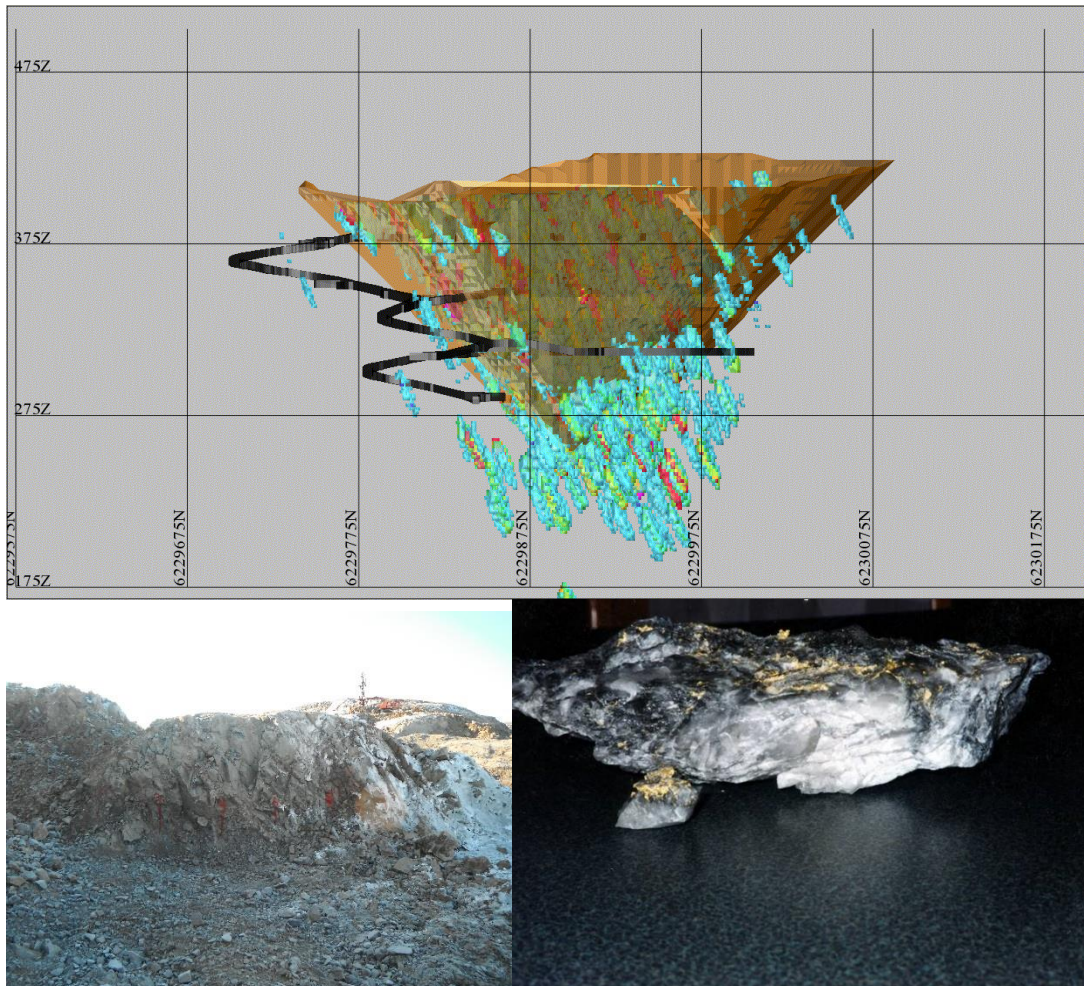


# Komis Gold Project

## NI 43-101 Technical Report

Saskatchewan, Canada

Effective Date: February 22, 2021



Prepared for:

**Matrixset Investment Corporation**

Prepared By:

Ronald G. Simpson, P.Geo. (Geosim Services Inc.)

Frank Hrdy, P.Geo. (CanMine Consultants)

**Report Date: February 28, 2021**

## DATE AND SIGNATURE PAGE

The effective date of this NI 43-101 Technical report, entitled "NI 43-101 Technical Report, Komis Gold Project" is February 22, 2021.



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Ronald G. Simpson, P.Geo.

Date: February 22, 2021.

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Frank Hrdy, P.Geo.

Date: \_\_\_\_\_.

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Date: MARCH 1, 2021



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## **1.0 Summary**

### **1.1 Introduction**

Geosim Services Inc. ("Geosim") and CanMine Consultants ("CanMine") were retained by the Matrixset Investment Corporation ("Matrixset" or "the Company") to prepare a Technical Report on the Komis Gold Project ("the Project") located in the La Ronge Mining District of Northern Saskatchewan. The claims are 100% owned by Golden Band Resources Inc. ("Golden Band").

Matrixset has signed a three-way Option Agreement with Procon and Golden Band back to 2018. Golden band as the company holds the Mineral Properties, the surface leases and the other Assets. Procon as the Optionor owns 100% of voting shares of the company. Matrixset as Optionee intends to receive the voting shares of the company on the terms set out in the Option Agreement by exploration.

The Komis Project is located approximately 200 road kilometres north-northwest of La Ronge and one kilometre west of Upper Waddy Lake in northern Saskatchewan. The project area is accessible by road from the community of Brabant Lake, located adjacent to Highway 102. An all-weather tote road links Brabant Lake with the Komis property 16 kilometres to the northwest.

The claims cover a contiguous area of 1,109.957 hectares.

### **1.2 History**

During the course of regional base metal exploration, gold was discovered in 1947 in the Waddy Lake region. Subsequent exploration in the late 1950's and the 1960's continued the search for gold in the greater Waddy Lake region. The dramatic rise in the price of gold in the 1970's prompted a resurgence of exploration activity throughout the La Ronge Domain and a re-examination of known gold showings in the Waddy Lake area lead to the discovery of several new gold occurrences including Komis.

From 1980 to 1996, Golden Rule Resources, its affiliates and joint-venture partners spent an aggregate of more than \$30 million on exploration and development on about 25 properties encompassing an area of 85,000 hectares in the Waddy Lake region. Since 1990 however, gold exploration efforts have been sharply curtailed in the belt due to unstable gold prices and unfavorable market conditions for junior resource companies. In spite of these conditions, Waddy Lake Resources Inc. secured financing during this period to further explore and eventually bring the Komis deposit into production.



Test mining began at Komis when the portal was collared on November 18, 1993. All work on the underground portion of the test mining program was completed by April 15, 1994. A total of 8,072 tonnes (8,898 dry short tons) were processed at the nearby Jolu mill. Waddy Lake estimated that total gold in the mill feed was approximately 53,902 grams Au (1,733 oz Au) indicating that the average mill head grade was approximately 6.68 grams per tonne Au (0.195 oz/ton Au).

The Komis mine was in production from February, 1996 to February, 1997. A total of 120,565 tonnes (132,900 short tons) were processed at the Jolu mill and, as of September 1, 1997, 835,395 grams Au (26,859 oz Au) and 104,693 grams Ag (3,366 oz Ag) were recovered. The final mill head was projected to be 6.9 grams per tonne Au (0.201 oz/ton). Final recovery was 88.0%.

The portal to the mine has been blasted shut and filled in with waste rock. At the mouth of the portal a small stream of water flows from the rocks where the mine opening was. Water samples from a small stream of water issuing from the portal are collected three times a year by Golden Band and submitted for analysis for the purpose of environmental monitoring. The ventilation shaft has been covered with a concrete cap.

In 2012 the old workings were dewatered and rehabilitated so that a cross-cut drift and accompanying ore drift along a modeled zone could evaluate the geological model and grade estimates. This work was not completed even though the cross-cut results appear to be close to what the grade model predicted and a reconciliation was never conducted.

After hastily shutting down the underground development work without a proper reconciliation of the results the group was tasked to mine the deposit via an open pit. Unfortunately the grade model was not interpreted to be mined via an open pit mining method so it was inappropriate for this task. In addition, the on-site planning department did not even know if they were using the most recent model (Author's personal observations while conducting an on-site evaluation in 2012). The open pit mining was also complicated by the fact that all of the Geologists and "Engineers" were recent graduates and did not have the necessary experience to do this work. There were also no strict grade control measures taken to ensure excess dilution did not cause problems – which it did.

### **1.3 Geology and Mineralization**

The Project area is located in the northern portion of the Central Metavolcanic Belt of the La Ronge Domain, a granite-greenstone belt in the Saskatchewan segment of the ca. 1.9-1.8 billion years (Ga) Trans-Hudson Orogen (Lafrance and Heaman 2004).

Mineralization at Komis occurs on the northeast flank of the Round Lake stock. The granodiorite pluton was emplaced into a sequence of intermediate and felsic volcanics that now generally wrap around the steeply dipping margin of the pluton. North of the volcanics hosting the Komis mine, is the multiphase Dog Creek Stock.

Gold mineralization at Komis occurs as fine disseminations of native gold (<1.0 mm) and as coarse flakes (up to 5.0 mm) in quartz veins and as fine disseminations associated with pyrite in hydrothermal alteration halos. Individual quartz veins range from one millimetre to more than one metre but seldom exceed 0.2 metres in width. The quartz is milky, very clean and exhibits sharp contacts with wallrocks. Other minerals including dolomite, calcite, biotite, muscovite, chalcopyrite and pyrite with minor amounts of Mg-chlorite, green biotite, microcline and apatite are also present.

Quartz veins occur as narrow veins, 0.10 to 0.50 meters in width. Individual veins exhibit strike lengths up to ten metres and vertical dimensions up to 15 metres. As quartz veins pinch out laterally and vertically, other quartz veins start adjacent to, and in the footwall of, the previous quartz vein forming a mineralized zone composed of a series of en echelon veins. Individual zones are typically one to five metres wide, although in areas where quartz veining has intersected the dike swarms, mineralized zones can exceed ten metres in width.

The mineralized zones exhibit behavior similar to individual veins. As one mineralized zone pinches out laterally and vertically, another mineralized zone starts adjacent to, and in the footwall of, the previous zone forming a series of en echelon zones that step down and to the footwall of the previous mineralized zone. It is important to note that individual quartz veins are not parallel to the strike of the mineralized zone containing them. Individual quartz veins strike oblique (10° to 15°) to the strike of the zone and therefore cannot be followed during mining. The critical component is the determination of the strike of the mineralized zone, rather than the strike of individual veins.

### **1.4 Exploration**

A detailed airborne magnetic and VLF-EM survey totalling 700.3 km of flight lines was completed in June 2012 over the Upper Waddy Lake region for Golden Band Resources

Inc. by Tundra Airborne Surveys (Chisholm & Jamieson, 2012). The survey was designed to furnish a high-resolution view of the project and to provide lithological and structural data in an area which has very good government geologic coverage as well as to provide context and guidance for future gold exploration. Metallurgical Test work

Preliminary laboratory test work was undertaken at SGS Lakefield Research (Lakefield) in 2005 and 2006 on composite samples from several area deposits, including Bingo, Tower East, Golden Heart, Memorial and Komis. Further testwork was undertaken in 2007/2008 on the Birch Crossing (BC), Komis, Tower Lake (Tower East) EP, and Bingo deposits.

An Airborne Geophysical Survey was completed in September, 2018 for the Greater Waddy Lake area (Figure 9-3). The Total Magnetic Intensity (TMI) and dB/dt time constant tau shows significant isolated anomalies in the center of the block while dB/dt early-mid time channels show several anomalies in the northern areas

## **1.5 Mineral Resource Estimations**

### **1.5.1 Historic Resource Estimate**

In 2010, Golden Band published an NI 43-101 compliant Indicated Mineral Resource Estimate of 141,690 tonnes grading 9.05 g/t Au (41,235 gold troy ounces) and an Inferred Estimate of 6,945 tonnes grading 9.78 g/t Au (2,184 gold troy ounces). This Resource Estimate was prepared utilizing the existing database with the addition of all underground chip and channel samples. The chip and channel samples were digitized into the database from existing surveyed mining plans by Golden Band geologists and were used to create a Geological Model based on existing mine development. Resource estimation was constrained by a three-dimensional solid model developed from the most current geological and analytical data. A statistically derived cap grade of 115 g/t gold was applied to all assay results used in both the Indicated (25 metres from any drill hole) and Inferred (25 to 50 metres from any drill hole) categories from this estimation. Blocks were estimated using a search ellipse at an orientation of 300 degrees, -80 degrees dip, and 0 degrees plunge. Tonnages were calculated using an average specific gravity of 2.80 grams/cm<sup>3</sup> based on several composite samples taken from drill core within the Komis deposit. In order to be included in the estimate, a block was required to have at least 3 composites within a maximum radius of 50 metres.

### 1.5.2 Current Resource Estimate for the Komis Gold Deposit is:

Cut-off Grade g/t Au	Measured		Indicated (100 g/t Au Cap)		M+I	Inferred (10 g/t Au Cap)		
	Tonnes	Grade g/t Au	Tonnes	Grade g/t Au	<b>Au Ounces</b>	Tonnes	Grade g/t Au	Au Ounces
1.00	0	0	1,567,820	3.33	<b>167,753</b>	457,906	1.66	24,365

**Note: Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.**

## 1.6 Interpretation and Conclusions

The updated Indicated Resource estimate for the Komis Gold deposit is 1,567,820 tonnes grading 3.33 g/t gold and the Inferred Resource is 457,906 tonnes grading 1.66 g/t gold.

In 2012 the old workings were dewatered and rehabilitated so that a cross-cut drift and accompanying ore drift along a modeled zone could evaluate the geological model and grade estimates. This work was not completed even though the cross-cut results appear to be close to what the grade model predicted and a reconciliation was never conducted.

After hastily shutting down the underground development work without a proper reconciliation of the results the group was tasked to mine the deposit via an open pit. Unfortunately the grade model was not interpreted to be mined via an open pit mining method (individual higher grade zones were modeled so the lower grade halos were left out) and so it was inappropriate for this task. In addition, the on-site planning department did not know if they were using the most recent model (Co-Author's personal observations while conducting an on-site evaluation in 2012). The open pit mining was also complicated by the fact that the planning department had mostly recent graduates (the somewhat more trained personnel had quit) and did not have the necessary experience to do this work. Strict grade control measures were also not taken to ensure excess dilution did not cause problems – which it did. The cost of transporting low grade material to the Jolu Mill was also a major cost-contributing factor.

So it is the Author's opinion that the Komis Gold deposit has a good chance to become a profitable mining operation but must be well planned ahead of mining, a strict grade control system is enacted that takes into account the existence of very high grade zones that are relatively small and occur at significant distances from each other, onsite ore concentrating technology is implemented and an open pit mining method that can deal with existing underground development is established. Strict security must also exist to prevent "high grading".

## **1.7 Recommendations**

1. Investigate ore concentrating technology to be implemented here as the cost scenario does not take into account low grade ore haulage to the Jolu Mill.
2. Create a mine design, a detailed mining method that takes into account the small and separated high grade zones and existing underground development and a mining schedule to create a detailed Reserve Estimate.
3. Conduct a PEA Study at minimum but a Pre-Feasibility Study is preferable.



## **2.0 Introduction**

Geosim Services Inc. ("Geosim") and CanMine Consultants ("CanMine") were retained by Matrixset Investment Corporation ("Matrixset" or "the Company") to prepare a Technical Report on the Komis Gold Project ("the Project" or "the Property") located in the La Ronge Mining District of Northern Saskatchewan.

The claims are 100% owned by Golden Band Resources Inc. ("Golden Band"). In August 2016, Golden Band ceased to be a publicly traded company and became a wholly (100%) owned subsidiary of Procon Holdings Inc. ("Procon").

Matrixset has signed a three-way Option Agreement with Procon and Golden Band back to 2018. Golden band as the company holds the Mineral Properties, the surface leases and the other Assets. Procon as the Optionor owns 100% of voting shares of the company. Matrixset as Optionee intends to receive the voting shares of the company on the terms set out in the Option Agreement by exploration.

The Komis Gold deposit, consists of four mineral disposition, which encompasses 1,109.957 hectares.

## **2.1 Terms of Reference**

CanMine are independent of Matrixset and Golden Band and have no beneficial interest in the Komis Gold Project. Fees for this Technical Report are not dependent in whole or in part on any prior or future engagement or understanding resulting from the conclusions of this report.

All measurement units used in this report are metric, and currency is expressed in United States dollars unless stated otherwise.

The geographic projection used for the project maps and surveys is UTM ZONE 13 NAD83 (CSRS) CGVD28, centred at 103° 56' W longitude and 56° 11' N latitude within NTS map sheet 64D/4.

## **2.2 Qualified Persons**

Ronald G. Simpson, P. Geo. Of Geosim Services Inc. and Frank Hrdy, P. Geo of CanMine Consultants served as the Qualified Persons (QPs) as defined in NI 43-101.

## **2.3 Site Visits and Scope of Personal Inspection**

Qualified Persons involved in the preparation of this technical report conducted the following site visits:

Ronald Simpson briefly visited the Property on July 28, 2005 as part of a personal inspection of the adjacent EP deposit.

Frank Hrdy visited the Property many times since 2012 but was there last between September 15, 2020 and September 25, 2020.

## **2.4 Effective Dates**

The effective date of this Technical Report is February 22, 2021.

## **2.5 Information Sources and References**

Information used to support this Technical Report was derived from a previous Technical Report by the author (Hrdy, 2010). Other supplemental sources of information are cited in the text of this report and listed in Section 26 of this Report.

## **2.6 Previous Technical Reports**

Previous NI 43-101 Technical Reports on the project area are listed below:

A.C.A. Howe International Ltd., 2005: Technical Report and Resource Estimate for the Komis Mine, La Ronge Gold Belt, Saskatchewan, Canada. Effective date: January 21, 2005.

Hrdy, F., 2010: Technical Report and Resource Estimate Update for the Komis Mine, La Ronge Gold Belt, Saskatchewan, Canada. Effective date: January 22, 2010.

P&E Mining Consultants, 2009: Technical Report and Pre-Feasibility Study on the La Ronge Gold Project, Northern Saskatchewan, Canada. Effective date: January 16, 2009.

These report were filed on the SEDAR website ([www.sedar.com](http://www.sedar.com)). Background information and a portion of the technical data for this report was obtained from this reference. This technical report replaces and supersedes all prior technical reports on the Komis Gold Deposit.

### **3.0 Reliance on Other Experts**

The author of this Report state that he is the qualified person for those areas as identified in the "Certificate of Qualified Person", as included in this Report. The author has not conducted independent land status evaluations and has relied on, and believe there is a reasonable basis for this reliance, upon information from Matrixset, Golden Band, and the Mineral Administration Registry Saskatchewan ("MARS") regarding property status, and legal title for the Project (Section 4.2), which the author believes to be accurate.

This Report relies on reports and statements from technical experts who are not Qualified Persons as defined by NI 43-101. Mrs. Barbara Stehwein, an Independent Consultant, has provided the information in section 4.2 (Disposition and Ownership).

Mr. Don Hovdebo, Golden Band's Environmental Group member has provided the information in sections: 4.5 (Current Environmental Lease Permits and Licenses to Retain the Property); (Environmental Liabilities); and section 20 (Environmental Studies, Permitting and Social or Community Impact).

Mr. Paul Saxton P.Eng. and Golden Band's CEO who has provided some information regarding the Company's Social License and mining costs.

Mr. Michael Yakimchuck P.Eng., and former Mill Manager at the Jolu Mill, verified sections 13 and 17.

Employees for Matrixset have provided information for Section 9 (Exploration Geophysics) and Section 10 (Drilling) and Section 11 (Sample Preparation, Analysis and Security).

Mr. Ron Simpson and Mr. Frank Hrdy, Qualified Persons responsible for preparation of this report have reviewed the information provided and determined that it conforms to industry standards, is professionally sound, and is acceptable for use in this report.

## 4.0 Property Description and Location

The project area is located one kilometre ("km") west of Upper Waddy Lake in northern Saskatchewan. The geographic projection used for the project maps and surveys is UTM ZONE 13 NAD83 (CSRS) CGVD28, centred at 103° 56' W longitude and 56° 11' N latitude within NTS map sheet 64D/4. The work area is located approximately 200 road kilometres north-northwest of La Ronge and is accessible by road from the community of Brabant Lake, located adjacent to Highway 102 (Figure 4.1). An all-weather road links Brabant Lake with the Komis property 18 km to the northwest. The site is accessible by car or truck.

**Figure 4-1 General Location Map**



## 4.1 Project Ownership

All the mineral claims for the Project are fully owned by Golden Band Resources Inc. of Saskatoon, Saskatchewan and are in good standing. The claims are not legally surveyed.

Golden Band is a wholly owned subsidiary of Procon.

Matrixset has signed a three-way Option Agreement with Procon and Golden Band back to 2018. Golden band as the company holds the Mineral Properties, the surface leases and the other Assets. Procon as the Optionor owns 100% of voting shares of the company. Matrixset as Optionee intends to receive the voting shares of the company on the terms set out in the Option Agreement by exploration.

## 4.2 Mineral Tenure

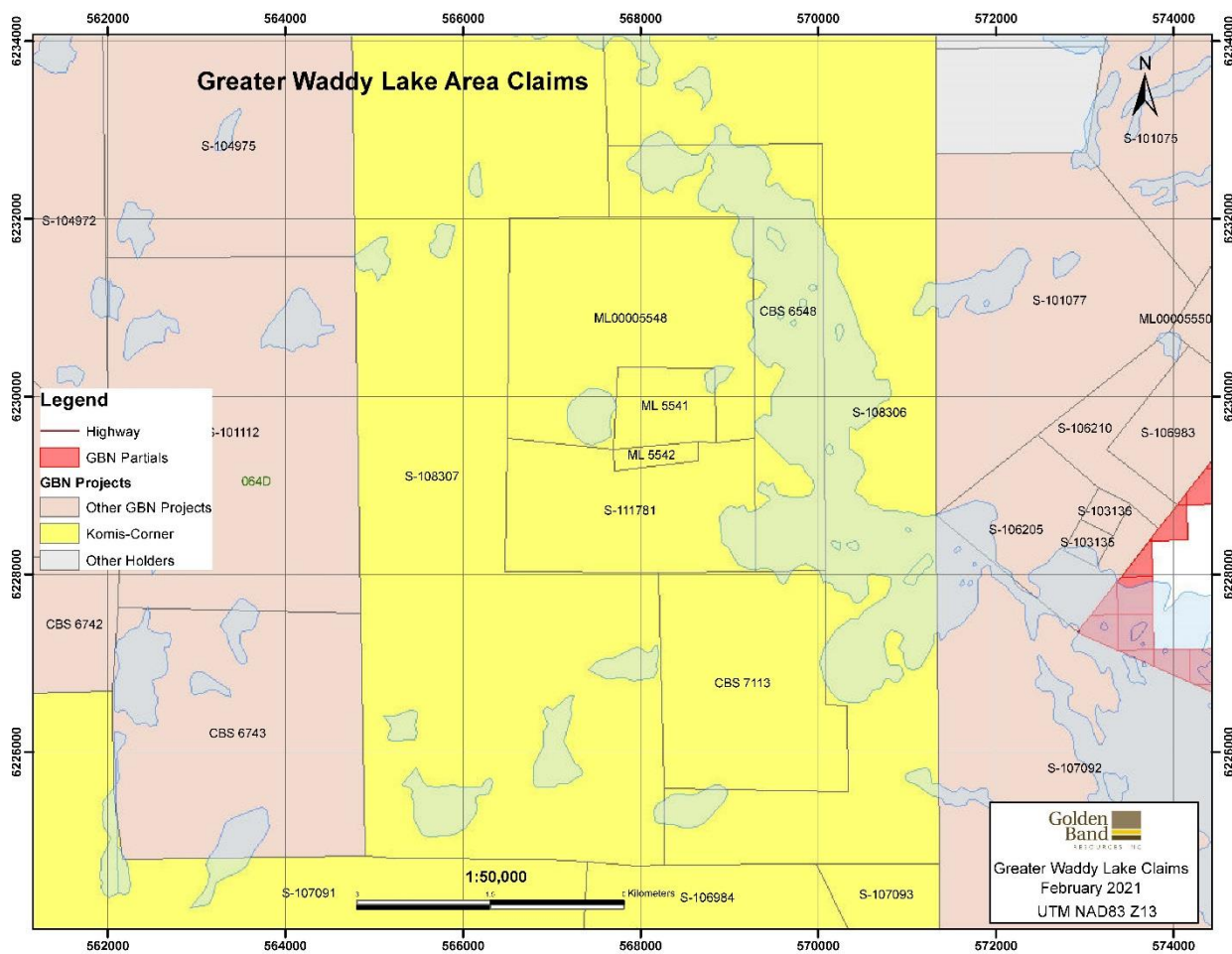
The Komis Property is contained within mineral dispositions ML 5541, ML 5542, ML00005548 and S-111781 covering an area of 1,109.957 ha (Table 4-1). The claim extents are illustrated in Figure 4-2.

**Table 4-1 Komis Disposition**

Disposition	Size (ha)	Annual Requirement	Effective Date	Anniversary Date	Excess Credits
ML 5541	97	\$4,850.00	04/22/10	04/21/21	\$56,630.20
ML 5542	23	\$1,150.00	04/22/10	04/21/21	\$13,113.79
ML00005548	607.957	\$15,198.93	12/17/12	12/17/21	\$105,328.18
S-111781	382	\$9,550.00	08/25/58	08/24/21	\$66,321.63

The disposition has had the Saskatchewan government assessment relief applied for the first year. The second-year credit is shown in the status as well, although officially, this won't be credited to the claims until 2021.



**Figure 4-2 - Claim Location Map**

### 4.3 Surface Rights

Mineral claims in Saskatchewan do not give surface rights. In order to remove material from the site claims must be converted to leases. Mineral claims and leases in Saskatchewan are currently governed by the Mineral Tenure Registry Regulations which became effective December 1, 2012.

### 4.4 Royalties

No underlying royalties or encumbrances exist on the Property. Comments on Section 4 Permits will be required for any future Project exploration or development. To the extent known, there are no other significant factors and risks that may affect access, title, or right or ability to perform work on the Project.

## 4.5 Permits

Surface disturbance Permits are required for mineral exploration in Saskatchewan prior to any work starting. The permits that may be required are: Temporary Work Camp permit, Aquatic habitat Protection Permit, Forest Product permit, and Surface Exploration permit. Legislation includes the Provincial Lands Regulations, the Environmental Management & Protection Act, and the Forest Resources Management Act. Drilling programs normally require a Term right to Use Water licenses and a Notification Form may need to be submitted to the Department of Fisheries and Oceans Canada.

The Property has the following Permits:

1. Approval to Operate, Pollutant Control Facilities. Issued pursuant to The Environmental Management and Protection Act, 2010, and the regulations there under. Ministry of Environment, Environment Protection Branch, Uranium and Northern Operations. APPROVAL NO. **P018-059**
2. La Ronge Gold Project Surface Lease Agreement 2013 between The Government of Saskatchewan and Golden Band Resources Inc.

## 4.6 Social License

All of Golden Band's activities in the La Ronge Gold Belt are within the traditional lands of the Lac La Ronge Indian Band ("LLRIB") and Golden Band has signed a Memorandum of Understanding with the LLRIB. The Memorandum of Understanding encompasses the Company's commitment to work with the LLRIB to establish a mutually beneficial business relationship. To ensure that business and employment opportunities are available to the LLRIB within Golden Band's exploration and development projects, Golden Band has also signed a General Services Agreement with Kitsaki Management Limited Partnership in the past.

If Golden Band wanted to come out of care and maintenance and go back into production a new Memorandum of Understanding would have to be worked out with the Lac La Ronge Indian Band.

## 4.7 Environmental Considerations

Canada North Environmental Services (CanNorth) completed environmental baseline studies in the Greater Waddy Lake area that includes the Oven Lake Property (Canada North, 2005). The Komis area was also studied in 1993 to 1995 in support of the Komis underground mine operation.

The environmental baseline studies consisted of a terrestrial and aquatic habitat evaluation including the following detailed studies:

**Aquatic environment**

- Spring fish spawning
- Summer fish and plankton community structure, fish habitat assessment, water and fish chemistry survey, lake morphometry and stream crossing assessments
- Fall Spawning, sediment benthic invertebrate survey
- Desktop hydrology study including regional streamflow analysis, flood frequency and magnitude, low flow frequency and magnitude, flow durations, etc.

**Terrestrial environment**

- Winter wildlife tracking survey
- Spring raptor survey
- Spring ungulate pellet group/browse survey, habitat mapping and development of a caribou mitigation/protection plan
- Summer vegetation / rare plant survey
- Ungulate pellet group survey

This work adds to existing environmental baseline data which includes work initiated by the Terrestrial and Aquatic Environmental Managers (TAEM) now known as CanNorth. TEAM carried out environmental field work in 1988 which involved Lake Morphometry, fish community, and fish habitat assessments in Tower Lake, Island Lake, Bead Lake, Middle Lake and Unnamed Lake. TAEM also conducted a comprehensive study of the Komis project area in 1994 and 1995 that included aquatic and terrestrial assessments

**4.8 Comments on Section 4**

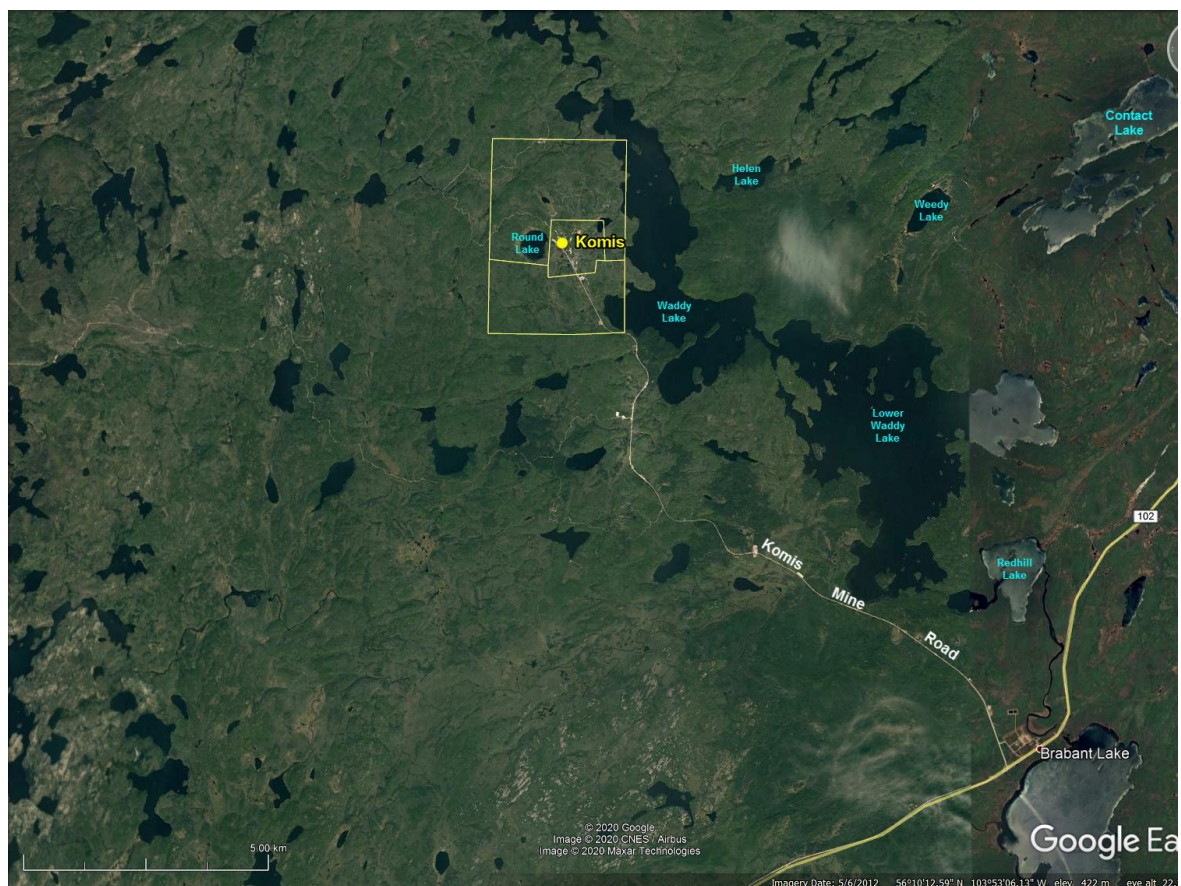
Permits will be required for any future Project development. To the extent known, there are no other significant factors and risks that may affect access, title, or right or ability to perform work on the Project.

## 5.0 Accessibility, Climate, Local Resources, Infrastructure, and Physiography

### 5.1 Accessibility

The project area is located one kilometre ("km") west of Upper Waddy Lake in northern Saskatchewan. The geographic projection used for the project maps and surveys is UTM ZONE 13 NAD83 (CSRS) CGVD28, centred at 103° 56' W longitude and 56° 11' N latitude within NTS map sheet 64D/4. The work area is located approximately 200 road kilometres north-northwest of La Ronge and is accessible by road from the community of Brabant Lake, located adjacent to Highway 102 (Figure 5-1 and 5-2). An all-weather tote road links Brabant Lake with the Komis property 18 km to the northwest. The site is accessible by car or truck. Closer to the mine, parts of the road have been stabilized using waste rock from the mine.

**Figure 5-1 Satellite Images of Project Area and Access**





**Figure 5-2 - Komis Site**

## 5.2 Climate

The project area is within the boreal forest of the Canadian Shield, a district with cold winters and warm summers, and with annual temperatures ranging from  $-50^{\circ}\text{C}$  to  $+35^{\circ}\text{C}$ . The climate in the Tower Lake area is classified as cold temperate continental. Annual precipitation is from 40 to 60 centimetres (cm), falling mostly in the summers. Snow begins to accumulate during October and generally persists into April. Lakes in the region are generally frozen-over between December and April each year.

No weather statistics are available for the specifically for the Project area, but weather statistics are available for La Ronge, located 200 km to the southwest at the same approximate elevation. The average annual temperature is  $-0.1^{\circ}\text{C}$ , with an average daily maximum of  $23.0^{\circ}\text{C}$  in July and an average daily minimum of  $-25.8^{\circ}\text{C}$  in January. Average annual precipitation for La Ronge is 483.8 millimetres (mm), which is comprised of 348.8 mm of rainfall and 148.4 cm of snowfall.



Exploration work, specifically diamond drilling is best performed from mid-January to the end of March when ice conditions are suitable to allow diamond drilling on Tower Lake and the large swamp area to the east.

### **5.3 Local Resources and Infrastructure**

The nearest large town is La Ronge, a major service centre for northern Saskatchewan. It has a population of approximately 2,700 (June 2017 Statistics Canada census) with a further 3,000 in outlying communities. It has a paved 1524 m runway offering scheduled and charter air services.

Access to La Ronge is via Highway 2 from Prince Albert. North of La Ronge, Highway 102 is paved for 30 km past the town and then continues as an all-weather, maintained gravel road to the uranium mines in the northern part of the province.

A 25 kV hydro distribution line, belonging to SaskPower, extends northward along Highway 102 from La Ronge to Missinipe (94 km southwest of Brabant). At present, there is no available commercial load from this line. Another major power line, the 138 kV Island Falls to Points North transmission line, extends from the Island Falls hydroelectric generation plant through the general project area, crossing Highway 102 at Lindsey Lake 12 km southwest of Brabant. Commercial distribution is available from this line from SaskPower.

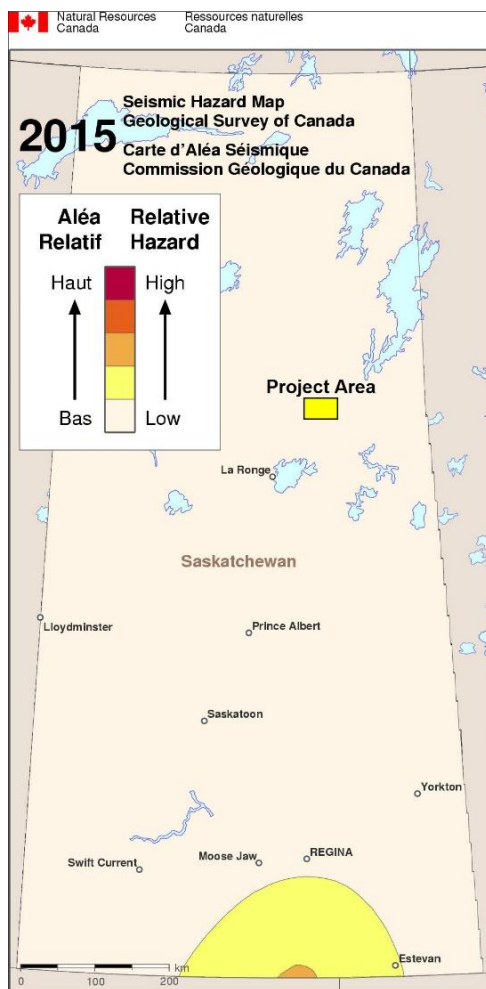
### **5.4 Physiography**

The Project lies in a glaciated terrain with topography typical of that found elsewhere in the Canadian Shield. It is characterized by low rolling hills interspersed with numerous lakes and muskegs. Elevations in the area range from 475 to 515 m above mean sea level with local relief on the order of a few tens of metres.

### **5.5 Seismicity**

The project area is located in central Saskatchewan, one of the least seismically active areas in Canada (Figure 5-3).

**Figure 5-3 Seismic Hazard Map - Saskatchewan**



## 5.6 Comments on Section 5

The accessibility, climate, physiography and seismic situation of the Komis Project area are sufficiently well understood to allow for exploration and mining.

## 6.0 History

The Greater Waddy Lake area was first explored in the late 1930's by prospectors from Consolidated Mining and Smelting (now Teck Cominco Ltd.). After World War II, other firms (Augustus Exploration) and individuals (Eric Partridge) also became active in the belt.

Large iron-sulfide bearing zones in the Waddy-Nistoassini lakes area were discovered as early as 1928. During the course of this base metal exploration, gold was discovered in 1947 in the Waddy Lake region. The discovery touched off a minor exploration boom in the area, which had declined by the mid-1950's. These zones have been examined on numerous occasions for their base metal, gold and iron potential from the 1930's to the 1970's by Consolidated Mining and Smelting Co. (Cominco), Hudson Bay Mining and Smelting Co. Ltd., Churchill Minerals Ltd. and Granges Exploration AB concentrated on the known presence of formational massive sulfides in the northern portion of the Central Metavolcanic Belt (Avery and Demmans, 2003).

The dramatic rise in the price of gold in the 1970's prompted a resurgence of exploration activity throughout the La Ronge Domain and a re-examination of known gold showings in the Waddy Lake area lead to the discovery of several new gold occurrences including the Komis and EP Zones.

From 1980 to 1996, Golden Rule Resources, its affiliates and joint-venture partners (Cameco and Goldsil Resources Ltd.) spent an aggregate of more than \$30 million on exploration and development on about 25 properties encompassing an area of 85,000 hectares in the Waddy Lake region. Since 1990 however, gold exploration efforts have been sharply curtailed in the belt due to unstable gold prices and unfavorable market conditions for junior resource companies. In spite of these conditions, Waddy Lake Resources Inc. secured financing during this period to further explore and eventually bring the Komis deposit into production. Another subsidiary company, Tyler Resources Inc., also raised money to explore the Golden Heart deposit from 1995-96

The most intensive period of gold exploration within the La Ronge gold belt was in the 1980s and early 1990s, triggered by an increase in the price of gold and the federal implementation of flow-through share financing. During this period, up to 80 senior and junior companies worked in the La Ronge gold belt. Several of the historic gold occurrences were significantly enhanced (Jojay, Wedge Lake, Twin Lake, Weedy Lake, Komis, and the EP zone). Other deposits discovered and mined during this period were: Star Lake, Jasper, and the Rod Zone (Jolu mine). The most active companies were SMDC (predecessor to Cameco), Royex, and Golden Rule Resources Ltd. ("Golden Rule"). The last discoveries during this period in the belt were the

Contact Lake deposit and the Greywacke zone (both by Cameco in 1987-8) and the Bingo deposit (by Uranerz Exploration and Mining Ltd.) in 1991-2.

From the mid-1990s onward, less than a handful of exploration companies have continued gold exploration in the belt, most notably Golden Band Resources Inc.

## **6.1 Komis Property History**

The exploration history of the Komis property is long and sporadic. Four different operators have collected over 44,000m of core from 1959 to the present (see Table 6-1). In addition to extensive diamond drilling, 130,265 tonnes of material averaging 7.75 grams per tonne ("g/t") Au (0.226 ounces/ton ("oz/ton") Au) have been mined at Komis. Total gold production stands at nearly 29,000 ounces ("oz") Au. The exploration of the Komis property is summarized below (Lahusen and others, 1994; Lahusen and others, 1995; Avery and Demmans, 2003).

**1943:** The original claims were staked in the northern portion of the present mineral lease CBS 6548 by Cominco to cover an occurrence of gold-bearing float on the southwest peninsula of Upper Waddy Lake. Five BX-diameter core-holes were drilled by Cominco to test the occurrence.

**1958:** Prospector Eric Partridge staked 28 claims to cover an occurrence of gold in till. The outcrop expression of the Komis deposit was discovered soon after.

**1959:** Partridge re-staked lapsed Cominco claims covering the original showing and surrounding area of shearing at the Narrows of Waddy Lake. Partridge optioned the claims to Ventures Limited (a subsidiary of Falconbridge Gold Corp.), who completed ground magnetometer surveys and soil geochemistry. Attempts were made to sample the lake bottom where coarse free gold was reported in 1948. Geologic mapping at scales of 1": 500' and 1": 40' was completed and 55 samples were collected during the resampling of eight of Partridge's original trenches (62.6m of channel sampling).

**1960:** A ground magnetometer survey on 200' grid centers (68.4 line-km), grid mapping (1": 40') and trenching (99m) were completed on the main Komis Zone. Detailed prospecting and soil panning on the northern portion of the property lead to the discovery of five new gold zones. Prospecting in the southern portion of mineral lease ML-5080 yielded that up to 30 colors/pan could be panned from tills on the east-west trending ridges.

**1961:** Detailed prospecting, trenching and stripping (1,486m<sup>2</sup>) were completed. Channel sampling (340.9m) and 35 auger drill holes (457m) were completed in gold bearing "gravels".

**1959-61:** Forty-four (44) BQ-diameter core holes (4,214m including holes V1-V43) were completed. The core from the 1959-61 Ventures drilling was sampled on a very limited basis often resulting in gold-rich samples with no adjacent sampling in material that may have carried gold values. This core is no longer available for additional sampling.

**1968:** Three-hundred-ninety-four (394) soil samples were collected every 200 feet ("ft") from lines 400 ft apart on the Komis grid and analyzed for Mo, Cu, Pb, and Zn. "Significant" concentration of Cu, Zn and Mo results were found in the area west of Round Lake. Anomalous Pb values occur at random throughout the survey area.

**1973:** The 200-ft grid was cleaned and re-established (97.3 line-km), 30 trenches were completed, and 1,960 soil samples were collected at a sample spacing of 50 ft and 100 ft. Partridge completed detailed soil sample panning in the Camp Zone area. A Wacker till sampling program was also completed by Partridge for Energy Resources Canada Limited covering most of ML-5364 and CBS 6548.

**1973-75:** Partridge acquired control of Waddy Lake Mines Ltd. with exploration initially undertaken by Partridge and later by consultants Derry, Michener and Booth on behalf of Auric Resources. Exploration consisted of soil geochemistry, soil panning, ground magnetometer/IP surveys and diamond drilling. Sixteen BQ-diameter core holes (1,732m in holes DMB-1 to 16) were completed on Komis, while other holes, designed to test IP anomalies, failed to locate any bedrock-hosted gold mineralization. The 1974, Derry, Michener and Booth core was sampled along the entire length of the hole with the entire, un-split core interval assayed.

**1979:** Waddy Lake Mines was reorganized as Waddy Lake Resources Inc., which entered into a joint venture with Energy Reserves Canada Ltd. to pursue exploration at Komis.

**1980:** Waddy Lake Resources and joint-venture partner Energy Reserves Canada Ltd. excavated a small open pit over the surface exposure of the Komis discovery zone. A 1,031 ton bulk sample was extracted and processed on site by jig and gravity separation. A combined sample consisting of concentrate and in-situ tailings yielded a calculated head grade of 0.382 oz/ton Au.

**1981:** Energy Reserves completed a Wacker till sampling program to locate the source of the Riddle till anomaly. Forty-eight (48) BQ-diameter core holes (6,493 m) were drilled on the Komis property package (KA81-1 to KA8104, KB81-1 to KB81-4, KC81-1 to KC81-20, KE81-1 to KE817, KF81-1 to KF81-5, and KG81-1 to KG81-3). Note that only the KC-series core-holes were completed in the Komis zone. Drill core was split into 1.0 m intervals and assayed along

the entire length of the hole irrespective of geological contacts, which resulted in some ambiguity in determining the nature of the occurrence of gold at Komis. This is particularly true for comparison of quartz vein-hosted visible gold with adjacent intervals of gold-bearing pyritized wall-rock.

The 1959-61, 1974 and 1981 drilling programs outlined a mineralized area approximately 200 m by 150m covering the main part of the deposit.

**1982:** Waddy Lake Resources, as operator, completed geophysical surveys and 37 BQ-diameter core holes consisting of 2,101m in 36 vertical holes (maximum 140m depth) and one angle hole in the Komis discovery zone to expand and increase confidence in defining the Komis mineralization. Assay sample intervals were determined by geological contacts resulting in selective analysis of quartz vein and pyrite hosted ore for the first time.

**1983:** Waddy Lake completed 57 BQ core-holes totaling 5,975m (KC8301 to KC83-20, KX83-1 to KX83-6 and EP83-1 to RP83-31). Note that only the KC-series core-holes were completed in the Komis zone. Geophysical surveys consisting of magnetometer/VLF-EM were also completed in the Komis area.

The EP Zone was discovered as the result of a rotasonic overburden drilling program (110 holes for 931.6m) designed to collect basal till samples to the northeast of the Komis discovery. Subsequent diamond drilling in the area of the EP Zone consisted of 32 BQ-diameter core holes totaling 3,281m. (EP81-2 to EP83-31 are included in the 57 core holes mentioned in the preceding paragraph). The EP Zone is located a short distance to the northeast of the Komis area.

**1984:** Placer Development Ltd. completed a pre-feasibility study on Komis using an open pit model.

**1985-87:** Placer Development optioned the property with the intention of exploring for additional gold deposits to supplement reserves at Komis. No further exploration was directed at Komis or the EP Zone at this time. Property-wide exploration activities during this period include geological mapping, soil geochemistry, till sampling by backhoe and rotasonic drilling, ground magnetometer/VLF-EM and IP surveys and diamond drilling (18 BQ-diameter core holes totaling 2,706m – PDL87-1 to PDL87-18).

**1988:** Placer Development drilled 28 BQ-diameter core holes totaling 4,282m (D88-19 to D88-46). Drilling was widely spaced and reconnaissance in scope. No new drilling was completed in the Komis or EP Zones.

From 1985 to 1988, Placer Development identified six new gold targets, five of which are drill tested. Three of those areas contained potentially economic gold values.

**1989:** Placer Dome relinquishes its option on Komis property, which coincided with Placer's withdrawal from active exploration in Saskatchewan.

**1990:** Waddy Lake Resources reinterpreted all pre-1990 drillhole data collected on the Komis property. The re-interpretation work resulted in a realignment of the drill grid to 118° and was followed by 29 NQ diameter core holes totaling 4,106m (KO90001 to KO90029) intended to confirm the location of high grade zones and to define the geometry and continuity of mineralization along strike. Drilling was on 12.5 to 25m centres and at 25m spacing down-dip. By the end of the 1990, 278 diamond drillholes were completed at Komis (31,653m).

**1992:** Waddy Lake completed 20 NQ-diameter core holes (2,735m - KO92030 to 92049). In conjunction with the diamond drilling program, a detailed mapping (1:25) and channel sampling program was performed on the sub-crop of the Komis deposit.

**1993-94:** Waddy Lake commissioned Dynatec Engineering Ltd to complete a pre-feasibility study on the Komis property. The Dynatec study recommended an underground bulk sampling program be conducted with underground access by decline ramp and additional development to cross-cut mineralization and drift in "ore" on the A and C zones on two levels. The study further recommended that a 10,000 tonne bulk sample be tested at the nearby Jolu mill.

Following the necessary environmental permitting, the Komis mine portal was collared on November 18, 1993. All physical underground work was completed by April 15, 1994. See Section 6.1.1 on Test Mining for a review of this program.

Sixty (60) BQ-diameter core holes (2,966m - KO94-050 to KO94-109) were completed underground and 36 additional NQ-diameter core holes (7,033m - KO-94-110 to KO94-145) were completed from the surface to expand the reserves. Accurate surveys of 1992 and 1994 drillhole collars by Tri-City Surveys (KO92-30 to 92-49; KO94-110 to 94-145) were also completed at this time.

**Table 6-1 Summary of Komis Drilling 1959-1994**

Date	Operator	Number of Drillholes	Core Size	Metres Drilled
1959-1961	Ventures Limited	44	BQ	4,124
1974-1975	Derry, Michener and Booth	16	BQ	1,732
1981	Energy Reserves Canada Ltd.	48	BQ	6,493
1982-1983	Waddy Lake Resources Inc.	94	BQ	8,076
1987-1988	Placer Dome Inc.	46	BQ	6,988
1990	Waddy Lake Resources Inc.	29	NQ	4,106
1992	Waddy Lake Resources Inc.	20	NQ	2,735
1994	Waddy Lake Resources Inc.	36	NQ	7,003
1994*	Waddy Lake Resources Inc.	60	AW-34	2,996
<b>TOTAL</b>		<b>393</b>		<b>44,253</b>

\* Some of the 1994 drilling was in the EP zone and outlying areas

**2007:** Golden Band completed an expanded scoping study for the La Ronge Gold Project (P&E, 2007). This study described an 8-year project for mining operations at the Bingo, Komis, EP, Birch Crossing and Tower East gold deposits, and milling of ores at the refurbished Jolu mill and Tailings Management Facility.

**2008:** Golden Band completed a Pre-Feasibility Study ("PFS") for the La Ronge Gold Project (P&E, 2008). This study described an 8-year project for mining operations at the Bingo, Komis, EP, Birch Crossing and Tower East gold deposits, and milling of ores at the refurbished Jolu mill and Tailings Management Facility.

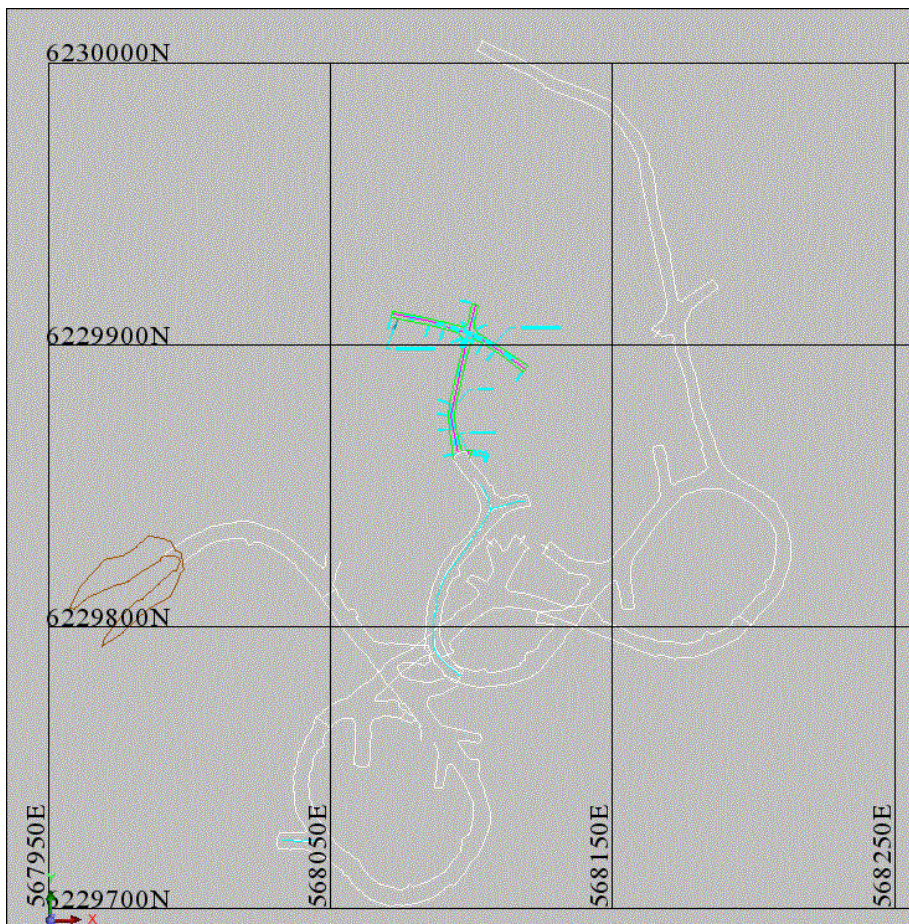
**2011-2012:** Golden Band investigated the Komis underground workings in 2011 through an exploration program that involved dewatering followed by underground exploration by drifting off the bottom level of the decline. The Company also carried out a detailed engineering and geological assessment of the mine workings, including surveying, mapping and sampling of the workings. Pre-production surface drilling was also carried out. This underground mining attempt was shut down for the following reason (Internal Memo dated January 20, 2012):



*"The underground 300N exploration drift advanced 85m. Out of the advance we recovered 800 t of ore material with an average grade of 3.05 g/t. Geological mapping and sampling has been completed in this drift. Numerous quartz veins and aplite dykes were intersected some of the quartz veins contain high grade values, but over small (0.5m) intervals with the high grade assays often being spotty and isolated to small quartz veins. It is noted that where the existing block/ore model crosses the development there is an increase in the number of structures, but the grades projected by the model were not necessarily obtained. Current mapping and sampling in my opinion suggests that the mineralization we have encountered in this drift would be sub-economic."*

Figures 6-1 and 6-2 show what was planned on the 300 Level and what was actually done. Table 6-2 documents the chips samples taken at each cross-cut face.

**Figure 6-1 - Planned Development at the 300 Level.**





**Figure 6-2 - Underground 300 Level Cross-Cut Development**

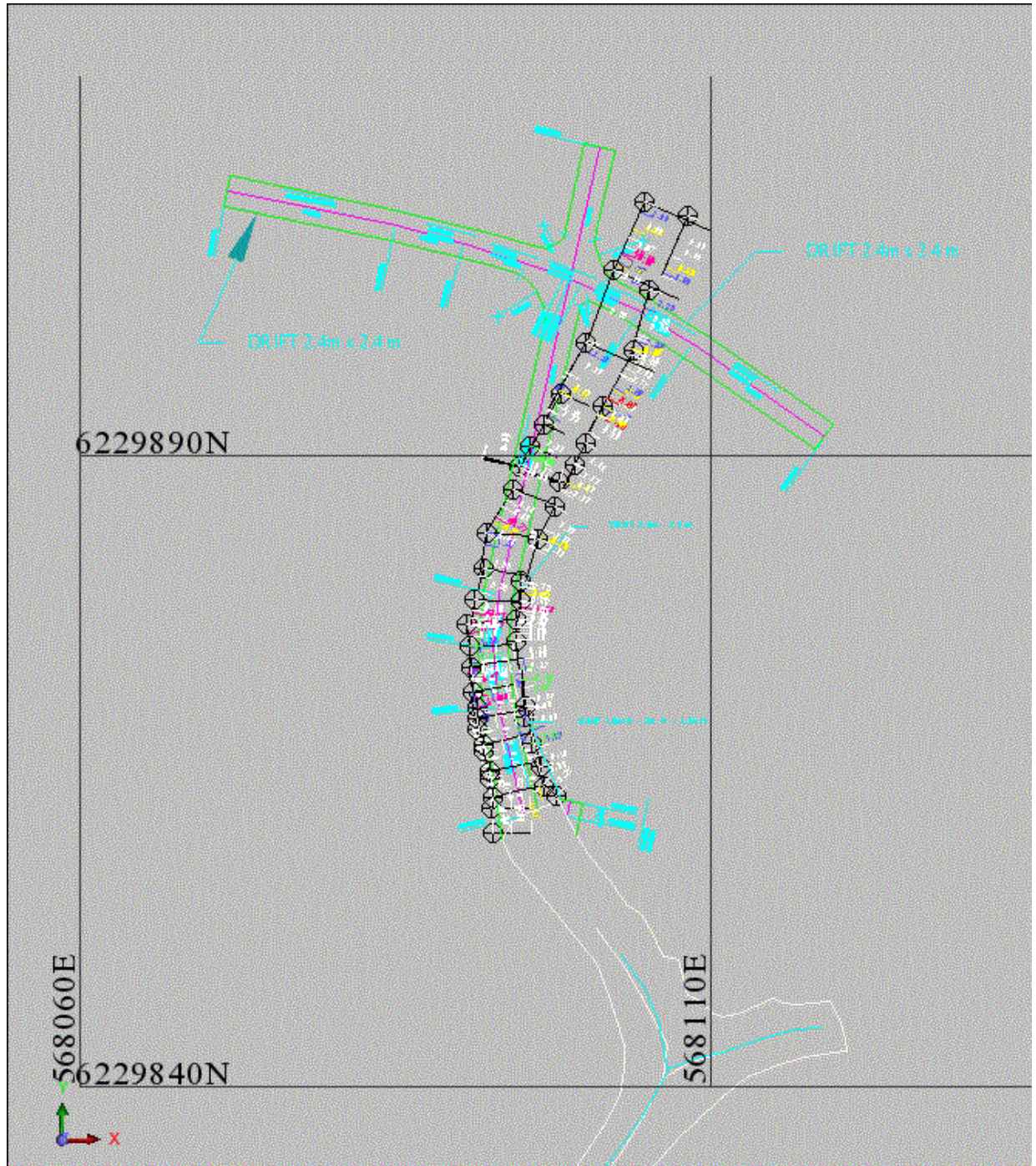
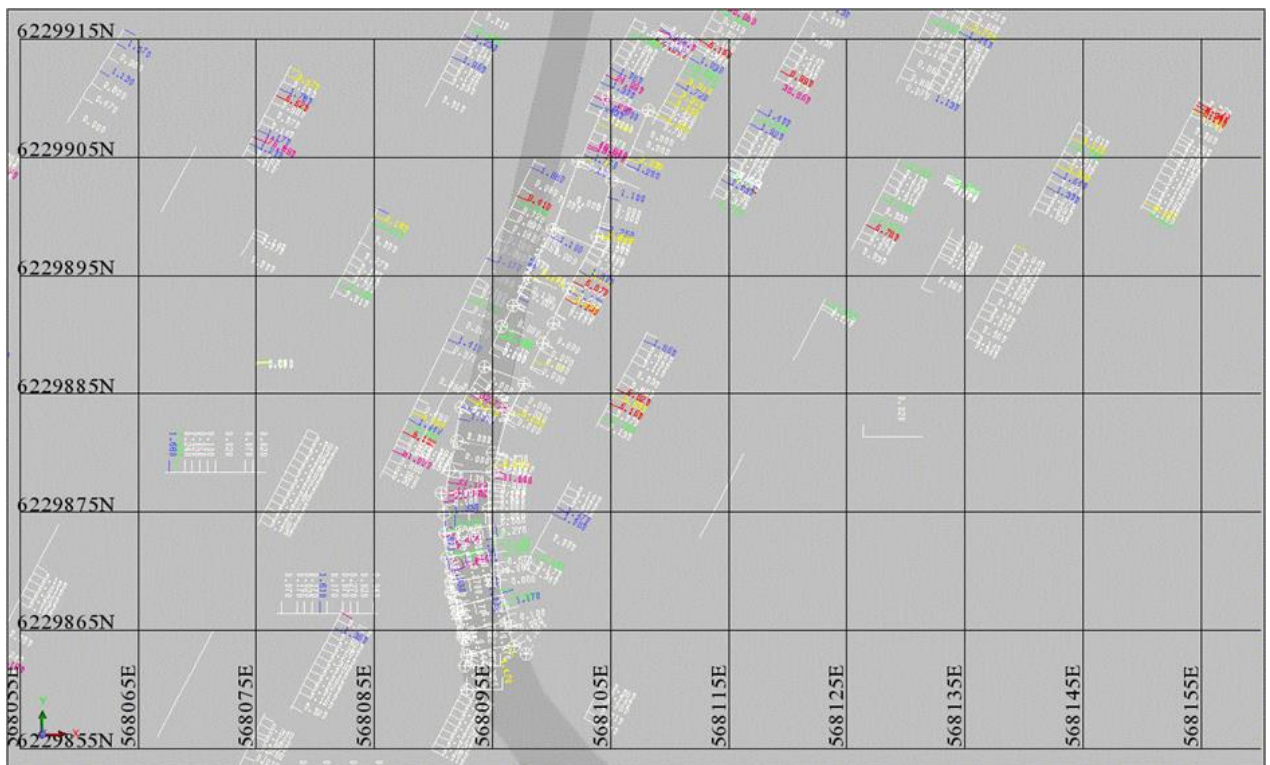




Figure 6-3 and Table 6-1 is a plan view at the 300 meter level where the 2011 underground cross-cut drift development occurred and includes assay results from both the chip samples and surrounding drill holes. This work was stopped as the head Geologist at the time said: *"...Current mapping and sampling in my opinion suggests that the mineralization we have encountered in this drift would be sub-economic."* This comment was made even though the planned work was not completed and with no reconciliation of what was expected and what was realized. This was also a cross-cut, not an ore drift so a fair bit of dilution should have been expected.

**Figure 6-3 – 300 Level Cross-Cut Plan View with Surrounding Drill Holes**



**Table 6-2 – Assay Results from the 300 Level Cross-Cut**

Chip ID		From (m)	To (m)	Interval (m)	Fire Assay g/t Au
300N-00		2.3	3.8	1.5	4.47
300N-03		3	3.8	0.8	1
300N-03RW		0	1.3	1.3	2.6
300N-05LW		0	0.8	0.8	43.54
300N-05LW		0.7	1.4	0.7	2.67
300N-05LW		1.4	2.9	1.5	9.24
300N-06LWTOP		1.4	2.3	0.9	2.1
300N-06LWBOTTOM	<i>including</i>	0	1.3	1.3	0
300N-06LWBOTTOM		1.3	2.5	1.2	2.07
300N-06		0	0.9	0.9	1.67
300N-07LWTOP		1.3	2.1	0.8	7.73
300N-07LWBOTTOM		1.1	1.9	0.8	1.33
300N-07LWBOTTOM	<i>including</i>	0.8	1.1	0.3	0.1
300N-07LWBOTTOM		0	0.8	0.8	11.77
300N-08LWBOTTOM		1	2	1	15.17
300N-08LWBOTTOM		0.5	1	0.5	33.17
300N-09RWTOP	<i>including</i>	0	0.5	0.5	0.73
300N-09RWTOP		0.5	1	0.5	3.43
300N-011LW		0	1	1	1.07
300N-13LWTOP	<i>including</i>	1	1.6	0.6	0.47
300N-13LWTOP		1.6	2.6	1	32.77
300N-13LWBOTTOM		2.5	3	0.5	3.27
300N-13RWBOTTOM		2	2.6	0.6	3.03
300N-15LWTOP		0	0.8	0.8	2.53
300N-15LWTOP	<i>including</i>	0.8	1.7	0.9	0.17
300N-15LWBOTTOM		0	0.9	0.9	2.33
300N-15RWBOTTOM		0.6	1.6	1	4.87
300N-17LWBOTTOM		1	2	1	1.83
300N-17LWBOTTOM	<i>including</i>	2	2.5	0.5	0.2
300N-17RWTOP		0	0.8	0.8	3.43
300N-20LWTOP		2.8	4.3	1.5	3.07
300N-20LWTOP	<i>including</i>	4.3	6	1.7	0.13
300N-20LWBOTTOM		0	0.6	0.6	1.1
300N-20RWTOP		2.1	3.3	1.2	1.9
300N-20RWTOP		3.3	4.3	1	5.67
300N-20RWTOP	<i>including</i>	4.3	5.8	1.5	0.5
300N-20RWBOTTOM	<i>including</i>	0	1.5	1.5	0.1
300N-20RWBOTTOM	<i>including</i>	1.5	2.3	0.8	0.77
300N-20RWBOTTOM		2.3	3.5	1.2	3.1
300N-20RWBOTTOM	<i>including</i>	3.5	4.5	1	0.6
300N-20RWBOTTOM		4.5	5.2	0.7	1.17
300N-20RWBOTTOM		5.2	5.9	0.7	7.03
300N-23RWTOP		4	4.8	0.8	4.27
300N-23RWTOP	<i>including</i>	4.8	5.4	0.6	0.15
300N-23RWBOTTOM		0	1.5	1.5	1.1
300N-23RWBOTTOM		3.7	4.2	0.5	1.25
300N-23RWBOTTOM		4.2	4.9	0.7	3.6
300N-27LWBOTTOM		0	0.9	0.9	1
300N-27LWBOTTOM		0.9	2.4	1.5	4.23
300N-27LWBOTTOM	<i>including</i>	2.4	3.9	1.5	0.37
300N-27LWBOTTOM		3.9	4.4	0.5	13.37
300N-27LWBOTTOM		4.4	5.5	1.1	4.3
300N-27LWBOTTOM		5.5	6.3	0.8	1.6

Chip ID		From (m)	To (m)	Interval (m)	Fire Assay g/t Au
300N-27LWTOP		3.1	4.6	1.5	46.6
300N-27LWTOP		4.6	5.3	0.7	1.77
300N-27RWBOTTOM		3.5	4.5	1	3.23
300N-27RWBOTTOM		4.5	5	0.5	1.2
300N-30LWTOP		0	1.5	1.5	1.83
300N-30LWTOP	<i>including</i>	1.5	3	1.5	0.1
300N-30LWTOP		3	3.8	0.8	6.57
300N-30LWTOP	<i>including</i>	3.8	4.8	1	0
300N-30LWBOTTOM		0	1.5	1.5	1.6
300N-30RWTOP		2.5	3.6	1.1	9.67
300N-30RWTOP	<i>including</i>	3.6	4.2	0.6	0
300N-30RWBOTTOM	<i>including</i>	0	1	1	0.3
300N-30RWBOTTOM		1	2	1	2.33
300N-30RWBOTTOM		2	3	1	7.93
300N-31LWTOP		0	1.6	1.6	1.5
300N-31LWTOP		1.6	3.1	1.5	7.2
300N-31LWBOTTOM		0	1.5	1.5	2.6
300N-31LWBOTTOM		1.5	3.5	2	1.1
300N-31RWTOP		2.3	2.9	0.6	3.13
300N-31RWBOTTOM		0	1	1	3.87
300N-31RWBOTTOM		1	2	1	1
300N-31RWBOTTOM	<i>including</i>	2	3	1	0.9
300N-36LWTOP		0	0.6	0.6	19.87
300N-38		0	1.4	1.4	25.43
300N-40LW		0	0.8	0.8	2.93
300N-41LWTOP		0.9	1.4	0.5	17.27
300N-41LWBOTTOM		0.7	1.2	0.5	21.77
300N-41LWBOTTOM		1.2	1.9	0.7	3.83
300N-41LWBOTTOM	<i>including</i>	1.9	2.6	0.7	0.1
300N-41RWTOP	<i>including</i>	0	0.5	0.5	0.3
300N-41RWTOP		0.5	1	0.5	5.27
300N-41RWTOP		1	1.6	0.6	8.03
300N-41RWBOTTOM	<i>including</i>	0	0.8	0.8	0.07
300N-41RWBOTTOM		0.8	1.4	0.6	8.6

**2012-2013:** The Komis mine was put into production as an open pit operation (see Section 6.2.3).

## 6.2 Test Mining

Procon Mining and Tunneling Ltd collared the Komis portal on November 18, 1993. All work on the underground portion of the test mining program was completed by April 15, 1994. The following summary of the physical work completed during the test mining program is taken from Lahusen and others, 1994):

- 981 linear metres of access decline, cross-cuts and drifts were completed. Ore zones were exposed on the 350 and 400 levels.

- 51 linear metres of raise were completed exploring the "C" zone between the 350 and 400 levels.
- 1,571 cubic metres of miscellaneous slashing in ore and waste rock were completed.
- Delivery of 3,400 m<sup>3</sup> (9,700 tonnes as per mine survey) to the Jolu mill for processing. This included some material below 3.42 g/t that was intended for mill start-up. This bulk sample was obtained from the mine development excavations described above. Each round that was drilled and blasted was transported and stockpiled separately at the Komis site. Ninety-eight rounds were individually sampled at the mill after crushing.
- Three-hundred-and-fifty tonnes of rock grading over 3.42 g/t were left on site at Komis when spring breakup prevented further truck haulage.
- 2,966 metres of underground diamond drilling.

The average uncut grade for all face and rib sampling for all rounds shipped to the Jolu mill, weighted by size was 12.19 g/t and weighted by sample length was 12.81 g/t.

A total of 8,072 tonnes (8,898 dry short tons) were processed at the Jolu mill. The difference between the 9,700 tonnes mined and the 8,072 tonnes milled is related to the fact that some of the mined material was not transported to the mill due to poor road conditions and a perceived low grade for this material. Using a gravity concentration circuit, a total of 395 kg of high-grade table concentrate containing about 17,667 gm Au (568 oz Au) and 25.1 tonnes of low-grade middlings concentrate containing about 11,819 gm Au (380 oz Au) were produced and shipped to Johnson Matthey Refinery and Asarco Smelter respectively. In addition, about 23.1 tonnes of low-grade sands, estimated to contain about 1,058 gm Au (34 oz Au) were recovered at the end of the milling period. Mill tailings discharged at the old Jolu mill were sampled and are estimated to contain about 21,648 gm. Au (696 oz Au). Unaccounted for residual Au remaining in the mill liners, mill processing equipment and various samples is estimated to total approximately 1,711 gm Au (55 oz Au). Waddy Lake estimated that total gold in the mill feed was approximately 53,902 gm. Au (1,733 oz Au). Therefore, the average mill head grade is estimated to have been 6.68 g/t +/- 0.45 g/t.

The recommended mill configuration included a wet tertiary crusher in closed circuit with two automated Knelson centrifuges and sluices boxes to recover the maximum amount of gold as a gravity concentrate that could then be upgraded by tabling to an on-site meltable grade product. Following the coarse gravity circuit, a regrind ball mill and multiple column flotation circuit would recover most of the remaining gold as a sulfide concentrate which could then

be cyanide leached in a small circuit. Gold would be recovered by carbon extraction and electrowinning. The overall recovery was projected to be 95% for 13.7 g/t Au mill feed and 93% for 10.27 g/t Au mill feed.

During test mining underground face mapping at 1:125 scale was conducted on the 400m and 350m level drifts and crosscuts. In addition to mapping, 8,714 chip samples were collected as part of face and rib sampling programs and analyzed by fire assayed on site. Detailed geological mapping and systematic sampling on access the ramp, cross-cuts, drift ribs and raises was also conducted.

A value of 12.81 g/t Au for all rounds (uncut) was obtained for chip sampling compared to the average mill head grade of approximately 6.68 g/t Au calculated from milling operations. The reasons given for the discrepancy is that chip sampling contained high amounts of free gold whereas mine sample rounds were substantially diluted by waste rock due to the lack of well-defined footwall and hanging wall contacts marking the ore zones.

## **6.3 Production**

### **1996-1997**

The Komis mine was initially in operation from February 1996 to February 1997. During that period, 120,565 tonnes were processed through the Jolu mill, with 26,859 ounces Au and 3,366 ounces Ag recovered. The final head grade was 7.81 g/t Au with a final mill head recovery rate of 88%. The mill head grade was significantly lower than that forecast by the feasibility study 10.34 g/t Au. Several factors contributed to this discrepancy: excessive dilution in development headings; development muck accounted for 20% of the tonnage mined; and the A stope which accounted for 36% of production proved to be much lower grade than originally forecast.

### **2012**

#### **6.3.1 Cross-Cut Development**

The underground 300N exploration drift advanced 85m from beginning of December to middle of January 2012. Out of the advance 800 tonnes were recovered of ore material with an average grade of 3.05 g/t. Geological mapping and sampling had been completed in this drift to test the cross cut provided by the geological model.

#### **6.3.2 Open Stope Mucking**

Muck samples have been retrieved from the open stopes where safe to do so. These samples were collected mainly from the 325 and 360 levels. The average grade of these samples is 3.48

g/t gold. Two trucks have been hauled from the 400 level cleaning out the loose ore in the 400 level, this ore graded 38.06 g/t (30 t of ore). Also 186 t of ore has been mucked to surface from the 325 #6E draw point; the average grade of this ore has been 7.75 g/t. There can be considerable variability when muck sampling depending on the quality of the sample and the circumstances it is collected in. Muck sampling gives an overall idea of the grade. 2012-2013

### 6.3.3 Open Pit Mining

The Komis mine was restarted as an open pit operation in 2012 and produced an additional 38,770 tonnes averaging 2.44 g/t Au. The mill head grade was significantly lower than the forecasted level of 6.58 g/t Au. This was partially attributed to prior surface mining efforts that were not identified in the mine plan, and partially to excessive dilution resulting from blasting procedures. The co-author (F. Hrdy P.Geo.) would also like to add that the grade model that was used for this open pit mining exercise was originally estimated to focus on the higher grade areas and for an underground mining operation, not an open pit operation.

The mine was closed in early 2013. Mine workings at Komis are now flooded and most surface buildings have been removed from site (Figure 6-4).

**Figure 6-4 - Komis Site**





## **6.4 Comments on Section 6**

### **6.4.1 Pre-2010**

Between 1996 and 1997 a total of 120,565 tonnes were processed at the Jolu mill and 26,859 ounces of gold and 3,366 ounces of silver were recovered. The final mill head was 7.8 g/t gold. Final recovery was 88.0% (Fraser, 1997). The mill head grade was significantly lower than projected (7.8 g/t gold versus 10.34 g/t gold). Several factors contributed to this discrepancy:

1. There was excessive dilution in development headings (development muck accounted for 20% of the 120,565 tonnes mined).
2. The "A" zone proved to be much lower grade than anticipated (16,448 tonnes averaging 6.27 g/t gold) which accounted for 36% of the production.
3. The effects of internal dilution within the stopes due to complex quartz vein geometry were significant.
4. Although it is not known what part "high grading" (theft) by mine personnel played in reducing the head grade, it was commonly practiced (A.C.A. Howe, 2005).

### **6.4.2 Post-2010**

In 2012 the old workings were dewatered and rehabilitated so that a cross-cut drift and accompanying ore drift along a modeled zone could evaluate the geological model and grade estimates. This work was not completed even though the cross-cut results appear to be close to what the grade model predicted and a reconciliation was never conducted.

After hastily shutting down the underground development work without a proper reconciliation of the results the group was tasked to mine the deposit via an open pit. Unfortunately the grade model was not interpreted to be mined via an open pit mining method (individual higher grade zones were modeled so the lower grade halos were left out) and so it was inappropriate for this task. In addition, the on-site planning department did not know if they were using the most recent model (F. Hrdy P.Geo. personal observations while conducting an on-site evaluation in 2012). The open pit mining was also complicated by the fact that the planning department had mostly recent graduates (the somewhat more trained personnel had quit) and lacked the necessary experience to oversee this work. For example, the planned transportation costs did not consider transporting low-grade material to the Jolu Mill as this alone made an open pit mining scenario unfeasible. Strict grade control measures were also not taken to ensure excess dilution did not cause problems – which it did.

So it is the Author's opinion that the Komis Gold deposit has a good chance to become a profitable mining operation but must have the following:

1. A well planned mine design before anything starts.
2. A mining method that takes into account the existence of underground development.
3. A mining method that allows for the segregation of very high grade zones that are relatively small and occur at significant distances from each other.
4. A strict grade control system must be enacted.
5. Onsite ore concentrating technology must be implemented.
6. Strict security must be implemented to prevent "high grading".

## **7.0 Geological Setting and Mineralization**

### **7.1 Regional Geology**

The greater Waddy Lake area was geologically mapped by C.T. Harper from the Saskatchewan Geological Survey in 1984-85. (Saskatchewan Geological Survey Summary of Investigations, 1985, Miscellaneous Report 85-4).

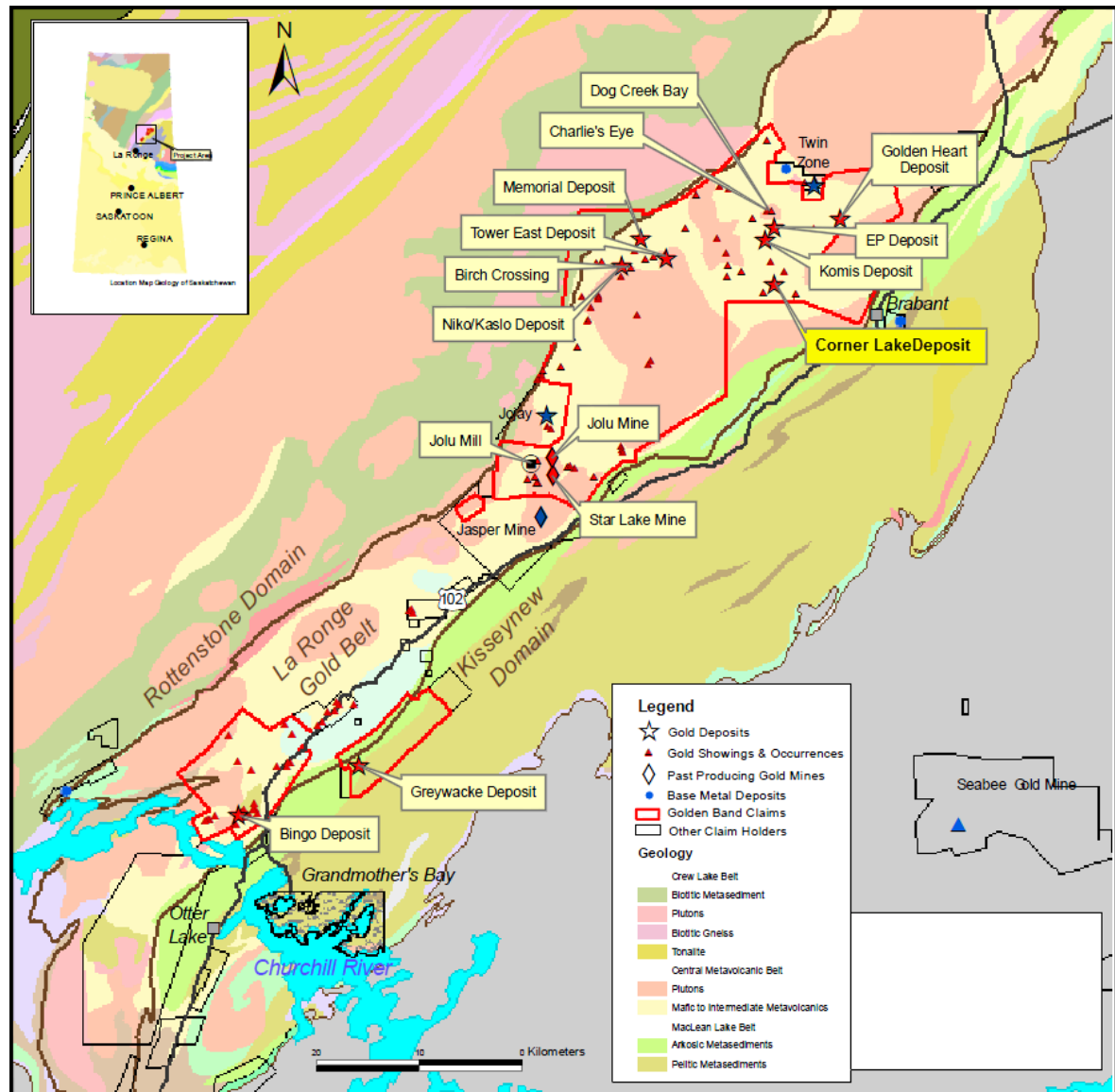
During the late Wisconsin-era glaciation (25,000 to 10,000 years before present), northern Saskatchewan was subjected to several continental ice advances. The most recent ice movement through this region during Quaternary glaciation was generally from northeast to southwest. Glacial deposits commonly comprise a thin veneer of till, generally less than three metres thick. Glacial Lake Agassiz formerly covered wide parts of the La Ronge Belt and, as a result, low-lying areas below 430 m are now likely to be covered with lacustrine clays and silts. Both the till and the lacustrine sediments have been eroded to fresh bedrock in places by glaciofluvial or fluvial channels. The Quaternary geology of the Waddy Lake district was mapped by Janet Campbell (Saskatchewan Geological Survey Summary of Investigations, 1985), and by B.T. Schreiner (Saskatchewan Energy & Mines, Report 221, 1984).

Bedrock exposure in the area, which varies from less than 1% to greater than 5%, is often masked by a thick cover of moss.

The greater Waddy Lake project area, shown in Figure 7 1, is located in the northern portion of the Central Metavolcanic Belt of the La Ronge Domain, a granite-greenstone belt in the Saskatchewan segment of the ca. 1.9-1.8 billion years (Ga) Trans-Hudson Orogen (Lafrance and Heaman 2004). The Saskatchewan segment of the Trans-Hudson Orogen comprises:

- ca. 2.1-1.9 Ga continental margin sequence (Wollaston Domain),
- ca. 1.91-1.87 Ga marginal sedimentary basin and arc-root complex (Rottenstone Domain),
- ca. 1.91-1.87 Ga granite-greenstone arcs (La Ronge, Glennie, Flin Flon domains),
- ca. 1.85-1.84 Ga oceanic metasedimentary basin (Kisseynew Domain) (Hoffman, 1988; Lewry et al., 1990; Andsell et al., 1995; Corrigan et al., 1998).

The La Ronge Domain consists of an older sequence of back-arc ultramafic and mafic volcanic rocks, the >1.88 Ga Lawrence Point Volcanic Assemblage (Maxeiner, 1997), and a younger sequence of juvenile arc volcanic rocks of intermediate to felsic composition, the ca. 1.882-1.876 Ga Reed Lake Volcanic Assemblage (Maxeiner, 1999; Maxeiner et al. 2001).

**Figure 7-1 - Regional Geology**

The younger Reed Lake Assemblage was deposited during intraoceanic subduction on the older Lawrence Point Assemblage substrate (Lafrance and Heaman 2004). Magmas generated above the subduction zone crystallized as ca. 1.87 Ga dioritic to granitic plutons in the root of the arc. Erosion of the arc began at approximately 1.87 Ga, supplying psammitic and pelitic sediments to the marginal basins flanking the arc-subduction zone to the north (Rottenstone

Domain-Crew Lake Belt) and in the south to the Duck Lake Sedimentary Assemblage (Maxeiner, 1997, 1999; Maxeiner et al., 2001).

Subduction beneath the La Ronge arc ended by approximately 1.861 Ga and the arc was accreted to the Hearne Craton (Andsell et al., 1995). A new, west-dipping, subduction zone developed beneath the La Ronge-Hearne continental margin. This resulted in subduction-generated magmas that crystallized across the Rottenstone and Wathaman domain boundary, notably the 1.86-1.85 Ga Wathaman Batholith, and as cogenetic calc-alkaline dioritic to granitic plutons in the La Ronge Domain (e.g. Brindson Lake Pluton, Tower Lake property; Fumerton et al., 1984; Meyer et al., 1992; Corrigan et al., 2001).

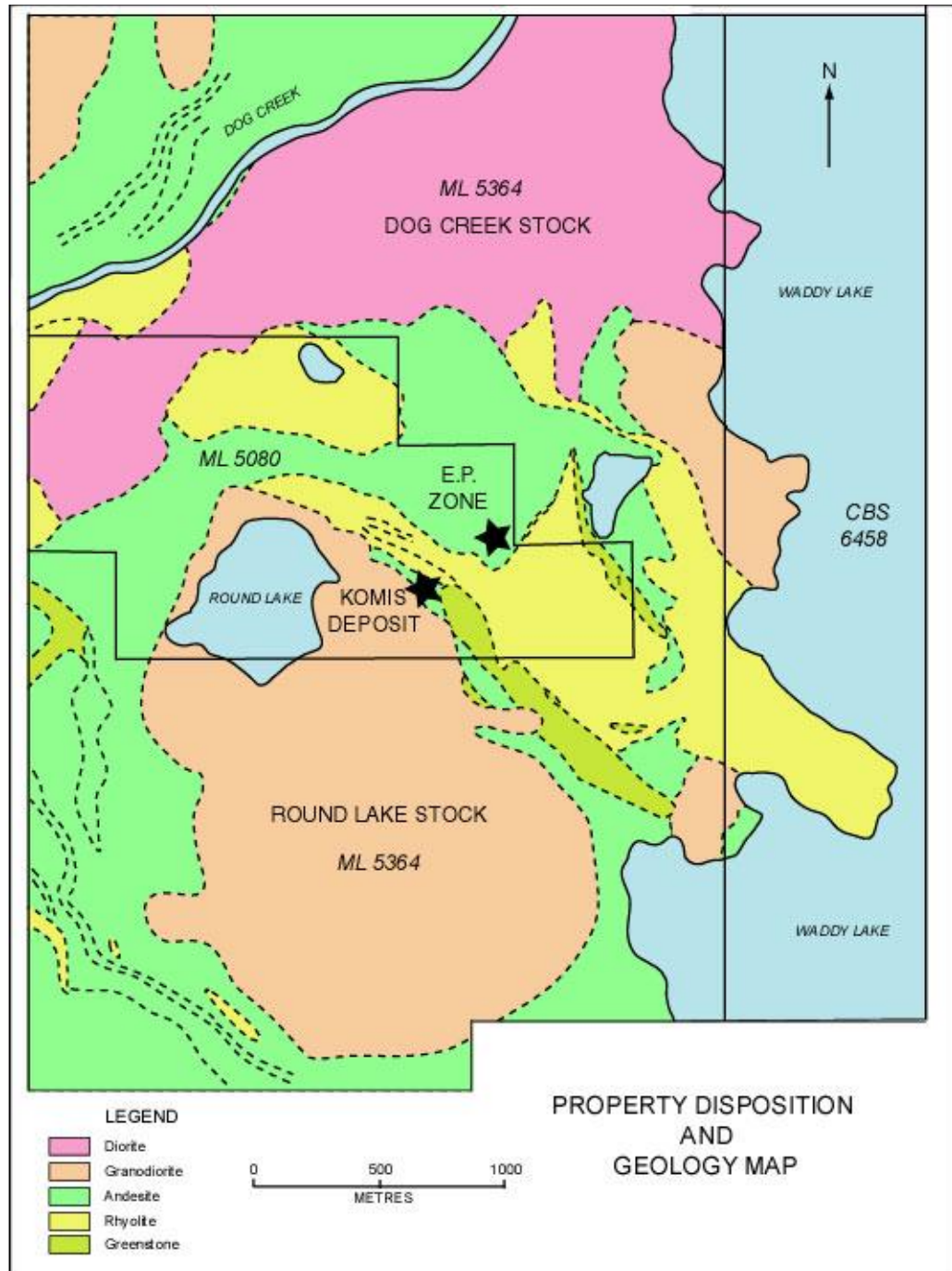
Continental-arc magmatism ended approximately 1.85 Ga and the arc was subsequently eroded from approximately 1.85-1.84 Ga. During the ca. 1.83-1.80 Ga collisional phase of the Trans Hudson Orogeny (Bickford et al., 1990), the La Ronge-Hearne craton collided with the Archean Saskatchewan and Superior cratons. This was the last significant event that influenced the introduction of gold within the La Ronge Domain and specifically within the Greater Waddy Lake project area. All lithotectonic domains of the Trans-Hudson Orogen were penetratively deformed during this final collisional event (Lafrance and Heaman, 2004).

## **7.2 Property Geology**

Excellent summaries of the geology of the Komis property are presented in Asbury (1986), Lahusen and others (1995), Lafrance (2000) and Avery and Demmans (2003). The following summary is taken from these sources.

Mineralization at Komis occurs on the northeast flank of the Round Lake stock (Figure 7.2). The granodiorite pluton was emplaced into a sequence of intermediate and felsic volcanics that now generally wrap around the steeply dipping margin of the pluton. North of the volcanics hosting the Komis mine, is the multiphase Dog Creek Stock.

**Figure 7-2 - Geologic Map of the Komis Property**



On the basis of field observation and local usage, four main rock types have been identified in the vicinity of the Komis prospect (Asbury, 1986). They are 1) andesite; 2) the Round Lake granodiorite and related easterly-trending dikes of granodiorite and tonalite; 3) porphyritic greenstone, and; 4) rhyolite. Gold mineralization at Komis occurs primarily in andesite and granodiorite/tonalite dikes related to the Round Lake stock, although mineralization does occur locally in rhyolite. The porphyritic greenstone has not been found to host significant mineralization and is regarded as being post-mineral.

### **7.2.1 Lithologies**

#### **Volcanic Rocks**

Andesite is the most abundant rock type at the Komis mine site. It occurs as massive flows, lapilli tuffs and agglomerates. Massive flows are generally light to dark greenish grey, fine-grained and are commonly composed of 40-60% hornblende, +/- biotite, +/- chlorite along with plagioclase. Hornblende porphyroblasts up to 4 mm in size may be surrounded by narrow rims of white feldspar. In the vicinity of the Komis mine the andesite contains up to 5% disseminated magnetite (this has prevented accurate down-hole surveys using traditional Sperry-Sun technology). When present, amygdules are generally small (<10 mm) and contain quartz, feldspar and calcite. Lapilli tuffs and agglomerates are massive and consist of 0.3 cm- to 75 cm-diameter mafic volcanic fragments in a fine-grained, grey-green andesitic matrix. Rare rhyolite fragments similar in composition to interlayered massive rhyolite flows may also be present.

Rhyolite flows are aphanitic, light grey to pink, and generally contain less than one percent mafic minerals. The rhyolite unit in the vicinity of the Komis prospect is 70 to 100 metres thick. Within the rhyolite there are several discontinuous three to ten metre thick horizons of andesite.

#### **Round Lake Stock**

The Round Lake granodiorite (or more accurately quartz monzonite) is a coarse-grained grey to pink massive rock with five to 15% biotite and hornblende. Bickford and others, 1986) obtained an age of 1834 +/-13 MA for the Round Lake stock. The stock has weathered to form a low area with virtually no outcrop, except around the margins and where it intrudes the volcanics as dikes. The contact is irregular in detail. In the vicinity of the Komis mine, the contact generally strikes to the northwest and dips about 70° to the northeast.

Granodiorite and tonalite dikes are apophyses of the Round Lake. The granodiorite dikes are compositionally and texturally similar to the granodioritic stock. They are pale brown to grey

and consist of 50 to 65% feldspar, 25 to 35% quartz and 5 to 15% biotite. Aplite dikes are also present and are aphanitic to fine-grained, red to pale orange and composed almost exclusively of quartz and feldspar with less than 2% mafic minerals.

The dikes occur as east-northeast-trending swarms of dykes five to 20 m in width that dip 60 to 70° to the north. Individual dikes seldom exceed three metres in width and may be less than one mm in width at distances of 50 to 60 m from the stock.

### **Porphyritic Greenstone**

The porphyritic greenstone lies southeast of the andesite. It consists of intermediate to mafic, olive green rock containing 10 to 25% mafic phenocrysts one to three mm in diameter, now altered to chlorite and amphibole. Quartz veins, granodiorite dikes or other indications of brittle fracturing are absent in the porphyritic greenstone, suggesting that this unit is post-mineralization. The contact with the andesite is sharp and defines an antiform plunging 50 to 60° to the northwest under the mineralization. This unit is thought to represent a thick massive flow or subvolcanic intrusion.

## **7.2.2 Structural Geology**

Structure of the Komis prospect is complex. Hubregtse (1990) suggested that the geometry of mineralized zones indicates formation in a "brittle-ductile" shear zone. Characteristics of Komis vein geometry that support this contention included s-type sigmoidal structures, multiple generations of tension veins with the older tension veins rotated to form sigmoidal structures and intersected by younger tension veins, and crack-seal textures.

There are several structural components at Komis. Tectonic foliation, east northeast-trending dikes emanating from the Round Lake stock and mineralized veins northeast-trending are key elements in the structure of the Komis property.

An early tectonic foliation (S1) that strikes 300° and dips 70° to the northeast is parallel to lithologic contacts in the volcanic rocks (Harper, 1984 and 1985). This foliation is cut by the dikes at a high angle and is subparallel to mineralized structures.

A thirty metre-wide swarm of granodiorite, aplite and tonalite dikes extends eastward across the west northwest-trending volcanic rocks for more than 100 m from the Komis mine portal in the Round Lake stock. Granodiorite, tonalite and aplite dikes strike 080° to 110° and dip 50° to 80° to the northwest. Individual dikes are up to five metres in width but commonly occur as swarms of narrower dikes in excess of 20 m. Individual dikes and swarms of dikes narrow as the dikes reach the rhyolite. Dikes seldom penetrate the rhyolite unit.



Gold mineralization occurs associated with en-echelon, fault-fill veins striking 330° to 350°, fault-fill quartz veins striking 310° with associated extensional veins striking 330° to 350°. Where quartz veins intersect dikes, most occur as ladder veins, which only span the width of the dike, although some extend beyond the dikes into the wallrocks. In cases where quartz veins completely cut dikes, veins are refracted 5° clockwise as they pass into the more competent dikes (Lafrance, 2000). Quartz veins generally dip to the northeast at 50° to 60°.

Numerous occurrences of jointing and joint sets were measured underground during mining at Komis. Four prominent orientations were recorded. One set of joints consistently occurs parallel to quartz veining at 320° to 350° and another set parallels the dikes at 080° to 110°. A third set of joint striking 350° to 010° is subparallel to the orientation of a minor set of quartz vein 355° to 010°. The fourth set of joints is less well-developed and strikes 030° to 050°.

The best-developed fault observed underground was mapped on both the 400 and 350 levels (Lahusen and others, 1994). The fault strikes 045° and dips south at 045° (parallel to the fourth joint set mapped in the mine). Displacement on the fault appears to be right lateral and observations suggest that movement along the fault had a greater effect on the dike swarms than on the quartz veins. Dikes on the 400 level had apparent horizontal displacements of up to 10 metres, whereas quartz veins had little apparent horizontal displacement (less than 0.5 metres). Several smaller-scale shears were mapped in the mine. Their orientation generally parallels one of the four joint directions.

### **7.2.3 Mineralization**

Gold mineralization at Komis occurs in 14 discrete named zones and numerous unnamed zones. The relationships between zones are complex and boundaries between zones are often diffuse, particularly where mineralized structures cut the dike swarms.

#### **Mineralogy**

Gold mineralization at Komis occurs as fine disseminations of native gold (<1.0 mm) and as coarse flakes (up to 5.0 mm) in quartz veins (Figure 7-3) and as fine disseminations associated with pyrite in hydrothermal alteration halos. Individual quartz veins range from one millimetre to more than one metre but seldom exceed 0.2 metres in width. The quartz is milky, very clean and exhibits sharp contacts with wall-rocks. Other minerals including dolomite, calcite, biotite, muscovite, chalcopyrite and pyrite with minor amounts of Mg-chlorite, green biotite, microcline and apatite are also present.

Mineralization in rhyolite-hosted veins is somewhat different from the andesite and dike-hosted mineralization. Rhyolite-hosted quartz veins contain free native gold but also contain galena and sphalerite.

Hydrothermal alteration is associated with both the quartz veins and dikes at Komis. The alteration halo extends 0.20 to 0.50 metres on either side of the veins (Figure 7-4) and dikes. Alteration consists of coarse, disseminated pyrite (locally termed Komis pyrite and shown on Plate 7.3), potassic alteration, carbonate alteration and silicification, or what Hubregtse (1990) calls potassic-sulfidic alteration.

**Figure 7-3 - Coarse visible gold from the Komis mine.**



### **Alteration**

Hydrothermal alteration is associated with both the quartz veins and dikes at Komis. The alteration halo extends 0.20 to 0.50 metres on either side of the veins (Figure 7-4) and dikes. Alteration consists of coarse, disseminated pyrite (locally termed Komis pyrite and shown on Figure 7-5, potassic alteration, carbonate alteration and silicification, or what Hubregtse (1990) calls potassic-sulfidic alteration.

**Figure 7-4 - Hydrothermal alteration halo adjacent to zone of quartz flooding.**



Potassic-sulfidic alteration consists of the addition of K, Mg, Fe, Si, CO<sub>2</sub>, B, S, base metals and Au resulting in the formation of biotite, sericite, muscovite, microcline, pyrite, dolomite, calcite, quartz, actinolite, magnesian chlorite and traces of apatite.

The alteration assemblages are controlled by the composition of the host rock. Mafic lithologies are altered to assemblages dominated by biotite and dolomite while intermediate to felsic lithologies are altered to assemblages dominated by muscovite, calcite and minor microcline.

Alteration halos in andesite, granodiorite and tonalite contain gold and represent part of the mineralized zone. In instances where alteration halos are mineralized, zone boundaries are diffuse rather than sharp. Lithologies beyond the altered zone are barren. Alteration halos in rhyolite do not contain gold.

### **Geometry of Mineralization**

Quartz veins occur as narrow veins, 0.10 to 0.50 meters in width. Individual veins exhibit strike lengths up to ten metres and vertical dimensions up to 15 metres. As quartz veins pinch out laterally and vertically, other quartz veins start adjacent to, and in the footwall of, the previous quartz vein forming a mineralized zone composed of a series of en-echelon veins. Individual zones are typically one to five metres wide, although in areas where quartz veining has intersected the dike swarms, mineralized zones can exceed ten metres in width and gold values can be significantly higher.

The mineralized zones exhibit behavior similar to individual veins. As one mineralized zone pinches out laterally and vertically, another mineralized zone starts adjacent to, and in the footwall of, the previous zone forming a series of en echelon zones that step down and to the footwall of the previous mineralized zone. It is important to note that individual quartz veins are not parallel to the strike of the mineralized zone containing them. Individual quartz veins strike oblique (10o to 15o) to the strike of the zone and therefore cannot be followed during mining. The critical component is the determination of the strike of the mineralized zone, rather than the strike of individual veins prior to mining in order to maximize recovery of mineralized material and minimizes the inclusion of low-grade material or waste.

The contacts of individual mineralized zones are complicated by the lack of well-defined structures marking the footwall and hanging wall contacts. Other distinguishing features such as quartz vein and dike density or changes in color and texture caused by hydrothermal alteration are subtle and difficult to quantify. Examples of mineralized vein and zone geometry are presented in Figures 7-5 to 7-9. Figure 7-10 represents the mine level geology derived from geological maps created during the mining operation in 1996 and 1997 and then digitized by the Frank Hrdy P.Geo. (Co-Author). The items coloured red are individual quartz veins.



**Figure 7-5 - Komis pyrite occurring adjacent to quartz veinlets.**



**Figure 7-6 - Quartz vein in Face at the 400 Level**



**Figure 7-7 - Quartz Vein Structure along the back at the 400 Level**

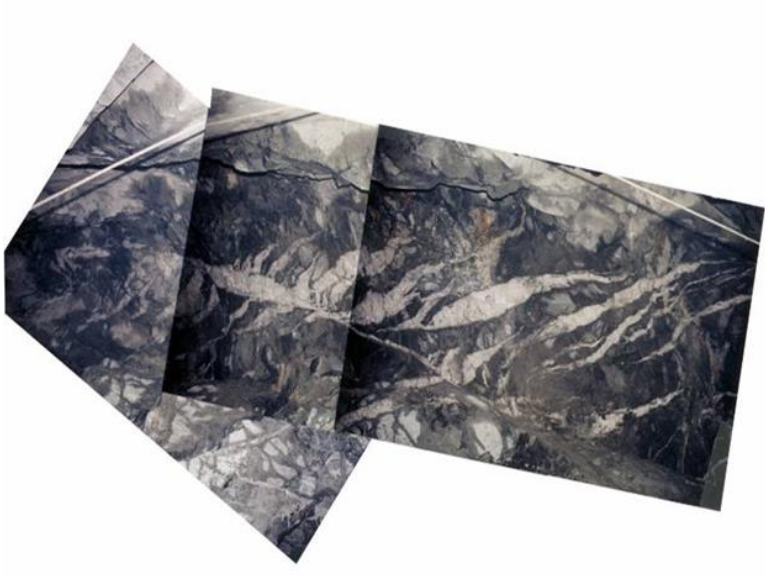


**Figure 7-8 - Ladder Veins in Granodiorite Dike at the 400 Level**

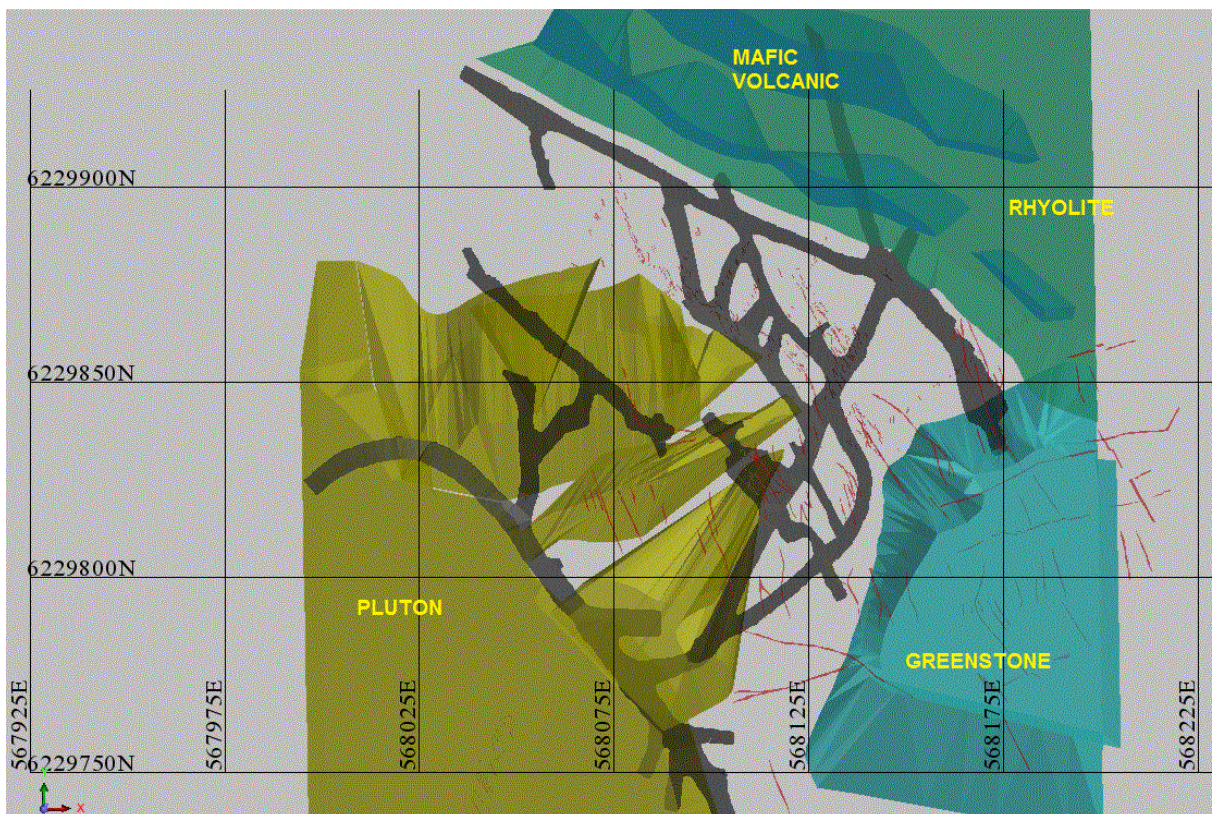




**Figure 7-9 - En Echelon Quartz Vein System**



**Figure 7-10 - Mine Geology and 400 Level Development**





### **7.3 Comments on Section 7**

The regional and deposit-scale geology and controls on mineralization of the Komis Gold deposit are sufficiently well understood to permit the construction of geological models, mineral resources and mineral reserves.

## **8.0 Deposit Types**

The Komis property is underlain by metavolcanic and intrusive rocks of the Proterozoic-age La Ronge Domain. Gold mineralization at Komis is similar to that found elsewhere in the La Ronge Domain as well as in the Archean terranes of Canada and Australia. Deposits of this type are variously known as shear zone-hosted, mesothermal or lode Au deposits. A general review of mineral deposits of this class is presented by Colvine and others (1984), Card and others (1988) and Kerrich (1993). Reviews of similar gold occurrences in the La Ronge Domain include Field and others (1987), Thomas and Harper (1989) and Thomas and Heaman (1994).

### **8.1 Deposit Models**

Two groups of gold occurrences have been noted in the La Ronge Domain and specifically in the Greater Waddy Lake district (Lafrance and Heaman, 2004).

Group I gold occurrences include the Komis gold deposit and consist of single quartz veins or swarms of quartz veins having extensive biotite-pyrite-carbonate alteration haloes that are up to 15 times as wide as the widths of the single quartz veins. At the Komis gold deposit, single quartz veins and swarms of quartz veins cut through mafic volcanic rocks and the east-striking dykes. It has been interpreted that the dykes and the northwest-striking volcanic host rocks were in the strain shadow of the Round Lake stock during the development of regional ENE-striking S2 foliation. Tensile fractures opened in the volcanic rocks and dykes, hydrothermal fluids flowed into the fractures and quartz crystallized, sealing the fractures.

Group II gold occurrences are shear-hosted mineralization including the Golden Heart and Komis Gold deposits. Quartz veins within the shears at both gold deposits have been classified as extensional veins that predate the shearing. Hence these veins are similar to the Group I veins discussed above but they have been overprinted by the shear zones.

Throughout the Greater Waddy Lake district, gold occurs in quartz veins and in pyritized wall rocks of the quartz veins. The similar mineralization style and upper greenschist to amphibolite grade metamorphism associated with the alteration of numerous gold occurrences throughout the Greater Waddy Lake district suggests gold was introduced during a regional, hypozonal, mineralizing event. Furthermore, the similarity of the Group I and Group II gold occurrences suggest they formed during the same deformation event, specifically the D2 fabrics that formed in the La Ronge Domain during the collision of the Rae-Hearne Craton with the Superior and Saskatchewan cratons (Lewry et al., 1990; Ansdell et al., 1995; Schwerdtner and Côté, 2001).

Lafrance and Heaman (2004) suggested during the collisional event, regional compression across the La Ronge Domain resulted in localized deformation producing reverse and dextral shear zones along lithological contacts between more competent and less competent rock units. Group I gold occurrences were deposited during the development during the regional D2 fabrics, which are locally overprinted by late D2 shear zones that host the Group II gold occurrences.

## **8.2 Comments on Section 8**

The authors consider that a shear-hosted, mesothermal deposit model is an adequate model for exploration and mineral resource estimation for the Komis Gold deposit. However, the geological environment and high silver content indicate some form of porphyry-style and possibly even epithermal style of mineralization could also be present but this would require academic study.

## **9.0 Exploration**

### **9.1 2012 Geophysics**

A detailed airborne magnetic and VLF-EM survey totalling 700.3 km of flight lines was completed in June 2012 over the Upper Waddy Lake region for Golden Band Resources Inc. by Tundra Airborne Surveys (Chisholm& Jamieson, 2012). The survey was designed to furnish a high-resolution view of the project and to provide lithological and structural data in an area which has very good government geologic coverage as well as to provide context and guidance for future gold exploration.

Very high resolution orthophoto coloured imagery was sourced from the province of Saskatchewan and provides a strong complement to the magnetic data collected by the airborne survey while existing geologic data was examined for useful data to support the survey interpretation. The geological interpretation was completed by Taiga Consultants Ltd (Taiga) on the combined data set and the interpretation has been shown on an orthophoto base.

It was found that previous government and academic interpretations of the regional geology are for the most part quite accurate. The survey provided additional geological information in areas of limited outcrop. On the large scale, Taiga interprets the geology to be that of three related sub-domains of the Central Magmatic Belt separated by large strike-slip fault structures. These major structures likely represent paleo-physiographic breaks which likely would have been present during the formation of the Central Meta Volcanic Belt and during the deposition of the known gold mineralisation.

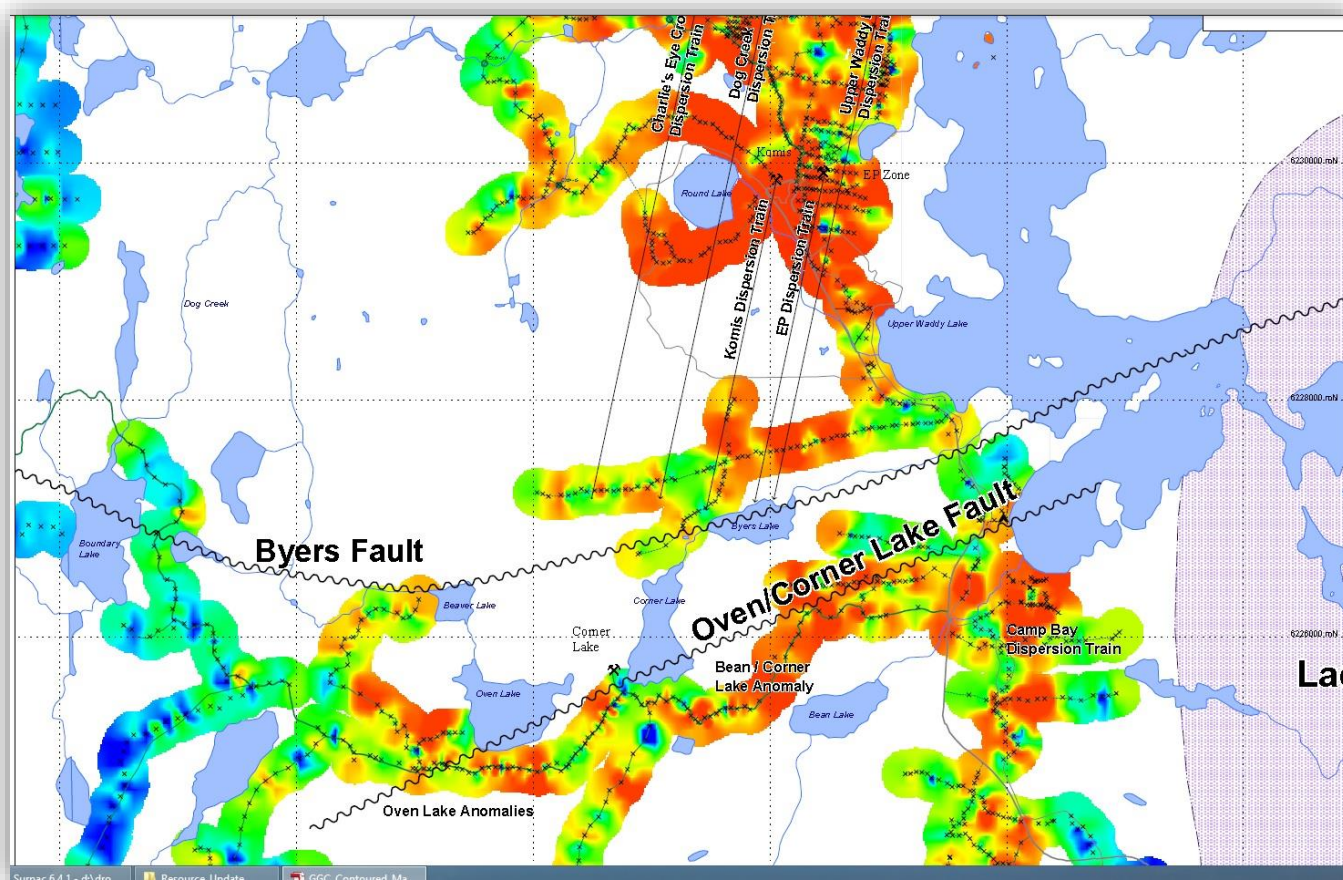
The survey accomplished the goals of the company by highlighting the large number of major fault structures which cut through the property cross-cutting the local stratigraphy and provides a basis for an understanding of the litho-structural setting of the known gold deposits and occurrences. The study gives direction as to which areas merit further exploration for new deposits. At the same time the interpretation of the magnetic and supporting data was used to identify the regional geologic context of the immediate property area.

Gold occurrences and deposits in the Waddy Lake gold camp have historically been known to have strong relationship to ENE faults of the Byers Fault (see Figure 9-1 and Figure 9-2) and Byers Deformation Zone as well as to young, high level felsic "G3" stocks of the Round Lake Stock family. The E-W felsic dyke corridor which hosts much of the Komis Deposit resources likely is also related to the Byers Fault direction. During this

study it was also found that deposits and occurrences have a strong locational relationship with N-S striking faults which cut both the volcanic and intrusive rocks in the area. This is a new conclusion but is based upon the observations of previous exploration workers. The importance of these structures is supported by the fact that the known Komis deposit mineralisation is present in N-S veining and where these veins intersect E-W structures containing felsic dykes.

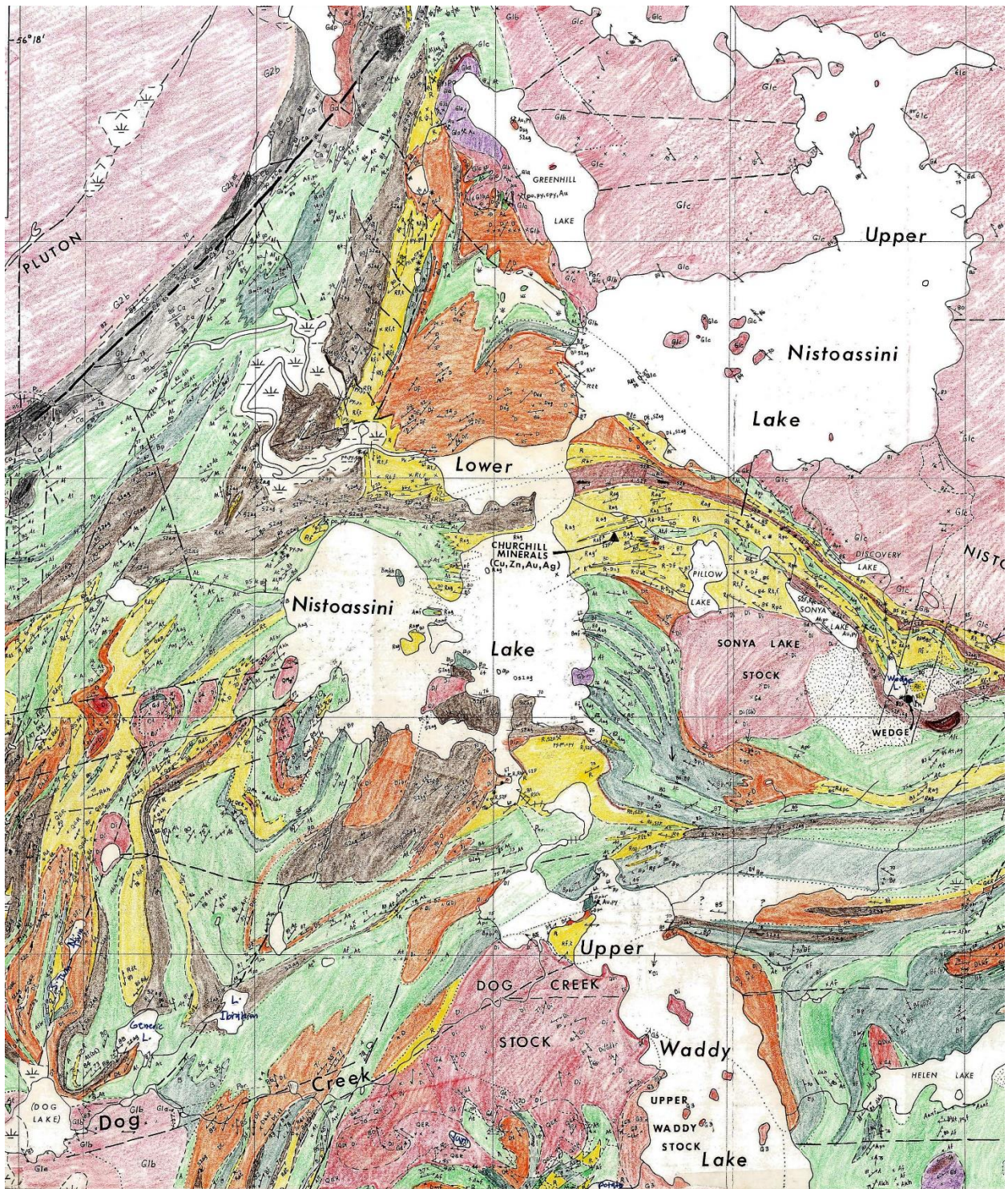
**Figure 9-1 - Major EW Structures in the Komis Mine Area**

*(Coloured areas Represent Historic Gold-in-Till Anomalies)*





**Figure 9-2 - Komis Area Significant Structures – Dashed Lines (from C.T. Harper)**

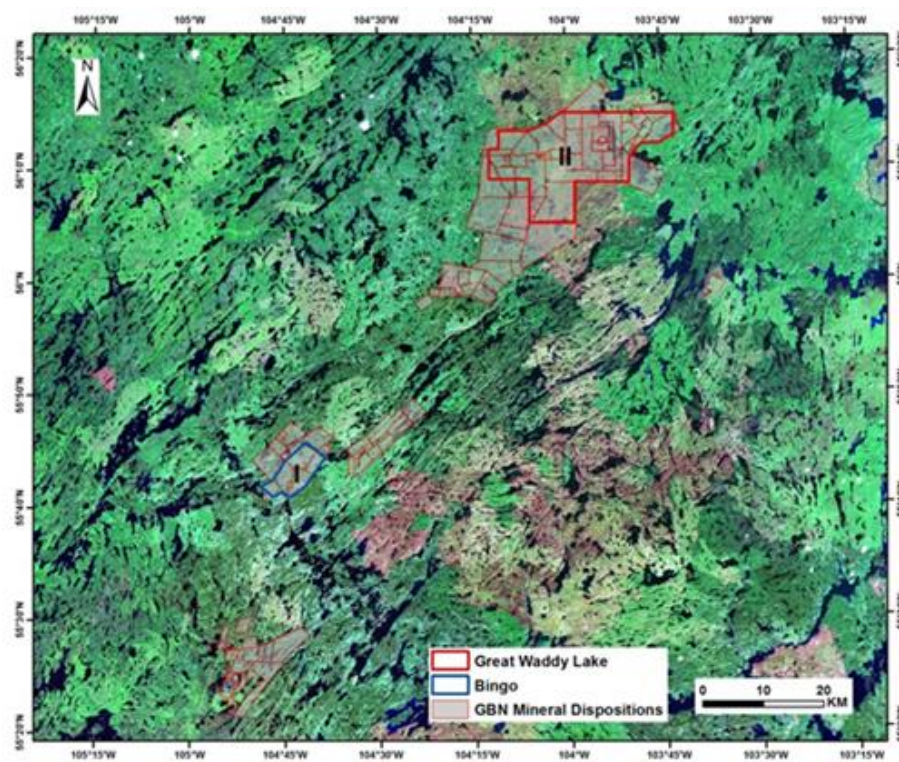




## 9.2 2018 Geophysics

An Airborne Geophysical Survey was completed in September, 2018 for the Greater Waddy Lake area (Figure 9-3). The Total Magnetic Intensity (TMI) and dB/dt time constant tau shows significant isolated anomalies in the center of the block while dB/dt early-mid time channels show several anomalies in the northern areas (Figures 9-4 and 9.5). Table 9-1 shows the survey specifications.

**Figure 9-3- Airbourne Geophysical Survey Area**

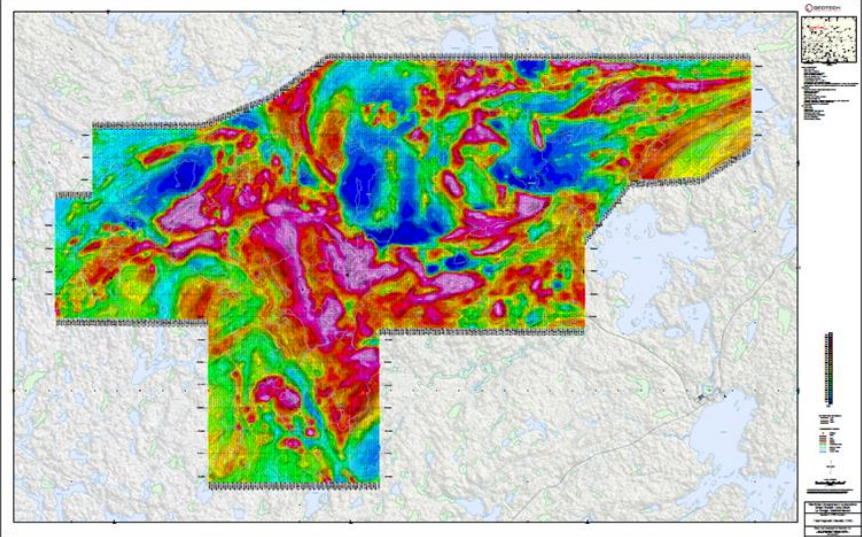


**Table 9-1 - Survey Specifications**

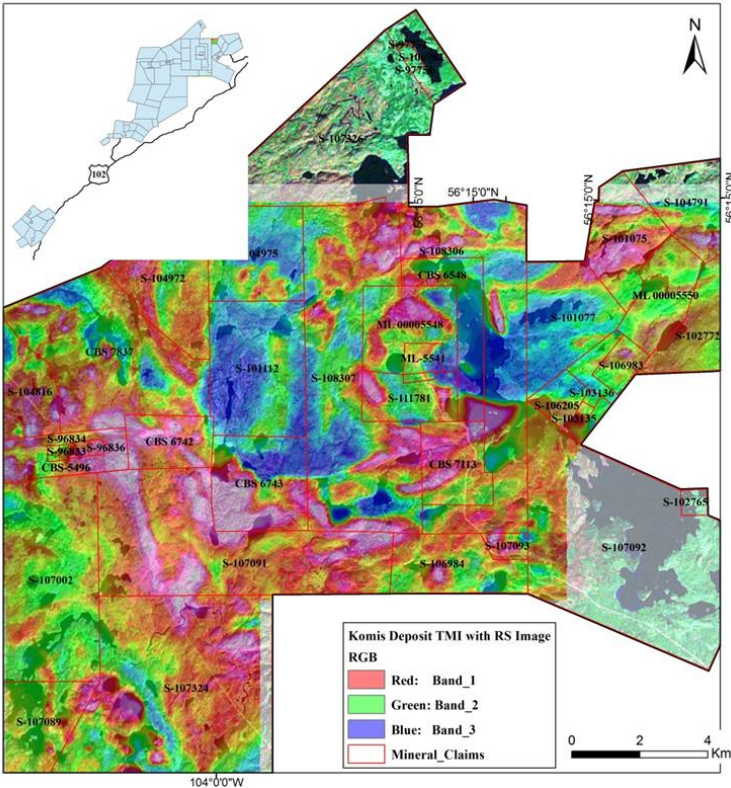
Survey block	Line spacing (m)	Area km	Planned Line-km	Actual Line-km	Flight direction	Line numbers
Greater Waddy Lake	Traverse:100	368	3474	3547	N 0°E / N180°E	L1000 – L4040
	Tie:1000				N 90°E / N270°E	T5000 – T5180



**Figure 9-4 - Total Magnetic Intensity (TMI) of the Greater Waddy Lake Area**



**Figure 9-5 - Total Magnetic Intensity (TIM) with Komis Mineral Claims**



### **9.3 2020 Topographic Survey**

On September 5th, 6th and 7th Matixset contracted Aeroquest Mapcon to perform a high resolution UAV imaging survey of the Komis Mine site. The products generated from a UAV aerial survey include orthophotos and point clouds

### **9.4 Comments on Section 9**

Interpretation of the historic and current exploration data including mapping, petrography, geochemical sampling and geophysics, is sufficiently detailed to support the definition of shear-hosted gold targets on the Property.

## **10.0 Drilling**

### **10.1 Pre-2010**

Little is known of the sampling and analytical procedures for pre-1990 drilling. The core from the 1959- 61 Ventures drilling was sampled on a very limited basis often resulting in gold-rich samples with no adjacent sampling in material that may have carried gold values. This core is no longer available for additional sampling. The 1974, Derry, Michener and Booth core was sampled along the entire length of the hole with the entire, unsplit core interval assayed leaving no core from mineralized for later examination.

In **1981**, Energy Reserves completed 48 BQ-diameter core holes. Drill core was split into 1.0 m intervals and assayed along the entire length of the hole irrespective of geological contacts, which resulted in some ambiguity in determining the nature of the occurrence of gold at Komis. It is believed that the entire core was assayed, leaving no core from mineralized intervals for later examination.

In **1982**, Waddy Lake Resources completed 37 BQ-diameter core holes. Assay sample intervals were determined by geological contacts resulting in selective analysis of quartz vein- and pyrite-hosted ore for the first time. Once again it is believed that the entire core was assayed, leaving no core from mineralized intervals for later examination.

Generally, for the **1990** and **1992** drill programs, the entire cored intervals from individual NQ-size drill holes were sampled on one metre and half metre intervals, split and assayed initially using the Standard Assay Procedure. Most mineralized intersections assayed values over 3,000 ppb, were then re-assayed using the Metallic Assay Procedure. All mineralized intersections representing ore zone boundaries have been check assayed using the Metallic Assay Procedure.

For the **1994** surface drill program (NQ-size drill core), intervals for assaying were selected based on observed intensity of alteration, pyrite mineralization, quartz vein density and the presence of visible gold observed in the core. One metre intervals were selected for assaying and whole core (no splitting) was generally assayed, using the Standard Assay Procedure. In some cases, when gold was visible in the core, samples were immediately assayed using the Metallic Assay Procedure. Additional check metallic assays were performed on cored intervals having high-grade gold values as a result of

standard assaying. All mineralized intersections representing ore zone boundaries have been check assayed using the Metallic Assay Procedure.

For the 1994 underground drill program selected cored intervals from individual BQ-size drill holes were sampled on one-metre intervals. Whole core (no splitting) was assayed using the Duplicate Assay Procedure and check assayed using the Metallic Assay Procedure.

## **10.2 2010-2011**

Golden Band Resources Inc. acquired 100% interest in the Komis property on November 7, 2002.

An updated 43-101 compliant technical report and resource estimate were completed in January of **2010** by Golden Band Resources. The new resource model indicated that the Komis deposit is open in several directions and infill information is needed. Prior to undertaking dewatering and refurbishing the underground workings, and to increase the confidence of known mineral resources and to expand the mineralization boundaries, three priority areas were defined for the 2010-2011 winter diamond drilling program:

1. The Western Extension of the Komis deposit
2. The Eastern Deeps
3. The Komis Decline Loop Mineralization

Eight drill holes (KO-10-01 to KO-10-08, Figure 10.1 and Table 10.1) were completed between November 20th and December 12th, 2010 with 1,532 metres drilled. Five holes (KO-10-04 to KO-10-08) drilled along the eastern deeps and the western extension of Komis deposit successfully intersected multiple mineralized intervals and follow up exploration was warranted. The other three holes (KO-10-01 to KO-10-03) drilled toward the Komis Decline Loop mineralization did not intersect any significant mineralization only with one short interval of 0.73 m assayed 2.73 g/t of gold from hole KO-10-03 (Table 8.2).

From September 9 to November 19, 2011, another 19 holes (KO-11-001 to KO-11-019) of 4,306 metres were completed in the eastern deeps and the western extension of Komis deposit. Almost every hole intersected mineralized sections. Multiple mineralization intervals are common. Higher grade quartz veins and broad zones up to

52 metres of down-hole length with lower grade gold mineralization associated with hydrothermal alteration were encountered in many of the holes (Table 8.2). The complete list of assay results is attached at the end of this report. For 2010 winter drilling program, intervals for assaying were selected based on observed intensity of alteration, especially the pyrite alteration, quartz vein density and the presence of visible gold observed in the core.

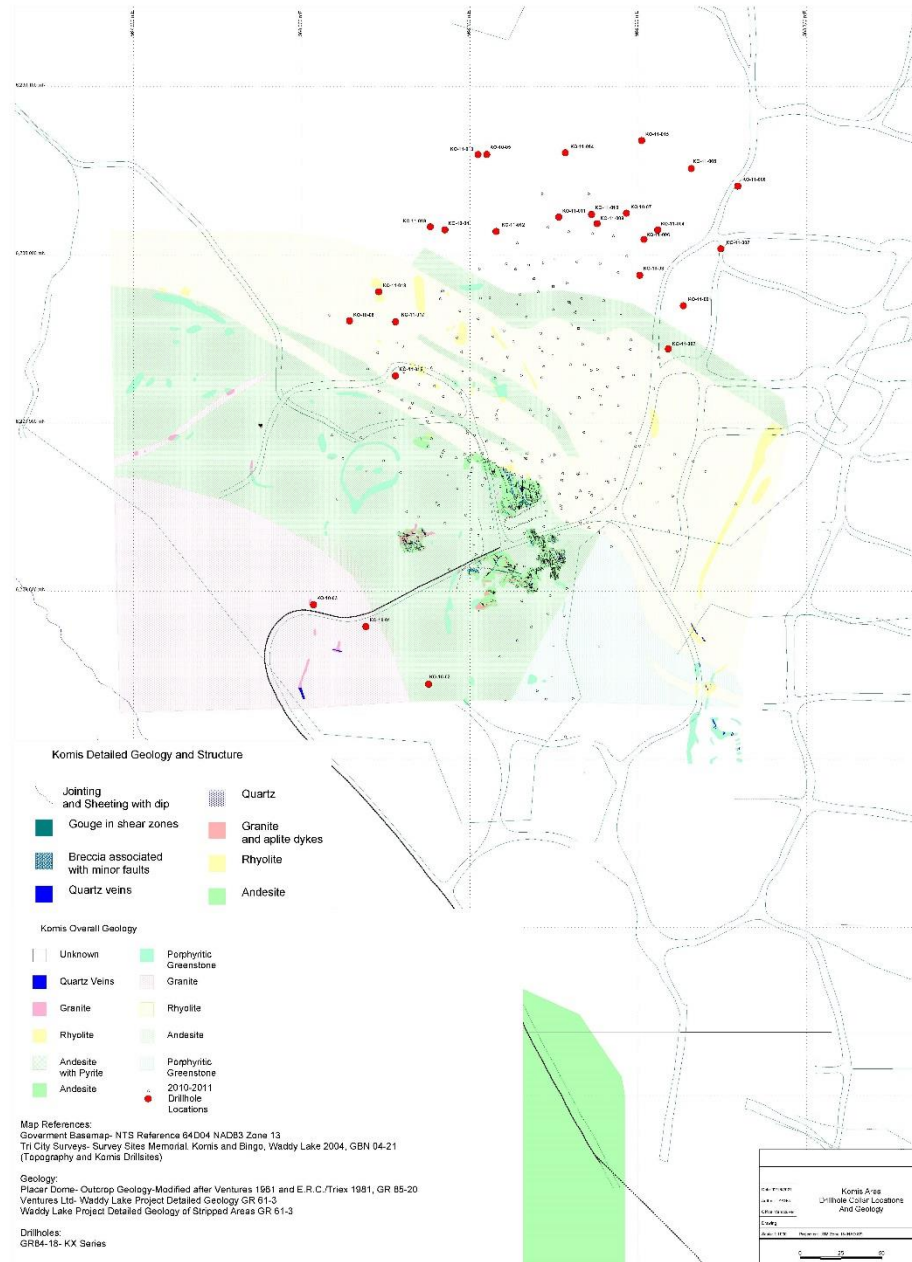
Gold mineralization intersected in the 2010-2011 DD holes is similar to that identified in previous exploration programs. It is closely related to quartz veining and hydrothermal alteration in the wall rocks. Specifically, gold is hosted in andesite, rhyolite, and granodiorite/tonalite dikes related to the Round Lake stock. While the porphyritic greenstone is thought post-mineralization and is not mineralized based the drill hole log.

**Table 10-1 - 2010-2011 Drill Hole Locations**

Hole ID	Easting	Northing	Elevation	Azimuth (°)	Dip (°)	Final Depth (m)
KO-10-01	568038.6	6229781.0	404.0	230.0	-50.0	75.30
KO-10-02	568070.8	6229742.8	401.0	230.0	-50.0	55.78
KO-10-03	568012.7	6229789.1	403.0	143.0	-50.0	75.30
KO-10-04	568084.6	6230016.2	416.0	208.0	-50.0	242.90
KO-10-05	568108.7	6230060.1	416.0	208.0	-50.0	279.80
KO-10-06	568027.7	6229961.1	416.0	208.0	-50.0	166.11
KO-10-07	568195.6	6230029.1	409.0	208.0	-70.0	308.20
KO-10-08	568202.6	6229986.2	404.0	208.0	-70.0	328.57
KO-11-001	568233.8	6229970.4	404.7	209°	-70°	171.00
KO-11-002	568220.3	6229943.1	407.7	207°	-50.5°	150.00
KO-11-003	568195.8	6229972.7	402.7	208°	-65°	114.00
KO-11-004	568220.0	6230014.1	402.7	207.7°	-70°	300.00
KO-11-005	568233.4	6230047.3	414.7	206°	-70°	330.00
KO-11-006	568209.8	6230026.9	404.7	214°	-53.3°	198.00
KO-11-007	568249.3	6230000.6	414.7	210°	-70°	201.00
KO-11-008	568264.6	6230032.9	414.7	203°	-71°	234.00
KO-11-009	568188.9	6230023.3	407.7	209°	-50.4°	230.00
KO-11-010	568182.7	6230031.4	404.7	208°	-50°	320.00
KO-11-011	568156.6	6230035.9	410.7	208°	-50°	252.00
KO-11-012	568116.1	6230011.2	407.7	208°	-65°	250.00
KO-11-013	568106.2	6230060.9	415.7	208°	-59°	298.00
KO-11-014	568172.2	6230061.2	410.7	208°	-50°	252.00
KO-11-015	568200.1	6230064.7	402.7	208°	-55°	240.00
KO-11-016	568057.6	6229932.1	414.7	215°	-50°	180.00
KO-11-017	568057.1	6229962.1	414.7	230°	-50°	180.00
KO-11-018	568066.5	6229990.2	413.7	215°	-50°	186.00
KO-11-019	568081.0	6230017.5	414.7	218°	-50°	220.00



**Figure 10-1 - Drill Hole Locations**





**Table 10-2 – Highlights of Mineralized Intervals from 2010-2011 Drill Holes**

Hole ID	Zone	Azimuth	Dip	Final Depth (m)	From (m)	To (m)	Interval (m)	Au (g/t)
KO-10-01	Decline	230°	-50°	75.3	27.37	27.76	0.39	0.98
KO-10-02	Decline	230°	-50°	55.78	No significant assay results			
KO-10-03	Decline	143°	-50°	75.3	74.12	74.85	0.73	2.73
KO-10-04	West Ext	208°	-50°	242.9	81.54	82.30	0.76	31.10
					103.80	106.46	2.66	12.02
				Including	105.06	105.46	0.40	77.60
					192.20	196.80	4.60	4.18
				Including	195.27	196.80	1.53	11.23
					212.89	213.39	0.50	6.26
KO-10-05	West Ext	208°	-50°	279.5	46.91	50.18	3.27	2.34
					178.96	180.92	1.96	15.69
				Including	179.63	179.87	0.24	87.60
					199.77	202.01	2.24	4.48
					221.24	231.70	10.46	3.36
				Including	225.70	227.27	1.57	16.44
					245.15	249.18	4.03	2.03
KO-10-06	West Ext	208°	-50°	166.11	19.80	21.32	1.52	119.86
				Including	21.12	21.32	0.20	907.00
					36.45	36.77	0.32	29.70
					88.69	97.38	8.69	2.68
KO-10-07	East Deep	208°	-70°	308.2	103.00	103.38	0.38	3.09
					108.65	109.30	0.65	3.27
					211.80	215.50	3.70	3.40
				Including	212.62	213.07	0.45	13.50
KO-10-08	East Deep	208°	-70°	328.57	174.75	177.65	2.90	6.12
				Including	174.75	176.22	1.47	10.80
					185.77	186.74	0.97	23.42
				Including	185.77	185.97	0.20	111.00
					259.43	266.45	7.02	4.99
				Including	260.63	261.94	1.31	15.92
				Including	264.67	265.92	1.25	7.42
					270.52	271.28	0.76	7.03
Hole ID	Zone	Azimuth	Dip	Final Depth (m)	From (m)	To (m)	Interval (m)	Au (g/t)
KO-11-001	East Deep	209°	-70°	171.0	98.52	101.43	2.91	0.73
					152.09	154.96	2.87	1.76
KO-11-002	East Deep	207°	-50.5°		70.50	72.60	2.10	14.73
				Including	71.41	71.87	0.46	65.33
KO-11-003	East Deep	208°	-65°		42.00	42.65	0.65	0.80
KO-11-004	East Deep	207.7°	-70°	300.0	32.10	33.10	1.00	4.56
					133.00	134.00	1.00	8.66
					177.00	178.00	1.00	9.06
					181.00	182.00	1.00	33.50
					208.20	210.20	2.00	5.02

Hole ID	Zone	Azimuth	Dip	Final Depth (m)	From (m)	To (m)	Interval (m)	Au (g/t)
				<i>Including</i>	208.70	209.80	1.10	7.59
					212.20	215.10	2.90	2.83
				<i>Including</i>	214.40	214.70	0.30	11.57
KO-11-005	East Deep	206°	-70°	330.0	157.00	158.28	1.28	2.13
				<i>Including</i>	157.97	158.28	0.31	8.16
					250.86	251.80	0.94	2.40
KO-11-006	East Deep	214°	-53.3°	171.0	156.00	168.00	12.00	3.03
				<i>Including</i>	158.00	159.00	1.00	13.27
				<i>Including</i>	164.00	165.00	1.00	8.60
KO-11-007	East Deep	210°	-70°	201.0	16.00	19.00	3.00	2.19
				<i>Including</i>	17.27	17.62	0.35	14.29
					44.00	46.00	2.00	34.30
				<i>Including</i>	44.80	44.95	0.15	454.54
KO-11-008	East Deep	203°	-71°	238.0	175.00	179.00	4.00	5.90
				<i>Including</i>	176.00	177.00	1.00	14.37
				<i>Including</i>	178.00	179.00	1.00	9.24
KO-11-009	East Deep	209°	-50.4°	230.0	127.00	132.00	5.00	3.03
				<i>Including</i>	129.80	130.40	0.60	12.85
					148.50	150.50	2.00	4.08
					158.50	162.00	3.50	4.26
				<i>Including</i>	161.00	162.00	1.00	7.87
KO-11-010	East Deep	208°	-50°	320.0	139.00	142.00	3.00	17.62
				<i>Including</i>	140.00	141.00	1.00	48.97
					171.00	175.00	4.00	5.35
					172.40	173.51	1.11	17.78
KO-11-011	East Deep	208°	-50°	250.0	89.00	91.00	2.00	2.27
					127.00	129.00	2.00	4.10
					185.00	189.00	4.00	1.28
					183.00	235.00	52.00	1.44
				<i>Including</i>	219.00	221.00	2.00	7.15
KO-11-012	East Deep	208°	-65°	250.0	24.00	44.00	20.00	1.11
					48.00	58.00	10.00	1.00
					82.00	114.00	32.00	11.24
				<i>Including</i>	88.00	90.00	2.00	27.60
				<i>Including</i>	96.00	98.00	2.00	25.48
				<i>Including</i>	104.00	106.00	2.00	114.47
					160.00	174.00	14.00	0.90
					190.00	200.00	10.00	2.86
				<i>Including</i>	192.00	194.00	2.00	12.08
					206.00	222.00	16.00	2.51
					230.00	234.00	4.00	21.03
				<i>Including</i>	230.80	232.32	1.52	54.64
KO-11-013	East Deep	208°	-59°	298.0	171.00	183.00	12.00	1.16
					192.00	195.00	3.00	2.46
					206.00	215.30	9.30	1.71

Hole ID	Zone	Azimuth	Dip	Final Depth (m)	From (m)	To (m)	Interval (m)	Au (g/t)
					243.00	252.00	9.00	2.03
				<i>Including</i>	<i>243.00</i>	<i>244.50</i>	<i>1.50</i>	<i>7.23</i>
<b>KO-11-014</b>	East Deep	208°	-50°	252.0	89.70	92.50	2.80	1.18
					106.00	147.00	41.00	0.53
					162.00	163.00	1.00	4.60
					181.90	182.60	0.70	4.80
					194.70	208.00	13.30	4.22
				<i>Including</i>	<i>194.70</i>	<i>195.70</i>	<i>1.00</i>	<i>9.98</i>
				<i>Including</i>	<i>206.00</i>	<i>208.00</i>	<i>2.00</i>	<i>17.12</i>
					219.50	221.60	2.10	6.90
				<i>Including</i>	<i>219.50</i>	<i>220.00</i>	<i>0.50</i>	<i>26.44</i>
<b>KO-11-015</b>	East Deep	208°	-55°	240.0	13.50	15.00	1.50	3.43
					125.00	131.00	6.00	17.15
					155.00	157.00	2.00	3.43
					223.00	229.00	6.00	0.66
<b>KO-11-016</b>	East Deep	215°	-50°	180.0	5.00	29.00	24.00	2.95
				<i>Including</i>	<i>20.00</i>	<i>21.00</i>	<i>1.00</i>	<i>46.43</i>
					51.00	56.00	5.00	2.80
					65.50	67.50	2.00	10.50
				<i>Including</i>	<i>65.50</i>	<i>66.50</i>	<i>1.00</i>	<i>20.30</i>
					164.00	178.00	14.00	0.42
<b>KO-11-017</b>	East Deep	230°	-50°	180.0	38.00	45.00	7.00	1.70
					63.00	76.00	13.00	2.75
				<i>Including</i>	<i>71.00</i>	<i>73.00</i>	<i>2.00</i>	<i>9.88</i>
					112.46	119.00	6.54	0.83
					162.00	166.00	4.00	1.38
<b>KO-11-018</b>	East Deep	215°	-50°	215.0	4.90	30.00	25.10	0.32
					64.00	66.00	2.00	25.80
					72.00	80.00	8.00	0.81
					84.00	86.00	2.00	10.87
					96.00	99.00	3.00	1.95
					128.0	130.00	2.00	20.36
					149.00	168.00	19.00	0.78
					178.00	180.00	2.00	2.20
<b>KO-11-019</b>		218°	-50°	219.0	9.00	11.00	2.00	3.08
					25.00	43.00	18.00	0.56
					109.80	114.00	4.20	12.09
				<i>Including</i>	<i>109.80</i>	<i>111.00</i>	<i>1.20</i>	<i>39.69</i>
					131.00	172.00	41.00	1.09

## **10.3 Underground Sampling**

### **Pre-2010**

For the 1994 underground drilling program, a rigorous and routine face and rib chip sampling program was carried out for each round in the ore zones. Normal practice consisted of chip sampling three levels across the entire width of each face in mineralized areas, each level being located respectively near-back height, at mid-face, and close-to-floor height. In addition, the left and right ribs were sampled on two levels, one near floor-height and one near mid-rib height. Generally, the sample interval for each face and rib level was one metre in length. Individual chip sample weights normally ranged between one and two kilograms, averaging 1.8 kilograms. An estimated grade for each round was calculated from chip sample results by averaging gold assays weighted by sample length from the front-face, back-face, left-rib and right-rib. Typically, each round extracted was represented by 36 samples. The assay results of these samples were averaged resulting in a chip sampled grade for each round. As discussed above, each round excavated was stockpiled separately at the Komis site and then hauled separately and stockpiled on a round-by-round basis at the Jolu mill site.

### **Post-2010**

See Section 6-1 – Komis Property History

## **11.0 Sample Preparation, Analyses, and Security**

### **11.1 Introduction**

The Komis gold deposit consists primarily of coarse "free" gold (Au grains > 20 microns) in quartz veins and fine gold associated with pyrite mineralization. Because of the deposit's potential for having a significant "nugget effect", a metallic gold assay procedure (metallic assay) was used to ensure that an adequate sample size and homogeneity were maintained where coarse gold was observed in drill core or where high grade gold values were the result of prior "standard" gold assay procedures, (i.e. "one assay ton" fire assay).

Little is known of the sample preparation and analysis procedures employed at Komis before 1990. For that reason, pre-1990 drilling data were used for domain boundary determination, but not grade determination. The present study included all underground drill data, which is post-1990. The following discussion is taken largely from the in-house feasibility study prepared by Waddy Lake in 1995 and new drilling from programs carried on 2010 and 2011.

### **11.2 Programs 2010 and 2011**

In the fall of 2010, eight (8) drill holes totalling 1,532m of drilling was proposed for the Komis Deposit. All eight of the drill holes were drilled between November 20th and December 12th 2010. In the summer of 2011 a diamond drilling program at Komis consisted of 4,288m of coring. Overall the purpose of these holes was to add to the existing resource model. During the core sampling process of 2010 and 2011 drilling programs, Golden Band Resources Inc.'s geologist performed in an organized and systematic manner.

In 2010 and 2011 Golden Band Resources Inc. assigned SRC and TSL Laboratories for sample analysis. All core samples were analyzed and checked using the fire assay method. Core samples with significant gold contents were subsequently checked at TSL by means of a metallic gold assay (VG method). The metallic assay was used as the final accepted value for the samples that were analyzed by this method.



Selected intervals for assaying were split first and one half of the core was collected and assayed at SRC Geoanalytical Laboratories in Saskatoon, using the Standard Assay Procedure. Additional check metallic assays were performed for intervals having high gold values returned from the standard assaying.

Similar procedure was used for the 2011 summer drilling program but the core samples were analyzed at the Jolu mine site assay lab instead of the commercial lab. The Jolu lab employed the classic Fire Assay Technique which is fire assay with gravimetric finish with a detection limit is 0.03 g/tonne. Results were reported as grams per tonne or ppm rather than ppb. Should the assay of the exploration sample exceed 5.0 g/tonne then a metallic assay will follow. The paper bag containing the pulp of that sample will be pulled from the storage box and the total sample weighed. The entire sample is then sieved at 100 mesh. All of the +100 mesh material is assayed and duplicate assays of 30 grams each are done on the -100 mesh portion. All the un-used portion of the sample (-100 mesh only) is re-bagged and stored as pulp reject. After the metallic assays are fused, cupelled, parted and weighed back a weighted average or Total Gold Metallic is then calculated and the results are sent on a separate report.

Industrial standard samples with gold values of 0.77 g/t, 1.46 g/t, 2.03 g/t, 4.83 g/t, and 8.25 g/t, respectively, were used as assay quality control in addition of blank samples and duplicate samples. For every 15 to 20 core samples collected, one of these quality control samples was inserted in turn.

### **11.3 Assay Quality Assurance and Quality Control**

#### **Programs 2010 and 2011**

Golden Band Resources Inc. conformed to NI 43-101 guidelines for QA/QC collection, storage and recording during the core sampling process. Standards and Blank samples were inserted into the sample stream at rates appropriated for the 2010 and 2011 drilling programs. At every 15 or 20 samples in the sampling a Standard sample was inserted. The aim was to insert 10% total quality control samples to test for cross contamination, preparation and analytical errors and inconsistencies. The QA/QC control of all assays was monitored by the Company using sample standards from CDN Resource Laboratories Ltd. and sample blanks which were routinely inserted into the sample sequences.

**Table 11-1 - List of Gold Reference materials**

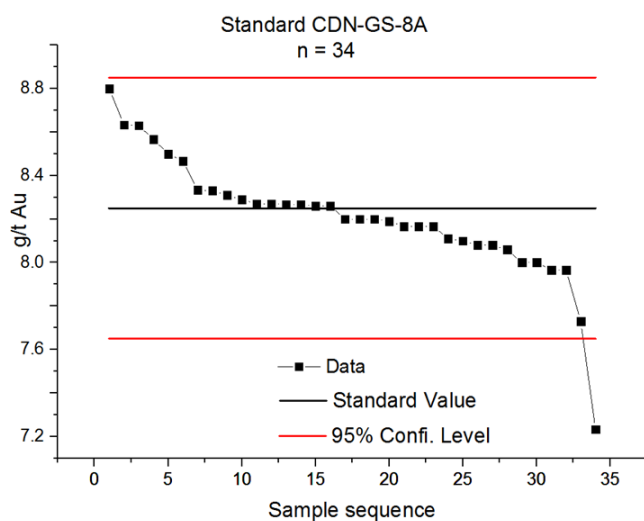
<b>Reference Material</b>	<b>Recommended Value (Au g/t)</b>	<b>+/- two Standard Deviations (Au g/t)*</b>	<b>Project Gold Value</b>	<b>Total Packages</b>
CDN-GS-8A	8.25	0.60	High	34
CDN-GS-6P5	6.74	0.45	High	3
CDN-GS-5E	4.83	0.37	Medium	36
CDN-GS-2B	2.03	0.12	Medium	11
CDN-GS-1P5B	1.46	0.12	Low	16
CDN-GS-P7A	0.77	0.06	Low	4
CDN-BL-4	< 0.01			42
<b>Total RM's for 2010 and 2011 Drilling programs</b>				<b>146</b>

\*Between laboratory determination

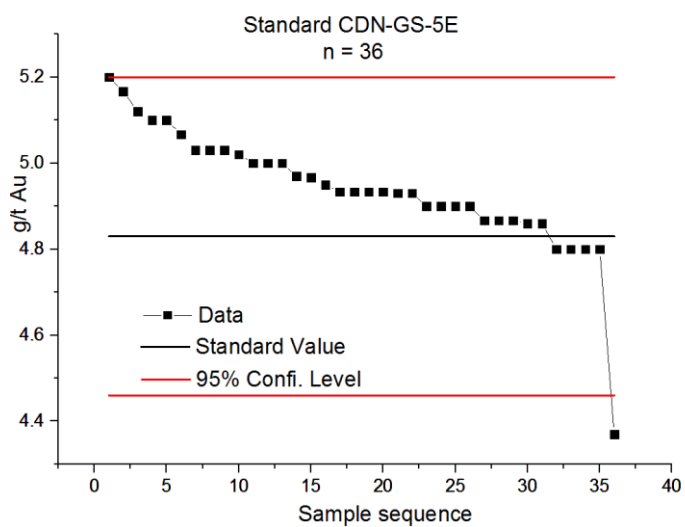
For standards, the accepted range should be the accepted value plus or minus two standard deviations and less than 5% of the results from the submitted standard material should fall outside these limits.

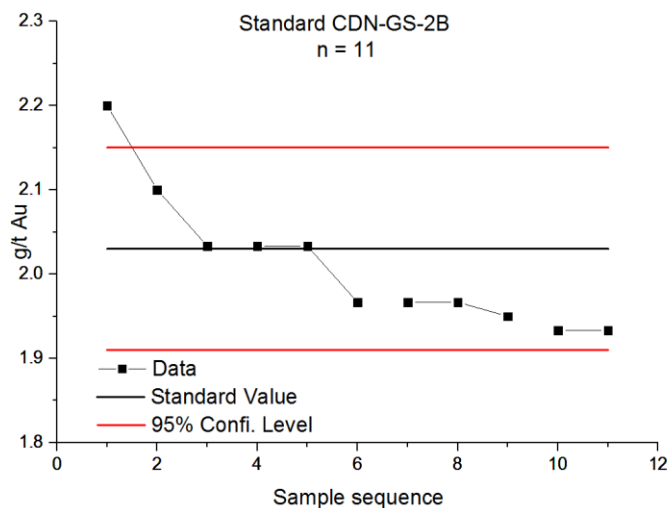
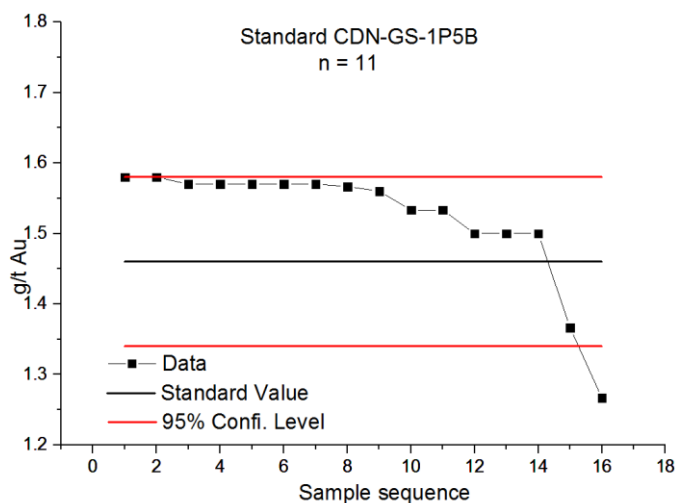
The results for the sampling data are shown in Figures 11-1 through 11-4.

**Figure 11-1 – Results for CDN-GS-8A Standards**



**Figure 11-2 – Results for CDN-GS-5E Standards**

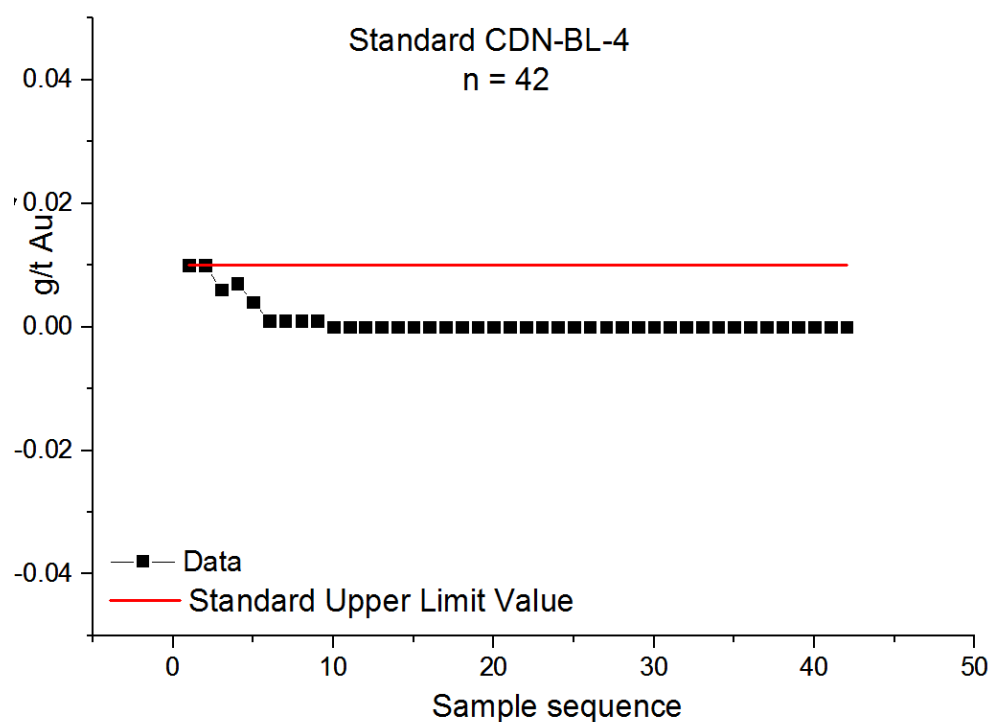


**Figure 11-3 - Results for CDN-GS-2B Standards****Figure 11-4 – Results for CDN-GS-1P5B Standard**

Blank materials are used to monitor contamination caused when sample preparation equipment has not been cleaned between samples. This transfer of material from sample to sample is most evident immediately following a sample that has high grade gold values. Therefore, blank materials are used to assess the overall cleanliness of the assay laboratory (including airborne dust which should be kept to a minimum).

Golden Band Resources Inc. used commercially produced CDN-BL-4. To be in line with Industry Standards for insertion of blank materials, a total of 1 in every 25 samples is to be processed at the laboratory. 42 Blank samples of the total assay samples to be tested (Figure 11-5).

**Figure 11-5 - Results for DCN-BL-4 Blank Standards**

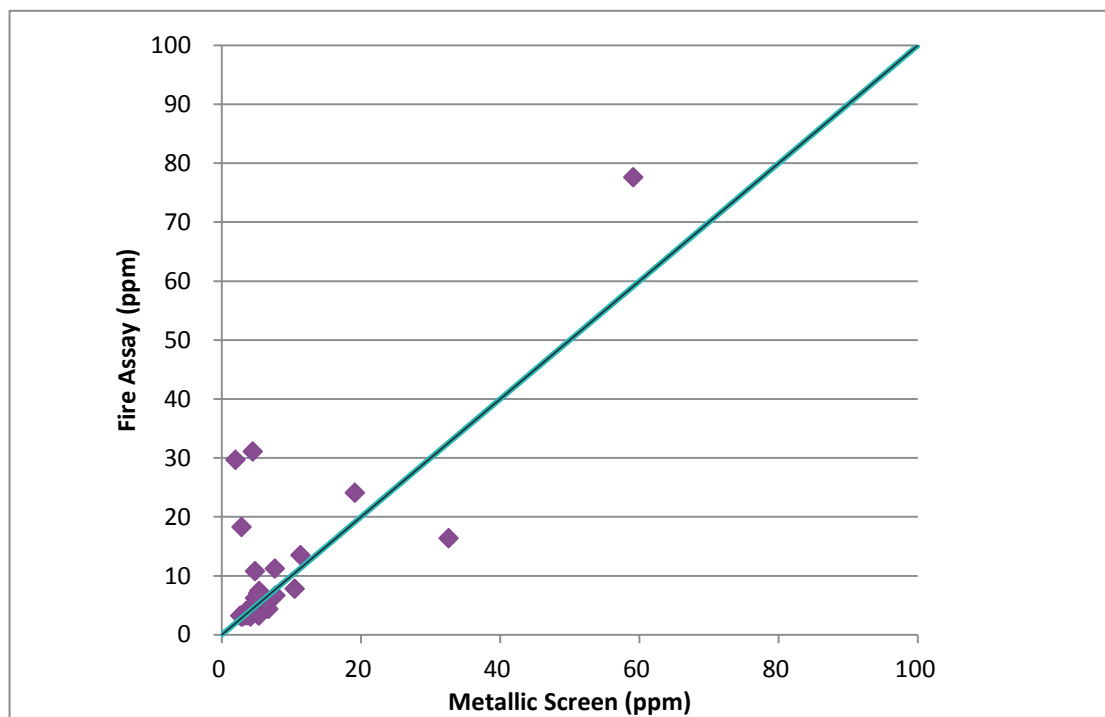


## 11.4 Check Assays

Thirty three samples from the 2010 and 2011 drill programs were analyzed by the metallic screen fire assay method. A comparison of the metallic assays with the original (averaged) fire assays are illustrated in **Error! Reference source not found.** 11-5 below. The results show little significant bias between the two methods.



**Figure 11-6 - Comparison of Metallic Assay vs Original Fire Assays**



## **12.0 Data Verification**

Data verification was limited by the fact that much of the work at Komis was completed between the years 1959 and 1997. The situation is further complicated by the fact that assayed intervals from the pre-1990 drill core were assayed in its entirety. This is also true for some of the post-1990 drilling.

As stated in the previous sections, it is not known how samples from the pre-1990 work were assayed. Analytical work for the post-1990 exploration programs were performed by commercial assay laboratories (Saskatchewan Research Council, TSL Lab and Dunn Lab) using the assay procedures discussed above. During the underground bulk sample program, Golden Rule performed its own assaying at the Komis mine site using the Duplicate Assay Procedure outlined above.

To Howe's knowledge, there are no pulps or coarse rejects from the pre-1990 analytical work or the analytical work performed by Golden Rule at the Komis mine site. Fraser (personal communication, 2004) indicated that pulps and/or coarse rejects may still exist at the above-mentioned analytical labs. This has not been verified by Howe nor have any check assays been performed.

### **Post-2010**

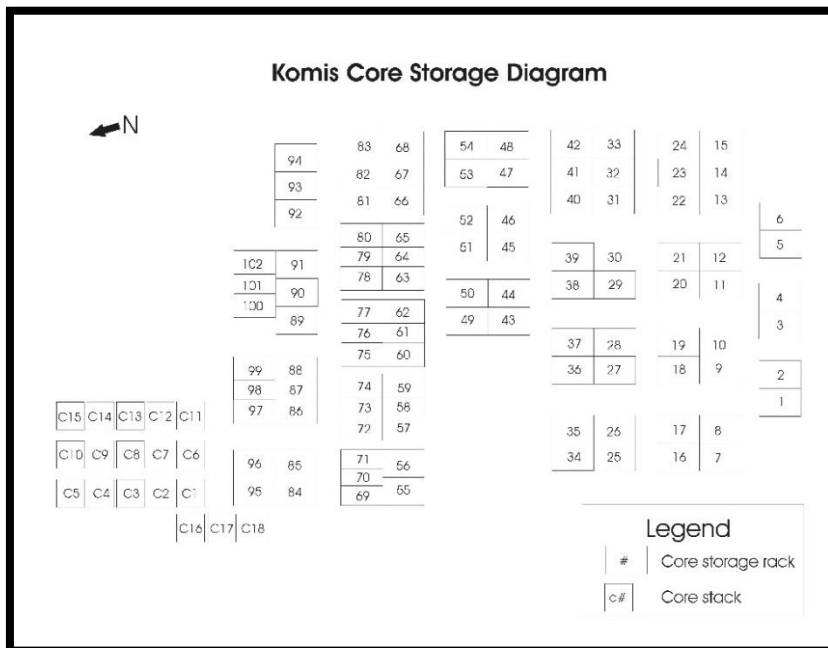
Near the mine site there is an outdoor core storage area (Figures 12-1 and 12-2 and Table 12-1). The remaining core and core racks are on the property and in good shape with only a few of the racks having collapsed over the years. Core boxes with aluminum labels are legible while boxes with plastic labels are difficult to identify. One sample from split core was collected and submitted for analysis (sample 104852 from (KO92047, Box 21, 90.60-95.00, #28980, 92.50 m to 93.00 m). The original value for this sample was 5.7 g/t Au while the verification assay of the remaining split core for this same interval (sample number 104852) assayed 3.95 g/t Au.

Numerous drill collars were observed on the site, but only a few of them still had labels. Drill collars for drill holes KO94-119 and KO94-121 were observed during the site visit.

### Figure 12-1 - Komis Drill Core Storage Site



### Figure 12-2 - Komis Core Storage Layout Diagram



**Table 12-1 - Komis Core Locations**

Hole Id	Rack #	Box#	Interval (m)	Notes
<b>Komis Deposit</b>				
KC81-008	102	1-26	3.5-152.0	
KC81-009	102	1-28	4.5-152	
KC81-010	102/101	1-10/11-26	3.6-61.8/61.8-152.0	
KC81-014	100	1-26	4.2-151	
KC81-017	99	1-30	?-179	Box 1 unlabeled
KC81-019	98/97	1-19/20-30	7.5-117.4/117.4-180.0	
KC82-026	80	1-9		No intervals listed on boxes- in db as 100.3m
KC83-002	76/75	1-15/16-31		No intervals listed on boxes- in db as 176.0m
KC83-003	75/74	1-23/24-29		No intervals listed on boxes- in db as 167.0m
KC83-006	73/72	1-21/22-37		No intervals listed on boxes- in db as 218.0m
KC83-010	69/55	1-16/17-31		No intervals listed on boxes- in db as 176.0m
KC83-015				Not listed in core depository listing (TD- 116m)
KO90 001	42	1-12	9.0-75.0	
KO90 007	40	1-49	2.5-229.0	
KO90 012	31/32	1-23/24-43	1.4-101.7/101.7-185.0	
KO90 018	24	1-38	3.0-170.0	
KO90 027	13	1-45	9.7-203.0	
KO90 028	13/14	1-12/26-49	4.3-110.5/110.5-218.0	
KO92 035	45/46	1-4/5-20	7.0-23.4/23.4-89.0	
KO92 039	47	1-52	9.5-230.0	
KO92 046	53/52	1-12/13-34	4.0-56.1/56.1-149.0	
KO92 047	52	1-27	4.0-119.0	
KO94 058				Not listed in core depository listing (TD- 85m)
KO94 063				Not listed in core depository listing (TD- 76.2m)
KO94 064				Not listed in core depository listing (TD- 76.2m)
KO94 066				Not listed in core depository listing (TD- 67.2m)
KO94 098	43	2-15	5.8-89.1	DB- 91.1 m listed as Td- missing box 1
KO94 107	49	1-16	0.0-93.0	
KO94 108	49	7-10	36.2-56.6	Boxed 2 and 6 are also present- high grade min.
KO94 111	44	1-56	9.0-254	
KO94 116	37	1-37	9.0-168.0	
KO96 149	9	1-26	3.0-120.2	
KO96 155	10/11	1-17/18-26	3.1-77.25/77.25-116.2	
KO96 162	5/4	1-24/25-39	0.2-105.5/105.5-167.6	Missing boxed 8 and 9
KO96 164	3/2	1-24/25-42	1.2-103.9/103.9-180	
KO96 168				Not listed in core depository listing - ends at ho
KO96 177				Not listed in core depository listing
KO96 180				Not listed in core depository listing
KO96 188				Not listed in core depository listing
KO96 196				Not listed in core depository listing
V33				Not listed in core depository listing
V34				Not listed in core depository listing
V35				Not listed in core depository listing

The existing database, drill logs, assay certificates and internal memos were examined and are in good order with appropriate QA/QC procedures in place. The Author also visited the on-site assay lab at the Jolu Mill and was given a tour of the facility.

### **12.1 Comments on Section 12**

The process of data verification indicates that the data collected by Golden Band and previous operators adequately reflect deposit dimensions, true widths of mineralization, and the style of the deposits, and adequately support the geological interpretations for the purpose of Mineral Resource estimation. The QPs are of the opinion that the analytical and database quality are adequate for the purposes of the estimation of Mineral Resources.



## **13.0 Mineral Processing and Metallurgical Testing**

Preliminary laboratory test-work was undertaken at SGS Lakefield Research (Lakefield) in 2005 and 2006 on composite samples from several area deposits, including Bingo, Tower East, Golden Heart, Memorial and Komis. Further test-work was undertaken in 2007/2008 on the Birch Crossing (BC), Komis, Tower Lake (Tower East) EP, and Bingo deposits.

Test-work has included grindability, flotation, gravity, cyanidation, and associated waste characterization tests. The tested deposits contain significant free gold which can be readily recovered by gravity concentration within the grinding circuit. The presence of this relatively coarse gold adversely affected test reproducibility and precision, but the test-work nevertheless shows that relatively high extractions of gold can be obtained by 48 hour conventional cyanidation preceded by gravity concentration. For mill feed comprising blended Komis, Bingo and EP material and the expected ratio of feed sources, combined gravity recovery and cyanidation extraction is expected to be in the range of 91 % to 95 % at moderate levels of cyanide and lime consumption.

For a detailed description of the results of a comprehensive metallurgical study please refer to the independently reported National Instrument 43-101 compliant Technical Report and Pre-Feasibility Study on the La Ronge Gold Project, Northern Saskatchewan, Canada by P&E Mining Consultants Inc., Effective Date January 16, 2009.

## 14.0 Mineral Resource Estimates

The updated Indicated Resource estimate for the Komis Gold deposit is 1,567,820 tonnes grading 3.33 g/t gold (167,753 ounces gold) and the Inferred Resource is 457,906 tonnes grading 1.66 g/t gold (24,365 ounces of gold) (Table 14-1 and Figures 14-1, 14-2 and 14-3 represent both Indicated and Inferred grade distribution within an optimized open pit. Figure 4 represents a plan view of the existing surface development and Figures 14-5 and 14-6 represents 2m x 2m blocks with grades >10 g/t Gold and >5 g/t Gold respectively.

CIM Definition Standards for a Mineral Resource as a "concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade or quality that there are reasonable prospect for eventual economic extraction". In this case a 1.0 g/t cut-off grade was used to estimate the resource as that is the minimum grade necessary to cover estimated production costs as per the following criteria (prices in US\$):

Au Price	\$1,550 / Troy Ounce Gold
Mining Cost/tonne	\$12.00
Processing Cost/tonne	\$28.00
G&A Cost	\$5.00
Down Hole Composite Size	2 m
Grade Cap	100 g/t Gold for Indicated, 10 g/t Gold for Inferred

**Table 14-1 - Resource Estimate for the Komis Gold Deposit**

Cut-Off 1.00 g/t Au	Tonnes (t)	Grade g/t Au	Au Ounces
<b>Indicated</b>	1,567,820	3.33	167,753
<b>Inferred</b>	457,906	1.66	24,365

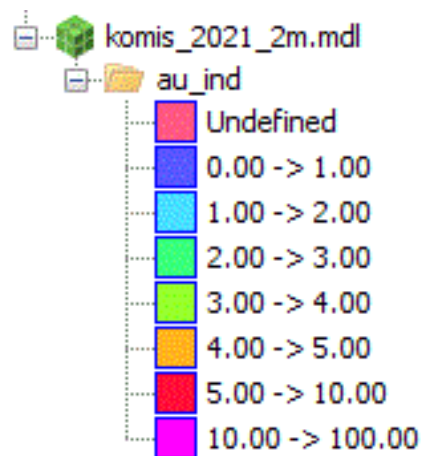
**Note 1:** Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

**Note 2:** The existing underground and surface mined areas were excluded from the Resource Estimate.

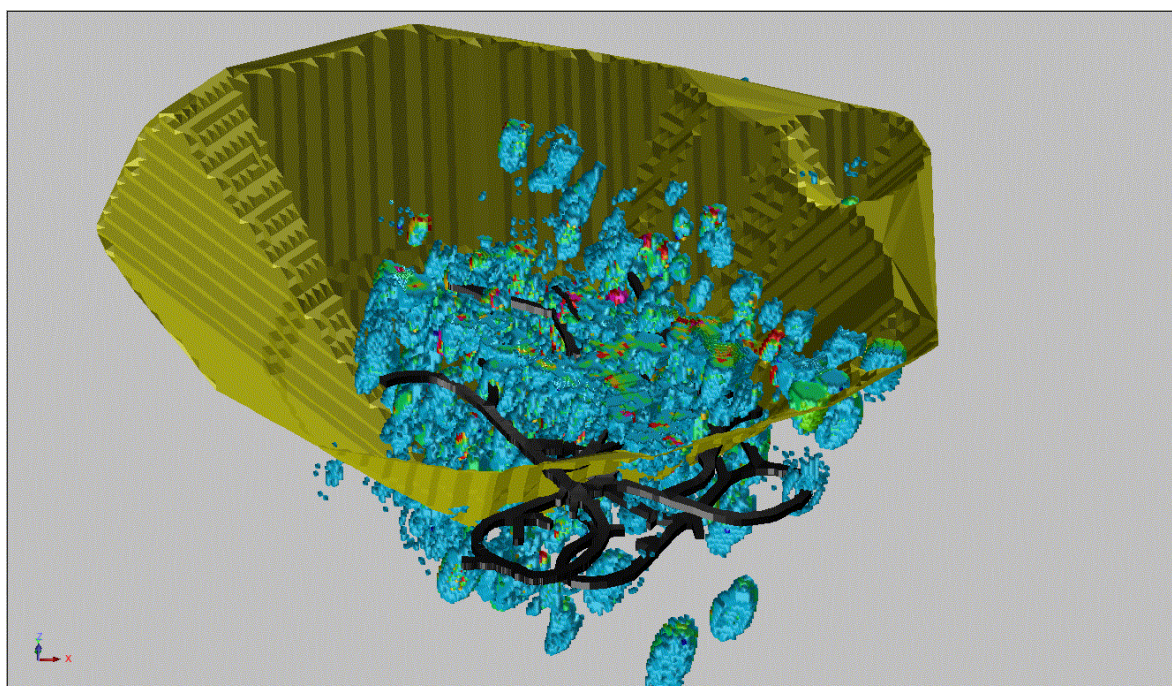
**Note 3:** Existing underground stopes were used to reconcile reported tonnes & grade mined in 1996 - 1997 with what this Resource Estimate would have predicted. It shows at the current Resource Estimate is conservative. This method was also used to determine a cap grade of 100 g/t Au for the Indicated Resource.

**Note 4:** The estimated mining cost and processing cost were increased relative to other Resource Estimates in the area as the Author wanted to build-in a bit of a "safeguard" due to the cost history of mining this deposit.

**Figure 14-1 - Block Model Grades**

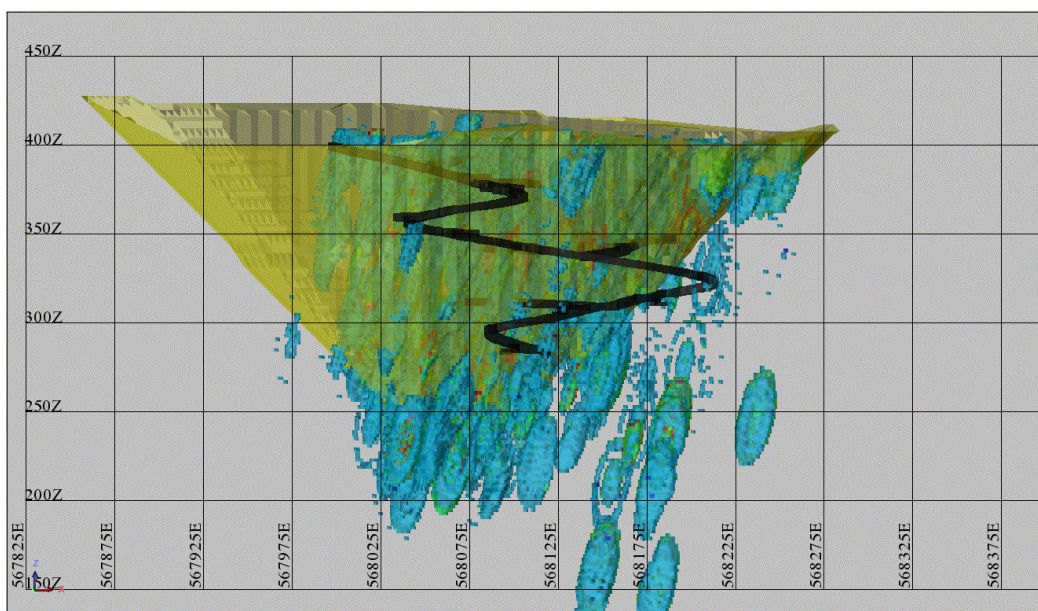


**Figure 14-2 - Oblique View of Grade Distribution of Indicated & Inferred Resource**

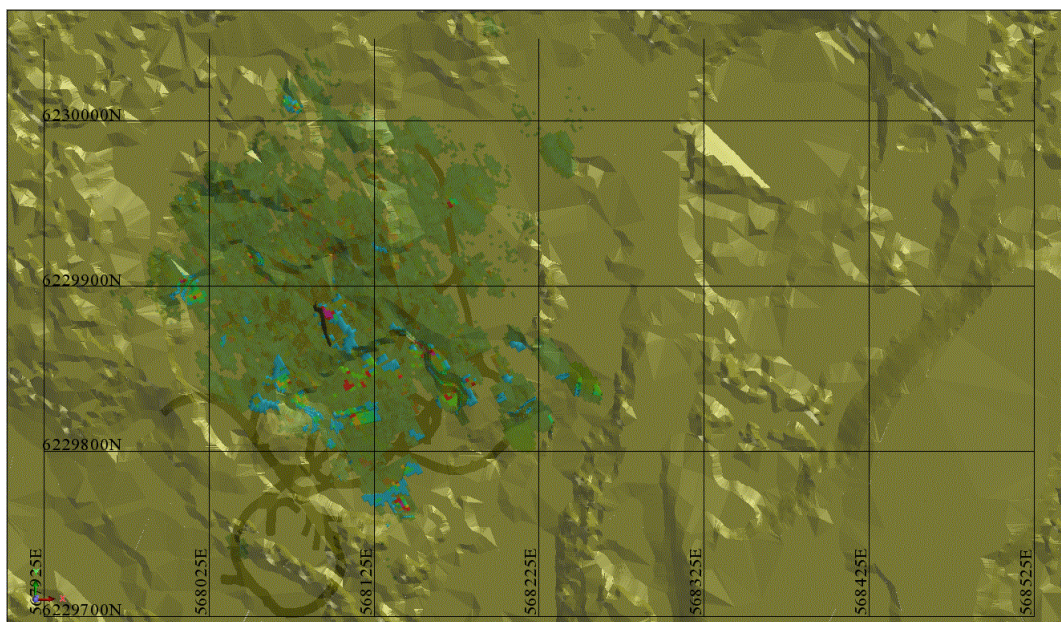




**Figure 14-3 - Cross Section of Grade Distribution of Indicated and Inferred Resource**

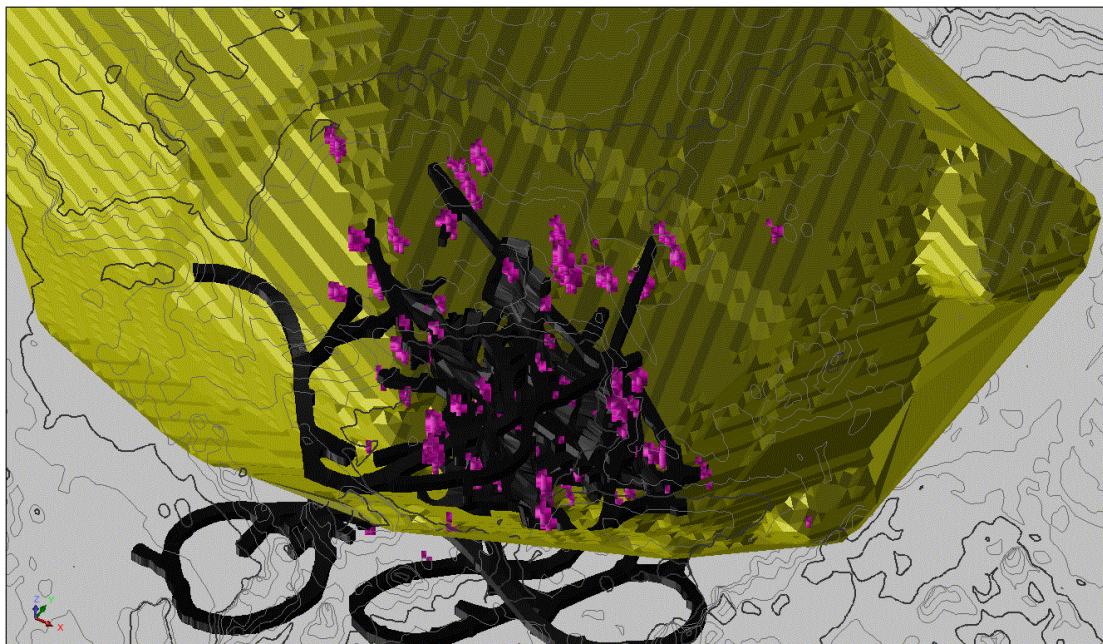


**Figure 14-4 - Plan View of Topography (Coloured = Block Model at Surface)**

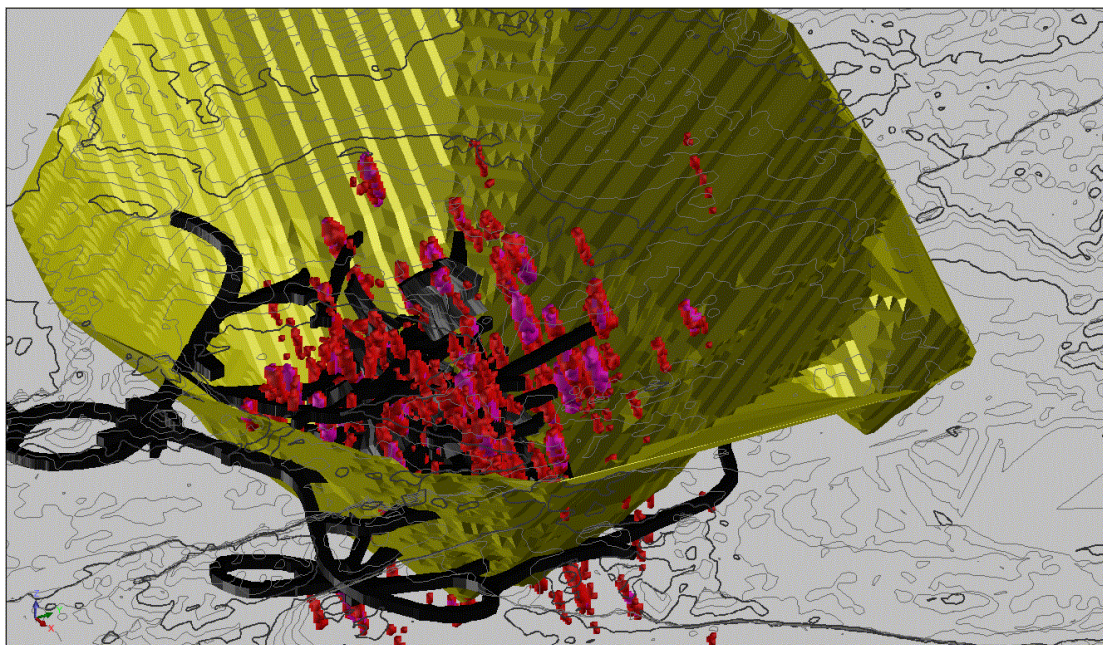




**Figure 14-5 - Oblique View with Existing Development and High Grade Blocks (>10 g/t)**



**Figure 14-6 - Oblique View with Existing Development and High Grade Blocks (>5 g/t)**





## 14.1 Key Assumptions and Basis of Estimate

These are advanced mineral resource statements which utilized open pit optimization algorithms to further restrict the resource to that which adheres to the CSA-CIM Committee statement that requires "the use of mine planning tools, such as open pit design algorithms, to limit the extent of mineralization of "Advanced Mineral Resource" statements..." This all falls under NI 43-101 Section 3.4c which requires the assessment of 'reasonable prospects for economic extraction' as central to disclosing a mineral resource.

An open pit mining method with a stockpile for processing is used as the basis for these estimates. The following are considerations used to estimate the resource for the Komis gold deposit.

## 14.2 Density

SRC composite samples of the "A" and "C" zones were collected from split core at the Komis site by Clifton and Associates, an environmental consulting firm, as part of a larger report prepared for test mine permitting in preparation for the Underground Program.

A total of 34 specific gravity determinations were made by SRC on "A" zone and "C" zone samples. The weighted specific gravity of 21 determinations on the "A" zone material is 2.84 t/m<sup>3</sup>. The weighted average specific gravity of 13 determinations on the "C" zone material is 2.76 t/m<sup>3</sup>.

The specific gravity factor used for the current Resource Estimate is 2.84 g/cm<sup>3</sup>.

## 14.3 Cut-Off Grade

In this case of a 1.00 g/t cut-off grade was used to estimate the Resource. This cut-off grade is considered to be minimum grades necessary to cover estimated production and processing costs as per the following criteria (prices in US\$):

Au Price	\$1,550 / Troy Ounce Gold
Mining Cost/tonne	\$12.00
Processing Cost/tonne	\$28.00
G&A Cost	\$5.00
Down Hole Composite Size	2 m

## 14.4 Grade Capping

Grade capping was carried out on 2m composite assay values to ensure that the possible influence of erratic gold values did not bias the database. Commonly these outlier populations are geologically distinctive and have limited geological continuity relative to lower-grade values. To determine the appropriate level of capping 3 Block Models were created to serve various tasks due to restrictions inherent in the estimation software(s) used.

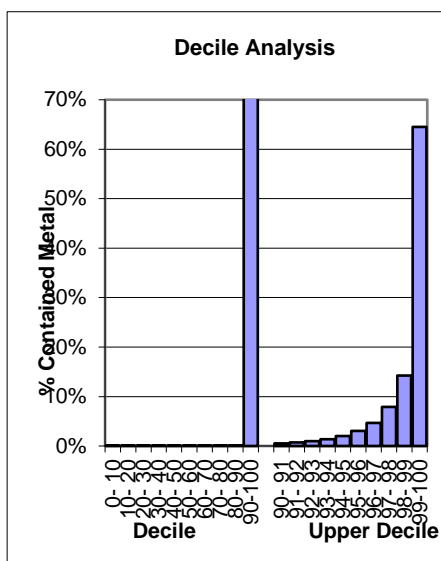
1. A 4m x 4m x 4m Block Model that was not sub-blocked and that is not oriented was created so that it could be transformed to the optimized open pit software program.
2. A 2m x 2m x 2m Block Model that was sub-blocked to 1.25m x 1.25m x 1.25m and that has a 330 degree azimuth (main strike of the mineralized zones) was created to better suit the size of high grade mineralized zones. This was also used to reconcile what was already mined out of this deposit in the 1990's and aided with establishing cut-off grades, cap grades and interpolation search distances.
3. A 4m x 4m x 4m Block Model that was sub-blocked and given a 330 degree azimuth to see how block size affects the Resource Estimation.

A decile analysis was also conducted of all drill samples that were composited to 2m and from that a probability distribution plot of gold values was created to aid with the determination of cap grades (Figures 14-7 and 14-8).

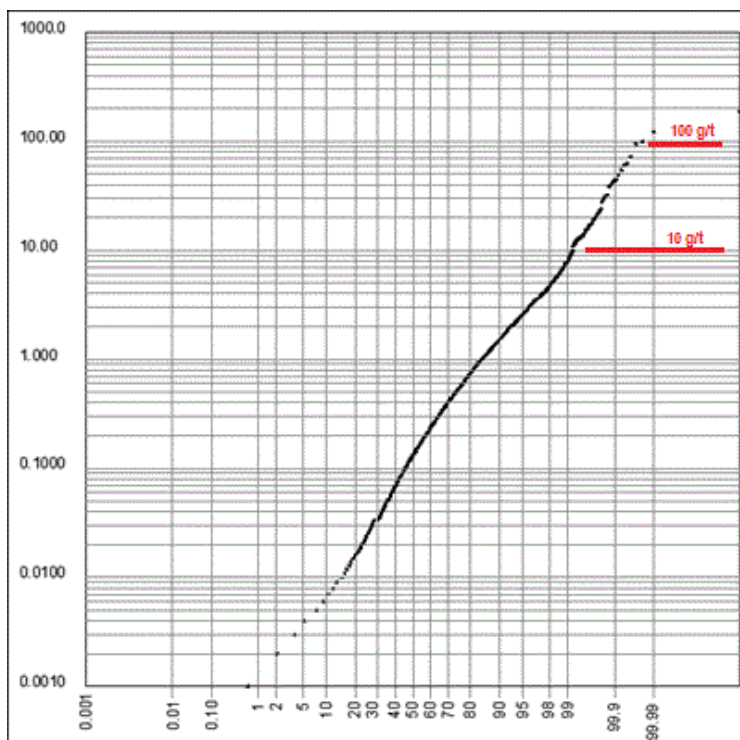
To determine a capping grade using the Decile method, the highest value of the top percentile containing less than 10% of the metal is often selected. An analysis of the log probability distribution is also used to determine a clear percentile break-point which can be used to determine the capping value.

F. Hrdy, P.Geo., reviewed all of the assay results used for this resource update (Decile analysis and Probability plot of the data) and determined that the capping of high grade values is warranted and a cap grade of 100 g/t Au for the Indicated Resources and a cap grade of 10 g/t Au for the Inferred Resource is warranted. Additional evidence that supports a 100 g/t Au cap grade for the Indicated Resource is that it better reconciles with what was previously mined and reported (120,565 t at 7.81 g/t = 26,859 Au ounces). The reconciliation value = 116,490 t at 3.28 g/t = 12,284 Au ounces which is in line with the reported mined tonnes but underestimates the gold ounces indicated a 100 g/t cap grade could be conservative.

**Figure 14-7 - Decile Plot**



**Figure 14-8 - Log Probability Plot**



## 14.5 Block Model Parameters

**Table 14-2 - Block Model Parameters for the Komis Resource Estimate**

Block Model Geometry			
<b>Min Coordinates</b>	Y: 6229400	X: 568000	Z: 0
<b>Max Coordinates</b>	Y: 6230100	X: 568700	Z: 450
<b>User block Size</b>	Y: 2	X: 2	Z: 2
<b>Min. block Size</b>	Y: 0.5	X: 0.5	Z: 0.5
<b>Rotation</b>	Bearing: -30.000	Dip: 0	Plunge: 0

**Table 14-3 - Block Model Parameters for the Open Pit Optimization**

Block Model Geometry			
<b>Min Coordinates</b>	Y: 6229600	X: 567800	Z: 0
<b>Max Coordinates</b>	Y: 6230200	X: 568500	Z: 452
<b>User block Size</b>	Y: 4	X: 4	Z: 4
<b>Min. block Size</b>	Y: 4	X: 4	Z4
<b>Rotation</b>	Bearing: 0	Dip: 0	Plunge: 0

## 14.6 Interpolation and Search Factors

All existing drill hole information was used to create 2m downhole drill assay composites. Individual units were generally not defined, rather boundaries were defined by the search parameters. Also, any drill interval that was not assayed was given a "0" value.

Block model size was selected to best match mineralized zone continuity. Care was also taken to remove any estimated resource from existing developed areas.

Geological Modelling and Resource Estimation Software Surpac Version 6.4.1 was used for this resource estimation.

**Interpolation Method** = Inverse Distance Cubed, Interpolation Block Size = 2m x 2m x 2m, minimum, Cap Grade = 100 g/t Au for Indicated and 10 g/t Au for Inferred. A visual representation of the Search Ellipse was plotted and visualized to ensure that it logically followed strike, dip and plunge of the gold mineralization. The following are search parameters used for the interpolations.

#### Indicated Resource Estimate Search

Max Search Distance of Major Axis:	15 m
Max Vertical Search Distance:	30 m
Max Number of Informing Samples:	2
Min Number of Informing Samples:	15
Rotation Convention:	Surpac ZXY LRL
Angles of Rotation:	First Axis = 330.00 Second Axis = -65.00 Third Axis = -60.00
Anisotropy Factors:	Semi-Major axis 3.00 Minor axis 4.00

#### Inferred Resource Estimate

Max Search Distance of Major Axis:	30 m
Max Vertical Search Distance:	50.00 m
Max Number of Informing Samples:	2
Min Number of Informing Samples:	15
Rotation Convention:	Surpac ZXY LRL
Angles of Rotation:	First Axis = 330.00 Second Axis = -65.00 Third Axis = -60.00
Anisotropy Factors:	Semi-Major axis 3.00 Minor axis 4.00



## Variography Study

For this Resource Estimate a variography study was conducted as an open pit mining method was introduced allowing for a significantly lower cut-off grade which provides more samples for the study. The following are the results from this study:

### Search Ellipse Parameters

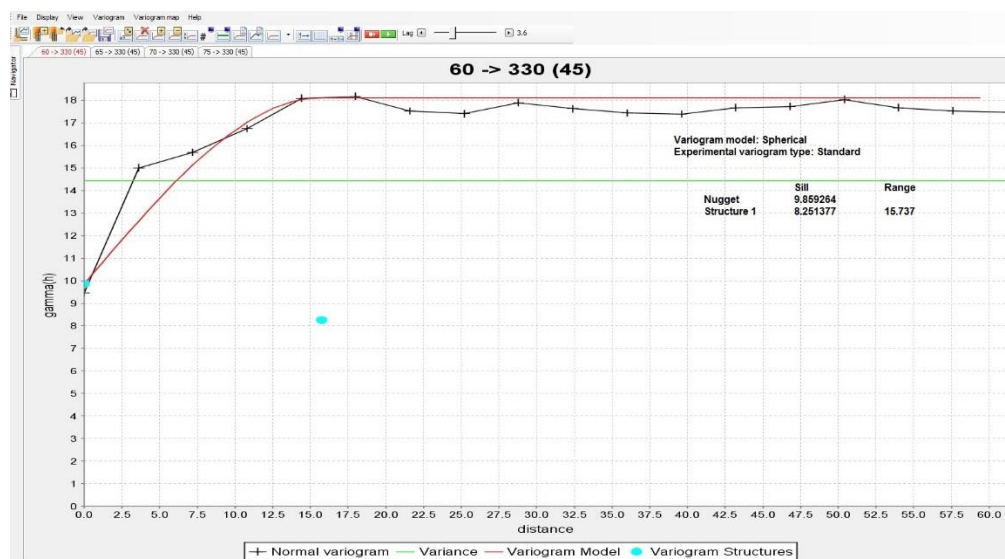
Experimental Variogram Parameters: Max Distance: 100 m, Azimuth: 330 degrees, Variogram Plunge: 60, Spread Angle: 45 degrees, Spread Limit: None, Statistics: 12,999 samples, Mean: 1.173062, Variance: 14.434090, Standard Deviation: 3.799222.

Variogram Results: Model Type: Spherical, Nugget Sill: 9.859264, Structure 1: Sill = 8.251377, **Range = 15.737 m.** (Figures 14-9 and 14-10)

**Figure 14-9 - Oblique View of the Search Ellipse Orientation**

(White = Existing Underground Development; Magenta = Zones >10 g/t Au)



**Figure 14-10 - Variogram Model**

## 14.7 Classification

Resource classifications used in this study conform to the following definition from National Instrument 43-101 as published on May 10, 2014:

### Measured Mineral Resource

*"Mineralization or other natural material of economic interest may be classified as a Measured Mineral Resource by the Qualified Person when the nature, quality, quantity and distribution of data are such that the tonnage and grade or quality of the mineralization can be estimated to within close limits and that variation from the estimate would not significantly affect potential economic viability of the deposit. This category requires a high level of confidence in, and understanding of, the geology and controls of the mineral deposit."*

### Indicated Mineral Resource

*"Mineralization may be classified as an Indicated Mineral Resource by the Qualified Person when the nature, quality, quantity and distribution of data are such as to allow confident interpretation of the geological framework and to reasonably assume the continuity of mineralization. The Qualified Person must recognize the importance of the Indicated Mineral Resource category to the advancement of the feasibility of the project. An Indicated Mineral Resource estimate is of sufficient quality to support a Pre-Feasibility Study which can serve as the basis for major development decisions"*

**Inferred Mineral Resource**

*"An Inferred Mineral Resource is based on limited information and sampling gathered through appropriate sampling techniques from locations such as outcrops, trenches, pits, workings and drill holes. Inferred Mineral Resources must not be included in the economic analysis, production schedules, or estimated mine life in publicly disclosed Pre-Feasibility or Feasibility Studies, or in the Life of Mine plans and cash flow models of developed mines. Inferred Mineral Resources can only be used in economic studies as provided under NI 43-101.*

*There may be circumstances, where appropriate sampling, testing, and other measurements are sufficient to demonstrate data integrity, geological and grade/quality continuity of a Measured or Indicated Mineral Resource, however, quality assurance and quality control, or other information may not meet all industry norms for the disclosure of an Indicated or Measured Mineral Resource. Under these circumstances, it may be reasonable for the Qualified Person to report an Inferred Mineral Resource if the Qualified Person has taken steps to verify the information meets the requirements of an Inferred Mineral Resource."*

**14.8 Factors That May Affect the Mineral Resource Estimate**

The resource estimate is based on information and sampling gathered through appropriate techniques from diamond drill core holes. The estimate was prepared using industry standard techniques and has been validated for bias and acceptable grade-tonnage characteristics.

Areas of uncertainty that may materially impact the Mineral Resource Estimate include:

- Commodity price assumptions
- Pit slope angles
- Metal recovery assumptions
- Mining and Process cost assumptions
- Assumptions that all required permits will be forthcoming

There are no other known factors or issues that materially affect the estimate other than normal risks faced by mining projects in the province of Saskatchewan in terms of environmental, permitting, taxation, socio-economic, marketing, and political factors. Geosim and Canmine are not aware of any known legal or title issues that would materially affect the Mineral Resource estimate.

## **14.9 Comment on Section 14**

The QP has estimated and classified the Mineral Resources in a manner consistent with the 2014 CIM Definition Standards. The risks of the Mineral Resources are presented in Sections.

**See Section 6-3 Comments.**

## **15.0 Mineral Reserves Statement**

This section is not relevant to this Report as no Mineral Reserves have been estimated.



## **16.0 Mining Methods**

Shrinkage stoping on open pit mining methods were employed at the Komis Gold Deposit. The project was shut down in early 2013 due to high operating costs, lower than expected recovered grades and a relatively low gold price. If the price of gold were to increase significantly then a new PEA study or Pre-Feasibility Study would be warranted and the potential mining methods would need to be reviewed at that time.

## **17.0 Recovery Methods**

The project was shut down in early 2013 and has reverted back to a resource disclosure. The following is a brief discussion recovery methods when the mine was in operation but are no longer current to this disclosure:

The mill (where the ore from the Komis deposit was processed) consisted of a 2-stage crushing plant followed by a mill with both gravity recovery and carbon in pulp (CIP) recovery circuits. The crushing plant was fed run of mine ore by loader. This ore was passed through a grizzly and, via a pan feeder, to a jaw crusher. Material processed by the jaw crusher is delivered to a vibrating screen with a 2-inch opening. All material coarser than 2 inches flowed to a cone crusher for secondary crushing. The resultant product was then recirculated to the vibrating screen. All material finer than the screen opening was delivered to the fine ore bin (FOB) where it is available for milling operations. The FOB has a 400 tonne capacity.

Ore from the FOB is delivered to the ball mill. The ball mill effectively ground the ore to 70% passing 140 microns. The mill discharge was in slurry form, this slurry was pumped to classifying cyclones that separate the milled product by size. The coarser fraction (approximately + 140 microns) was delivered to a Knelson concentrator where the feed was centrifugally concentrated to produce a rich gold concentrate. The concentrate, in a semi-continuous process, was exposed to an accelerated leach with an ACACIA reactor. The gold rich pregnant solution was further treated by electro-winning cells in preparation for smelting. Tailings from the concentrator and from the ACACIA were recirculated to the ball mill to ensure that unrecovered fine gold reported to the leaching and CIP operations.

The finer fraction from the cyclones was delivered to a thickener and then to a 4-stage cyanidation operation. Slurry was delivered to the leach tanks at 50% solids by weight and was designed to have a residence time 48 hours. The continuous discharge from the leach circuit was gravity fed to 6-stage CIP operation. The carbon, via pneumatic transfer, flowed counter-current to the slurry flow. Slurry was pumped to tailings continuously following the CIP operation. The loaded carbon was collected and, in batch operation, was sent the carbon stripping vessel where a pregnant solution was eluted from the active carbon. A parallel electro-winning cell in preparation for smelting treated the pregnant solution stripped from the carbon

## **18.0 Project Infrastructure**

The project was shut down in early 2013 and has reverted back to a resource disclosure. At present most of the original infrastructure that was used during the mining operation has been removed from site except for a shop building (see Figure 6-4).

## **19.0 Market Studies and Contracts**

The project was shut down in early 2013 and has reverted back to a resource disclosure; therefore, the Komis deposit has reverted to a resource disclosure.

## **20.0 Environmental Studies, Permitting and Social or Community Impact**

### **20.1 Current Environmental Lease Permits and Licenses**

- La Ronge Gold Project Lease Agreement 2013: inclusive of the Komis surface lease – Expiry May 31st, 2034
- Government of Saskatchewan, Ministry of Environment, Environmental Protection Branch, Uranium and Northern Operations: Approval to Operate Pollutant Control Facilities: Approval No. P018-059 – Signed April 27, 2018, Expiry April 30, 2023.

Golden Band does not have a Forest Products Permit or and Aquatic Habitat Protection Permit because they are issued on an annual basis and the site is in care and maintenance, so the permits are not required. Golden Band gets them only when they are needed.

These documents must be current in order to maintain property rights in their current state of operation. Other documents are required, such as the sand and gravel lease, or temporary water rights licence, but there are not mandatory to retain the rights to the property. Following the indefinite termination of the forest products permit, and aquatic habitat protection permit, the La Ronge Gold Project Decommissioning and Reclamation Plan must be executed to return the property to a natural state determined suitable by the Saskatchewan Ministry of Environment.

### **20.2 Social License**

All of Golden Band's activities in the La Ronge Gold Belt are within the traditional lands of the Lac La Ronge Indian Band ("LLRIB") and Golden Band has signed a Memorandum of Understanding with the LLRIB. The Memorandum of Understanding encompasses the Company's commitment to work with the LLRIB to establish a mutually beneficial business relationship. To ensure that business and employment opportunities are available to the LLRIB within Golden Band's exploration and development projects, Golden Band has also signed a General Services Agreement with Kitsaki Management Limited Partnership in the past.

If Golden Band wanted to come out of care and maintenance and go back into production a new Memorandum of Understanding would have to be worked out with the Lac La Ronge Indian Band.



## **20.3 Environmental Liabilities**

All environmental liabilities are subject to the conditions noted in the; Saskatchewan Ministry of Environment Environmental Operating Approval PO11-027, Saskatchewan Ministry of Environment Forest Product Permit, Aquatic Habitat Protection Permit, and the Saskatchewan Water Security Agency Term Water Rights Licence. In the event of a mine closure, all environmental liabilities for the site would defer to the La Ronge Gold Project Decommissioning and Reclamation Plan.

## **21.0 Capital and Operating Costs**

The project was shut down in early 2013 and has reverted back to a resource disclosure.

## **22.0 Economic Analysis**

The project was shut down in early 2014 and has reverted back to a resource disclosure.

## **23.0     Adjacent Properties**

This section is not relevant to this report.

## **24.0 Other Relevant Data and Information**

The author is of the opinion that all known relevant technical data and information with regard to the Komis project has been reviewed and addressed in this Technical Report.



## **25.0 Interpretation and Conclusions**

### **25.1 Conclusions**

The updated Indicated Resource estimate for the Komis Gold deposit is 1,567,820 tonnes grading 3.33 g/t gold and the Inferred Resource is 457,906 tonnes grading 1.66 g/t gold.

In 2012 the old workings were dewatered and rehabilitated so that a cross-cut drift and accompanying ore drift along a modeled zone could evaluate the geological model and grade estimates. This work was not completed even though the cross-cut results appear to be close to what the grade model predicted and a reconciliation was never conducted.

After hastily shutting down the underground development work without a proper reconciliation of the results the group was tasked to mine the deposit via an open pit. Unfortunately the grade model was not interpreted to be mined via an open pit mining method (individual higher grade zones were modeled so the lower grade halos were left out) and so it was inappropriate for this task. In addition, the on-site planning department did not know if they were using the most recent model (Co-Author's personal observations while conducting an on-site evaluation in 2012). The open pit mining was also complicated by the fact that the planning department had mostly recent graduates (the somewhat more trained personnel had quit) and did not have the necessary experience to do this work. Strict grade control measures were also not taken to ensure excess dilution did not cause problems – which it did. The cost of transporting low grade material to the Jolu Mill was also a major cost-contributing factor.

So it is the Author's opinion that the Komis Gold deposit has a good chance to become a profitable mining operation but must be well planned ahead of mining, a strict grade control system is enacted that takes into account the existence of very high grade zones that are relatively small and occur at significant distances from each other, onsite ore concentrating technology is implemented and an open pit mining method that can deal with existing underground development is established. Strict security must also exist to prevent "high grading".

## **25.2 Recommendations**

1. Investigate ore concentrating technology to be implemented here as the cost scenario does not take into account low grade ore haulage to the Jolu Mill.
2. Create a mine design, a detailed mining method that takes into account the small and separated high grade zones and existing underground development and a mining schedule to create a detailed Reserve Estimate.
3. Conduct a PEA Study at minimum but a Pre-Feasibility Study is preferable.

## 26.0 References

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I, Ronald G. Simpson, P.Geo., am employed as a Professional Geoscientist with GeoSim Services Inc.

This certificate applies to the technical report titled "NI43-101 Technical Report, Komis Gold Project, Saskatchewan, Canada" with an effective date of February 22, 2021, the "Technical Report").

I am a Professional Geoscientist (19513) with the Association of Professional Engineers and Geoscientists of British Columbia. I graduated with a Bachelor of Science in Geology from the University of British Columbia, May 1975.

I have practiced my profession continuously for 46 years. I have been directly involved in mineral exploration, mine geology and resource estimation with practical experience from feasibility studies.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101").

I visited the Komis property on July 28, 2005.

I am responsible for Sections 2 to 8 of the technical report and contributed to Sections 1 to 3 and Section 25 as a co-author.

I am independent of Matrixset Investment Corporation and Golden Band Resources Inc. as independence is described by Section 1.5 of NI 43-101.

I have had prior involvement with the property that is the subject of the Technical Report. I contributed as a co-author in a Preliminary Economic Assessment on the La Ronge Gold Project in 2008 and a Pre-Feasibility report in 2009.

As of the effective date of the technical report, to the best of my knowledge, information and belief, the Technical Report contain all scientific and technical information that is required to be disclosed to make those sections of the Technical Report not misleading

Dated: February 22, 2021



Ronald G. Simpson, P.Geo.



## **CERTIFICATE OF QUALIFIED PERSON**

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I, Frank Hrdy, P.Geo., am employed as a Professional Geoscientist with Canmine Consultants.

This certificate applies to the technical report titled "NI43-101 Technical Report, Komis Gold Project, Saskatchewan, Canada" with an effective date of February 22, 2021, the "Technical Report".

I am a Professional Geoscientist (10226) with the Association of Professional Engineers and Geoscientists of Saskatchewan. I graduated with a Bachelor of Science in Geology from the University of Saskatchewan, 1987 and Masters of Science in Geology (U of S) in 1994.

I have practiced my profession since 1984 with the exception of the years between 1998 and 2003 that were spent in business school and working as a manager in a heavy equipment and cyclotron manufacturing business. I have worked as a geologist (junior to senior, executive), in gold, silver and copper exploration, gold production and gold resource evaluation positions.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101").

I visited the Property many times since 2012 but was there last between September 15, 2020 and September 23, 2020. I also visited the Komis property a couple of times between 2007 and 2010 while employed with Golden Band Resources as their Exploration V.P. and Mineral Resources manager.

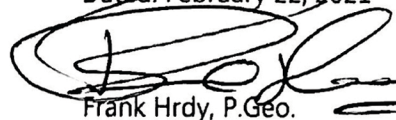
I responsible for all Sections except for Sections 2, 4 and 8 of this Report.

I am independent of Matrixset Investment Corporation and Golden Band Resources Inc. as independence is described by Section 1.5 of NI 43-101.

I Authored a Technical Report and Resource Estimate Update for the Komis deposit with an Effective Date of January 22, 2010. I also co-authored Preliminary Economic Assessments on the Waddy Lake Project in 2008 and 2009.

As of the effective date of the technical report, to the best of my knowledge, information and belief, the Technical Report contain all scientific and technical information that is required to be disclosed to make those sections of the Technical Report not misleading

Dated: February 22, 2021

  
Frank Hrdy, P.Geo.

