

Geochemistry of gold from Ontario gold deposits

by

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Abstract

Gold is one of the most crucial metals in human history, and still, few investigations have directly studied gold composition to understand gold systems. Ontario (Canada) provides a natural example of gold systems because of the abundance and distribution of world class gold deposits. The present study constrains the geochemical signature of free gold using SEM-EDS, EPMA and LA-ICP-MS to characterize 242 samples from 71 gold deposits and occurrences. Generally, Ag, Cu, and Hg occur over 100 ppm, with Sb, Pd, Cd, and Bi typically as trace elements between 0.001 and 100 ppm. The geochemical signature of gold varies at the craton scale but is consistent at the camp scale. These spatially distinct trace element signatures are independent of local host rock and deposit types, which have implications regarding the controls on ore-forming mechanisms and reflect district-scale variations in the primary and secondary composition of gold. This elemental signature has important practical applications for industry; for example, in using elemental vectors that reflect local gold composition and/or in metallurgical processing.

Keywords

Gold fingerprinting, native gold, trace element, regional metallogeny, Ontario gold deposits, EPMA, LA-ICP-MS, geochemical signature, remobilization

Co-Authorship Statement

This manuscript has multiple authors and this section outlines the contributions made by the candidate and co-authors.

This thesis is part of the Gold Fingerprinting Project, which was devised in 2019 as a collaboration between the Ontario Geological Survey (OGS), the Royal Ontario Museum (ROM), and the Mineral Exploration Research Centre (MERC) at Laurentian University through the Metal Earth initiative. The project was conceived by Drs. Harold Gibson, Evan Hastie, Kim Tait, and Joe Petrus with input from the candidate.

Most of the samples were acquired from the ROM collection with the aid of Dr. Kim Tait and Katherine Dunnell. The remaining samples were obtained through donations from companies, individuals, and the OGS, summing up to a total of 242 samples.

The gold grains were prepared, mounted, and polished by Dr. Evan Hastie and Geoscience Laboratories. The samples were analyzed using EPMA at the Geoscience Laboratories by Dave Crabtree and Sandra Clarke. LA-ICP-MS analyses were done on 233 samples at the MERC Isotope Geochemistry Laboratory by the candidate and Dr. Jeffrey Marsh.

The candidate took the lead in generating all initial interpretations of the data and preparing the first drafts, while receiving guidance and feedback from the co-authors. The co-authors provided intellectual input and made edits to the work.

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Chapter 1

1.1 Research problem

The need for gold in several aspects of modern life, like electronics, medicine and jewelry, has been a driver of Canada's economy primarily because of the world-class gold districts hosted in the Canadian Shield. This economic importance has triggered significant research on gold deposits and native gold (Boyle, 1979; Hough et al., 2009), but variations in the minor and trace element composition of gold are not well understood. Gold deposit research commonly has used proxies for gold (e.g., host quartz or sulfides), rather than gold itself, to infer the source, transport, and deposition of the gold. The issue that arises is that these proxies may not be genetically linked directly to gold mineralization because gold typically shows textural evidence indicating a later timing than these proxies (Hastie, et al., 2020), such as gold-filling fractures that crosscut sulfide minerals and quartz. Research on gold deposits indicates that a wide variety of elements are associated with gold (e.g., Ag, As, Cu, B, Bi, Hg, Mo, Pb, Sb, Se, Te, V and W; Boyle, 1979; McCuaig and Kerrich 1998; Bateman and Bierlein 2007; Goldfarb and Groves 2015). However, many of these elements are not necessarily unique to gold deposits or occur as trace elements in gold. If specific elements within gold can be identified as genetically linked to gold itself, then many questions such as gold source, in gold systems can be truly addressed.

The Gold Fingerprinting project is a collaborative effort involving the Ontario Geological Survey (OGS), the Royal Ontario Museum (ROM) and Metal Earth (Laurentian University; Hastie et al., 2020; Melo-Gómez et al., 2021 and Melo-Gómez et al., 2022). Initiated in 2019, the project has the main goal of identifying the chemical signature of gold and determining its implication for gold metallogenesis and exploration. During the first years, research was focussed on the development of a rigorous *in situ* methodology for sample preparation and analysis that was needed to confidently characterize gold chemistry. In addition, it provided an assessment of the elemental associations contained within gold samples from significant deposits. In this thesis, samples from Ontario are used as a natural example due to the abundance of deposits in the province. However, the project has grown into a national and international effort with samples from all over Canada, USA, and the world. Planned deliverables from the Gold Fingerprinting project include digital maps highlighting gold geochemical variation by region within Ontario and the creation of a freely available global gold database, which will be of interest to a wide range of users from the private, public, and academic sectors. Broader implications of this project are an improved geological understanding for gold mineralization across Ontario, Canada, and worldwide.

1.2 Objectives of the thesis

- Document the abundance of major, minor, and trace elements present in free gold from Ontario gold deposits using *in situ* geochemical techniques such as scanning electron microscopy-energy dispersive spectroscopy, electron probe micro analysis and laser ablation-inductively coupled plasma-mass spectroscopy.
- Identify variations and trends in the composition of gold from deposits that have different age, host rocks, deposit type, and associated minerals.
- Understand the processes responsible for gold composition variations at the grain-, deposit-, district-, and craton-scales, and present interpretations on the development of the trace element signature.
- Discuss how these patterns can be used in exploration and ore deposit research.

1.3 Structure of thesis

This thesis is written in two chapters. Chapter 1 introduces the thesis and outlines the research problem, objectives, methodology, and structure of the thesis. Chapter 2 is written as a journal manuscript accompanied by supplementary material. The manuscript, entitled “*Minor and trace element chemistry of gold: controls and metallogenic implications for Ontario gold deposits.*”, is written for submission to a peer-reviewed journal. Co-authors on this publication are:

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Supplementary material for the thesis is included in the appendices. Appendix A contains a geological summary of all the deposits that provided samples. Appendix B contains full EPMA data of all samples. Appendix C contains a compilation of processed trace element data obtained through LA-ICP-MS on gold. Appendix D contains the link to download the Summary of Fieldwork reports for 2021 and 2022 that were published as open file reports through the Ontario Geological Survey.

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Chapter 2

Minor and trace element chemistry of gold: controls and metallogenic implications for Ontario gold deposits.

2.1 Introduction

Gold has been an integral part of human history and is one of the most sought metals from ancient to modern times. Its unique attributes make it very versatile for jewelry, medicine, electrical and technological industries, and store value (Butt and Hough, 2009). As the demand for gold and its price have increased in the last several years, it has become even more important to understand how gold occurs and behaves in nature, hence the importance of gold specific research.

Gold is a unique metal because it behaves differently from other transition metals. Gold is the most noble, that is, it does not like to react with other elements or dissolve in acids (except for *aqua regia*) at surface conditions (Williams-Jones et al., 2009). In nature, Au occurs in a few minerals (e.g., tellurides, bismuthides, antimonides, selenides) but it is most commonly found as Au-Ag alloys. For simplicity and to avoid confusion, gold is used herein as any Au-Ag alloy with minor Cu and Hg, even though alloys between 20 to 80 wt% Ag are commonly called *electrum* (Boyle, 1979) and Au as the element. Gold deposit research has historically focused on gold associated mineral proxies (e.g., quartz, sulfides) to understand ore forming processes, but this can be problematic because much of the free gold that we mine is not genetically associated with these minerals. For example, using data derived from oxygen isotopes and fluid inclusions in quartz to interpret ore-forming fluids and conditions may not be valid when the gold fills fractures that crosscut quartz and is thus of later timing. In addition, this late gold texture is ubiquitous in gold deposits with free gold (Fig. 1; Hastie et al., 2020). Even with these problems, *in situ* research on the trace element content of gold was not used until recently because of very low concentrations of these elements (Boyle, 1979) and, subsequently, the increased difficulty in quantitatively analyzing gold. Previous studies on gold have shown that it is a valuable tool in several geological applications as an indicator mineral in exploration (Chapman et al. 2018; McClenaghan et al., 2020; Chapman et al. 2021, 2022), to connect lode deposits with their placer expressions (Knight et al., 1999; Dongmo et al., 2019; Gerasimov 2019), or to understand the geological processes in a single deposit (Spence-Jones et al. 2018).

The Gold Fingerprinting Project is a collaborative effort among Metal Earth (Laurentian University), the Ontario Geological Survey (OGS), and the Royal Ontario Museum (ROM) that was initiated to better understand the trace element chemistry within gold and its link to gold genesis, source, and depositional processes (Hastie et al., 2020; Melo-Gómez et al., 2021; Melo-Gómez et al., 2022). Thus, the objectives of this research are to: 1) document the major and trace element composition of free gold from gold deposits across Ontario; 2) identify trends in the variable elemental composition of free gold for Ontario gold

deposits; 3) identify and understand possible processes that are responsible for trace element variation at different scales; and 4) discuss how patterns in the trace element composition of gold can benefit exploration and ore deposit research.

To address these objectives, gold from deposits across Ontario, Canada, were used as natural examples due to the occurrence of numerous world-class deposits in renowned camps such as Timmins, Kirkland Lake, and Red Lake (Figs. 2 and 3; Harris et al. 2006; Bateman et al., 2008; Goldfarb and Groves 2015; Dubé and Mercier-Langevin 2020; Poulsen et al., 2020). Most gold deposits and occurrences are located in the Archean Superior Province, with many from the well-endowed Abitibi greenstone belt (AGB; Fig. 3A; Gosselin and Dubé 2005; Monecke et al. 2017; Dubé and Mercier-Langevin 2020).

Previous studies on the geochemical signature of gold

Previous studies involving gold dissolution and analyzing the subsequent solution, typically faced problems determining which phases are either physically (i.e., inclusions) or chemically (i.e., trace elements) present in the gold (Boyle, 1979). Electron probe microanalysis (EPMA) has been used to assess the concentration of trace elements in gold; however, due to detection limits it can only detect minor elements like Ag, Cu, Hg and, in rare cases, Pd (Desborough 1970; Guindon and Nichol; 1982; McTaggart and Knight 1993; Townley et al. 2003; Hastie et al., 2020). More recently, methods with lower detection limits like laser ablation inductively-coupled mass spectrometry (LA-ICP-MS) have been used to determine the trace element content of gold. Early development of these methods was done by McCandless et al. (1997), who determined that Cu, Sb, Te, Hg and Bi are present in the structure of gold grains. Some of the earliest gold fingerprinting research in forensic geology was conducted by Watling et al., (1994) to determine the source of illegal gold, comparing a qualitative (trace element signature of raw spectral data without calibration) of illegal gold grains with the possible mine sources in Western Australia and South Africa. Similarly, but with a quantitative approach, Dixon and Merkle (2021) applied this methodology to grains from Venezuela and Colombia, and Pochon et al. (2021) to grains from Guyana. In addition, identifying gold smuggled as jewelry, bullions, or alloys (Dixon and Schouwstra, 2017) or identifying the source of gold artifacts (Guerra and Calligaro, 2004) have been important to the development of these methods.

In mineral exploration and economic geology, there have been limited studies on gold to understand gold-forming processes, but recent technological innovation with LA-ICP-MS and the creation of gold reference materials (e.g., AuRM1 and AuRM2) have permitted researchers to obtain geochemical signatures or “fingerprints” from gold populations with very low limits of detection. Greenough et al. (2021) determined the trace element content of eight gold particles from three deposits in the Abitibi greenstone belt and showed small differences between individual gold deposits. Even though only a small population was used, this study was an improvement on the methods, and observed that chalcophile elements occur in solution rather than as isolated microinclusions. Liu et al. (2021) used a similar approach with a higher number of samples from all over the world. Using LA-ICP-MS data along with discriminant analysis, they concluded

that trace element signature can be used to distinguish populations from orogenic gold deposits in relation to different host rocks and mineral associations. However, the methods used were not consistent among the samples (i.e., thin sections and epoxy mounts, different ablation settings, different reduction methods) that can produce irregular data and contamination from surrounding minerals. Similarly, Liu and Beaudoin (2021) used the gold elemental signature to differentiate among gold-bearing deposit types like orogenic, reduced intrusion-related, epithermal and volcanogenic massive sulfides (VMS), with similar methodological issues. Banks et al. (2018) and Chapman et al. (2021) measured the trace element signature of detrital gold grains to link them to specific deposits and deposit-types in western Canada and worldwide; with a strong method development comparing data of quadrupole and time-of-flight ICP-MS. Chapman et al. (2021) included more than 40000 gold particles. However, their conclusion is that chemical heterogeneity and surface modification complicated the interpretation of gold grains and that a more complete approach (i.e., using inclusions in gold) was warranted.

Gold transport mechanisms

Three dominant mechanisms have been documented in the transport of Au and associated trace elements in ore systems; (1) in solution (including vapor); (2) as nanoparticles (NP); and (3) as polymetallic melts. These different transport mechanisms affect how Au and associated metals may be coupled/decoupled in an ore system. Other mechanisms as vapor or hydrocarbons transport (Williams-Jones et al., 2009) are not discussed herein as these are not considered predominant in Precambrian gold deposits.

Gold transported in solution has been studied in various environments and conditions (Seward, 1973; Gammons and Williams-Jones, 1997; Stefánsson and Seward, 2004; Williams-Jones et al., 2009; Fougere et al., 2016), and is generally accepted that the dominant Au species in fluids forming ore deposits are chloride (AuCl_2^-), hydrogen sulfide ($\text{Au}(\text{HS})_2^-$, AuHS^0) and hydroxide species (AuOH^0). Other metals and metalloids detected in gold can form similar complexes in a hydrothermal environment and be transported and precipitated by the same mechanisms (Seward et al., 2014; Pokrovski et al., 2014). For Au dissolved in solution, controls on the gold composition are temperature, species and ligand concentration, and pH (Pokrovski et al., 2014; Chapman et al., 2018). However, this mechanism faces difficulties explaining the bonanza-grade ore concentrations, high fineness (i.e., purity) of gold, and the lack of formation of a new generation of gangue and alteration minerals (Hastie et al., 2020; Voisey et al., 2020; McLeish et al., 2021).

When Au supersaturates in a fluid, it may form solid or liquid nanoparticles with a surface charge that is mainly affected by pH, counter-ion activity, and nanoparticle size (Hotze et al., 2010; Hastie et al., 2021). Mobilization of gold as nanoparticles (or colloidal gold) has been studied as synthetic experimental designs (Fron del, 1938; Noble et al., 2009; Liu et al., 2019), and identified in modern hydrothermal systems (Hannington and Garbe-Schönberg, 2019), in epithermal (Saunders and Burke, 2017; Saunders et al., 2020; McLeish et al., 2021), and orogenic gold deposits (Petrella et al., 2020; Voisey et al., 2020; Hastie et

al., 2021; Petrella et al., 2022). Transport of Au as nanoparticles offers a solution as to how ultra-high grade gold zones can be produced in gold deposits, because NPs can grow through several processes like flocculation (due to cooling, boiling or fluid mixing, Hough et al., 2011; McLeish et al., 2021), diffusion-limited aggregation, orthokinetic aggregation, and Ostwald ripening (Saunders and Burke, 2017; Hastie et al., 2021). However, little is known about the effect of other elements (e.g., Ag, Cu, Hg) on the formation of Au nanoparticles and the incorporation of trace elements into gold.

Evidence for the transport of Au as polymetallic melts has been identified by multiple authors (Frost et al., 2002, Tomkins et al., 2004; Ciobanu et al., 2006; Tooth et al., 2011; Hastie et al., 2020; Jian et al., 2022; Zhang et al., 2023). The presence of low-melting point chalcophile elements (LMCE), like Bi, Te, Hg, and Sb, can depress the melting temperature of Au to below 300°C (Tomkins et al. 2004), a temperature at which many hydrothermal deposits form. These LMCE can be liberated from the primary mineralization (e.g., pyrite and arsenopyrite) rich in Au and LMCE during a deformational/heating event, aided by coupled dissolution reprecipitation (CDR) reactions (Frost et al., 2002; Tooth et al., 2011; Hastie et al., 2020). These elements then form a melt that can transport Au (\pm Ag-Cu-Pb-Pd) up to several kilometers from the source (Tomkins et al., 2004) that can be fluid-mediated (Tooth et al., 2011; Hastie et al., 2020). The polymetallic melt model has been recently referred to explain remobilized gold in several deposits worldwide and to account for late coarse gold in high-grade zones (Zhou et al., 2017; Hastie et al., 2020; Kiliyas et al., 2022; Zhang et al., 2022; Li et al., 2023; Wehrle et al., 2023). However, this mechanism is difficult to invoke when LMCEs are not spatially associated with gold.

2.2 Regional Geology

The gold deposits studied are located within the Canadian Shield which, in the Ontario province, has been divided into three geological provinces based on their age, tectonic context, and genesis: Superior, Southern, and Grenville (Hoffman, 1988; Card, 1990; Thurston, 1991).

The Superior Province is the most extensive, covering the north part of Ontario, from the city of Greater Sudbury at its southern margin to the north, west, and northeast. Within Ontario, the Superior Province comprises linear east-west trending Mesoarchean continental fragments mostly separated by Neoproterozoic fragments of oceanic affinity and sedimentary basins bounded by subparallel boundary faults (Figs. 2, 4; Thurston, 1991; Percival et al., 2012). These terranes comprise a large variety of rock types metamorphosed from sub-greenschist to granulite facies (Easton, 2000), and even though the prefix “meta” is omitted in this paper, it is nonetheless implied. The accretion and amalgamation of these sections is debated but, it is generally accepted that occurred between 2720 and 2680 Ma, leading to widespread magmatism, syn-orogenic sedimentation, regional metamorphism, and hydrothermal fluid circulation (Percival et al., 2006, 2012). After amalgamation, the Superior Province has been tectonically stable despite the emplacement of dike swarms (e.g., Matachewan, Dahl et al. 2006), the Kapuskasing intracratonic uplift (Percival and West, 1994; Evans and Halls, 2010), the formation of the failed mid-continent rift (Davis and

Green, 1997), and the formation of the Grenville orogen along the southeast margin of the craton (Easton, 1992; Easton, 2000b). The geological terranes hosting gold deposits from which samples were obtained in this study are summarized hereafter. The subdivision of these regions into subprovinces, domains, and terranes used herein follows the tectonic framework of Percival et al. (2006) and (2012). Figure 4 shows a graphical summary of the time-space correlation between the terranes and domains that host gold deposits in the Superior Province in Ontario.

The Western Superior comprises the oldest continental fragments of the craton (i.e., the core of the Northern Caribou Superterrane or the Hudson Bay terrane), which have igneous suites with ages of 3.7 Ga to 3.0 Ga (Thurston et al., 1991; Henry et al., 2000; Percival et al., 2006), and are surrounded and covered by slightly younger greenstone and metasedimentary arc sequences (Percival, 2007). Deformation associated with the first stages of craton amalgamation led to magmatism and the emplacement of important gold deposits in the Western Superior. Orogenic gold (e.g., Musselwhite) and Cu-Mo porphyry-like deposits formed within the North Caribou Superterrane during early deformation (2.8 to 2.7 Ga; Percival, 2007). On its southern margin, the Uchi domain consists of several greenstone belts chronostratigraphically correlated over a strike length of more than 500 km (Percival et al., 2006). Prolific gold camps, like Pickle Lake, Confederation Lake and the world-class Red Lake district, are hosted in the Uchi domain and are spatially associated with Mesoarchean-Neoproterozoic unconformities (Sanborn-Barrie et al. 2001). These belts show multiple deformation events and gold mineralization, with D₂ deformation as the main ore precipitation stage prior to 2712 Ma (Sanborn-Barrie et al., 2001; Dubé et al., 2004; Percival et al., 2012) possibly associated to the Uchian orogeny (Percival et al., 2006).

Within the western Wabigoon Terrane, gold deposits associated with greenstone belts have a similar history, being emplaced during deformation around 2709 to 2700 Ma in the Lake of the Woods and Sioux Lookout areas (Ayer and Davis, 1997; Sanborn-Barrie et al., 2002; Melnyk et al., 2006). This terrane is dominated by mafic volcanic rocks of oceanic and arc environments (Ayer and Dostal, 2000) that formed mainly between 2740 to 2720 Ma (Corfu et al., 1992). To the east, the Beardmore-Geraldton greenstone belt is host to several gold deposits (e.g., MacLeod-Cockshutt, Hardrock, Little Long Lac) and is located along the contact of the Eastern Wabigoon and the Quetico terranes. It comprises fluvial and turbiditic sediments structurally imbricated with mafic to intermediate volcanic rocks (Tóth et al., 2022) with volcanism between 2740 and 2720 Ma (Hart et al. 2002) and sedimentation between 2700 and 2694 Ma (Tóth et al., 2022). The gold deposits are associated with regional dextral transpression zones (Lafrance et al., 2004). To the south of the Quetico terrane on the north shore of Lake Superior, some remnants of the Wawa-Abitibi terrane outcrop and host the Harkness-Hays and Northshore deposits, which are hosted in metavolcanic and metasedimentary rocks and preferentially along the contact with the Terrace Bay batholith (Marmont, 1984).

The Central Superior region contains the Wawa-Abitibi terrane, which is subdivided into the Wawa and Abitibi subprovinces that are separated by the Kapuskasing Structural Zone (KSZ); a 500-km long uplift composed of amphibolite-granulite facies rocks from the mid- to low-Archean crust (Percival and Card, 1983; Evans and Halls, 2010). Even though some authors have considered the Wawa an extension of the Abitibi Subprovince (Percival et al., 2012), others support a different tectonic environment and evolution based on zircon Hf isotope record (Mole et al., 2021). To the west of the KSZ, the deposits studied are within the Wawa Subprovince, specifically in the Michipicoten greenstone belt, which comprises Mesoarchean and Neoarchean (2.9 to 2.7 Ga) metavolcanic rocks and discrete Timiskaming-type metasedimentary rocks (Williams et al. 1991; Sage, 1994; Percival et al., 2012). The Abitibi Subprovince, located east of the KSZ, comprises sublinear Neoarchean greenstone belts intruded and dismembered by granitoid-dominated areas. The Abitibi greenstone belt (AGB) comprises supracrustal rocks and mafic to felsic intrusions. The former is divided into seven distinct volcanic assemblages and two sedimentary assemblages with Neoarchean ages between 2750 and 2695 Ma (Thurston et al., 2008; Monecke et al. 2017). Several phases of folding and deformation have taken place in the AGB. The main stage of regional deformation is known as D₂ (Wilkinson et al., 1999) or D₃ in the Timmins district (Dubé and Mercier-Langevin, 2020), and is associated with north-south shortening, and has a maximum age of 2670 Ma. The volcano-sedimentary succession is cut by east-west ductile-brittle faults associated with the main deformation: the Porcupine-Destor and the Larder Lake-Cadillac faults. These first order structures controlled the architecture of the belt, late-stage sedimentation, alkaline volcanism, and the emplacement of gold deposits, including the ones studied herein (Poulsen, 2017; Dubé and Mercier-Langevin, 2020).

The Southern Province comprises tectonically deformed and metamorphosed Paleoproterozoic rocks amalgamated to the Superior Province during the Penokean and Grenville orogens (Thurston, 1991). The Huronian Supergroup (2.4 To 2.2 Ga) comprises continental margin sedimentary rocks that are divided into 4 groups: Elliot Lake, Hough Lake, Quirke Lake, and Cobalt (Robertson et al., 1969; Bennet et al., 1991). Igneous intrusions occur throughout the Southern Province, including the Nipissing mafic intrusions and the Sudbury granitic plutons (Bennet et al., 1991). Regional potassic and sodic metasomatism is recognized where it is commonly associated with ore deposits, like the uranium deposits in Elliot Lake and occurrences (e.g., Crystal, Scadding) east of Sudbury (Fedo et al., 1997). The prominent Sudbury impact structure, and its associated igneous complex and Ni-Cu-PGE deposits, are located along the southern edge, close to the Grenville Province. The Sudbury structure formed circa 1.85 Ga and consists of several phases and domains with clear magmatic differentiation and accompanying Ni-Cu-Co-PGE massive sulfide mineralization (Ames et al., 2008). Several related offset dykes occur in localities like Vermilion where Au and Ag are part of the metalliferous assemblage (Naldrett, 2004; Ames et al., 2008; Généreux, 2023).

The Grenville Province bounds the south-southeast extent of the Superior and Southern provinces and consists of a complex orogenic belt that formed during the Grenville Orogeny between 1100 to 1070 Ma (Easton, 1992). The province is subdivided into the Central Gneiss Belt and the Central Metasedimentary

Belt. The gold deposits included herein are part of the Central Metasedimentary belt, within the Elzevir terrane, and are hosted by mafic metavolcanic and volcanoclastic metasedimentary rocks in the contact aureole of dioritic intrusions (Easton and Fyon, 1992). This terrane represents a supracrustal arc accreted to the Laurentia margin (Carr et al., 2000, McLelland et al., 2010) and was metamorphosed to greenschist and amphibolite facies during at least two phases of deformation (Easton, 1992; Easton, 2000b).

Mineralization

A summary of the gold mineralization within the large metallogenic districts and belts described in this study follows. The samples and deposits are illustrated in Figure 2, according to their location and proximity to the metallogenic districts. Readers are directed to the references in Appendix A, for more details on each deposit.

The Red Lake metallogenic district is hosted by rocks of the Balmer (2.99–2.96 Ga) and overlying Confederation assemblages (2.75–2.74 Ga; Sanborn-Barrie et al., 2001; Dubé et al. 2004). The gold deposits are commonly spatially associated with the folded regional unconformity between these two assemblages and areas of extensive carbonate hydrothermal alteration (Robert et al., 2005). The north cluster of deposits (Figure 3B) occurs mainly along a deformation corridor that groups several faults and high-strain fabrics known as the Red Lake mine trend (Dubé et al., 2004). Gold occurs within crustiform carbonate veins and silica-sulfide replacements with arsenopyrite, pyrite, pyrrhotite, stibnite and minor amounts of tellurides, sphalerite, galena, and chalcopyrite (Dubé et al., 2004; Harris et al., 2006). Younger, extremely gold-rich zones are associated with fractures cutting the foliation and are interpreted as remobilization from the arsenopyrite-rich ore (Dubé et al., 2002, 2004). At the Madsen mine, gold mineralization occurs as a replacement and dissemination in mafic tuffs and basalts localized by the intersection of structures and favorable rock types (Dubé et al., 2000; Robert et al., 2005). The deposit is hosted by rocks that have undergone amphibolite facies metamorphism (Dubé et al., 2000) and has possibly gone through two distinct metamorphic events (Revering et al., 2023). To the south, at the Great Bear (Dixie) deposit, gold occurs as three mineralization styles: silica-sulfide replacement (Limb Zone), quartz veining (Hinge Zone) and disseminated gold within high-strain zones (LP zone, Pfeiffer et al., 2023). The Limb and Hinge zones are spatially related, and the ore consists of common visible gold with pyrrhotite, chalcopyrite, and pyrite which is similar to other areas in the Red Lake district. However, the LP zone is characterized by disseminated sulfide minerals and visible gold in highly deformed and transposed rock units (Pfeiffer et al., 2023).

The Beardmore-Geraldton metallogenic district is hosted mainly by rocks of the Southern Metasedimentary Unit of the Beardmore-Geraldton greenstone belt, comprising turbiditic sequences with iron formation and lenses of conglomerate (Tomlinson et al., 1996; Tóth et al., 2022). The main mineralization event manifests as steeply dipping quartz – carbonate ± pyrite – chalcopyrite – tourmaline veins associated with second order structures adjacent to the Bankfield-Tombhill fault, which formed during the Shebandowanian

orogeny. The gold mineralization has a maximum age of 2694 Ma, but there are indications of later remobilization (Lafrance et al., 2004; Tóth, 2019).

In the Wawa metallogenic district, gold deposits occur within the Michipicoten greenstone belt. The Island Gold deposit is hosted mainly in felsic to intermediate volcanic rocks that are strongly deformed, generally parallel to the Goudreau fault, and crosscut by four generations of orogenic veins, although the bulk of the gold is in the first generation (Jellicoe et al., 2022). Gold generally occurs as free gold on slip faces in veins or between quartz grains, or as inclusions in pyrite (Ciufo et al., 2020; Jellicoe et al., 2022). Another generation of gold-bearing veins is only recognized in the Webb Lake stock within the Goudreau Zone. A similar set of veins has been identified in the adjacent Magino mine, where they are interpreted as early intrusion-related mineralization (Campos et al., 2023). In a similar setting, the gold deposits in the Wawa gold corridor (i.e., Darwin, Parkhill, Deep Lake) are hosted in shear zones that have undergone multiple deformation events, but commonly in quartz-tourmaline veins accompanied mainly by arsenopyrite and pyrite (Wehrle et al., 2023). An early intrusion-related event within the Jubilee stock has also been identified (Wehrle et al., 2023). In addition, a late remobilization stage upgraded the ore zones, resulting in coarse visible gold associated with Bi-Te minerals (Wehrle et al., 2023).

The southern Abitibi greenstone belt is one of the world's most important gold-producing regions. In this study, the deposits in the AGB are divided based on their locations with respect to the two major trans-crustal deformation zones in the area: the Porcupine-Destor (PD) and the Larder Lake-Cadillac (LLC) faults. There are several styles of mineralization across the AGB, but the bulk is concentrated in orogenic quartz-carbonate veins subordinated by intrusion-associated stockwork-disseminated deposits (Robert et al., 2005; Dubé and Gosselin, 2007; Dubé and Mercier-Langevin, 2020). The large gold systems in the AGB (e.g., Dome, Hollinger-McIntyre, Kirkland Lake) are associated with the D₃ shortening event (2660–2640 Ma) and are hosted by structures closely associated with the two large crustal faults mentioned above (Robert et al., 2005; Dubé et al., 2017; Dubé and Mercier-Langevin, 2020). The intrusion-associated systems (e.g., Young-Davidson, Upper Beaver) pre-date the quartz-carbonate vein event and represent magmatic-hydrothermal events early in the development of the AGB, comprising disseminated and stockwork gold-bearing ores (Dubé and Mercier-Langevin, 2020; Mathieu, 2021). Gold is associated generally with pyrite and chalcopyrite (Monecke et al., 2017; Dubé and Mercier-Langevin, 2020), and in the Kirkland Lake deposits it is associated with tellurides (Ispolatov et al., 2008). Remobilized gold has been identified in several deposits resulting in high-grade zones (Stromberg et al., 2019; Mathieu, 2021), but very little research has focused on this specific event.

The Swayze greenstone belt is deemed the southwestern extension of the AGB (Thurston et al., 2008; Monecke et al., 2017) but in the literature is normally referenced separately. Historically, the Swayze greenstone belt has been considered less endowed than the remainder of the AGB but recent discoveries, like the synvolcanic intrusion-related Côté Gold (Katz et al., 2017, 2021), have encouraged exploration in

the area. The orogenic systems found in the Swayze are like those in the AGB (Heather, 2001) comprising syn-orogenic quartz-carbonate veins (e.g., Kenty) associated with deformation zones (e.g., the Rundle and Ridout faults) and pre-orogenic, synvolcanic intrusion-associated systems like Côté Gold (Hastie et al., 2020, 2023; Katz et al., 2021). The Côté Gold deposit is considered to be an Archean (2740 Ma) analogue of Au-Cu porphyry-type deposits. The mineralization occurs as disseminated and stockwork zones, hosted by a synvolcanic composite intrusion composed of low aluminum tonalitic and dioritic rocks that are part of the Chester Intrusive Complex (Katz et al., 2021).

Gold deposits studied in the Southern Province are divisible into three different types of mineralization. The Vermilion deposit occurs within an offset dike environment of the Proterozoic Sudbury Structure (Szentpeteri et al., 2003; Généreux, 2023), where primary magmatic ore minerals have undergone subsequent remobilization that concentrated Au and PGEs, which are commonly associated with Te, Sb, and As enrichment (Généreux, 2023). The Crystal deposit comprises quartz veins and replacement zones in rocks of the Huronian Supergroup. Gold is associated with chalcopyrite, arsenopyrite, and sphalerite (Gates, 1991). Conversely, the Pardo deposit is a Paleoproterozoic-aged paleoplacer deposit hosted by the Mississagi and Matinenda formations of the Huronian Supergroup. Here the conglomerates host pyrite, uranium-bearing minerals, and gold grains (Ulrich et al., 2011; Whymark and Frimmel, 2018). There is evidence of small-scale gold remobilization due to low-grade metamorphism (Ulrich et al., 2011; Whymark and Frimmel, 2018).

Gold deposits in the Grenville Province are less thoroughly studied compared to deposits in the Superior Province and only a few are mentioned in reports. The Bannockburn, Ackerman, and Sophia gold deposits are spatially related to a regional deformation zone at the contact of the Elzevir and Grimsthorpe domains, with host rocks consisting of mafic volcanic rocks and semi-pelitic sediments (Malczak et al., 1985). The gold is structurally controlled, hosted by quartz veins, and is associated with pyrite, arsenopyrite, tellurides, and bismuthides with quartz, potassic, and carbonate alteration present close to the veins (Malczak et al., 1985; Easton and Fyon, 1992; Chamale and Jeffs, 2017). The Richardson deposit is hosted by marbles within the contact aureole of the Deloro pluton. The deposit consists of a skarn-like mineralization with gold and, notably, U-minerals (i.e., brannerite) (Stacey et al., 1974; Malczak et al., 1985).

2.3 Methods

Specimens with visible gold were obtained mainly from collections at the Royal Ontario Museum (ROM) (n = 169) with the remaining specimens (n = 73) donated from the private sector (i.e., individuals and mining companies; Figure 2). The gold grains were extracted from hand specimens on site at the ROM and then mounted in epoxy pucks at the Geoscience Laboratories in Sudbury, Ontario. Where possible, ten grains were mounted per puck and where grains were particularly small, some quartz/wall rock was mounted also. These were polished in a staggered process, finishing with Buehler MicroPolish Alumina 0.05 μm on a ChemoMet polishing pad. Gold-mounted epoxy pucks were scanned in reflected light to obtain a high-

resolution image of the mounts as reference for further analyses using an Olympus BX51 petrographic microscope and automated stage using Stream Motion™ software. Scanning electron microscopy-energy dispersive spectrometry (SEM-EDS), electron probe microanalysis (EPMA), and laser ablation inductively coupled mass spectrometry (LA-ICP-MS) were used to determine the elemental concentrations of the gold grains.

SEM-EDS and EPMA

At the Geoscience Laboratories in Sudbury, Ontario, a Zeiss EVO 50 SEM equipped with an Oxford X-Max 50-mm² EDS with a working distance of 8.5 mm, accelerating voltage of 20 kV, and a beam current 0.75 nA was used to: 1) identify mineral inclusions and their textural relationship with gold grains, and 2) distinguish major elemental zonation or microveinlets. Following SEM-EDS analyses, a JEOL JXA-8530F EPMA equipped with five wavelength dispersive spectrometers (WDS) was used to obtain quantitative analyses of Au, Ag, Cu, and Hg in the gold grains, which represent the most common major and minor elements in gold. The EPMA used a 20 kV accelerating voltage, 40 nA beam current, a probe diameter of 1 µm, and an acquisition time (combined peak and background) of 110 s. The calibration standards used for quality control (QC) monitoring and evaluating overlap corrections were the ASTIMEX pure metal standards for Au, Ag, and Cu and the Micro Analytical Consultants (MAC) synthetic HgTe for Hg. Even though Te was rarely detected, it was acquired to monitor and validate the HgTe standard. Additionally, several in-house standards (PR1-2, PR1-4, PR5-2, and PR5-4) were developed from homogenous gold grains from the Preston Mine (Timmins Camp) to use as external standards in the LA-ICP-MS data processing.

A total of 2328 EPMA analyses were obtained, generally 10 per gold grain, with average detection limits and accuracy of: Au (0.078 wt%, 0.01%), Ag (0.063 wt%, 0.18%), Cu (0.017 wt%, 0.22%), Hg (0.059 wt%, 0.10%) and Te (0.032 wt%, 0.28%), respectively. Mineral inclusions were avoided visually when setting up the ablation spots. The EPMA compositional data were used to determine within-grain homogeneity, as well as quality control for the subsequent LA-ICP-MS analyses.

LA-ICP-MS

Due to the low concentration of other elements in gold (Liu et al., 2021, Greenough et al., 2021), trace element analyses were done by LA-ICP-MS at the Isotope Geochemistry Laboratory at the Mineral Exploration Research Centre (MERC, Laurentian University, Sudbury, Canada). As part of the project, a rigorous evaluation of the operating conditions and ablation parameters was done to achieve the most accurate and precise data for a large set of elemental analytes. All the conditions use for LA-ICP-MS data acquisition are summarized in Table 1. Laser ablation sampling was performed using a Photon Machines Analyte G2 equipped with an ArF excimer laser ablation system with 193 nm wavelength and <5 ns pulse width. A HelEx II cell was used and the helium carrier gas flow through the ablation cell was 0.45-0.525

l/min (cup) and 0.1 l/min (cell), with 0.6-0.65 l/min Ar and 6 ml/min N₂ makeup gas added downstream of the cell. The grains were ablated with a 50 µm spot, measuring 60s of background, followed by a 30 s on the sample, with an energy density of 5 J/cm² and the beam operating at 7 Hz repetition frequency. When size did not permit a 50 µm spot, a 20 µm was used instead, with the resulting data treated as semi-quantitative due to lower accuracy and precision calculations.

A Thermo Scientific iCap-TQ ICP-MS in single quadrupole mode was employed to ensure maximum sensitivity on the low to intermediate mass range. Cool gas, auxiliary gas, and RF power were set at 14 L/min, 0.8 L/min, and 1550 W, respectively. The elemental suite analyzed was: ⁷Li, ²⁴Mg, ²⁷Al, ²⁹Si, ³¹P, ³⁴S, ⁴³Ca, ⁴⁵Sc, ⁴⁷Ti, ⁵¹V, ⁵²Cr, ⁵⁵Mn, ⁵⁷Fe, ⁵⁹Co, ⁶⁰Ni, ⁶³Cu, ⁶⁶Zn, ⁷⁵As, ⁸²Se, ⁹⁰Zr, ⁹³Nb, ⁹⁵Mo, ¹⁰¹Ru, ¹⁰³Rh, ¹⁰⁵Pd, ¹⁰⁷Ag, ¹⁰⁸Pd, ¹¹¹Cd, ¹¹⁵In, ¹¹⁸Sn, ¹²¹Sb, ¹²⁵Te, ¹⁸¹Ta, ¹⁸²W, ¹⁸⁵Re, ¹⁸⁹Os, ¹⁹³Ir, ¹⁹⁵Pt, ¹⁹⁷Au, ²⁰²Hg, ²⁰⁵Tl, ²⁰⁶Pb, ²⁰⁷Pb, ²⁰⁸Pb, ²⁰⁹Bi and ²³⁸U (Fig. 5). The external standards used were: the USGS synthetic glasses NIST SRM 610 (Jochum et al., 2011a), GSE-1G (Jochum et al., 2005b), and GSD-1G (Jochum et al., 2011b); the artificial sulfides MASS-1 (Wilson et al., 2002) and FeS1 (Savard et al., 2018); the gold reference materials AuRM1 and AuRM2 (London Bullion Market Association, 2009; Milidragovic et al., 2016; Tetland et al. 2017); and the in-house standards PR1-2 and PR1-4. All reference values were taken from GeoReM (Jochum et al., 2005a).

For each analytical session, two analyses of each standard were performed at the beginning and end of each session, and one analysis of each standard every 30 spots. The in-house reference materials PR1-2 and PR1-4 were used to calibrate the major and minor elements (Au, Ag, Hg and Cu). A combination of NIST610, GSE-1G and FeS1 was used to calibrate the remainder of the trace elements. Reference materials AuRM1, AuRM2, and GSD-1G were used to monitor the quality of analyses of the elements by a bracketing procedure, comparing the measured values with the accepted values in each of these reference materials. Considering that the measurements are done entirely in gold alloys, a sum normalization calibration was used as an internal standard (Lin et al., 2016 and the references therein). For this, the sum of all the major and trace elements to 100% is normalized and calibrated against the external reference materials. Polyatomic interferences were monitored using pure Ag and Cu metals and a collision cell in the ICP-MS (at 2 and 3mL/min He flow). Corrections due to the interference of ⁶⁵Cu-⁴⁰Ar with ¹⁰⁵Pd and ¹⁰⁹Ag-¹⁶O with ¹²⁵Te were made following the procedure proposed by Guillong et al. (2011). ¹⁰⁸Pd presented isobaric interferences and peak overlaps, thus, these data were excluded from the results.

Intensity data (i.e., counts per second) were transformed to concentration data (ppm) by iolite software v.4.8 (Paton et al. 2011) using the 3D trace element reduction scheme. During data processing, the first seconds of the signal were ignored to avoid measuring surface contamination and issues with laser coupling/signal stabilization (Lin et al., 2016). Spikes in the time-resolved spectra due to contamination or major micro-inclusions were eliminated. The average limit of detection (LOD) obtained for the elements discussed herein are as follows: ¹⁹⁷Au (0.43 ppm), ¹⁰⁷Ag (0.42 ppm), ²⁰²Hg (2.42 ppm), ⁶³Cu (0.24 ppm),

^{121}Sb (0.04 ppm), ^{105}Pd (0.04 ppm), ^{111}Cd (0.09 ppm) and ^{209}Bi (0.008 ppm). For the LODs of the remainder of analytes listed above, refer to Melo-Gómez et al. (2022) and Appendix C.

The LA-ICP-MS values for Au, Ag, Cu, and Hg compared with the values obtained through EPMA analyses having a very good fit with R^2 values of 0.999, 0.997, 0.934 and 0.927, respectively. AuRM1 and AuRM2 analyses show good accuracy and precision with a mean relative error (RE) of 4.8% and a relative standard deviation (RSD) of 18.8%, respectively (Table 2). For Cd in GSD-1G, the RE was 2.7%, and an RSD of 14.7%. For Hg in GSD-1G, the RE was 11.2%, and an RSD of 15.5%. These results show that the methods are robust and reproducible and that the results are fit for the purpose of quantifying the trace elements present in gold. A total of 1985 spots were obtained quantitatively, with 49 censored. Another 409 spots were semi-quantitative, most of which were taken with 20 μm spots or did not pass the QC tests.

2.4 Results

Gold texture and associated minerals

A total of 242 grains of gold were obtained from high-grade samples from gold deposits and occurrences across Ontario, Canada (Figure 2). The textures of the gold and the associated minerals were documented using optical microscopy and back-scattered electron (BSE) imaging in the SEM. The gold grains were generally from veinlets that fill fractures in quartz veins (Fig. 1), and less commonly, from fractures in the host rock (i.e., free gold; Fig. 1C). These grains are mostly homogeneous with no visible zonation and little to no visible inclusions (Fig. 6). Several minerals associated with gold or that occur as inclusions were detected using the SEM-EDS. Only minerals that displayed textures indicative of mutual timing with the gold, such as smooth, regular, curved contacts, were counted as associated. The dominant mineral species is quartz, followed by tellurides, sulfides/sulfosalts, carbonates, and silicates. The tellurides are especially common in samples from Abitibi-LLC (e.g., Kirkland Lake district, Ashley, Young-Davidson) with multiple species like altaite (Fig. 6F), petzite, tellurobismuthite, tetradyomite, tsumoite, calaverite, among others. Sulfides, like pyrite, chalcopyrite, arsenopyrite, sphalerite, and galena (Fig. 6D-F), were identified as associated and as inclusions. Sulfides are ubiquitous and not especially related to a particular metallogenic district. Conversely, samples from the Red Lake district have abundant Sb-minerals (stibnite and aurostibite) as inclusions (Fig. 6D), which were not observed elsewhere. The only rare features observed crosscutting the gold grains were in samples from Lake Shore and Toburn deposits, where the gold is cut by microveinlets composed of more Ag-rich gold (Fig. 6G).

Geochemistry of gold

Major and minor elements: Au, Ag, Cu, and Hg were measured by EPMA in all the gold grains and are included in Appendix B. Au and Ag were detected and quantified in all the grains with ranges of 67.8 to 99.7 wt% Au and 0.49 to 30.8 wt% Ag, respectively. Cu was detected in 70.3% of the cases with ranges of

0.017 to 0.281 wt%. Hg has a higher LOD and therefore was detected less commonly (52.14%) with ranges of 0.058 to 1.86 wt%, except for grains from Upper Beaver that contain up to 4.03 wt% Hg. The differences in Au and Ag concentration are reflected by the color of the grains. Gold grains with a high Au content (>90 wt%) have a reddish-yellow color (Fig. 6A), whereas with increasing Ag content, the gold grains have a whiteish-yellow color (Fig. 6B and C).

Gold fineness is a description of the “purity” of a natural gold alloy and has been used to represent the Au vs. Ag concentration in an alloy (Boyle, 1979). However, herein due to the measured Cu and Hg values in gold, these elements are included in the calculation as follows: $\frac{Au \text{ wt}\%}{(Au+Ag+Cu+Hg) \text{ wt}\%} \times 1000$, where the result is a unitless number between 0-1000. The overall calculated gold fineness in Ontario ranges between 688 and 995; however, samples from different metallogenic districts have a similar gold fineness range. For example, gold grains from the Red Lake, Beardmore-Geraldton, Wawa, Abitibi PD and Abitibi LLC districts have fineness ranges of 832-991, 827-993, 850-973, 828-971; and 898-971, respectively. Although the fineness is similar among districts, the concentration of major and minor elements shows differences. Figure 7, a ternary diagram of Au-Ag-Cu, indicates that samples from Abitibi PD and Abitibi LLC are different, with the latter being richer in Au and Cu.

Trace elements: For the 48 isotopes measured using LA-ICP-MS, the absolute quantitative values, LOD, and errors for each of the 2394 measurements are provided in Appendix C. However, only ^{63}Cu , ^{105}Pd , ^{107}Ag , ^{111}Cd , ^{121}Sb , ^{197}Au , ^{202}Hg and ^{209}Bi were detected over 60% of the time (to facilitate comparisons, Fig. 5) and they behaved similarly to Au in the time-resolved spectra. This behavior suggests their presence in gold and not in micro-inclusions (Fig. 8). Hereafter, when referring to these isotopes, the atomic number is omitted but implied. Numerical comparisons are only done between data obtained with 50 μm spots because trace element data collected with 20 μm ablation spots are treated herein as semiquantitative due to lower precision and accuracy results. Au content in gold has a linear negative correlation with Ag (Fig. 9A), an exponential positive correlation with Cu (Fig. 9B), a slightly positive exponential correlation with Hg at low concentrations (<1 wt%), except at Upper Beaver where it shows a negative correlation (Fig. 9C), and no correlation with Sb (Fig. 9D), Cd, Pd, and Bi. Figure 10 shows box-and-whisker diagrams with the ranges of Cu, Hg, Sb, Pd, and Cd for each of the metallogenic districts studied. Cu, Hg, Pd, and Cd have ranges that span two to three orders of magnitude, indicating that districts have variations in the concentration of trace elements within gold. The means and medians tend to be the same in each grouping, showing a trend for unimodal distribution in some districts. Nevertheless, the Southern and Grenville provinces samples are exceptions because they have different populations in every element, which makes their comparison with other districts difficult. Data from Western Ontario samples is insufficient to make comparisons. Gold from the Upper Beaver deposit in the Abitibi LLC and the Côté Gold and Gosselin deposits in the Swayze metallogenic district have higher Pd values (15.07, 4.79, and 1.52 ppm, respectively) deviating the mean from the median for their respective districts. Sb has the largest variation between districts, with a range of five orders of magnitude (Fig. 10). Figure 11 displays three distinct

groupings according to Sb cumulative frequency: 1) Red Lake, Beardmore-Geraldton, and Confederation Lake; 2) Abitibi PD, Wawa, and Southern Province; and 3) Abitibi LLC, Swayze, and Temagami.

Figure 12 compares the Sb and Hg content of gold among deposits and districts, where each dot shows the mean Sb and Hg values using a hot-cold color scheme with ranges indicated. From Figure 12, the Sb concentration in gold is higher in northwestern Ontario (i.e., Red Lake) and decreases systematically to the southeast in the Archean deposits with the lowest concentrations in gold proximal to the Abitibi-LLC. However, the mean Hg values tend to be higher for gold in the Abitibi deposits (over 200 ppm Hg) and then decreases in gold towards the northwestern districts. Similarly, Figure 13 shows the Cu and Cd mean concentration for each deposit in the Abitibi greenstone belt. Cu is steadily higher in each deposit on the Abitibi-LLC district, with averages between 220 and 580 ppm (except Upper Beaver with an average of 1372 ppm), whereas Abitibi-PD deposit averages are between 122 and 447 ppm. Conversely, Cd values are higher in gold from the Abitibi-PD (between 0.037 and 0.776 ppm) relative to gold in the Abitibi-LLC (0.034 and 0.137 ppm).

Considering that the values for Sb, Hg, Cd, and Cu show the most significant variation in absolute values among metallogenic districts in the Archean, Figure 14 was constructed to compare the Sb/Cu and Hg/Cd ratios in gold. On average, Red Lake has both high Sb/Cu and Hg/Cd ratios, whereas Confederation Lake and Beardmore-Geraldton have high Sb/Cu but low Hg/Cd ratios. The Abitibi-PD samples have a wide range of Sb/Cu, similar to Wawa, however the latter has lower Hg/Cd values. Abitibi LLC, Swayze, and Temagami all have very low Sb/Cu and moderate to high Hg/Cd values.

Case study: Pardo paleoplacer project

A puck containing 64 gold grains from three different areas/groups within the Pardo deposit, and one possible lode source provided by Inventus Mining, are shown by different colors in Figure 15 (green, blue, pink, and red). The green group contains gold grains extracted from an *in situ* quartz vein at the Emerald Lake occurrence located northeast of the Pardo area, which is interpreted to be up in the paleoflow of the Missisagi Formation (Long et al., 2011). The other three groups (i.e., blue, pink, and red) represent grains from gold mineralized intervals from three different locations within the conglomeratic deposit. Elements detected are the same as those for gold from other Ontario deposits; however, ^{238}U was also commonly over the LOD. The green group from Emerald Lake has, in general, a lower content of trace elements with a lower Au/Ag ratio and higher Hg (up to 2.6 wt%). The blue group has similar values to the green, but with lower Hg. The pink group has small grains so less data was obtained, however, the data available show higher values of Au/Ag, Hg, and Cu, and lower values of Sb and Pd. The red group has a higher trace element content, with higher Pd (up to 71 ppm), higher U (up to 375 ppm), higher Cu (up to 565 ppm), and the highest Au/Ag ratio among the analyzed grains from Pardo. To better compare these groups, and considering the detected elements, the data are plotted on an Ag/Cu vs. Hg/Pd diagram in Figure 15B. Gold grains from the green, blue, and pink groups have higher values in both ratios, whereas gold grains

in the red group have lower values. In Figure 15C, a bivariate plot of Cu vs. U, the same three groups have lower Cu and U content, whereas gold from the red group has a higher U and Cu content.

2.5 Discussion

A more complete understanding of gold, its chemistry, and geological interpretations are scale dependent and need to be addressed at the grain-, deposit-, district-, and craton-scales. At the grain- and district-scales, the chemical behavior of major, minor, and trace elements, including how they are transported, must be discussed to better understand how elements may be coupled/decoupled from gold. In addition, the implications of gold geochemistry to regional gold metallogeny at the district- to craton-scale of primary versus secondary gold are discussed. Any model attempting to explain the trace element composition of gold from deposits in Ontario must account for these facts:

1. The samples are generally homogeneous Au-Ag alloys with minor Cu and Hg. Sb, Pd, Cd, and Bi are present as trace elements.
2. The gold is generally coarse-grained, occurs in fractures that crosscut quartz, is associated with a low abundance of accessory ore minerals, and is late in the system.
3. Gold grains from the same deposit have similar trace element signatures with low variability, except for some outlier samples.
4. Gold grains from different mines/deposits in the same metallogenic district show similar concentrations and ratios of trace elements.
5. Samples used in this study come from deposits considered to be orogenic, intrusion-related, replacement-type and polymetallic veins. The deposits are also hosted in a wide range of rock types (e.g., greenstone belts, metasedimentary belts, BIF, and intrusions, among others).
6. The deposits studied herein are Precambrian in age and have undergone multiple deformation/metamorphic events.

Major, minor, and trace elements within gold

The process by which elements become enriched/depleted within gold and/or coupled/decoupled from gold depends on several factors, the most critical being: 1) crystal-chemical substitution mechanisms; 2) how Au is transported, and 3) if gold is primary or secondary (e.g., remobilized).

Crystal-Chemical Substitution Mechanisms: Substitution of elements within gold depend on size (i.e., metallic radii), preference for other minerals, and other substituents (Tait et al., 2023). For an element to substitute in an alloy, its chemical properties should be similar to the host, namely: atomic size factor (i.e., metallic radii), relative valency factor, and electrochemical factor (i.e., electronegativity) (Barret, 1943; Smallman and Ngan, 2011). In the case of gold, the relative valency factor does not play a role in determining substitution because the electrons are shared through metallic bonding in the alloy (i.e., Au⁰). In nature, gold alloys consist mainly of Au and Ag because they can form a continuous solid solution due to their similar metallic radii (144 pm; Pauling, 1960), which permits easy substitution (Hough et al. 2009). The solid-solution is observed in the results as indicated by the 1:1 correlation shown in Figure 9A. Copper is smaller, 128 pm, but several studies have shown that it can form a continuous solid solution with Au and

Ag due to their similar chemical properties as all are part of Group 11 of the periodic table (Knipe and Fleet, 1997; Chapman et al., 2009; Chudnenko and Pal'yanova, 2014). This solid solution is not 1:1 but exponential, as shown in Figure 9B, because Cu probably occurs as an interstitial alloy. Mercury has a similar behavior as Ag and Cu and forms a solid solution with Au as documented by Chapman et al. (2010), Chudnenko and Pal'yanova (2016) and Liu et al. (2021), and supported by the slight positive correlation observed in Figure 9C. The other elements detected in gold grains (Pd, Sb, Bi, Cd) have similar metallic radii (within 15%), permitting their substitution for Au. However, the lack of correlation with Au (e.g., Sb; Figure 9D) suggests their occurrence is as lattice impurities or nanoparticle inclusions.

The metallic radius of Sb is approximately 15% larger than for Au (Pauling, 1960), however it was still detected in the vast majority of gold samples (Fig. 5). Chapman et al. (2021) observed the presence of Sb in detrital gold in the form of clusters or micro-inclusions. This was also shown by recent atom probe tomography research (Tait et al., 2023) which documented the distribution of Sb as nanoclusters within gold. Tait et al. (2023) interpreted that Sb formed a metastable alloy with Au, which later diffused into nanoclusters by solid-state Ostwald ripening. Based on the aforementioned observations, Sb nanoclusters may be distributed in gold such that the 50 μm spot size used in the analysis of each grain appeared to indicate a homogeneous distribution in time-resolved LA-ICP-MS spectra (Fig. 8), and thus, a meaningful mean concentration.

In the case of electronegativity, Au is the most electronegative metal, which explains why it is the most noble of metals and why it prefers to form alloys (Kepp, 2020) by attracting less electronegative elements such as Ag, Cu, and Pd. However, Au nobleness does not permit the incorporation of many elements in its structure, hence the low quantity of elements detected. This may explain why other metals and semi-metals (e.g., Sb and Cd) would form nanoparticles, most likely in a native state.

Preference for other phases: Even if elements can structurally fit in an Au-alloy lattice, these elements may prefer to combine with other elements to form separate phases. This links back to the discussion above, as elements with similar behavior in the crust are more likely to substitute for each other. This has been shown by Christy's (2018) classification of elements, which was modified from the Goldschmidt (1937) classification. According to the "chalcophilicity index" of Christy (2018), the detected elements in Au in this study have similar geochemical behavior as Au (between 7 and 10 in the chalcophilicity scale). This may explain why other elements that may "fit in gold" (e.g., Al, Ti, or Ta; Tait et al., 2023) are not detected and why limited elements can enter the structure of gold. Other authors have detected elements that are not geochemically compatible with gold structure; however, these measurements may be the result of methodological issues. Greenough et al. (2021), Liu and Beaudoin (2021), and Liu et al. (2021) pointed out the presence of Mg, Al, Fe, Ca, Si, and Ti in gold, which they interpreted as silicate microinclusions, although their presence can also be the product of contamination during polishing or as a matrix effect due to the use of thin sections. These authors also detected Te, which has a positive correlation with Ag, that

herein is shown to be the result of isobaric interference with Ag. Greenough et al. (2021) also detected Rh in gold, which may be due to the isobaric interference with Cu as shown herein. In addition, Liu and Beaudoin (2021) and Liu et al. (2021) identified Fe, Co, and S in gold. Even though Au is a siderophile element, Fe and Co do not fulfill the previously stated substitution mechanisms as they differ greatly in metallic radii with Au, and Fe is not stable as a native metal in normal crustal pH-Eh conditions (Bird and Weathers, 1977; Kamenetsky et al., 2013). Therefore, their concentration may be explained by a matrix effect because most of the grains were small (<25 μm), included in sulfides, and in thin sections.

In addition to fitting into the crystal structure of gold, the presence and concentration of elements in gold may be influenced by their preference for other phases. Thus, even though Bi, Sb, and Te are commonly associated with Au in gold systems, their detected concentrations are variable among gold districts (Fig. 10 and Appendix C). This could be explained by their preference to form their own more favorable phases. For instance, the low concentration of Bi in gold may be explained by its preference to form Bi-minerals like maldonite (Au_2Bi) or even native bismuth at the appropriate range of temperatures (i.e., 200-400°C) in gold systems (Tooth et al. 2008). These same minerals are observed in several gold deposits across Ontario like in the Wawa gold corridor (Wehrle et al. 2023), the Ashley deposit (Harris et al. 1983), the Kirkland Lake camp (Poulsen, 2017), and the Dome deposit (Stromberg et al. 2019). This may apply to Sb as well, which also depresses the melting temperature of gold (Tomkins et al., 2007) and forms aurostibite (AuSb_2) as reported in the Red Lake camp (Dubé et al., 2004). The best example is the behavior of Te in gold. Te-minerals are commonly observed in gold samples herein (Fig. 6) however, Te is still below the LOD in most samples. This behavior suggests that it prefers to form tellurides (e.g., altaite, calaverite, petzite, or sylvanite) that are common to many gold deposits, rather than substituting into gold, despite the availability of Te in the system.

In addition, the availability of Te in the system can impact Ag concentration in gold. Spence-Jones et al. (2018) showed that the values of $f\text{Te}$ could influence the Ag content of an Au-alloy: at high Te availability, Ag-tellurides will form until Te is depleted, after which Ag becomes available to alloy with Au. This is consistent with a coincidence between the timing of gold and telluride mineralization in some gold deposits (Figure 8). This may, in part, explain Te values below the limit of detection in gold and the observed variation in gold fineness values (i.e., purity) between gold deposits along the Larder Lake Cadillac deformation zone versus the Porcupine-Destor deformation zone. For example, gold from the Kirkland Lake camp has a mean fineness of 934 (Fig. 7) and has been commonly associated with Ag-tellurides (Ispolatov et al., 2008; Poulsen, 2017; Nadeau et al. 2021), whereas gold from the Porcupine-Timmins camp is associated with lesser Ag-tellurides (Bateman et al. 2008; Stromberg et al. 2019), consistent with a lower mean fineness of 905 (Fig. 7; Melo-Gómez et al., 2021).

Other element substitutions: The concentration of a certain element in an Au-alloy may be influenced by the occurrence of other minor and trace elements within gold (Tait et al., 2023). In these data (Figs. 5 and

10), Cu is consistently present in gold from different deposit types (e.g., polymetallic vein, orogenic, intrusion-related) and has an inverse exponential relationship with Ag (Figure 9B). This inverse relationship indicates that Cu substitutes in Au at the expense of Ag (Murzin and Malyugin, 1983; Knight and Leitch, 2001) and agrees with the findings of other gold geochemistry research from a variety of settings of different ages (Chapman et al., 2011; Moles et al., 2013; Dongmo et al., 2019; Liu and Beaudoin, 2021). This had been interpreted to reflect mineralization temperature or direct association with a magmatic source (Antweiler and Campbell, 1977; Moles et al., 2013; Liu and Beaudoin, 2021). Even though this relationship was found in gold from the Upper Beaver deposit, it was not the case for the Côté Gold sample, yet both deposits are interpreted as intrusion-related deposits (Katz et al., 2021; Mathieu, 2021). Thus, a magmatic influence on high Cu content in gold may not be valid for all intrusion-associated deposits and may be just the reflection of the availability of Cu in the system and/or the fineness of gold, because with less Ag, more Cu can enter the structure. Other elements in gold do not have a correlation between them, or with Au, and their abundance and presence may be influenced by their availability in the system due to other larger-scale causes as discussed below.

Primary versus Secondary Gold

The similarity in the geochemistry of gold in samples from the same area and/or metallogenic district as indicated in this study (Figures 10, 11, 12, 13 and 14) and in previous studies (Boyle, 1979; Hastie et al., 2023) suggests common and district to regional-scale influences on the trace element signature of gold. For example, the near ubiquitous presence of associated tellurides (Fig. 6) and the low values of Sb/Cu throughout all the LLC samples (Fig. 14) suggest they have been subjected to similar geological processes and conditions. These processes are mainly controlled by Au-transport mechanisms: in primary gold the dominant mechanism is generally considered as Au transported in solution by a hydrothermal fluid (Gammons and Williams-Jones, 1997; William-Jones et al., 2009) subordinated by transport as nanoparticles (William-Jones et al., 2009; Monecke et al., 2023). Conversely, secondary gold (i.e., remobilized) is dominated by Au transported as nanoparticles (Hastie et al., 2021; McLeish et al., 2021) or as polymetallic melts (Fougerouse et al., 2016; Hastie et al., 2020).

Primary gold: gold source, transport, and depositional processes can influence the trace element signature of primary gold. In the first case, a similar or common source for Au and related metals and semi-metals transported by the same fluid for all deposits in an area is likely to explain a specific district-scale elemental signature. For instance, in the AGB, deposits that formed in similar geological and chronological conditions, such as those associated with the PD, are thought to be related and be part of the same “gold mineral system” with co-genetic fault-related and magmatic gold emplacement (Mathieu et al., 2021; Mole et al. 2022). Jørgensen et al. (2022) and Roots et al. (2022) have shown that lithospheric structures interconnecting Au deposits of different ages in the AGB may have served as long-lived conduits for magmatic and metamorphic fluids. Similar structures are described by Adiban (2021) and Adetunji et al.

(2023) for the Red Lake camp. Trans-crustal structures, described in all the studied districts of the Superior province, may have tapped a sub-continental lithospheric mantle and/or underwent mixing with metamorphic fluids. Diverse gold-rich fluids could be homogenized and distributed in these same structures (Dubé et al., 2017; Witt et al., 2020; Tuba et al., 2021; Jørgensen et al., 2022; Mole et al., 2022; Roots et al., 2022) producing gold deposits with a similar signature in a single area or district (Fig. 16A), even if gold is mobilized in solution or as NPs.

At the province scale, the Sb/Cu ratio marks two different sample populations: deposits from the northwestern region in the Superior Province with a high Sb/Cu ratio (Red Lake, Beardmore-Geraldton, Confederation Lake, Pickle Lake, Musselwhite, Hawk Bay), compared to deposits in the southeastern Superior Province with a low ratio (Abitibi, Swayze, Temagami, Fig. 14). The most notable difference between these two groups is that deposits in the northwest are underlain mostly by Mesoarchean crust, whereas deposits in the SE by Neoarchean crust. Differences in the composition of Mesoarchean and Neoarchean crust may have influenced the elemental signature of gold as they could be the gold source during metamorphic devolatilization (Pitcairn et al., 2015; Gaboury, 2019; Goldfarb and Pitcairn, 2023) or interacted with the mineralizing fluids as they traveled through them. Another option is that Mesoarchean crust served as a thermal and mechanical barrier, permitting primary magmatic fluids to have more time to tap Sb from the host rocks. The Wawa Subprovince is associated mainly with Neoarchean rocks, but some Mesoarchean rocks of the Hawk Bay domain can also be found in the area, which may explain its broader Sb/Cu ratio (Fig. 14). However, there are no geochemical reports of the host rocks in NW Ontario that include Sb, Cu, and Hg to confirm these hypotheses or to make a better interpretation of these observations.

Pd behaves differently in gold than the other trace elements discussed, because it may be linked to magmatic-hydrothermal processes. For example, a higher Pd content in gold has been interpreted by LeFort et al. (2011) and Chapman et al. (2017) to indicate a magmatic-hydrothermal input: the latter observed that gold from alkalic porphyry-type systems has a higher Pd signature. Samples from Vermilion, Upper Beaver, and Côté Gold (including Gosselin) share a higher Pd concentration, above one ppm up to hundreds of ppm, whereas the other gold samples analyzed do not show as much variation and have a lower Pd concentration (Fig. 10). These deposits have a clearly identified magmatic-related genesis: Vermilion is hosted in offset dykes associated with the Sudbury Igneous Complex (Szentpeteri et al., 2003; Généreux, 2023); Côté Gold (and probably Gosselin) is an Archean analog of porphyry-type deposits (Katz et al., 2021); and Upper Beaver is described as an intrusion-syenite-related system (Kontak et al., 2008; Mathieu et al., 2021).

For gold from deposits within a district or region to have a similar elemental signature, ore processes, source, and precipitation conditions should be similar for each deposit or area to produce a consistent signature during primary mineralization. In this sense, the deposits in a single mining district should be

viewed as part of a larger, interconnected mineral system, with a comparable source of fluids and metals. The primary gold elemental signature can be slightly variable due to specific local conditions during deposition or transport. For instance, one sample with higher Hg and Cu in the Dickenson mine (Red Lake) or two samples from the Darwin mine with higher Hg (Wawa). However, as stated above, primary gold precipitation and Au in solution models cannot explain the late, high-grade gold within deposits, and the different alteration and associated ore minerals in deposits where gold has similar trace element signatures (e.g., Young Davidson vs. Kerr Addison).

Secondary gold: Conversely, the trace element signature of gold can be modified during secondary processes, like remobilization during metamorphism and deformation events (Hastie et al., 2020). Remobilization is reported in several gold deposits in the Abitibi and Swayze greenstone belts (Hastie et al. 2020, 2023), Wawa gold corridor (Wehrle et al., 2023), Red Lake camp (Dubé et al., 2004; Harris et al., 2006), and Beardmore-Geraldton belt (Tóth, 2019). Considering most samples used in this study are from gold in fractures that crosscut quartz veins, the role of remobilization must be considered. The three Au transport mechanisms mentioned in the introduction and discussed above can occur during remobilization, but nanoparticles and polymetallic melts are interpreted as the most efficient to produce coarse gold (Hastie et al., 2020). The presence of LMCE as traces in gold (Hg, Sb, Cd, and Bi) and associated minerals support the polymetallic melt hypothesis. In this case, the LMCE and Au are extracted from primary pyrite and/or arsenopyrite via coupled dissolution-reprecipitation (CDR) processes (Fougerouse et al., 2016; Hastie et al., 2020) or partial melting (Tomkins et al., 2004). After liberated, an Au-rich melt is produced, using the hydrothermal fluid as a heat source, and then transported elsewhere (Tooth et al., 2011; Hastie et al., 2020). During subsequent deposition, gold forms with an LMCE-signature and with LMCE-bearing associated minerals (i.e., tellurides, bismuthides, antimonides or native metals; Figs. 6 and 16B). Liu et al. (2021) noticed that a second gold event in fractures (probably remobilized) was associated with a positive signature for Bi and Sb, lending further support of this hypothesis.

Where high-grade gold is found without associated Bi-Te-Sb minerals, physical nanoparticle transport in a fluid (i.e., colloidal gold) can be the remobilization mechanism. In a secondary environment, this implies that gold was remobilized from precursor mineral hosts, like pyrite, arsenopyrite, or associated quartz and then aggregated and upgraded in secondary structures (Voisey et al., 2020; Hastie et al., 2021; McLeish et al., 2021; Fig. 16B).

The fact that samples from the same metallogenic district have a similar trace element signature suggests that the gold deposit districts have been subjected to similar geological events (e.g., metamorphism and deformation), during which secondary gold with similar composition formed in those systems (Fig. 16). This consideration has implications in geological and metallogenic interpretations of Au deposits and districts. For instance, the Abitibi-LLC and Swayze samples have a similar gold “fingerprint” supporting the thesis that the Swayze is the southwestern extension of the AGB (Thurston et al., 2008; Monecke et al., 2017)

and has been subjected to the same geological events. Conversely, the Wawa Subprovince has been considered an extension of the Abitibi Subprovince (Percival et al., 2012), yet Wawa gold has a significantly different elemental signature from the AGB gold samples (Fig. 12 and 14), which suggests that these subprovinces evolved separately or have different basements or crustal reservoirs (Mole et al., 2021). Even if gold is remobilized, its elemental signature may still reflect the original overall deposit geochemistry, because Au and associated elements were remobilized from the primary mineralization, for instance, during CDR reactions. This may explain why, even if the same remobilization mechanisms were responsible for the secondary gold (e.g., polymetallic melts), different districts have different elemental concentrations, such as high Sb in Red Lake versus high Hg in the AGB.

An example that deviates from this is gold from the Madsen mine in Red Lake. Samples from the Red Lake area are associated with rocks that range from lower greenschist to upper amphibolite metamorphic grade (Thompson, 2003). Although they have been subjected to different pressure and temperature regimes during metamorphism, the trace element signature of gold from other Red Lake deposits does not change significantly between the samples (e.g., Sb/Cu ratio; Fig. 14). However, gold samples from the Madsen mine have a different signature. Madsen is a replacement-style deposit that has undergone at least two metamorphic events: amphibolite-facies regional metamorphism and subsequent contact metamorphism produced by the Killala-Baird batholith (Corfu and Andrews, 1987; Dubé et al., 2000). The Madsen gold samples have an incredibly high fineness > 975 and lower concentrations of trace elements compared to other Red Lake samples (Fig. 9B-D). This suggests that higher heat and/or pressure conditions during multiple metamorphic events, particularly the later and localized contact metamorphic event, may have preferentially removed Ag and other trace elements from gold. Furthermore, this behavior is observed as well in samples from the Hardrock and Richardson mines (Fig. 9) which show a decoupling of Au from the minor and trace elements at high Au wt% (i.e., natural refinement).

In this study of 242 visible gold samples from gold deposits across Ontario, there is an unequivocal trace element signature in gold for deposits associated in a metallogenic district, rather than a product of deposit type, host rock, or associated minerals, that has not been shown before. Considering the arguments above for primary and secondary gold processes, the most probable model is that the trace element signature in gold from Ontario gold deposits is a product of both primary and secondary processes. During primary mineralization, gold deposits in the same district that formed under similar metallogenic conditions, would acquire a similar geochemical signature in the mineralization. During subsequent metamorphic/deformation events, the coarser late gold alloy (Au-Ag-Cu-Pd) is a product of remobilization that was aided by Sb, Hg, Cd, and Bi (and probably Te). The remobilization process is district-scale and therefore likely occurred during regional metamorphism and deformation, where the gold was remobilized as polymetallic melts and nanoparticles (Tomkins et al 2007; Hastie et al., 2020). In general, however, the secondary gold retained the primary trace element signature as represented in Figure 16. This refined metal signature reflects the primary composition and sources of the mineral system, which explains the elemental differences between

gold from different metallogenic districts, with deposits in each district having a similar metal source and having undergone similar geological processes.

Using detrital gold to identify populations and sources: Pardo Project

As observed in Figure 15, the gold samples analyzed from the Pardo paleoplacer deposit can be divided into at least two populations. One population of detrital grains has a strikingly similar signature in trace elements (Ag, Cu, Sb, Cd, Bi, Pd, U) to gold grains collected from the Emerald Lake *in situ* quartz veins (Long et al., 2011). This signature suggests that these grains were sourced from this kind of vein in this area (Whymark and Frimmel, 2018). Nevertheless, the second population has a different signature than the *in situ* grains. This may indicate a different, perhaps more distal source that has not yet been identified. However, the U content of these grains (>100 ppm) is several orders of magnitude more than any other gold analyzed in this study. This may indicate the presence of U-bearing mineral inclusions in the gold, which are indeed present as detrital grains in the deposit (Whymark and Frimmel, 2018); however, this could not be verified with the time-resolved LA-ICP-MS spectra. Another possibility is that the trace element signature in this gold population represents a late hydrothermal event recognized in the deposit that remobilized some of the gold (Ulrich et al., 2011; Whymark and Frimmel, 2018). In either case, the gold signature has proven useful for comparing detrital gold to its possible *in situ* source and has distinguished gold populations that relate to different geologic events.

Implications for exploration

When conducting gold exploration in a given area, the trace element signature of gold from that area provides insight as to what pathfinder elements in soil, stream, till, or lake samples may be most useful to target gold. For example, Sb and Cd notably correlate with Au in NW Ontario, especially in the Red Lake area; or Hg is higher in the AGB. Brownfield exploration can also be refined by acquiring the gold trace element signature of known deposits to understand the mineral system, because gold composition may provide insights on the genetic relation between prospects. In areas that have undergone multiple deformation events, LMCE elements can provide information on remobilization processes and can help to prioritize elemental gold pathfinders. Furthermore, these methods can be applied to placer or paleoplacer deposits in addition to the methodology proposed by Chapman et al. (2022), which incorporates the chemical composition with the inclusion assemblage to identify multiple gold sources, like the example presented from the Pardo project. To facilitate this endeavor, the data obtained in this project will be made freely available online.

2.6 Conclusions

The results represent the first data set for the trace element composition of gold from Ontario gold deposits at very low detection limits, with good precision and accuracy. Gold is typically an alloy formed with variable

amounts of Ag, Cu, and Pd and traces of Hg, Sb, Cd, and Bi. The data for 242 samples derived from 71 deposits across Ontario, indicate that there is a clear spatial control on the trace element signature of gold in deposits within the same metallogenic district, regardless of host rocks, deposit type, or associated minerals.

The controls on this “gold fingerprint” can be explained by both primary and secondary metallogenic processes; considering the 1) late-crosscutting nature of coarse gold; 2) similar trace element gold composition among deposits in the same district; 3) variability among districts in the Superior Province, and 4) LMCE detected in gold (Hg, Sb, Cd and Bi) and as associated minerals (Sb, Te and Bi). Based on this, our interpretation is that gold analyzed herein was remobilized as secondary polymetallic melts and nanoparticles during deformation and metamorphism, but the primary gold elemental signatures are retained. Thus, differences in the elemental ratios and concentrations within remobilized gold reflect primary differences, that resulted from different metallogenic processes, sources, or transport mechanisms.

These results and interpretations have important implications for Au exploration in terms of selecting the most appropriate pathfinder elements and understanding of mineral systems. More specifically, the trace element signature of gold can pinpoint the elements that are associated with Au in each area (e.g., Sb in Red Lake or Hg in the AGB). LMCE elements should be considered as high priority in areas suspected to have undergone multiple deformation events as this facilitates remobilization of gold. Lastly, detrital gold can be used as an exploration tool to distinguish populations and sources in placer and paleoplacer deposits, even if the exact source cannot be identified.

2.7 References

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2.8 Figures

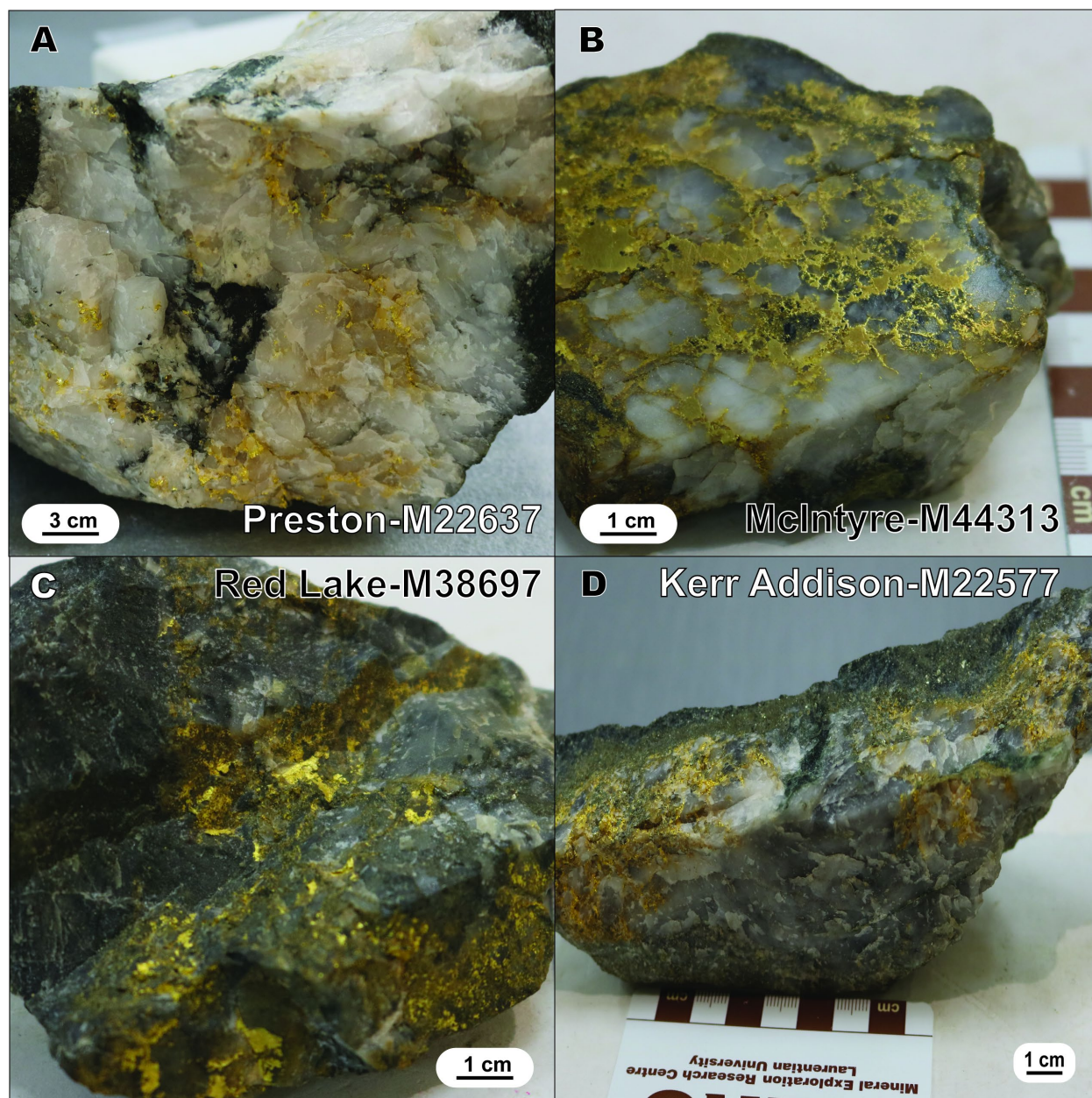


Figure 1. Examples of ultra high-grade gold in hand samples from Ontario gold deposits featuring gold in fractures in quartz veins and in the host rock from: A) Preston deposit, Porcupine-Destor metallogenic district, Abitibi Greenstone Belt, sample M22637; B) McIntyre deposit, Porcupine-Destor metallogenic district, Abitibi Greenstone Belt, sample M44313; C) Red Lake deposit, Red Lake Camp, sample M38697; and D) Kerr Addison deposit, Larder Lake-Cadillac metallogenic district, Abitibi Greenstone Belt, sample M22577.

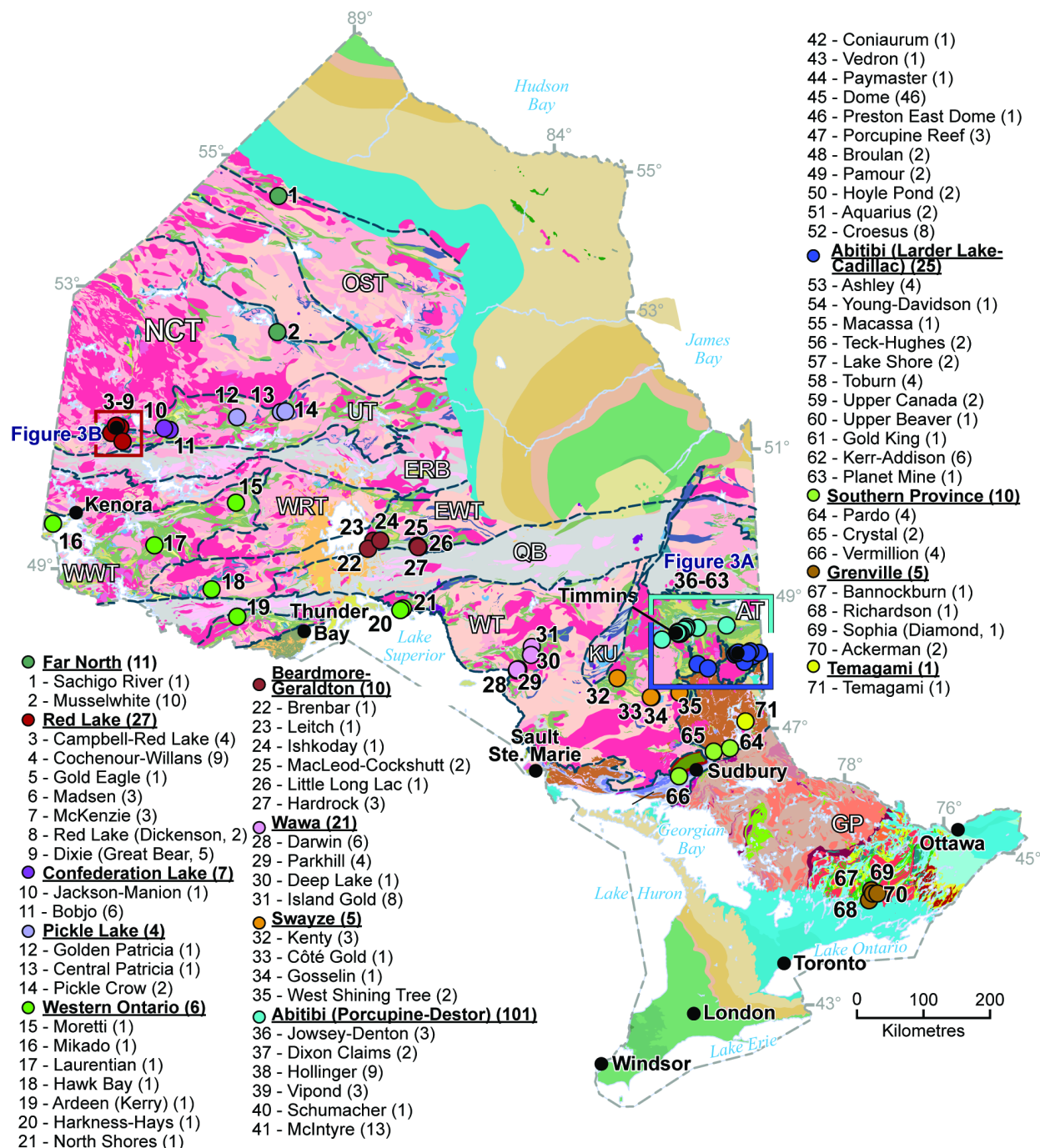


Figure 2 Geological map of Ontario, with simplified chronostratigraphic units and terranes boundaries, indicating the mines and deposits included in this study. The deposits are grouped based on their proximity and/or the metallogenic district they belong to. In brackets are the number of samples obtained for each deposit/district. For a detailed geological legend, the reader is referred to Ontario Geological Survey (2011). OST: Oxford-Stull Terrane. NCT: North Caribou Terrane. ERB: English River Belt. WRT: Winnipeg River Terrane. WWT: West Wabigoon Terrane. EWT: East Wabigoon Terrane. QB: Quetico Belt. WT: Wawa Terrane. AT: Abitibi Terrane. SP: Southern province. GP: Grenville Province. Modified from Melo-Gómez et al. (2022)

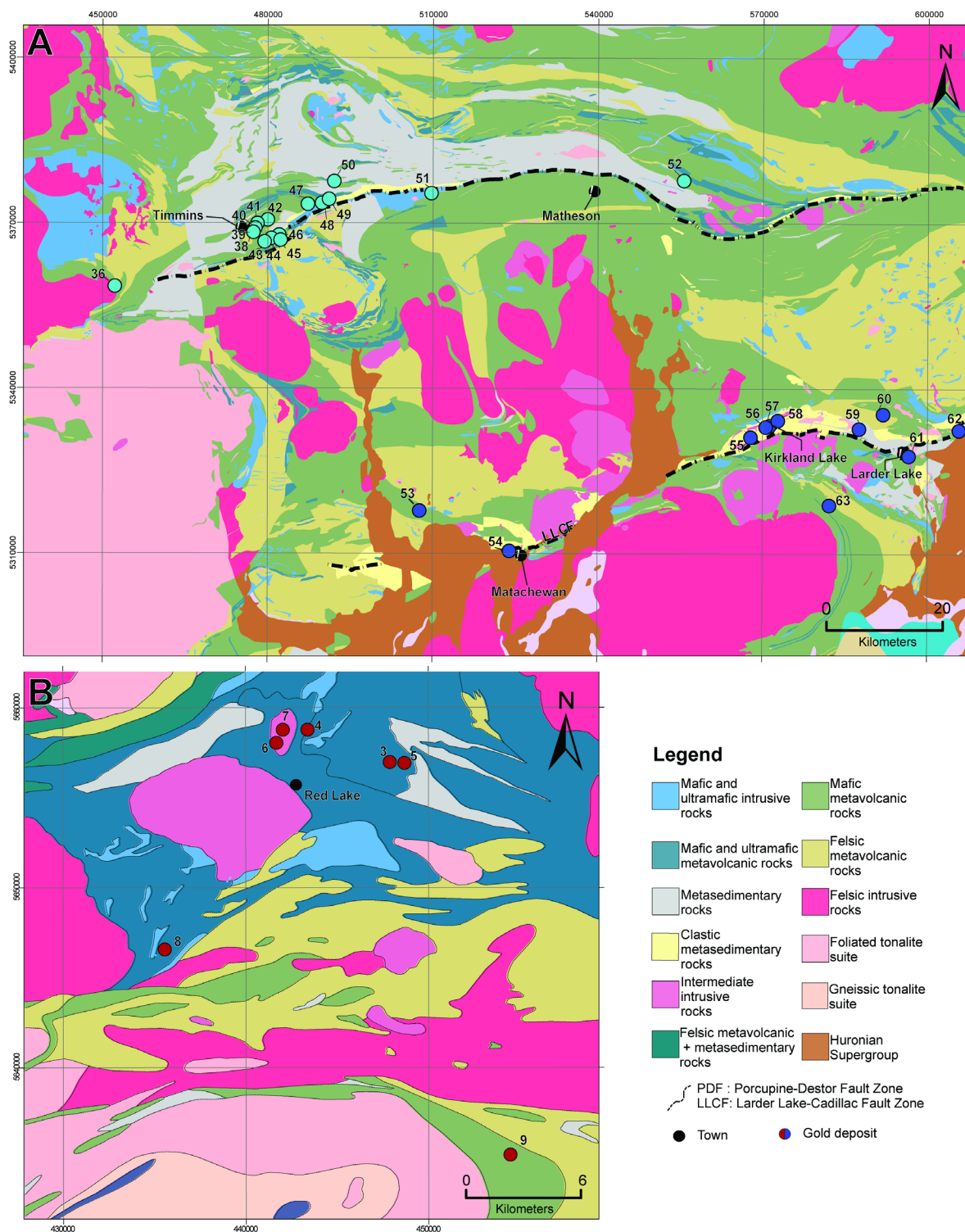


Figure 3. Simplified geological map showing the location of gold deposits in the Abitibi Greenstone Belt and Red Lake camp. A) Abitibi Greenstone belt map showing the two principal deformation zones: Porcupine-Destor fault (PDF) and Larder Lake-Cadillac fault (LLCF). The deposits on or close to the PDF are grouped in the Abitibi-PD metallogenic district and are shown in light blue, whereas those on or close to the LLCF are grouped in the Abitibi-LLC metallogenic district and are pictured in dark blue. Deposits are

numbered and are keyed to the list provided in Figure 2. Geology from Ontario Geological Survey (2011) and from Dubé and Mercier-Langevin (2020). The Universal Transverse Mercator (UTM) co-ordinates are provided in North American Datum 1983 (NAD83) in Zone 17.

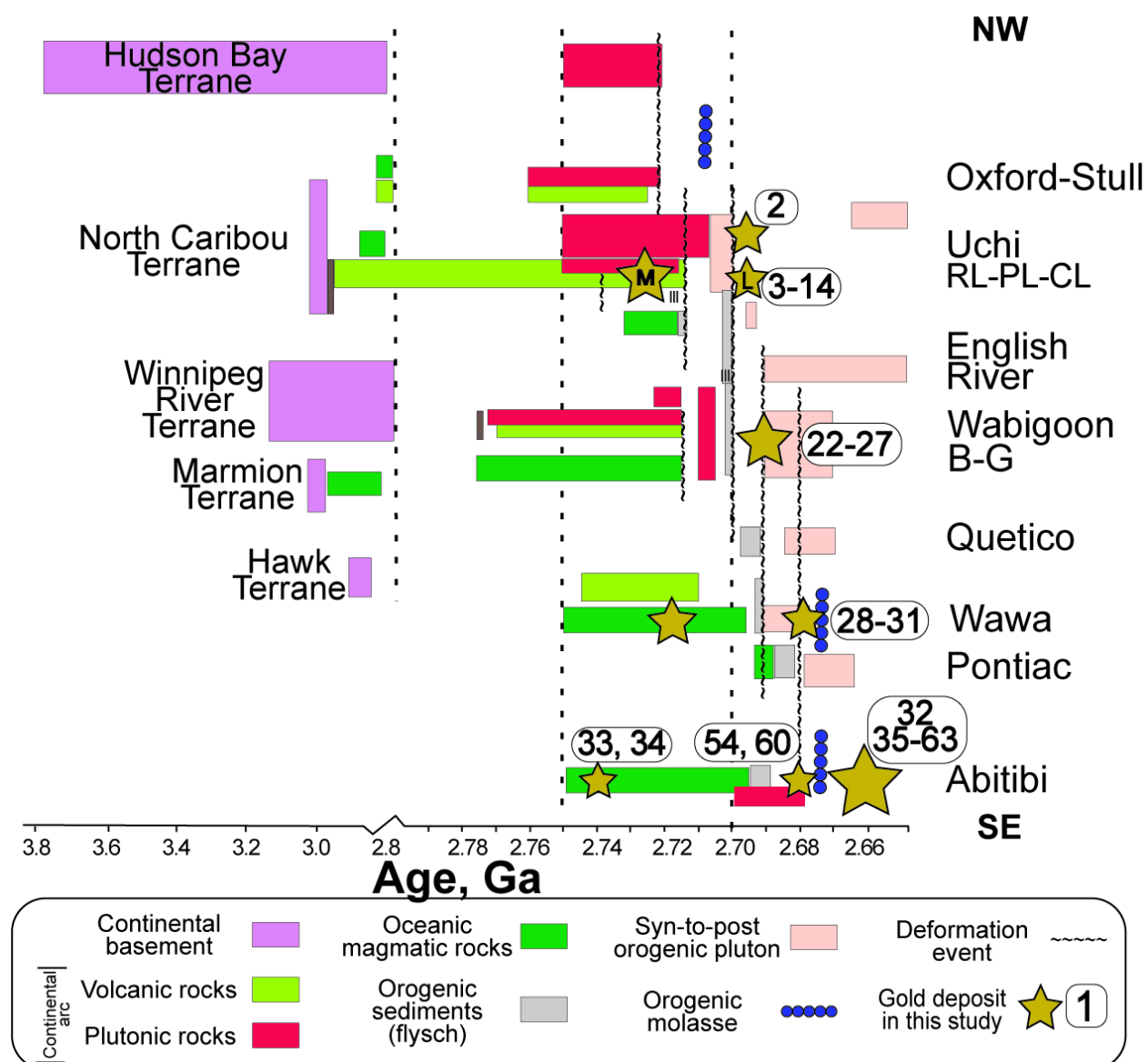


Figure 4 Time-space diagram showing the different terranes and domains in Ontario's Superior Province including the relationship between continental and oceanic blocks. Note the southward-younging advancement of rocks, events, and mineralization. L: Late. M: Main. RL: Red Lake. CL: Confederation Lake. PL: Pickle Lake. Modified from Percival et al. (2012) including the mineralization ages from the references in Table 1. Star sizes showing a graphical representation of gold produced in these districts.

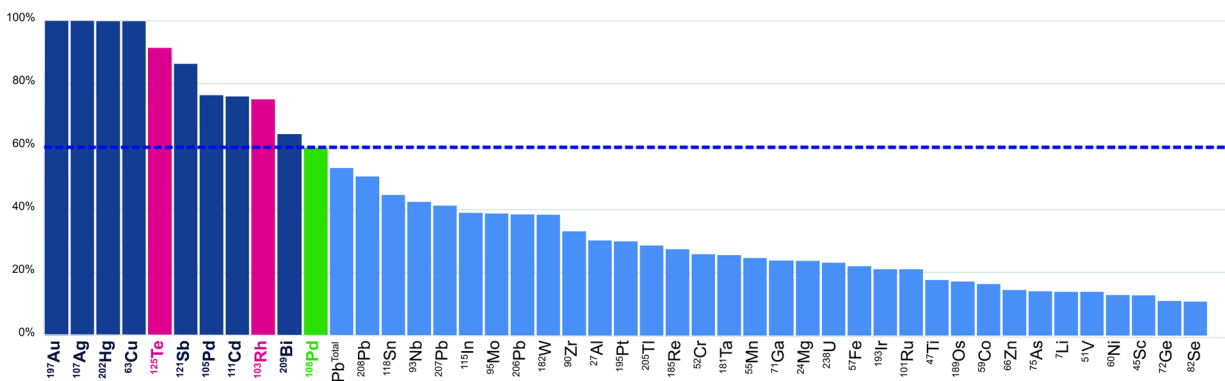


Figure 5. Bar chart showing every isotope measured in this study and their abundance at trace level. Y-axis represents the percentage of measurements where the isotope exceeds the LOD. Elements in dark blue are included and discussed herein. In red are elements with interferences that were corrected during processing. In green, ¹⁰⁸Pd with interferences and signal overlaps and was not included in the data. In light blue the rest of elements without abundance over the 60%.

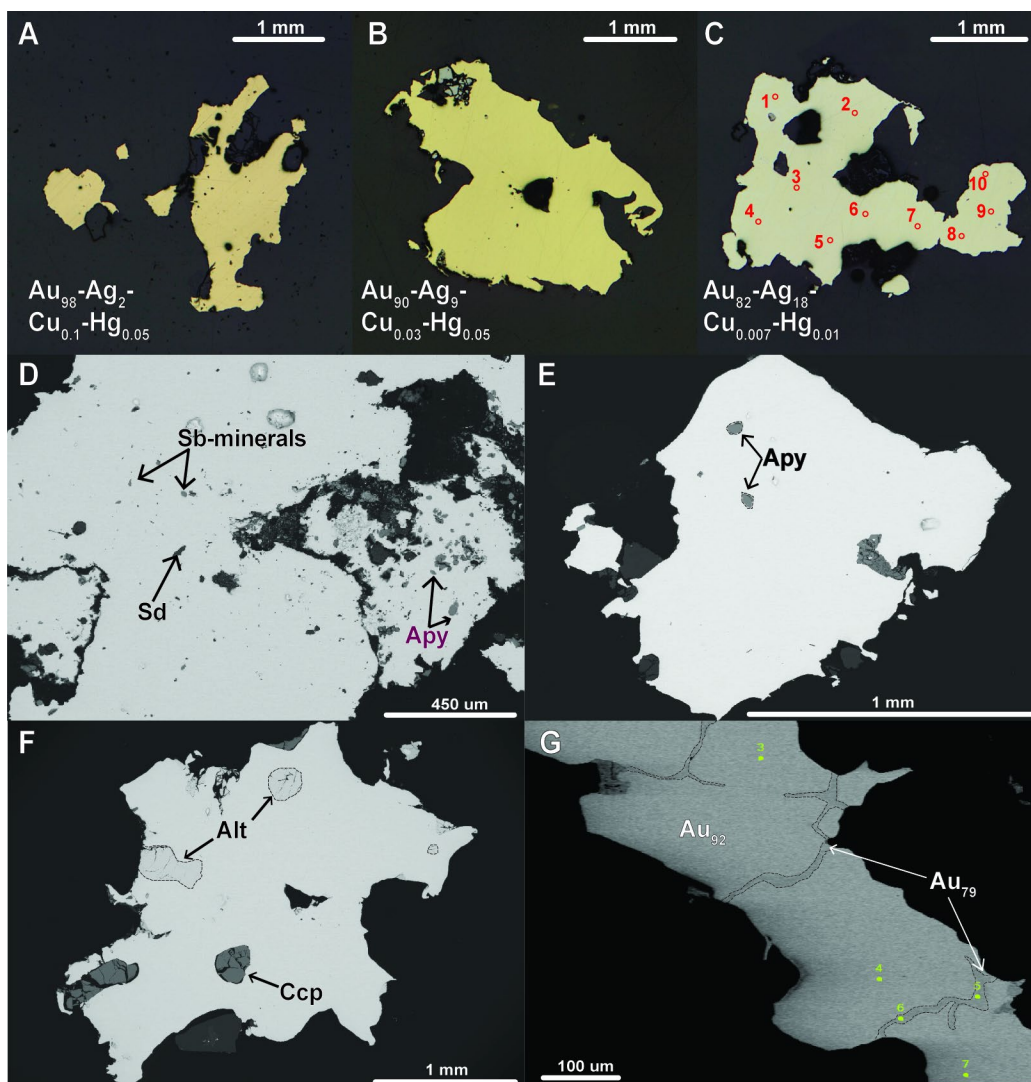


Figure 6. Examples of gold textures and associated minerals at the microscopic level. A, B and C: reflected light images of gold grains showing differences in color according to their composition. C shows the random location of LA-ICP-MS measurements in the grain. D, E and F: BSE images displaying the homogenous composition of the gold and associated/included minerals. G: Gold grain from Lake Shore deposit in Abitibi-LLC with late crosscutting microveinlets with less gold content. Sd: Siderite. Apy: Arsenopyrite. Alt: Altaite. Ccp: Chalcopyrite. Subscripts besides elements are in wt%.

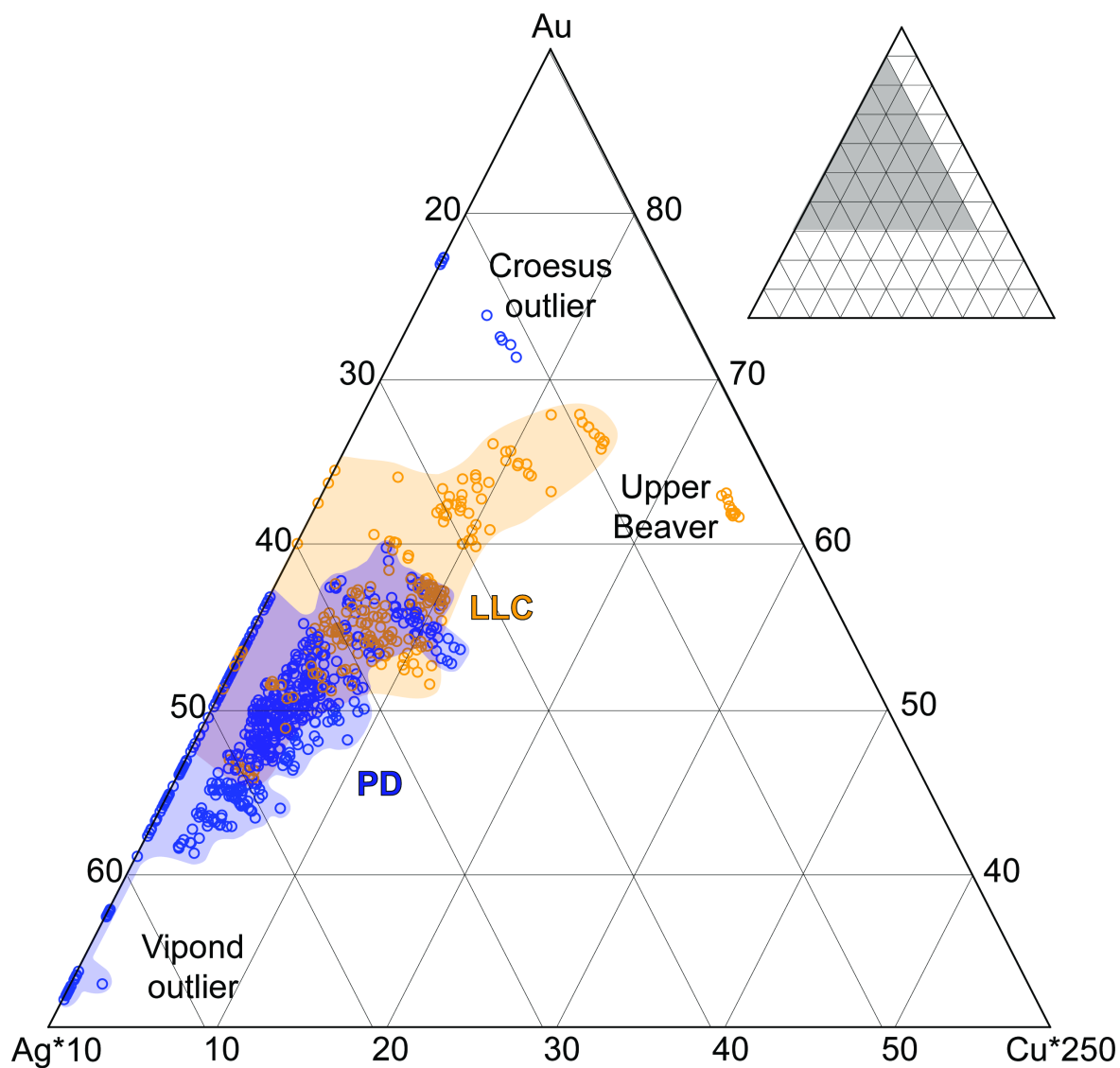


Figure 7. Au-Ag-Cu ternary diagram with the composition of AGB gold samples divided into the Abitibi-PD (blue) and Abitibi-LLC (orange). Each open circle is an EPMA measurement taken from the values in Appendix B. To enhance visual comparison Ag and Cu have an increased scaling and the diagram is an enlarged portion of the complete ternary diagram.

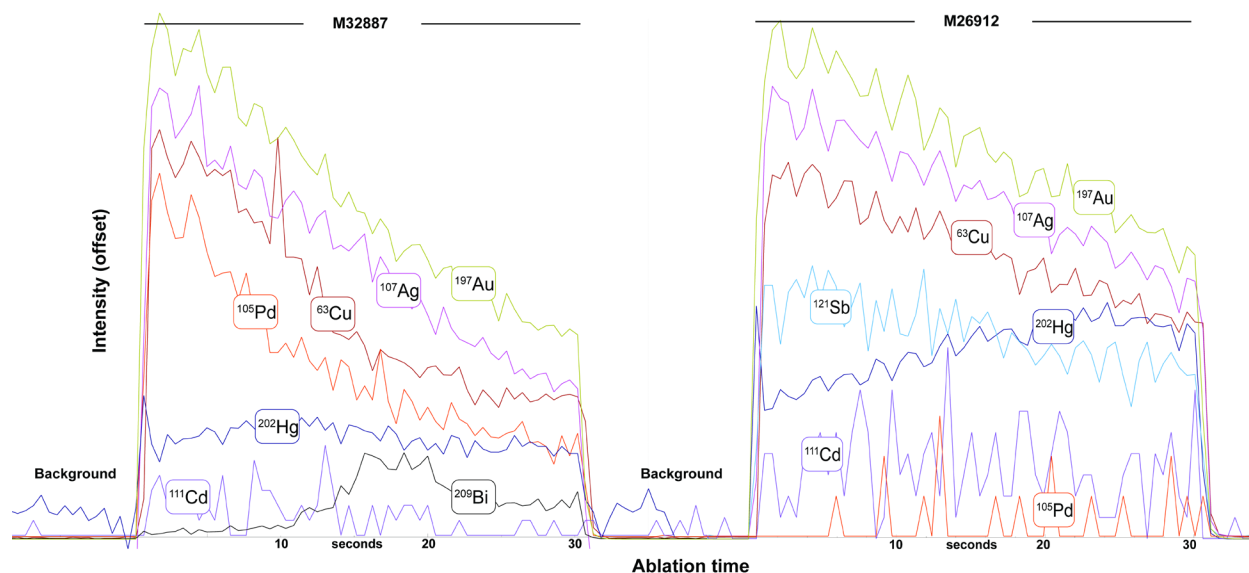


Figure 8. LA-ICP-MS time-resolved spectra from the ablation of two spots in two different gold grains. The Y-axis has been offset for each element for visual clarity. Note the parallel behavior of the minor and trace elements compared to Au and the differences in their intensity.

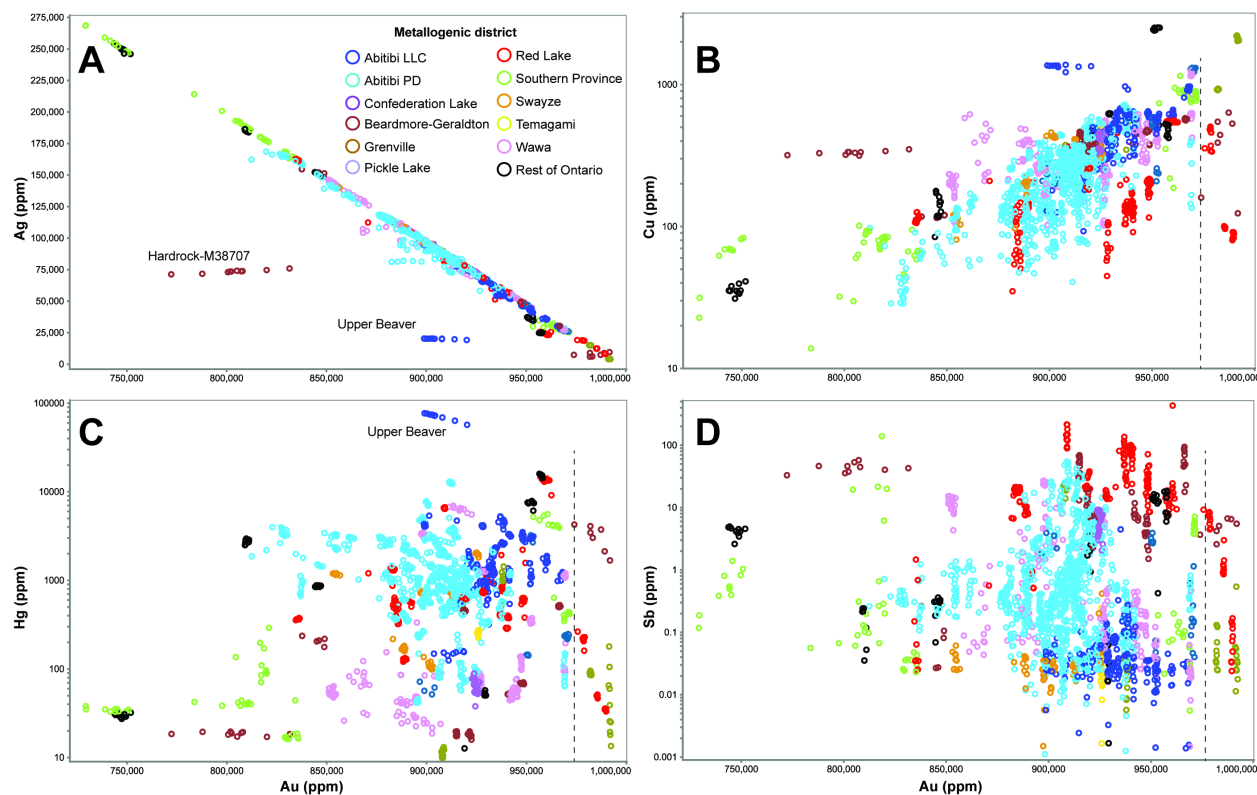


Figure 9. Bivariate LA-ICP-MS plots showing Au vs A) Ag, B) Cu, C) Hg and D) Sb. Note that the correlation of Au with Ag is negative, with Cu is positive, with Hg is slightly positive and no correlation with Sb. Notice that after around 97.5 wt% Au (dashed line), minor and trace element abundance tend to decrease considerably (Madsen and Hardrock mines samples). The legend on A applies to all the plots. Concentrations are on ppm. The Y-axis is on a logarithmic scale on B, C and D

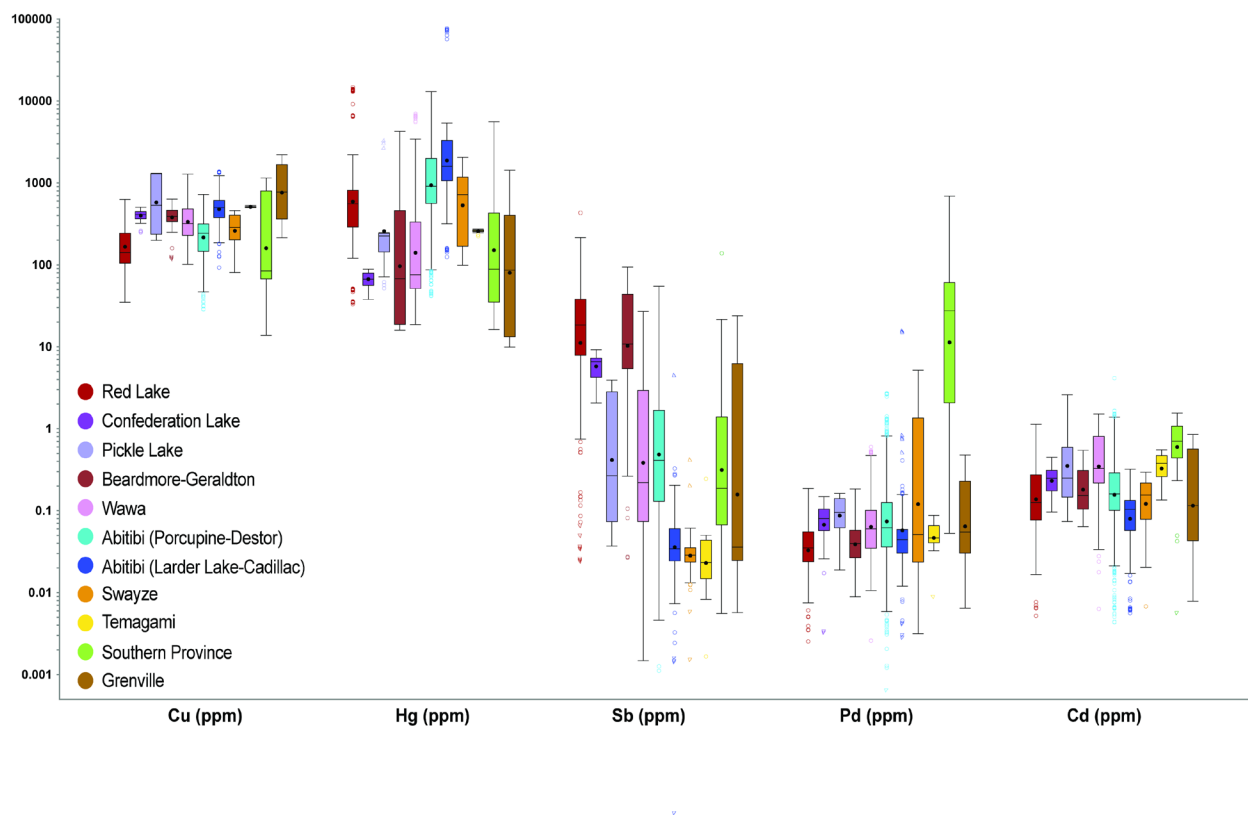


Figure 10. Box and whisker plots showing the variability in Cu, Hg, Sb, Pd and Cd in gold for each studied area. Whiskers are drawn to the last data point, which is 1.5 times the box length from the maximum and minimum. Open circles are outliers (within 3 box lengths), and open triangles are extreme outliers (beyond 3 box lengths).

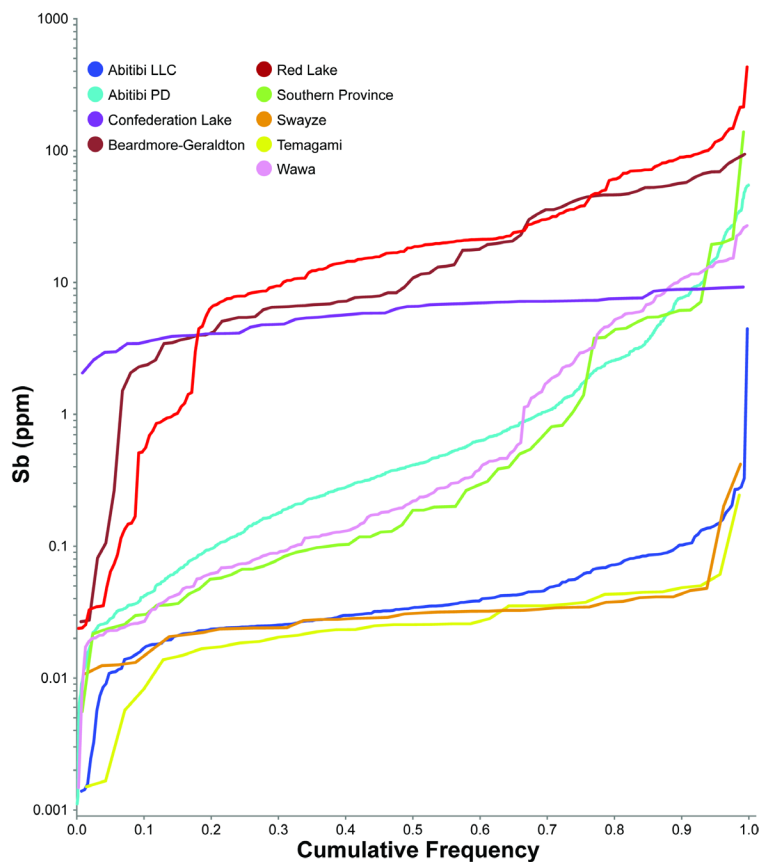


Figure 11. Sb abundance in gold divided by metallogenic districts. Note the similarity on the patterns between a) Red Lake – Confederation Lake – Beardmore-Geraldton, b) Abitibi-PD – Wawa – Southern Province, and c) Abitibi-LLC – Swayze – Temagami.

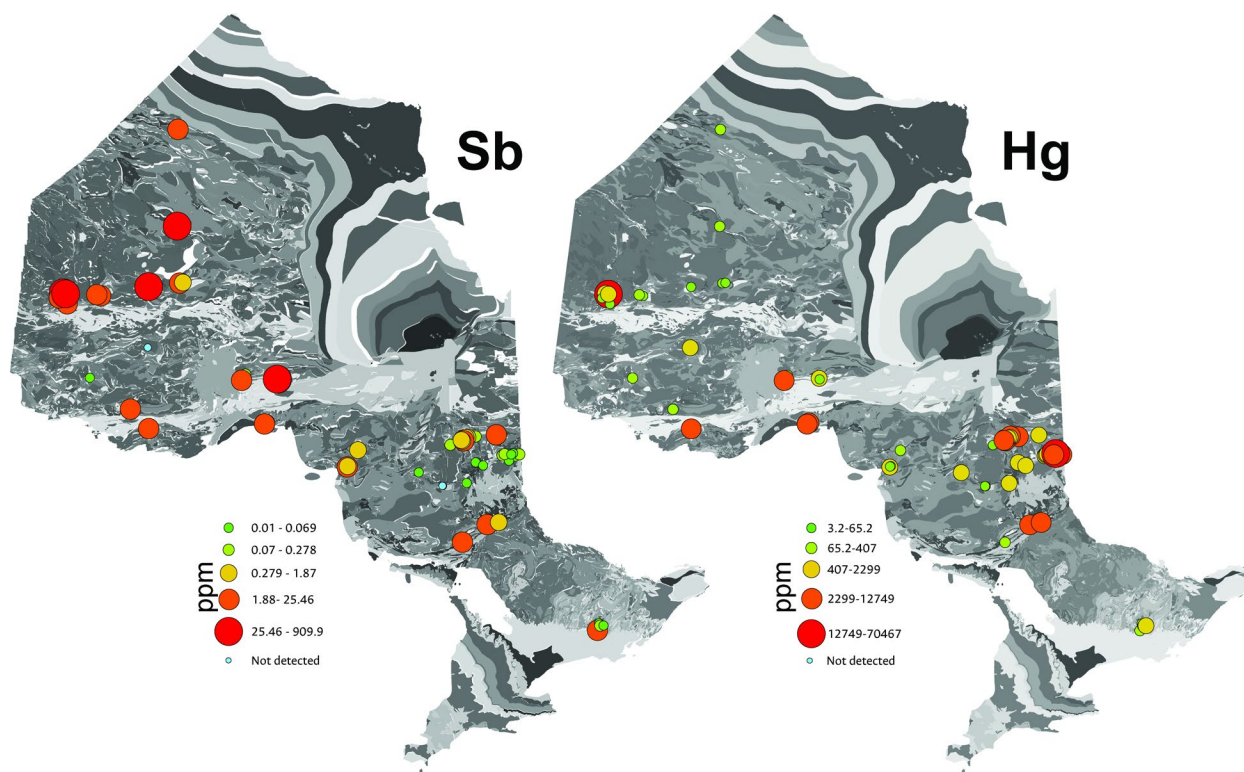


Figure 12. Map of Ontario displaying the LA-ICP-MS trace element data for gold grains showing the mean concentration of Sb (on the left) and Hg (on the right). Geology is in black and white for easier visualization, refer to Figure 2 for more information.

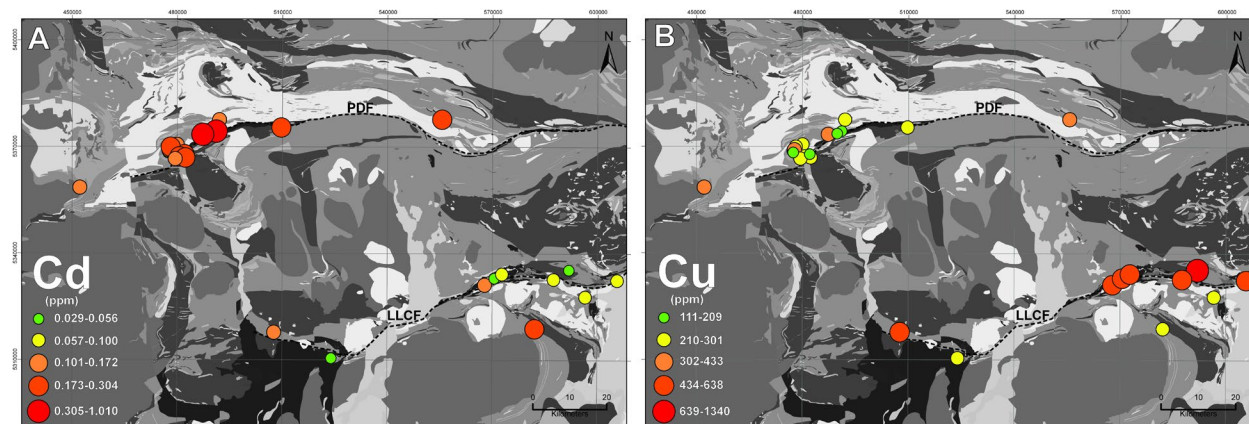


Figure 13. Map of the AGB displaying the mean concentration of Cd (A) and Cu (B) in gold for each deposit in the Abitibi-PD and Abitibi-LLC metallogenic districts. Geology is in black and white for easier visualization, refer to Figure 3 for more information. Black dashed lines represent the trace of the Porcupine-Destor (PDF) and Larder Lake-Cadillac (LLCF) faults.

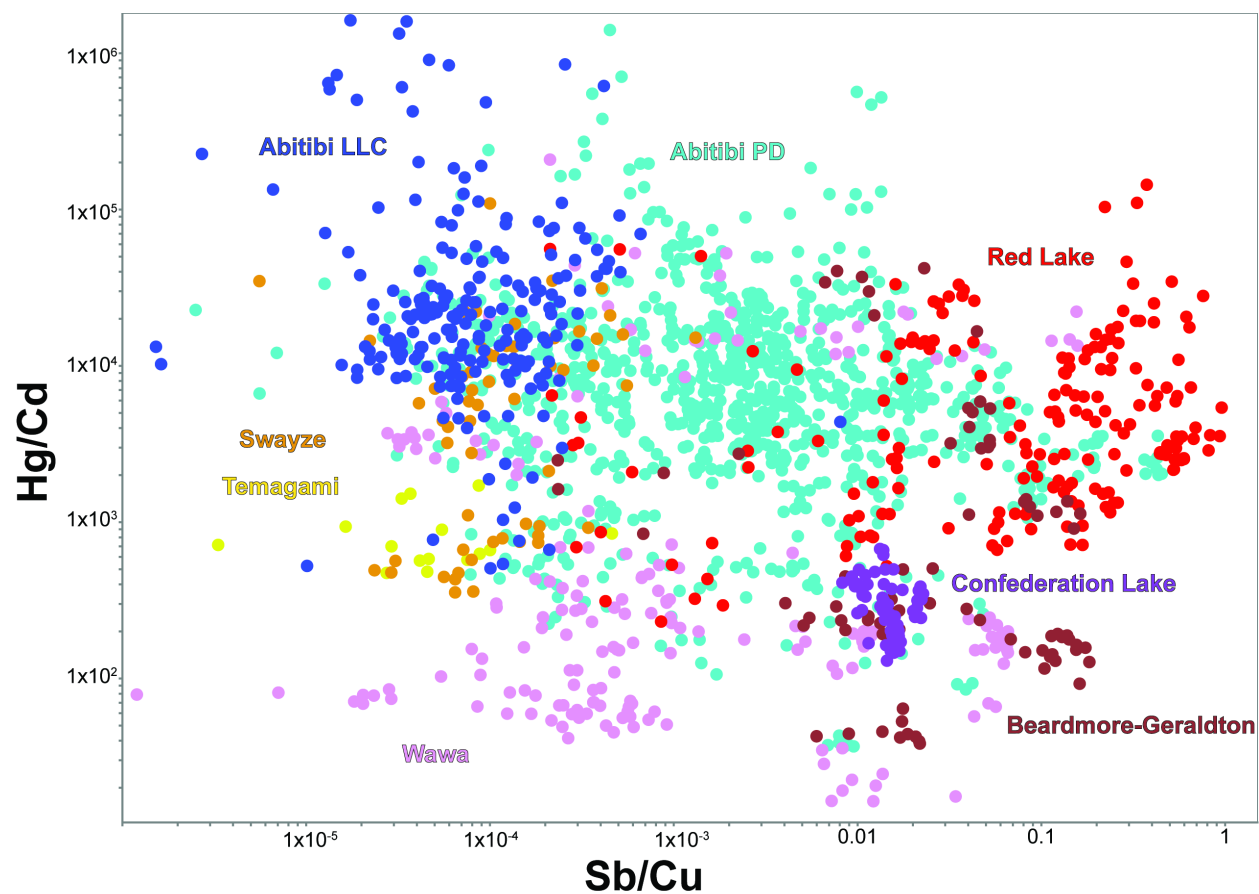


Figure 14. Biplot of the Sb/Cu and Hg/Cd ratios for all deposits in the Superior Province divided in color according to metallogenic districts. Note that each district tends to plot in one sector of the diagram. Each circle represents a LA-ICP-MS spot in gold.

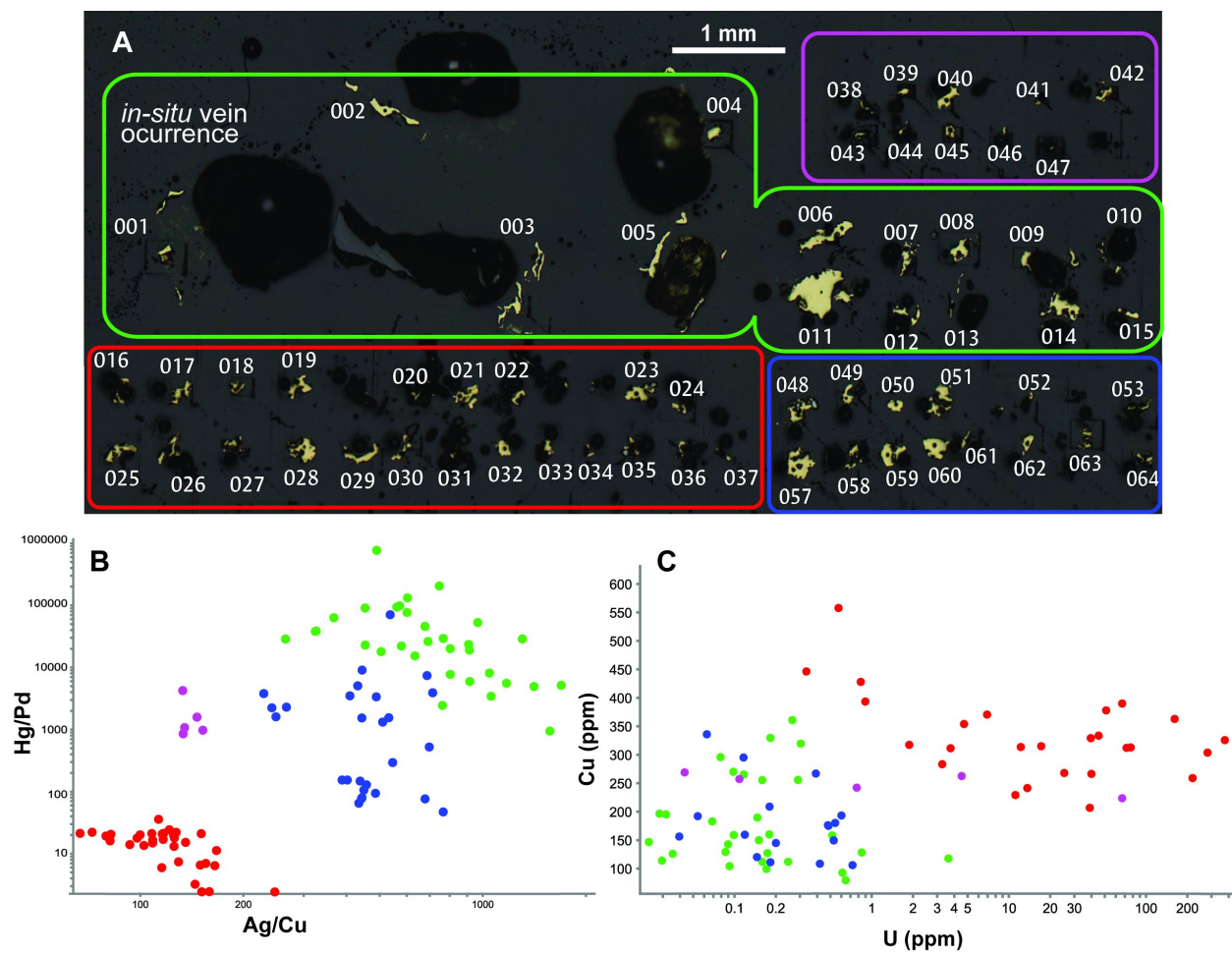


Figure 15. Gold grains and data obtained from the Pardo project in the Southern Province. Red, pink, and blue groups are detrital grains from different areas. The green group was collected from an *in situ* quartz vein. A) Reflected light image of the Pardo puck showing the gold grains. B). Biplot of the Ag/Cu vs Hg/Pd ratios C) Biplot of U vs Cu.

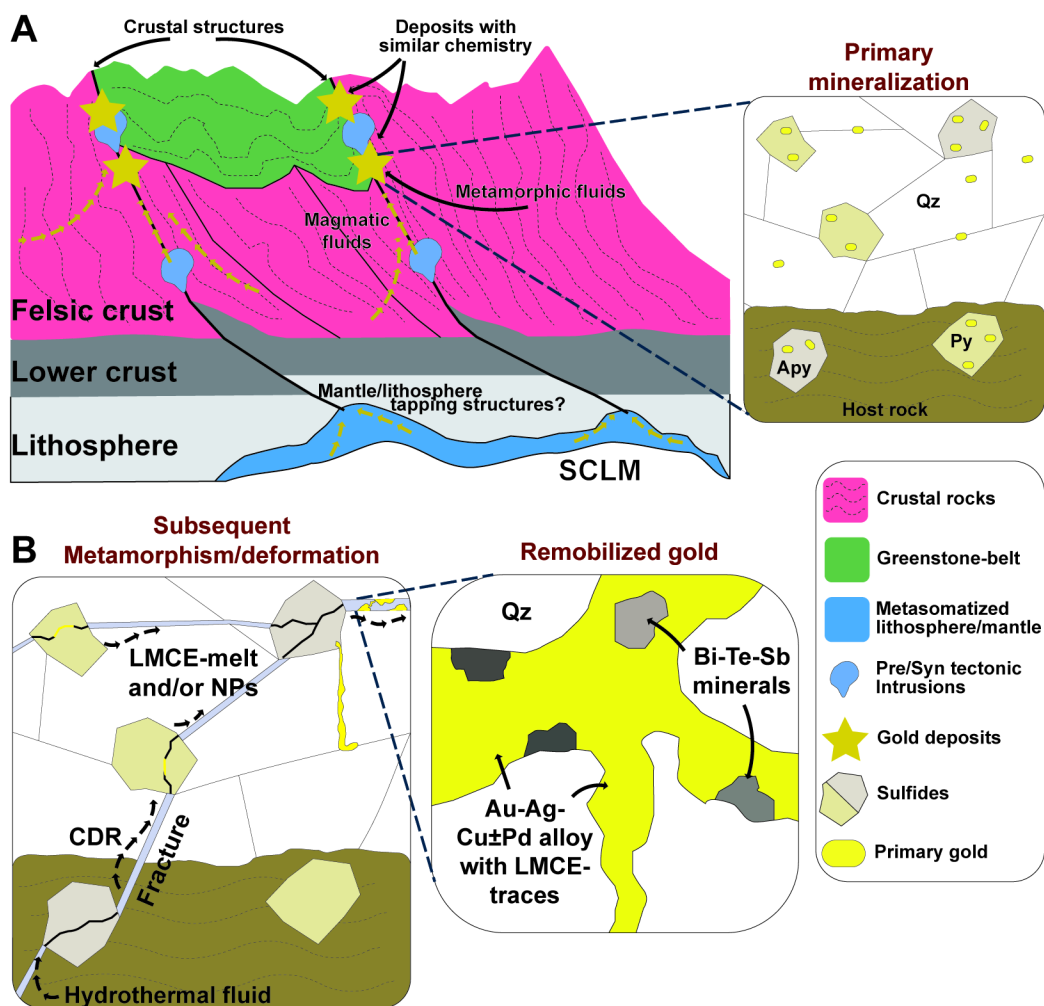


Figure 16. Conceptual model for Ontario gold deposits representing the incorporation of major, minor and trace elements in gold. A) Large scale mobilization of gold in the crust during primary mineralization producing deposits associated with crustal structures, and with similar overall chemistry. B) Secondary event (metamorphism or deformation) that permit the remobilization of gold in sulfides (CDR reactions) or as gold, transported as LMCE-melts or NPs. Remobilized gold is then precipitated in fractures as an Au-Ag-Cu-Pd alloy with traces of Hg, Sb, Cd and Bi. SCLM: sub continental lithospheric mantle. Apy: arsenopyrite. Qz: quartz. Py: pyrite. LMCE: low-melting point chalcophile elements. NP: nanoparticle. CDR: coupled dissolution-precipitation mechanism.

2.9 Tables

Table 1. Equipment calibration and conditions for the analysis of LA-ICP-MS data

Laboratory & Sample Preparation			
Laboratory name	MERC IGL	ICP-MS Instrument	
Sample type/mineral	Gold	Make, Model & type	Thermo iCap-TQ
Sample preparation	polished mount	Sample introduction	Laser Ablation
Reference material location	separate mount	RF power (W)	1550
Imaging	BSE	Make-up gas flow (l/min)	0
		Detection system	IC
Laser ablation system		Masses measured	⁷ Li, ²⁴ Mg, ²⁷ Al, ²⁹ Si, ³¹ P, ³⁴ S, ⁴³ Ca, ⁴⁵ Sc, ⁴⁷ Ti, ⁵¹ V, ⁵² Cr, ⁵⁵ Mn, ⁵⁷ Fe, ⁵⁹ Co, ⁶⁰ Ni, ⁶³ Cu, ⁶⁶ Zn, ⁷⁵ As, ⁸² Se, ⁹⁰ Zr, ⁹³ Nb, ⁹⁵ Mo, ¹⁰¹ Ru, ¹⁰³ Rh, ¹⁰⁵ Pd, ¹⁰⁷ Ag, ¹⁰⁸ Pd, ¹¹¹ Cd, ¹¹⁵ In, ¹¹⁸ Sn, ¹²¹ Sb, ¹²⁵ Te, ¹⁸¹ Ta, ¹⁸² W, ¹⁸⁵ Re, ¹⁸⁹ Os, ¹⁹³ Ir, ¹⁹⁵ Pt, ¹⁹⁷ Au, ²⁰² Hg, ²⁰⁵ Tl, ²⁰⁶ Pb, ²⁰⁷ Pb, ²⁰⁸ Pb, ²⁰⁹ Bi and ²³⁸ U
Make, Model & type	Photon Machines, Analyte G2		
Ablation cell & volume	Helix II, large format, two volumes		
Laser wavelength (nm)	193		
Pulse width (ns)	<4		
Fluence (J.cm ⁻²)	5	Integration time per peak/dwell times (ms)	10
Repetition rate (Hz)	7		
Ablation duration (secs)	30	Data Processing	
Spot size (um)	20, 50	Gas blank	Measured for 60 sec at beginning and end of run & 30 sec between ablations
Sampling mode / pattern	spot	Calibration strategy	Standard Sample bracketing
Carrier gas	He & Ar (after cell) & N ₂ (after cell)		
Cell carrier gas flow (l/min)	He1 (cell) = 0.45-0.525, He2 (cup) = 0.10, Ar = 0.55-0.65, N ₂ = 0.006		

Table 2 Quality control summary for the eight elements presented herein compared to the gold reference materials AuRM1 and AuRM2 and the GSD-1G synthetic glass. The empty cells are due to no value reported for that element in the reference material.

	AuRM1				AuRM2			
	Certificate value	Average (n=99) - this study	Precision (%) - RSD	Accuracy (%) - MRE	Certificate value	Average (n=56) - this study	Precision (%) - RSD	Accuracy (%) - MRE
Cu⁶³	13.5	12.37	10.03	0.03	31.6	31.6	13.6	0.08
Pd¹⁰⁵	9.7	9.74	13.67	0.46	29.2	29.9	20.4	2.55
Ag¹⁰⁷	20	19.55	5.25	2.27	99.6	96.8	5.6	2.9
Cd¹¹¹								
Sb¹²¹	35.7	39.67	25.04	10.02	11.3	13.2	37.4	14.1
Au¹⁹⁷	999000	9997581	0.04	0.14	999000	9997199	0.03	0.18
Hg²⁰²								
Bi²⁰⁹	30.4	33.9	39.4	10.4	9.7	11.5	54.74	15.65
	GSD-1G							
	Certificate value	Average (n=56) - this study	Precision (%) - RSD	Accuracy (%) - MRE				
Cu⁶³	2.28	1.596	34.83	29.56				
Pd¹⁰⁵	9	7.767	13.46	13.63				
Ag¹⁰⁷	7	6.22	16.57	11.16				
Cd¹¹¹	34	34.87	14.74	2.72				
Sb¹²¹	48	48.61	4.83	1.26				
Au¹⁹⁷	10	8.17	14.9	18.24				
Hg²⁰²	99	87.69	15.5	11.25				
Bi²⁰⁹	11	11.47	21.64	5.2				

2.10 Appendices

Appendix A: Gold deposits summary

	Deposit/ Mine	Dominant Host Rock	Metamorphic grade	Deposit type	Chronostratigraphic age	Associated minerals	References
Far North							
1	Sachigo River		Amphibolite?	Qz veins	Archean	Py Po Ccp Sph Gn	Stone et al. (2000)
2	Musselwhite	Iron formations	Amphibolite	Homestake type (BIF- hosted)	Neoproterozoic (2690 Ma)	Apy Po	Biczok et al. (2012); Oswald et al. (2015)
Red Lake							
3	Campbell- Red Lake	Mafic metavolcanics / Metasediments	Greenschist	Qtz-Cb shear-zone- related	2725–2710 Ma (Main Au) 2700–2695 Ma (Late Au)	Apy Py Sph Ccp Stbn	Thompson (2003); Dubé et al. (2004); Gosselin and Dubé (2005); Harris et al. (2006)
4	Cocheno- ur Willans	Mafic metavolcanics / Metasediments	Lower Greenschist	Qtz-Cb shear-zone- related	2725–2710 Ma (Main Au) 2700–2695 Ma (Late Au)	Apy Py Po Sch Sph Stbn	Thompson (2003); Dubé et al. (2004); Gosselin and Dubé (2005); Harris et al. (2006)
5	Gold Eagle	Intermediate intrusive		Qtz-Cb shear-zone- related	Neoproterozoic (probably same age as 3 and 4)	Py Sph Sch Apy Tell Ccp Po Gn	Thompson (2003); Dubé et al. (2004); Gosselin and Dubé (2005); Harris et al. (2006)
6	Madsen	Mafic metavolcanics	Lower amphibolite	Stockwork- disseminated/ BIF replacement	2744–2699 Ma	Py Apy Ccp	Dubé et al. (2000); Thompson (2003); Dubé et al. (2004); Gosselin and Dubé (2005)
7	McKenzie	Diorite	Lower greenschist	Qtz-Cb shear-zone- related	Neoproterozoic (probably same age as 3 and 4)	Apy Py Ccp Gn Sph Sch Tell	Thompson (2003); Gosselin and Dubé (2005)
8	Dickenson	Mafic metavolcanics / Metasediments	Lower greenschist	Qtz-Cb shear-zone- related	2725–2710 Ma (Main Au) 2700–2695 Ma (Late Au)	Apy Ccp Py Po Sch Sph	Thompson (2003); Dubé et al. (2004); Gosselin and Dubé (2005); Harris et al. (2006)
9	Dixie (Great Bear)	Mafic to felsic metavolcanics	Greenschist	Qtz-Cb shear-zone- related (LP)/ Replacement- stockwork (Limb and Hinge)	Neoproterozoic	Po, Py, Apy, Ccp	Ferguson et al. (1971)
Confederation Lake							
10	Jackson Manion	Mafic metavolcanics /Granitoids	Greenschist	Qz veins	Archean	Ccp Py Sph Tell	Bruce (1929); Parker and Atkinson (1992)
11	Bobjo	Mafic metavolcanics		Qtz-Cb shear-zone- related	Archean	Py Po	Parker and Atkinson (1992)
Pickle Lake							

12	Golden Patricia	Mafic metavolcanics	Lower greenschist	Qtz-Cb shear-zone-related	Mesoarchean?	Py Po Sp Gn Ccp	Rodd (1990)
13	Central Patricia	Mafic metavolcanics /Iron formation	Greenschist	Homestake type (BIF-hosted)	Neoproterozoic	Ccp Apy Sph	Cormie (1936); Young et al. (2006)
14	Pickle Crow	Mafic metavolcanics /Iron formation	Greenschist	Homestake type (BIF-hosted)	Neoproterozoic	Py Ccp Po Sph Gn Apy Sch	MacQueen (1987); Young et al. (2006)
Western Ontario							
15	Moretti	Mafic to intermediate intrusive		Qtz-Tour veins	Precambrian	Py Ccp Gn Tour	Heritage Mining (2022)
16	Mikado	Mafic metavolcanics	Greenschist to amphibolite	Qtz-Cb shear-zone-related	Precambrian	Py Ccp Gn Mol Bis Ttd	Davies and Smith (1988)
17	Laurentian	Mafic to felsic metavolcanics		Qtz-Cb shear-zone-related	Precambrian		Ferguson et al. (1971)
18	Hawk Bay	Gneissic granite		Qtz-Cb shear-zone-related	Precambrian	Py, Ccp	Schnieders and Dutka (1985)
19	Kerry	Mafic to felsic metavolcanics		Qtz-Cb shear-zone-related	Archean	Py Ccp Gn Sph Tell	Schnieders and Dutka (1985)
20	Harkness Hays	Mafic metavolcanics		Qtz-Cb shear-zone-related	Archean	Py Sph Ccp Gn Mol Tell	Schnieders et al. (1996)
21	North Shores	Metasediments	Greenschist	Qtz-Cb veins/Disseminated	Neoproterozoic	Ccp Apy Sph Tell Bis	Schnieders et al. (1996)
Beardmore-Geraldton							
22	Brenbar	Felsic metavolcanics		Qtz-Cb shear-zone-related	Neoproterozoic	Ank Tour Py Gn Sp Ccp	Mason and White (1986); Stinson (2013)
23	Leitch	Metasediments		Qtz-Cb shear-zone-related	Neoproterozoic	Apy Py Sch Sph Ttd	Mason and White (1986); Gosselin and Dubé (2005)
24	Ishkoday	Felsic metavolcanics /Granodiorite		Polymetallic veins + Qtz-Cb veins	Neoproterozoic	Py Ccp Sph Tell	Laurion Mineral Exploration Inc. (2022)
25	MacLeod Cockshutt	Iron formation/Metasediments	Greenschist	Qtz-Cb shear-zone-related/BIF replacement	Neoproterozoic (<2694 ma)	Py Apy Po Sph Gn	Lafrance et al. (2004); Stinson (2013); Tóth (2019); Nadeau and Harris (2019); Gignac et al. (2021)
26	Little Long Lac	Metasediments	Greenschist	Qtz-Cb shear-zone-related	Neoproterozoic	Py Apy Bn Ccp Gn Po Sph Sch Ttr	Mason and White (1986); Stinson (2013)
27	Hardrock	Metasediments/Qtz-Ab porphyry	Greenschist	Qtz-Cb shear-zone-related/BIF replacement	Neoproterozoic (<2694 ma)	Apy Ccp Gn Py Po Sch Sph	Lafrance et al. (2004); Stinson (2013); Tóth (2019); Nadeau and Harris (2019); Gignac et al. (2021)
Wawa							
28	Darwin	Felsic metavolcanics	Greenschist	Qtz-Cb shear-zone-related	Neoproterozoic (2750 ma)	Py Ccp Apy Po	Sage (1994); Thomas et al. (2021); Wehrle et al. (2023)
29	Parkhill	Felsic metavolcanics	Greenschist	Qtz-Cb shear-zone-related	Neoproterozoic (2750 ma)	Py Ccp Apy Po	Sage (1994); Thomas et al. (2021); Wehrle et al. (2023)
30	Deep Lake	Felsic metavolcanics	Greenschist	Qtz-Cb shear-zone-related	Neoproterozoic (2750 ma)	Py Ccp Sph Po	Sage (1994)
31	Island Gold	Felsic metavolcanics	Greenschist	Qtz-Cb shear-zone-related	Neoproterozoic (2750 ma)	Py Po Ccp Tour	Ciufo et al. (2020); Jellicoe et al. (2022)
Swayze							

32	Kenty	Mafic metavolcanics	Greenschist	Qz-Cb veins	Neoproterozoic (2695 ma)	Py Tell Sph Ccp	Fumerton and Houle (1995); Hastie et al. (2020)
33	Côte Gold	Intermediate porphyry	Greenschist	Archean porphyry-type Au	Neoproterozoic (2740 ma)	Py Ccp Po Mag Mol	Katz et al. (2017); Katz et al. (2021). Cox et al. (2022)
34	Gosselin	Intermediate porphyry	Greenschist	Archean porphyry-type Au	Neoproterozoic (2740 ma)	Py Ccp Po Mag Mol	Katz et al. (2017); Katz et al. (2021)
35	West Shining Tree	Mafic metavolcanics	Greenschist	Qtz-Cb shear-zone-related		Py Ccp Mol	Carter (1977)
Abitibi PD							
36	Jowsey Denton	Mafic metavolcanics /Iron formation	Greenschist	Qtz-Cb shear-zone-related	Neoproterozoic	Py Ccp Po Mag	Choudhry (1989)
37	Dixon Claims	No information					
38	Hollinger	Mafic metavolcanics /Felsic porphyry	Greenschist	Qtz-Cb shear-zone-related	Neoproterozoic (2670–2645 Ma)	Py Ccp Po Gn Sph Tell Mol	Burrows et al (1993); Bateman et al. (2008); Dubé et al. (2017); MacDonald and Piercey (2019); Dubé et al. (2020)
39	Vipond	Mafic metavolcanics	Greenschist	Qtz-Cb shear-zone-related	Neoproterozoic (2670–2645 Ma)	Py Ccp Sph Gn	Burrows et al (1993); Bateman et al. (2008); Dubé et al. (2017); MacDonald and Piercey (2019); Dubé et al. (2020)
40	Schumacher	Mafic metavolcanics /Felsic porphyry	Greenschist	Qtz-Cb shear-zone-related	Neoproterozoic (2670–2645 Ma)	Py Ccp Po Gn Sph Tell Mol	Ferguson et al. (1971)
41	McIntyre	Mafic metavolcanics /Felsic porphyry	Greenschist	Qtz-Cb shear-zone-related	Neoproterozoic (2670–2645 Ma)	Py Ccp Po Gn Sph Tell Mol	Burrows et al (1993); Bateman et al. (2008); Dubé et al. (2017); MacDonald and Piercey (2019); Dubé et al. (2020)
42	Coniaurum	Mafic metavolcanics /Felsic porphyry	Greenschist	Qtz-Cb shear-zone-related	Neoproterozoic (2670–2645 Ma)	Py Ccp Po Gn Sph Tell Mol	Piroshco and Hodgson (1988); Burrows et al (1993); Bateman et al. (2008); Dubé et al. (2017); MacDonald and Piercey (2019); Dubé et al. (2020)
43	Vedron (Fuller)	Mafic metavolcanics /Felsic porphyry	Greenschist	Qtz-Cb shear-zone-related	Neoproterozoic (2670–2645 Ma)	Py Ccp Po Gn Sph Tell Mol	Ferguson et al. (1971)
44	Paymaster	Mafic metavolcanics /Felsic porphyry	Greenschist	Qtz-Cb shear-zone-related	Neoproterozoic (2670–2645 Ma)	Gn Sph Tell Ccp Py Po Mol	Bateman et al. (2008); Stromberg et al. (2018); MacDonald and Piercey (2019); Stromberg et al. (2019); Dubé et al. (2020)
45	Dome	Mafic metavolcanics /Metasediments	Greenschist	Qtz-Cb shear-zone-related	Neoproterozoic (2670–2645 Ma)	Po Ccp Sph Gn Sch Py Tour	Bateman et al. (2008); Stromberg et al. (2018); MacDonald and Piercey (2019); Stromberg et al. (2019); Dubé et al. (2020)
46	Preston East Dome	Mafic metavolcanics /Metasediments	Greenschist	Qtz-Cb shear-zone-related	Neoproterozoic (2670–2645 Ma)	Po Ccp Sph Gn Sch Py Tour	Bateman et al. (2008); Stromberg et al. (2018); MacDonald and Piercey (2019); Stromberg et al. (2019); Dubé et al. (2020)
47	Porcupine Reef	Metasediments	Greenschist	Qz-Cb veins/Disseminated	Neoproterozoic (2670–2645 Ma)	Ccp Apy Sph	Ferguson et al. (1971)

48	Broulan	Metasediments	Greenschist	Qtz-Cb shear-zone-related	Neoproterozoic (2670–2645 Ma)	Py Po Sp Gn Ccp	Ferguson et al. (1971)
49	Pamour	Metasediments	Greenschist	Qtz-Cb shear-zone-related	Neoproterozoic (2670–2645 Ma)	Po Sph Gn Apy	Walsh et al. (1988); Bateman et al. (2008); Schneider et al. (2012)
50	Hoyle Pond	Mafic metavolcanics	Greenschist	Qtz-Cb shear-zone-related	Neoproterozoic (267–2645 Ma)	Py Apy Sph Ccp Sch	Rye (1987); Diné et al. (2008); Schneider et al. (2012); Dubé et al. (2020)
51	Aquarius	Mafic metavolcanics	Greenschist	Qtz-Cb shear-zone-related	Neoproterozoic (2670–2645 Ma)	Ccp Po Gn Py Sph	Ferguson et al. (1971)
52	Croesus	Mafic metavolcanics	Greenschist	Qtz-Cb shear-zone-related	Neoproterozoic	Py Apy Po Sph Ccp Tell	Ferguson et al. (1971); Onyx Gold (2023)
Abitibi LLC							
53	Ashley	Metasediments/Syenite	Greenschist	Qtz-Cb shear-zone-related/Syenite hosted	Neoproterozoic	Py Ccp Apy Sph Tell	Harris et al. (1983); Ashley Gold Corp. (2023)
54	Young Davidson	Syenite	Greenschist	Syenite-hosted	Neoproterozoic (2670–2660 Ma)	Py Ccp Sch	Zhang et al. (2014); Dubé and Mercier-Langevin (2020); Mathieu et al. (2021)
55	Macassa	Syenite	Lower Greenschist	Qtz-Cb shear-zone-related/Syenite hosted	Neoproterozoic (2660–2640 Ma)	Py Mol Tell	Kerrich and Watson (1984); Ispolatov et al. (2008); Poulsen (2017); Dubé and Mercier-Langevin (2020)
56	Teck Hughes	Syenite	Lower Greenschist	Qtz-Cb shear-zone-related/Syenite hosted	Neoproterozoic (2660–2640 Ma)	Py Mol Tell	Kerrich and Watson (1984); Ispolatov et al. (2008); Poulsen (2017); Dubé and Mercier-Langevin (2020)
57	Lake Shore	Syenite	Lower Greenschist	Qtz-Cb shear-zone-related/Syenite hosted	Neoproterozoic (2660–2640 Ma)	Py Mol Tell	Kerrich and Watson (1984); Ispolatov et al. (2008); Poulsen (2017); Dubé and Mercier-Langevin (2020)
58	Toburn	Syenite	Lower Greenschist	Qtz-Cb shear-zone-related/Syenite hosted	Neoproterozoic (2660–2640 Ma)	Py Mol Tell	Kerrich and Watson (1984); Ispolatov et al. (2008); Poulsen (2017); Dubé and Mercier-Langevin (2020)
59	Upper Canada	Felsic metavolcanics/Syenite	Lower Greenschist	Qtz-Cb shear-zone-related	Neoproterozoic (2660–2640 Ma)	Py Tell	Ispolatov et al 2008
60	Upper Beaver	Felsic intrusive	Lower Greenschist	Intrusion-related	Neoproterozoic (2678 Ma)	Py Ccp Mol Mag Tell	Kontak et al. (2008); Feick (2016); Mathieu (2021)
61	Gold King	No information					
62	Kerr Addison	Mafic-ultramafic metavolcanics	Lower greenschist	Qtz-Cb shear-zone-related	Neoproterozoic (2660–2640 Ma)	Py	Kishida and Kerrich (1987); Monecke et al. (2017); Dubé and Mercier-Langevin (2020)
63	Planet Mine	Mafic metavolcanics	Greenschist	Qtz-Cb shear-zone-related	Neoproterozoic	Py Tell Bis	Gordon et al. (1979)
Southern Province							
64	Pardo	Metasediments	Lower greenschist	Paleoplacer	Paleoproterozoic	Py Ccp Urn	Long et al. (2011); Kuntz, et al. (2018); Whymark and Frimmel (2018)
65	Crystal	Metasediments	Greenschist	Qtz-Cb veins/Disseminated	Paleoproterozoic	Ccp Apy Sph	Gates (1991)

66	Vermilion	Gabbro	Greenschist	Veins associated with offset dykes	Paleoproterozoic	Ccp Po Bn Cc Mil PGE	Szentpeteri et al. (2003); Généreux (2023)
Grenville							
67	Bannockburn	Mafic metavolcanics /Metasediments	Greenschist	Qz veins	Mesoproterozoic	Py Apy Tell Bis	Malczak et al. (1985); Easton and Fyon (1992); Chamale and Jeffs (2017)
68	Richardson	Marbles	Greenschist	Skarn-like	Mesoproterozoic	Py Brann	Stacey et al. (1974); Malczak et al. (1985)
69	Sophia	Mafic metavolcanics /Metasediments	Greenschist	Qz veins	Mesoproterozoic	Py Apy Tell Bis	Malczak et al. (1985); Easton and Fyon (1992); Chamale and Jeffs (2017)
70	Ackerman	Mafic metavolcanics /Metasediments	Greenschist	Qz veins	Mesoproterozoic	Py Apy Tell Bis	Malczak et al. (1985); Easton and Fyon (1992); Chamale and Jeffs (2017)
Temagami							
71	Temagami	No information					

Appendix B: EPMA data

See digital appendix.

Appendix C: LA-ICP-MS data

See digital appendix.

Appendix D: Summary of field work 2021

Download report from:

<https://www.geologyontario.mndm.gov.on.ca/mndmfiles/pub/data/imaging/ofr6380/ofr6380.pdf>

Appendix E: Summary of field work 2022

Download report from:

<https://www.geologyontario.mndm.gov.on.ca/mndmfiles/pub/data/imaging/ofr6390/ofr6390.pdf>

Appendix B. EPMA data

Point	Sample	Area	Deposit/Mine	Au (wt%)	Ag (wt%)	Cu (wt%)	Hg (wt%)
Ashley-M19881-1	M19881	Abitibi LLC	Ashley	96.03	3.6	0.0689	0.1664
Ashley-M19881-10	M19881	Abitibi LLC	Ashley	95.59	3.56	0.057	0.1552
Ashley-M19881-2	M19881	Abitibi LLC	Ashley	96.26	3.6	0.0705	0.1282
Ashley-M19881-3	M19881	Abitibi LLC	Ashley	96.01	3.54	0.0814	0.1567
Ashley-M19881-4	M19881	Abitibi LLC	Ashley	96.01	3.54	0.0658	0.1453
Ashley-M19881-5	M19881	Abitibi LLC	Ashley	96.14	3.7	0.0579	0.098
Ashley-M19881-6	M19881	Abitibi LLC	Ashley	95.93	3.67	0.0495	0.1317
Ashley-M19881-7	M19881	Abitibi LLC	Ashley	95.97	3.63	0.063	0.1567
Ashley-M19881-8	M19881	Abitibi LLC	Ashley	96.4	3.62	0.063	0.088
Ashley-M19881-9	M19881	Abitibi LLC	Ashley	96.17	3.63	0.0558	0.1181
Ashley-M19882-1	M19882	Abitibi LLC	Ashley	92.42	6.99	0.0274	0.1101
Ashley-M19882-10	M19882	Abitibi LLC	Ashley	92.69	6.89	0.0358	0.1015
Ashley-M19882-2	M19882	Abitibi LLC	Ashley	92.45	7.2	0.0324	0.0913
Ashley-M19882-3	M19882	Abitibi LLC	Ashley	92.25	7.05	0.0352	0.0633
Ashley-M19882-4	M19882	Abitibi LLC	Ashley	92.13	7.28	0.0263	0.0933
Ashley-M19882-5	M19882	Abitibi LLC	Ashley	92.6	6.87	0.0302	0.098
Ashley-M19882-6	M19882	Abitibi LLC	Ashley	92.81	7.11	0.0277	0.1144
Ashley-M19882-7	M19882	Abitibi LLC	Ashley	92.77	6.87	0.0277	0.1019
Ashley-M19882-8	M19882	Abitibi LLC	Ashley	92.28	7.27	0.0297	0.0616
Ashley-M19882-9	M19882	Abitibi LLC	Ashley	92.86	6.99	0.0243	0.0881
Ashley-M22337-1	M22337	Abitibi LLC	Ashley	97.16	2.77	0.0791	0.0845
Ashley-M22337-10	M22337	Abitibi LLC	Ashley	97.32	3.01	0.0636	0.1078
Ashley-M22337-2	M22337	Abitibi LLC	Ashley	96.9	2.73	0.0878	0.0719
Ashley-M22337-3	M22337	Abitibi LLC	Ashley	96.94	2.81	0.0888	0.1103
Ashley-M22337-4	M22337	Abitibi LLC	Ashley	97.2	2.75	0.0856	0.1732
Ashley-M22337-5	M22337	Abitibi LLC	Ashley	96.95	2.76	0.0879	0.0975
Ashley-M22337-6	M22337	Abitibi LLC	Ashley	97.43	2.8	0.076	0.085
Ashley-M22337-7	M22337	Abitibi LLC	Ashley	97.39	2.78	0.0793	0.1064
Ashley-M22337-8	M22337	Abitibi LLC	Ashley	97.18	2.77	0.0827	0.1134
Ashley-M22337-9	M22337	Abitibi LLC	Ashley	97.48	2.77	0.0733	0.1063
Ashley-M38716-1	M38716	Abitibi LLC	Ashley	95.87	4.36	0.0501	0.2819
Ashley-M38716-10	M38716	Abitibi LLC	Ashley	95.53	4.08	0.051	0.2726
Ashley-M38716-2	M38716	Abitibi LLC	Ashley	95.1	4.53	0.0469	0.2485
Ashley-M38716-3	M38716	Abitibi LLC	Ashley	95.18	4.19	0.0577	0.3052
Ashley-M38716-4	M38716	Abitibi LLC	Ashley	95.01	4.18	0.0463	0.278
Ashley-M38716-5	M38716	Abitibi LLC	Ashley	95.67	4.06	0.0503	0.3061
Ashley-M38716-6	M38716	Abitibi LLC	Ashley	95.05	4.45	0.0456	0.2736
Ashley-M38716-7	M38716	Abitibi LLC	Ashley	95.01	4.73	0.0233	0.229
Ashley-M38716-8	M38716	Abitibi LLC	Ashley	95.53	4	0.0566	0.3275
Ashley-M38716-9	M38716	Abitibi LLC	Ashley	95.35	4.14	0.0536	0.2785
GoldKing-E2669-1	E2669	Abitibi LLC	Gold King	90.01	9.56	0.0299	0.3727
GoldKing-E2669-10	E2669	Abitibi LLC	Gold King	90.14	9.7	0.0327	0.3708
GoldKing-E2669-2	E2669	Abitibi LLC	Gold King	89.87	9.55	0.0335	0.3903
GoldKing-E2669-3	E2669	Abitibi LLC	Gold King	89.7	9.68	0.0281	0.3965
GoldKing-E2669-4	E2669	Abitibi LLC	Gold King	90.59	9.77	0.0356	0.3593
GoldKing-E2669-5	E2669	Abitibi LLC	Gold King	89.95	9.59	0.0238	0.3975
GoldKing-E2669-6	E2669	Abitibi LLC	Gold King	90.06	9.66	0.0232	0.4031
GoldKing-E2669-7	E2669	Abitibi LLC	Gold King	90.25	9.67	0.0193	0.3801
GoldKing-E2669-8	E2669	Abitibi LLC	Gold King	90.24	9.66	0.0306	0.3895
GoldKing-E2669-9	E2669	Abitibi LLC	Gold King	90.43	9.69	0.0286	0.3994
KerrAddison-11875-1	11875	Abitibi LLC	Kerr Addison	92.3	6.83	0.0317	0.2739
KerrAddison-11875-2	11875	Abitibi LLC	Kerr Addison	92.37	6.68	0.0347	0.2886
KerrAddison-11875-3	11875	Abitibi LLC	Kerr Addison	92.68	6.49	0.0777	0.3521
KerrAddison-11875-4	11875	Abitibi LLC	Kerr Addison	92.56	6.61	0.0597	0.2641
KerrAddison-11875-5	11875	Abitibi LLC	Kerr Addison	92.27	6.49	0.0862	0.2588
KerrAddison-11875-6	11875	Abitibi LLC	Kerr Addison	92.59	6.81	0.0385	0.2478
KerrAddison-11875-7	11875	Abitibi LLC	Kerr Addison	92.74	6.63	0.0591	0.3303
KerrAddison-11875-8	11875	Abitibi LLC	Kerr Addison	92.7	6.6	0.0715	0.3591
KerrAddison-11875-9	11875	Abitibi LLC	Kerr Addison	92.71	6.77	0.0604	0.3282
KerrAddison-M22577-1	M22577	Abitibi LLC	Kerr Addison	93.71	5.8	0.0634	0.2566
KerrAddison-M22577-10	M22577	Abitibi LLC	Kerr Addison	93.8	5.84	0.0674	0.2264
KerrAddison-M22577-2	M22577	Abitibi LLC	Kerr Addison	94.04	5.78	0.0612	0.2151
KerrAddison-M22577-3	M22577	Abitibi LLC	Kerr Addison	93.71	5.65	0.0398	0.209
KerrAddison-M22577-4	M22577	Abitibi LLC	Kerr Addison	93.85	5.7	0.0733	0.2296
KerrAddison-M22577-5	M22577	Abitibi LLC	Kerr Addison	93.68	5.79	0.0593	0.2265
KerrAddison-M22577-6	M22577	Abitibi LLC	Kerr Addison	93.73	5.75	0.0556	0.1901
KerrAddison-M22577-7	M22577	Abitibi LLC	Kerr Addison	93.65	5.8	0.0572	0.2389
KerrAddison-M22577-8	M22577	Abitibi LLC	Kerr Addison	93.87	5.77	0.0609	0.2248
KerrAddison-M22577-9	M22577	Abitibi LLC	Kerr Addison	93.73	5.88	0.0576	0.2164
KerrAddison-M36548-1	M36548	Abitibi LLC	Kerr Addison	93.65	5.42	0.0612	0.4026
KerrAddison-M36548-10	M36548	Abitibi LLC	Kerr Addison	93.78	5.54	0.0503	0.3558
KerrAddison-M36548-2	M36548	Abitibi LLC	Kerr Addison	93.59	5.58	0.063	0.4043
KerrAddison-M36548-3	M36548	Abitibi LLC	Kerr Addison	93.54	5.5	0.0691	0.4203
KerrAddison-M36548-4	M36548	Abitibi LLC	Kerr Addison	93.52	5.56	0.0583	0.4107
KerrAddison-M36548-5	M36548	Abitibi LLC	Kerr Addison	93.72	5.4	0.0558	0.3791
KerrAddison-M36548-6	M36548	Abitibi LLC	Kerr Addison	93.92	5.42	0.0612	0.3987
KerrAddison-M36548-7	M36548	Abitibi LLC	Kerr Addison	93.85	5.37	0.0567	0.3561
KerrAddison-M36548-8	M36548	Abitibi LLC	Kerr Addison	93.75	5.44	0.0601	0.4025
KerrAddison-M36548-9	M36548	Abitibi LLC	Kerr Addison	93.49	5.57	0.069	0.3637

Appendix B. EPMA data

Point	Sample	Area	Deposit/Mine	Au (wt%)	Ag (wt%)	Cu (wt%)	Hg (wt%)
KerrAddison-M38709-1	M38709	Abitibi LLC	Kerr Addison	94.24	5.46	0.0692	0.3249
KerrAddison-M38709-10	M38709	Abitibi LLC	Kerr Addison	93.97	5.45	0.0584	0.3539
KerrAddison-M38709-2	M38709	Abitibi LLC	Kerr Addison	93.96	5.44	0.0661	0.2988
KerrAddison-M38709-3	M38709	Abitibi LLC	Kerr Addison	93.74	5.41	0.0664	0.3588
KerrAddison-M38709-4	M38709	Abitibi LLC	Kerr Addison	94.12	5.37	0.0664	0.3501
KerrAddison-M38709-5	M38709	Abitibi LLC	Kerr Addison	93.76	5.5	0.0551	0.3574
KerrAddison-M38709-6	M38709	Abitibi LLC	Kerr Addison	93.6	5.36	0.0648	0.3543
KerrAddison-M38709-7	M38709	Abitibi LLC	Kerr Addison	93.77	5.4	0.0563	0.3451
KerrAddison-M38709-8	M38709	Abitibi LLC	Kerr Addison	93.81	5.45	0.0631	0.3508
KerrAddison-M38709-9	M38709	Abitibi LLC	Kerr Addison	93.77	5.54	0.063	0.3694
KerrAddison-M38710-1	M38710	Abitibi LLC	Kerr Addison	92.53	6.6	0.0462	0.2905
KerrAddison-M38710-10	M38710	Abitibi LLC	Kerr Addison	92.74	6.61	0.0547	0.3163
KerrAddison-M38710-2	M38710	Abitibi LLC	Kerr Addison	92.51	6.52	0.0458	0.3417
KerrAddison-M38710-3	M38710	Abitibi LLC	Kerr Addison	93.24	6.63	0.05	0.3221
KerrAddison-M38710-4	M38710	Abitibi LLC	Kerr Addison	93.06	6.57	0.0541	0.2887
KerrAddison-M38710-5	M38710	Abitibi LLC	Kerr Addison	92.4	6.58	0.0522	0.2947
KerrAddison-M38710-6	M38710	Abitibi LLC	Kerr Addison	92.99	6.59	0.0519	0.3217
KerrAddison-M38710-7	M38710	Abitibi LLC	Kerr Addison	92.52	6.57	0.0526	0.3322
KerrAddison-M38710-8	M38710	Abitibi LLC	Kerr Addison	92.95	6.48	0.033	0.3119
KerrAddison-M38710-9	M38710	Abitibi LLC	Kerr Addison	92.85	6.55	0.0601	0.2981
KerrAddison-M38711-1	M38711	Abitibi LLC	Kerr Addison	94.44	5.35	0.0356	0.3144
KerrAddison-M38711-10	M38711	Abitibi LLC	Kerr Addison	93.91	5.43	0.0263	0.3383
KerrAddison-M38711-2	M38711	Abitibi LLC	Kerr Addison	94.26	5.42	0.0599	0.2837
KerrAddison-M38711-3	M38711	Abitibi LLC	Kerr Addison	94.34	5.38	0.0444	0.3294
KerrAddison-M38711-4	M38711	Abitibi LLC	Kerr Addison	94.1	5.32	0.0364	0.3522
KerrAddison-M38711-5	M38711	Abitibi LLC	Kerr Addison	93.96	5.62	L.O.D.	0.3362
KerrAddison-M38711-6	M38711	Abitibi LLC	Kerr Addison	94.06	5.34	L.O.D.	0.3104
KerrAddison-M38711-7	M38711	Abitibi LLC	Kerr Addison	93.85	5.35	0.0335	0.3601
KerrAddison-M38711-8	M38711	Abitibi LLC	Kerr Addison	94.31	5.44	0.0368	0.3509
KerrAddison-M38711-9	M38711	Abitibi LLC	Kerr Addison	94.4	5.35	0.044	0.2927
LakeShore-M12266-1	M12266	Abitibi LLC	Lake Shore	93.51	6.83	0.0425	0.0811
LakeShore-M12266-10	M12266	Abitibi LLC	Lake Shore	93.25	6.73	0.0307	L.O.D.
LakeShore-M12266-2	M12266	Abitibi LLC	Lake Shore	93.45	6.85	0.0406	L.O.D.
LakeShore-M12266-3	M12266	Abitibi LLC	Lake Shore	93.27	6.91	0.0481	L.O.D.
LakeShore-M12266-4	M12266	Abitibi LLC	Lake Shore	93.85	6.83	0.0255	L.O.D.
LakeShore-M12266-5	M12266	Abitibi LLC	Lake Shore	93.29	6.83	0.0334	0.0733
LakeShore-M12266-6	M12266	Abitibi LLC	Lake Shore	93.21	6.83	0.027	L.O.D.
LakeShore-M12266-7	M12266	Abitibi LLC	Lake Shore	93.18	6.85	0.0337	0.1071
LakeShore-M12266-8	M12266	Abitibi LLC	Lake Shore	93.62	6.82	0.0395	L.O.D.
LakeShore-M12266-9	M12266	Abitibi LLC	Lake Shore	93.5	6.82	0.034	0.0602
LakeShore-M38713-1	M38713	Abitibi LLC	Lake Shore	93.75	6.38	0.0506	0.0949
LakeShore-M38713-10	M38713	Abitibi LLC	Lake Shore	93.35	6.56	0.0379	L.O.D.
LakeShore-M38713-2	M38713	Abitibi LLC	Lake Shore	92.82	6.26	0.0446	0.0949
LakeShore-M38713-3	M38713	Abitibi LLC	Lake Shore	93.66	6.21	0.0502	0.137
LakeShore-M38713-4	M38713	Abitibi LLC	Lake Shore	92.84	6.36	0.0339	L.O.D.
LakeShore-M38713-5	M38713	Abitibi LLC	Lake Shore	92.84	6.46	0.0413	0.0646
LakeShore-M38713-6 (vein?)	M38713	Abitibi LLC	Lake Shore	82.86	12.57	0.0272	3.85
LakeShore-M38713-7	M38713	Abitibi LLC	Lake Shore	93.35	6.26	0.0467	0.0963
LakeShore-M38713-8 (vein?)	M38713	Abitibi LLC	Lake Shore	83.68	12.75	0.0282	3.08
LakeShore-M38713-9	M38713	Abitibi LLC	Lake Shore	93.34	6.43	0.044	0.068
Macassa-M38715-1	M38715	Abitibi LLC	Macassa	93.43	6.37	0.0608	0.1119
Macassa-M38715-10	M38715	Abitibi LLC	Macassa	93.36	6.38	0.0556	0.1218
Macassa-M38715-2	M38715	Abitibi LLC	Macassa	93.01	6.48	0.0553	0.0832
Macassa-M38715-3	M38715	Abitibi LLC	Macassa	93.41	6.3	0.0563	0.1051
Macassa-M38715-4	M38715	Abitibi LLC	Macassa	93.07	6.47	0.0553	0.1077
Macassa-M38715-5	M38715	Abitibi LLC	Macassa	93.25	6.56	0.0485	0.1115
Macassa-M38715-6	M38715	Abitibi LLC	Macassa	93.32	6.49	0.0683	0.0839
Macassa-M38715-7	M38715	Abitibi LLC	Macassa	93.33	6.5	0.0555	0.0951
Macassa-M38715-8	M38715	Abitibi LLC	Macassa	93.65	6.4	0.0566	0.1062
Macassa-M38715-9	M38715	Abitibi LLC	Macassa	93.14	6.38	0.0579	0.1149
G40184-PLANET MINE-TIMISKAMING DISTRICT-ONTARIO-1	G40184	Abitibi LLC	Planet Mine	92.12	7.52	0.0228	L.O.D.
G40184-PLANET MINE-TIMISKAMING DISTRICT-ONTARIO-10 (fine vein)	G40184	Abitibi LLC	Planet Mine	82.91	16.56	L.O.D.	L.O.D.
G40184-PLANET MINE-TIMISKAMING DISTRICT-ONTARIO-2	G40184	Abitibi LLC	Planet Mine	92.6	7.22	L.O.D.	L.O.D.
G40184-PLANET MINE-TIMISKAMING DISTRICT-ONTARIO-3	G40184	Abitibi LLC	Planet Mine	92.44	7.44	0.0324	L.O.D.
G40184-PLANET MINE-TIMISKAMING DISTRICT-ONTARIO-4	G40184	Abitibi LLC	Planet Mine	92.43	7.38	0.0199	L.O.D.
G40184-PLANET MINE-TIMISKAMING DISTRICT-ONTARIO-5	G40184	Abitibi LLC	Planet Mine	92.32	7.45	0.0234	L.O.D.
G40184-PLANET MINE-TIMISKAMING DISTRICT-ONTARIO-6	G40184	Abitibi LLC	Planet Mine	92.62	7.38	0.0292	L.O.D.
G40184-PLANET MINE-TIMISKAMING DISTRICT-ONTARIO-7	G40184	Abitibi LLC	Planet Mine	92.19	7.38	0.0294	L.O.D.
G40184-PLANET MINE-TIMISKAMING DISTRICT-ONTARIO-8	G40184	Abitibi LLC	Planet Mine	92.19	7.41	0.0217	L.O.D.
G40184-PLANET MINE-TIMISKAMING DISTRICT-ONTARIO-9 (fine vein)	G40184	Abitibi LLC	Planet Mine	81.4	17.63	L.O.D.	L.O.D.
TeckHughes-M12313-1	M12313	Abitibi LLC	Teck Hughes	95.27	4.49	0.0528	0.0677
TeckHughes-M12313-10	M12313	Abitibi LLC	Teck Hughes	95.25	4.47	0.05	0.0971
TeckHughes-M12313-2	M12313	Abitibi LLC	Teck Hughes	94.93	4.54	0.0617	0.0923
TeckHughes-M12313-3	M12313	Abitibi LLC	Teck Hughes	95.48	4.4	0.0686	0.0848
TeckHughes-M12313-4	M12313	Abitibi LLC	Teck Hughes	95.16	4.43	0.0565	0.1158
TeckHughes-M12313-5	M12313	Abitibi LLC	Teck Hughes	95.22	4.45	0.0415	0.0892
TeckHughes-M12313-6	M12313	Abitibi LLC	Teck Hughes	95	4.46	0.0618	0.0823
TeckHughes-M12313-7	M12313	Abitibi LLC	Teck Hughes	95.27	4.45	0.0522	0.1023
TeckHughes-M12313-8	M12313	Abitibi LLC	Teck Hughes	95.15	4.56	0.0467	L.O.D.

Appendix B. EPMA data

Point	Sample	Area	Deposit/Mine	Au (wt%)	Ag (wt%)	Cu (wt%)	Hg (wt%)
TeckHughes-M12313-9	M12313	Abitibi LLC	Teck Hughes	95.17	4.39	0.0509	L.O.D.
TeckHughes-M24804-1	M24804	Abitibi LLC	Teck Hughes	93.62	6.21	0.0325	L.O.D.
TeckHughes-M24804-2	M24804	Abitibi LLC	Teck Hughes	93.58	6.07	0.0469	L.O.D.
TeckHughes-M24804-3	M24804	Abitibi LLC	Teck Hughes	93.57	6.24	0.0309	L.O.D.
TeckHughes-M24804-4	M24804	Abitibi LLC	Teck Hughes	93.43	6.29	0.0224	L.O.D.
TeckHughes-M24804-5	M24804	Abitibi LLC	Teck Hughes	93.97	6.18	0.0326	L.O.D.
TeckHughes-M24804-6	M24804	Abitibi LLC	Teck Hughes	93.6	6.21	0.0345	L.O.D.
TeckHughes-M24804-7	M24804	Abitibi LLC	Teck Hughes	93.18	6.18	L.O.D.	L.O.D.
TeckHughes-M24804-8	M24804	Abitibi LLC	Teck Hughes	93.65	6	0.0366	L.O.D.
Toburn-M38718-1	M38718	Abitibi LLC	Toburn	94.24	5.59	0.0578	0.0622
Toburn-M38718-10	M38718	Abitibi LLC	Toburn	94.51	5.19	L.O.D.	L.O.D.
Toburn-M38718-2	M38718	Abitibi LLC	Toburn	94.24	5.51	0.0678	0.1008
Toburn-M38718-3	M38718	Abitibi LLC	Toburn	94.34	5.58	0.0622	0.1241
Toburn-M38718-4	M38718	Abitibi LLC	Toburn	93.86	5.48	0.0668	0.1339
Toburn-M38718-5	M38718	Abitibi LLC	Toburn	94.05	5.53	0.0629	0.0712
Toburn-M38718-6	M38718	Abitibi LLC	Toburn	94.36	5.53	0.0617	0.1023
Toburn-M38718-7	M38718	Abitibi LLC	Toburn	93.84	5.47	0.0648	0.1037
Toburn-M38718-8	M38718	Abitibi LLC	Toburn	94.48	5.61	0.0557	0.0691
Toburn-M38718-9	M38718	Abitibi LLC	Toburn	94.06	5.65	0.0631	0.1081
ToughOakes-M8553A-1	M8553A	Abitibi LLC	Toburn	91.86	7.59	0.0463	0.1891
ToughOakes-M8553A-10 (vein)	M8553A	Abitibi LLC	Toburn	75.9	21.18	L.O.D.	2.71
ToughOakes-M8553A-2	M8553A	Abitibi LLC	Toburn	92.03	7.55	0.0343	0.1499
ToughOakes-M8553A-3	M8553A	Abitibi LLC	Toburn	92.13	7.51	0.0356	0.171
ToughOakes-M8553A-4	M8553A	Abitibi LLC	Toburn	91.79	7.62	0.0417	0.1464
ToughOakes-M8553A-5	M8553A	Abitibi LLC	Toburn	92.13	7.32	0.0537	0.1233
ToughOakes-M8553A-6	M8553A	Abitibi LLC	Toburn	91.03	8.58	0.0363	0.1313
ToughOakes-M8553A-7	M8553A	Abitibi LLC	Toburn	91.78	8.08	0.0316	0.1497
ToughOakes-M8553A-8	M8553A	Abitibi LLC	Toburn	91.67	7.47	0.038	0.1926
ToughOakes-M8553A-9	M8553A	Abitibi LLC	Toburn	91.98	7.46	0.0315	0.1066
ToughOakes-M8553B-1	M8553B	Abitibi LLC	Toburn	93.55	6.15	0.0421	0.0938
ToughOakes-M8553B-10	M8553B	Abitibi LLC	Toburn	92.76	6.3	0.0383	0.1228
ToughOakes-M8553B-2	M8553B	Abitibi LLC	Toburn	92.37	7.23	0.0458	0.1462
ToughOakes-M8553B-3	M8553B	Abitibi LLC	Toburn	92.46	7.19	0.0468	0.1987
ToughOakes-M8553B-4	M8553B	Abitibi LLC	Toburn	92.43	7.09	0.0502	0.1259
ToughOakes-M8553B-5	M8553B	Abitibi LLC	Toburn	93.47	6.48	0.0438	0.0764
ToughOakes-M8553B-6	M8553B	Abitibi LLC	Toburn	93.4	6.32	0.0398	0.0862
ToughOakes-M8553B-7	M8553B	Abitibi LLC	Toburn	93.01	6.16	0.0474	0.0994
ToughOakes-M8553B-8	M8553B	Abitibi LLC	Toburn	92.66	6.55	0.0501	0.1667
ToughOakes-M8553B-9	M8553B	Abitibi LLC	Toburn	92.55	6.82	0.0556	0.0918
ToughOakes-M8837-1	M8837	Abitibi LLC	Toburn	92.55	6.74	0.033	0.0822
ToughOakes-M8837-10	M8837	Abitibi LLC	Toburn	91.98	6.53	0.0482	0.0735
ToughOakes-M8837-2	M8837	Abitibi LLC	Toburn	92.45	6.78	0.0332	0.1094
ToughOakes-M8837-3	M8837	Abitibi LLC	Toburn	92.6	6.76	0.0341	0.1149
ToughOakes-M8837-4	M8837	Abitibi LLC	Toburn	92.28	6.88	0.039	0.0674
ToughOakes-M8837-5	M8837	Abitibi LLC	Toburn	79.38	16.55	L.O.D.	2.83
ToughOakes-M8837-6	M8837	Abitibi LLC	Toburn	78.93	18.61	L.O.D.	2.13
ToughOakes-M8837-7	M8837	Abitibi LLC	Toburn	92.91	6.66	0.0264	L.O.D.
ToughOakes-M8837-8	M8837	Abitibi LLC	Toburn	90.72	8.6	L.O.D.	L.O.D.
ToughOakes-M8837-9	M8837	Abitibi LLC	Toburn	92.41	6.64	0.0477	0.1418
UpperBeaver-M42652-1	M42652	Abitibi LLC	Upper Beaver	94.18	2	0.1493	4.03
UpperBeaver-M42652-10	M42652	Abitibi LLC	Upper Beaver	94.08	2.03	0.15	3.99
UpperBeaver-M42652-2	M42652	Abitibi LLC	Upper Beaver	94.12	1.97	0.1443	3.99
UpperBeaver-M42652-3	M42652	Abitibi LLC	Upper Beaver	94.58	2	0.1522	3.89
UpperBeaver-M42652-4	M42652	Abitibi LLC	Upper Beaver	94.23	2	0.1472	3.83
UpperBeaver-M42652-5	M42652	Abitibi LLC	Upper Beaver	94.12	2.03	0.1515	3.94
UpperBeaver-M42652-6	M42652	Abitibi LLC	Upper Beaver	94.23	2	0.1411	3.95
UpperBeaver-M42652-7	M42652	Abitibi LLC	Upper Beaver	94.06	1.94	0.1417	3.91
UpperBeaver-M42652-8	M42652	Abitibi LLC	Upper Beaver	93.67	2	0.1505	3.92
UpperBeaver-M42652-9	M42652	Abitibi LLC	Upper Beaver	94.49	1.99	0.1547	3.78
UpperCanada-11825-1	11825	Abitibi LLC	Upper Canada	93.16	6.46	0.0739	0.1287
UpperCanada-11825-10	11825	Abitibi LLC	Upper Canada	93.22	6.59	0.0698	0.1203
UpperCanada-11825-2	11825	Abitibi LLC	Upper Canada	93.44	6.22	0.0651	0.1262
UpperCanada-11825-3	11825	Abitibi LLC	Upper Canada	93.24	6.3	0.0821	0.1198
UpperCanada-11825-4	11825	Abitibi LLC	Upper Canada	93.26	6.26	0.0712	0.1625
UpperCanada-11825-5	11825	Abitibi LLC	Upper Canada	93.35	6.12	0.0705	0.1807
UpperCanada-11825-6	11825	Abitibi LLC	Upper Canada	93.32	6.18	0.0723	0.1084
UpperCanada-11825-7	11825	Abitibi LLC	Upper Canada	93.38	6.11	0.0746	0.1416
UpperCanada-11825-8	11825	Abitibi LLC	Upper Canada	93.94	6.23	0.0696	0.1422
UpperCanada-11825-9	11825	Abitibi LLC	Upper Canada	93.34	6.4	0.0685	0.1624
UpperCanada-M42651-1	M42651	Abitibi LLC	Upper Canada	95.8	4.71	0.0637	0.2853
UpperCanada-M42651-10	M42651	Abitibi LLC	Upper Canada	94.85	4.64	0.0489	0.28
UpperCanada-M42651-2	M42651	Abitibi LLC	Upper Canada	95.6	4.69	0.0479	0.2393
UpperCanada-M42651-3	M42651	Abitibi LLC	Upper Canada	95.26	4.65	0.0645	0.2626
UpperCanada-M42651-4	M42651	Abitibi LLC	Upper Canada	95.27	4.77	0.0622	0.2286
UpperCanada-M42651-5	M42651	Abitibi LLC	Upper Canada	95.3	4.78	0.0618	0.2434
UpperCanada-M42651-6	M42651	Abitibi LLC	Upper Canada	95.3	4.65	0.0455	0.2004
UpperCanada-M42651-7	M42651	Abitibi LLC	Upper Canada	95.11	4.67	0.0674	0.2663
UpperCanada-M42651-8	M42651	Abitibi LLC	Upper Canada	95.42	4.75	0.0495	0.2306
UpperCanada-M42651-9	M42651	Abitibi LLC	Upper Canada	94.9	4.7	0.0447	0.2301

Appendix B. EPMA data

Point	Sample	Area	Deposit/Mine	Au (wt%)	Ag (wt%)	Cu (wt%)	Hg (wt%)
YoungDavidson-M39322-1	M39322	Abitibi LLC	Young Davidson	90.93	7.89	L.O.D.	L.O.D.
YoungDavidson-M39322-10	M39322	Abitibi LLC	Young Davidson	90.84	7.95	L.O.D.	L.O.D.
YoungDavidson-M39322-2	M39322	Abitibi LLC	Young Davidson	91.22	8.09	0.0189	L.O.D.
YoungDavidson-M39322-3	M39322	Abitibi LLC	Young Davidson	90.81	8.08	0.0291	0.0697
YoungDavidson-M39322-4	M39322	Abitibi LLC	Young Davidson	90.56	8.12	L.O.D.	L.O.D.
YoungDavidson-M39322-5	M39322	Abitibi LLC	Young Davidson	91.19	7.89	L.O.D.	0.072
YoungDavidson-M39322-6	M39322	Abitibi LLC	Young Davidson	91.01	8	0.0189	L.O.D.
YoungDavidson-M39322-7	M39322	Abitibi LLC	Young Davidson	91.08	8.04	0.0204	L.O.D.
YoungDavidson-M39322-8	M39322	Abitibi LLC	Young Davidson	91.46	8.09	0.0194	L.O.D.
YoungDavidson-M39322-9	M39322	Abitibi LLC	Young Davidson	90.93	7.95	0.0234	0.1003
Aquarius-M55935-1	M55935	Abitibi PD	Aquarius	90.1	9.32	0.0207	0.216
Aquarius-M55935-10	M55935	Abitibi PD	Aquarius	90.35	9.39	0.0329	0.2109
Aquarius-M55935-2	M55935	Abitibi PD	Aquarius	90.48	9.17	0.0366	0.2013
Aquarius-M55935-3	M55935	Abitibi PD	Aquarius	90.05	9.13	0.0295	0.225
Aquarius-M55935-4	M55935	Abitibi PD	Aquarius	90.64	9.27	0.0326	0.2019
Aquarius-M55935-5	M55935	Abitibi PD	Aquarius	90.19	9.2	0.0392	0.2051
Aquarius-M55935-6	M55935	Abitibi PD	Aquarius	90.18	9.14	0.038	0.2336
Aquarius-M55935-7	M55935	Abitibi PD	Aquarius	90.11	9.15	0.0451	0.1959
Aquarius-M55935-8	M55935	Abitibi PD	Aquarius	90.55	9.29	0.0361	0.2152
Aquarius-M55935-9	M55935	Abitibi PD	Aquarius	90.27	9.41	0.0292	0.2235
TH005-Aquarius-1	TH005	#N/A	#N/A	90.55	8.98	L.O.D.	0.1803
TH005-Aquarius-10	TH005	#N/A	#N/A	90.19	8.84	L.O.D.	0.1781
TH005-Aquarius-2	TH005	#N/A	#N/A	90.63	8.93	0.022	0.1911
TH005-Aquarius-3	TH005	#N/A	#N/A	90.66	8.94	0.0286	0.1629
TH005-Aquarius-4	TH005	#N/A	#N/A	90.24	9	0.0196	0.17
TH005-Aquarius-5	TH005	Abitibi PD	Broulan	90.79	8.96	0.0194	0.1814
TH005-Aquarius-6	TH005	Abitibi PD	Broulan	90.15	8.99	0.0319	0.1947
TH005-Aquarius-7	TH005	Abitibi PD	Broulan	90.27	8.88	0.0215	0.1526
TH005-Aquarius-8	TH005	Abitibi PD	Broulan	90.42	8.82	L.O.D.	0.1985
TH005-Aquarius-9	TH005	Abitibi PD	Broulan	90.53	8.98	0.0187	0.1664
G40050-BROULAN MINE-COCHRANE DISTRICT-ONTARIO-1	Broulan	Abitibi PD	Broulan	90.77	8.84	L.O.D.	0.1075
G40050-BROULAN MINE-COCHRANE DISTRICT-ONTARIO-2	Broulan	Abitibi PD	Broulan	90.96	8.8	L.O.D.	0.1366
G40050-BROULAN MINE-COCHRANE DISTRICT-ONTARIO-3	Broulan	Abitibi PD	Broulan	90.85	8.98	L.O.D.	0.0867
G40050-BROULAN MINE-COCHRANE DISTRICT-ONTARIO-4	Broulan	Abitibi PD	Broulan	90.59	8.81	L.O.D.	0.1168
G40050-BROULAN MINE-COCHRANE DISTRICT-ONTARIO-5	Broulan	Abitibi PD	Broulan	90.93	8.87	L.O.D.	0.0869
Broulan-M21177-1	M21177	Abitibi PD	Coniaurum	91.19	8.21	L.O.D.	L.O.D.
Broulan-M21177-10	M21177	Abitibi PD	Coniaurum	91.07	8.37	L.O.D.	0.1197
Broulan-M21177-2	M21177	Abitibi PD	Coniaurum	91.3	8.33	L.O.D.	0.0734
Broulan-M21177-3	M21177	Abitibi PD	Coniaurum	91.21	8.18	L.O.D.	0.1149
Broulan-M21177-4	M21177	Abitibi PD	Coniaurum	91.58	8.27	L.O.D.	0.0942
Broulan-M21177-5	M21177	Abitibi PD	Coniaurum	91.25	8.2	0.0228	0.0795
Broulan-M21177-6	M21177	Abitibi PD	Coniaurum	91.27	8.17	L.O.D.	0.126
Broulan-M21177-7	M21177	Abitibi PD	Coniaurum	91.17	8.31	L.O.D.	0.1205
Broulan-M21177-8	M21177	Abitibi PD	Coniaurum	91.46	8.12	0.0171	0.1156
Broulan-M21177-9	M21177	Abitibi PD	Coniaurum	91.5	8.42	0.0212	0.1057
Coniaurum-M16668-1	M16668	Abitibi PD	Croesus	88.69	9.65	0.0367	0.4755
Coniaurum-M16668-10	M16668	Abitibi PD	Croesus	89.34	9.64	0.0348	0.4755
Coniaurum-M16668-2	M16668	Abitibi PD	Croesus	89.33	9.48	L.O.D.	0.3957
Coniaurum-M16668-3	M16668	Abitibi PD	Croesus	89.15	9.64	L.O.D.	0.4271
Coniaurum-M16668-4	M16668	Abitibi PD	Croesus	89.27	9.5	0.0173	0.3615
Coniaurum-M16668-5	M16668	Abitibi PD	Croesus	89.54	9.47	L.O.D.	0.3759
Coniaurum-M16668-6	M16668	Abitibi PD	Croesus	89.16	9.63	0.0242	0.4277
Coniaurum-M16668-7	M16668	Abitibi PD	Croesus	89.17	9.64	0.0347	0.4267
Coniaurum-M16668-8	M16668	Abitibi PD	Croesus	89.22	9.7	0.0381	0.4631
Coniaurum-M16668-9	M16668	Abitibi PD	Croesus	88.78	9.49	0.0207	0.4708
Croesus-LM47273-1	LM47273	Abitibi PD	Croesus	90.99	8.71	0.0463	0.062
Croesus-LM47273-10	LM47273	Abitibi PD	Croesus	91.48	8.62	0.0323	L.O.D.
Croesus-LM47273-2	LM47273	Abitibi PD	Croesus	91.06	8.68	0.0523	0.0756
Croesus-LM47273-3	LM47273	Abitibi PD	Croesus	91.63	8.31	0.0353	0.0661
Croesus-LM47273-4	LM47273	Abitibi PD	Croesus	90.88	8.64	0.0323	0.0687
Croesus-LM47273-5	LM47273	Abitibi PD	Croesus	91.35	8.86	0.0336	0.0911
Croesus-LM47273-6	LM47273	Abitibi PD	Croesus	91.13	8.76	0.0358	L.O.D.
Croesus-LM47273-7	LM47273	Abitibi PD	Croesus	90.84	8.59	0.0417	L.O.D.
Croesus-LM47273-8	LM47273	Abitibi PD	Croesus	90.99	8.58	0.0309	L.O.D.
Croesus-LM47273-9	LM47273	Abitibi PD	Croesus	91.08	8.48	0.0349	0.0764
Croesus-M13995-1	M13995	Abitibi PD	Croesus	97.35	2.91	0.0319	L.O.D.
Croesus-M13995-10	M13995	Abitibi PD	Croesus	97.1	2.84	L.O.D.	L.O.D.
Croesus-M13995-2	M13995	Abitibi PD	Croesus	96.94	2.89	0.0306	L.O.D.
Croesus-M13995-3	M13995	Abitibi PD	Croesus	96.97	2.86	0.0354	L.O.D.
Croesus-M13995-4	M13995	Abitibi PD	Croesus	97.43	2.91	0.0398	L.O.D.
Croesus-M13995-5	M13995	Abitibi PD	Croesus	97.35	2.87	0.0226	L.O.D.
Croesus-M13995-6	M13995	Abitibi PD	Croesus	97.59	2.89	L.O.D.	L.O.D.
Croesus-M13995-7	M13995	Abitibi PD	Croesus	97.52	2.88	L.O.D.	L.O.D.
Croesus-M13995-8	M13995	Abitibi PD	Croesus	97.4	2.91	L.O.D.	L.O.D.
Croesus-M13995-9	M13995	Abitibi PD	Croesus	97	2.83	L.O.D.	L.O.D.
Croesus-M36623-1	M36623	Abitibi PD	Croesus	91.97	7.92	0.0556	0.0636
Croesus-M36623-10	M36623	Abitibi PD	Croesus	92.1	7.72	0.0375	L.O.D.
Croesus-M36623-2	M36623	Abitibi PD	Croesus	92.32	7.81	0.043	L.O.D.
Croesus-M36623-3	M36623	Abitibi PD	Croesus	91.76	7.73	0.0417	0.0635

Appendix B. EPMA data

Point	Sample	Area	Deposit/Mine	Au (wt%)	Ag (wt%)	Cu (wt%)	Hg (wt%)
Croesus-M36623-4	M36623	Abitibi PD	Croesus	91.9	7.7	0.0529	L.O.D.
Croesus-M36623-5	M36623	Abitibi PD	Croesus	91.74	7.56	0.0432	0.0614
Croesus-M36623-6	M36623	Abitibi PD	Croesus	92.05	7.83	0.053	0.0784
Croesus-M36623-7	M36623	Abitibi PD	Croesus	91.85	7.8	0.0505	L.O.D.
Croesus-M36623-8	M36623	Abitibi PD	Croesus	92.29	7.89	0.0408	L.O.D.
Croesus-M36623-9	M36623	Abitibi PD	Croesus	91.98	7.81	0.0488	L.O.D.
Croesus-M36624-1	M36624	Abitibi PD	Croesus	91.96	7.54	0.0301	0.0881
Croesus-M36624-10	M36624	Abitibi PD	Croesus	92.41	7.29	0.0233	0.0954
Croesus-M36624-2	M36624	Abitibi PD	Croesus	92.26	7.54	0.0326	L.O.D.
Croesus-M36624-3	M36624	Abitibi PD	Croesus	92.17	7.59	0.0417	0.0677
Croesus-M36624-4	M36624	Abitibi PD	Croesus	92.4	7.39	0.0295	0.0803
Croesus-M36624-5	M36624	Abitibi PD	Croesus	92.41	7.37	0.0297	0.0868
Croesus-M36624-6	M36624	Abitibi PD	Croesus	92.41	7.69	0.0414	0.107
Croesus-M36624-7	M36624	Abitibi PD	Croesus	92.14	7.68	0.0239	L.O.D.
Croesus-M36624-8	M36624	Abitibi PD	Croesus	92.43	7.5	0.024	0.0722
Croesus-M36624-9	M36624	Abitibi PD	Croesus	92.26	7.56	0.0239	L.O.D.
Croesus-M36625-1	M36625	Abitibi PD	Croesus	93.93	5.6	0.0526	0.0996
Croesus-M36625-10	M36625	Abitibi PD	Croesus	93.72	5.44	0.0337	0.1455
Croesus-M36625-2	M36625	Abitibi PD	Croesus	93.72	5.58	0.0591	0.072
Croesus-M36625-3	M36625	Abitibi PD	Croesus	93.91	5.52	0.0503	L.O.D.
Croesus-M36625-4	M36625	Abitibi PD	Croesus	93.87	5.54	0.0586	0.1103
Croesus-M36625-5	M36625	Abitibi PD	Croesus	93.64	5.55	0.0374	0.0982
Croesus-M36625-6	M36625	Abitibi PD	Croesus	93.86	5.52	0.059	0.1151
Croesus-M36625-7	M36625	Abitibi PD	Croesus	94.03	5.56	0.0685	0.1045
Croesus-M36625-8	M36625	Abitibi PD	Croesus	93.81	5.54	0.0559	0.1372
Croesus-M36625-9	M36625	Abitibi PD	Croesus	93.91	5.52	0.0537	0.084
Croesus-M36727-1	M36727	Abitibi PD	Croesus	92.21	7.7	0.0319	L.O.D.
Croesus-M36727-10	M36727	Abitibi PD	Croesus	91.94	7.74	0.0262	L.O.D.
Croesus-M36727-2	M36727	Abitibi PD	Croesus	92.01	7.96	0.0469	0.0735
Croesus-M36727-3	M36727	Abitibi PD	Croesus	91.7	7.73	0.0408	0.075
Croesus-M36727-4	M36727	Abitibi PD	Croesus	91.76	7.65	0.0344	L.O.D.
Croesus-M36727-5	M36727	Abitibi PD	Croesus	91.68	7.75	0.038	L.O.D.
Croesus-M36727-6	M36727	Abitibi PD	Croesus	91.88	7.63	0.0317	L.O.D.
Croesus-M36727-7	M36727	Abitibi PD	Croesus	91.85	7.82	0.0311	L.O.D.
Croesus-M36727-8	M36727	Abitibi PD	Croesus	92.14	7.85	0.0333	0.0735
Croesus-M36727-9	M36727	Abitibi PD	Croesus	91.56	7.6	0.0241	0.0694
Croesus-M36728-1	M36728	Abitibi PD	Croesus	92.36	7.59	0.0454	L.O.D.
Croesus-M36728-10	M36728	Abitibi PD	Croesus	92.44	7.84	0.0338	L.O.D.
Croesus-M36728-2	M36728	Abitibi PD	Croesus	92.05	7.59	0.0379	0.0603
Croesus-M36728-3	M36728	Abitibi PD	Croesus	92.06	7.71	0.0399	0.0758
Croesus-M36728-4	M36728	Abitibi PD	Croesus	91.89	7.7	0.0325	L.O.D.
Croesus-M36728-5	M36728	Abitibi PD	Croesus	91.74	7.59	0.0352	L.O.D.
Croesus-M36728-6	M36728	Abitibi PD	Croesus	91.92	7.58	0.0289	L.O.D.
Croesus-M36728-7	M36728	Abitibi PD	Croesus	92.51	7.71	0.0338	0.073
Croesus-M36728-8	M36728	Abitibi PD	Croesus	92.3	7.73	0.0369	0.0687
Croesus-M36728-9	M36728	Abitibi PD	Croesus	92.09	7.72	0.0361	0.0641
Croesus-M40586-1	M40586	Abitibi PD	Dixon Claims	92.37	7.23	0.0308	0.0621
Croesus-M40586-10	M40586	Abitibi PD	Dixon Claims	92.49	7.1	0.0286	L.O.D.
Croesus-M40586-2	M40586	Abitibi PD	Dixon Claims	92.3	7.22	0.0238	0.0744
Croesus-M40586-3	M40586	Abitibi PD	Dixon Claims	92.4	7.12	0.0257	0.1093
Croesus-M40586-4	M40586	Abitibi PD	Dixon Claims	92.33	7.09	0.0324	L.O.D.
Croesus-M40586-5	M40586	Abitibi PD	Dixon Claims	91.94	7	0.0271	0.0965
Croesus-M40586-6	M40586	Abitibi PD	Dixon Claims	91.99	7.17	0.0344	0.0872
Croesus-M40586-7	M40586	Abitibi PD	Dixon Claims	92.7	7.24	0.026	L.O.D.
Croesus-M40586-8	M40586	Abitibi PD	Dixon Claims	92.22	7.03	0.0236	0.0717
Croesus-M40586-9	M40586	Abitibi PD	Dixon Claims	92.36	7.21	0.0341	0.0619
DixonClaims-M48036A-1	M48036A	Abitibi PD	Dixon Claims	89.16	10.11	0.0208	L.O.D.
DixonClaims-M48036A-1	M48036A	Abitibi PD	Dixon Claims	89.55	10.02	0.0263	L.O.D.
DixonClaims-M48036A-1	M48036A	Abitibi PD	Dixon Claims	89.49	10.03	0.0313	L.O.D.
DixonClaims-M48036A-1	M48036A	Abitibi PD	Dixon Claims	89.12	10.07	0.034	L.O.D.
DixonClaims-M48036A-1	M48036A	Abitibi PD	Dixon Claims	89.53	10.09	0.029	L.O.D.
DixonClaims-M48036A-1	M48036A	Abitibi PD	Dixon Claims	89.63	9.98	0.0435	0.0764
DixonClaims-M48036A-1	M48036A	Abitibi PD	Dixon Claims	89.68	10.18	0.0281	L.O.D.
DixonClaims-M48036A-1	M48036A	Abitibi PD	Dixon Claims	89.09	9.99	0.0317	L.O.D.
DixonClaims-M48036A-1	M48036A	Abitibi PD	Dixon Claims	89.67	9.91	0.0334	L.O.D.
DixonClaims-M48036A-1	M48036A	Abitibi PD	Dixon Claims	89.63	10.11	0.0318	L.O.D.
DixonClaims-M48036B-1	M48036B	Abitibi PD	Dome	85.36	14	L.O.D.	0.1883
DixonClaims-M48036B-1	M48036B	Abitibi PD	Dome	85.74	14.2	L.O.D.	0.2031
DixonClaims-M48036B-1	M48036B	Abitibi PD	Dome	85.35	13.97	L.O.D.	0.214
DixonClaims-M48036B-1	M48036B	Abitibi PD	Dome	85.45	14	L.O.D.	0.2208
DixonClaims-M48036B-1	M48036B	Abitibi PD	Dome	85.06	14.13	L.O.D.	0.2166
DixonClaims-M48036B-1	M48036B	Abitibi PD	Dome	85.43	13.98	L.O.D.	0.1748
DixonClaims-M48036B-1	M48036B	Abitibi PD	Dome	85.37	13.99	L.O.D.	0.2271
DixonClaims-M48036B-1	M48036B	Abitibi PD	Dome	85.41	14.03	L.O.D.	0.173
DixonClaims-M48036B-1	M48036B	Abitibi PD	Dome	85.32	13.91	L.O.D.	0.1853
DixonClaims-M48036B-1	M48036B	Abitibi PD	Dome	85.19	14.07	L.O.D.	0.2185
DUG-1-1	DUG1	Abitibi PD	Dome	91.47	8.55	L.O.D.	L.O.D.
DUG-1-10	DUG1	Abitibi PD	Dome	90.71	8.46	L.O.D.	0.075
DUG-1-2	DUG1	Abitibi PD	Dome	91.38	8.53	0.0238	L.O.D.

Appendix B. EPMA data

Point	Sample	Area	Deposit/Mine	Au (wt%)	Ag (wt%)	Cu (wt%)	Hg (wt%)
DUG-1-3	DUG1	Abitibi PD	Dome	91.51	8.55	0.0192	L.O.D.
DUG-1-4	DUG1	Abitibi PD	Dome	91.39	8.61	L.O.D.	L.O.D.
DUG-1-5	DUG1	Abitibi PD	Dome	91.39	8.54	0.0205	0.0744
DUG-1-6	DUG1	Abitibi PD	Dome	91.16	8.72	L.O.D.	L.O.D.
DUG-1-7	DUG1	Abitibi PD	Dome	91.07	8.68	L.O.D.	L.O.D.
DUG-1-8	DUG1	Abitibi PD	Dome	91.05	8.62	L.O.D.	0.0772
DUG-1-9	DUG1	Abitibi PD	Dome	91	8.53	0.0233	0.0694
DUG-10-1	DUG10	Abitibi PD	Dome	92.18	7.91	L.O.D.	0.1321
DUG-10-10	DUG10	Abitibi PD	Dome	92.01	7.97	0.0189	0.1505
DUG-10-2	DUG10	Abitibi PD	Dome	92.18	7.9	0.0296	0.147
DUG-10-3	DUG10	Abitibi PD	Dome	92.3	7.87	L.O.D.	0.1069
DUG-10-4	DUG10	Abitibi PD	Dome	92.07	7.94	0.0297	0.1141
DUG-10-5	DUG10	Abitibi PD	Dome	92.02	7.96	0.0211	0.1065
DUG-10-6	DUG10	Abitibi PD	Dome	92.15	7.95	0.029	0.0926
DUG-10-7	DUG10	Abitibi PD	Dome	91.89	7.88	0.0307	0.1333
DUG-10-8	DUG10	Abitibi PD	Dome	91.95	8.03	0.0217	0.1343
DUG-10-9	DUG10	Abitibi PD	Dome	91.78	8.03	0.0429	0.0885
DUG-11-1	DUG11	Abitibi PD	Dome	91.49	8.52	0.0302	0.2557
DUG-11-2	DUG11	Abitibi PD	Dome	91.56	8.42	0.0458	0.2438
DUG-11-3	DUG11	Abitibi PD	Dome	91.21	8.3	0.0322	0.2414
DUG-11-4	DUG11	Abitibi PD	Dome	91.56	8.34	0.0205	0.2325
DUG-11-5	DUG11	Abitibi PD	Dome	91.43	8.52	0.0305	0.2276
DUG-11-6	DUG11	Abitibi PD	Dome	91.16	8.53	L.O.D.	0.2298
DUG-11-7	DUG11	Abitibi PD	Dome	91.43	8.43	0.0193	0.2298
DUG-12-1	DUG12	Abitibi PD	Dome	90.9	8.17	0.0337	0.3769
DUG-12-10	DUG12	Abitibi PD	Dome	90.94	8.15	L.O.D.	0.316
DUG-12-2	DUG12	Abitibi PD	Dome	90.74	8.08	0.022	0.3642
DUG-12-3	DUG12	Abitibi PD	Dome	91.11	8.12	0.0283	0.3678
DUG-12-4	DUG12	Abitibi PD	Dome	91.05	8.2	0.0303	0.336
DUG-12-5	DUG12	Abitibi PD	Dome	91.4	8.03	0.0217	0.3151
DUG-12-6	DUG12	Abitibi PD	Dome	91.12	8.17	0.0313	0.3494
DUG-12-7	DUG12	Abitibi PD	Dome	90.69	8.13	0.0383	0.3396
DUG-12-8	DUG12	Abitibi PD	Dome	91.06	8.16	L.O.D.	0.3385
DUG-12-9	DUG12	Abitibi PD	Dome	91.11	8.1	0.0232	0.3046
DUG-13-1	DUG13	Abitibi PD	Dome	87.42	11.8	L.O.D.	0.1086
DUG-13-10	DUG13	Abitibi PD	Dome	87.71	11.99	L.O.D.	0.0961
DUG-13-2	DUG13	Abitibi PD	Dome	87.38	11.9	L.O.D.	0.0909
DUG-13-3	DUG13	Abitibi PD	Dome	87.26	11.75	L.O.D.	0.1066
DUG-13-4	DUG13	Abitibi PD	Dome	87.69	11.99	L.O.D.	0.1092
DUG-13-5	DUG13	Abitibi PD	Dome	87.75	11.94	L.O.D.	0.0993
DUG-13-6	DUG13	Abitibi PD	Dome	87.21	11.84	L.O.D.	0.0693
DUG-13-7	DUG13	Abitibi PD	Dome	87.42	11.89	L.O.D.	0.1485
DUG-13-8	DUG13	Abitibi PD	Dome	87.53	11.75	L.O.D.	0.0885
DUG-13-9	DUG13	Abitibi PD	Dome	87.33	11.91	L.O.D.	0.1159
DUG-14-1	DUG14	Abitibi PD	Dome	88.38	10.74	L.O.D.	0.185
DUG-14-10	DUG14	Abitibi PD	Dome	88.8	10.87	0.021	0.1833
DUG-14-2	DUG14	Abitibi PD	Dome	88.65	10.94	L.O.D.	0.1793
DUG-14-3	DUG14	Abitibi PD	Dome	88.76	10.88	L.O.D.	0.1575
DUG-14-4	DUG14	Abitibi PD	Dome	88.73	10.68	L.O.D.	0.1771
DUG-14-5	DUG14	Abitibi PD	Dome	88.53	10.94	L.O.D.	0.1703
DUG-14-6	DUG14	Abitibi PD	Dome	88.85	10.91	L.O.D.	0.1745
DUG-14-7	DUG14	Abitibi PD	Dome	88.59	10.92	L.O.D.	0.1628
DUG-14-8	DUG14	Abitibi PD	Dome	88.28	10.9	L.O.D.	0.1798
DUG-14-9	DUG14	Abitibi PD	Dome	88.41	10.78	L.O.D.	0.1991
DUG-15-1	DUG15	Abitibi PD	Dome	92	7.68	0.0361	0.1015
DUG-15-10	DUG15	Abitibi PD	Dome	91.76	7.76	0.0226	0.0938
DUG-15-2	DUG15	Abitibi PD	Dome	92.16	7.71	0.0248	0.0741
DUG-15-3	DUG15	Abitibi PD	Dome	91.58	7.73	0.0354	0.0841
DUG-15-4	DUG15	Abitibi PD	Dome	91.32	7.85	0.0173	0.1142
DUG-15-5	DUG15	Abitibi PD	Dome	91.75	7.88	L.O.D.	0.1261
DUG-15-6	DUG15	Abitibi PD	Dome	91.54	7.95	L.O.D.	0.1276
DUG-15-7	DUG15	Abitibi PD	Dome	91.85	7.73	0.0187	0.1076
DUG-15-8	DUG15	Abitibi PD	Dome	92.23	7.79	0.0299	0.0672
DUG-15-9	DUG15	Abitibi PD	Dome	91.53	8.04	0.0368	0.1259
DUG-16-1	DUG16	Abitibi PD	Dome	85.27	13.98	L.O.D.	0.1954
DUG-16-10	DUG16	Abitibi PD	Dome	85.59	13.47	L.O.D.	0.1737
DUG-16-2	DUG16	Abitibi PD	Dome	85.37	13.92	L.O.D.	0.2371
DUG-16-3	DUG16	Abitibi PD	Dome	85.41	13.92	L.O.D.	0.2386
DUG-16-4	DUG16	Abitibi PD	Dome	85.22	13.61	L.O.D.	0.2348
DUG-16-5	DUG16	Abitibi PD	Dome	85.57	13.68	L.O.D.	0.1604
DUG-16-6	DUG16	Abitibi PD	Dome	85.69	13.77	L.O.D.	0.1904
DUG-16-7	DUG16	Abitibi PD	Dome	85.8	13.66	L.O.D.	0.2084
DUG-16-8	DUG16	Abitibi PD	Dome	85.4	13.8	L.O.D.	0.2106
DUG-16-9	DUG16	Abitibi PD	Dome	85.57	13.66	L.O.D.	0.1911
DUG-17-1	DUG17	Abitibi PD	Dome	90.85	8.82	0.032	0.176
DUG-17-10	DUG17	Abitibi PD	Dome	90.69	8.85	0.0304	0.1946
DUG-17-2	DUG17	Abitibi PD	Dome	90.65	8.79	0.032	0.2049
DUG-17-3	DUG17	Abitibi PD	Dome	90.63	8.78	0.028	0.1747
DUG-17-4	DUG17	Abitibi PD	Dome	90.63	8.76	0.0275	0.1858

Appendix B. EPMA data

Point	Sample	Area	Deposit/Mine	Au (wt%)	Ag (wt%)	Cu (wt%)	Hg (wt%)
DUG-17-5	DUG17	Abitibi PD	Dome	90.63	8.89	0.0331	0.1986
DUG-17-6	DUG17	Abitibi PD	Dome	90.67	8.63	0.0238	0.1829
DUG-17-7	DUG17	Abitibi PD	Dome	90.78	8.77	0.0296	0.1732
DUG-17-8	DUG17	Abitibi PD	Dome	90.81	8.79	0.0214	0.1796
DUG-17-9	DUG17	Abitibi PD	Dome	90.77	8.79	0.0264	0.1862
DUG-18-1	DUG18	Abitibi PD	Dome	83.79	15.35	L.O.D.	0.1436
DUG-18-10	DUG18	Abitibi PD	Dome	84.4	15.27	L.O.D.	0.1116
DUG-18-2	DUG18	Abitibi PD	Dome	84.05	15.31	L.O.D.	0.1099
DUG-18-3	DUG18	Abitibi PD	Dome	84.35	15.55	L.O.D.	0.1455
DUG-18-4	DUG18	Abitibi PD	Dome	83.2	16.32	L.O.D.	0.1409
DUG-18-5	DUG18	Abitibi PD	Dome	84.14	15.5	L.O.D.	0.1382
DUG-18-6	DUG18	Abitibi PD	Dome	83.83	15.85	L.O.D.	0.1348
DUG-18-7	DUG18	Abitibi PD	Dome	84.1	15.42	L.O.D.	0.1355
DUG-18-8	DUG18	Abitibi PD	Dome	84.06	15.21	L.O.D.	0.1035
DUG-18-9	DUG18	Abitibi PD	Dome	84.13	15.3	L.O.D.	0.1042
DUG-19-1	DUG19	Abitibi PD	Dome	91.04	8.93	0.0192	L.O.D.
DUG-19-10	DUG19	Abitibi PD	Dome	90.74	8.99	L.O.D.	L.O.D.
DUG-19-2	DUG19	Abitibi PD	Dome	90.95	8.75	0.023	L.O.D.
DUG-19-3	DUG19	Abitibi PD	Dome	90.77	9.01	0.0287	L.O.D.
DUG-19-4	DUG19	Abitibi PD	Dome	90.91	8.88	0.0316	L.O.D.
DUG-19-5	DUG19	Abitibi PD	Dome	90.72	8.86	0.0324	L.O.D.
DUG-19-6	DUG19	Abitibi PD	Dome	90.82	8.84	0.0361	0.0889
DUG-19-7	DUG19	Abitibi PD	Dome	90.65	8.99	0.0208	L.O.D.
DUG-19-8	DUG19	Abitibi PD	Dome	90.75	9.04	0.025	L.O.D.
DUG-19-9	DUG19	Abitibi PD	Dome	90.53	9.06	0.0289	L.O.D.
DUG-2-1	DUG2	Abitibi PD	Dome	85.12	14.33	L.O.D.	0.2516
DUG-2-10	DUG2	Abitibi PD	Dome	85.13	14.12	L.O.D.	0.2981
DUG-2-2	DUG2	Abitibi PD	Dome	84.99	14.36	L.O.D.	0.2857
DUG-2-3	DUG2	Abitibi PD	Dome	85.05	14.42	L.O.D.	0.2733
DUG-2-4	DUG2	Abitibi PD	Dome	85.63	14.14	L.O.D.	0.2974
DUG-2-5	DUG2	Abitibi PD	Dome	85.14	14.27	L.O.D.	0.2479
DUG-2-6	DUG2	Abitibi PD	Dome	85.21	14.38	L.O.D.	0.269
DUG-2-7	DUG2	Abitibi PD	Dome	85.35	14.38	L.O.D.	0.2696
DUG-2-8	DUG2	Abitibi PD	Dome	85	14.15	L.O.D.	0.2912
DUG-2-9	DUG2	Abitibi PD	Dome	85.19	14.11	0.02	0.3099
DUG-20-1	DUG20	Abitibi PD	Dome	91.62	8.17	0.0306	0.2979
DUG-20-10	DUG20	Abitibi PD	Dome	91.5	8.15	0.0208	0.293
DUG-20-2	DUG20	Abitibi PD	Dome	90.99	8.1	0.029	0.2537
DUG-20-3	DUG20	Abitibi PD	Dome	91.25	8.16	0.0235	0.2742
DUG-20-4	DUG20	Abitibi PD	Dome	91.08	8.15	0.0276	0.2457
DUG-20-5	DUG20	Abitibi PD	Dome	90.99	8.11	0.0228	0.2841
DUG-20-6	DUG20	Abitibi PD	Dome	91.34	8.05	0.0225	0.2838
DUG-20-7	DUG20	Abitibi PD	Dome	91.61	8.08	0.0179	0.2793
DUG-20-8	DUG20	Abitibi PD	Dome	91.44	8.15	0.0223	0.2543
DUG-20-9	DUG20	Abitibi PD	Dome	91.53	8.19	0.0277	0.2915
DUG-21-1	DUG21	Abitibi PD	Dome	89.6	9.97	L.O.D.	0.0788
DUG-21-10	DUG21	Abitibi PD	Dome	89.5	9.83	L.O.D.	L.O.D.
DUG-21-2	DUG21	Abitibi PD	Dome	89.5	10	L.O.D.	0.102
DUG-21-3	DUG21	Abitibi PD	Dome	89.38	9.9	L.O.D.	0.0798
DUG-21-4	DUG21	Abitibi PD	Dome	89.24	9.98	L.O.D.	0.0777
DUG-21-5	DUG21	Abitibi PD	Dome	89.81	9.99	L.O.D.	L.O.D.
DUG-21-6	DUG21	Abitibi PD	Dome	89.79	10.02	L.O.D.	L.O.D.
DUG-21-7	DUG21	Abitibi PD	Dome	89.71	9.85	L.O.D.	L.O.D.
DUG-21-8	DUG21	Abitibi PD	Dome	89.55	9.87	0.0217	0.0835
DUG-21-9	DUG21	Abitibi PD	Dome	89.63	9.91	L.O.D.	0.0705
DUG-22-1	DUG22	Abitibi PD	Dome	90.75	9.08	L.O.D.	0.0705
DUG-22-10	DUG22	Abitibi PD	Dome	90.61	9.02	0.0187	L.O.D.
DUG-22-2	DUG22	Abitibi PD	Dome	90.67	9.16	L.O.D.	0.0648
DUG-22-3	DUG22	Abitibi PD	Dome	90.83	9.08	0.018	L.O.D.
DUG-22-4	DUG22	Abitibi PD	Dome	90.96	9.16	L.O.D.	L.O.D.
DUG-22-5	DUG22	Abitibi PD	Dome	90.81	9.12	0.024	0.0879
DUG-22-6	DUG22	Abitibi PD	Dome	90.5	8.92	L.O.D.	0.0736
DUG-22-7	DUG22	Abitibi PD	Dome	90.76	9.2	L.O.D.	0.0974
DUG-22-8	DUG22	Abitibi PD	Dome	90.82	9.22	L.O.D.	0.0644
DUG-22-9	DUG22	Abitibi PD	Dome	90.87	9.26	L.O.D.	L.O.D.
DUG-23-1	DUG23	Abitibi PD	Dome	90.68	9.52	L.O.D.	0.1331
DUG-23-10	DUG23	Abitibi PD	Dome	90.34	9.45	L.O.D.	0.1509
DUG-23-2	DUG23	Abitibi PD	Dome	90.09	9.42	L.O.D.	0.0998
DUG-23-3	DUG23	Abitibi PD	Dome	90.66	9.3	L.O.D.	0.1516
DUG-23-4	DUG23	Abitibi PD	Dome	90.32	9.31	L.O.D.	0.1331
DUG-23-5	DUG23	Abitibi PD	Dome	90.22	9.47	L.O.D.	0.1567
DUG-23-6	DUG23	Abitibi PD	Dome	90.64	9.36	L.O.D.	0.1167
DUG-23-7	DUG23	Abitibi PD	Dome	90.42	9.35	L.O.D.	0.1177
DUG-23-8	DUG23	Abitibi PD	Dome	90.22	9.32	0.0169	0.1317
DUG-23-9	DUG23	Abitibi PD	Dome	90.3	9.24	L.O.D.	0.0991
DUG-24-1	DUG24	Abitibi PD	Dome	86.43	13.44	L.O.D.	0.2036
DUG-24-10	DUG24	Abitibi PD	Dome	86.08	13.43	L.O.D.	0.258
DUG-24-2	DUG24	Abitibi PD	Dome	86.61	13.46	L.O.D.	0.1983
DUG-24-3	DUG24	Abitibi PD	Dome	86.27	13.48	L.O.D.	0.2677

Appendix B. EPMA data

Point	Sample	Area	Deposit/Mine	Au (wt%)	Ag (wt%)	Cu (wt%)	Hg (wt%)
DUG-24-4	DUG24	Abitibi PD	Dome	86.45	13.27	L.O.D.	0.2616
DUG-24-5	DUG24	Abitibi PD	Dome	86.08	13.38	L.O.D.	0.2607
DUG-24-6	DUG24	Abitibi PD	Dome	86.07	13.37	L.O.D.	0.2456
DUG-24-7	DUG24	Abitibi PD	Dome	85.99	13.52	0.0196	0.2476
DUG-24-8	DUG24	Abitibi PD	Dome	86.33	13.44	0.0179	0.2114
DUG-24-9	DUG24	Abitibi PD	Dome	86.22	13.4	0.023	0.2644
DUG-25-1	DUG25	Abitibi PD	Dome	92.18	7.8	0.0224	0.1035
DUG-25-10	DUG25	Abitibi PD	Dome	92.05	7.78	L.O.D.	0.0596
DUG-25-2	DUG25	Abitibi PD	Dome	91.97	7.76	0.019	0.0978
DUG-25-3	DUG25	Abitibi PD	Dome	91.94	7.8	0.0308	0.0747
DUG-25-4	DUG25	Abitibi PD	Dome	91.8	7.82	0.0204	0.0864
DUG-25-5	DUG25	Abitibi PD	Dome	92.11	7.79	0.0193	0.0709
DUG-25-6	DUG25	Abitibi PD	Dome	92.33	7.94	0.0219	0.0782
DUG-25-7	DUG25	Abitibi PD	Dome	92.12	7.85	0.0223	L.O.D.
DUG-25-8	DUG25	Abitibi PD	Dome	91.79	7.86	L.O.D.	0.0908
DUG-25-9	DUG25	Abitibi PD	Dome	92.22	7.87	0.0194	0.0647
DUG-26-1	DUG26	Abitibi PD	Dome	91.2	8.25	0.0246	0.3282
DUG-26-10	DUG26	Abitibi PD	Dome	91.13	8.19	L.O.D.	0.3211
DUG-26-2	DUG26	Abitibi PD	Dome	91.46	8.2	0.0217	0.3546
DUG-26-3	DUG26	Abitibi PD	Dome	91.23	8.25	0.0305	0.286
DUG-26-4	DUG26	Abitibi PD	Dome	91.27	8.21	0.0184	0.3203
DUG-26-5	DUG26	Abitibi PD	Dome	90.93	8.24	0.0176	0.3622
DUG-26-6	DUG26	Abitibi PD	Dome	91.63	8.32	0.0294	0.3186
DUG-26-7	DUG26	Abitibi PD	Dome	91.48	8.1	0.0272	0.3145
DUG-26-8	DUG26	Abitibi PD	Dome	91.22	8.27	0.0278	0.3316
DUG-26-9	DUG26	Abitibi PD	Dome	91.21	8.27	L.O.D.	0.3075
DUG-27-1	DUG27	Abitibi PD	Dome	88.79	10.74	L.O.D.	0.1244
DUG-27-10	DUG27	Abitibi PD	Dome	89.16	10.76	L.O.D.	0.1168
DUG-27-2	DUG27	Abitibi PD	Dome	88.95	10.81	0.0206	0.1049
DUG-27-3	DUG27	Abitibi PD	Dome	89.01	10.8	L.O.D.	0.0827
DUG-27-4	DUG27	Abitibi PD	Dome	88.98	10.66	L.O.D.	0.0816
DUG-27-5	DUG27	Abitibi PD	Dome	88.7	10.56	L.O.D.	0.1205
DUG-27-6	DUG27	Abitibi PD	Dome	89.1	10.81	L.O.D.	0.12
DUG-27-7	DUG27	Abitibi PD	Dome	89.08	10.71	L.O.D.	0.073
DUG-27-8	DUG27	Abitibi PD	Dome	89.11	10.74	L.O.D.	0.1091
DUG-27-9	DUG27	Abitibi PD	Dome	88.92	10.57	L.O.D.	0.1031
DUG-28-1	DUG28	Abitibi PD	Dome	88.75	10.71	L.O.D.	0.2293
DUG-28-10	DUG28	Abitibi PD	Dome	88.78	10.76	L.O.D.	0.1716
DUG-28-2	DUG28	Abitibi PD	Dome	88.76	10.67	0.0193	0.1705
DUG-28-3	DUG28	Abitibi PD	Dome	88.91	10.57	L.O.D.	0.1768
DUG-28-4	DUG28	Abitibi PD	Dome	88.71	10.72	L.O.D.	0.2318
DUG-28-5	DUG28	Abitibi PD	Dome	88.88	10.62	0.0195	0.2056
DUG-28-6	DUG28	Abitibi PD	Dome	88.97	10.68	L.O.D.	0.1973
DUG-28-7	DUG28	Abitibi PD	Dome	89.07	10.78	L.O.D.	0.1877
DUG-28-8	DUG28	Abitibi PD	Dome	88.92	10.66	L.O.D.	0.1604
DUG-28-9	DUG28	Abitibi PD	Dome	89.02	10.75	0.021	0.202
DUG-29-1	DUG29	Abitibi PD	Dome	91.05	8.47	0.0415	0.2669
DUG-29-10	DUG29	Abitibi PD	Dome	91.48	8.39	0.0284	0.1773
DUG-29-2	DUG29	Abitibi PD	Dome	91.22	8.48	0.0283	0.2266
DUG-29-3	DUG29	Abitibi PD	Dome	91.09	8.42	0.0293	0.2422
DUG-29-4	DUG29	Abitibi PD	Dome	91.19	8.55	0.0363	0.2124
DUG-29-5	DUG29	Abitibi PD	Dome	91.13	8.42	0.0284	0.2264
DUG-29-6	DUG29	Abitibi PD	Dome	91.04	8.67	0.0249	0.2185
DUG-29-7	DUG29	Abitibi PD	Dome	91.39	8.45	0.029	0.2228
DUG-29-8	DUG29	Abitibi PD	Dome	90.99	8.23	0.0271	0.2598
DUG-29-9	DUG29	Abitibi PD	Dome	91.23	8.48	0.0301	0.1994
DUG-3-1	DUG3	Abitibi PD	Dome	88.06	11.71	L.O.D.	0.2001
DUG-3-10	DUG3	Abitibi PD	Dome	88.06	11.49	0.0283	0.2401
DUG-3-2	DUG3	Abitibi PD	Dome	87.89	11.71	L.O.D.	0.188
DUG-3-3	DUG3	Abitibi PD	Dome	87.74	11.54	0.0232	0.1936
DUG-3-4	DUG3	Abitibi PD	Dome	88.42	11.58	0.0224	0.1949
DUG-3-5	DUG3	Abitibi PD	Dome	88.23	11.45	L.O.D.	0.2066
DUG-3-6	DUG3	Abitibi PD	Dome	88.3	11.44	0.0228	0.2748
DUG-3-7	DUG3	Abitibi PD	Dome	88.3	11.55	0.0257	0.2433
DUG-3-8	DUG3	Abitibi PD	Dome	87.9	11.36	0.0225	0.2318
DUG-3-9	DUG3	Abitibi PD	Dome	87.91	11.42	0.0247	0.2595
DUG-30-1	DUG30	Abitibi PD	Dome	88.23	11.57	0.0195	0.2423
DUG-30-10	DUG30	Abitibi PD	Dome	88.28	11.53	L.O.D.	0.2129
DUG-30-2	DUG30	Abitibi PD	Dome	87.78	11.5	L.O.D.	0.2198
DUG-30-3	DUG30	Abitibi PD	Dome	88.12	11.54	L.O.D.	0.2252
DUG-30-4	DUG30	Abitibi PD	Dome	88.09	11.44	0.0183	0.2152
DUG-30-5	DUG30	Abitibi PD	Dome	87.93	11.45	L.O.D.	0.2347
DUG-30-6	DUG30	Abitibi PD	Dome	88.3	11.45	0.0189	0.225
DUG-30-7	DUG30	Abitibi PD	Dome	87.93	11.37	0.019	0.2037
DUG-30-8	DUG30	Abitibi PD	Dome	87.78	11.42	0.0184	0.203
DUG-30-9	DUG30	Abitibi PD	Dome	87.81	11.26	0.0205	0.2217
DUG-31-1	DUG31	Abitibi PD	Dome	89.51	10.2	0.0192	0.1381
DUG-31-10	DUG31	Abitibi PD	Dome	89.59	10.27	L.O.D.	0.1882
DUG-31-2	DUG31	Abitibi PD	Dome	89.07	10.11	L.O.D.	0.125

Appendix B. EPMA data

Point	Sample	Area	Deposit/Mine	Au (wt%)	Ag (wt%)	Cu (wt%)	Hg (wt%)
DUG-31-3	DUG31	Abitibi PD	Dome	89.31	10.18	0.0175	0.1488
DUG-31-4	DUG31	Abitibi PD	Dome	89.17	10.17	L.O.D.	0.1816
DUG-31-5	DUG31	Abitibi PD	Dome	89.43	10.18	L.O.D.	0.1523
DUG-31-6	DUG31	Abitibi PD	Dome	89.41	10.18	L.O.D.	0.1853
DUG-31-7	DUG31	Abitibi PD	Dome	89.08	10.14	L.O.D.	0.1716
DUG-31-8	DUG31	Abitibi PD	Dome	89.68	10.23	0.0322	0.157
DUG-31-9	DUG31	Abitibi PD	Dome	88.88	10.16	L.O.D.	0.1511
DUG-32-1	DUG32	Abitibi PD	Dome	91.05	8.01	L.O.D.	0.1429
DUG-32-10	DUG32	Abitibi PD	Dome	89.43	9.99	L.O.D.	L.O.D.
DUG-32-2	DUG32	Abitibi PD	Dome	89.43	9.83	L.O.D.	0.0634
DUG-32-3	DUG32	Abitibi PD	Dome	89.54	10.01	L.O.D.	0.0886
DUG-32-4	DUG32	Abitibi PD	Dome	89.59	10	0.0214	0.0884
DUG-32-5	DUG32	Abitibi PD	Dome	89.41	9.96	L.O.D.	0.0698
DUG-32-6	DUG32	Abitibi PD	Dome	89.71	9.91	L.O.D.	0.0922
DUG-32-7	DUG32	Abitibi PD	Dome	89.68	10	L.O.D.	L.O.D.
DUG-32-8	DUG32	Abitibi PD	Dome	89.49	9.97	L.O.D.	L.O.D.
DUG-32-9	DUG32	Abitibi PD	Dome	89.83	9.94	L.O.D.	L.O.D.
DUG-33-1	DUG33	Abitibi PD	Dome	90.46	9.45	0.0292	L.O.D.
DUG-33-10	DUG33	Abitibi PD	Dome	90.02	9.49	0.0303	L.O.D.
DUG-33-2	DUG33	Abitibi PD	Dome	90.29	9.32	0.0255	0.0877
DUG-33-3	DUG33	Abitibi PD	Dome	90.19	9.46	0.0366	0.0733
DUG-33-4	DUG33	Abitibi PD	Dome	90.27	9.46	0.0421	0.0764
DUG-33-5	DUG33	Abitibi PD	Dome	89.86	9.4	0.0373	0.0602
DUG-33-6	DUG33	Abitibi PD	Dome	90.14	9.34	0.0326	L.O.D.
DUG-33-7	DUG33	Abitibi PD	Dome	90.08	9.4	0.0312	0.0744
DUG-33-8	DUG33	Abitibi PD	Dome	89.95	9.38	0.0214	0.0781
DUG-33-9	DUG33	Abitibi PD	Dome	90.06	9.48	0.033	L.O.D.
DUG-34-1	DUG34	Abitibi PD	Dome	90.25	9.19	0.0252	0.0785
DUG-34-10	DUG34	Abitibi PD	Dome	90.01	9.2	L.O.D.	0.0841
DUG-34-2	DUG34	Abitibi PD	Dome	90.02	9.19	0.021	0.1343
DUG-34-3	DUG34	Abitibi PD	Dome	89.92	9.01	0.0201	0.1
DUG-34-4	DUG34	Abitibi PD	Dome	90.2	9.12	0.0216	0.0833
DUG-34-5	DUG34	Abitibi PD	Dome	90.23	9.24	L.O.D.	L.O.D.
DUG-34-6	DUG34	Abitibi PD	Dome	90.27	9.11	L.O.D.	0.0824
DUG-34-7	DUG34	Abitibi PD	Dome	89.92	9.17	0.0211	0.0916
DUG-34-8	DUG34	Abitibi PD	Dome	89.98	9.08	L.O.D.	0.1046
DUG-34-9	DUG34	Abitibi PD	Dome	90.42	9.28	L.O.D.	0.109
DUG-36-1	DUG36	Abitibi PD	Dome	91.32	8.07	L.O.D.	0.1333
DUG-36-10	DUG36	Abitibi PD	Dome	91.27	8.17	0.0177	0.1059
DUG-36-2	DUG36	Abitibi PD	Dome	91.02	8.14	L.O.D.	0.1621
DUG-36-3	DUG36	Abitibi PD	Dome	91.37	8	L.O.D.	0.1732
DUG-36-4	DUG36	Abitibi PD	Dome	91.39	8.28	0.0193	0.1186
DUG-36-5	DUG36	Abitibi PD	Dome	91.34	8.15	L.O.D.	0.1506
DUG-36-6	DUG36	Abitibi PD	Dome	91.41	8.12	L.O.D.	0.0934
DUG-36-7	DUG36	Abitibi PD	Dome	91.02	8.28	0.02	0.1391
DUG-36-8	DUG36	Abitibi PD	Dome	90.96	8.37	L.O.D.	0.148
DUG-36-9	DUG36	Abitibi PD	Dome	91.17	8.15	L.O.D.	0.1626
DUG-37-1	DUG37	Abitibi PD	Dome	87.02	11.91	0.0211	0.2625
DUG-37-10	DUG37	Abitibi PD	Dome	87.22	11.83	L.O.D.	0.2737
DUG-37-2	DUG37	Abitibi PD	Dome	86.89	12.01	L.O.D.	0.2775
DUG-37-3	DUG37	Abitibi PD	Dome	87.51	11.7	L.O.D.	0.2107
DUG-37-4	DUG37	Abitibi PD	Dome	87.42	12.11	L.O.D.	0.2503
DUG-37-5	DUG37	Abitibi PD	Dome	87.16	11.81	L.O.D.	0.2598
DUG-37-6	DUG37	Abitibi PD	Dome	87.48	11.93	L.O.D.	0.2854
DUG-37-7	DUG37	Abitibi PD	Dome	87.27	11.72	L.O.D.	0.3282
DUG-37-8	DUG37	Abitibi PD	Dome	87.14	11.84	L.O.D.	0.3103
DUG-37-9	DUG37	Abitibi PD	Dome	87.47	11.75	0.0227	0.2649
DUG-39-1	DUG39	Abitibi PD	Dome	89.78	9.57	L.O.D.	0.0917
DUG-39-10	DUG39	Abitibi PD	Dome	89.69	9.53	L.O.D.	0.0704
DUG-39-2	DUG39	Abitibi PD	Dome	89.65	9.55	L.O.D.	0.105
DUG-39-3	DUG39	Abitibi PD	Dome	89.88	9.56	L.O.D.	0.0978
DUG-39-4	DUG39	Abitibi PD	Dome	89.84	9.49	L.O.D.	0.1017
DUG-39-5	DUG39	Abitibi PD	Dome	90.14	9.64	L.O.D.	0.0791
DUG-39-6	DUG39	Abitibi PD	Dome	89.97	9.56	L.O.D.	0.1222
DUG-39-7	DUG39	Abitibi PD	Dome	90.02	9.35	L.O.D.	0.0744
DUG-39-8	DUG39	Abitibi PD	Dome	89.58	9.51	L.O.D.	0.0954
DUG-39-9	DUG39	Abitibi PD	Dome	89.76	9.51	L.O.D.	0.0842
DUG-4-1	DUG4	Abitibi PD	Dome	90.92	9.07	0.0279	0.1197
DUG-4-10	DUG4	Abitibi PD	Dome	90.96	8.94	0.0254	0.079
DUG-4-2	DUG4	Abitibi PD	Dome	90.61	8.99	0.0286	0.1072
DUG-4-3	DUG4	Abitibi PD	Dome	91.06	8.94	0.0306	0.1121
DUG-4-4	DUG4	Abitibi PD	Dome	90.77	8.92	0.0248	0.1115
DUG-4-5	DUG4	Abitibi PD	Dome	90.57	8.7	0.0184	0.107
DUG-4-6	DUG4	Abitibi PD	Dome	90.98	8.97	0.0307	0.1089
DUG-4-7	DUG4	Abitibi PD	Dome	90.88	8.79	0.0285	0.1005
DUG-4-8	DUG4	Abitibi PD	Dome	90.35	8.79	0.0395	0.0961
DUG-4-9	DUG4	Abitibi PD	Dome	91.03	9.06	0.0309	0.1225
DUG-5-1	DUG5	Abitibi PD	Dome	91.57	8.38	0.0191	0.1116
DUG-5-10	DUG5	Abitibi PD	Dome	91.79	8.27	L.O.D.	0.1149

Appendix B. EPMA data

Point	Sample	Area	Deposit/Mine	Au (wt%)	Ag (wt%)	Cu (wt%)	Hg (wt%)
DUG-5-2	DUG5	Abitibi PD	Dome	91.4	8.33	0.0194	0.087
DUG-5-3	DUG5	Abitibi PD	Dome	91.51	8.31	0.0222	0.1516
DUG-5-4	DUG5	Abitibi PD	Dome	91.18	8.11	L.O.D.	0.104
DUG-5-5	DUG5	Abitibi PD	Dome	91.97	8.18	L.O.D.	0.1149
DUG-5-6	DUG5	Abitibi PD	Dome	91.41	8.26	L.O.D.	0.125
DUG-5-7	DUG5	Abitibi PD	Dome	91.63	8.53	L.O.D.	0.0889
DUG-5-8	DUG5	Abitibi PD	Dome	91.81	8.33	L.O.D.	0.1361
DUG-5-9	DUG5	Abitibi PD	Dome	91.74	8.3	0.0184	0.1245
DUG-6-1	DUG6	Abitibi PD	Dome	90.19	9.72	0.0222	L.O.D.
DUG-6-10	DUG6	Abitibi PD	Dome	89.95	9.78	0.0201	L.O.D.
DUG-6-2	DUG6	Abitibi PD	Dome	89.4	9.55	L.O.D.	0.0843
DUG-6-3	DUG6	Abitibi PD	Dome	90.23	9.6	L.O.D.	L.O.D.
DUG-6-4	DUG6	Abitibi PD	Dome	90	9.85	L.O.D.	L.O.D.
DUG-6-5	DUG6	Abitibi PD	Dome	90.22	9.73	0.0208	L.O.D.
DUG-6-6	DUG6	Abitibi PD	Dome	89.83	9.75	0.0229	L.O.D.
DUG-6-7	DUG6	Abitibi PD	Dome	90.36	9.63	0.021	0.0601
DUG-6-8	DUG6	Abitibi PD	Dome	89.72	9.72	0.0306	0.0831
DUG-6-9	DUG6	Abitibi PD	Dome	90.4	9.48	0.0224	0.0753
DUG-7-1	DUG7	Abitibi PD	Dome	91.06	9.03	0.024	0.0698
DUG-7-10	DUG7	Abitibi PD	Dome	91.03	9.01	0.0227	0.0722
DUG-7-2	DUG7	Abitibi PD	Dome	91.27	8.96	0.0213	0.0762
DUG-7-3	DUG7	Abitibi PD	Dome	90.77	8.92	0.0217	0.0679
DUG-7-4	DUG7	Abitibi PD	Dome	90.89	8.99	L.O.D.	0.0885
DUG-7-5	DUG7	Abitibi PD	Dome	91.22	8.96	0.033	0.1097
DUG-7-6	DUG7	Abitibi PD	Dome	90.92	8.97	0.0233	0.0949
DUG-7-7	DUG7	Abitibi PD	Dome	91.01	8.89	0.0301	0.0668
DUG-7-8	DUG7	Abitibi PD	Dome	90.69	9.19	0.0326	0.112
DUG-7-9	DUG7	Abitibi PD	Dome	91.1	9.01	0.0296	L.O.D.
DUG-8-1	DUG8	Abitibi PD	Dome	92.92	7.8	L.O.D.	0.0674
DUG-8-10	DUG8	Abitibi PD	Dome	92.99	7.36	0.0173	0.0933
DUG-8-2	DUG8	Abitibi PD	Dome	92.88	7.51	0.0272	L.O.D.
DUG-8-3	DUG8	Abitibi PD	Dome	92.55	7.52	0.0312	0.0771
DUG-8-4	DUG8	Abitibi PD	Dome	92.28	7.54	0.0204	L.O.D.
DUG-8-5	DUG8	Abitibi PD	Dome	92.77	7.52	L.O.D.	L.O.D.
DUG-8-6	DUG8	Abitibi PD	Dome	92.74	7.46	0.0392	L.O.D.
DUG-8-7	DUG8	Abitibi PD	Dome	92.82	7.39	L.O.D.	0.1031
DUG-8-8	DUG8	Abitibi PD	Dome	92.43	7.64	L.O.D.	0.0628
DUG-8-9	DUG8	Abitibi PD	Dome	92.56	7.48	0.0209	0.0717
Dome-M14630-1	M14630	Abitibi PD	Dome	90.97	8.43	L.O.D.	0.0637
Dome-M14630-10	M14630	Abitibi PD	Dome	91.8	8.43	L.O.D.	0.0795
Dome-M14630-2	M14630	Abitibi PD	Dome	91.4	8.35	0.0262	L.O.D.
Dome-M14630-3	M14630	Abitibi PD	Dome	90.98	8.33	L.O.D.	0.0989
Dome-M14630-4	M14630	Abitibi PD	Dome	91.01	8.05	0.0296	L.O.D.
Dome-M14630-5	M14630	Abitibi PD	Dome	91.13	8.31	0.0269	0.0749
Dome-M14630-6	M14630	Abitibi PD	Dome	91.01	8.45	L.O.D.	0.0933
Dome-M14630-7	M14630	Abitibi PD	Dome	90.82	8.37	0.0219	0.0803
Dome-M14630-8	M14630	Abitibi PD	Dome	91.26	8.38	0.0343	0.0718
Dome-M14630-9	M14630	Abitibi PD	Dome	91.05	8.4	0.0232	L.O.D.
Dome-M22578-1	M22578	Abitibi PD	Dome	91.6	8.01	L.O.D.	0.0634
Dome-M22578-10	M22578	Abitibi PD	Dome	91.37	8.09	L.O.D.	0.0634
Dome-M22578-2	M22578	Abitibi PD	Dome	92.13	7.98	L.O.D.	0.0623
Dome-M22578-3	M22578	Abitibi PD	Dome	91.79	8.03	L.O.D.	L.O.D.
Dome-M22578-4	M22578	Abitibi PD	Dome	91.66	7.98	L.O.D.	0.0983
Dome-M22578-5	M22578	Abitibi PD	Dome	91.58	7.93	0.0266	L.O.D.
Dome-M22578-6	M22578	Abitibi PD	Dome	91.61	7.8	L.O.D.	L.O.D.
Dome-M22578-7	M22578	Abitibi PD	Dome	91.96	7.6	L.O.D.	L.O.D.
Dome-M22578-8	M22578	Abitibi PD	Dome	91.36	8.16	0.017	L.O.D.
Dome-M22578-9	M22578	Abitibi PD	Dome	91.29	8.2	L.O.D.	0.1079
Dome-M22580-1	M22580	Abitibi PD	Dome	90.96	8.67	0.0331	L.O.D.
Dome-M22580-10	M22580	Abitibi PD	Dome	90.95	8.48	0.0356	L.O.D.
Dome-M22580-2	M22580	Abitibi PD	Dome	90.9	8.42	0.0331	L.O.D.
Dome-M22580-3	M22580	Abitibi PD	Dome	90.95	8.56	0.0399	0.0681
Dome-M22580-4	M22580	Abitibi PD	Dome	90.92	8.71	0.0343	0.0798
Dome-M22580-5	M22580	Abitibi PD	Dome	90.91	8.63	0.032	L.O.D.
Dome-M22580-6	M22580	Abitibi PD	Dome	91	8.44	0.0397	L.O.D.
Dome-M22580-7	M22580	Abitibi PD	Dome	91.01	8.68	0.0261	0.0699
Dome-M22580-8	M22580	Abitibi PD	Dome	90.32	8.62	0.034	L.O.D.
Dome-M22580-9	M22580	Abitibi PD	Dome	90.66	8.57	0.0212	L.O.D.
Dome-M22581-1	M22581	Abitibi PD	Dome	90.79	8.63	0.0349	L.O.D.
Dome-M22581-10	M22581	Abitibi PD	Dome	91.08	8.59	0.0381	L.O.D.
Dome-M22581-2	M22581	Abitibi PD	Dome	91.06	8.62	0.0399	L.O.D.
Dome-M22581-3	M22581	Abitibi PD	Dome	91.04	8.53	0.0428	0.0821
Dome-M22581-4	M22581	Abitibi PD	Dome	90.97	8.63	0.0362	L.O.D.
Dome-M22581-5	M22581	Abitibi PD	Dome	90.61	8.61	0.0338	L.O.D.
Dome-M22581-6	M22581	Abitibi PD	Dome	90.76	8.46	0.0322	0.1077
Dome-M22581-7	M22581	Abitibi PD	Dome	90.81	8.52	0.0381	L.O.D.
Dome-M22581-8	M22581	Abitibi PD	Dome	90.39	8.57	0.0402	L.O.D.
Dome-M22581-9	M22581	Abitibi PD	Dome	90.8	8.49	0.0261	0.1018
Dome-M22582-1	M22582	Abitibi PD	Dome	90.99	8.51	0.0281	0.1003

Appendix B. EPMA data

Point	Sample	Area	Deposit/Mine	Au (wt%)	Ag (wt%)	Cu (wt%)	Hg (wt%)
Dome-M22582-10	M22582	Abitibi PD	Dome	90.65	8.6	0.0255	0.1331
Dome-M22582-2	M22582	Abitibi PD	Dome	90.99	8.77	L.O.D.	L.O.D.
Dome-M22582-3	M22582	Abitibi PD	Dome	90.84	8.57	0.0194	0.0732
Dome-M22582-4	M22582	Abitibi PD	Dome	90.69	8.58	0.0229	0.094
Dome-M22582-5	M22582	Abitibi PD	Dome	90.35	8.71	0.025	0.0956
Dome-M22582-6	M22582	Abitibi PD	Dome	90.46	8.69	0.0228	0.1231
Dome-M22582-7	M22582	Abitibi PD	Dome	90.88	8.82	L.O.D.	0.1194
Dome-M22582-8	M22582	Abitibi PD	Dome	90.39	8.78	0.0195	0.1093
Dome-M22582-9	M22582	Abitibi PD	Dome	90.92	8.61	0.0197	L.O.D.
Dome-M22583A-1	M22583A	Abitibi PD	Dome	91.3	8.62	0.0299	L.O.D.
Dome-M22583A-1	M22583A	Abitibi PD	Dome	91.23	8.73	0.0347	L.O.D.
Dome-M22583A-1	M22583A	Abitibi PD	Dome	91.01	8.58	0.0312	L.O.D.
Dome-M22583A-1	M22583A	Abitibi PD	Dome	90.49	8.62	0.0438	L.O.D.
Dome-M22583A-1	M22583A	Abitibi PD	Dome	90.86	8.2	L.O.D.	L.O.D.
Dome-M22583B-1	M22583B	Abitibi PD	Dome	90.84	8.64	0.0216	L.O.D.
Dome-M22583B-1	M22583B	Abitibi PD	Dome	90.91	8.79	0.0257	L.O.D.
Dome-M22583B-1	M22583B	Abitibi PD	Dome	91.24	8.44	L.O.D.	L.O.D.
Dome-M22583B-1	M22583B	Abitibi PD	Dome	90.52	8.7	0.0209	L.O.D.
Dome-M22583B-1	M22583B	Abitibi PD	Dome	90.53	8.75	0.0299	L.O.D.
Dome-M22583B-1	M22583B	Abitibi PD	Dome	90.77	8.77	0.0292	L.O.D.
Dome-M22583B-1	M22583B	Abitibi PD	Dome	91.1	8.57	0.0206	L.O.D.
Dome-M22583B-1	M22583B	Abitibi PD	Dome	90.86	8.68	0.0219	L.O.D.
Dome-M22583B-1	M22583B	Abitibi PD	Dome	90.69	8.63	0.0257	0.0683
Dome-M22583B-1	M22583B	Abitibi PD	Dome	91.15	8.76	0.0296	L.O.D.
Dome-M22586-1	M22586	Abitibi PD	Dome	91.18	7.85	0.0241	L.O.D.
Dome-M22586-10	M22586	Abitibi PD	Dome	93.25	7.63	0.034	0.0642
Dome-M22586-2	M22586	Abitibi PD	Dome	91.5	7.73	L.O.D.	0.0679
Dome-M22586-3	M22586	Abitibi PD	Dome	91.99	7.69	0.0244	0.0766
Dome-M22586-4	M22586	Abitibi PD	Dome	91.83	7.91	0.0229	L.O.D.
Dome-M22586-5	M22586	Abitibi PD	Dome	92.19	7.78	0.0224	0.0965
Dome-M22586-6	M22586	Abitibi PD	Dome	91.37	7.98	0.0245	L.O.D.
Dome-M22586-7	M22586	Abitibi PD	Dome	91.24	7.78	0.0236	0.0833
Dome-M22586-8	M22586	Abitibi PD	Dome	92.79	7.64	L.O.D.	0.0603
Dome-M22586-9	M22586	Abitibi PD	Dome	92.69	7.74	L.O.D.	0.0944
Dome-M22588-1	M22588	Abitibi PD	Dome	91.73	8.16	0.0343	L.O.D.
Dome-M22588-10	M22588	Abitibi PD	Dome	91.5	8.03	0.046	0.0669
Dome-M22588-2	M22588	Abitibi PD	Dome	91.27	8.18	0.0475	L.O.D.
Dome-M22588-3	M22588	Abitibi PD	Dome	91.65	8.22	0.048	L.O.D.
Dome-M22588-4	M22588	Abitibi PD	Dome	91.36	8.07	0.0434	L.O.D.
Dome-M22588-5	M22588	Abitibi PD	Dome	91.66	8.11	0.0391	L.O.D.
Dome-M22588-6	M22588	Abitibi PD	Dome	91.55	8.23	0.0419	L.O.D.
Dome-M22588-7	M22588	Abitibi PD	Dome	91.73	8.11	0.0301	L.O.D.
Dome-M22588-8	M22588	Abitibi PD	Dome	91.68	8.05	0.0336	L.O.D.
Dome-M22588-9	M22588	Abitibi PD	Dome	91.85	7.96	0.039	L.O.D.
Dome-M8675-1	M8675	Abitibi PD	Hollinger	91.79	8.06	0.0403	0.1299
Dome-M8675-10	M8675	Abitibi PD	Hollinger	91.35	8.07	0.0315	0.1031
Dome-M8675-2	M8675	Abitibi PD	Hollinger	91.96	8.05	0.0297	0.0817
Dome-M8675-3	M8675	Abitibi PD	Hollinger	91.33	8.19	0.0348	0.1321
Dome-M8675-4	M8675	Abitibi PD	Hollinger	91.9	8.06	0.0292	0.0856
Dome-M8675-5	M8675	Abitibi PD	Hollinger	91.62	8.23	0.0291	0.1199
Dome-M8675-6	M8675	Abitibi PD	Hollinger	91.89	8.13	0.0329	0.0838
Dome-M8675-7	M8675	Abitibi PD	Hollinger	91.63	8.15	0.0263	0.1147
Dome-M8675-8	M8675	Abitibi PD	Hollinger	91.88	8.09	0.0386	0.078
Dome-M8675-9	M8675	Abitibi PD	Hollinger	91.25	7.96	0.0285	0.1136
Hollinger-9634-1	9634	Abitibi PD	Hollinger	89.7	10.11	L.O.D.	L.O.D.
Hollinger-9634-10	9634	Abitibi PD	Hollinger	89.29	10.23	0.0314	L.O.D.
Hollinger-9634-2	9634	Abitibi PD	Hollinger	89.61	10.2	0.0269	L.O.D.
Hollinger-9634-3	9634	Abitibi PD	Hollinger	89.45	10.27	0.0229	L.O.D.
Hollinger-9634-4	9634	Abitibi PD	Hollinger	89.43	10.17	0.0256	L.O.D.
Hollinger-9634-5	9634	Abitibi PD	Hollinger	90.01	10.18	0.0347	L.O.D.
Hollinger-9634-6	9634	Abitibi PD	Hollinger	89.3	10.26	0.0287	L.O.D.
Hollinger-9634-7	9634	Abitibi PD	Hollinger	89.5	10.29	0.0353	L.O.D.
Hollinger-9634-8	9634	Abitibi PD	Hollinger	89.45	10.25	0.0229	L.O.D.
Hollinger-9634-9	9634	Abitibi PD	Hollinger	90.21	10.26	0.0288	L.O.D.
Hollinger-M19776-1	M19776	Abitibi PD	Hollinger	88.56	10.71	0.0309	L.O.D.
Hollinger-M19776-10	M19776	Abitibi PD	Hollinger	88.71	10.66	0.0304	L.O.D.
Hollinger-M19776-2	M19776	Abitibi PD	Hollinger	88.95	10.81	0.0386	L.O.D.
Hollinger-M19776-3	M19776	Abitibi PD	Hollinger	88.65	10.83	0.0275	L.O.D.
Hollinger-M19776-4	M19776	Abitibi PD	Hollinger	88.75	10.9	0.024	L.O.D.
Hollinger-M19776-5	M19776	Abitibi PD	Hollinger	88.7	10.84	0.0362	0.0605
Hollinger-M19776-6	M19776	Abitibi PD	Hollinger	88.43	10.93	0.0256	L.O.D.
Hollinger-M19776-7	M19776	Abitibi PD	Hollinger	88.34	10.83	0.0323	L.O.D.
Hollinger-M19776-8	M19776	Abitibi PD	Hollinger	88.38	10.84	0.0277	L.O.D.
Hollinger-M19776-9	M19776	Abitibi PD	Hollinger	88.32	10.84	0.0293	0.065
Hollinger-M22631-1	M22631	Abitibi PD	Hollinger	90.55	8.93	0.0393	L.O.D.
Hollinger-M22631-10	M22631	Abitibi PD	Hollinger	90.51	8.88	L.O.D.	L.O.D.
Hollinger-M22631-2	M22631	Abitibi PD	Hollinger	90.89	9	0.0303	L.O.D.
Hollinger-M22631-3	M22631	Abitibi PD	Hollinger	90.82	8.99	0.0243	0.0708
Hollinger-M22631-4	M22631	Abitibi PD	Hollinger	90.8	8.95	0.0205	L.O.D.

Appendix B. EPMA data

Point	Sample	Area	Deposit/Mine	Au (wt%)	Ag (wt%)	Cu (wt%)	Hg (wt%)
Hollinger-M22631-5	M22631	Abitibi PD	Hollinger	90.76	8.92	0.035	L.O.D.
Hollinger-M22631-6	M22631	Abitibi PD	Hollinger	90.83	8.87	0.0286	L.O.D.
Hollinger-M22631-7	M22631	Abitibi PD	Hollinger	90.64	8.87	0.0338	L.O.D.
Hollinger-M22631-8	M22631	Abitibi PD	Hollinger	90.73	8.91	0.0447	L.O.D.
Hollinger-M22631-9	M22631	Abitibi PD	Hollinger	90.75	8.98	0.0388	L.O.D.
Hollinger-M22632-1	M22632	Abitibi PD	Hollinger	89.19	10.18	L.O.D.	0.2077
Hollinger-M22632-10	M22632	Abitibi PD	Hollinger	89.08	10.22	L.O.D.	0.2416
Hollinger-M22632-2	M22632	Abitibi PD	Hollinger	89.21	10.19	0.0172	0.1778
Hollinger-M22632-3	M22632	Abitibi PD	Hollinger	89.02	10.36	0.022	0.1752
Hollinger-M22632-4	M22632	Abitibi PD	Hollinger	89.22	10.22	L.O.D.	0.1889
Hollinger-M22632-5	M22632	Abitibi PD	Hollinger	89.28	10.22	L.O.D.	0.1891
Hollinger-M22632-6	M22632	Abitibi PD	Hollinger	89.09	10.36	L.O.D.	0.2023
Hollinger-M22632-7	M22632	Abitibi PD	Hollinger	88.84	10.31	0.0178	0.2059
Hollinger-M22632-8	M22632	Abitibi PD	Hollinger	89.31	10.21	L.O.D.	0.1988
Hollinger-M22632-9	M22632	Abitibi PD	Hollinger	89.11	10.29	0.0191	0.1598
Hollinger-M33209-1	M33209	Abitibi PD	Hollinger	90.24	9.05	0.0317	0.5242
Hollinger-M33209-10	M33209	Abitibi PD	Hollinger	89.87	8.77	0.0344	0.5295
Hollinger-M33209-2	M33209	Abitibi PD	Hollinger	89.77	9.04	0.0317	0.5516
Hollinger-M33209-3	M33209	Abitibi PD	Hollinger	89.82	9.07	0.0315	0.5661
Hollinger-M33209-4	M33209	Abitibi PD	Hollinger	90.24	9.08	0.0287	0.5563
Hollinger-M33209-5	M33209	Abitibi PD	Hollinger	90.21	9.12	0.0249	0.5453
Hollinger-M33209-6	M33209	Abitibi PD	Hollinger	89.8	9.11	0.0355	0.5103
Hollinger-M33209-7	M33209	Abitibi PD	Hollinger	90.06	9.12	0.0328	0.5313
Hollinger-M33209-8	M33209	Abitibi PD	Hollinger	90.2	9.07	0.0302	0.5398
Hollinger-M33209-9	M33209	Abitibi PD	Hollinger	89.47	8.93	0.0309	0.5381
Hollinger-M33210-1	M33210	Abitibi PD	Hollinger	88.19	11.26	L.O.D.	0.0767
Hollinger-M33210-10	M33210	Abitibi PD	Hollinger	89.13	10.04	0.0306	0.0924
Hollinger-M33210-2	M33210	Abitibi PD	Hollinger	88.32	11.01	L.O.D.	0.0694
Hollinger-M33210-3	M33210	Abitibi PD	Hollinger	88.09	11.24	0.02	0.0639
Hollinger-M33210-4	M33210	Abitibi PD	Hollinger	88.98	10.01	0.0303	0.0731
Hollinger-M33210-5	M33210	Abitibi PD	Hollinger	89.02	10.03	L.O.D.	0.0651
Hollinger-M33210-6	M33210	Abitibi PD	Hollinger	89.01	9.97	0.0333	L.O.D.
Hollinger-M33210-7	M33210	Abitibi PD	Hollinger	89.66	9.98	0.0317	0.1207
Hollinger-M33210-8	M33210	Abitibi PD	Hollinger	89.56	10.05	0.0243	0.0814
Hollinger-M33210-9	M33210	Abitibi PD	Hollinger	89.11	10.21	0.0325	0.0878
Hollinger-M38693-1	M38693	Abitibi PD	Hollinger	88.06	10.92	L.O.D.	0.0714
Hollinger-M38693-10	M38693	Abitibi PD	Hollinger	88.09	10.77	L.O.D.	L.O.D.
Hollinger-M38693-2	M38693	Abitibi PD	Hollinger	87.93	11.04	L.O.D.	L.O.D.
Hollinger-M38693-3	M38693	Abitibi PD	Hollinger	87.89	10.95	L.O.D.	0.0618
Hollinger-M38693-4	M38693	Abitibi PD	Hollinger	88.06	11.03	L.O.D.	0.0864
Hollinger-M38693-5	M38693	Abitibi PD	Hollinger	88.12	11.03	L.O.D.	L.O.D.
Hollinger-M38693-6	M38693	Abitibi PD	Hollinger	87.94	10.8	L.O.D.	0.072
Hollinger-M38693-7	M38693	Abitibi PD	Hollinger	88.26	10.87	L.O.D.	0.0623
Hollinger-M38693-8	M38693	Abitibi PD	Hollinger	88.07	10.93	L.O.D.	0.062
Hollinger-M38693-9	M38693	Abitibi PD	Hollinger	88.29	10.83	L.O.D.	L.O.D.
Hollinger-M47259-1	M47259	Abitibi PD	Hollinger	88.75	10.76	0.0187	L.O.D.
Hollinger-M47259-10	M47259	Abitibi PD	Hollinger	88.41	10.79	0.0244	L.O.D.
Hollinger-M47259-2	M47259	Abitibi PD	Hollinger	89.03	10.9	0.0197	L.O.D.
Hollinger-M47259-3	M47259	Abitibi PD	Hollinger	88.56	10.88	0.0323	0.062
Hollinger-M47259-4	M47259	Abitibi PD	Hollinger	88.66	10.92	0.0178	L.O.D.
Hollinger-M47259-5	M47259	Abitibi PD	Hollinger	88.52	10.62	L.O.D.	L.O.D.
Hollinger-M47259-6	M47259	Abitibi PD	Hollinger	88.77	10.95	L.O.D.	L.O.D.
Hollinger-M47259-7	M47259	Abitibi PD	Hollinger	88.9	11	0.02	L.O.D.
Hollinger-M47259-8	M47259	Abitibi PD	Hollinger	88.48	11.04	0.0265	L.O.D.
Hollinger-M47259-9	M47259	Abitibi PD	Hollinger	88.75	10.9	0.021	L.O.D.
Hollinger-M47260-1	M47260	Abitibi PD	Hoyle Pond	89.49	9.83	0.0344	0.2126
Hollinger-M47260-10	M47260	Abitibi PD	Hoyle Pond	91.62	7.59	0.0635	0.1131
Hollinger-M47260-2	M47260	Abitibi PD	Hoyle Pond	91.34	8.11	0.0673	0.1415
Hollinger-M47260-3	M47260	Abitibi PD	Hoyle Pond	91.87	7.5	0.0591	0.1581
Hollinger-M47260-4	M47260	Abitibi PD	Hoyle Pond	91.44	7.84	0.0526	0.0968
Hollinger-M47260-5	M47260	Abitibi PD	Hoyle Pond	91.98	7.22	0.0587	0.0656
Hollinger-M47260-6	M47260	Abitibi PD	Hoyle Pond	91.87	7.22	0.0538	0.1049
Hollinger-M47260-7	M47260	Abitibi PD	Hoyle Pond	90.74	8.36	0.0511	0.191
Hollinger-M47260-8	M47260	Abitibi PD	Hoyle Pond	91.72	7.49	0.0654	0.1587
Hollinger-M47260-9	M47260	Abitibi PD	Hoyle Pond	90.89	8.42	0.0543	0.1533
HoylePond-M49320-1	M49320	Abitibi PD	Hoyle Pond	93.35	6.36	0.0323	0.2163
HoylePond-M49320-10	M49320	Abitibi PD	Hoyle Pond	92.87	6.4	0.0367	0.2736
HoylePond-M49320-2	M49320	Abitibi PD	Hoyle Pond	93.01	6.33	0.0312	0.2073
HoylePond-M49320-3	M49320	Abitibi PD	Hoyle Pond	93.22	6.32	0.0236	0.2319
HoylePond-M49320-4	M49320	Abitibi PD	Hoyle Pond	93.24	6.34	0.0309	0.2565
HoylePond-M49320-5	M49320	Abitibi PD	Hoyle Pond	93.4	6.38	0.0211	0.2051
HoylePond-M49320-6	M49320	Abitibi PD	Hoyle Pond	93.37	6.33	0.0228	0.2065
HoylePond-M49320-7	M49320	Abitibi PD	Hoyle Pond	93.28	6.4	0.0316	0.2445
HoylePond-M49320-8	M49320	Abitibi PD	Hoyle Pond	93.69	6.23	0.0386	0.2253
HoylePond-M49320-9	M49320	Abitibi PD	Hoyle Pond	93.1	6.18	0.0238	0.2479
HoylePond-PK001-1	PK001	Abitibi PD	Jowsey Denton	90.57	9.51	0.0236	0.2707
HoylePond-PK001-10	PK001	Abitibi PD	Jowsey Denton	90.21	9.47	0.0215	0.2781
HoylePond-PK001-2	PK001	Abitibi PD	Jowsey Denton	90.01	9.43	0.034	0.2432
HoylePond-PK001-3	PK001	Abitibi PD	Jowsey Denton	90.28	9.52	0.0212	0.2908

Appendix B. EPMA data

Point	Sample	Area	Deposit/Mine	Au (wt%)	Ag (wt%)	Cu (wt%)	Hg (wt%)
HoylePond-PK001-4	PK001	Abitibi PD	Jowsey Denton	90.19	9.57	0.0185	0.2722
HoylePond-PK001-5	PK001	Abitibi PD	Jowsey Denton	89.73	9.52	0.0304	0.2636
HoylePond-PK001-6	PK001	Abitibi PD	Jowsey Denton	90.35	9.34	0.027	0.2849
HoylePond-PK001-7	PK001	Abitibi PD	Jowsey Denton	90.34	9.45	0.0277	0.3024
HoylePond-PK001-8	PK001	Abitibi PD	Jowsey Denton	90.25	9.38	L.O.D.	0.3175
HoylePond-PK001-9	PK001	Abitibi PD	Jowsey Denton	89.81	9.43	0.0327	0.263
JowseyDenton-M17012-1	M17012	Abitibi PD	Jowsey Denton	91.32	7.99	L.O.D.	L.O.D.
JowseyDenton-M17012-10	M17012	Abitibi PD	Jowsey Denton	92.18	7.76	0.034	L.O.D.
JowseyDenton-M17012-2	M17012	Abitibi PD	Jowsey Denton	91.89	7.89	L.O.D.	L.O.D.
JowseyDenton-M17012-3	M17012	Abitibi PD	Jowsey Denton	91.47	7.9	0.0393	L.O.D.
JowseyDenton-M17012-4	M17012	Abitibi PD	Jowsey Denton	91.59	7.96	0.0374	L.O.D.
JowseyDenton-M17012-5	M17012	Abitibi PD	Jowsey Denton	91.47	7.85	0.0305	L.O.D.
JowseyDenton-M17012-6	M17012	Abitibi PD	Jowsey Denton	91.64	8.03	0.0389	L.O.D.
JowseyDenton-M17012-7	M17012	Abitibi PD	Jowsey Denton	91.62	8.17	0.0349	L.O.D.
JowseyDenton-M17012-8	M17012	Abitibi PD	Jowsey Denton	91.52	8.06	0.0375	L.O.D.
JowseyDenton-M17012-9	M17012	Abitibi PD	Jowsey Denton	91.67	7.9	0.0354	L.O.D.
JowseyDenton-M18401-1	M18401	Abitibi PD	Jowsey Denton	90.23	9.01	0.0258	L.O.D.
JowseyDenton-M18401-10	M18401	Abitibi PD	Jowsey Denton	90.59	9.2	L.O.D.	L.O.D.
JowseyDenton-M18401-2	M18401	Abitibi PD	Jowsey Denton	90.34	9.04	0.0344	L.O.D.
JowseyDenton-M18401-3	M18401	Abitibi PD	Jowsey Denton	90.21	9.08	0.0259	L.O.D.
JowseyDenton-M18401-4	M18401	Abitibi PD	Jowsey Denton	90.3	9	0.0226	L.O.D.
JowseyDenton-M18401-5	M18401	Abitibi PD	Jowsey Denton	90.44	9.14	0.0288	L.O.D.
JowseyDenton-M18401-6	M18401	Abitibi PD	Jowsey Denton	90.58	8.92	0.0289	L.O.D.
JowseyDenton-M18401-7	M18401	Abitibi PD	Jowsey Denton	90.48	9.07	0.0199	L.O.D.
JowseyDenton-M18401-8	M18401	Abitibi PD	Jowsey Denton	90.58	9.06	0.0268	L.O.D.
JowseyDenton-M18401-9	M18401	Abitibi PD	Jowsey Denton	90.01	9.06	0.025	L.O.D.
JowseyProspect-M36485-1	M36485	Abitibi PD	McIntyre	93.01	7.36	0.0515	L.O.D.
JowseyProspect-M36485-10	M36485	Abitibi PD	McIntyre	93.26	7.2	0.0529	L.O.D.
JowseyProspect-M36485-2	M36485	Abitibi PD	McIntyre	92.81	7.37	0.0366	L.O.D.
JowseyProspect-M36485-3	M36485	Abitibi PD	McIntyre	92.81	7.47	0.0447	L.O.D.
JowseyProspect-M36485-4	M36485	Abitibi PD	McIntyre	92.85	7.27	0.0338	L.O.D.
JowseyProspect-M36485-5	M36485	Abitibi PD	McIntyre	92.62	7.29	0.0462	L.O.D.
JowseyProspect-M36485-6	M36485	Abitibi PD	McIntyre	92.78	7.3	0.053	L.O.D.
JowseyProspect-M36485-7	M36485	Abitibi PD	McIntyre	92.98	7.38	0.0577	L.O.D.
JowseyProspect-M36485-8	M36485	Abitibi PD	McIntyre	92.71	7.19	0.0411	L.O.D.
JowseyProspect-M36485-9	M36485	Abitibi PD	McIntyre	92.85	7.44	0.026	L.O.D.
McIntyre-9006-1	9006	Abitibi PD	McIntyre	91.36	8.5	0.0291	0.0617
McIntyre-9006-10	9006	Abitibi PD	McIntyre	91.69	8.68	0.0178	0.0786
McIntyre-9006-2	9006	Abitibi PD	McIntyre	91.89	8.53	0.0198	L.O.D.
McIntyre-9006-3	9006	Abitibi PD	McIntyre	91.64	8.39	L.O.D.	L.O.D.
McIntyre-9006-4	9006	Abitibi PD	McIntyre	91.47	8.55	0.0222	L.O.D.
McIntyre-9006-5	9006	Abitibi PD	McIntyre	91.43	8.46	0.0199	L.O.D.
McIntyre-9006-6	9006	Abitibi PD	McIntyre	91.42	8.16	L.O.D.	L.O.D.
McIntyre-9006-7	9006	Abitibi PD	McIntyre	91.72	8.49	0.0176	L.O.D.
McIntyre-9006-8	9006	Abitibi PD	McIntyre	92.29	8.21	L.O.D.	0.0753
McIntyre-9006-9	9006	Abitibi PD	McIntyre	91.97	8.69	L.O.D.	L.O.D.
McIntyre-M14564-1	M14564	Abitibi PD	McIntyre	89.83	9.95	0.0569	0.0604
McIntyre-M14564-10	M14564	Abitibi PD	McIntyre	89.88	9.85	0.0309	L.O.D.
McIntyre-M14564-2	M14564	Abitibi PD	McIntyre	89.46	9.76	L.O.D.	0.0643
McIntyre-M14564-3	M14564	Abitibi PD	McIntyre	90.04	9.85	0.0413	0.0594
McIntyre-M14564-4	M14564	Abitibi PD	McIntyre	89.85	9.9	0.0441	L.O.D.
McIntyre-M14564-5	M14564	Abitibi PD	McIntyre	89.62	9.77	0.021	L.O.D.
McIntyre-M14564-6	M14564	Abitibi PD	McIntyre	89.52	9.71	0.0245	L.O.D.
McIntyre-M14564-7	M14564	Abitibi PD	McIntyre	89.91	9.92	L.O.D.	0.0636
McIntyre-M14564-8	M14564	Abitibi PD	McIntyre	89.28	9.93	0.0173	L.O.D.
McIntyre-M14564-9	M14564	Abitibi PD	McIntyre	89.79	9.87	0.0388	L.O.D.
McIntyre-M15652-1	M15652	Abitibi PD	McIntyre	87.33	12.45	L.O.D.	L.O.D.
McIntyre-M15652-10	M15652	Abitibi PD	McIntyre	87.88	11.48	L.O.D.	L.O.D.
McIntyre-M15652-2	M15652	Abitibi PD	McIntyre	88.18	11.45	L.O.D.	L.O.D.
McIntyre-M15652-3	M15652	Abitibi PD	McIntyre	88.51	11.2	L.O.D.	L.O.D.
McIntyre-M15652-4	M15652	Abitibi PD	McIntyre	87.88	11.54	0.0226	L.O.D.
McIntyre-M15652-5	M15652	Abitibi PD	McIntyre	88.49	11.41	0.026	L.O.D.
McIntyre-M15652-6	M15652	Abitibi PD	McIntyre	88.22	11.49	L.O.D.	L.O.D.
McIntyre-M15652-7	M15652	Abitibi PD	McIntyre	88.22	11.6	0.0187	L.O.D.
McIntyre-M15652-8	M15652	Abitibi PD	McIntyre	88.13	11.57	0.0232	L.O.D.
McIntyre-M15652-9	M15652	Abitibi PD	McIntyre	88.24	11.49	L.O.D.	L.O.D.
McIntyre-M18877-1	M18877	Abitibi PD	McIntyre	87.85	11.82	L.O.D.	L.O.D.
McIntyre-M18877-10	M18877	Abitibi PD	McIntyre	87.63	11.88	L.O.D.	0.0864
McIntyre-M18877-2	M18877	Abitibi PD	McIntyre	87.52	11.63	0.0183	0.0941
McIntyre-M18877-3	M18877	Abitibi PD	McIntyre	87.82	11.77	0.0179	0.0985
McIntyre-M18877-4	M18877	Abitibi PD	McIntyre	87.96	11.75	0.0277	0.0626
McIntyre-M18877-5	M18877	Abitibi PD	McIntyre	87.81	11.71	L.O.D.	0.0627
McIntyre-M18877-6	M18877	Abitibi PD	McIntyre	87.9	11.74	L.O.D.	0.0666
McIntyre-M18877-7	M18877	Abitibi PD	McIntyre	87.84	11.91	L.O.D.	0.0906
McIntyre-M18877-8	M18877	Abitibi PD	McIntyre	87.77	11.69	L.O.D.	L.O.D.
McIntyre-M18877-9	M18877	Abitibi PD	McIntyre	87.86	11.81	0.0186	0.076
McIntyre-M24262-1	M24262	Abitibi PD	McIntyre	93.86	6.01	0.0559	0.0741
McIntyre-M24262-10	M24262	Abitibi PD	McIntyre	93.95	6.12	0.0412	L.O.D.
McIntyre-M24262-2	M24262	Abitibi PD	McIntyre	93.83	5.97	0.0644	L.O.D.

Appendix B. EPMA data

Point	Sample	Area	Deposit/Mine	Au (wt%)	Ag (wt%)	Cu (wt%)	Hg (wt%)
McIntyre-M24262-3	M24262	Abitibi PD	McIntyre	93.85	6.01	0.0506	L.O.D.
McIntyre-M24262-4	M24262	Abitibi PD	McIntyre	93.77	6.04	0.0537	L.O.D.
McIntyre-M24262-5	M24262	Abitibi PD	McIntyre	94	6.02	0.0513	0.0599
McIntyre-M24262-6	M24262	Abitibi PD	McIntyre	93.98	5.94	0.0476	0.0821
McIntyre-M24262-7	M24262	Abitibi PD	McIntyre	94.08	6.1	0.0376	L.O.D.
McIntyre-M24262-8	M24262	Abitibi PD	McIntyre	93.65	5.98	0.0512	L.O.D.
McIntyre-M24262-9	M24262	Abitibi PD	McIntyre	93.91	6.11	0.0589	L.O.D.
McIntyre-M24273A-1	M24273A	Abitibi PD	McIntyre	93.78	5.93	0.0698	L.O.D.
McIntyre-M24273A-10	M24273A	Abitibi PD	McIntyre	93.91	5.84	0.0735	L.O.D.
McIntyre-M24273A-2	M24273A	Abitibi PD	McIntyre	93.61	5.83	0.0893	0.0804
McIntyre-M24273A-3	M24273A	Abitibi PD	McIntyre	93.8	6.09	0.0672	L.O.D.
McIntyre-M24273A-4	M24273A	Abitibi PD	McIntyre	93.69	5.83	0.0811	L.O.D.
McIntyre-M24273A-5	M24273A	Abitibi PD	McIntyre	94.07	5.97	0.0728	L.O.D.
McIntyre-M24273A-6	M24273A	Abitibi PD	McIntyre	93.6	5.92	0.0766	0.0754
McIntyre-M24273A-7	M24273A	Abitibi PD	McIntyre	93.97	5.86	0.072	0.0607
McIntyre-M24273A-8	M24273A	Abitibi PD	McIntyre	93.61	5.9	0.0718	L.O.D.
McIntyre-M24273A-9	M24273A	Abitibi PD	McIntyre	93.97	5.89	0.0865	L.O.D.
McIntyre-M24273B-1	M24273B	Abitibi PD	McIntyre	93.74	6.05	0.0762	0.0615
McIntyre-M24273B-10	M24273B	Abitibi PD	McIntyre	93.69	6.1	0.067	L.O.D.
McIntyre-M24273B-2	M24273B	Abitibi PD	McIntyre	93.77	6.11	0.0877	L.O.D.
McIntyre-M24273B-3	M24273B	Abitibi PD	McIntyre	93.34	6.07	0.0662	L.O.D.
McIntyre-M24273B-4	M24273B	Abitibi PD	McIntyre	93.89	6.11	0.0801	L.O.D.
McIntyre-M24273B-5	M24273B	Abitibi PD	McIntyre	93.56	6.12	0.0667	L.O.D.
McIntyre-M24273B-6	M24273B	Abitibi PD	McIntyre	93.1	6.1	0.0838	L.O.D.
McIntyre-M24273B-7	M24273B	Abitibi PD	McIntyre	93.69	6.1	0.0669	L.O.D.
McIntyre-M24273B-8	M24273B	Abitibi PD	McIntyre	93.91	6.11	0.0904	L.O.D.
McIntyre-M24273B-9	M24273B	Abitibi PD	McIntyre	93.24	6.09	0.0658	L.O.D.
McIntyre-M24274-1	M24274	Abitibi PD	McIntyre	91.6	8.21	0.0238	L.O.D.
McIntyre-M24274-10	M24274	Abitibi PD	McIntyre	91.36	8.07	L.O.D.	L.O.D.
McIntyre-M24274-2	M24274	Abitibi PD	McIntyre	91.37	7.83	0.0239	L.O.D.
McIntyre-M24274-3	M24274	Abitibi PD	McIntyre	91.95	8.12	L.O.D.	L.O.D.
McIntyre-M24274-4	M24274	Abitibi PD	McIntyre	90.51	8.2	L.O.D.	0.2029
McIntyre-M24274-5	M24274	Abitibi PD	McIntyre	91.42	7.89	L.O.D.	L.O.D.
McIntyre-M24274-6	M24274	Abitibi PD	McIntyre	91.54	8.03	L.O.D.	L.O.D.
McIntyre-M24274-7	M24274	Abitibi PD	McIntyre	91.66	7.79	L.O.D.	L.O.D.
McIntyre-M24274-8	M24274	Abitibi PD	McIntyre	91.74	7.83	L.O.D.	L.O.D.
McIntyre-M24274-9	M24274	Abitibi PD	McIntyre	90.97	7.79	L.O.D.	L.O.D.
McIntyre-M24276-1	M24276	Abitibi PD	McIntyre	92.23	6.99	L.O.D.	L.O.D.
McIntyre-M24276-10	M24276	Abitibi PD	McIntyre	92.32	7	0.0186	0.1306
McIntyre-M24276-2	M24276	Abitibi PD	McIntyre	92.19	7.21	L.O.D.	0.0673
McIntyre-M24276-3	M24276	Abitibi PD	McIntyre	92.25	7.1	L.O.D.	0.1277
McIntyre-M24276-4	M24276	Abitibi PD	McIntyre	92.08	7.04	L.O.D.	L.O.D.
McIntyre-M24276-5	M24276	Abitibi PD	McIntyre	92.4	7.17	L.O.D.	L.O.D.
McIntyre-M24276-6	M24276	Abitibi PD	McIntyre	92.26	7.1	L.O.D.	L.O.D.
McIntyre-M24276-7	M24276	Abitibi PD	McIntyre	92.24	7.09	L.O.D.	0.0722
McIntyre-M24276-8	M24276	Abitibi PD	McIntyre	92.4	7	L.O.D.	L.O.D.
McIntyre-M24276-9	M24276	Abitibi PD	McIntyre	92.45	7.23	L.O.D.	L.O.D.
McIntyre-M36549-1	M36549	Abitibi PD	McIntyre	88.84	10.23	0.0427	L.O.D.
McIntyre-M36549-10	M36549	Abitibi PD	McIntyre	89.29	10.23	0.0383	L.O.D.
McIntyre-M36549-2	M36549	Abitibi PD	McIntyre	89.3	10.29	0.0438	L.O.D.
McIntyre-M36549-3	M36549	Abitibi PD	McIntyre	89.38	10.28	0.0415	L.O.D.
McIntyre-M36549-4	M36549	Abitibi PD	McIntyre	89.22	10.3	0.0372	L.O.D.
McIntyre-M36549-5	M36549	Abitibi PD	McIntyre	89.42	10.24	0.0298	L.O.D.
McIntyre-M36549-6	M36549	Abitibi PD	McIntyre	89.56	10.28	0.038	L.O.D.
McIntyre-M36549-7	M36549	Abitibi PD	McIntyre	89.32	10.39	0.0476	L.O.D.
McIntyre-M36549-8	M36549	Abitibi PD	McIntyre	89.46	10.31	0.0362	L.O.D.
McIntyre-M36549-9	M36549	Abitibi PD	McIntyre	89.6	10.17	0.039	L.O.D.
McIntyre-M44313-1	M44313	Abitibi PD	McIntyre	91.19	8.89	0.0236	0.0659
McIntyre-M44313-10	M44313	Abitibi PD	McIntyre	90.28	9.04	0.0224	0.0769
McIntyre-M44313-2	M44313	Abitibi PD	McIntyre	90.68	9.04	0.027	0.0688
McIntyre-M44313-3	M44313	Abitibi PD	McIntyre	90.86	9.02	0.0302	0.0582
McIntyre-M44313-4	M44313	Abitibi PD	McIntyre	90.72	9.08	0.0293	0.0741
McIntyre-M44313-5	M44313	Abitibi PD	McIntyre	90.79	8.98	L.O.D.	0.0632
McIntyre-M44313-6	M44313	Abitibi PD	McIntyre	90.57	8.97	0.0275	L.O.D.
McIntyre-M44313-7	M44313	Abitibi PD	McIntyre	90.78	9.11	0.0258	L.O.D.
McIntyre-M44313-8	M44313	Abitibi PD	McIntyre	91.03	9.14	0.029	0.0615
McIntyre-M44313-9	M44313	Abitibi PD	McIntyre	90.88	9.06	0.0323	0.0711
McIntyre-M8559-1	M8559	Abitibi PD	McIntyre	83.01	16.07	L.O.D.	0.1117
McIntyre-M8559-10	M8559	Abitibi PD	McIntyre	83.05	16.12	L.O.D.	L.O.D.
McIntyre-M8559-2	M8559	Abitibi PD	McIntyre	82.95	16.27	L.O.D.	0.0848
McIntyre-M8559-3	M8559	Abitibi PD	McIntyre	83.32	16.17	L.O.D.	0.0605
McIntyre-M8559-4	M8559	Abitibi PD	McIntyre	83.09	16.29	L.O.D.	L.O.D.
McIntyre-M8559-5	M8559	Abitibi PD	McIntyre	82.85	16.18	L.O.D.	L.O.D.
McIntyre-M8559-6	M8559	Abitibi PD	McIntyre	83.25	15.96	L.O.D.	0.087
McIntyre-M8559-7	M8559	Abitibi PD	McIntyre	82.76	16.18	L.O.D.	0.1065
McIntyre-M8559-8	M8559	Abitibi PD	McIntyre	82.86	16.26	L.O.D.	L.O.D.
McIntyre-M8559-9	M8559	Abitibi PD	McIntyre	82.94	16.01	0.0177	0.0865
McIntyre-M9689-1	M9689	Abitibi PD	Pamour	89.52	10.38	L.O.D.	0.0932
McIntyre-M9689-10	M9689	Abitibi PD	Pamour	89.45	10.31	L.O.D.	0.087

Appendix B. EPMA data

Point	Sample	Area	Deposit/Mine	Au (wt%)	Ag (wt%)	Cu (wt%)	Hg (wt%)
McIntyre-M9689-2	M9689	Abitibi PD	Pamour	89.18	10.15	0.0195	0.071
McIntyre-M9689-3	M9689	Abitibi PD	Pamour	89.25	10.41	L.O.D.	0.0719
McIntyre-M9689-4	M9689	Abitibi PD	Pamour	89.01	10.28	0.02	0.1215
McIntyre-M9689-5	M9689	Abitibi PD	Pamour	89.19	10.33	L.O.D.	L.O.D.
McIntyre-M9689-6	M9689	Abitibi PD	Pamour	89.48	10.3	L.O.D.	0.0789
McIntyre-M9689-7	M9689	Abitibi PD	Pamour	89.7	10.29	L.O.D.	0.0738
McIntyre-M9689-8	M9689	Abitibi PD	Pamour	89.42	10.26	L.O.D.	0.0886
McIntyre-M9689-9	M9689	Abitibi PD	Pamour	89.34	10.12	L.O.D.	0.1097
Pamour-M41070-1	M41070	Abitibi PD	Pamour	90.77	8.69	L.O.D.	0.1153
Pamour-M41070-10	M41070	Abitibi PD	Pamour	90.7	8.78	L.O.D.	0.1241
Pamour-M41070-2	M41070	Abitibi PD	Pamour	90.8	8.75	L.O.D.	0.1194
Pamour-M41070-3	M41070	Abitibi PD	Pamour	90.92	8.77	0.0219	0.0913
Pamour-M41070-4	M41070	Abitibi PD	Pamour	90.67	8.67	0.0309	0.1369
Pamour-M41070-5	M41070	Abitibi PD	Pamour	90.82	8.54	L.O.D.	0.1244
Pamour-M41070-6	M41070	Abitibi PD	Pamour	90.7	8.76	0.0214	0.0918
Pamour-M41070-7	M41070	Abitibi PD	Pamour	91.04	8.72	0.0237	0.1244
Pamour-M41070-8	M41070	Abitibi PD	Pamour	90.73	8.78	L.O.D.	0.0895
Pamour-M41070-9	M41070	Abitibi PD	Pamour	90.72	8.7	L.O.D.	0.1311
Pamour-M41877-1	M41877	Abitibi PD	Paymaster	90.59	8.75	L.O.D.	0.1089
Pamour-M41877-10	M41877	Abitibi PD	Paymaster	90.54	8.65	0.0183	0.1335
Pamour-M41877-2	M41877	Abitibi PD	Paymaster	90.77	8.71	L.O.D.	0.1488
Pamour-M41877-3	M41877	Abitibi PD	Paymaster	90.8	8.76	0.0197	0.1322
Pamour-M41877-4	M41877	Abitibi PD	Paymaster	90.54	8.46	0.0172	0.1601
Pamour-M41877-5	M41877	Abitibi PD	Paymaster	90.63	8.6	0.0174	0.1019
Pamour-M41877-6	M41877	Abitibi PD	Paymaster	90.83	8.72	0.0232	0.1229
Pamour-M41877-7	M41877	Abitibi PD	Paymaster	90.57	8.58	L.O.D.	0.134
Pamour-M41877-8	M41877	Abitibi PD	Paymaster	90.57	8.56	0.0216	0.107
Pamour-M41877-9	M41877	Abitibi PD	Paymaster	90.73	8.71	L.O.D.	0.1209
Paymaster-M27622-1	M27622	Abitibi PD	Porcupine Reef	91.41	7.41	0.0223	0.9239
Paymaster-M27622-10	M27622	Abitibi PD	Porcupine Reef	91.29	7.23	0.0261	0.9393
Paymaster-M27622-2	M27622	Abitibi PD	Porcupine Reef	91.2	7.35	0.0297	0.9045
Paymaster-M27622-3	M27622	Abitibi PD	Porcupine Reef	91.3	7.39	0.0385	0.9178
Paymaster-M27622-4	M27622	Abitibi PD	Porcupine Reef	91.31	7.42	0.0363	0.913
Paymaster-M27622-5	M27622	#N/A	#N/A	91.14	7.37	0.0305	0.8912
Paymaster-M27622-6	M27622	#N/A	#N/A	91.37	7.48	0.0238	0.9029
Paymaster-M27622-7	M27622	#N/A	#N/A	91.51	7.41	L.O.D.	0.8974
Paymaster-M27622-8	M27622	#N/A	#N/A	91.26	7.33	L.O.D.	0.9126
Paymaster-M27622-9	M27622	#N/A	#N/A	91.45	7.36	L.O.D.	0.8997
G40040-PORCUPINE REEF MINE-ONTARIO-1	G40044	#N/A	#N/A	94.33	5.91	0.0437	0.0648
G40040-PORCUPINE REEF MINE-ONTARIO-10	G40044	#N/A	#N/A	93.74	5.76	0.044	0.0631
G40040-PORCUPINE REEF MINE-ONTARIO-2	G40044	#N/A	#N/A	94.02	5.94	0.0462	0.062
G40040-PORCUPINE REEF MINE-ONTARIO-3	G40044	#N/A	#N/A	93.98	5.91	0.0449	L.O.D.
G40040-PORCUPINE REEF MINE-ONTARIO-4	G40044	#N/A	#N/A	93.92	5.97	0.0414	L.O.D.
G40040-PORCUPINE REEF MINE-ONTARIO-5	PorcupineRee	Abitibi PD	Porcupine Reef	94.38	5.97	0.0356	L.O.D.
G40040-PORCUPINE REEF MINE-ONTARIO-6	PorcupineRee	Abitibi PD	Porcupine Reef	93.83	5.87	0.0252	L.O.D.
G40040-PORCUPINE REEF MINE-ONTARIO-7	PorcupineRee	Abitibi PD	Porcupine Reef	94.09	5.9	0.0312	L.O.D.
G40040-PORCUPINE REEF MINE-ONTARIO-8	PorcupineRee	Abitibi PD	Porcupine Reef	93.71	5.99	0.0365	0.0631
G40040-PORCUPINE REEF MINE-ONTARIO-9	PorcupineRee	Abitibi PD	Porcupine Reef	93.93	6.01	0.0435	L.O.D.
G40044-PORCUPINE REEF MINE COCHRANE DIST. ONTARIO-1	PorcupineRee	Abitibi PD	Porcupine Reef	93.68	6.03	0.0294	0.0787
G40044-PORCUPINE REEF MINE COCHRANE DIST. ONTARIO-2	PorcupineRee	Abitibi PD	Porcupine Reef	93.7	6.02	0.0375	0.0654
G40044-PORCUPINE REEF MINE COCHRANE DIST. ONTARIO-3	PorcupineRee	Abitibi PD	Porcupine Reef	93.81	5.88	L.O.D.	L.O.D.
G40044-PORCUPINE REEF MINE COCHRANE DIST. ONTARIO-4	PorcupineRee	Abitibi PD	Porcupine Reef	93.79	6.17	0.0253	0.1071
G40044-PORCUPINE REEF MINE COCHRANE DIST. ONTARIO-5	PorcupineRee	Abitibi PD	Porcupine Reef	93.96	5.87	0.0281	0.0657
PorcupineReef-M38695-1	M38695	Abitibi PD	Preston East Dome	92.81	6.65	0.0355	L.O.D.
PorcupineReef-M38695-10	M38695	Abitibi PD	Preston East Dome	92.91	6.67	0.0435	L.O.D.
PorcupineReef-M38695-2	M38695	Abitibi PD	Preston East Dome	92.84	6.66	0.0507	0.0635
PorcupineReef-M38695-3	M38695	Abitibi PD	Preston East Dome	92.55	6.64	0.0564	L.O.D.
PorcupineReef-M38695-4	M38695	Abitibi PD	Preston East Dome	92.58	6.64	0.0437	L.O.D.
PorcupineReef-M38695-5	M38695	Abitibi PD	Preston East Dome	92.25	6.73	0.0449	L.O.D.
PorcupineReef-M38695-6	M38695	Abitibi PD	Preston East Dome	92.68	6.68	0.0365	L.O.D.
PorcupineReef-M38695-7	M38695	Abitibi PD	Preston East Dome	92.7	6.67	0.0366	L.O.D.
PorcupineReef-M38695-8	M38695	Abitibi PD	Preston East Dome	92.65	6.77	0.054	L.O.D.
PorcupineReef-M38695-9	M38695	Abitibi PD	Preston East Dome	92.43	6.73	0.052	L.O.D.
PrestonEastDome-M22584-1	M22584	Abitibi PD	Schumacher	91.14	8.2	0.0257	L.O.D.
PrestonEastDome-M22584-10	M22584	Abitibi PD	Schumacher	91.47	8.36	0.0286	L.O.D.
PrestonEastDome-M22584-2	M22584	Abitibi PD	Schumacher	91.39	8.33	L.O.D.	0.0784
PrestonEastDome-M22584-3	M22584	Abitibi PD	Schumacher	91.37	8.19	0.0329	L.O.D.
PrestonEastDome-M22584-4	M22584	Abitibi PD	Schumacher	91.64	8.29	0.041	0.082
PrestonEastDome-M22584-5	M22584	Abitibi PD	Schumacher	91.63	8.34	0.0304	L.O.D.
PrestonEastDome-M22584-6	M22584	Abitibi PD	Schumacher	91.22	8.22	0.0199	L.O.D.
PrestonEastDome-M22584-7	M22584	Abitibi PD	Schumacher	91.31	8.38	0.0298	0.0791
PrestonEastDome-M22584-8	M22584	Abitibi PD	Schumacher	91.33	8.22	0.0315	L.O.D.
PrestonEastDome-M22584-9	M22584	Abitibi PD	Schumacher	91.32	8.26	0.0246	L.O.D.
Schumacher-M41069-1	M41069	Abitibi PD	Vedron	91.46	8.37	0.0378	L.O.D.
Schumacher-M41069-10	M41069	Abitibi PD	Vedron	91.91	7.85	0.0485	0.0726
Schumacher-M41069-2	M41069	Abitibi PD	Vedron	91.82	7.99	0.0383	L.O.D.
Schumacher-M41069-3	M41069	Abitibi PD	Vedron	91.3	8.43	0.0322	L.O.D.
Schumacher-M41069-4	M41069	Abitibi PD	Vedron	91.81	8	0.0549	L.O.D.
Schumacher-M41069-5	M41069	Abitibi PD	Vedron	92	7.96	0.0581	L.O.D.

Appendix B. EPMA data

Point	Sample	Area	Deposit/Mine	Au (wt%)	Ag (wt%)	Cu (wt%)	Hg (wt%)
Schumacher-M41069-6	M41069	Abitibi PD	Vedron	91.49	8.28	0.0388	L.O.D.
Schumacher-M41069-7	M41069	Abitibi PD	Vedron	91.32	8.33	0.0278	L.O.D.
Schumacher-M41069-8	M41069	Abitibi PD	Vedron	91.64	8.07	0.0534	L.O.D.
Schumacher-M41069-9	M41069	Abitibi PD	Vedron	91.54	7.94	0.0424	L.O.D.
Vedron-M46421-1	M46421	Abitibi PD	Vipond	91.54	8.4	0.028	L.O.D.
Vedron-M46421-10	M46421	Abitibi PD	Vipond	91.52	8.37	0.0337	L.O.D.
Vedron-M46421-2	M46421	Abitibi PD	Vipond	91.97	8.3	0.0389	0.0675
Vedron-M46421-3	M46421	Abitibi PD	Vipond	90.82	8.31	L.O.D.	L.O.D.
Vedron-M46421-4	M46421	Abitibi PD	Vipond	91.34	8.28	0.0233	L.O.D.
Vedron-M46421-5	M46421	Abitibi PD	Vipond	91.02	8.5	L.O.D.	L.O.D.
Vedron-M46421-6	M46421	Abitibi PD	Vipond	91.14	8.28	0.0414	L.O.D.
Vedron-M46421-7	M46421	Abitibi PD	Vipond	91.01	8.29	0.0324	L.O.D.
Vedron-M46421-8	M46421	Abitibi PD	Vipond	90.92	8.42	0.0262	L.O.D.
Vedron-M46421-9	M46421	Abitibi PD	Vipond	91.31	8.23	0.0277	L.O.D.
Vipond-M13399-1	M13399	Abitibi PD	Vipond	90.65	9.15	0.0385	0.2193
Vipond-M13399-2	M13399	Abitibi PD	Vipond	90.95	9.11	0.0446	0.2012
Vipond-M13399-3	M13399	Abitibi PD	Vipond	91.17	9.14	0.0511	0.2491
Vipond-M13399-4	M13399	Abitibi PD	Vipond	90.86	8.98	0.0459	0.1999
Vipond-M13399-5	M13399	Abitibi PD	Vipond	91.1	9.07	0.0449	0.2119
Vipond-M13399-6	M13399	Abitibi PD	Vipond	91.13	9.1	0.0447	0.2605
Vipond-M13399-7	M13399	Abitibi PD	Vipond	90.62	9.07	0.0464	0.2384
Vipond-M13399-8	M13399	Abitibi PD	Vipond	90.82	9.19	0.0514	0.2494
Vipond-M15118A-1	M15118A	Abitibi PD	Vipond	82.26	16.68	L.O.D.	0.3188
Vipond-M15118A-10	M15118A	Abitibi PD	Vipond	82.17	16.54	L.O.D.	0.2466
Vipond-M15118A-2	M15118A	Abitibi PD	Vipond	82.15	16.51	L.O.D.	0.3458
Vipond-M15118A-3	M15118A	Abitibi PD	Vipond	82.57	16.68	L.O.D.	0.2968
Vipond-M15118A-4	M15118A	Abitibi PD	Vipond	81.95	16.7	L.O.D.	0.2835
Vipond-M15118A-5	M15118A	Abitibi PD	Vipond	82.44	16.58	L.O.D.	0.2996
Vipond-M15118A-6	M15118A	Abitibi PD	Vipond	82.02	16.72	L.O.D.	0.2911
Vipond-M15118A-6	M15118A	Abitibi PD	Vipond	82.09	16.51	L.O.D.	0.3539
Vipond-M15118A-7	M15118A	Abitibi PD	Vipond	82.4	16.76	L.O.D.	0.3048
Vipond-M15118A-8	M15118A	Abitibi PD	Vipond	82.26	16.83	L.O.D.	0.3486
Vipond-M15118A-9	M15118A	Abitibi PD	Vipond	82.42	16.88	L.O.D.	0.3013
Vipond-M15118B-1	M15118B	Abitibi PD	0	82.22	16.4	L.O.D.	0.332
Vipond-M15118B-10	M15118B	Abitibi PD	0	81.98	16.03	L.O.D.	0.2937
Vipond-M15118B-2	M15118B	Abitibi PD	0	81.94	16.56	L.O.D.	0.3173
Vipond-M15118B-3	M15118B	Abitibi PD	0	82.03	16.66	L.O.D.	0.3256
Vipond-M15118B-4	M15118B	Abitibi PD	0	82.36	16.64	L.O.D.	0.3412
Vipond-M15118B-5	M15118B	Abitibi PD	0	82.26	16.59	L.O.D.	0.2662
Vipond-M15118B-6	M15118B	Abitibi PD	0	81.75	16.62	L.O.D.	0.2955
Vipond-M15118B-7	M15118B	Abitibi PD	0	81.96	16.59	L.O.D.	0.3011
Vipond-M15118B-8	M15118B	Abitibi PD	0	82.19	16.59	L.O.D.	0.3441
Vipond-M15118B-9	M15118B	Abitibi PD	0	82.32	17.04	L.O.D.	0.3402
WhitneyTWP-M38694-1	M38694	Abitibi PD		94	5.94	0.062	L.O.D.
WhitneyTWP-M38694-10	M38694	Abitibi PD		93.9	6	0.0624	L.O.D.
WhitneyTWP-M38694-2	M38694	Abitibi PD		93.95	5.9	0.061	L.O.D.
WhitneyTWP-M38694-3	M38694	Abitibi PD		94.18	5.85	0.0564	L.O.D.
WhitneyTWP-M38694-4	M38694	Abitibi PD		94.04	6.01	0.0606	L.O.D.
WhitneyTWP-M38694-5	M38694	Abitibi PD		93.8	6.05	0.0538	L.O.D.
WhitneyTWP-M38694-6	M38694	Abitibi PD		93.75	5.89	0.0637	L.O.D.
WhitneyTWP-M38694-7	M38694	Abitibi PD		94.22	5.99	0.0581	L.O.D.
WhitneyTWP-M38694-8	M38694	Abitibi PD		94.1	5.87	0.0612	L.O.D.
WhitneyTWP-M38694-9	M38694	Abitibi PD		93.73	6.1	0.0542	L.O.D.
RGP002-BRENBAR-ONTARIO-1	RGP002	Beardmore-Geraldton	Brenbar	83.87	15.18	L.O.D.	L.O.D.
RGP002-BRENBAR-ONTARIO-2	RGP002	Beardmore-Geraldton	Brenbar	83.96	15.34	L.O.D.	L.O.D.
RGP002-BRENBAR-ONTARIO-3	RGP002	Beardmore-Geraldton	Brenbar	83.97	15.68	L.O.D.	L.O.D.
RGP002-BRENBAR-ONTARIO-4	RGP002	Beardmore-Geraldton	Brenbar	84.26	15.66	L.O.D.	L.O.D.
RGP002-BRENBAR-ONTARIO-5	RGP002	Beardmore-Geraldton	Brenbar	84.03	15.49	L.O.D.	L.O.D.
RGP002-BRENBAR-ONTARIO-6	RGP002	Beardmore-Geraldton	Brenbar	83.8	15.47	L.O.D.	L.O.D.
RGP002-BRENBAR-ONTARIO-7	RGP002	Beardmore-Geraldton	Brenbar	83.59	15.38	L.O.D.	L.O.D.
HardRock-M38706-1	M38706	Beardmore-Geraldton	Hardrock	91.76	8.47	0.0378	L.O.D.
HardRock-M38706-10	M38706	Beardmore-Geraldton	Hardrock	91.68	8.33	0.0345	L.O.D.
HardRock-M38706-2	M38706	Beardmore-Geraldton	Hardrock	91.71	8.32	0.0426	L.O.D.
HardRock-M38706-3	M38706	Beardmore-Geraldton	Hardrock	91.41	8.48	0.039	L.O.D.
HardRock-M38706-4	M38706	Beardmore-Geraldton	Hardrock	91.56	8.29	0.0394	L.O.D.
HardRock-M38706-5	M38706	Beardmore-Geraldton	Hardrock	91.43	8.27	0.0525	L.O.D.
HardRock-M38706-6	M38706	Beardmore-Geraldton	Hardrock	91.82	8.28	0.0518	L.O.D.
HardRock-M38706-7	M38706	Beardmore-Geraldton	Hardrock	91.4	8.44	0.0353	L.O.D.
HardRock-M38706-8	M38706	Beardmore-Geraldton	Hardrock	91.48	8.35	0.0363	L.O.D.
HardRock-M38706-9	M38706	Beardmore-Geraldton	Hardrock	91.6	8.48	L.O.D.	L.O.D.
Hardrock-M38707-1	M38707	Beardmore-Geraldton	Hardrock	91.04	8.4	0.0523	L.O.D.
Hardrock-M38707-10	M38707	Beardmore-Geraldton	Hardrock	91.06	8.31	0.0445	L.O.D.
Hardrock-M38707-2	M38707	Beardmore-Geraldton	Hardrock	91.32	8.34	0.0371	L.O.D.
Hardrock-M38707-3	M38707	Beardmore-Geraldton	Hardrock	91.12	8.26	0.0431	L.O.D.
Hardrock-M38707-4	M38707	Beardmore-Geraldton	Hardrock	91.27	8.3	0.0494	L.O.D.
Hardrock-M38707-5	M38707	Beardmore-Geraldton	Hardrock	91.03	8.38	0.0358	L.O.D.
Hardrock-M38707-6	M38707	Beardmore-Geraldton	Hardrock	91.51	8.38	0.0392	L.O.D.
Hardrock-M38707-7	M38707	Beardmore-Geraldton	Hardrock	91.13	8.26	0.0418	L.O.D.
Hardrock-M38707-8	M38707	Beardmore-Geraldton	Hardrock	91.4	8.29	0.0463	L.O.D.

Appendix B. EPMA data

Point	Sample	Area	Deposit/Mine	Au (wt%)	Ag (wt%)	Cu (wt%)	Hg (wt%)
Hardrock-M38707-9	M38707	Beardmore-Geraldton	Hardrock	91.05	8.27	0.044	L.O.D.
HardRock-M46420-1	M46420	Beardmore-Geraldton	Hardrock	92.01	7.61	0.0427	L.O.D.
HardRock-M46420-10	M46420	Beardmore-Geraldton	Hardrock	91.61	7.6	0.0421	L.O.D.
HardRock-M46420-2	M46420	Beardmore-Geraldton	Hardrock	91.74	7.7	0.035	L.O.D.
HardRock-M46420-3	M46420	Beardmore-Geraldton	Hardrock	91.51	7.58	0.0294	L.O.D.
HardRock-M46420-4	M46420	Beardmore-Geraldton	Hardrock	91.83	7.54	0.0346	L.O.D.
HardRock-M46420-5	M46420	Beardmore-Geraldton	Hardrock	91.89	7.62	0.0473	L.O.D.
HardRock-M46420-6	M46420	Beardmore-Geraldton	Hardrock	91.66	7.55	0.0479	L.O.D.
HardRock-M46420-7	M46420	Beardmore-Geraldton	Hardrock	91.71	6.89	0.0373	L.O.D.
HardRock-M46420-8	M46420	Beardmore-Geraldton	Hardrock	91.33	7.61	0.0432	L.O.D.
HardRock-M46420-9	M46420	Beardmore-Geraldton	Hardrock	91.96	7.68	0.0368	L.O.D.
RGP001-ISHKODAY-IRWIN TOWNSHIP-ONTARIO-1	RGP001	Beardmore-Geraldton	Ishkoday	82.16	17.17	L.O.D.	0.0703
RGP001-ISHKODAY-IRWIN TOWNSHIP-ONTARIO-2	RGP001	Beardmore-Geraldton	Ishkoday	82.15	17.14	L.O.D.	L.O.D.
RGP001-ISHKODAY-IRWIN TOWNSHIP-ONTARIO-3	RGP001	Beardmore-Geraldton	Ishkoday	82.46	17.12	L.O.D.	L.O.D.
RGP001-ISHKODAY-IRWIN TOWNSHIP-ONTARIO-4	RGP001	Beardmore-Geraldton	Ishkoday	82.28	17.12	L.O.D.	L.O.D.
RGP001-ISHKODAY-IRWIN TOWNSHIP-ONTARIO-5	RGP001	Beardmore-Geraldton	Ishkoday	82.1	17.02	L.O.D.	L.O.D.
RGP005-LEITCH MINE-EVA TOWNSHIP-BEARDMORE-ONTARIO-1	RGP005	Beardmore-Geraldton	Leitch	98.37	1.04	0.0244	0.2184
RGP005-LEITCH MINE-EVA TOWNSHIP-BEARDMORE-ONTARIO-10	RGP005	Beardmore-Geraldton	Leitch	98.67	1.02	0.0605	0.1539
RGP005-LEITCH MINE-EVA TOWNSHIP-BEARDMORE-ONTARIO-2	RGP005	Beardmore-Geraldton	Leitch	98.3	1.05	0.027	0.3058
RGP005-LEITCH MINE-EVA TOWNSHIP-BEARDMORE-ONTARIO-3	RGP005	Beardmore-Geraldton	Leitch	98.83	1.16	L.O.D.	0.1106
RGP005-LEITCH MINE-EVA TOWNSHIP-BEARDMORE-ONTARIO-4	RGP005	Beardmore-Geraldton	Leitch	98.89	0.7587	0.0443	0.3005
RGP005-LEITCH MINE-EVA TOWNSHIP-BEARDMORE-ONTARIO-5	RGP005	Beardmore-Geraldton	Leitch	98.99	0.7018	0.0224	0.2837
RGP005-LEITCH MINE-EVA TOWNSHIP-BEARDMORE-ONTARIO-6	RGP005	Beardmore-Geraldton	Leitch	98.79	0.6223	0.0588	0.2328
RGP005-LEITCH MINE-EVA TOWNSHIP-BEARDMORE-ONTARIO-7	RGP005	Beardmore-Geraldton	Leitch	98.87	0.7104	0.0358	0.3549
RGP005-LEITCH MINE-EVA TOWNSHIP-BEARDMORE-ONTARIO-8	RGP005	Beardmore-Geraldton	Leitch	98.6	0.8643	L.O.D.	0.3875
RGP005-LEITCH MINE-EVA TOWNSHIP-BEARDMORE-ONTARIO-9	RGP005	Beardmore-Geraldton	Leitch	98.8	0.9219	0.0473	0.1847
LittleLongLac-M18607-1	M18607	Beardmore-Geraldton	Little Long Lac	91.69	7.85	0.0337	L.O.D.
LittleLongLac-M18607-10	M18607	Beardmore-Geraldton	Little Long Lac	91.65	7.75	0.022	L.O.D.
LittleLongLac-M18607-2	M18607	Beardmore-Geraldton	Little Long Lac	91.41	7.85	0.0259	L.O.D.
LittleLongLac-M18607-3	M18607	Beardmore-Geraldton	Little Long Lac	91.77	7.91	0.0317	L.O.D.
LittleLongLac-M18607-4	M18607	Beardmore-Geraldton	Little Long Lac	91.84	7.7	L.O.D.	0.065
LittleLongLac-M18607-5	M18607	Beardmore-Geraldton	Little Long Lac	90.99	7.83	0.0294	L.O.D.
LittleLongLac-M18607-6	M18607	Beardmore-Geraldton	Little Long Lac	91.28	7.84	0.0317	L.O.D.
LittleLongLac-M18607-7	M18607	Beardmore-Geraldton	Little Long Lac	91.65	7.95	0.0228	L.O.D.
LittleLongLac-M18607-8	M18607	Beardmore-Geraldton	Little Long Lac	91.91	7.74	0.0313	L.O.D.
LittleLongLac-M18607-9	M18607	Beardmore-Geraldton	Little Long Lac	91.3	7.96	0.0338	L.O.D.
MacLeodCockshutt-M38705-1	M38705	Beardmore-Geraldton	MacLeod Cockshutt	94.83	4.85	0.0517	L.O.D.
MacLeodCockshutt-M38705-10	M38705	Beardmore-Geraldton	MacLeod Cockshutt	94.77	4.81	0.0501	L.O.D.
MacLeodCockshutt-M38705-2	M38705	Beardmore-Geraldton	MacLeod Cockshutt	94.46	4.91	0.0358	L.O.D.
MacLeodCockshutt-M38705-3	M38705	Beardmore-Geraldton	MacLeod Cockshutt	95.08	4.91	0.0374	L.O.D.
MacLeodCockshutt-M38705-4	M38705	Beardmore-Geraldton	MacLeod Cockshutt	94.52	4.87	0.0564	L.O.D.
MacLeodCockshutt-M38705-5	M38705	Beardmore-Geraldton	MacLeod Cockshutt	94.44	4.96	0.0531	L.O.D.
MacLeodCockshutt-M38705-6	M38705	Beardmore-Geraldton	MacLeod Cockshutt	94.52	4.95	0.0567	L.O.D.
MacLeodCockshutt-M38705-7	M38705	Beardmore-Geraldton	MacLeod Cockshutt	94.88	4.9	0.0398	L.O.D.
MacLeodCockshutt-M38705-8	M38705	Beardmore-Geraldton	MacLeod Cockshutt	94.21	4.82	0.0376	L.O.D.
MacLeodCockshutt-M38705-9	M38705	Beardmore-Geraldton	MacLeod Cockshutt	94.43	4.77	0.0357	L.O.D.
MacLeodCockshutt-M44035-1	M44035	Beardmore-Geraldton	MacLeod Cockshutt	97.06	3.04	0.0502	L.O.D.
MacLeodCockshutt-M44035-10	M44035	Beardmore-Geraldton	MacLeod Cockshutt	96.95	3.1	0.0521	L.O.D.
MacLeodCockshutt-M44035-2	M44035	Beardmore-Geraldton	MacLeod Cockshutt	97.36	3.05	0.0473	L.O.D.
MacLeodCockshutt-M44035-3	M44035	Beardmore-Geraldton	MacLeod Cockshutt	96.99	3.01	0.0477	L.O.D.
MacLeodCockshutt-M44035-4	M44035	Beardmore-Geraldton	MacLeod Cockshutt	96.81	3.06	0.0496	L.O.D.
MacLeodCockshutt-M44035-5	M44035	Beardmore-Geraldton	MacLeod Cockshutt	96.87	3.03	0.037	L.O.D.
MacLeodCockshutt-M44035-6	M44035	Beardmore-Geraldton	MacLeod Cockshutt	96.7	2.97	0.0506	L.O.D.
MacLeodCockshutt-M44035-7	M44035	Beardmore-Geraldton	MacLeod Cockshutt	97.1	2.95	0.0518	L.O.D.
MacLeodCockshutt-M44035-8	M44035	Beardmore-Geraldton	MacLeod Cockshutt	97.13	3.07	0.0354	L.O.D.
MacLeodCockshutt-M44035-9	M44035	Beardmore-Geraldton	MacLeod Cockshutt	96.82	2.98	0.0551	L.O.D.
RGP003-PORPHYRY HILL-HARDROCK-GERALDTON-ONTARIO-1	RGP003	Beardmore-Geraldton	Porphyry Hill	94.52	5.03	0.0443	L.O.D.
RGP003-PORPHYRY HILL-HARDROCK-GERALDTON-ONTARIO-10	RGP003	Beardmore-Geraldton	Porphyry Hill	94.9	5.09	0.0351	L.O.D.
RGP003-PORPHYRY HILL-HARDROCK-GERALDTON-ONTARIO-2	RGP003	Beardmore-Geraldton	Porphyry Hill	94.25	5.01	0.0458	L.O.D.
RGP003-PORPHYRY HILL-HARDROCK-GERALDTON-ONTARIO-3	RGP003	Beardmore-Geraldton	Porphyry Hill	94.26	5.04	0.0492	L.O.D.
RGP003-PORPHYRY HILL-HARDROCK-GERALDTON-ONTARIO-4	RGP003	Beardmore-Geraldton	Porphyry Hill	94.36	5.04	0.0348	L.O.D.
RGP003-PORPHYRY HILL-HARDROCK-GERALDTON-ONTARIO-5	RGP003	Beardmore-Geraldton	Porphyry Hill	94.25	5.12	0.0396	L.O.D.
RGP003-PORPHYRY HILL-HARDROCK-GERALDTON-ONTARIO-6	RGP003	Beardmore-Geraldton	Porphyry Hill	94.34	5.07	0.0498	L.O.D.
RGP003-PORPHYRY HILL-HARDROCK-GERALDTON-ONTARIO-7	RGP003	Beardmore-Geraldton	Porphyry Hill	94.48	5.2	0.0357	L.O.D.
RGP003-PORPHYRY HILL-HARDROCK-GERALDTON-ONTARIO-8	RGP003	Beardmore-Geraldton	Porphyry Hill	94.57	5.04	0.0378	L.O.D.
RGP003-PORPHYRY HILL-HARDROCK-GERALDTON-ONTARIO-9	RGP003	Beardmore-Geraldton	Porphyry Hill	94.39	5.09	0.0343	L.O.D.
Bobjo-10486-1	10486	Confederation Lake	Bobjo	91.85	7.25	0.0419	L.O.D.
Bobjo-10486-10	10486	Confederation Lake	Bobjo	92.2	7.15	0.0495	L.O.D.
Bobjo-10486-2	10486	Confederation Lake	Bobjo	92.14	7.34	0.0425	L.O.D.
Bobjo-10486-3	10486	Confederation Lake	Bobjo	92.3	7.15	0.0578	L.O.D.
Bobjo-10486-4	10486	Confederation Lake	Bobjo	92.26	7.24	0.0539	L.O.D.
Bobjo-10486-5	10486	Confederation Lake	Bobjo	92.19	7.13	0.0532	L.O.D.
Bobjo-10486-6	10486	Confederation Lake	Bobjo	92.24	7.28	0.0468	L.O.D.
Bobjo-10486-7	10486	Confederation Lake	Bobjo	92.32	7.24	0.0564	L.O.D.
Bobjo-10486-8	10486	Confederation Lake	Bobjo	92.28	7.2	0.0486	L.O.D.
Bobjo-10486-9	10486	Confederation Lake	Bobjo	92.59	7.15	0.0498	L.O.D.
Bobjo-10488-1	10488	Confederation Lake	Bobjo	92.42	7.42	0.0313	L.O.D.
Bobjo-10488-10	10488	Confederation Lake	Bobjo	91.77	7.28	0.0439	L.O.D.
Bobjo-10488-2	10488	Confederation Lake	Bobjo	92.17	7.39	0.0427	L.O.D.

Appendix B. EPMA data

Point	Sample	Area	Deposit/Mine	Au (wt%)	Ag (wt%)	Cu (wt%)	Hg (wt%)
Bobjo-10488-3	10488	Confederation Lake	Bobjo	92.61	7.39	0.0347	L.O.D.
Bobjo-10488-4	10488	Confederation Lake	Bobjo	92.2	7.47	0.0255	L.O.D.
Bobjo-10488-5	10488	Confederation Lake	Bobjo	92.08	7.38	0.0322	L.O.D.
Bobjo-10488-6	10488	Confederation Lake	Bobjo	92.29	7.24	0.0424	L.O.D.
Bobjo-10488-7	10488	Confederation Lake	Bobjo	92.23	7.39	0.046	L.O.D.
Bobjo-10488-8	10488	Confederation Lake	Bobjo	92.08	7.23	0.0363	L.O.D.
Bobjo-10488-9	10488	Confederation Lake	Bobjo	92.3	7.3	0.0434	L.O.D.
Bobjo-10490-1	10490	Confederation Lake	Bobjo	92.21	7.52	0.0399	L.O.D.
Bobjo-10490-10	10490	Confederation Lake	Bobjo	92.48	7.43	0.0329	L.O.D.
Bobjo-10490-2	10490	Confederation Lake	Bobjo	92.55	7.46	0.0364	L.O.D.
Bobjo-10490-3	10490	Confederation Lake	Bobjo	92.53	7.46	0.0411	L.O.D.
Bobjo-10490-4	10490	Confederation Lake	Bobjo	92.53	7.37	0.0396	L.O.D.
Bobjo-10490-5	10490	Confederation Lake	Bobjo	92.16	7.4	0.0333	L.O.D.
Bobjo-10490-6	10490	Confederation Lake	Bobjo	92.16	7.31	0.0367	L.O.D.
Bobjo-10490-7	10490	Confederation Lake	Bobjo	92.37	7.43	0.0379	L.O.D.
Bobjo-10490-8	10490	Confederation Lake	Bobjo	92.12	7.41	0.042	L.O.D.
Bobjo-10490-9	10490	Confederation Lake	Bobjo	92.34	7.48	0.0439	L.O.D.
Bobjo-10492-1	10492	Confederation Lake	Bobjo	92.55	7.28	0.0218	L.O.D.
Bobjo-10492-10	10492	Confederation Lake	Bobjo	92.32	7.32	0.037	L.O.D.
Bobjo-10492-2	10492	Confederation Lake	Bobjo	92.52	7.32	0.0263	L.O.D.
Bobjo-10492-3	10492	Confederation Lake	Bobjo	92.13	7.49	0.0354	L.O.D.
Bobjo-10492-4	10492	Confederation Lake	Bobjo	92.23	7.52	0.0243	L.O.D.
Bobjo-10492-5	10492	Confederation Lake	Bobjo	92.34	7.35	0.0383	L.O.D.
Bobjo-10492-6	10492	Confederation Lake	Bobjo	92.34	7.31	0.0257	L.O.D.
Bobjo-10492-7	10492	Confederation Lake	Bobjo	92.24	7.2	0.0376	L.O.D.
Bobjo-10492-8	10492	Confederation Lake	Bobjo	92.74	7.48	0.0261	L.O.D.
Bobjo-10492-9	10492	Confederation Lake	Bobjo	92.2	7.42	0.0377	L.O.D.
Bobjo-10493-1	10493	Confederation Lake	Bobjo	92.26	7.31	0.0416	L.O.D.
Bobjo-10493-10	10493	Confederation Lake	Bobjo	92.37	7.34	0.0377	L.O.D.
Bobjo-10493-2	10493	Confederation Lake	Bobjo	92.53	7.39	0.0551	L.O.D.
Bobjo-10493-3	10493	Confederation Lake	Bobjo	92.55	7.33	0.0499	L.O.D.
Bobjo-10493-4	10493	Confederation Lake	Bobjo	92.6	7.35	0.0493	L.O.D.
Bobjo-10493-5	10493	Confederation Lake	Bobjo	92.29	7.33	0.0492	L.O.D.
Bobjo-10493-6	10493	Confederation Lake	Bobjo	92.27	7.26	0.0405	L.O.D.
Bobjo-10493-7	10493	Confederation Lake	Bobjo	92.3	7.4	0.0513	L.O.D.
Bobjo-10493-8	10493	Confederation Lake	Bobjo	92.25	7.18	0.0342	L.O.D.
Bobjo-10493-9	10493	Confederation Lake	Bobjo	91.9	7.37	0.0404	L.O.D.
Bobjo-10494-1	10494	Confederation Lake	Bobjo	92.64	7.3	0.0277	L.O.D.
Bobjo-10494-10	10494	Confederation Lake	Bobjo	92.74	7.36	0.039	L.O.D.
Bobjo-10494-2	10494	Confederation Lake	Bobjo	92.69	7.37	0.0313	L.O.D.
Bobjo-10494-3	10494	Confederation Lake	Bobjo	93.01	7.39	0.0347	L.O.D.
Bobjo-10494-4	10494	Confederation Lake	Bobjo	92.71	7.43	0.0303	L.O.D.
Bobjo-10494-5	10494	Confederation Lake	Bobjo	93.22	7.49	0.0473	L.O.D.
Bobjo-10494-6	10494	Confederation Lake	Bobjo	92.6	7.44	0.0433	L.O.D.
Bobjo-10494-7	10494	Confederation Lake	Bobjo	92.9	7.43	0.0484	L.O.D.
Bobjo-10494-8	10494	Confederation Lake	Bobjo	92.62	7.43	0.0427	L.O.D.
Bobjo-10494-9	10494	Confederation Lake	Bobjo	92.97	7.36	0.0318	L.O.D.
JacksonManion-M33211-1	M33211	Confederation Lake	Jackson Manion	85.76	13.74	L.O.D.	L.O.D.
JacksonManion-M33211-2	M33211	Confederation Lake	Jackson Manion	84.62	14.66	L.O.D.	L.O.D.
JacksonManion-M33211-3	M33211	Confederation Lake	Jackson Manion	85.57	14.1	L.O.D.	L.O.D.
JacksonManion-M33211-4	M33211	Confederation Lake	Jackson Manion	83.47	16.2	L.O.D.	L.O.D.
RM001-MUSSELWHITE MINE-ONTARIO-1	RM001	Far North	Musselwhite	94	6.57	0.0522	L.O.D.
RM002-MUSSELWHITE MINE-ONTARIO-1	RM002	Far North	Musselwhite	92.72	6.15	0.0403	L.O.D.
RM004-MUSSELWHITE MINE-ONTARIO-1	RM004	Far North	Musselwhite	93.96	5.81	0.0302	L.O.D.
RM004-MUSSELWHITE MINE-ONTARIO-2	RM004	Far North	Musselwhite	91.78	5.91	0.0394	L.O.D.
RM005-MUSSELWHITE MINE-ONTARIO-1	RM005	Far North	Musselwhite	92.27	6.23	0.0309	L.O.D.
RM005-MUSSELWHITE MINE-ONTARIO-2	RM005	Far North	Musselwhite	92.55	6.27	0.0427	L.O.D.
RM005-MUSSELWHITE MINE-ONTARIO-3	RM005	Far North	Musselwhite	93.06	6.55	0.0406	L.O.D.
RM006-MUSSELWHITE MINE-ONTARIO-1	RM006	Far North	Musselwhite	93.4	6.4	0.0461	L.O.D.
RM006-MUSSELWHITE MINE-ONTARIO-2	RM006	Far North	Musselwhite	93.17	6.02	0.0432	L.O.D.
RM006-MUSSELWHITE MINE-ONTARIO-3	RM006	Far North	Musselwhite	93.37	6.36	0.046	L.O.D.
RM007-MUSSELWHITE MINE-ONTARIO-1	RM007	Far North	Musselwhite	92.7	6.19	0.0418	L.O.D.
RM007-MUSSELWHITE MINE-ONTARIO-2	RM007	Far North	Musselwhite	93.53	6.08	0.0418	L.O.D.
RM007-MUSSELWHITE MINE-ONTARIO-3	RM007	Far North	Musselwhite	93.39	6.16	0.038	L.O.D.
RM008-MUSSELWHITE MINE-ONTARIO-1	RM008	Far North	Musselwhite	93.7	6.35	0.0427	L.O.D.
RM008-MUSSELWHITE MINE-ONTARIO-2	RM008	Far North	Musselwhite	93.45	6.26	0.0504	L.O.D.
RM008-MUSSELWHITE MINE-ONTARIO-3	RM008	Far North	Musselwhite	93.43	6.17	0.0467	L.O.D.
RM008-MUSSELWHITE MINE-ONTARIO-4	RM008	Far North	Musselwhite	93.04	6.17	0.0497	L.O.D.
RM009-MUSSELWHITE MINE-ONTARIO-1	RM009	Far North	Musselwhite	93.89	6.45	0.0294	L.O.D.
RM009-MUSSELWHITE MINE-ONTARIO-10	RM009	Far North	Musselwhite	92.44	6.42	0.0454	L.O.D.
RM009-MUSSELWHITE MINE-ONTARIO-2	RM009	Far North	Musselwhite	93.93	6.38	0.0388	L.O.D.
RM009-MUSSELWHITE MINE-ONTARIO-3	RM009	Far North	Musselwhite	93.72	6.37	0.0356	L.O.D.
RM009-MUSSELWHITE MINE-ONTARIO-4	RM009	Far North	Musselwhite	93.58	6.3	0.0423	L.O.D.
RM009-MUSSELWHITE MINE-ONTARIO-5	RM009	Far North	Musselwhite	92.66	6.33	0.039	L.O.D.
RM009-MUSSELWHITE MINE-ONTARIO-6	RM009	Far North	Musselwhite	93.04	6.3	0.0361	L.O.D.
RM009-MUSSELWHITE MINE-ONTARIO-7	RM009	Far North	Musselwhite	93.64	6.12	0.0424	L.O.D.
RM009-MUSSELWHITE MINE-ONTARIO-8	RM009	Far North	Musselwhite	93.8	6.28	0.041	L.O.D.
RM009-MUSSELWHITE MINE-ONTARIO-9	RM009	Far North	Musselwhite	92.59	6.49	0.0369	L.O.D.
SachigoRiver-M19915-1	M19915	Far North	Sachigo River	92.07	7.71	0.054	L.O.D.

Appendix B. EPMA data

Point	Sample	Area	Deposit/Mine	Au (wt%)	Ag (wt%)	Cu (wt%)	Hg (wt%)
SachigoRiver-M19915-10	M19915	Far North	Sachigo River	92.33	7.7	0.0357	L.O.D.
SachigoRiver-M19915-2	M19915	Far North	Sachigo River	92.44	7.73	0.042	L.O.D.
SachigoRiver-M19915-3	M19915	Far North	Sachigo River	92.15	7.8	0.043	L.O.D.
SachigoRiver-M19915-4	M19915	Far North	Sachigo River	91.87	7.82	0.0456	L.O.D.
SachigoRiver-M19915-5	M19915	Far North	Sachigo River	92.09	7.79	0.0422	L.O.D.
SachigoRiver-M19915-6	M19915	Far North	Sachigo River	92.04	7.78	0.0442	L.O.D.
SachigoRiver-M19915-7	M19915	Far North	Sachigo River	91.86	7.74	0.0371	L.O.D.
SachigoRiver-M19915-8	M19915	Far North	Sachigo River	91.81	7.72	0.045	L.O.D.
SachigoRiver-M19915-9	M19915	Far North	Sachigo River	92.05	7.73	0.0402	L.O.D.
Ackerman-M54923-1 (poor polish)	M54923	Grenville	Ackerman	91.53	8.14	L.O.D.	0.0812
Ackerman-M54923-1 (poor polish)	M54923	Grenville	Ackerman	91.93	7.81	0.0221	0.0807
Ackerman-M54923-1 (poor polish)	M54923	Grenville	Ackerman	91.44	7.44	0.0227	0.0726
Ackerman-M54923-1 (poor polish)	M54923	Grenville	Ackerman	91.46	7.83	0.0224	0.0604
Ackerman-M54923-1 (poor polish)	M54923	Grenville	Ackerman	92.06	8.17	0.018	L.O.D.
Ackerman-M54924-1	M54924	Grenville	Ackerman	90.21	9	0.0213	L.O.D.
Ackerman-M54924-10	M54924	Grenville	Ackerman	89.98	9.2	0.0261	L.O.D.
Ackerman-M54924-2	M54924	Grenville	Ackerman	90.19	9.07	0.039	L.O.D.
Ackerman-M54924-3	M54924	Grenville	Ackerman	90.39	8.9	0.0293	L.O.D.
Ackerman-M54924-4	M54924	Grenville	Ackerman	89.7	9.03	0.0254	L.O.D.
Ackerman-M54924-5	M54924	Grenville	Ackerman	89.98	8.99	0.0233	L.O.D.
Ackerman-M54924-6	M54924	Grenville	Ackerman	90.05	9.02	0.0376	L.O.D.
Ackerman-M54924-7	M54924	Grenville	Ackerman	90.22	8.95	0.0244	L.O.D.
Ackerman-M54924-8	M54924	Grenville	Ackerman	90.35	8.98	0.0238	L.O.D.
Ackerman-M54924-9	M54924	Grenville	Ackerman	89.79	8.94	0.0334	L.O.D.
BannockburnHastingsCo-M3686-1	M3686	Grenville	Bannockburn	98.14	1.69	0.0816	L.O.D.
BannockburnHastingsCo-M3686-10	M3686	Grenville	Bannockburn	98.69	1.55	0.0813	L.O.D.
BannockburnHastingsCo-M3686-2	M3686	Grenville	Bannockburn	98.64	1.63	0.0866	L.O.D.
BannockburnHastingsCo-M3686-3	M3686	Grenville	Bannockburn	98.27	1.61	0.0829	L.O.D.
BannockburnHastingsCo-M3686-4	M3686	Grenville	Bannockburn	98.7	1.46	0.0762	L.O.D.
BannockburnHastingsCo-M3686-5	M3686	Grenville	Bannockburn	98.53	1.54	0.0944	L.O.D.
BannockburnHastingsCo-M3686-6	M3686	Grenville	Bannockburn	98.05	1.81	0.0311	L.O.D.
BannockburnHastingsCo-M3686-7	M3686	Grenville	Bannockburn	98.42	1.49	0.0772	L.O.D.
BannockburnHastingsCo-M3686-8	M3686	Grenville	Bannockburn	98.4	1.48	0.0819	L.O.D.
BannockburnHastingsCo-M3686-9	M3686	Grenville	Bannockburn	98.21	1.57	0.0757	L.O.D.
Richardson-8429-1	8429	Grenville	Richardson	99.06	0.5813	0.2237	L.O.D.
Richardson-8429-10	8429	Grenville	Richardson	98.75	0.6121	0.202	L.O.D.
Richardson-8429-2	8429	Grenville	Richardson	99.23	0.5537	0.2251	L.O.D.
Richardson-8429-3	8429	Grenville	Richardson	99.48	0.5639	0.2299	L.O.D.
Richardson-8429-4	8429	Grenville	Richardson	99.64	0.5411	0.2113	L.O.D.
Richardson-8429-5	8429	Grenville	Richardson	99.34	0.4989	0.2174	L.O.D.
Richardson-8429-6	8429	Grenville	Richardson	98.73	0.6236	0.2137	L.O.D.
Richardson-8429-7	8429	Grenville	Richardson	99.2	0.5081	0.1983	L.O.D.
Richardson-8429-8	8429	Grenville	Richardson	99.02	0.5518	0.223	L.O.D.
Richardson-8429-9	8429	Grenville	Richardson	99.1	0.5953	0.226	L.O.D.
Sophia-M22918-1	M22918	Grenville	Sophia	93.69	5.9	0.0441	L.O.D.
Sophia-M22918-10	M22918	Grenville	Sophia	93.51	5.88	0.0428	L.O.D.
Sophia-M22918-2	M22918	Grenville	Sophia	93.75	5.72	0.0623	L.O.D.
Sophia-M22918-3	M22918	Grenville	Sophia	93.99	5.75	0.0639	0.0629
Sophia-M22918-4	M22918	Grenville	Sophia	93.37	5.78	0.0588	0.0961
Sophia-M22918-5	M22918	Grenville	Sophia	93.79	5.97	0.0411	L.O.D.
Sophia-M22918-6	M22918	Grenville	Sophia	93.68	5.83	0.0503	L.O.D.
Sophia-M22918-7	M22918	Grenville	Sophia	93.86	5.73	0.0633	0.0637
Sophia-M22918-8	M22918	Grenville	Sophia	94.12	5.79	0.0612	L.O.D.
Sophia-M22918-9	M22918	Grenville	Sophia	93.54	5.84	0.0452	L.O.D.
HarknessHays-SH001-1	SH001	Hemlo	Harkness Hays	80.75	18.06	L.O.D.	0.1962
HarknessHays-SH001-10	SH001	Hemlo	Harkness Hays	80.4	17.9	L.O.D.	0.2324
HarknessHays-SH001-2	SH001	Hemlo	Harkness Hays	80.75	18.02	L.O.D.	0.2256
HarknessHays-SH001-3	SH001	Hemlo	Harkness Hays	81.08	17.92	L.O.D.	0.217
HarknessHays-SH001-4	SH001	Hemlo	Harkness Hays	80.94	17.88	L.O.D.	0.2288
HarknessHays-SH001-5	SH001	Hemlo	Harkness Hays	81.33	18.22	L.O.D.	0.2392
HarknessHays-SH001-6	SH001	Hemlo	Harkness Hays	80.87	18.25	L.O.D.	0.2459
HarknessHays-SH001-7	SH001	Hemlo	Harkness Hays	81.14	18.07	L.O.D.	0.1973
HarknessHays-SH001-8	SH001	Hemlo	Harkness Hays	80.9	18.07	L.O.D.	0.1725
HarknessHays-SH001-9	SH001	Hemlo	Harkness Hays	80.82	18.02	L.O.D.	0.2374
HemloCZone-DC001-1	DC001	Hemlo	Hemlo	85.64	14.19	L.O.D.	0.0758
HemloCZone-DC001-2	DC001	Hemlo	Hemlo	85	14.12	L.O.D.	0.0662
HemloCZone-DC001-3	DC001	Hemlo	Hemlo	85.12	13.79	L.O.D.	0.1303
HemloCZone-DC001-4	DC001	Hemlo	Hemlo	84.73	13.61	L.O.D.	0.0945
Borden-1-1	Borden1	Kapuskasing	Borden	96.41	3.81	0.0749	L.O.D.
Borden-1-2	Borden1	Kapuskasing	Borden	95.8	3.69	0.0755	L.O.D.
Borden-1-3	Borden1	Kapuskasing	Borden	96.24	3.69	0.0802	L.O.D.
Borden-2-1	Borden2	Kapuskasing	Borden	95.89	3.71	0.0713	L.O.D.
Borden-2-2	Borden2	Kapuskasing	Borden	95.66	3.82	0.0703	L.O.D.
Borden-2-3	Borden2	Kapuskasing	Borden	96.4	3.63	0.0775	L.O.D.
Borden-2-4	Borden2	Kapuskasing	Borden	96	3.72	0.0598	L.O.D.
Borden-2-5	Borden2	Kapuskasing	Borden	96.28	3.64	0.0678	L.O.D.
Borden-2-6	Borden2	Kapuskasing	Borden	95.96	3.87	0.0762	L.O.D.
Borden-4-1	Borden4	Kapuskasing	Borden	95.89	3.26	0.0374	L.O.D.
Borden-4-2	Borden4	Kapuskasing	Borden	95.5	3.51	0.0343	L.O.D.

Appendix B. EPMA data

Point	Sample	Area	Deposit/Mine	Au (wt%)	Ag (wt%)	Cu (wt%)	Hg (wt%)
Borden-9-1	Borden9	Kapuskasing	Borden	96.2	3.74	0.1139	L.O.D.
Borden-9-2	Borden9	Kapuskasing	Borden	96.39	3.72	0.1227	L.O.D.
Borden-9-3	Borden9	Kapuskasing	Borden	96.19	3.79	0.1185	L.O.D.
Borden-9-4	Borden9	Kapuskasing	Borden	95.94	3.8	0.0582	L.O.D.
Borden-9-5	Borden9	Kapuskasing	Borden	96.01	3.85	0.0448	L.O.D.
CntPatriciaSpringerVein-M38696-1	M38696	Pickle Lake	Central Patricia	94.92	4.81	0.059	L.O.D.
CntPatriciaSpringerVein-M38696-10	M38696	Pickle Lake	Central Patricia	95.1	4.83	0.0564	L.O.D.
CntPatriciaSpringerVein-M38696-2	M38696	Pickle Lake	Central Patricia	95.05	4.76	0.0337	L.O.D.
CntPatriciaSpringerVein-M38696-3	M38696	Pickle Lake	Central Patricia	94.93	4.75	0.0504	L.O.D.
CntPatriciaSpringerVein-M38696-4	M38696	Pickle Lake	Central Patricia	94.73	4.73	0.0394	L.O.D.
CntPatriciaSpringerVein-M38696-5	M38696	Pickle Lake	Central Patricia	95	4.65	0.062	L.O.D.
CntPatriciaSpringerVein-M38696-6	M38696	Pickle Lake	Central Patricia	94.82	4.72	0.0688	L.O.D.
CntPatriciaSpringerVein-M38696-7	M38696	Pickle Lake	Central Patricia	94.93	4.78	0.0617	L.O.D.
CntPatriciaSpringerVein-M38696-8	M38696	Pickle Lake	Central Patricia	94.78	4.77	0.0524	L.O.D.
CntPatriciaSpringerVein-M38696-9	M38696	Pickle Lake	Central Patricia	95.14	4.77	0.0461	L.O.D.
GoldenPatricia-M47456-1	M47456	Pickle Lake	Golden Patricia	91.04	8.32	L.O.D.	L.O.D.
GoldenPatricia-M47456-10	M47456	Pickle Lake	Golden Patricia	91.11	8.72	L.O.D.	L.O.D.
GoldenPatricia-M47456-2	M47456	Pickle Lake	Golden Patricia	91.01	8.31	0.0318	L.O.D.
GoldenPatricia-M47456-3	M47456	Pickle Lake	Golden Patricia	90.71	8.74	L.O.D.	L.O.D.
GoldenPatricia-M47456-4	M47456	Pickle Lake	Golden Patricia	90.9	8.57	0.0373	L.O.D.
GoldenPatricia-M47456-5	M47456	Pickle Lake	Golden Patricia	90.85	8.64	L.O.D.	L.O.D.
GoldenPatricia-M47456-6	M47456	Pickle Lake	Golden Patricia	90.91	8.64	0.0254	L.O.D.
GoldenPatricia-M47456-7	M47456	Pickle Lake	Golden Patricia	91.14	8.68	0.0275	L.O.D.
GoldenPatricia-M47456-8	M47456	Pickle Lake	Golden Patricia	91.16	8.76	L.O.D.	L.O.D.
GoldenPatricia-M47456-9	M47456	Pickle Lake	Golden Patricia	90.69	8.56	0.0255	L.O.D.
PickleCrow-TH002-1	TH002	Pickle Lake	Pickle Crow	95.22	4.43	L.O.D.	0.2928
PickleCrow-TH002-10	TH002	Pickle Lake	Pickle Crow	95.31	4.44	0.031	0.2909
PickleCrow-TH002-2	TH002	Pickle Lake	Pickle Crow	95.29	4.55	0.0213	0.3202
PickleCrow-TH002-3	TH002	Pickle Lake	Pickle Crow	95.57	4.4	0.022	0.2382
PickleCrow-TH002-4	TH002	Pickle Lake	Pickle Crow	95.34	4.53	0.021	0.2776
PickleCrow-TH002-5	TH002	Pickle Lake	Pickle Crow	95.92	4.28	0.0199	0.2944
PickleCrow-TH002-6	TH002	Pickle Lake	Pickle Crow	95.47	4.58	0.0191	0.3144
PickleCrow-TH002-7	TH002	Pickle Lake	Pickle Crow	95.24	4.5	0.0313	0.2643
PickleCrow-TH002-8	TH002	Pickle Lake	Pickle Crow	95.26	4.58	0.0173	0.2659
PickleCrow-TH002-9	TH002	Pickle Lake	Pickle Crow	95.07	4.41	0.0201	0.2818
PickleCrow-TH003-1	TH003	Pickle Lake	Pickle Crow	96.88	2.83	0.1361	L.O.D.
PickleCrow-TH003-10	TH003	Pickle Lake	Pickle Crow	96.91	2.89	0.1332	L.O.D.
PickleCrow-TH003-2	TH003	Pickle Lake	Pickle Crow	97.3	2.77	0.1374	L.O.D.
PickleCrow-TH003-3	TH003	Pickle Lake	Pickle Crow	96.6	2.93	0.1368	L.O.D.
PickleCrow-TH003-4	TH003	Pickle Lake	Pickle Crow	97.25	2.8	0.129	L.O.D.
PickleCrow-TH003-5	TH003	Pickle Lake	Pickle Crow	97.24	2.72	0.1405	L.O.D.
PickleCrow-TH003-6	TH003	Pickle Lake	Pickle Crow	97.01	2.8	0.1269	L.O.D.
PickleCrow-TH003-7	TH003	Pickle Lake	Pickle Crow	96.75	3	0.1241	L.O.D.
PickleCrow-TH003-8	TH003	Pickle Lake	Pickle Crow	95.27	2.77	0.124	L.O.D.
PickleCrow-TH003-9	TH003	Pickle Lake	Pickle Crow	96.79	2.86	0.1247	L.O.D.
CampbellRedLake-M38697-1	M38697	Red Lake	Campbell	90.52	8.39	0.0274	0.5409
CampbellRedLake-M38697-10	M38697	Red Lake	Campbell	90.62	8.32	0.0291	0.5245
CampbellRedLake-M38697-2	M38697	Red Lake	Campbell	90.67	8.53	0.0434	0.5188
CampbellRedLake-M38697-3	M38697	Red Lake	Campbell	90.42	8.37	0.0416	0.5126
CampbellRedLake-M38697-4	M38697	Red Lake	Campbell	90.91	8.35	0.0249	0.5143
CampbellRedLake-M38697-5	M38697	Red Lake	Campbell	90.85	8.37	0.027	0.5102
CampbellRedLake-M38697-6	M38697	Red Lake	Campbell	90.75	8.4	0.0204	0.5459
CampbellRedLake-M38697-7	M38697	Red Lake	Campbell	90.45	8.42	0.0284	0.5251
CampbellRedLake-M38697-8	M38697	Red Lake	Campbell	90.64	8.39	0.0221	0.4916
CampbellRedLake-M38697-9	M38697	Red Lake	Campbell	90.29	8.29	0.036	0.53
CochenourWillans-M21202-1	M21202	Red Lake	Cochenour Willans	94.14	5.58	L.O.D.	L.O.D.
CochenourWillans-M21202-10	M21202	Red Lake	Cochenour Willans	94.11	5.75	L.O.D.	0.0738
CochenourWillans-M21202-2	M21202	Red Lake	Cochenour Willans	94.45	5.69	L.O.D.	0.0649
CochenourWillans-M21202-3	M21202	Red Lake	Cochenour Willans	93.8	5.8	L.O.D.	L.O.D.
CochenourWillans-M21202-4	M21202	Red Lake	Cochenour Willans	93.67	5.8	L.O.D.	L.O.D.
CochenourWillans-M21202-5	M21202	Red Lake	Cochenour Willans	93.61	5.72	L.O.D.	L.O.D.
CochenourWillans-M21202-6	M21202	Red Lake	Cochenour Willans	93.94	5.67	L.O.D.	L.O.D.
CochenourWillans-M21202-7	M21202	Red Lake	Cochenour Willans	93.72	5.72	L.O.D.	L.O.D.
CochenourWillans-M21202-8	M21202	Red Lake	Cochenour Willans	93.88	5.78	L.O.D.	L.O.D.
CochenourWillans-M21202-9	M21202	Red Lake	Cochenour Willans	93.86	5.68	L.O.D.	L.O.D.
CochenourWillans-M21859A-1	M21859A	Red Lake	Cochenour Willans	95.39	5.02	0.0222	L.O.D.
CochenourWillans-M21859A-10	M21859A	Red Lake	Cochenour Willans	94.9	5.26	L.O.D.	L.O.D.
CochenourWillans-M21859A-2	M21859A	Red Lake	Cochenour Willans	95.48	5	0.0214	0.0846
CochenourWillans-M21859A-3	M21859A	Red Lake	Cochenour Willans	95.39	4.99	0.0229	L.O.D.
CochenourWillans-M21859A-4	M21859A	Red Lake	Cochenour Willans	95.26	4.93	L.O.D.	L.O.D.
CochenourWillans-M21859A-5	M21859A	Red Lake	Cochenour Willans	95.68	4.99	L.O.D.	L.O.D.
CochenourWillans-M21859A-6	M21859A	Red Lake	Cochenour Willans	95.12	5.19	0.0196	L.O.D.
CochenourWillans-M21859A-7	M21859A	Red Lake	Cochenour Willans	95.04	5.24	L.O.D.	L.O.D.
CochenourWillans-M21859A-8	M21859A	Red Lake	Cochenour Willans	94.85	5.26	0.02	L.O.D.
CochenourWillans-M21859A-9	M21859A	Red Lake	Cochenour Willans	95.06	5.22	0.0225	0.0718
CochenourWillans-M21859B-1	M21859B	Red Lake	Cochenour Willans	94.53	5.2	0.0221	0.0627
CochenourWillans-M21859B-10	M21859B	Red Lake	Cochenour Willans	95.32	4.96	0.025	L.O.D.
CochenourWillans-M21859B-2	M21859B	Red Lake	Cochenour Willans	95.01	4.97	0.0202	L.O.D.
CochenourWillans-M21859B-3	M21859B	Red Lake	Cochenour Willans	94.93	5.05	0.0224	0.0736

Appendix B. EPMA data

Point	Sample	Area	Deposit/Mine	Au (wt%)	Ag (wt%)	Cu (wt%)	Hg (wt%)
CochenourWillans-M21859B-4	M21859B	Red Lake	Cochenour Willans	95.16	4.97	0.0277	L.O.D.
CochenourWillans-M21859B-5	M21859B	Red Lake	Cochenour Willans	95.17	5.06	0.0195	L.O.D.
CochenourWillans-M21859B-6	M21859B	Red Lake	Cochenour Willans	94.91	5.12	0.0238	L.O.D.
CochenourWillans-M21859B-7	M21859B	Red Lake	Cochenour Willans	95.02	5.21	L.O.D.	L.O.D.
CochenourWillans-M21859B-8	M21859B	Red Lake	Cochenour Willans	94.92	5.13	L.O.D.	0.0694
CochenourWillans-M21859B-9	M21859B	Red Lake	Cochenour Willans	95	5.08	0.0178	0.0934
Cochenour1300ftLevel-M29798-1	M29798	Red Lake	Cochenour Willans	82.86	16.5	L.O.D.	L.O.D.
Cochenour1300ftLevel-M29798-10	M29798	Red Lake	Cochenour Willans	82.64	16.41	L.O.D.	L.O.D.
Cochenour1300ftLevel-M29798-2	M29798	Red Lake	Cochenour Willans	82.84	16.44	L.O.D.	0.0867
Cochenour1300ftLevel-M29798-3	M29798	Red Lake	Cochenour Willans	82.77	16.37	L.O.D.	L.O.D.
Cochenour1300ftLevel-M29798-4	M29798	Red Lake	Cochenour Willans	82.84	16.43	L.O.D.	L.O.D.
Cochenour1300ftLevel-M29798-5	M29798	Red Lake	Cochenour Willans	82.76	16.31	L.O.D.	L.O.D.
Cochenour1300ftLevel-M29798-6	M29798	Red Lake	Cochenour Willans	82.77	16.28	0.0182	0.0616
Cochenour1300ftLevel-M29798-7	M29798	Red Lake	Cochenour Willans	82.72	16.27	L.O.D.	L.O.D.
Cochenour1300ftLevel-M29798-8	M29798	Red Lake	Cochenour Willans	82.84	16.14	L.O.D.	L.O.D.
Cochenour1300ftLevel-M29798-9	M29798	Red Lake	Cochenour Willans	82.53	16.56	L.O.D.	L.O.D.
CochenourWillans-M31178-1	M31178	Red Lake	Cochenour Willans	90.22	9.54	L.O.D.	0.2192
CochenourWillans-M31178-10	M31178	Red Lake	Cochenour Willans	93.83	5.89	L.O.D.	0.0751
CochenourWillans-M31178-2	M31178	Red Lake	Cochenour Willans	93.81	5.95	L.O.D.	L.O.D.
CochenourWillans-M31178-3	M31178	Red Lake	Cochenour Willans	94.19	5.94	L.O.D.	0.0692
CochenourWillans-M31178-4	M31178	Red Lake	Cochenour Willans	94.01	5.92	L.O.D.	0.0639
CochenourWillans-M31178-5	M31178	Red Lake	Cochenour Willans	94	5.87	L.O.D.	L.O.D.
CochenourWillans-M31178-6	M31178	Red Lake	Cochenour Willans	93.91	5.91	L.O.D.	0.0686
CochenourWillans-M31178-7	M31178	Red Lake	Cochenour Willans	93.77	5.89	L.O.D.	0.084
CochenourWillans-M31178-8	M31178	Red Lake	Cochenour Willans	93.41	5.95	L.O.D.	L.O.D.
CochenourWillans-M31178-9	M31178	Red Lake	Cochenour Willans	93.69	5.85	L.O.D.	0.0742
Cochenour-M38699-1	M38699	Red Lake	Cochenour Willans	93.56	6.12	L.O.D.	L.O.D.
Cochenour-M38699-10	M38699	Red Lake	Cochenour Willans	93.32	6.14	L.O.D.	L.O.D.
Cochenour-M38699-2	M38699	Red Lake	Cochenour Willans	93.51	6.03	0.0195	L.O.D.
Cochenour-M38699-3	M38699	Red Lake	Cochenour Willans	93.3	6.13	L.O.D.	L.O.D.
Cochenour-M38699-4	M38699	Red Lake	Cochenour Willans	93.27	6.22	L.O.D.	L.O.D.
Cochenour-M38699-5	M38699	Red Lake	Cochenour Willans	93.78	6.01	L.O.D.	L.O.D.
Cochenour-M38699-6	M38699	Red Lake	Cochenour Willans	93.61	6	0.0201	L.O.D.
Cochenour-M38699-7	M38699	Red Lake	Cochenour Willans	93.73	6.11	L.O.D.	L.O.D.
Cochenour-M38699-8	M38699	Red Lake	Cochenour Willans	93.66	6.03	L.O.D.	L.O.D.
Cochenour-M38699-9	M38699	Red Lake	Cochenour Willans	93.45	6.08	L.O.D.	L.O.D.
CochenourWillans-M46422-1	M46422	Red Lake	Cochenour Willans	92.64	6.82	L.O.D.	L.O.D.
CochenourWillans-M46422-10	M46422	Red Lake	Cochenour Willans	92.63	6.91	L.O.D.	L.O.D.
CochenourWillans-M46422-2	M46422	Red Lake	Cochenour Willans	92.75	6.94	L.O.D.	L.O.D.
CochenourWillans-M46422-3	M46422	Red Lake	Cochenour Willans	92.74	6.85	L.O.D.	L.O.D.
CochenourWillans-M46422-4	M46422	Red Lake	Cochenour Willans	92.73	6.85	L.O.D.	L.O.D.
CochenourWillans-M46422-5	M46422	Red Lake	Cochenour Willans	92.79	6.77	L.O.D.	L.O.D.
CochenourWillans-M46422-6	M46422	Red Lake	Cochenour Willans	92.72	6.83	L.O.D.	L.O.D.
CochenourWillans-M46422-7	M46422	Red Lake	Cochenour Willans	92.33	6.85	L.O.D.	L.O.D.
CochenourWillans-M46422-8	M46422	Red Lake	Cochenour Willans	92.63	6.96	L.O.D.	L.O.D.
CochenourWillans-M46422-9	M46422	Red Lake	Cochenour Willans	92.53	6.79	L.O.D.	0.0729
CochenourWillans-M47258-1	M47258	Red Lake	Cochenour Willans	94.07	5.7	L.O.D.	L.O.D.
CochenourWillans-M47258-10	M47258	Red Lake	Cochenour Willans	94.25	5.77	0.0202	L.O.D.
CochenourWillans-M47258-2	M47258	Red Lake	Cochenour Willans	93.59	5.76	0.0195	L.O.D.
CochenourWillans-M47258-3	M47258	Red Lake	Cochenour Willans	93.68	5.84	L.O.D.	L.O.D.
CochenourWillans-M47258-4	M47258	Red Lake	Cochenour Willans	93.85	5.71	L.O.D.	L.O.D.
CochenourWillans-M47258-5	M47258	Red Lake	Cochenour Willans	93.61	5.68	L.O.D.	L.O.D.
CochenourWillans-M47258-6	M47258	Red Lake	Cochenour Willans	93.65	5.72	L.O.D.	L.O.D.
CochenourWillans-M47258-7	M47258	Red Lake	Cochenour Willans	93.82	5.73	L.O.D.	L.O.D.
CochenourWillans-M47258-8	M47258	Red Lake	Cochenour Willans	93.79	5.75	L.O.D.	L.O.D.
CochenourWillans-M47258-9	M47258	Red Lake	Cochenour Willans	94.08	5.64	L.O.D.	L.O.D.
CochenourWillans-TH001-1	TH001	Red Lake	Cochenour Willans	95.48	4.36	0.0223	0.3572
CochenourWillans-TH001-10	TH001	Red Lake	Cochenour Willans	96.04	3.64	0.0442	0.3592
CochenourWillans-TH001-2	TH001	Red Lake	Cochenour Willans	96.01	3.84	0.0429	0.3304
CochenourWillans-TH001-3	TH001	Red Lake	Cochenour Willans	96.09	3.8	0.0353	0.3448
CochenourWillans-TH001-4	TH001	Red Lake	Cochenour Willans	96.04	3.68	0.037	0.3549
CochenourWillans-TH001-5	TH001	Red Lake	Cochenour Willans	96.05	3.5	0.0433	0.3139
CochenourWillans-TH001-6	TH001	Red Lake	Cochenour Willans	96.24	3.47	0.0415	0.3422
CochenourWillans-TH001-7	TH001	Red Lake	Cochenour Willans	95.88	3.62	0.048	0.3109
CochenourWillans-TH001-8	TH001	Red Lake	Cochenour Willans	95.78	3.55	0.0406	0.3219
CochenourWillans-TH001-9	TH001	Red Lake	Cochenour Willans	96.74	3.73	0.0377	0.0991
Dickenson-M26912A-1	M26912A	Red Lake	Dickenson	96.48	2.48	0.0574	0.9993
Dickenson-M26912A-1	M26912A	Red Lake	Dickenson	96.59	2.42	0.0581	0.9799
Dickenson-M26912A-1	M26912A	Red Lake	Dickenson	96.52	2.44	0.0543	0.9881
Dickenson-M26912A-1	M26912A	Red Lake	Dickenson	96.91	2.37	0.0545	1.04
Dickenson-M26912A-1	M26912A	Red Lake	Dickenson	96.48	2.46	0.0561	0.9962
Dickenson-M26912A-1	M26912A	Red Lake	Dickenson	96.61	2.4	0.0591	0.9732
Dickenson-M26912A-1	M26912A	Red Lake	Dickenson	96.77	2.4	0.06	0.9766
Dickenson-M26912A-1	M26912A	Red Lake	Dickenson	96.87	2.41	0.0577	0.9996
Dickenson-M26912A-1	M26912A	Red Lake	Dickenson	96.73	2.35	0.0674	0.9704
Dickenson-M26912A-1	M26912A	Red Lake	Dickenson	96.51	2.36	0.0621	1.04
Dickenson-M26912B-1	M26912B	Red Lake	Dickenson	96.32	2.76	0.0498	1.03
Dickenson-M26912B-1	M26912B	Red Lake	Dickenson	96.1	2.78	0.0612	1.02
Dickenson-M26912B-1	M26912B	Red Lake	Dickenson	96.26	2.63	0.0593	0.9988

Appendix B. EPMA data

Point	Sample	Area	Deposit/Mine	Au (wt%)	Ag (wt%)	Cu (wt%)	Hg (wt%)
Dickenson-M26912B-1	M26912B	Red Lake	Dickenson	96.23	2.81	0.0528	1.01
Dickenson-M26912B-1	M26912B	Red Lake	Dickenson	95.92	2.76	0.0488	1.02
Dickenson-M26912B-1	M26912B	Red Lake	Dickenson	95.9	2.81	0.0603	1.02
Dickenson-M26912B-1	M26912B	Red Lake	Dickenson	96.27	2.68	0.0566	1.04
Dickenson-M26912B-1	M26912B	Red Lake	Dickenson	96.11	2.77	0.061	0.9566
Dickenson-M26912B-1	M26912B	Red Lake	Dickenson	96.59	2.75	0.0511	1.01
Dickenson-M26912B-1	M26912B	Red Lake	Dickenson	96.42	2.7	0.0594	1.05
278525-DIXIE-ONTARIO-1	278525	Red Lake	Dixie	95.73	3.3	0.1012	L.O.D.
A00357843-DIXIE-ONTARIO-1	A00357843	Red Lake	Dixie	94.42	5.39	0.0443	L.O.D.
A00357843-DIXIE-ONTARIO-2	A00357843	Red Lake	Dixie	94.34	5.42	0.0558	L.O.D.
A00357843-DIXIE-ONTARIO-3	A00357843	Red Lake	Dixie	94.16	5.38	0.0539	L.O.D.
A00357843-DIXIE-ONTARIO-4	A00357843	Red Lake	Dixie	94.17	5.38	0.0564	L.O.D.
A00357843-DIXIE-ONTARIO-5	A00357843	Red Lake	Dixie	94.21	5.44	0.046	L.O.D.
A00372826-DIXIE-ONTARIO-1	A00372826	Red Lake	Dixie	91.56	7.7	0.0436	L.O.D.
A00372826-DIXIE-ONTARIO-10	A00372826	Red Lake	Dixie	91.83	7.69	0.0492	L.O.D.
A00372826-DIXIE-ONTARIO-2	A00372826	Red Lake	Dixie	91.87	7.7	0.052	L.O.D.
A00372826-DIXIE-ONTARIO-3	A00372826	Red Lake	Dixie	92.07	7.59	0.0425	L.O.D.
A00372826-DIXIE-ONTARIO-4	A00372826	Red Lake	Dixie	91.91	7.65	0.0597	L.O.D.
A00372826-DIXIE-ONTARIO-5	A00372826	Red Lake	Dixie	91.47	7.65	0.0511	L.O.D.
A00372826-DIXIE-ONTARIO-6	A00372826	Red Lake	Dixie	91.46	7.65	0.0527	L.O.D.
A00372826-DIXIE-ONTARIO-7	A00372826	Red Lake	Dixie	91.62	7.51	0.0491	L.O.D.
A00372826-DIXIE-ONTARIO-8	A00372826	Red Lake	Dixie	91.82	7.66	0.0429	L.O.D.
A00372826-DIXIE-ONTARIO-9	A00372826	Red Lake	Dixie	91.91	7.66	0.0487	L.O.D.
DX164489-DIXIE-ONTARIO-1	DX164489	Red Lake	Dixie	85.53	13.54	0.021	L.O.D.
DX164489-DIXIE-ONTARIO-2	DX164489	Red Lake	Dixie	85.92	13.59	L.O.D.	L.O.D.
DX164489-DIXIE-ONTARIO-3	DX164489	Red Lake	Dixie	85.79	13.59	L.O.D.	L.O.D.
DX164489-DIXIE-ONTARIO-4	DX164489	Red Lake	Dixie	85.99	13.64	L.O.D.	L.O.D.
DX164489-DIXIE-ONTARIO-5	DX164489	Red Lake	Dixie	87.11	13.21	0.0204	L.O.D.
DX164489-DIXIE-ONTARIO-6	DX164489	Red Lake	Dixie	85.89	13.06	L.O.D.	L.O.D.
DX164489-DIXIE-ONTARIO-7	DX164489	Red Lake	Dixie	86.22	13.06	0.0206	L.O.D.
DX164489-DIXIE-ONTARIO-8	DX164489	Red Lake	Dixie	86.03	12.8	0.0213	L.O.D.
GoldEagle-M42560-1	M42560	Red Lake	Gold Eagle	87.7	11.45	L.O.D.	0.0782
GoldEagle-M42560-10	M42560	Red Lake	Gold Eagle	88	11.29	L.O.D.	0.0975
GoldEagle-M42560-2	M42560	Red Lake	Gold Eagle	87.76	11.53	L.O.D.	L.O.D.
GoldEagle-M42560-3	M42560	Red Lake	Gold Eagle	88.2	11.4	0.0194	L.O.D.
GoldEagle-M42560-4	M42560	Red Lake	Gold Eagle	87.8	11.38	L.O.D.	L.O.D.
GoldEagle-M42560-5	M42560	Red Lake	Gold Eagle	87.83	11.18	L.O.D.	L.O.D.
GoldEagle-M42560-6	M42560	Red Lake	Gold Eagle	88.06	11.49	L.O.D.	0.1278
GoldEagle-M42560-7	M42560	Red Lake	Gold Eagle	88.17	11.13	L.O.D.	0.1086
GoldEagle-M42560-8	M42560	Red Lake	Gold Eagle	87.86	11.32	L.O.D.	0.1271
GoldEagle-M42560-9	M42560	Red Lake	Gold Eagle	88.07	11.41	0.0186	0.1263
Madsen-M38700-1	M38700	Red Lake	Madsen	98.41	1.29	0.0193	L.O.D.
Madsen-M38700-10	M38700	Red Lake	Madsen	98.29	1.27	L.O.D.	L.O.D.
Madsen-M38700-2	M38700	Red Lake	Madsen	98.83	1.28	L.O.D.	L.O.D.
Madsen-M38700-3	M38700	Red Lake	Madsen	98.66	1.31	L.O.D.	L.O.D.
Madsen-M38700-4	M38700	Red Lake	Madsen	98.51	1.28	L.O.D.	L.O.D.
Madsen-M38700-5	M38700	Red Lake	Madsen	98.57	1.24	L.O.D.	L.O.D.
Madsen-M38700-6	M38700	Red Lake	Madsen	98.51	1.32	L.O.D.	L.O.D.
Madsen-M38700-7	M38700	Red Lake	Madsen	98.55	1.31	L.O.D.	L.O.D.
Madsen-M38700-8	M38700	Red Lake	Madsen	98.37	1.33	L.O.D.	L.O.D.
Madsen-M38700-9	M38700	Red Lake	Madsen	98.56	1.32	L.O.D.	L.O.D.
Madsen-M38701-1	M38701	Red Lake	Madsen	99.37	0.936	L.O.D.	L.O.D.
Madsen-M38701-10	M38701	Red Lake	Madsen	99.7	0.888	L.O.D.	L.O.D.
Madsen-M38701-2	M38701	Red Lake	Madsen	99.5	0.9112	L.O.D.	L.O.D.
Madsen-M38701-3	M38701	Red Lake	Madsen	99.4	0.8464	L.O.D.	L.O.D.
Madsen-M38701-4	M38701	Red Lake	Madsen	99.21	0.9087	L.O.D.	L.O.D.
Madsen-M38701-5	M38701	Red Lake	Madsen	99.27	0.9081	L.O.D.	L.O.D.
Madsen-M38701-6	M38701	Red Lake	Madsen	99.07	0.8553	L.O.D.	L.O.D.
Madsen-M38701-7	M38701	Red Lake	Madsen	99.04	0.9763	L.O.D.	L.O.D.
Madsen-M38701-8	M38701	Red Lake	Madsen	99.54	0.8635	L.O.D.	L.O.D.
Madsen-M38701-9	M38701	Red Lake	Madsen	99.21	0.9591	L.O.D.	L.O.D.
Madsen-M47261-1	M47261	Red Lake	Madsen	97.97	1.92	0.0432	L.O.D.
Madsen-M47261-10	M47261	Red Lake	Madsen	97.85	1.88	0.0424	L.O.D.
Madsen-M47261-2	M47261	Red Lake	Madsen	98.06	2	0.0311	L.O.D.
Madsen-M47261-3	M47261	Red Lake	Madsen	97.96	2.04	0.0274	L.O.D.
Madsen-M47261-4	M47261	Red Lake	Madsen	97.76	1.99	0.0472	L.O.D.
Madsen-M47261-5	M47261	Red Lake	Madsen	98.22	1.88	0.0579	L.O.D.
Madsen-M47261-6	M47261	Red Lake	Madsen	98.05	1.87	0.0424	L.O.D.
Madsen-M47261-7	M47261	Red Lake	Madsen	97.39	1.9	0.0528	L.O.D.
Madsen-M47261-8	M47261	Red Lake	Madsen	97.62	1.91	0.0462	L.O.D.
Madsen-M47261-9	M47261	Red Lake	Madsen	97.6	1.92	0.0512	L.O.D.
McKenzie-M19712-1	M19712	Red Lake	McKenzie	88.27	10.92	L.O.D.	L.O.D.
McKenzie-M19712-10	M19712	Red Lake	McKenzie	88.64	10.92	L.O.D.	L.O.D.
McKenzie-M19712-2	M19712	Red Lake	McKenzie	88.76	10.94	L.O.D.	L.O.D.
McKenzie-M19712-3	M19712	Red Lake	McKenzie	88.4	10.97	L.O.D.	L.O.D.
McKenzie-M19712-4	M19712	Red Lake	McKenzie	88.87	10.99	L.O.D.	L.O.D.
McKenzie-M19712-5	M19712	Red Lake	McKenzie	88.67	10.95	L.O.D.	L.O.D.
McKenzie-M19712-6	M19712	Red Lake	McKenzie	89	11	0.0182	L.O.D.
McKenzie-M19712-7	M19712	Red Lake	McKenzie	88.81	10.94	0.0171	L.O.D.

Appendix B. EPMA data

Point	Sample	Area	Deposit/Mine	Au (wt%)	Ag (wt%)	Cu (wt%)	Hg (wt%)
McKenzie-M19712-8	M19712	Red Lake	McKenzie	88.58	10.94	0.0235	L.O.D.
McKenzie-M19712-9	M19712	Red Lake	McKenzie	88.64	10.87	L.O.D.	L.O.D.
McKenzie-M38702-1	M38702	Red Lake	McKenzie	88.54	10.39	L.O.D.	L.O.D.
McKenzie-M38702-10	M38702	Red Lake	McKenzie	89.19	10.44	0.0178	L.O.D.
McKenzie-M38702-2	M38702	Red Lake	McKenzie	88.44	10.48	0.0213	L.O.D.
McKenzie-M38702-3	M38702	Red Lake	McKenzie	88.62	10.78	0.0181	L.O.D.
McKenzie-M38702-4	M38702	Red Lake	McKenzie	88.71	10.75	0.0223	L.O.D.
McKenzie-M38702-5	M38702	Red Lake	McKenzie	88.57	10.74	0.0252	L.O.D.
McKenzie-M38702-6	M38702	Red Lake	McKenzie	88.62	10.59	0.0222	L.O.D.
McKenzie-M38702-7	M38702	Red Lake	McKenzie	88.88	10.83	0.0281	L.O.D.
McKenzie-M38702-8	M38702	Red Lake	McKenzie	88.5	10.59	0.0255	0.0895
McKenzie-M38702-9	M38702	Red Lake	McKenzie	88.81	10.53	0.0202	0.1168
McKenzie-M38703-1	M38703	Red Lake	McKenzie	88.39	11.18	L.O.D.	L.O.D.
McKenzie-M38703-10	M38703	Red Lake	McKenzie	88.38	11.27	L.O.D.	L.O.D.
McKenzie-M38703-2	M38703	Red Lake	McKenzie	88.39	11.18	L.O.D.	L.O.D.
McKenzie-M38703-3	M38703	Red Lake	McKenzie	88.19	11.3	L.O.D.	0.0616
McKenzie-M38703-4	M38703	Red Lake	McKenzie	88.5	11.19	L.O.D.	L.O.D.
McKenzie-M38703-5	M38703	Red Lake	McKenzie	88.19	11.15	L.O.D.	L.O.D.
McKenzie-M38703-6	M38703	Red Lake	McKenzie	88.14	11.11	L.O.D.	L.O.D.
McKenzie-M38703-7	M38703	Red Lake	McKenzie	87.75	10.97	L.O.D.	L.O.D.
McKenzie-M38703-8	M38703	Red Lake	McKenzie	88.48	11.12	0.0182	L.O.D.
McKenzie-M38703-9	M38703	Red Lake	McKenzie	87.85	11.26	L.O.D.	L.O.D.
RedLake-M52649-1	M52649	Red Lake	Red Lake	91.63	7.79	0.0457	L.O.D.
RedLake-M52649-10	M52649	Red Lake	Red Lake	92.36	7.88	0.0302	L.O.D.
RedLake-M52649-2	M52649	Red Lake	Red Lake	91.56	7.87	L.O.D.	0.0712
RedLake-M52649-3	M52649	Red Lake	Red Lake	91.97	7.74	0.0313	0.0623
RedLake-M52649-4	M52649	Red Lake	Red Lake	92.1	7.69	0.0299	L.O.D.
RedLake-M52649-5	M52649	Red Lake	Red Lake	91.68	7.74	0.0327	0.0688
RedLake-M52649-6	M52649	Red Lake	Red Lake	91.61	7.71	0.0273	L.O.D.
RedLake-M52649-7	M52649	Red Lake	Red Lake	91.78	7.73	0.018	L.O.D.
RedLake-M52649-8	M52649	Red Lake	Red Lake	91.79	7.68	0.0316	L.O.D.
RedLake-M52649-9	M52649	Red Lake	Red Lake	91.93	7.85	0.026	L.O.D.
RedLake-M56684-1	M56684	Red Lake	Red Lake	95.25	4.56	0.0262	0.1169
RedLake-M56684-10	M56684	Red Lake	Red Lake	94.64	4.6	0.0293	0.172
RedLake-M56684-2	M56684	Red Lake	Red Lake	95.5	4.65	L.O.D.	0.1319
RedLake-M56684-3	M56684	Red Lake	Red Lake	95.44	4.65	0.0175	0.0898
RedLake-M56684-4	M56684	Red Lake	Red Lake	95.35	4.68	L.O.D.	0.1046
RedLake-M56684-5	M56684	Red Lake	Red Lake	95.5	4.48	0.034	0.1261
RedLake-M56684-6	M56684	Red Lake	Red Lake	95.28	4.57	L.O.D.	0.1215
RedLake-M56684-7	M56684	Red Lake	Red Lake	95.74	4.67	0.0227	0.1222
RedLake-M56684-8	M56684	Red Lake	Red Lake	95.13	4.67	0.026	0.1531
RedLake-M56684-9	M56684	Red Lake	Red Lake	95.18	4.63	L.O.D.	0.1212
G40013-CRYSTAL MINE SUDBURY DIST. ONTARIO-1	Crystal	Southern Province	Crystal	96.61	2.78	0.0785	0.3815
G40013-CRYSTAL MINE SUDBURY DIST. ONTARIO-2	Crystal	Southern Province	Crystal	96.37	3.01	L.O.D.	0.3746
G40013-CRYSTAL MINE SUDBURY DIST. ONTARIO-3	Crystal	Southern Province	Crystal	96.4	2.96	0.094	0.3455
G40013-CRYSTAL MINE SUDBURY DIST. ONTARIO-4	Crystal	Southern Province	Crystal	96.85	2.86	0.0897	0.3618
G40013-CRYSTAL MINE SUDBURY DIST. ONTARIO-5	Crystal	Southern Province	Crystal	96.58	2.95	L.O.D.	0.3919
Crystal-M43564-1	M43564	Southern Province	Pardo	96.8	2.64	0.0764	L.O.D.
Crystal-M43564-10	M43564	Southern Province	Pardo	96.87	2.56	0.0849	L.O.D.
Crystal-M43564-2	M43564	Southern Province	Pardo	96.91	2.56	0.08	L.O.D.
Crystal-M43564-3	M43564	Southern Province	Pardo	96.99	2.54	0.0965	L.O.D.
Crystal-M43564-4	M43564	Southern Province	Pardo	96.91	2.58	0.0891	L.O.D.
Crystal-M43564-5	M43564	Southern Province	Pardo	97.05	2.54	0.0816	L.O.D.
Crystal-M43564-6	M43564	Southern Province	Pardo	96.83	2.58	0.0861	L.O.D.
Crystal-M43564-7	M43564	Southern Province	Pardo	96.85	2.54	0.0875	L.O.D.
Crystal-M43564-8	M43564	Southern Province	Pardo	96.74	2.71	0.0738	L.O.D.
Crystal-M43564-9	M43564	Southern Province	Pardo	96.79	2.52	0.0918	L.O.D.
Pardo-G1-1	Pardo001	Beardmore-Geraldton	Brenbar	91.96	7.72	0.0205	0.1968
Pardo-G1-2	Pardo001	Beardmore-Geraldton	Brenbar	91.68	7.69	L.O.D.	0.2007
Pardo-G1-3	Pardo001	Beardmore-Geraldton	Brenbar	91.81	7.73	0.0176	0.2174
Pardo-G2-1	Pardo002	Beardmore-Geraldton	Brenbar	91.68	7.76	0.0345	0.2015
Pardo-G2-2	Pardo002	Beardmore-Geraldton	Brenbar	91.92	7.79	0.0221	0.1899
Pardo-G2-3	Pardo002	Beardmore-Geraldton	Brenbar	91.69	7.75	0.0251	0.204
Pardo-G3-1	Pardo003	Beardmore-Geraldton	Brenbar	91.44	7.97	0.0185	0.1897
Pardo-G3-2	Pardo003	Beardmore-Geraldton	Porphyry Hill	91.46	7.96	L.O.D.	0.1701
Pardo-G4-1	Pardo004	Beardmore-Geraldton	Porphyry Hill	91.86	7.8	0.0176	0.2012
Pardo-G4-2	Pardo004	Beardmore-Geraldton	Porphyry Hill	91.76	7.94	L.O.D.	0.196
Pardo-G4-3	Pardo004	Beardmore-Geraldton	Porphyry Hill	91.57	7.9	L.O.D.	0.1785
Pardo-G4-4	Pardo004	Beardmore-Geraldton	Porphyry Hill	91.25	7.82	L.O.D.	0.1812
Pardo-G4-5	Pardo004	Beardmore-Geraldton	Porphyry Hill	91.56	7.89	L.O.D.	0.1925
Pardo-G5-1	Pardo005	Beardmore-Geraldton	Porphyry Hill	91.56	7.91	0.02	0.2017
Pardo-G5-2	Pardo005	Beardmore-Geraldton	Porphyry Hill	91.98	7.91	L.O.D.	0.1823
Pardo-G5-3	Pardo005	Beardmore-Geraldton	Porphyry Hill	91.48	7.83	0.0193	0.2219
Pardo-G6-1	Pardo006	Beardmore-Geraldton	Porphyry Hill	92.26	7.57	0.0206	0.179
Pardo-G6-2	Pardo006	Red Lake	Dixie	92.1	7.53	L.O.D.	0.1605
Pardo-G6-3	Pardo006	Red Lake	Dixie	91.96	7.6	L.O.D.	0.138
Pardo-G7-1	Pardo007	Red Lake	Dixie	96	3.67	0.0194	0.3137
Pardo-G7-2	Pardo007	Red Lake	Dixie	95.69	3.71	0.0186	0.4189
Pardo-G7-3	Pardo007	Red Lake	Dixie	95.67	3.62	0.0282	0.4486

Appendix B. EPMA data

Point	Sample	Area	Deposit/Mine	Au (wt%)	Ag (wt%)	Cu (wt%)	Hg (wt%)
Pardo-G8-1	Pardo008	Red Lake	Dixie	95.85	3.64	0.0215	0.4411
Pardo-G8-2	Pardo008	Red Lake	Dixie	96.36	3.66	0.0205	0.3637
Pardo-G9-1	Pardo009	Red Lake	Dixie	96.15	3.68	0.0363	0.0781
Pardo-G9-2	Pardo009	Red Lake	Dixie	96.17	3.68	0.038	0.075
Pardo-G9-3	Pardo009	Red Lake	Dixie	96.18	3.72	0.0386	0.0732
Pardo-G10-1	Pardo010	Red Lake	Dixie	95.91	3.85	0.0199	L.O.D.
Pardo-G11-1	Pardo011	Red Lake	Dixie	95.64	4.09	0.0419	0.1093
Pardo-G11-2	Pardo011	Red Lake	Dixie	95.54	4.1	0.0365	0.1182
Pardo-G11-3	Pardo011	Red Lake	Dixie	95.57	4.17	0.0329	0.0858
Pardo-G12-1	Pardo012	Red Lake	Dixie	96.18	3.91	0.0331	0.0726
Pardo-G12-2	Pardo012	Red Lake	Dixie	95.87	3.86	0.0311	0.0911
Pardo-G12-3	Pardo012	Red Lake	Dixie	95.96	3.84	0.0242	0.0681
Pardo-G14-1	Pardo014	Red Lake	Dixie	95.55	4.14	0.0344	L.O.D.
Pardo-G15-1	Pardo015	Wawa	North Shores	95.5	4.11	0.0493	0.0764
Pardo-G15-2	Pardo015	Wawa	North Shores	96.06	4.2	0.0464	0.0784
Pardo-G16-1	Pardo016	Wawa	North Shores	95.84	3.88	0.027	L.O.D.
Pardo-G17-1	Pardo017	Wawa	North Shores	88.85	9.17	L.O.D.	1.6
Pardo-G17-2	Pardo017	Wawa	North Shores	88.65	9.21	L.O.D.	1.5
Pardo-G17-3	Pardo017	Wawa	North Shores	88.57	9.27	0.0184	1.72
Pardo-G17-4	Pardo017	Wawa	North Shores	88.68	9.2	L.O.D.	1.74
Pardo-G17-5	Pardo017	Wawa	North Shores	88.49	9.21	L.O.D.	1.64
Pardo-G18-1	Pardo018	Wawa	North Shores	88.65	9.41	L.O.D.	1.59
Pardo-G18-2	Pardo018	Wawa	North Shores	88.06	10.53	L.O.D.	1.14
Pardo-G18-3	Pardo018	Beardmore-Geraldton	Leitch	88.54	9.26	0.0342	1.81
Pardo-G18-4	Pardo018	Beardmore-Geraldton	Leitch	88.22	9.4	0.0263	1.83
Pardo-G18-5	Pardo018	Beardmore-Geraldton	Leitch	88.52	9.4	0.0227	1.84
Pardo-G19-1	Pardo019	Beardmore-Geraldton	Leitch	88.19	9.79	L.O.D.	1.55
Pardo-G19-2	Pardo019	Beardmore-Geraldton	Leitch	88.16	9.66	L.O.D.	1.65
Pardo-G19-3	Pardo019	Beardmore-Geraldton	Leitch	87.96	9.59	0.0188	1.79
Pardo-G19-4	Pardo019	Beardmore-Geraldton	Leitch	87.93	9.68	L.O.D.	1.68
Pardo-G19-5	Pardo019	Beardmore-Geraldton	Leitch	88.08	9.6	L.O.D.	1.86
Pardo-G20-1	Pardo020	Beardmore-Geraldton	Leitch	89.11	8.99	0.0178	1.79
Pardo-G20-2	Pardo020	Beardmore-Geraldton	Leitch	88.7	8.95	L.O.D.	1.76
Pardo-G20-3	Pardo020	Red Lake	Dixie	89.3	8.89	L.O.D.	1.74
Pardo-G20-4	Pardo020	Red Lake	Dixie	88.99	8.93	L.O.D.	1.7
Pardo-G20-5	Pardo020	Red Lake	Dixie	88.95	8.92	L.O.D.	1.74
Vermilion-M32671-1	M32671	Southern Province	Pardo	72.77	26.11	L.O.D.	L.O.D.
Vermilion-M32671-10	M32671	Southern Province	Pardo	72.04	27.69	L.O.D.	L.O.D.
Vermilion-M32671-2	M32671	Southern Province	Pardo	72.75	26.66	L.O.D.	L.O.D.
Vermilion-M32671-3	M32671	Southern Province	Pardo	73.88	25.23	L.O.D.	L.O.D.
Vermilion-M32671-4	M32671	Southern Province	Pardo	72.1	27.22	L.O.D.	L.O.D.
Vermilion-M32671-5	M32671	Southern Province	Pardo	72.59	27.18	L.O.D.	L.O.D.
Vermilion-M32671-6	M32671	Southern Province	Pardo	72.86	26.73	L.O.D.	L.O.D.
Vermilion-M32671-7	M32671	Southern Province	Pardo	72.76	26.28	L.O.D.	L.O.D.
Vermilion-M32671-8	M32671	Southern Province	Pardo	71.43	27.77	L.O.D.	L.O.D.
Vermilion-M32671-9	M32671	Southern Province	Pardo	74	25.66	L.O.D.	L.O.D.
Vermilion-M32679-1	M32679	Southern Province	Pardo	81.46	18.4	L.O.D.	L.O.D.
Vermilion-M32679-10	M32679	Southern Province	Pardo	81.84	18.17	L.O.D.	L.O.D.
Vermilion-M32679-2	M32679	Southern Province	Pardo	81.69	18.27	L.O.D.	L.O.D.
Vermilion-M32679-3	M32679	Southern Province	Pardo	81.59	18.03	L.O.D.	L.O.D.
Vermilion-M32679-4	M32679	Southern Province	Pardo	81.09	18.47	L.O.D.	L.O.D.
Vermilion-M32679-5	M32679	Southern Province	Pardo	80.95	18.31	L.O.D.	L.O.D.
Vermilion-M32679-6	M32679	Southern Province	Pardo	81.55	18.08	L.O.D.	L.O.D.
Vermilion-M32679-7	M32679	Southern Province	Pardo	81.32	17.87	L.O.D.	L.O.D.
Vermilion-M32679-8	M32679	Southern Province	Pardo	81.47	18.1	L.O.D.	L.O.D.
Vermilion-M32679-9	M32679	Southern Province	Pardo	81.53	18.54	L.O.D.	L.O.D.
Vermilion-M32887-1	M32887	Southern Province	Pardo	82.87	16.39	L.O.D.	L.O.D.
Vermilion-M32887-10	M32887	Southern Province	Pardo	82.25	16.45	L.O.D.	L.O.D.
Vermilion-M32887-2	M32887	Southern Province	Pardo	82.56	16.26	L.O.D.	L.O.D.
Vermilion-M32887-3	M32887	Southern Province	Pardo	82.82	16.44	L.O.D.	L.O.D.
Vermilion-M32887-4	M32887	Southern Province	Pardo	80.06	19.36	L.O.D.	L.O.D.
Vermilion-M32887-5	M32887	Southern Province	Pardo	82.86	16.42	L.O.D.	L.O.D.
Vermilion-M32887-6	M32887	Southern Province	Pardo	82.88	16.49	L.O.D.	L.O.D.
Vermilion-M32887-6	M32887	Southern Province	Pardo	82.93	16.6	L.O.D.	L.O.D.
Vermilion-M32887-7	M32887	Southern Province	Pardo	82.89	16.38	L.O.D.	L.O.D.
Vermilion-M32887-8	M32887	Southern Province	Pardo	83.01	16.57	L.O.D.	L.O.D.
Vermilion-M32887-9	M32887	Southern Province	Pardo	82.7	16.44	L.O.D.	L.O.D.
Vermilion-M43340-1	M43340	Southern Province	Pardo	78.67	20.86	L.O.D.	L.O.D.
Vermilion-M43340-10	M43340	Southern Province	Pardo	80.53	18.9	L.O.D.	L.O.D.
Vermilion-M43340-2	M43340	Southern Province	Pardo	80.77	18.95	L.O.D.	L.O.D.
Vermilion-M43340-3	M43340	Southern Province	Pardo	80.53	18.61	L.O.D.	L.O.D.
Vermilion-M43340-4	M43340	Southern Province	Pardo	79.98	19.03	L.O.D.	L.O.D.
Vermilion-M43340-5	M43340	Southern Province	Pardo	80.05	18.57	L.O.D.	L.O.D.
Vermilion-M43340-6	M43340	Southern Province	Pardo	80.4	19.05	L.O.D.	L.O.D.
Vermilion-M43340-7	M43340	Southern Province	Pardo	80.57	18.82	L.O.D.	L.O.D.
Vermilion-M43340-8	M43340	Southern Province	Pardo	80.42	18.73	L.O.D.	L.O.D.
Vermilion-M43340-9	M43340	Southern Province	Pardo	80.58	18.73	L.O.D.	L.O.D.
SudburyNear-E1801-1	E1801	#N/A		96.8	2.75	0.0816	L.O.D.
SudburyNear-E1801-10	E1801	#N/A		97.12	2.81	0.0859	L.O.D.

Appendix B. EPMA data

Point	Sample	Area	Deposit/Mine	Au (wt%)	Ag (wt%)	Cu (wt%)	Hg (wt%)
SudburyNear-E1801-2	E1801	#N/A		97.09	2.84	0.1133	L.O.D.
SudburyNear-E1801-3	E1801	#N/A		97.07	2.89	0.0883	L.O.D.
SudburyNear-E1801-4	E1801	#N/A		96.63	2.86	0.0779	L.O.D.
SudburyNear-E1801-5	E1801	Southern Province		97.09	2.93	0.1006	L.O.D.
SudburyNear-E1801-6	E1801	Southern Province		96.84	2.73	0.0925	0.0622
SudburyNear-E1801-7	E1801	Southern Province		96.59	2.94	0.091	L.O.D.
SudburyNear-E1801-8	E1801	Southern Province		97.28	2.83	0.1041	L.O.D.
SudburyNear-E1801-9	E1801	Southern Province		96.97	2.87	0.0946	L.O.D.
IMG001-Cote-1	IMG001	Southern Province	Vermilion	89.97	9.67	0.0329	L.O.D.
IMG001-Cote-10	IMG001	Southern Province	Vermilion	90.03	9.6	0.0273	L.O.D.
IMG001-Cote-2	IMG001	Southern Province	Vermilion	90.24	9.66	0.0369	L.O.D.
IMG001-Cote-3	IMG001	Southern Province	Vermilion	90.24	9.54	0.0364	L.O.D.
IMG001-Cote-4	IMG001	Southern Province	Vermilion	90.05	9.55	0.0326	L.O.D.
IMG001-Cote-5	IMG001	Southern Province	Vermilion	90.19	9.45	0.036	L.O.D.
IMG001-Cote-6	IMG001	Southern Province	Vermilion	90.02	9.66	0.0329	L.O.D.
IMG001-Cote-7	IMG001	Southern Province	Vermilion	90.39	9.68	0.0316	L.O.D.
IMG001-Cote-8	IMG001	Southern Province	Vermilion	90.15	9.59	0.0383	L.O.D.
IMG001-Cote-9	IMG001	Southern Province	Vermilion	89.96	9.57	0.0399	L.O.D.
IMG002-Gosselin-1	IMG002	Southern Province	Vermilion	88.84	10.98	0.0202	L.O.D.
IMG002-Gosselin-1	IMG002	Southern Province	Vermilion	88.84	10.98	0.0202	L.O.D.
IMG002-Gosselin-10	IMG002	Southern Province	Vermilion	88.78	10.85	L.O.D.	L.O.D.
IMG002-Gosselin-10	IMG002	Southern Province	Vermilion	88.78	10.85	L.O.D.	L.O.D.
IMG002-Gosselin-2	IMG002	Southern Province	Vermilion	89.13	10.79	L.O.D.	L.O.D.
IMG002-Gosselin-2	IMG002	Southern Province	Vermilion	89.13	10.79	L.O.D.	L.O.D.
IMG002-Gosselin-3	IMG002	Southern Province	Vermilion	88.99	11.08	0.0207	L.O.D.
IMG002-Gosselin-3	IMG002	Southern Province	Vermilion	88.99	11.08	0.0207	L.O.D.
IMG002-Gosselin-4	IMG002	Southern Province	Vermilion	88.89	11.03	L.O.D.	L.O.D.
IMG002-Gosselin-4	IMG002	Southern Province	Vermilion	88.89	11.03	L.O.D.	L.O.D.
IMG002-Gosselin-5	IMG002	Southern Province	Vermilion	87.54	11.94	L.O.D.	L.O.D.
IMG002-Gosselin-5	IMG002	Southern Province	Vermilion	87.54	11.94	L.O.D.	L.O.D.
IMG002-Gosselin-6	IMG002	Southern Province	Vermilion	88.84	10.92	L.O.D.	L.O.D.
IMG002-Gosselin-6	IMG002	Southern Province	Vermilion	88.84	10.92	L.O.D.	L.O.D.
IMG002-Gosselin-7	IMG002	Southern Province	Vermilion	89.12	10.88	L.O.D.	L.O.D.
IMG002-Gosselin-7	IMG002	Southern Province	Vermilion	89.12	10.88	L.O.D.	L.O.D.
IMG002-Gosselin-8	IMG002	Southern Province	Vermilion	89.16	10.95	L.O.D.	L.O.D.
IMG002-Gosselin-8	IMG002	Southern Province	Vermilion	89.16	10.95	L.O.D.	L.O.D.
IMG002-Gosselin-9	IMG002	Southern Province	0	89.05	10.82	0.0263	L.O.D.
IMG002-Gosselin-9	IMG002	Southern Province	0	89.05	10.82	0.0263	L.O.D.
Kenty-11916-1	11916	Southern Province	0	91.08	8.65	0.0575	0.0635
Kenty-11916-10	11916	Southern Province	0	91.72	8.63	0.0339	0.0601
Kenty-11916-2	11916	Southern Province	0	91.41	8.52	0.0444	0.0752
Kenty-11916-3	11916	Southern Province	0	91.43	8.53	0.0505	0.065
Kenty-11916-4	11916	Southern Province	0	91.39	8.56	0.0402	0.0647
Kenty-11916-5	11916	Southern Province	0	91.69	8.68	0.0533	0.1032
Kenty-11916-6	11916	Southern Province	0	91.37	8.66	0.0421	L.O.D.
Kenty-11916-7	11916	Southern Province	0	90.75	8.49	0.0358	0.0627
Kenty-11916-8	11916	Swayze	Côté Gold	91.39	8.52	0.0467	L.O.D.
Kenty-11916-9	11916	Swayze	Côté Gold	91.23	8.46	0.0401	L.O.D.
Kenty-11917-1	11917	Swayze	Côté Gold	91.32	8.18	0.0265	L.O.D.
Kenty-11917-2	11917	Swayze	Côté Gold	91.32	8.32	0.0249	L.O.D.
Kenty-11917-3	11917	Swayze	Côté Gold	91.32	8.57	0.0346	0.0621
Kenty-M17410-1	M17410	Swayze	Côté Gold	92.02	7.05	0.0342	0.2144
Kenty-M17410-10	M17410	Swayze	Côté Gold	92.64	7.03	0.0263	0.2141
Kenty-M17410-2	M17410	Swayze	Côté Gold	92.24	6.97	0.0302	0.1923
Kenty-M17410-3	M17410	Swayze	Côté Gold	92.03	7.09	0.0385	0.1727
Kenty-M17410-4	M17410	Swayze	Côté Gold	92.28	7	0.0319	0.1644
Kenty-M17410-5	M17410	Swayze	Gosselin	91.86	7.04	0.0355	0.2303
Kenty-M17410-6	M17410	Swayze	Gosselin	92.01	7.01	0.0232	0.2194
Kenty-M17410-7	M17410	Swayze	Gosselin	91.55	7.12	0.0246	0.1793
Kenty-M17410-8	M17410	Swayze	Gosselin	92.24	7.06	0.0429	0.1875
Kenty-M17410-9	M17410	Swayze	Gosselin	92.1	7.01	0.0283	0.1673
M17410-Kenty-1	M17410	Swayze	Gosselin	92.72	6.7	0.0472	0.1823
M17410-Kenty-10	M17410	Swayze	Gosselin	92.6	6.72	0.0391	0.1353
M17410-Kenty-2	M17410	Swayze	Gosselin	92.85	6.67	0.0418	0.1434
M17410-Kenty-3	M17410	Swayze	Gosselin	92.32	6.8	0.0459	0.1717
M17410-Kenty-4	M17410	Swayze	Gosselin	92.58	6.8	0.0415	0.1612
M17410-Kenty-5	M17410	Swayze	Gosselin	92.83	6.68	0.0404	0.093
M17410-Kenty-6	M17410	Swayze	Gosselin	93	6.66	0.0426	0.1611
M17410-Kenty-7	M17410	Swayze	Gosselin	92.61	6.75	0.0422	0.1376
M17410-Kenty-8	M17410	Swayze	Gosselin	92.92	6.59	0.0467	0.1544
M17410-Kenty-9	M17410	Swayze	Gosselin	92.82	6.74	0.0376	0.1511
WestShiningTree-M36726-1	M36726	Southern Province		85.13	14.03	L.O.D.	0.1134
WestShiningTree-M36726-10	M36726	Southern Province		85.28	14.13	L.O.D.	0.1034
WestShiningTree-M36726-2	M36726	Southern Province		85.28	14.19	L.O.D.	0.1468
WestShiningTree-M36726-3	M36726	Southern Province		85.07	14.47	L.O.D.	0.1165
WestShiningTree-M36726-4	M36726	Southern Province		85.17	14.28	L.O.D.	0.1371
WestShiningTree-M36726-5	M36726	Southern Province		85.29	14.37	L.O.D.	0.1163
WestShiningTree-M36726-6	M36726	Southern Province		85.54	14.5	0.0192	0.0785
WestShiningTree-M36726-7	M36726	Southern Province		85.4	14.25	L.O.D.	0.1258

Appendix B. EPMA data

Point	Sample	Area	Deposit/Mine	Au (wt%)	Ag (wt%)	Cu (wt%)	Hg (wt%)
WestShiningTree-M36726-8	M36726	Southern Province		85.25	14.35	L.O.D.	0.0946
WestShiningTree-M36726-9	M36726	Southern Province		85.43	14.23	L.O.D.	0.0965
WestShiningTree-M7280-1	M7280	Southern Province		89.58	10.13	0.0236	L.O.D.
WestShiningTree-M7280-10	M7280	Southern Province		89.48	10.06	0.0211	L.O.D.
WestShiningTree-M7280-2	M7280	Southern Province		89.57	10	0.0307	0.0716
WestShiningTree-M7280-3	M7280	Southern Province		89.77	10.17	0.0297	0.074
WestShiningTree-M7280-4	M7280	Southern Province		89.25	9.88	0.0306	0.0769
WestShiningTree-M7280-5	M7280	Southern Province		89.37	10.04	0.0215	0.0752
WestShiningTree-M7280-6	M7280	Southern Province		89.81	10.01	0.0226	L.O.D.
WestShiningTree-M7280-7	M7280	Southern Province		89.82	9.88	0.0218	0.0661
WestShiningTree-M7280-8	M7280	Southern Province		89.84	9.89	0.0339	0.0634
WestShiningTree-M7280-9	M7280	Southern Province		89.99	9.97	0.0209	0.0708
Temagami-M47285-1	M47285	Swayze		92.88	7.2	0.0579	L.O.D.
Temagami-M47285-10	M47285	Swayze		92.19	7.19	0.0499	L.O.D.
Temagami-M47285-2	M47285	Swayze		92.4	7.09	0.058	L.O.D.
Temagami-M47285-3	M47285	Swayze		92.46	7.08	0.0576	L.O.D.
Temagami-M47285-4	M47285	Swayze		92.53	7.16	0.0515	L.O.D.
Temagami-M47285-5	M47285	Swayze		92.07	7.16	0.0403	L.O.D.
Temagami-M47285-6	M47285	Swayze		92.32	7.19	0.0467	L.O.D.
Temagami-M47285-7	M47285	Swayze		92.38	7.24	0.0469	L.O.D.
Temagami-M47285-8	M47285	Swayze		92.31	7.15	0.0513	0.0617
Temagami-M47285-9	M47285	Swayze		92.56	7.21	0.0397	L.O.D.
Darwin(Grace Vein)-M38688-1	M38688	Swayze	Kenty	95.26	4.61	0.0408	L.O.D.
Darwin(Grace Vein)-M38688-10	M38688	Swayze	Kenty	95.13	4.48	0.0482	L.O.D.
Darwin(Grace Vein)-M38688-2	M38688	Swayze	Kenty	95.44	4.46	0.0304	L.O.D.
Darwin(Grace Vein)-M38688-3	M38688	Swayze	Kenty	95.3	4.48	0.0423	0.0612
Darwin(Grace Vein)-M38688-4	M38688	Swayze	Kenty	95.5	4.53	0.0356	L.O.D.
Darwin(Grace Vein)-M38688-5	M38688	Swayze	Kenty	95.64	4.44	0.0304	L.O.D.
Darwin(Grace Vein)-M38688-6	M38688	Swayze	Kenty	95.85	4.5	0.0363	L.O.D.
Darwin(Grace Vein)-M38688-7	M38688	Swayze	Kenty	95.62	4.48	0.0422	L.O.D.
Darwin(Grace Vein)-M38688-8	M38688	Swayze	Kenty	95.71	4.45	0.0462	0.0625
Darwin(Grace Vein)-M38688-9	M38688	Swayze	Kenty	95.44	4.42	0.0381	L.O.D.
Darwin-M38689-1	M38689	Swayze	Kenty	95.06	4.9	0.0489	L.O.D.
Darwin-M38689-10	M38689	Swayze	Kenty	94.83	5.11	0.0392	L.O.D.
Darwin-M38689-2	M38689	Swayze	Kenty	94.73	5.07	0.0546	L.O.D.
Darwin-M38689-3	M38689	Swayze	Kenty	95.04	5.02	0.0567	L.O.D.
Darwin-M38689-4	M38689	Swayze	Kenty	95.08	5.18	0.0672	L.O.D.
Darwin-M38689-5	M38689	Swayze	Kenty	94.64	5.17	0.0373	L.O.D.
Darwin-M38689-6	M38689	Swayze	Kenty	94.96	5.02	0.0399	L.O.D.
Darwin-M38689-7	M38689	Swayze	Kenty	94.93	5.14	0.056	L.O.D.
Darwin-M38689-8	M38689	Swayze	Kenty	94.88	5.1	0.0619	L.O.D.
Darwin-M38689-9	M38689	Swayze	Kenty	94.71	5.19	0.0672	L.O.D.
Grace-M38690B-1	M38690B	Swayze	Kenty	89.31	9.89	0.0256	0.3239
Grace-M38690B-10	M38690B	Swayze	Kenty	89.39	9.66	0.0301	0.3485
Grace-M38690B-2	M38690B	Swayze	Kenty	89.71	9.89	L.O.D.	0.3579
Grace-M38690B-3	M38690B	Swayze	Kenty	89.43	9.78	L.O.D.	0.3253
Grace-M38690B-4	M38690B	Swayze	Kenty	89.63	9.76	0.0196	0.2829
Grace-M38690B-5	M38690B	Swayze	Kenty	89.48	9.77	0.0217	0.3491
Grace-M38690B-6	M38690B	Swayze	Kenty	89.52	9.74	0.0215	0.359
Grace-M38690B-7	M38690B	Swayze	Kenty	89.52	10.01	L.O.D.	0.3566
Grace-M38690B-8	M38690B	Swayze	0	89.5	9.81	0.025	0.3535
Grace-M38690B-9	M38690B	Swayze	0	89.66	9.82	L.O.D.	0.3414
Darwin-M38691-1	M38691	Swayze	0	96.83	2.76	0.1199	L.O.D.
Darwin-M38691-10	M38691	Swayze	0	97.45	2.76	0.1126	L.O.D.
Darwin-M38691-2	M38691	Swayze	0	97.3	2.74	0.1112	L.O.D.
Darwin-M38691-3	M38691	Swayze	0	97.47	2.78	0.1142	L.O.D.
Darwin-M38691-4	M38691	Swayze	0	96.97	2.77	0.1181	L.O.D.
Darwin-M38691-5	M38691	Swayze	0	97.03	2.85	0.1081	L.O.D.
Darwin-M38691-6	M38691	Swayze	0	97.05	2.82	0.1184	L.O.D.
Darwin-M38691-7	M38691	Swayze	0	97.14	2.74	0.1188	L.O.D.
Darwin-M38691-8	M38691	Swayze	0	97.27	2.75	0.1172	L.O.D.
Darwin-M38691-9	M38691	Swayze	0	97.25	2.7	0.1078	L.O.D.
DarwinEWVein-M38692-1	M38692	Swayze	0	97.23	2.78	0.0591	0.0886
DarwinEWVein-M38692-10	M38692	Swayze	0	97.32	2.69	0.0716	0.0649
DarwinEWVein-M38692-2	M38692	Swayze	0	97.48	2.8	0.0408	0.09
DarwinEWVein-M38692-3	M38692	Swayze	0	97.05	2.79	0.0726	0.0921
DarwinEWVein-M38692-4	M38692	Swayze	0	97.51	2.75	0.0724	0.0881
DarwinEWVein-M38692-5	M38692	Swayze	0	96.95	2.78	0.0729	L.O.D.
DarwinEWVein-M38692-6	M38692	Swayze	0	96.82	2.74	0.0724	0.0715
DarwinEWVein-M38692-7	M38692	Swayze	0	97.23	2.7	0.0668	0.0721
DarwinEWVein-M38692-8	M38692	Temagami	0	97.12	2.71	0.0678	0.0867
DarwinEWVein-M38692-9	M38692	Temagami	0	96.76	2.8	0.0615	0.0809
Darwin-M40521-1	M40521	Temagami	0	94.57	5.39	0.0562	L.O.D.
Darwin-M40521-10	M40521	Temagami	0	94.54	5.41	0.0366	L.O.D.
Darwin-M40521-2	M40521	Temagami	0	94.45	5.4	0.0535	L.O.D.
Darwin-M40521-3	M40521	Temagami	0	94.39	5.4	0.0642	L.O.D.
Darwin-M40521-4	M40521	Temagami	0	94.57	5.37	0.0527	L.O.D.
Darwin-M40521-5	M40521	Temagami	0	94.45	5.34	0.0437	L.O.D.
Darwin-M40521-6	M40521	Temagami	0	94.15	5.39	0.0329	L.O.D.

Appendix B. EPMA data

Point	Sample	Area	Deposit/Mine	Au (wt%)	Ag (wt%)	Cu (wt%)	Hg (wt%)
Darwin-M40521-7	M40521	Temagami	0	94.55	5.45	0.0446	L.O.D.
Darwin-M40521-8	M40521	Wawa	Darwin	94.39	5.37	0.049	L.O.D.
Darwin-M40521-9	M40521	Wawa	Darwin	94.56	5.52	0.064	L.O.D.
DeepLake-M38687-1	M38687	Wawa	Darwin	92.01	7.07	L.O.D.	L.O.D.
DeepLake-M38687-10	M38687	Wawa	Darwin	92.59	7.03	L.O.D.	L.O.D.
DeepLake-M38687-2	M38687	Wawa	Darwin	92.65	7.13	L.O.D.	L.O.D.
DeepLake-M38687-3	M38687	Wawa	Darwin	92.67	7.09	0.0253	L.O.D.
DeepLake-M38687-4	M38687	Wawa	Darwin	92.55	7.06	0.0261	L.O.D.
DeepLake-M38687-5	M38687	Wawa	Darwin	92.55	7.13	L.O.D.	L.O.D.
DeepLake-M38687-6	M38687	Wawa	Darwin	92.97	7.04	L.O.D.	L.O.D.
DeepLake-M38687-7	M38687	Wawa	Darwin	92.6	7.14	L.O.D.	L.O.D.
DeepLake-M38687-8	M38687	Wawa	Darwin	92.52	7	0.0194	L.O.D.
DeepLake-M38687-9	M38687	Wawa	Darwin	92.53	7.05	L.O.D.	L.O.D.
IG007a-IslandGold-1	IG007a	Wawa	Darwin	84.74	14.82	0.0181	L.O.D.
IG007a-IslandGold-10	IG007a	Wawa	Darwin	85.08	14.63	0.0171	L.O.D.
IG007a-IslandGold-2	IG007a	Wawa	Darwin	84.75	14.62	0.0273	L.O.D.
IG007a-IslandGold-3	IG007a	Wawa	Darwin	84.98	14.74	0.0226	L.O.D.
IG007a-IslandGold-4	IG007a	Wawa	Darwin	84.85	14.69	L.O.D.	L.O.D.
IG007a-IslandGold-5	IG007a	Wawa	Darwin	84.48	14.66	L.O.D.	L.O.D.
IG007a-IslandGold-6	IG007a	Wawa	Darwin	85.06	14.72	0.0251	L.O.D.
IG007a-IslandGold-7	IG007a	Wawa	Darwin	84.92	14.56	L.O.D.	L.O.D.
IG007a-IslandGold-8	IG007a	Wawa	Darwin	84.76	14.86	L.O.D.	L.O.D.
IG007a-IslandGold-9	IG007a	Wawa	Darwin	84.93	14.66	L.O.D.	L.O.D.
IG007b-IslandGold-1	IG007b	Wawa	Darwin	84.75	14.66	0.0237	L.O.D.
IG007b-IslandGold-10	IG007b	Wawa	Darwin	84.88	14.68	L.O.D.	L.O.D.
IG007b-IslandGold-2	IG007b	Wawa	Darwin	85.16	14.72	0.023	L.O.D.
IG007b-IslandGold-3	IG007b	Wawa	Darwin	85.39	14.77	0.0175	L.O.D.
IG007b-IslandGold-4	IG007b	Wawa	Darwin	84.71	14.8	0.0218	L.O.D.
IG007b-IslandGold-5	IG007b	Wawa	Darwin	84.62	14.59	L.O.D.	L.O.D.
IG007b-IslandGold-6	IG007b	Wawa	Darwin	85.04	14.7	L.O.D.	L.O.D.
IG007b-IslandGold-7	IG007b	Wawa	Darwin	84.92	14.57	L.O.D.	L.O.D.
IG007b-IslandGold-8	IG007b	Wawa	Darwin	84.89	14.65	0.0222	L.O.D.
IG007b-IslandGold-9	IG007b	Wawa	Darwin	84.93	14.69	0.0181	L.O.D.
IG013-ISLAND GOLD-740-01W-ONTARIO-1	Darwin	Wawa	Darwin	88.62	11.5	0.0423	L.O.D.
IG013-ISLAND GOLD-740-01W-ONTARIO-10	Darwin	Wawa	Darwin	88.44	11.2	0.0213	L.O.D.
IG013-ISLAND GOLD-740-01W-ONTARIO-2	Darwin	Wawa	Darwin	88.27	11.49	0.0442	L.O.D.
IG013-ISLAND GOLD-740-01W-ONTARIO-3	Darwin	Wawa	Darwin	87.91	11.54	0.0503	L.O.D.
IG013-ISLAND GOLD-740-01W-ONTARIO-4	Darwin	Wawa	Darwin	88.27	11.44	0.0333	L.O.D.
IG013-ISLAND GOLD-740-01W-ONTARIO-5	Darwin	Wawa	Darwin	88.28	11.47	0.0347	L.O.D.
IG013-ISLAND GOLD-740-01W-ONTARIO-6	Darwin	Wawa	Darwin	88.07	11.52	0.0574	L.O.D.
IG013-ISLAND GOLD-740-01W-ONTARIO-7	Darwin	Wawa	Darwin	88.52	11.31	0.0541	L.O.D.
IG013-ISLAND GOLD-740-01W-ONTARIO-8	DarwinEWVei	Wawa	Darwin	88.17	11.14	0.0231	L.O.D.
IG013-ISLAND GOLD-740-01W-ONTARIO-9	DarwinEWVei	Wawa	Darwin	88.68	11.41	0.0303	L.O.D.
IG026-ISLAND GOLD-400E ACCESS-ONTARIO-1	DarwinEWVei	Wawa	Darwin	89.33	10.02	0.0315	L.O.D.
IG026-ISLAND GOLD-400E ACCESS-ONTARIO-10	DarwinEWVei	Wawa	Darwin	89.07	9.9	0.0408	L.O.D.
IG026-ISLAND GOLD-400E ACCESS-ONTARIO-2	DarwinEWVei	Wawa	Darwin	89.1	9.9	0.0372	L.O.D.
IG026-ISLAND GOLD-400E ACCESS-ONTARIO-3	DarwinEWVei	Wawa	Darwin	89.21	9.88	0.0385	L.O.D.
IG026-ISLAND GOLD-400E ACCESS-ONTARIO-4	DarwinEWVei	Wawa	Darwin	89.54	9.79	0.026	L.O.D.
IG026-ISLAND GOLD-400E ACCESS-ONTARIO-5	DarwinEWVei	Wawa	Darwin	89.42	9.94	0.0369	L.O.D.
IG026-ISLAND GOLD-400E ACCESS-ONTARIO-6	DarwinEWVei	Wawa	Darwin	89.3	9.91	0.0328	L.O.D.
IG026-ISLAND GOLD-400E ACCESS-ONTARIO-7	DarwinEWVei	Wawa	Darwin	89.1	9.94	0.0363	L.O.D.
IG026-ISLAND GOLD-400E ACCESS-ONTARIO-8	Darwin	Wawa	Darwin	89.34	9.98	0.0365	L.O.D.
IG026-ISLAND GOLD-400E ACCESS-ONTARIO-9	Darwin	Wawa	Darwin	89.29	9.95	0.029	L.O.D.
IG029-ISLAND GOLD-810W ACC-ONTARIO-1	Darwin	Wawa	Darwin	88.96	10.99	0.0263	L.O.D.
IG029-ISLAND GOLD-810W ACC-ONTARIO-10	Darwin	Wawa	Darwin	88.46	11.19	0.0403	L.O.D.
IG029-ISLAND GOLD-810W ACC-ONTARIO-2	Darwin	Wawa	Darwin	89.09	10.99	0.0269	L.O.D.
IG029-ISLAND GOLD-810W ACC-ONTARIO-3	Darwin	Wawa	Darwin	88.43	10.9	0.0274	L.O.D.
IG029-ISLAND GOLD-810W ACC-ONTARIO-4	Darwin	Wawa	Darwin	88.53	11.08	L.O.D.	L.O.D.
IG029-ISLAND GOLD-810W ACC-ONTARIO-5	Darwin	Wawa	Darwin	88.42	10.99	0.0193	L.O.D.
IG029-ISLAND GOLD-810W ACC-ONTARIO-6	Darwin	Wawa	Darwin	88.85	10.94	0.0207	L.O.D.
IG029-ISLAND GOLD-810W ACC-ONTARIO-7	Darwin	Wawa	Darwin	88.82	10.96	0.026	L.O.D.
IG029-ISLAND GOLD-810W ACC-ONTARIO-8	DeepLake	Wawa	Deep Lake	88.57	11.03	0.0242	L.O.D.
IG029-ISLAND GOLD-810W ACC-ONTARIO-9	DeepLake	Wawa	Deep Lake	88.57	11.22	0.0243	L.O.D.
IG037-ISLAND GOLD-920 X2-ONTARIO-1	DeepLake	Wawa	Deep Lake	91.32	8.62	L.O.D.	L.O.D.
IG037-ISLAND GOLD-920 X2-ONTARIO-10	DeepLake	Wawa	Deep Lake	91.16	8.7	0.023	L.O.D.
IG037-ISLAND GOLD-920 X2-ONTARIO-2	DeepLake	Wawa	Deep Lake	91.39	8.56	L.O.D.	L.O.D.
IG037-ISLAND GOLD-920 X2-ONTARIO-3	DeepLake	Wawa	Deep Lake	91.17	8.49	0.0184	L.O.D.
IG037-ISLAND GOLD-920 X2-ONTARIO-4	DeepLake	Wawa	Deep Lake	90.71	8.57	0.0312	L.O.D.
IG037-ISLAND GOLD-920 X2-ONTARIO-5	DeepLake	Wawa	Deep Lake	90.86	8.71	0.0303	L.O.D.
IG037-ISLAND GOLD-920 X2-ONTARIO-6	DeepLake	Wawa	Deep Lake	91.03	8.64	0.025	L.O.D.
IG037-ISLAND GOLD-920 X2-ONTARIO-7	DeepLake	Wawa	Deep Lake	90.67	8.71	L.O.D.	L.O.D.
IG037-ISLAND GOLD-920 X2-ONTARIO-8	IG007a	Wawa	Island Gold	90.63	8.63	L.O.D.	L.O.D.
IG037-ISLAND GOLD-920 X2-ONTARIO-9	IG007a	Wawa	Island Gold	91.07	8.66	L.O.D.	L.O.D.
IG038-ISLAND GOLD-(ICGLICEIE)-ONTARIO-1	IG007a	Wawa	Island Gold	90.45	9.64	0.0241	L.O.D.
IG038-ISLAND GOLD-(ICGLICEIE)-ONTARIO-10	IG007a	Wawa	Island Gold	89.93	9.93	L.O.D.	L.O.D.
IG038-ISLAND GOLD-(ICGLICEIE)-ONTARIO-2	IG007a	Wawa	Island Gold	90.37	9.73	0.0178	L.O.D.
IG038-ISLAND GOLD-(ICGLICEIE)-ONTARIO-3	IG007a	Wawa	Island Gold	89.52	10.14	0.0419	L.O.D.
IG038-ISLAND GOLD-(ICGLICEIE)-ONTARIO-4	IG007a	Wawa	Island Gold	89.64	10.38	0.0427	L.O.D.
IG038-ISLAND GOLD-(ICGLICEIE)-ONTARIO-5	IG007a	Wawa	Island Gold	89.61	10.19	0.0247	L.O.D.

Appendix B. EPMA data

Point	Sample	Area	Deposit/Mine	Au (wt%)	Ag (wt%)	Cu (wt%)	Hg (wt%)
IG038-ISLAND GOLD-(ICGLICEIE)-ONTARIO-6	IG007a	Wawa	Island Gold	89.69	9.95	0.0186	L.O.D.
IG038-ISLAND GOLD-(ICGLICEIE)-ONTARIO-7	IG007a	Wawa	Island Gold	89.31	9.98	0.0392	L.O.D.
IG038-ISLAND GOLD-(ICGLICEIE)-ONTARIO-8	IG007b	Wawa	Island Gold	90.13	9.63	0.0261	L.O.D.
IG038-ISLAND GOLD-(ICGLICEIE)-ONTARIO-9	IG007b	Wawa	Island Gold	89.37	9.84	L.O.D.	L.O.D.
IG039-ISLAND GOLD-MH27-02-ONTARIO-1	IG007b	Wawa	Island Gold	90.97	9.29	L.O.D.	L.O.D.
IG039-ISLAND GOLD-MH27-02-ONTARIO-2	IG007b	Wawa	Island Gold	90.98	8.99	0.0239	L.O.D.
IG039-ISLAND GOLD-MH27-02-ONTARIO-3	IG007b	Wawa	Island Gold	90.56	9.2	0.0248	L.O.D.
IG039-ISLAND GOLD-MH27-02-ONTARIO-4	IG007b	Wawa	Island Gold	90.45	9.55	0.0211	L.O.D.
IG039-ISLAND GOLD-MH27-02-ONTARIO-5	IG007b	Wawa	Island Gold	91.47	8.12	L.O.D.	L.O.D.
RGP004-GOLDSHORE-ONTARIO-1	IG007b	Wawa	Island Gold	83.28	15.99	L.O.D.	0.1987
RGP004-GOLDSHORE-ONTARIO-10	IG007b	Wawa	Island Gold	83.08	16.23	L.O.D.	0.1374
RGP004-GOLDSHORE-ONTARIO-2	IG007b	Wawa	Island Gold	83.48	15.76	L.O.D.	0.1608
RGP004-GOLDSHORE-ONTARIO-3	IG013	#N/A	#N/A	83.12	16.23	L.O.D.	0.1706
RGP004-GOLDSHORE-ONTARIO-4	IG013	#N/A	#N/A	83.36	16.08	L.O.D.	0.1777
RGP004-GOLDSHORE-ONTARIO-5	IG013	#N/A	#N/A	83.78	16.08	L.O.D.	0.1838
RGP004-GOLDSHORE-ONTARIO-6	IG013	#N/A	#N/A	83.49	16.02	L.O.D.	0.1953
RGP004-GOLDSHORE-ONTARIO-7	IG013	#N/A	#N/A	82.97	16.18	L.O.D.	0.2305
RGP004-GOLDSHORE-ONTARIO-8	IG013	#N/A	#N/A	83.49	16.1	L.O.D.	0.1998
RGP004-GOLDSHORE-ONTARIO-9	IG013	#N/A	#N/A	83.43	16.1	L.O.D.	0.2011
Parkhill-10933-1	10933	#N/A	#N/A	94.34	5.6	0.0571	L.O.D.
Parkhill-10933-10	10933	#N/A	#N/A	94.12	5.7	0.0442	L.O.D.
Parkhill-10933-2	10933	#N/A	#N/A	94.25	5.64	0.0393	L.O.D.
Parkhill-10933-3	10933	#N/A	#N/A	94.21	5.67	0.0533	L.O.D.
Parkhill-10933-4	10933	#N/A	#N/A	94.27	5.56	0.0346	L.O.D.
Parkhill-10933-5	10933	#N/A	#N/A	93.96	5.65	0.0514	L.O.D.
Parkhill-10933-6	10933	#N/A	#N/A	94.13	5.7	0.0506	L.O.D.
Parkhill-10933-7	10933	#N/A	#N/A	94.29	5.71	0.0426	L.O.D.
Parkhill-10933-8	10933	#N/A	#N/A	94.33	5.63	0.0374	L.O.D.
Parkhill-10933-9	10933	#N/A	#N/A	94.37	5.71	0.0422	L.O.D.
Parkhill-M38685-1	M38685	#N/A	#N/A	94.41	5.52	0.0509	L.O.D.
Parkhill-M38685-10	M38685	#N/A	#N/A	94.35	5.39	0.0539	L.O.D.
Parkhill-M38685-2	M38685	#N/A	#N/A	94.27	5.44	0.0615	L.O.D.
Parkhill-M38685-3	M38685	#N/A	#N/A	93.99	5.46	0.0651	L.O.D.
Parkhill-M38685-4	M38685	#N/A	#N/A	94.29	5.44	0.0574	L.O.D.
Parkhill-M38685-5	M38685	#N/A	#N/A	94.33	5.57	0.0433	L.O.D.
Parkhill-M38685-6	M38685	#N/A	#N/A	94.36	5.33	0.0572	L.O.D.
Parkhill-M38685-7	M38685	#N/A	#N/A	94.75	5.48	0.0535	L.O.D.
Parkhill-M38685-8	M38685	#N/A	#N/A	94.37	5.51	0.0435	L.O.D.
Parkhill-M38685-9	M38685	#N/A	#N/A	94.34	5.42	0.0588	L.O.D.
Parkhill-M38686A-1	M38686A	#N/A	#N/A	93.18	6.98	0.0366	0.1077
Parkhill-M38686A-10	M38686A	#N/A	#N/A	93.08	7	L.O.D.	0.1192
Parkhill-M38686A-2	M38686A	#N/A	#N/A	93.52	6.92	0.0225	0.1074
Parkhill-M38686A-3	M38686A	#N/A	#N/A	93.03	6.87	0.0242	0.093
Parkhill-M38686A-4	M38686A	#N/A	#N/A	93.17	7	0.0276	0.0857
Parkhill-M38686A-5	M38686A	#N/A	#N/A	93.38	6.98	0.0311	0.0907
Parkhill-M38686A-6	M38686A	#N/A	#N/A	93.16	6.98	0.02	0.1238
Parkhill-M38686A-7	M38686A	#N/A	#N/A	93.54	6.9	0.0232	0.0965
Parkhill-M38686A-8	M38686A	#N/A	#N/A	93.25	6.89	0.0308	0.0893
Parkhill-M38686A-9	M38686A	#N/A	#N/A	93.16	7.02	0.0277	0.1031
Parkhill(4thLevel)-M38686B-1	M38686B	#N/A	#N/A	92.43	7.03	0.0482	L.O.D.
Parkhill(4thLevel)-M38686B-10	M38686B	Wawa	Island Gold	92.35	7.21	0.0579	L.O.D.
Parkhill(4thLevel)-M38686B-2	M38686B	Wawa	Island Gold	92.34	7.31	0.0574	L.O.D.
Parkhill(4thLevel)-M38686B-3	M38686B	Wawa	Island Gold	92.54	7.22	0.0532	L.O.D.
Parkhill(4thLevel)-M38686B-4	M38686B	Wawa	Island Gold	92.47	7.16	0.052	L.O.D.
Parkhill(4thLevel)-M38686B-5	M38686B	Wawa	Island Gold	92.38	7.11	0.0345	L.O.D.
Parkhill(4thLevel)-M38686B-6	M38686B	Wawa	Island Gold	92.08	7.22	0.0565	L.O.D.
Parkhill(4thLevel)-M38686B-7	M38686B	Wawa	Island Gold	92.52	7.23	0.0486	L.O.D.
Parkhill(4thLevel)-M38686B-8	M38686B	Wawa	Island Gold	92.06	7.14	0.0491	L.O.D.
Parkhill(4thLevel)-M38686B-9	M38686B	Wawa	Island Gold	92.3	7.14	0.053	L.O.D.
G39993-RANSON PROPERTY-ALGOMA DISTRICT-ONTARIO-1	IG038	Wawa	Island Gold	93.77	5.74	L.O.D.	0.4051
G39993-RANSON PROPERTY-ALGOMA DISTRICT-ONTARIO-10	IG038	Wawa	Island Gold	94.09	5.52	0.0217	0.3421
G39993-RANSON PROPERTY-ALGOMA DISTRICT-ONTARIO-2	IG038	Wawa	Island Gold	94.2	5.71	0.0305	0.3972
G39993-RANSON PROPERTY-ALGOMA DISTRICT-ONTARIO-3	IG039	Wawa	Island Gold	93.56	5.56	0.0199	0.3973
G39993-RANSON PROPERTY-ALGOMA DISTRICT-ONTARIO-4	IG039	Wawa	Island Gold	93.75	5.67	0.0317	0.4157
G39993-RANSON PROPERTY-ALGOMA DISTRICT-ONTARIO-5	IG039	Wawa	Island Gold	93.85	5.64	L.O.D.	0.3863
G39993-RANSON PROPERTY-ALGOMA DISTRICT-ONTARIO-6	IG039	Wawa	Island Gold	93.9	5.66	0.0189	0.3599
G39993-RANSON PROPERTY-ALGOMA DISTRICT-ONTARIO-7	IG039	Wawa	Island Gold	93.66	5.62	0.0225	0.3688
G39993-RANSON PROPERTY-ALGOMA DISTRICT-ONTARIO-8	RGP004	Wawa	Island Gold	93.87	5.7	0.0203	0.3732
G39993-RANSON PROPERTY-ALGOMA DISTRICT-ONTARIO-9	RGP004	Wawa	Island Gold	94.4	5.7	0.0177	0.3578
HawkBay-M7289-1	M7289	Wawa	Island Gold	73.71	25.56	L.O.D.	L.O.D.
HawkBay-M7289-10	M7289	Wawa	Island Gold	74.41	24.83	L.O.D.	L.O.D.
HawkBay-M7289-2	M7289	Wawa	Island Gold	73.66	25.27	L.O.D.	0.0696
HawkBay-M7289-3	M7289	Wawa	Island Gold	73.45	25.52	L.O.D.	L.O.D.
HawkBay-M7289-4	M7289	Wawa	Island Gold	72.76	25.99	L.O.D.	L.O.D.
HawkBay-M7289-5	M7289	Wawa	Island Gold	74.34	25.12	L.O.D.	L.O.D.
HawkBay-M7289-6	M7289	Wawa	Island Gold	74.31	25.18	L.O.D.	L.O.D.
HawkBay-M7289-7	M7289	Wawa	Island Gold	74.14	25.19	L.O.D.	L.O.D.
HawkBay-M7289-8	M7289	Wawa	Parkhill	73.83	25.2	L.O.D.	L.O.D.
HawkBay-M7289-9	M7289	Wawa	Parkhill	73.94	25.2	L.O.D.	L.O.D.

Appendix B. EPMA data

Point	Sample	Area	Deposit/Mine	Au (wt%)	Ag (wt%)	Cu (wt%)	Hg (wt%)
Kerry-M19095-1	M19095	Wawa	Parkhill	95.48	3.81	0.2492	0.5617
Kerry-M19095-10	M19095	Wawa	Parkhill	95.76	3.56	0.2673	0.5482
Kerry-M19095-2	M19095	Wawa	Parkhill	95.67	3.84	0.0839	0.6022
Kerry-M19095-3	M19095	Wawa	Parkhill	95.27	3.76	0.254	0.5762
Kerry-M19095-4	M19095	Wawa	Parkhill	95.13	3.6	0.2655	0.5486
Kerry-M19095-5	M19095	Wawa	Parkhill	95.41	3.76	0.2574	0.5291
Kerry-M19095-6	M19095	Wawa	Parkhill	95.57	3.84	0.2446	0.5613
Kerry-M19095-7	M19095	Wawa	Parkhill	95.61	3.63	0.2553	0.5839
Kerry-M19095-8	M19095	Wawa	Parkhill	95.46	3.49	0.2687	0.5594
Kerry-M19095-9	M19095	Wawa	Parkhill	95.88	3.45	0.2814	0.5387
Laurentian-M8805-1	M8805	Wawa	Parkhill	92.59	6.87	0.0687	L.O.D.
Laurentian-M8805-10	M8805	Wawa	Parkhill	92.74	6.65	0.0595	L.O.D.
Laurentian-M8805-2	M8805	Wawa	Parkhill	92.62	6.84	0.0765	L.O.D.
Laurentian-M8805-3	M8805	Wawa	Parkhill	92.89	6.86	0.067	L.O.D.
Laurentian-M8805-4	M8805	Wawa	Parkhill	93.42	6.65	0.0653	L.O.D.
Laurentian-M8805-5	M8805	Wawa	Parkhill	93.2	6.7	0.0656	L.O.D.
Laurentian-M8805-6	M8805	Wawa	Parkhill	92.67	6.7	0.0543	L.O.D.
Laurentian-M8805-7	M8805	Wawa	Parkhill	92.5	6.53	0.0672	L.O.D.
Laurentian-M8805-8	M8805	Wawa	Parkhill	93.2	6.7	0.0682	L.O.D.
Laurentian-M8805-9	M8805	Wawa	Parkhill	92.93	6.84	0.0606	L.O.D.
Mikado-E1787A-1	E1787A	Wawa	Parkhill	68.04	30.61	L.O.D.	0.2283
Mikado-E1787A-2	E1787A	Wawa	Parkhill	67.93	30.56	L.O.D.	0.2468
Mikado-E1787A-3	E1787A	Wawa	Parkhill	68.06	30.78	L.O.D.	0.2422
Mikado-E1787A-4	E1787A	Wawa	Parkhill	67.87	30.77	L.O.D.	0.2581
Mikado-E1787A-5	E1787A	Wawa	Parkhill	68.09	30.86	L.O.D.	0.2593
TH004-Moretti-1	TH004	Wawa	Parkhill	84	15.15	L.O.D.	L.O.D.
TH004-Moretti-10	TH004	Wawa	Parkhill	83.78	15.13	L.O.D.	0.0868
TH004-Moretti-2	TH004	Wawa	Parkhill	83.88	15.28	L.O.D.	0.0806
TH004-Moretti-3	TH004	Wawa	Parkhill	84.04	15.27	0.0212	0.0631
TH004-Moretti-4	TH004	Wawa	Parkhill	84.03	15.24	0.0227	0.0759
TH004-Moretti-5	TH004	Wawa	Parkhill	84.03	15.26	L.O.D.	0.0651
TH004-Moretti-6	TH004	Wawa	Parkhill	83.78	15.37	L.O.D.	0.0752
TH004-Moretti-7	TH004	Wawa	Parkhill	84.09	15.17	0.0193	0.0612
TH004-Moretti-8	TH004	Wawa	Parkhill	84.19	15.25	L.O.D.	0.0894
TH004-Moretti-9	TH004	Wawa	Parkhill	83.78	15.38	L.O.D.	0.1047

Appendix C. ACP WISdata. 50mm

Spot	Sample	Area	Depth/Time	Cell3 gm	Cell4 gm	PD3	PD4	PD5	PD6	PD7	PD8	PD9	PD10	PD11	PD12	PD13	PD14	PD15	PD16	PD17	PD18	PD19	PD20	PD21	PD22	PD23	PD24	PD25	PD26	PD27	PD28	PD29	PD30	PD31	PD32	PD33	PD34	PD35	PD36	PD37	PD38	PD39	PD40	PD41	PD42	PD43	PD44	PD45	PD46	PD47	PD48	PD49	PD50	PD51	PD52	PD53	PD54	PD55	PD56	PD57	PD58	PD59	PD60	PD61	PD62	PD63	PD64	PD65	PD66	PD67	PD68	PD69	PD70	PD71	PD72	PD73	PD74	PD75	PD76	PD77	PD78	PD79	PD80	PD81	PD82	PD83	PD84	PD85	PD86	PD87	PD88	PD89	PD90	PD91	PD92	PD93	PD94	PD95	PD96	PD97	PD98	PD99	PD100	PD101	PD102	PD103	PD104	PD105	PD106	PD107	PD108	PD109	PD110	PD111	PD112	PD113	PD114	PD115	PD116	PD117	PD118	PD119	PD120	PD121	PD122	PD123	PD124	PD125	PD126	PD127	PD128	PD129	PD130	PD131	PD132	PD133	PD134	PD135	PD136	PD137	PD138	PD139	PD140	PD141	PD142	PD143	PD144	PD145	PD146	PD147	PD148	PD149	PD150	PD151	PD152	PD153	PD154	PD155	PD156	PD157	PD158	PD159	PD160	PD161	PD162	PD163	PD164	PD165	PD166	PD167	PD168	PD169	PD170	PD171	PD172	PD173	PD174	PD175	PD176	PD177	PD178	PD179	PD180	PD181	PD182	PD183	PD184	PD185	PD186	PD187	PD188	PD189	PD190	PD191	PD192	PD193	PD194	PD195	PD196	PD197	PD198	PD199	PD200	PD201	PD202	PD203	PD204	PD205	PD206	PD207	PD208	PD209	PD210	PD211	PD212	PD213	PD214	PD215	PD216	PD217	PD218	PD219	PD220	PD221	PD222	PD223	PD224	PD225	PD226	PD227	PD228	PD229	PD230	PD231	PD232	PD233	PD234	PD235	PD236	PD237	PD238	PD239	PD240	PD241	PD242	PD243	PD244	PD245	PD246	PD247	PD248	PD249	PD250	PD251	PD252	PD253	PD254	PD255	PD256	PD257	PD258	PD259	PD260	PD261	PD262	PD263	PD264	PD265	PD266	PD267	PD268	PD269	PD270	PD271	PD272	PD273	PD274	PD275	PD276	PD277	PD278	PD279	PD280	PD281	PD282	PD283	PD284	PD285	PD286	PD287	PD288	PD289	PD290	PD291	PD292	PD293	PD294	PD295	PD296	PD297	PD298	PD299	PD300	PD301	PD302	PD303	PD304	PD305	PD306	PD307	PD308	PD309	PD310	PD311	PD312	PD313	PD314	PD315	PD316	PD317	PD318	PD319	PD320	PD321	PD322	PD323	PD324	PD325	PD326	PD327	PD328	PD329	PD330	PD331	PD332	PD333	PD334	PD335	PD336	PD337	PD338	PD339	PD340	PD341	PD342	PD343	PD344	PD345	PD346	PD347	PD348	PD349	PD350	PD351	PD352	PD353	PD354	PD355	PD356	PD357	PD358	PD359	PD360	PD361	PD362	PD363	PD364	PD365	PD366	PD367	PD368	PD369	PD370	PD371	PD372	PD373	PD374	PD375	PD376	PD377	PD378	PD379	PD380	PD381	PD382	PD383	PD384	PD385	PD386	PD387	PD388	PD389	PD390	PD391	PD392	PD393	PD394	PD395	PD396	PD397	PD398	PD399	PD400	PD401	PD402	PD403	PD404	PD405	PD406	PD407	PD408	PD409	PD410	PD411	PD412	PD413	PD414	PD415	PD416	PD417	PD418	PD419	PD420	PD421	PD422	PD423	PD424	PD425	PD426	PD427	PD428	PD429	PD430	PD431	PD432	PD433	PD434	PD435	PD436	PD437	PD438	PD439	PD440	PD441	PD442	PD443	PD444	PD445	PD446	PD447	PD448	PD449	PD450	PD451	PD452	PD453	PD454	PD455	PD456	PD457	PD458	PD459	PD460	PD461	PD462	PD463	PD464	PD465	PD466	PD467	PD468	PD469	PD470	PD471	PD472	PD473	PD474	PD475	PD476	PD477	PD478	PD479	PD480	PD481	PD482	PD483	PD484	PD485	PD486	PD487	PD488	PD489	PD490	PD491	PD492	PD493	PD494	PD495	PD496	PD497	PD498	PD499	PD500	PD501	PD502	PD503	PD504	PD505	PD506	PD507	PD508	PD509	PD510	PD511	PD512	PD513	PD514	PD515	PD516	PD517	PD518	PD519	PD520	PD521	PD522	PD523	PD524	PD525	PD526	PD527	PD528	PD529	PD530	PD531	PD532	PD533	PD534	PD535	PD536	PD537	PD538	PD539	PD540	PD541	PD542	PD543	PD544	PD545	PD546	PD547	PD548	PD549	PD550	PD551	PD552	PD553	PD554	PD555	PD556	PD557	PD558	PD559	PD560	PD561	PD562	PD563	PD564	PD565	PD566	PD567	PD568	PD569	PD570	PD571	PD572	PD573	PD574	PD575	PD576	PD577	PD578	PD579	PD580	PD581	PD582	PD583	PD584	PD585	PD586	PD587	PD588	PD589	PD590	PD591	PD592	PD593	PD594	PD595	PD596	PD597	PD598	PD599	PD600	PD601	PD602	PD603	PD604	PD605	PD606	PD607	PD608	PD609	PD610	PD611	PD612	PD613	PD614	PD615	PD616	PD617	PD618	PD619	PD620	PD621	PD622	PD623	PD624	PD625	PD626	PD627	PD628	PD629	PD630	PD631	PD632	PD633	PD634	PD635	PD636	PD637	PD638	PD639	PD640	PD641	PD642	PD643	PD644	PD645	PD646	PD647	PD648	PD649	PD650	PD651	PD652	PD653	PD654	PD655	PD656	PD657	PD658	PD659	PD660	PD661	PD662	PD663	PD664	PD665	PD666	PD667	PD668	PD669	PD670	PD671	PD672	PD673	PD674	PD675	PD676	PD677	PD678	PD679	PD680	PD681	PD682	PD683	PD684	PD685	PD686	PD687	PD688	PD689	PD690	PD691	PD692	PD693	PD694	PD695	PD696	PD697	PD698	PD699	PD700	PD701	PD702	PD703	PD704	PD705	PD706	PD707	PD708	PD709	PD710	PD711	PD712	PD713	PD714	PD715	PD716	PD717	PD718	PD719	PD720	PD721	PD722	PD723	PD724	PD725	PD726	PD727	PD728	PD729	PD730	PD731	PD732	PD733	PD734	PD735	PD736	PD737	PD738	PD739	PD740	PD741	PD742	PD743	PD744	PD745	PD746	PD747	PD748	PD749	PD750	PD751	PD752	PD753	PD754	PD755	PD756	PD757	PD758	PD759	PD760	PD761	PD762	PD763	PD764	PD765	PD766	PD767	PD768	PD769	PD770	PD771	PD772	PD773	PD774	PD775	PD776	PD777	PD778	PD779	PD780	PD781	PD782	PD783	PD784	PD785	PD786	PD787	PD788	PD789	PD790	PD791	PD792	PD793	PD794	PD795	PD796	PD797	PD798	PD799	PD800	PD801	PD802	PD803	PD804	PD805	PD806	PD807	PD808	PD809	PD810	PD811	PD812	PD813	PD814	PD815	PD816	PD817	PD818	PD819	PD820	PD821	PD822	PD823	PD824	PD825	PD826	PD827	PD828	PD829	PD830	PD831	PD832	PD833	PD834	PD835	PD836	PD837	PD838	PD839	PD840	PD841	PD842	PD843	PD844	PD845	PD846	PD847	PD848	PD849	PD850	PD851	PD852	PD853	PD854	PD855	PD856	PD857	PD858	PD859	PD860	PD861	PD862	PD863	PD864	PD865	PD866	PD867	PD868	PD869	PD870	PD871	PD872	PD873	PD874	PD875	PD876	PD877	PD878	PD879	PD880	PD881	PD882	PD883	PD884	PD885	PD886	PD887	PD888	PD889	PD890	PD891	PD892	PD893	PD894	PD895	PD896	PD897	PD898	PD899	PD900	PD901	PD902	PD903	PD904	PD905	PD906	PD907	PD908	PD909	PD910	PD911	PD912	PD913	PD914	PD915	PD916	PD917	PD918	PD919	PD920	PD921	PD922	PD923	PD924	PD925	PD926	PD927	PD928	PD929	PD930	PD931	PD932	PD933	PD934	PD935	PD936	PD937	PD938	PD939	PD940	PD941	PD942	PD943	PD944	PD945	PD946	PD947	PD948	PD949	PD950	PD951	PD952	PD953	PD954	PD955	PD956	PD957	PD958	PD959	PD960	PD961	PD962	PD963	PD964	PD965	PD966	PD967	PD968	PD969	PD970	PD971	PD972	PD973	PD974	PD975	PD976	PD977	PD978	PD979	PD980	PD981	PD982	PD983	PD984	PD985	PD986	PD987	PD988	PD989	PD990	PD991	PD992	PD993	PD994	PD995	PD996	PD997	PD998	PD999	PD1000
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Appendix C. LA-ICP-MS data. 20um

Spot	Sample	Sample	Deposit/Mine	Area	Co63 ppm LOD	Co63 ppm	Pt105 ppm	Pt105 ppm LOD	Ag107 ppm	Ag107 ppm LOD	Cs133 ppm	Cs133 ppm LOD	Bi211 ppm	Bi211 ppm LOD	Au197 ppm	Au197 ppm LOD	Hg202 ppm	Hg202 ppm LOD	Bi209 ppm	Bi209 ppm LOD	L7 ppm	L7 ppm LOD	Mg24 ppm	Mg24 ppm LOD	As77 ppm	As77 ppm LOD	A127 ppm	A127 ppm LOD	Al27 ppm	Al27 ppm LOD	Si29 ppm	Si29 ppm LOD		
Ackerman-M54923-1	M54923	M54923	Ackerman	Grenville	108.728	2.12156	BelowLOD	0.81531	80248.2	3.29791	BelowLOD	0.00000	BelowLOD	17.541	911906	1.45409	1245.89	25.6672	0.11669	0.04435	BelowLOD	1.8786	BelowLOD	2.82986	BelowLOD	14.6131	BelowLOD	14.6131	BelowLOD	14.6131	BelowLOD	14.6131	BelowLOD	
Ackerman-M54923-2	M54923	M54923	Ackerman	Grenville	137.988	2.9188	0.13539	0.00034	82196.4	3.80223	BelowLOD	0.00000	0.00000	0.00000	90324.0	3.7881	1159.29	24.9728	1.35959	0.08734	BelowLOD	2.84528	BelowLOD	4.98231	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD	
Ackerman-M54923-4	M54923	M54923	Ackerman	Grenville	152.246	2.49252	BelowLOD	0.00000	82196.4	3.80223	BelowLOD	0.00000	0.00000	0.00000	90324.0	3.7881	1159.29	24.9728	1.35959	0.08734	BelowLOD	2.84528	BelowLOD	4.98231	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD	
Ackerman-M54923-5	M54923	M54923	Ackerman	Grenville	201.423	0.92384	0.60892	0.25740	75841.4	3.38583	BelowLOD	0.00000	0.00000	0.00000	101134.0	92054.4	4.20774	1417.82	33.9423	BelowLOD	0.00000	4.77965	BelowLOD	8.28773	BelowLOD	14.6836	BelowLOD	14.6836	BelowLOD	14.6836	BelowLOD	14.6836	BelowLOD	
Ackerman-M54923-6	M54923	M54923	Ackerman	Grenville	97.0067	0.062	BelowLOD	0.00000	75909.1	3.17005	BelowLOD	0.00000	0.00000	0.00000	117005.0	92025.0	1.70252	821.578	8.28944	0.6736	0.061	BelowLOD	1.19516	BelowLOD	2.42373	BelowLOD	14.6836	BelowLOD	14.6836	BelowLOD	14.6836	BelowLOD		
G40050-Broulain#1	G40050	G40050	Broulain	Abitibi	40.2089	1.0618	BelowLOD	0.96275	30166.8	2.5004	BelowLOD	2.30559	59927.0	28723.0	8047.0	14.4397	1341.25	5.05932	0.41023	0.170765	BelowLOD	1.05917	41.7579	0.79191	770.138	5.5853	14.4442	14.4442	14.4442	14.4442	14.4442	14.4442		
G40050-Broulain#2	G40050	G40050	Broulain	Abitibi	49.2774	1.2094	BelowLOD	1.2364	78911.7	4.51294	BelowLOD	4.3727	9.076	0.00000	90324.0	3.7881	1159.29	24.9728	1.35959	0.08734	BelowLOD	2.84528	BelowLOD	4.98231	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD	
G40050-Broulain#3	G40050	G40050	Broulain	Abitibi	42.2089	1.52593	BelowLOD	1.42603	34170.4	3.44861	BelowLOD	3.58811	2.90661	91.341	88574.0	26.4297	1.9659	6.78807	2.13025	0.13716	0.439214	BelowLOD	1.42603	1.71236	31.120	31.120	14.7116	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD		
G40050-Broulain#4	G40050	G40050	Broulain	Abitibi	47.2818	1.37589	BelowLOD	1.41010	93176.2	3.15572	BelowLOD	2.76087	1.81718	54132.0	89944.0	21.2627	1.78096	6.91374	1.93788	0.23465	0.149645	BelowLOD	2.7296	BelowLOD	1.20951	13.499	17.8107	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD		
G40050-Broulain#5	G40050	G40050	Broulain	Abitibi	43.5966	1.52042	BelowLOD	2.11404	90021.9	3.82222	BelowLOD	3.92458	0.5554	40.0313	89944.0	28.2502	11.2134	7.87594	0.44425	0.23995	0.149645	BelowLOD	4.4002	BelowLOD	1.10351	34.977	8.888	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD		
G40050-Broulain#6	G40050	G40050	Broulain	Abitibi	50.1828	2.89077	BelowLOD	2.05054	92011.9	4.28104	BelowLOD	4.92024	BelowLOD	0.00000	90324.0	3.7881	1159.29	24.9728	1.35959	0.08734	BelowLOD	2.84528	BelowLOD	4.98231	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD	
G40050-Broulain#7	G40050	G40050	Broulain	Abitibi	38.6487	1.16681	BelowLOD	1.9403	91284.7	3.2043	BelowLOD	3.24444	BelowLOD	0.00000	90324.0	3.7881	1159.29	24.9728	1.35959	0.08734	BelowLOD	2.84528	BelowLOD	4.98231	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD	
G40050-Broulain#8	G40050	G40050	Broulain	Abitibi	56.8714	1.8146	BelowLOD	2.14391	89905.6	3.97888	BelowLOD	4.79949	BelowLOD	0.00000	90324.0	3.7881	1159.29	24.9728	1.35959	0.08734	BelowLOD	2.84528	BelowLOD	4.98231	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD	
G40050-Broulain#9	G40050	G40050	Broulain	Abitibi	40.5934	2.79127	BelowLOD	2.54635	89047	6.2828	BelowLOD	6.4519	BelowLOD	0.00000	90324.0	3.7881	1159.29	24.9728	1.35959	0.08734	BelowLOD	2.84528	BelowLOD	4.98231	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD	
G40050-Broulain#10	G40050	G40050	Broulain	Abitibi	41.373	1.9556	BelowLOD	1.60071	92706.6	3.1274	BelowLOD	3.59316	0.587	0.55037	90425.0	2.3793	1405.48	6.81986	1.80515	0.16184	0.149645	BelowLOD	3.84613	BelowLOD	1.25208	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD
CochenourWilliams-TH-001-1	TH001	TH001	CochenourWilliams	Red Lake	439.334	4.88388	BelowLOD	1.11018	33599.2	2.61556	BelowLOD	2.59716	12.826	0.04561	95624.0	2.7255	456.666	20.485	BelowLOD	0.00000	3.84688	BelowLOD	5.75027	BelowLOD	14.6131	BelowLOD	14.6131	BelowLOD	14.6131	BelowLOD	14.6131	BelowLOD		
CochenourWilliams-TH-001-2	TH001	TH001	CochenourWilliams	Red Lake	439.334	2.9111	BelowLOD	5.75757	33654.8	2.3164	BelowLOD	2.3164	19.579	0.9309	90606.0	4.21632	4800.18	25.4074	BelowLOD	0.05767	0.92105	BelowLOD	4.76083	BelowLOD	30.0716	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD		
CochenourWilliams-TH-001-3	TH001	TH001	CochenourWilliams	Red Lake	444.039	2.65044	BelowLOD	0.25571	33863.3	2.81239	BelowLOD	2.81239	18.1297	0.94738	95589.0	4.16245	4654.91	20.3714	BelowLOD	0.00000	1.31146	BelowLOD	4.14278	24.144	18.3131	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD		
CochenourWilliams-TH-001-4	TH001	TH001	CochenourWilliams	Red Lake	448.251	2.93809	BelowLOD	0.00000	34039.9	3.06939	BelowLOD	3.06939	18.2815	0.0022	95589.0	3.71603	4760.28	24.2164	BelowLOD	0.00000	1.64527	BelowLOD	4.6276	BelowLOD	8.02966	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD		
CochenourWilliams-TH-001-5	TH001	TH001	CochenourWilliams	Red Lake	439.334	2.02447	BelowLOD	0.18161	38447.0	2.89056	BelowLOD	2.89056	12.826	0.04561	95624.0	2.7255	456.666	20.485	BelowLOD	0.00000	3.84688	BelowLOD	5.75027	BelowLOD	14.6131	BelowLOD	14.6131	BelowLOD	14.6131	BelowLOD	14.6131	BelowLOD		
CochenourWilliams-TH-001-6	TH001	TH001	CochenourWilliams	Red Lake	372.61	2.50893	0.29684	0.10347	33761.1	3.15976	BelowLOD	3.2341	9.2284	0.8097	95834.0	3.84454	4915.33	26.7011	BelowLOD	0.00000	1.2722	2.48408	0.22886	BelowLOD	2.35083	127.22	14.5428	BelowLOD	14.5428	BelowLOD	14.5428	BelowLOD		
CochenourWilliams-TH-001-7	TH001	TH001	CochenourWilliams	Red Lake	446.616	2.57791	0.47375	0.10371	34927	2.53575	BelowLOD	3.48499	13.7307	0.84772	95602.0	4.06637	4601.58	23.364	BelowLOD	0.00000	1.63673	BelowLOD	4.82371	BelowLOD	8.23271	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD		
CochenourWilliams-TH-001-8	TH001	TH001	CochenourWilliams	Red Lake	472.009	1.84084	BelowLOD	0.06439	34975.5	3.03103	BelowLOD	3.18308	13.7307	0.84772	95602.0	4.06637	4601.58	23.364	BelowLOD	0.00000	1.63673	BelowLOD	4.82371	BelowLOD	8.23271	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD		
CochenourWilliams-TH-001-9	TH001	TH001	CochenourWilliams	Red Lake	410.818	1.89045	BelowLOD	0.06439	34975.5	3.03103	BelowLOD	3.18308	13.7307	0.84772	95602.0	4.06637	4601.58	23.364	BelowLOD	0.00000	1.63673	BelowLOD	4.82371	BelowLOD	8.23271	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD		
A0037286-DioMine-1	A0037286	A0037286	Dio	Red Lake	247.214	1.32176	BelowLOD	2.42287	77755.7	2.90479	BelowLOD	3.29658	3.13663	0.0131	851043.0	2.69945	78.7273	5.74698	86.5032	0.26304	0.149645	BelowLOD	1.95839	216.049	1.44485	60.5157	17.6431	15.0743	15.0743	15.0743	15.0743	15.0743	15.0743	
A0037286-DioMine-2	A0037286	A0037286	Dio	Red Lake	316.252	1.03253	BelowLOD	3.34628	79708	3.2805	3.4791	2.6418	6.88778	0.23718	95105.0	2.66185	170.171	8.49357	25.8886	0.2345	0.149645	BelowLOD	1.55357	21.587	7.60026	62.2616	14.5428	14.5428	14.5428	14.5428	14.5428	14.5428	14.5428	
A0037286-DioMine-3	A0037286	A0037286	Dio	Red Lake	441.027	2.82385	BelowLOD	0.88662	74016.7	5.94253	BelowLOD	6.9476	9.2588	1.1172	92549.0	3.5856	138.185	22.345	BelowLOD	0.00000	1.62311	BelowLOD	4.60271	BelowLOD	8.23271	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD		
A0037286-DioMine-4	A0037286	A0037286	Dio	Red Lake	384.424	1.5140	BelowLOD	2.82385	78444.4	3.19249	BelowLOD	3.19249	13.1167	0.00000	90324.0	3.7881	1159.29	24.9728	1.35959	0.08734	BelowLOD	2.84528	BelowLOD	4.98231	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD	
A0037286-DioMine-5	A0037286	A0037286	Dio	Red Lake	431.057	2.52428	BelowLOD	1.41376	74164.4	5.20322	BelowLOD	6.67971	9.2588	1.1172	92549.0	3.5856	138.185	22.345	BelowLOD	0.00000	1.62311	BelowLOD	4.60271	BelowLOD	8.23271	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD	14.7116	BelowLOD		
A0037286-DioMine-6	A0037286	A0037286	Dio	Red Lake	445.213	2.29429	BelowLOD	3.43461	74531.9	5.49378	13.663	8.8046	8.41516	0.6515	92049.0	4.7347	152.336	19.133	0.32022	0.10121	0.149645	BelowLOD	7.9077											

Appendix C. LA-CP-MS data. 20um

Spot	P31 ppm	P31 ppm LOD	S34 ppm	S34 ppm LOD	Ca43 ppm	Ca43 ppm LOD	Ca65 ppm	Ca65 ppm LOD	T47 ppm	V51 ppm	V51 ppm LOD	Cr52 ppm	Cr52 ppm LOD	Mn55 ppm	Mn55 ppm LOD	Mn55 ppm LOD	Fe57 ppm	Fe57 ppm LOD	Co59 ppm	Co59 ppm LOD	Ni60 ppm	Ni60 ppm LOD	Zn66 ppm	Zn66 ppm LOD	Zn66 ppm LOD	Ga71 ppm	Ga71 ppm LOD	Ge72 ppm	Ge72 ppm LOD	As75 ppm	As75 ppm LOD	Se82 ppm	Se82 ppm LOD		
Ackerman-M54923-1	BelowLOD	376.127	BelowLOD	592.88	BelowLOD	7.76777	BelowLOD	19.2684	BelowLOD	4.44046	BelowLOD	152.827	BelowLOD	36.4195	BelowLOD	1174	BelowLOD	8.07078	BelowLOD	24.5391	BelowLOD	26.6433	BelowLOD	0.71705	0.17317	BelowLOD	2145.32	BelowLOD	17.2612	BelowLOD	290.814	BelowLOD			
Ackerman-M54923-2	BelowLOD	1745.84	BelowLOD	1029.96	BelowLOD	Inf	BelowLOD	7.30195	BelowLOD	62.9959	BelowLOD	2.67447	BelowLOD	48.3423	BelowLOD	54.9222	BelowLOD	Inf	BelowLOD	15.1276	BelowLOD	19.7414	BelowLOD	58.6776	BelowLOD	Inf	BelowLOD	2581.25	BelowLOD	10.5814	BelowLOD	213.989	BelowLOD		
Ackerman-M54923-3	BelowLOD	187.402	BelowLOD	1874.18	BelowLOD	18552	BelowLOD	6.50816	BelowLOD	Inf	BelowLOD	34.0301	BelowLOD	44.9622	BelowLOD	58.8133	BelowLOD	21.9312	BelowLOD	4.45025	BelowLOD	34.0024	BelowLOD	Inf	BelowLOD	4.5866	BelowLOD	2646.08	BelowLOD	5.7005	BelowLOD	187.844	BelowLOD		
Ackerman-M54923-4	BelowLOD	442.16	BelowLOD	1957.41	BelowLOD	606.53	BelowLOD	7.07007	BelowLOD	14.2627	BelowLOD	2.0791	BelowLOD	38.8191	BelowLOD	70.017	BelowLOD	16.1148	BelowLOD	0.9546	BelowLOD	7.9891	BelowLOD	2.2116	BelowLOD	2.9551	5.66648	BelowLOD	38.9022	BelowLOD	204.502	BelowLOD			
Ackerman-M54923-5	BelowLOD	815.329	BelowLOD	171.641	BelowLOD	75.156	BelowLOD	Inf	BelowLOD	4.70833	BelowLOD	4.13607	BelowLOD	16.0514	BelowLOD	Inf	BelowLOD	52.919	BelowLOD	Inf	BelowLOD	34.312	BelowLOD	0.50311	0.24881	0.6369	BelowLOD	Inf	BelowLOD	8.328	BelowLOD	377.64	BelowLOD		
Ackerman-M54923-6	BelowLOD	266.67	1915.11	1861.64	BelowLOD	1545.16	BelowLOD	1.67308	BelowLOD	4.57815	BelowLOD	0.64321	BelowLOD	14.027	BelowLOD	14.789	BelowLOD	Inf	BelowLOD	0.29196	BelowLOD	5.61216	BelowLOD	0.93553	BelowLOD	0.4115	BelowLOD	Inf	BelowLOD	1.68601	BelowLOD	77.733	BelowLOD		
G40050-BroulanON-1	BelowLOD	239.029	BelowLOD	2399.96	BelowLOD	2979.34	BelowLOD	4.37823	BelowLOD	12.3982	BelowLOD	12.2496	BelowLOD	12.2496	BelowLOD	11.2227	14.716	1.95058	BelowLOD	0.05065	BelowLOD	5.0309	7.80646	3.92826	BelowLOD	1.32945	35.056	3.17884	BelowLOD	1.24823	BelowLOD	35.902	BelowLOD		
G40050-BroulanON-2	BelowLOD	421.948	BelowLOD	4068.53	BelowLOD	5165.61	BelowLOD	7.60719	BelowLOD	16.7662	BelowLOD	2.0791	BelowLOD	34.2489	BelowLOD	38.8191	BelowLOD	16.1148	BelowLOD	0.9546	BelowLOD	7.9891	BelowLOD	2.2116	BelowLOD	2.9551	5.66648	BelowLOD	38.9022	BelowLOD	204.502	BelowLOD			
G40050-BroulanON-3	BelowLOD	324.628	4372.39	31.904	BelowLOD	415.558	BelowLOD	5.86063	BelowLOD	14.3627	BelowLOD	1.57036	BelowLOD	17.3274	BelowLOD	15.5052	BelowLOD	14.9105	BelowLOD	0.02626	BelowLOD	6.06889	BelowLOD	1.63028	BelowLOD	1.63028	BelowLOD	16.3011	38.777	4.55564	BelowLOD	1.89075	BelowLOD	49.7324	BelowLOD
G40050-BroulanON-4	BelowLOD	319.306	BelowLOD	3046.84	BelowLOD	4011.68	BelowLOD	5.68845	BelowLOD	20.1549	BelowLOD	1.55556	BelowLOD	10.4785	BelowLOD	14.9667	BelowLOD	90.4757	BelowLOD	0.81295	BelowLOD	6.49626	5.24123	6.21627	BelowLOD	1.66572	35.895	4.25986	BelowLOD	1.81995	BelowLOD	48.707	BelowLOD		
G40050-BroulanON-5	BelowLOD	374.562	BelowLOD	3808.1	BelowLOD	4616.38	BelowLOD	6.65684	BelowLOD	10.1547	BelowLOD	1.95087	BelowLOD	20.3474	BelowLOD	18.2098	BelowLOD	0.9168	BelowLOD	7.4851	BelowLOD	5.05221	BelowLOD	2.02478	37.4745	5.24892	BelowLOD	1.97081	BelowLOD	55.4448	BelowLOD	45.4448	BelowLOD		
G40050-BroulanON-6	BelowLOD	322.646	BelowLOD	7637.94	BelowLOD	11132.36	BelowLOD	25.7975	BelowLOD	2.0855	BelowLOD	37.612	BelowLOD	38.7035	BelowLOD	182.954	BelowLOD	1.58646	BelowLOD	12.9959	BelowLOD	10.4732	BelowLOD	3.02066	35.608	4.20517	34.947	4.75516	BelowLOD	57.6983	BelowLOD	47.6983	BelowLOD		
G40050-BroulanON-7	BelowLOD	327.886	BelowLOD	3079.5	BelowLOD	3968.99	BelowLOD	5.93818	BelowLOD	17.2866	BelowLOD	1.70997	BelowLOD	21.7621	BelowLOD	15.4346	BelowLOD	0.92553	BelowLOD	6.57977	BelowLOD	6.31779	BelowLOD	1.53187	28.957	5.43818	BelowLOD	1.86053	BelowLOD	49.74	BelowLOD	48.555	BelowLOD		
G40050-BroulanON-8	BelowLOD	394.593	BelowLOD	3698.08	BelowLOD	4826.36	BelowLOD	7.14577	BelowLOD	19.6277	BelowLOD	1.96057	BelowLOD	17.337	BelowLOD	18.1771	BelowLOD	109.098	BelowLOD	1.04041	BelowLOD	7.97614	BelowLOD	2.02621	68.909	5.5276	BelowLOD	1.9122	BelowLOD	58.555	BelowLOD	48.555	BelowLOD		
G40050-BroulanON-9	BelowLOD	633.09	891.1	5905.87	BelowLOD	7658.44	BelowLOD	11.057	BelowLOD	27.2726	BelowLOD	2.8284	BelowLOD	26.6662	BelowLOD	166.081	BelowLOD	1.73995	BelowLOD	12.6553	BelowLOD	6.21828	BelowLOD	2.96451	88.9648	8.33955	BelowLOD	2.46494	BelowLOD	99.7625	BelowLOD	48.555	BelowLOD		
G40050-BroulanON-10	BelowLOD	313.573	BelowLOD	2979.26	BelowLOD	3779.3	BelowLOD	17.6893	BelowLOD	15.6267	BelowLOD	16.9403	BelowLOD	16.4882	BelowLOD	86.378	BelowLOD	0.18088	BelowLOD	6.42103	BelowLOD	5.35444	BelowLOD	1.81373	13.522	4.33316	BelowLOD	1.8456	BelowLOD	48.1597	BelowLOD	48.1597	BelowLOD		
CochranuWilliams-TM-001-1	BelowLOD	273.064	BelowLOD	13825.06	BelowLOD	18587.1	BelowLOD	11.9411	BelowLOD	22.8224	BelowLOD	2.68157	BelowLOD	34.568	BelowLOD	Inf	BelowLOD	21.1744	BelowLOD	3.58223	BelowLOD	17.338	BelowLOD	0.67268	BelowLOD	21.1334	BelowLOD	10.7834	BelowLOD	33.2821	BelowLOD	33.2821	BelowLOD		
CochranuWilliams-TM-001-2	BelowLOD	858.216	BelowLOD	5180.9	BelowLOD	4307.1	BelowLOD	16.4816	BelowLOD	Inf	BelowLOD	53.492	BelowLOD	1.93829	BelowLOD	107.799	BelowLOD	1.4364	BelowLOD	396.124	BelowLOD	17.5488	BelowLOD	Inf	BelowLOD	Inf	BelowLOD	Inf	BelowLOD	26.846	BelowLOD	26.846	BelowLOD		
CochranuWilliams-TM-001-3	BelowLOD	836.894	BelowLOD	9585.79	BelowLOD	8738.67	BelowLOD	9.28111	BelowLOD	4.12867	BelowLOD	4.4274	BelowLOD	19.1392	BelowLOD	115.757	BelowLOD	Inf	BelowLOD	21.0263	BelowLOD	22.466	BelowLOD	0.07182	BelowLOD	Inf	BelowLOD	3.99414	BelowLOD	112.551	BelowLOD	112.551	BelowLOD		
CochranuWilliams-TM-001-4	BelowLOD	347.138	BelowLOD	306.94	BelowLOD	408.23	BelowLOD	3.0394	BelowLOD	12.7960	BelowLOD	1.81163	BelowLOD	42.2172	BelowLOD	71.1121	BelowLOD	Inf	BelowLOD	48.9863	BelowLOD	0.47643	BelowLOD	18.4463	BelowLOD	29.6248	0.67697	0.54743	BelowLOD	Inf	BelowLOD	187.709	BelowLOD		
CochranuWilliams-TM-001-5	BelowLOD	916.095	BelowLOD	1955.44	BelowLOD	5981.39	BelowLOD	4.62465	BelowLOD	40.4841	BelowLOD	2.85644	BelowLOD	42.727	BelowLOD	Inf	BelowLOD	265.66	BelowLOD	Inf	BelowLOD	24.8816	BelowLOD	31.6085	BelowLOD	0.7473	BelowLOD	Inf	BelowLOD	2456.73	BelowLOD	2456.73	BelowLOD		
CochranuWilliams-TM-001-6	BelowLOD	740.496	BelowLOD	5914.9	BelowLOD	1604.39	BelowLOD	Inf	BelowLOD	40.7599	BelowLOD	2.98454	BelowLOD	Inf	BelowLOD	55.5238	BelowLOD	209.487	BelowLOD	2.98318	BelowLOD	9.4182	BelowLOD	Inf	BelowLOD	4.47884	BelowLOD	7297.11	BelowLOD	7297.11	BelowLOD	543.383	BelowLOD	543.383	BelowLOD
CochranuWilliams-TM-001-8	BelowLOD	421.948	BelowLOD	4068.53	BelowLOD	5165.61	BelowLOD	7.60719	BelowLOD	16.7662	BelowLOD	2.0791	BelowLOD	34.2489	BelowLOD	38.8191	BelowLOD	16.1148	BelowLOD	0.9546	BelowLOD	7.9891	BelowLOD	2.2116	BelowLOD	2.9551	5.66648	BelowLOD	38.9022	BelowLOD	204.502	BelowLOD	204.502	BelowLOD	
CochranuWilliams-TM-001-9	BelowLOD	426.647	BelowLOD	3180.24	BelowLOD	3114.114	BelowLOD	5.52246	BelowLOD	2.99726	BelowLOD	1.7026	BelowLOD	36.3683	BelowLOD	69.0233	BelowLOD	128.356	BelowLOD	0.71882	BelowLOD	7.14842	BelowLOD	23.5787	BelowLOD	0.60683	BelowLOD	1769.28	BelowLOD	10.429	BelowLOD	10.429	BelowLOD		
A0037282e-DioxIN-1	BelowLOD	348.19	BelowLOD	1526.64	BelowLOD	3946.97	BelowLOD	8.85428	BelowLOD	27.6488	BelowLOD	2.50551	BelowLOD	30.5217	BelowLOD	36.1626	121.18	1.341	1.4561	BelowLOD	Inf	40.645	8.1168	0.30191	BelowLOD	16.742	8.5021	2.7857	BelowLOD	71.3437	BelowLOD	71.3437	BelowLOD		
A0037282e-DioxIN-2	BelowLOD	Inf	BelowLOD	473.823	BelowLOD	6140.3	BelowLOD	11.5516	BelowLOD	Inf	BelowLOD	1.16881	BelowLOD	19.5988	BelowLOD	34.7828	154.085	122.767	BelowLOD	Inf	BelowLOD	Inf	BelowLOD	7.378	BelowLOD	7.054	BelowLOD	Inf	BelowLOD	1.73201	BelowLOD	39.9595	BelowLOD	39.9595	BelowLOD
A0037282e-DioxIN-3	BelowLOD	394.135	BelowLOD	394.135	BelowLOD	394.135	BelowLOD	394.135	BelowLOD	394.135	BelowLOD	394.135	BelowLOD	394.135	BelowLOD	394.135	BelowLOD	394.135	BelowLOD	394.135	BelowLOD	394.135	BelowLOD	394.135	BelowLOD	394.135	BelowLOD	394.135	BelowLOD	394.135	BelowLOD	394.135	BelowLOD	394.135	BelowLOD
A0037282e-DioxIN-4	BelowLOD	121.671	BelowLOD	1409.8	BelowLOD	4209.83	BelowLOD	6.13268	BelowLOD	24.864	BelowLOD	2.861	BelowLOD	29.8454	BelowLOD	30.58	19.544	18.644	BelowLOD	1.97547	BelowLOD	18.2591	BelowLOD	14.1235	BelowLOD	3.97187	BelowLOD	Inf	BelowLOD	1.50919	BelowLOD	26.1735	BelowLOD	26.1735	BelowLOD
A0037282e-DioxIN-5	BelowLOD	Inf	BelowLOD	807.7	BelowLOD	2102.94	BelowLOD	28.2409	BelowLOD	24.042	BelowLOD	24.042	BelowLOD	29.993	BelowLOD	29.993	BelowLOD	29.993	BelowLOD	29.993	BelowLOD	29.993	BelowLOD	29.993	BelowLOD	29.993	BelowLOD	29.993	BelowLOD	29.993	BelowLOD	29.993	BelowLOD	29.993	BelowLOD
A0037282e-DioxIN-6	BelowLOD	1121.86	BelowLOD	1390.33	BelowLOD	1667.2	BelowLOD	Inf	BelowLOD	10.1595	BelowLOD	15.0774	BelowLOD	49.1314	BelowLOD	74.024	BelowLOD	667.668	BelowLOD	Inf	BelowLOD	109.613	BelowLOD	26.9598	BelowLOD	3.58587	BelowLOD	2.8803	BelowLOD	2.64176	BelowLOD	233.094	BelowLOD	233.094	BelowLOD
A0037282e-DioxIN-7	BelowLOD	1022.73	BelowLOD	1998.33	BelowLOD	16725.6	BelowLOD	25.921	BelowLOD	24.9458	BelowLOD	13.0824	BelowLOD	181.138	BelowLOD	791.802	BelowLOD	606.639	BelowLOD	82.0924	BelowLOD	Inf	BelowLOD	27.7677	BelowLOD	7.7686	BelowLOD	3.78686	BelowLOD	Inf	BelowLOD	Inf	BelowLOD	Inf	BelowLOD
A0037282e-DioxIN-8	BelowLOD	231.621	BelowLOD	231.621	BelowLOD	231.621	BelowLOD	231.621	BelowLOD	231.621	BelowLOD	231.621	BelowLOD	231.621	BelowLOD	231.621	BelowLOD	231.621	BelowLOD	231.621	BelowLOD	231.621	BelowLOD	231.621	BelowLOD	231.621	BelowLOD	231.621	BelowLOD	231.621	BelowLOD	231.621	BelowLOD	231.621	BelowLOD
A0037282e-DioxIN-9	BelowLOD	92.1441	BelowLOD	34815.6	BelowLOD	5377.88	BelowLOD	Inf	BelowLOD	97.1728	BelowLOD	Inf	BelowLOD	116.254	BelowLOD	81.521	BelowLOD	369.987	BelowLOD	15.494	BelowLOD	33.7734	BelowLOD	13.9729	BelowLOD	7.8849	BelowLOD	Inf	BelowLOD	5.37	BelowLOD	Inf	BelowLOD	Inf	BelowLOD
A0037282e-DioxIN-10	BelowLOD	1121.84	BelowLOD	1951.08	BelowLOD	59490	BelowLOD	20.5075	BelowLOD	100.528	BelowLOD	4.86017	BelowLOD	16.8706	BelowLOD	58.8179	BelowLOD	129.82	BelowLOD	2.1137	BelowLOD	44.0541	BelowLOD	19.0729	BelowLOD	0.74466	BelowLOD	5415.22	BelowLOD	10.767	BelowLOD	358.811	BelowLOD	358.811	BelowLOD
D161489-DioxIN-1	BelowLOD	391.427	BelowLOD	5275.49	BelowLOD	4493.97	BelowLOD	9.35272	BelowLOD	22.3716	BelowLOD	2.91794	BelowLOD	36.9976	BelowLOD	25.5882	43.342	18.716	4653.61	122.862	1.44542</														

Appendix C. LA-ICP-MS data. 20um

Spot	Pb206 ppm	Pb206 ppm LOD	Pb207 ppm	Pb207 ppm LOD	Pb208 ppm	Pb208 ppm LOD	U238 ppm	U238 ppm LOD	PbTotal ppm	PbTotal ppm LOD
Ackerman-M54923-1	0.27965	0.24802	BelowLOD	0.27208	BelowLOD	0.12055	BelowLOD	inf	0.12738	0.12055
Ackerman-M54923-2	BelowLOD	0.16426	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf
Ackerman-M54923-3	0.21132	0.09412	BelowLOD	inf	0.17587	0.11474	BelowLOD	inf	0.34212	0.11474
Ackerman-M54923-4	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf
Ackerman-M54923-5	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf
Ackerman-M54923-6	BelowLOD	0.24232	BelowLOD	0.26572	0.33019	0.11185	BelowLOD	0.03433	0.26307	0.11185
G40050-BroudanON1	4.90085	0.62292	3.77198	0.77972	2.99006	0.08992	BelowLOD	0.27482	2.4032	0.08992
G40050-BroudanON2	2.1279	1.0383	1.5673	0.93977	2.49555	0.39973	BelowLOD	0.52242	2.1207	0.9873
G40050-BroudanON3	6.5952	0.84256	5.45368	0.91033	6.3358	0.30904	BelowLOD	0.46393	6.15896	0.30904
G40050-BroudanON4	6.33973	1.13184	5.96165	1.05881	7.68961	0.34267	BelowLOD	0.35629	7.64037	0.34267
G40050-BroudanON5	2.57726	1.06941	1.95071	1.2864	2.96664	0.42216	BelowLOD	0.43812	2.44789	0.42216
G40050-BroudanON6	2.09771	1.25494	3.70449	2.02644	5.4523	0.57206	BelowLOD	0.78522	3.20406	0.57206
G40050-BroudanON7	1.99159	0.75638	2.31829	0.63147	1.78526	0.26942	BelowLOD	0.42076	1.74701	0.26942
G40050-BroudanON8	0.2876	0.2179	BelowLOD	0.75333	BelowLOD	0.64348	BelowLOD	0.51285	BelowLOD	0.64348
G40050-BroudanON9	BelowLOD	1.2755	BelowLOD	1.39986	BelowLOD	1.08425	BelowLOD	0.70795	BelowLOD	1.08425
G40050-BroudanON10	2.05342	0.98802	1.48676	0.94504	2.02894	0.40443	BelowLOD	0.31324	2.15723	0.40443
CochehourWillans-TH-001-1	0.06749	0.0598	BelowLOD	0.26697	0.03183	0.0282	BelowLOD	inf	BelowLOD	0.0282
CochehourWillans-TH-001-2	BelowLOD	inf	BelowLOD	inf	BelowLOD	0.03289	BelowLOD	inf	BelowLOD	0.03289
CochehourWillans-TH-001-3	0.13621	0.1208	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf
CochehourWillans-TH-001-4	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf
CochehourWillans-TH-001-5	0.20504	0.09261	BelowLOD	0.03143	0.10729	0.05591	BelowLOD	inf	0.15527	0.05591
CochehourWillans-TH-001-6	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf
CochehourWillans-TH-001-7	BelowLOD	5.73479	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf
CochehourWillans-TH-001-8	0.15308	0.08345	0.05664	0.10098	0.08771	BelowLOD	0.48396	0.11511	0.10871	0.08771
CochehourWillans-TH-001-9	BelowLOD	inf	BelowLOD	inf	BelowLOD	1.76717	BelowLOD	0.03835	BelowLOD	1.76717
A00372826-DioicON-1	410.704	1.0656	434.316	1.35188	449.142	0.47972	BelowLOD	0.41667	437.066	0.47972
A00372826-DioicON-2	79.5148	1.14595	89.2116	1.1339	90.6773	0.64421	BelowLOD	0.34615	93.5396	0.64421
A00372826-DioicON-3	BelowLOD	7.76711	BelowLOD	5.62566	BelowLOD	0.87745	BelowLOD	2.12854	BelowLOD	0.87745
A00372826-DioicON-4	17.8457	2.007	16.2648	2.01576	19.2955	1.79048	BelowLOD	0.7986	18.073	1.79048
A00372826-DioicON-5	BelowLOD	1.18294	BelowLOD	1.42138	BelowLOD	inf	BelowLOD	1.13951	BelowLOD	inf
A00372826-DioicON-6	BelowLOD	1.68966	BelowLOD	inf	BelowLOD	1.29873	BelowLOD	inf	BelowLOD	1.29873
A00372826-DioicON-7	0.59553	0.20411	BelowLOD	0.17505	BelowLOD	0.31228	BelowLOD	inf	BelowLOD	0.31228
A00372826-DioicON-8	BelowLOD	2.10393	BelowLOD	0.95758	BelowLOD	0.42442	BelowLOD	1.76942	BelowLOD	0.42442
A00372826-DioicON-9	BelowLOD	inf	BelowLOD	5.10986	BelowLOD	15.6165	BelowLOD	5.53805	BelowLOD	15.6165
A00372826-DioicON-10	BelowLOD	inf	BelowLOD	2.99588	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf
DI164489-DioicON-1	20.4442	0.98186	20.2892	0.72238	21.6753	0.40785	BelowLOD	inf	21.6189	0.40785
DI164489-DioicON-2	4.2345	0.2598	3.94483	1.84962	4.79775	0.55719	BelowLOD	1.3951	4.49892	0.55719
DI164489-DioicON-3	4.38105	0.84126	4.98404	1.14942	3.9382	0.43163	BelowLOD	0.37836	4.3975	0.43163
DI164489-DioicON-4	1.81345	0.20167	2.35998	0.32596	2.84049	1.3314	BelowLOD	2.36158	2.53723	1.3314
DI164489-DioicON-5	13.9599	0.48407	14.7454	1.03876	13.2221	0.37557	BelowLOD	0.55636	13.0213	0.37557
DI164489-DioicON-6	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf
DI164489-DioicON-7	BelowLOD	0.86508	BelowLOD	inf	BelowLOD	2.99005	BelowLOD	1.28479	BelowLOD	2.99005
DI164489-DioicON-8	BelowLOD	6.0485	BelowLOD	9.26863	BelowLOD	0.58529	BelowLOD	0.97433	BelowLOD	0.58529
DI164489-DioicON-9	BelowLOD	2.04835	BelowLOD	inf	BelowLOD	1.51515	BelowLOD	2.06096	BelowLOD	1.51515
DI164489-DioicON-10	BelowLOD	inf	BelowLOD	2.81237	BelowLOD	1.33598	BelowLOD	inf	BelowLOD	1.33598
Dome-M22583B-1	BelowLOD	inf	BelowLOD	inf	BelowLOD	3.66258	BelowLOD	inf	BelowLOD	3.66258
Dome-M22583B-2	BelowLOD	8.50556	BelowLOD	0.08608	BelowLOD	0.10487	BelowLOD	inf	BelowLOD	0.10487
Dome-M22583B-3	BelowLOD	0.24676	BelowLOD	inf	0.03224	0.02858	BelowLOD	inf	BelowLOD	0.02858
Dome-M22583B-4	BelowLOD	inf	BelowLOD	4.77151	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf
RM001-MusshWhiteON-1	1.82227	0.4379	1.61157	1.04442	1.75389	0.36683	BelowLOD	inf	1.75381	0.36683
RM001-MusshWhiteON-2	BelowLOD	10.4084	BelowLOD	166.189	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf
RM001-MusshWhiteON-3	BelowLOD	0.31426	BelowLOD	inf	BelowLOD	0.56455	BelowLOD	2.1976	BelowLOD	0.56455
RM001-MusshWhiteON-4	0.14423	0.05597	BelowLOD	0.04306	BelowLOD	0.36358	BelowLOD	0.29138	BelowLOD	0.36358
RM001-MusshWhiteON-5	BelowLOD	2.1897	BelowLOD	2.95913	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf
RM001-MusshWhiteON-6	BelowLOD	1.18303	BelowLOD	0.81261	BelowLOD	0.59137	BelowLOD	0.91541	BelowLOD	0.59137
RM001-MusshWhiteON-7	0.83488	0.12186	BelowLOD	0.96325	0.50248	0.44026	BelowLOD	1.10355	0.63763	0.44026
RM001-MusshWhiteON-8	0.44491	0.1599	BelowLOD	0.92387	BelowLOD	0.49882	BelowLOD	0.73394	BelowLOD	0.49882
RM001-MusshWhiteON-9	0.92036	1.4696	2.7517	1.76709	4.87279	0.82249	BelowLOD	0.40073	0.40073	0.82249
RM001-MusshWhiteON-10	BelowLOD	inf	2.1448	1.13595	BelowLOD	0.80609	BelowLOD	1.52107	BelowLOD	0.80609
RM001-MusshWhiteON-11	BelowLOD	inf	BelowLOD	7.2971	BelowLOD	11.1339	BelowLOD	inf	BelowLOD	11.1339
RM001-MusshWhiteON-12	BelowLOD	0.74436	BelowLOD	6.66201	BelowLOD	0.74699	BelowLOD	0.94648	BelowLOD	0.74699
RM001-MusshWhiteON-13	BelowLOD	2.1158	BelowLOD	4.4952	BelowLOD	0.3771	BelowLOD	0.5271	BelowLOD	0.3771
RM001-MusshWhiteON-14	BelowLOD	3.48194	BelowLOD	2.36201	2.13079	1.85119	BelowLOD	1.18536	BelowLOD	1.85119
RM001-MusshWhiteON-15	1.55618	1.06635	1.69371	0.96678	2.26566	0.67266	BelowLOD	0.54922	1.96183	0.67266
RM001-MusshWhiteON-16	2.22086	1.05623	4.76172	2.14914	4.49415	1.02166	BelowLOD	0.70177	4.21212	1.02166
RM001-MusshWhiteON-17	BelowLOD	1.5441	0.61379	1.48824	BelowLOD	0.40715	BelowLOD	0.80685	BelowLOD	0.40715
RM001-MusshWhiteON-18	BelowLOD	1.91806	BelowLOD	0.43859	BelowLOD	inf	BelowLOD	0.69842	BelowLOD	inf
RM001-MusshWhiteON-19	BelowLOD	0.71368	BelowLOD	0.98387	0.49528	0.3808	BelowLOD	inf	0.51072	0.3808
RM001-MusshWhiteON-20	1.0273	0.56782	0.98735	0.86883	1.44223	0.54701	BelowLOD	0.16386	1.21667	0.54701
RM001-MusshWhiteON-21	BelowLOD	0.67765	1.26261	1.17303	1.70973	1.00277	BelowLOD	1.09596	1.00277	1.09596
RM001-MusshWhiteON-22	BelowLOD	1.4841	BelowLOD	1.53175	BelowLOD	1.41225	BelowLOD	1.0545	BelowLOD	1.41225
RM001-MusshWhiteON-23	BelowLOD	18.3185	BelowLOD	inf	BelowLOD	8.21753	BelowLOD	inf	BelowLOD	8.21753
RM001-MusshWhiteON-24	BelowLOD	64.6445	BelowLOD	inf	2.0045	0.32407	BelowLOD	6.01652	0.38194	0.32407
RM001-MusshWhiteON-25	BelowLOD	24.7644	BelowLOD	inf	BelowLOD	3.38895	BelowLOD	14.341	BelowLOD	3.38895
RM001-MusshWhiteON-26	BelowLOD	5.80601	BelowLOD	inf	3.55183	3.33365	BelowLOD	10.5798	BelowLOD	2.33165
RM001-MusshWhiteON-27	BelowLOD	1.12167	0.7233	0.20029	BelowLOD	0.9565	BelowLOD	0.87866	BelowLOD	0.9565
RM001-MusshWhiteON-28	0.31398	0.13852	BelowLOD	0.75978	BelowLOD	0.80116	BelowLOD	0.58813	BelowLOD	0.80116
RM001-MusshWhiteON-29	BelowLOD	2.5478	BelowLOD	1.07072	BelowLOD	0.47614	BelowLOD	0.61063	BelowLOD	0.47614
RM001-MusshWhiteON-30	BelowLOD	2.96469	BelowLOD	1.11776	BelowLOD	0.45059	BelowLOD	0.9554	BelowLOD	0.45059
RM001-MusshWhiteON-31	BelowLOD	2.57637	BelowLOD	6.07394	BelowLOD	0.83501	BelowLOD	0.44684	BelowLOD	0.83501
RM001-MusshWhiteON-32	BelowLOD	0.61344	BelowLOD	1.00645	BelowLOD	0.5469	BelowLOD	0.65287	BelowLOD	0.5469
RM001-MusshWhiteON-33	BelowLOD	1.25236	BelowLOD	6.52734	BelowLOD	0.89935	BelowLOD	0.48025	BelowLOD	0.89935
RM001-MusshWhiteON-34	BelowLOD	1.4696	BelowLOD	1.48874	BelowLOD	0.4216	BelowLOD	0.5845	BelowLOD	0.4216
RM001-MusshWhiteON-35	3.80656	1.90179	4.12494	1.47622	4.27937	1.04124	BelowLOD	inf	4.20829	1.04124
RM001-MusshWhiteON-36	5.52944	2.95413	6.07707	3.28449	2.6483	1.22761	BelowLOD	1.02952	3.59652	1.22761
RM001-MusshWhiteON-37	BelowLOD	inf	BelowLOD	0.95997	BelowLOD	0.93616	BelowLOD	1.14093	BelowLOD	0.93616
RM001-MusshWhiteON-38	BelowLOD	0.1454	BelowLOD	inf	BelowLOD	0.38284	BelowLOD	2.42718	BelowLOD	0.38284
RM001-MusshWhiteON-39	BelowLOD	2.71301	BelowLOD	0.24728	0.60128	0.06216	BelowLOD	1.81068	0.33538	0.06216
RM001-MusshWhiteON-40	2.21888	0.61737	BelowLOD	inf	8.48744	1.87114	BelowLOD	2656.57	3.92123	1.87114
RM001-MusshWhiteON-41	0.72121	0.21234	BelowLOD	2.48347	BelowLOD	0.40863	BelowLOD	0.33799	BelowLOD	0.40863
RM001-MusshWhiteON-42	BelowLOD	1.7531	BelowLOD	1.47426	BelowLOD	4.1252	BelowLOD	0.99862	BelowLOD	1.25232
RM001-MusshWhiteON-43	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf	BelowLOD	4.88373	BelowLOD	inf
RM001-MusshWhiteON-44	3.31004	1.81045	2.11503	1.40975	2.59505	1.02182	BelowLOD	0.88834	2.5628	1.02182
RM001-MusshWhiteON-45	2.71267	0.30609	BelowLOD	3.87334	BelowLOD	1.61009	BelowLOD	3.64951	BelowLOD	1.61009
RM001-MusshWhiteON-46	0.69383	0.578	0.83921	0.15605	BelowLOD	0.51162	BelowLOD	0.4623	BelowLOD	0.51162
RM001-MusshWhiteON-47	BelowLOD	2.33858	BelowLOD	1.40539	BelowLOD	0.79357	BelowLOD	1.44389	BelowLOD	0.79357
RP001-IshkodayON-1	3.76122	1.19872	3.06714	1.45641	4.02334	0.62256	BelowLOD	0.6208	4.90392	0.62256
RP001-IshkodayON-2	BelowLOD	0.81847	BelowLOD	1.3035	BelowLOD	0.44422	BelowLOD	0.44919	BelowLOD	0.44422
RP001-IshkodayON-3	1.01614	0.17223	2.80134	0.77315	1.42205	0.58818	BelowLOD	0.46739	1.39776	0.58818
RP001-IshkodayON-4	BelowLOD	1.12022	BelowLOD	0.81664	BelowLOD	0.46412	BelowLOD	0.31972	BelowLOD	0.46412

Appendix C. LA-ICP-MS data. 20um

Spot	Sample	Sample	Deposit/Mine	Area	Cu63 ppm	Cu63 ppm LOD	Pd105 ppm	Pd105 ppm LOD	Ag107 ppm	Ag107 ppm LOD	Cs133 ppm	Cs133 ppm LOD	Ga111 ppm	Ga111 ppm LOD	Sr87 ppm	Sr87 ppm LOD	Ni57 ppm	Ni57 ppm LOD	Au197 ppm	Au197 ppm LOD	Hg202 ppm	Hg202 ppm LOD	Bi209 ppm	Bi209 ppm LOD	L7 ppm	L7 ppm LOD	Mg24 ppm	Mg24 ppm LOD	As75 ppm	As75 ppm LOD	Az177 ppm	Az177 ppm LOD	Sr99 ppm	Sr99 ppm LOD	Sr99 ppm	Sr99 ppm LOD											
Pard005-1	Pard005	Pard005	Pardo	Southern Province	127.375	2.94075 BelowLOD	5.7136	115773	1.11235	256000	101367	BelowLOD	2.83308	867045	4.36402	6947.31	7.596	26.5063	0.75498	BelowLOD	122.726	198.781	9.89165	BelowLOD	42.1603	BelowLOD	142.274	198.781	9.89165	BelowLOD	42.1603	BelowLOD	142.274	198.781	9.89165	BelowLOD	42.1603	BelowLOD									
Pard005-2	Pard005	Pard005	Pardo	Southern Province	126.196	2.90633 BelowLOD	Inf	123299	6.72766	BelowLOD	4.00866	BelowLOD	1.62043	854243	5.11365	66136.2	84.4136	1.46711	0.81846	BelowLOD	Inf	29.9657	10.0110	20.4645	BelowLOD	Inf	29.9657	10.0110	20.4645	BelowLOD	Inf	29.9657	10.0110	20.4645	BelowLOD	Inf	29.9657	10.0110	20.4645	BelowLOD							
Pard005-3	Pard005	Pard005	Pardo	Southern Province	111.253	2.8122 BelowLOD	13.8088	102399	4.66332	BelowLOD	17.3799	1.06319	30.8021	882426	3.58979	9537.26	10.933	1.98524	0.68876	BelowLOD	4.49614	21.9593	3.19219	25.059	24.9938	BelowLOD	13.8088	102399	4.66332	BelowLOD	17.3799	1.06319	30.8021	882426	3.58979	9537.26	10.933	1.98524	0.68876	BelowLOD							
Pard005-4	Pard005	Pard005	Pardo	Southern Province	146.727	2.97201 BelowLOD	0.9757	94949	4.56432	BelowLOD	2.9449	1.06319	30.8021	882426	3.58979	9537.26	10.933	1.98524	0.68876	BelowLOD	4.49614	21.9593	3.19219	25.059	24.9938	BelowLOD	13.8088	102399	4.66332	BelowLOD	17.3799	1.06319	30.8021	882426	3.58979	9537.26	10.933	1.98524	0.68876	BelowLOD							
Pard005-5	Pard005	Pard005	Pardo	Southern Province	114.218	2.32748 BelowLOD	Inf	105889	4.61534	BelowLOD	20.5059	BelowLOD	0.5601	900212	4.34417	12645	10.9552	1.23177	0.65973	BelowLOD	1.85175	15.1262	4.40415	51.7968	24.6327	BelowLOD	106.071	114.218	2.32748	BelowLOD	Inf	105889	4.61534	BelowLOD	20.5059	BelowLOD	0.5601	900212	4.34417	12645	10.9552	1.23177	0.65973	BelowLOD			
Pard005-6	Pard005	Pard005	Pardo	Southern Province	127.19	1.87927 BelowLOD	Inf	97264	1.23863	BelowLOD	Inf	0.77782	4.82707	884008	3.03442	21354.6	12.3163	BelowLOD	Inf	0.10599	BelowLOD	Inf	16.628	2.01059	BelowLOD	Inf	16.628	2.01059	BelowLOD	Inf	16.628	2.01059	BelowLOD	Inf	16.628	2.01059	BelowLOD	Inf	16.628	2.01059	BelowLOD	Inf					
Pard005-7	Pard005	Pard005	Pardo	Southern Province	158.428	2.4136 BelowLOD	1.99502	95495	4.53099	BelowLOD	6.83815	1.318	0.99119	884008	3.46058	24748.2	17.3735	BelowLOD	Inf	0.10599	BelowLOD	Inf	9.69337	BelowLOD	2.04278	BelowLOD	16.2758	BelowLOD	158.428	2.4136	BelowLOD	1.99502	95495	4.53099	BelowLOD	6.83815	1.318	0.99119	884008	3.46058	24748.2	17.3735	BelowLOD	Inf			
Pard006-1	Pard006	Pard006	Pardo	Southern Province	128.128	2.04209 BelowLOD	2.81996	98218	3.798	BelowLOD	1.6246	1.74939	3.69146	873734	3.21951	20214.6	15.9997	74742	0.44389	BelowLOD	3.97879	19.919	15.2318	BelowLOD	1.42421	BelowLOD	14.513	BelowLOD	128.128	2.04209	BelowLOD	2.81996	98218	3.798	BelowLOD	1.6246	1.74939	3.69146	873734	3.21951	20214.6	15.9997	74742	0.44389	BelowLOD		
Pard006-2	Pard006	Pard006	Pardo	Southern Province	129.221	1.63165 BelowLOD	Inf	96868.0	3.8074	BelowLOD	4.49046	1.58018	4.0917	884008	2.90685	25514	15.8069	25.514	1.69307	BelowLOD	4.70734	BelowLOD	Inf	BelowLOD	Inf	BelowLOD	11.6445	129.221	1.63165	BelowLOD	Inf	96868.0	3.8074	BelowLOD	4.49046	1.58018	4.0917	884008	2.90685	25514	15.8069	25.514	1.69307	BelowLOD	4.70734	BelowLOD	Inf
Pard006-3	Pard006	Pard006	Pardo	Southern Province	110.096	1.79289 BelowLOD	1.02142	106384	4.94957	BelowLOD	Inf	1.12852	8.62616	884008	3.30645	17190	13.0224	BelowLOD	0.15418	BelowLOD	0.95615	BelowLOD	4.53682	BelowLOD	4.53682	BelowLOD	45.7202	BelowLOD	110.096	1.79289	BelowLOD	1.02142	106384	4.94957	BelowLOD	Inf	1.12852	8.62616	884008	3.30645	17190	13.0224	BelowLOD	0.15418	BelowLOD	0.95615	BelowLOD
Pard006-4	Pard006	Pard006	Pardo	Southern Province	130.71	1.95882 BelowLOD	0.89347	97577.2	3.85181	BelowLOD	8.34751	1.86356	0.52566	871808	3.06127	22889.7	14.3239	BelowLOD	0.53823	BelowLOD	4.46707	BelowLOD	2.19319	BelowLOD	Inf	BelowLOD	776.38	BelowLOD	130.71	1.95882	BelowLOD	0.89347	97577.2	3.85181	BelowLOD	8.34751	1.86356	0.52566	871808	3.06127	22889.7	14.3239	BelowLOD	0.53823	BelowLOD	4.46707	BelowLOD
Pard006-5	Pard006	Pard006	Pardo	Southern Province	99.312	1.8278 BelowLOD	10.209	110546	4.65495	BelowLOD	0.75008	7.5008	860122	3.45249	14400.6	13.9009	BelowLOD	0.67777	BelowLOD	0.52441	BelowLOD	2.35814	BelowLOD	1.8278	BelowLOD	11.651	BelowLOD	99.312	1.8278	BelowLOD	10.209	110546	4.65495	BelowLOD	0.75008	7.5008	860122	3.45249	14400.6	13.9009	BelowLOD	0.67777	BelowLOD	0.52441	BelowLOD		
Pard007-1	Pard007	Pard007	Pardo	Southern Province	79.4538	2.92939 BelowLOD	9.34414	124725	6.69497	BelowLOD	9.94669	BelowLOD	4.97369	849396	5.11295	47612.2	10.626	8.45036	1.86989	BelowLOD	25.537	80.5669	6.14835	BelowLOD	45.8844	BelowLOD	79.4538	2.92939	BelowLOD	9.34414	124725	6.69497	BelowLOD	9.94669	BelowLOD	4.97369	849396	5.11295	47612.2	10.626	8.45036	1.86989	BelowLOD				
Pard008-1	Pard008	Pard008	Pardo	Southern Province	92.7307	4.06735 BelowLOD	5.33555	130836	7.90736	BelowLOD	Inf	1.52168	869512	7.23384	3772.74	24.9812	4.34862	0.68208	BelowLOD	44.8802	56.6809	31.9246	BelowLOD	54.884	BelowLOD	92.7307	4.06735	BelowLOD	5.33555	130836	7.90736	BelowLOD	Inf	1.52168	869512	7.23384	3772.74	24.9812	4.34862	0.68208	BelowLOD						
Pard008-2	Pard008	Pard008	Pardo	Southern Province	79.1368	2.99402 BelowLOD	10.3739	134099	5.53517	BelowLOD	50.7767	BelowLOD	1.21508	897922	4.53258	6534.98	13.7457	8.89341	0.24653	BelowLOD	19.9556	13.0773	1.99343	BelowLOD	20.6035	BelowLOD	79.1368	2.99402	BelowLOD	10.3739	134099	5.53517	BelowLOD	50.7767	BelowLOD	1.21508	897922	4.53258	6534.98	13.7457	8.89341	0.24653	BelowLOD				
Pard008-3	Pard008	Pard008	Pardo	Southern Province	93.8855	2.25938 BelowLOD	4.2084	110101	3.78622	BelowLOD	4.7543	BelowLOD	1.21508	897922	4.53258	6534.98	13.7457	8.89341	0.24653	BelowLOD	19.9556	13.0773	1.99343	BelowLOD	20.6035	BelowLOD	93.8855	2.25938	BelowLOD	4.2084	110101	3.78622	BelowLOD	4.7543	BelowLOD	1.21508	897922	4.53258	6534.98	13.7457	8.89341	0.24653	BelowLOD				
Pard008-4	Pard008	Pard008	Pardo	Southern Province	102.058	2.09622 BelowLOD	0.77252	105662	4.01963	BelowLOD	Inf	0.39081	871583	3.18821	22789	16.0012	3.26415	0.44564	BelowLOD	21.012	16.3274	1.7893	BelowLOD	15.6072	BelowLOD	102.058	2.09622	BelowLOD	0.77252	105662	4.01963	BelowLOD	Inf	0.39081	871583	3.18821	22789	16.0012	3.26415	0.44564	BelowLOD						
Pard008-5	Pard008	Pard008	Pardo	Southern Province	111.854	1.99082 BelowLOD	Inf	98257.6	4.36289	BelowLOD	3.0798	BelowLOD	0.63446	884815	3.28753	19205.3	14.8094	1.10813	0.64251	BelowLOD	31.7924	37.3224	2.11834	BelowLOD	13.7044	BelowLOD	111.854	1.99082	BelowLOD	Inf	98257.6	4.36289	BelowLOD	3.0798	BelowLOD	0.63446	884815	3.28753	19205.3	14.8094	1.10813	0.64251	BelowLOD				
Pard008-6	Pard008	Pard008	Pardo	Southern Province	100.461	2.89609 BelowLOD	6.47815	106233	7.82882	BelowLOD	18.2142	BelowLOD	1.45588	869393	6.14691	56210.9	11.2326	12.4135	0.90909	BelowLOD	51.7065	157.957	7.78847	95.279	64.7684	BelowLOD	100.461	2.89609	BelowLOD	6.47815	106233	7.82882	BelowLOD	18.2142	BelowLOD	1.45588	869393	6.14691	56210.9	11.2326	12.4135	0.90909	BelowLOD				
Pard009-1	Pard009	Pard009	Pardo	Southern Province	159.031	2.32493 BelowLOD	1.81888	95498.9	4.05439	BelowLOD	1.6246	1.74939	3.69146	873734	3.21951	20214.6	15.9997	74742	0.44389	BelowLOD	3.97879	19.919	15.2318	BelowLOD	1.42421	BelowLOD	159.031	2.32493	BelowLOD	1.81888	95498.9	4.05439	BelowLOD	1.6246	1.74939	3.69146	873734	3.21951	20214.6	15.9997	74742	0.44389	BelowLOD				
Pard009-2	Pard009	Pard009	Pardo	Southern Province	146.444	2.60562 BelowLOD	6.74743	95697.1	1.49172	BelowLOD	1.3175	1.85667	0.99751	879891	3.57419	24943.3	18.3306	24.9812	0.43852	BelowLOD	Inf	4.1172	0.9004	BelowLOD	10.9114	BelowLOD	146.444	2.60562	BelowLOD	6.74743	95697.1	1.49172	BelowLOD	1.3175	1.85667	0.99751	879891	3.57419	24943.3	18.3306	24.9812	0.43852	BelowLOD				
Pard009-3	Pard009	Pard009	Pardo	Southern Province	119.567	2.66338 BelowLOD	7.15034	94625.2	3.93666	BelowLOD	7.7085	2.76939	0.71536	879619	3.50774	24570.3	17.032	BelowLOD	0.3701	BelowLOD	7.5651	BelowLOD	2.88287	BelowLOD	Inf	BelowLOD	119.567	2.66338	BelowLOD	7.15034	94625.2	3.93666	BelowLOD	7.7085	2.76939	0.71536	879619	3.50774	24570.3	17.032	BelowLOD						
Pard010-1	Pard010	Pard010	Pardo	Southern Province	129.627	1.87737 BelowLOD	6.75204	94836.5	4.3663	BelowLOD	1.7517	3.58884	0.7012	879619	3.24807	26426.2	17.7304	BelowLOD	0.10362	BelowLOD	5.93195	27.3873	2.45838	BelowLOD	17.5343	BelowLOD	129.627	1.87737	BelowLOD	6.75204	94836.5	4.3663	BelowLOD	1.7517	3.58884	0.7012	879619										

Appendix C. LA-ICP-MS data. 20um

Spot	P31 ppm LOO	P31 ppm LOO	S34 ppm LOO	K43 ppm LOO	Ca43 ppm LOO	Sc45 ppm LOO	Sc45 ppm LOO	Y147 ppm LOO	Y147 ppm LOO	V51 ppm LOO	V51 ppm LOO	Cr52 ppm LOO	Mo55 ppm LOO	Mn55 ppm LOO	Mn55 ppm LOO	Fe57 ppm LOO	Fe57 ppm LOO	Co59 ppm LOO	Co59 ppm LOO	Ni60 ppm LOO	Ni60 ppm LOO	Zn66 ppm LOO	Zn66 ppm LOO	Zn66 ppm LOO	Ga71 ppm LOO	Ga71 ppm LOO	Ge72 ppm LOO	Ge72 ppm LOO	As75 ppm LOO	As75 ppm LOO	Se82 ppm LOO	Se82 ppm LOO		
Pard005-1	BelowLOD	705.019	BelowLOD	31023	BelowLOD	72106.8	BelowLOD	inf	88.1699	BelowLOD	245.582	BelowLOD	173.485	BelowLOD	170.304	3360.83	645.774	BelowLOD	2.54765	BelowLOD	124.823	BelowLOD	2.67833	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf	BelowLOD	15.7904	BelowLOD	1459.49	
Pard005-2	BelowLOD	1100.02	BelowLOD	4887.88	BelowLOD	238979	BelowLOD	232.026	BelowLOD	77.1514	BelowLOD	454.001	BelowLOD	180.063	BelowLOD	113.023	BelowLOD	inf	BelowLOD	4.46621	BelowLOD	80.5815	BelowLOD	49.3499	BelowLOD	71.9183	BelowLOD	inf	BelowLOD	inf	BelowLOD	65.6592	BelowLOD	inf
Pard005-3	BelowLOD	1217.54	BelowLOD	4887.88	BelowLOD	40969.6	BelowLOD	5.34054	BelowLOD	281.957	BelowLOD	373.079	BelowLOD	106.376	BelowLOD	172.64	224.174	BelowLOD	4.02282	BelowLOD	inf	BelowLOD	39.2146	BelowLOD	81.9353	BelowLOD	inf	BelowLOD	inf	BelowLOD	7.18951	BelowLOD	93.3933	
Pard005-4	BelowLOD	1314.76	BelowLOD	10018.9	BelowLOD	40609.1	BelowLOD	16.2251	BelowLOD	35.0619	BelowLOD	28.8563	BelowLOD	120.099	BelowLOD	244.073	533.378	BelowLOD	5.24835	BelowLOD	42.5313	BelowLOD	20.2646	BelowLOD	36.1953	BelowLOD	inf	BelowLOD	inf	BelowLOD	5.38482	BelowLOD	115.355	
Pard005-5	BelowLOD	969.947	BelowLOD	inf	BelowLOD	6.62026	BelowLOD	48.2123	BelowLOD	inf	BelowLOD	197.146	BelowLOD	50.278	BelowLOD	inf	BelowLOD	2.9854	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf	BelowLOD	4.642	BelowLOD	inf	BelowLOD	inf	BelowLOD	9.99714	BelowLOD	131.405
Pard005-6	BelowLOD	1709.53	BelowLOD	4822.42	BelowLOD	2126.1	BelowLOD	22.8679	BelowLOD	29.9554	BelowLOD	22.1499	BelowLOD	188.795	BelowLOD	106.462	BelowLOD	inf	BelowLOD	1.87078	BelowLOD	7.05175	BelowLOD	18.1423	BelowLOD	2.3312	BelowLOD	inf	BelowLOD	inf	BelowLOD	14.988	BelowLOD	23.189
Pard006-2	BelowLOD	780.37	BelowLOD	inf	BelowLOD	8748.22	BelowLOD	17.8574	BelowLOD	10.7621	BelowLOD	inf	BelowLOD	35.9005	BelowLOD	32.8933	BelowLOD	267.226	BelowLOD	2.19054	BelowLOD	3.08573	BelowLOD	16.1664	BelowLOD	8.42425	BelowLOD	2052.73	BelowLOD	11.4335	BelowLOD	100.705		
Pard006-3	BelowLOD	1159.59	BelowLOD	5917.04	BelowLOD	17957	BelowLOD	4.56666	BelowLOD	18.3885	BelowLOD	4.56666	BelowLOD	15.5411	BelowLOD	inf	BelowLOD	84.8064	BelowLOD	2.92707	BelowLOD	inf	BelowLOD	16.7	BelowLOD	14.78	BelowLOD	inf	BelowLOD	inf	BelowLOD	25.379		
Pard006-4	BelowLOD	5515.08	BelowLOD	6273.65	BelowLOD	5087.72	BelowLOD	73.7352	BelowLOD	38.4782	BelowLOD	1.67651	BelowLOD	17.9669	BelowLOD	65.0985	BelowLOD	154.19	BelowLOD	4.53344	BelowLOD	20.9772	BelowLOD	13.043	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf		
Pard006-5	BelowLOD	1123.01	BelowLOD	9997.64	BelowLOD	5377.78	BelowLOD	46.1233	BelowLOD	2.64653	BelowLOD	26.895	BelowLOD	202.995	BelowLOD	30.2883	BelowLOD	891.35	BelowLOD	8.04	BelowLOD	73.7474	BelowLOD	25.0299	BelowLOD	0.8482	BelowLOD	5037.9	BelowLOD	1.5278	BelowLOD	88.964		
Pard007-1	BelowLOD	1129.61	BelowLOD	inf	BelowLOD	68.764	BelowLOD	3.16078	BelowLOD	4.58922	BelowLOD	60.782	BelowLOD	276.373	BelowLOD	1109.24	398.106	BelowLOD	4.62193	BelowLOD	100.816	BelowLOD	inf	BelowLOD	17.418	BelowLOD	inf	BelowLOD	inf	BelowLOD	16.1384	BelowLOD	inf	
Pard007-2	BelowLOD	1535.35	BelowLOD	inf	BelowLOD	19399.9	BelowLOD	58.6592	BelowLOD	inf	BelowLOD	122.288	BelowLOD	37.7888	BelowLOD	70.788	83.227	310.201	BelowLOD	13.9856	BelowLOD	inf	BelowLOD	25.08	BelowLOD	25.4544	BelowLOD	inf	BelowLOD	inf	BelowLOD	11.1014	BelowLOD	487.165
Pard008-2	BelowLOD	1709.95	BelowLOD	8728.98	BelowLOD	20665.1	BelowLOD	88.9611	BelowLOD	58395	BelowLOD	19.7894	BelowLOD	144.297	BelowLOD	284.34	216.659	BelowLOD	66.9604	BelowLOD	64.6215	BelowLOD	inf	BelowLOD	9.55187	BelowLOD	4422.21	BelowLOD	inf	BelowLOD	inf	BelowLOD	121.765	
Pard008-3	BelowLOD	15379.9	BelowLOD	inf	BelowLOD	34171.4	BelowLOD	2.82631	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf	BelowLOD	33.8002	BelowLOD	220.769	BelowLOD	53.9068	BelowLOD	409.376	BelowLOD	inf	BelowLOD	38.917	BelowLOD	inf	BelowLOD	inf	BelowLOD	1.206	BelowLOD	899.094
Pard008-4	BelowLOD	684.959	BelowLOD	6274.21	BelowLOD	54122.3	BelowLOD	inf	BelowLOD	48.7431	BelowLOD	inf	BelowLOD	24.4626	BelowLOD	34.9488	BelowLOD	157.713	BelowLOD	inf	BelowLOD	inf	BelowLOD	16.6562	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf	BelowLOD	604.636	BelowLOD	146.528
Pard008-5	BelowLOD	932.835	BelowLOD	inf	BelowLOD	18.5557	BelowLOD	73.2856	BelowLOD	7.30925	BelowLOD	28.8553	BelowLOD	47.3158	BelowLOD	154.834	BelowLOD	0.99025	BelowLOD	5.14166	BelowLOD	6.0244	BelowLOD	6.78976	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf	BelowLOD	921.736		
Pard008-6	BelowLOD	2796.57	BelowLOD	inf	BelowLOD	4662.6	BelowLOD	47.5608	BelowLOD	12.881	BelowLOD	inf	BelowLOD	28.131	BelowLOD	200.184	286.84	BelowLOD	38.2426	BelowLOD	86.1259	BelowLOD	6.2945	BelowLOD	30.008	BelowLOD	13315	BelowLOD	inf	BelowLOD	11.1024	BelowLOD	inf	
Pard009-1	BelowLOD	1167.05	BelowLOD	6898.16	BelowLOD	10711.1	BelowLOD	240.8484	BelowLOD	inf	BelowLOD	8.1707	BelowLOD	25.985	BelowLOD	30.255	BelowLOD	206.44	BelowLOD	3.81739	BelowLOD	4.7571	BelowLOD	2.7176	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf	BelowLOD	1.3016	BelowLOD	76.144
Pard009-2	BelowLOD	1086.61	BelowLOD	5253.62	BelowLOD	4900.2	BelowLOD	26.5216	BelowLOD	52.2661	BelowLOD	25.985	BelowLOD	3.9973	BelowLOD	27.9761	BelowLOD	194.254	BelowLOD	0.91364	BelowLOD	2.92178	BelowLOD	4.7571	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf	BelowLOD	1116.52	BelowLOD	65.284
Pard009-3	BelowLOD	inf	BelowLOD	15251.02	BelowLOD	7103.06	BelowLOD	4.88171	BelowLOD	21.2880	BelowLOD	inf	BelowLOD	inf	BelowLOD	25.9642	BelowLOD	223.256	BelowLOD	3.32624	BelowLOD	16.5266	BelowLOD	14.9719	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf	BelowLOD	2.9913	BelowLOD	54.9279
Pard011-1	BelowLOD	inf	BelowLOD	56523.43	BelowLOD	8185.93	BelowLOD	28.2169	BelowLOD	34.4146	BelowLOD	35.4956	BelowLOD	79.319	BelowLOD	188.158	BelowLOD	429.712	BelowLOD	0.51057	BelowLOD	40.2414	BelowLOD	inf	BelowLOD	8.90202	BelowLOD	11862.8	BelowLOD	inf	BelowLOD	1.9818	BelowLOD	146.933
Pard011-2	BelowLOD	644.747	BelowLOD	5477.36	BelowLOD	21749	BelowLOD	26.8322	BelowLOD	inf	BelowLOD	74.1739	BelowLOD	2.9597	BelowLOD	160.074	BelowLOD	1.7726	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf	BelowLOD	0.5674	BelowLOD	348.861
Pard011-3	BelowLOD	681.068	BelowLOD	11698.1	BelowLOD	7057.95	BelowLOD	11.9382	BelowLOD	45.2968	BelowLOD	6.45009	BelowLOD	161.132	BelowLOD	168	BelowLOD	149.878	BelowLOD	1.31016	BelowLOD	60.1136	BelowLOD	13.9719	BelowLOD	2.7517	BelowLOD	inf	BelowLOD	inf	BelowLOD	230.071		
Pard011-4	BelowLOD	429.223	BelowLOD	11055.3	BelowLOD	8528.08	BelowLOD	14.5447	BelowLOD	41.4547	BelowLOD	0.2741	BelowLOD	42.711	BelowLOD	23.1999	BelowLOD	14.144	BelowLOD	2.12947	BelowLOD	13.8347	BelowLOD	22.873	BelowLOD	3.7152	BelowLOD	inf	BelowLOD	inf	BelowLOD	202.951		
Pard011-5	BelowLOD	1158.55	BelowLOD	8027.35	BelowLOD	24655.4	BelowLOD	13.8112	BelowLOD	17.4633	BelowLOD	2.59933	BelowLOD	28.9713	BelowLOD	83.241	BelowLOD	310.993	BelowLOD	0.05718	BelowLOD	27.8147	BelowLOD	11.4371	BelowLOD	3.69908	BelowLOD	5786.92	BelowLOD	8.42926	BelowLOD	52.3677		
Pard011-6	BelowLOD	954.388	BelowLOD	1742.79	BelowLOD	5582.5	BelowLOD	8.29677	BelowLOD	21.2068	BelowLOD	0.19359	BelowLOD	36.1884	BelowLOD	41.9399	BelowLOD	inf	BelowLOD	1.32246	BelowLOD	29.5539	BelowLOD	30.2498	BelowLOD	0.99567	BelowLOD	4469.4	BelowLOD	2.16845	BelowLOD	294.573		
Pard011-7	BelowLOD	291.828	BelowLOD	121.84	BelowLOD	12631.1	BelowLOD	1.43486	BelowLOD	24.6267	BelowLOD	7.6333	BelowLOD	29.9293	BelowLOD	81.2654	BelowLOD	185.948	BelowLOD	4.7231	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf	BelowLOD	1.0882	BelowLOD	124.623
Pard011-8	BelowLOD	509.159	BelowLOD	8142.52	BelowLOD	2670.07	BelowLOD	45.7755	BelowLOD	36.9607	BelowLOD	18.9981	BelowLOD	48.9816	BelowLOD	103.819	BelowLOD	690.831	BelowLOD	2.11022	BelowLOD	26.9658	BelowLOD	13.2355	BelowLOD	4.86191	BelowLOD	inf	BelowLOD	inf	BelowLOD	17.4742		
Pard011-9	BelowLOD	1196.61	BelowLOD	2127.75	BelowLOD	7484.05	BelowLOD	55.4838	BelowLOD	3.64676	BelowLOD	70.635	BelowLOD	64.664	BelowLOD	54.8872	BelowLOD	557.523	BelowLOD	1.66312	BelowLOD	20.0308	BelowLOD	49.3679	BelowLOD	11.6829	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf		
Pard011-10	BelowLOD	5387	BelowLOD	8919.83	BelowLOD	38874.6	BelowLOD	23.7539	BelowLOD	inf	BelowLOD	3.84291	BelowLOD	70.0924	BelowLOD	13.8371	BelowLOD	43.2728	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf	BelowLOD	4.3325	BelowLOD	3155.48	BelowLOD	inf	BelowLOD	8.4201	BelowLOD	894.167
Pard012-1	BelowLOD	402.99	BelowLOD	8023.7	BelowLOD	1629.94	BelowLOD	21.9921	BelowLOD	25.6726	BelowLOD	1.339	BelowLOD	75.209	BelowLOD	49.934	BelowLOD	19.812	BelowLOD	4.4518	BelowLOD	50.7854	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf	BelowLOD	inf	BelowLOD	3.596	BelowLOD	198.969
Pard014-1	BelowLOD	918.902	BelowLOD	inf	BelowLOD	17956.4	BelowLOD	82.7751	BelowLOD	29.5966	BelowLOD	41.2499	BelowLOD	63.2282	BelowLOD	42.7708	BelowLOD	181.601	BelowLOD	1.64668	BelowLOD	19.1757	BelowLOD	24.881	BelowLOD	5.52264	BelowLOD	inf	BelowLOD	inf	BelowLOD	33.6322	BelowLOD	191.959
Pard014-2	BelowLOD	6583.66	BelowLOD	inf	BelowLOD	40689.3	BelowLOD	inf	BelowLOD	150.411	BelowLOD	263.399	BelowLOD	101.822	BelowLOD	228.875	210.34	791.249	BelowLOD	3.00554	BelowLOD	292.154	BelowLOD	7.0264	BelowLOD	2.6564	BelowLOD	inf	BelowLOD	inf	BelowLOD	33.1378	BelowLOD	inf
Pard014-3	BelowLOD	91.1429	BelowLOD	734																														

Appendix C. LA-ICP-MS data. 20um

Spot	Zr90 ppm	Zr90 ppm LOD	Nb93 ppm	Nb93 ppm	Mo95 ppm	Mo95 ppm	Ru101 ppm	Ru101 ppm	Rh103 ppm	Rh103 ppm	Pd108 ppm	Pd108 ppm	Ag115 ppm	Ag115 ppm	Ca138 ppm	Ca138 ppm	Te125 ppm	Te125 ppm	Ta181 ppm	Ta181 ppm	W182 ppm	W182 ppm	Re185 ppm	Re185 ppm	Os199 ppm	Os199 ppm	Ir193 ppm	Ir193 ppm	Pt195 ppm	Pt195 ppm	Ti205 ppm	Ti205 ppm	
Pard005-1	BelowLOD	0.73923	BelowLOD	1.99339	BelowLOD	106.171	BelowLOD	2.30878	BelowLOD	0.05879	3.54819	1.77247	BelowLOD	0.25199	BelowLOD	8.95918	72.854	2.6548	BelowLOD	0.61021	BelowLOD	0.76685	BelowLOD	0.18855	BelowLOD	BelowLOD	BelowLOD	1.60541	BelowLOD	2.19815	BelowLOD		
Pard005-2	BelowLOD	4.23348	BelowLOD	2.28126	BelowLOD	25.5459	BelowLOD	BelowLOD	0.88119	1.07006	0.85886	BelowLOD	0.03479	BelowLOD	48.213	44.349	1.29826	BelowLOD	0.22061	BelowLOD	8.80406	BelowLOD	0.1115	BelowLOD	12.9932	BelowLOD	20.261	BelowLOD	BelowLOD	0.08601	BelowLOD		
Pard005-3	BelowLOD	0.43599	BelowLOD	1.44734	BelowLOD	BelowLOD	BelowLOD	BelowLOD	0.4306	2.55212	1.41702	BelowLOD	0.05155	BelowLOD	2.56361	14.6663	1.12232	BelowLOD	BelowLOD	4.25237	BelowLOD	BelowLOD	BelowLOD	BelowLOD	BelowLOD	BelowLOD	0.07207	BelowLOD	BelowLOD	BelowLOD	BelowLOD		
Pard005-4	BelowLOD	0.02121	BelowLOD	1.2265	BelowLOD	4.3854	0.0608	0.1854	3.89176	1.5815	BelowLOD	0.04243	BelowLOD	0.20894	3.1651	0.0717	BelowLOD	0.2378	BelowLOD	0.18731	BelowLOD	0.48227	BelowLOD	0.13127	BelowLOD	0.27033	BelowLOD	0.24365	BelowLOD	0.16448	BelowLOD	0.03244	
Pard005-5	0.83219	0.12265	BelowLOD	0.96166	BelowLOD	6.83995	BelowLOD	0.15431	0.05046	5.43196	1.29242	BelowLOD	0.04542	1.36032	1.29846	7.80154	1.5681	BelowLOD	0.06266	BelowLOD	0.00898	BelowLOD	0.09257	BelowLOD	0.05002	0.04126	BelowLOD	1.16914	0.03867	0.14106	0.37405		
Pard005-6	BelowLOD	0.24379	BelowLOD	0.36255	BelowLOD	1.19379	BelowLOD	0.00974	2.29006	1.29066	1.56151	BelowLOD	0.08471	0.04282	4.8852	1.04177	BelowLOD	0.02248	0.07015	0.06326	BelowLOD	0.10506	BelowLOD	0.01967	BelowLOD	BelowLOD	1.19379	BelowLOD	0.33703	0.13305	0.13745		
Pard005-7	BelowLOD	0.57192	BelowLOD	0.46001	BelowLOD	2.68572	BelowLOD	0.16272	2.0302	BelowLOD	0.04243	BelowLOD	1.76616	BelowLOD	1.19789	BelowLOD	0.08087	BelowLOD	0.08087	BelowLOD	0.08087	BelowLOD	0.08087	BelowLOD	0.08087	BelowLOD	0.08087	0.17526	BelowLOD	0.06686	0.64664		
Pard006-1	BelowLOD	0.64991	BelowLOD	1.2265	BelowLOD	4.3854	0.0608	0.1854	3.89176	1.5815	BelowLOD	0.04243	BelowLOD	0.20894	3.1651	0.0717	BelowLOD	0.2378	BelowLOD	0.18731	BelowLOD	0.48227	BelowLOD	0.13127	BelowLOD	0.27033	BelowLOD	0.24365	BelowLOD	0.16448	0.03244		
Pard006-2	BelowLOD	0.59194	BelowLOD	0.96166	BelowLOD	6.83995	BelowLOD	0.15431	0.05046	5.43196	1.29242	BelowLOD	0.04542	1.36032	1.29846	7.80154	1.5681	BelowLOD	0.06266	BelowLOD	0.00898	BelowLOD	0.09257	BelowLOD	0.05002	0.04126	BelowLOD	1.16914	0.03867	0.14106	0.37405		
Pard006-3	BelowLOD	0.24379	BelowLOD	0.36255	BelowLOD	1.19379	BelowLOD	0.00974	2.29006	1.29066	1.56151	BelowLOD	0.08471	0.04282	4.8852	1.04177	BelowLOD	0.02248	0.07015	0.06326	BelowLOD	0.10506	BelowLOD	0.01967	BelowLOD	BelowLOD	1.19379	BelowLOD	0.33703	0.13305	0.13745		
Pard006-4	BelowLOD	0.57192	BelowLOD	0.46001	BelowLOD	2.68572	BelowLOD	0.16272	2.0302	BelowLOD	0.04243	BelowLOD	1.76616	BelowLOD	1.19789	BelowLOD	0.08087	BelowLOD	0.08087	BelowLOD	0.08087	BelowLOD	0.08087	BelowLOD	0.08087	BelowLOD	0.08087	0.17526	BelowLOD	0.06686	0.64664		
Pard006-5	BelowLOD	0.64991	BelowLOD	1.2265	BelowLOD	4.3854	0.0608	0.1854	3.89176	1.5815	BelowLOD	0.04243	BelowLOD	0.20894	3.1651	0.0717	BelowLOD	0.2378	BelowLOD	0.18731	BelowLOD	0.48227	BelowLOD	0.13127	BelowLOD	0.27033	BelowLOD	0.24365	BelowLOD	0.16448	0.03244		
Pard006-6	BelowLOD	0.59194	BelowLOD	0.96166	BelowLOD	6.83995	BelowLOD	0.15431	0.05046	5.43196	1.29242	BelowLOD	0.04542	1.36032	1.29846	7.80154	1.5681	BelowLOD	0.06266	BelowLOD	0.00898	BelowLOD	0.09257	BelowLOD	0.05002	0.04126	BelowLOD	1.16914	0.03867	0.14106	0.37405		
Pard006-7	BelowLOD	0.24379	BelowLOD	0.36255	BelowLOD	1.19379	BelowLOD	0.00974	2.29006	1.29066	1.56151	BelowLOD	0.08471	0.04282	4.8852	1.04177	BelowLOD	0.02248	0.07015	0.06326	BelowLOD	0.10506	BelowLOD	0.01967	BelowLOD	BelowLOD	1.19379	BelowLOD	0.33703	0.13305	0.13745		
Pard006-8	BelowLOD	0.57192	BelowLOD	0.46001	BelowLOD	2.68572	BelowLOD	0.16272	2.0302	BelowLOD	0.04243	BelowLOD	1.76616	BelowLOD	1.19789	BelowLOD	0.08087	BelowLOD	0.08087	BelowLOD	0.08087	BelowLOD	0.08087	BelowLOD	0.08087	BelowLOD	0.08087	0.17526	BelowLOD	0.06686	0.64664		
Pard006-9	BelowLOD	0.64991	BelowLOD	1.2265	BelowLOD	4.3854	0.0608	0.1854	3.89176	1.5815	BelowLOD	0.04243	BelowLOD	0.20894	3.1651	0.0717	BelowLOD	0.2378	BelowLOD	0.18731	BelowLOD	0.48227	BelowLOD	0.13127	BelowLOD	0.27033	BelowLOD	0.24365	BelowLOD	0.16448	0.03244		
Pard007-1	BelowLOD	0.5154	BelowLOD	2.8241	BelowLOD	15.1077	BelowLOD	63.527	0.21059	0.60623	3.94588	4.9323	0.1473	0.1114	BelowLOD	44.348	14.9051	BelowLOD	0.47133	BelowLOD	0.48552	BelowLOD	1.05898	BelowLOD	0.95658	BelowLOD	BelowLOD	0.17383	0.0607	BelowLOD	0.4078		
Pard007-2	BelowLOD	1.69885	BelowLOD	0.7683	BelowLOD	20.2235	BelowLOD	4.7683	BelowLOD	1.06931	2.46488	1.28811	BelowLOD	0.21633	BelowLOD	3.07061	51.1641	2.4931	BelowLOD	0.52513	0.21183	BelowLOD	0.76685	BelowLOD	0.18855	BelowLOD	BelowLOD	0.67318	BelowLOD	0.30028	BelowLOD	3.46747	
Pard008-2	BelowLOD	0.22608	BelowLOD	1.43995	BelowLOD	4.7029	BelowLOD	14.3982	BelowLOD	0.16551	4.22758	2.15929	BelowLOD	0.04825	BelowLOD	17.6688	1.286	BelowLOD	0.2006	BelowLOD	0.24256	BelowLOD	98.673	BelowLOD	0.26237	BelowLOD	2.7447	BelowLOD	0.44732	0.28689			
Pard008-3	BelowLOD	0.94241	BelowLOD	1.6882	BelowLOD	19.882	BelowLOD	2.65417	0.06356	0.02372	2.45567	1.28046	BelowLOD	0.1568	BelowLOD	25.8609	1.0865	BelowLOD	0.07513	BelowLOD	0.18432	BelowLOD	0.27271	BelowLOD	1.13895	BelowLOD	BelowLOD	0.52829	BelowLOD	3.25248	BelowLOD	2.62669	
Pard008-4	BelowLOD	0.0218	BelowLOD	0.23888	BelowLOD	4.97029	BelowLOD	4.08309	BelowLOD	0.23525	4.85988	1.8022	BelowLOD	0.18478	BelowLOD	0.05155	8.8423	BelowLOD	0.18478	BelowLOD	0.190331	BelowLOD	0.102311	BelowLOD	1.25011	BelowLOD	0.39936	BelowLOD	0.39936	BelowLOD	0.14877		
Pard008-5	BelowLOD	1.20859	BelowLOD	0.78811	BelowLOD	7.6832	BelowLOD	0.14476	2.1953	1.63018	0.25562	0.22429	0.10563	6.84865	1.85189	BelowLOD	0.14356	BelowLOD	0.14356	BelowLOD	0.0751	BelowLOD	0.01646	BelowLOD	1.04275	0.08564	0.06573	BelowLOD	4.00028	BelowLOD	0.43897		
Pard008-6	BelowLOD	0.47462	BelowLOD	0.48827	BelowLOD	13.2092	BelowLOD	0.14514	4.84766	BelowLOD	0.15599	BelowLOD	10.4328	38.7001	0.8158	BelowLOD	0.13775	BelowLOD	3.86207	BelowLOD	0.19355	BelowLOD	0.19355	BelowLOD	0.19355	BelowLOD	0.19355	0.6517	BelowLOD	0.96808	BelowLOD	4.46739	
Pard009-1	BelowLOD	0.33872	0.34034	BelowLOD	0.90884	BelowLOD	5.96881	BelowLOD	1.57295	BelowLOD	1.62452	1.66361	1.48249	2.82809	0.42024	BelowLOD	0.03125	4.02634	0.07017	0.05509	0.01417	BelowLOD	5.88595	BelowLOD	0.35846	BelowLOD	0.22198	BelowLOD	0.69874	0.02544	0.02366	BelowLOD	0.52575
Pard009-2	BelowLOD	0.03616	BelowLOD	0.73308	BelowLOD	0.28929	BelowLOD	0.14658	4.6758	1.8356	0.03399	0.21297	BelowLOD	0.40633	BelowLOD	0.45438	BelowLOD	0.03705	BelowLOD	0.18409	BelowLOD	0.36244	BelowLOD	0.41084	BelowLOD	0.41084	BelowLOD	0.10827	BelowLOD	0.16827	BelowLOD	0.61498	
Pard011-1	BelowLOD	0.08086	BelowLOD	1.9437	BelowLOD	0.76384	0.17595	BelowLOD	4.88435	1.50455	BelowLOD	0.03488	BelowLOD	2.5158	0.65894	0.29796	BelowLOD	0.42315	BelowLOD	0.12949	BelowLOD	0.062	BelowLOD	1.94206	BelowLOD	0.38057	BelowLOD	0.20868	BelowLOD	0.19084	BelowLOD	0.40487	
Pard011-2	BelowLOD	0.97515	BelowLOD	0.48279	BelowLOD	27.8863	BelowLOD	0.23861	4.55319	1.97523	BelowLOD	0.13893	BelowLOD	BelowLOD	11.7008	0.06211	0.03083	BelowLOD	0.19355	BelowLOD	0.06989	BelowLOD	0.31804	BelowLOD	3.24877	BelowLOD	2.9864	BelowLOD	0.27255	0.28689			
Pard011-3	BelowLOD	0.02564	BelowLOD	1.07746	BelowLOD	3.40111	0.10595	0.30064	BelowLOD	0.1739	6.26839	1.95159	BelowLOD	0.62582	BelowLOD	0.13508	BelowLOD	0.13508	BelowLOD	0.1341	BelowLOD	0.06916	BelowLOD	0.414702	0.08615	0.06835	BelowLOD	1.258	BelowLOD	0.16772	0.01722		
Pard011-4	BelowLOD	0.11447	BelowLOD	0.35738	BelowLOD	14.1058	BelowLOD	0.17542	3.5732	1.62599	BelowLOD	0.15782	BelowLOD	0.45521	0.23691	BelowLOD	0.09855	BelowLOD	0.09855	BelowLOD	0.05688	0.04025	BelowLOD	0.17415	BelowLOD	1.98457	BelowLOD	0.18457	BelowLOD	0.19571	BelowLOD		
Pard011-5	BelowLOD	0.09894	BelowLOD	0.97811	BelowLOD	0.14391	0.08752	BelowLOD	3.89321	2.77454	1.88796	BelowLOD	0.05919	BelowLOD	0.15883	BelowLOD	0.28941	BelowLOD	0.28941	BelowLOD	0.10425	BelowLOD	2.24459	BelowLOD	0.38005	0.19793	0.15883	BelowLOD	0.02153	0.15883	BelowLOD	0.2153	
Pard011-6	BelowLOD	0.0822	BelowLOD	1.45617	BelowLOD	0.7602	0.88889	BelowLOD	4.9599	2.90611	1.8212	BelowLOD	0.08273	BelowLOD	0.08273	BelowLOD	0.10399	BelowLOD	0.43191	BelowLOD	0.07993	BelowLOD	1.54543	BelowLOD	0.17473	BelowLOD	1.47318	BelowLOD	0.14743	0.14743			
Pard011-7	BelowLOD	0.2793	BelowLOD	1.26519	BelowLOD	6.6329	BelowLOD	0.17945	2.92878	BelowLOD	0.02617	BelowLOD	0.20319	0.23666	0.40239	BelowLOD	0.15122	BelowLOD	0.20319	BelowLOD	0.06969	BelowLOD	0.20996	BelowLOD	0.02817	BelowLOD	0.20996	BelowLOD	0.02817	0.20996	BelowLOD	0.16772	
Pard011-8	BelowLOD	1.53555	BelowLOD	0.85236	BelowLOD																												

Appendix C. LA-ICP-MS data. 20um

Spot	Pb206 ppm	Pb206 ppm LOD	Pb207 ppm	Pb207 ppm LOD	Pb208 ppm	Pb208 ppm LOD	U238 ppm	U238 ppm LOD	PbTotal ppm	PbTotal ppm LOD
Pard005-1	9.88799	5.69355	5.31531	4.7437	9.62717	1.69729	BelowLOD	6.40183	8.06936	1.69729
Pard005-2	4.12527	1.08885	BelowLOD	0.67917	1.83171	1.50516	BelowLOD	inf	2.04601	0.50516
Pard005-3	7.09162	3.39204	8.88441	5.07143	9.20955	1.32894	BelowLOD	1.80206	8.74681	1.32894
Pard005-4	BelowLOD	5.21697	BelowLOD	5.56553	BelowLOD	3.39023	BelowLOD	0.17212	BelowLOD	2.39023
Pard005-5	9.16318	3.14333	6.7328	3.93115	7.81159	1.32882	BelowLOD	0.45202	8.67197	1.32882
Pard005-6	1.56549	1.33128	BelowLOD	1.25871	0.96462	0.73397	BelowLOD	0.6846	1.31916	0.73397
Pard005-7	BelowLOD	2.1115	BelowLOD	0.59693	BelowLOD	1.00046	BelowLOD	0.755	BelowLOD	1.00046
Pard006-1	BelowLOD	1.57793	BelowLOD	inf	BelowLOD	inf	BelowLOD	10.416	BelowLOD	inf
Pard006-2	BelowLOD	inf	BelowLOD	0.06721	BelowLOD	inf	BelowLOD	0.39626	BelowLOD	inf
Pard006-3	BelowLOD	0.44828	BelowLOD	1.03632	BelowLOD	0.51692	BelowLOD	inf	BelowLOD	0.51692
Pard006-4	BelowLOD	inf	BelowLOD	0.50515	BelowLOD	0.95508	BelowLOD	inf	BelowLOD	0.95508
Pard006-5	BelowLOD	13.8657	BelowLOD	3.6881	BelowLOD	0.57134	BelowLOD	1.58311	BelowLOD	0.37534
Pard007-1	BelowLOD	2.84905	BelowLOD	3.49182	BelowLOD	1.04076	BelowLOD	6.68784	BelowLOD	1.04076
Pard008-1	BelowLOD	5.27765	3.87884	2.14546	4.50268	1.34562	BelowLOD	4.10401	4.53603	1.34562
Pard008-2	1.5689	1.50205	BelowLOD	inf	1.83876	1.53591	BelowLOD	inf	2.12381	1.53591
Pard008-3	BelowLOD	inf	BelowLOD	inf	BelowLOD	0.97841	BelowLOD	2.30339	BelowLOD	0.97841
Pard008-4	BelowLOD	0.60289	BelowLOD	0.73382	0.89135	0.44558	BelowLOD	0.90252	0.64589	0.44558
Pard008-5	BelowLOD	1.49843	BelowLOD	0.8644	BelowLOD	0.84781	BelowLOD	0.63725	BelowLOD	0.84781
Pard008-6	BelowLOD	745166	BelowLOD	0.81919	BelowLOD	3.55356	BelowLOD	inf	4.06777	3.55356
Pard009-1	BelowLOD	0.34786	BelowLOD	1.47377	BelowLOD	0.82211	BelowLOD	0.43637	BelowLOD	0.82211
Pard009-2	1.20342	0.12677	BelowLOD	0.79356	1.31603	0.35621	BelowLOD	0.50293	1.37156	0.35621
Pard009-3	BelowLOD	1.49413	BelowLOD	1.75716	0.15383	0.04531	BelowLOD	inf	BelowLOD	0.04531
Pard011-1	BelowLOD	inf	BelowLOD	6.959	BelowLOD	0.70645	BelowLOD	1.42517	BelowLOD	0.70645
Pard011-2	BelowLOD	inf	BelowLOD	2.87968	0.24955	0.08619	BelowLOD	0.64907	0.12889	0.08619
Pard011-3	BelowLOD	inf	BelowLOD	4.44868	BelowLOD	0.54074	BelowLOD	0.74668	BelowLOD	0.54074
Pard011-4	BelowLOD	1.65524	BelowLOD	5.47887	BelowLOD	0.42036	BelowLOD	inf	BelowLOD	0.42036
Pard011-5	BelowLOD	0.87008	BelowLOD	8.17359	BelowLOD	0.38258	BelowLOD	2.75302	BelowLOD	0.38258
Pard011-6	BelowLOD	inf	BelowLOD	1.93135	BelowLOD	1.93177	BelowLOD	0.39976	BelowLOD	0.93177
Pard011-7	BelowLOD	8.21594	BelowLOD	1.92128	BelowLOD	1.80723	BelowLOD	0.48089	BelowLOD	1.80723
Pard011-8	BelowLOD	2.07283	BelowLOD	0.39063	BelowLOD	2.50533	BelowLOD	1.49751	BelowLOD	2.50533
Pard011-9	BelowLOD	5.49933	BelowLOD	2.33541	BelowLOD	inf	BelowLOD	0.56839	BelowLOD	inf
Pard011-10	BelowLOD	2.41132	BelowLOD	14.2435	BelowLOD	1.18572	BelowLOD	0.29864	BelowLOD	1.18572
Pard012-1	9.32177	0.52529	2.26922	7.45681	10.5436	1.64949	BelowLOD	4.4238	9.8876	1.64949
Pard014-1	BelowLOD	0.41478	BelowLOD	4.21463	BelowLOD	inf	BelowLOD	0.53379	BelowLOD	inf
Pard014-2	44.2758	9.40372	37.9387	8.63228	47.1577	5.24353	BelowLOD	inf	43.6614	5.24353
Pard014-3	BelowLOD	4.8572	BelowLOD	2.86651	BelowLOD	0.22739	BelowLOD	0.75162	BelowLOD	0.22739
Pard014-4	81.1843	31.34	61.2005	26.3743	85.2432	8.16639	BelowLOD	40.3335	93.07	8.16639
Pard015-1	BelowLOD	2.48661	BelowLOD	inf	BelowLOD	0.4288	BelowLOD	inf	BelowLOD	0.4288
Pard017-1	BelowLOD	inf	BelowLOD	1.36533	0.31805	0.06018	BelowLOD	3.12329	BelowLOD	0.06018
Pard017-2	26.9869	1.30067	4.24029	1.36691	1.04227	0.55792	7.80563	0.42983	7.67416	0.55792
Pard017-3	BelowLOD	19.0723	BelowLOD	inf	BelowLOD	0.20897	BelowLOD	0.75151	BelowLOD	0.20897
Pard017-4	BelowLOD	3497.89	BelowLOD	inf	BelowLOD	0.25192	BelowLOD	inf	BelowLOD	0.25192
Pard019-1	5518.72	1.24865	738.62	0.15764	138.772	0.58038	374.974	0.77618	1576.68	0.58038
Pard019-2	44.1257	2.34642	6.21876	3.17081	1.49597	0.96552	12.2077	1.39456	12.7827	0.96552
Pard019-3	506.66	1.71097	70.0101	1.37114	11.1107	0.73027	161.424	0.60377	145.639	0.73027
Pard019-4	837.384	1.60185	95.8609	1.56164	20.3642	1.35659	45.0927	1.62866	238.568	1.35659
Pard021-1	30.1611	2.58093	5.68502	4.99785	1.26227	0.98406	38.852	1.4132	9.81195	0.98406
Pard021-2	11.1104	3.00056	BelowLOD	2.39546	BelowLOD	0.46449	11.1511	1.10845	3.30326	0.46449
Pard023-1	196.471	4.78015	72.2333	2.86581	46.9263	1.67813	13.6231	1.32688	89.3809	1.67813
Pard023-2	106.971	1.34561	43.5779	4.43698	36.4614	25.1939	1.77514	54.764	69.2254	1.77514
Pard023-3	279.722	1.28662	101.976	1.24547	88.7071	0.52593	39.9292	0.70241	131.141	0.52593
Pard023-4	471.005	0.85337	165.048	1.07298	136.438	0.45895	218.117	0.54632	222.192	0.45895
Pard024-1	93.8455	0.17809	14.5247	1.74738	3.92817	0.59813	77.1571	0.73412	27.3891	0.59813
Pard025-1	60.0246	1.44867	6.68671	1.67038	1.29462	0.65544	71.9923	0.72175	16.724	0.65544
Pard025-2	36.6038	2.36033	BelowLOD	2.70186	BelowLOD	0.57093	66.936	1.0975	8.82677	0.57093
Pard025-3	BelowLOD	4.15883	BelowLOD	9.79681	BelowLOD	1.94297	BelowLOD	2.04347	BelowLOD	1.94297
Pard025-4	BelowLOD	17.6278	BelowLOD	1.45473	BelowLOD	2.7493	BelowLOD	1.57603	BelowLOD	2.7493
Pard025-5	16.1236	1.54702	1.67166	1.15727	BelowLOD	1.71962	BelowLOD	0.46249	BelowLOD	1.67166
Pard028-2	17.5818	0.83995	3.66576	0.67663	BelowLOD	0.22037	39.5327	0.24217	4.55437	0.22037
Pard028-3	BelowLOD	37.4317	BelowLOD	inf	BelowLOD	1.83902	BelowLOD	4.73206	BelowLOD	1.83902
Pard028-4	BelowLOD	inf	BelowLOD	inf	BelowLOD	0.63743	BelowLOD	36.7266	BelowLOD	0.63743
Pard028-5	BelowLOD	9.94129	BelowLOD	6.89668	BelowLOD	inf	BelowLOD	1.93054	BelowLOD	inf
Pard029-1	2510.73	1.05253	340.307	0.83956	66.7704	0.97198	280.458	0.48552	707.872	0.97198
Pard029-2	94.6114	2.69281	12.8783	3.25029	3.52623	1.74691	6.92856	1.64265	27.3463	1.74691
Pard029-3	39.6599	2.94901	BelowLOD	5.23931	BelowLOD	0.85018	51.1421	1.54988	11.2099	0.85018
Pard029-4	1.14881	2.11227	BelowLOD	2.5042	BelowLOD	0.79712	4.70742	1.16834	2.3545	0.79712
Pard029-5	BelowLOD	1.69442	BelowLOD	1.4794	BelowLOD	inf	BelowLOD	1.68591	BelowLOD	inf
Pard030-1	26.6747	0.40903	2.89842	2.30002	1.80763	1.19354	3.2631	1.02136	7.81175	1.19354
Pard030-2	573.304	13.4398	81.5997	14.7633	20.4925	2.92308	3.76537	3.60356	165.407	2.92308
Pard032-1	BelowLOD	5.51498	BelowLOD	18.6521	BelowLOD	10.1658	BelowLOD	0.55978	BelowLOD	10.1658
Pard032-2	BelowLOD	7.12526	BelowLOD	3.49377	BelowLOD	inf	BelowLOD	3.77801	BelowLOD	inf
Pard032-3	BelowLOD	inf	BelowLOD	inf	BelowLOD	0.21713	BelowLOD	1.33572	BelowLOD	0.21713
Pard032-4	11573.8	2.51678	1446.11	1.76092	262.765	1.24406	4386.41	1.06776	3219.47	1.24406
Pard033-1	1.19613	1.12866	BelowLOD	0.93595	0.88957	0.40639	BelowLOD	0.95007	0.40639	0.88957
Pard033-2	BelowLOD	6.65833	BelowLOD	inf	BelowLOD	3.59483	BelowLOD	47.736	BelowLOD	3.59483
Pard035-1	1.9217	1.17405	BelowLOD	inf	BelowLOD	inf	0.78982	0.49686	BelowLOD	inf
Pard035-2	163.622	11.6511	5.1609	4.2327	20.3049	8.95858	49.3414	2.16889	55.8303	8.95858
Pard039-1	38.1302	2.2057	9.39171	1.53965	5.47314	2.2491	BelowLOD	0.46555	14.4551	2.2491
Pard040-1	2052.23	0.89717	479.879	1.74738	349.066	0.58147	168.126	0.66986	780.064	0.58147
Pard040-2	1724.84	1.6848	396.128	0.96916	317.934	0.77132	999.124	0.64563	680.792	0.77132
Pard040-3	2115.89	0.21204	509.243	2.08659	363.55	0.73961	140.127	1.12902	813.252	0.73961
Pard040-4	806.029	3.45693	179.528	3.70809	150.536	1.2879	66.881	1.54374	301.604	1.2879
Pard040-5	0.71233	0.69888	BelowLOD	inf	BelowLOD	inf	BelowLOD	0.54941	BelowLOD	inf
Pard042-1	6.59489	3.76941	BelowLOD	12.8536	1.7698	0.84545	BelowLOD	1.57227	2.54471	0.84545
Pard045-1	26.4399	2.41537	6.95596	0.40331	0.73201	0.72508	4.52361	3.12784	7.46747	0.72508
Pard048-1	BelowLOD	1.44945	BelowLOD	4.73595	BelowLOD	inf	BelowLOD	1.46625	BelowLOD	inf
Pard048-2	BelowLOD	81.378	BelowLOD	2.1114	BelowLOD	inf	BelowLOD	0.43034	BelowLOD	inf
Pard048-3	BelowLOD	1.99835	BelowLOD	4.83139	BelowLOD	inf	BelowLOD	0.23233	BelowLOD	inf
Pard048-4	1.61796	1.57174	BelowLOD	0.21927	BelowLOD	0.35646	BelowLOD	1.42388	BelowLOD	0.35646
Pard049-1	BelowLOD	3.41989	0.85012	0.13234	BelowLOD	0.80386	BelowLOD	2.59991	BelowLOD	0.80386
Pard049-2	0.70597	0.01016	BelowLOD	0.6473	BelowLOD	2.78455	BelowLOD	4.75522	BelowLOD	2.78455
Pard049-3	0.12554	2.11304	2.14146	1.23418	1.91451	0.57194	BelowLOD	2.46809	1.90319	0.57194
Pard050-1	2388.79	1.5828	1677.88	2.59973	1804.82	0.87711	BelowLOD	0.80235	1910.21	0.87711
Pard050-2	6.69204	1.99128	3.95171	1.32519	3.84237	1.00515	BelowLOD	0.32215	4.50292	1.00515
Pard050-3	BelowLOD	3.50731	BelowLOD	2.70322	BelowLOD	inf	BelowLOD	1.13237	BelowLOD	inf
Pard051-1	6.60028	1.97904	3.28054	2.89934	3.08327	1.93229	BelowLOD	2.94437	3.70927	1.93229
Pard051-2	BelowLOD	3.7679	BelowLOD	4.13272	0.99128	1.49476	BelowLOD	2.04114	2.97711	1.49476
Pard051-3	4.29789	2.23623	BelowLOD	2.18944	2.73892	1.95439	BelowLOD	inf	3.26012	1.95439
Pard051-4	12.461	6.68937	15.8034	6.04848	15.853	5.23285	BelowLOD	1.76721	15.3828	5.23285
Pard051-5	55.6819	1.65009	43.3314	1.67526	46.9119	0.80515	BelowLOD	1.54257	49.8005	0.80515
Pard051-6	10.3602	0.68688	7.8							