

# **NI 43-101 TECHNICAL REPORT**

**on the**

**HORWOOD PROPERTY**

**DISTRICT OF SUDBURY,  
ONTARIO**

**For**

**HORWOOD EXPLORATION  
CORP.**

Prepared by:  
Brian H Newton, P. Geo

Minroc Management Limited  
2857 Sherwood Heights Drive, Unit 2  
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Effective Date: December 21, 2022  
Amended August 1, 2023

## CERTIFICATE OF QUALIFIED PERSON

I, Brian H Newton P. Geo, certify that;

1. I reside at 1518 Jasmine Crescent, Oakville, Ontario L6H 3H3 and I am a geologist practitioner for Minroc Management Limited, office address 2857 Sherwood Heights Unit 2, Oakville Ontario L6J 7J9.
2. This certificate applies to the technical report entitled "NI 43-101 Technical Report on the Horwood Copper Property, District of Sudbury, Ontario" with an effective date of 21 December 2022, revised August 1 2023.
3. I am a graduate of McMaster University, Hamilton, Ontario, Canada with a Bachelor of Science (1984) and I have practiced my profession continually since that time. This practice has included:
  - Designing and implementing exploration programs across Canada and abroad;
  - Undertaking QP site visits to properties in Canada and abroad;
  - Authoring NI 43-101 Technical Reports.Past projects have included several copper deposits at all stages of exploration and development.
4. I am a member of Professional Geoscientists of Ontario (PGO), Membership Number 1330.
5. I am a Qualified Person, as per NI 43-101.
6. I have read NI 43-101 as well as all sections of this Report, verify that this Report was prepared in compliance with the Instrument, and am responsible for all sections of this Report.
7. I visited the Horwood Property on the 4<sup>th</sup> November, 2022.
8. I am independent, as described in Section 1.5 of NI 43-101, of the Horwood Property, Horwood Exploration Corp. and all other interested parties. I have had no prior involvement with the Horwood Property prior to the preparation of this Report.
9. As of the date of this certificate, to the best of my knowledge, information and belief, this Technical Report contains all scientific and technical information that is required to be disclosed to make this Technical Report not misleading.

Effective Date: 21<sup>st</sup> December 2022

*"Brian H Newton"*

Brian H Newton P. Geo

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*Note: All UTM's are in NAD83 zone 17T. All northings are against true/geodetic north.  
Costs are in Canadian Dollars unless otherwise specified*



## **1.0 SUMMARY**

### **1.1 General**

Minroc Management Limited (Minroc) has been retained by Horwood Exploration Corp. ("HEC" or the "Issuer") to complete a technical report prepared in accordance with NI 43-101 pertaining to the Horwood Property (the "Property"). The purpose of this report is to disclose all material scientific and technical information pertaining to the Horwood Property, in accordance with NI 43-101 and as required to facilitate the listing of HEC on the Canadian Securities Exchange, and to recommend additional exploration.

Horwood Exploration Corp. (HEC) is a mineral exploration company addressed at 9285 - 203B Street, Langley, British Columbia, V1M 2L9.

### **1.2 Property Description, Location and Access**

The Horwood Property is located in Horwood and Silk Townships in the Sudbury District of Ontario, approximately 90 kilometres southwest of Timmins in a straight line. The nearest major road is Highway 101 which passes about 20 km to the north of the Property. The smaller towns of Foleyet and Chapleau are approximately 20 and 105 km west of the property along Highway 101. The Property lies within NTS map sheets 41O/16 and 42B/01 in the Porcupine Mining Division.

The Property consists of two hundred and ninety-six (296) mining claim cells, arranged into forty-five (45) Multicell Claims which form two non-contiguous blocks. The claims have a total area of 68.36 km<sup>2</sup> after accommodating for overlaps with private patented claims. The largest claim block surrounds five smaller areas of third-party claim ownership as well as a number of small patents that cover cottage properties on Horwood Lake. The claims are registered in the name of Gravel Ridge Resources Ltd (40 out of 45) and Perry Vern English (5 out of 45). The claim groups lie atop Crown land. In the south the Property abuts two groups of historic mining patents (where surface and subsurface rights are held) which cover the historic Orofino and Smith-Thorne gold deposits.

The historic Denross gold occurrence is within the boundaries of the Property, located within Claim 717970 at 405,470 mE, 5,320,812 mN (Zone 17T, NAD83).

According to the option agreement dated the 4<sup>th</sup> May 2022, (The "Agreement") and an Amending Agreement signed on the 4<sup>th</sup> May 2023 (The "Amendment"), HEC has been granted an option by Gravel Ridge Resources Corp and 1544230 Ontario Inc (together, the "Optionors") to acquire a 100% undivided interest in and to the Horwood Project claims, by:

- Making an Initial Payment of \$24,000 to the Optionors;
- Making a \$25,000 cash payment, which was made on May 4<sup>th</sup> 2022, and issuing 500,000 common shares in HEC to the Optionors on the listing date on the Canadian Securities Exchange;
- Making a \$30,000 cash payment on the first anniversary of the listing date on the Canadian Securities Exchange;

- Making a \$45,000 cash payment on the second anniversary of the listing date on the Canadian Securities Exchange.

Further, HEC's tenure will be subject to a 2% production royalty owed to the Optionors, which can be reduced to 1% by way of a one-time payment to the Optionors of \$1,000,000.

Payments and share issuances are to be divided equally between the two Optionors.

### **1.3 History**

Exploration in the central Swayze Belt around the Horwood Property has been heavily focused on gold and has not been especially intense since the early 20<sup>th</sup> century.

Most historic work programs only have partial overlap with the Horwood Property. Historically, portions of the Horwood Property were explored as part of larger exploration programs which were primarily focused on targets that are outside the Property. The Orofino deposit, which lies just outside the Horwood Property, was first discovered in 1934, explored underground in the late 1940s and again explored in detail in the 1980s. These 1980s programs also included mapping and drilling on secondary gold occurrences within the Property. Similarly, JML Resources and Amador Gold explored a number of gold showings associated with the Horwood Peninsula Pluton in the 1990s-2000s - most of these are outside the Horwood Property but some of them lie within the Horwood claims, including the Denross occurrence. No detailed compilation of historic exploration work on the Horwood Property has yet taken place.

Furthermore, there is some history of exploring for industrial minerals in the region, mostly focused on the Hardiman Deformation Zone ("HDZ"). An area of ultramafics in the northeast of the present Horwood Property was explored for mineral filler (substitutes for asbestos) in the early 2000s. In the 1990s Roseval Silica Inc. quarried silica at three sites within quartz veins associated with the HDZ, within 1 km of the two outlying claims 746611 and 758077.

### **1.4 Geological Setting, Mineralization, and Deposit Type**

The Horwood Property lies within the southwest portion of the Abitibi Subprovince, part of the Superior Province of the Canadian Shield. The Abitibi Subprovince consists, broadly, of a greenstone belts of late Archean-age, composed of mafic to felsic volcanics and sedimentary units, into which are intruded volumetrically significant syn-volcanic to late granitoid bodies. The Abitibi subprovince is divided into Northern and Southern Volcanic Zones by the Destor-Porcupine deformation zone based on geochronological data.

Mafic and ultramafic intrusives, and chemical sediments (iron formations) are commonly interlayered with volcanic edifices. On a regional scale, stratigraphic units generally oriented east-west with subvertical dip, are separated by crustal-scale deformation zones. The metamorphic grade is generally inside the lower greenschist environment but increasing to amphibolite grade in the vicinity of syn-tectonic granodiorite-tonalite batholiths.

The Horwood Property lies in the east-centre of the Swayze Greenstone Belt, a mafic-dominated swath of volcanics bounded by TTG-type granitoid masses which forms the southwestern most portion of the Abitibi Subprovince. It is mostly underlain by a thick package of mafic flows, autobreccias, pillows and minor variolitic flows, striking broadly northeasterly with dips varying from subvertical to about 40° westerly, around Hardiman Bay. Minor ultramafic and intermediate to felsic volcanic phases as well as interflow type sediments are present. Mafic tuff units noted in several drill programs in the area may represent shear deformation. Gabbroic sills and stocks post-date this volcanosedimentary cycle and are intruded into the package, particularly southwest of Horwood Lake and around Stangiff Lake, and with some amount of structural control exhibited by a north-northeast fabric. An elongated biotite granodiorite stock, the Horwood Peninsula Pluton ("HPP"), crosses the northern part of the Property with a northeasterly trend. In places it is internally sheared and carries the north-northeasterly foliation (Wood 2005). Its northern limb is in contact with one of the aforementioned gabbroic stocks. Darke (1995) mentions quartz diorite and (dioritic?) quartz-porphyry units in this area which may represent phases of the HPP or separate sills. Conversely, Dadson (1980) lists "Quartz Diorite (metagabbro)" as a major lithology in the Orofino area hinting that the affinity of different intrusive units requires further study.

The Horwood Property lies south of the Destor-Porcupine Deformation Zone and is traversed by the Hardiman Deformation Zone, which is interpreted as a secondary, regional-scale splay structure emanating from the Destor-Porcupine. This runs southwesterly through the main body of the Property. Serpentinized ultramafic units are noted close to the fault (Breaks 1978) and their presence is likely the cause of the preferred route taken by ductile deformation. To the northeast of the Property, the HDZ hosts sizeable quartz veins which have been quarried for silica. A Proterozoic (Abitibi swarm) diabase dyke parallels the HDZ, about 1,500 m to its north. Minor Matachewan (north-trending) diabase dykes are also noted in the area (Laird 1935).

Most of the gold mineralization in and around the Horwood Property takes the form of quartz-carbonate vein-hosted or vein-associated sulphides within gabbros, intermediate-felsic intrusives and mafic volcanics, proximal to or within ductile-deformed zones, which themselves are mostly controlled by lithologic contacts and the presence of ultramafic zones within the volcanics. Pyrite is the dominant sulphide, found as disseminations, stringers and clots, and is typically found alongside minor chalcopyrite and occasional pyrrhotite and sphalerite. Alteration commonly mentioned includes silicification and sericite and/or muscovite in and around the deformation zones (Siragusa 1991, Hartley 2010). Fuchsite is mentioned in spinifex komatiite units (Walmsley 2011). Coarse/native gold was noted at the "Robert Sample 6515" occurrence (Draper 1997).

Gold, gold-copper, zinc and molybdenum mineralization can be found in and around the Horwood Peninsula Pluton ("HPP") (only partly within the Horwood Property). Gold is found as shear-hosted narrow pyrite disseminations and vein-type mineralization in the mafic wallrocks surrounding the porphyry stock as well as inside it (Darke 1995). Wood (2005) further reports "carbonate-silica-pyrite rich horizons" within the HPP. It is suggested that gold mineralization may prefer the porphyritic phases of the pluton.

Hartley (2009) discusses Au zones traced by DDH within a gabbro along the southern limb of the HPP which have a relatively shallow, 20-30° dip to the northwest.

The gold mineralization at the Horwood Property can be seen as examples of orogenic gold systems. Orogenic gold, or greenstone-hosted gold deposits generally consist of a system of auriferous quartz-carbonate veins, which have a strong spatial association with crustal-scale shear zones with mixed brittle-ductile expression. Further, there is commonly an association with second-order fault structures, sedimentary unconformity, locally including iron formations. Minor intrusions such as porphyritic intermediate dykes and alkaline magmatic events.

Orogenic gold deposits are particularly common in Archean-age greenstone belts. The shear zone is generally theorized to act as a pathway for hydrothermal fluids. These fluids are then emplaced as veins in dilated portions of ductile-deformed units, in brecciated portions of more brittle units, and/or on the contacts of units which may act as chemical traps, such as iron formations. Orogenic gold deposits can have highly complex geometries due to continued tectonic activity on the shear zone after the emplacement of the mineralized veins.

In the Abitibi, gold mineralization frequently manifests as a mix of coarse and fine refractory gold, associated with sulphides, most commonly pyrite, chalcopyrite and arsenopyrite. Commonly associated alteration minerals include chlorite, sericite and carbonates.

## **1.5 Exploration and Drilling**

A heliborne high-resolution magnetic survey was flown over the Horwood Property by Prospectair Geosurveys from October 27<sup>th</sup> to November 1<sup>st</sup>, 2022. The work was completed on behalf of HEC. The survey was flown on a grid with 50 m spacing and 500 m spaced control lines, with the main lines following an azimuth of 70°. The grid totals 1,291 line km and covers the main Horwood claim block and its environs. The northeastern two claims at Roseval were not covered.

Plots were made of:

- total magnetic intensity (TMI);
- the first and second vertical gradients of the total field;
- the residual total field (representing the difference between the TMI dataset and the International Geomagnetic Reference Field);
- the tilt derivative (the arctan angle between the horizontal and vertical gradients);
- elevation data.

The magnetic data shows a series of linear features which likely correspond to Proterozoic dyke swarms, as well as more subtle features from the volcanic stratigraphy. No detailed interpretation of the magnetic data has yet taken place.

Horwood Exploration Corp. has not yet completed any drilling on the Property as of the effective date of this report.

## **1.6 Sampling, Analysis and Data Verification**

The Denross gold occurrence on the Horwood Property was visited by Brian Newton, P. Geo, and Sahil Alurkar, GIT on 3<sup>rd</sup> November 2022. Five grab samples were taken from the Denross stripped area and returned elevated Au values to a high of 6.01 g/t Au (sample A249586).

## **1.7 Mineral Resource and Mineral Reserve Estimates**

The Property is an early-stage exploration property. There are no current Mineral Resources or Reserves on the Property as defined in the Definition Standards on Mineral Resources and Mineral Reserves published by the Canadian Institute of Mines, Minerals and Petroleum (CIM), JORC or any equivalent international code.

## **1.8 Recommendations for Exploration**

The Author recommends that HEC complete a two phase program to advance the Property. A Phase 1 program is outlined here consisting of data review and compilation and grid-based geologic mapping and prospecting. This is to be followed by a subsequent Phase 2 exploration program. The exact nature of Phase 2 will depend on findings from Phase 1 but the implementation of Phase 2 will not depend on any specific outcome from Phase 1.

## **2.0 INTRODUCTION**

Minroc has been retained by Horwood Exploration Corp. to complete a technical report prepared in accordance with NI 43-101 pertaining to the Horwood Property. The purpose of this report is to disclose all material scientific and technical information pertaining to the Horwood Property, in accordance with NI 43-101 and as required to facilitate HEC's listing on the Canadian Securities Exchange, and to recommend additional exploration.

### **2.1 Notes on Issuer**

Horwood Exploration Corp. is a mineral exploration company addressed at 9285 203B Street, Langley, British Columbia, V1M 2L9.

According to the option agreement dated the 4<sup>th</sup> May 2022, (The "Agreement") and an Amending Agreement signed on the 4<sup>th</sup> May 2023 (The "Amendment"), HEC has been granted an option by Gravel Ridge Resources Corp and 1544230 Ontario Inc (together, the "Optionors") to acquire a 100% undivided interest in and to the Horwood Project claims, by:

- Making an Initial Payment of \$24,000 to the Optionors;
- Making a \$25,000 cash payment, which was made on May 4<sup>th</sup> 2022, and issuing 500,000 common shares in HEC to the Optionors on the listing date on the Canadian Securities Exchange;
- Making a \$30,000 cash payment on the first anniversary of the listing date on the Canadian Securities Exchange;
- Making a \$45,000 cash payment on the second anniversary of the listing date on the Canadian Securities Exchange.

Further, HEC's tenure will be subject to a 2% production royalty owed to the Optionors, which can be reduced to 1% by way of a one-time payment to the Optionors of \$1,000,000.

Payments and share issuances are to be divided equally between the two Optionors.

### **2.2 Definitions**

The following list presents the definitions used in this report.

**Table 1 Definitions and Abbreviations**

<b>Abbreviation or term</b>	<b>Definition</b>
°	Degrees (angle)
°C	Degrees Celsius (temperature)
<b>AFRI</b>	Assessment File Research Image (Ontario assessment file catalogue system)
<b>Ag</b>	Silver (chemical symbol)
<b>As</b>	Arsenic (chemical symbol)
<b>Au</b>	Gold (chemical symbol)
<b>Bi</b>	Bismuth (chemical symbol)
<b>CIM</b>	Canadian institute of Mining, Minerals and Petroleum
<b>cm</b>	Centimetre (measurement)
<b>Co</b>	Cobalt (chemical symbol)
<b>Cu</b>	Copper (chemical symbol)
<b>DDH</b>	Diamond Drillhole
<b>EM</b>	Electromagnetic (geophysical conductivity survey)
<b>ENDM</b>	Ministry of Energy, Northern Development and Mines (Ontario ministry)
<b>ft</b>	Feet (imperial distance)
<b>g/t</b>	Grams per tonne (concentration)
<b>Ga</b>	Billion years (Giga-annum, age)
<b>GIT</b>	Geoscientist-in-Training
<b>GPS</b>	Global Positioning System
<b>Ha</b>	Hectare (area)
<b>HPP</b>	Horwood Peninsula Pluton (geologic feature on Horwood Property)
<b>Hz</b>	Hertz (frequency)
<b>ICP-MS</b>	Inductively Coupled Plasma – Mass Spectrometry (chemical analytical method)
<b>IP</b>	Induced Polarization (geophysical survey technique)
<b>JORC</b>	Joint Ore Reserves Committee (Australian mineral resource reporting code)
<b>kg</b>	Kilogram (weight)
<b>km</b>	Kilometre (distance)
<b>km<sup>2</sup></b>	Square kilometre (area)
<b>Kt</b>	Kilotonne (thousand tonnes, weight)
<b>kΩ</b>	Kilo-ohm (electrical resistance)
<b>LRIA</b>	Lakes and Rivers Improvement Act
<b>µm</b>	Micrometre or micron (distance)
<b>m</b>	Metre (distance)
<b>mE</b>	Metres east
<b>mN</b>	Metres north

<b>MDI</b>	Mineral Deposit Inventory (Ontario mineral deposit catalogue)
<b>MLAS</b>	Mining Lands Administration System (Ontario online mining claim staking/management system)
<b>mm</b>	Millimetre (distance)
<b>Mo</b>	Molybdenum (chemical symbol)
<b>Mt</b>	Megatonne (million tonnes, weight)
<b>NAD83</b>	North American Datum 1983 (geodetic datum)
<b>NI 43-101</b>	National Instrument 43-101 (Canadian mineral resource reporting code)
<b>NSR</b>	Net Smelter Royalty
<b>ODD</b>	Ontario Drillhole Database (OGS diamond drillhole compilation)
<b>OGS</b>	Ontario Geological Survey
<b>P. Geo</b>	Professional Geoscientist (as accredited in Canada)
<b>Pb</b>	Lead (chemical symbol)
<b>PLA</b>	Public Lands Act
<b>QA/QC</b>	Quality Assurance and Quality Control
<b>QP</b>	Qualified Person
<b>SEDAR</b>	System for Electronic Document Analysis and Retrieval (Canadian securities document filing system)
<b>t</b>	Tonne (weight)
<b>TTG</b>	Tonalite-Trondhjemite-Granodiorite (Archean posttectonic intrusive complex style)
<b>U</b>	Uranium (chemical symbol)
<b>UTM</b>	Universal Transverse Mercator (coordinate reference system)
<b>VLF</b>	Very Low Frequency (electromagnetic survey method)

## 2.3 Sources of Information

This report was written based upon documents and data, both public and private, provided by HEC, as well as publicly available reports and data accessed via SEDAR, the online assessment file repository maintained by the Ontario ENDM, the Ontario mineral claims system (MLAS) and the Ontario Land Registry Access system. The Author has reviewed the data described above and believes that it is sufficiently accurate for the purposes of this technical report.

## 2.4 Personal Inspection

The Property was visited by Brian H Newton, P. Geo, and Sahil Alurkar, GIT, of Minroc on 4<sup>th</sup> November 2022. Specifically, the Denross showing area was visited. Five grab samples were taken from the Denross stripped area.

## 3.0 RELIANCE ON OTHER EXPERTS

While the Author has reviewed the accessible public data pertaining to the mining claims forming the Property, the Author has not investigated the ownership, legal or tax status of the mineral tenure and are not qualified to do so. The Author has relied upon



information provided by the Issuer with respect to information regarding ownership, permits, licenses, environmental concerns, and the agreements referenced in section 4.5 of this Report. The Author has relied on the information provided by the Issuer, and information presented by the Ontario ENDM and in the Ontario Mining Act, as more particularly set out in section 20.0 References, as accurate.

## **4.0 PROPERTY DESCRIPTION AND LOCATION**

### **4.1 Area**

The Horwood Property consists of two hundred and ninety-six (296) mining claim cells, arranged into forty-five (45) Multicell Claims which form two non-contiguous blocks. The claims have a total area of 68.36 km<sup>2</sup> after accommodating for overlaps with private patented claims. The largest claim block surrounds four smaller areas of third-party claim ownership as well as a number of small patents that cover cottage properties on Horwood Lake.

### **4.2 Location**

The Property is located in Horwood and Silk Townships in the Sudbury District of Ontario, approximately 90 kilometres southwest of Timmins in a straight line. The nearest major road is Highway 101 which passes about 20 km to the north of the Property. The smaller towns of Foleyet and Chapleau are approximately 20 and 105 km west of the property along Highway 101 (Figures 2, 3).

The Property lies within NTS map sheets 41O/16 and 42B/01 in the Porcupine Mining Division.

The historic Denross gold occurrence is located on the Horwood Property, within Claim 717970 at 405,470 mE, 5,320,812 mN (Zone 17T, NAD83).

### **4.3 Description of Mineral Tenure**

The Horwood Property consists of two hundred and ninety-six (296) mining claim cells, arranged into forty-five (45) Multicell Claims which form two non-contiguous blocks.

The claim groups lie atop Crown land. In the south the Property abuts two groups of historic mining patents (where surface and subsurface rights are held) which cover the historic Orofino and Smith-Thorne gold deposits. Claim 700378 overlaps with two small Alienations which are protected ground where exploration cannot be carried out, which cover lakefront cottage properties.

**Table 2 Claim Details and Annual Work Required**

Claim	Issue Date	Due Date	Work Required	Holder	# Cells
700378	2022-01-07	2024-01-04	\$ 10,000.00	(100) Gravel Ridge Resources Ltd.	25
700379	2022-01-07	2024-01-04	\$ 9,200.00	(100) Gravel Ridge Resources Ltd.	23
715342	2022-03-22	2024-03-22	\$ 5,600.00	(100) Gravel Ridge Resources Ltd.	14
716846	2022-04-03	2024-04-03	\$ 4,400.00	(100) Gravel Ridge Resources Ltd.	11
717594	2022-04-08	2024-04-08	\$ 400.00	(100) Gravel Ridge Resources Ltd.	1
717595	2022-04-08	2024-04-08	\$ 800.00	(100) Gravel Ridge Resources Ltd.	2
717596	2022-04-08	2024-04-08	\$ 400.00	(100) Gravel Ridge Resources Ltd.	1
717597	2022-04-08	2024-04-08	\$ 400.00	(100) Gravel Ridge Resources Ltd.	1
717598	2022-04-08	2024-04-08	\$ 400.00	(100) Gravel Ridge Resources Ltd.	1
717883	2022-04-09	2024-04-09	\$ 800.00	(100) Gravel Ridge Resources Ltd.	2
717933	2022-04-09	2024-04-09	\$ 2,400.00	(100) Gravel Ridge Resources Ltd.	6
717942	2022-04-09	2024-04-09	\$ 400.00	(100) Gravel Ridge Resources Ltd.	1
717969	2022-04-09	2024-04-09	\$ 400.00	(100) Gravel Ridge Resources Ltd.	1
717970	2022-04-09	2024-04-09	\$ 8,400.00	(100) Gravel Ridge Resources Ltd.	21
718151	2022-04-10	2024-04-10	\$ 6,800.00	(100) Gravel Ridge Resources Ltd.	17
718165	2022-04-10	2024-04-10	\$ 6,000.00	(100) Gravel Ridge Resources Ltd.	15
718166	2022-04-10	2024-04-10	\$ 3,600.00	(100) Gravel Ridge Resources Ltd.	9
718171	2022-04-10	2024-04-10	\$ 3,600.00	(100) Gravel Ridge Resources Ltd.	9
718531	2022-04-12	2024-04-12	\$ 2,000.00	(100) Gravel Ridge Resources Ltd.	5
718532	2022-04-12	2024-04-12	\$ 1,200.00	(100) Gravel Ridge Resources Ltd.	3
718533	2022-04-12	2024-04-12	\$ 800.00	(100) Gravel Ridge Resources Ltd.	2
718534	2022-04-12	2024-04-12	\$ 1,200.00	(100) Gravel Ridge Resources Ltd.	3
718538	2022-04-12	2024-04-12	\$ 400.00	(100) Gravel Ridge Resources Ltd.	1
718539	2022-04-12	2024-04-12	\$ 1,600.00	(100) Gravel Ridge Resources Ltd.	4
718553	2022-04-12	2024-04-09	\$ 9,200.00	(100) Gravel Ridge Resources Ltd.	23
718554	2022-04-12	2024-04-09	\$ 4,000.00	(100) Gravel Ridge Resources Ltd.	10
718764	2022-04-13	2024-04-13	\$ 1,200.00	(100) Gravel Ridge Resources Ltd.	3
718784	2022-04-13	2024-04-13	\$ 1,600.00	(100) Gravel Ridge Resources Ltd.	4
720162	2022-04-17	2024-04-17	\$ 1,600.00	(100) Gravel Ridge Resources Ltd.	4
720177	2022-04-17	2024-04-17	\$ 1,600.00	(100) Gravel Ridge Resources Ltd.	4
721435	2022-04-24	2024-04-24	\$ 800.00	(100) Gravel Ridge Resources Ltd.	2
721440	2022-04-24	2024-04-24	\$ 800.00	(100) Gravel Ridge Resources Ltd.	2
721441	2022-04-24	2024-04-24	\$ 5,600.00	(100) Gravel Ridge Resources Ltd.	14
721442	2022-04-24	2024-04-24	\$ 5,600.00	(100) Gravel Ridge Resources Ltd.	14
721452	2022-04-24	2024-04-24	\$ 400.00	(100) Gravel Ridge Resources Ltd.	1

721560	2022-04-25	2024-04-25	\$ 400.00	(100) Gravel Ridge Resources Ltd.	1
741009	2022-08-01	2024-08-01	\$ 1,200.00	(100) Gravel Ridge Resources Ltd.	3
746611	2022-09-16	2024-09-16	\$ 1,200.00	(100) Gravel Ridge Resources Ltd.	3
758077	2022-11-18	2024-11-18	\$ 2,000.00	(100) Gravel Ridge Resources Ltd.	5
765050	2022-12-02	2024-12-02	\$ 4,400.00	(100) Gravel Ridge Resources Ltd.	11
718167	2022-04-10	2024-04-10	\$ 800.00	(100) PERRY VERN ENGLISH	2
718172	2022-04-10	2024-04-10	\$ 1,600.00	(100) PERRY VERN ENGLISH	4
745026	2022-09-08	2024-09-08	\$ 800.00	(100) PERRY VERN ENGLISH	2
745027	2022-09-08	2024-09-08	\$ 1,200.00	(100) PERRY VERN ENGLISH	3
745029	2022-09-08	2024-09-08	\$ 1,200.00	(100) PERRY VERN ENGLISH	3

#### 4.4 Nature of Issuer's Title

The Horwood Property consists entirely of mining claims. In northern Ontario, mining claims can be acquired by any person or entity, possessing a Prospector's License, on provincially owned Crown Land as well as land for which third party surface rights exist, subject to limits as per the Ontario Mining Act and to the discretion of the Provincial Mining Recorder and Minister for Northern Development and Mines. Possession of a mining claim confers upon the holder the exclusive right to explore for all minerals, which in the context of the Ontario Mining Act refers to base and precious metals, coal, salt and "quarry and pit material", but does not include unconsolidated aggregate material, peat or oil and gas. A mineral claim does not confer any surface rights; the holder of a claim is required to notify any surface rights holders and come to arrangements regarding such factors as access and surface disturbance. A mineral claim does not confer the right to mine minerals; this requires a mining lease.

Since 2018, mining claims in Ontario have been acquired by map-staking using the online MLAS system. Claims are typically 16 hectares in area and square in shape. Claims endure for two years and can be renewed following the filing of reports of exploration work meeting the required value for assessment credits. At the time of writing, this value is set at \$400 per claim, an annual eligible work expenditure of \$118,400 is required to keep the claims listed in Table 2 above in good standing.

For further information, the reader is directed to review the Ontario Mining Act and the publications of the Ministry of Northern Development and Mines.

#### 4.5 Ownership Details

The claims are registered in the name of Gravel Ridge Resources Ltd (40 out of 45) and Perry Vern English (5 out of 45).

According to the option agreement dated the 4<sup>th</sup> May 2022, (The "Agreement") and an Amending Agreement signed on the 4<sup>th</sup> May 2023 (The "Amendment"), HEC has been granted an option by Gravel Ridge Resources Corp and 1544230 Ontario Inc (together, the "Optionors") to acquire a 100% undivided interest in and to the Horwood Project

claims, by:

- Making an Initial Payment of \$24,000 to the Optionors;
- Making a \$25,000 cash payment, which was made of May 4th 2022, and issuing 500,000 common shares in HEC to the Optionors on the listing date on the Canadian Securities Exchange;
- Making a \$30,000 cash payment on the first anniversary of the listing date on the Canadian Securities Exchange;
- Making a \$45,000 cash payment on the second anniversary of the listing date on the Canadian Securities Exchange.

Further, HEC's tenure will be subject to a 2% production royalty owed to the Optionors, which can be reduced to 1% by way of a one-time payment to the Optionors of \$1,000,000.

Payments and share issuances are to be divided equally between the two Optionors.

#### **4.6 Environmental liabilities**

To the best of the Author's knowledge, there are no environmental liabilities which would affect the Issuer's title upon the Property or ability to perform work upon it.

#### **4.7 Permits Required**

An Exploration Permit is required should the holder wish to complete any mechanized or invasive exploration (including drilling, stripping, trenching, significant line cutting, and ground geophysical surveys requiring generators). To acquire an Exploration Permit, the holder must:

- Submit an Exploration Plan to the ENDM outlining the proposed work.
- Notify and consult with the Mississauga First Nation and any and all other First Nations or Metis groups who have Treaty rights or traditional land uses (e.g. hunting, trapping, fishing) in the areas in question, so as to avoid conflicts regarding exploration activities, traditional land uses and significant sites.
- Notify any surface rights holders of the intent to file an Exploration Plan.

Any anticipated or potential impacts to fish habitat must be approved at the federal level by the Department of Fisheries and Oceans (DFO) via the Fisheries Act. Liaison may also be required with the Ministry of Natural Resources, local conservation authorities and First Nations.

Bridges, culverts and winter ice roads for the mobilization of mechanized equipment across bodies or courses of water require Ministry of Natural Resources approval, regardless of the surface rights status. Approval may be acquired in the form of a work permit under the Public Lands Act ("PLA") or approvals under the Lakes and Rivers Improvement Act ("LRIA").

Any exploration or development work which requires the pumping of 50,000 litres or more of water per day must be approved by the Ministry of the Environment via the Ontario Water Resources Act. If approved, the MOE will issue a Permit to Take

Water.

#### **4.8 Other Factors**

The Property lies within the bounds of Treaty 9 between the Crown and the Anishinaabe and Omushkegowuk Cree and is in the traditional lands of the Mattagami, Flying Post and Brunswick House First Nations. The Author recommends that Horwood proactively engage with these First Nation communities so as to build trust and avoid conflicts regarding land use and disturbance.





Figure 1 Property location







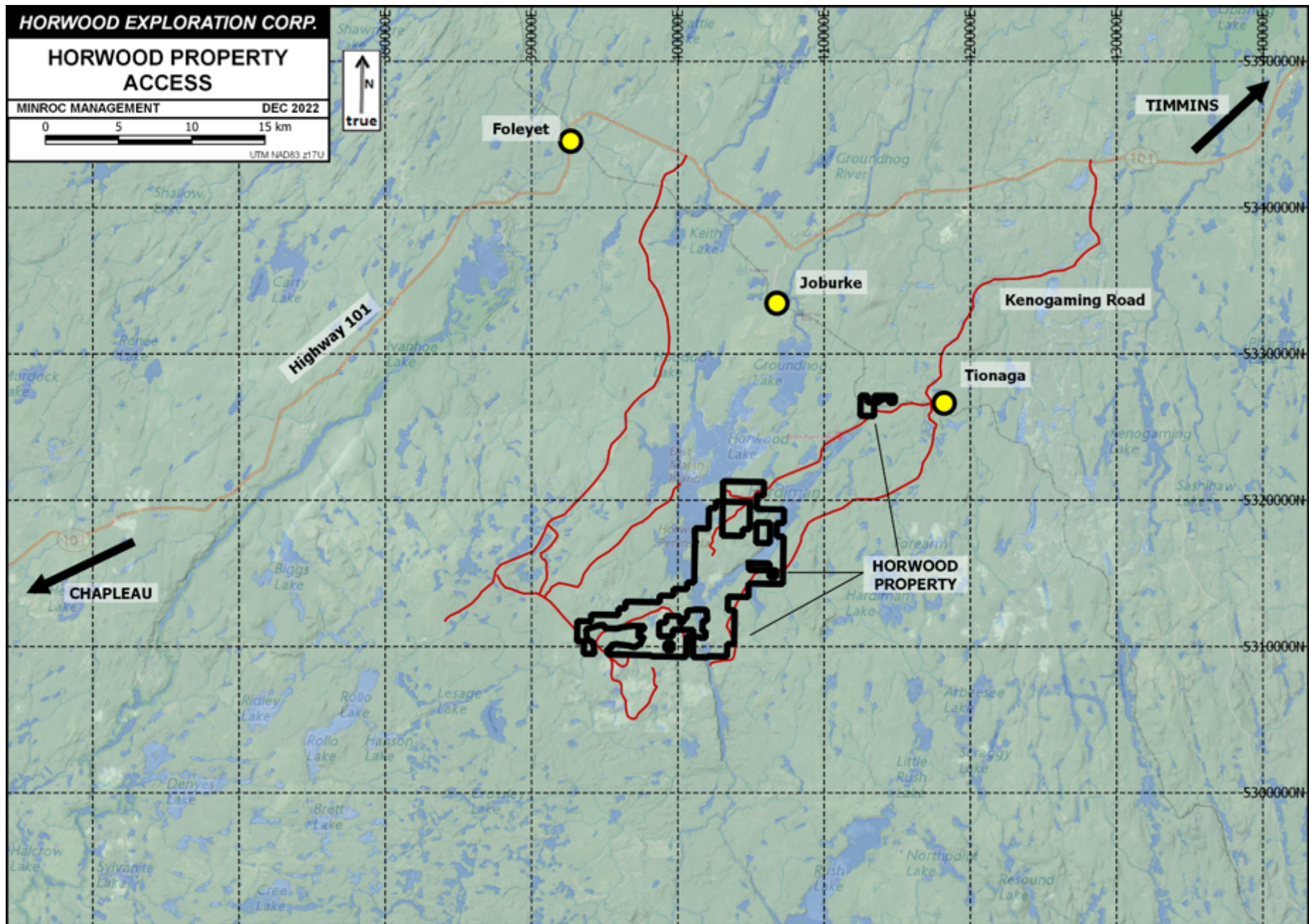


Figure 3 Access routes to the Horwood Property



## **5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE & PHYSIOGRAPHY**

### **5.1 Topography, Elevation and Vegetation**

The landscape is a typical Northeastern Ontario continental forest environment. The Property overlaps the southern half of Horwood Lake and the southern part of Hardiman Bay, which splits from Horwood Lake in the centre of the Property. The largest lake entirely within the Property is Stangiff Lake in the southwest, with an area of about 30 Ha. The claims are heavily wooded, mostly with stands of spruce and fir. The forestry industry is active in the area and much of the Property area is in varying stages of regrowth. Elevation varies from 340 m to 400 m with several hills and ridges. The most prominent topographic feature is a northeast-striking scarp and trough outlining the eastern arm of Horwood Lake and the Hardiman Deformation Zone.

Water for drilling is readily available from ponds and lakes located within the claim block and from several creeks that cross the Property.

### **5.2 Accessibility**

The northern portion of the Property can be reached by traveling southwest on Highway 101 from Timmins. The Kenogaming logging/rail access road runs south from Highway 101 at a point about 40 km east of Foleyet. This road provides access to the CN rail sidings at Tionaga and Joburke. At Tionaga a secondary road runs west and provides access to the northern part of the main body of the Property after about 10 km. One of the outlying portions of the Property (the two outlying claims 758077 and 746611) lie about 4 km along this road, west of Tionaga.

Access to the southwest part of the Property is via another logging road runs south from Highway 101 at a point about 9 km west of Foleyet. After about 35 km this road in turn gives access to a wider network of forestry roads which provide access to several parts of the Horwood Property.

Alternatively, highway 616 (the Groundhog Lake Road) runs south from Highway 101 to the rail siding at Joburke and to camps on the north shore of Horwood Lake. From here, the Horwood claims can be reached by boat on Horwood Lake.

### **5.3 Proximity to Infrastructure**

The closest major community is Timmins, which is about 90 km by air from the Property or about 120 km by road, with a population of approximately 45,000. The much smaller communities of Foleyet (population 200) and Chapleau (population 2,000) can also be reached by road. A CN rail line runs through Joburke and Tionaga, about 20 km north of the Property. Joburke and Tionaga are uninhabited save for seasonal fishing and hunting tourism. Electrical supply is available at Groundhog River where transmission lines run to the OPG dam at the head of Horwood Lake, about 12 km north of the Property. This installation manages waterflow for hydroelectric dams further downstream but is not a hydroelectric dam itself.

There are many fishing and hunting lodges in the area including on Horwood Lake, which can be used as accommodation during exploration programs.

Timmins is one of the major mining hubs of Ontario and has an industrial base and workforce that is experienced with the mining and mineral exploration industries.

The Property is at an early stage of exploration. However, the Property area provides ample space for potential future surface rights required for mining operations, potential tailings storage areas, potential waste disposal areas, heap leach pad areas, potential processing plant sites and other mining and development infrastructure. The Issuer must be granted a Mining Lease before mining or development infrastructure can be established on the Property.

## **5.4 Climate**

The property lies within Köppen climate zone Dfb (hemiboreal humid continental). Winters are cold and dry with typical midwinter lows of about -25° C and snowfall of about 300 cm. Summers are warm and wet but short, with temperature highs of 25° C and total rainfall of over 500 mm. The climate and terrain put some limits on exploration. The operating season can be considered year-round save for spring thaw and late autumn freeze-up periods. Biting insects can be a nuisance in the summer months.

## **6.0 HISTORY**

### **6.1 Prior Ownership**

The claims comprising the Horwood Property were map-staked by Gravel Ridge Resources and Perry Vern English in 2022.

### **6.2 Cautionary Note**

Most historic work programs only have partial overlap with the Horwood Property and no detailed compilation of historic data has yet taken place. The Author cautions that the following section discusses work programs which lie at least partly outside the Horwood Property.

### **6.3 Discussion of Work**

#### *6.3.1 Regional Context*

Exploration in the central Swayze Belt around the Horwood Property has been heavily focused on gold and has not been significant since the early 20<sup>th</sup> century. The first gold occurrences in Horwood Township were discovered by T Jessop in 1918 on Horwood Lake. The Orofino deposit, which lies just outside the Horwood Property, was first discovered in 1934 and explored most intensively in the late 1940s. The Smith-Thorne (or Tionaga) deposit was discovered and quickly brought into production in 1938-39. About 15 km north of the Property, the Joburke deposit was discovered in 1946 and similarly rapidly developed underground. Production eventually took place intermittently under Noranda in the 1970s.

There is some history of exploring for industrial minerals in the region, mostly focused on the Hardiman Deformation Zone. An area of ultramafics in the northeast of the present Horwood Property was explored for mineral filler (substitutes for asbestos) in the early 2000s. In the 1990s Roseval Silica Inc. quarried silica at three sites within quartz veins associated with the fault located approximately 1 km from the two outlying claims 746611 and 758077.

The exploration history of the Property is best outlined by dividing the Property into four main areas.

### *6.3.2 History - Horwood Lake*

The northern part of the Horwood Property covers parts of a peninsula within Horwood Lake, and adjacent areas. A dozen or so gold and molybdenum occurrences were discovered in and around this part of the Property throughout the 20<sup>th</sup> century, associated with the Horwood Peninsula Pluton. Until the 2000s exploration was piecemeal and took the form either of localized grassroots exploration by small junior companies, or incidental coverage in the periphery of larger projects by larger companies whose main focus was elsewhere, e.g. the Hollinger and Northgate exploration programs which were focused at Orofino. Similarly, the Labbe gold prospect, which lies about 1 km northeast of the Property, was the focus of several grassroots programs which had some overlap with the Property.

In the 1980s Hardiman Bay Mines acquired claims around the shores of Hardiman Bay itself as well as to the east of the Smith-Thorne deposit. The Jacobs occurrence was discovered (or rediscovered) during this program, from which multisulphide-bearing quartz shear veins yielded assays up to 126 ppb Au (Lormand et al 1988). This occurrence is on the very edge of the Horwood Property. The Tarzan Gold prospecting program in the centre-west of the Horwood Peninsula led to the discovery of several minor Cu occurrences in the late 1980s. The MDI notes three “Robert” Au occurrences within the area worked by Tarzan Gold; according to the MDI entries these were discovered in the 1990s (after the Tarzan program) and were also worked by Echo Bay Mines, but the Author could not locate the relevant assessment files.

Denomme, Ross and Morin discovered the Denross occurrence in the 1990s in the northeast corner of the Property and optioned their claim block to Noranda, Phelps-Dodge and then to Haddington Resources who completed a ten-hole drill program. Drillholes directly beneath the showing failed to return appreciable Au values though hole H-95-7, about 350 m to the east, intercepted a quartz-carbonate vein within the HPP which returned 5,769 ppb Au over 0.35 m (Darke 1995).

JML Resources completed the first “property-scale” project in this area in the mid 2000s, with prospecting and a ground magnetic and IP survey covering much of the HPP’s area, followed by an 11 DDH, 1,186 m drill program. The drill program results were underwhelming but were attempts to follow up on narrow, high grade Au prospects discovered on surface (Wood 2005). This was followed by similar drill programs, with similar results, by Amador Gold. Most of the Amador and JML work fell outside the Horwood Property and lie within a block of 3<sup>rd</sup> party claims (presently registered to Solstice Gold Corp.) which are surrounded by the Horwood Property on all sides. JML’s “Zone 2” appears to be the same location as the Denross occurrence, and from which grab samples returned values up to 40.45 g/t Au (Darke 1995).

In the early 2000s Hedman Resources explored an ultramafic body close to Hardiman Bay and developed it for industrial minerals purposes.

Aside from the Hedman drill program, the work programs listed below only have partial overlap with the Horwood Property.

**Table 3 Work History, Horwood Lake Area**

Year	Company	Work	Desc	Reference
1933	F Gould	Prospecting	Discovery of Deburmac prospect	-
1947	Lafontaine Group	DDH	3 DDH, 458 m	`
1948-59	J Lefevre	DDH	4 DDH, 1,115 m	42B01SW8531
1951-64	Horlak Mines	`	`	`
1960	Kerr-Addison Mines	Mag survey, DDH	11 DDH, 1,261 m	42B01SE0069
1961	Ajax Minerals	Mapping, prospecting		41O16NW0036
1963	Queensway Mines	DDH	22 DDH, 1,348 m	`
1972	R G Newman / Hollinger	Prospecting, DDH	1 DDH, 130.8 m	42B01SE0075
1974	Noranda	Mag & EM surveys	`	`
1980	Northgate	Mag, EM, soil, mapping, prospecting	`	`
1985	Ultrix Petroleum	geophys, DDH	5 DDH, 531 m	42B01SE0044
1988	Hardiman Bay Resources	Prospecting	Discovery of Jacobs occurrence	41O16NE0002
1989	Tarzan Gold	Mapping, prospecting	`	`42B01SE0033
1993-94	Denomme & Ross	Prospecting	Discovery of Denross prospect	42B01SW0004
1994-95	Haddington Resources	Mapping, VLF, mag, IP, soil, DDH	10 DDH, 1,795 m	42B01SE0004, 42B01SE0065
1996-97	Patrie, Robert, Morin	Prospecting	Discovery of Robert West, Robert East, Robert 6515 Au occurrences	`
1996-2004	G Ross	Prospecting, stripping	`	42B01SW0002
2003	Hedman Resources	VLF, mapping, DDH, mineralogy, some production (industrial minerals)	26 DDH, 1,720 m	20001765
2004-05	JML Resources	Prospecting, mag, IP, DDH	11 DDH, 1,186 m	20001770
2009-10	Amador Gold	Ground and airborne mag, EM, Prospecting, DDH	40 DDH, 7,261 m	20006555, 20008211

### 6.3.3 History – Orofino

The Horwood Property surrounds the Orofino patents on three sides and so covers some of the peripheral areas of the Orofino exploration programs.

H Landry held a claim group south of Stangiff Lake in 1933 and discovered quartz veining with gold-bearing pyritic halos. This occurrence is entirely within the Horwood Property.

The initial Orofino discovery, by Burke, McIlory and Thorne, was optioned by Hollinger in 1935 and dropped in 1938. The original Orofino property covered about 480 Ha and still exists in the form of a block of patents which are enclosed by the Horwood Property on three sides. In 1945, Orofino Mines Ltd acquired the original patents as well as much of southern Horwood Township (including areas of the present Horwood Property). Numerous drill programs and underground development followed, hampered by forest fires which destroyed the headframe twice in 1949 and 1952. Limited drilling took place in the early 1960s and again under a Camflo option in the 1970s.

From this early period of Orofino work, some work at the western strike extension of the Orofino system fell within the Horwood Property, specifically two Orofino Mines DDH in 1947 and DDH 103 from the 1963 Orofino drill program. The OGS reports assays from one drillhole returning 0.7 g/t Au over 0.5 m (the McVittie occurrence, Fumerton & Wilson 2005).

Hardiman Bay Mines held the ground around Stangiff Lake in the 1960s and completed confirmatory sampling and a drill program on the Landry occurrence as well as other porphyry and diorite targets in 1963. A chip sample from the original Landry trench gave 13 g/t Au over 1.2 m. No assays are reported from the drilling (Smith 1963).

In 1979, Orofino entered into a JV with Northgate Exploration who pursued deposit-scale exploration at Orofino as well as property-scale reconnaissance magnetic and EM surveys, soil grids, prospecting and mapping. This work covered areas of the Horwood Property including the Stangiff Lake area and the Landry prospect. The work at Orofino culminated in a historic ore reserve calculation in 1984 (Atkins et al 1984) after which work appears to have stalled.

The area north of Orofino saw some attention from prospectors in the 1980s when a number of poorly documented Au-Cu occurrences were identified and stripped by Landers and Wdowczyk. At least some of these are within the Horwood Property. Earlier assay certificates are presented in an assessment file from a later Noranda option in 1991 and discuss grab assay results up to 0.018 oz/ton Au, 0.58 oz/ton Ag and 3.30% Cu (Wdowczyk 1982). In 1991, Noseworthy & Mortimer completed one DDH in this area using an OPAP grant; a mix of mafic-intermediate volcanics and feldspar porphyry were noted. Only 3 samples (NSV) were taken from the 172 m hole (Mortimer 1991). Amador Gold completed a 11-hole drill program across this broad region in 2010, with few notable results (Walmsley 2011).

**Table 4 Work History, Orofino area**

Year	Company	Work	Desc	Reference
1933	H Landry	Prospecting	Discovery of Landry prospect	
1933	Burke, McIlroy, Thorne	Prospecting	Discovery of Orofino deposit	
1935	Hollinger	Trenching, channelling		
1945-52	Orofino Mines	Stripping, DDH, underground development	Very limited overlap with Horwood Property	
1963-64	Orofino Mines	DDH	One DDH within Horwood Property. McVittie occurrence drilled	41O16NW0066
1963	Hardiman Bay Mines	Mapping, DDH	Focused on Landry prospect	41O16NW0039, 41O16NW0041
1973-74	Camflo Mines	DDH	No DDH within Horwood Property	41O16NW0040
1979-85	Orofino/Northgate	DDH, Soil, VLF, prospecting	Some overlap with Horwood Property	41O16NW0023, 41O16NW0012, 41O16NW0016
1984-91	Landers & Wdowczyk/ Noranda	Prospecting	Discovery of Wdowczyk occurrence/s	41O16NW0009, 41O16NW0022
1990-91	Mortimer & Noseworthy	DDH	1 DDH, 172m	41O16NW0006
2010	Amador Gold	DDH	11 DDH, 1,851m (mostly within Horwood Property)	20009933

#### *6.3.4 History – Smith-Thorne*

The Smith-Thorne mineralized system lies within patents which are outside the Horwood Property. The Horwood Property wraps around the Smith-Thorne patents to the north and east.

What became the Smith-Thorne deposit was originally discovered in 1933 by F and J Lefever (spelled Lefevre in some files) on the shore of Horwood Lake. In the 1930s the property passed hands to Hollinger and then to Tionaga Gold Mines. After limited production in 1938-39 the Lefevers retained the rights to the patents, which remained dormant until Orofino acquired them in the 1980s.

The Thorne occurrence – within the Horwood Property - was also discovered in the 1930s, at the southern tip of the Horwood Peninsula.

The Orofino-Northgate property covered part of the Smith-Thorne area (referred to as Project 782). Limited drilling of new discoveries took place such as the Gifford occurrence (Atkins et al 1984; outside the Horwood Property). Reconnaissance mapping, humus sampling and ground mag/VLF were completed north and east of the Smith-Thorne patents (i.e. partly within the Horwood Property and covering the Thorne occurrence). VLF conductors and minor Au-Zn soil anomalies were noted, running east-west through this area (the RPN, QUO, M and L grids; Weber et al 1981; Gilman 1985). Surface grab assay values were disappointing (Lormand et al 1988).

Following the wrapping-up of the Orofino-Northgate programs, Hardiman Bay Mines acquired claims around the Smith-Thorne deposit and to the northeast along the shores of Hardiman Bay itself. No notable findings were made in the Smith-Thorne area during their late 1980s programs.

The Thorne occurrence was visited by OGS geologists in 1991. Grab samples from this visit returned values up to 12 g/t Au (Wilson 2005).

#### *6.3.5 History – Roseval Claims*

These two claims lie within an area which has been explored for industrial minerals, both silica from quartz veins and asbestos from serpentinized ultramafic units. Lake Shore Gold held a claim group to the immediate southwest in the 2000s and conducted reconnaissance sampling.

#### *6.3.6 Resources, Reserves and Production*

The Property is an early-stage exploration property. There are no current Mineral Resources or Reserves on the Project as defined in the Definition Standards on Mineral Resources and Mineral Reserves published by the Canadian Institute of Mines, Minerals and Petroleum (CIM), JORC or any equivalent international code.

The Author is unaware of any records of any past base or precious metals production from the Property. The Property has seen some industrial minerals production. Hedman Resources reports that, in 2001, 30,000 tonnes of serpentinite-talc material was pitted from an ultramafic body east of Hardiman Bay within claim 717933, for use as an asbestos substitute. 1,000 tonnes of this material was milled in Matheson, Ontario (Dumka & Guttenberg 2003).

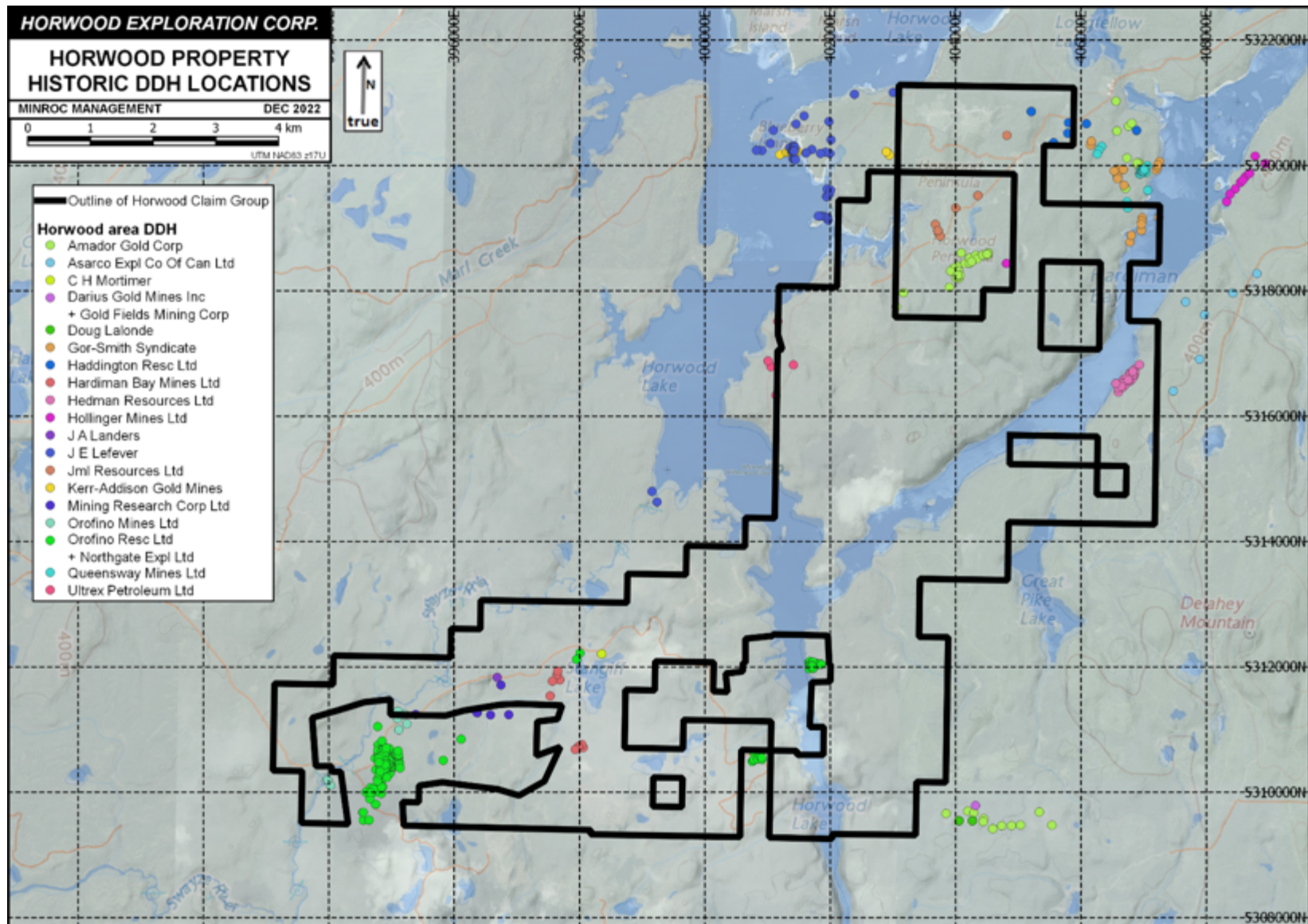
**Table 5 Work History, Smith-Thorne area**

Year	Company	Work	Desc	Reference
1928	J Lefevre	Prospecting	Discovery of Lefevre prospect	`
1935	Hollinger	Drilling, underground development	No DDH within Horwood Property	Breaks 1978
1938-39	Tionaga Gold Mines	Production		Breaks 1978
1984-85	Orofino/Northgate	DDH, Soil, VLF, prospecting	No DDH within Horwood Property	41O16NW0012, 41O16NW0016
1988	Hardiman Bay Resources	Prospecting		41O16NE0002
1989	Golden Dragon Resources	Prospecting	Golden Dragon Cu occurrence discovered	41O16NE0001
1991	OGS	Visit to Thorne		Siragusa 1991

**Table 6 Work History, Roseval Area**

Year	Company	Work	Desc	Reference
1957	Canadian Johns-Manville	Mapping, mag survey	Exploration for asbestos	42B01SE0020
1987	Roseval Silica Inc	Trenching, boreholes	Very limited overlap	42B01SE0017
2001-2002	Maskours Inc	Trenching for silica	Very limited overlap	42B01SE2006
2005-2007	Lake Shore Gold	Reconnaissance prospecting	No notable results	20000002268





**Figure 4 Location of drillholes from the ODD, in and around the Horwood Property** (note: the two outlying claims at Roseval are not shown). The ODD does not include the Camflo DDH at Orofino

## **7.0 GEOLOGICAL SETTING AND MINERALIZATION**

### **7.1 Regional and Local Geology**

The Horwood Property lies within the southwest of the Abitibi Subprovince, part of the Superior Province, of the Canadian Shield. The Abitibi Subprovince consists, broadly, of a greenstone belts of late Archean-age, composed of mafic to felsic volcanics and sedimentary units, into which are intruded volumetrically significant syn-volcanic to late granitoid bodies. The Abitibi subprovince is divided into Northern and Southern Volcanic Zones by the Destor-Porcupine deformation zone based on geochronological data.

Mafic and ultramafic intrusives, and chemical sediments (iron formations) are commonly interlayered with volcanic edifices. On a regional scale, stratigraphic units generally oriented east-west with subvertical dip, are separated by crustal-scale deformation zones. The metamorphic grade is generally inside the lower greenschist environment but increasing to amphibolite grade in the vicinity of syn-tectonic granodiorite-tonalite batholiths.

### **7.2 Property Geology**

The Horwood Property lies in the east-centre of the Swayze Greenstone Belt, a mafic-dominated swath of volcanics bounded by TTG-type granitoidal masses. It is mostly underlain by a thick package of mafic flows, autobreccias, pillows and minor variolitic flows, striking broadly northeasterly with dips varying from subvertical to about 40° westerly, around Hardiman Bay Minor ultramafic and intermediate to felsic volcanic phases as well as interflow type sediments are present. Mafic tuff units noted in several drill programs in the area may represent shear deformation. Gabbroic sills and stocks post-date this volcanosedimentary cycle and are intruded into the package, particularly southwest of Horwood Lake and around Stangiff Lake, and with some amount of structural control exhibited by a north-northeast fabric. An elongated biotite granodiorite stock, the Horwood Peninsula Pluton, crosses the northern part of the Property with a northeasterly trend. In places it is internally sheared and carries the north-northeasterly foliation (Wood 2005). Its northern limb is in contact with one of the aforementioned gabbroic stocks. Darke (1995) mentions quartz diorite and dioritic quartz-porphyry units in this area which may represent phases of the HPP or separate sills. Conversely, Dadson (1980) lists “Quartz Diorite (metagabbro)” as a major lithology in the Orofino area hinting that the affinity of different intrusive units requires further study.

The Horwood Property lies south of the Destor-Porcupine Deformation Zone and is traversed by the Hardiman Deformation Zone (HDZ), which is interpreted as a secondary, regional-scale splay structure emanating from the Destor-Porcupine. This runs southwesterly through the main body of the Property. Serpentinized ultramafic units are noted close to the fault (Breaks 1978) and their presence is likely the cause of the preferred route taken by ductile deformation. To the northeast of the Property, the HDZ hosts sizeable quartz veins which have been quarried for silica. A Proterozoic (Abitibi swarm) diabase dyke parallels the HDZ, about 1500m to its north. Minor Matachewan (north-trending) diabase dykes are also noted in the area (Laird 1935).

Significant folding has been interpreted from magnetic data by some past workers (Hartley 2010) and isoclinal folds are mentioned in the Swayze belt generally (Weber et

al 1981) and southeast of Hardiman Bay specifically (Lormand et al 1988), but structure is yet to be mapped in detail across the whole Property area. Darke (1995) notes that strain-dominated shearing patterns cross-cut stratigraphy at the Denross occurrence. It is possible that the two main foliations visible from property/township-scale data (the northeast, and north-northeast fabrics) may have a C-S shear relationship.

Most Archean units are regionally metamorphosed to greenschist grade.

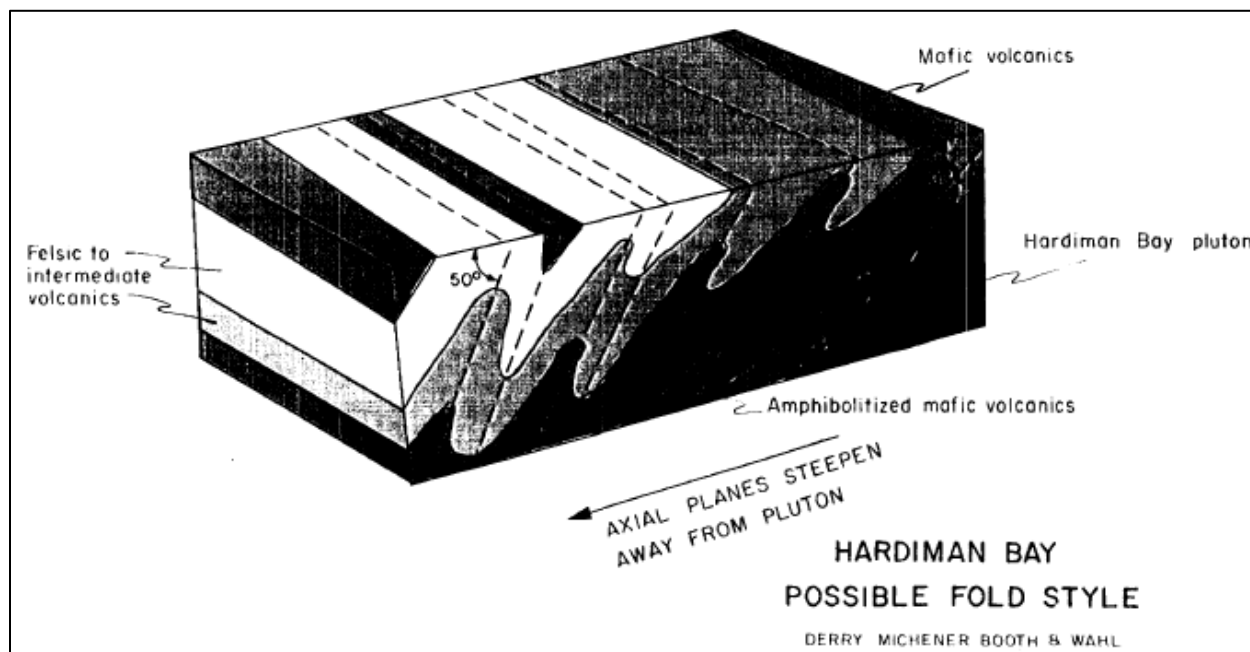


Figure 5 Schematic structural interpretation for the Hardiman Bay area, from Lormand et al 1988

## 7.3 Mineralization

### 7.3.1 Cautionary Note

Most historic work programs only have partial overlap with the Horwood Property. Furthermore, the gold mineralization that does exist within the Property is rarely described to any great degree of accuracy in historic reports and no detailed compilation of historic data has yet taken place. At present it is not precisely clear how the property boundary interacts with mineralization in the area. The Author cautions that the following section discusses gold-mineralized systems which may lie at least partly outside the Horwood Property. Furthermore, exploration is at too early a stage for definitive statements regarding width, depth and strike extent, grade and tenor of gold mineralization to be made.

### 7.3.2 Gold and Base Metals Mineralization in and around the Horwood Property

Most of the gold mineralization in and around the Horwood Property takes the form of quartz-carbonate vein-hosted or vein-associated sulphides within gabbros, intermediate-felsic intrusives and mafic volcanics, proximal to or within ductile-deformed zones, which themselves are mostly controlled by lithologic contacts and the presence of ultramafic zones within the volcanics. Pyrite is the dominant sulphide, found as disseminations, stringers and clots, and is typically found alongside minor chalcopyrite

and occasional pyrrhotite and sphalerite. Alteration commonly mentioned includes silicification and sericite and/or muscovite in and around the deformation zones (Siragusa 1991, Hartley 2010). Fuchsite is mentioned in spinifex komatiite units (Walmsley 2011). Coarse/native gold was noted at the “Robert Sample 6515” occurrence (Draper 1997).

Gold, gold-copper, zinc and molybdenum mineralization can be found in and around the Horwood Peninsula Pluton, only partly within the Horwood Property. Gold is found as shear-hosted narrow pyrite disseminations and vein-type mineralization in the mafic wallrocks surrounding the porphyry stock as well as inside it (Darke 1995). Wood (2005) further reports “carbonate-silica-pyrite rich horizons” within the HPP. It is suggested that gold mineralization may prefer the porphyritic phases of the pluton. Hartley (2009) discusses Au zones traced by DDH within a gabbro along the southern limb of the HPP which have a relatively shallow, 20-30° dip to the northwest.

At the Orofino deposit, outside the Horwood Property, two stages of sulphidation were noted. The first consists of quartz nodules and stringers within quartz veins in gabbro stocks as well as within the mass of the gabbro itself, and can return gold grades up to 4,870 ppb Au (Siragusa 1991). This mineralization predates the emplacement of intermediate-felsic porphyry bodies. It is possible that this mineralization is not vein-related but is simply replacing carbonate emplaced within the gabbro as well as within vein fractures. The second mineralization event emplaced fine pyrite disseminations within the porphyry units.

### *7.3.3 Industrial Minerals*

The Horwood Property may also host industrial minerals in potentially economically viable amounts, particularly in the vicinity of the Hardiman Deformation Zone. The Hedman Resources program explored, and test-pitted, a talc-serpentine ultramafic body for the production of mineral filler (Dumka & von Guttenberg 2003) from a location on claim 717933. Historically, quartz vein systems were pitted for silica to the north east of the Property, near the Tionaga rail siding. Maskours Inc. report quartz veins, parallel to the HDZ, with thickness “from 23 to 65 feet for a length of 2,479 feet” (Jensen 2002) – this is within 500 m of claim 746611.

**Table 7 Mineralized locations from the Horwood Property as listed in the MDI**

Occurrence	Geology	Mineralization	Assays	Ref
A H Smith	Mafic volcs & granodiorite	Diss py close to tension veins around contact		MDI
Deburmac	sheared mafic volcs, sericitised	shear-controlled qz vein braids with diss py	0.4 oz/ton Au over 3.5 ft (chip channel)	41O16NE0001
Denross	pillowed basalt / quartz diorite contact	narrow sulphidic shears	1.22 oz/ton Au, 0.27% Cu (grabs)	42B01SE0065
Golden Dragon	Int/fels volcs	Pyrite stringers	253 ppm Cu	41O16NE0001
Gould-Dunn	"schist"	Pyrite	?	MDI
Jacobs	Mafic volcs	Qz tension gash sets perp to granite contact. Diss py		41O16NE0002
Landers	Mafic volcs (amygdoloidal)	diss py	0.1 g/t Au	MDI
Landry	Maf volcs/diorite contact	Pyritic qz veins	13 g/t Au over 1.2 m (chip channel)	MDI
Lefevre	Mafic volcs and "tuffs" (sheared?)	py-po-cpy-sph stringers	9.2 g/t Au, 1.87% Cu (grabs)	MDI
McVittie	Sheared diorite, porphyry	qz vein set with py	0.7 g/t Au over 0.5 m	MDI
P H Silams	sheared mafic volcs	carb-ser-chl-py schist	3 g/t Au (grab)	MDI
Robert East Shear	sheared mafic volcs	1% py, cpy, po (disseminated?)	1.034 g/t Au over 1 m (chip channel)	MDI
Robert Sample 6515	Granodiorite	py, coarse Au in qz-ca stringers	5.3 oz/ton Au (grab)	MDI
Robert West Shear	"quartz carbonate shear zone"	diss py, minor cpy	0.061 oz/ton Au (grab)	MDI
Thorne	sheared mafic volcs	Au in qz veins	12 g/t Au (grab)	Siragusa 1991
Ultrex HW-85-1	Mafic volcs	po-py-cpy lenses	0.82 g/t Au, 0.8% Cu (grabs)	MDI
Wdowczyk	Mafic volcs	Pyritic qz stkwk	0.018 oz/ton Au, 0.58 oz/ton Ag, 3.30% Cu	41O16NW0022

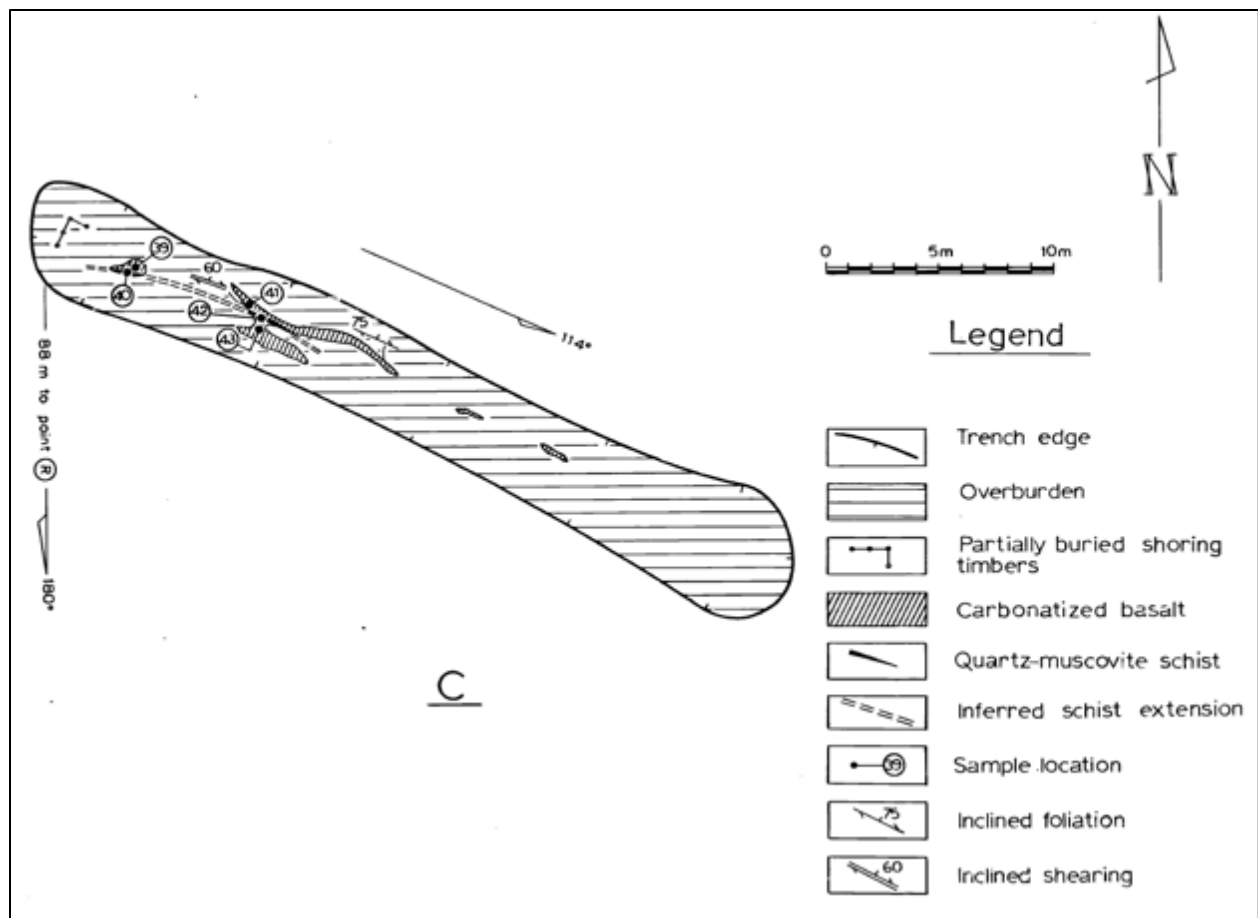


Figure 6 Detail of a trench at the Thorne occurrence /visited by the OGS, from Siragusa (1991)



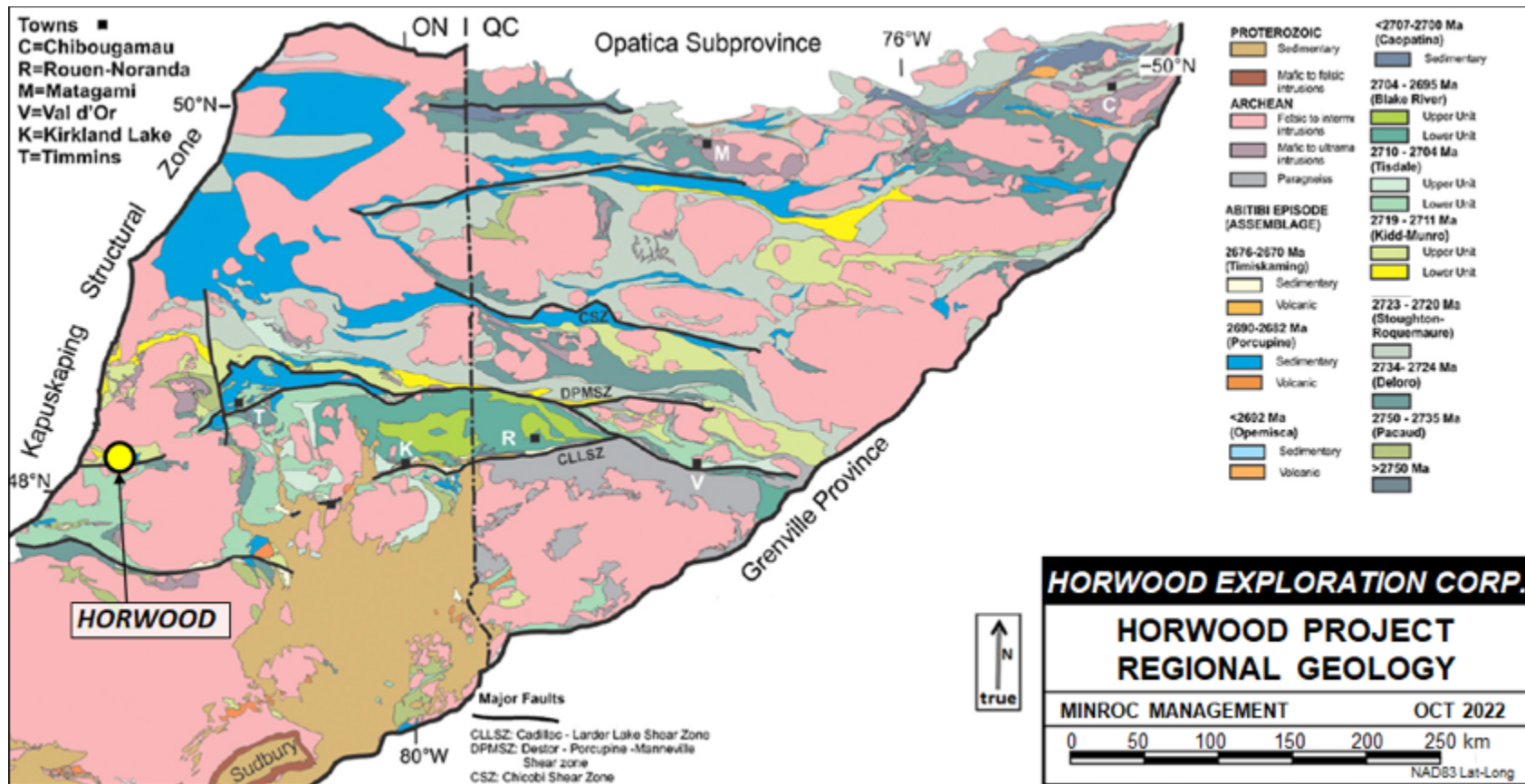
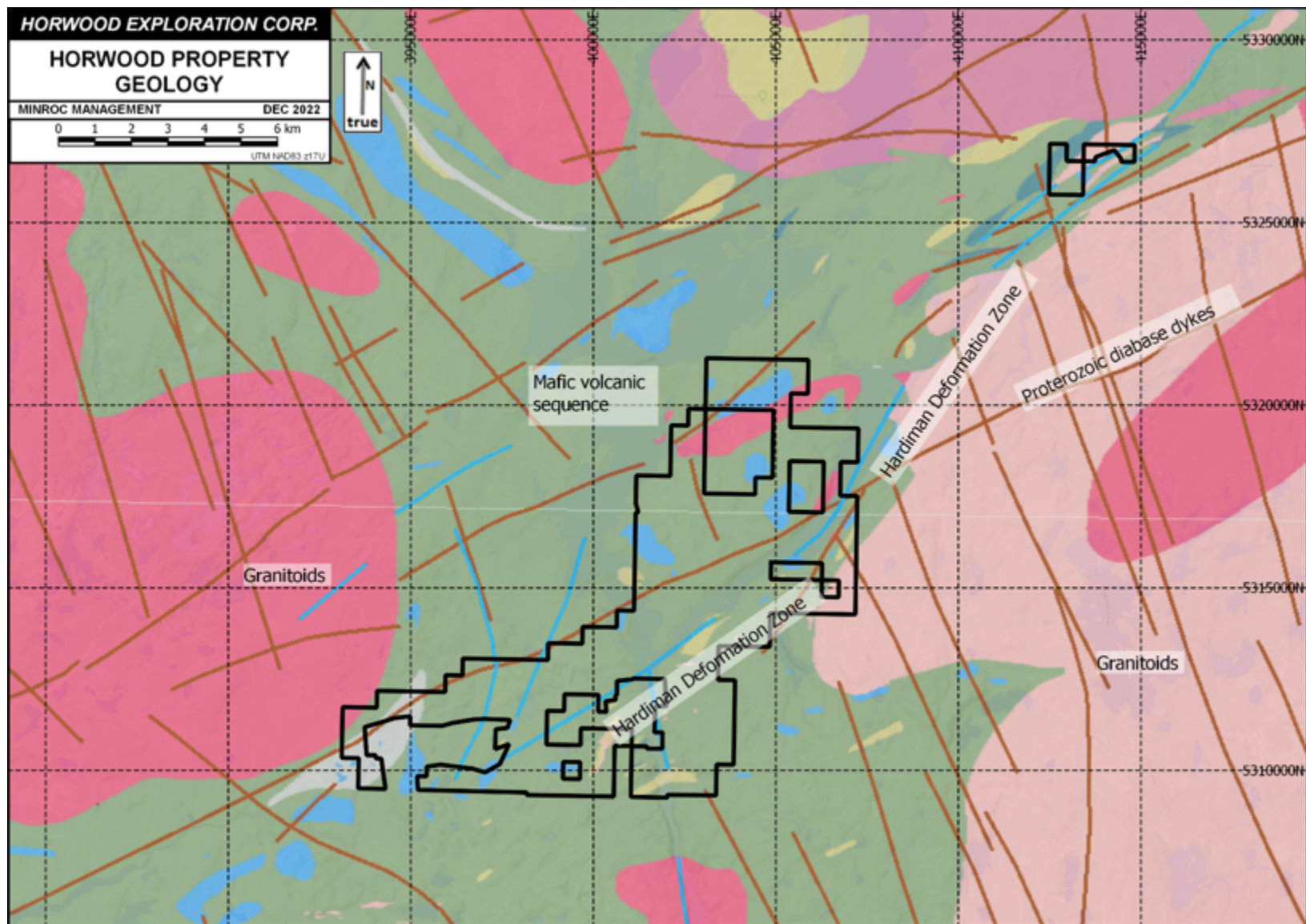
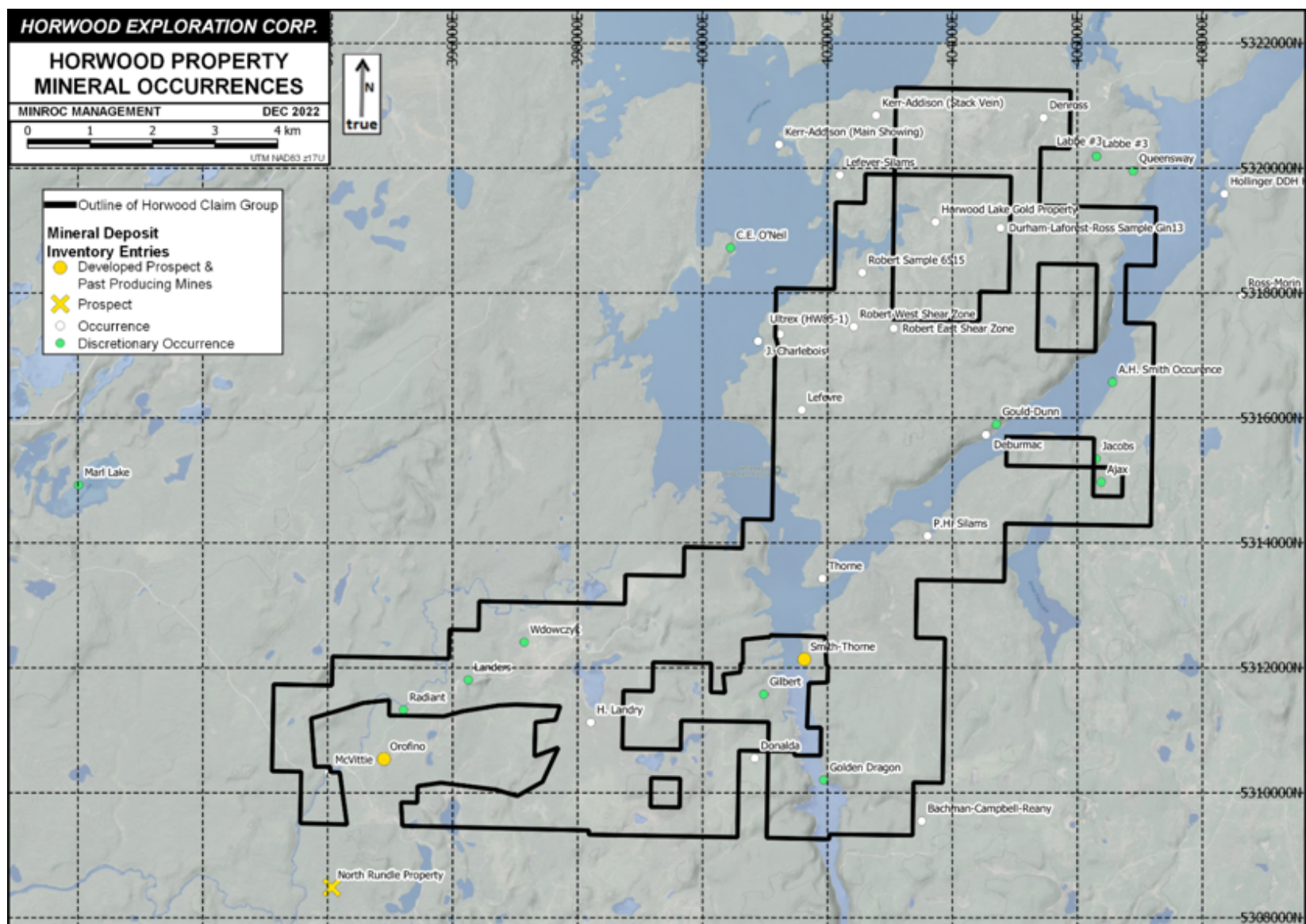


Figure 7 Location of Horwood Property in the Abitibi Subprovince



**Figure 8 Property geology.** Using data from OGS





## **8.0 DEPOSIT TYPES**

### **8.1 Orogenic Gold**

Orogenic gold, or greenstone-hosted gold deposits, generally consist of a system of auriferous quartz-carbonate veins, which have a strong spatial association with crustal-scale shear zones with mixed brittle-ductile expression. Further, there is commonly an association with second-order fault structures, sedimentary unconformity, locally including iron formations. Minor intrusions such as porphyritic intermediate dykes and alkaline magmatic events.

Orogenic gold deposits are particularly common in Archean-age greenstone belts. The shear zone is generally theorized to act as a pathway for hydrothermal fluids. These fluids are then emplaced as veins in dilated portions of ductile-deformed units, in brecciated portions of more brittle units, and/or on the contacts of units which may act as chemical traps, such as iron formations. Orogenic gold deposits can have highly complex geometries due to continued tectonic activity on the shear zone after the emplacement of the mineralized veins.

In the Abitibi, gold mineralization frequently manifests as a mix of coarse and fine refractory gold, associated with sulphides, most commonly pyrite, chalcopyrite and arsenopyrite. Commonly associated alteration minerals include chlorite, sericite and carbonates.

The Abitibi belt is home to many world-class orogenic gold deposits including the Dome and Hollinger mines at Timmins, Ontario; Macassa at Kirkland Lake, Ontario and Sigma-Lamaque at Val-d'Or, Québec.

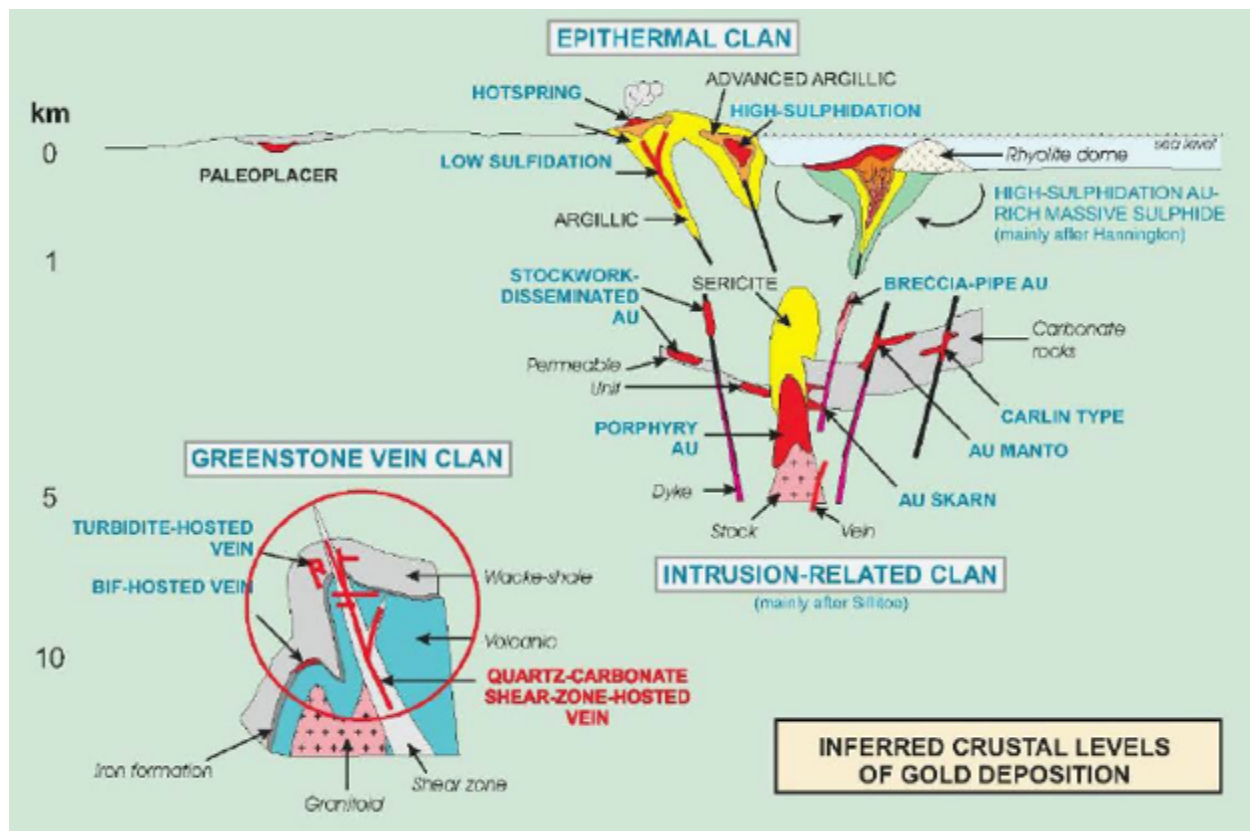


Figure 10 Styles of lode gold deposits, including the Orogenic “Greenstone” Type, from Dube et al 2001

## 9.0 EXPLORATION

### 9.1 Rationale and Logistics

A heliborne high-resolution magnetic survey was flown over the Horwood Property by Prospectair Geosurveys from October 27<sup>th</sup> to November 1<sup>st</sup>, 2022. The work was completed on behalf of HEC. The survey was flown on a grid with 50 m spacing and 500 m spaced control lines, with the main lines following an azimuth of 70°. The grid totals 1,291 line kms and covers the main Horwood claim block and its environs. The northeastern two claims at Roseval were not covered.

Twelve flights were required to complete the grid. A Robinson R-44 was used for the flights. Timmins airport was used as a base of operations.

A Geometrics G-822A magnetometer was used, mounted on a bird towed 19 m below the helicopter and at an altitude of 22 m. A GEM GSM-19 base station was established close to the property in a magnetically quiet area.

Magnetic data was recorded at 10 Hz. Magnetic data was levelled against altitude variations and diurnal variations from the base station magnetometer.

Plots were made of:

- total magnetic intensity (TMI);
- the first and second vertical gradients of the total field;
- the residual total field (representing the difference between the TMI dataset and the International Geomagnetic Reference Field);
- the tilt derivative (the arctan angle between the horizontal and vertical gradients);
- elevation data.

## **9.2 Results**

The magnetic datasets show a strong imprint from Proterozoic dykes including the Abitibi swarm dyke that runs east-northeast through the Property area. Other, north-northwest linear features may represent Matachewan dykes. More subtle linear features may represent stratigraphy in the volcanic sequence. Areas of greater magnetic relief may represent intrusive stocks.

No detailed interpretation of the magnetic data has yet taken place. The Author suggests that, as part of an interpretation, it may be worth attempting to remove the signature of the dyke swarms in order to focus on the magnetic signals from the country rocks which are the target hosts for gold mineralization.



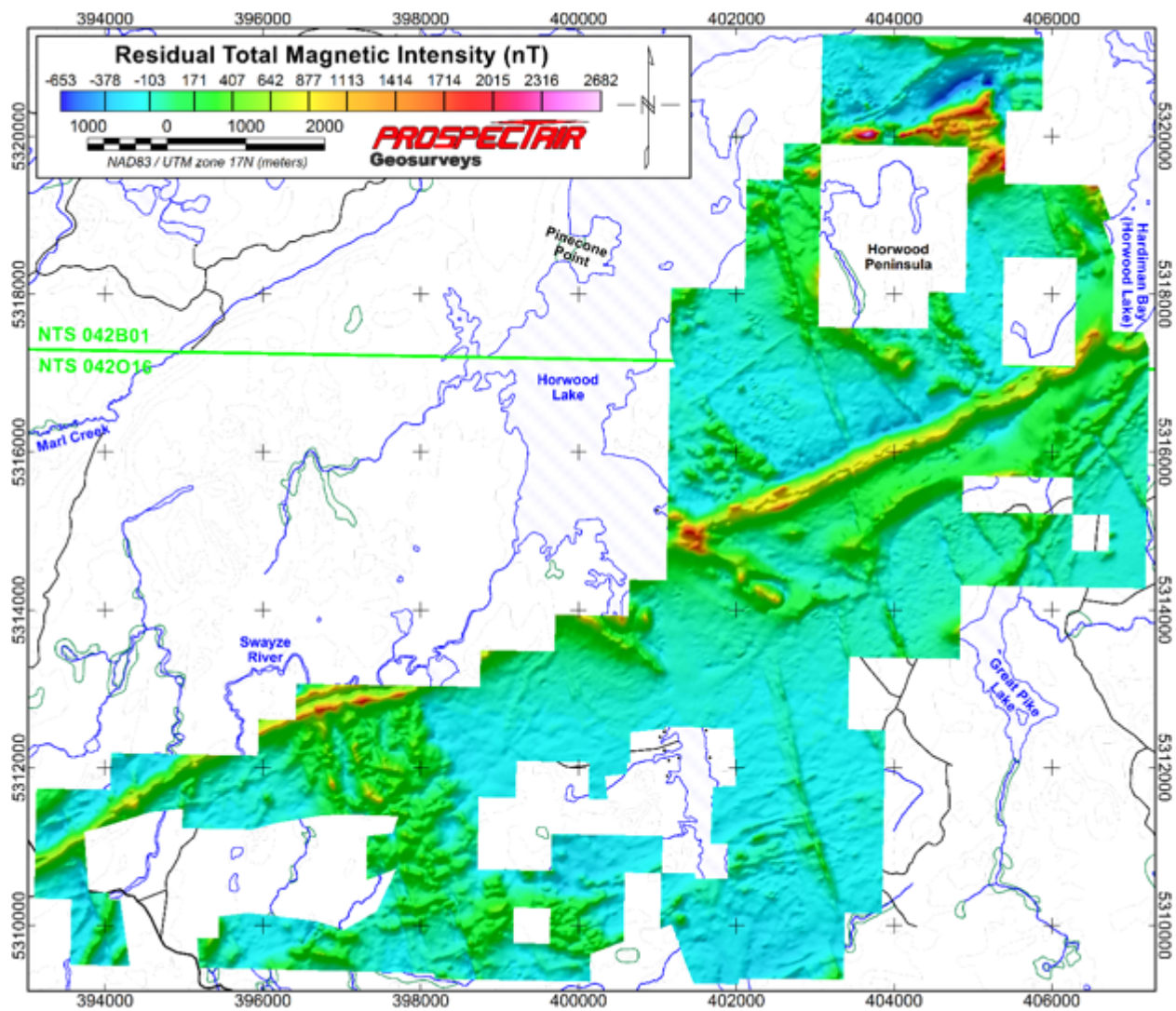


Figure 11 Residual total magnetic field

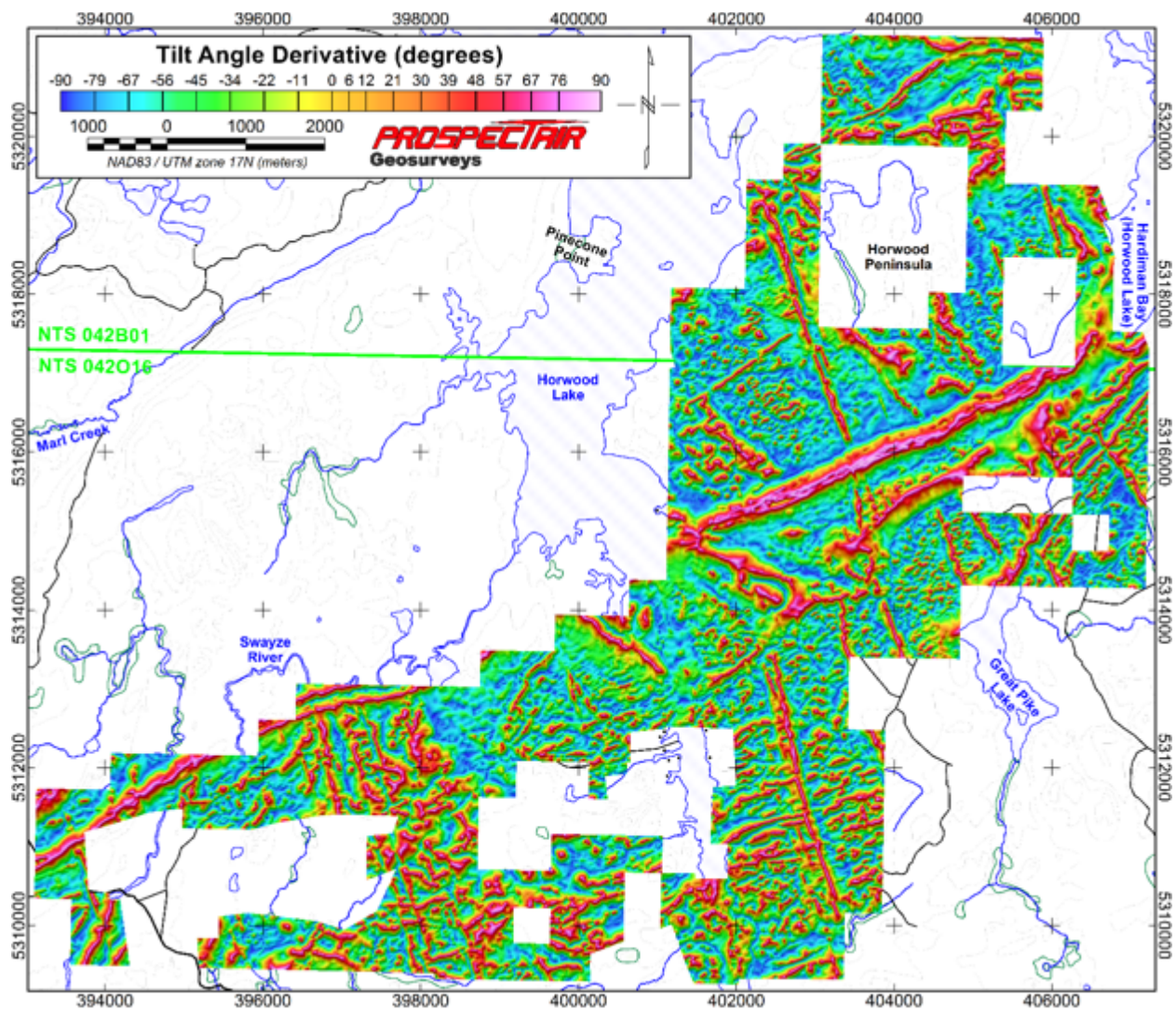


Figure 12 Tilt derivative

## **10.0 DRILLING**

As of the Effective Date of this Report, Horwood Exploration Corp has not completed any drilling on the Horwood Property. Historic drilling is discussed under Item 6.0.

## **11.0 SAMPLE PREPARATION, ANALYSIS AND SECURITY**

This section discusses the samples taken in the Minroc site visit discussed in detail under Item 12.1.

Five grab samples were taken during the visit. Brian Newton, P. Geo, and Sahil Alurkar, GIT, both of Minroc, performed the sampling. The Minroc samples were taken in the field using hand tools and sealed inside plastic bags alongside a unique identifying tag and recorded in field notes alongside UTM coordinates taken with a handheld GPS, according to standard best field practices. The samples were stored securely before being delivered by Minroc personnel to ALS Laboratories (ALS) in Sudbury, Ontario for sample preparation. Sample analysis was then completed by ALS Minerals in their North Vancouver geochemical laboratory in British Columbia.

At ALS, the samples were crushed to 70% passing a 2 mm mesh and riffle-split, after which one split is pulverized to 85% passing a 75 µm mesh. The unpulverized split (the reject) were retained while the pulverized split (the pulp) were assayed by “ME-MS61” four-acid digestion with ICP-MS analysis for a suite of 51 elements as well as “PGM-MS23L” gold and platinum group element fire assay on a 30 g sub-sample.

ALS ran a QA/QC regime internally alongside the sample assays, including six Standards (TAZ-20, GPP-03, OREAS 920, EMOG-17, SP 116 and OREAS 681) and four Blanks. All results were reviewed against the published values by the Author and are considered satisfactory and sufficient for the purposes of this Technical Report. ALS facilities conform to the requirements of the ISO/IEC 17025 Standard (General requirements for the competence of testing and calibration laboratories), and regularly take part in proficiency testing. Further, ALS facilities conform to CAN-P-1579 (Mineral Analysis/Geological Tests) as set out by the Standards Council of Canada. ALS is independent of Horwood, Minroc and all other interested parties.

## **12.0 DATA VERIFICATION**

### **12.1 Site Visit**

The Denross gold occurrence on the Horwood Property was visited by Brian Newton, P. Geo, and Sahil Alurkar, GIT, on 4<sup>th</sup> November 2022. The Property was accessed using the Kenogaming Road. Five grab samples were taken from the main Denross stripped area, described below. All samples are within claim 717970. All samples returned elevated Au values up to a high of 6.01 g/t Au (A249586) from a gossanized, albitized volcanic unit, close to a historic channel sample. These samples confirm the presence of gold mineralization on the Horwood Project at the Denross occurrence.

**Table 8 Samples from Minroc Site Visit**

Sample	UTM E	UTM N	Description	Au ppb	Cu ppm
<b>A249586</b>	405460	5320794	Denross showing: V4 albitized , mod to strong ab, rust , 5-10% py , possible po, cpy , rusty. Old channel cut into it	6010	1065
<b>A249587</b>	405458	5320803	Denross showing :Syenodiorite , white/ buff coloured, ~NW-SE intrusion into surrounding ultramafics/mafics	64	87.1
<b>A249588</b>	405468	5320815	Denross showing :Diabase or mafic volcanic , fine grained , rusty, 5 % py, possibly some cpy	217	1770
<b>A249589</b>	405470	5320815	Denross showing : Diabase as A249588, but no visible sulphide	35	619
<b>A249590</b>	405472	5320811	Diabase but strongly altered , coarse greenish grey acicular needles(chlorite?) . Vuggy overall with adularia or other clays in vugs. 1-3% py	54	1360



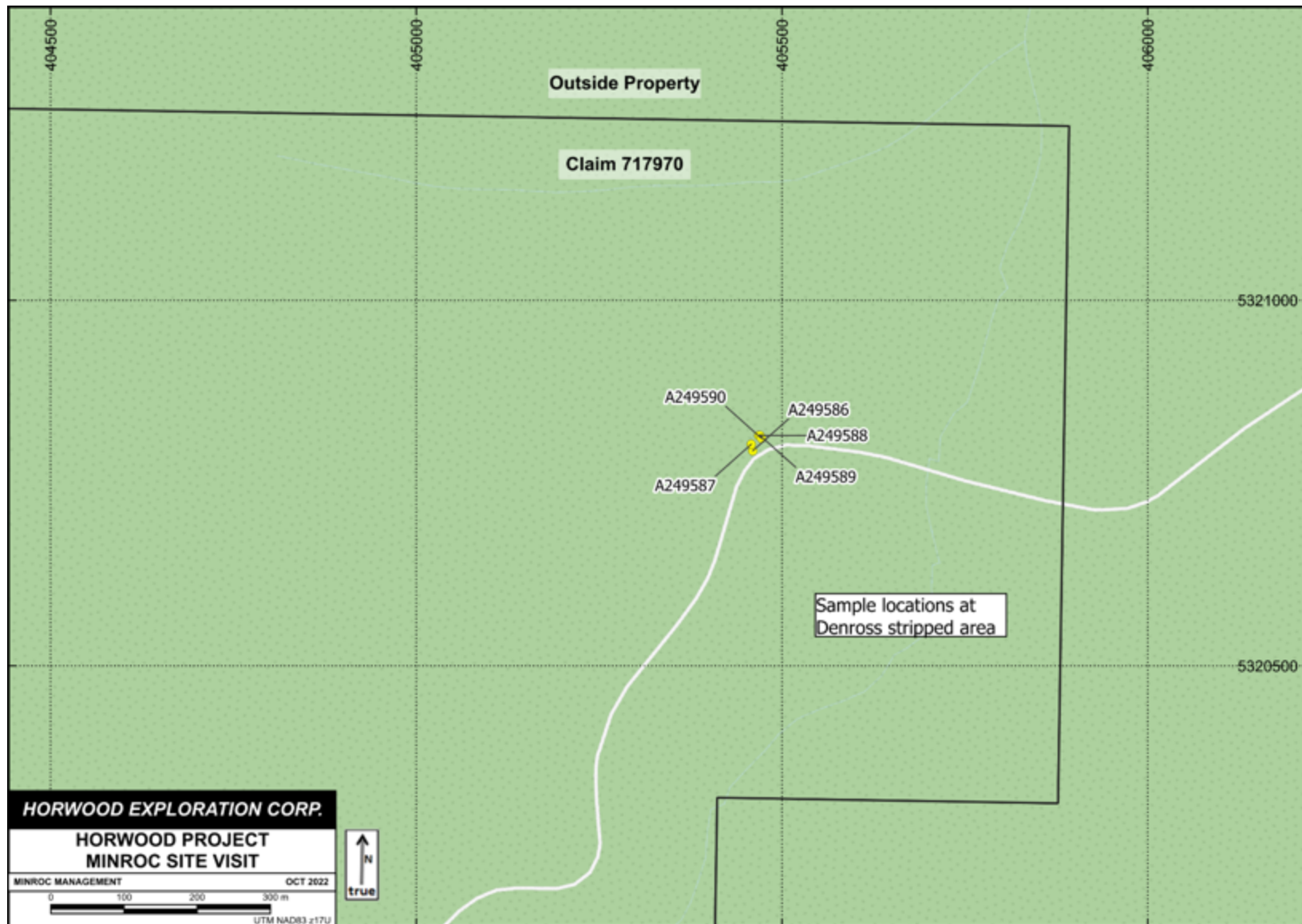


Figure 13 Locations of confirmatory Minroc samples

## **12.2 Data Review**

The Author has reviewed the assessment files pertaining to previous exploration programs that overlapped with the Horwood Property. The historic work programs appear to have been completed according to industry standards at the time and the Author believes that the exploration information contained therein is sufficiently reliable for the purposes of this technical report.

The Author cautions that significant compilation work must be undertaken before it can be confirmed exactly which historic work programs took place within the Horwood Property boundary and that, given the age and quality of some maps contained in some assessment files, it may not be possible to geolocate some features (e.g. historic DDH, surface samples) to better than 100 m accuracy. While the historic dataset is of great value as a guide for future exploration, the Issuer should treat it in this respect only.

## **13.0 MINERAL PROCESSING AND METALLURGICAL TESTING**

The Author is not aware of any mineral processing or metallurgical testing having been completed on any material from the Horwood Property.

## **14.0 MINERAL RESOURCE ESTIMATES**

To date, no mineral resource estimates, as defined in the CIM Definition Standards, or any equivalent international code, have been filed on any mineral occurrences within the Horwood Property.

## **15.0 ADJACENT PROPERTIES**

Note: The Author has included information regarding any adjacent properties in order to provide the geological context of the Horwood Property. Information below regarding adjacent properties is not necessarily indicative of the mineralization which is or may be present within the Horwood Property. This information has been taken from public sources.

### ***Horwood Peninsula Property – Solstice Gold***

Solstice Gold's Horwood Peninsula Property is surrounded by the Horwood Property on all sides. Solstice Gold's claim group covers the majority of the area explored by JML and Amador Gold in the 1990s-2000s. Gold mineralization is controlled by shears and shear-hosted veins close to the contacts between the Horwood Peninsula Pluton (a felsic stock) and its mafic volcanic and gabbro wall rocks. Grab samples from within the HPP returned assays up to 39.47 g/t Au (Darke 1995). JML and Amador outlined three zones along the southern limb of the HPP termed the Bend Zone, Massive Sulphide Zone and Gabbro Zone. Drillhole intervals from these zones "typically average 1 to 5 g/t gold over widths of 0.5 to 2.0 metres" (Hartley 2009).

### ***Orofino Patents***

The Horwood Property surrounds the Orofino patents on three sides. The Orofino Patents cover the Orofino gold deposit. Mineralization at Orofino is contained within six diorite-hosted quartz vein sets, a "Replacement Zone" of disseminated mineralization

and a mineralized fault zone.

The mineralized system was first discovered in the 1930s and was subject to underground development in the late 1940s. Intensive exploration in the early 1980s by Northgate led to a historic, non-compliant “mineral inventory” which was calculated in 1984 of 1.6 million short tons at a grade of 0.14 oz/ton Au (Atkins et al 1984). This was subdivided into “proven ore” and “probable ore” using a cutoff grade of 0.10 oz/ton Au, a minimum true width of 7ft and maximum search radii of 20ft and 25ft respectively. Dilution was introduced to accommodate for the presence of minor dykes.

It must be clarified that this historical estimate pre-dates the CIM guidelines and cannot be relied upon. Insufficient work has been done by any Qualified Persons and this historical estimate cannot be considered a current mineral resource or reserve. It is not clear if this historical estimate uses categories which are equivalent to those defined in the CIM guidelines. This information is included for context only.

Very little work has taken place since the Historical Estimate was calculated. The Orofino Patents were operated by Tamaka Gold in the 2010s and appear to be held by one of the former directors of Tamaka.

### ***Smith-Thorne Patents***

The Smith-Thorne Patents cover the past-producing Smith-Thorne (Tionaga) gold mine. Vein-hosted gold mineralization was initially discovered in the 1930s where a 76 cm-wide vein was exposed across 18 m of strike. Tionaga Gold Mines operated the mine in 1938-39. During that period, 6,653 tons were milled yielding 2,299 oz Au and 404 oz Ag (Miller 1978). Limited exploration took place in the 1980s but otherwise the Smith-Thorne Patents have effectively lain dormant. The Author could not identify the current owners of the Smith-Thorne Patents.

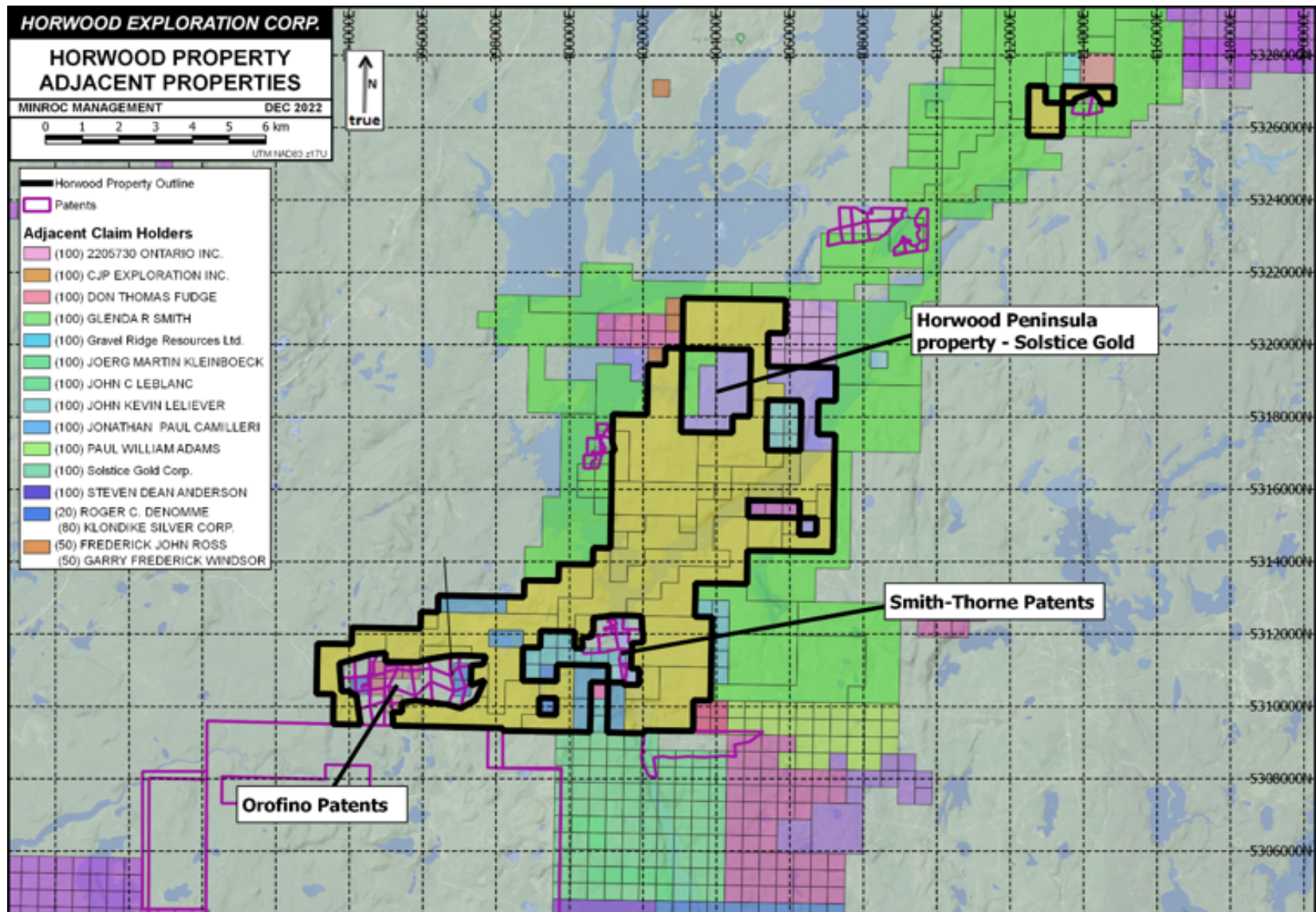


Figure 14 Horwood Property adjacent properties

## **16.0 OTHER RELEVANT DATA AND INFORMATION**

To the Author's knowledge, all relevant information has been included in the other sections of this report.

## **17.0 INTERPRETATION AND CONCLUSIONS**

The Horwood property lies in the eastern part of the Swayze Greenstone Belt, part of the Abitibi Subprovince of the Canadian Shield. The Property geology includes mafic-dominated supracrustal country rocks impacted by regional-scale brittle-ductile deformation events and into which are intruded mafic through to intermediate-felsic intrusive suites. The regional geologic picture, with a regional-scale deformation structure, a history of deformation and a mix of rheologic and chemical contrasts is favourable for orogenic gold and gold-copper mineralization. Gold-mineralized systems have been explored, developed and mined within a kilometre of the Property boundary.

To date there has been no dedicated, property-wide exploration program. Historic exploration in the vicinity of the Property was typically focused on targets outside the Property. Furthermore, there are very few comprehensive geologic maps or otherwise evidence of detailed geologic mapping amongst the historic exploration assessment files that are presently publicly available. As a general statement it can be said that the Horwood Property is very thinly explored. A detailed compilation of historic work on and around the Property is required in order to determine exactly which historic occurrences, drillholes and other features lie within the Property boundary.

Exploration models based upon nearby properties can be applied to the Horwood Property. For example, diorite-hosted conjugate vein sets are known to carry potentially economic gold mineralization at Orofino and so this model can be applied to intrusions within the Horwood Property.

Furthermore, the Horwood Property has some potential for industrial minerals. A talc-serpentine body was delineated by historic explorers within the Hardiman Deformation Zone and briefly exploited for use as mineral filler. Silica bodies, also associated with the HDZ, were quarried to the northeast of the Property. It is possible that industrial mineral production may be a valuable secondary income source for HEC.

The Author believes that the Horwood Property is highly prospective for gold mineralization, and that there is also potential for copper mineralization and industrial minerals.

**Table 9 Risks and Opportunities to the Horwood Property**

<b>Risk</b>	<b>Potential Impact</b>	<b>Possible Mitigation</b>
Poor social acceptability	Difficulty in undertaking work on the Property or enhancing its value	Maintain good relationships with First Nations communities and other local stakeholders, including landowners, hunters, fishers and trappers both on the Property and along access routes
Logistic Issues	Difficulty in accessing part of the Property due to ground conditions	Winter conditions will likely improve access in lower lying areas.
Environmental Issues	Permits to complete part or all of work programs (e.g. drilling) may be denied	Minimize potential environmental impact at all stages of exploration planning and execution (e.g. area and intensity of surface disturbance).
<b>Opportunity</b>	<b>Potential Impact</b>	<b>Explanation</b>
Successful exploration results	Value of property enhanced	Discovery of notable gold mineralization would increase the Property value
Discovery of secondary economic minerals	Value of property enhanced	Copper or other base or precious metals may be discovered alongside gold mineralization
Development of industrial mineral potential	Value of property enhanced	Successful exploration by third parties on nearby projects may increase market interest in the Property
Successful exploration in region	Value of property enhanced	Successful exploration by third parties on nearby projects may increase market interest in the Property



## 18.0 RECOMMENDATIONS

The Author recommends that HEC complete a two stage program to advance the Property. A Phase 1 program is outlined here consisting of a thorough data review and compilation, detailed grid-based mapping, sampling and soil surveying. This is to be followed by a subsequent Phase 2 exploration program. The exact nature of Phase 2 will depend on findings from Phase 1 but the implementation of Phase 2 will not depend on any specific outcome from Phase 1.

Phase 1 shall consist of the following:

- A compilation, review and interpretation of all available data including historic drilling and surface work, and recent geophysics and site visit findings. This interpretation work should result in the drafting of detailed compilation maps and/or a workspace in GIS or modelling software, and the selection of targets for exploration or confirmation. Because of the history of the area, this work will involve compiling historic exploration data from outside the Property as it may have some geologic relevance to conditions within the Property. It may also be worth reprocessing the geophysical data to reduce the impact of the Proterozoic dykes.
- Grid-based geologic mapping and prospecting across the entire property. The entire Property can be traversed along a GPS-controlled grid with 200 m line spacing. No physical grid needs to be cut. Geologic mapping and routine outcrop sampling should take places on these lines.

Humus and/or vegetation sampling can be implemented if there are any sizeable areas that lack outcrop. Soil and/or vegetation samples can be taken at 200 m line stations to create a grid of sampling points.

The prospecting program is envisioned primarily as a target generation exercise, in combination with the compilation program. However, if some level of target generation takes place while field crews are active, it can also include some more targeted prospecting. If any areas are encountered during the grid program which appear to have promising mineralization, they can also be targeted with local hand stripping and more detailed sampling e.g. channel sampling.

Horwood Lake and its various bays puts limits on access to some parts of the Property. Boats will be required as well as ATVs or other vehicles.

A subset of outcrops may show some industrial minerals potential. Specimen pieces should be retained for potential mineralogic analysis.

All rock sampling should routinely incorporate multi-element sampling and gold fire assaying in order to detect gold and other potentially economic metals, and to allow a geochemical evaluation of primary lithologies and hydrothermal alteration assemblages.

Should soil or vegetation samples be taken, the Author recommends a modern analytical technique for the soil sample dataset such as a mobile metal ion leach analysis. Some research should be done into a suitable vegetation species and medium (e.g. alder twig, spruce bark) for the vegetation sampling program, depending on coverage in the field and biogeochemical suitability.

Findings from this initial Phase 1 program can be used to plan more detailed Phase 2 exploration which would likely consist of targeted drill-testing or stripping/trenching of priority targets.

**Table 10 Recommendations for Phase 1 Program**

Item	Details	Units	Rate	Quantity	Total (CAD)
<b>Compilation</b>	Compilation and interp				\$20,000
<b>Field Crew for</b>					
<b>Prospecting and sampling</b>	Geologist and Assistant	Days	\$750	32	\$24,000
			\$500	32	\$16,000
<b>Accommodations / Meals</b>		Days	\$200	64	\$12,800
<b>Consumables</b>	Field Tools: Rock saw				\$2,500
	Sample Bags, Hammers, etc				
<b>Assays</b>	500 Rx (Au + Multi Element	/ Sample	\$75	500	\$37,500
	1800 Soil Ionic Leach	/ Sample	\$30	1400	\$42,000
	1800 Vegetation	/ Sample	\$30	1400	\$42,000
<b>Transportation</b>	Mob / Demob crew and				\$5,000
	eqptmt				
	ATV, Boat Rental	Days		30	\$7,000
<b>Report</b>					\$5,000
<b>Management</b>	15% of Total				\$32,070
<b>Contingency</b>					\$4,130
<b>Total</b>					<b>\$250,000</b>

Note that these costs are estimates. Prior to execution a program proposal must be built out in detail based on RFPs from various contractors which will then be approved by the client.



## 19.0 REFERENCES

Atkins, T; Gilman, W; Harper, G ; Manns, F T; 1984: Orofino Resources Ltd, Geology and Ore Reserves, Orofino Gold Mine, Vol 1. Assessment file 41O16NW0016

Breaks, F W; 1978: Geology of the Horwood Lake Area. Ontario Geological Survey Report 169

Dadson, P; 1980: Introductory Report, Orofino Project 775, Silk and Horwood Townships, Ontario. Northgate Exploration Ltd. Assessment file 41O16NW0023

Darke, K H; 1995: Geological Evaluation Report on the Denross/Horpen Gold Properties, Horwood Township, Ontario. Haddington Resources Ltd. Assessment file 42B01SE0065

Draper, D; 1997: Ontario Mineral Inventory "Robert Sample 6515 – 1997". Entry MDI000000000173

Dumka, D; von Guttenberg, R; 2003: Mineral Resources of the Horwood Lake Serpentinite Deposit, Northern Ontario, for Hedman Resources Limited. Assessment file 20001765

Fumerton, S; Wilson, A; 2005: Ontario Mineral Inventory "McVittie - 1947, McVittie - Cryderman – 1947". Entry MDI41O16NW00017

Gilman, W; 1985: Report on Surface Geology, Tionaga Patented Claims, Lefever Option, Orofino Resources. Assessment file 41O16NW0012

Hartley, C; 2010: Report on Diamond Drilling for Amador Gold Corp on the Horwood Gold Project, Porcupine Mining Division, Northeastern Ontario. Assessment file 20008211

Jensen, K A; 2002: Roseval Siliva Property, Site No. 1 Project. La Societe de Gestion Maskours Inc. Assessment file 42B01SE2006

Laird, H C; 1935: Geology of the Horwood Lake Area. In: Forty-Fourth Annual Report of the Ontario Department of Mines. Reference ARV44

Lormand, C J; Alford, C S; Trinder, I D; 1988: Report on the 1988 Geological Mapping Program, Hardiman Bay Property, Horwood Township, Ontario. Assessment file 41O16NE0002

Mortimer, C; 1991: Final Submission, OPAP Grant OP90-536, Horwood Township Property. Assessment file 41O16NW0006

Siragusa, G M; 1991: Geological and Geochemical Setting of 3 gold occurrences in the

Horwood Lake Area, Central Swayze Belt. OGS Open File Report 5803

Smith, F M; 1963: Diamond drill logs. Hardiman Bay Mines Ltd. Assessment file 41O16NW0041

Wdowczyk, R Z; 1982: Miscellaneous assessment file documents. Assessment file 41O16NW0022

Weber, W W; Dadson, P A; Conquer, S; 1981: Summary Report, Exploration Activities on the Orofino Joint Venture Property. Assessment file 41O16NW0018

Wilson, A; 2005: Ontario Mineral Inventory "Thorne - 1933, Horwood Peninsula - 1936, Horwood Lake – 1984". Entry MDI41O16NW00035

Wood, P C; 2005: Report on the 2004-2005 Exploration Programs on the Horwood Property, Horwood Township, Porcupine Mining Division, Ontario. JML Resources Ltd. Assessment file 20001770

## 20.0 APPENDICES

### 20.1 Photos



Photo 1: Brian Newton P. Geo at Denross stripped area





Photo 2: Pillowed mafic volcanics near the Denross stripped area



Photo 3: Material from sample A249586 (6.01g/t Au)

## **20.2 Assay Certificate**



ALS Canada Ltd.  
2103 Dollarton Hwy  
North Vancouver BC V7H 0A7  
Phone: +1 604 984 0221 Fax: +1 604 984 0218  
www.alsglobal.com/geochemistry

To: MINROC MANAGEMENT LTD.  
2857 SHERWOOD HEIGHTS DRIVE, UNIT 2  
OAKVILLE ON L6J 7J9

Page: 1  
Total # Pages: 2 (A – D)  
Plus Appendix Pages  
Finalized Date: 13-DEC-2022  
This copy reported on  
18-DEC-2022  
Account: MINMAN

## CERTIFICATE SD22333495

Project: HORWOOD FALL 2022

This report is for 8 samples of Rock submitted to our lab in Sudbury, ON, Canada on 17-NOV-2022.

The following have access to data associated with this certificate:

SAHIL ALURKAR

FRANCIS NEWTON

ACCESS WEBTRIEVE

## SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
CRU-31	Fine crushing - 70% <2mm
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize up to 250g 85% <75 um

## ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
PGM-MS23L	Low level PGM - FA ICPMS	ICP-MS
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*

**"Saa Traxler"**

**Signature:**

Saa Traxler, Director, North Vancouver Operations





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To: MINROC MANAGEMENT LTD.  
2857 SHERWOOD HEIGHTS DRIVE, UNIT 2  
OAKVILLE ON L6J 7J9

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Project: HORWOOD FALL 2022

# CERTIFICATE OF ANALYSIS SD22333495

Sample Description	Method Analyte Units LOD	WEI-21 Recvd Wt. kg 0.02	ME-MS61 Ag ppm 0.01	ME-MS61 Al % 0.01	ME-MS61 As ppm 0.2	ME-MS61 Ba ppm 10	ME-MS61 Be ppm 0.05	ME-MS61 Bi ppm 0.01	ME-MS61 Ca % 0.01	ME-MS61 Cd ppm 0.02	ME-MS61 Ce ppm 0.01	ME-MS61 Co ppm 0.1	ME-MS61 Cr ppm 1	ME-MS61 Cs ppm 0.05	ME-MS61 Cu ppm 0.2	ME-MS61 Fe % 0.01
A249583		0.31	0.03	7.25	1.1	40	0.27	0.03	5.94	0.08	7.73	47.0	76	0.09	61.0	8.25
A249584		1.76	0.04	7.01	<0.2	30	0.24	0.01	6.87	0.10	6.88	45.1	69	0.22	103.0	8.54
A249585		1.15	0.02	6.52	1.8	30	0.28	0.01	7.35	0.10	7.10	54.9	59	0.53	70.7	11.10
A249586		2.42	0.68	5.09	3.4	30	0.21	5.79	0.57	0.02	8.27	118.5	68	0.44	1065	11.20
A249587		1.36	0.07	8.89	2.0	160	1.07	0.10	0.60	0.17	32.9	17.4	21	0.24	87.1	1.93
A249588		1.91	1.61	7.09	3.9	130	0.25	0.14	5.74	0.26	26.4	85.8	89	0.47	1770	13.65
A249589		1.55	0.52	7.44	4.2	210	0.29	0.08	5.27	0.18	6.55	66.3	91	0.33	619	11.85
A249590		2.15	0.77	7.32	1.5	90	0.28	0.13	5.36	0.05	6.12	72.2	98	0.40	1360	10.30



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**CERTIFICATE OF ANALYSIS SD22333495**

Sample Description	Method Analyte Units LOD	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
		Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
		ppm 0.05	ppm 0.05	ppm 0.1	ppm 0.005	% 0.01	ppm 0.5	ppm 0.2	% 0.01	ppm 5	ppm 0.05	% 0.01	ppm 0.1	ppm 0.2	ppm 10
A249583		14.75	0.07	0.7	0.070	0.15	2.9	12.0	4.26	1600	0.43	1.45	1.9	76.9	300
A249584		14.50	0.07	0.8	0.069	0.09	2.5	9.4	4.11	1380	0.51	1.42	1.9	71.7	280
A249585		16.80	0.05	0.6	0.097	0.10	2.4	7.2	3.96	1750	0.41	1.33	2.4	73.1	350
A249586		12.80	<0.05	0.7	0.088	0.08	3.5	14.9	2.22	639	0.74	1.93	1.6	55.9	300
A249587		17.55	0.07	2.2	0.022	0.18	11.4	12.6	0.49	192	0.65	6.72	3.0	25.9	470
A249588		18.55	0.08	1.3	0.101	0.44	13.4	14.7	3.97	1445	3.57	2.21	2.2	96.2	340
A249589		16.55	0.05	1.3	0.095	0.48	2.9	18.6	4.24	1430	3.61	2.49	2.2	95.2	350
A249590		16.50	0.05	1.2	0.071	0.46	2.5	11.0	3.84	1095	0.86	2.80	2.2	30.8	300





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**CERTIFICATE OF ANALYSIS SD22333495**

Sample Description	Method Analyte Units LOD	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	
		Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V
		ppm 0.1	ppm 0.002	% 0.01	ppm 0.05	ppm 0.1	ppm 1	ppm 0.2	ppm 0.2	ppm 0.05	ppm 0.05	ppm 0.01	% 0.005	ppm 0.02	ppm 0.1	ppm 1
A249583		4.2	<0.002	0.01	0.09	53.2	1	0.5	127.5	0.11	<0.05	0.34	0.506	0.02	0.1	291
A249584		6.4	<0.002	0.11	<0.05	50.8	1	0.4	99.1	0.11	<0.05	0.21	0.515	0.02	0.1	286
A249585		6.8	<0.002	0.05	<0.05	58.8	1	0.3	108.0	0.14	<0.05	0.12	0.766	0.03	<0.1	361
A249586		3.4	<0.002	3.24	<0.05	29.1	3	2.2	34.5	0.08	0.19	0.12	0.422	0.03	0.1	205
A249587		4.0	<0.002	0.01	<0.05	8.0	1	0.5	217	0.24	<0.05	3.78	0.226	0.02	0.5	45
A249588		10.0	0.003	1.13	0.07	48.8	2	4.7	117.0	0.13	0.21	0.18	0.586	0.07	0.1	306
A249589		14.0	0.004	0.64	<0.05	52.2	1	3.2	115.5	0.12	0.08	0.13	0.610	0.09	<0.1	329
A249590		15.6	0.003	1.33	<0.05	55.4	3	3.2	138.0	0.12	0.31	0.12	0.614	0.07	0.1	333



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**CERTIFICATE OF ANALYSIS SD22333495**

Sample Description	Method Analyte Units LOD	ME-MS61	ME-MS61	ME-MS61	ME-MS61	PGM-MS23L	PGM-MS23L	PGM-MS23L	Au-AA25	CRU-QC	PUL-QC
		W	Y	Zn	Zr	Au	Pt	Pd	Au	Pass2mm	Pass75um
		ppm	ppm	ppm	ppm	ppb	ppb	ppb	ppm	%	%
A249583	0.1	20.9	100	16.0	1	0.3	0.2			98.9	95.5
A249584	0.1	21.3	91	20.1	3	0.4	<0.2				95.6
A249585	<0.1	25.6	107	14.7	2	0.2	<0.2				
A249586	3.3	9.9	60	30.9	>1000	0.2	<0.2		6.01		
A249587	0.7	7.1	40	85.8	64	0.9	2.5				
A249588	0.5	22.8	130	48.6	217	0.2	<0.2				
A249589	0.3	24.1	125	40.9	35	0.2	<0.2				
A249590	0.4	23.2	98	38.7	54	0.3	<0.2				





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**CERTIFICATE OF ANALYSIS SD22333495**

	CERTIFICATE COMMENTS
	<p><b>ANALYTICAL COMMENTS</b></p> <p>Applies to Method: REEs may not be totally soluble in this method. ME-MS61</p> <p><b>LABORATORY ADDRESSES</b></p> <p>Applies to Method: Processed at ALS Sudbury located at 1351-B Kelly Lake Road, Unit #1, Sudbury, ON, Canada. CRU-31 CRU-QC LOG-22 PUL-31 PUL-QC SPL-21 WEI-21</p> <p>Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada. Au-AA25 ME-MS61 PGM-MS23L</p>