# TECHNICAL REPORT SELA CREEK GOLD PROJECT, SIPALIWINI DISTRICT, SURINAME, SOUTH AMERICA

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**Prepared for** 

# **MIATA METALS CORP**

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Cover: Gold from Sela Creek. Photo provided by Selakriki Okansi NV.

#### 1 SUMMARY

The Sela Creek gold project in Suriname has been mined for alluvial gold and is currently mined for gold in weathered bedrock, called saprolite. Local miners started small-scale mining at Sela Creek in the period from 1920-1930, one of the earliest gold occurrences found in the Tapanahony river area (Healy, personal communication). Past and current mining and production span an area of 30 km<sup>2</sup>. Despite this extensive production only limited exploration for gold in bedrock has taken place. The first drilling was done by Hunter Bay in 2012 and results were very positive. 79North acquired Hunter Bay in 2017 but conducted minimal exploration. Miata Metals has proposed to acquire 79North, and upon completion of such acquisition would become 70% owner of the Sela Creek Project.

The Sela Creek Property consists of two gold concessions:

- The exploitation concession GMD no: 497/19 is in good standing until March 22<sup>nd</sup>, 2025. The company holding the rights is Selakriki Okanisi Resources N.V. and the concession consists of 10,000 hectares. Within the period from two years to three months of the expiry date, an application can be made to extend the exploitation concession for five years or longer.
- 2) Gold exploration concession GMD no: 490/19 has an application submitted to convert the currently expired exploration concession to an exploitation concession with the GMD, the geological and mining survey of Suriname (Geologische Mijnbouwkundige Dienst). The Minister of Natural Resources must approve and sign any concession after review by the GMD. The concession is for 10,000 hectares also under the company Selakriki Okanisi Resources NV.

This NI43-101 reports the historic results of the exploitation concession (497/19), but certain historic information, such as the geophysics, can be applied to the pending gold exploration licence which surrounds the exploitation concession.

Sela Creek is located 235 km south of Paramaribo, the capital of Suriname. The property can be accessed in a variety of ways depending on time, personnel, and materials:

- Scheduled flights from the Zorg en Hoop airstrip in Paramaribo to Drietabikki, and from Drietabikki a motorized canoe to travel 40 km upstream on the Tapanahony River to the small village of Paaston at the northwestern edge of the Sela Creek concession (Figure 1).
- Fuel and heavy equipment can be brought in by motorized canoe from Albina.
- A helicopter from Paramaribo can reach the field area in about 1 hour.
- From the village of Paaston the majority of the concession is accessed by fourwheel drive all-terrain vehicles (ATV) along dirt tracks created by small-scale miners.

There is currently no infrastructure other than the village of Paaston. Food, fuel, and supplies must be transported from town by boat or air. Local technical and support people are critical for efficiency and community relations will be essential at Sela Creek. Fly

camps or recon camps with a small team can be used to start mapping and sampling while a camp for drilling is constructed from local materials. The camp for drilling should be located away from the village and active small-scale mining. Access to this camp may be improved by building an airstrip The project is well accessible along dirt roads from small-scale mining activities using ATVs.

Suriname is set in the Guiana shield, a massif of rocks of Paleoproterozoic age in the northwest corner of South America between the Orinoco and Amazon River basins, to the north and south respectively (Gibbs and Barron, 1993). Granite-greenstone-belts occur predominantly in the northern part of the shield between Venezuela and French Guiana, trend roughly NE-SW, and span a geographic distance of about 200 km.

Rocks of the Guiana Shield correlate to other rocks in various terranes in the circumsouth-Atlantic continents that were involved in the Transamazonian - Eburnean (name used in Africa) orogeny. This age of rocks is a major source of gold production and resources both in eastern South America and west Africa, which were linked together prior to the opening of the Atlantic Ocean. The Guiana shield and most notably its counterpart in West Africa host many gold mines which typically consist of multiple shearand fold-hosted orogenic deposits of which single deposits can exceed a million ounces of gold.

The entire Guiana Shield has undergone prolonged chemical weathering under a humid, tropical paleoclimate that may have started as far back as the Cretaceous period. Weathering has produced laterite and saprolite profiles up to 100 meters in depth. The soft rock allows for low-cost mining due to reduced milling cost.

Gold mineralization at Sela Creek is observed within a northwest trending corridor that has a strike length of over 7 km and extends through the central part of the concession. In 2013, there were five main prospects within the central mineralised corridor: Central Ridge, Cambior, Stranger, Jons Pit and Puma. Continued small scale mining opens new pits and the older pits are flooded or filled with tailings. Past operators recognized that the Paaston and Panther prospects may represent separate mineralized trends. Mineralization is spatially associated with the faulted contact of a moderate intensity magnetic unit of likely felsic intrusive affinity, and a more widespread schist with slightly lower magnetic signature. This interpretation is supported by localisation of pits along the faulted contacts of the two magnetic units, in conjunction with the fact that drainages sourced at these contacts have almost entirely been mined for placer gold.

From January 2011 through 2013, Sela Creek was explored using high-resolution satellite imagery, airborne geophysics, soil, channel and rock-chip geochemical sampling programs, reconnaissance and prospect scale mapping and diamond core drilling. Nine (9) diamond core holes totaling 1693.5 m were drilled in five fences at Jons Pit. The drilling encountered rock types typical of greenstone belts, all of which are locally mineralized. Drilling intercepts include:

• 42.0 m @ 1.22 g/t Au (SKD001)

- o including 15.0 m @ 2.42 g/t Au,
- 28 m @ 1.12 g/t Au (SKD002)
  - o including 2 m @ 5.89 g/t Au and
  - o 3 m @ 2.45 g/t Au,
- 8.0 m @ 2.70 g/t Au (SKD008)
  - including 4.0 m @ 4.57 g/t Au.

More recently (June 2024), four grab samples collected in new exposures on the Jon's trend during the authors site visit yielded the following grades (the reader is cautioned that grab samples are inherently biased as they only sample a small portion of the available outcrop):

- 3.94 g/t in quartz of a stockpile at a small-scale mining shaft
- 13.94 g/t in a weakly oxidized quartz-sulphide vein in new outcrop.
- 25.13 g/t in a weakly oxidized quartz-sulphide vein in new outcrop.
- 1.72 g/t in a weakly oxidized quartz-sulphide vein in new outcrop.

The Central Guiana Shield Shear Zone (CGSZ) is a major structure that runs along the southwestern boundary of the concession, and a semi parallel splay of the CGSZ represents the northeastern boundary of the concession. The interaction of these two structures has created an area of extension for gold-rich fluids and intrusive rocks to access the highly deformed sedimentary and volcanic sequence of the greenstone belt.

The primary gold trend has an apparent north-north-east trend, but may represent a sequence of mega-scale extensional structures and the Jons trend occurs along one such extensional structure. These structural and intrusive features indicate an excellent region for gold exploration where a new major gold deposit may be established should continued exploration be successful.

The author recommends a LiDAR survey for ground control, field mapping and geologic interpretation. The available magnetic data should be reprocessed and inverted. Selected areas can be mapped and (channel) sampled, and potentially further explored using Gradient Array IP. One of the most useful exploration tools in deeply weathered profiles is trenching. Excavators are available on site for the small-scale mining activities, or transported from Paramaribo. Trenching a low-cost exploration tool prior to core drilling.

The author further recommends 3,000 feet of core drilling. Core is to be oriented and HQ diameter. A track mounted rig supported by one excavator is sufficient to access all areas. A generalized budget of \$2.3 million US (\$3.1 million Canadian) is proposed for a rapid drill program.

This technical report has been prepared at the request of MIATA METALS CORP., a company incorporated under the laws of British Columbia and having an address at 2133 – 1177 W. Hastings Street, Vancouver, BC V6E 2K3. The purpose of the report is to provide a summary of existing information on the project to potential investors. The format

of this report is that used by the Canadian Exchanges which is referred to as a NI 43-101 report. The author of this technical report has worked in Suriname since 1999 and has managed and conducted exploration programs throughout Suriname. He has written a number of publicly available technical reports, including those for Canasur, Harvest Gold, Suparna and Reunion Gold. In 2000, he initiated the program and led the Suriname team that discovered the Nassau gold deposit for Alcoa in 2003. Dr. LaPoint has no interest, shares or options in Miata Minerals and has received no offer or promise of stock, options or future interest in company. He is an independent qualified person for this report as defined by the current regulations for 43-101.

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# 2 INTRODUCTION

#### 2.1 Reason for Technical Report and terms of Reference

This technical report has been prepared at the request of Miata Metals Corp. ("Miata Metals" or the "Company"), a company incorporated under the laws of British Columbia and having an address at 2133 – 1177 W. Hastings Street, Vancouver, BC V6E 2K3. The author was requested by Miata Metals Corp., to produce a Technical Report for the Sela Creek property in Suriname (Figure 1) in compliance with NI 43-101 Standards of Disclosure for Mineral Projects. The author has reviewed and described recorded work to date and proposed future work programs. The author understands the Company may file this report partially or in full in support of its continuous disclosure requirements. 2.2 Sources of Data used in Report

Data was provided by the Company and earlier from records provided to the author by the concession holder on the work of Hunter Bay Minerals. The author was also associated with 79North, while a private company, and visited the property and supervised limited exploration. Current legal and concession records were provided by the Company. An experienced local geologist, Eriaan Wirosono, assisted with site visit and drafting figures.



Figure 1. Location of Sela Creek in Suriname Source: author

#### 2.3 Qualifications of Qualified Person and Site Visit

The author of this technical report has conducted exploration in Suriname since 1999 and has managed and conducted exploration programs throughout Suriname. He has written a number of technical reports for private investors as well as Canadian listed companies, such as Harvest Gold, Suparna and Reunion Gold, that are available on Sedar. Starting in 2000, he initiated the program and led the Suriname team that discovered the Merian Mine for Alcoa in 2003 (referred to as Nassau gold deposit for Suralco). This was a greenfields discovery (LaPoint, 2019). From 2004 till 2007 he was employed by Cambior as Exploration Manager for Suriname and was responsible for all exploration within Suriname for Cambior outside of mine development and later for IAMGOLD after they acquired Cambior. He is President and Owner of Appalachian Resources LLC. Since 2007, he has done project management and development in Suriname, the United States, Serbia, Panama, Belize and Guyana for clients that include concession holders, investors, public and private companies and the government of Suriname. He has served as Director, VP Exploration and COO for various private and public companies. Dr. LaPoint had reviewed Sela Creek before it was acquired by Hunter Bay. For 79North, he was in charge of a minimal exploration program. Most recently, Dr. LaPoint was VP Exploration for Omai Gold Mines in Guyana and Managed two projects for Rhyolite Resources in Suriname.

Dr. LaPoint has no interest, shares or options and has received no offer or promise of stock, options or future interest in the company. He is an independent qualified person for this report as defined by the current regulations for 43-101. Through Appalachian Resources LLC, Dr. LaPoint provides the same services to other concession holders and private and public companies. Dr. LaPoint takes full responsibility for this report. Dr. LaPoint is a registered geologist with the Society of Mining Engineers (SME). He is also a licensed geologist in North Carolina and South Carolina. He currently serves on the NC Board to Licence Geologists and was appointed twice by two Governors of North Carolina. He is a COE for the National organization of State Boards (ASBOG) and in 2022 received the honor of the Sherman Award for his service. Dr. LaPoint teaches a course of Mineral Deposits on the Guiana Shield, has led a field methods course in Aruba, and advises theses in the Masters Program at the Anton de Kom University of Suriname, AdeKUS.

## 2.4 Site Visit and verification of core available

On June 13, the author examined the shipping container stored in Paramaribo which contained core that was saved by the concession holder. Pulps and rejects are also stored there. Because some of the core shelves are unstable, sampling was limited to hole 6 for verification. The author collected seven samples from hole 6 to verify assay results. The remaining half of core from the same sample intervals was sampled to be the most representative for comparison. Samples were sent to Filab in Paramaribo.

On June 19, the author conducted a site visit to Sela Creek by helicopter chartered from Gumair using a Robinson L44. Eriaan Wirosono, an experienced Suriname geologist accompanied the author.

## 2.5 Units used in report

Most of the information on the property and surrounding area are in metric units. Currency is in United States Dollars. The following units of measurement and conversion factors are provided for clarification.

1 troy ounce = 31.103 grams 1 ppm = 1 part per million 1 ppb = 1 part per billion g Au/t means grams gold per metric tonne 1 oz Au/ton = 34.286 g Au/t 100 hectares = 1 square kilometers 1 foot = 31.28 cm or 0.3128 meters 1 mile = 1.609 km 1 m<sup>3</sup> = 1 cubic meter = 35.31 ft<sup>3</sup> 1 ton (Imperial) = 2240 lbs 1 hectare = 10,000 m<sup>2</sup> = 2.471 acres 1 cubic foot = 0.028317 cubic meters Ma = million years ago

Geologic terms used are those of standard usage.

# 3 RELIANCE ON OTHER EXPERTS

The author has reviewed the documents regarding the concession rights, but is not a legal expert in Suriname law, mineral agreements or the rules and laws governing exploration rights and thus relies on the information provided by the Company.

# 4 PROPERTY DESCRIPTION AND LOCATION

## 4.1 Sela Creek Project

79Northhas a 70% interest in the Sela Creek Property. The Sela Creek Property consists of two gold concessions:

3) The exploitation concession GMD no: 497/19 is in good standing until March 22<sup>nd</sup>, 2025. The Suriname company holding the rights is Selakriki Okanisi Resources N.V. and the concession consists of 10,000 hectares (Figure 2). Within the period two years to three months of the expiry date, an application can be made to extend the exploitation concession for five years or longer. (Figure 2). That is in progress according to the concession holder.

4) Gold exploration concession GMD no: 490/19 has an application submitted to convert the currently expired exploration concession to an exploitation concession with the GMD, the geological and mining survey of Suriname (Geologische Mijnbouwkundige Dienst). The Minister of Natural Resources must approve and sign any concession after review by the GMD. The concession is for 10,000 hectares under the company Selakriki Okanisi Resources NV. (Figure 2).

Because the rights for GMD490/19 are currently expired, this report is prepared for the current exploitation concession GMD497/19. The expired exploration concession is included as the historic geophysical data includes this region, and steps have been undertaken to return the concession to good standing under the same ownership.



Figure 2. Sela Creek exploitation concession 497/19 and pending exploitation concession with former number 490/19. Grid in UTM WGS 84 and concessions in latitude-longitude with datum WGS84. Source the author.

According to the current Surinam mining laws, exploration rights holders are obligated to: begin exploration activities within three months and to continue activities without interruption of more than four months; notify the Minister about each finding of minerals within 30 days; meet the minimum expenditure requirements; maintain technical lists; refrain from commercial production; submit quarterly reports and annual reports on scientific and technical details; and pay the relevant fees to maintain the concessions.

Similarly, exploitation rights holder are obligated to: promptly start exploitation activities and continue without interruption unless the Minister approves otherwise; provide annual reports on the quantities of production and export for the year, as well details of imported goods, estimated export values, levies to be paid and sum of money to be financed; keep accurate lists of technical and financial data; report annually on reserves; submit quarterly technical reports; submit annual reports with details of investment, export, employment etc.; and pay the relevant fees to maintain the concessions. These obligations are loosely enforced in practice. The exploitation rights permit mining and no further mining permits are required. Other than communicating with the local community, no permits are required by the Ministry to build roads, trench or drill. As noted, quarterly and annual reports must be submitted to the GMD.

Sela Creek is within a region where hunting and fishing rights are held by the Saramaka Maroon group. The government of Suriname still retains the mineral and surface rights and Suriname is a country that does not legally recognize the collective rights of indigenous and tribal peoples to the lands and resources they claim. A new mining law has been drafted to address the rights of the indigenous people, but with upcoming elections in 2025, its passage is uncertain.

# 4.2 Concession Rights Under Decree E-58

Exploration and mining activities are managed by the Suriname Ministry of Natural Resources and the Geology and Mining Department (GMD) within the Ministry, according to the Mining Code of 1986 (Decree E-58, 1986). A draft of a new mining law is in progress.

There are four types of mineral rights that can be granted under the Decree E-58 including: (1) "Rights of Reconnaissance" (up to 200,000 ha), (2) "Rights of Exploration" (up to 40,000 ha), (3) "Rights of Exploitation" (up to 10,000 ha), and (4) "Right of Small-Scale Mining" (up to 200 ha).

Exploitation concessions allow for the mining of gold and other minerals, if included. The exploitation concession of Sela Creek Project N.V. will fall under the following rules and regulations in Suriname with regards to production:

1. "Mining Decree" E-58 (SB 1986 no. 28), laying down general rules concerning the exploration and exploitation of minerals;

2. Decisions of the State May 11, 1989 (SB 1989 No. 39 and 40); (as last amended by SB 1997 No. 44);

3. Brokopondo agreement pertaining to the law January 25, 1958 (GB No. 4) and the Act of August 3, 1977 No.8821 (Bulletin No.45);

4. 'Economic Offences Act of January 9, 1986 "(SB 1986 No.2, as amended by SB 2008 No. 55).

The extension of the right of exploitation are possible as long as certain prescribed terms and conditions are met and duly fulfilled by the applicant, subject to the discretion of the Minister of Natural Resources. The renewal applications must be made at least 30 (thirty) days before the expiration of concession rights. Production is allowed under the current exploitation licence.

#### 4.3 *Prior concession ownership*

Records of prior concession ownership from the GMD are unknown as the Ministry of Natural Resources does not provide public access to these records. There was no prior concession granted at Sela Creek. Based on personal communication with Selakriki Okansi resources NV, Sela Creek has had a licence since 2012.

#### 4.4 Community and Environmental Aspects

The concession holder has local partners and maintains a good relationship with the local community of Paaston (Apoeke on Google Earth; Figures 3 and 4). Since the author has been active in Suriname, he has not heard of issues in prior exploration activities at Sela Creek.



Figure 3. Village of Paaston). June 19, 2024. Looking SE toward concession. Photo by author.



Figure 4. Landing at Paaston for supplies. Photo taken 2012-2013 and provided by Selakriki Okansi NV.

Communities of Maroon groups inhabit the region around Sela creek. Each Maroon group has a main authority called the *granman* or paramount chief. The *granman* directs a team of officials called *kapiteins* (captains), who are in charge of the villages or clans. The *granman* and *kapiteins* are assisted at community level by *basias* (heralds or monitors) who implement socio-political control governed by religious principles. Maroon religion manifests many traditional African elements, including oracles and the veneration of African ancestors and spirits.

Maroon society traces descent through the female line. The central group of a village consists of the descendants of an ancestral mother. Females also play a major role in the economy. Maroon economy has been traditionally based on female subsistence horticulture, and male hunting and fishing.

Holders of exploration and exploitation concessions must respect the local inhabitants and their traditions, culture and economic activities in order to successfully operate in the area. For Sela Creek, there are no known environmental liabilities that affect the ability to conduct exploration and later mining activities. The current Mining Law states that a concession holder works according to best international environmental practices but there are no specific requirements. The author knows of no significant factors or risks to prevent exploration on the concessions in terms of access rights, title, or local community relations.

# 5 ACCESS, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

#### 5.1 General observations on Suriname

The Republic of Suriname is the smallest sovereign state in South America, obtaining its independence from the Netherlands in 1975. It is a unitary parliamentary republic and a member of the Caribbean Community.

A country with an estimated population of 560.000 inhabitants, Suriname has an economy dominated by the extractive industries, with exports of oil and gold accounting for approximately 85% of exports and 27% of government revenues. Off shore development of new light crude oil is expected to be an economic boom, like in neighboring Guyana.

Suriname is the smallest independent country in South America. The national capital, Paramaribo, accounts for nearly half of Suriname's population. Most municipalities are located along the densely populated coastline. It lies on the Guiana Shield between latitudes 1° and 6°N, and longitudes 54° and 58°W. The country can be divided into two main geographic regions. The northern, lowland coastal area, that has been cultivated for centuries, and the southern part that consists of tropical rainforest and covers about 80 percent of Suriname's land surface.

Suriname is situated between French Guiana to the east and Guyana to the west. The southern border is shared with Brazil and the northern border is the Atlantic coast. The southernmost borders with French Guiana and Guyana are disputed by these countries along the Marowijne and Corantijn rivers, respectively (Figure 1).

Suriname was explored and contested by European powers before coming under Dutch rule in the late 17th century. In 1948 the country gained autonomy and in 1953 it became one of the constituent countries of the Kingdom of the Netherlands. On 25 November 1975, the country of Suriname left the Kingdom of the Netherlands to become an independent state. Close economic, diplomatic, and cultural ties are maintained.

Strong ties developed between Suriname and the United States as in WWII, 60 per percent of the aluminum used in the war effort came from Suriname bauxite.

Bauxite (aluminium ore) mining was a strong revenue source until the decline that started during the Interior war. Since 2015 there is no bauxite industry with the closure of the mines and refinery by Alcoa after 99 years presence in Suriname.

Suriname is considered to be culturally a Caribbean country, and is a member of the Caribbean Community (CARICOM). Suriname is a mostly Dutch-speaking country; Sranan, an English-based creole language, is widely used. It is the only independent entity in the world where Dutch is spoken by most of the population apart from the Netherlands. English is spoken by most people in Suriname, especially the younger generations with exposure to American TV and movies and English is taught in the schools. The people of Suriname are among the most diverse in the world, spanning a multitude of ethnic, religious, and linguistic groups. Suriname has a population of 620,400 inhabitants in 2023.

# 5.2 Access

The Sela Creek licenses are crosscut by dirt roads from the alluvial and saprolite mining activities. ATVs are the vehicle of choice to get around. Until an airstrip is built on the **concession the access is** in the following ways:

- The Sela Creek gold project is 235 kilometers south of Paramaribo and is directly accessible by helicopter with a flight of about one hour.
- The property is also accessed by a daily scheduled flight from the Zorg en Hoop airstrip in Paramaribo to a grass airstrip at Drietabikki. From Drietabikki a motorized canoe is used to travel approximately 40 km up the Tapanahony River to the small village of Paaston at the northwestern edge of the Sela Creek licence (Figure 1). The travel time is approximately 4 hours from Paramaribo to Paaston.
- Heavy equipment and fuel can be transported by motorized canoe or small barge from Albina up the Marowijne and Tapanahony Rivers for a total distance of approximately 230 km (Figure 1). The journey takes two days.
- Currently, most equipment is brought in from Atjonie across Tosso and then barged across the Tapanahony River.

## 5.3 Climate

Suriname has a tropical climate. There are four seasons: a minor rainy season from early December to early February, a minor dry season from early February to late April, a major rainy season from late April to mid-August and a major dry season from mid-August to early December. However, there is considerable yearly variation in the onset and intensity of each season. Daytime temperatures range between 23° and 31° C, with an annual average temperature of 27°. Nights can be pleasant sleeping by late evening. The range

in average temperatures between the warmest month, September, and the coldest, January, is only 2° C. Rainfall is highest in the central and southeastern parts of the country. Annual rainfall averages 1,930 millimeters (m) in the west and 2,400 mm in the town of Paramaribo. The relative humidity is very high, from 70 to 90 percent. Climatic conditions seem to be becoming with more variable and extreme drought or rainy periods.

Work programs can be conducted year around. If possible, initiation of programs is best in the dry seasons especially from August to the end of the year. This is especially true for Sela Creek due to access. Suriname is outside of the hurricane belt, but heavy rains can cause flooding of low-lying areas.

## 5.4 Physiography

The physiography of the Sela Creek concession reflects the underlying rock types and regolith. Primary rainforest covers the majority of the concession. The field area is dissected by a series of seasonal streams and gullies which separate a series of low rolling hills. Elevations range from 100 to 200 meters above sea level and rare steep sided slopes occur on the larger hills.

The center of the project area has been subject to decades of small-scale gold mining over an area of 30 km2. Mined areas have been stripped of primary rainforest and the top soil removed. Re-vegetation results in a dense secondary regrowth. Where mined, a series of flooded pits are left, separated by mounds of washed sand and gravel, which over time form a patchwork of shallow ponds and re-vegetated corridors. Saprolite above shear and contact zones is mined in a series of open pits to depths of between 10 to 30 meters which remain as either open excavations or flooded pits.

Outcrop throughout the field area is very poor and is limited to exposures in gullies and streams. Variably weathered bedrock is exposed in some artisanal pits especially where quartz veins or zones of silica alteration are exposed. Saprolite can be mapped on the hills by experienced mappers. The DEM from the geophysical survey is used for locations (Figure 5.).



Figure 5. Digital terrain model of Sela Creek concessions with areas of small-scale mining. (E. Wirosono, July 2024)

#### 5.5 Local Resources and Infrastructure

Unskilled and semi-skilled labor is available in the nearby villages of Paaston, Dritabikki and Godolo as well as from other villages and Paramaribo. All materials, fuel, food and skilled labor must be sourced from either Paramaribo or Albina.

Timber for construction of camp buildings can be cut from the forest by the skilled local labor. Potable camp water is collected from rain and streams. A filter and UV treatment allows for local water to be used in camp. Water for drilling can be collected from flooded pits created by miners, Electrical power is supplied by generators or solar power.

Sara Creek has a long history of mining and an unknown number of miners (porkknockers), work the area. These miners create the road and trail access in the concession and, when actively mining, create exposures for sampling weathered bedrock (saprolite) and quartz veins, but they also destroy access roads with their pits, heavy equipment and overuse of trails for fuel and other supplies. The landscape has been considerably transformed by mining (Figures. 6 and 7).



Figures 6 Current landscape in concession near Jons trend of mining. Photo by author, July 2024.





#### 5.6 Sufficiency of Surface Rights

The sufficiency of surface rights for mining operations, the availability and sources of power, water, mining personnel, potential tailings storage areas, potential waste disposal areas, heap leach pad areas and potential processing plant sites will be addressed by scoping studies, pre-feasibility and feasibility studies once a potential economic resource is located. No information has been disclosed to the author to indicate that there are any issues with surface use for mining, processing and disposal of waste. Sources of power for mining operations will be evaluated during feasibility.

# 6 HISTORY

#### 6.1 Prior ownership

Records of prior concession ownership from the GMD are unknown as the Ministry of Natural Resources does not provide public access to records of current or prior concession holders. Based on personal communication with the concession holder, the Right of Exploration was first granted as an exploration licence in 2012.

#### 6.2 Past Production

There are no production records of production from past mining. The earliest small scale mining started at Sela Creek between 1920 and 1930. in. The local miners made a dam in the creeks, to create a small reservoir. Then they used the hollow grey colored stem of the acai palm, which could be as much as 25 meters long, to channel water to a sluice box positioned downstream at a lower elevation. Over the years thousands of Maroon miners flocked to the Sela Creek area and began to use mechanized approaches, first with small 2-inch and 3-inch water pumps, and then with increasingly larger pumps powered by four- and six-cylinder diesel engines. The miners also began to use excavators so that they could reach mineralized layers at much deeper levels (Chris Healy, personal communication, 2024). Considering the access and cost for mobilization of heavy equipment for local small-scale miners (SSM), the scope of mining is impressive and implies significant past production (Figure 7). The reader is cautioned that small-scale production of gold does not imply an economic resource or reserve can be established at Sela Creek.

# 7 GEOLOGIC SETTING AND MINERALIZATION

## 7.1 Regional Setting

The Guiana Shield forms the northern part of the Amazonian Craton, the core of the South American continent, and is separated from its southern counterpart, the Central Brazilian Shield, by the Amazon–Solimoes basin. The Proterozoic basement of Suriname consists of three metamorphic belts, the low-grade Marowijne Greenstone Belt, which is host to most of the known gold occurrences (Figure 8), in the northeast and the high-grade Bakhuis Granulite Belt and Coeroeni Gneiss Belt in the northwest and southwest, respectively, separated in the central part of the country by a large area with various types of granitoid rocks and felsic metavolcanic rocks. The basement is overlain by the Proterozoic Tafelberg Formation, a sandstone remnant of the Roraima Supergroup, and transected by Proterozoic and Early Jurassic dolerite dikes (Kroonenberg and others, 2016).



Figure 8. Marowijne Greenstone Belt in Suriname with significant gold districts, indicated mineral inventory are proven and probable reserves (Kioe-A-Sen et al., 2016; LaPoint, unpublished; Newmont Resources and Reserves, 2023; IAMgold attributable Reserves, 2023). Figure by Exploration Sites, July 2024.

The Marowijne Greenstone Belt in Suriname forms part of a large Paleoproterozoic greenstone belt stretching over a distance of 1500 km along the whole northern coast of the Guiana Shield from Venezuela to the Amapa state in Brazil. The main northeastern part of the Marowijne Greenstone Belt shows a broad asymmetrical synclinorial structure, with its oldest rock units, the Paramaka Formation greenschist-facies metabasalts and associated rocks, on the outer, southwestern side, and the younger, mainly metaturbiditic Armina Formation in the northeastern core of the synclinorium. The Paramaka Formation is intruded by large ellipsoid diapiric TTG bodies and small mafic to ultramafic plutons, now partly metamorphosed. Smaller plutons of two-mica granite intrude the Armina

Formation in the northeastern corner of the Marowijne Greenstone belt. The Paramaka and Armina Formations are unconformably overlain by a more mature metasandstone formation, the Rosebel Formation. (Kroonenberg, and others, 2016). The author considers the formation names simplistic and if mapped in the detail typically used for defining formations, would be revised (LaPoint and Watson, 2006), but the nomenclature is commonly used.

The Marowijne Greenstone Belt is a Paleoproterozoic belt accreted to an Archean block in the south, during a collisional orogeny with the West-African Archean Shield at 2.2– 1.95 Ga. When the island-arc basins were closed, convergence continued at an oblique angle, 2.11–2.08 Ga, with sinistral sliding and the formation of 'pull-apart' basins in which the upper detrital unit was deposited. In it not well understood if these pull apart basins postdate gold mineralization or may represent part of the mineralizing event. Granitic batholiths were emplaced during this stage and a major tectonic phase D2 developed in metavolcanics and metasediments, including the upper detrital unit. This structural setting is a classic deformational period with emplacement of intrusive rocks to host to major gold deposits throughout the world. In all the greenstone-related gold deposits goldrich fluids travel and are deposited along structural zones of weakness or where brittle fractured high fluid flow is related to fault events.

Orogenic gold occurrences are lithologically and structurally controlled and Sela Creek is no different. What is striking, even on the simplified geologic map of Suriname, is the obvious CGSZ (Central Guiana Shield Shear) that affects lithologies and trends northwest through Sela Creek towards Antino (Figure 9). An SRTM image suggests the CGSZ shifts from one strand to another at Sela Creek thus creating the open space for gold-rich fluids. When two strike-slip fault strands overlap, depending on shear sense and sense of overlap, you can create localized extension/pull-apart structures. As is well documented in the literature, the main structure is not the primary host for mineralization, and that appears the case at Sela Creek with the segments of the CGSZ (Figure 10).



Figure 9. Simplified geologic map of Suriname with CGSZ (Kroonenberg, 2017).

The mineral inventory of the greenstone belt of the Guiana Shield is over 110 million tons of gold from Venezuela to Brazil (Bardoux and others, 2022). Suriname and the Guiana Shield are one of the few remaining frontiers for new major gold discoveries like Merian (LaPoint, 2019; Figure 11). Besides the exploration challenges of deep weathering with few exposures, the database of Suriname is very out of date and limited to the period in the 1950's and 1060's when Dutch geologists and government funded, worked, and managed the geological surveys. Although impressive mapping for the time, mapping was limited to traverses along the rivers and overland traverses. Much of this data is poorly accessible as it is not maintained. Concessions are often held by residents who obtained the concessions for political favors and can not or will not conduct exploration. Thus companies must rely on historic data and information provided by the porkknockers, the traditional, small-scale independent miners who conduct surface mining operations in the region (LaPoint, 2019). Major mining companies depend on junior miners for the initial high-risk investments and Suriname and Sela Creek are going through these cycles.



Figure 10. DEM showing Central Guiana Shield Shear zone (CGGS) at Sela Creek that visibly extends towards Antino and beyond. At Sela Creek, it appears two strike-slip fault strands over lap to create an extensional or pull apart basin that is a suitable host region for gold-rich fluids. Figure by author.



Figure 11. General outline of Greenstone Belt in Suriname and French Guiana with mines and historic gold regions. (Combes, unpublished presentations). Sela Creek lies along the Central Guiana Shield Shear corridor defined by Voicu and others (2001).

The rocks of the Trans Amazonian orogenic cycle and equivalent are a major source of gold production and resources in both South America and Africa. These regions were connected prior to the opening of the Atlantic Ocean, and record similar styles of sedimentation, structural evolution, and igneous evolution. West Africa hosts numerous long-lived and currently producing mines and as result of their similar geological history, the Guiana shield is expected to have similar gold endowment. In Ghana alone since 1970, 2023 metric tons of gold have been produced (63 million ounces; http://www.goldsheetlinks.com/goldhist.htm).

The entire Guiana Shield has undergone prolonged chemical weathering under a humid, tropical paleoclimate that may have started as far back as the Cretaceous period. Weathering has produced laterite and saprolite profiles up to 100 meters below surface. The chemical effects of the deep weathering include leaching of mobile constituents (alkali and alkali earths), partial leaching of SiO<sub>2</sub> and Al<sub>2</sub>O<sub>3</sub>, formation of stable secondary minerals (clays, Fe-Ti and Al-oxides), mobilization and partial precipitation of Fe and Mn and the concentration of resistant minerals (zircon, magnetite, quartz). Understanding the regolith and especially if the weathered material is in situ or transported is critical in an exploration program. The weathering profile at Saramacca (Zijin) is multistage and a complex history while at Merian, the profiles are more in situ (personal observations and data). The history at Sela Creek has not been addressed.

#### 7.2 Local Geology

Outcrop at Sela Creek is limited to workings in saprolite and very rare exposures in stream beds and gullies. The majority of the area is overlain by a one to three meters of lateritic soil with a sharp contact into saprolite. Saprolite is between 10 and 30 m deep and is exposed in the small-scale mine pits (Figure 12). The dominant lithologies at Sela Creek are meta-sedimentary and meta-volcanic rocks which have been subjected to multiple brittle-ductile deformation events. As a result, a well developed, sub-vertical, west-northwest to northwest trending schistosity has been developed. Rocks display an upper greenschist to lower amphibolite grade metamorphic assemblage. Pyrite is ubiquitous and likely formed both as part of the metamorphic assemblage (typically with epitode-chlorite) and also as a hydrothermal product. Garnet porphyroblasts are best developed in shear zones and are indicative of lower amphibolite facies. Protoliths are not recognisable and metamorphic rocks are named on the basis of their metamorphic mineral assemblage and metamorphic grade (Hantelmann, 2013).



Figure 12. Good example of saprolite exposure in small-scale mine. Photo taken 2012-2013 and provided by PPA.

The main lithologies comprise fine-grained, chlorite schist, mica schist, biotite schist and garnet-mica schist. Decimetre thick bands and smaller lenses of strongly fractured and recrystallised quartzite are observed in central parts of Sela Creek and form boudins within the greenschist rocks. Rare marbleized bands are observed in drill core. Metamorphic rocks are intruded by northeast to north trending dikes and stocks. Diorite dikes are weakly magnetic and chlorite-pyrite altered, and display sheared contacts with the host rocks. Felsic dikes are believed to post date diorite dikes and display sharp contacts with host rocks. Tonalite stocks are inferred in the central part of Sela Creek, and were observed at the Cambior prospect when Hunter Bay was active. Tonalites and

other intrusive units may occur throughout the central part of Sela Creek (Hantelmann, 2013).

A west-northwest to northwest trending schistosity is present which displays localised, tight parasitic folding. Outcropping greenschist rocks are offset by steeply dipping, east-northeast trending mylonitic shear zones and shallowly dipping, west-northwest trending reverse faults with throws of up to 2 m. Northeast trending normal faults with a minor dextral strike-slip component were also observed in outcrop, cross-cutting all lithologies. At the regional scale, magnetic data indicates that northeast trending faults offset the faulted intrusive-schist contacts of the central Sela Creek region by 10 to 250 m (Hantelmann, 2013).

#### 7.3 Mineralized Zones

Current and historic gold production has been from alluvial and saprolite mining and these mines are also prospecting tools because they create exposure for sampling in the test and mine pits as well as along access roads. They also indicate the presence of gold on the concession.

Current alluvial mining methods use an excavator to remove the overburden and then pressure from hydraulic hoses to wash the gravels into a sump. The slurry is pumped to a sluice box where the gold and heavy minerals are concentrated. The efficiency of this process is typically poor. Mercury is used to recover the gold. When mining is in saprolite the procedures and processing are similar, but a Brazilian crusher maybe added to crush the quartz. Because of the recovery, the tailings are often reprocessed again. Becoming very common in Suriname, but not yet seen at Sela Creek, are heap leach recovery operations of tailings using a Chinese imported material that is reported to not use cyanide.

Most, if not all current mining at Sela appears to be in saprolite or reprocessing tailings. The gold nuggets in front piece photo appear to be derived from the duricrust in the regolith. As seen by the author at Sara Creek and Benzdorp (Antino), individual prospectors use metal detectors and then excavate a pit to find nuggets. This can be the first step to developing a saprolite mine. During chemical weathering, the nuggets grow in place as the pyrite oxidizes.

Gold mineralized zones for this report are defined based on where small-scale miners have extended pits into the saprolite to mine gold occurrences to depths of 10 to 30 meters. The saprolite is weathered, clay-rich bedrock that can be extracted with excavators to loosed material then high-pressure hoses to wash away the clay.

Gold mineralization at Sela Creek is observed within a northwest trending corridor that has a strike length of over 7 km and extends through the central part of the licence. In 2013, there were five main prospects within the central mineralised corridor: Central Ridge, Cambior, Stranger, Jons Pit and Puma. Continued small scale mining opens new pits and the older pits are flooded or filled with tailings. Mineralization is spatially associated with the faulted contact of a moderate intensity magnetic unit of likely felsic intrusive affinity, and a more widespread schist with slightly lower magnetic signature. This interpretation is supported by localisation of pits along the faulted contacts of the two magnetic units, in conjunction with the fact that drainages sourced at these contacts have almost entirely been mined for placer gold. The competency contrast between the intrusive rocks and schists likely served to focus mineralizing fluids along regional structures (Hantelmann, 2013). The author expects multiple gold trends to be developed, as seen at Rosebel and currently being tested by Founders at Antino.

Interpretation of magnetic data by Hunter Bay indicates that the Puma prospect is not located at the contact of an intrusive unit and schist, but is localised along a major northwest-southeast trending fault zone. Workings have exposed in-situ mineralization coincident with the faulted contact of different magnetic (and thus lithological) units along the Jons Pit Trend and at the Cambior, Stranger and Puma prospects. This is suggested on the airborne magnetic data, The Central Ridge prospect, which is centered on a large magnetic anomaly, had no hard rock exposure but all drainages emanating from the area were extensively mined for placer gold, indicating an excellent exploration target. Mineralization at all prospects is associated with sub-vertical quartz and quartz-pyrite vein zones that are up to 21 metres wide. Vein zones are hosted in chlorite-mica schist and garnet schist within shear zones. Oxidation of sulphide to limonite and hematite is pervasive (Hantelmann, 2013).

The work by Hantelmann (2013) and the geophysical airborne survey demonstrate the importance of structural control and understanding required to properly test Sela Creek. Lithologic contrasts and multiple generations of shear and tension veins control mineralization in this orogenic gold system. The overall northwest trend of pits may represent a sequence of large-scale tension structures. With new exploration, the potential of Sela Creek will be better realized. Sela Creek will have a variety of exploration targets to evaluate,

# 8 DEPOSIT TYPES

Orogenic gold deposits form in metamorphic rocks in the mid- to shallow crust (5–15 km depth), at or above the brittle-ductile transition, in compressional settings that facilitate transfer of hot gold-bearing fluids from deeper levels. The term "orogenic" is used because these deposits likely form in accretionary and collisional orogens. Transfer of weakly oxidized, low-salinity fluids to the sites of gold deposition is controlled by earthquake events, allowing fluids to rapidly traverse large thicknesses of crust. This rapid rise takes the fluids out of equilibrium with their surroundings, promoting destabilization of the gold-carrying hydrosulfide complexes [Au(HS)<sub>2</sub>- and AuHS]. The chemical cause of gold precipitation, facilitated by a temperature-pressure decrease, varies from place to place, and mechanisms such as fluid-rock reaction, boiling, fluid mixing, and chemisorption on surfaces of pyrite and arsenopyrite are possible.

Evidence so far suggests an orogenic gold deposit may be established at Sela Creek should continued exploration be successful:

- An orogenic gold system is a structurally controlled region of gold occurrences formed during one or more of the major stages of an orogeny. Any rock type within a greenstone or schist belt, a metamorphosed supracrustal rock, dike, or intrusion within or intrusion bounding such belt may host a gold occurrence.
- There is strong structural control of mineralization at a variety of scales but the favoured host is typically the locally most reactive and/or most competent lithological unit. Because of the interrelationship of shear and tension components on mineralization, the orientation of drill holes must be constantly studied in three dimensions and oriented core is essential. This was not so easily available to Hunter Bay and is not effective in drilling saprolite.

Current and historic gold production has been from alluvial and saprolite mining and these exposures and pits are also prospecting tools because they create exposure for sampling in the mine pits as well as along access roads (Figure 13). They also indicate the presence of gold on the concession (Cover photo). The alluvial and colluvial gold may be a target for exploration and development, depending on the investor, but is not addressed in this report

The following paragraphs serve to illustrate the geological similarity of certain gold mines, deposits, and occurrences in the Guiana Shield with the Sela Creek concession. However, the reader is cautioned that these geological similarities do not guarantee that a deposit will be established at Sela Creek.

Bulk mineable, open pit targets are the primary focus of exploration, but high-grade quartz vein systems that can be mined by both open pit and underground methods are also a viable exploration target. The Aurora deposit in Guyana is both an open pit and underground mining operation. At the Rosebel mine, deep drilling below the Pay Caro pit has provided initial information for the underground mining potential. The Saramacca deposit of Rosebel maybe better mined as an underground operation. At Omai, Cambior tested the underground potential below the Fennell pit. The ounces of gold within these quartz vein systems can create major new gold districts with multimillion-ounce potential, based on similarities elsewhere in greenstone belts worldwide. The reader is cautioned that the aforementioned mines and deposits do not guarantee a deposit will be established at Sela Creek despite geological similarities.

Gold mineralization is hosted in multiple deposits of various tonnage and grade. The localization depends on the nature of host rocks and the presence of major structures that define mineralized trends. Each trend can be distinguished based on varying structural characteristics such as intensity of deformation, orientation of structures, and kinematic histories. Two main phases of deformation are recognized in the district are recognized at Rosebel. Daoust and others (2011) present evidence that gold mineralization occurred during the latest stages of the second deformation phase at Rosebel. Their concept is a Riedel Model as applied to structures recognized at Rosebel. The orientation of structure indicates a system in transpression where the main structures are present in the North domain (D) and the South domain. Those correspond respectively to a major dextral strike-slip fault developed at 65° from the main constrain

and a major thrust fault developed at 90° from the main stress (s1). Tension veins present throughout the property were developed parallel to the N-S stress.

Primary gold mineralization at Rosebel occurs in several different styles on the property but is typically associated with multiple generations of quartz, quartz-carbonate and quartz-carbonate-tourmaline veining. Vein arrays are thought to have developed preferentially along pre-existing structural heterogeneities such as lithological contacts, fold closures and sub-vertical shear corridors during major deformation phases.

Gold mainly occurs in its native form as free grains, often precipitated close to vein selvages or as intergrowths in pyrite crystals within veins and adjacent country rocks. Mineralized quartz veins range from a few centimeters up to 4 meters in thickness and are typically associated with a wall-rock alteration assemblage comprising sericite, chlorite, carbonate, tourmaline, pyrite, pyrrhotite and plagioclase.

Mineralization at Merian is hosted in spatially and temporally related shear and tension vein arrays. The association of these two vein systems is typical of orogenic gold systems where tension veins develop in extensional fractures that have accommodated deformation. At Merian, tension veins are more important in terms of contained gold, although shear veins can carry significant grades and are thought to be a fundamental control on hydrothermal fluid circulation (Capps and others, 2004; LaPoint and Watson, 2006).

# 9 EXPLORATION

## 9.1 Introduction

The history of small-scale mining and the gold produced as well as the exposures generated plus the exploration by Hunter Bay are very positive for future discoveries at Sela Creek. Orogenic gold occurrences are challenging to explore and drill due to their complex and heterogeneous nature and Sela Creek is no exception. The exploration is based on a comprehensive understanding of the regional and local geology, structure, and alteration of the orogenic belt, as well as the geochemical and geophysical anomalies that indicate the presence of gold mineralization. The exploration methods include geological mapping, rock and soil sampling, trenching, geophysical surveys, and geochemical analysis, to identify and prioritize the most prospective targets. The drilling program should be designed to test the targets at different depths and angles. Oriented core is recommended. The drilling data should be interpreted and integrated with the other exploration data, to update and refine the geological model and the resource estimation.

In tropical environments, such as Suriname, understanding the chemistry and mobility of gold during weathering of gold–bearing rocks is critical in effective exploration. The processes are controlled by geochemical, biogeochemical or simple mechanical processes. Gold usually occurs as native gold which is resistant to the effects of chemical weathering because gold has a low mobility and is generally dispersed as clastic fragments by slow mechanical weathering into soils. Under acidic conditions, such as

produced by organic acids in the tropical environment, some gold can be dissolved into groundwater. The dissolved gold is then re-precipitated in the lateritic part of the profile or where groundwater discharges into creek. This gold has a greater fineness or purity than the primary gold as the silver is dissolved and removed by chemical weathering.

In the weathered environment, a key is locating the primary sources of gold, At Sela Creek, the source of the gold found in the alluvial operations is from the surrounding hills. Transport into the creeks is by down slope movement by mechanical methods such as debris flows, landslides, slope wash and alluvial transport within the creeks (Figure 14). Gold is also transported in solution in shallow groundwater, probably as organic acid complexes, and is precipitated as fine flour gold in the drainages. This dispersion of gold can lead to the development of a dispersion halo, commonly called a "mushroom", because of its shape. For exploration of saprolite and fresh rock gold sources, it is a challenge to fine the "roots" of the gold system. Understanding the importance of regolith development is essential in an exploration program as is an understanding of the structural and geologic controls to mineralization based on mapping and recognizing lithologies, structure and alteration in saprolite. At Sela Creek, almost all exposures will be saprolitic until core drilling below depths of 30 to 50 meters.



Figure 13. Gold dispersion in weathered environments (https://csiropedia.csiro.au/regolith-geochemistry-for-mineral-exploration/)

#### 9.2 Exploration Results at Sela Creek

The Company has conducted no exploration yet. All results discussed are from the exploration of Hunter Bay and limited exploration by 79North, which is being acquired by Miata.
#### 9.2.1 Auger Sampling

Reconnaissance soil samples were collected over an area of 29.8 km<sup>2</sup> by Hunter Bay. and primarily targeted potential strike extensions of known mineralization and source areas of placer gold. A total of 1315 samples were taken of which 1063 were assayed. Samples were taken by hand auger at 100 m intervals along northeast-southwest oriented lines spaced 200 m apart and at depths of between 70 and 120 cm. The A-horizon was discarded and the entire remaining interval of the upper B-horizon was placed in a sequencially numbered plastic sample bag. A sample number tag was also placed inside the sealed bag and soil profile, color, grain size, and composition were recorded. Sample location was taken by hand held GPS with an accuracy of  $\pm 3$  m. Areas of workings were not sampled as miners had removed the soil profile.

In the author's experience, the most appropriate approach is to sample deeper in the profile and ideally about 2 meters in depth or into saprolite. The auger samples where deeper sampling was done by Hunter Bay, contain the highest results for gold. Soil anomalies generated are scattered, but suggest a northwest trend. Only at the Puma area was there a cluster of values greater than 100 ppb (Figure 14). In the last 12 years, this anomaly may have been mined, the status is unknown. Soil grids require line cutting, trained technicians and crew to sample and record, and the soil surveys are often expensive to conduct. Technicians and crew must be trained and experienced to not sample transported material. Because so much of Sela Creek is disturbed by mining, selected sampling can be warranted based on geologic evaluation, but blanket surveys are not recommended. At Merian the author used "ridge crest" or "ridge and spur" sampling very effectively. This minimized line cutting and downslope transport of colluvial material that can displace or hid primary mineralization.



Figure 14. Auger sampling by Hunter Bay (Capps, 2018).

#### 9.2.2 Panning

Panning was completed by 79North using an experienced panning team and methods developed by the author (LaPoint, 1996) in the southeastern US. 106 samples were panned west of the primary mining activity. More than 30 colors are considered very anomalous. A total of 12 samples were over 100 colors and more than half (56) were over 30 colors. The central Ridge prospect has a cluster of anomalous samples. The region of panning merits further sampling and prospecting. Auger sampling did not cover this region. There is on-going small-scale mining of drainages. Many geologists are not experienced in the value of a quality panning program. The author believes that the pan results merit further follow up and that it may be useful to expand the survey to undisturbed areas (Figure 15).



Figure 15. Pan results from sampling by 79North Source the author

9.2.3 Grab and Channel Sampling

Hunter Bay collected 189 grab samples from the central mineralised corridor, which includes Cambior, Jons Pit and Puma, as part of first pass reconnaissance work (Figure 16). The samples assayed from below detection to a maximum of 446.27 g/t Au. Twenty eight of the 189 samples were above 1 g/t Au of which 18 were above 5 g/t Au. The results indicate the presence of high-grade gold mineralization associated with quartz vein zones at Jons trend, Cambior, Stranger and Puma. Rock chip gold assay results were used to help prioritise areas for subsequent channel sampling. Samples were collected using a hammer and chisel to chip a composite sample from outcrop. Sample location was recorded using GPS with an accuracy of ±3 m. Samples were given a unique sample number, placed in individually numbered plastic sample bags with a numbered sample tag, and the bag was then sealed using a clip lock plastic tie. Lithology, colour, grain size, texture, alteration and mineralization was recorded (Handelmann, 2013)

Hunter Bay also collected 55 channel samples totalling 846.8 metres. The majority of these were taken along the Jons Pit Trend and at the Cambior Prospect. A small number of channel samples were also collected at the Puma, Stranger and Paaston Prospects.

Channel sampling and mapping of saprolite in areas being mined is an effective tool to help understand mineralization controls and assist in drill sites and drill orientation, as was done by Hunter Bay. One difficulty is that most abandoned pits are either flooded or back-filled with washed material, making it impossible to channel sample large areas of the mineralized trend, outside of those areas being actively worked.

Channel samples were marked by the geologist and taken perpendicular to the strike of the structure. The location of the start of the channel is recorded using a hand-held GPS with an accuracy of ±3 m, and a tape and compass are used to survey the channel to the end point, allowing data to be entered into the database as a 'drill hole'. Sample length was a nominal one metre, unless the sample crossed a lithological boundary or change in alteration or mineralization, in which case sample length was dictated by geology. A hammer and chisel were used to sample a 5 cm wide and 3 cm deep channel across the face of the outcrop and material was collected directly into a plastic sample bag. Each sample was marked with a unique sample number, a numbered sample tag was placed in the sample bag, and the bag was sealed with a plastic clip-lock tie. The weight of the sample varied between 1.5 to 3.0 kg dependent upon sample length. The lithology, colour, grain size, texture, and style of alteration and mineralization of each sample was recorded and entered into a database.

Channel sampling was primarily used to assist with drill targeting by providing information on the location and grade of mineralized structures exposed in pits. This is a good first past approach, but currently, more attention would be paid to understanding the structural controls (Combes, and others, 2023). Channel sampling at Jons Pit and Jons Pit Central defined gold mineralised structures which were targeted in the diamond drill program. (Hantelmann, 2013).

Channel samples at the Cambior prospect returned significant assays over a strike length of 1 km. Large parts of the Cambior prospect are covered with washed material and most areas were not amenable to channel sampling. Assay results ranged from 1 m @ 0.68 g/t Au (CH002) to 9.0 m @ 13.60 g/t Au (CH011) and 2.0 m @ 26.58 g/t Au (CH040). Two channel samples taken within the small area of workings at the Puma prospect returned 9.0 m @ 2.66 g/t Au (CH027) and 6.0 m @ 3.93 g/t Au (CH036) (Hantlemann, 2013). When exploration restarts, new mapping and channel sampling will be a high priority as well as a robust program of trenching.



Figure 16. Grab and channel results by Hunter Bay that are greater than 10 ppm. Source the author.

#### 9.2.4 Airborne Magnetic Geophysical Survey

Hunter Bay commissioned Terraquest Ltd to conduct an airborne geophysical survey over Sela Creek in April 2011 (Barrie 2011). The survey was oriented northeast and flown at a line spacing of 100 metres, for a total of 4978 line kilometres. Magnetic, radiometric, VLF-EM and elevation data was collected and processed. Fugro Airborne Surveys Corp. (Fugro) was commissioned in May 2012 to re-process and interpret the geophysical data, and in particular the magnetic data . In 2018, 79North contracted Jeremy Brett to reprocess the Terraquest survey, but no interpretation was requested. Brett is one of the leading experts in interpretation of data, including VLF Surveys. The author has worked closely with Brett on many interpretations in Suriname and his interpretations and processing add value. Reprocessing again using advances in inversion processing and preparing depth slices would add exploration value at low cost. Also, a further review and processing of VLF data may add value at low cost.

Airborne magnetic data displays strong structural disturbance. The central mineralized part of the licence is bounded by major northwest-southeast trending lineaments which display strong magnetic low and high signatures. The entire area of survey is cross-cut by numerous northeast-southwest trending and a lesser number of northwest southeast trending major and minor faults which offset and locally terminate magnetic anomalies. The background magnetic signature throughout the licence is characterized by a relatively

flat, moderately low magnetic response, that is interpreted to represent a package of metasediments and intercalated metavolcanics dominated by chlorite, mica and biotite schists with lesser quartzite and marble. Linear west-northwest trending magnetic highs represent metavolcanic rocks. Probable felsic intrusive rocks are noted in the central part of the licence and display a mottled moderate to locally strong magnetic signature. Mineralized targets defined as source areas of drainages that have been mined by open pits along shear structures. Channel sampling and diamond drilling conducted by Hunter Bay, are spatially associated with the faulted contacts of the schist and felsic units Northeast-southwest trending faults offset these contact and magnetic units, and thus potentially mineralized structures, by generally less than 50 metres but occasionally up to 250 metres. Felsic igneous units in faulted contact with schists also occur in the southwest of the licence and represent potential targets.

Figure 17 represents a simplistic interpretation of the magnetic RTE figure.

- A splay of the CGSZ represents the northeastern boundary of the concession and the interaction of these two structures creates an area of extension for gold-rich fluids and intrusives.
- The primary gold trend has an apparent north-north-east trend, but may represent a sequence of mega-scale extensional structures and the Jons trend occurs along one such extensional structure.
- The dynamics of these structural and intrusive interactions creates an excellent region for major gold deposits which can be developed with proper exploration and drilling.

A younger east-west trending structure cuts through the other magnetic units to the southeast. On the east side of this structure, there is very limited small-scale mining and little recent activity was noted during site visit. The author's review of the magnetic data of the geophysical survey suggests two northwest trending subparallel shears that bound the area of mineralization at Sela Creek. Between these shears, cross structures, intrusive rocks and dikes were emplaced. These shears are suggested to represent first order, deep structures along the Central Guiana Shield Shear zone (CGSZ) of Voicu (2001). The northern splay opened just southeast of the concession and the opening of this splay created an "pull apart structural zone" where deformation was intense and multistaged, and created extension for gold-bearing fluids and intrusives for deposition of quartz plus gold. Two subparallel east-west structures bound the Sela Creek mineralization and create a parallelogram with a focus of intense deformation centered on Sela Creek. The central gold trend represented by the north-northwest line of workings, may represent a semi-parallel series of large-scale tension arrays which generate the apparent north-northwest trend of gold mineralization (Figure 17).



Figure 17. Simplified interpretation of RTE magnetic data by author.

# 9.2.5 Radiometric Data

Radiometric data shows a strong correlation between increased response and the presence of metavolcanic units. Radiometric data also supports the inferred dextral offset on major faults but does not readily identify the smaller scale structural offsets identified from magnetic data. An increased radiometric response also occurs coincident with large river channels and areas of exposed saprolite and bedrock where miners have removed forest cover and topsoil (Handelmann, 2013).

# 9.2.6 Site Visit

The site visit of June 19, 2024 by helicopter was to review the extent of recent small scale mining activities and visit an area of active mining. In a flyover, the aerial extent of workings, both in saprolite and drainages is extensive. As noted, many worked pits are flooded or filled with mine waste. Several areas of active mining with one or two excavators were noted and Figure 18 is one example near Jons.



Figure 18. Active mining with excavators in saprolite on Jons trend. Photo by Author, July 2024.

During the site visit we landed at the one small area of mineralization where fresh rock was exposed. It is hoped that the exposure remains open to allow for further investigation (Figures 19 and 20). The wall of about 30 meters of saprolite was unstable and not examined closely. Four samples were collected from this site including one from stockpile. The samples were submitted to Filab in Paramaribo.

Of the samples, one was from the stockpile of quartz from a new shaft (Figure 21) and three from deformed quartz veins that were very high grade (Table 1).

| Sample ID | Sample<br>Type | Location<br>Type | Easting | Northing | RL  | Notes   | Au ppm | Au<br>Graviometric |
|-----------|----------------|------------------|---------|----------|-----|---|--------|--------------------|
|           |                |                  | 755622  | 417939   |     | grab samples of quartz taken from stockpile at  |        |                    |
| SC-DL-001 | Grab           | shaft            |         |          | 157 | shaft   | 3.85   | 4.60               |
|           |                |                  | 755647  | 417938   |     | sample collected from strongly folded, weakly<br>oxiduzed vein in. pit, fine disseminated sulfide   |        |                    |
| SC-DL-002 | Grab           | pk workings      |         |          | 161 | on wallrock, wallrock strongly ductile deformed   | 13.94  | 13.70              |
|           |                |                  | 755649  | 417938   |     | sample collected from strongly folded, weakly<br>oxiduzed vein in. pit, fine disseminated sulfide<br>on wallrock, wallrock strongly ductile deformed  |        |                    |
| SC-DL-003 | Grab           | pk workings      |         |          | 161 | , foliation: N166/75  | 25.13  | 23.13              |
|           |                |                  | 755655  | 417947   |     | sample collected from strongly folded , weakly<br>oxiduzed vein in. pit, fine disseminated sulfide<br>on wallrock, wallrock strongly ductile deformed |        |                    |
| SC-DL-004 | Grab           | pk workings      |         |          | 162 | , foliation: N114/75  | 1.72   |                    |

 Table 1. Samples collected during site visit.



Figure 19. Area of active mining on Jons trend where active mining of saprolite has exposed fresh rock. Photo by author, 2024.



Figure 20. Area of fresh rock sampled during site visit. Photo by author, 2024.



Figure. 21. New shaft by Brazilians Jons trend. Quartz brought up by bucket cut from ½ fuel barrel. Photo by author, 2024.

The host rock is well foliated and variable in composition, but overall, a quartz biotite schist. The host rock is isoclinally folded with crenulation cleavage (Figure 22). Fold axes were steeply plunging. Some exposures were Boudinaged with ptygmatic folding internally (Figure 23).



Figure 22. Steeply plunging isoclinally folded biotite schist with crenulation cleavage. Photo by author, 2024.



Figure 23. More siliceous layer boudinaged with ptygmatic folding. Photo by author, 2024.

Quartz veins were also folded and dramatically thicken and thinned (Figure 24). Pyrite was accessory. A younger felsic dike cut the folded sequence and was not folded. A mafic dike was seen in the corner of the exposure.



Figure 24. Folded quartz veins that were sampled. Photos by Wirosono, 2024.

The overall impression from the site visit was that Sela Creek has been and is being worked and reworked multiple times over the previous decades. Recently Brazilians have been allowed back to also work and this is creating new activity (figure 25), as seen in the shaft. One of the first phases will be to reestablish where there are exposures and areas to be sampled and mapped. An experienced team of Suriname geologists is very experienced and is use to working in the conditions of weather, access, and communication. To assist, a Lidar survey is strongly recommended in conclusions section.



Figure 25. Current status of Jons trend with evidence of multiple phases of mining and processing. Area sampled in middle right side of photo with two white structures next to hill cut. Photo by author, 2024.

# 10 Drilling

Hunter Bay completed ten diamond drill holes totalling 1832.3 meters. Nine holes (SKD001 to SKD009) were drilled at Jons Pit and Jons Pit Central and one hole (SKD010) was drilled at Cambior (Figure 26). The drill contractor was Surecore Portable Drilling Ltd. All drilling was with man portable rigs. These rigs were a suitable option to minimize mobilization costs of a drill and associated equipment versus a drill on skids. No records of drilling cost were provided. For the Company, a track mounted drill and excavator are recommended. Based on the initial drilling on an early-stage project, the author believes the results are positive and indicate the potential for a discovery at Sela Creek.

At the Jons pit trend, the drilling encountered metamorphosed turbiditic sediments, basalt and undifferentiated mafic rocks, leucocratic dikes, and granodiorite. All rock types locally host gold mineralization and quartz veins. Drilling intercepts include 42.0 m @ 1.22 g/t Au including 15.0 m @ 2.42 g/t Au (SKD001), 28 m @ 1.12 g/t Au including 2 m @ 5.89

g/t Au and 3 m @ 2.45 g/t Au (SKD002), and 8.0 m @ 2.70 g/t Au including 4.0 m @ 4.57 g/t Au (SKD008).

A single core hole (SKD010) was drilled at the northeastern end of the Cambior Trend and intercepted 5.5 m @ 0.87 g/t Au from 62.0 to 67.5 m including 1.0 m @ 2.41 g/t Au (62.0 to 63.0 m) and 0.5 m @ 3.62 g/t Au (67.0 to 67.5 m).



Figure 26. Location of drill holes Jons Pit area on RTE image. Note correlation with linear mag feature. Figure by author.

#### 10.1 Drilling Procedures

All diamond drill holes were inclined and drilled in HQ diameter to the base of saprolite and NQ to the end of the hole. Drill hole location and orientation and significant assays are presented in Table 2 (Capps, 2018). Drill collars were located in the field prior to drilling with hand held GPS with an accuracy of ±3 m and the rig was sited at each collar by the rig geologist. Completed holes were marked with plastic casing set in a concrete block. The author believes most, if not all locations are lost to continued small scale mining.

Downhole surveys were taken for holes SKD005 through to SKD009 using a Flex-It tool. However, the equipment was not correctly calibrated by the driller and survey results are

considered inaccurate. Because of the shallow depth of each hole, it is not considered a significant issue. Drill core was washed clean of mud and drilling fluids and placed in wooden core boxes marked with drill hole number, from and to in meters, and box number. A core block marked with downhole depth was placed at the end of each drill run.

Drill core was stored at the drill rig under the secure supervision of the driller, until it was collected by Hunter Bay and transported to camp, where it was stored in a secure core logging facility. Drill core was subject to geotechnical logging and meter marked prior to geological logging. Geotechnical and geological logging used standardised log sheets that recorded core recovery, RQD, lithology, and type and intensity of alteration and mineralization. Each core box was photographed prior to sampling. All core was half cut using a diamond core saw fitted with a core cradle. One half of the core was sampled and one half of the core was retained in the core box. The entire length of each hole was sampled and assayed. Samples were taken at nominal 2 m intervals, unless the sample interval crossed a lithological boundary or a change in alteration and/or mineralization, in which case a shorter sample interval was 50 cm was used in order to retain sufficient sample weight for appropriate sample preparation and assay. The procedures follow industry standards of the time.

#### 10.2 Historic Drill Results

The sections produced by Hunter Bay (Handtelmann, 2013 and Capps, 2018) assume steeply dipping, near vertical zones. The geometry is likely more complex and more attention will be required to understand multiple generations of structure and mineralization.

| Hole ID | Easting | Northing | Elevation | Azimuth | Inclination | Total Depth |
|---------|---------|----------|-----------|---------|-------------|-------------|
|         |         |          | (m)       | (°)     | (*)         | (m)         |
| SKD001  | 754751  | 418303   | 134       | 215     | 60          | 184.0       |
| SKD002  | 754776  | 418336   | 121       | 215     | 60          | 269.5       |
| SKD003  | 754818  | 418257   | 136       | 215     | 60          | 222.0       |
| SKD004  | 754687  | 418222   | 105       | 035     | 50          | 92.0        |
| SKD005  | 754739  | 418147   | 109       | 035     | 50          | 100.0       |
| SKD006  | 754815  | 418268   | 130       | 215     | 50          | 201.0       |
| SKD007  | 755123  | 417989   | 110       | 215     | 50          | 274.0       |
| SKD008  | 755189  | 417943   | 110       | 215     | 50          | 181.0       |
| SKD009  | 755254  | 417897   | 110       | 215     | 50          | 170.0       |
| SKD010  | 754013  | 420973   | 111       | 235     | 50          | 138.8       |

Drill hole collar location. Coordinates were taken using a hand-held Garmin GPS with an accuracy of ±3 m. Coordinates are WGS84 UTM Zone 21.

Significant diamond drill hole intercepts: Jons Pit and Jons Pit Central Prospects. True width was estimated from drill cross sections.

| Hole ID |           | From   | То     | Interval | Estimated True Width | Gold  |
|---------|-----------|--------|--------|----------|----------------------|-------|
|         |           | (m)    | (m)    | (m)      | (m)                  | (g/t) |
| SKD001  |           | 6.00   | 34.00  | 28.00    | 14.60                | 0.50  |
|         | including | 29.00  | 30.00  | 1.00     | 0.50                 | 2.04  |
|         |           | 44.00  | 58.00  | 14.00    | 8.20                 | 0.64  |
|         |           | 86.00  | 90.00  | 4.00     | 2.30                 | 0.54  |
|         |           | 102.00 | 144.00 | 42.00    | 21.20                | 1.22  |
|         | including | 105.00 | 120.00 | 15.00    | 8.20                 | 2.42  |
| SKD002  |           | 48.00  | 50.00  | 2.00     | 1.20                 | 0.24  |
|         |           | 78.00  | 82.00  | 4.00     | 2.30                 | 0.89  |
|         |           | 102.00 | 130.00 | 28.00    | 16.00                | 1.12  |
|         | including | 115.00 | 117.00 | 2.00     | 1.20                 | 5.89  |
|         | and       | 120.00 | 123.00 | 3.00     | 1.80                 | 2.45  |
|         |           | 146.00 | 147.00 | 1.00     | 0.60                 | 1.55  |
|         |           | 166.00 | 168.00 | 2.00     | 1.20                 | 0.45  |
|         |           | 184.00 | 194.00 | 10.00    | 5.40                 | 0.32  |
|         |           | 222.00 | 225.00 | 3.00     | 1.80                 | 1.20  |
|         |           | 228.00 | 230.00 | 2.00     | 1.20                 | 0.82  |
|         |           | 252.00 | 254.00 | 2.00     | 1.20                 | 0.58  |
| SKD003  |           | 40.00  | 54.00  | 14.00    | 6.50                 | 0.99  |
|         |           | 76.00  | 88.00  | 12.00    | 6.00                 | 1.45  |
|         | including | 82.00  | 83.00  | 1.00     | 0.60                 | 6.40  |
|         |           | 148.00 | 158.00 | 10.00    | 5.20                 | 0.53  |
|         |           | 166.00 | 188.00 | 22.00    | 14.50                | 0.66  |
|         |           | 197.00 | 202.00 | 5.00     | 3.00                 | 0.33  |

Table 2. Historic Drilling and significant results (Capps, 2018).

## 11 Sample Preparation, Analyses and Security

The following are procedures were used by Hunter Bay which follow industry standards at that time: All samples were placed in individually numbered plastic sample bags together with a waterproof sample number. Each bag was sealed with a clip-lock plastic tie and several sample bags were then placed in a numbered rice bag which was also sealed with clip-lock plastic tie. Samples were stored in a restricted-access secure facility at Hunter Bay's field camp and then transported to Paaston by ATV and from Paaston to Dritabikki in motorized canoe. A flight was used to transport samples from Dritabikki airstrip to Zorg en Hoop where they were they were delivered to the assay laboratory.

Samples were assayed by the Assay Office, at the time of drilling. Although it is not certified by any standards of association, the Assay Office was independent o Hunter Bay and therefore determined to be reliable in the view of the author. Samples were dispatched to The Assay Office in batches of 40 (soil and channel samples) or 20 (drill core samples) allowing Hunter Bay to monitor laboratory performance on a batch-by-batch basis as results became available. Hunter Bay implemented a QA/QC protocol based on the insertion of certified reference materials (CRM's), blank material and staged duplicates, into each batch. CRM's were supplied by Ore Research and Exploration Pty Ltd (OREAS) of Australia and encompassed a range of oxide and sulphide materials and grades typical of the grades encountered at Sela Creek. Blank material was sourced from a quartzite outcrop within the Sela Creek licence and ten samples were assayed prior to use which confirmed that the material was blank for gold.

## 12 Data Verification

The author considered the data accurate for purposes of this report based on the early stage of exploration and knowledge of the personnel supervising the exploration. Seven samples of hole 6 were sampled by the author for verification. Results are reported in table. For quality verification, all the remaining half core was sent to Filab for assay. The core was in good condition and not mixed or jumbled in the core boxes (Figure 27). The verification assays are considered valid considering the change in labs and normal variability of gold (Table 3; Figure 28).

| Hole ID  | top (m) | bottom<br>(m) | interval<br>(m) | -      | ample<br>ollar/type |      | Au ppm | Rerun   | Au<br>ppm |
|----------|---------|---------------|-----------------|--------|---------------------|------|--------|---------|-----------|
| SKD006   | 122.00  | 123.00        | 1.00            | 544266 | HBY00034            | Core | 2.52   | 544266R | 1.86      |
| SKD006   | 123.00  | 124.00        | 1.00            | 544268 | HBY00034            | Core | 2.68   | 544268R | 2.86      |
| SKD006   | 124.00  | 125.60        | 1.60            | 544269 | HBY00034            | Core | 4.21   | 544269R | 2.77      |
| SKD006   | 125.60  | 128.00        | 2.40            | 544270 | HBY00034            | Core | 0.71   | 544270R | 0.89      |
| SKD006   | 128.00  | 130.00        | 2.00            | 544271 | HBY00034            | Core | 0.26   | 544271R | 0.34      |
| SKD006   | 130.00  | 132.00        | 2.00            | 544272 | HBY00034            | Core | 2.60   | 544272R | 1.52      |
| SKD006   | 132.00  | 134.00        | 2.00            | 544274 | HBY00034            | Core | 0.42   | 544274R | 0.63      |
| Averages |         |               | 12.00           |        |                     |      | 1.12   |         | 0.90      |

Table 3. Verification of drill core assays (this report)



Figure 27. Example of Hole 6 intervals sampled for verification. Photo by author, July 2024.



Figure 28. Comparison of assay results. Source this report.

# 13 Mineral Processing and Metallurgical Testing

No mineral processing or metallurgical testing has been done on property.

# 14 Mineral Resource Estimates

There are no mineral resource estimates on the project and there is currently insufficient drilling to establish a resource estimate.

Additional Requirements for Advanced Property Technical Reports (Sections 15 to 22) are beyond scope of this report and are not required, some general comments are made.

## **15 Mineral Reserve Estimates**

There are no mineral reserve estimates as there is no drilling conducted on project.

## 16 Mining methods

No mining methods are proposed, but given the widespread surface mineralization the assumption is that if further exploration is successful and followed by development, open pit mining will be possible.

## 17 Recovery Methods

There are no processing or recovery tests.

# **18 Property Infrastructure**

There is no current infrastructure on the project except for limited road and ATV access. A new camp with power and water are required for further exploration activities. Prior to significant mining operations, access, water and power requirements would need to be addressed.

# **19 Market Studies and Contracts**

The Sela Creek concession is an exploitation concession and gold can be sold with a royalty paid to the government. Any gold produced can be sold to the Kaloti Mint House located near the airport in Suriname. Kaloti is the gold refinery in the region. The refinery is part of a joint venture with the Suriname government and local gold traders.

## 20 Environmental Studies, Permitting and Social or Community Impact

There are no current studies on the project for this early stage.

# 21 Capital and Operating Costs

The project is early stage to calculate or predict such costs.

## 22 Economic Analysis

The project is early stage to calculate or predict such costs as they relate to Chavarma.

#### 23 Adjacent Properties

There are no mineral properties adjacent to Sela Creek. Producing mines of Merian (Newmont) and Rosebel (Zijin) are hundreds of kilometers to the north (figure 11).

## 24 Other Relevant Data and Information

No other additional information or explanation is considered necessary to make the technical report understandable and not misleading.

## 25 Interpretation and Conclusions

Sela Creek, like Merian and Rosebel, was first opened by local small-scale miners who have used the standard tools of mining and processing to discover gold in saprolite. Samples from the pits where the soft ore from saprolite was mined have produced very positive gold results (Handlemann, 2013) and initiated the understanding of the gold system at Sela Creek. A quality and sustainable exploration program is required for success. At Rosebel, Placer Dome, Golden Star, and Grassalco all added to the understanding and data to develop a mine, based on the earlier mining by local and Dutch miners. Current exploration at Antino was built on the exploration by Sytze Miediema for Golden Star and then Reunion and the extensive mining by experienced Brazilian miners. At Merian, Suralco used the small-scale mining of the locals and Brazilians to make a discovery (LaPoint, 2019). The same can occur at Sela Creek by building on the work of small-scale miners and the geologists of earlier exploration.

Because Sela Creek is very representative of an orogenic gold system, the geology and structure are complex A skilled team is required for success with understanding of the regolitic development, structure, and interpretation. The skilled team must include experienced geologists from Suriname and familiarity with the common exploration obstacles, such as the deep tropical weathering. As an example, logging and mapping the saprolite is essential.

Like all orogenic gold occurrences, Sela Creek is not one large occurrence, but rather a cluster of gold occurrences of various size and grade in a variety of lithologic and structural environments. Logistics and safety are focused items besides the mineralization, but most critical will be to develop a good working relationship with the local community and their leaders.

Based on the author's interpretation of the RTE magnetic data (Figure 17).

- The CGSZ is seen as a major structure along the southwestern boundary of the survey and original concession and a splay of the CGSZ represents the northeastern boundary of the concession. The interaction of these two structures creates an area of extension for gold-rich fluids and intrusive rocks to access the highly deformed sedimentary and volcanic sequence of the greenstone belt.
- The primary gold trend has an apparent north-north-east trend, but may represent a sequence of mega-scale extensional structures and the Jons trend occurs along one such extensional structure.

These structural and intrusive characteristics indicate an excellent region for gold exploration where major gold deposits can be discovered should continued exploration and development be successful.

## 26 Recommendations

There is a learning curve for any group working in a new region, especially in tropical environments, where exposures are rare and often selective in the type of rock. Suriname is a small country, but the quality of their people at all levels from technical to recognizing how to survive in the Jungle and repair equipment are essential. The author is of the view that if the Surinamese team is treated with respect and responsibility, the project will be more likely to thrive. Community relations and understanding the dynamics between the various communities will be essential at Sela Creek. Foreign workers with an attitude and lack of respect will be resented by the locals.

Access to Sela Creek is a challenge. A dirt airstrip could be of benefit both to Paaston and the exploration program, however, the Civil Aviation Authority is resistant to new airports in the interior because of drug and other smuggling operations. Permits and mobilizing the required equipment (a D-8 dozer?) can be expensive. The first step to better access may be a proper helipad for safety and emergency evacuation.

Safety and Emergency response is essential in any modern exploration program and there are groups who can assist in first aid training, supplies and procedures. Procedures for sampling, line cutting, ATV training, trenching, drilling, and database should be developed from the beginning.

A LiDAR survey would be of great value for not only location, but mapping and recognizing lithology and structure. There is an excellent group based in French Guiana that supplies LiDAR surveys.

A proper camp is critical for exploration and especially drilling. This involves access and being sited away from the village and active small-scale mining. Year around water for all activities is required and large trees need to be removed to avoid falling in high winds due to shallow root systems.

Fly camps or recon camps with a small team can be used to start mapping and sampling while a camp for longer term is constructed from local materials. ATV's are the essential transport. With time a bush truck or other vehicle maybe added. Mapping and understanding regolith is a critical activity as well as better understanding of structural controls and lithology. It seems that the landscape is so disturbed that auger sampling should be a selective, lower priority tool.

Geophysics is an essential tool and must be used and interpreted on an ongoing basis. The Terraquest data should be reprocessed with inversion derived maps. Gradient Array IP can be a useful tool, but only for selected areas, such as Jon trend, based on mapping and sampling. Pole-dipole IP is less effective as it evidently does not see through saprolite as well.

One of the most useful exploration tools, besides sampling the workings with channel sampling, is trenching. Prior to any drilling program, a month or more of trenching and logging should be undertaken as it is a lower cost exploration method than core drilling.

Drilling should be properly planned to be successful. Logistics for obtaining the rig and fuel, core drilling supplies and boxes, data base set up and access are all components to plan.

A recommended generalized proposed budget for the program discussed is as follows: The budget is divided into a pre-drilling and drilling budget. The totals are 2.3 million US and 3.1 million Canadian Dollars.

The assumptions are 3000 feet of core drilling starting in November 2024. Core will be oriented and HQ diameter. A track mounted rig supported by one excavator is recommended. Actual costs will vary of course, but these costs are derived from recently completed drilling and trenching programs. The proposed program and costs are summarized in the following table:

| EXPLORATION              | TIMING                  | US \$       | CANADIAN \$ |
|--------------------------|-------------------------|-------------|-------------|
| Pre-drilling             |                         | 00 <b></b>  |             |
| r re-urilling            |                         |             |             |
| Lidar Survey             | August/September        | \$120,000   | \$162,000   |
| Geophysical Processing   |                         | \$20,000    | \$27,000    |
| Sampling and Mapping     | July August (crew)      | \$46,000    | \$62,100    |
| Trenching (crew)         | September/Oct           | \$46,000    | \$62,100    |
| Assays                   | 3000 samples            | \$75,000    | \$101,250   |
| Computers,geologists su  |                         | \$75,000    | \$33,750    |
| Sub Total                | ipplies                 | \$332,000   | \$448,200   |
| Drilling                 |                         | \$552,000   | 9448,200    |
| •                        | Use \$200/meter         | \$600,000   | ¢910.000    |
| Drilling (3000 m):       |                         |             | \$810,000   |
| Assays                   | 7000 samples Au only    | \$100,000   | \$135,000   |
| Drilling Supplies        | boxes, standards, tools | \$35,000    | \$47,250    |
| Sub Total                |                         | \$735,000   | \$992,250   |
| Total                    |                         | \$1,067,000 | \$1,174,500 |
|                          |                         |             |             |
| LOGISTICS                |                         |             | <u> </u>    |
| Pre Drilling             |                         |             |             |
|                          |                         | 400.000     |             |
| Fly camp                 | July to September       | \$30,000    | \$40,500    |
| Camp Supplies and food   |                         | \$28,800    | \$38,880    |
| Transportation           | to project              | \$21,600    | \$29,160    |
| helicopter support       |                         | \$36,000    | \$48,600    |
| Crew and sample transp   | ort                     | \$64,000    | \$86,400    |
| fuel                     |                         | \$28,000    | \$37,800    |
| In town Logistics        |                         | \$24,000    | \$32,400    |
| Vehicle                  |                         | \$20,000    | \$27,000    |
| Logistical crew          |                         | \$32,000    | \$43,200    |
| ATV purchase + repair    |                         | \$72,000    | \$97,200    |
| Satellite Internet       |                         | \$12,000    | \$16,200    |
| First Aid                |                         | \$6,000     | \$8,100     |
| Community relations      |                         | \$6,000     | \$8,100     |
| Sub total                |                         | \$380,400   | \$513,540   |
|                          |                         |             |             |
| Drilling Logistics       |                         |             |             |
| Drill camp construction  | August to September     | \$80,000    | \$108,000   |
| generators, camp equipr  | nent, chain saws        | \$45,000    | \$60,750    |
| Camp Supplies and food   | drilling                | \$67,500    | \$91,125    |
| Transportation           | drilling                | \$54,000    | \$72,900    |
| Fuel                     |                         | \$252,000   | \$340,200   |
| Excavator                | July-February           | \$160,000   | \$216,000   |
| Mobilization Excavator   |                         | \$30,000    | \$40,500    |
| Mobilization Drill       |                         | \$40,000    | \$54,000    |
| helicopter support       |                         | \$36,000    | \$48,600    |
| Sample shipment          |                         | \$20,000    | \$27,000    |
| Drill crew support perso | nnel                    | \$10,000    | \$13,500    |
| Crew transport           |                         | \$34,000    | \$45,900    |
| Sub Total                |                         | \$828,500   | \$1,118,475 |
| Total Logistics          |                         | \$1,208,900 | \$1,632,015 |
|                          |                         | , ,,        | · ·,··-,·-  |

Table 4. Proposed Generalized Budget up through 3000 meters of drilling by author.

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# **CERTIFICATE OF THE AUTHOR**

# Dennis J. LaPoint, Ph.D.

Registered Geologist with SME (QP) Licensed Geologist, North Carolina, USA, #625 Licensed Geologist, South Carolina, USA, #322 APPALACHIAN RESOURCES LLC P.O. Box 3810 Chapel Hill, NC 27515 1-919-949-2913 597-8834515 Suriname <u>dennis.lapoint@gmail.com</u>

- I, Dennis J. LaPoint, PhD, Registered geologist with SME, do hereby certify that:
  - 1. I am President of Appalachian Resources LLC, a North Carolina Corporation with a physical office at 9601 Gates Lane, Chapel Hill, NC 27516 and provide geological consulting services.
  - I graduated with a PhD in Geology from the University of Colorado, Boulder, CO in 1977; an M.S. degree in Geology from the University of Montana, Missoula, MT in 1971; and a B.A. in Geology from the University of Iowa, Iowa City, IA in 1968.
  - 3. I am a registered Geologist with the Society of Mining Engineers (SME) and this organization is approved for a qualifying person to author this report. I am also a Licensed Geologist in North Carolina, #625, and am also appointed to the North Carolina Board of Licensing Geologists by the Governor of North Carolina, #322. I am a member of various professional organizations including Society of Economic Geologists, Geological Society of America, Society of Exploration Geochemists, Carolina Geological Society (Past President), and Society of Mining Engineers (Past chairman of Carolina Section). I am a Member at Large and on the Council of Examiners for the National Organization for testing of geologists, ASBOG. I have published and presented many professional papers at Professional meetings including papers on Suriname exploration.
  - 4. I have been employed as a geologist for over 40 years and have managed Exploration Programs in Suriname since 2000. I initiated the exploration program for Alcoa and led the team that discovered the Nassau gold deposit, now being mined Newmont and known as Merian. I was Exploration Manager for Cambior and initiated exploration and discoveries on projects at the mine concession and elsewhere in Suriname. Since 2007, I have provided project management services to clients in Suriname, Central America, Southeastern US and Serbia. I am and have been a Director of public and a private companies and COO of private companies as well as VP of Exploration for public and private companies. Three 43-101 reports for Suriname are available on Sedar. Other

43-101 reports have been written for clients to seek funding for Suriname projects.

5. I have read the definition of "qualified person" as set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined by NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

I am responsible for the preparation of this report entitled TECHNICAL REPORT SELA CREEK GOLD PROJECT, SIPALIWINI DISTRICT, SURINAME, SOUTH AMERICA. I have visited the property for purposes of this report on July 3, 2024.

- 1. I am not aware of any material fact or material change with respect to subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the technical report misleading.
- 2. I have no affiliation with Miata Metals or Affiliated Companies and I am independent of Miata Metals according to all criteria defined.
- 3. I have read NI 43-101 and Form 43-101F and the Technical Report has been prepared with compliance with that instrument and form.
- 4. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated this 3rd day of July, 2024

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Dennis J. LaPoint