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**Ministry of Energy, Mines & Petroleum Resources**
Mining & Minerals Division
BC Geological Survey

**Assessment Report**
**Title Page and Summary**

**TYPE OF REPORT [type of survey(s)]:** Soil Geochemistry

**TOTAL COST:** 12,680

**AUTHOR(S):** Jeffrey D. Rowe

**SIGNATURE(S):**

**NOTICE OF WORK PERMIT NUMBER(S)/DATE(S):**

**YEAR OF WORK:** 2016

**STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S):** 5636256 / Feb 2, 2017

**PROPERTY NAME:** Holy Cross

**CLAIM NAME(S) (on which the work was done):** Van (1027920), Slow (1027922), Halen (1027925),
Slayer (1027926), Gollit#2 (1041881), Cabbage (1041882)

**COMMODITIES SOUGHT:** Gold, silver

**MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN:**

**MINING DIVISION:** Omineca

**NTS/BCGS:** 93F/15W

**LATITUDE:** 53 ° 47 ' 35 " **LONGITUDE:** 124 ° 58 ' 14 " **(at centre of work)**

**OWNER(S):**

1) Charles Greig

2)

**MAILING ADDRESS:**

729 Okanagan Ave E., Penticton, BC V2A 3K7

**OPERATOR(S) [who paid for the work]:**

1) Charles Greig

2)

**MAILING ADDRESS:**

729 Okanagan Ave E., Penticton, BC V2A 3K7

**PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):**

The Holy Cross property contains alteration and mineralization typical of that associated with a low sulphidation epithermal gold-silver system. Gold and silver occur within areas of silicified, quartz veined rhyolite of the Eocene Ootsa Lake Group. Gold anomalies in soil and coincident IP resistivity and chargeability highs provide good exploration targets.

**REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS:** 17807, 19005A, 19278, 19627, 24228, 24732, 25313, 26441, 26946, 30368, 31203, 35896

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| TYPE OF WORK IN THIS REPORT | EXTENT OF WORK (IN METRIC UNITS) | ON WHICH CLAIMS | PROJECT COSTS APPORTIONED (incl. support) |
|---|---|---|---|
| **GEOLOGICAL (scale, area)** | | | |
| Ground, mapping | | | |
| Photo interpretation | | | |
| **GEOPHYSICAL (line-kilometres)** | | | |
| Ground | | | |
| Magnetic | | | |
| Electromagnetic | | | |
| Induced Polarization | | | |
| Radiometric | | | |
| Seismic | | | |
| Other | | | |
| Airborne | | | |
| **GEOCHEMICAL (number of samples analysed for...)** | | | |
| Soil | 57 analyzed by XRF for 33 elements | | 12,680 |
| Silt | | | |
| Rock | | | |
| Other | | | |
| **DRILLING (total metres; number of holes, size)** | | | |
| Core | | | |
| Non-core | | | |
| **RELATED TECHNICAL** | | | |
| Sampling/assaying | | | |
| Petrographic | | | |
| Mineralographic | | | |
| Metallurgic | | | |
| **PROSPECTING (scale, area)** | | | |
| **PREPARATORY / PHYSICAL** | | | |
| Line/grid (kilometres) | | | |
| Topographic/Photogrammetric (scale, area) | | | |
| Legal surveys (scale, area) | | | |
| Road, local access (kilometres)/trail | | | |
| Trench (metres) | | | |
| Underground dev. (metres) | | | |
| Other | | | |
| | | TOTAL COST: | 12,680 |

# 2016 SOIL GEOCHEMISTRY PROGRAM

**on the**

# HOLY CROSS PROPERTY

Tenures 1027914, 1027918, 1027920, 1027922, 1027923, 1027925,

1027926, 1027928, 1031305, 1035801, 1041877, 1041881, 1041882

Omineca Mining Division

Fraser Lake Area, Central British Columbia

NTS Map Sheet 093F/15W

53º 47' 35” North Latitude, 124º 58' 14” West Longitude

370200E, 5962300N (UTM: NAD 83 Zone 10)

Prepared for

EverGold Corp.

729 Okanagan Ave E.,
Penticton, B.C. V2A 3K7

by

Jeffrey D. Rowe, B.Sc. P.Geo.

C.J. Greig & Associates Ltd.
729 Okanagan Ave E.,
Penticton, B.C. V2A 3K7

July 19, 2017

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## APPENDICES

## 1.0 SUMMARY

The Holy Cross Gold property consists of thirteen contiguous mineral tenures covering 1471 hectares, located in the Nechako Plateau area of central British Columbia. The tenures are 100% owned by Mr. Charles Greig and under option to EverGold Corp. The claim group is located approximately 145 kilometres west of Prince George and has excellent access provided by forest service logging roads extending from the village of Fraser Lake, 33 kilometres to the north.

Gold mineralization at the Holy Cross prospect was discovered in 1987 by Noranda Exploration Company, Ltd. Noranda conducted extensive geological, geochemical, geophysical and trenching programs in 1988 and 1989, identifying several areas of silicified, quartz-veined rhyolite that returned numerous anomalous gold values from grab samples; some greater than 10 g/t Au. Samples collected from a trench in the Discovery zone, which is in the south-central part of the property, returned an average gold analysis of 1.0 g/t over 8.5 metres. Exposures of alteration and mineralization on the property are typical of those associated with a low sulphidation epithermal gold-silver system. Alteration is generally restricted to the Ootsa Lake Group felsic volcanic rocks, consisting of banded and brecciated rhyolites that have been interpreted as a series of volcanic domes. Massive to drusy quartz and chalcedony veins from 2 to 5 mm and veins of jasper up to 2 cm have been found cutting the rhyolite at several locations, in zones ranging up to 10 metres wide and containing 1-5% disseminated pyrite. Minor arsenopyrite, chalcopyrite and pyrrhotite and rare visible gold have also been observed.

Noranda allowed the claims to lapse and other companies, including Cogema Resources Inc., Phelps Dodge Corporation of Canada, Limited and Golden Cross Resources Inc., subsequently conducted limited exploration in the area of the property between 1995 and 2009. They identified additional showings of gold mineralization, with grab samples returning as much as 24.02 g/t Au, and defined significant Induced Polarization geophysical anomalies, but failed to follow up these targets with any new trenching or diamond drilling.

A number of significant, un-tested targets on the property have been identified by the author based on interpretation of the historic exploration data and more recent geophysical and geochemical data. The 2016 soil geochemistry of this report, although fairly limited, defined three small clusters of coincident Pb, Bi and Mo anomalies and a separate area of anomalous Cu and Zn, all within, or near, the favourable rhyolite unit. Two of the anomalies are within areas covered by previous IP surveys, and these both show high chargeability and high resistivity, suggesting areas of disseminated sulphide minerals within siliceous rocks. Gold analyses produced by the XRF unit had too high a detection limit to be useful in this study, but the presence of Pb, Bi and Mo could be indicative of a mineralized epithermal system that contains gold and silver values.

Geologic evidence, including host rock types, tectonic setting, alteration and style of mineralization, suggests that the Holy Cross property has the potential to host an epithermal-style gold-silver deposit. Based on the favourable results of previous work, the author believes that additional exploration is warranted to further assess the property. Recommends include additional soil sampling and geophysical surveys in selected areas to the northwest and

southeast of the core of the property, where previous work has been concentrated. Excavator trenching of geochemical targets in the Hilltop zone has been recommended in previous reports. Trenching is still a viable option or, alternatively, diamond drilling could serve the dual purpose of testing the geochemical anomalies as well as testing areas of high chargeability that have been indicated at depth.

A number of diamond drill sites are proposed in this report. The holes are situated to test possible northwest-trending mineralized zones that have been interpreted by the author based on the geochemical and geophysical data. Highest priority holes are in the Hilltop zone where Au and Cu anomalies are strongest and IP results indicate sizeable chargeability highs. Locations of these holes may change, or holes may be added, subject to results of more detailed ground surveys. All data should be collected and compiled prior to final planning of the drill sites. Contingent on positive results from this program, a second stage expanded program of diamond drilling would be warranted.

## 2.0 LOCATION, ACCESS, PHYSIOGRAPHY, VEGETATION AND CLIMATE

The Holy Cross property is located in the Omineca Mining Division of central British Columbia, approximately 145 kilometres west of Prince George and 30 kilometres south of the village of Fraser Lake (fig. 1). The claims lie within the Nechako Plateau between Holy Cross Mountain and Bentzi Lake.

Access to the property is provided by the Holy Cross Forest Service Road that leaves Highway 16 approximately 7.5 kilometres east of Fraser Lake. Several branch roads head west onto the claims from the Holy Cross Forest Service Road, but most of these side roads are reported to be overgrown and are only suitable for foot traffic. These spur roads could be easily re-activated by clearing the recent growth of underbrush with a small bulldozer.

Accommodation, along with basic supplies, labour and fuel are available in the village of Fraser Lake 30 kilometres to the north, or the town of Vanderhoof 70 kilometres to the northeast. Any specialized material, equipment or manpower requirements can be found in the city of Prince George, 145 kilometres to the east.

The Holy Cross property covers two low, east-northeast trending, gently to moderately sloping hills, located 2 to 6 km east-northeast of Holy Cross Mountain (fig. 2). Elevations range from 975 to 1410 metres. The property covers mainly the northern and eastern slopes of the two hills, encompassing forested as well as logged hillsides containing local ponds and small streams. Unharvested forest cover consists primarily of pine, much of it infected by the Mountain Pine Beetle. Logging operations have been active throughout the region and moderately large clear-cut patches are present on the property, many of which appear to have been cut within the last ten to fifteen years. Logging roads extend into most parts of the property, although some may have been de-activated or overgrown.

Outcrop is present near hilltops where overburden is thin, but on the northern and eastern slopes of the hills outcrop is scarcer and overburden may be quite thick. Previous exploration activities approximately 25 years ago have included excavator trenching and road building in three or more areas of the property and it is not known if these excavated areas have been reclaimed.

The Holy Cross property is within a region that has a temperate continental climate with warm summers, ranging from 5 to 25°C, and cold winters, ranging from 0 to -15°C. Precipitation in this part of the province is limited, typically totaling 50 centimetres annually, with an average of 33 cm of rainfall and 165 cm of snowfall. Surface exploration work on the property is best carried out between April and late October.

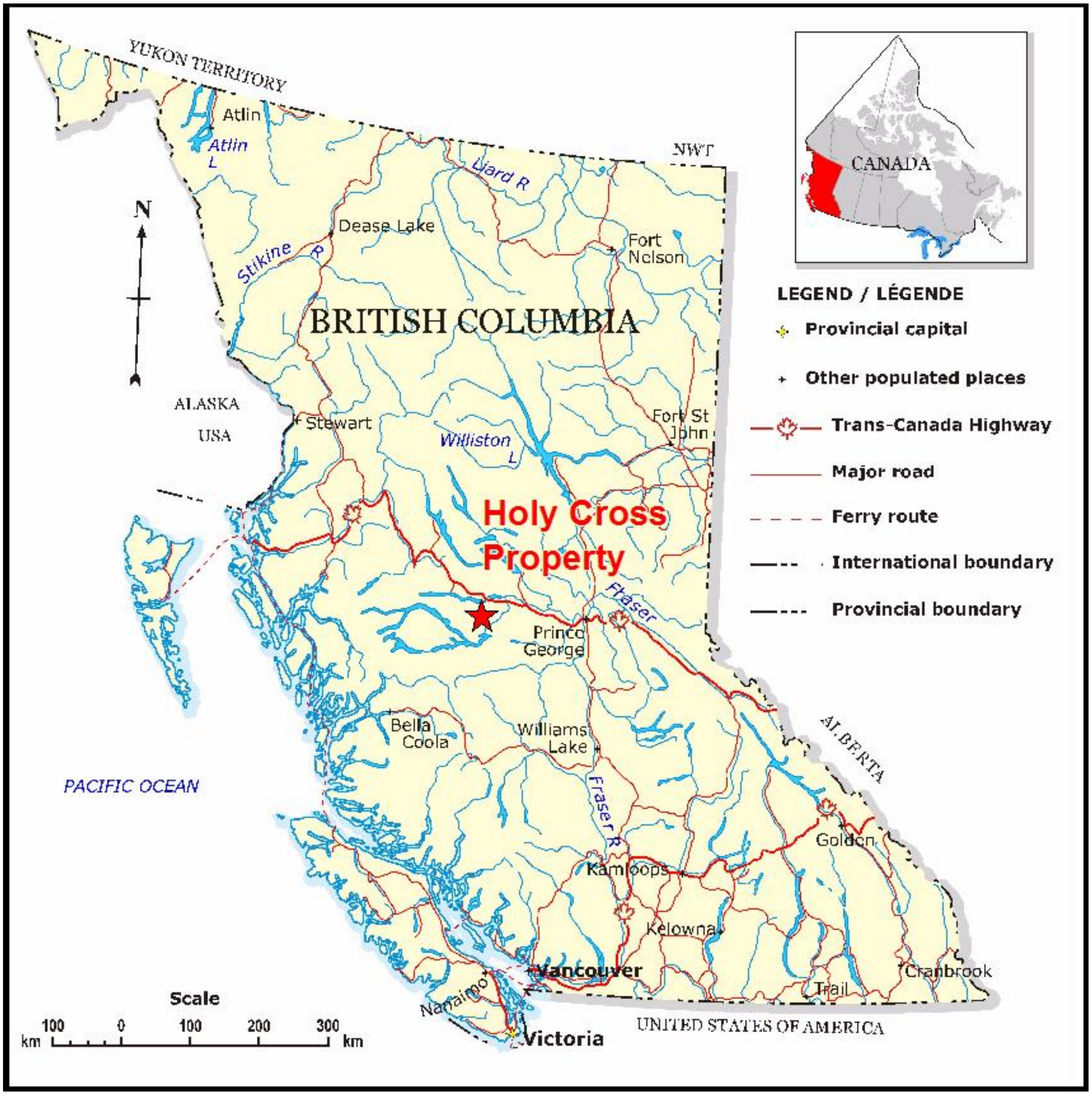


**Figure 1. Property location map**

## 3.0 CLAIMS

The Holy Cross gold property consists of thirteen contiguous MTO mineral tenures covering 1470.85 hectares, located on NTS map-sheet 093F15W, centered at approximately 53 degrees, 47 minutes, 35 seconds North Latitude and 124 degrees, 58 minutes, 14 seconds West Longitude, or UTM co-ordinates 370200E, 5962300N (NAD83, Zone10). The claims were staked in April and October, 2014, April, 2015 and February, 2016. They are all owned 100% by Charles Greig and currently under option to EverGold Corp. Tenure details are listed in Table 1 and they are illustrated on Figure 2.

Assessment work, including soil sample collection, analyses, evaluation of results and report preparation, totalling $12,680, was applied to all of the claims to extend their expiry dates to November 2, 2018. A statement of expenditures is included in Section 10.

**Table 1. Holy Cross Property Mineral Tenures as of Oct 31, 2016**

| Tenure No. | Name | Issue Date | Good To Date | Hectares |
|---|---|---|---|---|
| 1027914 | Dun | 2014/apr/29 | 2018/nov/02 | 19.10 |
| 1027918 | Scorpio | 2014/apr/29 | 2018/nov/02 | 38.20 |
| 1027920 | Van | 2014/apr/29 | 2018/nov/02 | 76.40 |
| 1027922 | Slow | 2014/apr/29 | 2018/nov/02 | 114.59 |
| 1027923 | Holy Cross | 2014/apr/29 | 2018/nov/02 | 76.42 |
| 1027925 | Halen | 2014/apr/29 | 2018/nov/02 | 76.42 |
| 1027926 | Slayer | 2014/apr/29 | 2018/nov/02 | 133.68 |
| 1027928 | Sled-Head E | 2014/apr/29 | 2018/nov/02 | 152.79 |
| 1031305 | No GQ Man's Land | 2014/oct/02 | 2018/nov/02 | 401.22 |
| 1035801 | Still The King! | 2015/apr/30 | 2018/nov/02 | 114.63 |
| 1041877 | Frick! | 2016/feb/07 | 2018/nov/02 | 76.42 |
| 1041881 | Gollit#2 | 2016/feb/07 | 2018/nov/02 | 76.40 |
| 1041882 | Cabbage | 2016/feb/07 | 2018/nov/02 | 114.58 |
| | | | **Total:** | **1470.85** |

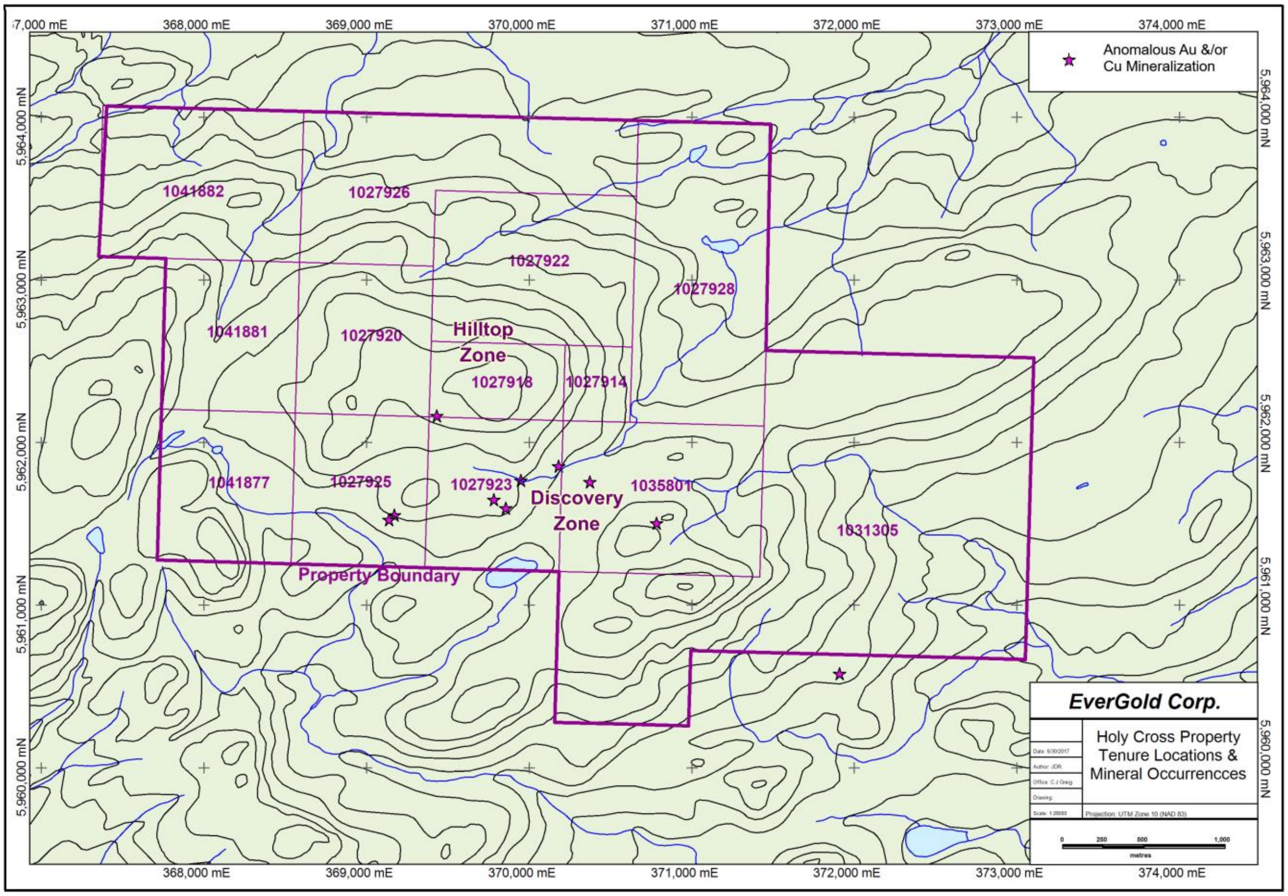


**Figure 2. Mineral tenure locations**

## 4.0 GEOLOGY

### 4.1 Regional Geology

The Holy Cross property is situated in the Nechako Plateau, which is at the northern end of the much larger Interior Plateau region of central British Columbia and is part of the Intermontane Belt. The Nechako Plateau is an area of subdued relief with extensive glacial drift and bedrock surface exposures are typically limited to 5-10%.

The geology of the area was first mapped at a regional scale of 1:250,000 by Tipper (1963). More detailed mapping in the area was conducted by Diakow and Webster (1994), Lane (1995) and Diakow and Levson (1997). The regional geology within the surrounding area, extending up to about 20 km from the property, is illustrated on Figure 3, which is derived from previously published maps that have been compiled by Massey et al. (2005).

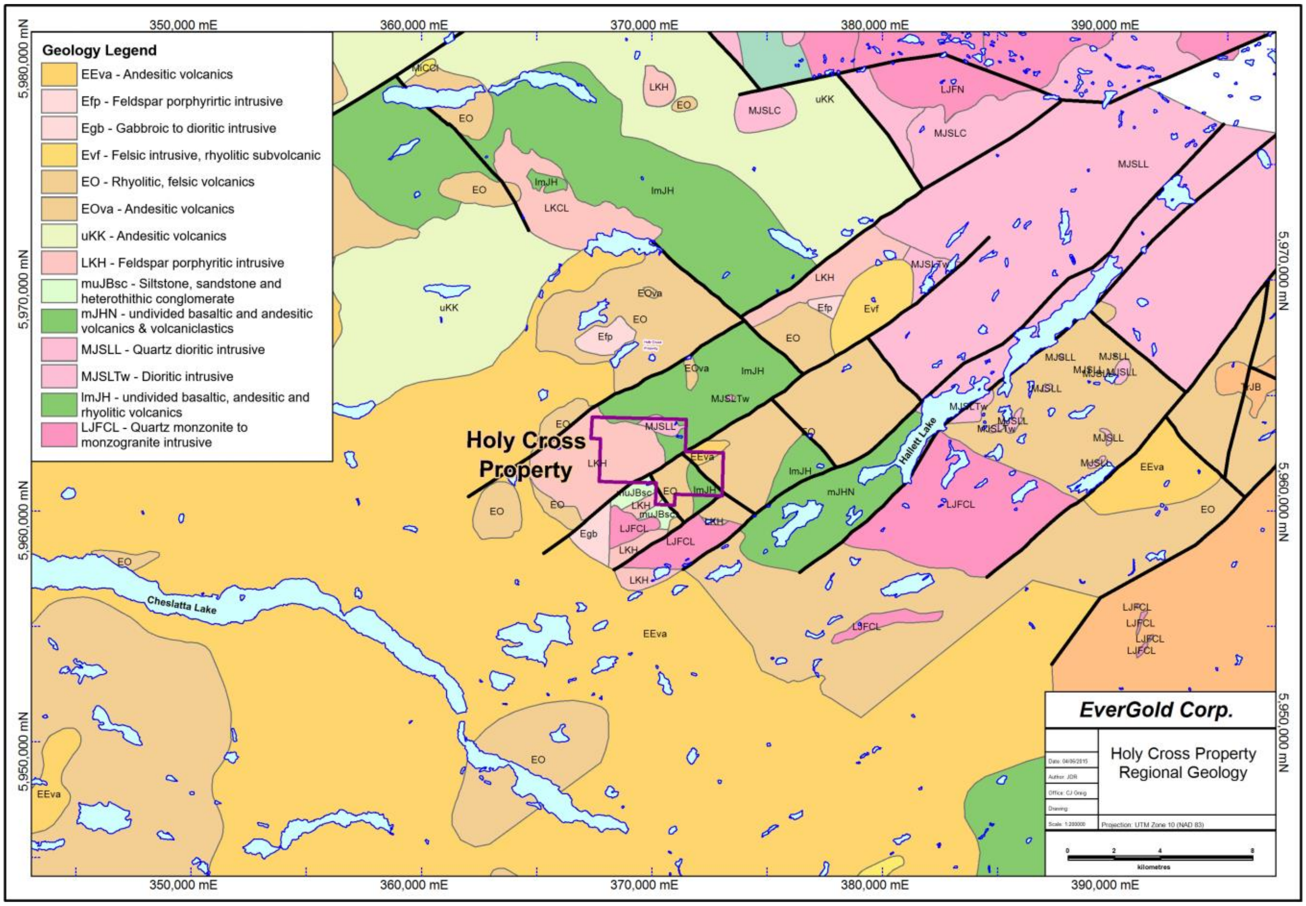


**Figure 3. Regional geology in the area of the Holy Cross property (Massey et al., 2005)**

According to Lane & Schroeter (1997) the Nechako region is underlain by basement rocks of the Stikine Terrane comprised of remnants of superposed island arc volcanics and associated marine sequences that are assigned to the Lower Permian Asitka, the Upper Triassic Stuhini and the Lower and Middle Jurassic Hazelton Groups. Hazelton Group rocks (mJHN & lmJH) are the oldest units mapped in the area surrounding the property.

During Middle Jurassic time, the previous widespread volcanism ended and structural onlap of the Cache Creek Terrane onto Stikinia led to the formation of basinal settings. Initial deposits in these basins consisted primarily of shale, succeeded by chert dominated coarse clastic deposits characteristic of marine regression and fluvial-deltaic sedimentation, represented here by the Bowser Lake Group (muJBsc).

During Early Cretaceous time, shallow-marine sediments of the Skeena Group were deposited. Upper Cretaceous calc-alkaline volcanic rocks, represented in central Stikinia by the Kasalka Group (uKK), stratigraphically overlie the Skeena Group and mark the construction of a continental margin arc. This volcanism remained active until latest Late Cretaceous time.

Continental arc magmatism was re-established during Middle and Late Eocene time with eruption of the andesitic and rhyolitic Ootsa Lake (EO, EOva, Evf) and Endako (EEva) Groups.

The Miocene and Pliocene Chilcotin Group followed the Endako Group and forms a broad lava plateau covering much of south-central British Columbia, but is not present in the project area.

The area of the Holy Cross property contains exposures of many of the units described above and, as shown on Figure 3, the older volcanic and intrusive units are typically fault-bounded, along which they may have been uplifted and later exposed by erosion of the capping Eocene to Pliocene volcanics.

The Nechako Plateau region has potential to host different styles of mineral deposits and in particular within the highly prospective Jurassic Hazelton Group and Eocene Ootsa Lake Group volcanic rocks, and their coeval intrusions, that are locally disrupted by intensive extensional faulting.

## 4.2 Property Geology

The Holy Cross property is underlain by three groups of volcanic-sedimentary rocks ranging in age from Middle Jurassic to Eocene. In this region, during Early to Middle Eocene time, tectonic events resulted in hydrothermal activity that produced several localized areas of epithermal gold-silver mineralization hosted by various different volcanic-sedimentary units.

The Holy Cross property is predominantly underlain by rhyolitic and andesitic volcanic and volcaniclastic rocks intruded, in the northern area, by a quartz monzonite stock and capped locally by basaltic flows (fig.4). The volcanic rocks have been previously mapped by Noranda geologists (Barber, 1989) as belonging to the Eocene age Ootsa Lake Group; however more recent mapping by Lane (1995) has classified some of the andesitic volcanics in the north part of the property as older Hazelton Group. Nevertheless, Lane’s (1995) mapping does confirm that the significant mineral-bearing rhyolite unit within the property is part of the Ootsa Lake Group, although the extent of the unit is not quite as widespread as shown on the Noranda maps. Within the north part of the property Lane’s (1995) mapping has Ootsa Lake Group volcanic rocks apparently in unconformable contact with Hazelton Group volcanic rocks.

Based on Lane’s (1995) mapping the oldest rocks are on the north part of the property, comprising grey-green andesitic volcanic and epiclastic rocks of the Middle Jurassic Hazelton Group. These volcanics are generally massive flows but local, crystal-rich sections display weak graded bedding and are interpreted to be reworked crystal tuffs. Thermal alteration (hornfelsing) has been noted near the contact with a quartz monzonite stock.

To the south of the property, and in the southwest part of the property, Cretaceous Kasalka Group rocks are, at least partially, in fault contact with younger rocks. Lower Kasalka Group is comprised of conglomerate, minor argillite and sandstone. Upper Kasalka Group consists of hornblende phyric andesite flows.

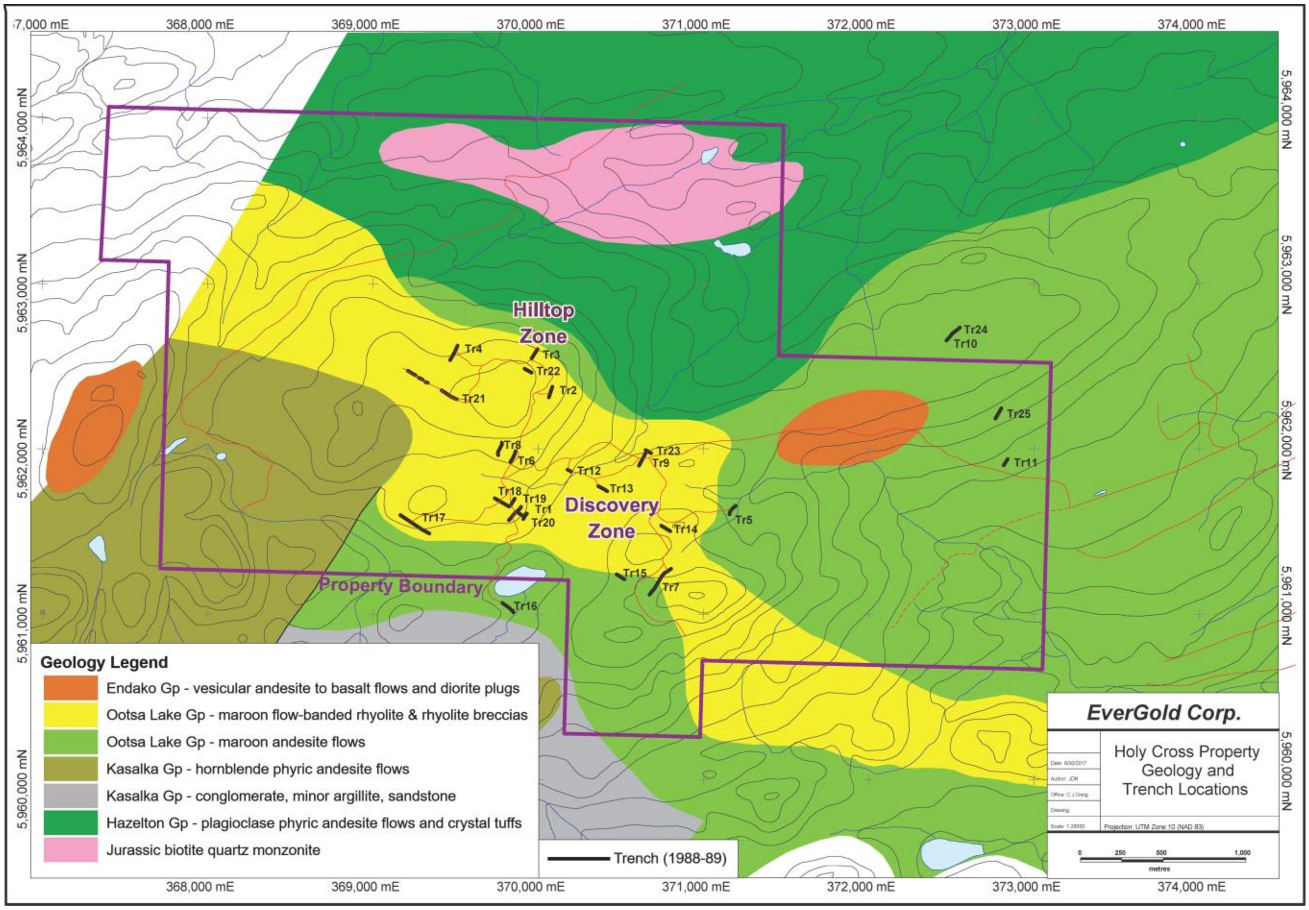


**Figure 4. Property geology (Lane, 1995) and trench locations (Barber, 1989)**

The lowermost Ootsa Lake Group volcanic unit that covers much of the southeast part of the property consists of massive, locally feldspar phyric, maroon to grey colored andesite and massive basalt. The groundmass is composed of biotite, hornblende, epidote and feldspar with locally up to 15% plagioclase phenocrysts up to 3 mm in length. Up to 2% disseminated specular hematite occurs in the andesites with limited hematite veins up to 10 cm and trace pyrite and malachite. Sparse 2-10 mm white quartz veins cut the Ootsa Lake andesites but mineralization has not been observed in them. Minor calcite and epidote veinlets fill fractures. Alteration includes chlorite and kaolinite which appears as bleaching and replacement of feldspar phenocrysts by kaolinite. This type of alteration is typical of an epithermal environment.

Overlying the andesitic unit are banded and brecciated rhyolites of the upper Ootsa Lake Group, which have been interpreted as a series of volcanic domes (Donaldson, 1988) that form prominent resistant hilltops. The average strike of flow banding varies from 120 to 170 degrees with dips of 70 to 80 degrees southwest. The flow banded rhyolites are dark purple to maroon where unaltered and light purple, tan, buff or cream where argillically altered, with bands 1 to 2 mm in width. The rhyolite is typically very siliceous with many of the flow bands replaced by quartz. Rhyolite breccias may in part be syn-depositional, caused by explosive volcanism, producing 1 mm to 5 cm angular to sub-angular fractured fragments of light purple, buff, tan, and cream coloured banded rhyolite in a dark purple-maroon fine grained matrix. However, some of the breccias appear to have been tectonically formed, as they are cemented by vein quartz and chalcedony with fragments typically kaolinized, sericitized or silicified.

Massive to drusy quartz and chalcedony veins from 2 to 5 mm and veins of jasper up to 2 cm have been found cutting the rhyolite (Donaldson, 1988). Quartz veinlets in joints commonly strike 015 and 060 degrees and dip 60 to 80 degrees northwest. The Jasper veins strike 040 to 060 degrees and may contain up to 1% specular hematite. Mineralization within the rhyolites consists of less than 1% specular hematite and trace pyrite. Alteration typically consists of silicification and patchy kaolinite replacement with local areas of more pervasive kaolinite.

Interbedded with the rhyolites are lesser felsic lapilli and ash tuffs that exhibit a dark purple fine grained matrix usually with preferentially clay-altered clasts. More significant clay or silica alteration results in lighter-coloured matrix and clasts. Tuffs may contain up to 1% disseminated pyrite and 3% specular hematite. Local calcite and/ or epidote and/ or quartz-carbonate veinlets cut these rocks.

Endako Group rocks lie unconformably over the Ootsa Lake Group. The Endako Group has been subdivided into three units but only one unit has been mapped on the property. It consists of massive, vesicular basalt that is fine grained, dark grey to black with up to 3% olivine phenocrysts about 2 mm in diameter. Vesicles make up 5% to 50% of the rock, it is relatively unaltered and it is not known to host mineralization.

Much of the northern part of the property is underlain by grey, massive, medium to coarse grained biotite quartz monzonite. Plagioclase phenocrysts 0.5 to 1 cm long are common and a hornblende phyric phase, containing prismatic hornblende phenocrysts 0.5 to 0.7 cm long, is also present. Felsic plutonic rocks have also been mapped from the northern part of the property with compositions ranging from syenite to quartz monzonite, but these are believed to be phases of the same biotite quartz monzonite body. The rocks are brown to light pink, coarse grained, equigranular, homogenous and fresh. This intrusion has been reported to be early Middle Jurassic in age by Lane (1995).

Noranda identified two prominent circular features and several prominent NE and ENE trending linear features from an interpretation of Landsat imagery (Barber, 1989). Field checks apparently established that the circular features outlined rhyolite domes and the linear features were interpreted as fault structures. Several of the linear features appear to be terminated by the circular features, whereas others cut across the circular features. Aerial photographs and ground surveys revealed a series of NNE and NNW-trending linear features which appear to cut all rock types and are possible evidence of a late stage tectonic event.

## 5.0 MINERALIZATION

On the Holy Cross property exposures of alteration and mineralization are typical of those associated with a low sulphidation epithermal system. Argillic alteration is generally restricted to areas within the Ootsa Lake felsic volcanic rocks. Locally it has been overprinted by silicification in zones ranging up to 10 metres wide and containing 1% to 5% disseminated euhedral pyrite

(Chapman, 2009). Minor arsenopyrite, chalcopyrite and pyrrhotite and rare visible gold have also been observed. Alteration is centered on the Hilltop Zone in the central part of the Holy Cross property and extends southeasterly to the Discovery Zone, covering an area of over two square kilometres.

Silicification is most evident in the banded rhyolite flow units and rhyolite breccias that underlie the prominent, resistant knolls and hilltops. It is locally accompanied by fracture controlled drusy quartz veinlets, veins of banded quartz and jasper up to 10 cm wide, zones of quartz healed breccias and, less commonly, chalcedony veins, secondary brecciation, and specular hematite. Silicified zones that have returned anomalous gold and silver values locally contain up to several percent fine-grained, disseminated pyrite and commonly have fracture coatings of manganese oxides, limonite and hematite. All of these features have been interpreted by Chapman (2009) as evidence of several episodes of silicification. Veins and pervasively silicified zones are commonly enveloped for a few tens of metres by weakly to moderately clay-altered, sericitic and bleached wallrock. Peripheral to the bleached zones pervasive hematitic alteration has stained andesites and rhyolites dark maroon or purple.

The best grade gold and silver-bearing mineralization found to date is associated with banded vuggy quartz veinlets found in silicified volcanic rocks in the south part of the property at the Discovery Zone. In this area a grab sample reported by Goodall (2002), of silicified rhyolite with 5% disseminated pyrite (sample RR19) from near Trench TR-1 (fig.4), returned a value of 24.02 g/t gold and 20.8 g/t silver. Also from TR-1, a grab sample of banded quartz and chalcedony (sample 54084) returned 9.56 g/t gold and 9.5 g/t silver (Payne 1996). TR-1 exposed banded, pyritic, quartz-jasper veins up to 10 centimetres in width occurring at an intersection of two lineaments trending approximately 035º and 120º. The quartz-jasper veins contain 10-15% disseminated pyrite within a zone of massive grey chalcedony and intense silicification that forms an alteration halo extending for tens of metres. Chip samples collected by Noranda (Barber, 1989) in this showing area returned 1.0 g/t gold over 8.5m and chip samples collected by Phelps Dodge (Payne, 1996) averaged 1.8 g/t gold and 47.8 g/t silver over 4 metres.

Goodall (2002) noted that arsenic values from some of his rock samples were weakly to moderately anomalous, reaching a high concentration of 318 ppm and roughly correlating with elevated gold values. Lead shows an association with silver and a weak correlation with gold. Other typical epithermal pathfinder elements such as antimony, mercury, barium and zinc were not elevated in any of Goodall's samples. One of the more significant samples collected from inside the Holy Cross property area was Goodall's sample JB17 located near trench TR-21, approximately 1000m northwest of the Discovery Zone. It returned 400 ppb Au and 5.0 ppm Ag from a grab sample of drusy quartz in maroon rhyolite. Results from 3 of the 5 trenches excavated in the Hilltop Zone by Noranda are not publically available, so it is not known what, if any, significant gold values were returned from those targets.

## 6.0 PREVIOUS WORK

The first recorded exploration work in the area around the Holy Cross property was in 1987 when reconnaissance by Noranda Exploration Company, Ltd. ("Noranda") discovered a rhyolite dome from which several samples returned anomalous concentrations of gold. Noranda explored the property during 1988-89 with geological mapping, extensive soil sampling, magnetometer and IP surveys and trenching. They identified several areas of pervasively silicified, quartz veined rhyolite with anomalous gold, silver and copper values.

As part of their 1988 program Noranda collected 3,170 soil samples on northeast-oriented soil lines (Church & Savell, 1988) that covered most of the area of the current Holy Cross property as well as areas to the east, southeast and north. All samples were analyzed for Au, Ag, Cu, Pb and Zn and 621 of the samples were also analyzed for As, Sb, Mo and Ba. The results indicated zones of anomalous copper, silver and gold although these anomalies did not always coincide. Also, during two sampling campaigns in 1988, 663 rock grab samples were collected from outcrop and float and analyzed for gold and a suite of 30 elements (Donaldson, 1988) (Church & Savell, 1988). Silicified rhyolite and rhyolite breccia returned the best results, with values such as 7.12 g/t gold and 4.8 g/t silver from grabs of drusy quartz veins (Church & Savell, 1988). A magnetometer survey was completed in 1988 (Savell and Bradish, 1989) but was located to the east of the current Holy Cross property so the results are not pertinent to this report. In addition to the geochemical and geophysical programs Barber (1989) reported that nine bulldozer trenches were excavated in 1988. The results of the 1988 trenching were not made public, however, Barber's report on trenching conducted in 1989 did show the 1988 trench locations and noted that Trench 1 (TR-1), excavated at the Discovery outcrop in 1988, returned 1.0 g/t gold over 8.5 metres from a silicified rhyolite breccia.

In 1989 Noranda conducted geological mapping and follow-up geochemical surveys, with totals of 770 rock samples and 1137 soil samples. Soils were analyzed for Au, Ag and Cu. Values >10 ppb Au, >1.0 ppm Ag and >75 ppm Cu were considered significant anomalies. In general, anomalous gold values occurred as smaller zones within more extensive areas of anomalous silver and copper values. Magnetometer and IP surveys were reportedly undertaken; however the data does not appear in assessment records, so is unavailable to the author. An additional 17 trenches (Trenches 10 to 26) were excavated by backhoe on a variety of geological, geochemical and geophysical targets. Barber (1989) concluded from the trench results that in general the IP anomalies are due to pyrite and/or silicification in the host rocks and soil geochemical anomalies reflect elevated Au, Ag and Cu in silicified, pyritized volcanics. The best result from the 1989 trenching program was 240 ppb gold over 2 metres. Silicified and quartz-veined zones with variable kaolinite, pyrite and sericite alteration were noted in several of the trenches. Barber (1989) made recommendations for further work, including extending the sample grid to the west to test the west side of the "dome", excavating additional trench targets and drilling selected IP targets and linear features. However, Noranda did no further work on the property and the claims lapsed.

In 1995 Phelps Dodge Corporation of Canada, Limited optioned Cogema Resources Inc.'s property that covered much of the original Noranda ground. Fifty-two rock samples collected by Phelps Dodge included samples from the Discovery trench (TR-1), which is located on the south part of the Holy Cross property. A grab sample from TR-1 returned 9.6 g/t gold and 28.1 g/t silver, and chip samples averaged 1.8 g/t gold and 47.8 g/t silver over 4 metres (Payne, 1996). A sample collected approximately 800 metres east of TR-1 returned 264 ppb Au, 50.0 ppm Ag.

The best sample result from the Hilltop Zone area, in the north-central part of the property, was 24 ppb Au and 1.9 ppm Ag, which Phelps Dodge collected from Noranda trench TR-4.

In 1997 Phelps Dodge undertook geologic mapping, prospecting and collection of 24 rock samples. The work was undertaken primarily to the south and east of the current property and the sample values were relatively low, with the best sample returning 967 ppb gold from rhyolite crackle breccia with traces of pyrite and specular hematite (Fox, 1997). No further work was recommended and the property was returned to Cogema, which allowed the claims to lapse in 1999.

The key showings in the Holy Cross area were staked by Geoffrey Goodall in 2000 and 66 rock samples were collected in 2000 and 2001, mostly within 70 m of old Noranda trenches. Approximately 10% of the samples returned gold concentrations greater than 100 ppb, to a high of 2402 ppb Au.  Silver concentrations ranged from detection limit to 20.8 g/t Ag (Goodall, 2002).

In 2006 Golden Cross Resources Inc. optioned claims that covered the main showings from Aegean Marine Consultants Ltd., a private company owned by Geoffrey Goodall. In 2007 Golden Cross carried out line cutting, IP, and magnetometer surveys over 22 line-km of grid. This work located co-incident chargeability and resistivity anomalies along the western edge of the grid trending north-northwesterly over a length of 1200m and up to 400m in width (Chapman, 2008). The co-incident geophysical anomalies coincide closely with the mapped extent of the Ootsa Lake Group rhyolite unit, which contains most of the known mineral showings that are typified by strong silica alteration and sparse disseminated pyrite.

In 2009, additional IP and magnetometer surveys were undertaken by Golden Cross, with 2 lines added to the south of the grid and extension of the 2007 lines 250m further to the west, totalling 12 line-km. The survey data showed that the original resistivity and chargeability anomalies are continuous to the west and to the south and they remain open to expansion. Some of the strong geophysical responses coincide with gold-bearing mineral showings in trenches or on surface, however, a number of the strongest responses have not been tested by trenching and there has never been any drill testing done on the property. Drilling was recommended by Chapman (2009) to evaluate the geophysical targets, however, this was not undertaken and the claims were allowed to lapse.

In April, 2014 the initial claims comprising the Holy Cross property were staked by Charles Greig to partially cover the areas of the main mineral occurrences and trenches. Additional claims expanded the property in 2015 and 2016. In 2015 a desktop study was done (Rowe, 2015) comprising a compilation of all exploration data from the area of the Holy Cross property, including exploration assessment reports, as well as government sponsored geological mapping, airborne geophysical survey data and Minfile reports. GIS software was used to combine all the data, along with satellite imagery, to facilitate an evaluation of the relationships between known mineral occurrences and geological, geochemical, geophysical and topographic features. Based on the relationships noted in the mineralized areas, recommendations for further exploration on the rest of the property were formulated. Later in 2015 an IP survey, totalling 4.8 km on two lines, was undertaken in the Hilltop Zone, to overlap and extend previous survey lines to the west and to depth (Walcott & Walcott, 2016). A near surface, flat lying high resistivity feature was observed and shows good correlation with the mapped rhyolitic unit. Four discrete chargeability anomalies were noted at moderate depths, two of which coincide with elevated copper and gold soil geochemistry. Additional IP survey lines were recommended to better define the zones between, and along trend from the wide-spaced 2015 survey lines.

## 7.0 2016 EXPLORATION PROGRAM

The 2016 program consisted of soil geochemical sampling in the western part of the Holy Cross property, to test an area along the projection of the northwest-trending resistivity high and the possible extension of the rhyolite unit. Four man-days were spent collecting 57 samples on two northeast oriented lines.

### 7.1 Soil Geochemical Sampling Procedure & Analytical Techniques

Work on the Holy Cross property was conducted by two employees of C. J. Greig & Associates Ltd. on October 18 and 19, 2016, based out of Fraser Lake, BC. The soil sample lines were oriented parallel to previous lines established in 1988-89 by Noranda to test for continuation of anomalous metal values towards the northwest. A total of 57 samples were collected on two, 800 metre-spaced, northeast-southwest lines with 50 metre stations. A sample location map, with sample ID’s and claim tenure locations, is shown in Figure 5 below.

Soil samples were collected from the B horizon, at a depth of 15 to 20 centimetres. The soil was placed in standard Kraft paper soil sample bags that were labelled with sample numbers. Control on locations was provided by hand-held Garmin GPS units; datum used was UTM NAD83, Zone 10. The soil samples were packed in plastic bags, sealed in rice sacks and transported to the offices of C. J. Greig & Associates Ltd. in Penticton, B.C., where they were laid out on racks to dry for several days. The dried samples were analyzed with a Thermo Scientific Niton Gold XL3t 500 GOLDD™ handheld X-Ray Fluorescence (XRF) Analyzer unit, operated in the ‘benchtop’ mode. The sample, in its original bag, was placed on the test stand and centered on the probe window; the test stand lid was then closed and locked. The analyzer was then run in “Soils” mode for 30 seconds, reading three separate “filters” of elements, at 10 seconds per filter. The three “filters” provided analytical values for a total of 33 elements. Data was automatically recorded, saved directly to the analyzer and simultaneously downloaded to a laptop computer. Three samples were chosen randomly for a duplicate reading taken on the flip side of the bag to check reproducibility. All XRF analytical values and soil sample UTM coordinates are attached in Appendix II.

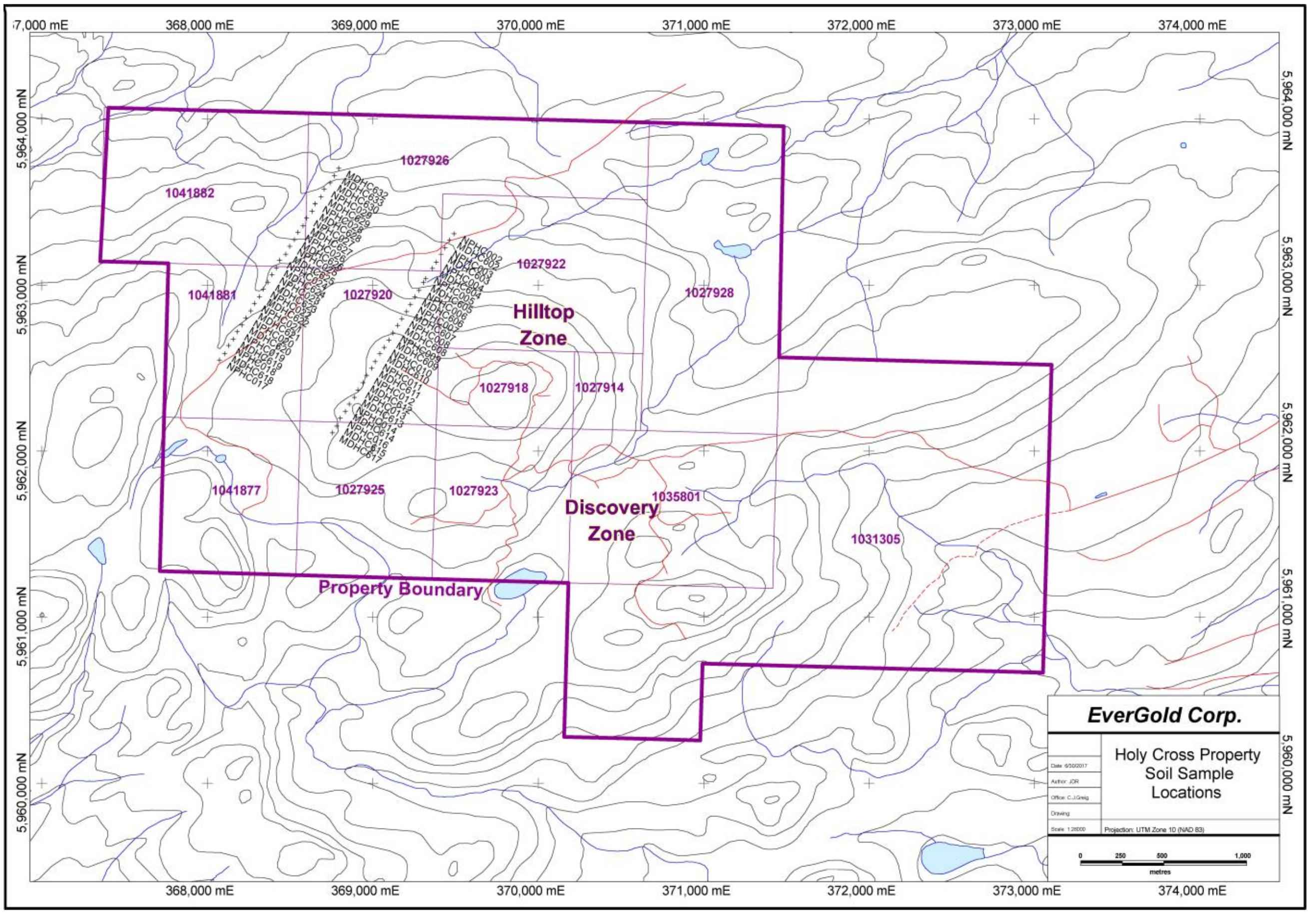


Figure 5. Sample location map

## 7.2 Soil Geochemistry Evaluation

Soil geochemical programs previously carried out by Noranda in 1988 and 1989 essentially covered all of the current Holy Cross property, with most of the samples collected at 50m station intervals on lines spaced 200m apart. The Hilltop Zone area in the central part of the property had coverage at 25 x 100m, and only the northern and western parts of the block were relatively sparsely sampled, with a wider-spaced grid measuring 50 x 400m.

An area to the northwest of the Hilltop Zone, measuring 700-1000m wide by 2000m long, is on the projected trend of the favourable rhyolite unit and has had relatively sparse soil sample coverage. Therefore, this area was selected for additional wide-spaced sample lines in 2016 to test for anomalous metals that may indicate potential for gold-mineralized zones.

The XRF unit used for analyses has a very high detection limit for Au and Ag, therefore any results other than very high levels of Au or Ag are recorded as less than limit of detection (<LOD). For this reason, the objective was to identify "pathfinder" elements showing anomalous areas that may also contain elevated gold and silver values (to be determined later by more detailed analytical techniques). Selected elements showing local clusters of anomalous values are shown on Figures 6 to 12 below; these include Pb, Bi, Mo, As, Cu, Zn and Fe. It has not been determined which, if any, of these elements may be associated with gold values. The

figures also include colour contours of Au >50 ppb and Cu >100 ppm compiled from the Noranda data, all overlain on the property geology.

The Au and Cu contours from Noranda's data indicate poor correlation between anomalous gold and copper even though minor chalcopyrite has been noted in some of the gold-bearing veins in the Discovery Zone (Barber, 1989). Many of the copper-in-soil anomalies are located within the Ootsa Lake Group andesitic rocks whereas most of the gold-in-soil anomalies are within the overlying rhyolite unit. Metal zonation is common in epithermal deposits, with base metals occupying deeper levels of the system; therefore, the copper anomalies may represent deeper parts of the mineralizing system, with the gold anomalies occupying the rhyolitic rocks at higher levels.

The XRF lead results are shown below on Figure 6. The values are relatively low, but do define three small clusters of elevated values. In the central part of the eastern line a Pb anomaly, with values up to 28 ppm, is on trend, 250 m to the northwest of a sizeable Cu anomaly (>100 ppm) that also has a coincident single point anomalous Au value (>50 ppb). This Pb anomaly is within the favourable rhyolite unit; therefore it is a priority target for follow-up. On the north end of the eastern soil line a moderate Pb anomaly falls within the >100 ppm Cu contour close to a single point Au anomaly. This Pb anomaly is within Ootsa Group andesitic rocks, so may be of lower priority; however the glacial direction in this area trends 065° so the actual source of the anomaly could be within rhyolitic rocks to the southwest. Closer-spaced soil sampling may help to better define the possible source of this anomaly. On the north end of the western soil line one anomalous value of 22 ppm Pb and two weakly anomalous values occur within an area mapped as Hazelton Group andesitic rocks. Rhyolitic rocks to the southwest could host the source of this anomaly; more detailed sampling is required for better definition.

Bismuth anomalies, shown on Figure 7, have a strong correlation with the Pb anomalies. In the central part of the eastern line two of the highest Bi values (10.86 and 12.85 ppm) are located at sites of moderately to strongly anomalous Pb, and are underlain by rhyolitic rocks. Moderately anomalous Bi values also coincide with anomalous Pb values near the north end of the eastern line and at the north end of the western line. Bismuth minerals often accompany gold mineralization in epithermal systems, therefore these three anomalous areas all represent good targets for follow-up sampling.

Molybdenum anomalies, shown on Figure 8, although of relatively low values (up to 7.38 ppm), do cluster in the same locations as the Pb and Bi anomalies on the eastern line. Arsenic anomalies, shown on Figure 9, coincide with the other three elements near the north end of the eastern line. Arsenic and molybdenum enrichment are known to accompany gold mineralization in some epithermal systems. Mercury and antimony, which are also common accessory minerals in upper levels of epithermal deposits, are all <LOD in the soil samples, however, rubidium and thorium values are elevated in the same samples as the anomalous Pb and Bi (see XRF selected results & Correlation Matrix, Appendix I).

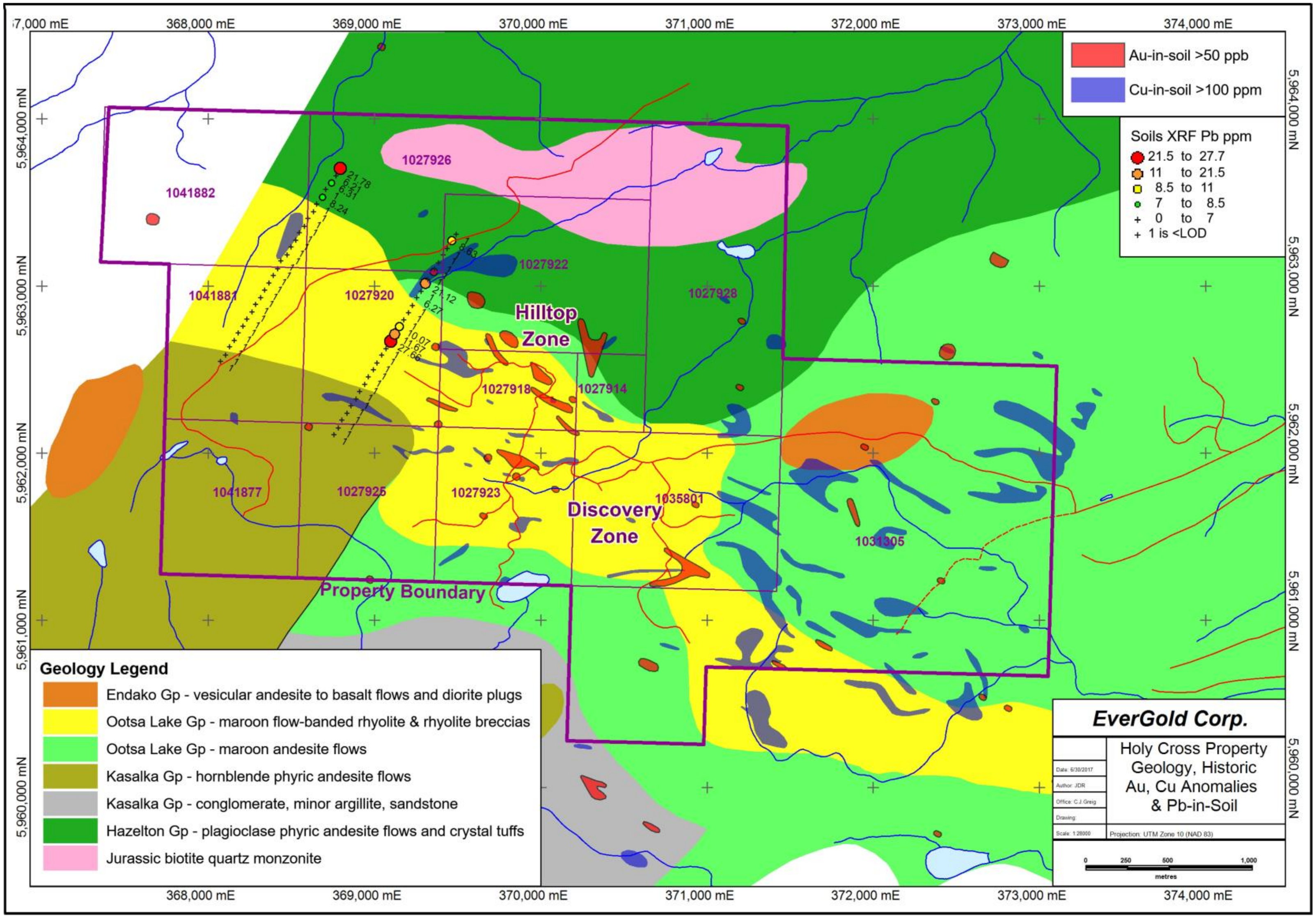


**Figure 6. Lead geochemistry and Au & Cu soil anomalies (Church & Savell, 1988), (Barber, 1989) on geology (Lane, 1995)**

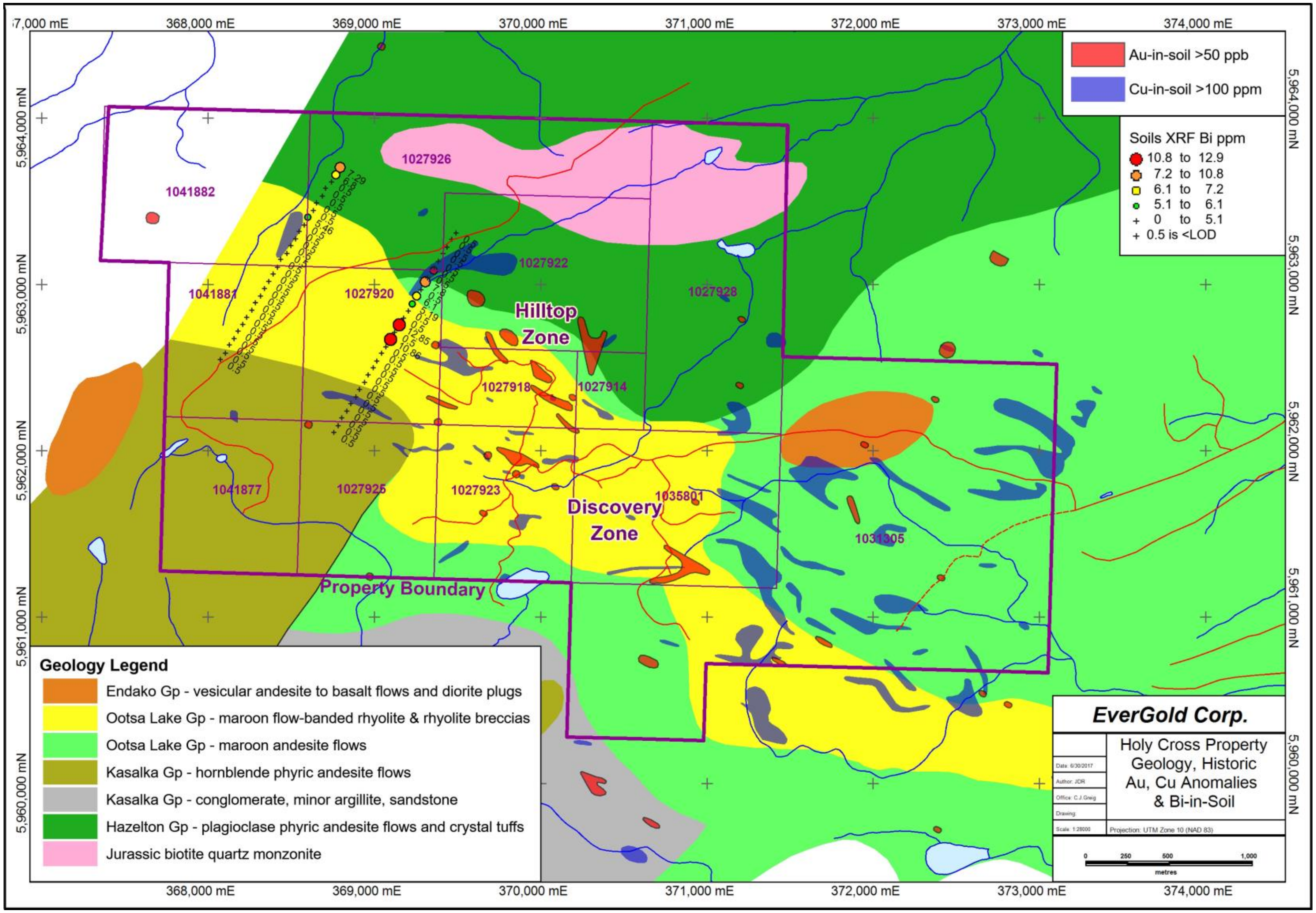


**Figure 7. Bismuth geochemistry and Au & Cu soil anomalies (Church & Savell, 1988), (Barber, 1989) on geology (Lane, 1995)**

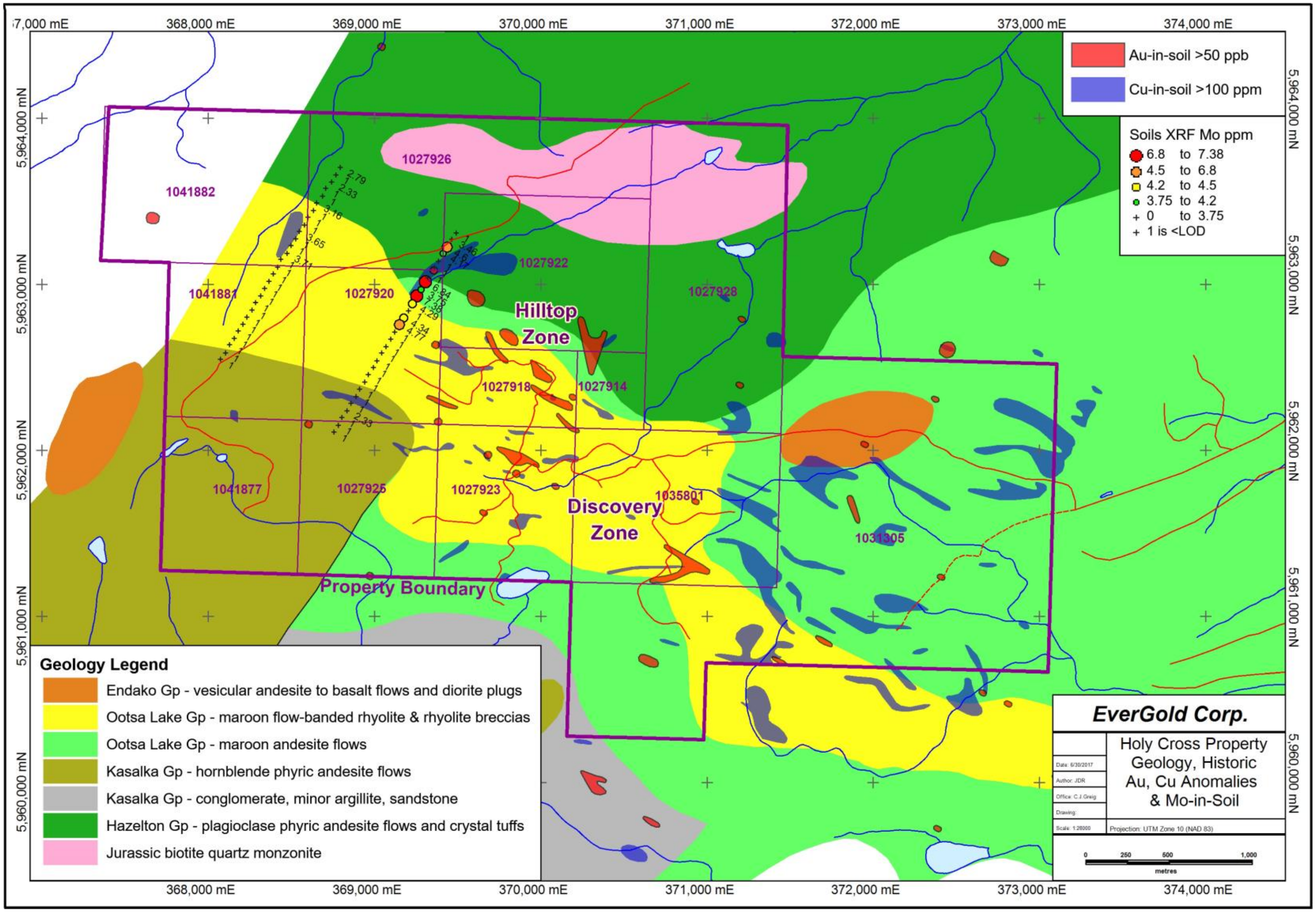


**Figure 8. Molybdenum geochemistry and Au & Cu soil anomalies (Church & Savell, 1988), (Barber, 1989) on geology (Lane, 1995)**

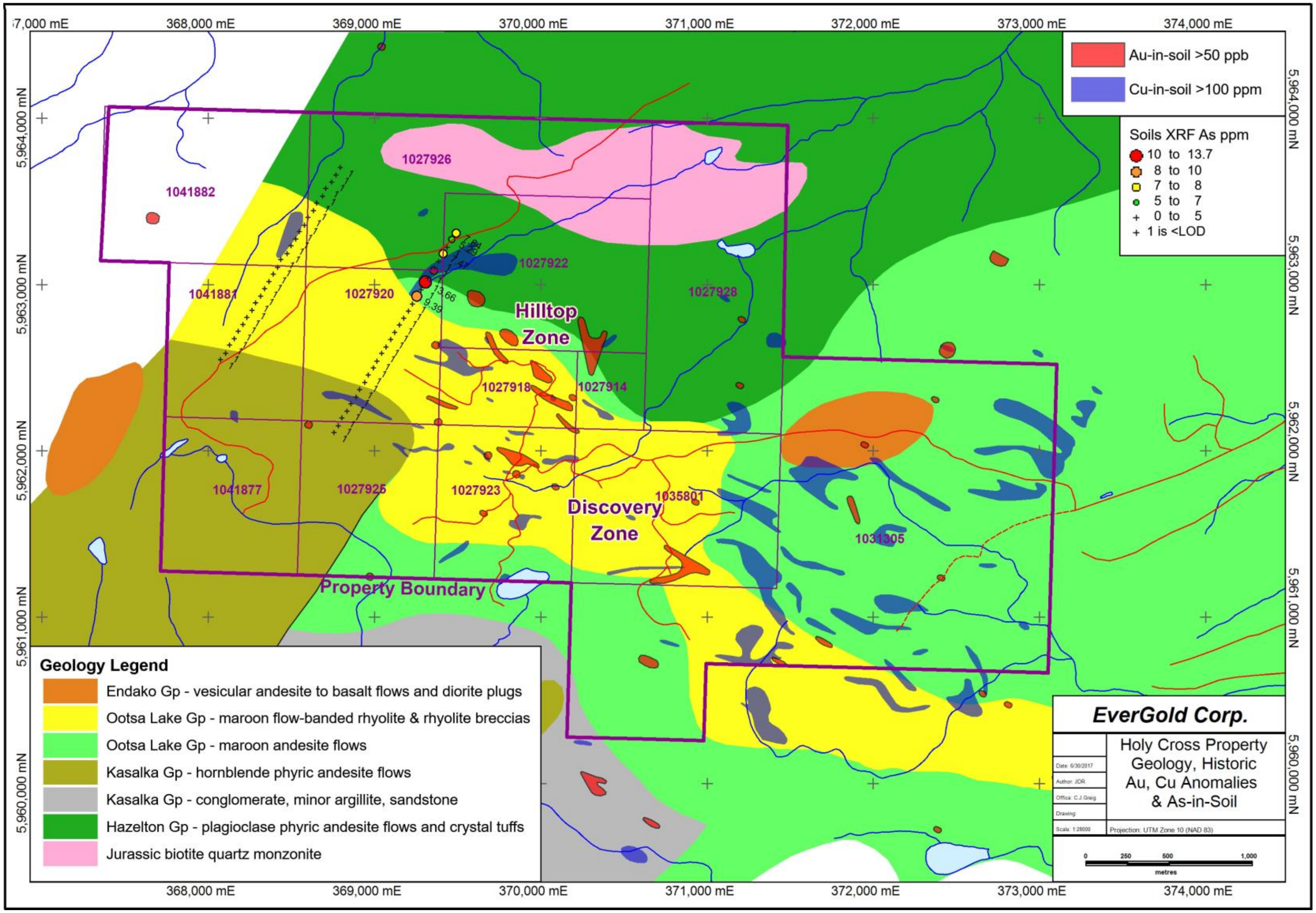


**Figure 9. Arsenic geochemistry and Au & Cu soil anomalies (Church & Savell, 1988), (Barber, 1989) on geology (Lane, 1995)**

On Figure 10 anomalous copper values from the XRF analyses are strongest (up to 116.52 ppm) in the northern third of the western line, coinciding with, and confirming, a >100 ppm Cu contour from the Noranda data. This area is possibly underlain by rhyolitic volcanics. Other moderately anomalous Cu spot highs occur on the southern parts of both soil lines, also possibly underlain by rhyolite. A moderately anomalous copper value of 66.57 ppm near the north end of the eastern line is coincident with anomalous Pb, Bi, As and Mo, although for the most part copper is not well correlated with these elements. This multi-element anomaly is underlain by Ootsa Group andesitic rocks but the rhyolite unit is mapped nearby to the southwest.

Anomalous zinc values, on Figure 11, show a cluster of high values, up to 297.6 ppm, on the northern part of the western line, coincident with anomalous copper. Based on the elevated Cu and Zn values in this area of rhyolitic rocks, further soil sampling is warranted to better define the anomaly and identify a possible mineralized source area. Moderately anomalous Zn values near the south end of the western line are adjacent to moderately anomalous Cu values. This is a secondary target; also possibly underlain by rhyolite.

On Figure 12, anomalous iron values coincide closely with three areas of anomalous Cu and Zn located on the western line. Manganese values (Appendix I) also show strong correlation with Cu, Zn and Fe. A spot high of strongly anomalous Fe in the central part of the eastern line coincides with a higher priority Pb, Bi and Mo target, suggesting that pyrite or hematite may be present, accompanied by these other metals. Most of the significant gold mineralized samples on the property have been similarly described, as being comprised of siliceous rocks containing several percent disseminated pyrite.

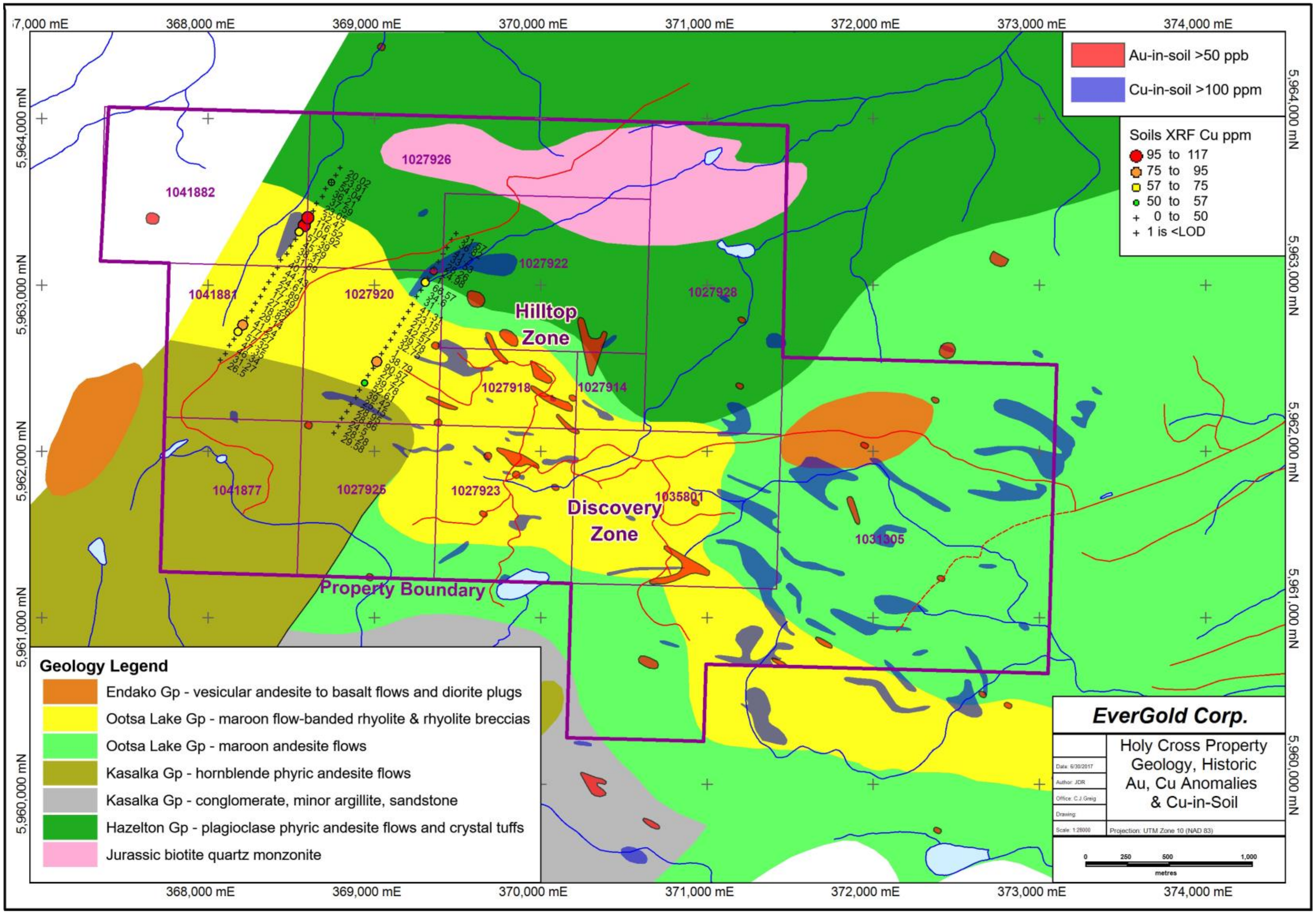


**Figure 10. Copper geochemistry and Au & Cu soil anomalies (Church & Savell, 1988), (Barber, 1989) on geology (Lane, 1995)**

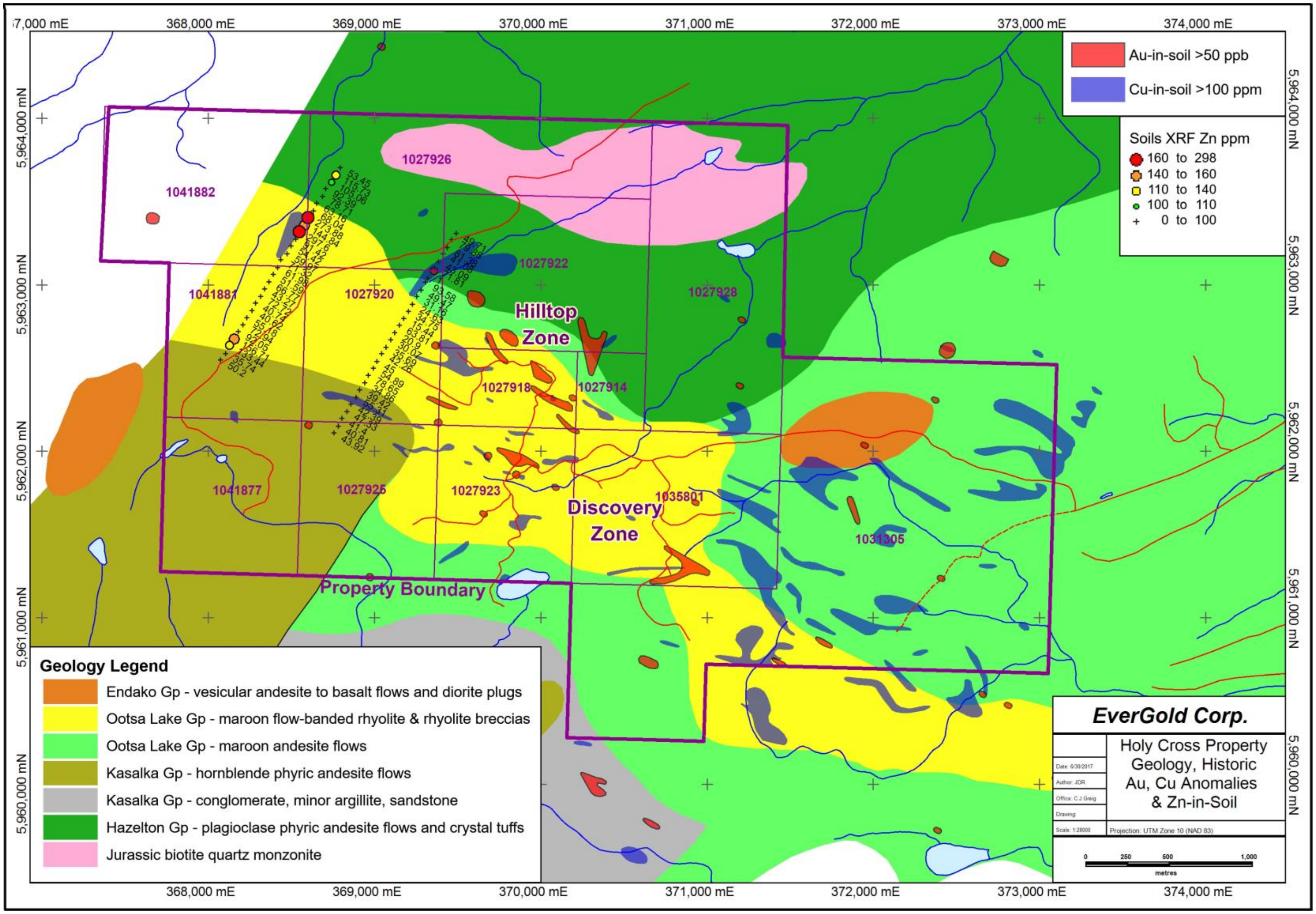


**Figure 11. Zinc geochemistry and Au & Cu soil anomalies (Church & Savell, 1988), (Barber, 1989) on geology (Lane, 1995)**

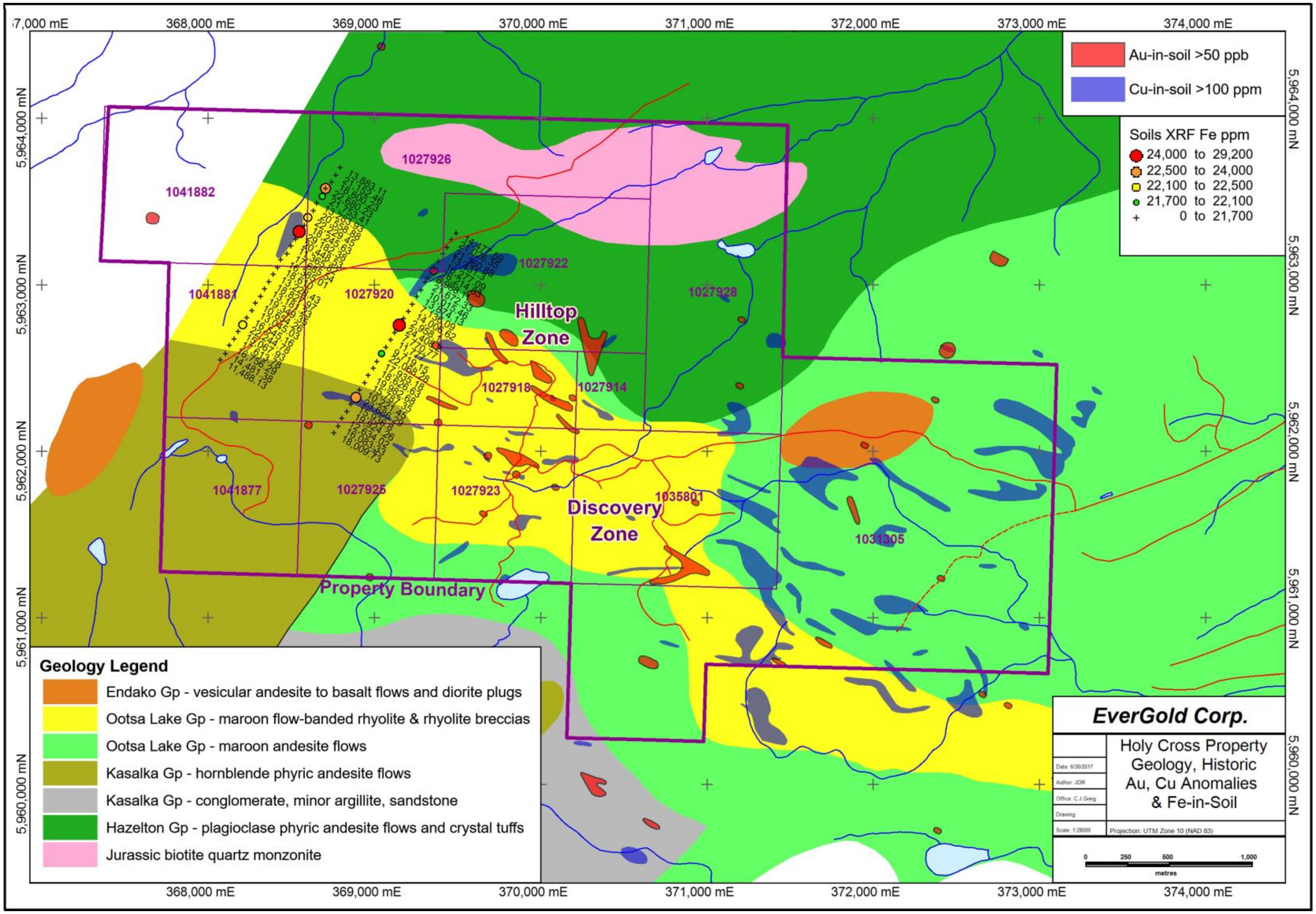


**Figure 12. Iron geochemistry and Au & Cu soil anomalies (Church & Savell, 1988), (Barber, 1989) on geology (Lane, 1995)**

Induced Polarization (IP) surveying was undertaken in 2007 and 2009 by Golden Cross Resources Inc. Resistivity and chargeability maps included in a report by Chapman (2009) have been incorporated in Figures 13 and 14, along with the lead-in-soil geochemical results.

The resistivity map (fig. 13) illustrates resistivity highs with "warmer" coloured contours; for instance, yellow is >3000 ohm-m and light brown is >7000 ohm-m. The higher resistivity is believed to be caused by rocks of higher silica content and, in fact, the outline of the high resistivity does coincide well with the mapped area of silica-rich rhyolite and with areas of known silica alteration, such as the Discovery Zone.

On the eastern 2016 soil line the anomalous Pb values, along with coincident Bi, Mo, and to some extent Fe and Cu, fall within the northwest trend of the resistivity high, suggesting that they are underlain by siliceous host rocks.

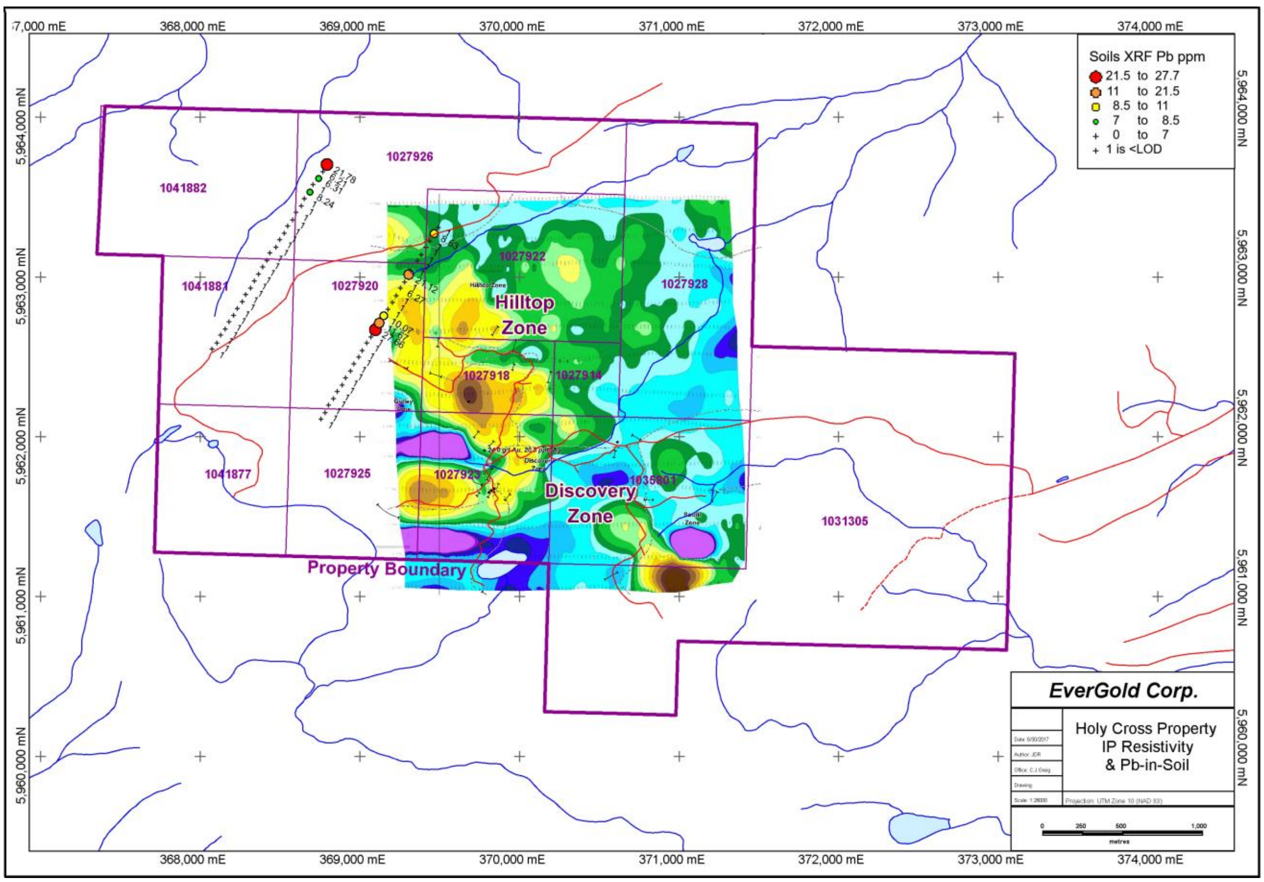


**Figure 13. IP resistivity (Chapman, 2009) with Pb-in-soil results**

The IP chargeability map (fig. 14) shows areas of high chargeability in “warmer” colours, with light orange indicating >12 mV/V and pink indicating >20 mV/V. The areas of high chargeability coincide closely with those of high resistivity. Elevated chargeability is commonly caused by sulphide grains in the rock and this is supported by descriptions of sparsely disseminated pyrite frequently seen in breccias or veins in the rhyolite unit and typically associated with the known gold showings. The localized very high chargeability areas in pink probably represent greater concentrations of sulphide minerals, such as pyrite, probably fairly close to surface.

The anomalous Pb values on the eastern 2016 soil line are located on the trend of the high chargeability zone suggesting that sulphide minerals may be at, or very near, the surface in that area.

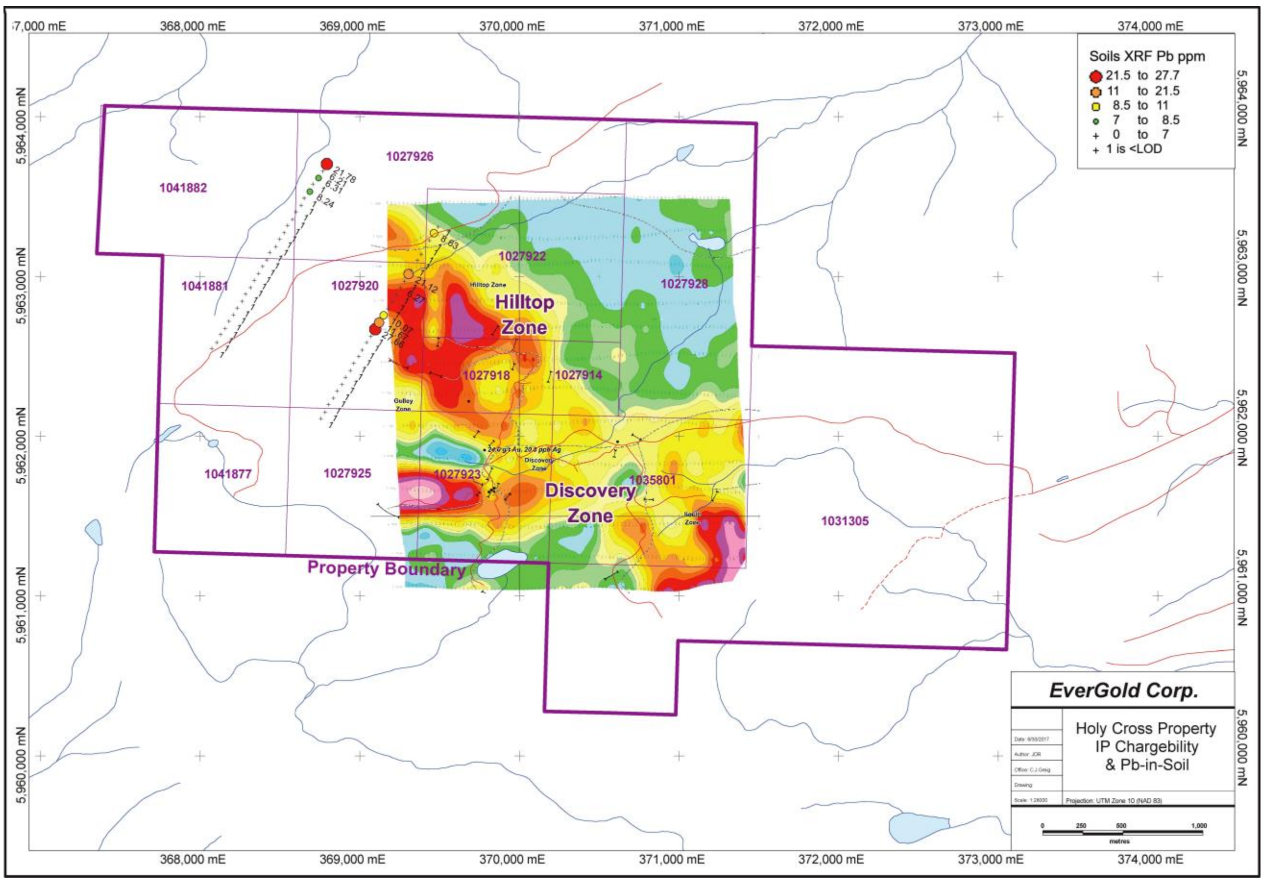


**Figure 14. IP chargeability (Chapman, 2009) with Pb-in-soil results**

Areas of high chargeability extend to the north of the rhyolite unit as it is mapped (fig. 15), indicating that the contact of the rhyolite may, in places, be located farther to the north than shown on the map or, alternatively, that sulphide mineralization may extend into the underlying andesite unit along the northern contact zone of the rhyolite.

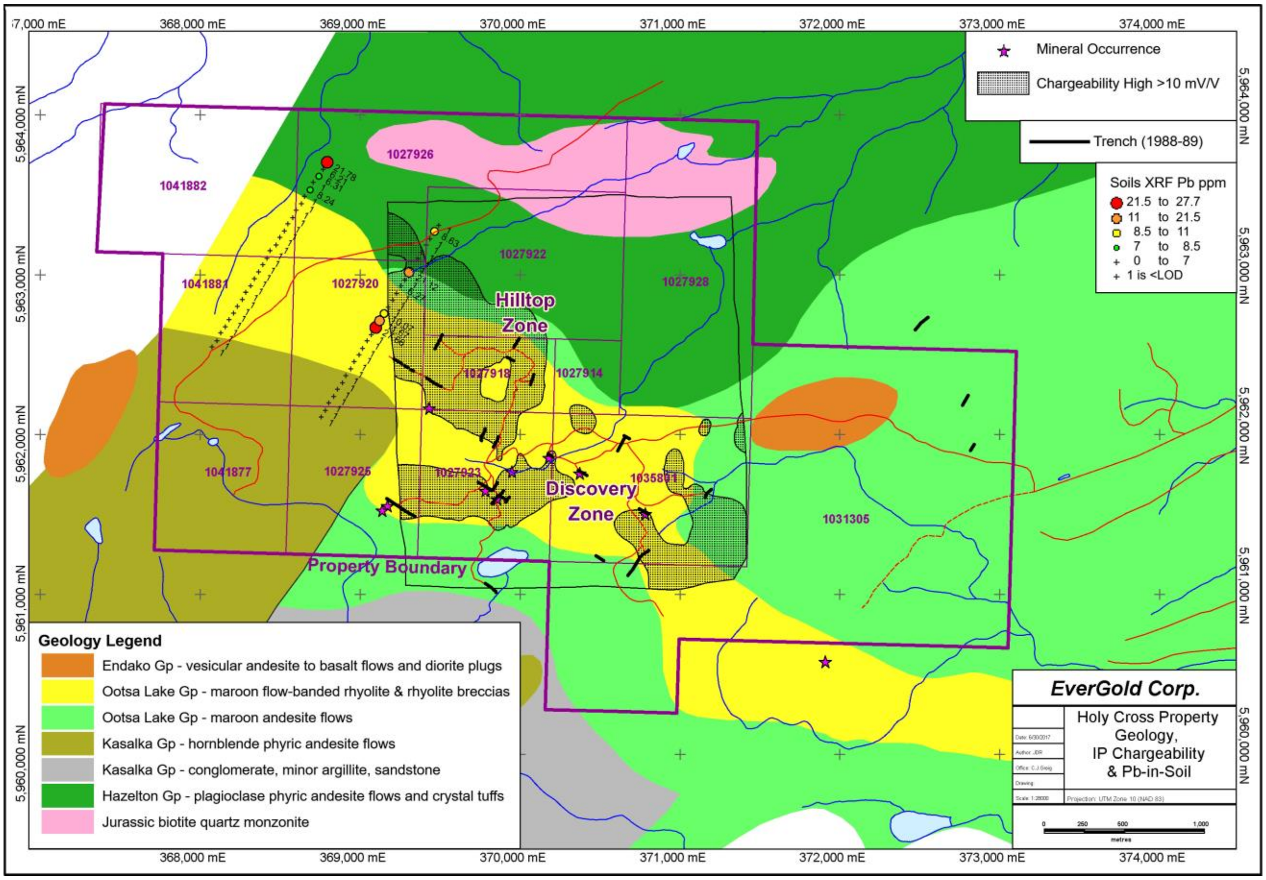


**Figure 15. Geology (Lane, 1995) with overlain chargeability highs (>10 mV/V) (Chapman, 2009), locations of mineral occurrences and Pb-in-soil results**

## 8.0 CONCLUSIONS AND RECOMMENDATIONS

Geologic evidence, including host rock types, tectonic setting, alteration and style of mineralization, suggests that the Holy Cross property has the potential to host an epithermal-style gold-silver deposit. Based on the favourable results of previous work, including geological, geochemical and geophysical surveys, the author believes that additional exploration is warranted to further assess the property.

Soil geochemical and Induced Polarization geophysical surveys were recommended in a previous report by the author (Rowe, 2015), to supplement data on the western and the southeastern parts of the property. In 2015 and 2016 two wide-spaced IP lines and two wide-spaced soil geochemical lines were established on the west side of the property, returning results of interest. In particular, the 2016 soil results indicated three areas of coincident Pb, Bi and Mo anomalies, two of which are located within chargeability highs. It is recommended that more detailed surveys be undertaken, extending to both the northwest and the southeast, to better define zones of interest. Lines should be oriented at 030° to mesh with, and extend, the historic Noranda grid.

Rowe (2015) also recommended five trenches in the Hilltop Zone area to test gold-in-soil geochemical anomalies that were not adequately tested by previous trenching because of possible substantial down-ice dispersion of the anomalies. As an alternative to this recommended trenching, diamond drilling may be considered to test the geochemical anomalies which, additionally, would also test some of the chargeability anomalies at depth. Figure 16 shows colour contoured chargeability values from Chapman (2009) in which the dark orange and pink contours represent chargeability values of 15 to >25 mV/V. The brown ovals on the map represent similar values from a survey conducted by Walcott (2016). Although the Walcott (2016) survey consisted of only two wide-spaced lines the areas of overlap with the Chapman (2009) survey show very good correlation. Significantly, both surveys also show that the highest chargeability areas coincide closely with areas of highest resistivity, possibly indicative of sulphide mineralization in silicified zones. Additional, closer-spaced IP lines are required to the northwest to better define and possibly extend the chargeability anomalies.

A number of proposed drill holes are shown on Figure 16. These holes are situated to test possible northwest-trending mineralized zones that have been interpreted by the author based on the geochemical and geophysical data. Southwest dips of 45° to 80° on some of the interpreted zones are based on pseudo-sections by Walcott & Walcott (2016). Based on currently available information the easternmost holes are highest priority; this is where Au and Cu anomalies are strongest and IP results indicate sizeable chargeability highs. Locations of these holes may change, or holes may be added, subject to results of more detailed ground surveys. All data should be collected and compiled prior to final planning of the drill sites. Contingent on positive results from this program, a second stage expanded program of diamond drilling would be warranted.

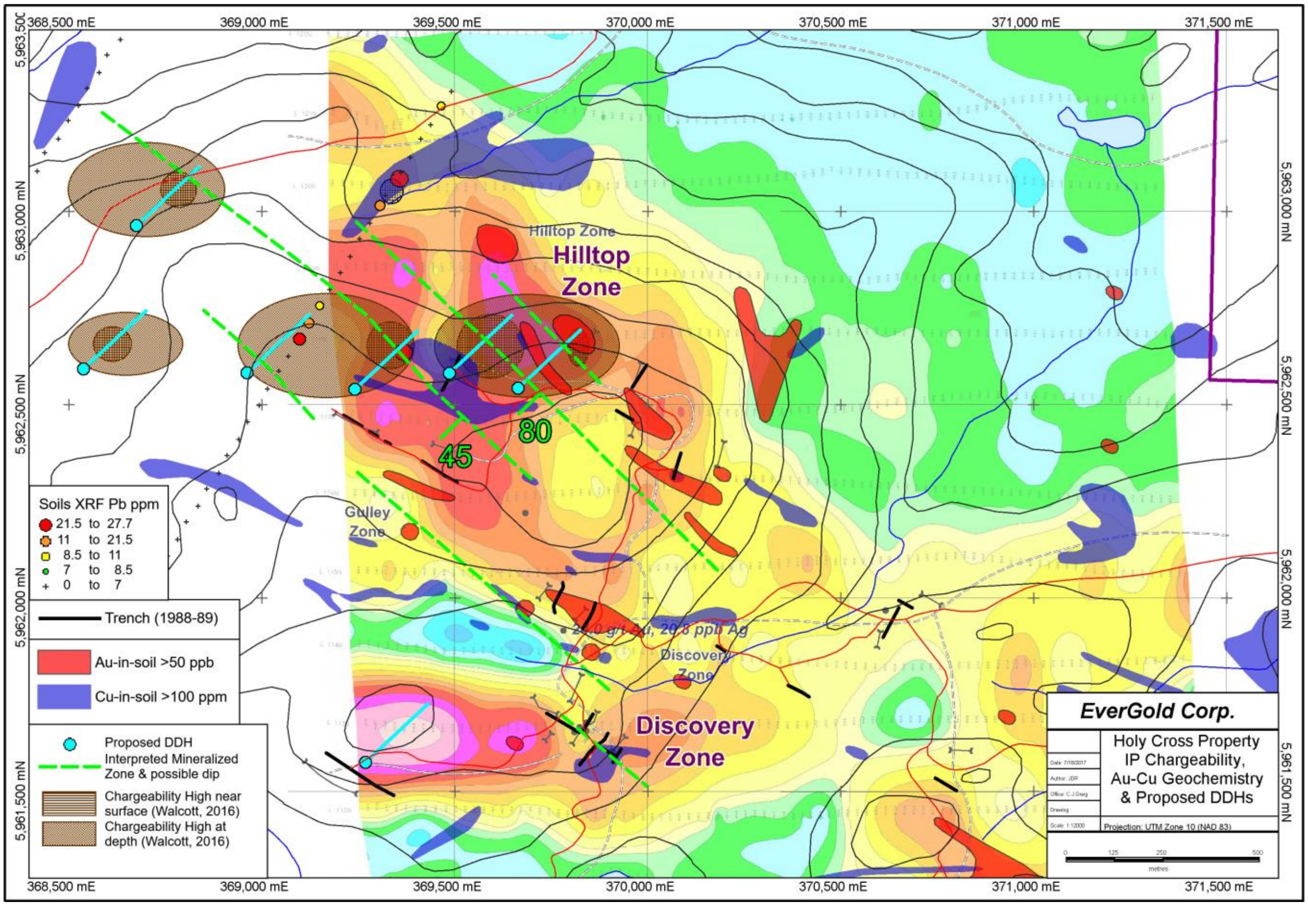


**Figure 16. Chargeability highs shown in pink (Chapman, 2009) and brown (Walcott, 2016) show good correlation. Possible mineralized zones are interpreted from geophysical and geochemical data and drill holes are proposed to test some of those targets.**

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* All Assessment Reports are available on-line at http://aris.empr.gov.bc.ca/

* BC Ministry of Energy, Mines and Petroleum Resources Exploration Assistant available online at http://webmap.em.gov.bc.ca/mapplace/minpot/ex_assist.cfm

* Minfile descriptions are available on-line at http://minfile.gov.bc.ca/searchbasic.aspx

* All BC GSB publications are available on-line at

http://www.empr.gov.bc.ca/MINING/GEOSCIENCE/PUBLICATIONSCATALOGUE/Pages/default.aspx

## 10.0 STATEMENT OF EXPENDITURES

**Holy Cross Exploration Cost Statement, Oct 1, 2016 - Feb 1, 2017**

| Exploration Work Type | Details | | | | Totals |
|---|---|---|---|---|---|
| | | | | | |
| **Geological Consulting** | | Days | Rate | Subtotal | |
| J.Rowe - Geologist | Planning, Research, Report Writing | 8 | 700 | 5,600 | |
| C. Greig - Geologist | Planning, supervision | 1 | 700 | 700 | |
| M. Donohoe - Geologist | Geology, Soil Sampling *note | 3 | 500 | 1,500 | |
| N. Prowse - Geologist | Geology, Soil Sampling *note | 3 | 500 | 1,500 | |
| C.J.Greig & Associates Ltd. | GIS prep of maps for report | 3 | 500 | 1,500 | |
| | | | | | 10,800 |
| **Analytical** | | No. | Rate | Subtotal | |
| XRF Analyses | Soils 57 x $10 | 57 | 10 | 570 | |
| | | | | | 570 |
| **Equipment & Supplies** | Field Equipment, Rentals | | | 300 | |
| | Office Equipment, Software | | | 300 | |
| | | | | | 600 |
| **Travel & Accommodation** | Truck Rental | | | 415 | |
| | Fuel, Food & Lodging | | | 295 | |
| | | | | | 710 |
| | | | | | - |
| | | **Total Expenditures** | | | **12,680** |

*note: travel days Oct. 17 and Oct 22, 2016 - 1 day prorated
field work Oct 18, 19, 2016 - 2 days

## 11.0 AUTHOR'S QUALIFICATIONS

I, Jeffrey D. Rowe, of 111-6109 Boundary Drive W, Surrey, British Columbia, Canada, hereby certify that:

1. I am a graduate of the University of British Columbia with a B.Sc. (Honours) (Geological Sciences, 1975) and have practiced my profession continuously from 1975 to 1999 and from 2007 to present.

2. I have been employed in the geoscience industry for over 30 years, and have explored for gold and base metals in North America for both senior and junior mining companies, on exploration properties as well as at a producing mine.

3. I am a member in good standing of the Association of Professional Engineers and Geoscientists of British Columbia (license #19950).

4. I am not aware of any material fact or material change with respect to the subject matter of the technical report that is not reflected in the technical report, the omission to disclose which makes the technical report misleading.

5. I have no direct or indirect interest in the property described herein, nor do I expect to receive any.

6. I am the author of the report entitled; "2016 Soil Geochemistry Program on the Holy Cross Property" dated July 19, 2017.

Dated at Surrey, British Columbia, this 19th day of July, 2017.

Respectfully submitted,

*"J D Rowe"*

Jeffrey D. Rowe, B.Sc., P.Geo.

# Appendix I

# XRF Analytical Results for Selected Elements

# &

# Correlation Matrix of Elements

**Holy Cross XRF Analyses Selected Elements - 2016 Soils**

| SAMPLE | Easting | Northing | Elev | Mo | Zr | Sr | Rb | Th | Pb | As | Zn | W | Cu | Co | Fe | Mn | Ti | Nb | Bi |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MDHC602 | 369465 | 5963272 | 1242 | 3.46 | 96.90 | 102.89 | 51.62 | 8.22 | 8.63 | 5.29 | 79.88 | 1.00 | 36.82 | 194.62 | 21026.35 | 264.42 | 5.00 | 6.93 | 0.50 |
| MDHC603 | 369412 | 5963187 | 1263 | 4.17 | 103.66 | 109.38 | 49.32 | 5.66 | 1.00 | 7.47 | 41.08 | 1.00 | 33.53 | 128.54 | 13431.30 | 400.69 | 5.00 | 5.29 | 0.50 |
| MDHC604 | 369360 | 5963100 | 1259 | 1.00 | 94.98 | 126.73 | 27.75 | 5.17 | 1.00 | 1.00 | 71.81 | 1.00 | 24.98 | 239.57 | 16214.83 | 5.00 | 5.00 | 7.72 | 0.50 |
| MDHC605 | 369306 | 5963015 | 1264 | 6.84 | 129.16 | 101.00 | 60.46 | 11.16 | 21.12 | 13.66 | 93.58 | 1.00 | 66.57 | 5.00 | 21672.33 | 521.88 | 5.00 | 7.68 | 7.80 |
| MDHC606 | 369253 | 5962929 | 1303 | 7.38 | 108.78 | 50.87 | 81.90 | 8.32 | 6.27 | 9.39 | 31.16 | 1.00 | 31.00 | 168.33 | 13874.13 | 5.00 | 5.00 | 5.52 | 6.10 |
| MDHC607 | 369203 | 5962841 | 1332 | 1.00 | 77.58 | 76.45 | 31.49 | 4.36 | 1.00 | 1.00 | 34.75 | 1.00 | 23.15 | 158.73 | 14006.62 | 5.00 | 5.00 | 4.39 | 0.50 |
| MDHC608 | 369150 | 5962756 | 1360 | 4.77 | 126.14 | 36.64 | 99.58 | 12.85 | 10.07 | 1.00 | 63.81 | 1.00 | 42.57 | 5.00 | 24408.20 | 433.78 | 5.00 | 9.37 | 12.85 |
| MDHC609 | 369098 | 5962670 | 1387 | 1.00 | 111.49 | 39.95 | 72.90 | 10.82 | 27.66 | 1.00 | 30.07 | 44.78 | 32.75 | 5.00 | 11777.00 | 319.65 | 5.00 | 4.87 | 10.86 |
| MDHC610 | 369044 | 5962586 | 1376 | 1.00 | 92.86 | 114.19 | 35.62 | 6.03 | 1.00 | 1.00 | 42.26 | 1.00 | 38.79 | 145.40 | 22068.28 | 216.02 | 5.00 | 7.14 | 0.50 |
| MDHC611 | 368993 | 5962498 | 1372 | 1.00 | 73.33 | 101.96 | 23.31 | 4.64 | 1.00 | 1.00 | 54.89 | 1.00 | 27.27 | 254.37 | 18626.63 | 230.00 | 5.00 | 6.42 | 0.50 |
| MDHC612 | 368940 | 5962410 | 1376 | 1.00 | 77.67 | 100.84 | 27.11 | 4.84 | 1.00 | 1.00 | 34.86 | 1.00 | 52.61 | 259.15 | 15787.35 | 5.00 | 5.00 | 5.01 | 0.50 |
| MDHC613 | 368889 | 5962323 | 1406 | 1.00 | 94.24 | 164.99 | 24.83 | 3.81 | 1.00 | 1.00 | 55.31 | 1.00 | 25.15 | 5.00 | 23686.29 | 299.57 | 5.00 | 5.06 | 0.50 |
| MDHC614 | 368835 | 5962238 | 1397 | 2.33 | 88.95 | 111.59 | 32.87 | 6.72 | 1.00 | 1.00 | 47.33 | 1.00 | 28.86 | 222.06 | 19924.26 | 308.03 | 5.00 | 6.46 | 0.50 |
| MDHC615 | 368782 | 5962151 | 1372 | 1.00 | 95.46 | 70.58 | 45.24 | 5.16 | 1.00 | 1.00 | 40.81 | 1.00 | 28.28 | 170.43 | 16083.33 | 5.00 | 5.00 | 6.98 | 0.50 |
| MDHC617 | 368755 | 5962109 | 1359 | 1.00 | 83.16 | 96.27 | 31.91 | 4.86 | 1.00 | 1.00 | 43.92 | 1.00 | 29.58 | 195.41 | 18009.73 | 261.83 | 5.00 | 5.98 | 0.50 |
| MDHC618 | 368103 | 5962587 | 1275 | 1.00 | 58.14 | 136.83 | 21.32 | 3.24 | 1.00 | 1.00 | 35.74 | 1.00 | 31.27 | 176.83 | 14481.38 | 489.51 | 5.00 | 4.58 | 0.50 |
| MDHC619 | 368156 | 5962673 | 1279 | 1.00 | 55.35 | 101.33 | 19.33 | 4.14 | 1.00 | 1.00 | 156.71 | 1.00 | 47.35 | 198.62 | 17613.78 | 733.09 | 5.00 | 3.24 | 0.50 |
| MDHC620 | 368209 | 5962759 | 1270 | 1.00 | 83.81 | 191.17 | 28.17 | 5.62 | 1.00 | 1.00 | 72.94 | 1.00 | 77.27 | 137.78 | 22244.78 | 568.68 | 5.00 | 7.13 | 0.50 |
| MDHC621 | 368264 | 5962845 | 1269 | 1.00 | 67.59 | 151.00 | 24.22 | 3.26 | 1.00 | 1.00 | 40.62 | 1.00 | 29.14 | 186.93 | 13045.03 | 391.92 | 5.00 | 4.46 | 0.50 |
| MDHC622 | 368315 | 5962931 | 1270 | 1.00 | 88.78 | 152.11 | 28.05 | 3.58 | 1.00 | 1.00 | 72.72 | 1.00 | 27.26 | 276.18 | 19349.35 | 324.41 | 576.28 | 5.39 | 0.50 |
| MDHC623 | 368365 | 5963017 | 1265 | 1.00 | 116.19 | 116.91 | 51.63 | 6.84 | 1.00 | 1.00 | 66.77 | 1.00 | 27.89 | 150.68 | 18827.97 | 301.33 | 5.00 | 5.65 | 0.50 |
| MDHC624 | 368418 | 5963103 | 1249 | 1.00 | 87.46 | 162.90 | 35.27 | 5.13 | 1.00 | 1.00 | 61.98 | 1.00 | 44.43 | 228.77 | 18610.00 | 436.19 | 5.00 | 5.49 | 0.50 |
| MDHC625 | 368473 | 5963187 | 1232 | 3.71 | 92.42 | 146.11 | 43.53 | 4.58 | 1.00 | 1.00 | 59.97 | 1.00 | 31.89 | 202.93 | 17685.54 | 336.40 | 5.00 | 6.08 | 0.50 |
| MDHC626 | 368525 | 5963273 | 1204 | 1.00 | 96.48 | 142.73 | 51.20 | 6.31 | 1.00 | 1.00 | 91.42 | 1.00 | 45.29 | 193.22 | 20448.53 | 586.92 | 655.18 | 7.27 | 0.50 |
| MDHC627 | 368579 | 5963358 | 1188 | 1.00 | 100.05 | 196.03 | 44.59 | 7.08 | 1.00 | 1.00 | 144.84 | 1.00 | 104.92 | 192.52 | 18245.63 | 313.79 | 5.00 | 8.47 | 0.50 |
| MDHC628 | 368633 | 5963444 | 1198 | 1.00 | 103.10 | 216.59 | 35.78 | 4.03 | 1.00 | 1.00 | 68.04 | 1.00 | 32.47 | 238.18 | 20558.88 | 431.38 | 1169.89 | 6.70 | 0.50 |
| MDHC629 | 368687 | 5963530 | 1200 | 1.00 | 124.40 | 102.85 | 55.11 | 5.75 | 8.24 | 1.00 | 78.71 | 34.19 | 37.59 | 125.62 | 21753.41 | 345.48 | 732.38 | 8.98 | 0.50 |
| MDHC630 | 368741 | 5963616 | 1180 | 2.33 | 61.59 | 54.30 | 82.69 | 7.58 | 6.31 | 1.00 | 105.06 | 1.00 | 54.04 | 194.92 | 18600.23 | 927.45 | 5.00 | 4.70 | 0.50 |
| MDHC630dup | 368741 | 5963616 | 1180 | 2.11 | 57.23 | 51.62 | 78.86 | 7.82 | 7.84 | 1.00 | 103.97 | 1.00 | 48.10 | 173.46 | 16595.92 | 1169.78 | 5.00 | 4.15 | 0.50 |
| MDHC632 | 368794 | 5963702 | 1171 | 2.79 | 128.96 | 88.35 | 82.08 | 7.60 | 21.78 | 1.00 | 53.45 | 1.00 | 20.02 | 176.97 | 13883.11 | 289.92 | 5.00 | 7.66 | 7.29 |
| MDHC633 | 368768 | 5963658 | 1185 | 1.00 | 123.28 | 60.83 | 93.91 | 9.96 | 6.21 | 1.00 | 115.73 | 1.00 | 23.91 | 5.00 | 21152.46 | 432.30 | 5.00 | 6.14 | 6.80 |
| NPHC002 | 369491 | 5963310 | 1230 | 1.00 | 93.85 | 90.90 | 31.33 | 5.25 | 1.00 | 7.64 | 49.71 | 1.00 | 31.57 | 176.58 | 14477.59 | 5.00 | 5.00 | 5.90 | 0.50 |

**Holy Cross XRF Analyses Selected Elements - 2016 Soils**

| SAMPLE | Easting | Northing | Elev | Mo | Zr | Sr | Rb | Th | Pb | As | Zn | W | Cu | Co | Fe | Mn | Ti | Nb | Bi |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NPHC003 | 369437 | 5963223 | 1256 | 4.60 | 115.30 | 128.43 | 41.06 | 6.43 | 1.00 | 1.00 | 81.38 | 1.00 | 41.70 | 113.98 | 21360.88 | 384.16 | 5.00 | 8.97 | 0.50 |
| NPHC004 | 369384 | 5963139 | 1253 | 1.00 | 100.25 | 191.81 | 35.36 | 5.92 | 1.00 | 1.00 | 43.09 | 1.00 | 28.26 | 140.57 | 16277.09 | 199.90 | 5.00 | 6.75 | 0.50 |
| NPHC005 | 369320 | 5963040 | 1258 | 1.00 | 2.47 | 5.69 | 5.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 5.00 | 6988.11 | 5.00 | 5.00 | 2.66 | 0.50 |
| NPHC006 | 369280 | 5962969 | 1278 | 3.75 | 91.48 | 64.44 | 66.07 | 5.60 | 1.00 | 1.00 | 49.47 | 1.00 | 34.60 | 236.78 | 10015.46 | 5.00 | 5.00 | 6.16 | 0.50 |
| NPHC007 | 369229 | 5962883 | 1323 | 4.29 | 185.90 | 28.82 | 78.53 | 7.36 | 1.00 | 1.00 | 24.63 | 34.19 | 41.31 | 122.49 | 7136.09 | 5.00 | 5.00 | 9.63 | 5.19 |
| NPHC008 | 369176 | 5962798 | 1342 | 4.34 | 100.42 | 26.11 | 31.22 | 4.20 | 1.00 | 1.00 | 15.44 | 1.00 | 21.27 | 5.00 | 2958.10 | 5.00 | 5.00 | 4.21 | 0.50 |
| NPHC009 | 369122 | 5962711 | 1371 | 1.00 | 104.61 | 30.15 | 82.91 | 8.05 | 11.67 | 1.00 | 20.90 | 36.90 | 39.78 | 90.30 | 7770.77 | 463.89 | 5.00 | 5.16 | 0.50 |
| NPHC010 | 369068 | 5962625 | 1377 | 1.00 | 68.71 | 71.47 | 24.81 | 1.00 | 1.00 | 1.00 | 35.69 | 1.00 | 1.00 | 140.97 | 9719.15 | 938.68 | 5.00 | 3.50 | 0.50 |
| NPHC010dup | 369068 | 5962625 | 1377 | 1.00 | 91.56 | 102.34 | 35.42 | 5.27 | 1.00 | 1.00 | 39.25 | 1.00 | 27.29 | 202.76 | 13639.27 | 192.44 | 5.00 | 5.89 | 0.50 |
| NPHC011 | 369015 | 5962540 | 1365 | 1.00 | 110.50 | 101.89 | 54.09 | 7.77 | 1.00 | 1.00 | 45.00 | 1.00 | 90.57 | 216.57 | 17935.18 | 212.21 | 5.00 | 4.40 | 0.50 |
| NPHC012 | 368963 | 5962455 | 1361 | 1.00 | 92.10 | 93.01 | 36.66 | 6.44 | 1.00 | 1.00 | 78.65 | 1.00 | 39.78 | 135.50 | 19982.68 | 226.28 | 5.00 | 4.70 | 0.50 |
| NPHC013 | 368910 | 5962369 | 1368 | 1.00 | 89.45 | 126.95 | 28.94 | 5.18 | 1.00 | 1.00 | 39.42 | 1.00 | 39.42 | 211.96 | 10221.45 | 266.87 | 5.00 | 6.18 | 0.50 |
| NPHC014 | 368857 | 5962282 | 1391 | 1.00 | 60.15 | 86.94 | 19.87 | 1.00 | 1.00 | 1.00 | 42.39 | 1.00 | 28.95 | 211.86 | 15936.80 | 5.00 | 5.00 | 3.56 | 0.50 |
| NPHC016 | 368804 | 5962197 | 1375 | 1.00 | 111.82 | 120.83 | 24.99 | 4.34 | 1.00 | 1.00 | 41.40 | 1.00 | 24.50 | 150.87 | 12634.02 | 5.00 | 5.00 | 8.15 | 0.50 |
| NPHC017 | 368074 | 5962548 | 1276 | 1.00 | 66.50 | 143.19 | 23.21 | 1.00 | 1.00 | 1.00 | 50.20 | 1.00 | 26.50 | 249.22 | 11488.13 | 250.48 | 5.00 | 5.25 | 0.50 |
| NPHC018 | 368127 | 5962635 | 1272 | 1.00 | 83.77 | 238.02 | 28.67 | 1.00 | 1.00 | 1.00 | 133.44 | 1.00 | 46.34 | 255.46 | 16756.29 | 292.81 | 5.00 | 6.88 | 0.50 |
| NPHC019 | 368179 | 5962718 | 1274 | 1.00 | 52.93 | 94.70 | 17.77 | 3.97 | 1.00 | 1.00 | 92.05 | 1.00 | 57.32 | 279.87 | 15067.93 | 354.43 | 5.00 | 3.82 | 0.50 |
| NPHC020 | 368232 | 5962803 | 1270 | 1.00 | 57.25 | 141.24 | 21.55 | 1.00 | 1.00 | 1.00 | 55.18 | 1.00 | 41.24 | 191.31 | 16545.16 | 525.07 | 5.00 | 5.79 | 0.50 |
| NPHC021 | 368284 | 5962890 | 1269 | 1.00 | 44.90 | 120.76 | 15.46 | 1.00 | 1.00 | 1.00 | 40.74 | 1.00 | 18.82 | 5.00 | 10654.26 | 351.42 | 5.00 | 2.16 | 0.50 |
| NPHC022 | 368338 | 5962975 | 1263 | 1.00 | 61.96 | 117.64 | 19.47 | 1.00 | 1.00 | 1.00 | 43.27 | 1.00 | 17.49 | 212.52 | 13181.23 | 5.00 | 5.00 | 4.03 | 0.50 |
| NPHC023 | 368391 | 5963062 | 1252 | 1.00 | 99.55 | 121.23 | 30.99 | 5.52 | 1.00 | 1.00 | 51.59 | 1.00 | 24.61 | 175.10 | 13228.43 | 5.00 | 5.00 | 5.87 | 0.50 |
| NPHC024 | 368437 | 5963151 | 1237 | 1.00 | 87.65 | 146.42 | 32.92 | 4.87 | 1.00 | 1.00 | 71.32 | 1.00 | 40.10 | 199.69 | 16385.01 | 461.04 | 5.00 | 6.87 | 0.50 |
| NPHC025 | 368498 | 5963234 | 1216 | 1.00 | 67.40 | 124.05 | 29.45 | 1.00 | 1.00 | 1.00 | 54.42 | 33.18 | 38.31 | 189.60 | 11365.82 | 5.00 | 5.00 | 7.00 | 0.50 |
| NPHC026 | 368547 | 5963318 | 1194 | 3.65 | 92.32 | 177.41 | 44.53 | 5.96 | 1.00 | 1.00 | 297.60 | 1.00 | 57.39 | 5.00 | 29182.38 | 4313.96 | 5.00 | 9.20 | 0.50 |
| NPHC027 | 368599 | 5963404 | 1187 | 1.00 | 102.20 | 218.53 | 47.96 | 7.06 | 1.00 | 1.00 | 273.88 | 1.00 | 116.52 | 5.00 | 22229.45 | 3605.10 | 812.14 | 9.08 | 5.46 |
| NPHC028 | 368652 | 5963490 | 1196 | 3.16 | 80.61 | 134.61 | 37.59 | 5.15 | 1.00 | 1.00 | 63.16 | 1.00 | 23.05 | 209.53 | 13283.93 | 283.05 | 5.00 | 5.69 | 0.50 |
| NPHC029 | 368706 | 5963577 | 1186 | 1.00 | 104.84 | 156.61 | 51.40 | 4.14 | 1.00 | 1.00 | 92.39 | 1.00 | 36.21 | 5.00 | 22680.23 | 261.12 | 507.75 | 6.31 | 0.50 |
| NPHC029dup | 368706 | 5963577 | 1186 | 2.53 | 97.07 | 124.64 | 41.61 | 5.16 | 1.00 | 1.00 | 73.84 | 31.94 | 43.02 | 273.36 | 11406.62 | 5.00 | 5.00 | 8.16 | 0.50 |

**Correlation Matrix**

| | *Mo* | *Zr* | *Sr* | *Rb* | *Th* | *Pb* | *As* | *Zn* | *W* | *Cu* | *Co* | *Fe* | *Mn* | *Ti* | *Nb* | *Bi* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mo | 1 | | | | | | | | | | | | | | | |
| Zr | 0.410515 | 1 | | | | | | | | | | | | | | |
| Sr | -0.29548 | -0.03225 | 1 | | | | | | | | | | | | | |
| Rb | 0.486535 | 0.626322 | -0.40071 | 1 | | | | | | | | | | | | |
| Th | 0.466977 | 0.654476 | -0.29662 | 0.814924 | 1 | | | | | | | | | | | |
| Pb | 0.316424 | 0.334268 | -0.36514 | 0.60304 | 0.607351 | 1 | | | | | | | | | | |
| As | 0.616706 | 0.219778 | -0.13369 | 0.20417 | 0.322932 | 0.344029 | 1 | | | | | | | | | |
| Zn | 0.028643 | 0.057577 | 0.468709 | 0.118881 | 0.172504 | -0.04362 | -0.03493 | 1 | | | | | | | | |
| W | -0.01574 | 0.314935 | -0.2771 | 0.30378 | 0.171859 | 0.399593 | -0.09315 | -0.1493 | 1 | | | | | | | |
| Cu | 0.042607 | 0.20043 | 0.375699 | 0.200093 | 0.36039 | 0.022903 | 0.081852 | 0.611748 | 0.006784 | 1 | | | | | | |
| Co | -0.23352 | -0.2167 | 0.224735 | -0.29803 | -0.32243 | -0.34467 | -0.15326 | -0.18578 | -0.12668 | -0.01568 | 1 | | | | | |
| Fe | 0.013852 | 0.186588 | 0.460895 | 0.151789 | 0.338196 | 0.019134 | 0.059691 | 0.600688 | -0.29966 | 0.415882 | -0.13041 | 1 | | | | |
| Mn | 0.06242 | -0.0159 | 0.311529 | 0.116152 | 0.138034 | 0.007314 | -0.05827 | 0.850943 | -0.09981 | 0.463792 | -0.34345 | 0.451287 | 1 | | | |
| Ti | -0.17317 | 0.164507 | 0.378826 | 0.035706 | -0.01736 | -0.05286 | -0.08976 | 0.291342 | 0.059551 | 0.193951 | -0.03189 | 0.31971 | 0.257139 | 1 | | |
| Nb | 0.292811 | 0.691045 | 0.300603 | 0.367073 | 0.439457 | 0.111085 | 0.060574 | 0.388636 | 0.21126 | 0.378173 | -0.07668 | 0.420902 | 0.26052 | 0.247864 | 1 | |
| Bi | 0.436798 | 0.487344 | -0.32169 | 0.651392 | 0.665277 | 0.725047 | 0.282482 | 0.067876 | 0.242365 | 0.113698 | -0.47577 | 0.107489 | 0.096359 | -0.00813 | 0.298624 | 1 |

# Appendix II

# XRF Analytical Results Complete

## Holy Cross XRF Analyses 2016 Soil Samples

| SAMPLE | East_N83 | North_N83 | Durtn | Units | Mo | Mo Error | Zr | Zr Error | Sr | Sr Error | U | U Error | Rb | Rb Error | Th | Th Error | Pb | Pb Error | Se | Se Error | As | As Error | Hg | Hg Error | Au | Au Error |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MDHC602 | 369465 | 5963272 | 30 | ppm | 3.46 | 1.55 | 96.9 | 2.74 | 102.89 | 2.61 | < LOD | 6.76 | 51.62 | 1.9 | 8.22 | 2.54 | 8.63 | 4.15 | < LOD | 1.5 | 5.29 | 3.01 | < LOD | 7.43 | < LOD | 8.69 |
| MDHC603 | 369412 | 5963187 | 30 | ppm | 4.17 | 1.53 | 103.66 | 2.77 | 109.38 | 2.63 | < LOD | 6.62 | 49.32 | 1.82 | 5.66 | 2.33 | < LOD | 5.65 | < LOD | 1.5 | 7.47 | 2.84 | < LOD | 7.05 | < LOD | 7.93 |
| MDHC604 | 369360 | 5963100 | 30 | ppm | < LOD | 1.5 | 94.98 | 2.59 | 126.73 | 2.72 | < LOD | 5.64 | 27.75 | 1.35 | 5.17 | 2.13 | < LOD | 5.21 | < LOD | 1.5 | < LOD | 3.65 | < LOD | 6.35 | < LOD | 7.26 |
| MDHC605 | 369306 | 5963015 | 30 | ppm | 6.84 | 1.58 | 129.16 | 2.98 | 101 | 2.49 | 12.32 | 4.86 | 60.46 | 1.98 | 11.16 | 2.66 | 21.12 | 4.53 | < LOD | 1.5 | 13.66 | 3.45 | < LOD | 7.03 | < LOD | 7.98 |
| MDHC606 | 369253 | 5962929 | 30 | ppm | 7.38 | 1.58 | 108.78 | 2.73 | 50.87 | 1.82 | < LOD | 7.73 | 81.9 | 2.32 | 8.32 | 2.55 | 6.27 | 4.02 | < LOD | 1.79 | 9.39 | 3.06 | < LOD | 7.3 | < LOD | 8.08 |
| MDHC607 | 369203 | 5962841 | 30 | ppm | < LOD | 1.5 | 77.58 | 2.26 | 76.45 | 2.06 | < LOD | 5.38 | 31.49 | 1.39 | 4.36 | 2.03 | < LOD | 5.66 | < LOD | 1.5 | < LOD | 2.47 | < LOD | 6.14 | < LOD | 6.81 |
| MDHC608 | 369150 | 5962756 | 30 | ppm | 4.77 | 1.62 | 126.14 | 3 | 36.64 | 1.63 | < LOD | 8.45 | 99.58 | 2.65 | 12.85 | 2.92 | 10.07 | 4.35 | < LOD | 1.5 | < LOD | 4.55 | < LOD | 7.52 | < LOD | 7.98 |
| MDHC609 | 369098 | 5962670 | 30 | ppm | < LOD | 1.67 | 111.49 | 2.85 | 39.95 | 1.7 | < LOD | 7.52 | 72.9 | 2.28 | 10.82 | 2.82 | 27.66 | 5 | < LOD | 1.58 | < LOD | 4.01 | < LOD | 7.78 | < LOD | 8.74 |
| MDHC610 | 369044 | 5962586 | 30 | ppm | < LOD | 1.5 | 92.86 | 2.6 | 114.19 | 2.63 | < LOD | 6.08 | 35.62 | 1.54 | 6.03 | 2.23 | < LOD | 5.25 | < LOD | 1.5 | < LOD | 3.61 | < LOD | 6.92 | < LOD | 7.55 |
| MDHC611 | 368993 | 5962498 | 30 | ppm | < LOD | 2.02 | 73.33 | 2.35 | 101.96 | 2.47 | < LOD | 5.46 | 23.31 | 1.28 | 4.64 | 2.1 | < LOD | 5.05 | < LOD | 1.5 | < LOD | 3.33 | < LOD | 6.66 | < LOD | 7.84 |
| MDHC612 | 368940 | 5962410 | 30 | ppm | < LOD | 1.52 | 77.67 | 2.37 | 100.84 | 2.42 | < LOD | 5.44 | 27.11 | 1.34 | 4.84 | 2.08 | < LOD | 4.85 | < LOD | 1.5 | < LOD | 3.5 | < LOD | 6.54 | < LOD | 7.03 |
| MDHC613 | 368889 | 5962323 | 30 | ppm | < LOD | 2.26 | 94.24 | 2.8 | 164.99 | 3.31 | < LOD | 5.96 | 24.83 | 1.37 | 3.81 | 2.19 | < LOD | 5.54 | < LOD | 1.5 | < LOD | 2.72 | < LOD | 7.16 | < LOD | 7.92 |
| MDHC614 | 368835 | 5962238 | 30 | ppm | 2.33 | 1.51 | 88.95 | 2.65 | 111.59 | 2.7 | < LOD | 6.19 | 32.87 | 1.54 | 6.72 | 2.34 | < LOD | 5.43 | < LOD | 1.5 | < LOD | 3.83 | < LOD | 7.4 | < LOD | 8.2 |
| MDHC615 | 368782 | 5962151 | 30 | ppm | < LOD | 1.5 | 95.46 | 2.53 | 70.58 | 2.05 | < LOD | 6.12 | 45.24 | 1.7 | 5.16 | 2.16 | < LOD | 4.77 | < LOD | 1.5 | < LOD | 3.43 | < LOD | 6.66 | < LOD | 7.91 |
| MDHC617 | 368755 | 5962109 | 30 | ppm | < LOD | 1.53 | 83.16 | 2.47 | 96.27 | 2.42 | < LOD | 5.85 | 31.91 | 1.47 | 4.86 | 2.15 | < LOD | 5.1 | < LOD | 1.5 | < LOD | 2.47 | < LOD | 6.69 | < LOD | 7.51 |
| MDHC618 | 368103 | 5962587 | 30 | ppm | < LOD | 1.5 | 58.14 | 2.17 | 136.83 | 2.79 | 5.51 | 3.59 | 21.32 | 1.2 | 3.24 | 1.94 | < LOD | 4.4 | < LOD | 1.5 | < LOD | 3.03 | < LOD | 6.25 | < LOD | 6.2 |
| MDHC619 | 368156 | 5962673 | 30 | ppm | < LOD | 2.03 | 55.35 | 2.07 | 101.33 | 2.39 | < LOD | 4.99 | 19.33 | 1.15 | 4.14 | 2 | < LOD | 5.06 | < LOD | 1.5 | < LOD | 2.42 | < LOD | 6.35 | < LOD | 7.3 |
| MDHC620 | 368209 | 5962759 | 30 | ppm | < LOD | 1.5 | 83.81 | 2.63 | 191.17 | 3.45 | < LOD | 6.01 | 28.17 | 1.4 | 5.62 | 2.22 | < LOD | 5.42 | < LOD | 1.5 | < LOD | 3.83 | < LOD | 7.05 | < LOD | 8.04 |
| MDHC621 | 368264 | 5962845 | 30 | ppm | < LOD | 1.5 | 67.59 | 2.35 | 151 | 3 | < LOD | 5.48 | 24.22 | 1.29 | 3.26 | 2.01 | < LOD | 4.87 | < LOD | 1.5 | < LOD | 2.37 | < LOD | 6.27 | < LOD | 7.08 |
| MDHC622 | 368315 | 5962931 | 30 | ppm | < LOD | 2.25 | 88.78 | 2.74 | 152.11 | 3.19 | < LOD | 6.01 | 28.05 | 1.45 | 3.58 | 2.19 | < LOD | 5.55 | < LOD | 1.5 | < LOD | 3.81 | < LOD | 7.2 | < LOD | 7.95 |
| MDHC623 | 368365 | 5963017 | 30 | ppm | < LOD | 1.89 | 116.19 | 2.82 | 116.91 | 2.64 | < LOD | 6.69 | 51.63 | 1.8 | 6.84 | 2.32 | < LOD | 5.42 | < LOD | 1.5 | < LOD | 3.77 | < LOD | 6.95 | < LOD | 7.78 |
| MDHC624 | 368418 | 5963103 | 30 | ppm | < LOD | 2.18 | 87.46 | 2.67 | 162.9 | 3.22 | 8.06 | 4.32 | 35.27 | 1.56 | 5.13 | 2.26 | < LOD | 5.61 | < LOD | 1.5 | < LOD | 3.98 | < LOD | 6.93 | < LOD | 7.76 |
| MDHC6245 | 368473 | 5963187 | 30 | ppm | 3.71 | 1.55 | 92.42 | 2.78 | 146.11 | 3.14 | 7.15 | 4.58 | 43.53 | 1.77 | 4.58 | 2.33 | < LOD | 5.88 | < LOD | 1.5 | < LOD | 4.19 | < LOD | 7.27 | < LOD | 7.96 |
| MDHC626 | 368525 | 5963273 | 30 | ppm | < LOD | 1.5 | 96.48 | 2.81 | 142.73 | 3.08 | < LOD | 7.09 | 51.2 | 1.9 | 6.31 | 2.42 | < LOD | 5.74 | < LOD | 1.5 | < LOD | 3.89 | < LOD | 7.47 | < LOD | 8.08 |
| MDHC627 | 368579 | 5963358 | 30 | ppm | < LOD | 2.22 | 100.05 | 2.83 | 196.03 | 3.53 | 17.2 | 4.8 | 44.59 | 1.72 | 7.08 | 2.37 | < LOD | 5.54 | < LOD | 1.5 | < LOD | 3.6 | < LOD | 6.93 | < LOD | 7.41 |
| MDHC628 | 368633 | 5963444 | 30 | ppm | < LOD | 1.53 | 103.1 | 3.02 | 216.59 | 3.9 | 7.88 | 4.63 | 35.78 | 1.63 | 4.03 | 2.3 | < LOD | 5.8 | < LOD | 1.5 | < LOD | 4.06 | < LOD | 7.84 | < LOD | 8.56 |
| MDHC629 | 368687 | 5963530 | 30 | ppm | < LOD | 2.34 | 124.4 | 3.06 | 102.85 | 2.62 | < LOD | 7.07 | 55.11 | 1.97 | 5.75 | 2.45 | 8.24 | 4.19 | < LOD | 1.54 | < LOD | 3.27 | < LOD | 7.83 | < LOD | 8.55 |
| MDHC630 | 368741 | 5963616 | 30 | ppm | 2.33 | 1.42 | 61.59 | 2.13 | 54.3 | 1.83 | < LOD | 7.5 | 82.69 | 2.28 | 7.58 | 2.45 | 6.31 | 3.86 | < LOD | 1.5 | < LOD | 3.33 | < LOD | 6.84 | < LOD | 7.46 |
| MDHC630dup | 368741 | 5963616 | 30 | ppm | 2.11 | 1.4 | 57.23 | 2.04 | 51.62 | 1.76 | < LOD | 7.27 | 78.86 | 2.19 | 7.82 | 2.42 | 7.84 | 3.84 | < LOD | 1.5 | < LOD | 2.87 | < LOD | 6.41 | < LOD | 6.97 |
| MDHC632 | 368794 | 5963702 | 30 | ppm | 2.79 | 1.54 | 128.96 | 2.99 | 88.35 | 2.36 | 11.34 | 5.31 | 82.08 | 2.32 | 7.6 | 2.59 | 21.78 | 4.58 | < LOD | 1.5 | < LOD | 3.67 | < LOD | 7.3 | < LOD | 8.23 |
| MDHC633 | 368768 | 5963658 | 30 | ppm | < LOD | 1.5 | 123.28 | 2.92 | 60.83 | 1.99 | 9.84 | 5.55 | 93.91 | 2.5 | 9.96 | 2.69 | 6.21 | 4.04 | < LOD | 1.5 | < LOD | 4.09 | < LOD | 7.46 | < LOD | 7.89 |
| NPHC002 | 369491 | 5963310 | 30 | ppm | < LOD | 2.11 | 93.85 | 2.49 | 90.9 | 2.28 | < LOD | 5.55 | 31.33 | 1.41 | 5.25 | 2.1 | < LOD | 4.96 | < LOD | 1.5 | 7.64 | 2.54 | < LOD | 6.27 | < LOD | 6.78 |
| NPHC003 | 369437 | 5963223 | 30 | ppm | 4.6 | 1.58 | 115.3 | 2.97 | 128.43 | 2.9 | 7.57 | 4.47 | 41.06 | 1.7 | 6.43 | 2.4 | < LOD | 5.91 | < LOD | 1.5 | < LOD | 4.11 | < LOD | 7.49 | < LOD | 8.02 |
| NPHC004 | 369384 | 5963139 | 30 | ppm | < LOD | 2.23 | 100.25 | 2.85 | 191.81 | 3.52 | < LOD | 6.36 | 35.36 | 1.57 | 5.92 | 2.32 | < LOD | 5.79 | < LOD | 1.5 | < LOD | 4.08 | < LOD | 7.29 | < LOD | 8.13 |
| NPHC005 | 369320 | 5963040 | 30 | ppm | < LOD | 1.61 | 2.47 | 1 | 5.69 | 0.86 | < LOD | 2.75 | < LOD | 1.5 | < LOD | 1.75 | < LOD | 2.63 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 4.24 | < LOD | 4.12 |
| NPHC006 | 369280 | 5962969 | 30 | ppm | 3.75 | 1.5 | 91.48 | 2.54 | 64.44 | 2.02 | < LOD | 7 | 66.07 | 2.08 | 5.6 | 2.34 | < LOD | 5.71 | < LOD | 1.5 | < LOD | 4.11 | < LOD | 7.11 | < LOD | 7.81 |
| NPHC007 | 369229 | 5962883 | 30 | ppm | 4.29 | 1.47 | 185.9 | 3.85 | 28.82 | 1.55 | 11.09 | 4.87 | 78.53 | 3.22 | 7.36 | 2.37 | < LOD | 5.59 | < LOD | 1.5 | < LOD | 2.86 | < LOD | 6.94 | < LOD | 7.64 |
| NPHC008 | 369176 | 5962798 | 30 | ppm | 4.34 | 1.32 | 100.42 | 2.79 | 26.11 | 1.58 | < LOD | 4.98 | 31.22 | 1.8 | 4.2 | 1.91 | < LOD | 5.87 | < LOD | 1.5 | < LOD | 2.27 | < LOD | 5.41 | < LOD | 6.28 |
| NPHC009 | 369122 | 5962711 | 30 | ppm | < LOD | 2.27 | 104.61 | 3.05 | 30.15 | 1.49 | < LOD | 7.75 | 82.91 | 2.61 | 8.05 | 2.59 | 11.67 | 4.28 | < LOD | 1.5 | < LOD | 4.49 | < LOD | 7.49 | < LOD | 8.71 |
| NPHC010 | 369068 | 5962625 | 30 | ppm | < LOD | 1.5 | 68.71 | 2.16 | 71.47 | 2.01 | < LOD | 4.99 | 24.81 | 1.26 | < LOD | 2.81 | < LOD | 4.76 | < LOD | 1.5 | < LOD | 3.03 | < LOD | 6.22 | < LOD | 6.63 |
| NPHC010dup | 369068 | 5962625 | 30 | ppm | < LOD | 2.15 | 91.56 | 2.53 | 102.34 | 2.45 | < LOD | 5.85 | 35.42 | 1.51 | 5.27 | 2.14 | < LOD | 4.78 | < LOD | 1.5 | < LOD | 2.3 | < LOD | 6.63 | < LOD | 7 |
| NPHC011 | 369015 | 5962540 | 30 | ppm | < LOD | 1.5 | 110.5 | 2.88 | 101.89 | 2.58 | < LOD | 6.92 | 54.09 | 1.94 | 7.77 | 2.48 | < LOD | 6.64 | < LOD | 1.5 | < LOD | 2.87 | < LOD | 7.31 | < LOD | 8.06 |
| NPHC012 | 368963 | 5962455 | 30 | ppm | < LOD | 1.5 | 92.1 | 2.56 | 93.01 | 2.37 | < LOD | 5.95 | 36.66 | 1.56 | 6.44 | 2.26 | < LOD | 5.38 | < LOD | 1.5 | < LOD | 3.71 | < LOD | 7.01 | < LOD | 7.56 |
| NPHC013 | 368910 | 5962369 | 30 | ppm | < LOD | 2.11 | 89.45 | 2.52 | 126.95 | 2.71 | < LOD | 5.55 | 28.94 | 1.37 | 5.18 | 2.11 | < LOD | 4.91 | < LOD | 1.5 | < LOD | 2.8 | < LOD | 6.74 | < LOD | 7.45 |

## Holy Cross XRF Analyses 2016 Soil Samples

| SAMPLE | Zn | Zn Error | W | W Error | Cu | Cu Error | Ni | Ni Error | Co | Co Error | Fe | Fe Error | Mn | Mn Error | Cr | Cr Error | V | V Error | Ti | Ti Error | Sb | Sb Error | Sn | Sn Error | Cd |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MDHC602 | 79.88 | 8.21 | < LOD | 54.17 | 36.82 | 10.63 | < LOD | 32.51 | 194.62 | 72.61 | 21026.35 | 190.36 | 264.42 | 46.48 | < LOD | 143.24 | < LOD | 308.59 | < LOD | 478.81 | < LOD | 13.25 | < LOD | 14.66 | < LOD |
| MDHC603 | 41.08 | 6.63 | < LOD | 50.36 | 33.53 | 10.16 | < LOD | 32.19 | 128.54 | 57.38 | 13431.3 | 149.24 | 400.69 | 48.21 | < LOD | 151.56 | < LOD | 321.9 | < LOD | 506.65 | < LOD | 12.98 | < LOD | 14.28 | < LOD |
| MDHC604 | 71.81 | 7.28 | < LOD | 47.16 | 24.98 | 9.2 | < LOD | 28.88 | 239.57 | 60.89 | 16214.83 | 156.47 | < LOD | 87.6 | < LOD | 137.48 | < LOD | 286.86 | < LOD | 449.01 | < LOD | 12.19 | < LOD | 13.43 | < LOD |
| MDHC605 | 93.58 | 8.34 | < LOD | 52.97 | 66.57 | 11.27 | < LOD | 31.65 | < LOD | 106.18 | 21672.33 | 186.57 | 521.88 | 51.9 | < LOD | 142.45 | < LOD | 292.64 | < LOD | 460.97 | < LOD | 12.7 | < LOD | 14.07 | < LOD |
| MDHC606 | 31.16 | 6.23 | < LOD | 29.57 | 31 | 10.14 | < LOD | 32.06 | 168.33 | 58.69 | 13874.13 | 151.47 | < LOD | 90.59 | < LOD | 149.58 | < LOD | 323.25 | < LOD | 506.48 | < LOD | 13.02 | < LOD | 14.32 | < LOD |
| MDHC607 | 34.75 | 5.81 | < LOD | 44.28 | 23.15 | 8.87 | < LOD | 27.51 | 158.73 | 54.93 | 14006.62 | 142.15 | < LOD | 83.13 | < LOD | 131.3 | < LOD | 275.62 | < LOD | 436.7 | < LOD | 11.65 | < LOD | 12.88 | < LOD |
| MDHC608 | 63.81 | 7.74 | < LOD | 30.09 | 42.57 | 10.89 | < LOD | 31.89 | < LOD | 115.75 | 24408.2 | 208.21 | 433.78 | 52.66 | < LOD | 145.5 | < LOD | 311.68 | < LOD | 496.93 | < LOD | 13.49 | < LOD | 14.84 | < LOD |
| MDHC609 | 30.07 | 6.52 | 44.78 | 21.61 | 32.75 | 10.6 | < LOD | 34.14 | < LOD | 87.02 | 11777 | 145.32 | 319.65 | 48.01 | < LOD | 169.9 | < LOD | 358.38 | < LOD | 550.72 | < LOD | 13.76 | < LOD | 15.04 | < LOD |
| MDHC610 | 42.26 | 6.53 | < LOD | 49.01 | 38.79 | 10.09 | < LOD | 29.82 | 145.4 | 71.29 | 22068.28 | 186.23 | 216.02 | 43.01 | < LOD | 133.65 | < LOD | 285.65 | < LOD | 450.36 | < LOD | 12.54 | < LOD | 13.9 | < LOD |
| MDHC611 | 54.89 | 6.93 | < LOD | 49.76 | 27.27 | 9.62 | < LOD | 29.89 | 254.37 | 66.03 | 18626.63 | 170.63 | 230 | 42.8 | < LOD | 135.59 | < LOD | 277.04 | < LOD | 434.2 | < LOD | 12.21 | < LOD | 13.51 | < LOD |
| MDHC612 | 34.86 | 6.09 | < LOD | 46.57 | 52.61 | 10.2 | < LOD | 28.84 | 259.15 | 60.6 | 15787.35 | 154.94 | < LOD | 88.93 | < LOD | 136.32 | < LOD | 282.79 | < LOD | 447.39 | < LOD | 12.14 | < LOD | 13.49 | < LOD |
| MDHC613 | 55.31 | 7.23 | < LOD | 51.12 | 25.15 | 10.13 | < LOD | 32.42 | < LOD | 112.57 | 23686.29 | 200.57 | 299.57 | 47.69 | < LOD | 141.36 | < LOD | 304.94 | < LOD | 493.12 | < LOD | 13.29 | < LOD | 14.5 | < LOD |
| MDHC614 | 47.33 | 6.99 | < LOD | 51.83 | 28.86 | 10.35 | < LOD | 33.35 | 222.06 | 70.64 | 19924.26 | 184.05 | 308.03 | 47.46 | < LOD | 149.77 | < LOD | 310.19 | < LOD | 502.83 | < LOD | 13.23 | < LOD | 14.57 | < LOD |
| MDHC615 | 40.81 | 6.38 | < LOD | 49.98 | 28.28 | 9.56 | < LOD | 29.66 | 170.43 | 60.69 | 16083.33 | 157.83 | < LOD | 90.48 | < LOD | 143.64 | < LOD | 302.32 | < LOD | 493.46 | < LOD | 12.54 | < LOD | 13.69 | < LOD |
| MDHC617 | 43.92 | 6.53 | < LOD | 48.41 | 29.58 | 9.67 | < LOD | 29.86 | 195.41 | 64.86 | 18009.73 | 168.89 | 261.83 | 43.66 | < LOD | 134.78 | < LOD | 302.28 | < LOD | 469.23 | < LOD | 12.64 | < LOD | 13.92 | < LOD |
| MDHC618 | 35.74 | 5.91 | < LOD | 45.6 | 31.27 | 9.31 | < LOD | 28.11 | 176.83 | 56.5 | 14481.38 | 146.12 | 489.51 | 47.37 | < LOD | 133.64 | < LOD | 276.25 | < LOD | 431.71 | < LOD | 11.84 | < LOD | 13.1 | < LOD |
| MDHC619 | 156.71 | 9.5 | < LOD | 48.95 | 47.35 | 9.75 | < LOD | 29.03 | 198.62 | 61.91 | 17613.78 | 161.2 | 733.09 | 53.61 | < LOD | 136.65 | < LOD | 276.19 | < LOD | 430.58 | < LOD | 12.04 | < LOD | 13.25 | < LOD |
| MDHC620 | 72.94 | 7.64 | < LOD | 50.41 | 77.27 | 11.3 | < LOD | 31.09 | 137.78 | 71.35 | 22244.78 | 187.22 | 568.68 | 52.27 | < LOD | 137.27 | < LOD | 292 | < LOD | 464.67 | < LOD | 12.69 | < LOD | 13.97 | < LOD |
| MDHC621 | 40.62 | 6.23 | < LOD | 46.08 | 29.14 | 9.25 | < LOD | 29 | 186.93 | 55.25 | 13045.03 | 141.71 | 391.92 | 45.85 | < LOD | 140.45 | < LOD | 298.5 | < LOD | 464.58 | < LOD | 12.3 | < LOD | 13.43 | < LOD |
| MDHC622 | 72.72 | 7.9 | < LOD | 30.16 | 27.26 | 10.17 | < LOD | 33.18 | 276.18 | 70.76 | 19349.35 | 182.66 | 324.41 | 48.31 | < LOD | 152.77 | < LOD | 326.41 | 576.28 | 344.75 | < LOD | 13.36 | < LOD | 14.83 | < LOD |
| MDHC623 | 66.77 | 7.29 | < LOD | 50.13 | 27.89 | 9.68 | < LOD | 30.43 | 150.68 | 64.98 | 18827.97 | 170.75 | 301.33 | 44.79 | < LOD | 139.7 | < LOD | 294.7 | < LOD | 476.01 | < LOD | 12.56 | < LOD | 13.81 | < LOD |
| MDHC624 | 61.98 | 7.26 | < LOD | 49.62 | 44.43 | 10.31 | < LOD | 31.61 | 228.77 | 67.15 | 18610 | 174.28 | 436.19 | 49.6 | < LOD | 144.61 | < LOD | 299.67 | < LOD | 472.76 | < LOD | 12.91 | < LOD | 14.19 | < LOD |
| MDHC6245 | 59.97 | 7.5 | < LOD | 52.31 | 31.89 | 10.32 | < LOD | 32.5 | 202.93 | 67.48 | 17685.54 | 175.35 | 336.4 | 48.52 | < LOD | 153.9 | < LOD | 325.93 | < LOD | 508.76 | < LOD | 13.42 | < LOD | 14.83 | < LOD |
| MDHC626 | 91.42 | 8.61 | < LOD | 53.87 | 45.29 | 11.14 | < LOD | 33.15 | 193.22 | 71.65 | 20448.53 | 187.81 | 586.92 | 55.28 | < LOD | 150.97 | < LOD | 319.43 | 655.18 | 343.29 | < LOD | 13.27 | < LOD | 14.66 | < LOD |
| MDHC627 | 144.84 | 9.74 | < LOD | 52.39 | 104.92 | 12.18 | < LOD | 30.29 | 192.52 | 65.66 | 18245.63 | 171.14 | 313.79 | 45.53 | < LOD | 134.74 | < LOD | 296.42 | < LOD | 469.68 | < LOD | 12.59 | < LOD | 13.9 | < LOD |
| MDHC628 | 68.04 | 7.93 | < LOD | 55.33 | 32.47 | 10.75 | < LOD | 33.2 | 238.18 | 72.96 | 20558.88 | 189.98 | 431.38 | 52.19 | < LOD | 158.6 | < LOD | 335.95 | 1169.89 | 353.42 | < LOD | 13.7 | < LOD | 15.13 | < LOD |
| MDHC629 | 78.71 | 8.27 | 34.19 | 21.39 | 37.59 | 10.86 | < LOD | 33.33 | 125.62 | 74.29 | 21753.41 | 194.86 | 345.48 | 49.58 | < LOD | 150.59 | < LOD | 327.44 | 732.38 | 342.99 | < LOD | 13.48 | < LOD | 14.85 | < LOD |
| MDHC630 | 105.06 | 8.5 | < LOD | 49.51 | 54.04 | 10.39 | < LOD | 30.64 | 194.92 | 65.59 | 18600.23 | 171.39 | 927.45 | 59.6 | < LOD | 139.44 | < LOD | 291.77 | < LOD | 440.48 | < LOD | 12.6 | < LOD | 13.88 | < LOD |
| MDHC630dup | 103.97 | 8.27 | < LOD | 47.32 | 48.1 | 10.08 | < LOD | 29.51 | 173.46 | 61.1 | 16595.92 | 159.54 | 1169.78 | 62.94 | < LOD | 134.04 | < LOD | 282.14 | < LOD | 427.94 | < LOD | 12.17 | < LOD | 13.38 | < LOD |
| MDHC632 | 53.45 | 7.09 | < LOD | 29.85 | 20.02 | 9.76 | < LOD | 31.33 | 176.97 | 58.7 | 13883.11 | 151.29 | 289.92 | 45.43 | < LOD | 153.46 | < LOD | 322.12 | < LOD | 509.52 | < LOD | 12.93 | < LOD | 14.34 | < LOD |
| MDHC633 | 115.73 | 9.12 | < LOD | 52.63 | 23.91 | 10 | < LOD | 31.44 | < LOD | 107.06 | 21152.46 | 188.37 | 432.3 | 50.81 | < LOD | 147.76 | < LOD | 318.08 | < LOD | 493.77 | < LOD | 13.21 | < LOD | 14.45 | < LOD |
| NPHC002 | 49.71 | 6.47 | < LOD | 26.21 | 31.57 | 9.34 | < LOD | 29.18 | 176.58 | 56.81 | 14477.59 | 146.73 | < LOD | 83.27 | < LOD | 134.53 | < LOD | 275.01 | < LOD | 423.01 | < LOD | 11.97 | < LOD | 13.11 | < LOD |
| NPHC003 | 81.38 | 8.27 | < LOD | 53.43 | 41.7 | 10.95 | < LOD | 31.84 | 113.98 | 72.87 | 21360.88 | 190.61 | 384.16 | 49.57 | < LOD | 139.44 | < LOD | 297.65 | < LOD | 479.66 | < LOD | 12.79 | < LOD | 14.13 | < LOD |
| NPHC004 | 43.09 | 6.72 | < LOD | 53.61 | 28.26 | 10.23 | < LOD | 32.18 | 140.57 | 62.26 | 16277.09 | 162.83 | 199.9 | 42.85 | < LOD | 146.77 | < LOD | 311.85 | < LOD | 474.58 | < LOD | 12.76 | < LOD | 14.03 | < LOD |
| NPHC005 | < LOD | 4.74 | < LOD | 31.07 | < LOD | 9.41 | < LOD | 19.09 | < LOD | 52.63 | 6988.11 | 83.84 | < LOD | 52.34 | < LOD | 86.52 | < LOD | 174.27 | < LOD | 264.52 | < LOD | 8.51 | < LOD | 9.35 | < LOD |
| NPHC006 | 49.47 | 6.83 | < LOD | 28.56 | 34.6 | 9.94 | < LOD | 31.5 | 236.78 | 51.56 | 10015.46 | 128.05 | < LOD | 94.31 | < LOD | 156.94 | < LOD | 319.22 | < LOD | 524.47 | < LOD | 12.69 | < LOD | 14.02 | < LOD |
| NPHC007 | 24.63 | 5.76 | 34.19 | 19.43 | 41.31 | 10.04 | < LOD | 30.49 | 122.49 | 41.94 | 7136.09 | 104.84 | < LOD | 88.45 | < LOD | 143.68 | < LOD | 307.34 | < LOD | 482.8 | < LOD | 11.96 | < LOD | 13.17 | < LOD |
| NPHC008 | 15.44 | 4.64 | < LOD | 41.05 | 21.27 | 8.03 | < LOD | 24.75 | < LOD | 46.08 | 2958.1 | 64.51 | < LOD | 75.24 | < LOD | 126.9 | < LOD | 263.95 | < LOD | 396.87 | < LOD | 10.75 | < LOD | 11.84 | < LOD |
| NPHC009 | 20.9 | 6 | 36.9 | 21.08 | 39.78 | 10.79 | < LOD | 32.9 | 90.3 | 45.58 | 7770.77 | 116.22 | 463.89 | 50.11 | < LOD | 168.47 | < LOD | 349.31 | < LOD | 532.36 | < LOD | 13.18 | < LOD | 14.47 | < LOD |
| NPHC010 | 35.69 | 5.86 | < LOD | 44.9 | < LOD | 14.09 | < LOD | 27.93 | 140.97 | 47.01 | 9719.15 | 120.07 | 938.68 | 56.4 | < LOD | 140.73 | < LOD | 287.29 | < LOD | 447.59 | < LOD | 11.87 | < LOD | 13.11 | < LOD |
| NPHC010dup | 39.25 | 6.29 | < LOD | 47.86 | 27.29 | 9.68 | < LOD | 30.57 | 202.76 | 56.57 | 13639.27 | 144.86 | 192.44 | 40.56 | < LOD | 140.14 | < LOD | 297.69 | < LOD | 461.76 | < LOD | 12.17 | < LOD | 13.45 | < LOD |
| NPHC011 | 45 | 6.91 | < LOD | 51.78 | 90.57 | 12.04 | < LOD | 31.82 | 216.57 | 67.48 | 17935.18 | 175.04 | 212.21 | 44.38 | < LOD | 145.34 | < LOD | 315.49 | < LOD | 498.59 | < LOD | 13.16 | < LOD | 14.47 | < LOD |
| NPHC012 | 78.65 | 7.76 | < LOD | 49.79 | 39.78 | 10.18 | < LOD | 30.51 | 135.5 | 67.27 | 19982.68 | 177.55 | 226.28 | 43.25 | < LOD | 139.91 | < LOD | 296.48 | < LOD | 466.74 | < LOD | 12.65 | < LOD | 13.93 | < LOD |
| NPHC013 | 39.42 | 6.23 | < LOD | 27.88 | 39.42 | 9.85 | < LOD | 30.34 | 211.96 | 49.65 | 10221.45 | 124.36 | 266.87 | 41.77 | < LOD | 145.88 | < LOD | 308.72 | < LOD | 479.73 | < LOD | 12.21 | < LOD | 13.46 | < LOD |

**Holy Cross XRF Analyses 2016 Soil Samples**

| SAMPLE | Cd Error | Ag | Ag Error | Pd | Pd Error | Bal | Bal Error | Nb | Nb Error | Bi | Bi Error | Re | Re Error | Ta | Ta Error | Hf | Hf Error |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MDHC602 | 10.97 | < LOD | 7.65 | < LOD | 5.97 | 971395.81 | 484.19 | 6.93 | 1.31 | < LOD | 5.15 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| MDHC603 | 10.65 | < LOD | 7.42 | < LOD | 5.81 | 980352.69 | 473.86 | 5.29 | 1.25 | < LOD | 4.89 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| MDHC604 | 10.18 | < LOD | 6.97 | < LOD | 5.52 | 977070 | 438.07 | 7.72 | 1.24 | < LOD | 4.25 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| MDHC605 | 10.5 | < LOD | 7.4 | < LOD | 5.72 | 970290.69 | 469.49 | 7.68 | 1.28 | 7.8 | 3.53 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| MDHC606 | 10.75 | < LOD | 7.45 | < LOD | 5.83 | 980051.44 | 474.09 | 5.52 | 1.26 | 6.1 | 3.65 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| MDHC607 | 9.81 | < LOD | 6.65 | < LOD | 5.23 | 979946.5 | 417.63 | 4.39 | 1.16 | < LOD | 4.2 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| MDHC608 | 11.13 | < LOD | 7.75 | < LOD | 6.08 | 967215.75 | 507.42 | 9.37 | 1.37 | 12.85 | 4.16 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| MDHC609 | 11.24 | < LOD | 7.76 | < LOD | 6.16 | 982470.5 | 506.18 | 4.87 | 1.29 | 10.86 | 3.97 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| MDHC610 | 10.4 | < LOD | 7.2 | < LOD | 5.63 | 970227.81 | 459.84 | 7.14 | 1.26 | < LOD | 4.45 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| MDHC611 | 10.27 | < LOD | 7.04 | < LOD | 5.59 | 974169.94 | 439.43 | 6.42 | 1.24 | < LOD | 3.42 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| MDHC612 | 10.11 | < LOD | 6.97 | < LOD | 5.45 | 977618 | 435.08 | 5.01 | 1.2 | < LOD | 3.06 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| MDHC613 | 10.92 | < LOD | 7.57 | < LOD | 5.92 | 968047.69 | 496.64 | 5.06 | 1.27 | < LOD | 3.32 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| MDHC614 | 10.88 | < LOD | 7.58 | < LOD | 5.94 | 972454.5 | 491.38 | 6.46 | 1.29 | < LOD | 4.61 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| MDHC615 | 10.36 | < LOD | 7.11 | < LOD | 5.64 | 977282.81 | 464.18 | 6.98 | 1.24 | < LOD | 4.53 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| MDHC617 | 10.54 | < LOD | 7.23 | < LOD | 5.7 | 974889.38 | 460.49 | 5.98 | 1.24 | < LOD | 3.22 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| MDHC618 | 9.89 | < LOD | 6.75 | < LOD | 5.29 | 978895.31 | 420.84 | 4.58 | 1.17 | < LOD | 2.86 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| MDHC619 | 10.05 | < LOD | 6.78 | < LOD | 5.44 | 974611.69 | 432.9 | 3.24 | 1.14 | < LOD | 4 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| MDHC620 | 10.49 | < LOD | 7.27 | < LOD | 5.72 | 969458.88 | 471.17 | 7.13 | 1.25 | < LOD | 4.44 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| MDHC621 | 10.19 | < LOD | 6.94 | < LOD | 5.56 | 980769.38 | 440.62 | 4.46 | 1.19 | < LOD | 2.99 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| MDHC622 | 11.03 | < LOD | 7.62 | < LOD | 6.06 | 972530.75 | 502.84 | 5.39 | 1.28 | < LOD | 3.38 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| MDHC623 | 10.34 | < LOD | 7.19 | < LOD | 5.64 | 973903.38 | 463.22 | 5.65 | 1.22 | < LOD | 4.71 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| MDHC624 | 10.69 | < LOD | 7.35 | < LOD | 5.83 | 973864.31 | 468.24 | 5.49 | 1.24 | < LOD | 4.64 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| MDHC6245 | 11.07 | < LOD | 7.69 | < LOD | 6.04 | 975085.44 | 494.16 | 6.08 | 1.3 | < LOD | 4.65 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| MDHC626 | 10.95 | < LOD | 7.71 | < LOD | 5.97 | 970958 | 503.89 | 7.27 | 1.32 | < LOD | 4.95 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| MDHC627 | 10.5 | < LOD | 7.33 | < LOD | 5.71 | 974359.13 | 461.5 | 8.47 | 1.29 | < LOD | 4.78 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| MDHC628 | 11.13 | < LOD | 7.83 | < LOD | 6.1 | 970463.69 | 518.02 | 6.7 | 1.31 | < LOD | 3.58 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| MDHC629 | 11.06 | < LOD | 7.79 | < LOD | 6.05 | 969695.06 | 510.08 | 8.98 | 1.35 | < LOD | 4.52 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| MDHC630 | 10.46 | < LOD | 7.11 | < LOD | 5.65 | 973223.94 | 451.31 | 4.7 | 1.21 | < LOD | 5.22 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| MDHC630dup | 10.14 | < LOD | 6.89 | < LOD | 5.43 | 975349.13 | 434.38 | 4.15 | 1.19 | < LOD | 5.13 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| MDHC632 | 10.67 | < LOD | 7.42 | < LOD | 5.82 | 979865.31 | 476.32 | 7.66 | 1.29 | 7.29 | 3.75 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| MDHC633 | 10.83 | < LOD | 7.49 | < LOD | 5.9 | 970888.38 | 492.39 | 6.14 | 1.27 | 6.8 | 3.79 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| NPHC002 | 10.02 | < LOD | 6.82 | < LOD | 5.47 | 979276.88 | 415.6 | 5.9 | 1.2 | < LOD | 4.23 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| NPHC003 | 10.74 | < LOD | 7.46 | < LOD | 5.83 | 970831.5 | 481.47 | 8.97 | 1.34 | < LOD | 4.83 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| NPHC004 | 10.55 | < LOD | 7.36 | < LOD | 5.78 | 977052.44 | 463.24 | 6.75 | 1.27 | < LOD | 4.62 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| NPHC005 | 7.51 | < LOD | 4.88 | < LOD | 3.95 | 989474.25 | 259.06 | 2.66 | 1 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| NPHC006 | 10.54 | < LOD | 7.27 | < LOD | 5.81 | 984908.75 | 469.42 | 6.16 | 1.25 | < LOD | 5.13 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| NPHC007 | 10.02 | < LOD | 6.94 | < LOD | 5.5 | 988906.19 | 431.19 | 9.63 | 1.25 | 5.19 | 3.39 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| NPHC008 | 9.18 | < LOD | 6.09 | < LOD | 4.93 | 995218.69 | 321.91 | 4.21 | 1.09 | < LOD | 3.13 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| NPHC009 | 10.84 | < LOD | 7.55 | < LOD | 5.89 | 987693.56 | 436.65 | 5.16 | 1.26 | < LOD | 5.48 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| NPHC010 | 9.92 | < LOD | 6.71 | < LOD | 5.34 | 984432.38 | 418.62 | 3.5 | 1.15 | < LOD | 2.85 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| NPHC010dup | 10.16 | < LOD | 7 | < LOD | 5.47 | 980347.81 | 439.79 | 5.89 | 1.22 | < LOD | 4.38 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| NPHC011 | 10.9 | < LOD | 7.53 | < LOD | 5.97 | 974955.31 | 484.15 | 4.4 | 1.25 | < LOD | 5.11 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| NPHC012 | 10.47 | < LOD | 7.24 | < LOD | 5.66 | 972655.81 | 464.38 | 4.7 | 1.21 | < LOD | 4.52 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| NPHC013 | 10.11 | < LOD | 6.98 | < LOD | 5.48 | 984590 | 440.31 | 6.18 | 1.21 | < LOD | 4.21 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |

**Holy Cross XRF Analyses 2016 Soil Samples**

| SAMPLE | East_N83 | North_N83 | Durtn | Units | Mo | Mo Error | Zr | Zr Error | Sr | Sr Error | U | U Error | Rb | Rb Error | Th | Th Error | Pb | Pb Error | Se | Se Error | As | As Error | Hg | Hg Error | Au | Au Error |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NPHC014 | 368857 | 5962282 | 30 | ppm | < LOD | 1.5 | 60.15 | 2.16 | 86.94 | 2.27 | 6.67 | 3.55 | 19.87 | 1.19 | < LOD | 2.93 | < LOD | 4.8 | < LOD | 1.5 | < LOD | 2.32 | < LOD | 6.68 | < LOD | 7.55 |
| NPHC016 | 368804 | 5962197 | 30 | ppm | < LOD | 1.5 | 111.82 | 2.74 | 120.83 | 2.64 | < LOD | 5.33 | 24.99 | 1.29 | 4.34 | 2.06 | < LOD | 5.05 | < LOD | 1.5 | < LOD | 2.47 | < LOD | 6.58 | < LOD | 6.86 |
| NPHC017 | 368074 | 5962548 | 30 | ppm | < LOD | 1.86 | 66.5 | 2.29 | 143.19 | 2.88 | < LOD | 5.35 | 23.21 | 1.25 | < LOD | 2.9 | < LOD | 5.1 | < LOD | 1.5 | < LOD | 2.39 | < LOD | 6.32 | < LOD | 7.22 |
| NPHC018 | 368127 | 5962635 | 30 | ppm | < LOD | 1.58 | 83.77 | 2.72 | 238.02 | 3.93 | < LOD | 6.17 | 28.67 | 1.42 | < LOD | 3.15 | < LOD | 5.46 | < LOD | 1.5 | < LOD | 2.69 | < LOD | 6.93 | < LOD | 7.72 |
| NPHC019 | 368179 | 5962718 | 30 | ppm | < LOD | 1.5 | 52.93 | 2 | 94.7 | 2.28 | < LOD | 4.96 | 17.77 | 1.1 | 3.97 | 1.96 | < LOD | 5 | < LOD | 1.5 | < LOD | 2.34 | < LOD | 6.07 | < LOD | 6.56 |
| NPHC020 | 368232 | 5962803 | 30 | ppm | < LOD | 1.86 | 57.25 | 2.37 | 141.24 | 3.58 | 6.38 | 3.92 | 21.55 | 1.28 | < LOD | 3.06 | < LOD | 5.38 | < LOD | 1.5 | < LOD | 2.62 | < LOD | 7.39 | < LOD | 7.85 |
| NPHC021 | 368284 | 5962890 | 30 | ppm | < LOD | 1.5 | 44.9 | 1.93 | 120.76 | 2.54 | < LOD | 4.68 | 15.46 | 1.02 | < LOD | 2.56 | < LOD | 4.31 | < LOD | 1.5 | < LOD | 2.01 | < LOD | 5.74 | < LOD | 5.95 |
| NPHC022 | 368338 | 5962975 | 30 | ppm | < LOD | 1.5 | 61.96 | 2.13 | 117.64 | 2.52 | < LOD | 4.94 | 19.47 | 1.13 | < LOD | 2.75 | < LOD | 4.54 | < LOD | 1.5 | < LOD | 2.13 | < LOD | 6.06 | < LOD | 6.82 |
| NPHC023 | 368391 | 5963062 | 30 | ppm | < LOD | 1.5 | 99.55 | 2.64 | 121.23 | 2.67 | < LOD | 5.77 | 30.99 | 1.43 | 5.52 | 2.16 | < LOD | 5.24 | < LOD | 1.5 | < LOD | 3.43 | < LOD | 6.79 | < LOD | 7.61 |
| NPHC024 | 368437 | 5963151 | 30 | ppm | < LOD | 2.23 | 87.65 | 2.66 | 146.42 | 3.06 | < LOD | 6.15 | 32.92 | 1.53 | 4.87 | 2.25 | < LOD | 5.67 | < LOD | 1.5 | < LOD | 3.87 | < LOD | 7.25 | < LOD | 8.34 |
| NPHC025 | 368498 | 5963234 | 30 | ppm | < LOD | 2.09 | 67.4 | 2.29 | 124.05 | 2.69 | 6.52 | 3.85 | 29.45 | 1.39 | < LOD | 2.96 | < LOD | 4.85 | < LOD | 1.5 | < LOD | 3.45 | < LOD | 6.91 | < LOD | 7.2 |
| NPHC026 | 368547 | 5963318 | 30 | ppm | 3.65 | 1.58 | 92.32 | 2.88 | 177.41 | 3.54 | 8.15 | 4.83 | 44.53 | 1.82 | 5.96 | 2.46 | < LOD | 5.97 | < LOD | 1.51 | < LOD | 4.12 | < LOD | 7.6 | < LOD | 7.94 |
| NPHC027 | 368599 | 5963404 | 30 | ppm | < LOD | 2.38 | 102.2 | 3.09 | 218.53 | 4.01 | 12.23 | 5.17 | 47.96 | 1.91 | 7.06 | 2.58 | < LOD | 6.11 | < LOD | 1.56 | < LOD | 4.23 | < LOD | 8.12 | < LOD | 8.94 |
| NPHC028 | 368652 | 5963490 | 30 | ppm | 3.16 | 1.44 | 80.61 | 2.47 | 134.61 | 2.83 | < LOD | 6.06 | 37.59 | 1.56 | 5.15 | 2.16 | < LOD | 5.18 | < LOD | 1.5 | < LOD | 2.52 | < LOD | 6.72 | < LOD | 7.13 |
| NPHC029 | 368706 | 5963577 | 30 | ppm | < LOD | 2.07 | 104.84 | 2.92 | 156.61 | 3.25 | < LOD | 7.19 | 51.4 | 1.9 | 4.14 | 2.34 | < LOD | 5.9 | < LOD | 1.5 | < LOD | 2.93 | < LOD | 7.53 | < LOD | 7.78 |
| NPHC029dup | 368706 | 5963577 | 30 | ppm | 2.53 | 1.43 | 97.07 | 2.61 | 124.64 | 2.69 | < LOD | 6.16 | 41.61 | 1.62 | 5.16 | 2.17 | < LOD | 6.46 | < LOD | 1.5 | < LOD | 3.15 | < LOD | 7.18 | < LOD | 7.77 |

**Holy Cross XRF Analyses 2016 Soil Samples**

| SAMPLE | Zn | Zn Error | W | W Error | Cu | Cu Error | Ni | Ni Error | Co | Co Error | Fe | Fe Error | Mn | Mn Error | Cr | Cr Error | V | V Error | Ti | Ti Error | Sb | Sb Error | Sn | Sn Error | Cd |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NPHC014 | 42.39 | 6.47 | < LOD | 49.45 | 28.95 | 9.59 | < LOD | 29.86 | 211.86 | 60.89 | 15936.8 | 157.09 | < LOD | 89.06 | < LOD | 138.34 | < LOD | 296.72 | < LOD | 454.23 | < LOD | 12.43 | < LOD | 13.68 | < LOD |
| NPHC016 | 41.4 | 6.26 | < LOD | 46.76 | 24.5 | 9.34 | < LOD | 29.13 | 150.87 | 53.6 | 12634.02 | 138.16 | < LOD | 87.76 | < LOD | 140.25 | < LOD | 288.42 | < LOD | 459.37 | < LOD | 12.02 | < LOD | 13.32 | < LOD |
| NPHC017 | 50.2 | 6.48 | < LOD | 46.6 | 26.5 | 9.08 | < LOD | 28.82 | 249.22 | 52.26 | 11488.13 | 130.92 | 250.48 | 40.94 | < LOD | 137.15 | < LOD | 289.9 | < LOD | 439.12 | < LOD | 12.02 | < LOD | 13.23 | < LOD |
| NPHC018 | 133.44 | 9.4 | < LOD | 52.51 | 46.34 | 10.54 | < LOD | 31.26 | 255.46 | 63.73 | 16756.29 | 163.64 | 292.81 | 44.66 | < LOD | 137.51 | < LOD | 299.15 | < LOD | 448.55 | < LOD | 12.49 | < LOD | 13.79 | < LOD |
| NPHC019 | 92.05 | 7.69 | < LOD | 44.62 | 57.32 | 9.76 | < LOD | 28.01 | 279.87 | 57.86 | 15067.93 | 147.04 | 354.43 | 43.47 | < LOD | 129.93 | < LOD | 269.63 | < LOD | 417.76 | < LOD | 11.8 | < LOD | 12.94 | < LOD |
| NPHC020 | 55.18 | 7.33 | < LOD | 53.37 | 41.24 | 11.01 | < LOD | 32.35 | 191.31 | 64.67 | 16545.16 | 167.91 | 525.07 | 52.08 | < LOD | 138.37 | < LOD | 291.41 | < LOD | 461.98 | < LOD | 12.79 | < LOD | 14.05 | < LOD |
| NPHC021 | 40.74 | 5.86 | < LOD | 41.52 | 18.82 | 8.35 | < LOD | 26.13 | < LOD | 75.44 | 10654.26 | 121.77 | 351.42 | 41.73 | < LOD | 127.54 | < LOD | 268.47 | < LOD | 416.72 | < LOD | 11.25 | < LOD | 12.34 | < LOD |
| NPHC022 | 43.27 | 6.07 | < LOD | 44.68 | 17.49 | 8.49 | < LOD | 27.17 | 212.52 | 53.34 | 13181.23 | 136.02 | < LOD | 81.74 | < LOD | 125.44 | < LOD | 260.77 | < LOD | 411.66 | < LOD | 11.47 | < LOD | 12.68 | < LOD |
| NPHC023 | 51.59 | 6.69 | < LOD | 48.58 | 24.61 | 9.33 | < LOD | 30.24 | 175.1 | 55.39 | 13228.43 | 142.39 | < LOD | 89.89 | < LOD | 141.92 | < LOD | 298.43 | < LOD | 462.73 | < LOD | 12.31 | < LOD | 13.59 | < LOD |
| NPHC024 | 71.32 | 7.76 | < LOD | 53.88 | 40.1 | 10.62 | < LOD | 32.36 | 199.69 | 63.6 | 16385.01 | 164.78 | 461.04 | 50.45 | < LOD | 152.73 | < LOD | 324.73 | < LOD | 495.35 | < LOD | 12.92 | < LOD | 14.25 | < LOD |
| NPHC025 | 54.42 | 6.84 | 33.18 | 19.3 | 38.31 | 9.92 | < LOD | 29.93 | 189.6 | 51.78 | 11365.82 | 131.39 | < LOD | 87.6 | < LOD | 142.64 | < LOD | 298.45 | < LOD | 502.6 | < LOD | 11.94 | < LOD | 13.21 | < LOD |
| NPHC026 | 297.6 | 13.86 | < LOD | 57.57 | 57.39 | 11.91 | < LOD | 33.45 | < LOD | 121.24 | 29182.38 | 230.87 | 4313.96 | 117.2 | < LOD | 134.75 | < LOD | 280.61 | < LOD | 436.63 | < LOD | 13.29 | < LOD | 14.79 | < LOD |
| NPHC027 | 273.88 | 13.59 | < LOD | 61.54 | 116.52 | 13.76 | < LOD | 35.72 | < LOD | 113.66 | 22229.45 | 204.01 | 3605.1 | 109.31 | < LOD | 154.84 | < LOD | 332.87 | 812.14 | 344.01 | < LOD | 14.03 | < LOD | 15.36 | < LOD |
| NPHC028 | 63.16 | 7.11 | < LOD | 48.35 | 23.05 | 9.39 | < LOD | 29.64 | 209.53 | 55.99 | 13283.93 | 143 | 283.05 | 42.99 | < LOD | 138.87 | < LOD | 295.63 | < LOD | 462.85 | < LOD | 12.15 | < LOD | 13.43 | < LOD |
| NPHC029 | 92.39 | 8.58 | < LOD | 30.16 | 36.21 | 10.78 | < LOD | 32.8 | < LOD | 111.67 | 22680.23 | 198.04 | 261.12 | 46.84 | < LOD | 142.96 | < LOD | 311.5 | 507.75 | 336.68 | < LOD | 13.28 | < LOD | 14.76 | < LOD |
| NPHC029dup | 73.84 | 7.48 | 31.94 | 19.36 | 43.02 | 10.05 | < LOD | 30.76 | 273.36 | 52.92 | 11406.62 | 131.61 | < LOD | 84.52 | < LOD | 143.62 | < LOD | 311.6 | < LOD | 515.09 | < LOD | 12.15 | < LOD | 13.49 | < LOD |

**Holy Cross XRF Analyses 2016 Soil Samples**

| SAMPLE | Cd Error | Ag | Ag Error | Pd | Pd Error | Bal | Bal Error | Nb | Nb Error | Bi | Bi Error | Re | Re Error | Ta | Ta Error | Hf | Hf Error |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NPHC014 | 10.28 | < LOD | 7.08 | < LOD | 5.56 | 977503 | 443.93 | 3.56 | 1.18 | < LOD | 2.85 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| NPHC016 | 10.02 | < LOD | 6.91 | < LOD | 5.45 | 981660.75 | 431.25 | 8.15 | 1.25 | < LOD | 3.06 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| NPHC017 | 10.08 | < LOD | 6.85 | < LOD | 5.47 | 982874.38 | 418.31 | 5.25 | 1.18 | < LOD | 2.9 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| NPHC018 | 10.43 | < LOD | 7.22 | < LOD | 5.65 | 976158.13 | 448.04 | 6.88 | 1.26 | < LOD | 3.12 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| NPHC019 | 9.87 | < LOD | 6.65 | < LOD | 5.36 | 978155.19 | 412.25 | 3.82 | 1.14 | < LOD | 2.82 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| NPHC020 | 10.7 | < LOD | 7.4 | < LOD | 5.72 | 976236.31 | 456.61 | 5.79 | 1.28 | < LOD | 3.08 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| NPHC021 | 9.53 | < LOD | 6.38 | < LOD | 5.11 | 984070.13 | 393.56 | 2.16 | 1.1 | < LOD | 2.32 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| NPHC022 | 9.67 | < LOD | 6.57 | < LOD | 5.23 | 980897.19 | 397.06 | 4.03 | 1.13 | < LOD | 2.64 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| NPHC023 | 10.24 | < LOD | 7.06 | < LOD | 5.62 | 980811.56 | 439.38 | 5.87 | 1.21 | < LOD | 4.34 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| NPHC024 | 10.7 | < LOD | 7.39 | < LOD | 5.86 | 976511 | 480.19 | 6.87 | 1.28 | < LOD | 3.98 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| NPHC025 | 10.05 | < LOD | 6.87 | < LOD | 5.46 | 983174.06 | 451.34 | 7 | 1.23 | < LOD | 3.02 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| NPHC026 | 11.19 | < LOD | 7.85 | < LOD | 6.08 | 957910.38 | 509.75 | 9.2 | 1.38 | < LOD | 5.05 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| NPHC027 | 11.51 | < LOD | 8.11 | < LOD | 6.25 | 964967.56 | 536.14 | 9.08 | 1.39 | 5.46 | 3.54 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| NPHC028 | 10.17 | < LOD | 7.03 | < LOD | 5.56 | 980598.13 | 438.9 | 5.69 | 1.21 | < LOD | 4.44 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| NPHC029 | 11.02 | < LOD | 7.74 | < LOD | 5.98 | 969015.25 | 502.04 | 6.31 | 1.3 | < LOD | 3.82 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |
| NPHC029dup | 10.16 | < LOD | 7.04 | < LOD | 5.57 | 982621.25 | 460.57 | 8.16 | 1.24 | < LOD | 3.84 | < LOD | 1.5 | < LOD | 1.5 | < LOD | 1.5 |