

2017 YMEP Final Report
a YMEP-funded Target Evaluation Exploration Program on the
McKay Hill Project, Yukon

Beaver River Area
NTS 106D/06
Lat. 64°20'57" N • Long. 135°21'9" W
Mayo Mining District

Claims work applied to:
SNOOSE 1 -20 (YC56719 to YC56737)
SNOOSE 21-90 (YD11201 to YD11270)
MK 1-54 (YD34989 to YD34936)
SNOOSE 91-116 (YF29091 to YF29116)

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January 19th, 2018

Period of Work:
June 21st, July 10th-15th & October 1st-2nd, 2017

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Summary

The McKay Hill property is located in the Mayo Mining District at 50 km at latitude 64° 20' north and longitude 135° 21' east (NTS map-sheet 106D/06). The property is situated on the southern slopes of the McKay, Horseshoe and Sullivan hills, which are part of the Ogilvie mountains in Central Yukon. In mid-July 2017, Metallic Minerals Corp. completed a YMEP-funded target evaluation exploration program on the McKay Hill property. In early October, following up from results from this work program, an additional soil campaign was completed west of Red Gulch and 16 contiguous quartz claims were staked to the south. Currently the McKay Hill project comprises 170 quartz claims (3,353.3 ha).

Stratigraphically, McKay Hill is currently described as part of the Yusezyu Formation of the Upper Proterozoic to Lower Cambrian Hyland Group, which sits within the Dawson Thrust sheet. Mineralization occurs on surface as a series of Ag±Au-rich, quartz-galena-Cu oxides veins hosted in carbonate-altered consistently north-northwest striking, near vertical, siliciclastic and hypabyssal-volcanic rocks (basalts and diorites as well as grit to quartz-pebble conglomerate with interbedded shale and siltstone). As a result of this program and previous work by Monster Mining Corp., the host sequence of the McKay Hill veins is interpreted likely be the Dempster volcanics (CO_v) of the Marmot Group and not be the Yusezyu formation of the Hyland Group. The Dempster volcanics are described as an unconstrained mafic volcanic alkalic rock formation of at least two different ages. The volcanic products mainly consist in flows (sometimes pillowed) and associated breccias, with no clear boundaries between flows (Abbott, 1997).

In comparison to the nearby Keno-Hill type veins, silver mineralization encountered at McKay is generally lower-grade and associated with higher concentrations of copper and gold. Previous work by the author (2009, 2010) characterized the McKay silver veins as part of a high-sulphidation epithermal system; however, upon continued evaluation an intermediate-sulphidation model may more accurately fit the current findings.

The 2017 YMEP-funded exploration program was completed from July 12-14th and October 1st-2nd 2017 and included satellite imagery data collection (in early June), mapping (1:250- to 1:30,000-scale), prospecting, exposing the No. 6 vein via hand-pitting, soil sampling and subsequent claim staking. The work comprised of two exploration campaigns, the first totaled of 22-man days and the second 4-man days staking and 4-man days soil sampling. A total of \$66,691.94 was spent during the July program which included mapping, prospecting and soil sampling. The October program included prospecting, soil sampling, production of an orthophoto from the satellite imagery data collected earlier in the year and subsequent claim staking at a cost of \$28,930.47. Total 2017 expenditures on the YMEP-funded project was \$95,622.41.

In summary, the exploration program included:

- satellite (orthophotography) imagery over the project area;
- 1:30,000-scale mapping of the project area to evaluate regional geological setting and confirm Blackburn's (2009) findings;
- 1:250-scale mapping around the No. 6 vein, delineating vein-attitude and extending it to the southwest;
- 1:750-scale mapping, prospecting and sampling at the Independence Zone;
- two soil sampling campaigns covering four grids; and
- subsequent staking of the Snoose 91-116 claims.

Additionally, on July 20th the central claim area of the property was visited by Yukon Geological Survey (YGS) geologists Lara Lewis and Derek Torgerson who were accompanied by the author. During this visit, the main showings in the McKay Hill Zone were visited followed by a brief stop at the Independence Zone.

In August 2017, Photosat Information Ltd. produced a 50 cm per pixel resolution colour orthophoto of 100 km² covering the McKay Hill property. This orthophoto was produced from a series of 50 cm pixel resolution WorldView-3 satellite photos acquired on August 10, 2017. Satellite photos were acquired with the goal of detecting orange-coloured alteration zones and white quartz veins typical of McKay Hill, and to compliment the lineament study completed pre-field work. These photos also make possible the generation of a 3-m elevation grid of the visible earth surface (DEM/DSM) in the area.

Three days of mapping in the Sullivan, McKay and Independence Hill areas was completed to characterize the regional structural setting of the McKay Hill property. Three north-south traverses were done along ridgelines and a 1:50,000-scale map of the area was created. A product of this work was the grouping of host stratigraphy earlier described in Blackburn (2009) into seven packages. Stratigraphy correlates well across the Sullivan and McKay Hill ridges, and along the northern portion of the Independence Hill ridge.

At present, the most prospective showing on the project is the No. 6 vein which is centered within the historic workings which includes numerous hand-pits, trenches and an adit. In 1949, East Bay Mining Ltd. shipped 143 tonnes of ore from the No. 6 vein with an average grade of 390.9 g/t Ag and 74.1 % Pb (Green, 1972). The 2017 program was successful in extending the strike length of the vein from 168 m to 467 m, as well as confirm the veins are overall oriented roughly 030° and are steeply dipping, cut by a series of dextral faults, giving it an overall trend of 065°-245°N.

Mapping of the McKay Hill ridge focused on assessing veins and trenches at lower elevations outside of Blackburn's (2009) mapping area. Measurement of ten mineralized vein orientations confirms the mean orientation of the mineralized trend oriented at 061°-070°N at the McKay Hill ridge-scale. However, the 2017 findings on the No. 6 vein highlight multiple dextral offsets from ~330°N(?) -oriented faults at the meter-scale. Strike and dip measured for the Blackhawk vein in this study differ from previous studies, which could represent post-D₃ remobilization along the late ~330°N(?) -oriented apparently dextral faults identified on the western side of the ridge.

Five-days of prospecting entailed ground-truthing and sampling rusty-coloured patches of ground within the Sullivan, McKay and Independence hills which were spotted from the fly camp or the helicopter. A total of 23 rock samples were collected from the McKay Hill and Independence Hill Zones and sent in for geochemical analysis. Prospecting followed the Blackhawk West vein along strike to the northeast (for ~300m) down slope where seven float and subcrop samples of vein material and mineralized conglomerate were collected and returned up to 919 g/t Ag from historical pits and trenches. This area is deemed highly prospective and should be followed up on in 2018.

Two soil sampling campaigns covering four grids were completed in 2017:

- extend the pre-existing soil grid around the central McKay workings westward
- extend the pre-existing soil grid around the central McKay workings eastward
- centralized grid on the Independence Hill historical trenches area
- a grid over the Red Gulch valley to extend the McKay Hill vein system eastward towards the Independence Hill area.

A total of 254 soil samples were collected during the program and highlighted numerous areas of interest.

Overall, the 2017 exploration season was successful. YMEP Target Evaluation funding assisted MMG in furthering the understanding of the project geology and its potential. Encouraging results led to the staking of the Snoose 91-116 (*YF29091* to *YF29116*; 26 claims totaling 543.4 hectares) to the south. Colour orthophoto surveying (50 cm per-pixel resolution) was completed by Photosat Information Ltd. over the entire 100 km² project. This work produced WorldView-3 satellite photos which highlighted orange-coloured (iron ± carbonate) alteration zones and white quartz veins typical of McKay Hill, which complimented the lineament study completed pre-field work. These photos also make possible the generation of a 3-m elevation grid of the visible earth surface (DEM/DSM) in the area

The McKay Hill project is deemed highly prospective. The author recommends extensive follow-up and testing of the targets delineated to date as well as helicopter prospecting campaigns in outlying areas. In order to adequately test the mineralization observed on the McKay Hill property, the following recommendations are made: establishing infrastructure; create target access; methodically map and geochemically sample veins; additional prospecting, mapping and soil sampling; test veins via bedrock-interface probing and heli-portable RAB drill; hyperspectral surveying and combined VLF-IP surveying. Currently, planning for the 2018 exploration program is underway and includes the above recommendations minus geophysical surveys and hyperspectral surveying and has a proposed budget of approximately \$750,000.00.

1 Introduction

This report summarizes the 2017 YMEP-funded exploration program activities performed by Metallic Minerals Corp. Work included satellite (orthophotography) imagery over the project area; delineating attitude and extending the No. 6 vein; mapping, prospecting and sampling at the Independence Zone; 1:2000-scale mapping of the project area to evaluate Blackburn’s (2009) proposed regional geological interpretation; and conducting two soil sampling campaigns covering 4 grids. All assay results, certificates as well as a description of the analytical techniques used and location of all samples are provided. Current interpretations concerning mineralization-styles and geological setting are based on work-to-date are included, leading to recommendations for future exploration work.

1.1 Underlying Agreements & Land Tenure

The McKay and Independence Zones are part of the McKay Hill Project located in the southern Wernecke Mountains (refer to *Figure 1*, following page). Metallic Minerals Corps. (MMG), precursor Monster Mining Corp. acquired the initial land package at McKay Hill from prospector Matthias Bindig in 2007. The project currently covers 170 unsurveyed mineral quartz claims in the Mayo Mining District which are 100% owned by MMG: Snoose 1-20 (YC56719 – YC56737), Snoose 21-90 (YD11201 – YD11270) and MK 1-54 (YD34989 - YD34936) and the newly staked Snoose 91-116 (YF 29091 – YF29116).

This YMEP Final Report covers two work campaigns during 2017. A total of \$66,691.94 was spent during the July program which included mapping, prospecting and soil sampling. The October program included prospecting, soil sampling, production of an orthophoto from the satellite imagery data collected earlier in the year and subsequent claim staking at a cost of \$28,930.47. Total 2017 expenditures on the YMEP-funded project was \$95,622.41. *Table 1. Claim Status* tabulates the current land-package and current expiry data; *Figure 2. McKay Hill Claims Map* (page 8) shows the location of the claims; and Appendix I. includes the YMEP Final Submission and Expense Claim Forms.

Table 1. Claim Status¹

<i>Grant #</i>	<i>Claim Name</i>	<i>Claim Owner</i>	<i>Expiry Date</i>
YC56719 - YC56738	Snoose 1 - 20	Metallic Minerals Corp. - 100%	2024-Dec-01
YD11201 - YD11208	Snoose 21 - 28	Metallic Minerals Corp. - 100%	2023-Dec-01
YD11209 - YD11248	Snoose 29 - 68	Metallic Minerals Corp. - 100%	2024-Dec-01
YD11249 - YD11252	Snoose 69-72	Metallic Minerals Corp. - 100%	2023-Dec-01
YD11253 - YD11270	Snoose 73-90	Metallic Minerals Corp. - 100%	2024-Dec-01
YD34989 - YD34936	MK 1 - 54	Metallic Minerals Corp. - 100%	2024-Dec-01
YF29091 - YF29116	Snoose 91 - 116*	Metallic Minerals Corp. - 100%	2018-Oct-18

¹ Claim expiry dates based on acceptance of submitted Assessment Report. *Newly staked Snoose 91-116 claims.

Figure 1. Location & Access

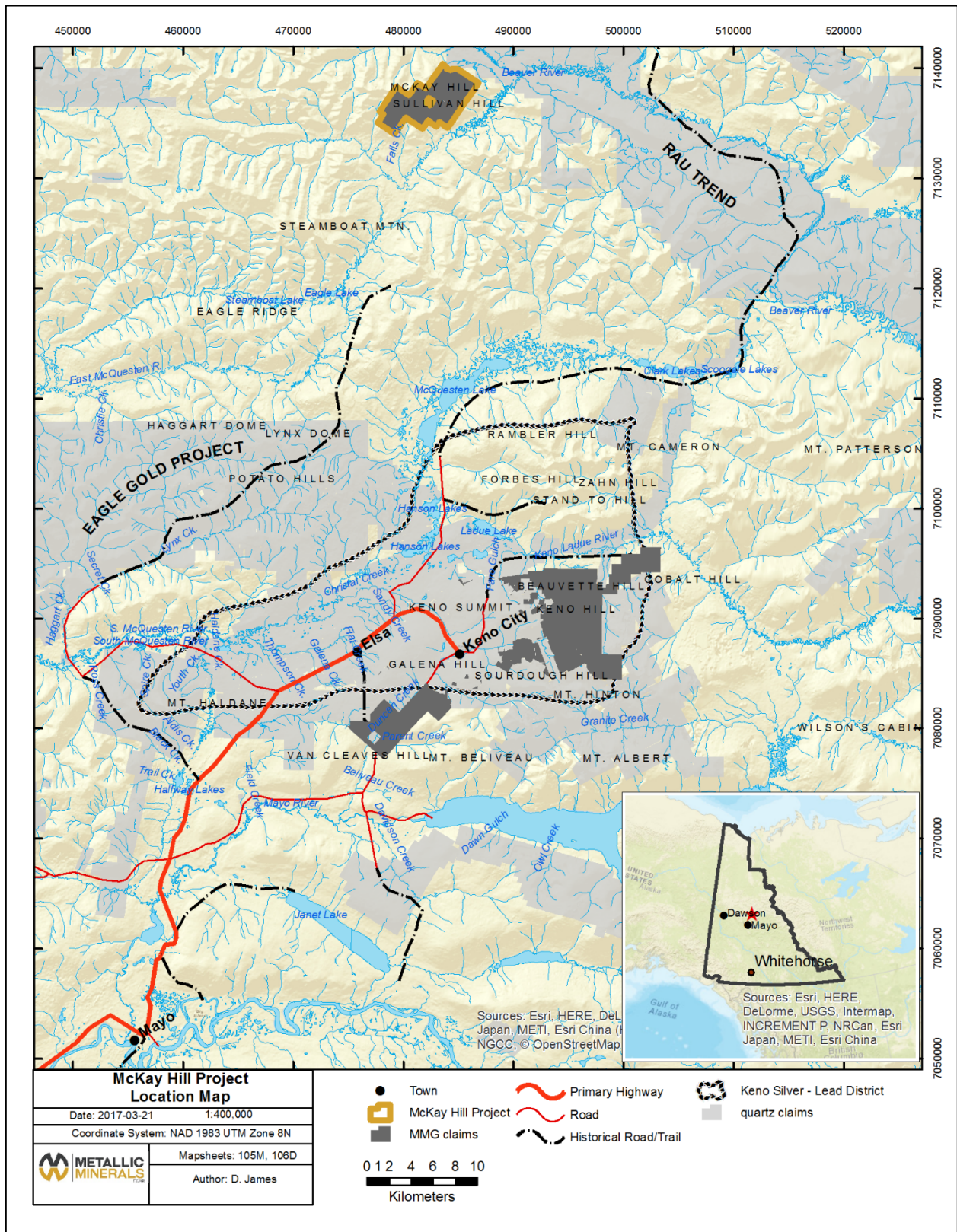
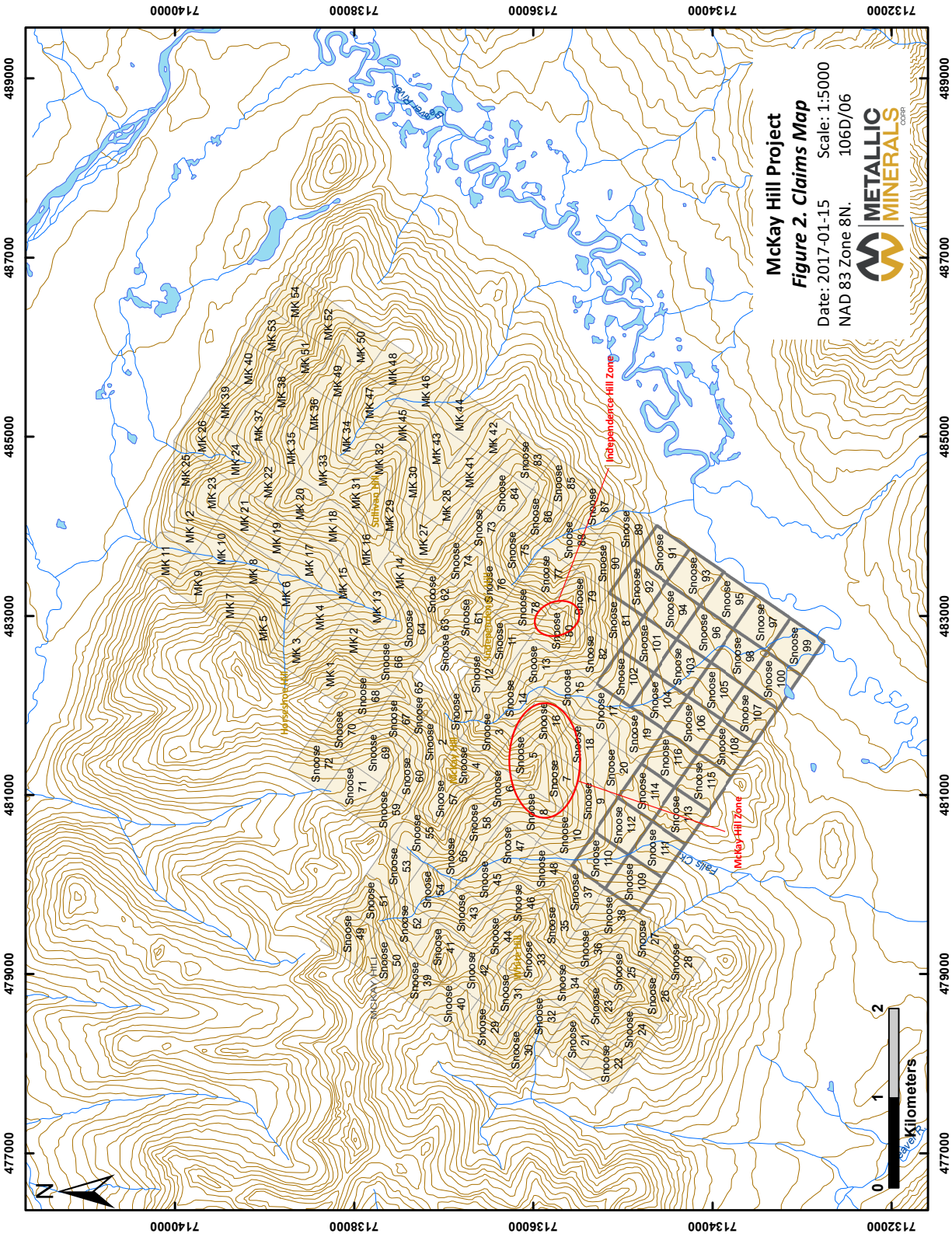


Figure 2. McKay Hill Claims Map²



² Claims staked in early October are highlighted with a dark grey claim border.

1.2 Location & Access

The occurrence area is situated on the south slopes of McKay and Horseshoe Hills near the headwaters of Red Gulch approximately 23.5 km northwest of McQuesten Lake on NTS map sheet 106D/06. The McKay Hill Property is located within the Mayo Mining District, 50 km north of Keno City which is 465 km by road to Whitehorse. The property is centered at 64° 20' N Latitude, 135° 22' W Longitude (refer to *Figure 1*, page 7). McKay Hill is currently accessible by helicopter from the townsite of Keno 50 km south of the property. The closest road access is via Hanson Lake Road to McQuesten Lake from the Silver Trail Highway at km 102.1. From this point, a 1959 era winter road forms the Wind River Trail which follows McQuesten Lake, Scrougale Creek and the Beaver River to its junction with Braine Creek which is approximately 20 km downstream along the Beaver River from the McKay Hill property (Pautler, 2009). If the target proves that it has development potential the original access route that followed the South McQuesten River from Elsa across a low divide to the East McQuesten River to the Beaver River could be evaluated (*Figure 1*).

1.3 Physiography & Climate

The claims are located in the area surrounding McKay Hill on the southern flank of Horseshoe Hill, roughly due north of the Beaver River within the Olgivie Mountains. Elevations within the claim area range from 1050 m ASL to 1750 m ASL. It should be noted that McKay Hill appears to originally refer to the hill on the southern flank of Horseshoe Hill where the showing(s) are located but it now marked as a hill 2 km to the west (Pautler, 2009).

The area experiences warm summers and long cold winters with relatively little precipitation. In the Mayo area summer temperatures average 15°C during the day and 9°C at night. Winter temperatures average -20°C during the day and -31°C at night. Permafrost was found to extend down to 46 m below surface by Cominco in 1929 (Pautler, 2009).



To date, fly-camps have been temporarily set-up on a saddle on the Snoose 8 claim. Water is available if the need arises for drilling from Red Gulch which flows southerly into the Beaver River. Most of the property lies above tree line with narrow ridge-tops and steep slopes.



LEFT Photo-plate 1.
Looking at
Independence Hill
(east) from the
Snowdrift showing
on McKay Hill;

RIGHT Photo-plate 2.
Typical topography
of the district.

2 Property History

The McKay Hill property is comprised of the White Hill (106D 037) and McKay Hill MINFILE occurrences (106D 038) which have a rich exploration history dating back to 1922 during the early days of the Keno Hill district staking rush. *Table 2* (below) summarizes the work history in the area surrounding the McKay Hill showing (106D 038), which includes the 'Independence Zone', and is based primarily on the YGS's MINFILE database (Deklerk and Traynor (*compilers*, 2008). *Figure 3* (refer to page 12) illustrates the geochemical work completed by Monster Mining Corp. from 2007-2011.

Table 2. Property History

June 1922	Originally staked by W. McKay (Snowdrift- 14669 and Blackhawk- 14676) and L. Erickson (Carrie- 14672) and Margaret (14702) by N. Marquis.
1925-29	While under option from Erickson, Cominco pursues the Carrie (14672) claim via prospecting, trenching and a 7-hole, 832 m diamond drilling program. Trenching in 1926 returned average values of 154.3 g/t Ag and 9.6% Zn over an average width of 1.6 m.
1926 & 29	McKay drives an 18 m adit into the Blackhawk claim (14676).
1945-46	The Carrie claim was restaked as Rit (55329) by Yukon Northwest Exploration Ltd (a Leitch Gold Mines Ltd subsidiary) and sold to Hoyle Mining Company Ltd. (a Ventures Ltd. subsidiary).
1948-49	East Bay Gold Limited held a sub-lease from Hoyle Mining Co. and produced 143 tons from the Carrie (14672) claim at 390.8 g/t Ag and 74.1% Pb.
1951-52	Mac (61588) claims are staked by M. McCallion who explored with a 3.7m shaft in 1952.
1952	Property is transferred to Beaver River Silver ML.
1953	Rit group are taken to lease.
1959	Property is transferred to Venture Claims Ltd.
1966-1981	Pat (Y6309) claims staked by P. Callison and L. Brown. The Sam (Y31831) claims staked by P. Verslucé. The McCal (Y94231) claims staked by C.A. Lindstrom. The Beaver (YA41621) claims are staked by Grant Oil Inc. which transferred the claims to Jamto Resources Ltd in 1981.
July 19 th 2007	SNOOSE 1-20 (YC56719 to YC56737) claims are staked by Matthias Bindig.
October 12 th 2007	Prospecting, trench mapping/verification and geochemical sampling by Monster Mining Corp. (previously Northex Minerals Inc.).
July 24 th 2008	Prospecting, trench mapping/verification and geochemical sampling by Monster Mining Corp. (previously Northex Minerals Inc.).
August 1 st 2009	Staking of SNOOSE 21-90 (YD11201 to YD11270) by Monster Mining Corp. for a total of 90 claims (1,881 Ha).
August 12-14 th 2009	YMIP-funded exploration program completed on the SNOOSE 1-90 (YC56719 to YC56737, YD11201 to YD11270) claims by Monster Mining Corp. Program included: detailed mapping of a 700 m ² area, collection and analysis of 140 soil samples and petrographic analysis of 10 thin sections and 7 polished sections.
2011	Detailed Structural mapping (refer to Nicholson, 2011), rock sampling and helicopter-borne SkyTEM time domain electromagnetic geophysical survey by Monster Mining Corp.

2.1 McKay Hill (106D 038) Showing

The McKay Hill showing was initially staked in 1922 as 25 contiguous claims by L.B. Erickson, W. McKay and N. Marquis. In 1925, the area around the main showing was evaluated by Consolidated Mining and Smelting Co. Ltd (the precursor to Cominco), which identified nine veins primarily as lines of float on the White Rock, Snowdrift, Carrie and Black Hawk claims (Cram, 1925). Consolidated Mining optioned the White Rock and Carrie claims along with five other claims in 1926 and carried out trenching on the No. 6 vein in 1927 and 1928. Trenching across the No. 6 (Carrie?) vein in 1927 returned average grades of 182 g/t Ag, 29.0 % Pb and 4.9 % Zn across an average width of 1.7 m (Pautler, 2009). This discovery was followed up by 832 m of drilling in the Carrie claim (now Snoose 7 claim) in 1929. Results were reportedly disappointing with only trace galena identified (Erickson & Bussey, 1944), although it is likely that the veins were not adequately tested (Pautler, 2009) as the drill mast had a limited dip range and several drill holes appear to have missed their targets due to fault offsets in the veins (Ettlinger, 2012).

In 1949, East Bay Mining Ltd. shipped 143 tons of ore from the No. 6 vein with an average grade of 390.9 g/t Ag and 74.1 % Pb (Green, 1972). Tetrahedrite showings in the area returned best results of 1302.8 g/t Ag, 4.58 % Pb, and 8.84 % Cu, and 2129.1 g/t Ag, 9.27 % Pb and 15.04 % Cu (Green, 1972). Falconbridge Ltd. held the property from 1972 to 1998, but no work was recorded during this period. In 2007, Monster Mining Corp. optioned the property from prospector M. Bindig.

In both 2007 and 2008, Pautler supervised prospecting programs to locate the veins, trenches and drill holes reported by Consolidated Mining between 1926 and 1929 (Pautler, 2009). Forty-two rock samples were collected from outcrop and float during the course of the 2007 and 2008 programs, the results of which verified grades reported by Consolidated Mining and Smelting Co. Ltd. Pautler (2009) successfully located 17 veins and confirmed grades reported from these veins in the 1920's. Of these veins, 14 were sampled and 10 returned "significant Au \pm Ag analyses" (Pautler, 2009).

The 2009 program objective was to complete detailed mapping the central claims and establish mineralization styles, locate and verify the White Hill Occurrence and to collect soil geochemical samples for analysis (refer to Blackburn, 2010). The soil campaign collected 140 soils on a 450m X 300m grid over the cluster of veins in the central claim area. Geochemical results indicated Pb-Ag-Zn anomalies related to the No. 6, No. 8, No. 9 and Snowdrift veins and Au-As anomalies related to the No. 6, No. 7, North, Blackhawk and Snowdrift veins. Mapping work conducted in the area highlighted that the underlying bedrock is atypical of the Hyland Group, Yusezyu Formation rock mapped regionally, but may represent the extension of the Middle Cambrian to Early Ordovician volcanic rocks (Dempster volcanics, COv) mapped by Abbott (1997) on NTS map-sheets 116A/10 116A/11. It was also proposed that the mineralization-style was not polymetallic Keno Hill-type veins but rather may represent an epithermal scenario, now interpreted as intermediate-sulphidation type.

In 2011, a helicopter-borne SkyTEM time domain electromagnetic geophysical survey was flown by Monster Mining Corp. and highlighted several areas on the property with similar geophysical properties to those of the known veins and associated alteration (refer to *Figure 4*, page 13). Additionally, structural mapping and prospecting identified four deformation events on the property and provided constraints on the attitude of mineralization which indicated that mineralization at McKay Hill occurs at the intersection of D₂ quartz-carbonate veins and D₃ faults. Monster Mining proposed targets on the known veins for diamond drill follow up. Prospecting identified a new, previously unknown outcropping vein set, which returned best results of 288.8 g/t Ag, 10.94 % Pb and 1452 ppm Zn from an iron carbonate-altered conglomerate.

Figure 3. 2007-2011 Geochemical Sampling by Monster Mining Corp.

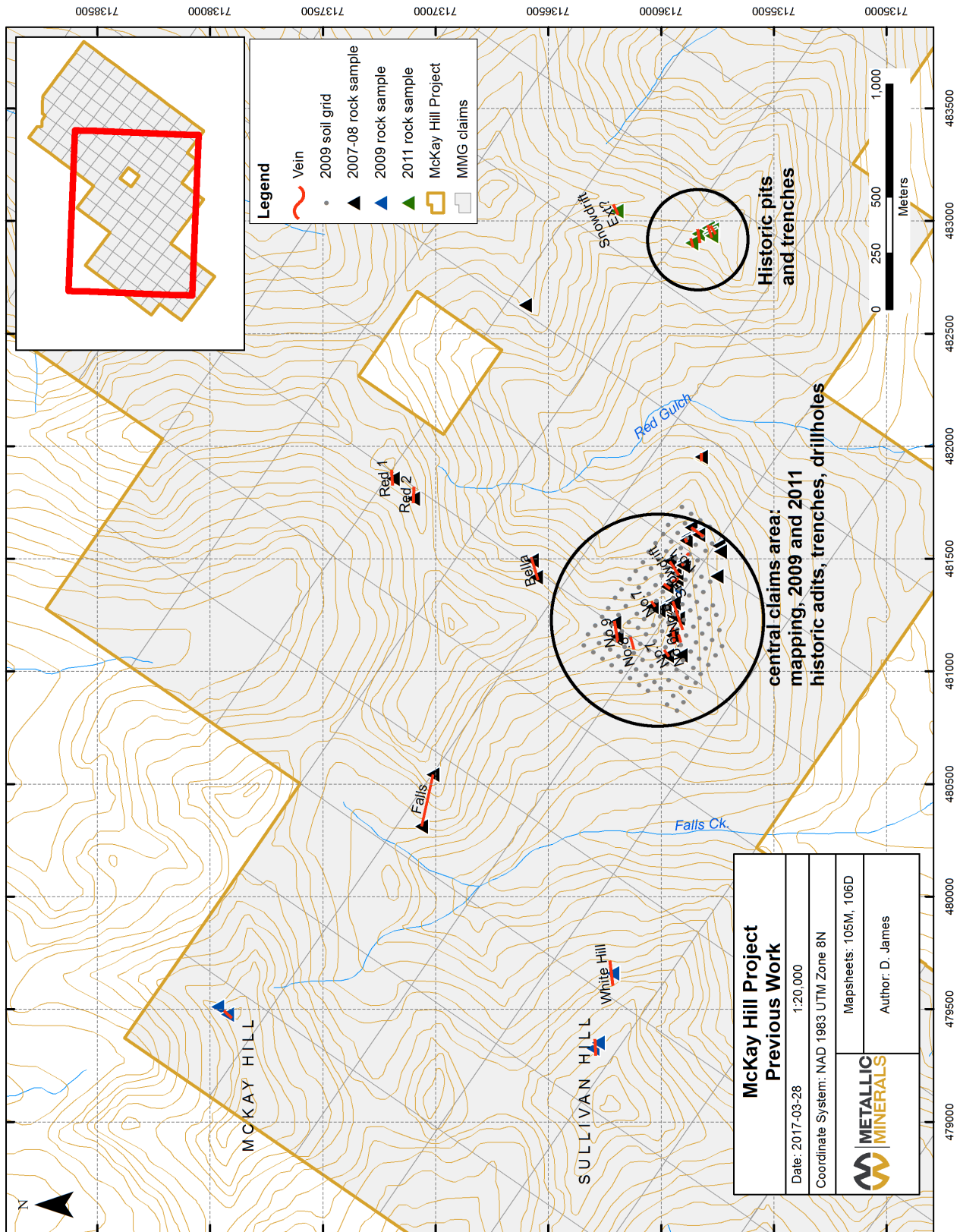
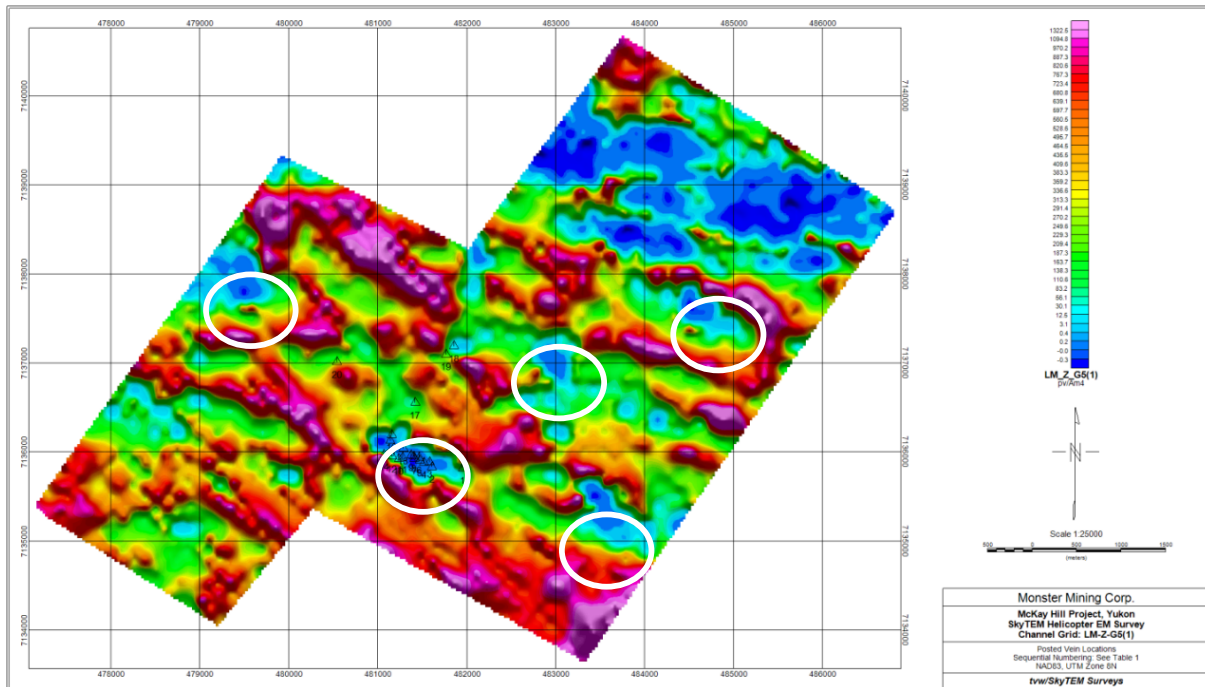


Figure 4. SkyTEM Survey Low moment (LM) channel plot* (see James, 2017).



* Pink and red areas are more conductive. White ellipses are target zones. Known veins are highlighted by a triangular symbol.

2.2 White Hill (106D 037) Showing

White Hill was first staked as a single claim (Crystal) in 1924 by F.E. Endvoldsen. Additional single claims were staked in 1925 including Selma (E. Anderson), Seline (C. Williamson) and Northstar (L.B. Erickson). Only a minor amount of prospecting was conducted on each claim. The occurrence reportedly comprises a single narrow quartz-galena-chalcopyrite-sphalerite vein at the margins of a small greenstone sill that intrudes Hyland Group quartzites and schist. In 2009 Monster Mining Corp. staked and sampled the White Hill showing, five rock samples sent for geochemical analysis and reported up to 0.06 g/t Au, 3.9 g/t Ag, 1.41% Pb, 0.13% Zn and 0.5% Cu (refer to Blackburn, 2010).

2.3 Independence Hill Zone

In 2017, the MMG geology team coined the 'Independence Hill Zone' after the original claim 'Independence' which was centred on a mineralized base-metal vein on the ridge east of McKay Hill proper (refer to Figure 4, above). On most topographic maps, 'McKay Hill' covers three peaks, the eastern-most which underlay the historic Independence claim. No MINFILE occurrence is associated with this showing which is characterized by a base-metal vein hosted in intensely clay-altered volcanics that have cockade and boiling textures.

3 Regional and Property Geology

3.1 Regional Geology and Tectonic Setting

The property is located on the 1:250 000 scale Mayo (106D) map-sheet and the 1:50 000 scale Horseshoe Hill map-sheet (106D/06). The most recent mapping of the area was completed by the Geological Survey of Canada (GSC) in 1961 by L.J. Green and J.A. Roddick (1972 GSC 1:250 000 map 1282A). The south-central portion of NTS 106D (1:50 000 map sheets 6 and 7) has never been mapped at a 1:50 000-scale and to date is relatively poorly understood (Blackburn, 2010).

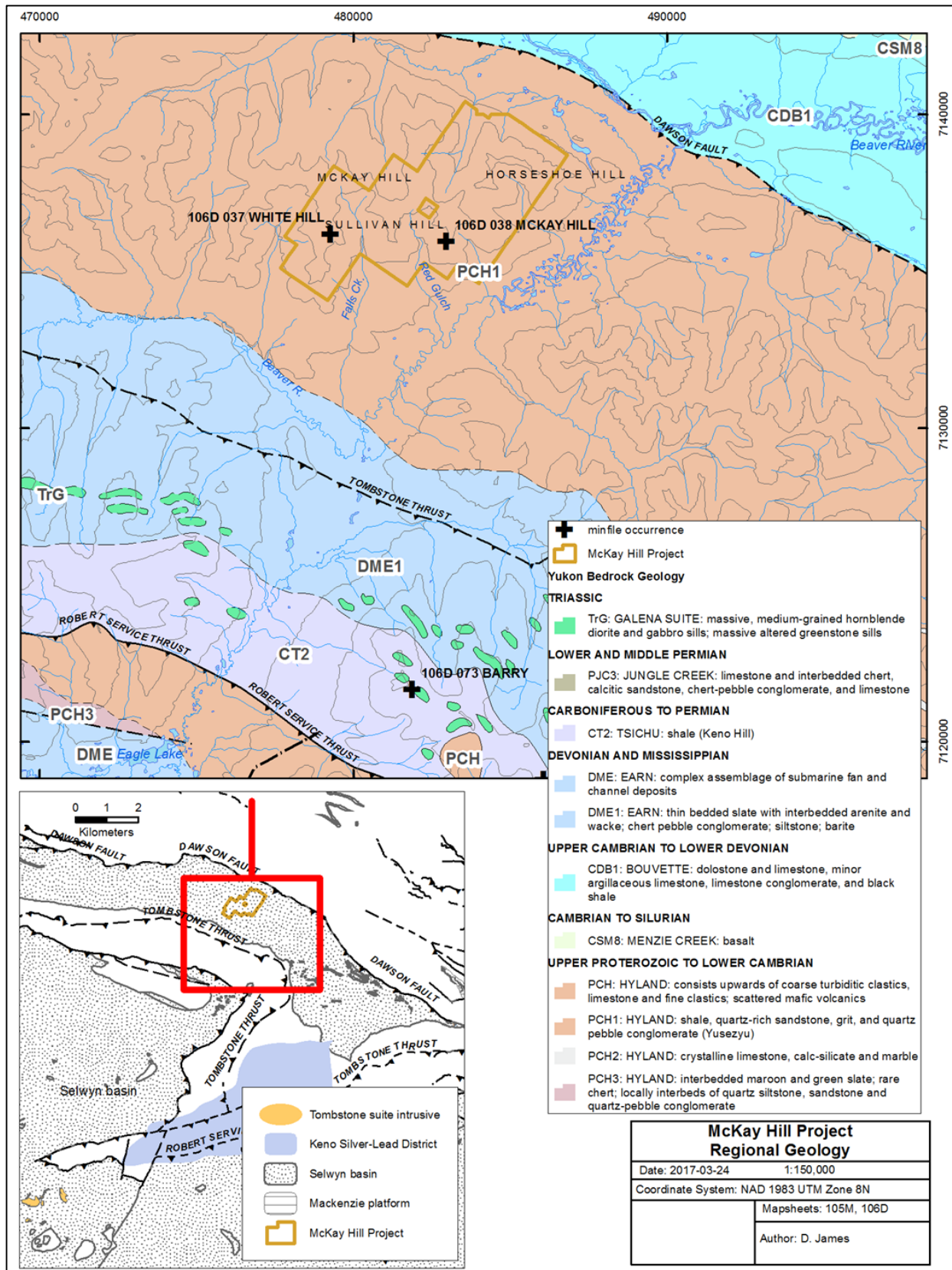
The McKay Hill property is part of the Omineca Belt within the Ancestral North American terrane. The Omineca Belt consists of a poorly understood Neoproterozoic to late Paleozoic assemblage of alternating basin (Selwyn Basin) and platform (Mackenzie Platform) sequences occurring in sheets separated by a series of regional scale thrust faults. McKay Hill sits within the Dawson Thrust sheet, which is part of the Selwyn Basin and bound by the Mesozoic Dawson Thrust (Abbott, 1997) to the northeast and the Tombstone Thrust to the north (refer to *Figure 5*, following page). These regional-scale thrust faults are the result of the northeast-directed accretion of a succession of allochthonous terranes. This main tectonic event is also responsible for mega to microscopic folding of the Selwyn Basin sedimentary sequence. Widespread granitic magmatism during the early to mid-Cretaceous formed at least five main intrusive suites between 112 and 90 Ma and a younger suite at 65 Ma (Ettlinger, 2012 and references therein).

In the McKay Hill area, the Dawson Thrust sheet is currently mapped as underlain by the Yusezyu Formation of the Upper Proterozoic to Lower Cambrian Hyland Group (PCH; Blackburn, 2010). The Hyland Group and Earn Group together form the Dawson Range Mineral Belt (formally known as the Dawson Thrust Sheet) which is bound by the Dawson Thrust to the northwest and the Tombstone Thrust to the southwest. Approximately 7 km to the southwest the Hyland Group rocks are overlain by the Earn Group (DME) metasediments, which host the Keno Hill mineral occurrences. In the Keno district, the Keno Hill Quartzite (Early Carboniferous) hosts 'blow-outs' of polymetallic Ag-Pb-Zn ± Au veins and is extensively exposed within the Dawson Thrust Sheet.

The Hyland Group consists upwards, from oldest to youngest of coarse turbiditic clastics, limestone and fine clastics typified by maroon and green shale and may include younger scattered mafic volcanic rocks (Gordey and Makepeace (compilers), 2003). The Hyland Group is divided into two formations- the Late Proterozoic to Cambrian Narchilla Formation (PCn) and the Late Proterozoic Yusezyu Formation (PY). The McKay Hill area is mapped to cover the older Yusezyu Formation which is described by Roots (1997) as consisting of metamorphosed sandstone, grit, black slate, minor limestone, chlorite schist and conglomerate.

Yusezyu Formation stratigraphy comprises shale-siltstone, sandstone-quartzite with younger lesser grits. The extensive hypabyssal volcanic rocks found at McKay Hill are not incorporated into the geological models proposed for the formation and conglomerate within the Yusezyu Formation are described as containing strained quartz and feldspar sedimentary clasts surrounded by little matrix material (Blackburn, 2010). However, on the McKay Hill property the majority of clasts found within the conglomerate are undeformed and volcanic in origin (Blackburn, 2010). These findings suggest that the Hyland Group Yusezyu Formation does in fact not underlie the McKay Hill area but may represent the extension of the Middle (?) Cambrian to Early (?) Ordovician volcanic rocks ("Dempster volcanics" (COV) mapped by Abbott (1997) on NTS map-sheets 116A/10 116A/11.

Figure 5. Regional Geology



3.2 McKay Hill Property Geology

Cockfield's 1920's-era mapping efforts described meta-sedimentary and volcanic packages covering the project area. As aforementioned, no 1:50,000-scale mapping has been conducted in the area despite the significant exploration history. Regional, 1:250 000-scale mapping (Mayo (106D) map-sheet) extends the regional stratigraphy of Hyland Group, Yusezyu Fm. rocks to underlie the area. However, in agreement with Cockfield's circa 1920's-era findings, Monster Mining Corp. and Metallic Minerals Corp. have verified the presence of siliciclastic and hypabyssal-volcanic rocks (refer page 18 for *Figure 6. Property Geology - Fault & Fold Models*) which may represent the Dempster Volcanics of the Marmot Group. The following is taken from Blackburn (2010):

Previous mapping completed in the area by Cockfield (1924a, b and 1925a, b) recognized two units within the siliciclastic sequence—sedimentary and breccia/volcanic rocks. In 2009 these units were broken up and described more specifically as: sedimentary rocks comprising slate, conglomerate and sandstone grit, and hypabyssal volcanic rocks comprising basalt (amygdaloidal, vesicular and pillowed), andesite, volcanic tuff and their brecciated equivalents.

Extensive fine-grained grey-blue slate and matrix-supported, polymictic, cobble-conglomerate (diamictite) are present as a steeply dipping, near vertical, succession striking roughly northwest. Slate bedding appears to be parallel to foliation consistently in the mapped area, less a few localized pockets where it was observed as an argillic-altered slate breccia related to brittle deformation along discrete topographic depressions presumed to be faults. Layers of fining-upwards, poorly bedded conglomerate are characterized by very fine to fine-grained, immature matrix material, enveloping poorly sorted sub-angular to sub-rounded clasts. The diamictite unit is one of the more favorable hosts for deep level Ag-Cu-Pb mineralization. Clasts (≤ 15 cm) of primarily volcanic (and lesser sedimentary) origin appear to float in the finer-grained detrital clay-rich matrix. A thin bed of poorly sorted sandstone grit overlies the conglomerate and is penetratively weathered a distinct rusty-orange colour.

The interior of the succession comprises thickening upward intercalations of volcanic rocks. Most notably, andesite and basaltic units with extensive local variation. Amygdaloidal, vesicular and pillowed basalts were observed on the property illustrating the local variation along strike. Calcite (\pm quartz) circular to oblong amygdules (≤ 3 mm) comprise $\leq 35\%$ of the amygdaloidal basalt, this unit was noted to almost always exhibit a weak to well-developed penetrative planar fabric and hosts numerous high-level siliceous veins. Two small, hillside outcrops of pillowed basalt were mapped on the southwest end of the map area on the west margin of the thick conglomerate layer. These pillows were distinctly concentric with a northeasterly younging direction and locally were brecciated and generally vesicular. Highly porous basalts with abundant vesicles were noted on the property as small, but prolific, localized lenses on the west end of the map area. This unit appears to be particularly favourable host for mineralization at depth. Volcanic tuff is a favourable host for deep-level base metal mineralization at the Snowdrift Vein where its groundmass is replaced with galena \pm copper carbonate minerals (namely azurite, malachite \pm chrysocolla). Outcrops of volcanic tuff, surrounded by resistant andesite, were noted to exhibit extensive iron-carbonate and propylitic (? Clay) alteration. At the center of the map area a resistant knob

of massive (locally foliated), dark green hornblende-porphyritic to nearly aphanitic, locally propylitic altered (clay ± pyrite) andesite forms the top of McKay Hill.

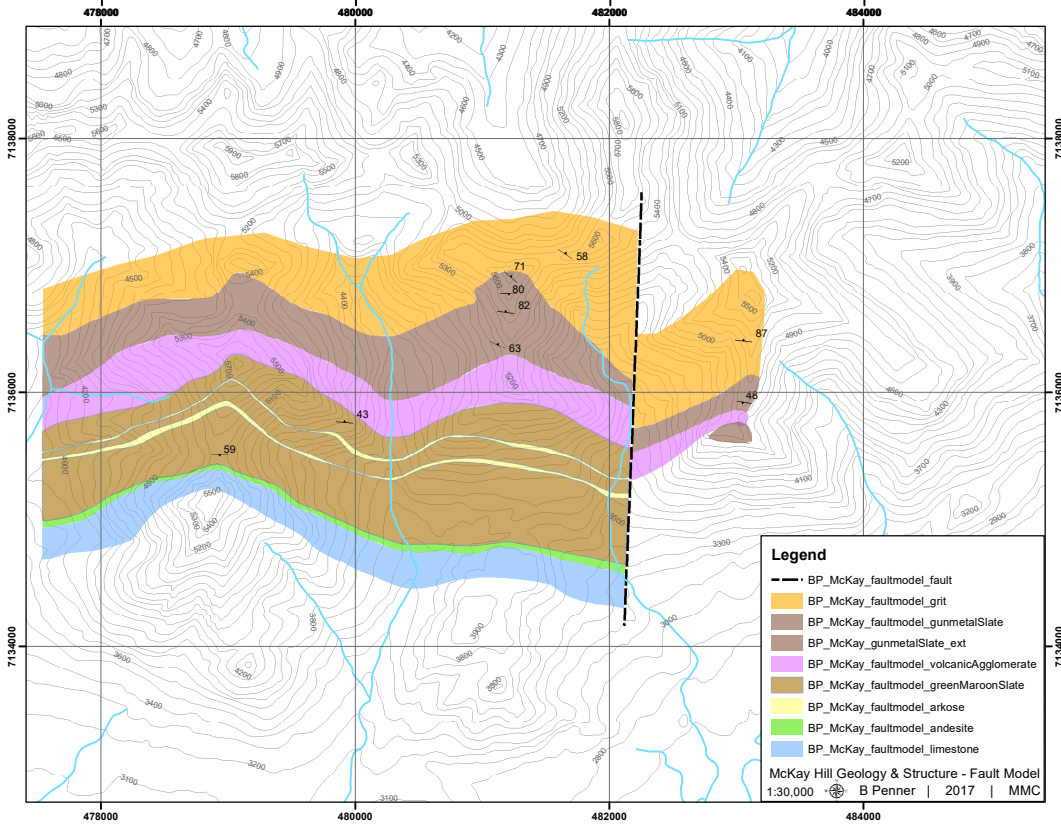
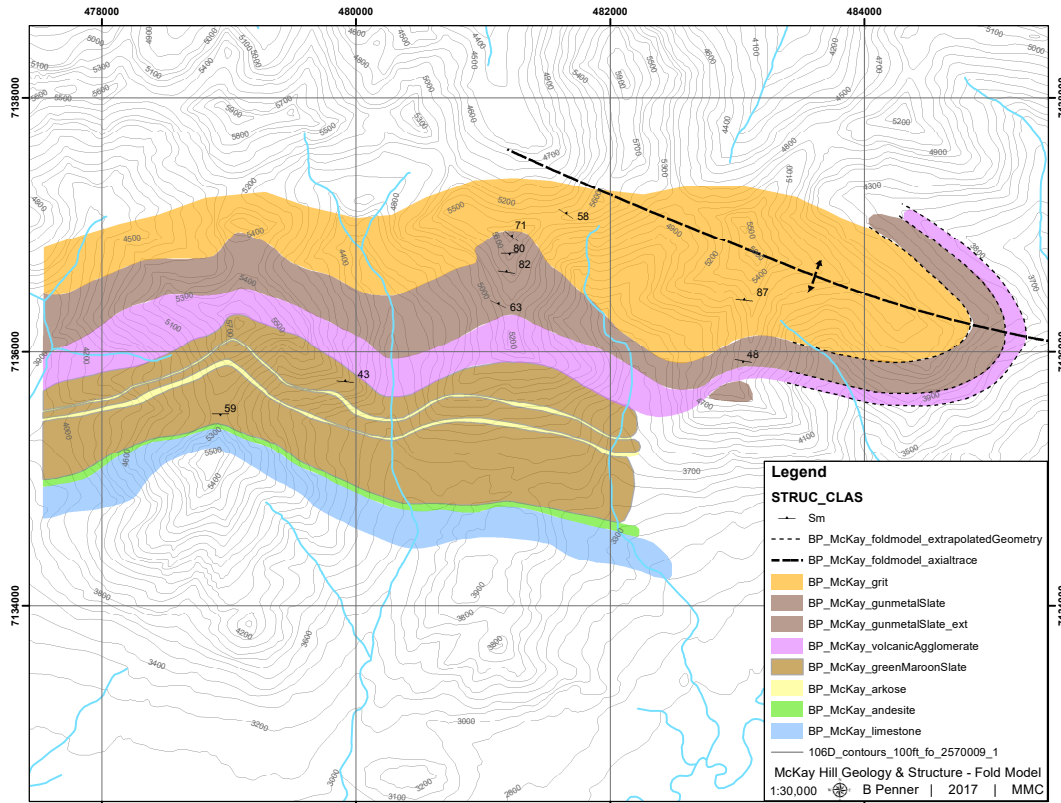
Lithological contacts between units are parallel to foliation, which is consistently striking roughly northwest and steeply dipping (Blackburn, 2009; this study). Further structural work by Nicholson (2011) estimates the foliation fabric to be consistent within the study area, with an average of 289N/71°NE. All units have undergone greenschist facies metamorphism (Pautler, 2009). This host sequence is intruded by minor diorite and gabbro sills, which are, according to Pautler (2009) and Ettliger (2012) considered favourable host rocks for mineralized veins. Work performed this year outlines that, while this is sometimes true, numerous veins are hosted at the contact between mafic intrusive or extrusive bodies and brecciated units (of volcanic or sedimentary origin) or within sedimentary units.

In 2011, Monster Mining Corp. performed a 10-day structural study (Nicholson, 2011) focusing on the different controls on vein emplacement in the 'McKay Hill' and 'Independence Hill' zones. The main goal was to develop drill targets and establish a geological framework for identifying potential precious metal targets outside the areas of known mineralization. Main results include the delineation of four main deformation events affecting the property (see below) as well as the generation of an extensive structural measurement database.

- D₁ is associated with the late Jurassic-early Cretaceous accretion of allochthonous terranes on the Ancestral American craton. At McKay Hill, D₁ generated the regional foliation and associated minor folding as well as faults and veins with the average 284N/84°NE orientation.
- D₂ corresponds to a shift from the main northward compressional event to a dextral transcurrent regime after the emplacement of the Dawson thrust. At McKay, it is expressed as steeply dipping faults and veins averaging 358N/81°E.
- D₃ represents a period of extension associated with initiation of movement along the Tintina Fault and expressed by the emplacement of the Tombstone intrusive suite. At McKay Hill, D₃ is expressed by a series of mineralized tensile veins oriented 220N/87°NE on average. Veins are quartz-dominated and can be up to 2 meters wide.
- D₄ is a poorly constrained compressive event post-Tombstone intrusive event and Dawson thrust movement. It reactivated older faults and generated new faults and veins oriented 150N/17°SW on average.

In 2017, Metallic Minerals Corp. conducted 1:30,000-scale mapping (refer to § 5.2.1. and *Figure 6*, following page) over the area to create a stratigraphic and structural framework and to examine Blackburn's (2009) proposed underlying geology (*i.e.*, Marmot Gp., Dempster volcanics Vs. Hyland Gp., Yusezyu Fm). The resulting map supports the authors' 2009 hypothesis (refer to Blackburn, 2009 & 2010) and two potential geological interpretations are presented. The first, and preferred model, invokes a warping of stratigraphy along the eastern ridge to reflect a counter-clockwise-rotating strike and shallowing dip around a proposed antiformal hinge. The stratigraphic repetition observed at the south end of the eastern ridge could be a function of local faulting on the southern fold limb, or could be a function of fold limb orientation that was not observed during this work. The fold interpretation is lent weight by the presence of an east-west striking, steeply dipping axial planar foliation that was mapped through the property. Vergence between the contact/bedding dips and the foliation measurements indicate the presence of an antiform to the north. The second model invokes a fault that strikes approximately north-south up the creek between the central and western ridgelines. In this model, the attitudes of beds along the eastern ridge is assumed to be the same as in the central and western edge. A smaller fault would also likely be needed to explain the stratigraphic repetition of the gunmetal slate at the southern end of the eastern ridge.

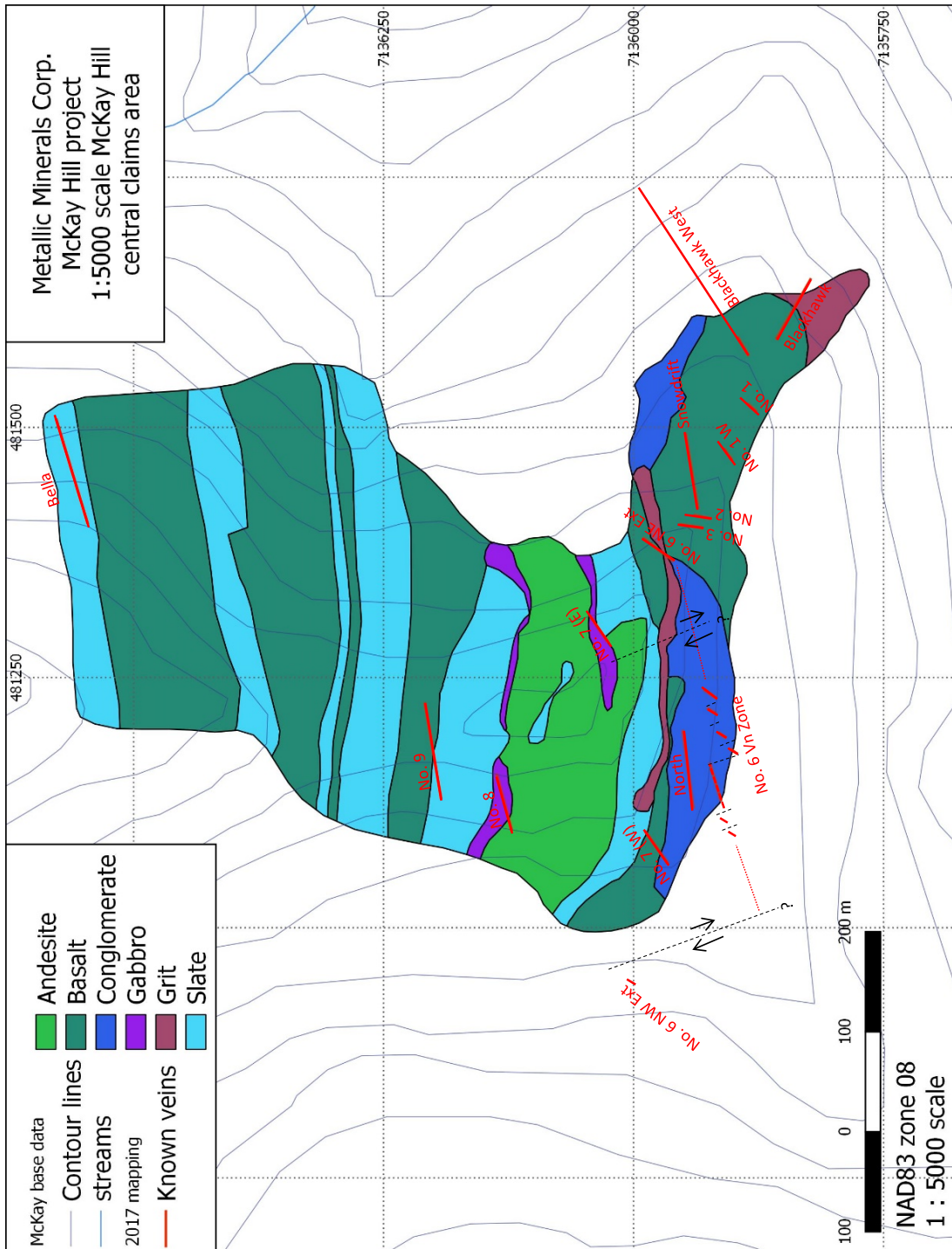
Figure 6. McKay Hill Area Property Geology– Fault & Fold Models



3.2.1. McKay Hill Zone Geology

The aforementioned geology is primarily based on mapping efforts around the McKay Hill Zone area. In 2009 the Monster Mining Corp. conducted a 2-day mapping exercise around the main showings which has been adapted to include 2017 mapping (refer to Blackburn, 2009 & 2010; and *Figure 7*, below). It should be noted that the units are consistently, north-northwest striking and near vertical.

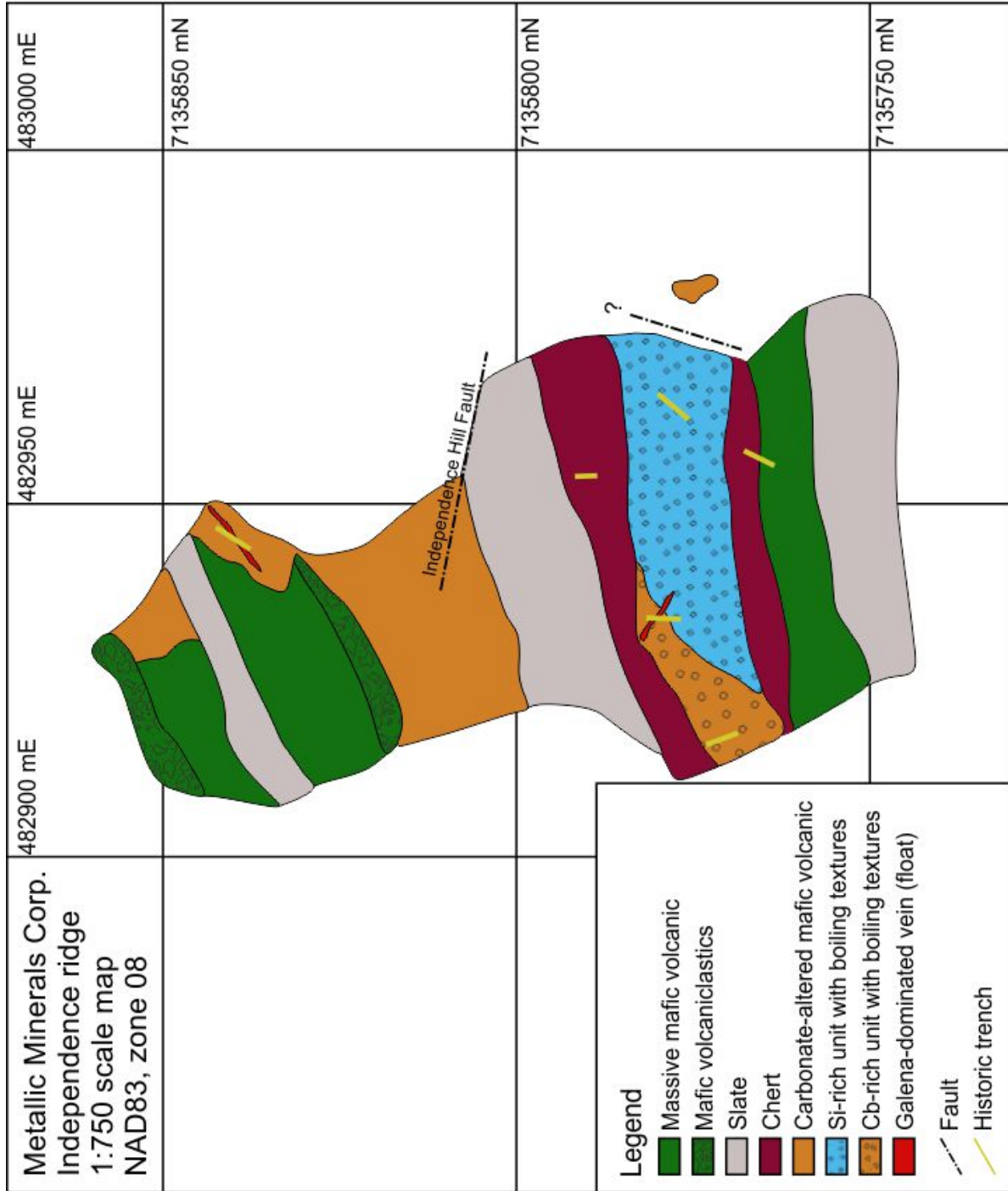
Figure 7. McKay Hill Zone Geology



3.2.2. Independence Hill Zone Geology

In 2017, the historic workings area at Independence Hill was evaluated via 1:750-scale mapping and a localized prospecting campaign (refer to *Figure 8* below). The Independence Hill Zone differs geologically from the McKay Hill Zone primarily in mineralization style (refer to § 4, this report).

Figure 8. Independence Hill Zone Geology



4 Mineralization-Style & Deposit-Type

McKay Hill encompasses MINFILE occurrences 106D 037 (White Hill) and 106D 038 (McKay Hill) and has historically been explored for Keno Hill-style polymetallic Ag-Pb-Zn veins. At least 25 veins have been located and identified since Monster Mining started work on the project in 2007 and most are in the central claim area where they are exposed along ridgetops (refer to *Figure 7*, page 19).

Known mineralization at McKay Hill occurs as a series of decimetre to metre-scale quartz- galena ± copper oxides ± sphalerite ± sulfosalts veins with banding and localized brecciation parallel to vein walls observed on well-developed veins (refer to Photo-plate 3. A, B, C; following page). In lithological units with high initial porosity such as conglomerates, mafic volcanoclastics and grit (coarse sandstone), mineralization is of matrix replacement type (refer to Photo-plate 3. D; following page). In 2009, Bennett and Blackburn (2009), categorized mineralized occurrences part of the McKay Hill showing into three zones: 1) high-level quartz-carbonate-gold mineralization zone 2) quartz-carbonate-gold-galena-lead transition zone and 3) low-level galena mineralization. The following table from the Blackburn (2009) report displays the metal concentrations of veins from the different levels.

Table 3. Selected 2007 & 2008 Geochemical Results (Pautler, 2009; adapted from Blackburn 2009).

Zone	Vein	Sample	Width (m)	Au (g/t)	Ag (g/t)	Cu (%)	Zn (%)	Pb (%)
High-level	Snowdrift	MK-06	Grab	15.6	668	3.9	0.94	2.4
	Snowdrift	526150	Grab	2.61	174	0.69	0.13	0.42
	Snowdrift	526196	1.5	1.37	57.2	0.63	4.7	1.51
	Blackhawk West	526244	Grab	1.14	100	1.46	0.17	0.27
	No. 8	MK-02	Grab	16.8	646	0.64	0.14	33
	No. 1 West	29887	Grab	0.765	502	2.4	0.47	46.4
Transition	Snowdrift	29885	Grab	0.085	470	0.595	0.29	46.5
	Blackhawk	29890	Grab	0.51	551	0.51	1.16	47.3
	Blackhawk	29889	Grab	0.9	484	0.53	8.33	54.6
	No. 9	29896	Grab	0.59	132	2.24	2.31	5.14
Low-level	North?	526241	Grab	1.84	372	1.96	7.01	22.74
	No. 6	526239	Grab	0.565	528	1.52	8.66	50.55
	No. 6	526238	1.1	0.83	683	0.78	0.4	40.5
	Snowdrift	29886	Grab	2.49	534	2.16	0.46	47

This classification is based on an interpreted vertical zonation from gold-copper in hypabyssal volcanic rocks to: “deeper level massive galena mineralization in less competent sedimentary (± highly vesicular volcanic) rocks” (Blackburn, 2009). It is important to note that mineralization is post-main deformation; *i.e.*, veins crosscut the main foliation, therefore a spatial zonation based on the nature of the host rock is delicate, since these units were already deformed prior to vein emplacement. Nicholson (2011), also states that the mineralization is concentrated where D₃ (220N/87°NE) veins intersect D₂ (358N/81°E) structures. D₄ event is also responsible for a potential second mineralizing event or remobilization of D₃-related mineralization.

In 2009 the Blackburn presented an alternative deposit-type for the mineralization-style observed in the area which was then interpreted to represent polymetallic Ag-Pb-Zn Keno Hill-type veins. An epithermal model was presented and it was speculated that the mineralization may be of high-sulphidation type. Since 2009, limited work has been completed concerning mineralization-style (fluid source, chemistry etc.), however, upon revisiting the property, in culmination with data collected to date, an intermediate-sulphidation epithermal model appears to most accurately fit. Intermediate-sulphidation deposits are

often temporally-related to Carlin gold deposits. Interestingly, the neighbouring ATAC Rau-Nadaleen Block property is interpreted to represent a Carlin-type deposit. Intermediate sulphidation deposits are generally characterized by the following (refer to Sillitoe & Hedenquist, 2003):

- Generally, ore is present as veins and breccia, similar to low-sulphidation epithermals but with coarser banding;
- Alunite may be present, as often in high-sulphidation epithermals;
- In addition to gold, usually contain significant silver & lead (galena), zinc (sphalerite) at depth;
- Gold and silver deposition is controlled by boiling, base metal mineralization is mainly by fluid mixing and cooling.

The aforementioned characteristics largely describe the overall observations at McKay Hill, whereby placing the McKay Hill Zone which is primarily coarsely-banded base-metal veins/breccias at lower level (*i.e.*, originally at depth in deposit) and the Independence Hill Zone which has boiling and cockade-textures, at a higher level (*i.e.*, originally closer to surface within the ore shoot). It may be the ore shoot has since tilted to the north-northwest thereby creating a vertical zonation that daylights along the hillsides, particularly along ridges. Alternatively, mapped stratigraphic offset between the southern part of the McKay and Independence ridges can be explained by a kilometer-scale fault with a dextral component running north-northwest-south southeast whereby the volcanic package (a favourable host for mineralized veins on McKay ridge), would extend east-southeast of the Independence ridge historic trench area and could represent a prospective area to host the eastern extension of the McKay Hill mineralized system.

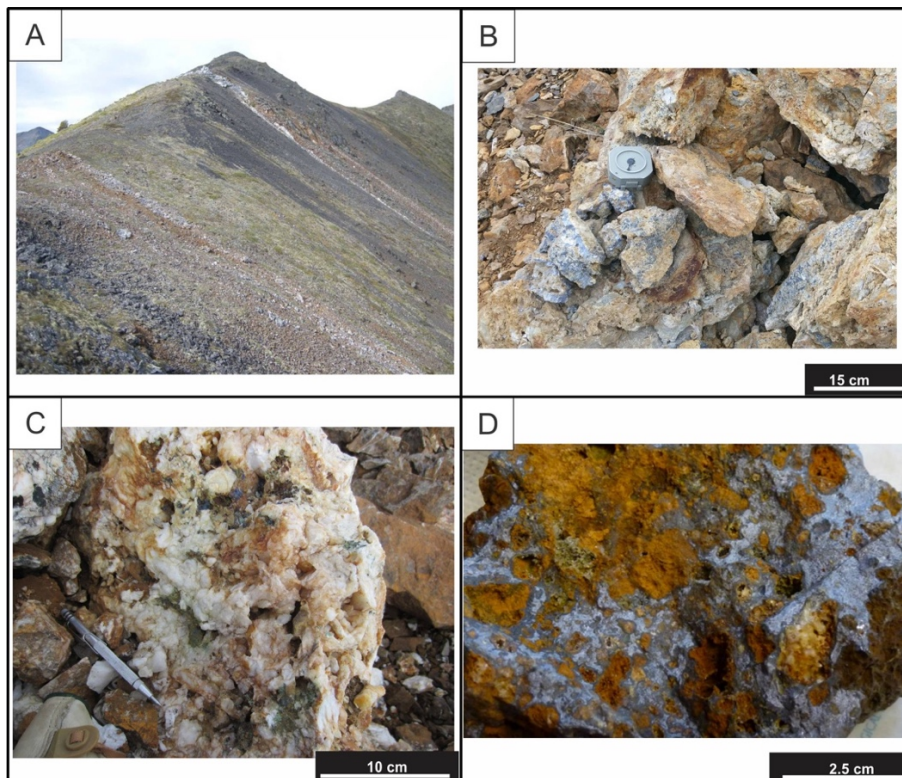


Photo-plate 3. (A) McKay Hill ridge mineralized vein occurrences (3 of 20), looking north-northwest (M. Bindig, from Blackburn, 2009); (B) Massive galena ± sulfosalts with weak banding (parallel to vein walls?) in historic trench at Independence Hill @ E482963/N7135786; (C) No. 4 vein consisting in quartz-azurite-scorodite-malachite-limonite, approx. 3 meter-wide where photo was taken @ E481377/N7135971; (D) Replacement type galena vein in conglomerate (Blackburn, 2009).

5 2017 YMEP-funded Work Program

The 2017 YMEP-funded exploration program was completed from June 21st, July 10-14th and October 1st-2nd 2017 and included satellite imagery data collection, mapping (1:250- to 1:30,000-scale) and prospecting, exposing the No. 6 vein via hand-pitting, soil sampling and subsequent claim staking. The work comprised of two exploration campaigns, the first totaled of 22-man days and the second 4-man days staking and 4-man days soil sampling. A total of \$66,6919.94 was spent during the July program and another \$24,061.32 in October which included prospecting and soil sampling, as well as production of an orthophoto from the satellite imagery data collected earlier in the year.

In summary, the exploration program included:

- satellite (orthophotography) imagery over the project area;
- 1:30,000-scale mapping of the project area to evaluate regional geological setting and confirm Blackburn's (2009) findings;
- 1:250-scale mapping around the No. 6 vein, delineating vein-attitude and extending it to the southwest;
- 1:750-scale mapping, prospecting and sampling at the Independence Zone;
- two soil sampling campaigns covering four grids; and
- subsequent staking the Snoose 91-116 claims.

Additionally, on July 20th the central claim area of the property was visited by Yukon Geological Survey (YGS) geologists Lara Lewis and Derek Torgerson who were accompanied by the author. During this visit, the main showings in the McKay Hill Zone were visited followed by a brief stop at the Independence Zone.

5.1 Stereo Satellite (Orthophotography) Imagery

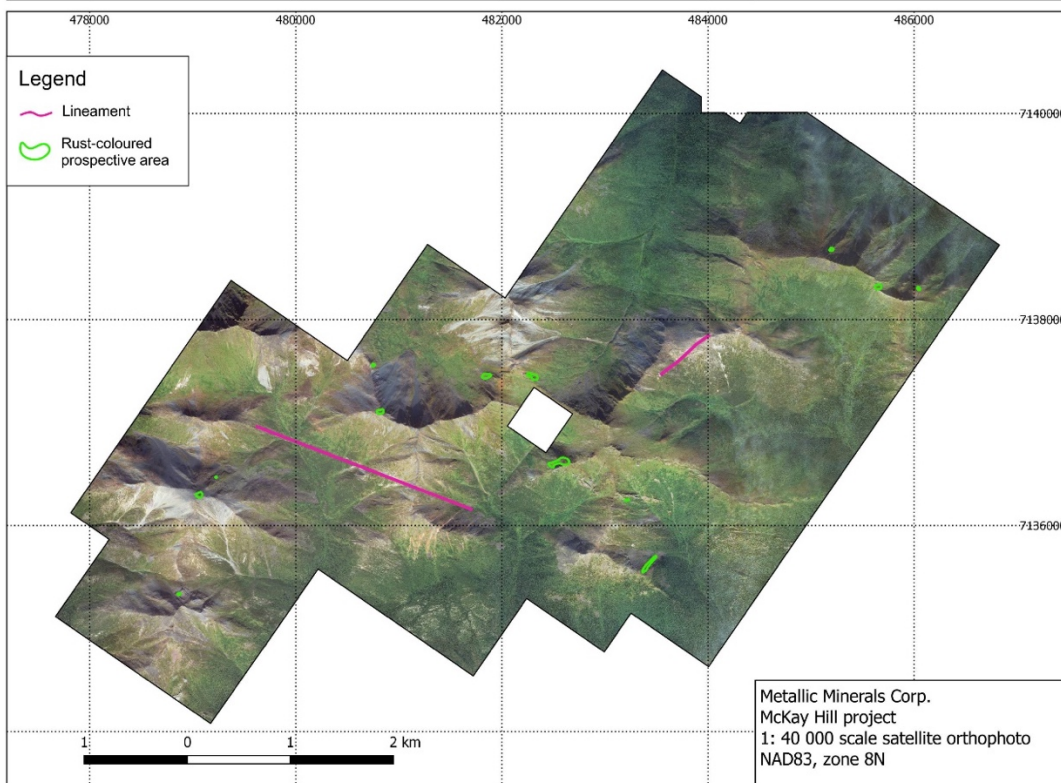
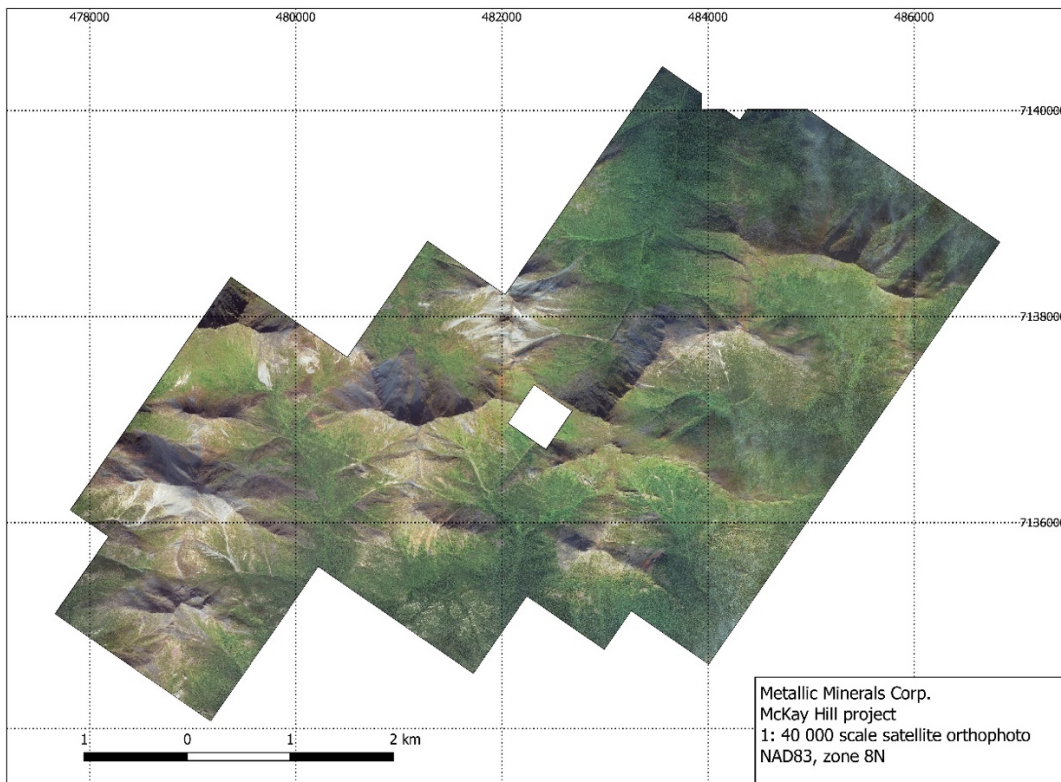
In August 2017, Photosat Information Ltd. produced a 50 cm per pixel resolution colour orthophoto of 100 km² covering the McKay Hill property. This orthophoto was produced from a series of 50 cm pixel resolution WorldView-3 satellite photos acquired on August 10, 2017. As stated in the YMEP application, satellite photos were acquired with the goal of detecting orange-coloured alteration zones and white quartz veins typical of McKay Hill, and compliment the lineament study which was completed pre-field work. These photos also make possible the generation of a 3-m elevation grid of the visible earth surface (DEM/DSM) in the area.

5.1.1. Imagery - Results & Interpretation

At time of writing, initial interpretation of the data outlines a strong lineament oriented northwest-southeast sitting between the No. 9 and Bella veins (refer to *Figures 9A & B*, following page). On the ridge, the lineament has been mapped as a contact between gunmetal slate and volcanics oriented 115N/63°SW but, based on the photo, this lineament seems to extend along strike into the gunmetal slate unit.

Several unmapped areas on the property with orange-coloured rocks are visible on the orthophotos. These rocks represent potential target areas as their colour could be caused by Fe-carbonate alteration similar to host rocks in the footwall and hanging wall of the known veins of the McKay Hill showing. When superposed with the aeromagnetic data acquired in 2011, the high resolution orthophotos highlight 5 zones of characteristic orange-coloured rocks (potentially due to pervasive iron carbonate alteration of a volcanic-derived host rock) located in an interpreted favourable mag anomaly area, *i.e.*, in a transitional zone from high to low mag (refer to *Figure 9B*, following page).

Figure 9 (A, B). Satellite imagery of the McKay Hill property³



B) Same as A, with highlighted lineaments and prospective looking zones.

³ From Photosat Information Ltd., 50 cm per pixel

5.1.2. Imagery - Recommendations

After initial review of the newly acquired data and preliminary integration with the historical mapping and sampling database as well as with the geophysical data, a series of potential targets and areas to field test were produced.

It is recommended to map in greater detail the main lineament outlined on the orthophotos between the Bella and No. 9 vein. In the scenario where this lineament turns out to be generating late offset, this could have major implications in projecting mineralization towards Independence Hill. It is also recommended to do field checks of the anomalous areas highlighted by both the orthophoto and the SkyTEM reduced-to-pole aeromagnetic data. Further work on the data is required to further delineate and prioritize the targets presented in this preliminary report.

5.2 Mapping (1:250 to 1:30,000-scale)

MMG staff and management made an initial one-day property visit on July 10, 2017 which allowed for the MMG geologists new to the project to get familiar with the area and mineralized showings.

Following this site visit, it was decided that mapping activities should be focused on:

- 1:30,000 property-scale mapping of the area comprising the Sullivan, McKay and Independence summits, assess to the level of structural deformation affecting the central claim zone and project prospective lithological units outside of the current claim block.
- McKay Hill Zone: detailed mapping, delineation of the No. 6 vein with focus on extending the known vein zone to delineate potential trenching and drilling targets.
- 1:2500-scale mapping of the cirque to the east of McKay Hill to further extend the previous lithological map by Blackburn (2009) as well as to prospect for potential vein traces down slope from the known occurrences.
- Independence Hill Zone: trench mapping at 1:750-scale to highlight meter-scale control and variations on the attitude of the veins as well as to verify the extent and nature of the alteration halo around the veins. Characterize the mineralization encountered in the area in comparison with the McKay Hill veins as well as to delineate the extent of the boiling zone identified on the July 9th visit.

5.2.1 1:30,000 Property-scale Mapping – Results & Interpretation

Three days of mapping the Sullivan, McKay and Independence Hill areas was undertaken to characterize the regional structural setting of the McKay Hill property (refer to *Figure 6*, § 3.2 of this report for two 1:30,000-scale interpretations and following page, *Figure 10*, for preliminary 1:50,000-scale map of the McKay Hill Property). These north-south traverses were done along ridgelines and a 1:50,000-scale map of the area was created. A product of this work was the grouping of host stratigraphy earlier described in Blackburn (2009) into seven packages (refer to *Table 4.*, page 27). Stratigraphy correlates well across the Sullivan and McKay Hill ridges, and along the northern portion of the Independence Hill ridge.

Figure 10. Preliminary 1:50,000-scale map of the McKay Hill property

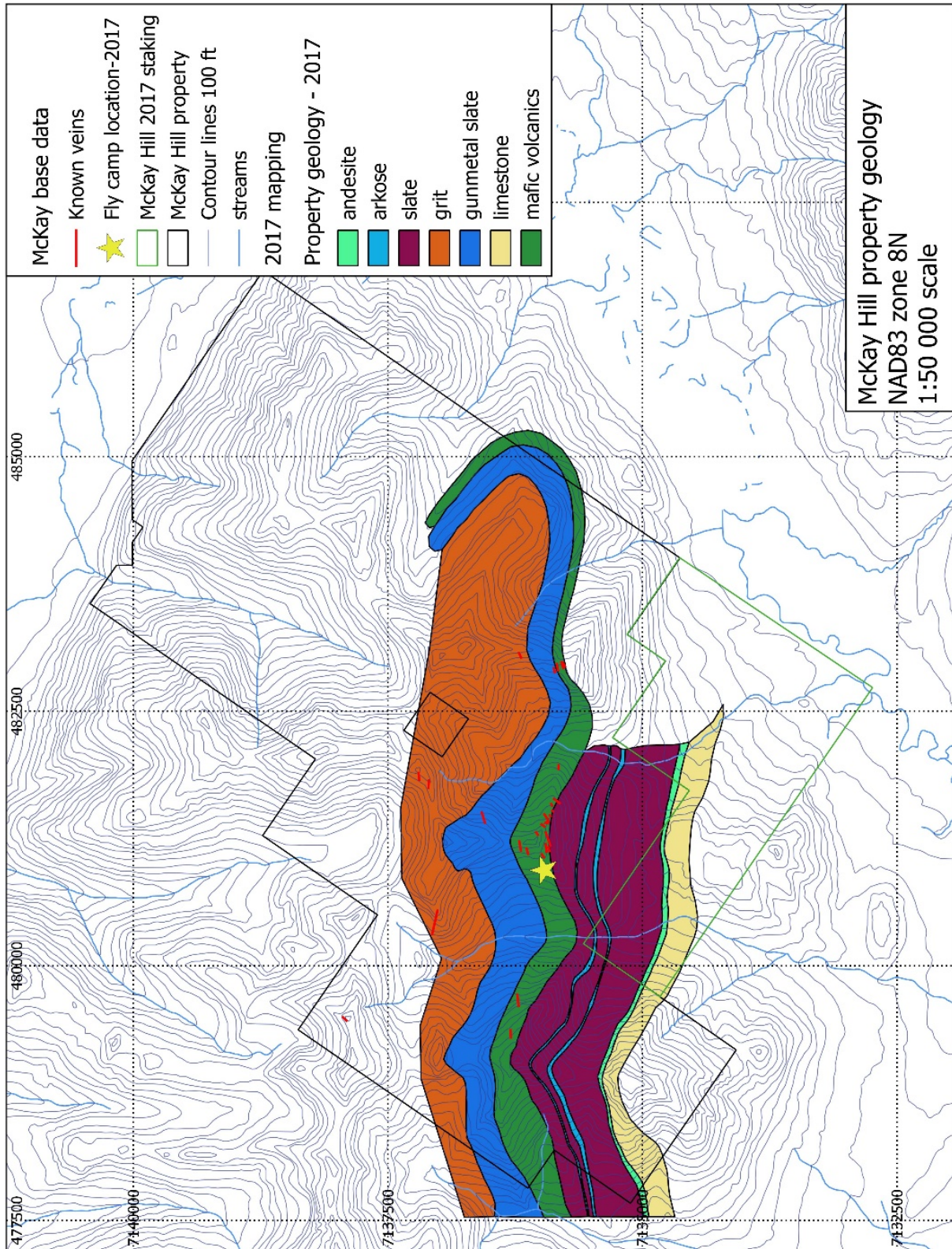


Table 4. Property-scale Lithological Units

Unit	Description
Limestone	Very fine crystalline, dark grey-black, pale grey weathering, massive to finely laminated
Andesite	Fine crystalline, phyrlic, dark forest green, chlorite-plagioclase-bearing andesite
Green-maroon slate	Pale grey-apple green to maroon, very fine grained, fissile slate
Arkose	Pale gray, medium grained, massive, quartz-feldspar-biotite (chlorite?) arkose
Mafic volcanics	Package of variably calcareous volcanics (basalt, andesite?) and calcareous conglomerates with interbedded slate
Gunmetal slate	Dark gunmetal blue, very fine grained, very fissile slate
Grit	Package of ubiquitously calcareous, fine to medium grained, moderately to poorly sorted, quartz- and lithic-bearing arkoses; finely laminated, siliceous siltstones, tan-weathering boulder conglomerates with calcareous groundmass, and black, massive, very fine-grained mudstones

Property 1:50,000-scale mapping outlined a correlation between the mineralized veins and the mafic-intermediate hypabyssal volcanic rocks⁴. This correlation further demonstrates the importance of understanding where McKay Hill sits within the regional package (*i.e.*, Marmot Gp., Dempster volcanics Vs. Hyland Gp., Yusezyu Fm) in order to project potential areas of interest. Fragmental units mapped in the project area are mafic volcanic-dominated and it is of general consensus within the MMG geology team that they are likely volcanoclastics of the Dempster volcanics rather than part of the turbiditic clastic rocks of the Hyland Group as earlier suggested (Blackburn, 2010). Further geochemical analyses and, if possible, dating is required to place the McKay Hill property rocks in the regional stratigraphic column.

Abbott (1997) and Mamrol (2016) describe the Dempster volcanics (CO_v) as an unconstrained mafic volcanic alkalic rock formation of at least two different ages. Volcanic products mainly consist in flows (sometimes pillowed, refer to Photo-plate 4. C, following page) and associated breccias, gabbroic dikes and minor felsic rocks with no clear boundaries between flows. These volcanic rocks are currently interpreted to record episodic early Paleozoic magmatism along the northwestern margin of Laurentia (Mamrol, 2016).

⁴ However, it is important to note that the highly prospective No. 6 vein (as currently traced) is hosted in volcanoclastic-conglomerate, re-worked volcanic tuff-agglomerate.

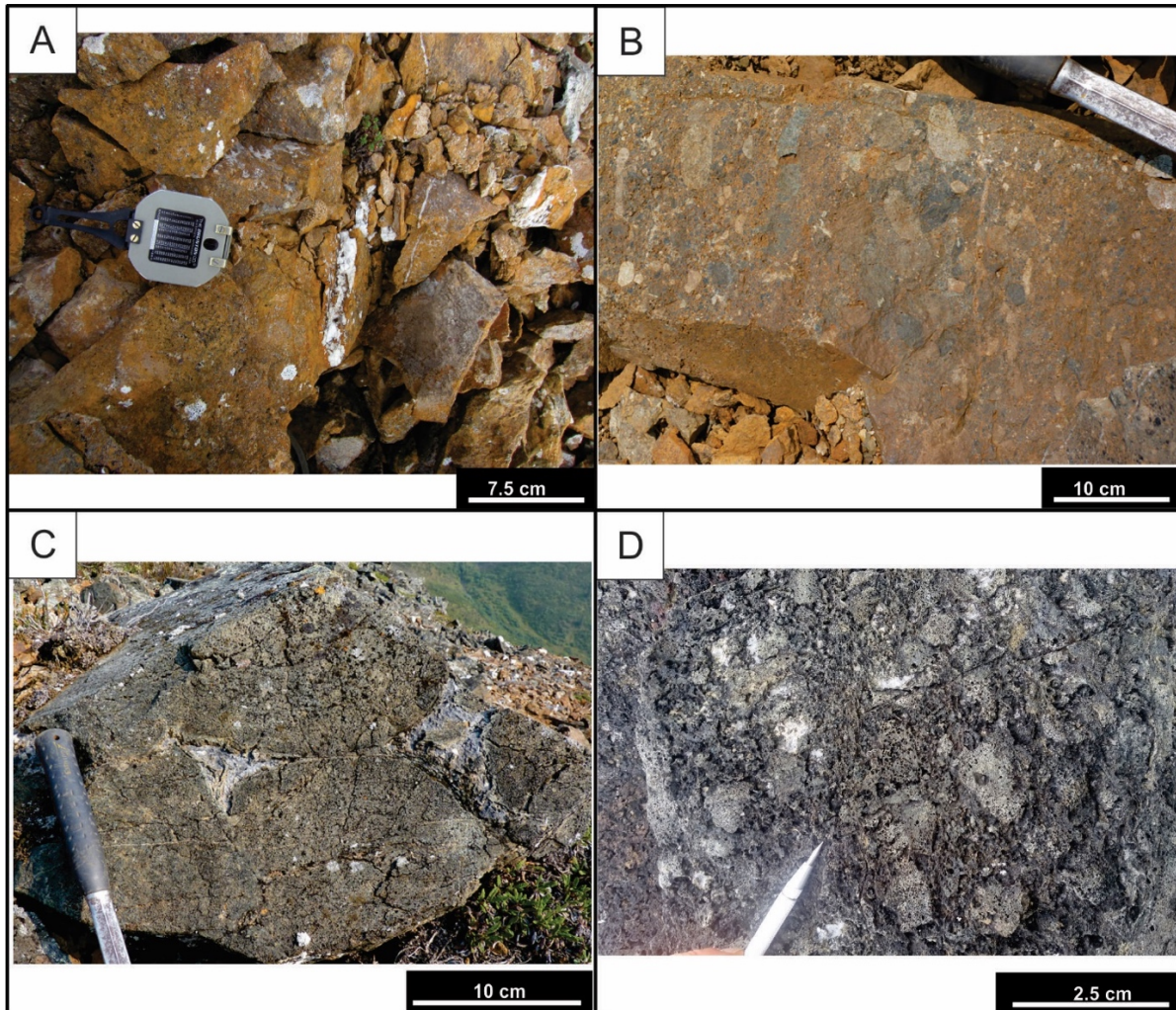


Photo-plate 4. (A) Pervasive Fe-carbonate and limonite alteration of mafic volcanic at No. 4 vein showing (compass points north) at E481377/N7135971; (B) Matrix-controlled Fe-carbonate and limonite alteration in conglomerates, from Blackburn (2009); (C) Pillowed basalts with calcite at selvage, from Blackburn (2009); (D) Close-up of calcite-rich volcaniclastic-agglomerate (?) from the central claim area with abundant dissolution holes at surface.

The mapped stratigraphic offset between the southern part of the McKay and Independence ridges can be explained by a kilometer-scale fault with a dextral component running north-northwest – south-southeast and highlighted on the orthophoto (refer to *Figure 10*, page 26). In such a scenario, the volcanic package, a favourable host for mineralized veins on McKay ridge, would extend east-southeast of the Independence ridge historic trench area and could represent a prospective area to host the eastern extension of the McKay Hill mineralized system.

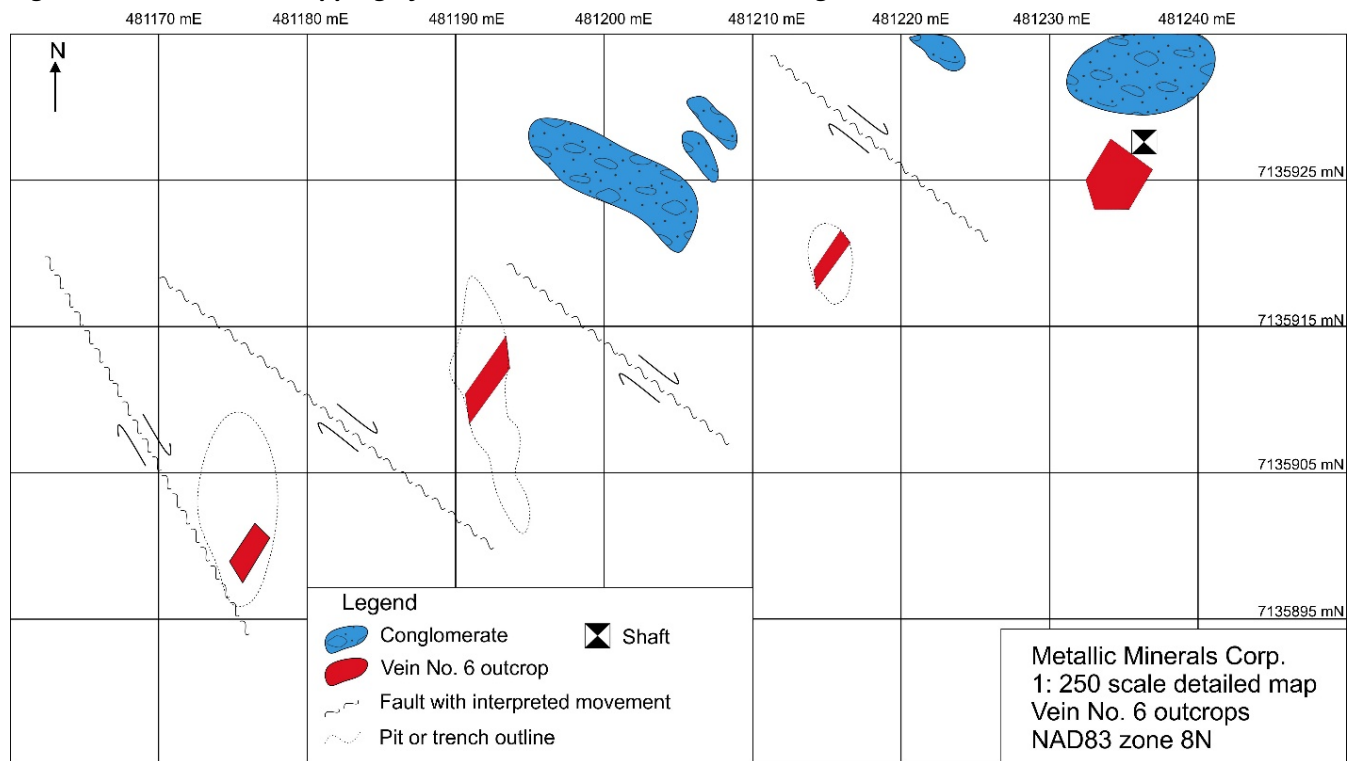
5.2.2 McKay Hill Zone, No. 6 Vein mapping (various scales) - Results & Interpretation

At present, the most prospective showing on the project is the No. 6 vein which is centered within the historic workings where numerous hand-pits, trenches and an adit explore it. In 1949, East Bay Mining Ltd. shipped 143 tonnes of ore from the No. 6 vein with an average grade of 390.9 g/t Ag and 74.1 % Pb (Green, 1972). According to Cockfield (1924), the No. 6 ‘an open-cut has exposed a mass of galena, 12 feet 6 inches wide. The strike on the hanging wall side is north 30 degrees east and on the footwall its north (i.e., RHR strike 000°-030°) both walls being approximately vertical’. However, data from Cominco,

cited by Pautler (2009), established the orientation of the No. 6 vein at near vertical(?), striking 063°-243°. Here the mineralization is hosted in volcanoclastic-conglomerate and re-worked volcanic tuff-agglomerates with indistinct boundaries. The mineralization largely replaces the framework (and/or matrix) of the permeable unit, particularly in the hanging wall.

One of the main objectives of the 2017 program was to obtain an orientation of the No. 6 vein and, if possible, extend the strike-length via gophering (*i.e.*, digging pits while tracking the highest elevation float) to the southwest where higher-grade float, grab samples were previously collected. For this reason, MMG spent two-man days exposing the No. 6 vein at the historic adit, to obtain attitude and true width. At the adit, it was successfully exposed as a 10-foot⁺-wide vein segment oriented ~030°N/80° (refer to *Figure 11*, below). There, the internal zonation of the No. 6 vein was measured as 245°N/77° (refer to *Photo-plate 5.D*, page 33) which approximates Cominco's data. To the southwest in a neighbouring historic pit, a 029°N/78° orientation was obtained for the No. 6 vein. Following the No. 6 vein to the west, a series of ~330°N(?) -oriented faults of unknown dip were observed with apparent dextral movement (refer to *Figure 11*, below). These structures are post-mineralization in timing and offset the No. 6 vein at the metre scale. The combination of closely spaced ~330°N(?) -oriented dextral faults and a vein attitude of 030°N/steep results in an overall 065°-245°N vein trend. The 35° difference between the vein trend and the actual strike of the vein could potentially explain why follow-up drilling in the 1920's was unsuccessful.

Figure 11. 1:250-scale mapping of the No. 6 Vein – Historic Workings Area*



*The above detailed sketch of the different outcropping exposures of the No. 6 vein show a general 065°-245°N vein trend resulting from an actual 030°-035°N vein orientation affected by closely spaced, ~330°N (?) -oriented minor dextral faults.

It was previously anticipated that a No. 6 vein extension would project to the southwest, however, the series of dextral faults are presumed to repeat, offsetting the vein to the northwest. As a result, the MMG personnel gophered (*i.e.*, digging hand pits) along the hillside further to the west (*i.e.*, uphill). Via

this method, the No. 6-type vein material was exposed as far as E480957/N7136003, where it may intersect the North vein (?; refer to *Table 5.*, below). The (historic) No. 4 vein, which is located to the northeast, was also inspected (at ~E481377/N7135967). Pautler (2008) suspected that this vein may actually represent the No. 6 vein northeast extension. MMG personnel were able to verify based on presence of float, textural and mineralogical properties that it is indeed the northeast extension of the No. 6 vein with a measured orientation of 030°N/75°. As a product of following float-trains, prospecting uphill and gophing along the hillside, the No. 6 vein which previously had a 168-m strike-length, now has a (to be tested) 467 m strike-length (refer to *Figure 7*, page 19). Overall, the veins are oriented roughly 030° and are steeply dipping, cut by a series of dextral faults, giving it an overall trend of 065°-245°N. Current program planning for 2018 is scheduled to test this target in multiple areas.

Table 5. No. 6 Vein Extensions & Associated 2017 geochemical results⁵

Location	Easting	Northing	Sample	Ag (g/t)	Note
Original No. 6 NE	481318	7135954			NE historic extent, exposed in historic 'Trench-A'
Original No. 6 SW	481160	7135892			Southwest historic extent, exposed in historic 'Trench-G'
1 st West extension	481165	7135923	1907516*	297	Offset northwest uphill by ~33m, sample collected from float just downhill
2 nd West extension	481070	7135915	1907517	988	Additional ~95 m of strike length, also reported 24.4 g/t Au
3 rd West extension	480957	7136001	1907518	442	Additional ~142 m of strike length, intersection of North-vein (?).
Extension to NE	481377	7135967			Historic 'No. 4' vein, now interpreted to be No. 6 vein NE extension

*Sample collected from float downhill at E481152/7135904.

5.2.3 McKay Hill East, 1:2,500-scale Mapping - Results & Interpretation

Mapping of the McKay Hill ridge was planned to build on previous work done by Pautler (2007-2008), Blackburn (2009-2010) and various Monster Mining staff (2010). Earlier programs, in particular Pautler (2007, 2008) and Blackburn (2009), sampled veins and mapped locations of historic trenches. It was for this reason that MMG focused on assessing veins and trenches at lower elevations outside of Blackburn's (2009) mapping area. One and a half man-days were spent mapping and documenting the area to the east of the authors' 2009 mapping.

Ten mineralized vein orientations were measured on the McKay Hill ridge and outline a strong trend oriented 061°-070°N (refer to *Table 6.*, and *Figure 12*, following page). This newly acquired data confirms the robustness of the mean orientation of the mineralized trend at the McKay Hill ridge-scale. However, as aforementioned, the 2017 findings on the No. 6 vein highlight multiple dextral offsets from ~330°N(?) -oriented faults at the meter-scale (see previous section). When possible, known vein attitudes were measured at the ridge and most of them returned values along the 063°-243°N trend previously established by Cominco. Strike and dip measured for the Blackhawk vein in this study differ from previous studies, which could represent post-D₃ remobilization along the late ~330°N(?) -oriented apparently dextral faults identified on the western side of the ridge.

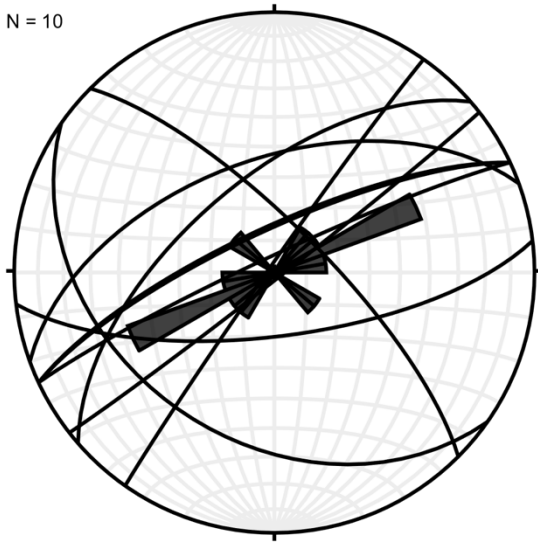
⁵ For all geochemical rock results, refer to § 5.3 of this report, *Table 7. 2017 Rock Samples & Results*

Table 6. Vein attitudes - Historical (from Pautler, 2008) and Current (Blackburn, 2009 and this study)

Vein name	Strike (historical)	Dip (historical)	Strike Current	Dip Current	Northing/Easting NAD83 zone 08
Blackhawk	055°-060°	50°-80°SE	315°-345°	70-75°NE	E481607 / N7135834
Blackhawk West	075°?		045°	Unknown	E481581 / N7135890
Blackhawk East	Unknown				E481952 / N7135822
Snowdrift	210°	70°NW	065°-245°		E481465 / N7135938
Snowdrift Ext.			250°N	80°NNW	E483056 / N7136202
No. 1	NE				E481519 / N7135882
No. 1 West	NE				E481472 / N7135905
No. 2	N				E481410 / N7135930
No. 3	010°	Unknown			E481403 / N7135953
No. 4* (= No. 6)	030°	75°SE	030°-080°	70-75°S-SE	E481377 / N7135967
No. 6	063°	Unknown	030°	Near vertical	E481277 / N7135939
No. 7	045°-078°	75°SE	250°	54°NNW	E481070 / N7135972
No. 8	085°	SE			E481139 / N7136132
No. 9	075°-090°	SSE			E481155 / N7136196
North	085°	Unknown			E481159 / N7135950
Bella	080°	60°S			E481419 / N7136554
Red 1	095°	45°S			E481856 / N7137189
Red 2	095°	Unknown			E481767 / N7137098
Falls	260°	35°NNW			E480541 / N7137012

*The No. 4 vein is now interpreted to represent the NE extent of the No. 6 vein. The overall trend of the No. 6 vein is ~063° or 243° and steeply dipping to the north-northwest.

N = 10



The veins observed to date are briefly characterized in *Table 7* (following page) which summarizes each vein encountered in the McKay Hill Zone. Silver : gold ratios are based on very limited data⁶ and might not be representative of the overall vein chemistry two clear populations are defined, a silver-rich and a gold-rich. The gold-rich population is represented by veins No. 8, No. 9 and Snowdrift (*Figure 7*, page 19) and does not seem to be correlated to galena and sulphide content. Further geochemical work with a larger database is required to determine if the absence of correlation would still hold.

Figure 12. Equal area projection stereonet with vein orientations observed*

⁶ Sample values reported in italics are from a single sample. * mean orientation between 060°-070°.

Table 7. Vein Summary⁷

Vein	Host rock	Alteration	Sulphides and oxides	Gangue mineralogy and vein texture	Ag/Au ratio
Blackhawk	Basalt/andesite or intrusive equivalent	Silica-rich	Galena-malachite-azurite ± scorodite, freibergite	Vuggy, with anhedral quartz with rare <5 mm veinlets of copper oxides. Transparent euhedral quartz filling vugs	423
Snowdrift	Grit	Proximal iron-carbonate, distal silica-rich	Scorodite-malachite-azurite ± tenorite	Vuggy quartz, with both transparent euhedral quartz and anhedral milky white quartz	51
No. 2	Andesite	Iron-carbonate	30-40% euhedral galena ± tetrahedrite	Anhedral quartz with semi-massive galena and trace copper oxides	4481
No. 3	Calcite-rich grit	Carbonate (?)	Galena 3-5% and limonite (3-5%)	<3 cm pods of sulphides and oxides in quartz gangue	<i>60.4</i>
No. 4 (NE No. 6 extension)	Contact between grit and altered basalt	Strong iron-carbonate alteration in both units	Galena-sphalerite-jarosite-azurite-malachite-scorodite	Zoned vein, from barren quartz to base-metal with Cu-O at the centre	1109
No. 6	Conglomerate, re-worked volcanic tuff ± basalt	Weak to moderate pervasive iron carbonate alteration	Galena (>30%)-tetrahedrite and limonite	Quartz. Zonation perpendicular to vein walls from quartz to massive galena at the centre	140
No. 7	Gabbro		Barren	Milky quartz	<i>40</i>
No. 8	Basalt (juvenile)/gabbro	Potential chrysocolla observed	Galena (>30%)-tetrahedrite-malachite	Semi-massive sulphides	98.9
No. 9	Contact between slate and andesite		Scorodite-azurite-malachite	Quartz	571
Bella	Slate	Fracture-controlled iron-carbonate alteration	Galena (<20 %)-malachite-azurite-limonite	Massive quartz vein with common <2 cm euhedral galena crystals and rare azurite-limonite.	187

Mapping of the cirque to the east of the McKay Hill mineral occurrences (refer to *Figure 7*, page 19) extended the previously mapped (Blackburn, 2009) slate, andesite and basalt units with minor variations overall in strike direction. In general, the mapping area is composed of mafic to intermediate volcanics with various levels of carbonate alteration (refer to Photo-plate 4. A & B, page 28) intercalated with slate packages (less than 75 meters in apparent thickness). Coherent facies consist in massive to pillowed aphanitic to microporphyric flows (refer to Photo-plate 4. C, page 28). Fragmental units occur in the SE corner of the mapped area and consist in variously iron-carbonate altered conglomerates and

⁷ Compiled from Pautler (2008), Blackburn (2009) and this study. *All numbers in italics are based on one sample.*

what has been referred to as grit in previous reports (Blackburn, 2009). Conglomerates are mafic volcanic-dominated, with subrounded to angular <20 cm clasts (refer to Photo-plate 4. B, page 28) and the grit is poorly sorted (fragments from <1 to 40 cm in size) and extremely calcite-rich (refer to Photo-plate 4. D, page 28). The abundance of calcite in grit could be caused by either pervasive carbonate-alteration of an initially porous unit or could correspond to the initial composition of the rock. Graded beds and channels were identified in volcanic-dominated conglomerates, with a fining upwards direction to the north (refer to Photo-plate 5., A & B, below). Foliation striking mainly east-west and dipping south implies that the stratigraphy on the McKay Hill ridge is overturned. In any case, this younging direction is based on a single polarity indicator, which can be misleading and additional field evidence is required to determine the younging direction with more certainty. Faults with dextral and sinistral meter-scale displacement have also been mapped in the slate, basalt and conglomerate units (refer to Photo-plate 5. C, below), confirming observations made through the detailed mapping of the No. 6 vein this year.

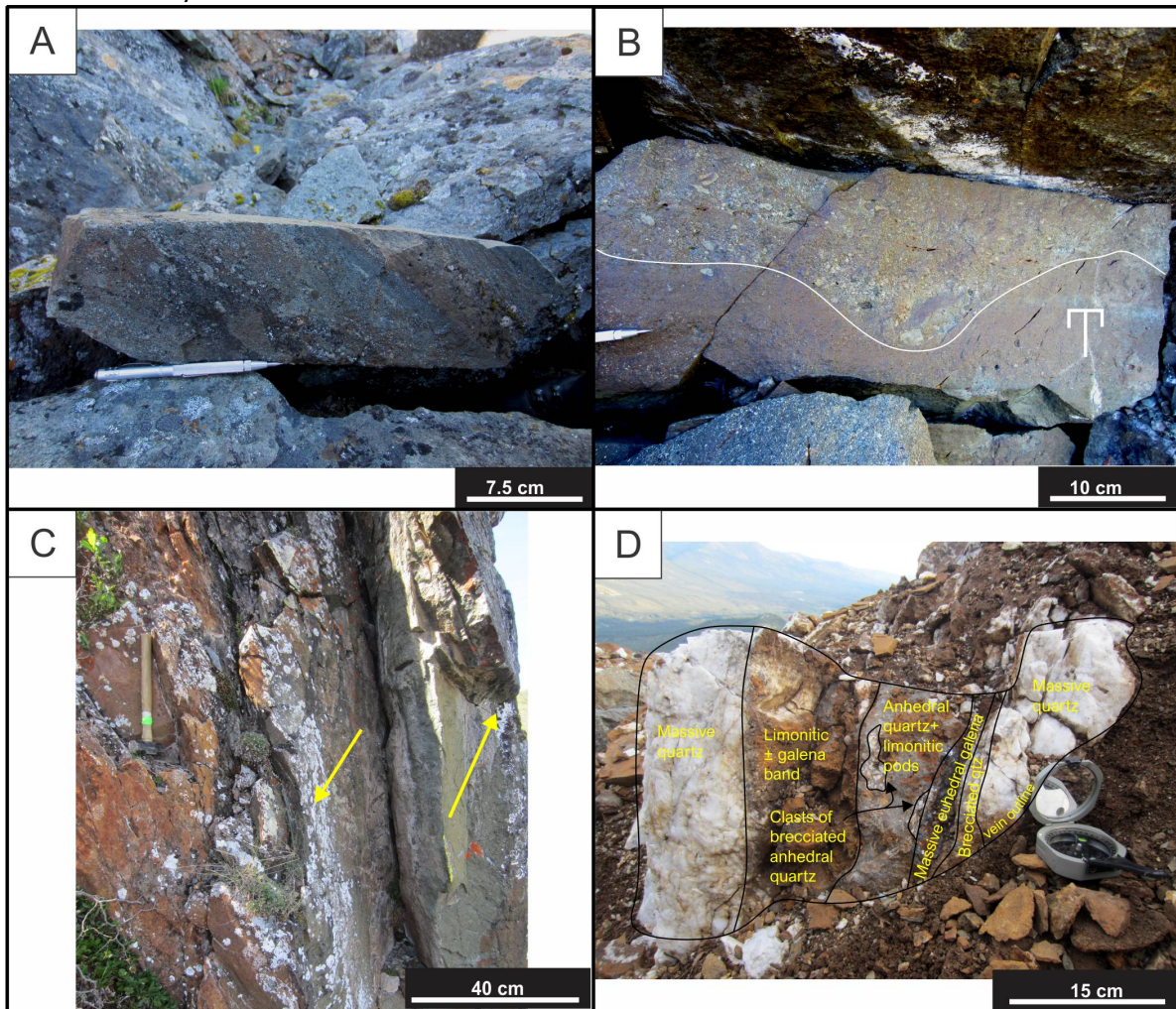


Photo-plate 5. (A) Float of graded mass flow (pyroclastic flow, surge or fall?) mafic volcanics showing fining towards the right of the photo, McKay ridge area at E481552/N7135972; (B) Subcrop with erosional channel in conglomerate or volcanoclastic product with approximate younging to the north at E481492/N7135978; (C) Sub-vertical fault oriented 330°N with mainly sinistral motion with moderate to strong pervasive Fe-carbonate alteration in the footwall, apparently weak to absent alteration in the hanging wall (looking 330°N at E481302/N7136085; (D) Vein No. 6 exposure with zonation from barren to massive euhedral galena at center, looking 205°N at E481239/N7135922.

5.2.4 Independence Hill Zone, 1:750-scale Mapping - Results & Interpretation

On the Independence Hill Zone field work built on previous structural mapping by Nicholson (2010) and the emphasis was put on characterizing the extent and nature of the silica-Fe-carbonate- rich zone with boiling textures, and to sample this area to assess its economic potential. One day was spent mapping the trenches around the Independence Hill area. Lithologies mapped consist in mafic volcanics of coherent and volcanoclastic facies (based on classification by White and Houghton, 2006) intercalated with slate (refer to *Figure 8*, page 20).

Corridors of iron-carbonate alteration are present but with no visible associated mineralization. An area of approximately 1135 m² of strongly altered (mafic?) protolith with boiling textures hosting a series of north-northwest – south-southeast oriented historical trenches was observed. Colloform and cockade textures are abundant and rocks show evidence of multiple brecciation events, which is interpreted from the presence of breccia clasts within the breccia (Photo-plate 6. A & B, below). This boiling zone is subdivided into a carbonate-limonite zone to the west and a silica zone to the east (refer to *Figure 8*, page 20). Both groups have been sampled and returned trace precious metal values. The boiling zone is bound to the north and south by a slate package, but remains open to the east and west, where outcrop exposure is poor. Another set of historical trenches less than 100 metres to the north contain vein material of massive galena hosted in a strongly iron-carbonate altered (mafic?) protolith (Photo-plate 3. B, page 21).

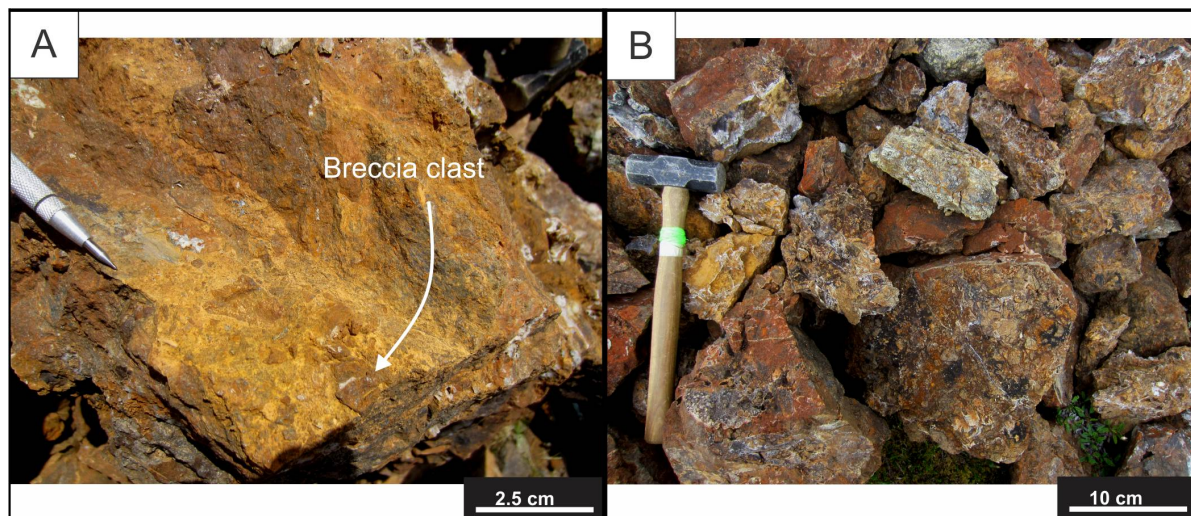


Photo-plate 6. (A) Angular boulder from historical trench on Independence Hill of matrix-supported breccia with angular breccia clasts (multiple brecciation events) at E482932 / N7135780; (B) Float from historical trench on Independence Hill of iron-carbonate altered volcanics (?) with cockade, colloform and brecciated textures and saccharoidal quartz veins, at E482917 / N7135771.

5.3 Prospecting

Five days of prospecting took place during the July-October period. Ground truthing and sampling of rusty-coloured patches of ground which were spotted from the fly-camp or helicopter took place in the Sullivan, McKay and Independence Hill areas (refer to *Figure 13*, following page). A total of 23 rock samples were collected from the McKay Hill and Independence Hill Zones by MMG during the 2017 field season and sent in for geochemical analysis to Bureau Veritas. Results are reported in *Table 8* (following page), highly-anomalous samples are in bold (refer to *Figures 14-19*, pages 37-39 for maps illustrating geochemical results).

Figure 13. 2017 Prospecting Traverses & Rock Sample Locations

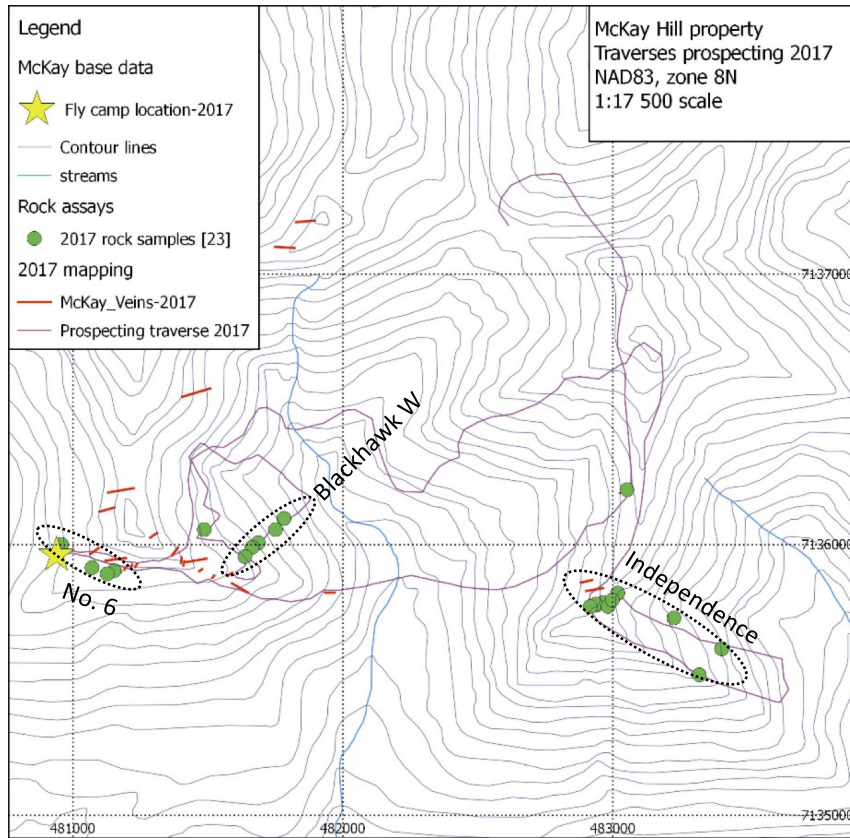


Table 8. Summary of 2017 Rock Samples & Results

Zone	Vein	Sample	Easting	Northing	Ag (g/t)	Au (g/t)	Pb %	Zn %	Cu %	As (ppm)
McKay Hill Zone	No. 6	1907516	481152	7135904	297	0.2709	34.13	30.84	0.814	145.2
	No. 6	1907517	481070	7135915	988	24.4	37.74	3.71	7.971	564.4
	No. 6	1907518	480957	7136001	442	0.6178	43.87	0.51	0.478	18.6
	No. 6	1907519	481126	7135892	742	2.355	40.02	14.72	2.915	647.9
	Snowdrift Ext?	113851	482963	7135786	3	0.0072	0.04	5.2	0.005	46.6
	Snowdrift Ext	113351	483052	7136203	80	0.2803	0.06	0.93	3.4	824.1
	Blackhawk West	113386	481781	7136097	491	0.0444	78.73	0.5592	0.68505	291.6
	Blackhawk West	113387	481781	7136097	36.2	2.6382	12.38	13.03	0.19491	847.5
	Blackhawk West	113388	481750	7136056	111	0.3159	18.9	18.87	0.20913	2767.3
	Blackhawk West	113389	481686	7136007	212	0.2807	28.44	25.45	0.29257	6712.9
	Blackhawk West	113390	481663	7135990	919	0.0032	82.55	1.03	0.04886	41.6
Blackhawk West	113391	481637	7135956	356	0.2938	67.93	3.37	0.54686	2547.5	
Blackhawk West	113392	481486	7136056	500	0.1474	65.05	4.01	1.06	512.8	
Independence Hill Zone	Independence	113852	483018	7135821	706	0.1776	77.81	0.38	1.626	506.5
	(Not vein)	113853	483018	7135821	3.3	0.0013	0.19313	0.0128	0.01058	75.7
	(Not vein)	114151	482938	7135776	1.7	0.0068	0.14968	0.4828	0.00667	44.2
	(Not vein)	114152	482936	7135780	0.6	0.002	0.02903	0.0294	0.0051	48.4
	(Not vein)	114153	482916	7135771	0.5	0.0021	0.06031	0.2155	0.0025	76.8
	(Not vein)	114154	482982	7135772	0.2	0.002	0.00779	0.0319	0.00542	6.7
	(Not vein)	114155	482998	7135795	0.1	0.0037	0.00804	0.0036	0.00087	1.2
	(Not vein)	113352	483320	7135519	0.4	0.0033	0.00174	0.011	0.02024	246.9
	(Not vein)	113353	483403	7135615	0.2	0.0029	0.00186	0.007	0.00847	138.2
	(Not vein)	113354	483226	7135729	0.05	0.0008	0.00021	0.0025	0.00083	1.8

The Blackhawk West was also followed along strike to the northeast (for ~300m) down slope, following a series of historical pits and trenches not previously mapped by Metallic Minerals. Seven float and subcrop samples (113386-113392) of vein material and mineralized conglomerate were collected and returned up to 919 g/t Ag (see *Table 8*, previous page and Appendix II-III for assay results & descriptions). The Blackhawk West vein was previously thought to be exposed in one historic trench (TR-O, Pautler, 2009) and to have an orientation of ~075°, however, float was traced on a 045°-trend. This was one of the most valuable finds in the 2017 field season and the area is deemed highly prospective and should be followed up on in 2018.

5.3.1. Rock Sampling – Geochemical Analysis

Twenty-three rock samples of vein material were collected from: the vein No. 6 (central claim area); silicified and/or carbonate-rich rocks with boiling textures from the Independence Ridge trenches; and float samples, primarily from the Blackhawk West area collected while prospecting, and sent in for geochemical analysis (refer to *Figure 13*, previous page and Appendices II-III). Samples were sent to Bureau Veritas in Whitehorse for assaying and multiple packages were used to properly evaluate the precious metal concentrations, from low to high grade. Sample preparation consisted of crushing 70% at 10 mesh and pulverize 250 g. Sample splits of 0.5 g were then leached in hot modified Aqua Regia (partial digestion). Thirty grams of the total sample were then analysed for 36 elements using inductively coupled mass spectrometry (ICP-ES/MS) analytical technique. Samples with over limit ($\geq 0.01\%$) Cu, Pb and Zn concentrations were assayed by titration and over limit (≥ 10 ppm) Au and Ag samples were analysed by fire assay and gravimetric methods.

Preliminary interpretation of assay data available highlight an overall higher concentration of mobile major elements (K, Na, Ca) and lower metal content on the Independence ridge in comparison with samples taken from the central claim area.

Figure 14. Rock & Soil Chemistry - Ag

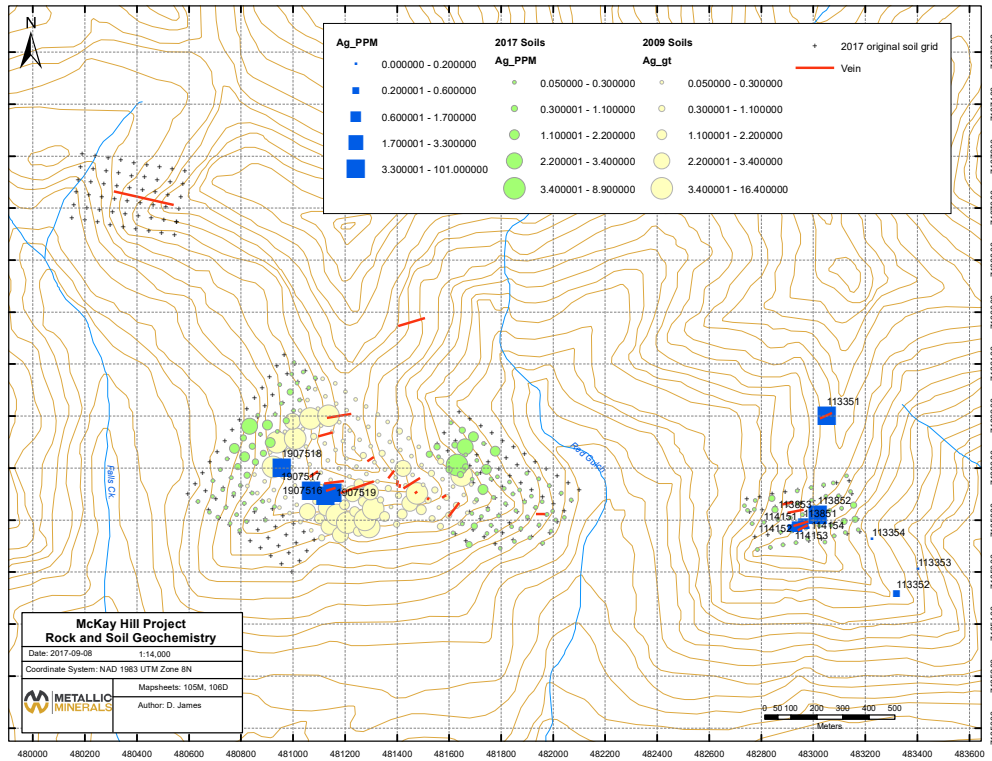


Figure 15. Rock & Soil Chemistry – Au

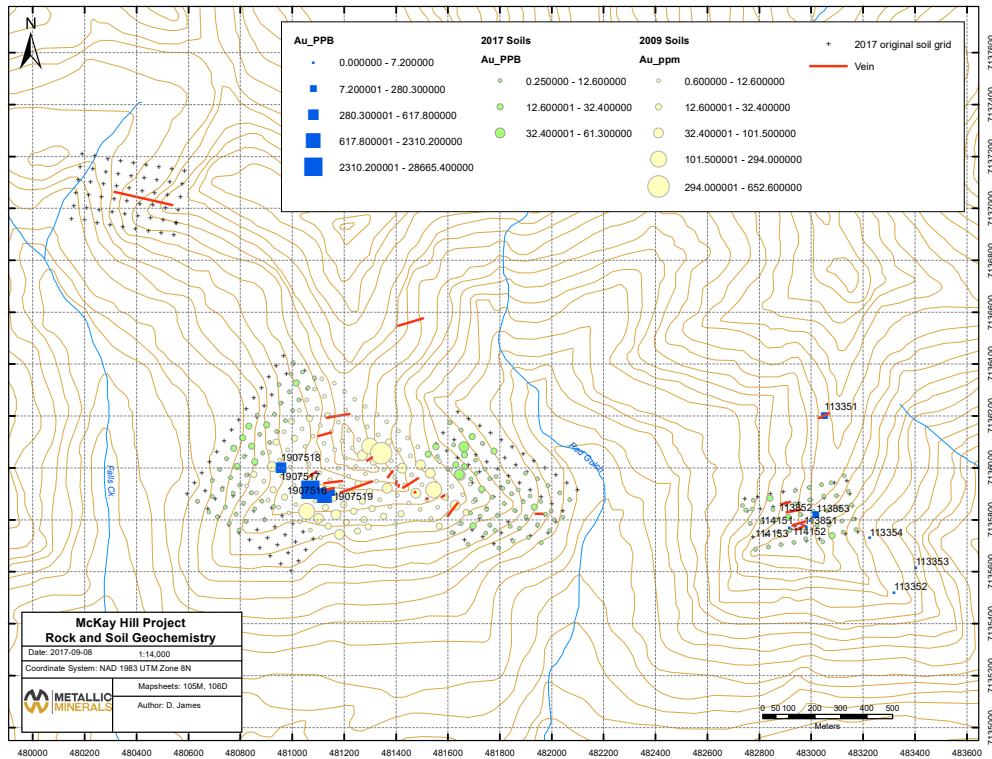


Figure 16. Rock & Soil Chemistry – Pb

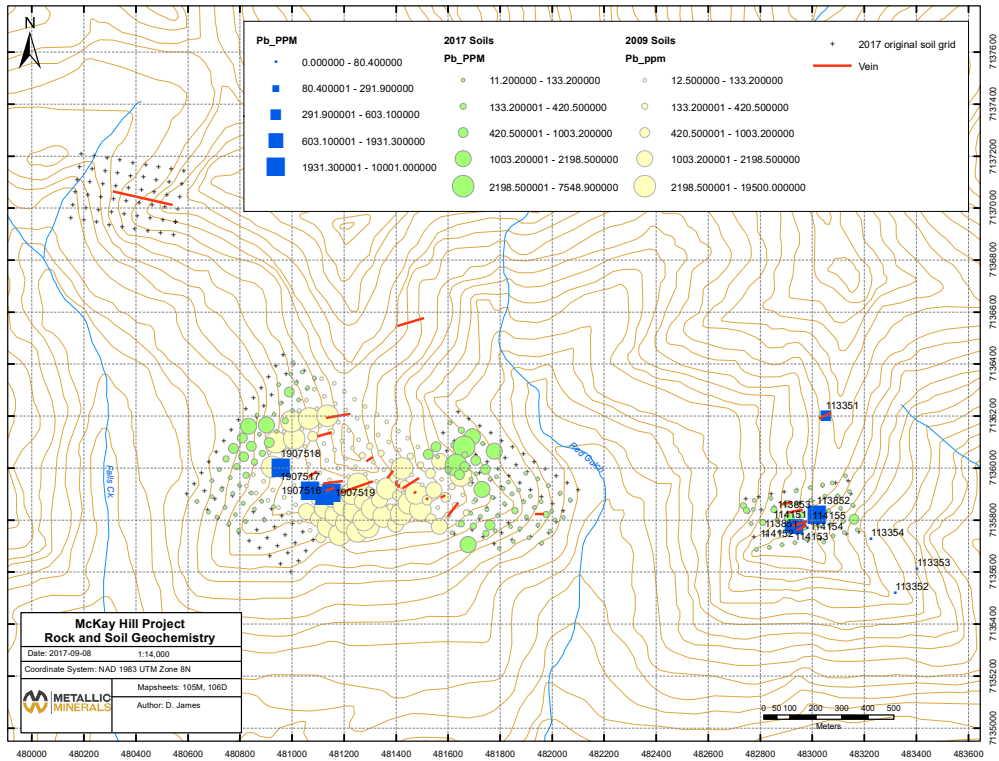


Figure 17. Rock & Soil Chemistry – Zn

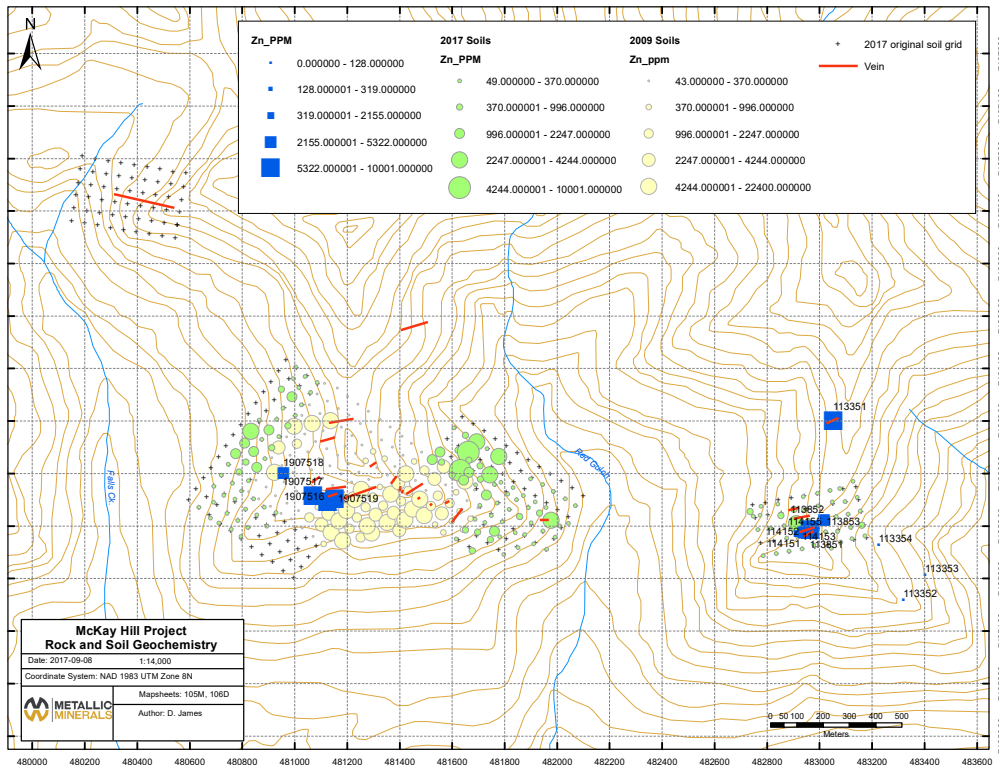


Figure 18. Rock & Soil Chemistry – Cu

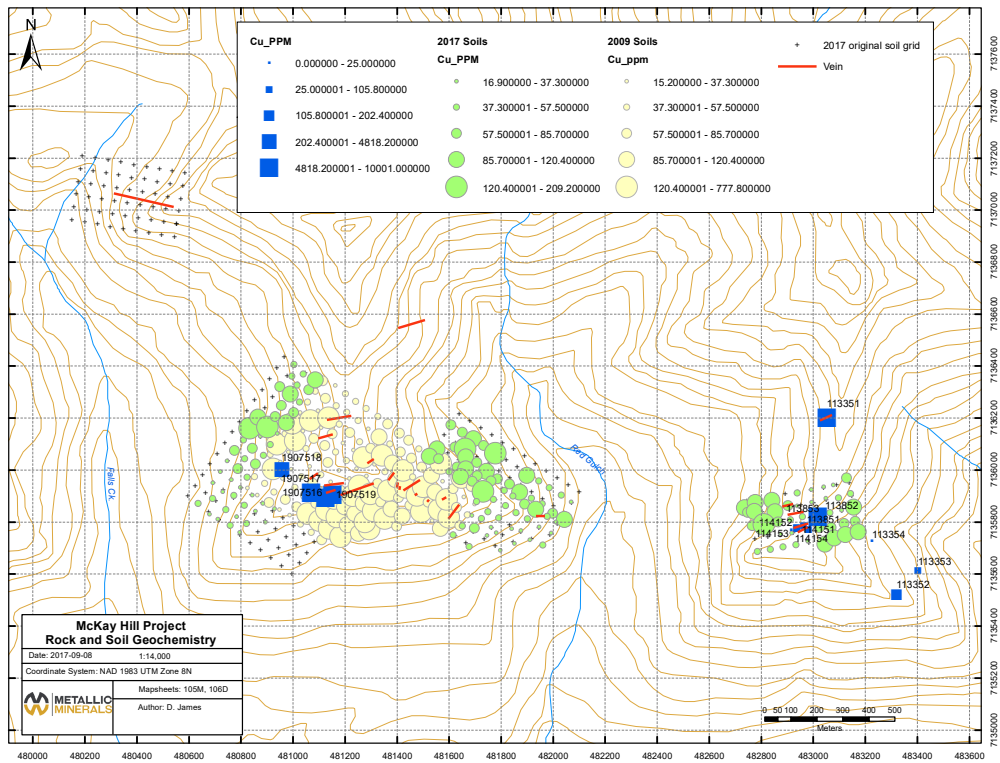
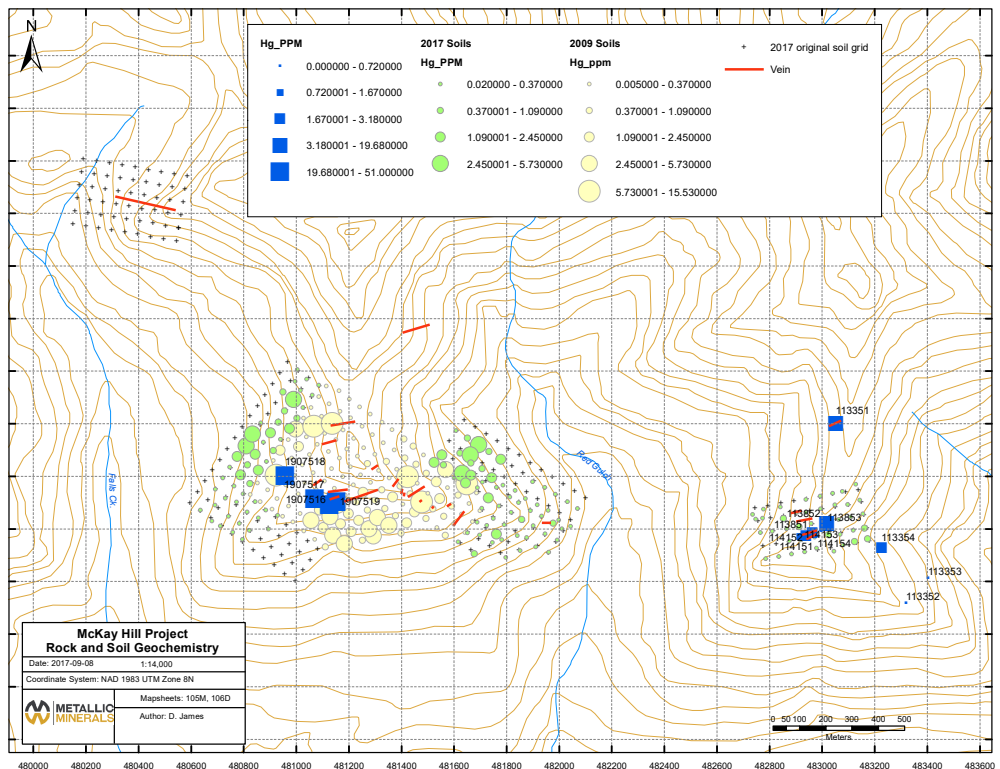


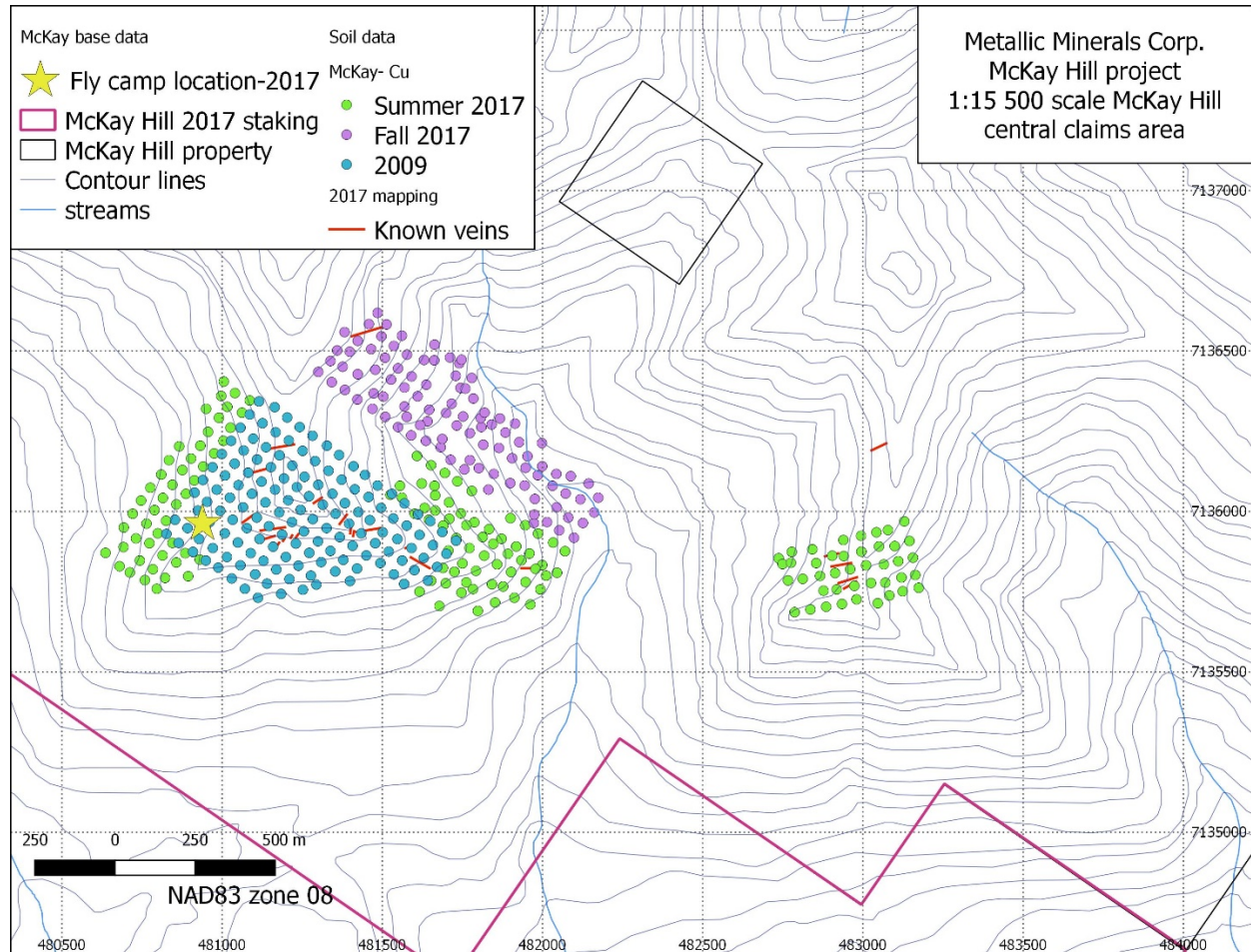
Figure 19. Rock & Soil Chemistry – Hg



5.4 Soil Sampling

Two soil sampling campaigns were conducted in 2017, one from July 12-14 and the second from October 1-2 after receiving the assay results from the soils sampled earlier in the year and the orthophoto data. Soil samplers were largely locally-based from Keno City. The July soil sampling campaign extends the 2009 soil grid centered on the main McKay Hill showing (MINFILE 106D 038) both westward and eastward. In addition, a third grid was placed to cover the Independence Hill historical trenches area (refer to *Figure 20*). These grids aimed at characterizing the soil signature on known mineralized zones and trace potential extensions along strike to orient future exploration work. The October soil campaign took place in the Red Gulch valley to pick up any mineralized signature that would extend the McKay Hill vein system eastward and orient projections of potential veins in the Independence Hill area. Also, due to weather conditions this late in the exploration season, the grid was placed in the valley to avoid extensive snow cover. Consequently, anomalies outlined by combining the orthophoto and SkyTEM maps could not be tested due to the poor weather conditions at that time of year and areas of poor soil development (talus slopes).

Figure 20. 2017 Soil Sampling Grids



5.4.1. Soil Sampling Results & Maps

Ordinary kriging of the combined 2009 and 2017 data for the main economic metals (refer to Figures 21 & 22, following pages), show that anomalous values in Ag are mainly concentrated down slope of veins No. 6-8-9, North and Snowdrift. Cu, Zn, Pb, and As show similar distribution patterns. Anomalous values in Au display a distribution centered on the No. 7 vein as well as down slope from veins No. 6, No. 1 and Blackhawk. Au is also only present in traces in the northwest part of the ridge where the No. 8 and No. 9 veins outcrop. High Ca and Na values are concentrated around the vein occurrences although the highest concentrations measured are located away from the veins close to the Red Gulch. This might be caused by strong mobility (via dissolution, etc.) of Ca and Na in soils combined with moderate to strong topographic relief in the area.

A correlation matrix of selected base and precious metals concentrations in soils (*Table 9*, below) shows very strong (>0.75) correlation coefficients between Ag-Pb, Ag-Zn and Zn-Pb. On the other hand, Ag-Cu, Ag-Au and Pb-Cu have poor correlations (<0.45). This poor correlation between Ag and Au is also seen on McKay ridge, where Au is concentrated at the center of the vein cluster whereas anomalous Ag in soil values occur as a halo to the Au-rich zone.

Overall, metals in soils values on Independence Hill are lower than the ones on McKay Hill, except for Cu (refer to *Figure 21*, following page). This could be explained by the absence of mineralization at surface on Independence. Anomalous Cu values obtained on Independence Hill are located outside the historical trenches area where there is poor outcrop exposure. Correlation coefficients for soil data results from a mix of actual metal association in the rock and variable element mobility in soil. For that reason, metal associations highlighted in soil data only is not robust and requires rock assay data to be verified.

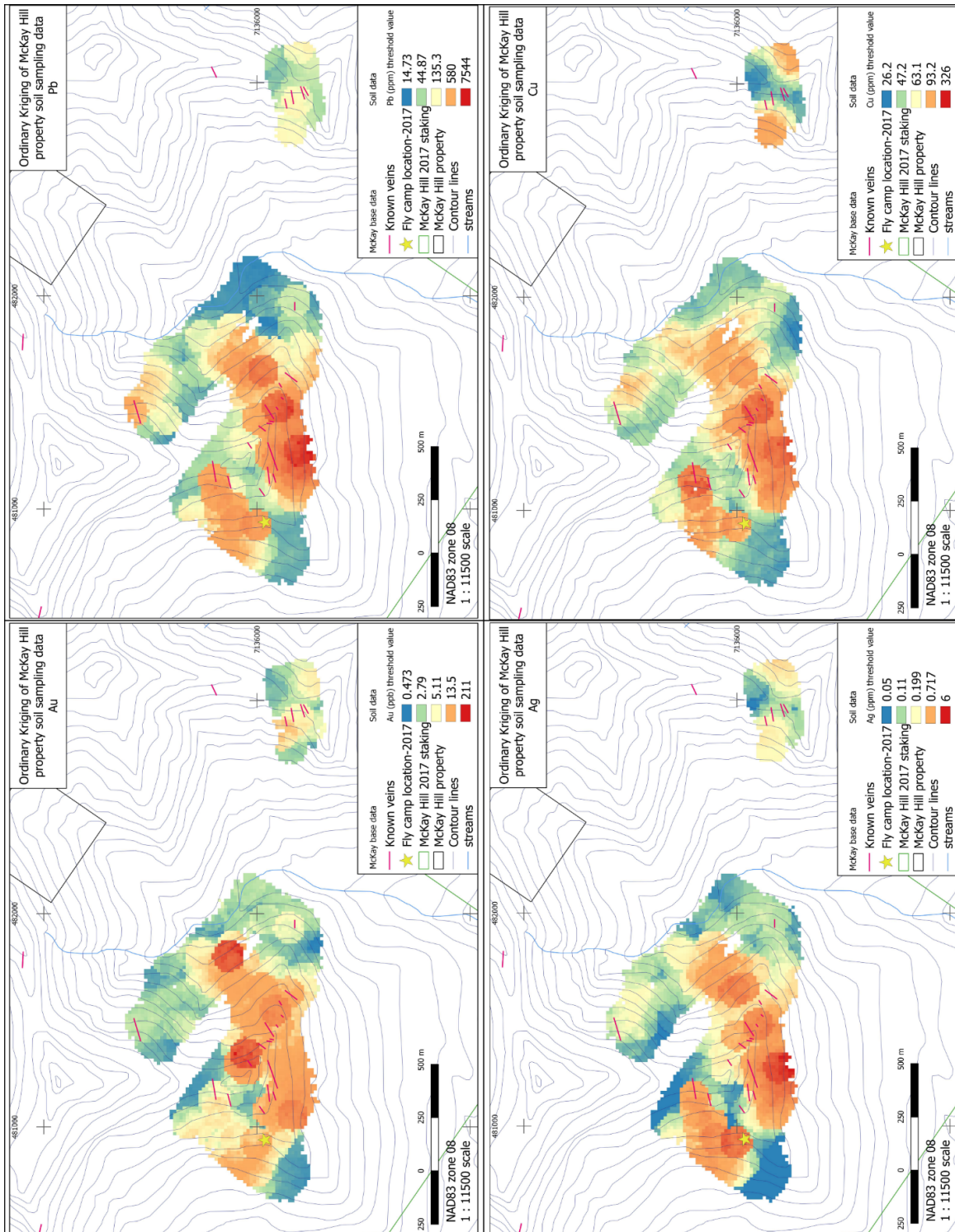
Table 9. Correlation of Economic & Pathfinder metals from soil sampling (n = 392)

Element	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	As (ppm)	Au (ppb)
Cu (ppm)	1					
Pb (ppm)	0.76883	1				
Zn (ppm)	0.83127	0.83159	1			
Ag (ppm)	0.76344	0.87455	0.72929	1		
As (ppm)	0.56951	0.57187	0.59206	0.49296	1	
Au (ppb)	0.19963	0.11957	0.13734	0.14587	0.51897	1

*Strong (>0.75) correlation, poor (<0.45) correlation.

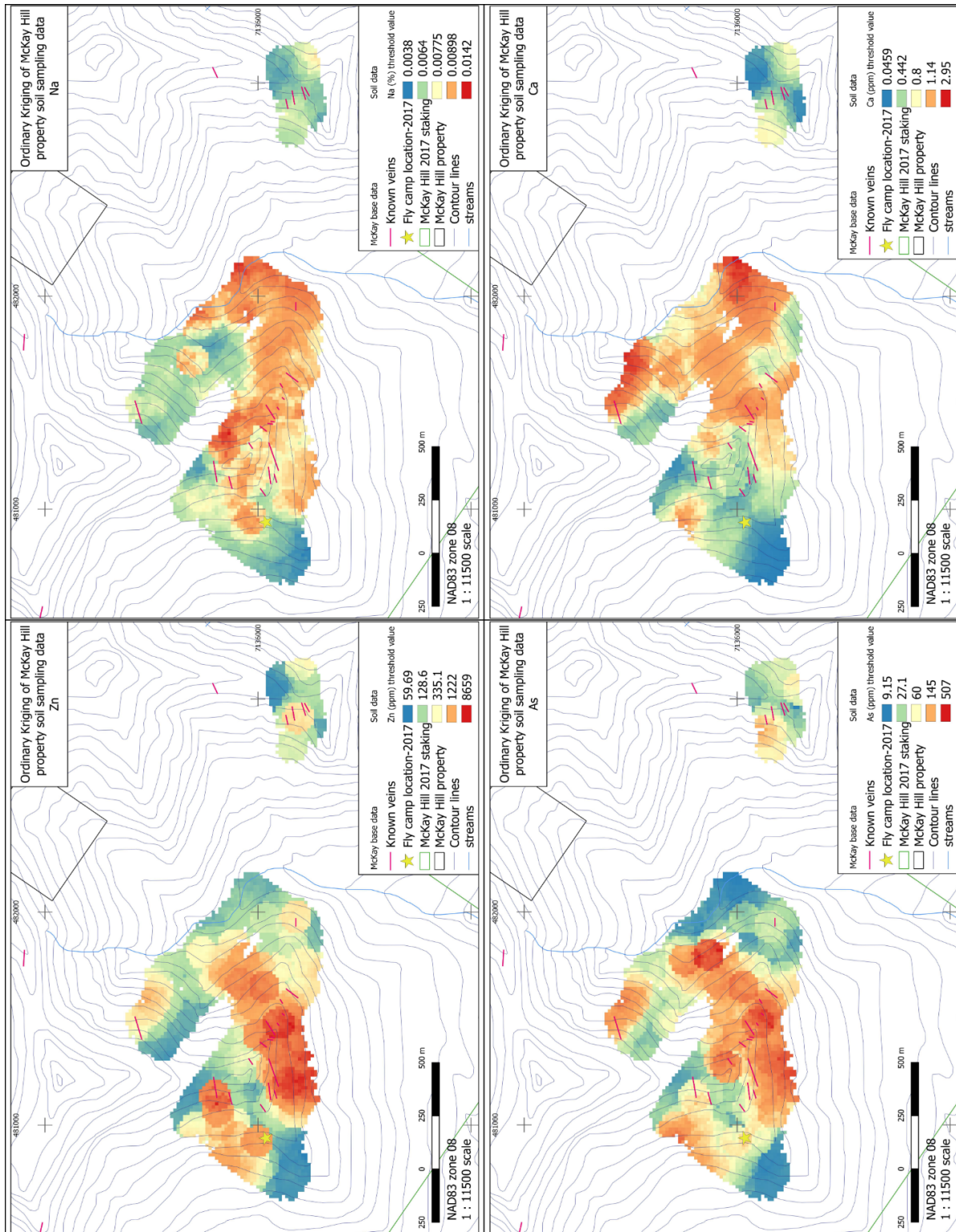
Preliminary analysis of soil data shows a good metal association between Ag-Pb-Zn, which indicates that Zn and Pb minerals can be used to target Ag mineralization in the area. Distribution of Au- vs Ag-anomalous soils on McKay ridge also seem to highlight a metal zonation from an Au-rich center to an Ag-rich rim (refer to *Figure 21 & 22*, following pages).

Figure 21. Ordinary Kriging of all soil data using 15 m cells at 75 m range



Note: poor correlation between the distribution of anomalous Ag and Au values. Threshold values for colour display are set at quantiles to reduce the effect of outliers. N = 392.

Figure 22. Ordinary Kriging of all soil data using 15 m cells at 75 m range

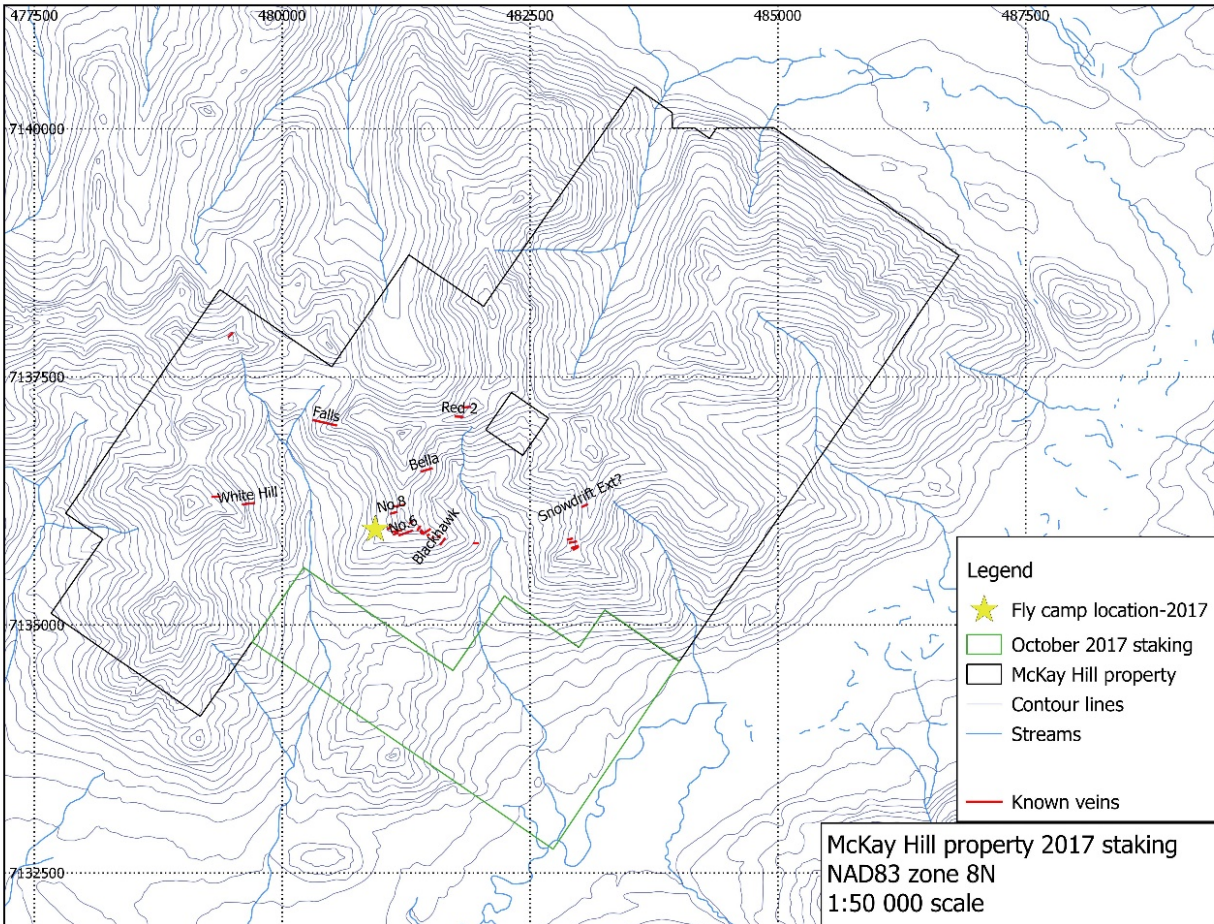


Note: poor correlation between the distribution of anomalous Ag and Au values. Threshold values for colour display are set at quantiles to reduce the effect of outliers. N = 392.

5.5 Staking

On October 1st, MMG personnel staked an additional 26 claims totaling 543.4 hectares to the south of the property. These claims are Snoose 91-116 (YF29091 to YF29116) and extend the property along the Red Gulch valley stopping at the Beaver River, directly down slope of the McKay Hill ridge (refer to Figure 23, below).

Figure 23. Claims staked in October 2017 as a result of earlier 2017 findings



6 Conclusions and Recommendations for Future Work

Overall, the 2017 exploration season was successful. YMEP Target Evaluation funding assisted MMG in furthering the understanding of the project geology and its potential. Encouraging results led to the staking of the Snoose 91-116 (YF29091 to YF29116; 26 claims totaling 543.4 hectares) to the south. Colour orthophoto surveying (50 cm per-pixel resolution) was completed by Photosat Information Ltd. over the entire 100 km² project. This work produced WorldView-3 satellite photos which highlighted orange-coloured (iron ± carbonate) alteration zones and white quartz veins typical of McKay Hill, which complimented the lineament study completed pre-field work. These photos also make possible the generation of a 3-m elevation grid of the visible earth surface (DEM/DSM) in the area.

Additionally, a preliminary 1:50,000-scale geological map was produced via three traverses covering the Sullivan, McKay and Independence Hill areas over the entire claim-block. Main findings include the grouping of host stratigraphy earlier described in Blackburn (2009) into seven packages. Stratigraphy correlates well across the Sullivan and McKay Hill ridges, and along the northern portion of the Independence Hill ridge. Prospective regional rock units will be projected and followed up in the following seasons.

6.1 McKay Hill Zone

Work in the McKay Hill Zone entailed ridge-line mapping and built on previous work done by Pautler (2007-2008), Blackburn (2009-2010) and various Monster Mining staff (2010). Ten mineralized vein orientations were measured on the McKay Hill ridge and outlined a strong trend oriented 061°-070°N. This newly acquired data confirms the robustness of the mean orientation of the mineralized trend at the McKay Hill ridge-scale. However, as aforementioned, the 2017 findings on the No. 6 vein highlight multiple dextral offsets from 330°N-oriented faults at the meter-scale. When possible, known vein attitudes were measured at the ridge and most of them returned values along the 063°-243°N trend previously established by Cominco. Strike and dip measured for the Blackhawk vein in this study differ from previous studies, which could represent post-D₃ remobilization along the late 330°N-oriented apparently dextral faults identified on the western side of the ridge.

The highly prospective No. 6 vein which is centered within the historic workings (previously explored by numerous hand-pits, trenches and an adit) was evaluated in detail. The attitude, width (at the historic adit), and structural setting was examined. At the adit, the No. 6 vein was successfully exposed as a 10-foot⁺-wide vein segment oriented ~030°N/80° (matching Cockfield's 1924 measurements). There, the internal zonation of the No. 6 vein was measured as 245°N/77° which approximates Cominco's data. Following the No. 6 vein to the west, a series of 330°N oriented faults of unknown dip were observed with apparent dextral movement, these post-mineralization structures offset the No. 6 vein at the metre scale. These structures are post-mineralization in timing and offset the No. 6 vein at the metre scale.

Digging of hand pits along the hillside further to the west extended the vein trace as far as E480957/N7136003, where it may intersect the North vein (?). The (historic) No. 4 vein, which is located to the northeast, was also inspected and based on presence of float, textural and mineralogical properties it is hypothesized that this vein is actually the northeast extension of the No. 6 vein with a measured orientation of 030°N/75°. The No. 6 vein which previously had a 168-m strike-length, now has a (to be tested) 467 m strike-length. Overall, the veins are oriented roughly 030° and are steeply dipping, cut by a series of dextral faults, giving it an overall trend of 065°-245°N. Current program planning for 2018 is scheduled to test this target in multiple areas.

Five man-days were spent prospecting on the McKay Hill property whereby rusty-coloured areas of interest in the Sullivan, McKay and Independence hills (which were spotted from the fly camp or the helicopter), were ground-truthed and sampled. A total of 23 rock samples were collected from the McKay Hill and Independence Hill Zones during the 2017 field season and sent in for geochemical analysis. Of particular interest is the Blackhawk West vein, which was followed along strike to the northeast (for ~300m) down slope via a series of historical pits and trenches not previously mapped by Metallic Minerals. Seven float and subcrop samples of vein material and mineralized conglomerate were collected and returned up to 919 g/t Ag. The Blackhawk West vein was previously thought to be exposed in one historic trench and to have an orientation of ~075°, however, float was traced on a 045°-trend. This area is deemed highly prospective and should be followed up on in 2018.

Three soil-grids were completed in the area surrounding the main McKay Hill Zone. One westward and another eastward to extend earlier sampling. These grids aimed at characterizing the soil signature on known mineralized zones and trace potential extensions along strike to orient future exploration work. Another grid was completed over the Red Gulch valley to pick up any mineralized signature that would extend the McKay Hill vein system eastward and orient projections of potential veins towards the Independence Hill area.

6.2 Independence Hill Zone

In recent history, very little work has been completed in the Independence Hill area. On behalf of Monster Mining Corp., Nicholson (2010) completed limited structural mapping in the area. Boiling textures in highly-altered volcanic (?) rock surrounding historic trenches which cut a galena vein were noted in a preliminary visit to the area. This was followed up by two man-days of mapping and prospecting in the area. Emphasis was put on characterizing the extent and nature of the silica-Fe-carbonate-rich zone with boiling textures as well as sampling this area to assess its economic potential. Corridors of iron-carbonate alteration are present but with no visible associated mineralization. An area of approximately 1135 m² of strongly altered (mafic?) protolith with boiling textures hosting a series of north-northwest – south-southeast oriented historical trenches was observed. Colloform and cockade textures are abundant and rocks have seen multiple brecciation events, which is interpreted from the presence of breccia clasts within the breccia. This boiling zone is subdivided into a carbonate-limonite zone to the west and a silica zone to the east. Sampling returned trace precious metal values. Another set of historical trenches less than 100 metres to the north contain vein material of massive galena hosted in a strongly iron-carbonate altered (mafic?) protolith.

A soil grid was centered over the Independence Hill historical trench area. Results highlight a weakly anomalous silver and moderately anomalous copper lineament on-trend with McKay Hill proper.

6.2 Recommendations for Future Work

The McKay Hill project is deemed highly prospective. As access is limited and there is no infrastructure on-site, exploration techniques utilized to date have been limited to prospecting, mapping, geochemical sampling (soil & rock) and aerial surveying. The author recommends extensive follow-up and testing of the targets delineated to date as well as helicopter prospecting campaigns in outlying areas. In order to adequately test the mineralization observed on the McKay Hill property, the following recommendations are made:

- Establishing infrastructure: construct a clearing for camp and build a compact framed wall-tent camp including a kitchen, dry, office and sleeping shelters. (build), create access to high-priority targets (for bedrock-interface probing, additional trenching and potentially drilling) and cut trenches (open up historic cuts and explore potential vein-extensions)
- Create target access: utilize a heli-portable excavator to create access to high-priority targets in the McKay Hill Zone
- Methodically map and geochemically sample veins: once adequately exposed, channel and panel samples of the veins should be collected to characterize grade and Ag:Au ratios
- Prospecting & Mapping (utilizing a portable Terraspec and/or XRF?)
 - The northern region of iron-carbonate altered zones highlighted previously via air and in 2017 by orthophotography
 - Blackhawk West

- The valley to the north and northeast to examine for potential intermediate-sulphidation style mineralization at 'lower' Independence
- Trace the potential connection between Snowdrift ext. and the central claims area.
- Soil sampling:
 - Grid over iron-carbonate altered zones highlighted previously via air and in 2017 by orthophotography to the north
 - Grid over Blackhawk West
 - Grid connecting Snowdrift Ext. to McKay Hill proper
- Test veins: via bedrock-interface probing and heli-portable RAB drilling (following the access development and initial trenching program)
- Hyperspectral surveying: after establishing and characterizing alteration related to mineralized (Au-rich and Ag-rich) veins, conduct a hyperspectral survey combined with high resolution satellite photos already available to generate greenfield targets for prospecting and reconnaissance mapping
- VLF (\pm IP): combined VLF-IP ground surveys have proved effective in recognizing structures in the region; potential areas to survey include the valleys to the north and northwest of the central claim area to test iron carbonate-altered gossanous zone and on lineaments highlighted in the central claims block to identify potential extensions of known veins.

Currently, planning for the 2018 exploration program is underway and includes the above recommendations minus geophysical surveys and hyperspectral surveying and has a proposed budget of approximately \$750,000.00.

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8 Statement of Qualifications

I, Lauren Blackburn, of the City of Keno, in the Territory of Yukon, HEREBY CERTIFY:

1. That I am a geologist and that I worked at the property during the summers of 2009, 2010 and 2017.
2. That I am a graduate of the University of Alberta (B.Sc. Geology, 2007).
3. That I have been engaged in mineral exploration and development and have worked on a full-time basis in Yukon Territory and Mexico since 2006 and in northern Canada (NU, NWT, YT, northern BC) since 2005.
4. That I am an employee of Metallic Minerals Corp. (2017 – present).
5. I consent to the use of this report by Metallic Minerals Corp. for such assessment and/or regulatory and financing purposes deemed necessary.

Dated at Whitehorse, Yukon Territory this 16th day of January 2018.



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Appendix I. YMEP Final Submission & Expense Claim Forms

Appendix II. Batch Sheets and Assay Certificates

Appendix III. Rock & Soil Descriptions & Data