

ASSESSMENT REPORT
2020 SOIL GEOCHEMISTRY AND PROSPECTING

at the

MM & BLACKBEAR PROJECT

MM 1 – 10: YD132001 – YD132010
MM 13 – 36: YD132013 – YD132036
BLACKBEAR 1 – 5: YF08691 – YF08695
BLACK BEAR 6 – 25: YD132051 – YD132070
BLACK BEAR 26 – 30: YD132037 – YD132041

located at

NTS 115N/15

Latitude 63°54'N; Longitude 140°34'W

Dawson Mining District

Yukon, CANADA

for claim owners

WILLIAM MANN & MAX MIKHAILYTCHEV

prepared by

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YMEP PROJECT 20- 058

Field Work Performed August 2- 5 and September 10 to 13, 2020



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INTRODUCTION

The MM & Blackbear project hosts high grade silver-lead-gold veins along with potential for porphyry and skarn deposits, located in the Sixtymile placer gold camp of western Yukon Territory. The project is comprised of 34 MM claims and 30 Blackbear claims which are owned by William Mann and Max Mikhailytchev. The claim blocks are not contiguous and are separated by about 2km, however assessment work from both properties is combined in this report.

This report describes a program of soil sampling and prospecting performed by the owners between August 2- 5 and September 10 to 13, 2020. This work resulted in the discovery of the No. 99 silver- gold vein by prospecting. The project was optioned to ATAC Resources in November 2020.

PROPERTY LOCATION, CLAIM DATA AND ACCESS

The MM & Blackbear project consists of 64 mineral claims in two blocks located in western Yukon at latitude 63°54' north and longitude 140°34' west on NTS map sheet 115N/15 (Figure 1). The claims are all registered with the Dawson Mining Recorder. The MM and Black Bear claims are filed in the names of William Mann or Max Mikhailytchev however both claim blocks are jointly and equally owned by the two prospecting partners.

Claim data are listed below while the locations of individual claims are shown on Figure 2.

<u>Claim Name</u>	<u>Grant Number</u>	<u>Expiry Date*</u>
MM 1 – 10	YD132001 – YD132010	2024/02/24
MM 13 – 36	YD132013 – YD132036	2021/08/05
BLACKBEAR 1 – 5	YF08691 – YF08695	2022/02/24
BLACK BEAR 6 – 25	YD132051 – YD132070	2022/02/24
BLACK BEAR 26 – 30	YD132037 – YD132041	2021/08/05

* Expiry dates exclude 2020 work which has been filed for assessment credit but not yet accepted.

The property lies 65 km due west of Dawson City and can be reached by four wheel drive vehicle via the Sixtymile Road, which runs south from the Top of the World Highway. An extensive system of bush roads and trails exist on the alpine ridge but to reach them, the Sixtymile River must be forded. During spring runoff and following major storms, this ford is sometimes impassable. The Top of the World Highway extends west from Dawson City into Alaska. It is open during summer and fall when the ferry across the Yukon River is in service. Dawson City is situated 536 km by road north of Whitehorse, the Yukon's main supply centre, and is reached via the all-season Klondike Highway. Total road distance from Dawson City to the property is 115km. Helicopters are based in Dawson City. A temporary road accessible tent camp was located in an existing clearing adjacent to the No. 9 vein on the Blackbear claims.

Legend

Outboard

CG Chugach

YA Yakutat

Insular

WR Wrangellia

AX Alexander

KS Kluane schist

Arctic

AA Arctic Alaska

Intermontane

CC Cache Creek

ST Stikinia

QN Quesnellia

YT Yukon-Tanana

SM Slide Mountain

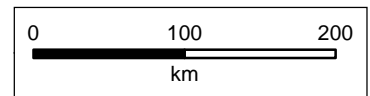
Ancestral North America

CA Cassiar

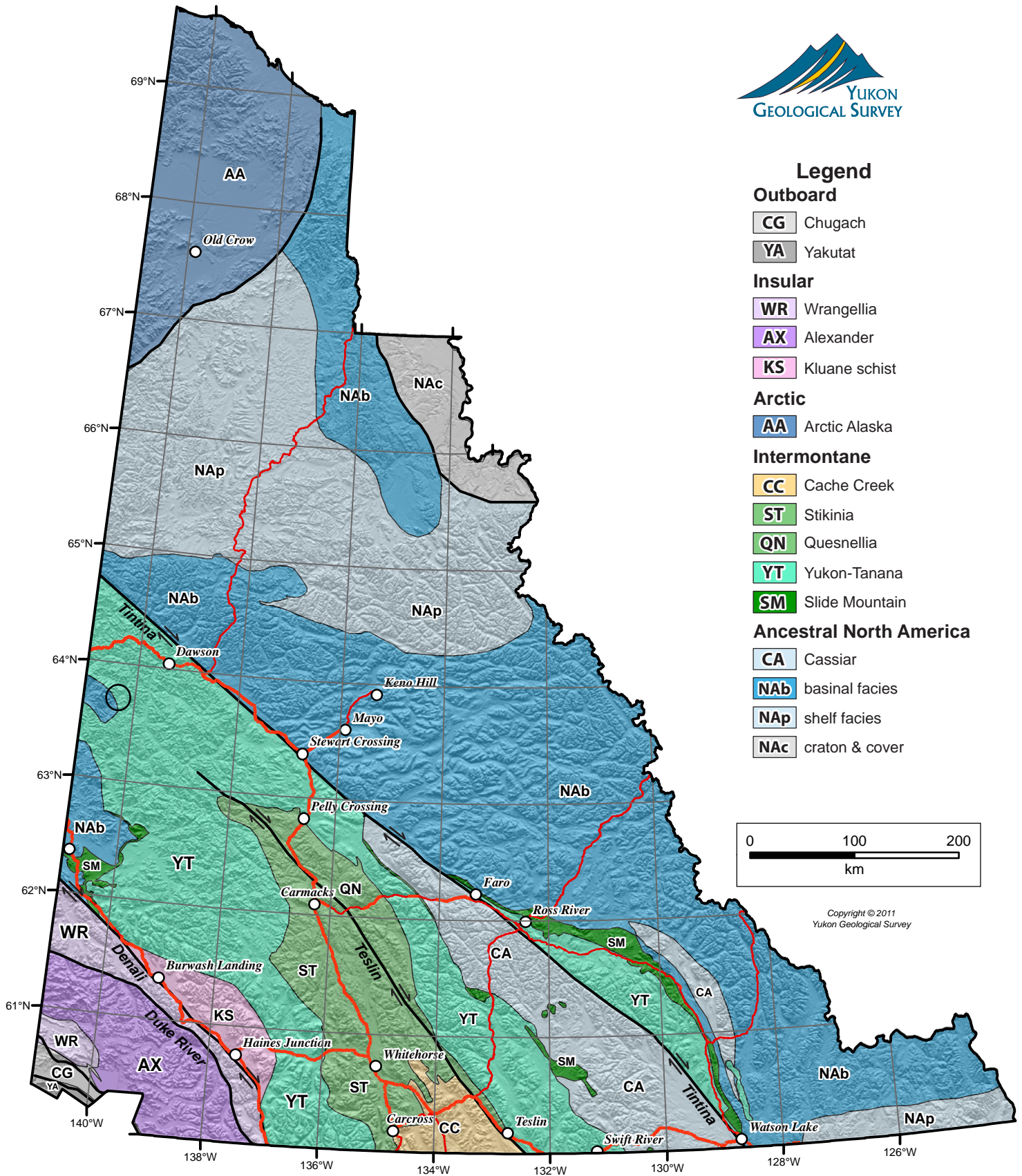
NAb basinal facies

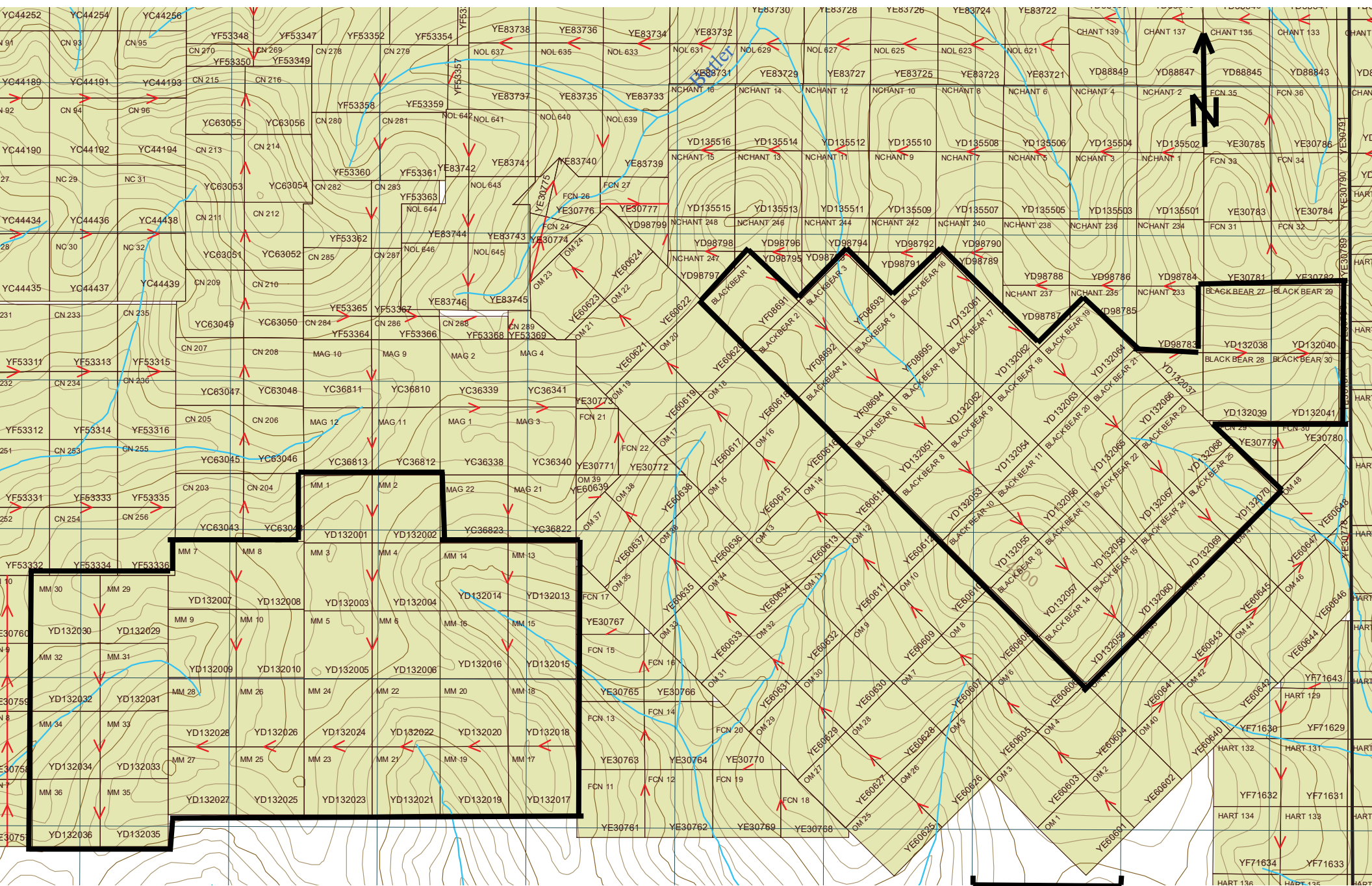
NAp shelf facies

NAc craton & cover



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PREVIOUS WORK

This section summarizes pre-2020 exploration activities in the project area.

1890s - silver-lead-gold veins were likely found in the Sixtymile area, but are not documented. Hand dug pits in the magnetite skarn showing at the MAG claims are an example of this work.

1899 - old hand pits are present and about a dozen copper claims were staked in the vicinity of Fifty Mile Creek in 1899-1900 by H.E. Porter. The “Fifty” minfile occurrence (115N 043) is located on the MM claims. Evidence of old workings, most of which expose traces of malachite in skarn, can be found along a zone some 300 m in length.

1917 – Reconnaissance geological mapping conducted for government of Canada (Cockfield, 1921). Focus on placer mining, with some discussion of possible bedrock sources.

1965 - the first reported discovery was made by J. Lerner and M. Chefkoi. Exploration consisted of “cold extraction” soil geochemistry and prospecting, which led to claim staking. The claims were optioned to A. Moisey, who later transferred them to the Sixtymile Mining Company Ltd.

1966 and 1967 - Sixtymile Mining carried out bulldozer trenching and electromagnetic (EM) surveys. The trenching uncovered substantial lenses of massive galena on the No. 1 and No. 3 veins. In summer 1966, a total of 22.7 tonnes of hand sorted material as collected from open cuts on the No. 1 and No. 3 veins, and shipped to the Cominco smelter at Trail, BC (Harper, 1967). This shipment averaged 2297 g/t Ag, 67.3% Pb and 2.1 g/t Au (Cholach, 1969).

1968 and 1969 - the property was optioned by Connaught Mines Ltd, which completed geological mapping, geochemical sampling, 35,200 m³ of bulldozer trenching and 431.8 m of diamond drilling in eight holes (Archer, 1969 & Cholach, 1969). The 1969 soil sampling covered a very large area - 10,542 soil samples collected on 225 claims were analyzed for Pb, Cu and Mo. This work generated new silver-lead targets and also identified strong copper response in irregular clusters away from the veins. Bulldozer trenching on the geochemical anomalies led to the discovery or delineation of more vein zones, including the No. 4, No.5 & 6, No. 7, No. 8 and No. 9. Note that the No. 9 vein was discovered in trench 69- 6, and some subsequent explorers have mistakenly called this vein No. 6. 8 diamond drill holes tested the No. 1 and No. 3 Veins. Most of the holes intersected variably mineralized vein structures (Cholach, 1969). Skarn alteration was noted in several locations, with weak mineralization. Some weakly galena bearing quartz- arsenopyrite veins were discovered by bulldozer trenching in this program, but not sampled or named as silver-rich galena was the exploration target.

1972 – The No. 9 vein was trenched at regular intervals for 350m (King, 2004).

1976 - Connaught Mines transferred its interest to A. Tottrup, who optioned the property to J. Lerner. That summer J. Lerner extracted an additional 218 tonnes of ore from shallow pits on the No. 1 and No. 3 Veins and shipped it to the Asarco smelter in East Helena, Montana.

Combined, the 1966 and 1976 shipments totalled 240.7 tonnes at an average grade of 2228.5 g/t Ag, 60% Pb and 1.0 g/t Au.

Note also that the No. 9 vein was stripped off and likely bulk sampled during the 1970s, though documentation of this work is not available.

1981 - J. Lerner staked sixteen additional claims. The entire claim block was then sold to Lougheed Resources Ltd., which cut trenches on the No. 1 Vein totalling 4134 m³. These trenches were mapped and sampled in 1982. The claims were held in good standing until 1986.

1987 - Walhalla Exploration Ltd. restaked the core of the property and optioned the claims to Croesus Resources Inc., which sub-optioned part of the claim block to Red Fox Minerals Ltd. and Kelan Resources Ltd. Aurum Geological Consultants Inc. was contracted to conduct an exploration program that consisted of geological mapping, geochemical sampling (2,545 samples analyzed for Au, Ag, Pb, Sb & As), geophysical surveys and bulldozer trenching (Price, 1988a and Keyser, 1988). A petrographic examination of two vein specimens is included as an appendix in the Keyser report.

1988 - Kelan Resources and Croesus Resources completed 315.8 m of diamond drilling in ten (short!) holes. Three of the holes tested the No. 9 Vein target, which is partially on the Black Bear claims (Price, 1988b). The first two holes were collared west of the stripped area, near the current claim boundary, with one of these testing a VLF geophysical anomaly. The third hole tested beneath the vein outcrop within the stripped area, with poor core recovery at the target. Strong sericite- clay alteration with molybdenite mineralization and fault gouge was seen in all holes near the No. 9 vein. Another of the holes tested the No. 8 Vein and the other six holes explored beneath a nearby magnetite skarn which lie immediately north of the MM claims. It is worth noting that two of the holes were not analyzed despite geological descriptions favourable for gold. The core from the 1988 diamond drilling program is stored at a site along the road close to the No. 8 vein.

1990 – Tombstone Explorations optioned 59 claims (including the No. 9 vein area) from Walhalla.

1992 – Tombstone Explorations explored two areas within a large copper in soil anomaly identified in the 1960s (Smith, 1993). A truck-mounted auger drill was used to test bedrock along two pre-existing trenches. 36 holes totalling 357 feet were drilled. The best results were from trench #5, where the 23 samples averaged 410 ppm Cu with elevated Au, Ag and Mo. This trench is on the current Black Bear claims, but was backfilled to form the current road to Cheryl creek. All of the claims in the area were allowed to lapse.

1997 – The federal government performed a Phase II environmental assessment of the No. 9 vein area (Environmental Services, Public Works and Government Services Canada, 1997). They erroneously called the area “Connaught”, which is an occurrence located about 5km west of the “Butler” minfile occurrence which hosts the No.9 vein. The environmental impact of work at the site was not considered to be significant.

1998 - 17363 Yukon Inc. restaked the main Connaught showings (MOS claims) and the No. 8 vein and magnetite skarn area (Mag claims). It conducted minor prospecting and geochemical

sampling before contracting Equity Engineering Ltd. to perform geological mapping and geochemical sampling across the known veins and showings (Harris, 1998). Harris's report contains detailed sampling information for the No. 9 vein from a prior report that is unavailable to this author. Soil samples were analyzed for Au, Ag, Pb, Sb & As.

Also in 1998 P. Ledwidge staked 12 OM claims to cover the No. 9 vein, and optioned them to Carta Resources.

Also in 1998 Nordling and Rudis prospected the Monica claims at the Enchantment minfile occurrence (115N 042) located about 4km southeast of the current Black Bear claims at the headwaters of Cheryl creek (Rudis, 1999).

1999 – Carta Resources staked 22 Tom claims. Carta established a baseline and grid lines and conducted soil sampling and geological mapping on the Om & Tom claims (King, 1999). 109 soil samples were collected from 4 grid lines at 50m intervals by auger and analyzed for 36 elements. The exploration target was both high grade silver lead veins and porphyry style copper molybdenum. Also in 1999 Prospector International Resources conducted silt sampling of the creeks around Mt. Hart to the east, which returned strongly anomalous gold from four creeks (Jaworski & Meyer, 2000).

2001 - An additional 10 MI claims were added on the east side of the Tom claims. The property was transferred to Grid Capital Corp. The soil grid was expanded and 335 samples collected on 10 additional lines (Ledwidge, 2001).

2003 – 19 kilometres of additional gridlines were cut, and an IP geophysical survey was conducted on the OM-TOM-MI property (Dziuba, 2003). 17 line-kilometres of IP and resistivity survey were conducted on 10 of the grid lines, targeting disseminated porphyry mineralization and sulphide-rich veins. Later that year a diamond drill program was conducted to test the property (King, 2003). 813m were drilled in 5 holes to test the No. 9 vein, a tourmaline breccia structure, and coincident geochemical and IP anomalies. A high grade section of vein was intersected, along with broad sections of weakly altered and Cu- Mo- Au- Ag mineralized quartz monzonite. Core from the 2003 drilling is stacked at the clearing near the No. 9 vein.

2005 - R. Nordling staked the Mag claims, which cover the No. 8 vein and nearby magnetite skarn. These claims are currently in good standing, and lie immediately north of the MM claims. The access trail to the No. 9 vein was extended southeast to placer claims at the Cheryl creek tributary of Fiftymile creek around this time.

2006 - the CN and NC claims were staked to the west of the property by ATAC, which immediately optioned a 50% interest in them to Klondike Silver. A property-wide helicopter borne VTEM survey was flown that summer (Wengzynowski, 2007). The survey produced time domain electromagnetic and magnetic data over their claims, but stopped west of our claims.

2007 - Klondike Silver performed prospecting, soil sampling, excavator trenching and 556 m of diamond drilling in seven holes (Wengzynowski, 2008). Soil sampling totalling 1621 samples was conducted on two grids. Trenching led to the discovery of a new vein (Stirling Vein) and the formal recognition of another, previously identified structure (Core Shack Vein). Diamond drilling confirmed down dip continuity of mineralization at the No. 1, No. 3, and No. 4 veins.

Also in 2007 ATAC and Klondike Silver optioned the Mag claims from R. Nordling. This property contains the No. 8 vein and a gold-bearing magnetite skarn zone.

2008 - ATAC and Klondike Silver continued with soil sampling, excavator trenching and excavator stripping of veins. 4,000 soil samples were collected in 3 grids, and analyzed for 34 elements, but not for gold (Eaton & Mundhenk, 2009). Prospecting and excavator trenching extended some known veins and resulted in the discovery of the AC/DC, Ice, Rain and PP veins. 41 trenches were excavated on 10 targets, with only 36 reaching bedrock due to permafrost. 254 rock samples were analyzed. Parts of the No. 1, No. 7, Stirling and No. 8 (Mag) veins were stripped in preparation for bulk sampling.

2009 - a program of prospecting, soil sampling and excavator stripping was undertaken by Klondike Silver on behalf of the Joint Venture (Mann, 2010). The number 1, 3, Stirling and 8 veins were stripped within existing excavations with the intention of improving access for future bulk sampling. Prospecting was conducted in areas of anomalous soils identified by 2007 and 2008 sampling. This program was successful in discovery or re-discovery of several mineralized veins not previously documented, notably the 69-3 vein and a north-easterly extension of the No. 7 vein. The Nordling option was terminated at the end of 2009.

2010 – A program of soil geochemistry, prospecting and geological mapping was conducted on the Connaught property (Mann, 2011a). A total of 654 samples were collected on 20 lines, including one line on the current MM claims. The prospecting resulted in the discovery of new high grade epithermal veining at the Woodpecker and New veins, as well as the rediscovery of epithermal veins in bulldozer trenches that were low in lead (and therefore ignored in 1969), specifically Sandro’s vein, 69-2 vein, Ridge vein and the Kitchen vein. Geological mapping focused on outlining the intrusive rocks that extend the length of the Connaught property to the west side of Mt. Hart. Also in 2010 the Hart and Art claims were staked by Klondike Silver immediately east of the current Blackbear claims. A program of soil geochemistry and prospecting was conducted (Mann, 2011b). Also in 2010 a very large block of claims was staked to the north, south and east of the area by Ryangold.

2011 – Ryangold conducted ridge and spur soil geochemistry over their claim block. Numerous gold anomalies were identified proximal to the current Black Bear claims (Jin, 2011).

2014 – The governments of Canada and Yukon flew an airborne magnetic survey over NTS 115N/15, which includes the property (Kiss & Coyle, 2014). Flight lines were spaced 400m apart, with 2400m control lines and a nominal terrain clearance of 125m.

2015 – ATAC Resources conducted a program of prospecting, mapping and soil geochemistry funded in part by YMEP grant 2015-026 (Burrell, 2015). Prospecting up to 1000 m along strike of the No. 9 Vein resulted in the discovery of three mineralized quartz vein float occurrences on the OM claims. Four composite grab samples were collected and returned peak values of 7.13 g/t gold, 1040 g/t silver, 15% lead. Extensive skarn was mapped adjacent to the Black Bear claims on the OM claims.

2018 – The No. 9 vein area was staked with Blackbear claims and the nearby MM claims staked to cover favourable ground by W. Mann and M. Mikhailytchev.

2019 - Soil geochemistry, prospecting and petrography were conducted as assessment work on the MM & Blackbear claims.

GEOMORPHOLOGY AND VEGETATION

The MM & BLACKBEAR project is situated in the Klondike Plateau ecoregion, part of the Boreal Cordillera ecozone (Smith et al, 2004). The property lies about 45 km southwest of the Tintina Trench. The area features rounded ridges and low peaks, which represent the top of an ancient peneplane that has been deeply incised by dendritic drainages (plate 2). Continental ice sheets did not cover the area but there is evidence of localized alpine glaciation. The property is drained by creeks that flow into the Sixtymile River, part of the Yukon River watershed.

Local elevations range from about 2900' in the valley of a tributary to Butler Gulch to a 4600' peak at the south of the Black Bear claim block. Terrain is subdued with gentle to moderately steep hillsides flanking broad, rounded hilltops. Outcrop is rare and is mostly confined to ridge crests. In areas where drilling has been done, rocks are typically weathered to about 30 m below surface. Soil development is fair, but there has been considerable solifluction on steeper slopes.

Vegetation consists of stunted spruce and buckbrush along with mosses and grasses near ridge tops. South and west facing slopes support grasslands. The project lies within the zone of extensive discontinuous permafrost, with north and east facing slopes that are often moss covered and permanently frozen. This may present an obstacle to soil sampling, trenching and road construction. Part of the MM property was burned by a wildfire in the summer of 2009, which has been favourable for exposing rock in outcrop and float.



Plate 2. View looking south from Black Bear claims. Number 9 vein clearing, road and campsite visible in upper right. MM claims are in middle distance, left side of photo.

GEOLOGY

Geology in the vicinity of the MM & BLACKBEAR project was most recently mapped at 1:50,000 scale by Mortensen (1996) and put into broader context by Gordey and Makepeace (1999). The Stewart River Area was mapped at 1:250,000 by Gordey and Ryan (2005), however no new mapping was done in the project area at that time. The Yukon Tanana Terrane was examined and compiled as a whole (Colpron, 2006). The Sixtymile – Pika fault zone area was described by Allan & Mortensen in 2012.

The property lies between the Tintina and Denali Faults within a part of Yukon that is mostly underlain by Yukon-Tanana Terrane. That tectonic terrane is composed of continental margin sediments, island arc volcanics and coeval intrusions, which were metamorphosed and deformed during accretion to the North American continent during Mesozoic times. In the Sixtymile district, the Yukon-Tanana Terrane is subdivided into two stratigraphic elements (the Nasina or Finlayson Assemblage) and a metaplutonic package (the South Fiftymile Batholith). The Yukon-Tanana units are intruded by undeformed, Late Cretaceous plugs and stocks.

Regional Geological Setting

(modified from Allan & Mortensen, 2012)

The project area is underlain by Yukon Tanana terrane Paleozoic metaplutonic and metasedimentary rocks of Devonian to Mississippian age. Basement rocks include K-feldspar augen orthogneiss of the Fiftymile batholith. The batholith is structurally overlain to the north along a north-dipping, low angle normal fault by metamorphic rocks of the Nasina assemblage of the Yukon Tanana terrane. The Nasina assemblage is composed of variably carbonaceous quartzite, semipelite, and lesser marble.

Exhumation of the Fiftymile batholith domain to upper crustal levels is inferred to have taken place in the mid-Cretaceous. The Fiftymile domain is therefore interpreted as a mid-Cretaceous core complex accommodated by a major north-dipping normal fault along its northern margin, named for convenience herein as the Fiftymile fault. Metamorphic basement units in the upper plate of the Fiftymile fault have been intruded by plutonic rocks of Late Cretaceous (67-71Ma) age.

Pebble conglomerate assigned to the Indian River Formation and ranging from <1m to >25m thick unconformably overlies metamorphic basement rocks locally. The sedimentary package is in turn overlain by Late Cretaceous volcanic and volcanoclastic rocks of Carmacks Group affinity that are best preserved where accommodated by extensional faulting in the Late Cretaceous.

The Yukon Tanana terrane as mapped by Colpron in the project area is identified as belonging to the Finlayson Assemblage instead of the Nasina assemblage. The Finlayson Assemblage of the Yukon Tanana terrane comprises Late Devonian to Mid-Mississippian fine grained, moderately to non-carbonaceous, metavolcanic quartz-muscovite-chlorite schist and quartzite with locally abundant interlayered mafic schist and amphibolite. In the Sixtymile River area, some higher grade metamorphic equivalent rocks are also present including coarse grained, locally

garnetiferous biotite-quartz-muscovite schist and amphibolite. Lenses of recrystallized limestone are present on the MM property, and extend northward towards Mt. Nolan.

A string of Late Cretaceous Plugs and Stocks of the Prospector Mountain Suite (67-71Ma) intrude the Nasina Assemblage and South Fiftymile Batholith in the project area. These plutons consist of fine to medium grained, equigranular biotite-hornblende quartz monzonite and granodiorite.

Structure

(modified from Allan & Mortensen, 2012)

All rock units are cut by a major northeast-trending fault zone, which was first published on geological maps as a coherent structure in 2012. This newly named “Sixtymile-Pika fault” is interpreted to have accommodated regionally significant sinistral displacement.

The Sixtymile-Pika fault segments are derived from some combination of historic or current field mapping, interpretations from airborne magnetic surfaces, and topographic lineament analysis.

Detailed mapping by Mortensen in the Sixtymile region demonstrated an asymmetric graben structure centred on the Sixtymile River valley, in which Late Cretaceous volcanic rocks are preserved. On the basis of mapped fault traces, this graben structure is well explained as a pull-apart basin within a stepover in the transpressive Sixtymile-Pika fault system. This graben hosts a porphyry Au- Cu target (minfile 116C 153). A series of shorter secondary fault strands with north-northwesterly trends in the Connaught area is also consistent with a sinistral transpressive regime. These structures are important for controlling mineralization, and are discussed in greater detail in the following sections.

On the basis of regional map patterns alone, Allan & Mortensen propose that the Sixtymile-Pika fault is a coherent structure with at least 140km of strike length and up to 17km of sinistral offset. This fault is truncated to the north by the mainly early Tertiary Tintina fault. Its continuation to the southwest could be speculated to follow a major magnetic discontinuity for an additional 35km along a segment of the upper Ladue River, and ultimately terminate in the Tanana River valley.

Property Geological Mapping

There has been little geological mapping conducted during exploration of the area, and no complete detailed property geology maps. The intrusive complex outline between Mt. Hart and the western end of the mineralized trend was mapped in 2010 (Figure 3, Mann, 2010a, b), and parts of the ATAC ground including the OM claims adjacent to the Black Bear claims were mapped at 1:10,000 in 2015 (Burrell, 2015).

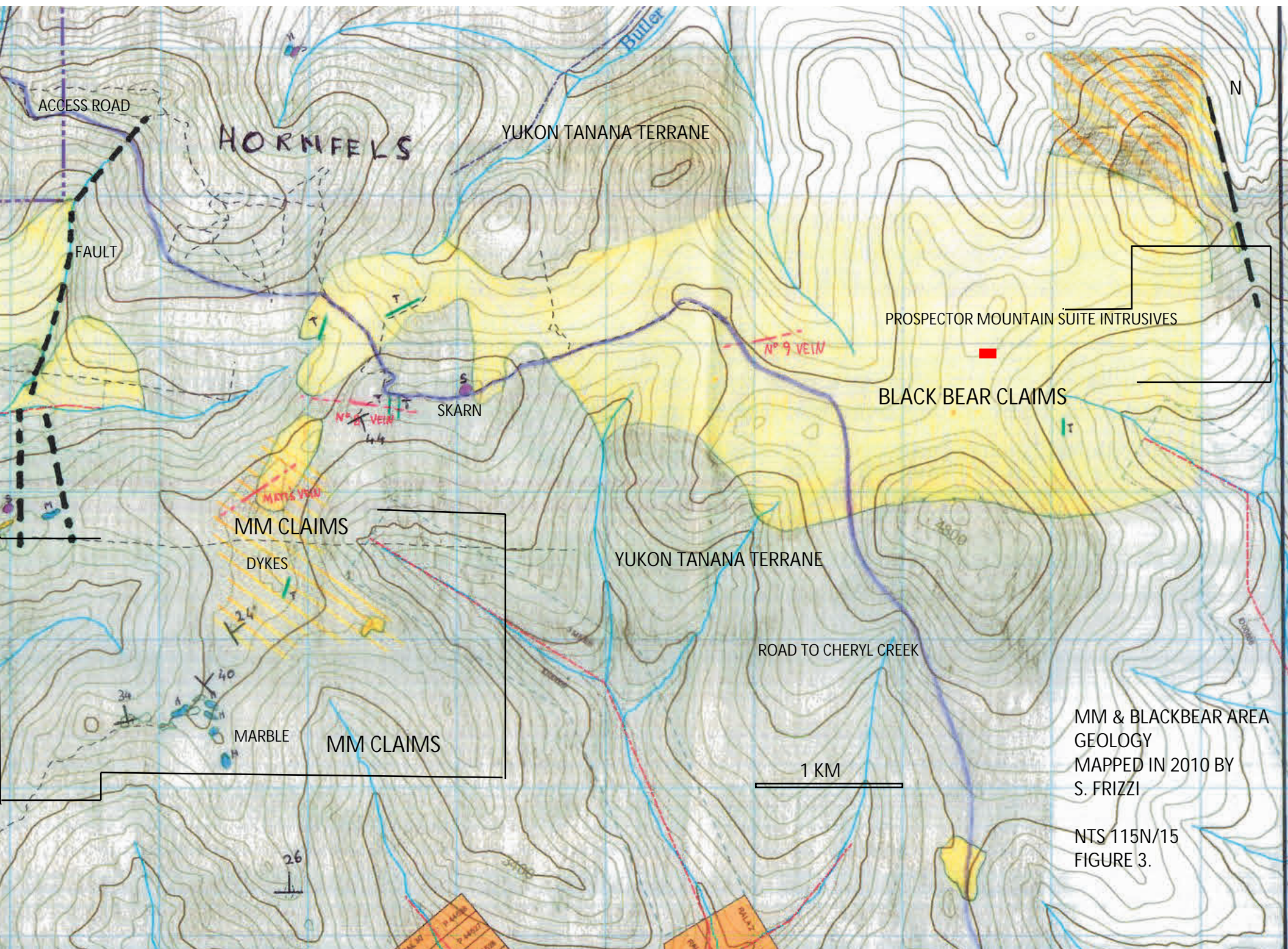
The intrusive rocks are now seen to occupy a nearly continuous east- west trending band from the west side of Mt. Hart across to the Connaught showings, a distance of about 20 kilometres. Considerable volumes of hornfels +/- skarn is present proximal to the intrusive, particularly in

the vicinity of the MM & Blackbear claims. Silver-rich lead veins are spatially associated with the intrusion.

Most of the geology is present on surface as felsenmeer boulders, with very little true outcrop. The recent mapping is consistent with the airborne magnetic signature of the area, which shows an extensive magnetic high that corresponds to the intrusive complex and associated hornfels zone (Kiss, 2014).

Petrography – 2019

Petrographic work on rocks from the claims was conducted by Dr. Timothy Liverton (Mann, 2019). Skarn, hornfels and intrusive rocks were examined. The skarn and hornfels contain significant amounts of amphibole (actinolite) and epidote. The intrusive rocks contain hornblende +/- biotite as mafic minerals. Potassic alteration was not definitively identified.



MM & BLACKBEAR AREA
GEOLOGY
MAPPED IN 2010 BY
S. FRIZZI

NTS 115N/15
FIGURE 3.

MINERALIZATION

The MM & BLACKBEAR project area has been explored as both a high-grade silver- lead \pm gold epithermal vein prospect similar to mines in the Keno Hill district, located about 250 km to the east and a porphyry Cu- Mo- Au- Ag target similar to the Casino deposit, located about 100km to the southeast. Some exploration has also been directed to skarn mineralization on ground now covered by the MAG claims immediately north of the MM property, and at the “Fifty” minfile occurrence located immediately south of the MM claims. The potential for porphyry Cu- Mo- Au- Ag mineralization was recognized as early as the 1960s era work, and was the primary target for much of the work on the BlackBear claims and claims owned by ATAC which lie between the MM and BlackBear claims during work conducted in the 1990s and 2000s. Porphyry occurrences are found in the Sixtymile valley to the north, and at the Taurus and Bluff occurrences to the southwest in Alaska. Significant gold-rich skarns have recently been discovered at the Peak occurrence in Alaska, associated with a 70ma intrusion proximal to the southwest extension of the Sixtymile-Pika fault. Placer gold has been mined from many creeks in the area, including the creeks that drain the claims for over 120 years. The property lies within the Tintina Gold Belt, and at the north-western end of the White Gold District.

Over twenty veins are known in the overall area, with two (No. 8 & 9) located on or adjacent to the MM & Blackbear. These vein zones are hosted by dilatant fault structures up to several metres in thickness. Individual vein structures have been traced for lengths in excess of 1000m, and most are open in both directions along strike. Soil geochemical anomalies indicate some much longer mineralized structures. Typical vein exposures consist of multiphase quartz that is variable mineralized with blebby to massive arsenopyrite + galena \pm chalcopyrite \pm covellite \pm stibnite \pm sulphosalts. Massive galena \pm anglesite lenses are intermittently exposed in the core of some veins. The galena is usually coarsely cubic and contains scattered blebs of chalcopyrite. Anglesite weathered surfaces often exhibit botryoidal textures and some show shear textures. The veins and their selvages are usually light coloured compared to the surrounding units and are often tinted green, because of oxidization of arsenopyrite to scorodite and sericitization of mafic minerals. Coarse white crystals of barite are present as a significant vein accessory mineral at the No. 9 vein. Bleached phyllic- and argillic-altered halos extend up to six metres into adjacent wallrocks at the No. 9 vein, but only a few centimetres at the other veins.

The No. 1, 3, 8 and Stirling veins strike 050 to 094° and dip subvertically to 070° to the south, while the No. 2, 4, 5, 6, 7 and Core Shack veins strike 020 to 038° and dip steeply toward the west or east (Harris, 1998). The AC/DC vein is anomalous in orientation, with a strike of roughly 020° and steep dip. The north-easterly striking veins structures are thought to be related to the Sixtymile- Pika fault.

The greatest number of veins in the area are found at the Connaught and Lerner minfile occurrences (115N 039, 040) on the claims of ATAC Resources, about 5 to 10km west of the MM claims. These include veins number 1 to 7, Stirling, Ice, Rain, PP, Ridge, Kitchen, Core Shack, AC/DC, 69-2 and 69-3. The MM & Black Bear claims are associated with the Butler minfile occurrence (115N 042), which include the number 8 & 9 veins, Matt’s vein, gold-bearing magnetite skarns and a large Cu- Mo- Au- Ag porphyry target area. A few minor showings are

known between the Connaught and Butler areas, including Sandro's vein, New vein and Woodpecker.

A magnetite skarn zone located on competitors ground immediately north of the MM claims and east of the No. 8 vein was tested by a series of very short drill holes (Price, 1989). Some significant gold intersections were returned from this drilling, with best values of 0.219 oz/ton over 5 feet.

Southwest of the No. 8 Vein and west of the MM claims on the ATAC property is the "Mom 18" skarn mineralization in an area of hand pits where skarn mineralization was noted in 1969. This material returned values up to 0.874 g/t Au, 312 g/t Ag, 7.24% Zn, In (68 ppm), W (201 ppm), Ga (13.95 ppm) with elevated values for Fe, Cu, Bi, As & Cd within coarse garnet- diopside skarn (Mann, 2010a). Ratios of Ag: Pb are very high compared to the local veins. Arsenic values are very low compared to vein mineralization. The "Fifty" copper minfile showing (115N 043) which is located in the southern side of the MM claims is thought to be related to this trend, with some prominent marble outcrops on the ridge crest between Mom 18 and Fifty.

The carbonate and skarn trend from "Mom 18" to "Fifty" lies on the new MM claims staked in 2020, and was investigated by soil geochemistry in the 2020 program (figure 4). These soils show elevated values of Pb (up to 191ppm Pb, figure 6), Mo, Cu, Zn, As and W. Precious metal values were not encouraging, while the base metal and pathfinder elements show proof of the mineralized skarn band concept.

Prospecting of the area due east of the No. 9 vein, in an area with extensive Pb, Ag, As in soil anomalies was successful in the discovery of traces of vein mineralization in several areas and of one strong vein. The "No. 99 vein" is typical of the galena- poor epithermal veins found in the Connaught camp. It is exposed in rubble crop intermittently along 45 meters of strike. Visible gold was observed in one specimen.

The drill core from 2003 is stacked at the edge of the No. 9 vein clearing, and is in fair to good condition. This core should be photographed, re-stacked on treated wood and covered. The drill core from 1988 drilling that tested the No. 9 vein (and other targets) is in poor condition, and is stored beside the access road on the MAG claims north of the No. 8 vein.



Plate 3. Newly discovered No. 99 vein. Sample #72916, 1474ppb Au, >100 ppm Ag.

2020 EXPLORATION PROGRAM

The 2020 field program was conducted by the author William Mann, and partner and senior field technician Max Mikhailytchev. Access was by truck to a tent camp located adjacent to the No. 9 vein.

2020 Soil Geochemistry – MM Claims

The 2020 soil sampling was designed to build on earlier grid sampling that was conducted between 1969 and 2019. One soil line from 2010 lies on the MM claims, on UTM gridline 517400E (Mann, 2010a). 2019 samples were collected along north-south UTM gridline 517800E, with a 50m sample spacing, and also sporadically in the vicinity of mineralized float at the Matt's vein target. In 2020 samples were collected on a southern extension of the 2010 sample line to cut across the carbonate band in proximity to several limestone outcrops (figure 4). A second line was sampled on east-west grid line 7085600N, just south of the skarn and marble outcrops on the ATAC ground. A third line was supposed to be located 200m south of this line, but was erroneously located 1km to the east.

These soils show elevated values of Pb (up to 191ppm Pb, figure 6), Mo, Cu, Zn, As and W. Precious metal values were not encouraging, while the base metal and pathfinder elements show proof of the mineralized skarn band concept.

The 2020 soil samples were located using handheld GPS units, with supplemental navigation by compass. The sites are marked by flagging tape marked with the sample numbers. Soil samples were collected using an auger or shovel. They were placed into Kraft paper bags along with an analytical sample tag. Soil descriptions were recorded in a notebook and usually photographed.

On the property there are many areas where permafrost is well developed near surface under moss (due to the relatively high elevation) and therefore deep sampling is often not possible. Both auger and shovel were used to collect samples. The bedrock which underlies much of the area sampled in 2020 tends to form boulder-rich soils that also hamper deep sampling, however samples were collected from as deep as possible. Ash and loess were not observed to be thick or extensive where sampling was conducted.

Soil sample locations from 2020, 2019 and 2010 are shown on Figure 4. Copper and Lead in soil results are shown in figures 5 & 6. Certificates of Analysis for soil samples are in Appendix IV. A spreadsheet containing analytical results and soil locations is included in the digital files for this report.

2020 Prospecting – MM Claims

Prospecting was conducted in conjunction soil sampling, and to further explore an area with abundant dykes and white quartz veins found along the ridge crest. Two samples were collected from rusty boulders, with elevated values in Cu, Pb, Zn, Ag and As.

Rock assay highlights, locations and descriptions are presented in Table 1. Certificates of analysis are in Appendix III. Rock sample locations are plotted in figure 7, with results for Cu in figure 8 and Pb in figure 9.

Table 1.						
Black Bear & MM 2020 Rock Sample Locations and Descriptions						
UTM NAD83 Zone 7V						
Sample	E	N	Description	Claims	Ag PPM	Au PPB
72793	522671	7087084	99 Vein. Rusty QV pebbles, easternmost sample	Blackbear	40.7	988.4
72794	522659	7087081	99 Vein. Altered wallrock w/ minor QV, cream colour w/ rust	Blackbear	>100.0	846.9
72795	522658	7087081	99 Vein. 9cm true width vein boulders, vuggy, oxidized, scorodite, local coxcomb texture.	Blackbear	99.2	1621.8
72796	522648	7087079	99 Vein. 2 to 10cm true width coxcomb grey QV cobbles and pebbles, trace arsenopyrite, galena.	Blackbear	50.3	206
72797	522648	7087079	99 Vein. 2 to 10cm true width coxcomb grey QV cobbles and pebbles, trace arsenopyrite, galena, VG.	Blackbear	16.6	322.6
72798	522637	7087078	99 Vein. QV pebbles and cobbles w/ hematite, limonite, jarosite & pits after pyrite, scorodite.	Blackbear	78.2	1420.2
72799	517734	7085949	Rusty boulders and cobbles near ridge crest, vuggy, irregular QVs w/ pits after sulphides.	MM	1.5	8.4
72800	517609	7085844	Boulder rusty epidote skarn @ contact w/ felsic dyke	MM	2.1	5.9
72907	522691	7087319	QV1 = 3 to 5cm white & smoky QVs in cobble float. Minor limonite & black amorphous mineral.	Blackbear	1	5.9
72908	522675	7087367	QV2 = 20 pebbles crystalline rusty white & grey QV, tr aspy.	Blackbear	4.8	95.6
72909	522680	7087209	L22E picket site. QV3 = 0.5cm vuggy white QV	Blackbear	0.3	1.6
72910	522680	7087209	QV4 = single rounded rusty QV cobble in unaltered boulders, near soil which ran 7092ppb Ag. Galena and arsenopyrite.	Blackbear	>100.0	418.3
72911	522089	7086795	QV5 = 3 to 5cm white & smoky QV cuts boulder	Blackbear	0.7	3.8
72912	522089	7086795	"near QV5" 7 rusty cobbles altered quartz monzonite, non-magnetic	Blackbear	0.1	<0.5
72913	522623	7087095	QV7 = 0.5 to 3cm vuggy, rusty QV w/ pits after pyrite, orange soil a.t.p. Approx. 20m N of 99 vein.	Blackbear	1	31.5
72914	522636	7087077	99 Vein. QV pebbles and cobbles w/ hematite, limonite, jarosite & pits after pyrite, scorodite.	Blackbear	54.4	2195.5
72915	522648	7087079	99 Vein. Vuggy coxcomb quartz vein w/ arsenopyrite.	Blackbear	38.7	141.2
72916	522660	7087081	99 Vein. 9cm true width vein boulders, sulphide-rich.	Blackbear	>100.0	1474.5

Sample	Cu PPM	Pb PPM	Zn PPM	Ag PPM	As PPM	Au PPB	Au PPM
72793	125.8	875.2	27	40.7	>10000.0	988.4	
72794	151.2	2532.3	51	>100.0	>10000.0	846.9	
72795	131.6	728.9	13	99.2	>10000.0	1621.8	
72796	28.8	709.9	18	50.3	5017.5	206	
72797	34.8	488.8	27	16.6	5586.6	322.6	
72798	352.5	6111.3	442	78.2	>10000.0	1420.2	
72799	111.4	251.8	13	1.5	111.8	8.4	
72800	180.3	34.4	576	2.1	43.4	5.9	
72907	11.4	126.5	124	1	92.2	5.9	
72908	22.5	1109.7	280	4.8	2443.7	95.6	
72909	8.7	53.4	71	0.3	18.3	1.6	
72910	2473.2	>10000.0	476	>100.0	>10000.0	418.3	
72911	16	92.7	25	0.7	36.5	3.8	
72912	10.7	16.8	21	0.1	12.2	<0.5	
72913	18.2	128.6	109	1	7841.9	31.5	
72914	309.9	>10000.0	573	54.4	>10000.0	2195.5	2.2
72915	34.5	845.2	15	38.7	5321.2	141.2	
72916	167.8	5342	60	>100.0	>10000.0	1474.5	

2020 Soil Geochemistry – Black Bear Claims

Two soil grid lines were sampled in 2020 to confirm and infill the anomalous Pb- Ag- As area, located due east of the No. 9 vein. This soil anomaly is over 2000m long above 100ppm Pb (up to 582ppm Pb) and over 500ppb Ag (up to 7092ppb Ag), with coincident As, Zn and other metals. Samples were collected on a north- south line (L522650E) and on an east- west line (L7087150N) at approximately 25m centres. This area has abundant boulder fields, so sample locations had to be adjusted to suitable sites. 3 soil samples were collected along the No. 99 vein.

The 2020 sampling confirmed the consistent high metal values above, and some of the highest results warrant follow up prospecting. Sample locations (with arsenic) are shown in figure 10, Pb values in figure 11 and Au in figure 12.



Plate 4. Soil 1961410, Black Bear claims, No. 99 vein area. 2.9ppm Ag, 66ppb Au, 1714ppm As.

2020 Prospecting – Black Bear Claims

Study of previous work in the area suggested that the strong Pb- Ag and pathfinder element in soil anomalies detected in the late 1990's and early 2000's located east of the No. 9 vein (Ledwidge, 2001) were likely never followed up due to a focus at the time on the porphyry Cu-Mo potential. This soil anomaly is over 2000m long with elevated Pb, Ag, As, Zn and other metals. Cu and Mo in soil were elevated in other parts of the property. This exploration effort led to the drilling of 5 diamond holes testing porphyry targets and the No. 9 vein (King, 2003).

Prospecting of this area in 2020 revealed numerous legible lath grid markers with aluminium tags. Very few broken rocks and no test pitting were observed in the area, suggesting little prospecting activity had been done to follow up anomalies.

Most of the anomalous Pb- Ag area is covered either by thick organic soils on the west side near the creek or large angular boulders of monotonous unaltered quartz monzonite on the high ground to the east. A few narrow veinlets and vein pebbles and cobbles were discovered within this area (QVs 2 to 7), with significant anomalies returned from QVs 2, 4, 6 and 7 (see table 1, figure 13). QV4 was a single cobble found proximal to the highest 2001 silver in soil anomaly (7092ppb Ag) and returned >100ppm Ag and 418ppb Au (see plate 6). This discovery is located up slope and over 150m from the No. 99 vein.

The most significant discovery was vein QV6, named the **No. 99 vein** (see plates 3, 5). This vein was discovered in rubble and subcrop along an east-west strike of 45 metres, and remains open ended. The true width is unknown, however slabs with a true width of 9cm were uncovered. The vein lies about 1.5km east of the No. 9 vein and more or less on strike. The vein is found within rusty and bleached sandy soil interpreted to be clay altered wall rock (see plate 4). Large, angular boulders of unaltered quartz monzonite are found a few metres away on either side of the vein zone. The vein is not closely located to any of the better 2001 soil geochemical anomalies.

The No. 99 vein consists of vuggy white to clear vein quartz, commonly rusty with limonite, jarosite, hematite and scorodite staining. Some fresh arsenopyrite, pyrite and galena are found locally. Cubic pits after pyrite are common. Coxcomb texture quartz is common. The soil within which vein fragments are found ranges from rusty to cream coloured, and appears to be derived from clay alteration of the quartz monzonite country rock, similar to the alteration at the No. 9 vein. Visible gold was noted in one vuggy quartz vein sample, #72797 which assayed only 322.6ppb Au.

Nine rock samples were collected for assay from the No. 99 vein, with gold values ranging from 141 to 2,195ppb Au. Silver values ranged from 16.6 to >100ppm Ag, with two samples over limit. One sample returned over the 10,000ppm Pb limit. Six samples returned over the 10,000ppm As limit. The vein is also anomalous in Mo, Cu, Zn, Sb, and Bi. The samples are low in barium, which differentiates it from the No. 9 vein which is barite rich. ATAC Resources has optioned the property, and has forwarded the rock sample rejects to ALS laboratory for further fire assays to determine more accurate values for Ag & Au.



Plate 5. 2020 discovery, the No. 99 vein.



Plate 6. Sample #72910, single cobble, new vein QV4. >100ppm Ag, 418ppb Au.

2020 Portable XRF Utilization

A Niton XL3t portable hand-held XRF was used in the field to provide rapid qualitative evaluation of soils and rocks. The information provided by the XRF can be useful in determining anomalous soils for possible follow-up during the program. 111 XRF readings were taken in 2020 (Appendix V).

Some samples of vein rock were analyzed for 3 minutes to determine the approximate silver grade and evaluate certain other elements. For example rock sample 72796 which returned 50.3 ppm Ag by assay had XRF values of 57 and 71 g/t Ag. Clearly, the XRF is a reasonably accurate indicator of high silver levels.

XRF readings were generally taken for 30 seconds through the soil sample bags, and high values of Pb, Zn, Cu and As used as indicators of mineralization. Comparison of XRF values to geochemical analysis for soils reveals a good general correlation in that elevated values for Pb, As, Cu and Zn by XRF generally return anomalous values for these metals by geochemistry.

William D. Mann, M.Sc., P.Geo.

MM & BLACKBEAR Property Assessment Report 2020

Rock samples were also analyzed by XRF, and this information was used to reduce the number of rock samples submitted for assay. Complete XRF readings from this project are presented in a .xls file as a digital appendix (Appendix V) to this report.

SAMPLE PREPARATION, ANALYSES AND SECURITY

The 2020 samples were placed into rice bags in the field by the author, sealed and secured. The samples were transported and delivered directly by the author to the Whitehorse preparation facility of Bureau Veritas Minerals (Acmelab). The samples were prepared in Whitehorse, then shipped by BVM to their Vancouver laboratory. Bureau Veritas Mineral Laboratories is accredited and certified to the International Organization for Standardization for Quality ISO9001:2008, Environmental Management: ISO14001 and Safety Management OH SAS 18001 and AS4801.

At the laboratory samples were dried at 60°C. Soil samples were sieved to -80 mesh. Rocks were crushed, then a 250g split was pulverized to 200 mesh. The soil samples were analyzed by BVM method AQ201 for 36 elements by ICP-MS after digestion of 15g by 1:1:1 aqua regia.

One rock sample returned 2195.5ppb Au, and this sample was re-analyzed by method FA550 - Lead collection fire assay fusion with gravimetric finish of a 50g subsample for Au which returned a result of 2.2 g/t Au. Three samples, all from the No. 99 vein returned greater than the 100 g/t Ag limit, and should have been re-analyzed to find the actual silver quantities. Similarly, two samples returned greater than the 10,000ppm Pb limit, and should have been further analyzed. Seven of the 18 samples returned above the 10,000ppm As limit.

Quality control procedures were implemented at the laboratory, involving the regular insertion of blanks and standards and repeat analyses on the samples. Quality Assurance data is provided for each batch of samples and included with each analytical certificate (Appendices III & IV).

There was no evidence of any tampering with the samples during collection or shipping. All sample preparation was conducted by the laboratory. The quality control report for the analyses is considered to show acceptable variations.

DISCUSSION AND CONCLUSIONS

The MM & Blackbear project hosts significant high grade epithermal silver-lead-gold veins, along with gold bearing skarns and potential for significant porphyry copper- gold-molybdenum- silver. The area is located at the headwaters of the placer gold bearing streams. The No. 9 vein on the Blackbear claims is associated with an east-north-easterly trending alteration and structural zone that cuts the intrusives and extends for hundreds of meters to the west onto competitor's ground. Mineralization is likely intrusion- related and associated with Late Cretaceous Prospector Mountain Suite plutonism. The No. 9 vein appears to be the longest, widest and richest vein in the Sixtymile area, with by far the strongest associated wallrock alteration.

Several veins were discovered in 2020 about 1.5km east of the No. 9 vein and on trend, by prospecting an area with highly anomalous soil geochemistry. The largest of these has been named the No. 99 vein, which is enriched in gold, silver, lead and pathfinder elements. Further work in this area is justified.

Soil geochemistry work at the MM claims in 2020 proved the concept of a mineralized skarn band wrapping around the south and west side of the property, however gold and silver values were low. Soil geochemistry work at the Black Bear claims in 2020 confirmed a very strong polymetallic anomaly that warrants further work on its own, with the discovery of mineralized veins confirming the strength of this target. Despite the presence of weathering, local soil solifluction, permafrost and boulder fields, soil geochemistry has proven to be an excellent tool for identifying veins and other mineralized zones that are covered by overburden.

A small excavator (Candig or larger) may be suitable for low impact testing at Matt's vein on the MM claims and the new No. 99 vein on the Black Bear claims along with other areas of strong soil anomalies. However a larger excavator (20 or 40 ton) would be required to obtain solid bedrock exposures. The No. 9 vein within the stripped area could also be excavated to provide better exposure of the vein, as slumping has almost totally obscured vein outcrop. This vein may be suitable for bulk sample testing and direct shipping to a smelter.

There is an oval FVD magnetic low anomaly within a strong magnetic high at the northern base of the slope of the main hill on the Black Bear claims that should be examined by soil geochemistry, ground geophysics and drilling. This magnetic low may represent a magnetite-destructive hydrothermal altered zone. Boulders of unaltered, magnetic rock are present at this location on surface, and appear to have tumbled down slope on top of the recessive magnetic low target.

Future exploration should also include detail geological mapping to delineate phases within the granitic body, carbonate rocks, and skarn and hornfels mineralogy of country rocks proximal to the intrusives.

The 2003 drill core is still in fair to good condition. The drill core should be photographed, as this was not done at the time of drilling. Considerable sections of core were not split. The core

should be reviewed and relogged, with possible sampling of mineralized sections not previously sampled. The core should be re-stacked on treated wood and covered.

Respectfully submitted,
William D. Mann, M.Sc., P.Geol.

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APPENDIX I**Black Bear Project YMEP Actual Cost 2020**

W.D. Mann

		Activity	Units	Rate	Total
<u>PHASE 1 - Staking & Exploration Aug 1 - 5</u>					
Labour	M. Mikhailytchev	Staking & Soils	3	350	\$1,050.00
	W. Mann	Staking & Prospecting	4	500	\$2,000.00
Field Costs	\$100 per worker-day		7	100	\$700.00
Truck	\$.60 per km	Whitehorse to property rtn	1300	0.6	\$780.00
	\$.60 per km	Dawson to property return	230	0.6	\$138.00
Phase 1 subtotal					\$4,668.00
<u>PHASE 2 - Exploration Sept 10 - 13</u>					
Labour	W.D. Mann	Prospecting/ Soils	3.5	500	\$1,750.00
	M. Mikhailytchev	Soil Sampling/ Test Pitting	3	350	\$1,050.00
Field Costs	\$100 per worker-day		6.5	100	\$650.00
Trucks	\$.60 per km	Whitehorse to property rtn (split w/ Border project)	750	0.6	\$450.00
Assays	BV	soils	118	32.24	\$3,803.73
	BV VANI375673	rocks	18	37.33	\$671.66
XRF	Niton XL3t	\$110 per day of use	3	110	\$330.00
Maps	W.D. Mann	GIS	1.5	500	\$750.00
Report	W.D. Mann		4	500	\$2,000.00
Phase 2 subtotal					\$11,455.39
TOTAL					\$16,123.39
YMEP request (75%):					\$12,092.54
PAYMENT #1					\$8,237.60
FINAL REQUEST					\$3,854.94

APPENDIX II
STATEMENTS OF QUALIFICATIONS

WILLIAM D. MANN, M.Sc., P.Geo.

19 HAYES CRESCENT, WHITEHORSE, YUKON Y1A 0E1

1. I am a member in good standing of the Association of Professional Engineers and Geoscientists of BC, Licence #31907.
2. I am a Graduate of Queen's University, 1986, with a Master of Science Degree in Mineral Exploration Geology.
3. I am a Graduate of the University of British Columbia, 1983, with a Bachelor of Science Degree in Geology.
4. I have worked in mineral exploration and mining continuously since 1979.
5. I designed and participated in the work program on the MM & Black Bear claims in 2020.
6. I am an owner of the MM & Black Bear claims.

January 15, 2021

William D. Mann, M.Sc., P.Geo.

MAX MIKHAILYTCHEV
DAWSON CITY, YUKON

Max Mikhailytchev has worked in the mineral exploration and mining industry since 2004. He has considerable experience in claim staking, soil sampling, equipment operation, camp construction, test pitting, mechanical repairs and other bush skills.



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Client: **Bill Mann**
19 Hayes Cres.
Whitehorse Yukon Y1A 0E1 Canada

Submitted By: Bill Mann
Receiving Lab: Canada-Whitehorse
Received: September 16, 2020
Analysis Start: November 19, 2020
Report Date: December 02, 2020
Page: 1 of 2

CERTIFICATE OF ANALYSIS

WHI20000403.1

CLIENT JOB INFORMATION

Project: MM & BB
Shipment ID:
P.O. Number
Number of Samples: 18

SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days
IMM-RJT Return immediately after analysis

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: **Bill Mann**
19 Hayes Cres.
Whitehorse Yukon Y1A 0E1
Canada

CC:

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
PRP70-250	18	Crush, split and pulverize 250 g rock to 200 mesh			WHI
AQ201	18	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN
SHP01	18	Per sample shipping charges for branch shipments			VAN
FA550	1	Lead collection fire assay 50G fusion - Grav finish	50	Completed	VAN

ADDITIONAL COMMENTS



This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
*** asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



Bureau Veritas Commodities Canada Ltd.

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PHONE (604) 253-3158

Client: **Bill Mann**
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Whitehorse Yukon Y1A 0E1 Canada

Project: MM & BB
Report Date: December 02, 2020

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CERTIFICATE OF ANALYSIS

WHI20000403.1

Method	WGHT	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201
Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	
Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	
MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	1	0.01	
72793	Rock	0.68	11.6	125.8	875.2	27	40.7	0.8	0.7	74	3.00	>10000	7.3	988.4	7.8	42	2.4	84.8	160.1	10	0.05
72794	Rock	0.47	6.2	151.2	2532.3	51	>100	0.7	0.7	58	3.82	>10000	5.8	846.9	13.3	93	1.8	124.2	376.0	11	0.05
72795	Rock	0.55	2.5	131.6	728.9	13	99.2	0.5	0.8	40	3.48	>10000	4.2	1621.8	1.6	20	0.8	138.8	363.8	2	0.02
72796	Rock	0.56	11.4	28.8	709.9	18	50.3	0.6	1.8	52	1.06	5017.5	2.6	206.0	1.3	9	0.5	63.3	174.4	<1	<0.01
72797	Rock	0.58	3.8	34.8	488.8	27	16.6	0.6	2.7	40	1.48	5586.6	2.0	322.6	0.5	7	0.6	34.2	110.6	<1	<0.01
72798	Rock	0.88	4.3	352.5	6111.3	442	78.2	1.1	1.6	159	7.37	>10000	10.6	1420.2	0.6	174	10.3	138.3	193.2	4	0.07
72799	Rock	0.41	0.4	111.4	251.8	13	1.5	0.5	0.4	60	2.77	111.8	<0.1	8.4	<0.1	12	0.1	1.2	6.2	12	0.01
72800	Rock	0.80	<0.1	180.3	34.4	576	2.1	18.8	9.4	1274	8.11	43.4	<0.1	5.9	0.2	79	3.4	1.5	15.9	116	1.45
72907	Rock	1.02	0.9	11.4	126.5	124	1.0	1.6	0.5	589	0.42	92.2	1.1	5.9	8.2	8	2.6	0.7	1.6	2	0.09
72908	Rock	0.28	6.5	22.5	1109.7	280	4.8	1.9	3.8	>10000	2.28	2443.7	8.9	95.6	1.2	38	7.4	9.9	0.8	3	0.03
72909	Rock	0.72	0.8	8.7	53.4	71	0.3	2.8	2.5	499	1.60	18.3	1.8	1.6	18.4	27	1.4	0.7	0.4	21	0.54
72910	Rock	1.15	62.2	2473.2	>10000	476	>100	0.6	1.2	97	8.90	>10000	19.6	418.3	3.8	56	16.8	661.1	46.3	6	<0.01
72911	Rock	0.59	1.2	16.0	92.7	25	0.7	1.8	2.5	254	1.76	36.5	3.4	3.8	24.2	23	<0.1	2.0	0.2	23	0.23
72912	Rock	0.72	0.8	10.7	16.8	21	0.1	1.7	2.2	214	1.79	12.2	1.2	<0.5	18.1	18	<0.1	0.6	0.2	12	0.12
72913	Rock	0.68	9.2	18.2	128.6	109	1.0	0.9	0.7	92	2.50	7841.9	9.0	31.5	3.8	77	4.1	24.4	2.1	7	0.03
72914	Rock	0.61	4.6	309.9	>10000	573	54.4	1.0	2.3	316	8.73	>10000	16.7	2195.5	0.6	108	17.8	136.0	52.5	3	0.07
72915	Rock	1.06	14.3	34.5	845.2	15	38.7	0.5	2.0	43	0.95	5321.2	2.4	141.2	1.4	7	0.5	67.9	168.5	<1	<0.01
72916	Rock	1.61	4.1	167.8	5342.0	60	>100	0.7	1.1	52	5.61	>10000	7.1	1474.5	9.1	109	2.7	137.1	700.1	2	0.02



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Method	Analyte	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	FA550
		P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Au
Unit		%	ppm	ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	
MDL		0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	0.9	
72793	Rock	0.042	14	3	0.05	341	0.004	4	0.40	0.013	0.23	0.3	0.01	0.9	0.2	0.17	2	1.1	0.7	
72794	Rock	0.054	18	3	0.05	449	0.003	6	0.50	0.013	0.29	1.3	0.02	0.7	0.3	0.21	3	1.2	0.8	
72795	Rock	0.021	4	3	<0.01	416	<0.001	1	0.10	0.006	0.09	1.2	0.02	0.1	<0.1	0.15	<1	2.2	1.3	
72796	Rock	0.004	2	4	<0.01	279	<0.001	2	0.07	0.002	0.04	0.4	<0.01	0.1	<0.1	0.15	<1	0.6	0.3	
72797	Rock	0.004	2	4	<0.01	222	<0.001	3	0.06	0.003	0.04	0.3	<0.01	<0.1	<0.1	0.25	<1	0.6	0.5	
72798	Rock	0.021	29	4	0.02	208	<0.001	2	0.29	0.007	0.13	0.4	0.05	0.7	0.3	0.22	6	1.6	1.0	
72799	Rock	0.011	<1	4	<0.01	36	0.002	<1	0.14	0.021	0.05	0.1	<0.01	0.3	<0.1	<0.05	4	0.6	<0.2	
72800	Rock	0.140	<1	8	0.91	124	0.044	2	1.36	0.065	0.07	0.1	<0.01	3.6	<0.1	<0.05	8	<0.5	<0.2	
72907	Rock	0.033	15	3	0.03	82	<0.001	3	0.23	0.004	0.13	<0.1	<0.01	0.3	0.1	<0.05	<1	<0.5	<0.2	
72908	Rock	0.004	4	4	0.02	236	<0.001	2	0.13	0.003	0.06	0.2	0.01	0.5	0.2	0.08	1	<0.5	<0.2	
72909	Rock	0.060	31	5	0.25	118	0.026	4	0.67	0.053	0.21	0.2	<0.01	1.7	0.2	<0.05	3	<0.5	<0.2	
72910	Rock	0.009	10	3	<0.01	103	<0.001	1	0.23	0.024	0.11	0.2	0.08	0.3	0.2	0.74	3	0.6	<0.2	
72911	Rock	0.036	27	6	0.26	130	0.082	2	0.76	0.148	0.34	0.4	<0.01	1.6	0.2	<0.05	3	<0.5	<0.2	
72912	Rock	0.032	48	5	0.12	136	0.018	8	0.88	0.122	0.33	0.3	<0.01	0.9	0.3	<0.05	4	<0.5	<0.2	
72913	Rock	0.023	13	5	0.02	72	<0.001	4	0.41	0.007	0.24	1.3	<0.01	0.3	0.3	<0.05	2	<0.5	<0.2	
72914	Rock	0.024	16	3	0.01	300	<0.001	1	0.26	0.006	0.08	0.7	0.05	0.6	0.2	0.13	6	2.2	0.4	2.2
72915	Rock	0.006	2	4	<0.01	131	<0.001	2	0.07	0.002	0.04	0.2	<0.01	0.1	<0.1	0.12	<1	0.6	0.4	
72916	Rock	0.033	12	3	<0.01	427	<0.001	4	0.29	0.011	0.18	0.6	0.02	0.1	0.3	0.40	2	2.6	1.7	



QUALITY CONTROL REPORT

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Method	WGHT	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201
Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	
Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	
MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	1	0.01	
Pulp Duplicates																					
72907	Rock	1.02	0.9	11.4	126.5	124	1.0	1.6	0.5	589	0.42	92.2	1.1	5.9	8.2	8	2.6	0.7	1.6	2	0.09
REP 72907	QC		1.0	11.8	117.4	119	0.9	1.7	0.6	568	0.41	83.7	1.0	12.5	7.4	7	2.2	0.6	1.4	2	0.09
REP 72912	QC		0.8	11.1	16.8	21	0.2	1.7	2.2	215	1.80	12.4	1.2	0.7	17.9	18	<0.1	0.5	0.2	12	0.12
72914	Rock	0.61	4.6	309.9	>10000	573	54.4	1.0	2.3	316	8.73	>10000	16.7	2195.5	0.6	108	17.8	136.0	52.5	3	0.07
REP 72914	QC																				
Core Reject Duplicates																					
72912	Rock	0.72	0.8	10.7	16.8	21	0.1	1.7	2.2	214	1.79	12.2	1.2	<0.5	18.1	18	<0.1	0.6	0.2	12	0.12
DUP 72912	QC		0.7	10.6	16.0	20	0.1	1.7	2.1	214	1.79	11.9	1.1	0.7	17.3	18	<0.1	0.5	0.2	12	0.12
Reference Materials																					
STD AGPROOF	Standard																				
STD BVGEO01	Standard		10.7	4491.9	186.6	1730	2.5	157.1	25.0	703	3.73	115.8	3.7	216.1	13.7	54	5.9	3.3	23.8	74	1.32
STD DS11	Standard		14.8	150.4	144.9	351	1.9	82.5	14.5	1041	3.14	47.5	2.7	142.1	8.2	69	2.7	9.2	12.9	48	1.07
STD DS11	Standard		15.6	145.9	131.8	333	1.8	81.8	14.1	1017	3.08	42.6	2.6	63.5	7.6	68	2.3	8.5	10.9	48	1.06
STD OREAS262	Standard		0.7	114.7	55.5	145	0.4	64.8	27.4	528	3.33	35.2	1.2	66.8	8.8	34	0.6	5.1	1.0	23	2.89
STD OREAS262	Standard		0.6	118.7	62.3	157	0.5	67.2	29.2	558	3.27	39.4	1.3	68.0	10.0	38	0.7	5.5	1.1	21	2.98
STD OREAS262	Standard		0.7	113.2	55.2	147	0.5	66.2	28.2	548	3.21	34.9	1.2	60.1	9.1	35	0.6	5.3	1.0	22	2.98
STD OXQ114	Standard																				
STD OXQ132	Standard																				
STD BVGEO01 Expected			11.2	4415	187	1741	2.53	163	25	733	3.7	121	3.77	219	14.4	55	6.5	3.39	25.6	73	1.3219
STD AGPROOF Expected																					
STD OXQ114 Expected																					
STD OXQ132 Expected																					
STD DS11 Expected			14.6	149	138	345	1.71	77.7	14.2	1055	3.1	42.8	2.59	79	7.65	67.3	2.37	8.74	12.2	50	1.063
STD OREAS262 Expected			0.68	118	56	154	0.45	62	26.9	530	3.284	35.8	1.22	65	9.33	36	0.61	5.06	1.03	22.5	2.98
BLK	Blank		<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	5.0	<0.1	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01
BLK	Blank		<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.1	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01
BLK	Blank																				
BLK	Blank		<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.1	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01



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QUALITY CONTROL REPORT

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Method		AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	FA550
Analyte		P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Au
Unit		%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
MDL		0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	0.9
Pulp Duplicates																				
72907	Rock	0.033	15	3	0.03	82	<0.001	3	0.23	0.004	0.13	<0.1	<0.01	0.3	0.1	<0.05	<1	<0.5	<0.2	
REP 72907	QC	0.030	14	3	0.04	71	<0.001	3	0.24	0.004	0.13	<0.1	<0.01	0.2	0.1	<0.05	<1	<0.5	<0.2	
REP 72912	QC	0.031	47	5	0.12	135	0.018	8	0.87	0.124	0.33	0.3	<0.01	0.9	0.3	<0.05	4	<0.5	<0.2	
72914	Rock	0.024	16	3	0.01	300	<0.001	1	0.26	0.006	0.08	0.7	0.05	0.6	0.2	0.13	6	2.2	0.4	2.2
REP 72914	QC																			2.2
Core Reject Duplicates																				
72912	Rock	0.032	48	5	0.12	136	0.018	8	0.88	0.122	0.33	0.3	<0.01	0.9	0.3	<0.05	4	<0.5	<0.2	
DUP 72912	QC	0.031	45	5	0.12	129	0.018	7	0.88	0.122	0.32	0.2	<0.01	0.9	0.3	<0.05	4	<0.5	<0.2	
Reference Materials																				
STD AGPROOF	Standard																			<0.9
STD BVGEO01	Standard	0.069	26	191	1.26	284	0.235	3	2.25	0.191	0.89	5.3	0.10	6.2	0.6	0.66	7	4.8	1.0	
STD DS11	Standard	0.077	19	62	0.86	401	0.098	6	1.16	0.072	0.41	3.3	0.29	3.3	5.0	0.27	5	2.6	4.7	
STD DS11	Standard	0.067	19	63	0.85	367	0.097	7	1.21	0.082	0.41	3.0	0.29	3.3	4.9	0.26	5	2.1	4.4	
STD OREAS262	Standard	0.039	16	44	1.19	247	0.003	4	1.34	0.068	0.31	0.2	0.17	3.2	0.5	0.25	4	0.6	<0.2	
STD OREAS262	Standard	0.041	17	47	1.19	262	0.003	3	1.39	0.068	0.31	0.2	0.17	3.5	0.5	0.26	4	<0.5	0.3	
STD OREAS262	Standard	0.038	17	47	1.17	252	0.003	4	1.46	0.066	0.33	0.2	0.16	3.3	0.5	0.25	4	0.5	0.2	
STD OXQ114	Standard																			34.9
STD OXQ132	Standard																			34.6
STD BVGEO01 Expected		0.0727	25.9	187	1.2963	260	0.233	3.8	2.347	0.1924	0.89	5.3	0.1	5.97	0.62	0.6655	7.37	4.84	1.02	
STD AGPROOF Expected																				0
STD OXQ114 Expected																				35.2
STD OXQ132 Expected																				34.69
STD DS11 Expected		0.0701	18.6	61.5	0.85	385	0.0976		1.1795	0.0762	0.4	2.9	0.26	3.4	4.9	0.2835	5.1	2.2	4.56	
STD OREAS262 Expected		0.04	15.9	41.7	1.17	248	0.0027	4	1.3	0.071	0.312	0.2	0.17	3.24	0.47	0.253	4.1	0.4	0.23	
BLK	Blank	<0.001	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2	
BLK	Blank	<0.001	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2	
BLK	Blank																			<0.9
BLK	Blank	<0.001	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2	



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QUALITY CONTROL REPORT **WHI20000403.1**

		WGHT	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	
		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	
		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	
		0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	0.1	1	0.01
Prep Wash																						
ROCK-WHI	Prep Blank		1.0	6.5	2.6	23	<0.1	0.7	3.2	383	1.64	4.2	0.3	2.1	2.5	26	<0.1	0.2	0.2	20	0.58	
ROCK-WHI	Prep Blank		0.5	2.2	4.3	26	<0.1	0.8	3.4	410	1.70	4.8	0.4	<0.5	2.4	31	<0.1	0.2	<0.1	21	0.69	



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		AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	FA550	
		P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Au
		%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
		0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	0.9
Prep Wash																				
ROCK-WHI	Prep Blank	0.037	6	2	0.39	73	0.078	2	0.98	0.142	0.12	0.1	<0.01	3.9	<0.1	<0.05	4	<0.5	<0.2	
ROCK-WHI	Prep Blank	0.037	6	3	0.40	87	0.078	2	1.03	0.154	0.13	0.2	<0.01	4.3	<0.1	<0.05	4	<0.5	<0.2	



BUREAU VERITAS MINERAL LABORATORIES
Canada

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Bureau Veritas Commodities Canada Ltd.
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada
PHONE (604) 253-3158

Client: **Bill Mann**
19 Hayes Cres.
Whitehorse Yukon Y1A 0E1 Canada

Submitted By: Bill Mann
Receiving Lab: Canada-Whitehorse
Received: September 16, 2020
Analysis Start: October 09, 2020
Report Date: October 15, 2020
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CERTIFICATE OF ANALYSIS

WHI20000402.1

CLIENT JOB INFORMATION

Project: MM & BB
Shipment ID:
P.O. Number
Number of Samples: 118

SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days
IMM-RJT Return immediately after analysis

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: **Bill Mann**
19 Hayes Cres.
Whitehorse Yukon Y1A 0E1
Canada

CC:

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
SS80	118	Dry at 60C sieve 100g to -80 mesh			WHI
AQ201	118	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN
SHP01	118	Per sample shipping charges for branch shipments			VAN
SVRJT	118	Save all or part of Soil Reject			WHI

ADDITIONAL COMMENTS


JEFFREY CANNON
Geochemistry Department Supervisor

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
*** asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



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CERTIFICATE OF ANALYSIS

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Method Analyte	Unit	MDL	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	
			Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
			ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	
			0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	2	0.01	0.001	
1961245	Soil		1.7	29.4	123.5	134	1.2	15.1	9.0	531	2.86	202.7	6.6	12.6	10.8	54	0.5	1.1	1.7	64	0.36	0.082
1961246	Soil		2.0	19.3	179.7	81	1.2	12.7	7.1	328	2.42	88.3	2.0	4.4	3.9	34	0.5	1.1	1.1	51	0.22	0.042
1961247	Soil		3.1	66.3	260.3	171	3.0	23.0	12.6	867	3.47	256.6	11.2	10.8	6.2	59	1.1	2.5	3.0	74	0.37	0.077
1961248	Soil		3.3	61.9	263.5	198	2.4	19.7	8.8	609	2.85	202.7	8.2	14.2	7.7	73	1.0	1.4	2.2	62	0.40	0.067
1961249	Soil		2.8	29.3	99.8	133	0.8	20.1	9.7	563	3.12	166.0	6.5	12.2	10.2	55	0.5	1.1	1.2	68	0.34	0.082
1961250	Soil		1.9	17.7	78.5	98	0.5	15.8	6.3	238	2.49	66.7	2.7	5.3	6.3	31	0.5	0.6	0.8	59	0.20	0.039
1961251	Soil		2.7	28.4	112.7	177	0.9	18.4	8.1	515	2.79	206.8	6.3	8.3	7.2	56	0.8	0.9	1.9	61	0.31	0.063
1961252	Soil		1.4	27.6	117.2	155	0.6	16.8	7.9	530	2.40	169.9	6.4	5.5	12.2	63	0.6	0.9	1.0	51	0.35	0.064
1961253	Soil		3.1	56.6	338.7	297	4.8	23.5	12.0	884	3.43	316.9	17.3	14.9	9.1	95	0.9	1.7	3.0	65	0.47	0.091
1961254	Soil		1.0	41.9	150.0	197	1.5	17.6	8.1	689	2.69	152.1	10.6	7.5	16.2	78	0.8	2.7	1.9	56	0.43	0.076
1961255	Soil		1.0	28.1	108.3	136	0.8	20.2	9.2	581	2.68	148.3	4.5	4.5	12.6	50	1.0	0.9	1.1	60	0.32	0.076
1961256	Soil		2.8	55.9	236.4	329	3.2	22.7	12.5	719	4.46	693.1	23.1	18.2	8.5	75	2.1	2.0	3.9	73	0.28	0.128
1961257	Soil		1.7	25.7	139.1	183	1.7	14.4	9.9	965	2.91	178.6	6.3	7.5	15.7	113	0.9	1.1	2.3	58	0.34	0.067
1961258	Soil		1.1	26.5	144.7	168	0.9	15.7	7.9	594	2.46	117.8	6.6	7.0	16.3	114	1.0	1.1	1.4	52	0.58	0.086
1961259	Soil		1.2	15.0	227.2	263	0.5	13.7	7.5	683	2.95	111.7	1.5	2.1	14.0	84	1.0	1.4	1.4	55	0.37	0.062
1961260	Soil		1.8	15.3	164.3	149	1.7	12.5	10.0	1287	2.89	169.4	2.5	5.0	11.1	80	0.7	1.4	1.3	55	0.33	0.062
1961261	Soil		0.8	17.9	87.7	172	0.7	12.2	6.0	444	2.47	62.1	5.8	4.1	16.5	140	0.6	1.1	0.5	47	0.61	0.077
1961262	Soil		1.1	29.3	162.8	171	0.9	15.4	8.1	477	2.65	72.9	6.2	4.8	19.2	98	0.9	1.3	0.9	53	0.59	0.077
1961263	Soil		0.6	25.1	93.2	123	0.6	15.2	6.4	340	2.42	45.9	5.3	2.9	17.4	82	0.6	1.0	0.5	50	0.45	0.072
1961264	Soil		1.0	26.1	98.8	105	0.5	16.9	6.3	379	2.38	65.0	4.0	4.8	15.2	109	0.4	1.1	0.5	50	0.52	0.075
1961265	Soil		1.1	47.1	352.8	151	2.0	17.1	10.0	595	2.73	192.7	7.4	6.6	15.8	79	0.8	3.6	1.0	56	0.42	0.070
1961266	Soil		0.9	38.5	210.9	153	1.7	14.2	6.6	446	2.47	150.0	6.4	7.5	15.8	106	0.5	3.1	1.2	49	0.43	0.067
1961267	Soil		2.3	39.3	190.4	167	2.8	11.7	7.2	487	2.67	304.6	5.1	6.2	8.8	85	0.9	2.8	1.9	59	0.33	0.045
1961268	Soil		1.1	30.3	348.2	149	1.3	17.5	10.1	557	2.53	170.0	2.2	4.8	13.6	93	0.9	3.7	1.1	49	0.35	0.067
1961269	Soil		1.0	29.6	259.3	116	1.4	19.3	10.9	658	2.59	115.8	5.3	5.6	10.8	84	0.5	2.5	1.0	53	0.34	0.071
1961270	Soil		0.9	31.9	151.4	107	1.4	20.5	10.2	417	2.77	65.1	5.8	4.5	18.1	57	0.5	2.1	2.5	62	0.43	0.072
1961271	Soil		1.3	30.1	120.9	121	0.7	17.9	9.0	579	2.73	144.0	8.0	9.1	18.8	82	0.5	1.7	0.6	56	0.45	0.067
1961272	Soil		1.5	35.6	174.5	98	1.2	20.2	10.5	550	2.90	64.8	6.6	8.3	12.5	57	0.3	1.8	0.7	62	0.36	0.075
1961273	Soil		1.0	25.4	194.5	148	0.4	18.4	8.1	553	2.74	133.3	2.0	7.6	12.4	82	0.8	1.9	0.9	57	0.34	0.063
1961274	Soil		1.8	41.3	193.9	173	0.9	17.8	8.7	887	2.70	307.9	6.9	12.6	14.9	133	1.2	2.0	0.9	49	0.48	0.055



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Project: MM & BB
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Method	Analyte	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	TI	S	Ga	Se	Te
Unit		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
MDL		1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2
1961245	Soil	17	25	0.48	142	0.052	1	1.79	0.013	0.05	0.4	0.04	3.1	0.1	<0.05	6	<0.5	<0.2
1961246	Soil	9	20	0.34	88	0.058	1	1.46	0.015	0.07	0.3	0.07	2.1	0.1	<0.05	6	<0.5	<0.2
1961247	Soil	16	33	0.50	258	0.044	2	2.65	0.018	0.08	0.4	0.06	4.0	0.2	<0.05	9	0.5	<0.2
1961248	Soil	13	31	0.53	245	0.050	2	2.17	0.016	0.08	0.5	0.07	4.5	0.2	0.06	7	0.5	<0.2
1961249	Soil	18	30	0.51	181	0.053	2	2.02	0.012	0.06	0.7	0.04	3.7	0.2	<0.05	6	<0.5	<0.2
1961250	Soil	14	26	0.41	133	0.061	1	1.73	0.013	0.06	0.4	0.04	2.9	0.2	<0.05	7	<0.5	<0.2
1961251	Soil	14	28	0.45	196	0.047	2	2.04	0.015	0.07	0.5	0.07	3.5	0.2	<0.05	7	<0.5	<0.2
1961252	Soil	18	25	0.47	151	0.049	1	1.53	0.013	0.05	0.4	0.03	3.5	0.1	<0.05	5	<0.5	<0.2
1961253	Soil	22	33	0.59	266	0.035	2	3.13	0.018	0.10	0.3	0.09	5.2	0.3	0.07	9	0.6	<0.2
1961254	Soil	22	28	0.51	227	0.064	1	1.68	0.014	0.07	0.3	0.03	4.9	0.2	<0.05	6	<0.5	<0.2
1961255	Soil	20	28	0.48	200	0.064	2	1.80	0.012	0.06	0.3	0.04	3.5	0.2	<0.05	6	<0.5	<0.2
1961256	Soil	34	38	0.52	305	0.021	2	3.81	0.010	0.10	0.3	0.11	5.7	0.3	0.10	11	0.8	<0.2
1961257	Soil	19	25	0.42	333	0.031	1	2.32	0.015	0.06	0.3	0.06	3.5	0.3	<0.05	7	<0.5	<0.2
1961258	Soil	25	24	0.45	179	0.065	1	1.65	0.015	0.09	0.2	0.03	4.1	0.1	<0.05	6	<0.5	<0.2
1961259	Soil	17	23	0.38	187	0.035	2	2.40	0.011	0.07	0.3	0.06	2.5	0.3	<0.05	8	<0.5	<0.2
1961260	Soil	18	23	0.40	220	0.032	2	2.44	0.010	0.07	0.3	0.05	2.7	0.3	<0.05	8	<0.5	<0.2
1961261	Soil	21	23	0.53	236	0.040	1	2.16	0.017	0.07	0.2	0.02	3.8	0.2	<0.05	7	<0.5	<0.2
1961262	Soil	22	25	0.54	224	0.045	1	1.87	0.017	0.09	0.2	0.03	4.7	0.2	<0.05	6	<0.5	<0.2
1961263	Soil	20	25	0.49	226	0.054	1	1.50	0.013	0.06	0.2	0.02	4.6	0.2	<0.05	5	<0.5	<0.2
1961264	Soil	22	26	0.52	246	0.056	1	1.59	0.014	0.08	0.2	0.02	4.7	0.1	<0.05	5	<0.5	<0.2
1961265	Soil	22	28	0.49	268	0.048	2	1.71	0.014	0.07	0.2	0.04	5.4	0.2	<0.05	6	<0.5	<0.2
1961266	Soil	25	25	0.47	249	0.050	1	1.73	0.014	0.07	0.2	0.03	4.0	0.2	<0.05	6	<0.5	<0.2
1961267	Soil	17	22	0.36	238	0.027	1	2.02	0.010	0.06	0.2	0.06	2.8	0.3	<0.05	9	<0.5	<0.2
1961268	Soil	18	24	0.49	190	0.041	2	2.28	0.011	0.06	0.2	0.03	3.0	0.2	<0.05	6	<0.5	<0.2
1961269	Soil	21	26	0.46	227	0.048	1	1.81	0.012	0.06	0.3	0.06	3.8	0.2	<0.05	6	<0.5	<0.2
1961270	Soil	20	28	0.59	294	0.069	1	1.72	0.014	0.07	0.2	0.04	4.9	0.2	<0.05	6	<0.5	<0.2
1961271	Soil	21	26	0.57	288	0.057	1	1.74	0.014	0.08	0.5	0.03	5.0	0.2	<0.05	6	<0.5	<0.2
1961272	Soil	24	30	0.53	232	0.052	2	2.08	0.013	0.06	0.3	0.07	5.2	0.2	<0.05	6	0.5	<0.2
1961273	Soil	18	27	0.54	198	0.059	1	2.06	0.011	0.07	0.3	0.04	3.7	0.2	<0.05	7	<0.5	<0.2
1961274	Soil	22	25	0.49	267	0.042	2	1.84	0.012	0.10	0.2	0.03	4.4	0.2	<0.05	6	<0.5	<0.2



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	Method Analyte Unit MDL	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.1	0.1	0.1	1	0.1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01
1961330	Soil	1.3	38.7	38.2	106	0.1	42.6	13.3	417	3.34	27.3	1.0	5.5	4.8	55	0.3	0.5	2.1	83	0.38	0.042
1961331	Soil	1.0	54.4	60.1	157	0.2	53.0	18.0	447	3.54	37.7	1.2	5.7	6.2	74	0.4	0.6	2.7	84	0.61	0.054
1961332	Soil	1.0	43.7	21.1	82	<0.1	47.0	14.8	390	3.29	24.3	0.9	6.5	5.3	53	0.2	0.5	1.7	81	0.51	0.057
1961333	Soil	1.4	36.1	15.6	80	<0.1	34.4	11.0	320	3.19	18.0	1.0	3.7	3.7	42	0.2	0.4	1.0	94	0.38	0.052
1961334	Soil	1.4	31.0	14.5	77	0.1	31.1	9.9	255	2.96	13.8	1.0	2.3	3.3	32	0.2	0.5	0.5	81	0.31	0.047
1961335	Soil	1.2	61.7	10.8	92	<0.1	49.9	17.3	423	3.99	17.8	1.3	2.7	5.9	86	0.2	0.4	0.7	120	0.62	0.037
1961336	Soil	1.6	28.5	80.4	140	<0.1	40.2	12.7	324	3.83	24.2	0.7	2.0	4.4	24	0.7	0.7	0.5	97	0.17	0.035
1961337	Soil	2.4	25.4	13.9	62	0.2	26.0	9.9	236	4.12	23.1	0.7	1.1	4.2	20	0.3	0.7	0.4	102	0.16	0.024
1961338	Soil	1.7	41.0	32.8	127	<0.1	40.9	15.4	423	3.67	36.2	1.1	2.9	5.5	63	0.2	0.5	0.4	108	0.47	0.040
1961339	Soil	3.2	59.6	129.7	157	<0.1	46.5	12.1	352	3.46	42.6	1.5	2.6	4.5	30	0.4	0.6	0.7	105	0.26	0.057
1961340	Soil	1.8	35.3	63.2	162	<0.1	24.1	8.1	333	3.54	31.3	0.8	4.9	3.7	28	0.4	0.5	3.2	92	0.38	0.032
1961341	Soil	1.0	36.6	27.7	135	<0.1	34.7	13.7	443	3.29	24.7	1.0	4.8	5.7	28	0.8	0.5	1.1	79	0.29	0.031
1961342	Soil	0.6	38.0	21.7	142	0.2	36.3	14.3	536	3.15	21.0	2.2	2.7	4.8	47	0.5	0.5	0.8	74	0.93	0.066
1961343	Soil	1.4	33.9	61.7	178	0.2	42.4	13.1	518	3.32	28.3	1.1	3.1	5.0	38	0.5	0.5	0.8	97	0.60	0.039
1961344	Soil	1.0	36.9	17.3	158	<0.1	31.9	13.5	668	3.69	39.4	2.0	8.3	5.7	51	0.2	0.8	3.1	83	0.83	0.049
1961345	Soil	1.2	47.6	26.2	351	0.3	34.4	10.8	735	2.99	32.4	2.2	6.7	2.7	36	1.4	0.4	3.8	67	0.98	0.061
1961346	Soil	0.9	31.0	16.3	99	<0.1	36.1	13.5	582	3.42	19.3	1.1	4.1	6.1	41	0.2	0.4	1.8	88	0.55	0.039
1961347	Soil	1.0	28.8	17.0	119	<0.1	35.3	13.8	414	3.43	33.0	0.8	7.5	5.5	44	0.5	0.5	4.3	87	0.45	0.045
1961348	Soil	1.1	33.6	17.5	117	<0.1	36.6	12.6	302	4.17	32.2	0.8	1.4	7.1	37	0.6	0.3	0.6	112	0.34	0.039
1961349	Soil	1.0	26.8	23.2	90	<0.1	33.5	11.6	286	3.96	42.3	0.7	1.9	5.9	22	0.4	0.6	0.4	92	0.21	0.028
1961350	Soil	1.9	21.2	117.1	109	0.2	24.1	8.1	241	3.53	40.2	0.7	1.7	5.3	20	0.3	0.5	0.4	102	0.20	0.029
1961397	Soil	7.3	54.1	440.0	372	2.6	15.2	11.1	566	3.09	268.6	8.8	7.5	22.2	66	3.1	3.6	4.0	70	0.57	0.121
1961398	Soil	2.3	33.1	460.5	262	1.0	19.1	9.2	509	3.14	239.1	4.6	6.8	14.0	101	1.3	2.0	2.1	67	0.36	0.099
1961399	Soil	3.3	24.1	241.2	317	0.7	14.2	12.4	541	3.36	289.2	16.2	4.7	22.5	141	2.1	6.4	1.1	51	0.57	0.115
1961400	Soil	1.3	37.1	227.1	88	1.2	26.9	11.6	476	3.19	128.7	3.2	11.4	15.9	49	0.5	1.6	2.3	68	0.35	0.081
1961401	Soil	0.8	30.8	259.2	137	0.6	16.7	11.9	906	2.87	64.0	7.6	4.1	18.2	128	1.0	1.2	3.0	60	0.59	0.103
1961402	Soil	0.7	17.6	38.6	92	<0.1	22.3	10.7	456	2.85	16.6	2.5	2.0	13.2	149	0.6	0.6	0.6	61	0.51	0.099
1961403	Soil	1.0	21.6	32.7	80	<0.1	30.1	13.0	414	3.20	15.5	1.4	2.1	10.9	192	0.4	0.6	0.3	69	0.42	0.050
1961404	Soil	1.8	28.9	154.2	124	0.5	17.6	9.0	422	2.80	247.9	3.2	5.7	8.2	113	0.5	0.9	1.2	65	0.39	0.081
1961405	Soil	7.0	76.7	1413.9	683	12.1	8.9	14.7	1883	3.48	1416.4	8.7	101.1	30.8	78	6.4	13.5	19.3	41	0.50	0.106

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Method	Analyte	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	TI	S	Ga	Se	Te
Unit		ppm	ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
MDL		1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.01	0.01	0.1	0.05	1	0.5	0.2	
1961330	Soil	16	64	0.89	210	0.145	1	2.95	0.015	0.27	0.2	0.02	5.8	0.4	<0.05	11	0.5	0.2
1961331	Soil	17	78	1.08	199	0.164	1	3.29	0.020	0.35	0.2	0.02	7.2	0.5	<0.05	11	0.7	0.2
1961332	Soil	16	62	0.94	208	0.148	1	2.83	0.017	0.25	0.2	0.02	5.9	0.4	<0.05	9	0.6	<0.2
1961333	Soil	14	53	0.93	243	0.138	1	2.76	0.016	0.26	0.2	0.02	6.4	0.4	<0.05	9	0.6	<0.2
1961334	Soil	13	44	0.77	185	0.106	1	2.41	0.014	0.17	0.2	0.03	5.5	0.3	<0.05	8	0.6	<0.2
1961335	Soil	15	78	1.51	308	0.216	<1	4.06	0.025	0.51	0.1	0.01	10.2	0.7	<0.05	12	0.8	<0.2
1961336	Soil	12	47	0.85	194	0.114	2	3.07	0.015	0.15	0.2	0.02	5.5	0.3	<0.05	9	<0.5	<0.2
1961337	Soil	12	38	0.51	154	0.118	1	2.32	0.012	0.09	0.2	0.02	4.5	0.2	<0.05	10	<0.5	<0.2
1961338	Soil	15	55	1.05	270	0.171	2	3.34	0.013	0.36	0.2	0.02	8.4	0.5	<0.05	10	0.6	<0.2
1961339	Soil	15	47	0.77	182	0.109	2	2.56	0.011	0.17	0.2	0.02	5.6	0.4	<0.05	8	0.6	<0.2
1961340	Soil	12	38	0.55	131	0.116	1	2.53	0.014	0.11	0.5	0.03	4.8	0.2	<0.05	11	<0.5	<0.2
1961341	Soil	16	43	0.73	241	0.101	2	2.81	0.019	0.09	0.2	0.02	6.1	0.2	<0.05	7	<0.5	<0.2
1961342	Soil	19	45	0.77	264	0.105	1	2.84	0.035	0.08	0.2	0.04	6.4	0.2	<0.05	9	<0.5	<0.2
1961343	Soil	16	51	0.98	259	0.126	2	2.91	0.021	0.12	0.2	0.02	6.4	0.3	<0.05	10	<0.5	<0.2
1961344	Soil	19	45	1.31	240	0.165	1	3.08	0.065	0.20	0.3	0.03	8.6	0.3	<0.05	9	<0.5	<0.2
1961345	Soil	18	38	1.15	194	0.064	2	2.23	0.024	0.07	0.3	0.05	4.7	0.2	<0.05	7	0.6	<0.2
1961346	Soil	16	42	0.96	271	0.116	2	2.74	0.030	0.10	0.2	0.02	6.1	0.2	<0.05	8	<0.5	<0.2
1961347	Soil	14	47	0.98	208	0.136	2	2.81	0.015	0.16	0.2	0.02	5.0	0.2	<0.05	9	<0.5	0.3
1961348	Soil	18	57	0.88	180	0.151	1	3.06	0.010	0.35	0.2	0.01	6.4	0.3	<0.05	11	<0.5	<0.2
1961349	Soil	16	44	0.71	175	0.107	<1	2.70	0.012	0.16	0.3	0.02	5.1	0.2	<0.05	8	<0.5	<0.2
1961350	Soil	18	41	0.52	143	0.110	<1	2.12	0.010	0.19	0.2	0.02	5.0	0.3	<0.05	10	<0.5	<0.2
1961397	Soil	26	23	0.56	186	0.067	1	1.69	0.016	0.08	0.2	0.05	4.3	0.2	<0.05	6	<0.5	<0.2
1961398	Soil	22	26	0.56	205	0.067	2	2.25	0.014	0.07	0.2	0.04	3.5	0.2	<0.05	7	<0.5	<0.2
1961399	Soil	43	20	0.48	210	0.053	1	2.08	0.020	0.14	0.2	0.02	4.0	0.3	<0.05	7	<0.5	<0.2
1961400	Soil	20	31	0.61	231	0.086	2	2.01	0.018	0.07	0.6	0.04	4.2	0.2	<0.05	6	<0.5	<0.2
1961401	Soil	28	21	0.57	200	0.062	1	1.74	0.019	0.10	0.7	0.03	3.9	0.1	<0.05	6	<0.5	<0.2
1961402	Soil	17	25	0.63	179	0.076	2	2.57	0.023	0.08	0.6	0.02	3.1	0.1	<0.05	7	<0.5	<0.2
1961403	Soil	14	32	0.70	203	0.111	2	2.49	0.020	0.10	0.2	0.03	4.0	0.1	<0.05	7	<0.5	<0.2
1961404	Soil	16	23	0.51	150	0.082	2	1.75	0.014	0.08	0.3	0.04	2.9	0.1	<0.05	7	<0.5	<0.2
1961405	Soil	30	12	0.46	270	0.005	<1	2.13	0.008	0.08	0.2	0.05	3.7	0.2	<0.05	7	<0.5	<0.2

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Method Analyte Unit MDL	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201
	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	
	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	
1961406	Soil	1.8	32.7	621.6	150	2.0	21.5	8.7	399	2.83	111.5	5.2	5.5	14.8	94	0.5	4.5	2.2	61	0.46	0.082
1961407	Soil	2.0	49.5	363.0	250	1.2	18.6	9.6	948	3.17	408.2	6.0	16.2	18.3	154	1.7	2.2	1.7	59	0.52	0.080
1961408	Soil	1.0	22.4	285.2	133	0.5	20.4	9.4	519	3.01	109.4	3.2	3.6	19.0	74	0.8	1.3	1.0	64	0.34	0.072
1961409	Soil	0.9	27.5	125.8	106	0.3	20.6	10.1	362	3.13	112.0	3.7	5.2	19.9	102	0.7	0.9	0.7	67	0.36	0.056
1961410	Soil	2.3	34.4	173.2	200	2.9	4.0	4.9	276	4.23	1714.7	13.2	66.0	31.9	98	1.1	6.1	9.2	43	0.37	0.104
1961411	Soil	1.1	55.0	102.0	122	0.4	26.3	11.7	633	3.12	177.7	6.0	9.6	18.0	98	0.6	1.5	1.1	64	0.46	0.068
1961412	Soil	1.1	30.9	115.8	83	0.3	25.5	13.1	460	3.11	109.5	1.2	7.3	7.9	32	0.5	1.4	1.1	63	0.18	0.048
1961413	Soil	1.1	49.7	193.2	132	0.4	16.4	12.1	940	2.99	154.5	6.2	10.6	18.7	117	1.3	1.7	1.7	55	0.39	0.077
1961414	Soil	2.0	78.1	201.6	140	1.1	12.4	9.5	1027	3.04	151.2	9.3	15.2	23.1	186	1.0	4.0	6.9	49	0.44	0.084
1961415	Soil	1.1	39.3	109.1	85	0.3	20.7	10.8	514	2.70	55.6	3.8	4.1	12.7	65	0.5	0.8	0.8	62	0.38	0.084
1961416	Soil	0.9	44.5	70.1	94	0.5	28.2	12.2	356	3.03	33.3	6.4	4.5	13.7	52	0.6	1.0	1.2	68	0.54	0.091
1961417	Soil	0.9	51.2	110.3	90	1.1	19.5	13.2	295	2.78	58.2	9.8	6.6	16.7	61	0.4	1.2	2.4	65	0.41	0.081
1961418	Soil	1.5	62.1	122.6	289	0.8	1.8	1.6	306	1.86	280.7	10.1	10.3	24.6	27	0.7	9.8	5.9	15	0.28	0.055
1961419	Soil	1.0	48.3	45.2	189	1.3	3.9	4.5	273	2.71	420.6	10.5	35.2	30.3	163	0.6	2.7	3.7	38	0.49	0.072
1961420	Soil	0.4	38.3	18.9	99	<0.1	37.6	13.8	504	3.51	19.5	0.6	0.8	3.8	56	0.3	0.2	0.2	81	0.55	0.058
1961421	Soil	0.2	41.6	9.3	76	<0.1	110.2	20.3	453	3.21	9.1	0.6	1.4	4.2	71	0.3	0.1	0.1	89	0.68	0.079
1961422	Soil	0.8	41.3	17.9	77	0.3	31.3	10.3	317	2.72	66.3	0.8	2.0	2.5	44	0.3	0.3	0.4	72	0.34	0.038
1961423	Soil	0.8	33.5	43.5	90	0.4	20.7	12.0	388	2.81	17.5	0.6	2.1	1.8	40	0.2	0.3	0.3	66	0.41	0.057
1961424	Soil	0.6	39.2	24.5	82	0.2	30.5	13.1	382	3.40	22.9	0.9	1.3	4.5	82	0.3	0.3	0.2	82	0.63	0.048
1961425	Soil	0.5	42.6	24.3	100	0.2	19.7	20.8	627	3.58	22.7	0.6	0.9	3.3	59	0.3	0.2	0.5	79	0.68	0.077
1961426	Soil	0.7	50.1	19.2	89	0.3	20.6	15.7	508	3.33	10.8	0.9	1.9	3.9	55	0.2	0.3	0.2	84	0.55	0.065
1961427	Soil	1.0	52.3	15.1	95	0.4	19.8	13.4	625	3.34	8.2	1.0	2.6	2.7	70	0.3	0.2	0.2	92	0.58	0.056
1961428	Soil	0.5	86.6	18.4	79	0.5	22.7	14.1	539	3.17	7.8	0.5	1.6	1.1	114	0.2	0.2	0.2	89	0.95	0.083
1961429	Soil	0.5	78.6	17.5	74	0.4	21.7	13.9	567	2.96	8.7	0.5	2.6	1.2	114	0.1	0.3	0.1	85	0.85	0.071
1961430	Soil	0.4	86.1	19.0	79	0.6	21.7	13.5	561	2.94	10.4	0.5	3.2	1.3	125	0.2	0.3	0.2	87	0.97	0.086
1961431	Soil	0.9	81.8	22.8	101	0.9	21.6	15.2	926	2.95	11.5	0.7	2.3	1.0	103	1.0	0.3	0.2	82	0.85	0.091
1961432	Soil	0.5	79.1	11.8	74	0.3	25.1	12.4	426	3.32	11.5	0.4	2.8	1.7	180	0.2	0.2	0.1	101	0.81	0.087
1961433	Soil	0.7	61.7	37.2	86	0.5	21.5	13.6	613	2.86	19.0	0.5	3.2	1.4	70	0.2	0.3	0.2	82	0.53	0.073
1961434	Soil	0.5	58.4	4.8	104	<0.1	20.1	17.1	526	4.92	16.7	0.5	0.5	2.0	93	0.2	0.1	<0.1	139	1.00	0.232
1961435	Soil	0.5	61.4	22.1	71	0.2	15.8	8.0	310	2.12	8.1	0.4	1.5	1.5	101	0.2	0.2	0.5	60	0.87	0.075



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		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	TI	S	Ga	Se	Te
Unit		ppm	ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
MDL		1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.01	0.01	0.01	0.05	1	0.5	0.2	
1961406	Soil	23	30	0.57	285	0.073	1	2.02	0.017	0.08	0.2	0.04	4.8	0.2	<0.05	7	<0.5	<0.2
1961407	Soil	25	27	0.58	238	0.066	2	2.22	0.017	0.11	0.6	0.03	5.4	0.2	<0.05	7	<0.5	<0.2
1961408	Soil	22	31	0.65	207	0.070	2	2.55	0.012	0.08	0.4	0.05	4.4	0.2	<0.05	7	<0.5	<0.2
1961409	Soil	22	29	0.60	213	0.071	2	2.85	0.013	0.09	0.3	0.04	4.5	0.3	<0.05	8	<0.5	<0.2
1961410	Soil	25	8	0.37	500	0.023	<1	1.30	0.009	0.17	0.2	<0.01	2.3	0.2	<0.05	6	<0.5	<0.2
1961411	Soil	25	33	0.59	393	0.082	1	2.06	0.017	0.10	0.3	0.04	7.3	0.2	<0.05	6	<0.5	<0.2
1961412	Soil	14	34	0.65	178	0.076	2	2.73	0.012	0.07	0.4	0.04	4.0	0.2	<0.05	6	<0.5	<0.2
1961413	Soil	20	20	0.48	203	0.052	1	1.89	0.013	0.06	4.1	0.02	3.5	0.2	<0.05	6	<0.5	<0.2
1961414	Soil	25	18	0.47	269	0.036	1	1.88	0.015	0.07	1.2	0.02	3.6	0.2	<0.05	6	<0.5	<0.2
1961415	Soil	20	25	0.47	196	0.068	<1	1.42	0.015	0.06	1.5	0.02	3.9	<0.1	<0.05	5	<0.5	<0.2
1961416	Soil	21	32	0.58	283	0.085	1	1.59	0.024	0.08	0.4	0.04	5.9	0.1	<0.05	5	<0.5	<0.2
1961417	Soil	23	29	0.52	270	0.060	1	1.96	0.016	0.06	0.7	0.04	5.5	0.2	<0.05	6	<0.5	<0.2
1961418	Soil	37	5	0.14	40	0.003	2	1.00	0.003	0.13	<0.1	0.01	1.9	0.2	<0.05	4	<0.5	<0.2
1961419	Soil	26	9	0.42	554	0.011	<1	1.69	0.007	0.09	<0.1	0.02	2.9	0.2	<0.05	6	<0.5	<0.2
1961420	Soil	9	61	1.28	272	0.160	<1	3.73	0.018	0.44	0.1	0.02	6.0	0.3	<0.05	10	<0.5	<0.2
1961421	Soil	11	167	1.92	534	0.186	<1	3.72	0.026	0.66	<0.1	<0.01	7.0	0.4	<0.05	11	<0.5	<0.2
1961422	Soil	12	40	0.83	299	0.100	<1	2.91	0.017	0.20	0.1	0.02	5.0	0.2	<0.05	9	<0.5	<0.2
1961423	Soil	10	34	0.73	158	0.088	1	2.47	0.018	0.14	0.1	0.03	3.9	0.2	<0.05	8	<0.5	<0.2
1961424	Soil	13	51	1.01	213	0.142	<1	3.11	0.018	0.35	0.1	0.02	6.1	0.2	<0.05	10	<0.5	<0.2
1961425	Soil	10	35	1.30	249	0.154	<1	3.00	0.027	0.52	<0.1	0.01	5.2	0.3	<0.05	9	<0.5	<0.2
1961426	Soil	12	34	1.06	311	0.139	<1	2.72	0.024	0.37	0.1	0.02	6.0	0.2	<0.05	9	<0.5	<0.2
1961427	Soil	11	31	0.95	409	0.151	<1	2.83	0.024	0.45	<0.1	0.03	6.8	0.3	<0.05	10	0.6	<0.2
1961428	Soil	6	32	0.97	307	0.109	<1	3.15	0.031	0.27	<0.1	0.03	6.2	0.2	<0.05	9	<0.5	<0.2
1961429	Soil	6	31	0.87	299	0.105	<1	2.77	0.027	0.24	<0.1	0.03	6.2	0.2	<0.05	8	<0.5	<0.2
1961430	Soil	6	29	0.93	306	0.113	<1	2.82	0.029	0.30	<0.1	0.03	6.1	0.3	<0.05	8	<0.5	<0.2
1961431	Soil	8	30	0.72	274	0.083	<1	2.84	0.027	0.19	<0.1	0.04	6.0	0.2	<0.05	8	0.5	<0.2
1961432	Soil	7	36	1.03	320	0.131	<1	3.24	0.037	0.43	<0.1	0.01	8.3	0.4	<0.05	10	<0.5	<0.2
1961433	Soil	8	33	0.71	239	0.088	<1	2.58	0.022	0.15	<0.1	0.03	5.8	0.2	<0.05	8	<0.5	<0.2
1961434	Soil	7	32	1.54	364	0.125	<1	3.12	0.025	0.94	<0.1	<0.01	8.7	0.3	<0.05	10	<0.5	<0.2
1961435	Soil	6	24	0.57	175	0.072	<1	2.48	0.029	0.10	<0.1	0.01	5.9	0.1	<0.05	6	<0.5	<0.2



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Project: MM & BB
Report Date: October 15, 2020

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CERTIFICATE OF ANALYSIS

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Method	Analyte	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL
1961436	Soil	0.6	72.1	15.1	73	0.3	18.5	10.5	430	2.67	16.1	0.4	1.5	1.6	99	0.2	0.3	0.2	78	0.74	0.085
1961437	Soil	0.3	88.5	21.3	114	0.2	19.3	12.2	532	3.23	21.1	0.2	1.0	1.2	161	0.3	0.3	0.1	94	1.18	0.098
1961438	Soil	0.6	66.0	11.3	65	0.2	24.1	12.1	380	2.79	10.2	0.4	3.6	1.5	78	0.2	0.2	0.1	78	0.63	0.085
1961439	Soil	1.0	32.0	13.9	63	0.2	19.3	10.3	361	2.61	7.5	0.6	6.2	2.0	35	<0.1	0.3	0.2	62	0.32	0.056
1961440	Soil	1.0	44.3	17.4	65	0.4	20.6	10.9	279	2.69	6.6	0.6	2.8	2.5	43	<0.1	0.3	0.2	67	0.37	0.061
1961441	Soil	0.9	54.6	12.6	60	<0.1	106.0	29.3	489	3.36	7.1	0.8	0.8	4.8	22	<0.1	0.2	0.1	89	0.48	0.104
1961442	Soil	1.8	35.4	30.3	90	0.2	49.5	17.3	497	4.19	9.0	1.2	1.4	8.0	22	0.2	0.5	0.2	68	0.24	0.051
1961443	Soil	2.3	48.8	20.1	96	0.1	40.3	20.5	554	4.16	7.4	1.3	1.7	7.8	20	0.2	0.7	0.2	69	0.16	0.039
1961444	Soil	3.4	42.2	17.9	63	0.5	17.9	9.2	318	3.57	9.2	0.9	2.0	6.4	25	0.3	1.2	0.3	67	0.11	0.048
1961445	Soil	1.8	29.4	19.7	63	0.2	25.2	12.8	453	2.99	10.6	2.0	4.3	5.0	17	0.1	0.7	0.2	65	0.20	0.035
1961446	Soil	1.2	42.0	191.7	79	0.2	27.4	17.6	584	3.51	7.7	1.1	5.7	4.5	23	0.2	0.4	0.5	75	0.51	0.051
1961447	Soil	1.8	15.8	17.5	65	0.1	17.0	9.1	373	3.63	7.7	0.5	0.8	3.2	13	0.1	0.5	0.3	90	0.16	0.027
1961448	Soil	0.4	10.9	7.7	32	0.1	11.5	4.2	228	0.90	2.8	0.4	0.6	0.3	112	0.6	0.2	<0.1	20	17.23	0.049
1961449	Soil	1.3	34.9	12.3	64	0.1	27.5	11.0	292	3.33	10.0	1.4	6.1	5.5	21	0.1	1.5	0.2	65	0.24	0.057
1961450	Soil	1.0	24.1	9.8	56	<0.1	26.8	13.1	355	2.88	9.7	0.9	4.1	4.6	17	0.2	0.7	0.2	59	0.24	0.056
1961451	Soil	0.9	26.5	39.0	94	0.1	30.6	11.8	312	2.98	27.1	0.8	2.1	5.6	40	0.3	0.4	0.3	76	0.39	0.043
1961452	Soil	1.4	29.0	20.6	94	<0.1	33.2	14.6	530	3.94	73.5	0.7	3.2	5.0	60	0.3	0.5	0.3	108	0.32	0.065
1961453	Soil	1.1	30.0	10.0	68	<0.1	26.3	10.0	259	2.89	8.5	1.1	5.8	3.1	22	0.1	1.0	0.2	62	0.31	0.070
1961454	Soil	1.0	29.1	11.7	76	0.1	27.9	10.4	313	2.64	8.1	1.0	3.1	2.4	27	0.3	0.8	0.2	62	0.55	0.072
1961455	Soil	0.7	42.1	13.5	54	0.2	23.5	10.2	690	2.14	6.2	0.7	3.1	1.4	34	0.5	0.4	0.1	46	1.65	0.080
1961456	Soil	1.4	30.0	15.5	74	0.5	33.4	11.9	473	2.48	8.3	1.7	2.2	1.8	24	0.3	0.4	0.2	55	0.61	0.062
1961457	Soil	0.6	28.2	12.3	69	0.1	29.8	9.7	424	2.43	7.6	1.2	3.4	1.9	37	0.4	0.4	0.2	54	1.26	0.090
1961458	Soil	0.8	25.0	14.5	89	<0.1	34.3	15.5	440	3.42	9.5	0.7	2.9	5.5	26	0.2	0.5	0.2	70	0.29	0.053
1961459	Soil	0.8	25.6	8.1	84	<0.1	26.1	13.9	391	3.27	6.8	0.6	1.5	4.8	24	0.1	0.5	0.1	68	0.30	0.062
1961460	Soil	1.1	35.9	9.6	90	0.1	36.1	20.5	377	3.79	7.4	0.8	2.4	5.7	19	0.2	0.4	0.1	86	0.22	0.059
1961461	Soil	1.0	50.3	10.1	65	0.1	116.4	19.9	290	2.94	4.4	0.8	1.4	3.8	25	0.1	0.3	0.1	75	0.28	0.047
1961462	Soil	1.2	28.4	11.3	81	<0.1	34.2	12.6	366	3.89	4.7	0.5	1.4	3.6	23	0.1	0.3	0.1	88	0.28	0.047
1961463	Soil	2.6	32.1	65.1	96	0.5	9.8	5.0	279	2.67	57.6	1.7	2.2	11.7	90	0.3	1.0	1.8	61	0.34	0.075



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Method	Analyte	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	TI	S	Ga	Se	Te
Unit		ppm	ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
MDL		1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.01	0.01	0.01	0.05	1	0.5	0.2	
1961436	Soil	6	32	0.66	181	0.079	<1	2.49	0.029	0.13	<0.1	0.02	5.8	0.2	<0.05	7	<0.5	<0.2
1961437	Soil	4	37	0.90	218	0.096	<1	3.01	0.042	0.19	<0.1	<0.01	8.5	0.2	<0.05	8	<0.5	<0.2
1961438	Soil	6	39	0.77	185	0.091	<1	2.22	0.028	0.19	<0.1	<0.01	5.2	0.2	<0.05	7	<0.5	<0.2
1961439	Soil	11	31	0.61	170	0.079	1	1.96	0.014	0.07	0.1	0.03	3.9	0.1	<0.05	6	<0.5	<0.2
1961440	Soil	11	32	0.69	180	0.106	1	2.20	0.017	0.11	0.2	0.03	4.3	0.2	<0.05	7	<0.5	<0.2
1961441	Soil	18	468	2.05	221	0.118	<1	2.49	0.008	0.20	0.2	0.01	5.0	0.3	<0.05	9	<0.5	<0.2
1961442	Soil	24	65	0.88	168	0.061	1	2.76	0.011	0.17	0.1	0.03	4.4	0.3	<0.05	9	0.6	<0.2
1961443	Soil	23	43	1.08	110	0.049	<1	2.32	0.008	0.16	<0.1	0.02	5.1	0.3	0.07	7	0.7	<0.2
1961444	Soil	31	32	0.41	139	0.039	<1	1.78	0.008	0.13	0.1	0.02	2.9	0.4	0.11	8	0.9	<0.2
1961445	Soil	15	38	0.54	201	0.059	1	2.33	0.013	0.07	0.1	0.04	4.7	0.2	<0.05	7	0.7	<0.2
1961446	Soil	17	42	0.89	197	0.098	1	2.03	0.014	0.17	0.1	0.01	5.3	0.3	<0.05	7	<0.5	<0.2
1961447	Soil	13	34	0.43	121	0.080	<1	1.96	0.009	0.06	0.1	0.01	3.1	0.2	<0.05	10	<0.5	<0.2
1961448	Soil	5	14	0.51	52	0.018	1	0.60	0.008	0.03	<0.1	0.02	1.3	<0.1	<0.05	2	0.9	<0.2
1961449	Soil	18	37	0.60	174	0.076	1	2.05	0.011	0.06	0.2	0.04	5.0	0.2	<0.05	6	1.0	<0.2
1961450	Soil	15	32	0.56	122	0.077	2	2.17	0.013	0.06	0.2	0.04	4.3	0.1	<0.05	6	0.7	<0.2
1961451	Soil	16	46	0.65	211	0.106	1	2.41	0.014	0.20	0.2	0.02	5.1	0.2	<0.05	8	<0.5	<0.2
1961452	Soil	15	57	0.76	247	0.139	<1	3.00	0.014	0.39	0.2	0.01	6.7	0.3	<0.05	11	<0.5	<0.2
1961453	Soil	17	33	0.54	176	0.073	1	1.81	0.013	0.06	0.2	0.04	4.1	0.1	<0.05	5	0.7	<0.2
1961454	Soil	15	35	0.58	223	0.055	3	1.81	0.019	0.06	0.2	0.04	4.2	0.1	<0.05	5	<0.5	<0.2
1961455	Soil	12	25	0.55	219	0.037	2	1.42	0.020	0.05	0.1	0.05	3.0	<0.1	<0.05	4	<0.5	<0.2
1961456	Soil	13	29	0.58	194	0.046	2	1.68	0.017	0.05	0.2	0.04	3.5	0.1	<0.05	5	0.6	<0.2
1961457	Soil	17	32	0.68	183	0.043	2	1.80	0.018	0.05	0.1	0.04	3.4	0.1	0.05	5	<0.5	<0.2
1961458	Soil	13	47	0.91	176	0.083	2	2.64	0.011	0.09	0.1	0.02	4.3	0.2	<0.05	7	<0.5	<0.2
1961459	Soil	14	41	0.97	221	0.131	1	2.07	0.012	0.19	0.1	0.02	3.3	0.2	<0.05	6	<0.5	<0.2
1961460	Soil	13	47	0.88	261	0.145	2	2.48	0.012	0.22	0.2	0.04	3.8	0.2	<0.05	7	<0.5	<0.2
1961461	Soil	14	129	1.41	334	0.157	1	2.21	0.012	0.33	<0.1	0.02	3.2	0.3	<0.05	7	<0.5	<0.2
1961462	Soil	8	61	1.27	137	0.221	1	2.48	0.012	0.28	0.1	0.03	2.1	0.2	<0.05	9	<0.5	<0.2
1961463	Soil	16	19	0.40	104	0.060	2	1.84	0.012	0.09	0.4	0.05	2.5	0.2	<0.05	8	<0.5	<0.2



QUALITY CONTROL REPORT

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Method	Analyte	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%	%
MDL		0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	0.1	0.1	0.1	2	0.01	0.001	
Pulp Duplicates																					
1961270	Soil	0.9	31.9	151.4	107	1.4	20.5	10.2	417	2.77	65.1	5.8	4.5	18.1	57	0.5	2.1	2.5	62	0.43	0.072
REP 1961270	QC	0.9	32.1	154.1	107	1.4	20.4	10.1	416	2.79	65.3	5.8	5.0	18.4	57	0.5	2.1	2.5	62	0.44	0.073
1961407	Soil	2.0	49.5	363.0	250	1.2	18.6	9.6	948	3.17	408.2	6.0	16.2	18.3	154	1.7	2.2	1.7	59	0.52	0.080
REP 1961407	QC	1.9	48.1	361.9	248	1.1	18.8	9.5	935	3.06	408.5	5.9	16.3	18.1	143	1.6	2.1	1.7	56	0.52	0.075
1961443	Soil	2.3	48.8	20.1	96	0.1	40.3	20.5	554	4.16	7.4	1.3	1.7	7.8	20	0.2	0.7	0.2	69	0.16	0.039
REP 1961443	QC	2.4	50.0	20.9	98	0.2	41.2	20.8	568	4.26	7.8	1.4	1.8	8.0	19	0.2	0.7	0.2	71	0.16	0.041
Reference Materials																					
STD BVGEO01	Standard	10.9	4189.5	197.2	1639	2.5	175.4	26.4	684	3.78	115.7	4.0	220.2	16.6	51	6.2	3.5	25.0	81	1.34	0.078
STD BVGEO01	Standard	11.8	4439.1	205.2	1717	2.5	178.0	26.6	742	4.02	119.9	4.1	213.0	17.3	61	6.8	3.6	25.7	79	1.31	0.083
STD DS11	Standard	15.3	139.2	133.6	320	1.9	82.1	14.3	1005	3.07	42.5	2.6	75.6	7.9	65	2.2	8.5	10.8	50	1.05	0.065
STD DS11	Standard	16.0	140.8	128.6	321	1.9	83.3	14.9	1016	3.18	43.7	2.7	71.1	7.9	67	2.3	8.2	10.4	51	1.09	0.067
STD OREAS262	Standard	0.7	108.1	52.3	149	0.5	66.5	28.3	525	3.25	35.3	1.1	67.4	8.7	34	0.6	5.8	0.9	23	2.82	0.036
STD OREAS262	Standard	0.6	113.4	59.7	150	0.5	68.3	28.7	507	3.43	36.7	1.2	66.8	10.3	35	0.6	6.1	1.0	24	3.04	0.044
STD OREAS262	Standard	0.8	109.7	56.2	155	0.5	68.9	30.5	546	3.42	37.1	1.3	61.3	9.5	36	0.6	5.3	1.0	25	2.94	0.039
STD OREAS262	Standard	0.7	112.1	60.0	150	0.5	66.5	28.2	501	3.35	36.6	1.3	58.7	10.2	37	0.6	5.2	1.1	23	2.92	0.043
STD DS11 Expected		14.6	149	138	345	1.71	77.7	14.2	1055	3.1	42.8	2.59	79	7.65	67.3	2.37	8.74	12.2	50	1.063	0.0701
STD BVGEO01 Expected		11.2	4415	187	1741	2.53	163	25	733	3.7	121	3.77	219	14.4	55	6.5	3.39	25.6	73	1.3219	0.0727
STD OREAS262 Expected		0.68	118	56	154	0.45	62	26.9	530	3.284	35.8	1.22	65	9.33	36	0.61	5.06	1.03	22.5	2.98	0.04
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.1	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.1	<0.5	0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.1	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.1	<0.5	<0.1	<1	<0.1	<0.1	<0.1	3	<0.01	<0.001



QUALITY CONTROL REPORT

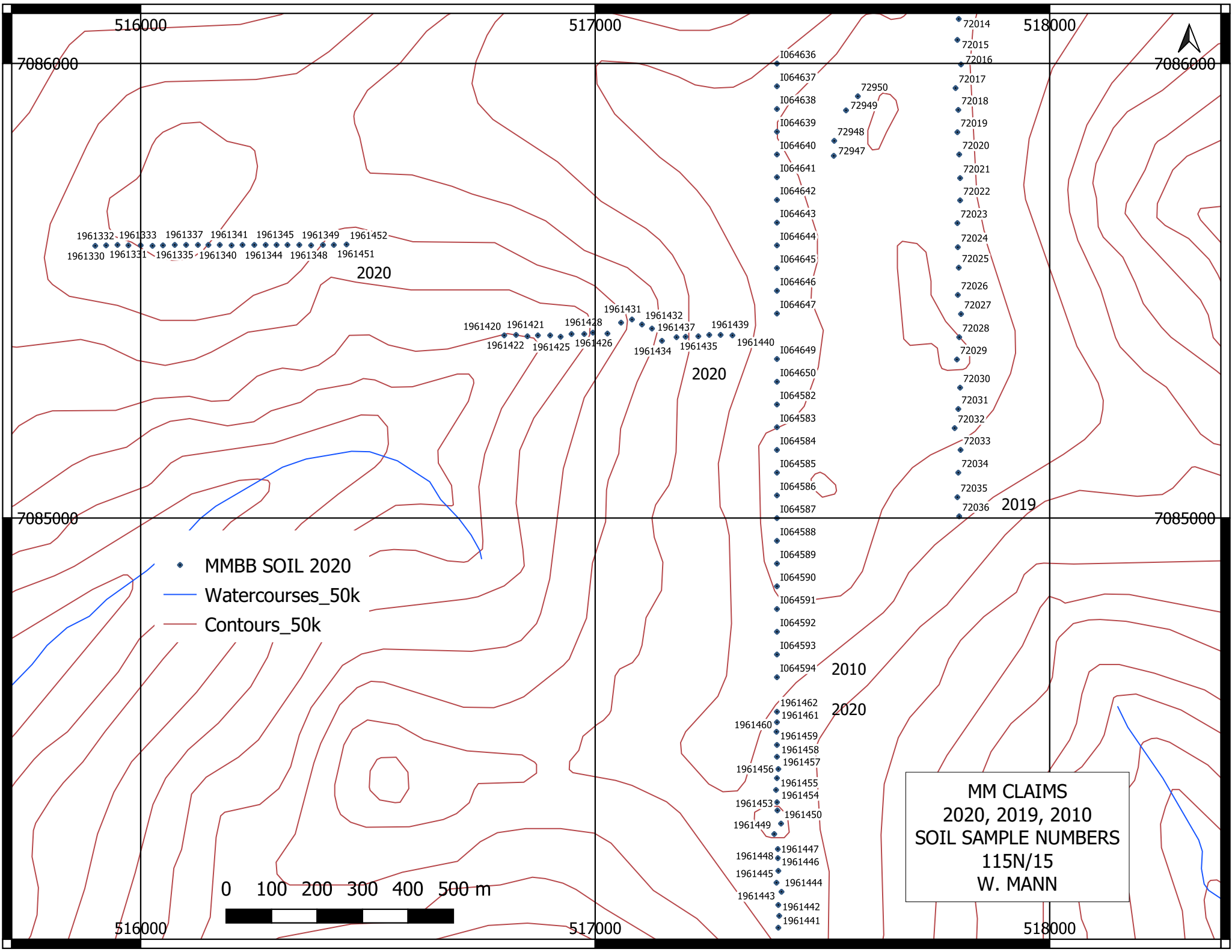
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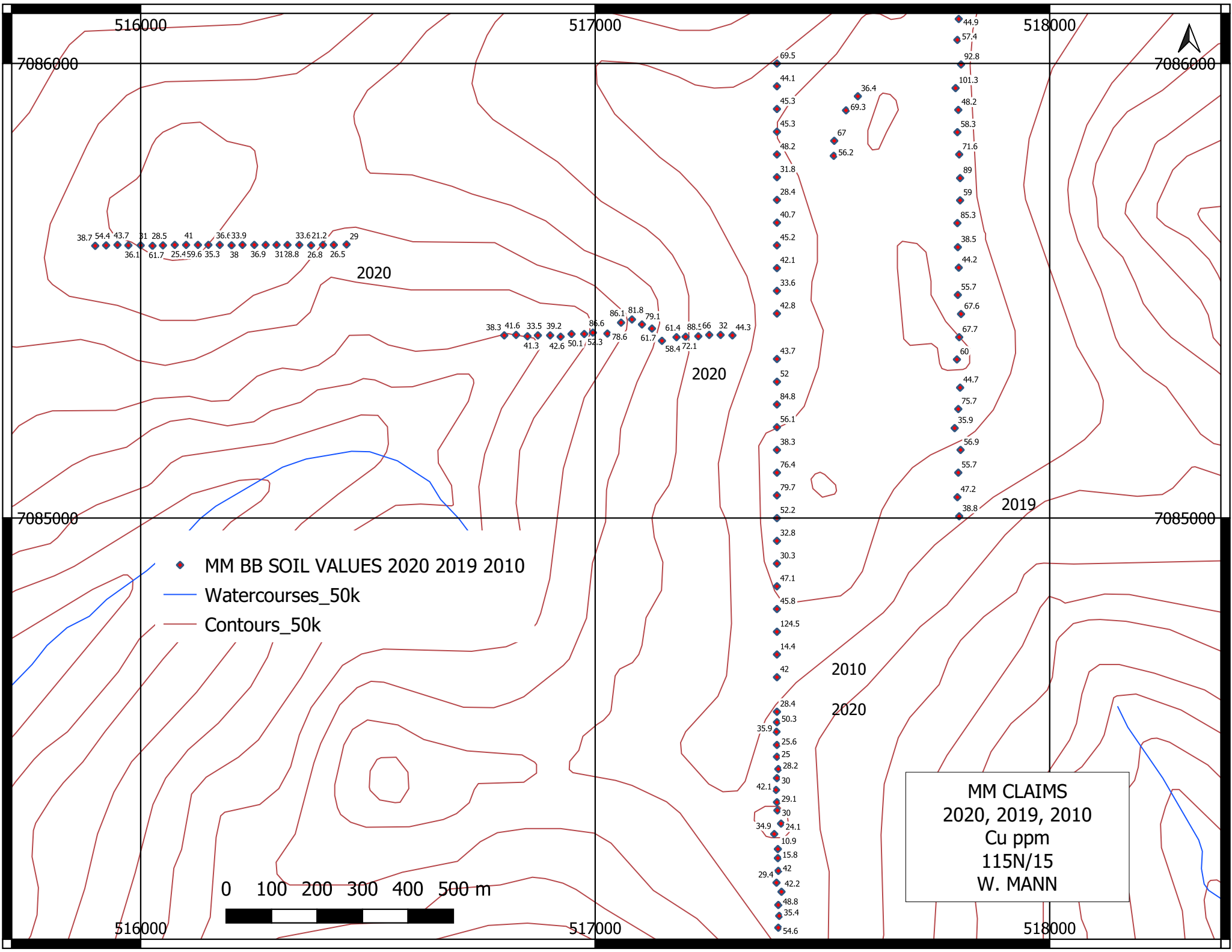
Method	Analyte	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
MDL		1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
Pulp Duplicates																		
1961270	Soil	20	28	0.59	294	0.069	1	1.72	0.014	0.07	0.2	0.04	4.9	0.2	<0.05	6	<0.5	<0.2
REP 1961270	QC	20	29	0.59	291	0.071	1	1.71	0.014	0.07	0.2	0.04	4.9	0.2	<0.05	6	<0.5	<0.2
1961407	Soil	25	27	0.58	238	0.066	2	2.22	0.017	0.11	0.6	0.03	5.4	0.2	<0.05	7	<0.5	<0.2
REP 1961407	QC	24	27	0.57	233	0.064	2	2.19	0.018	0.11	0.6	0.03	5.3	0.2	<0.05	7	<0.5	<0.2
1961443	Soil	23	43	1.08	110	0.049	<1	2.32	0.008	0.16	<0.1	0.02	5.1	0.3	0.07	7	0.7	<0.2
REP 1961443	QC	23	44	1.11	112	0.050	<1	2.38	0.008	0.16	<0.1	0.01	5.2	0.3	0.07	7	0.8	<0.2
Reference Materials																		
STD BVGEO01	Standard	26	205	1.31	293	0.243	4	2.30	0.181	0.92	5.3	0.09	5.8	0.6	0.66	8	5.0	1.0
STD BVGEO01	Standard	27	197	1.42	280	0.243	4	2.53	0.212	0.94	5.1	0.10	6.0	0.7	0.76	8	4.8	1.1
STD DS11	Standard	18	59	0.84	365	0.089	7	1.13	0.068	0.38	3.0	0.28	3.2	5.1	0.31	5	2.3	4.6
STD DS11	Standard	18	60	0.86	350	0.092	7	1.20	0.072	0.39	2.9	0.28	3.3	5.1	0.31	5	2.5	4.8
STD OREAS262	Standard	16	43	1.16	223	0.002	3	1.28	0.063	0.29	0.2	0.15	3.2	0.5	0.30	4	0.8	0.2
STD OREAS262	Standard	16	44	1.20	250	0.003	5	1.24	0.072	0.32	0.2	0.15	3.2	0.5	0.27	4	<0.5	0.2
STD OREAS262	Standard	17	45	1.23	240	0.003	4	1.36	0.068	0.31	0.2	0.17	3.5	0.5	0.31	5	0.8	<0.2
STD OREAS262	Standard	17	43	1.20	255	0.003	3	1.33	0.067	0.32	0.2	0.17	3.1	0.5	0.28	4	<0.5	0.2
STD DS11 Expected		18.6	61.5	0.85	385	0.0976		1.1795	0.0762	0.4	2.9	0.26	3.4	4.9	0.2835	5.1	2.2	4.56
STD BVGEO01 Expected		25.9	187	1.2963	260	0.233	3.8	2.347	0.1924	0.89	5.3	0.1	5.97	0.62	0.6655	7.37	4.84	1.02
STD OREAS262 Expected		15.9	41.7	1.17	248	0.0027	4	1.3	0.071	0.312	0.2	0.17	3.24	0.47	0.253	4.1	0.4	0.23
BLK	Blank	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2

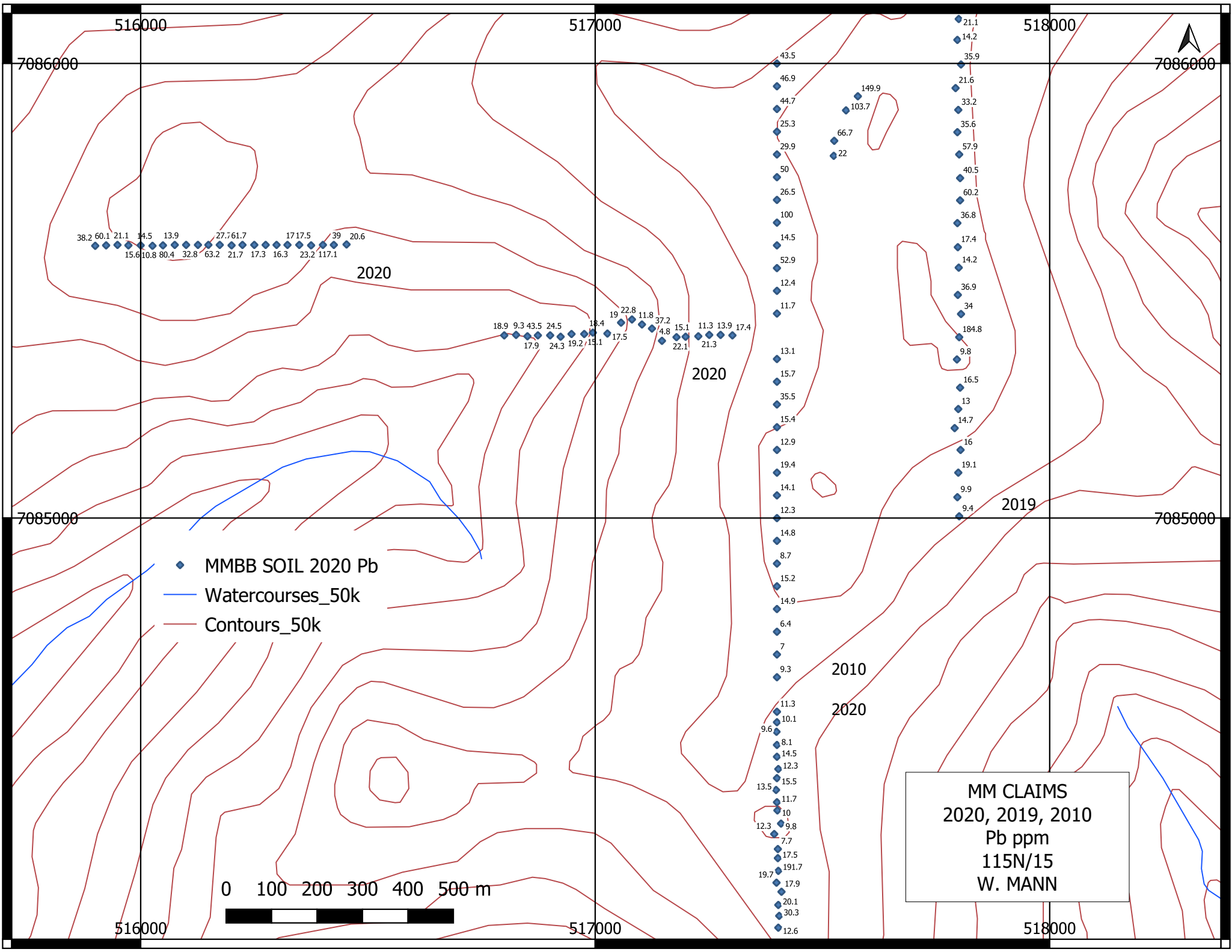
APPENDIX V - MM & BLACKBEAR 2020 XRF

Sample#	Reading No	Duration	Units	Mo	Mo Error	Pb	Pb Error	As	As Error	Zn	Zn Error	Cu	Cu Error	Fe	Fe Error	Mn	Mn Error
1961463	1398	30.14	ppm	< LOD	5.98	27.28	7.51	23.06	6.89	54.76	12.47	34.63	16.28	6032.88	190.06	106.68	46.13
72907	1399	180	ppm	6.4	3.19	150.83	11.31	116.58	11.26	342.27	20.79	21.47	13.29	5908.04	153.98	3067.66	135.29
72908	1400	30.89	ppm	< LOD	6.06	393.46	23.57	328.91	24.36	95.15	16.35	31.16	17.67	6585.23	219.23	3923.07	204.8
near QV2	1401	30.09	ppm	< LOD	9.31	361.37	31.43	< LOD	36.77	900.78	61.19	78.36	33.68	26673.65	583.2	988.67	155.94
near QV2	1402	30.13	ppm	< LOD	8.27	290.38	26.81	< LOD	30.95	262.12	33.52	< LOD	29.65	51589.13	764.08	1216.82	166.45
near QV2	1403	30.12	ppm	< LOD	7.21	308.18	24.4	83.64	20.75	145.37	22.57	< LOD	29.74	10809.5	315.23	2261.02	182.7
72909	1404	30.14	ppm	< LOD	7.06	38.7	10.02	16.25	8.38	29.75	12.89	< LOD	28.98	10366.56	289.35	207.4	68.72
72910	1405	180	ppm	25.41	4.35	9541.98	105.59	5785.5	103.02	271.63	26.67	589.67	41.68	91642.24	729.82	950.03	117.68
72910	1406	30.12	ppm	< LOD	10.31	16890.99	238.98	7803.45	221.95	374.95	53.39	1596.1	110.24	95558.57	1268.2	< LOD	194.87
weird rock	1407	30.13	ppm	< LOD	7.62	26.01	9.72	91.79	12.52	48.79	16.9	37.19	23.35	27761.72	509.24	644.45	115.54
1961245	1408	30.14	ppm	< LOD	6.62	61.02	10.86	82.68	11.77	67.95	15.27	30.68	18.29	13296.04	308.52	379.08	78
1961246	1409	30.14	ppm	< LOD	6	83.83	11.25	56.37	10.66	28.92	10.84	28.99	16.12	10035.54	248.04	198.83	57.78
1961247	1410	30.12	ppm	7.59	4.32	154.27	15.23	131.69	15.51	89.73	16.26	68.63	20.03	14071.27	306.53	364.25	74.3
1961248	1411	30.13	ppm	< LOD	5.8	126.71	13.03	82.15	12.44	82.44	14.37	49.76	17.11	9769.96	238.44	198.29	56.06
1961249	1412	30.14	ppm	9.07	4.67	65.61	11.26	81.88	12.08	68.85	15.54	30.69	18.91	13154.07	312.08	339.97	76.28
1961250	1413	30.12	ppm	6.74	4.22	46.01	9.11	38.94	8.76	45.02	12.23	< LOD	22.2	10363.89	256.82	177.45	57.24
1961251	1414	30.14	ppm	< LOD	6.23	62.43	10.35	95.85	11.69	89.33	15.64	26.73	16.69	11764.86	276.51	234.53	62.92
1961252	1415	30.13	ppm	< LOD	6.67	66.93	11.3	83.24	12.07	78.35	16.1	30.7	18.6	11418.35	287.94	372.23	77
1961253	1416	30.13	ppm	7.19	4.13	217.91	17.3	184.04	17.7	158.99	19.44	< LOD	23.94	15255.96	309.62	482.92	79.76
1961254	1417	30.11	ppm	< LOD	6.88	87.26	12.76	76.35	12.79	101.31	17.92	47.44	20.65	12083.85	303.44	435.55	83.9
1961255	1418	30.12	ppm	< LOD	6.65	66.03	11.12	86.03	12.07	56.16	14.39	43.42	19.47	11375.44	286.24	371.01	77.01
1961256	1419	30.13	ppm	< LOD	6.17	112.88	13.25	274.37	17.97	120.6	17.84	< LOD	25.21	13396.63	297.05	278.17	67.38
1961257	1420	30.13	ppm	< LOD	6.62	67.79	11.15	91.84	12.2	99.09	17.18	< LOD	26.41	12742.1	299.19	464.3	82.53
1961258	1421	30.09	ppm	< LOD	6.74	99.3	13.37	38.85	11.69	86.9	16.94	40.74	19.72	11236.05	290.28	434.83	82.85
1961259	1422	30.08	ppm	9.54	4.42	122.26	14.03	62.94	12.81	143.81	19.37	< LOD	25.06	11627.31	282.81	437.93	78.76
1961260	1423	30.14	ppm	< LOD	6.32	86.24	11.98	64.95	11.58	58.85	13.86	32.81	17.54	11356.75	276.77	730.72	95.64
1961261	1424	30.15	ppm	< LOD	6.29	47.16	9.49	30.24	8.64	83.08	15.56	46.47	18.58	9272.1	249.22	239.81	63.05
1961262	1425	30.1	ppm	< LOD	6.67	83.58	12.2	39.84	10.91	81.43	16.06	< LOD	26.98	10675.47	277.29	353.39	75.36
1961263	1426	30.12	ppm	< LOD	6.63	62.82	10.94	21.82	9.2	75.17	15.47	< LOD	25.43	10912.35	276.16	288.88	69.49
1961264	1427	30.12	ppm	< LOD	6.92	69.66	12.07	37.32	10.82	58.99	15.28	31.26	19.94	11187.26	297.76	303.25	75.63
1961265	1428	30.13	ppm	< LOD	6.99	169.25	17.33	60.46	15.15	89.36	17.57	52.04	21.53	11193.12	298.11	362.15	79.31
1961266	1429	30.13	ppm	< LOD	6.71	105.75	13.81	63.51	12.87	75.05	16.13	46.72	20.26	9736.9	270.43	255.77	68.81
1961267	1430	30.09	ppm	< LOD	6.35	111.96	13.29	177.39	15.69	89.35	15.94	50.99	18.9	12552.32	289.49	334.54	71.42
1961268	1431	30.15	ppm	< LOD	6.6	242.54	18.95	104.2	17.13	70.56	15.08	45.59	18.79	11235.67	278.3	339.16	72.76
1961269	1432	30.12	ppm	< LOD	6.46	159.78	15.66	59.75	13.72	56.18	13.73	28.61	17.41	10538.25	267.45	297.68	69.05
1961270	1433	30.14	ppm	< LOD	6.55	69.19	11.19	31.92	9.82	43.25	12.89	32.01	17.88	9783.03	259.86	210.56	62.15
1961271	1434	30.14	ppm	< LOD	6.47	73.84	11.3	74.4	11.57	61.31	14.44	29.87	17.6	10895.49	272.24	235.83	64.63
1961272	1435	30.14	ppm	< LOD	6.29	84.04	11.59	21.64	9.66	48.97	13.12	48.91	18.37	12117.28	281.39	229.65	63.14
1961273	1436	30.14	ppm	< LOD	6.59	110.72	13.9	75.71	13.34	62.66	14.95	29.33	18.63	11616.99	293.02	357.2	76.65
1961274	1437	30.13	ppm	< LOD	6.8	134.16	15.24	166.3	16.89	83.73	16.78	45.5	20.17	11678.97	296.38	595.67	93.2
72911	1438	30.07	ppm	< LOD	7.14	15.68	8.28	< LOD	9.03	39.56	13.95	< LOD	29.61	7872.23	257.18	133.01	60.1
72912	1439	30.07	ppm	8.32	4.89	< LOD	10.03	9.94	5.75	40.92	13.67	< LOD	29.3	5494.13	212.41	< LOD	65.61
72913	1440	30.12	ppm	< LOD	9.71	251.6	28.59	19924.58	185.99	197.4	36.39	< LOD	51.15	94868.95	1140.08	362.19	145.98
72914	1441	30.13	ppm	< LOD	6.67	493.96	28.41	1035.74	38.44	82.09	16.67	31.1	19.74	8023.08	252.59	< LOD	75.52
72914	1442	30.08	ppm	< LOD	12.28	897.65	66.69	57188.22	410.01	169.81	52.99	207.01	67.11	158194.7	1914.38	384.06	222.26
72915	1443	30.12	ppm	18.9	5.8	1450.96	59.17	11955.12	134.67	53.6	20.57	100.62	32.02	33641.89	605.62	338.14	104.16
72915	1444	30.12	ppm	< LOD	8.18	1429.96	58.29	16561.87	159.84	< LOD	26.5	108.96	33.9	32434.83	609.82	< LOD	119.83
72916	1445	30.12	ppm	< LOD	10.52	4826.84	132.87	35126.04	297.43	56.79	32.29	190.88	54.57	63676.95	1068.48	< LOD	211.71
72916	1446	180	ppm	< LOD	12.83	21433.33	296.3	120382.35	595.1	78.51	50.41	345.64	81.93	177310.38	1894.7	349.02	230.21
72796	1623	180	ppm	< LOD	4.9	83.19	9.61	1438.5	28.84	< LOD	11.48	< LOD	21.98	15272.52	258.01	< LOD	52.92
72796	1624	30.14	ppm	< LOD	6.27	414.5	25.69	2888.7	55.25	< LOD	16.17	< LOD	25.01	8001.33	245.45	< LOD	60.68
72796	1625	180	ppm	< LOD	4.76	47.05	7.51	630.12	18.9	< LOD	9.84	< LOD	20.76	13566.31	237.79	< LOD	54.35
1961397	1626	30.11	ppm	< LOD	6.45	331.21	22.04	165.7	20.46	173.61	21.19	47.54	19.2	11470.1	281.84	284.5	68.94
1961398	1627	30.1	ppm	< LOD	6.41	226.3	18.13	120.54	16.94	120.33	17.85	26	17.09	10325.41	263.19	210.18	61.84
1961399	1628	30.14	ppm	< LOD	7.01	108.43	14.08	142.4	15.67	145.4	20.75	41.37	20.14	12136.37	304.3	307	74.24
1961400	1629	30.12	ppm	< LOD	6.65	102.52	13.03	42.78	11.51	55.2	14.01	< LOD	26.1	12877.77	298.92	248.54	66.8
1961401	1630	30.15	ppm	< LOD	6.7	116.71	14.07	19.34	11.29	64.76	14.65	31.7	18.3	8980.38	253.13	304.93	70.38
1961402	1631	30.14	ppm	< LOD	6.56	40.63	9.13	< LOD	10.73	92.77	16.37	27.77	17.4	10256.4	264.1	232.12	63.81
1961403	1632	30.14	ppm	< LOD	6.61	17.8	7.51	< LOD	9.06	33.83	12.52	28.04	18.36	9789.72	266.94	197.8	62.28
1961404	1633	30.12	ppm	10.54	4.42	60.5	10.4	86.85	11.53	54	13.55	31.19	17.61	8262.54	236.65	196.25	59.86
1961405	1634	30.15	ppm	< LOD	6.7	447.46	26.19	453.56	28.35	252.99	25.68	47.15	20.14	12208.51	300.03	636.15	95.09
1961406	1635	30.15	ppm	8.06	4.49	355.86	22.95	< LOD	26.97	63.03	14.52	32.36	18.3	8414.69	244.13	125.53	54.88
1961407	1636	30.12	ppm	8.37	4.42	195.9	17.15	197.68	18.26	109.65	17.25	45.91	18.77	9901.45	260.07	272.71	67.03
1961408	1637	30.13	ppm	< LOD	6.38	127.37	14.02	29.1	11.58	50.03	13.28	43.07	18.13	9957.19	256.91	192.79	59.46
1961409	1638	30.12	ppm	< LOD	6.51	61.23	10.42	64.15	10.61	49.67	13.39	47.06	18.54	11196.43	272.23	174.94	58.6
1961410	1639	30.12	ppm	< LOD	7.2	49.21	10.76	425.12	22.08	88.21	17.73	33.11	20.36	11389.92	302.9	131.32	61.29
1961411	1640	30.08	ppm	< LOD													

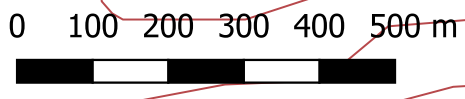
1961412	1641	30.07	ppm	< LOD	6.31	68.51	10.8	52.12	10.37	33.55	11.94	32.64	17.37	11011.55	269.56	259.15	64.87
1961413	1642	30.14	ppm	< LOD	6.33	66.94	10.76	47.39	10.12	57.08	13.27	35.18	17.54	7498.25	222.52	251.33	62.38
1961414	1643	30.12	ppm	< LOD	6.77	123.86	14.63	87.99	14.13	65.59	15.18	48.83	20.13	10016.54	271.5	374.66	77.5
1961415	1644	30.13	ppm	< LOD	6.78	61.35	10.73	26.02	9.35	37.93	12.79	37.34	18.82	9454.05	260.1	324.41	72.2
1961416	1645	30.07	ppm	7.13	4.51	49.27	9.77	18.29	8.31	36.54	12.44	49.12	19.31	11895.24	287.64	208.66	63.85
1961417	1646	30.13	ppm	8.68	4.33	47.64	9.5	43.92	9.23	25.44	11.15	40.52	17.89	10303.75	260.34	170.02	56.82
1961418	1647	30.14	ppm	< LOD	6.47	31.48	8.63	117.13	11.75	148.28	19.45	45.85	18.84	7553.53	227.3	165.54	57.48
1961419	1648	30.15	ppm	< LOD	6.71	38.28	9.33	228.01	15.77	107.89	17.85	34.62	18.61	9534.05	261.46	248.89	66.69
1961330	1649	30.15	ppm	< LOD	6.3	15.57	6.8	21.47	6.49	54.74	13.4	48.21	18.49	11876.25	278.9	242.66	63.8
1961331	1650	30.14	ppm	< LOD	6.76	30.97	8.76	18.92	7.72	67.59	15.76	63.97	21.53	14376.26	328.07	235.16	69.85
1961332	1651	30.13	ppm	< LOD	6.63	15.29	6.97	16.69	6.4	46.19	13.75	39.46	18.92	15367.54	329.61	300.76	72.61
1961333	1652	30.07	ppm	7.66	4.41	< LOD	9.27	10.73	5.48	24.47	11.4	40.35	18.89	12662.92	299.09	215.49	63.9
1961334	1653	30.1	ppm	< LOD	6.19	< LOD	9.31	8.07	5.17	47.98	13.02	30.87	17.23	14508.14	309.71	156.6	58.92
1961335	1654	30.09	ppm	< LOD	6.6	< LOD	9.48	< LOD	7.95	52.22	14.47	62.59	21.29	16541.77	348.73	309.58	75.08
1961336	1655	30.09	ppm	< LOD	6.16	38.81	8.51	14.46	7.18	69.67	14.25	< LOD	23.42	14777.18	305.16	241.01	63.65
1961337	1656	30.13	ppm	< LOD	6.14	< LOD	8.6	17.77	5.63	25.75	11.14	31.18	16.91	15972.66	320.85	142.5	56.95
1961338	1657	30.13	ppm	< LOD	6.31	16.86	6.92	12.66	6.03	66	14.25	30.29	17.19	14073.66	305.48	244.86	65.53
1961339	1658	30.13	ppm	< LOD	6.96	45.21	10.17	33.39	9.56	47.19	14.48	36.9	20.75	10638.82	293.48	218.18	68.5
1961340	1659	30.11	ppm	< LOD	6.77	29.26	8.55	25.02	8	74.59	16.44	43.1	20.18	16367.19	352.23	327.02	77.26
1961341	1660	30.13	ppm	< LOD	6.77	< LOD	9.41	15.59	5.98	44.41	13.97	43.56	20.59	9623.4	271.84	314.3	74.37
1961342	1661	30.14	ppm	< LOD	6.35	10.3	6.3	< LOD	7.59	50.42	13.3	26.02	17.15	12848.49	294.35	251.26	66.04
1961343	1662	30.12	ppm	< LOD	6.41	27.09	7.98	12.22	6.75	83.13	16.02	39.53	18.61	13087.12	301	331.43	72.92
1961344	1663	30.1	ppm	6.73	4.45	< LOD	9.39	20.32	6.25	72.8	15.51	53.08	20.04	13269.58	308.97	314.66	73.46
1961345	1664	30.14	ppm	< LOD	6.47	13.01	6.58	20.06	6.4	158.59	20.45	42.02	18.88	12381.4	293.53	469.37	82.1
1961346	1665	30.12	ppm	< LOD	6.49	< LOD	9.1	13.69	5.57	62.06	14.46	29.97	17.7	14200.8	312.47	380.37	76.52
1961347	1666	30.12	ppm	< LOD	6.29	9.44	6.12	13.99	5.6	59.48	13.9	30.09	16.96	15826.43	321.66	294.64	69.51
1961348	1667	30.12	ppm	< LOD	6.34	11.48	6.5	15.45	6.02	66.87	14.93	< LOD	25.47	17388.41	347.46	235.38	67.85
1961349	1668	30.13	ppm	< LOD	6.3	< LOD	9	24.38	6.26	56.36	13.87	39.39	17.93	16547.48	331.12	160.62	59.05
1961350	1669	30.13	ppm	< LOD	6.32	53.39	9.67	21.45	8.32	43.09	12.54	< LOD	24.3	12732.11	286.25	162.56	56.64
1961451	1670	30.13	ppm	< LOD	6.52	23.91	7.77	17.09	6.94	76.11	15.64	49.25	19.45	15699.43	332.16	230.48	67.21
1961452	1671	30.14	ppm	6.81	4.45	11.44	6.48	35.53	7.31	46.13	13.48	30.66	18.05	11376.99	281.66	158.56	58.57
1961420	1672	30.13	ppm	8.17	4.36	10.98	6.43	13.44	5.8	71.32	15.14	37.38	18.38	16295.06	333.76	357.38	75.25
1961421	1673	30.09	ppm	< LOD	7.12	< LOD	10.09	< LOD	8.36	50.27	15.26	47.24	22.01	16537.6	368.74	354.11	82.81
1961422	1674	30.13	ppm	< LOD	5.92	8.98	5.65	17.35	5.54	30.19	10.92	45.57	17.27	6802.62	204.94	149.56	51.8
1961423	1675	30.12	ppm	< LOD	6.14	24.56	7.45	25.53	7.05	57.45	13.15	32.56	16.56	13090.01	285.3	311.22	67.65
1961424	1676	30.14	ppm	< LOD	6.51	18.68	7.28	10.35	6.21	44.12	13.83	47.95	19.83	15922.85	338.11	220.45	66.75
1961425	1677	30.13	ppm	< LOD	6.74	16.66	7.36	12.53	6.45	40.13	13.88	36.62	19.71	19905.24	388.69	415.01	85.02
1961426	1678	30.15	ppm	< LOD	6.7	11.91	6.7	< LOD	8.04	46.1	14.12	48.29	19.94	20438.32	386.24	365.9	80.2
1961427	1679	30.07	ppm	< LOD	6.26	13.97	6.57	< LOD	7.3	47.15	13.24	40.4	18.23	14642.52	315.39	340.6	73.97
1961428	1680	30.12	ppm	< LOD	5.95	< LOD	8.62	< LOD	6.62	34.48	11.55	47.93	17.75	12381.76	277.68	205.38	59.55
1961429	1681	30.12	ppm	< LOD	6.27	10.3	6.21	< LOD	7.68	33.63	12.45	63.91	20.07	15446.61	324.45	488.81	83.43
1961430	1682	30.06	ppm	< LOD	6.03	11.91	6.12	< LOD	7.58	43.31	12.53	57.91	18.91	11945.26	277.36	365.51	71.82
1961431	1683	26.92	ppm	< LOD	6.6	16.41	7.16	< LOD	8.67	38.01	12.84	65.87	20.54	14142	320.67	253.19	69.47
1961431	1684	30.13	ppm	< LOD	6.04	8.89	5.84	< LOD	7.18	47.05	12.76	55.08	18.53	14077.36	299.29	314.27	68.98







- ◆ MMBB SOIL 2020 Pb
- Watercourses_50k
- Contours_50k



MM CLAIMS
 2020, 2019, 2010
 Pb ppm
 115N/15
 W. MANN

38.2 60.1 21.1 14.5 13.9 27.7 61.7 17 17.5 39 20.6
 15.6 10.8 80.4 32.8 63.2 21.7 17.3 16.3 23.2 117.1

2020

18.9 9.3 43.5 24.5 18.4 19 22.8 11.8 37.2 15.1 11.3 13.9 17.4
 17.9 24.3 19.2 15.1 17.5 4.8 22.1 21.3

2020

43.5
 46.9
 44.7
 25.3
 29.9
 50
 26.5
 100
 14.5
 52.9
 12.4
 11.7
 13.1
 15.7
 35.5
 15.4
 12.9
 19.4
 14.1
 12.3
 14.8
 8.7
 15.2
 14.9
 6.4
 7
 9.3
 11.3
 2020
 10.1
 9.6
 8.1
 14.5
 12.3
 15.5
 13.5
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 12.6

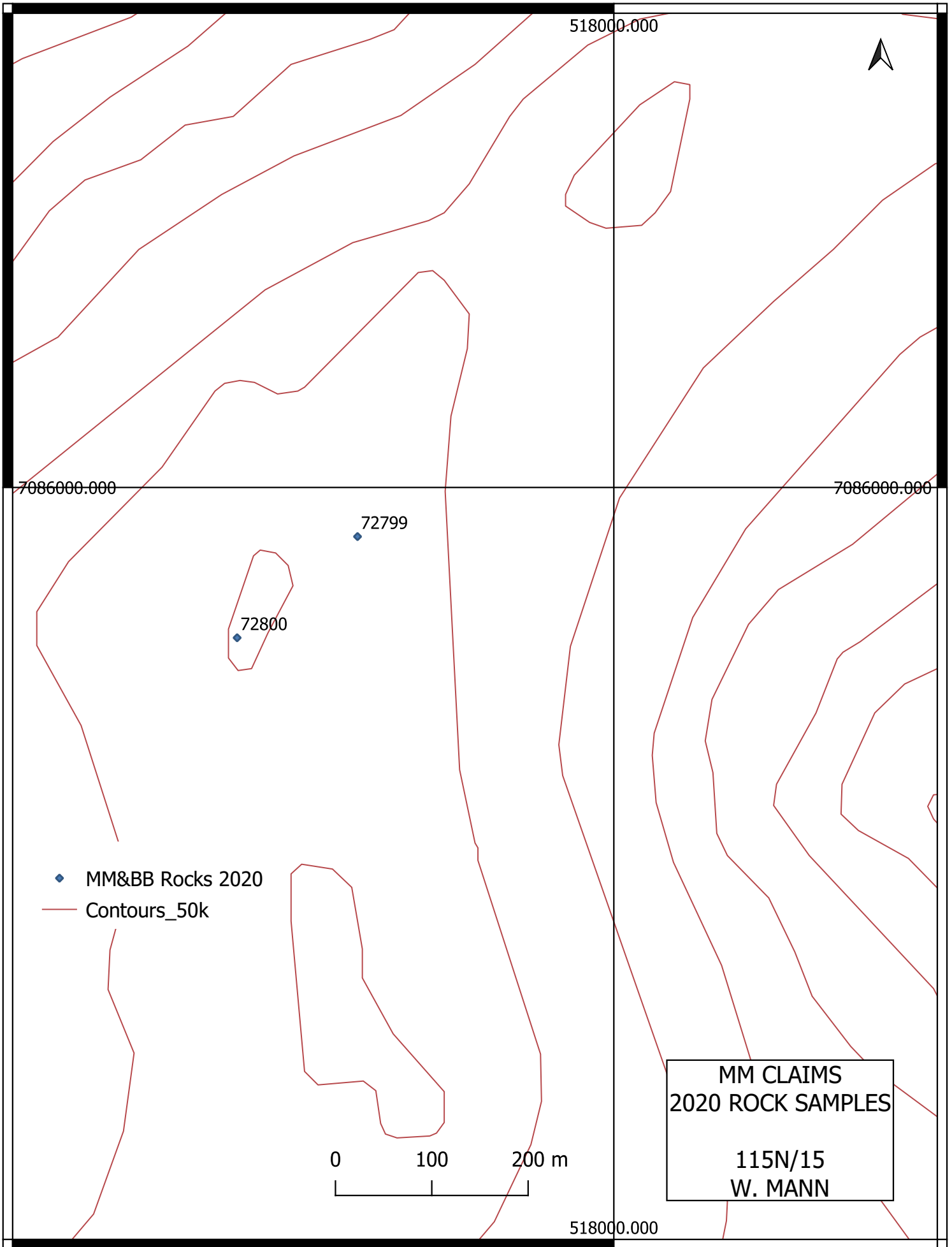
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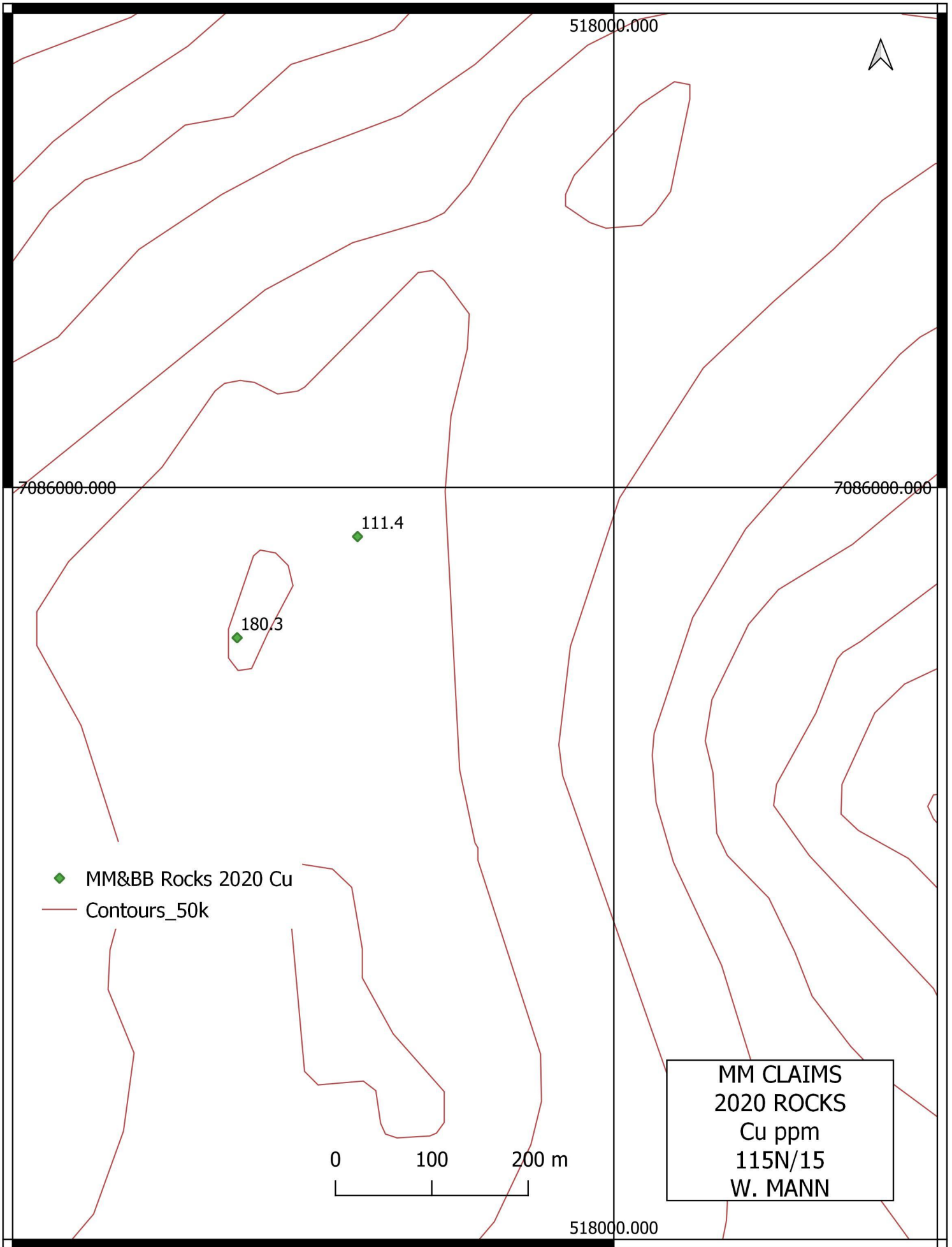
2020

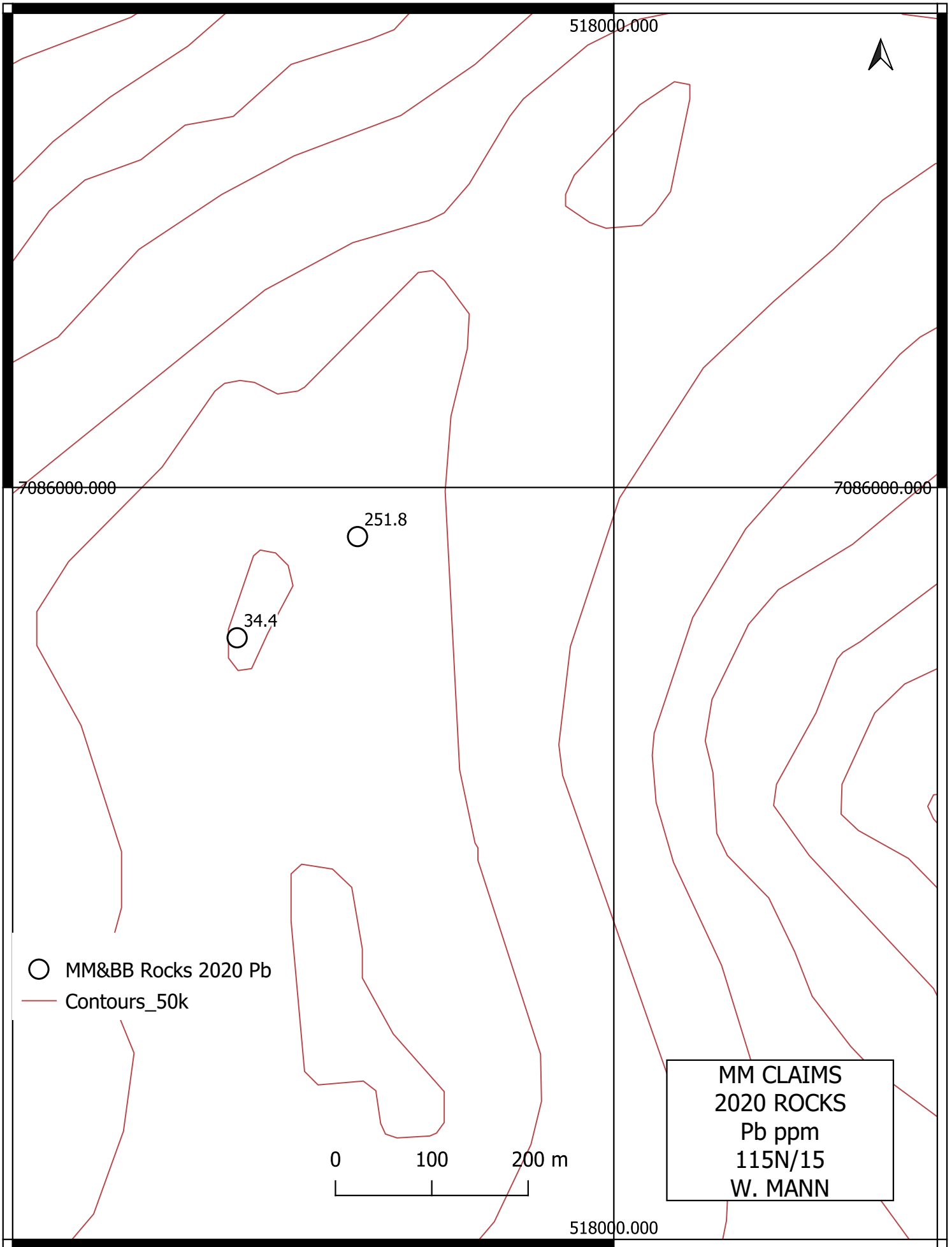
2019

21.1
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 21.6
 33.2
 35.6
 57.9
 40.5
 60.2
 36.8
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 14.2
 36.9
 34
 184.8
 9.8
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 13
 14.7
 16
 19.1
 9.9
 9.4









518000.000



7086000.000

7086000.000

251.8

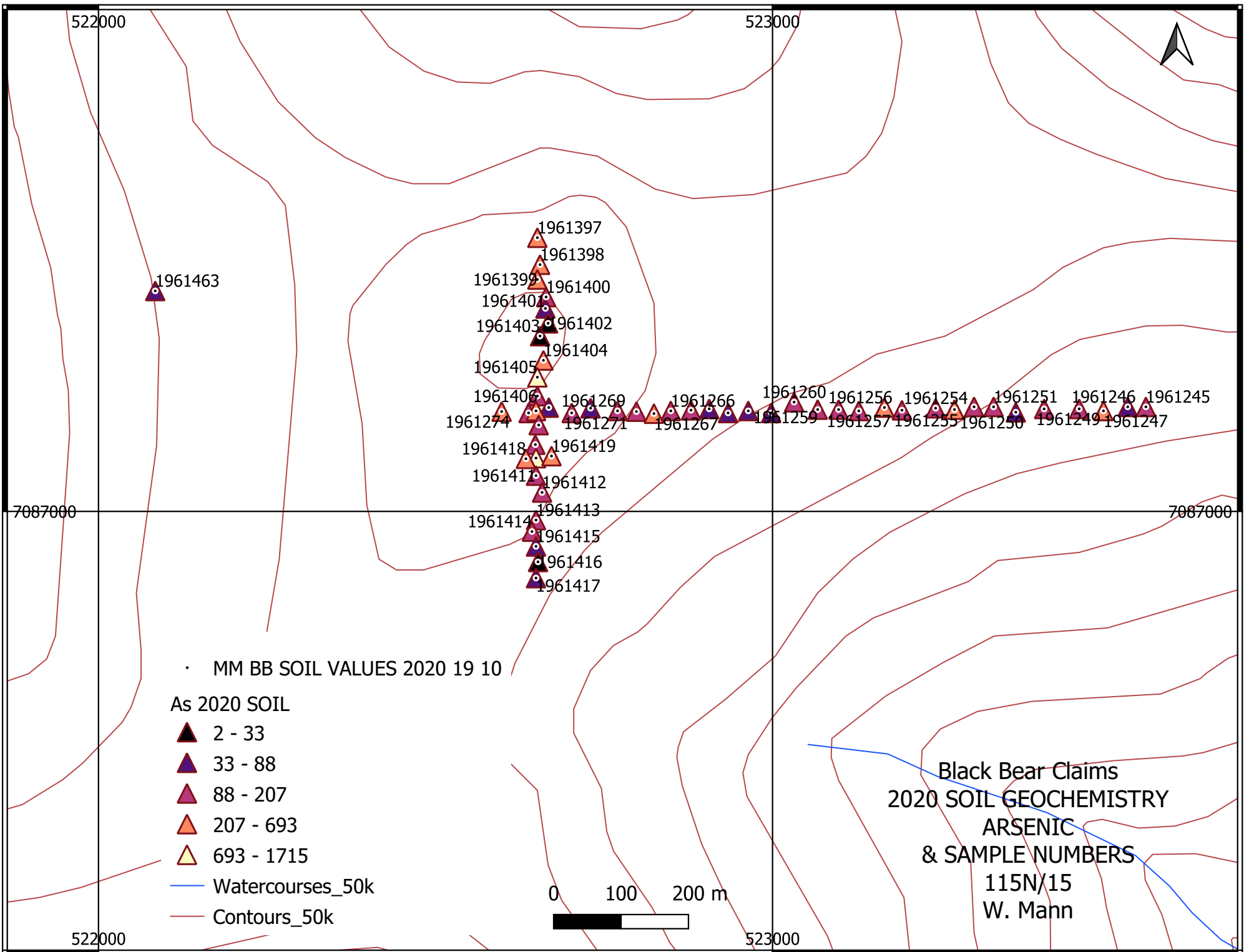
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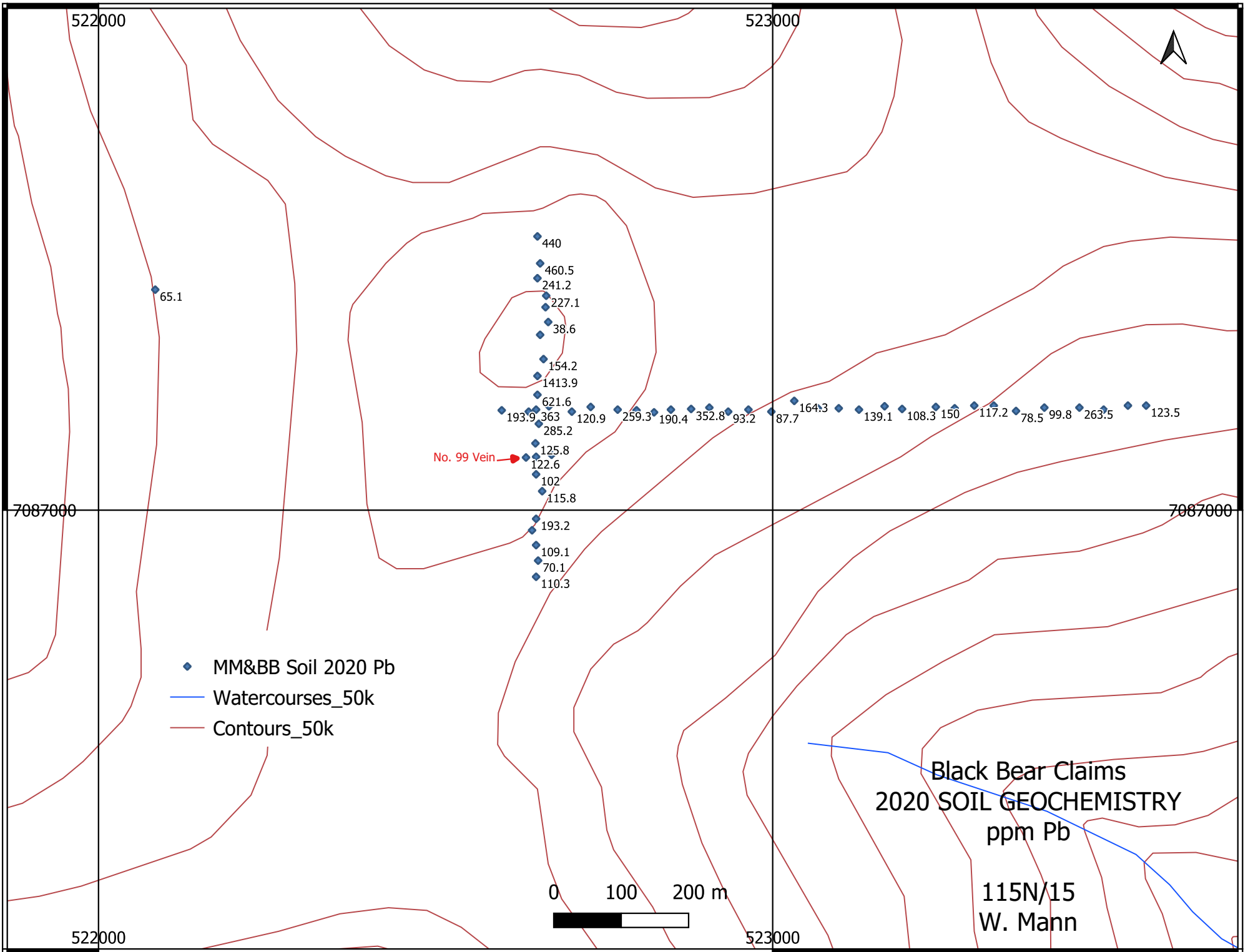
○ MM&BB Rocks 2020 Pb
— Contours_50k

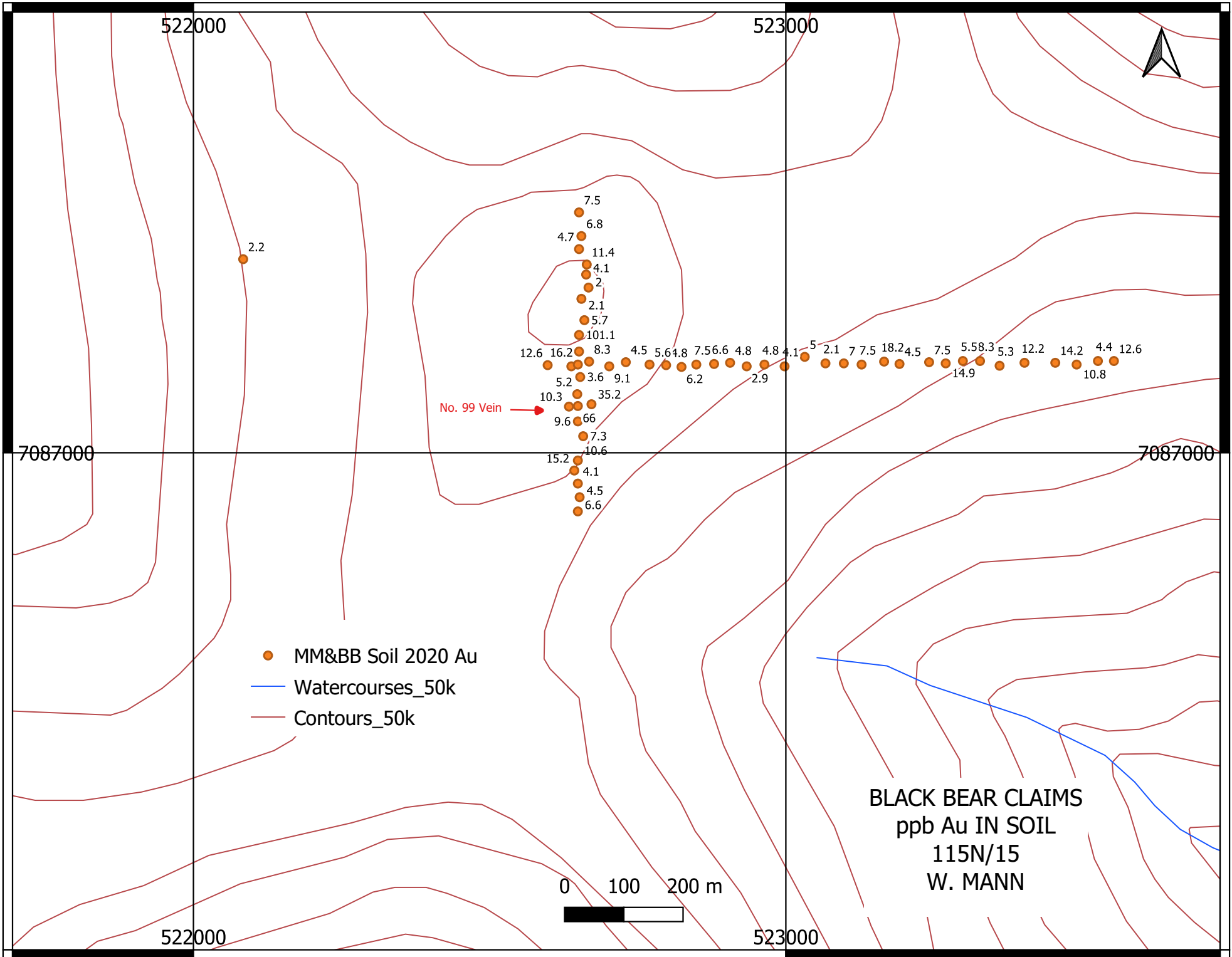
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MM CLAIMS
2020 ROCKS
Pb ppm
115N/15
W. MANN

518000.000



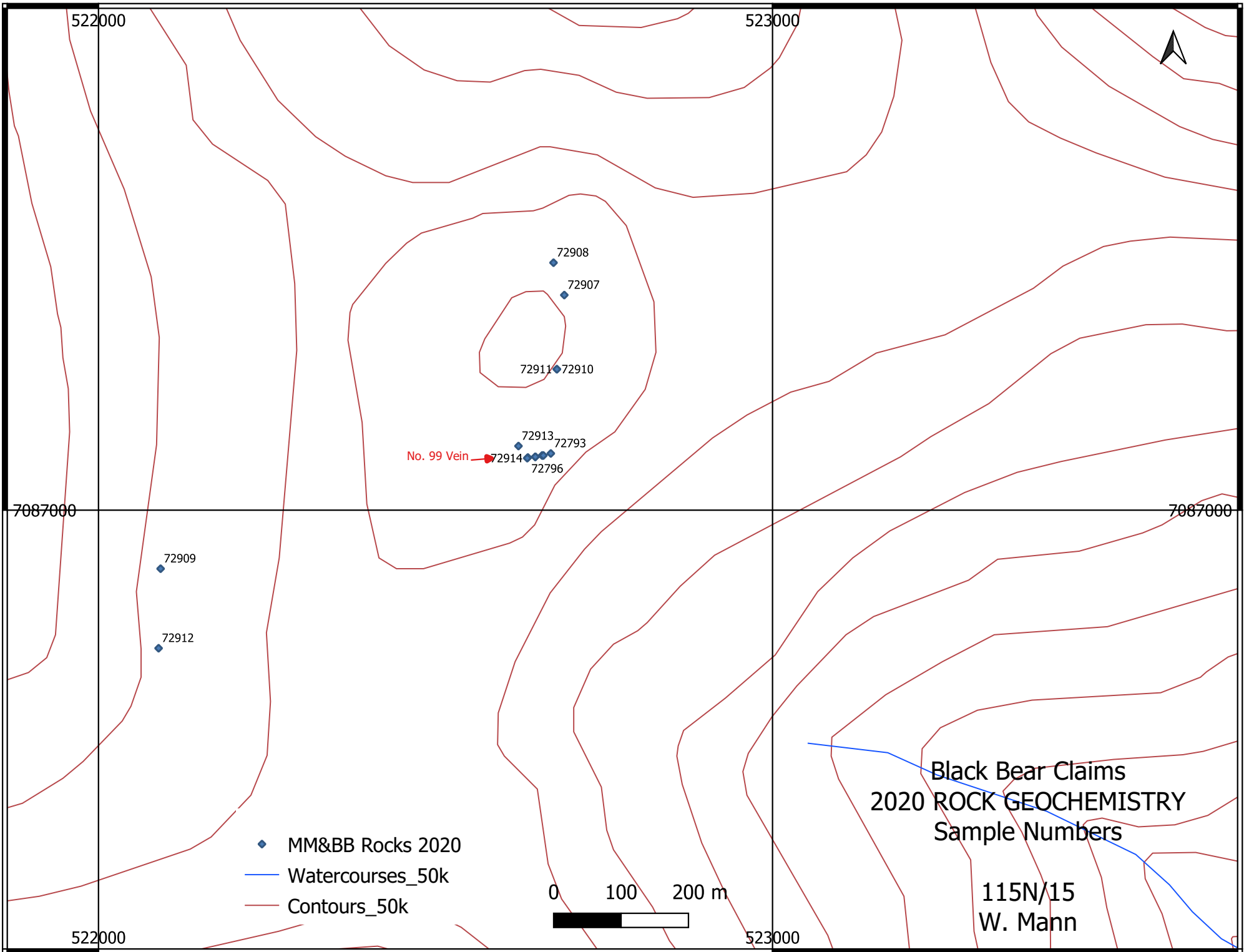




- MM&BB Soil 2020 Au
- Watercourses_50k
- Contours_50k

BLACK BEAR CLAIMS
ppb Au IN SOIL
115N/15
W. MANN





522000

523000



7087000

7087000

522000

523000

- MM&BB Rocks 2020 Au
- Watercourses_50k
- Contours_50k



No. 99 Vein



1.6

<0.5

95.6

5.9

3.8

418.3

31.5

2195.5

1420.2

206

988.4

Black Bear Claims
 2020 ROCK GEOCHEMISTRY
 Au ppb
 115N/15
 W. Mann

MM Soil 2020			Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	
UTM NAD83 Zone 7V			PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPB	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	%	PPM	PPM	%	PPM	%	PPM	%	%	%	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM
Sample	E	N	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	
1961330	515900	7085599	1.3	38.7	38.2	106	0.1	42.6	13.3	417	3.34	27.3	1	5.5	4.8	55	0.3	0.5	2.1	83	0.38	0.042	16	64	0.89	210	0.145	1	2.95	0.015	0.27	0.2	0.02	5.8	0.4	<0.05	11	0.5	0.2	
1961331	515924	7085600	1	54.4	60.1	157	0.2	53	18	447	3.54	37.7	1.2	5.7	6.2	74	0.4	0.6	2.7	84	0.61	0.054	17	78	1.08	199	0.164	1	3.29	0.02	0.35	0.2	0.02	7.2	0.5	<0.05	11	0.7	0.2	
1961332	515949	7085601	1	43.7	21.1	82	<0.1	47	14.8	390	3.29	24.3	0.9	6.5	5.3	53	0.2	0.5	1.7	81	0.51	0.057	16	62	0.94	208	0.148	1	2.83	0.017	0.25	0.2	0.02	5.9	0.4	<0.05	9	0.6	<0.2	
1961333	515973	7085600	1.4	36.1	15.6	80	<0.1	34.4	11	320	3.19	18	1	3.7	3.7	42	0.2	0.4	1	94	0.38	0.052	14	53	0.93	243	0.138	1	2.76	0.016	0.26	0.2	0.02	6.4	0.4	<0.05	9	0.6	<0.2	
1961334	516000	7085600	1.4	31	14.5	77	0.1	31.1	9.9	255	2.96	13.8	1	2.3	3.3	32	0.2	0.5	0.5	81	0.31	0.047	13	44	0.77	185	0.106	1	2.41	0.014	0.17	0.2	0.03	5.5	0.3	<0.05	8	0.6	<0.2	
1961335	516026	7085599	1.2	61.7	10.8	92	<0.1	49.9	17.3	423	3.99	17.8	1.3	2.7	5.9	86	0.2	0.4	0.7	120	0.62	0.037	15	78	1.51	308	0.216	<1	4.06	0.025	0.51	0.1	0.01	10.2	0.7	<0.05	12	0.8	<0.2	
1961336	516049	7085600	1.6	28.5	80.4	140	<0.1	40.2	12.7	324	3.83	24.2	0.7	2	4.4	24	0.7	0.7	0.5	97	0.17	0.035	12	47	0.85	194	0.114	2	3.07	0.015	0.15	0.2	0.02	5.5	0.3	<0.05	9	<0.5	<0.2	
1961337	516075	7085601	2.4	25.4	13.9	62	0.2	26	9.9	236	4.12	23.1	0.7	1.1	4.2	20	0.3	0.7	0.4	102	0.16	0.024	12	38	0.51	154	0.118	1	2.32	0.012	0.09	0.2	0.02	4.5	0.2	<0.05	10	<0.5	<0.2	
1961338	516100	7085601	1.7	41	32.8	127	<0.1	40.9	15.4	423	3.67	36.2	1.1	2.9	5.5	63	0.2	0.5	0.4	108	0.47	0.04	15	55	1.05	270	0.171	2	3.34	0.013	0.36	0.2	0.02	8.4	0.5	<0.05	10	0.6	<0.2	
1961339	516126	7085601	3.2	59.6	129.7	157	<0.1	46.5	12.1	352	3.46	42.6	1.5	2.6	4.5	30	0.4	0.6	0.7	105	0.26	0.057	15	47	0.77	182	0.109	2	2.56	0.011	0.17	0.2	0.02	5.6	0.4	<0.05	8	0.6	<0.2	
1961340	516149	7085601	1.8	35.3	63.2	162	<0.1	24.1	8.1	333	3.54	31.3	0.8	4.9	3.7	28	0.4	0.5	3.2	92	0.38	0.032	12	38	0.55	131	0.116	1	2.53	0.014	0.11	0.5	0.03	4.8	0.2	<0.05	11	<0.5	<0.2	
1961341	516174	7085601	1	36.6	27.7	135	<0.1	34.7	13.7	443	3.29	24.7	1	4.8	5.7	28	0.8	0.5	1.1	79	0.29	0.031	16	43	0.73	241	0.101	2	2.81	0.019	0.09	0.2	0.02	6.1	0.2	<0.05	7	<0.5	<0.2	
1961342	516200	7085600	0.6	38	21.7	142	<0.2	36.3	14.3	536	3.15	21	2.2	2.7	4.8	47	0.5	0.5	0.8	74	0.93	0.066	19	45	0.77	264	0.105	1	2.84	0.035	0.08	0.2	0.04	6.4	0.2	<0.05	9	<0.5	<0.2	
1961343	516224	7085601	1.4	33.9	61.7	178	0.2	42.4	13.1	518	3.32	28.3	1.1	3.1	5	38	0.5	0.5	0.8	97	0.6	0.039	16	51	0.98	259	0.126	2	2.91	0.021	0.12	0.2	0.02	6.4	0.3	<0.05	10	<0.5	<0.2	
1961344	516250	7085601	1	36.9	17.3	158	<0.1	31.9	13.5	668	3.69	39.4	2	8.3	5.7	51	0.2	0.8	3.1	83	0.83	0.049	19	45	1.31	240	0.165	1	3.08	0.065	0.2	0.3	0.03	8.6	0.3	<0.05	9	<0.5	<0.2	
1961345	516275	7085601	1.2	47.6	26.2	351	0.3	34.4	10.8	735	2.99	32.4	2.2	6.7	2.7	36	1.4	0.4	3.8	67	0.98	0.061	18	38	1.15	194	0.064	2	2.23	0.024	0.07	0.3	0.05	4.7	0.2	<0.05	7	0.6	<0.2	
1961346	516299	7085601	0.9	31	16.3	99	<0.1	36.1	13.5	582	3.42	19.3	1.1	4.1	6.1	41	0.2	0.4	1.8	88	0.55	0.039	16	42	0.96	271	0.116	2	2.74	0.03	0.1	0.2	0.02	6.1	0.2	<0.05	8	<0.5	<0.2	
1961347	516323	7085601	1	28.8	17	119	<0.1	35.3	13.8	414	3.43	33	0.8	7.5	5.5	44	0.5	0.5	4.3	87	0.45	0.045	14	47	0.98	208	0.136	2	2.81	0.015	0.16	0.2	0.02	5	0.2	<0.05	9	<0.5	0.3	
1961348	516349	7085601	1.1	33.6	17.5	117	<0.1	36.6	12.6	302	4.17	32.2	0.8	1.4	7.1	37	0.6	0.3	0.6	112	0.34	0.039	18	57	0.88	180	0.151	1	3.06	0.01	0.35	0.2	0.01	6.4	0.3	<0.05	11	<0.5	<0.2	
1961349	516375	7085600	1	26.8	23.2	90	<0.1	33.5	11.6	286	3.96	42.3	0.7	1.9	5.9	22	0.4	0.6	0.4	92	0.21	0.028	16	44	0.71	175	0.107	<1	2.7	0.012	0.16	0.3	0.02	5.1	0.2	<0.05	8	<0.5	<0.2	
1961350	516401	7085601	1.9	21.2	117.1	109	0.2	24.1	8.1	241	3.53	40.2	0.7	1.7	5.3	20	0.3	0.5	0.4	102	0.2	0.029	18	41	0.52	143	0.11	<1	2.12	0.01	0.19	0.2	0.02	5	0.3	<0.05	10	<0.5	<0.2	
1961420	516800	7085402	0.4	38.3	18.9	99	<0.1	37.6	13.8	504	3.51	19.5	0.6	0.8	3.8	56	0.3	0.2	0.2	81	0.55	0.058	9	61	1.28	272	0.16	<1	3.73	0.018	0.44	0.1	0.02	6	0.3	<0.05	10	<0.5	<0.2	
1961421	516826	7085403	0.2	41.6	9.3	76	<0.1	110.2	20.3	453	3.21	9.1	0.6	1.4	4.2	71	0.3	0.1	0.1	89	0.68	0.079	11	167	1.92	534	0.186	<1	3.72	0.026	0.66	<0.1	<0.01	7	0.4	<0.05	11	<0.5	<0.2	
1961422	516851	7085400	0.8	41.3	17.9	77	0.3	31.3	10.3	317	2.72	66.3	0.8	2	2.5	44	0.3	0.3	0.4	72	0.34	0.038	12	40	0.83	299	0.1	<1	2.91	0.017	0.2	0.1	0.02	5	0.2	<0.05	9	<0.5	<0.2	
1961423	516874	7085402	0.8	33.5	43.5	90	0.4	20.7	12	388	2.81	17.5	0.6	2.1	1.8	40	0.2	0.3	0.3	66	0.41	0.057	10	34	0.73	158	0.088	1	2.47	0.018	0.14	0.1	0.03	3.9	0.2	<0.05	8	<0.5	<0.2	
1961424	516901	7085402	0.6	39.2	24.5	82	0.2	30.5	13.1	382	3.4	22.9	0.9	1.3	4.5	82	0.3	0.3	0.2	82	0.63	0.048	13	51	1.01	213	0.142	<1	3.11	0.018	0.35	0.1	0.02	6.1	0.2	<0.05	10	<0.5	<0.2	
1961425	516924	7085399	0.5	42.6	24.3	100	0.2	19.7	20.8	627	3.58	22.7	0.6	0.9	3.3	59	0.3	0.2	0.5	79	0.68	0.077	10	35	1.3	249	0.154	<1	3	0.027	0.52	<0.1	0.01	5.2	0.3	<0.05	9	<0.5	<0.2	
1961426	516948	7085405	0.7	50.1	19.2	89	0.3	20.6	15.7	508	3.33	10.8	0.9	1.9	3.9	55	0.2	0.3	0.2	84	0.55	0.065	12	34	1.06	311	0.139	<1	2.72	0.024	0.37	0.1	0.02	6	0.2	<0.05	9	<0.5	<0.2	
1961427	516976	7085405	1	52.3	15.1	95	0.4	19.8	13.4	625	3.34	8.2	1	2.6	2.7	70	0.3	0.2	0.2	92	0.58	0.056	11	31	0.95	409	0.151	<1	2.83	0.024	0.45	<0.1	0.03	6.8	0.3	<0.05	10	0.6	<0.2	
1961428	516995	7085408	0.5	86.6	18.4	79	0.5	22.7	14.1	539	3.17	7.8	0.5	1.6	1.1	114	0.2	0.2	0.2	89	0.95	0.083	6	32	0.97	307	0.109	<1	3.15	0.031	0.27	<0.1	0.03	6.2	0.2	<0.05	9	<0.5	<0.2	
1961429	517027	7085406	0.5	78.6	17.5	74	0.4	21.7	13.9	567	2.96	8.7	0.5	2.6	1.2	114	0.1	0.3	0.1	85	0.85	0.071	6	31	0.87	299	0.105	<1	2.77	0.027	0.24	<0.1	0.03	6.2	0.2	<0.05	8	<0.5	<0.2	
1961430	517057	7085430	0.4	86.1	19	79	0.6	21.7	13.5	561	2.94	10.4	0.5	3.2	1.3	125	0.2	0.3	0.2	87	0.97	0.086	6	29	0.93	306	0.113	<1	2.82	0.029	0.3	<0.1	0.03	6.1	0.3	<0.05	8	<0.5	<0.2	
1961431	517081	7085437	0.9	81.8	22.8	101	0.9	21.6	15.2	926	2.95	11.5	0.7	2.3	1	103	1	0.3	0.2	82	0.85	0.091	8	30	0.72	274	0.083	<1	2.84	0.027	0.19	<0.1	0.04							

1961452	516453	7085602	1.4	29	20.6	94	<0.1	33.2	14.6	530	3.94	73.5	0.7	3.2	5	60	0.3	0.5	0.3	108	0.32	0.065	15	57	0.76	247	0.139	<1	3	0.014	0.39	0.2	0.01	6.7	0.3	<0.05	11	<0.5	<0.2
1961453	517401	7084357	1.1	30	10	68	<0.1	26.3	10	259	2.89	8.5	1.1	5.8	3.1	22	0.1	1	0.2	62	0.31	0.07	17	33	0.54	176	0.073	1	1.81	0.013	0.06	0.2	0.04	4.1	0.1	<0.05	5	0.7	<0.2
1961454	517400	7084375	1	29.1	11.7	76	0.1	27.9	10.4	313	2.64	8.1	1	3.1	2.4	27	0.3	0.8	0.2	62	0.55	0.072	15	35	0.58	223	0.055	3	1.81	0.019	0.06	0.2	0.04	4.2	0.1	<0.05	5	<0.5	<0.2
1961455	517398	7084402	0.7	42.1	13.5	54	0.2	23.5	10.2	690	2.14	6.2	0.7	3.1	1.4	34	0.5	0.4	0.1	46	1.65	0.08	12	25	0.55	219	0.037	2	1.42	0.02	0.05	0.1	0.05	3	<0.1	<0.05	4	<0.5	<0.2
1961456	517400	7084428	1.4	30	15.5	74	0.5	33.4	11.9	473	2.48	8.3	1.7	2.2	1.8	24	0.3	0.4	0.2	55	0.61	0.062	13	29	0.58	194	0.046	2	1.68	0.017	0.05	0.2	0.04	3.5	0.1	<0.05	5	0.6	<0.2
1961457	517403	7084448	0.6	28.2	12.3	69	0.1	29.8	9.7	424	2.43	7.6	1.2	3.4	1.9	37	0.4	0.4	0.2	54	1.26	0.09	17	32	0.68	183	0.043	2	1.8	0.018	0.05	0.1	0.04	3.4	0.1	0.05	5	<0.5	<0.2
1961458	517400	7084475	0.8	25	14.5	89	<0.1	34.3	15.5	440	3.42	9.5	0.7	2.9	5.5	26	0.2	0.5	0.2	70	0.29	0.053	13	47	0.91	176	0.083	2	2.64	0.011	0.09	0.1	0.02	4.3	0.2	<0.05	7	<0.5	<0.2
1961459	517400	7084501	0.8	25.6	8.1	84	<0.1	26.1	13.9	391	3.27	6.8	0.6	1.5	4.8	24	0.1	0.5	0.1	68	0.3	0.062	14	41	0.97	221	0.131	1	2.07	0.012	0.19	0.1	0.02	3.3	0.2	<0.05	6	<0.5	<0.2
1961460	517399	7084530	1.1	35.9	9.6	90	0.1	36.1	20.5	377	3.79	7.4	0.8	2.4	5.7	19	0.2	0.4	0.1	86	0.22	0.059	13	47	0.88	261	0.145	2	2.48	0.012	0.22	0.2	0.04	3.8	0.2	<0.05	7	<0.5	<0.2
1961461	517400	7084551	1	50.3	10.1	65	0.1	116.4	19.9	290	2.94	4.4	0.8	1.4	3.8	25	0.1	0.3	0.1	75	0.28	0.047	14	129	1.41	334	0.157	1	2.21	0.012	0.33	<0.1	0.02	3.2	0.3	<0.05	7	<0.5	<0.2
1961462	517400	7084574	1.2	28.4	11.3	81	<0.1	34.2	12.6	366	3.89	4.7	0.5	1.4	3.6	23	0.1	0.3	0.1	88	0.28	0.047	8	61	1.27	137	0.221	1	2.48	0.012	0.28	0.1	0.03	2.1	0.2	<0.05	9	<0.5	<0.2

Blackbear Soil 2020		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	
UTM NAD83 Zone 7V		PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPB	PPM	PPM	PPM	PPM	PPM	PPM	%	%	PPM	PPM	%	PPM	%	PPM	%	%	%	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	
Sample	E	N	0.1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.001	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
1961245	523554	7087155	1.7	29.4	123.5	134	1.2	15.1	9	531	2.86	202.7	6.6	12.6	10.8	54	0.5	1.1	1.7	64	0.36	0.082	17	25	0.48	142	0.052	1	1.79	0.013	0.05	0.4	0.04	3.1	0.1	<0.05	6	<0.5	<0.2
1961246	523527	7087155	2	19.3	179.7	81	1.2	12.7	7.1	328	2.42	88.3	2	4.4	3.9	34	0.5	1.1	1.1	51	0.22	0.042	9	20	0.34	88	0.058	1	1.46	0.015	0.07	0.3	0.07	2.1	0.1	<0.05	6	<0.5	<0.2
1961247	523491	7087149	3.1	66.3	260.3	171	3	23	12.6	867	3.47	256.6	11.2	10.8	6.2	59	1.1	2.5	3	74	0.37	0.077	16	33	0.5	258	0.044	2	2.65	0.018	0.08	0.4	0.06	4	0.2	<0.05	9	0.5	<0.2
1961248	523455	7087152	3.3	61.9	263.5	198	2.4	19.7	8.8	609	2.85	202.7	8.2	14.2	7.7	73	1	1.4	2.2	62	0.4	0.067	13	31	0.53	245	0.05	2	2.17	0.016	0.08	0.5	0.07	4.5	0.2	0.06	7	0.5	<0.2
1961249	523403	7087152	2.8	29.3	99.8	133	0.8	20.1	9.7	563	3.12	166	6.5	12.2	10.2	55	0.5	1.1	1.2	68	0.34	0.082	18	30	0.51	181	0.053	2	2.02	0.012	0.06	0.7	0.04	3.7	0.2	<0.05	6	<0.5	<0.2
1961250	523361	7087147	1.9	17.7	78.5	98	0.5	15.8	6.3	238	2.49	66.7	2.7	5.3	6.3	31	0.5	0.6	0.8	59	0.2	0.039	14	26	0.41	133	0.061	1	1.73	0.013	0.06	0.4	0.04	2.9	0.2	<0.05	7	<0.5	<0.2
1961251	523328	7087155	2.7	28.4	112.7	177	0.9	18.4	8.1	515	2.79	206.8	6.3	8.3	7.2	56	0.8	0.9	1.9	61	0.31	0.063	14	28	0.45	196	0.047	2	2.04	0.015	0.07	0.5	0.07	3.5	0.2	<0.05	7	<0.5	<0.2
1961252	523299	7087155	1.4	27.6	117.2	155	0.6	16.8	7.9	530	2.4	169.9	6.4	5.5	12.2	63	0.6	0.9	1	51	0.35	0.064	18	25	0.47	151	0.049	1	1.53	0.013	0.05	0.4	0.03	3.5	0.1	<0.05	5	<0.5	<0.2
1961253	523270	7087151	3.1	56.6	338.7	297	4.8	23.5	12	884	3.43	316.9	17.3	14.9	9.1	95	0.9	1.7	3	65	0.47	0.091	22	33	0.59	266	0.035	2	3.13	0.018	0.1	0.3	0.09	5.2	0.3	0.07	9	0.6	<0.2
1961254	523242	7087153	1	41.9	150	197	1.5	17.6	8.1	689	2.69	152.1	10.6	7.5	16.2	78	0.8	2.7	1.9	56	0.43	0.076	22	28	0.51	227	0.064	1	1.68	0.014	0.07	0.3	0.03	4.9	0.2	<0.05	6	<0.5	<0.2
1961255	523192	7087150	1	28.1	108.3	136	0.8	20.2	9.2	581	2.68	148.3	4.5	4.5	12.6	50	1	0.9	1.1	60	0.32	0.076	20	28	0.48	200	0.064	2	1.8	0.012	0.06	0.3	0.04	3.5	0.2	<0.05	6	<0.5	<0.2
1961256	523166	7087154	2.8	55.9	236.4	329	3.2	22.7	12.5	719	4.46	693.1	23.1	18.2	8.5	75	2.1	2	3.9	73	0.28	0.128	34	38	0.52	305	0.021	2	3.81	0.01	0.1	0.3	0.11	5.7	0.3	0.1	11	0.8	<0.2
1961257	523128	7087149	1.7	25.7	139.1	183	1.7	14.4	9.9	965	2.91	178.6	6.3	7.5	15.7	113	0.9	1.1	2.3	58	0.34	0.067	19	25	0.42	333	0.031	1	2.32	0.015	0.06	0.3	0.06	3.5	0.3	<0.05	7	<0.5	<0.2
1961258	523098	7087151	1.1	26.5	144.7	168	0.9	15.7	7.9	594	2.46	117.8	6.6	7	16.3	114	1	1.1	1.4	52	0.58	0.086	25	24	0.45	179	0.065	1	1.65	0.015	0.09	0.2	0.03	4.1	0.1	<0.05	6	<0.5	<0.2
1961259	523067	7087151	1.2	15	227.2	263	0.5	13.7	7.5	683	2.95	111.7	1.5	2.1	14	84	1	1.4	1.4	55	0.37	0.062	17	23	0.38	187	0.035	2	2.4	0.011	0.07	0.3	0.06	2.5	0.3	<0.05	8	<0.5	<0.2
1961260	523032	7087162	1.8	15.3	164.3	149	1.7	12.5	10	1287	2.89	169.4	2.5	5	11.1	80	0.7	1.4	1.3	55	0.33	0.062	18	23	0.4	220	0.032	2	2.44	0.01	0.07	0.3	0.05	2.7	0.3	<0.05	8	<0.5	<0.2
1961261	522998	7087146	0.8	17.9	87.7	172	0.7	12.2	6	444	2.47	62.1	5.8	4.1	16.5	140	0.6	1.1	0.5	47	0.61	0.077	21	23	0.53	236	0.04	1	2.16	0.017	0.07	0.2	0.02	3.8	0.2	<0.05	7	<0.5	<0.2
1961262	522964	7087149	1.1	29.3	162.8	171	0.9	15.4	8.1	477	2.65	72.9	6.2	4.8	19.2	98	0.9	1.3	0.9	53	0.59	0.077	22	25	0.54	224	0.045	1	1.87	0.017	0.09	0.2	0.03	4.7	0.2	<0.05	6	<0.5	<0.2
1961263	522934	7087146	0.6	25.1	93.2	123	0.6	15.2	6.4	340	2.42	45.9	5.3	2.9	17.4	82	0.6	1	0.5	50	0.45	0.072	20	25	0.49	226	0.054	1	1.5	0.013	0.06	0.2	0.02	4.6	0.2	<0.05	5	<0.5	<0.2
1961264	522906	7087152	1	26.1	98.8	105	0.5	16.9	6.3	379	2.38	65	4	4.8	15.2	109	0.4	1.1	0.5	50	0.52	0.075	22	26	0.52	246	0.056	1	1.59	0.014	0.08	0.2	0.02	4.7	0.1	<0.05	5	<0.5	<0.2
1961265	522879	7087150	1.1	47.1	352.8	151	2	17.1	10	595	2.73	192.7	7.4	6.6	15.8	79	0.8	3.6	1	56	0.42	0.07	22	28	0.49	268	0.048	2	1.71	0.014	0.07	0.2	0.04	5.4	0.2	<0.05	6	<0.5	<0.2
1961266	522849	7087149	0.9	38.5	210.9	153	1.7	14.2	6.6	446	2.47	150	6.4	7.5	15.8	106	0.5	3.1	1.2	49	0.43	0.067	25	25	0.47	249	0.05	1	1.73	0.014	0.07	0.2	0.03	4	0.2	<0.05	6	<0.5	<0.2
1961267	522824	7087145	2.3	39.3	190.4	167	2.8	11.7	7.2	487	2.67	304.6	5.1	6.2	8.8	85	0.9	2.8	1.9	59	0.33	0.045	17	22	0.36	238	0.027	1	2.02	0.01	0.06	0.2	0.06	2.8	0.3	<0.05	9	<0.5	<0.2
1961268	522798	7087148	1.1	30.3	348.2	149	1.3	17.5	10.1	557	2.53	170	2.2	4.8	13.6	93	0.9	3.7	1.1	49	0.35	0.067	18	24	0.49	190	0.041	2	2.28	0.011	0.06	0.2	0.03	3	0.2	<0.05	6	<0.5	<0.2
1961269	522770	7087149	1	29.6	259.3	116	1.4	19.3	10.9	658	2.59	115.8	5.3	5.6	10.8	84	0.5	2.5	1	53	0.34	0.071	21	26	0.46	227	0.048	1	1.81	0.012	0.06	0.3	0.06	3.8	0.2	<0.05	6	<0.5	<0.2
1961270	522730	7087153	0.9	31.9	151.4	107	1.4	20.5	10.2	417	2.77	65.1	5.8	4.5	18.1	57	0.5	2.1	2.5	62	0.43	0.072	20	28	0.59	294	0.069	1	1.72	0.014	0.07	0.2	0.04	4.9	0.2	<0.05	6	<0.5	<0.2
1961271	522702	7087146	1.3	30.1	120.9	121	0.7	17.9	9	579	2.73	144	8	9.1	18.8	82	0.5	1.7	0.6	56	0.45	0.067	21	26	0.57	288	0.057	1	1.74	0.014	0.08	0.5	0.03	5	0.2	<0.05	6	<0.5	<0.2
1961272	522668	7087154	1.5	35.6	174.5	98	1.2	20.2	10.5	550	2.9	64.8	6.6	8.3	12.5	57	0.3	1.8	0.7	62	0.36	0.075	24	30	0.53	232	0.052	2	2.08	0.013	0.06	0.3	0.07	5.2	0.2	<0.05	6	0.5	<0.2
1961273	522638	7087146	1	25.4	194.5	148	0.4	18.4	8.1	553	2.74	133.3	2	7.6	12.4	82	0.8	1.9	0.9	57	0.34	0.063	18	27	0.54	198	0.059	1	2.06	0.011	0.07	0.3	0.04	3.7	0.2	<0.05	7	<0.5	<0.2
1961274	522598	7087148	1.8	41.3	193.9	173	0.9	17.8	8.7	887	2.7	307.9	6.9	12.6	14.9	133	1.2	2	0.9	49	0.48	0.055	22	25	0.49	267	0.042	2	1.84	0.012	0.1	0.2	0.03	4.4	0.2	<0.05	6	<0.5	<0.2
1961397	522651	7087406	7.3	54.1	440	372	2.6	15.2	11.1	566	3.09	268.6	8.8	7.5	22.2	66	3.1	3.6	4	70	0.57	0.121	26	23	0.56	186	0.067	1	1.69	0.016	0.08	0.2	0.05	4.3	0.2	<0.05	6	<0.5	<0.2
1961398	522655	7087366	2.3	33.1	460.5	262	1	19.1	9.2	509	3.14	239.1	4.6	6.8	14	101	1.3	2	2.1	67	0.36	0.099	22	26	0.56	205	0.067	2	2.25	0.014	0.07	0.2	0.04	3.5	0.2	<0.05	7	<0.5	<0.2
1961399	522651	7087344	3.3	24.1	241.2	317	0.7	14.2	12.4	541	3.36	289.2	16.2	4.7	22.5	141	2.1	6.4	1.1	51	0.57	0.115	43	20	0.48	210	0.053	1	2.08	0.02	0.14	0.2	0.02	4	0.3	&			