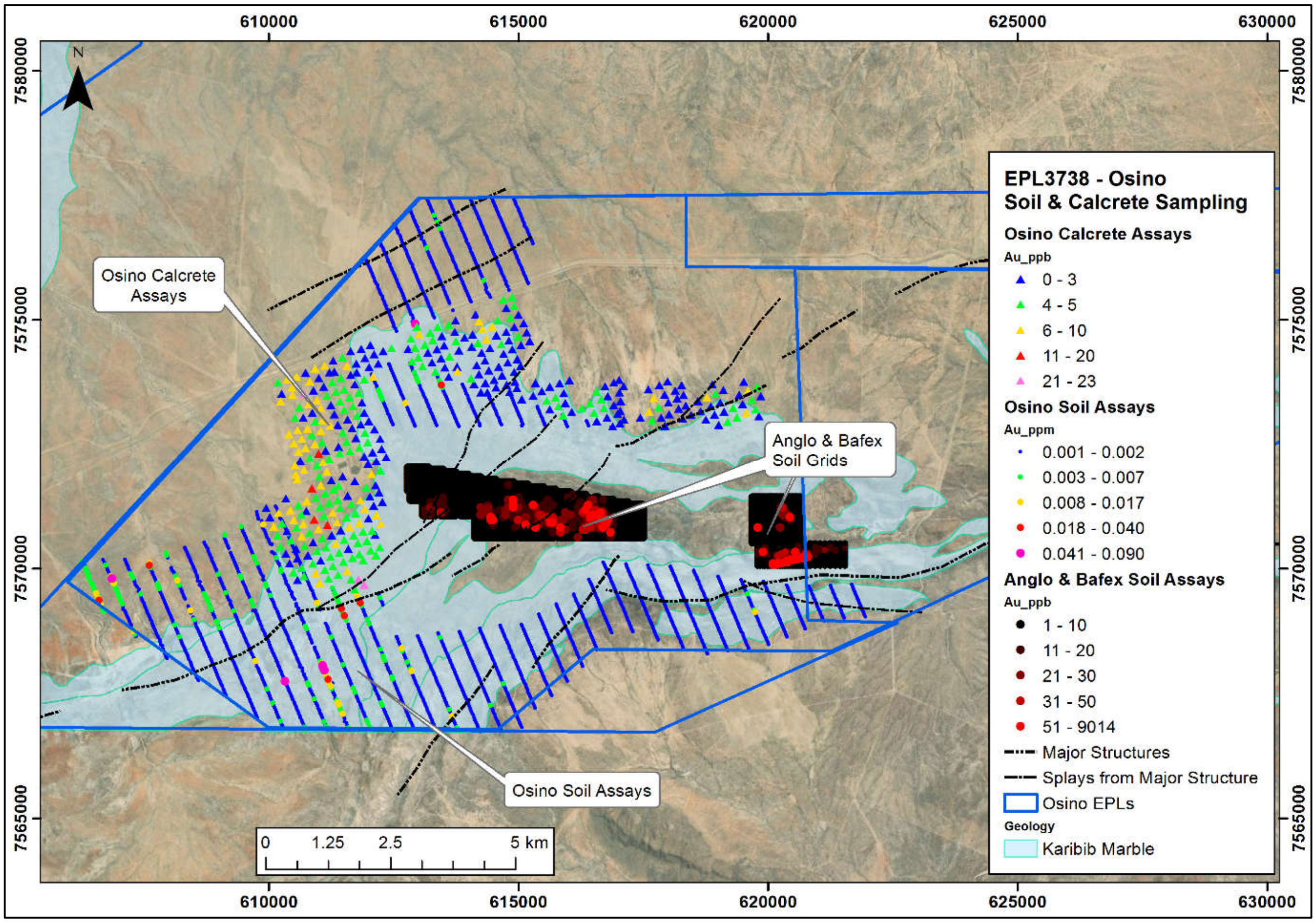


Figure 9-6: EPL 3738 Osino soil and calcrete assays on EPL 3738
Source: Osino

9.1.3 Rock Chip Sampling

A total of approximately 636 rock samples have been collected on the greater Twin Hills Project to date (Figure 9-7). Assay values of greater than 5 g/t Au were obtained from Twin Hills, OJW, Goldkuppe, Wedge, and Albrechtshöhe. High-grade rock chip samples at Twin Hills, Goldkuppe, and Wedge were followed up with drill programs. The high-grade samples from OJW and OJW South were followed up with trench channel sampling in Q4 2019 and will be drilled later in 2021.

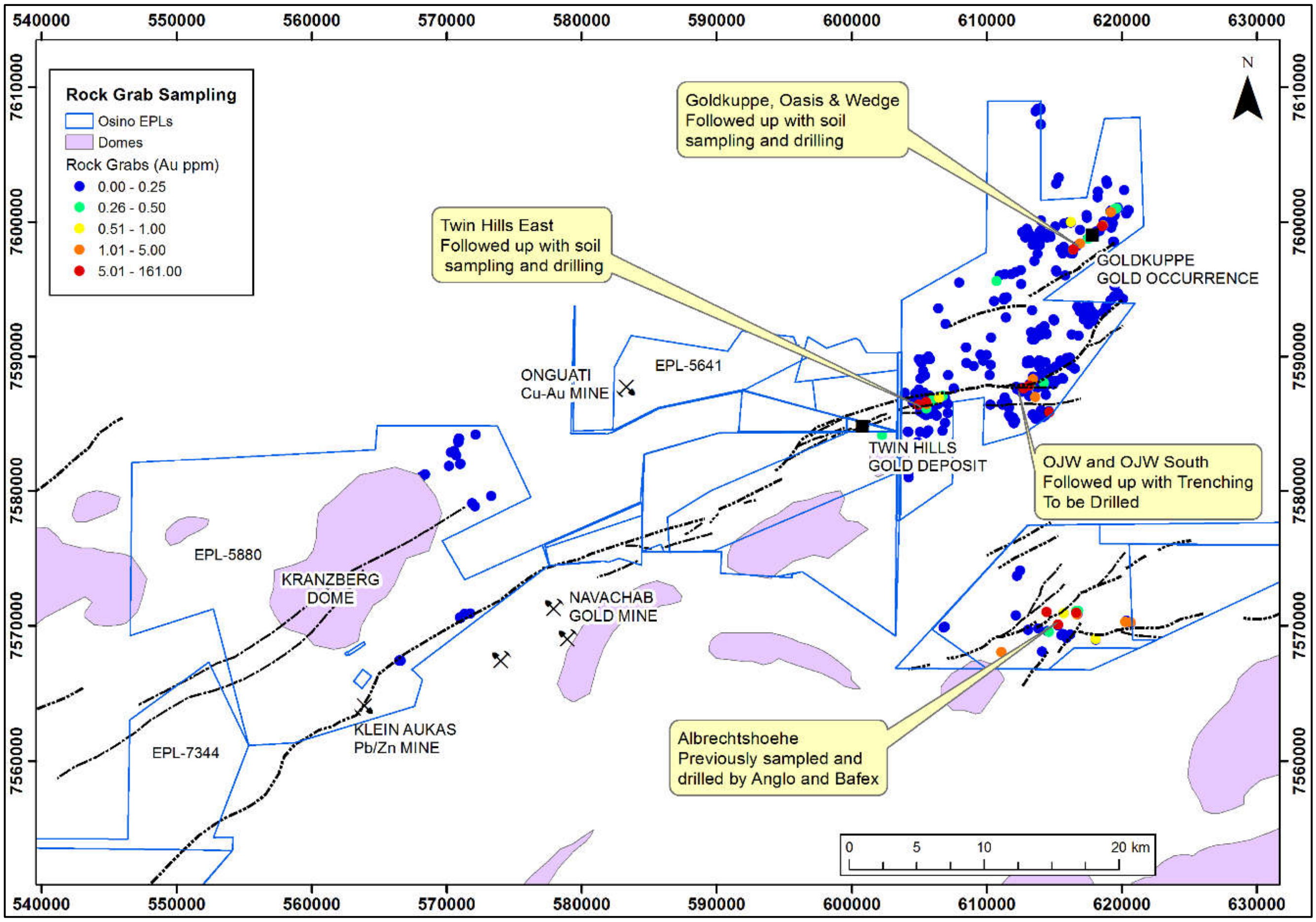


Figure 9-7: Rock chip sampling on EPL 3739
Source: Osino

9.1.4 Trench Channel Sampling

Gold anomalies in soil and rock chip sampling at OJW and OJW South were followed up by excavating trenches and collecting continuous channel samples from the exposed rock (Figure 9-8). Five trenches were excavated at OJW for a total of 452 m and two trenches were excavated at OJW South for a total of 265 m. The samples were collected as 2 m composites and submitted for gold fire assay and 36-element ICP analysis. The samples from the OJW South trenches returned assays as follows:

- OWC006: 22 m at 0.77 g/t Au
- OWC007: 2 m at 3.29 g/t Au.

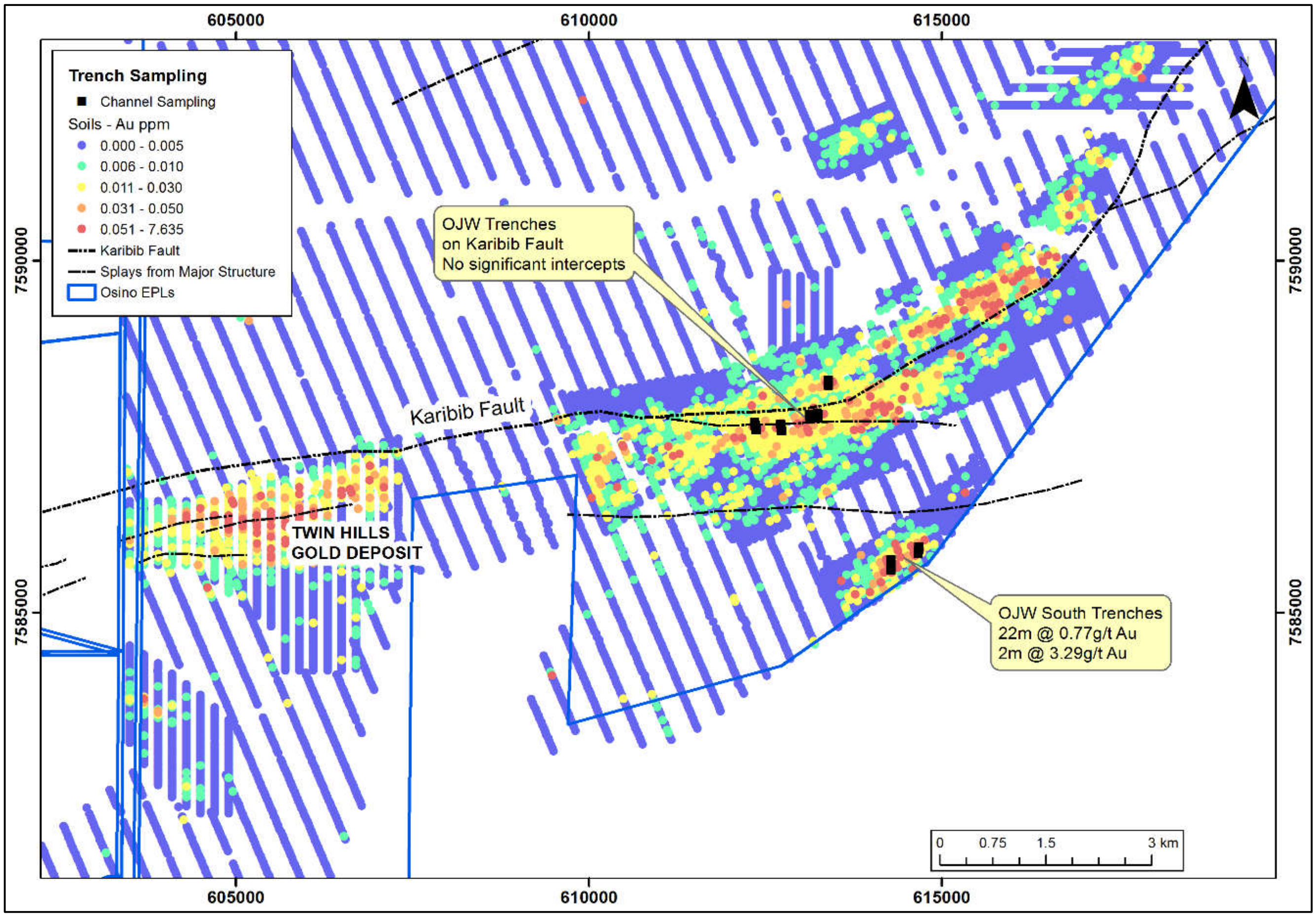


Figure 9-8: Location of trenches on EPL 3739
Source: Osino

9.2 Geophysical Surveys

9.2.1 Regional Survey

The Twin Hills Project area has been covered by a government aeromagnetic survey, which (in this area) was flown at a line spacing of 200 m. The regional geology draped onto the regional first vertical derivative (1VD) magnetic image, for the general area of Twin Hills (EPLs 3739, 6953, 6167, 5649, 5658, 5117, and 5196) is shown in Figure 9-9. Using this data, Osino recognized the KFZ, a regional-scale deep structure along the southern margin of the Karibib Basin, filled with schist and meta-greywacke belonging to the Kuiseb Formation.

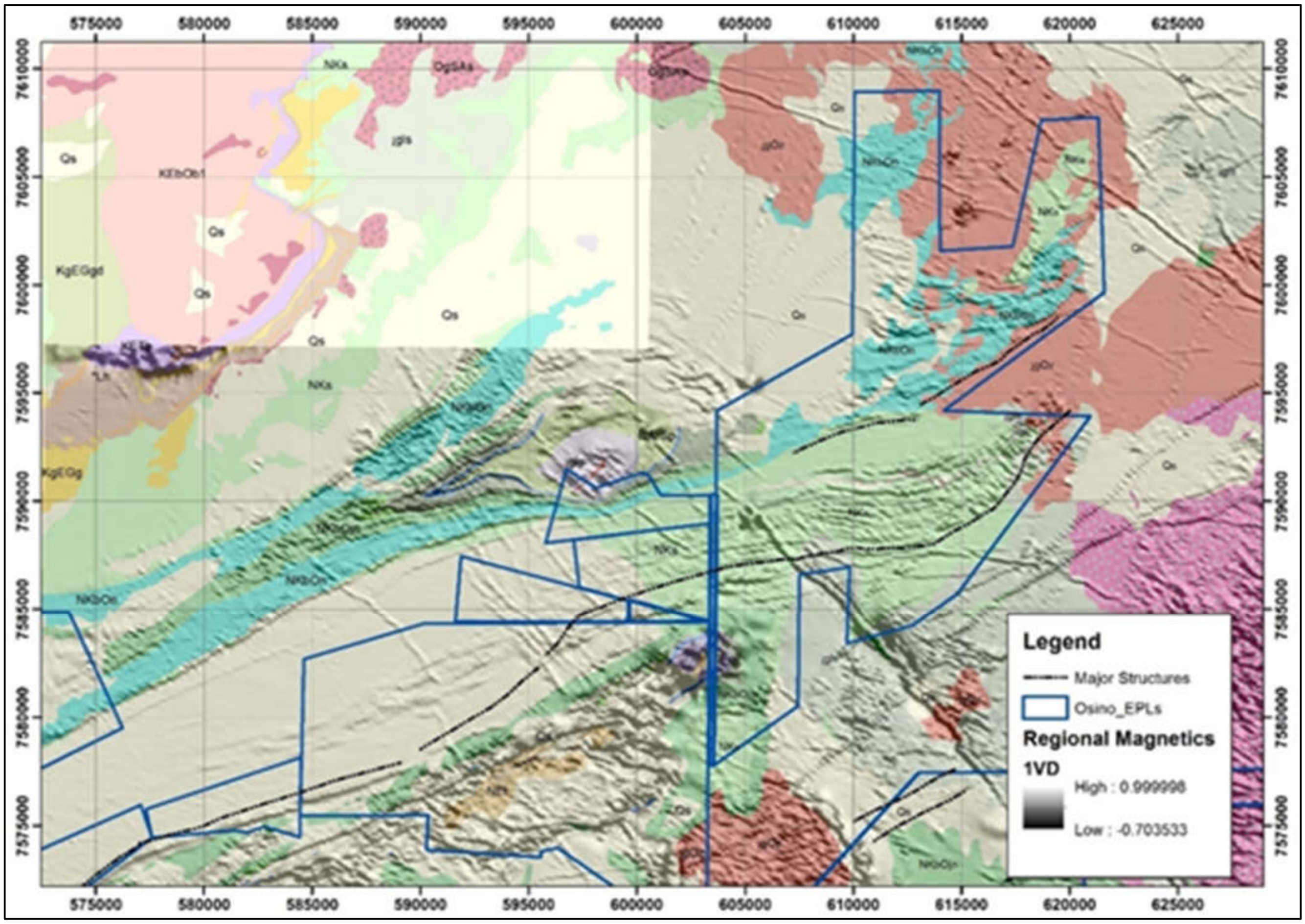


Figure 9-9: Regional magnetics (1VD) draped onto geology
Source: Osino

9.2.2 Geophysical Surveys at Twin Hills

In H2 2019, Osino carried out a detailed ground magnetic survey along the KFZ from Twin Hills East on EPL 3739 to the western boundary of EPL 5649, north of the Navachab Mine. The survey was carried out on lines spaced 50 m apart and orientated northwest to southeast. The results of this survey indicated that the gold anomaly at Twin Hills is closely associated with an anomalous magnetic response due to the presence of pyrrhotite. In addition, the Karibib Fault and splay structures (collectively the KFZ) were more closely defined and provided further drill targets (see Figure 9-10).

In addition, three lines of IP were surveyed over The Bulge, Twin Hills Central and Twin Hills East as an orientation exercise. The results indicated that the mineralization at Twin Hills is associated with a conductivity anomaly due to the presence of disseminated sulphides. Several structures of potential significance were also identified in the IP sections.

Following the IP orientation survey, a decision was made to cover the Twin Hills area with geochemical and magnetic anomalies with gradient array IP. This kind of survey is carried out in a series of rectangular blocks which are then stitched together and levelled. This survey was completed in August 2020 and produced prominent chargeability anomalies over the areas of known mineralization (Bulge, Twin Hills Central, Twin Hills East, Twin Hills West – i.e. Kudu and Oryx) as well as highlighting several new target areas (see Figure 9-11).

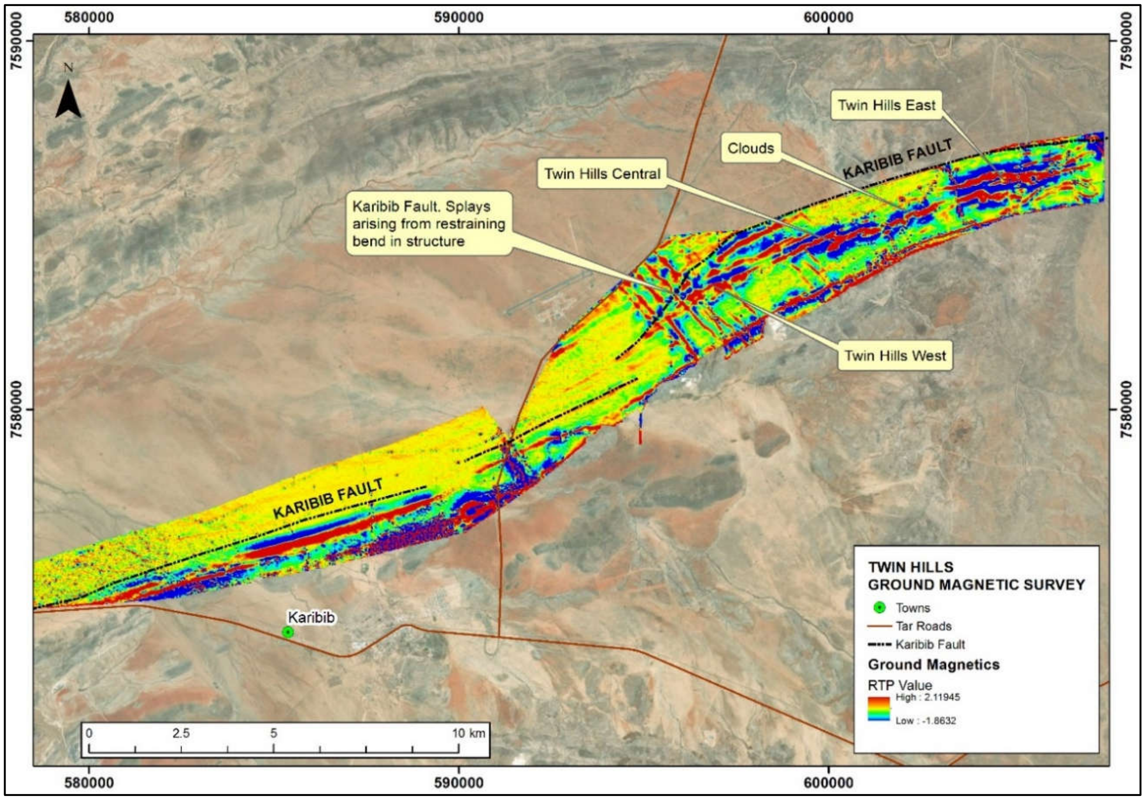


Figure 9-10: Ground magnetics over Twin Hills
Source: Osino

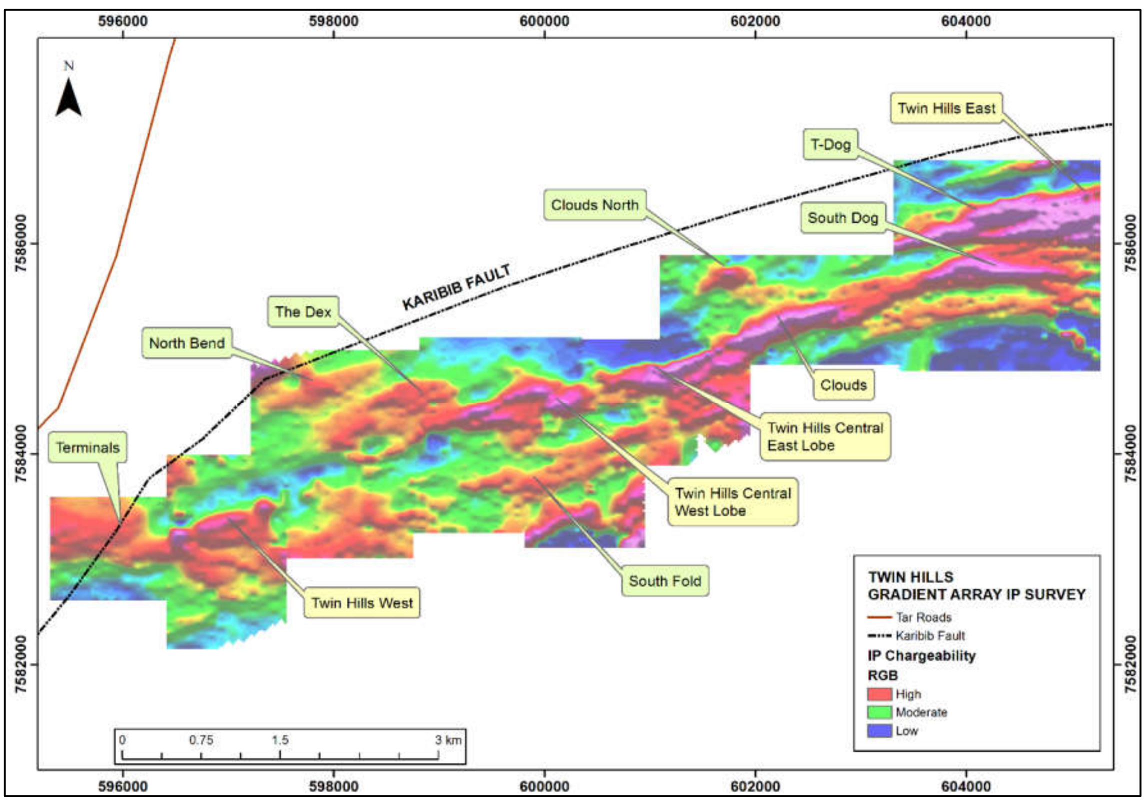


Figure 9-11: Gradient array IP over Twin Hills
Source: Osino

9.3 Structural Geology

A detailed structural study of the Twin Hills deposit was commissioned by Osino and completed by structural geologist Dr Colin Porter in February 2021. The interpretation produced by Dr Porter was used to update the mineralized envelope used for modelling and the MRE (see Section 14). His work included a review of aeromagnetic, IP data, and detailed structural logging of diamond core. This focused on the measurement of bedding, foliation, minor folding, and veining, combined with visual observations. This allowed the facing directions to be established and the geometry of the mineralized fold to be accurately defined. Oriented structural measurements were taken and corrected for downhole deviation using survey data. A consistent overturned syncline was identified as well as a series of crosscutting faults. Higher-grade shoots were identified in minor parasitic folds.

9.4 Summary of Exploration Prospects

The exploration prospects at the project have been ranked as shown in Table 9-1. The work programs indicated are costed in Section 26.1.

Table 9-1: Summary of targets from geochemical and geophysical data

Exploration stage	Rank	Target	Status	Work program
Discoveries	1	The Bulge, Twin Hills Central and Clouds	Osino discovery with economic potential	Large-scale drill program for resource estimate; infill drilling for upgrade and feasibility
	2	Kudu and Oryx	Osino discovery with economic potential	Large-scale drill program for resource estimate; infill drilling for upgrade and feasibility
	3	Goldkuppe	Significant historical and current drilling; potential economic intersections	Further drilling and modelling in conjunction with Oasis prospect
Targets	4	Dobbelsberg	Gold-in-calcrete anomaly on fold nose and other Arandis targets	Scout drilling and bedrock sampling
	5	Eland and Terminals	Gold-in-calcrete and magnetic anomalies on strike from Twin Hills West discovery	Scout drilling
	6	Bulge North	Gold-in-calcrete anomaly to north of Bulge deposit	Scout drilling
	7	OJW	Gold anomaly in sampling and trenching	Scout drilling
	8	OJW South	Gold anomaly in sampling and trenching	Scout drilling
	9	Okapawe	Gold anomaly in soil sampling	Scout drilling
	10	Puff Adder	Gold anomaly in soil sampling	Scout drilling
	11	Kranzberg Dome South Margin	Gold anomaly in bedrock sampling, magnetic anomaly	Follow-up bedrock sampling, scout drilling
	12	Kranzberg EPL	Gold anomalies in soil and calcrete sampling	Follow-up sampling and mapping, Scout drilling

10 Drilling

10.1 Summary of Drilling

The major focus of the Osino drilling has been at the Twin Hills discovery, the associated structures and extensions including Twin Hills East, Twin Hills West (Kudu and Oryx), and Barking Dog (Figure 10-1 and Table 10-1). Before the discovery of Twin Hills, Osino drilled two campaigns of RC and diamond holes at Goldkuppe, Oasis, and Wedge during 2017 and 2018 as well as a short campaign of scout holes at the Okapawe and Dropstone targets along the KFZ. Additional hydrological and geotechnical drilling has taken place during 2021 and 2022 to support the feasibility studies. A summary of all drilling carried out to date by Osino is provided in Table 10-1.

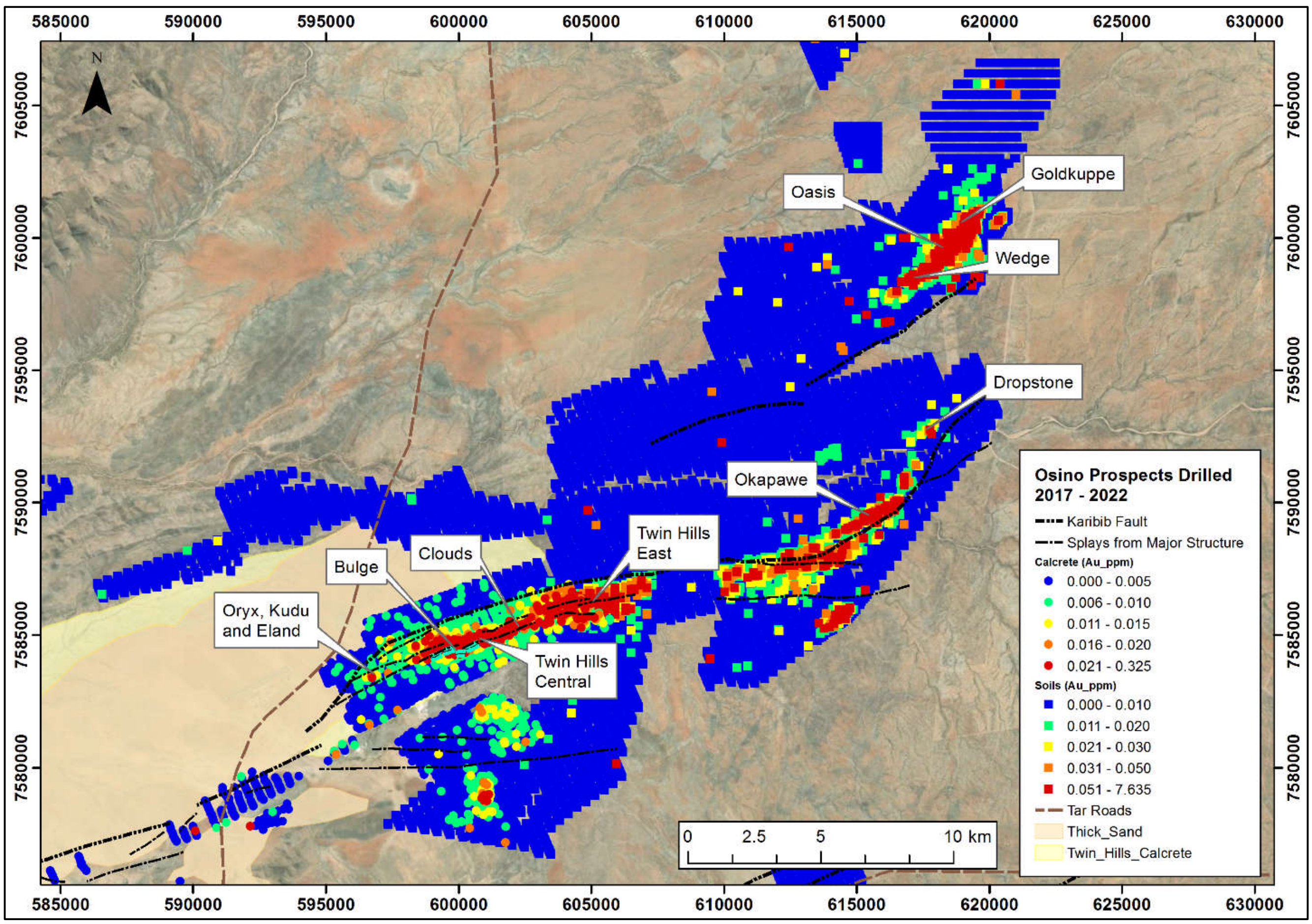


Figure 10-1: Location of Osino prospects (2017–2021)
Source: Osino

Table 10-1: Summary of all holes drilled by Osino to date

Prospect	Type	No. of hole	Drill metres	Date
Goldkuppe, Oasis, and Wedge	DD	24	3,856	2017 to 2018
	RC	45	4,902	2017 to 2018
Okapawe	RC	6	560	2018
Dropstone	RC	4	415	2017
Twin Hills East	DD	4	408	2018
	RC	19	1,904	2018
South Fold	DD	8	1,608	2021
	RC	12	2,079	2021
Oryx, Kudu, Eland, and Terminals	DD	53	10,761	2019 to Feb 2022
	RC	41	8,823	
North Contact, Rails, and Phantom Granite	DD	8	1,456	2021
	RC	5	884	2021
Barking Dog, T-Dog, Moose, and South Dog	DD	22	4,126	2019 to 2021
	RC	10	2,005	2019 to 2021
DMZ, Dex, The Break, and North Bend	DD	14	2,715	2021
	RC	16	3,168	2021
Twin Hills Central, Bulge, and Clouds	DD	277	81,584	2019 to Feb 2022
	RC	358	53,712	2019 to Feb 2022
Total		**928**	**184,966**	

Three different drilling techniques were employed by Osino at various stages of exploration across the Project area:

- Diamond drilling using HQ and NQ core diameters to test and develop exploration targets while also providing geological and structural information
- RC drilling to test and develop exploration targets
- Percussion drilling to recover geochemical bedrock samples below the calcrete cover and allow for basic geological and regolith assessments.

All exploration drilling (diamond and RC) was targeted normal to the plane of the principal, mineralized structures (normally dipping moderately to the north-northwest) to ensure the optimum angle of intersection. Consequently, holes were generally collared towards 160° at a dip of 60°. Minor scissor holes, drilled in the opposite direction, and vertical holes were also completed to ensure drilling was completed in the proper orientation. All holes were planned using Leapfrog modelling software and collar coordinates were staked in the field using handheld global positioning system (GPS) units (with nominal X and Y precision of 5 m and 20 m in the Z plane).

10.2 Drilling Techniques

10.2.1 Diamond Drilling

Osino utilized diamond drilling at regional exploration projects as well as the Twin Hills resource drilling campaign. All diamond holes were typically collared in PQ diameter and reduced to HQ diameter once competent (usually at bedrock level) rock was encountered, typically at depths below 20 m downhole. Where the ground was less compact, PQ casing was inserted to keep the hole from collapsing and to ensure optimal flushing of rock cuttings. Drill run lengths were 3 m and wireline drilling methods were employed. Two drilling companies were contracted to supply diamond drilling services. The contractors supplied all the required drilling equipment, trained personnel, and safety equipment.

Kodo Drilling CC supplied and operated four diamond drill rigs – these were:

- Sandvik DE712
- Two AtlasCopco Boyles C6 rigs
- Epiroc Boyles C5.

Günzel Drilling CC supplied and operated four diamond drill rigs – these were:

- Two AtlasCopco CS14 rigs
- Two AtlasCopco CS10 rigs.

All HQ drill core was orientated by using the Reflex ACT II orientation tool. The tool records the orientation of the core barrel before breaking the core free and provides a bottom of hole orientation for each 3 m core run. This is extended along the length of the core by matching broken ends and drawing on the orientation line.

10.2.2 Reverse Circulation Drilling

Osino contracted Hammerstein Mining & Drilling CC ("Hammerstein") to carry out all RC and percussion drilling at the Project. Hammerstein supplied the Project with the following five drill rigs and auxiliary equipment:

- Thor 5000 rig (RC drilling only) with 18-tonne pullback and an Atlas Copco Compressor (24 bar, 1200 CFM) mounted on-board a Powerstar 6x6 truck.
- Thor 5000 Mercedes rig (RC drilling only) with 18-tonne pullback mounted on a Mercedes and a Doosan compressor (24 bar, 1200 CFM) mounted a Volvo truck.
- Superrock 1000 rig (RC and percussion) with 16-tonne pullback mounted on a Peterbuilt and a Kiloskar compression (24 bar, 1200 CFM) mounted on a Samil 100 6x6 truck.
- Superrock 5000 rig (RC and water well drilling) with 28-tonne pullback mounted on a Powerstar truck and an Ingersoll Rand compressor (24 bar, 900 CFM) mounted on Samil 50 4x4 truck.
- Cobra Crawler (RC only) with 16-tonne pullback and a Kiloskar compressor (24 bar, 1200 CFM) mounted on Mercedes 1517 4x4 truck.
    - Hurricane Booster T7 mounted on trailer (69 bar, 1000 CFM).
    - Ingersoll Rand compressor (24 bar, 900 CFM) mounted on MAN 4x6 truck.
    - Rods are 4.5 inches (114.3 mm) and run at 6 m lengths. The first two rods behind the hammer were fitted with stabilisers (130 mm outside diameter) to reduce hole deflection.
    - Mincon MR 120 hammers were used for RC and percussion drilling.

Steel casing (152 mm outer diameter), that was inserted into the hole upon commencement, was selectively installed down hole to offer stability, improve recovery, and to preserve the drill collars.

Hammerstein used a 5.2-inch (~132 mm) diameter bit on all its rigs. The use of boosters facilitated the collection of dry samples except for a few moist/wet samples during the switch over to booster use. Water strikes were recorded on the drill register.

10.3 Logging Techniques

All drilling, logging, and sampling procedures follow industry standard practices and are documented in Osino's standard operating procedure documents. Geological logging of core and percussion/RC cuttings is based on visual observations of the mineralogy and mineralization.

10.3.1 Diamond Core Logging

Core was logged at the drill rig in a summary format during the drilling of a hole; this included recovery logging and rock quality designation on a run-by-run basis. Core was subsequently transported to the secure core-yard facility in Omaruru for detailed logging and undercover storage. Both summary and detailed geological logs were completed for each hole drilled. Logged observations include lithology, structures, oxidation state, mineralization, and alteration. These were captured in both hard and soft copy format and captured into the project database. Oriented structural measurements were made using a kenometer, "rocket launcher" and REFLEX IQ-Logger. Logging of these key features is standardized through implementing standardized coding. All diamond core was photographed, and the photos were maintained within the geological database.

10.3.2 Reverse Circulation Logging

RC geological logs were recorded for each hole drilled. Observations include lithology, structures, oxidation state, mineralization, and alteration. These observations were captured on hard and soft copies and then transferred into the geological database. Retained sample material (following primary and duplicate sample generation using a riffle splitter) was wet screened/washed using a 2 mm sieve and the +2 mm sample placed in a labelled chip box. This material was used for detailed geological logging in the field, after which the chip trays were transported to, stored, and catalogued at Osino's secure core yard facility.

10.3.3 Bulk Density

Bulk density data were routinely collected from diamond drill core for all rock types. Bulk density was determined using the hydrostatic immersion method, on solid core pieces, with lengths exceeding 10 cm at a nominal sampling interval of one sample every 5 m downhole. Every tenth sample was repeated as an internal quality control measure.

10.4 Recoveries

Core recovery from the diamond drilling campaign was calculated at 98%. Recoveries for the RC drilling were estimated based on a theoretical sample mass per metre run, expressed as a percentage. These were carried out only in fresh material and moist/wet samples were excluded from the calculation. These recoveries average 93%. Recoveries are recorded in the Project database.

10.5 Surveying

10.5.1 Collar Surveying

Drillhole collars were surveyed using a Trimble R2 receiver DGPS with Trimble Centre Point Real Time eXtended (RTX) that provides high-accuracy GSSN positioning services via satellite. The RTX Centre Point signal provided an accuracy of 2–3 cm on X and Y coordinates and 5 cm on Z coordinates. All elevation data was referenced to the Geoid model EGM08-1 (Earth Geoidal Model of 2008). All data was acquired in WGS84 UTM Zone 33S system using the Trimble R2 differential GPS system. Three differential GPS base stations were established on this prospect for future use in all positioning surveys. Surveys were done by an experienced local consultancy, Greg Symons Geophysics.

10.5.2 Downhole Surveying

RC and diamond holes were surveyed from the bottom (end of hole) upwards, at 20–30 m intervals. The REFLEX EZ-TRAC downhole survey tool was used by all the drill contractors and produced readings relative to magnetic north; these were corrected using the magnetic declination prior to importing to the database. There is little evidence of magnetic influence from pyrrhotite in the deposit. For the RC holes, surveys were conducted after all rods were tripped from the hole and the final/shallowest shot was taken at least 10 m below the steel casing to avoid any magnetic interference. The diamond drill contractors surveyed by dangling the tool about 10 m below/outside the rod string, while tripping out rods, to avoid any influence from the steel rods. Survey results were reviewed and referenced against planned surveys. If results were anomalous, entire holes would be resurveyed or individual anomalous survey shots would be ignored before importing the data to the geological database.

10.6 Summary of Drilling Results at the Project

The first round of drilling at Twin Hills was carried out in April and May 2018 on the easternmost outcropping portion of the mineralization at Twin Hills East. A total of 19 holes (for 1,904 m) were drilled in altered and mineralized quartz biotite schist covering a strike extent of 1 km (Figure 10-2 and a summary of significant intercepts in Table 10-2). The drill program returned several mineralized intersections appearing to be the distal portion of a larger gold-bearing hydrothermal system open in all directions as well as down dip. As a result of the initial program, follow-up drilling was planned and subsequently executed.

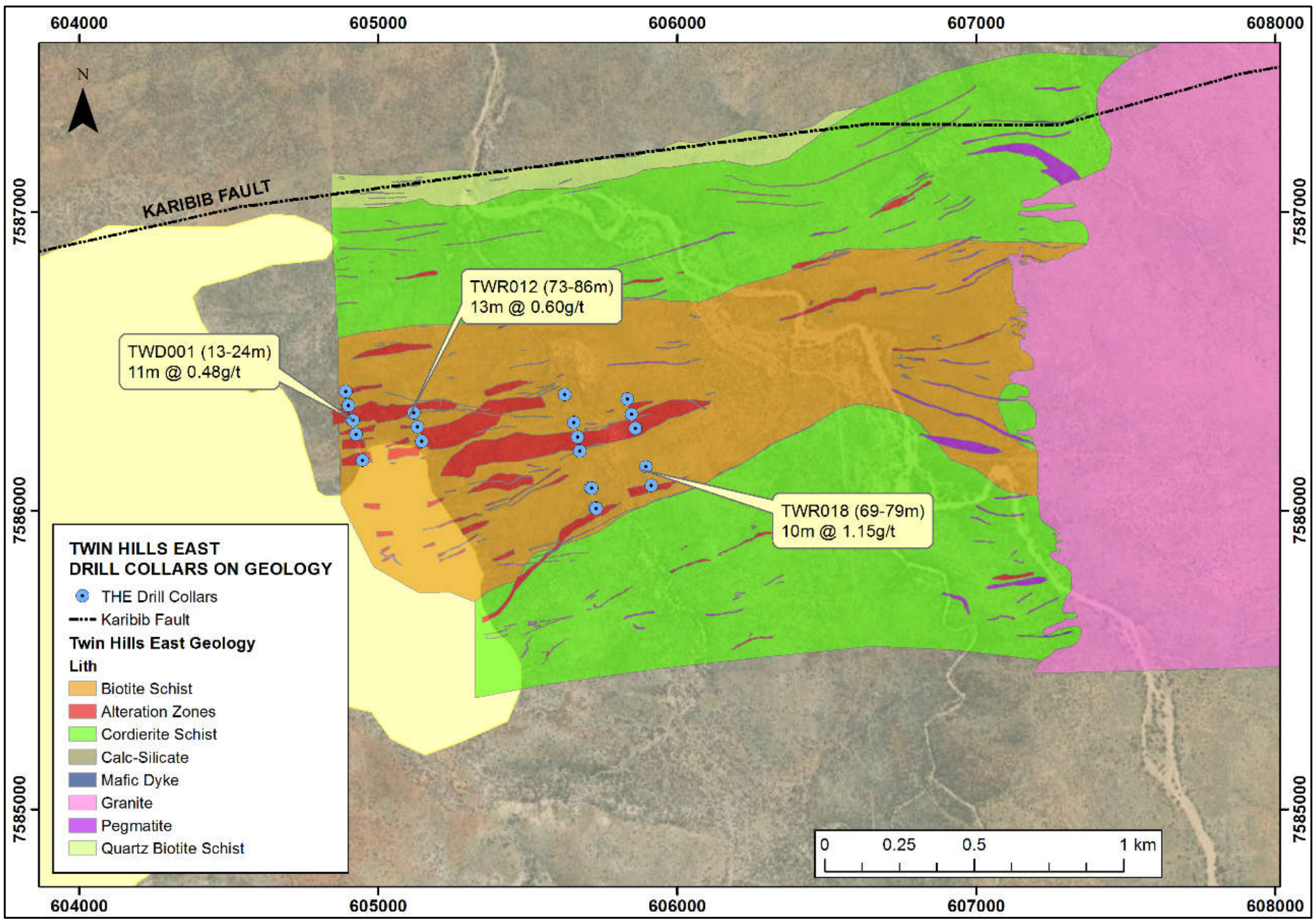


Figure 10-2: Twin Hills East drill collars on geology
Source: Osino

Table 10-2: Intercepts (>0.5 g/t Au) for initial Twin Hills East drilling campaign

Hole no.	From (m)	To (m)	Width (m)	Grade (g/t Au)
TWD001	13	24	11	0.48
TWD003	9	19	6	0.61
TWD004	83	87	4	1.01
TWR002	14	17	3	0.89
	20	21	2	0.85
TWR004	62	69	7	0.4
TWR008	8	12	4	0.48

Hole no.	From (m)	To (m)	Width (m)	Grade (g/t Au)
TWR009	74	79	5	0.77
TWR012	42	44	2	0.52
	73	86	13	0.6
TWR016	91	93	2	0.78
TWR017	14	20	6	0.42
TWR018	69	79	10	1.15

Note: The relationship between true thickness and intercept width is unknown.

In Q4 2018, two lines of percussion drillholes were completed over the Twin Hills Central gold-in-calcrete target. This drill program was designed to confirm the relationship between the surface calcrete anomalies and the bedrock beneath. The short program confirmed a coincident bedrock gold anomaly of 400 m in strike length, with values up to 2.25 g/t Au with a median of 0.017 g/t Au and an average of 0.129 g/t Au and open in all directions.

In April–May 2019, approximately 4,660 m of shallow percussion drilling was completed over the rest of the Twin Hills cluster of targets as well as at Far West on the south-western boundary of EPL 5649 just north of the Navachab mine. The percussion holes were drilled vertically through the calcrete cover (which varies in thickness from 3 m at Barking Dog to over 50 m at Far West) to sample the bedrock beneath. Samples were collected and assayed for the first 2 m of bedrock as well as the metre of mixed calcrete/bedrock above. Results of this bedrock sampling program included a maximum grade of 2.68 g/t Au on the western-most line at Twin Hills West. The Twin Hills West target is open to the west and south. Bedrock mineralization was confirmed at all targets within the Twin Hills cluster including The Bulge, Twin Hills Central, Twin Hills West, Clouds, and Barking Dog (Figure 10-3).

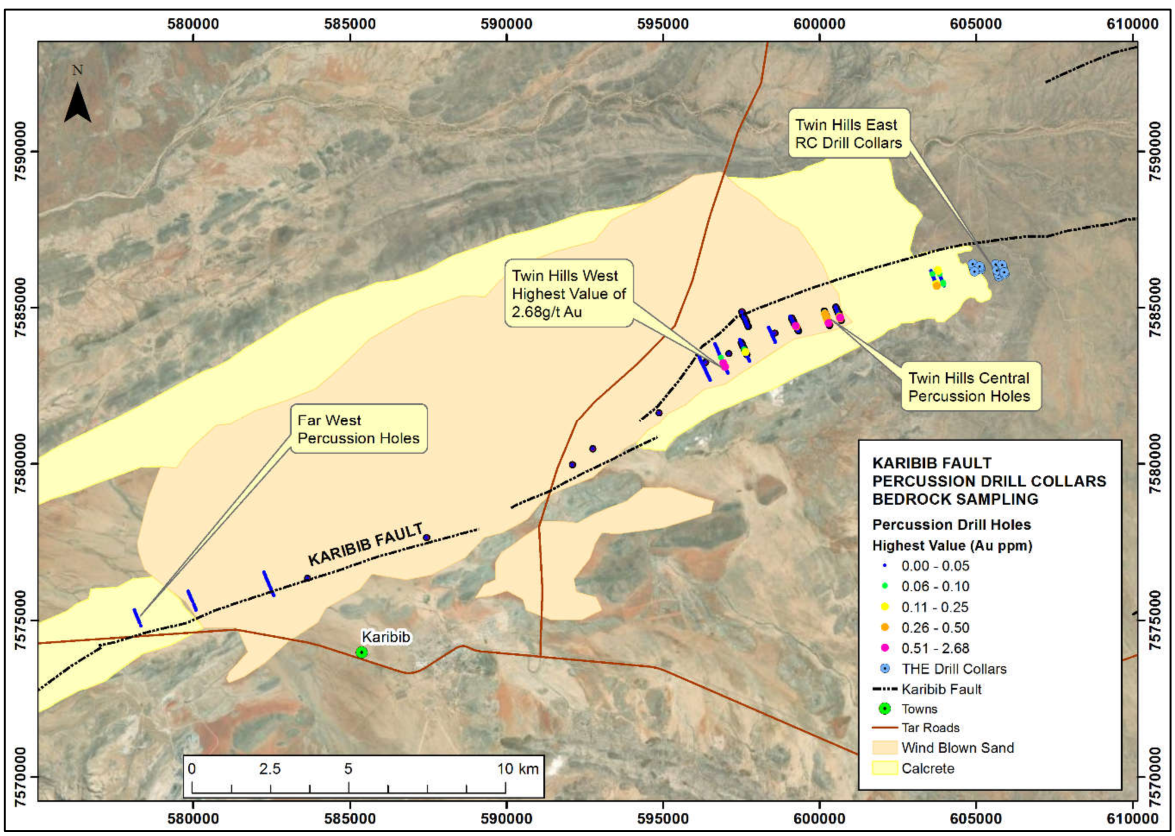


Figure 10-3: Percussion drilling on KFZ for bedrock samples beneath cover – highest value for each hole indicated
Source: Osino

In July–August 2019, Osino completed an initial diamond drill program at The Bulge and Twin Hills Central comprising seven holes for a total of approximately 1,475 m. These holes were laid out on three section lines 400 m apart, covering a total strike length of 1,200 m. The holes were drilled at a declination of 60° on an azimuth of 160° (south-southeast) – perpendicular to the regional lithological strike.

This initial program resulted in the discovery of the Twin Hills gold mineralization, with five of the initial seven holes returning significant gold intercepts including OKD004 with 65 m at 1.37 g/t Au (from 16 m), including 31 m at 2.2 g/t Au. Two other holes (OKD001 and 002) returned intercepts over 100 m wide.

A second drill program was started in October 2019 to follow up on the initial success at The Bulge and Twin Hills Central and test other geochemical anomalies at Twin Hills West, Clouds, and Barking Dog (Figure 10-4). This second program extended the strike of confirmed gold mineralization at The Bulge and Twin Hills Central to 1,200 m and down to a depth of over 300 m, open to the east, west, and at depth. The best intercepts included OKD024 with 92 m at 1.40 g/t Au (20–112 m), including 35 m at 2.54 g/t Au and OKD022 with 37 m at 2.58 g/t Au (173–200 m), including 8 m at 7.50 g/t Au. OKD022 was drilled towards the north-northwest (opposite direction to other holes).

At Twin Hills West, four out of eight holes intersected significant gold mineralization including 28 m at 0.83 g/t Au (including 11 m at 1.16 g/t Au) (OKD011) and 11 m at 1.08 g/t Au (OKD019) with grade and width of mineralization appearing to increase to the south and west. The Clouds target returned a low-grade intercept, albeit in the targeted mineralized greywacke horizon. The six-hole fence line drilled at Barking Dog returned no significant intercepts and drilling indicated a more schistose lithology than the greywacke at The Bulge and Twin Hills Central (Figure 10-4).

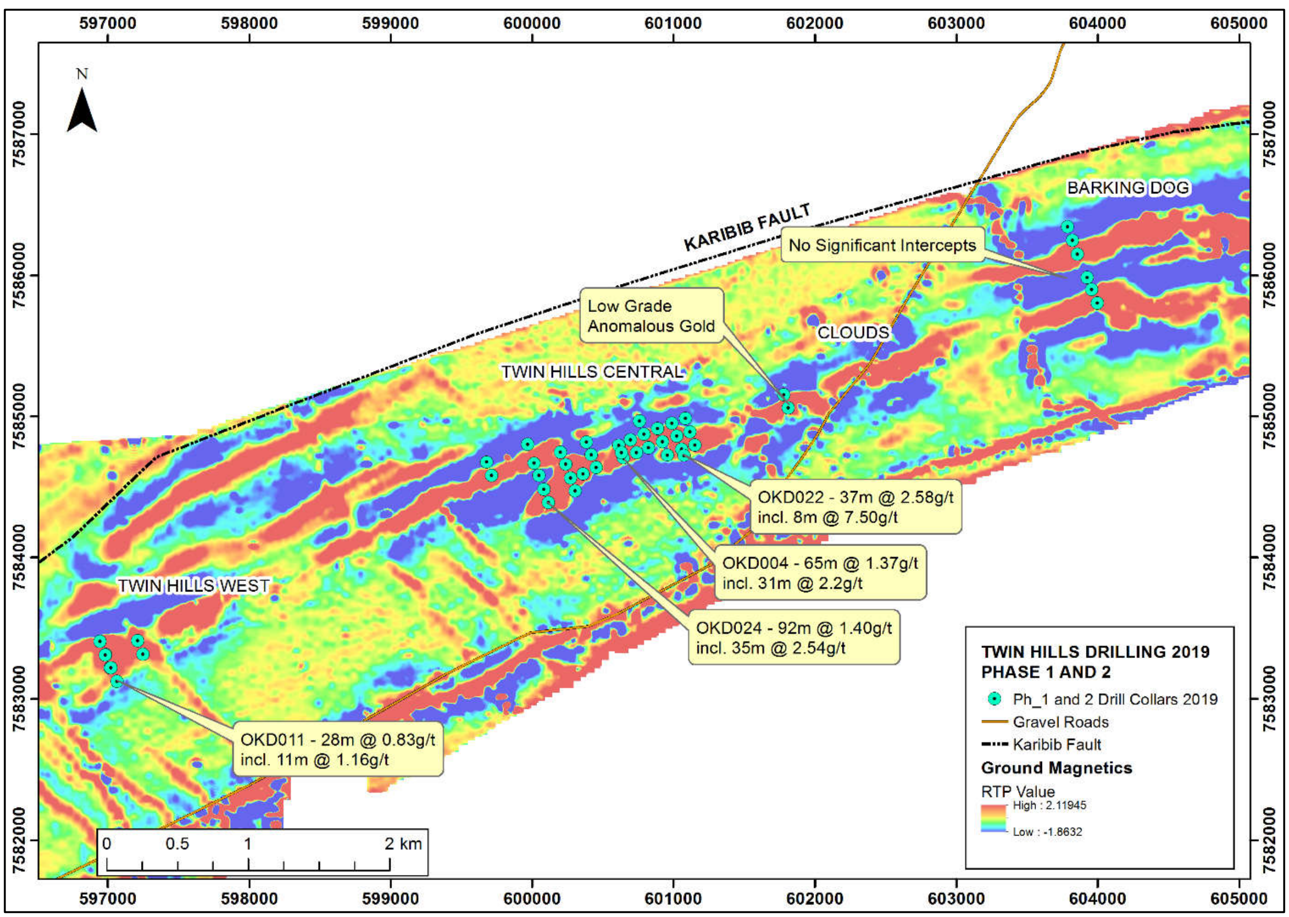


Figure 10-4: Phase 1 and Phase 2 drilling at Twin Hills on ground magnetic image
Source: Osino

10.6.1 Infill and Expansion Drilling (2020–2022) for the Mineral Resource Estimate

The objective of the first phase of Mineral Resource definition drilling (drill plan H1-20) at the Twin Hills Gold Project was to infill and expand on known areas of mineralization, especially in and around Bulge and Twin Hills Central discoveries. The drill program included an initial 20,000 m, with inclined holes planned along a 50 m x 50 m grid in support of a targeted Inferred Mineral Resource classification. Drilling commenced in March 2020 but, due to delays caused by the COVID-19 global pandemic, drilling operations only began in mid-May 2020. The program started with two diamond drill rigs which, on the back of early and continued positive drill results, quickly expanded to five diamond rigs and three RC rigs. The H1-20 drill plan was concluded on 11 October 2020, after completing a total of 28,124 m, of which 18,102 m were drilled by diamond and 10,022 m by RC rigs.

After a short break in drilling operations, allowing for assay results to be returned by the lab, the next phase of Mineral Resource definition drilling got underway on 28 October 2020. The H2-20 drill plan was designed with similar objectives as the H1-20 plan; however, expansion/exploration drilling at Clouds and Clouds West targets were included. The program had five diamond and four RC rigs drilling six days a week to complete 20,000 m by 25 January 2021. Drilling operations progressed quicker than planned which opened the work schedule up to drill additional meters. Planning of these additional holes was supported by further positive drill results at Clouds and Twin Hills Central. When the H1-21 drill plan commenced on 25 January 2021, a total of 29,147 m (16,766 m RC and 12,381 m diamond) had been drilled.

In early February 2021, the next phase of Mineral Resource infill and expansion drilling commenced at Clouds, Twin Hills Central and Bulge. The drill plan (TH03-21 and TH06-21) included an initial 58,000 m of inclined drilling, following a staggered 50 m x 50 m collar grid spacing. The staggered grid resulted in an inter-hole spacing of roughly 32–34 m, deemed sufficient to support the upgrading of Inferred Mineral Resources to Indicated Mineral Resources.

The infill and expansion program progressed in parallel with a brownfields exploration program (TH02-21) aimed at discovering satellite mineralization within close proximity to the main Twin Hills deposits. A discovery was made at the Twin Hills West target (Kudu and Oryx) during Q3 of 2021 and was further supported by encouraging assay results from the Mineral Resource expansion drill program.

During August and September 2021, the infill and expansion program (with about 41,000 m of drilling completed) was reviewed and resulted in the drill program being expanded and fast tracked, with a total of eight diamond and three RC drill rigs drilling at the Project. Upon conclusion in early February 2022, the 2021–2022 Mineral Resource infill and expansion drill program totalled 70,165 m, comprising 40,566 m DD and 29,599 m RC.

Drilling has confirmed a combined strike extent for Bulge and Twin Hills Central of at least 1.3 km with mineralization open down dip and down plunge. Clouds is located about 1 km east of Twin Hills Central, has a defined strike extent of about 400 m and is also open at depth. Clouds West is located about 300 m from Twin Hills Central but is not open along strike or down dip. The newly discovered Twin Hills West deposits comprise two mineralized lobes namely Oryx and Kudu. The largest of these, Oryx, has a strike extent in excess of 600 m and is open along strike to the east and down dip. Figure 10-5 shows the gram meter (gm) values for holes drilled at Twin Hills West, Bulge, Twin Hills Central and Clouds with a selection of annotated intercepts. A table of significant intersections for selected holes informing the updated portion of the MRE is provided in Table 10-3 and for the maiden MRE targets in Table 10-4.

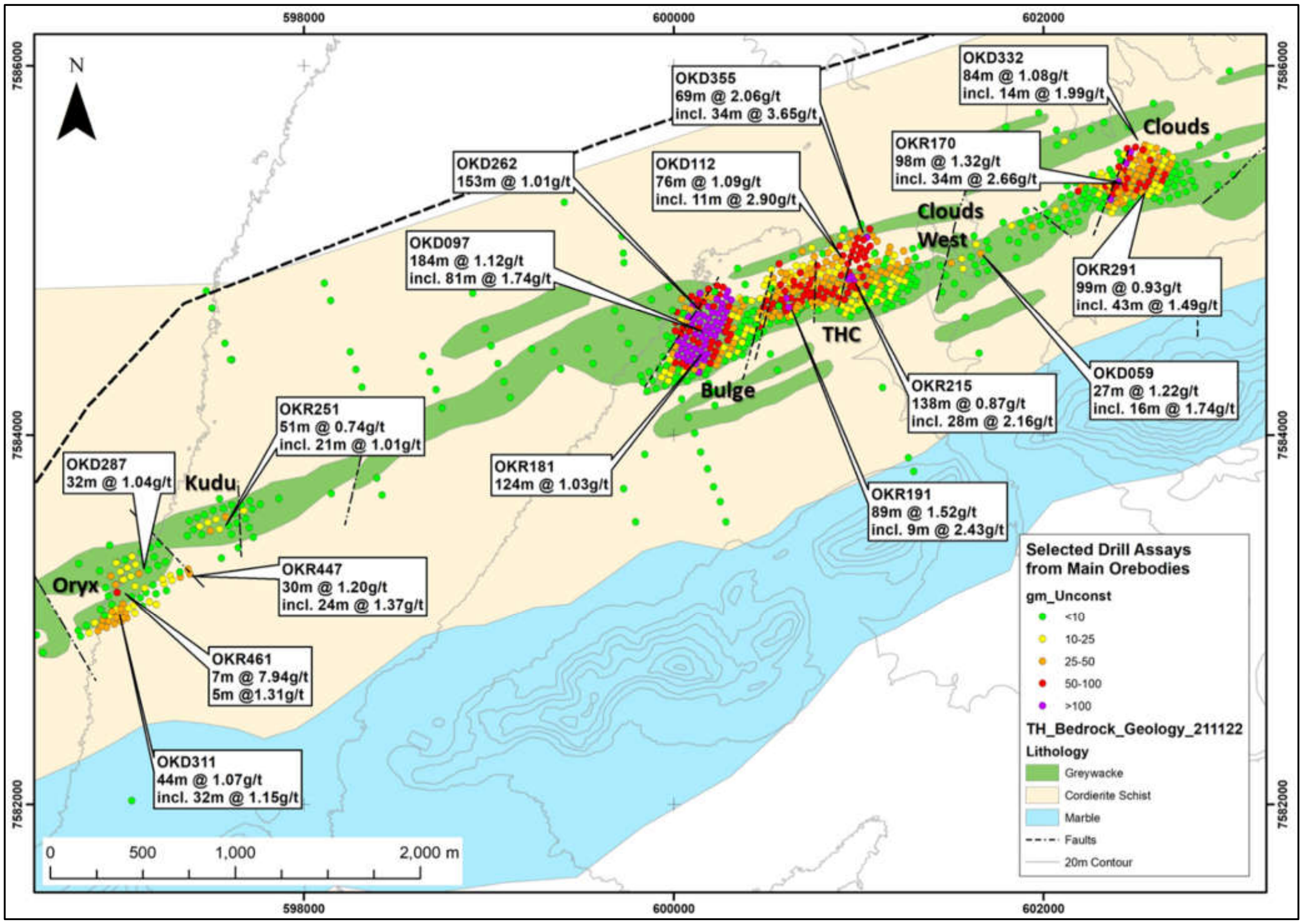


Figure 10-5: *Gram meter values for drill intersections at Bulge, Twin Hills Central, Clouds, Clouds West, Oryx and Kudu and Clouds East*

Source: Osino

Table 10-3: *Significant intercepts for representative sections within the mineralized volume at Bulge, Twin Hills Central and Clouds (refer to Figure 14-10 in Section 14 for section line locations)*

Hole no.	From (m)	To (m)	Width (m)	Grade (g/t Au)	Grade meters
Bulge					
OKD020	99	130	31	0.73	22.7
	136	150	14	1.02	
	156	200	44	1.09	48.1
	220	241	21	1.23	25.9
OKD035	30	35	5	1.03	
	40	69	29	0.80	23.2
	74	123	49	0.98	47.9
OKD077	119	124	5	1.31	
	265	278	14	1.49	20.9
	297	318	21	1.07	22.5
OKD226	41	70	30	0.72	21.5
	112	171	59	0.88	52.2
	209	257	48	0.74	35.7
	264	297	33	0.82	27.0

Hole no.	From (m)	To (m)	Width (m)	Grade (g/t Au)	Grade meters
OKD278	72	107	35	0.82	28.6
	123	127	4	1.31	
	131	147	16	1.02	
	164	228	64	1.34	85.9
OKR032	52	103	51	0.83	42.1
	108	189	81	1.45	117.2
OKR156	30	44	14	1.32	
	56	146	90	1.15	103.3
OKR202	36	63	27	1.12	30.2
	74	81	7	1.10	
Twin Hills Central					
OKD046	22	52	30	1.29	38.7
OKD068	219	258	39	1.30	50.5
OKD204	279	303	23	1.68	38.7
OKD263	214	227	13	1.34	
	250	273	23	1.29	29.7
	277	294	17	1.09	
OKD306	173	180	7	1.05	
	187	200	13	1.03	
	204	216	12	2.06	24.8
OKD331	20	26	6	8.63	51.8
	378	403	25	1.42	35.6
OKD336	317	324	7	1.00	
	333	368	35	1.27	44.4
OKD347	290	298	8	1.99	
	299	339	40	0.81	32.5
OKR051	91	104	13	1.61	20.9
OKR068	87	91	4	1.00	
	166	175	9	2.28	20.5
	177	185	8	1.54	
OKR286	22	33	11	1.25	
OKR302	34	80	46	1.31	60.2
Clouds					
OKD142	214	252	38	2.22	84.3
OKD216	178	192	14	1.67	23.4
	201	218	17	1.53	26.0
OKD229	262	290	28	2.02	56.5
OKD244	180	195	15	1.13	
OKD332	269	289	20	1.59	31.7
	317	351	34	1.39	47.4
OKR092	31	60	29	1.07	30.9
	88	96	8	3.22	25.7
	112	139	27	2.20	59.5
OKR148	145	166	21	1.81	38.0

Hole no.	From (m)	To (m)	Width (m)	Grade (g/t Au)	Grade meters
OKR170	78	90	12	1.11	
	113	121	8	2.17	
	129	163	34	2.66	90.3
OKR177	58	70	12	5.24	62.9
	87	93	6	2.26	
OKR179	24	41	17	1.86	31.6
	52	61	9	11.32	101.8
OKR265	40	44	4	4.75	

Notes: Intercepts over 20 gm (grade x meters) or >1 g/t Au over 4 m. All widths are apparent. Only intercepts plotting on sections provided in Figure 14-10 are provided. The relationship between true thickness and intercept length is not known but can be estimated visually on sections.

Table 10-4: Significant intercepts within the mineralized volume at Twin Hills North, Clouds West, Kudu and Oryx

Hole no.	From (m)	To (m)	Width (m)	Grade (g/t Au)	Grade metres
Twin Hills North					
OKD329	11	20	9	1.44	
OKD331	20	26	6	8.63	51.8
Clouds West					
OKD059	154	170	16	1.73	27.7
OKD145	201	206	5	2.13	
OKD304	182	192	10	1.06	
OKR143	155	269	14	1.03	
OKR264	112	120	8	1.74	
Kudu					
OKD264	55	59	4	1.02	
OKR251	56	94	38	0.79	30.2
OKR380	126	166	40	0.53	21.0
OKR382	65	70	5	1.11	
OKR388	71	127	56	0.62	35.0
Oryx					
OKD011	142	149	7	1.49	
OKD019	45	56	11	1.08	
OKD037	169	185	16	1.38	22.1
OKD040	45	51	6	1.14	
OKD175	116	129	13	1.80	23.4
	145	149	4	1.28	
OKD179	217	222	5	1.11	
OKD237	102	112	10	1.31	
OKD243	111	115	4	1.21	
OKD246	97	101	4	1.32	
OKD287	109	115	6	2.60	
	130	135	5	2.70	
OKD293	70	74	4	1.30	
OKD303	53	68	15	1.96	29.4
OKD311	95	140	45	1.10	49.5

Hole no.	From (m)	To (m)	Width (m)	Grade (g/t Au)	Grade metres
OKD358	157	189	32	1.25	39.9
OKD365	162	167	5	1.21	
	201	206	5	1.33	
OKD372	223	227	4	2.31	
OKR385	122	144	22	1.62	35.6
	153	159	6	1.03	
OKR387	94	99	5	3.87	
	105	109	4	1.43	
OKR389	94	99	5	1.08	
OKR392	66	89	23	1.27	29.2
	208	213	5	1.41	
OKR393	65	69	4	1.29	
	77	81	4	1.39	
OKR395	99	104	5	1.00	
OKR396	35	48	13	2.48	27.8
OKR398	86	99	13	1.00	
OKR399	31	35	4	1.03	
OKR413	116	139	23	1.19	27.5
OKR422	138	142	4	1.18	
OKR429	64	95	31	0.77	24.0
OKR431	203	208	5	1.23	
OKR439	106	136	30	0.87	26.1
OKR441	156	160	4	1.11	

Notes: Intercepts over 20 gm (grade x meters) or >1 g/t Au over 4 m. All widths are apparent. The relationship between true thickness and intercept length is not known but can be estimated visually on sections.

10.6.2 Other Drilling

A total of 37 hydrological drillholes for 5,524 m were completed in 2021 and five drillholes for 260 m in 2022. Geotechnical drilling consisted of three drillholes for 1,054 m in 2021 and a further eight drillholes in 2022 for 1,804 m.

10.6.3 Drilling at Goldkuppe, Oasis and Wedge

In Q4 2016, Osino drilled 10 diamond holes and 17 RC holes at Goldkuppe to expand and delineate gold mineralization previously intersected by Anglo American and Bafex. Standard diamond (HQ size) and RC drilling methods were used. In general, core recoveries were excellent (.95%), but in a few instances, underground karst cavities were intersected.

Gold intercepts from the 2016 campaign were generally narrow and discontinuous and it became clear that detailed structural work was required to get a better understanding of the controls on mineralization before further drilling.

In December 2017, Osino drilled 32 inclined RC holes (3,309 m) at Oasis and Wedge to the south of Goldkuppe, to expand on historical drilling and anomalous geochemistry at Oasis and to test a new anomaly from soil and rock chip sampling at Wedge. Additional fence lines were drilled over geochemical anomalies at Calidus, Spang and North End to the north of Goldkuppe (Figure 10-6). Minor mineralization was intersected at Calidus, North End, and Spang in boudinaged, massive sulphide (pyrrhotite) lenses within dolomitic marble. These sulphide zones generally occur near fold noses and are associated with skarn alteration. Significant intersections are shown in Table 10-5. Drilling in these areas was aimed at geochemical and structural targets, which had not been previously tested (Figure 10-6).

Table 10-5: Significant intersections for 2017 and 2018 drilling at Goldkuppe Extensions, Oasis, and Wedge

Hole no.	From (m)	To (m)	Width (m)	Grade (Au g/t)	Prospect
2017 RC drill campaign					
OJR188	33	36	3	1.52	North End
and	39	46	7	0.76	
OJR189	12	16	4	1.03	North End
OJR201	0	3	3	1.09	Calidus
and	9	11	2	2.24	
OJR203	38	40	2	1.42	Calidus
OJR205	82	84	2	0.97	Calidus
OJR206	11	16	5	1.48	Spang
OJR210	75	124	49	0.73	Oasis
including	82	86	4	1.91	
including	121	124	3	3.59	
OJR211	113	114	4	1.38	Oasis
OJR212	38	42	4	1.25	Oasis
and	53	55	2	0.76	
OJR213	18	21	3	0.83	Oasis
OJR215	11	21	10	2	Wedge
2018 Diamond drill campaign					
OJD023	103	105	2	0.97	Oasis
and	127	129	2	0.87	
OJD026	206	209	3	0.59	Oasis
OJD027	173	183	10	0.74	Oasis
OJD028	83	108	25	0.63	Oasis
including	83	89	6	1.74	
including	106	108	2	1.45	
OJD029	112	114	2	2.27	Oasis
and	128	132	4	0.49	
OJD030	86	91	5	1.12	Oasis
OJD031	87	164	77	0.39	Oasis
including	87	94	7	1.55	
OJD032	31	33	2	1.01	Oasis
and	80	83	3	0.63	
OJD035	67	71	4	0.62	Wedge
OJD036	78	89	11	1.31	Wedge

Note: The relationship between true thickness and intersection width is not known.

The best hole at Oasis was OJR210, which intersected several high-grade quartz-sulphide veins occurring within or adjacent to narrow calc-silicate layers. Assays of 9.45 g/t and 6.95 g/t Au over a metre each are contained within a wide, low-grade halo of 49 m at 0.75 g/t Au. The gold mineralization at Oasis occurs within a broad unit of banded marble (which has been altered to skarn) interbedded with calc-silicate.

At Wedge, four holes were drilled to intercept gold mineralized quartz veins sampled at surface which returned assays of 5.48 g/t and 4.15 g/t Au. These veins occur within biotite schist just below the contact with the marble.

The best intercept is in hole OJR215 which returned 10 m at 2.00 g/t Au within intensive (diopside-garnet) skarn altered schist. Soil sampling and mapping indicate that this mineralization continues to the southwest (Figure 10-6).

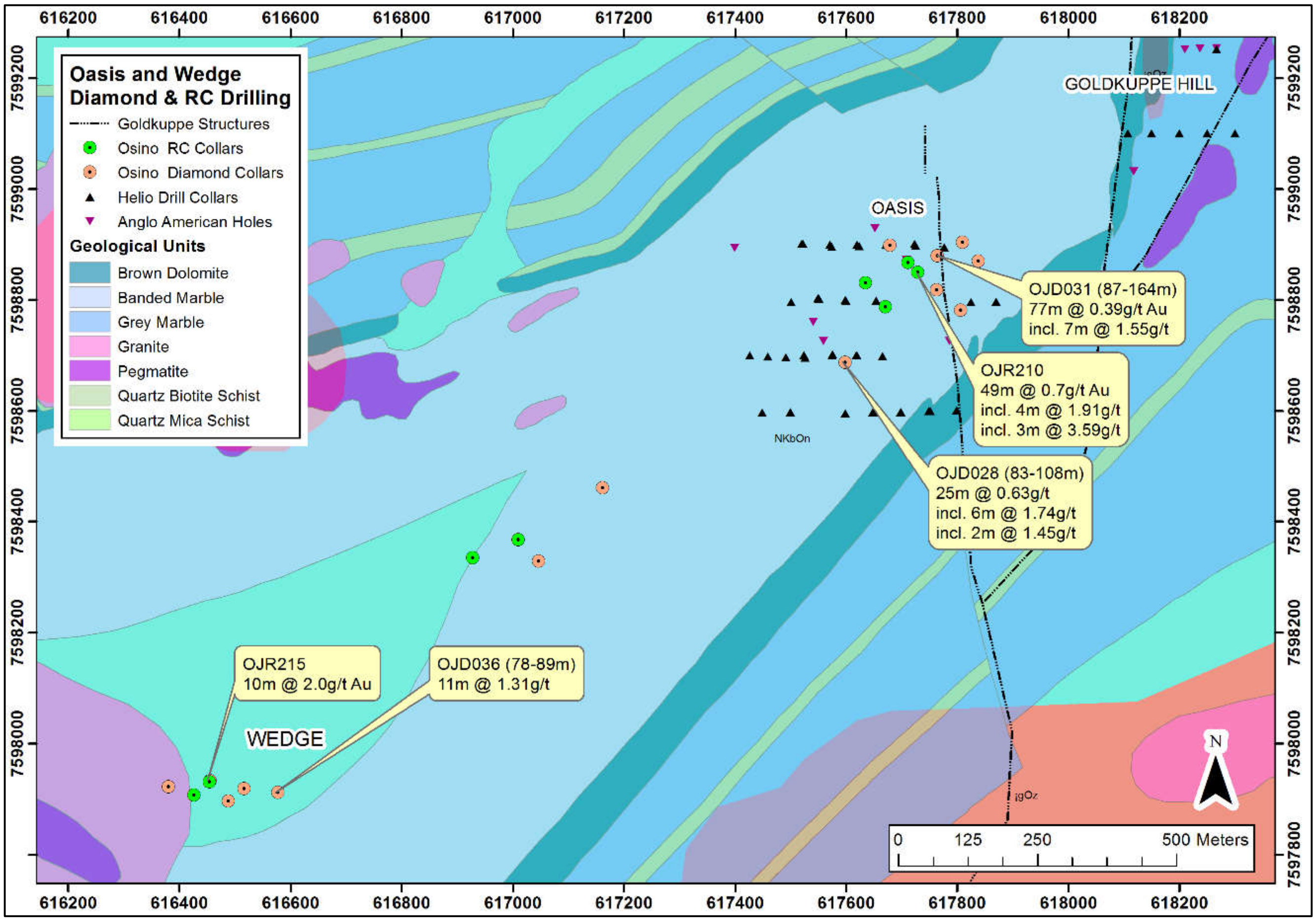


Figure 10-6: Location of diamond and RC drillholes at Oasis and Wedge
Source: Osino

In Q4 2018, a follow-up program of 2,000 m of diamond drilling was carried out to expand on the mineralization discovered in the 2017 RC program, and to obtain geological and structural information.

Wide zones of low-grade gold mineralization were intersected in several holes at Oasis, with best intercepts of 77 m at 0.4 g/t Au (OJD031), 37 m at 0.5 g/t Au (OJD028), and 37 m at 0.4 g/t Au (OJD027). This mineralization is contained within sheeted quartz-pyrite veins associated with faulting and folding in the banded marble host lithology. These sheeted veins, which have a moderately consistent distribution and grade throughout the mineralized package, strike north-south and dip moderately to the east. At Wedge, the best hole returned 11 m at 1.3 g/t Au in OJD035. Significant intersections for Oasis, Wedge, and Goldkuppe Extensions are listed in Table 10-5.

10.6.4 Percussion Drilling for Bedrock Samples at Kranzberg

In January 2022, a total of 41 vertical percussion holes were drilled to sample bedrock below alluvial and calcrete cover around the south of the Kranzberg Dome (Figure 10-7). The holes ranged in depth between 5 m and 41 m. The area is considered prospective as the schists and marbles within the Arandis Formation are squeezed and steepened around the Kranzberg Dome in an analogous structural setting to the Navachab gold mine on the south side of the Kuiseb Basin 15 km to the east.

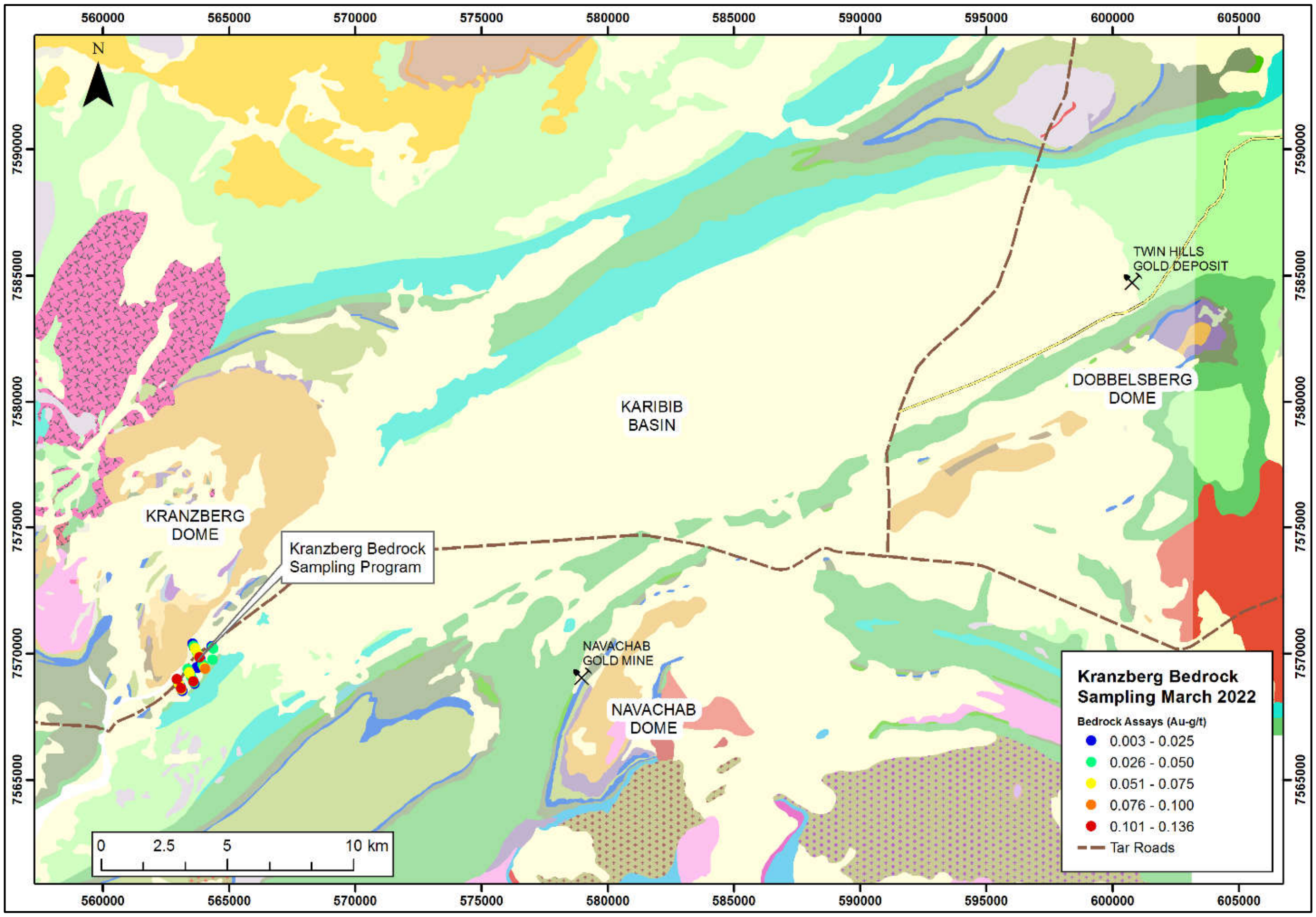


Figure 10-7: Location of bedrock sampling holes on southern margin of Kranzberg Dome – EPL 5880

The bedrock assays indicate at least two zones of anomalous gold associated with oxides after sulphides striking northeast, parallel to the stratigraphy (Figure 10-8). Although this area is primarily covered by thick alluvium, there are also scattered outcrops of leucogranite which appears to have an elongate shape indicating that it may be syn-orogenic. Two of the bedrock anomalies are associated with the schist-granite contact.

These mineralized zones will be followed up with infill bedrock sampling traverses with holes drilled on 25 m spacing and step-out drilling to the southwest where there is a prominent magnetic anomaly and alluvium. (Figure 10-9).

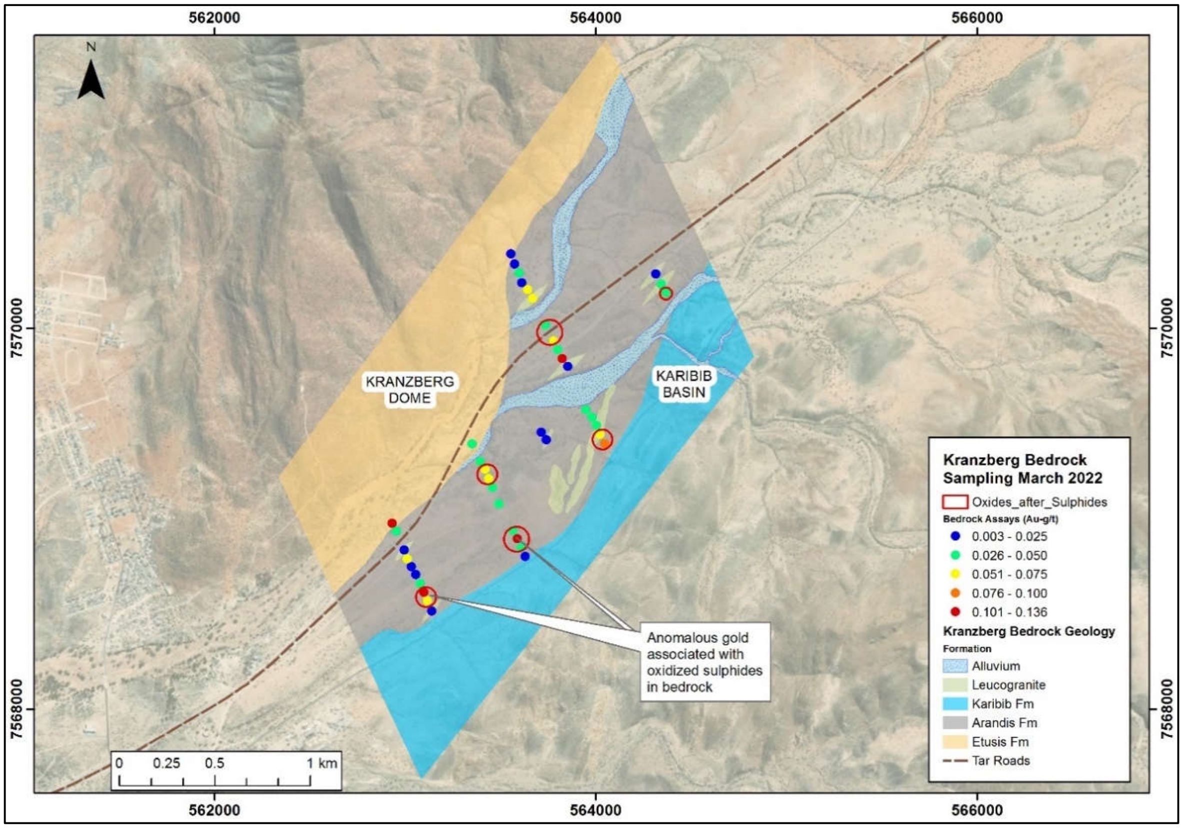


Figure 10-8: Assay results for bedrock sampling on southern margin of Kranzberg Dome (EPL 5880)

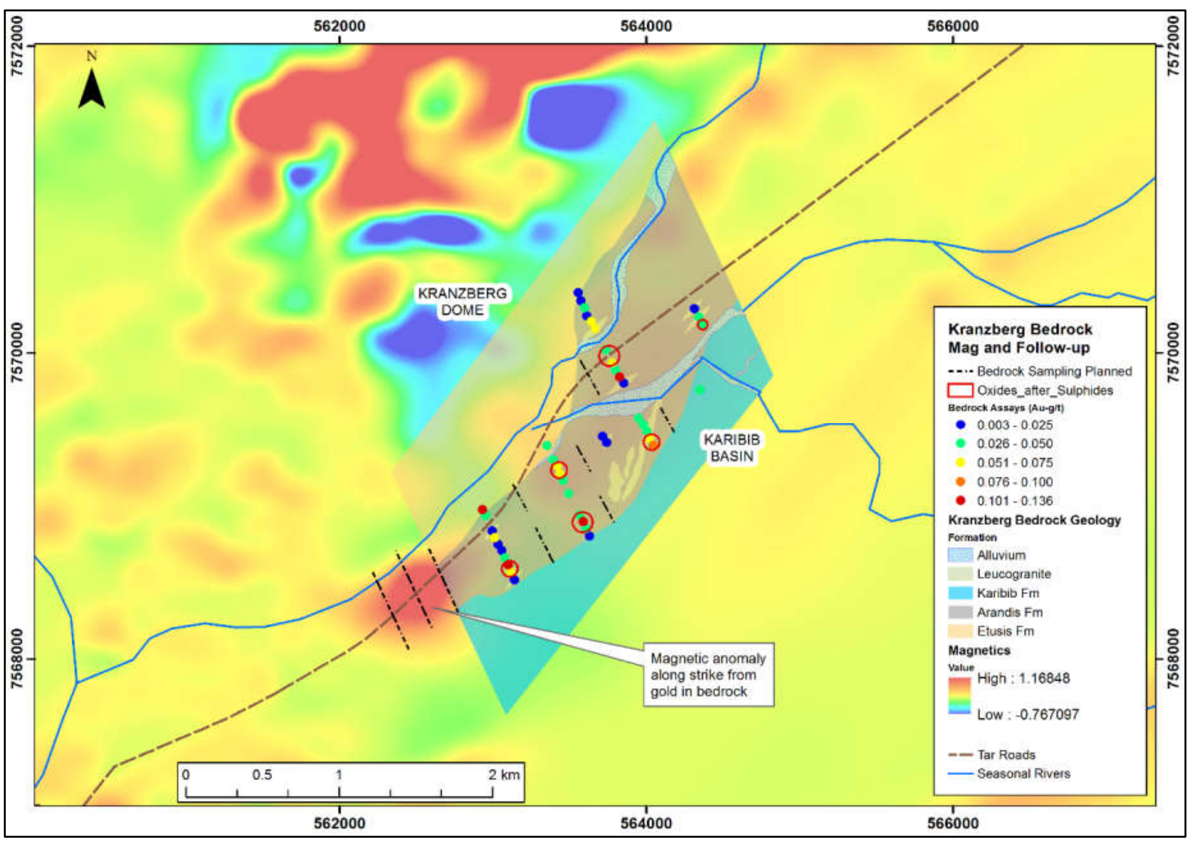


Figure 10-9: Bedrock geology and magnetics – south margin of Kranzberg Dome (EPL 5880)

11 Sample Preparation, Analyses and Security

11.1 Sampling Methodology

Diamond core was split using a water-cooled diamond saw and the top half of the core was dispatched from the core yard to the laboratories as a parent sample. During core cutting, fractured sections would be reconstructed as best possible. Typical core sample lengths were 1 m but could vary from 0.5 m to 1.5 m to accommodate the end of hole, structural, and/or lithological features. Once half cores were cut, they were placed into sequentially labelled, thick plastic bags, and their weights recorded on the sampling sheet. QAQC samples (blanks, certified reference materials (CRMs), and duplicates) were added to the sample batch as indicated by the sampling sheet. QAQC sample insertion to each batch was at random intervals.

RC sample material was routed from the bit and hammer to the drill rods' inner tube and via a hose to a cyclone. Each 1 m sample was collected into a 50 kg capacity plastic bag at the cyclone outlet. Each sample was weighed before splitting on site, allowing for immediate monitoring of sample recovery whilst drilling. Cyclones were cleaned with compressed air at regular intervals, after every 30–50 m of drilling or depending on water strikes. Each sample, typically with a mass of 35–40 kg was split down to a 2–3.5 kg representative or parent sample by passing the material through a three-tier riffle splitter with 25 mm wide slots. The splitter and collection bins were cleaned between each sample. The parent sample was collected into a labelled A3-sized plastic sample bag and weighed, before packing batches of five parent samples into larger labelled hessian bags and dispatching these to the laboratory. QAQC samples were inserted into the sample sequence at random intervals.

For both diamond and RC holes, drillholes were sampled continuously in the mineralized units and selectively outside of these.

11.2 Analysis

11.2.1 Sample Routing

Since May 2018, all samples have been submitted to Activation Laboratories Ltd ("Actlabs") for preparation and assay. Samples are transported by Osino from the Omaruru camp to Actlabs' sample preparation facility in Windhoek (Namibia). All prepared pulp samples are then shipped to Actlabs' Kamloops (Canada) laboratory. This Laboratory is ISO 17025 accredited. From October 2020 onwards, due to the increased drilling activity and resulting sample volumes, prepared pulp samples were also sent to Actlabs analytical laboratories in Medellin (Colombia) and Zacatecas (Mexico), both of which are ISO 9001 accredited.

11.2.2 Sample Preparation

All original parent (RC chips, half DD core, and rock grab samples), inclusive of QAQC samples were prepared by Actlabs at their Windhoek-based sample preparation facility. As a routine practice, the entire sample is dried at 60°C, crushed to 80% passing 2 mm (10 mesh), riffle split (single tier) to obtain a representative 250 g subsample, and then pulverized (mild steel) to 95% passing 105 µm (150 mesh). The pulverizer bowl is cleaned with sand after each sample to avoid carry-over contamination. A 65 g pulp sample is scooped from the pulverizer bowl and collected in a labelled zip lock sample bag which is dispatched via DHL to the analytical facilities.

11.2.3 Assay Techniques

Once at the analytical lab, the sample is re-homogenized and a 30 g pulp sample is collected for analysis. The analytical technique is by fire assay with atomic absorption spectrometry (AAS) finish and automatically re-analyzed with a gravimetric finish if gold >5 g/t. Both methods are ISO 9001-2015 certified. Actlabs' method codes are 1A2 for fire assay with AAS and 1A3-30 for the gravimetric finish. The analytical range for the fire assay with AAS finish method (d) is between 5 ppb and 5,000 ppb and between 0.03 ppm and 10,000 ppm for the gravimetric finish.

Fire assaying is the quantitative analytical technique in which a metal, such as gold, is separated from impurities by fusion processes, producing a precious metal bead which is then dissolved in aqua regia acid and the gold content determined by spectroscopic methods (atomic absorption, AA, in this case).

All samples returning gold values greater than 5 g/t (or 5 ppm) were re-assayed by fire assay with a gravimetric finish to ensure accurate values. A gravimetric finish uses nitric acid to separate gold from silver in the fire assay bead, and the resulting gold flake is annealed and weighed on a microbalance.

In addition, metallic screen fire assay (SFA) analyses were carried out on selected samples from the Twin Hills East drill program of 2018 (one RC and two diamond holes) and the Bulge/Twin Hills Central drill program of 2019 (two diamond holes). SFA techniques aim to provide more accurate assays on samples containing coarse gold by using a coarser milling and screening procedure. Allen (2019) assessed and interpreted these SFA results noting that SFA and routine fire assay produced comparable results and routine fire assay was therefore retained as the primary assay methodology. A follow-up investigation was conducted by Allen (2021) on a further eight drillholes. The investigation produced comparable results between the two methods, corroborating the earlier findings. Osino monitors the need for additional SFA on an ongoing basis (primarily through the assessment of the coarse reject duplicate results).

11.2.4 Reporting of Results

Assay results are reported by Actlabs per submitted batch. The results are sent via email attachment in Microsoft Excel and PDF formats. The PDF report is a signed "Certificate of Analysis" document. In addition to the results of the original samples submitted by Osino, both report formats include results of Actlabs' internal QAQC samples.

11.3 QAQC Protocols and Performance

To monitor the precision and accuracy of the analytical assay data reported by Actlabs, Osino implemented an industry standard QAQC program. The program involves the insertion and performance monitoring of blind CRMs, duplicates, and blank samples randomly inserted into the original sample sequences. QAQC samples make up about 15% of all samples submitted to Actlabs prep and analytical laboratories. Quarterly QAQC summary reporting was undertaken for all QAQC samples. QAQC data were reviewed and assigned a Pass/Fail mark based on qualitative and quantitative criteria. If the QAQC samples indicate a batch had "failed", the lab was instructed to re-assay the batch (or part thereof) which may include the addition of more CRMs. Osino's sampling, assay, and QAQC protocols were independently reviewed and assessed by Allen (2018a and 2018b).

Actlabs prescribes to an internal QAQC system that Osino monitors. Samples are processed in batches of 42 samples which contain up to 35 original client samples, plus seven internal quality control samples (two blanks, three sample duplicates, and two CRMs (one high and one low) for at least 20% quality control in each batch. Osino reviews these results as they are reported along with the original samples. Actlabs further supplies a regular PDF document to Osino, reporting on and interpreting their internal QAQC performance over the period.

11.3.1 Blanks

Field blanks were inserted into the sample sequence at random and comprised about 5% of the total sample volumes. The coarse blank material was sourced from local river sand. The upper limit was set at five times the lower detection limit of the 1A2 method used, which equates to 0.025 ppm. Based on this threshold, the performance of the blank sample is acceptable and cross-contamination at the prep or analytical lab faculties is not considered a material issue (Table 11-1).

Table 11-1: Blank data

Standard	Method	No. of values	No. of anomalous values	Calculated mean	Expected value
River sand	FA_AAS	153	0	0.0025	0
Khan river sand	FA_AAS	2663	0	0.0026	0
Blank	FA_AAS	44	0	0.0041	0.003

11.3.2 Certified Reference Materials

To monitor assay accuracy, CRMs were inserted randomly into the sampling stream. Commercially available CRMs were purchased from Geostats Pty Ltd ("Geostats") in Perth. These were delivered as homogeneous pulp material (100% passing 200 mesh) with certified concentrations and expected standard deviations of the elements of interest. CRMs were supplied in heat-sealed, airtight, plastic pulp packets of 50 g not requiring any further sample preparation. CRM pulps utilized were not matrix-matched to the host rock lithologies.

As a rule, three CRMs were inserted into a sample batch (at a rate of 4%), each representing a different gold grade. The high-grade CRMs have certified assay values ranging from 1.2 g/t to 1.8 g/t Au, the medium-grade ranges between 0.8 g/t and 1.0 g/t Au, and the low-grade CRMs range between 0.4 g/t and 0.6 g/t Au. As the limited CRM stockpiles at Geostats were depleted, replacement CRMs were selected by Osino geologists to replace these. Careful consideration was taken of matrix colour and gold grade before selecting a replacement CRM (Table 11-2).

Table 11-2: Geostats Pty Ltd CRMs used by Osino

CRM ID	Au certified value	Standard deviation	Description	Colour
G306-1	0.41	0.03	Cut-off ore oxide	Greyish-pink
G307-3	0.24	0.02	Milled waste material diorite	Light grey
G307-4	1.4	0.06	Low sulphide diorite	Light grey
G310-4	0.43	0.03	Sub ore milled low sulphide	Light grey
G310-9	3.29	0.14	Low sulphide ore	Light grey
G311-6	0.22	0.02	Milled waste/tailings	Pale red
G312-1	0.88	0.09	Cu/Au sulphide ore	Light grey
G312-2	1.51	0.13	Cu/Au sulphide ore	Grey
G314-10	0.38	0.02	Cut-off oxide ore	Light grey
G314-8	1.03	0.04	Low-grade oxide ore	Pale red
G316-5	0.5	0.02	Cut-off ore	Light grey
G318-1	1.05	0.04	Mine ore composites low sulfide	Light grey
G399-5	0.87	0.05	Fresh rock South West Mineral Field	Brownish-grey
G901-7	1.52	0.06	Sulphide ore-Eastern Goldfields	Light grey
G910-1	1.43	0.06	Minor sulphide ore ex Eastern Goldfields	Light grey
G912-5	0.38	0.02	Milled tail	Light grey
G912-7	0.42	0.02	Cut-off ore low-grade oxide	Pale red
G913-8	4.87	0.16	Low sulphide mine ore	Light grey
G916-5	19.92	0.69	High-grade ore Low sulphide	Light grey
G916-9	3.13	0.19	Composite of tail samples	Pale yellowish-brown
G917-10	3.33	0.13	Composite run of mine ore	Light grey
G998-3	0.81	0.05	Basalt ore ex Eastern Goldfields	Pale orange
G998-6	0.8	0.06	Oxide ore with kaolin and minor iron	Greyish-orange

The performance of the CRMs is constantly monitored with a report produced every quarter. The analyses of all CRMs indicate acceptable analytical accuracy and precision. Examples of low, medium and high-grade CRMs are shown in Figure 11-1, Figure 11-2 and Figure 11-3 respectively. Apart from, what appears to be, incorrectly labelled CRMs as is evidenced by the returned values when outside of expected limits, the performance is acceptable and within expected tolerances. Some low bias is observed in G318-1 and will be monitored.

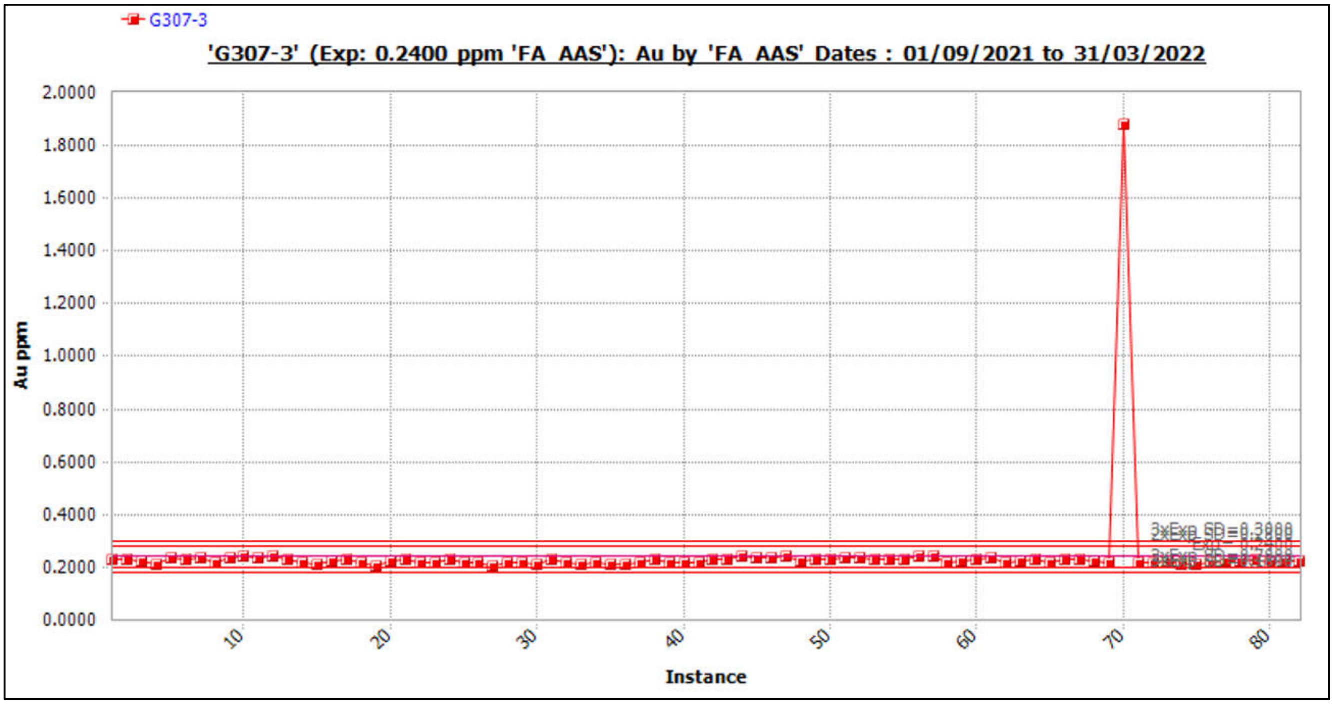


Figure 11-1: Performance of low-grade CRM G307-3 since 1 September 2021

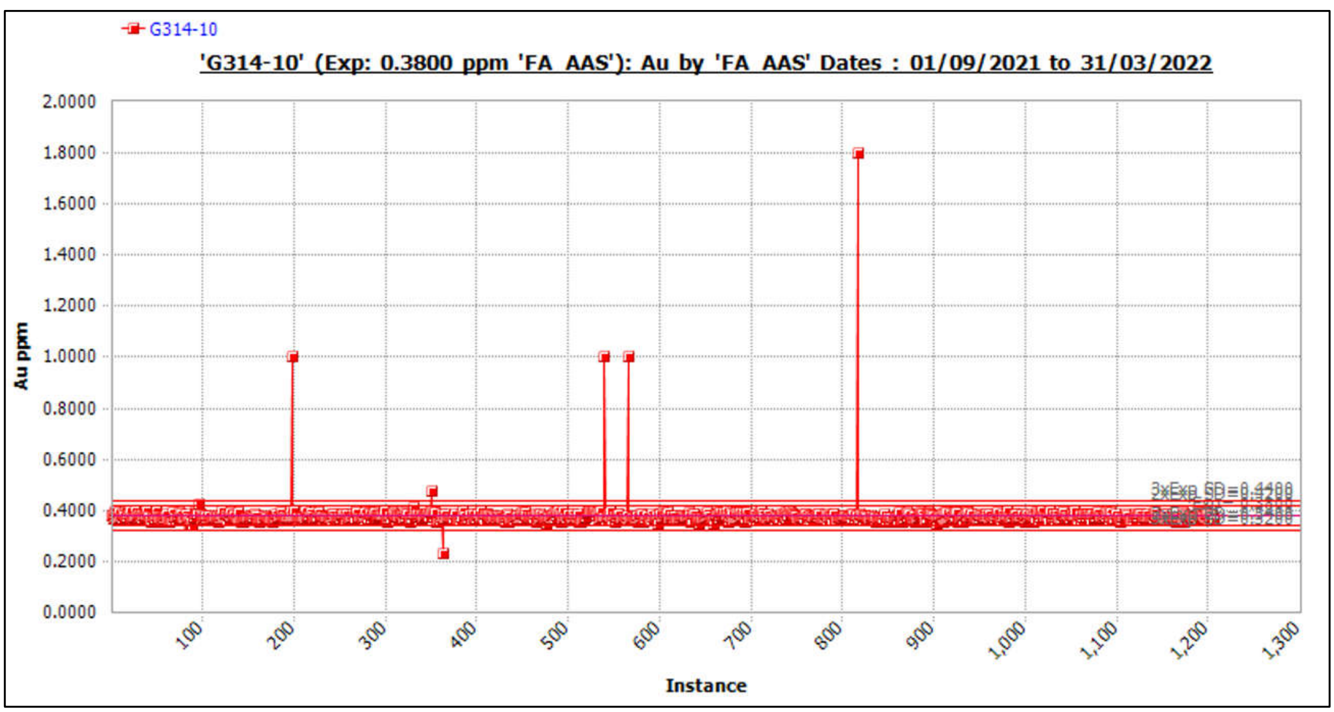


Figure 11-2: Performance of moderate-grade CRM G314-10 since 1 September 2021

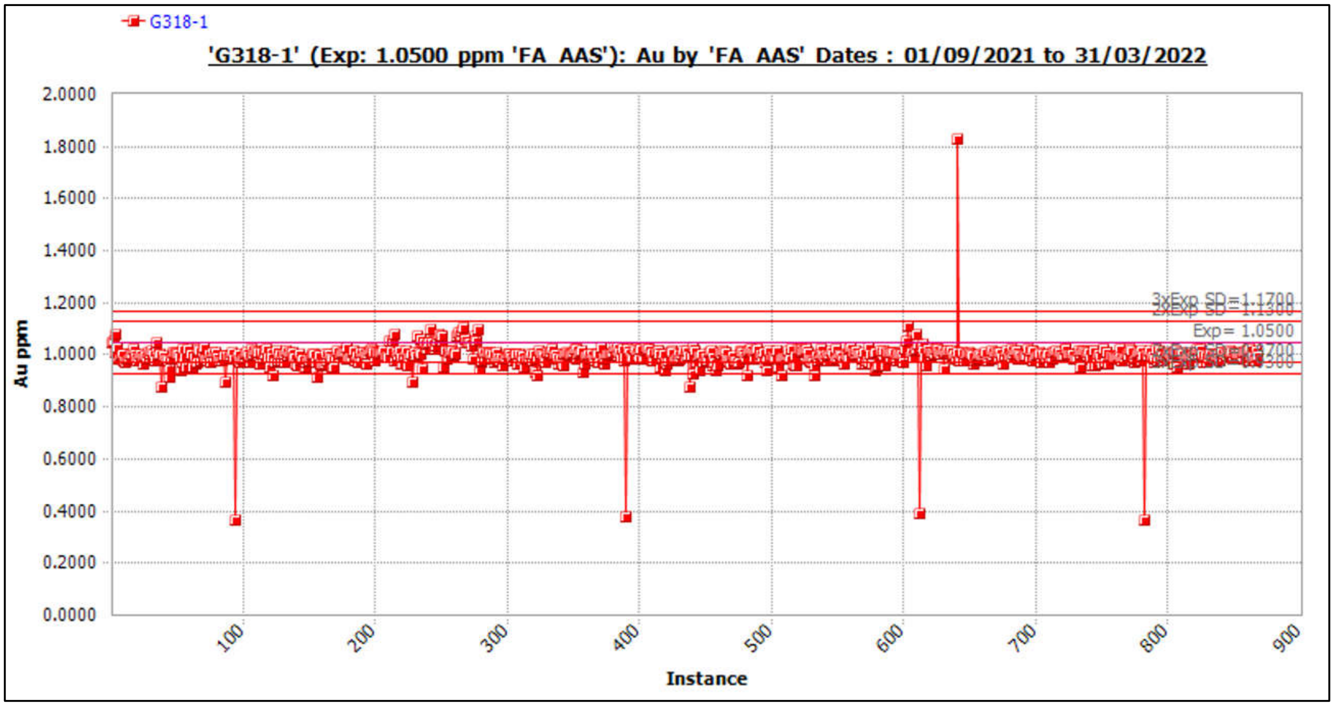


Figure 11-3: Performance of high-grade CRM G314-10 since 1 September 2021

11.3.3 Duplicates

Coarse (Figure 11-4) and pulp (Figure 11-5) duplicates as well as external check (umpire) results were compared for primary drill samples (DD) submitted to Actlabs, and external check samples sent to ALS Laboratory. No material bias was observed in the coarse and pulp duplicates; however, precision of the pulp duplicates appears to be decreasing over time (Figure 11-5). While acceptable, this must be closely monitored, and action taken if necessary. External check samples had acceptable precision with no significant bias.

The duplicate data were assessed using average coefficients of variation (CVAVR%=standard deviation/average presented as a percentage – also known as relative standard deviation) calculated from individual duplicate pairs and averaged using the RMS (root mean squared) approach. This approach is recommended by Abzalov (2008) as a way of defining a fundamental measure of data precision using duplicate paired data.

Field duplicates were also collected from the original DD and RC parent samples. For DD samples, the duplicate sample is generated by splitting the remaining half core of the initial sample and sampling a quarter-core piece which is then submitted as a duplicate. For RC samples, the representative original sample was split to generate a parent and field duplicate sample. The correlation between these samples is better than for the DD samples, indicating better sample homogeneity associated with the RC drilling method.

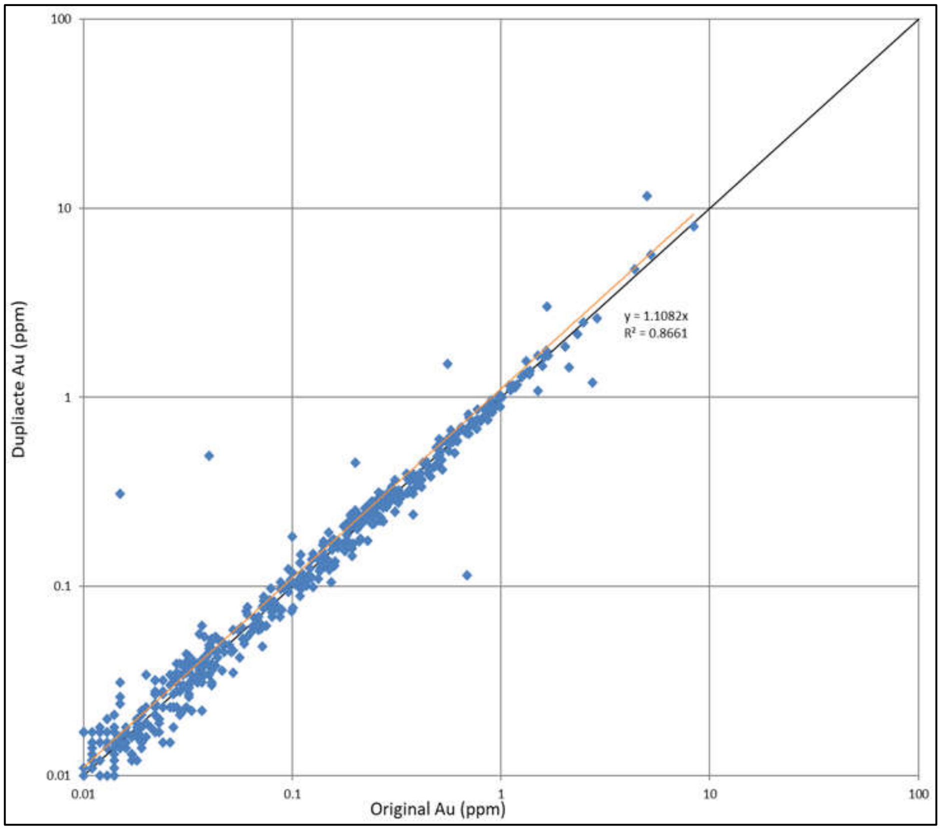


Figure 11-4: Coarse duplicate results for the MRE samples

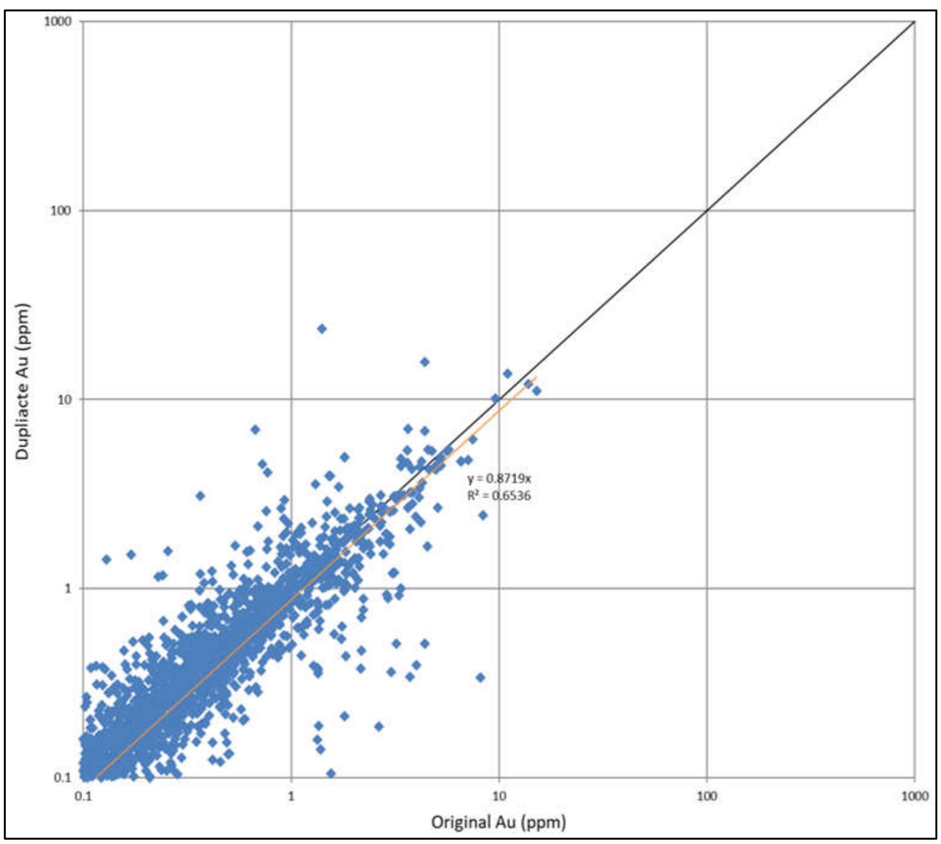


Figure 11-5: Pulp duplicate results for the MRE samples

11.4 Qualified Person's Opinion on Sample Preparation, Security and Analytical Procedures

The following observations are made regarding sample analysis and QAQC performance:

- Sampling and sample preparation methodologies are aligned with standard industry practice.
- Assay methodology is appropriate for the type of mineralization.
- The QAQC protocols employed by Osino are aligned with standard industry practice.
- Blank performance is acceptable.
- CRM performance is acceptable and spans a grade range appropriate for the deposit. Some evidence of negative bias is present with some CRMs, but this is not considered material.
- Duplicate performance is acceptable however the decreasing precision of pulp duplicates is of concern and must be closely monitored and action taken if required.
- The umpire laboratory results are broadly acceptable.

The QAQC protocols and performance of QAQC samples is considered acceptable and, in the Qualified Person's opinion, provides confidence in the use of the data for the MRE.

12 Data Verification

12.1 Site Visit

A site visit was conducted by the Qualified Person, Mr Anton Geldenhuys, from 28 to 31 March 2021 and on 2 February 2022. During the first trip, the following sites were visited:

- Operating drill rig in the vicinity of Karibib
- Core processing facility in Omaruru
- Actlabs sample preparation facility in Windhoek
- Osino head office in Windhoek.

12.1.1 Drill Rigs

An operating RC rig was observed in the field drilling OKR296 (Figure 12-1), with the crew performing the sample reduction process using a riffle splitter (Figure 12-2). The drill rig setup, sampling, sample reduction process, logging, and archiving of drill chips were explained and demonstrated at the rig. All processes were acceptable and would result in the acquisition of data suitable for Mineral Resource estimation and reporting.

Figure 12-1: Operating RC rig drilling OKR296 with sample reduction area in foreground

Figure 12-2: Riffle splitter used for the RC sample reduction process

Collar locations of three drillholes were verified in the field (Figure 12-3). These were:

- OKR088
- OKD080
- OKD142.

Diamond drill rigs were observed in the field; however, these were not operating due to rig moves.

Figure 12-3: Verified drillhole collar locations in the field

12.1.2 Core Processing Facility

The core processing facility in Omaruru was inspected with regards to core and sample receipt, and the flow of core through the various processing stations.

When a core arrives at the facility, it is photographed in core trays with a digital camera mounted on a tripod. The core is then marked, cut, sampled, photographed again (marked-up half-core), logged, and then samples are selected from each tray for density determination using a standard Archimedes-type technique of weighing the core dry and wet. The core is stored undercover in the facility (Figure 12-4).

Figure 12-4: Core stored in the core processing facility at Omaruru

Cores from various drillholes were examined on the logging tables and verified against the geological logs, and when available, the assay data.

12.1.3 Actlabs Sample Preparation Facility

The Actlabs sample preparation facility in Windhoek was inspected with regards to the receipt of sample batches, crushing, milling, and the dispatch of sample pulps to the Actlabs laboratories in Canada or Colombia.

The preparation of all samples appeared to be reasonable with the necessary checks in place to identify any issues that may arise in the process.

12.1.4 Database Review at the Head Office in Windhoek

The drilling database was reviewed with regards to the importing, validation, structure, and backup of data. The review took place with the assistance of the Osino Resources Database Geologist.

Data are imported from Microsoft Excel spreadsheets which contain data captured at either the drill rigs or at the core processing facility. The data are manually checked, validated, and corrected before importing into Microsoft Access. A backup of the Microsoft Access database is stored on the server which is located in the office.

12.2 Laboratory Inspections

The Actlabs Kamloops analytical facility was visited by Dr Luke Longridge (Senior Geologist at CSA Global at the time) on 31 August 2020. The Actlabs Kamloops facility assayed most of the samples at the time of the visit.

During the site visit, laboratory management was interviewed, and the following were inspected:

- Data recording procedures: All data is recorded digitally via a Laboratory Information Management System (LIMS). Each batch of 42 samples has a unique code maintained from sample weighing to AA finish.

- Fire assay sample preparation facilities: Samples are homogenized, 30 g samples weighed, pre-mixed flux and silver nitrate added, and mixed in the crucible using a batch tumbler. The sample preparation area was clean and dust-free. Each batch of 42 samples contains two blanks, two standards, and three weigh duplicates.
- Fire assay: Two gas furnaces are used with two thermocouples per furnace. Batches of 42 samples are loaded (7x6 tray), with copper added to two cupels per batch to cross-check the transfer of samples. Furnace areas were clean and free of dust.
- AA finish: Analysis is carried out using a self-flushing Agilent Technologies 200 Series Atomic Absorption Spectrometer. Each sample is a 15-second run with five seconds of flushing. Calibrations are done routinely before each batch of samples using stock solutions created using single-element standards.
- Quality control: Quality control pass or failure is determined internally by the data department at Actlabs Global Headquarters in Ancaster, Ontario, and is not determined at the Kamloops facility. If a quality control sample fails, all samples between the previous and subsequent quality control passes are re-analyzed, and the source of the error will be identified where possible.

Overall, the Kamloops facility was clean, with a digital LIMS, and appropriate quality control procedures. No concerns were noted.

12.3 Conclusion

The Qualified Person is satisfied that the necessary steps were taken to verify the data used for the MRE.

13 Mineral Processing and Metallurgical Testing

A substantive amount of metallurgical testwork has been undertaken by Osino at the Project. This testwork initially supported the 2021 PEA and has been augmented with additional testwork to support the planned PFS. A summary of the testwork completed to date, as well as key outputs thereof, is provided below.

13.1 SGS South Africa (Pty) Ltd Testwork (2020)

In June 2020, SGS South Africa (Pty) Ltd published a report (SGS, 2020) on metallurgical tests that they had completed for Osino on Twin Hills mineralization samples. The objective of the metallurgical testwork was to determine the gold dissolution via direct cyanidation leaching of 10 composites samples selected, prepared, and provided by Osino Resources.

Gold recovery from direct cyanidation of the mineralization is represented by these samples.

- In one case, >94% gold dissolution was achieved in 24 hours of cyanidation, following pre-oxidation of the sample for one hour
- In three other cases, >90% gold dissolution was achieved at a fine grind
- The arithmetic average gold dissolution was 89%, at an average grind size of 93% passing 75 µm and it was noticeable that the results were variable.

The testwork concluded that the samples were amenable to cyanide leaching and the dissolution was 89%.

13.2 Lycopodium/Maelgwyn PEA Testwork (2020–2021)

Lycopodium was commissioned by Osino in August 2020 to initiate and oversee the PEA metallurgical testwork on samples from the Twin Hills gold deposit. The PEA testwork was carried out by Maelgwyn Laboratories in Johannesburg (Lycopodium, 2021 and Maelgwyn, 2021).

Samples received were from core drilling and included Oxide and Fresh samples from Twin Hills West and Twin Hills East. Four composites of these mineralization types as well as a blend of Fresh West and Fresh East were prepared. The PEA testwork results are summarized below.

13.2.1 Comminution

The Bond Ball Mill Work Index (BBWi) figures of 10 kWh/t are indicative of a qualitative “soft” to “medium” hardness classification.

Bond Rod Mill Work Index (BRWi) test results of 16.3 kWh/t, indicate a “hard” classification for fresh material.

A relatively consistent ratio of 1.6 Rod to Ball Mill work index was recorded for each of the mineralization types.

The A x b value for the Fresh Composites was <30 and a 40 A x b value for the Oxide Composites.

Orway Mineral Consultants (OMC) modelled a three-stage crush, ball mill circuit as more power efficient than a semi-autogenous ball mill crusher (SABC) circuit.

13.2.2 Mineralogy

Mineralogical studies indicate three main compositional groupings:

- Group 1 – concentration of sulphides, dominated by pyrrhotite (1.7–2.8%), with smaller quantities of pyrite (0.7–1.8%) and arsenopyrite (0.5–1.3%)

- Group 2 – pyrite is the dominant sulphide (0.9–1.3%) with some arsenopyrite (0.14–0.44%) and pyrrhotite (0.1–0.3%)
- Group 3 – high concentrations of pyrite (1.7–2.6%) with some arsenopyrite (0.3–0.5%) and traces of pyrrhotite (0.07–0.16%).

13.2.3 Gravity Recovery of Gold

Preliminary gravity gold testwork on the three main composites of Oxide, Fresh West and Fresh East produced overall gravity recoverable gold (GRG) values of 50.0%, 38.5% and 44.9% respectively.

13.2.4 Grind vs Gold Recovery

Grind versus gold recovery tests indicated that slightly more gold dissolution was possible by grinding to a finer 38 µm grind finer than 80% passing 75 µm. All the tests were done as “whole ore” leaches without gravity concentration.

13.2.5 Cyanide Leach Configuration and Retention Time

Pre-oxidation ahead of cyanidation was demonstrated to significantly improve gold dissolution from all mineralization types, followed by gold leaching for between 24 hours and 48 hours. Based on the baseline leach test results, and the provisional average additional recoveries achieved by pre-oxidation per mineralization type, at a grind of 80% passing 75 µm, the following recoveries from different mineralization types were derived:

- Oxide: 84.2% Au recovery
- Fresh material: 81.35% to 90.1% Au recovery.

An additional benefit of the pre-oxidation step was the reduction in cyanide consumption. All the tests were done as “whole ore” leaches without gravity concentration.

13.2.6 Tailings Filtration

The tailings thickening flux rates are within the standard ranges of 0.87 t/m^2/h to 1.32 t/m^2/h which were also applicable to the pre-leach thickening. Tailings filtration testwork was not done.

13.2.7 Heap Leach Tests

Bottle roll tests were conducted at 90% passing 10 mm and 80% passing 5 mm. The results showed partial leaching and were inconclusive.

13.3 Lycopodium/Maelgwyn PEA Interim Testwork (2020–2021)

Following the PEA testwork and the development of the PEA flowsheet, additional testwork was initiated to confirm and expand some key design parameters. A particular focus of the testwork was to determine the effect of pre-oxidation at natural pH vs pre-oxidation at an adjusted pH of 10.5, confirm the increased gold recovery obtainable by pre-oxidation and investigate the effect of a finer grind, P80 of 53 µm, on the gold recovery.

Kinetic leach “sighter” tests at a grind P80 of 75 µm samples from the Clouds deposit, were conducted as part of the testwork program. Other samples were received from core drilling and included Oxide, “Fresh West” and “Fresh East” material from the Twin Hills deposit as selected by Osino. A summary of the sample complement is provided below:

- 5 x Fresh West High Grade samples
- 5 x Fresh West Low Grade samples
- 5 x Fresh East High Grade samples
- 5 x Fresh East Low Grade samples

- 5 x Oxide samples (3 x West, 2 x East)
- 5 x Cloud samples (2 x Oxide, 3 x Fresh).

13.3.1 Mineralogy

There was significantly more pyrrhotite and less pyrite in the fresh samples compared to the initial PEA testwork. Arsenopyrite was also evident in the fresh samples, whereas the oxide samples had very low amounts of sulphides present.

13.3.2 Gravity Recoverable Gold

The results from this set of testwork had an average of nearly 40% of the gold being recovered.

13.3.3 Oxygen Uptake Tests

The oxygen uptake rates in the oxide samples were high at around 0.36 mg/L/min compared to the Fresh samples average of 0.13 mg/L/min.

The oxygen uptake tests showed that oxygen was consumed extensively over the leaching period and did not diminish over the six-hour time duration test. The average cyanide consumptions for the 25 Fresh West, Fresh West and Oxide samples in interim testwork are approximately double those reported in the initial PEA pre-oxidation kinetic leach tests, for which the pyrrhotite levels in the Fresh samples were lower.

13.3.4 Diagnostic Leaching Tests

The standard diagnostic leach tests for the Fresh samples averaged 76.38% gold recovery in the CIL step. The oxide samples averaged 89.3% gold recovery in the CIL step.

16.77% of gold in the Fresh samples was liberated with the hydrochloric acid leach.

13.3.5 Leaching and Pre-Oxidation Results

Extending the leach time from 24 hours to 48 hours increases gold recovery by an average of 1.6%.

At the PEA design grind of a P80 of 75 µm, with pre-oxidation and a 48-hour leaching time, the average gold recoveries from the interim tests were 88.3% for Fresh West, 82.4% for Fresh East, and 88.6% for the Oxide samples.

Grinding to a P80 of 53 µm compared to the PEA design of a P80 of 75 µm increased the gold extraction. significantly across all samples tested, and by an average of 5.3% across all the mineralization types.

For the Clouds samples, initial pre-oxidation and leaching results at a grind P80 of 75 µm gave gold recoveries in the region of 70–74% from the Cloud Fresh samples. Clouds Oxide samples gave gold recoveries of over 90%.

13.4 Lycopodium/Maelgwyn Additional Testwork (2021–2022)

Following the completion of the PEA report in 2021, Lycopodium Minerals Africa (Pty) Ltd (LMA) was contracted by Osino to initiate and oversee further metallurgical testwork, notionally to support the design, sizing and costing of a flowsheet for use in a PFS for the Project.

Samples received were from core drilling and included Twin Hills Central, Bulge and Clouds as well as transitional material from the Project as selected and designated by the client Geologist.

A summary of the additional testwork completed to date includes:

- Comminution testwork on 37 individual core samples
    - Bond Crusher Work Index (CWi) – nine samples

- Bond Rod Mill Work Index (BRWi) – 28 samples
- Bond Ball Mill Work Index at 106 µm CSS (BBWi) – 37 samples
- Bond Ball Mill Work Index at 63 µm CSS (BBWi) – 28 samples
- Abrasion Index (Ai) – 31 samples
- SMC tests – 37 samples.

- Metallurgical recovery testwork on composite samples of Twin Hills Central, Bulge, Clouds and Transition material:
  - Composite Sample Gold Head Analysis by SFA and BLEG
  - Composite Sample Head Analysis – full suite ICP, carbon and sulphur
  - Diagnostic leach on each composite
  - Mineralogy on each composite
  - Gold deportment by size
  - GRG testwork
  - Gravity tests to produce gravity tails samples for leach testwork (including gravity concentrate upgrade)
  - Grind vs Recovery testwork at 106 µm, 75 µm, 63 µm and 53 µm
  - 48-hour CIL tests at 75 µm, 63 µm and 53 µm
  - Pre-oxidation optimization testwork
  - Reagent optimization testwork at the optimum grind
  - Repeatability tests using the optimum leach conditions
  - Whole ore leach tests
  - Leach tests using site water.
- Other testwork included:
  - Flotation testwork and the leaching of the rougher concentrates
  - Heap leach tests
  - Settling and dewatering tests
  - Filtration tests
  - Viscosity tests
  - Site water quality tests
  - Oxygen up-rate tests
  - Continuous cyanide detoxification test.

The results of this testwork are summarized below.

13.4.1 Mineralogy

QEMSCAN bulk modal analyses clearly distinguish between the Fresh and Oxide mineralization. The Fresh mineralization is characterized by relatively high concentration of sulphides. The sulphides are dominated by pyrrhotite, with lesser arsenopyrite and pyrite. Pyrrhotite is an oxygen consumer, and its presence can therefore affect the cyanidation process negatively.

The Oxide material is characterized by very low sulphides. Only traces of pyrrhotite, arsenopyrite and pyrite are present. Oxide material contains a significant iron-oxide, kaolinite and jarosite content.

Generally, distinct arsenic-bearing phases are not usually detected in oxide materials, as the arsenic released during the oxidation of the arsenopyrite is adsorbed onto secondary iron-oxides/hydroxides and clays, resulting in anomalous arsenic values detected by the chemical assays. However, at the Project, the Oxide mineralization does contain traces of distinct secondary arsenic-bearing phases (i.e. arseniosiderite and associated scorodite).

13.4.2 Comminution

OMC confirmed the PEA circuit selection of the three-stage crush and single stage ball mill circuit is still valid from the power efficiency perspective.

13.4.3 Gravity Recoverable Gold

GRG ranged from 23% to 31.5% for the Fresh Composite samples. The transition sample had a lower gravity recovery of 17.8% gold. A modelled GRG recovery of 28.3% is recommended based on a 50:50 composite of Bulge and Twin Hills Central material.

13.4.4 Optimum Grind and Residence Time

At standard leaching conditions and a leaching time of 48 hours a grind of 80% passing 63 µm was selected as the optimum grind for the Project.

13.4.5 Carbon-in-Leach Tests

Leach Tests with $PbNO_3$ Pre-Oxidation

The addition of 500 ppm $PbNO_3$ to the pre-oxidation produced a significant improvement in gold extraction for all composites, especially at the 24-hour and 36-hour kinetic leach periods. These results indicate that the 48-hour leaching time can be reduced to at least 36 hours for the plant design.

Reducing the $PbNO_3$ addition to 250 ppm resulted in a drop in gold recovery of about 2% in all cases at the 24-hour and 36-hour leach periods.

Leach Tests with Shear Reactor Pre-Oxidation

The Shear reactor pre-oxidation tests proved that a 24-hour leach will produce higher gold recoveries than the 48-hour direct leach and the 36-hour leach with the addition of 500 ppm $PbNO_3$. The inclusion of a shear reactor to the leach circuit design will significantly reduce the leach tankage required with the added benefit of increased gold recovery and a reduction in cyanide consumption.

Cyanide Optimization

The results indicate that a 100 ppm controlled cyanide addition results in 4% to 9% lower gold recovery after 24 hours leaching when compared to the 500 ppm controlled cyanide addition tests.

200 ppm cyanide control tests were conducted with the addition of 500 ppm $PbNO_3$ to the pre-oxidation step. The comparable recoveries were between 3.5% and 5% lower after 24 hours leaching when compared to the 500 ppm controlled cyanide addition tests.

It would appear that a cyanide level of 500 ppm should be maintained throughout the leach to ensure optimum gold recoveries. Cyanide optimization tests are planned to be repeated with the addition of the shear reactor step, to assess the effect of lower controlled addition rates of cyanide on recovery.

Leach Test using Site Water

The results indicate that the borehole site water has no detrimental effects on the leach recoveries.

"Whole-Ore" Leaches

"Whole-ore" leach tests are done by leaching the mineralized material directly. The results of the "whole-ore" leach tests were compared to the test results of gravity concentration followed by the leaching of the gravity tails. The results were measured as the overall gold recovery, gravity recovery plus gravity tail leach recovery, and the "whole ore" recovery.

The "whole-ore" leach test results for the Fresh Composites of Twin Hills Central, Bulge and Clouds resulted in lower overall gold recoveries of 9%, 13% and 4% respectively compared to the Gravity/Leach results on the same samples. The whole-ore leach recovery on the Transition Composite was 1% higher than the Gravity/Leach results which was due to the lower gravity gold in the Transition material.

13.4.6 Repeatability Tests

All the composites were tested in duplicate using the proposed flowsheet consisting of gravity extraction, mill product 80% passing 63 µm, four hours of pre-oxidation with a two-pass shear and 24 hours CIL.

The Repeat 1 and Repeat 2 Fresh tailings values for each of the composites had no quantifiable variation. The average gold leach tailings values for Twin Hills Central, Bulge and Clouds were 0.06 g/t, 0.08 g/t and 0.14 g/t respectively. There was a 2% leach extraction variation in the Transition Repeat tests which had an average gold leach tailings value of 0.07 g/t.

13.4.7 Heap Leaches

The Twin Hills sample material is competent and did not require agglomeration to achieve the percolation properties for heap leaching. The results showed slow leach kinetics with on 16% of the gold leaching after 39 days from the top size of 25 mm PSD.

13.4.8 Flotation Testwork

Whole ore flotation samples returned overall gold recoveries of 85.2%, 82.2% and 82.4% on the concentrate milled to 80% passing 25 µm for Twin Hills Central, Bulge and Clouds respectively. Lower recoveries were achieved at coarser grinds.

On the flotation of the Gravity Tailings sample for Twin Hills Central, the overall gold recovery increased to 89.7% at the finest concentrate grind. A direct comparison of the Gravity CIL leach with the shear pre-oxidation step produced a gold recovery of 94.4%.

13.4.9 Settling and Dewatering Tests

Thickening testwork on the four composites showed that a thickener area of 1.2–1.4 $t/m^2/h$ would be required for the fresh samples with a flocculant addition of 15–16 g/t and a feed-well dilution of down to 10–12% solids.

13.4.10 Filtration Testwork

Vacuum filtration tests showed that all composites (apart from Transition composite) at grind sizes of 63 µm and above, can be accommodated on two operating 145 m^2 belt filters. The Transition composite can be accommodated with a 50/50 blend of Bulge and Transition on three operating 145 m^2 vacuum belt filters for a grind size of 63 µm and above. An unblended Transition composite at 63 µm cannot be accommodated on three operating 145 m^2 vacuum belt filters without the use of flocculant at 60 g/t. However, the Transition composite at a grind of 75 µm can be accommodated on two operating 145 m^2 vacuum belt filters.

Increases in pH with lime were observed to make a negligible impact on formation time and moisture content.

Typical cake moisture contents ranged from 25% to 20% for the 53 µm to 106 µm grind size for all the composites.

A lower moisture content was achieved with pressure filtration with the formation moisture content for Transition and Bulge composites measured to be 18.6% and 14.6% respectively.

Air blow conducted at 3 bar and for a 3-minute duration had a measured cake moisture content for the Transition and Bulge composites of 13.6% and 8.8% respectively.

The back calculated filtration flux for pressure filtration was 70 kg/h.m^2 compared to 191 kg/h.m^2 for vacuum filtration.

13.4.11 Gold Recovery

Calculated recoveries are based on the testwork composite head grades and summarised in Table 13-1.

Table 13-1: Testwork recoveries

Material	Pit	Overall circuit recovery
Transition	**Testwork grade recovery**	**%**
	Composite of all pits	92.8
Fresh	**Testwork grade recovery**	**%**
	Bulge	93.7
	Twin Hills Central	94.6
	Clouds	89.9

The following discounts have been allowed for on the recoveries stated in Table 13-1:

- CIL carbon fines losses of 30 g carbon per ton milled at a grade of 50 g/t as per the expected eluted carbon value, equal to 0.09% gold loss.
- Solution gold losses based on 42% solids in the CIL tailings stream and 0.01 g/L Au in solution, equal to a 0.64% soluble gold loss.

13.4.12 Provisional Process Design

The Twin Hills gold plant design is based on a flowsheet that comprises three stage crushing, milling, gravity recovery, a CIL circuit, carbon elution, and a gold recovery circuit. CIL tails will be treated in cyanide destruction before thickening and filtration, for transfer as filter cake on an overland conveyor for disposal at the dry tailings storage facility.

The proposed process design is comprised of the following circuits:

- Primary gyratory crushing of run-of-mine (ROM) material.
- A coarse ore stockpile to decouple primary crushing from the fine crushing circuit.
- Secondary and Tertiary cone crushing to produce a fine product for storage in a covered ore stockpile ahead of the milling plant.
- Grinding circuit: Single-stage ball mill operating in closed circuit with cyclones.
- Gravity recovery of cyclone underflow by a semi-batch centrifugal gravity concentrator, followed by intensive cyanidation of the gravity concentrate and electrowinning of the pregnant leach solution in a dedicated electrowinning cell located in the gold room.
- Trash screening and thickening of cyclone overflow before leaching.
- Pre-oxidation with shear reactors ahead of the CIL circuit and pure oxygen addition to the leaching tanks
- Acid washing of loaded carbon and pressure ZADRA type elution followed by electrowinning and smelting to produce doré. Carbon regeneration by rotary kiln.
- Cyanide destruction of tailings using SO_2/O_2 process.

- Thickening of the detoxified slurry.
- Filtration of the tailings and the conveying of the filter cake to the tailings disposal facility.

14 Mineral Resource Estimate

14.1 Introduction

The Mineral Resource was estimated for the Twin Hills deposit which includes several target areas. The three primary targets: Bulge; Twin Hills Central; and Clouds, were updated from infill drilling, while four smaller targets have been modelled and estimated for the first time (Figure 14-1).

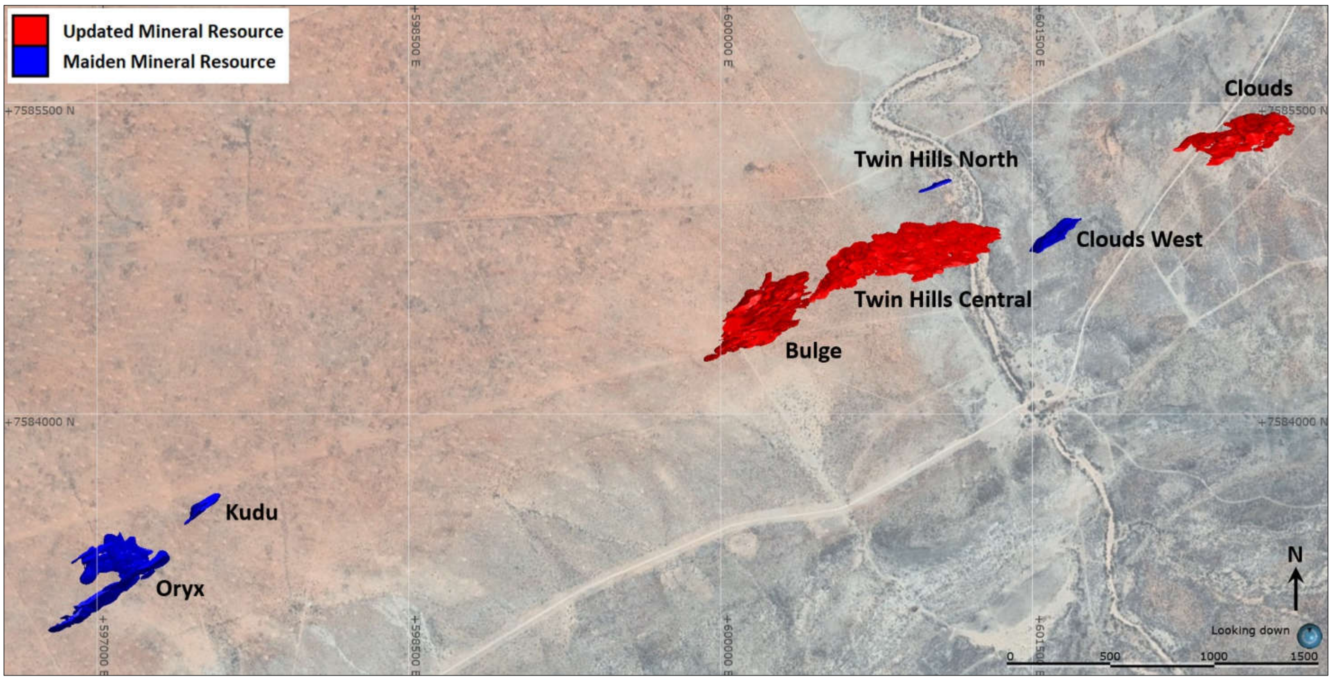


Figure 14-1: Plan view of the Twin Hills area showing the mineralization domains

All work was carried out using:

- Leapfrog Geo version 2021.2.4
- Datamine Studio RM version 1.7.100.0
- SAS JMP version 16.0.0
- Microsoft Office 365.

The database was established by the collection, validation, recording, storing, and processing of data and forms the foundation for the MRE. Standard operating procedures were established to govern the collection of all data, while a rigorous QAQC program is in place to support the database.

The Mineral Resource meets the minimum requirement of reasonable prospects for eventual economic extraction (RPEEE) as defined by “CIM Definition Standards - For Mineral Resources and Mineral Reserves”.

The Mineral Resource is based on geological premises, facts, interpretations, and technical information, and used appropriate estimation methods, parameters, and criteria for the deposit under consideration.

14.2 Drillhole Database (relating to the Mineral Resource)

A total of 167,597 m of drilling from 801 holes (98,512 m of diamond core from 363 holes and 69,085 m of RC from 438 holes) was completed at Twin Hills since 2019 (Figure 14-2). In total, 153,356 m were sampled from 153,318 assays, all of which support the MRE.

Diamond drillholes range from 63.13 m to 555.03 m in depth, while RC holes range from 40 m to 260 m in depth. The average drilled depth for diamond and RC holes is 274 m and 160 m, respectively. Diamond holes generally targeted deeper mineralization while RC holes targeted shallower mineralization. This is evident in Figure 14-2 where most diamond collars are north of the RC collars. Majority of the drillholes were oriented at 160° azimuth and -60° dip.

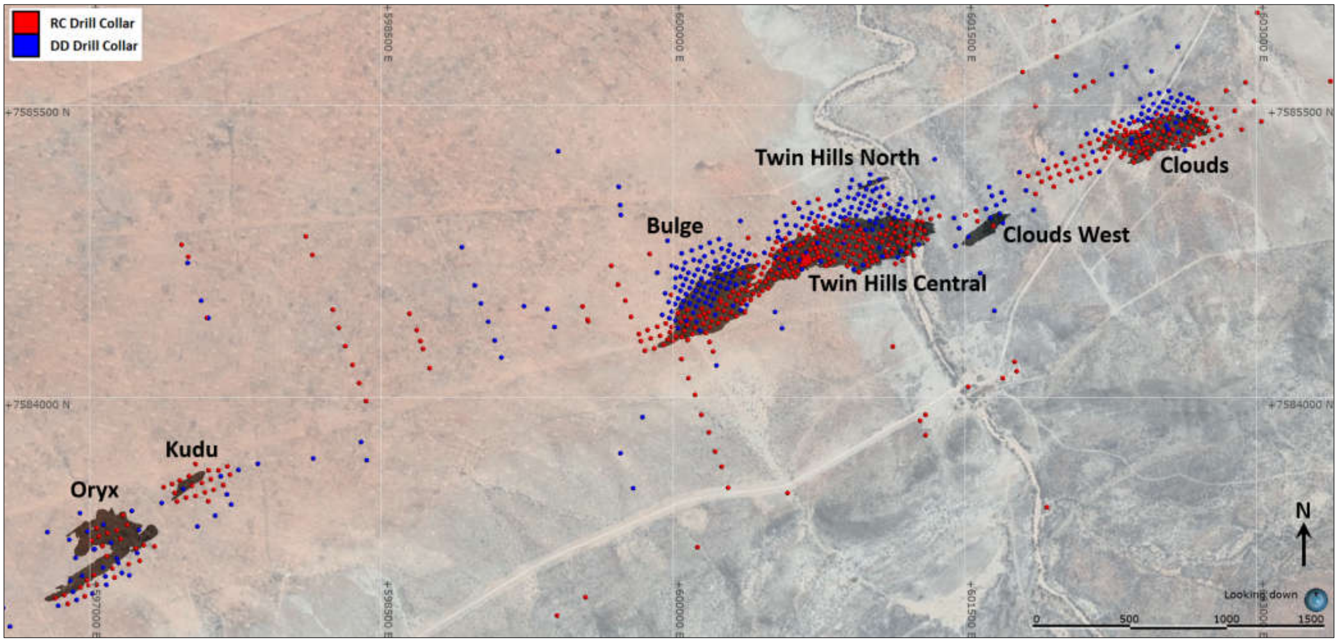


Figure 14-2: Plan view of the Twin Hills area with drill collar locations and mineralization domains

Both diamond and RC holes were sampled at 1 m intervals at the Osino core yard in Omaruru and at the drill rigs, respectively. A subsampling process using a riffle splitter was used at the RC drill rig to reduce sample mass. This process was observed in the field by the QP and was deemed to be a reasonable and robust method for reducing sample mass and producing a representative subsample.

The relevant drilling data, hosted by CSA Global for Osino Resources in Maxgeo Datashed 4, was supplied to the QP as csv exports on 22 February 2022:

- Collar_220218_AG.csv
- Survey_220218_AG.csv
- Assay_220218_AG.csv
- Lith_220218_AG.csv
- 220218_SG.csv.

Drillholes were named according to drilling type, such that diamond holes have the prefix "OKD" and RC holes have the prefix "OKR". The diamond holes range from OKD001 to OKD374 and include three holes with the prefix "OKRD". RC holes range from OKR001 to OKR442 and include 11 holes with the prefix "OKRG". Not all holes in the sequence were drilled at Twin Hills and therefore some holes in the sequence were not included in the supplied data.

Downhole survey data were recorded and captured below the collar position. The planned azimuth and dip were captured at the collar position (0 m depth).

For diamond holes up to and including OKD077, an extensive suite of elements was assayed: Ag, Al, As, Au, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, Hg, Ga, K, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sc, Sr, Te, Th, Ti, Tl, U, V, W, Zn, Y, Zr. For diamond holes from OKD087 onwards, and all RC holes, only gold was assayed.

Lithological data included rock type with typical description fields for colour, texture, and grain size. The main rock types logged were interbedded meta greywacke, meta greywacke, cordierite meta-greywacke, calcrete, cordierite schist, and biotite schist. These six rock types account for 98.2% of the logged metres at Twin Hills. Included with the lithological data was an interpretation of the state of oxidation, which ranged from very highly oxidized to fresh.

Bulk density was determined using the hydrostatic immersion technique on core samples. The dry and wet weights, repeat checks, and final bulk density determination values were all supplied. A total of 17,967 bulk density determinations were carried out on core.

14.3 Database Validation

The data were reviewed and validated, with minor changes required for use in Mineral Resource estimation.

Assay and bulk density data were reviewed relative to expected values. The assay data contained no unexpected values. The bulk density data contained 11 unexpected low or high values. These were addressed when working with the bulk density data (detailed in Section 14.8).

Assay data were compared by drilling type using statistics (Figure 14-3), with the mean of the diamond data at 0.246 g/t Au and the RC at 0.254 g/t Au, with the conclusion that the diamond and RC assay data are comparable.

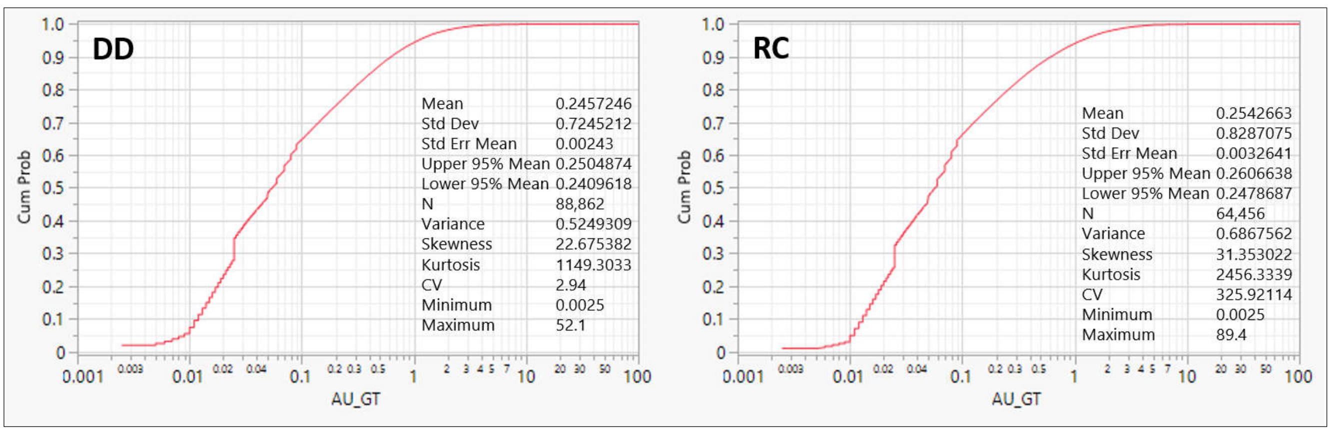


Figure 14-3: Cumulative distribution function for gold by drilling type

14.4 Topography

A topographic digital terrain model (DTM) was constructed from surface elevation data acquired during an aerial drone survey of the Twin Hills area (Figure 14-4). The drillhole collar locations were plotted relative to the DTM and their elevations checked against the DTM. The collar elevations were close to the elevation of the DTM in all instances. All collars were projected onto the DTM in Leapfrog Geo for further work.

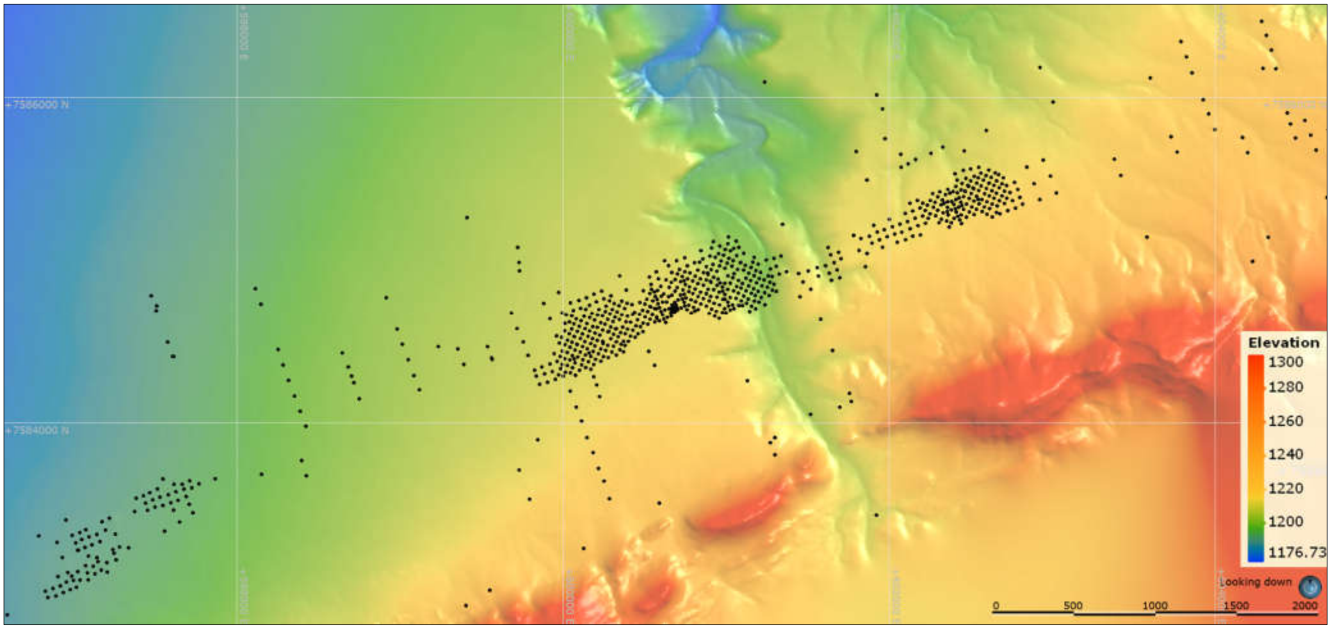


Figure 14-4: Plan view of the topographic DTM showing surface elevation relative to collar locations

14.5 Geological Interpretation

14.5.1 Lithology

The host lithology and country rock are, in the most part, some form of meta-greywacke. There is no discernible distinction between the lithology that hosts mineralization, and the lithology that does not. Due to this, no detailed lithology model was interpreted and constructed for this MRE.

The calcrete layer which overlays the meta-greywacke units was however interpreted and modelled (Figure 14-5), due to its barren nature and distinctly different physical and chemical properties. The modelled calcrete layer varies in vertical thickness from 0 m to 40 m, with the general trend that it thickens from east to west.

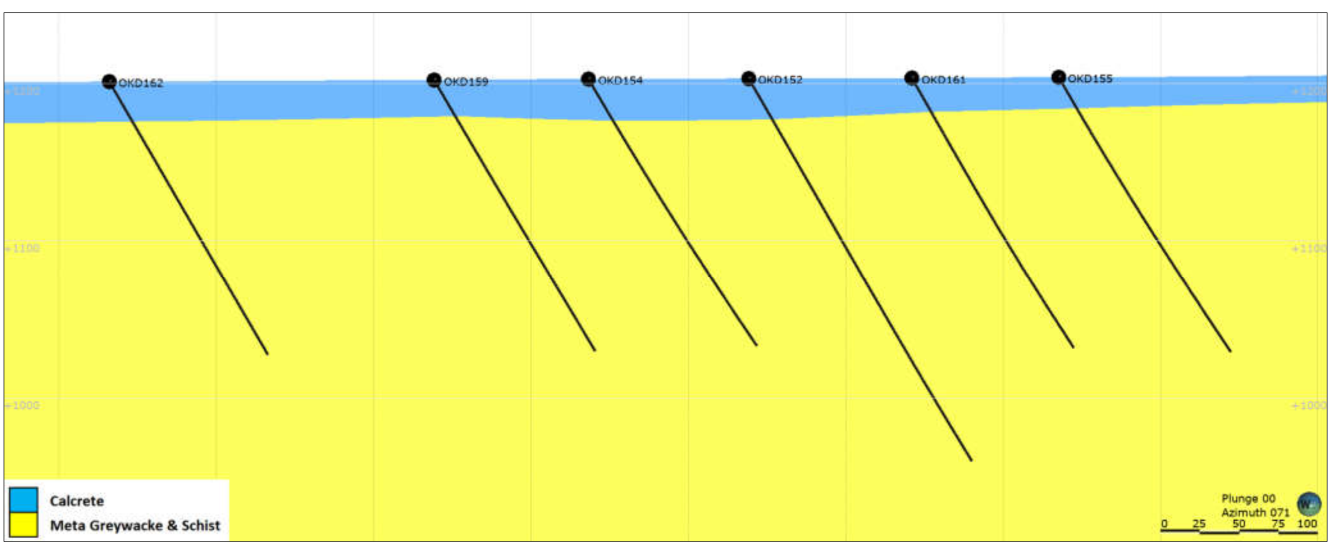


Figure 14-5: Cross section looking east showing the modelled calcrete layer relative to the meta greywacke and schist

14.5.2 Oxidation

The oxidation state was logged into one of five categories. In order from most to least oxidized, these are:

- Very highly oxidized
- Highly oxidized
- Moderately oxidized
- Slightly oxidized
- Fresh.

Due to the variable nature of logging, and the spatial location of the categories, modelling the five categories individually proved problematic. The oxidation categories were therefore simplified for modelling purposes (Table 14-1 and Figure 14-6).

Table 14-1: Simplification of the oxidation logging categories for modelling

Logged oxidation state	Simplified category for modelling
Very highly oxidized Highly Oxidized	Oxidized
Moderately oxidized Slightly oxidized	Transitional
Fresh	Fresh

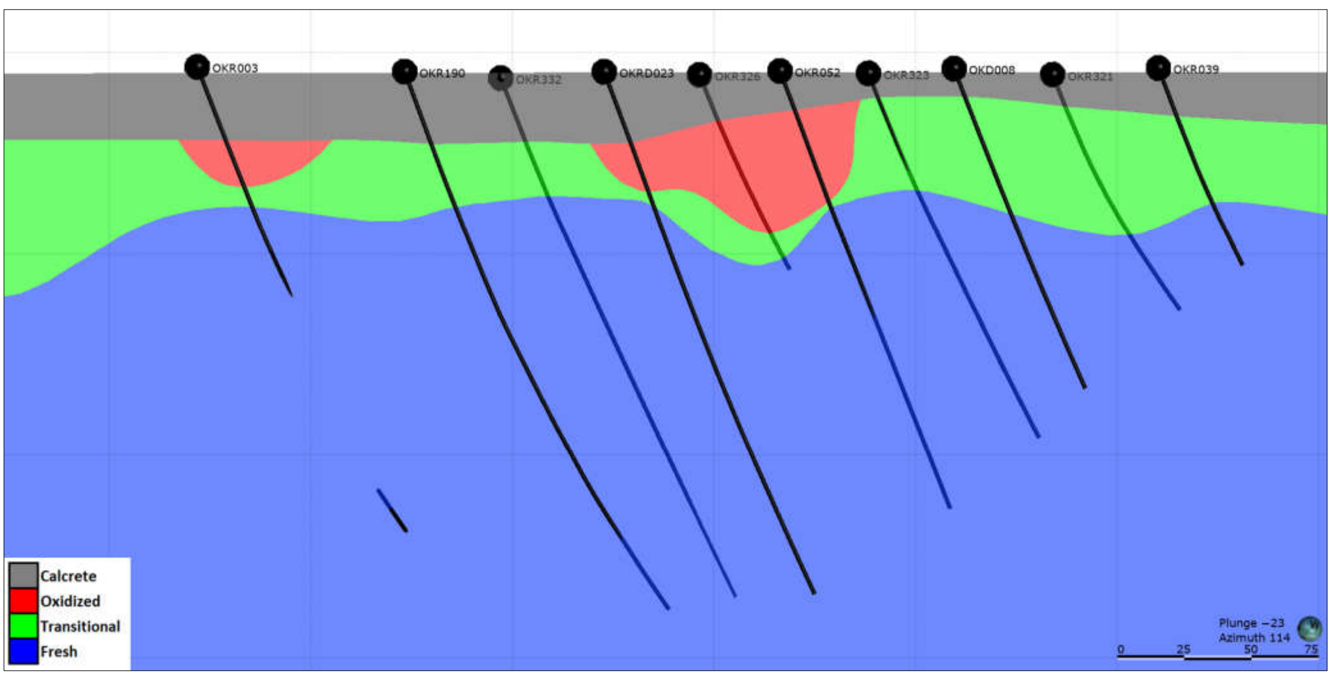


Figure 14-6: Cross section looking southeast showing the modelled oxidation state

It is evident that the depth of oxidation and transitional material is highly variable. This is likely due to the ability of meteoric water to permeate downwards along geological structures.

14.5.3 Mineralization

Bulge, Twin Hills Central, and Clouds

The primary domains at Twin Hills were modelled in Leapfrog Geo using a 0.4 g/t Au threshold from infill drillholes spaced at 35 m x 35 m on surface (previously 50 m x 50 m). The geometry of the mineralization was guided by local trends and extrapolated no more than 50 m past the last mineralized intersections. The mineralization between Bulge and Twin Hills Central is interpreted to be separated by a fault (Figure 14-7). The mineralization appears to be closed off along strike, as is evidenced by drilling and sampling, however the mineralization is open at depth at all three domains.

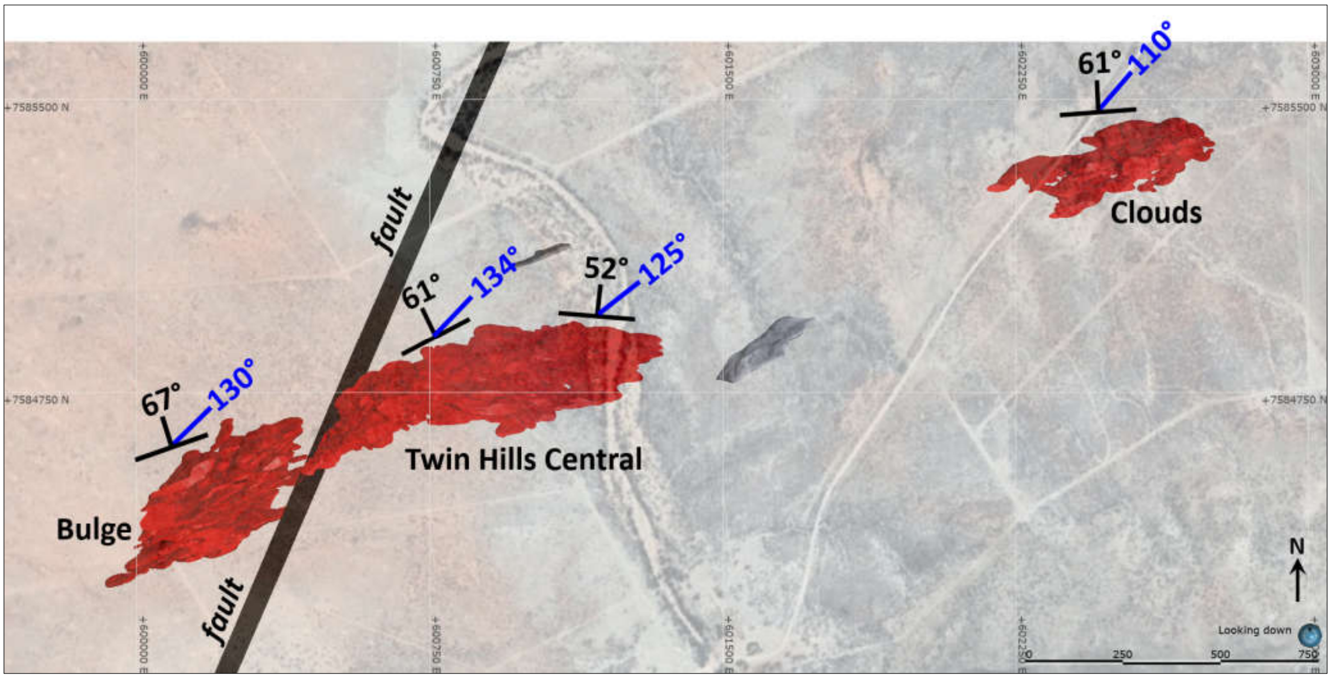


Figure 14-7: Plan view of mineralization at the primary domains showing average strike and dip (black) and plunge (blue)

Twin Hills North, Clouds West, Kudu, and Oryx

The smaller, newly added domains at Twin Hills were modelled in Leapfrog Geo using a 0.3 g/t Au threshold (for continuity purposes) from drillholes spaced mostly at 50 m x 50 m on surface. The geometry of the mineralization was guided by local trends and extrapolated no more than 50 m past the last mineralized intersections. The mineralization at Kudu and Oryx tends to be lower grade than at Twin Hills North and Clouds West, although the southwestern area at Oryx forms a continuous volume over 1.0 g/t Au. All domains have the potential to be extended along strike and down dip with additional drilling (Figure 14-8). The mineralization at Kudu and Oryx dips in the opposing direction relative to the mineralization in the east (Figure 14-9).

Figure 14-8: Plan view of mineralization at the newly added domains

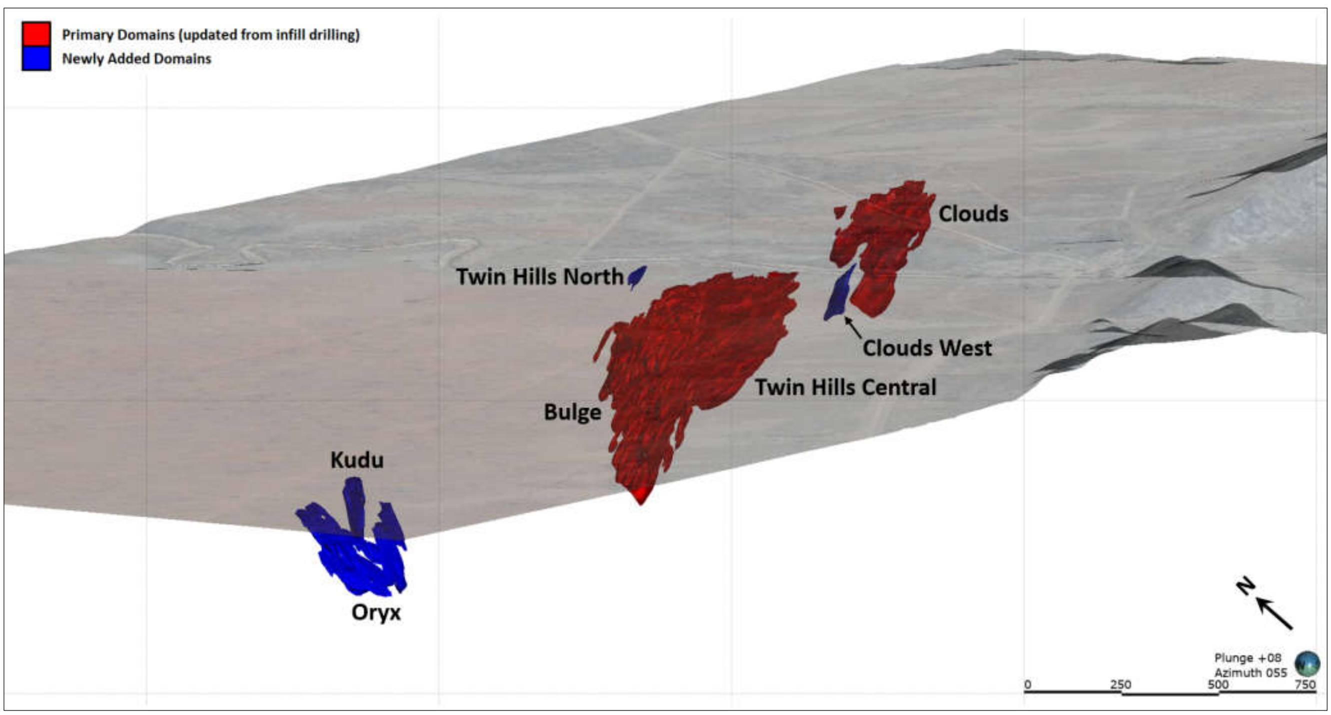


Figure 14-9: Oblique view looking northeast showing mineralization domains

Cross Sections

Cross sections depict the mineralization at the three primary domains (Figure 14-10). The cross sections are oriented to align with the plane of the closest-spaced drilling and to illustrate the geometry and orientation of the mineralization (Figure 14-11 to Figure 14-13).

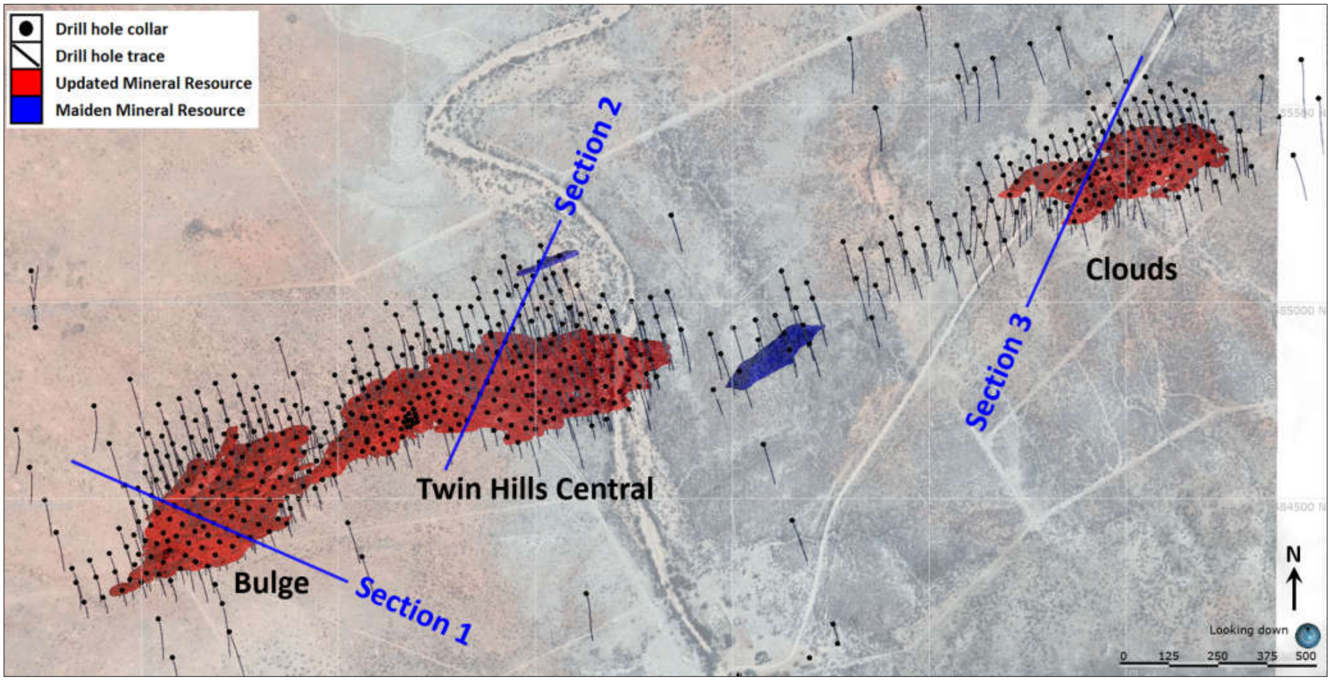


Figure 14-10: Plan view showing mineralization at the primary domains with orientation of sections lines

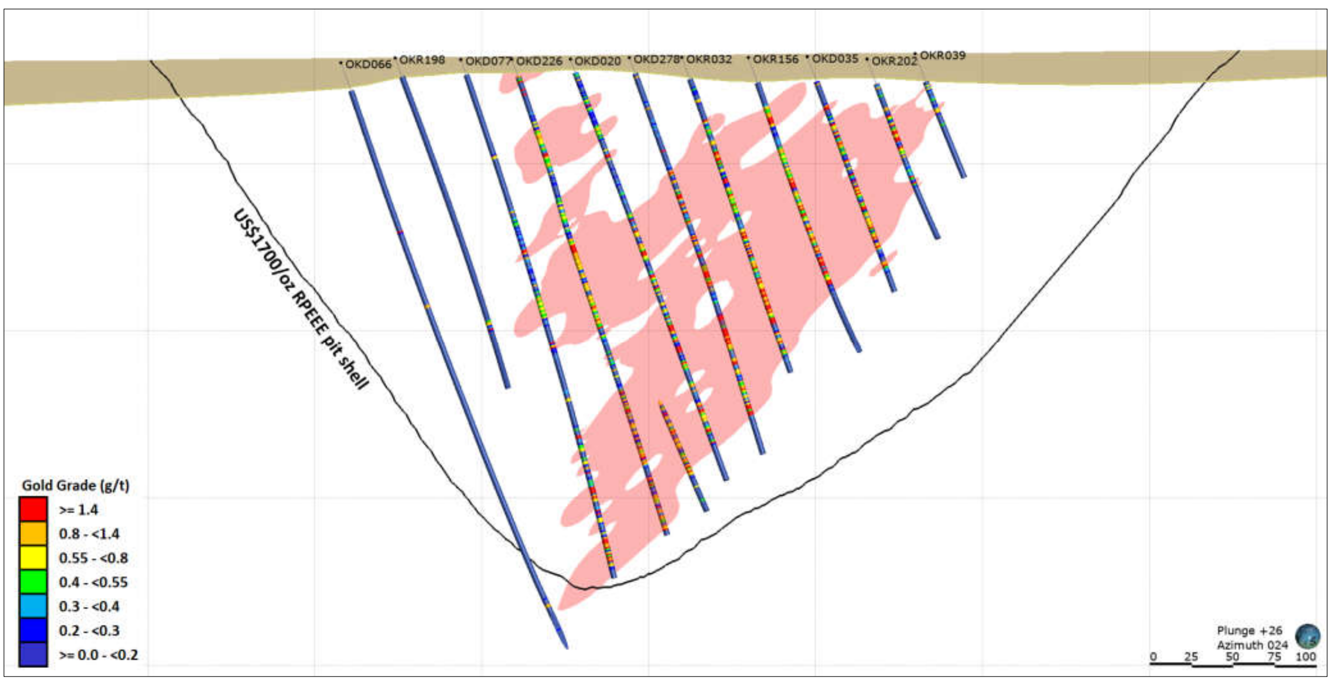


Figure 14-11: Bulge Section 1 looking northeast showing mineralization and drill assays

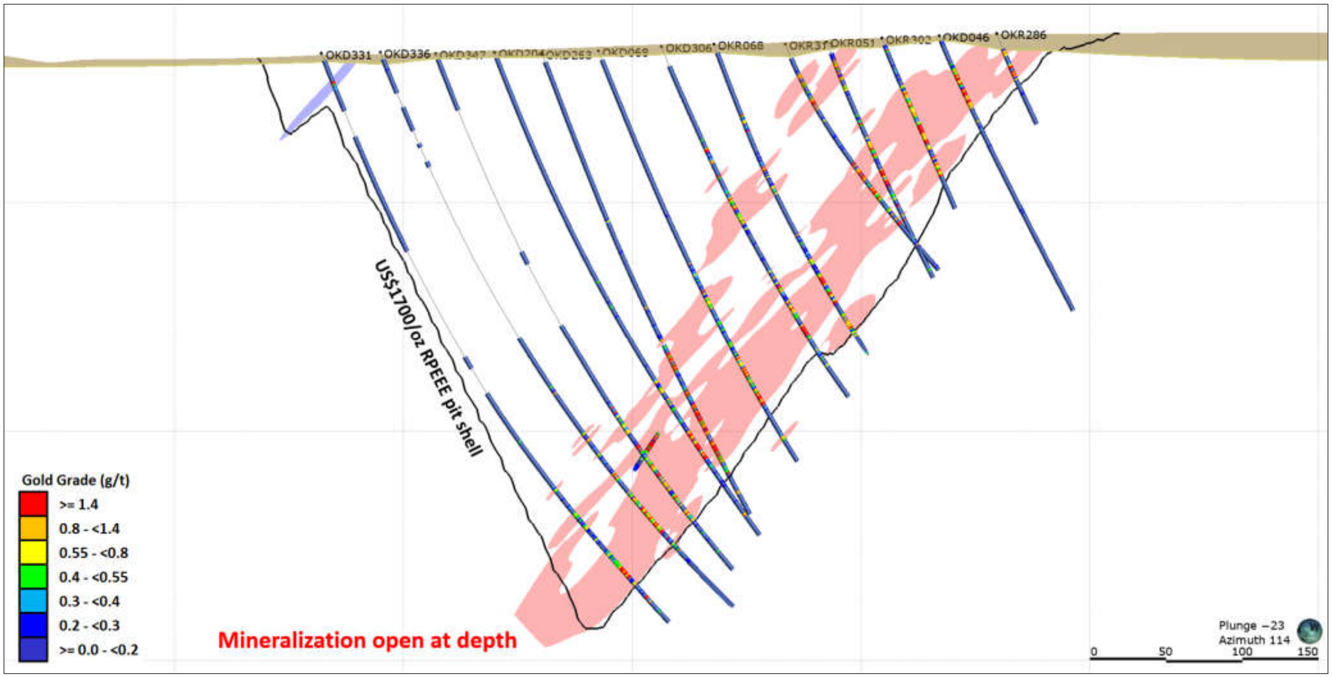


Figure 14-12: Twin Hills Central Section 2 looking southeast showing mineralization and drill assays

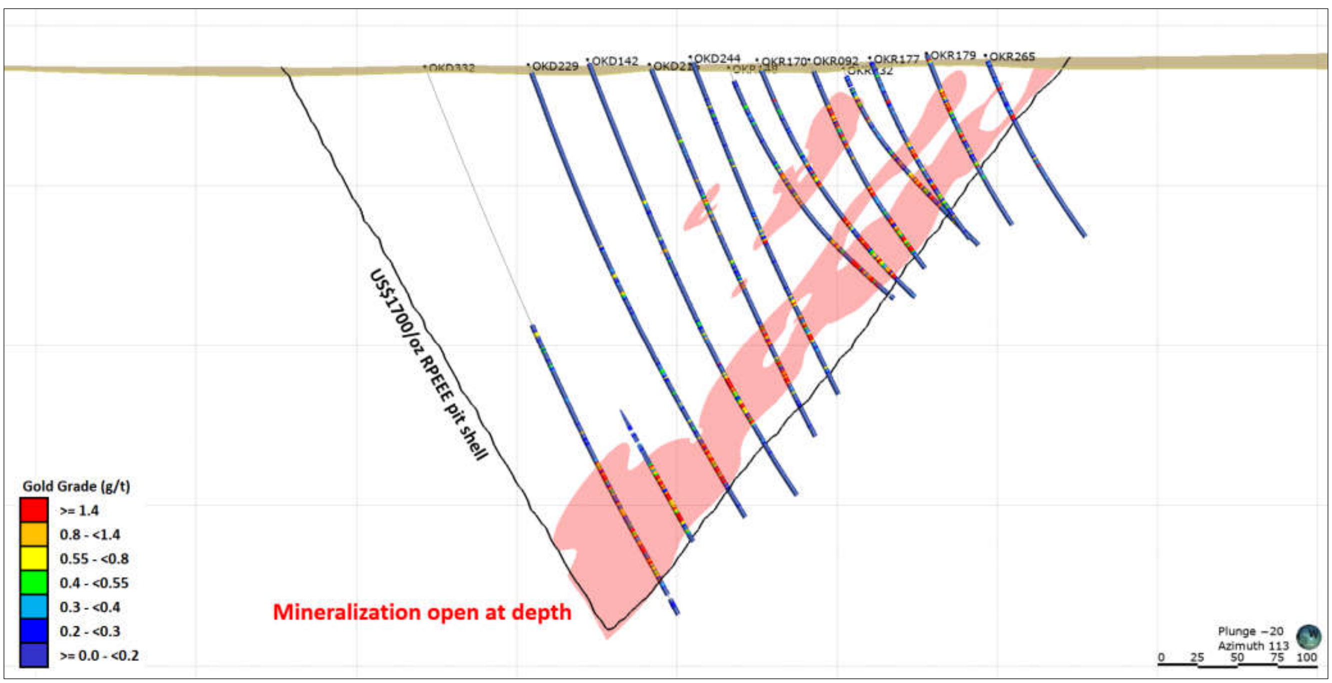


Figure 14-13: Clouds Section 3 looking southeast showing mineralization and drill assays

14.6 Sample Coding and Length

14.6.1 Domain Coding

Samples were flagged and coded according to the geological interpretation of lithology and oxidation (Table 14-2), and mineralization by area (Table 14-3).

Table 14-2: Lithology and oxidation sample coding

Lithology and oxidation model	Sample code (WEATH)
Calcrete	4
Oxidized	3
Transitional	2
Fresh	1

Table 14-3: Mineralization sample coding by area

Description of mineralization domain	Sample code (ZONE)
Calcrete	1
Country Rock (waste)	2
Bulge (≥0.4 g/t Au mineralization)	141
Twin Hills Central (≥0.4 g/t Au mineralization)	241
Clouds (≥0.4 g/t Au mineralization)	341
Twin Hills North (≥0.3 g/t Au mineralization)	431
Clouds West (≥0.3 g/t Au mineralization)	531
Kudu (≥0.3 g/t Au mineralization)	631
Oryx (≥0.3 g/t Au mineralization)	731

14.6.2 Sample Length Analyses

Diamond and RC holes were sampled at 1 m intervals (Figure 14-14) at the core-yard in Omaruru and at the drill rigs, respectively. A subsampling process using a riffle splitter was used at the RC drill rig to reduce sample mass. This process was observed in the field by the Qualified Person and was deemed to be a reasonable and robust method for reducing sample mass and producing a representative subsample.

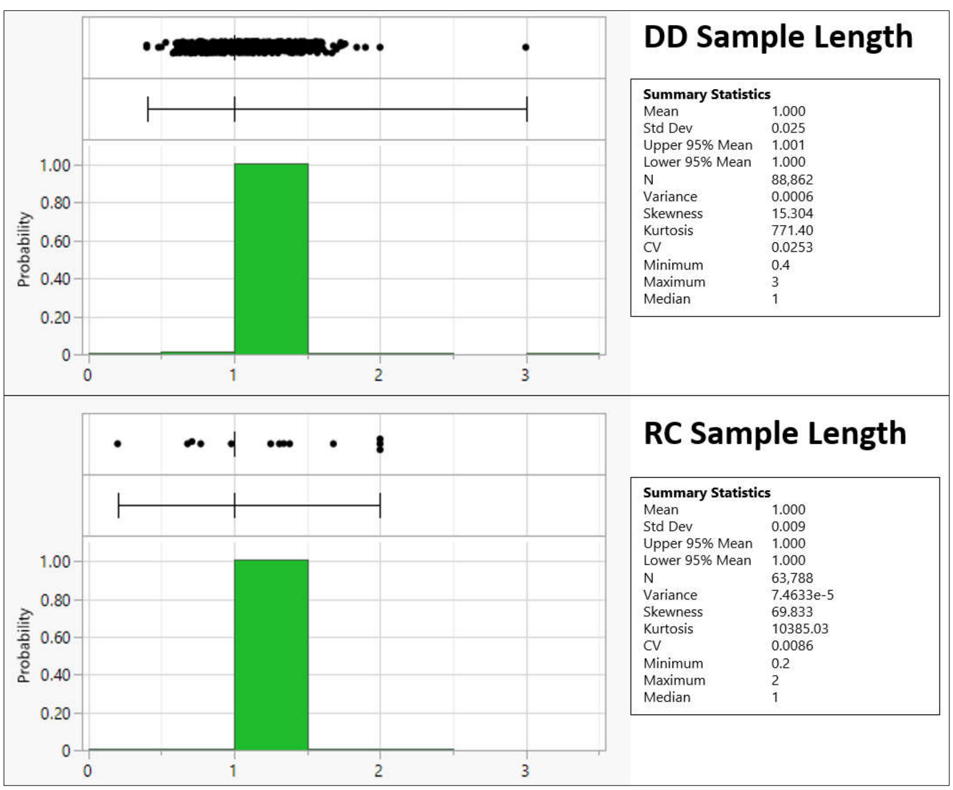


Figure 14-14: Histogram and statistics of sample length by drilling type

14.7 Geostatistical Analysis

14.7.1 Summary Statistics

Length-weighted summary statistics were compiled for gold assay samples by mineralization domain (Table 14-4).

Table 14-4: Length-weighted statistics for gold by mineralization domain

Domain	Count	Minimum (g/t Au)	Mean (g/t Au)	Maximum (g/t Au)	Coefficient of variation
Bulge	12,257	0.003	0.919	52.00	1.432
Twin Hills Central	9,073	0.012	1.069	52.10	1.305
Clouds	3,105	0.012	1.207	89.40	1.927
Twin Hills North	24	0.051	2.947	46.80	3.182
Clouds West	123	0.053	0.980	5.78	0.976
Kudu	213	0.068	0.622	1.96	0.662
Oryx	975	0.010	0.914	11.60	1.209

14.7.2 Compositing

The Qualified Person investigated a compositing strategy for use in estimation in 2021. The investigation showed that a 2 m composite length was well suited for use in estimation. Summary statistics were compiled for gold assay composites by mineralization domain (Table 14-5). The statistics show that mean values per domain remained similar while the coefficient of variation (CV) was reduced.

Table 14-5: Statistics for gold from 2 m composites

Domain	Count	Minimum (g/t Au)	Mean (g/t Au)	Maximum (g/t Au)	CV
Bulge	6,363	0.029	0.916	26.71	1.024
Twin Hills Central	4,865	0.031	1.061	26.33	1.000
Clouds	1,658	0.052	1.194	30.28	1.375
Twin Hills North	13	0.229	2.796	25.25	2.419
Clouds West	64	0.212	0.978	3.63	0.773
Kudu	109	0.179	0.621	1.91	0.529
Oryx	529	0.075	0.913	7.71	0.931

14.7.3 Top Cut Analysis

Grade cutting (top cutting) is generally applied to data used for grade estimation to reduce the local high grading effect of anomalous high-grade composites. In cases where isolated high-grade composites would unduly influence the grade estimates of surrounding blocks, without the support of other high-grade composites, top cuts are applied. These top cuts are quantified according to the statistical distribution of the composite population.

The 2 m composites were investigated for any top cutting requirements and implemented where required (Table 14-6). No top cutting was required for Clouds West and Kudu.

Table 14-6: Statistics for gold from 2 m composites following top cutting

Domain	Count	Uncut mean	Uncut CV	Top cut	No. of composites cut	Value of cut composites	Cut mean	Cut CV
Bulge	6,363	0.92	1.02	14.30	1	26.71	0.91	0.98
Twin Hills Central	4,865	1.06	1.00	11.60	3	26.33; 15.95; 14.42	1.06	0.94
Clouds	1,658	1.19	1.38	11.50	4	30.28; 25.70; 23.98; 16.18	1.16	1.10
Twin Hills North	13	2.80	2.42	2.00	1	25.25	1.01	0.59
Oryx	529	0.91	1.98	4.25	5	7.71; 6.24; 5.23; 4.93; 4.65	0.90	0.86

14.7.4 Variography

Experimental semi-variograms were calculated in various directions in the plane of mineralization, and perpendicular to this plane at Bulge, Twin Hills Central, Clouds and Kudu & Oryx (combined).

All domains yielded traditional semi-variograms that were sufficiently stable to model and use in estimation (Bulge example in Figure 14-15). Due to the reduced number of composites available at Twin Hills North and Clouds West, the resulting semi-variograms were not sufficiently stable to fit a model to. The Twin Hills Central semi-variograms were applied to Twin Hills North and Clouds West, since they were the closest valid set of semi-variograms (Table 14-7 and Table 14-8). In addition, it is reasonable to expect that the statistical characteristics of the mineralization at Twin Hills North and Clouds West is similar to that of Twin Hills Central, since the mineralization originates from the same system and is hosted by the same lithologies and structures.

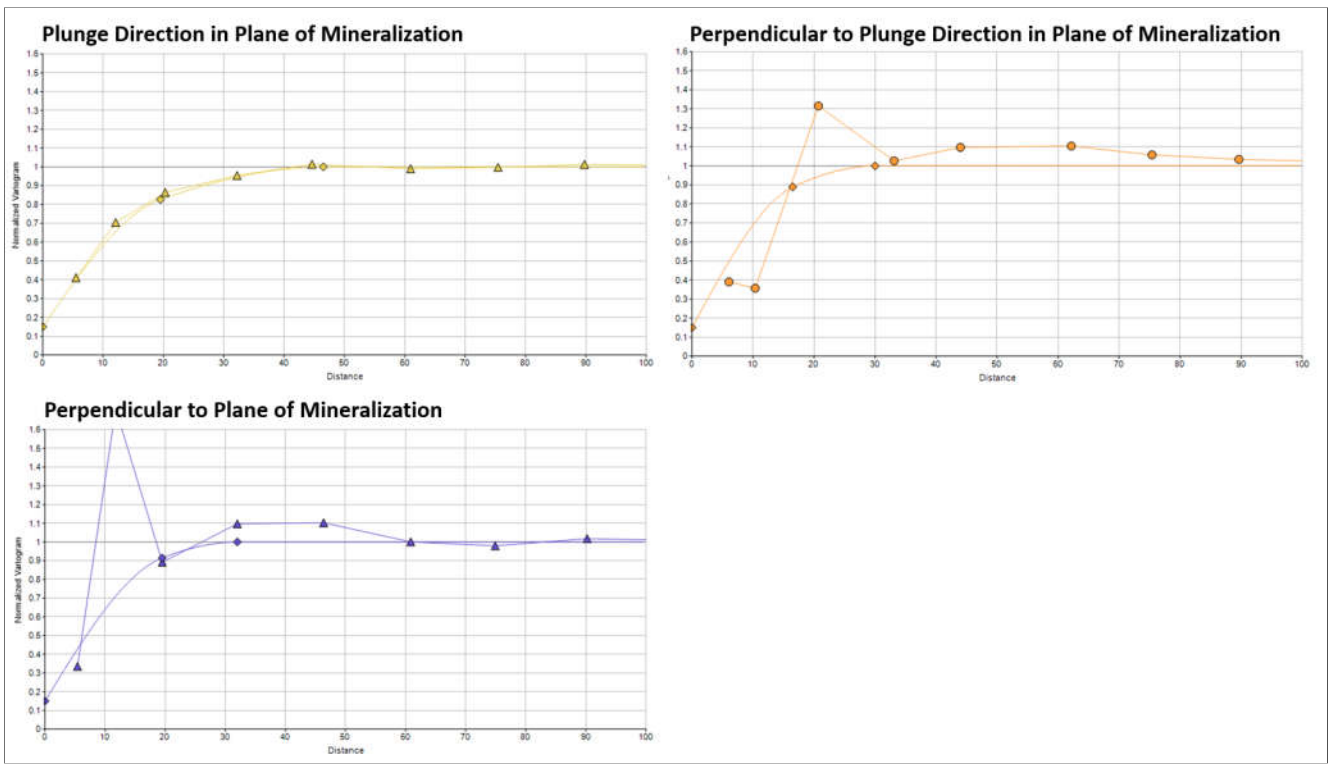


Figure 14-15: Traditional semi-variogram model for the high-grade domain at Twin Hills Central

Table 14-7: Semi-variogram model orientations applied for estimation

Domain	VANGLE1	VANGLE2	VANGLE3	VAXIS1	VAXIS2	VAXIS3
Bulge	-20	67	30	3	1	3
Twin Hills Central	-20	67	45	3	1	3
Clouds	-2	60	60	3	1	3
Twin Hills North	-2	60	60	3	1	3
Clouds West	-2	60	60	3	1	3
Kudu	157	75	15	3	1	3
Oryx	157	75	15	3	1	3

Table 14-8: Semi-variogram model parameters applied for estimation

Domain	Nugget	ST1PAR1	ST1PAR2	ST1PAR3	Sill 1	ST2PAR1	ST1PAR2	ST2PAR3	Sill 2
Bulge	0.150	16.7	19.5	19.5	0.425	30.1	46.6	32.1	0.425
Twin Hills Central	0.550	21.9	26.2	12.0	0.450				
Clouds	0.450	26.6	28.6	66.1	0.550				
Twin Hills North	0.450	26.6	28.6	66.1	0.550				
Clouds West	0.450	26.6	28.6	66.1	0.550				
Kudu	0.247	60.2	60.2	30.1	0.753				
Oryx	0.247	60.2	60.2	30.1	0.753				

14.8 Bulk Density

Bulk density data were examined relative to the geological logging of lithology in 2021 (Table 14-9). It was observed that the bulk density values were in the most part similar, with the major lithology types ranging from 2.74 t/m^3 to 2.77 t/m^3.

Table 14-9: Bulk density statistics by lithology during 2021 investigation

Lithology	Count	Mean bulk density (t/m^3)
Interbedded Meta Greywacke	9,769	2.76
Meta Greywacke	4,346	2.74
Cordierite Meta Greywacke	1,203	2.76
Cordierite Schist	359	2.77
Biotite Schist	207	2.77
Quartz Vein	78	2.69
Pegmatite	71	2.69
Quartz Biotite Schist	40	2.75
Calc Silicate Unit	31	2.80
Graphitic Unit	27	2.75
absent	16	2.76
Graphitic Schist	7	2.73
Quartz Calcite Vein	2	-
Calcite Vein	1	-

As a lithology model was not interpreted nor constructed, such that bulk density values could be assigned to the model based on rock type, bulk density was further investigated relative to the oxidation state (and calcrete) with the latest data. In order to derive robust bulk density estimates, outlier values were removed, and mean values computed (Table 14-10). These values were assigned to the model (for tonnage calculations).

Table 14-10: Bulk density statistics by oxidation state (outliers removed)

Lithology	Count	Mean bulk density (t/m³)
Calcrete	697	2.22
Oxidized	166	2.57
Transitional	2,424	2.66
Fresh	13,982	2.76

14.9 Block Model

A block model was constructed in Datamine that used the modelled wireframes as contacts. The block model covered the entire Twin Hills Project area (Table 14-11) and was coded according to lithology/oxidation and mineralization (estimation) domain (Table 14-12). These codes aligned with the coding in the drillholes.

Table 14-11: Block model parameters

	Minimum	Maximum	Range	Block size	Block no.	Sub-cell size
X	596,580	603,340	6,760	20	338	5
Y	7,582,780	7,585,940	3,160	20	158	5
Z	600	1,400	800	5	160	1

Table 14-12: Block model coding

Field	Code	Description
ZONE	1	Calcrete
	2	Country Rock (waste)
	141	Bulge (≥0.4 g/t Au mineralization)
	241	Twin Hills Central (≥0.4 g/t Au mineralization)
	341	Clouds (≥0.4 g/t Au mineralization)
	431	Twin Hills North (≥0.3 g/t Au mineralization)
	531	Clouds West (≥0.3 g/t Au mineralization)
	631	Kudu (≥0.3 g/t Au mineralization)
	731	Oryx (≥0.3 g/t Au mineralization)
WEATH	1	Calcrete
	2	Oxide
	3	Transitional
	4	Fresh

14.10 Grade Estimation

Grade was estimated into the coded block model from 2 m composites by ordinary kriging. All contacts were treated as hard boundaries for estimation into 20 m x 20 m x 5 m parent cells, such that composites located in zone 141 would be used to estimate zone 141 etc.

Search ellipses were set up based on the modelled semi-variogram directions and ranges to locate 2 m composites for estimation (Figure 14-16). A minimum of eight and maximum of 15 composites were required for a block to be estimated, with no more than five composites used from a single drillhole (search volume 1). If the minimum eight composites were not located in the search ellipse, the dimensions of the ellipse were doubled and the search re-run (search volume 2). If the minimum composites were still not located, the original search ellipse was expanded such that all remaining un-estimated blocks were estimated (search volume 3).

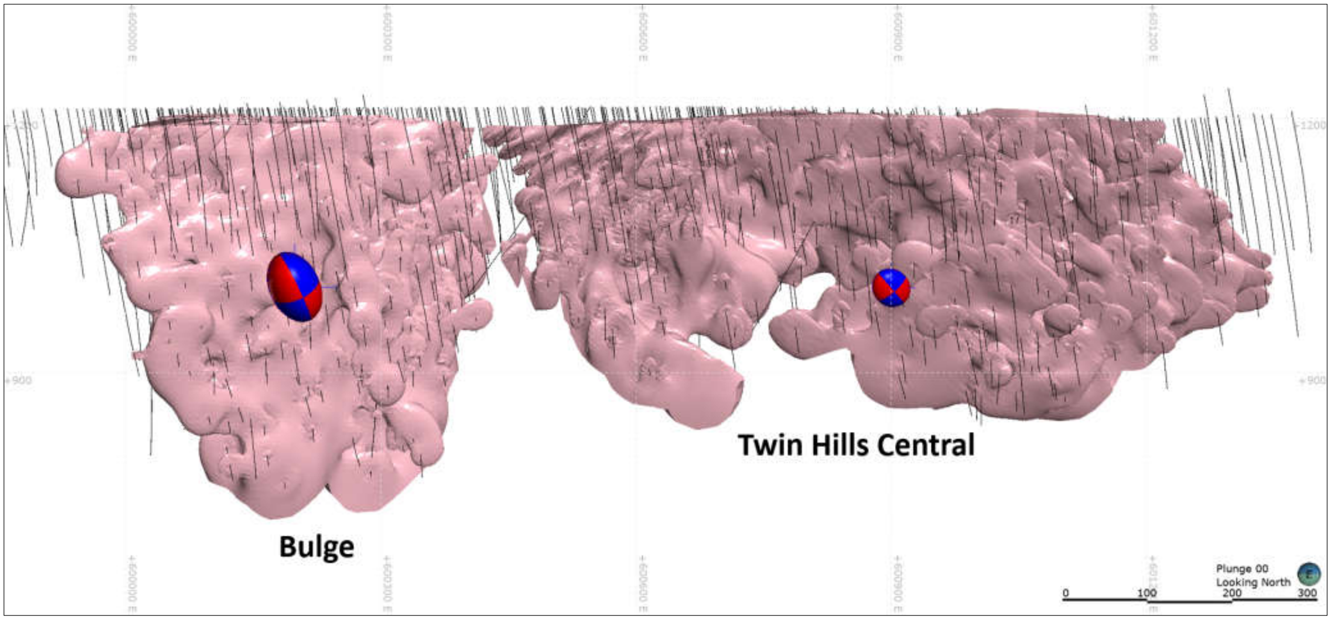


Figure 14-16: Long section looking north showing search ellipses relative to the mineralization and drillholes

14.11 Validation of the Estimates

The block model estimates were validated by:

- Global statistics
- Swath analysis
- Localized visual validation on cross sections.

14.11.1 Global Statistics

Global mean values were calculated for the input composites and output estimates (Table 14-13). These were compared to assess the global representivity of the model vs the composites.

Table 14-13: Global mean values of input composites and output estimates

Mineralization domain	Zone	Input composites (mean g/t Au)	Output estimate (mean g/t Au)	Relative difference
Bulge	141	0.91	0.90	-1.1%
Twin Hills Central	241	1.06	1.03	-2.9%
Clouds	341	1.16	1.17	0.9%
Twin Hills North	431	1.01	1.00	-1.0%
Clouds West	531	0.98	0.99	1.0%
Kudu	631	0.62	0.59	-5.1%
Oryx	731	0.90	0.89	-1.1%

The comparison validates the global representivity of the model, with relative differences within ±3% (apart from Kudu at -5.1%).

14.11.2 Swath Analysis

Swath plots were compiled to validate the estimates on a semi-local scale. This entailed comparing the mean of the input composites to the mean of the output estimates in 40 m wide north-south corridors and plotting these against each other (Figure 14-17).

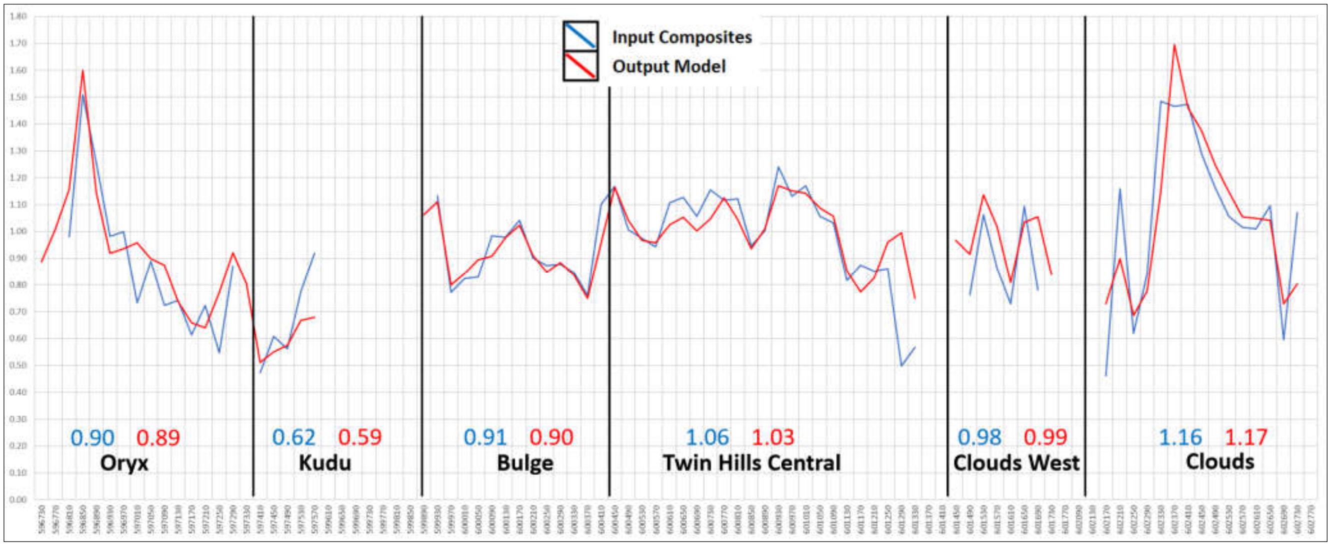


Figure 14-17: Swath analysis plot for the Twin Hills domains including mean values for composites and model
Note: Twin Hills North is included in the Twin Hills Central data.

14.11.3 Localized Visual Validation

Cross sections were examined to compare the assay data against the estimated block model. This process validates the model on a local scale when comparing the estimated blocks in the vicinity of the input composites. The process showed a reasonable correlation between composites and estimates.

14.11.4 Summary

The model validated well, both globally and locally. The QP deems the model to be an acceptable representation of the input data, with the result that the model is suitable for Mineral Resource disclosure according to NI 43-101 standards.

14.12 Reasonable Prospects for Eventual Economic Extraction

A Mineral Resource is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade, or quality and quantity that there are RPEEE. To satisfy the requirement of RPEEE by open pit mining, reporting pit shells were determined based on conceptual parameters and costs supplied by Osino and reviewed for reasonableness by CSA Global (Table 14-14). Gold recovery would likely be achieved using a conventional crushing, milling, gravity, pre-oxidation, and CIL circuit.

Table 14-14: Conceptual parameters applied for the determination of RPEEE

Parameter	Value	Unit
Gold price	1,700	US$/oz
Government royalty (3%) + Export levy (1%)	4.00	%
Selling costs – gold refining costs	0.55	US$/oz
Process plant recovery	90	%
Selling costs – gold transport costs	2.20	US$/oz
Weathered material – overall slope angle excluding ramps (toe to toe)	48	°
Fresh material – overall slope angle excluding ramps (toe to toe)	55	°
Mining costs – Mineralized material at pit rim	2.00	US$/t rock
Mining costs – Waste at pit rim	1.85	US$/t rock
Mining costs – Mineralization – elevation dependent	0.03	US$/t/10 m

Parameter	Value	Unit
Mining costs – waste – elevation dependent	0.03	US$/t/10 m
Process Plant costs – based on ROM material to the Plant	8.00	US$/t ROM ore
Process Plant costs – based on ROM material to the Plant including rehandling and grade control	0.15	US$/t ROM ore
General and administration cost	4.00	US$/t ROM ore

A long-term gold price of US$1,700/oz was selected for the determination of RPEEE; however, conceptual pit shells were also calculated at prices of US$1,600/oz, US$1,800/oz, US$1,900/oz, US$2,000/oz, US$2,200/oz and US$2,500/oz to assess the sensitivity of gold price. It was observed in most cases that the conceptual pit shells were similar, with increasing gold prices showing minor incremental increases in tonnage and gold content.

14.13 Mineral Resource Classification

The portion of the block model that satisfied RPEEE criteria was classified according to Mineral Resource confidence categories defined in CIM Definition Standards for Mineral Resources and Mineral Reserves. Data quality and quantity, geological and grade continuity, and confidence in the grade and density estimates, were considered when classifying the Mineral Resource.

Mineral Resources were classified as either Inferred or Indicated. Indicated Mineral Resources were generally classified where the interpretation and estimate were informed by 35 m x 35 m spaced infill drilling, such that the data were sufficient to assume geological and grade continuity between points of observation. Indicated Mineral Resources were only classified at Bulge, Twin Hills Central and Clouds, as these domains were covered by infill drilling.

Areas supported by 50 m x 50 m spaced drilling were generally classified as Inferred Mineral Resources, as evidence was sufficient to imply, but not necessarily verify, geological and grade continuity (Figure 14-18). It is reasonable to expect that majority of the Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued infill drilling.

Mineral Resources were not classified beyond 50 m from data.

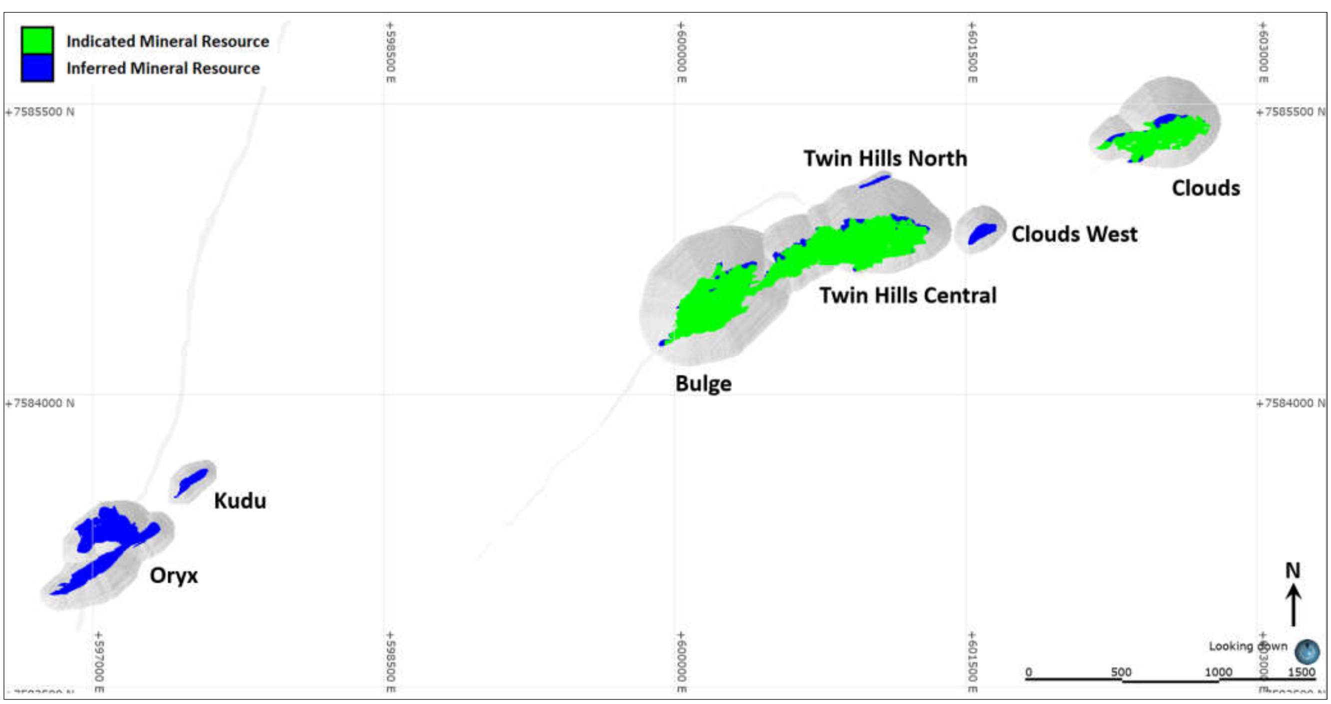


Figure 14-18: Plan view showing the Mineral Resource classification relative to the US$1,700/oz RPEEE pit shells

14.14 Mineral Resource Statement

The Mineral Resource is that material within the conceptual RPEEE pit shell above a 0.5 g/t Au cut-off grade (Figure 14-19 and Figure 14-20). The MRE has an effective date of 1 April 2022 (Table 14-15).

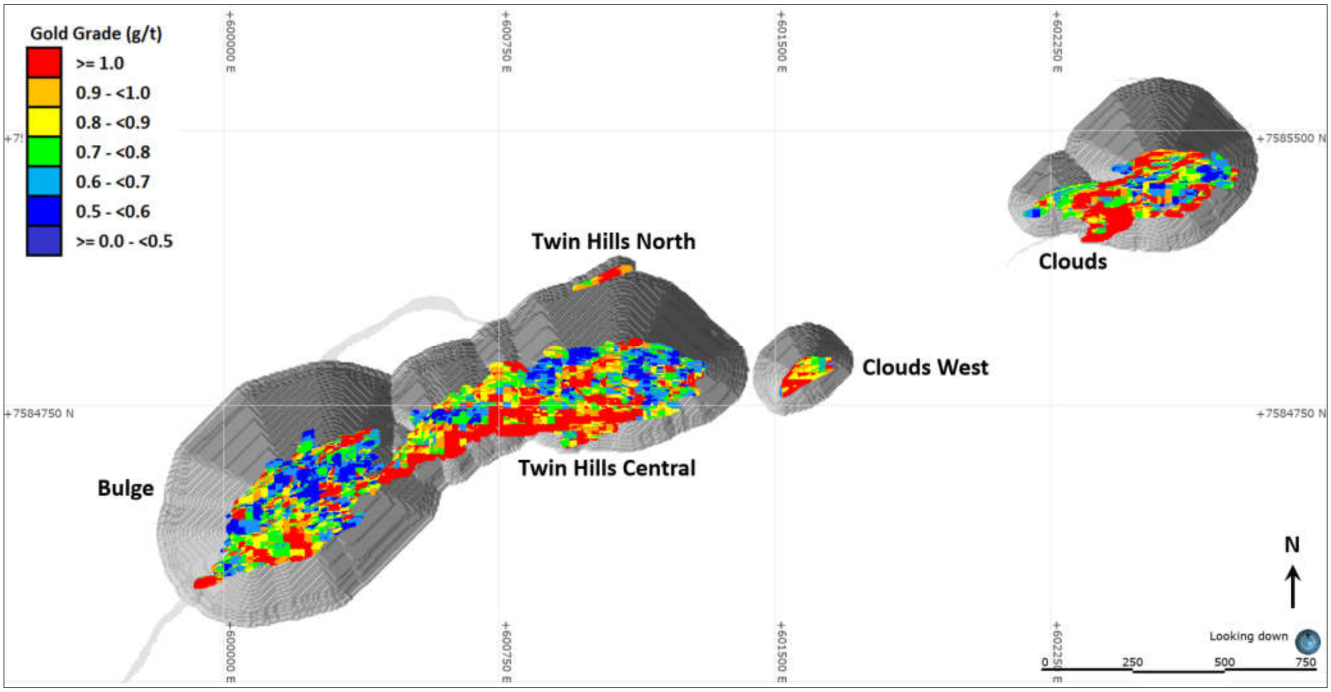


Figure 14-19: Plan view showing the Mineral Resource above 0.5 g/t Au within the reporting (RPEEE) pit shell

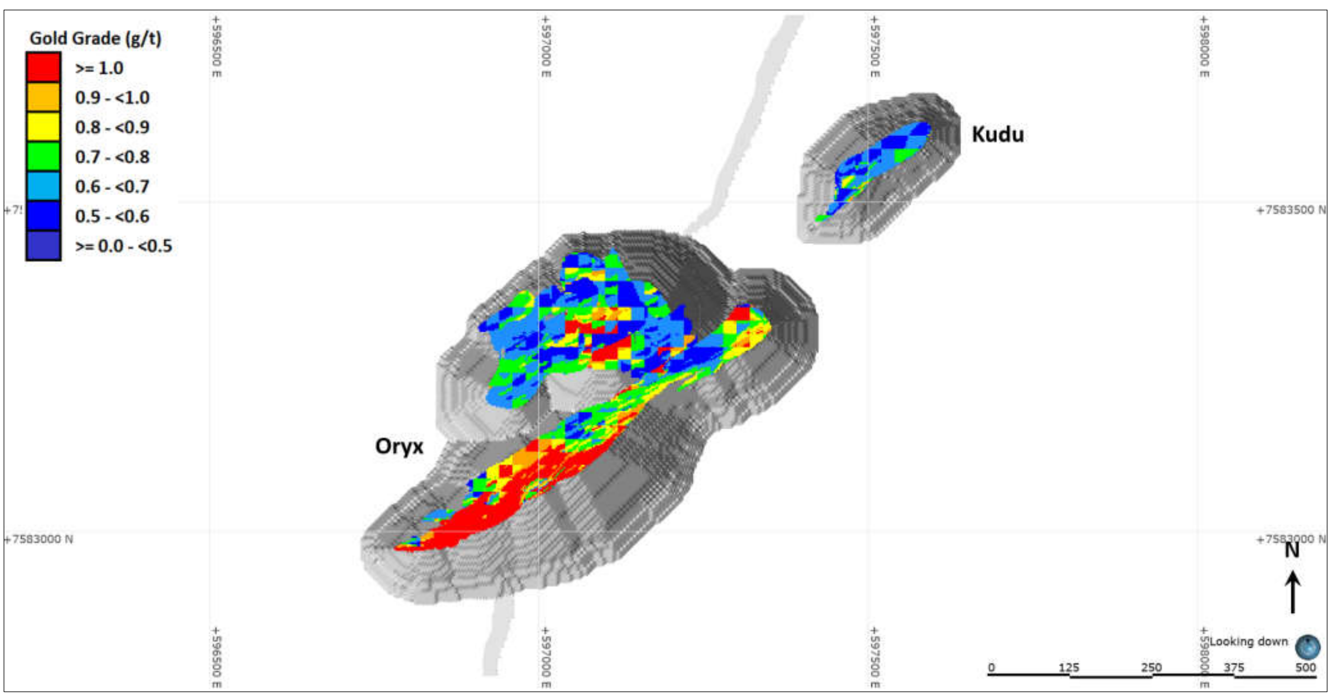


Figure 14-20: Plan view showing the Mineral Resource above 0.5 g/t Au within the reporting (RPEEE) pit shell

Table 14-15: Mineral Resource for the Twin Hills Gold Project at a 0.5 g/t Au cut-off as of 01 April 2022

Mineral Resource category	Tonnes (Mt)	Grade (g/t Au)	Troy ounces (Moz)
Indicated	65.0	1.00	2.10
Inferred	20.7	0.93	0.62

Notes:

- *Figures have been rounded to the appropriate level of precision for the reporting of Mineral Resources.*
- *Mineral Resources are stated as in situ dry tonnes; figures are reported in metric tonnes.*
- *The Mineral Resource has been classified under the guidelines of the CIM Definition Standards for Mineral Resources and Mineral Reserves and adopted by the CIM Council, and procedures for classifying the reported Mineral Resources were undertaken within the context of the Canadian Securities Administrators NI 43-101.*
- *The Mineral Resource is reported within a conceptual pit shell determined using a gold price of US$1,700/oz and conceptual parameters and costs to support assumptions relating to reasonable prospects for eventual economic extraction.*
- *Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.*
- *The exclusive exploration licences on which the Mineral Resource is reported are 90%, 100%, 95% and 90% owned by Osino. As a result, the blended ownership of the total reported gold ounces attributable to Osino is 94.66%.*

The MRE was carried out by Mr Anton Geldenhuys (MEng), a registered Professional Natural Scientist (SACNASP, membership number 400313/04) of CSA Global, who is an independent Qualified Person as defined by CIM Definition Standards for Mineral Resources and Mineral Reserves in accordance with NI 43-101. Mr Geldenhuys is a geoscientist, is qualified as a geologist (Honours) and engineer (Masters) and has over 21 years of relevant industry experience. Mr Geldenhuys is member in good standing of the South African Council for Natural Scientific Professions (SACNASP) and has sufficient experience relevant to the commodity, style of mineralization and activity which he is undertaking to qualify as a Qualified Person under NI 43-101.

The Mineral Resource was also subdivided by domain (Table 14-16).

Table 14-16: Mineral Resource for the Twin Hills Gold Project at a 0.5 g/t Au cut-off by domain, as of 1 April 2022

Domain	Indicated			Inferred		
	Tonnes (Mt)	Grade (g/t Au)	Troy ounces (Moz)	Tonnes (Mt)	Grade (g/t Au)	Troy ounces (Moz)
Bulge	34.5	0.91	1.01	6.2	0.90	0.18
Twin Hills Central	23.0	1.08	0.80	4.2	0.87	0.12
Clouds	7.5	1.18	0.28	1.8	1.25	0.07
Twin Hills North	-	-	-	0.1	1.00	0.003
Clouds West	-	-	-	0.5	1.04	0.02
Kudu	-	-	-	0.9	0.66	0.02
Oryx	-	-	-	7.1	0.93	0.21
Total	**65.0**	**1.00**	**2.10**	**20.7**	**0.93**	**0.62**

The estimated block model has been tabulated at various cut-off grades (Table 14-17). This tabulation does not represent a Mineral Resource in any way and only serves to illustrate the nature of the mineralization and sensitivity to various cut-offs.

Table 14-17: Classified block model within the conceptual RPEEE pit shell at various cut-off grades

Cut-off grade (g/t Au)	Indicated			Inferred		
	Tonnes (Mt)	Grade (g/t Au)	Troy ounces (Moz)	Tonnes (Mt)	Grade (g/t Au)	Troy ounces (Moz)
0.4	66.2	0.99	2.11	21.3	0.92	0.63
0.5	**65.0**	**1.00**	**2.10**	**20.7**	**0.93**	**0.62**
0.6	60.5	1.04	2.01	18.5	0.97	0.58
0.7	52.3	1.10	1.84	14.8	1.05	0.50
0.8	42.4	1.18	1.60	11.2	1.15	0.41
0.9	32.9	1.27	1.35	8.4	1.25	0.34
1.0	25.2	1.37	1.11	6.3	1.35	0.27

14.15 Previous Mineral Resource Estimates

The previous Mineral Resource was reported as of 14 July 2021 (Table 14-18).

Table 14-18: Mineral Resource for the Twin Hills Gold Project at a 0.3 g/t Au cut-off as of 14 July 2021

Mineral Resource category	Tonnes (Mt)	Grade (g/t Au)	Troy ounces (Moz)
Indicated	14.0	0.98	0.44
Inferred	46.2	1.02	1.52

Notes:

- *Figures have been rounded to the appropriate level of precision for the reporting of Mineral Resources.*
- *Mineral Resources are stated as in situ dry tonnes; figures are reported in metric tonnes.*
- *The Mineral Resource has been classified under the guidelines of the CIM Definition Standards for Mineral Resources and Mineral Reserves and adopted by the CIM Council, and procedures for classifying the reported Mineral Resources were undertaken within the context of the Canadian Securities Administrators NI 43-101.*
- *The Mineral Resource is reported within a conceptual pit shell determined using a gold price of US$1,700/oz and conceptual parameters and costs to support assumptions relating to reasonable prospects for eventual economic extraction.*
- *Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.*
- *The exclusive exploration licences constituting the Twin Hills Project are owned 80%, 90% and 95% respectively by Osino. The total reported gold ounces attributable to Osino is 93.05%.*

15 Mineral Reserve Estimates

Given the material change in the Mineral Resources at the Project since the 2021 PEA, the results of the PEA are considered obsolete since the Project has no defined Mineral Reserves or Mineral Resources with proven potential economic viability. As such, until such time as the PFS is published, the Project can longer be regarded as an “Advanced Project”.

16 Mining Methods

Given the material change in the Mineral Resources at the Project since the 2021 PEA, the results of the PEA are considered obsolete since the Project has no defined Mineral Reserves or Mineral Resources with proven potential economic viability. As such, until such time as the PFS is published, the Project can longer be regarded as an "Advanced Project".

17 Recovery Methods

Given the material change in the Mineral Resources at the Project since the 2021 PEA, the results of the PEA are considered obsolete since the Project has no defined Mineral Reserves or Mineral Resources with proven potential economic viability. As such, until such time as the PFS is published, the Project can longer be regarded as an “Advanced Project”.

18 Project Infrastructure

Given the material change in the Mineral Resources at the Project since the 2021 PEA, the results of the PEA are considered obsolete since the Project has no defined Mineral Reserves or Mineral Resources with proven potential economic viability. As such, until such time as the PFS is published, the Project can longer be regarded as an “Advanced Project”.

19 Market Studies and Contracts

Given the material change in the Mineral Resources at the Project since the 2021 PEA, the results of the PEA are considered obsolete since the Project has no defined Mineral Reserves or Mineral Resources with proven potential economic viability. As such, until such time as the PFS is published, the Project can longer be regarded as an “Advanced Project”.

20 Environmental Studies, Permitting and Social or Community Impact

Given the material change in the Mineral Resources at the Project since the 2021 PEA, the results of the PEA are considered obsolete since the Project has no defined Mineral Reserves or Mineral Resources with proven potential economic viability. As such, until such time as the PFS is published, the Project can longer be regarded as an “Advanced Project”.

21 Capital and Operating Costs

Given the material change in the Mineral Resources at the Project since the 2021 PEA, the results of the PEA are considered obsolete since the Project has no defined Mineral Reserves or Mineral Resources with proven potential economic viability. As such, until such time as the PFS is published, the Project can longer be regarded as an “Advanced Project”.

22 Economic Analysis

Given the material change in the Mineral Resources at the Project since the 2021 PEA, the results of the PEA are considered obsolete since the Project has no defined Mineral Reserves or Mineral Resources with proven potential economic viability. As such, until such time as the PFS is published, the Project can longer be regarded as an “Advanced Project”. Details of the 2021 PEA are presented in Section 24.

23 Adjacent Properties

The only adjacent property, that can be considered, is the mining licence area of the Navachab gold mine. The Navachab gold mine and deposit is located within 10 km from parts of the Project licences. The mine is about 25 km southwest of the Twin Hills deposit.

The Navachab gold mine (currently owned and operated by the private mining group, QKR) was commissioned in 1989 by Anglo American. The mine was sold by AngloGold Ashanti to QKR in 2014. QKR does not publicly report Mineral Resources for Navachab.

The last publicly available Mineral Resource was reported by AngloGold Ashanti in 2013.

The authors for this Technical Report have been unable to verify the information above concerning the nearby mineral properties which was provided by Osino staff, and the information is not necessarily indicative of mineralization on the Project that is the subject of this Technical Report.

24 Other Relevant Data and Information

The 2021 PEA (Lycopodium, 2021) and the Mineral Resource underpinning the PEA has materially changed and many of the input assumptions of the 2021 PEA are no longer valid.

25 Interpretation and Conclusions

The Project comprises a number of gold occurrences, and the Twin Hills deposit, that are associated with orogenic gold mineralization along the KFZ. The Navachab gold mine is located about 25 km away from the Twin Hills deposit in a broadly similar geological setting. Systematic exploration along the KFZ by Osino has led to the generation of the MRE reported here. It has also identified numerous other gold occurrences that warrant further exploration and in excess of 20 km of mineralized strike has been discovered. A total of 801 drillholes for 167,597 m of drilling has been completed by Osino which informs the Mineral Resource. A total of 153,356 m of drilling were sampled and assayed and were used for the MRE. No reliance has been placed on historical drilling data, although a moderate amount of historical exploration was undertaken in the Project area and immediate surrounds by Anglo American and Bafex. A review of the QAQC results associated with the data generated by Osino coupled with a review of Osino's drilling, logging, sampling, and assay practices and procedures, indicates the data is acceptable for use in the MRE.

A substantial amount of metallurgical testwork has been carried out by Osino and demonstrates potential gold recoveries of 80% to >90% using CIL coupled with gravitational gold recoveries. The deposit is considered to be reasonably mineralogically consistent and mineralized material is classified as "medium to hard".

25.1 Risks

25.1.1 General Risks

Although not currently evident, environmental, permitting, legal, title, taxation, socio-economic, and political risk issues could potentially affect access, title, or the right to perform the work recommended in this report.

25.1.2 Exploration Risk

A key risk, common to all exploration companies, is that the targeted mineralization type may not be discovered, or if discovered, may not be of sufficient grade and/or tonnage to warrant commercial exploitation. Exploration risk associated with strike, plunge and downdip extensions of known mineralization at the Project is considered reasonably low, given the success of drilling activities to date and an understanding of the geological setting of mineralization. Hitherto untested targets at the Project carry higher exploration risk, in common with other exploration projects. The geological setting of mineralization is well understood, and the success of the targeting rationale used by Osino has, to some extent however, reduced the risk associated with these other targets.

25.1.3 Mineral Resource Risk

Approximately 23% of the Mineral Resource ounces reported for the Project are classified as Inferred. An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply, but not verify, geological and grade continuity. Inferred Mineral Resources have the lowest level of confidence of all the categories.

The quantity and grade of the Inferred Mineral Resource would likely change with the addition of infill drilling, as mineralization (volume) could be added or removed from the current interpretation based on the additional data.

25.2 Opportunities

CSA Global considers there to be potential opportunities at the Project as follows:

- Additional discovery potential within the Project area at the numerous occurrences and targets delineated along the KFZ and on the Dobbelsberg Dome by Osino. There are a series of soil anomalies to the east of the Twin Hills deposits along the KFZ at Twin Hills East, OJW, OJW South and Rheinsheim which remain to be drill tested. In addition, the newly delineated Dobbelsberg calcrete and Puff Adder soil anomalies on the Dobbelsberg Dome, approximately 2 km south of Bulge should be drill tested as soon as possible. The bedrock anomaly delineated at Kranzberg to the southwest of the Twin Hills deposits should be followed up with further bedrock sampling and drilling. The early work carried out at Goldkuppe, Oasis and Wedge should be reviewed and further work considered, especially in the area around the large north-south structure between Goldkuppe and Oasis.

- The conceptual pit shell used to report the Mineral Resource in order to satisfy RPEEE, resulted in the majority of the block model being reported as Mineral Resource. This suggests that undrilled material below the current RPEEE pit shell could potentially satisfy RPEEE requirements and that the deposit is effectively open at depth.
- It is reasonable to expect that majority of the Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued infill drilling.

26 Recommendations

The exploration results, the MRE documented in this report, as well as the results of the metallurgical work undertaken on mineralized samples from the Project, supports ongoing exploration and additional study work being undertaken at the Project.

These recommendations are grouped into overarching workstreams and may be conducted concurrently.

26.1 Exploration

26.1.1 Quality Assurance/Quality Control

Osino should consider the use of commercially prepared blank material (as opposed to the current river sand) to monitor potential contamination more precisely during sample preparation and assay.

The decreasing precision of pulp duplicates is of concern and must be closely monitored in future.

26.1.2 Infill Drilling

Infill drilling, aimed at increasing the confidence of the Mineral Resources disclosed in this report, should be undertaken to support future economic studies. The Qualified Person notes that Osino is currently working towards a PFS that is supported by the current MRE. This PFS is a more advanced study requiring higher confidence Mineral Resources to allow the conversion of Mineral Resources to Mineral Reserves. Osino has developed a 24,257 m infill program to satisfy these requirements that has been reviewed by CSA Global, to be executed in Q2 and Q3 of 2022. The general premise of the infill program is to infill the current nominal 50 m x 50 m drill spacing at Oryx, Kudu, Clouds West and Twin Hills North with a staggered grid, resulting in an effective drillhole spacing of 32 m to 35 m. In addition, the infill program aims to step out on the 50 m x 50 m grid at Bulge, Twin Hills Central and Clouds, to expand the current Mineral Resource. Certain areas may be drilled at a closer spacing to ensure a minimum Indicated Mineral Resource classification. The Qualified Person notes that should deeper drilling establish grade and mineralization continuity, this deeper material may satisfy RPEEE requirements, and it is therefore recommended that some deeper drilling be undertaken in order to test this.

26.1.3 Exploration Drilling

Numerous targets located along the KFZ and associated splays as well as the Dobbelsberg anticline to the south of Twin Hills Central and Bulge, have been defined during systematic exploration at the Project and warrant drill testing (Figure 26-1). Drilling of some of these targets has already commenced. The program, which has been prepared by Osino and reviewed by CSA Global, is considered appropriate for the advancement of the Project, with the view to adding strike extent to the currently defined Mineral Resource. The proposed drilling metreage for these targets, together with the targeting rationale for these targets, are presented in Figure 26-1 and Table 26-1.

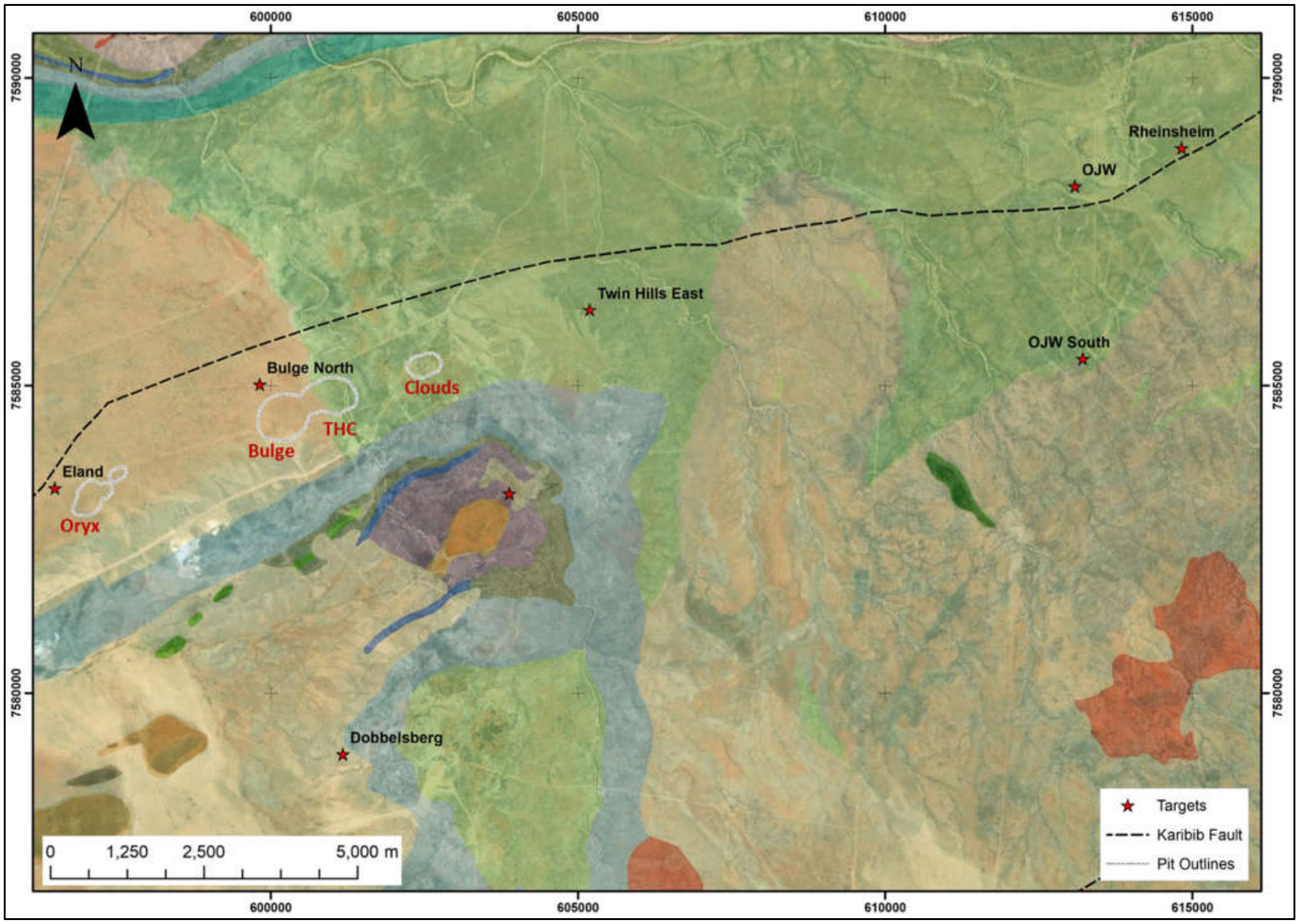


Figure 26-1: Exploration drilling targets at the Project

Table 26-1: Planned exploration drilling

Target name	Planned metres (RC)	Planned metres (diamond)	Priority	Targeting vectors
Dobbelsberg	1,500	1,800	1	Eastern end of anticline hosting Navachab gold mine. Surface geochemical anomaly associated with fold closure hosted within preferential lithologies.
Eland/Terminals	1,200	2,000	1	Follow-up on potential western extension of Oryx mineralization along structural corridor.
Bulge North	800	400	1	Geochem anomaly along lithological contact.
Puff Adder	600	800	1	Eastern end of anticline hosting Navachab gold mine. Geochemical anomaly.
OJW South	500	800	2	Karibib fault extension along preferential lithologies, follow-up on surface geochemical anomaly.
Twin Hills East	400	600	2	Hosted along Karibib Fault extension from Clouds, follow-up on geochemical anomaly.
OJW	0	400	2	Karibib fault extension along preferential lithologies, follow-up trench geochemical anomalies.
Oasis	600	600	3	Follow-up of surface geochemical and drill anomalies.
Rheinsheim	800	400	3	Karibib fault extension along preferential lithologies, follow-up geochemical and drill anomalies.
Total	**6,400**	**7,800**		

26.1.4 Exploration Budget

Osino has compiled a working budget, based on actual costs incurred to date, for the completion of its exploration and infill drill program. The unit costs and total costs are provided in Table 26-2.

Table 26-2: Exploration and resource drilling budget (C$)

Drill project	**Total metres**	**Diamond (m)**	**RC (m)**
Resource infill	24,257	13,300	10,957
Exploration	14,200	7,800	6,400
Total	**38,457**	**21,100**	**17,357**
Drill project	**Total (C$)**	**Diamond (C$)**	**RC (C$)**
Resource infill	$3,236,387	$2,370,128	$866,259
Exploration	$1,895,983	$1,390,000	$505,983
Total	**$5,132,370**	**$3,760,128**	**$1,372,241**
Unit costs (C$)			
Diamond	$148/m		
RC	$51/m		
Assay	$24/m		
RC consumables	$4/m		
Diamond consumables	$6/m		

26.2 Study Work

Osino is currently working towards a PFS and have prepared a budget that includes provision for consulting fees, metallurgical, geohydrological, civil and geotechnical testwork as well as ongoing environmental studies. The total budget allocated to the PFS is C$1.52 million.

26.3 Mineral Resource Estimate

Infill drilling is recommended to upgrade the classification of the Inferred Mineral Resource. Additional closer spaced infill drilling will be required to test the requirements for Measured Mineral Resources. This could take the form of a potential grade control drill spacing and orientation. The infill drilling is budgeted for in Table 26-2.

Alternative estimation methods, such as localized uniform conditioning, a recoverable resource approach, should be investigated. A total budget of C$6.7 million is required to execute all of the contemplated workstreams.

27 References

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28 Glossary

Below are brief descriptions of some terms used in this report. For further information or for terms that are not described here, please refer to internet sources such as Wikipedia (www.wikipedia.org).

atomic absorption spectrometry (AAS)	Detects elements in either liquid or solid samples through the application of characteristic wavelengths of electromagnetic radiation from a light source.
accretionary	Mass of sediments and rock fragments which has accumulated by accretion.
acid (composition)	Either siliceous, having a high content of silica (SiO_2).
aeromagnetic survey	Geophysical survey carried out using a magnetometer aboard or towed behind an aircraft.
alkaline (composition)	Sodium rich, with a relatively high ratio of alkalis to silica (SiO_2).
alteration (geological)	Any change in the mineralogical composition of a rock brought about by physical or chemical means.
amphibolite	Rocks composed mainly of amphibole and plagioclase feldspar, with little or no quartz.
amphibolite facies	Moderate to high metamorphic facies corresponding to temperatures of 500–800°C and 20–80 kbar (crustal depths of 5–30 km).
anticline	A fold in a sequence of rock layers in which the older rock layers are found in the centre.
aqua regia	Acid used to dissolve the noble metals gold and platinum during assaying.
arsenopyrite	An iron arsenic sulphide with a chemical composition of FeAsS.
back-arc	Submarine basins associated with island arcs and subduction zones.
banded iron formation	Distinctive units of sedimentary rock consisting of alternating layers of iron oxides and iron-poor chert.
batholith	A large mass >100 km^2 of intrusive igneous rock.
blank	A standardized waste sample used for QAQC of assay laboratory processes.
calcareous	Mostly or partly composed of calcium carbonate.
calcite	A rock-forming mineral with a chemical formula of $CaCO_3$.
calcrete	Calcium-rich duricrust.
calc-silicate	A rock produced by metasomatic alteration of existing rocks in which calcium silicate minerals such as diopside and wollastonite are produced.
carbon in leach (CIL)	A method of recovering gold and silver from fine ground ore by simultaneous dissolution and adsorption of the precious metals onto fine, activated carbon in an agitated tank of ore solids/solution slurry.
carbon in pulp (CIP)	An extraction technique for the recovery of gold which has been liberated into a cyanide solution as part of the gold cyanidation process.
chalcopyrite	A brass-yellow mineral with a chemical composition of $CuFeS_2$.

craton	The stable interior portion of a continent characteristically composed of ancient crystalline basement rock.
Cretaceous	A geological period in the Mesozoic Era from 145.5–65.5 million years ago.
certified reference material (CRM)	A prepared sample with a known concentration of the element of interest.
cyanidation	A hydrometallurgical technique for extracting gold from low-grade ore.
deportment	A comprehensive and quantitative mineralogical description.
dextral fault	Fault with right-lateral strike-parallel displacement component of slip.
diamond core drilling	Drilling that uses a rotary drill with a diamond drill bit.
disconformity	A break in a sedimentary sequence that does not involve a difference of inclination between the strata on each side of the break.
disseminated sulphides	Metal sulphide deposit that consists of clots or patches of sulphides in the country rocks.
dolomite	An anhydrous carbonate mineral composed of calcium magnesium carbonate, ideally $CaMg(CO_3)_2$.
dolomitic	Descriptive of limestone or marble rich in magnesium carbonate.
dropstone	Isolated fragments of rock found within finer-grained water-deposited sedimentary rocks.
electromagnetic survey (EM)	A geophysical imaging technique that uses the principle of induction to measure the electrical conductivity of the subsurface.
electrowinning	Also called electroextraction, is the electrodeposition of metals from their ores that have been put in solution via a process commonly referred to as leaching.
elution	The process of extracting one material from another by washing with a solvent.
endemic	Native and restricted to a certain place.
felsic volcanic	Rock with high silica (SiO_2) content from 62 wt% to 78 wt%.
flood basalt	The result of a giant volcanic eruption or series of eruptions that cover large stretches of land or the ocean floor with basalt lava.
fold	A stack of originally planar surfaces, such as sedimentary strata, that are bent or curved during permanent deformation.
fold axial plane	The plane or surface that divides the fold as symmetrically as possible.
fold axis	The intersection of the axial plane with one of the strata of which the fold is composed.
gabbro	A coarse-grained, dark-coloured, intrusive igneous rock.
garnet	A group of silicate minerals.
glaciogenic	Derived from glaciers (or ice-sheets).
granite	A coarse-grained igneous rock composed mostly of quartz, alkali feldspar, and plagioclase.
gravity survey	A geophysical imaging technique that measures localized variations in the Earth's gravitational field using a gravity meter.

greenschist facies	Low to medium metamorphic facies corresponding to temperatures of about 300–500°C and pressures of 3–20 kbar (crustal depths of 8–50 km).
greenstone	A field term applied to any compact, dark green, altered, or metamorphosed basic igneous rock.
greywacke	A variety of sandstone generally characterized by its hardness, dark colour, and poorly sorted angular grains of quartz, feldspar, and small rock fragments or lithic fragments set in a compact, clay-fine matrix.
grit (rock type)	Sedimentary rock that consists of angular sand-sized grains and small pebbles.
heap leach	An industrial mining process used to extract precious metals from ore using a series of chemical reactions that absorb specific minerals and re-separate them after their division from other earth materials.
HQ (core diameter)	Core with 63.5 mm diameter.
ICP-MS	Inductively coupled plasma mass spectrometry. A type of mass spectrometry that uses plasma to ionize the sample.
ICP-OES	Inductively coupled plasma optical emission spectrometry. A type of spectrometry that used characteristic emission spectra to analyze for elements of interest.
Indicated Mineral Resource	Part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit.
induced polarization (IP)	A geophysical imaging technique used to identify the electrical chargeability of subsurface materials.
Inferred Mineral Resource	Part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological, and grade continuity. The estimate is based on limited information.
intrusive	Rock formed when magma penetrates existing rock, crystallizes, and solidifies underground to form intrusions, such as batholiths, dikes, or sills.
isoclinal fold	A fold in sedimentary rocks where the axial surface and limbs slope in the same direction and at approximately the same angle
I-type granite	A category of granites originating from igneous sources.
Jurassic	The period of the Mesozoic era between the Triassic and the Cretaceous.
kilowatt	A measure of power – 1,000 watts.
lineament	Linear feature in a landscape that is an expression of an underlying geological structure such as a fault, fracture, or joint.
mafic	A silicate mineral or igneous rock rich in magnesium and iron.
marble	Metamorphosed limestone.
mass pull	The percentage of the material (mass) sent to a processing method.
massive sulphide	Metal sulphide ore deposit which consists almost entirely of sulphides.
meta-sedimentary	A rock of sedimentary origin that has been subjected to metamorphism.

mixtite	Mixture of clay, pebbles, and boulders deposited by ice sheets.
modal	Whole-rock chemical composition.
megawatt (MW)	A measure of power – 1,000,000 watts.
Neoproterozoic	The unit of geologic time from 1,000 million to 541 million years ago.
orogen or orogenic belt	Develops when a continental plate crumples and is uplifted to form one or more mountain ranges.
orogenic	Orogenic (mountain-building) belts formed wherever plates converged.
Pan African	A long interval of mountain building, rifting, and reorganization spanning most of the Neoproterozoic Era.
parasitic fold	A fold of small wavelength and amplitude which usually occurs in a systematic form superimposed on folds of larger wavelength.
pegmatite	An exceptionally coarse-grained plutonic igneous rock, commonly with the mineralogical composition of granite.
pelitic	A metamorphosed fine-grained sedimentary rock, i.e. mudstone or siltstone.
post-tectonic	A process or event which occurs after deformation.
PQ (core diameter)	Core with 85 mm diameter.
pyribole	Any mineral of either the pyroxene or amphibole groups.
pyrite	A brass-yellow mineral with the chemical composition of iron sulphide (FeS_2).
pyrrhotite	An iron sulphide mineral with the formula $Fe_{(1-x)}S$ (x = 0 to 0.2).
quartzite	A hard, non-foliated metamorphic rock that was originally pure quartz sandstone.
rotary air blast (RAB)	Percussion rotary air blast drilling.
reverse circulation (RC)	Reverse circulation drilling using a percussion hammer.
reagent	A substance or mixture for use in chemical analysis.
riffle splitter	A static and fractional sub-sampling device that can be used for dividing a lot of dry particulate material into two half-lots.
rifting	The splitting apart of a single tectonic plate into two or more tectonic plates separated by divergent plate boundaries.
ring complex	An association of intrusive rocks in the form of ring-dykes, cone and roof-sheets, plugs, and linear dyke swarms.
riparian	Situated on the banks of a river.
saddle reef	A mineral deposit associated with the crest of an anticlinal fold and following the bedding planes.
schist	A medium-grade metamorphic rock formed from mudstone or shale.
selvage	A zone of altered rock at the edge of a rock mass.
sericite	A common alteration mineral of orthoclase or plagioclase feldspars in areas that have been subjected to hydrothermal alteration.

sheath fold	Closed folds, resembling sheaths or a sock, former in high-strain environments.
siliciclastic	Clastic noncarbonate sedimentary rocks that are almost exclusively silica-bearing.
silicification	A process in which the original minerals of a rock become replaced by silicate minerals.
skarn	Hard, coarse-grained metamorphic rocks that form by a process called metasomatism.
sparging	Gas flushing in metallurgy, a technique in which a gas is bubbled through a liquid in order to remove other dissolved gas(es) and/or dissolved volatile liquid(s) from that liquid.
sulphide	A group of compounds of sulphur with one or more metals.
suture zone	A linear belt of intense deformation, where distinct terranes, or tectonic units with different plate tectonic, metamorphic, and paleogeographic histories join together.
syncline	A fold in a sequence of rock layers in which the younger rock layers are found in the centre.
syn-tectonic	A geologic process or event occurring during any kind of tectonic activity, or of a rock or feature so formed.
tailings	Materials left over after the process of separating the valuable fraction from the uneconomic fraction (gangue) of an ore.
thrust	A fault is a break in the Earth's crust, across which older rocks are pushed above younger rocks.
turbidite	The geologic deposit of a turbidity current, which is a type of amalgamation of fluidal and sediment gravity flow responsible for distributing vast amounts of clastic sediment into the deep ocean.
variogram	A description of the spatial continuity of the data.

29 Abbreviations and Units of Measurement

°	degrees
°C	degrees Celsius
1VD	first vertical derivative
3D	three dimensional
AA	atomic absorption
AAS	atomic absorption spectrometry
Actlabs	Activation Laboratories Ltd
Ag	silver
Ai	Abrasion index
ALS	ALS Global Laboratory in Johannesburg, South Africa
Au	gold
Bafex	Bafex Exploration
BBWi	Bond Ball Mill Work Index
BRWi	Bond Rod Mill Work Index
C$	Canadian dollars
CIL	carbon-in-leach
CIM	Canadian Institute of Mining, Metallurgy and Petroleum
cm	centimetre(s)
CRM	certified reference material
CSA Global	CSA Global South Africa (Pty) Ltd
CV	coefficient of variation
CWi	Crushing Work index
DD	diamond drill core
DTM	digital terrain model
ECC	Environmental Compliance Consultancy
EM	electromagnetic(s)
EPL	Exclusive Prospecting Licence
ESIA	environmental and social impact assessment
g	gram(s)
g/cm^3	grams per cubic centimetre
g/L	grams per litre
g/t	grams per tonne
gm	gram meter
GPS	global positioning system
GRG	gravity recoverable gold
ha	hectare(s)
ICP-MS	inductively coupled plasma with mass spectroscopy
ICP-OES	inductively coupled plasma with optical emission spectrometry

IP	induced polarization
KFZ	Karibib Fault Zone
kg	kilogram(s)
kg/t	kilograms per tonne
km	kilometres
km^2	square kilometres
kV	kilovolts
kW	kilowatt
kWh/t	kilowatt hours per tonne
L	litre
LIMS	laboratory information management system
LMA	Lycopodium Minerals Africa (Pty) Ltd
LOM	life of mine
Lycopodium	Lycopodium Minerals Canada Ltd
m	metre(s)
M	million(s)
m^2	square metres
m^3	cubic metres
Ma	million years before present
MAWLR	Ministry of Agriculture, Water and Land Reform
MET	Ministry of Environment and Tourism
mg	milligrams
mg/L/min	milligrams per litre per minute
mm	millimetres
MME	Ministry of Mines and Energy
Moz	million ounces
MRE	Mineral Resource estimate
Mt	million tonnes
Mtpa	million tonnes per annum
MW	megawatts
N$	Namibian dollars
NI 43-101	National Instrument 43-101 – Standards for Disclosure for Mineral Projects
NPV	net present value
Osino	Osino Resources Corporation
oz	ounce(s)
$PbNO_3$	lead nitrate
PEA	preliminary economic assessment
PFS	prefeasibility study
ppb	parts per billion
ppm	parts per million
QAQC	quality assurance/quality control

RAB	rotary air blast
RC	reverse circulation
ROM	run of mine
RPEEE	reasonable prospects for eventual economic extraction
RTX	Real Time eXtended
SBAC	semi-autogenous ball mill crusher
SFA	screen fire assay
SGS	SGS South Africa (Pty) Ltd
t	tonne(s)
$t/m^2/h$	tonnes per square metre per hour
t/m^3	tonnes per cubic metre
tpa	tonnes per annum
tph	tonnes per hour
US$	United States of America dollars

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