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# TECHNICAL REPORT FOR THE OAKES PROPERTY, KENORA MINING DIVISION, ONTARIO

**CLAIM NUMBERS:** 

710246, 710247, 710248 EWART TOWNSHIP

PREAPRED FOR: RIVERSIDE RESOURCES INC.

PREPARED BY: FREEMAN SMITH, P.GEO.

DATED: March 30, 2022

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#### Summary

The High Lake Project is located near the Manitoba-Ontario border west of the town of Kenora, Ontario part of the Kenora Mining Division. The property consists of 3 multi-cell claims or about 1360 hectares.

The project area lies within the Wabigoon Subprovince a major, east striking subdivision of the Superior Province which hosts several significant mines sandwiched between two gneissic terranes the English River to the north and the Quetico to the south. The metavolcanic-metasedimentary belt is composed of submarine and subaerial, mafic to felsic, tholeiitic to calc-alkaline to marginally alkaline, volcanic rocks and associated clastic and chemical sedimentary rocks. Marginal batholiths have been recognized to both intrude and act as feeders for more felsic parts of the volcanic terrain. Lowermost metavolcanic rocks are recognized to be submarine, tholeiitic predominantly magnesian basalts. Middle sequences are mixed tholeiitic to calc-alkaline submarine to subaerial, flows and pyroclastics of basalt to rhyolitic composition, with minor trachyandesites. Sedimentary rocks vary from proximal facies, alluvial to submarine inner fan deposits to distal outer submarine tholeiitic, Fe tholeiitic basalts. The claims around High Lake, Electrum Lake area cover part of the contact zone between mafic to felsic metavolcanic and related metasedimentary rocks and metasedimentary rocks of the Electrum Lake Supergroup with the High Lake Granodiorite Stock. This consists of an early syn-volcanic phase dated at 2,727Ma, and a late tectonic phase dated at 2,711 Ma years (Blackburn et al. 1991). The granitic rocks at High Lake underlain primarily by granodiorite and quartz-feldspar porphyry with approximately 10 to 20% felsic dykes and sills. The southern portion of the project contains a large area of intercalated zones of felsic intrusive rocks and mafic to intermediate metavolcanic rock.

Within the High Lake Project three types of mineralization and potential deposit types have been described: (1) Stratabound Mineralization Hosted by Felsic to Mafic Metavolcanic Rocks such as base metal in VMS style deposits; (2) Orogenetic Vein Mineralization; (3) Porphyry-related Cu + Au  $\pm$  Mo deposits.

While vein style orogenic type deposits have been explored for stratigraphically controlled deposits have not been widely explored. Exploration for stratabound deposits like at the Rainy River deposit have not been applied to this region. The area to the north of High Lake and Electrum Lake comprises quartz and feldspar porphyry quartz showing sericite alteration and larger shears zones suggesting the potential for intrusive hosted mineralization. Field observations and results from the resampled historical core suggests these shears can host significant mineralization.

Selco Exploration (1960s) reported chalcopyrite and minor bornite mineralization occurs in thin massive veins of pyrite and pyrrhotite in fractures in the porphyry and as disseminations in the porphyry. A sample of the zone assayed in excess of 1% Cu, 0.03 opt Au and 0.4 opt Ag. To the north of High Lake both Hudson's Bay Exploration and Teck drilled several hundred meters targeting for base metals.

Historical drilling in 1989 by Calnor Exploration focussed on the gold potential, they drilled two holes on the High Lake claims (Cel-07 and Cel-08). Riverside did a significant amount of prospecting, mapping and sampling and relogged and resampled relevant core stored in the core library in Kenora. The geology and mineralization on the project are variable and occurs as shear hosted, stratabound, and porphyry in style. Detailed geophysical studies are recommended to advance the high Lake project; detailed IP surveys or drone magnetics would help explore the area further.

### 1 Introduction

This report summarizes the results from Riverside's exploration work on the High Lake Greenstone Gold Project between August and November 2020. The first site visit was to verify the past work, to locate old drill pad locations, old trenches and identify the areas outlined as being anomalous in previous soil geochemistry and drill campaigns. While the anomaly locations were somewhat established on maps they were not in digital form and some discrepancies were noted in the transfer into GIS for mapping purposes the drill pads of interest were mostly not found. The geochemical and drilling campaigns were conducted by others but are believed to be reliable as the mineralized intersections are still available for review. The subsequent fieldwork consisted of one field crew that completed prospecting, mapping, and further verification of published materials. Part of this work included reviewing the old trenches assisted by a portable handheld XRF unit. The old core was also resampled as part of the exploration work. This core is available for review at the Core Library in Kenora while some core is stored on site at High Lake.

### 2 Property Description and Location

The High Lake Project is located in the Township of Ewart, west of the town of Kenora, Ontario part of the Kenora Mining Division. The approximate UTM coordinates for the center of the property are 350000E and 5510000N (Datum NAD83, Zone 15U). The property consists of 3 multi-cell claims comprising 78 cells or about 1380 hectares. Figure 1 below shows the project location and its proximity to Kenora and the Manitoba-Ontario border. Table 1 below shows the status of the High Lake claims.

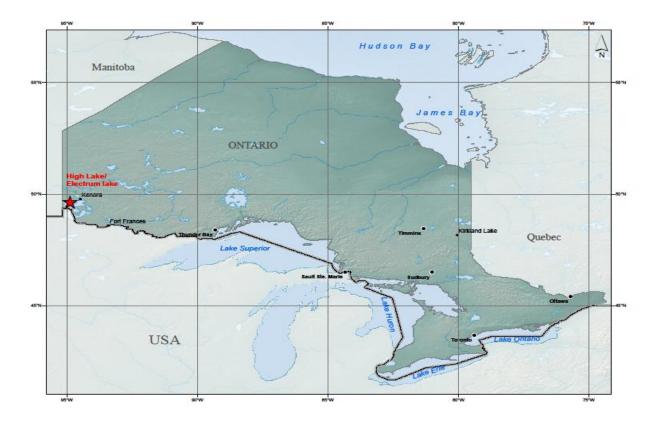


Figure 1: Location Map of the High Lake Project, Western Ontario, Canada

Table 1: List of	High Lake Project.
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Township	Tenure ID	Due Date	Work Required/yr.	Cells	Hectares
Ewart	710246	29-Jul-22	\$ 10,000	25	~460
Ewart	710247	29-Jul-22	\$ 10,000	25	~460
Ewart	710248	29-Jul-22	\$ 10,000	25	~460

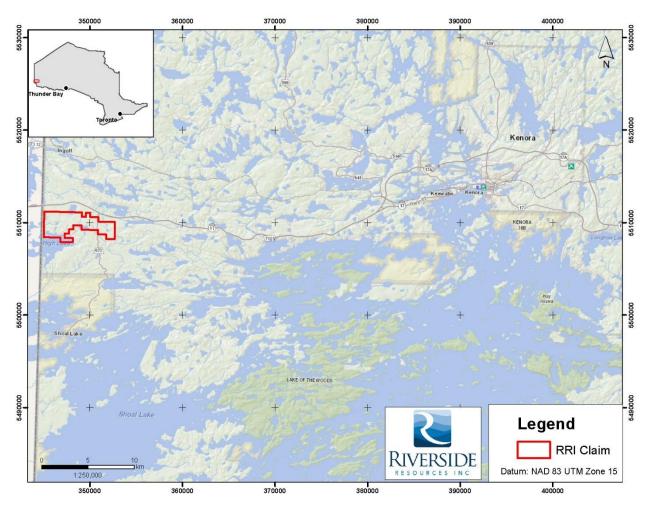


Figure 2: Claim Map showing the Riverside Claim group at High Lake Greenstone Gold Project.

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

The High Lake Project is located from the Manitoba-Ontario border east to Highway 673 and south of Trans-Canada Highway 17. During the spring, summer and fall the project area can be easily accessed by car from highway 673 the Rush Bay Road. Secondary access roads are located throughout the project area, however, a 4x4 or quad is required to access these areas. The east-west trending Pipeline right-of-way is driveable with a truck and accesses the northern portion of the claims between the Manitoba border and Rush Bay Road.

Temperatures from highs of 35C in the summer to -40C in winter with snow cover between November and May. The best exploration season is between August and November (to avoid ticks) although work can be carried out year-round. Cedar swamps comprise a small portion of the property, in these areas' exploration is best conducted in the winter months when the ground is frozen.

Kenora has a population of 15,880 (2014 Census) and has most the amenities to assist with exploration activities although the nearest laboratory for geochemical analysis is in Dryden about 1.5-hour drive east of Kenora. Winnipeg does not have laboratories servicing the mining industry. The project borders one Indian Reserve Shoal Lake 39A. Shoal Lake 39A is part of the Bimose Tribal Council, Grand Council Treaty #3. The treaty consists of 4 reserves and is shared with 12 other First Nations. Shoal Lake 39A is the main reserve with a land area of 13.15 square miles, the main village is Kejick.

The property is roughly rectangular east-west block that covers several geological units primarily focused on the High Lake greenstone belt part of the Lake of the Woods Greenstone Belt. A power line right-ofway and natural gas pipeline transect the project east-west in the northern portion and the CNR railway transects the project providing excellent infrastructure. The project area comprises rolling, heavily glaciated terrain of low relief and elevation (300m). Surficial cover is generally shallow except in the lowest lying terrain where swamps can be present. Vegetation consists primary of mixed deciduous with oak and pine and cedar in the swampy areas. The underbrush can be thick in some areas and some of the swamps are very difficult to navigate around in the summer months.

## 4 Property History

At the turn of the 19<sup>th</sup> century, mines in the Lake of the Woods gold fields produced 55% of Ontario's gold production. Within a few miles of Kenora there were seven moderate producers and numerous smaller operations. The total production from these mines is unknown but may lie in the 50,000-ounce range. Economic events and technical advances which occurred outside of the Lake of the Woods region had a profound effect on prospecting, financing, and development of the Kenora area's gold occurrences. Some nineteen mines operated for seven years or more during two periods (1892-1906 and 1932-1938).

In 1872 gold was discovered on an island in Partridge Lake by prospectors; this is the earliest reported occurrence of gold in the Kenora area. Prospecting continued at Lake of the Woods and in 1879 a promising gold occurrence was located on Hay Island. Coincident with construction of the CPR railroad was the geological mapping of the right of way by a survey crew of the Geological Survey of Canada providing some of the first geological maps for Canada, (Bruce, E.L. 1932). A prospector invasion followed



Figure 3: Historic photos showing the Sultana Gold Mine which produced around 20,000 ounces of gold located just east of Kenora, hosted in mafic volcanic rocks (Goodwin, 1965).

with the opening of the area by the railroad construction. The following year many prospectors were in the area and numerous gold bearing quartz veins were being uncovered. During the succeeding four or five years some high-grading took place around the northern part of the Lake of the Woods. In 1934 the

United States decided to peg the price of gold at \$35/ounce. These events led to the second gold boom on the Lake of the Woods, but momentum was soon deflated by World War II. Only sporadic activity occurred in the area until the spectacular rises in the price of gold in the early 1970's and the gold find at Hemlo in the early 1980's which rekindled interest in the Lake of the Woods goldfields.

The High Lake-Electrum Lake area has seen significant past historical work that culminated in some historical resource calculations primarily smaller high-grade deposits. In 1936, an occurrence of electrum was discovered by C.A. Alcock and R.J. Young, south of South Baubee Lake (Electrum Lake). In 1956, Alcock completed 4 holes totaling 506 feet in the Purdex Gold Zone. In 1953, San Antonio Gold Mine optioned claims that included the western part of the High Lake claims (now owned by Canadian Star group). They carried out geophysical surveys and diamond drilling (20 holes totaling 4526 feet) mostly on the High Lake area. Also, in 1953, Noranda Mines Limited completed geological mapping, ground magnetic and electromagnetic surveys on claims in the north-central part of the property. In 1956, Green Bay Mining Company completed 6 drill holes (2,155 feet) on a "porphyry" Cu-Au zone northeast of the east end of High Lake.

Between 1959-1961, Electrum Lake Gold Mines completed a drilling program on several zones including the "A", "B", "C", "D", "W", "P" and "R" - Zones immediately east of High Lake as well as the "Arsenic Pond" zone east off the Shoal Lake Road (71 holes totaling 12,962 feet). Arsenic Pond is located approximately 300 m north of High Lake and 1,600 m west of the "porphyry" zone. In 1961 Selco Exploration Company Limited trenched a number of the areas some of which can still be located in the field. In 1967 Steep Rock Iron Mines Ltd. completed 49.5-line km of induced polarization (IP) survey over the porphyry copper zone. In 1977, Pelican Mines Limited completed a series of drill holes on the Arsenic Pond Au Zone east of the Shoal Lake Road; the holes were designed to test the zone at depth but were unsuccessful. In 1981, Teck Corp. completed ground geophysical surveys, prospecting and drilling of one hole near Shoal Lake Road no significant results were reported. In 1987 metallurgical testing on samples from the Arsenic Pond Zone were completed as well as ground magnetic, electromagnetic, geological and geochemical surveys in this area. In 1985 P.M. Mare completed a thesis on the Arsenic Pond area (U of M). In 1990, Noranda optioned several claim groups northeast of High Lake and completed geological mapping, sampling and an IP survey over the Arsenic Pond zone.

Between 1982-1989, Consolidated Jalna Resources Limited completed geological mapping, drilling and a resource estimate on the Purdex Gold Zone at High Lake; they completed 12 drill holes totaling 5491 feet (see table 2). Between 1987-1988, Calnor Resources Ltd. completed 22 drill holes totaling 7594 feet at and west of High Lake (some of these holes were resampled by Riverside). In 1987 they completed a resource estimate on several zones at High Lake. From 2004-2006, Cabo Mining Corp. completed prospecting and diamond drilling on several gold prospects in the Electrum Lake claim group including 4 holes in the area of the Arsenic Pond Au prospect. It included 10 holes totaling 1288 metres. Most of the historical work at High Lake was on the High Lake Mining Licence which is ground <u>not</u> held by RRI.

### 5 Geological Setting and Mineralization

### 5.1 Regional Geology

The project area lies within the Wabigoon Subprovince a major, east striking subdivision of the Superior Province sandwiched between two gneissic terranes the English River to the north and the Quetico to the south. The Wabigoon has an exposed length of almost 900 kilometres and an average width of about 150 kilometres extending east from the Manitoba border to just past Longlac in Ontario where it extends beneath flat-lying Paleozoic sedimentary rocks. Supracrustal rocks of the Wabigoon Subprovince are predominantly volcanic. The volcanics are steeply dipping and for the most part have not been metamorphosed above greenschist metamorphic facies. In contrast, the English River Sub-province to the south consists of granitic and metasedimentary gneisses and the Quetico Sub-province to the south consists of metasediments, which were subject to moderately high temperature metamorphism.

This Wabigoon metavolcanic-metasedimentary belt is composed of submarine and subaerial, mafic to felsic, tholeiitic to calc-alkaline to marginally alkaline, volcanic rocks and associated clastic and chemical sedimentary rocks. Marginal batholiths have been recognized to both intrude and act as feeders for more felsic parts of the volcanic terrain. Lowermost metavolcanic rocks are recognized to be submarine, tholeiitic predominantly magnesian basalts. Middle sequences are mixed tholeiitic to calc-alkaline submarine to subaerial, flows and pyroclastics of basalt to rhyolitic composition, with minor trachyandesites. Subvolcanic feeders have been traced to batholithic rocks (Ayers, 2009).

Clastic and chemical sedimentary rocks are predominantly associated with these middle sequences. Sedimentary rocks vary from proximal facies, alluvial to submarine inner fan deposits to distal outer submarine tholeiitic, Fe tholeiitic basalts. It has been suggested that the three subprovinces were developed contemporaneously, as part of a lateral gradation from shallow water or terrestrial sedimentation in the Wabigoon Subprovince to deep-water sedimentation in adjacent provinces. The oldest volcanic rocks in the Wabigoon Subprovince are tholeiitic mafic flows.

Overlying intermediate to felsic volcanics are predominantly calc-alkaline pyroclastics. At least, three mafic to felsic cycles have been recognized in some parts of the Subprovince, and metasediments are commonly associated with the pyroclastic rocks. Geochronological data suggest that there may be significant differences in the ages of apparently similar sequences in different parts of the Subprovince. It has been recognized that there is a genetic relationship between the granitic intrusions, their overlying subvolcanic apophyses, and the mantling felsic volcanic sequences.

The boundary between the Wabigoon and English River Subprovinces is generally defined as the contact between granitic gneisses and low-grade volcanic rocks. North of the Lake of the Woods, this coincides with a fault or intrusive contact, but further east it may be gradational. The Dryberry Batholith has been part of the English River Subprovince, most importantly because of the presence of migmatized metasediments along its south-eastern boundary. The western boundary is in contact with relatively low-grade volcanics of Bigstone Bay and, here, the Batholith resembles more closely those of the Wabigoon Subprovince.

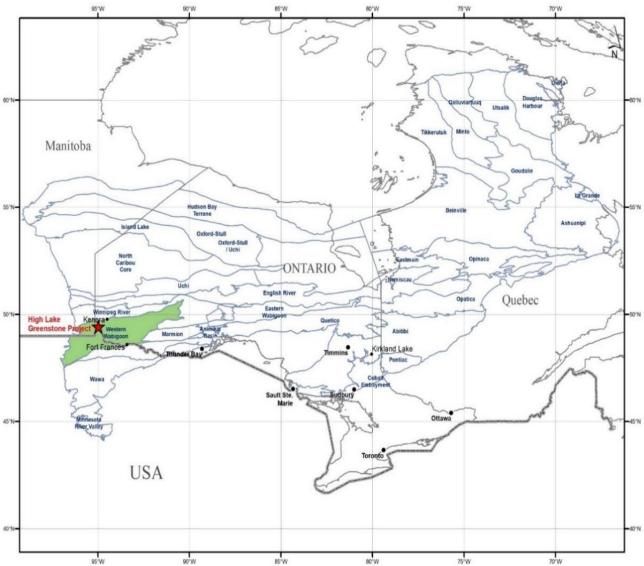


Figure 4 Map of the Geological Terranes of the Superior Province of Canada (map source OGS website).

The Keewatin Group Metasediments are younger than the volcanic rocks in the map area and comprise arkose, greywacke, arkosic greywacke, conglomerate, reworked agglomerate, iron-rich greywacke, slate, iron-rich slate, siliceous siltstone, cherty sedimentary rocks (tuff), garnet-rich greywacke, (Davies, 1964). These rocks are intruded by *Basic Intrusive Rocks* comprising quartz-hornblende diorite, hornblende diorite with much injected, granodiorite and gabbro and by the *Earlier Acid Intrusive Rocks* primarily porphyritic granodiorite, quartz porphyry, and feldspar porphyry (High Lake stock).

The younger Crowduck Lake Group rocks comprise argillite and cherty argillite, arkose, arkosic greywacke, impure sandstone, conglomerate, reworked agglomerate and minor volcanic rocks. These sedimentary rocks are uncomfortably in contact with the *Later Intrusive Rocks* that include pink quartz monzonite and granodiorite, with some grey foliated granodiorite; gneissic hornblende-biotite granodiorite, with aplite, pegmatite; grey granodiorite; tonalite and diorite.

The pattern of lithologies, ages, and isotopic signatures in the Winnipeg River Subgroup to the north of the project area is in marked contrast to that of greenstones from the Western Wabigoon Subprovince (WWS) to the south. The area of the project is part of the Lake of the Woods Greenstone Belt (LWGB) part of the WWS and mapped in detail and described in Ayer et al. 1987; Sanborn-Barrie 1991a; Blackburn et al. 1991. The greenstones of the LWGB consist of basal mafic and ultramafic volcanic rocks, which yielded U-Pb ages between  $2738 \pm 2$  and  $2732 \pm 4$  Ma (Ayer and Davis 1997; Davis and Edwards 1986). These rocks are overlain by a calc-alkaline volcanic sequence that erupted between 2723 and 2712 Ma (Davis and Smith 1991; Davis and Edwards 1986).

Metasedimentary rocks of the Electrum Supergroup unconformably overlie the volcanic sequences in the northern LWGB. A debris flow in the Crowduck Lake Group (basal Electrum Supergroup) has yielded a maximum U-Pb detrital zircon age of 2699  $\pm$  2 Ma (Ayer and Davis 1997). A volcanic unit in the White Partridge Bay Group, also of the Electrum Supergroup, has yielded zircons as young as 2709  $\pm$  2 Ma (Ayer and Davis 1997). In the southeastern LWGB, older turbidites of the 2715 Ma Warclub Group overlie the calc-alkaline volcanic rocks (Blackburn et al. 1991; Davis 1996). The entire greenstone assemblage was intruded by mainly granodioritic plutons that have yielded U-Pb zircon ages of 2711  $\pm$  2 to 2695  $\pm$  3 Ma (Davis and Smith 1991; Ayer and Davis 1997). Hence, the dominant period of volcanism in the Western Wabigoon Subprovince lasted from about 2.75 to 2.71 Ga and was followed by late plutonism and regional deformation. The granite-greenstone sequences are suggested to represent fragments of allochthonous arcs and volcanic plateaus that developed in an oceanic environment prior to interaction with Winnipeg River crust and are therefore separate subprovinces.

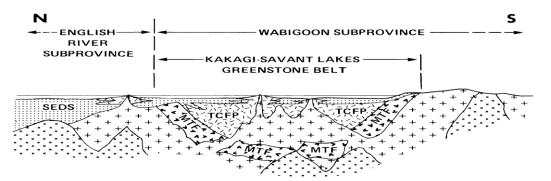


Figure 5 Cross-section illustrating hypothetical stage of development during time of late tholeiitic to calc-alkalic flow and pyroclastic (TCFP) volcanism. MTF indicates magnesian tholeiitic flows; crosses indicate two phases of granitic intrusions (Davies, 1965).

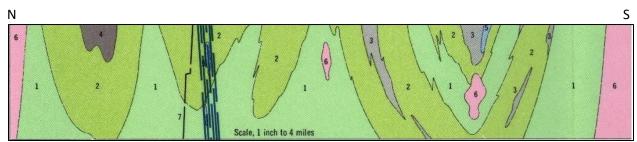


Figure 6 Cross section, north to south from Highway 17 to Shoal Lake through the Riverside claim group. Extracted from Lake of the Woods Map 2115, Ontario Department of Mines. (1) are the oldest rocks comprising basaltic and andesitic lavas, pillows and tuffs; (2) undifferentiated rhyolitic and dacitic tuff and flows; (3) metasediments; greywacke, slate, mica schists, gneisses; (4) Metasediments, arkose, wacke (Crowduck Lake Sediments); (6) Earlier Acid Igneous rocks (High Lake stock); and (7) Diabase.

#### 5.2 Project Geology

The High Lake Project lies in the Lake of the Woods Greenstone belt which is located near the western end of the Wabigoon Subprovince. The Lake of the Woods greenstone belt is one of a series of six interconnected greenstone belts that make up the western part of the Wabigoon Subprovince. The High Lake Greenstone Belt is made up of 60-80% ultramafic to felsic metavolcanic rocks of various types and 20-40% clastic and chemical metasediments. Numerous elliptical shaped granitic batholiths thought to be derived from the same parent magmas as the volcanic rocks are enclosed within the greenstone belts. All of these rocks have been extensively deformed and intruded locally by syntectonic and post tectonic plutons, dykes and small bodies of ultramafic to felsic composition. The stratigraphy of the Lake of the Woods greenstone belt has been described in an OGS publication by Blackburn, et al (1991).



Figure 7 Left is a sample of Crowduck Lake metasediments near its contact with Electrum Lake Intrusive rock (right).

The geology of the High Lake area is shown on Figure 7 below. The claims in the area of High Lake, Electrum Lake cover part of the contact zone between mafic to felsic metavolcanic and related metasedimentary rocks (High Lake Formation of the Upper Keewatin Supergroup) and metasedimentary rocks of the Electrum Lake Supergroup with the High Lake Granodiorite Stock. The granitic rocks at High Lake underlain primarily by granodiorite and quartz-feldspar porphyry with 10% to 20% inclusions, large rafts and roof pendants of volcanic rock. The eastern part is underlain by a complex sequence of mafic to intermediate metavolcanic rocks, metasedimentary rocks (argillite, shale) and approximately 10 to 20% felsic dykes and sills. The southern portion of the project contains a large area of intercalated intermediate metavolcanic rocks and later and mafic to felsic intrusives.

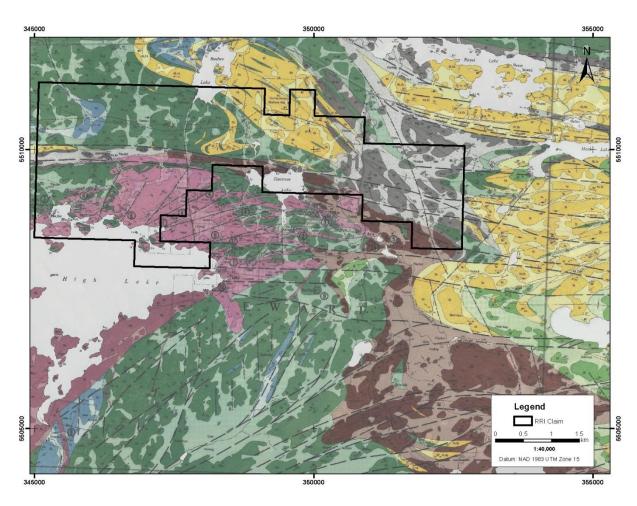


Figure 8: Geology of High Lake project

### 5.3 Mineralization

Most of the known gold deposits and prospects of the Wabigoon are interpreted as epigenetic, shearhosted Au-vein in nature and Archean in age. Notable examples are the Mine Centre areas, Shoal Lake (Duport mine: 1.8 Mt at 9.8 g/t Au) (Spooner and Barrie, 1993), and Cameron Lake mineralization hosted within the Pipestone-Cameron deformation zone (Melling, 1986).

The Hammond Reef project, located near the town of Atikokan and at the boundary with the Marmion terrane, has Au mineralization hosted in altered granitoid, occurring in a faults/shears bounded stockwork of quartz vein and veinlets oriented parallel to the main NE-trending thrust zones that control the geometry of the deposit. No syngenetic Au deposit associated with intermediate to felsic volcanics has been documented in the Wabigoon, with the potential exception of the Goliath gold project. The Goliath deposit, located about 20 km northeast of the town of Dryden, is hosted in sericite-pyrite altered intermediate to felsic volcanic rocks and shows a good correlation between gold and lead-zinc sulphides (Treasury Metals website, 2020). Gold grades at Goliath are similar to those at Rainy River, with indicated resources of 9.14 Mt @ 2.6 g/t Au for 760,000 oz Au. The Maybrun copper-gold deposit which is hosted in mafic volcanics close to the Pipestone-Cameron deformation zone is the only interpreted syngenetic

gold deposit documented in the Wabigoon. Here sulphides in inter-pillow space and fractures of mafic volcanics grade at 1.12 wt.% Cu and 1 g/t Au on average (Pelletier, 2016).

Three types of mineralization have been described in the area of the project:

- **Type 1:** Stratabound Mineralization Hosted by
- Felsic to Mafic Metavolcanic Rocks such as base metal in VMS style deposits **Type 2:** Orogenetic Vein Mineralization.

Quartz-gold-sulphide veins in shear zones and cleavage-parallel dilatant

**Type 3:** Porphyry-related Cu + Au ± Mo deposits Disseminated chalcopyrite-pyrrhotite mineralization hosted by ultramafic

#### Type 1 – Stratabound VMS Type Deposits

Recent detailed work at Rainy River deposit has demonstrated that precious metal endowment can, in a similar way to known auriferous volcanogenic massive sulphide (VMS) systems, be attributed to a primary (synvolcanic) source and/or to a secondary (e.g., syntectonic) mineralizing event (Mercier Langevin et al., 2015). These combined elements are: 1) a spatial correlation of gold with base metals at the deposit scale, 2) a close spatial association between gold and zoned hydrothermal alteration, 3) the stacking of

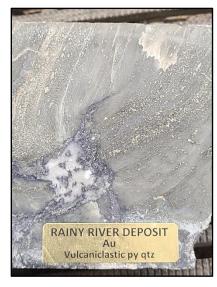




Figure 9 Mineralized rock from two prominent deposits within metavolcanic rocks within the Western Wabigoon terrane. From Kenora MNDM Library.



auriferous bodies in a restrained volcanic pile, and 4) the preferential association of alteration and auriferous zones with volcaniclastic rocks (control on fluid circulation by primary permeability of the host rock). Typically, preserved Archean VMS camps are associated with bimodal basalt-andesite and rhyolite magmatism making the basalt-dacite association found at Rainy River atypical suggesting a possible additional exploration model for High Lake greenstone belt which hosts similar terranes at Rainy River. Wartman (2011) indicated that the gold mineralization at the Rainy River deposit is associated with strong sodium depletion, potassium enrichment, aluminous alteration, a strong gold-pyrite association, ubiquitous sphalerite, chalcopyrite and manganiferous garnet alteration and very high ratio of silver to gold which are features to be considered on the mineral claims.

#### Type 2 – Vein Type Mineralization (Timmins Gold Camp)

Archean aged, structurally hosted, orogenic deposits range in size from small, sub economic lenses containing 10s of thousands of tonnes to greater than 100 million tonnes of mineralized material grading from 5 to 15 g/t Au. This type of deposit is best represented by the gold deposits of the Timmins, Kirkland

Lake and Red Lake mining camps. The key features that are common in this type of deposit are a spatial association with a regional scale structural lineament such as the Porcupine-Destor Fault in the Timmins



Figure 10 quartz-carbonate veining in historical trenches showing the typical rusty outcrops seen in orogenic deposits located in Greenstone belts of Ontario

area or the Kirkland Lake-Larder Lake Break in the Kirkland Lake Area as well as proximity of young intrusive rocks such as quartz porphyry and intense alteration of the host rocks (carbonate-sericite-silica). Previous exploration on the property has confirmed the presences of gold mineralization hosted in quartz-carbonate sulphide bearing veins hosted within narrow and wide silicified and carbonitized shear zones within mafic, intermediate and felsic volcanic and intrusive rocks but also within conglomerates of similar age. This type of mineralized system may produce large and moderate gold bearing deposits as similar gold bearing quartz-carbonate shear zones are the main gold host system in the Timmins Gold Camp.

#### Type 3 Porphyry-related Cu + Au ± Mo deposits

The quartz porphyritic rocks and their contact aureoles also have potential for hosting large tonnage, bulk mineable gold mineralization associated with quartz carbonate stockwork and vein zones. Porphyry type deposits are common in other parts of the world but are not unknown in an Archean greenstone environment. There is a prospect northeast of High Lake that has been described as a porphyry deposit (Davies, 1965).



*Figure 11: Calnor Resources: 1987 core from High Lake. Bedrock consists of felspar porphyry with silicified shear zones that show tourmaline veins with pyrite and pyrrhotite.* 

# 6 Deposit Types

#### **Structural Emplacement of Gold Mineralization**

Exploration work carried out in the district suggests that gold mineralization can be associated with lithological boundaries at altered contacts between mafic, intermediate and felsic volcanics, interbedded chemical sediments such as tuff, lapilli tuff and agglomerate and/or intrusive rock contacts. These contact and interbedded zones are in many cases subjected to structural deformation due to their lower resistance to deformation. These contact boundaries show preferential deposition of mineralizing fluids due to greater porosity. These structures also show alteration in the form of carbonitization, chloritization, and sericitisation and/or silicification. These alteration zones may contain quartz, quartz-



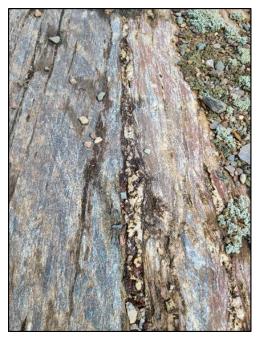


Figure 12: Quartz-carbonate veining along the contact between mafic and rhyolitic rocks

carbonate veining and sulphide bearing that are generally gold bearing. There are two prominent orientations of gold bearing quartz veins found in the Kenora metavolcanic belt. Most of the described alteration zones follow a general north-easterly (High Lake) and east-west (Moth Lake) strike direction, parallel to sub-parallel to the local stratigraphy within the volcanic rocks such as those observed on the property and surrounding area. Similar gold bearing quartz and quartz-carbonate veins have been discovered at Shoal Lake where work has outlined significant resources.

The lithologically controlled quartz and quartz-carbonate veining within the volcanic rocks and the lithologically bounded shear zones associated with the contacts between the late quartz and quartz-feldspar porphyries and other mafic rocks, are the main exploration target for the region.

Groves (2007) suggests that these deposits formed prior to the major phase(s) of orogenesis involving transpressional deformation and regional metamorphism and post volcanic granitoid magmatism during fragmental rocks, tuff, lapilli tuffs, flow breccias related to intermediate and felsic flows in areas of intense deformation as is noted elsewhere in the Wabigoon as at the Beardmore-Geraldton Greenstone Belt.

which the orogenic gold deposits formed. A pre-orogenic depositional environment must have had original permeability in the rocks and some structural deformation for the percolation of fluids such as

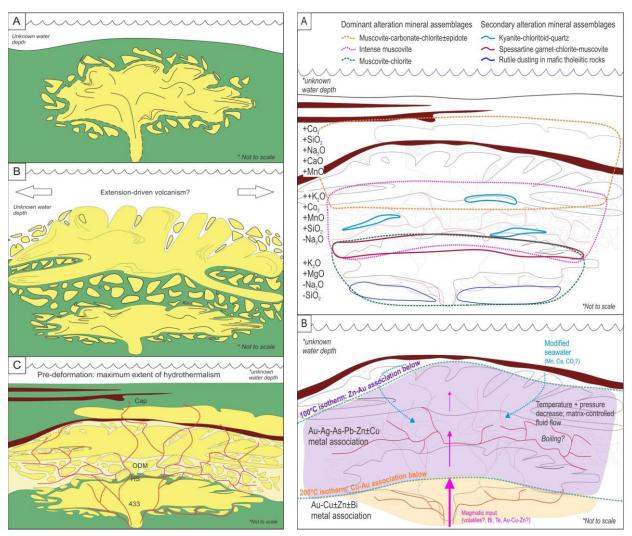


Figure 13 Possible evolution of the Rainy River Deposit: (A) Beginning of calc-alkaline volcanism by emplacement of dacite crypto-dome in tholeiitic basalt; (B) Prolonged and voluminous dacitic volcanism (extension-driven?) eventually reaching the seafloor, forming lava domes and flows and associated breccias; and (C) Final extent of volcanic activity and mineralization, here schematised in red, prior to deformation. The layers in dark brown correspond to sedimentary units (Pelletier, 2016).

Figure 13 is a possible explanation for the formation of the Rainy River deposit. As described, and as is seen at the High Lake project the deposit, is akin to a VMS deposit with some missing elements and additional of dacitic units which is often not typical to subaqueous VMS black smoker type of deposit development.

At Rainy River we have a mafic package of volcanic rocks including pillow basalts that in infused with a dacitic dome, during what is being interpreted as a seafloor spreading event. This emplacement eventually reaches the seafloor deposits flows and breccias. Subsequent volcanism caps the dacitic unit and sedimentary units are deposited around the time of mineralization prior to deformation. In Mireille Pelletier's PhD thesis (2016) tilted *The Rainy River Gold Deposit, Wabigoon Subprovince, Western Ontario: Style, Geometry, Timing and Structural Controls on Ore Distribution and Grades* it is postulated that the potential volcanic architecture and emplacement of the calc-alkaline dacitic body hosting the Rainy River

deposit evolved as: (A) Beginning of calc-alkaline volcanism by emplacement of dacite crypto-dome in tholeiitic basalt; (B) Prolonged and voluminous dacitic volcanism (extension-driven?) eventually reaching the seafloor, forming lava domes and flows and associated breccias; and (C) Final extent of volcanic activity and mineralization, here schematised in red, prior to deformation. The layers in dark brown correspond to sedimentary units.

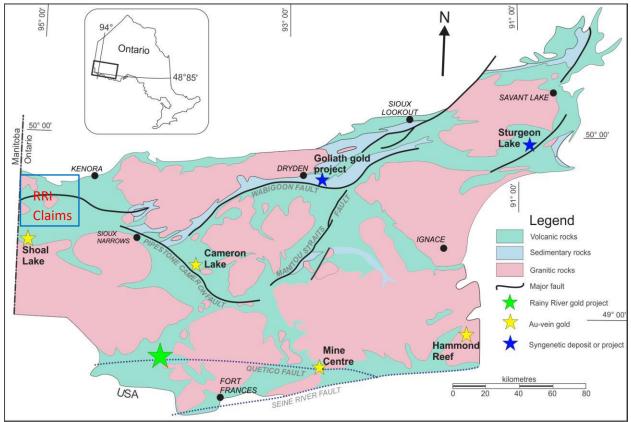


Figure 14: Simplified Map of the Major Gold deposits in the Western Wabigoon Subprovince of Kenora and Fort Francis

# 7 Exploration Work

Riverside conducted three site visits in the summer and fall of 2020 taking 35 rock samples in the field from both outcrop, old trenches and documented MDI sites. The third site visit included relogging and resampling/sampling the core from several diamond drill holes drilled on the southern edge of the project. The core from a drill program conducted by Calnor in 1988 was located in the field on the property. The core was examined using a XRF gun, in addition several samples were sent in for geochemical analysis. Several small drill programs have occurred in various locations on the project.

The bedrock sampled from historical trenches did show copper mineralization and evidence of shearing. Following the receipt of assays from samples taken in August and September, subsequent work focused on determining the relationship between the geophysics and geochemistry in the High Lake and Bare Hill-Lake areas. A second wave of reconnaissance work focused on the known showing and areas drilled for base metals by Noranda and Hudson Bay Exploration along the northern boundary of the project. Attempts by Riverside were made to relocate the old drill collars and locations, however in most cases too much time has passed, and the exact locations could not be located except for the 1989 drilling by Calnor this core was located in the field. Riverside carried a portable X-ray fluorescence spectroscopy gun



Figure 15: Drill core from WZ-6 (1987) from High Lake, Northwest Ontario conducted by Laramide Service Corporation. Results from Riversides re-sampling of this hole are tabulated in Table 3 below.

and a Terraplus K-10 magnetic susceptibility meter in the field for metal evaluation and mapping purposes. A Mavic 2 drone was used extensively to evaluate access, find areas of outcrop and for documentation purposes.

Riverside resampled the mineralized zones of 3 holes from drilling originally covered in an assessment report from J.H. Reedman & Associated (1987). This drill program was conducted primarily on the High Lake mining licence along the southern boundary to the High Lake Project. The holes were collared in quartz and feldspar porphyry and drilled into shear zones. Surface exposures in the area show sericitic alteration with pyrite and a trace of chalcopyrite mineralization. Riverside resampled the previously sampled intervals and extended the core sampling into both the footwall and hanging wall directions. The results tabulated below were slightly higher, about 20%, than the original results with the best results coming from the previously sampled core.

The re-sampling was conducted by Riverside at the government facility and the samples driven to Dryden by Riverside for analysis. The resampling returned similar results as to the original assays. The assays typically returned sub-gram results for gold but did return higher grades over narrow widths with Hole 1 returning one sample of 9.7 g/t gold over 2 feet. A weighted average composite in this zone was calculated at 3.9 g/t over 1.5m. Assays from the footwall of holes 1 and 6 suggest mineralization continues at depth albeit in the 1-to-2-gram range. No other elements of importance were noted in the assays.

Historical Drill Hole	From (ft)	To (ft)	Interval (ft)	Au (ppb) FA-AA		Description
WZ-1	167.5	169.6	2.1	11	1/2 core	Weakly altered quartz porphyry. Trace of
WZ-1	169.5	172.0	2.5	33	1/2 core	mafic minerals and pyrite. XRF indicates a
WZ-1	171.0	173.5	2.5	79	1/2 core	trace of copper, zinc and lead, no silver or
WZ-1	173.5	175.5	2.1	29	1/2 core	arsenic high potassium. From 177 XRF
WZ-1	175.5	177.5	2.1	601	1/4 core	and iron with led copper and molybdenum
WZ-1	177.5	179.5	2.1	1150	1/4 core	vanadium and titanium. From 185 to 195 a
WZ-1	179.5	181.6	2.1	9760	1/2 core	large shear is evident.
WZ-6	385.0	387.5	2.5	47	1/2 core	Weakly altered quartz porphyry. Fiver
WZ-6	387.5	391.0	3.5	168	1/4 core	percent mafic minerals and trace pyrite.
WZ-6	390.0	393.3	3.3	1090	1/4 core	XRF indicates a trace of
WZ-6	393.3	395.8	2.5	2500	1/4 core	copper>lead>arsenic. From 387.5-390
WZ-6	395.8	398.3	2.6	388	¼ core	strongly silicified zone 1% pyrite trace sericite and shears. 390-393.25 pervasive yellow green mineral Some soft minerals, no carbonates, looks like sericite, trace pyrite.
WZ-6	398.3	403.7	5.4	675	1/4 core	393.25-406.67: altered quartz porphyry
WZ-6	403.7	406.7	3.0	1170	<sup>1</sup> ⁄ <sub>4</sub> core	material is easily scratched pale-yellow brown mineral no mafics, trace disseminated euhedral pyrite. No shearing evident this interval may be an aplite dike?
WZ-6	406.7	410.0	3.3	239	1/4 core	Contact with porphyritic rock
WZ-6	409.0	412.0	3.0	432	1/4 core	Weakly altered quartz porphyry
WZ-6	412.0	415.0	3.0	129	1/4 core	
WZ-6	415.0	418.0	3.0	483	1/4 core	
WZ-6	418.0	421.0	3.0	64	1/4 core	
WZ-6	421.0	424.0	3.0	69	1/4 core	Strongly altered quartz porphyry, trace
WZ-6	424.0	427.0	3.0	128	1/4 core	pyrite
WZ-6	427.0	430.0	3.0	201	1/4 core	
WZ-6	430.0	433.0	3.0	348	1/4 core	Strongly altered quartz porphyry with tourmaline veins, trace pyrite
WZ-6	434.0	436.0	3.0	141	1/4 core	Strongly altered quartz porphyry, trace pyrite, sharp lower contact
WZ-6	436.0	439.0	3.0	159	1/4 core	Weakly altered quartz porphyry, trace pyrite
WZ-6	439.0	442.0	3.0	181	1/4 core	
WZ-6	442.0	445.0	3.0	68	1/4 core	
WZ-6	445.0	447.3	2.3	79	1/2 core	
WZ-6	447.3	450.0	2.7	1000	1/2 core	
WZ-7	316.9	320.0	3.1	84	1/2 core	Unaltered feldspar porphyry, large feldspar crystals to 1cm, trace pyrite and Po.
WZ-7	320.0	322.4	2.4	1530	1/4 core	Weakly altered quartz porphyry, trace pyrite
WZ-7	322.4	328.4	4.0	872	1/4 core	Quartz-sericite-pyrite alteration 4cm wide tourmaline vein. XRF: 8 g/t Au.
WZ-7	328.4	331.7	3.3	362	1/4 core	Greenish yellow coloured rock, sheared.
WZ-7	331.7	333.7	2.0	181	1/4 core	QSP; trace to 1% pyrite small subhedral cubes, trace tourmaline.
WZ-7	333.7	336.0	2.3	199	1/2 core	Weakly altered QFP rock trace biotite and pyrite.

Table 2: Resampled core from MNDM core library in Kenora

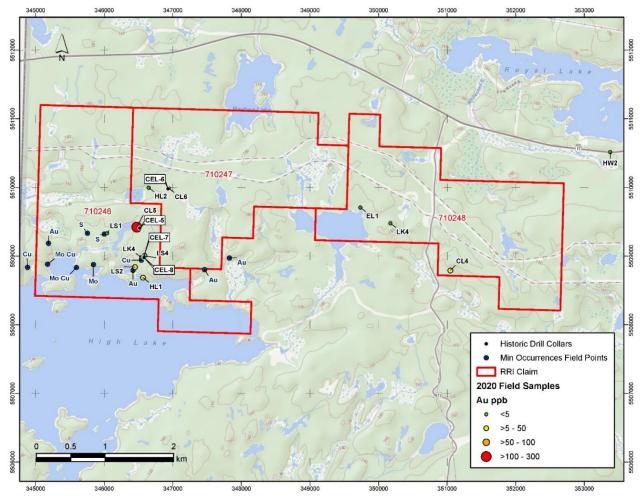


Figure 16: Surface sample sites High Lake project

### 8 Interpretations and Conclusions

The High Lake Project is located in an area of past exploration however this work is generally from the 1980s and is not digital; significant modifications to exploration techniques have evolved since that time. There are several deposits in the region that can serve as analogs and have never been applied to the belt. While vein style orogenic type deposits have been explored as at the Dupont Mine, stratigraphically controlled deposits like the model described at Rainy River Mine have not been applied to this region.

The area to the north of High Lake and Electrum Lake comprises quartz and feldspar porphyry quartz showing quartz sericite alteration and significant shearing that suggests intrusive hosted vein mineralization; these types of deposits can be of significant size and volume. The resampling of the historical core and field observations at High Lake suggest these shears are significant, see Figure 16.

Also, in the High Lake area is the potential for *"porphyry style"* mineralization. This area was first explored in the 1960's by Selco Exploration and is known as the *Selco-Alcock Occurrence*. Selco reported chalcopyrite and minor bornite mineralization occurring in thin massive veins of pyrite and pyrrhotite as both fractures in the porphyry and as disseminations in the porphyry. The length of the zone is about 91.4

m, the average width 1.8 m, with a strike of N70E and a steep dip to the south. A sample of the zone assayed more than 1% Cu, 0.03 opt Au and 0.4 opt Ag.

Drilling in 1989 by Calnor Exploration focussed on the gold potential and drilled two holes in this area; Cel-07 and Cel-08. Prior to 1989 Hudson's Bay Exploration and Teck Corp. drilled several hundred meters of core to the north of High Lake where they were focused on base metals.

#### 9 Recommendations

Exploration work in 2020 included incorporating in the past work has proved up several areas to focus more detailed studies in the High Lake area and in the eastern portion of the property. Geophysics, trenching and past drilling have identified east-west, contact controlled shear zones with gold. The High Lake Target was drilled in 1987 and showed economic grades over narrow widths. Fieldwork suggests the area shows significant and widespread silica and sericitic alteration that could be defined by geophysics. The Arsenic Pond area was looked at by Homestake and two short holes were drilled here, more work is required in this area.

It is recommended more groundwork, prospecting and detailed mapping be conducted to better define the current targets at High Lake, Electrum Lake, and Arsenic Pond within intent of extending the anomaly along strike to possibly discover additional mineralized zones. Mineralization noted to date would best be defined using IP geophysics. Two possible grids would include the area immediately north or High Lake and Electrum Lake beginning at the shoreline.

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- 19. Rio Algom Exploration Inc, 1990: Ewart Township, Fairservice Option, Diamond Drilling Report #34 one hole to test EM Conductor logs and assay only.

## APPENDIX A: CERTIFICATE OF AUTHOR

I, Freeman Smith, P.Geo., as an author of this report regarding the exploration project in the Thunder Bay Mining District, Northwestern Ontario, Canada; do hereby certify that:

- 1. I am a consulting geologist at Omni Resource Consulting Ltd. of Port Moody, BC, Canada, V3H 0G6
- 2. I have B.Sc. degree in Geology from the University of British Columbia, 1991.
- 3. I am registered as a Professional Geologist in BC (License #: 100829).
- 4. I have been practicing as a professional since 1999 and have over 20 years of experience in mineral exploration.
- 5. The exploration work was carried out under my supervision, and I was on site through the duration of the project.

Dated March 30<sup>th</sup>, 2022

"Freeman Smith"

Freeman Smith, P.Geo.

# APPENDIX B: LIST OF PERSONNEL WORKED ON EXPLORATION WORK

# List of Contractors Involved on the Project

- 1. Freeman Smith, P.Geo., Geologist of Port Moody, B.C.
- 2. John-Mark Staude, Geologist, Vancouver, BC
- 3. Elena Rein, GIS mapping work, Nanaimo B.C.
- 4. Ben Connor, GIS, data compilation work, Figure preparation, Vancouver, B.C
- 5. Erika Sweeney, Geologist, Vancouver, BC

Date from	Date to	# of	Personnel	Task
		Days		
Aug 10, 2020	Nov 5, 2020	60	Freeman Smith	Site review and prep
				Fieldwork, mapping, sampling
Sept 20, 2020	Sept 30, 2020	10	John-Mark Staude	Fieldwork, mapping, sampling
Sep 28, 2020	Dec 16, 2020	14	Ben Connor	GIS work, compilation and
				targeting
Aug 31, 2020	Sept 24, 2020	2.5	Erika Sweeney	Map compilation and analysis
Jan 19, 2021	Jan 29, 2021	10	Freeman Smith	Reporting First nation
				meeting, assay review
Feb 25, 2021		1	Elena Rein	Map creation, GIS work
Mar 25, 2021	Mar 29, 2021	5	Freeman Smith	Data analysis, evaluation
Jan 29, 2021	Mar 31, 2021	8	Ben Connor	Map prep
Jan 1, 2022	Jan 31, 2022	10	Freeman Smith	AR report writing

# APPENDIX C: STATEMENT OF EXPENDITURES 2020-2022

Assays	\$4,042.18
Equipment	\$6,170.74
Accom	\$5,227.33
Meals	\$3,026.56
Travel	\$15,120.23
Labor	\$60,293.90
Total	\$93,880.94

#### High Lake Daily Log, Riverside Resources Inc.

RRI Personnel	Date	Page 1	General Duty
Freeman Smith	August 10, 2020	Field Prep	Kenora Data Review
Freeman Smith	August 11, 2020	Field Prep	Kenora Data Review
Freeman Smith	August 12, 2020	Field Prep	Kenora Data Review
Freeman Smith	August 13, 2020	Field Prep	Kenora Data Review
Freeman Smith	August 17, 2020	Field Prep	Field preparation
Freeman Smith	August 18, 2020	Field Prep	Field preparation
Freeman Smith	August 19, 2020	Field	Travel
Freeman Smith	August 20, 2020	Field	Reconn of access to sites
Freeman Smith	August 21, 2020	Field	Road reconn. met w. Craig Ravaanas, District Geo.
Freeman Smith	August 22, 2020	Field	Field High Lake, Shoal Lake roads
Freeman Smith	August 23, 2020	Field	Field, road side geology, sampling
Freeman Smith	August 24, 2020	Field	Field, road side geology, sampling
Freeman Smith	August 25, 2020	Field	Field, First nations meeting cancelled
Freeman Smith	August 26, 2020	Field	Field, Thunder and lightening short day
Freeman Smith	August 27, 2020	Field	review of old field trenches historical work, sampling
Freeman Smith	August 28, 2020	Field	review of old field trenches historical work, sampling
Freeman Smith	August 29, 2020	Field	Field, road side geology, sampling
Freeman Smith	August 30, 2020	Field	Field, road side geology, sampling
Freeman Smith	August 31, 2020	Field	Field, road side geology, sampling
Freeman Smith	September 1, 2020	Field	Travel, drop off samples
Freeman Smith	September 2, 2020	Field Post doc.	Compile Field summaries
Freeman Smith	September 3, 2020	Field Post doc.	Compile Field summaries
Freeman Smith	September 4, 2020	Field Post doc.	Ben Maps, locked out of office
Freeman Smith	September 15, 2020	Field Post doc.	finish of map, field prep with ben,
Freeman Smith	September 18, 2020	Field Post doc.	field prep with ben,
Freeman Smith	September 21, 2020	Field	fly to Winnipeg, travel to Kenora
Freeman Smith	September 22, 2020	Field	Field traverse High Lake Showings, bear charge
Freeman Smith	September 23, 2020	Field	Field Traverse Electrum Lake east to secondary road
Freeman Smith	September 24, 2020	Field	Field Traverse Clearwater Bay area
Freeman Smith	September 25, 2020	Field	Field Traverse High lake and D lake field traverses
Freeman Smith	September 26, 2020	Field	Field Traverse Moss Lake folds and pipeline row
Freeman Smith	September 27, 2020	Field	tick bite infection hospital, compile notes
Freeman Smith	September 28, 2020	Field	Field Traverse Rush Bay, Echo Bay, old mine site traverse
Freeman Smith	September 29, 2020	Field	field prep, visited Craig, Doug data, core library
Freeman Smith	September 30, 2020	Field	high lake half day, return car to Winnipeg
Freeman Smith	October 1, 2020	Field	Core review, roadside geology
Freeman Smith	October 2, 2020	Field	Electrum lake traverse w. JMS
Freeman Smith	October 3, 2020	Field	High Lake traverse w. JMS
Freeman Smith	October 4, 2020	Field	High Lake traverse

RRI Personnel	Date	Page 2	General Duty		
Freeman Smith	October 5, 2020	Field	High Lake traverse		
Freeman Smith	October 6, 2020	Field	Drive samples at Dryden, drive to Winn.		
Freeman Smith	October 7, 2020	Field	Fly home 6AM flight. post field prep.		
Freeman Smith	October 13, 2020	Field Comp	QA QC, geophysical call w. craig.ravnaas@ontario.ca		
Freeman Smith	October 14, 2020	Field Comp	Inox review and comp, QA/QC		
Freeman Smith	October 15, 2020	Field Comp	Inox, resend emails to FN's in Kenora block		
Freeman Smith	October 16, 2020	Field Comp	Inox, KT-10, FN calls/emails		
Freeman Smith	October 19, 2020	Field Comp	reflex, KT-10, QA/QC		
Freeman Smith	October 20, 2020	Field	Travel, High Lake Field, 6" fresh snow		
Freeman Smith	October 21, 2020	Field	core review at Kenora Core Library diamond drill holes WZ-01 to 07 (1987)		
Freeman Smith	October 22, 2020	Field	core review at Kenora Core Library Holes WZ-04 to 07 (1987)		
Freeman Smith	October 23, 2020	Field	core review at Kenora Core Library Holes WZ-06 to 07 (1987). An Innovex XRF gun was used to prescreen relacvant core in the library and the KT-10 magnetometer was used on the core.		
Freeman Smith	Ostober 24, 2020				
Freeman Smith	October 24, 2020	Field	Sampling & cutting used ministry core saw at library		
Freeman Smith	October 25, 2020	Field	Sampling & cutting, (1/2 & 1/4) core samples 35 core samples were taken using the core saw.		
Freeman Smith	October 26, 2020	Field	Review High Lake core, DDH: Cell 5 & 6. Stored in field, the core was screened use a Innovex XRF		
	,		and then sampled.		
Freeman Smith	October 27, 2020	Field	Pipeline traverse 3 samples, snowed 3cm		
Freeman Smith	October 28, 2020	Field	Dropped samples at Dryden Act labs. FN meeting cancelled, snowing		
Freeman Smith	October 29, 2020	Field	FN meeting; Phyllis Pinesse, snowing		
Freeman Smith	October 30, 2020	Field	travel, COVID shut downs		
Freeman Smith	January 19, 2021	Post Field Doc.	Plotting, map preparation		
Freeman Smith	January 20, 2021	Post Field Doc.	Plotting, map preparation		
Freeman Smith	January 21, 2021	Post Field Doc.	Plotting, map preparation		
Freeman Smith	January 22, 2021	Post Field Doc.	Reporting, assay review		
Freeman Smith	January 23, 2021	Post Field Doc.	Reporting, assay review		
Freeman Smith	January 24, 2021	Post Field Doc.	Reporting, assay review		
Freeman Smith	January 25, 2021	Post Field Doc.	Reporting, compilation		
Freeman Smith	January 26, 2021	Post Field Doc.	Reporting, compilation		
Freeman Smith	January 27, 2021	Post Field Doc.	Reporting, compilation		
Freeman Smith	January 28, 2021	Post Field Doc.	Reporting, compilation		
Freeman Smith	January 29, 2021	Post Field Doc.	Reporting, compilation		
Freeman Smith	March 25, 2021	Reporting	AR report writing		
Freeman Smith	March 26, 2021	Reporting	AR report writing		
Freeman Smith	March 27, 2021	Reporting	AR report writing		
Freeman Smith	March 28, 2021	Reporting	AR report writing		
Freeman Smith	January 17, 2022	Reporting	AR report writing		
Freeman Smith	January 18, 2022	Reporting	AR report writing		
Freeman Smith	January 19, 2022	Reporting	AR report writing		
Freeman Smith	January 20, 2022	Reporting	AR report writing		

RRI Personnel	Date	Page 3	General Duty
Freeman Smith	January 21, 2022	Reporting	AR report writing
Freeman Smith	January 24, 2022	Reporting	AR report writing
Freeman Smith	January 25, 2022	Reporting	AR report writing
Freeman Smith	January 26, 2022	Reporting	AR report writing
Freeman Smith	January 27, 2022	Reporting	AR report writing
Freeman Smith	January 28, 2022	Reporting	AR report writing
Elena Rein	February 25, 2021	AR Report	Creation of claim maps
Erika Sweeney	August 31, 2020	Field Prep	GIS compilation exploration targeting
Erika Sweeney	September 16, 2020	Field Prep	GIS compilation exploration targeting
Erika Sweeney	September 24, 2020	Field Prep	GIS compilation exploration targeting
Ben Connor	August 8, 2020	Field Prep	Field Map preparation, GIS Compilations
Ben Connor	August 9, 2020	Field Prep	Field Map preparation, GIS Compilations
Ben Connor	September 28, 2020	Post Field Comp	Field Map preparation, GIS Compilations
Ben Connor	September 29, 2020	Post Field Comp	Field Map preparation, GIS Compilations
Ben Connor	October 14, 2020	Post Field Comp	Field Map preparation, GIS Compilations
Ben Connor	October 15, 2020	Post Field Comp	Field Map preparation, GIS Compilations
Ben Connor	October 16, 2020	Post Field Comp	Field Map preparation, GIS Compilations
Ben Connor	November 16, 2020	Post Field Comp	Field Map preparation, GIS Compilations
Ben Connor	November 17, 2020	Post Field Comp	Field Map preparation, GIS Compilations
Ben Connor	December 15, 2020	Post Field Comp	Field Map preparation, GIS Compilations
Ben Connor	December 16, 2020	Post Field Comp	Field Map preparation, GIS Compilations
Ben Connor	December 17, 2020	Post Field Comp	Field Map preparation, GIS Compilations
Ben Connor	December 18, 2020	Post Field Comp	Field Map preparation, GIS Compilations
Ben Connor	Jan-15-2021	AR Report	Final Maps preparation and compilations
Ben Connor	Jan-16-2021	AR Report	Final Maps preparation and compilations
Ben Connor	Jan-17-2021	AR Report	Final Maps preparation and compilations
Ben Connor	Jan-18-2021	AR Report	Final Maps preparation and compilations
Ben Connor	Feb-15-2021	AR Report	Final Maps preparation and compilations
Ben Connor	Feb-16-2021	AR Report	Final Maps preparation and compilations
Ben Connor	March 29, 2021	AR Report	Report figures and map preparations
Ben Connor	May 26, 2021	AR Report	Report figures and map preparations
Ben Connor	June 28, 2021	AR Report	Report figures and map preparations
Ben Connor	June 29, 2021	AR Report	Report figures and map preparations
John-Mark Staude	September 28, 2020	Fieldwork	fly to Winnipeg, drive to site
John-Mark Staude	September 29, 2020	Fieldwork	High Lake Showings
John-Mark Staude	September 30, 2020	Fieldwork	High Lake Showings
John-Mark Staude	October 1, 2020	Fieldwork	High Lake Showings
John-Mark Staude	October 2, 2020	Fieldwork	Electrum Lake
John-Mark Staude	October 3, 2020	Fieldwork	Electrum Lake
John-Mark Staude	October 4, 2020	Field Reviews	Roadside geology, travel

Name	UTM_E	UTM_N	Description	ppb Au			
Shoal Lake 01	363284	5500130	Sample for road cut, oxidized altered granitic rock				
Shoal Lake 02	358123	5502747	Silicified felsic volcanics trace fine cubic Py.				
High Lake 001	346565	5508686	Rusty porphyritic rock at old trench 040/80N, 1-5% Py.	12			
High Lake 002	346648	5509996	bedded volcanics with seds, cherty beds, trace Py, edge of lake/swamp	1			
CELL-04	351045	5508552	Sampled bedrock it what appears to be the ooutcrop targeted by this drill hole in 1987. XRF gun indicated the presence of gold but assays did not.	11			
Cell 05	346475	5509422	Small access road now visible in snow. Large exposed outcrop 150 by 80m exposed between two swamps of highly altered intrusive rock; clays and phyllosilicates. Lots of iron oxide staining. XRF measures gold here. Anomalous in Cu>Zn>As>Pb. Copper 10-20ppm As 5-20. One sample here oxidized QFP.	300			
Cell 06	346924	5509985	Altered QFP. Micas and iron staining. At contact with Mafic also looks like veins along contact which strikes east west.	<5			
LAKE-S1	346041	5509332	Historial trench noted in MDI Inventory. Highly oxidized and silicified volcanic rock. Historically these trench retunred >3 g/t gold, our sample did not.	< 6			
LAKE-S2	346448	5508840	Historial trench noted in MDI Inventory. Highly oxidized and silicified volcanic rock. Historically these trench retunred >3 g/t gold, our sample did not. Photo 10b in report.	50			
LAKE-S4	346587	5509003	Historial pits noted in MDI Inventory east of Electrum Lake. Highly oxidized and silicified volcanic rock. Historically these trench retunred >3 g/t gold, our sample did not.	32			
LAKE-04	350173	5509478	Historial transh noted in MDI Inventory just off old road paar High Jake. Highly oxidized and silicified volcanic rock 55% pyrite in samples				
LAKE-05	346540	5508982	Historial trench noted in MDI Inventory. Highly oxidized and silicified volcanic rock. Historically these trench retunred >3 g/t gold, our sample did not.	< 5			
LAKE-06	362116	5502407	Historial trench noted in MDI Inventory. Highly oxidized and silicified volcanic rock. Historically these trench retunred >3 g/t gold, our sample did not.				
LAKE-07	356977	5509515	Historial trench noted in MDI Inventory, Highly oxidized and silicified volcanic rock. Historically these trench returned >3 g/t gold, our				
LAKE-08	354997	5508905	Historial trench noted in MDI Inventory. Highly oxidized and silicified volcanic rock. Historically these trench retunred >3 g/t gold, our sample did not.	< 5			
ELECTRUM-1	349735	5509707	Historial trench noted in MDI Inventory. The trench was not found found some silicified material was found on the lake shore near the reported UTMs and was sampled	< 5			
BRONT-01	354360	5511685	Altered materail found during road traverse iron oxieds and trace pyrite	< 5			
ECHO-01	358695	5500743	Altered and oxized material found along the contact between felsic and mafic bedrock. Figure 12 in AR				
HWY-01	358359	5510218	Highly silicified and altered rock on road near northern boundary trace to 3% pyrite in outcrop				
HWY-02	353378	5510515	15 Highly silicified and altered rock on road near northern boundary trace to 3% pyrite in outcrop				
CB-01	366683	5501976	Altered materail found during road traverse iron oxide and trace pyrite	< 5			
PIPELINE 01	354597	5508662	Altered mafic volcanics near boundary to felsic volcanics. Moderate alteration in this area, trace pyrite	293			
PIPELINE 02	355052	5508424	Altered mafic volcanics near boundary to felsic volcanics	7			
PIPELINE 03	355074	5508449	Altered mafic volcanics near boundary to felsic volcanics	20			

Quality Analysis ...



#### Innovative Technologies

Report No.:A20-13615Report Date:03-Dec-20Date Submitted:28-Oct-20Your Reference:

Riverside Resources 550-800 West Pender St Vancouver BC V6C 2V6 Canada

ATTN: Freeman Smith

# CERTIFICATE OF ANALYSIS

44 Core samples were submitted for analysis.

The following analytical package(s) were requested:	Testing Date:	
1A2-Dryden	QOP AA-Au (Au - Fire Assay AA)	2020-11-24 20:18:11
1A3-Dryden	QOP AA-Au (Au - Fire Assay Gravimetric)	2020-11-26 10:47:30

#### REPORT A20-13615

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3

CERTIFIED BY:

Emmanuel Eseme , Ph.D. Quality Control Coordinator

ACTIVATION LABORATORIES LTD.

264 Government Road, Dryden, Ontario, Canada, P8N 2R3 TELEPHONE +807 223-6168 or +1.888.228.5227 FAX +1.905.648.9613 E-MAIL Dryden@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

#### Quality Analysis ...

#### Innovative Technologies

Report No.:A20-13615Report Date:03-Dec-20Date Submitted:28-Oct-20Your Reference:

Riverside Resources 550-800 West Pender St Vancouver BC V6C 2V6 Canada

ATTN: Freeman Smith

# **CERTIFICATE OF ANALYSIS**

44 Core samples were submitted for analysis.

The following analytical package(s) were requested:		Testing Date:
8-Peroxide ICP	QOP Sodium Peroxide (Sodium Peroxide Fusion ICP)	2020-11-27 11:04:37

REPORT A20-13615

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Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3

CERTIFIED BY:

Emmanuel Eseme , Ph.D. Quality Control Coordinator

ACTIVATION LABORATORIES LTD.

41 Bittern Street, Ancaster, Ontario, Canada, L9G 4V5 TELEPHONE +905 648-9611 or +1.888.228.5227 FAX +1.905.648.9613 E-MAIL Ancaster@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com Results

Analyte Symbol	Au	Al	As	Be	Ca	Co	Cr	Cu	Fe	К	Li	Mg	Mn	Ni	Pb	S	Sb	Si	Ti	W	Zn	Au
Unit Symbol	ppb	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	g/tonne
Lower Limit	5	0.01	0.01	0.001	0.01	0.002	0.01	0.005	0.05	0.1	0.01	0.01	0.01	0.005	0.01	0.01	0.01	0.01	0.01	0.005	0.01	0.03
Method Code	FA-AA	FUS-	FUS-	FUS-	FUS-	FUS-	FUS-	FUS-	FUS-	FUS-	FUS-	FUS-	FUS-	FUS-	FUS-	FUS-	FUS-	FUS-	FUS-	FUS-	FUS-	FA-
		Na2O2	Na2O2	Na2O2	Na2O2	Na2O2	Na2O2	Na2O2	Na2O2	Na2O2	Na2O2	Na2O2	Na2O2	Na2O2	Na2O2	Na2O2	Na2O2	Na2O2	Na2O2	Na2O2	Na2O2	GRA
W2-1 167.5-169.5	11	8.12	< 0.01	< 0.001	0.85	< 0.002	< 0.01	< 0.005	1.07	1.1	< 0.01	0.39	< 0.01	< 0.005	< 0.01	0.38	< 0.01	34.7	0.09	< 0.005	< 0.01	
W2-1 169.5-171	33	8.05	< 0.01	< 0.001	1.03	< 0.002	< 0.01	< 0.005	0.70	1.6	< 0.01	0.20	< 0.01	< 0.005	< 0.01	0.25	< 0.01	33.1	0.08	< 0.005	< 0.01	
W2-1 171-173.5	79	7.90	< 0.01	< 0.001	1.15		< 0.01	< 0.005	0.78	2.3	< 0.01	0.21	< 0.01	< 0.005	< 0.01	0.15	< 0.01	35.3	0.09	< 0.005	< 0.01	
W2-1 173.5-175.5	29	7.74	< 0.01	< 0.001	1.14	< 0.002	< 0.01	< 0.005	0.88	2.4	< 0.01	0.20	< 0.01	< 0.005	< 0.01	0.12	< 0.01	33.1	0.09	< 0.005	< 0.01	
W2-1 175.5-177.5	601	7.67	< 0.01	< 0.001	0.93	< 0.002	< 0.01	< 0.005	1.14	2.4	< 0.01	0.22	< 0.01	< 0.005	< 0.01	0.60	< 0.01	34.4	0.08	< 0.005	< 0.01	
W2-1 177.5-179.5	1150	7.81	< 0.01	< 0.001	0.76		< 0.01	< 0.005	1.08	2.3	< 0.01	0.21	< 0.01	< 0.005	< 0.01	0.60	< 0.01	34.2	0.09	< 0.005	< 0.01	
W2-1 179.5-181.5	> 5000	6.69	< 0.01	< 0.001	0.90	< 0.002	< 0.01	< 0.005	3.82	2.8	< 0.01	0.46	0.01	< 0.005	< 0.01	3.43	< 0.01	33.9	0.08	< 0.005	< 0.01	9.76
W2-6 385-387.5	47	8.03	< 0.01	< 0.001	1.39	< 0.002	< 0.01	< 0.005	1.01	2.5	< 0.01	0.22	< 0.01	< 0.005	< 0.01	0.37	< 0.01	32.3	0.09	< 0.005	< 0.01	
W2-6 387.5-390	168	7.84	< 0.01	< 0.001	1.62	< 0.002	< 0.01	< 0.005	1.02	2.3	< 0.01	0.19	< 0.01	< 0.005	< 0.01	0.49	< 0.01	33.9	0.08	< 0.005	< 0.01	
W2-6 390.0-393.25	1090	8.05	< 0.01	< 0.001	1.35	< 0.002	< 0.01	< 0.005	0.89	2.5	< 0.01	0.18	< 0.01	< 0.005	< 0.01	0.39	< 0.01	34.5	0.08	< 0.005	< 0.01	
W2-6 393.25-395.75	2500	6.77	< 0.01	< 0.001	1.02	< 0.002	< 0.01	< 0.005	0.69	2.7	< 0.01	0.19	< 0.01	< 0.005	< 0.01	0.31	< 0.01	36.3	0.08	< 0.005	< 0.01	
W2-6 395.75-398.33	388	7.72	< 0.01	< 0.001	1.03	< 0.002	< 0.01	< 0.005	0.70	2.8	< 0.01	0.20	< 0.01	< 0.005	< 0.01	0.19	< 0.01	34.1	0.08	< 0.005	< 0.01	
W2-6 398.33-403.67	675	7.75	< 0.01	< 0.001	1.00	< 0.002	< 0.01	< 0.005	0.74	2.7	< 0.01	0.19	< 0.01	< 0.005	< 0.01	0.26	< 0.01	34.0	0.08	< 0.005	< 0.01	
W2-6 403.67-406.67	1170	7.76	< 0.01	< 0.001	1.10	< 0.002	< 0.01	< 0.005	0.89	2.8	< 0.01	0.21	< 0.01	< 0.005	< 0.01	0.34	< 0.01	33.9	0.09	< 0.005	< 0.01	
W2-6 406.67-409	239	7.97	< 0.01	< 0.001	1.07	< 0.002	< 0.01	< 0.005	0.92	2.9	< 0.01	0.23	< 0.01	< 0.005	< 0.01	0.29	< 0.01	34.6	0.09	< 0.005	< 0.01	
W2-6 409-412	432	7.97	< 0.01	< 0.001	1.21	< 0.002	< 0.01	< 0.005	0.96	2.8	< 0.01	0.21	< 0.01	< 0.005	< 0.01	0.27	< 0.01	35.0	0.09	< 0.005	< 0.01	
W2-6 412-415	129	8.05	< 0.01	< 0.001	1.22	< 0.002	< 0.01	< 0.005	0.91	3.0	< 0.01	0.18	< 0.01	< 0.005	< 0.01	0.22	< 0.01	34.1	0.09	< 0.005	< 0.01	
W2-6 415-418	483	7.93	< 0.01	< 0.001	1.14	< 0.002	< 0.01	< 0.005	0.94	2.9	< 0.01	0.19	< 0.01	< 0.005	< 0.01	0.33	< 0.01	33.8	0.09	< 0.005	< 0.01	
W2-6 418-421	64	8.12	< 0.01	< 0.001	1.28	< 0.002	< 0.01	< 0.005	0.96	2.7	< 0.01	0.20	< 0.01	< 0.005	< 0.01	0.19	< 0.01	34.4	0.09	< 0.005	< 0.01	
W2-6 421-424	69	8.04	< 0.01	< 0.001	1.09	< 0.002	< 0.01	< 0.005	1.07	2.5	< 0.01	0.22	< 0.01	< 0.005	< 0.01	0.36	< 0.01	34.0	0.09	< 0.005	< 0.01	
W2-6 424-427	128	7.95	< 0.01	< 0.001	1.05	< 0.002	< 0.01	< 0.005	0.90	2.6	< 0.01	0.21	< 0.01	< 0.005	< 0.01	0.32	< 0.01	34.6	0.09	< 0.005	< 0.01	
W2-6 427-430	201	8.02	< 0.01	< 0.001	1.05	< 0.002	< 0.01	< 0.005	0.89	2.5	< 0.01	0.22	< 0.01	< 0.005	< 0.01	0.29	< 0.01	35.0	0.09	< 0.005	< 0.01	
W2-6 430-433	348	8.12	< 0.01	< 0.001	0.95	< 0.002	< 0.01	< 0.005	0.96	3.2	< 0.01	0.29	< 0.01	< 0.005	< 0.01	0.41	< 0.01	33.8	0.08	< 0.005	< 0.01	
W2-6 433-436	141	8.31	< 0.01	< 0.001	0.97	< 0.002	< 0.01	< 0.005	0.88	3.7	< 0.01	0.20	< 0.01	< 0.005	< 0.01	0.44	< 0.01	33.4	0.09	< 0.005	< 0.01	
W2-6 436-439	159	7.98	< 0.01	< 0.001	1.13	< 0.002	< 0.01	< 0.005	0.87	3.2	< 0.01	0.19	< 0.01	< 0.005	< 0.01	0.41	< 0.01	34.2	0.09	< 0.005	< 0.01	
W2-6 439-442	181	8.38	< 0.01	< 0.001	1.05	< 0.002	< 0.01	< 0.005	1.00	3.1	< 0.01	0.20	< 0.01	< 0.005	< 0.01	0.53	< 0.01	34.7	0.08	< 0.005	< 0.01	
W2-6 442-445	68	7.57	< 0.01	< 0.001	1.07	< 0.002	< 0.01	< 0.005	0.86	2.8	< 0.01	0.17	< 0.01	< 0.005	< 0.01	0.40	< 0.01	34.6	0.08	< 0.005	< 0.01	
W2-6 445-447.25	79	7.96	< 0.01	< 0.001	1.21	< 0.002	< 0.01	< 0.005	1.03	2.8	< 0.01	0.21	< 0.01	< 0.005	< 0.01	0.54	< 0.01	34.2	0.09	< 0.005	< 0.01	
W2-6 447.25-450	1000	8.13	< 0.01	< 0.001	1.43	< 0.002	< 0.01	< 0.005	1.94	3.6	< 0.01	0.56	0.01	< 0.005	< 0.01	1.07	< 0.01	32.6	0.19	< 0.005	< 0.01	
CELL-05	300	7.48	< 0.01	< 0.001	0.49	< 0.002	< 0.01	0.006	1.22	3.2	< 0.01	0.14	< 0.01	< 0.005	< 0.01	0.17	< 0.01	37.1	0.08	< 0.005	< 0.01	
CELL-06	< 5	7.01	< 0.01	< 0.001	0.28	< 0.002	< 0.01	< 0.005	2.93	5.8	< 0.01	0.32	0.04	< 0.005	< 0.01	0.22	< 0.01	34.1	0.23	< 0.005	< 0.01	
PIPELINE 01	293	6.71	0.22	< 0.001	< 0.01	< 0.002	< 0.01	< 0.005	1.28	5.7	< 0.01	0.24	< 0.01	< 0.005	< 0.01	0.09	< 0.01	35.9	0.07	< 0.005	< 0.01	
PIPELINE 02	7	5.87	< 0.01	< 0.001	1.34	< 0.002	< 0.01	< 0.005	1.28	1.4	< 0.01	0.38	0.02	< 0.005	< 0.01	0.46	< 0.01	37.4	0.06	< 0.005	< 0.01	
PIPELINE 03	20	6.37	< 0.01	< 0.001	0.35	< 0.002	< 0.01	< 0.005	1.12	2.6	< 0.01	0.31	< 0.01	< 0.005	< 0.01	0.12	< 0.01	38.6	0.07	< 0.005	< 0.01	
W2-7 316.9-320	84	8.16	< 0.01	< 0.001	1.33	< 0.002	< 0.01	< 0.005	0.94	2.7	< 0.01	0.19	< 0.01	< 0.005	< 0.01	0.24	< 0.01	35.0	0.08	< 0.005	< 0.01	
W2-7 320-322.4	1530	7.36	< 0.01	< 0.001	1.40	< 0.002	< 0.01	< 0.005	0.89	2.4	< 0.01	0.18	< 0.01	< 0.005	< 0.01	0.31	< 0.01	36.6	0.08	< 0.005	< 0.01	
W2-7 322.9-328.4	872	7.69	< 0.01	< 0.001	1.24	< 0.002	< 0.01	< 0.005	0.83	2.7	< 0.01	0.18	< 0.01	< 0.005	< 0.01	0.46	< 0.01	36.4	0.08	< 0.005	< 0.01	
W2-7 328.4-331.67	362	8.19	< 0.01	< 0.001	1.41	< 0.002	< 0.01	< 0.005	1.03	2.9	< 0.01	0.26	< 0.01	< 0.005	< 0.01	0.49	< 0.01	35.5	0.09	< 0.005	< 0.01	
W2-7 331.67-333.67	181	8.10	< 0.01	< 0.001	1.20	< 0.002	< 0.01	< 0.005	0.90	2.8	< 0.01	0.26	< 0.01	< 0.005	< 0.01	0.30	< 0.01	33.9	0.09	< 0.005	< 0.01	
W2-7 333.67-336.0	199	8.10	< 0.01	< 0.001	1.28	< 0.002	< 0.01	< 0.005	0.92	2.5	< 0.01	0.22	< 0.01	< 0.005	< 0.01	0.25	< 0.01	35.1	0.09	< 0.005	< 0.01	

QC

#### Activation Laboratories Ltd.

Analyte Symbol	Au	AI	As	Be	Ca	Co	Cr	Cu	Fe	к	Li	Mg	Mn	Ni	Pb	S	Sb	Si	Ti	W	Zn	Au
Unit Symbol	ppb	%	лз %	%	%	%	%	%	%			ů.	%	%	%	%	%	%	%	%	%	g/tonne
Lower Limit	5						0.01	0.005							0.01	0.01	0.01			0.005	0.01	0.03
Method Code	FA-AA	FUS- Na2O2	FUS- Na2O2	FUS-	FUS- Na2O2	FUS- Na2O2	FUS- Na2O2	FUS- Na2O2	FUS- Na2O2	FUS- Na2O2	FUS-	FUS-	FUS- Na2O2	FUS- Na2O2	FUS-	FUS- Na2O2	FUS- Na2O2	FUS-	FUS-	FUS- Na2O2	FUS- Na2O2	FA- GRA
PTM-1a Meas		Î	0.22			2.03		24.5						47.3		22.6						
PTM-1a Cert			0.220			2.05		24.96						47.44		22.4						
CCU-1C Meas								24.9								33.6			< 0.01		3.83	
CCU-1C Cert								25.6								33.3			0.00640		3.99	
CD-1 Meas			0.67														3.59					
CD-1 Cert			0.660														3.57					
DTS-2b Meas		0.22			0.03	0.013	1.59	< 0.005				31.7	0.08	0.386	< 0.01		< 0.01	19.3			< 0.01	
DTS-2b Cert		0.240			0.0900	0.0120	1.55	0				29.8	0.0830		0.00040 0		0.00006 00	18.4			0.00450	
DTS-2b Meas		0.23			0.09	0.013	1.55					30.8	0.08	0.373	< 0.01		< 0.01	18.8			< 0.01	
DTS-2b Cert		0.240			0.0900	0.0120	1.55	0.00030 0				29.8	0.0830		0.00040 0		0.00006 00	18.4			0.00450	
GBW 07238 (NCS DC 70006) Meas			< 0.01					0.009					1.04	< 0.005	< 0.01			16.4		0.348	0.01	
GBW 07238 (NCS DC 70006) Cert			0.00016 0					0.00936					1.084	0.00178	0.00187			15.9		0.360	0.00655	
Oreas 74a (Fusion) Meas			< 0.01			0.058	0.18	0.121	13.8					3.20		7.57		15.8				
Oreas 74a (Fusion) Cert			0.005			0.058	0.18	0.124	13.7					3.24		7.25		15.14				
Oreas 74a (Fusion) Meas			< 0.01			0.057	0.17	0.122	13.5					3.15		7.40		15.6				
Oreas 74a (Fusion) Cert			0.005			0.058	0.18	0.124	13.7					3.24		7.25		15.14				
OREAS 134b (Fusion) Meas			0.02			0.011		0.134	11.9							19.9	0.01				17.2	
OREAS 134b (Fusion) Cert			0.02			0.010		0.134	12.69							20.74	0.01				18.12	
NCS DC86303 Meas											0.23									< 0.005		
NCS DC86303 Cert											0.21									0.0009		
NCS DC86314 Meas											1.83									0.007		
NCS DC86314 Cert											1.81											
NCS DC86313 Meas				1.089																		
NCS DC86313 Cert				1																		
NCS DC86313 Meas				1.081																		
NCS DC86313 Cert				1																		
CZN-4 Meas		0.08	0.04			0.010		0.407	<u> </u>						0.18	34.4		0.29			54.7	
CZN-4 Cert		0.0715	0.0356	1	İ	0.009		0.403	1						0.1861	33.07		0.295		1	55.07	1
W 106 Meas																				2.17		
W 106 Cert																				2.16		
OREAS 621 (Peroxide Fusion) Meas		6.79	< 0.01	< 0.001	2.01	0.003	< 0.01	0.375	3.73	2.3		0.51	0.06		1.33	4.41	0.01	28.2	0.18	< 0.005	4.97	
OREAS 621 (Peroxide Fusion) Cert		6.63	0.009	0.0002	2.00	0.003	0.005	0.368	3.71	2.23		0.516	0.06		1.33	4.51	0.0146	28.1	0.181	0.0003	5.22	
OREAS 216 (Fire Assay) Meas																						6.59

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Analyte Symbol	Au	AI	As	Be	Ca	Со	Cr	Cu	Fe	К	Li	Mg	Mn	Ni	Pb	S	Sb	Si	Ti	W	Zn	Au
- <u> </u>	ppb	%	%	%	%	%	%	%	%	%	%	0		%	%	%	%	%	%	%	%	g/tonne
· · ·	5	0.01	0.01	0.001	0.01	0.002	0.01	0.005	0.05	0.1	0.01	0.01	0.01	0.005	0.01	0.01	0.01	0.01	0.01	0.005	0.01	0.03
Method Code	FA-AA	FUS- Na2O2	FA- GRA																			
OREAS 216 (Fire Assay) Cert																						6.66
OREAS 229 (Fire Assay) Meas																						12.0
OREAS 229 (Fire Assay) Cert																						12.1
OREAS 209 (Fire Assay) Meas	1600																					
OREAS 209 (Fire Assay) Cert	1580																					
OREAS 209 (Fire Assay) Meas	1580																					
OREAS 209 (Fire Assay) Cert	1580																					
Oreas 77b (Fusion) Meas		1.82	0.20		3.08	0.161	0.03	0.345	29.9	0.4	< 0.01	2.62	0.07	11.5	< 0.01	22.5	< 0.01	9.50	0.06	< 0.005	0.02	
Oreas 77b (Fusion) Cert		1.84	0.208		3.09	0.161	0.0336	0.330	29.8	0.369	0.00204	2.65	0.0670	11.3	0.00580	22.2	0.00082 0	9.49	0.0620	0.00026 7	0.0202	
Oreas 77b (Fusion) Meas		1.89	0.20		3.10	0.158	0.03	0.348	29.3	0.4	< 0.01	2.67	0.07	11.4	< 0.01	22.2	< 0.01	9.50	0.06	< 0.005	0.02	
Oreas 77b (Fusion) Cert		1.84	0.208		3.09	0.161	0.0336	0.330	29.8	0.369	0.00204	2.65	0.0670	11.3	0.00580	22.2	0.00082 0	9.49	0.0620	0.00026 7	0.0202	
Oreas E1336 (Fire Assay) Meas	522																					
Oreas E1336 (Fire Assay) Cert	510																					
Oreas E1336 (Fire Assay) Meas	520																					
Oreas E1336 (Fire Assay) Cert	510																					
OREAS 139 (Peroxide Fusion) Meas		3.84	0.03	< 0.001	1.17	0.002		0.026	11.5	3.4	< 0.01	0.49	0.65		2.22	16.0	< 0.01	16.5	0.15		12.5	
OREAS 139 (Peroxide Fusion) Cert		3.70	0.0332	0.00031 7	1.20	0.00260		0.0274	11.9	3.30	0.00404	0.501	0.657		2.20	16.04	0.00630	16.34	0.157		13.36	
OREAS 624 (Peroxide Fusion) Meas		4.28	< 0.01		1.44	0.027		3.15	16.5	1.0	< 0.01	1.29	0.07		0.62	13.4	< 0.01	20.6	0.15	< 0.005	2.34	
OREAS 624 (Peroxide Fusion) Cert		4.32	0.0115		1.49	0.0273		3.08	16.3	0.991	0.00103	1.31	0.0660		0.612	13.2	0.00720	20.5	0.146	0.00045 8	2.41	
OREAS 624 (Peroxide Fusion) Meas		4.42	0.01		1.43	0.026		3.03	15.9	1.0	< 0.01	1.32	0.07		0.59	13.1	< 0.01	20.5	0.15	< 0.005	2.17	
OREAS 624 (Peroxide Fusion) Cert		4.32	0.0115		1.49	0.0273		3.08	16.3	0.991	0.00103	1.31	0.0660		0.612	13.2	0.00720	20.5	0.146	0.00045 8	2.41	
OREAS 124 (Peroxide Fusion) Meas		4.80		< 0.001	0.09		< 0.01		1.53	2.7		0.22	0.07					39.1	0.26			
OREAS 124 (Peroxide Fusion) Cert		4.62		0.00018 3	0.0880		0.00510		1.56	2.62		0.224	0.0700					38.2	0.254			
AMIS 0346 (Peroxide Fusion) Meas									43.7										14.8			
AMIS 0346 (Peroxide Fusion)									44.3										15.0			

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#### Report: A20-13615

Analyte Symbol	Au	AI	As	Be	Ca	Co	Cr	Cu	Fe	к	l i	Mg	Mn	Ni	Pb	s	Sb	Si	Ті	w	Zn	Au
	ppb	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	g/tonne
	5 5	0.01	0.01				0.01	0.005	0.05	0.1	0.01	0.01	0.01		0.01	0.01	0.01		0.01	0.005	0.01	0.03
-	FA-AA	FUS- Na2O2	FUS- Na2O2	FUS- Na2O2	FUS-	FUS-	FUS-	FUS-	FUS-	FUS- Na2O2	FUS- Na2O2	FUS-	FUS-	FUS-	FUS- Na2O2	FUS- Na2O2	FUS- Na2O2	FUS-	FUS-	FUS-	FUS- Na2O2	FA- GRA
Cert																						
W2-1 171-173.5 Orig		7.78	< 0.01	< 0.001	1.16	< 0.002	< 0.01	< 0.005	0.76	2.4	< 0.01	0.21	< 0.01	< 0.005	< 0.01	0.15	< 0.01	34.9	0.09	< 0.005	< 0.01	
W2-1 171-173.5 Dup		8.03	< 0.01	< 0.001	1.13	< 0.002	< 0.01	< 0.005	0.80	2.3	< 0.01	0.21	< 0.01	< 0.005	< 0.01	0.15	< 0.01	35.7	0.09	< 0.005	< 0.01	
W2-1 177.5-179.5 Orig		7.95	< 0.01	< 0.001	0.79	< 0.002	< 0.01	< 0.005	1.08	2.4	< 0.01	0.21	< 0.01	< 0.005	< 0.01	0.59	< 0.01	34.8	0.09	< 0.005	< 0.01	
W2-1 177.5-179.5 Dup		7.68	< 0.01	< 0.001	0.73	< 0.002	< 0.01	< 0.005	1.08	2.3	< 0.01	0.21	< 0.01	< 0.005	< 0.01	0.60	< 0.01	33.6	0.09	< 0.005	< 0.01	
W2-1 179.5-181.5 Orig																						9.83
W2-1 179.5-181.5 Dup																						9.69
W2-6 403.67-406.67 Orig		7.94	< 0.01	< 0.001	1.09	< 0.002	< 0.01	< 0.005	0.88	2.8	< 0.01	0.22	< 0.01	< 0.005	< 0.01	0.34	< 0.01	34.4	0.09	< 0.005	< 0.01	
W2-6 403.67-406.67 Dup		7.58	< 0.01	< 0.001	1.12	< 0.002	< 0.01	< 0.005	0.89	2.8	< 0.01	0.21	< 0.01	< 0.005	< 0.01	0.34	< 0.01	33.5	0.08	< 0.005	< 0.01	
W2-6 409-412 Orig	432																					
W2-6 427-430 Orig	206																					
W2-6 427-430 Dup	195																					
W2-6 447.25-450 Orig		8.09	< 0.01	< 0.001	1.43	< 0.002	< 0.01	< 0.005	1.94	3.6	< 0.01	0.56	0.01	< 0.005	< 0.01	1.06	< 0.01	32.5	0.19	< 0.005	< 0.01	
W2-6 447.25-450 Dup		8.16	< 0.01	< 0.001	1.44	< 0.002	< 0.01	< 0.005	1.95	3.6	< 0.01	0.56	0.01	< 0.005	< 0.01	1.08	< 0.01	32.7	0.19	< 0.005	< 0.01	
PIPELINE 03 Orig	26																					
PIPELINE 03 Dup	13																					
W2-7 316.9-320 Orig		8.08	< 0.01	< 0.001	1.30	< 0.002	< 0.01	< 0.005	0.95	2.7	< 0.01	0.19	< 0.01	< 0.005	< 0.01	0.24	< 0.01	34.6	0.08	< 0.005	< 0.01	
W2-7 316.9-320 Dup		8.25	< 0.01	< 0.001	1.36	< 0.002	< 0.01	< 0.005	0.94	2.8	< 0.01	0.19	< 0.01	< 0.005	< 0.01	0.24	< 0.01	35.3	0.08	< 0.005	< 0.01	
W2-7 333.67-336.0 Orig		8.07	< 0.01	< 0.001	1.28	< 0.002	< 0.01	< 0.005	0.92	2.5	< 0.01	0.22	< 0.01	< 0.005	< 0.01	0.24	< 0.01	34.9	0.09	< 0.005	< 0.01	
W2-7 333.67-336.0 Dup		8.13	< 0.01	< 0.001	1.29	< 0.002	< 0.01	< 0.005	0.91	2.5	< 0.01	0.22	< 0.01	< 0.005	< 0.01	0.25	< 0.01	35.3	0.09	< 0.005	< 0.01	
Method Blank	< 5																					
Method Blank	< 5																					
Method Blank	< 5																					
Method Blank		< 0.01	< 0.01	< 0.001	< 0.01	< 0.002	< 0.01	< 0.005	< 0.05	< 0.1	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	
Method Blank																						< 0.03
Method Blank		< 0.01	< 0.01	< 0.001	< 0.01	< 0.002	< 0.01	< 0.005	< 0.05	< 0.1	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	

