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The Extractor
Mapping Namibia's Mineral Resources

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Windhoek sits on copper & a bit of gold

Beneath the capital's hills lies a century-old copper belt — 10 mines, six active projects, and more than 700,000 tonnes from the 1857 discovery of Matchless to the modern Omitiomire and Ongombo projects.

Featured

Matchless, Otjihase, Hope Copper-Gold, Gorob Copper-Gold, Ongombo Copper Project, Omitiomire Copper, Rehoboth-Aris Copper Belt, Gocheganas-Dordabis Copper Zone, Klein Aub Copper Mine, Seeis-Groot Aub Corridor, Kaanjoo and Esser Hook Prospects

Inside

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COVER STORY

Windhoek Sits on Copper

The greater Windhoek copper belt hosts more than ten known copper deposits and prospects containing a combined total of over 140 million tonnes of ore and approximately 700,000 tonnes of contained copper metal, ranking it among Namibia's most mineralised inland regions.

The principal deposits include Matchless, Otjihase, Omitiomire, Hope, and Gorob, supported by more minor but geologically related prospects such as Klein Aub, Seeis–Groot Aub, Kaanjoo, Esser Hook, Gocheganas–Dordabis, and Rehoboth–Aris.

> **Over 140 million tonnes of ore and 700,000 tonnes of contained copper make the Windhoek Copper Belt one of Namibia's most mineralised inland regions.**

The first discovery in the belt was made in 1850, when prospectors identified copper-bearing outcrops at Matchless, about 30 kilometres southwest of Windhoek. The deposit was mined intermittently for more than a century, with early production smelted on

site and later railed to the coast for export.

Records from the Geological Survey of Namibia show that Matchless produced an estimated 30,000 tonnes of copper metal before operations ceased.

The mine's sulphide ore contained mainly chalcopyrite and pyrrhotite hosted in amphibolite, characteristic of the Damara Orogenic Belt.

By the 1960s, attention shifted eastward toward Otjihase, near Seeis, where Tsumeb Corporation Limited (TCL) developed an underground mine accessed by declines and sublevels.

Ore production began in the mid-1970s and continued intermittently until the early 1980s, yielding several thousand tonnes of copper concentrate annually.

The mine was later reopened by Weatherly International plc, which operated Otjihase and Matchless as a single unit until 2015, when operations were suspended due to underground flooding and a decline in copper prices.

The two mines were subsequently acquired by Consolidated Copper Corp (CCC), which holds the assets under a restart study for modern mechanised operations.

Farther south near Rehoboth, the Hope and Gorob deposits mark the southern continuation of the same geological system.

Originally delineated by Gold Fields Namibia in the 1970s, they are now controlled by Bezant

Eco Atlantic, Tower Resources, Pancontinental, and Chevron are leading the new exploration wave.

Resources through Hope and Gorob Mining (Pty) Ltd.

The deposits contain a combined 10.2 million tonnes grading 1.9% copper and 0.3 g/t gold, representing roughly 194,000 tonnes of contained copper.

The mineralisation is hosted in volcanic and sedimentary rocks of the Matchless Amphibolite Belt and exhibits volcanogenic massive sulphide (VMS) characteristics similar to those at Matchless and Otjihase.

To the northeast, the Omitiomire copper deposit, managed by Craton Mining and Exploration (Pty) Ltd, a subsidiary of Omico Mining Corp, forms the most significant single copper reserve in the central Namibian region.

The project's 2024 Bankable Feasibility Study defined 102 million tonnes grading 0.51% copper, equivalent to 516,000 tonnes of contained copper metal, with potential for expansion through deeper exploration.

Omitiomire is planned as a large-scale open-pit operation employing heap leaching and solvent extraction–electrowinning (SX-EW) to produce refined copper cathode.

Smaller historical

The Geological Survey of Namibia classifies the Windhoek Copper Belt as one of the country's most prospective zones for new volcanogenic and shear-hosted discoveries.

mines and prospects complete the Windhoek copper picture. The Klein Aub Mine, located approximately 90 kilometres south of the city, produced approximately 55,000 tonnes of copper between 1966 and 1987 from high-grade underground workings that averaged 2–3% Cu.

Other known occurrences include Seeis–Groot Aub, Kaanjoo, Esser Hook, Gocheganas–Dordabis, and Rehoboth–Aris, where surface sampling and shallow trenching have recorded grades ranging between 0.3 and 1.0% copper in schist and quartz–carbonate veins.

Collectively, when combining historical production with defined reserves and resources, the Windhoek copper belt has yielded and delineated over 700,000 tonnes of contained copper metal.

Cumulative ore inventories across the district now exceed 140 million tonnes, establishing the area as a significant inland copper province within the Damara Supergroup.

From 19th-century smelters at Matchless to modern SX–EW plans at Omitiomire, the Windhoek Copper Belt reflects 175 years of evolving copper development.

The mineralisation is predominantly sulphide-hosted in schist and amphibolite, with secondary enrichment in weathered zones forming visible malachite and azurite.

Infrastructure advantages have long favoured the district. The Windhoek basin is crossed by Namibia's central east–west railway line, linking Gobabis and Walvis Bay, supplemented by paved highways, a grid power system, and water supply infrastructure.

This proximity to logistics centres allows exploration and mining companies to operate within short distances of processing and export routes.

Active exploration continues across the region. CCC is undertaking mine restart assessments at Matchless and Otjihase, Omico Mining is advancing feasibility work at Omitiomire, and Bezant is preparing development plans for Hope and Gorob.

Meanwhile, Namibian prospectors and junior licence holders continue surface work around Seeis, Kaanjoo, and Dordabis.

The Geological Survey of Namibia classifies the belt as one of the country's most prospective zones for additional volcanogenic and shear-hosted copper deposits.

From the early workings of Matchless in the 19th century to modern feasibility studies at Omitiomire and Hope, the Khomas region's geological record shows a consistent trend: copper mineralisation extends across more than 200 kilometres surrounding the capital.

The combined tonnages and grades confirm that Windhoek sits atop one of southern Africa's oldest and most enduring copper provinces.

The Nama and the first copper mine

Nama pastoral communities living across the Khomas Highlands were the first to recognise the copper-stained rocks around Matchless.

Oral accounts preserved in the National Archives of Namibia record how local herders collected green and red mineral fragments from streambeds for ornamentation and trade.

When German prospector Heinrich Vogelsang, a trader associated with the Rhenish Mission Society, reached the area in 1857, he relied on Nama guides who already knew the mineralised hills.

According to archival notes cited by historian Brigitte Lau in the Namibia Scientific Society Journal (1987), Vogelsang's reconnaissance toward Matchless was authorised

Under German colonial rule, Matchless became Namibia's first organised copper mine, operated by the Deutsch-Südwestafrikanische Bergbaugesellschaft.

by Chief Jonker Afrikaner, who controlled access to the central highlands and permitted traders and missionaries to move through his territory in exchange for goods.

Early copper ore was mined by hand and hauled by ox-wagon toward Walvis Bay, where it was shipped to Europe via Cape Town.

As noted by Rüdiger Kock in the Communications of the Geological Survey of Namibia (1991), the ore was smelted locally using charcoal furnaces to produce matte copper and slag that could be more easily transported.

Formal mining began under German colonial administration in the late 19th century.

The Deutsch-Südwestafrikanische Bergbaugesellschaft (German South West African Mining Company) developed small shafts at Matchless and Kupferberg. Production remained small-scale but was included in export records from 1898 to 1905, according to the National Archives of Namibia.

Nama and Baster workers from Rehoboth made up most of the labour force. Records in the Evangelical Lutheran Church Archives (Barmen Collection, Germany) show that Chief Paul Fredericks of Rehoboth negotiated grazing and work rights in the Matchless area for his followers.

Once German authorities issued exclusive mining titles after 1884, local communities were gradually displaced.

Systematic exploration began in the 1960s, when Tsumeb Corporation Limited (TCL) identified Matchless as part of the

Nama and Baster workers from Rehoboth formed the core of the early mining labour force, negotiating grazing and work rights through Chief Paul Fredericks.

Matchless Amphibolite Belt, a sequence of metamorphosed volcanic and sedimentary rocks southwest of Windhoek.

TCL mined underground sulphide ore until December 1983, when it closed the mine because of flooding and falling copper prices.

After TCL's collapse in the 1990s, the mine passed to Ongopolo Mining and Processing Ltd, which kept it under care and maintenance.

In 2006, Weatherly International plc acquired Ongopolo, combining

Matchless and Otjihase under its Central Operations.

Weatherly mined the Matchless Western Extension between 2011 and 2015, extracting about 172,000 tonnes of ore at 1.9 per cent copper, producing roughly 3,000 tonnes of contained copper metal, according to Weatherly's 2015 annual report.

Operations were suspended in September 2015 due to renewed flooding and a decline in global prices.

In 2023, the mine was acquired by Consolidated Copper Corp (CCC), a private company that also owns Otjihase. CCC is preparing a ten-year restart plan based on new feasibility studies and an electrified underground mining design, according to filings with the Ministry of Mines and Energy (2024).

Nama pastoral communities were the first to recognise the copper-stained rocks around Matchless, collecting green and red fragments long before European prospectors arrived.

Throughout its history, Matchless has faced recurring operational and geological challenges. Flooding has been the most persistent, caused by continuous groundwater inflow through fractured schists and amphibolites. Both TCL in the 1980s and Weatherly in 2015 cited high water inflows as the main factor behind mine closure.

Low copper prices have also affected operations. TCL halted production in 1983 when copper prices fell below US$0.70 per pound, and Weatherly did the same in 2015 when prices dropped to about US$2.20 per pound.

The narrow and irregular ore bodies, typical of volcanogenic

massive sulphide deposits, have made mechanisation difficult and increased mining costs.

Ownership instability has added to the difficulties, as the mine has passed through several companies over the decades, each constrained by financing and infrastructure limitations.

Environmental problems, including oxidised tailings, water contamination, and abandoned shafts, have required monitoring and rehabilitation under Namibia's environmental regulations.

Matchless is a volcanogenic massive sulphide (VMS) deposit hosted in amphibolites and schists of the Kuiseb Formation. Copper occurs mainly as chalcopyrite with minor pyrrhotite and pyrite.

The deposit extends for several kilometres and remains open at depth. Combined resources for Matchless and Otjihase, according to CCC's 2023 technical statement, total 4.5 million tonnes grading 2.25 per cent copper, or about 101,000 tonnes of contained copper metal under JORC 2012 standards.

TCL's 1980s production reports record more than 30,000 tonnes of copper mined before 1983.

As of 2025, the mine remains on care and maintenance while CCC undertakes rehabilitation and geological review. Dewatering of old workings and validation of historical resource models are planned for completion by 2026.

Matchless is Namibia's oldest documented copper mine. It introduced organised mining to the Khomas region and established the Matchless Belt as one of southern Africa's principal VMS terrains.

Archival, geological, and oral sources together confirm that the Nama people's early knowledge and participation formed the foundation for what became Namibia's first copper industry.

Hope: The copper twin of the Khomas highlands

Southwest of Windhoek, where the Khomas highlands roll toward Rehoboth and the hills open into dry riverbeds, lies a copper story that has slept for nearly half a century.

The Hope Copper-Gold Project, along with its sister deposit, Gorob, occupies a stretch of the Matchless Amphibolite Belt, the same geological corridor that hosts the historic Matchless and Otjihase mines, located closer to the capital.

The Hope deposit was first mapped and drilled by Gold Fields Namibia between 1976 and 1980, in search of a successor to the waning Matchless and Otjihase mines.

Today, Hope stands as one of Namibia's largest undeveloped base-metal deposits — a reminder that beneath the scrub and silence, the ground still holds the promise that first drew geologists here in the 1970s.

The Hope deposit was first mapped and drilled by Gold Fields Namibia (Pty) Ltd between 1976 and 1980. According to archival records lodged with the Geological Survey of Namibia, the company identified a series of copper-gold-bearing sulphide

lenses hosted within metamorphosed volcanic rocks of the Kuiseb Formation. The discovery was part of Gold Fields' broader programme to locate a successor to the waning Matchless and Otjihase mines.

Extensive trenching, geophysical surveys, and diamond drilling confirmed that Hope contained a wide zone of disseminated and massive sulphides, predominantly chalcopyrite and pyrite, with traces of gold and silver.

The deposit lies approximately 70 kilometres southwest of Windhoek, and its accessibility to both the capital and the coast made it one of the most strategically located exploration projects in the country.

Reports from Gold Fields' 1980 feasibility summary estimated an indicated resource of more than 4 million tonnes grading 1.5% copper and 0.3 g/t gold, with mineralisation extending along strike and down dip.

Ore samples were shipped to Tsumeb and South Africa for metallurgical testing, which confirmed that the copper was readily recoverable through flotation.

Despite promising results, the project stalled in the early 1980s. Political uncertainty, low copper prices, and the impending era of independence led Gold Fields to withdraw from Namibia, transferring its exploration data and rights back to the state.

For nearly two decades, the Hope area lay idle, its core samples stored in wooden crates at the Geological Survey in Windhoek.

Modern exploration resumed in the 2000s, when the licences were reissued under EPL 3140 to a series of Namibian entities before being acquired by Bezant Resources plc.

Gold Fields' early work confirmed a wide zone of copper–gold sulphides — chalcopyrite and pyrite with traces of silver — hosted in ancient volcanic rocks.

The company, listed on the London Stock Exchange, now controls both the Hope and Gorob deposits through its Namibian subsidiaries Hope and Gorob Mining (Pty) Ltd, which holds EPL 5796 / ML 246, and Hope Namibia Mineral Exploration (Pty) Ltd, which holds EPL 6605 and EPL 7170. Bezant

owns 70% of Hope and Gorob Mining and 80% of Hope Namibia Mineral Exploration. Mining Licence ML 246 was granted in 2025 and remains valid until 31 March 2040.

Bezant has undertaken an extensive re-evaluation using 3D geological modelling and modern geophysical imaging.

According to the company's 2023 Mineral Resource Statement, the combined Hope–Gorob Project hosts 10.2 million tonnes grading 1.9% copper and 0.3 g/t gold, containing approximately 193,000 tonnes of copper and 3 tonnes of gold under JORC 2012 classification. Within that total, the Hope deposit itself accounts for roughly 5.7 million tonnes at 1.8% copper, with higher grades in the central zones.

The geology of Hope is textbook volcanogenic massive sulphide (VMS) — layers of copper-bearing sulphides trapped between folded metamorphic rocks laid down by volcanic activity over 500 million years ago during the Damara Orogeny.

The ore occurs as disseminated chalcopyrite and pyrite, often forming thick lenses with widths of up to 20 metres. According to geologist André Olivier's technical paper for the Geological Survey of Namibia (2021), the deposit's structure and orientation suggest potential for additional parallel shoots to the west and north, which remain largely untested.

The site's proximity to the national grid, the Trans-Kalahari Highway, and Walvis Bay port makes it one of the most infrastructure-ready copper assets in Namibia. The project area also benefits from its closeness to Rehoboth and Windhoek, allowing access to a trained workforce and established logistics.

Historically, local Nama and Baster communities from the Rehoboth Reserve were among the first to assist Gold Fields' early survey teams.

Oral accounts preserved in regional archives at the National Museum of Namibia describe how residents helped clear roads, dig trenches, and transport drilling supplies by donkey wagon.

As mining activity expanded elsewhere, many families moved

north to work at Otjihase and Matchless, creating an unbroken social link across the entire Khomas Copper Belt.

As of 2025, the Hope project remains in the advanced exploration and feasibility stage. Bezant has completed updated metallurgical testing, confirming recovery rates exceeding 90% through conventional flotation, and has initiated an Environmental and Social Impact Assessment in consultation with the Ministry of Mines and Energy. The company's development plan envisions an initial open-pit operation transitioning to underground mining, supported by a modular concentrator.

Bezant Resources Executive Chairman Colin Bird said in 2024 that Hope and Gorob represent one of the most significant undeveloped copper-gold assets in Namibia, strategically located near Windhoek and Rehoboth with ready access to infrastructure, power, and people. When the deposits eventually enter production, they are expected to deliver between 8,000 and 10,000 tonnes of copper per year, positioning the southern Khomas region as a mid-tier producer that will feed into Namibia's green industrialisation drive.

For now, the old trenches and weathered drill collars are the only signs of the copper-rich horizons below. But to geologists and investors alike, Hope represents more than just another mineral deposit — it is a bridge between the early discoveries of the 1970s and Namibia's modern quest for sustainable mineral development.

Modern exploration revived Hope's legacy under Bezant Resources, which now controls both the Hope and Gorob deposits through Namibian subsidiaries.

From the first Gold Fields geologists who drilled into the Damara schists nearly fifty years ago to today's digital mapping and ESG-led feasibility studies, Hope remains aptly named: a sleeping copper giant whose time may soon come again.

Gorob: The other twin in Windhoek highlands

The Gorob copper-gold deposit, located approximately 85 kilometres southwest of Windhoek, near the old road to Rehoboth, could be said to be the other twin to the Hope deposit on the Windhoek highlands.

The deposit was first identified by Gold Fields Namibia (Pty) Ltd in 1974, during systematic base-metal exploration in the Khomas Highlands.

According to archival reports held by the Geological Survey of Namibia, Gold Fields discovered copper-bearing sulphides hosted in metamorphosed volcanic rocks of the Kuiseb Formation. The same geological belt produced the Matchless and Otjihase mines closer to Windhoek.

Between 1974 and 1979, Gold Fields drilled more than 60 diamond holes at Gorob, delineating a continuous sulphide zone extending over 1.5 kilometres.

The ore consisted mainly of chalcopyrite, pyrite, and pyrrhotite, typical of volcanogenic massive sulphide (VMS) systems formed over 500 million years ago during the Damara Orogeny.

Gold Fields Namibia first drilled Gorob in 1974, uncovering copper-bearing sulphides within the Kuiseb Formation of the Matchless Amphibolite Belt.

Gold Fields' internal reports from 1978 recorded grades ranging between 1.5% and 2.2% copper and up to 0.5 g/t gold.

By 1980, the company had prepared a small-scale mine plan and feasibility outline, proposing underground development and concentrate transport to the Tsumeb smelter.

However, falling copper prices and political uncertainty halted the project before it began production.

The licences later reverted to the state.

After Namibian independence, the Gorob area was re-licensed to local entities and eventually consolidated into Hope and Gorob Mining (Pty) Ltd.

The company's ownership is now held by Bezant Resources PLC, which controls 70%, with the remaining 30% held by Namibian partners, according to Bezant's 2024 project disclosure on the London Stock Exchange's RNS platform.

Bezant operates Gorob jointly with the nearby Hope deposit, about 20 kilometres to the north.

Together, they form the Hope & Gorob Copper-Gold Project, which is one of Namibia's most advanced undeveloped copper assets.

The licences covering the project include EPL 5796, EPL 6605, and EPL 7170, all held through Bezant's Namibian subsidiaries — Hope

Plans for an underground mine and Tsumeb concentrate shipment were drawn in 1980, but low prices and politics halted development before it began.

and Gorob Mining (Pty) Ltd and Hope Namibia Mineral Exploration (Pty) Ltd.

Mining Licence ML 246, covering both Hope and Gorob, was granted in 2025 and is valid until 31 March 2040.

The project also holds an Environmental Clearance Certificate issued in April 2025 under Namibia's

Environmental Management Act.

This certificate permits construction and limited early works pending final approval for mine development.

In May 2024, Bezant released an updated Mineral Resource Estimate reporting a combined total of 10.2 million tonnes at 1.9% copper and 0.3 g/t gold, with 4.5 million tonnes of that contained within Gorob.

The Gorob deposit alone holds approximately 94,000 tonnes of contained copper metal.

The project's geology mirrors that of the nearby Matchless and Otjihase mines, which lie within the same folded metamorphic sequence as the Matchless Amphibolite Belt.

Bezant's feasibility plan envisions a central plant producing 8,000–10,000 tonnes of copper per year from both Hope and Gorob.

The ore zones at Gorob strike northeast–southwest and dip steeply northwest, making them suitable for conventional underground mining.

Geophysical surveys conducted between 2022 and 2024 suggest the presence of additional, untested sulphide targets extending west of the main deposit.

Infrastructure advantages remain a key strength.

The site is situated near Rehoboth, within trucking distance of Windhoek, and offers access to the national grid, water resources, and skilled labour.

Feasibility studies released by Bezant Resources (2024) outline plans for a central processing plant capable of producing 8,000 to 10,000 tonnes of copper per year, which both the Hope and Gorob mines will feed.

Historical notes from Gold Fields' field

journals indicate that early trenching and drilling were supported by Nama and Baster residents from nearby Rehoboth settlements, who provided labour and transport using donkey-drawn wagons.

These communities continue to occupy land near the licence area and are expected to participate in future community consultations under Namibia's Environmental Management Act.

As of 2025, the Hope and Gorob project remains in the advanced feasibility stage.

Environmental and social impact assessments are ongoing, alongside engineering studies aimed at determining optimal mine sequencing and tailings management.

Gorob alone holds about 94,000 tonnes of contained copper metal, within a total resource of 10.2 million tonnes at 1.9% Cu and 0.3 g/t Au.

Bezant Resources' Executive Chairman Colin Bird, in a 2024 statement to investors, said the project represents a "viable near-term copper producer with excellent infrastructure and strong potential to expand."

The project's design includes provisions for solar hybrid power and dry-stack tailings, aligning with Namibia's green industrialisation framework.

Gorob's history spans five decades — from Gold Fields' first drill cores in the 1970s to its revival under Bezant's ownership.

It remains part of the same geological story that threads through Matchless, Otjihase, and Hope: a corridor of copper stretching beneath the hills south of Windhoek, marking Namibia's earliest inland mining frontier.

Otjihase: The copper vein beneath Windhoek's hills

Thirty kilometres east of Windhoek lies the Otjihase Mine — a name synonymous with both Namibia's industrial past and its quiet resilience in the face of global commodity cycles.

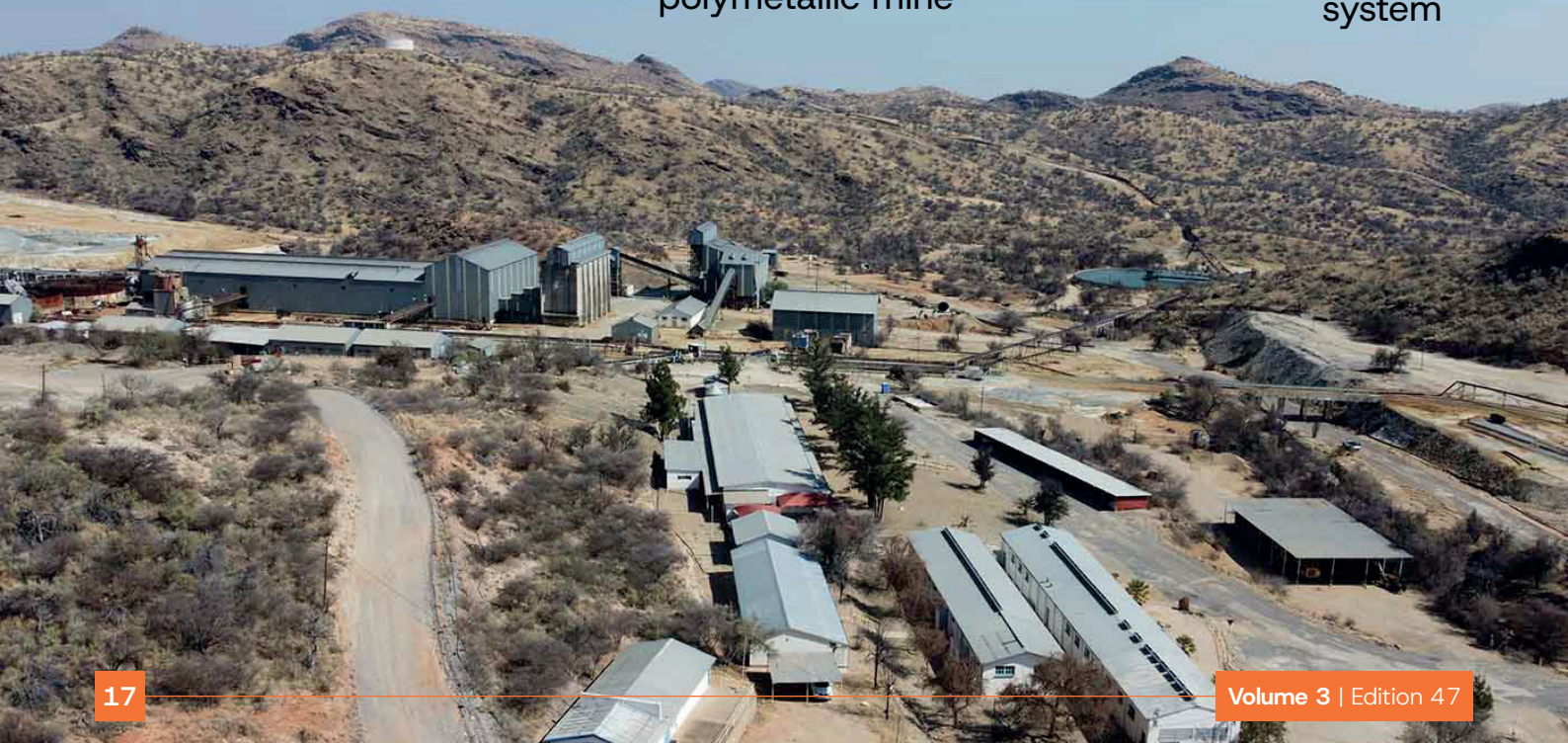
Alongside Matchless, Otjihase forms one of the twin anchors of the Khomas Copper Belt, a region that has supplied Namibia with ore, jobs, and experience stretching back nearly six decades.

Consolidated Copper Corp. (CCC) now holds the keys, planning a phased restart beginning with Otjihase due to its intact infrastructure.

The story of Otjihase begins in the early 1960s, when Tsumeb Corporation Limited (TCL), already renowned for its world-class polymetallic mine in northern Namibia, turned its attention to the copper-bearing horizons east of Windhoek.

Geophysical surveys conducted between 1962 and 1965 delineated a series of stratabound sulphide lenses hosted in schists and amphibolites — the same Kuiseb Formation rocks that carry mineralisation westward toward Matchless.

Drilling soon confirmed what prospectors had long suspected: Otjihase was a major copper system



waiting to be mined.

According to TCL's internal geological bulletins (1968–1972), the deposit consisted of several parallel ore zones containing chalcopyrite, pyrite, and pyrrhotite.

The main orebody stretched over two kilometres in strike length, dipping gently northward, with high-grade shoots of 2–3% copper at depth.

The company began development in 1970, sinking declines and constructing a processing plant designed to produce copper concentrate for export through Walvis Bay.

Mining began in 1973, with production stabilising at 30,000 to 40,000 tonnes of concentrate per year, according to archival mine reports held by the Geological Survey of Namibia.

Ore was hauled by truck and rail to Tsumeb, where it was smelted into blister copper for international markets. Otjihase quickly became one of central Namibia's largest employers, drawing workers from Windhoek's eastern settlements and surrounding farms.

By the 1980s, the Otjihase operation had matured into a cornerstone of TCL's copper portfolio. The mine's underground workings extended several hundred metres

Future operations will integrate solar power and efficient pumping systems — a blend of old veins and new energy.

below surface, with longhole stoping and backfilling employed to manage the narrow but continuous ore zones. However, as global copper prices weakened and groundwater inflows increased, operations became uneconomical. TCL closed Otjihase in 1983, placing it under

care and maintenance.

The mine remained idle for more than a decade until Ongopolo Mining & Processing Ltd, a Namibian successor to TCL, reactivated it in the late 1990s. Production resumed modestly, but the genuine revival came in 2006, when Weatherly International plc acquired Ongopolo and consolidated Otjihase with Matchless under its "Central Operations."

Between 2011 and 2015, Weatherly operated both mines concurrently, with ore from Otjihase being fed into a refurbished concentrator.

The 2015 Weatherly Annual Report recorded that Otjihase contributed the majority of the combined output of 172,000 tonnes of ore, containing 1.9% copper, mined from the two operations before the final suspension in September 2015. Weatherly cited persistent water inflows, power interruptions, and a depressed copper price below US$5,000 per tonne as the main factors behind the shutdown.

The National Archives of Namibia and former TCL records estimate that since its commissioning, Otjihase has produced over 30,000 tonnes of contained copper metal, making it one of Namibia's most productive inland copper mines outside Tsumeb.

Ownership passed to Consolidated Copper Corp. (CCC) in 2023, along with Matchless, under a transaction approved by Namibia's Competition Commission. According to CCC's 2023 technical statement, the combined Mineral Resource for Otjihase and Matchless stands at 4.5 million tonnes grading 2.25% copper, containing approximately 101,000 tonnes of copper metal. The company's updated feasibility studies, filed with the Ministry of Mines and Energy in 2024, propose a phased restart beginning with Otjihase due to its easier access, intact infrastructure, and proximity to Windhoek.

Otjihase's geology is classic volcanogenic massive sulphide (VMS), with lenses of sulphide ore sandwiched between metamorphosed volcanic layers. The host rocks are part of the Damara Orogenic Belt, formed over 500 million years ago during the collision of ancient

continental plates. The deposit remains open at depth, and CCC geologists believe there are extensions yet to be explored through drilling.

As of 2025, Otjihase remains on care and maintenance, with CCC completing environmental audits, shaft inspections, and updated mine designs for future underground operations.

The company plans to utilise energy-efficient pumping and ventilation systems, powered in part by solar installations near Windhoek. Discussions are also underway to employ Namibian contractors for the rehabilitation phase, creating local jobs and ensuring compliance with Namibia's local participation requirements.

Like Matchless, Otjihase

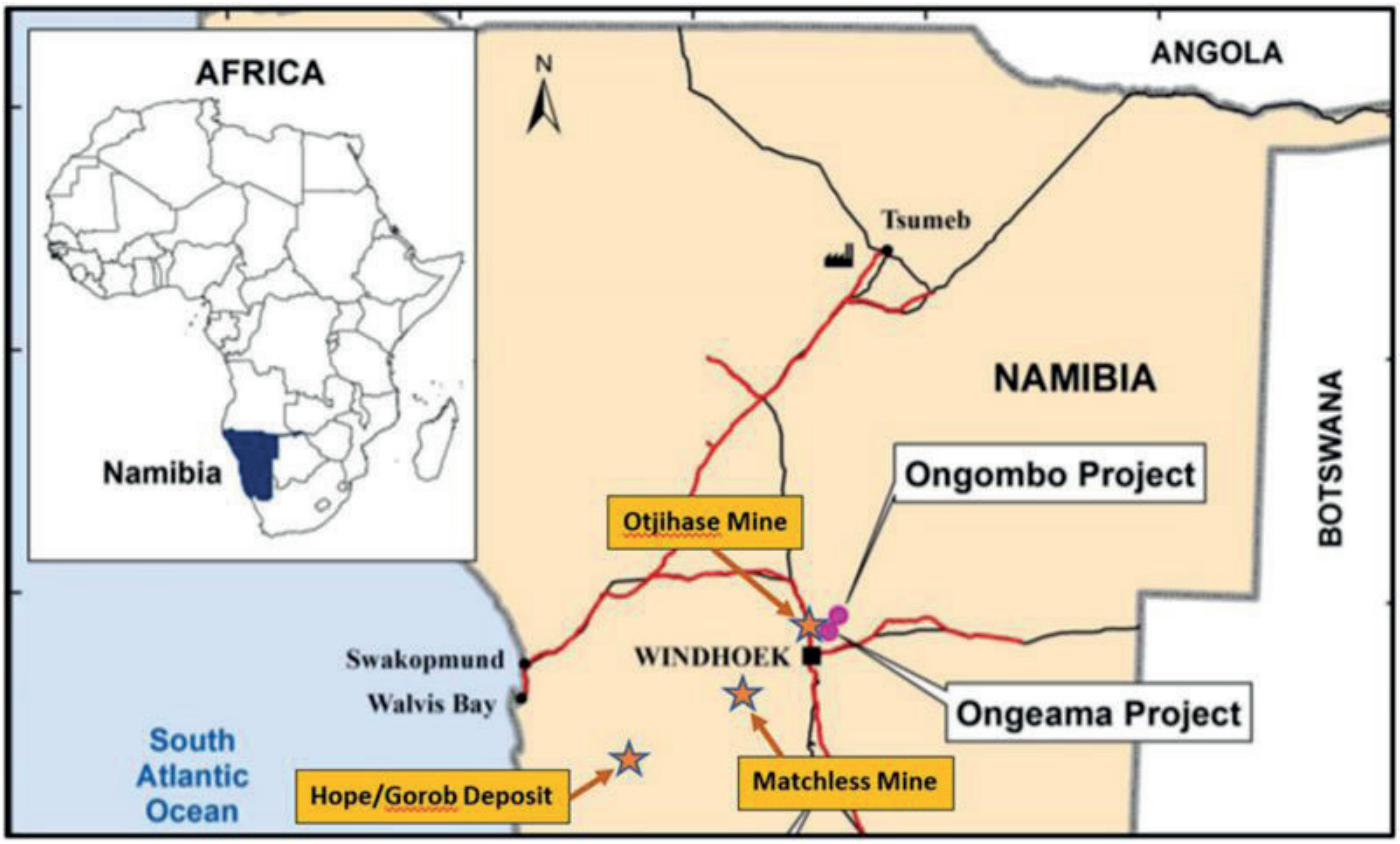
As Namibia embraces the green energy transition, Otjihase's copper may once again flow — this time to power a cleaner future.

carries layers of history that go beyond geology. Archival correspondence from the 1960s shows that Nama and Baster families from the Windhoek-Rehoboth corridor supplied the early workforce, building settlements that later evolved into the peri-urban communities east of the capital. Their contribution to the mine's development — as builders, truck drivers, and smelter attendants — laid the foundation for Windhoek's early industrial growth.

Today, the shafts of Otjihase are quiet, yet beneath them lies one of Namibia's most enduring copper resources, a reminder of how the country's capital grew in the shadow of the ore body that helped define its industrial identity.

As Namibia positions itself within the global energy transition, the eastern hills of Windhoek may once again echo with the sound of copper.

The metal that once left Otjihase by rail to Tsumeb could yet flow again — this time to power grids, electric vehicles, and the green technologies of the future.



Ongombo: The copper-gold revival east of Windhoek

Forty kilometres northeast of Windhoek, along the road to Gobabis, lies the Ongombo Copper-Gold Project — a historic deposit once overshadowed by its neighbours at Matchless and Otjihase, but now emerging as a significant part of Namibia's modern copper narrative. The project is situated within the Matchless Amphibolite Belt, a well-known geological corridor that has been a hub for copper mining for over a century.

Ongombo sits within the Matchless Amphibolite Belt — a geological corridor that has fed Namibia's copper mines for more than a century.

The Ongombo deposit was first mapped in the 1950s by the Geological Survey of South West Africa, which recorded small-scale artisanal pits and mineralised outcrops along a low ridge near the present-day Seeis area.

The first systematic exploration was undertaken in the 1960s and 1970s by Gold Fields Namibia (Pty) Ltd, as part of its regional copper exploration

programme in the Khomas Highlands.

Drilling confirmed the presence of stratabound and vein-hosted chalcopyrite, pyrrhotite, and pyrite mineralisation, similar to that found at Otjihase.

According to Geological Survey archives, the early resource was modest, and work ceased by the early 1980s when copper prices dropped.

The area was later re-licensed under Exclusive Prospecting Licence (EPL) 5772, covering approximately 6,000 hectares northeast of Windhoek.

The Ongombo deposit is now owned by African Pioneer plc, a UK-based exploration and development company listed on the London Stock Exchange.

African Pioneer operates the project through its Namibian subsidiary, African Pioneer Namibia (Pty) Ltd, and holds a 20-year mining licence (ML 240) issued by the Namibian Ministry of Mines and Energy in June 2025. The licence is valid until March 2045.

African Pioneer's Executive Chairman, Colin Bird, has described Ongombo as a near-term production asset with significant expansion potential.

The company holds both mining and environmental approvals,

Forty kilometres northeast of Windhoek lies Ongombo — a historic copper-gold deposit once overshadowed, now emerging as part of Namibia's modern copper narrative.

enabling early-stage planning and financing discussions for the mine.

The deposit contains both open-pit and underground resources. According to African Pioneer's 2024 technical report, the Indicated resource stands at 5.7 million tonnes at 1.1% copper equivalent, with

an additional Inferred resource of 23 million tonnes, containing copper and gold mineralisation extending along strike and at depth.

The company is assessing opportunities for synergies with nearby concessions, some of which contain historic workings and untested mineralisation.

Discussions are ongoing with neighbouring licence holders regarding potential collaboration or acquisition to enlarge Ongombo's operational footprint.

Ongombo lies within the central section of the Matchless Amphibolite Belt, part of the Damara Orogenic system. The deposit consists of metamorphosed volcanic and sedimentary rocks that have been intruded by granitic veins. Copper occurs mainly as chalcopyrite associated with pyrrhotite and pyrite, while gold appears as fine inclusions within sulphide grains and quartz stringers.

The ore zones follow a northeast–southwest orientation, dipping steeply northwest, consistent with regional folding trends.

The mineralisation style is transitional between volcanogenic massive sulphide (VMS) and shear-hosted copper-gold systems, offering potential for both near-surface and deeper underground development.

The Ongombo Project benefits from its proximity to major infrastructure. It lies within trucking distance of Windhoek, Gobabis, and Walvis Bay, with access to rail, power, and water infrastructure.

The project area is also near the Otjihase and Matchless mines, allowing potential processing synergies or shared infrastructure development.

African Pioneer has engaged external mining and engineering consultants to refine mine planning and update financial models. Preferred contractors for both open-pit and underground mining have been identified, and cost databases are being developed for an initial eight-thousand-tonne-per-year copper production scenario.

With a 20-year mining licence secured and environmental clearances

in place, African Pioneer has transitioned from the permitting phase to execution. The company is in advanced discussions with financiers and strategic partners for project-level funding.

Feasibility studies focus on optimising open-pit design, confirming metallurgical recovery rates, and evaluating the economic potential of underground extensions.

African Pioneer is also exploring joint development options with nearby licence holders, recognising that consolidation could create a district-scale operation east of Windhoek.

The company plans to bring Ongombo into production in phases, starting with open-pit mining followed by underground expansion.

Gold Fields' exploration in the 1960s confirmed chalcopyrite and pyrrhotite mineralisation striking through the Khomas Highlands.

Ongombo is situated within Namibia's forgotten inland copper belt, where copper mining has been documented since the 19th century. Its location near Windhoek offers logistical advantages rarely found in African mining projects.

The development of Ongombo would add a new chapter to Namibia's copper production story, linking the country's historic central mines to its future energy-transition supply chain.

African Pioneer's 2025 operational timeline envisions detailed design work, contractor selection, and early construction activities beginning before the end of the year, paving the way for copper production by 2026.

Ongombo's evolution from an overlooked exploration site to a permitted mine underscores the increasing significance of Namibia's central copper province.

This region once powered the colonial mining era and may again contribute to the nation's industrial resurgence.

Omitiomire: The copper discovery redefining Namibia's interior belt

About 140 kilometres northeast of Windhoek, near the dry farmlands between Okahandja and Hochfeld, lies the Omitiomire Copper Project, one of Namibia's largest undeveloped copper deposits and the foundation of a new inland copper frontier.

The Omitiomire copper deposit was first discovered in 1973 by Dr J.S. Greeff, a geologist with the Geological Survey of South West Africa, now the Geological Survey of Namibia.

During regional mapping and mineral reconnaissance, Greeff identified distinctive malachite and azurite stains on quartzite and

About 140 kilometres northeast of Windhoek, near Okahandja and Hochfeld, lies Omitiomire — the foundation of Namibia's new inland copper frontier.

schist outcrops east of

the Omitiomire Farm, located about 120 kilometres northeast of Windhoek.

Rock-chip sampling confirmed elevated copper values, marking the start of one of Namibia's most significant inland copper finds.

According to archival Geological Survey field reports from 1973 to 1975, follow-up mapping and soil geochemical sampling outlined a broad copper anomaly spanning several kilometres along a north-northeast structural trend.

The results suggested that copper mineralisation was hosted within sheared, metamorphosed sedimentary and volcanic rocks, part of the Damara Orogenic Belt, a 500-million-year-old geological system stretching across central Namibia.

Between 1974 and 1976, the Geological Survey partnered with Anglovaal (Pty) Ltd, a South African exploration company, to carry out the first trenching and drilling campaign at Omitiomire.

Early percussion drilling confirmed broad, low- to medium-grade copper mineralisation averaging between 0.3 per cent and 0.8 per cent copper over tens of metres. These results established Omitiomire as a large-tonnage, disseminated copper system, unlike the narrow volcanogenic massive sulphide deposits at Matchless and Otjihase.

The project remained under state custodianship through the late 1970s and 1980s, with periodic geological mapping and academic studies refining its stratigraphy. After independence, the area

Discovered in 1973 by Dr J.S. Greeff of the Geological Survey, Omitiomire began with the sight of green and blue copper stains on sun-bleached quartzite.

was re-licensed under Namibia's new Minerals (Prospecting and Mining) Act.

During the early 2000s, Craton Mining and Exploration (Pty) Ltd, a Namibian-registered company founded by geologists who recognised the project's long-term potential, acquired the exploration rights to Omitiomire. In 2010, the Australian-listed company Weatherly International plc acquired a 25% stake in Craton Mining to advance the project.

Weatherly's involvement provided technical and financial backing, enabling deeper drilling and more accurate resource definition.

By 2014, Craton had secured Mining Licence 197 (ML197) from the Namibian Ministry of Mines and Energy. Shortly thereafter, Weatherly divested its interest as part of a corporate restructuring, and ownership was consolidated under Omico Mining Corp, a private Canadian and Namibian-backed company. Omico subsequently became the majority shareholder of Craton Mining, holding a 95% interest in Omitiomire.

At the same time, 5 per cent remained in the hands of Namibian partners, as required under the country's local equity participation framework.

Omico is a privately funded copper development company established to fast-track Omitiomire into production. It operates from Windhoek and maintains technical links with Canadian engineering and finance institutions.

The company's 2024 corporate filings confirm its ownership of Omitiomire through Craton Mining and its commitment to sustain Namibian ownership participation throughout the mine's life cycle.

Omitiomire's copper occurs within a shear-hosted disseminated system, with chalcopyrite and bornite mineralisation spread through biotite-quartz schist, quartzite, and gneiss of the Damara Supergroup.

Unlike the high-grade sulphide lenses at Matchless and Otjihase, Omitiomire's orebody is broad and low-grade but extensive, extending along a strike length of more than three kilometres and remaining open at depth.

According to Omico Mining's 2024 Bankable Feasibility Study, the deposit contains a proven and probable reserve of 102 million tonnes grading 0.51 percent total copper, equivalent to 516,000 tonnes of contained copper metal.

The resource supports a 15-year mine life, with potential to extend through deeper exploration.

The planned operation is a large-scale open-pit mine using heap leaching and solvent extraction-electrowinning (SX-EW) technology to produce 99.99 per cent pure copper cathode.

The Bankable Feasibility

Study projects an annual output of 26,800 tonnes of copper, with peak production of about 32,000 tonnes per year, according to Mining Weekly (February 2025).

The project's capital cost is estimated at US$364 million, with a post-tax internal rate of return of 18 per cent and a payback period of 3.7 years. The planned strip ratio is 5:1, and processing facilities will include crushing, agglomeration, heap-leach pads, solvent extraction, and electrowinning circuits.

Infrastructure plans outlined in the Environmental and Social Impact Assessment by ECC Environmental Consultants in 2024 include a single open pit, leach pads, SX-EW plant, workshops, power supply from the national grid, and water management facilities.

Omico's Q1 2024 project update reports that metallurgical testing phases one to three have been completed, while Phase 4, focused on leach kinetics and reagent optimisation, is ongoing. Results from this phase will be integrated into the final Bankable Feasibility Study, which is expected to be completed in late 2025.

The project is forecast to create 800 to 1,000 direct jobs during operations and several hundred during construction.

Omico has committed to local procurement, training initiatives, and collaboration with technical institutions for workforce development.

Copper cathodes produced at Omitiomire will meet London Metal Exchange specifications and be transported by road and rail to Walvis Bay for export.

Omitiomire represents a different kind of copper opportunity for Namibia, a bulk-tonnage, open-pit project that will deliver refined copper cathode within the country.

It complements the smaller, higher-grade sulphide mines around Windhoek and aligns with Namibia's broader strategy of expanding green energy and base-metal production.

From Dr Greeff's first malachite samples in 1973 to Omico's advanced feasibility studies today, Omitiomire stands as one of Namibia's most enduring copper prospects, a discovery born in geological fieldwork and now positioned to anchor the next chapter of Namibia's copper industry.

Rehoboth–Aris Belt: The southern frontier of Windhoek's copper zone

South of Windhoek, between the town of Rehoboth and the Aris railway siding, a narrow corridor of metamorphosed schists and amphibolites marks one of the last known southern expressions of the inland copper belt.

This belt, extending roughly 70 kilometres, contains numerous small copper showings that link Namibia's central

South of Windhoek, between Rehoboth and Aris, a narrow corridor of metamorphosed schists and amphibolites marks one of the last known southern expressions of the inland copper belt.

mining history with the early exploration of the Rehoboth Basement Inlier.

The first recorded mention of copper occurrences between Rehoboth and Aris appears in Geological Survey Bulletin No. 3 (1957), which described "green and blue copper

stains on quartzites and amphibolites" along the Aris–Rehoboth road corridor.

Subsequent reconnaissance by Geological Survey geologists W. F. Söhnge and G. Miller in the early 1960s confirmed small workings and shallow pits on farms Klipdam, Gemsbok, and Auasblick, where malachite and azurite occurred in narrow veins within schist and quartzite.

By 1971, field sampling from the Rehoboth–Aris region had recorded copper values ranging between 0.4 and 1.2 per cent, according to Geological Survey archives. The mineralisation was attributed to hydrothermal shears related to the same tectonic system that hosts the Matchless and Otjihase deposits north of Windhoek.

Interest in the Rehoboth–Aris copper belt resurfaced in the 1980s, when local prospectors registered small claims under the Department of Mines and Energy's open claim system.

The Gemsbok and Auasblick claims were worked briefly for surface ore, with small quantities of hand-sorted malachite sent for assay to the Tsumeb laboratories.

The Rehoboth–Aris copper belt represents the southernmost continuation of the Windhoek copper province, bridging the geological gap between the Khomas Highlands and the Rehoboth Basement Inlier.

Between 2008 and

2016, the area was consolidated under Exclusive Prospecting Licence (EPL) 4123, held by Namibian Copper Exploration (Pty) Ltd, which conducted a regional magnetic and soil geochemical survey. The work outlined several weak copper anomalies trending northeast–southwest, particularly near Klipdam and Aris. Follow-up sampling in 2014 yielded assays of up to 0.7% copper from quartz–carbonate veins, which contained traces of chalcopyrite and bornite.

Since 2021, Shali Metals (Pty) Ltd, a Namibian private company, has reoccupied parts of the belt under EPL 8517, focusing on shallow trenching and pitting around the historical showings. Their 2023 progress note, filed with the Ministry of Mines and Energy, confirmed the presence of visible copper oxides over several hundred metres of strike.

The Rehoboth–Aris belt lies within the southern continuation of the Matchless Amphibolite Belt, characterised by metamorphosed volcanic rocks of the Kuiseb Formation intruded by biotite gneiss and granite. Copper mineralisation occurs as chalcopyrite, bornite, and malachite within quartz–carbonate veins and along sheared contacts between amphibolite and schist.

Structural studies by the Geological Survey in 1989 indicated that mineralisation is controlled by north-northeast-trending shear zones associated with the Damara orogeny. These shears act as conduits for copper-bearing fluids that deposited sulphides in narrow, discontinuous veins.

Weathering has produced extensive surface enrichment, with copper oxides visible on outcrops and small workings. No deep drilling

has been undertaken to test for sulphide zones below the oxidised layer.

As of 2025, the Rehoboth–Aris copper belt remains under active early-stage exploration by Namibian private licence holders. The area has not yet yielded a defined resource, but surface sampling and mapping continue under the guidance of the Geological Survey of Namibia. The Ministry of Mines and Energy lists the belt as part of Namibia's Small-Scale Mining Support Programme, encouraging further evaluation of the shallow copper veins for potential artisanal extraction.

The first recorded mention of copper occurrences between Rehoboth and Aris appears in Geological Survey Bulletin No. 3 (1957), describing green and blue copper stains on quartzites and amphibolites.

The Rehoboth–Aris copper belt represents the southernmost continuation of the Windhoek copper province, bridging the geological gap between the Khomas Highlands and the Rehoboth Basement Inlier. Though never mined commercially, the belt preserves valuable geological evidence of the Damara Orogenic copper system's full reach.

From the oxidised veins near Aris to the schist ridges south of Rehoboth, these small showings mark the outer rim of Namibia's inland copper story — the point where the great Matchless Belt finally fades into the desert plains.

Gocheganas–Dordabis Copper Zone

Roughly 40 kilometres southeast of Windhoek, extending from the Gocheganas hills toward Dordabis, lies a lesser-known belt of copper-stained schists and sheared quartz veins that represent the southeastern margin of the inland copper province.

Though never mined commercially, the Gocheganas–Dordabis Copper Zone remains a consistent feature in Namibia's geological literature, having been mapped intermittently since the 1950s.

According to Geological Survey Bulletin No. 10 (1976), early geological mapping conducted in 1954 by E. Martin and J. Söhnge of the Geological Survey of South West Africa identified a "copper-stained ridge" on Farm Gocheganas, approximately 35 kilometres southeast of Windhoek.

Roughly 40 kilometres southeast of Windhoek, a lesser-known belt of copper-stained schists and sheared quartz veins marks the southeastern margin of the inland copper province.

Field samples from weathered schists

returned 0.4 to 0.9 per cent copper, with visible malachite and azurite.

Follow-up reconnaissance between 1968 and 1972 extended the mapping southeast toward Dordabis, where additional outcrops of quartz–mica schist and amphibolite were observed.

These contained sporadic chalcopyrite and secondary copper oxides, suggesting shear-related mineralisation similar to that of the Ongombo and Otjihase deposits.

By 1978, the Geological Survey had completed detailed mapping of the area.

It concluded that copper occurrences at Gocheganas and Dordabis were structurally controlled, occurring along northeast-trending faults linked to the broader Damara deformation zone.

However, no drilling or trenching was carried out due to limited accessibility and low commodity prices at the time.

The Gocheganas–Dordabis copper corridor was first licensed in the 1990s under Exclusive Prospecting Licence (EPL) 2014, and was later transferred to Namibian Copper Holdings (Pty) Ltd in 2008.

Though never mined commercially, the Gocheganas–Dordabis Copper Zone has remained a consistent feature in Namibia's geological literature since the 1950s.

The company conducted geochemical soil sampling and magnetic profiling, identifying several weak anomalies along the Dordabis shear.

Between 2019 and 2023, the area was re-evaluated by Private Namibian licence holders, supported by the Ministry

of Mines and Energy's Small-Scale Mining Directorate.

Field sampling during this period confirmed persistent copper staining over a 6-kilometre strike length near Gocheganas Lodge and eastward toward Dordabis.

In 2023, technical notes submitted to the Geological Survey of Namibia by independent consultants reported grab samples averaging 0.6 per cent Cu in weathered schist, with minor gold traces.

These samples were collected along narrow quartz–carbonate veins at the contact between amphibolite and biotite–feldspar gneiss.

In 1954, Geological Survey geologists E. Martin and J. Söhnge identified a copper-stained ridge on Farm Gocheganas, about 35 kilometres southeast of Windhoek.

The Gocheganas–Dordabis zone is located within the Kuiseb Formation of the Damara Supergroup, a metamorphic terrain characterised by quartz–mica schist, amphibolite, and gneiss. Copper occurs as disseminated chalcopyrite and bornite within sheared zones and along foliation planes.

The mineralisation is associated with hydrothermal alteration, marked by the development of chlorite and carbonate.

Outcrop observations indicate that copper mineralisation follows northeast–southwest shear zones parallel to the Ongombo and Otjihase trends, suggesting a genetic link to the same tectonic event.

Surface mineralisation is typically oxidised, with malachite and azurite replacing sulphides in

By 1978, detailed mapping confirmed that the copper occurrences were structurally controlled along northeast-trending faults linked to the Damara deformation zone.

weathered zones.

As of 2025, the Gocheganas–Dordabis area remains under active prospecting by Namibian-owned exploration companies, with no foreign joint ventures reported.

Work to date includes rock-chip sampling, geological mapping, and small-scale pitting. No drilling has yet been completed, and no resource estimate exists.

The Geological Survey of Namibia classifies the copper occurrences within the Gocheganas–Dordabis zone as "low-grade shear-hosted prospects," with moderate exploration potential for shallow, vein-style copper systems.

Although small and undeveloped, the Gocheganas–Dordabis zone represents a significant geological transition between the copper-rich Matchless Belt near Windhoek and the granitic terrain towards Dordabis, it preserves the southeastern expression of the Damara orogenic copper system, demonstrating that the mineralisation around Windhoek extends beyond the better-known Otjihase and Ongombo deposits.

These outcrops serve as the last visible record of copper enrichment before the landscape gives way to the Kalahari sands — a reminder that the copper story of Windhoek stretches well beyond the city's hills.

Klein Aub Copper Mine

Located about 90 kilometres south of Windhoek and 45 kilometres southwest of Rehoboth, the Klein Aub Copper Mine was one of central Namibia's most productive small-scale underground copper operations of the twentieth century.

The mine lies within the Rehoboth Basement Inlier, a sequence of folded metamorphic rocks forming the southern continuation of the Matchless Amphibolite Belt.

First discovered in the 1920s after local farmers reported green-stained rocks, Klein Aub grew into one of central Namibia's most productive small underground mines.

The deposit was first documented in 1920 by prospectors from the South West Africa Company, following reports of green copper-stained rocks by local Nama farmers who grazed livestock on the surrounding farms.

Archival correspondence from the early 1920s, preserved in the National Archives of Namibia, attributes the first physical discovery to H. F. Kohrs, a prospector contracted by the

company, who collected the initial samples near an outcrop known locally as "Klein Aub se Koppie."

Early geological mapping by W. F. Söhnge and the Geological Survey of South West Africa in the 1930s identified several mineralised veins and gossans on Farm Klein Aub.

These findings were later confirmed by government geologist G. L. Reeves, who noted the presence of malachite and azurite at the surface.

Systematic underground exploration began in 1958, when the South West Africa Company Ltd, and later South West Minerals (Pty) Ltd, sank the first production shaft to a depth of 180 metres.

The operation was developed as a conventional underground copper mine with two primary levels and a ventilation incline.

By 1966, the mine was producing high-grade copper-silver ore averaging between 2% and 3% copper and up to 60 grams per tonne of silver. Ore was trucked to Tsumeb for smelting by Tsumeb Corporation Ltd (TCL), which also supplied technical services and geological supervision.

The closure of Klein Aub in 1987 marked the end of a 60-year cycle of discovery, boom, and decline in Namibia's central copper belt.

Between 1966 and 1987, the mine produced approximately 55,000 tonnes of contained copper from over 2 million tonnes of

ore, according to the Geological Survey of Namibia production records (1989).

The mineralisation at Klein Aub is stratabound, hosted in dolomitic marble and quartzite of the Rehoboth Metamorphic Complex, with ore consisting mainly of chalcopyrite, bornite, and chalcocite. The deposit occurs along a faulted contact zone trending northeast–southwest and dipping steeply northwest. Minor cobalt and gold have also been reported in association with the sulphides.

Between 1966 and 1987, Klein Aub produced roughly 55,000 tonnes of contained copper from more than 2 million tonnes of ore.

The mine was closed in 1987, following depletion of ore reserves and a sharp fall in copper prices to below US$1,000 per tonne. TCL's withdrawal from regional smelting also contributed to the closure. After abandonment, shafts were sealed and the site was left under care and maintenance.

In the early 2000s, Namibian Copper Mines (Pty) Ltd undertook site rehabilitation, constructed a small processing plant for metallurgical testing, and sampled tailings for copper reprocessing.

Since 2018, small

Namibian exploration firms — including Schneider Resources (Pty) Ltd and Maroelaboom Mining (Pty) Ltd — have held exclusive prospecting licences (EPLs) over the Klein Aub area, re-evaluating remnant ore zones, waste dumps, and tailings for low-cost recovery.

As of 2025, the Klein Aub Copper Mine remains inactive, but new airborne magnetic surveys and historical drill re-analysis confirm several unmined parallel lodes extending along strike to the northeast.

As of 2025, new airborne magnetic surveys confirm several unmined parallel lodes extending northeast of the old workings.

The site still retains its headframe foundations and waste-rock piles as visible reminders of its industrial past.

Klein Aub stands as the southernmost link in Namibia's inland copper belt — a forgotten chapter connecting the early Nama prospectors and German-era traders to the post-war mining boom that helped establish Windhoek's central highlands as one of southern Africa's enduring copper provinces

COPPER SPECIAL EDITION

Seeis–Groot Aub copper corridor

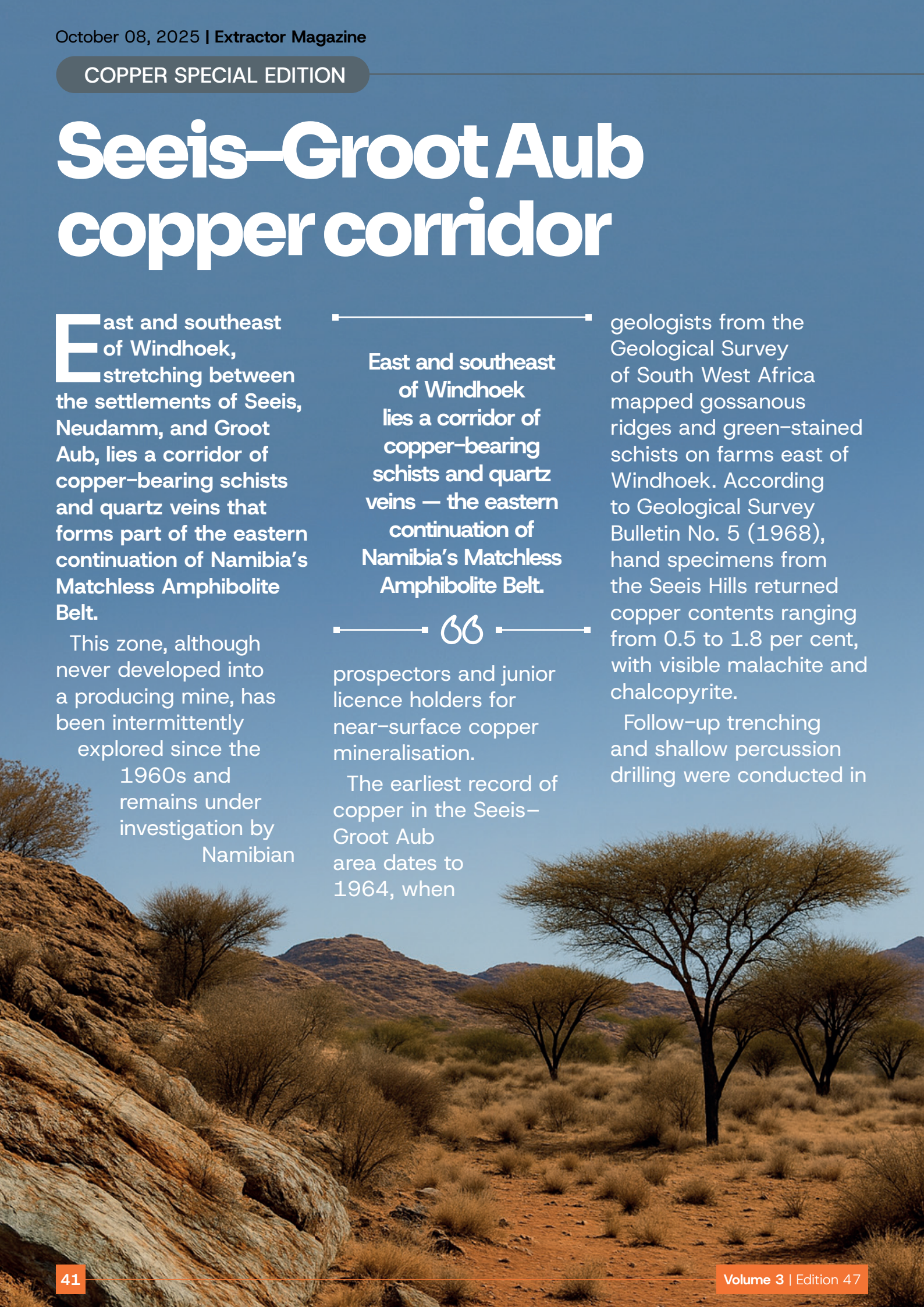
East and southeast of Windhoek, stretching between the settlements of Seeis, Neudamm, and Groot Aub, lies a corridor of copper-bearing schists and quartz veins that forms part of the eastern continuation of Namibia's Matchless Amphibolite Belt.

This zone, although never developed into a producing mine, has been intermittently explored since the 1960s and remains under investigation by Namibian prospectors and junior licence holders for near-surface copper mineralisation.

East and southeast of Windhoek lies a corridor of copper-bearing schists and quartz veins — the eastern continuation of Namibia's Matchless Amphibolite Belt.

The earliest record of copper in the Seeis–Groot Aub area dates to 1964, when geologists from the Geological Survey of South West Africa mapped gossanous ridges and green-stained schists on farms east of Windhoek. According to Geological Survey Bulletin No. 5 (1968), hand specimens from the Seeis Hills returned copper contents ranging from 0.5 to 1.8 per cent, with visible malachite and chalcopyrite.

Follow-up trenching and shallow percussion drilling were conducted in



the early 1970s by Anglovaal (Pty) Ltd, which was then undertaking regional surveys along the Khomas–Gobabis road.

The programme confirmed narrow zones of disseminated sulphides within amphibolite and quartz–mica schist, striking northeast and dipping moderately northwest. While no economic orebody was delineated, the mineralised structures were noted as possible extensions of the Otjihase and Ongombo systems farther north.

Following independence, the Seeis–Groot Aub corridor was subdivided into several small Exclusive Prospecting Licences (EPLs) granted to Namibian individuals and companies. Between 2007 and 2012, parts of the area were evaluated under regional reconnaissance by Craton Mining and Exploration (Pty) Ltd, which carried out geochemical soil sampling and magnetic profiling as part of its Omitiomire copper survey.

Recent fieldwork from 2021 to 2024 by Windhoek Exploration Services (Pty) Ltd and Namibian Copper (Pty) Ltd has reconfirmed copper mineralisation at surface, with grab samples yielding up to 0.9 per cent copper in weathered schist and quartz veins near Seeis. Geological logs and geophysical data remain limited, and no modern drilling has been undertaken, according to exploration updates filed with the Ministry of Mines and Energy and technical notes shared with the Geological Survey of Namibia (2024).

The Seeis–Groot Aub corridor is underlain by metamorphosed volcanic and sedimentary rocks of the Kuiseb Formation, intruded by granitic bodies. Copper mineralisation occurs in quartz–carbonate shear veins and in disseminated sulphides within schist horizons. The dominant ore minerals are chalcopyrite, pyrite, and malachite, with trace gold recorded in some samples. The mineralisation trends northeast–southwest, following shear zones linked to the same tectonic deformation that hosts Otjihase and Ongombo.

The earliest record of copper in the Seeis–Groot Aub area dates to 1964, when geologists mapped green-stained schists and gossanous ridges east of Windhoek.

As of 2025, exploration in the corridor remains preliminary. No defined resources have been declared. Namibian prospectors and small private companies hold the licences under the oversight of the Ministry of Mines and Energy, which has designated the area as an active copper-prospecting zone.

Though small and scattered, the Seeis–Groot Aub occurrences form an essential link between Windhoek's eastern margin and the greater Matchless Belt.

They represent the last recorded surface exposures of copper-bearing schists before the terrain flattens toward the Kalahari, marking the east boundary of Namibia's historic inland copper province.

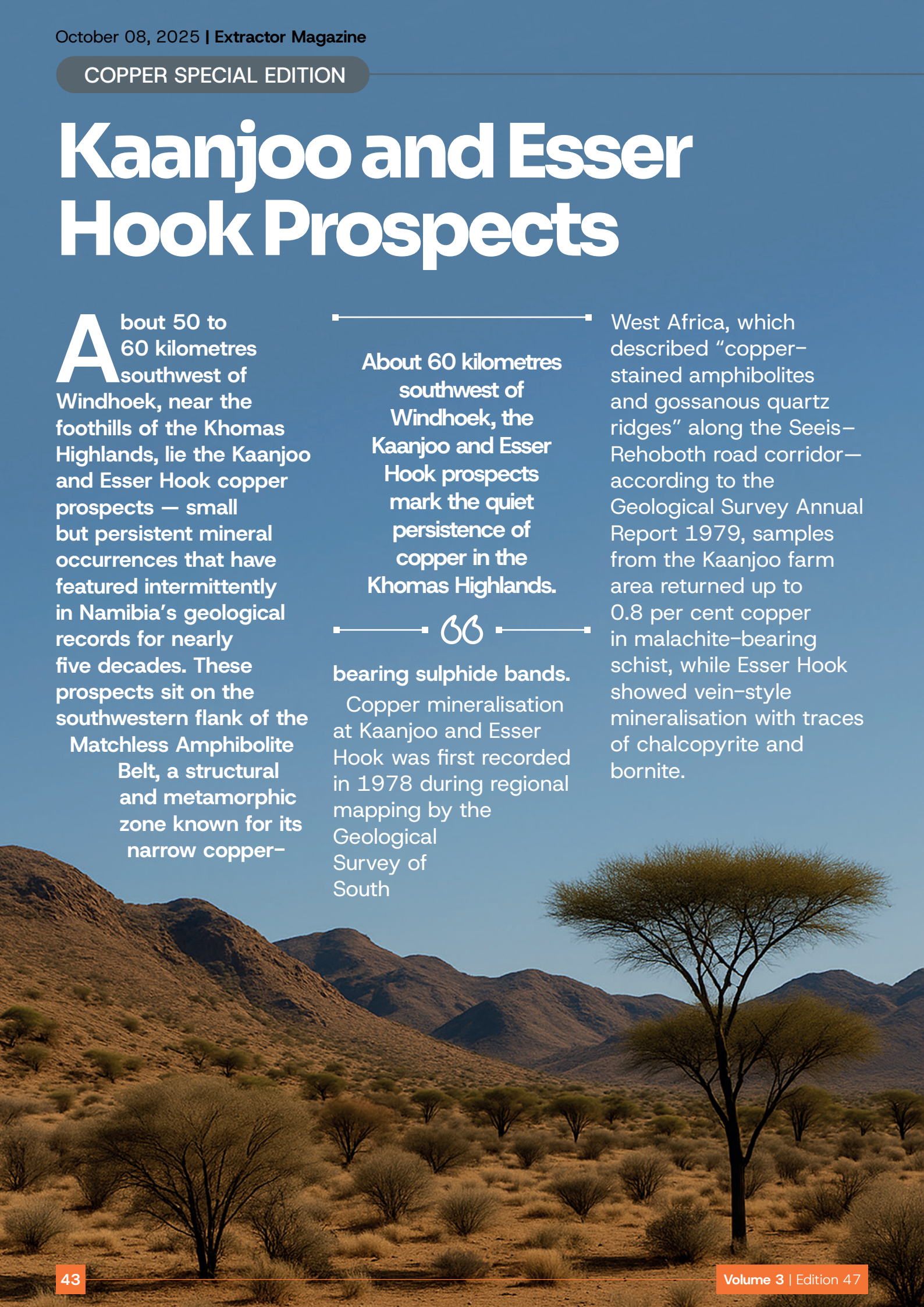
COPPER SPECIAL EDITION

Kaanjoo and Esser Hook Prospects

About 50 to 60 kilometres southwest of Windhoek, near the foothills of the Khomas Highlands, lie the Kaanjoo and Esser Hook copper prospects — small but persistent mineral occurrences that have featured intermittently in Namibia's geological records for nearly five decades. These prospects sit on the southwestern flank of the Matchless Amphibolite Belt, a structural and metamorphic zone known for its narrow copper-bearing sulphide bands.

About 60 kilometres southwest of Windhoek, the Kaanjoo and Esser Hook prospects mark the quiet persistence of copper in the Khomas Highlands.

Copper mineralisation at Kaanjoo and Esser Hook was first recorded in 1978 during regional mapping by the Geological Survey of South West Africa, which described "copper-stained amphibolites and gossanous quartz ridges" along the Seeis–Rehoboth road corridor—according to the Geological Survey Annual Report 1979, samples from the Kaanjoo farm area returned up to 0.8 per cent copper in malachite-bearing schist, while Esser Hook showed vein-style mineralisation with traces of chalcopyrite and bornite.



Both prospects were re-evaluated in the 1980s under a programme of detailed mapping conducted by Tsumeb Corporation Ltd (TCL), which sought to identify small satellite deposits around its central operations at Matchless and Otjihase. TCL's work confirmed the presence of thin sulphide lenses striking northeast and dipping moderately northwest, consistent with the regional structural orientation of the Matchless Belt. However, drilling was never undertaken, as the anomalies were deemed too small to support standalone mining at then-prevailing copper prices.

The ground covering Kaanjoo and Esser Hook was later reissued under Exclusive Prospecting Licence (EPL) 4540, which was intermittently held by Namibian Copper (Pty) Ltd and other local firms between 2010 and 2020. The Geological Survey database lists both prospects as part of the Khomas Project, which encompasses early-stage targets defined by surface sampling and limited ground magnetic surveys.

In 2022, new prospecting work by

First recorded in 1978, these small but enduring prospects have threaded through Namibia's geological record for nearly five decades.

Windhoek Exploration Services (Pty) Ltd included reconnaissance mapping and portable XRF analysis across the Kaanjoo hills. The company identified several gossanous zones containing secondary malachite

and azurite, with grab samples yielding up to 0.6% copper. Field observations indicated that the mineralisation occurs along the contact between amphibolite and quartz–feldspar gneiss, likely representing metamorphosed volcanic horizons.

Esser Hook, located about 12 kilometres to the southeast, was re-logged by the Geological Survey of Namibia (2023) as part of its small-scale mining support programme.

Archived trench samples stored at the Geological Survey's Windhoek core shed confirmed low-grade disseminated copper averaging 0.3 per cent Cu, with occasional pyrite and magnetite bands.

Kaanjoo and Esser Hook form the southwestern link in the Matchless Amphibolite Belt — a chain of folded rocks long known for its hidden copper veins.

Both Kaanjoo and Esser Hook are characterised by banded amphibolite and schist belonging to the Kuiseb Formation, which forms the southern limb of the Matchless Amphibolite Belt.

Copper mineralisation occurs as fine-grained chalcopyrite within quartz–carbonate veins and as disseminations along sheared contacts. Weathering has produced visible malachite and azurite on the surface, often accompanied by iron oxide staining.

Structural mapping indicates that the copper-bearing layers are folded and faulted, suggesting repetition of mineralised horizons at

depth. Although small in scale, the Kaanjoo and Esser Hook occurrences demonstrate the continuity of sulphide-bearing horizons along the southwestern margin of the belt.

As of 2025, both prospects remain under exploration by Namibian private licence holders.

No defined mineral resource has been published, and the Ministry of Mines and Energy classifies the sites as early-stage copper occurrences.

The Geological Survey continues to list them in its official Mineral Occurrence Database as part of the Windhoek–Rehoboth regional copper trend.

Windhoek Exploration Services' 2022 survey found new gossanous zones, with visible malachite and azurite glinting across the Kaanjoo hills.

Kaanjoo and Esser Hook occupy a transitional zone between Windhoek's historic copper belt and the rugged terrain leading toward Rehoboth.

Though unmined, they illustrate the widespread but fragmentary nature of copper mineralisation within the Khomas Highlands. Their discovery in the late 1970s significantly expanded the geological understanding of the Matchless Belt's southern extent, providing the foundation for subsequent exploration that continues to this day.

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Mapping Namibia's Mineral Resources

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