FALCON
METAL
RESOURCES
BOTSWANA

TECHNICAL REVIEW REPORT FOR PL0121/2025 GOLD PROJECT

1. EXECUTIVE SUMMARY

Geosphere Solutions (Pty) Ltd was commissioned by Okavango Geomatics and Resources (Pty) Ltd to undertake a technical review of the geological potential for gold mineralization within Prospecting License PL0121/2025, located in the Tati Greenstone Belt (TGB) of northeastern Botswana. This review synthesizes historical exploration data, publicly available geoscientific information, and regional analogs to assess the residual mineral potential and support the planning of future exploration programs.

PL0121/2025, granted on 1 April 2025, covers an area of approximately 10.36 square kilometers southeast of Francistown, a historic gold mining center with production dating back to the 1860s. The license is proximal to known gold deposits, including Golden Eagle (1.44 g/t Au), Map Nora (8.1 g/t Au), Cherished Hope, and Lady Mary. Geologically, the area is underlain by Archean metavolcanic rocks of the Lady Mary Formation, intruded by granitic plutons, and transected by multiple shear zones known to host gold mineralization.

The license area encompasses the disused Globe Gold Mine, historically exploited for its oxidized zone to shallow depth via a vertical shaft approximately 25 meters deep. Mineralization remains untested at depth, where sulfide-hosted gold potential is inferred. Additionally, extensive artisanal workings occur within the license, particularly focused on quartz rubble zones and alluvial gold extractionvvvv, confirming the presence of an active near-surface placer system. The distribution and style of these artisanal activities suggest in-situ weathered mineralization and residual concentrations, similar to those observed at the Tekwane deposit within the same belt.

Historic soil geochemical surveys have delineated significant gold anomalies, particularly along lithological contacts between the metavolcanics and intrusive units. Airborne magnetic and induced polarization (IP) data further support the presence of structurally controlled, potentially blind mineralized zones. At least seven boreholes were historically drilled, with reported intersections including up to 5 g/t Au over 3 m. However, the lack of verified drill logs and QA/QC protocols limits the confidence in these results.

Gold mineralization in the Tati region is typically associated with sulfide-rich shear zones and schistosity-parallel quartz-carbonate veins—mineralization styles that are well-documented at nearby deposits such as Golden Eagle and Map Nora. These provide robust exploration analogs for PL0121/2025.

In conclusion, the license area exhibits strong geological and structural criteria for gold endowment. Based on its favorable geological setting, proximity to established gold deposits, historical mineralized intercepts, and artisanal activity, PL0121/2025 is assessed to have moderate to high potential for hosting shear-hosted, structurally controlled gold mineralization. A phased exploration program is recommended, beginning with confirmatory geochemical sampling and trenching, followed by geophysical modeling and targeted drilling to test identified shear structures.

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1. INTRODUCTION

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2. PROJECT LOCATION AND ACCESS

Prospecting License (PL) 0121/2025 is located approximately 3 km northeast of Francistown, in northeastern Botswana ((Figure 1 and Figure 2). The license area covers approximately 10.36 km square kilometers within the Tati Greenstone Belt. Access to the project site is via the old Matsiloje road, followed by secondary gravel roads that are passable year-round with a four-wheel drive vehicle.

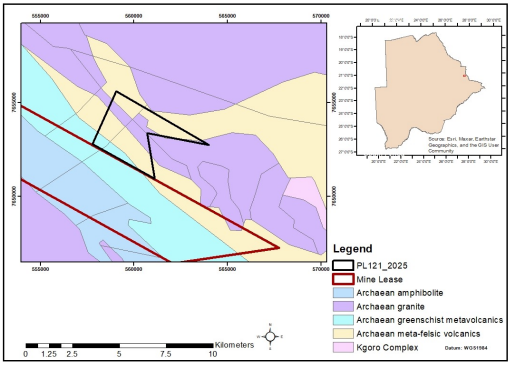

Figure 1: Location of PL0121/2025

The project area lies in a sub-tropical to semi-arid climatic zone, with average annual rainfall ranging from 400 mm to 500 mm. The rainy season typically extends from September to April, while annual evaporation rates exceed 2,000 mm. Temperatures range between 23°C and 33°C throughout the year, with the hottest period occurring between October and January. The coldest months are June and July, with minimum temperatures between 3°C and 15°C; occasional frost may occur.

The topography is generally flat to gently undulating, with variations in vegetation and soil type. The dominant vegetation types are shrub savannah and Mopani woodland, interspersed with small pockets of acacia and riparian woodland along seasonal drainage lines (Figure 2). Baseline environmental assessments and subsequent site observations have not identified any rare or endangered species. Neither the local climate nor vegetation impose significant limitations on exploration activities, and year-round operations are considered feasible.

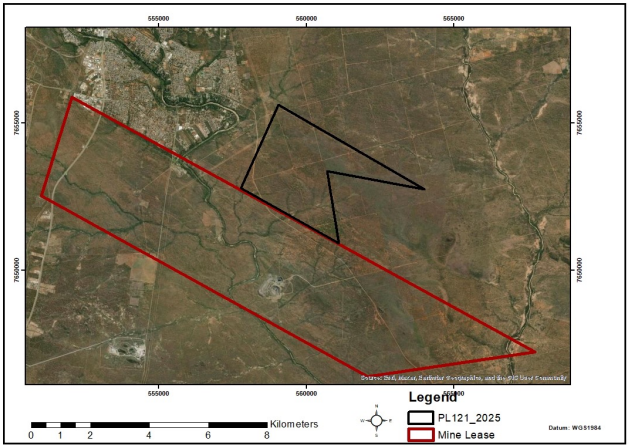

Figure 2: Satellite imagery of PL0121/2025.

3. TENURE AND LEGAL STATUS

3. 1 Mineral Tenure and Legal Framework – Botswana

In Botswana, all mineral rights are vested in the State, and mineral exploration and mining activities are governed by the Mines and Minerals Act, 1999 (the "Act"), as administered by the Ministry of Minerals and Energy (formerly Ministry of Mineral Resources, Green Technology and Energy Security). The Act outlines the legal framework for acquiring, holding, and operating mineral rights across various license categories.

Under the Act, the Government of Botswana retains the right to acquire a minority equity stake—typically 15%—in mining operations, often accompanied by board representation in mining companies. The legislation seeks to balance efficient mineral resource development with environmental and social considerations.

3.2 Prospecting License (PL)

A Prospecting License grants the holder the right to explore for specific minerals over a defined area. The initial term of a prospecting license is up to three (3) years, with the option for two renewals, each not exceeding two (2) years. After a maximum holding period of seven (7) years, the license holder is expected to either apply for a Mining License or justify further renewal through a special application.

Key obligations of a Prospecting License holder include:

1. Commencing prospecting operations within three months of license issuance (or a period approved by the Minister);
2. Conducting work in accordance with the approved program of prospecting operations;
3. Reporting any mineral discovery within 30 days of identification;
4. Notifying the Minister of any economically viable discovery within 30 days;
5. Taking due consideration of surface rights holders, where applicable.

A Prospecting License is granted for a specific area (measured in km), and holders must pay an annual ground rental fee of BWP 5.00 per square kilometre, subject to a minimum charge of BWP 1,000 per annum (approximately USD 77 at BWP 13/USD exchange rate).

3.3 Retention License

A Retention License may be granted to a Prospecting License holder where a mineral discovery has been made, but immediate mining is not feasible due to technical, economic, or regulatory reasons.

A Retention License permits the holder to:

Retain the licensed area for future mining;

Conduct occasional prospecting activities to assess project viability;

Remove samples for metallurgical, testing, or geological purposes (not for sale), with permission from the Director of Mines;

Maintain rights to apply for a Mining License when justified.

3.4 Royalties and Government Revenue

Under the Mines and Minerals Act, mineral license holders are required to pay royalties to the Government of Botswana for any minerals recovered. The royalty rates are standardized by commodity type, Table 1. Royalties are calculated as a percentage of the gross market value of minerals sold or disposed of in any reporting period.

Table 1: Royalties payable to the government

Mineral Type	Royalty Rate
Precious stones	10%
Precious metals (e.g., gold)	5%
Other minerals/products	3%

4. REGIONAL GEOLOGY

The Tati Greenstone Belt (TGB) is located along the southwestern margin of the Zimbabwe Craton, extending into northeastern Botswana. The Zimbabwe Craton is a stable Archean cratonic block exposed primarily in Zimbabwe and northeastern Botswana, and is separated from the Kaapvaal Craton by the ENE–WSW-trending Limpopo Belt (Bagai et al., 2002).

The TGB forms part of a series of Archean greenstone belts in Botswana, which also include the Matsitama, Maitengwe and Vumba belts. These greenstone sequences are surrounded by tonalitic granitoids and trondhjemitic gneisses. The TGB trends NNW–SSE, with a strike length of approximately 65 km and a width of up to 20 km (Hellman & Schofield, 2003), Figure 3. The belt comprises metavolcanic, metasedimentary, and intrusive igneous rocks emplaced at ca. 2.7 Ga, with subsequent deformation and metamorphism during the Neoarchean.

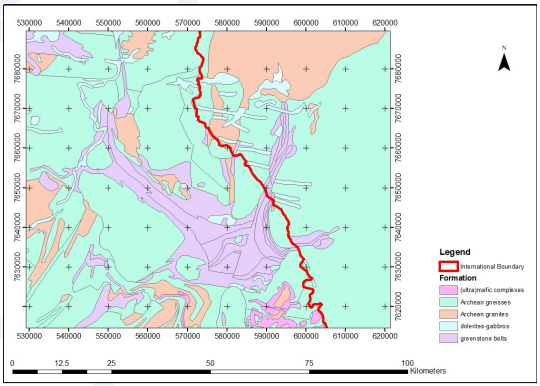

Figure 3: Regional geology map of Eastern Botswana

The stratigraphy of the TGB has been subdivided into several formations, Figure 4, listed from youngest to oldest (Mason, 1970; modified by later workers).

The Selkirk Formation is made up of the viable, coeval intrusive and volcanic rocks. It occurs in the central portion of the Tati Greenstone Belt. It is comprised of dacitic and rhyolitic volcanoclastic rocks and quartz sericite schist (Dɯssing et al., 2009). The Selkirk Formation host the Phoenix, Selkirk and Tekwane metagabbronoric intrusions and Sikukwe meta-peridotite intrusions (Maier, 2008).

Penhalonga Formation: Schistose assemblages of quartz–amphibole–feldspar–carbonate, interpreted as metamorphosed wackes, siltstones, and volcanogenic conglomerates. This formation hosts most of the Mupane gold deposits, with banded iron formations (BIFs) near its upper contact.
Lady Mary Formation: Comprised of ultramafic schists, amphibolites, and subordinate metasediments. The Matsiloje Hills are formed from BIFs within this unit. Notable deposits such as Golden Eagle and Map Nora are hosted within this formation.

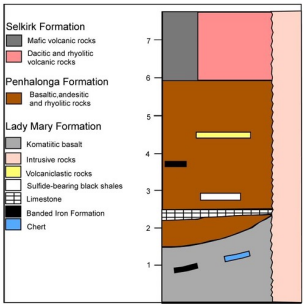

Figure 4: Stratigraphy of Tati Greenstone Belt. (From Mokane, 2020)

The TGB hosts significant gold and base metal mineralization, commonly structurally controlled and spatially associated with shear zones and lithological contacts.
Gold Deposits: The belt contains several significant gold deposits, including Mupane, Golden Eagle, Map Nora, and Signal Hill. Gold is typically associated with sulfide minerals such as arsenopyrite, pyrrhotite, pyrite, chalcopyrite, sphalerite, and bornite. Gold occurs as microscopic inclusions within sulfides or as free gold in quartz-carbonate vein systems.
The Mupane deposit, hosted in the Penhalonga Formation, is subdivided into multiple ore zones, including the economically dominant Tau zone.
Golden Eagle and Map Nora, hosted in the Lady Mary Formation, exhibit schist-hosted mineralization and quartz–carbonate vein systems.
Base Metal Deposits: The Selkirk Formation and other ultramafic units host Cu-Ni-PGE mineralization, including the Phoenix, Tekwane, and Selkirk deposits. These are typically associated with meta-gabbroic or ultramafic intrusive bodies.

According to Tombale (1992), gold mineralization in the TGB occurred during three key stages:
Volcanogenic stage: Primary syngenetic gold associated with volcanism.
Syn-deformational stage: Remobilization and enrichment during regional deformation.
Late-stage D3 shearing and granitoid intrusion: Epigenetic mineralization in shear zones, including structural controls and fluid-driven metasomatism (Mokane, 2020).
A variety of mineral deposits are observed in the Tati Greenstone Belt. The mineral deposits found in the Tati Greenstone Belt include Gold, Nickel, Copper, Kyanite, antimony, arsenic and Silver. The gold mineralization occurs in these setting.
In quartz reefs in granitoid rocks adjacent to the schist relics, as observed at Cherished and some Monarch prospects working.
In quartz reefs along the granite and and schist contacts as observed in the Monarch mine workings.
Shear zone that are heavily sericitized, silicified and/or propyylitized as Map Nora, Golden Eagle, white Elephant and many other prospects.
Fissure (gash) quartz veinsas at the old Bonanza workings.
Elluvial deposits as at Tekwane and the area around New Prospect Mine.
Mineralization in metasedimentary formations, a good example being the signal hill gold mineralization in arkoses.
Banded irostones are host to gold mineralization in the Matsiloje Hills.a

4.1 Structural setting of the Tati Greenstone Belt

The Tati Greenstone Belt (TGB) is a well-preserved Archean greenstone belt located on the southwestern margin of the Zimbabwe Craton in northeastern Botswana. It is one of several greenstone belts in the region, alongside the Matsitama, Maitengwe and Vumba belts. Structurally and geodynamically, the TGB exhibits characteristics of an accreted oceanic arc terrane that has undergone polyphase deformation, metamorphism, and granitoid intrusion. Its structural evolution plays a fundamental role in the localization of gold mineralization within the belt.

4.1.2 Regional Structural Framework
The TGB trends predominantly north-northwest (NNW) with an overall strike length of more than 60 km and a width of up to 20 km. It is bounded to the east and west by tonalitic and trondhjemitic granitoid complexes, which were emplaced syn- to post-deformation. The TGB lies in close proximity to the Limpopo Belt to the south, which separates the Zimbabwe Craton from the Kaapvaal Craton. The geotectonic environment is interpreted to represent an Archean arc or oceanic plateau, subsequently accreted and deformed during late Archean crustal assembly events (Maier et al., 2008; Bagai et al., 2002).

The supracrustal sequence of the TGB includes tholeiitic and komatiitic basalts, intermediate to felsic metavolcanics, and metasedimentary rocks such as greywackes, BIFs, and polymictic conglomerates. These rocks belong primarily to the Lady Mary, Penhalonga, and Last Hope formations. The belt has been intruded by granodioritic to tonalitic plutons, such as the Airport and Wolf plutons, as well as swarms of dolerite dykes.

4.2 Deformation Phases

Multiple deformation phases (D1–D3) have been identified in the TGB (Aldiss, 1991; Mokane, 2020):

4.2.1 D1 – Early Layer-Parallel Thrusting and Folding

The earliest deformation is characterized by isoclinal to tight folding and low-angle thrusting, which developed a penetrative foliation (S1) parallel to bedding. These structures are best preserved in the metasedimentary units and felsic metavolcanics.

4.2.2 D2 – Regional Folding and Shearing

The dominant foliation (S2) formed during this phase, trending NNW-SSE (310°–330°) and dipping moderately to steeply to the southwest. This deformation phase is responsible for regional upright to steeply inclined folds and the development of high-strain shear zones, particularly along lithological boundaries. Many of the known gold deposits are structurally controlled by D2-related shear zones.

4.2.3 D3 – Late Strike-Slip Reworking and Shear Reactivation:

This phase is marked by late brittle-ductile deformation, reactivation of earlier structures as transpressional shear zones, and the formation of en echelon quartz-carbonate-sulfide veins. D3 shears are typically associated with gold mineralization events (Tombale, 1992; Chipate, 1999).

4.3 Shear Zone Architecture and Mineralization Control

The TGB hosts numerous NNW-trending ductile to brittle-ductile shear zones. In PL0121/2025, at least fourteen such shear zones have been mapped or inferred. These shear zones are interpreted as first-order fluid pathways, controlling the emplacement of auriferous quartz-carbonate veins.

The Lady Mary Formation, which underlies the PL0121/2025 license, is particularly susceptible to strain localization due to its tholeiitic composition and competency contrast with surrounding intrusive rocks. This has resulted in the formation of foliation-parallel shear zones that exhibit a penetrative schistosity and are commonly associated with amphibolite-grade metamorphism.

Mineralization is typically found in shear zones parallel to the regional foliation (S2), fold hinges and axial planar zones, en echelon veins and cross-cutting fracture zones developed during D3 deformation.

This structural architecture is exemplified by nearby deposits such as Map Nora, Golden Eagle, and Mupane, where gold mineralization is hosted in sulfide-rich shear zones, schistosity-controlled quartz veins, and veinlet arrays within amphibolites and biotite schists (Tombale, 1992; Glanvill et al., 2011).

4.4 Implications for PL0121/2025

The structural context of PL0121/2025 is highly favorable for the development of gold-bearing shear zones and vein systems. The dominant foliation trends (~310° azimuth) and southwest dips (60°–65°) observed in the field align with regional deformation patterns. The presence of fine-grained, foliated amphibolites and interleaved metasedimentary units provides a suitable rheological framework for strain localization and fluid flow.

The disused Globe Mine, located within PL0121/2025, is developed on one such shear zone and exploited oxidized material near surface to depths of ~25 m. Deeper, unoxidized sulfide-rich zones remain largely untested. Furthermore, the extensive quartz rubble and placer workings within the license suggest near-surface weathered expressions of structurally controlled gold systems, similar to those at the Tekwane deposit.

Targeting strategies should integrate structural mapping, magnetic lineament interpretation, and geochemical anomalies to prioritize shear intersections, flexures, and dilation zones—common structural traps for gold mineralization.

5. LOCAL GEOLOGY AND MINERALIZATION

The geology of Prospecting License (PL) 0121/2025 is underlain by Archean metavolcanic and intrusive rocks of the Lady Mary Formation, a key stratigraphic unit within the Tati Greenstone Belt. The principal lithologies observed in the license area include meta-felsic to mafic volcanic rocks, tonalitic to granodioritic intrusions, and metagabbros. These rocks have undergone greenschist to lower amphibolite facies metamorphism.

The dominant lithological unit is a suite of tholeiitic metabasalts, which are part of the Lady Mary Formation. These rocks are strongly foliated, with the predominant foliation trending 310°–315° azimuth and dipping 60°–65° southwest. Apparent layering within the metavolcanics is accentuated by plagioclase segregation, which is common in foliated amphibolites. The primary mineral assemblage includes feldspar (plagioclase), actinolite, and subordinate chlorite and epidote. Texture varies from fine-grained to coarse-grained amphibolites, with coarser textures typically observed along shear zones, attributed to hydrothermal alteration and strain localization (Key, 1976).

Late Archean granitic plutons of tonalitic to granodioritic composition have intruded the supracrustal sequence. Notably, the Wolf and Airport plutons occur to the south and northwest of the project area, respectively. These intrusions are considered genetically related to regional gold mineralization.

Mineralization within PL0121/2025 is structurally controlled and typically hosted within shear zones developed in the metabasalts. Approximately fourteen mineralized shear zones have been identified in the broader area, primarily within grey-green, fine-grained, weakly foliated amphibolites. These structures are aligned with regional deformation trends and are potential targets for orogenic gold mineralization.

Nearby deposits such as Map Nora and Golden Eagle, located within the broader Shashe project area, provide analogs for expected mineralization styles. These deposits are also hosted within the Lady Mary Formation.

At Golden Eagle, gold is associated with interbedded laminated limestone, BIF, greywacke, and arkosic sandstone, whereas at Map Nora, mineralization occurs in volcano-plutonic schists comprising amphibole, biotite, chlorite, sericite, talc, and garnet. Alteration assemblages associated with gold include muscovite, carbonate, actinolite, and phengite (Tombale, 1992; Glanvill et al., 2011).

These nearby deposits suggest the mineralization in PL0121/2025 is likely related to similar shear-hosted and lithology-controlled systems, with potential for disseminated to vein-hosted gold occurring within schistose metabasalts and structurally deformed amphibolites.

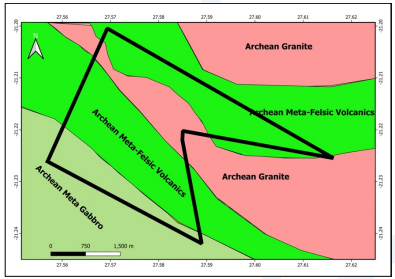

Figure 5: Local Geology of PL0121/2025.

6. MINERALIZATION STYLE AND ANALOG DEPOSITS

The gold mineralization observed within and adjacent to Prospecting License (PL) 0121/2025 is interpreted to be structurally controlled, consistent with mineralization styles documented at nearby deposits such as Map Nora, Golden Eagle, and Tekwane, all of which are hosted within the Lady Mary Formation of the Tati Greenstone Belt (TGB). These analog deposits provide critical geological models for exploration targeting in PL0121/2025.

6.1 Map Nora Deposit
Gold mineralization at the Map Nora deposit is primarily hosted in quartz–calcite–epidote ± chlorite ± actinolite veins, which commonly form en echelon arrays. Additional styles include disseminated sulfide mineralization and schistosity-controlled zones. The mineralized zones occur within fine-grained, biotite-rich schists.

The principal ore minerals include:
Arsenopyrite (dominant, ~45 vol.% of sulfides), occurring both as deformed elongated grains and euhedral cubic crystals, indicating a pre- to post-tectonic timing of gold emplacement.
Pyrrhotite, pyrite, chalcopyrite, sphalerite, and bornite occur as inclusions, intergrowths, or disseminations.

Arsenopyrite is often intergrown with or adjacent to biotite, and contains inclusions of pyrrhotite and chalcopyrite. Actinolite is the dominant alteration mineral, often associated with sulfide mineralization.

6.2 Golden Eagle Deposit
The Golden Eagle gold deposit exhibits three main styles of mineralization:
» Schistosity-controlled zones
» Vein-hosted mineralization
» Disseminated sulfides
» Ore minerals at Golden Eagle include:
» Pyrrhotite (60 vol.% of sulfides)
» Arsenopyrite (20%)
» Sphalerite, chalcopyrite, pyrite, bornite, and trace gold (~0.5%)

Gold was not observed as free particles but occurs as microscopic inclusions in arsenopyrite, commonly intergrown with pyrrhotite. Sphalerite and chalcopyrite are also found in disseminated form within biotite schists and in quartz veins. The alteration assemblage includes actinolite, biotite, and sericite, consistent with low- to medium-grade metamorphic overprints and fluid-rock interaction.

6. 3 Tekwane Auriferous gravels
PL0121/2025 contains extensive quartz rubble zones that are lithologically and morphologically similar to the auriferous gravels of the Tekwane deposit, Figure 6 and Figure 7. Trenches excavated in the license area expose gravel horizons varying from 20 cm to 1 m in thickness, typically found at shallow depths (<2 m), and are currently being exploited by artisanal miners.

At Tekwane, Falconbridge delineated over 1 million tonnes grading 1 g/t Au, and Morex later mined the gravels at a head grade exceeding 1 g/t Au (Chipate, 1999). The gravels represent free-digging, low-strip, low-processing-cost gold targets with potential for small-scale, near-term extraction.

Surface quartz rubble workings in PL0121/2025.

Figure 7: Quartz rubble working on PL0121/225

6.4 Implications for PL0121/2025

Given the similarity in host lithologies (amphibolites, metabasalts, biotite schists of the Lady Mary Formation), the presence of multiple shear zones, and the occurrence of fine-grained amphibolites, PL0121/2025 is considered to be prospective for schist-hosted, structurally controlled gold mineralization. Future exploration should prioritize mapping and sampling shear zones, geochemical testing for sulfide and pathfinder elements (As, Sb, Cu), detailed structural mapping to identify potential en echelon vein sets, and trenching or drilling across schistosity-parallel and crosscutting structures.

The presence of En echelon vein analogs (Map Nora), schistosity-parallel sulfide zones (Golden Eagle) and Surface-exposed quartz rubble gravels (Tekwane) suggests a multi-style mineral system with both bedrock and residual/alluvial potential.

7. EXPLORATION HISTORY

Mining in the area dates to the Mwenemotapa Empire that flourished from 500 1500 A.D. The Tati area was the site of the first European gold discovery in Southern Africa, by Carl Mauch in 1866 (Baldock, 1977). A gold rush started at Tati in 1867 leading to the establishment of Francistown and over 70 reported small scale gold mining operations. Incomplete records and estimates indicate that from 1866 to 1963 over 200 000 oz of gold were produced from mines in the Francistown area (Seaba,2024).

Over sixty abandoned mines and prospects have been recorded (Baldock, 1977). The abandoned gold mines and other gold occurrences were investigated by Sedge Botswana (Anglo American Corporation) in 1969-71 but no mine development ensued. Falconbridge Explorations Botswana undertook evaluation between 1977 and 1982, when most attention was focused on the Map-Nora and Golden Eagle areas (now Shashe group of mines) and on the Last Hope area (now Signal Hill). In the late 1980's the Shashe area, southeast of Francistown, was acquired by Phelps Dodge Incorporated (as Shashe Mines (Pty) Ltd), who recommenced underground gold mining at the Map-Nora area. In 1991 Phelps Dodge divested of the project, its interests being taken up by Francis Prospecting. Francis re-opened the Monarch gold mine (underground) and established an open cut mine at Golden Eagle (Shashe area). The mining operations were not profitable and mining ceased in 1994.

In 1994, Gallery Gold Botswana (Pty) Ltd entered into a joint venture with Francis Prospecting and began to consolidate mineral tenement holdings in the Tati belt. Since 1996, Gallery conducted systematic exploration, primarily for gold. Although previously known as a gold occurrence, the significance of the Mupane prospect was revealed by soil sampling in 1998. At the Signal Hill area, which had been the site of historic antimony workings in the 1920's and 1930's, gold mineralisation was recognised by a Seltrust/Falconbridge joint venture in 1982.

In 1989 Seltrust's interest was acquired by Mosetse Investments (Pty) Ltd and, in 1991, Sigmor Mines (Pty) Ltd was ceded the rights of Falconbridge. The prospect subsequently underwent a series of changes of ownership, culminating with a mining lease being held by Sigmor Mines (Pty) Ltd. Gallery entered an option to purchase agreement with Sigmor and that option was exercised in June 2002. (Hellman and Schofield, 2003) On March 22, 2006, IAMGOLD completed a business transaction with Gallery Gold through which IAMGOLD became the 100% owner of Mupane Gold Mine.

Globe Mine is shown on official geological maps as a disused gold mine. Past mining focused only on oxidized gold zones, generally less than 25 m depth. The mine was exploiting a quartz reef about a meter wide Figure 8 and Figure 9. The is no mention of the gold production and duration of mining activity at Globe gold mine.

Figure 8: Shaft at disused Globe Gold mine

Figure 9: Workings at disused Globe Gold mine

8. GEOCHEMICAL SURVEYS

Prospecting license 0121/2025 have been surveyed by different companies including Tati Territory Exploration Company, Falconbridge Exploration and Phelphs Dodge. The geochemical surveys varied in terms of the resolution from 250m line spacing and 10m sample interval. The samples were analyzed for different pathfinder minerals and gold. The pathfinder minerals analyzed for were mainly Cu, Zn and As. The samples were treated at different laboratories using different analytical methods.

The historical soil sampling results reveal a lot of gold in soil anomalies (Figure 10). Some of these anomalies lie with PL0121/2025 at the contact of the lady Mary formation and the granites and also around intrusive and faults.

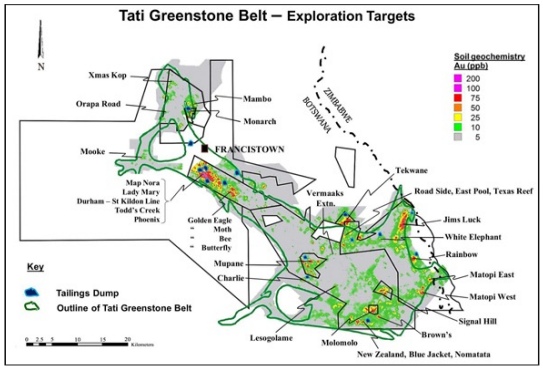

Figure 10: Historical gold in soil sampling results over Tati Greenstone belt.

Power Metals Resources conducted a geochemical soil sampling survey over their prospecting license PL126/2019 (Figure 11). A total of 380 samples were collected on the Prospecting license. They highlighted 3km long anomaly trending North west-south east. The anomaly has a high value of 12ppb and background values of 1ppb. The low values are used to map anomalous areas since they response better. The is no mention of assay method that was used to analyze the samples.

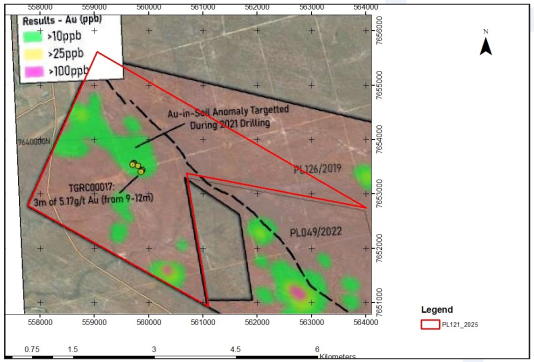

Figure 11: Power Metals Resources soil sampling results over PL0121/2025. With PL0121/2025 indicated as red polygon.

The historical reconnaissance soil sampling mapped six anomalous areas. With the largest anomaly have a strike length of 2.5km. The anomalies are structurally controlled. Grab sampling over one of the geochemical anomalies

Trenching program is currently underway. Trenching will be focused over these gold in soil anomalies. The trenches will be perpendicular to the geological strike across the anomalies. Quartz reef as well shear zones and mineralized wall rock will be sampled when intersected within the exposed trenches.

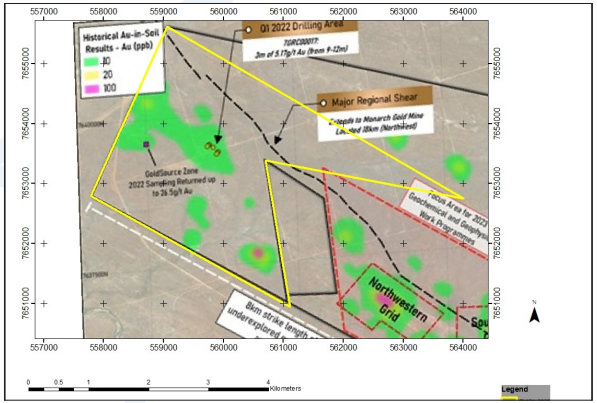

Figure 12: Location of grab sample with 26.5 g/t of Au in PL0121/2025. PL boundary is indicated as yellow outline.

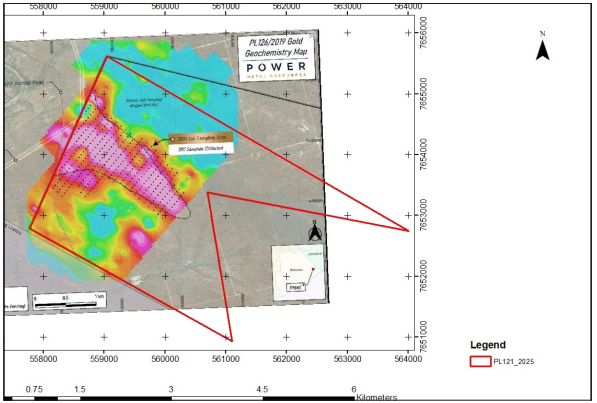

Figure 13: Power metals Resources follow up soils sampling results over PL0121/2025. With PL0121/2025 indicated as red polygon.

9. GEOPHYSICAL DATA

The area is covered by airborne magnetics, low resolution gravity data and radiometrics data, IP surveys and ground Magnetics surveys. A small part of the prospecting license was covered by Geotem survey that was flown by Albidion- Gallery Gold Tati Option. The Geotem data was not available to Falcon Metals at the compilation of this report.

The available airborne magnetics data shows linear structures that trend parallel to the geological strike of the greenstone belt (Figure 14 and Figure 15). This structures are interpreted to be karoo aged dykes as well as iron formation of the Lady Mary Formations. The dolerite has been observed to crosss cut mineralization in the Tati Greeenstone belt. The mapping of the dykes also will allow for accurate and precise drill siting. A high-resolution magnetic survey is recommended over the prospecting license. There are also faults in prospecting license observed from the airborne magnetics data. Some of these faults tend to bound or are located around geochemical anomalies. The area is also covered by radiometrcs data. Due to its resolution it does not adequately map the greenstone belt.

IP survey was conducted by Falconbridge in the area and it indicated that IP survey gave anomalies moderately coincidental with gold workings and geochemical anomalies, and also some showing offsets that could indicate blind bodies (Chipate 1999). IP surveys are also recommended over his prospecting to locate sulphides and any hidden mineralization.

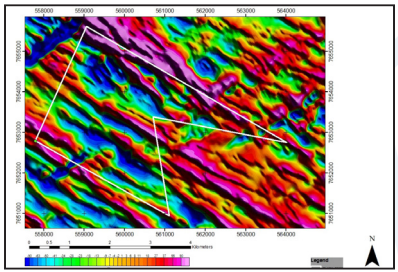

Figure 14: Airborne Total Magnetic Intensity (TMI) over PL0121/2025 with prospecting license shown as white polygon.

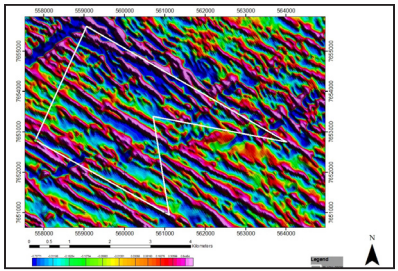

Figure 15: Airborne Total Magnetic Intensity (TMI) first vertical derivative (VD1) over PL0121/2025 with prospecting license shown as white polygon.

10. DRILLING AND ASSAY RESULTS

Seven drillholes were drilled by Power metals Resources, Table 2 in Prospecting license 0121/2025. Six boreholes intersected gold mineralization at shallow depths. The mineralization was intercepted at different depths. The boreholes were inclined at -55 degrees. The boreholes were along the major regional shear that has a coincident Au-in soil anomaly that extends for a strike distance of approximately 8km.

PL126/2019 drillhole Results of 7 RC drillholes (TGRC00017-TGRC00023) were completed on PL126/2019 targetting 200m of strike length within a >2,000m long (open to the east and west) Au-in-soil anomaly defined by the company during its 2021 Phase I geochemical work programme. Six of the drillholes were completed within a fan array, at a set dip of -50°, with each hole being stepped back 20m from another. The two fans were positioned exactly 200m along strike from one another, with the 7th hole being completed within the middle of the array - approximately 100m equidistant from each drillhole fan. Drillholes intersected a modest to shallow dipping quartzite unit with variable gold grades including highlight results up to 3m of 5.17g/t Au. The drill results highlighted the down dip extent of the quartzite, which remains open at depth and along strike.

Mapping within the area identified a northwest-southeast oriented structure which extends at least 17km, intersecting the nearby Monarch Gold Mine along its extent.

Table 2: Drillholes by Power Metals Resources in PL0121/2025.

Borehole	From(m)	To (m)	Au g/t
TGRC00017	9	12	5.17
TGRC00018	0	3	0.101
TGRC00019			No significant intersection
TGRC00020	0	5	0.106
TGRC00020	15	18	1.299
TGRC00021	21	24	0.591
TGRC00022	39	42	0.255
TGRC00023	0	3	0.131

11. RESOURCE POTENTIAL AND TARGET AREAS

Prospecting License (PL) 0121/2025 presents moderate to high potential for both near-surface and structurally hosted gold mineralization. The license is situated within the Tati Greenstone Belt (TGB), a well-endowed Archean terrain known for its orogenic gold deposits and associated Cu-Ni-PGE occurrences in ultramafic-mafic intrusions. The geology of the area includes tholeiitic metabasalts and amphibolites of the Lady Mary Formation, similar to the host lithologies of the nearby Map Nora, Golden Eagle, and Monarch gold deposits.gg

11.1 Known Geological Features Within PL0121/2025

The project area is underlain by foliated metabasalts intruded by tonalitic to granodioritic plutons. Mapping and interpretation indicate at least fourteen shear zones within the license, aligned with regional deformation trends, which are considered key controls for gold mineralization.

A total of seven historic boreholes were drilled within the license area, six of which reported anomalous gold intersections—including one with a grade of 5 g/t Au over 3 meters. However, these results are not supported by full QA/QC documentation or verified lithological logs.

Soil geochemical surveys completed by Gallery Gold and Tati Greenstone Resources identified a 2.1 km-long gold anomaly that correlates well with structural contacts and lithological boundaries. This anomaly strengthens the case for blind mineralized systems.

In addition, the license area hosts the disused Globe Gold Mine, which was historically exploited to shallow depth via a vertical shaft (~25 m). The oxidized zone was mined by colonial-era operators, while the sulfide mineralization at depth remains untested. Artisanal workings in the vicinity indicate ongoing recovery of gold from surface-exposed quartz rubble gravels, with similarities to the Tekwane auriferous gravels that were previously mined at a head grade exceeding 1 g/t Au.

11.2 Analog Deposits and Target Model

The nearby deposits (Map Nora, Golden Eagle, Mupane) provide strong analogues for mineralization potential:

Hosted in schistose metabasalts and amphibolites

Gold occurs in quartz-carbonate veins, schistosity-parallel shears, and disseminated sulfides

Associated alteration includes actinolite, muscovite, carbonate, and biotite

Gold is typically not free-milling, occurring as microscopic inclusions in sulfide minerals such as arsenopyrite and pyrrhotite

The strike-continuity of mineralized trends, supported by geochemistry and geophysics, suggest the potential for moderate tonnage, low to moderate grade gold deposits with potential for underground extensions. Additionally, the Tekwane-style quartz rubble gravels provide a viable low-cost, shallow gold target, given their free-digging nature and artisanal extraction history.

11.3 Potential and Limitations

Positive Indicators:

Strategic location within a prolific gold belt

Confirmed structural features (14 shear zones)

Strong geochemical anomalies aligned with geology and structure

Historical drilling with anomalous gold grades

Presence of unmined sulfide-hosted gold at Globe Mine

Surface quartz rubble zones with ongoing artisanal gold recovery

Current Limitations:

Absence of a compliant mineral resource estimate (e.g., NI 43-101 or SAMREC)

Historical data lacks QA/QC assurance and detailed logs

No structural analysis at depth; limited trenching across key shear zones

Geophysical datasets have not yet been inverted or modeled in detail

Quartz rubble potential has not been tested beyond surface sampling

12. RISK ASSESSMENT

12.1 Technical Risks

Data Integrity and Historical Records: While historical drilling in the area returned encouraging results (e.g., up to 5 g/t Au), supporting datasets such as geological logs, QA/QC procedures, and assay certificates are unavailable. This limits the confidence in legacy results and their reproducibility.

Limited Exploration Footprint: Despite known mineral occurrences such as the disused Globe Mine and widespread quartz rubble workings, only a small portion of the license has undergone systematic geochemical or geophysical surveying.

Underutilization of Known Targets: The Globe Mine, historically developed to ~25 m depth, exploited only the oxidized zone. The underlying sulfide-bearing zones remain untested, posing both an opportunity and a risk in terms of uncertainty on grade and continuity.
Inadequate Characterization of Quartz Rubble: The surface quartz rubble gravels, actively worked by artisanal miners, have not yet been quantitatively assessed through bulk sampling, geostatistics, or grade verification. This introduces risk to both the grade assumptions and tonnage potential.

Lack of Modern Geophysical Interpretation: Although airborne magnetic and IP datasets exist, there has been no recent inversion modeling or structural interpretation. Blind shear zones may remain undetected.

12.2 Geological Risks

Mineralization Continuity and Geometry: Gold mineralization in the region is structurally controlled and may be discontinuous or narrow, especially along poorly constrained shear zones. The possibility exists that the mineralized bodies may pinch and swell unpredictably.
Depth to Mineralization: Sulfide-hosted gold at the Globe Mine and other targets may lie below the weathered horizon, requiring deeper drilling and increasing early exploration costs.

Unconsolidated Surface Cover: Surface auriferous rubble varies from 20 cm to 1 m in thickness and may represent residual enrichment or transported placer material. Without stratigraphic control or metallurgical testing, the recoverable grade and economic potential remain uncertain.

12.3 External Risks

Land Access and Surface Rights: Although mineral rights are held by the State, access may require engagement with land users or traditional authorities. Seasonal access may also be impacted by local farming activities.
Funding and Market Risk: The project remains in a pre-resource stage and will require multiple funding rounds to advance. A downturn in gold prices or unfavorable market conditions may delay or curtail exploration.
Logistics and Infrastructure: While Francistown provides a strong logistical base, limited internal access roads and the absence of site-based services (e.g., power, water) may constrain larger programs such as reverse circulation (RC) or core drilling.

13. RECOMMENDATIONS

Based on the geological setting, historical data review, and mineralization analogues from nearby deposits, further exploration of PL0121/2025 is strongly justified. A phased exploration approach is recommended to systematically evaluate the mineral potential and advance the project toward resource definition.

13.1 Exploration Objectives

The key focus of exploration should be to systematically evaluate the known mineralization and define drill-ready targets. In particular:

Validate the mineralization around the Globe Mine, including testing below the oxidized zone.

Map, bulk sample, and assess the grade and extent of the auriferous quartz rubble.

Improve structural understanding of shear zones intersecting the license area.

Reprocess existing geophysical data to identify blind targets.

13.2 Proposed Work Program

Table 3: Proposed work program.

Phase	Activity	Description
Phase 1	Data Compilation & Target Refinement	Digitize and validate historical drill and trench data, integrate with soil geochem, identify knowledge gaps.
	Field Mapping	1:5,000 scale geological mapping focused on shear zones and quartz rubble areas.
	Soil Geochemistry	Infill and extend historical soil lines (~400 samples, 100x25m spacing).
	Geophysical Reprocessing	3D inversion and structural interpretation of magnetic and IP datasets.
Phase 2	Trenching & Channel Sampling	Mechanized trenches across shear zones and rubble zones (~5 trenches x 150 m).
	Structural Logging	Detailed trench wall mapping for orientation, width, and host rock types.
	Bulk Sampling of Quartz Rubble	Collect and process 3–5 bulk samples (~100–200 kg each) for grade variability and metallurgical testing.
Phase 3	RC Drilling Program	Initial 5-hole (~200 m each) RC drill program at Globe Mine, shear zones, and geochemical targets.

13.3 Budget Estimate

Table 4: Budget estimate for the proposed work program.

Item	Estimated Cost (USD)
Data validation and GIS integration	$5,000
Field mapping and soil geochemistry	$15,000
Geophysical reprocessing and modeling	$10,000
Trenching and sampling (5 x 150 m)	$25,000
Laboratory assays (1,400 samples incl. QA/QC)	$16,800
Bulk sampling and test work on quartz rubble	$8,000
RC Drilling (1,000 m @ $50/m)	$50,000
Logistics, fuel, consumables	$10,000
Reporting and interpretation	8,000$
Contingency (%10)	14,280$
Total Estimated Budget	162,080$

Note: Costs are indicative and will vary depending on contractor rates, equipment availability, and logistical factors at the time of execution.

13.4 Strategic Outlook
If initial trenching, sampling, and drilling programs confirm the presence of mineralized shears and/or viable quartz rubble gravels, the project could rapidly progress to resource definition. Given the presence of a shallow, historical mine (Globe) and artisanal activity, the license offers potential for both open-pit and bulk-minable gold systems.
To optimize exploration efficiency and minimize costs, it is recommended that exploration activities be executed in seasonally favorable periods (April–October) and leverage local technical expertise and contractors based in Francistown.

14. CONCLUSION

PL0121/2025 is an early-stage but highly prospective gold exploration property located in the prolific Tati Greenstone Belt. The project is underpinned by favorable geology (Lady Mary Formation metabasalts and amphibolites), the presence of structural controls (at least 14 shear zones), and multiple indicators of mineralization including:
Historical gold assays up to 5 g/t Au in drillholes.
Surface-exposed quartz rubble gravels with ongoing artisanal extraction.
The disused Globe Mine, which exploited only the oxidized portion of a broader mineralized system.

While historical exploration is incomplete and unverified by modern standards, the presence of high-grade values, structural complexity, and analog deposits such as Golden Eagle and Map Nora strengthen the project's geological credentials.

A phased, cost-effective exploration program is warranted. Key steps should include confirmatory mapping and sampling, bulk testing of quartz gravels, and drilling below the Globe Mine and other shear-hosted targets. If successful, the project could yield a maiden inferred resource and attract joint venture or investor interest for further development.

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