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**PROSPECTING AND GEOLOGICAL MAPPING REPORT ON THE SHINING  
TREE AREA PENNY CLAIMS,  
, ASQUITH TOWNSHIP,  
ONTARIO CANADA**

**Larder Lake Division, Northeastern Ontario  
NTS 41P11C**

**Claims: 555444, 555445, 561605, 561606**

**Universal Transverse Mercator Zone 17N (NAD83)**

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September 24<sup>TH</sup>, 2021

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## 1.0 SUMMARY

The Penny Claims are located near the community of Shining Tree and accessed via boat on West Shining Tree Lake. The claims consist of a block of 4 single cell claims in Asquith Township wholly owned by IAMGOLD Corp. Historical exploration in the area began in 1914 when a mining and exploration boom was seen throughout the Shining Tree area as well as the Kirkland Lake and Timmins Mining camp. Exploration was largely concentrated thereafter between 1974 and 1975. Most recently geophysical surveys were completed in 2014 by Shining Tree Resources over the Penny Claims area. A short concentrated prospecting and geological mapping program was executed during August, 2021 by IAMGOLD geologists on the Shining Tree Area Penny Claims.

A total of 6 days were spent prospecting on the Penny Claims and work was completed over a total of 3 claims with most of the work completed on claims 555444 & 555445. The prospecting and mapping work looked to identify the most favourable hosts for gold mineralization in the claims area and investigate, map and sample historical workings. A total of 54 samples were sent for fire assay.

Several historical trenches were located both east and west of a historical shaft that hosts the 'Steep' Occurrence. The 'Steep' Occurrence consists of a narrow shear zone hosted boudinaged blue-grey quartz vein with fine grained visible gold and pyrite. Approximately two days of work was focused on locating, sampling and mapping the historical trenches nearest the 'Steep' Shaft as well as manually exposing, sampling and mapping the gold bearing structure in three areas in a trench just west of the historical Shaft named the 'Penny Lane' trench. The other days were spent mapping and prospecting mainly along the eastern strike extent of the Steep Occurrence as well as mapping and prospecting for a manual stripping exposure reported by Teck Exploration in 1989 east of West Shining Tree Lake on claim 555445.

The results of the brief prospecting & mapping program were positive. The Steep vein samples were especially encouraging and comparable to historic values. Highlights from the program include 34.4 g/t Au & 41.5 g/t Au from grab samples taken from a pile of grey quartz fly rock with fine grained visible gold just 5 meters north of the historical Steep shaft. Another grab sample taken from loose grey quartz vein material in the Penny Lane trench 15 meters west of the shaft area retrieved 36 g/t Au. The chip channel samples were anomalous as well with the vein samples assaying at 13.7 g/t Au over 0.12m, 4.49 g/t Au over 0.1m and 4.31 g/t Au over 0.1m. The chip channel samples from the wall rock were inconsistently anomalous with values up to 0.419 g/t Au over 0.4m. An outcrop 13 meters northwest of the shaft returned 3.44 g/t Au in a grab sample hosting 1-2% fine grained pyrite suggests the mineralization may be wider than the Steep Occurrence trench exposures and suggestions mineralization may continue to the north of the Steep vein.

Future work is recommended would include deeper surface channel cutting and sampling over a wider exposure of the Steep Occurrence which may involve mechanized stripping to facilitate exposure. A

diamond drill hole to test the width and grade of the vein and shear zone at depth would also be beneficial to further evaluation of the Steep Vein and could be done during winter to help with access.

The coordinate system used to locate the area of work is the Universal Transverse Mercator (UTM) and the datum used is NAD 83 in Zone 17N.

## 2.0 INTRODUCTION

This report has been prepared by IAMGOLD Corporation to provide documentation on a prospecting & mapping program performed over the Shining Tree Area Penny Claims in Asquith Township completed between August 4<sup>th</sup> and August 24<sup>th</sup>, 2021. Timelines and personnel involved is presented in the body of the text and in the Appendices. Jillian Craig, Senior Field Exploration Geologist with IAMGOLD, planned, supervised and executed along with other IAMGOLD personnel the exploration program carried out on the Penny Claims.

The reason for the exploration work performed was to investigate and identify favourable geology and structures for hosting gold mineralization in and around historical workings in the Penny Claims area.

## 3.0 PROPERTY LOCATION, ACCESS, AND DESCRIPTION

The Penny Claims consist of 4 contiguous single cell claims in the Asquith Township which are wholly owned by IAMGOLD Corp. (Table 1; Figure 1 and 2). The property is located in the Larder Lake Mining Division, District of Timiskaming, NTS 41P11C.

The main access into the property is by boat launched on West Shining Tree Lake from the community of Shining Tree, which can be accessed from Route 560 (Figure 1). The topography typically contains gently rolling and hummocky terrain with occasional steep hills along the Shore of West Shining Tree Lake. In the claim area there does not appear to be thick or extensive areas of glacial till, but rather a thin layer of till and humus covering most of the property. The bedrock exposure is typically very good with extensive exposures along the shoreline of West Shining Tree Lake with smaller exposures in land. Vegetation consists mainly of mixed forest of poplar, spruce, pine and birch trees.

<b>Tenure ID</b>	<b>Township / Area</b>	<b>Tenure Type</b>	<b>Anniversary Date</b>	<b>Tenure Status</b>	<b>Ownership</b>
561606	ASQUITH	Single Cell Mining Claim	2021-10-11	Active	100% IAMGOLD Corp.
561605	ASQUITH	Single Cell Mining Claim	2021-10-11	Active	100% IAMGOLD Corp.
555445	ASQUITH	Single Cell Mining Claim	2022-08-03	Active	100% IAMGOLD Corp.
555444	ASQUITH	Single Cell Mining Claim	2022-08-03	Active	100% IAMGOLD Corp.

Table 1: IAMGOLD Penny Claims List

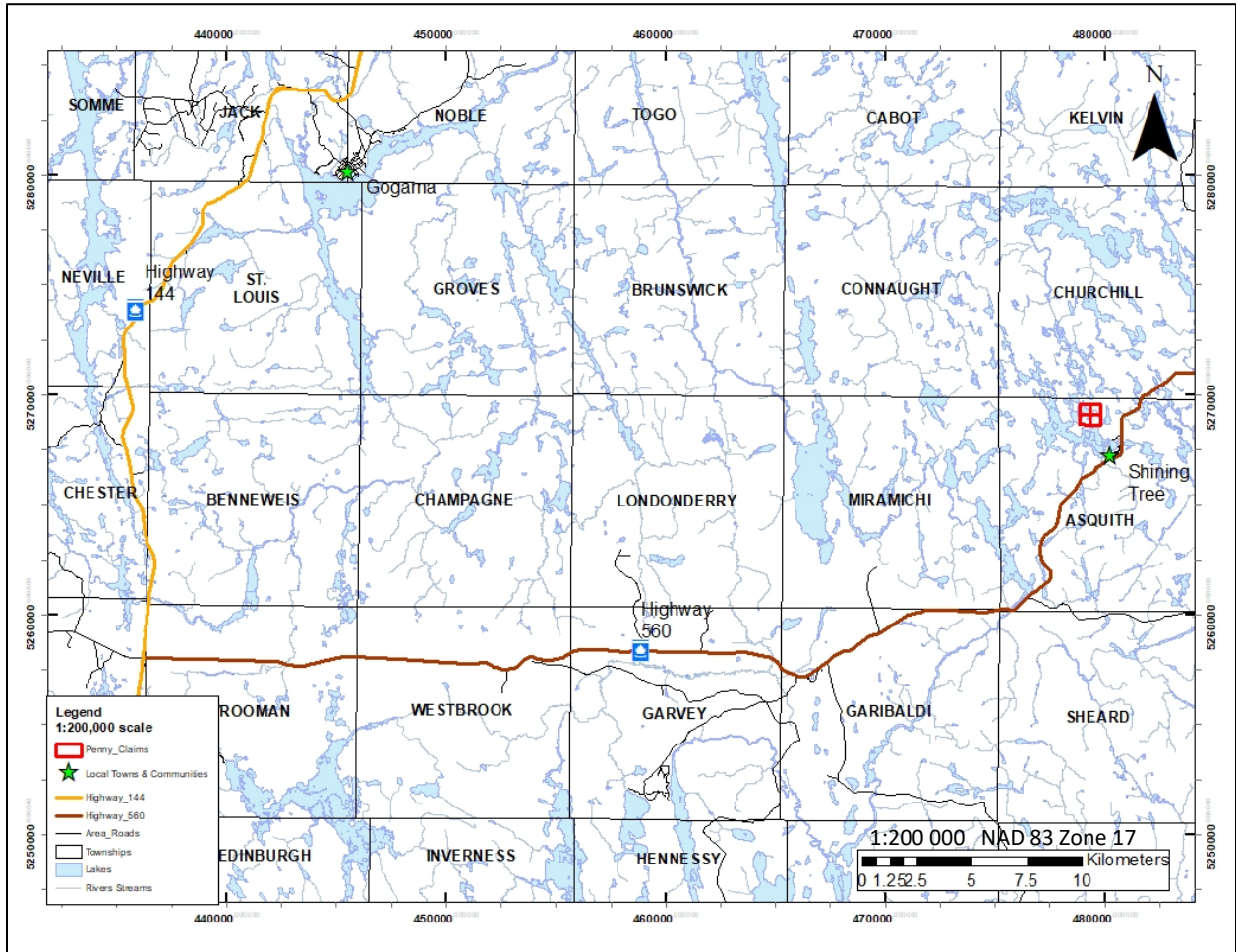


Figure 1: Location map of the Penny Claims Area in Asquith Township

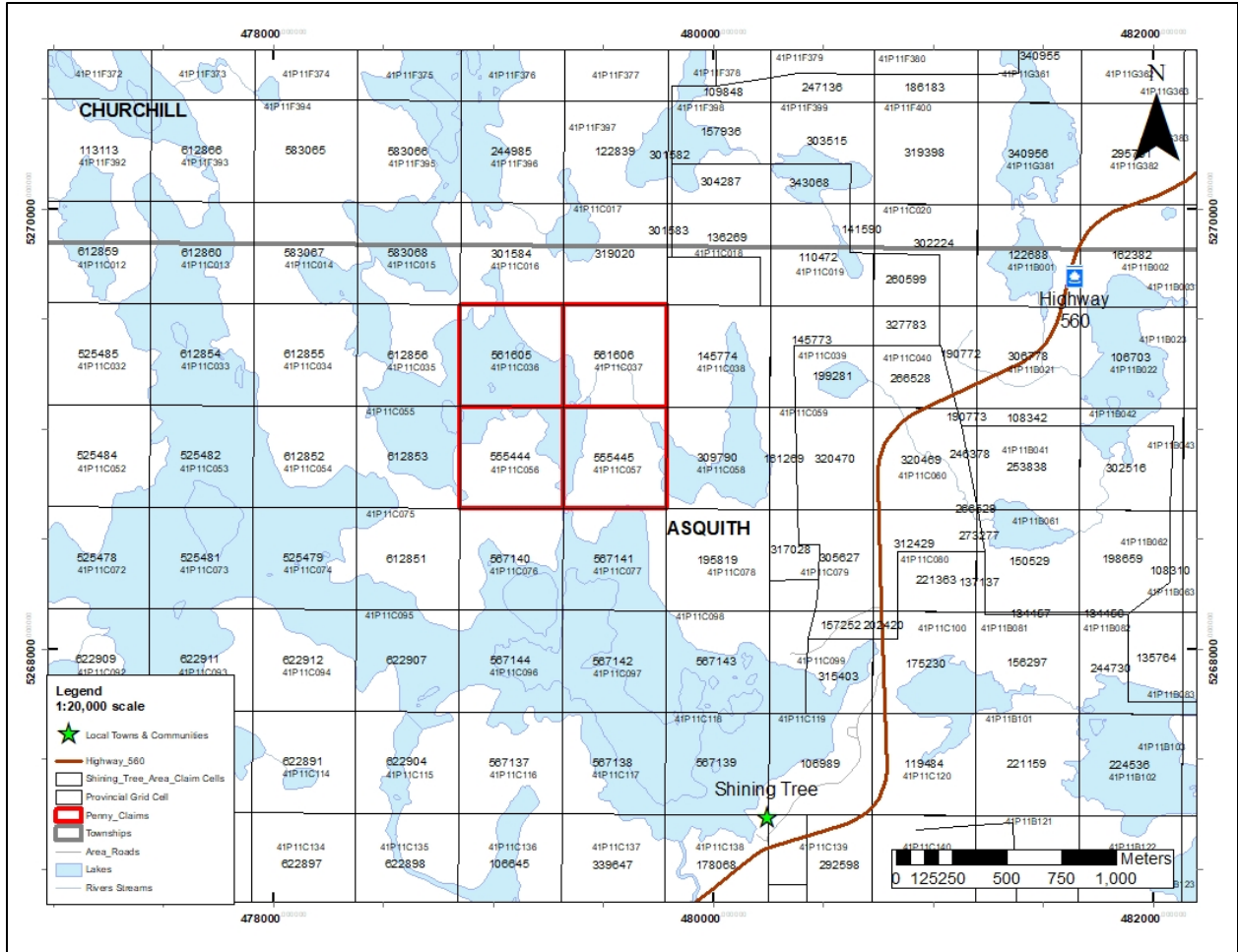


Figure 2: Plan map of the Penny Claims owned by IAMGOLD Corp. in Asquith Township

## 4.0 GEOLOGY

### 4.1 Regional Geology

The Shining Tree Area Penny Claims are situated in the southern part of the Abitibi greenstone belt (AGB) of the Superior Province (Figure 3). Supracrustal units in the Abitibi greenstone belt are dominated by east-west trending volcanic and sedimentary assemblages. The various volcanic and intrusive rocks of the AGB are diverse, ranging from ultramafic to felsic in composition, as well as containing both chemical and clastic sedimentary rocks of the Porcupine and Timiskaming assemblages. A variety of mafic to felsic intrusive rocks that represent synvolcanic intrusions occur as part of the greenstone belt. Larger batholithic complexes external to the greenstone belt rocks represent centres of structural domes. Syntectonic intrusions also occur in the AGB, some of which are coeval with the Timiskaming assemblage and are spatially associated with the Cadillac-Larder Lake and Porcupine-Destor deformation zones. The AGB contains several east-trending deformation zones that commonly occur at assemblage boundaries and are spatially associated with long linear belts representing the sedimentary assemblages (i.e., Porcupine and Timiskaming). These deformation zones have a complex structural history and represent



major breaks in the greenstone belt. The AGB is intruded by numerous diabase dikes trending from north to northwest in the property and likely represent the Matachewan and possibly Abitibi dike swarms.

The Archean rocks are unconformably overlain by Paleoproterozoic rocks of the Huronian Supergroup, which were deposited in a north-trending graben referred to as the Cobalt Embayment. The upper sedimentary cycles of the Huronian Supergroup include the Cobalt and Flack Lake Groups. Within the Cobalt Group there are two formations, the Gowganda and Lorrain. Within the Flack Lake Group there are also two formations, the Gordon Lake and Bar River. The Gowganda Formation is the lower sequence of the Cobalt Group and consists mainly of framework- and matrix-supported conglomerate and lesser greywacke, siltstone and mudstone (Carter, 1980; Long, 2009). The basal sequence of the Gowganda Formation (Coleman member) is interpreted to have been deposited beneath a continental ice sheet, while the upper sequence (Firstbrook member) is interpreted to have been deposited in a deltaic environment (Long, 2009).

Metamorphism is of lower greenschist facies. The rocks have been partially altered to carbonate and sericite but have not been penetratively deformed on a regional scale (Ayer et al. 2013).

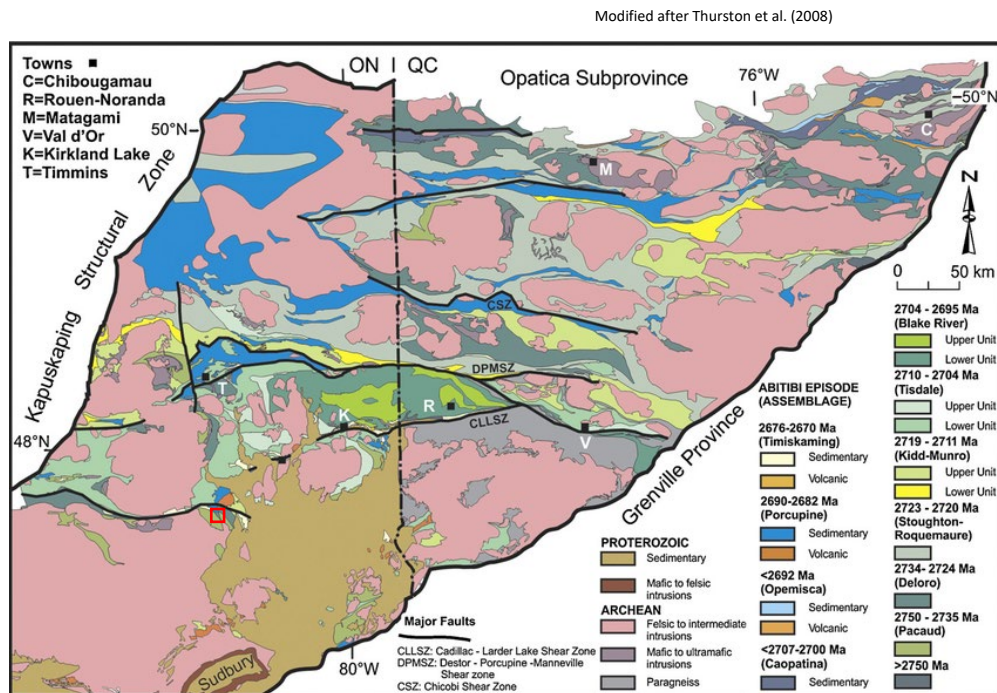


Figure 3: Regional geological map of the southern Abitibi greenstone belt (Thurston et al. 2008) with the Shining Tree Area Penny Claims location broadly outlined in red

## 4.2 Local Geology

The property covers a small portion of the western Shining Tree greenstone belt (Fig. 4), part of the southern Abitibi greenstone belt, and is underlain predominantly by Archean mafic and intermediate metavolcanic rocks of the Pacaud assemblage. The metavolcanic rocks have been observed to occur as pillows, tuffs, massive flows and flow breccias. Limited Proterozoic sedimentary rocks (arkose) of the Huronian Group has been mapped historically by Vintage Mines (1974) near the Penny Claims as well as a couple intrusions of quartz gabbro just south of claim 555444 which are likely the same metamorphosed mafic to ultramafic intrusive rocks indicated by Johns (2003) in the northeastern quadrant of Asquith Township. Intermediate to felsic porphyry dykes are observed to the east just outside the bounds of the Penny Claims. Late northwest striking Matchewan diabase dykes are observed intruding the entire lithological package.

The closest large structural deformation zone is the Ridout-Tyrrell Deformation Zone (RTDZ) which is interpreted by the OGS in 2011 to occur north of the Penny Claims in northern Churchill Township along the contact of intermediate to mafic metavolcanic rocks with clastic meta-sedimentary rocks. The Ridout is suggested to be the westward extension of the Cadillac-Larder Lake Fault. The deformation zone is defined by strong sericite and Fe-carbonate alteration and the dominant fabric corresponds to the regional D<sub>2</sub> (roughly east striking, steeply southerly dipping) foliation seen elsewhere across the southern Swayze and Shining Tree greenstone belts. Along the RTDZ several local deposits are linked to a syn-D<sub>3</sub> ductile deformation gold mineralizing event such as the Cook, Hydro Creek, Big Dome and Juby deposits. The gold in these deposits is associated with thin, relatively late high-grade quartz-carbonate-sulphide veins in large carbonate-sericite-chlorite alteration zones hosting disseminated pyrite and lower gold values (Ayer, 2013).

Regional scale fault structures which strike broadly north to northwest are known throughout the Abitibi. Locally, the Michiwakenda fault which is noted by the eastern boundary of Churchill Township and the Shining Tree Fault to the west of Churchill Township are characteristic of these regional faults. A northeast striking regional fault, historically called the Jesse James Creek Fault, is interpreted to cut through the stratigraphy through the narrows on West Shining Tree Lake on the Penny Claims. These late northerly trending brittle faults are associated with numerous gold deposits in the area such as Herrick, Gold Corona and Caswell. These deposits, associated with the late brittle faults are of late D<sub>4</sub> brittle deformation and late stage Au mineralization akin to that of the nearby breccia pipe hosted Minto deposit with an age of mineralization dated at 2636+/-11 Ma (Ayer, 2013). Thus the Jesse James Creek Fault striking through the narrows at the Penny Claims may provide a corridor for late stage Au mineralizing fluids.

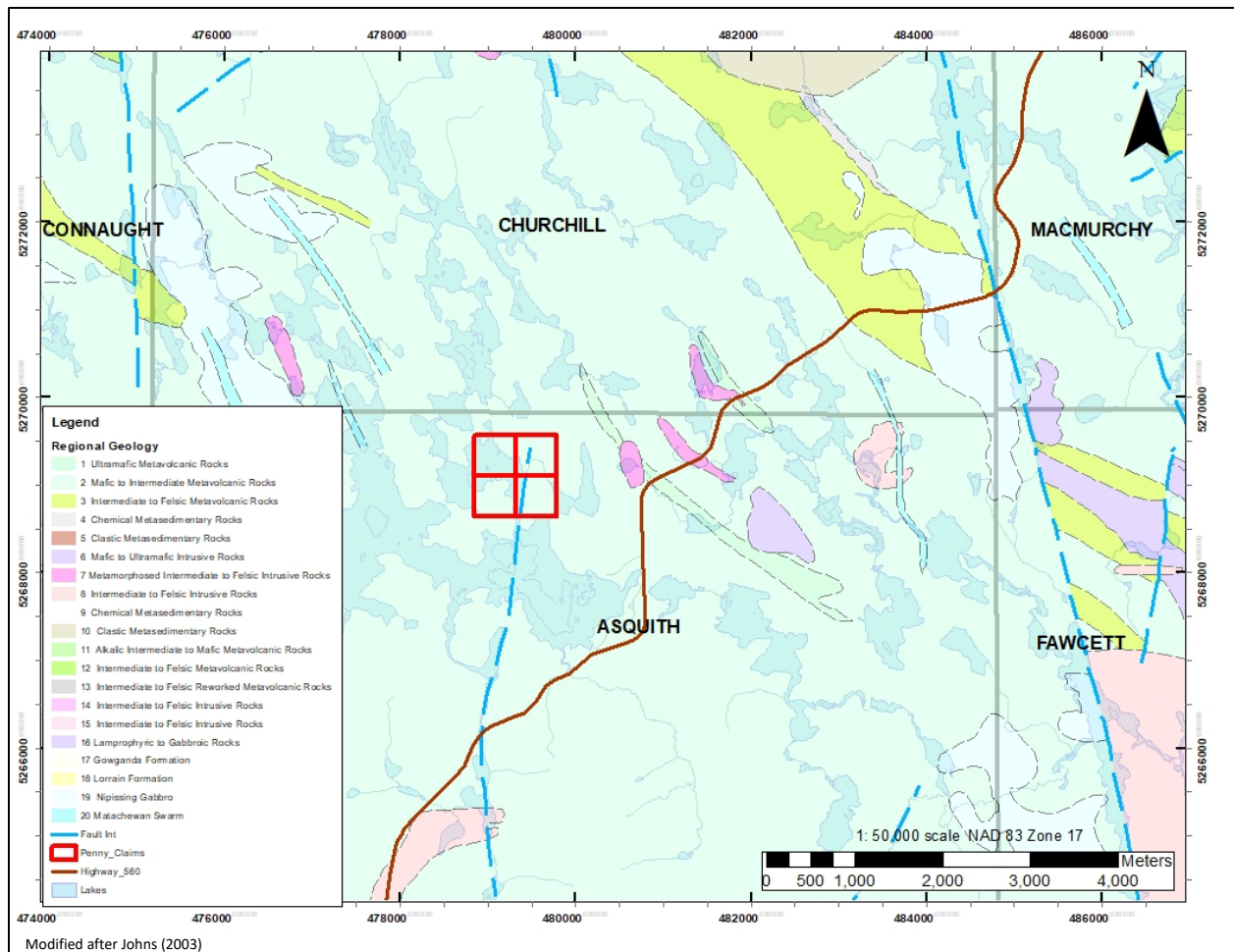


Figure 4: Local geological map of the Shining Tree Area Penny Claims

### 4.3 Mineralization

Historical exploration in the area targeted high-grade veins along a structural zone, which suggests previous workers were targeting an orogenic-type system. Regional mineralization is historically found mostly in EW trending veins and brittle-ductile shear zones from a few feet up to 100 feet thick such as the Jesse James Au-Cu-Pb Occurrence, the Buckingham Vein and the Steep Au-Cu-Pb-Zn Occurrence all of which parallel the EW trending regional foliation. Mineralized veins are also noted striking NW to NS, which may occupy a structural splay off the Ridout-Tyrrell Deformation Zone, such as at the Gosselin Vein Zone which is 1.5km to the northeast of the Penny Claims.

Historically documented and known mineralization on the Penny Claims is associated with the Steep Occurrence. The Steep Occurrence is described as a Au-Cu-Pb-Zn Occurrence where an EW trending shear zone, up to 5 feet in width and ~600 feet long hosts a blue-grey lenticular or boudinaged quartz vein with visible sphalerite, galena, chalcopyrite and fine grained visible gold (reported up to 1.08 oz/t from a grab sample at the shaft by McCannell, 1974). The showing was discovered by E. Steep along the Shore of West Shining Tree Lake. In 1914 E. Steep and partners sunk a 100 foot shaft, inclined 85 ° to the south on the east-trending shear zone hosted gold bearing vein. McCannell (1974) noted that E. Steep and partners

sampled the Steep vein along the shaft and described the Steep vein as showing greater width towards the bottom of the shaft and also small gold values in the shear zone that had otherwise been barren.

To the east of West Shining Tree Lake a manually stripped outcrop exposure by Teck Exploration in 1989 observed a 10 foot wide shear zone with 10-15% white to grey quartz-carbonate veins and stockworks hosting variable fine grained pyrite in strongly silicified pillowed mafic volcanic rock. The shear zone strikes at approximately 080° (similar to the Steep shear zone). No assays were reported. A NE striking fault, the Jesse James Creek fault, striking through the narrows of West Shining Tree Lake may have dextrally offset these two mineralized structures which could suggest the Teck Exploration shear zone exposure is the eastern continuation of the Steep Occurrence shear zone.

## 5.0 PREVIOUS WORK

Exploration activity has been conducted on the Penny Claims in Asquith Township since 1914. Table 2 represents a summary of previous work conducted in the area and is taken from assessment reports.

Year	Completed By	Exploration Activity
1914	E. Steep	E. Steep and partners sunk a ~100 foot shaft, inclined 85 degrees to the south on an east-trending shear zone near the shore of West Shining Tree Lake.
1973	Vintage Mines Ltd.	Performed a geological mapping program and a Mag and EM survey as well drilled 6 diamond drill holes for a total length of 308.1m. 5 of the drill holes tested the Steep showing near the old shaft however assays were disappointing and could not replicate surface sampling results. An attempt was made to de-water the shaft in the same year, without success.
1983	Southgate Resources Ltd.	Drilled 5 short diamond drill holes under the Steep showing. No assays are recorded but visible gold is noted in 2 of the drill holes.
1984	Manwa Exploration	Conducted a Dighem Survey over a large area including the Penny Claims. No bedrock conductors were noted in the Penny Claims area.
1985	Southgate Resources Ltd.	Geological mapping and geophysical surveys consisting of magnetic and EM surveys; 1 diamond drill hole with no anomalous assays reported.
1988	Teck Exploration Corp.	VLF-EM and Mag surveys
1989	Teck Exploration Corp.	Geological mapping, manual stripping and 2 diamond drill holes outside the Penny Claims area
1995	Trinity Exploration	Geological mapping, VLF & Mag
2014	Shining Tree Resources	Geophysical surveys over the 'South Grid' consisting of Mag & VLF-EM

Table 2: Summary of previous work

## 6.0 Geological Mapping & Prospecting Program

### 6.1 Summary of the 2021 Geological Mapping & Prospecting Program

Between August 4<sup>th</sup> and August 24<sup>th</sup>, 2021 IAMGOLD Corp. geologists conducted a concentrated geological mapping and prospecting program on the Penny Claims. The 2021 program was initiated to evaluate the potential for gold mineralization on the Penny Claims and evaluate historical showings. The field work was undertaken to understand the potential gold environment and structural considerations conducive for precious metal mineralization in the Shining Tree greenstone belt with the nearby Ridout-Tyrrell Deformation Zone.

The author conducted all of the mapping and prospecting and was assisted by Erik Bobechko of Keswick, Ontario and Justin Bisailon of Hanmer, Ontario. A total of 49 samples were taken with an additional 5 samples (standards and blanks) sent for QA/QC purposes. Mapping and prospecting was carried out using a GPS and compass survey (Garmin 78s & 62s) over the Penny Claims over two main areas of interest: 1. The historical Steep Occurrence area as well as along strike of the Steep Occurrence and shoreline peripheral to the Occurrence and 2. The reported historical 1989 Teck Exploration manual stripping area located just east of West Shining Tree Lake. Boat launched on West Shining Tree Lake from Tree Bear camp was used to access the field area. Accuracy of the GPS unit is approximately 3 to 6 meters. Nad 83 in Zone 17N was used in the mapping and prospecting program. All features were referenced using UTM co-ordinates.

### 6.2 Penny Lane Trench

During the mapping and prospecting program numerous historical trenches were located. Most of these trenches contained thick overburden with no outcrop exposures. Outcrop could be found in only 5 of the 12 located trenches. The 'Penny Lane' Trench, located beginning at the western shoreline of a point on West Shining Tree Lake and striking east for 40 meters almost to the 'Steep' shaft (15 meters to the west) hosts the most significant exposure of the geology of the Steep Occurrence. The trench was highly overgrown with rotten trees and debris covering the outcrop exposures. A couple of hours were spent to manually clear the debris and expose the outcrop within the trench over 3 separate areas along a 25 meter strike.

The outcrop revealed a shear zone up to 1 meter wide hosting a blue-grey coloured boudinaged quartz vein (the 'Steep' vein) that pinches and swells from 2cm to 18cm wide. The mapping demonstrated the ductile nature of the vein and shear zone given how the vein regularly pinches and swells every 0.2 to 0.5m. The 'Steep' vein appears to be light grey to smokey blue-grey in colour with chloritic fractures and hosts ~1% fine grained pyrite. No visible gold was observed from the samples taken from the trench. Both the 'Steep' vein and the shear zone that hosts the vein strike at ~084° and dip steeply from 70 to 80° to the south. The shear zone that hosts the wall rock of the 'Steep' vein consists of strongly sheared intermediate metavolcanic rock which is strongly carbonatized and variably silicified with up to 1% disseminated pyrite. Immediately outside of the shear zone the metavolcanic rock is fairly barren of sulphides and is weakly carbonatized.

Three sets of chip channel samples were taken across the 3 outcrop exposures within the Penny Lane Trench. The results of the chip channels were anomalous Au values for all 3 of the chip channels taken within the Steep Vein but Au values were inconsistently anomalous in the shear zone wall rock. The vein assays were 13.7 g/t Au over 0.12m, 4.49 g/t Au over 0.1m and 4.41 g/t Au over 0.1m. The shear zone/wall rock anomalous assay highlights were 0.11 g/t Au over 0.4m and 0.42 g/t Au over 0.4m. See Appendix C for the Penny Lane Trench geology, sample locations and Au assay maps.

### 6.3 Steep Shaft

The historic 'Steep' Shaft was located ~15m east of the Penny Lane trench. The shaft is documented to extend ~90 feet deep centered on the 'Steep' vein and dipping steeply at 85 degrees to the south. Upon observing the Shaft the old original 1914 timbers can be seen still intact. Approximately 10 meters of the shaft is exposed above water. When looking down into the Shaft you can clearly see the steeply dipping 'Steep' vein within a shear zone as well as a 3 narrow parallel quartz veins. The thickness of the main 'Steep' vein also appears to widen at depth over the limited distance that is observable from surface. Just north of the Shaft a pile of fly rock was found with numerous angular pieces of smokey grey quartz. Upon examination with a hand lens several pieces of the smokey grey quartz fly rock hosted fine grained visible gold (VG), <1% pyrite and trace sphalerite. Two grab samples were taken of the smokey grey quartz fly rock, samples 1077609 & 1077610 which assayed high grades of 34.4 g/t Au and 41.5 g/t Au. An outcrop 13 meters northwest of the shaft returned 3.44 g/t Au in a grab sample hosting 1-2% fine grained pyrite in pillowed mafic metavolcanics suggests the mineralization may be wider than the 1m wide Steep vein & shear zone which is exposed in the Penny Lane Trench. The reader is directed to Appendix C which holds the maps for the Penny Lane Trench and Shaft area in clearer detail (1:70 scale) than the Penny Claim mapping & prospecting maps in Appendix D which are at 1:1200 scale.

### 6.4 East of the Steep Shaft

Immediately east of the Shaft and along strike the Steep Vein another historical trench was located which also exposed sheared mafic metavolcanics and narrow quartz veins with the same pinch and swell character as that in the Penny Lane Trench. The exposures were not as good in this trench due to the historical blasting. A few grab samples were taken, samples 1077603, 1077604 & 1077605. Two of which were weakly anomalous in gold with values, 0.197 ppm Au (1077603) & 0.101 ppm Au (1077604).

Four additional trenches were located to the east-southeast of this trench however within the two trenches where outcrop could be found there was no evidence of shearing or veining in outcrop exposures. Approximately 100 meters east-northeast of the shaft a blast pile was located (station JE21-44, detailed in Appendix A Sample and Station descriptions) with several large angular pieces of smokey grey quartz vein akin to the 'Steep' vein. Five more additional historical trenches were found ~60 meters east of the blast pile however once again limited outcrop was found within the trenches and no evidence of shearing or veining similar to the 'Steep' occurrence could be found. Near the eastern shoreline of the point on West Shining Tree Lake another blast pile was found at station JJ21-03 with angular smokey grey quartz hosting <1% fine grained pyrite and trace chalcopyrite. The blast pile was located by a large outcrop exposure of pillowed mafic metavolcanic. Again no evidence of the Steep

Occurrence style of veining and mineralization could be found other than the material from within the blast pile. The combined strike length of the 'Steep' vein including these trenches and blast piles is approximately 300 meters. Otherwise, the strike length of the Steep vein in-situ is ~80 meters from the start of the Penny Lane trench at the western point of the shoreline to the trench just east of the Shaft.

### 6.5 Teck Exploration Historical Stripping Area

The second area of interest in the Penny Claims area is a historical stripping reported by Teck Exploration. In 1989 Teck Exploration performed manual stripping of an outcrop of altered massive pillowed flows located approximately 120m west of West Shining Tree Lake. The map of the stripping by K. Thorsen, 1989 reveals a ~10 foot wide shear zone striking at approximately 080° over a length of ~75 feet. The carbonate+/- chlorite+/- sericite altered shear zone reportedly hosts 10-15% quartz veins with 3-10% pyrite but only weakly anomalous Au assays are reported. Attempts made to locate this stripping in the field were unsuccessful thus given the size of the exposure it is suggested that the area may have been filled back in. An outcrop exposure with veining similar to that reported by Teck was found closer to the shoreline, approximately 80 meters northwest of the expected stripping location. This outcrop, station JE21-21 is postulated to be along strike of the historical stripping. The outcrop, JE21-21, consisted of strongly silicified pillowed mafic metavolcanic rock with 15% white to grey quartz veins & stockworks with up to 3% pyrite in clusters within the veins. The outcrop however was weakly foliated (072°/80°) but not obviously sheared. Three samples were taken here, 1077656, 1077657 & 1077658 unfortunately no anomalous Au values are reported from the results. See Appendix A for station/outcrop locations and descriptions as well as Appendix D for the geological map for this area.

A northeast striking regional fault, historically called the Jesse James Creek Fault (seen in Figure 4 as well as Appendix D maps), is interpreted to cut through the stratigraphy through the narrows on West Shining Tree Lake and may provide a corridor for late stage mineralizing fluids. It may also have displaced the Steep Vein & shear zone dextrally and perhaps this outcrop exposure reveal the same veins & structure as the Steep Vein.

### 6.6 Mapped Structures

Carter, 1979 describes the structural features observed in the Shining Tree area with "the early Precambrian metavolcanic-metasedimentary sequences in the area are tightly folded along a gently sinuous NNW- trending axis. These rocks have a well-developed foliation in the aureole of the granitic rocks. Two trends are apparent: one trend strikes easterly and the other trends about N30W. The latter trend could represent an axial plane foliation as it is subparallel to the fold axes. The east-trending foliation is the better developed". In the field, both structures were observed and measured however the axial plane foliation was rarely seen & measured. The EW foliation is typically weakly developed and often non-penetrative. Several narrow shear zones are observed along the shoreline as well as at the Steep Occurrence which strike parallel to the regional EW foliation. Mineralized veins are most often measured trending in a general EW direction and dipping steeply to the south however veins are also noted striking NW to NS. This vein trend is seen throughout the Shining Tree area as well such as at the Gosselin Vein Zone (1.5km to the northeast of the Penny Claims). These veins are thought to occupy a structural splay off the Ridout Tyrrell Deformation zone.

Two major late faults cross the township, the Papose Creek Fault which trends N30E and the Jesse James Creek Fault which trends N5E. These were not observed directly in the field however it is suggested that the shear structure that hosts the Steep Occurrence may be dextrally offset by the Jesse James Creek fault and is related to the shear zone exposure from the 1989 Teck Exploration stripping mentioned previously.

For more detail by outcrop the reader is directed to the maps in Appendix C & D which display the structural measurements taken during the Mapping & Prospecting program.

## 6.7 Rock Types

The rock types seen and mapped in the area are described below. The geological legend used for mapping was referenced largely from Johns, 2003 Preliminary Map Series P3521.

### *Intermediate to Mafic Metavolcanic*

Mafic to intermediate metavolcanics are the dominant rock type mapped in the Penny Claims. The mafic to intermediate metavolcanic is light-grey to dark grey and grey-green, fine to medium grained. Flow textures are variable from pillowed, pillowed breccias, weakly schistose and massive to tuffaceous. The tuffaceous variety notes small mm scale lapilli. Pillowed metavolcanic is the dominant lithology mapped with pillow structures typically well developed. In some cases a more massive medium grained variety is present which appears to be almost gabbroic but is believed to be a more massive exposure of the metavolcanic flow. Regional foliation is exposed occasionally along pillow selvages.

### *Diabase dike*

Diabase dikes are aphanitic to medium-grained, black, strongly magnetic, massive, and may contain coarse-grained glomeroporphyritic plagioclase. The diabase dikes sharply intrudes the entire stratigraphic package.

## 6.8 Alteration and Mineralization

The mafic to intermediate metavolcanics are typically weakly to moderately pervasively carbonate altered as well as chloritized. Silicification is generally weak if present. One exposure of strongly silicified pillowed metavolcanics is found just east of West Shining Tree Lake near the historical 1989 Teck Exploration stripping but overall notable silicification is rare. Alteration at the Steep Occurrence of moderate to strong iron carbonate and moderate silicification is constrained to the up to 1m wide shear zone that hosts the Steep vein.

Mineralization at the Steep Occurrence is both vein and shear hosted. The Steep Vein hosts up to 1% fine grained pyrite, very fine grained visible gold as well as trace amounts of Sphalerite. The Steep Vein is consistently anomalous with values up to 41.5 g/t Au from a grab sample. The Steep Shear zone hosts up to 1% fine grained pyrite but mineralization is typically weak. Assays from the shear zone are inconsistently anomalous with the highest Au value noted at 0.42 g/t Au over 0.4m from a chip channel



sample. Assay results highlights are described in section 8.0 with Assay certificates provided in Appendix E as well as the sample & description table in Appendix A.

Outside of the known mineral occurrence, trace to 0.5% fine grained disseminated primary pyrite is commonly noted throughout the intermediate to mafic metavolcanic rocks with pyrite increased within narrow shear zone structures and occasionally in quartz-carbonate veins.

## 7.0 Analytical Methods and QAQC

### 7.1 Summary

This section provides information on the samples, laboratory, geochemical technique and QA/QC information for Penny Claims Prospecting & Mapping program. Gold assay results and certificates can be found in Appendix E. A total of 49 grab and chip channel samples, 2 blanks and 3 certified reference materials were sent to Activation Laboratories (Actlabs) Ltd., Timmins, Ontario for gold assay. Standards and blanks were inserted at a fixed rotation. Standards were inserted every 24<sup>th</sup> sample and blank material was inserted every 12<sup>th</sup>. The standards that were used are certified reference materials and include OREAS 502c, OREAS 503d, and OREAS 507. All samples were sent for gold analyses by fire assay method (Code 1A2 Au) with over limit instructions. During this program no multi-element ICP-MS analysis was completed on the samples however several samples will be selected for future ICP analysis for further understanding of the geochemical footprint of the mineralization. No trace element geochemistry or whole-rock geochemistry was completed. Actlabs is accredited to international quality standards through the International Organization for Standardization/International Electrotechnical Commission (ISO/IEC) 17025 (ISO/IEC 17025 includes ISO 9001 and ISO 9002 specifications).

### 7.2 Gold Analysis

Samples requested for fire assay initially use a 30g sample and are analyzed using atomic absorption. If the sample returns a result greater than 2 g/t gold then a gravimetric analysis is performed on a 50g sample. Lastly, if this sample returns a result greater than 5 g/t gold a pulp metallic screen analysis is requested and a representative 500g sample split is sieved at 100 mesh (150 micron), with assays performed on the entire +100 mesh fraction and two splits of the -100 mesh fraction. When the assays have been completed on the coarse and fine portions of the bulk sample, a final assay is calculated based on the weight of each fraction. All results in this report are recorded using values that provided the highest degree of accuracy. Assay certificates can be found in Appendix B.

### 7.3 QA/QC

A total of 49 samples, 2 blanks and 3 certified reference materials (54 sample total) were sent to Actlabs in Timmins, Ontario for processing in three separate batches. Standards were inserted every 24<sup>th</sup> sample and blank material was inserted every 12<sup>th</sup>. Blank material consisted of certified blank diabase packets and the certified reference materials were OREAS standards purchased from OREAS North America. The standards that were used on this project were OREAS 502c, OREAS 503d, and OREAS 507. Mean gold values for the standards ranged from 0.176 to 0.658 ppm. All standards and blanks passed. The QA/QC results for the program can be found in Table 3.

2021 Penny Claims Mapping & Prospecting QA/QC Table						
Sample #	Assay Certificate	CRM	Certified Value	Acceptable Passing Range (3SD low to 3SD High)	Assayed Au Value (ppm)	Status
1077612	A21-15291	OREAS 502c	0.488	0.444 to 0.532	0.505	Pass
1077636	A21-16010	OREAS 503d	0.658	0.621 to 0.712	0.664	Pass
1077660	A21-16712	OREAS 507	0.176	0.159 to 0.194	0.167	Pass
Sample #	Assay Certificate	Coarse Silica Blank Material	Recommended Value (ppm)	Warning Value (Failure)	Assayed Au Value (ppm)	Status
1077624	A21-15291	Blank	<.005	0.1 Au ppm	0.005	Pass
1077672	A21-16712	Blank	<.005	0.1 Au ppm	0.005	Pass

Table 3: QA/QC Results

## 8.0 Program Results

The mapping and prospecting program was successful at preliminary characterization of the veining and mineralization found on the Penny Claims. Positive high grade assay results confirm historical sampling grades. Samples 1077609 & 1077610, taken just north of the historical Steep shaft from a pile of fly rock consisted of blue-grey quartz vein with 1% fine grained pyrite, sphalerite and fine grained visible gold retrieved assay values of 34.4 g/t Au and 41.5 g/t Au. Another assay highlight comes from angular blue-grey quartz float found in the Penny Lane trench to the west of the historical shaft. This sample, 1077602 has an assay value of 36 g/t Au. The 3 sets of chip channel samples completed in the Penny Lane trench resulted in anomalous samples for all 3 of the chip channels taken within the Steep Vein with only minor anomalous Au detected in the shear zone wall rock. The vein assays were 13.7 g/t Au over 0.12m, 4.49 g/t Au over 0.1m and 4.41 g/t Au over 0.1m. The shear zone/wall rock anomalous assay highlights were 0.11 g/t Au over 0.4m and 0.42 g/t Au over 0.4m.

Assay certificates are provided in Appendix E. Sample descriptions with Au results are detailed in Appendix A. Maps depicting the geology as well as assay results are found in Appendix C for the Penny Lane Trench & Shaft area as well as Appendix D for the general Penny Claims area.

## 9.0 Mapping & Prospecting Program Conclusions & Recommendations

The limited mapping & prospecting program provided valuable insight into the geology, structure and mineralization on the Penny Claims. The mapping demonstrated the ductile nature of the Steep Vein given how the vein regularly pinches and swells every 0.2 to 0.5m which could explain why historical diamond drilling in the area failed to intersect or identify the vein. The mapping and prospecting also identified the narrow width of the Steep Occurrence on surface but potential for the mineralized vein and shear zone to widen at depth remains. An outcrop 13 meters northwest of the shaft returned 3.44 g/t Au in a grab sample (1077635) hosting 1-2% fine grained pyrite suggests the mineralization may be wider than the Steep Occurrence trench exposures and suggests mineralization may continue to the north of the Steep vein.

Given the positive assay results with high grade Au values further exploration work is warranted on the Penny Claims to further understand and evaluate the potential for economic concentrations of Au. A first step would be to reveal a wider exposure of outcrop via a mechanized stripping program at the Steep Occurrence. The anomalous sample 1077635 of 3.44 g/t Au located 13m northwest of the historical Steep Shaft which suggests a greater width to the mineralized zone or a second mineralized zone immediate north of the Steep Vein. Following exposure deep channel sample cuts should be taken across the mineralized shear zone structure. Another recommendation would be to consider the Steep Vein for a diamond drill target. The historical drilling which undercut the Steep Shaft area tested at shallow depths to a maximum vertical depth of 15m. A drill hole to tests the width of the vein and mineralization at depth would greatly add to the evaluation of the Steep vein. A winter drill program would be best for access. Lastly, an IP survey should be considered over the Penny Claims to identify potential chargeability anomalies favourable for Au mineralization.

## 10.0 STATEMENT OF COSTS

The total value of work done on the Penny Claims is summarized in Table 4. A detailed breakdown of the expenses by claim cell and an expense verification is provided in Appendix G.

2021 Shining Tree Area - Penny Claims Statement of Costs					
Date From	Date To	Expense Type	Daily Rate	Invoice	Amount
04/08/2021	06/08/2021	Tree Bear Camp Accommodations & Boat Rental (2 nights 1 cabin / 2 days boat rental)		539	\$791.00
	10/08/2021	Independent Groceries (\$293.54 for 3 days, 1 day on Penny Claims @ \$97.85)			\$97.85
11/08/2021	11/08/2021	Tree Bear Camp Accommodations & Boat Rental (1 night 1 cabins/ 2 day boat rental)		548	\$553.70
	22/08/2021	Walmart Groceries			\$148.09
	25/08/2021	Tree Bear Camp Accommodations & Boat Rental (2 nights 1 cabin/ 2 days boat rental)		560	\$926.60
	09/09/2021	Invoice A21-16712 (18 Au Assays)			\$387.52
	20/09/2021	Invoice A21-15291 (26 Au Assays)			\$964.15
	23/09/2021	Invoice A21-16010 (10 Au assays)			\$232.94
04/08/2021	24/08/2021	Truck Rental (6 days @ \$82.41/day)	\$82.41	27629763	\$494.46
04/08/2021	24/08/2021	Geologist	\$450.00		\$2,700.00
04/08/2021	24/08/2021	Geologist-In-Training	\$350.00		\$2,100.00
01/09/2021	23/09/2021	Geologist Report Writing & GIS (3 days)	\$450.00		\$900.00
				Total	<b>\$10,296.31</b>

Table 4: Statement of Costs

## 11.0 STATEMENT OF QUALIFICATIONS

I, Jillian Craig, do hereby certify that:

- 1) I have worked for IAMGOLD Corporation, formerly Trelawney Mining and Exploration Inc., formerly Augen Gold Corp., since July 19th, 2010.
- 2) I graduated with a B.Sc in Geology at the University of New Brunswick in 2008.
- 3) I am a practising member in good standing with the Association of Professional Geoscientists of Ontario (Member Number 2471).
- 4) The report is true and accurate to the best of my knowledge. The report includes information that was gathered from various sources, such as assessment files, company reports and publications.
- 5) I am responsible for the planning and writing of the 2021 Prospecting and Mapping Program on the Penny Claims.
- 6) I have no personal interest in the property covered by this report.



Signed September, 24<sup>th</sup>, 2021

## 12.0 REFERENCES

- Ayer, J.A., and Chartrand, J.E., 2011, Geological compilation of the Abitibi greenstone belt: Ontario Geological Survey, Miscellaneous Release – Data 282.
- Ayer, J.A., Kontak, D.J., Linnen, R.L. and Lin, S., eds. 2013. Results from the Shining Tree, Chester Township and Matachewan gold projects and the Northern Cobalt Embayment polymetallic vein project; Ontario Geological Survey, Miscellaneous Release—Data 294.
- Borne, A., 1981, Geological Report on Shining II Property, ON: Assessment Report, Patino Mines (Quebec) Ltd, p. 1-18.
- Carter, M.W. 1979: Geological series, Asquith Township. Preliminary Map Series P2312
- Carter, M.W., 1980: Geological series, Shining Tree area, districts of Sudbury and Timiskaming. Preliminary Map Series P2313
- Johns, G.W., 2003, Precambrian Geology, Shining Tree Area, Preliminary Map Series P3521
- Long, D.G.F., 2009, The Huronian Supergroup; *in* A Field Guide to the Geology of Sudbury, Ontario: Ontario Geological Survey, Open File Report 6243, p. 14-30.
- McCannell, J.D., 1974, Geological Report, Vintage Mines Limited, Asquith Township, Ontario; Assessment file 41P11SW0271
- Ontario Geological Survey, 2008: Report on Shining Tree Area, Airborne Geophysical Survey, Geophysical Data Set 1064
- Sharpley, Fred J., 2012: NI-43101 Technical Report on Shining Tree Property for Shining Tree Resources Corp.
- Thorsen, K. 1989. Assessment Report on Geological Mapping in Asquith Township; Assessment File 41P11SW0218
- Thurston, P.C., Ayer, J.A. Goutier, J., and Hamilton, M.A., 2008, Depositional Gaps in Abitibi Greenstone Belt Stratigraphy: A Key to Exploration for Syngenetic Mineralization: *Economic Geology*, v. 2013, pp. 1097-1134.

## Appendices

Appendix A: Penny Claims Daily Log,  
Sample Locations & Mapping Descriptions



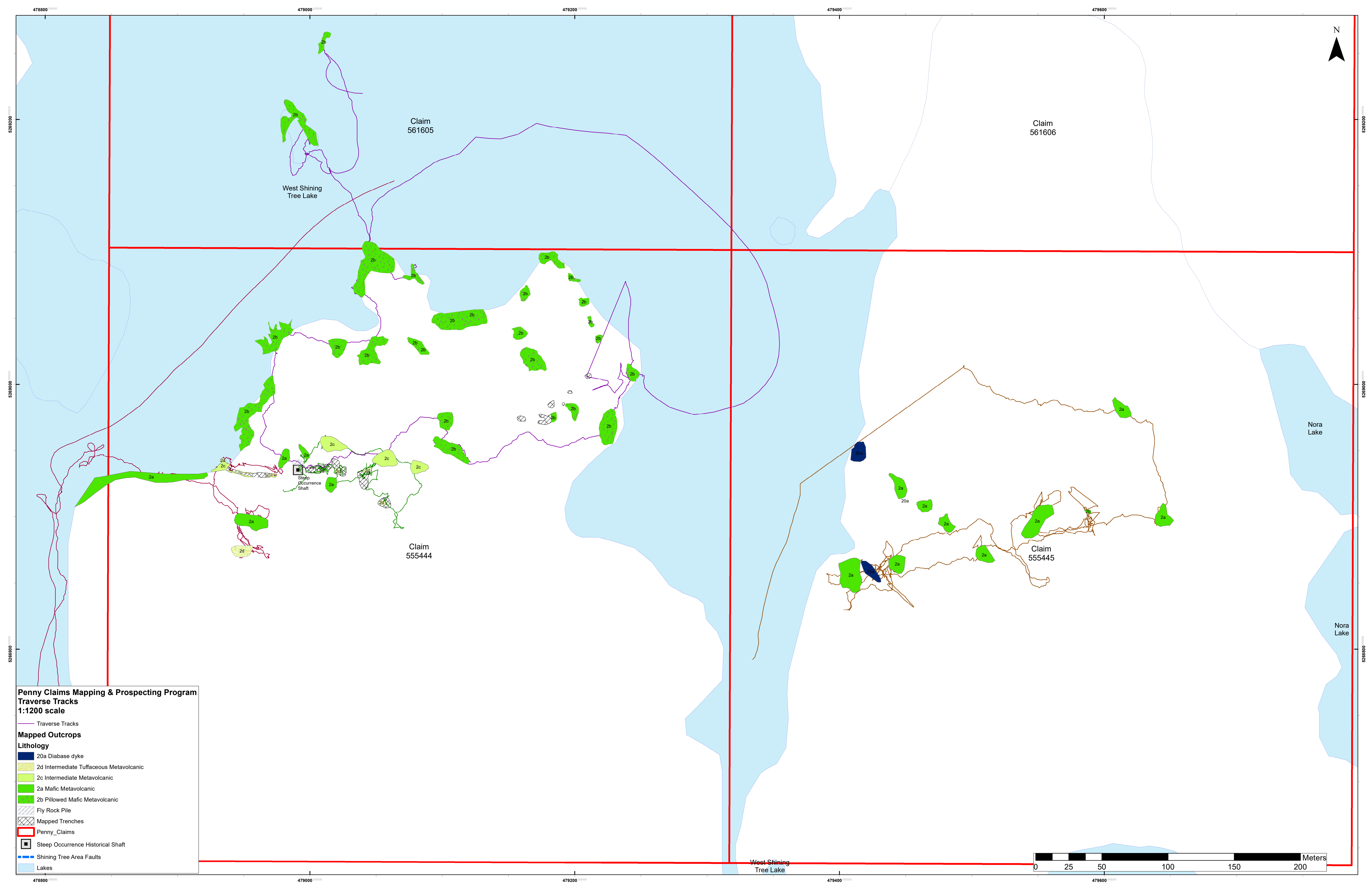
DATE	Project Area	Geologists	Station #	UTM Easting (Station) (m)	UTM Northing (Station) (m)	Elevation (station) (m)	Sample #	UTM Easting (sample) (m)	UTM Northing (sample) (m)	Elevation (sample) (m)	Sample Type	Rock Type	Vein type/ % of sample	Mineralization type/%	Comments	Au_ppm
August 4, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-01TR	478975	5268927	379	1077601	478952	5268938	379	Grab	QV Quartz Vein	Grey Qtz- 50%	1% py, tr Sphalerite	Long trench near shoreline with outcrop exposures of sheared intermediate volcanic rock and blue boudinaged quartz vein (Steep Vein); 1% py, tr sphalerite. Sample of Quartz Vein fly rock on side of trench.	0.017
August 4, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-01TR	478975	5268927	379	1077602	478956	5268932	378	Grab	QV Quartz Vein	Qtz+Chl -100%	tr to 0.5% py	Long trench near shoreline with outcrop exposures of sheared intermediate volcanic rock and blue boudinaged quartz vein (Steep Vein); 1% to 0.5% py. Sample of Quartz Vein fly rock on side of trench.	36
August 4, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-02TR	479009	5268937	388	1077603	479012	5268935	387	Grab	2c Massive Intermediate Metavolcanic Flow	Qtz-30%	tr py	20m long trench on east side of Shaft striking ~070; weak shearing on o/c exposed on south side of Trench. ~20cm wide, 5cm wide Qtz-Chl veins w/ tr py	0.197
August 4, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-02TR	479009	5268937	388	1077604	479012	5268935	386	Grab	QV Quartz Vein	Qtz- 90%	tr	Qtz vein sample from within sheared volcanic exposure in Trench, tr py	0.101
August 4, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-02TR	479009	5268937	388	1077605	479012	5268935	379	Grab	QV Quartz Vein	Qtz- 100%	Nil	Qtz vein sample from within sheared volcanic exposure in Trench, tr py	0.03
August 4, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-03	479022	5268933	389	No sample					2d Tuffaceous Intermediate Flow		1% dis py	Medium Grey massive intermediate tuff w/ fine lapilli; weakly carbonatized with 1% dis py	
August 4, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-04	479022	5268933	388	No sample					2a Massive Mafic Metavolcanic Flow		1% diss py	Grey-green massive mafic metavolcanic; weakly carbonatized with 1% dis py	
August 4, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-05TR	479044	5268934	393	1077606	479046	5268937	393	Grab	2d Tuffaceous Intermediate Flow		2% dissem. Py	Historical trench; north end has exposed o/c w/ light grey strongly silicified tuff w/ 2% dis py	0.006
August 4, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-06TR	479058	5268915	395	1077607	479055	5268910	393	Grab	2d Tuffaceous Intermediate Flow		1% py	2 trenches, north end is overburden, middle has ~4m of o/c exposure, ~1% py in grey-green int. tuff (wky chl & carb alt)	0.005
August 4, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-07	479078	5268936	396	No sample					2c Massive Intermediate Metavolcanic Flow		1% dis py	Lt grey massive intermediate metavolcanic, 1% dis py, moderately silicified	
August 4, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-08	479055	5268949	393	No sample					2c Massive Intermediate Metavolcanic Flow		1% dis py	Med grey massive intermediate metavolcanic, 1% dis py, moderately silicified	
August 4, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-09	479010	5268955	389	No sample					2c Massive Intermediate Metavolcanic Flow		tr dis py	Med grey massive intermediate metavolcanic, pervasive mod. Carb, moderately silicified	
August 5, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-10	478997	5268945	398	1077608	478997	5268944	398	Grab	2a Massive Mafic Metavolcanic Flow		tr to 0.5% dis py	Outcrop just north of the Steep Shaft with fly rock; Mafic Metavolcanic sample with ~0.5% dis py	0.005
August 5, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-10	478997	5268945	398	1077609	478993	5268945	390	Grab	QV Quartz Vein	100% Smokey Qtz	fg VG, <1% py, tr cpy, tr sphal.	Fly rock grab sample from fly rock pit just north of the Steep Shaft; Smokey grey quartz with 1% fg py, tr cpy, tr sphalerite and fine grained VG	34.4
August 5, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-10	478997	5268945	398	1077610	478995	5268938	388	Fly Rock Grab	QV Quartz Vein	Smokey Grey Qtz Vein	fg VG, <1% py, tr cpy, tr sphal.	Fly rock grab sample from fly rock pit just north of the Steep Shaft; Smokey grey quartz with 1% fg py, tr cpy, tr sphalerite and fine grained VG	41.5
August 5, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-11	478941	5268935	384	No sample					2c Massive Intermediate Metavolcanic Flow		tr to 0.5%	Sheared int. volc. Exposed at shoreline along strike of the 'Penny Lane' Trench; some broken pieces of Qtz at shoreline with tr to 1% py; 1m wide shear zone striking 080, dipping 80	
August 5, 2021	Penny Claims	Jillian Craig & Erik Bobechko	Penny Lane Trench	478971	5268932	379	1077611	478973.5	5268932	384	Chip Channel	SH Shear Zone		1	Chip channel sample along eastern end of 'Penny Lane' trench, shear zone north of Steep Vein, 0.3m long sample	0.06
August 5, 2021	Penny Claims	Jillian Craig & Erik Bobechko	Penny Lane Trench	478971	5268932	379	1077613	478973.6	5268932	382	Chip Channel	QV Quartz Vein	QCHLV	tr py	Chip channel sample along eastern end of 'Penny Lane' trench, blue-grey boudinaged Steep Vein, tr py; .12m long sample	13.7
August 5, 2021	Penny Claims	Jillian Craig & Erik Bobechko	Penny Lane Trench	478971	5268932	379	1077614	478973.5	5268932	385	Chip Channel	SH Shear Zone		1	Chip channel sample along eastern end of 'Penny Lane' trench, shear zone south of Steep Vein; 0.4m long sample	0.112
August 5, 2021	Penny Claims	Jillian Craig & Erik Bobechko	Penny Lane Trench	478971	5268932	379	1077615	478973.6	5268931	385	Chip Channel	2b Pillowed Mafic Metavolcanic		tr	Chip channel sample along eastern end of 'Penny Lane' trench, just south of the shear zone, moderately foliated volcanic, tr pyrite; 0.5m long sample	0.022
August 5, 2021	Penny Claims	Jillian Craig & Erik Bobechko	Penny Lane Trench	478971	5268932	379	1077616	478970.8	5268932	383	Chip Channel	SH Shear Zone		1	Chip channel sample along middle of 'Penny Lane' trench, shear zone north of Steep Vein; lt grey sheared intermediate volcanic, moderately carbonatized & silicified; 1% dis py 0.4m long sample	0.419
August 5, 2021	Penny Claims	Jillian Craig & Erik Bobechko	Penny Lane Trench	478971	5268932	379	1077617	478970.8	5268931	385	Chip Channel	QV Quartz Vein	QCHLV		Chip channel sample along middle of 'Penny Lane' trench, blue-grey boudinaged Steep Vein, tr py; 0.1m long sample	4.49
August 5, 2021	Penny Claims	Jillian Craig & Erik Bobechko	Penny Lane Trench	478971	5268932	379	1077618	478970.8	5268931	386	Chip Channel	SH Shear Zone		.5	Chip channel sample along middle of 'Penny Lane' trench, shear zone south of Steep Vein, 0.5m long	0.021
August 5, 2021	Penny Claims	Jillian Craig & Erik Bobechko	Penny Lane Trench	478971	5268932	379	1077619	478951.9	5268934	384	Chip Channel	SH Shear Zone		1	Chip channel sample at west end of 'Penny Lane' trench, shear zone south of Steep Vein, 0.25m long	0.033

August 5, 2021	Penny Claims	Jillian Craig & Erik Bobechko	Penny Lane Trench	478971	5268932	379	1077620	478951.9	5268933	393	Chip Channel	QV Quartz Vein	QCHLV	1	Chip channel sample at west end of 'Penny Lane' trench, blue grey boudinaged Steep Vein, chloritic fractures & 1% py in vein, 0.1m long	4.31
August 5, 2021	Penny Claims	Jillian Craig & Erik Bobechko	Penny Lane Trench	478971	5268932	379	1077621	478952	5268933	391	Chip Channel	SH Shear Zone		.5	Chip channel sample at west end of 'Penny Lane' trench, shear zone south of Steep Vein, medium grey, strongly carbonatized, weakly silicified, 0.5% dis py, 0.5m long	0.009
August 6, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-12	478934	5268943	379	No sample					2d Tuffaceous Intermediate Flow		nil	Outcrop of massive med. Grey tuffaceous intermediate volcanic w/ a sharp contact w/ the sheared int. volcanics that hosts the STEEP Vein (along the shoreline); weakly silicified and carbonatized; no visible sulphides	
August 6, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-13	478961	5268901	385	1077622	478961	5268901	383	Grab	2a Massive Mafic Metavolcanic Flow	20% Qtz-Chl	1% dis py	Massive mafic metavolcanic rock with irregular Qtz-chl vein, strongly carbonatized, weakly silicified; 1% dis py	0.005
August 6, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-14	478955	5268875	382	1077623	478953	5268872	385	Grab	2d Tuffaceous Intermediate Flow	Qtz- 50%	tr to 0.5% vn py	Grey-green massive mafic metavolcanic; weakly carbonatized with 0.5% dis py	0.007
August 6, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-15	478885	5268929	379	1077625	478884	5268929	375	Grab	2b Pillowed Mafic Metavolcanic		1% dis py	2 meter high cliff on shorelie of pillowed mafic metavolcanics w/ boudinaged 1-6cm wide Qtz-Carb-Chl vein w/ py, tr cpy and galena w/ magnetite. Striking SE.	0.005
August 6, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-15	478885	5268929	379	1077626	478884	5268927	372	Grab	QCV Quartz-(Carbonate) Vein	Qtz-Carb, 100%	% py, tr cpy, gale	2 meter high cliff on shorelie of pillowed mafic metavolcanics w/ boudinaged 1-6cm wide Qtz-Carb-Chl vein w/ py, tr cpy and galena w/ magnetite. Striking SE.	0.005
August 11, 2021	Penny Claims	Jillian Craig & Justin Bisailon	JJ21-01TR	479183	5268973	377	1077627	479184	5268978	390	Grab	QV Quartz Vein	Qtz-Carb 100%	tr py	V' shaped trench with outcrop at center of pillowed mafic volcanic with irregular veining and narrow veining local to pillow selvages;	0.006
August 11, 2021	Penny Claims	Jillian Craig & Justin Bisailon	JJ21-01TR	479183	5268973	377	1077628	479182	5268977	390	Grab	2a Massive Mafic Metavolcanic Flow		tr py	V' shaped trench with outcrop at center of pillowed mafic volcanic with irregular veining and narrow veining local to pillow selvages;	0.005
August 11, 2021	Penny Claims	Jillian Craig & Justin Bisailon	JJ21-02	479200	5258979	386	No sample					2a Massive Mafic Metavolcanic Flow		nil	Green-Grey Mafic Metavolcanics, moderately silicified, weakly carb and chl alt'd	
August 11, 2021	Penny Claims	Jillian Craig & Justin Bisailon	JJ21-03	479219	5268969	389	1077629	479223	5268963	385	Grab/Float	QCV Quartz-(Carbonate) Vein	Qtz-Carb 80%	0.5% tr py	Large exposure near shoreline of pillowed mafic metavolcanic rock with blasted angular grey quartz float on top of the outcrop hosting 0.5% fg py;	0.006
August 11, 2021	Penny Claims	Jillian Craig & Justin Bisailon	JJ21-03	479219	5268969	389	1077630	479227	5268967	384	Grab	QV Quartz Vein	Smokey Grey Qtz	2% py, 0.5% cpy	Large exposure near shoreline of pillowed mafic metavolcanic rock with a smokey grey Qtz vein hosting 2% py, 0.5% cpy	0.005
August 11, 2021	Penny Claims	Jillian Craig & Justin Bisailon	JJ21-03	479219	5268969	389	1077631	479227	5268962	382	Grab	QV Quartz Vein	Qtz-Carb 20%, 80% MV	3% py in MV; 1%py 1% cpy in QV	Large exposure near shoreline of pillowed mafic metavolcanic rock with 3% py and 1% py and cpy in a quartz vein	0.005
August 11, 2021	Penny Claims	Jillian Craig & Justin Bisailon	JJ21-03	479219	5268969	389	1077632	479226	5268965	384	Grab/Float	2b Pillowed Mafic Metavolcanic	qtz-carb, 20%	2-3% cpy clusters, 1-2% py	Large exposure near shoreline of pillowed mafic metavolcanic rock with blasted fly rock; a Qtz-carb vein hosting 2-3% cpy clusters, 1-2% py in a fly rock sample	0.005
August 11, 2021	Penny Claims	Jillian Craig & Justin Bisailon	JJ21-04	479166	5269018	385	1077633	479169	526018	380	Grab	QCV Quartz-(Carbonate) Vein	Qtz-Carb 80%	0.5% py & cpy	2cm wide Qtz-carb vein striking 060, dipping 70 deg south; hosting 0.5% py & cpy in a weakly carbonatized and chloritized pillowed mafic volc. Outcrop	0.005
August 12, 2021	Penny Claims	Jillian Craig & Justin Bisailon	JJ21-05	478981	5268942	380	1077634	478983	5268946	378	Grab	2a Massive Mafic Metavolcanic Flow		1-2% py	outcrop just north of the Steep Shaft area; pillowed carbonatized mafic volcanic with 1-2% dis py	0.025
August 12, 2021	Kubiak Occurr	Jillian Craig & Justin Bisailon	JJ21-05	478981	5268942	380	1077635	478981	5268944	381	Grab	2a Massive Mafic Metavolcanic Flow		1-2% py	outcrop just north of the Steep Shaft area; pillowed carbonatized mafic volcanic with 1-2% dis py	3.44
August 23, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-16	479414	5268956	373	No sample					20a Diabase dyke		nil	Black, strongly magnetic, medium grained massive Diabase dyke	
August 23, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-17	479438	5268933	374	1077654	479443	5268929	375	Grab	2 Mafic to Intermediate Metavolcanic Rocks		tr dis py	moderately foliated (104/72) mafic metavolcanics with moderate carbonate and chlorite alteration; tr dis py	0.005
August 23, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-18	479463	5268908	382	No sample					2a Massive Mafic Metavolcanic Flow		tr dis py	massive fine grained medium grey mafic metavolcanics with tr dis py	
August 23, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-19	479482	5268894	380	No sample					2a Massive Mafic Metavolcanic Flow		nil	massive fine grained medium grey mafic metavolcanics; nil sulphides	
August 23, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-20	479548	5268886	381	1077655	479551	5268900	383	Grab	2a Massive Mafic Metavolcanic Flow		1-2% dis py	large ridge of massive fine grained Green-grey mafic metavolcanics; moderately carbonatized, 1-2% dis py; weak fol (260/80)	0.005
August 23, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-21	479442	5268862	380	1077656	479443	5268867	382	Grab/Float	QV Quartz Vein	Qtz 90%	0.5% py vn	Outcrop with large float of quartz, rock is strongly silicified Beinge pillowed mafic volcanic with 10-15% white to grey Qtz stockworks from 1cm to 15cm in size, striking roughly ~062 to 065 as well as ~080; oxidized patches throughout the stockworks with pyrite (aspy?), patches are up to 1cmx2cm in size (3% py in these areas); possibly along strike of the Teck 1989 strappings	0.005

August 23, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-21	479442	5268862	380	1077657	479443	5268863	379	Grab	QTSW Quartz Stockwork	grey qtz stockworks 70%	2-3% clusters of py in qtz veins	Strongly silicified Beinge pillowed mafic volcanic with 10-15% white to grey qtz stockworks from 1cm to 15cm in size, striking roughly ~062 to 065 as well as ~080; oxidized patches throughout the stockworks with pyrite (aspy?), patches are up to 1cmx2cm in size (3% py in these areas); possibly along strike of the Teck 1989 strippings	0.005
August 23, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-21	479442	5268862	380	1077658	479438	5268862	391	Grab	2 Mafic to Intermediate Metavolcanic Rocks	5% qtz veinlets	~1% py, aspy?	Strongly silicified Beinge pillowed mafic volcanic with 10-15% white to grey qtz stockworks from 1cm to 15cm in size, striking roughly ~062 to 065 as well as ~080; oxidized patches throughout the stockworks with pyrite (aspy?), patches are up to 1cmx2cm in size (3% py in these areas); possibly along strike of the Teck 1989 strippings	0.005
August 23, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-22	479427	5268855	388	No sample					20a Diabase dyke		nil	Black, strongly magnetic, medium grained massive Diabase dyke	
August 23, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-23	479414	5268856	383	No sample					2 Mafic to Intermediate Metavolcanic Rocks		tr dis py	weakly foliated (082078), medium grey mafic metavolcanic, trace dis py	
August 23, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-24	479504	5268871	381	No sample					2a Massive Mafic Metavolcanic Flow		tr dis py	medium grey massive mafic metavolcanic, trace dis py	
August 23, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-25	479588	5268904	384	No sample					2G Pillow flows - pillow breccia		nil	massive medium grey pillowed mafic metavolcanics;	
August 23, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-26	479638	5268898	392	No sample					2 Mafic to Intermediate Metavolcanic Rocks		tr dis py	medium grey weakly foliated (075/80) mafic metavolcanic, tr dis py	
August 23, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-27	479618	5268979	387	No sample					2a Massive Mafic Metavolcanic Flow		1% dis py	medium grey massive mafic metavolcanic, moderately chloritized, 1% dis py	
August 24, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-28	479242	5269008	371	1077659	479244	5269008	371	Grab	2 Mafic to Intermediate Metavolcanic Rocks		1% dis py	medium grey weakly foliated (026/87); mafic metavolcanic, moderately carbonatized and chloritized; 1% dis py	0.005
August 24, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-29	479217	5269034	376	No sample					2b Pillowed Mafic Metavolcanic		tr py	green-grey massive pillowed mafic metavolcanics; moderately carbonatized and chloritized, tr py	
August 24, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-30	479210	5269050	372	No sample					2a Massive Mafic Metavolcanic Flow		1% dis py	Dark grey massive mafic metavolcanic; strongly carbonatized; 1% dis py	
August 24, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-31	479210	5269062	375	1077661	479209	5269063	370	Grab	2b Pillowed Mafic Metavolcanic		1% dis py	grey-green weakly foliated (075/62) pillowed mafic metavolcanics; 1% dis py	0.01
August 24, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-32	479197	5269082	379	1077662	479196	5269084	381	Grab	QV Quartz Vein	90% grey qtz	tr py	dark grey pillowed mafic metavolcanics with 50cm zone of strong foliation (weak shearing) at 250/70 with grey quartz veining along foliation, tr py	0.005
August 24, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-33	479179	5269098	381	No sample					2b Pillowed Mafic Metavolcanic		nil	light grey massive pillowed mafic metavolcanics with 2cm wide qtz vein along pillow selvage striking 200/65, tr py	
August 24, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-34	479165	5269069	381	No sample					2b Pillowed Mafic Metavolcanic		tr py	green-grey massive pillowed mafic metavolcanics, tr py	
August 24, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-35	479160	5269040	375	1077663	479163	5269037	372	Grab	SH Shear Zone		1% py along shear planes	green-grey weakly foliated (110/80) mafic metavolcanics with ~1m wide shear zone (278/85) with a few narrow qtz-carb veinlets along shear planes; crenulation cleavage trending 308 plunging 70, 1% dis py	0.005
August 24, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-36	479128	5269050	370	1077664	479118	5269047	371	Grab	QV Quartz Vein	90% qtz chl vn	tr py, tr moly?	outcrop of green-grey pillowed mafic metavolcanics with a boudinaged 5 to 20cm thick qtz vein striking at 230/82, tr py	0.005
August 24, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-37	479085	5269032	373	1077665	479089	5269024	378	Grab	QCV Quartz-(Carbonate) Vein		tr py	dark grey massive mafic metavolcanic with a vuggy grey qtz-carb vein striking 240/85 with tr py	0.005
August 24, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-38	479082	5269077	377	No sample					2b Pillowed Mafic Metavolcanic		tr py	green weakly foliated (260/80) pillowed mafic metavolcanic rock; tr py	
August 24, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-39	479058	5269091	380	1077666	479057	5269095	374	Grab	QV Quartz Vein	100% qtz chl vn	tr py	medium grey massive pillowed mafic metavolcanics with narrow 2m wide shear zone (striking 070/74) with 2 boudinaged white quartz-carb veins at 297/60 & 072/74	0.005
August 24, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-39	479058	5269091	380	1077667	479057	5269095	369	Grab	2b Pillowed Mafic Metavolcanic		1-2% dis py	medium grey massive pillowed mafic metavolcanics with narrow 2m wide shear zone (striking 070/74) with 2 boudinaged white quartz-carb veins at 297/60 & 072/74	0.005
August 24, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-39	479058	5269091	380	1077668	479046	5269105	379	Grab	QCV Quartz-(Carbonate) Vein	90% qtz chl vn	tr py	medium grey massive pillowed mafic metavolcanics with narrow 2m wide shear zone (striking 070/74) with 2 boudinaged white quartz-carb veins at 297/60 & 072/74	0.005
August 24, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-40	479050	5269034	376	No sample					2b Pillowed Mafic Metavolcanic		0.5% dis py	medium grey massive pillowed mafic metavolcanics; moderate carbonatization and silicification; 0.5% dis py; vuggy white 5cm qtz vein striking 170/65	
August 24, 2021	Penny Claims	Jillian Craig & Erik Bobechko	JE21-41	479027	5269032	378	No sample					2b Pillowed Mafic Metavolcanic		tr dis py	green grey massive pillowed mafic metavolcanics; moderate carbonatization, chloritization and silicification; tr dis py	

August 24, 2021	Penny Claims	Jillian Craig & Erik Bobecko	JE21-42	478974	5269027	370	1077669	478968	5269002	373	Grab	SH Shear Zone		tr to 0.5% py	green grey massive pillowed mafic metavolcanics; moderate carbonatization, 0.5m wide shear zone striking 063/72	0.005
August 24, 2021	Penny Claims	Jillian Craig & Erik Bobecko	JE21-43	479098	5268976	384	No sample					2b Pillowed Mafic Metavolcanic		nil	medium grey massive pillowed mafic metavolcanics; moderate carbonatization and chloritization; nil sulphides	
August 24, 2021	Penny Claims	Jillian Craig & Erik Bobecko	JE21-44	479095	5268956	386	1077670	479103	5268956	383	Grab/Float	QV Quartz Vein	100% qtz chl vn	tr py	Pile of blasted Qtz veins along strike of the Steep Occurrence on top of outcrop; sample is 30cm wide greyish quartz float sample; dark grey massive mafic metavolcanics; moderate chloritization & carbonatization; 4cm wide white qtz vein striking 025/56	0.005
August 24, 2021	Penny Claims	Jillian Craig & Erik Bobecko	JE21-45	478999	5269186	377	No sample					2b Pillowed Mafic Metavolcanic		tr py	Green pillowed mafic metavolcanic; weakly foliated along pillow selvages (270/80); tr py	
August 24, 2021	Penny Claims	Jillian Craig & Erik Bobecko	JE21-46	479010	5269254	377	No sample					2b Pillowed Mafic Metavolcanic		tr dis py	green grey pillowed mafic metavolcanics; strongly chloritized, weak foliation along pillow selvages (087/81); tr dis py	

Appendix B: Penny Claims Mapping &  
Prospecting GPS Traverse Tracks Map



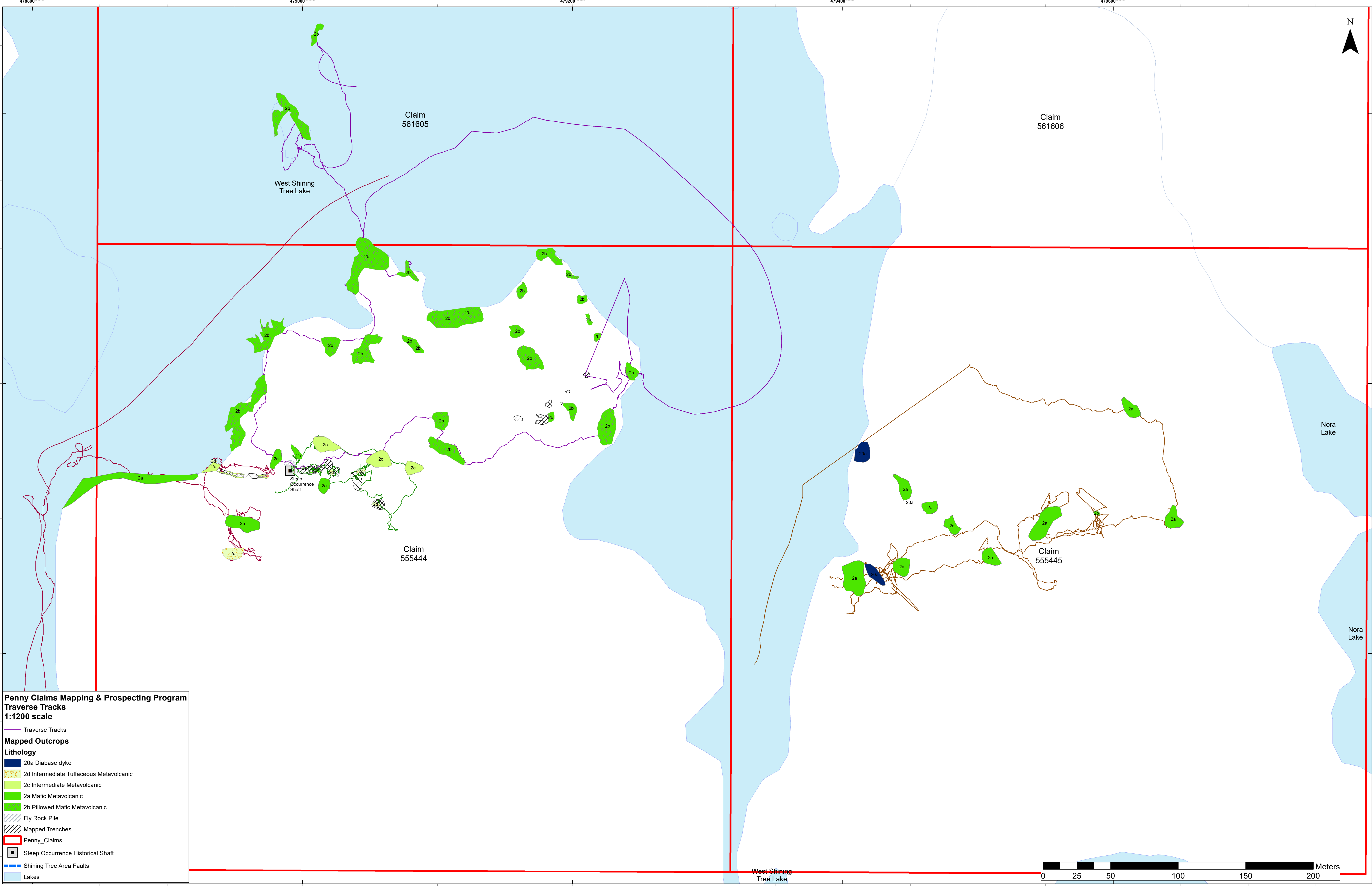
**Penny Claims Mapping & Prospecting Program**  
**Traverse Tracks**  
**1:1200 scale**

- Traverse Tracks

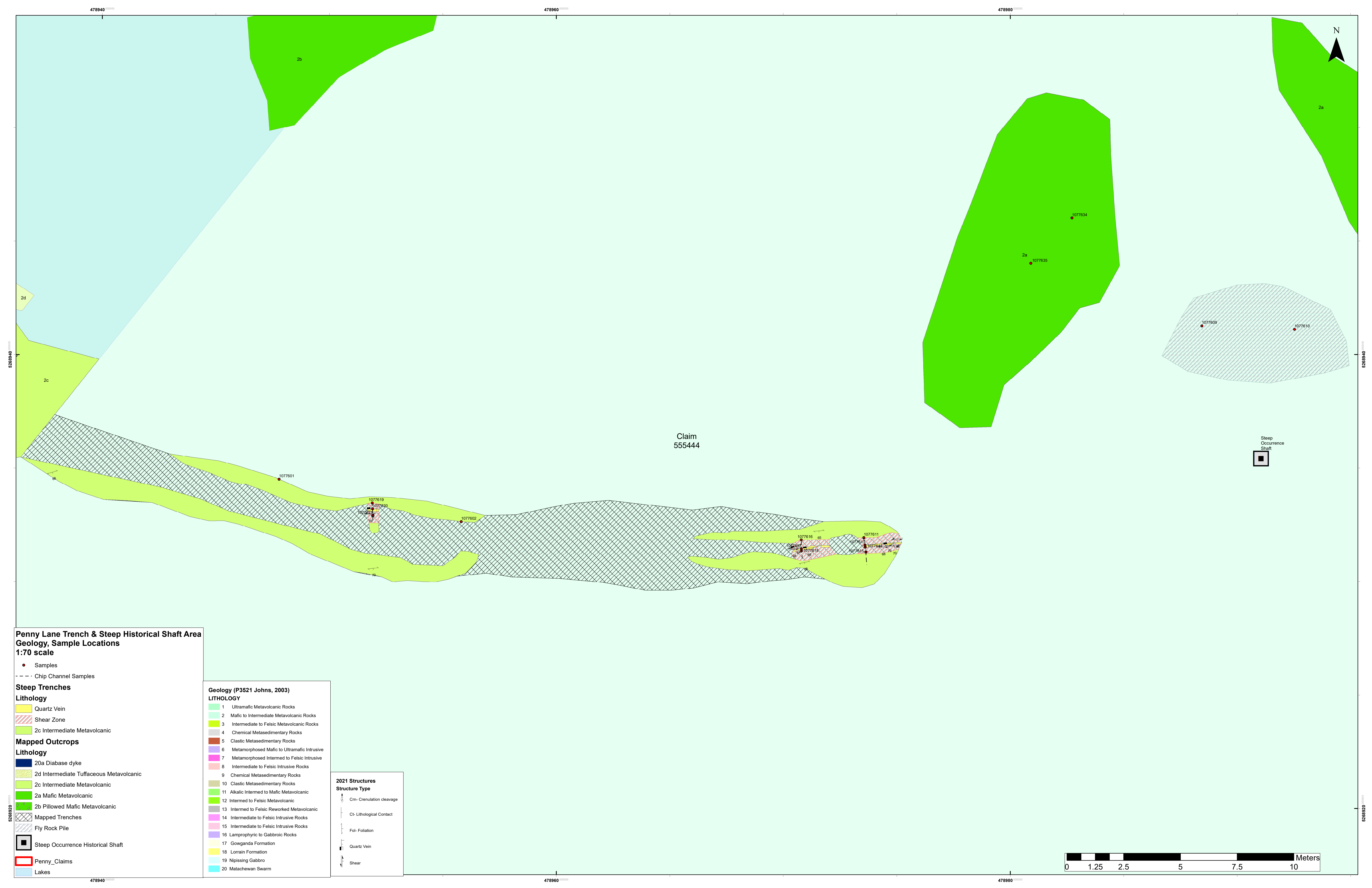
**Mapped Outcrops**

**Lithology**

- 20a Diabase dyke
- 2d Intermediate Tuffaceous Metavolcanic
- 2c Intermediate Metavolcanic
- 2a Mafic Metavolcanic
- 2b Pillowed Mafic Metavolcanic
- Fly Rock Pile
- Mapped Trenches
- Penny\_Claims
- Steep Occurrence Historical Shaft
- Shining Tree Area Faults
- Lakes



**Appendix C: Penny Lane Trench & Steep Historical Shaft Area Geological &  
Sample Location Map (1:70 scale)**

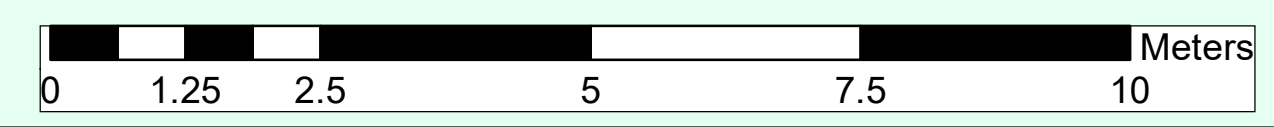


**Penny Lane Trench & Steep Historical Shaft Area  
Geology, Sample Locations  
1:70 scale**

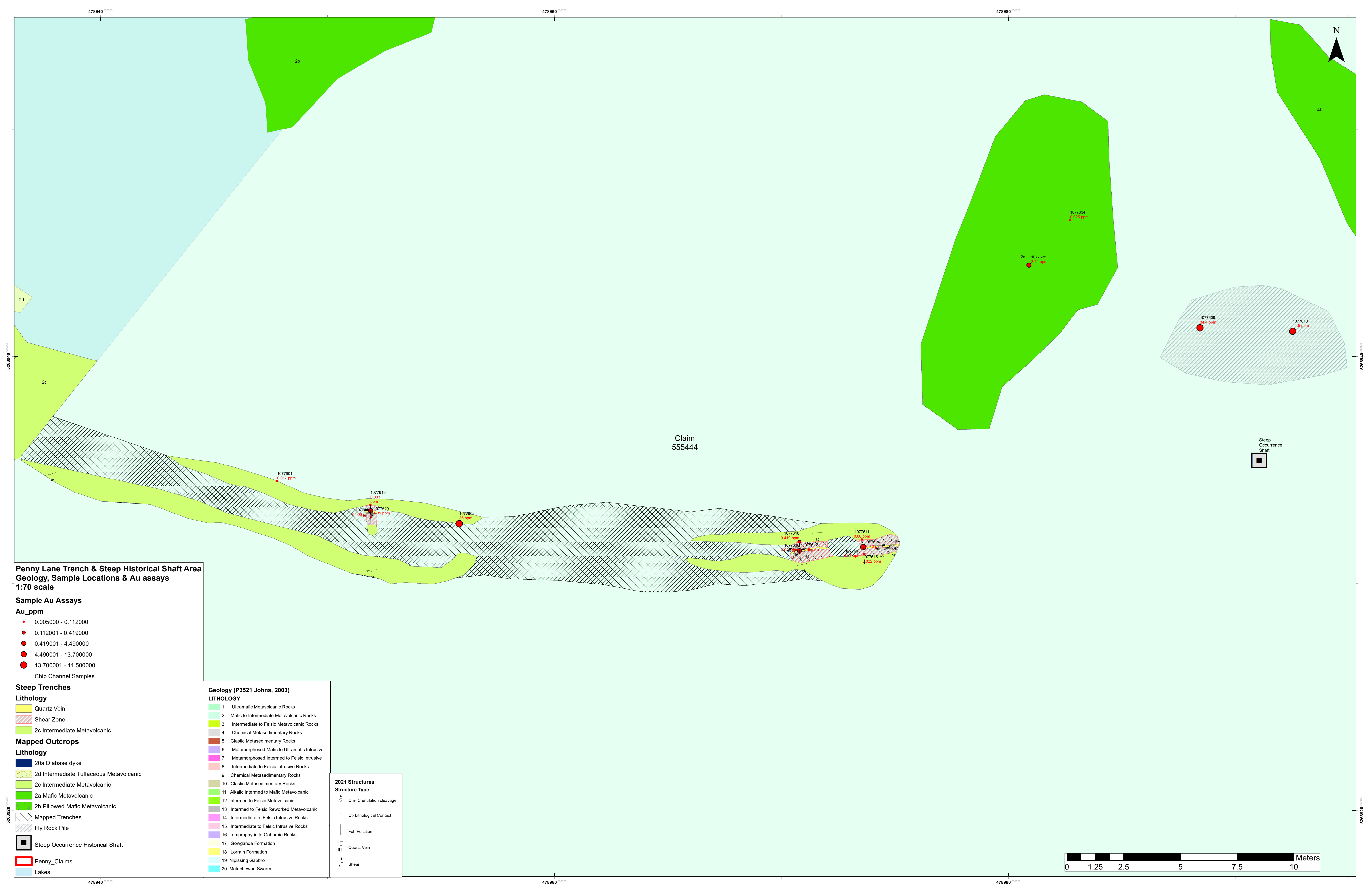
- Samples
- - - Chip Channel Samples
- Steep Trenches**
- Lithology**
- ▨ Quartz Vein
- ▨ Shear Zone
- ▨ 2c Intermediate Metavolcanic
- Mapped Outcrops**
- Lithology**
- 20a Diabase dyke
- ▨ 2d Intermediate Tuffaceous Metavolcanic
- ▨ 2c Intermediate Metavolcanic
- ▨ 2a Mafic Metavolcanic
- ▨ 2b Pillowed Mafic Metavolcanic
- ▨ Mapped Trenches
- ▨ Fly Rock Pile
- Steep Occurrence Historical Shaft
- ▨ Penny\_Claims
- ▨ Lakes

- Geology (P3521 Johns, 2003)**
- LITHOLOGY**
- 1 Ultramafic Metavolcanic Rocks
  - 2 Mafic to Intermediate Metavolcanic Rocks
  - 3 Intermediate to Felsic Metavolcanic Rocks
  - 4 Chemical Metasedimentary Rocks
  - 5 Clastic Metasedimentary Rocks
  - 6 Metamorphosed Mafic to Ultramafic Intrusive
  - 7 Metamorphosed Intermed to Felsic Intrusive
  - 8 Intermediate to Felsic Intrusive Rocks
  - 9 Chemical Metasedimentary Rocks
  - 10 Clastic Metasedimentary Rocks
  - 11 Alkalic Intermed to Mafic Metavolcanic
  - 12 Intermed to Felsic Metavolcanic
  - 13 Intermed to Felsic Reworked Metavolcanic
  - 14 Intermediate to Felsic Intrusive Rocks
  - 15 Intermediate to Felsic Intrusive Rocks
  - 16 Lamprophyric to Gabbroic Rocks
  - 17 Gowganda Formation
  - 18 Lorrain Formation
  - 19 Nipissing Gabbro
  - 20 Matatchewan Swarm

- 2021 Structures**
- Structure Type**
- ↑ Cm- Crenulation cleavage
  - Ct- Lithological Contact
  - Fcl- Foliation
  - ▨ Quartz Vein
  - Shear







**Penny Lane Trench & Steep Historical Shaft Area  
Geology, Sample Locations & Au assays  
1:70 scale**

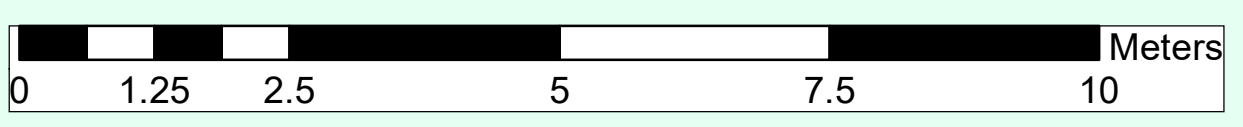
- Sample Au Assays**
- Au\_ppm**
- 0.005000 - 0.112000
  - 0.112001 - 0.419000
  - 0.419001 - 4.490000
  - 4.490001 - 13.700000
  - 13.700001 - 41.500000
- Chip Channel Samples

- Steep Trenches**
- Lithology**
- Quartz Vein
  - Shear Zone
  - 2c Intermediate Metavolcanic
- Mapped Outcrops**
- Lithology**
- 20a Diabase dyke
  - 2d Intermediate Tuffaceous Metavolcanic
  - 2c Intermediate Metavolcanic
  - 2a Mafic Metavolcanic
  - 2b Pillowed Mafic Metavolcanic
  - Mapped Trenches
  - Fly Rock Pile
  - Steep Occurrence Historical Shaft
  - Penny\_Claims
  - Lakes

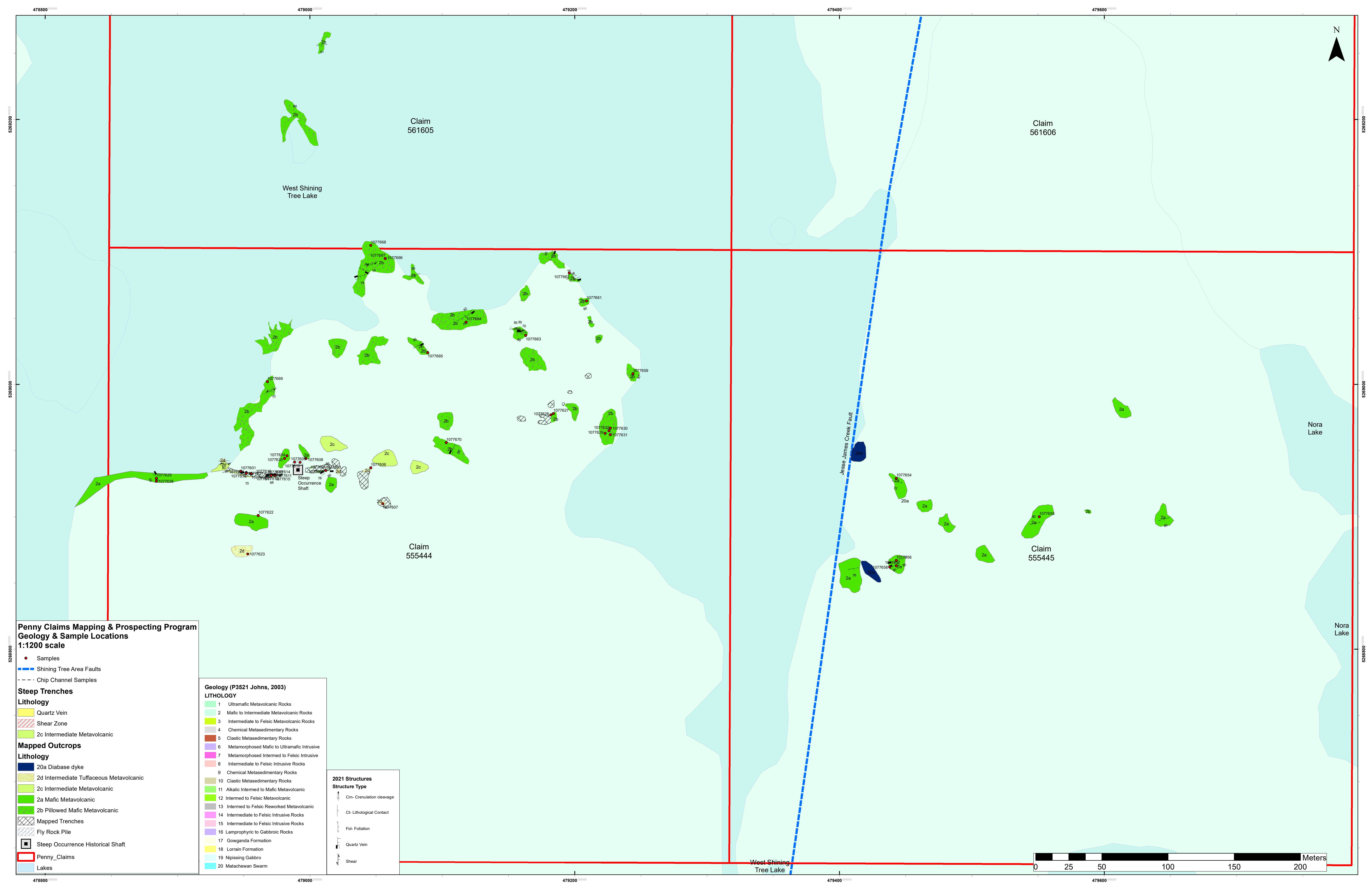
- Geology (P3521 Johns, 2003)**
- LITHOLOGY**
- 1 Ultramafic Metavolcanic Rocks
  - 2 Mafic to Intermediate Metavolcanic Rocks
  - 3 Intermediate to Felsic Metavolcanic Rocks
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  - 16 Lamprophyric to Gabbroic Rocks
  - 17 Gowganda Formation
  - 18 Lorrain Formation
  - 19 Nipissing Gabbro
  - 20 Matatchewan Swarm

- 2021 Structures**
- Structure Type**
- Crn- Crenulation cleavage
  - Ct- Lithological Contact
  - Fol- Foliation
  - Quartz Vein
  - Shear

Claim  
555444



Appendix D: Penny Claims Mapping & Prospecting Geological & Sample  
Location Map (1:1200 scale) & Geology & Assay Map (1:1200 scale)

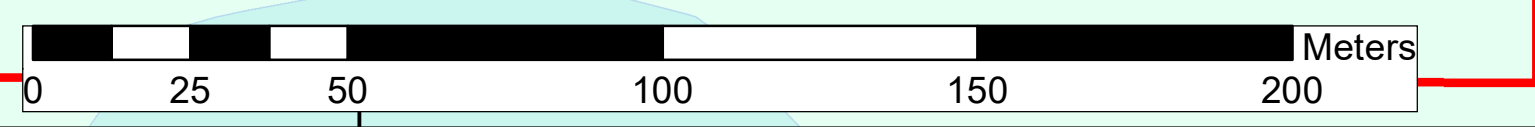


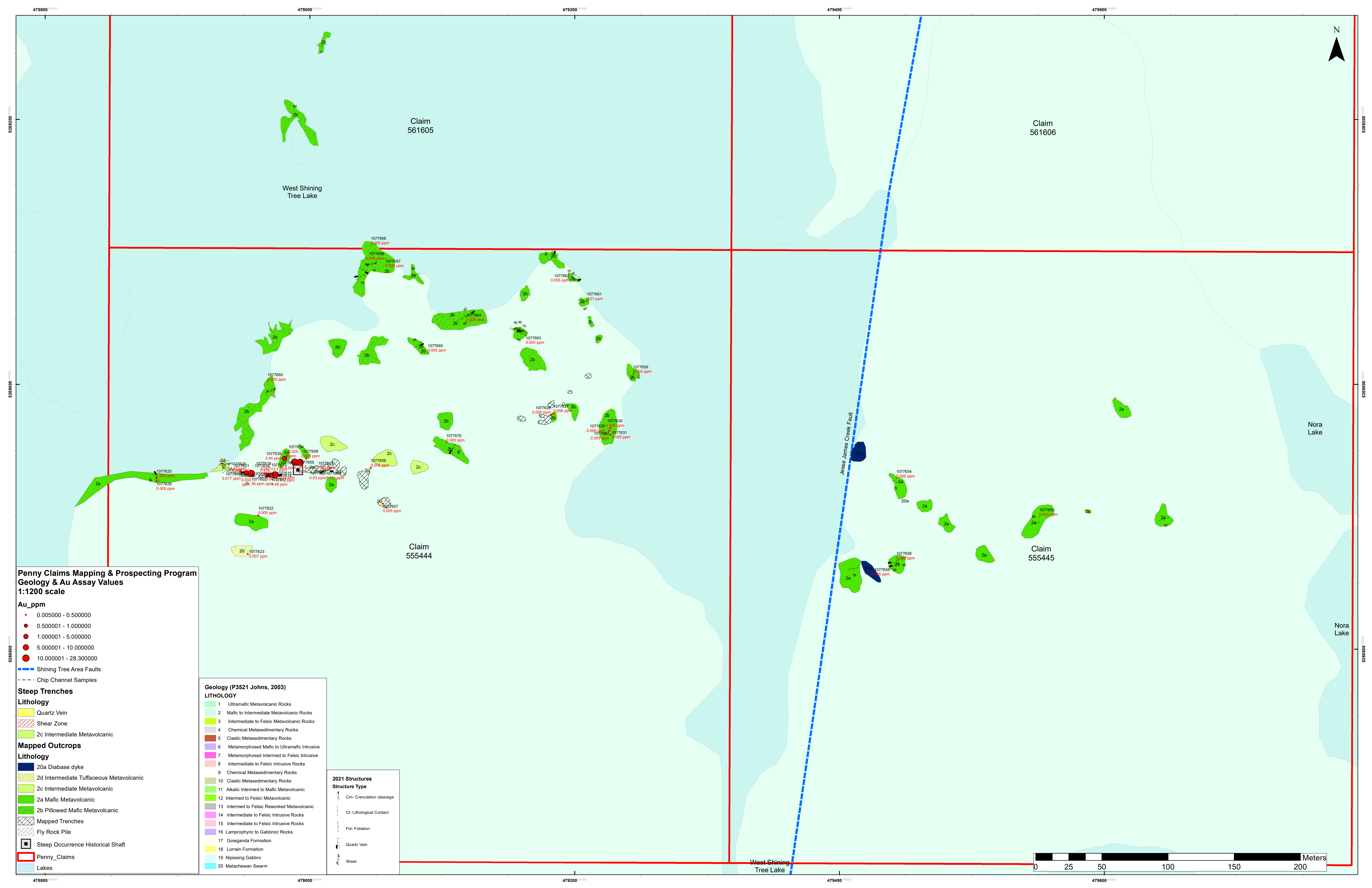
**Penny Claims Mapping & Prospecting Program  
Geology & Sample Locations  
1:1200 scale**

- Samples
- Shining Tree Area Faults
- - - Chip Channel Samples
- Steep Trenches**
- Lithology**
- Quartz Vein
- Shear Zone
- 2c Intermediate Metavolcanic
- Mapped Outcrops**
- Lithology**
- 20a Diabase dyke
- 2d Intermediate Tuffaceous Metavolcanic
- 2c Intermediate Metavolcanic
- 2a Mafic Metavolcanic
- 2b Pillowed Mafic Metavolcanic
- Mapped Trenches
- Fly Rock Pile
- Steep Occurrence Historical Shaft
- Penny Claims
- Lakes

- Geology (P3521 Johns, 2003)**
- LITHOLOGY**
- 1 Ultramafic Metavolcanic Rocks
  - 2 Mafic to Intermediate Metavolcanic Rocks
  - 3 Intermediate to Felsic Metavolcanic Rocks
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  - 13 Intermed to Felsic Reworked Metavolcanic
  - 14 Intermediate to Felsic Intrusive Rocks
  - 15 Intermediate to Felsic Intrusive Rocks
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  - 17 Gowganda Formation
  - 18 Lorrain Formation
  - 19 Nipissing Gabbro
  - 20 Matachewan Swarm

- 2021 Structures**
- Structure Type**
- Cm- Creulation cleavage
  - Ci- Lithological Contact
  - Fol- Foliation
  - Quartz Vein
  - Shear





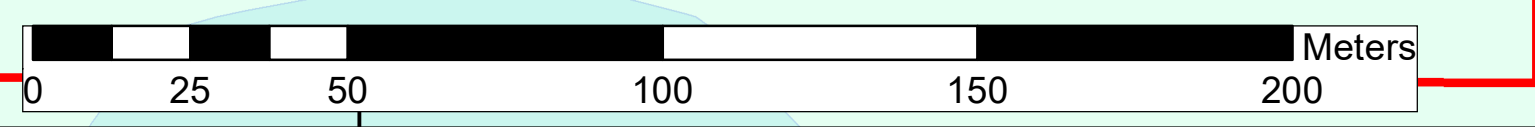
**Penny Claims Mapping & Prospecting Program  
Geology & Au Assay Values  
1:1200 scale**

- Au\_ppm**
- 0.005000 - 0.500000
  - 0.500001 - 1.000000
  - 1.000001 - 5.000000
  - 5.000001 - 10.000000
  - 10.000001 - 28.300000
- Shining Tree Area Faults  
- - - Chip Channel Samples

- Steep Trenches**
- Lithology**
- Quartz Vein
  - ▨ Shear Zone
  - 2c Intermediate Metavolcanic
- Mapped Outcrops**
- Lithology**
- 20a Diabase dyke
  - 2d Intermediate Tuffaceous Metavolcanic
  - 2c Intermediate Metavolcanic
  - 2a Mafic Metavolcanic
  - 2b Pillowed Mafic Metavolcanic
  - ▨ Mapped Trenches
  - ▨ Fly Rock Pile
  - Steep Occurrence Historical Shaft
  - Penny\_Claims
  - Lakes

- Geology (P3521 Johns, 2003)**
- LITHOLOGY**
- 1 Ultramafic Metavolcanic Rocks
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  - 18 Lorrain Formation
  - 19 Nipissing Gabbro
  - 20 Matachewan Swarm

- 2021 Structures**
- Structure Type**
- ↑ Crn- Creulation cleavage
  - Cl- Lithological Contact
  - ↑ Fol- Foliation
  - ▨ Quartz Vein
  - ↑ Shear



## Appendix E: Assay Certificates



Report No.: A21-15291
Report Date: 16-Sep-21
Date Submitted: 12-Aug-21
Your Reference: GEN-X

IAMGOLD Corporation
2140 Regent Street Unit 10
Sudbury Ontario P3E 5S8
Canada

ATTN: Alan Smith

CERTIFICATE OF ANALYSIS

26 Rock samples were submitted for analysis.

Table with 3 columns: Analytical package(s) requested, Testing Date, and details. Rows include 1A2-Timmins (ppm), 1A3-Timmins, and 1A4 (100mesh)-Timmins.

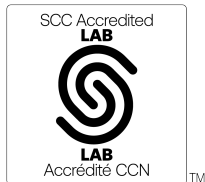
REPORT A21-15291

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:

A representative 500 gram split is sieved at 100 mesh (149 micron) with assays performed on the entire +100 mesh and 2 splits of the -100 mesh fraction. A final assay is calculated based on the weight of each fraction.

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



LabID: 709

ACTIVATION LABORATORIES LTD.
1752 Riverside Drive, Timmins, Ontario, Canada, P4R 1N1
TELEPHONE +705 264-0123 or +1.888.228.5227 FAX +1.905.648.9613
E-MAIL Timmins@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

CERTIFIED BY:

Handwritten signature of Emmanuel Eseme

Emmanuel Eseme, Ph.D.
Quality Control Coordinator

Analyte Symbol	Au	Au	Au + 100 mesh	Au - 100 mesh (A)	Au - 100 mesh (B)	Total Au	+ 100 mesh	- 100 mesh	Total Weight
Unit Symbol	ppm	g/tonne	g/mt	g/mt	g/mt	g/mt	g	g	g
Lower Limit	0.005	0.02	0.03	0.03	0.03	0.03			
Method Code	FA-AA	FA- GRA	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT
1077601	0.017								
1077602	> 5.000	26.9	17.0	40.2	35.5	36.0	42.41	441.57	483.98
1077603	0.197								
1077604	0.101								
1077605	0.030								
1077606	0.006								
1077607	< 0.005								
1077608	< 0.005								
1077609	> 5.000	36.2	15.4	36.3	37.0	34.4	49.91	427.48	477.39
1077610	> 5.000	43.3	29.2	43.9	41.2	41.5	36.94	431.05	467.99
1077611	0.060								
1077612	0.505								
1077613	> 5.000	13.7							
1077614	0.112								
1077615	0.022								
1077616	0.419								
1077617	4.173	3.90	2.10	5.91	4.97	4.49	42.87	107.55	150.42
1077618	0.021								
1077619	0.033								
1077620	> 5.000	6.26	3.12	3.97	4.98	4.31	35.22	262.90	298.12
1077621	0.009								
1077622	< 0.005								
1077623	0.007								
1077624	< 0.005								
1077625	< 0.005								
1077626	< 0.005								

Analyte Symbol	Au	Au	Au + 100 mesh	Au - 100 mesh (A)	Au - 100 mesh (B)	Total Au	+ 100 mesh	- 100 mesh	Total Weight
Unit Symbol	ppm	g/tonne	g/mt	g/mt	g/mt	g/mt	g	g	g
Lower Limit	0.005	0.02	0.03	0.03	0.03	0.03			
Method Code	FA-AA	FA- GRA	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT
OREAS 229b (Fire Assay) Meas		11.7				12.5			
OREAS 229b (Fire Assay) Cert		11.9				11.9			
Oreas 237 (Fire Assay) Meas	2.282								
Oreas 237 (Fire Assay) Cert	2.21								
OREAS 228b (Fire Assay) Meas		8.21				8.94			
OREAS 228b (Fire Assay) Cert		8.57				8.57			
Oreas E1336 (Fire Assay) Meas	0.526								
Oreas E1336 (Fire Assay) Cert	0.510								
1077602 Orig			17.0	40.2	35.5	36.0	42.41	441.57	483.98
1077607 Orig	< 0.005								
1077607 Dup	< 0.005								
1077609 Orig			15.4	36.3	37.0	34.4	49.91	427.48	477.39
1077610 Orig			29.2	43.9	41.2	41.5	36.94	431.05	467.99
1077617 Orig	4.173		2.10	5.91	4.97	4.49	42.87	107.55	150.42
1077620 Orig			3.12	3.97	4.98	4.31	35.22	262.90	298.12
Method Blank	< 0.005								
Method Blank		< 0.02							
Method Blank		< 0.02							
Method Blank						< 0.03			
Method Blank						< 0.03			





Report No.: A21-16010
Report Date: 22-Sep-21
Date Submitted: 23-Aug-21
Your Reference: GEN-X

IAMGOLD Corporation
2140 Regent Street Unit 10
Sudbury Ontario P3E 5S8
Canada

ATTN: Brian Tomczuk

CERTIFICATE OF ANALYSIS

27 Core samples were submitted for analysis.

Table with 3 columns: Analytical package(s), Testing Date, and details. Rows include 1A2 (ppm), 1A3-50, and 1A4 (100mesh).

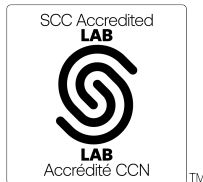
REPORT A21-16010

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Notes:

A representative 500 gram split is sieved at 100 mesh (149 micron) with assays performed on the entire +100 mesh and 2 splits of the -100 mesh fraction.

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



LabID: 266

ACTIVATION LABORATORIES LTD.
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E-MAIL Ancaster@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

CERTIFIED BY:

Handwritten signature of Emmanuel Eseme

Emmanuel Eseme, Ph.D.
Quality Control Coordinator

Analyte Symbol	Au	Au	Au + 100 mesh	Au - 100 mesh (A)	Au - 100 mesh (B)	Total Au	+ 100 mesh	- 100 mesh	Total Weight
Unit Symbol	ppm	g/tonne	g/mt	g/mt	g/mt	g/mt	g	g	g
Lower Limit	0.005	0.02	0.03	0.03	0.03	0.03			
Method Code	FA-AA	FA-GRA	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT
1077627	0.006								
1077628	0.005								
1077629	0.006								
1077630	0.005								
1077631	< 0.005								
1077632	0.005								
1077633	< 0.005								
1077634	0.025								
1077635	3.770	3.44							
1077636	0.664								
<del>1077637</del>	<del>0.690</del>								
<del>1077638</del>	<del>0.175</del>								
<del>1077639</del>	<del>0.199</del>								
<del>1077640</del>	<del>0.775</del>								
<del>1077641</del>	<del>0.199</del>								
<del>1077642</del>	<del>0.251</del>								
<del>1077643</del>	<del>0.071</del>								
<del>1077644</del>	<del>0.027</del>								
<del>1077645</del>	<del>0.006</del>	<del>02.1</del>	<del>20.2</del>	<del>27.0</del>	<del>20.0</del>	<del>20.0</del>	<del>12.10</del>	<del>1017.0</del>	<del>1020.1</del>
<del>1077646</del>	<del>0.020</del>								
<del>1077647</del>	<del>5.000</del>	<del>7.70</del>	<del>0.51</del>	<del>0.02</del>	<del>0.50</del>	<del>0.00</del>	<del>11.05</del>	<del>1100.0</del>	<del>1107.1</del>
<del>1077648</del>	<del>0.000</del>								
<del>1077649</del>	<del>0.720</del>								
<del>1077650</del>	<del>0.001</del>								
<del>1077651</del>	<del>0.101</del>								
<del>1077652</del>	<del>&lt; 0.005</del>								
<del>1077653</del>	<del>0.000</del>								

Analyte Symbol	Au	Au	Au + 100 mesh	Au - 100 mesh (A)	Au - 100 mesh (B)	Total Au	+ 100 mesh	- 100 mesh	Total Weight
Unit Symbol	ppm	g/tonne	g/mt	g/mt	g/mt	g/mt	g	g	g
Lower Limit	0.005	0.02	0.03	0.03	0.03	0.03			
Method Code	FA-AA	FA- GRA	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT
OREAS 229b (Fire Assay) Meas		12.3				12.3			
OREAS 229b (Fire Assay) Cert		11.9				11.9			
OREAS 229b (Fire Assay) Meas		11.6							
OREAS 229b (Fire Assay) Cert		11.9							
Oreas 237 (Fire Assay) Meas	2.148								
Oreas 237 (Fire Assay) Cert	2.21								
Oreas 237 (Fire Assay) Meas	2.220								
Oreas 237 (Fire Assay) Cert	2.21								
Oreas E1336 (Fire Assay) Meas	0.502								
Oreas E1336 (Fire Assay) Cert	0.510								
Oreas E1336 (Fire Assay) Meas	0.509								
Oreas E1336 (Fire Assay) Cert	0.510								
OREAS 228 Meas		8.60							
OREAS 228 Cert		8.73							
OREAS 228 Meas		8.59							
OREAS 228 Cert		8.73							
1077637 Orig	0.028								
1077637 Dup	0.038								
1077645 Orig			23.2	27.9	28.9	28.3	12.10	1017.0	1029.1
1077646 Orig	0.026								
1077646 Dup	0.024								
1077647 Orig			8.51	8.82	9.59	9.20	11.05	1486.0	1497.1
Method Blank	0.005								
Method Blank	< 0.005								
Method Blank	0.005								
Method Blank		< 0.02							
Method Blank		< 0.02							
Method Blank		< 0.02							
Method Blank		< 0.02							
Method Blank						< 0.03			
Method Blank						< 0.03			



Report No.: A21-16712 (i)
Report Date: 04-Sep-21
Date Submitted: 03-Sep-21
Your Reference:

IAMGOLD Corporation
2140 Regent Street Unit 10
Sudbury Ontario P3E 5S8
Canada

ATTN: Alan Smith

CERTIFICATE OF ANALYSIS

19 Rock samples were submitted for analysis.

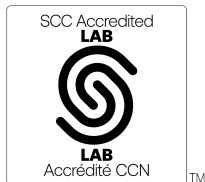
Table with 2 columns: Analytical package(s) requested, Testing Date. Row 1: 1A2-Timmins (ppm), GOP AA-Au (Au - Fire Assay AA), 2021-09-04 13:35:49

REPORT A21-16712 (i)

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.



LabID: 709

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E-MAIL Timmins@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

CERTIFIED BY:

Handwritten signature of Emmanuel Esemé

Emmanuel Esemé, Ph.D.
Quality Control Coordinator

Analyte Symbol	Au
Unit Symbol	ppm
Lower Limit	0.005
Method Code	FA-AA
1077654	< 0.005
1077655	< 0.005
1077656	< 0.005
1077657	< 0.005
1077658	< 0.005
1077659	< 0.005
1077660	0.167
1077661	0.010
1077662	< 0.005
1077663	< 0.005
1077664	< 0.005
1077665	< 0.005
1077666	< 0.005
1077667	< 0.005
1077668	< 0.005
1077669	< 0.005
1077670	< 0.005
<del>1077671</del>	<del>0.005</del>
1077672	< 0.005

Analyte Symbol	Au
Unit Symbol	ppm
Lower Limit	0.005
Method Code	FA-AA
Oreas 237 (Fire Assay) Meas	2.143
Oreas 237 (Fire Assay) Cert	2.21
Oreas E1336 (Fire Assay) Meas	0.519
Oreas E1336 (Fire Assay) Cert	0.510
Method Blank	< 0.005
Method Blank	< 0.005

## Appendix F: Invoices

\* Withheld for client confidentiality.

**Appendix G: Expense Verification Table & Expenses by claim**



Costs By Claim				
Claim Number	# Samples	% Samples	Days of work	% of work
555444	49	91	4.9375	82.3
555445	5	9	1	16.7
561605	0		0.0625	1

Expense Verification						
Date From	Date To	Expense Type	Cost	Claim 555444	Claim 555445	Claim 561605
04/08/2021	24/08/2021	Accommodations	\$1,458.00	\$1,200	\$243	\$15
10/08/2021	22/08/2021	Groceries	\$246.00	\$202	\$41	\$2
04/08/2021	24/08/2021	Boat Rental	\$814.00	\$670	\$136	\$8
04/08/2021	24/08/2021	Truck Rental	\$494.46	\$407	\$83	\$5
09/09/2021	23/09/2021	Assays	\$1,585.00	\$1,442	\$143	\$0
04/08/2021	24/08/2021	Geologist (in field)	\$2,700.00	\$2,222	\$451	\$27
04/08/2021	24/08/2021	Geologist in training	\$2,100.00	\$1,728	\$351	\$21
01/09/2021	23/09/2021	Geologist (report & GIS)	\$900.00	\$741	\$150	\$9
<b>Total Per Claim Worked</b>				\$8,613	\$1,598	\$87
<b>Grand Total</b>				<b>\$10,297</b>		

## Appendix H: List of Abbreviations

## Appendix H: List of Abbreviations

Symbol/Abbreviation	Description
km	Kilometre
cm	Centimetre
m	Meters
oz	Ounce
oz/t	Ounce per Tonne
ft.	Feet
"	inches
ppm	Parts per million
°C	Degrees celsius
%	Percent
ICP-MS	Inductively coupled plasma - mass spectrometry
QA/QC	Quality Assurance/Quality Control
tr	trace
Au	Gold
VG	Visible Gold
SHR	Sheared/ Shear Zone
QV	Quartz vein
QCV	Quartz-carbonate vein
QCCHLV	Quartz-carbonate-chlorite vein
QCHLV	Quartz-chlorite vein
QCSV	Quartz-carbonate-sulphide vein
QTV	Quartz-tourmaline vein
Vn	Vein
MV	Mafic Volcanic
py	Pyrite
aspy	Arsenopyrite
cpy	Chalcopyrite
moly	Molybdenite
sph/sphal	Sphalerite
DISS/dis	Disseminated
FRC	Fracture-controlled
MTV	Marginal to vein
g/t	Grams per ton
DDHs	Diamond drill holes
Ma	Millions years
o/c	outcrop
w/	with
mod	moderately
Lt	light
Med	medium
wky	weakly
chl	chlorite
carb	carbonate
sil	silicification/silicified
alt'd	altered