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ASSESSMENT REPORT

describing

GEOLOGICAL MAPPING, PROSPECTING, GEOCHEMICAL SAMPLING, DIAMOND DRILLING, AND PETROGRAPHIC STUDIES

at the

MINT PROPERTY

MINT 1-36	YD57201-YD57236
37-52	YD99701- YD99716
53-104	YD27625- YD27654
107-114	YD27657- YD27664
115-212	YD110256-YD110352
BUND 1-4	YD27665- YD27668
11-12	YD27675- YD27676
31-50	YD27695- YD27714
SLAG 1-14	YC65500- YC65513

NTS 115F/15

Latitude 61°49'N; Longitude 140°53'W

located in the
Whitehorse Mining District
Yukon Territory

Field work performed from June 17 to July 28, 2012

prepared by
Archer, Cathro & Associates (1981) Limited

for

SILVER RANGE RESOURCES LTD.

by

N. Bueckert, B.Sc.
February 2013

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INTRODUCTION

The Mint property covers an alkaline-type porphyry gold, copper and molybdenum prospect located in southwestern Yukon. It is owned 100% by Silver Range Resources Ltd.

This report describes geological mapping, prospecting, geochemical sampling and diamond drilling conducted between June 17 and July 27, 2012, by Archer, Cathro & Associates (1981) Limited on behalf of Silver Range. Minconsult Exploration Services of Coldstream, BC was contracted to construct timber pads, where needed, while Platinum Diamond Drilling Inc. of Winnipegosis, MB performed the diamond drilling. In fall of 2012, Vancouver Petrographics Ltd. of Langley, BC conducted a petrographic study of thin sections made from drill core. The author participated in the program and interpreted all results obtained from this work. His Statements of Qualifications are in Appendix I.

PROPERTY LOCATION, CLAIM DATA AND ACCESS

The Mint property consists of 250 contiguous mineral claims, which are located on NTS map sheet 115F/15 at latitude 61°49' north and longitude 140°53' west (Figure 1). The property covers an area of approximately 5000 ha (50 km²). The claims are registered with the Whitehorse Mining Recorder in the name of Archer Cathro, which holds them in trust for Silver Range. Specifics concerning claim registration are tabulated below, while the locations of individual claims are shown on Figure 2.

<u>Claim Name</u>	<u>Grant Number</u>	<u>Expiry Date*</u>
MINT 1-36	YD57201-YD57236	April 15, 2015
37-52	YD99701- YD99716	April 15, 2015
53-104	YD27625- YD27654	April 15, 2015
107-114	YD27657- YD27664	April 15, 2015
115-212	YD110255-YD110352	April 15, 2016
BUND 1-4	YD27665- YD27668	April 15, 2016
11-12	YD27675- YD27676	April 15, 2016
31-50	YD27695- YD27714	April 15, 2016
SLAG 1-14	YC65500- YC65513	April 15, 2016

* Expiry dates do not include 2012 work that has not yet been filed for assessment credit.

The Mint property is accessible from the White River Lodge (WRL), which is located 26 km northeast of the property. The WRL sits alongside the Alaska Highway, approximately 390 km by road west of Whitehorse. Although there is a small grass airstrip at WRL, all supply trips were made via truck from Whitehorse.

In 2012, the crew comprised up to six Archer Cathro employees, five diamond drillers and three professional pad builders. All personnel stayed in wall tents at WRL. Daily crew changes, core transportation and supply trips between the lodge and the Mint property were completed using a Bell 206 B helicopter owned and operated by Capital Helicopters (1995) Inc. of Whitehorse. This helicopter was based at the lodge for the duration of the program and was shared with another company exploring in the area. Drill mobilization, most drill moves and drill

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FIGURE 1

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

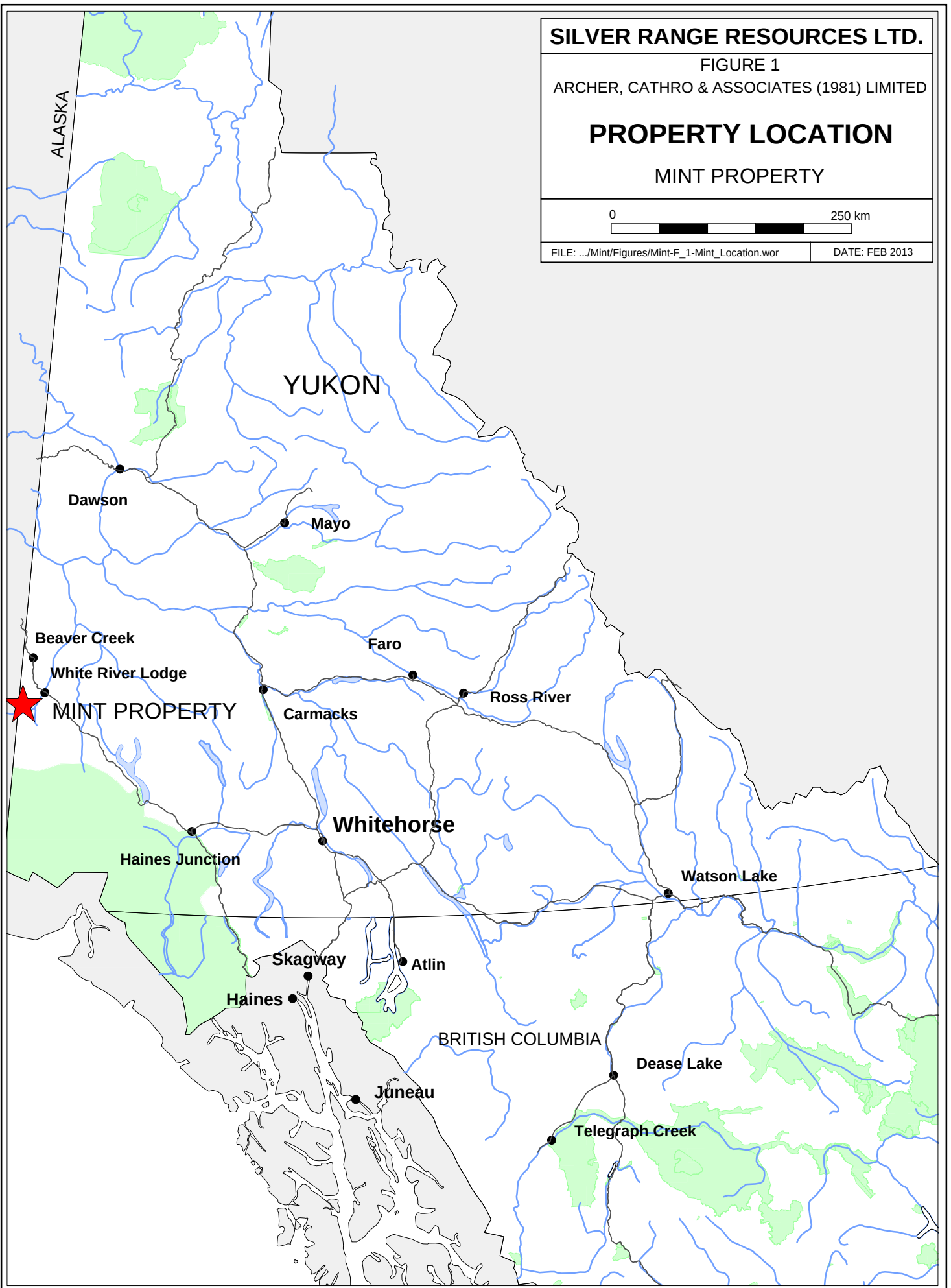
PROPERTY LOCATION

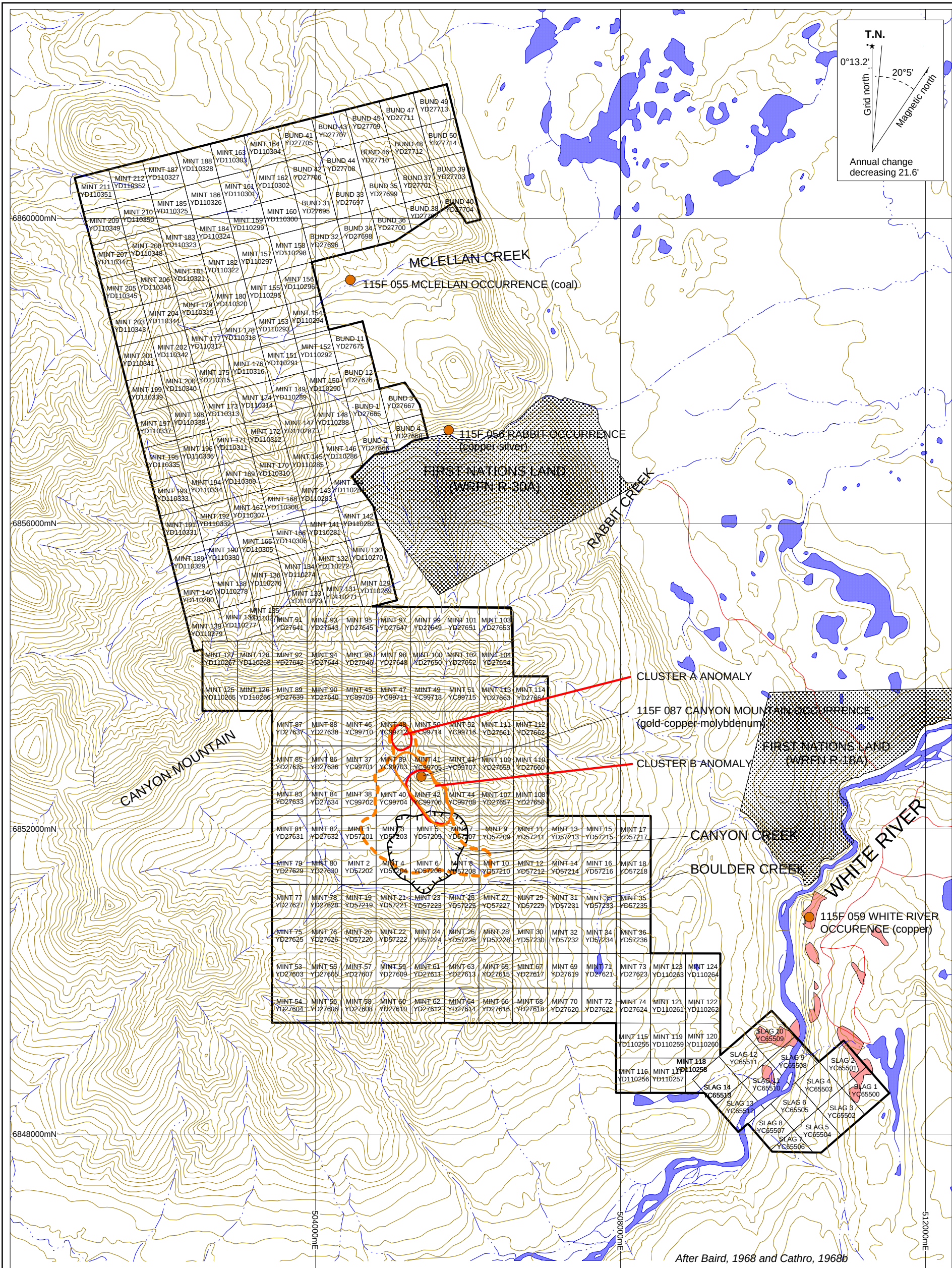
MINT PROPERTY

0 250 km

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DATE: FEB 2013





CORE OF MAGNETIC ANOMALY



Minfile occurrence (type)



ROCK GEOCHEMISTRY



1969 IP anomaly



2010 SOIL ANOMALY



CORE OF SOIL ANOMALY (ANOMALY 1)



Four-wheel drive access trail - condition unknown

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FIGURE 2
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

CLAIM LOCATIONS

MINT PROPERTY

0 1 2 km

UTM ZONE 7, NAD 83, 115F/15

FILE: ...2012//MINT/F_2_CLAIMS.wor

DATE: FEBRUARY 2013

demobilization utilized a Bell 204 helicopter, operated by Fireweed Helicopters from its base in Dawson City. One drill move was assisted by a Bell 206 L4 helicopter, which was also operated by Fireweed from its Dawson base.

HISTORY AND PREVIOUS WORK

Exploration in the White River area was first documented in 1905 when prospectors looking for placer gold found native copper in gravels of the White River. Further prospecting identified native copper and primary copper sulphide minerals, filling fractures and vesicles in massive volcanic flows.

There are four Minfile occurrences in the immediate vicinity of the Mint property (Deklerk and Traynor, 2005). Table I lists information regarding each of these occurrences, while their approximate locations are shown on Figure 2. These occurrences are described in more detail in the following paragraphs.

Table I– Minfile Occurrences

Minfile	Occurrence	Commodity	Host	Location
115F 055	McLellan	Coal	Sediments	600 m east of Mint 156
115F 056	Rabbit	Copper and silver	Shear zone	600 m east of Bund 4
115F 059	White River	Copper	Basalt	Partially covered by the Slag claims
115F 087	Canyon Mountain	Gold, copper and molybdenum	Intrusive	Mint property

McLellan Occurrence

The Geological Survey of Canada (GSC) noted seams of lignite up to five centimetres thick within Paleogene Amphitheatre Formation. No follow up work has been reported.

Rabbit Occurrence

The Rabbit Occurrence comprises pyrite, pyrrhotite, chalcopyrite and bornite, which were identified within a gossanous shear zone exposed along Rabbit Creek. The occurrence was first staked in 1907 by four independent prospectors. Between 1910 and 1917, three adits were driven to test for mineralization at depth. In 1913, a GSC geologist visited the occurrence and collected a chip sample from an adit, which returned 0.85% copper over 1.07 m (Cathro, 1967a). No further work was performed.

The Rabbit Occurrence was restaked in 1944 (Pete claims) and 1966 (CC claims). The CC claims were explored in 1967 by Canyon City Exploration Limited, with hand trenching, prospecting and sampling. Noteworthy results from this work include a sample of chalcopyrite-rich material, which graded 4.51% copper and 8.2 g/t silver with trace gold, and a chip sample from a trench adjacent to an adit, which returned 1.02% copper over 9.4 m (Cathro, 1967a). In 1968, Canyon City conducted road building, soil sampling, mapping and an Induced Polarization (IP) survey. A total of 1087 soil samples were collected and analyzed. The background threshold for copper-in-soil was 50 ppm and the peak value was 3350 ppm. The geophysical

surveys were hindered by cold weather and frozen ground; however, one large and two small chargeability anomalies were identified. The large anomaly straddles Rabbit Creek and was assumed to be related to a fault structure, while the two smaller anomalies roughly coincide with two showings of chalcopyrite (Cathro, 1968a).

In 1970, a diamond drill hole was completed to test the IP-chargeability anomaly about one kilometre east of the gossan in Rabbit Creek. The hole reached a depth of 121.92 m, and the best result was 0.06% copper over 6.10 m (Grant, 1970). The CC claims were allowed to lapse following this work.

The Rabbit Occurrence was restaked in summer 2010 by an independent prospector.

White River Copper Occurrence

From 1907 to 1915, a number of individuals from academia and industry investigated the White River Copper Occurrence. In 1907, J.D. Irving, a Professor of Economic Geology at Yale University, observed three slabs of native copper on joint planes in basalt along the face of a large cliff on the east side of the White River. A fourth slab weighing 1180 kg was removed from an adit and left beside a tree before being moved to the Whitehorse Mining Museum in 1958. In 1912, 4.5 tonnes of copper ore were shipped to the Tacoma Smelter from the property. No work was reported in the area from 1915 to 1943 (Deklerk and Traynor, 2005).

In 1944, additional claims were staked by two prospectors who rehabilitated old workings, performed some hand trenching and conducted magnetometer and resistivity surveys before dropping the claims in 1954 (Deklerk and Traynor, 2005).

In 1962, the showing was restaked as the Kay, Slaggard and Goldenhorne claims by A. Rivers.

In 1966, Silver City Mines Limited staked the Marc claims to surround the Slaggard and Goldenhorne claims, which Silver City then optioned from Rivers (Baird, 1967). Table II below lists work performed by Silver City and various partners between 1967 and 1981.

Table II–White River Copper Property Exploration Programs

Year (report)	Option Party	Work Performed	Results
1966 (061676)	n/a	Acquisition of claims, proposal for future work	n/a
1967 (060733)	Central Del-Rio Oil Ltd.	Geological mapping	Two possible styles of mineralization were identified: basalt-hosted copper, chalcocite, chalcopyrite and bornite; and skarn formation associated with limestone.

Year (report)	Option Party	Work Performed	Results
1967 (060886)	Central Del-Rio Oil Ltd.	Bulldozer trenching, airstrip and tote trail construction	Bulldozer trenching discovered a vertically dipping, structurally controlled deposit of chalcocite, native copper and bornite, which graded 3.53% copper and 6.86 g/t silver over 9.14 m.
1967 (061737)	Central Del-Rio Oil Ltd.	Geochemical sampling	Test pit excavations to determine soil profile. A copper-in-soil value near a native copper slab returned 3400 ppm. Rock samples returned between 110 to 3100 ppm copper.
1968 (091317)	United Pemetex Ltd.	Progress update – bulldozer work	Completed construction of a 32.19 km tote trail along the east bank of White River before crossing a braided gravel bar to reach an airstrip located slightly north of property.
1968 (091318)	United Pemetex Ltd.	Diamond drilling (11 holes, 800.4 m)	Mineralization included native copper and chalcocite with minor chalcopyrite and pyrite. Amygdaloidal, fracture fillings and replacement style mineralization were present to depths of 51.8 m. Hole 1: 2.98% copper and 8.91 g/t silver over 4.72 m; and 2.30% copper and 7.20 g/t silver over 8.23 m. Hole 2: 9.02% copper and 14.7 g/t silver over 5.33 m; 7.46% copper and 12.7 g/t silver over 6.71 m; and 4.72% copper and 10.29 g/t silver over 11.89 m. Hole 5: 6.81% copper and 17.14 g/t silver over 1.62 m.
1969 (060732)	Silver City Mines Limited	IP survey	An IP survey outlined a number of areas that are thought to contain greater than 1% by volume of metallic conductive material. These areas are scattered throughout the claim area (Figure 2).
1969 (019082)	United Pemetex Ltd.	Diamond drilling (one hole, 77.4 m and 44 holes, 3505 m)	Drill tested an IP anomaly and intersected the best mineralization to date: 2.14% copper over 20.7 m. Following this result a 3505 m drill program was carried out to further test IP anomalies, but it intersected mineralization occurring as narrow intervals with no apparent continuity along strike.
1970 (018930)	United Pemetex Ltd.	IP survey and portal excavation	General update on progress of portal excavation and sampling. Adit drifted at 2900 level. Numerous IP anomalies were identified north and south of the main zone.
1972 (019892)	Silver City Mines Limited	Underground diamond drilling (20 holes, 888.2 m)	Drilling confirmed presence of irregular, but high grade copper zones. Highly fractured rocks inhibited effectiveness of drilling.

Year (report)	Option Party	Work Performed	Results
1973 (019891)	Silver City Mines Limited	Drifted adit at 2800 level, and three other adits. Approximately 610 m of drilling at 2900 level. IP survey east of main zone.	The best drill result was from Hole 3B, which returned 10.70% copper over 3.04 m. IP survey showed two, approximately parallel, north-south trending conductors that underlie the main zone.
1974 (061477)	Silver City Mines Limited	Extension of 2800 level adit.	Conditions were difficult, but more work was recommended.

Mineralization at the White River Copper Occurrence consists of native copper, chalcocite, chalcopyrite, bornite, pyrite, covellite, cuprite and native silver hosted within basalt flows of the Upper Triassic Nikolai Assemblage, which includes basalt with porphyritic and amygdaloidal textures (Cathro, 1968b).

Silver City allowed the claims covering the White River Copper property to lapse around 1981. The property was restaked by an independent prospector in 1984 and trenching was conducted in 1984, 1985 and 1987, but the claims lapsed following this work. The core of the historical White River Copper property is currently covered by six claims owned by Shawn Ryan of Dawson City. Some undrilled IP anomalies are located on the Slag claims of the Mint property.

Canyon Mountain Occurrence

Placer claims were staked on Boulder Creek prior to 1982, but no exploration or production was documented.

In 1982, Homestake Mineral Development Company staked the CAN claims to cover a colour anomaly and anomalous stream sediment geochemical values from Canyon and Boulder creeks (Figure 2). In 1983, Homestake conducted a work program on the CAN claims, which comprised 1:10,000 scale geological mapping and limited rock, soil and stream sediment sampling. A total of 67 rock samples were collected. Values for rock samples ranged from background to 0.24 g/t gold, 1.89% copper and 129 ppm molybdenum. Results from 31 soil and six stream sediment samples yielded some moderately to strongly anomalous values, including up to 970 ppb gold-in-soil and 240 ppb gold-in-silt, 194 ppm copper-in-soil and 219 ppm copper-in-silt, and 13 ppm molybdenum-in-soil and 17 ppm molybdenum-in-silt (Boyd and Flanagan, 1983). Rock analyses did not adequately explain the anomalous soil and stream sediment values. Although Homestake recognized the porphyry potential, the CAN claims were allowed to lapse – likely because of a sharp economic downturn, which led to the dismantling of that company's exploration team.

In 1985, the GSC conducted a low-density stream sediment and water sampling survey on NTS

map sheet 115F (Friske et al., 1986). A sample from Boulder Creek returned 80th percentile values for gold (13 ppb), copper (75 ppm), molybdenum (1 ppm), lead (12 ppm) and zinc (106 ppm).

In July 2007, Strategic Metals Ltd. staked the Slag claims to cover chargeability anomalies identified during historical IP surveys performed by Silver City, and in April 2010, it staked the first Mint claims to cover the area of anomalous geochemistry identified by Homestake. Intermittently from June to December 2010, it added claims to the Mint property to cover a series of small intrusive bodies that correlate with magnetic highs identified by a Yukon Geological Survey (YGS) geophysical compilation. The Bund claims were staked in July 2010 to cover possible extensions of the mineralization identified on Rabbit Creek. In fall 2010, the Mint, Bund and Slag claims were connected to form the current Mint property.

In 2010, Strategic Metals performed a two-phase program on the Mint property. Phase 1 comprised geochemical sampling done by Archer Cathro, while Phase 2 involved helicopter-borne magnetic and gamma-ray spectrometric geophysical surveys flown by New-Sense Geophysics Limited of Markham, Ontario. Positive results were obtained from Phase 1 in an area where high-level plutons intrude volcanic rocks. A total of 33 rock and 491 soil samples were taken. Samples in a 1000 by 500 m northwesterly trending zone, which includes the Canyon Mountain Occurrence, identified a large gold-copper-molybdenum soil anomaly (Anomaly 1) and two clusters (Clusters A and B) of high rock values (Figure 2). Results from the rock and soil geochemical sampling program are further discussed in the Mineralization and Soil Geochemistry sections of this report. The New-Sense geophysical surveys identified a 1500 m diameter magnetic anomaly that is cored by an area of very high response. The core of the magnetic anomaly lies immediately southwest of Cluster B and coincides with the southern part of the gold-copper-molybdenum soil anomaly. A smaller magnetic high that lies three kilometres to the southeast may represent a satellite pluton. The New-Sense surveys also identified an 800 by 1200 m potassium radiometric anomaly centred about 500 m north of the core of the magnetic anomaly. This anomaly likely represents potassium altered intrusive and volcanic rocks, and coincides directly with Cluster B as well as the strongest part of the soil anomaly (Smith, 2011). Weak radiometric response from a gentle slope west of the Canyon Mountain Occurrence can likely be discounted because of interference from thick overburden.

In July 2011, an IP survey was contracted to Aurora Geosciences of Whitehorse. This survey was designed to cover two blocks, Survey Areas A and B. Survey Area A – the larger block – was supposed to cover: Clusters A and B; the main magnetic anomaly from the 2010 New-Sense survey; and, the overburden covered slope that lies immediately west of these anomalies. Unfortunately, a key part of Survey Area A (including Cluster A and the core of Anomaly 1) was not tested because the terrain was considered a safety hazard by the contractor. Survey Area B was designed as a one kilometre long line across the smaller magnetic anomaly located three kilometres to the southeast. This line was not surveyed because the contractor deemed it inaccessible without helicopter support.

On August 11, 2011, Strategic Metals finalized a sale of the Mint property to Silver Range through a plan of arrangement.

In February 2012, interpretation of Aurora's IP data was completed by Condor Consulting Inc. of Lakewood, Colorado. A large chargeability high was identified at 100 m depth in the area west of the main magnetic anomaly (Witherly, 2012). This chargeability high occurs as a zone around the 2010 anomalous geochemical values and is suggestive of a porphyry-style alteration halo. The highest chargeability response from the survey coincides with a magnetic high in the overburden covered area west of the Canyon Mountain Occurrence. Condor's report appears in Appendix II.

GEOMORPHOLOGY AND CLIMATE

The Mint property is located within the Nutzotin Mountains, which lie in the northern part of the St. Elias Mountain Range, about 27 km southwest of the Shakwak Trench. The southeastern part of the property straddles the White River. Elevations on the property range from 850 m near the river to 2150 m on the main ridge of Canyon Mountain (Figure 2).

The area has been affected by numerous glacial events. During the St. Elias Glacial Advance, the Klutlan Glacier almost reached the Shakwak Trench scouring a broad northwest-trending valley to Tchawshamon Lake, which lies about four kilometres northeast of the Mint property. Post-glacial uplift of the St. Elias Range coupled with rapid runoff resulting from glacial retreat caused the White River to swiftly cut its way down about 90 m to form Upper Canyon, which lies north of the Slag claims, on the White River (Cathro, 1967b). Local glacial features, such as moraines and cirques, are present on the property.

Volcanic ash is a significant component of the soil profile near the Mint property. It is believed that between 1450 and 1750 years ago an eruption occurred about 20 km southwest of the property and that prevailing winds scattered pumice in two large fans, 720 km to the east and 400 km to the north, respectively. The thickness of the pumice layer varies throughout the fan areas, but near the Mint property it is up to 60 cm thick. The pumice layer is often cemented by permafrost that is insulated by thick, widespread moss cover. This frozen pumice layer hinders conventional soil sampling techniques.

Vegetation at the Mint property consists of stunted black spruce, willow and birch with thick moss in valley bottoms and on lower slopes. Higher elevations are characterized by long, steep (about 30°) talus slopes. Outcrops occur near ridge crests, within steeper talus slopes and along actively eroding creek cuts.

The climate in the Mint area is typical of northern continental regions with long, cold winters, truncated fall and spring seasons and short, mild summers. Although summers are relatively mild, arctic cold fronts sometimes cover the area and snowfall can occur in any month. The property is mostly snow free from late May to late September.

REGIONAL GEOLOGY

The Mint property lies along the northeast edge of the Wrangellia Terrane (Figure 3), about 26 km southwest of the Denali Fault, which is the primary control structure for the Shakwak Trench. Figure 4 illustrates regional geology as compiled by Gordey and Makepeace (2003) and

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FIGURE 3

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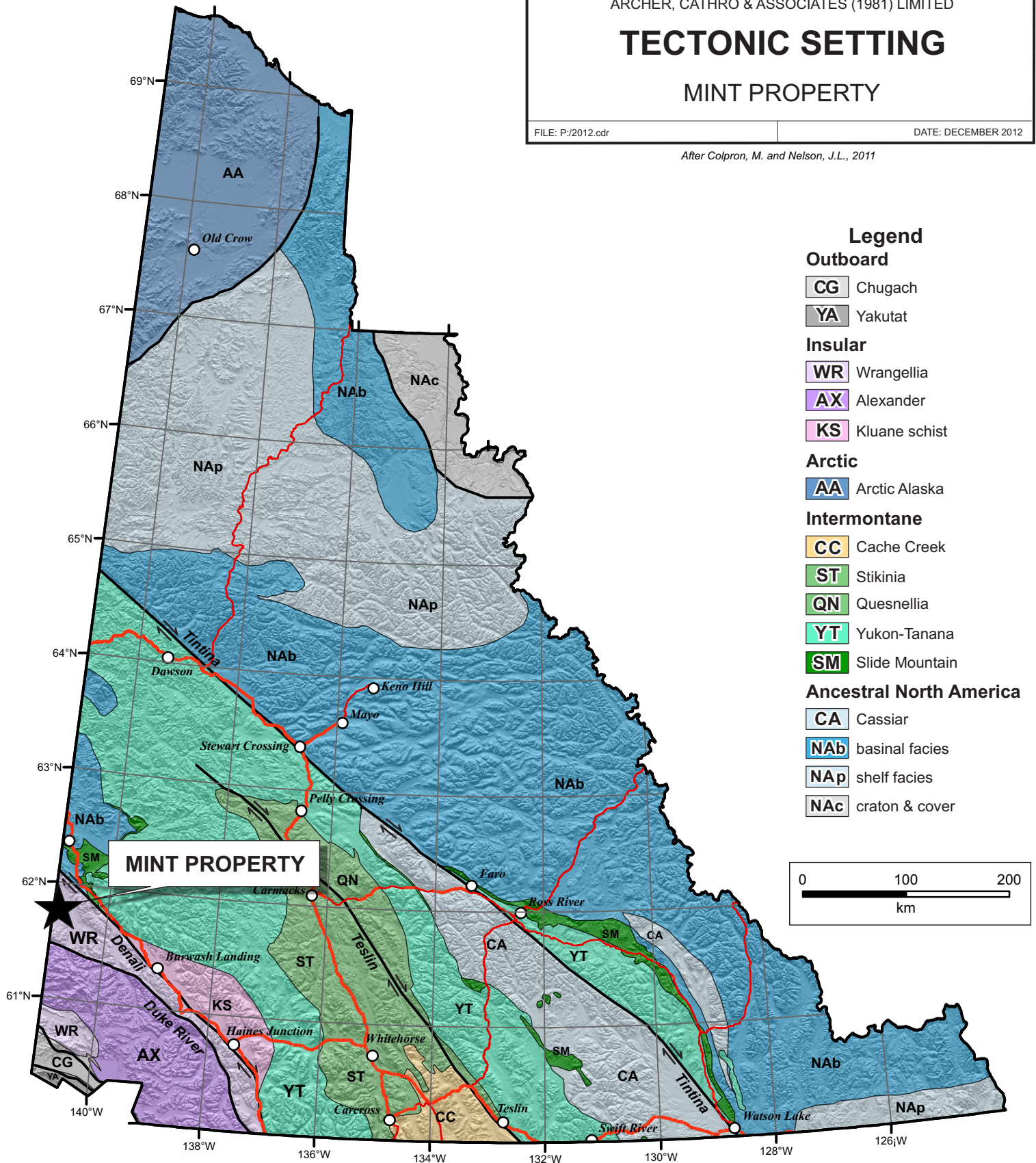
TECTONIC SETTING

MINT PROPERTY

FILE: P:/2012.cdr

DATE: DECEMBER 2012

After Colpron, M. and Nelson, J.L., 2011



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FIGURE 4

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

REGIONAL GEOLOGY

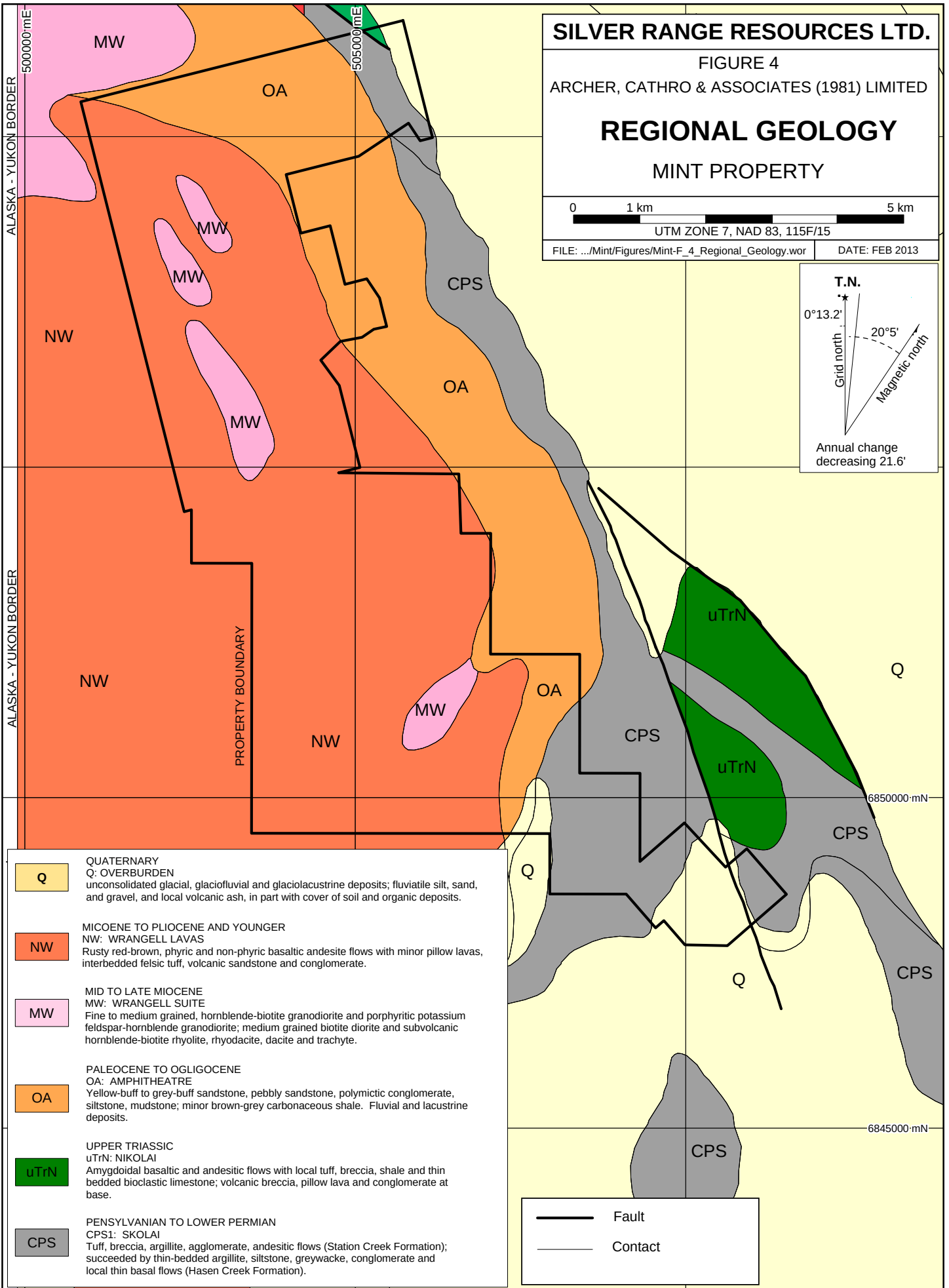
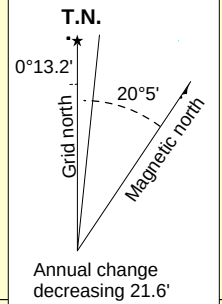
MINT PROPERTY

0 1 km 5 km

UTM ZONE 7, NAD 83, 115F/15

FILE: .../Mint/Figures/Mint-F_4_Regional_Geology.wor

DATE: FEB 2013



QUATERNARY
Q: OVERBURDEN
unconsolidated glacial, glaciofluvial and glaciolacustrine deposits; fluvial silt, sand, and gravel, and local volcanic ash, in part with cover of soil and organic deposits.

MIOCENE TO PLIOCENE AND YOUNGER
NW: WRANGELL LAVAS
Rusty red-brown, phryic and non-phryic basaltic andesite flows with minor pillow lavas, interbedded felsic tuff, volcanic sandstone and conglomerate.

MID TO LATE MIOCENE
MW: WRANGELL SUITE
Fine to medium grained, hornblende-biotite granodiorite and porphyritic potassium feldspar-hornblende granodiorite; medium grained biotite diorite and subvolcanic hornblende-biotite rhyolite, rhyodacite, dacite and trachyte.

PALEOCENE TO OLGIGOCENE
OA: AMPHITHEATRE
Yellow-buff to grey-buff sandstone, pebbly sandstone, polymictic conglomerate, siltstone, mudstone; minor brown-grey carbonaceous shale. Fluvial and lacustrine deposits.

UPPER TRIASSIC
uTrN: NIKOLAI
Amygdoidal basaltic and andesitic flows with local tuff, breccia, shale and thin bedded bioclastic limestone; volcanic breccia, pillow lava and conglomerate at base.

PENNSYLVANIAN TO LOWER PERMIAN
CPS1: SKOLAI
Tuff, breccia, argillite, agglomerate, andesitic flows (Station Creek Formation); succeeded by thin-bedded argillite, siltstone, greywacke, conglomerate and local thin basal flows (Hasen Creek Formation).

recently updated by the YGS (2012). The following regional unit descriptions have been modified to incorporate 1:50,000 scale mapping that was done in the area by Israel and Van Zeyl (2004).

Skolai Assemblage (CPS)

The oldest rocks in the project area belong to the 1000 m thick Pennsylvanian to Permian Skolai Assemblage (CPS). Station Creek Formation forms the lower part of this assemblage. It consists of augite-phyric basalt and andesitic volcanic flows that are succeeded upwards by fine to medium grained tuff. Volcanic agglomerate and breccia are locally present and discontinuous beds of limestone occur throughout. The upper 400 m of the formation is transitional with overlying Hasen Creek Formation, with the contact informally put at the cessation of pyroclastic deposition.

The Hasen Creek Formation forms the upper part of the Skolai Assemblage, attaining a maximum thickness of approximately 800 m. Stratigraphy consists of a fine grained clastic lower member composed of grey to black phyllite, cherty argillite, and siltstone, which gives way gradationally upward to shaley limestone and buff coloured massive bioclastic limestone and calcarenite with discontinuous beds of reddish brown conglomerate, massive greywacke and sandstone. Thin basaltic flows, breccia and tuff are locally present.

Nikolai Assemblage (uTrN)

The Middle to Late Triassic Nikolai Assemblage (uTrN) is a kilometre or more thick sequence of basalt flows with minor interbedded limestone that unconformably overlies Skolai Assemblage rocks. Flows are thin (2 to 10 m), vesicular to amygdaloidal and locally hematitic, indicating shallow water to sub-aerial deposition.

Chitistone Formation (uTrC)

The Early Triassic Chitistone Formation (uTrC) comprises thin interbeds of light to dark grey argillaceous limestone and dark grey argillite with massive light and dark grey, well-bedded limestone, limestone breccia, and white gypsum and anhydrite horizons.

Amphitheatre Formation (OA)

The Paleocene to Oligocene Amphitheatre Formation (OA) comprises yellow-buff to grey-buff sandstone, pebbly sandstone, polymictic conglomerate, siltstone, mudstone and minor brown-grey carbonaceous shale. In some areas, the Amphitheatre Formation disconformably overlies the Skolai Assemblage.

Wrangell Suite (MW)

The Mid to Late Miocene Wrangell Suite rocks (MW) form a northwest-trending belt of plugs and stocks. This suite is composed of: fine to medium grained, hornblende-biotite granodiorite and porphyritic potassium feldspar-hornblende granodiorite; and, medium grained biotite diorite and subvolcanic hornblende-biotite rhyolite, rhyodacite, dacite and trachyte.

Wrangell Lavas (NW)

These Miocene to Pliocene and younger lavas (NW) are typically rusty red-brown, phyric and non-phyric basaltic andesite flows with minor pillow lavas, interbedded felsic tuff, volcanic sandstone and conglomerate. The Wrangell Lavas conformably overly the Amphitheatre Formation, and are in part coeval with the Wrangell Suite.

PROPERTY GEOLOGY

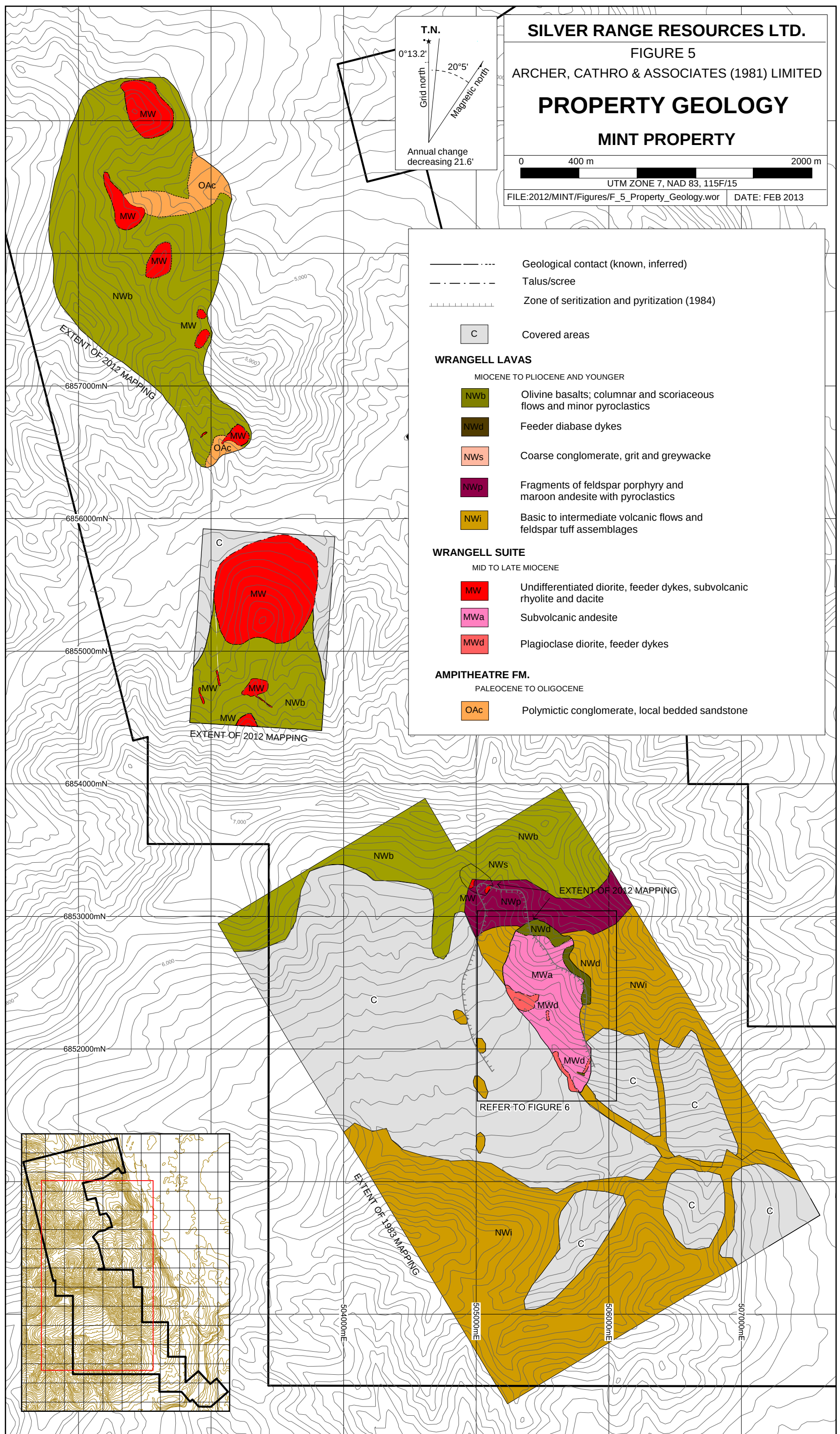
Property-scale mapping was done in the area currently covered by the Slag claims between 1967 and 1974 as part of exploration programs completed on the White River Copper property. In 1982, some property-scale mapping was done in the area of the Canyon Mountain Occurrence by Homestake.

In 2010, S. Israel of the YGS collected specimens of hornblende-biotite granodiorite for age dating in the vicinity of the Canyon Mountain Occurrence. An age of 26.2 ± 0.2 Ma was determined, and the intrusion was assigned to the Wrangell Suite (Smith, 2011).

In 2012, cursory property-scale (1:5000 scale) and more detailed (1:2500 scale) mapping was completed between the headwaters of Canyon Creek and the northern property boundary (Figures 5 and 6). Mapping was limited by a shortage of outcrop on vegetated and scree covered slopes. In some areas, 2012 mapping is incompatible with earlier less detailed work. Discrepancies are likely due, in part, to the complex volcanic/subvolcanic setting on the property. Table III below correlates regional units to property units identified during mapping in 1983 and 2012, while Appendix III provides photographs and detailed field descriptions of the mapped lithologies.

Table III – Property Lithologies

Regional Unit	Property Unit	Age	Description
Wrangell Lavas (NW)	Mafic volcanics (NWb)	Miocene to Pliocene	Reddish brown olivine-rich columnar basalts, agglomerate, conglomerate (predominantly basaltic clasts), scoriaceous flows and minor pyroclastics. Widespread in northern half of the property.
	Diabase dyke (NWd)		Massive, black, calcareous diabase dyke. Feeder dyke to the mafic volcanic flow (NWb).
	Conglomerate with grit (NWs)		Discontinuous unit consisting of coarse conglomerate, grit and greywacke filling small paleochannels at the base of the mafic volcanic flow (NWb).



Regional Unit	Property Unit	Age	Description
Wrangell Lavas (NW)	Maroon pyroclastics (NWp)	Miocene to Pliocene	Fragments of feldspar porphyritic intrusive with maroon andesite and pyroclastics.
	Tuffs and volcanic flows (NWt)		Felsic to intermediate volcanic flows and feldspar tuff assemblages. Thickest and most prevalent unit in the southern part of the property.
Wrangell Suite (MW)	Wrangell Suite (MW)	Mid to Late Miocene	Undifferentiated diorite, dioritic and plagioclase-phyric porphyry dykes, hornblende dacite and hornblende-biotite rhyolite.
	Subvolcanic andesite (MWa)		Flaggy, medium grained to porphyritic, plagioclase crowded andesite with hornblende and fine grained mafic minerals. Interbedded felsic porphyritic flows.
	Plagioclase diorite (MWd)		Blocky, medium grained to porphyritic, medium to coarse grained plagioclase diorite.
Amphitheatre Formation (OA)	Polymictic conglomerate and bedded sandstone (OAc)	Paleocene to Oligocene	1) Massive bedded, reddish brown volcanoclastic conglomerate with rounded pebble to boulder size clasts of coarse grained basalt and gabbro suspended in a matrix of gritty sand and red mudstone matrix. 2) Coarse grained, bedded lithic sandstone.

The southeastern part of the property is underlain by Skolai Assemblage volcanic-sedimentary rocks (CPS), and this unit likely extends under cover rock in other areas. The Skolai Assemblage is often unconformably overlain by Nikolai Assemblage basalt (uTrN) and Chitstone Formation limestone (uTrC). Just east of the property, Nikolai Assemblage basalts are exposed and bound by two north-northwest-trending faults, one of which runs through the property in the area of the Slag claims.

In the northern half of the property, Amphitheatre Formation polymictic conglomerates and lithic sandstone (OAc) are the deepest exposed bedrock, occurring as outcrops in creek cuts and canyons. The conglomerates are intruded by a northwest-trending belt of Wrangell Suite subvolcanic plugs and dykes, which consist of plagioclase diorite, plagioclase andesite, hornblende dacite, hornblende-biotite rhyolite and porphyry. In the 2012 drill area, two of these lithologies – plagioclase diorite (MWd) and plagioclase andesite (MWa) – outcrop on steep slopes and in creek cuts. These units are texturally and mineralogically similar, and can be best distinguished by their weathered surfaces. The diorite weathers beige-grey, has blocky surfaces and features widely spaced fractures, while the andesite weathers dark grey, has flaggy surfaces and exhibits closely spaced fractures.

Wrangell Suite intrusive rocks intrude and/or are overlain by Wrangell Lavas volcanic flows, which consist of three layered members as defined by Homestake (1983). The base member consists of felsic tuff and felsic to intermediate volcanic flows (NWt). It is overlain by maroon

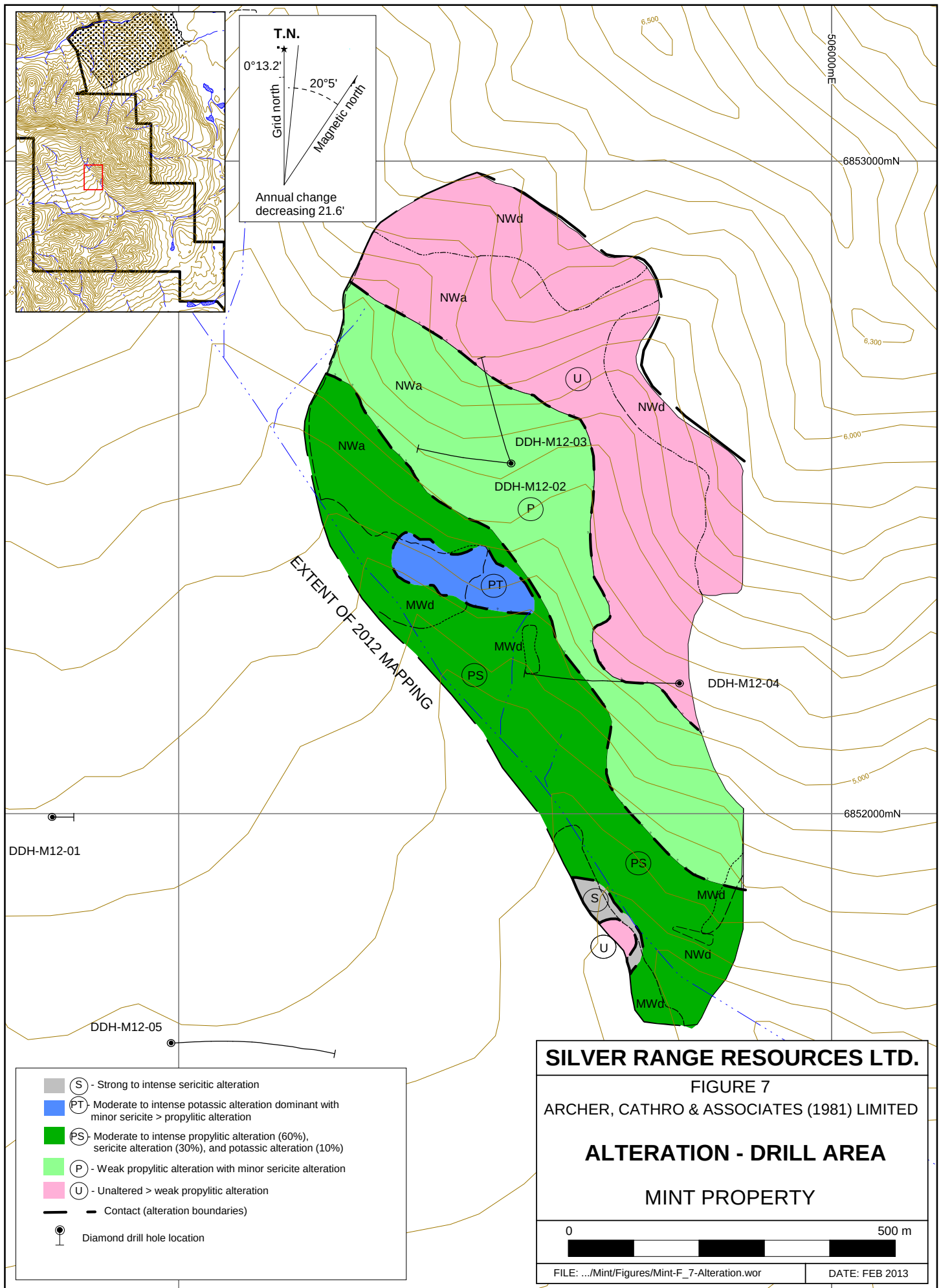
andesites and pyroclastics (NWp), which are exposed in a narrow band northeast of the drill area. The uppermost member contains mafic volcanic flows (NWb) including flow and columnar basalts, red scoria, and basaltic agglomerates. These rocks form a sub-horizontally dipping “cap” of volcanic rocks that comprise most ridges across the northern half of the property. Near the base of this member, lenses of fluvial facies sedimentary rocks (NWs) mark an erosional event prior to or syn-deposition of the mafic flows. Diabase dykes (NWd), which cut the bottom two members (NWt and NWp), are lithologically similar to the mafic flows and may be feeders to them. The mafic flows are unaltered and were likely deposited after a hydrothermal event that altered the underlying Wrangell Lavas, Wrangell Suite, and parts of the Amphitheatre Formation. This alteration is pervasive in lithologies within the 2012 drill area and is locally developed in Wrangell Suite dacites and Amphitheatre Formation conglomerates on Mint claims 135 and 167, about 2.5 km northwest of the drill area. Intensity of alteration in the drill area increases from northeast to southwest and forms a broadly concentric zone that appears to extend under covered areas to the west (Figure 7). Five types of hydrothermal alteration have been differentiated through field work, as categorized below.

- 1) Potassic alteration – defined by magnetite flooding, local potassium feldspar flooding, and locally abundant magnetite stringers.
- 2) Propylitic alteration – characterized by quartz-sulphide veinlets and chlorite-pyrite±epidote assemblages that replace mafic minerals.
- 3) Sericitic alteration (sericitization) – recognized by abundant pyrite, sericite-pyrite±quartz assemblages and distinct bleaching.
- 4) Argillic alteration – distinguished by grey-white clay, likely montmorillonite, and clayey gouge; alteration is commonly associated with intense sericitic alteration.
- 5) Silicification – locally pervasive and commonly overprints potassic, propylitic, and sericitic alteration types.

MINERALIZATION

Prospecting and rock geochemical sampling performed in 1982 and 2010 have identified two clusters of mineralization – Clusters A and B – within an approximately 1200 by 400 m northwest trending area that encompasses the Canyon Mountain Occurrence in the southern part of the Mint property (Figure 2). Mineralization occurs within hydrothermally-altered intrusive or volcanic rocks and is categorized as alkalic-style porphyry mineralization.

In 2012, an outcrop in a creek cut south of Cluster B was chip sampled after the discovery of limonite and pyrite mineralization in sub-vertically dipping fractures. The location of the resulting sample line (Chip Line 1) is plotted on Figure 8. Figures 9 through 11 illustrate the results for gold, copper, and molybdenum for geochemical rock samples collected during all programs. Sampling and Analytical Techniques used in 2012 are described in Appendix IV; Rock Sample Descriptions for 2012 samples are given in Appendix V; and Certificates of Analysis for 2012 samples are provided in Appendix VI. Anomalous threshold and peak values for the gold, copper, and molybdenum are listed in Table IV.

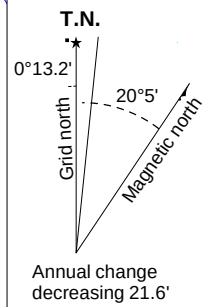


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FIGURE 8
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

CHIP SAMPLE LOCATIONS

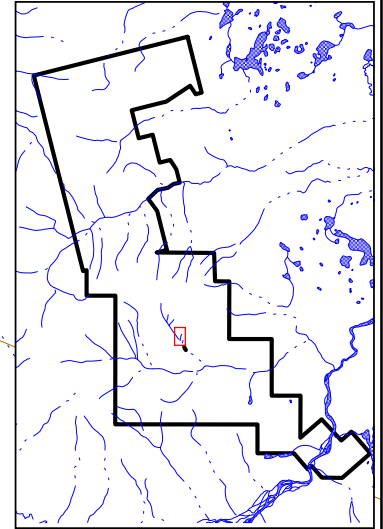
MINT PROPERTY



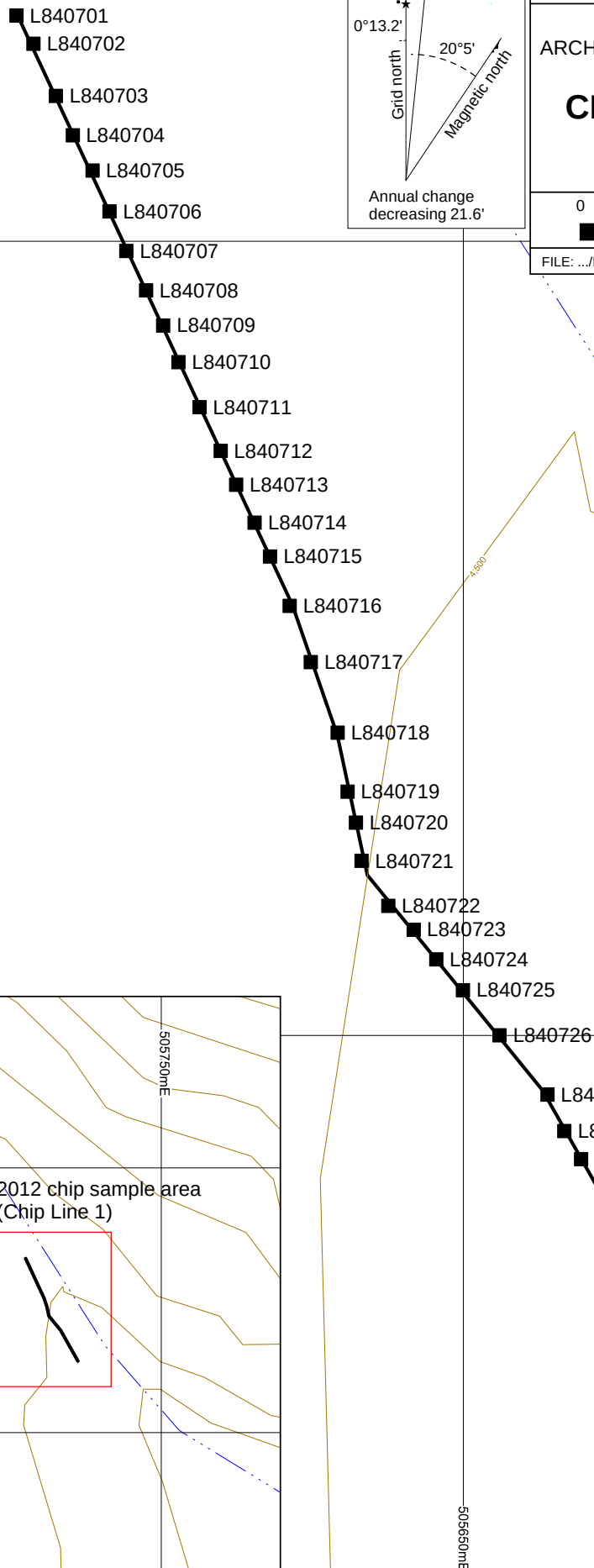
0 25 m

FILE: .../Mint/Figures/Mint-F_8-Chip_Location.wor

DATE: FEB 2013



6851900mN



2012 chip sample area
(Chip Line 1)

505600mE

505750mE

6852000mN

6851750mN

505650mE

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FIGURE 9
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

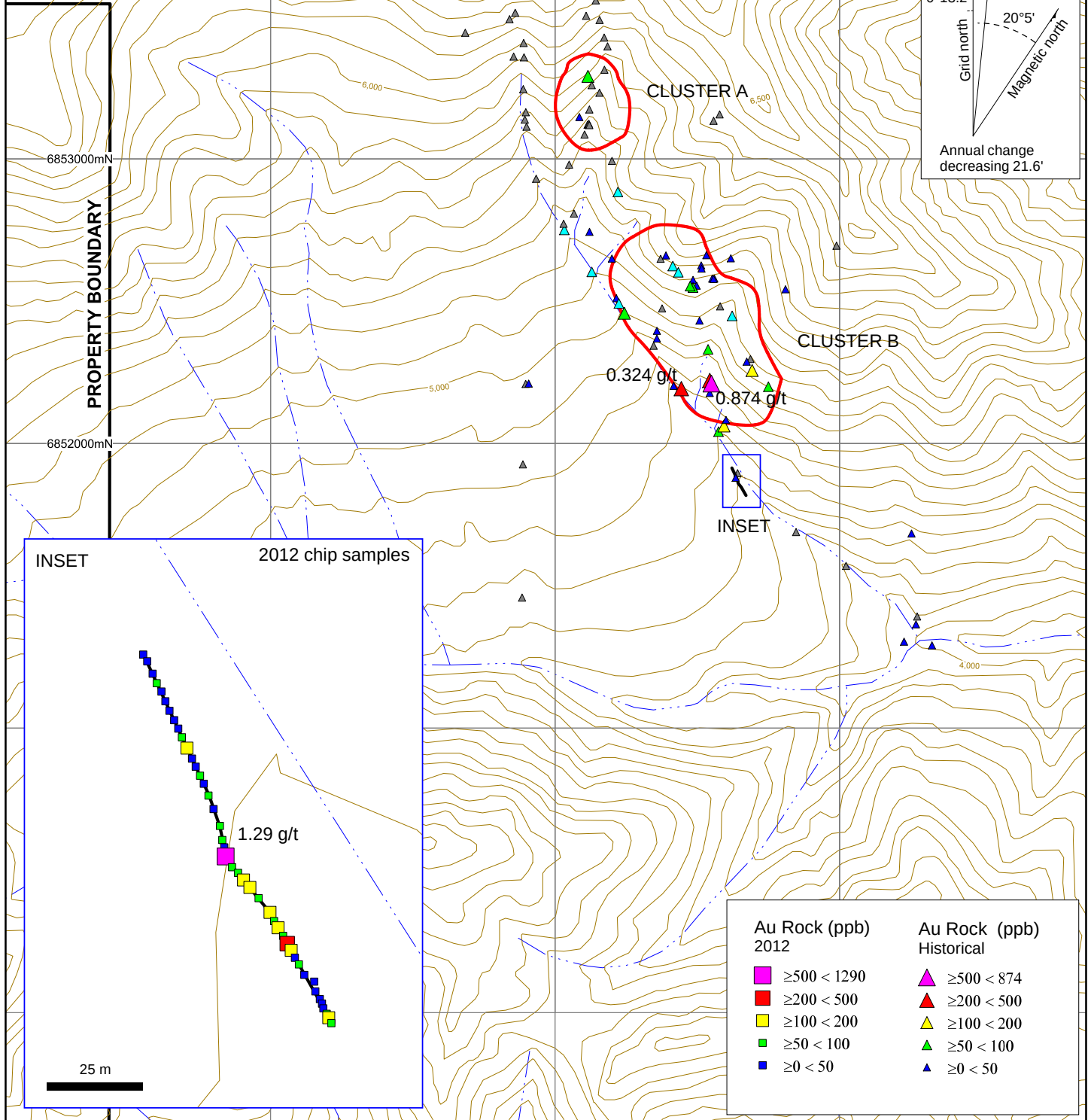
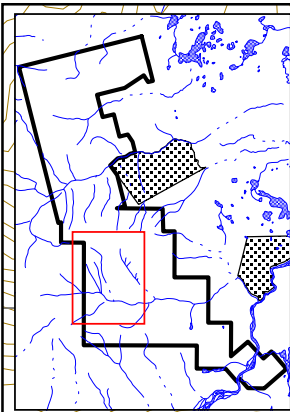
GOLD ROCK GEOCHEMISTRY

MINT PROPERTY

0 200 m 1000 m

FILE: .../Mint/Figures/Mint-F_9-rock_Au_2012.wor

DATE: FEB 2013



SILVER RANGE RESOURCES LTD.

FIGURE 10
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

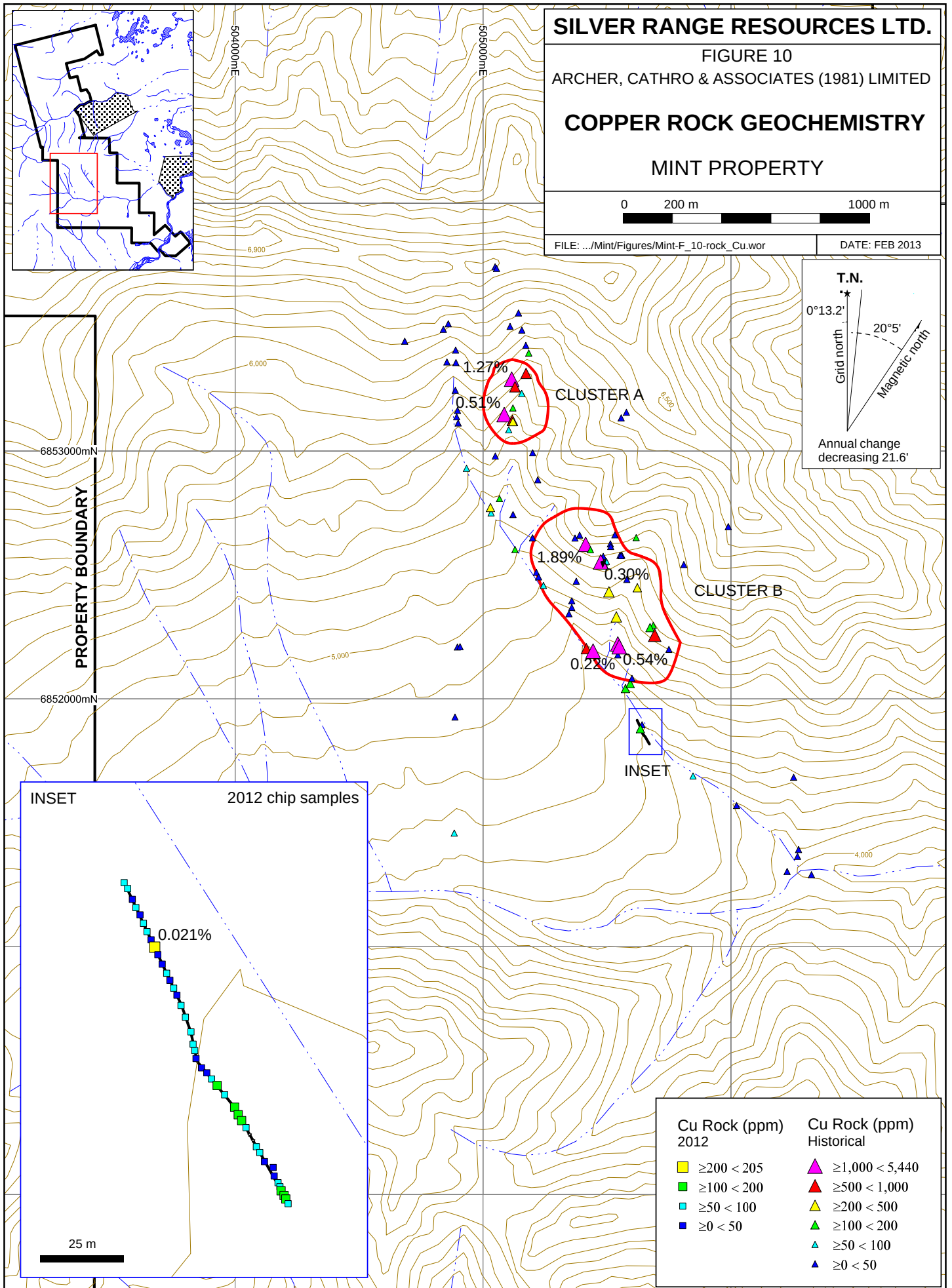
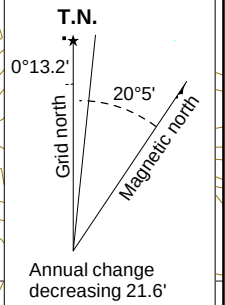
COPPER ROCK GEOCHEMISTRY

MINT PROPERTY

0 200 m 1000 m

FILE: .../Mint/Figures/Mint-F_10-rock_Cu.wor

DATE: FEB 2013



SILVER RANGE RESOURCES LTD.

FIGURE 11
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

MOLYBDENUM ROCK GEOCHEMISTRY MINT PROPERTY

0 200 m 1000 m

FILE: .../Mint/Figures/Mint-F_11-rock_Mo_2012.wor

DATE: FEB 2013

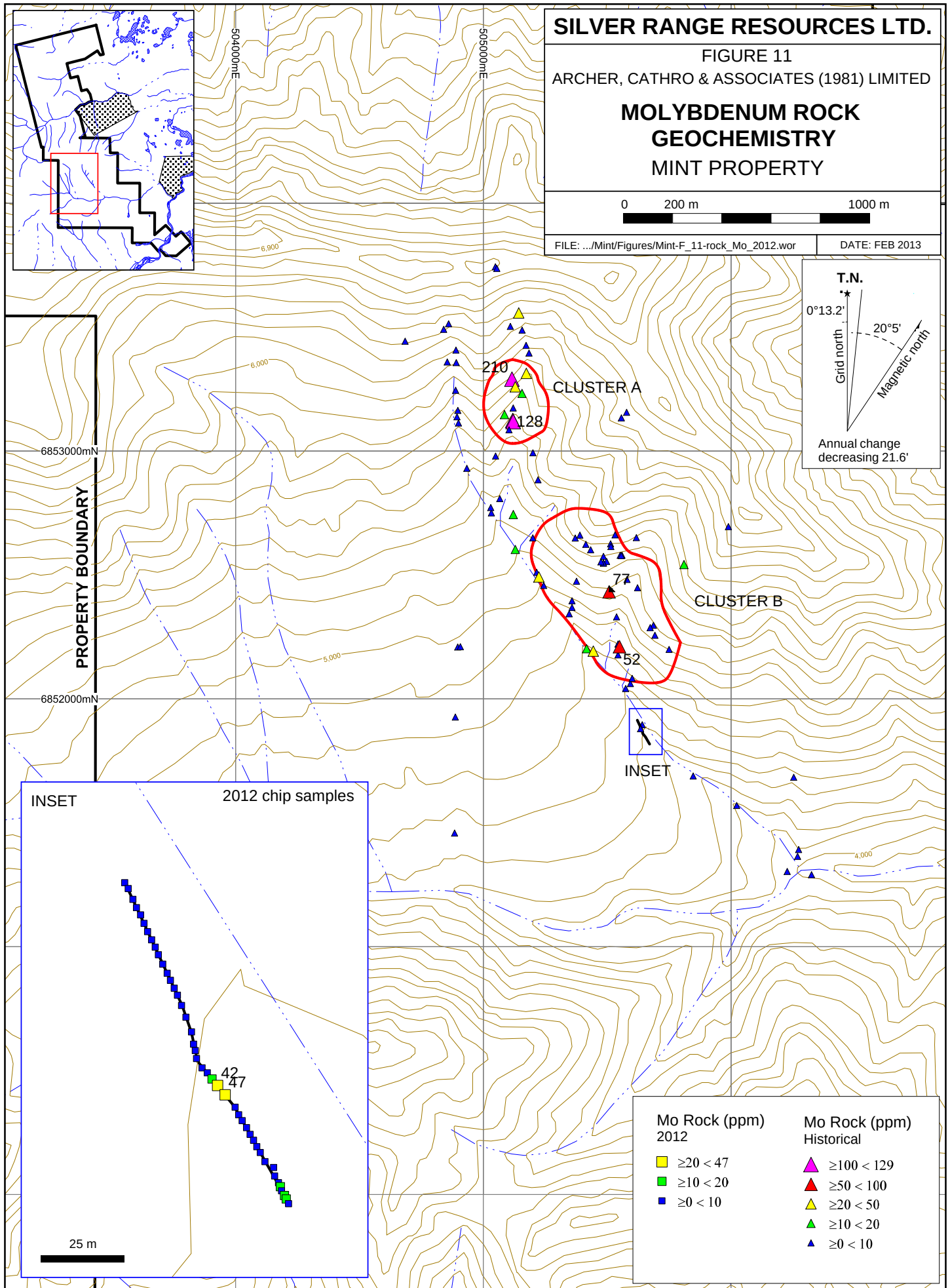
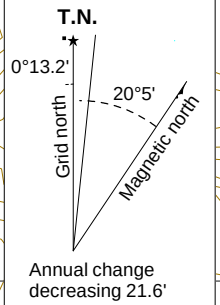


Table IV – Rock Geochemical Threshold and Peak Values

Metal	Anomalous Thresholds			Peak Values		
	Weak	Moderate	Strong	1983	2010	2012
Au (g/t)	$\geq 0.1 < 0.2$	$\geq 0.2 < 0.5$	≥ 0.5	0.240	0.874	1.29
Cu (ppm)	$\geq 200 < 500$	$\geq 500 < 1000$	≥ 1000	18,858	5440	205
Mo (ppm)	$\geq 20 < 50$	$\geq 50 < 100$	≥ 100	129	77	47

Cluster A lies in the headwaters of Canyon Creek. It comprises numerous rock samples in a 400 by 200 m, northerly trending area, which roughly straddles a contact between mafic volcanic flows and sericitic-altered maroon pyroclastics, immediately southeast of a small diorite plug. It hosts weakly to strongly anomalous copper values up to 1.27% and weakly to strongly anomalous molybdenum values up to 129 ppm. Gold values within the cluster are typically background to weakly anomalous with one moderately anomalous value of 0.210 g/t gold.

Cluster B is approximately 500 by 400 m in area and lies 400 m southeast of Cluster A at the Canyon Mountain Occurrence. Cluster B is a gold-copper-molybdenum anomaly that is underlain by propylitic-and sericitic-altered andesite. The northern edge of an area of very high magnetic response overlaps with the southern part of this cluster. Copper values are weakly to strongly anomalous with a peak value of 1.89%. Molybdenum values are background to moderately anomalous with a peak value of 77 ppm. Gold values are background to strongly anomalous with a peak value of 0.874 g/t. Strong copper values are well distributed in the cluster, while strong gold values are concentrated in the southern part.

Chip Line 1 consists of 43 discontinuous chip samples that were collected from a 110 m long northwesterly-trending outcrop exposed in a creek bed 200 m south of Cluster B. In the northern portion of the sample line, the outcrop is composed of intensely propylitic altered plagioclase-rich diorite with dense sheeted pyrite stringers and sub-vertically dipping pyrite veinlets. Mineralization further south is confined to intensely oxidized limonite-, pyrite- and chalcopyrite-bearing veinlets within propylitic- and sericitic-altered diorite. These veinlets form conjugate fracture sets that strike northwest and southwest, and dip sub-vertically. Analytical results for copper and molybdenum are background to weakly anomalous. Gold values are typically between 0.040 and 0.263 g/t but include an isolated value of 1.29 g/t over 3 m.

A new style of mineralization was identified in 2012 diamond drilling. Breccia-hosted mineralization was observed within and adjacent to felsic and intermediate volcanic feeder dykes. This mineralization typically consists of medium-grained disseminated and coarse-grained euhedral pyrite with rare intergrowths of chalcopyrite, sphalerite, and galena. A more detailed description of this mineralization is provided in the Diamond Drilling section of this report.

SOIL GEOCHEMISTRY

Soil and silt geochemical surveys were performed in 1982 and 2010 and have covered a 4000 by 3000 m area that encompasses talus slopes and a relatively flat-bottomed valley floor, in the southern part of the property. This sampling outlined a northwest-trending zone of anomalous geochemistry, Anomaly 1, around and downslope to the south of Clusters A and B. Contour soil sampling in 2012 expanded survey coverage to the northern half of the property. Soil sample locations are shown on Figure 12, while thematic data for gold, copper, and molybdenum are plotted on Figures 13 through 15.

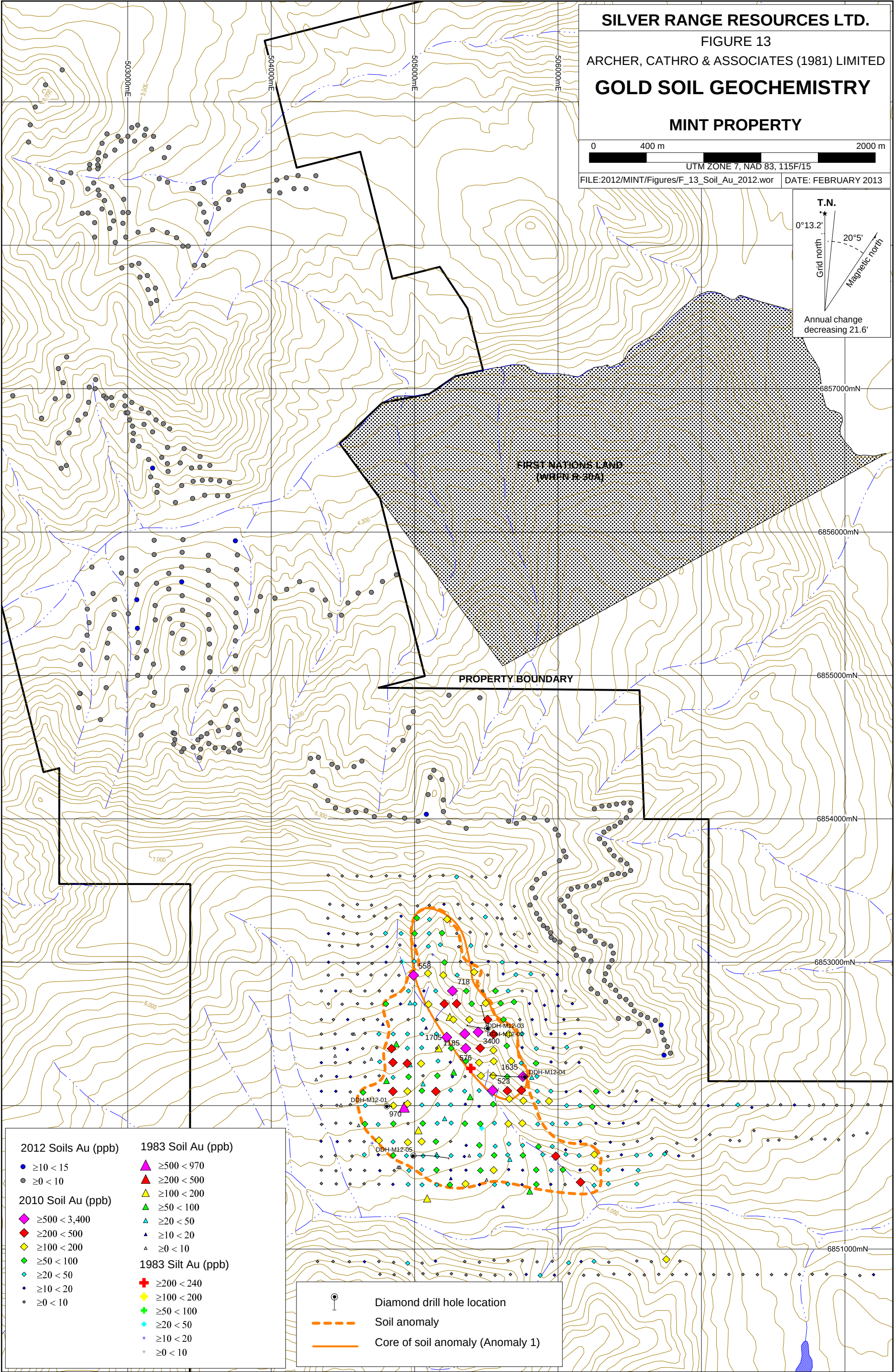
Anomalous thresholds and peak values are listed for the main metals of interest in Table V. Appendix IV provides a detailed description of the Sampling and Analytical Procedures used in the 2012 survey. Certificates of Analysis for 2012 samples are in Appendix VI.

Table V – Soil Geochemical Threshold and Peak Values

Metal	Anomalous Thresholds			Peak Values		
	Weak	Moderate	Strong	1983	2010	2012
Au (ppb)	≥ 100 < 200	≥ 200 < 500	≥ 500	970	3400	15
Cu (ppm)	≥ 100 < 200	≥ 200 < 500	≥ 500	219	1370	101
Mo (ppm)	≥ 5 < 10	≥ 10 < 20	≥ 20	17	150	2

Anomaly 1 was outlined by the 1982 and 2010 surveys. It is a 1200 by 400 m area of moderate to very strong gold-, copper- and molybdenum-in-soil response. Gold values are high across the anomaly, while strong copper and molybdenum values are localized in the vicinity of Cluster A and Cluster B. The anomaly follows the northwesterly trend of the underlying intrusive complex and altered volcanic flows. The southern part of the soil anomaly overlaps an area of very strong magnetic response (Figure 16). A chargeability high, which adjoins the area of Anomaly 1, is open to extension on the northeastern side of the survey area (Figure 17). Strong gold values are clustered on the eastern side of the chargeability high, in the middle of Anomaly 1, and returned a peak value of 3400 ppb. The strongest copper and molybdenum values (1370 ppm and 150 ppm, respectively) were returned from the area of Cluster A in sericitic-altered, volcanic flows (NWp) immediately southeast of a small diorite plug (MW).

In 2012, a total of 400 contour soil samples were taken at 50 to 100 m spacings from contour sampling lines and one grid in the northern half of the property. Results from the 2012 soil sampling program are disappointing with peak values of only 15 ppb gold, 101 ppm copper, and 2 ppm molybdenum. Mapping in 2012 suggests that most of the geochemically sampled area is underlain by unaltered mafic flows that are thought to have been deposited after the mineralizing event.



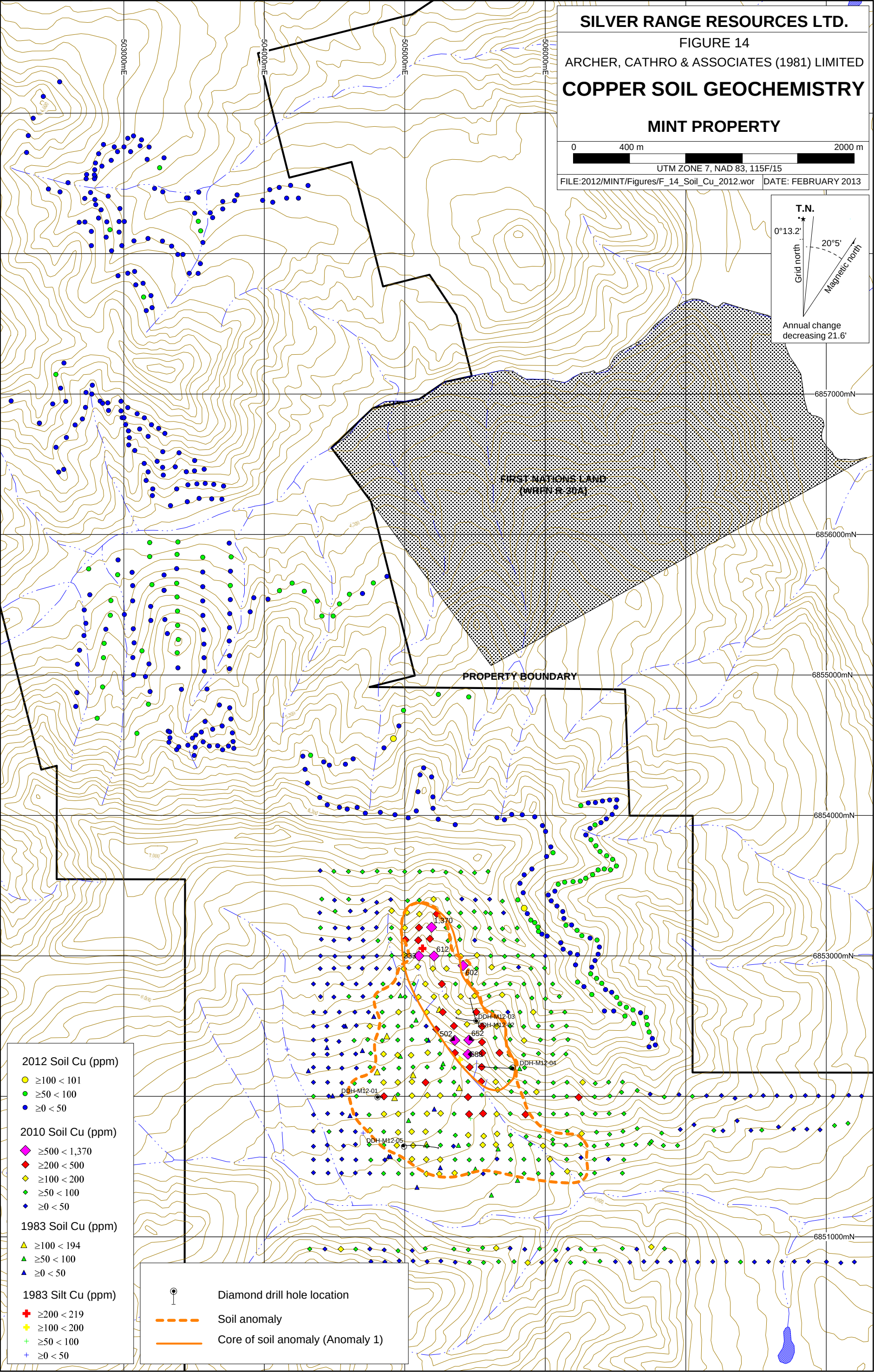
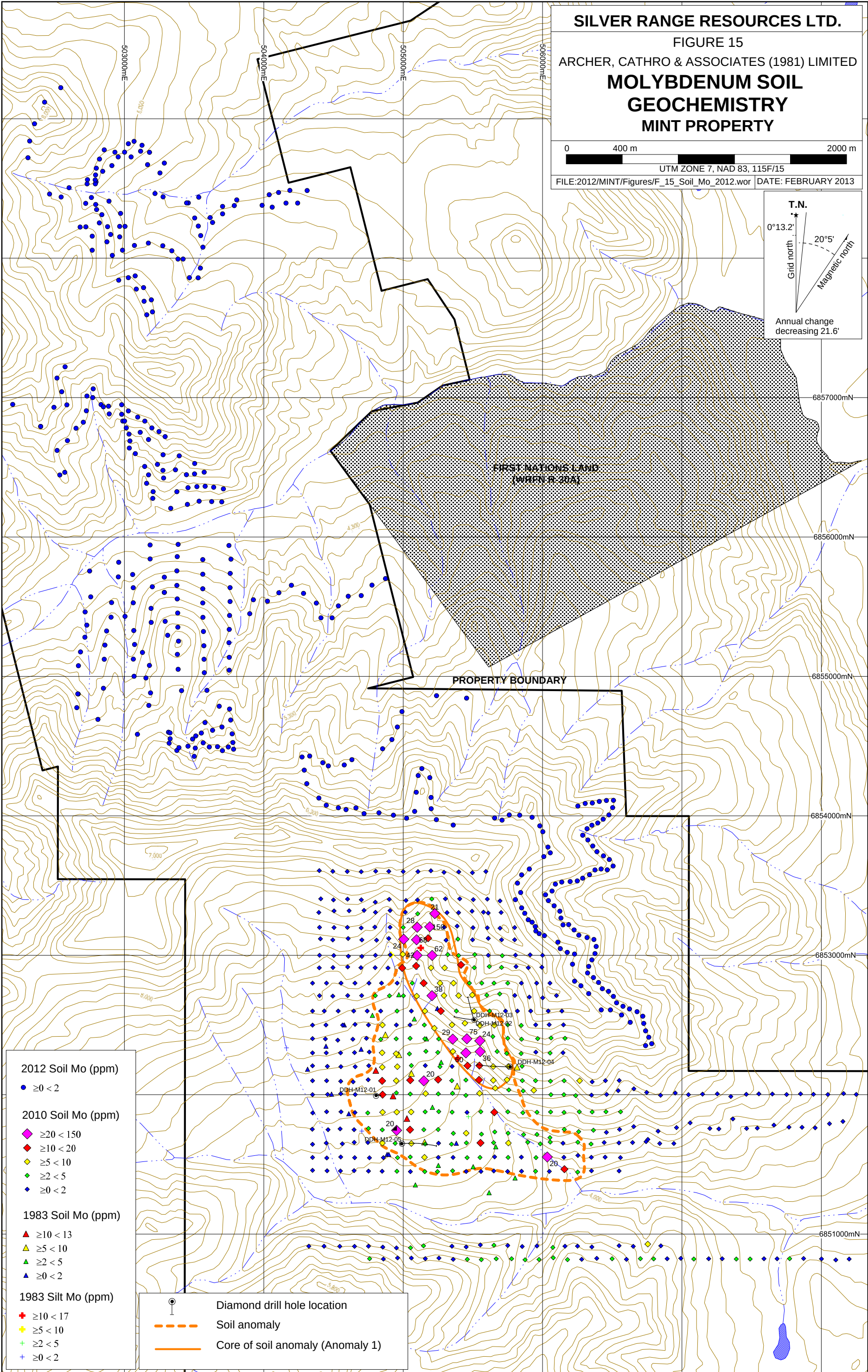
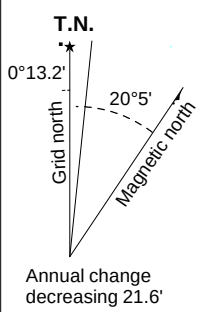


FIGURE 15
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
**MOLYBDENUM SOIL
GEOCHEMISTRY**
MINT PROPERTY

0 400 m 2000 m
UTM ZONE 7, NAD 83, 115F/15
FILE:2012/MINT/Figures/F_15_Soil_Mo_2012.wor DATE: FEBRUARY 2013



SILVER RANGE RESOURCES LTD.

FIGURE 16

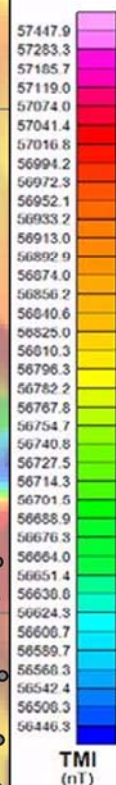
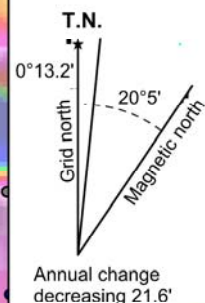
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

DRILL HOLE LOCATIONS WITH TMI AND GOLD GEOCHEMISTRY MINT PROPERTY

0 200 m 1000 m

FILE: .../Mint/Figures/Mint-F_17_TMI_w_Au.wor

DATE: FEB 1913



2010 Soil Au (ppb)

- ≥500 < 3,400
- ≥200 < 500
- ≥100 < 200
- ≥50 < 100
- ≥20 < 50
- ≥10 < 20
- ≥0 < 10



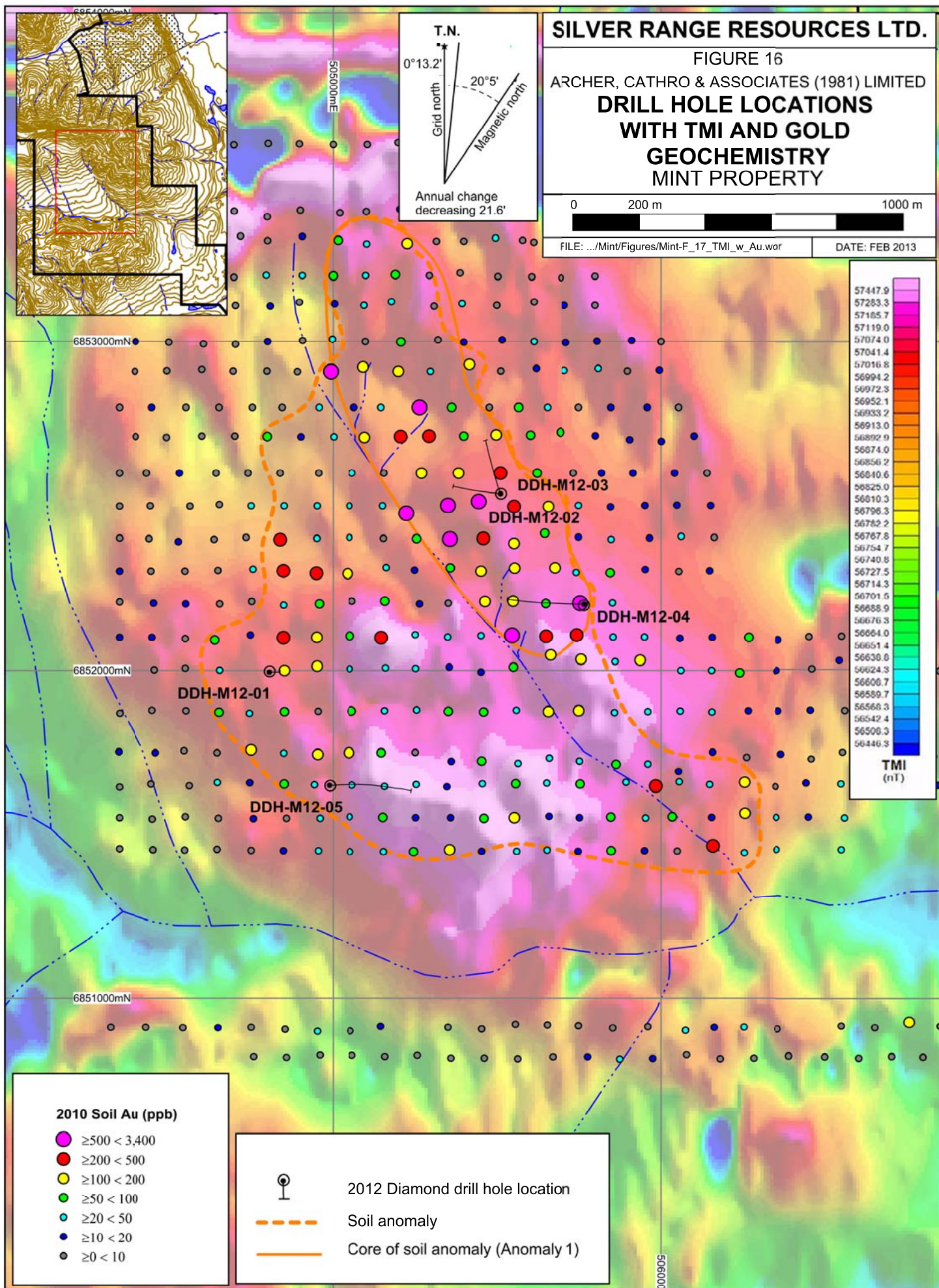
2012 Diamond drill hole location



Soil anomaly



Core of soil anomaly (Anomaly 1)



SILVER RANGE RESOURCES LTD.

FIGURE 17

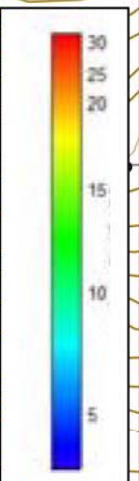
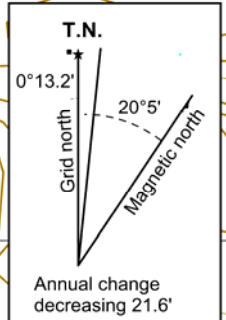
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

DRILL HOLE LOCATIONS WITH CHARGEABILITY AND GOLD GEOCHEMISTRY MINT PROPERTY

0 200 m 1000 m

FILE: .../Mint/Figures/Mint-F_16-Drill_IP_Ausol.wor

DATE: FEB 2013



2010 Soil Au (ppb)

- $\geq 500 < 3,400$
- $\geq 200 < 500$
- $\geq 100 < 200$
- $\geq 50 < 100$
- $\geq 20 < 50$
- $\geq 10 < 20$
- $\geq 0 < 10$



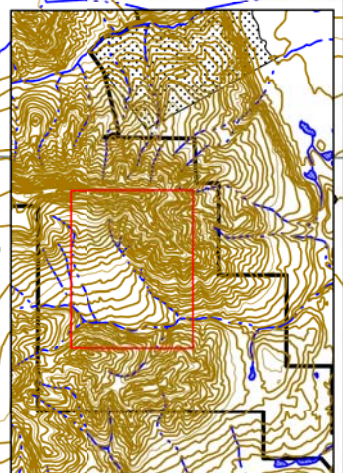
Diamond drill hole location



Soil anomaly



Core of soil anomaly (Anomaly 1)



DIAMOND DRILLING

Diamond drilling in 2012 consisted of five holes totalling 1767.83 m. Drilling was carried out from June 18 to July 27, 2012 by Platinum Drilling. The work was conducted with an A5 heli-portable diamond drill using NQ2 equipment. The drill usually was set up on 6" by 6" or 8" by 8" timbers nailed or rebarred in place and covered by 2" by 8" planks on 20' by 20' hand-leveled sites. The eastern-most drill hole location (DDH-M12-04) required construction of a stilted 14' by 14' drill pad because the hole was located on a very steep, talus covered slope. Construction of this drill pad was carried out by Minconsult.

Core was flown by helicopter from the drill sites to the grass airstrip at WRL, where it was secured and later taken by truck to Archer Cathro's Whitehorse facility for logging and sampling. Following completion of sampling, the halved Mint core was delivered to the H.S. Bostock core facility in Whitehorse for storage. Analytical procedures for drill core samples are identical to the rock sample techniques and are explained in Appendix IV. Certificates of Analyses are provided in Appendix VI, while Geological and Geotechnical Logs are given in Appendix VII. Drill collar locations are plotted on Figures 6, 7 and 13 through 17, while drill hole information is presented on Table VI. Cross sections showing the 2012 drill holes are illustrated on Figures 18 to 22.

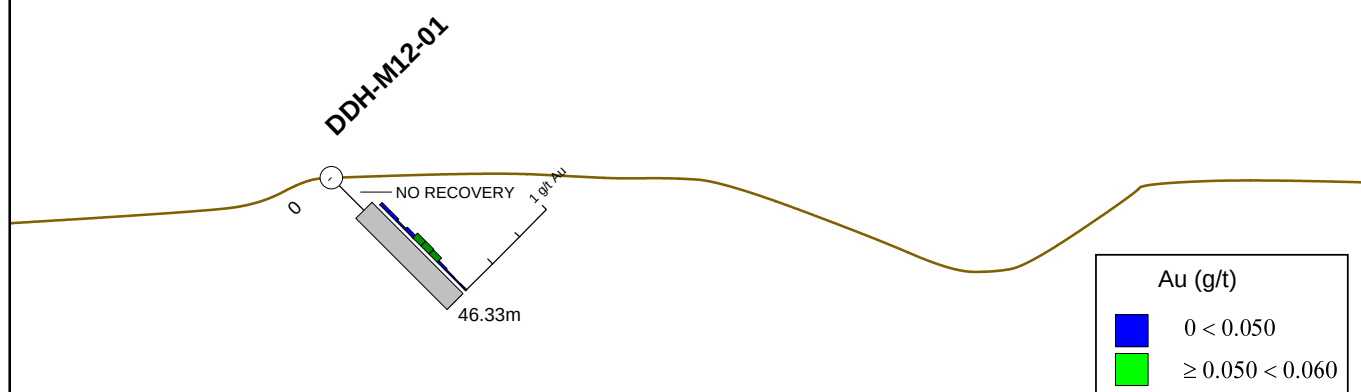
Table VI – 2012 Drill Hole Data

Hole	Easting	Northing	Elev. (m)	Azimuth	Dip	Depth (m)	Size
DDH-M12-01	504806	6851995	1511	90	-45	46.33	NQ2
DDH-M12-02	505509	6852537	1682	275	-70	462.38	NQ2
DDH-M12-03	505509	6852537	1682	340	-60	343.51	NQ2
DDH-M12-04	505767	6852200	1550	270	-60	465.42	NQ2
DDH-M12-05	504994	6851649	1430	90	-60	450.19	NQ2

The drill program was designed to test five targets identified using a combination of geophysical, geochemical and geological data. Hole DDH-M12-01 was terminated well short of its target depth due to poor ground conditions. All other holes intercepted mineralization in lithologies belonging to a hydrothermally altered subvolcanic intrusive complex. Alteration is developed in all of the intersected lithologies, except for late stage, narrow, intermediate porphyry and diabase dykes. It includes principally potassic, propylitic, and sericitic mineral assemblages with subordinate silicification and local argillic alteration. Table VII describes the lithological units observed in drill core along with their dominant alteration type(s), while assay results are described in the following paragraphs.

W

E

VIEW LOOKING
NORTH

LEGEND

- Andesite
- Felsite dyke
- Felsite-A (granodiorite-diorite dyke (?))
- Plagioclase porphyry
- Diorite porphyry dyke
- Intermediate porphyry dyke
- Diabase dyke

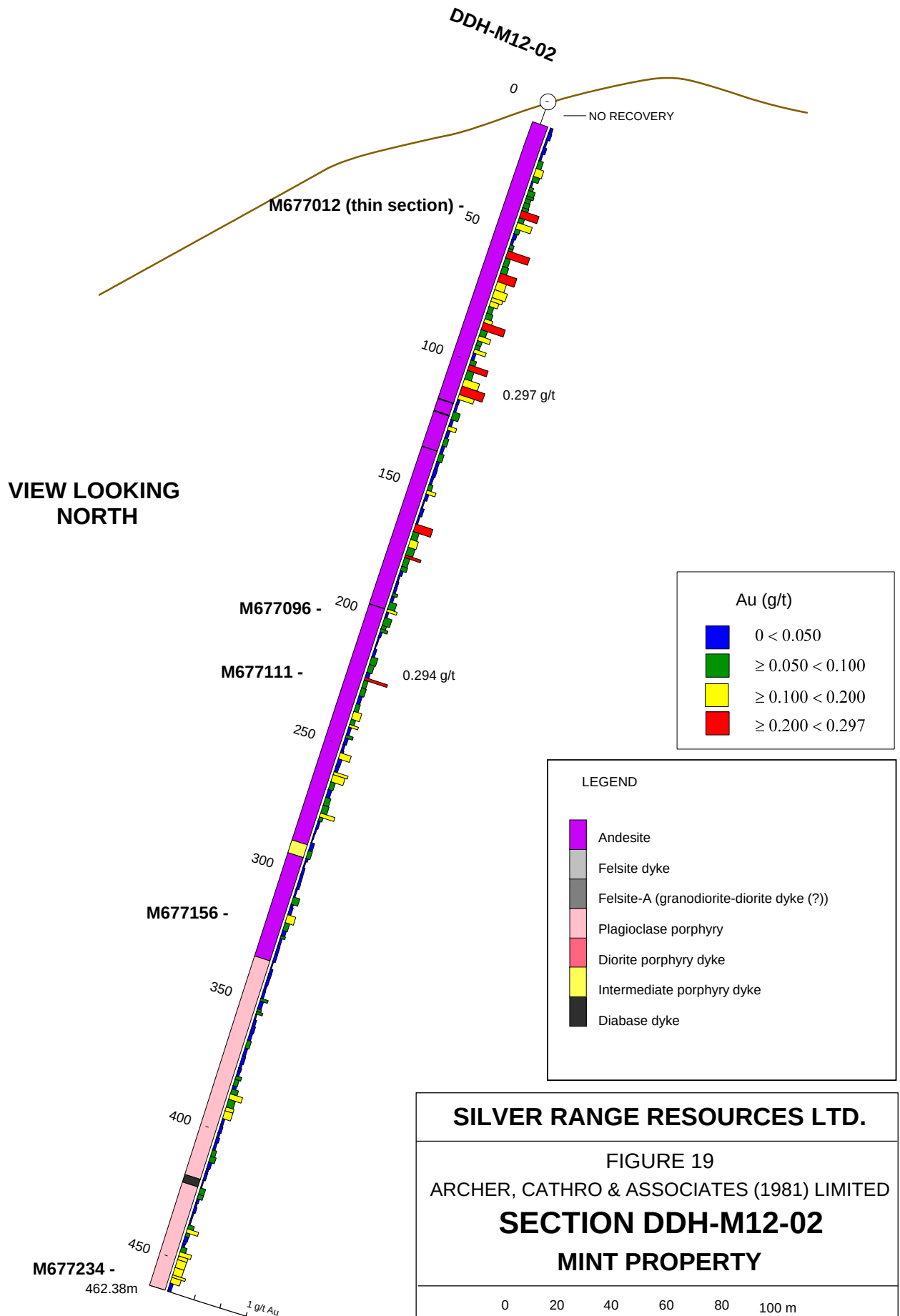
SILVER RANGE RESOURCES LTD.

FIGURE 18
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
SECTION DDH-M12-01
MINT PROPERTY

0 20 40 60 80 100 m

W

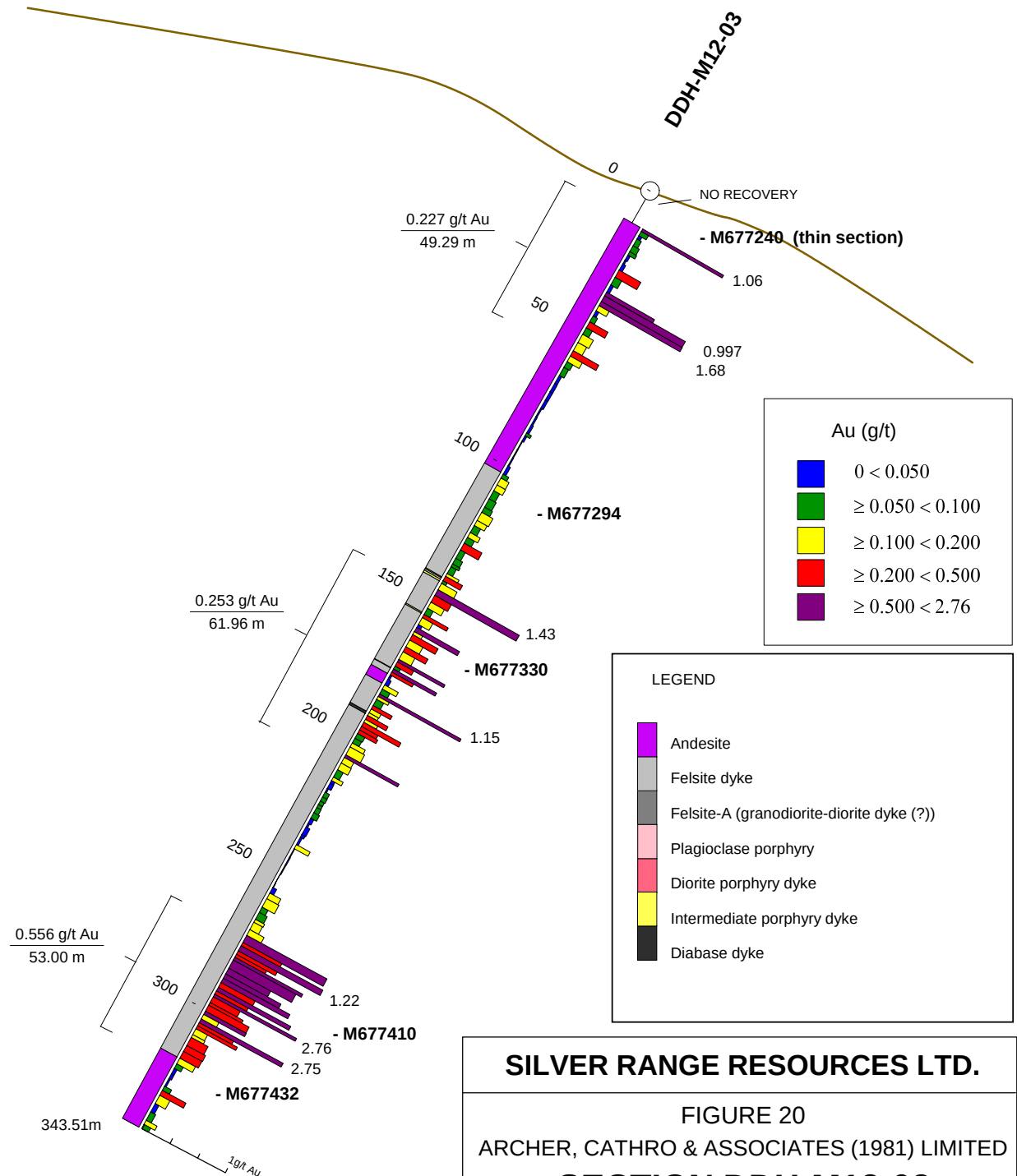
E



N

S

VIEW LOOKING EAST



SILVER RANGE RESOURCES LTD.

FIGURE 20
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
SECTION DDH-M12-03
MINT PROPERTY

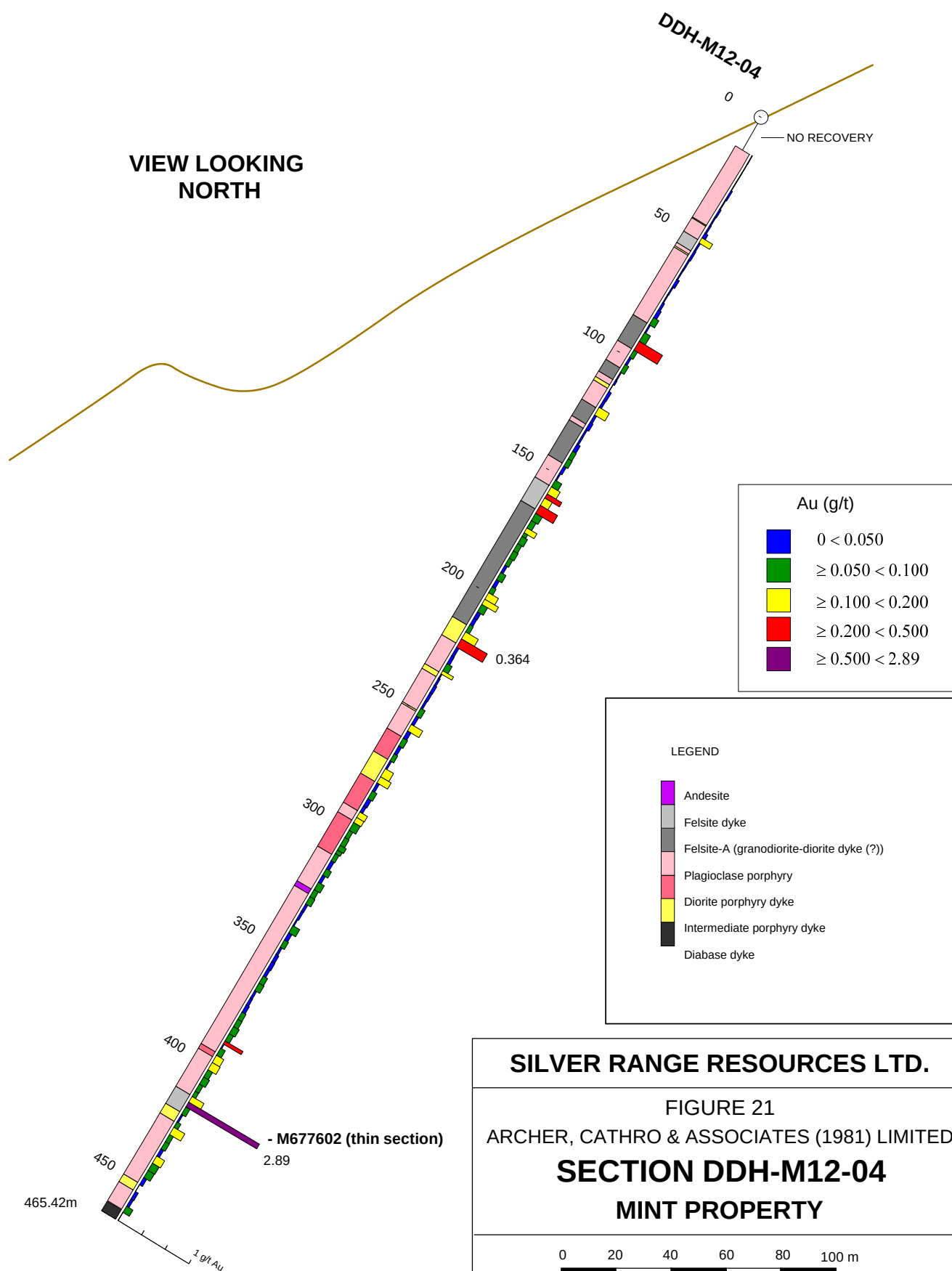
0 20 40 60 80 100 m

FILE:2012/MINT/Figures/Plan&Sections/MINT_Sections.wor

DATE: FEBRUARY 2013

W

E



SILVER RANGE RESOURCES LTD.

FIGURE 22

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

SECTION DDH-M12-05

MINT PROPERTY

0 20 40 60 80 100 m

FILE:2012/MINT/Figures/Plan&Sections/MINT_Sections.wor

DATE: FEBRUARY 2013

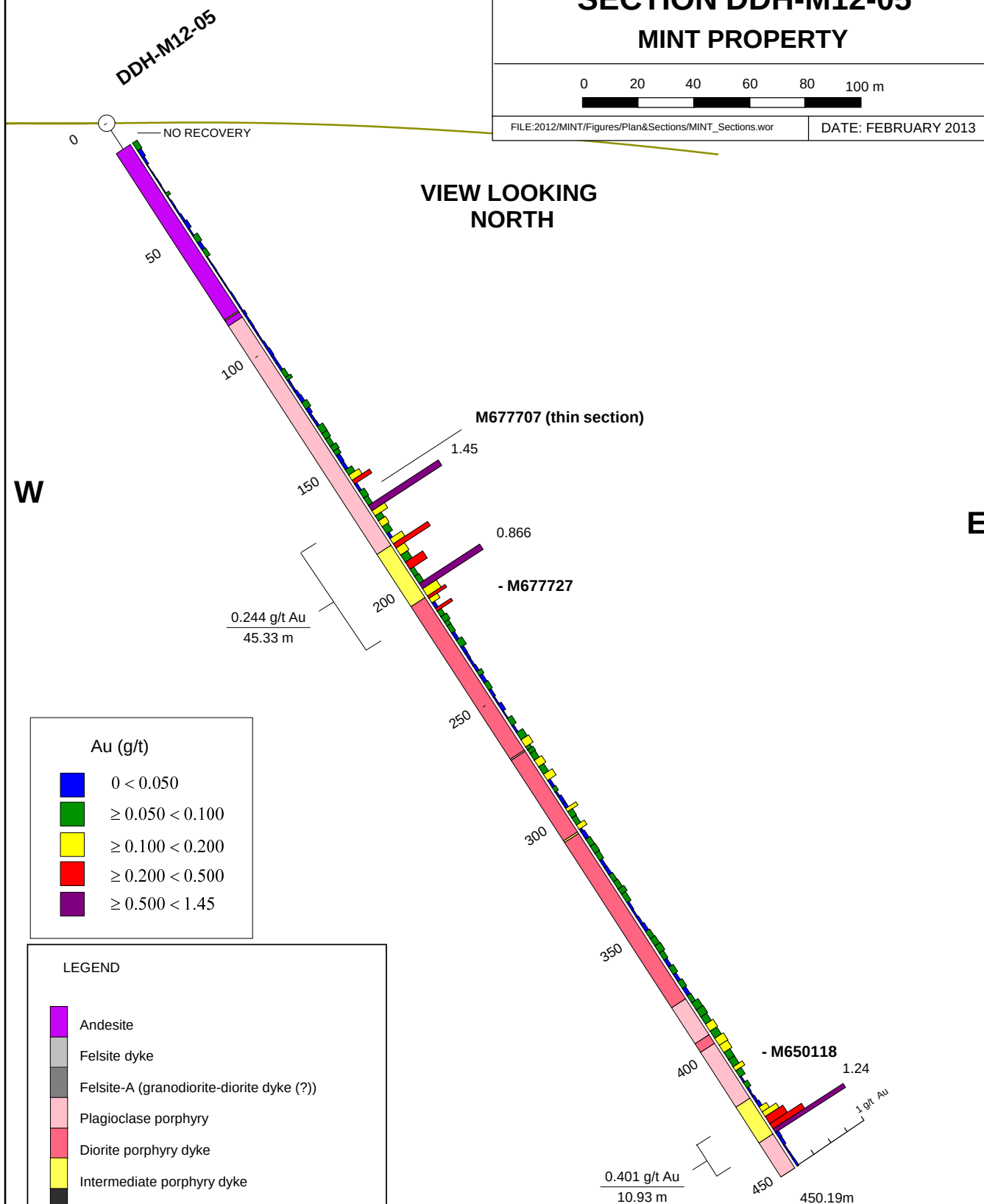


Table VII – Drill Log Lithologies and Alteration Types

Property unit	Drill log unit	Description	Dominant Alteration
Wrangell Suite (MW)	Intermediate porphyry dyke (IPD)	Massive, brown and grey, plagioclase-phyric, felsic to intermediate porphyry dyke.	Unaltered
	Felsite dyke (FEL)	Bleached, white to light grey massive to aphanitic felsic dyke (?). Felsite dyke hosts large zones of variably mineralized hydrothermal breccias comprised of 10 to 70% matrix and clasts that are likely derived from host andesite or porphyry units.	Sericitic
Plagioclase porphyry (MWd)	Felsite-A (F-A)	Massive, grey, coarse grained granodiorite to diorite porphyry dyke (?). Dyke (?) composed of potassium feldspar, plagioclase and local quartz with very coarse grained chlorite and 2-3% mafic minerals.	Sericitic
Subvolcanic andesite (MWa)	Volcanic 1 (V1)	Medium grained to porphyritic, plagioclase crowded, subvolcanic andesite with locally abundant hornblende and fine grained mafic minerals. Andesite is pyrite-rich and variably brecciated.	Propylitic, sericitic
Plagioclase diorite (MWd)	Plagioclase porphyry (PP)	Medium to dark grey plagioclase porphyry with brown to grey crystalline groundmass.	Potassic, propylitic
	Diorite porphyry dyke/plagioclase porphyry (PP-A)	Medium grained to porphyritic, medium to dark grey, diorite porphyry dyke(?). Plagioclase-phyric, abundant chlorite, pyrite, and mafic minerals with quartz absent.	Potassic, propylitic

All of the holes, except DDH-M12-01, have high gold backgrounds from top to bottom, but the silver, copper and molybdenum contents are generally low. Table VIII compares the total gold, silver, copper and molybdenum grades of the holes.

Table VIII – Grade of Entire Drill Hole

Hole	From (m)	To (m)	Interval (m)	Au (g/t)	Ag (g/t)	Cu (ppm)	Mo (ppm)
DDH-M12-01	14.14	46.33	32.19	0.032	1.01	138	8
DDH-M12-02	8.81	462.38	453.57	0.071	0.49	234	8
DDH-M12-03	11.78	343.51	331.73	0.204	1.57	133	4
DDH-M12-04	13.75	465.42	451.67	0.075	0.53	174	12
DDH-M12-05	11.01	450.19	439.18	0.080	0.32	192	9

The most significant intervals from the 2012 drill program at the Mint property are shown on Table IX below.

Table IX – Significant Drill Results

Hole	From (m)	To (m)	Interval (m)	Au (g/t)	Ag (g/t)	Cu (ppm)	Mo (ppm)
DDH-M12-02	107.10	115.00	7.90	0.239	0.30	159	1
including	109.88	113.2	3.32	0.297	0.86	184	1
and	196.95	198.09	1.14	0.127	0.88	1060	7
and	223.62	224.63	1.01	0.294	4.44	1025	3
and	260.34	261.49	1.15	0.182	1.50	1005	92
DDH-M12-03	35.30	40.29	4.99	1.11	14.05	75	5
and	145.38	207.34	61.96	0.253	2.35	108	6
and	266.80	319.80	53.00	0.556	1.74	236	6
including	276.46	278.38	1.92	1.22	4.22	904	12
including	291.69	297.31	5.62	0.909	2.80	168	9
and including	294.20	295.20	1.00	2.76	1.00	276	12
including	303.30	304.69	1.39	2.75	5.78	976	12
DDH-M12-04	380.09	383.13	3.04	0.062	0.370	323	134
and	412.75	447.15	34.40	0.247	1.96	498	35

Hole	From (m)	To (m)	Interval (m)	Au (g/t)	Ag (g/t)	Cu (ppm)	Mo (ppm)
including	415.15	417.18	2.03	2.89	21.0	1430	4
DDH-M12-05	166.73	212.06	45.33	0.244	0.633	134	6
including	166.73	169.11	2.38	1.45	0.930	323	11
including	200.25	206.71	6.46	0.443	0.435	66	3
and	424.77	435.70	10.93	0.401	0.400	19	2
including	434.06	435.70	1.64	1.24	0.480	16	2

DDH-M12-01 was designed to test a chargeability anomaly at a depth of 30 to 100 m below a 970 ppb gold-in-soil value. Unfortunately, the hole was abandoned at 46.33 m due to difficulties related to downhole destabilization and swelling clay (likely montmorillonite). Drilling cut moderately to strongly argillic-sericitic altered felsite-A (F-A) and brecciated felsite dyke (FEL) with abundant disseminated pyrite. No significant gold, silver, copper, or molybdenum grades were returned from this hole.

DDH-M12-02 tested below a 3400 ppb gold-in-soil value in an area that was not covered by the IP survey. Massive and brecciated andesite (V1) was intersected in most of the hole, until a sharp contact with plagioclase porphyry (PP) is reached at 334.37 m. Several narrow (<1 m) intermediate porphyry dykes (IPD) cut the andesite, while a diabase dyke (DD) cuts the porphyry unit near the bottom of the hole. Complex propylitic±sericitic±potassic alteration is pervasive in the andesite; whereas, sericitic±potassic alteration is well developed in plagioclase porphyry. Fine to coarse grained disseminated pyrite is present throughout the hole. Weak to moderate gold mineralization occurs throughout the hole, but is strongest in a wide zone of sericitic-altered breccias, hosted in andesite from 32.05 to 116.94 m. Disseminated pyrite is abundant in this breccia zone, which includes six samples that grade from 0.200 g/t to 0.297 g/t gold over individual intervals. Trace to weak copper mineralization is hosted in both andesite and porphyry units. The best copper mineralization occurs in a cluster of intervals in a zone of variably brecciated potassic-propylitic altered andesite between 190.70 and 276.55 m. The strongest copper grade in the hole (0.11% copper) is associated with a 1.14 m wide silicified breccia at a contact between andesite and an intermediate porphyry dyke.

DDH-M12-03 was drilled from the same pad as DDH-M12-02, but at a more northerly strike. It tested an intrusive-volcanic contact, zones of intense silicification, and a 718 ppb gold-in-soil value northwest of the 3400 ppb gold value. This hole intersected weakly to strongly brecciated andesite (V1), which is cut by an approximately 215 m wide, steeply dipping, variably brecciated, felsite dyke (FEL). The felsite dyke is crosscut by narrow (<1 m) intermediate porphyry dykes (IPD) and one diabase dyke (DD). Propylitic-sericitic alteration with a locally strong overprint of limonite and potassic alteration is most commonly developed in andesite, while sericitic alteration is dominant in felsite dyke. Fine to coarse grained disseminated pyrite is present in both units, but mineralization is notably stronger in sericitized hydrothermal

breccias within felsite dyke. These breccias are clast to matrix supported (up to 60% matrix) and occur in zones from 4 to 60 m wide. Hydrothermal textures within these breccias are indicative of strong fluid flow and degassing and include crackle and cobble breccias with zoned clasts, flow banding and large mineralized vugs. Euhedral and blebby pyrite with intergrowths of chalcopyrite, sphalerite and trace fine grained galena are common in breccia matrix and locally in vugs. A black, powdery mineral rims most pyrite disseminations in mineralized zones. The best interval on the property came from these breccias and returned a weighted average of 0.556 g/t gold over 53 m. At the top of the hole, sericitized andesite hosts minor pyrite-rich clayey gouge that graded up to 1.68 g/t gold over 1.59 m. Traces of copper mineralization are hosted in the felsite dyke, but they are spotty and nowhere exceed 0.01%.

DDH-M12-04 targeted strongly anomalous rock and soil gold geochemistry in the area of Cluster B, which overlies a moderate to strong chargeability anomaly between 80 and 250 m below surface. The hole intercepted four main intrusive units: plagioclase porphyry (PP); felsite dyke (FEL); felsite-A (F-A); and, diorite porphyry dyke (PP-A). Late stage intermediate porphyry dykes (IPD) and a diabase dyke (DD) crosscut the plagioclase porphyry and diorite porphyry dyke units. Weak to moderate and locally intense propylitic±sericitic±potassic alteration is well developed in the plagioclase porphyry and diorite porphyry units, while felsite dyke and felsite-A are dominantly sericitic-altered. Zones of intense silicification overprint propylitic alteration in breccia zones within the plagioclase porphyry near the bottom of the hole. The widest of these breccia zones occurs from 327.59 to 352.65 m, which is vertically below a sharp northeast-trending ridge. Disseminated pyrite is common in all lithologies, but intergrowths of chalcopyrite, arsenopyrite (?), and chalcocite (?) are limited to sericitized and silicified breccias within plagioclase porphyry. Magnetite and sheeted pyrite veinlets are locally dense and typically cut narrow breccia zones in the plagioclase porphyry unit. A sample of felsite dyke that is cut by sheeted pyrite veins (<1 cm) graded 2.89 g/t gold, 21 g/t silver, and 0.14% copper over 2.03 m, which is the best grade, individual sample from the drill program. Copper and molybdenum values are somewhat elevated in the last 130 m of the hole where plagioclase porphyry is variably brecciated, and intermittently sericitized and silicified. At the bottom of the hole, an interval graded 0.11% copper over 2.62 m in a silicified breccia directly adjacent to a diabase dyke.

DDH-M12-05 was designed to test beneath an overburden covered area where a chargeability high coincides with a zone of high to very high magnetic response (57000 to 57400 nT). The hole collared in weak to moderate sericitic- and locally potassic-altered andesite followed by transitional propylitic-and potassic-altered plagioclase porphyry (PP) and diorite porphyry dyke (PP-A). The hole ended in intensely potassic-altered and magnetite flooded plagioclase porphyry, where primary mineralogy and lithological textures are nearly indistinguishable. Intermediate porphyry dykes (IPD) intrude all units, but appear to be more closely associated with the plagioclase porphyry unit. Stockwork quartz and magnetite± hematite veinlets are infrequent throughout the hole. Elevated chromium-nickel values coincide with an increase in magnetic susceptibility near the bottom of the hole, which may indicate input of chromium-oxide minerals derived from underlying Nikolai flood basalts (Appendix VIII). Gold mineralization is strongest adjacent to and within, two relatively wide, intermediate porphyry dykes, which returned 0.441 g/t gold over 6.46 m and 0.401 g/t gold over 10.93 m, respectively. This mineralization is hosted in sericitized and silicified hydrothermal breccias associated with dyke emplacement. Blebby pyrite with intergrowths of chalcopyrite and coarse grained galena are

present in these breccias, while the related dykes carry a very small amount of visible sulphide minerals. Above background copper grades are consistent in the bottom half of this hole.

MAGNETIC SUSCEPTIBILITY

A positive correlation exists between high magnetic susceptibility and potassic alteration, namely magnetite-flooding, (Appendix VIII). This correlation is most apparent in DDH-M12-05 from 284.00 m to 450.19 m (EOH) where secondary magnetite occurs as abundant disseminations and veinlets within a zone of intense potassic alteration.

PETROGRAPHY

A total of 15 core samples from the Mint property were sent to Vancouver Petrographics for petrographic analysis and interpretation in fall 2012. The samples were analysed in order to identify major lithologies, sulphide minerals and alteration types. Six samples of altered intrusions, five samples of altered and variably mineralized breccias, and one sample containing a mineralized veinlet were analysed. The study identified potassic-propylitic-phyllic altered, hypabyssal porphyries with hydrothermal and fragmental breccias in core from the northern part of the drill area, and potassic±sericitic altered hypabyssal porphyry and possibly a deeper level pluton in core from the southern part. The complete report for this study is provided in Appendix IX, while core sample photos are given in Appendix X. Sample numbers and locations for thin sections are plotted on Figures 18 to 22.

Rock types were determined to be dacitic and andesitic porphyries that contain relict plagioclase and mafic phenocrysts. Phaneritic to aphanitic groundmass in these porphyries are suggestive of volcanics or hypabyssal intrusives, while the coarse groundmass of sample M677727 from DDH-M12-05 at 205.60 m depth is indicative of a deeper plutonic setting (Leitch, 2012).

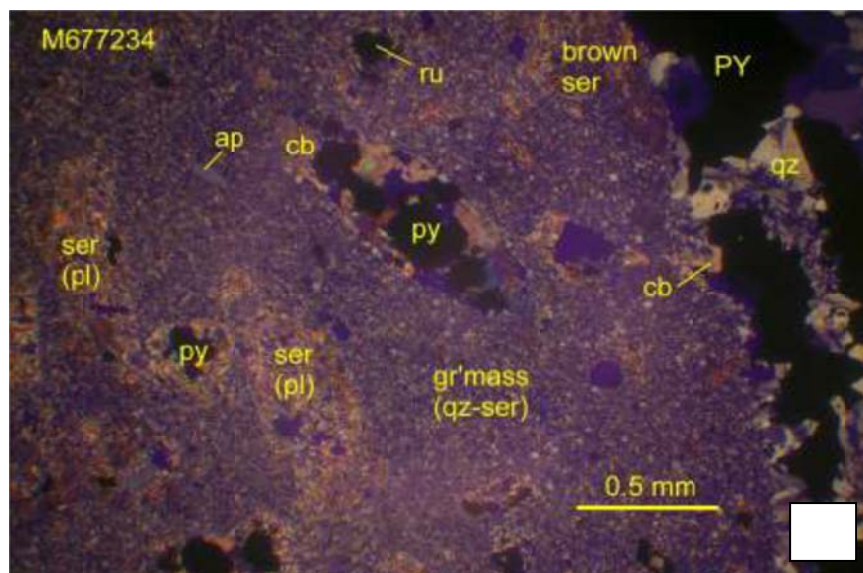
Breccias are hydrothermal or fragmental with clasts that are typically derived from the host porphyries. The veinlet analyzed was composed of carbonate, pyrite, chalcopyrite, sphalerite, trace quartz.

Leitch identified multiple alteration types within the 15 specimens studied in 2012. Alteration ranged from mainly phyllic (quartz-sericite-carbonate-pyrite±rutile), through transitional propylitic-potassic to potassic (alkali feldspar-amphibole-biotite±chlorite-quartz-magnetite-sericite-carbonate-sulphides-rutile). Phyllic alteration locally overprints relict potassic or transitional propylitic-potassic alteration as exemplified by strongly potassium feldspar altered clasts in the hydrothermal pyrite-carbonate-potassium feldspar-muscovite breccia matrix of sample M677410 from hole DDH-M12-03. In potassic alteration, thin veinlets contain magnetite (which is locally oxidized to hematite), secondary biotite, carbonate and trace chalcopyrite.

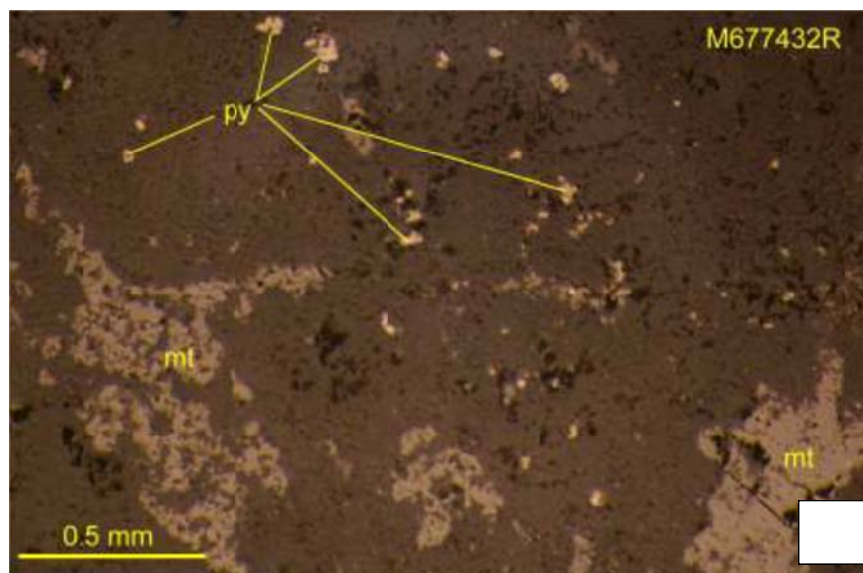
Sulphide minerals include pyrite with minor chalcopyrite (rare trace bornite±digenite?), local sphalerite, and relatively rare galena. Covellite (with possible lead/zinc oxides) locally occurs along the margins of sulphides of sample M677410 from DDH-M12-03 at 12.25 m depth.

Photomicrograph A below was taken in transmitted, cross polarized light at a three millimetre wide field of view. The photomicrograph illustrates an intensely phyllic-altered dacitic porphyry. Plagioclase phenocrysts altered to sericite (ser) and local pyrite (py; opaque), relict mafic sites altered to carbonate (cb) and pyrite, and local rutile (ru) occur in a groundmass of fine

grained quartz-sericite and local apatite (ap). This type of intense phyllic alteration that is commonly developed in the porphyry and felsite units.

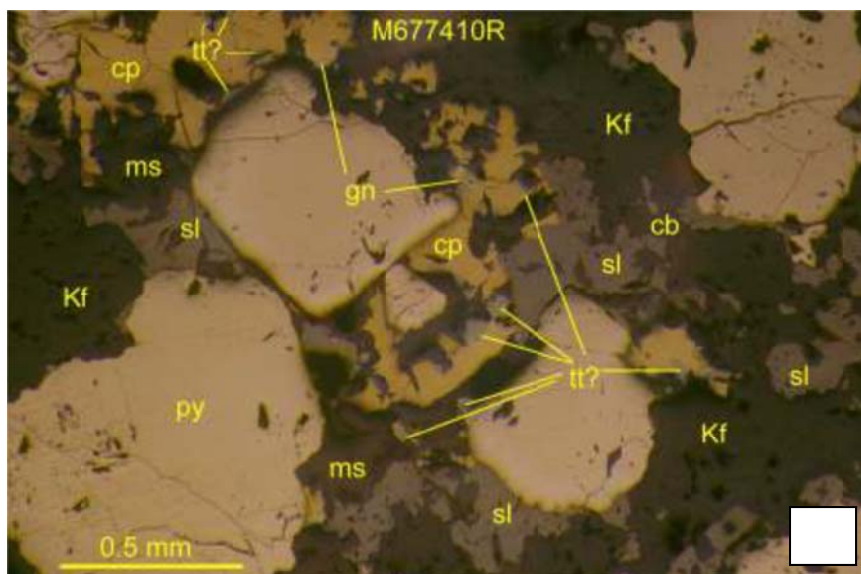


Photomicrograph B below was taken in reflected light at a 2.5 mm wide field of view. It illustrates secondary magnetite (mt), which is partly fracture controlled and locally replaced by pyrite (py), in a transitional propylitic/potassic altered andesitic porphyry. This alteration type is common in the drill area and typically correlates to strong values of magnetic susceptibility in core.



Photomicrograph C below was taken in reflected light with uncrossed polars at a 2.25 mm wide field of view. It illustrates breccia-hosted mineralization including coarse cubic pyrite (py) with intergrowths of sphalerite (sl) and local chalcopyrite (cp) with inclusions of galena (gn), and trace grey sulphosalt (tetrahedrite, tt?) intergrown with potassium feldspar (Kf), muscovite (ms) and carbonate (cb). This slide represents mineralization within a 1.76 m interval in

DDH-M12-03. That interval returned 2.76 g/t gold and 0.098 % copper and is part of a larger interval that graded 0.556 g/t gold over 53.00 m. Sulphosalt was observed in this slide and is thought to be associated with the elevated gold value of the sample.



Field observations mapped sericitic alteration in surface material within the drill area based on recognition of sericite, pyrite and strong bleaching with no visible quartz grains. Petrographic analysis has characterized similar rocks in core as phyllic-altered, but has identified secondary quartz as part of the alteration assemblage.

DEPOSIT TYPE

The Mint property is believed to host mineralization associated with two distinct deposit types. The first is alkalic-style porphyry mineralization (Canyon Mountain Occurrence) and the second is volcanic-hosted copper mineralization (White River Copper Occurrence).

The age of the Mint porphyry places it in a unique group of young, mineralized intrusions along the western edge of the Canadian and Andean Cordilleras. In Canada, there are two other, porphyry related intrusions known to be approximately this age. Catface (48±12 Ma.) on Vancouver Island; and, Corky (26±3 Ma), which lies about 90 km southeast of the Mint property. Catface has an indicated ore reserve of 56,000,000 tonnes at 0.40% copper and an inferred reserve of 263,000,000 tonnes at 0.38% copper (Chapman, 2009). The Corky porphyry was discovered in the late 1960s and was restaked in 2010 by Strategic Metals. The property has received only minor drilling and the extent and grade of mineralization is only partially constrained. In the Andean Cordillera, there are a number of 35 to 7 Ma porphyry deposits. A number of these porphyries are enriched in gold relative to copper. For example the Lobo-Marte deposit, located in northern Chile, has proven and probable resources of 164,230,000 tonnes at 1.14 g/t gold (Kinross, 2012).

The Slag claims in the southern-most part of the Mint property have potential for fracture-hosted or replacement-style copper mineralization. Historical work performed on the adjacent White River Copper property identified extensive copper mineralization within amygdaloidal basalts of

the Nikolai Assemblage. A 1969 IP survey identified a number of chargeability anomalies on the White River Copper Property and Slag claims (Figure 2). Some of the anomalies on the White River Copper Property are associated with known mineralization. The anomalies on the Slag property have not been drill tested and are blind targets below limestone cap rocks.

Exploration at the Slag claims could also be modelled on the Kennecott Deposit in Alaska, which lies 115 km west-southwest of the Mint property. The Kennecott Deposit was mined from 1911 to 1938 and produced 4.2 million tonnes at 13% copper. It has been described as a low temperature hydrothermal replacement deposit with complex mineralization, mainly chalcocite. Mineralization occurred in gently dipping Triassic dolomitic limestone overlying basalt. Only a small portion of ore outcropped at surface. Four mines (Bonanza, Glacier, Jumbo and Mother Lode), each with distinct types of ore, comprised the Kennecott Deposit. The Bonanza Mine hosted wide replacement veins striking normal to bedding. These veins were widest at their base and pinched out 150 to 300 m above. The Glacier Mine comprised boulders of ore within a lateral moraine, which are thought to have been scoured out of the Bonanza deposit. The Jumbo Mine hosted an ore body 25 by 45 by 120 m in size with an average grade of 60% copper. The Mother Lode deposit contains tabular or flat replacements that are localized by fissures in certain beds (Bateman, 1942). If Kennecott-type mineralization is present on the Slag claims, it would likely occur near the limestone-volcanic contact.

DISCUSSION AND CONCLUSIONS

The Mint property covers a large gold-enriched alkalic-type porphyry prospect associated with Miocene and younger intrusive and volcanic rocks. The property lies within the Wrangellia Terrane, which is host other deposits of similar age and mineralization style.

A soil geochemical sampling program performed in 2010 returned very encouraging gold and copper values, which combined with positive results from IP and magnetic surveys, prompted the 2012 exploration program. This program was designed to: 1) identify new targets through mapping, prospecting and soil geochemical sampling in the unexplored northern half of the property; and, 2) test beneath geophysical (chargeability-resistivity and magnetic) and soil geochemical anomalies in the southern half of the property.

No significant mineralization was discovered at surface in the northern half of the property perhaps due to thick, unmineralized mafic flows that “cap” the rocks in that area. Four of the five, widely spaced diamond drill holes in the southern half of the property returned long intervals with elevated gold values, and one hole (DDH-M12-03) returned particularly significant results including 0.556 g/t gold over 53 m. Gold mineralization is primarily hosted in hydrothermal breccias, contact breccias, and sheeted veins within a variably altered, subvolcanic intrusion. Copper and molybdenum values are relatively low in the drill holes, which could reflect the relatively high-level nature of the hydrothermal system. Silver values are generally of sub-economic grade, but are notably elevated in intervals with greater than one gram per tonne gold.

The petrographic study performed by Leitch (2012) identified two primary units (dacitic porphyry and andesitic porphyry), which were sub-divided by 2012 field work into andesite, felsite, and plagioclase porphyry lithologies. Widespread sericitic alteration appears to overprint potassic and propylitic alteration and is commonly associated with elevated gold mineralization.

Field work and petrographic studies have identified a subvolcanic hydrothermal system within a complex of dykes, plugs and breccias. The best mineralization occurs in breccia zones within dykes, and locally within contact breccias and sheeted veins. The southern part of the drill area may contain a buried, weakly mineralized pluton that has undergone variable amounts of sericitic, propylitic, and potassic alteration. Dykes, breccias bodies and volcanic rocks further north in the drill area mainly exhibit propylitic and sericitic alteration.

Follow up work is certainly warranted on the Mint Property due to the discovery of significant gold mineralization, which remains open laterally and to depth. To better define the controls and constraints on mineralization, additional diamond drilling is recommended and should include: 1) a hole that “scissors” toward DDH-M12-03 to test the thickness and continuity of the mineralized felsite dyke; 2) drill testing of magnetic lows associated with soil and rock geochemical anomalies immediately north of the drill area; and 3) longer holes to test deeper into the hydrothermal system. A series of shallow holes with a self-propelled, track-mounted reverse circulation drill should be considered to explore beneath overburden on relatively gentle slopes and the valley floor, west of the Canyon Mountain Occurrence. Other work should include prospecting, soil sampling, and possibly diamond drilling at the Slag claims to evaluate the IP-chargeability anomalies in that area. Due to the proximity of the Mint porphyry to Nikolai flood basalts, which are known to carry platinum group elements (PGE) elsewhere in Wrangellia, consideration should be given to assaying of some samples for PGE content.

Respectfully submitted,

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

N. Bueckert, B.Sc.

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Yukon Geological Survey

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APPENDIX I

STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, Nicholas Bueckert, geologist, with business addresses in Vancouver, British Columbia and Whitehorse, Yukon Territory and residential address in Squamish British Columbia, do hereby certify that

1. I graduated from the University of British Columbia in 2012 with a B.Sc. Honours in Geological Sciences.
2. From 2011 to present, I have been actively engaged in mineral exploration in the Yukon Territory and British Columbia.
3. I have personally participated in the fieldwork reported herein and have interpreted all data resulting from this work.

N. Bueckert, B.Sc.

APPENDIX II

ASSESSMENT OF STRATEGIC MINT IP-RESISTIVITY SURVEY, CONDOR CONSULTING INC., FEBRUARY 2012

Date: February 22, 2012

To: Bruce Youngman

From: Ken Witherly

Subject: Assessment of Strategic Mint IP-resistivity survey

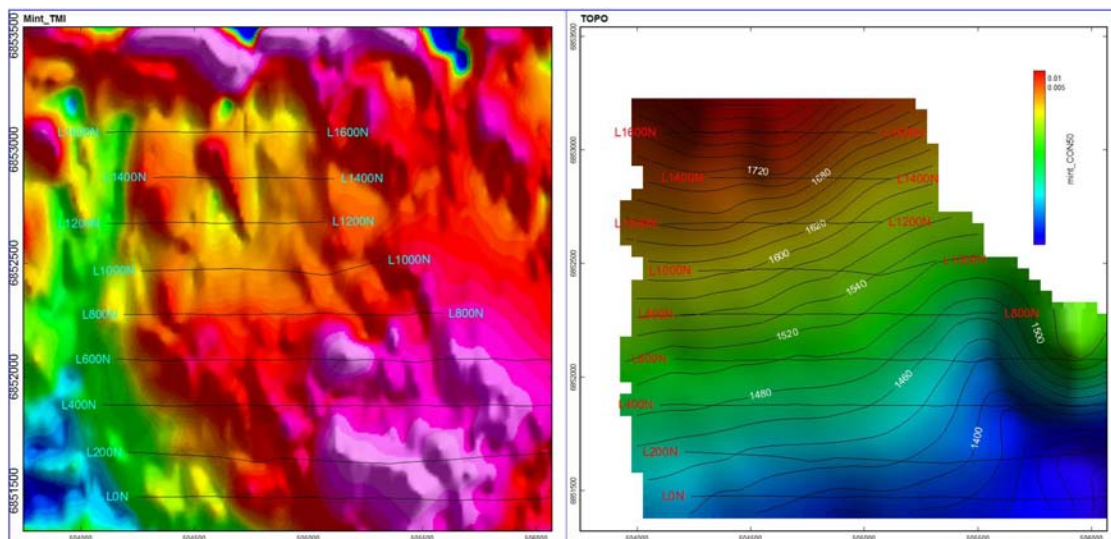
Bruce-

This memo outlines the outcomes of the IP-resistivity survey completed on the Mint property last year by Aurora. The year before Condor assessed a magnetic-radiometric survey over the property. This has been reported on by Goldie, December 2010. A magnetic grid generated as part of this assessment is used in this report.

The Strategic web site has this to say about Mint:

The Mint Property hosts newly discovered alkaline-type porphyry gold, copper and molybdenum mineralization that is associated with a young, very high level hornblende-biotite granodiorite stock. This discovery is situated within a belt of porphyry deposits that extends along the length of the Wrangellia geological terrane from Vancouver Island to Alaska. The property comprises 250 claims located 25 km south of the Alaska Highway in southwestern Yukon. Soil samples collected during summer 2010 outlined a 400 by 1200 m area of strongly to very strongly anomalous gold values (100 to 3400 ppb), which are accompanied by high copper and molybdenum values. Preliminary results from an airborne geophysical survey show potassic and magnetic highs that are approximately coincident with the soil anomaly.

The magnetic anomaly referred to on the Strategic web site was covered by an IP-resistivity grid. The primary reference for this work is the Aurora Geoscience IP Field Report (Stewart-July 13, 2011). The magnetic result (TMI) is shown in Figure 1 along with an image of the topography and the location of the IP-resistivity lines.



A series of plan and 2D sections were created from the IP-resistivity results. A selection of these products are presented and discussed here. Digital versions are provided as well (Appendix C).

Figure 2 shows the mapped local geology and the chargeability at 100 m depth below ground surface. The chargeability result shows there is a major feature which lies under glacial cover. The client had hoped to obtain more coverage along the eastern side of the survey grid but the contractor said that steep, rubbly ground precluded access.

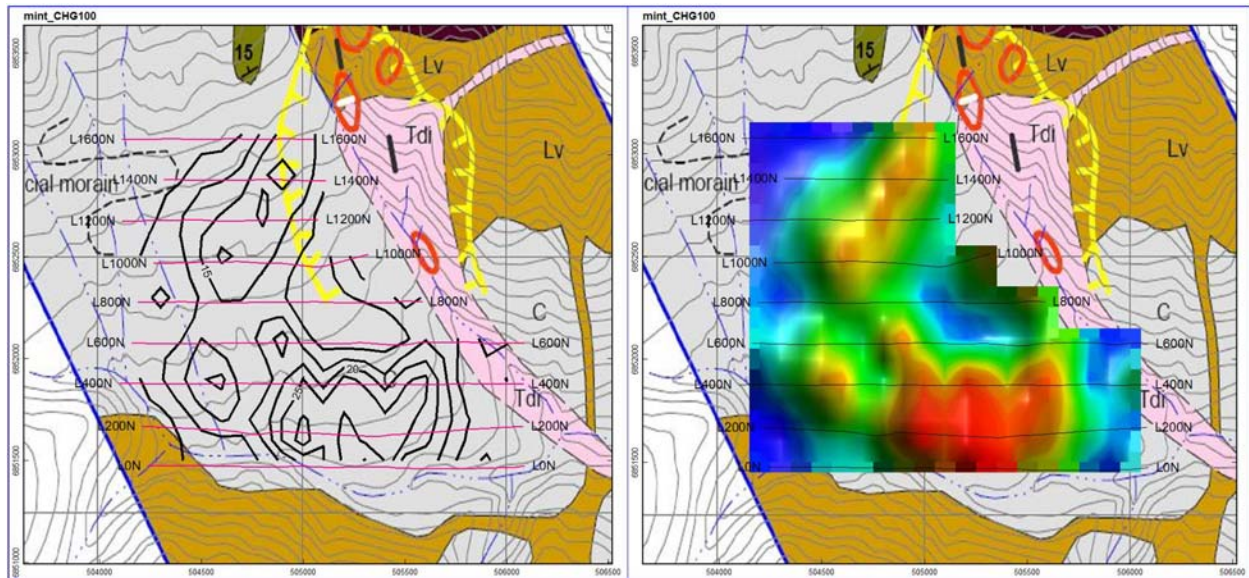


Figure 2: Local geology with chargeability 100 m depth contours (left image) and chargeability 100 m depth image (right).

Figure 3 shows the TMI image with the chargeability contours superimposed (left side) with the chargeability image on the right. This shows the large zone of higher chargeability at the southern end of the survey block overlies the area of strong magnetic response.

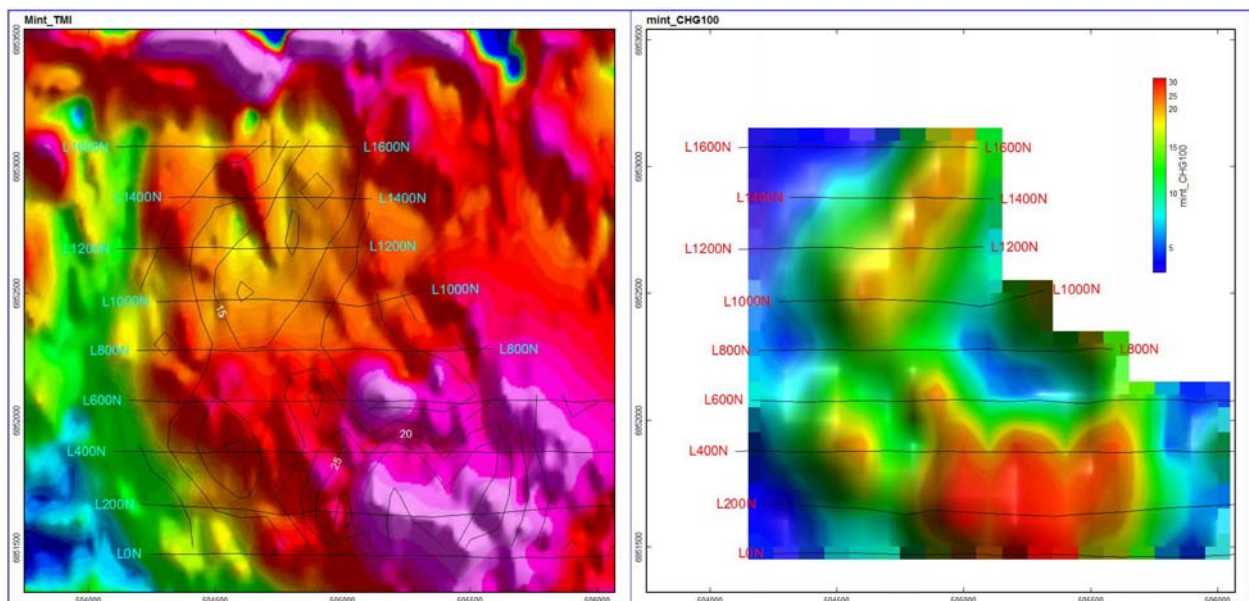


Figure 3: TMI with chargeability contours (left) and chargeability image (right).

Figure 4 shows the TMI image with the resistivity contours superimposed (left side) with the resistivity image on the right. This image shows there is a strong discrete conductive feature located on the west side of the TMI high.

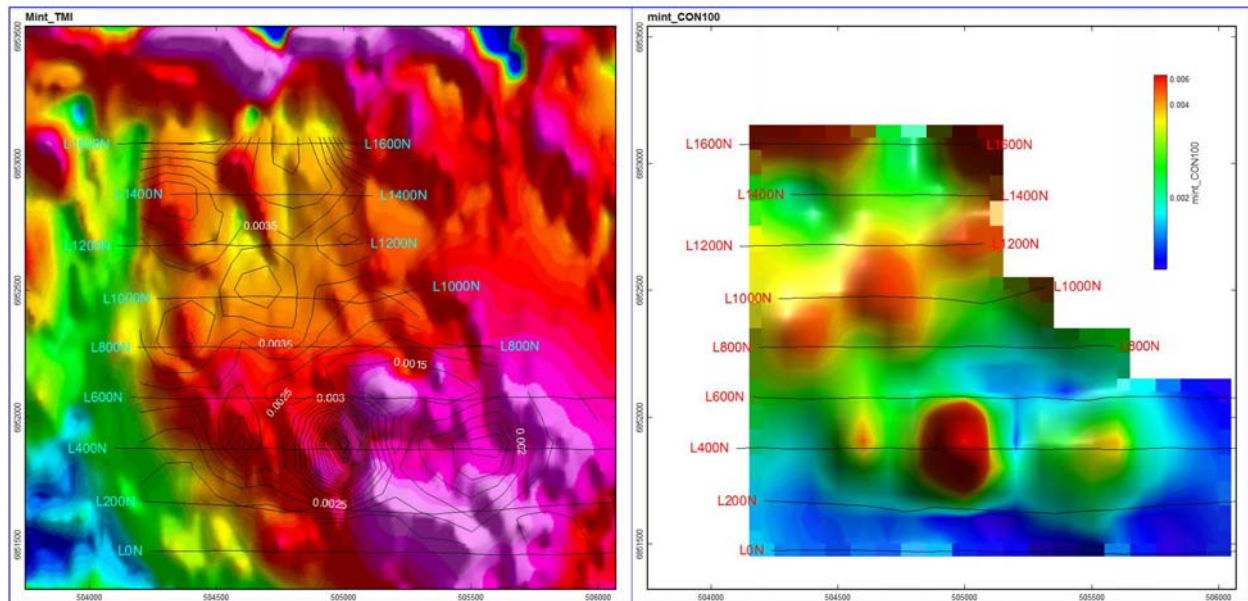


Figure 4: TMI with resistivity contours (left) and resistivity image (right).

Figure 5 shows the chargeability and resistivity for 100 m depth. So as to allow for a better comparison, the contours from the chargeability are displayed over the resistivity image and those of the resistivity are overtop the chargeability image. Note the resistivity grid is displayed in conductivity units (mS/m) and some conversions into ohm-m are provided for convenience. On the images as well, some interpretive line work is provided to show the trends of the two parameters.

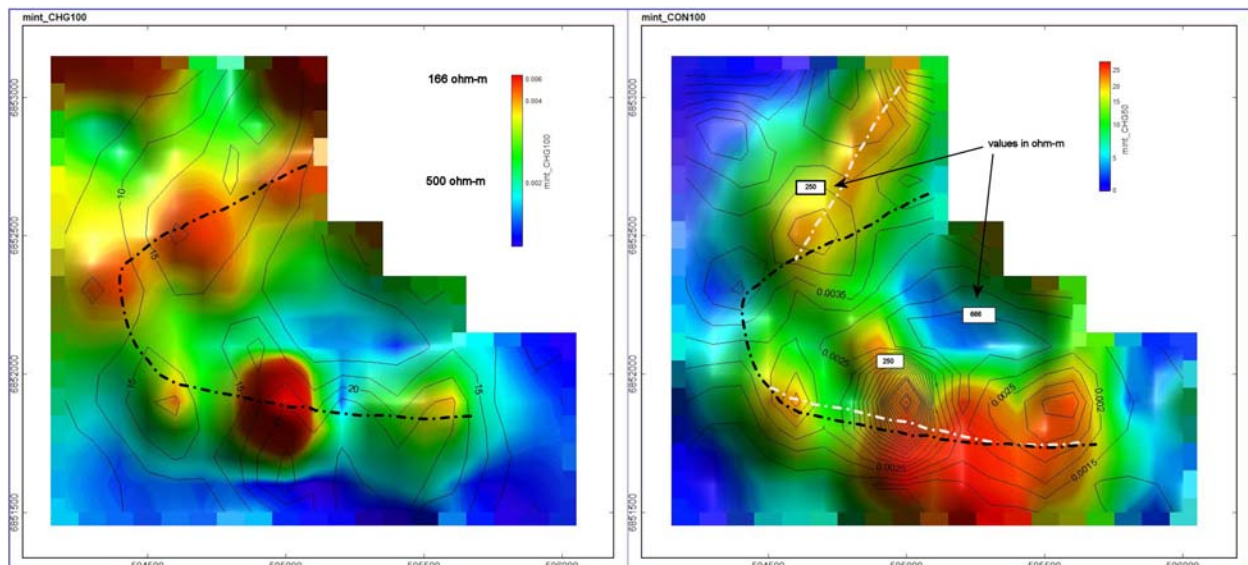


Figure 5: Resistivity image with chargeability contours (left) and chargeability image with resistivity contours (right). Both for 100 m depth.

To a first order, they appear similar and show a semi-circle of lower resistivity and higher chargeability that is closed to the west but open to the east (into area that additional data was not obtained as noted above). There is a departure from this pattern for the northern part of the chargeability response where the chargeability high trends more steeply than the limb of the resistivity low in the same area.

Figure 6 shows the full set of resistivity and chargeability sections in a 3D perspective (looking 012). On each section an estimate of the depth of the observed features is provided. Overall the resistivity lows and chargeability highs are not right at surface but appear to be strongest 50-100 m. This has implications for any drill testing of these features.

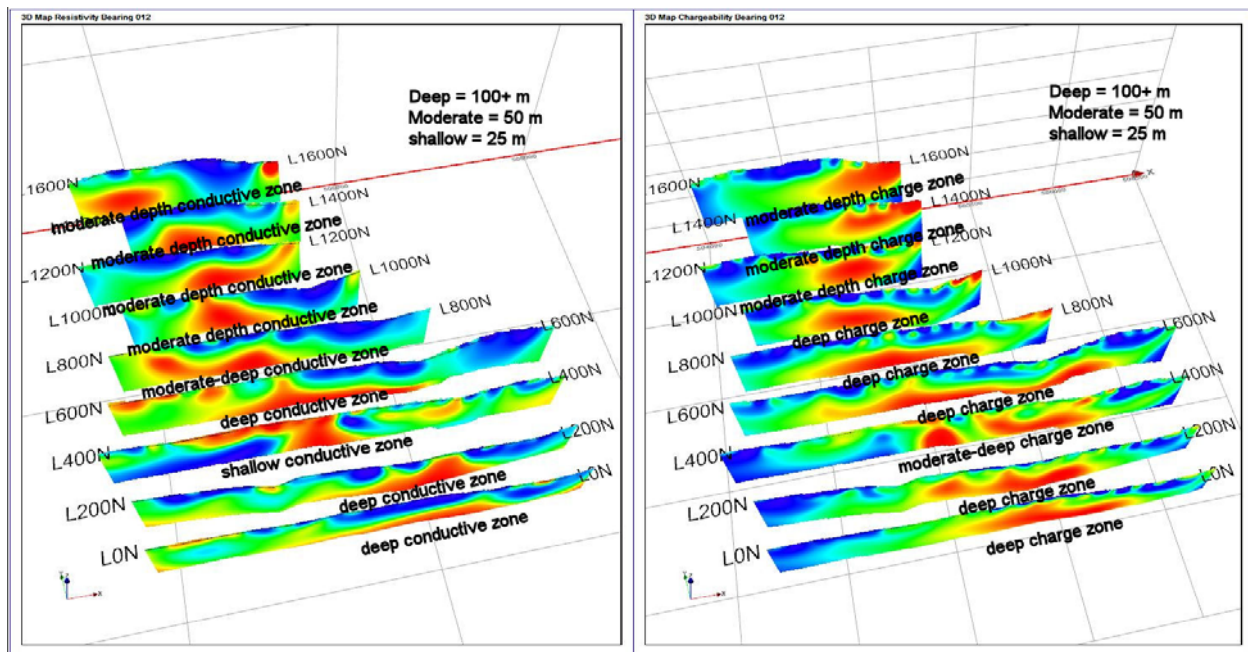


Figure 6: 3D display of resistivity (left) and chargeability (right) sections with general guidance as to depth of features.

Discussion: The client's area of strongest geochemical response did not get tested by the IP-resistivity survey. This is shown in Figure 7 which is a plot of the copper geochemistry and chargeability 100 m depth. However, the chargeability high does seem to be zoned around the geochemical response.

As to follow-up, based on the existing data, the coincident magnetic-chargeability response noted in Figure 3 should be tested. Also, while the IP-resistivity survey did not extend over the strongest geochemical responses, the data appears sufficient to suggest a favorable zoning near the geochemical response is taking place and hence warrants drilling as well.



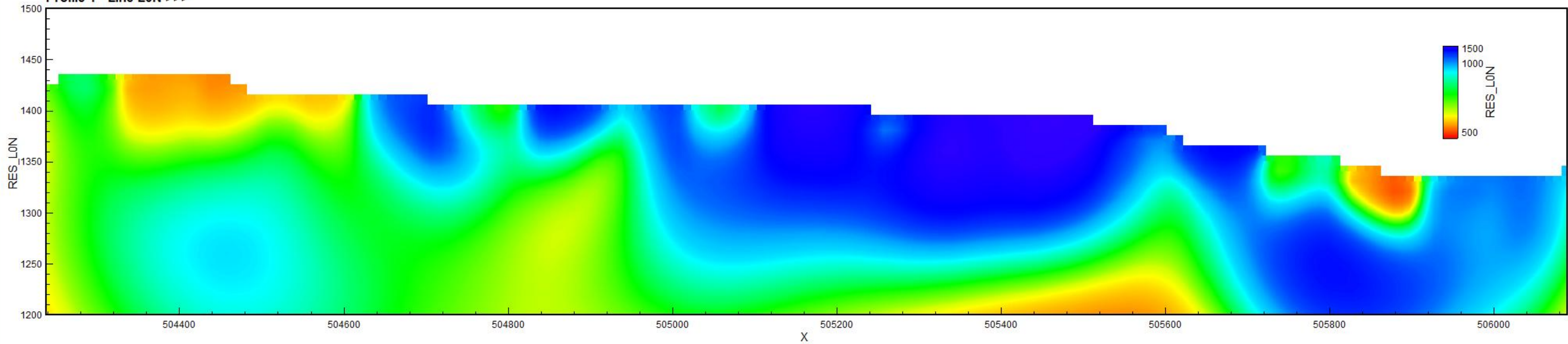
Ken Witherly

Condor Consulting, Inc., St. 150, 2201 Kipling Street, Lakewood Colorado 80215, 303-423-8475

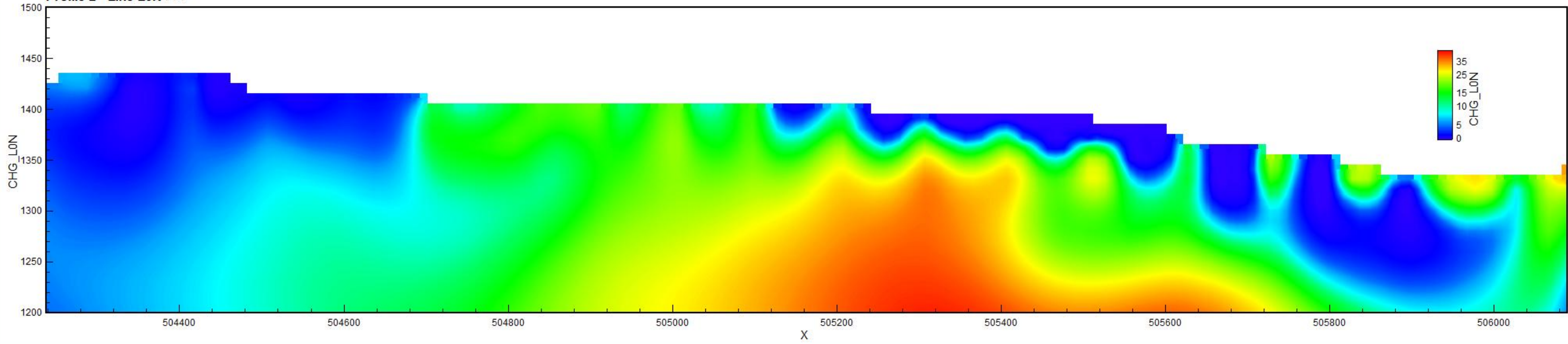
Appendix A

Complete set of IP-resistivity sections

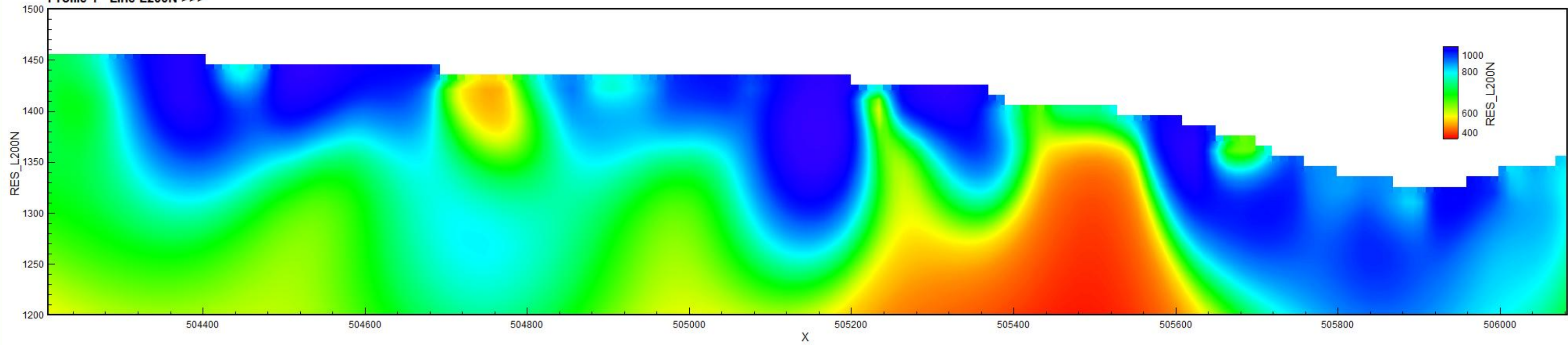
Profile 1 Line L0N >>>



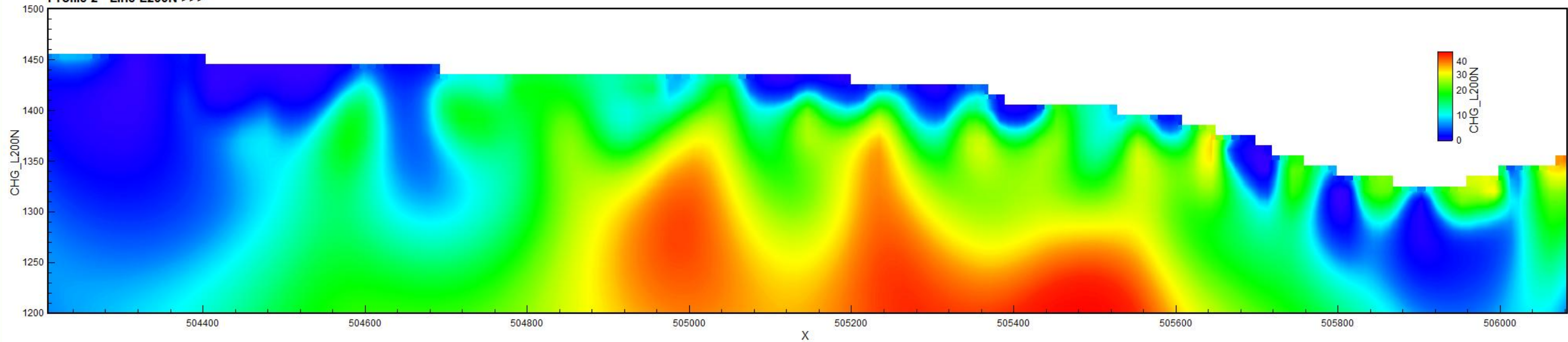
Profile 2 Line L0N >>>



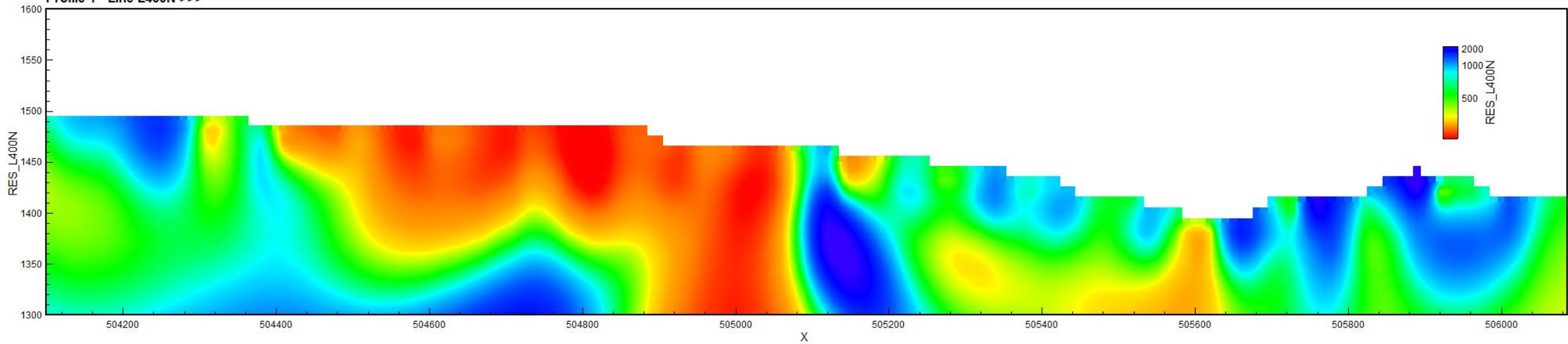
Profile 1 Line L200N >>>



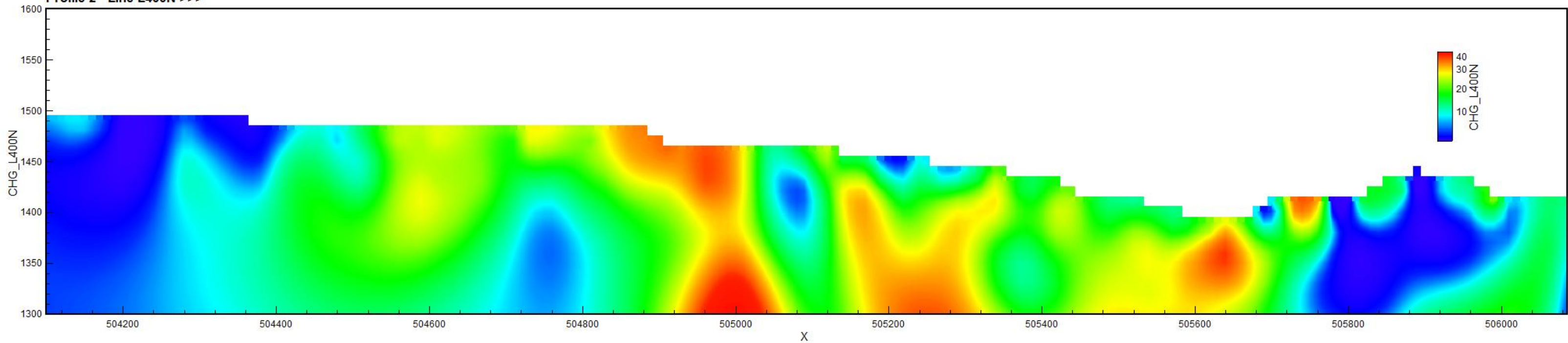
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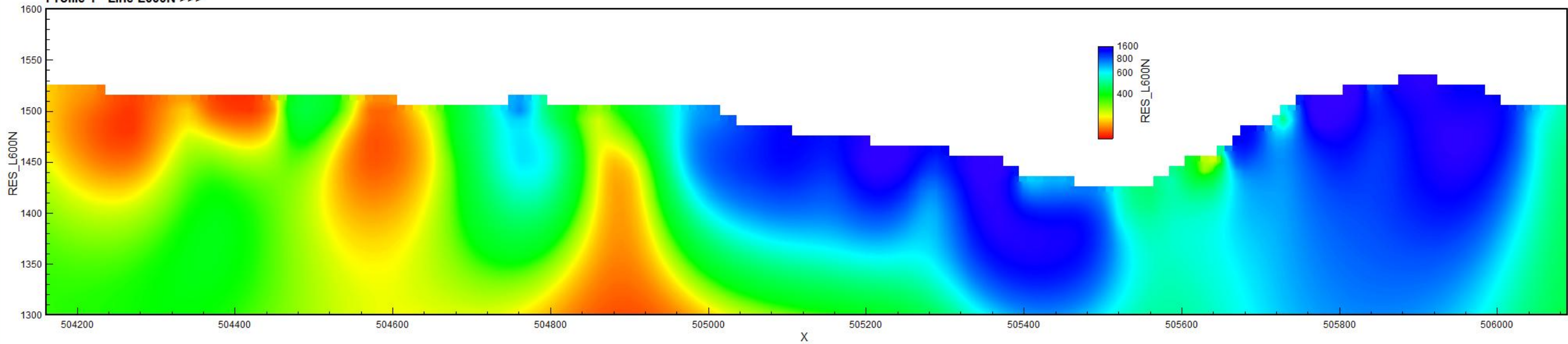
Profile 1 Line L400N >>>



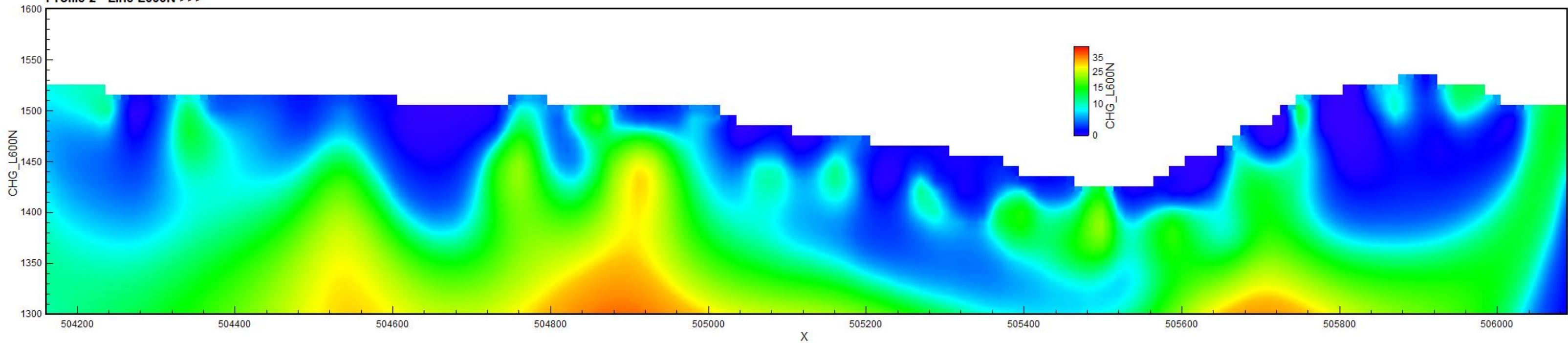
Profile 2 Line L400N >>>



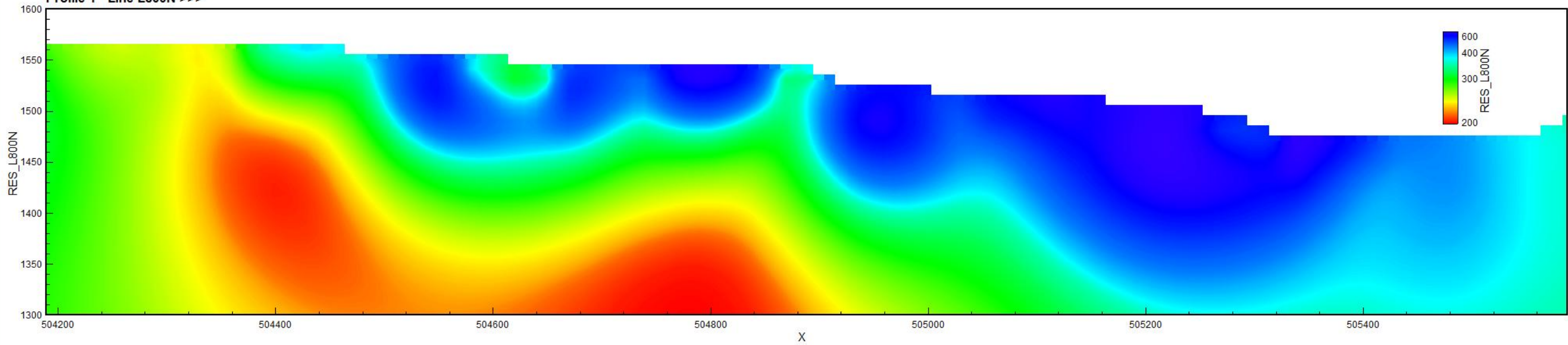
Profile 1 Line L600N >>>



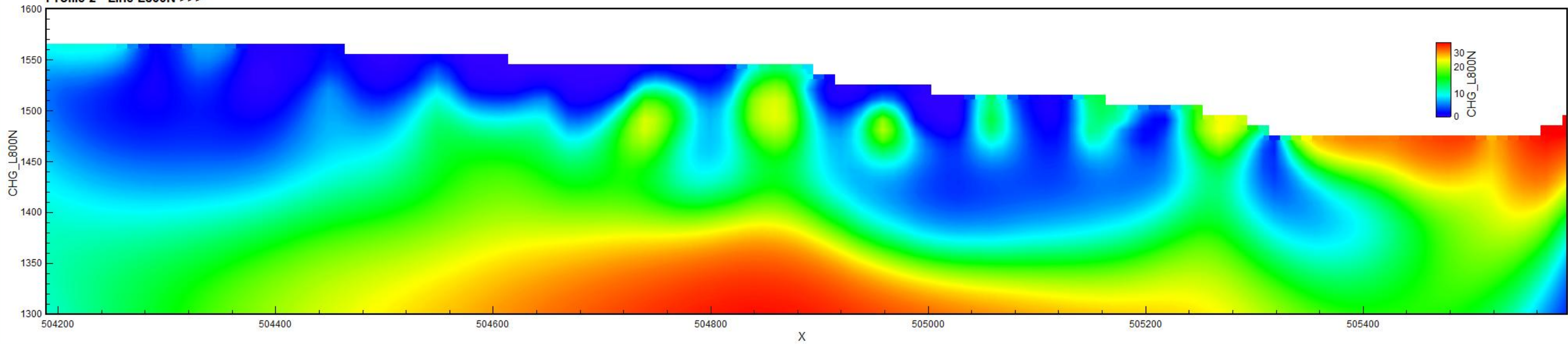
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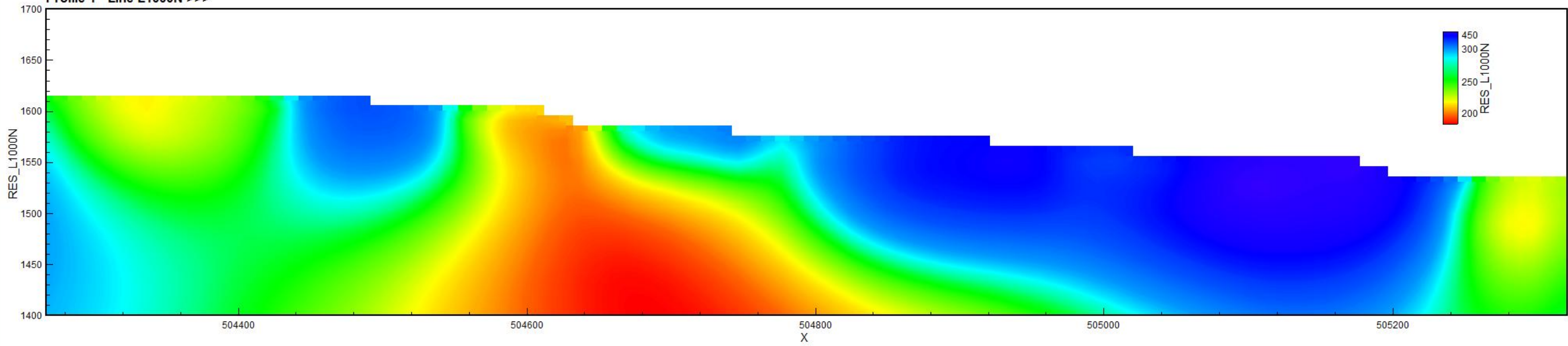
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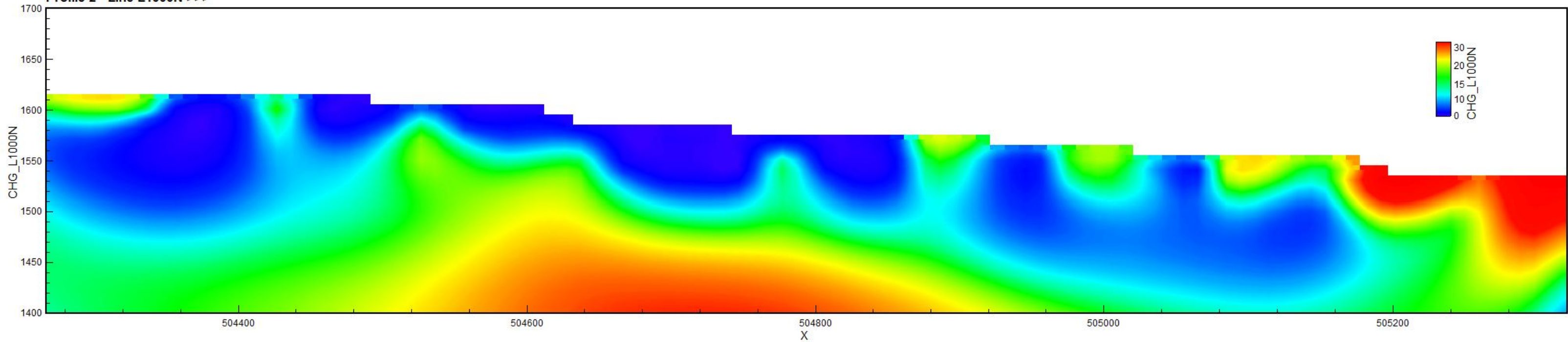
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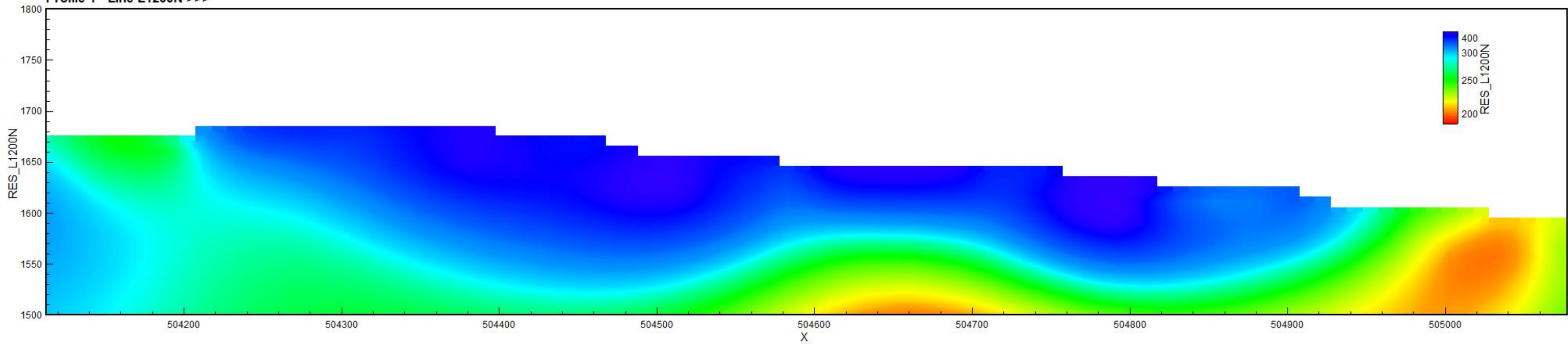
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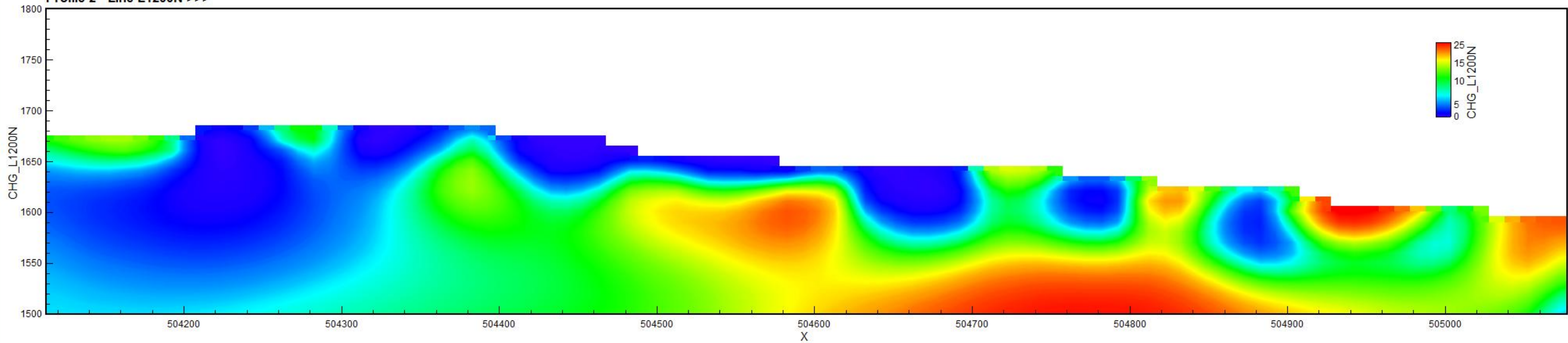
Profile 2 Line L1000N >>>



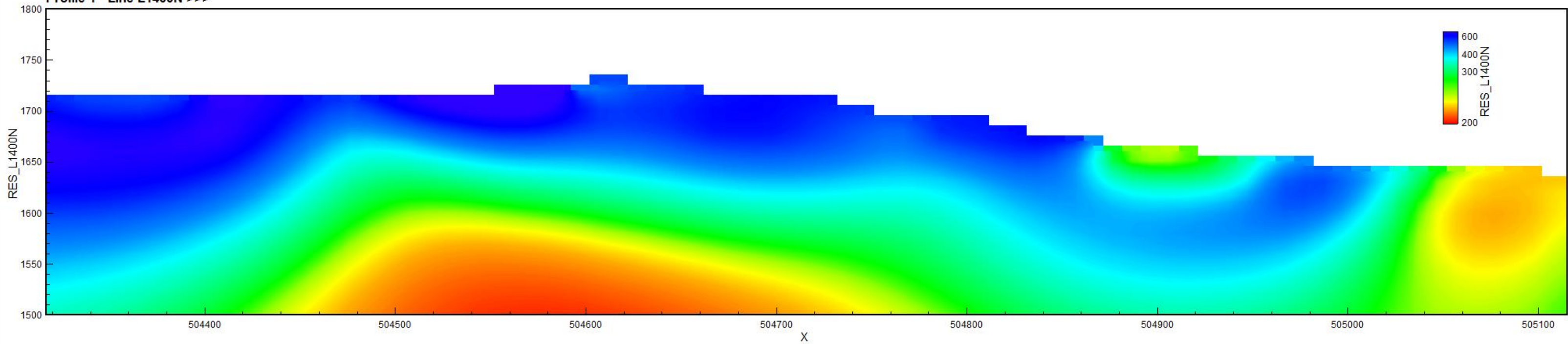
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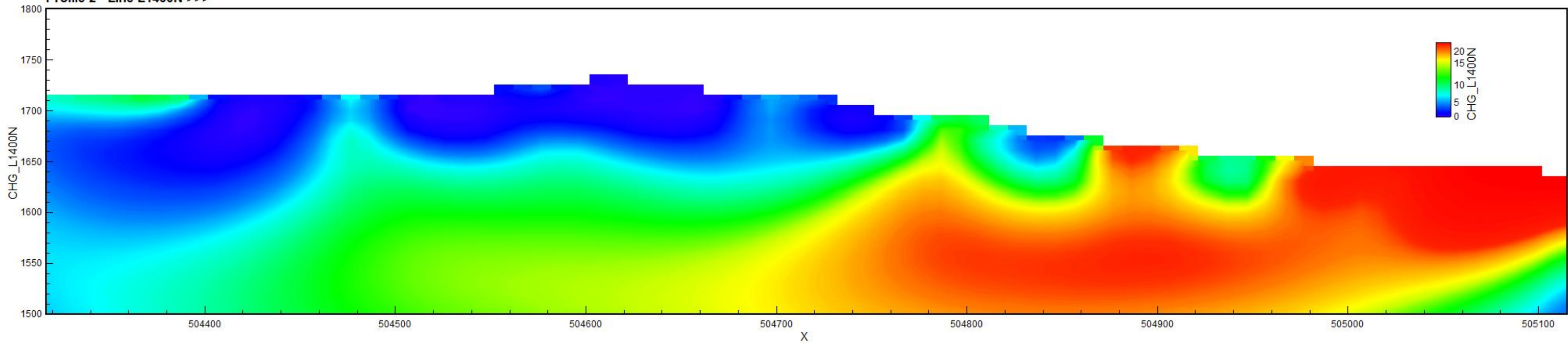
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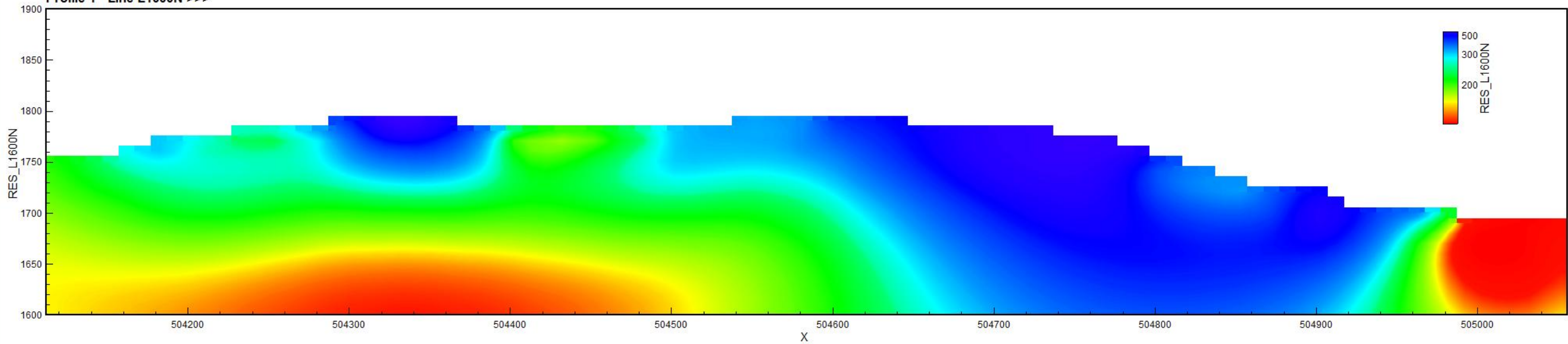
Profile 1 Line L1400N >>>



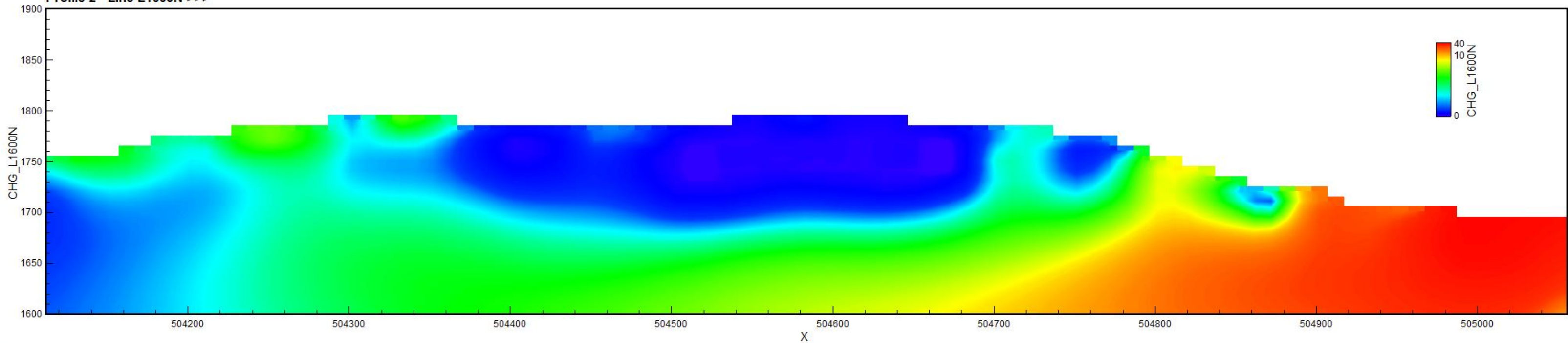
Profile 2 Line L1400N >>>



Profile 1 Line L1600N >>>

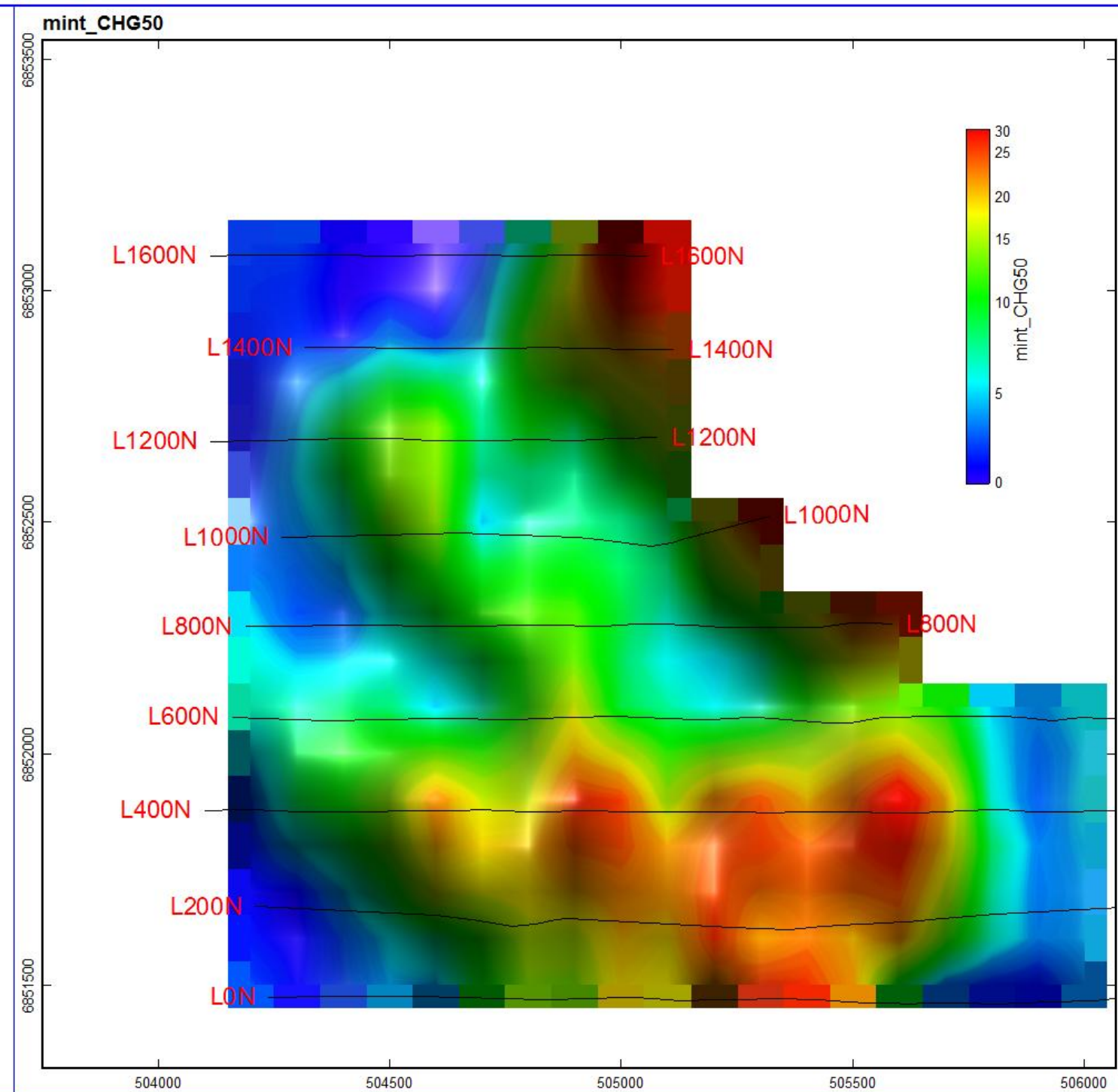
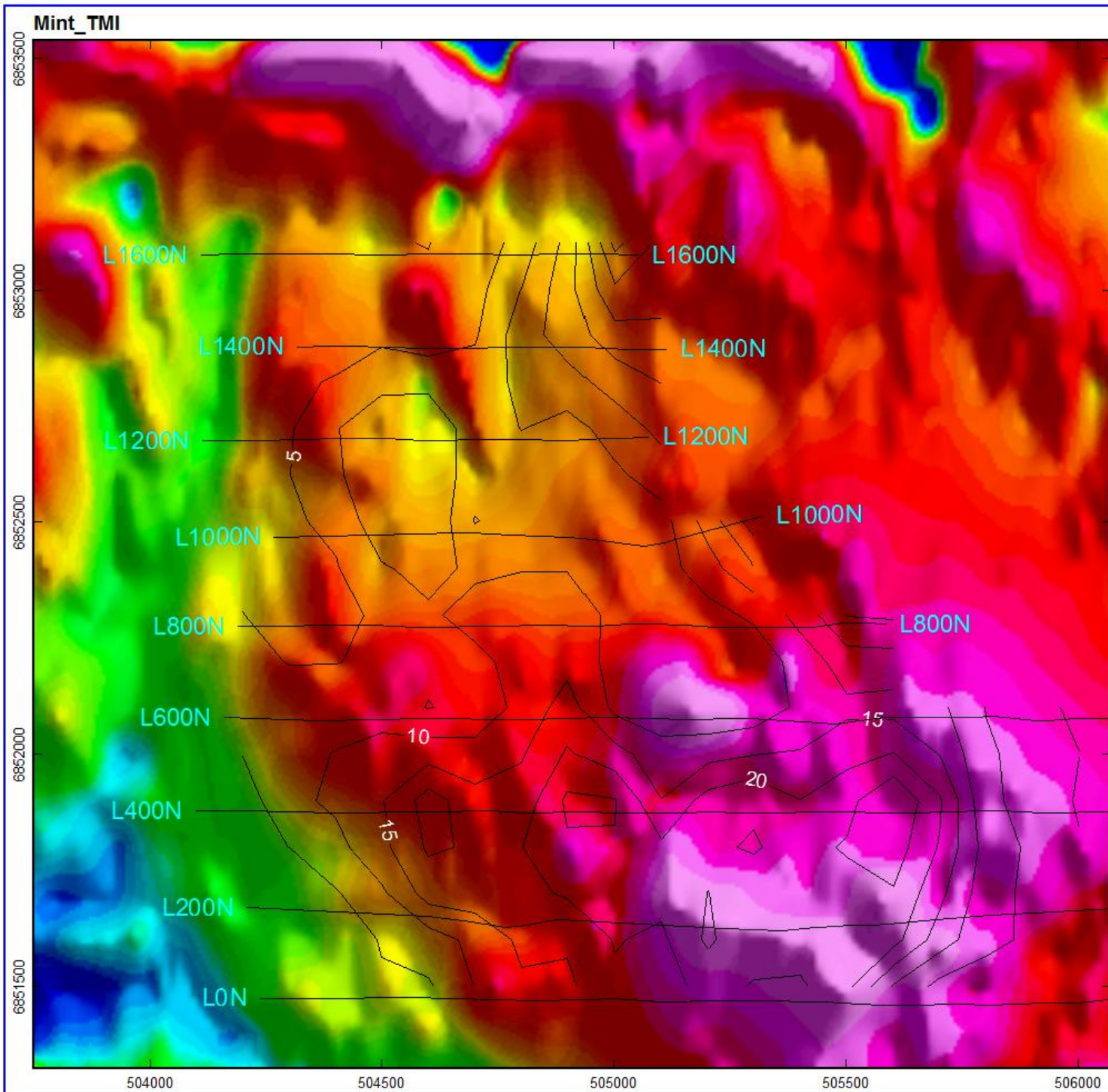


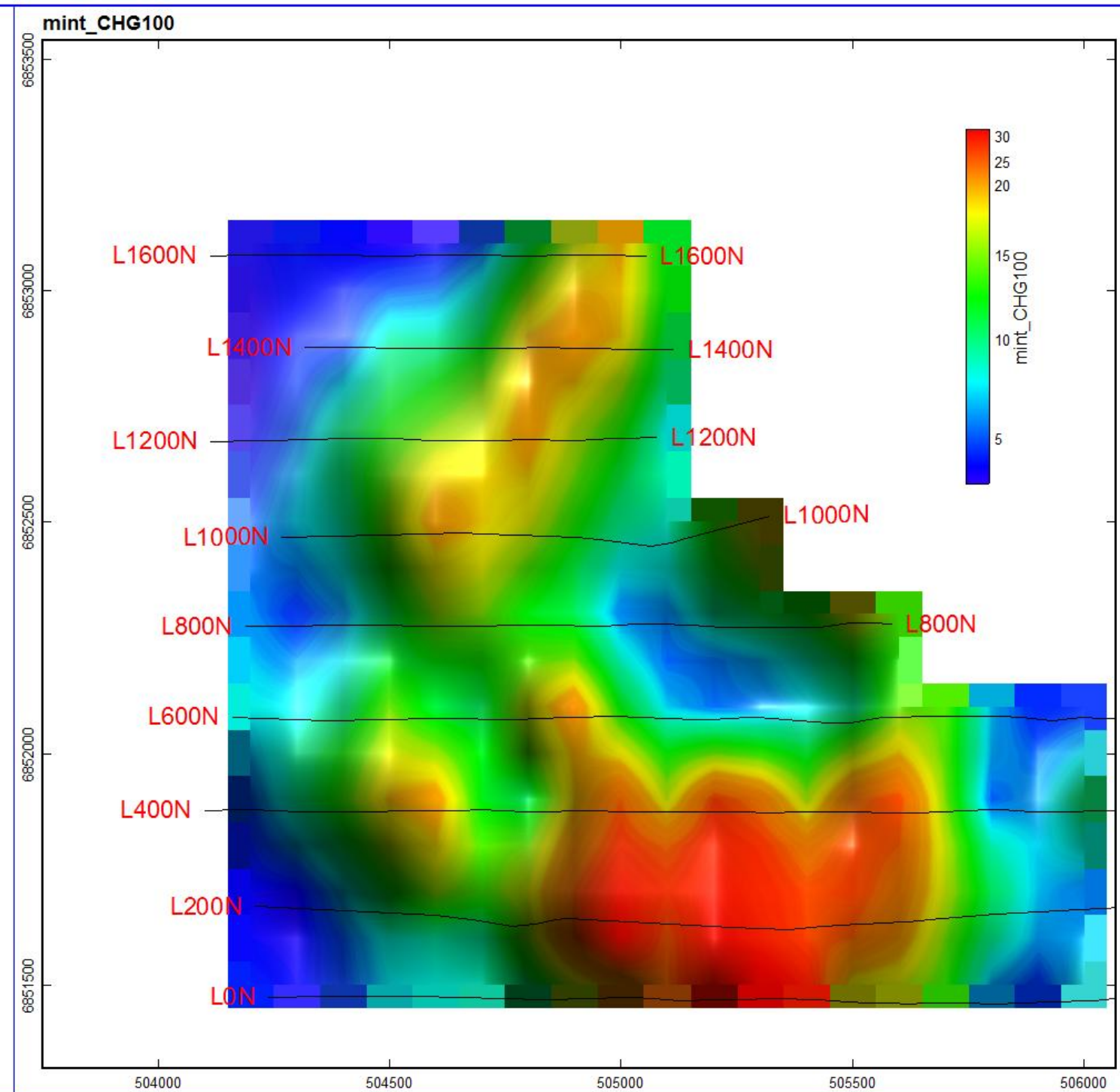
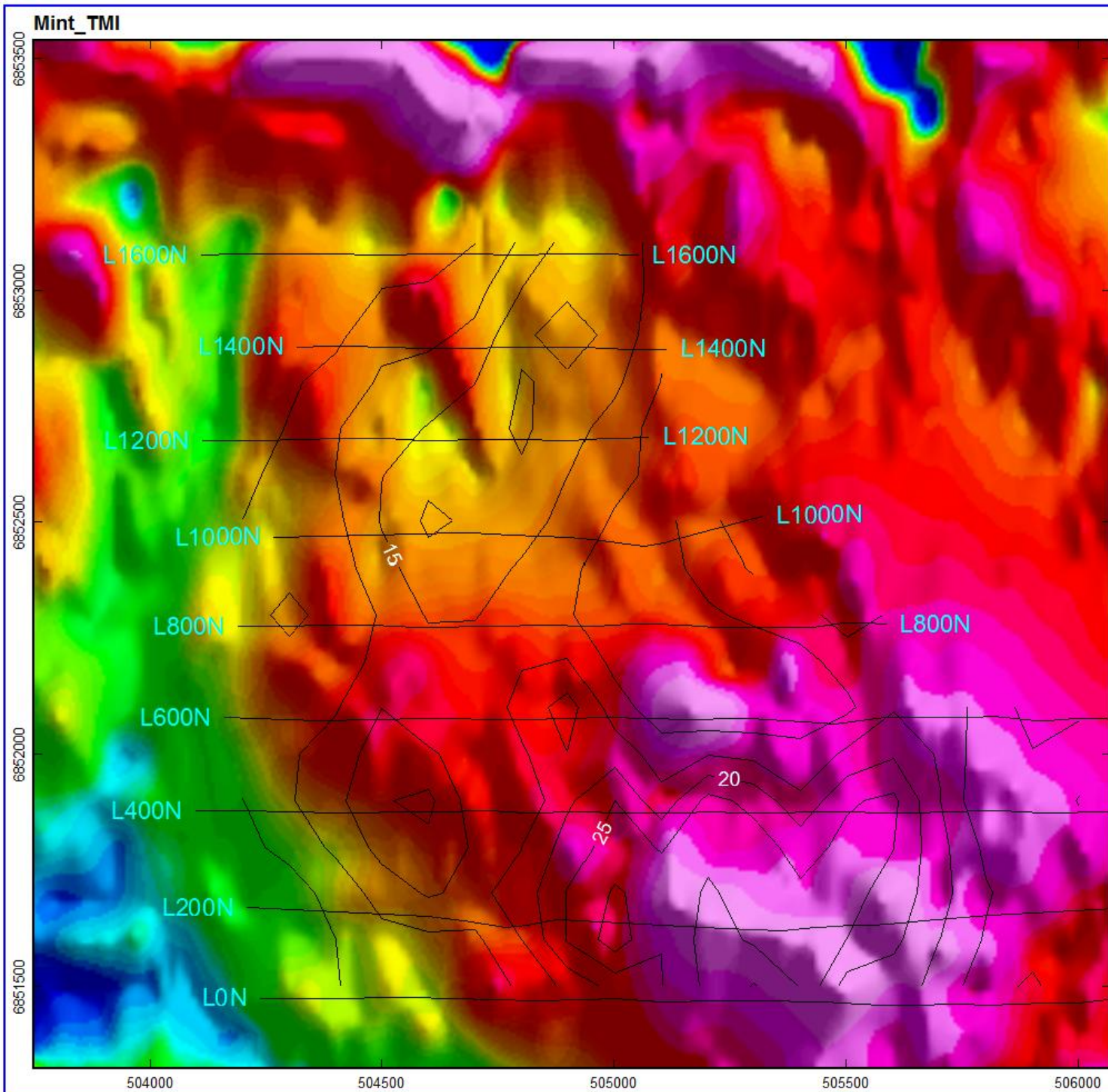
Profile 2 Line L1600N >>>

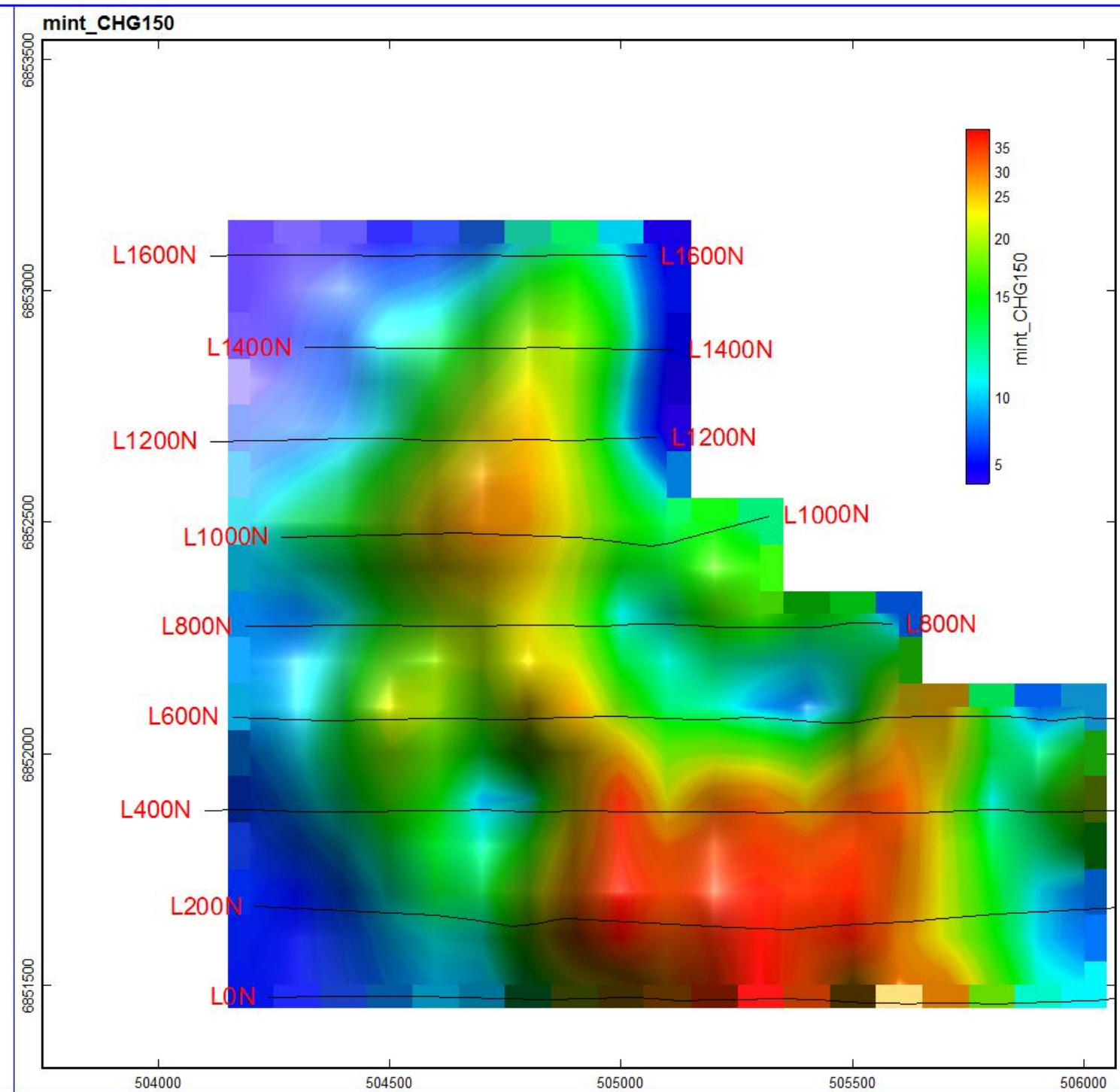
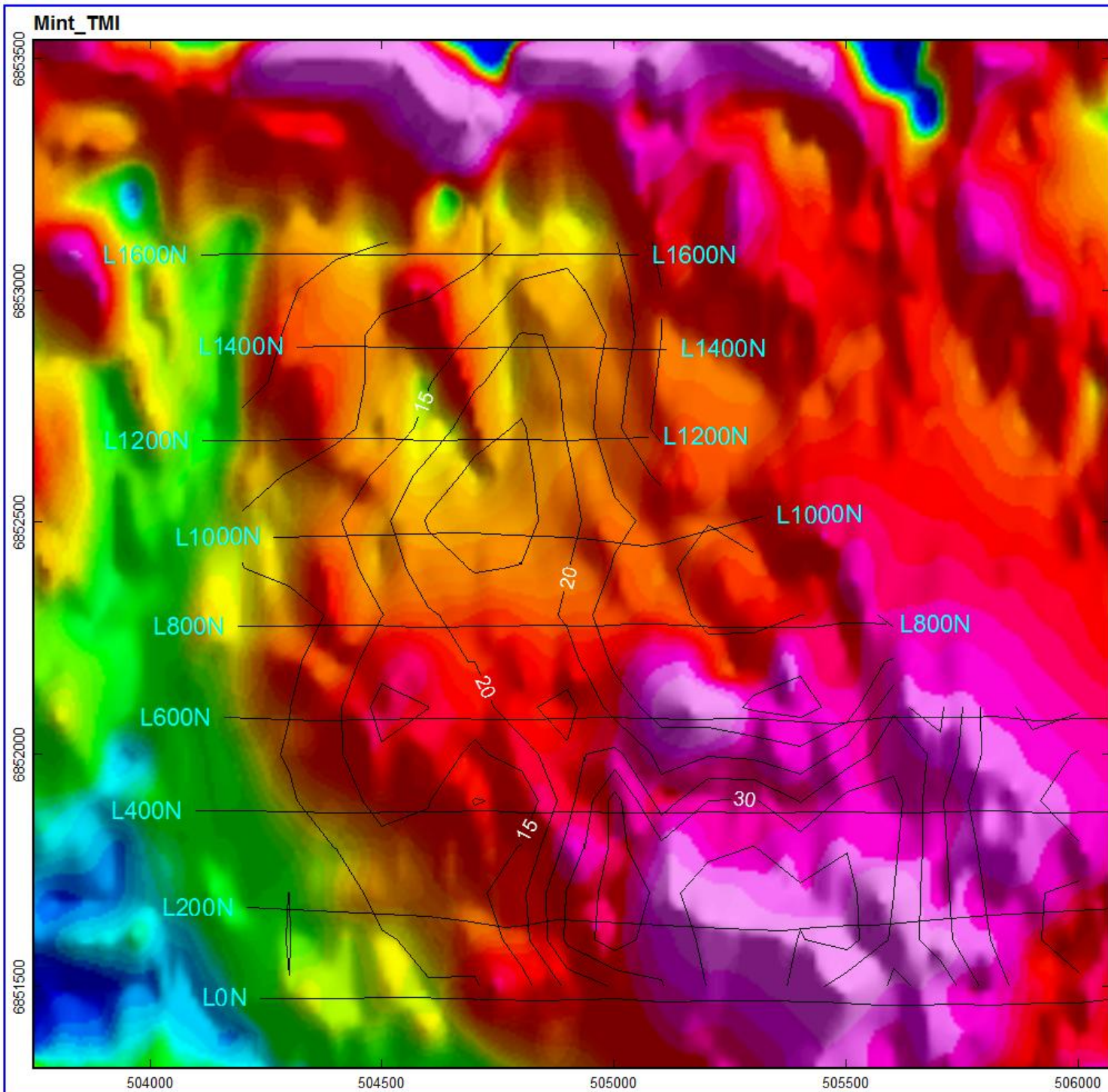


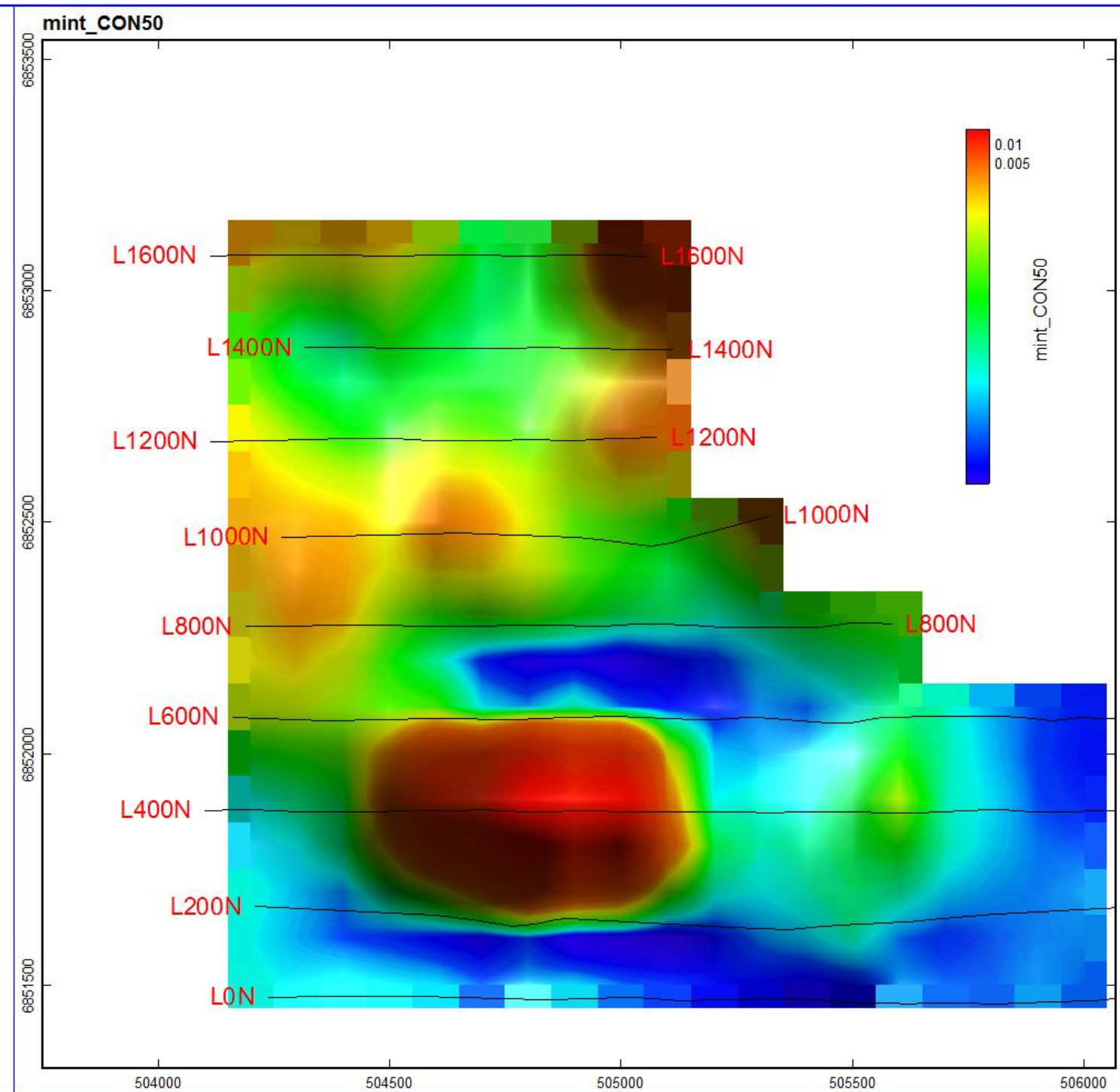
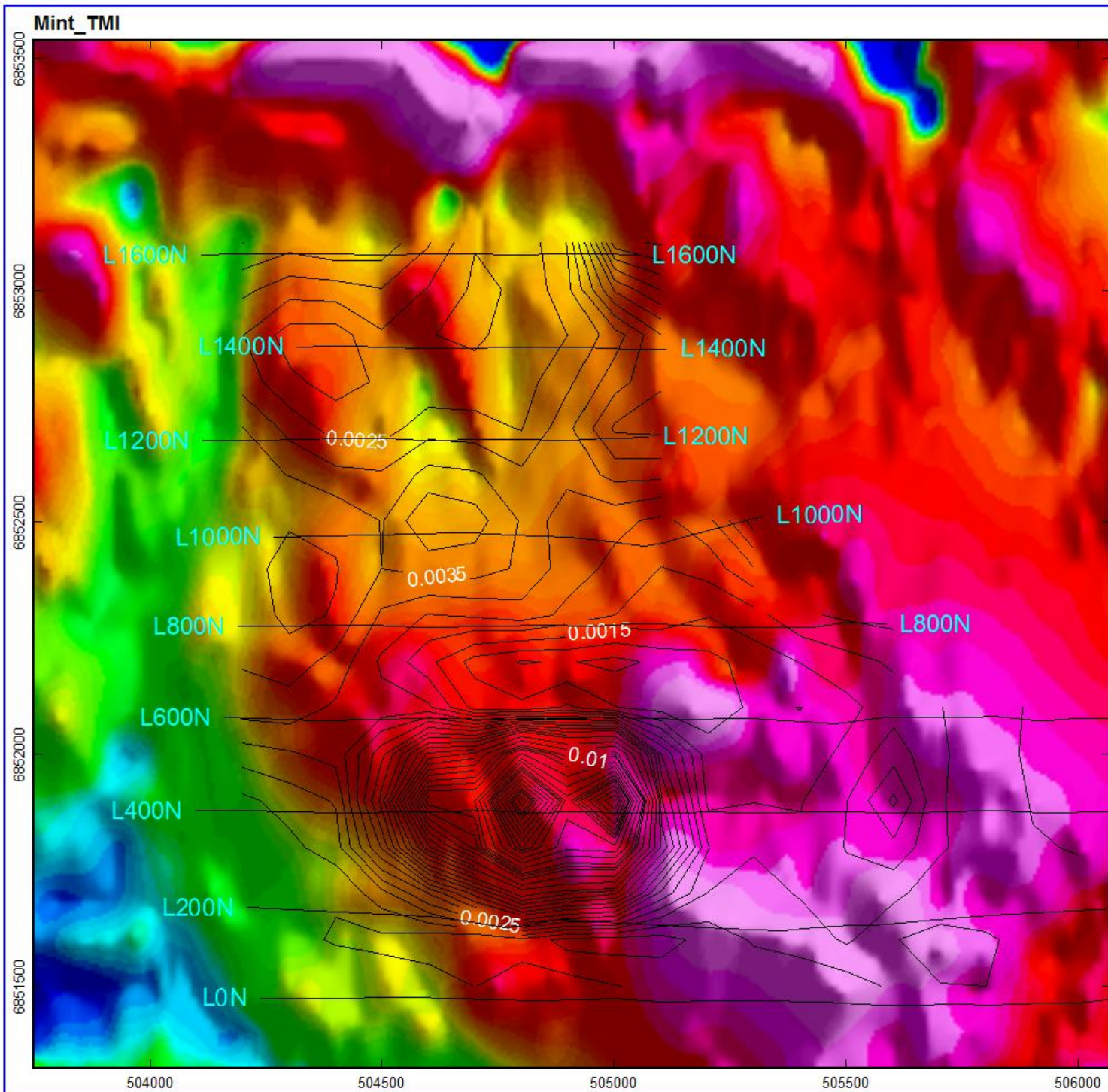
Appendix B

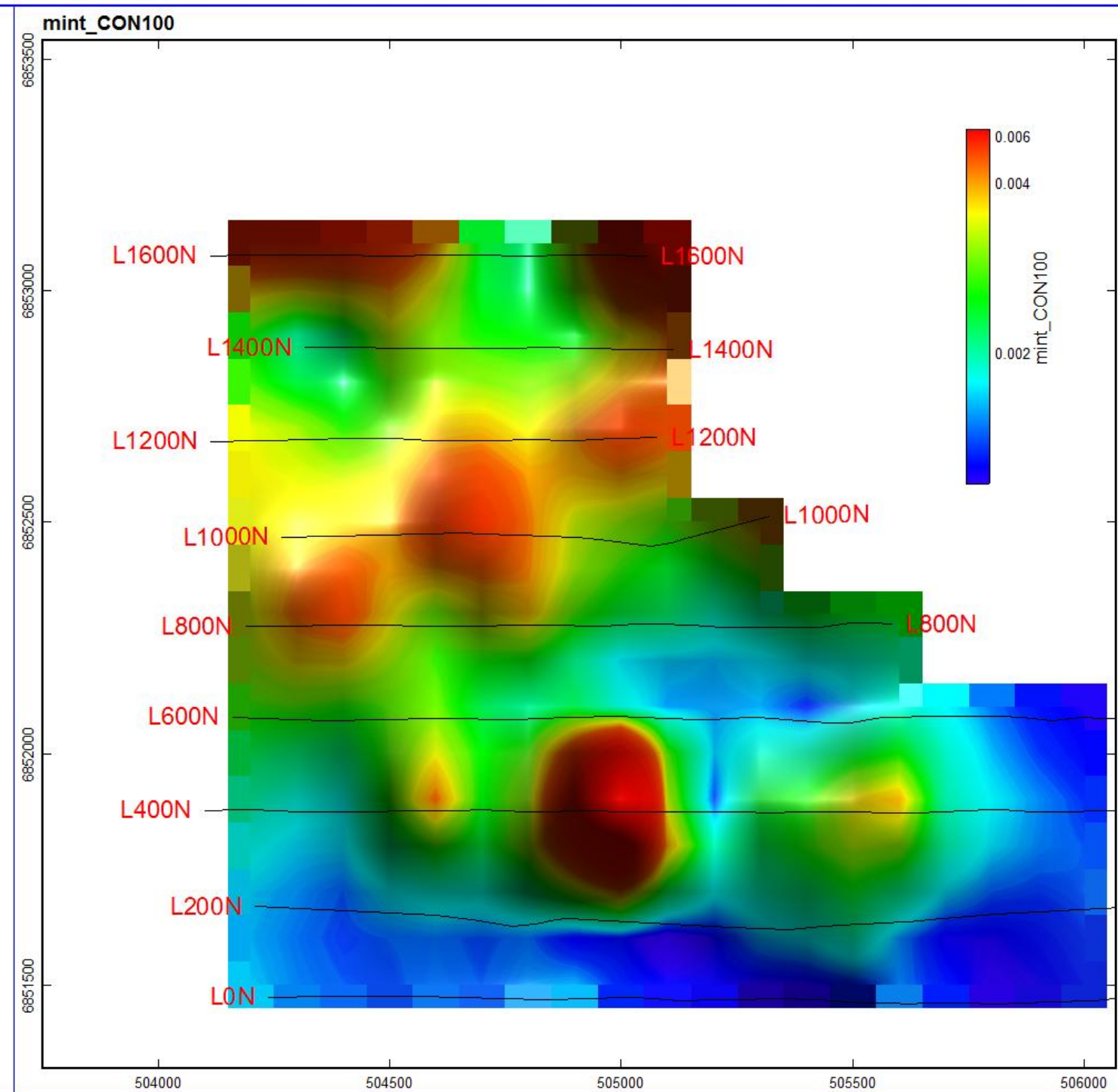
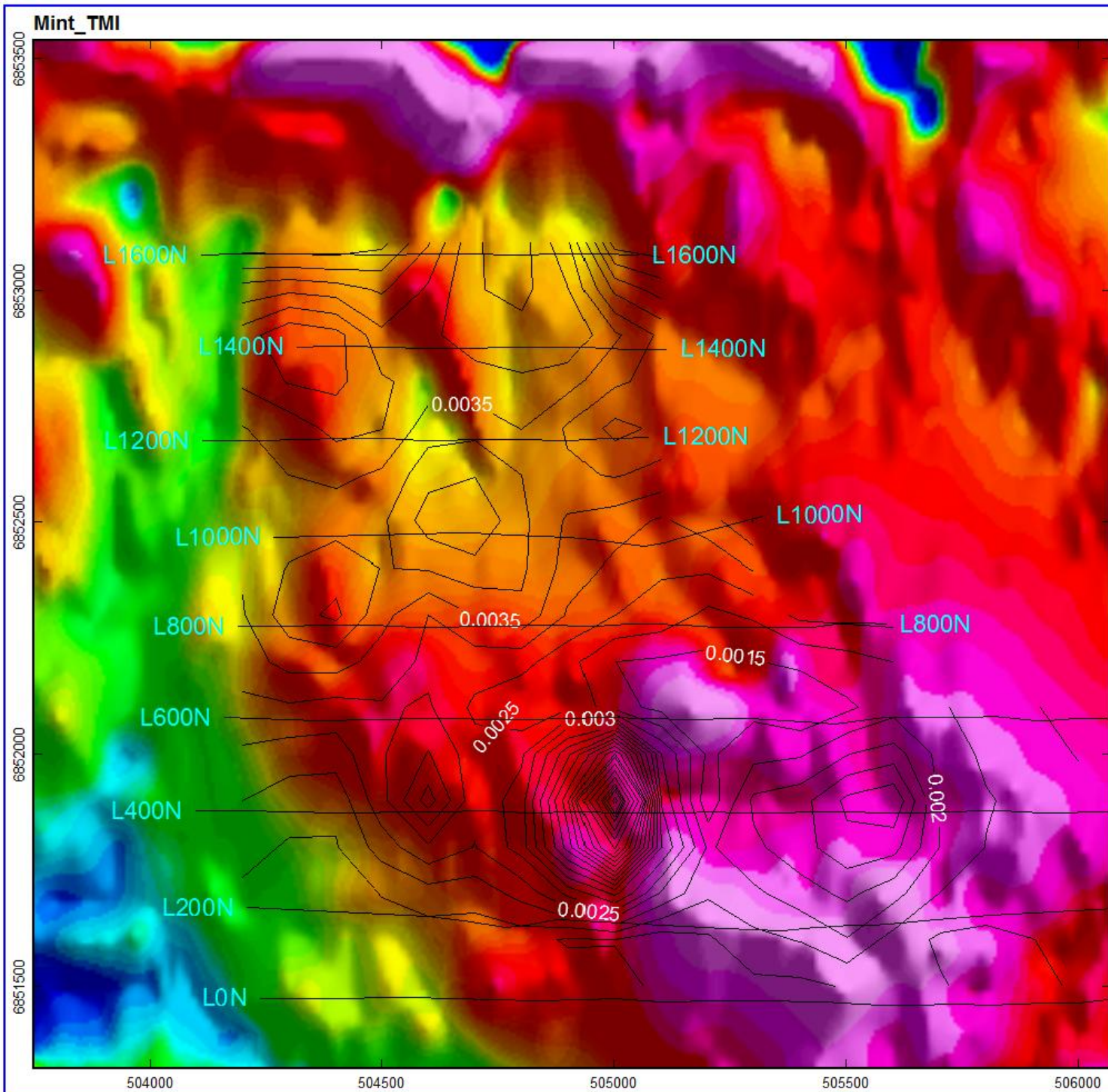
Additional plots of TMI-chargeability-resistivity results

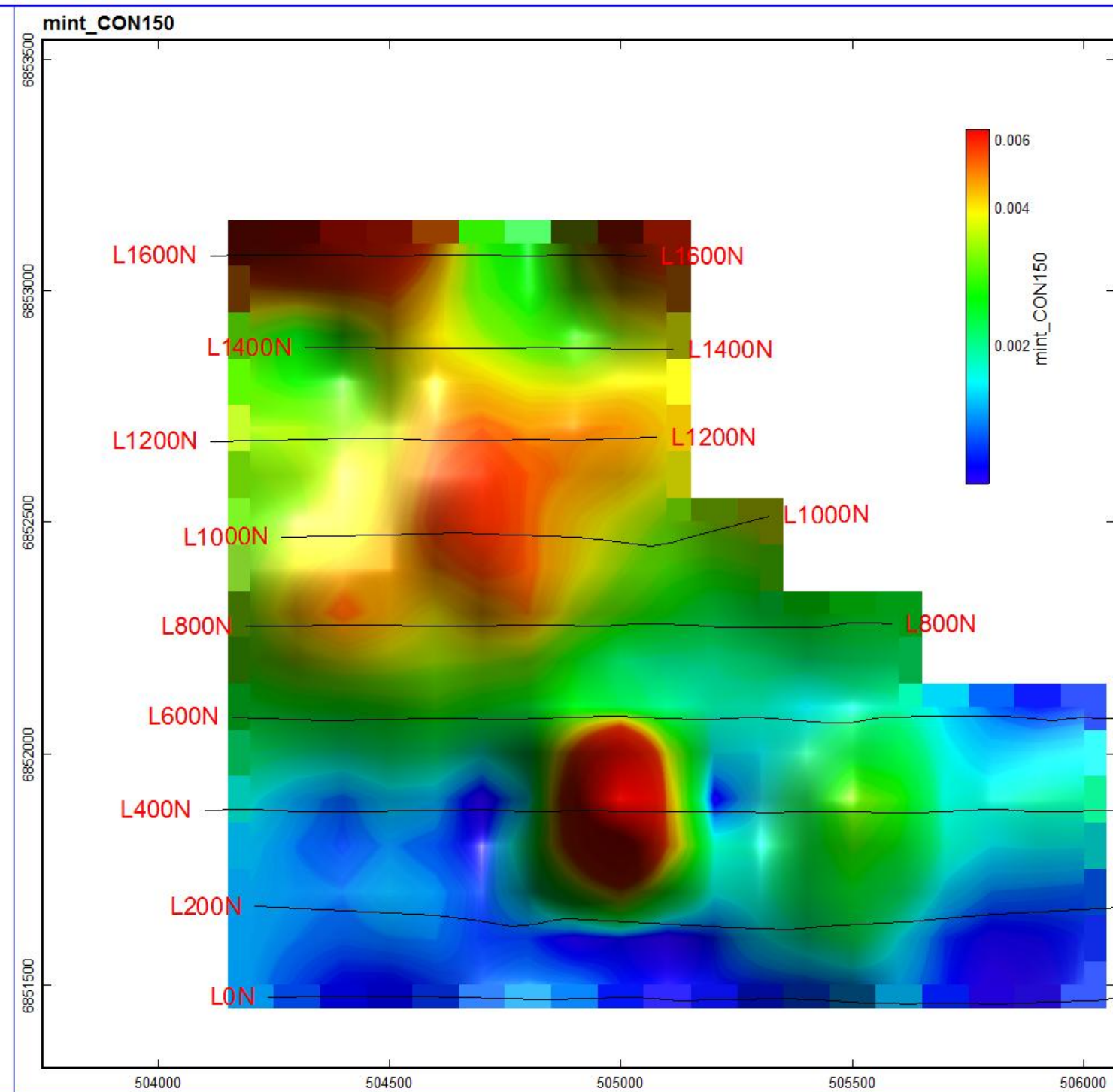
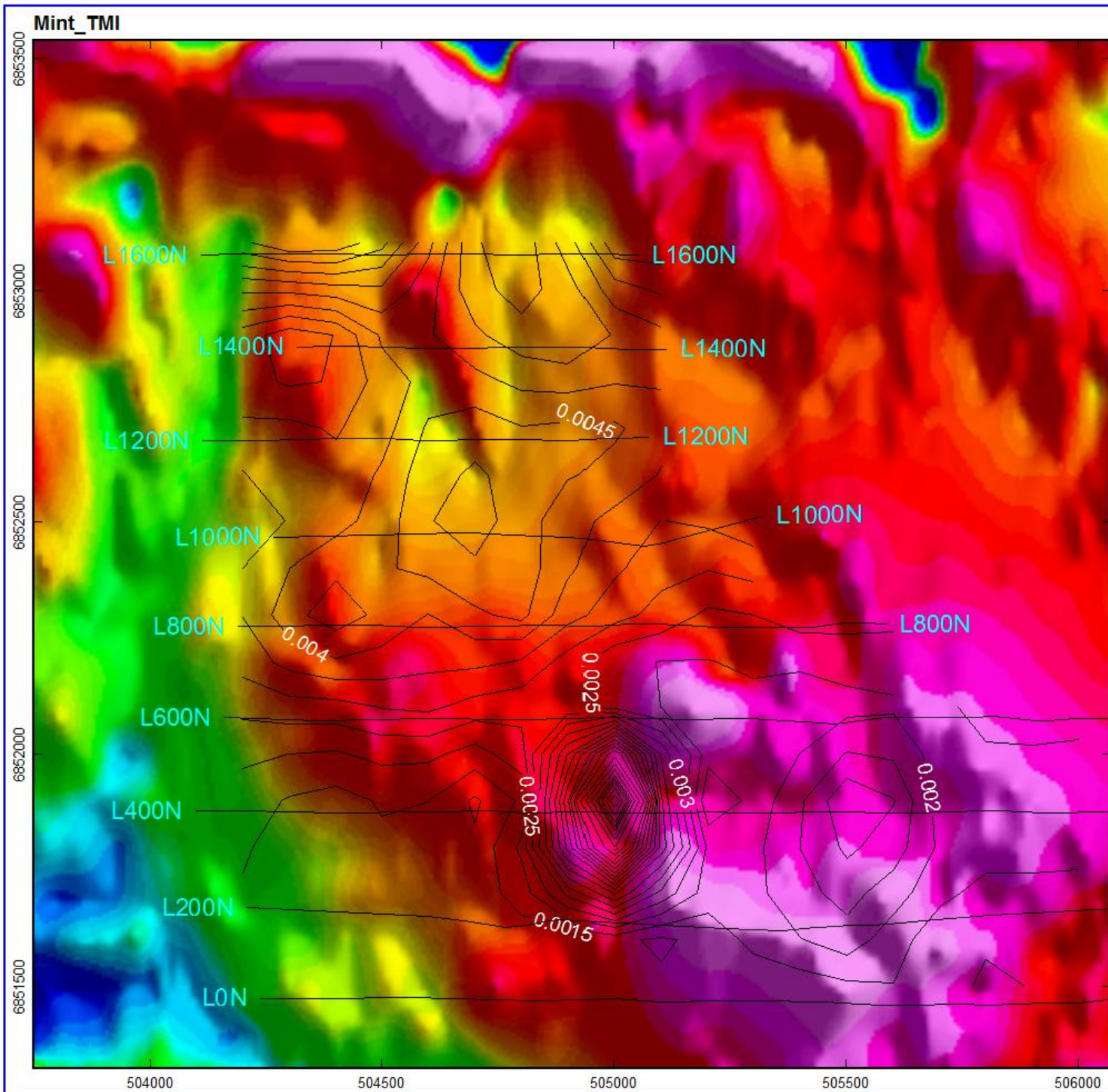












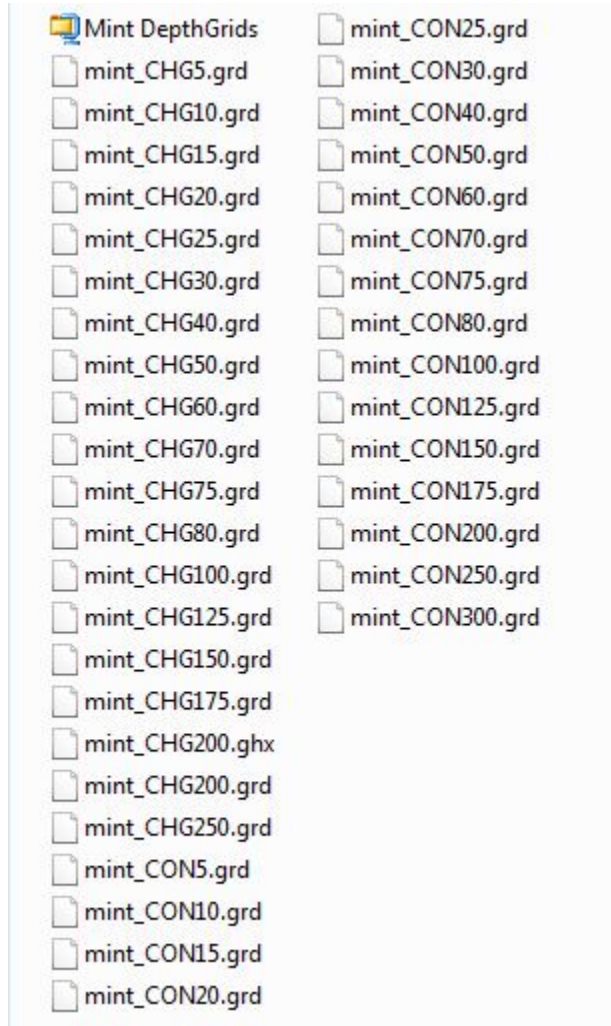
Appendix C

Digital grids of the various products are provided as a separate attachment.

These grids are the chargeability and resistivity referenced to sea level.

 Mint_CHG1025.grd	 Mint_CHG1625.grd	 Mint_CON1475.grd
 Mint_CHG1050.grd	 Mint_CHG1650.grd	 Mint_CON1500.grd
 Mint_CHG1075.grd	 Mint_CHG1675.grd	 Mint_CON1525.grd
 Mint_CHG1100.grd	 Mint_CHG1700.grd	 Mint_CON1550.grd
 Mint_CHG1125.grd	 Mint_CHG1725.grd	 Mint_CON1575.grd
 Mint_CHG1150.grd	 Mint_CHG1750.grd	 Mint_CON1600.grd
 Mint_CHG1175.grd	 Mint_CON1025.grd	 Mint_CON1625.grd
 Mint_CHG1200.grd	 Mint_CON1050.grd	 Mint_CON1650.grd
 Mint_CHG1225.grd	 Mint_CON1075.grd	 Mint_CON1675.grd
 Mint_CHG1250.grd	 Mint_CON1100.grd	 Mint_CON1700.grd
 Mint_CHG1275.grd	 Mint_CON1125.grd	 Mint_CON1725.grd
 Mint_CHG1300.grd	 Mint_CON1150.grd	 Mint_CON1750.grd
 Mint_CHG1325.grd	 Mint_CON1175.grd	
 Mint_CHG1350.grd	 Mint_CON1200.grd	
 Mint_CHG1375.grd	 Mint_CON1225.grd	
 Mint_CHG1400.grd	 Mint_CON1250.grd	
 Mint_CHG1425.grd	 Mint_CON1275.grd	
 Mint_CHG1450.grd	 Mint_CON1300.grd	
 Mint_CHG1475.grd	 Mint_CON1325.grd	
 Mint_CHG1500.grd	 Mint_CON1350.grd	
 Mint_CHG1525.grd	 Mint_CON1375.grd	
 Mint_CHG1550.grd	 Mint_CON1400.grd	
 Mint_CHG1575.grd	 Mint_CON1425.grd	
 Mint_CHG1600.grd	 Mint_CON1450.grd	

These grids are the chargeability and resistivity referenced to local ground level.



APPENDIX III

DETAILED PROPERTY LITHOLOGICAL DESCRIPTIONS

DETAILED LITHOLOGICAL DESCRIPTIONS

The table below includes lithologies that were mapped in the 2012 exploration program. These lithologies have been combined to form units or members of the Wrangell Lavas (NW), Wrangell Suite (MW), and Amphitheatre Formation (OA) on the Mint property.

Map unit	Lithology	Description	Photograph
NWb	Flow basalt	Massive, black fresh, dark grey weathered, fine to medium grained basalt. Sugary, locally vesicular, magnetite-rich. Yellow staining along flow fabric.	
	Basalt conglomerate	Locally to pervasively vesicular, black fresh, dark grey and red weathered, basalt conglomerate. Transition to vesicular basalt along unit flanks.	
	Basalt flow	Massive, black with green and beige flecks, dark grey weathered, coarse grained basalt flow with variable coarse grained feldspar.	
	Columnar basalt	Massive, black fresh, light grey weathered, medium grained columnar basalt. Medium grained epidote or olivine (?) relatively abundant. Gradational from vesicular basalt.	

Map unit	Lithology	Description	Photograph
NWb	Pillow basalt	Black fresh, black and pink weathered, fine grained pillow basalt. Distinct spheroidal weathering. Spheroids are black with pink cores.	
	Volcaniclastic conglomerate	Dark grey fresh, medium grey and red weathered ferricrete with sub-rounded pebbles to cobbles of mafic volcanics suspended in beige coarse grained matrix. Matrix is soft and powdery.	
NWd	Diabase dyke	Black fresh, dark grey weathered, medium grained mafic dyke.	
MW	Intermediate porphyry dyke	Massive, brown and grey felsic to intermediate plagioclase porphyry dyke.	n/a
	Hornblende-rich dacite	Massive, dark grey, dark grey weathered, medium grained hornblende-magnetite intermediate volcanic flow.	

Map unit	Lithology	Description	Photograph
MW	Hornblende-biotite rhyolite	Massive to flow bedded (?) whitish grey, pink weathered, fine to medium grained hornblende-rhyolite with weak local alteration. The volcanic unit is thought to overly competent intrusive that comprise knob-like features. Weakly magnetic.	
MWa	Plagioclase andesite	Massive, medium to dark green, medium to coarse grained plagioclase crowded andesite with hornblende and fine grained mafic minerals.	
	Volcaniclastic sandstone	Massive, medium grey fresh, dark grey weathered, medium to coarse grained volcaniclastic sandstone. Interbedded in V1 andesite, locally carbonaceous.	
MWd	Plagioclase diorite	Massive, light grey, beige and red weathered, coarse grained plagioclase diorite. Plagioclase is crowded, high modal abundance (~35 %). Non-magnetic.	

Map unit	Lithology	Description	Photograph
OAc or NWb (?)	Volcaniclastic conglomerate	Massive bedded, reddish brown to grey volcaniclastic matrix-supported conglomerate. Rounded pebble to boulder size clasts of coarse grained basalt and gabbro suspended in a matrix of gritty sand and red mudstone matrix.	
OAc	Polymictic conglomerate	Massive bedded, tan fresh, light grey weathered clast- to matrix-supported conglomerate. Rounded to sub-angular pebble to boulder size clasts of vesicular basalt and grey to maroon siltstone. Matrix comprises beige to tan, medium to very coarse grained sand.	
	Bedded sandstone	Irregular bedded, grey fresh, orange-grey weathered, coarse grained sandstone grit.	

APPENDIX IV

SAMPLING AND ANALYTICAL PROCEDURES

2012 Rock Geochemical Samples

Rock sample sites along a discontinuous sample line, Chip Line 1, were marked with orange flagging tape labelled with the sample number. The beginning and end of the 110 m outcrop exposure was determined using a handheld GPS unit, and individual sample lengths were measured using a nylon chain. Samples to be analyzed were sent to a preparation laboratory operated by ALS Minerals in Whitehorse. Each sample was dried, fine crushed to better than 70% passing - 2 mm and then a 250 g split was pulverized to better than 85% passing 75 micron. The fine fractions were sent to ALS Minerals in North Vancouver, BC, where they were analyzed for gold using fire assay followed by inductively coupled plasma-atomic emission spectroscopy analysis and analyzed for 35 other elements using an aqua regia digestion and inductively coupled plasma-atomic emission spectroscopy analysis (Au-AA24 and ME-ICP41).

2012 Soil Geochemical Samples

All soil sample locations were recorded using hand-held GPS units. Sample sites are marked by aluminum tags inscribed with the sample numbers and affixed to 0.5 m wooden lath that were driven into the ground. A hand held soil auger was used to collect material from as deep in the soil profile as ground conditions allowed, which was typically about 30 cm depth. On talus slopes, a geotul was used to collect talus fines and residual soils. Samples were placed into individually pre-numbered Kraft paper bags. The soil samples were sent to ALS Minerals in Whitehorse, where they were dried, screened to -180 microns, then sent to ALS Minerals laboratory in North Vancouver, where they were analyzed for 51 elements using an aqua regia digestion followed by inductively coupled plasma combined with mass spectroscopy and atomic emission spectroscopy (ME-MS41). An additional 30 g charge was further analysed for gold by fire assay with inductively coupled plasma-atomic emissions spectroscopy finish (Au-ICP21).

2012 Drill Core Samples

Samples for assay were divided into 36 sample batches with each batch including two blank samples, two standard samples, one duplicate sample, and one coarse reject duplicate sample. The analytical techniques used for core samples were the same techniques used for the 2012 rock samples. All blank, standard and duplicate samples returned results that were acceptable under QA/QC protocols.

APPENDIX V

ROCK SAMPLE DESCRIPTIONS

Rock Sample Descriptions			Project: <u>Silver Range</u>	Property: <u>Mint</u>	<u>Samples taken from NW - SE oriented outcrop</u>	
						<u>110 m in length</u>
Sample Number:	Grid East:	E	Grid North:	N	Type: chip	Dimension:
L840701	UTM:	505622 E	UTM:	6851914 N	Sample Width: 3 meters	Abundance:
		Elevation:	m			
Comments: 0-3 m - diorite (?) propylitic alteration; bedrock - discontinuous sample						
Sample Number:	Grid East:	E	Grid North:	N	Type: chip	Dimension:
L840702	UTM:	E	UTM:	N	Sample Width: 3 m	Abundance:
		Elevation:	m			
Comments: 3 - 6 m diorite (?) propylitic alteration; bedrock - discontinous sample						
Sample Number:	Grid East:	E	Grid North:	N	Type: chip	Dimension:
L840703	UTM:	E	UTM:	N	Sample Width: 3 m	Abundance:
		Elevation:	m			
Comments: 6-9m - diorite (?) propyliticalteration, frequent veinlets/stringers; bedrock - discontinuous sample						
Sample Number:	Grid East:	E	Grid North:	N	Type:	Dimension:
L840704	UTM:	E	UTM:	N	Sample Width:	Abundance:
		Elevation:	m			
Comments: 9-12 m - diorite (?) propylitic+ silicification; py stringers and veinlets; bedrock - discontinuous sample						
Sample Number:	Grid East:	E	Grid North:	N	Type: chip	Dimension:
L840705	UTM:	E	UTM:	N	Sample Width: 3 m	Abundance:
		Elevation:	m			
Comments: 12-15 m; diorite (?) bedrock - discontinous sample						
Sample Number:	Grid East:	E	Grid North:	N	Type: chip	Dimension:
L840706	UTM:	505625 E	UTM:	6851912 N	Sample Width: 3 m	Abundance:
		Elevation:	m			
Comments: 15-18 m - diorite (?) propylitic alteration decrease in pyrite stringers; bedrock - discontinuous sample						

Rock Sample Descriptions			Project: <u>Silver Range</u>	Property: <u>Mint</u>	Samples taken from NW - SE oriented outcrop 110 m in length	
Sample Number: L840707	Grid East: UTM: Elevation:	E E m	Grid North: UTM:	N N	Type: chip Sample Width: 3 m	Dimension: Abundance:
Comments: 18-21 m - diorite (?) propylitic alteration, decrease in pyrite stringers; bedrock - discontinuous sample						
Sample Number: L840708	Grid East: UTM: Elevation:	E E m	Grid North: UTM:	N N	Type: chip Sample Width: 3 m	Dimension: Abundance:
Comments: 21-24 m - diorite (?) propylitic alteration, dense pyrite stringers (074/90); bedrock - discontinuous samples						
Sample Number: L840709	Grid East: UTM: Elevation:	E E m	Grid North: UTM:	N N	Type: chip Sample Width: 3 m	Dimension: Abundance:
Comments: 24-27 m - diorite (?) propylitic alteration, decreasing pyrite stringers; bedrock - discontinuous sample- small sample due to a lot of organic matter.						
Sample Number: N/S	Grid East: UTM: Elevation:	E 505632 E m	Grid North: UTM:	N 505895 N	Type: Sample Width: 3 m	Dimension: Abundance:
Comments: 27- 30 m - no sample - vegetation						
Sample Number: L84710	Grid East: UTM: Elevation:	E E m	Grid North: UTM:	N N	Type: chip Sample Width: 3 m	Dimension: Abundance:
Comments: 30-33 m - diorite (?) sericitic alteration, disseminated pyrite; bedrock - discontinuous sample						
Sample Number: L84711	Grid East: UTM: Elevation:	E E m	Grid North: UTM:	N N	Type: chip Sample Width: 3 m	Dimension: Abundance:
Comments: 33-36 m - diorite (?) sericitic alteration, disseminated pyrite; bedrock - discontinuous sample						

Rock Sample Descriptions			Project: <u>Silver Range</u>	Property: <u>Mint</u>	Samples taken from NW - SE oriented outcrop 110 m in length	
Sample Number: L840712	Grid East: UTM: Elevation:	E E m	Grid North: UTM:	N N	Type: chip Sample Width: 3 m	Dimension: Abundance:
Comments: 36-39 m- diorite (?) seritic alteration, disseminated pyrite, feldspar-phyric; clay - discontinuous sample						
Sample Number: L84013	Grid East: UTM: Elevation:	E E m	Grid North: UTM:	N N	Type: chip Sample Width: 3 m	Dimension: Abundance:
Comments: 39-42 m - weak (propylitic?) altered diorite fallen bedrock - discontinuous sample						
Sample Number: L840714	Grid East: UTM: Elevation:	E 505639 E m	Grid North: UTM:	N 6851877 N	Type: chip Sample Width: 6 m	Dimension: Abundance:
Comments: 42-48 m moderate (propylitic?) alteration and silicification, increase in disseminated pyrite (2 - 10 %); fallen bedrock ** 6 m discontinuous sample						
Sample Number: L840715	Grid East: UTM: Elevation:	E E m	Grid North: UTM:	N N	Type: chip Sample Width: 3 m	Dimension: Abundance:
Comments: 48-51 m - diorite (?) moderate (propylitic?) alteration and silicification, increase in disseminated pyrite (2 - 10 %); bedrock - discontinuous sample						
Sample Number: L840716	Grid East: UTM: Elevation:	E 505639 E m	Grid North: UTM:	N 6851877 N	Type: chip Sample Width: 3 m	Dimension: Abundance:
Comments: 51- 54 m - diorite (?) moderate (propylitic?) alteration and silicification, increased disseminated pyrite; bedrock - discontinuous sample						
Sample Number: L840717	Grid East: UTM: Elevation:	E E m	Grid North: UTM:	N N	Type: chip Sample Width: 3 m	Dimension: Abundance:
Comments: 54 - 57 m - diorite (?) moderate (propylitic?) alteration and silicification, increased disseminated pyrite; bedrock - discontinuous sample						
Sample Number: L840718	Grid East: UTM: Elevation:	E 505642 E m	Grid North: UTM:	N 6851869 N	Type: chip Sample Width: 3 m	Dimension: Abundance:

Rock Sample DescriptionsProject: Silver RangeProperty: MintSamples taken from NW - SE oriented outcrop
110 m in length

Comments: 57 - 60 m - diorite (?) moderate (propylitic?) alteration and silicification, increased disseminated pyrite; bedrock - discontinuous sample

Sample Number:	Grid East:	E	Grid North:	N	Type: chip	Dimension:
L840719	UTM:	E	UTM:	N	Sample Width: 3 m	Abundance:
	Elevation:	m				

Comments: 60-63 m - diorite (?) moderate (propylitic?) alteration and silicification, increased disseminated pyrite; bedrock - discontinuous sample

Sample Number:	Grid East:	E	Grid North:	N	Type: chip	Dimension:
L840720	UTM:	E	UTM:	N	Sample Width: 3 m	Abundance:
	Elevation:	m				

63-66 m - diorite (?) sericitic alteration, disseminated pyrite; bedrock - discontinuous sample

Comments:

Sample Number:	Grid East:	E	Grid North:	N	Type: chip	Dimension:
L840721	UTM:	505644 E	UTM:	6851861 N	Sample Width: 3 m	Abundance:
	Elevation:	m				

66-69 m diorite (?) sericitic alteration, disseminated pyrite; bedrock - discontinuous

Comments:

Sample Number:	Grid East:	E	Grid North:	N	Type: chip	Dimension:
L840722	UTM:	E	UTM:	N	Sample Width: 3 m	Abundance:
	Elevation:	m				

Comments: 69-72 m - diorite (?) sericitic alteration, disseminated pyrite; bedrock - discontinuous sample

Sample Number:	Grid East:	E	Grid North:	N	Type: chip	Dimension:
L840723	UTM:	E	UTM:	N	Sample Width: 3 m	Abundance:
	Elevation:	m				

Comments: 72-75 m - diorite (?) sericitic alteration, disseminated pyrite; fallen bedrock - discontinuous sample

Rock Sample DescriptionsProject: Silver RangeProperty: MintSamples taken from NW - SE oriented outcrop
110 m in length

Sample Number: Grid East: E Grid North: N Type: chip Dimension:
L840724 UTM: E UTM: N Sample Width: 3 m Abundance:
 Elevation: m

Comments: 75 - 78 m - Includes 10 cm dike; sericitic alteration; bedrock/scree - discontinuous sample

Sample Number: Grid East: E Grid North: N Type: chip Dimension:
L840725 UTM: E UTM: N Sample Width: 3 m Abundance:
 Elevation: m

Comments: 78-81 m - Disseminated chalcopyrite and pyrite along fracture and in veinlets in intrusive; bedrock - discontinuous sample

Sample Number: Grid East: E Grid North: N Type: chip Dimension:
L840726 UTM: E UTM: N Sample Width: 3 m Abundance:
 Elevation: m

Comments: 81-84 m -Disseminated chalcopyrite and pyrite along fracture and in veinlets in intrusive; bedrock - discontinuous sample

Sample Number: Grid East: E Grid North: N Type: chip Dimension:
L840727 UTM: 505655 E UTM: 6851846 N Sample Width: 3 m Abundance:
 Elevation: m

Comments: 84-87 m -Disseminated chalcopyrite and pyrite along fracture and in veinlets in intrusive; bedrock - discontinuous sample

Sample Number: Grid East: E Grid North: N Type: chip Dimension:
L840728 UTM: E UTM: N Sample Width: 3 m Abundance:
 Elevation: m

Comments: 87-90 m -Disseminated chalcopyrite and pyrite along fracture and in veinlets in intrusive; bedrock - discontinuous sample

Sample Number: Grid East: E Grid North: N Type: chip Dimension:
L840729 UTM: E UTM: N Sample Width: 3 m Abundance:
 Elevation: m

Comments: 90-93 m -Includes across 40 cm wide alt'n zone (dike?) and oxidation; bedrock - discontinuous sample

Rock Sample DescriptionsProject: Silver RangeProperty: MintSamples taken from NW - SE oriented outcrop
110 m in length

Sample Number: Grid East: E Grid North: N Type: chip Dimension:
L840730 UTM: E UTM: N Sample Width: 3 m Abundance:
 Elevation: m
 Comments: 93-96 m; bedrock - discontinuous sample

Sample Number: Grid East: E Grid North: N Type: chip Dimension:
L840731 UTM: E UTM: N Sample Width: 3 m Abundance:
 Elevation: m
 Comments: 96-99 m -Silicification, disseminated pyrite >> chalcopyrite; bedrock - discontinuous sample

Sample Number: Grid East: E Grid North: N Type: chip Dimension:
L840732 UTM: 505661 E UTM: 505837 N Sample Width: 3 m Abundance:
 Elevation: m inaccurate
 Comments: 99-102 m - Silicified intrusive with intensely altered zones 1-3% sulphides; bedrock - discontinuous sample

Sample Number: Grid East: E Grid North: N Type: chip Dimension:
L840733 UTM: E UTM: N Sample Width: 3 m Abundance:
 Elevation: m
 Comments: 102-105 m; bedrock - discontinuous sample

Sample Number: Grid East: E Grid North: N Type: chip Dimension:
L840734 UTM: E UTM: N Sample Width: 3 m Abundance:
 Elevation: m
 Comments: 105-108 m; bedrock - discontinuous sample

Sample Number: Grid East: E Grid North: N Type: chip Dimension:
L840735 UTM: E UTM: N Sample Width: 3 m Abundance:
 Elevation: m

Rock Sample DescriptionsProject: Silver RangeProperty: MintSamples taken from NW - SE oriented outcrop
110 m in length

Comments: 108-111 m sercitic alteration; 1-2% pyrite; bedrock - discontinuous sample

Sample Number:	Grid East:	E	Grid North:	N	Type: chip	Dimension:
L840736	UTM:	505667	UTM:	6851828	N Sample Width: 3 m	Abundance:
	Elevation:	m				

Comments: 111 - 114 m - (mafic(?)/ porphyritic(?)) dike zone; bedrock - discontinuous sample

Sample Number:	Grid East:	E	Grid North:	N	Type: chip	Dimension:
L840737	UTM:	E	UTM:	N	Sample Width: 3 m	Abundance:
	Elevation:	m				

Comments: 114 - 117 m - wallrock to most distinct (mafic(?)/ porphyritic(?)) dyke - relatively unaltered intrusive; bedrock - discontinuous sample

Sample Number:	Grid East:	E	Grid North:	N	Type: chip	Dimension:
L840738	UTM:	E	UTM:	N	Sample Width: 3 m	Abundance:
	Elevation:	m				

Comments: 117 - 120 m - relatively unaltered intrusive - diorite (?); bedrock - discontinuous sample

Sample Number:	Grid East:	E	Grid North:	N	Type: chip	Dimension:
L840739	UTM:	505671	UTM:	6851818	N Sample Width: 3 m	Abundance:
	Elevation:	m				

Comments: 120 - 123 m - Unaltered intrusive- diorite (?); bedrock - discontinuous sample

Sample Number:	Grid East:	E	Grid North:	N	Type: chip	Dimension:
L840740	UTM:	E	UTM:	N	Sample Width: 3 m	Abundance:
	Elevation:	m				

Comments: 123- 126 m; bedrock - discontinuous sample

Sample Number:	Grid East:	E	Grid North:	N	Type: chip	Dimension:

Rock Sample Descriptions			Project: <u>Silver Range</u>	Property: <u>Mint</u>	<u>Samples taken from NW - SE oriented outcrop</u>	
						<u>110 m in length</u>
L840741	UTM:	505673 E	UTM:	6851820 N	Sample Width: 3 m	Abundance:
						Elevation: m
Comments: 30 cm wide pyrite+/-chalcopyrite+/-arsenopyrite(?) mineralized dike(?) (SE-NB-3 original name); bedrock - discontinuous sample						
Sample Number:	Grid East:	E	Grid North:	N	Type: chip	Dimension:
L840742	UTM:	505643 E	UTM:	6851832 N	Sample Width: 1.1 m	Abundance:
						Elevation: m
Comments: 1 m pyrite+/-chalcopyrite+/-arsenopyrite(?) mineralized dike? in intrusive o/c. Yellow, soft rock (SE-NB-6 original name); bedrock - discontinuous sample						
Sample Number:	Grid East:	E	Grid North:	N	Type: chip	Dimension:
L840743	UTM:	505694 E	UTM:	6851800 N	Sample Width: 1 m	Abundance:
						Elevation: m
Comments: 25 cm wide pyrite+/-chalcopyrite+/-arsenopyrite(?) mineralized dike? in o/c. Yellow soft rock (SE-NB-2 original name)						

APPENDIX VI
CERTIFICATES OF ANALYSIS



ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: 604 984 0221 Fax: 604 984 0218 www.alsglobal.com

To: **SILVER RANGE RESOURCES LTD.**

C/ O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

**1016- 510 W HASTINGS ST
VANCOUVER BC V6B 1L8**

Page: 1
Finalized Date: 23- JUL- 2012
Account: RANSIL

CERTIFICATE WH12157310

Project: Mint

P.O. No.:

This report is for 43 Rock samples submitted to our lab in Whitehorse, YT, Canada on 6- JUL- 2012.

The following have access to data associated with this certificate:

MATT DUMALA

JOAN MARIACHER

HEATHER SMITH

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/ o BarCode
CRU- QC	Crushing QC Test
PUL- QC	Pulverizing QC Test
CRU- 31	Fine crushing - 70%<2mm
SPL- 21	Split sample - riffle splitter
PUL- 31	Pulverize split to 85%< 75 um

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
ME- ICP61	33 element four acid ICP- AES	ICP- AES
Au- AA24	Au 50g FA AA finish	AAS

To: **SILVER RANGE RESOURCES LTD.**
ATTN: JOAN MARIACHER
C/ O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016- 510 W HASTINGS ST
VANCOUVER BC V6B 1L8

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Signature:

Colin Ramshaw, Vancouver Laboratory Manager



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CERTIFICATE OF ANALYSIS WH12157310

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	Au- AA24 Au ppm	ME- ICP61 Ag ppm	ME- ICP61 Al %	ME- ICP61 As ppm	ME- ICP61 Ba ppm	ME- ICP61 Be ppm	ME- ICP61 Bi ppm	ME- ICP61 Ca %	ME- ICP61 Cd ppm	ME- ICP61 Co ppm	ME- ICP61 Cr ppm	ME- ICP61 Cu ppm	ME- ICP61 Fe %	ME- ICP61 Ga ppm
		0.02	0.005	0.5	0.01	5	10	0.5	2	0.01	0.5	1	1	1	0.01	10
L840701		1.19	0.018	1.0	7.90	<5	400	1.0	<2	3.06	<0.5	12	61	73	2.69	20
L840702		1.70	0.036	1.2	8.37	6	440	1.1	2	3.02	<0.5	17	72	93	3.46	20
L840703		1.97	0.029	1.0	8.03	7	360	1.0	4	2.62	<0.5	17	59	32	3.23	20
L840704		1.57	0.063	1.3	8.18	9	340	1.0	<2	2.62	<0.5	14	61	65	3.18	20
L840705		1.55	0.031	1.1	7.97	8	390	1.0	<2	2.93	<0.5	12	52	42	2.99	20
L840706		1.48	0.037	1.1	7.95	15	480	1.0	2	2.63	<0.5	12	42	66	2.77	20
L840707		1.83	0.025	1.0	8.14	<5	420	0.9	3	2.76	<0.5	12	48	60	2.53	20
L840708		1.66	0.017	1.4	7.91	<5	540	0.9	<2	3.49	<0.5	17	36	46	3.49	20
L840709		0.80	0.014	1.1	7.98	<5	530	1.1	<2	2.11	<0.5	13	40	205	3.59	20
L840710		1.51	0.084	1.4	7.74	23	360	1.0	3	1.74	<0.5	14	24	8	2.16	20
L840711		1.83	0.188	1.1	6.45	70	700	1.2	3	1.26	<0.5	6	11	9	1.65	20
L840712		1.06	0.013	0.8	8.49	21	510	1.5	2	1.85	<0.5	19	191	73	4.10	20
L840713		1.58	0.035	1.2	7.70	17	1040	0.9	3	3.32	<0.5	14	37	17	2.80	20
L840714		1.80	0.052	1.4	8.36	17	310	1.0	3	2.49	<0.5	11	40	63	2.27	20
L840715		1.67	0.042	1.1	7.51	<5	330	0.9	3	1.29	<0.5	2	18	48	1.78	10
L840716		1.83	0.052	1.1	8.07	10	340	0.9	2	2.37	<0.5	8	48	96	2.28	20
L840717		1.78	0.025	1.0	7.96	13	480	0.9	<2	3.42	<0.5	13	54	63	2.96	20
L840718		1.81	0.058	1.1	8.02	9	380	0.9	<2	3.24	<0.5	13	54	70	2.83	20
L840719		1.71	0.060	1.4	7.79	17	330	1.0	4	3.29	<0.5	11	51	69	2.48	20
L840720		2.01	0.025	<0.5	7.65	<5	340	0.8	2	2.89	<0.5	8	41	56	1.95	20
L840721		1.61	1.290	0.6	7.13	10	230	0.8	2	1.12	<0.5	4	22	20	1.70	10
L840722		1.69	0.054	<0.5	7.33	7	350	0.8	<2	1.26	<0.5	6	23	35	2.04	20
L840723		1.46	0.099	<0.5	8.19	18	380	0.9	3	2.29	<0.5	7	54	48	2.22	20
L840724		1.41	0.176	0.7	7.64	14	380	0.8	<2	3.15	<0.5	8	52	52	2.79	20
L840725		1.62	0.195	0.5	7.89	5	320	0.8	7	3.67	<0.5	14	63	127	3.12	20
L840726		1.41	0.099	<0.5	7.56	<5	310	0.8	3	3.62	<0.5	12	58	93	3.20	20
L840727		1.43	0.106	0.5	7.64	7	270	0.8	8	3.71	<0.5	19	56	140	3.69	20
L840728		1.99	0.056	<0.5	7.61	8	250	0.8	3	2.91	<0.5	13	80	123	2.82	20
L840729		2.04	0.109	<0.5	7.85	10	250	0.8	3	2.16	<0.5	11	60	111	2.91	20
L840730		2.02	0.053	<0.5	7.80	7	290	0.8	5	3.25	<0.5	14	58	70	2.92	20
L840731		1.58	0.263	2.7	7.10	8	230	0.7	5	1.91	<0.5	11	39	794	3.39	20
L840732		1.49	0.103	0.8	7.43	7	250	0.8	5	2.19	<0.5	13	49	462	2.92	20
L840733		1.62	0.045	<0.5	7.04	13	290	1.0	3	3.38	<0.5	20	60	50	2.97	20
L840734		1.14	0.082	<0.5	7.37	19	260	1.0	3	1.88	<0.5	15	47	74	3.22	20
L840735		1.41	0.035	0.6	7.45	10	250	1.0	4	0.68	<0.5	6	13	40	1.78	20
L840736		1.94	0.044	<0.5	7.27	7	270	1.0	<2	0.51	<0.5	7	13	33	2.13	20
L840737		1.98	0.035	<0.5	7.23	7	250	1.0	4	1.63	<0.5	11	47	48	2.79	20
L840738		2.37	0.034	<0.5	7.45	6	510	1.0	2	3.05	<0.5	14	73	71	3.83	20
L840739		1.39	0.043	<0.5	7.97	9	550	1.0	3	3.72	<0.5	17	71	86	4.15	20
L840740		1.35	0.042	<0.5	7.45	9	370	1.0	<2	3.76	<0.5	20	68	106	4.06	20



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Account: RANSIL

Project: Mint

CERTIFICATE OF ANALYSIS WH12157310

Sample Description	Method Analyte Units LOR	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	
		K	La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Sr	Th	Ti
		%	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%
		0.01	10	0.01	5	1	0.01	1	10	2	0.01	5	1	1	20	0.01
L840701		0.41	10	1.17	388	1	3.44	40	1210	6	1.07	<5	10	614	<20	0.34
L840702		0.54	10	1.17	476	1	3.07	51	1250	10	1.38	<5	12	606	<20	0.39
L840703		0.59	10	1.21	496	1	2.97	44	930	7	1.69	<5	10	510	<20	0.33
L840704		0.60	10	1.04	604	<1	3.16	42	950	10	1.64	<5	9	534	<20	0.33
L840705		0.58	10	1.20	570	1	3.22	39	840	8	1.24	<5	9	542	<20	0.31
L840706		0.82	10	1.01	513	1	3.25	34	830	7	0.83	<5	8	510	<20	0.32
L840707		0.58	10	1.03	371	1	3.26	35	820	8	0.89	<5	9	557	<20	0.31
L840708		0.50	10	1.23	460	1	3.18	28	950	7	1.54	<5	11	670	<20	0.33
L840709		1.17	10	1.37	550	1	2.72	41	920	14	1.43	<5	9	469	<20	0.35
L840710		1.18	10	0.71	915	2	3.02	22	700	19	1.57	<5	7	329	<20	0.20
L840711		1.87	10	0.62	434	<1	1.86	11	540	20	1.12	<5	4	326	<20	0.19
L840712		0.76	20	0.81	734	1	1.85	87	2050	9	0.19	12	14	366	<20	0.67
L840713		0.51	10	1.32	561	1	3.24	32	890	11	2.02	<5	10	624	<20	0.28
L840714		0.28	10	0.68	329	1	3.63	24	870	8	1.43	<5	8	604	<20	0.23
L840715		0.68	<10	0.43	104	1	2.92	11	520	5	1.08	<5	4	456	<20	0.09
L840716		0.26	10	0.91	215	2	3.17	25	700	4	1.04	<5	8	506	<20	0.25
L840717		0.57	10	1.55	434	1	3.29	40	750	6	0.64	<5	9	551	<20	0.34
L840718		0.61	10	1.43	508	1	3.18	39	730	17	0.94	<5	9	522	<20	0.33
L840719		0.41	<10	1.18	560	<1	3.30	34	750	11	1.20	<5	9	533	<20	0.32
L840720		0.37	10	0.91	292	4	3.46	35	540	20	0.50	<5	7	539	<20	0.24
L840721		0.57	10	0.44	155	2	3.54	17	300	29	1.12	<5	4	404	<20	0.10
L840722		0.88	10	0.45	270	3	3.22	15	590	15	0.82	<5	6	404	<20	0.19
L840723		0.67	10	0.49	305	8	3.32	23	780	23	0.50	<5	9	493	<20	0.33
L840724		0.43	10	1.05	365	16	3.39	23	730	26	0.78	6	10	490	<20	0.38
L840725		0.41	10	1.29	472	42	3.25	34	770	19	1.09	<5	11	513	<20	0.41
L840726		0.41	10	1.69	520	47	3.40	36	630	12	0.93	<5	10	494	<20	0.39
L840727		0.30	10	1.27	516	5	3.05	40	710	28	2.38	<5	11	482	<20	0.36
L840728		0.53	10	0.94	437	7	3.11	33	510	24	1.17	<5	9	448	<20	0.36
L840729		0.51	10	0.84	389	8	3.36	26	560	27	1.08	5	10	429	<20	0.34
L840730		0.38	10	1.03	414	5	3.31	31	660	12	0.86	<5	11	484	<20	0.41
L840731		0.90	10	1.13	368	6	2.99	24	380	24	2.64	<5	7	343	<20	0.23
L840732		0.64	10	1.20	399	5	3.19	30	490	16	1.83	<5	9	398	<20	0.34
L840733		0.51	10	1.33	526	4	3.15	44	820	12	1.40	5	11	478	<20	0.39
L840734		0.68	10	0.82	355	7	3.18	29	790	22	1.61	<5	8	397	<20	0.28
L840735		1.01	20	0.40	211	3	3.86	8	640	25	1.30	<5	4	311	<20	0.15
L840736		0.66	10	0.47	128	3	3.98	8	630	18	1.39	<5	4	351	<20	0.14
L840737		0.65	20	0.70	272	5	3.52	22	830	11	1.28	<5	7	429	<20	0.27
L840738		0.90	10	0.87	422	7	3.15	39	980	10	1.32	<5	11	553	<20	0.44
L840739		0.89	10	1.78	625	15	3.21	54	1030	11	0.61	6	13	579	<20	0.48
L840740		0.75	10	1.83	603	8	3.20	52	960	9	1.03	<5	13	560	<20	0.49



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CERTIFICATE OF ANALYSIS WH12157310

Sample Description	Method Analyte Units LOR	ME- ICP61 Ti ppm 10	ME- ICP61 U ppm 10	ME- ICP61 V ppm 1	ME- ICP61 W ppm 10	ME- ICP61 Zn ppm 2
L840701		<10	<10	95	<10	36
L840702		<10	<10	104	<10	45
L840703		<10	<10	87	<10	45
L840704		<10	<10	86	<10	49
L840705		<10	<10	80	<10	44
L840706		<10	<10	77	<10	42
L840707		<10	<10	80	<10	39
L840708		<10	<10	101	<10	37
L840709		<10	<10	91	<10	70
L840710		<10	<10	62	<10	65
L840711		<10	<10	38	<10	58
L840712		<10	<10	146	<10	87
L840713		<10	<10	90	<10	65
L840714		<10	<10	75	<10	47
L840715		<10	<10	33	<10	19
L840716		<10	<10	70	<10	36
L840717		<10	<10	79	<10	43
L840718		<10	<10	80	<10	53
L840719		<10	<10	79	10	53
L840720		<10	<10	56	<10	42
L840721		<10	<10	33	<10	31
L840722		<10	<10	49	<10	42
L840723		<10	<10	76	<10	62
L840724		<10	<10	92	<10	51
L840725		<10	<10	94	<10	61
L840726		<10	<10	89	<10	58
L840727		<10	<10	96	<10	77
L840728		<10	<10	81	<10	78
L840729		<10	<10	87	<10	76
L840730		<10	<10	94	<10	49
L840731		<10	<10	57	<10	69
L840732		<10	<10	79	<10	78
L840733		<10	<10	98	<10	67
L840734		<10	<10	85	<10	71
L840735		<10	<10	37	<10	42
L840736		<10	<10	38	<10	35
L840737		<10	<10	79	<10	49
L840738		<10	<10	114	<10	60
L840739		<10	<10	120	<10	82
L840740		<10	<10	116	<10	76



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CERTIFICATE OF ANALYSIS WH12157310

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg 0.02	Au- AA24 Au ppm 0.005	ME- ICP61 Ag ppm 0.5	ME- ICP61 Al % 0.01	ME- ICP61 As ppm 5	ME- ICP61 Ba ppm 10	ME- ICP61 Be ppm 0.5	ME- ICP61 Bi ppm 2	ME- ICP61 Ca % 0.01	ME- ICP61 Cd ppm 0.5	ME- ICP61 Co ppm 1	ME- ICP61 Cr ppm 1	ME- ICP61 Cu ppm 1	ME- ICP61 Fe % 0.01	ME- ICP61 Ga ppm 10
L840741		1.18	0.099	<0.5	7.63	15	260	1.0	4	2.33	<0.5	23	71	103	4.19	20
L840742		0.63	0.116	<0.5	7.46	14	230	0.8	3	1.80	0.5	13	56	152	3.06	20
L840743		1.09	0.089	<0.5	7.18	29	310	0.9	2	3.37	<0.5	24	64	73	4.58	20



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CERTIFICATE OF ANALYSIS WH12157310

Sample Description	Method Analyte Units LOR	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	
		K	La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Sr	Th	Ti
		%	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%
		0.01	10	0.01	5	1	0.01	1	10	2	0.01	5	1	1	20	0.01
L840741		0.62	10	0.78	355	18	3.23	39	970	16	1.97	<5	11	504	<20	0.40
L840742		0.69	10	0.81	546	10	3.03	23	520	53	0.83	5	11	366	<20	0.28
L840743		0.68	10	2.04	649	3	2.74	56	1000	13	1.71	<5	12	493	<20	0.48



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CERTIFICATE OF ANALYSIS WH12157310

Sample Description	Method Analyte Units LOR	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61
		Tl	U	V	W	Zn
		ppm	ppm	ppm	ppm	ppm
		10	10	1	10	2
L840741		<10	<10	117	<10	63
L840742		<10	<10	82	<10	108
L840743		<10	<10	116	<10	68



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P.O. No.:

This report is for 193 Soil samples submitted to our lab in Whitehorse, YT, Canada on 12- JUL- 2012.

The following have access to data associated with this certificate:

MATT DUMALA

JOAN MARIACHER

HEATHER SMITH

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/ o BarCode
SCR- 41	Screen to - 180um and save both

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au- AA24	Au 50g FA AA finish	AAS
ME- ICP41	35 Element Aqua Regia ICP- AES	ICP- AES

To: **SILVER RANGE RESOURCES LTD.**
ATTN: JOAN MARIACHER
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This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager



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Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	Au- AA24 Au ppm	ME- ICP41 Ag ppm	ME- ICP41 Al %	ME- ICP41 As ppm	ME- ICP41 B ppm	ME- ICP41 Ba ppm	ME- ICP41 Be ppm	ME- ICP41 Bi ppm	ME- ICP41 Ca %	ME- ICP41 Cd ppm	ME- ICP41 Co ppm	ME- ICP41 Cr ppm	ME- ICP41 Cu ppm	ME- ICP41 Fe %
		0.02	0.005	0.2	0.01	2	10	10	0.5	2	0.01	0.5	1	1	1	0.01
ZZ60001		0.11	<0.005	0.2	2.19	4	<10	170	<0.5	<2	0.67	<0.5	12	36	35	2.63
ZZ60002		0.13	<0.005	<0.2	2.00	5	<10	150	<0.5	<2	0.67	<0.5	13	36	35	2.68
ZZ60003		0.14	<0.005	0.2	2.18	5	<10	160	<0.5	<2	0.59	<0.5	16	40	32	3.00
ZZ60004		0.18	<0.005	<0.2	2.16	3	<10	150	<0.5	<2	0.53	<0.5	13	40	28	3.00
ZZ60005		0.23	<0.005	<0.2	1.88	6	<10	150	<0.5	<2	0.71	<0.5	11	38	32	2.89
ZZ60006		0.17	<0.005	0.2	2.21	9	<10	120	0.6	<2	0.52	<0.5	16	44	44	3.54
ZZ60007		0.19	<0.005	<0.2	1.26	3	<10	90	<0.5	<2	0.47	<0.5	8	24	37	1.98
ZZ60008		0.27	<0.005	<0.2	1.51	4	<10	90	<0.5	<2	0.49	<0.5	9	22	34	2.25
ZZ60009		0.19	<0.005	0.2	1.93	2	<10	140	0.5	<2	0.63	<0.5	10	28	44	2.62
ZZ60010		0.16	<0.005	0.2	1.79	6	<10	100	<0.5	<2	0.44	<0.5	10	30	33	2.94
ZZ60011		0.24	<0.005	<0.2	1.99	2	<10	120	<0.5	<2	0.54	<0.5	11	29	37	2.53
ZZ60210		0.14	<0.005	0.2	3.03	4	<10	190	0.8	<2	0.94	<0.5	22	50	59	3.63
ZZ60211		0.22	<0.005	0.2	2.60	4	<10	160	0.7	<2	0.77	<0.5	17	38	43	3.46
ZZ60212		0.18	<0.005	0.2	1.79	2	<10	170	0.7	<2	0.65	<0.5	20	31	41	3.61
ZZ60213		0.30	<0.005	0.2	2.53	5	<10	110	0.6	<2	0.88	<0.5	18	33	49	3.42
ZZ60214		0.26	<0.005	<0.2	2.66	3	<10	140	0.6	<2	0.80	<0.5	17	41	42	3.39
ZZ60215		0.30	<0.005	<0.2	2.34	<2	<10	110	0.6	<2	0.84	<0.5	18	26	43	3.28
ZZ60216		0.17	<0.005	<0.2	1.87	<2	<10	130	<0.5	<2	1.39	<0.5	16	26	41	2.81
ZZ60217		0.23	<0.005	<0.2	2.58	<2	<10	40	<0.5	<2	1.71	<0.5	34	52	37	3.94
ZZ60218		0.15	<0.005	<0.2	1.79	<2	<10	120	0.5	<2	0.83	<0.5	22	35	51	3.48
ZZ60219		0.15	<0.005	<0.2	1.39	8	<10	100	<0.5	<2	1.03	<0.5	17	37	53	3.08
ZZ60028		0.09	<0.005	0.2	1.71	6	<10	70	<0.5	<2	0.45	<0.5	12	27	24	2.86
ZZ60029		0.17	<0.005	<0.2	1.15	4	<10	120	<0.5	<2	0.45	<0.5	9	24	23	2.38
ZZ60030		0.17	0.010	<0.2	1.44	<2	<10	120	<0.5	<2	0.44	<0.5	9	21	35	2.03
ZZ60031		0.25	<0.005	<0.2	1.29	2	<10	80	<0.5	<2	0.59	<0.5	13	30	32	2.53
ZZ60032		0.21	<0.005	<0.2	2.16	3	<10	110	<0.5	<2	0.60	<0.5	17	43	38	3.56
ZZ60033		0.10	<0.005	<0.2	1.29	3	<10	120	<0.5	<2	0.74	<0.5	13	32	37	2.47
ZZ60034		0.22	<0.005	<0.2	1.49	3	<10	90	<0.5	<2	0.53	<0.5	15	42	41	3.02
ZZ60035		0.11	<0.005	<0.2	1.14	3	<10	90	<0.5	<2	0.41	<0.5	10	19	25	2.47
ZZ60036		0.15	<0.005	<0.2	1.79	<2	<10	120	<0.5	<2	0.56	<0.5	11	25	43	2.37
ZZ60037		0.18	<0.005	0.2	1.51	2	<10	110	<0.5	<2	0.54	<0.5	11	21	33	2.19
ZZ60308		0.21	<0.005	<0.2	2.48	4	<10	240	0.6	<2	0.56	<0.5	17	40	36	3.64
ZZ60309		0.32	<0.005	<0.2	0.90	<2	<10	90	<0.5	<2	0.42	<0.5	13	49	31	2.26
ZZ60310		0.16	<0.005	<0.2	1.14	4	<10	90	<0.5	<2	0.47	<0.5	17	37	36	2.80
ZZ60311		0.18	<0.005	<0.2	1.28	3	<10	100	<0.5	<2	0.53	<0.5	13	38	35	2.74
ZZ60312		0.26	<0.005	<0.2	1.00	3	<10	90	<0.5	<2	0.78	<0.5	17	50	39	3.04
ZZ60313		0.14	<0.005	<0.2	1.50	3	<10	110	<0.5	<2	0.69	<0.5	14	41	37	3.11
ZZ60314		0.17	<0.005	0.2	2.22	5	<10	150	<0.5	<2	0.54	<0.5	19	45	43	3.61
ZZ60315		0.30	<0.005	<0.2	1.93	<2	<10	120	<0.5	<2	0.82	<0.5	21	46	46	3.64
ZZ60316		0.25	<0.005	<0.2	1.46	5	<10	90	<0.5	<2	0.53	<0.5	17	38	42	3.20



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CERTIFICATE OF ANALYSIS WH12159016

Sample Description	Method Analyte Units LOR	ME- ICP41 Ga ppm 10	ME- ICP41 Hg ppm 1	ME- ICP41 K % 0.01	ME- ICP41 La ppm 10	ME- ICP41 Mg % 0.01	ME- ICP41 Mn ppm 5	ME- ICP41 Mo ppm 1	ME- ICP41 Na % 0.01	ME- ICP41 Ni ppm 1	ME- ICP41 P ppm 10	ME- ICP41 Pb ppm 2	ME- ICP41 S % 0.01	ME- ICP41 Sb ppm 2	ME- ICP41 Sc ppm 1	ME- ICP41 Sr ppm 1
ZZ60001		10	<1	0.05	10	0.80	487	<1	0.04	35	800	5	0.09	<2	5	71
ZZ60002		<10	1	0.06	10	0.87	549	<1	0.05	35	700	4	0.06	<2	6	68
ZZ60003		10	1	0.05	10	0.81	1120	<1	0.04	32	670	5	0.07	<2	6	61
ZZ60004		10	1	0.06	10	0.84	461	<1	0.04	35	550	5	0.06	<2	5	52
ZZ60005		<10	<1	0.05	10	0.79	464	<1	0.04	33	680	4	0.09	<2	5	59
ZZ60006		10	<1	0.06	10	0.88	949	<1	0.04	42	810	5	0.10	<2	5	56
ZZ60007		<10	1	0.05	10	0.60	354	<1	0.04	26	590	3	0.07	<2	3	47
ZZ60008		<10	<1	0.04	10	0.53	430	<1	0.07	23	560	2	0.04	<2	4	53
ZZ60009		<10	<1	0.05	10	0.58	408	<1	0.06	27	740	3	0.08	<2	4	63
ZZ60010		10	<1	0.05	<10	0.49	282	1	0.04	26	530	4	0.07	<2	3	46
ZZ60011		<10	<1	0.05	10	0.68	377	<1	0.06	28	640	4	0.06	<2	5	57
ZZ60210		10	1	0.09	10	2.03	748	<1	0.05	97	910	3	0.04	<2	8	169
ZZ60211		10	1	0.07	10	1.23	679	<1	0.05	54	710	2	0.04	<2	8	143
ZZ60212		<10	<1	0.07	10	0.95	1250	<1	0.04	53	960	3	0.03	<2	11	165
ZZ60213		10	<1	0.08	10	1.24	611	<1	0.07	48	780	2	0.04	<2	9	125
ZZ60214		10	1	0.07	10	1.24	504	<1	0.06	54	760	3	0.05	<2	8	137
ZZ60215		<10	<1	0.10	10	1.08	587	<1	0.08	36	720	3	0.01	<2	8	125
ZZ60216		<10	<1	0.08	10	2.27	604	<1	0.07	56	900	2	0.01	<2	5	144
ZZ60217		<10	<1	0.02	10	5.02	472	<1	0.24	200	1040	<2	<0.01	<2	8	241
ZZ60218		<10	<1	0.06	10	1.30	797	<1	0.08	55	720	<2	0.01	<2	8	106
ZZ60219		<10	<1	0.05	10	1.19	587	1	0.07	49	880	3	0.06	<2	7	65
ZZ60028		10	<1	0.08	10	0.68	308	1	0.05	27	650	4	0.05	<2	3	55
ZZ60029		<10	<1	0.06	<10	0.54	277	1	0.04	20	720	3	0.05	<2	2	40
ZZ60030		<10	<1	0.04	10	0.58	318	<1	0.05	29	790	3	0.06	<2	3	46
ZZ60031		<10	<1	0.06	10	1.04	528	<1	0.06	37	740	3	0.03	<2	4	59
ZZ60032		10	<1	0.06	10	1.25	718	1	0.05	44	820	5	0.05	<2	5	65
ZZ60033		<10	<1	0.06	10	0.70	452	1	0.06	35	700	3	0.09	<2	4	59
ZZ60034		<10	<1	0.06	10	1.17	549	<1	0.06	45	590	4	0.03	<2	7	55
ZZ60035		<10	<1	0.04	<10	0.37	430	1	0.04	15	570	4	0.08	<2	2	34
ZZ60036		<10	<1	0.04	10	0.50	418	1	0.07	27	620	2	0.05	<2	4	60
ZZ60037		<10	<1	0.05	10	0.37	555	1	0.06	20	550	3	0.05	<2	3	55
ZZ60308		10	<1	0.04	10	0.63	638	1	0.04	39	570	4	0.03	<2	7	56
ZZ60309		<10	<1	0.06	10	0.38	473	<1	0.07	58	450	2	0.02	<2	6	27
ZZ60310		<10	<1	0.07	10	0.44	599	<1	0.08	54	590	2	0.02	<2	7	41
ZZ60311		<10	<1	0.06	10	0.47	476	<1	0.05	34	700	2	0.03	<2	6	40
ZZ60312		<10	<1	0.07	10	0.58	670	<1	0.06	53	790	2	0.04	<2	9	39
ZZ60313		<10	<1	0.06	10	0.60	487	1	0.06	43	700	2	0.05	<2	6	48
ZZ60314		<10	<1	0.07	10	0.65	840	1	0.04	44	1070	4	0.07	<2	4	54
ZZ60315		10	<1	0.05	10	1.52	476	<1	0.12	116	670	<2	0.03	<2	7	96
ZZ60316		<10	<1	0.05	10	0.79	660	1	0.06	54	630	4	0.04	<2	7	46



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Sample Description	Method Analyte Units LOR	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41
		Th	Ti	Ti	U	V	W	Zn
		ppm 20	% 0.01	ppm 10	ppm 10	ppm 1	ppm 10	ppm 2
ZZ60001		<20	0.07	<10	<10	66	<10	60
ZZ60002		<20	0.09	<10	<10	74	<10	64
ZZ60003		<20	0.09	<10	<10	75	<10	68
ZZ60004		<20	0.10	<10	<10	76	<10	73
ZZ60005		<20	0.08	<10	<10	69	<10	67
ZZ60006		<20	0.07	<10	<10	88	<10	71
ZZ60007		<20	0.07	<10	<10	58	<10	40
ZZ60008		<20	0.12	<10	<10	62	<10	42
ZZ60009		<20	0.11	<10	<10	80	<10	42
ZZ60010		<20	0.11	<10	<10	82	<10	48
ZZ60011		<20	0.13	<10	<10	74	<10	51
ZZ60210		<20	0.14	<10	<10	79	<10	63
ZZ60211		<20	0.15	<10	<10	71	<10	63
ZZ60212		<20	0.10	<10	<10	64	<10	74
ZZ60213		<20	0.21	<10	<10	76	<10	64
ZZ60214		<20	0.17	<10	<10	77	<10	66
ZZ60215		<20	0.27	<10	<10	64	<10	52
ZZ60216		<20	0.03	<10	<10	44	<10	65
ZZ60217		<20	0.10	<10	<10	72	<10	70
ZZ60218		<20	0.17	<10	<10	60	<10	64
ZZ60219		<20	0.06	<10	<10	59	<10	57
ZZ60028		<20	0.09	<10	<10	67	<10	53
ZZ60029		<20	0.06	<10	<10	57	<10	49
ZZ60030		<20	0.07	<10	<10	50	<10	36
ZZ60031		<20	0.08	<10	<10	57	<10	45
ZZ60032		<20	0.09	<10	<10	78	<10	60
ZZ60033		<20	0.08	<10	<10	61	<10	54
ZZ60034		<20	0.09	<10	<10	79	<10	52
ZZ60035		<20	0.07	<10	<10	55	<10	51
ZZ60036		<20	0.13	<10	<10	70	<10	42
ZZ60037		<20	0.11	<10	<10	64	<10	38
ZZ60308		<20	0.13	<10	<10	77	<10	58
ZZ60309		<20	0.05	<10	<10	42	<10	40
ZZ60310		<20	0.06	<10	<10	67	<10	43
ZZ60311		<20	0.09	<10	<10	69	<10	44
ZZ60312		<20	0.08	<10	<10	69	<10	49
ZZ60313		<20	0.09	<10	<10	71	<10	56
ZZ60314		<20	0.08	<10	<10	79	<10	72
ZZ60315		<20	0.17	<10	<10	96	<10	60
ZZ60316		<20	0.08	<10	<10	72	<10	65



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Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	Au- AA24 Au ppm	ME- ICP41 Ag ppm	ME- ICP41 Al %	ME- ICP41 As ppm	ME- ICP41 B ppm	ME- ICP41 Ba ppm	ME- ICP41 Be ppm	ME- ICP41 Bi ppm	ME- ICP41 Ca %	ME- ICP41 Cd ppm	ME- ICP41 Co ppm	ME- ICP41 Cr ppm	ME- ICP41 Cu ppm	ME- ICP41 Fe %
		0.02	0.005	0.2	0.01	2	10	10	0.5	2	0.01	0.5	1	1	1	0.01
ZZ60317		0.20	<0.005	<0.2	0.91	5	<10	70	<0.5	<2	0.43	<0.5	14	37	29	2.74
ZZ60433		0.32	0.009	<0.2	1.69	25	<10	180	0.7	<2	0.46	<0.5	27	42	38	4.37
ZZ60434		0.29	<0.005	<0.2	2.43	9	<10	190	0.6	<2	0.57	<0.5	13	43	35	3.68
ZZ60435		0.21	<0.005	<0.2	1.84	9	<10	140	0.7	<2	0.70	<0.5	16	33	43	3.28
ZZ60436		0.08	<0.005	<0.2	1.61	7	<10	150	0.5	<2	0.53	<0.5	15	29	34	2.99
ZZ60437		0.09	NSS	<0.2	1.32	6	<10	150	<0.5	<2	0.68	<0.5	13	24	34	2.66
ZZ60438		0.18	<0.005	<0.2	1.18	5	<10	120	0.7	<2	0.46	<0.5	10	23	25	2.37
ZZ60439		0.17	<0.005	<0.2	1.10	3	<10	110	0.7	<2	0.43	<0.5	9	23	21	2.19
ZZ60440		0.05	0.006	<0.2	1.23	7	<10	180	<0.5	<2	1.05	<0.5	11	27	31	2.33
ZZ60441		0.11	<0.005	<0.2	1.41	2	<10	140	0.8	<2	0.52	<0.5	11	26	28	2.54
ZZ60442		0.14	<0.005	<0.2	1.63	6	<10	150	0.8	<2	0.50	<0.5	13	30	31	2.71
ZZ60050		0.23	<0.005	<0.2	2.39	5	<10	160	<0.5	<2	0.45	<0.5	12	48	41	2.95
ZZ60051		0.16	<0.005	0.2	2.32	2	<10	170	<0.5	<2	0.52	<0.5	12	38	31	2.89
ZZ60052		0.27	<0.005	<0.2	1.72	6	<10	150	<0.5	<2	0.40	<0.5	12	31	39	3.26
ZZ60053		0.18	<0.005	<0.2	2.23	2	<10	260	<0.5	<2	0.54	<0.5	14	36	32	3.18
ZZ60054		0.08	<0.005	<0.2	1.71	3	<10	160	<0.5	<2	0.88	<0.5	12	30	39	2.59
ZZ60055		0.11	<0.005	<0.2	2.28	7	<10	190	0.5	<2	0.84	<0.5	19	41	56	3.61
ZZ60056		0.18	<0.005	<0.2	2.30	4	<10	170	<0.5	<2	0.52	<0.5	15	40	34	3.18
ZZ60057		0.22	<0.005	<0.2	2.42	3	<10	150	<0.5	<2	0.56	<0.5	15	38	36	3.15
ZZ60058		0.22	<0.005	0.2	2.16	8	<10	290	0.5	<2	0.60	<0.5	13	40	24	2.86
ZZ60059		0.20	<0.005	<0.2	2.21	2	<10	200	<0.5	<2	0.71	<0.5	16	33	30	3.17
ZZ60200		0.11	<0.005	0.3	2.34	4	<10	130	0.5	<2	0.83	<0.5	19	41	42	3.32
ZZ60201		0.15	<0.005	<0.2	3.06	<2	<10	160	0.7	<2	0.94	<0.5	23	29	52	3.58
ZZ60202		0.15	<0.005	<0.2	3.04	3	<10	130	0.6	<2	0.94	<0.5	23	40	50	3.83
ZZ60203		0.20	<0.005	<0.2	2.87	3	<10	120	0.6	<2	1.11	<0.5	23	30	51	3.73
ZZ60204		0.18	<0.005	<0.2	3.46	<2	<10	90	0.7	<2	1.21	<0.5	22	25	51	3.65
ZZ60205		0.12	<0.005	<0.2	2.84	2	<10	110	0.7	<2	0.95	<0.5	21	35	51	3.68
ZZ60206		0.22	<0.005	<0.2	2.80	2	<10	120	0.6	<2	0.82	<0.5	19	40	47	3.62
ZZ60207		0.16	<0.005	<0.2	0.47	3	<10	40	<0.5	<2	2.24	<0.5	9	8	27	1.38
ZZ60208		0.17	<0.005	<0.2	1.58	2	<10	150	0.5	<2	0.76	<0.5	27	54	64	3.53
ZZ60209		0.21	<0.005	<0.2	1.15	3	<10	90	<0.5	<2	0.51	<0.5	20	49	47	2.98
ZZ60351		0.13	<0.005	<0.2	2.04	6	<10	120	0.5	<2	0.85	<0.5	16	36	47	3.36
ZZ60352		0.11	<0.005	<0.2	1.30	5	<10	110	0.6	<2	0.54	<0.5	11	24	28	2.48
ZZ60353		0.05	<0.005	<0.2	1.44	8	<10	140	0.5	<2	0.86	<0.5	14	30	33	2.83
ZZ60354		0.07	<0.005	<0.2	1.49	7	<10	150	<0.5	<2	0.70	<0.5	12	32	30	2.95
ZZ60355		0.05	<0.005	<0.2	1.29	5	<10	120	<0.5	<2	0.62	<0.5	12	29	31	2.64
ZZ60356		0.07	NSS	<0.2	0.98	4	<10	100	<0.5	<2	0.61	<0.5	8	21	24	2.11
ZZ60357		0.08	<0.005	<0.2	1.29	5	<10	130	<0.5	<2	0.49	<0.5	10	24	28	2.43
ZZ60358		0.03	<0.005	0.2	1.39	4	<10	140	<0.5	<2	0.60	<0.5	12	25	34	2.71
ZZ60359		0.09	<0.005	<0.2	1.85	6	<10	160	<0.5	<2	0.44	<0.5	13	33	34	3.45



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Sample Description	Method Analyte Units LOR	ME- ICP41 Ga ppm 10	ME- ICP41 Hg ppm 1	ME- ICP41 K % 0.01	ME- ICP41 La ppm 10	ME- ICP41 Mg % 0.01	ME- ICP41 Mn ppm 5	ME- ICP41 Mo ppm 1	ME- ICP41 Na % 0.01	ME- ICP41 Ni ppm 1	ME- ICP41 P ppm 10	ME- ICP41 Pb ppm 2	ME- ICP41 S % 0.01	ME- ICP41 Sb ppm 2	ME- ICP41 Sc ppm 1	ME- ICP41 Sr ppm 1
ZZ60317		<10	<1	0.04	<10	0.53	617	1	0.05	41	670	<2	0.04	<2	5	36
ZZ60433		<10	<1	0.12	20	0.80	986	1	0.02	118	640	10	0.01	<2	8	46
ZZ60434		10	<1	0.07	10	0.87	474	1	0.04	36	810	8	0.06	<2	6	67
ZZ60435		10	<1	0.09	10	0.88	945	1	0.06	40	550	4	0.06	<2	6	56
ZZ60436		<10	<1	0.06	10	0.75	768	1	0.05	31	510	4	0.06	<2	4	42
ZZ60437		<10	<1	0.07	10	0.59	660	1	0.06	26	520	5	0.08	<2	4	50
ZZ60438		<10	<1	0.08	<10	0.56	644	1	0.05	23	380	3	0.03	<2	4	42
ZZ60439		<10	<1	0.06	<10	0.52	648	1	0.05	22	300	3	0.02	<2	4	41
ZZ60440		<10	<1	0.05	10	0.58	660	1	0.05	25	810	4	0.12	<2	3	71
ZZ60441		<10	<1	0.07	10	0.62	785	1	0.05	24	410	4	0.04	<2	5	46
ZZ60442		<10	<1	0.07	10	0.66	983	1	0.04	28	540	6	0.05	<2	4	42
ZZ60050		10	<1	0.05	10	0.92	214	<1	0.04	33	370	6	0.02	<2	8	46
ZZ60051		10	<1	0.05	10	0.74	236	<1	0.04	31	610	6	0.06	<2	6	67
ZZ60052		10	1	0.06	10	0.54	191	<1	0.04	26	740	5	0.05	<2	6	59
ZZ60053		10	<1	0.14	10	0.75	289	<1	0.05	27	570	8	0.03	<2	8	124
ZZ60054		<10	<1	0.05	10	0.61	572	1	0.05	31	870	5	0.10	<2	4	75
ZZ60055		10	<1	0.06	10	0.88	1020	1	0.07	40	670	7	0.07	<2	8	61
ZZ60056		10	<1	0.07	10	0.75	342	<1	0.05	32	600	5	0.04	<2	7	66
ZZ60057		10	1	0.05	10	0.79	346	<1	0.06	40	710	5	0.05	<2	6	62
ZZ60058		10	<1	0.10	10	0.73	817	1	0.04	59	600	9	0.05	<2	4	52
ZZ60059		10	1	0.12	10	0.95	481	<1	0.07	44	720	5	0.03	<2	7	96
ZZ60200		10	<1	0.06	10	1.22	566	1	0.07	51	910	6	0.11	<2	6	88
ZZ60201		10	<1	0.11	10	1.49	739	<1	0.08	49	730	2	0.02	<2	9	149
ZZ60202		10	1	0.07	10	1.65	680	<1	0.08	70	940	3	0.05	<2	9	137
ZZ60203		10	<1	0.09	10	1.69	764	<1	0.11	51	900	3	0.02	<2	8	153
ZZ60204		10	1	0.11	10	1.66	628	<1	0.12	44	800	3	0.02	<2	8	141
ZZ60205		10	1	0.09	10	1.35	676	<1	0.09	45	710	4	0.04	<2	10	100
ZZ60206		10	1	0.08	10	1.20	548	<1	0.09	51	660	4	0.04	<2	9	120
ZZ60207		<10	<1	0.03	10	1.42	707	<1	0.02	16	620	<2	0.02	<2	4	81
ZZ60208		<10	1	0.07	10	1.14	959	<1	0.08	86	770	<2	0.02	<2	10	71
ZZ60209		<10	<1	0.04	10	1.02	778	1	0.05	65	620	2	0.04	<2	7	50
ZZ60351		<10	<1	0.09	10	1.28	551	1	0.07	57	690	9	0.05	<2	6	104
ZZ60352		<10	<1	0.14	10	0.83	905	1	0.05	33	510	6	0.04	<2	6	60
ZZ60353		<10	<1	0.10	10	0.87	874	1	0.06	36	550	4	0.07	<2	5	74
ZZ60354		<10	<1	0.09	10	0.76	645	1	0.04	30	750	5	0.08	<2	3	57
ZZ60355		<10	<1	0.06	10	0.64	443	1	0.05	28	520	6	0.07	<2	3	49
ZZ60356		<10	<1	0.07	<10	0.54	375	1	0.05	23	520	5	0.08	<2	3	43
ZZ60357		<10	<1	0.05	10	0.51	474	1	0.04	23	490	5	0.06	<2	3	39
ZZ60358		<10	<1	0.05	10	0.68	623	1	0.05	28	520	5	0.08	<2	3	47
ZZ60359		10	<1	0.04	10	0.68	519	1	0.04	31	410	6	0.06	<2	4	42



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CERTIFICATE OF ANALYSIS WH12159016

Sample Description	Method Analyte Units LOR	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41
		Th	Ti	Ti	U	V	W	Zn
		ppm 20	% 0.01	ppm 10	ppm 10	ppm 1	ppm 10	ppm 2
ZZ60317		<20	0.05	<10	<10	56	<10	70
ZZ60433		<20	0.01	<10	<10	54	<10	82
ZZ60434		<20	0.05	<10	<10	74	<10	64
ZZ60435		<20	0.09	<10	<10	68	<10	76
ZZ60436		<20	0.07	<10	<10	64	<10	71
ZZ60437		<20	0.07	<10	<10	57	<10	65
ZZ60438		<20	0.07	<10	<10	53	<10	64
ZZ60439		<20	0.08	<10	<10	53	<10	61
ZZ60440		<20	0.06	<10	<10	53	<10	58
ZZ60441		<20	0.08	<10	<10	57	<10	70
ZZ60442		<20	0.07	<10	<10	58	<10	73
ZZ60050		<20	0.10	<10	<10	82	<10	56
ZZ60051		<20	0.10	<10	<10	69	<10	62
ZZ60052		<20	0.08	<10	<10	69	<10	69
ZZ60053		<20	0.09	<10	<10	74	<10	84
ZZ60054		<20	0.08	<10	<10	61	<10	75
ZZ60055		<20	0.11	<10	<10	92	<10	64
ZZ60056		<20	0.10	<10	<10	86	<10	64
ZZ60057		<20	0.12	<10	<10	76	<10	58
ZZ60058		<20	0.10	<10	<10	56	<10	59
ZZ60059		<20	0.16	<10	<10	79	<10	57
ZZ60200		<20	0.12	<10	<10	72	<10	67
ZZ60201		<20	0.28	<10	<10	74	<10	59
ZZ60202		<20	0.19	<10	<10	84	<10	66
ZZ60203		<20	0.25	<10	<10	76	<10	61
ZZ60204		<20	0.30	<10	<10	69	<10	57
ZZ60205		<20	0.28	<10	<10	69	<10	61
ZZ60206		<20	0.25	<10	<10	76	<10	58
ZZ60207		<20	0.02	<10	<10	15	<10	33
ZZ60208		<20	0.11	<10	<10	75	<10	65
ZZ60209		<20	0.06	<10	<10	53	<10	60
ZZ60351		<20	0.13	<10	<10	68	<10	67
ZZ60352		<20	0.04	<10	<10	42	<10	72
ZZ60353		<20	0.05	<10	<10	56	<10	81
ZZ60354		<20	0.06	<10	<10	64	<10	75
ZZ60355		<20	0.07	<10	<10	64	<10	72
ZZ60356		<20	0.06	<10	<10	45	<10	65
ZZ60357		<20	0.06	<10	<10	54	<10	60
ZZ60358		<20	0.07	<10	<10	55	<10	81
ZZ60359		<20	0.08	<10	<10	76	<10	65



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Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	Au- AA24 Au ppm	ME- ICP41 Ag ppm	ME- ICP41 Al %	ME- ICP41 As ppm	ME- ICP41 B ppm	ME- ICP41 Ba ppm	ME- ICP41 Be ppm	ME- ICP41 Bi ppm	ME- ICP41 Ca %	ME- ICP41 Cd ppm	ME- ICP41 Co ppm	ME- ICP41 Cr ppm	ME- ICP41 Cu ppm	ME- ICP41 Fe %
		0.02	0.005	0.2	0.01	2	10	10	0.5	2	0.01	0.5	1	1	1	0.01
ZZ60360		0.09	<0.005	<0.2	1.38	3	<10	140	0.5	<2	0.48	<0.5	12	25	26	2.44
ZZ60361		0.08	<0.005	<0.2	1.55	4	<10	160	<0.5	<2	0.59	<0.5	12	28	23	2.65
ZZ60362		0.11	0.008	0.2	2.15	5	<10	150	0.5	<2	0.58	<0.5	13	33	35	2.67
ZZ60363		0.09	<0.005	0.2	2.03	3	<10	150	<0.5	<2	0.68	<0.5	14	33	29	2.88
ZZ60364		0.05	<0.005	<0.2	1.38	4	<10	150	<0.5	<2	0.78	<0.5	15	31	30	2.74
ZZ60365		0.14	<0.005	<0.2	1.53	6	<10	140	<0.5	<2	0.58	<0.5	14	34	28	2.75
ZZ60366		0.07	<0.005	<0.2	1.75	5	<10	140	<0.5	<2	0.61	<0.5	13	40	31	2.83
ZZ60367		0.20	<0.005	<0.2	1.91	5	<10	160	0.6	<2	0.72	<0.5	18	43	48	3.49
ZZ60368		0.14	<0.005	<0.2	1.79	4	<10	120	<0.5	<2	0.67	<0.5	17	57	39	3.33
ZZ60369		0.11	<0.005	<0.2	1.67	5	<10	100	<0.5	<2	0.95	<0.5	19	72	44	3.37
ZZ60370		0.21	<0.005	<0.2	2.20	4	<10	140	0.5	<2	0.79	<0.5	16	37	37	3.15
ZZ60017		0.09	0.005	<0.2	1.72	3	<10	170	<0.5	<2	0.82	<0.5	10	33	38	2.49
ZZ60018		0.16	<0.005	<0.2	2.07	5	<10	130	<0.5	<2	0.44	<0.5	9	31	23	2.54
ZZ60020		0.08	<0.005	<0.2	1.63	4	<10	200	<0.5	<2	0.87	<0.5	16	31	36	2.94
ZZ60021		0.27	<0.005	<0.2	2.16	7	<10	190	0.5	<2	0.91	<0.5	15	37	43	3.37
ZZ60022		0.17	<0.005	0.2	2.18	2	<10	180	<0.5	<2	0.86	<0.5	14	37	37	2.94
ZZ60023		0.31	<0.005	<0.2	1.80	6	<10	480	0.6	<2	0.67	<0.5	10	32	17	2.56
ZZ60024		0.14	<0.005	<0.2	2.41	3	<10	200	0.6	<2	0.67	<0.5	12	36	30	2.90
ZZ60025		0.31	<0.005	<0.2	2.66	2	<10	210	0.5	<2	0.63	<0.5	11	35	31	3.14
ZZ60026		0.24	<0.005	<0.2	2.39	5	<10	170	<0.5	<2	0.62	<0.5	15	31	30	3.28
ZZ60027		0.27	<0.005	<0.2	2.38	4	<10	180	0.5	<2	0.65	<0.5	15	30	29	3.19
ZZ60283		0.33	<0.005	<0.2	0.87	3	<10	80	<0.5	<2	0.41	<0.5	15	46	39	2.41
ZZ60284		0.17	<0.005	<0.2	1.03	2	<10	70	<0.5	<2	0.69	<0.5	14	58	39	2.51
ZZ60285		0.18	<0.005	<0.2	1.17	2	<10	70	<0.5	<2	0.66	<0.5	13	40	33	2.56
ZZ60286		0.20	<0.005	<0.2	1.70	2	<10	200	<0.5	<2	0.57	<0.5	13	34	31	2.83
ZZ60287		0.21	<0.005	<0.2	1.89	4	<10	140	<0.5	<2	0.60	<0.5	13	60	36	3.32
ZZ60288		0.25	<0.005	<0.2	0.92	2	<10	50	<0.5	<2	0.69	<0.5	23	193	48	3.67
ZZ60289		0.10	<0.005	<0.2	0.70	2	<10	60	<0.5	2	0.33	<0.5	5	23	20	1.22
ZZ60290		0.21	<0.005	0.2	1.53	<2	<10	130	<0.5	<2	0.59	<0.5	12	33	32	2.49
ZZ60291		0.24	<0.005	<0.2	1.50	<2	<10	110	0.5	2	0.63	<0.5	13	49	31	2.95
ZZ60292		0.09	NSS	<0.2	1.00	<2	<10	60	<0.5	<2	0.74	<0.5	16	59	36	2.66
ZZ60293		0.13	<0.005	<0.2	1.03	2	<10	50	0.5	<2	0.65	<0.5	11	40	33	2.07
ZZ60294		0.18	<0.005	<0.2	1.08	2	<10	80	<0.5	2	0.56	<0.5	15	40	34	2.66
ZZ60371		0.11	<0.005	<0.2	1.73	5	<10	130	<0.5	<2	0.58	<0.5	14	31	38	3.01
ZZ60372		0.16	<0.005	<0.2	1.72	2	<10	120	<0.5	<2	0.53	<0.5	9	33	27	2.20
ZZ60373		0.19	<0.005	<0.2	1.88	<2	<10	100	<0.5	2	0.54	<0.5	9	32	25	2.29
ZZ60374		0.21	<0.005	<0.2	2.20	2	<10	160	<0.5	2	0.58	<0.5	11	34	34	2.81
ZZ60375		0.21	<0.005	<0.2	1.75	6	<10	150	<0.5	<2	0.96	<0.5	14	35	39	3.31
ZZ60376		0.14	<0.005	0.3	2.20	2	<10	190	0.5	<2	0.69	<0.5	12	42	41	2.87
ZZ60377		0.24	<0.005	0.2	2.08	6	<10	180	0.6	2	0.90	<0.5	11	35	46	3.11



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Sample Description	Method Analyte Units LOR	ME- ICP41 Ga ppm 10	ME- ICP41 Hg ppm 1	ME- ICP41 K % 0.01	ME- ICP41 La ppm 10	ME- ICP41 Mg % 0.01	ME- ICP41 Mn ppm 5	ME- ICP41 Mo ppm 1	ME- ICP41 Na % 0.01	ME- ICP41 Ni ppm 1	ME- ICP41 P ppm 10	ME- ICP41 Pb ppm 2	ME- ICP41 S % 0.01	ME- ICP41 Sb ppm 2	ME- ICP41 Sc ppm 1	ME- ICP41 Sr ppm 1
ZZ60360		<10	<1	0.05	10	0.58	802	1	0.04	25	390	5	0.04	<2	4	41
ZZ60361		<10	<1	0.05	10	0.75	582	1	0.05	28	450	4	0.04	<2	4	52
ZZ60362		10	<1	0.05	10	0.61	400	1	0.04	29	770	5	0.07	<2	6	66
ZZ60363		10	<1	0.05	10	0.76	584	1	0.05	33	530	5	0.05	<2	5	76
ZZ60364		<10	<1	0.06	10	0.69	464	1	0.05	30	580	5	0.08	<2	3	68
ZZ60365		<10	<1	0.07	10	0.82	784	1	0.06	36	460	4	0.03	<2	4	55
ZZ60366		<10	<1	0.06	10	0.83	429	1	0.05	39	620	4	0.06	<2	4	68
ZZ60367		10	<1	0.12	10	1.20	807	1	0.07	52	720	6	0.01	<2	8	72
ZZ60368		<10	<1	0.09	10	1.46	599	<1	0.06	63	580	3	0.04	<2	6	62
ZZ60369		<10	<1	0.08	10	1.93	474	<1	0.07	82	660	2	0.05	<2	6	71
ZZ60370		10	<1	0.06	10	1.21	524	<1	0.06	54	800	3	0.02	<2	7	118
ZZ60017		10	1	0.04	10	0.65	637	1	0.04	31	1070	4	0.11	<2	3	71
ZZ60018		10	<1	0.03	10	0.67	219	1	0.03	24	530	5	0.04	<2	4	44
ZZ60020		10	<1	0.04	10	0.58	1140	1	0.05	28	1100	5	0.11	<2	4	86
ZZ60021		10	<1	0.06	10	0.80	566	1	0.05	37	850	7	0.07	<2	5	69
ZZ60022		10	<1	0.06	10	0.81	505	<1	0.06	38	690	5	0.04	<2	6	67
ZZ60023		10	<1	0.21	20	0.77	710	1	0.02	44	720	13	0.01	<2	6	75
ZZ60024		10	<1	0.08	10	0.72	438	<1	0.03	29	560	6	0.02	<2	9	66
ZZ60025		10	<1	0.07	10	0.81	456	<1	0.03	32	630	7	0.03	<2	7	66
ZZ60026		10	<1	0.05	10	0.88	621	1	0.04	32	570	6	0.04	<2	5	76
ZZ60027		10	<1	0.08	10	0.74	569	1	0.04	31	640	6	0.04	<2	4	84
ZZ60283		<10	<1	0.03	10	0.64	669	<1	0.04	56	450	2	<0.01	<2	7	28
ZZ60284		<10	<1	0.07	10	0.81	449	<1	0.05	47	490	2	0.01	<2	9	44
ZZ60285		<10	<1	0.08	10	1.00	438	<1	0.07	48	830	2	0.02	<2	6	52
ZZ60286		<10	<1	0.09	10	0.85	483	<1	0.06	40	550	3	0.02	<2	9	68
ZZ60287		<10	<1	0.05	10	1.10	535	1	0.05	48	610	4	0.03	<2	7	53
ZZ60288		<10	<1	0.04	10	3.29	1085	<1	0.05	122	1110	3	<0.01	<2	8	53
ZZ60289		<10	<1	0.05	<10	0.39	150	<1	0.04	25	410	2	<0.01	<2	4	28
ZZ60290		<10	<1	0.05	10	0.72	538	<1	0.06	32	620	2	0.02	<2	5	52
ZZ60291		<10	<1	0.06	10	0.82	605	<1	0.04	47	660	3	0.01	<2	7	44
ZZ60292		<10	<1	0.07	10	0.88	694	<1	0.05	72	620	<2	0.04	<2	8	39
ZZ60293		<10	<1	0.06	10	0.71	500	<1	0.05	45	470	2	0.02	<2	7	36
ZZ60294		<10	<1	0.09	10	0.67	585	<1	0.06	47	620	<2	0.02	2	7	41
ZZ60371		<10	<1	0.05	10	0.71	562	<1	0.05	33	800	2	0.08	2	3	55
ZZ60372		<10	<1	0.04	<10	0.62	595	<1	0.05	31	580	2	0.03	<2	5	54
ZZ60373		<10	<1	0.04	10	0.71	150	<1	0.05	29	510	2	<0.01	<2	5	47
ZZ60374		10	<1	0.05	10	0.74	426	<1	0.05	37	540	2	0.02	<2	5	58
ZZ60375		<10	<1	0.10	10	1.02	559	<1	0.08	39	680	4	0.02	3	7	82
ZZ60376		10	<1	0.04	10	0.78	440	<1	0.05	36	1000	6	0.05	3	7	68
ZZ60377		10	<1	0.06	20	0.68	481	<1	0.05	31	970	7	0.07	3	6	76



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Sample Description	Method Analyte Units LOR	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41
		Th	Ti	Ti	U	V	W	Zn
		ppm 20	% 0.01	ppm 10	ppm 10	ppm 1	ppm 10	ppm 2
ZZ60360		<20	0.07	<10	<10	57	<10	62
ZZ60361		<20	0.08	<10	<10	60	<10	59
ZZ60362		<20	0.09	<10	<10	64	<10	61
ZZ60363		<20	0.12	<10	<10	71	<10	64
ZZ60364		<20	0.06	<10	<10	60	<10	67
ZZ60365		<20	0.07	<10	<10	64	<10	70
ZZ60366		<20	0.06	<10	<10	63	<10	65
ZZ60367		<20	0.10	<10	<10	71	<10	77
ZZ60368		<20	0.07	<10	<10	64	<10	57
ZZ60369		<20	0.08	<10	<10	66	<10	57
ZZ60370		<20	0.13	<10	<10	65	<10	56
ZZ60017		<20	0.06	<10	<10	58	<10	75
ZZ60018		<20	0.07	<10	<10	64	<10	49
ZZ60020		<20	0.05	<10	<10	63	<10	67
ZZ60021		<20	0.08	<10	<10	83	<10	66
ZZ60022		<20	0.10	<10	<10	74	<10	66
ZZ60023		<20	0.09	<10	<10	43	<10	73
ZZ60024		<20	0.12	<10	<10	68	<10	53
ZZ60025		<20	0.12	<10	<10	71	<10	50
ZZ60026		<20	0.10	<10	<10	76	<10	53
ZZ60027		<20	0.10	<10	<10	75	<10	58
ZZ60283		<20	0.04	<10	<10	50	<10	45
ZZ60284		<20	0.08	<10	<10	64	<10	33
ZZ60285		<20	0.09	<10	<10	63	<10	44
ZZ60286		<20	0.13	<10	<10	64	<10	48
ZZ60287		<20	0.10	<10	<10	74	<10	57
ZZ60288		<20	0.07	<10	<10	65	<10	54
ZZ60289		<20	0.06	<10	<10	35	<10	25
ZZ60290		<20	0.08	<10	<10	61	<10	51
ZZ60291		<20	0.08	<10	<10	67	<10	57
ZZ60292		<20	0.06	<10	<10	58	<10	52
ZZ60293		<20	0.06	<10	<10	57	<10	56
ZZ60294		<20	0.07	<10	<10	57	<10	52
ZZ60371		<20	0.06	<10	<10	68	<10	62
ZZ60372		<20	0.09	<10	<10	59	<10	48
ZZ60373		<20	0.11	<10	<10	66	<10	48
ZZ60374		<20	0.10	<10	<10	69	<10	57
ZZ60375		<20	0.11	<10	<10	78	<10	75
ZZ60376		<20	0.07	<10	<10	69	<10	75
ZZ60377		<20	0.06	<10	<10	71	<10	62



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Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	Au- AA24 Au ppm	ME- ICP41 Ag ppm	ME- ICP41 Al %	ME- ICP41 As ppm	ME- ICP41 B ppm	ME- ICP41 Ba ppm	ME- ICP41 Be ppm	ME- ICP41 Bi ppm	ME- ICP41 Ca %	ME- ICP41 Cd ppm	ME- ICP41 Co ppm	ME- ICP41 Cr ppm	ME- ICP41 Cu ppm	ME- ICP41 Fe %
		0.02	0.005	0.2	0.01	2	10	10	0.5	2	0.01	0.5	1	1	1	0.01
ZZ60378		0.23	<0.005	<0.2	1.93	6	<10	160	<0.5	2	0.58	<0.5	13	44	40	3.29
ZZ60379		0.25	<0.005	<0.2	2.34	3	<10	170	0.5	2	0.47	<0.5	12	44	44	3.17
ZZ60380		0.30	<0.005	0.2	2.15	3	<10	190	0.5	2	0.64	<0.5	12	39	40	2.85
ZZ60267		0.18	0.006	<0.2	0.76	<2	<10	40	<0.5	2	0.37	<0.5	15	34	34	2.28
ZZ60268		0.16	<0.005	<0.2	0.52	<2	<10	40	<0.5	<2	0.25	<0.5	25	48	83	1.67
ZZ60269		0.33	<0.005	<0.2	1.50	2	<10	80	<0.5	<2	0.40	<0.5	16	47	44	2.68
ZZ60270		0.25	<0.005	<0.2	1.23	<2	<10	60	<0.5	<2	0.45	<0.5	10	31	32	2.45
ZZ60271		0.21	<0.005	0.2	2.00	6	<10	110	<0.5	<2	0.44	<0.5	12	39	36	3.56
ZZ60272		0.25	<0.005	<0.2	0.91	<2	<10	40	<0.5	2	0.40	<0.5	14	60	34	2.39
ZZ60273		0.30	<0.005	<0.2	1.25	<2	<10	90	<0.5	2	0.53	<0.5	11	41	31	2.58
ZZ60274		0.24	<0.005	<0.2	1.39	3	<10	70	0.5	<2	0.75	<0.5	19	34	49	3.06
ZZ60275		0.19	NSS	<0.2	1.14	2	<10	60	<0.5	<2	0.59	<0.5	13	40	38	2.51
ZZ60443		0.21	<0.005	<0.2	1.66	<2	<10	70	<0.5	2	0.90	<0.5	16	30	45	3.18
ZZ60444		0.19	<0.005	<0.2	1.82	2	<10	110	<0.5	2	0.65	<0.5	14	29	34	2.85
ZZ60445		0.09	<0.005	<0.2	1.73	6	<10	120	<0.5	<2	0.54	<0.5	16	32	31	3.12
ZZ60446		0.07	<0.005	0.2	1.42	6	<10	130	0.6	<2	0.79	<0.5	13	27	32	2.80
ZZ60473		0.20	<0.005	<0.2	1.03	2	<10	80	<0.5	<2	0.59	<0.5	12	32	35	2.32
ZZ60474		0.16	<0.005	<0.2	1.27	3	<10	110	<0.5	<2	0.58	<0.5	16	41	43	3.06
ZZ60475		0.33	<0.005	<0.2	2.13	2	<10	80	<0.5	<2	0.95	<0.5	30	69	57	4.94
ZZ60476		0.13	<0.005	0.2	2.30	5	<10	110	<0.5	<2	1.02	<0.5	29	46	61	4.89
ZZ60477		0.15	<0.005	<0.2	1.84	<2	<10	100	<0.5	<2	0.97	<0.5	19	42	45	3.54
ZZ60478		0.18	<0.005	<0.2	1.53	2	<10	110	<0.5	<2	0.87	<0.5	26	53	55	3.95
ZZ60479		0.09	0.007	<0.2	1.09	<2	<10	100	<0.5	<2	0.62	<0.5	11	32	33	2.43
ZZ60480		0.32	<0.005	<0.2	0.79	<2	<10	70	<0.5	<2	0.26	<0.5	11	29	35	1.97
ZZ60318		0.29	<0.005	<0.2	0.54	<2	<10	50	<0.5	<2	0.29	<0.5	15	41	50	1.63
ZZ60319		0.28	<0.005	<0.2	1.43	2	<10	80	<0.5	<2	0.45	<0.5	16	45	46	2.63
ZZ60320		0.21	<0.005	<0.2	1.00	4	<10	60	<0.5	<2	0.42	<0.5	14	44	30	2.45
ZZ60321		0.21	<0.005	<0.2	1.35	3	<10	80	<0.5	<2	0.62	<0.5	14	41	47	2.74
ZZ60322		0.22	<0.005	<0.2	1.49	3	<10	130	<0.5	<2	0.96	<0.5	12	30	35	2.55
ZZ60323		0.31	<0.005	<0.2	0.92	<2	<10	60	<0.5	<2	0.45	<0.5	10	22	33	1.70
ZZ60324		0.22	<0.005	<0.2	1.09	3	<10	100	<0.5	<2	0.59	<0.5	21	50	43	3.23
ZZ60325		0.34	<0.005	<0.2	1.20	4	<10	170	<0.5	<2	0.51	<0.5	16	23	31	3.01
ZZ60326		0.28	<0.005	<0.2	1.61	5	<10	170	0.5	<2	0.65	<0.5	15	30	38	3.32
ZZ60253		0.20	<0.005	<0.2	1.96	<2	<10	160	<0.5	<2	0.92	<0.5	21	47	58	3.18
ZZ60490		0.17	<0.005	<0.2	1.57	5	<10	140	<0.5	<2	0.60	<0.5	14	28	32	2.81
ZZ60491		0.31	0.009	<0.2	1.32	3	<10	100	0.9	<2	0.42	<0.5	10	23	23	2.40
ZZ60492		0.25	<0.005	<0.2	1.50	7	<10	120	0.7	<2	0.54	<0.5	13	27	33	2.69
ZZ60493		0.19	<0.005	<0.2	2.47	2	<10	130	0.5	<2	0.74	<0.5	18	31	39	3.15
ZZ60494		0.17	0.013	<0.2	1.46	4	<10	100	0.7	<2	0.47	<0.5	9	23	26	2.26
ZZ60495		0.14	<0.005	<0.2	1.27	6	<10	110	1.0	<2	0.50	<0.5	9	18	25	2.01



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ZZ60378		<10	<1	0.08	10	0.94	620	<1	0.05	38	580	5	<0.01	<2	7	80
ZZ60379		10	<1	0.07	10	0.84	368	<1	0.05	37	510	6	0.02	2	9	58
ZZ60380		10	<1	0.09	10	0.83	341	<1	0.05	37	540	6	0.01	2	8	60
ZZ60267		<10	<1	0.04	<10	0.67	707	<1	0.05	60	450	<2	<0.01	<2	9	33
ZZ60268		<10	<1	0.03	<10	0.67	1985	<1	0.05	93	300	<2	<0.01	<2	14	24
ZZ60269		<10	<1	0.07	10	0.54	636	<1	0.05	47	630	<2	0.02	<2	7	42
ZZ60270		<10	<1	0.06	10	0.64	418	<1	0.06	35	590	<2	0.01	<2	5	40
ZZ60271		10	<1	0.07	10	0.65	513	1	0.04	35	560	3	0.03	<2	4	45
ZZ60272		<10	<1	0.05	10	1.29	593	<1	0.04	50	570	<2	<0.01	<2	8	31
ZZ60273		<10	<1	0.07	10	0.78	566	<1	0.05	40	570	3	0.02	<2	7	40
ZZ60274		<10	<1	0.07	10	0.82	849	<1	0.08	56	830	2	0.01	<2	9	61
ZZ60275		<10	<1	0.07	10	0.81	510	<1	0.07	48	640	3	<0.01	<2	7	48
ZZ60443		<10	<1	0.05	10	1.12	588	<1	0.08	36	800	<2	0.03	2	8	76
ZZ60444		<10	<1	0.08	10	1.03	526	<1	0.06	47	780	<2	0.01	<2	5	91
ZZ60445		10	1	0.05	10	0.59	681	<1	0.05	27	520	3	0.06	2	4	46
ZZ60446		<10	<1	0.07	<10	0.71	1015	<1	0.06	32	580	2	0.06	<2	4	56
ZZ60473		<10	<1	0.06	10	0.54	479	<1	0.05	46	760	<2	0.03	<2	6	42
ZZ60474		<10	<1	0.05	10	0.65	567	<1	0.07	71	650	2	0.02	<2	8	51
ZZ60475		10	<1	0.05	10	1.65	1135	<1	0.15	112	940	<2	0.01	<2	6	138
ZZ60476		10	<1	0.06	10	1.32	1175	<1	0.14	97	920	3	0.04	2	7	138
ZZ60477		<10	<1	0.06	10	1.09	668	<1	0.12	64	1030	2	0.05	<2	5	117
ZZ60478		<10	<1	0.06	10	1.09	980	<1	0.13	109	910	2	<0.01	<2	9	102
ZZ60479		<10	<1	0.06	10	0.56	427	<1	0.05	42	860	<2	0.06	<2	4	43
ZZ60480		<10	<1	0.06	10	0.37	345	<1	0.04	48	430	3	0.02	<2	6	19
ZZ60318		<10	<1	0.03	<10	0.50	804	<1	0.05	61	350	2	0.01	<2	9	22
ZZ60319		<10	<1	0.08	10	0.55	607	1	0.05	48	720	3	0.05	<2	6	39
ZZ60320		<10	<1	0.04	<10	0.80	767	<1	0.05	50	560	<2	0.04	<2	6	36
ZZ60321		<10	<1	0.05	10	0.84	543	1	0.07	43	720	3	0.05	<2	6	45
ZZ60322		<10	<1	0.08	10	0.67	549	1	0.05	33	1010	4	0.08	<2	3	68
ZZ60323		<10	1	0.04	10	0.46	346	<1	0.06	38	630	<2	0.02	<2	4	33
ZZ60324		<10	<1	0.04	10	0.73	979	1	0.06	62	780	2	0.01	<2	7	49
ZZ60325		<10	<1	0.08	10	0.60	1480	1	0.05	30	830	4	0.02	<2	7	41
ZZ60326		<10	<1	0.08	10	0.81	981	1	0.06	35	820	4	0.04	<2	7	50
ZZ60253		10	<1	0.07	10	2.29	552	<1	0.09	79	940	3	0.04	<2	8	78
ZZ60490		<10	<1	0.06	<10	0.69	666	<1	0.06	29	480	5	0.06	<2	3	46
ZZ60491		<10	<1	0.08	<10	0.56	745	<1	0.05	25	270	2	0.03	<2	4	35
ZZ60492		<10	<1	0.06	10	0.66	752	1	0.06	30	440	5	0.05	<2	4	42
ZZ60493		10	<1	0.07	10	1.02	591	<1	0.07	41	730	3	0.03	<2	7	92
ZZ60494		<10	<1	0.09	10	0.71	558	<1	0.05	31	410	3	0.03	<2	5	48
ZZ60495		<10	<1	0.11	<10	0.57	1135	1	0.05	22	400	4	0.04	<2	5	42



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Project: Mint

CERTIFICATE OF ANALYSIS WH12159016

Sample Description	Method Analyte Units LOR	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41
		Th	Ti	Ti	U	V	W	Zn
		ppm 20	% 0.01	ppm 10	ppm 10	ppm 1	ppm 10	ppm 2
ZZ60378		<20	0.10	<10	<10	78	<10	68
ZZ60379		<20	0.10	<10	<10	81	<10	66
ZZ60380		<20	0.08	<10	<10	73	<10	66
ZZ60267		<20	0.06	<10	<10	48	<10	56
ZZ60268		<20	0.02	<10	<10	39	<10	78
ZZ60269		<20	0.05	<10	<10	57	<10	58
ZZ60270		<20	0.09	<10	<10	58	<10	49
ZZ60271		<20	0.10	<10	<10	84	<10	62
ZZ60272		<20	0.05	<10	<10	54	<10	54
ZZ60273		<20	0.07	<10	<10	54	<10	49
ZZ60274		<20	0.09	<10	<10	75	<10	61
ZZ60275		<20	0.08	<10	<10	57	<10	48
ZZ60443		<20	0.08	<10	<10	79	<10	63
ZZ60444		<20	0.13	<10	<10	61	<10	48
ZZ60445		<20	0.08	<10	<10	71	<10	67
ZZ60446		<20	0.07	<10	<10	61	<10	83
ZZ60473		<20	0.07	<10	<10	53	<10	41
ZZ60474		<20	0.09	<10	<10	70	<10	51
ZZ60475		<20	0.23	<10	<10	121	<10	73
ZZ60476		<20	0.14	<10	<10	103	<10	77
ZZ60477		<20	0.15	<10	<10	97	<10	64
ZZ60478		<20	0.15	<10	<10	95	<10	66
ZZ60479		<20	0.06	<10	<10	54	<10	51
ZZ60480		<20	0.07	<10	<10	43	<10	39
ZZ60318		<20	0.03	<10	<10	42	<10	58
ZZ60319		<20	0.05	<10	<10	58	<10	60
ZZ60320		<20	0.03	<10	<10	47	<10	54
ZZ60321		<20	0.08	<10	<10	62	<10	56
ZZ60322		<20	0.07	<10	<10	58	<10	62
ZZ60323		<20	0.08	<10	<10	43	<10	28
ZZ60324		<20	0.08	<10	<10	64	<10	64
ZZ60325		<20	0.09	<10	<10	56	<10	73
ZZ60326		<20	0.12	<10	<10	69	<10	78
ZZ60253		<20	0.10	<10	<10	87	<10	56
ZZ60490		<20	0.08	<10	<10	64	<10	72
ZZ60491		<20	0.08	<10	<10	55	<10	67
ZZ60492		<20	0.07	<10	<10	58	<10	74
ZZ60493		<20	0.18	<10	<10	67	<10	52
ZZ60494		<20	0.09	<10	<10	47	<10	55
ZZ60495		<20	0.06	<10	<10	34	<10	75



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CERTIFICATE OF ANALYSIS WH12159016

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	Au- AA24 Au ppm	ME- ICP41 Ag ppm	ME- ICP41 Al %	ME- ICP41 As ppm	ME- ICP41 B ppm	ME- ICP41 Ba ppm	ME- ICP41 Be ppm	ME- ICP41 Bi ppm	ME- ICP41 Ca %	ME- ICP41 Cd ppm	ME- ICP41 Co ppm	ME- ICP41 Cr ppm	ME- ICP41 Cu ppm	ME- ICP41 Fe %
		0.02	0.005	0.2	0.01	2	10	10	0.5	2	0.01	0.5	1	1	1	0.01
ZZ60496		0.15	<0.005	<0.2	1.26	7	<10	120	0.9	<2	0.45	<0.5	8	18	25	2.00
ZZ60497		0.30	<0.005	<0.2	0.77	2	<10	80	0.6	<2	0.32	<0.5	6	12	16	1.40
ZZ60498		0.28	<0.005	<0.2	1.53	11	<10	160	0.5	<2	0.64	<0.5	12	32	33	2.60
ZZ60499		0.20	<0.005	<0.2	1.03	4	<10	270	<0.5	<2	1.17	<0.5	20	58	53	3.25
ZZ60256		0.22	<0.005	<0.2	2.01	3	<10	140	<0.5	<2	0.48	<0.5	9	24	35	2.32
ZZ60257		0.23	<0.005	<0.2	1.90	3	<10	130	<0.5	<2	0.59	<0.5	12	29	40	2.70
ZZ60258		0.16	<0.005	<0.2	2.53	5	<10	120	0.5	<2	0.42	<0.5	13	35	37	3.67
ZZ60259		0.22	<0.005	<0.2	1.28	3	<10	90	<0.5	<2	0.40	<0.5	10	23	27	2.57
ZZ60260		0.10	<0.005	<0.2	1.84	9	<10	130	<0.5	<2	0.57	<0.5	17	40	39	3.45
ZZ60261		0.26	<0.005	<0.2	0.98	3	<10	90	<0.5	<2	0.33	<0.5	6	18	24	1.35
ZZ60448		0.22	0.005	<0.2	2.11	4	<10	120	<0.5	<2	0.57	<0.5	15	34	35	3.15
ZZ60449		0.23	<0.005	<0.2	2.04	6	<10	120	<0.5	<2	0.63	<0.5	16	39	46	3.46
ZZ60450		0.23	<0.005	<0.2	2.80	2	<10	270	0.6	<2	0.71	<0.5	21	43	44	3.78
ZZ60012		0.25	<0.005	<0.2	1.77	3	<10	120	<0.5	<2	0.50	<0.5	8	24	41	2.09
ZZ60013		0.10	<0.005	<0.2	1.51	5	<10	120	<0.5	<2	0.51	<0.5	14	27	34	2.73
ZZ60452		0.19	<0.005	<0.2	2.55	5	<10	120	0.5	<2	0.86	<0.5	16	36	44	3.17
ZZ60453		0.23	<0.005	<0.2	1.93	15	<10	220	0.6	<2	1.16	<0.5	16	31	35	3.41
ZZ60454		0.41	0.005	<0.2	2.13	13	10	140	0.6	<2	0.98	<0.5	13	51	46	3.17
ZZ60455		0.19	<0.005	<0.2	1.72	10	<10	140	0.6	<2	0.74	<0.5	11	34	29	2.64
ZZ60456		0.27	<0.005	<0.2	0.69	5	<10	90	0.7	<2	0.24	<0.5	5	10	12	1.08
ZZ60457		0.23	<0.005	<0.2	0.62	2	<10	60	0.5	<2	0.26	<0.5	5	10	13	1.21
ZZ60458		0.27	<0.005	<0.2	0.82	3	<10	70	0.6	<2	0.35	<0.5	6	15	18	1.70
ZZ60470		0.15	<0.005	<0.2	1.20	2	<10	80	<0.5	<2	0.72	<0.5	16	31	34	2.48
ZZ60295		0.09	<0.005	<0.2	1.06	3	<10	90	<0.5	<2	0.59	<0.5	17	50	33	2.52
ZZ60296		0.26	<0.005	<0.2	1.87	4	<10	140	<0.5	<2	0.55	<0.5	15	44	37	3.03
ZZ60297		0.10	<0.005	<0.2	0.91	3	<10	70	<0.5	<2	0.83	<0.5	9	28	29	1.84
ZZ60298		0.03	NSS	<0.2	0.86	2	<10	110	<0.5	<2	1.67	<0.5	9	20	38	1.57
ZZ60220		0.17	<0.005	<0.2	1.62	7	<10	60	<0.5	<2	1.28	<0.5	26	54	77	3.17
ZZ60221		0.12	NSS	<0.2	1.92	4	<10	60	<0.5	<2	1.32	<0.5	30	62	85	3.99
ZZ60222		0.13	NSS	<0.2	0.71	6	<10	50	<0.5	<2	0.81	<0.5	11	27	35	1.89
ZZ60223		0.14	NSS	<0.2	2.31	2	<10	130	<0.5	<2	1.35	<0.5	25	30	101	4.16
ZZ60192		0.20	<0.005	<0.2	1.05	3	<10	80	<0.5	<2	0.52	<0.5	16	35	43	2.70
ZZ60193		0.18	NSS	<0.2	2.38	5	<10	130	<0.5	<2	2.04	<0.5	30	20	101	4.51



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Sample Description	Method Analyte Units LOR	ME- ICP41 Ga ppm 10	ME- ICP41 Hg ppm 1	ME- ICP41 K % 0.01	ME- ICP41 La ppm 10	ME- ICP41 Mg % 0.01	ME- ICP41 Mn ppm 5	ME- ICP41 Mo ppm 1	ME- ICP41 Na % 0.01	ME- ICP41 Ni ppm 1	ME- ICP41 P ppm 10	ME- ICP41 Pb ppm 2	ME- ICP41 S % 0.01	ME- ICP41 Sb ppm 2	ME- ICP41 Sc ppm 1	ME- ICP41 Sr ppm 1
ZZ60496		<10	<1	0.14	10	0.55	777	1	0.05	22	390	3	0.03	<2	5	42
ZZ60497		<10	<1	0.09	<10	0.40	786	<1	0.05	17	280	2	0.02	<2	4	39
ZZ60498		<10	<1	0.17	10	0.71	697	1	0.06	35	560	4	0.03	<2	6	93
ZZ60499		<10	<1	0.07	10	1.67	763	<1	0.04	67	1020	2	0.05	<2	10	74
ZZ60256		10	<1	0.05	<10	0.44	368	<1	0.06	24	570	4	0.05	<2	3	51
ZZ60257		10	<1	0.05	10	0.63	449	1	0.06	29	690	5	0.06	<2	4	60
ZZ60258		10	<1	0.05	<10	0.44	587	1	0.05	28	500	6	0.06	<2	3	45
ZZ60259		<10	<1	0.03	10	0.44	527	<1	0.04	22	540	3	0.06	<2	3	35
ZZ60260		10	<1	0.05	10	0.97	1140	1	0.05	43	670	7	0.06	<2	5	55
ZZ60261		<10	<1	0.06	<10	0.32	224	<1	0.04	16	430	2	0.04	<2	2	35
ZZ60448		10	<1	0.07	10	0.96	576	<1	0.05	40	780	4	0.04	<2	4	62
ZZ60449		10	<1	0.06	10	1.07	876	<1	0.05	43	790	6	0.07	<2	6	58
ZZ60450		10	<1	0.10	10	1.62	634	<1	0.06	66	620	3	0.04	<2	9	87
ZZ60012		<10	<1	0.05	10	0.48	281	<1	0.06	23	540	4	0.05	<2	5	50
ZZ60013		<10	1	0.04	10	0.62	459	1	0.05	28	550	5	0.06	<2	3	45
ZZ60452		10	<1	0.07	10	1.34	404	<1	0.07	46	740	5	0.05	<2	7	85
ZZ60453		<10	<1	0.14	20	1.15	842	1	0.04	54	810	8	0.06	<2	7	102
ZZ60454		10	<1	0.26	10	0.93	792	<1	0.11	47	610	6	0.05	<2	7	122
ZZ60455		<10	<1	0.18	10	0.76	613	1	0.07	34	610	4	0.05	<2	6	102
ZZ60456		<10	<1	0.10	<10	0.31	589	<1	0.04	11	220	3	0.02	<2	3	36
ZZ60457		<10	<1	0.08	<10	0.29	613	<1	0.04	13	210	2	0.02	<2	3	25
ZZ60458		<10	<1	0.07	<10	0.39	626	1	0.05	16	320	2	0.02	<2	4	30
ZZ60470		<10	<1	0.06	10	1.16	573	<1	0.09	56	840	2	0.02	<2	6	71
ZZ60295		<10	<1	0.11	10	0.68	626	<1	0.05	52	640	3	0.05	<2	7	38
ZZ60296		<10	<1	0.05	10	0.72	554	<1	0.06	42	450	4	0.04	<2	7	42
ZZ60297		<10	<1	0.04	10	0.68	291	<1	0.05	31	580	2	0.06	<2	4	49
ZZ60298		<10	<1	0.05	10	0.54	561	<1	0.05	26	690	2	0.13	<2	2	194
ZZ60220		<10	<1	0.03	10	1.89	637	<1	0.17	99	970	2	0.05	<2	5	138
ZZ60221		<10	<1	0.04	10	2.56	854	1	0.18	123	910	3	0.14	<2	7	153
ZZ60222		<10	<1	0.02	<10	0.78	615	<1	0.02	33	530	<2	0.01	<2	4	36
ZZ60223		10	<1	0.04	10	2.06	1155	1	0.22	41	1150	2	0.03	<2	8	179
ZZ60192		<10	<1	0.03	<10	0.81	700	<1	0.04	43	620	<2	0.03	<2	6	39
ZZ60193		10	<1	0.03	10	2.61	1665	<1	0.27	36	1150	3	0.04	<2	9	226



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Sample Description	Method Analyte Units LOR	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41
		Th	Ti	Ti	U	V	W	Zn
		ppm 20	% 0.01	ppm 10	ppm 10	ppm 1	ppm 10	ppm 2
ZZ60496		<20	0.04	<10	<10	34	<10	73
ZZ60497		<20	0.05	<10	<10	25	<10	55
ZZ60498		<20	0.04	<10	<10	51	<10	62
ZZ60499		<20	0.07	<10	<10	79	<10	56
ZZ60256		<20	0.13	<10	<10	72	<10	46
ZZ60257		<20	0.10	<10	<10	74	<10	57
ZZ60258		<20	0.11	<10	<10	92	<10	69
ZZ60259		<20	0.09	<10	<10	64	<10	49
ZZ60260		<20	0.08	<10	<10	80	<10	61
ZZ60261		<20	0.06	<10	<10	38	<10	27
ZZ60448		<20	0.11	<10	<10	77	<10	57
ZZ60449		<20	0.09	<10	<10	82	<10	63
ZZ60450		<20	0.14	<10	<10	83	<10	58
ZZ60012		<20	0.13	<10	<10	68	<10	40
ZZ60013		<20	0.08	<10	<10	64	<10	67
ZZ60452		<20	0.14	<10	<10	74	<10	62
ZZ60453		<20	0.02	<10	<10	50	<10	82
ZZ60454		<20	0.03	<10	<10	69	<10	72
ZZ60455		<20	0.04	<10	<10	51	<10	67
ZZ60456		<20	0.04	<10	<10	21	<10	35
ZZ60457		<20	0.04	<10	<10	23	<10	46
ZZ60458		<20	0.07	<10	<10	36	<10	54
ZZ60470		<20	0.11	<10	<10	64	<10	46
ZZ60295		<20	0.07	<10	<10	57	<10	44
ZZ60296		<20	0.08	<10	<10	72	<10	56
ZZ60297		<20	0.05	<10	<10	44	<10	40
ZZ60298		<20	0.04	<10	<10	35	<10	48
ZZ60220		<20	0.06	<10	<10	72	<10	48
ZZ60221		<20	0.05	<10	<10	77	<10	71
ZZ60222		<20	0.02	<10	<10	34	<10	41
ZZ60223		<20	0.07	<10	<10	99	<10	62
ZZ60192		<20	0.04	<10	<10	46	<10	54
ZZ60193		<20	0.06	<10	<10	100	<10	58



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CERTIFICATE OF ANALYSIS WH12159016

Method	CERTIFICATE COMMENTS
ALL METHODS	NSS is non- sufficient sample.



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CERTIFICATE WH12172348

Project: Mint

P.O. No.: Batch 1

This report is for 36 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 24- JUL- 2012.

The following have access to data associated with this certificate:

MATT DUMALA

JOAN MARIACHER

HEATHER SMITH

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/ o BarCode
CRU- QC	Crushing QC Test
PUL- QC	Pulverizing QC Test
CRU- 31	Fine crushing - 70%<2mm
SPL- 21	Split sample - riffle splitter
PUL- 31	Pulverize split to 85%<75 um
LOG- 24	Pulp Login - Rcd w/ o Barcode
LOG- 22d	Sample login - Rcd w/ o BarCode dup
SPL- 21d	Split sample - duplicate
PUL- 31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

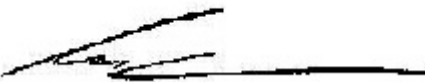
ALS CODE	DESCRIPTION	INSTRUMENT
Au- AA24	Au 50g FA AA finish	AAS
ME- MS61	48 element four acid ICP- MS	
ME- OG62	Ore Grade Elements - Four Acid	ICP- AES
Cu- OG62	Ore Grade Cu - Four Acid	VARIABLE

To: **SILVER RANGE RESOURCES LTD.**
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C/ O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016- 510 W HASTINGS ST
VANCOUVER BC V6B 1L8

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:


Colin Ramshaw, Vancouver Laboratory Manager



ALS Canada Ltd.
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North Vancouver BC V7H 0A7
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To: **SILVER RANGE RESOURCES LTD.**
C/ O ARCHER, CATHRO & ASSOCIATES (1981)
LIMITED
1016- 510 W HASTINGS ST
VANCOUVER BC V6B 1L8

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Account: RANSIL

Project: Mint

CERTIFICATE OF ANALYSIS WH12172348

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	Au- AA24 Au ppm	ME- MS61 Ag ppm	ME- MS61 Al %	ME- MS61 As ppm	ME- MS61 Ba ppm	ME- MS61 Be ppm	ME- MS61 Bi ppm	ME- MS61 Ca %	ME- MS61 Cd ppm	ME- MS61 Ce ppm	ME- MS61 Co ppm	ME- MS61 Cr ppm	ME- MS61 Cs ppm	ME- MS61 Cu ppm
		0.02	0.005	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
M677001		3.25	0.038	0.21	7.49	12.9	850	1.06	0.23	2.55	0.24	26.0	13.9	47	1.22	46.2
M677002		3.12	0.046	0.33	7.33	16.5	640	0.86	0.45	2.55	0.60	23.2	12.2	54	1.35	140.0
M677003		6.48	0.024	0.14	7.16	9.1	660	0.80	0.18	2.46	0.35	23.5	14.6	52	1.18	53.2
M677004		5.06	0.047	0.18	7.27	24.2	600	0.85	0.15	2.53	0.12	20.9	12.8	54	1.00	36.2
M677005		5.11	0.026	0.12	7.25	16.5	590	0.83	0.16	2.82	0.42	20.3	12.8	56	0.88	47.2
M677006		2.17	0.029	0.18	8.18	17.0	640	0.80	0.10	3.14	1.49	27.3	12.7	57	1.17	45.5
M677007		5.58	0.061	0.23	8.53	22.5	750	0.83	0.22	3.30	0.12	29.7	13.5	50	1.34	108.5
M677008		4.98	0.101	0.65	7.96	23.8	820	0.82	0.77	2.77	3.75	28.7	17.0	55	1.22	106.5
M677009		3.97	0.082	0.46	8.06	6.5	780	0.88	0.71	2.78	0.37	27.8	11.9	52	1.38	226
M677010		6.84	<0.005	0.01	0.12	<5	30	0.07	0.02	20.0	0.10	1.49	1.1	1	0.24	2.0
M677011		4.66	0.022	0.22	8.43	9.7	850	1.21	0.26	2.94	0.16	32.0	13.6	56	1.06	95.6
M677012		2.66	0.053	0.82	7.89	11.3	790	1.14	1.27	1.32	1.18	43.6	19.4	13	1.68	363
M677013		4.40	0.087	0.94	7.96	10.3	680	0.92	1.30	1.28	2.77	28.2	12.7	38	1.49	325
M677014		0.10	0.840	6.57	5.45	9450	1220	1.59	221	12.80	1.15	436	74.2	52	9.96	3560
M677015		2.18	0.095	0.95	8.32	5.2	680	0.93	1.72	1.42	0.88	28.4	15.7	54	1.49	611
M677016		1.85	0.067	0.33	8.20	3.6	750	0.90	0.89	1.07	0.30	28.4	16.7	58	1.45	65.9
M677017		4.23	0.074	0.64	8.28	8.0	740	0.81	1.25	1.38	0.17	25.6	17.0	48	1.39	293
M677018		2.85	0.080	0.59	8.22	6.6	790	0.84	1.69	1.43	0.13	23.1	13.0	50	1.38	181.5
M677019		5.12	0.228	0.53	8.24	5.7	400	0.83	0.88	0.84	0.13	31.2	9.9	66	1.30	379
M677020		4.17	0.070	0.44	8.28	18.4	760	0.73	1.08	1.15	1.85	23.6	11.5	30	1.69	101.0
M677021		0.10	1.200	22.5	4.64	>10000	640	1.59	233	13.40	3.00	226	68.0	55	5.51	>10000
M677022		4.95	0.192	1.35	8.15	8.8	320	0.80	1.69	0.73	1.98	16.30	12.4	41	1.53	71.2
M677023		3.49	0.062	0.42	8.53	10.8	590	0.82	0.97	0.86	0.68	18.75	10.1	33	1.41	415
M677024		2.86	0.045	0.50	8.34	6.2	680	0.78	0.98	0.73	0.33	22.8	11.9	63	1.41	228
M677025		4.25	0.031	0.52	8.54	6.3	570	0.73	1.07	1.03	1.69	21.9	15.3	54	1.63	30.7
M677026		2.60	0.055	0.49	8.19	6.4	570	0.67	0.77	0.70	1.36	15.65	11.5	74	1.44	130.5
M677027		4.93	<0.005	0.01	0.10	<5	30	0.05	0.02	21.2	0.08	1.38	1.0	1	0.20	2.1
M677028		2.13	0.055	0.29	8.71	10.0	360	0.78	0.63	1.24	1.67	19.05	13.7	85	1.09	153.0
M677029		5.14	0.286	1.05	7.72	8.3	170	0.85	1.22	0.80	3.58	13.05	14.5	54	2.21	28.9
M677030		5.93	0.066	0.46	8.18	11.5	690	0.81	0.62	0.67	2.24	20.2	12.7	42	1.60	84.7
M677031		4.53	0.080	0.58	8.22	6.3	550	0.90	0.66	0.59	2.51	24.4	15.8	61	1.45	249
M677032		<0.02	0.079	0.56	8.29	6.1	550	0.90	0.64	0.59	2.61	25.7	15.3	61	1.43	258
M677033		5.57	0.215	1.23	7.90	9.0	510	0.71	1.31	0.82	2.13	20.7	15.5	74	1.15	112.0
M677034		5.37	0.118	0.83	8.01	9.0	700	0.76	0.95	0.97	0.80	22.8	18.4	71	1.37	73.7
M677035		5.26	0.167	0.69	8.16	4.6	530	0.75	0.65	0.97	0.64	18.80	15.0	56	1.67	30.0
M677036		3.22	0.141	0.99	7.95	5.7	540	0.79	0.60	0.69	0.93	20.5	23.7	79	1.44	97.6



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CERTIFICATE OF ANALYSIS WH12172348

Sample Description	Method Analyte Units LOR	ME- MS61 Fe %	ME- MS61 Ga ppm	ME- MS61 Ge ppm	ME- MS61 Hf ppm	ME- MS61 In ppm	ME- MS61 K %	ME- MS61 La ppm	ME- MS61 Li ppm	ME- MS61 Mg %	ME- MS61 Mn ppm	ME- MS61 Mo ppm	ME- MS61 Na %	ME- MS61 Nb ppm	ME- MS61 Ni ppm	ME- MS61 P ppm
		0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
M677001		2.86	16.65	0.12	0.9	0.114	1.21	13.0	6.8	1.50	781	1.69	2.52	8.7	43.6	750
M677002		3.19	16.05	0.13	1.0	0.204	1.49	11.7	7.4	1.71	1260	1.26	2.04	6.6	50.6	770
M677003		3.04	16.35	0.13	0.8	0.147	1.25	11.7	7.2	1.66	1060	1.22	2.31	6.6	51.5	740
M677004		3.19	16.35	0.10	0.9	0.121	1.22	10.0	7.2	1.72	974	1.36	2.64	6.5	49.6	760
M677005		3.17	15.80	0.08	0.9	0.128	1.19	10.0	7.1	1.71	941	1.33	2.63	6.4	49.6	740
M677006		3.55	17.10	0.13	0.8	0.255	1.32	13.7	6.6	1.86	969	1.44	2.92	7.3	51.7	790
M677007		3.75	17.85	0.14	0.8	0.168	1.69	14.8	6.8	1.81	1340	1.66	2.67	7.8	47.1	870
M677008		3.73	17.30	0.13	0.8	0.245	1.56	14.4	6.8	1.88	1400	1.46	2.46	7.6	52.1	790
M677009		3.61	18.00	0.13	0.8	0.218	1.46	13.7	8.0	1.76	1180	1.76	2.40	8.6	49.5	820
M677010		0.51	0.35	0.08	<0.1	0.007	0.04	0.7	1.5	12.60	218	0.08	0.02	0.3	1.9	170
M677011		3.61	17.50	0.13	0.9	0.124	1.21	16.1	12.8	1.94	646	1.19	3.00	8.2	49.9	850
M677012		5.22	17.85	0.16	0.7	0.304	2.59	21.8	12.1	1.02	752	0.83	1.37	13.1	17.4	790
M677013		4.80	19.15	0.16	0.5	0.369	2.66	14.3	13.2	1.65	838	0.87	0.99	7.9	29.8	850
M677014		9.47	20.0	0.41	1.9	1.820	2.11	258	43.6	1.43	2450	14.40	0.90	10.3	37.9	1020
M677015		4.20	18.40	0.12	0.3	0.171	1.83	14.0	11.2	1.99	734	0.75	2.21	7.2	43.5	860
M677016		4.24	18.40	0.14	0.3	0.111	1.72	13.9	13.8	2.07	593	0.80	2.15	7.4	52.2	840
M677017		4.19	18.10	0.15	0.2	0.126	2.01	12.3	13.3	1.89	642	0.49	2.04	6.4	39.3	890
M677018		4.12	18.45	0.15	0.2	0.162	2.15	11.2	14.1	1.92	704	0.97	1.75	6.3	41.9	900
M677019		4.53	18.20	0.14	0.3	0.107	1.23	15.8	11.7	2.22	828	0.85	2.52	7.5	57.4	840
M677020		3.94	17.20	0.15	0.3	0.197	2.36	11.4	11.2	1.50	617	7.01	1.60	5.6	29.0	890
M677021		11.60	14.25	0.33	1.6	4.84	1.19	140.0	45.2	1.29	1860	13.90	1.27	8.7	71.5	850
M677022		5.86	20.3	0.14	0.3	0.284	2.70	7.4	10.8	1.77	619	2.49	1.09	5.8	36.2	940
M677023		3.71	19.70	0.12	0.2	0.184	1.90	8.7	10.4	1.89	590	0.49	2.46	5.3	32.3	890
M677024		4.35	19.50	0.15	0.2	0.140	2.19	10.9	12.1	2.02	500	0.71	1.74	6.0	46.8	1020
M677025		4.67	19.95	0.16	0.3	0.162	2.38	10.5	12.0	1.97	625	1.03	1.61	5.7	45.6	940
M677026		3.57	17.40	0.14	0.2	0.143	2.06	7.4	10.2	1.73	596	1.30	1.97	4.4	54.8	720
M677027		0.50	0.32	0.07	<0.1	0.005	0.04	0.7	1.5	12.60	223	0.12	0.01	0.3	1.6	190
M677028		3.68	16.20	0.13	0.2	0.087	1.27	9.1	11.5	2.10	929	2.62	3.19	4.5	66.2	760
M677029		5.95	16.90	0.16	0.2	0.185	2.51	5.7	9.4	1.33	562	1.37	1.01	4.6	44.0	820
M677030		4.29	18.15	0.15	0.3	0.157	2.27	9.3	11.1	1.75	573	1.03	1.69	5.9	39.7	1000
M677031		3.96	17.95	0.15	0.2	0.122	1.77	11.2	11.6	1.97	604	1.24	2.09	5.6	52.8	1010
M677032		3.87	18.15	0.16	0.2	0.125	1.75	11.9	11.3	1.98	610	1.21	2.10	5.6	53.1	1010
M677033		4.88	17.40	0.17	0.3	0.157	1.73	9.8	12.3	2.05	735	0.77	2.22	4.4	59.4	810
M677034		4.73	17.85	0.17	0.3	0.122	1.76	10.6	12.1	2.27	793	1.47	2.00	5.6	65.8	960
M677035		4.32	16.75	0.18	0.3	0.143	2.13	8.7	10.4	1.90	718	1.14	1.91	5.4	55.1	860
M677036		4.88	18.15	0.17	0.3	0.116	1.95	9.3	14.1	2.56	766	1.70	1.77	5.8	88.4	1040



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CERTIFICATE OF ANALYSIS WH12172348

Sample Description	Method Analyte Units LOR	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61
		Pb	Pb	Fe	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	U
		ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
		0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.1
M677001		9.7	25.4	0.002	0.54	1.56	9.0	<1	0.8	427	0.70	0.13	2.1	0.312	0.7
M677002		9.1	30.0	0.002	1.25	1.66	9.9	<1	0.7	336	0.53	0.27	1.7	0.332	0.6
M677003		6.6	26.5	<0.002	0.38	1.04	10.3	1	0.7	321	0.53	0.06	1.6	0.318	0.5
M677004		6.6	21.7	<0.002	0.80	1.57	9.6	<1	0.7	348	0.53	0.16	1.3	0.334	0.5
M677005		5.7	22.6	0.003	0.42	1.30	9.8	<1	0.6	325	0.48	0.07	1.3	0.328	0.6
M677006		7.6	31.7	<0.002	0.46	1.49	10.2	1	0.7	346	0.51	0.10	1.6	0.349	0.7
M677007		6.9	40.7	<0.002	1.09	1.77	10.2	1	0.7	335	0.55	0.19	1.7	0.361	0.6
M677008		14.4	31.4	<0.002	1.89	1.87	10.3	1	0.7	336	0.53	0.65	1.5	0.358	0.6
M677009		7.6	28.6	<0.002	1.12	1.89	9.5	1	0.8	397	0.60	0.38	1.8	0.338	0.6
M677010		1.7	1.6	<0.002	0.03	0.07	0.3	1	0.2	48.3	<0.05	<0.05	<0.2	0.005	0.7
M677011		8.6	24.6	<0.002	0.36	2.23	11.5	1	0.8	488	0.62	0.10	1.7	0.366	0.5
M677012		43.6	69.9	<0.002	4.66	1.29	5.7	3	1.4	124.0	1.11	0.58	3.9	0.251	1.1
M677013		27.7	71.7	0.002	3.66	2.04	9.2	4	1.5	79.7	0.56	0.51	2.0	0.326	0.8
M677014		37.0	137.0	0.003	1.48	32.2	8.0	8	107.0	259	0.64	0.91	11.4	0.241	14.3
M677015		16.6	43.8	0.004	2.68	0.95	11.3	2	1.0	223	0.53	0.65	1.8	0.362	0.6
M677016		5.9	44.2	0.003	2.57	1.05	11.1	3	0.9	235	0.52	0.33	1.9	0.358	0.5
M677017		7.5	48.8	<0.002	3.00	1.44	10.3	4	1.1	181.5	0.43	0.58	1.5	0.348	0.4
M677018		5.5	51.4	0.002	2.72	1.06	10.2	2	1.2	153.5	0.44	0.52	1.3	0.331	0.4
M677019		4.9	31.8	<0.002	1.16	0.86	11.2	1	0.8	269	0.53	0.22	1.9	0.358	0.6
M677020		9.2	63.5	0.002	3.05	1.15	9.4	3	1.1	135.0	0.38	0.51	1.1	0.332	0.3
M677021		30.7	70.1	0.008	2.89	33.3	6.4	14	94.6	257	0.54	1.63	9.5	0.202	10.4
M677022		26.3	69.5	0.002	5.23	1.50	10.6	4	1.7	73.8	0.38	1.38	0.9	0.381	0.5
M677023		11.9	46.5	<0.002	2.40	0.88	9.9	2	1.1	207	0.36	0.40	1.0	0.337	0.3
M677024		20.5	53.7	<0.002	3.53	1.25	10.6	4	1.7	128.0	0.40	0.44	1.2	0.359	0.4
M677025		31.0	60.2	0.002	4.02	1.20	11.3	6	1.9	123.0	0.38	0.46	1.2	0.337	0.4
M677026		8.6	54.5	0.003	2.39	0.83	9.3	4	1.4	155.0	0.28	0.45	0.9	0.265	0.3
M677027		2.1	1.7	<0.002	0.03	0.11	0.3	1	0.2	46.5	<0.05	<0.05	<0.2	<0.005	0.6
M677028		5.3	28.8	0.004	0.79	0.94	9.9	1	0.7	316	0.30	0.27	0.8	0.258	0.3
M677029		30.3	62.5	0.002	5.77	1.16	9.0	8	1.7	77.9	0.30	0.82	0.8	0.277	0.3
M677030		13.2	57.3	0.003	3.31	0.98	10.7	4	1.5	139.0	0.39	0.41	1.0	0.382	0.3
M677031		21.9	48.0	0.002	2.42	0.94	11.1	4	1.0	218	0.37	0.31	1.1	0.365	0.3
M677032		20.8	49.0	0.002	2.30	0.95	11.0	4	1.0	225	0.36	0.30	1.1	0.363	0.3
M677033		45.3	46.5	<0.002	3.92	0.76	9.9	5	1.1	181.0	0.27	0.89	0.9	0.270	0.3
M677034		25.2	41.0	0.002	3.61	1.08	12.5	6	1.3	203	0.35	0.68	1.1	0.357	0.3
M677035		19.2	58.6	0.002	3.57	1.19	10.0	7	1.2	160.0	0.35	0.52	1.0	0.318	0.3
M677036		9.0	39.8	0.003	3.77	1.16	11.6	6	1.4	169.5	0.35	0.68	1.1	0.385	0.4



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		V	W	Y	Zn	Zr	Cu
		ppm 1	ppm 0.1	ppm 0.1	ppm 2	ppm 0.5	% 0.001
M677001		73	0.8	8.4	103	28.2	
M677002		82	1.6	8.3	188	27.0	
M677003		82	0.9	8.7	161	24.2	
M677004		85	1.3	7.7	109	25.0	
M677005		84	0.8	7.9	142	23.8	
M677006		87	0.8	9.6	293	25.9	
M677007		88	1.3	10.3	149	23.2	
M677008		86	1.6	9.7	738	24.7	
M677009		83	1.6	9.4	170	25.2	
M677010		2	0.1	0.9	21	0.6	
M677011		87	1.0	9.2	89	25.9	
M677012		52	4.0	9.3	199	19.8	
M677013		78	5.6	9.4	398	18.6	
M677014		56	35.6	33.7	177	68.2	
M677015		91	5.3	10.2	179	9.3	
M677016		92	4.9	9.9	108	9.3	
M677017		87	5.3	10.0	77	7.2	
M677018		83	6.8	9.6	82	7.0	
M677019		94	2.5	9.2	129	10.4	
M677020		77	4.8	9.4	295	9.9	
M677021		48	283	28.2	322	57.0	1.280
M677022		90	5.7	9.0	321	8.5	
M677023		83	5.9	8.1	146	6.6	
M677024		92	6.6	9.9	99	6.7	
M677025		92	5.8	10.0	275	7.9	
M677026		72	3.8	7.1	254	5.7	
M677027		2	0.2	0.9	20	0.5	
M677028		75	1.3	7.2	341	6.5	
M677029		73	3.6	8.6	540	7.2	
M677030		93	4.0	8.9	377	6.5	
M677031		97	3.1	8.3	443	6.7	
M677032		97	3.1	8.5	456	6.4	
M677033		80	4.2	7.1	342	8.4	
M677034		105	4.9	8.2	168	8.5	
M677035		85	5.0	8.0	142	8.9	
M677036		105	5.2	8.2	205	9.4	



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CERTIFICATE OF ANALYSIS WH12172348

Method	CERTIFICATE COMMENTS
ME- MS61 ME- MS61	Interference: Ca> 10%on ICP- MS As,ICP- AES results shown. REE's may not be totally soluble in this method.



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CERTIFICATE WH12174360

Project: Mint

P.O. No.:

This report is for 121 Soil samples submitted to our lab in Whitehorse, YT, Canada on 25- JUL- 2012.

The following have access to data associated with this certificate:

MATT DUMALA

JOAN MARIACHER

HEATHER SMITH

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/ o BarCode
SCR- 41	Screen to - 180um and save both

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au- AA24	Au 50g FA AA finish	AAS
ME- ICP41	35 Element Aqua Regia ICP- AES	ICP- AES

To: **SILVER RANGE RESOURCES LTD.**

ATTN: JOAN MARIACHER

C/ O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

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This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Signature:

Colin Ramshaw, Vancouver Laboratory Manager



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CERTIFICATE OF ANALYSIS WH12174360

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	ME- ICP41 Ag ppm	ME- ICP41 Al %	ME- ICP41 As ppm	ME- ICP41 B ppm	ME- ICP41 Ba ppm	ME- ICP41 Be ppm	ME- ICP41 Bi ppm	ME- ICP41 Ca %	ME- ICP41 Cd ppm	ME- ICP41 Co ppm	ME- ICP41 Cr ppm	ME- ICP41 Cu ppm	ME- ICP41 Fe %	ME- ICP41 Ga ppm
		0.02	0.2	0.01	2	10	10	0.5	2	0.01	0.5	1	1	1	0.01	10
ZZ60016		0.08	<0.2	1.89	6	<10	150	<0.5	<2	0.62	<0.5	13	40	29	2.97	10
ZZ60039		0.15	<0.2	1.39	<2	<10	90	<0.5	<2	0.50	<0.5	12	34	35	2.65	<10
ZZ60040		0.15	<0.2	1.31	3	<10	110	<0.5	<2	0.49	<0.5	11	33	26	2.47	<10
ZZ60041		0.08	<0.2	1.48	2	<10	120	<0.5	<2	0.57	<0.5	11	30	32	2.61	<10
ZZ60042		0.20	<0.2	1.77	4	<10	120	0.5	<2	0.49	<0.5	12	32	41	2.71	<10
ZZ60060		0.33	<0.2	1.89	3	<10	130	0.6	<2	0.86	<0.5	21	46	37	4.45	<10
ZZ60061		0.21	<0.2	1.88	6	<10	90	0.5	<2	0.91	<0.5	20	38	45	4.10	<10
ZZ60062		0.17	<0.2	2.38	4	<10	130	0.6	<2	1.31	<0.5	20	28	40	4.31	10
ZZ60063		0.25	<0.2	1.95	<2	<10	50	0.6	<2	1.06	<0.5	17	20	44	4.15	10
ZZ60064		0.23	<0.2	3.31	<2	<10	110	0.6	<2	1.31	<0.5	22	27	50	3.75	10
ZZ60065		0.27	<0.2	3.24	<2	<10	100	0.6	<2	1.13	<0.5	22	28	47	3.98	10
ZZ60066		0.13	<0.2	1.57	12	<10	70	<0.5	<2	0.64	<0.5	11	27	22	2.68	<10
ZZ60067		0.20	<0.2	1.55	12	<10	220	<0.5	<2	0.70	<0.5	15	39	49	3.35	<10
ZZ60068		0.16	<0.2	1.65	17	<10	130	<0.5	<2	0.66	<0.5	13	40	47	3.28	<10
ZZ60069		0.32	<0.2	1.22	19	<10	130	<0.5	<2	0.50	<0.5	16	42	61	3.72	<10
ZZ60070		0.20	<0.2	1.65	20	<10	130	<0.5	<2	0.69	<0.5	14	42	50	3.40	<10
ZZ60071		0.19	<0.2	2.04	10	<10	80	<0.5	<2	1.12	<0.5	23	53	57	4.35	<10
ZZ60072		0.18	<0.2	1.85	33	<10	150	0.8	<2	0.62	<0.5	13	38	47	3.80	<10
ZZ60073		0.20	<0.2	2.61	2	<10	120	<0.5	<2	0.81	<0.5	14	26	27	2.47	10
ZZ60074		0.17	<0.2	4.59	<2	<10	90	0.7	<2	1.41	<0.5	31	39	85	3.81	10
ZZ60075		0.14	<0.2	3.88	<2	<10	140	0.7	<2	1.16	<0.5	26	42	59	4.62	10
ZZ60076		0.21	<0.2	3.80	4	<10	120	0.7	<2	0.93	<0.5	24	43	69	4.15	10
ZZ60077		0.19	<0.2	2.87	2	<10	150	0.6	<2	1.01	<0.5	25	32	71	4.00	10
ZZ60078		0.22	<0.2	2.34	4	<10	300	<0.5	<2	1.55	<0.5	18	12	37	3.73	10
ZZ60079		0.19	<0.2	2.92	2	<10	150	0.5	<2	1.14	<0.5	20	19	56	3.72	10
ZZ60080		0.26	<0.2	2.66	3	<10	100	0.7	<2	1.02	<0.5	19	23	50	3.74	10
ZZ60081		0.21	<0.2	2.98	<2	<10	120	0.7	<2	1.03	<0.5	23	31	53	4.07	10
ZZ60082		0.24	<0.2	1.29	<2	<10	120	0.5	<2	2.65	<0.5	10	15	32	1.85	<10
ZZ60083		0.18	<0.2	0.59	2	<10	110	0.5	<2	1.58	<0.5	8	5	12	2.37	<10
ZZ60084		0.19	<0.2	1.05	2	<10	100	0.5	<2	0.60	<0.5	21	36	35	3.93	<10
ZZ60085		0.20	<0.2	0.51	<2	<10	40	<0.5	<2	0.30	<0.5	18	44	50	3.48	<10
ZZ60086		0.19	<0.2	0.86	5	<10	60	<0.5	<2	1.32	<0.5	28	65	47	4.20	<10
ZZ60087		0.19	<0.2	1.52	3	<10	80	0.5	<2	0.84	<0.5	26	109	62	4.22	<10
ZZ60088		0.18	<0.2	1.71	7	<10	100	<0.5	<2	1.10	<0.5	24	145	65	3.87	<10
ZZ60089		0.18	<0.2	1.81	7	<10	160	0.5	<2	0.63	<0.5	18	36	43	4.22	<10
ZZ60090		0.22	<0.2	1.62	5	<10	100	<0.5	<2	0.68	<0.5	17	51	57	3.06	<10
ZZ60091		0.16	<0.2	1.33	3	<10	60	<0.5	<2	0.92	<0.5	24	86	49	3.84	<10
ZZ60092		0.20	<0.2	1.81	4	<10	100	<0.5	<2	0.96	<0.5	21	33	30	3.91	10
ZZ60093		0.19	<0.2	1.61	6	<10	110	0.7	<2	0.62	<0.5	11	27	29	3.10	10
ZZ60094		0.25	<0.2	1.41	5	<10	80	<0.5	<2	0.99	<0.5	12	13	38	3.26	<10



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CERTIFICATE OF ANALYSIS WH12174360

Sample Description	Method Analyte Units LOR	ME- ICP41 Hg ppm 1	ME- ICP41 K % 0.01	ME- ICP41 La ppm 10	ME- ICP41 Mg % 0.01	ME- ICP41 Mn ppm 5	ME- ICP41 Mo ppm 1	ME- ICP41 Na % 0.01	ME- ICP41 Ni ppm 1	ME- ICP41 P ppm 10	ME- ICP41 Pb ppm 2	ME- ICP41 S % 0.01	ME- ICP41 Sb ppm 2	ME- ICP41 Sc ppm 1	ME- ICP41 Sr ppm 1	ME- ICP41 Th ppm 20
ZZ60016		<1	0.04	10	0.80	532	<1	0.04	30	580	6	0.06	<2	5	54	<20
ZZ60039		1	0.04	10	1.11	493	<1	0.05	40	590	2	0.04	<2	5	50	<20
ZZ60040		<1	0.04	10	0.73	411	<1	0.04	31	570	3	0.06	<2	4	44	<20
ZZ60041		1	0.05	10	0.66	413	<1	0.04	29	820	3	0.08	<2	3	53	<20
ZZ60042		<1	0.05	10	0.69	484	<1	0.04	36	670	5	0.05	<2	5	52	<20
ZZ60060		<1	0.04	10	1.39	1220	<1	0.06	32	970	4	0.01	<2	10	108	<20
ZZ60061		<1	0.06	10	1.38	1015	<1	0.07	31	1000	5	0.01	<2	10	78	<20
ZZ60062		1	0.06	10	1.71	1525	<1	0.08	28	940	3	0.03	<2	9	160	<20
ZZ60063		<1	0.06	10	1.91	845	<1	0.07	18	1080	3	<0.01	<2	8	153	<20
ZZ60064		1	0.12	10	1.65	715	<1	0.13	48	790	3	0.01	<2	7	201	<20
ZZ60065		1	0.10	10	1.59	759	<1	0.11	44	890	2	0.01	<2	8	195	<20
ZZ60066		<1	0.06	10	0.55	344	<1	0.02	37	800	4	0.01	<2	6	60	<20
ZZ60067		<1	0.06	10	0.74	822	<1	0.04	41	660	13	0.01	<2	6	79	<20
ZZ60068		<1	0.04	10	0.66	521	<1	0.04	39	640	4	0.04	<2	5	57	<20
ZZ60069		1	0.03	10	0.68	930	<1	0.04	48	640	6	0.02	<2	6	60	<20
ZZ60070		<1	0.04	10	0.70	662	<1	0.05	37	650	2	0.02	<2	7	62	<20
ZZ60071		<1	0.05	10	2.09	604	<1	0.18	83	1160	4	0.01	<2	6	148	<20
ZZ60072		<1	0.12	10	0.79	736	<1	0.04	39	870	6	0.01	<2	8	59	<20
ZZ60073		<1	0.06	10	1.69	826	<1	0.03	39	540	2	<0.01	<2	6	87	<20
ZZ60074		<1	0.08	10	2.81	1025	<1	0.09	88	710	4	0.01	<2	9	302	<20
ZZ60075		1	0.08	10	1.72	879	<1	0.08	44	1320	2	0.01	<2	8	325	<20
ZZ60076		1	0.07	10	2.00	879	<1	0.08	62	850	5	0.03	<2	8	145	<20
ZZ60077		<1	0.07	10	1.77	749	<1	0.06	69	590	3	0.02	<2	9	160	<20
ZZ60078		1	0.06	10	0.96	776	<1	0.03	33	930	2	0.01	<2	5	117	<20
ZZ60079		<1	0.08	10	1.48	724	<1	0.07	41	1070	3	0.01	<2	6	175	<20
ZZ60080		1	0.11	10	1.37	736	<1	0.09	37	990	4	0.01	<2	7	138	<20
ZZ60081		<1	0.09	10	1.69	875	<1	0.07	53	850	3	0.01	<2	8	215	<20
ZZ60082		1	0.06	10	0.87	877	<1	0.03	14	920	5	<0.01	<2	6	120	<20
ZZ60083		1	0.09	10	0.64	1080	1	0.02	5	690	6	0.01	<2	4	64	<20
ZZ60084		<1	0.04	10	0.51	1230	1	0.03	47	1200	6	0.01	<2	13	35	<20
ZZ60085		<1	0.02	<10	0.49	901	<1	0.02	62	370	<2	0.01	<2	9	31	<20
ZZ60086		<1	0.10	10	1.82	722	<1	0.13	81	790	<2	0.01	<2	9	58	<20
ZZ60087		<1	0.03	10	2.47	980	<1	0.08	80	1250	<2	0.02	<2	11	72	<20
ZZ60088		1	0.04	10	1.99	778	<1	0.06	104	870	3	0.02	<2	10	99	<20
ZZ60089		1	0.07	10	0.79	743	<1	0.05	39	910	5	0.04	<2	9	65	<20
ZZ60090		<1	0.07	10	1.75	655	<1	0.09	53	750	2	0.02	<2	8	87	<20
ZZ60091		<1	0.05	10	2.58	777	<1	0.07	113	870	3	0.02	<2	11	68	<20
ZZ60092		<1	0.05	10	2.25	970	<1	0.13	34	940	2	0.02	<2	9	92	<20
ZZ60093		<1	0.04	10	0.88	662	<1	0.05	28	940	2	0.06	<2	5	64	<20
ZZ60094		<1	0.06	10	1.07	431	<1	0.09	16	1150	<2	0.03	<2	6	130	<20



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CERTIFICATE OF ANALYSIS WH12174360

Sample Description	Method Analyte Units LOR	ME- ICP41 Ti %	ME- ICP41 Ti ppm	ME- ICP41 U ppm	ME- ICP41 V ppm	ME- ICP41 W ppm	ME- ICP41 Zn ppm	Au- AA24 Au ppm
		0.01	10	10	1	10	2	0.005
ZZ60016		0.08	<10	<10	75	<10	74	<0.005
ZZ60039		0.07	<10	<10	62	<10	56	<0.005
ZZ60040		0.07	<10	<10	59	<10	55	<0.005
ZZ60041		0.07	<10	<10	63	<10	64	<0.005
ZZ60042		0.07	<10	<10	62	<10	59	<0.005
ZZ60060		0.10	<10	<10	106	<10	78	<0.005
ZZ60061		0.16	<10	<10	108	<10	78	<0.005
ZZ60062		0.22	<10	<10	104	<10	63	<0.005
ZZ60063		0.27	<10	<10	138	<10	65	<0.005
ZZ60064		0.19	<10	<10	70	<10	60	<0.005
ZZ60065		0.22	<10	<10	87	<10	62	<0.005
ZZ60066		0.01	<10	<10	51	<10	49	<0.005
ZZ60067		0.04	<10	<10	61	<10	78	<0.005
ZZ60068		0.05	<10	<10	63	<10	65	<0.005
ZZ60069		0.04	<10	<10	56	<10	112	<0.005
ZZ60070		0.05	<10	<10	62	<10	59	<0.005
ZZ60071		0.16	<10	<10	115	<10	68	<0.005
ZZ60072		0.07	<10	<10	73	<10	67	<0.005
ZZ60073		0.01	<10	<10	63	<10	41	<0.005
ZZ60074		0.16	<10	<10	70	<10	79	<0.005
ZZ60075		0.27	<10	<10	114	<10	86	<0.005
ZZ60076		0.21	<10	<10	82	<10	79	<0.005
ZZ60077		0.13	<10	<10	125	<10	63	<0.005
ZZ60078		0.02	<10	<10	92	<10	56	<0.005
ZZ60079		0.12	<10	<10	85	<10	63	0.011
ZZ60080		0.22	<10	<10	73	<10	63	<0.005
ZZ60081		0.21	<10	<10	80	<10	62	<0.005
ZZ60082		0.01	<10	<10	35	<10	56	<0.005
ZZ60083		0.02	<10	<10	21	<10	67	<0.005
ZZ60084		0.02	<10	<10	62	<10	97	0.013
ZZ60085		0.02	<10	<10	47	<10	30	<0.005
ZZ60086		0.02	<10	<10	57	<10	47	<0.005
ZZ60087		0.07	<10	<10	82	<10	85	<0.005
ZZ60088		0.06	<10	<10	85	<10	78	<0.005
ZZ60089		0.05	<10	<10	81	<10	82	<0.005
ZZ60090		0.06	<10	<10	68	<10	64	<0.005
ZZ60091		0.11	<10	<10	97	<10	71	<0.005
ZZ60092		0.13	<10	<10	83	<10	70	<0.005
ZZ60093		0.06	<10	<10	61	<10	64	<0.005
ZZ60094		0.09	<10	<10	78	<10	53	<0.005



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CERTIFICATE OF ANALYSIS WH12174360

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	ME- ICP41 Ag ppm	ME- ICP41 Al %	ME- ICP41 As ppm	ME- ICP41 B ppm	ME- ICP41 Ba ppm	ME- ICP41 Be ppm	ME- ICP41 Bi ppm	ME- ICP41 Ca %	ME- ICP41 Cd ppm	ME- ICP41 Co ppm	ME- ICP41 Cr ppm	ME- ICP41 Cu ppm	ME- ICP41 Fe %	ME- ICP41 Ga ppm
		0.02	0.2	0.01	2	10	10	0.5	2	0.01	0.5	1	1	1	0.01	10
ZZ60095		0.12	<0.2	2.96	10	<10	210	0.6	<2	0.53	<0.5	19	40	39	4.50	10
ZZ60167		0.11	<0.2	2.57	6	<10	180	0.5	<2	0.67	<0.5	18	39	43	4.05	10
ZZ60168		0.18	<0.2	2.60	8	<10	70	0.5	<2	1.06	<0.5	20	38	65	4.17	10
ZZ60169		0.10	<0.2	1.56	6	<10	100	<0.5	<2	1.47	<0.5	11	40	52	2.62	<10
ZZ60170		0.35	<0.2	2.59	11	<10	170	0.5	<2	0.98	<0.5	22	132	70	4.40	10
ZZ60171		0.15	0.2	2.30	12	<10	200	0.5	<2	1.12	<0.5	17	53	87	3.74	10
ZZ60172		0.18	<0.2	2.44	8	<10	160	0.5	<2	0.84	<0.5	19	56	50	4.00	10
ZZ60173		0.19	<0.2	2.10	9	<10	130	<0.5	<2	0.97	<0.5	21	106	68	4.06	10
ZZ60174		0.18	1.2	1.92	10	<10	310	0.5	<2	0.75	<0.5	16	53	54	3.84	10
ZZ60175		0.13	<0.2	2.45	11	<10	170	0.5	<2	0.66	<0.5	19	44	53	4.19	10
ZZ60176		0.20	0.4	1.15	8	<10	260	0.5	<2	0.95	<0.5	18	45	56	3.70	<10
ZZ60177		0.21	<0.2	2.60	10	<10	120	0.5	<2	1.06	<0.5	24	132	72	4.31	10
ZZ60178		0.15	<0.2	2.64	9	<10	170	0.6	<2	0.62	<0.5	17	51	50	3.98	10
ZZ60179		0.22	<0.2	2.06	7	<10	300	0.5	<2	1.06	<0.5	23	80	73	4.23	10
ZZ60180		0.23	<0.2	3.12	8	<10	260	0.5	<2	2.25	<0.5	27	223	70	4.67	10
ZZ60181		0.22	<0.2	2.46	7	<10	100	<0.5	<2	1.14	<0.5	23	108	65	4.14	10
ZZ60182		0.21	0.2	2.70	8	<10	210	0.5	<2	0.99	<0.5	20	82	53	4.29	10
ZZ60183		0.25	<0.2	2.36	6	<10	140	0.5	<2	1.04	<0.5	20	71	47	4.13	10
ZZ60184		0.19	<0.2	2.41	7	<10	310	0.8	<2	1.00	<0.5	17	37	45	4.06	10
ZZ60185		0.15	<0.2	2.62	6	<10	280	0.5	<2	0.89	<0.5	18	67	53	4.02	10
ZZ60186		0.20	<0.2	2.35	4	<10	170	0.5	<2	0.82	<0.5	16	53	44	3.69	10
ZZ60187		0.14	<0.2	3.62	3	<10	180	0.7	<2	1.18	<0.5	22	53	79	4.24	10
ZZ60188		0.23	<0.2	2.97	<2	<10	260	0.8	<2	1.01	<0.5	17	26	42	3.73	10
ZZ60189		0.24	<0.2	3.68	<2	<10	120	0.9	<2	1.07	<0.5	22	24	63	4.31	10
ZZ60190		0.24	<0.2	3.51	<2	<10	140	0.9	<2	1.01	<0.5	22	27	54	4.38	10
ZZ60191		0.18	<0.2	5.28	5	<10	140	1.0	<2	1.27	<0.5	33	40	80	5.29	10
ZZ60194		0.23	<0.2	4.84	5	<10	100	0.7	<2	1.34	<0.5	28	35	61	4.74	10
ZZ60195		0.17	<0.2	4.84	<2	<10	100	0.6	<2	1.51	<0.5	30	34	53	4.40	10
ZZ60196		0.20	<0.2	3.57	4	<10	150	0.7	<2	1.14	<0.5	28	36	58	4.53	10
ZZ60197		0.21	<0.2	3.98	<2	<10	150	0.8	<2	1.06	<0.5	22	31	54	4.43	10
ZZ60198		0.21	<0.2	3.06	4	<10	120	0.7	<2	1.03	<0.5	12	88	55	4.58	10
ZZ60199		0.23	<0.2	1.63	4	<10	40	<0.5	<2	0.71	<0.5	11	6	14	2.89	<10
ZZ60251		0.28	<0.2	1.59	2	<10	60	<0.5	<2	0.74	<0.5	16	37	43	3.30	10
ZZ60252		0.14	<0.2	1.30	4	<10	90	<0.5	<2	0.84	<0.5	15	36	37	3.00	<10
ZZ60254		0.14	<0.2	1.36	5	<10	70	<0.5	<2	0.92	<0.5	11	24	41	2.65	<10
ZZ60255		0.23	<0.2	1.47	<2	<10	60	<0.5	<2	0.82	<0.5	13	20	47	2.75	<10
ZZ60262		0.16	<0.2	1.97	3	<10	100	<0.5	<2	0.63	<0.5	13	61	34	3.10	10
ZZ60263		0.19	<0.2	1.30	<2	<10	90	<0.5	<2	0.67	<0.5	15	24	38	2.60	<10
ZZ60264		0.14	<0.2	1.58	4	<10	100	<0.5	<2	0.65	<0.5	16	32	34	2.88	<10
ZZ60265		0.17	<0.2	1.01	<2	<10	30	<0.5	<2	0.45	<0.5	11	19	20	1.68	<10



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CERTIFICATE OF ANALYSIS WH12174360

Sample Description	Method Analyte Units LOR	ME- ICP41 Hg ppm 1	ME- ICP41 K % 0.01	ME- ICP41 La ppm 10	ME- ICP41 Mg % 0.01	ME- ICP41 Mn ppm 5	ME- ICP41 Mo ppm 1	ME- ICP41 Na % 0.01	ME- ICP41 Ni ppm 1	ME- ICP41 P ppm 10	ME- ICP41 Pb ppm 2	ME- ICP41 S % 0.01	ME- ICP41 Sb ppm 2	ME- ICP41 Sc ppm 1	ME- ICP41 Sr ppm 1	ME- ICP41 Th ppm 20
ZZ60095		<1	0.06	10	1.00	950	1	0.04	43	580	7	0.05	<2	5	57	<20
ZZ60167		<1	0.05	10	1.00	810	1	0.05	35	1020	7	0.10	<2	3	72	<20
ZZ60168		<1	0.05	10	1.98	780	1	0.07	46	670	4	0.06	<2	7	225	<20
ZZ60169		<1	0.04	10	0.87	542	1	0.06	26	910	5	0.13	<2	4	110	<20
ZZ60170		<1	0.04	10	2.55	823	<1	0.06	61	810	6	0.04	<2	11	89	<20
ZZ60171		<1	0.05	10	1.45	676	1	0.05	40	910	32	0.07	<2	7	96	<20
ZZ60172		<1	0.08	10	1.59	986	1	0.06	42	1150	9	0.08	<2	8	65	<20
ZZ60173		<1	0.06	10	2.12	839	1	0.07	79	770	5	0.06	<2	7	122	<20
ZZ60174		<1	0.11	10	1.07	1160	<1	0.06	46	910	25	0.05	<2	8	56	<20
ZZ60175		1	0.06	10	1.10	678	1	0.05	45	640	6	0.09	<2	5	63	<20
ZZ60176		<1	0.12	10	0.75	874	<1	0.04	46	800	11	0.04	<2	9	98	<20
ZZ60177		<1	0.05	10	2.76	915	<1	0.06	77	900	6	0.05	<2	12	95	<20
ZZ60178		<1	0.05	10	1.01	651	1	0.04	42	820	7	0.07	<2	3	62	<20
ZZ60179		<1	0.05	10	2.17	1275	1	0.06	65	1170	6	0.05	<2	10	82	<20
ZZ60180		<1	0.04	10	3.82	1170	<1	0.05	90	990	8	0.04	<2	17	208	<20
ZZ60181		<1	0.04	10	2.57	710	<1	0.06	102	820	4	0.06	<2	7	151	<20
ZZ60182		<1	0.04	10	1.83	804	<1	0.07	73	770	7	0.07	<2	8	94	<20
ZZ60183		<1	0.06	20	1.97	903	<1	0.06	66	900	5	0.05	<2	8	89	<20
ZZ60184		1	0.09	20	1.30	1075	1	0.06	32	1020	10	0.06	<2	8	70	<20
ZZ60185		<1	0.07	10	1.38	897	1	0.06	48	820	7	0.06	<2	8	66	<20
ZZ60186		<1	0.07	10	1.37	755	<1	0.05	43	810	7	0.04	<2	6	79	<20
ZZ60187		<1	0.07	10	1.68	944	<1	0.07	55	1150	227	0.08	<2	9	131	<20
ZZ60188		<1	0.11	10	1.37	824	<1	0.06	40	890	4	0.03	<2	8	132	<20
ZZ60189		1	0.11	10	2.06	772	<1	0.07	55	970	3	0.03	<2	8	191	<20
ZZ60190		<1	0.09	10	1.83	920	<1	0.08	57	950	3	0.03	<2	9	130	<20
ZZ60191		1	0.09	10	2.74	853	<1	0.07	107	950	4	0.03	<2	14	98	<20
ZZ60194		<1	0.10	10	1.73	795	<1	0.11	57	1220	2	0.03	<2	6	278	<20
ZZ60195		<1	0.09	10	1.42	751	<1	0.11	94	940	4	0.04	<2	7	259	<20
ZZ60196		<1	0.08	10	1.73	1615	<1	0.09	63	940	3	0.05	<2	7	206	<20
ZZ60197		<1	0.09	10	1.91	656	<1	0.09	62	880	3	0.04	<2	9	162	<20
ZZ60198		<1	0.07	10	0.92	343	<1	0.05	69	980	3	0.02	<2	12	105	<20
ZZ60199		<1	0.05	50	0.75	320	<1	0.03	10	1180	4	0.01	<2	3	69	<20
ZZ60251		<1	0.06	10	1.44	576	<1	0.08	41	670	5	0.04	<2	7	63	<20
ZZ60252		<1	0.07	10	0.94	912	<1	0.05	38	660	4	0.06	<2	5	45	<20
ZZ60254		<1	0.06	10	0.85	287	<1	0.09	33	830	<2	0.06	<2	6	81	<20
ZZ60255		<1	0.08	10	1.06	444	<1	0.11	32	870	<2	0.02	<2	6	91	<20
ZZ60262		<1	0.04	10	1.36	292	<1	0.07	55	700	3	0.03	<2	6	67	<20
ZZ60263		<1	0.06	10	1.55	423	<1	0.08	74	850	2	0.02	<2	4	58	<20
ZZ60264		<1	0.06	10	1.12	464	<1	0.07	66	630	2	0.03	<2	5	50	<20
ZZ60265		<1	0.04	10	1.22	279	<1	0.05	143	660	<2	0.01	<2	2	36	<20



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CERTIFICATE OF ANALYSIS WH12174360

Sample Description	Method Analyte Units LOR	ME- ICP41 Ti %	ME- ICP41 Ti ppm	ME- ICP41 U ppm	ME- ICP41 V ppm	ME- ICP41 W ppm	ME- ICP41 Zn ppm	Au- AA24 Au ppm
		0.01	10	10	1	10	2	0.005
ZZ60095		0.09	<10	<10	92	<10	95	<0.005
ZZ60167		0.07	<10	<10	91	<10	77	<0.005
ZZ60168		0.16	<10	<10	100	<10	73	<0.005
ZZ60169		0.06	<10	<10	56	<10	55	<0.005
ZZ60170		0.10	<10	<10	108	<10	87	<0.005
ZZ60171		0.07	<10	<10	75	<10	75	<0.005
ZZ60172		0.10	<10	<10	82	<10	78	<0.005
ZZ60173		0.11	<10	<10	88	<10	81	<0.005
ZZ60174		0.06	<10	<10	70	<10	102	<0.005
ZZ60175		0.11	<10	<10	87	<10	87	<0.005
ZZ60176		0.02	<10	<10	61	<10	161	<0.005
ZZ60177		0.17	<10	<10	94	<10	81	<0.005
ZZ60178		0.04	<10	<10	80	<10	95	<0.005
ZZ60179		0.09	<10	<10	87	<10	85	<0.005
ZZ60180		0.04	<10	<10	106	<10	96	<0.005
ZZ60181		0.15	<10	<10	85	<10	74	<0.005
ZZ60182		0.12	<10	<10	92	<10	72	0.008
ZZ60183		0.13	<10	<10	87	<10	75	<0.005
ZZ60184		0.07	<10	<10	73	<10	92	<0.005
ZZ60185		0.08	<10	<10	81	<10	76	<0.005
ZZ60186		0.08	<10	<10	75	<10	65	<0.005
ZZ60187		0.12	<10	<10	83	<10	96	<0.005
ZZ60188		0.19	<10	<10	76	<10	59	<0.005
ZZ60189		0.26	<10	<10	90	<10	67	<0.005
ZZ60190		0.26	<10	<10	97	<10	67	<0.005
ZZ60191		0.44	<10	<10	116	<10	59	<0.005
ZZ60194		0.30	<10	<10	107	<10	77	<0.005
ZZ60195		0.20	<10	<10	77	<10	61	<0.005
ZZ60196		0.21	<10	<10	90	<10	74	<0.005
ZZ60197		0.23	<10	<10	102	<10	68	<0.005
ZZ60198		0.10	<10	<10	113	<10	50	<0.005
ZZ60199		0.03	<10	<10	41	<10	63	<0.005
ZZ60251		0.08	<10	<10	80	<10	51	<0.005
ZZ60252		0.07	<10	<10	60	<10	57	<0.005
ZZ60254		0.08	<10	<10	69	<10	55	<0.005
ZZ60255		0.11	<10	<10	72	<10	45	0.005
ZZ60262		0.16	<10	<10	79	<10	51	<0.005
ZZ60263		0.14	<10	<10	64	<10	45	0.011
ZZ60264		0.15	<10	<10	64	<10	42	<0.005
ZZ60265		0.12	<10	<10	46	<10	25	<0.005



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CERTIFICATE OF ANALYSIS WH12174360

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	ME- ICP41 Ag ppm	ME- ICP41 Al %	ME- ICP41 As ppm	ME- ICP41 B ppm	ME- ICP41 Ba ppm	ME- ICP41 Be ppm	ME- ICP41 Bi ppm	ME- ICP41 Ca %	ME- ICP41 Cd ppm	ME- ICP41 Co ppm	ME- ICP41 Cr ppm	ME- ICP41 Cu ppm	ME- ICP41 Fe %	ME- ICP41 Ga ppm
		0.02	0.2	0.01	2	10	10	0.5	2	0.01	0.5	1	1	1	0.01	10
ZZ60266		0.22	<0.2	1.42	2	<10	110	<0.5	<2	0.56	<0.5	11	26	38	2.53	<10
ZZ60278		0.09	<0.2	1.55	4	<10	110	<0.5	<2	0.72	<0.5	10	40	35	2.81	<10
ZZ60290		0.16	<0.2	1.53	3	<10	70	<0.5	<2	0.90	<0.5	18	32	47	3.04	<10
ZZ60381		0.20	<0.2	1.27	4	<10	80	<0.5	<2	0.38	<0.5	8	20	25	2.12	<10
ZZ60382		0.15	<0.2	1.26	3	<10	100	<0.5	<2	0.45	<0.5	9	22	28	2.17	<10
ZZ60383		0.17	<0.2	1.09	<2	<10	70	<0.5	<2	0.61	<0.5	19	39	39	3.08	<10
ZZ60384		0.17	<0.2	0.98	<2	<10	30	<0.5	<2	0.58	<0.5	16	37	32	3.07	<10
ZZ60385		0.22	<0.2	1.48	3	<10	60	<0.5	<2	0.49	<0.5	14	38	31	2.71	<10
ZZ60386		0.23	<0.2	1.70	2	<10	120	<0.5	<2	0.42	<0.5	8	24	22	2.29	<10
ZZ60387		0.20	<0.2	2.13	4	<10	140	<0.5	<2	0.55	<0.5	12	30	30	3.02	10
ZZ60388		0.12	<0.2	1.68	4	<10	120	<0.5	<2	0.47	<0.5	10	20	25	2.12	<10
ZZ60389		0.17	<0.2	1.40	3	<10	120	<0.5	<2	0.34	<0.5	8	23	21	2.28	<10
ZZ60390		0.17	<0.2	2.23	4	<10	190	<0.5	3	0.55	<0.5	11	31	28	3.15	10
ZZ60391		0.25	<0.2	1.40	3	<10	70	<0.5	<2	0.60	<0.5	21	74	31	3.32	<10
ZZ60392		0.26	<0.2	1.01	3	<10	50	<0.5	<2	0.32	<0.5	9	32	24	1.74	<10
ZZ60393		0.18	<0.2	1.83	4	<10	70	<0.5	<2	0.65	<0.5	19	101	40	3.53	10
ZZ60394		0.21	<0.2	1.09	2	<10	80	<0.5	<2	0.52	<0.5	15	39	39	2.37	<10
ZZ60395		0.11	<0.2	2.14	6	<10	110	<0.5	<2	0.47	<0.5	16	49	38	3.63	10
ZZ60396		0.10	<0.2	1.59	6	<10	120	<0.5	<2	0.73	<0.5	14	29	37	2.73	<10
ZZ60397		0.10	<0.2	1.67	6	<10	110	<0.5	<2	0.80	<0.5	16	39	34	3.46	10
ZZ60398		0.18	<0.2	1.62	<2	<10	100	<0.5	<2	0.47	<0.5	16	39	38	3.12	<10
ZZ60399		0.16	<0.2	1.64	4	<10	90	<0.5	<2	0.56	<0.5	13	35	37	3.02	10
ZZ60400		0.19	<0.2	1.72	3	<10	70	<0.5	<2	0.48	<0.5	14	47	34	3.21	10
ZZ60401		0.15	<0.2	1.55	4	<10	110	<0.5	<2	0.56	<0.5	10	28	32	2.48	10
ZZ60402		0.19	<0.2	1.10	2	<10	80	<0.5	<2	0.43	<0.5	11	30	31	2.66	<10
ZZ60459		0.19	<0.2	1.66	<2	<10	120	<0.5	<2	0.93	<0.5	21	29	42	3.60	10
ZZ60460		0.33	<0.2	2.21	4	<10	70	<0.5	<2	1.29	<0.5	29	58	74	4.09	10
ZZ60461		0.09	<0.2	2.05	<2	<10	100	0.5	2	0.95	<0.5	17	32	38	3.39	10
ZZ60462		0.25	<0.2	2.02	5	<10	150	<0.5	<2	0.55	<0.5	14	31	36	2.72	<10
ZZ60463		0.21	<0.2	1.94	3	<10	150	<0.5	<2	0.72	<0.5	19	31	41	3.20	<10
ZZ60464		0.29	<0.2	1.72	4	<10	140	<0.5	<2	0.60	<0.5	16	46	34	2.86	<10
ZZ60465		0.10	<0.2	1.64	5	<10	120	<0.5	<2	0.72	<0.5	14	34	30	2.73	<10
ZZ60466		0.15	<0.2	1.66	4	<10	130	<0.5	<2	0.69	<0.5	18	34	34	3.03	<10
ZZ60467		0.11	<0.2	2.09	<2	<10	140	<0.5	<2	0.76	<0.5	19	38	42	3.15	<10
ZZ60468		0.28	<0.2	1.29	2	<10	80	<0.5	<2	0.66	<0.5	16	33	33	2.58	<10
ZZ60469		0.16	<0.2	1.20	2	<10	70	<0.5	<2	0.68	<0.5	15	30	33	2.57	<10
ZZ60471		0.10	<0.2	1.14	3	<10	70	<0.5	2	0.64	<0.5	15	29	32	2.44	<10
ZZ60472		0.29	<0.2	1.26	2	<10	70	<0.5	<2	0.56	<0.5	16	40	32	2.61	<10
ZZ60488		0.16	<0.2	0.58	2	<10	70	0.6	<2	0.22	<0.5	6	8	12	1.07	<10
ZZ60489		0.26	<0.2	0.89	4	<10	80	0.6	<2	0.39	<0.5	8	14	25	1.84	<10



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Project: Mint

CERTIFICATE OF ANALYSIS WH12174360

Sample Description	Method Analyte Units LOR	ME- ICP41 Hg ppm 1	ME- ICP41 K % 0.01	ME- ICP41 La ppm 10	ME- ICP41 Mg % 0.01	ME- ICP41 Mn ppm 5	ME- ICP41 Mo ppm 1	ME- ICP41 Na % 0.01	ME- ICP41 Ni ppm 1	ME- ICP41 P ppm 10	ME- ICP41 Pb ppm 2	ME- ICP41 S % 0.01	ME- ICP41 Sb ppm 2	ME- ICP41 Sc ppm 1	ME- ICP41 Sr ppm 1	ME- ICP41 Th ppm 20
ZZ60266		<1	0.06	10	0.93	419	<1	0.06	39	690	3	0.04	<2	4	78	<20
ZZ60278		<1	0.04	10	0.74	335	<1	0.05	31	730	2	0.07	<2	3	59	<20
ZZ60290		<1	0.08	10	1.11	607	<1	0.12	60	810	2	0.02	<2	8	87	<20
ZZ60381		<1	0.07	10	0.47	230	<1	0.05	23	550	2	0.04	<2	2	42	<20
ZZ60382		<1	0.07	<10	0.55	368	<1	0.05	24	700	3	0.05	<2	2	44	<20
ZZ60383		<1	0.05	10	1.77	1180	<1	0.06	54	650	3	0.02	<2	7	50	<20
ZZ60384		<1	0.04	10	1.96	1125	<1	0.05	50	650	2	0.02	<2	6	49	<20
ZZ60385		<1	0.03	<10	1.46	637	<1	0.04	41	640	4	0.02	<2	5	49	<20
ZZ60386		<1	0.06	10	0.52	245	<1	0.04	23	560	4	0.02	<2	3	48	<20
ZZ60387		<1	0.05	10	0.64	473	1	0.04	27	930	5	0.07	<2	4	58	<20
ZZ60388		1	0.06	10	0.45	410	<1	0.04	20	650	3	0.06	<2	3	47	<20
ZZ60389		<1	0.05	10	0.49	358	<1	0.04	21	440	3	0.02	<2	3	47	<20
ZZ60390		<1	0.06	10	0.70	486	<1	0.04	32	900	4	0.06	<2	3	57	<20
ZZ60391		<1	0.04	10	2.44	913	<1	0.05	86	620	2	0.02	<2	6	50	<20
ZZ60392		<1	0.03	<10	0.67	466	<1	0.03	32	510	2	0.02	<2	3	28	<20
ZZ60393		<1	0.04	10	2.07	814	<1	0.07	91	730	2	0.04	<2	6	62	<20
ZZ60394		<1	0.06	10	1.15	791	<1	0.07	49	580	3	0.02	<2	5	49	<20
ZZ60395		<1	0.05	10	0.85	687	1	0.05	46	800	4	0.07	<2	3	49	<20
ZZ60396		1	0.05	10	0.62	661	1	0.06	29	890	3	0.11	<2	3	66	<20
ZZ60397		<1	0.07	10	0.90	973	2	0.05	36	1160	4	0.10	<2	4	58	<20
ZZ60398		<1	0.03	10	1.37	858	<1	0.05	51	440	2	0.04	<2	6	50	<20
ZZ60399		<1	0.04	10	0.91	553	<1	0.05	37	680	3	0.09	<2	4	58	<20
ZZ60400		<1	0.04	10	1.20	441	<1	0.04	46	750	3	0.06	<2	5	43	<20
ZZ60401		<1	0.04	10	0.70	448	<1	0.04	29	660	2	0.06	<2	4	51	<20
ZZ60402		<1	0.03	10	0.64	498	<1	0.05	35	550	<2	0.03	<2	6	43	<20
ZZ60459		<1	0.13	10	2.52	679	<1	0.10	70	960	3	0.01	<2	9	82	<20
ZZ60460		<1	0.06	10	3.30	739	<1	0.18	157	960	<2	0.02	<2	9	138	<20
ZZ60461		<1	0.05	10	1.15	574	<1	0.07	39	880	3	0.08	<2	6	67	<20
ZZ60462		<1	0.05	10	0.77	531	<1	0.04	37	570	4	0.03	<2	4	68	<20
ZZ60463		<1	0.06	10	0.93	652	<1	0.07	44	780	4	0.02	<2	8	86	<20
ZZ60464		<1	0.05	10	0.85	358	<1	0.06	46	540	3	0.02	<2	7	56	<20
ZZ60465		<1	0.06	10	0.75	525	<1	0.05	35	650	4	0.06	<2	4	70	<20
ZZ60466		<1	0.07	10	1.19	664	<1	0.07	58	840	3	0.02	<2	6	95	<20
ZZ60467		<1	0.06	10	1.50	606	<1	0.07	63	800	<2	0.01	<2	8	101	<20
ZZ60468		<1	0.06	10	0.98	452	<1	0.08	56	770	<2	0.01	<2	6	80	<20
ZZ60469		<1	0.06	10	1.16	479	<1	0.08	53	740	<2	0.01	<2	5	71	<20
ZZ60471		<1	0.06	10	0.89	456	<1	0.08	49	820	2	0.01	<2	5	69	<20
ZZ60472		<1	0.09	10	1.78	315	<1	0.09	45	620	2	0.01	<2	6	49	<20
ZZ60488		<1	0.10	<10	0.29	838	<1	0.03	10	190	2	0.01	<2	3	32	<20
ZZ60489		<1	0.10	<10	0.46	817	1	0.04	19	320	2	0.02	<2	4	38	<20



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CERTIFICATE OF ANALYSIS WH12174360

Sample Description	Method Analyte Units LOR	ME- ICP41 Ti %	ME- ICP41 Ti ppm	ME- ICP41 U ppm	ME- ICP41 V ppm	ME- ICP41 W ppm	ME- ICP41 Zn ppm	Au- AA24 Au ppm
		0.01	10	10	1	10	2	0.005
ZZ60266		0.11	<10	<10	62	<10	45	<0.005
ZZ60278		0.06	<10	<10	64	<10	38	<0.005
ZZ60290		0.10	<10	<10	75	<10	46	<0.005
ZZ60381		0.08	<10	<10	51	<10	33	<0.005
ZZ60382		0.07	<10	<10	51	<10	42	<0.005
ZZ60383		0.07	<10	<10	59	<10	50	<0.005
ZZ60384		0.05	<10	<10	52	<10	49	<0.005
ZZ60385		0.06	<10	<10	51	<10	43	<0.005
ZZ60386		0.13	<10	<10	62	<10	37	<0.005
ZZ60387		0.10	<10	<10	77	<10	49	<0.005
ZZ60388		0.09	<10	<10	53	<10	35	<0.005
ZZ60389		0.10	<10	<10	59	<10	37	<0.005
ZZ60390		0.10	<10	<10	75	<10	52	<0.005
ZZ60391		0.06	<10	<10	47	<10	53	<0.005
ZZ60392		0.06	<10	<10	41	<10	28	<0.005
ZZ60393		0.08	<10	<10	64	<10	63	<0.005
ZZ60394		0.09	<10	<10	63	<10	48	<0.005
ZZ60395		0.09	<10	<10	85	<10	59	<0.005
ZZ60396		0.07	<10	<10	65	<10	41	<0.005
ZZ60397		0.08	<10	<10	74	<10	56	<0.005
ZZ60398		0.05	<10	<10	60	<10	56	<0.005
ZZ60399		0.06	<10	<10	63	<10	60	<0.005
ZZ60400		0.06	<10	<10	68	<10	55	<0.005
ZZ60401		0.07	<10	<10	57	<10	52	<0.005
ZZ60402		0.08	<10	<10	59	<10	46	<0.005
ZZ60459		0.16	<10	<10	89	<10	54	<0.005
ZZ60460		0.11	<10	<10	97	<10	73	<0.005
ZZ60461		0.10	<10	<10	80	<10	59	<0.005
ZZ60462		0.07	<10	<10	62	<10	55	<0.005
ZZ60463		0.11	<10	<10	77	<10	67	<0.005
ZZ60464		0.08	<10	<10	67	<10	62	<0.005
ZZ60465		0.08	<10	<10	62	<10	58	<0.005
ZZ60466		0.13	<10	<10	65	<10	49	<0.005
ZZ60467		0.14	<10	<10	69	<10	51	<0.005
ZZ60468		0.12	<10	<10	64	<10	43	<0.005
ZZ60469		0.10	<10	<10	66	<10	44	<0.005
ZZ60471		0.11	<10	<10	64	<10	43	<0.005
ZZ60472		0.08	<10	<10	64	<10	42	<0.005
ZZ60488		0.03	<10	<10	17	<10	49	<0.005
ZZ60489		0.06	<10	<10	32	<10	67	0.005



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CERTIFICATE OF ANALYSIS WH12174360

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg 0.02	ME- ICP41 Ag ppm 0.2	ME- ICP41 Al % 0.01	ME- ICP41 As ppm 2	ME- ICP41 B ppm 10	ME- ICP41 Ba ppm 10	ME- ICP41 Be ppm 0.5	ME- ICP41 Bi ppm 2	ME- ICP41 Ca % 0.01	ME- ICP41 Cd ppm 0.5	ME- ICP41 Co ppm 1	ME- ICP41 Cr ppm 1	ME- ICP41 Cu ppm 1	ME- ICP41 Fe % 0.01	ME- ICP41 Ga ppm 10
ZZ60500		0.21	<0.2	1.61	13	<10	140	<0.5	<2	0.76	<0.5	16	42	37	3.26	<10



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CERTIFICATE OF ANALYSIS WH12174360

Sample Description	Method Analyte Units LOR	ME- ICP41 Hg ppm 1	ME- ICP41 K % 0.01	ME- ICP41 La ppm 10	ME- ICP41 Mg % 0.01	ME- ICP41 Mn ppm 5	ME- ICP41 Mo ppm 1	ME- ICP41 Na % 0.01	ME- ICP41 Ni ppm 1	ME- ICP41 P ppm 10	ME- ICP41 Pb ppm 2	ME- ICP41 S % 0.01	ME- ICP41 Sb ppm 2	ME- ICP41 Sc ppm 1	ME- ICP41 Sr ppm 1	ME- ICP41 Th ppm 20
ZZ60500		<1	0.12	10	1.03	853	<1	0.08	55	840	6	0.05	<2	5	80	<20



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CERTIFICATE OF ANALYSIS WH12174360

Sample Description	Method Analyte Units LOR	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	Au- AA24
		Ti	Ti	U	V	W	Zn	Au
		%	ppm	ppm	ppm	ppm	ppm	ppm
		0.01	10	10	1	10	2	0.005
ZZ60500		0.03	<10	<10	57	<10	73	0.005



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CERTIFICATE WH12176020

Project: Mint

P.O. No.: Batch 2

This report is for 36 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 27- JUL- 2012.

The following have access to data associated with this certificate:

MATT DUMALA

JOAN MARIACHER

HEATHER SMITH

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/ o BarCode
CRU- QC	Crushing QC Test
PUL- QC	Pulverizing QC Test
CRU- 31	Fine crushing - 70%<2mm
SPL- 21	Split sample - riffle splitter
PUL- 31	Pulverize split to 85%<75 um
LOG- 24	Pulp Login - Rcd w/ o Barcode
LOG- 22d	Sample login - Rcd w/ o BarCode dup
SPL- 21d	Split sample - duplicate
PUL- 31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au- AA24	Au 50g FA AA finish	AAS
ME- MS61	48 element four acid ICP- MS	
ME- OG62	Ore Grade Elements - Four Acid	ICP- AES
Cu- OG62	Ore Grade Cu - Four Acid	VARIABLE

To: **SILVER RANGE RESOURCES LTD.
ATTN: JOAN MARIACHER
C/ O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
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This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager



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Project: Mint

CERTIFICATE OF ANALYSIS WH12176020

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	Au- AA24 Au ppm	ME- MS61 Ag ppm	ME- MS61 Al %	ME- MS61 As ppm	ME- MS61 Ba ppm	ME- MS61 Be ppm	ME- MS61 Bi ppm	ME- MS61 Ca %	ME- MS61 Cd ppm	ME- MS61 Ce ppm	ME- MS61 Co ppm	ME- MS61 Cr ppm	ME- MS61 Cs ppm	ME- MS61 Cu ppm
		0.02	0.005	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
M677037		3.93	0.107	0.74	7.91	7.4	540	0.79	0.76	0.75	3.19	17.90	19.7	87	1.60	77.8
M677038		3.48	0.062	0.62	8.10	25.6	320	0.87	0.49	0.92	0.30	23.8	15.4	125	1.14	69.0
M677039		4.13	0.082	0.83	7.60	8.3	450	0.72	1.12	0.96	1.69	22.3	23.1	77	1.17	88.8
M677040		2.94	0.104	1.39	7.52	10.1	350	0.68	1.14	0.86	0.42	19.25	24.6	106	1.04	349
M677041		5.83	0.285	1.01	7.48	9.3	380	0.70	1.40	0.92	0.34	28.2	12.3	64	1.38	288
M677042		5.04	0.082	1.47	7.54	5.8	110	0.68	1.61	0.58	0.63	10.95	17.2	62	1.66	12.6
M677043		4.75	<0.005	0.01	0.11	5	20	0.07	0.03	18.80	0.06	1.27	1.3	2	0.19	1.8
M677044		4.34	0.153	1.08	7.92	4.6	310	0.76	0.43	0.83	0.07	17.30	10.1	56	1.12	151.5
M677045		4.26	0.062	0.66	7.89	6.4	260	0.73	0.42	1.17	0.04	14.45	6.8	57	0.89	246
M677046		2.88	0.058	0.40	7.38	3.9	440	0.82	0.88	0.69	0.07	15.40	19.2	87	1.38	157.0
M677047		3.19	0.153	0.45	7.59	6.2	400	0.76	0.69	0.49	0.42	19.55	18.4	73	1.44	93.2
M677048		5.76	0.038	0.38	7.39	6.4	190	0.79	1.61	0.56	0.45	14.25	17.6	92	2.20	11.0
M677049		0.10	1.170	22.3	4.46	9300	540	1.37	233	13.05	2.64	213	70.0	52	5.09	>10000
M677050		4.41	0.075	0.64	7.64	9.1	260	0.75	1.05	0.72	0.11	12.90	23.8	100	1.84	69.4
M677051		4.51	0.247	1.34	7.97	5.7	440	0.84	2.77	0.88	0.29	21.1	18.1	83	1.38	207
M677052		7.11	0.087	0.48	7.91	6.9	470	0.86	0.82	0.91	0.36	20.4	17.4	91	1.62	142.5
M677053		4.69	0.198	0.32	7.85	4.2	360	0.93	0.71	0.88	0.64	23.8	19.7	102	1.10	195.5
M677054		5.81	0.297	0.39	7.81	5.0	390	0.89	0.76	1.05	0.26	26.1	19.5	78	1.18	168.5
M677055		3.07	0.197	0.62	7.77	7.4	370	0.79	0.97	0.56	0.49	20.7	18.2	75	1.61	28.1
M677056		0.10	0.785	7.09	5.27	8210	1090	1.32	201	12.55	1.09	407	74.9	50	9.00	3080
M677057		4.37	0.032	0.27	7.99	6.2	280	0.88	0.87	0.77	0.09	20.2	15.8	76	1.79	22.1
M677058		7.89	0.030	0.19	7.34	29.4	700	1.04	1.06	2.22	0.13	23.1	11.8	35	1.52	36.2
M677059		8.17	0.090	0.22	7.44	28.2	870	1.11	1.15	2.23	0.05	24.6	11.3	38	1.47	83.2
M677060		6.20	0.036	0.32	7.26	40.8	990	1.17	1.72	2.52	0.16	22.7	9.7	30	1.41	17.6
M677061		3.78	0.106	0.20	7.02	26.4	940	1.24	1.19	2.46	0.04	24.6	8.7	20	1.58	21.3
M677062		1.97	0.128	0.21	6.97	23.6	840	1.21	1.01	2.39	0.07	24.4	8.6	25	1.52	37.9
M677063		7.77	0.039	0.31	6.72	33.1	740	1.19	0.64	2.68	1.33	23.7	9.2	23	1.64	27.8
M677064		8.31	0.057	0.15	6.90	28.4	820	1.12	0.20	2.67	0.06	22.0	10.1	29	1.40	28.3
M677065		7.55	0.037	0.13	7.49	10.5	670	1.23	0.29	2.62	0.18	27.1	11.8	37	1.61	60.6
M677066		6.77	0.062	0.66	7.77	9.7	640	0.92	0.69	0.87	0.27	18.85	13.4	78	1.40	82.9
M677067		5.41	<0.005	0.01	0.10	<5	20	0.07	0.02	18.75	0.06	2.00	1.4	1	0.20	2.5
M677068		6.41	0.038	0.55	7.57	10.2	520	0.85	0.70	1.14	0.58	20.2	9.0	84	1.21	178.0
M677069		5.66	0.043	0.44	7.61	11.5	410	0.89	0.55	0.81	0.08	14.30	11.5	85	1.51	201
M677070		5.69	0.031	0.34	7.65	8.7	380	0.87	0.61	0.93	0.03	16.50	14.7	76	1.22	151.0
M677071		<0.02	0.034	0.34	7.62	8.4	380	0.90	0.57	0.93	0.04	16.35	13.9	76	1.21	149.5
M677072		5.41	0.053	0.33	7.53	9.2	390	0.89	0.70	1.66	0.42	18.65	16.1	90	1.31	139.0



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CERTIFICATE OF ANALYSIS WH12176020

Sample Description	Method Analyte Units LOR	ME- MS61 Fe %	ME- MS61 Ga ppm	ME- MS61 Ge ppm	ME- MS61 Hf ppm	ME- MS61 In ppm	ME- MS61 K %	ME- MS61 La ppm	ME- MS61 Li ppm	ME- MS61 Mg %	ME- MS61 Mn ppm	ME- MS61 Mo ppm	ME- MS61 Na %	ME- MS61 Nb ppm	ME- MS61 Ni ppm	ME- MS61 P ppm
		0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
M677037		4.42	17.45	0.16	0.3	0.134	2.31	7.8	11.9	2.35	933	1.69	0.99	5.8	77.1	900
M677038		4.11	17.85	0.17	0.2	0.051	1.01	10.3	14.3	3.06	632	2.19	1.89	6.0	103.0	1050
M677039		4.64	17.30	0.18	0.2	0.128	1.59	9.4	14.1	2.38	685	2.49	1.90	5.2	66.0	1040
M677040		5.55	16.10	0.17	0.3	0.138	1.27	8.3	10.9	2.57	843	2.73	2.09	5.5	92.6	860
M677041		5.60	17.30	0.19	0.4	0.320	1.76	13.8	8.5	2.04	946	1.31	1.54	6.8	58.4	740
M677042		8.54	15.95	0.20	0.2	0.295	2.82	4.6	5.3	1.34	472	1.45	0.49	4.2	59.8	670
M677043		0.45	0.38	0.22	<0.1	0.006	0.03	0.6	1.1	12.40	194	0.16	0.01	0.3	0.8	170
M677044		2.93	16.05	0.14	0.2	0.080	1.23	8.1	10.1	2.08	840	3.40	2.78	3.5	57.0	620
M677045		2.80	15.75	0.13	0.1	0.102	0.96	6.6	10.9	1.97	819	1.21	3.10	3.3	53.4	600
M677046		4.43	16.70	0.18	0.3	0.166	1.95	6.6	13.3	2.30	552	1.47	1.32	5.1	86.6	770
M677047		3.79	15.65	0.17	0.2	0.146	1.76	9.5	11.2	1.95	497	2.02	1.74	4.5	69.2	730
M677048		6.22	15.00	0.20	0.2	0.175	2.50	6.3	9.5	1.47	448	1.68	0.36	4.1	84.4	710
M677049		10.20	13.00	0.39	1.6	4.46	1.03	127.0	37.5	1.24	1620	14.75	1.11	8.1	74.0	730
M677050		6.13	16.50	0.18	0.3	0.155	2.18	5.6	10.8	1.97	541	0.92	0.78	4.2	92.4	740
M677051		4.22	17.20	0.18	0.2	0.118	1.67	9.3	14.7	2.38	625	2.42	1.79	5.7	81.8	940
M677052		4.30	17.40	0.19	0.2	0.069	1.75	8.7	12.7	2.36	469	1.62	1.56	5.8	84.0	960
M677053		3.72	17.20	0.18	0.2	0.094	1.21	10.6	16.1	2.67	451	1.39	2.28	5.0	96.5	920
M677054		4.12	17.35	0.18	0.2	0.086	1.10	12.2	14.7	2.53	551	1.17	2.23	5.5	82.3	820
M677055		4.33	16.00	0.16	0.2	0.060	2.14	9.3	12.0	2.03	283	1.58	0.76	4.3	73.7	790
M677056		8.42	17.95	0.51	1.8	1.660	1.83	231	32.5	1.38	2210	14.45	0.80	9.4	40.4	870
M677057		5.11	13.95	0.15	0.2	0.038	2.24	9.3	10.2	1.51	373	1.71	0.61	3.6	77.0	770
M677058		2.88	16.25	0.15	0.9	0.084	1.91	10.8	17.7	1.07	1190	1.77	1.63	6.5	31.6	630
M677059		2.71	16.85	0.15	1.0	0.063	1.72	11.5	13.7	1.02	941	2.56	1.96	7.1	32.1	660
M677060		2.46	17.00	0.16	1.2	0.042	1.93	10.6	16.5	1.02	944	2.11	1.84	7.8	27.4	650
M677061		2.38	16.50	0.15	1.4	0.062	2.04	11.5	13.4	0.85	934	2.08	1.63	8.2	19.0	600
M677062		2.34	15.95	0.15	1.3	0.069	1.85	11.3	13.1	0.86	862	2.05	1.68	7.9	22.8	610
M677063		2.42	15.75	0.14	1.2	0.131	2.29	11.0	13.5	0.89	1440	2.06	1.07	7.4	22.2	580
M677064		2.50	15.95	0.16	1.1	0.079	1.67	10.1	16.0	1.05	1100	1.77	1.96	6.8	26.6	610
M677065		2.70	17.20	0.17	0.9	0.065	1.32	12.6	13.2	1.17	986	2.34	2.21	7.6	35.8	680
M677066		3.37	16.95	0.14	0.2	0.050	2.18	8.5	12.0	1.93	520	1.51	1.08	4.3	68.1	740
M677067		0.44	0.41	0.23	<0.1	0.005	0.03	1.0	1.2	12.40	193	0.26	0.01	0.4	1.1	160
M677068		2.88	15.15	0.13	0.2	0.053	1.52	9.2	15.4	1.93	471	1.17	1.77	4.8	62.7	750
M677069		2.98	15.30	0.13	0.2	0.055	1.38	6.3	12.6	1.99	415	3.01	1.98	3.8	65.4	650
M677070		3.36	16.10	0.15	0.2	0.061	1.59	7.4	12.2	2.05	434	1.89	1.83	4.4	66.0	780
M677071		3.22	15.80	0.14	0.2	0.061	1.58	7.3	11.8	2.04	425	1.87	1.81	4.3	63.2	760
M677072		3.67	15.70	0.17	0.2	0.151	1.29	8.3	10.2	1.88	665	1.77	1.92	4.3	71.8	700



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CERTIFICATE OF ANALYSIS WH12176020

Sample Description	Method Analyte Units LOR	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61
		Pb	Pb	Fe	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	U
		ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
		0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.1
M677037		10.9	59.4	0.002	3.43	1.10	13.7	5	1.2	101.5	0.37	0.44	1.2	0.370	0.4
M677038		7.2	21.0	0.003	1.22	1.29	15.8	2	0.8	253	0.38	0.88	1.2	0.441	0.4
M677039		47.8	35.1	0.003	3.75	0.92	13.9	7	1.0	192.0	0.34	0.44	1.2	0.360	0.4
M677040		15.1	27.7	0.002	4.23	1.13	12.5	4	1.0	212	0.36	0.98	1.1	0.354	0.4
M677041		5.6	47.7	<0.002	4.04	0.90	11.8	2	1.1	162.5	0.50	1.08	1.5	0.345	0.4
M677042		8.2	75.6	0.002	8.75	1.13	8.9	6	1.9	55.5	0.29	1.44	0.9	0.265	0.3
M677043		1.3	1.7	<0.002	0.03	0.06	0.4	1	<0.2	48.0	<0.05	<0.05	<0.2	0.005	0.6
M677044		4.3	38.3	0.004	1.36	0.73	8.4	1	0.5	232	0.24	0.81	0.7	0.225	0.2
M677045		5.0	31.0	0.007	1.22	0.78	8.8	1	0.5	264	0.23	0.54	0.8	0.210	0.2
M677046		6.1	52.1	0.003	3.69	1.27	12.0	6	1.1	124.5	0.34	0.66	1.1	0.339	0.4
M677047		6.8	53.4	0.003	3.07	1.58	9.8	4	1.1	154.5	0.30	0.66	1.0	0.276	0.3
M677048		16.1	70.2	0.003	6.11	2.51	10.4	7	1.7	52.0	0.27	1.58	0.9	0.251	0.3
M677049		33.8	61.7	0.009	2.45	29.7	6.6	12	78.7	229	0.56	1.47	8.3	0.192	9.4
M677050		9.2	59.2	0.004	5.57	1.47	11.1	6	1.6	85.7	0.27	0.98	1.0	0.281	0.4
M677051		11.4	45.4	0.005	3.35	1.21	13.1	5	1.2	168.0	0.37	2.03	1.2	0.382	0.4
M677052		4.4	44.4	0.006	3.45	1.49	13.2	6	1.8	173.0	0.38	0.59	1.1	0.378	0.4
M677053		8.5	29.2	0.003	2.79	1.09	13.4	4	1.4	246	0.34	0.33	1.1	0.337	0.4
M677054		6.2	27.5	0.005	2.69	0.90	12.4	3	1.2	268	0.39	0.43	1.4	0.339	0.4
M677055		23.9	53.3	0.004	3.79	1.51	11.0	4	2.0	82.2	0.29	0.55	1.1	0.290	0.4
M677056		36.8	118.5	0.004	1.27	28.9	7.9	7	86.8	234	0.66	0.87	10.1	0.231	12.9
M677057		14.7	54.6	0.002	4.41	1.37	10.6	4	2.2	77.9	0.24	0.62	1.1	0.232	0.4
M677058		10.0	53.6	0.005	1.43	2.50	7.9	1	0.8	201	0.52	0.33	1.9	0.254	0.8
M677059		9.4	43.8	0.003	1.27	3.00	8.0	1	0.7	293	0.57	0.36	2.1	0.259	0.9
M677060		12.4	49.7	0.002	1.27	3.49	7.5	1	0.6	261	0.63	0.75	2.2	0.261	1.0
M677061		9.0	49.9	<0.002	1.32	2.03	6.4	1	0.6	255	0.70	0.48	2.7	0.236	1.2
M677062		10.1	45.5	<0.002	1.14	2.07	6.6	1	0.6	275	0.65	0.38	2.6	0.239	1.1
M677063		31.5	58.4	<0.002	1.49	2.19	6.7	1	0.5	173.0	0.62	0.35	2.4	0.235	1.1
M677064		9.4	41.9	<0.002	1.28	2.93	7.3	1	0.5	263	0.55	0.30	1.8	0.239	0.8
M677065		23.1	35.3	<0.002	0.89	3.14	8.5	1	0.7	391	0.61	0.19	2.3	0.269	0.9
M677066		12.6	60.1	0.003	2.61	3.84	10.9	3	1.9	123.5	0.28	0.89	0.9	0.277	0.4
M677067		1.3	1.6	<0.002	0.01	<0.05	0.4	1	<0.2	46.2	<0.05	<0.05	<0.2	<0.005	0.5
M677068		44.1	44.3	0.005	2.02	4.33	9.4	2	1.2	201	0.34	0.58	1.0	0.268	0.5
M677069		8.4	41.3	0.007	2.01	1.39	9.8	2	1.2	212	0.26	0.53	0.9	0.235	0.4
M677070		5.4	44.8	0.005	2.60	1.16	11.0	2	2.3	196.5	0.30	0.59	1.0	0.277	0.6
M677071		5.2	44.8	0.006	2.51	1.10	10.8	2	2.3	195.5	0.29	0.55	1.0	0.275	0.6
M677072		8.4	35.9	0.003	2.26	1.38	10.8	2	1.0	261	0.29	0.50	0.9	0.264	0.3



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CERTIFICATE OF ANALYSIS WH12176020

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Cu-OG62
		V	W	Y	Zn	Zr	Cu
		ppm 1	ppm 0.1	ppm 0.1	ppm 2	ppm 0.5	% 0.001
M677037		98	4.9	8.8	551	7.0	
M677038		116	1.6	9.6	147	6.0	
M677039		101	4.2	9.1	279	6.1	
M677040		90	4.2	7.8	150	9.0	
M677041		89	2.4	7.3	157	11.0	
M677042		77	4.0	6.8	124	7.1	
M677043		2	0.1	0.9	16	0.5	
M677044		65	1.8	6.3	96	3.6	
M677045		59	1.4	6.8	88	3.3	
M677046		90	3.6	7.4	74	8.8	
M677047		71	3.3	6.4	104	4.9	
M677048		72	5.0	6.5	85	6.4	
M677049		45	263	26.0	308	54.7	1.270
M677050		80	5.2	6.6	74	10.0	
M677051		96	5.8	9.1	100	5.8	
M677052		100	4.8	9.4	98	5.5	
M677053		96	4.4	9.5	129	5.0	
M677054		94	4.0	9.2	120	6.9	
M677055		83	5.8	6.9	86	5.6	
M677056		52	29.6	30.2	158	60.3	
M677057		76	3.7	8.9	74	5.3	
M677058		60	1.3	8.3	124	31.5	
M677059		59	1.8	8.0	104	30.5	
M677060		56	1.1	7.8	108	38.9	
M677061		49	1.1	8.1	99	46.4	
M677062		51	1.0	8.0	93	43.4	
M677063		52	0.9	7.7	228	39.7	
M677064		55	0.6	7.5	100	34.3	
M677065		60	1.3	8.6	125	28.1	
M677066		79	3.8	7.5	71	4.3	
M677067		2	0.1	1.0	16	0.5	
M677068		69	4.2	7.1	96	6.5	
M677069		69	3.8	6.2	57	4.2	
M677070		78	7.5	7.8	58	4.4	
M677071		78	7.4	7.8	57	4.6	
M677072		75	2.3	6.7	112	4.8	



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CERTIFICATE OF ANALYSIS WH12176020

Method	CERTIFICATE COMMENTS
ME- MS61	Interference: Ca> 10%on ICP- MS As,ICP- AES results shown.
ME- MS61	REE's may not be totally soluble in this method.



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P.O. No.: Batch 3

This report is for 36 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 29- JUL- 2012.

The following have access to data associated with this certificate:

MATT DUMALA

JOAN MARIACHER

HEATHER SMITH

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/ o BarCode
CRU- QC	Crushing QC Test
PUL- QC	Pulverizing QC Test
CRU- 31	Fine crushing - 70%<2mm
SPL- 21	Split sample - riffle splitter
PUL- 31	Pulverize split to 85%<75 um
LOG- 24	Pulp Login - Rcd w/ o Barcode
LOG- 22d	Sample login - Rcd w/ o BarCode dup
SPL- 21d	Split sample - duplicate
PUL- 31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au- AA24	Au 50g FA AA finish	AAS
ME- MS61	48 element four acid ICP- MS	

To: **SILVER RANGE RESOURCES LTD.**

ATTN: JOAN MARIACHER

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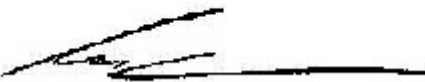
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This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:


Colin Ramshaw, Vancouver Laboratory Manager



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CERTIFICATE OF ANALYSIS WH12177097

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	Au- AA24 Au ppm	ME- MS61 Ag ppm	ME- MS61 Al %	ME- MS61 As ppm	ME- MS61 Ba ppm	ME- MS61 Be ppm	ME- MS61 Bi ppm	ME- MS61 Ca %	ME- MS61 Cd ppm	ME- MS61 Ce ppm	ME- MS61 Co ppm	ME- MS61 Cr ppm	ME- MS61 Cs ppm	ME- MS61 Cu ppm
		0.02	0.005	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
M677073		3.50	0.117	0.91	7.76	10.3	590	0.75	1.31	1.39	0.49	18.95	13.8	88	1.57	38.8
M677074		6.18	0.040	0.38	8.13	10.8	320	0.85	0.52	2.91	0.39	21.9	12.8	109	1.40	168.5
M677075		7.24	0.016	0.17	8.18	9.7	260	0.77	0.37	3.61	0.04	25.8	13.9	118	0.92	92.7
M677076		6.94	0.042	0.31	8.12	12.9	300	0.85	0.37	4.01	0.06	21.6	18.1	124	1.06	155.5
M677077		6.85	0.023	0.19	8.07	11.6	300	0.86	0.39	3.83	0.04	22.7	16.5	119	0.64	95.2
M677078		0.06	0.816	7.01	5.27	8590	1170	1.69	199.0	12.65	1.20	445	77.8	53	9.78	3530
M677079		6.06	0.223	0.89	7.71	26.5	330	0.73	0.73	2.42	0.09	22.7	17.8	119	1.85	91.1
M677080		6.50	0.078	0.32	7.82	11.8	260	0.70	0.52	2.19	0.09	21.6	17.0	119	1.28	81.2
M677081		5.42	0.102	0.83	7.60	16.0	290	0.75	1.49	1.11	0.10	22.7	23.0	109	1.55	169.5
M677082		7.74	0.093	0.51	7.98	14.4	240	0.82	0.84	1.65	0.05	22.2	24.6	114	1.23	129.0
M677083		2.09	0.204	1.97	7.77	18.6	350	0.75	1.33	1.32	0.97	26.8	16.8	114	2.19	124.5
M677084		8.44	<0.005	0.02	0.12	<5	20	0.07	0.05	21.3	0.07	1.29	0.7	1	0.19	2.3
M677085		7.80	0.069	0.43	7.50	12.8	210	0.83	0.74	2.12	0.05	22.1	18.7	119	1.26	121.5
M677086		3.39	0.077	0.83	8.13	10.4	420	0.74	1.11	1.23	0.27	16.95	7.5	83	1.92	64.8
M677087		3.02	0.039	0.37	7.55	11.1	450	0.87	0.65	1.60	0.04	12.70	8.7	42	2.15	95.3
M677088		4.92	0.021	0.21	7.75	5.8	340	0.78	0.37	2.12	0.11	13.35	5.5	36	1.02	134.0
M677089		<0.02	0.022	0.17	7.79	6.2	350	0.74	0.34	2.08	0.14	13.25	5.9	40	1.03	128.0
M677090		4.83	0.031	0.24	7.87	4.9	320	0.80	0.65	2.12	0.14	15.15	5.6	47	0.96	111.0
M677091		5.64	0.032	0.23	8.20	6.3	440	0.88	0.32	3.36	0.05	24.2	31.9	170	2.01	195.5
M677092		1.98	0.066	0.72	7.08	5.8	340	0.63	0.29	2.79	23.7	12.75	19.7	85	1.08	536
M677093		5.46	0.035	0.28	8.01	4.9	310	0.81	0.28	2.51	0.11	20.7	27.6	174	1.30	204
M677094		2.54	0.034	0.29	8.16	5.5	300	0.83	0.27	2.74	0.11	20.0	25.9	179	1.37	196.5
M677095		6.24	0.091	0.52	7.97	4.7	250	0.74	0.20	2.42	0.04	21.0	31.8	168	1.30	554
M677096		2.86	0.127	0.77	8.34	3.8	320	0.86	0.27	2.44	0.07	21.3	25.4	141	0.68	1060
M677097		4.75	0.030	0.21	8.00	5.0	420	0.93	0.25	2.80	0.04	19.20	24.0	126	1.54	213
M677098		0.08	0.776	7.80	5.35	8690	1180	1.45	211	13.15	1.01	384	73.9	49	9.36	3450
M677099		7.21	0.095	0.78	7.78	6.7	380	0.80	0.22	2.59	0.08	19.40	21.4	137	1.61	741
M677100		3.39	0.058	0.43	8.26	5.7	680	0.71	0.09	2.23	0.07	26.0	25.7	153	2.68	589
M677101		2.57	0.092	0.43	8.14	6.2	560	1.05	0.27	1.94	0.09	33.0	101.0	88	0.91	668
M677102		4.87	0.031	0.15	8.58	8.8	430	1.53	0.24	2.86	0.09	39.9	21.8	7	0.54	135.5
M677103		5.33	0.017	0.12	8.50	7.2	500	1.52	0.21	2.74	0.08	40.7	12.1	9	0.48	78.6
M677104		2.63	0.018	0.11	8.59	7.5	840	1.52	0.26	2.69	0.10	40.9	7.2	7	0.64	50.7
M677105		3.41	0.012	0.08	8.45	7.6	1020	1.60	0.25	2.55	0.06	40.7	9.8	10	0.54	72.1
M677106		5.19	<0.005	<0.01	0.09	<5	20	0.06	0.02	21.3	0.07	1.35	1.3	1	0.19	1.7
M677107		6.20	0.033	0.41	8.68	8.7	490	1.54	0.33	2.08	0.31	42.4	19.2	7	0.77	351
M677108		8.07	0.081	0.31	8.32	6.9	360	1.45	0.26	2.39	0.10	39.3	22.1	19	0.77	420



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Sample Description	Method Analyte Units LOR	ME- MS61 Fe %	ME- MS61 Ga ppm	ME- MS61 Ge ppm	ME- MS61 Hf ppm	ME- MS61 In ppm	ME- MS61 K %	ME- MS61 La ppm	ME- MS61 Li ppm	ME- MS61 Mg %	ME- MS61 Mn ppm	ME- MS61 Mo ppm	ME- MS61 Na %	ME- MS61 Nb ppm	ME- MS61 Ni ppm	ME- MS61 P ppm
		0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
M677073		4.82	14.45	0.14	0.3	0.147	1.99	9.4	7.8	1.46	558	2.82	1.66	3.8	62.5	740
M677074		4.44	17.20	0.12	0.2	0.050	0.89	9.6	8.9	2.44	638	3.98	2.60	6.2	83.7	1080
M677075		4.09	16.45	0.13	0.3	0.038	0.97	11.6	7.8	2.30	511	1.84	2.33	5.9	84.5	1010
M677076		3.97	16.90	0.12	0.3	0.043	0.70	9.8	7.7	2.21	658	9.81	2.19	6.3	87.6	1030
M677077		3.65	16.55	0.14	0.3	0.042	0.51	10.2	6.7	2.20	565	0.90	2.48	6.3	84.9	1020
M677078		9.02	18.95	0.42	1.8	1.800	1.96	258	37.7	1.40	2420	15.05	0.87	9.0	39.7	990
M677079		3.92	16.10	0.12	0.4	0.036	1.27	10.2	8.3	2.32	681	1.76	1.51	6.2	88.7	1020
M677080		3.86	15.50	0.11	0.2	0.025	0.99	9.7	7.5	2.42	482	1.35	2.11	5.1	81.8	1000
M677081		4.93	15.60	0.16	0.3	0.045	1.48	10.9	6.7	2.35	498	5.62	1.92	4.4	85.1	910
M677082		4.66	15.85	0.12	0.2	0.034	1.07	10.6	7.8	2.53	467	0.84	2.12	4.8	83.5	980
M677083		5.39	15.30	0.14	0.7	0.037	1.70	12.8	6.9	2.43	487	9.81	1.34	5.8	81.9	970
M677084		0.48	0.28	0.11	<0.1	<0.005	0.03	0.6	1.0	12.65	210	0.18	0.02	0.2	1.9	190
M677085		4.52	16.35	0.14	0.2	0.033	0.89	10.2	8.3	2.48	432	3.30	1.71	6.1	87.8	1040
M677086		3.30	16.05	0.15	0.2	0.021	1.84	8.4	5.2	1.79	370	1.39	1.89	3.4	61.9	580
M677087		2.36	15.40	0.14	0.2	0.046	1.72	6.4	5.1	1.18	324	6.29	1.98	3.0	34.3	450
M677088		2.08	16.30	0.13	0.3	0.020	1.00	6.8	5.5	1.12	245	5.10	2.75	3.2	33.1	420
M677089		2.05	16.00	0.09	0.2	0.033	1.04	6.3	5.9	1.12	248	5.41	2.77	3.5	32.6	430
M677090		2.15	15.80	0.11	0.2	0.043	1.18	7.2	5.9	1.26	429	4.24	2.66	3.8	35.4	480
M677091		4.88	17.35	0.14	0.2	0.040	1.35	10.3	11.4	3.17	470	1.69	2.49	5.4	106.0	990
M677092		2.53	13.25	0.11	0.2	1.150	1.29	5.8	6.9	1.23	431	9.22	2.37	3.9	52.7	660
M677093		4.00	17.00	0.15	0.2	0.036	1.27	8.4	13.3	2.54	312	2.63	2.58	4.2	86.8	850
M677094		4.11	17.30	0.13	0.2	0.037	1.26	8.0	13.6	2.65	335	3.05	2.69	4.4	85.5	920
M677095		4.41	17.00	0.15	0.2	0.032	1.03	8.7	11.8	2.49	257	2.02	2.51	4.0	89.8	910
M677096		3.01	15.90	0.14	0.2	0.031	0.96	9.2	7.7	1.29	188	6.72	3.33	3.3	77.0	1110
M677097		4.41	16.95	0.13	0.2	0.029	1.37	8.9	11.8	2.65	259	1.67	2.23	4.4	76.4	730
M677098		9.10	17.55	0.36	1.7	1.625	1.99	239	37.0	1.44	2470	12.65	0.85	8.3	38.3	970
M677099		4.62	17.05	0.10	0.2	0.036	1.22	9.0	13.1	3.33	431	4.98	1.84	3.8	80.4	750
M677100		5.05	18.10	0.16	0.2	0.023	1.86	11.5	16.4	3.80	318	7.17	2.05	4.4	79.0	780
M677101		4.54	17.00	0.16	0.3	0.031	1.23	15.0	11.2	2.02	206	6.19	2.66	5.9	49.3	1000
M677102		3.19	19.15	0.14	0.4	0.042	1.04	18.3	7.2	1.05	218	2.59	3.50	13.7	6.9	1400
M677103		3.01	18.50	0.14	0.4	0.034	1.04	18.0	7.4	1.06	241	11.65	3.36	13.5	7.2	1400
M677104		3.01	18.50	0.17	0.4	0.040	1.18	19.4	6.9	0.98	214	11.15	3.31	13.5	6.3	1390
M677105		2.93	18.95	0.15	0.4	0.037	1.16	19.0	6.8	0.96	194	2.51	3.38	13.5	8.5	1380
M677106		0.46	0.27	0.05	<0.1	<0.005	0.03	0.6	1.1	13.10	216	0.21	0.01	0.3	1.0	190
M677107		2.67	17.85	0.11	0.4	0.032	1.05	20.4	6.1	1.01	177	7.26	3.39	11.5	10.0	1410
M677108		2.85	18.35	0.15	0.3	0.038	1.12	17.5	7.2	1.07	192	3.21	3.36	11.6	18.6	1300



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CERTIFICATE OF ANALYSIS WH12177097

Sample Description	Method Analyte Units LOR	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61
		Pb	Pb	Fe	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Ti
		ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
		0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.02
M677073		42.4	59.1	0.003	3.88	1.52	9.1	2	1.1	200	0.25	1.52	0.9	0.247	0.67
M677074		7.7	15.8	0.002	1.49	1.94	11.6	<1	0.8	461	0.39	0.52	0.8	0.397	0.31
M677075		4.6	19.7	0.002	0.97	1.83	11.5	<1	0.8	500	0.35	0.36	0.9	0.374	0.36
M677076		8.3	10.9	0.005	1.27	2.33	12.0	1	0.8	528	0.40	0.70	0.7	0.393	0.26
M677077		5.6	7.4	0.002	1.21	2.56	11.8	<1	0.7	581	0.38	0.45	0.8	0.389	0.18
M677078		34.7	120.0	0.004	1.44	31.5	7.6	6	97.9	257	0.60	1.05	9.5	0.242	1.35
M677079		18.3	22.7	0.004	2.00	2.98	11.5	<1	0.8	343	0.38	1.90	0.7	0.378	0.50
M677080		10.1	20.1	0.003	1.73	1.95	10.7	1	0.7	368	0.34	1.05	0.8	0.340	0.39
M677081		16.5	34.6	0.006	3.30	1.84	11.0	<1	0.6	255	0.26	1.61	0.9	0.297	0.61
M677082		6.5	23.5	0.002	2.76	1.54	10.7	1	0.7	336	0.29	1.60	0.9	0.332	0.47
M677083		239	45.6	0.010	3.52	2.12	11.6	1	0.8	208	0.36	3.10	1.0	0.369	0.69
M677084		1.6	1.3	<0.002	0.02	0.07	0.3	<1	<0.2	46.6	<0.05	<0.05	<0.2	0.006	0.02
M677085		6.7	17.8	0.002	2.18	2.29	11.1	1	0.9	336	0.36	1.24	0.8	0.364	0.40
M677086		23.8	58.7	0.003	2.11	1.29	8.0	1	0.7	271	0.24	1.48	1.0	0.219	0.77
M677087		7.5	54.5	0.005	1.54	1.57	6.0	1	0.8	307	0.24	0.77	1.2	0.180	0.61
M677088		4.7	27.9	0.008	0.98	0.83	6.0	<1	0.7	483	0.26	0.49	1.2	0.179	0.37
M677089		4.9	24.0	0.006	1.03	0.81	6.7	1	0.7	488	0.26	0.39	1.1	0.184	0.35
M677090		4.5	29.3	0.003	0.84	0.86	7.5	1	0.6	464	0.27	0.49	1.2	0.202	0.38
M677091		3.6	24.4	0.002	1.68	0.95	18.6	3	0.8	495	0.32	0.30	1.1	0.411	0.56
M677092		5.1	30.8	0.011	1.92	1.12	10.6	4	0.6	384	0.25	0.86	1.0	0.263	0.49
M677093		5.8	22.7	0.003	1.83	1.27	19.6	5	0.8	500	0.26	0.36	1.0	0.425	0.49
M677094		5.9	17.9	0.004	1.74	1.37	20.0	5	1.1	525	0.27	0.37	0.9	0.445	0.48
M677095		4.1	17.5	0.003	2.01	1.07	19.2	4	0.7	451	0.25	0.23	1.0	0.404	0.42
M677096		4.6	19.0	0.005	1.97	0.77	17.3	3	0.6	510	0.21	0.29	1.0	0.284	0.36
M677097		4.0	23.8	0.004	1.13	0.79	13.6	2	0.6	448	0.33	0.20	1.3	0.334	0.55
M677098		34.4	114.0	0.002	1.38	28.5	7.0	5	87.7	252	0.62	1.12	9.3	0.243	1.22
M677099		7.3	18.6	0.007	1.37	1.15	14.4	2	0.9	395	0.29	0.50	1.1	0.322	0.49
M677100		3.2	34.7	0.007	1.32	0.63	17.5	3	1.0	422	0.27	0.14	1.4	0.327	0.74
M677101		4.4	22.1	0.005	3.17	0.90	11.1	3	1.1	446	0.39	0.30	1.8	0.249	0.37
M677102		5.7	21.3	<0.002	1.13	0.96	5.5	1	1.2	582	0.82	0.21	2.3	0.315	0.30
M677103		7.1	20.7	0.011	0.91	0.92	5.3	1	1.0	579	0.84	0.19	2.3	0.316	0.27
M677104		7.8	23.7	0.017	1.07	0.96	5.4	1	0.9	594	0.87	0.32	2.6	0.308	0.28
M677105		8.6	20.4	<0.002	1.03	0.90	5.3	1	0.9	603	0.87	0.18	2.5	0.307	0.25
M677106		1.4	1.3	<0.002	0.02	0.05	0.3	1	<0.2	50.3	<0.05	<0.05	<0.2	<0.005	<0.02
M677107		13.8	24.8	0.005	1.74	0.88	5.5	2	1.0	556	0.75	0.31	2.5	0.277	0.26
M677108		8.4	25.0	0.002	1.25	0.73	6.1	2	1.1	565	0.75	0.20	2.4	0.292	0.32



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Sample Description	Method Analyte Units LOR	ME- MS61 V ppm 1	ME- MS61 W ppm 0.1	ME- MS61 Y ppm 0.1	ME- MS61 Zn ppm 2	ME- MS61 Zr ppm 0.5
M677073		80	3.0	6.4	164	9.2
M677074		110	0.9	8.7	121	5.7
M677075		108	0.7	8.6	51	8.6
M677076		107	1.3	8.4	61	8.5
M677077		109	0.7	8.0	52	7.6
M677078		59	34.7	28.7	174	59.0
M677079		104	1.1	8.2	87	8.0
M677080		104	1.3	7.8	71	5.1
M677081		97	1.7	7.4	76	9.4
M677082		103	1.4	6.8	70	6.0
M677083		103	2.0	8.0	184	19.5
M677084		4	0.1	0.8	19	0.6
M677085		101	1.2	7.4	74	5.5
M677086		63	1.8	4.3	80	6.4
M677087		52	1.8	4.4	35	6.4
M677088		50	1.2	4.4	40	6.9
M677089		50	1.1	4.5	37	7.9
M677090		53	1.2	5.5	55	7.7
M677091		120	1.0	10.4	39	8.2
M677092		70	1.9	7.7	3000	8.8
M677093		117	1.5	8.8	50	5.3
M677094		124	1.4	9.0	50	5.3
M677095		118	1.9	9.4	33	5.1
M677096		109	2.9	8.8	22	7.0
M677097		119	0.7	7.7	40	7.7
M677098		55	28.9	27.2	166	53.6
M677099		120	1.9	7.2	56	7.0
M677100		125	1.4	9.1	37	7.6
M677101		81	2.7	8.5	27	9.6
M677102		58	0.9	12.2	29	17.3
M677103		58	0.8	11.8	34	15.6
M677104		55	0.7	11.3	38	14.0
M677105		55	0.7	10.2	38	14.5
M677106		3	0.1	0.9	15	<0.5
M677107		56	1.8	11.0	38	14.9
M677108		59	1.1	10.0	34	14.0



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Method	CERTIFICATE COMMENTS
ME- MS61 ME- MS61	Interference: Ca> 10%on ICP- MS As,ICP- AES results shown. REE's may not be totally soluble in this method.



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VANCOUVER BC V6B 1L8**

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Finalized Date: 16- AUG- 2012

Account: RANSIL

CERTIFICATE WH12177495

Project: Mint

P.O. No.:

This report is for 86 Soil samples submitted to our lab in Whitehorse, YT, Canada on 31- JUL- 2012.

The following have access to data associated with this certificate:

MATT DUMALA

JOAN MARIACHER

HEATHER SMITH

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/ o BarCode
SCR- 41	Screen to - 180um and save both

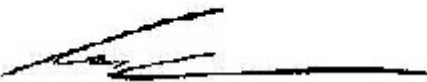
ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au- AA24	Au 50g FA AA finish	AAS
ME- ICP41	35 Element Aqua Regia ICP- AES	ICP- AES

To: **SILVER RANGE RESOURCES LTD.
ATTN: JOAN MARIACHER
C/ O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016- 510 W HASTINGS ST
VANCOUVER BC V6B 1L8**

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Signature:


Colin Ramshaw, Vancouver Laboratory Manager



ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7

Phone: 604 984 0221 Fax: 604 984 0218 www.alsglobal.com

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1016- 510 W HASTINGS ST
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CERTIFICATE OF ANALYSIS WH12177495

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	Au- AA24 Au ppm	ME- ICP41 Ag ppm	ME- ICP41 Al %	ME- ICP41 As ppm	ME- ICP41 B ppm	ME- ICP41 Ba ppm	ME- ICP41 Be ppm	ME- ICP41 Bi ppm	ME- ICP41 Ca %	ME- ICP41 Cd ppm	ME- ICP41 Co ppm	ME- ICP41 Cr ppm	ME- ICP41 Cu ppm	ME- ICP41 Fe %
		0.02	0.005	0.2	0.01	2	10	10	0.5	2	0.01	0.5	1	1	1	0.01
ZZ21225		0.46	<0.005	<0.2	2.43	11	<10	240	0.8	<2	0.55	<0.5	31	68	53	4.78
ZZ21226		0.34	<0.005	<0.2	1.79	2	<10	210	<0.5	<2	0.55	<0.5	17	98	45	3.34
ZZ21227		0.35	<0.005	<0.2	1.21	<2	<10	70	<0.5	<2	0.53	<0.5	17	90	38	2.75
ZZ21228		0.36	<0.005	<0.2	0.98	3	<10	100	<0.5	<2	0.95	<0.5	15	51	30	2.78
ZZ21229		0.47	<0.005	<0.2	0.75	10	<10	20	<0.5	<2	0.89	<0.5	14	81	38	2.31
ZZ21230		0.38	<0.005	<0.2	1.09	5	<10	140	<0.5	<2	1.65	<0.5	26	92	45	3.83
ZZ21231		0.45	<0.005	<0.2	1.40	5	<10	80	<0.5	<2	2.29	<0.5	27	186	46	3.89
ZZ21232		0.30	<0.005	<0.2	1.69	<2	<10	130	<0.5	<2	0.74	<0.5	24	111	41	3.59
ZZ21233		0.41	<0.005	<0.2	1.34	4	<10	100	0.5	<2	0.98	<0.5	18	57	44	3.63
ZZ21234		0.47	<0.005	<0.2	1.78	3	<10	120	0.5	<2	0.65	<0.5	20	77	43	3.42
ZZ21235		0.43	<0.005	<0.2	0.96	<2	<10	320	<0.5	<2	1.20	<0.5	15	45	34	2.76
ZZ21236		0.47	<0.005	<0.2	0.70	<2	<10	130	0.7	<2	2.75	<0.5	24	163	21	3.13
ZZ21237		0.40	<0.005	<0.2	1.00	<2	<10	50	<0.5	<2	1.56	<0.5	20	78	39	3.58
ZZ21238		0.43	0.008	<0.2	1.28	<2	<10	110	<0.5	<2	1.42	<0.5	19	67	42	3.31
ZZ21239		0.34	<0.005	<0.2	1.35	<2	<10	60	<0.5	<2	0.79	<0.5	15	44	40	2.60
ZZ21240		0.37	<0.005	<0.2	1.05	<2	<10	60	<0.5	<2	0.48	<0.5	13	47	41	2.21
ZZ21241		0.30	<0.005	<0.2	1.40	<2	<10	70	<0.5	<2	0.59	<0.5	10	21	31	1.99
ZZ21242		0.33	<0.005	<0.2	1.41	<2	<10	80	<0.5	<2	0.65	<0.5	13	37	34	2.51
ZZ21243		0.38	<0.005	<0.2	1.43	<2	<10	40	<0.5	<2	0.80	<0.5	26	92	46	2.96
ZZ21244		0.36	<0.005	<0.2	0.73	<2	<10	40	<0.5	<2	0.41	<0.5	17	48	30	2.03
ZZ21245		0.35	<0.005	<0.2	1.04	<2	<10	40	<0.5	<2	0.60	<0.5	17	63	46	2.19
ZZ21246		0.36	<0.005	<0.2	1.86	<2	<10	160	<0.5	<2	0.56	<0.5	17	43	36	3.06
ZZ21247		0.36	<0.005	<0.2	0.67	<2	<10	30	<0.5	<2	0.22	<0.5	10	41	20	1.67
ZZ21248		0.33	<0.005	<0.2	2.09	4	<10	160	<0.5	<2	0.58	<0.5	15	45	39	3.51
ZZ21249		0.28	<0.005	<0.2	1.51	2	<10	90	<0.5	<2	0.53	<0.5	13	40	39	2.88
ZZ21250		0.36	<0.005	<0.2	1.27	<2	<10	40	<0.5	<2	0.70	<0.5	24	47	53	3.52
DD022701		0.12	<0.005	<0.2	2.05	5	<10	170	<0.5	<2	0.63	<0.5	15	36	43	3.27
DD022702		0.18	<0.005	<0.2	2.56	7	<10	220	0.5	<2	0.74	<0.5	17	49	45	4.05
DD022703		0.15	<0.005	<0.2	2.28	6	<10	180	<0.5	<2	0.79	<0.5	15	43	44	3.55
DD022704		0.17	<0.005	<0.2	2.65	9	<10	200	0.5	<2	0.95	<0.5	18	60	56	3.81
DD022705		0.20	<0.005	<0.2	2.39	8	<10	110	0.5	<2	0.87	<0.5	25	100	62	4.20
DD022706		0.23	<0.005	<0.2	2.18	10	<10	330	0.7	<2	0.88	<0.5	23	74	69	4.45
DD022707		0.19	<0.005	<0.2	2.48	10	<10	180	0.6	<2	0.88	<0.5	22	96	61	4.41
DD022708		0.27	<0.005	<0.2	2.38	10	<10	140	0.5	<2	0.97	<0.5	24	109	61	4.12
DD022709		0.23	0.010	<0.2	2.08	10	<10	180	0.6	<2	0.93	<0.5	19	62	53	3.98
DD022710		0.15	<0.005	<0.2	1.80	10	<10	250	0.5	<2	0.98	<0.5	13	46	44	3.10
DD022711		0.15	<0.005	0.2	2.58	10	<10	200	0.7	<2	1.10	<0.5	20	82	83	3.81
DD022712		0.21	<0.005	<0.2	2.05	7	<10	100	0.5	<2	1.08	<0.5	17	45	65	3.30
DD022713		0.16	<0.005	<0.2	1.70	8	<10	100	<0.5	<2	0.93	<0.5	16	35	51	3.00
DD022714		0.20	<0.005	<0.2	2.44	3	<10	90	0.5	<2	1.04	<0.5	19	58	58	4.04



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Project: Mint

CERTIFICATE OF ANALYSIS WH12177495

Sample Description	Method Analyte Units LOR	ME- ICP41 Ga ppm 10	ME- ICP41 Hg ppm 1	ME- ICP41 K % 0.01	ME- ICP41 La ppm 10	ME- ICP41 Mg % 0.01	ME- ICP41 Mn ppm 5	ME- ICP41 Mo ppm 1	ME- ICP41 Na % 0.01	ME- ICP41 Ni ppm 1	ME- ICP41 P ppm 10	ME- ICP41 Pb ppm 2	ME- ICP41 S % 0.01	ME- ICP41 Sb ppm 2	ME- ICP41 Sc ppm 1	ME- ICP41 Sr ppm 1
ZZ21225		10	<1	0.05	20	0.92	1930	<1	0.05	63	780	6	0.04	<2	11	52
ZZ21226		<10	1	0.05	10	1.12	4760	<1	0.06	107	560	2	0.04	<2	8	51
ZZ21227		<10	<1	0.09	10	1.56	368	<1	0.05	78	450	<2	0.02	<2	7	44
ZZ21228		<10	<1	0.08	10	1.37	680	<1	0.07	62	590	<2	0.02	<2	7	47
ZZ21229		<10	<1	0.18	<10	2.05	425	<1	0.18	85	380	<2	<0.01	<2	7	40
ZZ21230		<10	<1	0.10	10	2.53	910	<1	0.07	121	720	<2	0.03	<2	11	68
ZZ21231		<10	<1	0.06	10	3.90	805	<1	0.04	117	490	2	0.07	<2	11	83
ZZ21232		<10	<1	0.08	10	1.74	757	<1	0.08	98	510	3	0.03	<2	9	50
ZZ21233		<10	<1	0.05	10	0.95	966	<1	0.07	53	1120	2	0.04	<2	9	62
ZZ21234		<10	<1	0.07	10	1.06	703	<1	0.07	74	650	<2	0.03	<2	9	54
ZZ21235		<10	9	0.09	10	1.29	759	<1	0.06	49	730	<2	0.02	<2	7	68
ZZ21236		<10	<1	0.04	10	1.64	1405	<1	0.06	89	680	<2	<0.01	<2	18	89
ZZ21237		<10	<1	0.04	10	1.88	899	<1	0.06	70	970	4	0.01	<2	10	57
ZZ21238		<10	<1	0.07	10	1.78	790	<1	0.10	76	860	2	0.01	<2	9	83
ZZ21239		<10	<1	0.05	10	1.30	504	<1	0.12	49	740	<2	0.02	<2	6	75
ZZ21240		<10	<1	0.07	10	0.94	419	<1	0.07	44	460	3	0.02	<2	6	29
ZZ21241		<10	<1	0.06	<10	0.91	256	<1	0.08	25	560	<2	0.01	<2	5	45
ZZ21242		<10	<1	0.07	10	1.21	471	<1	0.09	37	600	<2	0.02	<2	6	49
ZZ21243		<10	<1	0.07	10	2.79	1305	<1	0.13	87	670	<2	0.01	<2	8	65
ZZ21244		<10	<1	0.06	10	2.03	337	<1	0.06	60	480	<2	<0.01	<2	4	26
ZZ21245		<10	<1	0.07	<10	2.10	274	<1	0.15	61	620	<2	<0.01	<2	6	61
ZZ21246		<10	<1	0.06	10	0.88	754	<1	0.06	37	660	3	0.04	<2	4	51
ZZ21247		<10	<1	0.03	<10	0.99	272	<1	0.03	36	330	<2	0.01	<2	4	16
ZZ21248		10	<1	0.07	10	0.80	618	<1	0.06	37	750	3	0.05	<2	5	56
ZZ21249		<10	<1	0.06	10	0.85	518	<1	0.07	37	640	2	0.03	<2	6	44
ZZ21250		<10	<1	0.04	10	2.09	952	<1	0.14	74	720	<2	0.01	<2	8	64
DD022701		10	<1	0.05	10	0.83	505	<1	0.07	30	730	5	0.08	<2	4	56
DD022702		10	<1	0.06	10	1.01	738	<1	0.05	37	890	6	0.08	<2	4	58
DD022703		10	<1	0.06	10	1.01	612	<1	0.06	36	880	5	0.08	<2	4	62
DD022704		10	<1	0.06	10	1.51	629	<1	0.06	52	960	5	0.07	<2	7	75
DD022705		10	<1	0.06	10	2.14	1015	<1	0.07	79	840	8	0.04	<2	8	88
DD022706		10	<1	0.09	20	1.48	1085	<1	0.07	49	940	6	0.04	<2	10	57
DD022707		10	<1	0.05	10	1.63	892	<1	0.06	54	1050	5	0.06	<2	8	58
DD022708		10	<1	0.05	10	2.37	824	<1	0.07	57	870	5	0.04	<2	12	81
DD022709		10	<1	0.09	20	1.41	945	<1	0.05	48	1220	8	0.04	<2	7	50
DD022710		10	<1	0.05	10	0.89	484	<1	0.06	35	770	5	0.07	<2	5	60
DD022711		10	1	0.06	20	1.77	767	<1	0.06	50	970	6	0.09	<2	11	68
DD022712		10	<1	0.06	10	1.13	747	<1	0.07	34	990	4	0.09	<2	6	105
DD022713		<10	<1	0.06	10	0.79	698	<1	0.07	27	890	5	0.11	<2	4	81
DD022714		10	<1	0.06	10	1.62	717	<1	0.09	46	810	5	0.04	<2	8	252



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CERTIFICATE OF ANALYSIS WH12177495

Sample Description	Method Analyte Units LOR	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41
		Th	Ti	Ti	U	V	W	Zn
		ppm 20	% 0.01	ppm 10	ppm 10	ppm 1	ppm 10	ppm 2
ZZ21225		<20	0.08	<10	<10	89	<10	88
ZZ21226		<20	0.07	<10	<10	69	<10	55
ZZ21227		<20	0.06	<10	<10	60	<10	59
ZZ21228		<20	0.09	<10	<10	69	<10	52
ZZ21229		<20	0.04	<10	<10	38	<10	31
ZZ21230		<20	0.04	<10	<10	70	<10	65
ZZ21231		<20	0.06	<10	<10	75	<10	55
ZZ21232		<20	0.09	<10	<10	80	<10	70
ZZ21233		<20	0.04	<10	<10	72	<10	84
ZZ21234		<20	0.08	<10	<10	75	<10	68
ZZ21235		<20	0.07	<10	<10	53	<10	63
ZZ21236		<20	0.07	<10	<10	73	<10	61
ZZ21237		<20	0.08	<10	<10	77	<10	76
ZZ21238		<20	0.10	<10	<10	71	<10	65
ZZ21239		<20	0.12	<10	<10	73	<10	51
ZZ21240		<20	0.07	<10	<10	52	<10	39
ZZ21241		<20	0.11	<10	<10	57	<10	30
ZZ21242		<20	0.11	<10	<10	67	<10	41
ZZ21243		<20	0.08	<10	<10	62	<10	74
ZZ21244		<20	0.06	<10	<10	40	<10	67
ZZ21245		<20	0.09	<10	<10	66	<10	51
ZZ21246		<20	0.09	<10	<10	75	<10	65
ZZ21247		<20	0.05	<10	<10	33	<10	39
ZZ21248		<20	0.11	<10	<10	87	<10	67
ZZ21249		<20	0.10	<10	<10	69	<10	58
ZZ21250		<20	0.11	<10	<10	97	<10	58
DD022701		<20	0.09	<10	<10	79	<10	76
DD022702		<20	0.09	<10	<10	99	<10	86
DD022703		<20	0.09	<10	<10	87	<10	78
DD022704		<20	0.11	<10	<10	96	<10	79
DD022705		<20	0.15	<10	<10	94	<10	92
DD022706		<20	0.11	<10	<10	89	<10	93
DD022707		<20	0.09	<10	<10	105	<10	89
DD022708		<20	0.16	<10	<10	104	<10	84
DD022709		<20	0.04	<10	<10	68	<10	91
DD022710		<20	0.07	<10	<10	70	<10	66
DD022711		<20	0.09	<10	<10	94	<10	79
DD022712		<20	0.10	<10	<10	79	<10	65
DD022713		<20	0.08	<10	<10	73	<10	56
DD022714		<20	0.18	<10	<10	106	<10	77



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CERTIFICATE OF ANALYSIS WH12177495

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	Au- AA24 Au ppm	ME- ICP41 Ag ppm	ME- ICP41 Al %	ME- ICP41 As ppm	ME- ICP41 B ppm	ME- ICP41 Ba ppm	ME- ICP41 Be ppm	ME- ICP41 Bi ppm	ME- ICP41 Ca %	ME- ICP41 Cd ppm	ME- ICP41 Co ppm	ME- ICP41 Cr ppm	ME- ICP41 Cu ppm	ME- ICP41 Fe %
		0.02	0.005	0.2	0.01	2	10	10	0.5	2	0.01	0.5	1	1	1	0.01
DD022715		0.17	<0.005	<0.2	2.91	11	<10	170	0.7	<2	0.62	<0.5	21	56	50	4.39
DD022716		0.18	<0.005	<0.2	2.24	7	<10	170	0.5	<2	0.74	<0.5	16	47	48	3.62
DD022717		0.16	<0.005	0.2	1.87	4	<10	220	<0.5	<2	0.78	<0.5	14	43	41	3.18
DD022718		0.22	<0.005	<0.2	2.92	8	<10	270	0.6	<2	0.91	<0.5	24	107	56	4.38
DD022719		0.20	<0.005	<0.2	2.56	8	<10	280	0.6	<2	0.89	<0.5	22	59	51	4.32
DD022720		0.16	<0.005	<0.2	2.30	7	<10	330	0.5	<2	1.00	<0.5	19	58	49	3.66
DD022721		0.17	<0.005	<0.2	2.59	8	<10	160	0.5	<2	0.79	<0.5	19	39	44	3.79
DD022722		0.15	<0.005	<0.2	1.82	6	<10	150	<0.5	<2	0.74	<0.5	16	32	48	3.09
DD022723		0.15	<0.005	<0.2	2.23	9	<10	100	<0.5	<2	1.08	<0.5	24	40	63	3.71
DD022724		0.19	<0.005	<0.2	2.00	8	<10	180	<0.5	<2	0.69	<0.5	15	34	44	3.22
DD022725		0.17	<0.005	<0.2	1.71	6	<10	160	<0.5	<2	0.81	<0.5	14	34	41	2.95
DD022726		0.27	<0.005	<0.2	3.42	10	<10	160	0.5	<2	3.91	<0.5	24	82	94	4.28
DD022727		0.17	<0.005	<0.2	2.41	8	<10	170	0.5	2	0.85	<0.5	20	62	55	3.75
DD022728		0.20	<0.005	0.2	2.21	7	<10	120	0.5	<2	1.12	<0.5	24	60	63	3.89
DD022729		0.24	<0.005	0.2	2.13	9	<10	170	0.5	<2	0.99	<0.5	22	53	57	3.78
DD022730		0.25	<0.005	<0.2	1.87	4	<10	80	<0.5	<2	1.10	<0.5	25	71	48	3.84
DD022731		0.21	<0.005	0.2	1.90	6	<10	210	0.6	2	1.36	<0.5	17	49	58	3.52
DD022732		0.21	<0.005	<0.2	2.50	13	<10	220	0.5	<2	0.72	<0.5	17	39	54	3.82
DD022733		0.18	<0.005	<0.2	2.47	11	<10	200	0.5	<2	0.86	<0.5	16	33	53	3.50
DD022734		0.28	<0.005	<0.2	2.78	15	<10	90	0.5	<2	0.94	<0.5	19	46	47	3.90
DD022735		0.20	<0.005	0.2	2.48	11	<10	130	0.5	<2	0.90	<0.5	20	40	51	3.76
DD022736		0.22	0.006	<0.2	2.88	20	<10	80	0.6	<2	0.76	<0.5	18	49	45	3.81
DD022737		0.24	<0.005	<0.2	2.56	15	<10	70	0.5	<2	0.89	<0.5	17	44	39	3.59
DD022738		0.23	<0.005	<0.2	2.18	7	<10	60	0.5	<2	0.82	<0.5	16	36	39	3.26
DD022739		0.18	<0.005	<0.2	2.66	10	<10	80	0.5	<2	1.18	<0.5	18	30	47	3.74
DD022740		0.24	<0.005	<0.2	1.86	<2	<10	20	0.6	<2	1.44	<0.5	19	29	31	4.14
DD022741		0.25	<0.005	<0.2	1.70	8	<10	40	<0.5	2	0.99	<0.5	17	46	73	2.95
DD022742		0.17	<0.005	<0.2	2.02	7	<10	170	0.5	<2	0.93	<0.5	16	31	41	3.18
DD022743		0.16	<0.005	<0.2	1.99	11	<10	130	0.5	<2	0.96	<0.5	17	31	49	3.23
DD022744		0.21	<0.005	<0.2	2.32	8	<10	100	0.5	<2	0.95	<0.5	19	40	46	3.59
DD022745		0.21	<0.005	<0.2	2.60	11	<10	60	<0.5	<2	1.21	<0.5	14	48	47	3.13
DD022746		0.18	<0.005	<0.2	2.22	15	<10	90	<0.5	<2	0.89	<0.5	15	47	27	2.87
DD022747		0.21	<0.005	<0.2	2.10	18	<10	130	<0.5	<2	0.79	<0.5	13	38	31	2.93
DD022748		0.20	<0.005	<0.2	3.13	7	<10	130	0.5	2	0.83	<0.5	20	36	43	3.85
DD022749		0.21	<0.005	<0.2	2.51	9	<10	90	0.5	<2	0.97	<0.5	17	31	46	3.55
DD022750		0.25	0.005	<0.2	2.08	5	<10	80	<0.5	<2	0.95	<0.5	19	31	46	3.77
DD017951		0.19	<0.005	<0.2	2.46	6	<10	90	0.5	<2	0.87	<0.5	19	26	45	3.69
DD017952		0.16	<0.005	<0.2	2.10	7	<10	130	<0.5	<2	0.84	<0.5	18	28	41	3.46
DD017953		0.18	<0.005	<0.2	2.42	7	<10	130	<0.5	<2	0.71	<0.5	19	29	41	3.54
DD017954		0.21	<0.005	<0.2	2.11	7	<10	130	<0.5	<2	0.72	<0.5	22	28	38	3.80



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CERTIFICATE OF ANALYSIS WH12177495

Sample Description	Method Analyte Units LOR	ME- ICP41 Ga ppm 10	ME- ICP41 Hg ppm 1	ME- ICP41 K % 0.01	ME- ICP41 La ppm 10	ME- ICP41 Mg % 0.01	ME- ICP41 Mn ppm 5	ME- ICP41 Mo ppm 1	ME- ICP41 Na % 0.01	ME- ICP41 Ni ppm 1	ME- ICP41 P ppm 10	ME- ICP41 Pb ppm 2	ME- ICP41 S % 0.01	ME- ICP41 Sb ppm 2	ME- ICP41 Sc ppm 1	ME- ICP41 Sr ppm 1
DD022715		10	<1	0.06	10	1.14	940	<1	0.05	41	1220	6	0.09	<2	4	75
DD022716		10	<1	0.04	10	1.08	617	<1	0.06	35	940	4	0.10	<2	4	65
DD022717		10	<1	0.05	10	0.89	563	<1	0.07	30	1050	6	0.09	<2	4	61
DD022718		10	<1	0.06	10	1.97	1035	<1	0.06	77	920	4	0.07	<2	8	67
DD022719		10	<1	0.08	10	1.21	1015	<1	0.06	48	870	8	0.08	<2	5	61
DD022720		10	1	0.07	10	1.29	1010	<1	0.06	49	980	7	0.09	<2	6	60
DD022721		10	<1	0.08	10	1.16	733	<1	0.06	39	1060	4	0.09	<2	4	70
DD022722		10	<1	0.05	10	0.89	649	<1	0.07	32	750	3	0.09	<2	4	58
DD022723		10	1	0.04	10	2.44	678	<1	0.07	75	700	3	0.05	2	8	84
DD022724		10	1	0.05	10	0.94	556	1	0.06	33	660	6	0.06	2	5	71
DD022725		10	<1	0.05	10	0.81	582	1	0.06	28	660	6	0.07	<2	5	54
DD022726		10	1	0.07	20	3.14	1150	<1	0.03	113	1010	3	0.03	<2	11	80
DD022727		10	1	0.08	10	1.66	705	<1	0.05	59	740	5	0.04	2	8	75
DD022728		10	<1	0.06	10	2.24	754	<1	0.14	75	910	4	0.02	<2	11	119
DD022729		10	<1	0.08	10	1.85	851	<1	0.11	76	750	5	0.03	3	9	108
DD022730		10	<1	0.03	10	2.89	678	<1	0.07	97	720	2	0.01	3	9	77
DD022731		<10	<1	0.12	10	1.11	963	<1	0.04	42	820	6	0.02	<2	8	98
DD022732		10	1	0.08	10	1.09	702	<1	0.06	41	600	5	0.02	3	7	83
DD022733		10	1	0.12	10	1.06	746	<1	0.06	36	920	6	0.05	2	6	101
DD022734		10	<1	0.09	10	1.39	700	<1	0.08	44	850	4	0.02	<2	8	100
DD022735		10	<1	0.09	10	1.23	714	1	0.07	42	990	4	0.05	4	7	98
DD022736		10	1	0.05	10	1.45	632	<1	0.05	45	650	4	0.03	2	8	109
DD022737		10	<1	0.05	10	1.30	629	<1	0.06	40	760	4	0.03	2	7	89
DD022738		10	1	0.14	10	1.12	632	<1	0.08	33	1000	4	0.03	3	6	119
DD022739		10	<1	0.07	10	1.50	800	<1	0.10	31	890	3	0.06	3	7	118
DD022740		10	<1	0.09	10	2.15	912	<1	0.09	24	1210	2	0.01	5	9	113
DD022741		10	<1	0.05	10	1.13	876	<1	0.05	30	660	4	0.02	3	7	49
DD022742		10	1	0.06	10	0.89	835	1	0.06	31	820	6	0.09	<2	4	68
DD022743		10	<1	0.07	10	1.08	796	1	0.08	31	960	4	0.09	3	6	79
DD022744		10	1	0.07	10	1.38	989	<1	0.08	36	940	7	0.07	4	7	83
DD022745		10	1	0.07	10	1.43	485	<1	0.11	43	730	3	0.03	<2	7	114
DD022746		10	1	0.07	10	1.13	507	<1	0.07	40	700	4	0.04	4	6	146
DD022747		10	1	0.06	10	1.00	472	<1	0.06	36	670	3	0.03	2	6	116
DD022748		10	<1	0.05	10	1.17	573	<1	0.06	49	810	3	0.02	3	7	135
DD022749		10	1	0.07	10	1.55	660	<1	0.06	41	790	3	0.04	<2	9	111
DD022750		10	<1	0.07	10	1.80	658	<1	0.07	43	760	2	0.02	2	8	107
DD017951		10	<1	0.06	10	1.46	790	<1	0.07	35	760	<2	0.03	2	8	96
DD017952		10	1	0.07	10	1.40	677	<1	0.07	39	970	4	0.06	<2	6	92
DD017953		10	1	0.05	10	1.80	691	<1	0.06	48	570	2	0.03	3	7	76
DD017954		10	<1	0.05	10	1.76	829	<1	0.05	53	650	2	0.02	3	8	79



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CERTIFICATE OF ANALYSIS WH12177495

Sample Description	Method Analyte Units LOR	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41
		Th	Ti	Ti	U	V	W	Zn
		ppm 20	% 0.01	ppm 10	ppm 10	ppm 1	ppm 10	ppm 2
DD022715		<20	0.09	<10	<10	109	<10	81
DD022716		<20	0.09	<10	<10	90	<10	79
DD022717		<20	0.07	<10	<10	81	<10	70
DD022718		<20	0.13	<10	<10	106	<10	80
DD022719		<20	0.08	<10	<10	100	<10	89
DD022720		<20	0.07	<10	<10	83	<10	77
DD022721		<20	0.12	<10	<10	98	<10	73
DD022722		<20	0.10	<10	<10	75	<10	64
DD022723		<20	0.22	<10	<10	96	<10	63
DD022724		<20	0.10	<10	<10	66	<10	69
DD022725		<20	0.09	<10	<10	63	<10	56
DD022726		<20	0.01	<10	<10	70	<10	64
DD022727		<20	0.12	<10	<10	84	<10	80
DD022728		<20	0.18	<10	<10	107	<10	82
DD022729		<20	0.18	<10	<10	83	<10	92
DD022730		<20	0.23	<10	<10	91	<10	67
DD022731		<20	0.04	<10	<10	68	<10	68
DD022732		<20	0.07	<10	<10	78	<10	68
DD022733		<20	0.10	<10	<10	72	<10	66
DD022734		<20	0.15	<10	<10	89	<10	65
DD022735		<20	0.13	<10	<10	82	<10	67
DD022736		<20	0.07	<10	<10	85	<10	58
DD022737		<20	0.08	<10	<10	80	<10	55
DD022738		<20	0.13	<10	<10	78	<10	59
DD022739		<20	0.16	<10	<10	88	<10	64
DD022740		<20	0.34	<10	<10	130	<10	72
DD022741		<20	0.09	<10	<10	65	<10	65
DD022742		<20	0.08	<10	<10	65	<10	64
DD022743		<20	0.10	<10	<10	70	<10	61
DD022744		<20	0.13	<10	<10	80	<10	70
DD022745		<20	0.16	<10	<10	75	<10	56
DD022746		<20	0.09	<10	<10	66	<10	56
DD022747		<20	0.10	<10	<10	68	<10	56
DD022748		<20	0.15	<10	<10	89	<10	62
DD022749		<20	0.14	<10	<10	86	<10	62
DD022750		<20	0.21	<10	<10	90	<10	64
DD017951		<20	0.19	<10	<10	87	<10	66
DD017952		<20	0.14	<10	<10	79	<10	61
DD017953		<20	0.12	<10	<10	88	<10	58
DD017954		<20	0.12	<10	<10	95	<10	60



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CERTIFICATE OF ANALYSIS WH12177495

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	Au- AA24 Au ppm	ME- ICP41 Ag ppm	ME- ICP41 Al %	ME- ICP41 As ppm	ME- ICP41 B ppm	ME- ICP41 Ba ppm	ME- ICP41 Be ppm	ME- ICP41 Bi ppm	ME- ICP41 Ca %	ME- ICP41 Cd ppm	ME- ICP41 Co ppm	ME- ICP41 Cr ppm	ME- ICP41 Cu ppm	ME- ICP41 Fe %
		0.02	0.005	0.2	0.01	2	10	10	0.5	2	0.01	0.5	1	1	1	0.01
DD017955		0.17	0.015	<0.2	2.02	9	<10	140	0.5	<2	0.42	<0.5	17	36	41	3.63
DD017956		0.20	<0.005	<0.2	1.65	5	<10	80	<0.5	<2	0.79	<0.5	23	30	38	3.68
DD017957		0.20	0.011	<0.2	1.87	4	<10	90	<0.5	<2	0.73	<0.5	18	22	31	3.17
DD017958		0.21	<0.005	<0.2	1.94	6	<10	100	<0.5	<2	0.83	<0.5	18	22	35	3.30
DD017959		0.22	<0.005	<0.2	1.75	10	<10	70	<0.5	<2	0.83	<0.5	18	30	48	3.29
DD017960		0.14	<0.005	0.2	1.72	9	<10	120	<0.5	<2	0.73	<0.5	11	29	47	2.75



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CERTIFICATE OF ANALYSIS WH12177495

Sample Description	Method Analyte Units LOR	ME- ICP41 Ga ppm 10	ME- ICP41 Hg ppm 1	ME- ICP41 K % 0.01	ME- ICP41 La ppm 10	ME- ICP41 Mg % 0.01	ME- ICP41 Mn ppm 5	ME- ICP41 Mo ppm 1	ME- ICP41 Na % 0.01	ME- ICP41 Ni ppm 1	ME- ICP41 P ppm 10	ME- ICP41 Pb ppm 2	ME- ICP41 S % 0.01	ME- ICP41 Sb ppm 2	ME- ICP41 Sc ppm 1	ME- ICP41 Sr ppm 1
DD017955		10	<1	0.07	10	0.81	733	1	0.05	32	680	5	0.05	2	4	45
DD017956		10	<1	0.04	10	1.80	781	<1	0.05	54	640	2	0.03	<2	9	90
DD017957		10	<1	0.04	10	2.05	583	<1	0.06	41	500	2	0.03	2	7	82
DD017958		10	<1	0.05	10	1.87	602	<1	0.06	40	570	4	0.03	<2	7	90
DD017959		<10	<1	0.05	10	1.65	640	<1	0.10	50	800	3	0.02	2	7	95
DD017960		10	<1	0.04	10	0.73	424	<1	0.06	29	650	6	0.08	3	4	75



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CERTIFICATE OF ANALYSIS WH12177495

Sample Description	Method Analyte Units LOR	ME- ICP41 Th ppm 20	ME- ICP41 Ti % 0.01	ME- ICP41 Tl ppm 10	ME- ICP41 U ppm 10	ME- ICP41 V ppm 1	ME- ICP41 W ppm 10	ME- ICP41 Zn ppm 2
DD017955		<20	0.08	<10	<10	77	<10	73
DD017956		<20	0.12	<10	<10	90	<10	57
DD017957		<20	0.16	<10	<10	73	<10	53
DD017958		<20	0.13	<10	<10	72	<10	55
DD017959		<20	0.10	<10	<10	84	<10	56
DD017960		<20	0.06	<10	<10	59	<10	58



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CERTIFICATE WH12186535

Project: Mint

P.O. No.: Batch 4

This report is for 36 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 10- AUG- 2012.

The following have access to data associated with this certificate:

MATT DUMALA

JOAN MARIACHER

HEATHER SMITH

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/ o BarCode
LOG- 24	Pulp Login - Rcd w/ o Barcode
LOG- 22d	Sample login - Rcd w/ o BarCode dup
SPL- 21d	Split sample - duplicate
PUL- 31d	Pulverize Split - duplicate
CRU- QC	Crushing QC Test
PUL- QC	Pulverizing QC Test
CRU- 31	Fine crushing - 70%< 2mm
SPL- 21	Split sample - riffle splitter
PUL- 31	Pulverize split to 85%< 75 um

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION
ME- MS61	48 element four acid ICP- MS
Au- AA24	Au 50g FA AA finish AAS

To: **SILVER RANGE RESOURCES LTD.**
ATTN: JOAN MARIACHER
C/ O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
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This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager



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CERTIFICATE OF ANALYSIS WH12186535

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	Au- AA24 Au ppm	ME- MS61 Ag ppm	ME- MS61 Al %	ME- MS61 As ppm	ME- MS61 Ba ppm	ME- MS61 Be ppm	ME- MS61 Bi ppm	ME- MS61 Ca %	ME- MS61 Cd ppm	ME- MS61 Ce ppm	ME- MS61 Co ppm	ME- MS61 Cr ppm	ME- MS61 Cs ppm	ME- MS61 Cu ppm
		0.02	0.005	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
M677109		6.86	0.067	0.35	7.96	6.4	250	1.43	0.28	1.94	0.13	42.2	18.8	7	0.65	389
M677110		4.98	0.048	0.30	7.73	5.8	230	1.31	0.35	2.36	0.08	40.3	10.1	6	0.80	197.5
M677111		2.60	0.294	4.40	7.72	7.3	330	1.16	1.36	1.94	0.60	41.9	13.7	9	1.02	1025
M677112		5.97	0.053	0.43	7.92	7.0	350	1.28	0.47	1.96	0.85	42.3	15.4	6	0.97	154.0
M677113		6.47	0.063	0.38	7.91	5.1	440	1.13	0.25	2.46	0.06	29.1	15.7	60	1.19	268
M677114		<0.02	0.057	0.42	7.91	4.6	440	1.11	0.24	2.47	0.06	28.8	15.6	60	1.19	270
M677115		7.18	0.044	0.27	8.32	5.2	330	0.85	0.26	3.67	0.07	21.9	15.3	121	1.85	196.5
M677116		6.90	0.053	0.30	7.98	3.6	460	0.80	0.23	3.61	0.07	19.05	14.6	112	2.06	230
M677117		7.95	0.104	0.46	7.98	3.6	300	0.73	0.32	2.83	0.08	18.10	20.5	88	1.54	447
M677118		4.58	0.057	0.37	7.91	4.6	320	0.71	0.39	2.01	0.22	11.20	12.6	35	1.14	230
M677119		0.10	0.824	7.14	5.13	8900	1150	1.31	205	12.70	1.09	449	75.7	53	9.87	3290
M677120		2.34	0.116	3.57	7.85	15.4	330	0.79	0.80	2.06	0.24	11.70	15.3	43	1.41	308
M677121		7.68	0.036	0.23	7.51	2.6	290	0.71	0.30	2.05	0.13	10.70	9.4	37	0.82	140.5
M677122		2.87	0.093	0.61	7.54	6.0	290	0.79	0.33	2.39	0.11	17.75	16.9	46	1.26	362
M677123		5.23	0.042	0.19	7.93	3.0	320	0.85	0.23	2.41	0.09	26.2	11.6	38	0.85	132.5
M677124		6.31	0.028	0.33	7.87	1.9	280	0.72	0.23	1.84	0.06	14.60	11.0	35	0.69	232
M677125		2.20	0.038	0.39	7.95	1.9	340	0.86	0.20	1.82	0.11	29.5	6.8	24	0.74	255
M677126		4.75	0.143	1.46	7.94	9.3	330	0.89	0.84	2.00	0.26	26.5	20.7	31	1.66	351
M677127		5.25	<0.005	0.01	0.07	<5	20	0.05	0.03	20.1	0.06	1.15	1.0	1	0.13	3.3
M677128		5.62	0.048	0.50	8.66	8.4	430	1.20	0.38	2.57	0.04	30.0	21.4	10	1.90	261
M677129		4.65	0.043	0.36	8.21	5.3	570	1.35	0.23	2.09	0.06	39.5	10.1	6	1.41	141.0
M677130		2.49	0.182	1.30	8.50	3.3	600	1.22	0.38	2.46	0.16	48.2	8.3	8	0.77	1005
M677131		0.10	0.830	10.10	5.02	8600	1120	1.19	210	12.20	1.03	425	70.8	49	9.49	3210
M677132		6.51	0.156	0.66	8.46	6.6	350	1.35	0.32	2.15	0.25	41.8	14.1	7	0.74	666
M677133		6.94	0.060	0.32	8.34	7.4	400	1.30	0.20	2.39	0.10	40.5	8.9	6	0.72	283
M677134		6.72	0.047	0.45	7.89	4.2	370	1.06	0.14	2.00	0.26	27.1	7.7	10	0.64	361
M677135		7.83	0.068	0.55	7.77	2.3	400	0.86	0.14	2.25	0.41	23.8	6.6	17	0.92	573
M677136		5.44	<0.005	0.01	0.10	<5	20	0.08	0.03	19.40	0.06	1.26	1.0	2	0.18	3.0
M677137		7.99	0.078	0.44	8.00	4.3	390	1.40	0.19	2.48	0.16	36.4	7.1	7	1.08	445
M677138		4.13	0.186	2.98	7.45	28.7	460	0.92	1.61	1.98	1.79	28.4	10.8	24	1.49	642
M677139		4.01	0.050	0.79	7.27	3.3	410	0.76	0.66	1.42	0.87	13.40	16.2	58	0.68	384
M677140		7.15	0.031	0.45	7.81	2.9	460	0.56	0.27	1.45	0.80	15.50	15.9	55	0.67	238
M677141		4.75	0.019	0.28	7.69	2.6	330	0.56	0.30	1.71	0.48	12.65	11.1	33	0.67	113.0
M677142		5.17	0.015	0.23	8.17	2.7	420	0.61	0.31	2.37	0.35	10.80	13.4	104	0.95	91.2
M677143		2.20	0.015	0.29	8.12	3.3	450	0.60	0.35	2.29	0.41	11.15	13.0	116	1.02	102.5
M677144		3.29	0.011	0.18	8.33	4.7	280	0.91	0.28	2.23	0.24	29.2	15.3	23	0.77	69.8



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CERTIFICATE OF ANALYSIS WH12186535

Sample Description	Method Analyte Units LOR	ME- MS61 Fe %	ME- MS61 Ga ppm	ME- MS61 Ge ppm	ME- MS61 Hf ppm	ME- MS61 In ppm	ME- MS61 K %	ME- MS61 La ppm	ME- MS61 Li ppm	ME- MS61 Mg %	ME- MS61 Mn ppm	ME- MS61 Mo ppm	ME- MS61 Na %	ME- MS61 Nb ppm	ME- MS61 Ni ppm	ME- MS61 P ppm
		0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
M677109		2.20	17.50	0.09	0.4	0.027	0.81	20.7	6.5	0.87	159	6.30	3.96	10.4	10.8	1320
M677110		2.36	18.85	0.09	0.4	0.039	0.85	20.0	5.4	0.86	279	7.72	3.38	12.1	6.4	1260
M677111		3.11	17.45	0.11	0.4	0.352	1.85	20.6	5.1	0.81	515	3.15	2.74	10.4	9.5	1240
M677112		2.44	18.30	0.09	0.4	0.072	1.40	20.7	5.5	0.92	370	2.84	2.95	11.2	8.9	1250
M677113		3.17	18.55	0.09	0.3	0.041	1.29	13.4	8.0	1.53	262	5.22	2.99	10.3	40.4	1140
M677114		3.18	18.15	0.10	0.3	0.040	1.30	13.1	8.0	1.54	263	5.95	3.02	10.5	40.1	1130
M677115		3.73	18.35	0.11	0.3	0.057	1.39	9.7	8.8	2.48	397	11.40	2.55	6.7	82.5	900
M677116		4.21	18.35	0.11	0.3	0.047	1.29	8.2	7.7	2.54	379	3.66	2.53	6.8	84.4	980
M677117		3.52	17.60	0.10	0.2	0.050	1.34	8.1	7.3	1.89	275	4.03	2.82	5.6	58.3	860
M677118		2.17	14.10	0.08	0.2	0.041	1.21	5.4	6.1	1.03	304	5.79	3.45	3.5	24.8	520
M677119		8.94	19.40	0.36	1.9	1.740	1.92	257	40.2	1.39	2370	17.95	0.87	10.4	35.4	960
M677120		2.56	14.00	0.08	0.2	0.136	1.59	5.4	8.0	1.06	826	8.94	3.00	3.5	30.5	570
M677121		2.24	14.40	0.08	0.2	0.033	1.01	5.1	8.1	1.05	177	12.05	3.27	3.4	26.7	510
M677122		3.04	15.55	0.10	0.2	0.085	1.27	8.1	9.2	1.35	362	16.65	2.83	4.5	37.0	780
M677123		2.86	18.00	0.10	0.2	0.033	1.14	11.3	8.0	1.35	221	6.14	3.53	9.1	26.4	1320
M677124		2.05	15.60	0.08	0.2	0.024	0.93	6.8	5.9	1.00	176	6.01	3.94	3.3	25.9	640
M677125		1.69	15.20	0.08	0.2	0.046	1.02	14.5	6.0	0.98	248	59.2	3.80	6.8	17.8	750
M677126		3.83	17.05	0.12	0.3	0.175	1.89	12.9	7.4	1.32	716	2.67	2.38	8.5	28.2	930
M677127		0.45	0.23	0.06	<0.1	0.005	0.02	0.6	0.9	12.45	202	0.21	0.01	0.3	2.2	180
M677128		4.27	21.3	0.12	0.3	0.076	1.48	13.1	12.4	1.74	321	3.94	2.72	9.8	23.4	1430
M677129		2.45	17.95	0.10	0.3	0.062	1.21	19.6	7.6	0.86	423	2.64	3.25	10.7	7.1	1300
M677130		3.24	17.95	0.12	0.3	0.105	0.99	24.0	5.2	0.93	251	91.5	3.87	9.2	10.1	1350
M677131		8.60	18.65	0.31	1.9	1.690	1.89	247	35.9	1.36	2290	15.70	0.86	10.2	32.3	940
M677132		2.60	18.65	0.08	0.4	0.057	0.95	20.7	6.4	0.92	184	6.46	3.85	9.0	7.9	1320
M677133		2.75	18.70	0.10	0.4	0.033	1.01	20.2	5.5	0.90	213	7.18	3.48	11.0	6.1	1290
M677134		2.22	17.90	0.09	0.3	0.023	1.01	13.0	7.0	1.03	186	22.4	3.35	8.1	11.9	1120
M677135		2.18	16.95	0.09	0.4	0.031	1.25	11.4	6.7	1.10	274	36.5	3.15	6.1	14.3	850
M677136		0.44	0.27	0.05	<0.1	<0.005	0.03	0.6	1.1	12.05	193	0.22	0.01	0.3	2.6	210
M677137		2.86	18.10	0.10	0.4	0.050	1.12	17.3	7.7	0.91	253	16.15	3.25	10.3	6.9	1280
M677138		3.19	15.95	0.12	0.2	0.239	1.95	13.6	7.3	0.97	825	26.8	2.22	5.8	22.9	930
M677139		2.90	17.75	0.12	0.2	0.065	1.10	6.4	7.1	1.41	309	27.3	3.79	3.2	55.2	720
M677140		3.23	15.45	0.13	0.1	0.027	1.12	7.5	4.7	1.51	308	7.90	3.59	2.9	48.8	740
M677141		2.74	14.00	0.10	0.1	0.021	1.00	6.2	3.9	1.18	280	5.06	3.52	3.0	30.3	610
M677142		3.38	16.85	0.12	0.2	0.023	1.38	5.0	5.6	2.01	334	2.83	2.70	3.6	58.7	870
M677143		3.39	18.95	0.13	0.2	0.019	1.36	5.1	6.3	2.12	344	2.16	2.63	4.1	61.2	890
M677144		3.52	16.95	0.14	0.2	0.014	1.12	14.1	4.9	1.22	185	2.42	3.16	6.3	25.3	1240



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CERTIFICATE OF ANALYSIS WH12186535

Sample Description	Method Analyte Units LOR	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61
		Pb	Pb	Fe	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	U
		ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
		0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.1
M677109		9.1	23.2	0.006	1.43	0.72	4.9	2	1.3	528	0.73	0.18	2.6	0.249	0.5
M677110		6.4	24.0	0.005	1.22	0.93	4.7	2	1.1	486	0.81	0.25	2.5	0.262	0.6
M677111		12.2	52.9	0.002	2.62	0.90	5.0	2	1.1	313	0.73	1.99	2.4	0.243	0.6
M677112		7.9	43.6	<0.002	1.73	1.16	5.0	2	1.1	382	0.79	0.49	2.6	0.250	0.6
M677113		5.2	28.4	0.005	1.06	1.15	8.1	2	1.0	498	0.69	0.30	1.5	0.328	0.4
M677114		5.3	27.8	0.006	1.06	1.18	7.9	2	1.0	502	0.68	0.29	1.5	0.328	0.4
M677115		4.6	33.6	0.016	0.73	1.14	13.9	2	1.1	498	0.40	0.32	0.7	0.390	0.2
M677116		3.4	21.9	0.003	0.62	0.81	12.8	2	0.9	502	0.40	0.22	0.6	0.415	0.2
M677117		4.4	32.5	0.002	1.28	0.83	10.9	2	1.0	447	0.35	0.28	0.6	0.337	0.2
M677118		6.0	40.3	0.004	1.19	0.76	5.9	2	0.7	404	0.24	0.27	0.5	0.180	0.2
M677119		33.8	133.0	0.004	1.38	30.9	7.7	7	102.5	251	0.66	0.98	9.9	0.235	12.5
M677120		11.9	54.3	0.005	1.87	29.0	6.5	2	0.8	347	0.23	0.72	0.5	0.191	0.2
M677121		6.1	28.2	0.005	1.06	0.66	5.7	1	0.7	426	0.23	0.23	0.5	0.184	0.2
M677122		6.2	37.6	0.009	1.46	0.81	8.0	2	0.9	400	0.29	0.25	0.6	0.265	0.2
M677123		5.6	28.6	0.003	0.96	0.74	7.4	2	1.0	449	0.55	0.17	0.8	0.362	0.3
M677124		4.1	25.8	0.007	1.17	0.63	6.1	2	0.8	421	0.22	0.21	0.6	0.196	0.2
M677125		5.4	28.5	0.083	0.83	0.73	4.9	1	0.8	434	0.45	0.18	1.7	0.201	0.4
M677126		7.7	65.4	0.004	3.00	2.70	7.4	3	1.1	270	0.55	1.22	1.9	0.295	0.5
M677127		1.2	1.1	<0.002	0.01	<0.05	0.1	1	<0.2	48.1	<0.05	<0.05	<0.2	<0.005	0.6
M677128		5.2	32.7	0.002	1.41	1.23	12.6	2	1.5	527	0.60	0.30	1.3	0.561	0.3
M677129		5.7	33.9	0.002	1.23	1.03	4.9	2	1.0	461	0.74	0.24	2.5	0.263	0.6
M677130		7.6	27.3	0.144	2.77	1.05	5.1	3	1.7	532	0.62	0.58	2.8	0.229	0.7
M677131		34.1	131.5	0.003	1.33	30.1	7.5	7	101.5	247	0.64	0.88	10.1	0.230	12.9
M677132		7.1	28.1	0.005	1.70	0.85	4.8	2	1.3	524	0.64	0.20	2.7	0.232	0.6
M677133		6.9	28.8	0.008	1.15	0.84	4.8	2	1.1	536	0.76	0.21	2.6	0.266	0.6
M677134		7.9	24.6	0.030	1.04	0.75	5.9	2	1.3	488	0.56	0.19	2.0	0.266	0.5
M677135		11.9	35.6	0.039	0.88	0.69	6.9	2	1.3	461	0.41	0.17	1.5	0.268	0.6
M677136		1.2	1.4	<0.002	0.01	<0.05	0.2	1	<0.2	47.1	<0.05	<0.05	0.2	<0.005	1.2
M677137		7.7	29.6	0.013	1.32	0.71	4.8	2	1.0	502	0.72	0.17	2.2	0.263	0.5
M677138		234	69.2	0.028	2.61	25.3	5.4	2	1.0	237	0.41	0.99	1.6	0.212	0.5
M677139		8.8	28.8	0.023	1.99	0.75	8.2	2	1.0	361	0.22	0.98	0.7	0.240	0.3
M677140		15.2	31.5	0.008	2.45	0.58	7.7	2	1.0	386	0.18	0.21	0.8	0.233	0.2
M677141		12.9	26.0	0.006	2.14	0.50	5.6	2	0.8	396	0.20	0.17	0.7	0.183	0.2
M677142		13.8	28.2	0.004	2.10	0.48	9.7	2	0.9	442	0.23	0.15	0.7	0.321	0.2
M677143		13.7	31.3	0.003	2.00	0.52	11.0	2	1.0	434	0.26	0.18	0.7	0.333	0.2
M677144		11.4	25.7	<0.002	3.02	0.41	6.3	2	0.9	489	0.42	0.13	1.7	0.241	0.3



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Sample Description	Method Analyte Units LOR	ME- MS61 V ppm 1	ME- MS61 W ppm 0.1	ME- MS61 Y ppm 0.1	ME- MS61 Zn ppm 2	ME- MS61 Zr ppm 0.5
M677109		55	1.9	10.9	35	13.6
M677110		51	1.4	11.2	41	15.0
M677111		54	2.4	10.9	105	14.2
M677112		52	2.1	11.4	137	16.5
M677113		73	1.1	9.0	41	8.7
M677114		73	1.1	9.0	41	8.5
M677115		102	1.3	10.6	44	8.0
M677116		110	1.0	10.0	37	6.9
M677117		87	1.0	8.4	42	6.0
M677118		44	1.0	4.8	53	5.0
M677119		56	33.0	33.4	164	63.7
M677120		49	1.4	5.3	56	5.5
M677121		46	0.7	4.5	38	5.7
M677122		66	1.2	7.0	53	6.6
M677123		74	1.1	8.6	52	7.5
M677124		53	1.1	6.4	32	5.5
M677125		43	1.3	6.7	44	6.6
M677126		66	2.1	10.4	83	8.7
M677127		1	0.1	0.9	18	<0.5
M677128		132	1.3	9.4	79	8.0
M677129		53	1.1	11.1	38	11.7
M677130		57	1.6	13.2	41	11.8
M677131		54	32.6	32.5	161	62.4
M677132		54	1.4	11.1	52	12.8
M677133		52	1.0	10.6	44	13.7
M677134		64	1.4	7.7	54	10.9
M677135		67	1.6	8.5	88	11.6
M677136		2	0.1	0.9	15	<0.5
M677137		54	1.0	10.6	51	13.2
M677138		52	2.1	8.4	314	8.6
M677139		62	1.4	5.1	169	5.5
M677140		65	1.3	5.2	158	4.7
M677141		51	0.9	4.0	94	5.2
M677142		92	1.0	5.7	106	5.3
M677143		94	1.0	6.1	110	6.0
M677144		65	1.0	7.4	58	10.0



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Method	CERTIFICATE COMMENTS
ME- MS61 ME- MS61	Interference: Ca> 10%on ICP- MS As,ICP- AES results shown. REE's may not be totally soluble in this method.



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P.O. No.: Batch 5

This report is for 36 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 16- AUG- 2012.

The following have access to data associated with this certificate:

MATT DUMALA

JOAN MARIACHER

HEATHER SMITH

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/ o BarCode
LOG- 24	Pulp Login - Rcd w/ o Barcode
SPL- 21d	Split sample - duplicate
LOG- 22d	Sample login - Rcd w/ o BarCode dup
PUL- 31d	Pulverize Split - duplicate
CRU- QC	Crushing QC Test
PUL- QC	Pulverizing QC Test
CRU- 31	Fine crushing - 70%< 2mm
SPL- 21	Split sample - riffle splitter
PUL- 31	Pulverize split to 85%< 75 um

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION
ME- MS61	48 element four acid ICP- MS
Au- AA24	Au 50g FA AA finish AAS

To: **SILVER RANGE RESOURCES LTD.**
ATTN: JOAN MARIACHER
C/ O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016- 510 W HASTINGS ST
VANCOUVER BC V6B 1L8

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager



ALS Canada Ltd.

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North Vancouver BC V7H 0A7

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To: **SILVER RANGE RESOURCES LTD.**
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1016- 510 W HASTINGS ST
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Project: Mint

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Account: RANSIL

CERTIFICATE OF ANALYSIS WH12192091

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	Au- AA24 Au ppm	ME- MS61 Ag ppm	ME- MS61 Al %	ME- MS61 As ppm	ME- MS61 Ba ppm	ME- MS61 Be ppm	ME- MS61 Bi ppm	ME- MS61 Ca %	ME- MS61 Cd ppm	ME- MS61 Ce ppm	ME- MS61 Co ppm	ME- MS61 Cr ppm	ME- MS61 Cs ppm	ME- MS61 Cu ppm
		0.02	0.005	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
M677145		8.52	0.048	0.46	7.72	7.1	360	1.30	0.32	2.06	0.38	28.3	19.1	79	1.01	467
M677146		7.81	0.053	0.49	7.89	6.5	510	1.49	0.25	2.17	0.41	38.7	16.8	13	0.68	428
M677147		3.10	0.032	0.42	7.67	3.7	270	0.83	0.71	1.52	0.33	16.55	19.0	39	0.67	285
M677148		6.85	0.016	0.33	7.41	3.1	350	0.79	0.59	1.35	0.58	14.75	14.7	37	0.64	131.5
M677149		8.13	0.031	0.39	7.53	3.8	410	1.11	0.23	1.77	0.27	33.1	17.1	20	0.64	259
M677150		0.10	0.830	7.94	4.95	8490	1250	1.24	207	13.45	1.02	428	74.5	47	9.59	3480
M677151		8.22	0.034	0.37	7.78	5.1	650	1.14	0.78	1.86	0.19	34.5	11.1	20	0.66	223
M677152		2.70	0.038	0.46	7.50	5.7	380	1.06	0.40	2.05	0.32	34.0	11.5	19	0.73	281
M677153		2.91	0.037	0.70	7.33	6.5	790	0.99	0.35	2.38	0.48	34.8	14.2	19	0.84	223
M677154		7.72	0.021	0.26	7.76	3.3	410	1.15	0.16	1.89	0.23	33.7	16.2	20	0.54	179.0
M677155		7.75	0.084	0.43	7.58	3.9	400	1.20	0.28	1.98	0.18	34.9	13.2	23	0.81	183.5
M677156		2.59	0.031	0.28	7.42	2.8	470	1.13	0.19	1.98	0.17	33.9	17.6	23	0.81	161.5
M677157		3.15	<0.005	0.01	0.07	5	20	0.06	0.04	21.4	0.06	1.25	0.6	<1	0.20	6.0
M677158		8.62	0.040	0.34	7.66	6.9	360	1.19	0.39	2.13	0.24	36.2	21.5	20	0.61	228
M677159		8.04	0.106	0.37	8.00	12.4	380	1.52	0.78	2.30	0.34	40.6	13.4	12	1.02	259
M677160		7.94	0.060	0.40	7.55	7.6	500	1.29	0.88	2.08	0.39	39.9	18.9	21	1.03	218
M677161		5.14	0.049	0.55	7.55	4.0	410	1.15	0.65	2.09	0.25	36.3	14.6	32	0.57	269
M677162		<0.02	0.043	0.58	7.84	4.1	420	1.26	0.68	2.16	0.27	38.6	15.0	34	0.59	278
M677163		2.51	0.060	0.62	7.93	7.4	300	1.18	1.49	2.30	0.43	42.6	20.5	28	1.13	319
M677164		8.33	0.029	0.36	7.60	4.0	390	1.25	0.94	2.02	0.30	29.9	15.6	24	0.86	220
M677165		8.37	0.034	0.41	7.71	4.1	370	1.16	0.84	1.97	0.43	37.8	14.4	20	1.10	231
M677166		7.84	0.035	0.39	7.46	3.0	290	1.20	0.65	1.68	0.11	35.6	10.6	18	1.01	227
M677167		7.71	0.014	0.38	7.54	4.9	870	1.64	0.37	1.55	0.21	43.6	9.6	7	1.20	110.0
M677168		0.10	0.805	7.21	4.60	8040	1240	1.17	195.5	12.40	1.2	403	72.9	46	9.17	3300
M677169		4.50	0.037	0.15	7.46	7.3	540	1.58	0.62	0.96	0.13	44.4	10.5	7	1.08	96.5
M677170		3.98	0.038	0.37	7.45	2.6	1100	1.66	0.62	1.26	0.14	47.2	11.2	7	1.43	188.5
M677171		7.67	0.035	0.59	7.22	4.1	700	1.58	0.55	1.11	0.14	46.1	12.2	6	1.35	280
M677172		4.17	0.028	0.62	7.05	4.8	720	1.74	0.47	1.45	0.37	43.7	10.7	7	1.28	220
M677173		2.08	0.029	0.68	6.88	6.1	660	1.72	0.49	1.41	0.39	43.6	12.9	8	1.26	233
M677174		8.79	0.032	0.28	7.41	4.3	330	1.18	0.51	2.33	0.05	33.0	16.3	45	1.20	197.0
M677175		2.87	0.096	0.78	7.14	7.4	240	1.13	1.93	2.60	0.12	35.2	13.0	15	1.04	576
M677176		8.33	0.047	0.33	7.47	3.2	310	1.07	0.83	2.41	0.06	36.3	12.7	14	0.83	226
M677177		3.01	0.053	0.34	8.14	3.7	360	1.14	1.19	2.48	0.06	31.1	15.4	16	0.79	194.0
M677178		2.54	0.082	0.57	8.91	4.0	350	1.17	1.66	2.31	0.09	27.4	21.3	6	0.93	426
M677179		5.37	<0.005	0.01	0.09	<5	20	0.06	0.04	21.0	0.07	1.38	1.3	<1	0.28	4.1
M677180		6.35	0.017	0.30	8.40	4.9	380	0.93	0.28	3.68	0.06	30.4	7.3	6	1.56	171.0



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Project: Mint

CERTIFICATE OF ANALYSIS WH12192091

Sample Description	Method Analyte Units LOR	ME- MS61 Fe %	ME- MS61 Ga ppm	ME- MS61 Ge ppm	ME- MS61 Hf ppm	ME- MS61 In ppm	ME- MS61 K %	ME- MS61 La ppm	ME- MS61 Li ppm	ME- MS61 Mg %	ME- MS61 Mn ppm	ME- MS61 Mo ppm	ME- MS61 Na %	ME- MS61 Nb ppm	ME- MS61 Ni ppm	ME- MS61 P ppm
		0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
M677145		3.72	19.60	0.14	0.2	0.030	1.20	13.7	9.3	1.53	242	37.5	3.39	8.0	45.3	1250
M677146		3.07	19.75	0.15	0.3	0.031	1.09	19.3	8.3	1.16	220	18.65	3.46	9.0	13.9	1330
M677147		2.51	16.10	0.11	0.2	0.053	0.95	8.2	6.5	1.26	220	9.27	3.94	3.4	35.6	680
M677148		2.34	15.10	0.11	0.2	0.043	1.14	7.4	6.1	1.13	203	7.18	3.41	2.7	31.5	570
M677149		2.53	18.25	0.13	0.2	0.031	1.02	16.1	7.2	1.03	186	11.35	3.40	5.4	20.5	990
M677150		8.84	19.95	0.48	1.9	1.825	1.87	245	37.9	1.38	2460	18.90	0.83	9.9	32.5	980
M677151		2.62	19.50	0.14	0.3	0.057	1.01	17.4	6.5	1.04	231	13.10	3.58	6.9	18.0	1050
M677152		2.99	18.50	0.14	0.2	0.071	0.88	16.9	6.1	1.02	285	7.44	3.44	6.6	18.5	1030
M677153		3.11	16.35	0.17	0.2	0.059	0.92	17.2	5.8	1.01	629	11.90	3.22	5.4	16.7	980
M677154		2.68	19.00	0.16	0.2	0.026	1.09	16.8	7.3	1.11	195	12.00	3.62	5.8	17.8	1090
M677155		3.23	19.70	0.17	0.2	0.038	1.21	16.8	7.7	1.18	328	4.28	3.25	6.8	18.2	1120
M677156		3.43	18.95	0.18	0.2	0.019	1.35	16.4	8.2	1.46	230	8.03	3.01	6.3	19.8	1130
M677157		0.48	0.23	0.10	<0.1	0.011	0.03	0.6	1.0	13.80	215	0.19	0.01	0.2	2.0	160
M677158		3.15	18.90	0.15	0.2	0.035	1.07	17.5	6.3	1.24	204	40.6	3.38	6.0	15.7	1200
M677159		3.24	20.0	0.18	0.3	0.050	1.21	20.0	5.3	1.19	213	22.7	3.17	8.0	13.0	1310
M677160		3.44	18.80	0.16	0.2	0.037	1.15	19.9	6.1	1.20	252	9.85	3.24	5.9	18.4	1180
M677161		3.23	20.4	0.16	0.2	0.050	0.98	17.5	8.0	1.23	260	8.56	3.25	7.5	23.1	1250
M677162		3.34	20.7	0.18	0.2	0.051	1.02	18.5	8.2	1.27	270	8.49	3.33	7.6	23.5	1290
M677163		3.39	20.8	0.20	0.2	0.075	0.91	20.6	6.4	1.58	316	12.80	3.23	6.6	23.2	1240
M677164		2.59	19.95	0.16	0.2	0.059	0.85	14.3	7.3	1.17	219	10.45	3.30	6.2	20.1	1150
M677165		2.63	19.65	0.18	0.3	0.059	1.02	18.3	5.7	1.13	243	4.30	3.33	6.0	21.3	1150
M677166		2.41	19.10	0.16	0.2	0.045	0.88	17.6	5.7	1.02	229	4.16	3.64	4.8	17.6	1060
M677167		1.55	16.30	0.14	0.4	0.038	1.32	24.3	5.2	0.44	184	16.25	3.62	12.5	6.7	640
M677168		8.37	18.75	0.50	1.8	1.745	1.77	237	36.1	1.32	2330	16.35	0.77	9.1	31.8	910
M677169		2.04	15.75	0.13	0.4	0.049	1.52	25.2	4.9	0.42	115	4.20	3.18	9.7	7.1	620
M677170		1.96	16.55	0.14	0.4	0.091	1.79	26.7	3.8	0.40	180	5.08	2.97	11.7	6.6	620
M677171		1.67	15.55	0.15	0.4	0.094	1.50	26.8	4.6	0.47	211	18.90	3.42	12.6	6.8	620
M677172		1.60	15.55	0.13	0.4	0.080	1.31	24.3	4.7	0.49	242	56.6	3.54	14.3	6.7	610
M677173		1.71	15.75	0.15	0.4	0.081	1.30	24.3	4.8	0.48	239	46.2	3.60	14.2	7.4	610
M677174		3.40	18.85	0.19	0.3	0.059	0.88	16.0	6.3	1.40	332	37.2	3.31	7.3	26.8	1050
M677175		3.58	18.05	0.19	0.3	0.195	0.88	17.4	5.8	1.43	431	17.10	2.84	8.5	16.9	940
M677176		3.09	18.60	0.17	0.2	0.084	0.96	17.8	6.0	1.33	304	30.6	3.27	8.2	17.7	1080
M677177		3.26	19.50	0.16	0.2	0.063	1.03	14.8	5.4	1.22	282	22.0	3.49	8.0	19.0	1130
M677178		3.46	22.8	0.19	0.2	0.089	1.11	12.4	6.5	1.53	253	36.3	3.43	5.7	25.9	1370
M677179		0.46	0.42	0.19	<0.1	0.005	0.03	0.7	1.2	12.60	218	0.24	0.02	0.5	0.4	180
M677180		4.26	21.9	0.19	0.2	0.047	1.20	13.2	5.4	1.91	390	17.15	3.14	8.2	21.7	1370



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Project: Mint

CERTIFICATE OF ANALYSIS WH12192091

Sample Description	Method Analyte Units LOR	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61
		Pb	Pb	Fe	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Ti
		ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
		0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.02
M677145		15.7	33.0	0.035	2.83	0.66	10.5	3	1.4	484	0.55	0.31	1.5	0.331	0.35
M677146		19.3	31.4	0.015	2.35	0.63	6.9	3	1.3	504	0.68	0.25	2.2	0.276	0.34
M677147		17.4	34.1	0.008	2.15	0.45	6.9	3	1.3	391	0.24	0.39	0.9	0.194	0.30
M677148		21.1	38.5	0.005	1.86	0.45	6.6	3	1.2	349	0.20	0.30	0.7	0.167	0.31
M677149		13.0	28.8	0.009	1.82	0.57	6.8	3	1.3	447	0.39	0.11	1.7	0.219	0.29
M677150		35.1	136.0	0.004	1.35	31.2	7.8	8	105.5	248	0.70	0.90	10.3	0.238	1.39
M677151		11.1	32.2	0.013	1.79	0.65	7.1	3	1.3	467	0.50	0.33	2.1	0.251	0.30
M677152		16.0	27.4	0.010	1.74	0.67	6.9	3	1.0	490	0.47	0.23	1.9	0.245	0.29
M677153		39.4	30.0	0.011	2.41	4.49	6.7	3	1.1	466	0.38	0.31	1.7	0.204	0.35
M677154		10.7	33.0	0.013	1.66	0.58	7.4	3	1.1	513	0.41	0.12	2.0	0.243	0.29
M677155		11.3	36.5	0.005	1.52	0.80	8.0	3	1.1	466	0.47	0.20	1.9	0.289	0.35
M677156		7.6	37.7	0.007	2.05	0.49	8.0	3	1.1	464	0.44	0.16	1.9	0.285	0.39
M677157		2.9	1.4	<0.002	0.01	0.47	0.2	1	0.3	43.5	<0.05	<0.05	<0.2	<0.005	<0.02
M677158		10.5	30.1	0.055	2.47	0.56	7.1	3	1.1	473	0.44	0.18	1.9	0.239	0.30
M677159		11.5	37.9	0.026	2.45	0.70	6.9	3	1.5	504	0.60	0.40	2.1	0.257	0.38
M677160		16.4	36.8	0.012	2.78	0.77	7.8	3	1.2	441	0.42	0.38	1.9	0.251	0.38
M677161		11.5	26.5	0.012	2.17	0.71	9.4	3	1.2	519	0.49	0.32	1.9	0.313	0.31
M677162		11.6	28.2	0.012	2.24	0.74	9.7	3	1.2	533	0.50	0.34	2.1	0.325	0.33
M677163		15.2	30.5	0.011	2.84	0.88	9.9	4	1.3	464	0.47	0.68	2.1	0.303	0.31
M677164		9.3	25.3	0.012	1.86	0.51	8.4	3	1.1	508	0.44	0.42	2.1	0.279	0.28
M677165		15.2	33.8	0.003	1.83	0.53	8.2	3	1.1	506	0.43	0.42	1.8	0.276	0.37
M677166		7.3	29.3	0.008	1.78	0.50	7.2	3	1.2	452	0.34	0.28	1.8	0.222	0.30
M677167		10.0	33.3	0.003	1.48	1.82	3.1	2	0.9	424	1.01	0.20	5.0	0.118	0.34
M677168		33.2	126.0	0.004	1.26	30.0	7.6	8	100.5	231	0.64	0.83	10.0	0.225	1.31
M677169		6.2	44.0	0.002	2.11	0.52	2.8	3	1.2	353	0.81	0.23	5.2	0.089	0.39
M677170		8.2	50.1	0.002	1.99	0.60	2.9	3	1.1	283	0.96	0.31	5.3	0.112	0.49
M677171		9.5	45.0	0.021	1.62	7.80	2.8	3	1.1	306	1.04	0.26	5.2	0.115	0.45
M677172		17.4	39.4	0.055	1.33	5.49	2.8	3	1.0	375	1.15	0.19	4.9	0.133	0.44
M677173		16.0	36.8	0.041	1.50	7.87	2.8	3	1.0	380	1.14	0.19	4.8	0.131	0.43
M677174		4.3	28.4	0.039	1.49	0.76	9.9	3	1.1	442	0.49	0.24	1.7	0.308	0.33
M677175		8.2	30.8	0.020	2.67	0.88	7.0	3	1.3	395	0.57	0.92	1.7	0.279	0.37
M677176		4.4	26.3	0.043	1.41	0.66	9.4	3	1.1	472	0.54	0.33	1.5	0.359	0.36
M677177		5.3	24.7	0.027	1.61	0.58	9.1	2	0.9	496	0.51	0.42	1.5	0.339	0.36
M677178		10.1	27.9	0.047	2.49	1.46	15.0	3	1.7	506	0.36	0.57	1.4	0.461	0.40
M677179		1.6	2.0	<0.002	0.01	0.30	0.4	1	<0.2	44.8	<0.05	<0.05	0.2	<0.005	<0.02
M677180		4.6	25.5	0.020	0.66	1.19	14.7	2	1.5	581	0.49	0.10	1.2	0.581	0.43



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CERTIFICATE OF ANALYSIS WH12192091

Sample Description	Method Analyte Units LOR	ME- MS61 V ppm 1	ME- MS61 W ppm 0.1	ME- MS61 Y ppm 0.1	ME- MS61 Zn ppm 2	ME- MS61 Zr ppm 0.5
M677145		88	1.6	10.0	81	7.0
M677146		66	1.3	12.3	72	10.7
M677147		57	1.8	6.5	70	5.5
M677148		50	1.7	5.8	68	5.9
M677149		62	1.5	7.4	55	8.1
M677150		55	36.4	30.6	171	59.6
M677151		64	1.8	8.9	58	7.4
M677152		62	1.3	9.2	90	6.3
M677153		60	1.3	9.5	94	5.2
M677154		68	1.1	8.8	48	5.8
M677155		75	1.1	9.5	62	6.3
M677156		76	1.3	8.8	53	6.7
M677157		3	0.1	0.8	19	<0.5
M677158		72	1.2	9.4	50	7.7
M677159		67	2.2	11.8	55	11.1
M677160		72	2.2	10.5	76	6.5
M677161		85	1.7	7.6	71	6.6
M677162		88	1.7	7.9	73	6.8
M677163		84	3.8	11.2	86	7.7
M677164		76	2.0	7.3	49	6.5
M677165		73	2.1	8.3	73	7.0
M677166		64	2.1	8.7	45	6.9
M677167		23	1.5	7.1	39	11.9
M677168		53	35.2	28.5	159	54.3
M677169		22	2.3	6.2	18	12.4
M677170		23	2.5	7.3	30	13.2
M677171		22	2.4	6.8	31	12.0
M677172		22	1.8	6.8	55	11.0
M677173		23	1.7	6.6	59	11.3
M677174		80	1.1	9.6	42	7.5
M677175		61	2.5	10.3	51	6.1
M677176		84	1.3	9.4	43	5.7
M677177		86	1.2	9.0	39	6.6
M677178		134	3.4	11.9	46	6.0
M677179		1	0.1	1.1	17	<0.5
M677180		145	1.0	14.9	55	6.5



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Project: Mint

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Finalized Date: 3- SEP- 2012
Account: RANSIL

CERTIFICATE OF ANALYSIS WH12192091

Method	CERTIFICATE COMMENTS
ME- MS61 ME- MS61	Interference: Ca> 10%on ICP- MS As,ICP- AES results shown. REE's may not be totally soluble in this method.



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CERTIFICATE WH12193366

Project: Mint

P.O. No.: Batch 6

This report is for 36 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 18- AUG- 2012.

The following have access to data associated with this certificate:

MATT DUMALA

JOAN MARIACHER

HEATHER SMITH

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/ o BarCode
CRU- QC	Crushing QC Test
PUL- QC	Pulverizing QC Test
CRU- 31	Fine crushing - 70%<2mm
SPL- 21	Split sample - riffle splitter
PUL- 31	Pulverize split to 85%<75 um
LOG- 24	Pulp Login - Rcd w/ o Barcode
LOG- 22d	Sample login - Rcd w/ o BarCode dup
SPL- 21d	Split sample - duplicate
PUL- 31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

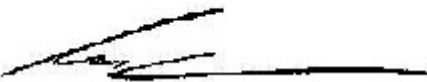
ALS CODE	DESCRIPTION	INSTRUMENT
Au- AA24	Au 50g FA AA finish	AAS
ME- MS61	48 element four acid ICP- MS	
ME- OG62	Ore Grade Elements - Four Acid	ICP- AES
Cu- OG62	Ore Grade Cu - Four Acid	VARIABLE

To: **SILVER RANGE RESOURCES LTD.**
ATTN: JOAN MARIACHER
C/ O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
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This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:


Colin Ramshaw, Vancouver Laboratory Manager



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Project: Mint

CERTIFICATE OF ANALYSIS WH12193366

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	Au- AA24 Au ppm	ME- MS61 Ag ppm	ME- MS61 Al %	ME- MS61 As ppm	ME- MS61 Ba ppm	ME- MS61 Be ppm	ME- MS61 Bi ppm	ME- MS61 Ca %	ME- MS61 Cd ppm	ME- MS61 Ce ppm	ME- MS61 Co ppm	ME- MS61 Cr ppm	ME- MS61 Cs ppm	ME- MS61 Cu ppm
		0.02	0.005	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
M677181		6.68	0.035	0.56	7.75	23.4	430	1.17	0.58	2.24	0.23	38.3	13.0	16	1.43	475
M677182		6.70	0.047	0.70	7.96	14.1	440	1.20	0.72	2.35	0.81	41.1	27.5	11	1.03	535
M677183		9.08	0.039	0.61	8.53	10.9	340	1.33	0.44	2.82	0.21	33.0	18.2	9	1.07	414
M677184		7.97	0.052	0.47	8.34	9.5	330	1.16	0.49	2.41	0.11	34.6	11.9	13	1.04	393
M677185		8.21	0.036	0.33	7.76	6.9	330	1.16	0.60	2.03	0.12	37.4	10.5	17	0.86	177.5
M677186		<0.02	0.033	0.35	7.89	10.5	340	1.17	0.59	2.11	0.13	38.5	11.7	17	0.86	181.0
M677187		8.20	0.044	0.38	7.98	7.8	390	1.25	0.59	2.25	0.17	38.1	13.8	16	0.79	270
M677188		4.59	0.032	0.44	7.91	4.2	350	1.15	0.51	2.13	0.29	37.0	12.3	13	0.99	357
M677189		3.05	0.041	0.56	7.85	6.5	310	1.19	0.69	2.53	0.16	36.1	16.4	14	1.36	236
M677190		4.41	0.035	0.38	7.63	5.1	340	0.99	0.72	2.41	0.13	35.8	15.5	15	1.26	275
M677191		3.56	0.074	0.33	7.76	7.2	370	1.05	1.09	2.46	0.19	33.8	16.2	15	1.78	169.5
M677192		6.76	0.054	0.28	7.44	5.1	300	1.07	0.84	2.10	0.06	37.0	11.7	16	1.23	203
M677193		0.10	0.586	8.10	5.14	8720	1290	1.79	215	13.85	1.3	464	81.2	43	11.50	3700
M677194		3.42	0.049	0.24	7.67	8.3	380	0.97	1.36	2.02	0.08	36.0	12.5	15	1.58	216
M677195		5.32	0.086	0.27	7.78	5.8	380	1.06	1.38	1.66	0.06	38.6	10.5	16	1.49	350
M677196		5.18	0.160	0.90	8.19	11.7	460	0.87	1.34	1.84	0.11	38.4	21.8	15	1.96	518
M677197		5.43	<0.005	0.01	0.07	<5	20	0.05	0.02	21.6	0.06	1.01	1.2	<1	0.11	2.9
M677198		7.95	0.089	0.49	7.62	12.3	430	0.94	0.93	2.32	0.19	27.1	17.1	17	1.40	515
M677199		3.93	0.103	0.45	7.60	7.2	390	0.91	0.73	2.38	0.06	32.8	18.0	20	1.18	596
M677200		8.32	0.103	0.59	7.50	6.9	450	0.87	0.72	2.23	0.08	28.1	35.8	16	1.15	818
M677201		8.32	0.031	0.21	7.69	4.3	410	0.88	0.79	2.02	0.04	27.1	14.7	17	1.19	253
M677202		0.10	1.240	22.1	4.12	9150	590	1.36	217	12.95	2.87	246	61.8	49	5.77	>10000
M677203		6.62	0.039	0.40	7.81	6.7	460	1.04	0.91	1.78	0.04	33.4	33.4	11	1.35	437
M677204		5.34	0.029	0.23	7.47	5.2	510	0.91	0.81	2.12	0.08	31.1	21.4	14	1.67	246
M677205		4.55	0.042	0.59	7.41	12.0	610	0.91	0.95	1.96	0.07	32.6	19.9	13	2.15	179.0
M677206		6.45	0.032	0.21	7.78	3.7	410	0.90	0.44	2.07	0.05	32.6	18.0	15	1.04	249
M677207		3.67	0.040	0.25	7.72	3.9	430	1.03	0.50	2.05	0.04	34.3	18.0	15	1.10	351
M677208		4.81	0.055	0.20	8.14	9.3	530	0.93	1.36	1.29	0.03	36.2	24.9	19	1.25	146.5
M677209		5.01	0.074	0.53	7.98	4.0	400	0.97	0.64	2.02	0.04	34.4	25.3	22	1.33	704
M677210		6.82	0.043	0.29	8.18	6.0	740	1.07	0.92	1.85	0.14	41.8	15.7	19	1.80	179.5
M677211		4.34	0.030	0.22	7.82	5.1	850	1.15	0.87	1.64	0.21	33.5	2.5	11	2.00	175.5
M677212		2.61	<0.005	0.01	0.08	<5	20	0.06	0.02	20.7	0.07	1.45	1.2	<1	0.34	4.6
M677213		7.05	0.033	0.21	7.90	11.2	400	1.18	0.92	1.30	0.13	33.0	13.0	10	2.31	68.6
M677214		7.28	0.015	0.07	8.57	33.7	660	1.04	0.08	5.71	0.12	39.5	23.2	10	3.68	51.5
M677215		5.52	0.068	0.42	8.35	20.0	880	1.21	0.74	1.92	0.13	36.3	10.6	18	2.77	538
M677216		3.45	0.068	0.37	8.10	12.4	340	1.15	0.81	2.21	0.08	34.5	14.5	29	1.51	496



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Finalized Date: 4- SEP- 2012
Account: RANSIL

Project: Mint

CERTIFICATE OF ANALYSIS WH12193366

Sample Description	Method Analyte Units LOR	ME- MS61 Fe %	ME- MS61 Ga ppm	ME- MS61 Ge ppm	ME- MS61 Hf ppm	ME- MS61 In ppm	ME- MS61 K %	ME- MS61 La ppm	ME- MS61 Li ppm	ME- MS61 Mg %	ME- MS61 Mn ppm	ME- MS61 Mo ppm	ME- MS61 Na %	ME- MS61 Nb ppm	ME- MS61 Ni ppm	ME- MS61 P ppm
		0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
M677181		3.36	18.85	0.09	0.2	0.043	1.15	18.8	5.5	1.18	220	10.25	3.29	6.1	18.8	1100
M677182		4.74	17.70	0.11	0.2	0.059	1.23	18.9	5.4	1.39	293	20.7	3.25	3.7	22.9	1120
M677183		3.85	21.6	0.08	0.2	0.046	1.25	15.0	5.7	1.53	263	17.15	3.48	5.8	22.9	1390
M677184		3.41	19.80	0.07	0.2	0.050	1.25	16.0	5.6	1.35	267	29.2	3.62	6.0	22.2	1330
M677185		2.99	18.05	0.08	0.2	0.039	0.99	17.8	5.1	1.16	222	15.60	3.62	5.6	17.2	1100
M677186		3.14	18.20	0.08	0.2	0.039	1.05	17.0	5.4	1.21	229	15.65	3.80	5.6	17.8	1140
M677187		3.16	19.40	0.08	0.2	0.041	1.12	17.9	5.7	1.26	223	16.90	3.60	6.0	19.8	1220
M677188		3.64	18.40	0.08	0.2	0.036	1.10	17.0	6.2	1.15	215	35.2	3.43	3.9	20.1	1220
M677189		3.58	18.75	0.08	0.2	0.056	1.13	17.4	6.5	1.12	415	36.6	3.43	4.8	19.5	1190
M677190		3.11	16.90	0.08	0.2	0.036	1.10	16.2	5.4	1.04	219	21.7	3.19	3.6	18.0	1070
M677191		3.76	17.30	0.08	0.2	0.035	1.31	15.9	5.3	0.93	203	8.33	2.97	3.1	17.3	1100
M677192		2.98	18.00	0.08	0.2	0.040	1.05	17.7	5.5	1.00	161	8.69	3.11	5.3	17.6	1100
M677193		9.60	20.9	0.34	1.9	2.02	2.04	275	42.9	1.45	2460	16.80	0.89	9.9	40.6	1010
M677194		3.74	17.10	0.09	0.2	0.033	1.56	18.3	4.6	1.16	193	9.73	2.64	4.6	18.0	1090
M677195		3.02	18.20	0.09	0.2	0.067	1.55	18.9	5.3	1.14	134	18.90	2.73	5.1	17.5	1110
M677196		4.62	18.10	0.10	0.2	0.047	2.01	19.8	4.2	1.13	177	34.2	2.48	3.0	18.4	1090
M677197		0.48	0.25	0.05	<0.1	<0.005	0.03	0.5	0.9	12.90	203	0.56	0.01	0.3	1.4	200
M677198		3.08	17.60	0.14	0.3	0.040	1.19	12.9	4.2	0.97	181	24.1	2.75	5.9	18.8	1110
M677199		3.16	18.55	0.14	0.2	0.036	0.98	15.2	4.8	1.11	165	11.60	2.87	4.8	22.3	1270
M677200		3.62	17.55	0.15	0.2	0.040	1.18	13.6	4.3	0.91	170	36.6	2.97	3.8	19.2	1080
M677201		2.72	17.55	0.13	0.2	0.028	0.94	13.2	4.4	0.86	131	11.25	3.03	5.4	16.3	1090
M677202		10.60	13.10	0.40	1.5	5.10	1.08	138.0	44.2	1.27	1740	13.35	1.12	7.3	67.3	770
M677203		2.74	16.40	0.12	0.2	0.039	1.41	17.0	4.9	1.16	171	23.3	3.14	4.1	19.4	1020
M677204		2.68	17.40	0.14	0.2	0.041	1.88	15.5	4.8	1.19	191	28.2	2.43	4.1	19.3	1000
M677205		2.97	16.75	0.16	0.3	0.036	2.19	16.7	4.6	1.09	340	8.22	1.93	4.5	19.3	870
M677206		2.37	17.40	0.14	0.3	0.017	0.94	16.3	4.7	0.91	137	9.58	3.22	5.1	18.1	1020
M677207		2.31	17.80	0.13	0.3	0.023	1.01	17.2	4.9	0.94	133	9.22	3.27	5.3	18.5	1040
M677208		3.56	17.10	0.15	0.2	0.029	1.96	18.6	4.4	0.97	100	10.10	2.20	4.0	22.0	1070
M677209		2.83	17.15	0.15	0.3	0.033	0.96	16.6	6.6	1.15	168	15.20	2.99	4.9	23.3	1100
M677210		3.16	17.90	0.17	0.3	0.032	1.49	21.5	8.6	0.84	216	6.59	2.35	4.6	19.6	980
M677211		2.51	14.75	0.10	0.7	0.030	1.79	16.7	10.0	0.80	281	1.93	2.27	4.1	12.4	590
M677212		0.47	0.28	0.10	<0.1	0.006	0.03	0.7	1.2	13.40	223	0.15	0.01	0.3	2.5	170
M677213		3.29	16.80	0.18	0.6	0.041	2.10	18.6	8.1	0.68	197	1.51	1.96	4.8	17.5	550
M677214		4.18	19.35	0.21	2.5	0.047	0.93	18.4	11.5	1.08	743	0.98	2.48	7.3	19.3	1390
M677215		2.32	19.35	0.17	0.6	0.034	1.63	19.9	8.7	0.86	232	4.66	2.72	5.0	20.2	790
M677216		2.97	18.40	0.17	0.3	0.027	0.80	16.5	9.0	1.32	166	13.80	3.39	5.5	25.1	1230



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Project: Mint

CERTIFICATE OF ANALYSIS WH12193366

Sample Description	Method Analyte Units LOR	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61
		Pb	Pb	Fe	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	U
		ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
		0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.1
M677181		14.2	28.7	0.011	1.97	1.04	7.0	2	1.5	503	0.43	0.27	1.7	0.243	0.4
M677182		49.5	30.5	0.018	3.71	10.05	9.0	3	1.8	497	0.24	0.42	1.5	0.248	0.8
M677183		13.7	26.1	0.019	1.97	3.60	10.6	2	2.0	571	0.40	0.24	1.3	0.407	0.4
M677184		8.0	30.8	0.033	1.26	0.56	7.7	1	1.6	511	0.40	0.26	1.6	0.354	0.4
M677185		14.6	27.0	0.018	1.58	4.35	6.5	1	1.3	462	0.38	0.31	1.7	0.236	0.4
M677186		11.0	25.7	0.018	1.70	2.62	6.7	1	1.3	482	0.39	0.28	1.7	0.246	0.4
M677187		9.7	27.0	0.019	1.84	0.51	7.4	1	1.2	520	0.40	0.37	1.6	0.275	0.4
M677188		15.0	26.8	0.049	2.53	2.61	7.6	2	1.4	492	0.29	0.33	1.5	0.224	0.4
M677189		11.9	25.4	0.066	2.18	2.85	6.9	1	1.3	511	0.36	0.38	1.3	0.277	0.3
M677190		7.0	25.1	0.031	2.40	0.53	6.2	2	1.1	456	0.28	0.30	1.5	0.189	0.4
M677191		14.2	30.1	0.008	3.27	2.75	6.4	2	1.3	442	0.26	0.46	1.6	0.181	0.4
M677192		7.0	23.1	0.011	1.97	1.58	6.4	1	1.3	494	0.38	0.34	1.6	0.237	0.4
M677193		37.8	133.5	0.004	1.37	37.1	8.6	6	122.0	260	0.67	1.05	11.4	0.246	13.1
M677194		7.0	42.6	0.008	3.47	0.79	6.4	3	1.5	394	0.33	0.42	1.6	0.187	0.4
M677195		7.7	41.0	0.028	2.81	1.82	6.3	2	1.7	416	0.39	0.44	1.7	0.216	0.5
M677196		11.8	48.6	0.060	4.55	1.32	6.3	4	2.4	328	0.23	1.03	1.7	0.158	0.5
M677197		1.5	1.0	<0.002	0.04	0.05	0.2	1	<0.2	45.4	<0.05	<0.05	0.2	<0.005	0.8
M677198		8.8	27.1	0.033	2.22	1.41	6.6	3	1.3	486	0.41	0.40	1.4	0.213	0.4
M677199		4.6	21.5	0.019	2.58	1.08	8.5	3	1.3	504	0.33	0.31	1.6	0.225	0.5
M677200		5.3	28.7	0.034	3.42	0.57	6.7	4	1.4	466	0.26	0.39	1.6	0.181	0.4
M677201		5.1	22.1	0.015	2.38	1.27	5.9	3	1.0	519	0.37	0.34	1.6	0.206	0.4
M677202		29.7	65.2	0.007	2.34	32.9	6.5	12	94.2	236	0.56	1.70	8.8	0.193	10.2
M677203		5.1	39.1	0.030	2.53	1.18	6.6	4	1.7	393	0.33	0.31	2.1	0.189	0.6
M677204		5.6	48.3	0.060	2.56	0.53	6.3	4	1.8	325	0.33	0.32	1.8	0.181	0.4
M677205		7.2	63.7	0.017	2.90	11.45	6.1	3	1.7	228	0.38	0.46	2.0	0.169	0.6
M677206		4.7	25.6	0.015	2.05	0.93	6.4	2	1.1	512	0.42	0.26	1.9	0.204	0.5
M677207		4.1	28.5	0.013	2.06	0.41	6.5	3	1.3	511	0.44	0.25	1.9	0.213	0.5
M677208		5.0	50.7	0.012	3.67	1.06	7.3	4	1.7	268	0.33	0.72	2.2	0.172	0.6
M677209		6.2	28.1	0.017	2.60	0.83	7.8	3	1.2	480	0.39	0.30	1.8	0.204	0.6
M677210		12.0	39.7	0.005	3.12	1.03	7.0	3	1.2	389	0.37	0.44	2.3	0.167	0.7
M677211		11.2	47.1	<0.002	2.39	1.12	4.4	2	1.0	333	0.43	0.41	3.3	0.129	1.0
M677212		1.3	2.4	<0.002	<0.01	0.09	0.3	1	<0.2	42.5	<0.05	<0.05	<0.2	<0.005	0.4
M677213		10.7	56.9	<0.002	3.24	0.98	5.5	3	1.1	297	0.44	0.54	3.4	0.124	1.0
M677214		8.3	14.2	<0.002	0.95	2.91	15.6	2	0.8	867	0.45	0.10	3.0	0.582	1.0
M677215		6.6	40.8	0.007	2.14	2.40	6.7	2	1.0	447	0.43	0.42	2.9	0.155	0.8
M677216		4.8	19.0	0.023	2.71	1.16	8.8	3	1.2	546	0.42	0.35	1.9	0.238	0.5



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Project: Mint

CERTIFICATE OF ANALYSIS WH12193366

Sample Description	Method Analyte Units LOR	ME- MS61 V ppm 1	ME- MS61 W ppm 0.1	ME- MS61 Y ppm 0.1	ME- MS61 Zn ppm 2	ME- MS61 Zr ppm 0.5	Cu- OG62 Cu % 0.001
M677181		68	1.6	8.6	49	5.8	
M677182		85	1.9	12.6	87	5.0	
M677183		110	1.7	11.6	52	6.1	
M677184		90	1.1	9.9	48	5.5	
M677185		66	1.0	8.5	42	6.2	
M677186		70	1.0	8.5	43	6.4	
M677187		77	1.0	9.4	49	6.3	
M677188		77	1.0	9.4	52	4.7	
M677189		80	1.1	8.9	51	5.3	
M677190		66	1.5	8.2	36	4.7	
M677191		65	2.0	7.8	34	4.6	
M677192		69	2.2	7.4	30	5.2	
M677193		56	38.3	32.8	180	144.5	
M677194		64	3.2	8.9	28	5.2	
M677195		67	3.8	8.1	22	6.7	
M677196		69	4.6	8.0	25	4.9	
M677197		3	0.1	0.7	16	<0.5	
M677198		70	2.2	6.5	39	9.6	
M677199		82	1.7	7.1	23	8.1	
M677200		71	3.2	6.4	23	5.9	
M677201		65	1.6	6.1	19	7.9	
M677202		46	276	27.7	300	52.7	1.280
M677203		66	2.5	9.1	21	9.0	
M677204		63	2.1	8.4	24	8.7	
M677205		57	2.4	7.8	20	10.2	
M677206		62	1.9	7.2	14	9.6	
M677207		62	2.0	7.5	14	10.1	
M677208		65	3.2	8.5	12	8.2	
M677209		70	2.5	8.5	18	9.4	
M677210		62	2.9	9.2	30	11.3	
M677211		42	2.6	7.3	39	21.0	
M677212		3	0.1	0.9	18	<0.5	
M677213		41	2.3	8.4	25	23.6	
M677214		158	0.4	14.8	66	108.0	
M677215		54	1.9	9.2	32	22.1	
M677216		78	2.8	9.0	22	12.4	



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CERTIFICATE OF ANALYSIS WH12193366

Method	CERTIFICATE COMMENTS
ME- MS61	Interference: Ca> 10%on ICP- MS As,ICP- AES results shown.
ME- MS61	REE's may not be totally soluble in this method.



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CERTIFICATE WH12194657

Project: Mint

P.O. No.: Batch 7

This report is for 23 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 20- AUG- 2012.

The following have access to data associated with this certificate:

MATT DUMALA

JOAN MARIACHER

HEATHER SMITH

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/ o BarCode
CRU- QC	Crushing QC Test
PUL- QC	Pulverizing QC Test
CRU- 31	Fine crushing - 70%<2mm
SPL- 21	Split sample - riffle splitter
PUL- 31	Pulverize split to 85%<75 um
LOG- 24	Pulp Login - Rcd w/ o Barcode
LOG- 22d	Sample login - Rcd w/ o BarCode dup
SPL- 21d	Split sample - duplicate
PUL- 31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

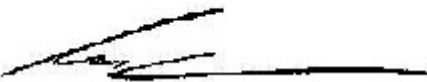
ALS CODE	DESCRIPTION	INSTRUMENT
Au- AA24	Au 50g FA AA finish	AAS
ME- MS61	48 element four acid ICP- MS	
ME- OG62	Ore Grade Elements - Four Acid	ICP- AES
Cu- OG62	Ore Grade Cu - Four Acid	VARIABLE

To: **SILVER RANGE RESOURCES LTD.**
ATTN: JOAN MARIACHER
C/ O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
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This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:


Colin Ramshaw, Vancouver Laboratory Manager



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CERTIFICATE OF ANALYSIS WH12194657

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	Au- AA24 Au ppm	ME- MS61 Ag ppm	ME- MS61 Al %	ME- MS61 As ppm	ME- MS61 Ba ppm	ME- MS61 Be ppm	ME- MS61 Bi ppm	ME- MS61 Ca %	ME- MS61 Cd ppm	ME- MS61 Ce ppm	ME- MS61 Co ppm	ME- MS61 Cr ppm	ME- MS61 Cs ppm	ME- MS61 Cu ppm
		0.02	0.005	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
M677217		4.33	0.034	0.12	7.75	7.1	1080	1.13	0.53	1.50	0.03	40.0	8.5	12	1.84	83.2
M677218		4.45	0.025	0.23	7.50	7.1	1000	1.14	0.71	0.85	0.12	38.5	9.4	12	1.68	96.5
M677219		5.98	0.035	0.19	7.50	5.3	650	1.12	0.89	0.96	0.06	35.6	8.1	11	1.91	111.0
M677220		2.74	<0.005	0.01	0.13	<5	40	0.07	<0.01	20.0	0.06	1.36	0.8	<1	0.44	1.4
M677221		8.30	0.020	0.20	7.31	3.0	920	1.08	0.63	1.39	0.07	31.5	4.0	11	1.67	105.0
M677222		4.32	0.019	0.29	7.28	5.0	630	1.12	0.67	1.60	0.16	30.1	2.9	11	1.87	76.7
M677223		3.89	0.074	0.60	7.84	5.8	460	1.11	0.56	1.90	0.12	49.7	12.7	21	2.52	633
M677224		4.32	0.147	1.33	7.49	51.2	730	0.88	0.60	1.84	0.56	40.4	13.7	22	5.45	291
M677225		0.09	1.180	22.9	4.10	8840	600	1.57	234	13.20	3.03	226	71.2	46	5.36	>10000
M677226		3.72	0.052	0.44	7.48	38.3	520	0.90	0.82	2.12	0.23	38.6	29.2	25	1.44	210
M677227		4.60	0.048	0.59	7.88	23.0	480	0.93	0.83	1.38	0.16	44.4	19.8	18	1.54	483
M677228		2.69	0.039	0.34	7.82	33.0	550	0.88	0.85	0.96	0.15	40.2	14.7	16	1.82	140.5
M677229		3.09	0.033	0.79	7.44	23.7	570	0.94	0.81	2.01	4.21	34.7	12.0	15	3.22	284
M677230		5.56	0.072	0.60	7.11	22.7	380	1.00	1.72	2.28	0.38	27.7	11.3	11	2.92	188.0
M677231		3.70	0.151	0.86	7.09	27.5	370	0.90	2.26	2.12	0.06	27.6	9.4	12	3.66	343
M677232		2.00	0.134	0.52	7.03	24.5	480	0.85	2.37	2.09	0.08	27.2	10.0	12	3.50	322
M677233		3.18	0.121	0.39	7.00	28.2	500	0.83	1.21	2.02	0.05	27.1	9.3	12	4.02	224
M677234		7.12	0.118	0.40	6.87	18.7	580	0.90	1.61	2.08	0.05	25.4	8.9	12	3.67	271
M677235		7.61	0.115	0.61	7.04	20.5	640	0.90	1.71	2.01	0.19	27.7	8.9	13	4.31	401
M677236		2.71	0.168	0.79	7.14	32.7	660	0.88	1.22	1.38	2.08	29.4	8.2	13	2.93	209
M677237		6.12	0.121	0.58	7.18	18.9	790	0.88	0.90	1.79	0.30	31.1	8.6	12	3.50	232
M677238		<0.02	0.127	0.57	7.15	19.5	820	0.82	0.90	1.80	0.26	31.4	8.7	13	3.49	242
M677239		7.63	0.043	0.34	7.12	13.3	720	0.89	1.59	2.07	0.14	28.3	10.2	18	3.90	237



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CERTIFICATE OF ANALYSIS WH12194657

Sample Description	Method Analyte Units LOR	ME- MS61 Fe %	ME- MS61 Ga ppm	ME- MS61 Ge ppm	ME- MS61 Hf ppm	ME- MS61 In ppm	ME- MS61 K %	ME- MS61 La ppm	ME- MS61 Li ppm	ME- MS61 Mg %	ME- MS61 Mn ppm	ME- MS61 Mo ppm	ME- MS61 Na %	ME- MS61 Nb ppm	ME- MS61 Ni ppm	ME- MS61 P ppm
		0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
M677217		1.94	16.55	0.12	0.8	0.035	1.95	20.9	6.8	0.64	137	2.46	2.48	4.4	14.7	630
M677218		2.32	16.10	0.13	0.7	0.062	2.23	21.5	6.1	0.64	137	3.65	2.09	4.1	14.5	580
M677219		2.75	15.50	0.12	0.8	0.065	2.05	19.0	5.7	0.65	151	1.90	2.16	4.5	14.2	590
M677220		0.45	0.36	0.12	<0.1	0.005	0.06	0.6	1.8	12.80	196	0.22	0.01	0.2	2.6	190
M677221		2.48	16.15	0.14	0.7	0.035	1.75	16.6	7.6	0.74	221	1.33	2.43	4.3	13.4	570
M677222		2.86	16.65	0.13	0.7	0.059	2.59	15.8	7.5	0.89	327	2.07	1.28	4.4	14.4	570
M677223		2.58	16.65	0.19	0.3	0.041	1.51	23.3	7.2	1.09	286	7.92	2.44	4.7	21.9	1120
M677224		2.68	17.00	0.16	0.3	0.024	1.75	18.5	13.9	0.91	488	5.18	1.94	4.9	24.0	1130
M677225		10.70	13.45	0.26	1.5	4.66	1.05	138.5	43.0	1.28	1760	14.15	1.12	7.2	74.0	790
M677226		4.64	18.00	0.13	0.2	0.036	1.80	17.4	8.0	1.16	348	5.45	2.24	3.2	29.3	1200
M677227		3.14	17.40	0.14	0.2	0.046	1.66	22.0	7.9	0.85	188	8.76	2.36	4.0	21.4	1130
M677228		3.80	18.40	0.14	0.2	0.050	2.54	19.6	8.6	0.68	159	19.20	1.83	3.3	23.7	1090
M677229		3.30	17.35	0.13	0.2	0.062	2.47	15.9	8.3	0.95	454	19.80	1.50	3.6	24.7	1030
M677230		4.28	16.50	0.14	0.7	0.030	2.77	12.7	6.4	1.17	475	2.29	0.65	4.5	15.1	870
M677231		3.73	16.70	0.14	0.8	0.037	2.47	13.1	6.9	1.06	337	3.84	0.98	4.8	12.5	800
M677232		3.82	16.65	0.11	0.8	0.030	2.47	13.5	7.1	1.07	319	4.34	0.87	4.7	12.9	780
M677233		3.42	16.55	0.13	0.9	0.026	2.47	13.2	6.2	1.04	335	2.57	0.97	5.0	12.8	740
M677234		3.00	16.20	0.11	0.9	0.024	2.37	12.6	5.2	1.01	331	1.88	1.28	5.3	12.1	740
M677235		3.04	16.85	0.12	1.0	0.036	2.84	13.5	5.7	1.05	601	2.24	0.73	5.4	13.9	690
M677236		3.20	16.80	0.13	0.9	0.048	3.24	15.1	6.7	0.89	751	2.16	0.19	4.9	14.7	660
M677237		3.50	16.40	0.14	1.0	0.043	3.14	15.7	5.4	1.10	423	2.51	0.35	4.2	15.0	700
M677238		3.50	16.70	0.15	0.9	0.036	3.15	15.9	5.4	1.10	427	2.60	0.35	4.4	15.7	680
M677239		3.04	16.85	0.13	0.8	0.022	2.23	13.9	7.2	1.01	308	6.72	1.43	5.5	23.1	720



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CERTIFICATE OF ANALYSIS WH12194657

Sample Description	Method Analyte Units LOR	ME- MS61 Pb ppm 0.5	ME- MS61 Pb ppm 0.1	ME- MS61 Fe ppm 0.002	ME- MS61 S % 0.01	ME- MS61 Sb ppm 0.05	ME- MS61 Sc ppm 0.1	ME- MS61 Se ppm 1	ME- MS61 Sn ppm 0.2	ME- MS61 Sr ppm 0.2	ME- MS61 Ta ppm 0.05	ME- MS61 Te ppm 0.05	ME- MS61 Th ppm 0.2	ME- MS61 Ti % 0.005	ME- MS61 Tl ppm 0.02	ME- MS61 U ppm 0.1
M677217		5.6	42.4	<0.002	1.99	1.13	4.3	2	0.9	349	0.41	0.39	3.1	0.116	0.54	0.9
M677218		20.4	56.1	0.003	2.35	1.75	4.3	3	1.1	257	0.38	0.47	3.1	0.109	0.58	1.0
M677219		6.6	55.0	<0.002	2.89	1.17	4.3	2	0.9	294	0.41	0.56	3.0	0.112	0.62	0.9
M677220		1.4	3.2	0.002	0.01	0.10	0.3	2	0.2	42.7	<0.05	<0.05	<0.2	0.005	0.03	0.5
M677221		7.7	46.5	<0.002	2.51	0.76	4.1	3	0.9	333	0.39	0.54	2.9	0.111	0.56	0.9
M677222		10.4	71.1	<0.002	2.68	1.94	4.3	2	1.1	171.5	0.40	0.55	2.7	0.115	0.75	0.9
M677223		8.1	43.2	0.008	2.42	1.70	7.3	3	1.5	336	0.37	0.36	1.8	0.221	0.49	0.5
M677224		49.3	57.4	0.007	2.43	31.0	7.1	3	1.2	273	0.38	0.37	1.7	0.217	0.62	0.4
M677225		28.4	63.3	0.007	2.51	30.5	6.1	12	84.2	239	0.54	1.55	7.6	0.194	0.93	8.7
M677226		17.0	45.5	0.006	4.82	3.26	7.3	6	1.4	307	0.25	0.80	1.4	0.167	0.51	0.4
M677227		15.0	52.5	0.011	3.13	3.08	6.9	2	1.6	316	0.30	0.56	2.0	0.190	0.50	0.6
M677228		12.9	77.7	0.007	4.00	1.79	6.7	3	1.7	181.0	0.26	0.65	1.9	0.162	0.58	0.5
M677229		75.2	65.2	0.011	3.20	6.14	6.0	3	1.5	207	0.29	0.48	1.7	0.164	0.74	0.4
M677230		50.1	61.9	0.002	4.17	6.94	6.9	4	1.7	128.0	0.38	1.20	1.9	0.205	0.90	0.8
M677231		10.8	63.3	<0.002	3.88	12.60	6.5	2	1.6	197.0	0.43	1.02	2.4	0.200	0.84	0.9
M677232		8.5	65.6	<0.002	3.95	8.77	6.6	3	1.6	180.5	0.40	1.10	2.4	0.195	0.81	0.9
M677233		7.9	75.1	<0.002	3.54	10.40	6.3	2	1.2	199.0	0.44	0.63	2.6	0.187	0.94	1.0
M677234		8.3	58.0	<0.002	3.09	7.23	5.8	2	1.2	264	0.48	0.85	2.4	0.199	0.83	0.9
M677235		15.0	74.8	0.002	3.07	3.77	6.0	3	1.4	143.0	0.47	1.05	2.8	0.185	1.01	1.1
M677236		39.0	92.7	0.002	3.31	8.90	6.0	3	2.2	52.4	0.44	0.64	3.3	0.175	0.91	1.3
M677237		25.4	93.3	<0.002	3.55	4.72	5.8	4	1.9	71.4	0.38	0.49	3.1	0.160	0.99	1.2
M677238		24.8	96.9	0.002	3.52	4.86	6.1	4	1.9	71.5	0.37	0.45	3.1	0.165	1.01	1.2
M677239		11.1	60.1	0.014	3.09	2.65	6.0	4	1.6	313	0.47	1.20	2.5	0.217	0.78	1.0



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Sample Description	Method Analyte Units LOR	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5	Cu-OG62 Cu % 0.001
M677217		41	2.3	8.4	9	24.6	
M677218		41	3.1	8.2	17	23.7	
M677219		42	2.6	8.4	12	22.4	
M677220		6	0.2	0.8	18	<0.5	
M677221		40	2.4	7.6	15	22.9	
M677222		42	3.2	8.6	39	18.8	
M677223		76	4.7	8.8	21	9.8	
M677224		73	3.3	8.2	73	9.3	
M677225		48	278	25.3	312	47.2	1.265
M677226		76	2.6	8.0	40	5.5	
M677227		70	3.8	8.2	23	6.1	
M677228		70	3.6	7.4	17	5.8	
M677229		64	3.7	7.9	565	6.0	
M677230		77	6.1	9.3	75	21.0	
M677231		70	5.7	8.8	18	25.8	
M677232		71	5.9	9.0	17	25.3	
M677233		64	4.0	8.7	14	30.7	
M677234		65	3.3	8.1	24	28.6	
M677235		61	5.4	8.2	39	29.1	
M677236		59	7.2	7.8	241	28.8	
M677237		60	7.5	8.7	38	27.6	
M677238		59	7.5	8.6	35	28.4	
M677239		64	8.6	7.7	33	26.8	



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Method	CERTIFICATE COMMENTS
ME- MS61 ME- MS61	Interference: Ca> 10%on ICP- MS As,ICP- AES results shown. REE's may not be totally soluble in this method.



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CERTIFICATE WH12195454

Project: Mint
P.O. No.: Batch 8
This report is for 36 Rock samples submitted to our lab in Whitehorse, YT, Canada on 20- AUG- 2012.

The following have access to data associated with this certificate:

MATT DUMALA

JOAN MARIACHER

HEATHER SMITH

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/ o BarCode
CRU- QC	Crushing QC Test
PUL- QC	Pulverizing QC Test
CRU- 31	Fine crushing - 70%< 2mm
SPL- 21	Split sample - riffle splitter
PUL- 31	Pulverize split to 85%< 75 um
LOG- 24	Pulp Login - Rcd w/ o Barcode
LOG- 22d	Sample login - Rcd w/ o BarCode dup
SPL- 21d	Split sample - duplicate
PUL- 31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au- AA24	Au 50g FA AA finish	AAS
ME- MS61	48 element four acid ICP- MS	
ME- OG62	Ore Grade Elements - Four Acid	ICP- AES
Cu- OG62	Ore Grade Cu - Four Acid	VARIABLE
Pb- OG62	Ore Grade Pb - Four Acid	VARIABLE
Zn- OG62	Ore Grade Zn - Four Acid	VARIABLE

To: **SILVER RANGE RESOURCES LTD.**
ATTN: JOAN MARIACHER
C/ O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
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This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager



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Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	Au- AA24 Au ppm	ME- MS61 Ag ppm	ME- MS61 Al %	ME- MS61 As ppm	ME- MS61 Ba ppm	ME- MS61 Be ppm	ME- MS61 Bi ppm	ME- MS61 Ca %	ME- MS61 Cd ppm	ME- MS61 Ce ppm	ME- MS61 Co ppm	ME- MS61 Cr ppm	ME- MS61 Cs ppm	ME- MS61 Cu ppm
		0.02	0.005	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
M677240		2.37	1.055	19.25	8.52	21.9	170	0.80	3.80	1.98	60.2	10.05	16.4	56	2.02	592
M677241		3.65	0.090	0.65	8.27	19.8	160	1.16	0.74	2.10	12.45	19.15	24.0	38	1.23	31.4
M677242		3.22	0.038	0.31	7.94	11.9	260	0.93	0.50	1.46	3.62	10.45	15.8	21	1.47	37.6
M677243		6.54	0.055	0.53	7.78	14.2	240	0.87	0.74	2.16	3.71	16.45	21.2	45	1.57	33.8
M677244		5.02	0.077	0.47	8.48	22.5	660	1.00	0.53	0.75	1.18	29.8	10.7	23	1.65	182.0
M677245		3.18	0.087	0.43	8.52	13.4	320	1.03	1.15	1.39	6.80	20.8	30.5	59	1.79	103.5
M677246		0.09	1.205	21.4	4.44	9870	640	1.45	288	14.35	2.88	260	69.5	53	5.83	>10000
M677247		5.42	0.030	0.33	8.17	11.0	310	0.90	1.21	1.27	4.53	20.2	18.9	51	1.70	30.0
M677248		3.57	0.017	0.34	7.86	13.0	340	0.91	1.17	1.11	2.73	23.1	14.4	36	1.94	20.3
M677249		5.57	0.037	0.33	7.98	20.7	560	0.90	0.79	1.62	1.93	32.5	21.7	53	1.52	19.9
M677250		3.85	<0.005	0.01	0.07	<5	20	0.08	0.03	21.2	0.07	1.19	1.1	<1	0.36	2.7
M677251		2.88	0.267	1.82	7.77	54.9	660	1.02	1.70	2.46	6.01	26.5	16.1	33	4.46	29.0
M677252		4.74	0.081	1.00	7.95	19.0	760	1.01	1.50	1.97	4.04	30.1	14.2	42	1.74	169.5
M677253		4.16	0.034	0.26	7.98	12.6	790	1.03	0.32	1.92	3.22	27.8	14.3	62	1.25	70.1
M677254		2.29	0.593	11.45	6.90	57.3	130	1.18	14.80	4.61	140.5	30.8	12.4	51	7.25	188.0
M677255		0.09	0.789	6.77	5.22	8540	1280	1.41	218	13.15	1.13	493	75.2	51	10.25	3610
M677256		4.14	0.997	14.30	8.96	42.0	270	1.13	5.23	3.14	21.8	25.2	15.9	67	5.13	43.4
M677257		3.51	1.680	15.85	7.61	58.4	210	1.28	3.24	3.53	11.95	25.6	13.7	61	6.75	26.9
M677258		4.35	0.126	1.41	7.83	34.1	180	0.87	2.20	1.71	1.96	34.9	15.4	57	1.76	22.6
M677259		5.05	0.036	0.31	7.17	17.2	530	0.81	0.64	2.01	0.76	23.4	15.5	56	1.24	28.3
M677260		5.62	0.056	0.52	7.27	20.1	770	0.95	1.10	1.68	1.71	27.5	16.5	58	1.51	104.0
M677261		4.29	0.226	1.55	6.85	25.2	1170	0.86	1.93	1.76	1.13	17.10	13.5	57	1.99	37.6
M677262		2.27	0.326	2.02	7.15	21.6	1130	0.94	1.66	1.71	1.18	17.75	11.6	59	2.04	30.4
M677263		6.92	0.074	0.59	7.21	20.8	750	0.89	1.05	2.31	1.90	26.1	16.0	63	1.21	34.4
M677264		8.12	0.133	0.92	7.29	42.3	1540	1.03	0.84	2.93	2.81	26.0	17.5	59	1.30	57.5
M677265		8.05	0.107	0.51	7.13	51.5	1690	0.92	0.55	3.17	0.98	27.3	18.0	77	1.18	71.6
M677266		2.20	0.315	2.78	7.43	68.5	930	0.97	1.86	1.70	0.31	19.95	16.5	57	3.11	138.5
M677267		5.21	0.149	1.14	7.76	46.5	590	0.71	2.65	1.47	0.45	32.5	25.9	131	1.17	131.5
M677268		<0.02	0.152	1.13	7.69	43.7	610	0.77	2.61	1.43	0.38	32.0	25.2	128	1.17	129.0
M677269		4.89	0.071	0.39	7.09	10.7	1010	0.96	0.67	1.79	1.53	13.80	8.9	26	2.02	68.7
M677270		5.61	0.058	0.38	7.40	8.9	1080	1.00	0.70	1.85	3.13	17.95	10.1	26	1.80	140.5
M677271		6.25	0.030	0.42	7.67	7.1	960	0.84	1.04	2.28	0.51	17.95	9.3	24	1.62	32.7
M677272		7.53	0.034	0.27	7.59	5.6	1030	0.96	0.77	2.37	0.39	17.30	7.5	27	1.48	45.8
M677273		2.87	<0.005	0.01	0.07	<5	20	0.05	0.03	21.0	0.06	1.01	0.6	<1	0.25	1.4
M677274		8.12	0.033	0.39	7.69	5.9	1020	0.92	0.59	2.43	0.89	18.10	6.5	26	1.29	61.3
M677275		7.84	0.031	0.37	7.85	8.0	970	0.90	0.31	2.27	0.68	18.70	7.4	28	1.36	99.9



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Sample Description	Method Analyte Units LOR	ME- MS61 Fe %	ME- MS61 Ga ppm	ME- MS61 Ge ppm	ME- MS61 Hf ppm	ME- MS61 In ppm	ME- MS61 K %	ME- MS61 La ppm	ME- MS61 Li ppm	ME- MS61 Mg %	ME- MS61 Mn ppm	ME- MS61 Mo ppm	ME- MS61 Na %	ME- MS61 Nb ppm	ME- MS61 Ni ppm	ME- MS61 P ppm
		0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
M677240		4.66	15.20	0.15	0.3	0.389	1.94	4.4	11.1	1.03	406	1.86	1.95	5.8	43.5	480
M677241		3.83	16.45	0.14	0.2	0.198	1.86	7.7	16.8	1.35	2100	1.31	2.18	5.8	78.6	1130
M677242		4.21	15.05	0.15	0.3	0.234	2.36	4.0	9.8	0.95	1190	2.45	1.63	5.3	41.1	970
M677243		5.12	15.95	0.17	0.2	0.213	2.17	7.1	10.9	1.64	1820	2.20	1.85	5.5	52.3	890
M677244		3.89	18.55	0.16	0.2	0.108	1.63	14.3	7.5	1.67	1000	1.14	3.15	6.5	31.4	1020
M677245		5.26	18.25	0.19	0.3	0.288	2.40	9.2	11.4	1.94	1220	2.00	1.77	5.5	81.2	980
M677246		11.55	14.00	0.46	1.7	5.09	1.15	157.5	41.2	1.34	1900	13.25	1.22	8.4	72.6	830
M677247		5.03	16.90	0.16	0.3	0.491	2.85	9.0	9.4	1.74	1560	0.74	1.00	5.4	67.9	920
M677248		5.12	16.65	0.17	0.3	0.363	2.64	10.7	8.3	1.64	936	0.86	1.33	6.0	34.5	960
M677249		4.31	17.70	0.15	0.4	0.202	1.71	16.2	11.3	2.00	1720	0.77	2.53	7.3	49.2	860
M677250		0.48	0.29	0.06	<0.1	0.006	0.03	0.6	1.2	13.20	206	0.25	0.01	0.3	2.6	180
M677251		6.92	16.35	0.19	0.4	0.576	2.76	12.5	7.8	1.27	1540	1.57	0.98	6.5	32.9	890
M677252		4.68	17.50	0.16	0.4	0.374	1.78	15.2	9.6	1.94	1960	1.20	2.28	6.9	43.6	890
M677253		4.15	17.60	0.14	0.5	0.223	1.73	13.8	9.6	2.13	1660	0.75	2.28	7.2	55.3	850
M677254		7.23	18.80	0.21	0.4	3.13	2.57	14.2	11.4	2.20	3300	3.52	0.91	8.0	47.6	1040
M677255		9.50	19.45	0.57	1.9	1.960	2.02	274	38.8	1.47	2590	15.55	0.87	9.8	38.9	990
M677256		7.59	22.4	0.20	0.5	1.025	3.34	11.2	13.1	1.95	2330	8.19	0.98	8.5	57.9	950
M677257		6.11	21.0	0.19	0.5	0.548	3.03	12.1	9.3	1.71	2720	2.55	0.70	8.2	52.9	750
M677258		7.42	17.90	0.22	0.5	0.462	2.22	17.4	12.0	1.90	1680	1.39	1.74	7.8	51.5	830
M677259		4.20	16.55	0.21	0.4	0.249	1.80	11.6	14.9	1.78	1840	0.66	2.01	7.7	48.9	780
M677260		4.62	17.00	0.21	0.5	0.293	2.02	14.3	10.9	1.81	1340	1.90	1.72	7.6	50.1	780
M677261		7.46	20.7	0.22	0.4	0.203	2.28	8.2	9.4	1.39	1100	18.50	0.89	7.3	44.5	690
M677262		6.05	20.7	0.19	0.5	0.186	2.34	8.5	10.8	1.43	1070	10.05	0.92	7.6	43.2	730
M677263		3.91	18.45	0.19	0.4	0.188	1.40	12.7	10.1	1.76	1520	6.66	2.62	8.0	49.8	790
M677264		3.83	16.75	0.22	0.6	0.193	1.37	13.3	8.5	1.77	1440	1.64	2.37	7.9	52.6	790
M677265		4.21	16.05	0.21	0.4	0.128	1.37	13.4	9.2	2.04	1520	0.89	2.22	8.2	57.8	1100
M677266		4.56	16.30	0.22	0.2	0.233	2.38	9.1	13.2	1.22	567	1.80	1.24	6.4	72.4	970
M677267		7.71	19.05	0.23	1.2	0.364	2.20	16.1	15.3	2.27	1340	25.1	1.16	8.4	92.1	1260
M677268		7.62	18.75	0.20	1.2	0.359	2.18	15.9	15.0	2.25	1320	25.8	1.14	8.2	90.7	1230
M677269		2.44	15.40	0.19	0.9	0.238	2.32	7.6	7.9	1.03	680	1.00	1.84	4.8	21.9	440
M677270		2.52	16.90	0.07	1.0	0.256	2.14	9.8	7.7	1.04	758	1.69	2.16	4.7	23.9	470
M677271		2.20	16.10	0.09	1.1	0.095	1.93	10.0	5.1	0.85	595	1.79	2.49	4.5	19.5	430
M677272		2.44	16.30	0.06	1.0	0.059	1.89	9.7	5.4	0.86	647	1.60	2.48	4.6	21.0	450
M677273		0.47	0.23	0.07	<0.1	<0.005	0.03	0.5	1.2	13.60	202	0.13	0.01	0.2	1.6	240
M677274		2.48	15.90	0.09	1.0	0.104	1.86	9.8	7.2	0.88	668	1.62	2.48	4.6	21.7	460
M677275		2.53	16.25	0.06	1.1	0.091	1.97	10.2	5.5	0.94	723	1.61	2.51	4.7	22.5	490



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Sample Description	Method Analyte Units LOR	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61
		Pb	Pb	Fe	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	U
		ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
		0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.1
M677240		>10000	50.1	0.007	7.69	11.00	11.4	6	1.3	133.5	0.41	8.45	1.0	0.358	0.4
M677241		314	41.6	0.003	4.74	1.47	10.5	2	1.1	146.0	0.43	0.54	0.9	0.352	0.4
M677242		57.0	59.6	<0.002	4.99	1.20	10.0	2	1.3	103.5	0.40	0.39	0.8	0.336	0.4
M677243		149.5	51.3	0.002	5.01	1.52	10.0	3	1.1	141.5	0.40	0.49	1.0	0.325	0.4
M677244		28.8	45.8	<0.002	2.42	1.79	11.7	2	1.0	272	0.46	0.38	1.0	0.433	0.5
M677245		40.1	54.2	<0.002	5.01	1.23	12.0	3	1.1	155.0	0.37	0.40	1.0	0.364	0.4
M677246		30.3	68.7	0.007	2.78	33.2	6.8	13	97.7	252	0.60	1.73	8.9	0.214	10.2
M677247		28.5	70.1	<0.002	4.63	1.25	9.8	2	1.1	80.9	0.38	0.34	1.1	0.321	0.4
M677248		19.7	65.8	0.002	4.64	1.38	9.4	2	1.2	116.0	0.44	0.34	1.1	0.332	0.4
M677249		21.1	44.7	<0.002	3.01	1.46	11.4	2	1.1	206	0.56	0.38	1.8	0.381	0.4
M677250		3.3	2.2	<0.002	0.01	<0.05	0.2	1	0.2	47.8	<0.05	<0.05	<0.2	<0.005	0.7
M677251		43.8	75.1	<0.002	6.41	2.27	8.6	3	1.2	127.5	0.52	1.56	1.9	0.322	0.4
M677252		150.0	45.0	<0.002	3.21	1.99	9.9	2	1.0	235	0.52	0.79	1.7	0.380	0.4
M677253		15.6	40.3	<0.002	1.81	2.22	11.5	1	0.9	302	0.58	0.25	1.7	0.384	0.4
M677254		646	50.6	<0.002	7.26	2.20	10.3	4	1.5	112.5	0.63	4.03	1.5	0.399	0.5
M677255		34.8	131.5	0.003	1.44	33.4	8.3	7	111.5	254	0.72	0.94	10.6	0.257	13.9
M677256		349	68.6	0.014	7.33	1.93	12.5	4	1.4	104.0	0.68	8.37	1.8	0.452	0.4
M677257		153.0	49.9	0.003	5.77	5.05	11.1	3	1.1	96.4	0.65	9.93	1.3	0.418	0.5
M677258		109.5	47.3	0.002	6.85	1.81	11.6	2	1.1	124.0	0.61	1.16	1.7	0.393	0.5
M677259		32.0	36.8	0.003	2.74	1.55	10.6	2	1.0	170.0	0.53	0.59	1.7	0.359	0.4
M677260		16.4	45.8	0.012	3.14	2.32	11.1	2	1.1	161.5	0.53	0.67	1.8	0.353	0.5
M677261		85.5	57.1	0.141	7.23	2.81	10.4	3	2.9	98.8	0.48	1.57	1.8	0.340	0.6
M677262		73.0	60.9	0.085	5.59	2.59	11.0	2	2.9	101.5	0.51	1.86	1.9	0.357	0.6
M677263		21.3	32.5	0.082	2.22	1.75	11.0	2	1.1	306	0.52	0.62	1.6	0.376	0.4
M677264		71.1	26.7	0.008	1.56	2.46	11.3	1	0.9	425	0.53	0.66	1.7	0.367	0.5
M677265		14.9	26.2	<0.002	1.88	2.81	11.3	1	1.0	423	0.49	0.51	1.4	0.394	0.4
M677266		27.9	53.7	0.006	2.39	2.56	11.0	2	1.4	269	0.40	1.71	1.0	0.370	0.5
M677267		34.1	62.2	0.002	4.95	1.60	13.8	2	2.3	144.0	0.46	1.01	1.5	0.464	0.6
M677268		33.6	61.2	0.003	4.83	1.54	13.6	2	2.3	141.0	0.44	1.03	1.5	0.457	0.7
M677269		14.8	54.7	<0.002	1.01	0.73	5.6	1	0.8	215	0.38	0.37	1.8	0.182	0.6
M677270		18.0	43.1	0.002	0.74	0.90	6.0	2	0.7	275	0.35	0.33	2.0	0.205	0.6
M677271		21.1	37.3	0.003	0.60	0.73	4.7	1	0.5	367	0.34	0.51	1.9	0.186	0.6
M677272		11.5	32.8	0.002	0.53	0.68	5.1	2	0.6	368	0.35	0.42	1.8	0.198	0.6
M677273		1.5	1.4	<0.002	0.01	<0.05	0.2	1	<0.2	50.0	<0.05	<0.05	<0.2	<0.005	0.6
M677274		11.1	31.2	<0.002	0.60	0.71	5.1	1	0.6	360	0.35	0.37	1.9	0.200	0.6
M677275		15.7	36.0	<0.002	0.62	1.08	5.5	2	0.6	337	0.39	0.20	2.0	0.210	0.6



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 Finalized Date: 6- SEP- 2012
 Account: RANSIL

Project: Mint

CERTIFICATE OF ANALYSIS WH12195454

Sample Description	Method Analyte Units LOR	ME- MS61 V ppm 1	ME- MS61 W ppm 0.1	ME- MS61 Y ppm 0.1	ME- MS61 Zn ppm 2	ME- MS61 Zr ppm 0.5	Cu- OG62 Cu % 0.001	Pb- OG62 Pb % 0.001	Zn- OG62 Zn % 0.001
M677240		83	3.5	4.4	9870	7.4		1.425	
M677241		91	3.6	15.0	1430	5.4			
M677242		84	4.1	11.7	403	7.2			
M677243		86	3.5	14.3	653	7.3			
M677244		97	3.4	10.5	207	6.2			
M677245		103	4.3	12.3	458	8.0			
M677246		50	290	28.1	337	56.4	1.260		
M677247		86	4.6	12.6	533	7.0			
M677248		81	4.4	9.2	475	9.6			
M677249		97	3.0	11.4	393	9.6			
M677250		2	0.2	0.9	16	<0.5			
M677251		79	3.9	14.3	890	15.7			
M677252		89	2.3	12.0	537	12.4			
M677253		99	1.5	10.6	687	14.2			
M677254		96	3.8	10.7	>10000	11.5			2.24
M677255		60	32.0	33.0	182	65.1			
M677256		119	3.9	10.7	3310	15.2			
M677257		111	3.8	8.8	1570	15.5			
M677258		91	3.9	9.9	393	15.3			
M677259		87	2.4	10.4	259	12.5			
M677260		87	2.7	9.3	354	15.7			
M677261		88	3.1	6.9	256	18.2			
M677262		90	3.1	6.7	224	18.8			
M677263		84	2.3	8.9	393	12.4			
M677264		86	1.8	10.0	576	16.9			
M677265		88	1.9	10.7	287	10.1			
M677266		85	4.2	7.7	287	6.8			
M677267		102	8.8	9.7	171	66.4			
M677268		98	8.7	9.4	163	63.6			
M677269		42	2.6	4.0	245	32.5			
M677270		49	2.1	4.3	435	32.9			
M677271		42	1.5	3.8	125	36.6			
M677272		45	1.6	4.1	108	36.1			
M677273		2	0.1	0.9	14	<0.5			
M677274		46	2.4	4.2	163	32.6			
M677275		48	2.0	4.5	170	32.8			



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CERTIFICATE OF ANALYSIS WH12195454

Method	CERTIFICATE COMMENTS
ME- MS61 ME- MS61	Interference: Ca> 10%on ICP- MS As,ICP- AES results shown. REE's may not be totally soluble in this method.



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CERTIFICATE WH12199286

Project: Mint

P.O. No.: Batch 9

This report is for 36 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 24- AUG- 2012.

The following have access to data associated with this certificate:

MATT DUMALA

JOAN MARIACHER

HEATHER SMITH

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/ o BarCode
CRU- QC	Crushing QC Test
PUL- QC	Pulverizing QC Test
CRU- 31	Fine crushing - 70%<2mm
SPL- 21	Split sample - riffle splitter
PUL- 31	Pulverize split to 85%<75 um
LOG- 24	Pulp Login - Rcd w/ o Barcode
LOG- 22d	Sample login - Rcd w/ o BarCode dup
SPL- 21d	Split sample - duplicate
PUL- 31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

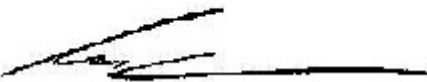
ALS CODE	DESCRIPTION	INSTRUMENT
Au- AA24	Au 50g FA AA finish	AAS
ME- MS61	48 element four acid ICP- MS	

To: **SILVER RANGE RESOURCES LTD.**
ATTN: JOAN MARIACHER
C/ O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
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This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:


Colin Ramshaw, Vancouver Laboratory Manager



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CERTIFICATE OF ANALYSIS WH12199286

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	Au- AA24 Au ppm	ME- MS61 Ag ppm	ME- MS61 Al %	ME- MS61 As ppm	ME- MS61 Ba ppm	ME- MS61 Be ppm	ME- MS61 Bi ppm	ME- MS61 Ca %	ME- MS61 Cd ppm	ME- MS61 Ce ppm	ME- MS61 Co ppm	ME- MS61 Cr ppm	ME- MS61 Cs ppm	ME- MS61 Cu ppm
		0.02	0.005	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
M677276		7.35	0.015	0.25	7.25	5.4	1320	0.81	0.27	2.51	0.09	20.5	8.3	30	1.45	108.0
M677277		7.67	0.018	0.15	6.86	5.4	910	0.73	0.17	2.34	0.07	18.25	8.7	26	1.34	66.9
M677278		7.88	0.028	0.17	7.01	11.1	870	0.85	0.27	2.49	0.11	17.40	6.6	26	1.65	46.9
M677279		2.12	0.060	0.19	7.01	18.3	1060	0.96	0.35	2.06	0.11	17.95	3.8	26	1.73	20.0
M677280		5.29	0.022	0.15	6.87	5.0	900	0.73	0.30	2.55	0.04	17.15	6.2	25	1.28	28.9
M677281		7.90	0.008	0.09	7.36	4.6	850	0.76	0.10	2.61	0.06	17.90	5.8	26	1.19	59.0
M677282		8.49	0.010	0.14	7.61	4.8	920	0.79	0.23	2.71	0.06	18.95	9.4	28	1.27	69.1
M677283		<0.02	0.010	0.12	7.54	4.8	910	0.78	0.23	2.64	0.06	18.20	9.3	27	1.21	65.6
M677284		7.82	0.013	0.17	7.50	6.1	700	0.82	0.16	2.56	0.08	18.95	7.8	28	1.29	94.9
M677285		8.09	0.033	0.30	7.73	11.8	980	0.90	0.58	2.39	0.07	20.5	7.8	29	1.42	127.5
M677286		4.00	0.070	0.61	7.15	15.8	810	0.75	0.67	2.15	0.71	20.4	8.0	29	1.52	161.5
M677287		6.52	0.101	1.43	7.19	34.5	730	0.80	1.64	1.53	2.05	26.8	7.5	26	1.87	212
M677288		0.06	0.817	6.89	4.92	8520	1250	1.21	205	13.15	1.17	397	69.2	48	9.23	3550
M677289		7.32	0.105	1.31	7.25	18.8	770	0.77	1.21	1.81	0.77	21.6	6.9	28	1.88	291
M677290		4.85	0.072	1.58	7.07	23.7	690	0.79	1.94	1.05	1.01	21.2	6.7	27	1.81	110.5
M677291		6.48	0.086	0.82	7.19	10.3	790	0.80	0.69	2.12	0.20	17.45	8.3	29	1.54	168.0
M677292		4.15	0.098	1.99	7.48	13.4	980	0.82	2.31	1.75	1.69	22.0	8.4	30	1.35	236
M677293		2.21	0.093	1.73	7.48	13.2	970	0.74	1.87	1.70	1.02	20.9	8.5	28	1.35	215
M677294		7.79	0.140	2.58	7.36	23.1	920	0.76	3.31	1.65	1.89	14.90	14.1	25	2.06	260
M677295		4.82	0.123	3.63	7.56	31.1	670	0.76	4.33	1.41	18.95	15.20	14.6	24	2.14	490
M677296		6.15	0.079	3.23	7.55	20.6	1190	0.78	2.48	0.84	8.94	14.95	5.5	32	2.10	751
M677297		4.85	0.124	2.47	7.30	25.5	1040	0.71	2.67	0.88	4.36	9.98	7.8	25	1.81	295
M677298		6.21	0.085	2.18	7.24	29.5	900	0.60	2.74	0.86	20.5	9.60	6.8	59	1.50	398
M677299		6.06	<0.005	0.02	0.09	<5	20	0.05	0.04	22.1	0.10	1.07	1.5	<1	0.30	4.2
M677300		7.21	0.218	3.76	7.31	37.7	510	0.59	5.14	1.31	2.30	22.3	26.0	90	1.24	249
M677301		8.60	0.060	1.97	7.55	20.2	1140	0.74	2.34	1.55	4.44	25.1	11.1	32	1.90	188.0
M677302		6.15	0.085	1.76	7.13	27.8	600	0.66	2.51	1.14	2.93	16.85	14.9	29	1.88	108.5
M677303		2.61	0.094	2.04	7.61	21.4	1410	0.85	2.65	1.81	19.50	28.5	11.0	30	1.83	217
M677304		0.06	0.805	6.46	4.89	8360	1230	1.23	198.5	12.40	1.17	402	70.8	47	9.29	3450
M677305		6.47	0.066	1.32	7.27	32.4	950	0.67	2.08	1.28	2.91	24.3	10.6	42	1.72	66.1
M677306		2.41	0.147	1.85	6.41	28.4	410	0.73	2.79	0.84	1.77	22.2	19.7	23	1.81	54.8
M677307		4.20	0.208	3.79	7.09	37.2	230	0.72	52.3	1.36	0.45	21.0	32.4	28	1.77	88.5
M677308		2.90	<0.005	0.03	0.09	<5	30	0.07	0.14	21.8	0.08	1.29	1.5	<1	0.31	2.2
M677309		2.67	0.051	1.15	7.07	14.7	1200	0.94	2.11	1.80	1.03	22.1	7.6	26	1.60	170.0
M677310		5.93	0.192	3.12	7.16	25.0	720	0.85	4.10	1.31	3.73	21.8	7.2	25	2.38	198.0
M677311		6.06	1.430	2.82	6.91	22.2	870	0.78	3.39	1.16	2.51	23.7	8.0	25	2.08	442



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Project: Mint

CERTIFICATE OF ANALYSIS WH12199286

Sample Description	Method Analyte Units LOR	ME- MS61 Fe %	ME- MS61 Ga ppm	ME- MS61 Ge ppm	ME- MS61 Hf ppm	ME- MS61 In ppm	ME- MS61 K %	ME- MS61 La ppm	ME- MS61 Li ppm	ME- MS61 Mg %	ME- MS61 Mn ppm	ME- MS61 Mo ppm	ME- MS61 Na %	ME- MS61 Nb ppm	ME- MS61 Ni ppm	ME- MS61 P ppm
		0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
M677276		2.19	16.50	0.08	0.9	0.070	1.82	10.8	4.7	0.82	606	1.71	2.63	5.4	22.2	490
M677277		2.01	16.25	0.11	0.7	0.048	1.73	9.6	4.0	0.79	554	1.54	2.67	4.9	22.0	440
M677278		2.12	17.15	0.12	0.7	0.100	2.04	9.0	4.9	0.79	1040	1.80	2.47	5.2	20.6	450
M677279		2.42	16.70	0.12	0.8	0.170	1.96	9.6	7.0	0.76	1160	0.91	2.33	4.9	19.1	420
M677280		2.11	16.45	0.12	0.8	0.089	1.67	9.0	4.1	0.77	789	1.08	2.74	5.0	20.3	430
M677281		2.08	17.45	0.12	0.8	0.063	1.50	9.3	5.1	0.84	543	1.57	3.15	5.3	22.0	460
M677282		2.24	18.00	0.12	0.8	0.071	1.63	9.9	4.5	0.88	678	1.62	3.17	5.6	22.7	480
M677283		2.23	17.30	0.13	0.8	0.067	1.62	9.4	4.4	0.87	663	1.59	3.17	5.4	21.8	470
M677284		2.24	17.75	0.12	0.7	0.094	1.44	10.0	4.8	0.87	501	1.43	3.28	5.5	23.2	480
M677285		2.25	18.10	0.12	0.8	0.098	1.68	10.8	4.8	0.82	597	1.41	3.22	5.7	21.8	470
M677286		2.37	16.55	0.13	0.9	0.140	2.02	10.7	6.3	0.92	1100	1.33	2.72	5.1	21.3	440
M677287		3.18	16.55	0.16	0.9	0.220	2.44	15.4	6.3	0.94	1200	1.09	1.83	5.2	21.5	430
M677288		9.36	18.55	0.44	1.6	1.730	2.05	240	31.9	1.44	2470	14.60	0.89	10.0	32.0	980
M677289		2.31	16.85	0.11	0.7	0.253	2.39	12.1	5.3	0.88	1100	0.97	2.04	5.2	21.3	440
M677290		3.27	17.10	0.12	0.8	0.180	2.91	12.0	5.1	0.73	701	0.82	0.93	5.1	22.8	430
M677291		2.43	17.50	0.12	0.8	0.101	1.87	9.1	8.5	0.84	788	1.39	2.86	5.2	22.0	430
M677292		2.20	17.05	0.12	0.7	0.145	2.13	12.0	6.3	0.67	825	1.73	2.49	5.5	20.2	460
M677293		2.35	16.75	0.12	0.7	0.139	2.14	11.5	6.4	0.70	841	1.63	2.54	5.3	19.8	450
M677294		3.29	15.25	0.13	0.8	0.302	3.40	8.2	8.6	0.67	1640	2.74	0.52	5.0	16.1	430
M677295		3.72	17.15	0.14	0.8	0.386	3.63	8.8	6.8	0.71	1510	1.79	0.45	5.3	21.3	450
M677296		2.87	17.25	0.12	0.8	0.339	3.89	8.6	4.8	0.69	1240	2.58	0.10	5.4	14.5	500
M677297		3.88	15.85	0.12	0.7	0.295	3.44	6.0	9.6	0.95	1720	1.57	0.10	4.9	16.8	430
M677298		4.87	19.45	0.14	0.8	0.438	2.84	5.4	13.2	1.74	1880	3.21	0.48	6.7	35.4	830
M677299		0.48	0.40	0.20	<0.1	0.007	0.05	0.5	1.2	13.30	225	0.10	0.01	0.4	0.5	190
M677300		7.57	18.30	0.17	0.6	0.289	2.28	10.7	17.2	2.11	2340	4.11	1.07	9.2	60.8	1330
M677301		3.92	16.80	0.13	0.7	0.208	2.94	14.9	10.7	1.09	1580	1.36	1.16	5.3	23.7	500
M677302		4.77	16.25	0.14	0.7	0.237	2.65	10.0	10.2	1.15	1780	2.28	1.08	5.0	25.9	450
M677303		3.45	17.45	0.15	0.8	0.208	2.92	16.4	8.9	0.94	1740	1.32	1.20	5.4	23.5	470
M677304		9.20	18.85	0.44	1.6	1.735	2.00	242	35.0	1.40	2350	15.55	0.90	10.0	32.7	960
M677305		4.63	16.80	0.13	0.7	0.211	2.68	14.1	11.2	1.31	2080	1.61	0.93	6.1	27.1	660
M677306		4.86	14.85	0.13	0.8	0.228	3.21	12.7	8.2	0.81	1650	0.96	0.19	5.0	19.8	390
M677307		5.85	16.00	0.15	0.6	0.163	2.81	11.3	8.1	0.71	1560	2.66	0.84	5.0	25.9	430
M677308		0.49	0.41	0.20	<0.1	0.006	0.05	0.6	1.1	12.90	212	<0.05	0.01	0.4	<0.2	170
M677309		2.53	18.15	0.08	0.7	0.136	2.33	12.1	7.2	0.66	1640	2.03	1.75	5.8	18.0	450
M677310		4.01	16.80	0.10	0.6	0.294	3.55	12.2	5.0	0.96	2640	1.88	0.09	5.8	21.7	470
M677311		4.03	16.70	0.11	0.6	0.308	3.16	13.3	8.3	0.96	1750	1.13	0.42	5.7	21.4	470



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CERTIFICATE OF ANALYSIS WH12199286

Sample Description	Method Analyte Units LOR	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61
		Pb	Pb	Fe	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	U
		ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
		0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.1
M677276		11.4	40.0	<0.002	0.36	0.75	6.6	1	0.6	390	0.40	0.11	2.0	0.216	0.6
M677277		5.4	33.6	<0.002	0.32	0.62	5.9	1	0.5	310	0.36	0.12	1.9	0.184	0.5
M677278		6.7	43.1	0.004	0.76	0.97	5.9	1	0.5	249	0.36	0.16	1.7	0.191	0.5
M677279		6.6	46.3	0.002	1.14	1.31	5.9	1	0.4	185.0	0.34	0.20	1.9	0.184	0.6
M677280		6.2	33.2	<0.002	0.52	0.81	5.7	1	0.4	309	0.34	0.12	1.7	0.184	0.5
M677281		5.9	29.9	<0.002	0.17	0.70	6.0	1	0.5	405	0.38	0.05	1.8	0.195	0.5
M677282		6.6	31.1	<0.002	0.40	0.79	6.1	1	0.5	402	0.39	0.15	2.1	0.208	0.6
M677283		6.0	30.0	<0.002	0.41	0.76	6.0	1	0.5	401	0.37	0.15	2.0	0.203	0.5
M677284		6.5	28.8	<0.002	0.18	1.02	6.8	1	0.5	419	0.38	0.10	2.1	0.207	0.5
M677285		6.5	35.7	<0.002	0.56	1.02	6.4	1	0.5	441	0.40	0.29	2.3	0.211	0.7
M677286		28.7	43.7	<0.002	1.20	1.00	5.9	1	0.6	269	0.36	0.45	2.1	0.192	0.9
M677287		88.3	63.9	<0.002	2.31	1.20	6.5	2	1.0	181.0	0.35	0.89	2.6	0.176	0.9
M677288		30.8	122.0	0.003	1.35	30.3	7.5	7	98.2	246	0.57	0.95	9.6	0.250	11.3
M677289		57.2	58.5	<0.002	1.04	0.51	6.2	1	1.1	178.0	0.36	0.64	2.2	0.182	0.7
M677290		70.1	69.8	<0.002	2.77	0.58	6.3	2	1.9	114.0	0.35	1.08	2.5	0.185	1.0
M677291		16.2	40.8	<0.002	0.68	0.63	7.2	1	0.7	326	0.36	0.41	1.9	0.202	0.7
M677292		209	48.5	<0.002	1.01	0.96	6.6	1	0.8	332	0.38	1.11	2.4	0.199	0.8
M677293		127.5	49.1	<0.002	1.02	1.09	6.3	1	0.9	323	0.37	0.85	2.5	0.194	0.8
M677294		132.0	83.9	<0.002	2.28	1.50	5.9	2	1.2	100.5	0.35	1.09	2.4	0.189	0.9
M677295		489	91.7	<0.002	2.75	2.56	5.8	2	1.5	101.5	0.36	1.86	2.4	0.199	0.9
M677296		586	96.6	<0.002	1.57	1.55	6.0	1	1.5	50.5	0.37	0.84	2.5	0.211	0.9
M677297		236	85.2	0.002	1.97	1.12	5.7	1	1.0	52.2	0.34	0.90	2.3	0.183	0.7
M677298		265	73.4	0.002	1.80	1.38	10.2	1	1.5	54.1	0.38	0.81	2.1	0.287	0.7
M677299		2.2	2.4	<0.002	0.01	<0.05	0.4	1	<0.2	34.8	<0.05	<0.05	<0.2	<0.005	0.9
M677300		201	50.5	0.002	4.45	1.56	11.2	2	1.7	131.5	0.47	2.41	1.3	0.420	0.5
M677301		84.1	69.3	<0.002	2.17	1.10	6.7	1	1.0	171.5	0.36	0.89	2.5	0.208	0.9
M677302		89.8	68.8	0.002	2.73	1.05	6.6	1	1.0	96.2	0.33	1.07	2.1	0.184	0.7
M677303		142.5	66.0	<0.002	1.83	1.66	6.7	1	0.7	250	0.37	0.76	2.4	0.214	0.9
M677304		32.7	121.5	0.004	1.35	28.6	7.7	7	97.9	243	0.58	0.91	9.6	0.242	11.4
M677305		104.0	72.4	<0.002	2.28	1.03	8.0	1	1.0	96.8	0.39	0.79	2.3	0.242	0.8
M677306		79.7	81.9	<0.002	3.56	0.85	5.9	1	1.1	39.7	0.34	1.40	2.3	0.176	0.8
M677307		120.0	71.6	<0.002	5.02	1.04	6.4	2	1.2	157.0	0.35	35.2	2.2	0.186	0.7
M677308		2.4	2.5	<0.002	0.02	0.05	0.5	1	<0.2	37.7	<0.05	0.07	<0.2	<0.005	0.3
M677309		65.1	55.0	<0.002	0.88	0.89	6.5	1	0.8	298	0.40	0.95	2.4	0.196	0.7
M677310		230	92.4	<0.002	2.23	0.90	6.7	1	1.1	45.3	0.38	1.65	2.2	0.205	0.8
M677311		420	84.3	<0.002	2.23	1.12	7.0	1	1.4	62.2	0.39	1.89	2.2	0.204	0.7



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CERTIFICATE OF ANALYSIS WH12199286

Sample Description	Method Analyte Units LOR	ME- MS61 V ppm 1	ME- MS61 W ppm 0.1	ME- MS61 Y ppm 0.1	ME- MS61 Zn ppm 2	ME- MS61 Zr ppm 0.5
M677276		49	2.3	4.8	75	32.9
M677277		42	2.3	4.3	74	26.8
M677278		44	1.5	4.5	85	28.6
M677279		43	1.2	4.5	84	30.4
M677280		42	0.8	4.4	75	31.1
M677281		45	0.7	4.8	71	31.6
M677282		47	1.1	5.1	72	32.8
M677283		45	1.0	4.9	70	31.7
M677284		49	1.1	5.4	67	26.7
M677285		47	1.9	5.3	65	28.0
M677286		46	3.1	4.9	122	36.9
M677287		46	3.6	5.8	273	34.1
M677288		56	35.8	29.9	177	59.5
M677289		44	4.0	5.3	144	26.2
M677290		44	7.1	4.9	156	30.4
M677291		53	2.5	5.2	84	30.0
M677292		46	3.1	5.4	266	24.9
M677293		44	3.4	5.3	194	25.1
M677294		37	5.9	5.6	267	30.6
M677295		37	7.2	5.0	2490	29.8
M677296		41	7.0	4.6	1360	30.4
M677297		39	5.6	4.1	686	24.9
M677298		73	9.0	4.6	2630	33.4
M677299		2	0.1	0.9	18	<0.5
M677300		88	10.1	6.3	399	26.1
M677301		47	6.1	5.3	624	27.3
M677302		43	6.1	4.7	458	23.8
M677303		47	5.8	6.0	2330	30.9
M677304		52	30.1	29.5	170	58.9
M677305		52	6.6	5.8	483	26.1
M677306		34	6.0	4.1	305	31.2
M677307		37	5.8	4.6	95	22.0
M677308		2	0.1	0.9	14	0.5
M677309		43	3.8	5.5	192	25.3
M677310		44	7.0	5.1	575	26.1
M677311		45	8.0	5.7	379	21.4



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Method	CERTIFICATE COMMENTS
ME- MS61 ME- MS61	Interference: Ca> 10%on ICP- MS As,ICP- AES results shown. REE's may not be totally soluble in this method.



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CERTIFICATE WH12201435

Project: Mint

P.O. No.: Batch 10

This report is for 36 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 27- AUG- 2012.

The following have access to data associated with this certificate:

MATT DUMALA

JOAN MARIACHER

HEATHER SMITH

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/ o BarCode
CRU- QC	Crushing QC Test
PUL- QC	Pulverizing QC Test
CRU- 31	Fine crushing - 70%<2mm
SPL- 21	Split sample - riffle splitter
PUL- 31	Pulverize split to 85%<75 um
LOG- 24	Pulp Login - Rcd w/ o Barcode
LOG- 22d	Sample login - Rcd w/ o BarCode dup
SPL- 21d	Split sample - duplicate
PUL- 31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

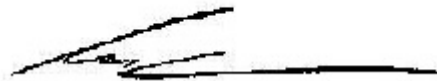
ALS CODE	DESCRIPTION	INSTRUMENT
Au- AA24	Au 50g FA AA finish	AAS
ME- MS61	48 element four acid ICP- MS	
ME- OG62	Ore Grade Elements - Four Acid	ICP- AES
Cu- OG62	Ore Grade Cu - Four Acid	VARIABLE

To: **SILVER RANGE RESOURCES LTD.**
ATTN: JOAN MARIACHER
C/ O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
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This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:


Colin Ramshaw, Vancouver Laboratory Manager



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Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	Au- AA24 Au ppm	ME- MS61 Ag ppm	ME- MS61 Al %	ME- MS61 As ppm	ME- MS61 Ba ppm	ME- MS61 Be ppm	ME- MS61 Bi ppm	ME- MS61 Ca %	ME- MS61 Cd ppm	ME- MS61 Ce ppm	ME- MS61 Co ppm	ME- MS61 Cr ppm	ME- MS61 Cs ppm	ME- MS61 Cu ppm
		0.02	0.005	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
M677312		5.35	0.204	2.71	7.21	28.6	730	0.78	4.95	0.67	3.13	22.7	8.0	37	1.76	168.5
M677313		5.61	0.165	2.30	7.21	28.6	360	0.65	9.20	0.65	1.34	30.0	11.7	66	1.42	266
M677314		5.39	0.069	1.13	7.01	22.0	780	0.69	4.38	0.93	1.84	30.1	7.2	49	1.58	64.6
M677315		3.12	0.298	2.10	7.04	53.9	350	0.62	8.81	1.25	1.87	35.0	14.0	107	1.47	131.5
M677316		6.74	0.130	1.38	6.75	16.8	540	0.70	6.30	1.02	1.43	29.4	6.6	36	1.82	105.0
M677317		0.10	1.170	21.5	3.97	9420	600	1.41	225	12.60	2.73	238	70.4	53	5.63	>10000
M677318		2.75	0.046	0.62	7.03	14.8	920	0.77	1.69	1.74	0.84	17.30	6.2	44	2.19	56.8
M677319		4.17	0.528	2.77	6.51	27.9	130	0.72	21.5	1.09	1.23	21.8	7.0	43	1.61	122.0
M677320		2.56	0.102	1.73	7.22	23.9	1340	0.85	3.84	1.10	1.22	18.60	6.0	39	1.80	126.5
M677321		5.64	0.313	3.67	6.74	46.9	270	0.63	16.70	0.74	2.84	27.3	12.1	58	1.48	59.7
M677322		<0.02	0.295	3.38	7.01	47.5	370	0.63	17.10	0.78	2.68	27.9	12.1	59	1.51	60.3
M677323		6.57	0.163	2.09	6.77	41.2	720	0.68	4.12	0.80	1.61	34.8	10.1	62	1.60	78.5
M677324		4.81	0.273	3.41	6.78	45.3	340	0.72	4.61	0.99	3.73	27.3	12.3	58	1.33	43.1
M677325		7.49	0.146	1.34	7.10	30.3	1430	0.71	3.03	0.92	0.60	15.20	8.7	45	1.43	106.5
M677326		2.72	0.567	3.86	7.31	43.4	160	0.74	38.6	0.79	1.32	17.20	13.6	41	1.31	228
M677327		5.04	<0.005	0.01	0.08	<5	20	0.06	0.07	20.0	0.07	1.54	1.3	<1	0.16	2.3
M677328		4.32	0.201	2.21	7.35	38.8	950	0.73	3.66	0.66	0.85	13.90	6.9	46	1.29	86.4
M677329		2.78	0.068	1.03	7.03	18.7	150	0.68	3.37	1.04	0.93	24.5	9.2	53	1.69	55.3
M677330		3.17	0.531	1.30	7.23	17.2	310	0.87	2.79	0.86	0.72	37.5	5.6	29	2.12	65.8
M677331		2.87	0.268	1.27	7.42	44.9	830	0.69	2.43	0.88	0.74	8.74	14.2	41	1.28	98.8
M677332		4.57	0.022	0.06	7.09	4.4	1300	0.78	0.30	1.69	0.04	13.10	8.9	45	1.36	8.0
M677333		1.91	0.021	0.07	7.47	4.4	1400	0.83	0.31	1.82	0.07	15.10	9.7	47	1.46	4.9
M677334		5.42	0.042	0.45	7.23	6.0	1060	0.86	0.51	1.78	1.27	13.30	6.8	43	1.40	22.9
M677335		4.34	0.169	2.27	6.90	54.5	330	0.72	2.99	0.86	7.99	36.8	8.6	38	1.78	208
M677336		4.30	0.095	1.45	7.22	45.3	550	0.66	2.32	1.42	4.01	24.3	7.1	48	1.78	55.4
M677337		2.91	1.150	22.3	6.86	76.5	90	0.71	42.8	1.08	1.37	20.1	16.4	64	1.50	29.9
M677338		2.47	0.137	3.21	7.29	52.0	590	0.76	4.54	1.00	2.01	15.90	10.2	38	1.38	78.5
M677339		0.10	0.796	6.25	4.52	7990	1140	1.44	198.5	11.45	0.91	431	73.8	47	9.76	3240
M677340		5.57	0.088	1.37	7.28	31.9	1530	0.76	2.35	1.28	2.71	13.90	11.2	38	1.52	91.0
M677341		3.26	0.235	2.40	7.01	18.4	440	0.78	8.42	1.52	2.05	15.05	11.1	23	1.64	156.0
M677342		3.57	0.122	1.16	6.81	14.6	1370	0.82	2.06	1.50	1.90	16.55	9.8	29	1.26	14.3
M677343		5.34	<0.005	0.01	0.06	<5	20	0.06	0.03	20.3	0.07	1.24	1.3	<1	0.11	1.7
M677344		3.00	0.117	1.09	7.21	25.9	750	0.88	1.83	2.24	1.07	21.5	15.7	102	1.66	118.0
M677345		4.47	0.252	1.78	7.21	32.5	480	0.78	2.67	0.90	3.60	17.60	12.0	56	1.33	101.0
M677346		3.27	0.153	1.74	7.12	22.0	1050	0.88	2.14	1.10	3.91	14.30	9.6	40	1.51	81.0
M677347		4.36	0.457	1.84	7.32	32.8	510	0.75	2.89	0.96	2.68	14.10	12.7	51	1.21	45.6



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CERTIFICATE OF ANALYSIS WH12201435

Sample Description	Method Analyte Units LOR	ME- MS61 Fe %	ME- MS61 Ga ppm	ME- MS61 Ge ppm	ME- MS61 Hf ppm	ME- MS61 In ppm	ME- MS61 K %	ME- MS61 La ppm	ME- MS61 Li ppm	ME- MS61 Mg %	ME- MS61 Mn ppm	ME- MS61 Mo ppm	ME- MS61 Na %	ME- MS61 Nb ppm	ME- MS61 Ni ppm	ME- MS61 P ppm
		0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
M677312		4.73	15.45	0.08	0.5	0.255	2.71	12.4	9.7	1.11	1300	2.15	0.92	4.8	32.3	530
M677313		6.53	16.95	0.14	0.3	0.281	2.44	16.6	13.3	1.50	1340	5.04	0.84	5.1	50.3	690
M677314		4.20	15.85	0.10	0.7	0.210	2.21	16.9	9.7	1.11	1210	4.78	1.47	5.9	32.7	650
M677315		7.18	19.70	0.17	0.5	0.237	1.88	18.2	17.7	1.92	1800	3.34	1.33	10.6	72.8	1520
M677316		4.43	15.10	0.11	0.7	0.325	2.61	17.1	7.6	0.95	1320	2.41	0.80	4.8	26.7	460
M677317		10.80	14.60	0.38	1.6	4.56	1.03	147.0	36.3	1.20	1800	14.55	1.09	8.6	70.1	780
M677318		2.90	15.80	0.06	0.2	0.116	2.11	9.0	9.1	1.10	1200	1.01	1.99	5.6	36.2	550
M677319		5.39	15.25	0.12	0.3	0.314	2.60	11.5	6.9	0.99	1400	2.55	0.74	4.5	31.8	470
M677320		3.38	15.10	0.08	0.3	0.194	2.37	9.8	9.5	1.08	1160	2.40	1.84	4.8	33.2	500
M677321		6.72	17.10	0.15	0.3	0.283	2.15	14.7	13.0	1.49	1480	2.09	1.13	4.8	48.4	650
M677322		6.72	17.20	0.14	0.3	0.292	2.23	15.4	13.1	1.50	1540	2.77	1.16	4.9	49.4	660
M677323		5.15	16.55	0.13	0.3	0.278	2.36	20.4	13.2	1.38	1530	2.51	1.15	5.0	40.8	640
M677324		5.69	17.10	0.14	0.2	0.233	2.12	14.0	13.0	1.42	1540	3.11	1.57	5.0	48.8	670
M677325		3.98	14.70	0.10	0.2	0.217	2.35	7.8	11.6	1.23	1330	1.88	1.88	4.3	37.2	560
M677326		6.00	16.55	0.14	0.2	0.304	2.69	9.1	8.3	1.02	1070	3.57	1.33	4.8	41.3	540
M677327		0.46	0.32	<0.05	<0.1	<0.005	0.03	0.7	1.1	12.35	212	0.18	0.01	0.3	2.7	170
M677328		4.69	14.85	0.09	0.1	0.213	2.18	7.0	16.9	1.29	1300	2.34	1.81	4.3	35.5	620
M677329		6.10	16.55	0.14	0.7	0.299	2.79	13.1	6.8	0.89	1080	2.45	0.77	5.8	33.5	670
M677330		4.10	17.60	0.12	0.7	0.242	2.92	22.8	9.9	0.67	834	2.16	0.46	4.7	20.7	460
M677331		4.32	14.85	0.10	0.1	0.171	2.82	4.3	12.7	1.13	1120	6.61	1.72	4.0	36.6	570
M677332		2.79	13.75	0.06	0.1	0.049	1.75	5.9	7.4	1.10	802	1.70	2.68	4.2	35.6	580
M677333		2.98	14.60	0.07	0.1	0.057	1.85	7.0	8.1	1.18	868	2.25	2.78	4.4	37.7	620
M677334		2.63	15.00	0.07	0.1	0.046	1.52	6.1	6.4	1.15	690	0.85	2.91	4.2	38.6	600
M677335		5.82	19.20	0.17	0.5	0.379	2.79	20.0	10.6	1.29	1780	4.84	0.44	5.8	35.6	700
M677336		4.74	16.45	0.12	0.8	0.258	2.68	12.5	11.8	1.22	2370	4.29	0.53	5.8	33.1	680
M677337		7.67	17.70	0.18	0.5	0.270	2.21	9.9	15.3	1.48	2110	5.04	1.05	4.8	58.3	660
M677338		4.86	16.30	0.12	0.3	0.344	2.55	8.0	11.3	1.19	1720	2.65	1.33	4.7	35.7	560
M677339		8.75	20.2	0.48	1.7	1.680	1.72	247	33.6	1.28	2290	15.90	0.75	9.7	37.6	920
M677340		3.70	15.20	0.08	0.3	0.188	2.72	7.0	9.4	1.07	1400	1.42	1.56	4.3	33.2	510
M677341		4.10	15.40	0.09	0.9	0.278	2.92	8.5	4.9	0.76	1360	2.00	0.75	4.4	24.0	410
M677342		2.81	15.65	0.09	0.7	0.180	2.65	8.8	5.2	0.81	1070	1.80	1.94	4.8	23.3	410
M677343		0.46	0.26	<0.05	<0.1	<0.005	0.02	0.6	1.0	12.60	201	0.13	0.01	0.3	2.0	170
M677344		4.49	17.70	0.11	0.5	0.250	1.44	10.4	9.7	1.73	1300	2.62	1.72	5.6	73.7	860
M677345		5.22	17.15	0.12	0.4	0.249	2.23	9.4	13.0	1.37	1650	3.88	1.49	5.0	49.9	590
M677346		3.99	15.45	0.10	0.1	0.212	2.48	7.4	9.2	1.13	1370	5.64	1.41	4.5	42.9	540
M677347		5.08	17.50	0.13	0.4	0.231	2.58	6.9	10.9	1.30	1550	11.90	1.48	5.6	38.0	710



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Sample Description	Method Analyte Units LOR	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61
		Pb	Pb	Fe	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Ti
		ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
		0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.1
M677312		96.3	77.4	0.005	2.87	1.19	6.3	2	1.1	71.5	0.39	2.27	1.8	0.216	0.6
M677313		75.3	68.5	0.002	4.15	0.84	8.5	2	1.6	73.8	0.37	4.78	1.5	0.278	0.5
M677314		76.6	60.1	0.002	2.27	0.74	7.4	2	1.1	146.5	0.46	2.01	2.3	0.270	0.8
M677315		98.7	42.3	0.003	3.91	0.90	11.5	2	1.9	143.5	0.67	4.07	1.4	0.507	0.8
M677316		55.1	76.4	<0.002	2.83	0.72	5.7	2	1.3	99.9	0.39	3.10	2.1	0.188	0.8
M677317		29.6	68.4	0.007	2.49	28.8	6.8	12	82.7	234	0.57	1.27	9.0	0.207	10.4
M677318		36.3	59.0	<0.002	1.06	0.67	5.4	1	1.0	220	0.43	0.67	0.9	0.204	0.4
M677319		77.9	73.5	0.002	3.89	1.01	5.8	2	1.5	96.3	0.35	10.60	1.2	0.193	0.5
M677320		53.6	64.8	<0.002	1.77	0.61	5.7	1	0.8	223	0.38	1.63	1.1	0.192	0.4
M677321		77.4	59.5	<0.002	4.32	0.78	8.3	2	1.4	90.5	0.34	8.26	1.3	0.250	0.4
M677322		79.6	64.4	0.002	4.33	0.78	8.5	2	1.4	91.9	0.35	8.24	1.4	0.262	0.4
M677323		75.0	63.8	0.002	2.78	0.93	8.1	1	1.5	107.0	0.37	1.81	1.5	0.242	0.5
M677324		148.5	53.0	0.002	3.17	0.55	8.3	2	1.6	154.5	0.33	2.01	0.9	0.254	0.3
M677325		72.2	62.3	0.003	1.79	0.84	6.5	1	1.4	209	0.32	1.17	0.9	0.201	0.3
M677326		75.9	76.2	0.003	4.63	1.59	6.3	3	3.0	154.5	0.37	19.35	0.9	0.199	0.4
M677327		1.7	1.8	<0.002	<0.01	<0.05	0.3	1	<0.2	43.8	<0.05	<0.05	<0.2	0.005	0.6
M677328		62.4	61.3	0.002	2.57	0.61	6.4	2	1.8	171.0	0.33	1.52	0.9	0.218	0.3
M677329		46.9	77.3	<0.002	4.96	0.89	6.4	4	2.0	105.5	0.43	1.55	2.1	0.269	0.8
M677330		38.2	72.3	<0.002	3.20	0.80	5.5	3	2.1	160.5	0.41	1.17	2.5	0.193	0.8
M677331		42.0	62.1	0.006	2.29	0.72	6.5	1	1.4	224	0.29	0.83	0.7	0.191	0.3
M677332		9.2	40.1	0.003	0.39	0.56	6.0	1	0.9	334	0.32	0.09	0.6	0.209	0.2
M677333		9.9	44.7	0.003	0.41	0.62	6.2	1	1.0	355	0.33	0.10	0.7	0.217	0.2
M677334		83.6	38.5	0.003	0.67	0.61	6.5	1	0.9	366	0.32	0.31	0.5	0.196	0.2
M677335		542	78.8	0.002	3.82	1.16	8.2	2	2.3	61.1	0.42	1.00	1.4	0.288	0.6
M677336		271	78.6	0.002	2.55	0.78	7.5	2	1.4	91.7	0.45	0.76	2.4	0.251	0.9
M677337		388	58.3	0.004	5.63	0.72	8.7	3	1.7	114.0	0.32	22.3	1.4	0.249	0.5
M677338		150.5	69.8	0.002	2.67	0.84	7.1	2	1.5	149.5	0.36	2.33	1.4	0.204	0.5
M677339		34.0	126.0	0.004	1.24	28.7	8.0	7	93.2	230	0.65	0.79	11.0	0.233	14.1
M677340		113.5	67.4	0.002	1.72	0.63	6.3	1	1.2	208	0.32	0.82	1.2	0.196	0.4
M677341		117.5	81.5	<0.002	2.79	0.70	4.9	2	1.5	109.0	0.39	4.62	2.5	0.172	1.0
M677342		93.0	60.7	<0.002	1.61	0.54	5.7	2	1.2	242	0.41	1.10	2.1	0.179	0.7
M677343		1.6	1.2	<0.002	0.01	<0.05	0.2	1	<0.2	44.4	<0.05	<0.05	<0.2	<0.005	1.1
M677344		93.4	41.5	<0.002	1.56	1.65	10.4	2	1.4	356	0.38	0.69	1.2	0.333	0.5
M677345		347	64.3	0.003	2.84	0.77	8.3	2	1.5	133.5	0.38	1.15	2.0	0.247	0.6
M677346		298	68.9	0.007	2.04	0.68	6.2	2	1.4	193.0	0.34	0.92	0.8	0.194	0.3
M677347		209	64.0	0.004	2.83	0.73	7.8	2	1.5	159.5	0.40	1.50	1.5	0.251	0.5



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Sample Description	Method Analyte Units LOR	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5	Cu-OG62 Cu % 0.001
M677312		50	9.4	4.8	544	15.0	
M677313		73	13.9	5.4	283	11.1	
M677314		60	11.3	5.6	347	24.8	
M677315		104	24.0	8.3	407	15.3	
M677316		43	9.3	5.4	256	25.5	
M677317		48	281	27.6	319	59.9	1.275
M677318		43	5.3	4.9	182	8.5	
M677319		46	8.9	5.0	226	11.3	
M677320		45	9.1	4.8	236	10.1	
M677321		65	10.8	5.1	489	8.2	
M677322		67	10.9	5.4	485	9.6	
M677323		64	11.6	5.6	309	10.3	
M677324		64	10.8	5.6	621	4.8	
M677325		53	7.5	4.9	158	4.1	
M677326		54	9.3	4.5	243	7.1	
M677327		2	0.1	0.9	18	<0.5	
M677328		62	13.0	3.7	190	3.3	
M677329		55	10.3	5.5	165	24.1	
M677330		52	6.4	4.8	126	25.0	
M677331		55	7.7	4.3	168	2.8	
M677332		53	3.6	5.4	86	2.8	
M677333		54	3.8	6.0	89	2.9	
M677334		51	2.9	5.7	232	2.7	
M677335		72	11.9	7.0	1220	16.6	
M677336		57	11.1	5.5	682	27.7	
M677337		68	13.4	5.3	290	17.1	
M677338		54	14.1	4.6	376	11.5	
M677339		55	31.8	30.6	161	64.6	
M677340		49	7.1	4.9	500	10.3	
M677341		37	7.9	4.9	361	32.2	
M677342		44	8.9	4.9	332	25.2	
M677343		2	0.1	0.9	15	<0.5	
M677344		88	9.0	7.9	226	16.4	
M677345		63	13.5	5.1	632	15.2	
M677346		49	8.9	4.6	636	3.4	
M677347		57	14.1	4.2	456	14.0	



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CERTIFICATE OF ANALYSIS WH12201435

Method	CERTIFICATE COMMENTS
ME- MS61 ME- MS61	REE's may not be totally soluble in this method. Interference: Samples with Ca> 10%on ICP- MS As. ICP- AES As results reported (5 ppm DL)



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Project: Mint

P.O. No.: Batch 11

This report is for 36 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 28- AUG- 2012.

The following have access to data associated with this certificate:

MATT DUMALA

JOAN MARIACHER

HEATHER SMITH

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/ o BarCode
CRU- QC	Crushing QC Test
PUL- QC	Pulverizing QC Test
CRU- 31	Fine crushing - 70%<2mm
SPL- 21	Split sample - riffle splitter
PUL- 31	Pulverize split to 85%<75 um
LOG- 24	Pulp Login - Rcd w/ o Barcode
LOG- 22d	Sample login - Rcd w/ o BarCode dup
SPL- 21d	Split sample - duplicate
PUL- 31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

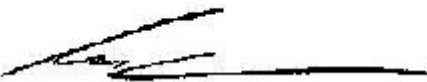
ALS CODE	DESCRIPTION	INSTRUMENT
Au- AA24	Au 50g FA AA finish	AAS
ME- MS61	48 element four acid ICP- MS	

To: **SILVER RANGE RESOURCES LTD.**
ATTN: JOAN MARIACHER
C/ O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
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This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:


Colin Ramshaw, Vancouver Laboratory Manager



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Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	Au- AA24 Au ppm	ME- MS61 Ag ppm	ME- MS61 Al %	ME- MS61 As ppm	ME- MS61 Ba ppm	ME- MS61 Be ppm	ME- MS61 Bi ppm	ME- MS61 Ca %	ME- MS61 Cd ppm	ME- MS61 Ce ppm	ME- MS61 Co ppm	ME- MS61 Cr ppm	ME- MS61 Cs ppm	ME- MS61 Cu ppm
		0.02	0.005	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
M677348		3.24	0.203	2.53	7.05	30.5	250	0.55	2.77	1.08	14.20	10.45	11.0	30	1.09	422
M677349		3.72	0.224	3.80	7.71	29.0	210	0.62	3.76	1.00	5.89	14.65	15.6	36	1.26	62.6
M677350		4.84	0.091	0.94	7.14	10.1	1050	0.73	1.18	1.65	1.08	14.25	7.8	25	1.36	20.1
M677351		4.79	0.082	1.15	7.14	18.9	1050	0.70	1.21	1.75	3.61	14.15	9.4	33	1.17	27.3
M677352		0.10	0.773	7.59	4.95	8640	1090	1.17	228	13.15	1.09	434	68.4	49	9.95	3350
M677353		4.21	0.160	1.89	7.51	29.7	110	0.66	3.21	2.06	1.18	24.5	21.9	60	1.20	61.1
M677354		7.74	0.178	4.29	7.37	28.5	190	0.70	3.04	1.41	2.02	18.10	17.5	31	1.30	80.0
M677355		2.74	0.653	2.82	6.94	36.0	60	0.61	5.27	1.33	3.04	16.40	43.7	34	1.23	25.4
M677356		5.51	0.117	1.22	7.66	28.7	370	0.69	1.89	1.58	1.45	15.50	17.2	38	1.28	32.5
M677357		<0.02	0.121	1.07	7.50	31.2	330	0.89	1.95	1.53	1.39	15.70	21.6	37	1.23	37.8
M677358		6.24	0.124	1.13	7.82	36.5	600	0.80	1.67	1.87	1.79	16.55	18.1	35	1.55	64.3
M677359		6.65	0.069	0.49	7.52	22.9	1200	0.71	0.67	1.82	1.51	20.2	12.5	26	1.62	15.0
M677360		3.26	0.119	1.27	7.36	35.0	110	0.77	1.88	1.86	1.80	14.65	28.8	29	1.53	49.0
M677361		2.64	0.042	0.75	7.31	26.0	820	0.81	1.18	1.78	1.50	13.85	14.7	29	1.58	30.6
M677362		5.40	0.046	0.71	7.83	19.9	1170	0.79	1.10	1.85	1.25	18.50	9.1	27	1.63	40.4
M677363		0.10	0.818	7.09	4.98	8640	1080	1.00	203	13.15	1.06	423	70.0	46	9.69	3400
M677364		3.83	0.016	0.32	7.55	43.7	930	0.73	0.44	2.44	0.59	18.25	6.6	26	1.28	26.2
M677365		4.55	0.054	0.84	7.94	30.3	620	0.64	1.58	1.42	1.97	15.85	8.4	37	1.60	17.7
M677366		3.42	0.057	1.09	7.47	16.7	120	0.66	2.04	1.27	3.94	24.2	19.0	38	1.64	28.0
M677367		3.09	0.050	0.83	7.36	15.8	810	0.69	1.25	1.65	2.42	16.65	9.5	23	1.59	44.1
M677368		2.78	0.050	0.89	7.47	19.9	120	0.63	2.05	1.51	8.22	17.40	31.4	30	1.38	56.5
M677369		4.69	<0.005	0.04	0.07	<5	20	<0.05	0.03	21.2	0.08	1.28	1.2	<1	0.10	1.8
M677370		5.10	0.054	0.63	8.06	26.0	470	0.71	1.83	1.37	1.86	21.2	15.4	42	1.69	55.3
M677371		5.65	0.069	1.18	7.49	22.8	360	0.74	2.41	1.39	2.46	14.70	10.7	35	1.55	34.1
M677372		4.68	0.038	0.60	7.70	23.6	580	0.76	1.22	1.44	1.01	14.15	10.7	36	1.55	16.8
M677373		3.20	0.020	0.40	7.37	13.2	240	0.72	1.17	1.31	1.58	14.30	17.8	30	1.33	9.1
M677374		1.22	0.026	0.40	7.53	9.0	210	0.71	1.07	1.49	1.72	15.90	20.5	28	1.46	12.2
M677375		7.31	0.048	0.71	7.66	18.6	630	0.72	1.25	1.38	2.30	22.5	12.0	29	1.56	32.0
M677376		2.63	0.040	0.24	7.60	27.7	310	0.67	1.16	1.37	0.32	17.25	19.5	32	1.56	15.0
M677377		6.56	0.023	0.32	7.62	15.1	1050	0.81	0.85	1.64	0.50	22.5	8.7	25	1.62	25.0
M677378		3.83	0.169	0.69	7.09	32.6	1120	0.66	1.27	1.44	6.63	12.55	7.3	24	1.96	48.0
M677379		5.37	<0.005	0.02	0.06	<5	20	<0.05	0.02	20.2	0.06	0.98	1.2	<1	0.10	1.5
M677380		8.32	0.008	0.26	7.13	9.2	1370	1.01	0.47	2.70	0.79	27.1	6.8	15	2.71	47.8
M677381		8.14	0.012	0.12	7.04	7.6	1530	0.93	0.41	3.38	0.12	29.4	7.3	14	2.75	25.6
M677382		7.83	0.010	0.21	7.25	10.8	1630	1.04	0.71	2.63	0.17	24.9	6.7	16	2.58	47.2
M677383		8.53	<0.005	0.07	7.16	5.7	1880	0.99	0.32	2.76	3.41	24.8	7.8	16	2.96	35.3



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Sample Description	Method Analyte Units LOR	ME- MS61 Fe %	ME- MS61 Ga ppm	ME- MS61 Ge ppm	ME- MS61 Hf ppm	ME- MS61 In ppm	ME- MS61 K %	ME- MS61 La ppm	ME- MS61 Li ppm	ME- MS61 Mg %	ME- MS61 Mn ppm	ME- MS61 Mo ppm	ME- MS61 Na %	ME- MS61 Nb ppm	ME- MS61 Ni ppm	ME- MS61 P ppm
		0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
M677348		4.95	13.15	0.14	0.3	0.357	2.45	5.6	7.4	1.17	1500	7.03	1.27	4.0	31.4	560
M677349		5.90	15.75	0.18	0.2	0.284	2.55	7.6	10.3	1.29	1560	45.8	1.32	5.2	38.7	790
M677350		2.55	14.40	0.14	0.8	0.092	2.45	7.6	3.8	0.75	907	1.69	2.11	4.5	19.9	410
M677351		3.14	14.85	0.16	0.5	0.116	2.02	7.5	5.2	0.96	1320	2.00	2.02	4.4	28.5	470
M677352		9.32	17.95	0.51	1.9	1.905	1.87	255	28.1	1.40	2350	15.10	0.80	9.5	39.0	980
M677353		7.38	16.30	0.21	0.3	0.155	1.84	11.6	8.1	1.63	1760	42.4	2.07	6.0	55.7	980
M677354		4.99	13.65	0.18	0.3	0.192	2.27	9.2	6.0	1.07	1530	23.1	1.66	4.1	34.5	620
M677355		7.46	11.95	0.21	0.1	0.195	2.20	8.1	4.7	0.89	1400	11.55	1.71	3.7	52.2	520
M677356		4.22	14.70	0.16	0.3	0.155	2.39	8.0	7.9	1.03	1400	10.75	1.95	5.0	37.6	620
M677357		4.25	15.60	0.15	0.3	0.145	2.35	8.0	11.5	0.97	1390	13.75	1.85	4.8	41.0	590
M677358		4.72	17.20	0.19	0.5	0.195	2.59	8.7	7.8	1.08	1720	12.95	1.40	5.5	34.4	690
M677359		3.01	17.10	0.16	0.8	0.142	2.54	10.9	7.8	0.93	1430	2.19	1.63	4.5	25.5	470
M677360		5.68	15.40	0.20	0.4	0.194	2.69	7.4	6.1	0.91	1560	10.95	1.29	4.9	45.1	560
M677361		3.44	15.25	0.16	0.5	0.190	2.68	7.8	5.3	0.72	1390	12.85	1.29	4.7	27.5	480
M677362		2.77	16.85	0.18	0.8	0.118	2.21	10.7	6.4	0.76	918	10.35	2.24	4.9	24.6	480
M677363		9.26	18.65	0.51	1.8	1.815	1.90	247	27.5	1.37	2320	13.25	0.81	9.0	39.1	970
M677364		2.00	16.20	0.15	1.2	0.040	1.57	10.2	4.7	0.65	484	1.76	2.91	4.7	20.6	450
M677365		4.10	14.45	0.18	0.3	0.194	2.36	8.8	8.7	1.08	1480	4.95	2.11	4.4	38.8	540
M677366		5.98	14.65	0.20	0.6	0.288	2.89	12.9	4.2	0.66	1090	15.80	1.14	4.7	33.3	510
M677367		3.51	14.10	0.16	0.8	0.183	2.85	9.5	5.9	0.67	1330	1.81	1.17	4.2	20.2	420
M677368		5.75	14.65	0.21	0.5	0.319	2.50	9.1	4.7	0.88	1320	8.28	1.72	4.6	55.4	450
M677369		0.50	0.33	0.29	<0.1	0.006	0.02	0.6	0.8	13.00	215	0.76	0.01	0.3	2.1	200
M677370		4.51	16.00	0.18	0.3	0.195	2.40	11.7	12.2	1.17	1380	7.20	1.92	4.9	38.0	640
M677371		4.50	14.75	0.17	0.4	0.232	2.32	8.3	9.1	0.94	1330	19.75	1.79	3.6	34.2	490
M677372		3.64	14.55	0.17	0.2	0.168	2.63	8.0	11.6	1.01	1260	7.19	1.99	4.2	34.4	540
M677373		4.14	14.50	0.20	0.5	0.212	2.38	8.2	5.6	0.70	879	9.96	1.96	4.1	39.1	450
M677374		4.33	13.65	0.18	0.6	0.236	2.54	9.0	4.5	0.72	972	5.07	1.96	4.3	42.1	460
M677375		3.39	16.75	0.19	0.6	0.227	2.65	13.3	7.2	0.78	1050	6.41	1.95	4.6	26.6	440
M677376		4.44	16.45	0.20	0.4	0.141	2.83	9.7	8.2	0.98	1250	1.73	1.80	4.6	30.6	480
M677377		2.75	16.75	0.19	0.7	0.286	2.85	13.1	4.3	0.60	1000	2.56	1.33	5.0	15.0	450
M677378		2.58	17.25	0.17	0.9	0.460	3.08	7.3	9.4	0.62	1110	3.53	0.59	5.0	15.1	490
M677379		0.47	0.32	0.36	<0.1	0.005	0.02	0.5	0.7	12.55	192	0.11	0.01	0.3	1.9	170
M677380		2.42	15.20	0.21	1.0	0.129	2.47	14.7	13.5	0.93	1760	1.96	1.31	7.1	16.1	630
M677381		2.34	16.10	0.21	1.0	0.100	2.33	16.3	9.8	1.36	1590	1.89	1.55	7.1	16.4	610
M677382		2.85	17.65	0.20	1.0	0.151	2.92	13.0	9.8	0.91	1970	1.44	0.99	6.6	17.9	650
M677383		2.44	18.65	0.20	1.0	0.101	2.64	12.5	9.6	0.86	1640	1.68	1.50	7.6	18.3	660



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Sample Description	Method Analyte Units LOR	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61
		Pb	Pb	Fe	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
		ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
		0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.02
M677348		135.5	61.5	0.002	3.29	1.36	5.4	2	1.5	126.5	0.33	1.50	1.3	0.196	0.69
M677349		55.5	66.8	0.014	3.97	1.08	7.2	3	1.8	149.0	0.37	2.82	1.1	0.284	0.75
M677350		58.8	52.8	<0.002	1.59	1.09	4.8	2	0.8	273	0.42	0.62	2.4	0.175	0.68
M677351		63.9	47.6	<0.002	1.81	0.68	5.6	2	0.9	243	0.38	0.72	2.0	0.188	0.60
M677352		34.4	124.5	0.004	1.35	32.5	7.5	7	97.6	234	0.67	1.09	10.3	0.242	1.32
M677353		21.1	44.7	0.005	5.81	1.00	8.3	4	1.9	223	0.40	1.76	1.0	0.363	0.56
M677354		22.7	58.9	0.004	3.60	1.03	5.9	2	1.2	166.5	0.33	2.96	1.2	0.228	0.68
M677355		37.9	56.9	0.002	6.99	0.66	5.1	5	1.1	180.0	0.27	3.87	0.7	0.178	0.64
M677356		26.5	56.9	0.004	2.71	0.73	6.5	2	1.2	255	0.40	0.82	1.3	0.235	0.69
M677357		24.5	69.2	0.004	2.82	0.62	7.5	2	1.1	232	0.37	0.87	1.3	0.224	0.65
M677358		38.5	69.6	<0.002	2.99	0.82	7.9	2	1.7	162.5	0.42	0.84	1.7	0.297	0.79
M677359		21.5	62.2	<0.002	1.58	0.56	5.3	1	0.9	253	0.41	0.34	2.3	0.190	0.78
M677360		33.7	70.4	<0.002	4.68	0.72	5.5	3	1.0	153.0	0.37	0.87	1.6	0.214	0.82
M677361		21.2	69.1	<0.002	2.19	0.66	5.1	1	0.8	179.5	0.39	0.52	1.8	0.189	0.76
M677362		23.3	60.1	<0.002	1.30	0.68	5.4	1	0.8	337	0.41	0.45	2.3	0.193	0.64
M677363		34.6	122.0	0.003	1.37	30.4	7.5	7	93.4	234	0.67	0.97	10.9	0.242	1.38
M677364		22.8	32.9	<0.002	0.56	0.82	4.9	1	0.8	466	0.45	0.24	2.5	0.189	0.41
M677365		25.6	64.9	<0.002	2.58	0.65	5.9	2	0.9	240	0.33	0.64	1.3	0.199	0.69
M677366		37.7	78.6	<0.002	5.54	0.78	5.3	3	1.1	101.5	0.40	0.97	2.4	0.198	0.85
M677367		27.1	72.2	<0.002	2.47	0.57	4.7	2	0.8	153.0	0.41	0.62	2.6	0.175	0.88
M677368		24.6	72.0	<0.002	5.08	0.70	5.3	3	1.2	137.0	0.38	1.05	1.9	0.175	0.72
M677369		1.8	1.0	<0.002	0.02	0.10	0.3	1	<0.2	46.6	<0.05	<0.05	<0.2	<0.005	<0.02
M677370		17.2	67.2	0.002	2.88	0.71	6.7	2	1.2	209	0.38	0.88	1.6	0.242	0.71
M677371		23.7	62.8	0.004	3.33	0.67	5.8	2	1.0	172.0	0.32	1.23	1.5	0.194	0.72
M677372		17.6	64.7	0.002	2.12	0.67	6.0	2	1.0	258	0.31	0.73	1.4	0.192	0.71
M677373		14.2	60.7	0.004	3.32	0.49	5.6	3	1.0	214	0.33	0.55	2.0	0.177	0.67
M677374		14.3	62.2	0.003	3.47	0.49	5.0	3	1.1	216	0.37	0.52	2.1	0.183	0.68
M677375		27.1	67.0	0.002	2.27	0.55	6.1	2	0.9	236	0.38	0.75	2.6	0.188	0.68
M677376		14.7	73.0	<0.002	3.21	0.58	6.5	3	0.9	226	0.36	0.84	1.9	0.192	0.75
M677377		20.2	82.8	<0.002	1.61	0.58	5.7	2	1.1	170.5	0.43	0.45	2.7	0.198	0.78
M677378		29.9	97.0	<0.002	1.58	1.78	6.0	1	1.6	110.5	0.44	0.48	2.7	0.196	0.87
M677379		1.3	0.9	<0.002	<0.01	<0.05	0.2	1	<0.2	41.2	<0.05	<0.05	<0.2	<0.005	<0.02
M677380		22.1	57.1	<0.002	0.41	1.30	5.2	1	0.6	302	0.65	0.09	3.3	0.220	0.85
M677381		12.3	62.7	<0.002	0.35	0.93	5.3	1	0.5	325	0.59	0.10	3.1	0.202	0.76
M677382		21.8	67.7	<0.002	0.39	0.74	5.8	1	0.5	244	0.63	0.10	3.2	0.212	1.07
M677383		11.9	63.5	<0.002	0.28	0.86	5.7	1	0.5	343	0.61	0.08	2.6	0.218	0.86



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Sample Description	Method Analyte Units LOR	ME- MS61 V ppm 1	ME- MS61 W ppm 0.1	ME- MS61 Y ppm 0.1	ME- MS61 Zn ppm 2	ME- MS61 Zr ppm 0.5
M677348		50	11.8	3.7	2240	9.4
M677349		69	16.3	4.9	1000	6.3
M677350		41	9.3	4.2	191	22.3
M677351		49	9.0	4.5	612	16.7
M677352		55	30.7	31.1	163	63.1
M677353		77	14.4	8.8	248	7.6
M677354		50	10.9	5.3	372	9.0
M677355		42	10.7	4.9	540	2.5
M677356		56	12.0	5.8	281	8.3
M677357		53	11.3	6.3	287	9.7
M677358		63	17.2	6.6	336	16.8
M677359		46	10.2	5.5	288	25.5
M677360		49	12.0	5.9	317	15.2
M677361		40	8.4	5.2	271	19.0
M677362		43	6.8	5.4	243	29.1
M677363		55	29.8	30.3	161	59.5
M677364		44	2.1	5.0	111	40.4
M677365		45	7.9	5.5	371	8.4
M677366		40	8.6	6.3	676	18.8
M677367		39	8.3	5.2	443	27.1
M677368		44	8.1	5.6	1400	15.7
M677369		2	0.1	0.9	17	0.5
M677370		65	11.9	6.3	352	10.5
M677371		52	10.0	4.5	465	11.9
M677372		48	8.0	4.3	203	6.8
M677373		42	6.5	4.4	299	15.7
M677374		41	6.6	4.8	323	16.3
M677375		48	5.1	5.3	437	20.1
M677376		57	7.4	5.0	94	13.4
M677377		44	6.2	5.2	99	21.7
M677378		48	7.3	5.4	951	29.4
M677379		2	0.1	0.8	15	<0.5
M677380		50	1.6	8.6	187	31.9
M677381		50	1.5	9.4	82	32.7
M677382		53	2.6	8.3	105	30.8
M677383		53	1.6	8.6	652	35.2



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CERTIFICATE OF ANALYSIS WH12202861

Method	CERTIFICATE COMMENTS
ME- MS61 ME- MS61	REE's may not be totally soluble in this method. Interference: Samples with Ca> 10%on ICP- MS As. ICP- AES As results reported (5 ppm DL)



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To: **SILVER RANGE RESOURCES LTD.**

C/ O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

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VANCOUVER BC V6B 1L8**

Page: 1
Finalized Date: 14- SEP- 2012
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CERTIFICATE WH12203879

Project: Mint

P.O. No.: Batch 12

This report is for 36 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 30- AUG- 2012.

The following have access to data associated with this certificate:

MATT DUMALA

JOAN MARIACHER

HEATHER SMITH

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/ o BarCode
CRU- QC	Crushing QC Test
CRU- 31	Fine crushing - 70%<2mm
SPL- 21	Split sample - riffle splitter
PUL- 31	Pulverize split to 85%<75 um
LOG- 24	Pulp Login - Rcd w/ o Barcode
LOG- 22d	Sample login - Rcd w/ o BarCode dup
SPL- 21d	Split sample - duplicate
PUL- 31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au- AA24	Au 50g FA AA finish	AAS
ME- MS61	48 element four acid ICP- MS	
ME- OG62	Ore Grade Elements - Four Acid	ICP- AES
Cu- OG62	Ore Grade Cu - Four Acid	VARIABLE

To: **SILVER RANGE RESOURCES LTD.**
ATTN: JOAN MARIACHER
C/ O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
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This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager



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Plus Appendix Pages
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Account: RANSIL

Project: Mint

CERTIFICATE OF ANALYSIS WH12203879

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	Au- AA24 Au ppm	ME- MS61 Ag ppm	ME- MS61 Al %	ME- MS61 As ppm	ME- MS61 Ba ppm	ME- MS61 Be ppm	ME- MS61 Bi ppm	ME- MS61 Ca %	ME- MS61 Cd ppm	ME- MS61 Ce ppm	ME- MS61 Co ppm	ME- MS61 Cr ppm	ME- MS61 Cs ppm	ME- MS61 Cu ppm
		0.02	0.005	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
M677384		4.69	0.007	0.19	7.02	5.9	2480	0.98	0.43	2.40	0.06	25.1	7.0	17	3.06	34.7
M677385		5.18	0.046	0.49	7.15	30.2	2990	0.83	1.14	2.41	0.46	27.8	7.8	18	2.89	75.6
M677386		6.13	0.136	0.86	6.92	91.3	420	0.54	2.58	1.38	0.55	20.2	6.2	24	1.62	198.0
M677387		8.09	0.150	1.62	7.31	30.9	500	0.62	2.48	0.74	9.16	21.2	3.6	31	1.64	502
M677388		5.28	0.073	0.81	7.56	18.7	1060	0.64	1.53	0.46	0.97	20.1	1.9	30	1.31	341
M677389		0.11	1.205	21.7	4.24	8970	530	1.53	224	12.80	2.92	222	70.4	52	5.70	>10000
M677390		6.18	0.099	0.66	7.45	20.7	340	0.58	2.01	0.63	1.39	19.85	3.9	29	1.35	111.0
M677391		2.87	0.113	0.65	7.69	16.3	330	0.60	2.31	0.52	1.85	23.9	4.0	30	1.38	81.7
M677392		7.48	0.106	0.65	7.48	15.4	370	0.51	2.03	0.85	0.93	17.00	4.0	25	1.20	43.4
M677393		5.42	0.175	0.67	7.49	12.3	310	0.60	2.43	0.66	0.53	27.5	10.7	27	1.35	95.3
M677394		1.90	0.203	0.70	7.60	13.3	300	0.55	2.29	0.65	0.33	25.3	10.9	27	1.26	71.0
M677395		6.40	0.981	2.48	7.12	18.8	180	0.58	4.08	1.14	1.72	44.0	23.8	26	1.50	907
M677396		3.29	0.478	1.11	7.27	15.3	140	0.57	3.87	0.60	1.54	43.5	15.9	28	1.44	227
M677397		4.72	1.220	4.22	7.47	54.2	250	0.45	8.04	0.43	1.79	23.3	54.0	28	1.17	904
M677398		3.31	0.477	1.34	6.86	20.6	160	0.48	5.03	0.30	1.17	17.55	54.3	27	0.96	102.0
M677399		2.96	0.371	0.84	7.37	31.3	140	0.54	3.22	1.06	1.59	21.6	21.8	25	1.16	110.5
M677400		2.64	0.832	1.60	6.82	29.8	170	0.45	7.72	0.55	1.12	14.80	85.1	23	1.06	56.9
M677401		4.73	<0.005	0.01	0.08	<5	130	<0.05	0.05	20.7	0.06	1.31	1.8	<1	<0.05	3.0
M677402		8.14	0.767	1.26	6.96	36.9	430	0.55	5.93	1.25	2.14	17.50	118.0	22	1.31	164.5
M677403		5.10	0.513	1.47	6.67	44.7	210	0.68	4.66	0.79	0.97	27.0	115.5	23	1.30	369
M677404		4.38	0.677	1.68	6.09	40.5	600	0.54	5.89	0.59	0.85	27.1	213	27	1.35	169.5
M677405		4.14	0.815	1.28	6.45	38.6	280	0.59	4.26	0.51	2.10	18.40	170.0	23	1.63	36.1
M677406		3.85	0.418	2.24	7.01	44.4	670	0.60	6.06	0.25	3.95	25.0	143.0	26	1.77	63.0
M677407		0.11	1.285	23.5	4.26	9120	610	1.52	233	13.00	2.97	226	69.8	51	5.75	>10000
M677408		3.59	0.884	3.64	6.64	48.3	560	0.55	6.82	1.06	6.38	14.40	71.7	24	1.94	192.0
M677409		2.97	0.388	1.31	6.90	36.3	780	0.54	2.79	1.42	5.84	15.35	27.4	22	1.80	126.5
M677410		3.06	2.76	7.65	6.40	64.6	540	0.46	9.61	1.42	13.40	13.95	134.5	20	1.69	276
M677411		5.71	0.329	0.75	6.65	44.7	110	0.55	2.88	0.97	1.90	19.15	61.7	23	1.76	123.5
M677412		<0.02	0.302	0.85	6.86	46.6	120	0.56	2.81	0.97	1.91	19.05	62.2	23	1.75	139.0
M677413		2.85	0.404	0.82	6.62	30.4	150	0.59	3.55	1.07	2.32	22.5	118.0	22	1.77	161.0
M677414		5.99	0.495	1.71	6.87	26.2	110	0.57	4.17	0.94	1.64	24.3	36.0	21	1.64	233
M677415		3.47	0.500	1.80	6.84	27.7	190	0.55	3.67	1.07	0.30	21.4	39.4	22	1.50	277
M677416		4.45	0.186	0.82	7.64	31.9	1470	0.76	2.26	1.19	1.33	24.4	7.2	24	1.84	152.5
M677417		3.74	2.75	5.78	7.35	72.6	50	0.59	35.2	0.52	0.71	10.65	131.5	27	2.34	976
M677418		5.92	<0.005	0.01	0.09	<5	30	<0.05	0.09	20.6	0.08	1.31	1.6	<1	<0.05	4.9
M677419		3.06	0.419	0.67	6.67	34.2	160	0.60	6.66	0.57	0.09	13.05	74.9	22	1.35	88.5



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Project: Mint

CERTIFICATE OF ANALYSIS WH12203879

Sample Description	Method Analyte Units LOR	ME- MS61 Fe %	ME- MS61 Ga ppm	ME- MS61 Ge ppm	ME- MS61 Hf ppm	ME- MS61 In ppm	ME- MS61 K %	ME- MS61 La ppm	ME- MS61 Li ppm	ME- MS61 Mg %	ME- MS61 Mn ppm	ME- MS61 Mo ppm	ME- MS61 Na %	ME- MS61 Nb ppm	ME- MS61 Ni ppm	ME- MS61 P ppm
		0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
M677384		2.52	15.50	0.10	1.3	0.145	3.31	10.7	9.4	0.89	1760	1.90	1.00	7.6	14.4	670
M677385		3.37	15.95	0.14	1.2	0.275	4.10	11.8	18.9	0.92	2170	2.60	0.33	7.5	16.1	640
M677386		4.17	13.60	0.15	0.7	0.429	3.56	9.4	5.8	0.57	1460	5.98	0.31	4.6	17.4	400
M677387		2.97	12.60	0.13	0.7	0.543	3.65	10.7	4.4	0.38	870	2.63	0.71	4.8	10.8	420
M677388		2.89	14.15	0.14	0.8	0.631	4.24	10.3	2.9	0.32	494	3.04	0.46	4.6	7.2	430
M677389		11.40	13.40	0.27	1.7	5.01	1.09	141.0	40.0	1.23	1750	17.15	1.16	8.6	71.5	790
M677390		3.51	13.15	0.13	0.7	0.643	4.07	9.8	4.6	0.34	541	4.65	0.75	4.7	12.1	420
M677391		3.80	13.45	0.16	0.7	0.709	4.31	11.5	4.5	0.31	578	2.92	0.64	4.4	17.9	430
M677392		3.03	11.70	0.13	0.7	0.633	3.74	7.9	3.5	0.35	774	4.08	0.84	4.7	14.5	400
M677393		3.37	12.65	0.14	0.8	1.015	3.70	13.4	3.6	0.35	667	3.44	0.59	4.8	13.0	410
M677394		3.75	12.55	0.15	0.7	0.926	4.15	12.1	3.4	0.36	659	3.33	0.68	4.7	13.1	420
M677395		4.42	12.80	0.18	0.7	0.966	3.57	23.8	5.5	0.47	965	3.53	0.59	4.6	20.2	380
M677396		4.87	13.20	0.22	0.8	0.428	4.06	22.3	3.7	0.35	598	5.92	0.41	4.5	16.9	410
M677397		6.97	11.20	0.26	0.8	0.374	4.46	9.9	2.9	0.27	269	12.45	0.43	4.8	24.1	400
M677398		6.98	10.60	0.23	0.7	0.215	4.23	8.7	3.2	0.19	256	7.48	1.04	4.5	20.9	380
M677399		4.57	11.65	0.20	0.8	0.223	3.63	10.4	3.3	0.43	930	7.20	1.05	4.4	14.5	400
M677400		7.07	10.20	0.25	0.7	0.178	4.16	5.9	3.8	0.32	492	3.67	0.70	4.4	19.5	360
M677401		0.50	0.24	0.05	<0.1	<0.005	0.05	<0.5	1.0	12.50	195	0.13	0.01	0.4	3.6	250
M677402		5.32	11.65	0.20	0.7	0.218	3.93	8.0	6.2	0.58	1080	2.42	0.33	4.5	21.6	370
M677403		5.54	13.80	0.21	0.6	0.458	3.41	12.5	2.7	0.43	885	2.51	0.09	4.1	20.5	370
M677404		9.58	10.60	0.30	0.7	0.324	3.18	14.6	5.0	0.29	482	3.41	0.19	3.8	27.8	350
M677405		8.04	11.10	0.27	0.7	0.296	3.41	8.6	14.1	0.28	465	5.78	0.09	4.1	24.8	380
M677406		9.32	11.95	0.30	0.8	0.296	3.70	11.9	13.9	0.27	311	9.59	0.11	4.3	25.5	390
M677407		11.40	13.35	0.26	1.7	5.17	1.08	142.5	41.9	1.23	1760	15.55	1.15	8.7	70.6	810
M677408		9.41	11.05	0.27	0.8	0.304	3.35	6.0	13.1	0.53	1500	7.60	0.11	4.1	20.2	370
M677409		5.10	13.15	0.18	0.8	0.418	3.54	7.3	14.1	0.68	1630	10.90	0.09	4.2	15.4	390
M677410		9.42	10.90	0.28	0.6	0.499	3.80	5.5	22.2	0.64	1500	11.80	0.11	4.0	29.9	370
M677411		5.64	12.90	0.19	0.5	0.499	3.35	9.4	9.6	0.56	1040	8.46	0.08	4.2	19.1	390
M677412		5.76	13.15	0.19	0.5	0.501	3.45	9.4	9.6	0.57	1050	6.92	0.09	4.3	19.1	400
M677413		7.23	12.45	0.24	0.5	0.536	3.27	10.1	12.0	0.54	994	21.5	0.09	4.2	30.0	390
M677414		6.07	12.90	0.23	0.5	0.440	3.38	10.9	17.0	0.59	969	5.12	0.09	4.2	20.7	420
M677415		6.47	14.40	0.23	0.6	0.446	3.52	9.8	9.5	0.72	1060	4.39	0.09	4.2	19.2	410
M677416		2.79	15.75	0.14	1.0	0.231	3.74	12.7	13.5	0.69	796	1.28	1.10	5.1	14.5	430
M677417		15.30	18.80	0.49	0.6	0.514	4.11	3.5	4.4	0.41	361	11.90	0.10	4.7	32.8	410
M677418		0.51	0.28	0.05	<0.1	0.005	0.03	<0.5	0.9	12.65	204	0.12	0.01	0.4	3.3	170
M677419		7.52	14.65	0.26	0.6	0.365	3.35	5.3	16.1	0.60	493	7.03	0.11	4.3	22.8	390



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CERTIFICATE OF ANALYSIS WH12203879

Sample Description	Method Analyte Units LOR	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61
		Pb	Pb	Fe	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	U
		ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
		0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.1
M677384		13.8	72.1	<0.002	0.35	0.86	4.8	1	0.6	247	0.62	0.14	2.7	0.213	1.1
M677385		31.8	80.8	<0.002	1.06	0.94	4.9	1	0.9	188.5	0.62	0.43	2.6	0.218	1.2
M677386		40.6	95.4	<0.002	2.98	0.70	4.7	2	1.7	76.3	0.37	0.76	2.4	0.162	0.8
M677387		394	90.1	<0.002	2.40	1.27	5.1	2	1.3	86.8	0.38	1.17	2.4	0.177	1.0
M677388		38.8	107.5	<0.002	2.25	0.55	4.8	2	1.7	52.0	0.42	0.97	2.5	0.178	0.9
M677389		28.2	66.7	0.009	2.65	32.3	7.1	12	93.4	240	0.56	1.55	8.8	0.198	9.6
M677390		33.6	106.0	<0.002	2.96	0.58	4.8	2	1.2	90.4	0.39	1.57	2.3	0.173	0.9
M677391		46.8	104.5	<0.002	3.39	0.61	4.6	2	1.0	65.0	0.37	1.66	2.4	0.172	1.0
M677392		38.9	74.5	<0.002	2.56	0.45	4.6	2	1.0	92.3	0.40	1.52	2.3	0.170	0.8
M677393		29.1	87.4	<0.002	2.88	0.47	4.8	2	1.1	60.1	0.42	1.92	2.4	0.173	0.9
M677394		27.1	99.6	<0.002	3.30	0.48	4.8	2	1.1	57.8	0.39	1.93	2.5	0.175	0.9
M677395		41.4	94.9	<0.002	3.97	0.73	4.7	3	1.3	65.9	0.38	4.12	2.3	0.168	1.1
M677396		37.7	103.5	<0.002	4.74	0.61	4.5	3	1.5	50.5	0.37	3.69	2.2	0.173	1.3
M677397		102.5	82.0	0.004	7.23	6.31	4.8	3	1.9	81.5	0.38	8.76	2.4	0.168	1.3
M677398		46.3	91.5	0.003	7.41	0.48	4.7	2	1.2	96.1	0.37	5.09	2.1	0.163	1.3
M677399		30.0	90.6	0.004	4.28	0.49	4.7	2	1.0	85.1	0.37	3.73	2.3	0.164	1.1
M677400		49.3	90.2	0.006	7.38	0.53	3.7	2	0.9	78.1	0.34	7.50	2.1	0.151	1.0
M677401		1.9	1.1	<0.002	0.03	<0.05	0.2	1	<0.2	51.7	<0.05	<0.05	<0.2	<0.005	0.7
M677402		53.1	97.8	0.006	5.04	0.58	4.5	3	1.0	75.7	0.36	4.94	2.4	0.159	0.9
M677403		43.5	98.4	0.009	5.30	0.58	3.8	3	2.3	25.8	0.34	4.59	2.1	0.155	0.8
M677404		25.0	89.4	0.013	>10.0	0.59	3.7	3	1.3	37.8	0.31	6.53	1.8	0.142	1.2
M677405		64.0	94.6	0.019	8.44	0.73	3.9	3	1.4	29.5	0.35	4.92	1.8	0.153	1.2
M677406		209	102.0	0.021	9.88	0.89	4.3	3	1.6	27.1	0.35	6.20	2.0	0.163	1.1
M677407		29.2	67.2	0.009	2.61	33.5	7.0	12	94.5	243	0.57	1.87	9.1	0.198	10.1
M677408		236	96.7	0.006	9.82	0.97	3.8	4	1.3	39.8	0.32	7.33	1.9	0.147	1.0
M677409		150.0	104.5	0.007	4.42	0.65	4.3	2	1.6	43.3	0.34	2.56	2.2	0.156	0.9
M677410		315	94.8	0.009	9.42	0.78	4.0	4	1.4	62.0	0.29	10.75	1.8	0.139	0.7
M677411		21.3	98.9	0.005	4.88	0.53	4.0	2	1.5	31.3	0.33	3.32	1.9	0.152	0.6
M677412		22.6	103.5	0.006	5.01	0.51	4.0	2	1.5	32.8	0.34	3.20	1.9	0.156	0.6
M677413		27.8	95.0	0.016	6.78	0.54	3.9	3	1.3	32.1	0.34	3.66	1.7	0.149	0.6
M677414		64.2	93.4	0.005	5.41	0.60	3.8	3	1.9	49.5	0.35	4.44	1.9	0.156	0.6
M677415		47.8	93.1	0.005	5.57	0.51	4.1	3	3.2	36.9	0.36	4.05	2.0	0.167	0.6
M677416		40.7	92.4	<0.002	1.60	0.61	4.6	1	1.0	181.5	0.42	1.71	2.9	0.179	1.3
M677417		114.5	103.0	0.008	>10.0	0.77	4.7	9	8.3	43.5	0.35	42.3	1.4	0.156	0.6
M677418		1.6	1.1	<0.002	0.02	0.05	0.2	1	<0.2	47.3	<0.05	0.06	<0.2	0.005	<0.02
M677419		13.0	88.3	0.006	7.19	0.50	4.2	3	2.1	33.8	0.36	6.31	2.0	0.160	0.6



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Sample Description	Method Analyte Units LOR	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5	Cu-OG62 Cu % 0.001
M677384		51	2.2	7.5	91	41.0	
M677385		53	4.9	7.4	171	36.1	
M677386		43	7.3	4.5	109	20.9	
M677387		44	8.8	3.9	1390	21.4	
M677388		45	10.7	3.9	171	23.0	
M677389		48	272	27.6	319	61.9	1.270
M677390		37	11.0	4.3	246	22.7	
M677391		33	8.1	4.5	347	23.9	
M677392		35	6.8	4.1	171	19.9	
M677393		34	7.1	5.3	105	22.9	
M677394		34	6.8	5.1	67	22.6	
M677395		33	7.1	6.0	303	22.1	
M677396		32	8.4	6.1	263	27.3	
M677397		24	7.6	5.6	273	28.2	
M677398		25	7.4	5.1	195	22.4	
M677399		29	5.8	5.5	280	22.8	
M677400		24	6.2	4.7	195	22.9	
M677401		2	0.1	0.8	17	0.5	
M677402		34	6.4	4.8	347	22.7	
M677403		23	6.8	3.8	157	20.5	
M677404		18	7.4	5.6	142	23.4	
M677405		21	10.1	5.4	335	22.2	
M677406		26	14.1	4.8	624	26.8	
M677407		47	282	28.0	319	62.2	1.250
M677408		28	11.2	4.4	1040	25.9	
M677409		34	7.1	4.5	892	26.1	
M677410		26	5.7	3.9	2010	18.5	
M677411		31	6.6	3.7	308	16.9	
M677412		31	6.7	3.9	315	18.2	
M677413		30	6.8	4.2	364	16.6	
M677414		34	6.9	3.7	274	16.8	
M677415		35	5.5	3.3	70	18.6	
M677416		41	4.2	5.0	229	29.5	
M677417		41	7.4	2.2	115	18.7	
M677418		2	0.1	0.8	15	0.6	
M677419		37	12.2	2.7	36	18.3	



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Method	CERTIFICATE COMMENTS
ME- MS61 ME- MS61	REE's may not be totally soluble in this method. Interference: Samples with Ca> 10%on ICP- MS As. ICP- AES As results reported (5 ppm DL)



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P.O. No.: Batch 13

This report is for 22 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 30- AUG- 2012.

The following have access to data associated with this certificate:

MATT DUMALA

JOAN MARIACHER

HEATHER SMITH

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
CRU- 31	Fine crushing - 70%<2mm
CRU- QC	Crushing QC Test
PUL- QC	Pulverizing QC Test
SPL- 21	Split sample - riffle splitter
PUL- 31	Pulverize split to 85%<75 um
LOG- 21	Sample logging - ClientBarCode
LOG- 23	Pulp Login - Rcvd with Barcode
LOG- 21d	Sample logging - ClientBarCode Dup
SPL- 21d	Split sample - duplicate
PUL- 31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au- AA24	Au 50g FA AA finish	AAS
ME- MS61	48 element four acid ICP- MS	

To: **SILVER RANGE RESOURCES LTD.**
ATTN: JOAN MARIACHER
C/ O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
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This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager



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CERTIFICATE OF ANALYSIS WH12203890

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	Au- AA24 Au ppm	ME- MS61 Ag ppm	ME- MS61 Al %	ME- MS61 As ppm	ME- MS61 Ba ppm	ME- MS61 Be ppm	ME- MS61 Bi ppm	ME- MS61 Ca %	ME- MS61 Cd ppm	ME- MS61 Ce ppm	ME- MS61 Co ppm	ME- MS61 Cr ppm	ME- MS61 Cs ppm	ME- MS61 Cu ppm
M677420		0.02	0.005	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
M677421		2.93	0.487	2.30	6.64	35.0	200	0.67	8.26	1.03	2.35	20.0	28.6	20	1.79	167.5
M677422		4.99	0.143	2.06	6.91	43.8	250	0.68	4.55	0.80	0.55	24.1	18.1	22	1.68	178.5
M677423		2.47	0.149	1.01	6.61	18.2	150	0.83	5.24	0.83	0.55	28.4	20.1	20	1.58	150.0
M677424		7.77	0.207	1.43	6.89	33.8	600	0.80	3.15	1.06	1.01	23.3	8.5	22	1.59	86.7
M677425		6.11	0.230	1.06	7.02	19.8	470	0.77	3.08	0.90	1.24	36.8	5.9	24	1.71	227
M677426		4.30	<0.005	0.13	0.06	<5	30	0.05	0.03	19.80	0.06	1.24	1.4	<1	0.09	2.2
M677427		6.26	0.224	1.03	7.32	53.7	1260	0.88	2.25	1.31	0.70	35.0	6.2	24	1.58	131.0
M677428		5.75	0.191	1.50	6.89	44.7	1250	0.81	4.98	1.45	1.25	29.2	6.6	22	1.78	117.0
M677429		4.49	0.079	0.73	6.92	10.3	1090	1.06	0.89	2.01	0.55	19.55	6.9	32	1.58	94.5
M677430		5.44	0.033	0.68	7.08	16.7	930	0.92	0.89	2.33	0.13	21.1	6.1	35	1.22	57.3
M677431		0.10	0.805	6.51	4.64	8020	1170	1.44	187.5	11.70	1.00	436	75.0	49	9.27	3310
M677432		5.41	0.033	0.45	7.48	13.9	570	0.95	0.60	4.31	0.07	35.1	21.4	144	3.03	67.1
M677433		7.87	0.018	0.60	7.63	9.1	520	0.97	0.07	4.41	0.04	34.5	20.0	140	2.51	60.2
M677434		4.44	0.086	0.40	7.09	15.0	310	0.89	0.83	3.55	0.06	29.0	22.0	127	1.36	166.5
M677435		2.10	0.074	0.51	7.44	15.1	320	0.91	1.12	3.69	0.06	31.7	21.1	133	1.41	169.5
M677436		4.59	0.289	2.42	7.09	23.2	370	1.16	3.35	2.64	32.7	31.5	22.6	112	3.05	158.5
M677437		8.91	0.125	0.89	7.27	14.5	480	1.07	0.92	3.64	0.36	31.8	20.5	101	2.11	133.0
M677438		8.20	0.046	0.32	7.45	23.7	420	0.97	0.86	3.70	0.09	36.4	21.3	153	2.51	169.0
M677439		<0.02	0.044	0.32	7.38	21.7	420	0.95	0.87	3.75	0.05	33.3	20.1	153	2.45	160.5
M677440		8.08	0.062	0.40	6.87	29.9	810	0.93	1.02	2.83	0.98	28.4	19.9	86	1.44	104.0
M677441		4.25	0.134	1.00	6.87	28.1	770	0.82	1.60	2.52	1.22	29.4	20.1	88	1.19	141.5
		3.80	0.083	0.56	7.07	16.0	580	1.02	1.19	2.93	1.68	28.2	15.6	98	1.51	78.6



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CERTIFICATE OF ANALYSIS WH12203890

Sample Description	Method Analyte Units LOR	ME- MS61 Fe %	ME- MS61 Ga ppm	ME- MS61 Ge ppm	ME- MS61 Hf ppm	ME- MS61 In ppm	ME- MS61 K %	ME- MS61 La ppm	ME- MS61 Li ppm	ME- MS61 Mg %	ME- MS61 Mn ppm	ME- MS61 Mo ppm	ME- MS61 Na %	ME- MS61 Nb ppm	ME- MS61 Ni ppm	ME- MS61 P ppm
		0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
M677420		5.82	15.10	0.13	0.6	0.377	3.04	10.4	19.5	0.82	944	3.71	0.17	4.6	21.7	410
M677421		4.52	15.85	0.15	0.7	0.419	3.22	12.8	12.0	0.69	842	4.94	0.23	4.7	16.7	430
M677422		5.17	15.50	0.16	0.5	0.461	3.05	16.0	8.6	0.70	648	4.67	0.20	4.2	18.6	410
M677423		3.45	16.40	0.14	0.6	0.341	2.86	14.1	9.8	0.83	867	2.87	0.87	4.9	16.4	450
M677424		3.44	17.65	0.13	0.5	0.470	3.17	23.4	15.4	0.88	919	8.38	0.37	4.9	15.7	420
M677425		0.43	0.29	0.06	<0.1	<0.005	0.03	0.6	0.8	12.25	202	0.13	0.01	0.3	1.9	200
M677426		2.79	16.55	0.10	0.7	0.196	2.70	22.2	16.8	0.95	897	2.14	1.54	5.0	18.0	450
M677427		2.50	15.80	0.11	0.6	0.154	2.48	16.8	19.7	0.89	1000	1.58	1.47	4.8	20.3	450
M677428		2.18	16.95	0.09	0.7	0.202	1.63	10.1	10.7	0.62	670	1.27	2.53	5.1	21.9	460
M677429		2.40	16.25	0.09	0.6	0.200	1.35	11.4	6.0	0.76	642	0.88	2.83	4.9	23.9	450
M677430		8.72	20.1	0.62	1.9	1.815	1.77	247	36.2	1.31	2350	14.65	0.77	9.8	38.1	940
M677431		4.25	17.50	0.14	0.5	0.070	0.85	17.0	5.7	2.49	945	1.36	2.31	10.3	105.5	1470
M677432		3.99	17.95	0.14	0.4	0.030	0.77	15.6	5.0	2.20	719	1.54	2.53	10.4	99.7	1490
M677433		3.96	17.10	0.12	0.3	0.255	0.66	12.7	9.0	2.43	789	1.23	1.95	8.7	100.0	1310
M677434		4.10	17.45	0.13	0.3	0.260	0.66	14.1	9.4	2.56	833	1.29	2.01	9.2	103.0	1420
M677435		5.54	17.35	0.17	0.3	0.204	2.01	14.1	10.4	1.76	1060	1.07	0.99	9.6	94.3	1360
M677436		4.29	17.45	0.15	0.3	0.219	0.91	13.9	8.5	1.88	1120	1.84	2.07	9.9	79.7	1410
M677437		4.68	18.50	0.17	0.4	0.325	0.93	16.2	8.2	2.82	825	1.05	2.11	10.8	113.0	1610
M677438		4.69	17.65	0.15	0.4	0.305	0.92	14.6	8.2	2.83	843	1.09	2.12	10.3	111.0	1630
M677439		4.01	16.35	0.16	0.3	0.536	1.10	13.0	8.6	1.88	1070	1.48	2.54	7.7	71.0	1070
M677440		4.60	15.90	0.14	0.3	0.539	1.17	13.4	9.2	1.85	1340	2.07	2.47	8.5	66.9	1160
M677441		3.87	16.95	0.14	0.3	0.471	1.11	12.5	9.6	2.03	1220	1.11	2.40	8.2	75.2	1150



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Sample Description	Method Analyte Units LOR	ME- MS61 Pb ppm 0.5	ME- MS61 Pb ppm 0.1	ME- MS61 Fe ppm 0.002	ME- MS61 S % 0.01	ME- MS61 Sb ppm 0.05	ME- MS61 Sc ppm 0.1	ME- MS61 Se ppm 1	ME- MS61 Sn ppm 0.2	ME- MS61 Sr ppm 0.2	ME- MS61 Ta ppm 0.05	ME- MS61 Te ppm 0.05	ME- MS61 Th ppm 0.2	ME- MS61 Ti % 0.005	ME- MS61 Tl ppm 0.02	ME- MS61 U ppm 0.1
M677420		83.3	91.5	0.004	5.12	5.02	5.5	3	1.4	56.3	0.37	5.74	2.1	0.175	0.83	0.8
M677421		44.9	95.8	0.012	3.78	3.43	5.6	3	2.2	45.0	0.38	3.10	2.3	0.180	0.84	0.9
M677422		23.4	93.3	0.027	4.60	2.73	5.3	3	1.5	36.8	0.36	3.80	2.3	0.163	0.82	0.6
M677423		29.0	84.7	0.002	2.55	2.09	5.7	2	1.3	82.2	0.40	2.32	2.5	0.192	0.82	0.8
M677424		25.5	92.4	0.019	2.47	1.93	5.6	3	2.0	68.4	0.40	1.96	2.5	0.191	0.78	0.7
M677425		1.8	1.2	<0.002	<0.01	0.35	0.3	1	<0.2	45.8	<0.05	<0.05	<0.2	<0.005	<0.02	0.8
M677426		37.6	83.6	0.002	1.87	1.55	5.6	2	1.0	154.0	0.42	1.72	2.7	0.196	0.83	1.0
M677427		42.8	74.1	<0.002	1.83	2.15	5.3	2	1.0	152.0	0.39	3.42	2.3	0.190	0.85	0.8
M677428		12.8	45.0	<0.002	0.94	2.25	6.5	1	0.6	376	0.43	0.83	2.2	0.211	0.48	0.6
M677429		10.5	40.5	<0.002	1.07	2.20	6.5	1	1.2	382	0.41	0.54	2.5	0.202	0.40	0.7
M677430		34.0	119.0	0.003	1.26	30.6	9.2	7	100.5	236	0.64	0.83	10.2	0.241	1.14	13.4
M677431		7.0	21.2	0.003	0.75	2.51	14.7	2	1.1	668	0.61	0.32	1.5	0.515	0.29	0.7
M677432		4.1	16.7	0.002	0.35	2.51	14.3	2	1.0	684	0.60	0.05	1.5	0.525	0.29	0.5
M677433		6.6	14.7	0.002	1.43	2.71	13.1	2	1.0	497	0.52	1.40	1.2	0.455	0.23	0.4
M677434		6.6	15.0	0.002	1.43	2.87	13.4	2	1.1	519	0.53	1.61	1.3	0.477	0.21	0.4
M677435		1200	47.3	0.002	4.66	8.87	12.0	4	2.0	187.5	0.58	2.99	1.3	0.446	0.52	0.6
M677436		19.1	21.6	0.003	1.33	3.02	11.5	2	0.9	508	0.62	0.99	1.6	0.455	0.35	0.5
M677437		8.7	28.9	<0.002	1.16	2.54	14.6	2	1.2	522	0.61	1.14	1.3	0.510	0.44	0.4
M677438		6.8	24.0	0.002	1.13	2.43	13.7	2	1.1	527	0.61	1.20	1.2	0.511	0.41	0.3
M677439		7.8	33.2	0.002	2.07	2.19	10.6	2	1.0	332	0.47	1.14	1.3	0.352	0.39	0.4
M677440		8.5	34.1	<0.002	2.68	1.83	10.3	2	1.2	258	0.52	1.64	1.3	0.374	0.43	0.4
M677441		10.5	30.4	<0.002	1.76	2.17	11.0	2	1.2	343	0.50	1.10	1.1	0.405	0.39	0.4



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Sample Description	Method Analyte Units LOR	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5
M677420		43	14.1	4.6	379	22.4
M677421		41	13.5	4.9	108	22.7
M677422		40	12.6	5.4	104	19.3
M677423		43	8.2	5.1	199	20.4
M677424		44	6.5	4.7	211	19.2
M677425		3	0.1	0.9	15	<0.5
M677426		43	3.6	5.4	143	25.6
M677427		43	3.5	5.5	215	21.5
M677428		49	1.2	5.6	116	22.1
M677429		46	1.1	6.2	69	19.1
M677430		54	35.6	33.5	165	68.3
M677431		114	1.5	12.7	95	12.6
M677432		115	1.0	12.2	54	12.1
M677433		103	1.6	10.8	77	8.1
M677434		107	1.7	11.2	83	8.7
M677435		101	2.9	10.7	3580	9.0
M677436		101	1.4	11.6	117	6.7
M677437		116	1.6	12.4	92	10.9
M677438		116	1.4	11.4	89	10.3
M677439		85	1.6	9.9	230	7.3
M677440		82	2.1	9.9	238	7.1
M677441		95	1.7	9.7	352	7.3



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Project: Mint

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Finalized Date: 12- SEP- 2012
Account: RANSIL

CERTIFICATE OF ANALYSIS WH12203890

Method	CERTIFICATE COMMENTS
ME- MS61 ME- MS61	REE's may not be totally soluble in this method. Interference: Samples with Ca> 10%on ICP- MS As. ICP- AES As results reported (5 ppm DL)



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Page: 1
Finalized Date: 25- SEP- 2012
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CERTIFICATE WH12212356

Project: Mint

P.O. No.: Batch 15

This report is for 36 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 9- SEP- 2012.

The following have access to data associated with this certificate:

MATT DUMALA

JOAN MARIACHER

HEATHER SMITH

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/ o BarCode
LOG- 23	Pulp Login - Rcvd with Barcode
LOG- 21d	Sample logging - ClientBarCode Dup
SPL- 21d	Split sample - duplicate
PUL- 31d	Pulverize Split - duplicate
CRU- QC	Crushing QC Test
PUL- QC	Pulverizing QC Test
CRU- 31	Fine crushing - 70%< 2mm
SPL- 21	Split sample - riffle splitter
PUL- 31	Pulverize split to 85%< 75 um

ANALYTICAL PROCEDURES

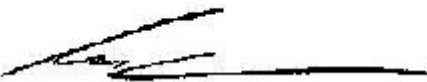
ALS CODE	DESCRIPTION
ME- MS61	48 element four acid ICP- MS
Au- AA24	Au 50g FA AA finish AAS

To: **SILVER RANGE RESOURCES LTD.**
ATTN: JOAN MARIACHER
C/ O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
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This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:


Colin Ramshaw, Vancouver Laboratory Manager



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Project: Mint

CERTIFICATE OF ANALYSIS WH12212356

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	Au- AA24 Au ppm	ME- MS61 Ag ppm	ME- MS61 Al %	ME- MS61 As ppm	ME- MS61 Ba ppm	ME- MS61 Be ppm	ME- MS61 Bi ppm	ME- MS61 Ca %	ME- MS61 Cd ppm	ME- MS61 Ce ppm	ME- MS61 Co ppm	ME- MS61 Cr ppm	ME- MS61 Cs ppm	ME- MS61 Cu ppm
		0.02	0.005	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
M677478		6.60	0.037	0.13	8.04	12.1	330	0.79	0.31	2.88	0.14	22.1	18.3	24	1.23	45.2
M677479		7.02	0.032	0.15	8.29	7.2	350	0.79	0.24	3.21	0.04	20.8	14.6	27	1.73	41.6
M677480		6.86	0.145	0.58	7.35	7.7	1090	0.77	0.45	2.41	0.69	16.95	11.7	36	1.41	131.5
M677481		6.61	0.031	0.12	7.11	3.4	870	0.83	0.55	1.99	0.09	15.85	5.7	32	1.20	22.9
M677482		6.33	0.043	0.16	7.23	8.2	530	0.86	0.45	2.17	0.05	19.60	8.2	61	0.89	148.0
M677483		0.11	0.792	7.06	4.81	7580	1160	1.50	198.5	11.95	0.91	416	73.2	43	9.07	3240
M677484		6.46	0.022	0.09	7.33	23.5	810	0.79	0.95	1.77	0.04	14.55	10.6	33	1.80	14.8
M677485		6.36	0.023	0.10	7.08	6.4	1100	0.89	0.78	1.94	0.10	15.95	5.7	32	1.27	21.9
M677486		6.65	0.048	0.19	6.98	20.2	660	0.70	0.55	2.04	0.03	15.85	8.6	31	1.23	32.9
M677487		6.67	0.053	0.09	7.66	19.1	760	0.71	0.80	2.10	0.05	18.70	8.0	36	1.25	29.4
M677488		<0.02	0.043	0.09	7.65	20.2	850	0.71	0.89	2.06	0.05	18.05	8.0	35	1.22	26.7
M677489		6.79	0.059	0.22	7.41	8.7	1550	0.88	0.40	2.51	0.06	19.35	10.7	58	1.16	139.5
M677490		7.27	0.036	0.12	8.02	7.3	450	0.85	0.28	2.95	0.11	38.0	11.2	151	1.16	114.5
M677491		6.92	0.017	0.11	7.91	4.8	420	1.02	0.18	3.45	0.55	43.1	13.6	150	1.37	57.2
M677492		6.11	0.092	0.43	7.95	6.3	650	1.01	0.39	4.41	0.06	49.9	14.0	160	1.06	313
M677493		6.88	0.125	0.42	7.60	12.9	1050	0.79	0.73	1.91	0.58	17.55	6.8	34	1.58	53.8
M677494		2.84	<0.005	0.01	0.09	<5	40	0.07	0.03	21.3	0.07	1.19	1.5	<1	0.29	3.1
M677495		3.85	0.208	0.87	7.46	18.8	320	0.77	1.05	1.49	2.72	14.25	9.6	29	1.57	266
M677496		6.52	0.107	0.54	7.64	3.7	1640	0.84	0.65	1.39	0.72	18.20	7.9	33	1.46	28.9
M677497		5.94	0.245	3.70	7.33	102.0	470	0.85	2.83	1.21	5.58	11.05	10.0	25	1.41	1000
M677498		6.30	0.094	0.38	7.65	1.9	1070	0.87	0.38	1.53	0.40	15.05	6.4	34	1.52	42.5
M677499		0.10	0.846	7.04	5.02	8390	1240	1.63	212	12.35	1.4	408	74.5	49	9.63	3390
M677500		6.27	0.067	0.44	7.37	3.9	1480	0.79	0.82	1.67	0.47	17.30	7.3	33	1.67	47.9
M677501		4.38	0.141	1.04	7.64	3.9	940	0.78	1.73	1.90	1.06	17.90	6.7	35	1.90	523
M677502		3.53	0.052	0.18	6.68	3.7	850	1.10	0.33	2.07	0.42	12.95	6.0	32	1.29	53.9
M677503		6.33	0.079	0.18	6.65	3.7	860	1.02	0.32	1.99	0.34	14.05	8.0	30	1.61	41.2
M677504		2.81	<0.005	0.01	0.06	<5	30	0.07	0.05	19.85	0.07	1.09	1.1	<1	0.15	2.0
M677505		6.11	0.058	0.86	6.66	6.4	410	1.16	0.38	1.99	1.32	17.25	5.2	30	2.26	75.2
M677506		6.11	0.068	0.25	7.05	3.4	530	1.04	0.38	1.87	0.36	17.00	6.2	31	1.44	111.5
M677507		5.87	0.052	0.21	7.09	1.9	670	0.98	0.34	1.73	0.65	17.35	5.2	31	1.34	44.7
M677508		6.18	0.034	0.11	6.95	1.6	500	1.00	0.29	1.77	0.07	17.95	5.4	31	1.43	10.0
M677509		6.69	0.077	0.41	6.92	2.1	630	0.98	0.45	2.04	0.21	17.80	6.3	30	1.35	250
M677510		3.52	0.062	0.39	6.88	2.2	630	0.89	0.47	2.00	0.14	17.15	6.0	30	1.36	245
M677511		6.53	0.042	0.57	6.87	2.0	570	0.95	0.54	1.90	0.69	16.45	6.1	32	1.58	332
M677512		5.13	0.058	0.55	6.78	2.5	580	0.90	0.60	1.76	0.23	17.65	6.0	30	1.87	150.0
M677513		5.64	0.139	0.47	7.01	4.5	570	1.06	2.03	1.37	0.43	18.40	11.2	30	1.79	197.5



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Project: Mint

CERTIFICATE OF ANALYSIS WH12212356

Sample Description	Method Analyte Units LOR	ME- MS61 Fe %	ME- MS61 Ga ppm	ME- MS61 Ge ppm	ME- MS61 Hf ppm	ME- MS61 In ppm	ME- MS61 K %	ME- MS61 La ppm	ME- MS61 Li ppm	ME- MS61 Mg %	ME- MS61 Mn ppm	ME- MS61 Mo ppm	ME- MS61 Na %	ME- MS61 Nb ppm	ME- MS61 Ni ppm	ME- MS61 P ppm
		0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
M677478		3.97	18.75	0.12	0.2	0.021	0.97	10.0	8.6	1.33	349	4.99	3.23	5.3	29.0	1260
M677479		4.32	19.60	0.15	0.2	0.022	1.41	10.6	8.4	1.77	308	1.42	3.23	6.5	39.1	1210
M677480		2.54	15.95	0.14	0.5	0.042	1.41	9.7	6.2	1.02	362	1.10	2.62	5.2	36.5	590
M677481		1.63	16.55	0.11	0.6	0.016	1.10	9.5	5.4	0.81	247	0.62	2.83	4.6	32.8	370
M677482		2.64	16.40	0.13	0.5	0.023	0.73	10.5	7.1	1.23	255	4.21	2.90	4.4	51.0	720
M677483		9.00	18.55	0.40	1.8	1.640	1.86	240	37.3	1.33	2290	14.10	0.80	8.8	36.8	900
M677484		2.65	15.10	0.12	0.4	0.024	1.66	8.8	5.6	0.83	257	0.62	2.39	3.9	31.5	390
M677485		1.82	15.30	0.10	0.8	0.017	1.18	9.7	6.1	0.76	233	1.09	2.68	4.3	30.2	400
M677486		2.56	15.25	0.12	0.7	0.021	1.34	9.7	5.9	0.75	225	0.81	2.52	3.6	29.3	360
M677487		2.54	16.25	0.12	0.5	0.018	1.38	11.4	5.7	0.81	211	0.58	2.67	4.0	31.8	410
M677488		2.47	14.85	0.13	0.5	0.018	1.36	10.9	5.4	0.81	202	0.52	2.67	3.7	31.3	390
M677489		2.83	16.60	0.14	0.6	0.027	1.02	11.2	6.3	1.11	236	0.96	2.61	4.9	48.1	690
M677490		4.72	17.90	0.19	0.4	0.034	1.13	20.8	8.9	2.68	370	2.25	2.56	10.2	112.0	1850
M677491		3.67	17.90	0.20	0.5	0.041	1.10	21.6	8.5	2.62	334	1.75	2.61	6.9	97.8	1990
M677492		3.84	19.05	0.18	0.7	0.065	0.61	25.5	10.1	2.94	504	0.88	2.41	12.4	118.0	2140
M677493		2.50	15.70	0.12	0.7	0.035	1.79	10.8	7.0	0.92	264	0.53	2.38	3.9	30.9	390
M677494		0.50	0.44	0.08	<0.1	<0.005	0.03	0.7	1.4	12.75	230	0.12	0.01	0.3	2.9	210
M677495		3.59	14.80	0.17	0.6	0.124	2.00	9.1	7.2	0.83	237	0.45	1.93	3.0	31.7	340
M677496		2.25	15.00	0.11	0.6	0.020	1.83	11.2	7.1	0.81	275	0.57	2.46	3.7	30.9	370
M677497		3.09	14.75	0.15	0.6	0.091	2.09	6.0	6.7	0.69	254	0.69	1.79	4.1	29.6	330
M677498		1.89	15.35	0.10	0.6	0.022	1.64	9.1	8.1	0.85	322	0.92	2.56	4.2	33.4	370
M677499		8.64	18.30	0.44	1.6	1.805	1.84	266	45.4	1.33	2420	16.00	0.79	9.1	42.8	960
M677500		1.99	15.55	0.10	0.6	0.043	1.54	10.7	7.8	0.75	249	0.94	2.40	4.1	31.7	380
M677501		1.90	15.70	0.09	0.6	0.093	1.33	11.2	9.5	0.79	305	0.77	2.62	4.2	31.9	390
M677502		1.86	16.35	0.07	0.7	0.031	0.87	7.0	7.1	0.77	189	0.53	2.96	4.5	28.8	350
M677503		1.75	16.40	0.10	0.7	0.031	0.98	7.6	7.5	0.76	213	0.38	2.90	4.5	27.2	340
M677504		0.45	0.36	0.32	<0.1	<0.005	0.02	0.5	1.2	12.25	198	0.14	0.01	0.3	1.3	170
M677505		1.48	16.70	0.20	0.7	0.031	1.22	9.1	10.5	0.82	346	0.42	2.73	4.5	26.1	350
M677506		1.70	17.25	0.17	0.7	0.033	0.96	9.2	6.2	0.84	228	0.84	3.12	4.6	28.4	360
M677507		1.59	17.60	0.13	0.7	0.031	0.93	9.4	5.5	0.87	194	0.91	3.21	4.5	28.2	370
M677508		1.82	17.05	0.11	0.7	0.031	0.78	9.9	5.2	0.82	173	0.57	3.23	4.5	27.4	350
M677509		1.70	17.80	0.12	0.7	0.060	0.90	9.9	4.9	0.77	175	15.30	3.14	4.8	28.9	360
M677510		1.73	17.10	0.11	0.7	0.049	0.93	9.5	4.6	0.76	174	13.20	3.04	4.6	27.8	340
M677511		1.69	17.45	0.11	0.5	0.082	1.06	8.9	5.4	0.83	203	21.7	2.91	3.8	30.1	360
M677512		1.69	17.75	0.12	0.5	0.044	1.47	9.4	7.6	0.79	307	16.45	2.41	3.5	30.1	360
M677513		2.69	17.70	0.11	0.5	0.051	1.77	10.2	5.6	0.78	156	3.87	1.93	3.2	29.4	360



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Project: Mint

CERTIFICATE OF ANALYSIS WH12212356

Sample Description	Method Analyte Units LOR	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61
		Pb	Pb	Fe	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
		ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
		0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.02
M677478		13.2	22.8	0.021	2.00	1.01	12.3	1	1.3	530	0.37	0.20	1.4	0.441	0.34
M677479		6.1	35.4	0.002	1.21	0.70	15.1	3	1.3	517	0.42	0.17	1.1	0.548	0.51
M677480		20.3	40.5	<0.002	1.47	0.83	7.8	2	1.3	332	0.44	0.51	2.0	0.245	0.46
M677481		10.3	29.8	<0.002	0.86	0.53	5.5	2	1.1	391	0.43	0.26	2.6	0.146	0.32
M677482		5.5	20.0	0.002	1.58	0.65	8.5	2	1.1	435	0.37	0.25	2.0	0.238	0.24
M677483		32.5	124.5	0.006	1.26	29.9	7.1	6	97.0	236	0.61	1.11	10.5	0.225	1.26
M677484		5.6	50.0	<0.002	2.21	0.81	5.8	2	1.1	271	0.34	0.43	2.5	0.158	0.53
M677485		8.8	33.5	<0.002	1.17	0.54	5.7	2	0.9	396	0.41	0.36	2.7	0.147	0.35
M677486		5.5	32.4	<0.002	2.12	0.53	5.5	2	1.4	355	0.34	0.39	2.4	0.134	0.35
M677487		6.9	33.5	<0.002	2.12	0.48	5.4	2	1.5	341	0.33	0.57	2.5	0.152	0.37
M677488		5.8	32.1	<0.002	2.09	0.49	5.2	2	1.4	341	0.32	0.53	2.7	0.150	0.38
M677489		7.0	21.1	<0.002	1.85	0.68	6.8	2	1.4	466	0.40	0.31	2.5	0.238	0.30
M677490		5.5	32.8	<0.002	1.46	0.71	14.3	3	1.5	542	0.60	0.18	1.9	0.611	0.49
M677491		7.8	27.8	<0.002	1.23	0.58	14.4	3	1.6	597	0.45	0.11	1.7	0.557	0.53
M677492		13.3	18.1	<0.002	1.25	1.05	15.7	3	1.9	615	0.70	0.22	2.1	0.708	0.23
M677493		13.3	45.4	<0.002	2.28	0.55	5.1	3	2.2	253	0.33	0.65	2.6	0.146	0.53
M677494		1.9	1.7	<0.002	<0.01	<0.05	0.3	2	<0.2	47.1	<0.05	<0.05	<0.2	<0.005	<0.02
M677495		25.5	49.7	<0.002	3.66	0.73	4.9	4	2.6	192.0	0.29	1.02	2.7	0.121	0.54
M677496		25.8	48.6	<0.002	1.72	0.53	5.3	2	1.3	222	0.32	0.92	2.8	0.148	0.51
M677497		334	61.2	0.003	2.51	35.3	4.5	2	1.7	160.0	0.35	1.71	2.6	0.147	0.53
M677498		17.7	45.5	<0.002	1.69	0.95	5.1	2	1.3	252	0.37	0.71	2.9	0.154	0.48
M677499		34.4	127.5	0.003	1.31	31.7	8.7	8	102.0	237	0.60	1.07	11.3	0.236	1.36
M677500		15.3	42.7	<0.002	1.83	1.88	5.2	2	1.6	274	0.37	0.68	2.8	0.149	0.43
M677501		14.5	36.5	<0.002	1.68	1.88	5.4	2	1.9	283	0.39	1.42	2.7	0.156	0.41
M677502		7.5	22.7	<0.002	1.27	0.42	5.3	1	1.5	311	0.40	0.28	2.3	0.151	0.27
M677503		7.2	28.9	<0.002	1.22	0.38	5.3	1	1.5	295	0.39	0.34	2.3	0.153	0.34
M677504		2.0	1.1	<0.002	<0.01	0.05	0.2	1	<0.2	51.8	<0.05	<0.05	<0.2	<0.005	<0.02
M677505		59.7	39.4	<0.002	0.98	6.05	5.3	1	1.6	239	0.38	0.43	2.3	0.154	0.47
M677506		8.8	28.4	<0.002	1.02	1.98	5.6	1	1.5	338	0.42	0.45	2.7	0.151	0.32
M677507		7.2	26.9	<0.002	1.02	0.42	5.6	1	1.5	352	0.39	0.34	2.6	0.150	0.30
M677508		5.1	23.5	<0.002	1.23	0.36	5.5	1	1.0	339	0.40	0.36	2.6	0.151	0.26
M677509		8.9	24.3	0.024	1.18	0.51	5.5	2	2.5	387	0.41	0.40	2.7	0.152	0.25
M677510		8.8	25.8	0.021	1.17	0.45	5.3	1	2.5	379	0.41	0.41	2.6	0.151	0.27
M677511		8.7	31.3	0.025	1.22	0.77	5.5	2	2.9	364	0.34	0.45	2.5	0.139	0.35
M677512		10.7	53.0	0.017	1.38	1.18	5.7	2	1.9	236	0.29	0.57	2.5	0.129	0.54
M677513		22.1	60.2	0.003	2.71	2.00	5.5	3	2.0	211	0.26	1.40	2.9	0.116	0.53



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CERTIFICATE OF ANALYSIS WH12212356

Sample Description	Method Analyte Units LOR	ME- MS61 V ppm 1	ME- MS61 W ppm 0.1	ME- MS61 Y ppm 0.1	ME- MS61 Zn ppm 2	ME- MS61 Zr ppm 0.5
M677478		130	1.4	12.7	70	5.3
M677479		141	0.9	13.9	38	3.8
M677480		62	0.5	7.4	114	10.2
M677481		39	0.4	5.7	34	12.6
M677482		62	0.7	7.9	31	9.7
M677483		51	30.6	28.9	156	58.5
M677484		40	0.6	5.6	29	6.3
M677485		38	0.4	5.9	30	14.9
M677486		37	0.3	5.2	22	14.9
M677487		41	0.4	6.2	24	11.6
M677488		40	0.4	5.8	23	11.2
M677489		55	0.4	6.8	33	13.0
M677490		121	0.7	13.0	40	10.7
M677491		123	0.9	13.8	78	11.8
M677492		131	0.8	15.2	59	19.1
M677493		39	0.6	5.6	98	16.3
M677494		1	0.1	0.9	18	<0.5
M677495		35	1.0	5.0	362	14.4
M677496		40	0.7	6.4	100	13.5
M677497		36	0.6	5.1	551	12.7
M677498		38	0.4	4.6	71	12.6
M677499		55	29.2	32.0	165	57.0
M677500		37	0.5	5.1	73	13.5
M677501		40	0.5	5.7	149	13.7
M677502		35	0.4	6.3	64	16.2
M677503		35	0.4	5.4	52	16.1
M677504		2	0.1	0.8	17	<0.5
M677505		36	0.3	5.0	156	15.4
M677506		36	0.4	5.5	59	15.8
M677507		37	0.3	5.5	81	16.3
M677508		35	0.4	5.6	27	16.9
M677509		37	0.7	5.7	40	16.5
M677510		37	0.7	5.5	33	15.9
M677511		38	1.0	5.8	90	11.1
M677512		38	0.7	5.5	42	11.0
M677513		36	0.9	4.9	54	11.8



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Method	CERTIFICATE COMMENTS
ME- MS61 ME- MS61	REE's may not be totally soluble in this method. Interference: Samples with Ca> 10%on ICP- MS As. ICP- AES As results reported (5 ppm DL)



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Project: Mint

P.O. No.: Batch 14

This report is for 36 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 10- SEP- 2012.

The following have access to data associated with this certificate:

MATT DUMALA

JOAN MARIACHER

HEATHER SMITH

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/ o BarCode
PUL- 31d	Pulverize Split - duplicate
SPL- 21d	Split sample - duplicate
LOG- 24	Pulp Login - Rcd w/ o Barcode
CRU- QC	Crushing QC Test
PUL- QC	Pulverizing QC Test
CRU- 31	Fine crushing - 70%< 2mm
LOG- 22d	Sample login - Rcd w/ o BarCode dup
SPL- 21	Split sample - riffle splitter
PUL- 31	Pulverize split to 85%< 75 um

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION
ME- MS61	48 element four acid ICP- MS
Au- AA24	Au 50g FA AA finish AAS

To: **SILVER RANGE RESOURCES LTD.**
ATTN: JOAN MARIACHER
C/ O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
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This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager



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CERTIFICATE OF ANALYSIS WH12212390

Sample Description	Method Analyte Units LOR	WEI- 21	Au- AA24	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61
		Recvd Wt. kg	Au ppm	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm
		0.02	0.005	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
M677442		5.99	0.008	0.15	7.91	6.9	590	0.75	0.19	1.75	0.08	15.15	7.4	63	0.64	12.2
M677443		5.69	0.005	0.05	7.72	5.0	660	0.82	0.15	1.56	0.07	14.90	8.3	60	0.62	7.1
M677444		5.77	0.007	0.05	7.23	4.9	620	0.86	0.20	1.54	0.07	12.50	8.1	52	0.62	9.3
M677445		5.52	0.007	0.08	7.70	2.4	560	0.85	0.21	1.92	0.06	18.55	5.1	57	0.52	25.8
M677446		6.67	0.021	0.16	7.62	6.1	470	0.84	0.20	2.50	0.06	25.2	10.9	139	1.27	42.8
M677447		<0.02	0.023	0.19	7.84	6.5	470	0.90	0.21	2.54	0.06	26.5	11.3	139	1.31	46.5
M677448		7.17	0.011	0.12	7.40	5.7	450	0.97	0.23	2.47	0.40	17.25	16.8	75	0.74	23.2
M677449		7.31	0.023	0.31	8.29	7.0	400	0.95	0.40	3.11	0.24	19.45	21.3	32	1.36	42.8
M677450		6.98	0.017	0.15	8.46	7.1	500	0.94	0.57	3.24	0.11	22.0	27.4	24	1.25	37.0
M677451		6.87	0.022	0.28	8.49	6.1	530	0.97	0.39	2.69	0.16	25.0	18.6	29	1.39	92.3
M677452		0.26	0.811	6.77	5.14	8620	1260	1.10	204	12.60	1.01	472	74.8	50	10.15	3460
M677453		3.84	0.045	0.47	8.45	14.3	920	0.91	0.51	1.95	0.64	24.6	53.2	24	1.37	44.7
M677454		3.84	0.151	4.04	8.81	12.8	680	0.93	0.45	1.79	0.96	13.75	25.9	22	1.20	45.1
M677455		5.50	0.021	0.14	8.98	5.0	940	0.91	0.22	1.34	0.24	12.10	24.3	22	1.15	40.7
M677456		6.19	0.027	0.15	8.75	3.5	700	0.90	0.24	2.12	0.15	19.85	31.4	25	0.88	76.9
M677457		2.11	<0.005	0.01	0.09	<5	20	0.05	0.03	21.3	0.07	1.36	1.5	<1	0.27	2.6
M677458		6.85	0.018	0.11	8.82	7.4	470	0.90	0.24	2.20	0.06	23.2	22.9	25	0.79	29.0
M677459		6.62	0.014	0.18	8.68	4.7	380	0.89	0.16	2.89	0.13	26.2	22.4	25	1.05	18.4
M677460		6.51	0.037	0.23	8.67	5.8	440	0.96	0.12	3.22	0.28	24.8	13.8	26	1.17	71.3
M677461		6.27	0.016	0.16	8.19	3.8	340	0.91	0.23	2.70	0.11	20.4	26.0	24	0.75	48.2
M677462		2.85	0.019	0.18	8.24	5.4	380	0.89	0.25	2.77	0.11	20.2	28.6	23	0.76	51.4
M677463		6.78	0.013	0.12	8.46	5.0	370	0.93	0.23	3.16	0.08	19.25	22.2	26	1.13	26.5
M677464		6.67	0.028	0.22	8.91	6.0	430	0.93	0.23	3.67	0.20	22.8	27.6	25	1.31	34.3
M677465		7.41	0.043	0.16	7.65	4.8	670	1.48	0.15	2.55	0.08	32.4	6.8	10	0.59	39.6
M677466		6.88	0.076	0.10	8.25	3.5	520	1.56	0.13	2.33	0.05	40.4	6.8	8	0.76	46.2
M677467		0.09	0.822	7.19	5.23	8880	1290	1.15	228	13.90	1.02	473	73.6	49	10.10	3550
M677468		7.04	0.018	0.09	7.85	5.8	560	1.41	0.18	2.30	0.07	36.7	6.8	8	0.71	14.8
M677469		7.09	0.085	0.52	7.80	15.8	370	1.30	0.17	2.06	0.15	34.8	7.6	9	1.11	23.6
M677470		6.99	0.331	2.50	7.55	22.9	430	1.31	0.40	2.47	6.66	32.5	10.0	11	1.67	99.2
M677471		6.58	0.051	0.37	7.62	11.4	560	1.32	0.18	2.55	0.44	31.8	7.4	9	1.01	88.1
M677472		6.39	0.027	0.22	8.26	9.1	490	1.48	0.19	2.28	0.50	37.8	4.5	10	0.94	99.6
M677473		2.08	<0.005	0.02	0.11	<5	50	0.07	0.04	20.8	0.07	1.55	1.4	<1	0.35	2.3
M677474		6.74	0.052	0.69	7.32	16.7	540	1.46	0.40	2.54	3.47	30.8	6.3	11	1.13	82.9
M677475		6.43	0.015	0.14	7.05	9.8	800	1.17	0.06	2.99	0.16	22.4	8.8	18	1.94	14.0
M677476		5.05	0.022	0.18	6.55	16.2	690	1.02	0.07	2.99	0.17	19.85	8.9	17	1.75	15.1
M677477		5.60	0.006	0.09	6.57	5.6	750	1.10	0.03	2.90	0.09	20.6	8.4	16	1.73	12.7



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CERTIFICATE OF ANALYSIS WH12212390

Sample Description	Method Analyte Units LOR	ME- MS61 Fe %	ME- MS61 Ga ppm	ME- MS61 Ge ppm	ME- MS61 Hf ppm	ME- MS61 In ppm	ME- MS61 K %	ME- MS61 La ppm	ME- MS61 Li ppm	ME- MS61 Mg %	ME- MS61 Mn ppm	ME- MS61 Mo ppm	ME- MS61 Na %	ME- MS61 Nb ppm	ME- MS61 Ni ppm	ME- MS61 P ppm
		0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
M677442		2.02	15.60	0.06	0.2	0.020	0.95	7.2	8.7	1.32	292	1.18	3.64	3.3	49.3	620
M677443		1.67	14.95	0.10	0.2	0.014	0.91	7.2	8.5	1.24	258	0.82	3.70	3.0	46.1	520
M677444		1.71	14.95	0.10	0.3	0.012	0.95	5.9	7.6	0.98	228	1.68	3.62	3.4	38.2	530
M677445		2.04	15.90	0.12	0.3	0.025	0.97	8.7	9.6	1.29	295	0.95	3.51	4.2	47.6	670
M677446		3.30	16.15	0.15	0.2	0.040	1.20	11.0	12.7	1.96	459	1.81	2.36	5.9	67.4	1030
M677447		3.34	16.80	0.16	0.2	0.041	1.23	11.7	12.7	1.98	467	1.89	2.39	6.0	69.6	1030
M677448		2.44	16.90	0.14	0.2	0.025	1.05	7.6	11.5	1.46	298	1.61	2.78	6.0	59.4	770
M677449		3.84	19.05	0.18	0.2	0.022	1.16	7.9	9.9	1.77	369	1.34	2.89	6.2	45.7	1260
M677450		4.13	19.65	0.18	0.2	0.025	1.21	9.3	10.6	1.76	296	3.90	3.04	5.7	43.3	1270
M677451		2.98	20.4	0.15	0.2	0.029	1.32	11.1	10.7	1.73	264	1.12	3.07	4.7	41.9	1290
M677452		9.32	17.95	0.52	1.8	1.830	1.90	254	31.4	1.39	2420	13.35	0.82	9.5	37.2	960
M677453		3.10	17.80	0.14	0.2	0.018	1.53	10.7	11.6	1.77	381	1.12	3.17	3.8	52.0	1360
M677454		2.39	17.00	0.12	0.1	0.021	1.55	5.7	8.0	1.12	320	5.88	4.05	3.2	35.6	1360
M677455		1.75	16.35	0.10	0.2	0.013	1.57	5.1	9.2	1.56	228	4.73	4.08	3.5	45.9	1530
M677456		2.27	20.1	0.15	0.2	0.013	1.24	8.7	11.5	1.87	201	3.59	3.70	4.2	48.7	1330
M677457		0.48	0.39	0.31	<0.1	<0.005	0.03	0.6	1.0	12.60	211	0.14	0.02	0.3	2.8	180
M677458		3.00	19.30	0.18	0.2	0.021	1.24	10.6	9.2	1.55	207	1.57	3.90	4.0	37.7	1300
M677459		3.05	19.20	0.16	0.2	0.021	1.25	11.5	8.3	1.42	253	0.74	3.55	5.3	36.6	1310
M677460		2.70	21.4	0.17	0.2	0.022	1.24	10.8	9.5	1.65	348	1.43	3.05	5.6	36.7	1330
M677461		3.06	19.05	0.17	0.2	0.016	1.06	8.9	9.9	1.61	295	1.53	3.07	4.4	37.7	1230
M677462		3.23	19.20	0.17	0.2	0.013	1.08	8.9	10.1	1.65	288	1.59	3.06	4.3	39.5	1280
M677463		3.85	19.60	0.18	0.2	0.019	1.26	7.6	8.4	1.56	276	1.24	3.36	6.5	37.7	1370
M677464		3.95	19.85	0.19	0.2	0.020	1.22	9.5	8.1	1.53	362	2.24	3.07	6.6	37.5	1300
M677465		2.95	17.00	0.16	0.3	0.027	0.75	15.0	5.9	0.89	304	4.24	3.36	9.6	11.9	1090
M677466		3.30	17.55	0.17	0.3	0.035	0.74	19.9	5.8	0.86	327	2.85	3.58	9.4	9.8	1060
M677467		9.54	17.85	0.51	1.8	1.835	1.96	259	31.5	1.42	2490	13.85	0.83	9.7	37.3	990
M677468		2.66	15.90	0.14	0.4	0.017	0.60	18.5	5.5	0.80	208	2.09	3.66	8.3	9.4	950
M677469		3.43	15.60	0.16	0.3	0.042	0.73	17.6	6.2	0.70	456	1.98	3.36	8.1	9.7	940
M677470		2.87	16.10	0.16	0.3	0.104	0.89	16.0	6.7	0.68	724	2.25	3.37	9.1	9.6	970
M677471		2.92	16.45	0.16	0.3	0.021	0.82	15.1	6.2	0.70	357	2.68	3.35	9.2	10.2	930
M677472		2.75	17.45	0.17	0.2	0.021	0.84	18.8	6.4	0.62	236	2.85	3.62	10.3	11.2	1050
M677473		0.51	0.47	0.29	<0.1	0.005	0.03	0.7	1.2	12.30	218	0.16	0.02	0.4	2.8	190
M677474		2.35	16.90	0.16	0.6	0.042	1.06	14.7	10.0	0.56	510	2.41	2.88	8.9	12.8	900
M677475		2.32	16.50	0.13	1.5	0.028	1.88	10.5	19.7	0.82	1020	1.19	1.89	7.6	17.7	650
M677476		2.25	15.60	0.14	1.5	0.023	1.84	9.0	22.9	0.85	979	1.32	1.74	7.2	17.0	640
M677477		2.12	16.20	0.15	1.5	0.021	1.68	9.4	21.1	0.79	904	1.00	2.00	7.4	15.9	610



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Sample Description	Method Analyte Units LOR	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61
		Pb	Pb	Fe	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	U
		ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
		0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.1
M677442		6.9	25.9	0.007	0.53	0.73	9.0	1	0.6	421	0.26	0.12	0.8	0.210	0.2
M677443		5.4	25.4	0.002	0.64	0.70	7.1	1	0.6	392	0.23	0.07	0.8	0.180	0.3
M677444		5.7	25.0	0.021	0.87	0.62	6.5	2	0.6	386	0.25	<0.05	0.7	0.194	0.5
M677445		6.2	27.1	0.007	0.54	0.64	8.5	1	0.8	430	0.31	0.05	0.8	0.246	0.4
M677446		8.0	34.2	0.007	0.67	0.92	14.1	2	0.8	407	0.38	0.16	1.2	0.366	0.3
M677447		8.0	36.1	0.007	0.70	0.93	14.6	1	0.9	413	0.39	0.16	1.2	0.370	0.3
M677448		18.7	31.3	0.010	0.63	0.80	10.2	2	1.0	479	0.41	0.08	0.8	0.344	0.2
M677449		14.5	27.9	0.003	1.15	0.90	12.8	2	1.2	496	0.38	0.19	0.7	0.467	0.2
M677450		8.1	30.8	0.026	2.01	0.78	13.4	2	1.6	487	0.35	0.15	0.8	0.461	0.2
M677451		8.4	36.5	0.012	1.83	0.91	12.3	2	2.1	457	0.30	0.14	0.7	0.395	0.2
M677452		33.0	132.5	0.004	1.32	31.9	7.2	7	106.5	260	0.63	1.03	10.5	0.231	12.9
M677453		8.9	35.3	<0.002	2.70	1.72	11.5	3	1.6	355	0.24	0.26	0.7	0.338	0.3
M677454		212	40.2	<0.002	1.59	21.1	11.3	2	1.5	355	0.21	1.23	0.8	0.285	0.3
M677455		9.7	37.6	0.006	1.31	1.11	12.0	2	1.7	356	0.22	<0.05	0.8	0.309	0.3
M677456		9.3	32.5	0.013	1.50	0.62	13.1	3	1.9	481	0.28	0.07	0.8	0.398	0.3
M677457		1.7	2.1	<0.002	<0.01	0.46	0.3	1	<0.2	49.7	<0.05	<0.05	<0.2	<0.005	0.6
M677458		6.4	34.9	0.002	2.41	0.60	12.6	3	1.1	487	0.26	0.08	0.8	0.382	0.3
M677459		10.2	31.3	0.002	1.55	0.61	12.9	2	1.0	513	0.34	0.14	0.7	0.475	0.2
M677460		13.8	34.8	<0.002	1.01	0.97	14.8	2	1.5	483	0.35	0.10	0.7	0.500	0.2
M677461		9.8	28.0	0.003	1.90	0.60	12.5	3	1.4	460	0.28	0.12	0.8	0.431	0.3
M677462		10.0	31.1	0.003	2.08	0.59	12.8	3	1.2	461	0.28	0.11	0.9	0.412	0.3
M677463		8.9	30.5	<0.002	1.53	0.67	13.7	3	1.1	529	0.38	0.13	0.7	0.520	0.2
M677464		11.2	38.3	0.003	1.57	0.74	14.7	3	1.6	549	0.39	0.24	0.8	0.516	0.3
M677465		7.3	16.0	0.002	0.98	0.63	6.6	2	1.2	547	0.70	0.11	2.6	0.282	0.8
M677466		5.6	21.0	0.003	0.70	0.66	5.9	2	1.5	573	0.69	0.10	3.3	0.232	0.8
M677467		32.8	135.0	0.004	1.33	32.3	7.2	7	106.5	265	0.66	0.95	10.5	0.238	12.9
M677468		6.1	15.9	0.009	1.27	0.60	5.8	3	1.4	527	0.62	0.10	3.3	0.210	0.7
M677469		7.9	25.2	0.002	1.38	1.24	5.8	2	1.7	496	0.61	0.61	3.2	0.224	0.8
M677470		141.0	25.2	<0.002	1.72	4.84	5.5	2	1.5	485	0.67	1.88	2.8	0.251	0.7
M677471		18.2	21.1	0.003	1.52	0.88	5.6	2	1.3	546	0.66	0.24	2.8	0.242	0.8
M677472		14.8	23.7	0.003	1.30	0.58	6.3	2	1.3	579	0.74	0.10	3.6	0.266	0.8
M677473		2.2	2.6	<0.002	0.01	1.26	0.4	1	<0.2	51.0	<0.05	<0.05	<0.2	<0.005	0.6
M677474		41.9	31.0	<0.002	1.01	1.81	5.1	2	1.1	478	0.68	0.25	2.9	0.234	0.8
M677475		19.5	45.8	<0.002	0.26	1.51	5.9	1	0.6	324	0.62	<0.05	2.6	0.233	1.0
M677476		25.3	41.2	<0.002	0.39	1.45	5.7	1	0.6	270	0.59	<0.05	2.4	0.221	0.9
M677477		10.5	40.1	<0.002	0.13	1.22	5.7	1	0.6	330	0.59	<0.05	2.2	0.219	0.8



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Project: Mint

CERTIFICATE OF ANALYSIS WH12212390

Sample Description	Method Analyte Units LOR	ME- MS61 V ppm 1	ME- MS61 W ppm 0.1	ME- MS61 Y ppm 0.1	ME- MS61 Zn ppm 2	ME- MS61 Zr ppm 0.5
M677442		69	0.5	5.8	33	7.0
M677443		61	0.6	5.1	28	7.8
M677444		66	0.6	5.7	25	10.5
M677445		61	0.5	6.5	33	9.2
M677446		99	0.5	8.4	53	5.4
M677447		99	0.5	8.8	54	6.2
M677448		86	0.5	7.3	61	7.6
M677449		119	0.9	12.7	57	6.0
M677450		126	1.1	12.7	44	4.4
M677451		146	1.4	11.6	46	5.6
M677452		56	38.7	32.3	169	62.4
M677453		166	1.9	11.5	73	4.7
M677454		130	3.5	8.4	213	3.9
M677455		131	3.6	8.5	52	4.5
M677456		153	2.3	8.8	33	4.9
M677457		3	0.1	1.0	16	0.5
M677458		138	1.8	9.9	30	5.1
M677459		148	0.8	11.3	41	4.8
M677460		163	1.1	13.1	77	4.6
M677461		134	1.0	10.8	45	4.9
M677462		132	1.1	11.4	43	4.9
M677463		141	0.6	12.3	43	4.3
M677464		147	1.0	13.8	62	6.0
M677465		59	1.3	10.0	37	8.9
M677466		47	1.3	10.8	34	9.6
M677467		58	36.0	32.7	175	63.3
M677468		46	1.2	9.1	28	13.4
M677469		48	1.2	10.1	42	9.5
M677470		48	1.4	9.9	730	8.8
M677471		48	1.0	9.8	79	7.8
M677472		49	0.8	11.4	72	6.4
M677473		3	0.2	1.1	17	<0.5
M677474		46	0.8	9.3	305	20.1
M677475		53	0.4	7.9	137	51.3
M677476		51	0.4	7.2	126	48.2
M677477		50	0.4	7.2	114	50.7



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CERTIFICATE OF ANALYSIS WH12212390

Method	CERTIFICATE COMMENTS
ME- MS61 ME- MS61	REE's may not be totally soluble in this method. Interference: Samples with Ca> 10%on ICP- MS As. ICP- AES As results reported (5 ppm DL)



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CERTIFICATE WH12215629

Project: Mint

P.O. No.: Batch 16

This report is for 36 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 13- SEP- 2012.

The following have access to data associated with this certificate:

MATT DUMALA

JOAN MARIACHER

HEATHER SMITH

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/ o BarCode
CRU- 31	Fine crushing - 70%< 2mm
CRU- QC	Crushing QC Test
SPL- 21	Split sample - riffle splitter
PUL- 31	Pulverize split to 85%< 75 um
LOG- 22d	Sample login - Rcd w/ o BarCode dup
SPL- 21d	Split sample - duplicate
PUL- 31d	Pulverize Split - duplicate
LOG- 23	Pulp Login - Rcd with Barcode

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au- AA24	Au 50g FA AA finish	AAS
Sn- XRF05	Sn- Trace Level XRF Analysis	XRF
ME- MS61	48 element four acid ICP- MS	

To: **SILVER RANGE RESOURCES LTD.**

ATTN: JOAN MARIACHER

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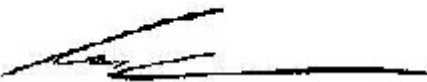
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This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:


Colin Ramshaw, Vancouver Laboratory Manager



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CERTIFICATE OF ANALYSIS WH12215629

Sample Description	Method Analyte Units LOR	WEI- 21	Au- AA24	Sn- XRF05	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61
		Recvd Wt. kg	Au ppm	Sn ppm	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm
		0.02	0.005	5	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05
M677514		4.43	0.193	<5	0.39	7.21	0.4	470	0.84	1.81	1.57	0.18	16.65	5.4	33	1.54
M677515		6.34	0.083	<5	0.28	7.24	2.7	440	0.87	0.38	1.92	0.34	15.90	5.0	36	1.22
M677516		5.42	0.047	<5	0.23	6.98	1.9	580	0.81	0.25	2.01	0.59	15.50	4.9	35	1.02
M677517		5.19	0.043	<5	0.24	6.77	4.1	480	0.66	0.16	2.03	0.20	13.65	4.5	33	1.48
M677518		5.93	0.051	<5	0.63	6.36	14.1	540	0.91	0.11	2.43	0.07	17.90	6.8	25	1.38
M677519		4.09	<0.005	<5	0.16	0.06	<5	30	0.09	0.02	21.3	0.05	1.12	0.6	<1	0.32
M677520		6.19	0.181	7	1.73	6.45	19.0	710	1.10	0.15	3.26	0.91	20.4	7.5	24	2.16
M677521		7.65	0.364	6	0.54	7.24	10.5	340	0.92	0.16	3.60	0.14	18.10	13.2	97	1.57
M677522		6.61	0.034	<5	0.17	7.55	5.6	420	0.77	0.11	3.44	0.08	23.2	19.2	116	1.36
M677523		6.79	0.039	6	0.10	7.37	3.5	310	0.80	0.08	3.37	0.09	21.1	28.6	131	1.94
M677524		0.10	0.846	110	6.87	4.85	8030	1190	1.65	197.5	12.35	1.0	413	73.5	49	8.71
M677525		6.62	0.074	<5	0.20	7.42	23.1	270	0.79	0.56	3.50	0.07	23.5	23.8	129	1.35
M677526		3.36	0.152	<5	0.13	7.38	10.3	390	0.84	0.22	3.49	0.12	24.3	14.8	93	1.12
M677527		4.82	0.015	6	0.11	6.78	8.4	610	1.03	0.16	2.67	0.11	22.6	8.4	25	1.19
M677528		8.37	0.025	5	0.12	7.29	3.8	300	0.78	0.12	3.45	0.11	21.8	31.2	128	1.96
M677529		8.50	0.036	<5	0.14	7.56	5.6	320	0.99	0.13	3.59	0.17	23.9	26.9	118	1.61
M677530		<0.02	0.036	6	0.33	7.25	4.0	310	0.90	0.13	3.49	0.12	23.5	25.9	112	1.55
M677531		8.94	0.032	7	0.18	7.48	3.3	390	1.09	0.08	4.34	0.09	32.9	27.7	138	1.55
M677532		8.62	0.026	10	0.17	7.63	2.3	430	1.19	0.07	3.92	0.09	28.5	19.5	89	1.28
M677533		8.93	0.061	7	0.12	7.62	3.5	390	1.10	0.10	3.87	0.05	27.2	18.1	113	1.37
M677534		8.63	0.037	9	0.14	7.52	6.5	320	1.24	0.13	3.13	0.06	29.5	20.6	105	1.65
M677535		4.52	<0.005	<5	0.02	0.10	<5	40	0.07	0.05	21.4	0.05	1.40	0.7	<1	0.14
M677536		7.41	0.161	6	0.15	7.70	3.8	350	1.09	0.13	2.96	0.05	20.7	20.5	42	0.89
M677537		7.95	0.049	7	0.12	8.01	5.4	420	1.21	0.12	2.64	0.12	23.3	24.2	53	1.00
M677538		8.38	0.061	7	0.16	7.39	6.0	560	2.02	0.11	1.63	0.40	41.4	27.0	9	0.65
M677539		7.72	0.040	7	0.26	7.53	8.1	600	2.17	0.17	1.73	0.27	43.5	18.8	13	0.84
M677540		3.08	0.040	5	0.28	7.67	8.0	620	1.99	0.16	1.81	0.37	43.2	17.9	12	0.80
M677541		8.32	0.052	5	0.16	7.14	10.7	590	1.97	0.12	1.74	0.05	42.1	12.7	9	0.94
M677542		8.64	0.022	<5	0.11	6.27	7.9	800	1.16	0.03	2.93	0.57	20.2	7.5	18	1.13
M677543		8.79	0.116	<5	0.35	6.00	11.0	820	1.21	0.03	2.95	0.26	18.50	7.5	18	1.14
M677544		6.65	0.148	<5	0.22	6.01	13.1	700	1.12	0.05	2.84	0.40	20.2	7.7	17	1.43
M677545		0.10	0.783	117	6.69	4.78	7940	1170	1.53	204	12.10	1.0	437	71.5	47	8.87
M677546		7.67	0.034	<5	0.14	7.25	12.6	570	2.01	0.33	1.66	0.07	42.3	18.9	8	0.77
M677547		9.03	0.066	<5	0.31	7.44	10.0	700	2.08	0.25	1.61	0.65	42.5	17.7	8	0.89
M677548		8.37	0.049	5	0.23	7.72	5.4	990	1.72	0.12	1.85	0.08	41.2	14.4	9	0.88
M677549		6.65	0.039	8	0.17	7.47	5.0	1140	1.83	0.11	2.12	0.08	40.3	18.7	9	0.67



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CERTIFICATE OF ANALYSIS WH12215629

Sample Description	Method Analyte Units LOR	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61
		Cu	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb
		ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
		0.2	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1
M677514		533	2.19	16.35	0.11	0.5	0.076	1.32	8.7	6.7	0.72	158	0.55	2.57	3.5
M677515		55.7	1.63	15.50	0.07	0.5	0.045	0.83	8.1	5.2	0.85	213	0.81	3.33	3.8
M677516		40.1	1.59	15.60	0.09	0.6	0.036	0.68	8.0	5.0	0.77	208	0.81	3.32	4.0
M677517		19.4	1.70	13.25	0.07	0.4	0.023	1.18	7.0	4.7	0.75	452	0.68	2.98	3.2
M677518		12.9	1.88	15.60	0.10	1.1	0.032	1.58	8.8	10.8	0.86	628	1.26	2.53	6.0
M677519		3.0	0.49	0.21	0.06	<0.1	<0.005	<0.01	0.5	1.0	12.75	223	0.15	0.01	0.2
M677520		71.0	2.35	15.65	0.10	1.4	0.034	1.94	9.9	12.3	0.91	1100	1.84	2.00	7.6
M677521		87.8	2.83	16.50	0.08	0.2	0.054	1.02	8.1	10.5	1.71	584	1.35	2.52	5.4
M677522		91.0	3.51	17.75	0.12	0.3	0.038	1.07	10.0	8.7	2.56	294	1.18	2.95	6.2
M677523		97.2	3.76	17.30	0.10	0.2	0.032	1.14	9.1	6.0	2.61	235	1.55	3.07	6.0
M677524		3300	8.81	19.05	0.44	1.6	1.465	1.81	243	36.7	1.35	2390	15.85	0.82	8.7
M677525		118.5	3.38	16.95	0.10	0.3	0.017	1.16	10.3	9.0	2.59	303	1.09	3.02	5.9
M677526		67.4	3.01	14.80	0.09	0.7	0.020	1.08	11.1	9.3	1.97	428	1.14	3.26	6.0
M677527		16.8	2.32	15.35	0.10	1.5	0.016	1.66	11.3	11.4	1.06	526	1.50	2.91	7.8
M677528		105.0	3.89	16.75	0.09	0.3	0.021	1.10	9.4	7.2	2.56	301	1.79	3.18	6.0
M677529		92.8	3.76	18.30	0.10	0.2	0.008	1.11	10.7	8.5	2.47	253	8.17	3.10	6.0
M677530		88.3	3.59	16.95	0.12	0.2	0.014	1.07	10.6	7.9	2.35	246	8.62	2.96	5.9
M677531		137.0	4.78	18.45	0.13	0.3	0.036	1.10	14.3	5.9	2.99	377	1.94	2.53	10.1
M677532		143.0	4.22	17.95	0.10	0.3	0.025	0.96	12.9	6.3	2.21	296	1.97	2.78	10.0
M677533		102.5	4.28	17.45	0.12	0.2	0.025	1.15	12.3	7.8	2.46	266	1.63	2.68	8.0
M677534		48.7	4.21	17.10	0.12	0.2	<0.005	1.24	13.6	8.3	2.45	254	1.92	3.13	6.1
M677535		3.3	0.49	0.32	0.07	<0.1	<0.005	<0.01	0.7	0.9	12.85	213	0.18	0.02	0.2
M677536		93.8	4.04	16.20	0.11	0.2	0.016	0.94	9.2	6.5	1.61	219	1.86	3.66	6.1
M677537		56.4	3.21	18.45	0.09	0.2	<0.005	1.17	10.2	11.0	2.10	210	3.00	3.75	4.2
M677538		16.5	2.17	13.65	0.13	0.2	0.010	0.88	20.3	5.0	0.61	177	9.31	4.12	7.6
M677539		20.4	2.18	14.70	0.13	0.3	0.006	1.00	21.7	5.8	0.58	219	7.89	3.82	14.2
M677540		17.8	2.16	14.30	0.11	0.3	0.006	0.97	20.5	5.5	0.61	237	8.04	4.03	13.5
M677541		82.3	2.23	14.10	0.12	0.2	0.025	1.11	20.8	5.1	0.51	318	6.81	3.57	14.6
M677542		11.5	2.08	15.80	0.11	1.5	0.016	1.96	9.9	12.8	0.78	964	1.59	1.96	7.9
M677543		16.6	2.04	14.90	0.11	1.6	0.021	2.06	9.0	11.3	0.78	1080	1.50	1.70	7.1
M677544		35.8	2.02	15.25	0.11	1.4	0.017	2.13	9.6	13.0	0.82	1610	1.86	1.49	7.9
M677545		3260	8.68	19.30	0.45	1.7	1.495	1.79	247	37.1	1.33	2350	15.45	0.81	8.9
M677546		31.8	2.07	15.20	0.11	0.2	0.013	1.23	21.0	5.8	0.55	311	5.68	3.62	10.6
M677547		69.9	2.57	14.25	0.11	0.3	0.012	1.48	21.9	4.7	0.53	328	5.36	3.41	8.3
M677548		132.5	2.40	14.95	0.11	0.2	0.010	1.54	20.7	5.9	0.73	176	4.22	3.04	9.0
M677549		93.9	2.78	14.30	0.13	0.2	0.012	1.27	19.9	7.0	0.65	195	5.11	3.45	13.4



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CERTIFICATE OF ANALYSIS WH12215629

Sample Description	Method Analyte Units LOR	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	
		P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
		ppm 10	ppm 0.5	ppm 0.1	ppm 0.002	% 0.01	ppm 0.05	ppm 0.1	ppm 1	ppm 0.2	ppm 0.2	ppm 0.05	ppm 0.05	ppm 0.2	% 0.005	ppm 0.02
M677514		390	10.5	44.4	0.002	2.20	2.39	4.8	4	1.7	262	0.30	1.30	2.4	0.131	0.38
M677515		390	6.1	24.9	0.003	1.15	0.45	4.6	<1	1.3	359	0.29	0.47	2.1	0.153	0.27
M677516		370	7.6	18.5	0.004	0.99	0.46	4.4	1	1.3	379	0.33	0.40	2.3	0.155	0.26
M677517		360	12.6	27.7	0.002	1.05	1.32	3.7	1	1.4	310	0.27	0.26	1.8	0.150	0.35
M677518		510	8.8	37.4	0.002	0.61	2.69	4.4	2	1.0	254	0.46	0.11	2.2	0.189	0.63
M677519		200	1.5	1.5	<0.002	<0.01	0.10	0.1	<1	0.2	43.7	<0.05	<0.05	<0.2	<0.005	0.02
M677520		670	297	42.1	0.004	0.53	19.40	5.0	1	1.0	300	0.58	0.43	2.1	0.250	0.73
M677521		1130	22.0	24.3	0.003	0.93	2.65	9.3	1	1.4	496	0.31	0.74	1.0	0.342	0.46
M677522		1170	8.9	20.7	0.004	0.67	0.95	11.4	2	1.6	582	0.35	0.14	1.1	0.417	0.51
M677523		1230	4.6	21.5	0.005	0.57	0.60	11.3	1	1.7	567	0.34	0.05	1.0	0.421	0.63
M677524		970	31.2	115.0	0.003	1.32	30.8	7.3	9	101.5	232	0.55	0.88	9.1	0.234	1.21
M677525		1260	6.6	22.5	0.006	0.37	0.76	11.6	2	2.0	522	0.33	0.06	1.0	0.419	0.51
M677526		1060	12.3	21.6	0.002	0.27	1.09	8.0	<1	1.2	443	0.37	<0.05	1.4	0.364	0.34
M677527		690	14.3	36.3	0.002	0.30	1.47	4.9	1	0.7	296	0.60	<0.05	2.3	0.253	0.49
M677528		1200	6.3	24.5	0.007	0.61	0.59	11.2	1	1.7	509	0.35	<0.05	1.0	0.408	0.62
M677529		1280	7.7	25.6	0.031	1.16	0.81	12.0	2	1.5	512	0.38	0.11	1.2	0.401	0.52
M677530		1230	8.1	23.1	0.031	1.12	0.87	11.5	2	1.6	493	0.34	0.05	1.3	0.387	0.53
M677531		1390	5.8	18.9	0.006	0.54	0.61	14.9	3	1.8	619	0.60	0.06	1.5	0.559	0.52
M677532		1210	5.0	18.0	0.004	0.32	0.47	11.6	1	1.6	612	0.65	<0.05	1.8	0.455	0.47
M677533		1260	5.3	21.6	0.003	1.14	0.54	12.2	2	1.4	571	0.54	0.13	1.9	0.450	0.49
M677534		1370	6.3	27.1	0.005	2.54	0.68	11.5	3	1.8	517	0.41	0.18	2.0	0.386	0.64
M677535		190	1.5	1.3	0.002	<0.01	0.09	0.2	1	0.2	47.3	<0.05	<0.05	<0.2	0.006	<0.02
M677536		1140	7.7	17.6	0.003	2.15	0.51	8.0	2	1.3	550	0.41	0.15	1.6	0.379	0.41
M677537		1220	17.4	23.3	0.004	2.18	0.60	10.4	3	1.6	498	0.33	0.24	1.1	0.387	0.50
M677538		940	44.5	20.3	0.005	1.80	0.75	2.6	1	1.3	437	0.63	0.34	5.1	0.138	0.28
M677539		790	13.1	23.2	0.008	1.37	0.84	3.4	1	1.8	415	1.06	0.33	5.2	0.190	0.30
M677540		840	13.2	20.3	0.011	1.37	0.80	3.2	2	1.7	436	1.09	0.33	5.1	0.193	0.28
M677541		790	8.7	25.5	0.007	1.16	0.93	3.1	1	1.9	387	1.03	0.11	5.0	0.184	0.33
M677542		640	33.3	36.9	0.002	0.34	1.45	4.5	1	0.7	267	0.60	<0.05	2.3	0.225	0.62
M677543		610	20.8	39.1	0.002	0.34	0.77	4.1	<1	0.7	254	0.58	<0.05	2.3	0.213	0.62
M677544		630	34.0	42.7	0.002	0.47	1.84	4.4	1	0.8	283	0.59	0.06	2.2	0.223	0.66
M677545		960	33.4	115.0	0.006	1.31	30.7	7.4	8	107.5	230	0.54	1.09	9.0	0.231	1.24
M677546		830	7.8	26.1	0.004	1.25	0.64	2.9	2	1.6	381	0.81	0.11	4.9	0.148	0.30
M677547		820	14.9	30.9	0.004	2.20	0.76	2.6	2	1.4	378	0.69	0.23	5.3	0.124	0.41
M677548		790	7.0	29.4	0.008	1.44	0.54	3.4	2	1.9	406	0.76	<0.05	4.7	0.175	0.33
M677549		850	8.5	22.4	0.007	0.81	0.50	3.6	2	1.9	475	0.95	0.13	4.4	0.224	0.25



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CERTIFICATE OF ANALYSIS WH12215629

Sample Description	Method Analyte Units LOR	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5
M677514		0.8	39	0.8	5.0	36	12.1
M677515		0.6	40	0.4	4.6	61	10.5
M677516		0.6	39	0.3	4.4	81	11.0
M677517		0.6	38	0.4	3.9	54	8.4
M677518		0.8	44	3.0	5.6	73	33.9
M677519		1.0	2	0.1	0.7	17	<0.5
M677520		0.9	55	0.8	6.7	224	42.1
M677521		0.3	85	1.5	8.6	80	3.9
M677522		0.3	106	1.0	8.6	37	4.9
M677523		0.3	110	1.5	8.2	24	5.5
M677524		10.4	55	28.0	26.2	167	56.0
M677525		0.3	111	1.8	8.6	34	4.6
M677526		0.5	89	1.0	8.2	61	18.7
M677527		0.9	55	0.5	6.9	67	47.7
M677528		0.4	105	1.9	8.6	34	4.3
M677529		0.4	107	1.7	10.0	33	5.8
M677530		0.4	105	1.7	9.9	32	4.7
M677531		0.6	137	2.0	12.6	32	6.2
M677532		0.5	109	1.3	11.0	27	5.7
M677533		0.6	112	1.2	10.7	32	4.9
M677534		0.6	109	1.8	10.7	28	4.6
M677535		0.7	3	0.1	0.8	16	1.2
M677536		0.5	80	1.3	9.6	32	4.2
M677537		0.4	101	2.1	9.2	46	3.6
M677538		1.0	27	1.6	7.1	68	5.2
M677539		1.0	32	2.3	8.7	57	5.7
M677540		1.0	31	2.1	8.2	68	5.8
M677541		0.8	31	2.3	8.5	39	5.2
M677542		0.9	51	0.5	6.4	176	46.3
M677543		0.8	49	0.6	6.0	139	44.4
M677544		0.9	49	1.0	6.3	149	45.7
M677545		10.6	55	29.0	26.9	165	65.1
M677546		1.0	30	1.8	9.0	34	5.9
M677547		1.2	27	1.8	7.7	98	7.0
M677548		1.0	37	3.1	7.8	25	6.0
M677549		1.1	38	3.2	9.1	32	3.9



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CERTIFICATE OF ANALYSIS WH12215629

Method	CERTIFICATE COMMENTS
ME- MS61 ME- MS61	REE's may not be totally soluble in this method. Interference: Samples with Ca> 10%on ICP- MS As. ICP- AES As results reported (5 ppm DL)



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CERTIFICATE WH12219227

Project: Mint

P.O. No.: Batch 23

This report is for 36 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 25- SEP- 2012.

The following have access to data associated with this certificate:

MATT DUMALA

JOAN MARIACHER

HEATHER SMITH

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/ o BarCode
CRU- QC	Crushing QC Test
PUL- QC	Pulverizing QC Test
CRU- 31	Fine crushing - 70%<2mm
SPL- 21	Split sample - riffle splitter
PUL- 31	Pulverize split to 85%<75 um
LOG- 22d	Sample login - Rcd w/ o BarCode dup
LOG- 24	Pulp Login - Rcd w/ o Barcode
SPL- 21d	Split sample - duplicate
PUL- 31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

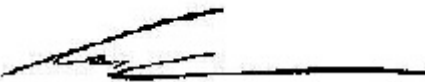
ALS CODE	DESCRIPTION	INSTRUMENT
Au- AA24	Au 50g FA AA finish	AAS
ME- MS61	48 element four acid ICP- MS	

To: **SILVER RANGE RESOURCES LTD.**
ATTN: JOAN MARIACHER
C/ O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
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This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:


Colin Ramshaw, Vancouver Laboratory Manager



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CERTIFICATE OF ANALYSIS WH12219227

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	Au- AA24 Au ppm	ME- MS61 Ag ppm	ME- MS61 Al %	ME- MS61 As ppm	ME- MS61 Ba ppm	ME- MS61 Be ppm	ME- MS61 Bi ppm	ME- MS61 Ca %	ME- MS61 Cd ppm	ME- MS61 Ce ppm	ME- MS61 Co ppm	ME- MS61 Cr ppm	ME- MS61 Cs ppm	ME- MS61 Cu ppm
		0.02	0.005	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
M650066		5.49	0.023	0.15	7.47	69.3	460	0.71	0.09	2.92	0.15	12.75	14.3	63	0.85	169.0
M650067		8.17	0.043	0.15	6.40	2.2	380	0.88	0.07	2.54	0.23	9.53	9.3	60	0.80	217
M650068		6.12	0.042	0.15	7.14	3.3	350	0.86	0.11	2.86	0.10	12.45	12.1	62	0.87	241
M650069		4.00	0.147	0.66	7.03	9.7	340	0.96	0.14	2.47	0.23	13.05	9.8	58	1.02	621
M650070		1.37	0.151	0.58	7.21	10.2	380	0.87	0.13	2.55	0.17	11.85	8.6	57	1.06	592
M650071		8.28	0.068	0.31	7.09	10.3	450	0.89	0.17	2.48	0.13	10.75	8.8	60	1.00	355
M650072		8.92	0.061	0.52	7.21	6.7	500	0.90	0.18	2.49	1.12	11.30	8.6	50	0.91	356
M650073		5.28	0.111	0.42	6.88	3.3	330	0.95	0.12	2.30	0.13	13.25	13.6	61	0.69	605
M650074		3.45	0.034	0.33	7.69	7.1	310	1.24	0.21	2.21	0.06	32.2	7.8	31	0.91	241
M650075		0.10	0.858	6.80	5.01	8690	1260	1.23	215	12.80	1.18	450	81.8	51	9.52	3590
M650076		7.61	0.049	0.27	7.07	2.6	430	0.88	0.09	2.43	0.14	11.15	10.3	59	0.68	260
M650077		8.20	0.064	0.27	7.10	2.7	430	0.94	0.24	2.39	0.14	12.75	12.0	61	0.64	295
M650078		8.50	0.070	0.26	7.18	2.3	610	0.90	0.14	2.46	0.18	12.25	7.4	56	0.44	273
M650079		8.93	0.061	0.25	7.31	2.9	510	1.03	0.15	2.50	0.39	18.35	15.9	68	0.98	343
M650080		2.75	<0.005	0.26	0.04	<5	20	0.07	0.03	19.75	0.07	1.08	0.6	<1	0.07	18.7
M650081		7.84	0.038	0.29	7.41	3.0	590	1.08	0.15	2.43	1.12	20.2	10.1	50	0.75	241
M650082		8.76	0.041	0.25	7.78	3.9	470	1.43	0.21	2.61	0.14	27.2	12.4	10	0.75	251
M650083		8.11	0.054	0.22	7.36	3.1	620	1.12	0.09	2.40	0.18	25.2	7.4	18	0.74	233
M650084		7.95	0.062	0.31	7.36	3.8	480	0.94	0.13	2.58	0.15	19.25	14.2	56	1.14	331
M650085		6.03	0.084	0.51	7.60	38.5	700	0.86	0.26	2.26	0.90	17.85	13.1	31	1.77	261
M650086		<0.02	0.080	0.47	7.54	37.8	710	0.98	0.26	2.24	0.92	17.80	12.9	29	1.79	242
M650087		10.11	0.060	0.33	7.11	12.8	650	0.78	0.12	2.05	0.10	9.43	13.7	37	0.98	330
M650088		8.64	0.030	0.18	7.27	4.0	490	0.61	0.09	1.98	0.11	9.68	7.5	52	0.91	157.0
M650089		8.23	0.022	0.22	7.34	3.5	500	0.68	0.06	2.16	0.12	10.05	10.6	65	1.06	149.0
M650090		8.77	0.031	0.30	7.09	3.7	400	0.61	0.10	2.54	0.10	15.20	10.2	59	0.90	204
M650091		0.10	0.657	7.01	4.73	7590	1160	1.18	197.0	12.35	1.4	400	68.4	45	8.89	3280
M650092		8.53	0.045	0.34	7.32	11.3	550	0.70	0.35	2.60	0.15	10.60	11.4	51	0.70	283
M650093		8.49	0.061	0.32	7.45	4.6	500	0.77	0.17	2.28	0.17	10.30	12.9	31	0.61	267
M650094		8.78	0.071	0.50	7.39	11.7	550	0.67	0.14	2.34	0.49	8.61	9.7	38	0.91	323
M650095		8.20	0.080	0.52	7.18	58.9	600	0.70	0.15	2.45	0.22	8.29	11.0	50	1.21	319
M650096		7.08	<0.005	0.01	0.05	<5	20	0.06	0.03	20.1	0.07	0.84	0.5	<1	0.10	1.8
M650097		9.15	0.058	0.39	7.12	4.1	520	0.70	0.09	2.77	0.43	11.60	13.0	71	1.20	287
M650098		8.67	0.043	0.22	7.12	2.3	570	0.73	0.08	2.74	0.17	15.85	11.0	67	0.98	222
M650099		8.66	0.065	0.47	7.37	64.3	640	0.73	0.11	2.49	0.44	13.00	10.9	65	1.42	255
M650100		8.77	0.040	0.30	7.30	5.3	530	0.78	0.07	2.56	0.15	14.30	15.6	72	1.24	265
M650101		8.79	0.063	0.24	7.78	2.9	500	0.76	0.11	2.67	0.23	18.65	11.6	79	1.23	255



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CERTIFICATE OF ANALYSIS WH12219227

Sample Description	Method Analyte Units LOR	ME- MS61 Fe %	ME- MS61 Ga ppm	ME- MS61 Ge ppm	ME- MS61 Hf ppm	ME- MS61 In ppm	ME- MS61 K %	ME- MS61 La ppm	ME- MS61 Li ppm	ME- MS61 Mg %	ME- MS61 Mn ppm	ME- MS61 Mo ppm	ME- MS61 Na %	ME- MS61 Nb ppm	ME- MS61 Ni ppm	ME- MS61 P ppm
		0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
M650066		2.23	15.50	0.12	0.2	0.022	0.87	5.9	8.1	1.19	346	3.72	3.26	4.4	65.5	530
M650067		2.13	15.75	0.10	0.1	0.018	0.88	4.5	6.9	1.12	277	6.89	3.34	3.8	40.7	490
M650068		2.08	16.85	0.09	0.1	0.019	0.85	5.8	7.4	1.12	188	7.69	3.10	4.0	41.5	520
M650069		2.30	17.20	0.09	0.1	0.026	0.85	6.1	6.7	1.05	284	28.2	3.27	3.9	37.7	560
M650070		2.27	15.90	0.12	0.1	0.024	0.93	5.6	6.7	1.00	298	12.20	3.28	3.7	34.3	530
M650071		2.18	15.95	0.10	0.2	0.032	0.84	4.8	5.5	0.87	248	10.80	3.46	3.8	33.7	430
M650072		1.96	15.60	0.08	0.1	0.029	0.88	5.3	6.0	1.01	269	8.74	3.62	3.7	31.0	490
M650073		2.07	15.80	0.09	0.1	0.031	0.72	5.9	5.9	1.14	194	9.59	3.66	3.6	37.8	510
M650074		1.82	17.20	0.12	0.5	0.020	0.90	14.6	7.9	1.00	155	2.76	3.74	6.4	24.3	710
M650075		9.20	19.95	0.52	1.8	1.790	1.99	254	32.7	1.41	2500	13.45	0.85	9.8	37.4	1010
M650076		1.95	16.50	0.10	0.1	0.032	0.86	5.1	6.4	1.17	263	7.62	3.60	4.0	31.9	440
M650077		2.56	15.70	0.09	0.1	0.031	0.91	5.6	6.5	1.24	249	7.17	3.60	4.0	33.5	440
M650078		2.07	16.35	0.10	0.1	0.044	1.03	5.9	4.9	1.00	327	8.42	3.83	5.6	24.5	360
M650079		3.01	16.90	0.10	0.1	0.020	1.39	8.6	6.9	1.72	322	10.25	3.45	7.3	41.7	860
M650080		0.47	0.15	0.14	<0.1	<0.005	0.01	0.5	0.9	12.30	194	0.21	0.01	0.1	1.9	170
M650081		2.44	16.55	0.14	0.2	0.012	1.26	9.8	6.8	1.27	249	12.30	3.49	6.7	27.5	820
M650082		2.54	18.35	0.12	0.2	0.011	1.13	13.5	6.5	0.88	209	14.90	3.47	6.6	9.1	860
M650083		2.35	17.40	0.12	0.2	0.014	1.27	11.9	7.0	0.95	323	7.01	3.43	7.2	11.9	800
M650084		2.65	17.90	0.13	0.1	0.030	1.09	9.4	7.6	1.36	254	15.20	3.40	6.4	35.5	740
M650085		2.54	16.90	0.15	0.3	0.028	1.40	8.6	8.8	0.81	276	12.10	3.23	4.3	26.7	570
M650086		2.46	17.25	0.16	0.3	0.028	1.39	8.5	9.1	0.79	276	11.55	3.20	4.2	26.3	560
M650087		2.37	16.15	0.11	0.1	0.053	0.97	4.6	6.1	0.99	238	30.4	3.88	3.5	31.7	540
M650088		1.86	14.60	0.08	0.1	0.015	0.92	4.9	4.5	1.13	214	11.75	3.78	3.5	27.7	530
M650089		2.77	16.95	0.09	0.1	0.014	1.06	5.0	5.6	1.36	284	29.3	3.71	4.0	49.5	550
M650090		2.52	17.05	0.09	0.1	0.022	1.02	6.4	5.8	1.40	348	6.57	3.34	4.0	45.8	620
M650091		9.02	18.45	0.40	1.8	1.470	1.89	233	28.0	1.36	2340	13.95	0.80	8.0	32.2	970
M650092		2.50	16.30	0.09	0.2	0.046	1.03	5.1	4.8	1.18	410	7.16	3.55	3.7	37.3	510
M650093		3.30	16.80	0.08	0.2	0.028	0.89	5.0	4.1	0.88	374	7.02	3.87	3.7	24.9	570
M650094		2.58	15.40	0.09	0.1	0.037	1.07	4.3	5.5	0.88	513	8.17	3.72	3.6	25.6	520
M650095		2.32	16.20	0.09	0.1	0.029	1.12	4.0	5.7	0.90	610	10.50	3.67	4.0	40.1	490
M650096		0.44	0.16	0.09	<0.1	0.029	0.02	<0.5	1.0	12.55	194	0.12	0.01	0.1	1.5	170
M650097		2.62	16.45	0.09	0.2	0.028	1.16	5.1	5.2	1.47	565	5.32	3.52	4.8	45.4	610
M650098		2.49	15.80	0.09	0.2	0.033	1.16	6.4	5.1	1.37	485	7.44	3.51	4.9	38.9	720
M650099		2.41	16.40	0.11	0.1	0.024	1.35	6.3	6.6	1.12	607	7.66	3.34	4.7	37.2	500
M650100		2.84	16.90	0.10	0.1	0.020	1.25	6.2	6.0	1.32	545	8.00	3.42	4.7	45.4	600
M650101		3.19	18.20	0.10	0.1	0.023	1.40	7.7	5.9	1.59	368	20.4	3.71	5.0	50.6	910



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CERTIFICATE OF ANALYSIS WH12219227

Sample Description	Method Analyte Units LOR	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61
		Pb	Pb	Fe	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Ti
		ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
		0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.02
M650066		5.5	24.6	0.006	0.45	4.80	7.8	1	0.8	556	0.32	<0.05	1.2	0.229	0.32
M650067		8.5	15.2	0.018	0.32	0.30	6.3	1	0.8	564	0.30	0.05	0.8	0.221	0.24
M650068		3.8	24.2	0.020	0.65	0.45	7.3	1	1.1	556	0.32	0.16	1.1	0.224	0.26
M650069		12.2	25.8	0.049	1.14	2.20	7.1	1	1.3	491	0.28	0.17	1.0	0.205	0.34
M650070		11.8	26.7	0.033	1.20	1.44	6.7	1	1.3	489	0.28	0.14	1.0	0.204	0.32
M650071		8.8	23.0	0.028	1.07	0.55	6.7	1	1.7	530	0.28	0.14	1.0	0.202	0.28
M650072		72.7	23.5	0.025	0.70	1.32	6.4	1	1.6	559	0.27	0.09	1.1	0.197	0.27
M650073		4.7	21.9	0.023	1.11	0.41	6.7	1	1.4	485	0.25	0.16	1.1	0.199	0.23
M650074		7.3	29.6	0.004	1.40	0.91	5.2	2	1.8	510	0.47	0.26	1.4	0.197	0.33
M650075		36.1	129.0	0.003	1.30	29.6	8.3	7	94.8	258	0.65	0.79	10.8	0.237	1.30
M650076		6.6	21.6	0.016	0.65	0.46	6.8	1	1.2	516	0.28	0.13	1.0	0.210	0.25
M650077		6.5	22.9	0.020	1.50	0.45	7.1	1	1.6	505	0.29	0.26	1.0	0.205	0.27
M650078		5.8	17.1	0.017	0.36	0.54	5.8	1	1.1	546	0.40	0.12	1.1	0.247	0.14
M650079		14.4	31.1	0.031	0.81	0.37	8.8	1	1.1	550	0.52	0.11	1.8	0.373	0.30
M650080		1.7	0.6	<0.002	0.02	0.07	0.1	<1	<0.2	48.4	<0.05	<0.05	<0.2	<0.005	<0.02
M650081		25.8	28.3	0.035	0.72	0.44	7.0	1	1.0	510	0.52	0.09	2.1	0.314	0.27
M650082		6.6	29.2	0.053	1.31	0.48	5.6	1	1.0	524	0.52	0.14	2.2	0.250	0.26
M650083		8.0	27.7	0.020	0.36	0.34	5.4	1	0.8	537	0.54	0.05	2.1	0.272	0.21
M650084		14.0	30.3	0.029	0.60	0.37	7.9	1	1.1	581	0.45	0.14	1.5	0.311	0.27
M650085		21.4	41.7	0.021	1.52	6.58	6.3	2	1.8	517	0.29	0.20	1.1	0.193	0.47
M650086		20.1	42.4	0.018	1.43	6.13	6.4	2	1.8	518	0.29	0.21	1.1	0.188	0.45
M650087		9.3	28.0	0.065	0.75	0.53	5.4	1	1.0	521	0.25	0.10	1.0	0.194	0.21
M650088		7.0	29.1	0.021	0.53	0.39	5.4	1	0.8	519	0.26	0.06	1.0	0.211	0.25
M650089		7.4	31.1	0.054	0.40	0.35	6.6	1	0.8	510	0.30	<0.05	1.1	0.241	0.33
M650090		8.2	30.0	0.014	0.63	0.43	6.7	1	1.0	501	0.29	<0.05	1.1	0.254	0.27
M650091		29.0	115.0	0.003	1.29	30.2	6.1	6	101.0	241	0.59	1.01	8.7	0.228	1.16
M650092		7.7	24.9	0.013	0.50	0.61	5.5	1	1.4	521	0.26	<0.05	1.0	0.216	0.18
M650093		7.0	20.6	0.011	0.42	0.44	4.7	1	1.0	526	0.28	0.05	1.0	0.199	0.13
M650094		49.9	25.5	0.021	0.53	1.30	5.1	1	0.8	516	0.27	0.09	0.9	0.206	0.16
M650095		10.2	27.6	0.016	0.71	4.85	5.5	1	0.7	514	0.30	0.08	0.9	0.223	0.57
M650096		1.6	0.7	<0.002	<0.01	<0.05	0.1	<1	<0.2	42.4	<0.05	<0.05	<0.2	<0.005	<0.02
M650097		27.6	28.4	0.011	0.50	0.92	7.0	1	0.9	496	0.36	0.05	1.0	0.284	0.21
M650098		5.7	28.1	0.013	0.24	0.71	6.8	1	1.0	524	0.34	<0.05	1.2	0.274	0.19
M650099		74.2	39.9	0.013	0.61	12.60	7.0	1	0.9	498	0.33	0.07	1.2	0.265	0.49
M650100		7.9	33.4	0.014	0.47	0.62	7.3	1	1.0	527	0.34	0.07	1.1	0.281	0.27
M650101		7.6	39.4	0.057	0.63	0.34	9.6	1	1.1	564	0.36	0.07	1.4	0.342	0.33



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CERTIFICATE OF ANALYSIS WH12219227

Sample Description	Method Analyte Units LOR	ME- MS61 V ppm 1	ME- MS61 W ppm 0.1	ME- MS61 Y ppm 0.1	ME- MS61 Zn ppm 2	ME- MS61 Zr ppm 0.5
M650066		55	0.6	6.2	38	2.5
M650067		53	0.5	5.1	42	2.2
M650068		56	0.5	5.8	20	2.4
M650069		59	1.1	5.3	39	1.7
M650070		54	1.3	5.1	31	1.7
M650071		50	2.4	5.4	25	2.2
M650072		48	1.3	5.2	144	2.8
M650073		52	0.8	6.3	21	2.3
M650074		44	1.5	7.2	22	20.2
M650075		56	36.5	29.6	180	57.2
M650076		47	0.7	5.4	29	2.2
M650077		50	1.0	6.2	28	2.6
M650078		41	0.7	5.7	28	2.8
M650079		78	1.0	7.5	64	2.4
M650080		1	0.1	0.7	14	<0.5
M650081		68	1.5	7.6	125	4.0
M650082		53	1.3	9.6	28	8.2
M650083		55	1.0	9.1	46	8.0
M650084		65	1.4	7.5	32	2.3
M650085		47	1.9	6.1	134	3.3
M650086		45	1.9	6.2	132	3.4
M650087		46	1.3	5.2	38	2.0
M650088		50	1.2	5.3	38	1.5
M650089		56	0.9	5.6	47	1.7
M650090		60	1.0	6.6	51	2.0
M650091		53	34.1	28.0	163	55.9
M650092		52	0.9	6.0	50	3.1
M650093		46	0.9	6.4	48	2.2
M650094		50	1.0	5.3	85	2.7
M650095		55	1.8	5.3	62	3.5
M650096		2	0.1	0.7	14	<0.5
M650097		64	0.8	6.4	83	3.0
M650098		58	0.7	6.9	52	3.1
M650099		57	1.2	5.9	86	2.8
M650100		69	0.7	6.8	52	2.4
M650101		87	0.7	8.7	60	2.0



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Method	CERTIFICATE COMMENTS
ME- MS61 ME- MS61	REE's may not be totally soluble in this method. Interference: Samples with Ca> 10%on ICP- MS As. ICP- AES As results reported (5 ppm DL)



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CERTIFICATE WH12219476

Project: Mint

P.O. No.: Batch 2

This report is for 36 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 17- SEP- 2012.

The following have access to data associated with this certificate:

MATT DUMALA

JOAN MARIACHER

HEATHER SMITH

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
FND- 02	Find Sample for Addn Analysis

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Cu- OG62	Ore Grade Cu - Four Acid	VARIABLE
ME- MS61	48 element four acid ICP- MS	
ME- OG62	Ore Grade Elements - Four Acid	ICP- AES

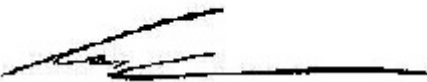
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This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Comments: **RE- ASSAY RESULTS FOR SAMPLES ORIGINALLY REPORTED ON CERTIFICATE WH12176020**

Signature:


Colin Ramshaw, Vancouver Laboratory Manager



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CERTIFICATE OF ANALYSIS WH12219476

Sample Description	Method Analyte Units LOR	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61
		Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe
		ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%
		0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01
M677037		0.73	7.94	7.2	570	0.74	0.82	0.78	3.56	18.95	20.3	87	1.67	75.2	4.46
M677038		0.59	7.94	25.7	330	0.78	0.50	0.91	0.34	23.8	15.3	122	1.15	66.3	4.12
M677039		0.85	8.11	9.3	510	0.78	1.30	1.03	1.95	26.4	24.2	79	1.30	95.1	4.89
M677040		1.37	7.32	9.6	380	0.67	1.22	0.88	0.45	17.05	25.3	103	1.01	382	5.60
M677041		1.06	7.83	9.9	430	0.70	1.62	0.99	0.38	32.7	14.0	62	1.56	326	5.78
M677042		1.90	7.89	6.0	110	0.80	1.79	0.61	0.74	12.70	18.9	65	1.87	12.9	8.91
M677043		0.01	0.09	<5	20	<0.05	0.03	20.7	0.07	1.35	1.4	<1	0.18	1.8	0.49
M677044		1.06	7.89	4.7	330	0.69	0.47	0.82	0.10	18.65	10.6	54	1.21	159.5	2.98
M677045		0.58	7.69	6.8	270	0.70	0.48	1.20	0.05	15.65	7.3	57	0.97	275	2.84
M677046		0.38	7.84	6.0	500	0.73	1.00	0.77	0.08	16.70	20.1	91	1.47	166.5	4.72
M677047		0.42	8.15	4.8	440	0.72	0.71	0.54	0.43	22.0	19.9	77	1.56	103.0	4.12
M677048		0.36	7.97	5.7	200	0.82	1.74	0.62	0.51	15.80	18.6	97	2.35	11.1	6.58
M677049		22.5	4.32	9470	600	1.28	224	13.60	2.83	215	70.3	50	5.12	>10000	10.95
M677050		0.60	8.03	7.9	290	0.71	1.00	0.77	0.14	14.20	24.5	106	1.98	67.1	6.32
M677051		1.31	7.94	5.2	480	0.81	2.77	0.90	0.33	19.30	19.5	82	1.41	230	4.33
M677052		0.45	8.09	6.4	510	0.73	0.80	0.96	0.38	21.2	17.2	91	1.62	149.5	4.48
M677053		0.31	8.10	4.3	390	0.91	0.78	0.93	0.75	25.3	21.1	102	1.16	212	3.96
M677054		0.26	8.04	5.1	430	0.81	0.84	1.10	0.28	26.6	20.3	78	1.22	184.0	4.34
M677055		0.38	8.28	7.8	380	0.73	1.09	0.61	0.53	21.7	19.8	80	1.70	30.1	4.62
M677056		6.93	5.08	8480	1220	1.28	209	13.10	1.24	446	78.0	49	10.15	3550	9.20
M677057		0.30	8.11	7.5	280	0.88	0.95	0.77	0.10	20.7	17.9	77	1.93	23.2	5.35
M677058		0.19	7.17	30.5	750	1.01	1.13	2.26	0.13	21.4	12.3	34	1.55	41.0	3.01
M677059		0.21	7.58	29.8	950	0.99	1.18	2.32	0.05	24.7	11.8	38	1.57	89.1	2.88
M677060		0.32	7.63	43.8	1100	1.10	1.85	2.67	0.16	24.2	10.2	30	1.54	18.3	2.66
M677061		0.23	7.24	27.5	1010	1.13	1.34	2.55	0.06	25.0	9.2	19	1.70	20.4	2.54
M677062		0.22	7.31	26.8	950	1.21	1.12	2.54	0.09	26.1	9.4	25	1.71	41.6	2.54
M677063		0.27	7.00	33.1	810	1.02	0.66	2.75	1.34	24.4	9.2	23	1.66	29.2	2.51
M677064		0.16	7.06	31.0	920	1.07	0.21	2.83	0.08	22.3	10.5	30	1.56	32.6	2.69
M677065		0.13	7.59	13.4	730	0.98	0.35	2.65	0.19	26.8	11.6	37	1.61	64.1	2.83
M677066		0.63	7.84	10.2	670	0.90	0.71	0.88	0.28	19.90	13.5	78	1.49	85.9	3.46
M677067		0.01	0.09	<5	20	0.06	0.02	20.1	0.06	1.44	1.1	<1	0.20	2.0	0.47
M677068		0.53	7.82	11.2	570	0.75	0.72	1.18	0.67	21.6	9.9	86	1.33	195.5	3.09
M677069		0.38	7.69	12.1	450	0.74	0.55	0.83	0.08	14.05	11.4	86	1.48	206	3.06
M677070		0.33	7.96	9.6	430	0.88	0.67	0.97	0.05	17.40	15.3	76	1.30	164.0	3.61
M677071		0.31	7.65	9.1	420	0.80	0.64	0.97	0.05	15.70	14.1	77	1.22	164.0	3.48
M677072		0.32	7.72	9.1	430	0.77	0.74	1.72	0.45	19.45	15.9	93	1.38	147.0	3.89

Comments: **RE- ASSAY RESULTS FOR SAMPLES ORIGINALLY REPORTED ON CERTIFICATE WH12176020**

***** See Appendix Page for comments regarding this certificate *****



ALS Canada Ltd.

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To: **SILVER RANGE RESOURCES LTD.**
C/ O ARCHER, CATHRO & ASSOCIATES (1981)
LIMITED
1016- 510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Mint

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Finalized Date: 24- SEP- 2012

Account: RANSIL

CERTIFICATE OF ANALYSIS WH12219476

Sample Description	Method Analyte Units LOR	ME- MS61 Ge ppm 0.05	ME- MS61 Hf ppm 0.1	ME- MS61 In ppm 0.005	ME- MS61 K % 0.01	ME- MS61 La ppm 0.5	ME- MS61 Li ppm 0.2	ME- MS61 Mg % 0.01	ME- MS61 Mn ppm 5	ME- MS61 Mo ppm 0.05	ME- MS61 Na % 0.01	ME- MS61 Nb ppm 0.1	ME- MS61 Ni ppm 0.2	ME- MS61 P ppm 10	ME- MS61 Pb ppm 0.5	ME- MS61 Rb ppm 0.1
M677037		0.15	0.3	0.150	2.43	9.0	14.0	2.22	971	1.73	1.04	6.4	69.6	950	9.8	68.4
M677038		0.16	0.3	0.056	1.05	11.7	15.5	2.82	628	2.18	1.92	6.5	93.4	1050	6.6	26.0
M677039		0.20	0.4	0.148	1.72	12.9	16.5	2.32	733	2.53	2.05	6.1	67.7	1110	50.9	49.8
M677040		0.19	0.4	0.148	1.32	8.0	12.3	2.41	890	2.62	2.22	6.0	84.8	910	14.6	20.8
M677041		0.21	0.6	0.369	1.91	17.7	10.8	1.99	1020	1.40	1.66	7.9	57.1	810	6.1	54.7
M677042		0.24	0.6	0.347	3.04	5.9	6.8	1.33	509	1.59	0.55	5.0	57.6	730	8.7	92.8
M677043		0.08	<0.1	0.005	0.03	0.7	1.1	12.65	212	0.15	0.01	0.4	1.7	200	1.3	1.8
M677044		0.14	0.2	0.092	1.29	9.4	10.4	1.95	866	3.62	2.91	3.9	52.6	630	4.4	42.2
M677045		0.14	0.1	0.116	1.03	7.9	11.7	1.88	866	1.10	3.22	3.8	50.6	620	5.2	33.7
M677046		0.18	0.3	0.182	2.16	8.0	14.3	2.27	613	1.46	1.44	5.6	81.5	850	5.9	59.5
M677047		0.18	0.2	0.157	1.95	11.9	12.5	1.95	543	2.18	1.93	5.0	66.2	790	6.8	63.8
M677048		0.23	0.3	0.193	2.82	7.9	11.2	1.52	498	1.70	0.41	4.6	81.0	790	16.6	81.0
M677049		0.37	1.5	4.69	1.07	138.5	43.8	1.25	1780	15.15	1.15	8.6	67.6	780	28.9	68.6
M677050		0.17	0.5	0.171	2.40	6.8	12.1	1.99	595	0.93	0.86	4.7	86.3	800	9.1	66.2
M677051		0.17	0.3	0.128	1.79	9.1	16.1	2.29	667	2.69	1.95	6.5	77.7	990	11.4	38.7
M677052		0.18	0.3	0.071	1.85	10.4	12.9	2.25	492	1.63	1.64	6.2	75.8	1020	4.1	49.9
M677053		0.18	0.2	0.099	1.32	12.5	18.1	2.60	481	1.48	2.47	5.8	93.4	1000	8.8	31.1
M677054		0.18	0.3	0.091	1.18	13.8	16.2	2.46	587	1.21	2.39	6.0	78.0	860	6.4	29.3
M677055		0.18	0.3	0.067	2.43	10.8	13.5	2.05	308	1.51	0.86	4.7	72.2	900	25.4	57.6
M677056		0.52	2.0	1.965	1.93	261	41.4	1.965	2390	17.95	0.84	11.1	37.0	980	34.6	144.5
M677057		0.17	0.2	0.043	2.46	10.2	11.3	1.50	392	2.16	0.68	4.1	76.0	830	15.3	59.9
M677058		0.14	1.0	0.091	2.01	11.0	18.8	1.02	1260	1.76	1.73	7.2	29.5	670	9.5	51.9
M677059		0.13	1.0	0.068	1.86	12.8	14.9	1.02	1020	2.37	2.12	7.9	30.4	720	9.4	44.9
M677060		0.13	1.3	0.044	2.14	12.7	18.5	1.04	1040	2.12	2.01	8.6	25.5	710	12.9	53.6
M677061		0.14	1.5	0.067	2.18	13.2	14.6	0.86	1000	2.10	1.76	8.7	17.7	650	9.1	51.5
M677062		0.14	1.5	0.078	2.02	13.8	15.2	0.88	955	2.25	1.85	9.2	22.0	660	9.7	50.8
M677063		0.13	1.3	0.138	2.45	12.8	14.6	0.89	1530	1.97	1.14	7.7	20.4	630	28.6	61.4
M677064		0.15	1.1	0.092	1.87	11.4	17.6	1.06	1220	1.89	2.17	7.8	25.4	670	10.2	43.9
M677065		0.13	0.9	0.067	1.40	14.1	13.4	1.15	1040	2.24	2.34	7.9	31.1	720	21.1	35.7
M677066		0.17	0.2	0.054	2.30	10.2	13.0	1.85	537	1.63	1.15	4.6	63.2	770	12.4	65.0
M677067		0.10	<0.1	<0.005	0.03	0.7	1.1	12.30	205	0.40	0.01	0.4	1.6	160	1.2	1.7
M677068		0.16	0.3	0.063	1.65	11.1	15.9	1.92	506	1.22	1.92	5.6	61.6	830	43.7	51.8
M677069		0.16	0.2	0.053	1.48	7.0	12.2	1.94	428	3.01	2.12	3.8	57.7	700	7.5	42.3
M677070		0.16	0.2	0.068	1.75	8.5	13.4	2.03	464	2.00	2.02	4.8	62.8	850	5.6	45.9
M677071		0.14	0.2	0.067	1.72	7.5	12.6	2.00	460	1.94	1.99	4.6	59.2	840	5.2	41.5
M677072		0.15	0.2	0.164	1.40	9.6	10.9	1.86	709	1.80	2.07	4.5	65.0	740	8.3	36.9

Comments: **RE- ASSAY RESULTS FOR SAMPLES ORIGINALLY REPORTED ON CERTIFICATE WH12176020**

***** See Appendix Page for comments regarding this certificate *****



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To: **SILVER RANGE RESOURCES LTD.**
C/ O ARCHER, CATHRO & ASSOCIATES (1981)
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Finalized Date: 24- SEP- 2012
Account: RANSIL

Project: Mint

CERTIFICATE OF ANALYSIS WH12219476

Sample Description	Method Analyte Units LOR	ME- MS61 Re ppm 0.002	ME- MS61 S % 0.01	ME- MS61 Sb ppm 0.05	ME- MS61 Sc ppm 0.1	ME- MS61 Se ppm 1	ME- MS61 Sn ppm 0.2	ME- MS61 Sr ppm 0.2	ME- MS61 Ta ppm 0.05	ME- MS61 Te ppm 0.05	ME- MS61 Th ppm 0.2	ME- MS61 Ti % 0.005	ME- MS61 Tl ppm 0.02	ME- MS61 U ppm 0.1	ME- MS61 V ppm 1	ME- MS61 W ppm 0.1
M677037		<0.002	3.60	1.25	14.1	5	1.3	104.5	0.40	0.60	1.2	0.362	0.82	0.4	100	5.8
M677038		0.003	1.28	1.42	15.2	2	1.0	256	0.40	1.09	1.1	0.433	0.42	0.4	115	1.8
M677039		0.003	4.00	1.00	15.0	8	1.3	208	0.39	0.56	1.4	0.365	0.66	0.4	105	5.1
M677040		0.002	4.53	1.21	12.5	4	1.1	230	0.39	1.24	0.9	0.347	0.46	0.4	94	4.8
M677041		<0.002	4.34	1.06	13.6	3	1.3	176.5	0.58	1.42	1.7	0.347	0.68	0.5	92	3.0
M677042		0.002	9.50	1.31	10.3	7	2.3	59.6	0.32	2.14	1.0	0.271	0.77	0.4	82	4.9
M677043		<0.002	0.03	0.06	0.3	1	<0.2	49.7	<0.05	<0.05	<0.2	<0.005	<0.02	1.2	2	0.1
M677044		0.003	1.41	0.87	8.8	2	0.6	242	0.26	1.03	0.8	0.223	0.51	0.2	67	2.1
M677045		0.005	1.27	0.88	9.1	2	0.6	274	0.25	0.63	0.8	0.215	0.44	0.2	61	1.7
M677046		0.002	4.01	1.40	12.2	6	1.3	130.0	0.35	0.82	1.2	0.349	0.69	0.4	97	4.3
M677047		0.003	3.45	1.79	10.4	5	1.2	166.0	0.32	0.88	1.1	0.283	0.59	0.4	76	3.8
M677048		0.003	6.81	2.84	11.6	8	1.9	52.8	0.29	1.91	1.0	0.266	0.73	0.4	78	5.8
M677049		0.007	2.56	30.4	6.9	12	89.4	250	0.54	1.72	7.7	0.199	0.95	8.9	46	267
M677050		0.003	6.06	1.65	11.8	7	1.8	88.9	0.29	1.28	1.0	0.294	0.64	0.4	88	5.7
M677051		0.005	3.61	1.40	13.4	6	1.4	177.5	0.40	2.43	1.0	0.383	0.64	0.5	101	6.7
M677052		0.005	3.66	1.57	13.4	7	1.9	176.5	0.39	0.74	1.1	0.374	0.52	0.4	103	5.1
M677053		0.003	3.05	1.24	13.9	4	1.6	265	0.36	0.44	1.1	0.337	0.43	0.4	102	5.1
M677054		0.006	2.87	1.01	12.8	3	1.3	290	0.41	0.50	1.5	0.338	0.43	0.5	97	4.6
M677055		0.004	4.29	1.45	11.7	5	2.3	83.5	0.32	0.73	1.1	0.303	0.64	0.4	91	6.9
M677056		0.004	1.37	32.5	8.8	8	108.0	258	0.71	0.94	9.8	0.242	1.39	13.0	56	36.5
M677057		0.003	4.98	1.53	11.4	5	2.6	79.0	0.27	0.79	1.0	0.236	0.61	0.5	81	4.3
M677058		0.005	1.57	2.72	7.4	1	0.9	213	0.52	0.41	1.7	0.254	0.73	0.7	61	1.4
M677059		0.002	1.38	3.31	8.0	2	0.9	320	0.60	0.42	2.0	0.262	0.65	0.8	63	2.0
M677060		0.002	1.40	3.84	7.6	2	0.7	287	0.67	0.93	2.2	0.270	0.80	1.0	62	1.3
M677061		<0.002	1.45	2.25	6.2	1	0.7	279	0.71	0.62	2.6	0.243	0.75	1.2	51	1.3
M677062		<0.002	1.27	2.41	6.8	2	0.7	307	0.70	0.46	2.6	0.247	0.73	1.1	54	1.1
M677063		0.002	1.56	2.24	6.5	1	0.6	179.0	0.61	0.39	2.4	0.239	0.79	1.1	53	1.0
M677064		<0.002	1.40	3.38	7.3	1	0.7	293	0.57	0.37	1.7	0.255	0.64	0.8	60	0.7
M677065		0.002	0.95	3.23	7.9	1	0.8	423	0.60	0.22	2.1	0.264	0.50	0.8	62	1.5
M677066		0.003	2.75	4.03	10.7	3	2.1	122.0	0.30	1.06	0.9	0.270	0.58	0.4	81	4.2
M677067		<0.002	0.01	<0.05	0.3	1	<0.2	43.2	<0.05	<0.05	<0.2	<0.005	<0.02	0.5	2	0.1
M677068		0.006	2.22	4.99	9.6	2	1.6	218	0.36	0.76	1.1	0.273	0.51	0.6	72	5.0
M677069		0.007	2.14	1.59	9.0	2	1.3	229	0.26	0.57	0.9	0.242	0.45	0.4	73	4.1
M677070		0.007	2.86	1.30	10.9	3	2.7	215	0.32	0.76	1.0	0.279	0.49	0.6	83	8.8
M677071		0.006	2.82	1.19	10.2	2	2.6	211	0.30	0.69	0.9	0.279	0.47	0.6	82	8.3
M677072		0.003	2.45	1.45	10.2	2	1.1	283	0.29	0.63	0.8	0.265	0.45	0.3	78	2.5

Comments: **RE- ASSAY RESULTS FOR SAMPLES ORIGINALLY REPORTED ON CERTIFICATE WH12176020**

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 Account: RANSIL

Project: Mint

CERTIFICATE OF ANALYSIS WH12219476

Sample Description	Method Analyte Units LOR	ME- MS61 Y ppm 0.1	ME- MS61 Zn ppm 2	ME- MS61 Zr ppm 0.5	Cu- OG62 Cu % 0.001
M677037		9.9	564	10.3	
M677038		9.8	144	8.1	
M677039		10.9	291	11.7	
M677040		8.1	156	12.2	
M677041		8.9	161	17.0	
M677042		8.7	128	25.9	
M677043		1.0	16	0.6	
M677044		6.9	98	4.8	
M677045		7.5	89	4.3	
M677046		8.3	78	7.2	
M677047		7.4	106	5.9	
M677048		7.4	91	8.9	
M677049		26.8	312	55.4	1.240
M677050		7.7	80	17.9	
M677051		9.5	106	8.7	
M677052		10.1	99	6.6	
M677053		10.5	135	6.3	
M677054		9.8	124	8.6	
M677055		7.6	89	6.4	
M677056		34.5	168	70.5	
M677057		10.1	77	6.6	
M677058		8.3	128	35.3	
M677059		8.5	110	35.3	
M677060		8.3	115	43.9	
M677061		8.2	103	47.9	
M677062		8.9	100	49.6	
M677063		8.0	228	42.4	
M677064		7.8	108	37.1	
M677065		8.6	131	29.5	
M677066		7.9	68	5.0	
M677067		0.9	16	0.5	
M677068		8.0	104	7.3	
M677069		6.1	55	4.8	
M677070		8.3	60	5.7	
M677071		7.7	60	4.6	
M677072		6.9	117	5.6	

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2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: 604 984 0221 Fax: 604 984 0218 www.alsglobal.com

To: **SILVER RANGE RESOURCES LTD.**
C/ O ARCHER, CATHRO & ASSOCIATES (1981)
LIMITED
1016- 510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Mint

Page: Appendix 1
Total # Appendix Pages: 1
Finalized Date: 24- SEP- 2012
Account: RANSIL

CERTIFICATE OF ANALYSIS WH12219476

Method	CERTIFICATE COMMENTS
ME- MS61 ME- MS61	REE's may not be totally soluble in this method. Interference: Samples with Ca> 10%on ICP- MS As. ICP- AES As results reported (5 ppm DL)



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Finalized Date: 30- SEP- 2012

Account: RANSIL

CERTIFICATE WH12220542

Project: Mint

P.O. No.: Batch 17

This report is for 36 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 17- SEP- 2012.

The following have access to data associated with this certificate:

MATT DUMALA

JOAN MARIACHER

HEATHER SMITH

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/ o BarCode
LOG- 23	Pulp Login - Rcvd with Barcode
PUL- 31d	Pulverize Split - duplicate
SPL- 21d	Split sample - duplicate
LOG- 21d	Sample logging - ClientBarCode Dup
PUL- QC	Pulverizing QC Test
CRU- 31	Fine crushing - 70%< 2mm
SPL- 21	Split sample - riffle splitter
PUL- 31	Pulverize split to 85%< 75 um

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION
ME- MS61	48 element four acid ICP- MS
Au- AA24	Au 50g FA AA finish AAS

To: **SILVER RANGE RESOURCES LTD.**

ATTN: JOAN MARIACHER

C/ O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

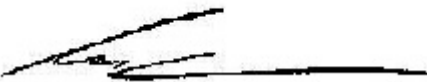
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This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:


Colin Ramshaw, Vancouver Laboratory Manager



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CERTIFICATE OF ANALYSIS WH12220542

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	Au- AA24 Au ppm	ME- MS61 Ag ppm	ME- MS61 Al %	ME- MS61 As ppm	ME- MS61 Ba ppm	ME- MS61 Be ppm	ME- MS61 Bi ppm	ME- MS61 Ca %	ME- MS61 Cd ppm	ME- MS61 Ce ppm	ME- MS61 Co ppm	ME- MS61 Cr ppm	ME- MS61 Cs ppm	ME- MS61 Cu ppm
		0.02	0.005	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
M677550		6.27	0.109	0.48	7.65	19.3	350	0.93	0.14	2.60	0.15	22.4	35.1	62	1.19	311
M677551		6.13	0.103	0.38	7.60	12.5	470	1.06	0.09	2.67	0.10	27.0	23.8	57	0.86	371
M677552		8.02	0.094	0.23	6.97	10.7	860	0.87	0.13	2.37	0.24	17.15	9.4	34	1.11	121.5
M677553		8.39	0.053	0.26	7.05	6.6	800	0.86	0.10	2.19	0.12	18.95	10.7	32	1.27	183.5
M677554		8.76	0.062	0.29	7.45	15.4	540	0.99	0.08	2.68	0.20	23.8	9.3	41	1.13	218
M677555		5.96	0.086	0.36	7.17	14.8	430	1.02	0.06	2.70	0.13	25.0	11.5	34	0.81	350
M677556		1.91	0.105	0.42	7.05	16.0	410	1.02	0.06	2.65	0.14	26.4	11.9	33	0.82	431
M677557		3.48	0.068	0.36	7.37	12.2	440	1.10	0.08	2.70	0.15	30.4	13.2	36	0.77	363
M677558		7.43	0.052	0.27	7.40	6.9	350	1.00	0.09	3.25	0.13	30.8	11.8	46	1.59	175.0
M677559		9.20	0.042	0.18	7.58	9.5	380	1.03	0.09	2.90	0.74	32.3	19.3	35	0.96	130.5
M677560		7.06	0.073	0.42	7.20	20.4	420	0.93	0.11	2.94	0.37	28.1	16.4	30	1.43	278
M677561		4.83	<0.005	0.01	0.10	<5	50	0.07	0.03	21.6	0.12	1.54	1.4	<1	0.38	3.9
M677562		8.39	0.038	0.21	7.57	4.9	420	0.85	0.08	2.58	0.11	31.5	17.2	29	1.11	179.0
M677563		9.81	0.084	0.41	7.56	16.2	430	0.93	0.14	2.84	1.14	32.6	15.1	42	1.17	341
M677564		6.03	0.061	0.29	7.47	15.3	630	0.92	0.07	2.15	0.11	24.3	9.1	45	1.38	210
M677565		7.76	0.072	0.50	7.46	7.5	610	0.95	0.10	2.50	0.26	23.7	19.9	63	1.24	307
M677566		8.00	0.032	0.24	7.78	1.8	460	1.02	0.07	1.74	0.15	22.6	14.6	61	1.31	187.0
M677567		0.10	0.769	6.95	4.75	8010	1180	1.21	191.5	12.45	0.91	439	70.6	48	10.30	3230
M677568		8.82	0.028	0.18	7.50	5.4	400	0.84	0.15	1.53	0.15	15.05	13.1	70	0.88	195.0
M677569		6.04	0.016	0.10	7.61	1.3	370	0.85	0.03	1.44	0.09	17.75	7.5	68	0.93	134.0
M677570		7.48	0.097	0.30	7.41	1.1	460	0.83	0.03	1.44	0.18	17.75	12.1	63	0.99	588
M677571		6.60	0.046	0.27	7.55	5.4	390	0.94	0.07	1.50	0.13	17.20	6.7	53	1.02	220
M677572		7.29	0.058	0.32	7.61	8.2	340	0.90	0.10	1.65	0.13	15.40	16.1	59	1.12	313
M677573		<0.02	0.053	0.31	7.41	9.6	340	0.83	0.11	1.63	0.13	14.20	15.5	58	1.10	304
M677574		9.12	0.027	0.32	7.42	3.9	500	0.96	0.05	1.87	0.33	22.3	9.6	50	1.10	200
M677575		7.32	0.042	0.30	7.42	2.7	990	1.12	0.06	1.91	0.18	22.9	13.6	19	0.77	355
M677576		8.26	0.047	0.29	7.34	2.9	1240	1.05	0.09	2.09	0.47	23.5	11.3	20	0.76	291
M677577		3.92	<0.005	0.01	0.06	<5	20	<0.05	0.02	21.4	0.06	1.19	1.4	<1	0.10	2.6
M677578		8.16	0.037	0.24	7.26	2.2	1410	0.92	0.07	2.64	0.17	21.7	8.8	20	0.82	274
M677579		8.52	0.063	0.39	7.01	6.0	1000	0.96	0.09	2.80	0.23	24.0	12.4	26	0.95	412
M677580		8.42	0.071	0.44	7.06	3.9	1410	0.97	0.12	2.62	0.51	21.8	7.0	19	1.11	408
M677581		8.20	0.028	0.24	6.97	2.9	730	1.10	0.07	2.73	0.17	22.2	8.3	22	0.81	201
M677582		8.02	0.033	0.26	6.99	3.6	590	1.10	0.07	2.77	0.25	22.9	5.6	24	0.69	207
M677583		0.10	0.814	6.72	5.06	8550	1250	1.27	205	13.15	1.3	470	73.7	50	11.05	3450
M677584		8.76	0.045	0.34	7.39	3.6	790	0.98	0.13	2.81	0.26	23.1	6.7	23	0.69	304
M677585		6.75	0.058	0.48	7.66	6.5	670	1.14	0.18	1.95	0.17	20.9	9.9	17	0.70	378



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Project: Mint

CERTIFICATE OF ANALYSIS WH12220542

Sample Description	Method Analyte Units LOR	ME- MS61 Fe %	ME- MS61 Ga ppm	ME- MS61 Ge ppm	ME- MS61 Hf ppm	ME- MS61 In ppm	ME- MS61 K %	ME- MS61 La ppm	ME- MS61 Li ppm	ME- MS61 Mg %	ME- MS61 Mn ppm	ME- MS61 Mo ppm	ME- MS61 Na %	ME- MS61 Nb ppm	ME- MS61 Ni ppm	ME- MS61 P ppm
		0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
M677550		3.27	16.45	0.11	0.2	0.030	1.01	11.1	9.6	1.80	381	9.22	3.48	5.1	47.8	720
M677551		2.96	15.85	0.15	0.2	0.045	0.77	13.3	9.1	1.34	325	16.45	3.74	6.1	44.0	810
M677552		1.70	16.30	0.11	0.4	0.021	1.34	8.9	6.5	0.74	264	4.97	3.20	5.1	30.2	410
M677553		2.02	16.45	0.11	0.5	0.028	1.31	9.9	6.5	0.76	213	7.64	3.19	5.3	29.7	410
M677554		2.22	17.05	0.14	0.5	0.025	0.97	12.4	8.0	1.03	261	8.60	3.38	6.7	31.3	740
M677555		3.11	15.95	0.13	0.3	0.025	0.71	12.9	8.3	1.07	226	15.50	3.35	6.8	26.7	820
M677556		3.04	15.85	0.16	0.3	0.028	0.69	13.7	8.2	1.09	220	17.80	3.25	6.7	28.0	810
M677557		2.48	17.65	0.17	0.3	0.024	0.87	14.8	9.2	1.21	216	15.30	3.57	8.6	29.4	990
M677558		2.88	19.80	0.16	0.2	0.012	1.00	14.6	9.3	1.49	194	8.30	3.32	8.2	30.2	1160
M677559		2.94	19.35	0.17	0.2	0.009	1.12	15.5	8.8	1.47	177	2.63	3.45	6.6	26.5	1240
M677560		3.25	18.80	0.15	0.1	0.012	1.08	12.9	8.8	1.34	948	1.79	3.09	6.8	28.2	1180
M677561		0.49	0.44	0.12	<0.1	<0.005	0.03	0.7	1.0	12.90	228	0.17	0.02	0.4	2.0	190
M677562		3.34	17.80	0.10	0.1	0.011	1.10	15.1	6.8	1.22	196	4.40	3.47	7.7	23.9	1160
M677563		2.20	17.55	0.13	0.2	0.029	1.15	16.4	7.2	1.23	342	12.55	3.33	7.9	28.6	1040
M677564		2.58	16.50	0.14	0.3	0.029	0.99	12.1	6.9	1.11	253	3.99	3.41	6.7	33.9	710
M677565		2.72	16.40	0.14	0.2	0.017	1.26	11.2	9.4	1.64	412	26.0	3.33	6.2	57.0	940
M677566		2.01	15.60	0.13	0.2	0.008	1.32	10.9	12.0	1.73	252	55.2	3.50	5.2	51.8	800
M677567		8.71	17.65	0.48	1.9	1.810	1.85	254	33.0	1.35	2350	13.90	0.80	9.4	35.9	910
M677568		1.70	14.05	0.08	0.1	0.009	1.21	7.3	11.4	1.65	177	36.7	3.94	3.4	46.8	600
M677569		1.27	14.75	0.09	0.1	<0.005	1.27	8.6	12.4	1.65	113	9.71	3.97	3.1	50.0	620
M677570		1.44	15.00	0.11	0.1	0.011	1.39	8.8	10.9	1.66	142	28.0	4.09	4.1	48.6	580
M677571		1.31	14.25	0.11	0.1	0.016	1.11	8.6	9.6	1.46	220	15.10	3.91	4.2	37.2	580
M677572		2.01	16.60	0.10	0.1	0.013	1.21	7.5	10.1	1.60	214	23.7	3.91	3.4	51.9	620
M677573		2.00	16.15	0.12	0.1	0.013	1.20	6.8	9.6	1.57	216	22.7	3.87	3.4	50.5	610
M677574		1.41	15.45	0.15	0.2	0.013	1.15	10.9	8.9	1.42	370	15.95	3.78	5.1	41.8	700
M677575		1.01	13.80	0.14	0.2	0.010	1.38	12.1	6.6	0.78	158	33.5	3.65	4.3	20.0	550
M677576		1.09	14.15	0.13	0.2	0.015	1.71	12.5	7.0	0.77	145	70.0	3.66	5.1	20.8	600
M677577		0.48	0.34	0.18	<0.1	<0.005	0.02	0.6	0.7	12.80	218	0.31	0.01	0.3	2.2	190
M677578		1.05	13.45	0.17	0.1	0.009	1.78	11.0	6.5	0.79	181	6.70	3.53	4.7	19.2	530
M677579		1.40	13.60	0.20	0.2	0.013	1.56	12.3	7.3	0.98	196	32.9	3.12	5.0	24.9	640
M677580		1.03	12.60	0.15	0.2	0.021	1.97	11.2	5.9	0.71	223	37.2	3.01	4.6	16.8	560
M677581		0.88	13.20	0.18	0.2	0.010	1.18	11.6	6.4	0.86	180	34.8	3.52	3.6	17.9	540
M677582		0.91	13.00	0.17	0.2	0.012	1.03	12.1	6.0	0.86	174	37.3	3.61	4.2	15.2	540
M677583		9.27	18.20	0.49	2.0	1.925	1.97	271	33.5	1.44	2480	15.05	0.86	9.9	37.6	960
M677584		1.11	13.65	0.11	0.3	0.015	1.12	11.9	5.7	0.80	211	32.0	3.82	6.0	19.4	600
M677585		1.31	11.70	<0.05	0.2	0.031	1.07	10.2	6.3	0.74	209	62.9	3.74	4.6	16.3	550



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CERTIFICATE OF ANALYSIS WH12220542

Sample Description	Method Analyte Units LOR	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61
		Pb	Pb	Fe	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	U
		ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
		0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.1
M677550		12.1	29.1	0.017	1.05	0.88	10.7	2	1.8	430	0.36	0.30	1.1	0.333	0.8
M677551		9.2	19.0	0.023	0.55	0.67	10.9	2	2.0	476	0.38	0.22	1.5	0.336	1.0
M677552		14.4	33.2	0.003	1.24	0.76	5.5	2	1.9	336	0.40	0.32	2.4	0.166	0.9
M677553		13.2	33.2	0.005	1.42	0.90	5.3	2	2.1	367	0.43	0.39	2.7	0.161	1.0
M677554		12.2	28.1	0.007	0.75	0.75	7.3	2	2.4	461	0.47	0.25	2.6	0.245	1.2
M677555		9.8	18.1	0.015	0.48	0.74	7.2	2	2.2	490	0.46	0.15	2.2	0.275	1.0
M677556		10.4	19.7	0.016	0.54	0.74	7.5	2	2.2	475	0.46	0.16	2.4	0.266	1.0
M677557		9.1	23.2	0.011	0.41	0.67	8.7	2	2.0	526	0.57	0.14	2.4	0.318	1.0
M677558		10.2	26.8	0.006	0.96	0.56	10.4	3	2.3	543	0.53	0.21	2.0	0.367	0.8
M677559		9.5	30.9	0.002	1.09	0.56	9.4	2	1.2	556	0.43	0.14	2.0	0.331	0.7
M677560		38.4	29.1	<0.002	1.71	2.52	8.5	2	1.9	505	0.45	0.20	1.7	0.317	0.6
M677561		1.7	2.1	<0.002	0.01	<0.05	0.4	1	<0.2	52.2	<0.05	<0.05	<0.2	0.011	0.8
M677562		8.7	30.6	0.003	1.12	0.52	7.6	2	1.2	566	0.51	0.10	2.1	0.324	0.7
M677563		15.8	33.4	0.011	0.59	1.14	8.3	2	1.4	514	0.53	0.16	2.1	0.333	0.8
M677564		10.4	29.0	0.004	0.45	2.32	7.3	2	1.5	440	0.49	0.11	2.6	0.262	0.9
M677565		16.8	33.3	0.033	1.09	1.37	9.5	2	1.7	395	0.46	0.25	2.0	0.306	1.0
M677566		12.2	40.0	0.062	0.59	0.44	9.2	2	1.5	401	0.38	0.07	1.8	0.283	0.8
M677567		34.4	127.5	0.004	1.27	30.2	7.2	7	99.7	237	0.64	0.91	10.8	0.233	13.8
M677568		9.6	36.1	0.073	0.30	0.26	8.4	2	1.3	349	0.25	<0.05	1.3	0.234	0.6
M677569		6.1	41.5	0.029	0.21	0.19	9.2	2	1.5	372	0.24	<0.05	1.2	0.238	0.7
M677570		8.4	44.8	0.074	0.15	0.23	8.6	2	1.6	393	0.30	<0.05	1.4	0.245	0.6
M677571		13.7	34.4	0.038	0.21	0.45	7.6	1	1.2	378	0.30	0.09	1.5	0.217	0.7
M677572		13.8	40.9	0.068	0.89	0.56	8.6	2	1.2	398	0.26	0.19	1.4	0.232	0.6
M677573		13.2	37.0	0.063	0.88	0.55	8.0	2	1.3	393	0.26	0.18	1.2	0.231	0.5
M677574		19.1	33.2	0.043	0.35	0.72	8.2	2	1.5	405	0.37	0.12	2.0	0.263	0.8
M677575		8.2	31.9	0.042	0.29	0.37	5.4	2	1.0	475	0.36	0.05	2.7	0.177	0.9
M677576		8.7	36.5	0.082	0.57	0.35	5.4	2	1.2	498	0.41	0.06	2.7	0.193	0.9
M677577		1.4	0.8	<0.002	0.01	<0.05	0.3	1	<0.2	46.1	<0.05	<0.05	<0.2	<0.005	0.6
M677578		9.1	35.6	0.013	0.99	0.27	4.7	1	1.1	552	0.39	<0.05	2.5	0.184	0.8
M677579		12.3	33.8	0.041	1.24	0.43	5.7	2	1.1	476	0.39	0.05	2.3	0.205	0.7
M677580		12.2	37.7	0.056	0.91	0.49	4.6	2	1.1	492	0.39	0.08	2.3	0.175	0.7
M677581		8.5	25.3	0.056	0.97	0.36	5.2	1	0.9	491	0.30	0.07	2.3	0.170	0.7
M677582		9.2	26.4	0.056	0.81	0.30	4.8	1	0.9	482	0.34	<0.05	2.4	0.172	0.8
M677583		35.2	132.0	0.004	1.36	32.2	7.4	8	105.0	251	0.66	0.98	10.9	0.247	14.1
M677584		11.2	23.5	0.054	0.64	0.34	5.1	2	1.0	542	0.48	0.05	2.5	0.212	0.8
M677585		12.1	25.2	0.108	0.50	0.47	4.4	1	0.9	526	0.38	0.14	2.9	0.182	0.9



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CERTIFICATE OF ANALYSIS WH12220542

Sample Description	Method Analyte Units LOR	ME- MS61 V ppm 1	ME- MS61 W ppm 0.1	ME- MS61 Y ppm 0.1	ME- MS61 Zn ppm 2	ME- MS61 Zr ppm 0.5
M677550		78	4.0	9.1	74	3.5
M677551		81	8.5	10.3	54	5.2
M677552		40	1.9	6.0	54	7.8
M677553		40	2.3	6.0	38	10.4
M677554		55	3.5	8.4	57	9.8
M677555		64	3.0	8.8	45	5.7
M677556		65	3.0	9.4	46	5.6
M677557		77	2.9	11.1	42	6.5
M677558		91	1.8	11.1	35	5.4
M677559		90	1.5	10.5	90	3.7
M677560		84	1.7	9.8	64	3.4
M677561		2	0.2	1.1	21	<0.5
M677562		80	1.9	10.3	30	3.2
M677563		79	3.0	10.5	142	4.9
M677564		62	2.0	8.8	44	6.5
M677565		85	3.0	9.1	71	3.8
M677566		74	2.8	8.9	47	4.9
M677567		55	32.8	30.8	160	60.9
M677568		69	2.5	7.6	36	2.5
M677569		70	2.3	7.9	23	2.3
M677570		72	2.2	8.1	37	2.3
M677571		57	2.8	7.4	44	2.7
M677572		70	1.3	7.3	40	2.8
M677573		70	1.3	6.9	39	2.1
M677574		70	2.6	8.7	65	3.5
M677575		45	3.7	7.4	35	4.2
M677576		48	3.3	7.4	73	3.6
M677577		1	0.1	0.9	14	0.5
M677578		47	2.5	7.0	32	3.1
M677579		56	3.9	7.6	51	4.3
M677580		44	5.1	6.5	84	5.3
M677581		46	3.6	6.5	37	5.9
M677582		39	4.5	7.5	50	6.4
M677583		57	33.6	31.9	171	62.3
M677584		42	5.1	7.9	55	7.5
M677585		42	3.7	6.2	50	5.6



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Method	CERTIFICATE COMMENTS
ME- MS61 ME- MS61	REE's may not be totally soluble in this method. Interference: Samples with Ca> 10%on ICP- MS As. ICP- AES As results reported (5 ppm DL)



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Project: Mint

P.O. No.: Batch 18

This report is for 36 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 20- SEP- 2012.

The following have access to data associated with this certificate:

MATT DUMALA

JOAN MARIACHER

HEATHER SMITH

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/ o BarCode
CRU- QC	Crushing QC Test
PUL- QC	Pulverizing QC Test
CRU- 31	Fine crushing - 70%<2mm
SPL- 21	Split sample - riffle splitter
PUL- 31	Pulverize split to 85%<75 um
LOG- 24	Pulp Login - Rcd w/ o Barcode
LOG- 22d	Sample login - Rcd w/ o BarCode dup
PUL- 31d	Pulverize Split - duplicate
SPL- 21d	Split sample - duplicate

ANALYTICAL PROCEDURES

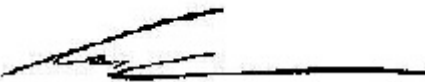
ALS CODE	DESCRIPTION	INSTRUMENT
Au- AA24	Au 50g FA AA finish	AAS
ME- MS61	48 element four acid ICP- MS	

To: **SILVER RANGE RESOURCES LTD.**
ATTN: JOAN MARIACHER
C/ O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
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This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:


Colin Ramshaw, Vancouver Laboratory Manager



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CERTIFICATE OF ANALYSIS WH12223898

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	Au- AA24 Au ppm	ME- MS61 Ag ppm	ME- MS61 Al %	ME- MS61 As ppm	ME- MS61 Ba ppm	ME- MS61 Be ppm	ME- MS61 Bi ppm	ME- MS61 Ca %	ME- MS61 Cd ppm	ME- MS61 Ce ppm	ME- MS61 Co ppm	ME- MS61 Cr ppm	ME- MS61 Cs ppm	ME- MS61 Cu ppm
		0.02	0.005	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
M677586		6.94	0.062	0.37	7.44	5.9	970	0.94	0.24	1.83	0.13	23.1	12.0	20	0.84	323
M677587		7.51	0.082	0.47	7.55	5.7	960	1.03	0.14	1.96	0.08	22.6	11.7	19	1.00	540
M677588		7.99	0.061	0.29	7.40	6.1	1040	1.00	0.19	2.14	0.26	21.9	8.0	18	1.07	205
M677589		3.52	0.254	0.67	7.04	4.9	910	0.92	0.38	2.61	0.63	23.9	5.2	19	0.82	135.5
M677590		3.08	<0.005	0.01	0.06	<5	20	<0.05	0.02	20.7	0.07	1.26	1.3	<1	0.11	3.1
M677591		4.56	0.015	0.24	7.43	1.5	860	1.15	0.15	1.74	0.12	23.0	3.1	15	0.75	116.0
M677592		7.74	0.066	0.48	7.78	8.4	780	1.22	0.33	2.26	0.09	22.2	7.3	20	0.91	187.5
M677593		8.23	0.104	0.49	7.04	9.3	1060	1.26	0.51	2.31	0.22	27.0	7.7	12	0.96	116.5
M677594		7.59	0.113	1.11	7.53	5.6	840	1.18	1.60	1.78	0.73	24.8	6.3	18	0.79	392
M677595		0.07	0.789	7.58	4.85	7600	1230	1.38	211	13.50	1.2	445	71.3	48	10.35	3430
M677596		7.77	0.066	0.67	7.23	9.5	760	1.09	0.68	1.82	1.57	22.7	4.7	20	0.97	201
M677597		7.37	0.083	0.62	7.20	11.1	1230	1.07	0.62	2.04	0.37	24.9	12.0	18	1.14	475
M677598		8.50	0.052	0.32	7.12	5.5	1030	1.13	0.26	2.44	0.46	23.4	5.2	17	1.10	156.5
M677599		6.32	0.050	0.39	7.09	3.1	910	0.98	0.31	2.51	0.65	20.7	7.4	19	1.01	166.0
M677600		6.84	0.169	0.55	7.06	11.7	1100	1.25	0.71	2.20	0.50	23.4	6.6	10	1.62	162.5
M677601		2.47	0.189	0.61	7.19	9.9	1410	1.25	0.73	2.34	0.72	22.4	5.7	9	1.64	169.5
M677602		5.50	2.89	21.0	7.23	25.7	1020	1.21	18.90	1.88	1.63	34.0	12.0	11	2.03	1430
M677603		8.67	0.058	0.62	7.21	10.6	960	0.94	0.33	2.29	0.50	22.3	9.7	21	1.61	197.5
M677604		8.59	0.021	0.11	6.89	13.2	760	0.93	0.08	2.67	0.09	20.8	7.3	19	2.25	17.8
M677605		5.01	0.056	0.42	7.05	7.6	690	1.01	0.19	2.31	0.27	25.9	11.8	18	1.71	234
M677606		9.10	0.157	1.59	7.51	12.3	470	1.12	0.68	2.30	0.77	22.9	18.2	27	1.65	782
M677607		0.07	0.800	6.83	4.72	7250	1190	1.22	205	12.90	0.90	411	68.3	46	9.70	3350
M677608		7.11	0.055	0.92	7.02	9.6	660	0.92	0.14	2.13	0.18	21.8	14.0	21	1.15	594
M677609		8.15	0.058	0.74	6.89	6.2	670	1.12	0.14	2.17	0.15	20.8	15.9	24	1.06	504
M677610		8.29	0.039	0.45	7.21	6.9	890	1.21	0.09	1.94	0.12	23.3	15.9	21	1.13	234
M677611		8.34	0.114	1.13	7.24	4.1	1080	1.04	0.08	2.00	0.24	21.4	13.8	19	1.18	955
M677612		<0.02	0.115	1.24	6.75	3.8	1070	1.03	0.07	1.97	0.29	19.85	14.0	19	1.10	1035
M677613		7.99	0.096	0.88	6.90	15.1	910	1.12	0.12	1.95	0.74	20.1	9.7	19	1.10	580
M677614		8.20	0.090	0.90	7.02	12.5	900	1.09	0.13	1.94	0.89	21.7	15.2	18	1.68	494
M677615		8.67	0.042	6.02	6.82	7.1	800	1.02	0.07	2.01	0.23	19.25	8.4	19	1.47	227
M677616		8.09	<0.005	0.25	7.06	7.4	750	1.06	0.04	2.64	0.08	18.65	7.0	20	3.13	23.9
M677617		8.81	0.041	0.42	6.97	87.6	850	1.09	0.09	2.05	0.89	26.2	8.9	17	1.92	166.5
M677618		4.07	<0.005	0.11	0.05	<5	60	0.06	0.02	20.0	0.06	1.09	0.6	<1	0.11	2.4
M677619		8.29	0.033	0.44	7.22	5.4	750	1.05	0.10	2.00	0.09	30.5	6.0	17	1.26	312
M677620		6.34	0.091	1.60	7.13	10.1	800	0.94	0.20	1.65	0.22	21.6	8.6	18	1.78	1090
M677621		9.58	<0.005	0.08	7.65	8.4	590	1.00	0.04	5.82	0.09	37.9	21.2	13	2.81	45.7



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CERTIFICATE OF ANALYSIS WH12223898

Sample Description	Method Analyte Units LOR	ME- MS61 Fe %	ME- MS61 Ga ppm	ME- MS61 Ge ppm	ME- MS61 Hf ppm	ME- MS61 In ppm	ME- MS61 K %	ME- MS61 La ppm	ME- MS61 Li ppm	ME- MS61 Mg %	ME- MS61 Mn ppm	ME- MS61 Mo ppm	ME- MS61 Na %	ME- MS61 Nb ppm	ME- MS61 Ni ppm	ME- MS61 P ppm
		0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
M677586		1.40	12.05	<0.05	0.2	0.021	1.58	12.9	6.9	0.73	170	133.5	3.47	4.9	16.7	510
M677587		1.72	13.15	0.05	0.2	0.026	1.66	12.6	7.5	0.86	154	34.5	3.04	4.3	15.8	540
M677588		1.42	13.00	0.06	0.2	0.018	1.65	11.7	6.7	0.76	218	16.45	2.81	4.2	15.3	560
M677589		1.16	13.85	0.09	0.2	0.054	1.61	12.4	8.3	0.85	424	38.8	2.99	4.4	17.5	520
M677590		0.48	0.22	0.07	<0.1	<0.005	0.02	0.6	0.9	12.80	203	0.27	<0.01	0.3	3.5	200
M677591		0.69	13.55	0.09	0.2	0.024	1.65	12.0	6.7	0.87	253	22.1	2.98	2.8	9.9	540
M677592		1.24	15.40	0.10	0.6	0.031	1.53	11.7	9.1	0.85	384	23.7	3.01	5.6	17.0	620
M677593		1.70	16.55	0.12	0.9	0.057	1.91	14.4	8.4	0.69	554	27.1	2.58	7.7	12.5	560
M677594		1.01	13.90	0.07	0.2	0.073	1.33	13.6	7.6	0.75	348	22.6	3.32	4.6	16.9	570
M677595		9.13	17.75	0.44	1.9	1.805	1.90	257	36.8	1.39	2290	13.55	0.83	9.3	37.3	960
M677596		0.88	13.55	<0.05	0.3	0.045	1.45	12.4	7.1	0.78	432	23.1	2.94	4.8	17.7	580
M677597		1.44	12.55	0.07	0.3	0.049	1.50	13.3	6.4	0.70	292	19.20	2.76	4.8	18.3	550
M677598		0.97	12.70	0.07	0.3	0.029	1.54	12.0	5.6	0.71	204	21.4	2.92	3.9	13.4	540
M677599		1.12	13.25	0.07	0.2	0.044	1.12	11.2	9.6	0.74	225	29.7	3.27	4.3	16.8	560
M677600		1.96	15.10	0.08	1.1	0.047	1.94	13.2	9.7	0.68	518	2.63	2.32	7.6	10.3	530
M677601		1.90	15.05	0.07	1.1	0.049	2.01	12.4	9.5	0.69	554	2.78	2.35	7.6	10.0	540
M677602		2.27	15.75	0.10	0.9	0.148	2.21	19.5	13.6	0.73	645	3.83	1.75	7.5	14.3	530
M677603		1.25	13.70	0.08	0.4	0.041	1.28	11.7	12.7	0.68	461	13.90	3.23	5.1	17.1	550
M677604		1.82	16.45	0.12	1.7	0.016	1.80	11.2	25.7	0.78	430	2.03	2.34	6.2	18.4	470
M677605		1.49	15.45	0.08	0.6	0.037	1.08	13.5	15.7	0.85	330	43.7	3.24	5.0	19.7	1050
M677606		1.66	15.60	0.09	0.2	0.042	0.90	11.6	8.8	0.97	328	60.2	3.46	5.8	22.5	730
M677607		8.84	17.05	0.42	1.7	1.675	1.85	242	33.6	1.34	2210	14.45	0.80	8.9	36.2	920
M677608		1.43	15.40	0.08	0.2	0.029	1.05	11.0	6.8	0.70	305	74.7	3.40	4.6	17.6	580
M677609		1.49	15.00	0.08	0.2	0.021	1.14	10.3	6.5	0.75	274	88.5	3.37	4.9	17.3	620
M677610		1.26	15.75	0.08	0.2	0.015	1.35	12.2	6.0	0.68	216	51.1	3.31	4.2	15.8	570
M677611		1.31	15.55	0.08	0.2	0.012	1.51	11.3	6.9	0.68	268	24.1	3.34	4.0	15.9	560
M677612		1.28	15.45	0.09	0.2	0.018	1.52	10.1	6.8	0.67	273	20.8	3.31	4.0	16.3	550
M677613		1.17	15.00	0.09	0.2	0.023	1.42	10.3	7.2	0.51	331	27.9	3.25	5.3	14.8	540
M677614		1.41	14.90	0.10	0.2	0.031	1.52	11.0	10.9	0.67	356	20.0	3.22	4.3	17.8	560
M677615		1.21	15.15	0.09	0.3	0.014	1.18	9.8	13.4	0.63	285	8.36	3.34	3.7	15.1	530
M677616		1.77	17.30	0.10	1.6	0.013	1.65	9.7	32.6	0.72	460	1.37	2.59	5.9	16.3	490
M677617		1.51	15.20	0.08	0.4	0.009	1.22	13.5	15.0	0.56	511	14.65	3.00	4.6	18.6	520
M677618		0.43	0.21	0.20	<0.1	<0.005	0.02	0.5	1.0	12.60	186	0.16	0.01	0.1	1.5	180
M677619		1.03	16.10	0.13	0.1	0.018	1.18	15.3	5.4	0.49	152	13.15	3.38	3.9	14.6	530
M677620		1.30	16.20	0.13	0.2	0.028	1.29	11.2	5.9	0.54	163	18.60	3.13	3.8	17.1	530
M677621		4.07	19.20	0.14	2.7	0.050	0.83	15.4	7.9	0.81	619	1.50	2.27	7.5	18.9	1400



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Sample Description	Method Analyte Units LOR	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61
		Pb	Pb	Fe	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	U
		ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
		0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.1
M677586		9.5	32.9	0.249	0.62	0.36	4.6	2	1.0	499	0.41	0.12	2.7	0.182	0.9
M677587		7.1	32.5	0.057	0.82	0.47	4.4	2	0.9	486	0.37	0.07	2.7	0.166	0.9
M677588		9.8	30.5	0.018	0.86	0.58	4.2	1	0.8	504	0.34	0.19	2.6	0.155	0.8
M677589		27.8	34.4	0.049	1.60	1.75	4.8	2	1.1	431	0.36	0.52	2.5	0.140	0.8
M677590		1.5	1.0	<0.002	0.01	<0.05	0.3	1	<0.2	45.0	<0.05	<0.05	<0.2	<0.005	0.7
M677591		10.0	33.2	0.035	0.21	0.43	4.3	1	0.8	393	0.25	0.14	2.5	0.116	0.9
M677592		19.0	32.4	0.033	0.81	1.40	5.1	1	0.9	453	0.46	0.40	2.8	0.182	0.9
M677593		23.8	41.1	0.027	1.35	0.76	4.3	2	0.8	413	0.67	0.57	3.1	0.171	1.0
M677594		64.3	31.0	0.022	0.56	0.54	3.4	2	1.0	480	0.36	1.02	2.6	0.168	0.8
M677595		36.2	121.5	0.003	1.32	30.5	7.3	7	102.0	247	0.63	1.14	10.3	0.240	13.3
M677596		71.3	35.7	0.019	0.49	0.66	5.4	2	1.1	459	0.38	0.43	2.5	0.191	0.7
M677597		16.8	32.4	0.019	1.24	0.94	4.1	2	1.0	572	0.40	0.40	2.6	0.173	0.8
M677598		12.9	31.5	0.019	1.03	0.54	4.1	1	1.0	526	0.32	0.18	2.4	0.149	0.7
M677599		17.8	23.8	0.036	1.16	0.49	5.4	1	1.0	566	0.36	0.27	2.4	0.179	0.7
M677600		42.3	46.2	0.002	1.79	0.84	3.7	2	0.9	443	0.63	0.77	3.1	0.166	1.0
M677601		54.1	46.2	0.002	1.68	0.75	3.7	2	0.9	416	0.67	0.67	3.2	0.175	1.0
M677602		217	62.1	0.005	1.98	1.19	4.3	4	1.0	331	0.62	16.30	3.5	0.177	1.1
M677603		48.0	33.1	0.018	0.88	1.25	4.8	2	1.1	655	0.42	0.31	2.2	0.191	0.7
M677604		13.2	45.3	<0.002	0.12	3.60	4.7	1	0.5	408	0.55	<0.05	2.5	0.181	1.5
M677605		38.2	27.9	0.030	0.39	1.48	5.3	2	1.1	563	0.41	0.12	2.2	0.198	1.0
M677606		72.8	22.7	0.058	0.65	1.30	6.2	2	1.8	469	0.43	0.42	2.0	0.258	0.8
M677607		32.2	116.0	0.004	1.27	28.6	7.1	6	95.5	240	0.59	0.87	9.5	0.231	12.2
M677608		22.1	21.7	0.038	0.59	0.70	5.1	2	1.6	565	0.34	0.16	2.3	0.195	0.9
M677609		14.8	23.2	0.045	0.67	0.57	4.9	1	1.4	557	0.39	0.20	2.1	0.204	0.7
M677610		12.0	28.7	0.018	0.49	0.84	4.6	1	1.3	535	0.35	0.14	2.6	0.173	0.8
M677611		15.6	30.7	0.026	0.56	0.52	4.6	2	1.4	499	0.33	0.26	2.4	0.174	0.7
M677612		15.5	28.6	0.022	0.58	0.56	4.3	1	1.5	481	0.33	0.22	2.1	0.174	0.7
M677613		17.0	28.5	0.056	0.38	1.70	4.5	1	1.5	470	0.43	0.17	2.3	0.192	0.7
M677614		32.7	37.5	0.024	0.76	1.34	4.4	3	1.4	456	0.37	0.24	2.3	0.173	0.8
M677615		40.8	25.9	0.016	0.44	0.94	4.1	1	1.1	473	0.30	0.05	2.3	0.158	0.7
M677616		20.0	37.0	0.002	0.06	1.70	4.6	1	0.7	435	0.53	<0.05	2.2	0.194	0.8
M677617		74.2	31.0	0.020	0.41	2.41	4.8	1	1.2	432	0.37	0.09	2.4	0.173	0.9
M677618		1.5	0.7	<0.002	<0.01	0.09	0.1	<1	<0.2	48.9	<0.05	<0.05	<0.2	<0.005	0.7
M677619		12.5	29.3	0.010	0.48	0.61	4.7	1	1.4	484	0.34	0.16	2.6	0.169	0.9
M677620		27.6	34.4	0.033	0.52	1.07	4.7	1	1.5	451	0.34	0.20	2.6	0.167	1.0
M677621		7.9	9.8	0.002	0.05	1.49	15.6	1	0.8	966	0.39	0.05	2.3	0.602	0.9



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Project: Mint

CERTIFICATE OF ANALYSIS WH12223898

Sample Description	Method Analyte Units LOR	ME- MS61 V ppm 1	ME- MS61 W ppm 0.1	ME- MS61 Y ppm 0.1	ME- MS61 Zn ppm 2	ME- MS61 Zr ppm 0.5
M677586		44	4.7	6.5	39	7.5
M677587		39	3.7	6.7	32	7.6
M677588		35	4.3	7.0	58	6.7
M677589		35	5.2	7.4	104	6.6
M677590		2	0.1	0.9	14	<0.5
M677591		31	5.4	6.8	29	6.9
M677592		43	5.6	7.6	40	18.0
M677593		35	2.7	7.0	58	25.9
M677594		32	5.5	7.9	129	7.7
M677595		55	31.2	30.1	167	66.8
M677596		48	6.6	7.3	251	9.6
M677597		37	5.1	6.6	71	8.6
M677598		33	5.2	6.2	73	9.5
M677599		54	4.4	6.0	101	7.8
M677600		32	4.3	6.8	94	32.9
M677601		33	3.9	6.5	131	31.3
M677602		36	2.8	7.2	202	27.2
M677603		43	4.1	6.9	101	13.3
M677604		40	0.8	5.4	93	64.3
M677605		51	3.6	8.1	94	23.1
M677606		63	4.7	8.1	139	5.3
M677607		54	30.5	28.2	161	60.2
M677608		49	4.4	6.6	55	6.9
M677609		47	3.5	6.3	53	5.8
M677610		41	3.9	6.0	42	6.5
M677611		43	3.7	6.1	53	4.9
M677612		43	3.7	5.7	54	4.8
M677613		41	4.9	6.4	103	5.6
M677614		42	3.6	6.6	130	5.0
M677615		42	2.2	5.6	64	9.9
M677616		43	0.6	5.2	72	56.2
M677617		43	3.7	5.8	173	13.9
M677618		2	0.1	0.7	14	<0.5
M677619		40	1.8	5.7	31	5.5
M677620		44	2.0	5.4	65	4.1
M677621		170	0.6	12.2	80	112.0



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CERTIFICATE OF ANALYSIS WH12223898

Method	CERTIFICATE COMMENTS
ME- MS61 ME- MS61	REE's may not be totally soluble in this method. Interference: Samples with Ca> 10%on ICP- MS As. ICP- AES As results reported (5 ppm DL)



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Project: Mint

P.O. No.: Batch 19

This report is for 36 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 20- SEP- 2012.

The following have access to data associated with this certificate:

MATT DUMALA

JOAN MARIACHER

HEATHER SMITH

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/ o BarCode
CRU- QC	Crushing QC Test
PUL- QC	Pulverizing QC Test
CRU- 31	Fine crushing - 70%<2mm
SPL- 21	Split sample - riffle splitter
PUL- 31	Pulverize split to 85%<75 um
LOG- 24	Pulp Login - Rcd w/ o Barcode
LOG- 22d	Sample login - Rcd w/ o BarCode dup
SPL- 21d	Split sample - duplicate
PUL- 31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

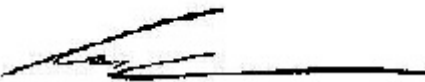
ALS CODE	DESCRIPTION	INSTRUMENT
Au- AA24	Au 50g FA AA finish	AAS
ME- MS61	48 element four acid ICP- MS	
ME- OG62	Ore Grade Elements - Four Acid	ICP- AES
Cu- OG62	Ore Grade Cu - Four Acid	VARIABLE

To: **SILVER RANGE RESOURCES LTD.**
ATTN: JOAN MARIACHER
C/ O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
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This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:


Colin Ramshaw, Vancouver Laboratory Manager



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CERTIFICATE OF ANALYSIS WH12223899

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	Au- AA24 Au ppm	ME- MS61 Ag ppm	ME- MS61 Al %	ME- MS61 As ppm	ME- MS61 Ba ppm	ME- MS61 Be ppm	ME- MS61 Bi ppm	ME- MS61 Ca %	ME- MS61 Cd ppm	ME- MS61 Ce ppm	ME- MS61 Co ppm	ME- MS61 Cr ppm	ME- MS61 Cs ppm	ME- MS61 Cu ppm
		0.02	0.005	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
M677622		5.99	0.029	0.21	7.92	7.9	1040	1.28	0.32	1.32	0.09	38.8	10.9	23	1.12	171.0
M677623		6.71	0.029	0.21	7.22	4.0	730	1.74	0.17	1.61	0.07	32.5	5.5	6	0.79	292
M677624		5.64	0.016	0.09	7.82	7.0	700	1.69	0.27	1.56	0.06	46.1	10.2	6	1.14	42.0
M677625		8.82	0.032	0.16	8.00	7.1	1040	1.65	0.30	1.79	0.06	41.4	11.8	7	1.18	118.0
M677626		0.10	1.185	22.0	4.05	9110	600	1.49	257	14.10	2.92	241	71.2	50	6.19	>10000
M677627		7.21	0.060	0.26	7.97	13.5	630	1.76	0.47	1.96	0.09	43.5	7.2	6	1.49	252
M677628		6.43	0.045	0.19	8.26	15.6	570	1.79	0.60	1.64	0.14	43.4	8.1	4	1.45	90.1
M677629		7.73	0.054	0.23	7.64	6.7	470	1.76	0.37	1.98	0.08	42.9	11.7	5	1.04	211
M677630		7.67	0.022	0.26	6.69	5.8	560	1.33	0.36	0.94	0.06	32.2	9.8	20	1.04	91.0
M677631		3.46	<0.005	0.02	0.08	<5	20	0.08	0.03	20.1	0.07	1.35	0.6	<1	0.19	2.3
M677632		7.46	0.014	0.29	6.97	4.5	900	0.66	0.45	0.34	0.54	9.40	8.5	56	1.02	47.1
M677633		3.71	0.011	2.86	8.02	3.9	1390	0.91	0.33	0.47	0.10	11.50	8.9	55	1.62	45.9
M677634		5.81	0.015	8.74	7.21	5.4	750	0.75	0.35	0.37	0.53	9.56	7.9	50	2.11	124.0
M677635		7.28	0.017	0.21	7.11	4.4	730	1.31	0.32	1.33	0.06	33.1	9.5	24	1.04	96.6
M677636		<0.02	0.019	0.18	7.41	4.4	760	1.39	0.29	1.34	0.07	33.0	9.7	23	1.05	102.0
M677637		6.59	0.013	0.21	6.83	3.0	960	0.70	0.37	0.89	0.11	9.51	12.4	46	0.89	91.9
M677638		5.66	0.022	0.24	8.10	4.9	1160	0.84	0.38	0.85	0.45	9.49	9.8	63	1.73	52.1
M677639		8.76	0.065	0.15	7.40	1.2	570	0.96	0.09	1.87	0.04	21.9	5.3	20	0.87	171.5
M677640		7.56	0.049	0.20	7.53	2.3	800	0.96	0.12	1.96	0.04	24.6	5.8	20	1.03	144.0
M677641		7.47	0.030	0.24	7.30	1.4	730	0.96	0.08	1.95	0.04	20.7	5.6	18	1.06	89.5
M677642		7.58	0.010	0.08	7.52	1.6	360	0.95	0.04	2.08	0.03	15.85	5.3	19	0.95	42.0
M677643		0.10	0.798	7.68	4.86	8460	1230	1.56	216	13.00	1.13	464	76.6	49	11.15	3480
M677644		8.57	0.014	0.09	7.46	4.2	370	0.98	0.12	2.10	0.04	19.55	5.5	19	0.84	59.3
M677645		8.41	0.017	0.10	7.76	1.6	390	0.96	0.07	2.24	0.03	15.70	6.1	19	0.90	70.5
M677646		7.57	0.012	0.14	7.66	1.1	470	0.94	0.18	2.18	0.03	17.05	7.3	18	1.10	70.2
M677647		3.17	0.053	0.52	7.28	14.5	480	0.93	0.18	2.33	1.14	14.90	7.2	23	1.92	84.5
M677648		1.12	0.040	0.47	7.47	10.6	460	0.93	0.17	2.42	2.30	16.50	7.1	21	1.77	88.0
M677649		4.40	0.012	0.26	7.69	1.4	380	0.97	0.11	2.20	0.17	15.35	5.6	18	1.26	58.6
M677650		7.08	0.020	0.27	7.56	1.3	370	0.92	0.09	2.06	0.06	15.40	6.7	17	1.23	139.0
M677651		8.46	0.017	0.18	7.51	1.4	460	0.87	0.13	2.02	0.04	14.90	7.6	19	1.13	48.3
M677652		7.28	0.027	0.24	7.34	2.6	350	1.00	0.10	2.10	0.05	18.70	5.1	18	0.97	175.5
M677653		6.06	0.047	0.30	7.22	8.8	310	0.93	0.15	2.01	0.06	23.9	9.7	18	0.96	282
M677654		3.96	<0.005	0.01	0.11	<5	10	0.06	0.02	20.8	0.05	1.27	1.5	<1	0.30	2.4
M677655		6.96	0.018	0.15	7.33	0.9	360	0.87	0.13	2.19	0.05	17.70	6.1	20	0.79	110.0
M677656		7.41	0.065	0.55	7.23	4.7	460	0.89	0.37	2.05	0.10	13.50	10.0	19	1.46	193.5
M677657		7.70	0.043	0.24	7.37	3.3	730	0.96	0.51	2.20	0.03	17.15	12.7	20	1.05	89.6



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Project: Mint

CERTIFICATE OF ANALYSIS WH12223899

Sample Description	Method Analyte Units LOR	ME- MS61 Fe %	ME- MS61 Ga ppm	ME- MS61 Ge ppm	ME- MS61 Hf ppm	ME- MS61 In ppm	ME- MS61 K %	ME- MS61 La ppm	ME- MS61 Li ppm	ME- MS61 Mg %	ME- MS61 Mn ppm	ME- MS61 Mo ppm	ME- MS61 Na %	ME- MS61 Nb ppm	ME- MS61 Ni ppm	ME- MS61 P ppm
		0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
M677622		2.16	16.90	0.11	0.4	0.029	1.47	22.9	7.2	0.66	174	6.19	3.29	5.3	26.2	860
M677623		1.19	15.95	0.09	0.4	0.022	0.78	18.7	10.1	0.76	152	12.20	3.96	7.6	13.1	960
M677624		2.09	16.25	0.13	0.4	0.018	1.31	27.1	6.8	0.67	153	8.01	3.35	6.8	12.0	920
M677625		2.21	17.75	0.13	0.4	0.022	1.25	24.3	6.7	0.79	170	9.04	3.50	7.6	10.1	1020
M677626		10.85	15.00	0.40	1.5	5.51	1.08	155.5	40.6	1.26	1770	17.45	1.15	8.8	69.9	790
M677627		2.25	20.3	0.11	0.3	0.030	1.09	25.1	10.0	1.03	207	3.77	3.69	7.4	9.7	1180
M677628		2.94	19.45	0.13	0.2	0.041	1.16	24.9	11.4	1.12	201	5.33	3.22	6.1	11.4	1210
M677629		2.28	18.40	0.12	0.3	0.023	0.73	20.7	10.2	1.06	181	6.64	3.19	4.6	12.7	1180
M677630		1.79	14.85	0.10	0.3	0.013	1.03	15.9	6.9	0.70	142	6.71	2.77	3.6	21.1	810
M677631		0.44	0.30	0.18	<0.1	<0.005	0.03	0.6	1.2	12.50	204	0.17	0.01	0.2	1.7	180
M677632		1.09	15.05	0.14	0.4	0.026	1.68	4.6	4.3	0.24	44	10.25	2.43	2.2	26.9	860
M677633		0.98	19.00	0.12	0.1	0.020	1.95	5.7	4.4	0.35	58	15.20	3.23	2.2	23.6	830
M677634		1.17	15.60	0.07	0.2	0.026	1.27	5.1	4.9	0.40	88	11.00	3.34	2.7	36.5	530
M677635		1.54	16.70	0.11	0.3	0.025	1.00	19.7	6.6	0.70	150	5.56	3.18	4.1	18.9	850
M677636		1.57	17.30	0.11	0.2	0.025	1.03	19.7	6.8	0.72	154	5.07	3.29	4.2	19.3	880
M677637		1.35	13.75	0.09	0.2	0.023	1.22	5.2	3.5	0.31	140	9.00	3.41	2.3	40.6	500
M677638		1.16	17.00	0.09	0.2	0.026	1.84	4.9	3.9	0.31	108	13.75	3.80	2.4	28.7	630
M677639		1.53	18.95	0.10	0.1	0.018	0.69	12.0	6.6	0.78	138	34.3	3.65	4.4	19.8	520
M677640		1.56	19.20	0.11	0.1	0.016	0.74	13.3	7.9	0.86	171	27.8	3.51	4.1	23.2	520
M677641		1.20	19.25	0.08	0.1	0.010	0.70	10.9	7.6	0.77	140	35.9	3.48	4.0	20.7	500
M677642		1.27	18.80	0.09	0.1	0.007	0.67	8.4	7.2	0.82	131	18.90	3.63	4.2	24.7	520
M677643		9.16	21.5	0.46	1.8	2.11	1.97	259	38.4	1.42	2470	15.75	0.84	10.5	39.0	950
M677644		1.41	18.60	0.08	0.1	0.012	0.77	10.7	6.8	0.74	125	12.80	3.68	4.4	21.2	510
M677645		1.45	18.85	0.08	0.1	0.013	0.68	8.6	6.3	0.79	165	41.7	3.64	4.1	24.4	510
M677646		1.54	19.35	0.10	0.1	0.016	0.82	9.0	7.1	0.86	179	43.4	3.58	3.9	20.5	520
M677647		1.66	18.90	0.10	0.5	0.022	1.24	7.7	8.4	0.87	318	19.80	2.97	4.1	24.1	510
M677648		1.63	19.75	0.11	0.4	0.026	1.15	8.5	8.4	0.93	322	22.9	3.12	4.1	24.4	560
M677649		1.35	18.35	0.09	0.2	0.011	0.86	7.4	8.1	0.82	186	33.4	3.56	3.8	21.2	550
M677650		1.41	18.15	0.10	0.1	0.015	0.83	7.7	7.9	0.79	191	7.97	3.58	3.4	19.3	480
M677651		1.88	17.45	0.10	0.1	0.022	0.86	7.8	6.2	0.85	221	12.65	3.45	3.1	19.7	500
M677652		1.59	18.90	0.10	0.1	0.022	0.58	9.8	6.6	0.84	200	5.96	3.54	3.7	29.2	530
M677653		1.78	17.60	0.12	0.2	0.025	0.52	13.3	6.8	0.79	192	4.96	3.50	3.3	25.3	480
M677654		0.46	0.36	0.05	<0.1	<0.005	0.04	0.7	1.5	13.05	216	0.14	0.01	0.3	3.4	180
M677655		1.43	16.60	0.08	0.2	0.023	0.44	10.3	5.5	0.71	224	5.25	3.51	2.4	20.3	400
M677656		2.73	17.30	0.13	0.2	0.072	1.05	7.2	6.1	0.62	303	13.95	2.84	2.8	23.8	390
M677657		3.31	16.85	0.12	0.2	0.041	0.90	9.0	5.6	0.85	271	4.01	2.83	4.5	21.1	580



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CERTIFICATE OF ANALYSIS WH12223899

Sample Description	Method Analyte Units LOR	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61
		Pb	Pb	Fe	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Ti
		ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
		0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.02
M677622		5.7	36.7	0.007	2.15	0.77	4.4	2	1.1	326	0.45	0.27	3.6	0.117	0.37
M677623		4.7	13.4	0.012	0.94	0.58	3.3	1	0.8	498	0.66	0.11	4.4	0.123	0.18
M677624		5.4	31.2	0.006	2.11	0.69	3.7	3	1.2	411	0.58	0.18	5.1	0.106	0.26
M677625		5.1	26.6	0.009	2.12	0.71	4.3	2	1.0	462	0.65	0.24	4.8	0.142	0.25
M677626		30.5	64.2	0.007	2.50	34.2	6.8	12	89.8	245	0.57	1.44	8.9	0.197	0.98
M677627		8.2	20.9	0.002	1.68	1.03	5.5	2	1.0	546	0.60	0.26	4.1	0.202	0.28
M677628		9.8	27.9	0.003	2.75	0.93	5.3	2	0.8	468	0.51	0.46	4.2	0.157	0.29
M677629		7.1	14.7	0.003	1.95	0.83	5.2	2	0.8	493	0.36	0.39	3.4	0.153	0.19
M677630		4.9	25.8	0.010	1.68	0.65	4.3	2	1.2	299	0.30	0.28	3.0	0.095	0.25
M677631		1.4	1.3	0.002	<0.01	0.07	0.2	<1	<0.2	44.2	<0.05	<0.05	<0.2	<0.005	<0.02
M677632		24.4	43.7	0.019	1.03	0.82	9.4	1	0.9	175.5	0.16	0.36	0.9	0.116	0.47
M677633		11.3	52.9	0.033	0.94	0.84	11.0	1	1.6	295	0.18	0.24	1.1	0.113	0.49
M677634		30.8	36.5	0.014	0.97	1.11	6.2	1	1.0	249	0.22	0.26	1.1	0.139	0.44
M677635		5.0	26.2	0.003	1.33	0.64	5.6	1	0.7	343	0.34	0.20	3.2	0.124	0.25
M677636		5.1	26.1	0.003	1.35	0.64	5.8	1	0.7	358	0.35	0.18	3.3	0.128	0.26
M677637		6.1	31.8	0.014	1.33	0.71	7.5	1	0.6	233	0.19	0.30	0.9	0.121	0.32
M677638		35.0	46.1	0.018	1.17	1.00	8.5	1	1.0	307	0.19	0.33	1.1	0.126	0.53
M677639		4.1	22.4	0.090	0.23	0.38	5.3	1	0.4	433	0.34	0.09	2.0	0.182	0.19
M677640		4.4	24.8	0.020	0.53	0.53	5.6	1	0.6	432	0.31	0.16	2.1	0.178	0.22
M677641		3.7	23.7	0.025	0.35	0.40	5.8	1	0.4	420	0.31	0.11	2.0	0.171	0.20
M677642		3.8	22.7	0.039	0.21	0.50	5.5	1	0.4	448	0.31	0.05	2.1	0.177	0.19
M677643		37.5	125.5	0.003	1.32	36.0	8.5	7	102.5	255	0.69	0.96	10.9	0.241	1.39
M677644		3.7	24.5	0.026	0.25	0.36	4.7	1	0.4	469	0.34	<0.05	2.1	0.184	0.20
M677645		3.6	22.2	0.056	0.35	0.46	5.5	1	0.4	470	0.31	0.09	2.1	0.172	0.19
M677646		4.1	28.6	0.075	0.91	0.36	5.8	1	0.5	434	0.30	0.23	2.2	0.159	0.25
M677647		17.8	35.7	0.047	1.04	2.64	6.2	1	0.9	366	0.31	0.27	1.8	0.175	0.46
M677648		25.5	34.0	0.054	0.97	2.60	6.7	1	0.7	378	0.31	0.23	2.0	0.175	0.42
M677649		5.9	26.2	0.104	0.74	0.38	5.6	1	0.6	422	0.27	0.16	1.9	0.150	0.27
M677650		4.0	26.7	0.028	0.80	0.35	5.4	1	0.5	395	0.24	0.12	2.0	0.133	0.29
M677651		3.6	23.2	0.045	1.30	0.31	5.7	2	0.6	391	0.23	0.15	2.0	0.129	0.29
M677652		3.8	15.7	0.014	0.63	0.44	5.3	1	0.5	441	0.27	0.13	2.3	0.147	0.21
M677653		3.6	13.9	0.009	1.13	0.46	5.1	2	0.5	440	0.21	0.21	1.9	0.121	0.18
M677654		1.2	1.8	<0.002	<0.01	<0.05	0.3	1	<0.2	46.4	<0.05	<0.05	<0.2	<0.005	<0.02
M677655		3.5	10.6	0.013	0.74	0.31	5.2	1	0.4	483	0.19	0.13	1.5	0.114	0.16
M677656		6.4	33.9	0.026	2.38	1.20	5.2	2	0.8	380	0.21	0.45	1.6	0.126	0.39
M677657		4.0	19.6	0.010	2.87	1.42	5.9	2	1.1	414	0.35	0.64	2.2	0.193	0.27



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CERTIFICATE OF ANALYSIS WH12223899

Sample Description	Method Analyte Units LOR	ME- MS61 V ppm 1	ME- MS61 W ppm 0.1	ME- MS61 Y ppm 0.1	ME- MS61 Zn ppm 2	ME- MS61 Zr ppm 0.5	Cu- OG62 Cu % 0.001
M677622		40	1.8	7.5	27	16.2	
M677623		35	1.4	6.9	26	17.4	
M677624		34	2.2	8.5	23	17.9	
M677625		41	1.2	9.2	28	15.2	
M677626		46	271	26.7	306	52.0	1.270
M677627		55	1.4	10.0	37	10.9	
M677628		52	2.0	8.8	49	8.8	
M677629		54	1.0	8.7	34	9.0	
M677630		37	1.9	6.0	30	11.1	
M677631		2	0.1	0.8	16	<0.5	
M677632		47	1.5	2.5	66	6.6	
M677633		65	19.3	2.3	17	4.4	
M677634		60	92.0	2.5	72	7.6	
M677635		42	1.9	6.2	30	10.2	
M677636		42	1.7	6.3	31	9.3	
M677637		42	1.4	2.7	25	7.3	
M677638		58	2.2	2.5	61	5.0	
M677639		42	0.4	6.3	19	3.0	
M677640		45	0.5	7.1	22	3.3	
M677641		41	0.8	6.3	18	3.2	
M677642		43	0.3	6.6	18	3.4	
M677643		56	38.2	32.1	169	59.3	
M677644		43	0.2	5.2	18	3.2	
M677645		42	0.2	6.2	21	3.1	
M677646		50	0.3	4.9	22	3.4	
M677647		54	0.5	5.1	140	17.6	
M677648		56	0.6	5.6	242	12.3	
M677649		50	0.5	5.5	34	4.1	
M677650		39	0.7	6.4	20	3.3	
M677651		46	1.2	4.9	20	2.8	
M677652		58	0.5	5.8	22	3.3	
M677653		41	0.5	6.9	25	4.4	
M677654		3	0.2	0.8	18	<0.5	
M677655		46	0.7	5.4	24	7.4	
M677656		46	1.3	5.6	24	5.7	
M677657		60	1.1	6.0	23	6.6	



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CERTIFICATE OF ANALYSIS WH12223899

Method	CERTIFICATE COMMENTS
ME- MS61 ME- MS61	REE's may not be totally soluble in this method. Interference: Samples with Ca> 10%on ICP- MS As. ICP- AES As results reported (5 ppm DL)



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CERTIFICATE WH12224023

Project: Mint

P.O. No.: Batch 20

This report is for 36 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 21- SEP- 2012.

The following have access to data associated with this certificate:

MATT DUMALA

JOAN MARIACHER

HEATHER SMITH

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/ o BarCode
SPL- 21d	Split sample - duplicate
PUL- 31d	Pulverize Split - duplicate
LOG- 24	Pulp Login - Rcd w/ o Barcode
LOG- 22d	Sample login - Rcd w/ o BarCode dup
CRU- QC	Crushing QC Test
CRU- 31	Fine crushing - 70%<2mm
PUL- QC	Pulverizing QC Test
SPL- 21	Split sample - riffle splitter
PUL- 31	Pulverize split to 85%<75 um

ANALYTICAL PROCEDURES

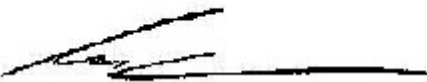
ALS CODE	DESCRIPTION
ME- MS61	48 element four acid ICP- MS
Au- AA24	Au 50g FA AA finish AAS

To: **SILVER RANGE RESOURCES LTD.
ATTN: JOAN MARIACHER
C/ O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
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This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:


Colin Ramshaw, Vancouver Laboratory Manager



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CERTIFICATE OF ANALYSIS WH12224023

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	Au- AA24 Au ppm	ME- MS61 Ag ppm	ME- MS61 Al %	ME- MS61 As ppm	ME- MS61 Ba ppm	ME- MS61 Be ppm	ME- MS61 Bi ppm	ME- MS61 Ca %	ME- MS61 Cd ppm	ME- MS61 Ce ppm	ME- MS61 Co ppm	ME- MS61 Cr ppm	ME- MS61 Cs ppm	ME- MS61 Cu ppm
		0.02	0.005	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
M677658		7.33	0.052	0.49	7.79	9.6	400	0.99	1.21	1.87	0.03	22.7	15.5	17	2.23	12.5
M677659		7.93	0.013	0.15	7.46	6.3	290	0.78	0.16	2.02	0.13	13.25	5.5	16	1.00	44.5
M677660		7.85	0.017	0.16	7.33	2.5	280	0.76	0.07	2.03	0.04	11.80	4.9	15	1.12	69.2
M677661		8.59	0.013	0.18	7.51	2.6	320	0.79	0.13	2.23	0.09	13.05	4.7	16	0.96	85.0
M677662		2.83	0.013	0.16	7.22	2.5	310	0.82	0.14	2.13	0.06	12.90	4.7	15	0.88	105.5
M677663		7.82	0.014	0.19	7.65	3.5	360	0.81	0.14	2.03	0.05	11.95	6.0	18	1.30	21.4
M677664		8.53	0.013	0.09	7.27	4.4	520	0.98	0.08	2.35	0.04	15.35	6.0	32	1.00	28.0
M677665		9.07	0.021	0.09	7.43	3.8	590	1.08	0.12	2.63	0.04	19.40	7.8	34	0.86	64.3
M677666		8.36	0.018	0.07	7.47	3.4	650	1.24	0.11	2.15	0.02	21.8	4.9	14	0.91	36.9
M677667		0.10	0.821	6.92	4.67	7340	1140	1.48	191.0	12.35	0.91	395	70.3	46	9.75	3270
M677668		4.92	0.017	0.12	7.74	5.2	670	1.05	0.21	1.92	0.06	19.85	4.7	11	1.16	36.0
M677669		5.58	0.034	0.26	7.54	12.2	620	1.10	0.07	2.65	0.47	20.4	5.9	22	1.24	51.7
M677670		4.98	0.023	0.05	7.49	2.9	480	1.31	0.04	2.26	0.06	22.0	5.4	11	0.66	51.3
M677671		8.35	0.025	0.18	7.72	7.2	540	1.24	0.11	2.37	0.14	21.5	5.7	13	0.92	50.6
M677672		3.20	<0.005	0.01	0.06	<5	10	0.07	0.02	20.4	0.08	1.24	1.2	<1	0.14	18.2
M677673		8.51	0.020	0.10	7.44	6.1	660	1.21	0.08	2.39	0.21	23.1	5.8	11	0.91	49.3
M677674		9.27	0.017	0.10	7.37	5.3	640	1.25	0.05	2.50	0.09	22.8	5.7	11	0.87	46.6
M677675		8.72	0.027	0.11	7.34	4.1	850	1.13	0.05	2.34	0.05	24.3	6.7	11	0.79	97.2
M677676		8.68	0.038	0.22	7.87	4.9	940	1.33	0.09	2.59	0.10	25.0	7.5	12	0.93	125.5
M677677		<0.02	0.034	0.20	7.46	4.1	900	1.32	0.09	2.43	0.12	23.5	7.4	11	0.87	125.0
M677678		7.80	0.029	0.24	7.26	6.5	680	1.26	0.09	2.09	0.13	21.1	6.5	10	1.38	61.9
M677679		7.51	0.030	0.20	7.27	8.6	560	1.19	0.09	2.21	0.06	21.7	5.2	10	0.84	84.5
M677680		8.38	0.053	0.96	7.25	8.7	450	1.14	0.13	2.36	0.12	20.5	6.9	14	1.01	116.0
M677681		4.00	0.077	0.35	7.40	10.0	370	1.24	0.11	2.38	0.18	22.4	7.6	16	0.95	136.5
M677682		4.79	0.028	0.06	7.39	5.1	410	1.16	0.06	2.57	0.07	24.4	5.1	17	0.66	69.4
M677683		0.10	0.873	7.06	4.63	7260	1130	1.43	198.5	12.00	0.89	402	67.7	43	9.73	3240
M677684		8.89	0.025	0.17	7.12	6.2	880	1.16	0.06	2.88	0.09	23.3	5.3	17	0.66	109.0
M677685		5.49	0.037	0.08	7.30	6.7	530	1.23	0.04	2.26	0.11	26.0	9.4	15	0.56	108.5
M677686		7.74	0.047	0.09	7.50	4.6	760	1.27	0.03	2.25	0.07	20.2	4.9	14	0.86	166.5
M677687		7.55	0.073	0.82	7.35	24.2	800	1.02	0.10	2.41	3.38	26.0	8.7	11	1.68	148.5
M677688		6.04	0.048	0.19	7.30	6.9	880	1.25	0.04	2.50	0.11	22.7	5.4	12	1.11	129.5
M677689		3.63	<0.005	0.01	0.08	<5	20	0.05	0.04	21.3	0.08	1.23	0.6	<1	0.19	2.0
M677690		3.67	0.026	0.21	7.19	4.5	800	1.01	0.03	2.51	0.09	20.5	5.3	13	0.89	117.5
M677691		5.40	0.028	0.17	7.26	3.7	880	1.17	0.04	2.37	0.12	23.2	6.3	13	0.91	152.5
M677692		6.71	0.032	0.16	7.22	6.1	560	1.19	0.04	2.68	0.16	22.1	5.9	12	0.86	184.0
M677693		8.77	0.080	0.32	7.45	4.9	890	1.22	0.05	2.57	0.23	23.9	7.8	15	0.92	310



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CERTIFICATE OF ANALYSIS WH12224023

Sample Description	Method Analyte Units LOR	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	
		Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
		%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
		0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
M677658		4.72	17.75	0.09	0.5	0.119	2.21	10.8	8.6	1.03	483	1.79	1.20	7.6	20.1	790
M677659		1.41	15.10	<0.05	0.2	0.014	0.54	6.4	5.1	0.70	229	1.00	3.34	3.7	23.7	420
M677660		0.98	14.50	0.05	0.2	0.005	0.65	5.6	5.8	0.66	179	4.92	3.36	2.8	22.6	400
M677661		1.04	15.20	0.06	0.1	0.008	0.66	6.0	6.3	0.75	179	4.03	3.49	3.4	22.5	460
M677662		1.04	14.80	0.06	0.1	0.008	0.60	6.0	6.5	0.74	166	3.60	3.47	3.5	23.6	460
M677663		1.47	14.40	0.06	0.1	0.007	0.99	6.0	7.0	0.83	199	6.57	2.85	2.8	26.8	510
M677664		1.98	15.10	0.06	0.2	0.016	0.65	7.6	5.7	0.88	192	2.70	3.09	5.7	28.4	550
M677665		2.34	15.10	0.08	0.2	0.026	0.80	9.5	4.9	1.09	244	3.04	3.06	6.9	28.4	660
M677666		1.70	14.40	0.06	0.1	0.010	1.03	11.3	4.7	0.62	181	2.89	2.95	7.2	13.0	650
M677667		8.92	16.40	0.39	1.8	1.805	1.76	232	34.5	1.37	2290	14.15	0.76	9.2	39.6	880
M677668		1.25	13.50	<0.05	0.1	0.008	1.51	9.8	4.4	0.53	165	11.40	2.51	6.9	10.5	640
M677669		2.08	15.20	<0.05	0.2	0.013	0.89	10.1	5.0	0.73	370	5.25	3.30	7.7	18.4	680
M677670		1.34	15.75	0.05	0.1	<0.005	0.62	11.2	4.5	0.48	147	5.17	3.72	6.9	11.3	680
M677671		1.60	15.40	0.06	0.1	0.010	0.75	11.1	4.5	0.55	193	9.03	3.56	7.5	12.0	680
M677672		0.45	0.22	<0.05	<0.1	<0.005	0.02	0.6	0.7	12.30	200	0.15	0.01	0.3	2.2	150
M677673		2.07	15.15	<0.05	0.1	0.010	0.87	11.6	5.1	0.64	211	5.35	3.38	7.7	12.3	670
M677674		1.95	15.50	0.08	0.1	0.014	0.88	11.4	5.2	0.64	232	3.43	3.41	7.7	11.0	670
M677675		2.28	15.30	0.08	0.1	0.016	1.22	12.1	5.6	0.66	231	5.65	3.16	7.9	10.8	680
M677676		2.52	15.60	0.07	0.1	0.018	1.28	12.8	5.4	0.74	307	6.18	3.33	7.7	12.5	700
M677677		2.41	14.95	0.08	0.1	0.013	1.22	11.9	5.3	0.70	283	6.08	3.22	7.7	12.2	680
M677678		1.95	14.85	0.08	0.1	0.017	1.06	10.7	4.7	0.53	246	6.14	3.17	7.3	11.5	660
M677679		1.73	15.05	0.08	0.1	0.015	0.82	11.3	4.5	0.48	189	4.93	3.34	7.5	10.2	590
M677680		1.56	15.40	0.10	0.1	0.019	0.66	10.5	4.5	0.55	239	6.77	3.48	7.0	13.8	600
M677681		1.54	15.35	0.09	0.2	0.016	0.66	11.1	4.2	0.50	242	3.03	3.47	7.0	11.4	600
M677682		1.48	15.35	0.08	0.1	0.019	0.44	12.6	4.6	0.58	205	2.51	3.70	7.8	11.4	520
M677683		8.78	15.95	0.36	1.7	1.770	1.74	232	34.5	1.34	2230	15.15	0.76	8.9	33.0	860
M677684		1.32	15.55	0.09	0.1	0.023	0.50	9.2	4.3	0.51	255	3.87	3.73	6.5	9.4	550
M677685		1.73	16.00	0.10	0.1	0.013	0.60	10.9	5.3	0.48	162	12.60	3.61	6.2	12.8	690
M677686		1.78	16.70	0.11	0.1	0.009	0.97	8.5	5.8	0.58	156	8.19	3.64	6.7	9.4	730
M677687		2.35	15.90	0.11	0.1	0.017	1.31	10.9	5.9	0.69	435	6.39	2.77	6.4	13.8	690
M677688		2.21	16.65	0.12	0.1	0.009	1.19	9.3	5.8	0.63	248	7.09	3.24	6.8	10.6	730
M677689		0.46	0.28	0.08	<0.1	0.016	0.03	0.6	2.0	12.80	212	0.21	0.01	0.2	2.2	180
M677690		1.94	14.65	0.09	0.1	0.009	1.10	8.4	5.5	0.60	247	4.45	3.42	6.5	9.1	680
M677691		1.97	15.70	0.11	0.1	0.012	1.23	9.9	7.0	0.67	198	5.81	3.23	6.6	11.1	700
M677692		1.70	16.40	0.11	0.1	0.012	0.85	8.8	5.8	0.53	216	11.75	3.58	5.9	10.4	580
M677693		2.28	17.05	0.12	0.1	0.025	1.18	10.0	6.8	0.67	207	8.93	3.36	6.9	11.1	730



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Sample Description	Method Analyte Units LOR	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61
		Pb	Pb	Fe	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Ti
		ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
		0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.02
M677658		6.6	57.6	0.003	3.70	1.79	7.7	2	4.4	223	0.54	1.06	1.9	0.295	0.58
M677659		4.0	15.1	0.002	0.48	0.40	4.9	1	0.7	440	0.28	0.11	1.7	0.152	0.20
M677660		3.9	19.1	0.008	0.37	0.46	4.6	1	0.6	441	0.21	0.07	1.4	0.124	0.22
M677661		5.4	17.3	0.006	0.39	0.59	4.7	1	0.4	447	0.27	0.09	1.9	0.140	0.22
M677662		4.2	16.1	0.007	0.36	0.58	4.7	1	0.5	443	0.28	0.08	1.9	0.142	0.19
M677663		4.5	26.6	0.009	0.83	0.53	5.1	1	0.7	374	0.22	0.15	1.8	0.133	0.30
M677664		5.2	17.1	0.005	0.28	0.85	6.6	1	0.7	478	0.43	0.17	1.9	0.222	0.15
M677665		3.6	20.2	0.007	0.76	0.49	7.2	1	0.8	502	0.52	0.14	1.9	0.251	0.17
M677666		3.6	24.9	0.006	0.36	0.49	4.4	1	0.7	451	0.58	0.09	2.6	0.209	0.19
M677667		32.6	123.5	0.003	1.25	30.7	6.8	6	98.5	237	0.62	0.88	9.1	0.223	1.20
M677668		4.7	37.2	0.033	0.42	0.57	3.9	1	1.2	360	0.56	0.06	2.7	0.196	0.30
M677669		23.2	24.9	0.011	0.32	0.98	5.8	1	0.8	514	0.58	0.09	2.2	0.247	0.21
M677670		4.4	17.4	0.011	0.18	0.93	4.7	1	0.7	515	0.55	<0.05	2.6	0.207	0.16
M677671		39.0	21.3	0.021	0.42	1.05	4.8	1	0.9	501	0.58	0.07	2.5	0.235	0.20
M677672		1.2	1.0	<0.002	<0.01	<0.05	0.3	1	<0.2	46.2	<0.05	<0.05	<0.2	<0.005	<0.02
M677673		27.3	21.7	0.008	0.26	0.86	4.5	1	0.7	512	0.60	0.05	2.6	0.225	0.17
M677674		15.7	21.2	0.005	0.13	0.96	4.6	1	0.7	532	0.62	<0.05	2.5	0.226	0.17
M677675		7.3	28.9	0.006	0.11	0.76	4.6	1	0.6	536	0.61	<0.05	2.4	0.228	0.18
M677676		8.5	27.6	0.007	0.32	0.84	4.8	1	0.7	558	0.61	0.08	2.6	0.237	0.20
M677677		8.1	25.3	0.005	0.28	0.78	4.6	1	0.7	541	0.57	0.07	2.4	0.221	0.19
M677678		10.4	25.2	0.008	0.42	1.24	4.4	1	0.8	490	0.57	0.11	2.5	0.215	0.23
M677679		11.1	19.9	0.006	0.22	1.86	4.2	1	0.8	505	0.62	<0.05	2.5	0.226	0.20
M677680		34.1	18.8	0.012	0.31	2.91	4.2	1	0.8	484	0.57	0.07	2.5	0.207	0.21
M677681		14.2	20.0	0.004	0.60	1.91	4.6	1	0.9	483	0.56	0.13	2.8	0.215	0.23
M677682		5.1	10.4	0.004	0.16	1.33	5.1	1	0.9	551	0.62	0.05	2.6	0.226	0.15
M677683		33.1	121.5	0.003	1.21	29.0	6.6	6	96.4	233	0.60	0.98	9.1	0.218	1.17
M677684		5.3	9.1	0.007	0.16	1.67	5.0	1	0.7	560	0.49	<0.05	2.0	0.231	0.16
M677685		4.2	11.1	0.035	0.29	3.15	4.6	1	0.7	560	0.49	<0.05	2.6	0.222	0.16
M677686		4.3	15.6	0.013	0.06	1.10	4.9	1	0.6	565	0.53	<0.05	2.6	0.232	0.19
M677687		368	29.0	0.017	0.77	1.67	4.7	1	1.0	426	0.49	0.14	2.4	0.216	0.40
M677688		15.2	20.9	0.026	0.21	0.81	4.8	1	0.8	530	0.52	<0.05	2.7	0.227	0.20
M677689		1.8	1.2	0.002	<0.01	0.11	0.2	<1	<0.2	47.6	<0.05	<0.05	<0.2	<0.005	0.02
M677690		7.4	19.0	0.017	0.10	0.53	4.2	1	0.7	529	0.52	<0.05	2.2	0.232	0.18
M677691		32.6	25.2	0.020	0.10	0.41	4.8	<1	0.8	527	0.51	<0.05	2.7	0.231	0.18
M677692		7.0	15.6	0.054	0.08	0.58	4.7	<1	0.8	530	0.47	<0.05	2.2	0.225	0.21
M677693		8.5	23.4	0.023	0.19	0.39	5.0	1	0.9	546	0.52	<0.05	2.6	0.230	0.23



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Sample Description	Method Analyte Units LOR	ME- MS61 V ppm 1	ME- MS61 W ppm 0.1	ME- MS61 Y ppm 0.1	ME- MS61 Zn ppm 2	ME- MS61 Zr ppm 0.5
M677658		78	1.5	8.4	26	18.3
M677659		41	0.8	5.4	31	5.3
M677660		33	0.7	5.2	18	8.0
M677661		43	0.4	5.4	22	3.2
M677662		43	0.4	5.2	18	3.0
M677663		41	0.7	5.4	20	2.4
M677664		53	0.4	7.2	20	4.6
M677665		61	0.4	8.6	21	3.7
M677666		41	0.4	7.5	17	2.6
M677667		51	35.7	28.2	155	60.2
M677668		35	0.8	7.1	17	2.6
M677669		52	0.4	8.3	64	3.2
M677670		41	0.8	8.1	16	3.0
M677671		44	0.5	8.1	28	3.0
M677672		2	0.1	0.8	14	<0.5
M677673		42	0.4	8.5	35	2.6
M677674		41	0.3	8.8	25	2.6
M677675		44	0.3	8.2	21	2.4
M677676		46	0.4	9.3	31	2.2
M677677		43	0.3	8.8	29	2.2
M677678		40	0.4	7.2	30	2.2
M677679		40	0.5	7.2	20	2.4
M677680		43	0.5	8.0	24	2.4
M677681		39	0.6	8.7	29	3.5
M677682		38	0.5	8.6	24	3.8
M677683		51	31.2	27.2	151	59.5
M677684		41	0.5	8.1	23	2.8
M677685		42	0.5	6.7	24	2.1
M677686		47	0.3	6.4	22	1.6
M677687		46	0.4	8.1	412	1.6
M677688		48	0.3	7.3	31	1.5
M677689		3	0.1	0.8	16	<0.5
M677690		45	0.3	6.5	27	1.6
M677691		47	0.3	6.6	29	1.8
M677692		50	0.5	7.2	36	2.1
M677693		48	0.3	7.2	40	1.5



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Method	CERTIFICATE COMMENTS
ME- MS61 ME- MS61	REE's may not be totally soluble in this method. Interference: Samples with Ca> 10%on ICP- MS As. ICP- AES As results reported (5 ppm DL)



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CERTIFICATE WH12225403

Project: Mint

P.O. No.: Batch 21

This report is for 36 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 23- SEP- 2012.

The following have access to data associated with this certificate:

MATT DUMALA

JOAN MARIACHER

HEATHER SMITH

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/ o BarCode
CRU- QC	Crushing QC Test
PUL- QC	Pulverizing QC Test
CRU- 31	Fine crushing - 70%<2mm
SPL- 21	Split sample - riffle splitter
PUL- 31	Pulverize split to 85%<75 um
LOG- 24	Pulp Login - Rcd w/ o Barcode
LOG- 22d	Sample login - Rcd w/ o BarCode dup
SPL- 21d	Split sample - duplicate
PUL- 31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

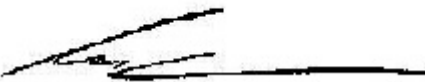
ALS CODE	DESCRIPTION	INSTRUMENT
Au- AA24	Au 50g FA AA finish	AAS
ME- MS61	48 element four acid ICP- MS	

To: **SILVER RANGE RESOURCES LTD.**
ATTN: JOAN MARIACHER
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This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:


Colin Ramshaw, Vancouver Laboratory Manager



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Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	Au- AA24 Au ppm	ME- MS61 Ag ppm	ME- MS61 Al %	ME- MS61 As ppm	ME- MS61 Ba ppm	ME- MS61 Be ppm	ME- MS61 Bi ppm	ME- MS61 Ca %	ME- MS61 Cd ppm	ME- MS61 Ce ppm	ME- MS61 Co ppm	ME- MS61 Cr ppm	ME- MS61 Cs ppm	ME- MS61 Cu ppm
		0.02	0.005	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
M677694		6.56	0.076	0.42	7.38	10.5	800	1.22	0.14	2.49	2.07	20.4	6.7	12	1.16	152.5
M677695		9.00	0.056	0.25	7.35	10.7	720	1.23	0.07	2.57	0.08	21.0	6.5	14	0.93	224
M677696		6.52	0.084	0.42	7.27	29.0	730	1.14	0.17	2.37	0.23	20.9	6.9	11	1.59	177.5
M677697		5.20	0.071	0.15	6.74	3.0	830	1.20	0.04	2.27	0.10	20.5	6.3	20	0.78	241
M677698		1.88	0.087	0.14	7.38	3.0	870	1.13	0.04	2.35	0.11	23.3	5.7	13	0.76	261
M677699		9.07	0.049	0.17	7.26	6.6	1000	1.22	0.07	2.48	0.09	23.1	7.5	15	0.84	152.5
M677700		8.83	0.040	0.16	7.22	6.3	790	1.11	0.14	2.46	0.11	23.5	5.5	12	0.86	114.5
M677701		6.77	0.091	0.32	7.16	8.7	700	1.16	0.21	2.44	0.09	24.1	7.5	11	1.18	238
M677702		6.21	0.145	1.19	6.78	29.2	850	0.94	0.29	2.38	0.15	19.55	8.2	9	2.54	342
M677703		4.39	0.249	2.73	6.36	26.0	570	0.99	0.51	2.74	0.28	18.50	6.5	9	2.69	218
M677704		4.97	<0.005	0.02	0.09	<5	20	0.08	0.03	20.9	0.07	1.65	1.9	<1	0.32	2.3
M677705		8.84	0.033	0.26	7.28	6.8	610	1.14	0.07	2.42	0.10	21.2	5.5	12	1.42	77.0
M677706		8.33	0.072	0.35	7.38	12.0	680	1.05	0.04	2.55	1.12	24.9	6.5	13	1.77	41.3
M677707		7.77	0.059	0.31	7.02	11.6	720	1.20	0.05	2.49	0.37	25.2	6.7	13	1.52	90.7
M677708		6.53	1.445	0.93	6.49	24.0	840	0.98	0.08	2.35	0.18	21.0	9.2	10	1.81	323
M677709		6.11	0.180	0.60	7.29	14.0	1110	1.04	0.07	2.28	0.25	24.8	8.8	10	1.56	434
M677710		0.10	0.820	8.04	4.74	8100	1180	1.94	195.5	12.55	1.2	490	83.6	45	11.35	3310
M677711		5.77	0.086	0.39	7.38	27.8	1160	0.97	0.26	2.29	0.10	25.1	8.0	11	1.33	184.5
M677712		6.94	0.101	0.69	6.95	4.6	410	0.70	0.26	2.09	0.18	13.60	6.0	19	1.34	333
M677713		7.86	0.083	0.69	7.07	11.9	350	0.86	0.38	1.92	0.16	14.20	4.5	22	1.34	252
M677714		5.20	0.036	0.24	7.08	11.4	440	1.06	0.14	2.18	0.09	19.45	3.7	14	1.21	98.3
M677715		6.10	0.168	3.13	6.83	27.3	1030	0.89	0.45	2.21	13.70	19.05	5.2	11	1.65	155.0
M677716		3.67	<0.005	0.01	0.10	<5	40	0.06	0.05	21.0	0.08	1.78	2.0	<1	0.45	2.4
M677717		4.54	0.491	1.11	6.70	39.8	540	0.75	0.10	3.26	1.10	27.0	10.0	10	2.18	44.5
M677718		8.67	0.120	0.41	6.42	35.3	490	1.01	0.07	2.93	2.61	25.3	9.3	10	2.44	27.5
M677719		8.49	0.099	0.25	7.16	23.7	600	0.97	0.04	3.07	0.33	27.9	8.7	11	2.50	20.8
M677720		8.60	0.249	0.21	7.14	13.7	720	1.01	0.07	3.08	1.69	27.3	8.7	10	2.26	20.0
M677721		<0.02	0.230	0.23	7.24	14.5	730	0.98	0.07	3.10	1.62	29.9	8.9	11	2.30	18.9
M677722		8.69	0.055	0.17	6.90	8.4	560	1.11	0.13	2.81	0.17	24.0	8.4	11	2.44	11.2
M677723		8.73	0.065	0.29	7.03	31.9	1090	1.00	0.11	2.94	0.56	27.2	8.4	11	2.60	14.8
M677724		6.27	0.866	0.40	7.32	13.4	1060	0.97	0.04	3.13	0.60	31.4	8.5	11	2.53	25.7
M677725		8.65	0.198	0.31	7.39	16.2	990	0.94	0.06	3.21	0.76	29.8	9.0	11	2.47	21.0
M677726		0.10	0.848	6.50	4.87	8490	1210	1.44	203	12.70	1.12	418	72.1	50	9.95	3330
M677727		3.30	0.254	0.86	7.35	24.5	250	0.82	0.55	1.75	2.15	18.70	8.3	10	1.84	277
M677728		5.17	0.118	0.94	7.31	20.6	710	0.90	0.36	2.24	0.96	19.65	5.6	11	1.93	303
M677729		6.94	0.040	0.43	7.74	9.6	700	1.07	0.17	2.42	0.48	21.1	5.3	15	1.77	69.2



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Sample Description	Method Analyte Units LOR	ME- MS61 Fe %	ME- MS61 Ga ppm	ME- MS61 Ge ppm	ME- MS61 Hf ppm	ME- MS61 In ppm	ME- MS61 K %	ME- MS61 La ppm	ME- MS61 Li ppm	ME- MS61 Mg %	ME- MS61 Mn ppm	ME- MS61 Mo ppm	ME- MS61 Na %	ME- MS61 Nb ppm	ME- MS61 Ni ppm	ME- MS61 P ppm
		0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
M677694		1.99	16.20	0.09	0.1	0.022	1.15	9.8	6.3	0.62	271	9.09	3.35	7.1	11.3	690
M677695		2.18	15.55	0.12	0.1	0.018	0.98	10.1	5.2	0.56	216	6.20	3.34	7.6	9.0	640
M677696		2.08	15.45	0.12	0.1	0.021	1.23	9.8	6.6	0.61	294	7.91	3.16	6.5	8.4	580
M677697		2.16	15.25	0.12	0.1	0.011	1.10	9.8	6.4	0.62	162	6.97	3.30	7.1	10.1	670
M677698		2.18	15.05	0.12	0.1	0.011	1.15	11.5	6.4	0.61	162	7.61	3.45	7.2	9.2	680
M677699		2.49	14.75	0.14	0.1	0.021	1.34	11.1	5.4	0.65	233	6.87	3.23	7.9	8.8	670
M677700		2.30	15.20	0.14	0.1	0.022	1.12	11.6	4.8	0.63	186	3.72	3.24	7.6	8.7	680
M677701		1.85	15.30	0.12	0.1	0.039	0.92	11.5	5.7	0.62	259	5.23	3.22	7.7	7.8	660
M677702		2.11	14.90	0.12	0.1	0.046	1.70	9.5	8.6	0.71	798	6.75	2.19	6.8	9.0	630
M677703		2.27	14.90	0.13	0.1	0.072	1.99	8.6	7.5	0.95	1600	3.42	1.55	7.1	9.7	660
M677704		0.47	0.46	0.22	<0.1	<0.005	0.03	0.7	1.1	12.65	207	0.13	0.01	0.5	3.1	180
M677705		2.28	16.10	0.19	0.1	0.015	0.84	10.2	5.7	0.60	250	4.03	3.37	7.8	8.5	690
M677706		2.39	15.75	0.19	0.1	0.009	1.13	12.4	6.4	0.72	350	2.49	3.01	7.8	9.1	670
M677707		2.34	14.95	0.15	0.1	0.012	1.09	12.2	6.3	0.63	284	4.00	2.96	7.7	8.8	640
M677708		2.27	13.65	0.14	0.1	0.018	1.21	10.0	7.9	0.59	389	10.55	2.67	6.3	8.6	600
M677709		3.07	14.75	0.14	0.1	0.026	1.36	12.6	6.3	0.51	253	14.25	2.94	5.9	8.1	590
M677710		8.88	19.65	0.76	1.7	1.785	1.87	260	50.9	1.33	2310	15.55	0.80	10.3	38.3	900
M677711		3.21	14.50	0.11	0.1	0.021	1.42	12.7	5.7	0.46	236	7.65	3.04	6.0	10.1	600
M677712		1.66	15.15	0.08	0.2	0.023	1.07	7.3	6.7	0.57	243	12.70	3.32	3.3	13.5	320
M677713		2.18	16.65	0.11	0.2	0.013	1.09	7.5	6.7	0.50	187	11.65	3.37	3.6	13.6	340
M677714		1.94	15.25	0.12	0.1	0.008	0.76	9.3	6.1	0.42	199	9.49	3.48	5.8	9.6	600
M677715		2.76	14.00	0.14	0.1	0.063	1.42	8.9	10.4	0.73	504	8.53	2.40	6.0	8.7	570
M677716		0.48	0.50	0.20	<0.1	<0.005	0.04	0.8	1.3	12.70	212	0.18	0.01	0.5	3.6	190
M677717		2.48	16.10	0.18	1.5	0.022	2.27	12.4	27.0	1.07	1230	1.52	1.78	8.0	10.0	740
M677718		2.26	15.65	0.17	1.6	0.020	2.38	11.5	20.2	0.95	1250	1.31	1.49	8.0	9.5	690
M677719		2.31	15.50	0.15	1.5	0.026	2.26	13.4	33.8	0.99	1190	0.97	1.69	8.1	10.9	720
M677720		2.30	15.30	0.16	1.5	0.025	2.21	13.3	20.1	1.00	1180	0.93	1.78	7.8	10.1	720
M677721		2.30	15.70	0.16	1.5	0.026	2.24	14.9	20.1	1.01	1180	0.95	1.79	8.0	10.7	700
M677722		2.26	15.40	0.16	1.5	0.027	1.79	11.3	27.9	0.87	841	1.01	2.25	8.0	9.9	720
M677723		2.28	15.10	0.18	1.5	0.025	1.97	13.3	24.5	0.87	1260	1.64	2.11	7.8	9.9	700
M677724		2.42	15.05	0.19	1.6	0.022	2.27	16.6	22.4	1.03	1080	1.46	1.88	7.8	10.2	730
M677725		2.46	15.90	0.18	1.6	0.038	2.26	14.7	34.9	1.07	1180	1.25	2.00	8.2	10.2	780
M677726		8.81	18.75	0.54	1.9	1.815	1.89	243	40.4	1.35	2400	13.80	0.81	10.2	37.8	940
M677727		3.69	14.05	0.14	0.3	0.089	2.21	9.2	15.3	0.65	561	12.75	1.72	4.8	9.5	590
M677728		2.78	14.25	0.15	0.1	0.025	1.34	9.5	10.0	0.69	667	7.99	3.18	5.4	11.3	630
M677729		2.41	15.95	0.15	0.1	0.013	1.11	10.4	8.5	0.56	318	4.84	3.10	6.5	8.9	620



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Sample Description	Method Analyte Units LOR	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61
		Pb	Pb	Fe	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	U
		ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
		0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.1
M677694		16.5	24.9	0.028	0.30	0.97	5.1	1	1.1	491	0.53	0.12	2.6	0.211	0.5
M677695		6.8	19.2	0.014	0.14	0.58	5.3	1	1.0	538	0.58	0.06	2.7	0.224	0.5
M677696		10.8	30.7	0.014	0.68	0.80	4.7	2	1.7	446	0.48	0.15	2.5	0.192	0.6
M677697		6.3	21.8	0.015	0.08	0.30	5.1	1	0.7	517	0.54	<0.05	2.5	0.216	0.4
M677698		6.2	24.4	0.015	0.06	0.31	5.0	1	0.8	548	0.55	<0.05	2.8	0.217	0.4
M677699		7.5	22.5	0.016	0.17	0.45	4.9	1	0.8	548	0.60	0.05	2.8	0.226	0.6
M677700		6.8	20.0	0.006	0.13	0.47	4.7	1	0.8	522	0.59	0.06	2.9	0.225	0.5
M677701		7.3	22.1	0.009	0.71	0.61	4.7	1	1.2	503	0.58	0.20	2.7	0.219	0.6
M677702		18.5	45.1	0.015	1.10	1.44	4.5	2	2.6	325	0.52	0.53	2.5	0.200	0.6
M677703		20.4	56.2	0.009	1.26	2.60	4.6	2	3.2	241	0.54	1.32	2.4	0.202	0.9
M677704		1.6	1.7	<0.002	<0.01	0.12	0.5	1	<0.2	42.8	<0.05	<0.05	0.2	<0.005	1.3
M677705		11.0	19.5	0.010	0.24	0.70	4.7	1	0.8	522	0.61	0.06	2.6	0.226	0.5
M677706		92.6	28.9	0.003	0.41	0.82	5.1	1	0.8	462	0.60	0.07	2.9	0.224	0.6
M677707		65.3	24.1	0.006	0.31	0.64	4.8	1	0.7	478	0.60	0.05	2.6	0.215	0.6
M677708		16.7	29.5	0.018	0.61	0.99	4.1	1	0.7	396	0.47	0.09	2.4	0.185	0.6
M677709		9.1	28.7	0.030	0.33	0.64	4.4	1	0.9	486	0.45	0.06	2.8	0.187	0.5
M677710		35.4	113.5	0.003	1.24	32.7	9.0	8	102.5	243	0.63	1.22	11.1	0.228	12.2
M677711		10.5	27.8	0.015	0.70	0.58	4.6	1	1.1	507	0.46	0.20	2.7	0.185	0.5
M677712		18.0	33.7	0.020	0.90	0.55	4.5	1	1.2	357	0.27	0.18	1.5	0.131	0.6
M677713		30.8	35.6	0.021	1.20	0.52	4.7	1	1.0	370	0.28	0.28	1.4	0.135	0.4
M677714		8.0	21.8	0.017	0.46	0.52	4.5	1	0.8	474	0.44	0.12	2.3	0.174	0.4
M677715		253	36.8	0.019	1.86	4.00	4.1	2	1.9	356	0.42	0.34	2.5	0.173	0.4
M677716		3.0	2.4	<0.002	0.01	0.15	0.5	1	<0.2	45.8	<0.05	<0.05	<0.2	<0.005	0.5
M677717		105.0	62.0	<0.002	0.95	6.32	7.0	1	0.7	249	0.58	0.05	2.6	0.285	1.4
M677718		109.0	62.2	<0.002	0.89	3.60	6.6	1	0.6	246	0.64	0.05	2.8	0.260	1.1
M677719		46.3	72.2	<0.002	0.53	1.65	6.3	1	0.6	298	0.64	<0.05	2.9	0.259	1.1
M677720		122.5	70.8	<0.002	0.63	1.62	6.1	1	0.6	288	0.63	0.05	3.0	0.252	1.1
M677721		124.5	76.9	<0.002	0.64	1.61	6.5	1	0.6	291	0.65	0.05	3.2	0.250	1.2
M677722		23.3	49.9	<0.002	0.48	1.15	5.6	1	0.6	436	0.64	<0.05	2.7	0.257	0.9
M677723		79.4	60.9	<0.002	0.51	1.53	6.2	1	0.6	390	0.63	<0.05	3.1	0.252	1.1
M677724		81.6	82.1	<0.002	0.53	1.53	6.7	1	0.6	299	0.65	0.06	3.6	0.255	1.3
M677725		349	70.6	<0.002	0.43	2.37	7.0	1	0.6	284	0.66	<0.05	3.0	0.286	1.2
M677726		34.4	124.5	0.004	1.31	30.9	8.1	7	97.9	243	0.67	0.92	10.8	0.233	13.8
M677727		54.4	66.3	0.040	3.07	2.00	4.9	2	3.0	254	0.38	0.22	2.6	0.155	0.6
M677728		98.8	45.1	0.029	1.84	3.80	4.1	1	1.2	363	0.42	0.30	2.6	0.158	0.6
M677729		32.9	31.9	0.011	0.95	0.79	4.6	1	0.9	494	0.50	0.24	2.7	0.185	0.6



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M677694		44	0.6	7.1	231	1.5
M677695		43	0.3	8.2	25	1.9
M677696		41	0.8	7.6	39	1.7
M677697		46	0.3	6.3	23	1.5
M677698		44	0.3	6.7	25	1.4
M677699		42	0.3	7.9	26	1.8
M677700		44	0.3	7.4	25	1.8
M677701		41	0.8	7.0	24	1.9
M677702		41	1.9	6.2	35	1.8
M677703		41	2.8	8.1	47	1.5
M677704		2	0.1	0.8	15	<0.5
M677705		43	0.5	7.4	29	1.6
M677706		43	0.5	8.2	144	1.9
M677707		41	0.6	7.6	58	1.9
M677708		36	0.8	6.3	35	1.3
M677709		39	0.6	6.8	48	1.1
M677710		53	38.5	27.7	159	64.9
M677711		41	0.7	7.2	26	1.0
M677712		37	0.6	4.4	31	7.0
M677713		36	0.5	4.8	26	6.5
M677714		37	0.8	6.9	24	2.9
M677715		37	1.7	6.6	1700	1.5
M677716		2	0.1	0.9	17	<0.5
M677717		68	0.9	8.6	201	55.4
M677718		62	0.7	7.9	318	59.1
M677719		64	0.6	9.0	119	52.3
M677720		63	0.8	8.8	246	51.7
M677721		63	0.7	9.4	238	51.7
M677722		63	0.8	8.2	80	51.6
M677723		64	0.7	8.8	146	50.9
M677724		64	0.9	9.7	133	54.9
M677725		70	0.8	9.4	149	56.1
M677726		56	34.1	30.8	164	67.4
M677727		50	2.1	6.6	233	10.7
M677728		40	0.9	7.8	124	3.2
M677729		41	1.0	7.3	73	1.4



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Phone: 604 984 0221 Fax: 604 984 0218 www.alsglobal.com

To: **SILVER RANGE RESOURCES LTD.**
C/ O ARCHER, CATHRO & ASSOCIATES (1981)
LIMITED
1016- 510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Mint

Page: Appendix 1
Total # Appendix Pages: 1
Finalized Date: 1- OCT- 2012
Account: RANSIL

CERTIFICATE OF ANALYSIS WH12225403

Method	CERTIFICATE COMMENTS
ME- MS61 ME- MS61	REE's may not be totally soluble in this method. Interference: Samples with Ca> 10%on ICP- MS As. ICP- AES As results reported (5 ppm DL)



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Project: Mint

P.O. No.: Batch 22

This report is for 36 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 24- SEP- 2012.

The following have access to data associated with this certificate:

MATT DUMALA

JOAN MARIACHER

HEATHER SMITH

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/ o BarCode
CRU- QC	Crushing QC Test
PUL- QC	Pulverizing QC Test
CRU- 31	Fine crushing - 70%<2mm
SPL- 21	Split sample - riffle splitter
PUL- 31	Pulverize split to 85%<75 um
LOG- 24	Pulp Login - Rcd w/ o Barcode
LOG- 22d	Sample login - Rcd w/ o BarCode dup
SPL- 21d	Split sample - duplicate
PUL- 31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

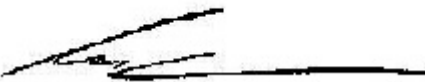
ALS CODE	DESCRIPTION	INSTRUMENT
Au- AA24	Au 50g FA AA finish	AAS
ME- MS61	48 element four acid ICP- MS	

To: **SILVER RANGE RESOURCES LTD.**
ATTN: JOAN MARIACHER
C/ O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
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This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:


Colin Ramshaw, Vancouver Laboratory Manager



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CERTIFICATE OF ANALYSIS WH12225406

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	Au- AA24 Au ppm	ME- MS61 Ag ppm	ME- MS61 Al %	ME- MS61 As ppm	ME- MS61 Ba ppm	ME- MS61 Be ppm	ME- MS61 Bi ppm	ME- MS61 Ca %	ME- MS61 Cd ppm	ME- MS61 Ce ppm	ME- MS61 Co ppm	ME- MS61 Cr ppm	ME- MS61 Cs ppm	ME- MS61 Cu ppm
		0.02	0.005	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
M677730		3.29	0.224	1.34	6.81	35.1	860	0.91	0.25	2.30	6.53	18.05	7.5	10	2.34	284
M677731		6.67	0.060	0.38	7.55	11.0	1110	1.12	0.06	2.63	0.58	21.1	8.8	12	1.44	217
M677732		6.80	0.083	0.56	7.11	13.1	1190	1.07	0.05	2.64	0.98	20.5	7.5	11	1.79	106.5
M677733		4.69	0.059	0.52	7.06	49.9	1450	0.99	0.09	2.70	0.62	21.2	8.2	10	2.12	121.5
M677734		8.21	0.058	0.16	7.36	8.1	960	1.08	0.06	2.50	0.07	21.2	9.5	12	0.82	329
M677735		0.10	0.805	6.46	4.89	8570	1240	1.27	204	12.70	1.10	433	79.8	50	9.55	3560
M677736		8.87	0.041	0.17	7.38	5.8	990	1.07	0.12	2.52	0.08	21.0	7.8	12	0.88	198.5
M677737		9.00	0.080	0.18	7.32	4.3	930	1.13	0.07	2.48	0.09	19.60	8.6	13	0.68	344
M677738		6.92	0.039	0.14	7.60	2.5	1180	1.07	0.07	2.35	0.08	21.0	7.8	12	0.77	220
M677739		5.91	0.034	0.28	7.33	17.4	960	1.11	0.18	2.15	0.12	20.3	9.0	11	1.14	154.0
M677740		3.08	<0.005	0.01	0.06	<5	30	0.06	0.03	21.2	0.07	1.16	1.2	<1	0.17	2.4
M677741		9.00	0.028	0.10	7.43	2.0	950	1.09	0.06	2.38	0.10	23.0	7.3	15	0.84	148.0
M677742		6.47	0.037	0.17	7.44	4.1	850	1.03	0.22	2.32	0.10	19.55	6.4	14	0.82	181.5
M677743		4.78	0.067	0.29	7.44	13.8	840	1.14	0.14	2.53	0.15	22.6	7.2	12	0.98	262
M677744		8.03	0.044	0.15	7.39	3.3	920	1.18	0.06	2.49	0.08	21.5	7.3	12	0.92	211
M677745		8.30	0.055	0.29	7.31	4.9	1020	1.21	0.07	2.57	0.31	21.5	6.9	12	1.00	203
M677746		<0.02	0.060	0.35	7.69	5.1	1050	1.24	0.08	2.60	0.30	24.8	7.2	13	1.05	203
M677747		9.11	0.035	0.28	7.31	9.6	1200	1.25	0.07	2.45	2.12	22.8	7.2	14	1.11	178.0
M677748		7.73	0.019	0.09	7.33	2.0	1130	1.27	0.03	2.52	0.09	20.9	5.8	13	0.89	93.1
M677749		8.76	0.048	0.29	7.29	12.6	1090	1.26	0.08	2.61	0.15	23.1	7.8	12	1.15	243
M677750		8.68	0.016	0.07	7.72	2.0	980	1.29	0.02	2.68	0.13	24.6	7.7	15	1.01	48.4
M650051		8.16	0.066	0.20	7.65	3.6	900	1.20	0.15	2.62	0.13	23.5	7.9	13	1.06	150.5
M650052		0.10	0.795	7.53	4.88	8560	1240	1.34	212	12.50	1.17	454	77.0	50	9.91	3530
M650053		8.24	0.026	0.10	7.32	5.3	840	1.15	0.11	2.65	0.09	22.7	7.1	12	0.80	90.2
M650054		8.37	0.091	0.20	7.39	2.2	650	1.18	0.13	2.22	0.09	21.1	5.7	15	0.81	249
M650055		8.01	0.109	0.14	7.24	8.1	760	1.13	0.05	2.30	0.11	20.7	5.0	17	0.99	209
M650056		3.05	0.064	0.16	7.39	2.9	770	1.16	0.06	2.36	0.11	23.1	5.8	17	0.80	223
M650057		1.46	0.061	0.14	7.31	2.3	680	1.14	0.05	2.30	0.11	21.0	5.8	19	0.75	179.5
M650058		5.31	0.079	0.20	7.35	2.9	760	1.37	0.07	2.46	0.09	24.0	7.1	14	0.88	283
M650059		8.07	0.072	0.36	7.43	6.9	500	1.22	0.09	2.31	0.09	24.2	6.1	16	1.10	376
M650060		7.84	0.105	0.22	7.40	2.3	820	1.41	0.05	2.68	0.19	25.2	8.1	21	0.78	416
M650061		8.77	0.073	0.22	7.15	3.6	820	1.45	0.08	2.60	0.12	25.6	7.0	14	0.89	375
M650062		7.08	0.124	0.20	7.86	2.3	620	1.09	0.14	2.60	0.10	21.3	8.1	26	0.72	373
M650063		3.88	<0.005	<0.01	0.07	<5	20	0.07	0.03	20.2	0.07	1.33	1.3	<1	0.90	2.2
M650064		9.02	0.038	0.17	7.56	1.9	470	0.83	0.06	2.81	0.15	12.25	11.3	58	0.77	227
M650065		5.80	0.050	0.36	7.31	5.9	430	0.88	0.08	2.66	2.24	11.55	12.1	57	1.27	270



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Finalized Date: 1- OCT- 2012
Account: RANSIL

Project: Mint

CERTIFICATE OF ANALYSIS WH12225406

Sample Description	Method Analyte Units LOR	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61
		Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
		%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
		0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
M677730		2.30	14.70	0.14	0.2	0.020	1.60	8.5	7.6	0.67	810	30.3	2.50	5.4	11.8	540
M677731		2.23	16.55	0.16	0.2	0.009	1.39	10.2	7.9	0.55	334	7.84	3.08	6.6	10.3	650
M677732		2.38	16.00	0.16	0.2	0.012	1.47	9.8	6.2	0.57	546	4.00	2.83	6.7	10.1	620
M677733		2.59	15.70	0.15	0.2	0.007	1.77	9.8	5.8	0.65	734	6.97	2.61	6.3	12.3	610
M677734		2.20	16.45	0.15	0.2	0.015	1.23	10.3	5.7	0.52	160	12.70	3.23	6.2	11.6	640
M677735		8.99	19.65	0.53	1.8	1.735	1.97	245	29.2	1.38	2470	15.65	0.83	9.6	39.3	990
M677736		2.28	16.40	0.14	0.2	0.010	1.27	10.1	5.2	0.54	153	11.30	3.17	6.6	11.7	680
M677737		2.12	17.15	0.14	0.2	0.014	1.20	9.3	6.0	0.63	145	7.92	3.38	6.6	11.5	650
M677738		1.82	16.50	0.15	0.2	0.012	1.48	10.2	7.1	0.69	145	10.60	3.22	6.2	11.7	670
M677739		2.12	16.35	0.18	0.2	0.008	1.40	9.8	6.9	0.66	232	7.69	3.11	5.7	17.9	680
M677740		0.45	0.34	0.30	0.1	<0.005	0.02	0.5	0.9	12.80	206	0.23	0.01	0.3	1.7	180
M677741		2.26	16.45	0.15	0.2	0.010	1.31	11.1	6.5	0.73	151	6.70	3.34	6.4	11.8	670
M677742		1.98	16.75	0.19	0.3	0.012	1.17	9.2	6.4	0.70	143	5.33	3.40	5.6	13.3	590
M677743		2.32	15.85	0.18	0.2	0.013	1.17	11.0	7.3	0.64	169	7.40	3.12	6.1	13.6	640
M677744		1.89	16.55	0.16	0.2	0.008	1.25	10.2	6.8	0.66	144	13.75	3.35	6.5	13.7	680
M677745		2.03	17.15	0.16	0.2	0.008	1.32	10.2	7.3	0.64	213	8.81	3.27	6.7	11.0	660
M677746		2.08	17.80	0.19	0.2	0.010	1.36	12.0	7.7	0.67	213	8.64	3.30	6.8	11.5	660
M677747		2.23	17.90	0.18	0.2	0.009	1.50	10.9	8.1	0.61	221	7.62	3.22	6.6	11.5	650
M677748		1.98	16.95	0.18	0.2	0.005	1.47	9.8	7.9	0.68	154	13.20	3.26	6.8	10.9	640
M677749		1.69	16.35	0.18	0.2	0.017	1.50	10.9	7.4	0.59	223	10.40	2.99	6.2	11.2	640
M677750		2.34	17.35	0.20	0.2	0.007	1.26	11.7	8.4	0.71	223	7.36	3.33	7.0	12.2	680
M650051		2.15	17.35	0.19	0.2	0.011	1.23	11.2	7.6	0.76	200	13.05	3.32	6.7	12.8	680
M650052		8.99	19.35	0.53	1.9	1.805	1.95	250	30.5	1.39	2460	13.85	0.84	9.5	38.2	980
M650053		2.11	16.20	0.15	0.2	0.010	1.22	10.9	6.3	0.68	166	5.55	3.30	6.6	12.0	670
M650054		2.10	17.45	0.17	0.2	0.016	1.01	10.1	7.1	0.68	146	4.70	3.66	5.9	14.9	560
M650055		2.07	16.40	0.16	0.2	0.012	1.07	10.0	5.9	0.52	190	7.97	3.50	5.7	13.6	550
M650056		1.79	16.90	0.18	0.3	0.032	1.18	10.8	5.5	0.58	203	7.14	3.55	6.8	12.3	580
M650057		1.92	17.10	0.17	0.4	0.033	1.05	9.7	5.5	0.60	201	6.49	3.66	5.8	14.1	560
M650058		2.35	16.90	0.18	0.2	0.031	1.26	11.4	6.2	0.70	215	3.77	3.36	7.5	14.0	690
M650059		2.03	17.25	0.20	0.3	0.021	0.92	11.4	7.0	0.70	182	3.61	3.64	6.5	15.6	620
M650060		2.35	17.90	0.19	0.2	0.033	1.27	11.7	5.7	0.71	284	4.71	3.54	8.3	15.0	700
M650061		2.22	16.95	0.19	0.2	0.025	1.25	11.8	5.0	0.60	284	8.74	3.29	7.7	12.0	700
M650062		2.39	17.55	0.16	0.1	0.028	0.99	11.3	5.3	0.80	220	10.10	3.69	7.2	17.9	680
M650063		0.45	0.43	0.17	<0.1	<0.005	0.03	0.7	1.3	12.05	191	0.20	0.01	0.4	0.2	180
M650064		2.49	17.15	0.16	0.1	0.034	0.94	6.0	8.0	1.27	339	7.30	3.56	4.5	44.3	490
M650065		2.32	16.20	0.18	0.1	0.027	1.05	5.4	9.2	1.09	484	12.25	3.12	4.5	42.6	500



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CERTIFICATE OF ANALYSIS WH12225406

Sample Description	Method Analyte Units LOR	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61
		Pb	Pb	Fe	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	U
		ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
		0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.1
M677730		456	50.3	0.097	1.34	4.25	4.6	1	0.8	348	0.41	0.24	2.0	0.174	0.8
M677731		101.5	30.1	0.015	0.48	0.87	5.1	1	0.7	563	0.50	0.05	2.2	0.207	0.6
M677732		128.0	30.9	0.006	0.41	0.66	4.9	1	0.5	593	0.52	0.11	2.2	0.206	0.7
M677733		36.7	43.8	0.010	1.07	3.16	5.0	1	0.9	453	0.49	0.18	2.1	0.197	1.1
M677734		6.3	26.6	0.029	0.50	0.30	5.0	1	0.8	563	0.48	<0.05	2.3	0.206	0.6
M677735		33.9	127.0	0.003	1.29	28.3	8.4	7	92.9	253	0.64	0.79	9.9	0.236	12.7
M677736		6.2	28.3	0.021	0.64	0.33	5.1	2	1.1	550	0.50	0.05	2.4	0.204	0.8
M677737		6.0	24.9	0.017	0.28	0.30	5.1	1	0.9	568	0.49	<0.05	2.3	0.206	0.5
M677738		5.2	31.4	0.028	0.38	0.30	5.2	1	1.1	564	0.46	0.05	2.5	0.198	0.7
M677739		12.8	38.1	0.016	1.18	0.46	5.0	2	1.4	469	0.44	0.17	2.4	0.184	0.9
M677740		1.3	1.2	<0.002	<0.01	<0.05	0.3	1	<0.2	54.9	<0.05	<0.05	<0.2	<0.005	0.5
M677741		6.1	34.3	0.011	0.29	0.20	5.0	1	1.2	556	0.49	<0.05	2.4	0.202	0.6
M677742		6.6	30.2	0.012	0.26	0.29	5.0	1	1.1	532	0.44	<0.05	2.3	0.193	0.7
M677743		12.8	30.7	0.018	1.09	0.38	5.0	2	1.1	536	0.48	0.08	2.4	0.201	0.9
M677744		5.7	29.7	0.039	0.36	0.24	5.0	1	0.9	563	0.50	0.05	2.3	0.207	0.7
M677745		85.3	28.3	0.023	0.41	0.39	5.0	1	1.1	557	0.51	0.08	2.2	0.205	0.8
M677746		94.8	33.2	0.024	0.42	0.41	5.5	1	1.2	560	0.53	0.09	2.6	0.214	0.8
M677747		101.5	35.1	0.024	0.36	0.42	5.3	1	0.8	560	0.52	0.05	2.4	0.207	0.7
M677748		6.3	32.0	0.037	0.07	0.32	5.3	1	0.8	578	0.52	<0.05	2.2	0.212	0.6
M677749		13.4	34.8	0.038	0.48	1.97	5.1	1	1.1	549	0.47	0.09	2.3	0.202	0.8
M677750		8.9	33.4	0.023	0.02	0.25	5.6	1	0.7	608	0.53	<0.05	2.4	0.221	0.7
M650051		6.9	32.0	0.082	0.28	0.32	5.5	1	0.9	562	0.51	0.07	2.4	0.216	0.7
M650052		32.8	127.0	0.004	1.29	30.3	8.1	7	96.3	256	0.65	1.02	9.7	0.232	12.5
M650053		5.8	29.9	0.011	0.20	0.30	5.0	1	0.9	570	0.51	0.05	2.3	0.208	0.7
M650054		5.2	29.2	0.011	0.32	0.34	5.3	1	1.0	506	0.46	0.08	2.3	0.193	0.6
M650055		5.6	26.9	0.022	0.22	0.50	4.9	1	0.9	506	0.45	<0.05	2.1	0.182	0.5
M650056		7.0	26.4	0.018	0.13	0.28	5.3	1	1.6	542	0.53	<0.05	2.4	0.199	0.7
M650057		6.6	24.0	0.017	0.10	0.28	5.5	1	1.6	516	0.45	<0.05	2.3	0.185	0.6
M650058		5.6	32.2	0.009	0.16	0.31	5.6	1	1.5	533	0.60	<0.05	2.7	0.226	0.7
M650059		6.9	30.2	0.007	0.39	0.70	5.7	1	1.4	529	0.50	0.09	2.4	0.204	0.7
M650060		5.6	26.9	0.015	0.20	0.29	5.9	1	1.2	579	0.64	<0.05	2.5	0.238	0.7
M650061		7.7	28.0	0.031	0.37	0.29	5.2	2	1.3	692	0.62	<0.05	2.6	0.210	0.7
M650062		5.6	28.5	0.047	0.64	0.29	5.5	2	1.3	564	0.59	0.10	2.7	0.223	0.9
M650063		1.5	3.5	<0.002	0.01	0.05	0.3	1	<0.2	56.0	<0.05	<0.05	<0.2	<0.005	0.8
M650064		4.8	25.8	0.015	0.21	0.24	7.7	1	1.0	547	0.32	<0.05	1.1	0.236	0.5
M650065		151.0	33.2	0.024	0.63	0.62	7.6	2	1.3	494	0.32	<0.05	1.1	0.222	0.5



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CERTIFICATE OF ANALYSIS WH12225406

Sample Description	Method Analyte Units LOR	ME- MS61 V ppm 1	ME- MS61 W ppm 0.1	ME- MS61 Y ppm 0.1	ME- MS61 Zn ppm 2	ME- MS61 Zr ppm 0.5
M677730		37	0.9	5.6	971	1.4
M677731		41	0.7	6.0	102	1.7
M677732		40	0.8	6.3	152	1.6
M677733		40	1.4	7.1	112	1.6
M677734		43	0.7	6.6	17	1.8
M677735		56	33.1	27.7	176	55.3
M677736		41	2.0	6.9	18	1.8
M677737		41	0.5	6.5	18	1.6
M677738		41	1.0	6.5	19	1.8
M677739		40	1.7	5.9	30	1.2
M677740		<1	0.1	0.7	18	<0.5
M677741		44	1.0	6.5	19	2.0
M677742		41	0.8	6.2	21	4.0
M677743		41	1.3	7.2	24	1.7
M677744		42	0.5	6.8	16	1.8
M677745		42	0.7	6.9	48	1.7
M677746		42	0.7	7.6	49	1.7
M677747		44	0.5	7.1	280	1.9
M677748		43	0.4	6.8	20	1.8
M677749		42	1.0	6.7	27	2.0
M677750		44	0.5	7.7	29	1.7
M650051		44	0.6	7.1	26	1.6
M650052		55	39.6	27.4	175	53.8
M650053		41	0.5	7.1	19	1.8
M650054		42	0.8	6.1	19	3.9
M650055		39	0.6	6.3	23	4.2
M650056		39	0.5	6.9	25	5.4
M650057		40	0.5	6.6	25	7.6
M650058		44	0.5	7.5	26	1.9
M650059		41	0.6	7.2	21	6.3
M650060		46	0.5	8.3	38	2.6
M650061		40	0.9	7.9	32	2.4
M650062		43	0.7	8.7	25	3.5
M650063		3	0.1	0.9	17	<0.5
M650064		53	0.4	6.8	35	2.7
M650065		54	1.4	6.7	292	2.9



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CERTIFICATE OF ANALYSIS WH12225406

Method	CERTIFICATE COMMENTS
ME- MS61 ME- MS61	REE's may not be totally soluble in this method. Interference: Samples with Ca> 10%on ICP- MS As. ICP- AES As results reported (5 ppm DL)



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CERTIFICATE WH12227173

Project: Mint

P.O. No.: Batch 24

This report is for 35 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 27- SEP- 2012.

The following have access to data associated with this certificate:

MATT DUMALA

JOAN MARIACHER

HEATHER SMITH

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/ o BarCode
CRU- QC	Crushing QC Test
PUL- QC	Pulverizing QC Test
CRU- 31	Fine crushing - 70%<2mm
SPL- 21	Split sample - riffle splitter
PUL- 31	Pulverize split to 85%< 75 um
LOG- 22d	Sample login - Rcd w/ o BarCode dup
LOG- 24	Pulp Login - Rcd w/ o Barcode
SPL- 21d	Split sample - duplicate
PUL- 31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

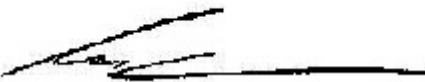
ALS CODE	DESCRIPTION	INSTRUMENT
Au- AA24	Au 50g FA AA finish	AAS
ME- MS61	48 element four acid ICP- MS	

To: **SILVER RANGE RESOURCES LTD.**
ATTN: JOAN MARIACHER
C/ O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
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This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:


Colin Ramshaw, Vancouver Laboratory Manager



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CERTIFICATE OF ANALYSIS WH12227173

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	Au- AA24 Au ppm	ME- MS61 Ag ppm	ME- MS61 Al %	ME- MS61 As ppm	ME- MS61 Ba ppm	ME- MS61 Be ppm	ME- MS61 Bi ppm	ME- MS61 Ca %	ME- MS61 Cd ppm	ME- MS61 Ce ppm	ME- MS61 Co ppm	ME- MS61 Cr ppm	ME- MS61 Cs ppm	ME- MS61 Cu ppm
		0.02	0.005	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
M650102		8.06	0.047	0.19	7.49	22.6	490	0.80	0.11	3.22	0.22	23.6	11.3	95	1.84	163.0
M650103		8.17	0.054	0.22	7.12	1.9	510	0.98	0.05	2.71	0.17	27.3	9.0	35	0.74	365
M650104		8.83	0.093	0.35	7.80	2.9	810	1.02	0.05	3.19	0.17	21.7	14.1	27	0.78	477
M650105		8.96	0.099	0.35	8.36	3.4	1630	1.11	0.09	3.38	0.22	28.0	15.7	26	0.95	511
M650106		9.25	0.083	0.70	7.48	6.0	1070	1.07	0.07	3.60	0.23	26.8	12.5	24	1.30	478
M650107		<0.02	0.100	0.65	7.78	6.2	1090	1.09	0.07	3.54	0.18	26.5	12.3	22	1.23	472
M650108		8.88	0.108	0.28	7.53	1.7	550	1.09	0.07	3.27	0.12	25.0	13.0	36	1.13	511
M650109		8.82	0.096	0.26	7.25	1.3	610	0.82	0.04	3.08	0.10	15.05	8.6	30	0.75	438
M650110		8.32	0.125	0.40	7.17	2.3	600	0.73	0.05	2.81	0.13	17.30	9.3	43	0.71	448
M650111		8.50	0.116	0.35	7.03	5.9	390	0.79	0.05	2.99	0.14	17.40	12.2	52	0.89	482
M650112		9.18	0.087	0.29	7.66	3.3	410	0.94	0.06	3.41	0.13	23.4	15.7	45	1.03	501
M650113		0.10	0.801	7.20	4.77	8410	1140	1.38	201	12.85	0.88	414	72.7	48	10.05	3200
M650114		8.48	0.086	0.38	7.60	8.4	370	0.81	0.28	3.93	0.10	29.5	20.9	30	1.40	407
M650115		4.96	0.131	0.37	7.51	3.7	300	0.79	0.11	2.90	0.09	16.50	20.2	59	1.26	597
M650116		7.73	0.077	0.60	7.30	22.8	440	0.74	0.14	2.66	1.47	14.10	13.7	48	1.18	292
M650117		6.51	0.023	0.19	6.84	4.3	430	0.75	0.16	2.72	0.09	14.50	9.2	44	1.08	142.5
M650118		6.34	0.058	1.27	6.45	41.7	1120	0.70	0.10	2.27	6.95	12.15	6.4	27	2.52	123.0
M650119		2.96	<0.005	0.07	0.05	<5	20	0.05	0.10	20.2	0.07	1.06	1.2	<1	0.13	9.2
M650120		4.86	0.026	0.32	6.99	4.5	540	0.72	0.05	2.65	1.03	12.10	5.2	24	1.30	130.5
M650121		5.49	0.019	0.21	6.97	3.8	580	0.74	0.03	2.70	0.55	12.10	5.0	26	1.22	92.2
M650122		5.16	0.029	0.42	7.45	15.0	1060	0.83	0.04	2.85	0.26	12.40	5.0	19	2.45	264
M650123		6.19	0.044	0.13	6.98	27.3	590	1.09	0.12	3.05	0.21	29.0	6.6	10	3.33	29.6
M650124		2.10	0.045	0.14	7.11	28.2	570	1.14	0.08	3.06	0.21	30.2	6.5	10	3.40	29.7
M650125		6.09	0.103	0.16	6.57	45.4	530	1.14	0.07	2.71	0.85	26.8	6.6	9	2.71	16.6
M650126		6.03	0.198	0.29	6.56	76.2	530	1.08	0.16	2.64	0.29	26.6	7.4	9	2.35	17.2
M650127		8.29	0.253	0.49	6.32	50.2	530	1.09	0.05	2.70	0.93	26.3	6.5	9	2.52	19.2
M650128		5.96	0.452	0.53	6.43	81.2	720	1.14	0.04	2.59	0.46	26.1	6.3	9	2.89	24.8
M650129		0.10	0.767	6.64	4.88	8620	1170	1.49	199.5	13.30	0.92	418	72.8	48	10.10	3410
M650130		4.81	1.235	0.48	6.53	86.2	610	1.17	0.11	2.76	0.37	27.5	7.0	10	3.03	15.7
M650131		5.83	0.043	0.30	7.29	6.6	650	0.94	0.11	3.48	0.17	25.1	11.4	55	1.65	124.0
M650132		9.31	0.037	0.21	6.65	3.8	610	1.03	0.07	3.77	0.26	22.8	13.7	69	1.52	114.0
M650133		7.62	0.017	0.14	7.56	4.1	670	1.01	0.05	4.09	0.11	28.8	16.0	76	1.70	81.9
M650134		3.59	<0.005	0.01	0.06	<5	30	<0.05	0.03	21.1	0.05	1.46	1.3	<1	0.11	1.5
M650135		8.56	0.022	0.14	7.48	3.1	580	1.02	0.07	3.91	0.09	28.2	15.6	77	1.68	130.0
M650136		8.19	0.024	0.14	7.90	2.9	600	1.00	0.07	3.94	0.11	31.9	16.6	82	1.99	153.5



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CERTIFICATE OF ANALYSIS WH12227173

Sample Description	Method Analyte Units LOR	ME- MS61 Fe %	ME- MS61 Ga ppm	ME- MS61 Ge ppm	ME- MS61 Hf ppm	ME- MS61 In ppm	ME- MS61 K %	ME- MS61 La ppm	ME- MS61 Li ppm	ME- MS61 Mg %	ME- MS61 Mn ppm	ME- MS61 Mo ppm	ME- MS61 Na %	ME- MS61 Nb ppm	ME- MS61 Ni ppm	ME- MS61 P ppm
		0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
M650102		4.03	17.55	0.12	0.2	0.029	1.59	10.4	9.7	2.03	570	10.95	3.10	5.9	55.5	970
M650103		2.16	17.35	0.10	0.2	0.021	0.98	12.6	7.8	0.92	271	39.3	3.81	8.4	31.5	840
M650104		2.46	18.85	0.11	0.2	0.029	1.29	10.0	7.9	1.04	356	31.3	3.98	9.0	21.0	910
M650105		2.72	19.00	0.15	0.2	0.028	1.96	12.9	7.2	1.07	313	23.9	3.77	10.2	20.4	1150
M650106		2.76	16.85	0.12	0.2	0.027	1.48	12.4	6.9	1.21	549	17.45	3.41	9.0	16.1	920
M650107		2.76	16.30	0.14	0.2	0.025	1.49	12.5	6.7	1.23	542	16.25	3.46	8.7	16.2	940
M650108		3.17	17.30	0.11	0.2	0.031	1.37	11.3	11.0	1.50	329	12.70	3.30	9.0	24.4	950
M650109		2.08	15.40	0.11	0.1	0.027	1.29	6.8	8.6	1.04	236	10.10	3.45	5.7	19.3	660
M650110		2.28	15.70	0.12	0.2	0.033	1.19	7.5	6.5	1.12	379	8.60	3.85	4.4	28.6	530
M650111		2.60	15.55	0.11	0.2	0.040	0.97	7.8	6.6	1.27	361	14.60	3.75	4.7	40.0	620
M650112		3.14	16.95	0.13	0.2	0.041	1.12	10.8	7.2	1.52	362	7.25	3.82	8.3	35.3	920
M650113		8.54	17.50	0.36	1.8	1.615	1.82	241	38.5	1.36	2350	15.25	0.80	9.0	36.5	920
M650114		4.73	18.00	0.11	0.2	0.040	1.06	14.3	8.6	1.79	533	14.10	3.17	6.4	38.0	1010
M650115		3.13	15.70	0.11	0.2	0.047	1.12	7.9	5.5	1.40	346	5.89	3.84	3.9	45.6	610
M650116		2.46	14.95	0.11	0.2	0.033	1.07	6.4	6.1	1.17	522	6.59	3.86	3.5	35.8	540
M650117		1.88	14.90	0.10	0.2	0.023	0.95	6.7	5.5	0.96	395	3.84	3.30	4.6	33.0	440
M650118		1.55	13.70	0.10	0.2	0.019	1.73	5.5	17.1	0.65	1200	3.90	2.07	3.3	21.7	490
M650119		0.47	0.21	0.07	<0.1	<0.005	0.02	0.5	0.8	12.95	208	0.13	0.01	0.2	3.0	200
M650120		1.49	15.05	0.08	0.2	0.018	1.19	5.7	7.3	0.61	484	1.96	3.21	3.2	16.7	360
M650121		1.50	15.75	0.10	0.2	0.019	1.19	5.6	6.7	0.58	495	2.21	3.22	3.5	16.8	370
M650122		1.38	16.70	0.11	0.3	0.021	2.05	5.1	18.3	0.57	1560	3.52	2.88	3.9	15.4	410
M650123		1.87	15.40	0.13	1.7	0.021	3.12	14.3	16.3	0.73	1620	2.91	1.00	8.4	10.6	670
M650124		1.86	15.00	0.13	1.7	0.019	3.09	15.1	16.7	0.71	1600	2.85	0.95	8.4	10.5	660
M650125		1.94	15.00	0.11	1.6	0.016	2.68	13.0	13.6	0.72	1140	1.99	1.58	8.5	9.4	660
M650126		1.96	14.15	0.11	1.8	0.016	2.36	12.7	13.5	0.72	946	2.64	1.80	8.0	8.9	640
M650127		1.94	14.75	0.11	1.8	0.020	2.44	12.4	10.7	0.72	1160	1.71	1.69	8.4	9.4	640
M650128		1.99	14.45	0.11	2.0	0.019	2.66	12.4	10.8	0.78	1400	2.19	1.47	8.4	8.7	660
M650129		8.71	17.55	0.35	1.9	1.590	1.92	246	39.8	1.41	2460	16.80	0.81	9.1	37.2	960
M650130		2.01	15.55	0.09	1.7	0.019	2.78	13.0	10.2	0.79	1690	2.38	1.23	8.7	11.1	660
M650131		2.71	16.25	0.10	0.3	0.043	0.89	11.5	8.2	1.31	763	5.92	3.34	6.8	40.7	850
M650132		3.20	16.65	0.13	0.3	0.046	1.03	10.5	6.2	1.59	650	4.29	3.27	7.8	52.4	930
M650133		3.49	17.20	0.13	0.3	0.045	1.13	13.3	6.8	1.80	732	8.01	3.34	8.6	60.1	1060
M650134		0.46	0.26	0.08	<0.1	<0.005	0.02	0.7	1.0	13.55	211	0.87	0.01	0.3	2.9	190
M650135		3.39	17.65	0.10	0.3	0.046	1.02	12.7	6.8	1.83	536	4.89	3.29	8.4	58.3	1030
M650136		3.60	17.30	0.11	0.3	0.039	1.25	15.2	6.9	1.95	566	8.58	3.31	8.5	59.5	1060



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CERTIFICATE OF ANALYSIS WH12227173

Sample Description	Method Analyte Units LOR	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61
		Pb	Pb	Fe	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	U
		ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
		0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.1
M650102		23.9	45.0	0.027	0.63	1.01	13.6	1	1.2	580	0.40	0.08	1.8	0.395	0.6
M650103		11.7	22.1	0.052	0.29	0.22	8.4	1	1.0	661	0.60	<0.05	2.2	0.350	0.8
M650104		8.2	26.1	0.064	0.49	0.27	7.3	1	1.1	733	0.65	<0.05	2.1	0.318	0.8
M650105		8.6	38.5	0.038	0.65	0.29	7.9	1	1.4	702	0.76	<0.05	2.3	0.351	0.9
M650106		135.5	38.1	0.034	0.91	0.59	7.2	1	1.1	695	0.69	0.09	2.3	0.308	1.1
M650107		118.5	38.5	0.033	0.88	0.56	7.2	1	1.1	704	0.69	0.07	2.4	0.308	0.9
M650108		5.7	36.6	0.022	0.60	0.18	9.2	1	1.4	606	0.67	<0.05	2.0	0.361	0.9
M650109		4.9	27.2	0.009	0.48	0.24	6.7	1	0.9	578	0.44	<0.05	1.9	0.250	0.6
M650110		7.3	24.1	0.010	0.48	0.34	6.5	1	0.9	560	0.32	<0.05	1.4	0.203	0.6
M650111		7.9	25.3	0.018	0.41	0.84	7.1	1	1.2	593	0.36	<0.05	1.3	0.247	0.6
M650112		4.9	27.8	0.014	0.60	0.23	7.4	1	1.3	650	0.60	<0.05	1.7	0.285	0.7
M650113		33.3	117.5	0.003	1.23	26.5	8.4	6	84.9	244	0.64	0.95	11.2	0.226	13.5
M650114		6.1	28.5	0.022	0.87	0.50	11.7	1	1.7	635	0.39	0.12	1.3	0.451	0.6
M650115		5.1	32.4	0.013	0.64	0.40	8.6	2	1.2	532	0.26	0.05	0.9	0.244	0.4
M650116		68.8	28.0	0.014	1.08	3.60	7.2	1	1.0	537	0.25	0.10	1.1	0.203	0.5
M650117		11.1	21.9	0.005	0.30	1.00	6.1	1	0.6	556	0.36	0.10	1.3	0.195	0.6
M650118		327	48.7	0.003	1.13	13.50	4.6	1	1.0	307	0.29	0.14	1.2	0.148	1.6
M650119		3.0	1.0	<0.002	0.01	1.54	0.2	1	<0.2	46.7	<0.05	<0.05	<0.2	<0.005	0.6
M650120		120.0	27.1	0.003	0.33	0.99	4.7	1	0.5	462	0.29	0.05	1.4	0.155	0.5
M650121		65.4	25.0	0.003	0.26	0.69	4.7	1	0.4	464	0.32	<0.05	1.4	0.156	0.4
M650122		63.9	52.2	0.005	0.81	2.14	4.7	1	0.8	468	0.34	0.08	1.5	0.169	0.6
M650123		18.2	79.2	<0.002	0.70	3.41	4.3	1	0.6	276	0.70	<0.05	3.1	0.235	1.5
M650124		21.7	81.1	<0.002	0.66	3.53	4.4	1	0.7	259	0.73	<0.05	3.2	0.234	1.5
M650125		56.0	60.4	<0.002	0.57	1.91	4.0	1	0.6	303	0.71	<0.05	2.8	0.232	1.3
M650126		28.5	57.5	<0.002	0.82	1.89	4.1	1	0.6	328	0.70	<0.05	3.0	0.228	1.2
M650127		89.6	55.9	<0.002	0.75	2.28	4.0	1	0.6	310	0.71	0.06	3.0	0.231	1.2
M650128		73.2	56.8	<0.002	1.12	2.95	4.0	1	0.6	300	0.72	0.06	3.2	0.231	1.3
M650129		33.9	119.0	0.004	1.32	28.8	8.4	6	85.2	252	0.65	0.71	11.2	0.237	13.7
M650130		35.1	63.9	<0.002	1.06	3.39	4.4	1	0.6	263	0.72	<0.05	3.0	0.235	1.3
M650131		27.3	17.6	0.011	0.39	0.74	8.1	1	0.9	650	0.51	0.09	2.1	0.315	0.6
M650132		11.9	16.3	0.006	0.25	0.56	8.6	1	1.0	637	0.60	0.05	1.9	0.364	0.7
M650133		9.6	20.4	0.013	0.19	0.53	9.8	1	0.9	707	0.63	<0.05	2.2	0.400	0.7
M650134		1.4	0.9	<0.002	<0.01	<0.05	0.2	1	<0.2	50.8	<0.05	<0.05	<0.2	<0.005	0.6
M650135		7.1	21.2	0.013	0.27	0.47	9.7	1	1.2	711	0.62	<0.05	2.2	0.392	0.8
M650136		6.7	27.7	0.019	0.19	0.32	9.8	1	1.0	686	0.64	<0.05	2.6	0.412	0.9



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 Total # Pages: 2 (A - D)
 Plus Appendix Pages
 Finalized Date: 7- OCT- 2012
 Account: RANSIL

Project: Mint

CERTIFICATE OF ANALYSIS WH12227173

Sample Description	Method Analyte Units LOR	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5
M650102		101	0.9	11.7	67	4.1
M650103		79	1.5	9.1	40	3.8
M650104		72	1.6	8.0	43	4.0
M650105		79	2.1	9.7	43	4.5
M650106		70	1.5	10.4	56	3.7
M650107		71	1.5	10.6	48	3.7
M650108		86	1.3	10.5	43	3.4
M650109		60	1.0	7.1	28	3.0
M650110		49	1.1	7.1	38	3.7
M650111		62	1.1	6.9	41	4.3
M650112		65	0.9	9.4	43	3.9
M650113		53	37.6	30.1	157	61.0
M650114		110	1.2	11.2	48	3.9
M650115		68	1.0	8.0	36	3.9
M650116		56	1.2	6.1	225	4.2
M650117		43	0.7	5.4	41	3.9
M650118		37	1.5	4.7	929	3.4
M650119		2	0.1	0.8	17	<0.5
M650120		39	0.6	4.9	160	3.2
M650121		39	0.6	4.8	91	3.9
M650122		41	0.9	5.5	55	10.8
M650123		43	1.1	7.9	77	59.8
M650124		43	1.1	8.1	80	60.6
M650125		42	0.8	7.1	172	57.6
M650126		41	0.8	7.1	92	60.7
M650127		42	0.7	7.2	198	66.2
M650128		42	0.9	7.1	122	66.1
M650129		55	32.0	30.4	163	61.9
M650130		42	1.2	7.5	103	60.6
M650131		71	1.1	9.6	75	6.5
M650132		88	1.0	9.6	79	6.1
M650133		92	0.9	11.5	69	6.5
M650134		2	0.1	1.0	16	<0.5
M650135		89	0.9	11.4	55	6.3
M650136		92	0.8	12.0	55	6.5



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Page: Appendix 1
Total # Appendix Pages: 1
Finalized Date: 7- OCT- 2012
Account: RANSIL

CERTIFICATE OF ANALYSIS WH12227173

Method	CERTIFICATE COMMENTS
ME- MS61	REE's may not be totally soluble in this method.
ME- MS61	Interference: Samples with Ca> 10%on ICP- MS As. ICP- AES As results reported (5 ppm DL)



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Finalized Date: 16- OCT- 2012

This copy reported on

17- OCT- 2012

Account: RANSIL

CERTIFICATE WH12240073

Project: MINT

P.O. No.: Batch 6

This report is for 36 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 10- OCT- 2012.

The following have access to data associated with this certificate:

JOAN MARIACHER

HEATHER SMITH

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
FND- 02	Find Sample for Addn Analysis

ANALYTICAL PROCEDURES

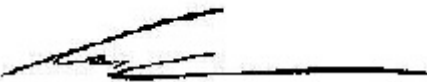
ALS CODE	DESCRIPTION	INSTRUMENT
Au- AA24	Au 50g FA AA finish	AAS

To: **SILVER RANGE RESOURCES LTD.**
ATTN: JOAN MARIACHER
C/ O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
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This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Comments: **RE- ASSAY RESULTS FOR SAMPLES ORIGINALLY REPORTED ON CERTIFICATE WH12193366 **

Signature:


Colin Ramshaw, Vancouver Laboratory Manager



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Page: 2 - A
 Total # Pages: 2 (A)
 Finalized Date: 16- OCT- 2012
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Project: MINT

CERTIFICATE OF ANALYSIS WH12240073

Sample Description	Method Analyte Units LOR	Au- AA24 Au ppm 0.005
M677181		0.036
M677182		0.040
M677183		0.038
M677184		0.051
M677185		0.036
M677186		0.034
M677187		0.043
M677188		0.033
M677189		0.042
M677190		0.033
M677191		0.149
M677192		0.058
M677193		0.809
M677194		0.054
M677195		0.084
M677196		0.176
M677197		<0.005
M677198		0.101
M677199		0.095
M677200		0.102
M677201		0.034
M677202		1.225
M677203		0.034
M677204		0.030
M677205		0.043
M677206		0.035
M677207		0.038
M677208		0.057
M677209		0.077
M677210		0.048
M677211		0.030
M677212		<0.005
M677213		0.034
M677214		0.014
M677215		0.076
M677216		0.061

Comments: **RE- ASSAY RESULTS FOR SAMPLES ORIGINALLY REPORTED ON CERTIFICATE WH12193366 **



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Page: 1

Finalized Date: 24- OCT- 2012

This copy reported on

25- OCT- 2012

Account: RANSIL

CERTIFICATE WH12245799

Project: Mint

P.O. No.: Batch 23

This report is for 36 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 17- OCT- 2012.

The following have access to data associated with this certificate:

MATT DUMALA

JOAN MARIACHER

HEATHER SMITH

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
FND- 02	Find Sample for Addn Analysis

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au- AA24	Au 50g FA AA finish	AAS

To: **SILVER RANGE RESOURCES LTD.**

ATTN: JOAN MARIACHER

C/ O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

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This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Comments: **RE- ASSAY RESULTS FOR SAMPLES ORIGINALLY REPORTED ON CERTIFICATE WH12219227**

Signature:

Colin Ramshaw, Vancouver Laboratory Manager



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 Total # Pages: 2 (A)
 Finalized Date: 24- OCT- 2012
 Account: RANSIL

Project: Mint

CERTIFICATE OF ANALYSIS WH12245799

Sample Description	Method Analyte Units LOR	Au- AA24 Au ppm 0.005
M650066		0.033
M650067		0.045
M650068		0.050
M650069		0.161
M650070		0.158
M650071		0.070
M650072		0.060
M650073		0.101
M650074		0.073
M650075		0.817
M650076		0.050
M650077		0.065
M650078		0.061
M650079		0.055
M650080		<0.005
M650081		0.042
M650082		0.043
M650083		0.053
M650084		0.063
M650085		0.092
M650086		0.077
M650087		0.056
M650088		0.028
M650089		0.023
M650090		0.033
M650091		0.806
M650092		0.046
M650093		0.051
M650094		0.068
M650095		0.073
M650096		<0.005
M650097		0.046
M650098		0.046
M650099		0.066
M650100		0.038
M650101		0.057

Comments: **RE- ASSAY RESULTS FOR SAMPLES ORIGINALLY REPORTED ON CERTIFICATE WH12219227**

APPENDIX VII

GEOLOGICAL AND GEOTECHNICAL DRILL LOGS

MINT PROPERTY

ZONE: _____

Grid East	Grid North	Easting	Northing	Elev.	Depth (m)
		504806	6851995	1511	46.3

SECTION: _____

HOLE: DDH-M12-01A, DDH-M12-01B

CLAIM: YD57203

Contractor: Platinum Drilling

Drill: 1

Core size: NQ2 Reduced at: _____ (m)

Casing depth: 33.53 (m) in / out

Drilling dates: June 19 - June 26, 2012

Geology logged by: Nick Bueckert

TARGET: _____

SURVEY							
Depth (m)	Azimuth	Dip	Method	Depth (m)	Azimuth	Dip	Method
0	90	-45	No survey				

[illegible]

SAMPLES

Numbers: M677622-M677638

Total: 17

Batch: 19

Date Sent:

Certificate:

COMMENTS

EOH @ 46.33m; Two holes drilled - DDH-M12-01A and DDH-M12-01B. DDH-M12-01A core recovery from 14.14m - 46.33m; DDH-M12-01B core recovery from 35.05 - 44.81m; Hole dip/azimuth shifted at 35.05m drill depth due to a shift in casing during hole conditioning

Geology Log

Hole: DDH-M12-01A, -01B

Logger: Nick Bueckert

Date: August 2012

[illegible]

n = none, t = <1%, w = 1-3%, f = 3-5%, m = 5-7%, ms = 7-10%, s = 10-15%, l = 15-20%, (write % for >20%)

Contact Log

Hole: DDH-M12-01A,B Logger Name: Nick Bueckert

Date: August 2012

[illegible]

Sample Log

Hole: DDH-M12-01A, -01B

Date: August, 2012

[illegible]

Density Log

Hole: DDH-M12-01A,B **Date:** August 2012

[illegible]

Geotechnical Log

Hole: M12-01

Tech Name: Liz Bueckert

Date: July 2012

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery (%)	RQD (m)	RQD (%)	Strength	Joint Sets				DESCRIPTION
								Freq (/m)	Attitude (tca)	Shape	Roughness	
14.14	15.24	2.13	0.98	89	89	0	2s	0.17		1	1	mostly rubble - many irregular breaks
15.24	20.42	1.10	1.61	75	75	0	2s	0.17		1	1	mostly rubble - many irregular breaks
17.37	20.41	3.05	2.70	88	88	30	2s	0.19	60	1	2	
20.42	23.47	3.05	1.98	65	65	10	2s	0.16		2	2	mostly rubble - many irregular breaks
23.47	26.52	3.05	2.91	95	95	22	2s	0.20	55	1	2	
26.52	29.57	3.05	2.70	88	88	15	2s	0.19	60	1	2	
29.57	32.61	3.04	2.48	81	81	9	2s	0.23	60	1	2	
32.61	35.66	3.05	2.90	95	95	36	2s	0.19	50	1	2	a lot of rubble
35.66	38.71	3.05	2.96	97	97	21	2s	0.17	50	1	2	a lot of rubble
38.71	41.76	3.05	2.49	81	81	20	2s	0.27	45	2	2	a lot of rubble
41.76	44.80	3.04	2.97	97	97	11	2s	0.27	65	2	2	

Magnetic Susceptibility Log

[illegible]

Box Log

Hole: DDH-M12-01 Date: July 2012

[illegible]

MINT PROPERTY

Grid East	Grid North	Easting	Northing	Elev.	Depth (m)
		505509	6852537	1682	462.38

ZONE: _____

SECTION: _____

HOLE: DDH-M12-02

CLAIM: YC99706

Contractor: Platinum Drilling

Drill: 1 _____

Core size: NQ2 Reduced at: _____ (m)

Casing depth: 9.10 (m) in / out

Drilling dates: JUNE 28 - JULY 5 2012

Geology logged by: NICK BUECKERT

SURVEY							
Depth (m)	Azimuth	Dip	Method	Depth (m)	Azimuth	Dip	Method
0	270*	-70	ranger	275	280.1	-71.9	ranger
35	276.2	-71.1	ranger	335	281.2	-72.1	ranger
125	277.2	-71.4	ranger	395	282.3	-72.2	ranger
215	278	-71.8	ranger	465	282.3	-72.2	ranger

TARGET: _____

[illegible]

SAMPLES	
Numbers:	M677001-M677239
Total:	239
Batch:	7
Date Sent:	July-August 2012
Certificate:	

COMMENTS	
EOH @ 462.38m	

Geology Log

Hole: DDH-M12-02

Logger: Nick Bueckert

Date: July 2012

GENERAL INTERVAL			DETAILED INTERVAL			LITHOLOGY					ALTERATION							MINERALS			Photo	DETAILED DESCRIPTION	
From (m)	To (m)	Interval (m)	From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Shade	Colour	Texture	Propylitic	Argillic	Phyllic	Potassic	Silic	Limonitic	Other		Pyrite	Other			
																	Type	Intensity		Type			Conc. (%)
0.00	9.10	9.10																					Casing depth; core recovery at 8.81m drill depth
8.81	32.05					V1	MG	MD	GN	PO	1.00								0.50	DI			PROPYLITIC ALTERED VOLCANIC 1 (andesite) (V1) - Plagioclase andesite - Green to dark green medium- to coarse-grained plagioclase-hbl-mafics+/-chl-bearing, qtz-absent intermediate volcanic. Plagioclase typically crowded and may be absent in increasing propylitic alteration. Absence of plagioclase is associated with increase mafics. In interval, plagioclase is most abundant, mafics are altered or replaced by pyrite in stronger alteration zones. Plag and mafics are coarse-grained.
			8.81	13.50		V1										2.00							Fractured surfaces oxidized, core fractured > rubblely
																							PROPYLITIC ALTERED VOLCANIC 1 (andesite) (V1) - Plagioclase andesite - Green to dark green medium- to coarse-grained plagioclase-hbl-mafics+/-chl-bearing, qtz-absent intermediate volcanic. Plagioclase typically crowded and may be absent in increasing propylitic alteration. Absence of plagioclase is associated with increase mafics). In interval, plagioclase is most abundant, mafics are altered or replaced by pyrite in stronger alteration zones. Plag and mafics are coarse-grained.
			13.50	31.95		V1		md	gn	po	1.00								1.00	di			CONTACT - sharp. 20 cm zone of weak propylitic alteration between propylitic altered Volcanic 1 and sericitized clast-supported felsic breccia
			31.95	32.05		V1	FG												0.50	DI			VOLCANIC 1 (andesite) - clast-supported breccia (CBX) - Clast supported breccia is dominant within unit with minor zones of crackle and matrix-supported breccia. Clasts (1-7cm) are angular, silicified(?), fragments of Volcanic 1 and are generally not mineralized. Blebby pyrite <30%
32.05	116.94					V1		LT	GY	BX					1.00	SER	3.00		2.00	DI			
																			30.00	BL			
																							VOLCANIC 1 (andesite) - clast-supported breccia - Bleached white and light grey brecciated Volcanic 1. 3 -10% blebby py close to contact. Metre-scale zones of weak propylitic altered Volcanic 1 throughout. Sheeted py mineralized fractures throughout. Last 40 cm of interval is bleached Volcanic 1 and transition to a crackle breccia.
			32.05	33.35		V1		LT	GY	BX								SER	3.00	1.00	FX		
									WH											10.00	BL		
			33.55	35.51		V1		LT	GY	BX								SER	2.00	2.00	BL		BRECCIA - Lt green and white weakly propylitic Volcanic 1 with cm-scale crackle breccia zones with py mineralization. Downhole is flow-like cobble breccia
									WH									PRO	1.00	1.00	FX		
			35.51	36.98		V1		MD	GN	PO										1.00	BL		VOLCANIC 1 (andesite) - with minor zones (2 cm) of matrix-supported breccia. Local zones of py mineralization (blebs)
			36.98	37.71		V1		LT	GY	BX								SER	2.00	3.00	DI		VOLCANIC 1 (andesite) - CLAST AND MATRIX-SUPPORTED BRECCIA. Clast-supported breccia transition to matrix-supported breccia 1/2 way through interval. Matrix hosts pyrite mineralization as blebs; mineralization decreases down interval
									WH														
			37.71	38.50		V1		MD	GN	PO								PRO	2.00				VOLCANIC 1 (andesite) - Light, med, dark green. Chlorite replaced by pyrite
									DK	GN													
			38.50	39.79		V1		LT	GY	BX								SER	2.00	1.00	BL		VOLCANIC 1 (andesite)- clast-supported breccia - typical. Ankerite? present (light pink mineral, fizzes) (2 % local) in matrix
									WH														
			39.79	40.38		V1		MD	GN	PO													VOLCANIC 1 (andesite) - type case
																							VOLCANIC 1 (andesite)- clast-supported breccia - Well defined breccia. Subangular to angular sericitized VOLCANIC 1 (andesite) (2-10 cm clasts). Trace blebby py. Greenish tinge to core.
			40.38	41.30		V1		LT	GY	BX								SER	2.00	1.00	BL		
									WH														
			41.30	44.06		V1		MD	GN	PO								PRO	1.00				VOLCANIC 1 (andesite) - type case - chl-present, no py
																							VOLCANIC 1 (andesite)- clast-supported breccia - Subtle and well defined brecciation, local zones of blebby py in matrix. Py mineralization increases in vuggy zones (cm-scale vug zones). Ankerite infill occasional. Minor zones of weak propylitic altered volcanics (3 x 5-10 cm intervals) occur throughout interval.
			44.06	48.41		V1		LT	GY	BX								SER	2.00	2.00	FX		

Geology Log

GENERAL INTERVAL			DETAILED INTERVAL			LITHOLOGY					ALTERATION							MINERALS			Photo	DETAILED DESCRIPTION			
From (m)	To (m)	Interval (m)	From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Shade	Colour	Texture	Propylitic	Argillic	Phyllic	Potassic	Silic	Limonitic	Other		Pyrite	Other					
																	Type	Intensity		Type			Conc. (%)		
									WH											8.00	BL				
			48.41	49.06		V1		LT	GY	PO								PRO	1.00	0.50	FX			VOLCANIC 1 (andesite) - Decrease in plagioclase abundance and grain size. Trace disseminated py on fractures	
			49.06	54.43		V1		LT	GY	BX								SER	3.00	3.00	DI			VOLCANIC 1 (andesite) - clast-supported breccia - Increase in sericitic alteration (to moderate). Core vuggy +/- rubbley. Brecciation consistently well-defined clast supported. Coarse-grained pyrite on most fracture surfaces. Minor zones of "unbrecciated" Volcanic 1 (weakly sericitized).	
								LT	GN											6.00	DI				
			54.43	54.62		GO		LT	GY	GO								SER	4.00	6.00	DI			VOLCANIC 1 (andesite) - gougey clast-supported breccia- Gougey CBX w/ distinct zone of fine-grained py mineralization (6 %).	
			54.62	55.07		V1	FG	LT	GN	AN								PRO	2.00					VOLCANIC 1 (andesite) - Aphanitic Volcanic 1 w/ increase in chl +py and decrease in plagioclase phenocrysts.	
			55.07	56.05		V1		LT	GY	BX								SER	3.00	2.00	DI			VOLCANIC 1- clast-supported breccia - Core rubblely to competent. 20 cm clast supported breccia; rest of interval is crackle breccia. Coarse-grained pyrite in matrix	
								LT	GN											5.00	FX				
			56.05	57.00		V1		MD	GN	AM								PRO	2.00					VOLCANIC 1 (andesite) - Amygdaloidal w/ chlorite replacement (1 cm avg amygds). Decrease in plagioclase porphyritic texture	
			57.00	78.70		V1		LT	GY	BX								SER	3.00	2.00	DI			VOLCANIC 1- clast-supported breccia - Very large zone of dominantly CBX (85%) w/ minor zones (10-25 cm) of weak propylitic altered V1 (15%). Py mineralization is consistently 1-2% disseminated throughout. Py mineralization increase in zones of rubblely moderate-strong sericite alteration. Occasional py mineralization vugs w/ ankerite throughout. Breccia contacts are sharp and show increase in py mineralization	
								LT	GN											10.00	BL				Coarse-grained disseminated py common along fractures. Clasts are weak-moderate propylitic + weak sericite altered Volcanic 1.
			78.70	81.34		V1	FG	MD	GN	AM								PRO	3.00	2.00	DI			VOLCANIC 1 (andesite) - POTASSIC ALTERATION - Lt green aphanitic + dark grey porphyritic, magnetic; mafics gained, plag phenos lost, qtz absent, chlorite-bearing (altered mafics), mafic porphyry. Sericite present.	
								DK	GN	PO								POT	3.00						
																		SER	1.00						
			81.34	84.75		V1		LT	GY	BX					2.00			SER	2.00	2.00	DI			VOLCANIC 1 (andesite) - clast-supported breccia - Clast-supported and crackle breccia. 1-3% diss py throughout matrix, coarse-grained on fractures. 7% blebby py occurs in 2 cm zones of strong sericite alteration. Qtz present in coarse-grained Volcanic 1. 25 cm zone of silicification	
								LT	GN									PRO	1.00	7.00	DI				
			84.75	87.86		V1		MD	GN	PO								PRO	2.00	1.00	DI			VOLCANIC 1 (andesite) - Type case - One 10 cm and 23 cm zone of brecciation. Py mineralization between clasts. Bottom breccia has 2 cm white gouge zone. Chl is replaced by coarse-grained py in V1.	
										BX								SER	1.00	3.00	DI				
			87.86	90.24		V1		LT	GY	BX								SER	2.00	2.00	DI			VOLCANIC 1 (andesite) - clast-supported breccia - Sericitized, brecciated Volcanic 1, diss py throughout. Zones of stronger sericitization host stronger py mineralization (<7%). Core highly fractured, softish.	
								DK	GY									SER	3.00	7.00	BL				
								LT	GN																
			90.24	93.86		V1		MD	GN	BX								PRO	3.00	2.00	DI			VOLCANIC 1 (andesite) - clast-supported breccia -"Washout breccia" - Matrix-supported breccia. Clasts are whiteish green, subrounded, coarse-grained chl-bearing, 1 cm - 6cm. Matrix is greyish green, plag-chl-phyr. Subtle distinction between clasts and matrix. Diss py (fine-grained) throughout with strong pyrite on fracture surfaces. Strong fluid flow? Occasional qtz-carb veinlet; no mineralization. Matrix is fine-grained w/ 2-10 mm clasts.	
																		SER	2.00						
			93.86	105.76		V1		LT	GY	BX								SER	3.00	3.00	DI			VOLCANIC 1- (andesite) - clast-supported breccia - type case - Core softish, highly fractured. Increase in py mineralization. Diss py to coarse-grained to blebby and in occasional veinlets. Occasional zones of "washout" breccia. Soft zones have largest increase in py mineralization.	

Geology Log

GENERAL INTERVAL			DETAILED INTERVAL			LITHOLOGY					ALTERATION							MINERALS			Photo	DETAILED DESCRIPTION	
From (m)	To (m)	Interval (m)	From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Shade	Colour	Texture	Propylitic	Argillic	Phyllic	Potassic	Silic	Limonitic	Other		Pyrite	Other			
																	Type	Intensity		Type			Conc. (%)
									WH											30.00	BL		
								LT	GN											6.00	FX		
			105.76	111.90		V1		MD	GY	BX								OXI	3.00	1.00	DI		VOLCANIC 1 (andesite) - clast-supported breccia - 50% Clast-supported breccia and 50% washout breccia alternating. 20-30 cm zones of each. Zone is oxidized. Py mineralization decrease. Occasional mineralized matrix. ?As? In with py? ~108 m.
								LT	GN												As	5.00	
																				20.00	BL		
			111.90	113.00		V1		MD	GY	PO								PRO	2.00				VOLCANIC 1 (andesite) - classic case - except not as green - more greyish. Strong py replacement of chl. Not oxidized
								LT	GN														
			113.00	116.94		V1		LT	GN	BX								SER	1.00	2.00	VT		VOLCANIC 1 (andesite) - clast-supported breccia - oxidized CBX and "washout" breccias. CBX 70%, "washout" 30%. Matrix mainly oxidized (vs clasts). Py veinlets occur frequently ~ sheeted
								LT	GY									PRO	1.00				
116.94	132.92					MBX		LT	GY	BX								SER	<1				VOLCANIC 1 (andesite) - matrix-supported breccia - Lt grey matrix, greyish purple + greenish clasts, felsic matrix-supported breccia. Clasts - weak propylitic altered Volcanic 1 and Volcanic 2 (felsite). Matrix - microcrystalline with coarse breccia. Fine-grained mafics disseminated throughout. Trace sericite on fractures +/- pyrite. ?qtz-present? Clasts are 0.5-3cm avg < 6cm, subrounded and rounded. Unit not mineralized. Metre-scale zones of volcanics and felsic dikes occur in interval.
			116.94	117.18		DK		LT	GN	PO													INTERMEDIATE PORPHYRY DIKE (I.P.D.) - 25 cm wide. Lt greyish green coarse- to very coarse-grained plagioclase-phryic porphyry dike. Matrix v.f.g., trace f.g. mafics. Upper contact is oxidized - nature unknown, lower contact is fine-grained - chilled or flow banded.
								MD	GY														
			117.18	117.90		MBX		MD	GN	BX								PRO	1.00			X	VOLCANIC 1 (andesite) - matrix-supported breccia ('flow brecciated' volcanics) - Lt + md green flow banded transition to flow brecciated volcanics. Matrix supported. Clasts 0.6-4cm subrounded, rounded, "elongated" fragments of propylitic altered (weak) volcanic 1 and felsite. Matrix is medium green, fine-grained, coarse-clastic, variable light green and soft, intermediate chl-bearing. Flow direction observable (see structure log)
								LT	GN	FL													
			117.90	121.66		MBX		LT	GY	BX								SER	1.00				VOLCANIC 1 (andesite) - matrix-supported breccia - typical case - some 10cm zones of flow banding with 8-11cm clasts below. Increase in fluid movement.
			121.66	121.96		DK	DIO	LT	GN	PO													INTERMEDIATE PORPHYRY DIKE - same as 116.94 - 117.18m - see contact log
								MD	GY														
			121.96	122.50		MBX		LT	GN	BX								SER	1.00	1.00	DI		VOLCANIC 1 (andesite) - matrix-supported breccia - type case - except greener, fine-grained py and sericite throughout - see contact log (contact with volcanic 1)
								MD	GN														
			122.50	123.64		V1		LT	GN	PO								PRO	0.00				VOLCANIC 1 (andesite) - type case - plag grains "washout", grain size decrease (2mm), Decrease in mafics, no epidote, no visible chlorite = unaltered? Probably
			123.64	125.67		MBX		LT	GY	BX										1.00	ST		VOLCANIC 1- matrix-supported breccia - type case - occasional mineralized stringers ?py? No preffered orientation also some at start of interval 40 degree sheeted
			125.67	128.33		V1		LT	GN	AN								PRO	2.00				VOLCANIC 1 (andesite) - propylitic altered - plagioclase phenos barely distinguishable. Mafics increase and altered to chlorite. Overall more felsic-looking than other V1 (matrix that is). Qtz present. See contact log.
			128.33	129.20		V1		LT	GY	FL								SER	2.00	1.00	DI		VOLCANIC 1 - sericitic altered - chl phenocrysts very soft; plag very soft. 0.5cm-1cm flow bands for 55cm beneath contact
			129.20	132.91		MBX		MD	GY	BX								SER	1.00	1.00	DI		VOLCANIC 1 (andesite) - matrix-supported breccia - type case - softish translucent mineral present - bleached plag or chl? Occasional < 6cm clast of dark grey plag+chl bearing rock?? Oxidized fractures
								LT	GY														

Geology Log

GENERAL INTERVAL			DETAILED INTERVAL			LITHOLOGY					ALTERATION							MINERALS			Photo	DETAILED DESCRIPTION		
From (m)	To (m)	Interval (m)	From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Shade	Colour	Texture	Propylitic	Argillic	Phyllic	Potassic	Silic	Limonitic	Other		Pyrite	Other				
																	Type	Intensity		Type			Conc. (%)	
132.91	135.68					V1		DK	GN	BX PO FL								PRO	3.00				X	VOLCANIC 1 (andesite) - dog's breakfast - flow banded at upper contact w/ aggregates of purple mineral rimmed w/ qtz. Felsic fine-grained transition to green irregular flow bands into typical V1 but w/ breccia (lrg V1 clasts). Toward bottom of interval is a porphyritic flow (4cm @ 35 TCA) and cobble breccia (matrix supported) Clasts all a version of V1 (variable propylitic + sercitic alteration) Interval is propylitic altered; chl replaced by py occasional.
135.68	152.04					V1		LT	GY	BX VU								SER	2.00	1.00	DI			VOLCANIC 1 (andesite)- clast-supported breccia - Dominantly CBX w/ 20% crackle breccia, 20% propylitic altered V1, 20% potassic alteration zone. CBX is more fractured and rubblely than minor intervals. Frequent vugs
			135.68	135.79		DY	DIO	MD	GY	PO								SER	3.00	7.00	BL			INTERMEDIATE PORPHYRY DIKE - plagioclase-phyric, very coarse-grained phenocrysts; py mineralization occurs/ starts downhole from lower contact
			135.79	138.00		V1		LT	GY	BX								SER	2.00	2.00	DI			VOLCANIC 1 (andesite) - clast-supported breccia - as described above. Coarse-grained pyrite on most fractures
			138.00	139.98		V1		LT	GY	BX						1.00								VOLCANIC 1 (andesite) - clast-supported breccia - type case - weak pervasive oxidation
			139.98	141.76		V1		LT	GY	BX								SER	2.00	1.00	FX			VOLCANIC 1 (andesite)- clast-supported breccia - crackle breccia. Py mineralized in fractures. Occasional vugs with weak py mineralization. 30cm zone of weak propylitic altered Volcanic 1. Plag phenocrysts medium-grained.
			141.76	148.30		V1		LT	GY	BX								SER	3.00					VOLCANIC 1 (andesite)- clast-supported breccia (CBX>V1>SILICIFIED CBX) - Zone of dominantly CBX - type case - rubblely; weak propylitic altered V1 (30cm zones), and minor silicified CBX toward bottom of interval
						V1	MG	MD	GN	MA						2.00		PRO	1.00	1.00	DI			
			148.30	149.04		V1		DK	GN	AM								POT	3.00					VOLCANIC 1 (andesite) - POTASSIC overprinted, amygdaloidal fine-grained V1; epidote in amygdaloids, chlorite throughout, MAGNETIC. Potassic overprint of sercite. Fine-grained pyrite and sercite present especially along fractures.
																		PRO	3.00					
																		SER	2.00	1.00	DI			
			149.04	151.67		V1		LT	GY	BX LT GN BX							1.00	SER	1.00	2.00	FX			VOLCANIC 1 (andesite)- clast-supported breccia - Brecciated V1 - Py mineralized in classic CBX - clasts look like medium-grained "felsite"= bleached white rock, mineralogy not recognizable, fine-grained pyrite throughout. Zones of subtle breccias are greenish w/ f.g. nonmagnetic mafics overprinting clasts and matrix. Increase in py mineralization toward bottom of interval also oxidation on fractures
			151.67	152.04		FT		MD	OR							5.00				3.00	FX			FAULT (?) - pervasive oxidation, coarse-grained pyrite on fractures
152.04	299.73					V1		MG DK	GN GN	MA MA								PRO POT	4.00 4.00	<1	DI			VOLCANIC 1 (andesite) - Strong propylitic alteration. Plagioclase phenocrysts absent. Coarse-grained chlorite-phyric with occasional replacement by pyrite. Epidote present as rims around chlorite. Sheeted carbonate stringers infrequent. Zones of potassic overprinting where core is dark green to black and strongly magnetic
			152.04	154.09		V1	FG	DK	GN	AN BK								POT	4.00					VOLCANIC 1 (andesite) - (POTASSIC ALTERED) - Dark green and black strongly magnetic potassic alteration overprinting propylitic alteration (minor chlorite grains present)
			154.09	154.53		V1	MG	MD	GN	AN								PRO	2.00					VOLCANIC 1 (andesite) - (PROPYLITIC ALTERED) - weakly altered if at all. No obvious chlorite grains. Quartz present rimmed by milky white ?plagioclase or K-spar?
			154.53	157.63		V1	FG	DK	GN	AN								POT	4.00					VOLCANIC 1 (andesite) - (POTASSIC ALTERED) - type case - infrequent sheeted calcite stringers

Geology Log

GENERAL INTERVAL			DETAILED INTERVAL			LITHOLOGY					ALTERATION							MINERALS			Photo	DETAILED DESCRIPTION		
From (m)	To (m)	Interval (m)	From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Shade	Colour	Texture	Propylitic	Argillic	Phyllic	Potassic	Silic	Limonitic	Other		Pyrite	Other				
																	Type	Intensity		Type			Conc. (%)	
								BK																
			157.63	163.05		V1		MD	GN	PO								PRO	4.00	1.00	DI			VOLCANIC 1 (andesite) - (PROPYLITIC ALTERED) - Strong - Plagioclase phenocrysts absent; coarse-grained chlorite creates porphyritic texture. Epidote associated with chlorite; occasional pyrite replacement of chlorite. Epidote rims mafic mineral (not hematite, maybe silicate mineral) in fractures, around elongate mineral aggregates and amygdaoids. Infrequent sheeted calcite stringers
			163.05	163.68		V1		DK	GN	AN								POT	4.00					VOLCANIC 1 (andesite) - (POTASSIC ALTERED) - type case. Overprinting propylitic alteration; chlorite present
			163.68	168.31		V1		MD	GN	PO								POT	4.00	1.00	DI			VOLCANIC 1 (andesite) - (PROPYLITIC ALTERED) - Plagioclase phenocrysts absent; coarse-grained chlorite-phyric; epidote rims chlorite; disseminated pyrite throughout
			168.31	171.89		V1	CG	LT	GN	PO								PRO	3.00	1.00	DI			VOLCANIC 1 (PROPYLITIC ALTERED) - Very coarse-grained chlorite "clusters" in very fine-grained matrix (cannot pick out matrix mineralogy). Cross-cutting pyrite stringers are infrequent
																				2.00	ST			
			171.89	176.27		V1		MD	GN	AN								PRO	3.00	0.50	DI			VOLCANIC 1 (PROPYLITIC ALTERED) - Medium-grained plagioclase phenocrysts present; Medium- to coarse-grained chlorite present; disseminated pyrite throughout and strongest on fractures
			176.27	176.74		V1		MD	GY	BX								SER	2.00	3.00	VT			VOLCANIC 1 (BRECCIATED, SERECITE ALTERED). Core highly fractured, gougey surfaces. Pyrite veinlets present
																		PRO	2.00	1.00	DI			
			176.74	180.19		V1		MD	GN	AN								PRO	4.00	1.00	DI			VOLCANIC 1 (PROPYLITIC ALTERED) - Plagioclased phenocrysts absent; chlorite-phyric with epidote replacement on rim; fine-grained disseminated pyrite throughout
			180.19	185.01		V1		LT	GY	AN					3.00			PRO	2?	2.00	VT			VOLCANIC 1 (andesite) - Variably silicified - Qtz-carb+/-py stringers; stockwork throughout; core texture "washed out"; medium-grained chlorite present. Matrix is very fine-grained. Core is oxidized and gougey in stringer zones; Rock type FUBAR. Core strongly sericitized. Fractures oxidized
																		SER	4.00	2.00	DI			
			185.01	188.40		V1		LT	GY	AN					1.00			SER	1.00	1.00	DI			VOLCANIC 1 (andesite) - (SERECITIZED + PROPYLITIC ALTERED) - Weak sercite alteration overprinting weak propylitic alteration. Faint chlorite present. Mineralogy "washout"; weak silicification? Fractures oxidized.
								LT	GN									PRO	1.00					
			188.40	190.70		V1			BK	AN								POT	5.00	2.00	ST			VOLCANIC 1 (andesite) - (POTASSIC ALTERED) - Medium-grained black altered minerals. 1cm qtz grains/clasts present. Infrequent chlorite-pyrite stringers and coarse clots. A 3 cm wide stringer zigzags along core axis for 20 cm. Mineralogy difficult to discern - probably propylitic altered Volcanic 1
								DK	GN									PRO	2.00					
			190.70	191.12		V1		MD	GY	AN					2.00			SER	1.00	1.00	DI			VOLCANIC 1 (andesite) - (SILICIFIED + SERECITE ALTERED) - Medium-grained chlorite +/- epidote present; pyrite on core fractures
			191.12	191.84		MBX		LT	BG	BX					2.00					2.00	CP	3.00		VOLCANIC 1 (andesite) - siliciclastic breccia - Clasts - beige and grey silicified volcanics(?) And quartz (subangular, 0.7-4cm). One clast (~4cm) hosts pyrite and chalcocite(?). Matrix - yellowish green, brecciated rock with green mineral and coarse-grained quartz. Chalcopyrite present in stringer at top of breccia
			191.84	195.70		V1			BK	AN								POT	4.00					
								DK	GN									PRO	3.00	2.00	DI			VOLCANIC 1 (POTASSIC ALTERED) - Magnetic. Chlorite+/- replaced by pyrite; epidote present - typical case
			195.70	196.95		V1		LT	GY	PO								PRO	3.00	2.00	DI			VOLCANIC 1 (andesite) - (PROPYLITIC ALTERED + BRECCIA) - Brecciated and ?variably silicified? With propylitic matrix (Plagioclase Porphyry?) Coarse-grained chlorite-phyric and epidote present throughout. Disseminated pyrite concentrated in propylitic altered Volcanic 1 clasts. Less brecciated down interval, also looks more felsic
										BX										3.00	DI			

Geology Log

GENERAL INTERVAL			DETAILED INTERVAL			LITHOLOGY					ALTERATION							MINERALS			Photo	DETAILED DESCRIPTION			
From (m)	To (m)	Interval (m)	From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Shade	Colour	Texture	Propylitic	Argillic	Phyllic	Potassic	Silic	Limonitic	Other		Pyrite	Other					
																	Type	Intensity		Type			Conc. (%)		
			196.95	197.21		V1		LT	GY	BX					3.00			PRO	2.00	2.00	DI			VOLCANIC 1 (andesite) - (SILICIFIED BRECCIA) - Mineralization elevated at beginning of interval (py). Intermediate Porphyry DiKE (IPD) present (~8 cm). Chlorite-phyruc zone followed by silicified breccia with IPD again.	
			197.21	197.28		IPD		LT	GY	PO															
			197.28	198.02		V1		LT	GY	BX					3.00					2.00	DI				VOLCANIC 1 (andesite) - SILICIFIED BRECCIA - Mineralization elevated at beginning of interval (py). Intermediate Porphyry DiKE (IPD) present (~8 cm). Chlorite-phyruc zone followed by silicified breccia with IPD again.
			198.02	205.25		V1		DK	GN	AN								POT	3.00	2.00	ST				VOLCANIC 1 (POTASSIC + PROPYLLITIC ALTERED) - type case - infrequent py-chl stringers + calcite stringers. Chl+epi+py amygdaloids present; chlorite-phyruc in dark green zones
									BK	AM										1.00	DI				
			205.25	205.47		V1		LT	GN									PRO	2.00	6.00	VN				QTZ-PY VEIN at alteration contact (see secondary structure log)
																									VOLCANIC 1(?) (andesite) - (PROPYLITIC ALTERED) - type case without plagioclase phenocrysts; chl-epi-py aggregates present. 2 sheeted qtz-carb-py veins present. Infrequent py stringers. Plagioclase phenocrysts reappear with chlorite-altered mafics. Matrix starting to look pretty felsic - CHANGING INTO INTRUSIVE?
			205.47	216.75		V1		LT	GN	AN								PRO	4.00	1.00	DI				
			216.75	217.18		V1			BK	AN								POT	3.00						VOLCANIC 1 (andesite) - (POTASSIC ALTERED) - type case - qtz present (coarse-grained)
			217.18	219.64		V1		LT	GN	AN								PRO	3.00	1.00	DI				VOLCANIC 1 (andesite) - (PROPYLITIC ALTERED) - Plagioclase phenocrysts and chlorite present - minor pyrite mineralization zones 0.5-2 cm wide
			219.64	219.65					WH	VN										40.00	VN				Blebbpy pyrite in white alteration zone - not a real vein
			219.65	224.33		V1		LT	GN	AN								PRO	3.00	1.00	DI				VOLCANIC 1 (andesite) - (PROPYLITIC ALTERED) - Plagioclase phenocrysts and chlorite present - minor pyrite mineralization zones 0.5-2 cm wide
			224.33	224.42		V1				BX					2.00					4.00	BL				VOLCANIC 1 (andesite) - (SILICIFIED BRECCIA) - Silicified breccia with cp + py in matrix. Clast supported; breccia silicified or sericitic altered
																				CP	5.00				
			224.42	228.29		V1		LT	GN	AN								PRO	3.00	1.00	DI				VOLCANIC 1 (andesite) - (PROPYLITIC ALTERED) - Plagioclase phenocrysts and chlorite present - minor pyrite mineralization zones 0.5-2 cm wide
			228.29	229.03		v1			BK	AN								POT	4.00						VOLCANIC 1 (andesite) - (POTASSIC ALTERED) - type case - chl+epi+py aggregates; very coarse-grained qtz grains and clasts. 'Flow swirls.'
			229.03	230.43		V1		LT	GN	AN								PRO	3.00	1.00	DI				VOLCANIC 1 (andesite) - (PROPYLITIC ALTERED) - like last propylitic interval - plagioclase phenocrysts increasing in grain size
			230.43	239.36		V1			BK	FL								POT	2.00						VOLCANIC 1 (andesite) - (POTASSIC ALTERED) - very "swirly" propylitic altered Volcanic 1; Minor brecciation (subtle-looking) of Volcanic 1. Magnetism decreases in interval. Core mostly black. Carbonate stringers common
								DK	GN	BX															
			239.36	246.00		V1		LT	GN	FL					1.00			PRO	2.00						VOLCANIC 1 - (andesite) - (SILICA FLOODED + PROPYLITIC ALTERED) - Chl-qtz-plag recognizable
			242.02	242.16		V1		LT	GY	VN										10.00	VT				PY VEINLETS - Zone of py-qtz veinlets. One is soft and gougey (upper), one is discontinuous (lower)
			242.16	242.82		V1	IGE	MD	GY	BX					4.00					1.00	ST				VOLCANIC 1 (andesite) - SILICIFIED BRECCIA - Clasts are milky white with medium-grained py+/-chl matrix is silica. Py stringers
																									VOLCANIC 1 (andesite) - (POTASSIC ALTERED + BRECCIA) - Green with black swirls and subangular clasts, variably magnetic. Chl+/-py+/-epi aggregates present. Plagioclase looks as if recrystallized as "mats" with greenish tinge? Increasingly medium-grained plagioclase-phyruc toward bottom of interval
			242.82	249.02		V1			BK	AN								POT	3.00						
								DK	GN	BX															
			249.02	250.43		V1		MD	GY	BX					2.00										VOLCANIC 1 (andesite) - (SILICIFIED BRECCIA) - Grey + greenish matrix-supported breccia. Clasts aphanitic with fine-grained mafics. Matrix - grey crystalline qtz and crystalline quartz clasts 0.7-1cm. Breccia looks silica-flooded
			250.43	253.94		V1		LT	GN	AN					2.00			PRO	2.00						VOLCANIC 1 (andesite) - (SILICIFIED) - Plagioclase phenocrysts semi-recrystallized into grey matrix; medium- to coarse-grained chlorite+/-py present
								LT	GY																

n = none, t = <1%, w = 1-3%, f = 3-5%, m = 5-7%, ms = 7-10%, s = 10-15%, l = 15-20%, (write % for >20%)

Geology Log

GENERAL INTERVAL			DETAILED INTERVAL			LITHOLOGY					ALTERATION							MINERALS			Photo	DETAILED DESCRIPTION	
From (m)	To (m)	Interval (m)	From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Shade	Colour	Texture	Propylitic	Argillic	Phyllic	Potassic	Silic	Limonitic	Other		Pyrite	Other			
																	Type	Intensity		Type			Conc. (%)
			253.94	254.34		V1		LT	GY	BX								SER	3.00	2.00	DI		VOLCANIC 1 (andesite) - clast-supported breccia - type case - pyrite with black sooty mineral (crushed py or chalcocite?) in matrix. Clasts type case
									WH											6.00	BX		
			254.34	254.88		V1		MD	GN	AN								PRO	2.00	2.00	ST		VOLCANIC 1 (andesite) - (PROPYLITIC ALTERED) - Plagioclase phenocrysts semi-recrystallized as matrix. Medium-grained chlorite present. Fine-grained py and sercite throughout. Py stringers infrequent
																		SER	1.00	2.00	DI		
			254.88	255.33		V1		LT	GY	AN								SER	3.00		Cc		VOLCANIC 1 (andesite) - (SERECITE ALTERED) - Increase in pyrite with black sooty mineral (Cc?); Core crumbleyish
			255.33	257.50		V1		BK		AN								POT	4.00				VOLCANIC 1 (andesite) - (POTASSIC ALTERED) - Medium-grained chlorite distinguishable
			257.50	260.34		V1		MD	GY	PO								PRO	1.00	1.00	DI		VOLCANIC 1 (andesite) - (PROPYLITIC ALTERED) - Weak alteration. Grey colour, plagioclase phenocrysts present (crowded). Hornblende altered to chlorite present. Discontinuous pyrite stringers throughout
																				1.00	FX		
			260.34	261.49		V1		MD	GY	PO								PRO	1.00	20.00	VT		VOLCANIC 1 (andesite) - (PROPYLITIC ALTERED) - Increase in pyrite mineralization. Three zones of py stringers and vug infill. General increase in qtz-py+/-carb stringers
			261.49	269.22		V1		MD	GY	PO								PRO	2.00				VOLCANIC 1 (andesite) - (PROPYLITIC ALTERED) - same as 257.50-260.34m
								LT	GN														
			269.22	272.82		V1		LT	GN	PO								PRO	1.00				VOLCANIC 1(andesite) - (PROPYLITIC ALTERED) - Contact between flows? Medium-grained plagioclase increasing to coarse-grained and crowded downhole; very abundant (50%)
								MD	GY														
			272.82	276.55		V1			BK	PO								POT	3.00				VOLCANIC 1 (andesite) - (POTASSIC ALTERED) - Magnetic; chlorite distinguishable; plagioclase variably distinguishable; matrix crystalline. Sheeted qtz-carb+/-py stringers present - offset by other qtz-carb-py stringer (1.5cm offset)
								MD	GN									PRO	2.00	1.00	DI		
			276.55	277.91		V1		LT	GY	PO								SER	2.00	3.00	ST		VOLCANIC 1 (andesite) - (SERECITE ALTERED) Frequent py and qtz-carb+/-py veinlets with offset by 1 cm qtz-py vein.
																		PRO	2.00	1.00	DI		
			277.91	281.32		V1			BK	BX								POT	3.00				VOLCANIC 1 (andesite) - (POTASSIC ALTERED) - Magnetic; faint cobble breccia texture; variably plag-phyric
								DK	BN	PO								PRO	3.00	2.00	DI		
			281.32	285.50		V1		LT	GN	PO						1?		PRO	2.00	1.00	DI		VOLCANIC 1 (andesite) - (PROPYLITIC ALTERED) - Weak alteration, crystalline matrix with plag phenocrysts (medium-grained) semi-recrystallized into matrix. Crystalline black matrix
			285.50	286.59		V1			BK	PO								POT	2.00				VOLCANIC 1 (andesite) - (POTASSIC ALTERED) - Non-magnetic, matrix-supported breccia clasts of milky white Volcanic 1. Matrix crystalline black
								MD	GN	BX													
			286.59	286.76		V1		LT	GY	PO						3.00				25.00	BL		VOLCANIC 1 (andesite) - (SILICIFIED WITH SEMI-MASSIVE PY) - Silica flooded zone at contact between potassic and Volcanic 1. Crystalline rock with medium-grained disseminated py and semi-massive py 'infill'.
			286.76	287.92		V1		LT	GN	PO								PRO	2.00	1.00	DI		VOLCANIC 1 (andesite) - Hornblende altered to chlorite, plag phenocrysts present, crystalline matrix more greyish than green.
			287.92	289.20		V1			BK	BX								POT	4.00				VOLCANIC 1 (andesite) - (POTASSIC ALTERED) - Type case with green colour overprint. Large clast in ?porphyry dike? at lower contact. Xenolith in dike or altered clast from volcanics? YOUNGING EVIDENCE
								MD	GN														
			289.20	294.17		IPD		MD	GY	PO													INTERMEDIATE PORPHYRY DIKE - Plag porphyry dike. Chlorite-altered mafics present

Geology Log

GENERAL INTERVAL			DETAILED INTERVAL			LITHOLOGY					ALTERATION							MINERALS			Photo	DETAILED DESCRIPTION		
From (m)	To (m)	Interval (m)	From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Shade	Colour	Texture	Propylitic	Argillic	Phyllic	Potassic	Silic	Limonitic	Other		Pyrite	Other				
																	Type	Intensity		Type			Conc. (%)	
			294.17	299.73		V1		LT	GY	BX					3.00		SER	2.00					VOLCANIC 1 (andesite) - (VARIABLY SILICIFIED) - Bleached white and grey variably silicified Volcanic 1 crackle breccia with milky white very fine-grained matrix. Medium to coarse-grained chlorite present, everything else crystalline. Transition into plag phenocryst crowded (medium-grained) Volcanic 1 with py stringers subparallel to core axis. NEW INTERVAL?	
									WH															
299.73	334.37					V1		MD	GN	PO							PRO	1.00	1.00	DI				VOLCANIC 1 (andesite) - (WEAKLY PROPYLITIC + POTASSIC ALTERED) - Plag phenocrysts throughout - very distinct. Metre scale zones of weak propylitic or potassic alteration. Potassic alteration magnetic - phenocrysts present. Increase in qtz-py stringers - stockwork (see secondary structure log)
								MD	BK								POT	1.00	2.00	ST				
									GY															
			299.73	304.67		V1		MD	GN	PO							PRO	1.00	1.00	DI				VOLCANIC 1 (andesite) - (WEAKLY PROPYLITIC + POTASSIC ALTERED) - Plag phenocrysts throughout - very distinct. Metre scale zones of weak propylitic or potassic alteration. Potassic alteration magnetic - phenocrysts present.
									BK								POT	1.00	2.00	ST				
								MD	GY															
			304.67	304.87		V1		MD	GY	BX										20.00	BX			PY MINERALIZED BRECCIA - Narrow brecciated vein with py in fine-grained matrix (1cm) at 20 TCA
			304.87	334.37		V1		MD	GN	PO							PRO	1.00	1.00	DI				VOLCANIC 1 (WEAKLY PROPYLITIC + POTASSIC ALTERED) - Plag phenocrysts throughout - very distinct. Metre scale zones of weak propylitic or potassic alteration. Potassic alteration magnetic - phenocrysts present.
									BK								POT	1.00	2.00	ST				
								MD	GY															
334.37	345.47					PP	CG			WH	PO						SER	1.00	1.00	DY		x		PLAGIOCLASE PORPHYRY - White and light grey qtz-bearing plag crowded diorite. Fine-grained mafics altered to py. Interval sericite altered. Frequent stockwork stringers.
									LT	GY										2.00	ST			
			345.47	354.24		PP		MD	GY	PO							POT	2.00						PLAGIOCLASE PORPHYRY (VARIABLY POTASSIC + SERICITIC ALTERED) - Interval of metre scale potassic and very weak sericite altered Plagioclase Porphyry. Strength of magnetism from weak to strong in potassic altered. Plag phenocrysts (medium-grained) in crystalline matrix present throughout alteration types throughout interval.
									BK								SER	1.00	0.50	DI				
			354.24	355.01		PP		MD	GY						3.00									PLAGIOCLASE PORPHYRY (SILICIFIED) - Type case, phenocrysts faint, chlorite replaced by py present
			355.01	357.12		PP				BK	AN						POT	4.00						PLAGIOCLASE PORPHYRY (POTASSIC ALTERED) - Crystalline black matrix with greenish phenocrysts (chlorite?)
			357.12	358.07		PP		MD	GY	PO							PRO	1.00	0.50	DI				PLAGIOCLASE PORPHYRY - Minor breccia zone, abundant qtz-carb-py veinlets along core axis - see secondary structure log
									BK								SER	1.00	10.00	VT				
			358.07	359.33		PP				BK	PO						POT	1.00						PLAGIOCLASE PORPHYRY (POTASSIC ALTERED) - Plag phenocrysts and black crystalline matrix
			359.33	361.94		PP		MD	GY	BX							POT	4.00						PLAGIOCLASE PORPHYRY (COBBLE BRECCIA + PY VEIN) - Top - 30cm of silicified cobble breccia (clasts fine-grained and black). Qtz +/- carb + py 0 degrees TCA, no selvage. Core fractured along vein
									BK	PO							POT	1.00	15.00	VN				
			361.94	363.87		PP				BK	PO						POT	4.00						PLAGIOCLASE PORPHYRY (POTASSIC ALTERED) - Very coarse-grained plag(?) phenocrysts in crystalline non-magnetic matrix. Stringers common
363.87	397.61					PP		LT	GN	PO							POT	2.00						PLAGIOCLASE PORPHYRY (VARIABLE POTASSIC + SERICITE ALTERED) - Plag phenocrysts distinct. Matrix colour varies with alteration. Stringers common. Occasional py veinlets (~8mm) +/- qtz +/- carb. See secondary structure log
									BK								SER	1.00						
			363.87	376.17		PP		LT	GN	PO							POT	2.00						PLAGIOCLASE PORPHYRY (VARIABLE POTASSIC + SERICITE ALTERED) - Plag phenocrysts distinct. Matrix colour varies with alteration.

Geology Log

GENERAL INTERVAL			DETAILED INTERVAL			LITHOLOGY					ALTERATION							MINERALS			Photo	DETAILED DESCRIPTION		
From (m)	To (m)	Interval (m)	From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Shade	Colour	Texture	Propylitic	Argillic	Phyllic	Potassic	Silic	Limonitic	Other		Pyrite	Other				
																	Type	Intensity		Type			Conc. (%)	
			376.17	376.27					BK									SER	1.00					Py vein, see secondary structure log
			376.27	378.69		PP		LT	GN BK	PO								POT SER	2.00 1.00					PLAGIOCLASE PORPHYRY (VARIABLE POTASSIC + SERICITE ALTERED) - Plag phenocrysts distinct. Matrix colour varies with alteration.
			378.69	379.20																				Gougey py veinlet, see secondary structure log
			386.38	386.82																				Carb - py vein, see secondary structure log
			392.03	393.04																				Py stringer, see secondary structure log
			393.04	396.61		PP		LT	GN BK	PO								POT SER	2.00 1.00					PLAGIOCLASE PORPHYRY (VARIABLE POTASSIC + SERICITE ALTERED) - Plag phenocrysts distinct. Matrix colour varies with alteration.
396.61	419.30					PP		LT	GY									SER	3.00					PLAGIOCLASE PORPHYRY (SERICITE ALTERED) - Light grey and white sericitic PP. Bleached variably. Increase in fracture zones mineralized with py. Subtle crackle breccias common. Py mineralized fractures, veinlets and stringers common.
			396.61	400.79		PP		LT	GY	PO								SER	3.00					PLAGIOCLASE PORPHYRY (SERICITE ALTERED) - Light grey and white sericitic PP. Bleached variably. Increase in fracture zones mineralized with py. Subtle crackle breccias common. Py mineralized fractures, veinlets and stringers common.
			400.79	404.55		PP		LT	GY WH	BX								SER	3.00	2.00	FX			PLAGIOCLASE PORPHYRY (CRACKLE BRECCIA) - Subtle crackle breccia with pyrite mineralized fractures. Clasts and matrix same composition, clasts 2-6cm slightly more felsic. One 30cm zone of sheeted py fractures (see secondary structure log)
			404.55	407.31		PP		LT	GY	PO								SER	1.00					PLAGIOCLASE PORPHYRY (WEAK SERICITE ALTERED) - local black potassic altered matrix.
			407.31	412.25		PP		LT	GY BK	BX								POT SER	3.00 2.00					COBBLE BRECCIA - Black fine-grained matrix and PP clasts. Rounded zone 20cm, zone of crack breccia, back into cobble breccia (matrix-supported). Py stringers and veinlets common. Zones of PP type case
			412.25	419.30		PP			WH LT	PO GY								SER	4.00	2.00	DI			BLEACHED PLAGIOCLASE PORPHYRY - White plagioclase with crystalline grey matrix All mafics replaced by py. Py stringers common
419.30	422.27					DD	MG		BK	MA														DIABASE DYKE - Black, medium-grained diabase dyke with calcite stringers and infill. Strongly magnetic.
422.27	462.38					PP			WH LT	PO GY	AN							SER SER	4.00 5.00	2.00	DI cc		2.00	BLEACHED PLAGIOCLASE PORPHYRY - Type case. Infrequent py mineralized breccia zones and py stringers with chalcocite(?). Intense sericite alteration, white with fine-grained py. Qtz variably present
																				15.00	BL			
																				30.00	VT			
																				40.00	BX			
			422.27	424.80		PP			WH LT	AN GY								SER	5.00	1.00	DI			BLEACHED PLAGIOCLASE PORPHYRY - Mafics all fine-grained py, background semi-recrystallized plag phenocrysts in grey and white crystalline matrix.
			424.80	426.51		PP		LT	GY	PO								SER	2.00	1.00	DI 4.00	BL		PLAGIOCLASE PORPHYRY (WEAK SERICITE ALTERED) - Minor py blebs - type case
			426.51	436.71		PP			WH LT	AN GY								SER	5.00	2.00	DI 30.00	VT		BLEACHED PLAGIOCLASE PORPHYRY - Type case, infrequent py veinlets and veins - gougey core rubbly with gougey fractures, more competent at bottom of interval.
																				cc	5.00			
			436.71	445.15		PP	MG	LT	GY WH	PO								SER SER	2.00 5.00	2.00	DI 40.00	DI BX		PLAGIOCLASE PORPHYRY (VARIABLELY SERICITE ALTERED) Py + chalcocite(?) present as disseminations in gougey zones and in veinlets with white bleaching, also in brecciated vein. Core highly fractured.

n = none, t= <1%, w = 1-3%, f = 3-5%, m = 5-7%, ms = 7-10%, s = 10-15%, l = 15-20%, (write % for >20%)

Geology Log

[illegible]

n = none, t = <1%, w = 1-3%, f = 3-5%, m = 5-7%, ms = 7-10%, s = 10-15%, l = 15-20%, (write % for >20%)

Contact Log

Hole: DDH-M12-02 Logger Name: Nick Bueckert

Date: July 2012

Depth (m)	DESCRIPTION
32.05	Sharp contact between propylitic altered volcanic 1 and sericite-altered felsic breccia; 31.95-32.05m -> 20cm zone of weak propylitic alteration with fine-grained disseminated pyrite; Contact 90 degrees to core axis
32.05 - 116.94	Very large interval of clast-supported breccia (CBX) w/ minor propylitic altered volcanic 1 zones (metre-scale). Contacts between CBX and Volcanic 1 are sharp, 90 degrees TCA. Occasional 10 cm zones of sericite alteration/ bleaching overprint propylitic altered Volcanic 1 at breccia contact (also sericite altered)
116.94, 117.18	Intermediate Porphyry Dike (IPD) - Upper contact - too oxidized to pinpoint - contact w/ matrix-supported breccia. Lower contact - 50 degrees to core axis with fine-grained chilled or flow-banded margin of similar composition. Below this margin (3cm thick) is a ~80cm zone of flow breccia
121.66	VOLCANIC 1 (matrix-supported breccia) - INTERMEDIATE PORPHYRY DIKE - 60 degrees TCA (upper) Lower contact - core is missing
122.50	VOLCANIC 1 (matrix-supported breccia) - VOLCANIC 1 (andesite) - 25 degrees TCA - could breccia in top of flow?
128.33	VOLCANIC 1 (andesite) (PRO altered) - VOLCANIC 1 (andesite) (SER altered) - 30 TCA - contact is faint - propylitic altered VOLCANIC 1 (andesite) is fine-grained and more felsic toward contact. Sericitic altered VOLCANIC 1 (andesite) is chlorite-phyric (chl very soft)
132.91	VOLCANIC 1 (matrix-supported breccia) - VOLCANIC 1 (andesite) - 25 to core axis - flow banded - contact faintly visible but distinct
135.68, 135.79	VOLCANIC 1 (matrix-supported breccia) - INTERMEDIATE PORPHYRY DIKE - VOLCANIC 1 (clast-supported breccia) - Upper and lower contacts recognized by lithology change. Py mineralization begins at lower contact
148.30, 149.04	VOLCANIC 1 (clast-supported breccia) - VOLCANIC 1 (andesite) (POT-PRO-SER) - 90 to core axis - contact faintly visible - colour change from light grey to dark green is gradational
	POT/PRO/SER VOLCANIC 1 (andesite) - VOLCANIC 1 (clast-supported breccia) - 90 degrees to core axis - contact "washed out" but colours reversed
151.67, 152.04	VOLCANIC 1 (clast-supported breccia) - FAULT - VOLCANIC 1 (andesite) (PRO-POT) - 40 degrees to core axis - contact sharp, pervasive oxidation but competent core in fault
157.63	VOLCANIC 1 (andesite)(POT) - VOLCANIC 1 (andesite)(PRO) - 35 degrees to core axis - contact indistinct - messy colour change
176.27, 176.74	VOLCANIC 1 (andesite)(PRO) - VOLCANIC 1 (breccia) - VOLCANIC 1 (andesite) (PRO) - 20 degrees to core axis - Zone of clast supported, sericite altered breccia, core is broken in zone of competent wallrock. Py veinlets present
191.12	VOLCANIC 1 (andesite) (POT) - QTZ BRECCIA - 45 degrees to core axis - orientation based on stringer with chalcopyrite, bottom contact not present
196.95, 198.02	VOLCANIC 1 (andesite) (POT) - SILICIC BRECCIA W/ INTERMEDIATE PORPHYRY DIKE - 90 degrees to core axis - sharp contact with gradual colour change
246.82, 246.08	VOLCANIC 1 (andesite) (PRO) - SILICIC BRECCIA - VOLCANIC 1 (andesite) (POT) - 85 degrees to core axis - sharp boundary, distinct colour change from dark green to grey

Contact Log

Depth (m)	DESCRIPTION
269.22	VOLCANIC 1 (andesite)-VOLCANIC 1 (andesite) - 20 degrees to core axis - coarse-grained VOLCANIC 1 (andesite) distinct contact with medium-grained VOLCANIC 1 (andesite)
285.50	VOLCANIC 1 (andesite) - VOLCANIC 1 (andesite) (POT) - 90 degrees to core axis
286.59	VOLCANIC 1 (andesite) (POT) - VOLCANIC 1 (andesite) (SILICIC) - 25 degrees to core axis - colour change sharp - black to grey
286.76	VOLCANIC 1 (andesite) (SILICIC) - VOLCANIC 1 (andesite) - 60 TCA contact sharp but "washout"
287.92	VOLCANIC 1 (andesite) - VOLCANIC 1 (andesite) (POT) - 55 TCA - contact flowlike, grain size maintained (medium to coarse-grained)
289.63	VOLCANIC 1 (andesite) (POT) - DK - 20 TCA - contact zig zags ~15 cm each zig. Potassic altered xenolith
294.17	DK - VOLCANIC 1 (andesite) (SILIC) - 40 TCA
334.37	VOLCANIC 1 (andesite) - PLAGIOCLASE PORPHYRY (SER) - 90 TCA - sharp contact and colour change, grey to white, addition of qtz
345.47	PLAGIOCLASE PORPHYRY (SER) - PLAGIOCLASE PORPHYRY (POT) - 90 TCA - Sharp contact, gradational colour change, qtz out, decrease in grain size
396.61	PLAGIOCLASE PORPHYRY - PLAGIOCLASE PORPHYRY - 25 TCA - contact is subtle, grey shade from dark to light
407.98	PLAGIOCLASE PORPHYRY - PLAGIOCLASE PORPHYRY BRECCIA - 25 TCA - contact is subtle, grey shade from dark to light, increase in sericite alteration
409.96	PLAGIOCLASE PORPHYRY BRECCIA - PLAGIOCLASE PORPHYRY - 20 TCA - contact is subtle, grey shade from light to dark
419.30	PLAGIOCLASE PORPHYRY - DIABASE DIKE (DD) - cobble breccia zone 25 cm long where colour transition is white-grey-black
422.27	DD - PLAGIOCLASE PORPHYRY (bleached) - core is rubblely, no visible contact
424.80	PLAGIOCLASE PORPHYRY (bleached) - PLAGIOCLASE PORPHYRY (unaltered) - 40 TCA - from white to grey, from fine-grained to coarse-grained
426.51	PLAGIOCLASE PORPHYRY (unaltered) - PLAGIOCLASE PORPHYRY (bleached) - 35 TCA - from grey to white, from coarse-grained to fine-grained
445.15	PLAGIOCLASE PORPHYRY (bleached) - PLAGIOCLASE PORPHYRY (coarse-grained) - 30 TCA - pyrite veinlets at contact. Grain size increases from medium-grained to coarse-grained

Secondary Structure Log

Hole: DDH-M12-02

Logger Name: Nick Bueckert

Date: July 2012

2° Structure Type	From (m)	To (m)	Attitude (TCA)	Attitude (TRFE)	Count	MINERALS		DESCRIPTION	Photo
						Type	Conc. (%)		
FX	32.05	33.35	40		20	py	3	Fracture (Fx) - Py mineralized sheeted fractures (3% of whole core)	
VT	92.51	92.63	20		1			qtz-carb veinlet in breccia (subtle or "washed out"), weak propylitic alteration	
VT	115.84	116.15	20		5	py	10	Py veinlets (vts) approximately sheeted, cross-cutting breccia in zone of moderate oxidation	
BX	117.18	117.90	70					Flow breccia (see log) upper is 50 degrees to core axis (TCA), transition to 70 TCA. Orientations taken from clast orientations TCA	x
			50						
	123.64	125.67	40		9	py	1	Mineralized stringers ?py? Too fine-grained to identify minerals, also some stringers with no preferred orientation - meandering along core axis	
FT	151.67	152.04	40					Fault, contacts 40 TCA	
ST	154.23	157.63	40		11			Calcite stringers - sheeted, 30-40 TCA	
VN	158.73		22		1	py	3	Calcite vein 0.8 - 1 cm thick w/ 3% py	
VN	168.90		55		1			2 cm thick very fine-grained qtz vein with milky centre and grey envelope	
ST	168.64	171.89	35		6	py	2	Py stringers	
VT	176.27	176.74	20		1	py	4	Py veinlet along fracture orientation	
VT	181.19	185.01	30		5			Stockwork qtz-carb+/-py veinlets. Dominant 50 degree orientation TCA. One vein-veinlet runs midline TCA, gougey, disseminated pyrite in vein, varying width	
			50		10	py	3		
			0		1	py	2		
VT	191.19		55		1			Veinlet at top of qtz-breccia interval	
ST	198.02	205.88	30		2	py		Py stringers minor with calcite stringers	
VN	205.25	205.47	20		1			Qtz-py vein 2.5 cm thick with pyrite stringers. Fractures occur parallel to vein. no strong alteration envelope - Qtz "envelope" is pinkish, quasi-flow banding uphole from vein	
ST			20		7				
VN	210.51		50		1	py	3	Qtz vein 1 cm with pyrite midline or pyrite vein with white qtz selvage (?)	
VN	210.85		50		1	py	3		
ST	230.43	239.36	45		25			Carbonate stringers	
VT	260.34	261.49	50		7	py	20	Qtz-py+/-carb vts approximately sheeted - one cross-cutting qtz veinlet	
ST	272.82	276.55	15		3	py	1	Qtz-carb+/-py stringers cut by higher angle veinlet	
			50		1	py	1		
ST	276.55	277.91	40		10	py	1	Qtz-py stringers offset by carbonate stringers 0 TCA. Offset 1cm	
			0		1				
ST	294.17	297.78	10		4	py	1	Sheeted qtz-carb-py veinlets	
VT	312.60	313.00	15		3	py	2	Sheeted qtz-py veinlets with feldspathic selvages	x
VN	312.02		88		1	py	10	Banded qtz-carb-py vein 1cm thick	

Secondary Structure Log

[illegible]

Sample Log

Hole: DDH-M12-02

Date:

Jul-12

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery (%)	Sample Number	Batch	Au (g/t)	Ag (g/t)	As (ppm)	Comments
8.81	11.00	2.19	2.19	100	M677001	1				
11.00	13.50	2.50	1.57	62.8	M677002	1				core highly fractured; poor recovery
13.50	16.50	3.00	3.00	100	M677003	1				
16.50	19.00	2.50	2.36	94.4	M677004	1				
19.00	21.70	2.70	2.61	96.7	M677005	1				
					M677006	1				DUPLICATE
21.70	24.77	3.07	2.61	85	M677007	1				
24.77	27.87	3.10	2.61	84.2	M677008	1				
27.87	29.90	2.03	2.00	98.5	M677009	1				
					M677010	1				BLANK
29.90	32.07	2.17	1.96	90.3	M677011	1				
32.07	33.37	1.30	1.30	100	M677012	1				
33.37	35.51	2.14	2.14	100	M677013	1				
35.51	36.53	1.02	1.00	98	M677014	1				
					M677015	1				STANDARD ML-2
36.53	38.10	1.57	1.30	82.8	M677016	1				
38.10	40.10	2.00	2.00	100	M677017	1				
40.10	41.30	1.20	1.20	100	M677018	1				
41.30	44.06	2.76	2.67	96.7	M677019	1				
44.06	45.95	1.89	1.76	93.1	M677020	1				
					M677021	1				STANDARD ML-4
45.95	48.41	2.46	2.46	100	M677022	1				
48.41	50.23	1.82	1.69	92.9	M677023	1				
50.23	52.41	2.18	1.90	87.2	M677024	1				
52.41	54.62	2.21	2.01	91	M677025	1				
54.62	56.05	1.43	1.17	81.8	M677026	1				
					M677027	1				BLANK
56.05	57.00	0.95	0.95	100	M677028	1				unmineralized rock between mineralized intervals
57.00	59.78	2.78	2.50	89.9	M677029	1				
59.78	63.10	3.32	3.00	90.4	M677030	1				
63.10	65.71	2.61	2.28	87.4	M677031	1				
					M677032	1				COARSE REJECT DUPLICATE
65.71	69.06	3.35	3.00	89.6	M677033	1				
69.06	72.24	3.18	2.71	85.2	M677034	1				
72.24	75.28	3.04	2.46	80.9	M677035	1				
75.28	76.75	1.47	1.47	100	M677036	1				
76.75	78.70	1.95	1.95	100	M677037	2				
78.70	81.34	2.64	1.75	66.3	M677038	2				
81.34	83.57	2.23	1.80	80.7	M677039	2				
83.57	85.07	1.50	1.50	100	M677040	2				
85.07	87.84	2.77	2.68	96.8	M677041	2				
87.84	90.24	2.40	2.31	96.3	M677042	2				
					M677043	2				BLANK

Sample Log

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery (%)	Sample Number	Batch	Au (g/t)	Ag (g/t)	As (ppm)	Comments
90.24	92.12	1.88	1.56	83	M677044	2				
92.12	93.88	1.76	1.70	96.6	M677045	2				
93.88	95.47	1.59	1.50	94.3	M677046	2				
95.47	96.96	1.49	1.49	100	M677047	2				
96.96	99.66	2.70	2.34	86.7	M677048	2				
					M677049	2				STANDARD ML-4
99.66	101.53	1.87	1.80	96.3	M677050	2				
101.53	103.76	2.23	1.80	80.7	M677051	2				
103.76	107.10	3.34	2.80	83.8	M677052	2				poor recovery - rubblely core
107.10	109.88	2.78	2.32	83.5	M677053	2				
109.88	113.20	3.32	2.87	86.4	M677054	2				
113.20	115.00	1.80	1.40	77.8	M677055	2				
					M677056	2				STANDARD ML-2
115.00	116.94	1.94	1.94	100	M677057	2				
116.94	119.94	3.00	3.00	100	M677058	2				
119.94	122.94	3.00	3.00	100	M677059	2				
122.94	125.56	2.62	2.62	100	M677060	2				
125.56	127.10	1.54	1.54	100	M677061	2				
					M677062	2				1/4 DUPLICATE
127.10	130.15	3.05	3.05	100	M677063	2				
130.15	133.20	3.05	3.05	100	M677064	2				
133.20	136.24	3.04	3.00	98.7	M677065	2				
136.24	139.30	3.06	2.70	88.2	M677066	2				
					M677067	2				BLANK
139.30	142.35	3.05	2.47	81	M677068	2				
142.35	145.38	3.03	2.43	80.2	M677069	2				
145.38	148.30	2.92	2.67	91.4	M677070	2				
					M677071	2				COARSE REJECT DUPLICATE
148.30	150.58	2.28	2.15	94.3	M677072	2				
150.58	152.04	1.46	1.40	95.9	M677073	3				15 cm fault oxidized
152.04	154.53	2.49	2.46	98.8	M677074	3				
154.53	157.58	3.05	2.98	97.7	M677075	3				
157.58	160.63	3.05	2.99	98	M677076	3				
160.63	163.68	3.05	2.90	95.1	M677077	3				
					M677078	3				STANDARD ML-2
163.68	166.72	3.04	2.87	94.4	M677079	3				
166.72	169.77	3.05	2.85	93.4	M677080	3				
169.77	172.82	3.05	2.79	91.5	M677081	3				
172.82	175.87	3.05	2.80	91.8	M677082	3				
175.87	176.87	1.00	1.00	100	M677083	3				
					M677084	3				BLANK
176.87	180.19	3.32	3.05	91.9	M677085	3				
180.19	182.00	1.81	1.48	81.8	M677086	3				
182.00	183.90	1.90	1.70	89.5	M677087	3				
183.90	186.25	2.35	2.27	96.6	M677088	3				
					M677089	3				COARSE REJECT DUPLICATE
186.25	188.48	2.23	2.23	100	M677090	3				
188.48	190.71	2.23	2.23	100	M677091	3				
190.71	191.85	1.14	1.10	96.5	M677092	3				Cp present

Sample Log

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery (%)	Sample Number	Batch	Au (g/t)	Ag (g/t)	As (ppm)	Comments
191.85	194.16	2.31	2.40	104	M677093	3				
					M677094	3				1/4 DUPLICATE
194.16	196.95	2.79	2.68	96.1	M677095	3				
196.95	198.09	1.14	1.14	100	M677096	3				
198.09	200.25	2.16	1.96	90.7	M677097	3				
					M677098	3				STANDARD ML-2
200.25	203.30	3.05	2.90	95.1	M677099	3				
203.30	204.68	1.38	1.35	97.8	M677100	3				
204.68	205.88	1.20	1.20	100	M677101	3				
205.88	207.88	2.00	2.00	100	M677102	3				
207.88	210.10	2.22	2.22	100	M677103	3				
210.10	211.10	1.00	1.00	100	M677104	3				2 py veinlets
211.10	212.45	1.35	1.35	100	M677105	3				
					M677106	3				BLANK
212.45	215.50	3.05	2.55	83.6	M677107	3				
215.50	218.55	3.05	2.90	95.1	M677108	3				
218.55	221.58	3.03	2.90	95.7	M677109	4				
221.58	223.62	2.04	1.89	92.6	M677110	4				Cp in breccia
223.62	224.63	1.01	1.01	100	M677111	4				
224.63	227.68	3.05	2.10	68.9	M677112	4				Poor recovery
227.68	230.73	3.05	2.80	91.8	M677113	4				
					M677114	4				COARSE REJECT DUPLICATE
230.73	233.78	3.05	2.93	96.1	M677115	4				
233.78	236.83	3.05	3.00	98.4	M677116	4				
236.83	239.88	3.05	2.90	95.1	M677117	4				
239.88	241.94	2.06	2.06	100	M677118	4				
					M677119	4				STANDARD ML-2
241.94	242.94	1.00	1.00	100	M677120	4				

Geotechnical Log

Hole: DDH-M12-02 Tech Name: Liz Bueckert

Date: July 7thth 2012

From (m)	To (m)	Interval (m)	Recovery (m)		Recovery (%)		RQD (m)	RQD (%)	Strength	Joint Sets				DESCRIPTION
										Freq (/m)	Attitude (tca)	Shape	Roughness	
8.81	11.28	2.47	2.35	95	0.64	27	3s	0.14	65	1	2			
11.28	14.32	3.04	2.80	92	0.82	29	3s	0.17	55	1	2			a lot of rubble
14.32	17.37	3.05	2.77	91	1.72	62	3s	0.19	60	1	1			
17.37	20.42	3.05	3.01	98	1.93	33	3s	0.25	55	1	1			
20.42	23.47	3.05	2.70	88	1.51	55	2s	0.15	60	1	1			
23.47	26.51	3.04	2.76	90	1.77	64	2s	0.23	55	1	1			
26.51	29.56	3.05	2.84	93	1.59	56	3s	0.18	55	1	1			
29.56	32.61	3.05	2.88	94	1.95	67	2s	0.23	65	2	1			
32.61	35.66	3.05	2.94	96	2.21	75	2s	0.18	55	2	1			
35.66	38.71	3.05	2.94	96	0.84	28	2s	0.23	75	1	1			
38.71	41.76	3.05	3.01	98	1.64	54	2s	0.19	75	2	1			
41.76	44.81	3.05	2.90	95	1.13	38	2s	0.12	65	1	1			
44.81	47.85	3.04	2.91	95	1.44	49	2s	0.14	65	2	2			1-2
47.85	50.90	3.05	2.85	93	0.76	26	2s	0.12	70	2	1			
50.90	53.95	3.05	2.65	86	0.60	22	2s	0.11	75	3	1			1-3
53.95	57.00	3.05	2.70	90	1.01	37	2s	0.15	65	2	1			very variable in attitude of joint break
57.00	60.04	3.04	2.84	93	1.25	44	2s	0.13	70	2	1			
60.04	63.10	3.06	2.94	96	0.44	14	2s	0.09	n/a	1	2			Many irregular breaks - hard to find an average attitude
63.10	66.14	3.04	2.76	90	0.45	16	2s	0.17	60	1	1			
66.14	69.19	3.05	2.22	72	0.87	39	2s	0.11	65	2	2			
69.19	72.24	3.05	2.43	79	0.59	24	2s	0.10	75	2	2			
72.24	75.28	3.04	3.00	98.7	0.55	18.33	3s	0.12	70	2	1			
75.28	78.33	3.05	2.61		0.52	19.92	3s	0.11	70	2	1			
78.33	81.38	3.05	2.61	92.1	0.25	9.579	3s	0.12	70	2	2			
81.38	84.43	3.05	2.81	86.9	0.54	19.22	3s	0.13	60	1	2			
84.43	87.48	3.05	2.65	95.7	0.80	30.19	3s	0.10	60	1	1			
87.48	90.52	3.04	2.92	93.4	1.33	45.55	3s	0.14	60	2	1			
90.52	93.57	3.05	2.84	95.1	1.32	46.48	3s	0.14	60	3	2			2-3
93.57	96.62	3.05	2.90	94.4	0.67	23.1	3s	0.14	70	2	2			

Geotechnical Log

96.62	99.66	3.04	2.88	90.8	1.41	48.96	3s	0.17	60	1-2	2	2
99.66	102.72	3.06	2.76	83.7	0.85	30.8	3s	0.16	60	1-2	2	2
102.72	105.76	3.04	2.56	81.2	0.54	21.09	3s	0.15	65	2	2	
105.76	108.81	3.05	2.47	93.4	0.40	16.19	3s	0.17	60	3	2	1 and 3
108.81	111.90	3.09	2.85	77.3	0.45	15.79	3s	0.16	65	1	2	
111.90	115.00	3.10	2.39	85.5	0.61	25.52	3s	0.19	55	1	2	
115.00	118.00	3.00	2.65	99.3	1.73	65.28	3s	0.27	60	2	2	
118.00	121.00	3.00	2.98	99	2.30	77.18	3s	0.30	60	1	1	
121.00	124.05	3.05	2.97	98.4	2.53	85.19	3s	0.38	55	1	1	
124.05	127.10	3.05	3.00	98.4	2.32	77.33	3s	0.27	60	1	2	
127.10	130.15	3.04	2.91	95.7	2.88	98.97	3s	0.43	60	1	2	
133.20	136.24	3.04	3.04	100	2.33	76.64	3S	0.28	60	1	2	
136.24	139.30	3.06	2.55	83.3	0.52	20.39	3s	0.19	60	2	1	1-2
139.30	142.34	3.04	2.45	80.6	0.89	36.33	3s	0.17	50	1	2	
142.34	145.38	3.04	2.09	68.8	0.51	24.4	3s	0.21	65	1	2	
145.38	148.44	3.06	2.85	93.1	2.16	75.79	3s	0.20	65	3	1	2-3
148.44	151.49	3.05	2.76	90.5	1.68	60.87	3s	0.16	65	1	1	
151.49	154.53	3.04	2.84	93.4	2.46	86.62	3s	0.23	60	1	1	
154.53	157.58	3.05	2.71	88.9	1.74	64.21	3s	0.25	60	1	1	
157.58	160.63	3.05	2.74	89.8	1.74	63.5	3s	0.43	55	1	1	
160.63	163.38	2.75	2.82	103	2.05	72.7	3s	0.30	60	1	1	
163.68	166.70	3.02	2.98	98.7	1.23	41.28	3s	0.17	60	3	1	1 and 3
166.70	169.77	3.07	2.86	93.2	0.98	34.27	3s	0.20	60	1	1	
169.77	172.82	3.05	2.80	91.8	1.05	37.5	3s	0.25	60	2	1	
172.82	175.87	3.05	2.82	92.5	1.45	51.42	3s	0.19	65	3	1	1 and 3
175.87	178.90	3.04	2.87	94.4	0.45	15.68	3s	0.21	65	1	1	
178.90	182.00	3.00	2.70	90	0.76	28.15	3s	0.16	30	3	1	1 and 3
182.00	185.01	3.01	2.77	92	0.34	12.27	3s	0.16	60	1	1	
185.01	188.06	3.05	2.90	95.1	1.38	47.59	3s	0.19	60	1	1	
188.06	191.12	3.05	2.90	95.1	1.73	59.66	3s	0.25	55	1	1	
191.12	194.16	3.05	3.02	99	1.66	54.97	3s	0.19	60	1	1	
194.16	197.21	3.05	2.98	97.7	2.55	85.57	3s	0.30	60	1	1	
197.21	200.25	3.05	2.93	96.1	2.06	70.31	3s	0.40	60	1	1	
200.25	203.30	3.05	2.74	89.8	1.40	51.09	3s	0.27	70	1	1	
203.30	206.35	3.05	2.84	93.1	2.50	88.03	3s	0.38	65	1	1	
206.35	209.40	3.05	2.92	95.7	2.44	83.56	3s	0.38	65	1	1	
209.40	212.45	3.05	2.74	89.8	2.39	87.23	3s	0.27	65	1	1	
212.45	215.50	3.05	2.77	90.8	1.04	37.55	3s	0.33	65	1	1	
215.50	218.53	3.05	2.94	96.4	1.86	63.27	3s	0.25	65	1	1	
218.53	221.58	3.05	2.65	86.9	1.62	61.13	3s	0.26	65	1	1	

Geotechnical Log

221.58	224.63	3.05	2.78	91.1	1.50	53.96	3s	0.27	60	1	2	
224.63	227.68	3.05	2.60	85.2	0.74	28.46	3s	0.50	70	1	2	
227.68	230.73	3.05	2.76	90.5	1.90	68.84	3s	0.23	65	1	2	
230.73	233.78	3.05	2.73	89.5	2.14	78.39	3s	0.27	70	2	1	
233.78	236.83	3.05	2.95	96.7	2.10	71.19	3s	0.25	60	1	1	
236.83	239.88	3.05	2.91	95.4	1.83	62.89	3s	0.27	70	1	1	
239.88	242.94	3.05	2.89	94.8	2.57	88.93	3s	0.30	70	1	1	
242.94	246.00	3.05	2.94	96.4	1.13	38.44	3s	0.25	65	1	1	
246.00	249.02	3.05	2.72	89.2	1.46	53.68	3s	0.43	65	2	1	1-2
249.02	252.07	3.05	2.97	97.4	1.36	45.79	3s	0.25	65	1	2	
252.07	255.11	3.05	2.52	82.6	0.62	24.6	3s	0.21	60	1	2	
255.11	258.16	3.05	2.35	77	0.53	22.55	3s	0.19	60	1	2	
258.16	261.21	3.05	2.72	89.2	1.48	54.41	3s	0.38	55	1	1	
261.21	264.26	3.05	2.93	96.1	2.06	70.31	3s	0.61	50	1	1	
264.26	267.30	3.04	2.49	81.9	0.82	32.93	3s	0.25	60	1	1	
267.30	270.35	3.05	2.77	90.8	1.45	52.35	3s	0.20	60	1	1	
270.35	273.40	3.05	2.88	94.4	2.10	72.92	3s	0.30	65	3	1	1 and 3
273.40	276.45	3.05	2.93	96.1	2.20	75.09	3s	0.30	65	1	1	
276.45	279.49	3.04	2.90	95.4	2.35	81.03	3s	0.27	55	1	1	
279.49	282.54	3.05	2.83	92.8	2.00	70.67	3s	0.30	70	1	1	
282.54	285.59	3.05	2.92	95.7	2.14	73.29	3s	0.23	65	1	2	
285.59	288.63	3.04	2.60	85.5	0.90	34.62	3s	0.25	65	2	1	1 and 2
288.63	291.68	3.05	2.78	91.1	2.06	74.1	3s	0.27	60	1	1	
291.68	294.73	3.05	2.83	92.8	2.11	74.56	3s	0.25	60	1	1	
294.73	297.78	3.05	2.80	91.8	2.27	81.07	3s	0.27	55	1	1	
297.78	300.83	3.05	2.82	92.5	2.50	88.65	3s	0.33	55	1	1	
300.83	303.88	3.05	2.90	95.1	2.10	72.41	3s	0.38	55	3	1	1 and 3
303.88	306.93	3.05	2.90	95.1	2.15	74.14	3s	0.38	60	1	1	
306.93	309.93	3.00	2.99	99.7	2.62	87.63	3s	0.30	45	1	1	
309.98	313.03	3.05	2.86	93.8	2.12	74.13	3s	0.27	50	1	1	
313.03	316.07	3.04	2.99	98.4	2.60	86.96	3s	0.25	50	1	1	
316.07	319.12	3.05	2.87	94.1	2.55	88.85	3s	0.20	55	1	1	
319.12	322.17	3.05	3.00	98.4	1.02	34	3s	0.20	55	1	1	
322.17	325.22	3.05	2.81	92.1	1.42	50.53	3s	0.38	50	1	1	
325.22	328.77	3.55	2.90	81.7	2.80	96.55	3s	0.20	55	3	1	1 and 3
328.77	331.32	2.55	2.80	110	2.10	75	3s	0.30	55	1	1	
331.32	334.37	3.05	2.80	91.8	1.98	70.71	3s	0.27	55	1	1	
334.37	337.41	3.04	2.82	92.8	1.44	51.06	3s	0.23	60	1	1	
337.41	340.46	3.05	2.84	93.1	2.00	70.42	3s	0.25	55	1	1	
340.46	343.51	3.05	2.90	95.1	1.95	67.24	3s	0.25	55	1	1	

Geotechnical Log

343.51	346.56	3.05	2.92	95.7	2.21	75.68	3s	0.30	55	1	1	
346.56	349.56	3.00	2.87	95.7	2.18	75.96	3s	0.23	55	1	1	actual recovery: 3.05 m. meter marker in wrong location i
349.61	352.66	3.05	2.73	89.5	1.43	52.38	3s	0.38	55	1	1	actual recovery: 3.05 m. meter marker in wrong location i
352.66	355.70	3.04	2.90	95.4	2.18	75.17	3s	0.38	55	1	1	
355.70	358.70	3.00	3.00	100	2.85	95	3s	0.33	65	1	1	
358.75	361.81	3.06	3.00	98	2.25	75	3s	0.30	65	1	1	
361.81	364.81	3.00	3.02	101	2.62	86.75	3s	0.76	60	1	1	
364.85	367.89	3.04	2.76	90.8	2.69	97.46	3s	0.43	60	1	1	
367.89	370.94	3.05	3.00	98.4	2.65	88.33	3s	0.43	60	1	1	
370.94	373.99	3.05	2.60	85.2	1.95	75	3s	0.24	50	1	1	
373.99	377.04	3.05	2.58	84.6	1.96	75.97	3s	0.50	50	1	1	
380.09	383.13	3.04	2.95	97	2.01	68.14	3s	0.25	50	1	1	
383.13	386.18	3.05	3.01	98.7	1.75	58.14	3s	0.22	50	1	1	
386.18	389.23	3.05	2.96	97	2.34	79.05	3s	0.25	50	1	1	
389.23	392.27	3.04	3.01	99	2.60	86.38	3s	0.38	55	1	1	
392.27	395.32	3.05	2.87	94.1	2.15	74.91	3s	0.30	50	1	1	
395.32	398.37	3.05	2.97	97.4	2.32	78.11	3s	0.23	60	1	2	
398.37	401.42	3.05	2.64	86.6	2.38	90.15	3s	0.30	50	2	2	
401.42	404.47	3.05	3.00	98.4	2.12	70.67	3s	0.33	60	1	2	
404.47	407.51	3.04	3.05	100	2.35	77.05	3s	0.25	55	3	2	2-3
407.51	410.56	3.05	3.01	98.7	2.05	68.11	3s	0.22	55	2	2	
410.56	413.61	3.05	2.91	95.4	2.22	76.29	3s	0.20	55	1	1	
413.61	416.66	3.05	2.99	98	1.37	45.82	3s	0.19	55	1		
416.66	419.70	3.04	2.82	92.8	1.42	50.35	3s	0.16	55	2	1	
419.70	422.75	3.05	2.79	91.5	2.30	82.44	3s	0.38	60	1	2	
422.75	425.80	3.05	2.78	91.1	0.98	35.25	3s	0.25	55	1	1	
425.80	428.85	3.05	2.67	87.5	1.50	56.18	3s	0.21	55	3	2	1 and 3
428.85	431.90	3.05	3.00	98.4	0.96	32	3s	0.20	50	1	1	
431.90	434.95	3.05	2.80	91.8	1.15	41.07	3s	0.23	55	1	1	
434.95	438.00	3.05	2.80	91.8	1.21	43.21	3s	0.19	55	2	2	
438.00	441.04	3.04	2.95	97	1.29	43.73	3s	0.17	60	1	2	
441.04	444.09	3.05	2.65	86.9	1.07	40.38	3s	0.16	50	1	2	
444.09	447.14	3.05	2.97	97.4	1.00	33.67	3s	0.19	60	2	2	
447.14	450.18	3.04	2.85	93.7	1.51	52.98	3s	0.14	60	2	1	1-2
450.18	453.23	3.05	2.63	86.2	1.85	70.34	3s	0.23	55	1	1	
453.23	456.28	3.05	2.68	87.9	1.43	53.36	3s	0.23	55	1	1	
456.28	459.33 E	3.05	2.75	90.2	1.12	40.73	3s	0.25	65	2	2	1-2

Magnetic Susceptibility Log

Hole: JDH-M12-02 Date: July 2012

Depth (m)	Magnetic Susceptibility	DESCRIPTION
24.73	0.612	
25.73	0.393	
26.73	0.427	
27.73	0.263	
28.73	0.612	
29.73	4.081	
30.73	0.161	
31.73	0.180	
32.73	0.152	
33.73	0.270	
34.73	0.304	
35.73	0.369	
36.73	0.244	
37.73	0.320	
38.73	0.316	
39.73	0.409	
40.73	0.756	
41.73	0.487	
42.73	0.586	
43.73	0.266	
44.73	0.281	
45.73	0.357	
46.73	0.446	
47.73	0.320	
48.73	0.488	
49.73	0.290	
50.73	0.243	
51.73	0.295	
52.73	0.387	
53.73	0.564	
54.73	0.635	
55.73	0.569	
56.73	0.444	
57.73	0.369	
58.73	0.828	
59.73	0.300	
60.73	0.431	
61.73	0.512	
62.73	0.454	
63.73	0.648	
64.73	0.177	
65.73	0.184	
66.73	0.342	
67.73	0.241	
68.73	0.703	
69.73	0.764	
70.73	0.591	
71.73	0.413	
72.73	0.324	
73.73	0.370	

Magnetic Susceptibility Log

Depth (m)	Magnetic Susceptibility	DESCRIPTION
74.73	0.281	
75.73	0.266	
76.73	0.269	
77.73	0.257	
78.73	1.112	
79.73	0.488	
80.73	0.449	
81.73	0.703	
82.73	0.157	
83.73	0.455	
84.73	0.450	
85.73	0.210	
86.73	0.317	
87.00	0.153	
88.00	0.194	
89.00	0.416	
90.00	0.476	
91.00	0.199	
92.00	0.232	
93.00	0.135	
94.00	0.540	
95.00	0.307	
96.00	0.423	
97.00	0.681	
98.00	0.748	
99.00	0.279	
100.00	0.265	
101.00	0.275	
102.00	0.204	
103.00	0.265	
104.00	0.402	
105.00	0.285	
106.00	0.192	
107.00	0.158	
108.00	0.498	
109.00	0.267	
110.00	0.166	
111.00	0.232	
112.00	0.169	
113.00	0.261	
114.00	0.268	
115.00	0.237	
116.00	0.350	
117.00	0.422	
118.00	0.543	
119.00	0.430	
120.00	0.321	
121.00	0.506	
122.00	0.171	
123.00	0.474	
124.00	0.157	

Magnetic Susceptibility Log

Depth (m)	Magnetic Susceptibility	DESCRIPTION
125.00	0.259	
126.00	0.179	
127.00	0.066	
128.00	0.159	
129.00	0.741	
130.00	0.447	
131.00	0.441	
132.00	0.138	
133.00	0.234	
134.00	0.080	
135.00	0.301	
136.00	0.670	
137.00	0.294	
138.00	0.046	
139.00	0.809	
140.00	0.129	
141.00	0.140	
142.00	0.171	
143.00	0.389	
144.00	0.277	
145.00	0.425	
146.00	0.423	
147.00	0.632	
148.00	8.922	
149.00	0.230	
150.00	0.149	
151.00	0.365	
152.00	23.190	
153.00	0.406	
154.00	6.588	
155.00	0.722	
156.00	14.420	
157.00	4.305	
158.00	1.382	
159.00	1.155	
160.00	0.930	
161.00	0.350	
162.00	0.541	
163.00	4.835	
164.00	0.973	
165.00	0.813	
166.00	0.693	
167.00	0.428	
168.00	4.439	
169.00	0.368	
170.00	0.652	
171.00	1.012	
172.00	0.607	
173.00	1.012	
174.00	0.614	
175.00	0.707	

Magnetic Susceptibility Log

Depth (m)	Magnetic Susceptibility	DESCRIPTION
176.00	0.461	
177.00	0.359	
178.00	0.622	
179.00	0.794	
180.00	0.321	
181.00	0.220	
182.00	0.161	
183.00	0.224	
184.00	0.620	
185.00	0.564	
186.00	0.251	
187.00	0.199	
188.00	0.279	
189.00	27.860	
190.00	5.235	
191.00	0.153	
192.00	1.862	
193.00	2.329	
194.00	5.214	
195.00	6.516	
196.00	0.783	
197.00	0.228	
198.00	13.230	
199.00	7.960	
200.00	32.090	
201.00	2.459	
202.00	0.505	
203.00	2.829	
204.00	0.447	
205.00	0.257	
206.00	1.865	
207.00	1.958	
208.00	1.201	
209.00	1.804	
210.00	1.136	
211.00	4.025	
212.00	0.210	
213.00	0.192	
214.00	0.178	
215.00	0.424	
216.00	0.357	
217.00	0.193	
218.00	0.170	
219.00	0.121	
220.00	0.240	
221.00	0.384	
222.00	0.163	
223.00	0.518	
224.00	0.133	
225.00	0.125	
226.00	0.595	

Magnetic Susceptibility Log

Depth (m)	Magnetic Susceptibility	DESCRIPTION
227.00	0.256	
228.00	6.571	
229.00	6.768	
230.00	0.435	
231.00	3.043	
232.00	7.633	
233.00	8.129	
234.00	15.000	
235.00	8.513	
236.00	18.430	
237.00	1.076	
238.00	0.895	
239.00	0.233	
240.00	0.379	
241.00	0.043	
242.00	0.480	
243.00	0.480	
244.00	0.156	
245.00	0.153	
246.00	1.694	
247.00	2.351	
248.00	1.937	
249.00	0.557	
250.00	0.111	
251.00	0.119	
252.00	0.039	
253.00	0.117	
254.00	0.747	
255.00	0.386	
256.00	2.400	
257.00	0.381	
258.00	0.335	
259.00	0.377	
260.00	0.354	
261.00	0.166	
262.00	0.471	
263.00	0.232	
264.00	0.029	
265.00	0.792	
266.00	0.230	
267.00	1.051	
268.00	0.633	
269.00	0.405	
270.00	0.360	
271.00	0.119	
272.00	0.156	
273.00	13.030	
274.00	4.166	
275.00	4.475	
276.00	0.235	
277.00	0.104	

Magnetic Susceptibility Log

Depth (m)	Magnetic Susceptibility	DESCRIPTION
278.00	0.111	
279.00	0.182	
280.00	0.125	
281.00	0.284	
282.00	0.349	
283.00	0.367	
284.00	0.370	
285.00	0.723	
286.00	0.112	
287.00	0.184	
288.00	0.305	
289.00	0.332	
290.00	0.349	
291.00	0.043	
292.00	0.138	
293.00	0.321	
294.00	0.029	
295.00	0.047	
296.00	0.142	
297.00	0.175	
298.00	0.222	
299.00	0.190	
300.00	0.110	
301.00	0.222	
302.00	0.387	
303.00	4.723	
304.00	0.460	
305.00	0.586	
306.00	0.167	
307.00	0.739	
308.00	0.223	
309.00	0.180	
310.00	5.896	
311.00	0.126	
312.00	0.135	
313.00	0.112	
314.00	0.362	
315.00	0.129	
316.00	0.232	
317.00	0.474	
318.00	0.140	
319.00	0.181	
320.00	0.225	
321.00	0.239	
322.00	0.572	
323.00	0.838	
324.00	0.183	
325.00	0.246	
326.00	0.261	
327.00	0.121	
328.00	0.092	

Magnetic Susceptibility Log

Depth (m)	Magnetic Susceptibility	DESCRIPTION
329.00	0.165	
330.00	0.449	
331.00	0.224	
332.00	0.480	
333.00	0.127	
334.00	0.356	
335.00	0.047	
336.00	0.057	
337.00	0.041	
338.00	0.098	
339.00	0.106	
340.00	0.145	
341.00	0.142	
342.00	0.151	
343.00	0.022	
344.00	0.181	
345.00	5.326	
346.00	0.218	
347.00	0.568	
348.00	0.487	
349.00	0.331	
350.00	0.289	
351.00	0.503	
352.00	0.414	
353.00	1.093	
354.00	0.503	
355.00	10.510	
356.00	5.060	
357.00	9.409	
358.00	0.879	
359.00	0.317	
360.00	0.291	
361.00	0.172	
362.00	0.109	
363.00	0.362	
364.00	0.347	
365.00	8.893	
366.00	10.580	
367.00	0.345	
368.00	0.154	
369.00	0.432	
370.00	2.423	
371.00	0.406	
372.00	0.309	
373.00	1.564	
374.00	1.041	
375.00	0.422	
376.00	0.393	
377.00	0.547	
378.00	0.170	
379.00	0.502	

Magnetic Susceptibility Log

Depth (m)	Magnetic Susceptibility	DESCRIPTION
380.00	0.181	
381.00	0.251	
382.00	0.352	
383.00	0.270	
384.00	0.187	
385.00	0.123	
386.00	0.133	
387.00	0.633	
388.00	0.660	
389.00	0.505	
390.00	0.613	
391.00	0.128	
392.00	0.185	
393.00	0.466	
394.00	0.205	
395.00	0.198	
396.00	0.206	
397.00	0.785	
398.00	0.245	
399.00	0.235	
400.00	0.241	
401.00	0.281	
402.00	0.129	
403.00	0.808	
404.00	0.059	
405.00	0.364	
406.00	0.354	
407.00	0.109	
408.00	0.380	
409.00	0.318	
410.00	0.132	
411.00	0.279	
412.00	0.089	
413.00	0.300	
414.00	0.186	
415.00	0.152	
416.00	0.056	
417.00	0.071	
418.00	0.050	
419.00	0.120	
420.00	7.646	
421.00	9.507	
422.00	13.900	
423.00	0.744	
424.00	0.047	
425.00	0.152	
426.00	0.348	
427.00	0.032	
428.00	0.406	
429.00	0.115	
430.00	0.114	

Magnetic Susceptibility Log

Depth (m)	Magnetic Susceptibility	DESCRIPTION
431.00	0.497	
432.00	0.340	
433.00	0.159	
434.00	0.180	
435.00	0.065	
436.00	0.449	
437.00	0.173	
438.00	0.159	
439.00	0.050	
440.00	0.222	
441.00	0.130	
442.00	0.194	
443.00	0.112	
444.00	0.104	
445.00	0.229	
446.00	0.045	
447.00	0.058	
448.00	0.046	
449.00	0.414	
450.00	0.142	
451.00	0.037	
452.00	0.607	
453.00	0.066	
454.00	0.126	
455.00	0.086	
456.00	0.056	
457.00	0.110	
458.00	0.020	
459.00	0.143	
460.00	0.262	
461.00	0.113	
462.00	0.025	

Box Log

Hole:DDH-M12-02

Date: July 2012

Box #	From (m)	To (m)
1	8.81	13.50
2	13.50	19.00
3	19.00	24.00
4	24.00	29.00
5	29.00	35.66
6	35.66	41.02
7	41.02	46.81
8	46.81	51.80
9	51.80	57.00
10	57.00	62.17
11	62.17	67.40
12	67.40	72.72
13	72.72	77.81
14	77.81	83.25
15	83.25	88.15
16	88.15	93.45
17	93.45	98.68
18	98.68	103.76
19	103.76	109.00
20	109.00	114.06
21	114.06	119.33
22	119.33	124.72
23	124.72	130.48
24	130.48	136.14
25	136.14	141.76
26	141.76	146.40
27	146.40	152.04
28	152.04	157.58
29	157.58	163.05
30	163.05	168.31
31	168.31	173.43
32	173.43	178.90
33	178.90	184.12
34	184.12	189.40
35	189.40	194.50
36	194.50	200.25
37	200.25	205.88
38	205.88	211.23
39	211.23	216.29
40	216.29	221.58
41	221.58	226.93
42	226.93	232.21
43	232.21	237.55
44	237.55	243.27
45	243.27	248.78
46	248.78	254.89

Box Log

47	254.89	259.01
48	259.01	264.78
49	264.78	270.08
50	270.08	275.56
51	275.56	281.04
52	281.04	286.91
53	286.91	292.44
54	292.44	297.78
55	297.78	303.48
56	303.48	309.10
57	309.10	314.75
58	314.75	320.34
59	320.34	325.91
60	325.91	331.32
**61-1	331.32	336.89
**61-2	336.89	342.42
62	342.42	348.16
63	348.16	353.70
64	353.70	359.53
65	359.53	364.85
66	364.85	370.94
67	370.94	376.64
68	376.64	382.19
69	382.19	387.83
70	387.83	393.27
71	393.27	398.85
72	398.85	404.75
73	404.75	410.11
74	410.11	415.05
75	415.05	421.22
76	421.22	426.75
77	426.75	431.90
78	431.90	437.70
79	437.70	443.01
80	443.01	448.45
81	448.45	453.92
82	453.92	459.44
83	459.44	462.38-EOH

**Drillers labeled box both box 61 and 62 "bx 61" -

Drill#: 1 **Batch: 1** **Colour: Red** **Date: July 15th**

Sample#	QA-QC Sample Type	Hole Number	Sample Wt. (kg)
M677001		DDH-M12-02	3.3
M677002		DDH-M12-02	3.2
M677003		DDH-M12-02	6.6
M677004		DDH-M12-02	5.2
M677005		DDH-M12-02	5.1
M677006	DUP	DDH-M12-02	2.3
M677007		DDH-M12-02	5.7
M677008		DDH-M12-02	5.1
M677009		DDH-M12-02	4.1
M677010	Blank	DDH-M12-02	7
M677011		DDH-M12-02	4.5
M677012		DDH-M12-02	2.8
M677013		DDH-M12-02	4.6
M677014	STD ML-2	DDH-M12-02	0.3
M677015		DDH-M12-02	2.3
M677016		DDH-M12-02	5.5
M677017		DDH-M12-02	4.4
M677018		DDH-M12-02	3
M677019		DDH-M12-02	5.3
M677020		DDH-M12-02	4.3
M677021	ML-4	DDH-M12-02	0.3
M677022		DDH-M12-02	5.1
M677023		DDH-M12-02	3.6
M677024		DDH-M12-02	3.1
M677025		DDH-M12-02	4.5
M677026		DDH-M12-02	2.8
M677027	Blank	DDH-M12-02	5.1
M677028		DDH-M12-02	2.3
M677029		DDH-M12-02	5.3
M677030		DDH-M12-02	6.1
M677031		DDH-M12-02	4.6
M677032	Coarse reject duplicate	DDH-M12-02	
M677033		DDH-M12-02	5.7
M677034		DDH-M12-02	4.5
M677035		DDH-M12-02	5.5
M677036		DDH-M12-02	3.3

Drill 1 **Batch 2** **colour: blue** **July 16th 2012**

sample nur	QA-QC Sample type	hole number	sample wt. (kg)
M677037		DDH-M12-02	4.3
M677038		DDH-M12-02	3.8
M677039		DDH-M12-02	4.4
M677040		DDH-M12-02	3.2
M677041		DDH-M12-02	6
M677042		DDH-M12-02	4.2
M677043	blank	DDH-M12-02	3
M677044		DDH-M12-02	4.5
M677045		DDH-M12-02	4.4
M677046		DDH-M12-02	3
M677047		DDH-M12-02	4.2

M677048		DDH-M12-02	3.99
M677049	ML-4	DDH-M12-02	0.2
M677050		DDH-M12-02	4.2
M677051		DDH-M12-02	5
M677052		DDH-M12-02	7.3
M677053		DDH-M12-02	5
M677054		DDH-M12-02	6
M677055		DDH-M12-02	3.2
M677056	ML-2	DDH-M12-02	0.2
M677057		DDH-M12-02	4.5
M677058		DDH-M12-02	8
M677059		DDH-M12-02	8.3
M677060		DDH-M12-02	6.2
M677061		DDH-M12-02	4
M677062	Duplicate	DDH-M12-02	2.1
M677063		DDH-M12-02	8
M677064		DDH-M12-02	8
M677065		DDH-M12-02	7.8
M677066		DDH-M12-02	6.9
M677067	Blank	DDH-M12-02	5.5
M677068		DDH-M12-02	5.4
M677069		DDH-M12-02	5.8
M677070		DDH-M12-02	5.9
M677071	Coarse reject duplicate	DDH-M12-02	0
M677072		DDH-M12-02	5

Drill 1	Batch:3	Colour yellow	July 17th 2012
Sample num	QA-QC Sample Type	Hole Number	sample wt. (kg)
M677073		DDH-M12-02	3.6
M677074		DDH-M12-02	6.5
M677075		DDH-M12-02	7.9
M677076		DDH-M12-02	7.2
M677077		DDH-M12-02	7.3
M677078	ML-2	DDH-M12-02	0.2
M677079		DDH-M12-02	6.9
M677080		DDH-M12-02	7
M677081		DDH-M12-02	5.9
M677082		DDH-M12-02	8.2
M677083		DDH-M12-02	2.8
M677084	Blank	DDH-M12-02	9
M677085		DDH-M12-02	8.5
M677086		DDH-M12-02	4
M677087		DDH-M12-02	6.5
M677088		DDH-M12-02	5.5
M677089	Coarse reject duplicate	DDH-M12-02	0
M677090		DDH-M12-02	5.4
M677091		DDH-M12-02	6.2
M677092		DDH-M12-02	2.5
M677093		DDH-M12-02	5.9
M677094	Duplicate	DDH-M12-02	3.1
M677095		DDH-M12-02	6.7
M677096		DDH-M12-02	3.3
M677097		DDH-M12-02	5.3
M677098	ML-2	DDH-M12-02	0.2

M677099		DDH-M12-02	7.8
M677100		DDH-M12-02	4
M677101		DDH-M12-02	2.9
M677102		DDH-M12-02	5.3
M677103		DDH-M12-02	5.8
M677104		DDH-M12-02	3
M677105		DDH-M12-02	3.8
M677106	Blank	DDH-M12-02	5.6
M677107		DDH-M12-02	7
M677108		DDH-M12-02	8.5

MINT PROPERTY

ZONE: _____

SECTION: _____

Grid East	Grid North	Easting	Northing	Elev.	Depth (m)
		505509	6852537	1682	343.51

HOLE: DDH-M12-03

CLAIM: YD99706

Contractor: Platinum Drilling

Drill: 1

Core size: NQ2 Reduced at: _____ (m)

Casing depth: 30.48 (m) in / **out**

Drilling dates: July 6 - July 10, 2012

Geology logged by: NICK BUECKERT

TARGET: _____

SURVEY							
Depth (m)	Azimuth	Dip	Method	Depth (m)	Azimuth	Dip	Method
0	330	-60	ranger	213.5	345.4	-61.1	
30.5	340	-60.2	ranger	244	345.6	-61.4	
91.5	344.2	-60.4	ranger	305	345.7	-61.5	
183	344.9	-60.9	ranger	335.5	346.7	-61.5	

[illegible]

SAMPLES	
Numbers: M677240 - M677441	
Total: 202	
Batch: 8-13	
Date Sent: _____	
Certificate: _____	

COMMENTS	
EOH @ 343.51m	

Geology Log

Hole: CDDH-M12-03

Logger: Nick Bueckert

Date: August 2012

GENERAL INTERVAL			DETAILED INTERVAL			LITHOLOGY					ALTERATION							MINERALS			Photo	DETAILED DESCRIPTION	
From (m)	To (m)	Interval (m)	From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Shade	Colour	Texture	Propylitic	Argillic	Phyllic	Potassic	Silic	Limonitic	Other		Pyrite	Other			
																	Type	Intensity		Type			Conc. (%)
0.00	11.78	11.78	0.00																				Casing is advanced from 9.14m to 30.48; coring starts at 11.78m
11.78	30.71					V1		Lt	gy	bx							4	ser	3	2	di		VOLCANIC 1 (andesite)- clast-supported breccia - see DDH-M12-02 log for description. Pervasive oxidation throughout. Local gouge throughout. Dominantly clast-supported breccia (crackle breccia) with pyrite mineralized matrix. Local blebby pyrite occurs in matrix. Large blebs (<8mm) of galena? In ?gypsum/anhydrite? Vein. Minor zones of Matrix-supported Breccia
																		pro	2	1	di		
																					gn		
																					li	40	
			11.78	12.19		V1			wh	gg								ser	3	2	di		VOLCANIC 1 (andesite)- clast-supported breccia - bleached white, very gougey, disseminated galena(?) 'streaks' present + pyrite
																		pro	3				
			12.19	12.38		VN		lt	gy	bx								ser	3		gn	3	VOLCANIC 1 (andesite)- clast-supported breccia - bleached white, very gougey, disseminated galena(?) 'streaks' present + pyrite. Mineralized vein see secondary log; gougey
																		pro	2		gn	40	x
																				4	bl		
			12.38	15.54		V1		lt	gy	bx								ser	3	3	di		VOLCANIC 1 (andesite)- clast-supported breccia - Pervasive oxidation along fractures and in breccia matrix. Crackle breccia with pyrite mineralization. Core relatively competent. Gouge zone (17 cm) with pervasive oxidation and increase in pyrite(<10%). Local blebby pyrite mineralization.
										gg								pro	4		gn	2	
																					li	40	
			15.54	15.81		GG		md	bn	gg								ser	3	3	di		GOUGE - core bleached + brown with coarse-grained pyrite and blebby pyrite throughout
																		pro	5	10	bl		
			15.81	16.57		V1				bx								ser	3				VOLCANIC 1 (andesite)- clast-supported breccia - Pervasive oxidation along fractures and in breccia matrix. Crackle breccia with pyrite mineralization. Core relatively competent. Gouge zone (17 cm) with pervasive oxidation and increase in pyrite(<10%). Local blebby pyrite mineralization.
			16.57	16.68		V1		lt	gn	bx								ser	3		mc		VOLCANIC 1 (andesite)- clast-supported breccia - Pervasive oxidation along fractures and in breccia matrix. Crackle breccia with pyrite mineralization. Core relatively competent. Narrow zone hosting malachite? Core greenish hue
										wh													
			16.68	18.04		V1				bx								ser	3				VOLCANIC 1 (andesite)- clast-supported breccia - Pervasive oxidation along fractures and in breccia matrix. Crackle breccia with pyrite mineralization. Core relatively competent.
			18.04	20.28		V1		md	gy	an							2	pro	1	1	di		VOLCANIC 1 (andesite) - unaltered to weakly propylitic altered aphanitic Volcanic 1. Stockwork limonite stained fractures
			20.28	24.80		V1		md	gy	an							2	pro	1	3	di		VOLCANIC 1 (andesite) - clast-supported breccia - type case texture but with pervasive oxidation. Pyrite mineralized matrix, less sericite altered than type case. Some fractures gougey; decreasing oxidization down hole
										or								ser	1	5	bl		
			24.80	27.15		V1		md	gy	bx							2	pro	1	3	di		VOLCANIC 1 (andesite) - breccia (distinct from previously described clast-supported breccia and matrix-supported Breccia). 50% matrix. Clasts 0.8cm - 3cm angular sericite altered Volcanic 1 - no pyrite mineralization. Matrix is green + white coarse- to very coarse-grained with coarse-grained pyrite throughout. Yellow stains around plagioclase phenocrysts.
			27.15	30.71		GG		lt	gy	bn	qq						4						see secondary structure log

Geology Log

GENERAL INTERVAL			DETAILED INTERVAL			LITHOLOGY					ALTERATION							MINERALS			Photo	DETAILED DESCRIPTION			
From (m)	To (m)	Interval (m)	From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Shade	Colour	Texture	Propylitic	Argillic	Phyllic	Potassic	Silic	Limonitic	Other		Pyrite	Other					
																	Type	Intensity		Type			Conc. (%)		
30.71	60.41					V1		lt	gy	po								ser	3	10				VOLCANIC 1 (andesite) - unaltered + sericite + propylitic altered. Large gougey zones (<1m); mineralogy and texture change from grey with 'washout' white plagioclase grains to light grey with white plagioclase grains and coarse-grained green chlorite; pyrite mineralization decrease in this interval but locally <10%; core very rubbley to approximately competent; one 33 cm zone with disseminated galena?	
								md	gy	gg								pro	1		gn				
			30.71	35.30		V1		md	gy	po															VOLCANIC 1 (andesite) - unaltered - Medium-grained pink weathered K-spar +plag in crystalline grey matrix. Core very crumbley and rubbley
			35.30	35.66		V1			wh	po							3	ser	4		gn	3			VOLCANIC 1 (andesite) -clayey - Soft, white + light grey sericite altered volcanic . Coarse-grained disseminated galena? And medium-grained pyrite throughout. Local blebby pyrite <6%
																				6	bl				
			35.66	40.29		V1			wh	gg							4	ser	5		2	di			VOLCANIC 1 (andesite) - sericite altered - Strong to intense sericite alteration with pervasive oxidation; core gougey throughout; fine-grained disseminated pyrite throughout; local pyriteblebs <6% and trace galena?
									or											6	bl				
																					gn	1			
			40.29	41.43		V1												ser	3						VOLCANIC 1 (andesite) - unaltered + sericite + propylitic altered. Large gougey zones (<1m); mineralogy and texture change from grey with 'washout' white plagioclase grains to light grey with white plagioclase grains and coarse-grained green chlorite; pyrite mineralization decrease in this interval;
			41.43	41.75		V1		lt	gy	gg								ser	4		3	di			VOLCANIC 1 (andesite) - sericite altered - type case; very gougey
			41.75	42.16		V1				po								ser	3						VOLCANIC 1 (andesite) - unaltered + sericite + propylitic altered. Large gougey zones (<1m); mineralogy and texture change from grey with 'washout' white plagioclase grains to light grey with white plagioclase grains and coarse-grained green chlorite; pyrite mineralization decrease in this interval;
			42.16	42.19		V1		lt	gy	gg								ser	4		10	bl			VOLCANIC 1 (andesite) - sericite altered - type case; semi-massive pyrite along fractured core surface
			42.19	46.27		V1				po								ser	3						VOLCANIC 1 (andesite) - unaltered + sericite + propylitic altered. Large gougey zones (<1m); mineralogy and texture change from grey with 'washout' white plagioclase grains to light grey with white plagioclase grains and coarse-grained green chlorite; pyrite mineralization decrease in this interval;
			46.27	50.10		V1		lt	gy	po							2	pro	1			di			VOLCANIC 1 (andesite) - (PROPYLITIC ALTERED) - Weak alteration; Py-li stringers and veinlets present; weak pervasive oxidation (see secondary structures log)
																				4	st				
			50.10	57.23		V1		md	gy	po							2								VOLCANIC 1 (andesite) - (UNALTERED) - Plagioclase-phyric in grey crystalline matrix; stockwork li stringers
			57.23	58.91		V1			bn	ox							4	ser							VOLCANIC 1 (andesite) - (OXIDIZED SERICITE ALTERED?) Core too oxidized to identify; likely sericite altered (soft and fine-grained pyrite present)
			58.91	60.41		V1		lt	gn	bx								ser	2		4	bl			VOLCANIC 1 (andesite) - brecciated - Dominantly clast-supported (10% matrix); clasts are subrounded propylitic and sericite altered volcanic. Matrix - limonite and blebby pyrite are present. Pyrite stringers overprint breccia. Bottom of interval - approximately 50 cm of 'flow breccia' - irregular flow bands present. Vuggy ankerite? present (1%).
								md	gn	bn								pro	3						
60.41	102.54					V1		lt	gn	po								pro	1		1	di			VOLCANIC 1 (andesite) - - Plagioclase absent; more felsic matrix - weak propylitic altered (chlorite > mafics); disseminated pyrite common
			60.41	78.33		V1		lt	gn	po								pro	1		1	di			VOLCANIC 1 (andesite) - - Plagioclase absent; more felsic matrix - weak propylitic altered (chlorite > mafics); disseminated pyrite common

n = none, t= <1%, w = 1-3%, f = 3-5%, m = 5-7%, ms = 7-10%, s = 10-15%, l = 15-20%, (write % for >20%)

Geology Log

GENERAL INTERVAL			DETAILED INTERVAL			LITHOLOGY					ALTERATION							MINERALS			Photo	DETAILED DESCRIPTION	
From (m)	To (m)	Interval (m)	From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Shade	Colour	Texture	Propylitic	Argillic	Phyllic	Potassic	Silic	Limonitic	Other		Pyrite	Other			
																	Type	Intensity		Type			Conc. (%)
			78.33	78.65		V1		dk	pu	an								pot	5				VOLCANIC 1 (andesite) (formerly "MAFIC DIKE?") (OR POTASSIC ALTERATION?) - magnetic, blackish purple; aphanitic texture. Host rock (if any) unidentifiable. If mafic dike not the same as Diabase Dike.
			78.65	87.47		V1		lt	gn	po								pro	1	1	di		VOLCANIC 1 (andesite) - - Plagioclase absent; more felsic matrix - weak propylitic altered (chlorite > mafics); disseminated pyrite common
			87.47	87.77		DD		md	bn								3	pro	1	1	di		Oxidized, rubblely core. Limonite stringers; pyrite and limonite veinlet at bottom
																				4	bl		
			87.77	102.54		V1		lt	gn	po								pro	1	1	di		VOLCANIC 1 (andesite) - - Plagioclase absent; more felsic matrix - weak propylitic altered (chlorite > mafics); disseminated pyrite common
102.54	176.93					FEL			wh	an										3	di		FELSITE - White-greyish white, aphanitic felsic dike with fine-grained to medium grained disseminated pyrite throughout. All silicate minerals are bleached white. Medium-grained turquoise-stained pits common. Pyrite mineralized+/-sphalerite+/-galena? Breccias several metres long common (general increase in sulphide mineralization in these zones).
										bx										40	py		pyrite <40%
																					sph	10	sphalerite <10%
																					gn	10	galena <10%
			102.54	118.81		FEL			wh	an								ser	5	2	di		FELSITE - type case - not brecciated one gougey fracture with 15% py. Colour changes to light grey in 'baked' zones (~10 cm average)
								lt	gy												gn	3	
			118.81	121.28		FEL			wh	bx								ser	5	3	di		FELSITE - brecciated case; most breccia is 5-15% matrix with zone of 30% matrix (30 cm average). Clasts are dominantly subangular and subrounded; zones (30 cm) of rounded clasts (= increase in fluid flow). Overall pyrite mineralization increase. Centimetre-scale zones of blebby to semi-massive pyrite in matrix. Clasts range from 1-7cm on average. Rare gougey zones host coarse-grained pyrite (<10%); zones of Cc? present throughout (~30cm).
								lt	gy											40	bl		blebby pyrite <40%
																					sph	20	sphalerite <20%
																					cc	5	chalcocite(?) <5%
			121.28	121.71		FEL		lt	gy	bx								ser	5	5	di		FELSITE - large vug (5cm) with colloform orange mineral infill. sphalerite > galena(?) > pyrite form semi-massive masses (infill?) proximal to vug. Pyrite commonly forms <8mm euhedral dodecahedrons. Breccia below vug has sphalerite + pyrite mineralization
									or	vu											sph	20	x
																					gn	5	
			121.71	128.35		FEL			wh	bx								ser	5	3	di		FELSITE - brecciated case; most breccia is 5-15% matrix with zone of 30% matrix (30 cm average). Clasts are dominantly subangular and subrounded; zones (30 cm) of rounded clasts (= increase in fluid flow). Overall pyrite mineralization increase. Centimetre-scale zones of blebby to semi-massive pyrite in matrix. Clasts range from 1-7cm on average. Rare gougey zones host coarse-grained pyrite (<10%); zones of Cc? present throughout (~30cm).
								lt	gy											40	bl		blebby pyrite <40%)
			128.35	128.53		FEL		md	gy	vu								ser	5	9	bl		FELSITE - small vugs (1 cm elongate) with increase in pyrite mineralization in matrix
										bx								ser					
			128.53	130.75		FEL			wh	bx								ser	5	3	di		FELSITE - brecciated case; most breccia is 5-15% matrix with zone of 30% matrix (30 cm average). Clasts are dominantly subangular and subrounded; zones (30 cm) of rounded clasts (= increase in fluid flow). Overall pyrite mineralization increase. Centimetre-scale zones of blebby to semi-massive pyrite in matrix. Clasts range from 1-7cm on average. Rare gougey zones host coarse-grained pyrite (<10%); zones of Cc? present throughout (~30cm).
								lt	gy											40	bl		blebby pyrite <40%

n = none, t= <1%, w = 1-3%, f = 3-5%, m = 5-7%, ms = 7-10%, s = 10-15%, l = 15-20%, (write % for >20%)

Geology Log

GENERAL INTERVAL			DETAILED INTERVAL			LITHOLOGY					ALTERATION							MINERALS			Photo	DETAILED DESCRIPTION	
From (m)	To (m)	Interval (m)	From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Shade	Colour	Texture	Propylitic	Argillic	Phyllic	Potassic	Silic	Limonitic	Other		Pyrite	Other			
																	Type	Intensity		Type			Conc. (%)
			130.75	135.91		FEL		lt	gy	an								ser	5	3	di		FELSITE - Classic case with sheeted pyrite veinlets; stringers have 1 cm wide white envelopes
			135.91	139.44		FEL		lt	gy	bx								ser	5	1	di		FELSITE - subtle breccia; clast-supported. Clasts are 8-10 cm on average. Infrequent pyrite stringers
			139.44	141.22		FEL			wh	an								ser	5	2	di		FELSITE - type case with 50 cm breccia zone at top of interval; clasts are 8-15 cm and decrease to 5 cm downhole. Zones of gougey clay (8cm and 13 cm long) are intensely sericite altered and are associated with an increase in pyrite mineralization.
			141.22	141.55		IPD		dk	gy	po													INTERMEDIATE PORPHYRY DIKE - Dark grey colour, with white crowded plagioclase (medium- to coarse-grained); non-magnetic; Five stockwork stringers present
			141.55	142.10		FEL			wh	bx								ser	5	4	di		FELSITE - classic breccia case - with 5mm pyrite stringer 45 degrees to core axis
																				7	bl		
																					cc		4
			142.10	142.75		IPD		dk	gy	po													INTERMEDIATE PORPHYRY DIKE - see 141.22 - 141.55 m interval; white stringers (stockwork) 25/m
			142.75	150.57		FEL		md	gy	an								ser	5	2	di		FELSITE - type case; minor blebby pyrite and pyrite mineralized fractures. Dark disseminated sulphide chalcocite? too fine-grained to identify
									wh													cc	1
			150.57	151.97		FEL		md	gy	bx								ser	5				blebby pyrite <6% FELSITE? - Cobble breccia with 10 cm clasts in dark grey crystalline matrix. Some clasts are oxidized; coarse-grained pyrite on fracture surfaces
			151.97	154.24		FEL			wh	an								ser	5	2	di		FELSITE - type case with several breccia zones 5-15 cm long. Breccia hosts pyrite mineralization in hard, orange mineral with fizz (ankerite?). Trace chalcopyrite with pyrite blebs
										bx										5	bl		
																					cp		2
			154.24	154.66		IPD			bk	po													INTERMEDIATE PORPHYRY DIKE? - magnetic; plagioclase-phyric in crystalline black matrix
			154.66	160.91		FEL		lt	gy	an								ser	5	3	di		FELSITE - 60% type case 40% pyrite mineralized breccia; vugs are common associated with very coarse-grained pyrite. Breccia zones are in 15-40 cm intervals - elevated sulphide mineralization in these zones.
									wh	bx										6	bl		blebby pyrite <6%
										vu												2	
			160.91	162.02		FEL			wh	an								ser	5	2	di		FELSITE - type case - pyrite mineralized fractures
			162.02	162.23		FEL		dk	gy	bx								ser	5	20	bl		FELSITE - Breccia with dark grey crystalline matrix and pyrite and chalcocite]? Vein. (Core has heft)
			162.23	168.08		FEL		lt	gy	bx					4			ser	5	2	di		
									md	gy										4	di		disseminated <4%
																					cc		
																					sph	2	
			168.08	168.54		FEL		lt	gn	an								pro	1				1
			168.54	171.14		FEL			wh	an					4			ser	5				FELSITE WITH SILICIC ZONE- Type case felsite with transition into 1m silicified zone
									md	gy													
			171.14	172.00		FEL		md	gy	bx								ser	5	40	bl		FELSITE - Cobble breccia zone (25cm) transition into crackle breccia with a zone (10cm) of semi-massive pyrite mineralization within milky-white quartz-carbonate-bearing matrix. Breccia texture
			172.00	173.70		FEL			wh	an								ser	5				FELSITE - Type case; Pyrite mineralized fractures present

n = none, t= <1%, w = 1-3%, f = 3-5%, m = 5-7%, ms = 7-10%, s = 10-15%, l = 15-20%, (write % for >20%)

Geology Log

GENERAL INTERVAL			DETAILED INTERVAL			LITHOLOGY					ALTERATION							MINERALS			Photo	DETAILED DESCRIPTION																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
From (m)	To (m)	Interval (m)	From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Shade	Colour	Texture	Propylitic	Argillic	Phyllic	Potassic	Silic	Limonitic	Other		Pyrite	Other																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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n = none, t= <1%, w = 1-3%, f = 3-5%, m = 5-7%, ms = 7-10%, s = 10-15%, l = 15-20%, (write % for >20%)

Geology Log

GENERAL INTERVAL			DETAILED INTERVAL			LITHOLOGY					ALTERATION							MINERALS			Photo	DETAILED DESCRIPTION		
From (m)	To (m)	Interval (m)	From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Shade	Colour	Texture	Propylitic	Argillic	Phyllic	Potassic	Silic	Limonitic	Other		Pyrite	Other				
																	Type	Intensity		Type			Conc. (%)	
								wh											4 bl				blebby pyrite <4%	
								lt	gn	po								pro	1					
			194.90	195.28		FEL		lt	gy	bx								ser	5	2 bl				FELSITE - Vuggy breccia hosting sphalerite > pyrite > chalcopyrite mineralization in milky quartz-carbonate infill. Druzy quartz on core end. General increase in sulphide mineralization
										vu										sph	4			
																				cp	2			
			195.28	201.70		FEL		lt	gy	an								ser	5	3 di				FELSITE - Pyrite mineralized fractures; quartz-carbonate stringers +/- pyrite mineralization present. Netted texture with minor breccia zones. General increase in quartz-carbonate infill
										bx										fx				
										vu														
			201.70	202.30		FEL		md	gn	po								pro	3					FELSITE - Propylitic altered with plagioclase-phyric with crystalline green-black matrix. No magnetism.
			202.30	218.08		FEL		lt	gy	an								ser	5	3 di				FELSITE - Dominantly crackle breccia (1-10% matrix). Matrix hosts 3-6%, locally 15-30% disseminated and blebby pyrite mineralization. Quartz-carbonate infill is common and associated with most pyrite mineralization. Three narrow zones (20-25cm) of green propylitic altered Volcanic 1 (plagioclase-phyric) occur in interval. Clast sizes range from 5-12cm and are hard to distinguish from matrix. Metre-scale zones of nonbrecciated Felsite occur throughout interval. Pyrite mineralized fractures are common throughout. An orange/yellow mineral is locally present. Chlorite is locally present.
										bx								pro	2	30 bl				blebby pyrite <30%
										vu														
			218.08	220.08		FEL		dk	pu	po								pot	4	1 di				FELSITE - Potassic altered Felsite (alteration looks similar to Diabase Dike? From 190.87-191.67m). Alteration is magnetic; Felsite very coarse-grained; potassic alteration (wisps and streaks of Felsite in potassic alteration. Felsite (50cm) occurs in the middle of interval.
										pa														
			220.08	236.17		FEL		lt	gy	an								ser	5					FELSITE - Very similar to 202.30m - 218.08m interval except for a decrease in length and frequency of localized pyrite mineralization. Increase in pyrite stringers. Some pyrite veinlets have plagioclase-phyric envelopes (<8mm) with grey crystalline groundmass.
										bx														
										vu														
			236.17	236.95		FEL		dk	gy									pot	3					FELSITE - Potassic alteration (?)
			236.95	240.93		FEL			wh	an								ser	5	2 di				FELSITE - Type case; one zone (15cm) of intense sericite alteration
240.93	257.21					FEL		lt	gn	po								pro	2					FELSITE? - Chlorite-phyric felsite. Pyrite and mafics are absent; coarse-grained to very coarse-grained crowded chlorite (soft) is present in white crystalline matrix. No sulphide mineralization.
									wh															
257.21	317.80					FEL			wh	bx								ser	5	3 di				FELSITE - Matrix-supported Felsite breccia. Long interval of light grey to white matrix-supported breccia (40-70% matrix). Clasts (2-8cm, <12cm) are subrounded felsite. Matrix is light grey; weak, moderate, and strong disseminated pyrite mineralization in matrix (weak pyrite mineralization in clasts). Some sulphides look darker than pyrite (galena? or chalcocite?) Texture and pyrite mineralization consistent throughout interval. Metre-scale zones of elevated pyrite+/- Cu oxide abundance occur throughout interval and are distinguished by the presence of coarse-grained pyrite +/- Cu oxide, vugs and semi-massive and euhedral pyrite. Core is fairly competent. Stringers and veins are absent. Local pyrite mineralized fractures occur throughout interval. Medium-grained quartz is locally present in matrix.
								lt	qv	vu										<25 di				

n = none, t= <1%, w = 1-3%, f = 3-5%, m = 5-7%, ms = 7-10%, s = 10-15%, l = 15-20%, (write % for >20%)

Geology Log

GENERAL INTERVAL			DETAILED INTERVAL			LITHOLOGY					ALTERATION							MINERALS			Photo	DETAILED DESCRIPTION		
From (m)	To (m)	Interval (m)	From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Shade	Colour	Texture	Propylitic	Argillic	Phyllic	Potassic	Silic	Limonitic	Other		Pyrite	Other				
																	Type	Intensity		Type			Conc. (%)	
			275.77	286.84		FEL		lt	wh gy	bx							ser	5	<40	eu			FELSITE BRECCIA (See 257.21m-317.80m interval description) - Increase in dissmeninated pyrite mineralization +/- Cu sulphide? Turquoise stained pits present (Cu oxide?). Zone of pyrite stringers (see secondary structure log). Disseminated chalcocite? Present with pyrite. Core is competent	
																			<10	bl cc?		3		
			286.84	295.16		FEL		lt	wh gy	bx vu							ser	5		17 40	di eu			FELSITE BRECCIA - (See 257.21m-317.80m interval description) - Greater increase in disseminated pyrite mineralization. Pyrite disseminations are coarse-grained and mineralization is strong in the breccia matrix. Vugs with euhedral pyrite (<6mm) are common and are associated with local increases in disseminated pyrite mineralization (10-25%). Disseminated ?chalcocite? is associated with pyrite. Yellow and white quartz-carbonate (ankerite?) infill is present in several vugs. Core is competent except for one zone of soft crumbly rubble (70cm)
			295.16	301.69		FEL		lt	gy wh	bx							ser	5		3 7	di			euhedral <40%
			301.69	303.30		FEL			wh	an							ser	5		2	di			FELSITE BRECCIA - (See 257.21m-317.80m interval description) - Decrease in disseminated pyrite mineralization. A coarse-grained yellow mineral is present in most clasts. General increase in clast size (8-12 cm on average). Clasts are zoned. Local increase in pyrite mineralization around clay altered/gougey core (5cm wide)
			303.30	315.25		FEL		lt	gy wh	bx							ser	5						FELSITE - type case with pyrite stringers. Core is competent
			315.25	317.80		FEL			wh	an							ser	5		4				FELSITE BRECCIA - (See 257.21m-317.80m interval description) - Disseminated pyrite abundance is variable (abundace increases and decreases every 60cm - 1m). Flow banding and cobble breccia are present. Yellow mineral locally present in clasts.
317.80	343.15					V1		lt	gn md	po bx							pro	2		1	di			FELSITE - type case except matrix for increase in yellow mineral in matrix. Disseminated medium-grained pyrite; pyrite abundance decreases and becomes fine-grained close to contact.
								dk	pu	pa							pot	4						VOLCANIC 1 (andesite) - weak to intense propylitic and potassic alteration of Volcanic 1. Patchy metre-scale alteration throughout the interval. Intense propylitic altered breccia is present. Minor zones of sericite alteration.
			317.80	323.42		V1		lt	gn	po							pro	2		5	di			VOLCANIC 1 (andesite) - Weak propylitic alteration; mafics, plagioclase, and chlorite present
			323.42	327.99		V1		dk	pu	po							pot	4		5	di			VOLCANIC 1 (andesite) - Strong potassic alteration; mineralogy unidentifiable; chlorite is present on fracture surfaces. Core is magnetic
			327.99	331.13		V1		md	gn	po							pro	5		2	di			VOLCANIC 1 (andesite) - Chlorite and epidote are abundant in strong propylitic altered Volcanic 1. Pyrite stringers are common. Trace galena? veinlet occurs gougey area sericite or mineralization.
			331.50	341.45		V1		dk	gn dk	bx pu							pot pro	5 5		3 2	st di			
																								VOLCANIC 1 (andesite) - Intermittent propylitic and potassic alteration. (60% propylitic alteration, 40% potassic alteration). Potassic altered core is magnetic.
			341.45	343.51		V1		md	gn	bx							pro	5		2	di			VOLCANIC 1 (andesite) BRECCIA - Propylitic altered polymictic breccia. Rounded and irregular shaped clasts of aphanitic and plagioclase-phyrlic Volcanic 1, sericite altered Volcanic 1 and minor propylitic altered Volcanic 1. No sulphide mineralization. Core is competent

n = none, t= <1%, w = 1-3%, f = 3-5%, m = 5-7%, ms = 7-10%, s = 10-15%, l = 15-20%, (write % for >20%)

Geology Log

GENERAL INTERVAL			DETAILED INTERVAL			LITHOLOGY					ALTERATION						MINERALS			DETAILED DESCRIPTION		
From (m)	To (m)	Interval (m)	From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Shade	Colour	Texture	Propylitic	Argillic	Phyllic	Potassic	Silic	Limonitic	Other		Pyrite		Other	
																	Type	Intensity			Type	Conc. (%)
				EOH				lt	gn													EOH @ 343.51m

n = none, t= <1%, w = 1-3%, f = 3-5%, m = 5-7%, ms = 7-10%, s = 10-15%, l = 15-20%, (write % for >20%)

Contact Log

Hole: DDH-M12-03

Logger Name: Nick Bueckert

Date: August 2012

Depth (m)	DESCRIPTION
60.41	VOLCANIC 1 (PORPHYRITIC) - VOLCANIC 1 (APHANITIC)
78.33 - 78.65	VOLCANIC 1 (APHANITIC) - DIABASE DIKE - VOLCANIC 1 (APHANITIC) - 30 degrees to core axis (both contacts) - sharp lithological boundary, texture and colour change
102.54	VOLCANIC 1- FELSITE - 30 degrees to core axis - Gradational colour change from dark grey to white; contact faintly visible
151.97	FELSITE (BRECCIA) - FELSITE (BRECCIA) - 30 degrees to core axis; from cobble breccia to clast-supported breccia; grey shade change from dark to light grey; sharp change in texture
154.24,154.66	FELSITE-?INTERMEDIATE PORPHYRY DIKE? - FELSITE - 80-90 degrees to core axis; sharp colour change from white to brownish grey and back to white; colour change 'washout' or gradual/faintly visible
176.93	FELSITE-VOLCANIC 1 (PROPYLITIC ALTERED) - 60 degrees to core axis ; sharp contact; py stringers on FELSITE hanging wall; colour change from dark grey to green
180.50	VOLCANIC 1 (PROPYLITIC ALTERED) - FELSITE (BRECCIA) - 90 degrees to core axis - see log for mineralogy changes; yellow mineral (replaced chlorite or vice versa?) present for 1 m on both sides of contact
188.80	FELSITE - FELSITE (BRECCIA) - 30 degrees to core axis; change in texture only; fractures parallel to contact on hanging wall
189.46	FELSITE (BRECCIA) - FELSITE 90 degrees to core axis; jagged 'saw-tooth' shape contact
190.56	FELSITE - FELSITE (BRECCIA) - 40 degrees to core axis; 40 degrees to core axis; sharp contact; texture change distinct;
190.87	FELSITE (BRECCIA) - DIABASE DIKE - 40 degrees to core axis; sharp contact; texture change distinct - diabase dike = reason for brecciation?
191.67	DIABASE DIKE - FELSITE (BRECCIA) - 90 degrees to core axis; 'washout' colour change is gradual from very dark grey/black to light grey; 20 cm zone of breccia then felsite with 40 degree to core axis pyrite mineralized sheeted fractures
218.08	FELSITE - FELSITE (POTASSIC ALTERED) - finger-like whisps of felsite into potassic alteration; stringers in potassic alteration are 40-65 degrees to core axis and ?related to contact orientation?
220.08	FELSITE (POTASSIC ALTERED) - FELSITE - 20 degrees to core axis; sharp, irregular contact; colour change from dark
240.93	FELSITE - FELSITE (PROPYLITIC ALTERED) - 90 degrees to core axis; faint colour change from white to green white; chlorite present in both units (in felsite for 30 cm away from contact)
257.21	FELSITE (PROPYLITIC) - FELSITE (BRECCIA) - 15 degrees to core axis - sharp contact; propylitic alteration is bleached white for 20 cm; 4 cm 'quenched' margin between lithologies; footwall is grey breccia
301.69	FELSITE (BRECCIA) - FELSITE (APHANITIC) - 55 degrees to core axis - sharp undulatory contact; colour change from light grey to white
303.30	FELSITE (APHANITIC) - FELSITE (BRECCIA) - 40 degrees to core axis - sharp, planar contact; no colour change (whites throughout); texture change from aphanitic to brecciated; very strong pyrite mineralization (coarse-grained disseminated) in footwall at contact
315.25	FELSITE (BRECCIA) - FELSITE (APHANITIC) - 20 degrees to core axis - gougey along planar surface; no colour change; texture change from brecciated to aphanitic

Contact Log

[illegible]

Secondary Structure Log

Hole: DDH-M12-03

Logger Name: Nick Bueckert

Date: August 2012

2° Structure Type	From (m)	To (m)	Attitude (TCA)	Attitude (TRFE)	Count	MINERALS		DESCRIPTION	Photo
						Type	Conc. (%)		
	11.78	14.32			10			Stockwork soft white veinlets (gypsum? Anhydrite?)	
VN	12.19	12.38	20		1	gn	40	?Gypsum/anhydrite?? Vein (white, soft, non-reactive, radial habit) hosting soft, cubic, blue sulphide - gn? - blebby to semi-massive and coarse-grained pyrite	x
						py	3		
GG	15.54	15.81	14			py	10	Gouge zone - core bleached and brown colour with coarse-grained disseminated pyrite throughout + blebby pyrite <10%	
FX	18.04	20.28	25		15	Li	1	Stockwork fractures 25-35 degree to core axis are dominant. Limonite stained	
			55		5				
GG	27.15	30.71						Oxidized gouge - fault? Core approximately competent; could be clay altered or strongly sericitized Volcanic 1	
VT	46.27	50.10	25		15	py		Limonite+/-pyrite stringers and veinlets; stockwork; local increase in pyrite and increase in veinlet density; grain size increase to coarse-grained	
			45		6	py			
ST	50.10	57.23	20		49	Li		Stockwork limonite stringers - no visible mineralization range from 20 to 45 degrees to core axis (7/m)	
ST	50.10	57.23	45					Stockwork limonite stringers - no visible mineralization range from 20 to 45 degrees to core axis	
	86.76	86.89	2		1	gn	30	Galena? With calcite veinlet	
	104.45	104.70	20		1	py	15	Gougey pyrite + galena? Veinlet 0.8cm	
						gn	3		
VT	130.75	135.91	50		10	py		Pyrite mineralized sheeted fractures - discontinuous pyrite mineralization; white stringers 0-10 degrees to core axis with white selvages	
ST/FX			25						
VT	135.91	139.44	50		2	PY		Pyrite veinlets and discontinuous pyrite mineralized fractures (8/m)	
					24	py			
ST	153.33	153.43	40		3	py		Sheeted pyrite stringers	
VN	162.02	162.23	30		1	py	20	Pyrite + galena? Semi-massive in 1cm milky carbonate	
						gn	5		
ST/FX	172.08	173.47	8		2	py		Pyrite mineralized fractures (stockwork)	
			40		12	py			
VT	187.09	187.25	5		2	py	1	Two sheeted, weakly pyrite mineralized veinlets with stockwork stringers; 2cm between veinlets is weak propylitic alteration	
ST/FX	188.58	188.80	30		10	py	2	Discontinuouse pyrite mineralized fractures parallel to felsite-felsite breccia contact	
ST/FX	189.46	190.56	45		9			Discontinuouse pyrite mineralized fractures parallel to felsite-felsite breccia contact	
			25		2				
VT	193.13	193.29	15		1	py	98	Massive pyrite-chalcopyrite veinlet; 4 cm offset by pyrite stringer at 70 degrees to core axis	
						cp	2		
ST/FX	195.28	201.70	2		10	py	2	Discontinuous pyrite mineralized fractures	

Secondary Structure Log

2° Structure Type	From (m)	To (m)	Attitude (TCA)	Attitude (TRFE)	Count	MINERALS		DESCRIPTION	Photo
						Type	Conc. (%)		
			65		30				
VN?	223.02	223.20	40		1	py	30	Pyrite (<30%) mineralized breccia with quartz-carbonate infill (breccia is two zones - 2 cm and 5 cm thick)	
VT	223.47	223.51	60		2	py	100	Two sheeted pyrite veinlets	
ST/VT	280.70	281.76	65		18	py	3	Zone of 60-70 degrees to core axis; pyrite stringers and veinlets cross-cut breccia	
ST	301.69	303.30	57		15	py	2	Approximately sheeted pyrite stringers with one or two at low angle to core axis	
					2	py	2		
ST/VT	330.10	331.13	55		6	py	1	Pyrite stringers and veinlets < 3mm and 1 chalcocite? Veinlet (3mm) in gougey core	
					1	cc	2		

Sample Log

Hole: DDH-M12-03

Date: August 2012

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery (%)	Sample Number	Batch	Au (g/t)	Ag (g/t)	As (ppm)	Comments
11.78	12.78	1.00	1.00	100	M677240	8				Casing (advanced) 0-30.48m, coring @ 11.78m
12.78	14.32	1.54	1.48	96.1	M677241	8				
14.32	15.56	1.24	1.24	100	M677242	8				
15.56	18.04	2.48	2.44	98.4	M677243	8				
18.04	20.28	2.24	2.04	91.1	M677244	8				
20.28	21.51	1.23	1.22	99.2	M677245	8				
					M677246	8				STANDARD ML-4
21.51	23.46	1.95	1.95	100	M677247	8				
23.46	24.80	1.34	1.26	94	M677248	8				
24.80	27.10	2.30	2.21	96.1	M677249	8				
					M677250	8				BLANK
27.10	29.77	2.67	1.20	44.9	M677251	8				rock fractured - very poor recovery
29.77	32.61	2.84	1.89	66.5	M677252	8				rock fractured - very poor recovery
32.61	35.30	2.69	1.70	63.2	M677253	8				rock fractured - very poor recovery
35.30	36.58	1.28	1.10	85.9	M677254	8				
					M677255	8				STANDARD ML-2
36.58	38.70	2.12	1.83	86.3	M677256	8				
38.70	40.29	1.59	1.39	87.4	M677257	8				
40.29	42.19	1.90	1.67	87.9	M677258	8				
42.19	44.10	1.91	1.78	93.2	M677259	8				
44.10	46.29	2.19	2.13	97.3	M677260	8				
46.29	48.50	2.21	2.21	100	M677261	8				
					M677262	8				DUPLICATE
48.50	50.89	2.39	2.39	100	M677263	8				
50.89	53.94	3.05	2.96	97	M677264	8				
53.94	56.99	3.05	3.05	100	M677265	8				
56.99	58.95	1.96	1.01	51.5	M677266	8				core oxidized, rubblely - poor recovery
58.95	61.07	2.12	2.12	100	M677267	8				
					M677268	8				COARSE REJECT DUPLICATE
61.07	63.09	2.02	2.02	100	M677269	8				
63.09	66.14	3.05	2.93	96.1	M677270	8				
66.14	69.18	3.04	2.96	97.4	M677271	8				
69.18	72.23	3.05	3.00	98.4	M677272	8				
					M677273	8				BLANK
72.23	75.28	3.05	3.05	100	M677274	8				
75.28	78.33	3.05	2.76	90.5	M677275	8				
78.33	81.38	3.05	2.68	87.9	M677276	8				
81.38	84.42	3.04	2.85	93.7	M677277	8				
84.42	87.47	3.05	3.00	98.4	M677278	9				
87.47	88.47	1.00	1.00	100	M677279	9				
88.47	90.52	2.05	1.93	94.1	M677280	9				
90.52	93.57	3.05	3.05	100	M677281	9				
93.57	96.62	3.05	3.05	100	M677282	9				

Sample Log

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery (%)	Sample Number	Batch	Au (g/t)	Ag (g/t)	As (ppm)	Comments
					M677283	9				COARSE REJECT DUPLICATE
96.62	99.66	3.04	2.80	92.1	M677284	9				
99.66	102.71	3.05	3.02	99	M677285	9				
102.71	104.17	1.46	1.46	100	M677286	9				
104.17	106.70	2.53	2.53	100	M677287	9				
					M677288	9				STANDARD ML-2
106.70	108.81	2.11	2.00	94.8	M677289	9				
108.81	111.86	3.05	2.93	96.1	M677290	9				
111.86	114.90	3.04	2.95	97	M677291	9				
114.90	116.81	1.91	1.83	95.8	M677292	9				
					M677293	9				DUPLICATE
116.81	119.81	3.00	3.00	100	M677294	9				
119.81	121.71	1.90	1.83	96.3	M677295	9				
121.71	124.31	2.60	2.39	91.9	M677296	9				
124.31	126.06	1.75	1.72	98.3	M677297	9				
126.06	128.22	2.16	2.16	100	M677298	9				
					M677299	9				BLANK
128.22	130.75	2.53	2.50	98.8	M677300	9				
130.75	133.82	3.07	3.00	97.7	M677301	9				
133.82	135.91	2.09	2.08	99.5	M677302	9				
135.91	136.92	1.01	1.00	99	M677303	9				20 cm dike
					M677304	9				STANDARD ML-2
136.92	139.44	2.52	2.52	100	M677305	9				
139.44	140.44	1.00	1.00	100	M677306	9				
140.44	142.10	1.66	1.65	99.4	M677307	9				Includes 30 cm dike
					M677308	9				BLANK
142.10	143.10	1.00	1.00	100	M677309	9				
143.10	145.38	2.28	2.28	100	M677310	9				
145.38	147.55	2.17	2.16	99.5	M677311	9				
147.55	150.04	2.49	2.28	91.6	M677312	10				
150.04	152.31	2.27	2.20	96.9	M677313	10				
152.31	154.53	2.22	2.22	100	M677314	10				
154.53	155.76	1.23	1.23	100	M677315	10				
155.76	158.30	2.54	2.52	99.2	M677316	10				
					M677317	10				STANDARD ML-4
158.30	159.40	1.10	1.10	100	M677318	10				
159.40	160.91	1.51	1.51	100	M677319	10				
160.91	162.03	1.12	1.12	100	M677320	10				
162.03	164.03	2.00	2.00	100	M677321	10				
					M677322	10				COARSE REJECT DUPLICATE
164.03	166.53	2.50	2.50	100	M677323	10				
166.53	168.38	1.85	1.83	98.9	M677324	10				
168.38	171.14	2.76	2.76	100	M677325	10				
171.14	172.14	1.00	1.00	100	M677326	10				
					M677327	10				BLANK
172.14	173.70	1.56	1.54	98.7	M677328	10				
173.70	174.75	1.05	1.00	95.2	M677329	10				
174.75	175.87	1.12	1.12	100	M677330	10				
175.87	176.93	1.06	1.05	99.1	M677331	10				

Sample Log

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery (%)	Sample Number	Batch	Au (g/t)	Ag (g/t)	As (ppm)	Comments
176.93	178.52	1.59	1.59	100	M677332	10				
					M677333	10				DUPLICATE
178.52	180.60	2.08	2.00	96.2	M677334	10				
180.60	182.16	1.56	1.53	98.1	M677335	10				
182.16	183.88	1.72	1.72	100	M677336	10				
183.88	184.88	1.00	1.00	100	M677337	10				
184.88	185.90	1.02	1.00	98	M677338	10				
					M677339	10				STANDARD ML-2
185.90	188.21	2.31	2.31	100	M677340	10				
188.21	189.46	1.25	1.25	100	M677341	10				
189.46	190.85	1.39	1.25	89.9	M677342	10				
					M677343	10				BLANK
190.85	191.85	1.00	1.00	100	M677344	10				
191.85	193.31	1.46	1.46	100	M677345	10				
193.31	194.37	1.06	1.06	100	M677346	10				
194.37	195.92	1.55	1.55	100	M677347	10				
195.92	197.20	1.28	1.28	100	M677348	11				
197.20	198.52	1.32	1.32	100	M677349	11				
198.52	200.25	1.73	1.73	100	M677350	11				
200.25	202.00	1.75	1.75	100	M677351	11				
					M677352	11				STD ML-4
202.00	203.49	1.49	1.49	100	M677353	11				
203.49	206.34	2.85	2.85	100	M677354	11				
206.34	207.34	1.00	1.00	100	M677355	11				
207.34	209.39	2.05	2.05	100	M677356	11				
					M677357	11				COARSE REJECT DUPLICATE
209.39	211.85	2.46	2.46	100	M677358	11				

Density Log

Hole: DDH-M12-03 **Date:** August 2012

From (m)	Length (cm)	Diameter (cm)	Weight in Air (g)	Weight in Water (g)	Rock Type	Texture	Alteration		Minerals		Density	Specific Gravity	DESCRIPTION
							Type	Intensity	Type	Conc. %			
			2001.5	1739.8	STD							7.64807	Standard - 2kg weight
16.35	10.05	5.03	523.5	324.0	CBX	BX	SER	3	PY	3	2.621349	2.62406	Weathered Clast-supported breccia with pyrite in Volcanic 1 clasts
25.34	9.27	5.04	464.9	280.6	V1	BX	PRO	1	PY	1	2.513789	2.522518	Weak propylitic altered Volcanic 1 breccia; trace disseminated pyrite throughout
63.00	10.05	4.97	502.2	306.8	V1	PO	PRO	2	PY	2	2.575775	2.570113	Volcanic 1? Felsite dike hosting trace disseminated pyrite
92.56	8.33	5.04	457.6	285.2	V1	PO	PRO	2			2.753532	2.654292	Weak-moderate propylitic altered Volcanic 1 - type case
103.70	9.40	5.03	483.3	299.9	FEL	AN	SER?	5	PY	2	2.587397	2.635224	Strongly sericite altered felsic dike; trace disseminated pyrite throughout - type case
118.10	9.70	5.03	503.0	388.9	FEL	BX	SER?	5	PY	3	2.609579	4.408414	Strongly sericite altered brecciated felsic dike; trace disseminated pyrite throughout
154.15	9.90	5.03	515.4	325.7	FEL	BX	SER?	5	PY	3	2.619892	2.716921	Brecciated Felsite
154.50	9.40	5.00	497.3	387.0	IPD	PO					2.694392	4.508613	Intermediate Porphyry Dike
177.73	10.10	5.00	493.7	296.6	V1?	PO	PRO	2	PY	5	2.489498	2.50482	Propylitic altered Volcanic 1; weak disseminated pyrite throughout
212.10	10.01	5.00	513.9	318.4	FEL	BX	SER?	5	PY	2	2.614657	2.628645	Strongly sericite altered brecciated Felsite; trace disseminated pyrite throughout
238.10	9.80	5.00	482.1	368.7	FEL	AN	PRO	2	PY	1	2.505424	4.251323	Felsite - type case
250.10	9.70	5.00	508.2	316.3	FEL	PO	SER?	5			2.66829	2.648254	Propylitic altered Felsite
257.50	9.40	5.05	485.5	299.0	FEL	BX	SER?	5	PY	4	2.578628	2.603217	Blebbpy pyrite mineralization in Felsite Breccia
			2002.0	1739.7	STD							7.632229	Standard - 2kg weight
286.44	9.82	5.03	480.1	364.8	FEL	BX	SER?	5	PY	5	2.460336	4.16392	Felsite breccia with disseminated pyrite
316.74	9.18	5.01	463.7	282.6	FEL	BX	SER?	5	PY	3	2.562295	2.560464	Felsite breccia with disseminated pyrite
320.60	10.34	5.01	523.5	325.3	V1	PO	PRO	2			2.568212	2.641271	Volcanic 1 - weak propylitic alteration
342.74	10.75	5.01	575.5	364.7	V1	BX	PRO	5	PY	1	2.715636	2.730076	Volcanic 1 - breccia with strong to intense propylitic alteration

Geotechnical Log

Hole: DDH-M12-03 Tech Name: Liz Bueckert

Date: July 10thth 2012

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery (%)	RQD (m)	RQD (%)	Strength	Joint Sets				DESCRIPTION
								Freq (/m)	Attitude (tca)	Shape	Roughness	
14.32	17.37	3.05	2.95	96.7	2.29	77.6	3s	0.21	50 1		2	1-2
17.37	20.41	3.04	2.50	82.2	1.66	66.4	3s	0.17	55 3		2	
20.41	23.46	3.05	2.91	95.4	2.56	88.0	3s	0.17	60 1		2	
23.46	26.51	3.05	2.79	91.5	1.95	69.9	3s	0.20	60 1		2	
26.51	29.56	3.05	1.50	49.2	1.26	84.0	1s	0.43	60 2		3	1s/3s
												a lot of irregular shaped rubble. Could not find an average attitude
29.56	32.61	3.05	1.64	53.8	0.44	26.8	3s	0.33	n/a			
32.61	35.66	3.05	2.44	80.0	0.77	31.6	3s	0.30	55 1		1	
35.66	38.70	3.04	2.33	76.6	1.49	63.9	1s	0.25	55 2		2	1s/3s
38.70	41.75	3.05	2.30	75.4	1.15	50.0	3s	0.23	60 2		2	
41.75	44.80	3.05	2.88	94.4	1.15	39.9	3s	0.20	50 1		2	1-2
44.80	47.84	3.04	2.80	92.1	1.50	53.6	3S	0.23	55 1		1	
47.84	50.89	3.05	2.95	96.7	1.71	58.0	3s	0.19	55 1		1	
50.89	53.94	3.05	2.71	88.9	1.91	70.5	3s	0.23	55 1		1	
53.94	56.99	3.05	2.85	93.4	1.74	61.1	3s	0.17	60 1		2	1-2
56.99	60.04	3.05	1.90	62.3	1.25	65.8	3s	0.40	70 2		2	rubble
60.04	63.09	3.05	3.01	98.7	2.65	88.0	3s	0.27	55 1		1	
63.09	66.14	3.05	2.83	92.8	2.43	85.9	3s	0.30	55 1		1	
66.14	69.18	3.04	2.85	93.7	1.83	64.2	3s	0.20	55 1		1	
69.18	72.23	3.05	2.91	95.4	1.80	61.9	3s	0.30	60 1		1	
72.23	75.28	3.05	2.96	97.0	2.64	89.2	3s	0.23	55 1		1	
75.28	78.33	3.05	2.80	91.8	0.95	33.9	3s	0.19	55 1		1	a lot of rubble
78.33	81.38	3.05	2.89	94.8	0.98	33.9	3s	0.29	55 1		1	
81.38	84.42	3.04	2.94	96.7	1.55	52.7	3s	0.33	55 1		1	a lot of rubble
84.42	87.47	3.05	2.97	97.4	2.18	73.4	3s	0.21	55 1		1	
87.47	90.52	3.05	2.66	87.2	2.67	100.4	3s	0.27	50 1		1	
90.52	93.57	3.05	3.00	98.4	2.42	80.7	3s	0.25	60 1		1	
93.57	96.62	3.05	2.89	94.8	1.98	68.5	3s	0.20	55 1		1	
96.62	99.66	3.04	2.47	81.3	1.90	76.9	3s	0.38	55 1		1	
99.66	102.71	3.05	3.00	98.4	1.57	52.3	3s	0.18	55 1		1	
102.71	105.76	3.05	2.81	92.1	2.15	76.5	3s	0.23	55 1		1	rubble
105.76	108.81	3.05	2.98	97.7	2.13	71.5	3s	0.27	50 2		1	1-2

Geotechnical Log

108.81	111.86	3.05	2.90	95.1	1.80	62.1	3s	0.30	50	2	1	1-2
111.86	114.90	3.04	2.89	95.1	1.80	62.3	3s	0.25	45	1	1	
114.90	117.95	3.05	2.95	96.7	2.09	70.8	3s	0.27	55	1	1	
117.95	121.00	3.05	2.85	93.4	2.14	75.1	3s	0.43	55	1	1	
121.00	124.05	3.05	2.80	91.8	1.49	53.2	3s	0.33	55	1	1	
124.05	127.10	3.05	2.82	92.5	1.89	67.0	3s	0.21	60	1	1	
127.10	130.14	3.04	2.97	97.7	1.95	65.7	3s	0.33	60	2	1	
130.14	133.19	3.05	2.71	88.9	2.39	88.2	3s	0.30	60	2	1	
133.19	136.24	3.05	2.92	95.7	2.87	98.3	3s	0.38	60	1	1	
136.24	139.29	3.05	2.99	98.0	2.30	76.9	3s	0.27	55	2	1	
139.29	142.33	3.04	2.97	97.7	2.17	73.1	3s	0.21	55	2	1	
142.33	145.38	3.05	3.00	98.4	2.57	85.7	3s	0.30	55	1	1	
145.38	148.44	3.06	2.95	96.3	2.45	83.1	1s	0.19	60	1	2	a lot of clay and mud. "reamed down" noted by drillers on marker blocks.
148.44	151.48	3.04	2.79	91.8	2.55	91.4	3s	0.30	60	2	1	joint breaks are more "irregular" than "undulating"
151.48	154.53	3.05	2.94	96.4	1.65	56.1	3s	0.43	50	2	1	joint breaks are more "irregular" than "undulating"
154.53	157.58	3.05	2.95	96.7	2.86	96.9	3s	0.51	60	2	1	joint breaks are more "irregular" than "undulating"
157.58	160.62	3.04	2.96	97.4	2.52	85.1	3s	0.43	55	2	1	joint breaks are more "irregular" than "undulating"
160.62	163.67	3.05	2.98	97.7	2.62	87.9	3s	0.43	55	2	1	joint breaks are more "irregular" than "undulating"
163.67	166.72	3.05	2.95	96.7	2.62	88.8	3s	0.61	60	2	1	joint breaks are more "irregular" than "undulating"
166.72	169.77	3.05	2.85	93.4	2.02	70.9	3s	0.43	55	2	1	joint breaks are more "irregular" than "undulating"
169.77	172.82	3.05	2.97	97.4	2.57	86.5	3s	0.38	60	2	1	joint breaks are more "irregular" than "undulating"
172.82	175.87	3.05	2.95	96.7	2.47	83.7	3s	0.50	60	2	1	joint breaks are more "irregular" than "undulating"
175.87	178.91	3.04	2.98	98.0	2.41	80.9	3s	0.38	60	1	1	joint breaks are more "irregular" than "undulating"
178.91	181.96	3.05	2.84	93.1	2.47	87.0	3s	0.43	60	2	1	joint breaks are more "irregular" than "undulating"
181.96	185.01	3.05	2.93	96.1	2.75	93.9	3s	0.61	60	2	1	joint breaks are more "irregular" than "undulating"
185.01	188.06	3.05	2.97	97.4	2.74	92.3	3s	0.58	60	2	1	joint breaks are more "irregular" than "undulating"

Geotechnical Log

188.06	191.10	3.04	2.89	95.1	2.60	90.0	3s	0.43	60	2	1	joint breaks are more "irregular" than "undulating"
191.10	194.15	3.05	3.02	99.0	2.67	88.4	3s	0.61	65	2	1	joint breaks are more "irregular" than "undulating"
194.15	197.20	3.05	3.02	99.0	2.82	93.4	3s	0.51	60	2	1	joint breaks are more "irregular" than "undulating"
197.20	200.25	3.05	2.99	98.0	2.72	91.0	3s	0.61	60	2	1	joint breaks are more "irregular" than "undulating"
200.25	203.30	3.05	2.97	97.4	2.54	85.5	3s	0.61	65	3	1	joint breaks are more "irregular" than "undulating"
203.30	206.34	3.04	2.98	93.4	2.65	93.3	3s	0.61	65	2	1	joint breaks are more "irregular" than "undulating"
206.34	209.39	3.05	2.84	94.4	2.86	99.3	3s	0.59	60	3	1	joint breaks are more "irregular" than "undulating"
209.39	212.44	3.05	2.88	94.4	2.47	85.8	3s	0.43	50	2	1	joint breaks are more "irregular" than "undulating"
212.44	215.49	3.05	2.88	96.7	2.74	92.9	3s	0.76	65	2	1	joint breaks are more "irregular" than "undulating"
215.49	218.54	3.05	2.95	90.2	2.77	100.7	3s	0.51	65	2	1	joint breaks are more "irregular" than "undulating"
218.54	221.58	3.04	2.75	87.5	2.56	96.2	3s	0.50	60	2	1	joint breaks are more "irregular" than "undulating"
221.58	224.63	3.05	2.66	93.8	2.46	86.0	3s	0.61	65	2	1	joint breaks are more "irregular" than "undulating"
224.63	227.68	3.05	2.86	87.2	2.78	104.5	3s	0.76	65	2	1	joint breaks are more "irregular" than "undulating"
227.68	230.73	3.05	2.66	90.8	2.14	77.3	3s	0.43	60	2	1	joint breaks are more "irregular" than "undulating"
230.73	233.78	3.05	2.77	90.8	2.10	75.8	3s	0.30	60	2	1	joint breaks are more "irregular" than "undulating"
233.78	236.82	3.04	2.73	89.8	2.50	91.6	3s	0.55	60	2	1	joint breaks are more "irregular" than "undulating"
236.82	239.87	3.05	2.87	94.1	2.50	87.1	3s	0.51	55	2	1	joint breaks are more "irregular" than "undulating"
239.87	242.92	3.05	2.73	89.5	1.67	61.2	3s	0.43	60	2	1	joint breaks are more "irregular" than "undulating"
242.92	245.97	3.05	2.91	95.4	2.48	85.2	3s	0.51	50	2	1	joint breaks are more "irregular" than "undulating"
245.97	249.02	3.05	2.72	89.2	2.00	73.5	3s	0.38	50	2	1	joint breaks are more "irregular" than "undulating"

Geotechnical Log

249.02	252.06	3.04	2.92	96.1	2.67	91.4	3s	0.33	50	2	1	joint breaks are more "irregular" than "undulating"
252.06	255.11	3.05	2.73	89.5	2.47	90.5	3s	0.43	50	2	1	joint breaks are more "irregular" than "undulating"
255.11	258.16	3.05	2.99	98.0	1.86	62.2	3s	0.33	55	2	1	joint breaks are more "irregular" than "undulating"
258.16	261.21	3.05	2.70	88.5	2.15	79.6	3s	0.43	50	2	1	joint breaks are more "irregular" than "undulating"
261.21	264.26	3.05	2.90	95.1	2.15	74.1	3s	0.33	60	2	1	joint breaks are more "irregular" than "undulating"
264.26	267.26	3.00	2.38	79.3	1.86	78.2	3s	0.43	60	2	1	joint breaks are more "irregular" than "undulating"
267.31	270.36	3.05	2.92	95.7	2.62	89.7	3s	0.33	60	2	1	joint breaks are more "irregular" than "undulating"
270.36	273.41	3.05	2.83	92.8	2.30	81.3	3s	0.27	50	2	1	joint breaks are more "irregular" than "undulating"
273.41	276.46	3.05	2.77	90.8	1.77	63.9	3s	0.30	50	2	1	joint breaks are more "irregular" than "undulating"
276.46	279.50	3.04	2.67	87.8	0.86	32.2	3s	0.23	60	2	1	rubble section - joint breaks are more "irregular" than "undulating"
279.50	282.55	3.05	2.72	89.2	1.82	66.9	3s	0.49	60	1	1	
282.55	285.60	3.05	2.81	92.1	2.67	95.0	3s	0.61	60	1	1	
285.60	288.64	3.04	2.95	97.0	2.32	78.6	3s	0.30	60	1	1	
288.64	291.64	3.00	2.64	88.0	2.01	76.1	3s	0.43	60	2	2	irregular
291.69	294.74	3.05	2.96	97.0	2.36	79.7	3s	0.30	60	2	2	irregular
294.74	297.79	3.05	3.02	99.0	2.71	89.7	3s	0.61	60	1	1	
297.79	300.84	3.05	2.92	95.7	2.67	91.4	3s	0.43	60	1	1	
300.84	303.89	3.05	2.83	92.8	2.09	73.9	3s	0.30	60	1	1	
303.89	306.93	3.04	2.87	94.4	1.93	67.2	3s	0.43	60	2	1	irregular
306.93	309.98	3.05	2.90	95.1	2.71	93.4	3s	0.33	60	1	1	
309.98	313.03	3.05	2.93	96.1	2.80	95.6	3s	0.51	60	2	1	irregular
313.03	316.08	3.05	2.80	91.8	2.05	73.2	3s	0.43	60	1	1	
316.08	319.13	3.05	2.80	91.8	2.35	83.9	3s	0.38	60	1	1	
319.13	322.18	3.05	2.90	95.1	2.25	77.6	3s	0.43	60	2	1	irregular
322.18	325.23	3.05	2.70	88.5	2.37	87.8	3s	0.43	60	2	1	
325.23	328.27	3.04	2.99	98.4	1.98	66.2	3s	0.38	60	2	1	irregular
328.27	331.32	3.05	2.77	90.8	1.76	63.5	3s	0.33	60	2	1	rubble sections
331.32	334.37	3.05	2.82	92.5	1.50	53.2	3s	0.61	60	2	1	rubble sections
334.37	337.42	3.05	2.89	94.8	2.82	97.6	3s	1.01	60	2	1	
337.42	340.47	3.05	2.96	97.0	2.83	95.6	3s	3.05	60	2	1	

Magnetic Susceptibility Log

Depth (m)	Magnetic Susceptibility	DESCRIPTION
12.00	0.232	
13.00	0.150	
14.00	0.269	
15.00	0.595	
16.00	0.356	
17.00	0.319	
18.00	0.208	
19.00	0.368	
20.00	0.097	
21.00	0.266	
22.00	0.167	
23.00	0.209	
24.00	0.305	
25.00	0.115	
26.00	0.124	
27.00		no recovery
28.00		no recovery
29.00	0.173	
30.00	0.695	
31.00	0.036	
32.00	0.175	
33.00	0.220	
34.00	0.583	
35.00	0.167	
36.00	0.180	
37.00	0.216	
38.00	0.261	
39.00	0.139	
40.00	0.172	
41.00	0.315	
42.00	0.419	
43.00	0.549	
44.00	0.481	
45.00	0.458	
46.00	0.452	
47.00	0.298	
48.00	0.302	
49.00	0.405	
50.00	0.509	
51.00	3.156	
52.00	0.321	
53.00	0.388	
54.00	0.556	
55.00	1.225	
56.00	0.388	
58.00	0.431	
59.00	0.666	
60.00	0.547	
61.00	0.334	
62.00	0.383	

Magnetic Susceptibility Log

Depth (m)	Magnetic Susceptibility	DESCRIPTION
63.00	0.265	
64.00	0.285	
65.00	0.430	
66.00	0.166	
67.00	0.193	
68.00	0.288	
69.00	0.477	
70.00	0.281	
71.00	0.366	
72.00	0.341	
73.00	0.584	
74.00	0.280	
75.00	0.318	
76.00	0.365	
77.00	0.467	
78.00	0.247	
79.00	0.189	
80.00	0.223	
81.00	0.219	
82.00	0.174	
83.00	0.270	
84.00	0.251	
85.00	0.669	
86.00	0.295	
87.00	0.137	
88.00	0.198	
89.00	0.343	
90.00	0.438	
91.00	0.212	
92.00	0.215	
93.00	0.319	
94.00	0.280	
95.00	0.256	
96.00	0.148	
97.00	0.446	
98.00	0.158	
99.00	0.437	
100.00	0.233	
101.00	0.137	
102.00	0.359	
103.00	0.152	
104.00	0.155	
105.00	0.088	
106.00	0.144	
107.00	0.041	
108.00	0.148	
109.00	0.446	
110.00	0.158	
111.00	0.040	
112.00	0.390	
113.00	0.545	

Magnetic Susceptibility Log

Depth (m)	Magnetic Susceptibility	DESCRIPTION
114.00	0.180	
115.00	0.314	
116.00	0.119	
117.00	0.383	
118.00	0.180	
119.00	0.180	
120.00	0.248	
121.00	0.129	
122.00	0.179	
123.00	0.189	
124.00	0.383	
125.00	0.201	
126.00	0.054	
127.00	0.169	
128.00	0.469	
129.00	0.311	
130.00	0.424	
131.00	0.213	
132.00	0.268	
133.00	0.122	
134.00	0.277	
135.00	0.184	
136.00	0.816	
137.00	0.129	
138.00	0.338	
139.00	0.202	
140.00	0.182	
141.00	0.341	
142.00	0.177	
143.00	0.104	
144.00	0.047	
145.00	0.311	
146.00	0.285	
147.00	0.455	
148.00	0.060	
149.00	1.851	
150.00	0.046	
151.00	0.121	
152.00	0.272	
153.00	0.632	
154.00	0.439	
155.00	0.332	
156.00	0.321	
157.00	0.199	
158.00	0.109	
159.00	0.116	
160.00	0.448	
161.00	0.313	
162.00	0.300	
163.00	0.380	
164.00	0.140	

Magnetic Susceptibility Log

Depth (m)	Magnetic Susceptibility	DESCRIPTION
165.00	0.121	
166.00	0.182	
167.00	0.169	
168.00	0.213	
169.00	0.122	
170.00	0.129	
171.00	0.109	
172.00	0.121	
173.00	0.182	
174.00	0.124	
175.00	0.182	
176.00	0.201	
177.00	0.198	
178.00	0.274	
179.00	0.122	
180.00	0.68	
181.00	0.138	
182.00	0.343	
183.00	0.442	
184.00	0.142	
185.00	0.131	
186.00	0.428	
187.00	0.552	
188.00	0.101	
189.00	0.155	
190.00	0.442	
191.00	0.425	
192.00	0.186	
193.00	1.787	
194.00	0.333	
195.00	0.108	
196.00	0.19	
197.00	0.264	
198.00	0.216	
199.00	0.06	
200.00	0.033	
201.00	0.167	
202.00	0.415	
203.00	0.137	
204.00	0.277	
205.00	0.193	
206.00	0.292	
207.00	0.378	
208.00	0.184	
209.00	0.394	
210.00	0.251	
211.00	0.192	
212.00	0.17	
213.00	0.173	
214.00	0.255	
215.00	0.109	

Magnetic Susceptibility Log

Depth (m)	Magnetic Susceptibility	DESCRIPTION
216.00	0.224	
217.00	0.189	
218.00	0.184	
219.00	0.201	
220.00	0.124	
221.00	0.305	
222.00	0.149	
223.00	0.27	
224.00	0.408	
225.00	0.284	
226.00	0.149	
227.00	0.203	
228.00	0.291	
229.00	0.22	
230.00	0.887	
231.00	0.11	
232.00	0.155	
233.00	0.154	
234.00	0.051	
235.00	0.152	
236.00	0.535	
237.00	0.567	
238.00	0.348	
239.00	0.098	
240.00	0.244	
241.00	0.134	
242.00	0.217	
243.00	0.205	
244.00	0.22	
245.00	0.152	
246.00	0.147	
247.00	0.111	
248.00	0.176	
249.00	0.152	
250.00	0.397	
251.00	0.414	
252.00	0.19	
253.00	0.771	
254.00	0.116	
255.00	0.229	
256.00	0.28	
257.00	0.883	
258.00	0.274	
259.00	0.189	
260.00	0.127	
261.00	0.24	
262.00	0.094	
263.00	0.421	
264.00	0.171	
265.00	0.102	
266.00	0.079	

Magnetic Susceptibility Log

Depth (m)	Magnetic Susceptibility	DESCRIPTION
267.00	0.108	
268.00	0.038	
269.00	0.074	
270.00	0.05	
271.00	0.297	
272.00	0.051	
273.00	0.129	
274.00	0.144	
275.00	0.06	
276.00	0.051	
277.00	0.044	
278.00	0.088	
279.00	0.118	
280.00	0.124	
281.00	0.165	
282.00	0.451	
283.00	0.438	
284.00	0.12	
285.00	0.049	
286.00	0.06	
287.00	0.477	
288.00	0.169	
289.00	0.049	
290.00	0.297	
291.00	0.069	
292.00	1.026	
293.00	0.195	
294.00	1.244	
295.00	0.478	
296.00	0.077	
297.00	0.028	
298.00	0.181	
299.00	0.331	
300.00	0.125	
301.00	0.271	
302.00	0.244	
303.00	0.251	
304.00	0.391	
305.00	0.035	
306.00	0.133	
307.00	0.121	
308.00	0.107	
309.00	0.376	
310.00	0.022	
311.00	0.107	
312.00	0.052	
313.00	0.1	
314.00	0.133	
315.00	0.166	
316.00	0.383	
317.00	0.05	

Magnetic Susceptibility Log

Depth (m)	Magnetic Susceptibility	DESCRIPTION
318.00	0.197	
319.00	0.075	
320.00	0.499	
321.00	0.244	
322.00	0.158	
323.00	0.259	
324.00	0.144	
325.00	11.97	
326.00	0.544	
327.00	6.23	
328.00	11.76	
329.00	0.439	
330.00	0.225	
331.00	0.602	
332.00	0.464	
333.00	0.451	
334.00	1.105	
335.00	14.45	
336.00	0.573	
337.00	5.322	
338.00	0.428	
339.00	0.697	
340.00	0.801	
341.00	1.203	
342.00	0.409	
343.00	0.667	EOH

Box Log

Hole: DDH-M12-03 Date: July 1, 2011

Box #	From (m)	To (m)
1	11.78	17.27
2	17.27	22.58
3	22.58	29.16
4	29.16	35.66
5	35.66	41.43
6	41.43	46.53
7	46.53	51.77
8	51.77	57.11
9	57.11	63.33
10	63.33	68.97
11	68.97	74.44
12	74.44	79.01
13	79.01	84.42
14	84.42	90.15
15	90.15	95.69
16	95.69	100.98
17	100.98	106.44
18	106.44	112.80
19	112.80	119.75
20	119.75	123.39
21	123.39	128.88
22	128.88	134.49
23	134.49	140.13
24	140.13	145.88
25	145.88	149.56
26	149.56	155.40
27	155.40	161.24
28	161.24	161.24
29	167.05	172.60
30	172.60	178.20
31	178.20	184.89
32	184.89	190.60
33	190.60	194.14
34	194.14	201.26
35	201.26	207.71
36	207.71	212.44
37	212.44	218.24
38	218.24	224.10
39	224.10	229.15
40	229.15	235.37
41	235.37	240.89
42	240.89	246.50
43	246.50	252.06
44	252.06	258.09
45	258.09	263.73
46	263.73	269.44

Box Log

47	269.44	275.26
48	275.26	280.79
49	280.79	286.44
50	286.44	292.01
51	292.01	297.89
52	297.89	303.49
53	303.49	309.05
54	309.05	314.78
55	314.78	320.55
56	320.55	326.06
57	326.06	331.67
58	331.67	337.64
59	337.64	343.15
60	343.15	343.51 EOH

Depth (m)	Magnetic Susceptibility

DDH-M12-03	12.00	0.232
DDH-M12-03	13.00	0.150
DDH-M12-03	14.00	0.269
DDH-M12-03	15.00	0.595
DDH-M12-03	16.00	0.356
DDH-M12-03	17.00	0.319
DDH-M12-03	18.00	0.208
DDH-M12-03	19.00	0.368
DDH-M12-03	20.00	0.097
DDH-M12-03	21.00	0.266
DDH-M12-03	22.00	0.167
DDH-M12-03	23.00	0.209
DDH-M12-03	24.00	0.305
DDH-M12-03	25.00	0.115
DDH-M12-03	26.00	0.124
DDH-M12-03	27.00	nill
DDH-M12-03	28.00	nill
DDH-M12-03	29.00	0.173
DDH-M12-03	30.00	0.695
DDH-M12-03	31.00	0.036
DDH-M12-03	32.00	0.175
DDH-M12-03	33.00	0.220
DDH-M12-03	34.00	0.583
DDH-M12-03	35.00	0.167
DDH-M12-03	36.00	0.180
DDH-M12-03	37.00	0.216
DDH-M12-03	38.00	0.261
DDH-M12-03	39.00	0.139
DDH-M12-03	40.00	0.172
DDH-M12-03	41.00	0.315
DDH-M12-03	42.00	0.419
DDH-M12-03	43.00	0.549
DDH-M12-03	44.00	0.481
DDH-M12-03	45.00	0.458
DDH-M12-03	46.00	0.452
DDH-M12-03	47.00	0.298
DDH-M12-03	48.00	0.302
DDH-M12-03	49.00	0.405
DDH-M12-03	50.00	0.509
DDH-M12-03	51.00	3.156
DDH-M12-03	52.00	0.321
DDH-M12-03	53.00	0.388
DDH-M12-03	54.00	0.556
DDH-M12-03	55.00	1.225
DDH-M12-03	56.00	0.388
DDH-M12-03	57.00	

DDH-M12-03	58.00	0.431
DDH-M12-03	59.00	0.666
DDH-M12-03	60.00	0.547
DDH-M12-03	61.00	0.334
DDH-M12-03	62.00	0.383
DDH-M12-03	63.00	0.265
DDH-M12-03	64.00	0.285
DDH-M12-03	65.00	0.430
DDH-M12-03	66.00	0.166
DDH-M12-03	67.00	0.193
DDH-M12-03	68.00	0.288
DDH-M12-03	69.00	0.477
DDH-M12-03	70.00	0.281
DDH-M12-03	71.00	0.366
DDH-M12-03	72.00	0.341
DDH-M12-03	73.00	0.584
DDH-M12-03	74.00	0.280
DDH-M12-03	75.00	0.318
DDH-M12-03	76.00	0.365
DDH-M12-03	77.00	0.467
DDH-M12-03	78.00	0.247
DDH-M12-03	79.00	0.189
DDH-M12-03	80.00	0.223
DDH-M12-03	81.00	0.219
DDH-M12-03	82.00	0.174
DDH-M12-03	83.00	0.270
DDH-M12-03	84.00	0.251
DDH-M12-03	85.00	0.669
DDH-M12-03	86.00	0.295
DDH-M12-03	87.00	0.137
DDH-M12-03	88.00	0.198
DDH-M12-03	89.00	0.343
DDH-M12-03	90.00	0.438
DDH-M12-03	91.00	0.212
DDH-M12-03	92.00	0.215
DDH-M12-03	93.00	0.319
DDH-M12-03	94.00	0.280
DDH-M12-03	95.00	0.256
DDH-M12-03	96.00	0.148
DDH-M12-03	97.00	0.446
DDH-M12-03	98.00	0.158
DDH-M12-03	99.00	0.437
DDH-M12-03	100.00	0.233
DDH-M12-03	101.00	0.137
DDH-M12-03	102.00	0.359
DDH-M12-03	103.00	0.152
DDH-M12-03	104.00	0.155
DDH-M12-03	105.00	0.088
DDH-M12-03	106.00	0.144
DDH-M12-03	107.00	0.041
DDH-M12-03	108.00	0.148
DDH-M12-03	109.00	0.446
DDH-M12-03	110.00	0.158
DDH-M12-03	111.00	0.040
DDH-M12-03	112.00	0.390

DDH-M12-03	113.00	0.545
DDH-M12-03	114.00	0.180
DDH-M12-03	115.00	0.314
DDH-M12-03	116.00	0.119
DDH-M12-03	117.00	0.383
DDH-M12-03	118.00	0.180
DDH-M12-03	119.00	0.180
DDH-M12-03	120.00	0.248
DDH-M12-03	121.00	0.129
DDH-M12-03	122.00	0.179
DDH-M12-03	123.00	0.189
DDH-M12-03	124.00	0.383
DDH-M12-03	125.00	0.201
DDH-M12-03	126.00	0.054
DDH-M12-03	127.00	0.169
DDH-M12-03	128.00	0.469
DDH-M12-03	129.00	0.311
DDH-M12-03	130.00	0.424
DDH-M12-03	131.00	0.213
DDH-M12-03	132.00	0.268
DDH-M12-03	133.00	0.122
DDH-M12-03	134.00	0.277
DDH-M12-03	135.00	0.184
DDH-M12-03	136.00	0.816
DDH-M12-03	137.00	0.129
DDH-M12-03	138.00	0.338
DDH-M12-03	139.00	0.202
DDH-M12-03	140.00	0.182
DDH-M12-03	141.00	0.341
DDH-M12-03	142.00	0.177
DDH-M12-03	143.00	0.104
DDH-M12-03	144.00	0.047
DDH-M12-03	145.00	0.311
DDH-M12-03	146.00	0.285
DDH-M12-03	147.00	0.455
DDH-M12-03	148.00	0.060
DDH-M12-03	149.00	1.851
DDH-M12-03	150.00	0.046
DDH-M12-03	151.00	0.121
DDH-M12-03	152.00	0.272
DDH-M12-03	153.00	0.632
DDH-M12-03	154.00	0.439
DDH-M12-03	155.00	0.332
DDH-M12-03	156.00	0.321
DDH-M12-03	157.00	0.199
DDH-M12-03	158.00	0.109
DDH-M12-03	159.00	0.116
DDH-M12-03	160.00	0.448
DDH-M12-03	161.00	0.313
DDH-M12-03	162.00	0.300
DDH-M12-03	163.00	0.380
DDH-M12-03	164.00	0.140
DDH-M12-03	165.00	0.121
DDH-M12-03	166.00	0.182
DDH-M12-03	167.00	0.169

DDH-M12-03	168.00	0.213
DDH-M12-03	169.00	0.122
DDH-M12-03	170.00	0.129
DDH-M12-03	171.00	0.109
DDH-M12-03	172.00	0.121
DDH-M12-03	173.00	0.182
DDH-M12-03	174.00	0.124
DDH-M12-03	175.00	0.182
DDH-M12-03	176.00	0.201
DDH-M12-03	177.00	0.198
DDH-M12-03	178.00	0.274
DDH-M12-03	179.00	0.122
DDH-M12-03	180.00	0.68
DDH-M12-03	181.00	0.138
DDH-M12-03	182.00	0.343
DDH-M12-03	183.00	0.442
DDH-M12-03	184.00	0.142
DDH-M12-03	185.00	0.131
DDH-M12-03	186.00	0.428
DDH-M12-03	187.00	0.552
DDH-M12-03	188.00	0.101
DDH-M12-03	189.00	0.155
DDH-M12-03	190.00	0.442
DDH-M12-03	191.00	0.425
DDH-M12-03	192.00	0.186
DDH-M12-03	193.00	1.787
DDH-M12-03	194.00	0.333
DDH-M12-03	195.00	0.108
DDH-M12-03	196.00	0.19
DDH-M12-03	197.00	0.264
DDH-M12-03	198.00	0.216
DDH-M12-03	199.00	0.06
DDH-M12-03	200.00	0.033
DDH-M12-03	201.00	0.167
DDH-M12-03	202.00	0.415
DDH-M12-03	203.00	0.137
DDH-M12-03	204.00	0.277
DDH-M12-03	205.00	0.193
DDH-M12-03	206.00	0.292
DDH-M12-03	207.00	0.378
DDH-M12-03	208.00	0.184
DDH-M12-03	209.00	0.394
DDH-M12-03	210.00	0.251
DDH-M12-03	211.00	0.192
DDH-M12-03	212.00	0.17
DDH-M12-03	213.00	0.173
DDH-M12-03	214.00	0.255
DDH-M12-03	215.00	0.109
DDH-M12-03	216.00	0.224
DDH-M12-03	217.00	0.189
DDH-M12-03	218.00	0.184
DDH-M12-03	219.00	0.201
DDH-M12-03	220.00	0.124
DDH-M12-03	221.00	0.305
DDH-M12-03	222.00	0.149

DDH-M12-03	223.00	0.27
DDH-M12-03	224.00	0.408
DDH-M12-03	225.00	0.284
DDH-M12-03	226.00	0.149
DDH-M12-03	227.00	0.203
DDH-M12-03	228.00	0.291
DDH-M12-03	229.00	0.22
DDH-M12-03	230.00	0.887
DDH-M12-03	231.00	0.11
DDH-M12-03	232.00	0.155
DDH-M12-03	233.00	0.154
DDH-M12-03	234.00	0.051
DDH-M12-03	235.00	0.152
DDH-M12-03	236.00	0.535
DDH-M12-03	237.00	0.567
DDH-M12-03	238.00	0.348
DDH-M12-03	239.00	0.098
DDH-M12-03	240.00	0.244
DDH-M12-03	241.00	0.134
DDH-M12-03	242.00	0.217
DDH-M12-03	243.00	0.205
DDH-M12-03	244.00	0.22
DDH-M12-03	245.00	0.152
DDH-M12-03	246.00	0.147
DDH-M12-03	247.00	0.111
DDH-M12-03	248.00	0.176
DDH-M12-03	249.00	0.152
DDH-M12-03	250.00	0.397
DDH-M12-03	251.00	0.414
DDH-M12-03	252.00	0.19
DDH-M12-03	253.00	0.771
DDH-M12-03	254.00	0.116
DDH-M12-03	255.00	0.229
DDH-M12-03	256.00	0.28
DDH-M12-03	257.00	0.883
DDH-M12-03	258.00	0.274
DDH-M12-03	259.00	0.189
DDH-M12-03	260.00	0.127
DDH-M12-03	261.00	0.24
DDH-M12-03	262.00	0.094
DDH-M12-03	263.00	0.421
DDH-M12-03	264.00	0.171
DDH-M12-03	265.00	0.102
DDH-M12-03	266.00	0.079
DDH-M12-03	267.00	0.108
DDH-M12-03	268.00	0.038
DDH-M12-03	269.00	0.074
DDH-M12-03	270.00	0.05
DDH-M12-03	271.00	0.297
DDH-M12-03	272.00	0.051
DDH-M12-03	273.00	0.129
DDH-M12-03	274.00	0.144
DDH-M12-03	275.00	0.06
DDH-M12-03	276.00	0.051
DDH-M12-03	277.00	0.044

DDH-M12-03	278.00	0.088
DDH-M12-03	279.00	0.118
DDH-M12-03	280.00	0.124
DDH-M12-03	281.00	0.165
DDH-M12-03	282.00	0.451
DDH-M12-03	283.00	0.438
DDH-M12-03	284.00	0.12
DDH-M12-03	285.00	0.049
DDH-M12-03	286.00	0.06
DDH-M12-03	287.00	0.477
DDH-M12-03	288.00	0.169
DDH-M12-03	289.00	0.049
DDH-M12-03	290.00	0.297
DDH-M12-03	291.00	0.069
DDH-M12-03	292.00	1.026
DDH-M12-03	293.00	0.195
DDH-M12-03	294.00	1.244
DDH-M12-03	295.00	0.478
DDH-M12-03	296.00	0.077
DDH-M12-03	297.00	0.028
DDH-M12-03	298.00	0.181
DDH-M12-03	299.00	0.331
DDH-M12-03	300.00	0.125
DDH-M12-03	301.00	0.271
DDH-M12-03	302.00	0.244
DDH-M12-03	303.00	0.251
DDH-M12-03	304.00	0.391
DDH-M12-03	305.00	0.035
DDH-M12-03	306.00	0.133
DDH-M12-03	307.00	0.121
DDH-M12-03	308.00	0.107
DDH-M12-03	309.00	0.376
DDH-M12-03	310.00	0.022
DDH-M12-03	311.00	0.107
DDH-M12-03	312.00	0.052
DDH-M12-03	313.00	0.1
DDH-M12-03	314.00	0.133
DDH-M12-03	315.00	0.166
DDH-M12-03	316.00	0.383
DDH-M12-03	317.00	0.05
DDH-M12-03	318.00	0.197
DDH-M12-03	319.00	0.075
DDH-M12-03	320.00	0.499
DDH-M12-03	321.00	0.244
DDH-M12-03	322.00	0.158
DDH-M12-03	323.00	0.259
DDH-M12-03	324.00	0.144
DDH-M12-03	325.00	11.97
DDH-M12-03	326.00	0.544
DDH-M12-03	327.00	6.23
DDH-M12-03	328.00	11.76
DDH-M12-03	329.00	0.439
DDH-M12-03	330.00	0.225
DDH-M12-03	331.00	0.602
DDH-M12-03	332.00	0.464

DDH-M12-03	333.00	0.451
DDH-M12-03	334.00	1.105
DDH-M12-03	335.00	14.45
DDH-M12-03	336.00	0.573
DDH-M12-03	337.00	5.322
DDH-M12-03	338.00	0.428
DDH-M12-03	339.00	0.697
DDH-M12-03	340.00	0.801
DDH-M12-03	341.00	1.203
DDH-M12-03	342.00	0.409
DDH-M12-03	343.00	0.667

MINT PROPERTY

Grid East	Grid North	Easting	Northing	Elev.	Depth (m)
		505767	6852200		465.42

ZONE: _____

SECTION: _____

SURVEY							
Depth (m)	Azimuth	Dip	Method	Depth (m)	Azimuth	Dip	Method
0	270	-60		298	275	-59.4	Ranger
38.7	271.1	-58.4	Ranger	359	277	-59.5	Ranger
115	272.1	-58.8	Ranger	420	277.9	-59.3	Ranger
267.5	275.7	-59.6	Ranger	450.5	278.8	-59	Ranger

TARGET: _____

[illegible]

HOLE: DDH-M12-04

CLAIM: YD57207

Contractor: Platinum Drilling

Drill: 1

Core size: NQ2 Reduced at: _____ (m)

Casing depth: 15.24 (m) in / out

Drilling dates: July 12 - July 18, 2012

Geology logged by: Nick Bueckert

SAMPLES	
Numbers:	<u>M677442-M677586</u>
Total:	<u>180</u>
Batch:	<u>14-18</u>
Date Sent:	<u>August 1, 2012</u>
Certificate:	

COMMENTS	
EOH @ 465.42m	

Geology Log

Hole: DDH -M12-04

Logger: Nick Bueckert

Date: August 2012

GENERAL INTERVAL			DETAILED INTERVAL			LITHOLOGY					ALTERATION						MINERALS			Photo	DETAILED DESCRIPTION		
From (m)	To (m)	Interval (m)	From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Shade	Colour	Texture	Propylitic	Argillic	Phyllic	Potassic	Silic	Limonitic	Other		Pyrite			Other	
																	Type	Intensity				Type	Conc. (%)
0.00	13.75	13.75	0.00																				Casing actually to 15.24m (not 13.75m), core recovery begins at 13.75m
13.75	114.22					PP	mg	md	gy	po							2 pro	2		1 di			PLAGIOCLASE PORPHYRY Core intensely fractured and rubblely. Fracture surfaces are oxidized. Several zones of pervasive oxidation. Rock looks to be medium-grained and crowded plagioclase- or Kspar-phyrlic +/- mafics+/- magnetite. Groundmass is typically brown and crystalline. Where texture changes from porphyritic to aphanitic, mafics are altered to chlorite and feldspar content decrease. Highly intermittent propylitic (dominant) and potassic alteration is weak to moderate and locally strong. Breccias are present. The Intermediate Porphyry Dike is present +/- quartz. Felsic zones with white milky crystalline matrix are centimetre-scale (<60cm) and metre-scale toward the bottom of the interval.
								lt	gy	an							5 pot	3					
								dk	gy														
								lt	bn														
			13.75	24.68		PP		md	gy	po							3 pro	1					PLAGIOCLASE PORPHYRY - Unaltered plagioclase porphyry is dominant with propylitic altered plagioclase porphyry. Chlorite locally present; matrix variably felsic and mafics are absent; Fractures are oxidized. Core colour changes from medium grey to light beigey-green approximately every 40cm. No veining present. Core is fractured.
								lt	gn														
			24.68	44.05		PP		lt	gn	po							3 pro	1		1 di			PLAGIOCLASE PORPHYRY +/- BRECCIA - Oxidized fractures and veinlets; core is highly fractured. Intermittent propylitic and potassic alteration zones (10-70cm) and minor breccia zones are present. Matrix-supported breccia (60% matrix) and clast-supported breccia (15% matrix) throughout; width of breccia zones unknown (core is rubble), Zones of potassic alteration are black, aphanitic, and variably magnetic. Plagioclase and a yellow weathered mineral present, yellow weathered mineral are present. Calcite veinlets are common throughout interval.
								md	gy	bx								pot					
								dk	gy	an													
			44.05	44.42		IPD		md	bn	po							3			1 di			INTERMEDIATE PORPHYRY DIKE - plagioclase is coarse- to very coarse-grained; chlorite is present
																							PLAGIOCLASE PORPHYRY BRECCIA - propylitic (?) and sericitic (?) alteration - Increase in oxidation (streaky); core is highly fractured. ?Clast-supported? breccia (approximately 10-25%) Subrounded clasts (5-8cm) are whiteish and chlorite-phyrlic; matrix is crystalline and dark grey (difficult to see colouration due to pervasive oxidation). Trace disseminated pyrite mineralization. Calcite and pyrite veinlets are common.
			44.42	48.79		PP		md	gy	bx							4 pro	1		1 di			
										an							ser	1					
			48.79	50.10		PP			or								5 ser	2					PLAGIOCLASE PORPHYRY - FAULT? Sericitic alteration(?) - Strong pervasive oxidation throughout interval; core crumbley and fractured. Whiteish host rock with stockwork stringers (?); texture and mineralogy unrecognizable (due to oxidation).
									wh														
			50.10	54.95		FEL			or	bx							4 ser						FELSITE (?) - FELSIC BRECCIA - Sericitic alteration(?) - Pervasive oxidation throughout interval. Clasts are chlorite-phyrlic (very coarse-grained to amygdaloidal-like) in white-grey crystalline groundmass. Minor calcite veinlets present.

n = none, t= <1%, w = 1-3%, f = 3-5%, m = 5-7%, ms = 7-10%, s = 10-15%, l = 15-20%, (write % for >20%)

Geology Log

GENERAL INTERVAL			DETAILED INTERVAL			LITHOLOGY					ALTERATION							MINERALS			Photo	DETAILED DESCRIPTION																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
From (m)	To (m)	Interval (m)	From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Shade	Colour	Texture	Propylitic	Argillic	Phyllic	Potassic	Silic	Limonitic	Other		Pyrite	Other																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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Geology Log

GENERAL INTERVAL			DETAILED INTERVAL			LITHOLOGY					ALTERATION							MINERALS			Photo	DETAILED DESCRIPTION	
From (m)	To (m)	Interval (m)	From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Shade	Colour	Texture	Propylitic	Argillic	Phyllic	Potassic	Silic	Limonitic	Other		Pyrite	Other			
																	Type	Intensity		Type			Conc. (%)
114.22	210.22					F-A		lt	gy									pro	5	3 di			FELSITE-A (DIORITE-GRANODIORITE) - Sericite altered felsite-A alternating with potassic altered plagioclase porphyry? Alternating intense propylitic+/- magnetite+carbonate and weak sericite alteration. Disseminated pyrite throughout interval. Host rock is white and green flecked, grey quartz present (<7%) in matrix. Plagioclase is destroyed in propylitic alteration; calcite stringers throughout interval; local quartz-bearing intrusive; host rock has metre-scale zones of increased mafic abundance (<20%)
						PP		dk	gn									ser	1	qz	7		
			114.22	121.72		PP	fg	dk	gn	an								pro	5	2 di			PLAGIOCLASE PORPHYRY - intense propylitic alteration; primary mineralogy completely replaced by chlorite and epidote; core is carbonaceous; calcite stringers present; dissmeninated pyrite throughout interval; core is variabley magnetic
			121.72	128.75		F-A	cg	md	gy	ma							1 ser	1	1 di				FELSITE-A (DIORITE-GRANODIORITE) - Grey and white flecked, massive coarse-grained granodiorite with weak sericite alteration; quartz is present (<7%) in matrix; mafics (20%) are greenish; disseminated pyrite throughout interval; oxidized fracture surfaces and decrease in carbonate stringers.
																			qz	7			
			128.75	130.55		PP		md	gn	an							1 pro	4	1 di				PLAGIOCLASE PORPHYRY - same as 114.22m - 121.72m interval with lighter green colour; mafics present; oxidized fractures; core is not magnetic
			130.55	145.39		F-A		md	gy	ma							1 ser	1	qz	7			FELSITE-A (DIORITE-GRANODIORITE) -- same as 121.72m - 128.75m; sericite alteration; oxidized fracture surfaces
			145.39	154.80		PP		dk	gn	an							1 pro	5	1 di				PLAGIOCLASE PORPHYRY - same as 114.22m - 121.72m interval with minor zones of light green colouration; magnetite+pyrite+carbonate stringers present
																			mt				
			154.80	164.80		FEL		md	gy	ma							3 ser	1	2 di				FELSITE(?) - same as 114.22m - 121.72m interval except more felsic; rock looks like Felsite but is less altered = hostrock? Kspar phenocrysts locally present, quartz present (<7%), pyrite stringers infrequent; minor zones of decreased mafics and increased pyrite grain size to 7mm blebs. Zones of 'Felsite' (<20cm) are very coarse-grained and chlorite is 100% replaced by pyrite. Weak pervasive oxidation throughout
																			3 bl				
																			qz	7			
			164.80	165.20		F-A												ser	3	cc	3		FELSITE-A (DIORITE-GRANODIORITE) - Clay altered, gougey oxidized core. Chalcocite? Occurs with pyrite in veinlets. Core is too fractured to get veinlet orientation
						FEL																	
			165.20	210.27		F-A			wh	ma								ser					FELSITE-A (DIORITE-GRANODIORITE) - Increase in stringer frequency and netted stringers (see secondary structures log)
								lt	gy														
								lt	gn														
			202.45	202.46		F-A																	Irregular clast(?) rimmed with chalcocite. Clast has massive texture similar to host rock but is yellowish. Clast 8cm wide - xenolith?
			202.46	210.27		F-A			wh	ma								ser					FELSITE-A (DIORITE-GRANODIORITE) - Increase in stringer frequency and netted stringers (see secondary structures log)
																							FELSITE-A (DIORITE-GRANODIORITE) TO FELSITE - see contact log. Fractures have pervasive oxidation <1cm. Minor sulphide stringers. Zone of intense sericite and clay alteration (50cm) hosts 4cm black band = sulphide/chalcocite?
			210.27	213.87		F-A			wh	an								ser	1	2 di			
						FEL												ser	5	cc	1		

n = none, t= <1%, w = 1-3%, f = 3-5%, m = 5-7%, ms = 7-10%, s = 10-15%, l = 15-20%, (write % for >20%)

Geology Log

GENERAL INTERVAL			DETAILED INTERVAL			LITHOLOGY					ALTERATION								MINERALS			Photo	DETAILED DESCRIPTION		
From (m)	To (m)	Interval (m)	From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Shade	Colour	Texture	Propylitic	Argillic	Phyllic	Potassic	Silic	Limonitic	Other		Pyrite	Other					
																	Type	Intensity		Type	Conc. (%)				
																				cc	100		INTERMEDIATE PORPHYRY DIKE - Coarse-grained felspar; very coarse-grained mafics in grey matrix. Zones (3m) of pink pervasive oxidation. Core crumbly to rubblely. Lower contact is rubble - location uncertain		
			213.87	219.18		IPD		md	gy	po														x	
									pk																
																								INTERMEDIATE PORPHYRY DIKE(?) - zone of silicification; Grey silified zone at contact with propylitic alteration; core rubble and oxidized. Dense stockwork limonite stringers; pyrite mineralization on fracture surfaces	
			219.18	221.59		IPD		md	gy	ma						4	5			1	di		x		
																								PLAGIOCLASE PORPHYRY (formerly DIABASE DIKE? - similar looking core was called propylitic altered Plagioclase Porphyry from 114.22m onward). Black aphanitic and brecciated, magnetite-rich, carbonate-rich dike? Potassic alteration? Metre-scale breccia zones are difficult to distinguish as clast-matrix margin is discrete; clasts (1-3cm) are subrounded, black, massive and variably magnetic. Matrix (40-50%) is fine-grained quartz-carbonate-magnetite-bearing. Calcite veinlets frequent; pyrite veinlets infrequent	
			221.59	233.78		PP				bk	an							pot	5						
										bx															
																								INTERMEDIATE PORPHYRY DIKE - chlorite-phyrlic, milky white matrix with medium-grained quartz <10%. More felsic than typical intermediate porphyry dike	
			233.78	235.79		IPD				bg	po									1	di				
										wh										qz		10			
																								PLAGIOCLASE PORPHYRY (formerly DIABASE DIKE?) - same as 221.59m - 233.78m interval. Disseminated highly reflective silver coloured mineral - galena? (1%). Breccias very hard to distinguish. Core carbonaceous. Carbonate stringers frequent. Local quartz veinlets (sheeted). Altered Plagioclase porphyry? (Evidence - 20cm zone of typical plagioclase porphyry breccia with black, very fine-grained magnetite matrix (<50%)).	
			235.79	244.48		PP				bk	an							pot	5	1	di		x		
										bx										mg		50			
										ma										gn		1			
																								PLAGIOCLASE PORPHYRY (formerly DIABASE DIKE?) - (breccia) (?) - 20cm zone of typical plagioclase porphyry breccia with black, very fine-grained magnetite matrix	
			244.48	244.89		PP				bk	an							pot	5		mg		50		x
										bx															
																								PLAGIOCLASE PORPHYRY (formerly DIABASE DIKE?) - same as 221.59m - 233.78m interval. Disseminated highly reflective silver coloured mineral - galena? (1%). Breccias very hard to distinguish. Core carbonaceous. Carbonate stringers frequent. Local quartz veinlets (sheeted). Altered Plagioclase porphyry? (Evidence - 20cm zone of typical plagioclase porphyry breccia with black, very fine-grained magnetite matrix which is described above)	
			244.89	249.89		PP				bk	an							pot	5	1	di		x		
										bx										mg		50			
										ma										gn		1			
																								INTERMEDIATE PORPHYRY DIKE - weak silicification and propylitic alteration; epidote+chlorite+pyrite present but not abundant	
			249.89	250.48		IPD		md	gy	po						2		pro	2						
																								PLAGIOCLASE PORPHYRY (formerly DIABASE DIKE?) Magnetic core; black aphanitic to brecciated to massive (down interval); early sericite alteration with propylitic overprint (chlorite+sericite+pyrite present); chlorite on fracture surfaces; magnetite throughout interval; minor calcite stringers and quartz-pyrite veins present.	
			250.48	252.59		PP				bk	an							pot	5	1	di				
										ma								pro	2						

Geology Log

GENERAL INTERVAL			DETAILED INTERVAL			LITHOLOGY					ALTERATION							MINERALS			Photo	DETAILED DESCRIPTION		
From (m)	To (m)	Interval (m)	From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Shade	Colour	Texture	Propylitic	Argillic	Phyllic	Potassic	Silic	Limonitic	Other		Pyrite	Other				
																	Type	Intensity		Type			Conc. (%)	
										bx								ser	1					PLAGIOCLASE PORPHYRY - Silicified - Light and dark grey patchy silica flooded plagioclase porphyry; chlorite and pyrite present; coarse-grained plagioclase in siliceous matrix
			252.59	253.29		PP		md lt	gy gy	pa						3		pro	1	1 di mg		3		PLAGIOCLASE PORPHYRY (formerly DIABASE DIKE?) - same as 250.48m - 252.59m interval; brecciated(?) carbonate stringers and magnetite veinlets present
			253.29	254.40		PP				bk bx								pot pro	5 2					
			254.40	256.33		PP		md	gy	po						3		pro	2	3 di				PLAGIOCLASE PORPHYRY - silica flooded
			256.33	261.03		PP				bk pu						4		pot pro	5 2	2 di				PLAGIOCLASE PORPHYRY (formerly DIABASE DIKE?) - same as 250.48m - 252.59m interval; transition into silicified plagioclase porphyry with very coarse-grained chlorite and patchy bleaching
			261.03	270.77		PP-A				md gy po						3		pro ser	1 1	mt	st			PLAGIOCLASE PORPHYRY-A - similar to FELSITE-A but with increase in mafics, chlorite and pyrite abundance, quartz absent with Plagioclase Porphyry plagioclase-phyric texture. Magnetite stringers present. Oxidized fractures; minor gouge.
			270.77	280.10		IPD				lt gn wh							2							INTERMEDIATE PORPHYRY DIKE - same as 233.78m - 235.79m interval; oxidized fractures; oxidized calcite stringers are frequent
			280.10	292.40		PP-A				md gy po pa						3		pro ser ser	1 1 3	3 di mg		4		PLAGIOCLASE PORPHYRY-A - Local silica flooding and local sericitic alteration - Mafics and chlorite <20%. Patchy white zones are aphanitic (similar to Felsite-A). Bottom 3m of interval is typical plagioclase porphyry with an increase in chlorite grain size from coarse-grained to very coarse-grained, an increase in magnetite disseminations and stringers. minor magnetite stringers throughout interval. Magnetite selvage/envelope (3mm) around calcite stringers.
			292.40	296.41		PP		md	gn bk	bx pa						5		pro pot	3 4	mg		60		PLAGIOCLASE PORPHYRY - Silica flooded +/- breccia - chlorite abundant; Patchy black and green coloured zones (~50cm); black zones strongly magnetic (magnetite <60%). Black clast in silica flooding is subrounded. Texture is highly variable from brecciated to very coarse-grained massive to aphanitic. Plagioclase porphyry texture/mineralogy variably distinct
			296.41	310.94		PP-A				md lt gy gn ma po bx								pro ser pot	2 1 5	3 di mg				PLAGIOCLASE PORPHYRY-A - Top of the interval is similar to Felsite-A with a gradual textural/phase change and increase in chlorite and mafics. Texture changes from massive to porphyritic (plagioclase-phyric). Quartz is absent except for in zones of patchy silica flooding. Minor magnetite 'streaks,' breccia zones (cm-scale) host magnetite-rich (<40%) matrix and rounded clasts 0.5cm - 3cm; strong sericite alteration at bottom of interval (70cm) where core is rubblely and clay altered.
			310.94	317.03		PP				bk po								pot	3	1 st				PLAGIOCLASE PORPHYRY -potassic alteration(?) - Black with white flecks; coarse-grained crowded plagioclase phenocrysts occur in black, variably magnetic matrix. Rock type is observed in DDH-M12-02 near the Volcanic 1 (andesite) - Plagioclase Porphyry contact. Stockwork calcite+/- pyrite stringers are frequent throughout interval

n = none, t= <1%, w = 1-3%, f = 3-5%, m = 5-7%, ms = 7-10%, s = 10-15%, l = 15-20%, (write % for >20%)

Geology Log

GENERAL INTERVAL			DETAILED INTERVAL			LITHOLOGY					ALTERATION							MINERALS			Photo	DETAILED DESCRIPTION	
From (m)	To (m)	Interval (m)	From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Shade	Colour	Texture	Propylitic	Argillic	Phyllic	Potassic	Silic	Limonitic	Other		Pyrite	Other			
																	Type	Intensity		Type			Conc. (%)
									wh									pro	1		2 di		
																					mg	7	
			317.03	318.50		PP		lt	gy	bx								ser	4		ak	2	
																		pro	2				
			318.50	325.61		PP			bk	po								pot	3		1 di		
									wh									pro	1		mg	5	
																					mg	7	
			325.61	327.59		V1		md	gn	ma								pro	2		1 di		
327.59	352.65					PP		md	gy	bx								pro	3		mg		
								dk	gy	pa													
										vu													
352.65	465.42					PP		md	gy	ma					5			pro	3		2 di		
									pk	pa								pot	3		mg	st	
										po								ser	2				
										bx													
			352.65	388.67		PP		md	gy	ma					5			pro	3		2 di		
										pk								pot	3		mg	st	
										po								ser	2				
										bx													
			388.67	389.23		PP			wh	po					5			ser	2		2 di		
									gn	bx											qz	6	
									gy														
			389.23	391.32		PP															8 bl		
																					cc	3	

n = none, t= <1%, w = 1-3%, f = 3-5%, m = 5-7%, ms = 7-10%, s = 10-15%, l = 15-20%, (write % for >20%)

Geology Log

GENERAL INTERVAL			DETAILED INTERVAL			LITHOLOGY					ALTERATION							MINERALS			Photo	DETAILED DESCRIPTION		
From (m)	To (m)	Interval (m)	From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Shade	Colour	Texture	Propylitic	Argillic	Phyllic	Potassic	Silic	Limonitic	Other		Pyrite	Other				
																	Type	Intensity		Type			Conc. (%)	
			391.32	394.48		PP			wh	po					5		ser	2	2 di				PLAGIOCLASE PORPHYRY - New phase/alteration type? Milky white matrix with grey and green; porphyritic quartz, feldspar and chlorite. Disseminated pyrite and sericite on fractures. Sodic alteration? Bottom of interval cobble breccia with plagioclase porphyry clasts (0.8 - 2cm) in siliceous matrix (60-70%)	
									gn	bx									qz		6			
									gy															
			394.48	396.48		PP-A		md	gy	bx					5		ser	2					PLAGIOCLASE PORPHYRY-A - type case	
									ma								pro	1						
			396.48	412.55		PP		md	gy	bx					5		ser	2					PLAGIOCLASE PORPHYRY - silicified matrix-supported breccia. Subrounded to rounded clasts (1-2cm) of chlorite-phyric plagioclase porphyry in sugary crystalline siliceous matrix. Stockwork calcite veinlets. No potassic alteration development.	
									ma								pro	1						
			412.55	416.78		FEL			wh	an							ser	5	2 di			x	FELSITE - typical case - pyrite+/-chalcopyrite(?) veins present (see secondary structures log); sericitic alteration locally intense	
																		5 vn						
																		cc		3				
			416.78	419.82		FEL			gy	bx					5		ser	5	1 di				FELSITE - silicified breccia - Interval resembles 394.48m - 412.55m interval except clasts here have the same texture as Felsite. Matrix supported (55%) cobble breccia with faint clast-matrix margins occurs throughout interval as does minor crackle breccia with matrix-hosted chalcocite(?) (black very fine-grained sulphide).	
			419.82	423.88		IPD		lt	bn	po										cc		3	Intermediate Porphyry Dike - Plagioclase phyrical with brown, medium-grained matrix. A very fine-grained black mineral occurs on fracture surfaces (sulphide?)	
			423.88	449.76		PP		md	gy	pa					5		ser	3	4 di				PLAGIOCLASE PORPHYRY (?) - silicified breccia +/- clayey sericite alteration (<50cm zones) - Clast-supported (35cm) hosts elevated chalcocite(?) in matrix. Patchy potassic (Kspar present) and propylitic alteration occurs throughout interval. Trace blebby arsenopyrite intergrown with pyrite and Cu-sulphide(?) is present. Black stringers and pyrite stringers are infrequent. Some black stringers have 1.5 cm wide envelopes. Carbonate present throughout interval	
									bg	bx									4 st					
																			as		2			
																			cp		1			
																			cc		2			
			449.76	453.05		IPD		lt	bn	po													INTERMEDIATE PORPHYRY DIKE - same as 419.82m - 423.88m interval - Dark grey clay altered mineral present	
			453.05	461.15		PP		lt	gy	ma					5		ser	4	1 cc		5			PLAGIOCLASE PORPHYRY - Variably silicified and brecciated host rock. Dark grey clayey mineral occurs throughout breccia matrix. Clasts are rounded in silicified zones. Chlorite present throughout. Chalcocite (?) <5%
								md	gy	bx														
			461.42	465.42		DD			bk														DIABASE DIKE - same as dike seen in DDH-M12-02. Dike is magnetic, hornblende-phyric and hosts calcite infilled pits. Epidote on fracture surfaces. EOH @ 465.42m	
				EOH																				

Contact Log

Hole: DDH-M12-04 Logger Name: Nick Bueckert

Date: August 2012

Depth (m)	DESCRIPTION
44.05	PLAGIOCLASE PORPHYRY (propylitic alteration) - INTERMEDIATE PORPHYRY DIKE - 50 degrees to coarse axis - sharp contact. From dark grey, aphanitic to medium grey porphyritic texture
44.42	INTERMEDIATE PORPHYRY DIKE - PLAGIOCLASE PORPHYRY - orientation unknown (core is fractured) - contact is irregular; grain decrease from coarse-grained to medium-grained
114.22-164.80	PLAGIOCLASE PORPHYRY (propylitic alteration) - FELSITE-A (sericite alteration) - no preferred orientation to core axis; lithologies alternate over interval; Contacts are sharp and irregular
210.27	FELSITE-A (sericite alteration) - FELSITE (strong sericite alteration) - 90 degrees to core axis - contact is a phase change or increase in alteration. Mafics and chlorite out, pyrite present. Plagioclase phenocrysts out. Texture change from massive to aphanitic with quartz-eyes in milky felspar matrix. Texture change is gradational over 1m. Colour change from greyish white to white
213.87	FELSITE - INTERMEDIATE PORPHYRY DIKE - 25 degrees to core axis - contact is sharp; texture change from aphanitic to porphyritic; colour change from white to grey with yellow specks + pink
219.80, 221.59	INTERMEDIATE PORPHYRY DIKE - SILICIFIED ZONE - DIABASE DIKE(?) - orientation unknown (core is crumbly at both contacts); core oxidized; contact not observed
233.78	DIABASE DIKE(?) - INTERMEDIATE PORPHYRY DIKE - 45 degrees to core axis - contact is sharp, very irregular; Intermediate Porphyry Dike makes 2cm undulations into Diabase Dike. Flow banding in Intermediate Porphyry Dike - quartz bands (8cm) then plagioclase bands
235.79	INTERMEDIATE PORPHYRY DIKE - DIABASE DIKE(?) - 45 degrees to core axis - contact is sharp, undulatory; disseminated chalcocite(?)
249.89	DIABASE DIKE(?) - PLAGIOCLASE PORPHYRY (propylitic alteration) - 50 degrees to core axis - contact is sharp/weakly gradational; colour and texture change from black+aphanitic to medium grey+porphyritic; plagioclase grains are elongate in Plagioclase Porphyry for 1cm along contact; epidote present in Plagioclase Porphyry
250.89?	PLAGIOCLASE PORPHYRY (propylitic alteration) -DIABASE DIKE(?) - orientation unknown (core is rubble); colour change only, from medium grey to dark purple
256.33	PLAGIOCLASE PORPHYRY - DIABASE DIKE(?) - 20 degrees to core axis - contact is irregular; colour change from medium grey to dark purple
261.03	DIABASE DIKE(?) - PLAGIOCLASE PORPHYRY-A (propylitic > sericite alteration) - 90 degrees to core axis - gradational colour change from purple to grey
270.77	PLAGIOCLASE PORPHYRY-A - INTERMEDIATE PORPHYRY DIKE - contact sharp, undulatory with deep, rounded undulations; texture change from aphanitic to porphyritic
280.10	INTERMEDIATE PORPHYRY DIKE - PLAGIOCLASE PORPHYRY-A - 25 degrees to core axis - (60 degree at steepest angle, 20 degrees at shallowest angle) contact is undulatory; tight crustiform-like boundary
292.40	PLAGIOCLASE PORPHYRY-A - PLAGIOCLASE PORPHYRY (propylitic alteration) - 45 degrees to core axis - gradual darkening in colour; contact at fractured core surface (fractured at 45 degrees to core axis)
296.41	PLAGIOCLASE PORPHYRY (propylitic alteration) - FELSITE-A - no distinct contact (likely decrease in silicification of Plagioclase Porphyry)

Contact Log

[illegible]

Secondary Structure Log

Hole: DDH-M12-04
Logger Name:
Nick Bueckert
Date: August 2012

2° Structure Type	From (m)	To (m)	Attitude (TCA)	Attitude (TRFE)	Count	MINERALS		DESCRIPTION	Photo
						Type	Conc. (%)		
VT	29.50	29.66	65		3.00	li	80	Sheeted calcite-limonite veinlets (0.5-0.7cm) with calcite stringers inbetween	
VT/ST	24.68	44.05	60		8/M	li		Calcite-limonite veinlets and stringers	
VT			45		2/m				
			20		<1/m				
VT	44.00	44.01	30		1.00	py	5	Two 'braided' pyrite-limonite-calcite veinlets	
VT/ST	44.42	48.79	15		3.00	py	3	Stockwork pyrite+/-limonite+/-calcite veinlets that overprint breccia	
						li	3		
			40		10/M				
FT?	48.79	50.10			1.00			FAULT? Strong pervasive oxidation throughout interval; core crumbly and fractured. Whiteish host rock with stockwork stringers (?); orientation, texture and mineralogy unrecognizable (due to oxidation)	
VT/ST	56.88	80.30	50		8/m	py	4	Calcite-limonite+/-pyrite veinlets at 50 degrees to core axis are dominant and consistent throughout interval.	
						li	4		
ST	80.30	85.68	60		4/m	mg	100	Magnetite stringers locally at 45 degrees to core axis	
ST	145.39	154.80	50		1.00	mg	50-100	Magnetite stringers hosting local pyrite clots; carbonate locally present. Magnetite scavenged from chlorite alteration? Why does pyrite coexist with magnetite? Carbonate veinlets are present (35-50 degrees to core axis)	
						py	<50		
VT	156.49	162.01	50		11.00	py	100	Pyrite veinlets are offset (8mm) by carbonate-limonite stringers oriented at 30 degrees to core axis	
VT	174.86	175.15	15		1.00	py	50	Pyrite veinlet (3mm) with increaseing disseminated pyrite abundance in selvage moving uphole - 'blowout'; disseminated pyrite 'blowout' does not appear to be within a vein.	
ST	198.21	204.32	50-70		10/m	py	100	Pyrite stringers - feldspar+pyrite selvage (1cm) with sericitic envelope (6mm)	
VT	198.21	204.32	60		1.00	py	20	Pyrite+milky quartz veinlet with pyrite stringers; quartz is blebby (boudinage-like)	
ST	198.21	204.32	45		1.00	cc?	100	One black sulphide stringer (chalcocite?)	
ST	198.21	204.32	30		4.00	py	5	Pyrite and limonite stringers cross-cut pyrite stringers and veinlets	
NE	199.74	199.97	30		10/m	py	5	Dense netted pyrite stringers	
ST	210.77	213.87	80		1	cc?	100	Chalcocite(?) mineralized stringers/fractures	
			60		1	cc?	100		
			10		1	cc?	100		
ST	244.48	249.58	50		15.00			Carbonate stringers 40-60 degrees to core axis is dominant; also at 10-25 degrees to core axis	
VT	240.60	240.69	60		3.00	py	40	Sheeted quartz-magnetite-pyrite veinlets offset by carbonate stringers	
						mt	40		
VN	252.19	252.47	40		3.00	py	20	Quartz-pyrite vein (1.5cm) hosting 2mm of pyrite (midline) and cross-cut by carbonate veinlet (0-25 degrees to core axis)	
ST	261.03	270.77	40		7.00	mt		Magnetite+/- pyrite stringers present	
			<25		2.00	mt			

Secondary Structure Log

2° Structure Type	From (m)	To (m)	Attitude (TCA)	Attitude (TRFE)	Count	MINERALS		DESCRIPTION	Photo
						Type	Conc. (%)		
ST	352.65	465.42			10/m	ct	100	Stockwork calcite << anhydrite/gypsum stringers. Rare calcite veinlets are crosscut by anhydrite/gypsum stringers (8mm offset). Rare magnetite stringers as well as chlorite+/-pyrite stringers.	
					<1/m	mt	100		
					<1/m	gy?	100		
VT	412.55	416.78	35		4.00	py	5	Sheeted pyrite+/-chalcocite(?) veins (1cm) with wide (1.5-4cm) dark grey sericite and plagioclase-rich envelopes. Veins and envelopes are offset (mm-scale)	
						cc?	3		
	423.88	449.76	30		<2/m	py	2	Black stringers and pyrite stringers are infrequent. Some black stringers have 1.5 cm wide envelopes.	

Sample Log

Hole: DDH-M12-04

Date: August 2012

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery (%)	Sample Number	Batch	Au (g/t)	Ag (g/t)	As (ppm)	Comments
13.75	17.37	3.62	3.00	82.9	M677442	14				Casing to 13.75. Rubble
17.37	20.90	3.53	3.00	85.0	M677443	14				
20.90	24.86	3.96	3.00	75.8	M677444	14				
24.86	28.50	3.64	3.00	82.4	M677445	14				
28.50	32.61	4.11	3.00	73.0	M677446	14				
					M677447	14				COARSE REJECT DUPLICATE
32.61	36.44	3.83	3.00	78.3	M677448	14				
36.44	39.83	3.39	3.00	88.5	M677449	14				
39.83	43.19	3.36	3.00	89.3	M677450	14				
43.19	46.75	3.56	3.00	84.3	M677451	14				
					M677452	14				STANDARD ML-2
46.75	48.73	1.98	1.90	96.0	M677453	14				
48.73	50.90	2.17	1.94	89.4	M677454	14				
50.90	54.34	3.44	3.00	87.2	M677455	14				Fault? Very oxidized core
54.34	58.20	3.86	3.00	77.7	M677456	14				
					M677457	14				BLANK
58.20	62.60	4.40	3.00	68.2	M677458	14				Poor recovery
62.60	66.43	3.83	3.00	78.3	M677459	14				
66.43	69.74	3.31	3.00	90.6	M677460	14				
69.74	73.00	3.26	2.90	89.0	M677461	14				Plagioclase Porphyry(?) breccia
					M677462	14				1/4 DUPLICATE
73.00	76.34	3.34	3.00	89.8	M677463	14				
										1 piece sawed - potassic alteration (Plagioclase Porphyry or mafic volcanics?)
76.34	79.47	3.13	3.00	95.8	M677464	14				
79.47	82.74	3.27	3.00	91.7	M677465	14				
82.74	85.82	3.08	3.00	97.4	M677466	14				
					M677467	14				STANDARD ML-2
85.82	89.05	3.23	3.00	92.9	M677468	14				
89.05	92.84	3.79	3.00	79.2	M677469	14				intrusive; Poor recovery
92.84	96.62	3.78	3.00	79.4	M677470	14				
96.62	99.66	3.04	3.00	98.7	M677471	14				
99.66	102.71	3.05	2.80	91.8	M677472	14				
					M677473	14				BLANK
102.71	106.02	3.31	2.87	86.7	M677474	14				
106.02	109.35	3.33	3.00	90.1	M677475	14				
109.35	111.33	1.98	1.98	100	M677476	14				
111.33	114.22	2.89	2.51	86.9	M677477	14				
114.22	117.95	3.73	3.01	80.7	M677478	15				
										1 piece sawed- Plagioclase Porphyry (intense propylitic)- Plagioclase Porphyry-A (sericite)
117.95	121.00	3.05	3.05	100	M677479	15				
121.00	124.25	3.25	3.05	93.8	M677480	15				
124.25	127.43	3.18	3.00	94.3	M677481	15				

Sample Log

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery (%)	Sample Number	Batch	Au (g/t)	Ag (g/t)	As (ppm)	Comments
127.43	130.43	3.00	3.00	100	M677482	15				
					M677483	15				STANDARD ML-2
130.43	133.56	3.13	3.00	95.8	M677484	15				
133.56	136.66	3.10	3.00	96.8	M677485	15				
136.66	139.73	3.07	3.00	97.7	M677486	15				
139.73	142.90	3.17	2.95	93.1	M677487	15				
					M677488	15				COARSE REJECT DUPLICATE
142.90	146.04	3.14	3.00	95.5	M677489	15				
146.04	149.11	3.07	3.00	97.7	M677490	15				
149.11	152.05	2.94	2.94	100	M677491	15				
152.05	154.85	2.80	2.69	96.1	M677492	15				
154.85	157.85	3.00	3.00	100	M677493	15				
					M677494	15				BLANK
157.85	159.60	1.75	1.75	100	M677495	15				
159.60	162.68	3.08	3.00	97.4	M677496	15				
162.68	166.05	3.37	3.00	89.0	M677497	15				
166.05	169.18	3.13	3.00	95.8	M677498	15				
					M677499	15				STANDARD ML-2
169.18	172.30	3.12	3.00	96.2	M677500	15				
172.30	174.32	2.02	2.00	99.0	M677501	15				
174.32	175.86	1.54	1.54	100	M677502	15				
175.86	178.91	3.05	2.94	96.4	M677503	15				
					M677504	15				BLANK
178.91	181.96	3.05	2.85	93.4	M677505	15				
181.96	185.01	3.05	2.90	95.1	M677506	15				
185.01	188.06	3.05	2.86	93.8	M677507	15				
188.06	191.11	3.05	2.95	96.7	M677508	15				
191.11	194.16	3.05	3.05	100	M677509	15				
					M677510	15				1/4 DUPLICATE
194.16	197.21	3.05	3.05	100	M677511	15				
197.21	199.74	2.53	2.43	96.0	M677512	15				
199.74	202.45	2.71	2.60	95.9	M677513	15				
202.45	204.62	2.17	2.10	96.8	M677514	16				
204.62	207.84	3.22	3.00	93.2	M677515	16				
207.84	210.42	2.58	2.50	96.9	M677516	16				
210.42	213.21	2.79	2.50	89.6	M677517	16				
213.21	216.26	3.05	2.95	96.7	M677518	16				
					M677519	16				BLANK
216.26	219.21	2.95	2.60	88.1	M677520	16				
219.21	222.75	3.54	3.00	84.7	M677521	16				
222.75	226.23	3.48	3.00	86.2	M677522	16				
226.23	229.70	3.47	3.00	86.5	M677523	16				
					M677524	16				STANDARD ML-2
229.70	232.70	3.00	3.00	100	M677525	16				
232.70	234.00	1.30	1.30	100	M677526	16				
234.00	235.79	1.79	1.78	99.4	M677527	16				
235.79	238.86	3.07	3.00	97.7	M677528	16				1 piece sawed- diabase dike; breccia
238.86	242.06	3.20	3.05	95.3	M677529	16				

Sample Log

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery (%)	Sample Number	Batch	Au (g/t)	Ag (g/t)	As (ppm)	Comments
					M677530	16				COARSE REJECT DUPLICATE
242.06	245.37	3.31	3.00	90.6	M677531	16				1 piece sawed- crackle breccia with magnetite-rich matrix
245.37	248.56	3.19	3.00	94.0	M677532	16				
248.56	251.85	3.29	3.00	91.2	M677533	16				1 piece sawed- Contact - Diabase Dike?- Plagioclase Porphyry
251.85	255.41	3.56	3.00	84.3	M677534	16				
					M677535	16				BLANK
255.41	258.17	2.76	2.45	88.8	M677536	16				
258.17	261.21	3.04	2.70	88.8	M677537	16				
261.21	264.50	3.29	2.94	89.4	M677538	16				
264.50	267.80	3.30	2.51	76.1	M677539	16				
					M677540	16				1/4 DUPLICATE
267.80	270.77	2.97	2.81	94.6	M677541	16				
270.77	274.10	3.33	2.96	88.9	M677542	16				
274.10	277.52	3.42	3.00	87.7	M677543	16				
277.52	280.11	2.59	2.30	88.8	M677544	16				
					M677545	16				STANDARD ML-2
280.11	283.50	3.39	3.00	88.5	M677546	16				
283.50	286.76	3.26	3.00	92.0	M677547	16				
286.76	289.90	3.14	3.00	95.5	M677548	16				
289.90	292.40	2.50	2.39	95.6	M677549	16				
292.40	294.74	2.34	2.08	88.9	M677550	17				row sawed - magnetite-rich zone
294.74	296.86	2.12	2.12	100	M677551	17				
296.86	300.13	3.27	3.00	91.7	M677552	17				1 piece sawed Felsite-A
300.13	303.19	3.06	3.00	98.0	M677553	17				
303.19	306.51	3.32	3.00	90.4	M677554	17				1 piece sawed- magnetite streaks in Plagioclase Porphyry
306.51	308.52	2.01	1.90	94.5	M677555	17				
					M677556	17				1/4 DUPLICATE
308.52	309.98	1.46	1.35	92.5	M677557	17				
309.98	313.03	3.05	2.38	78.0	M677558	17				
313.03	316.48	3.45	3.00	87.0	M677559	17				1 piece sawed Plagioclase Porphyry with black matrix; magnetite-rich
316.48	319.12	2.64	2.47	93.6	M677560	17				
					M677561	17				BLANK
319.12	322.17	3.05	2.87	94.1	M677562	17				
322.17	325.22	3.05	2.95	96.7	M677563	17				sample sawed - Volcanic 1 + Plagioclase Porphyry
325.22	328.27	3.05	2.79	91.5	M677564	17				
328.27	331.31	3.04	2.67	87.8	M677565	17				
331.31	334.36	3.05	2.71	88.9	M677566	17				
					M677567	17				STANDARD ML-2
334.36	337.77	3.41	3.00	88.0	M677568	17				
337.77	340.46	2.69	2.16	80.3	M677569	17				
340.46	343.51	3.05	2.28	74.8	M677570	17				
343.51	346.55	3.04	2.27	74.7	M677571	17				
346.55	349.60	3.05	2.50	82.0	M677572	17				
					M677573	17				COARSE REJECT DUPLICATE

Sample Log

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery (%)	Sample Number	Batch	Au (g/t)	Ag (g/t)	As (ppm)	Comments
349.60	352.65	3.05	2.89	94.8	M677574	17				
352.65	355.70	3.05	2.20	72.1	M677575	17				
355.70	358.75	3.05	2.45	80.3	M677576	17				1 piece sawed; potassic alteration (Kspar)
					M677577	17				BLANK
358.75	361.81	3.06	2.86	93.5	M677578	17				
361.81	364.84	3.03	3.03	100	M677579	17				
364.84	367.89	3.05	2.94	96.4	M677580	17				
367.89	370.95	3.06	2.93	95.8	M677581	17				
370.95	374.00	3.05	2.87	94.1	M677582	17				
					M677583	17				STANDARD ML-2
374.00	377.04	3.04	3.04	100	M677584	17				1 piece sawed; potassic altered (Kspar)
377.04	380.09	3.05	2.45	80.3	M677585	17				
380.09	383.13	3.04	2.15	70.7	M677586	18				
383.13	386.18	3.05	2.51	82.3	M677587	18				
386.18	389.23	3.05	2.87	94.1	M677588	18				
389.23	390.53	1.30	1.30	100	M677589	18				
					M677590	18				BLANK
390.53	392.27	1.74	1.56	89.7	M677591	18				1 piece sawed- chlorite-phyric white matrix silica? Sodic altered?
392.27	395.32	3.05	2.57	84.3	M677592	18				
395.32	398.37	3.05	2.75	90.2	M677593	18				
398.37	401.42	3.05	2.50	82.0	M677594	18				
					M677595	18				STANDARD ML-2
401.42	404.47	3.05	2.73	89.5	M677596	18				
404.47	407.51	3.04	2.38	78.3	M677597	18				
407.51	410.56	3.05	2.90	95.1	M677598	18				1 piece sawed silica breccia
410.56	412.75	2.19	2.09	95.4	M677599	18				
412.75	415.15	2.40	2.23	92.9	M677600	18				1 piece sawed- Felsite - with breccia; veinlet + selvage
					M677601	18				1/4 DUPLICATE
415.15	417.18	2.03	1.80	88.7	M677602	18				1 sawed; contact Felsite-Plagioclase Porphyry (silica flooded)
417.18	420.34	3.16	3.00	94.9	M677603	18				
420.34	423.55	3.21	3.00	93.5	M677604	18				
423.55	425.81	2.26	1.70	75.2	M677605	18				
425.81	428.85	3.04	2.42	79.6	M677606	18				
					M677607	18				STANDARD ML-2
428.85	431.90	3.05	2.15	70.5	M677608	18				
431.90	434.95	3.05	2.57	84.3	M677609	18				
434.95	438.00	3.05	2.46	80.7	M677610	18				
438.00	441.05	3.05	2.75	90.2	M677611	18				
					M677612	18				COARSE REJECT DUPLICATE
441.05	444.10	3.05	2.42	79.3	M677613	18				
444.10	447.15	3.05	2.60	85.2	M677614	18				
447.15	450.19	3.04	2.83	93.1	M677615	18				1 piece sawed silica flooded Plagioclase Porphyry

Sample Log

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery (%)	Sample Number	Batch	Au (g/t)	Ag (g/t)	As (ppm)	Comments
450.19	453.05	2.86	2.70	94.4	M677616	18				
453.05	456.29	3.24	2.56	79.0	M677617	18				
					M677618	18				BLANK
456.29	459.33	3.04	2.57	85	M677619	18				
459.33	461.95	2.62	2.00	76.3	M677620	18				
461.95	465.42	3.47	3.10	89.3	M677621	18				EOH @ 465.42m; 1 piece sawed - Diabase Dike

Density Log

Hole: DDH-M12-04 **Date:** August 2012

[illegible]

Geotechnical Log

Hole: DDH-M12-04

Tech Name:

Liz Bueckert

Date: July 29th

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery (%)	RQD (m)	RQD (%)	Strength	Joint Sets				DESCRIPTION
								Freq (/m)	Attitude (tca)	Shape	Roughness	
13.75	14.32	0.57	0.55	0.57	nil		2s	n/a	n/a			all rubble - no average frequency or attitude
14.32	17.37	3.05	2.55		0.2		2s	n/a	n/a			all rubble - no average frequency or attitude
17.37	20.42	3.05	1.97		nil		2s	0.25	60	2	1	mostly rubble one attitude taken
20.42	23.47	3.05	2		0.15		2s	0.19	n/a		1	mostly rubble to irregular to find an attitude
23.47	26.52	3.05	2.66		0.75		2s	0.19	70	1	1	mostly rubble - attitude based on one measurement
26.52	29.57	3.05	2.38		0.14		2s	0.11	65	1	1	irregular - rubble
29.57	32.61	3.04	2.3		0.52		2s	0.25	70	1	1	mostly rubble
32.61	35.66	3.05	2.28		0.66		2s	0.22	65	2	1	rubble
35.66	38.71	3.05	2.67		0.32		2s	0.13	60	2	1	rubble
38.71	41.76	3.05	2.46		1.04		2s	0.17	65	2	1	
41.76	44.81	3.05	2.39		0.62		2s	0.12	60	1	1	
44.81	47.85	3.04	2.55		0.88		2s	0.13	55	2	1	
47.85	50.9	3.05	2.85		1.42		2s	0.17	60	2	1	
50.9	53.95	3.05	2.32		1.61		2s	0.16	60	2	1	
53.95	57	3.05	2.39		0.5		2s	0.18	70	2	1	sections of rubble
57	60.05	3.05	2.63		0.73		2s	0.2	60	2	1	sections of rubble
60.05	63.1	3.05	2.19		nil		2s	n/a	n/a	2	1	all rubble - no average frequency or attitude
63.1	66.15	3.05	2.15		nil		2s	n/a	n/a	2	1	mostly rubble
66.15	69.19	3.04	2.25		0.63		2s	0.13	60	2	1	rubble
69.19	72.23	3.04	2.53		0.95		2s	0.15	60	2	1	rubble section
72.23	75.28	3.05	2.7		1.06		2s	0.13	60	2	1	
75.28	78.3	3.02	2.72		1.9		3s	0.19	60	1	1	
78.3	81.38	3.08	2.78		1.48		3s	0.17	65	1	1	
81.38	84.42	3.04	2.43		1.22		3s	0.14	60	1	1	
84.42	87.47	3.05	2.58		1.63		3s	0.19	60	1	1	
87.47	90.52	3.05	2.9		1.98		3s	0.16	70	1	1	
90.52	93.57	3.05	2.55		1.45		3s	0.16	70	1	1	
93.57	96.62	3.05	2.16		0.5		3s	0.19	70	2	1	all rubble - no average frequency or attitude
96.62	99.66	3.04	2.48		1.72		3s	0.16	60	1	1	rubble
99.66	102.71	3.05	2.5		1.47		3s	0.16	70	1	1	
102.71	105.76	3.05	2.59		1.09		3s	0.12	60	2	1	
105.76	108.81	3.05	2.43		1.3		3s	0.2	70	2	1	
108.81	111.86	3.05	2.85		2.09		3s	0.21	60	1	1	
111.86	114.9	3.04	2.7		1.54		3s	0.23	60	2	1	
114.9	117.95	3.05	2.65		1.1		3s	0.14	55	2	1	
117.95	121	3.05	3		2.05		3s	0.15	60	1	1	
121	124.05	3.05	2.72		2.32		3s	0.27	65	1	1	
124.05	127.1	3.05	2.71		2		3s	0.19	65	1	1	
127.1	130.15	3.05	2.88		2.37		3s	0.15	60	1	1	
130.15	133.2	3.05	2.74		2.21		3s	0.14	60	1	1	
133.2	136.25	3.05	2.34		0.62		3s	0.16	60	2	1	
136.25	139.3	3.05	2.9		2.83		3s	0.43	60	1	1	
139.3	142.35	3.05	2.76		2.29		3s	0.3	60	1	1	
142.35	148.43	6.08	2.81		2		3s	0.19	60	1	1	
148.43	151.48	3.05	2.67		1.25		3s	0.16	65	2	1	
151.48	154.53	3.05	2.79		2.5		3s	0.17	60	1	1	
154.53	157.58	3.05	2.8		2		3s	0.19	60	2	1	
157.58	160.62	3.05	2.73		1.9		3s	0.17	60	1	1	
160.62	163.67	3.05	2.83		1.63		3s	0.16	60	1	1	
163.67	166.72	3.05	2.37		1.17		3s	0.19	60	1	1	
166.72	169.77	3.05	2.65		1.73		3s	0.18	55	2	1	
169.77	172.82	3.05	2.55		1.56		3s	0.2	60	1	1	
172.82	175.86	3.04	2.84		2.55		3s	0.27	60	1	1	
175.86	178.91	3.05	2.83		2.38		3s	0.3	60	1	1	
178.91	181.96	3.05	2.7		1.25		3s	0.27	55	2	1	

Geotechnical Log

181.96	185.01	3.05	2.71		2.16		3s	0.25	60	2	1		
185.01	188.06	3.05	2.71		2.2		3s	0.25	60	1	1		
188.06	191.11	3.05	2.82		2.52		3s	0.25	60	1	1		
191.11	194.16	3.05	3.01		2.54		3s	0.23	60	2	1		
194.16	197.21	3.05	2.84		2.16		3s	0.2	60	1	1		
197.21	200.25	3.04	2.75		2.3		3s	0.21	55	2	1		
200.25	203.3	3.05	2.82		1.83		3s	0.17	65	2	1		
203.3	206.35	3.05	2.58		1.7		3s	0.17	50	1	1		
206.35	209.4	3.05	2.78		1.96		3s	0.16	65	2	1		
209.4	212.45	3.05	2.58		1.28		3s	0.18	70	1	1		
212.45	215.49	3.05	2.99		1.4		3s	0.15	70	2	1		
215.49	218.54	3.05	2.6		1.2		3s	0.11	n/a	2	1		
218.54	221.59	3.05	2.08		0.55		3s	0.25	70	2	1		
221.59	224.63	3.04	2.58		1.11		3s	0.15	n/a	2	1		
224.63	227.68	3.05	2.27		0.37		3s	0.16	60	2	1		
227.68	230.73	3.05	2.58		1.06		3s	0.15	45	2	1		
230.73	233.78	3.05	2.84		1.82		3s	0.17	n/a	1	1		
233.78	236.82	3.04	2.94		1.99		3s	0.18	60	1	1		
236.82	239.87	3.05	2.9		1.75		3s	0.15	55	1	1		
239.87	242.92	3.05	2.74		1.24		3s	0.17	40	2	1		
242.92	245.97	3.05	2.94		1.37		3s	0.14	45	1	1		
245.97	249.02	3.05	2.79		1.22		3s	0.13	60	1	1		
249.02	252.07	3.05	2.57		1.2		3s	0.17	65	2	1		
252.07	255.12	3.05	2.56		1.16		3s	0.25	50	2	1		
255.12	258.17	3.05	2.54		0.94		3s	0.17	70	1	1		
258.17	261.21	3.04	2.68		0.86		3s	0.13	70	2	1		
264.26	267.31	3.05	2.65		1.04		3s	0.16	60	2	1		
267.31	270.36	3.05	2.56		0.85		3s	0.17	55	2	1		
270.36	273.41	3.05	2.27		0.95		3s	0.12	65	1	1		
273.41	276.46	3.05	2.4		0.96		3s	0.19	60	1	1		
276.46	279.5	3.04	2.24		1.02		3s	0.16	60	2	1		
279.5	282.55	3.05	2.95		1.05		3s	0.15	60	2	1		
282.55	285.6	3.05	2.39		1.06		3s	0.14	n/a	2	1		
285.6	288.65	3.05	2.59		0.7		3s	0.16	60	1	1		
288.65	291.7	3.05	2.54		1.63		3s	0.14	n/a	2	1		
291.7	294.74	3.04	2.68		1.26		3s	0.15	65	2	1		
294.74	297.89	3.15	2.99		1.1		3s	0.15	n/a	2	1		
297.79	300.83	3.04	2.77		2.14		3s	0.17	60	2	1		
300.83	303.88	3.05	2.75		1.7		3s	0.19	55	2	1		
303.88	306.93	3.05	2.81		1.78		3s	0.16	60	2	1		
306.93	309.98	3.05	2.63		1.8		3s	0.17	n/a	2	1		tca range from 40 - 60
309.98	313.03	3.05	2.43		0.37		3s	0.15	65	2	1		
313.03	316.08	3.05	2.83		1.32		3s	0.18	60	2	1		
316.08	319.12	3.04	2.97		1.31		3s	0.17	55	2	1		
319.12	322.17	3.05	2.81		1.91		3s	0.2	n/a	1	1		tca range from 40 - 70
322.17	325.22	3.05	2.9		1.67		3s	0.14	60	2	1		
325.22	328.27	3.05	2.84		2		3s	0.2	75	2	1		
328.27	331.31	3.04	2.44		0.8		3s	0.12	75	2	1		
331.31	334.36	3.05	2.91		1.04		3s	0.12	n/a	2	1		tca range from 45 - 80
334.36	337.41	3.05	2.99		1.03		3s	0.13	65	2	1		
337.41	340.46	3.05	2.8		0.22		3s	0.12	75	2	1		
340.46	343.51	3.05	2.76		null		3s	0.23	n/a	2	1		all rubble contains no similar tca - frequency lower than noted due to rubble
343.51	346.55	3.04	2.22		null		3s	0.19	n/a	2	1		all rubble contains no similar tca - frequency lower than noted due to rubble
346.55	349.6	3.05	2.42		0.8		3s	0.19	60	2	1		
349.6	352.65	3.05	2.82		0.76		3s	0.2	65	2	1		
352.65	355.7	3.05	2.73		0.42		3s	0.19	65	2	1		
355.7	358.75	3.05	2.84		1		3s	0.15	65	2	1		
358.75	361.8	3.05	2.83		1.57		3s	0.17	55	2	1		
361.8	364.84	3.04	3.04		1.32		3s	0.21	65	2	1		
364.84	367.89	3.05	2.79		2.22		3s	0.27	55	2	1		

Geotechnical Log

367.89	370.95	3.06	2.83		2.35		3s	0.21	60	1	1		
370.95	374	3.05	2.85		2.18		3s	0.21	60	1	1		
374	377.04	3.04	2.45		0.3		3s	0.19	60	1	1		
377.04	380.09	3.05	2.34		0.36		3s	0.19	70	2	1		
380.09	383.14	3.05	2.43		0.78		3s	0.5	60	2	1		
383.14	386.18	3.04	0.5		0.5		3s	0.22	70	2	1		
386.18	389.23	3.04	3.03		1.74		3s	0.17	55	2	1		
389.23	392.27	3.04	2.98		1.73		3s	0.16	55	1	1		
392.27	395.32	3.05	2.76		1.26		3s	0.11	75	2	1		
395.32	398.37	3.05	2.83		0.6		3s	0.12	n/a	2	1		tca range from 55 - 80
398.37	401.42	3.05	2.61		0.57		3s	0.25	60	2	1		
401.42	404.47	3.05	2.6		0.4		3s	0.12	60	2	1		
404.47	407.51	3.04	2.37		0.8		3s	0.19	70	2	1		
407.51	410.56	3.05	2.79		1.73		3s	0.17	65	2	1		
410.56	413.61	3.05	2.66		1.65		3s	0.2	55	2	1		
413.61	416.66	3.05	2.98		1.93		3s	0.2	60	1	1		
416.66	419.71	3.05	2.63		2.17		3s	0.18	60	2	1		
419.71	422.76	3.05	2.83		2		3s	0.19	60	1	1		
422.76	425.81	3.05	2.39		1.5		3s	0.17	60	2	1		
425.81	428.85	3.04	2.21		0.5		3s	0.12	60	2	1		
428.85	431.9	3.05	2.74		0.31		3s	0.21	65	2	1		
431.9	434.95	3.05	2.57		0.34		3s	0.12	70	2	1		
434.95	438	3.05	2.82		0.47		3s	0.14	65	2	1		
438	441.05	3.05	2.51		1		3s	0.19	65	2	1		
441.05	444.1	3.05	2.56		0.9		3s	0.13	65	2	1		
444.1	447.15	3.05	3.04		0.71		3s	0.12	65	2	1		
447.15	450.19	3.04	3		1.92		3s	0.16	55	1	1		
450.19	453.24	3.05	2.65		1.41		3s	0.16	57	2	1		range 45 - 70
453.24	456.29	3.05	2.66		0.82		3s	0.13	55	1	1		range 40 - 70
456.29	459.33	3.04	2.52		0.76		3s	0.14	65	1	1		
459.33	462.38	3.05	2.7		nil		3s	0.15	70	2	1		
462.38	465.42 (EOH)	3.04			2.44		3s	0.25	50	2	1		

Magnetic Susceptibility Log

Depth (m)	Magnetic Susceptibility	DESCRIPTION
14	0.489	
15	0.317	
16	0.489	
17	0.538	
18	0.636	
19	0.232	
20	0.161	
21	0.149	
22	0.583	
23	0.316	
24	0.015	
25	0.616	
26	0.414	
27	0.496	
28	0.527	
29	0.451	
30	3.749	
31	0.570	
32	0.351	
33	0.462	
34	0.340	
35	0.848	
36	0.435	
37	14.470	
38	4.173	
39	0.234	
40	4.357	
41	0.216	
42	0.413	
43	2.378	
44	0.445	
45	0.388	
46	0.348	
47	0.127	
48	0.136	
49	0.158	
50	0.100	
51	0.179	
52	0.052	
53	0.047	
54	0.256	
55	0.050	
56	0.631	
57	0.362	
58	0.279	
60	0.192	
61	0.319	
62	0.167	
63	0.332	
64	0.665	
65	0.922	
66	1.591	
67	0.421	

Magnetic Susceptibility Log

Depth (m)	Magnetic Susceptibility	DESCRIPTION
68	0.408	
69	0.973	
70	0.270	
71	0.100	
72	0.211	
73	0.280	
74	0.816	
75	2.655	
76	0.136	
77	0.044	
78	0.601	
79	0.545	
80	9.668	
81	0.450	
82	2.166	
83	1.035	
84	15.940	
85	1.222	
86	0.926	
87	1.002	
88	0.687	
89	0.444	
90	1.052	
91	0.156	
92	0.539	
93	0.421	
94	0.011	
95	0.234	
96	0.567	
97	0.481	
98	0.270	
99	0.211	
100	0.454	
101	0.639	
102	0.302	
103	0.273	
104	0.730	
105	0.480	
106	0.444	
107	0.269	
108	0.671	
109	0.712	
110	0.003	
111	0.211	
112	0.408	
113	0.141	
114	0.055	
115	0.302	
116	0.237	
117	0.303	
118	1.652	
119	0.253	
120	1.892	
121	0.231	

Magnetic Susceptibility Log

Depth (m)	Magnetic Susceptibility	DESCRIPTION
122	0.434	
123	0.215	
124	0.175	
125	0.260	
126	0.140	
127	0.058	
128	0.205	
129	0.217	
130	0.366	
131	0.144	
132	0.125	
133	0.126	
134	0.138	
135	0.170	
136	0.067	
137	0.222	
138	0.162	
139	0.314	
140	0.277	
141	0.045	
142	0.060	
143	0.143	
144	0.110	
145	0.044	
146	3.798	
147	4.895	
148	0.229	
149	0.340	
150	3.347	
151	0.691	
152	2.549	
153	0.276	
154	0.291	
155	0.146	
156	0.028	
157	0.052	
158	0.064	
159	0.055	
160	0.091	
161	0.086	
162	0.156	
163	0.039	
164	0.052	
165	0.049	
166	0.081	
167	0.121	
168	0.321	
169	0.124	
170	0.071	
171	0.067	
172	0.055	
173	0.346	
174	0.420	
175	0.098	

Magnetic Susceptibility Log

Depth (m)	Magnetic Susceptibility	DESCRIPTION
176	0.232	
177	0.179	
178	0.941	
179	0.110	
180	0.044	
181	0.036	
182	0.350	
183	0.217	
184	0.295	
185	0.126	
186	0.122	
187	0.039	
188	0.090	
189	0.056	
190	0.116	
191	0.147	
192	0.160	
193	0.065	
194	0.174	
195	0.111	
196	0.081	
197	0.199	
198	0.200	
199	0.127	
200	0.116	
201	0.214	
202	0.195	
203	0.195	
204	0.432	
205	0.174	
206	0.527	
207	0.229	
208	0.150	
209	0.136	
210	0.048	
211	0.056	
212	0.022	
213	0.447	
214	0.548	
215	0.283	
216	0.198	
217	0.370	
218	0.374	
219	0.251	
220	0.176	
221	0.225	
222	0.426	
223	6.743	
224	1.955	
225	0.387	
226	4.288	
227	11.010	
228	2.925	
229	0.532	

Magnetic Susceptibility Log

Depth (m)	Magnetic Susceptibility	DESCRIPTION
230	2.801	
231	0.825	
232	3.546	
233	4.852	
234	0.202	
235	0.386	
236	1.149	
237	0.882	
238	3.605	
239	4.607	
240	0.912	
241	8.004	
242	7.236	
243	42.690	
244	22.450	
245	71.900	
246	25.080	
247	25.770	
248	30.940	
249	9.163	
250	2.195	
251	1.875	
252	0.544	
253	0.299	
254	0.371	
255	7.242	
256	1.279	
257	20.780	
258	1.009	
259	0.917	
260	0.465	
261	0.151	
262	0.243	
263	1.467	
264	0.102	
265	0.249	
266	1.116	
267	1.215	
268	0.293	
269	0.232	
270	0.123	
271	0.193	
272	0.242	
273	0.186	
274	0.172	
275	0.099	
276	0.262	
277	0.215	
278	0.235	
279	0.206	
280	0.122	
281	0.197	
282	0.367	
283	0.784	

Magnetic Susceptibility Log

Depth (m)	Magnetic Susceptibility	DESCRIPTION
284	0.223	
285	0.179	
286	0.421	
287	4.406	
288	18.280	
289	4.061	
290	3.765	
291	38.070	
292	4.460	
293	7.672	
294	20.430	
295	0.809	
296	3.056	
297	0.502	
298	0.150	
299	0.055	
300	0.062	
301	0.243	
302	0.637	
303	0.226	
304	0.953	
305	6.340	
306	10.350	
307	14.690	
308	24.150	
309	5.490	
310	3.869	
311	5.607	
312	13.360	
313	1.168	
314	17.770	
315	8.546	
316	3.586	
317	0.423	
318	0.675	
319	1.625	
320	11.970	
321	0.690	
322	0.201	
323	1.357	
324	1.089	
325	1.641	
326	0.041	
327	0.379	
328	0.352	
329	0.326	
330	0.310	
331	12.310	
332	0.176	
333	0.236	
334	0.286	
335	0.370	
336	0.194	
337	0.260	

Magnetic Susceptibility Log

Depth (m)	Magnetic Susceptibility	DESCRIPTION
338	0.257	
339	0.135	
340	0.030	
341	0.732	
342	0.989	
343	0.267	
344	0.434	
345	0.033	
346	0.022	
347	0.404	
348	0.701	
349	0.787	
350	0.126	
351	0.174	
352	0.290	
353	0.539	
354	0.216	
355	0.470	
356	0.047	
357	0.226	
358	0.413	
359	0.037	
360	0.292	
361	0.073	
362	0.049	
363	0.215	
364	0.293	
365	0.289	
366	0.103	
367	0.280	
368	0.347	
369	0.140	
370	0.191	
371	0.088	
372	0.238	
373	0.470	
374	0.216	
375	0.143	
376	4.963	
377	0.080	
378	0.145	
379	0.375	
380	0.384	
381	0.116	
382	2.987	
383	0.383	
384	0.121	
385	0.233	
386	2.332	
387	2.967	
388	1.800	
389	0.153	
390	0.113	
391	0.005	

Magnetic Susceptibility Log

Depth (m)	Magnetic Susceptibility	DESCRIPTION
392	0.229	
393	0.044	
394	0.222	
395	0.124	
396	0.470	
397	0.848	
398	0.010	
399	0.143	
400	0.484	
401	0.374	
402	0.019	
403	0.041	
404	0.016	
405	0.131	
406	0.163	
407	5.368	
408	0.058	
409	1.580	
410	0.155	
411	0.223	
412	0.043	
413	0.066	
414	0.034	
415	0.377	
416	0.356	
417	0.101	
418	0.043	
419	0.422	
420	0.152	
421	0.759	
422	0.237	
423	0.166	
424	0.200	
425	0.164	
426	2.832	
427	0.267	
428	0.134	
429	0.564	
430	0.139	
431	0.116	
432	0.575	
433	2.076	
434	1.018	
435	0.157	
436	0.323	
437	0.221	
438	0.044	
439	0.710	
440	0.194	
441	0.148	
442	0.467	
443	0.096	
444	0.371	
445	0.147	

Magnetic Susceptibility Log

Depth (m)	Magnetic Susceptibility	DESCRIPTION
446	0.143	
447	0.160	
448	0.730	
449	0.051	
450	0.669	
451	0.682	
452	0.529	
453	0.493	
454	0.816	
455	0.248	
456	0.059	
457	0.165	
458	0.096	
459	0.273	
460	0.186	
461	0.526	
462	1.897	
463	4.129	
464	6.598	
465	16.130	

Box Log

Hole:

Date:

Box #	From (m)	To (m)
1	13.75	17.69
2	17.69	24.03
3	24.03	29.01
4	29.01	34.69
5	34.69	39.00
6	39.00	44.81
7	44.81	50.10
8	50.10	56.17
9	56.17	60.59
10	60.59	66.02
11	66.02	71.05
12	71.05	75.90
13	75.90	81.38
14	81.38	86.62
15	86.62	92.25
16	92.25	97.13
17	97.13	102.71
18	102.71	107.64
19	107.64	113.04
20	113.04	118.42
21	118.42	124.05
22	124.05	129.53
23	129.53	134.62
24	134.62	139.83
25	139.83	145.57
26	145.57	151.00
27	151.00	156.49
28	156.49	162.01
29	162.01	167.85
30	167.85	173.02
31	173.02	178.82
32	178.82	184.53
33	184.53	190.64
34	190.64	196.28
35	196.28	202.06
36	202.06	207.48
37	207.48	212.95
38	212.95	218.45
39	218.45	223.50
40	223.50	228.80
41	228.80	234.43
42	234.43	240.02
43	240.02	245.48
44	245.48	250.48
45	250.48	255.66
46	255.66	261.09

Box Log

47	261.09	266.05
48	266.05	271.68
49	271.68	276.68
50	276.60	276.60
51	281.68	286.82
52	286.82	291.85
53	291.85	296.85
54	296.90	302.16
55	302.16	307.42
56	307.42	312.65
57	312.65	318.03
58	318.03	323.62
59	323.62	323.62
60	329.00	329.00
61	334.24	334.24
62	339.24	339.24
63	343.72	348.37
64	348.37	352.76
65	352.76	358.02
66	358.02	363.17
67	363.17	368.57
68	368.57	374.43
69	374.43	379.78
70	379.78	384.31
71	384.31	389.77
72	389.77	392.2
73	392.2	399.81
74	399.81	399.81
75	405.07	405.07
76	410.78	410.78
77	416.12	416.12
78	421.5	421.5
79	426.68	426.68
80	431.9	431.9
81	436.4	436.4
82	441.11	441.11
83	446.06	446.06
84	451.19	451.19
85	456.42	456.42
86	461.05	465.42 (EOH)

PROPERTY

ZONE:

SECTION:

Grid East	Grid North	Easting	Northing	Elev.	Depth (m)
		504994	6851649	1430m	450.19

HOLE: DDH-M12-05

CLAIM: YD57206

Contractor: Platinum Drilling

Drill: 1

Core size: NQ2 Reduced at: (m)

Casing depth: 12.19 (m) in / **out**

Drilling dates: July 14-19, 2012

Geology logged by: Nick Bueckert

SURVEY							
Depth (m)	Azimuth	Dip	Method	Depth (m)	Azimuth	Dip	Method
0	90	-60		246.1	98.4	-56.9	Ranger
17.4	86.7	-56.8	Ranger	307.1	98	-57	Ranger
108.9	89.3	-56.8	Ranger	398.6	100.3	-57	Ranger
185.1	92	-56.9	Ranger	429.1	101.6	-57	Ranger

TARGET:

[illegible]

SAMPLES		
Numbers:	M677639-	M650136
Total: <u>198</u>		
Batch: <u>19-24</u>		
Date Sent: _____		
Certificate: _____		

COMMENTS	
	EOH @ 450.19m

Geology Log

Hole: DDH -12-05

Logger:

Date: AUG 2012

GENERAL INTERVAL			DETAILED INTERVAL			LITHOLOGY					ALTERATION							MINERALS			Photo	DETAILED DESCRIPTION			
From (m)	To (m)	Interval (m)	From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Shade	Colour	Texture	Propylitic	Argillic	Phyllic	Potassic	Silic	Limonitic	Other		Pyrite	Other					
																	Type	Intensity		Type			Conc. (%)		
0.00		0.00	0.00																				Casing		
11.01	72.24					V1		MD	GY	MA							1	SER	2	2	DI		VOLCANIC 1 (andesite) - sericite altered - Grey colour medium-grained crowded plagioclase, with 5-15% mafics replaced by chlorite and pyrite. Chlorite locally occurs as <1cm grains. Minor zones of intense sericitization and clay alteration. Overall core is highly fractured with metre-scale zones of competent core. Limonite staining on fractures up to 32.00m. Downhole increase in pyrite mineralization on fracture surfaces (<10%). Local ankerite veining and vuggy pyrite carbonate veinlets. Pyrite mineralized fractures (healed) are common.		
								LT	GY									SER	3	10	BL		Blebbpy pyrite <10%		
																				1	ST				
72.24	85.14					V1	FG	DK	GY	MA							pot		2	2	DI		VOLCANIC 1 (andesite) - potassic alteration(?) - Dark grey, massive fine-grained pyrite-magnetite-bearing volcanic with faintly visible plagioclase phenocrysts and patchy white zones associated with increase in pyrite stringers.		
										PA										2	2	ST			
			72.24	76.50		V1	FG	DK	GY	MA							POT		2	2	DI		VOLCANIC 1 (andesite) - potassic alteration(?) - Dark grey, massive fine-grained pyrite-magnetite-bearing volcanic with faintly visible plagioclase phenocrysts and patchy white zones associated with increase in pyrite stringers.		
										PA											2	2	ST		
			76.50	76.77		V1		LT	GY	BX													VOLCANIC 1 (andesite) - carbonate-rich zone with minor vuggy breccia. No increase in pyrite mineralization		
										VU															
			76.70	82.50		V1	FG	DK	GY	MA							POT		2	2	DI		VOLCANIC 1 (andesite) - potassic alteration(?) - Dark grey, massive fine-grained pyrite-magnetite-bearing volcanic with faintly visible plagioclase phenocrysts and patchy white zones associated with increase in pyrite stringers.		
										PA											2	2	ST		
			82.50	83.00		IPD				WH												1	DI	INTERMEDIATE PORPHYRY DIKE - felsic dike - Medium-grained plagioclase-crowded with light grey crystalline matrix; white clay along fractures; very fine-grained disseminated pyrite present	
								LT	GY																
			83.00	85.14		V1	FG	DK	GY	MA							POT		2	2	DI		VOLCANIC 1 (andesite) - potassic alteration(?) - Dark grey, massive fine-grained pyrite-magnetite-bearing volcanic with faintly visible plagioclase phenocrysts and patchy white zones associated with increase in pyrite stringers.		
										PA											2	2	ST		
85.14	138.31					PP		MD	GY	MA					3		PRO		1	2	DI		PLAGIOCLASE PORPHYRY - Dark grey massive unaltered dominate; weak propylitic altered subordinate. Blebbpy pyrite <6%		
								LT	GN												6	BL			
138.31	165.00					PP		DK	GY	PA							3	PRO	3		MG	40		PLAGIOCLASE PORPHYRY - Increase in propylitic and potassic(?) alteration. Breccia zones common. Increase in magnetite stringers and disseminations. Alteration type and intensity alternates throughout interval. Chlorite, milky white feldspar, Kspar(?) present. Magnetite+/-chlorite clots present in stringers. Minor zones of sericitization throughout interval	
																	pot	3							

Geology Log

GENERAL INTERVAL			DETAILED INTERVAL			LITHOLOGY					ALTERATION							MINERALS			Photo	DETAILED DESCRIPTION	
From (m)	To (m)	Interval (m)	From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Shade	Colour	Texture	Propylitic	Argillic	Phyllic	Potassic	Silic	Limonitic	Other		Pyrite	Other			
																	Type	Intensity		Type			Conc. (%)
			138.31	141.86		PP		DK	GY	PA							3	PRO	3	MG	40		
			141.86	143.51		PP		LT	GY	BX						4	2			4	VT		PLAGIOCLASE PORPHYRY - sericitized breccia; clast-supported; pyrite veinlets present
			143.51	153.75		PP		DK	GY	PA							3	PRO	3	MG	40		PLAGIOCLASE PORPHYRY - Increase in propylitic and potassic(?) alteration. Breccia zones common. Increase in magnetite stringers and disseminations. Alteration type and intensity alternates throughout interval. Chlorite, milky white feldspar, Kspar(?) present. Magnetite+/-chlorite clots present in stringers. Minor zones of sericitization throughout interval
			153.75	157.58		PP		LT	GY	PA									SER	3	1 DI		PLAGIOCLASE PORPHYRY - sericite altered zone with gougey, clay altered veinlets and veins hosting <3% disseminated chalcocite(?) Decrease in pyrite from normal veinlets 20 degrees to core axis (average)
						PP		LT												10 VT			
																				cc	3		chalcocite(?) <3%
			157.58	165.00		PP		DK	GY	PA							3	PRO	3	MG	40		PLAGIOCLASE PORPHYRY - Increase in propylitic and potassic(?) alteration. Breccia zones common. Increase in magnetite stringers and disseminations. Alteration type and intensity alternates throughout interval. Chlorite, milky white feldspar, Kspar(?) present. Magnetite+/-chlorite clots present in stringers. Minor zones of sericitization throughout interval
165.00	183.19					PP		LT	GY	MA										2 DI			PLAGIOCLASE PORPHYRY - sericite alteration - Metre-scale zone of weak potassic alteration (Kspar-rich) at top of the interval. Core is moderately fractured
										BX								SER	3	6 BL			Blebbly pyrite <6%
			165.00	181.60		PP		LT	GY	MA										2 DI			PLAGIOCLASE PORPHYRY - sericite alteration - Metre-scale zone of weak potassic alteration (Kspar-rich) at top of the interval. Core is moderately fractured
										BX								SER	3	6 BL			Blebbly pyrite <6%
			181.60	181.97		PP		LT	GY	BX										8 BL			PLAGIOCLASE PORPHYRY - breccia - Gougey/clay alteration; very coarse-grained pyrite mineralization in massive milky quartz-carbonate vein (2cm)
			181.97	183.19		PP		LT	GY	MA										2 DI			PLAGIOCLASE PORPHYRY - sericite alteration - type case for interval
										BX								SER	3	6 BL			Blebbly pyrite <6%
183.19	205.60					IPD		LT	BN	PO													INTERMEDIATE PORPHYRY DIKE - chlorite-phyrlic (turquoise phenocrysts); yellow mineral present; brownish white milky matrix; one zone of dark grey cobble breccia with ankerite veinlets (30 degrees to core axis)
205.60	266.04					PP-A			wh								pro	1		mg	10		PLAGIOCLASE PORPHYRY - Plagioclase-crowded; increasing medium-grained to very coarse-grained mafics (non-magnetic); downhole <40% mafics. Stockwork quartz(?) stringers have white plag-phyrlic envelopes. Top of interval is brecciated and hosts sulphide mineralization. Weak potassic alteration (development of K-spar) in several zones, but mostly unaltered

Geology Log

GENERAL INTERVAL			DETAILED INTERVAL			LITHOLOGY					ALTERATION								MINERALS			Photo	DETAILED DESCRIPTION		
From (m)	To (m)	Interval (m)	From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Shade	Colour	Texture	Propylitic	Argillic	Phyllic	Potassic	Silic	Limonitic	Other		Pyrite	Other					
																	Type	Intensity		Type	Conc. (%)				
								lt	gy								pot	1							
			205.60	206.35		PP-A			GY	BX					5					10	BL		2	PLAGIOCLASE PORPHYRY-A - breccia - Silica-flooded matrix (30%) hosting blebby pyrite (<10%) and intergrown chalcopyrite; subangular clasts (4mm-1.5cm) are plagioclase-phyric.	
			206.35	212.06		PP-A		LT	GY	BX										5	gn		4	2	PLAGIOCLASE PORPHYRY-A - Zones of crackle breccia and quartz-carbonate veining + sheeted fractures host pyrite(5-15%)+/-chalcocite(?) mineralization. Clay occurs at vein margins. Disseminated grey mineral (galena?) is not associated with veining or breccia
			212.06	224.64		PP-A			wh	po															PLAGIOCLASE PORPHYRY - Plagioclase-crowded; increasing medium-grained to very coarse-grained mafics (non-magnetic); downhole <40% mafics. Stockwork quartz(?) stringers have white plag-phyric envelopes. Weak potassic alteration (development of K-spar) in several zones, but mostly unaltered
								lt	bk								pro	1		mg		10			
									gy	bn							pot	1							
			224.64	230.40		PP-A			WH								POT	1							PLAGIOCLASE PORPHYRY-A - unaltered diorite with subordnate potassic alteration; xenoliths (1-3cm) of black magnetite-rich rock
									BK																
			230.40	231.15		PP-A		LT	GY	BX							SER	4	30	MA					PLAGIOCLASE PORPHYRY-A - sericite altered crackle breccia hosting semi-massive pyrite in matrix
			231.15	235.15		PP-A			wh	po															PLAGIOCLASE PORPHYRY - Plagioclase-crowded; increasing medium-grained to very coarse-grained mafics (non-magnetic); downhole <40% mafics. Stockwork quartz(?) stringers have white plag-phyric envelopes. Weak potassic alteration (development of K-spar) in several zones, but mostly unaltered
								lt	bk								pro	1		mg		10			
									gy	bn							pot	1							
			235.15	236.02		PP-A			BK	BX							POT	3		MG		30			PLAGIOCLASE PORPHYRY-A - matrix-supported breccia - with subangular to rounded clasts (3mm - 10cm) in black magnetite-rich (<30%) matrix
								LT	PK																
			236.02	253.10		PP-A			wh	po															PLAGIOCLASE PORPHYRY - Plagioclase-crowded; increasing medium-grained to very coarse-grained mafics (non-magnetic); downhole <40% mafics. Stockwork quartz(?) stringers have white plag-phyric envelopes. Weak potassic alteration (development of K-spar) in several zones, but mostly unaltered
									bk								pro	1		mg		10			
								lt	gy								pot	1							
									bn																
			253.10	266.04		PP-A		LT	PK	MA							POT	2		1	DI				PLAGIOCLASE PORPHYRY-A - Increase in Kspar+/-chlorite; quartz absent. Infrequent potassic (Kspar-rich) alteration; infrequent magnetite stringers 25 degrees to core axis; pyrite stringers and one smoky quartz vein in sericite envelope 65 degrees to core axis. Core competent
									BK												MG		10		
									WH																

Geology Log

GENERAL INTERVAL			DETAILED INTERVAL			LITHOLOGY					ALTERATION							MINERALS			Photo	DETAILED DESCRIPTION		
From (m)	To (m)	Interval (m)	From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Shade	Colour	Texture	Propylitic	Argillic	Phyllic	Potassic	Silic	Limonitic	Other		Pyrite	Other				
																	Type	Intensity		Type			Conc. (%)	
266.04	298.12					PP-A		DK	GY	PA								POT	3	MG	25		PLAGIOCLASE PORPHYRY-A - potassic and propylitic(?) altered - Decrease in grain size from coarse-grained, to medium-grained. Increase in magnetite abundance (<25%), core moderate to strongly magnetic; decrease in Kspar abundance. Increase in chlorite+/-epidote mineralization (early propylitic alteration?) Irregular magnetite clasts (<8cm) rare;	
									DK	ma								pro	2					
										PK														
			266.04	271.05		PP-A		DK	GY	PA								POT	3	MG	25	PLAGIOCLASE PORPHYRY-A - potassic and propylitic(?) altered - Decrease in grain size from coarse-grained, to medium-grained. Increase in magnetite abundance (<25%), core moderate to strongly magnetic; decrease in Kspar abundance. Increase in chlorite+/-epidote mineralization (early propylitic alteration?)		
									DK	ma								pro	2					
										PK														
			271.05	271.57		PP	mg																PLAGIOCLASE PORPHYRY - plagioclase-crowded porphyry dike in dark grey crystalline matrix	
			266.04	271.05		PP-A		DK	GY	PA								POT	3	MG	25	PLAGIOCLASE PORPHYRY-A - potassic and propylitic(?) altered - Decrease in grain size from coarse-grained, to medium-grained. Increase in magnetite abundance, core moderate to strongly magnetic; decrease in Kspar abundance. Increase in chlorite+/-epidote mineralization (early propylitic alteration?)		
									DK	ma								pro	2					
										PK														
			278.93	285.83		PP-A'	mg	DK	GY									POT	4	2 DI HE MG	ST 30	PLAGIOCLASE PORPHYRY-A? potassic and propylitic(?) altered - plagioclase-crowded porphyry dike in dark grey crystalline matrix		
																		pro	3					Magnetite (<30%)
																								PLAGIOCLASE PORPHYRY-A - potassic and propylitic(?) altered - Decrease in grain size from coarse-grained, to medium-grained. Increase in magnetite abundance (<25%), core moderate to strongly magnetic; decrease in Kspar abundance. Increase in chlorite+/-epidote mineralization (early propylitic alteration?)
			285.83	298.12		PP-A		DK	GY	PA								POT	3	MG	25			
									DK	ma								pro	2					
										PK														
298.12	311.63					PP-A		LT	PK	PA								POT	3	3 DI MG	5	PLAGIOCLASE PORPHYRY-A - potassic and propylitic(?) altered Decrease in potassic alteration, chlorite gives greenish tinge. Veining frequent; magnetite absent zones frequent. Massive magnetite clasts (irregular, <3cm) present but rare		
									WH									pro	2					
								LT	BK															
								GY																
			298.12	299.53		PP-A		LT	GY						4					3 DI MG	5	PLAGIOCLASE PORPHYRY-A - Zone of frequent stockwork carbonate stringers and patchy silicified zones (strong)		
			299.53	306.12		PP-A		LT	PK	PA								POT	3			PLAGIOCLASE PORPHYRY-A - potassic and propylitic(?) altered Decrease in potassic alteration, chlorite gives greenish tinge. Veining frequent; magnetite absent zones frequent.		
									WH									PRO	2					
									BK															
								LT	GY															
			306.12	306.80		IPD		LT	GY	MA													INTERMEDIATE PORPHYRY DIKE - plagioclase-chlorite-phyrlic; texture more massive than porphyritic	

Geology Log

GENERAL INTERVAL			DETAILED INTERVAL			LITHOLOGY					ALTERATION							MINERALS			Photo	DETAILED DESCRIPTION	
From (m)	To (m)	Interval (m)	From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Shade	Colour	Texture	Propylitic	Argillic	Phyllic	Potassic	Silic	Limonitic	Other		Pyrite	Other			
																	Type	Intensity		Type			Conc. (%)
			306.12	311.63		PP-A		LT	PK	PA								POT	3	3 DI MG	5	PLAGIOCLASE PORPHYRY-A - Decrease in potassic alteration, chlorite gives greenish tinge. Veining frequent; magnetite absent zones frequent.	
									WH									PRO	2				
								LT	BK														
									GY														PLAGIOCLASE PORPHYRY-A - Texturally similar to 266.04m - 298.12m interval. Black, green, pinkish white flecked medium to coarse-grained massive plagioclase-Kspar-magnetite-chlorite+/-pyrite bearing diorite with strong potassic-chlorite alteration. Zones of silicification common; chlorite+/-pyrite stringers to veinlets with potassic envelope common. Most of interval is moderate to strongly magnetitic (magnetite <50%). Minor white bleached zone of sericite alteration (clay present, 5%pyrite). Local strong-intense potassic alteration where unit is pink and black speckled only. These zones are associated with very frequent carbonate stringers.
311.63	377.63					PP-A			BK	MA					4		POT	4	3 DI MG	50			
								MD	GN	PA							pro	4					
									GY								SER	5					
																							PLAGIOCLASE PORPHYRY-A - Texturally similar to 266.04m - 298.12m interval. Black, green, pinkish white flecked medium to coarse-grained massive plagioclase-Kspar-magnetite-chlorite+/-pyrite bearing diorite with strong potassic-chlorite alteration. Zones of silicification common; chlorite+/-pyrite stringers to veinlets with potassic envelope common. Most of interval is moderate to strongly magnetitic (magnetite <50%). Minor white bleached zone of sericite alteration (clay present, 5%pyrite). Local strong-intense potassic alteration where unit is pink and black speckled only. These zones are associated with very frequent carbonate stringers.
			311.63	312.72		PP-A			BK	MA					4		POT	4	3 DI MG	50			
								MD	GN	PA							pro	4					
									GY								SER	5					
																							PLAGIOCLASE PORPHYRY-A - potassic alteration - zone of very frequent sheeted chlorite-magnetite stringers with pink potassic envelopes (<4mm); stringers 1cm apart (20 degrees to core axis). Epidote clots present (<5%)
			312.72	315.84		PP-A			LT	PK							POT	4	1 DI				
									MD	GN													
																							PLAGIOCLASE PORPHYRY-A - Texturally similar to 266.04m - 298.12m interval. Black, green, pinkish white flecked medium to coarse-grained massive plagioclase-Kspar-magnetite-chlorite+/-pyrite bearing diorite with strong potassic-chlorite alteration. Zones of silicification common; chlorite+/-pyrite stringers to veinlets with potassic envelope common. Most of interval is moderate to strongly magnetitic (magnetite <50%). Minor white bleached zone of sericite alteration (clay present, 5%pyrite). Local strong-intense potassic alteration where unit is pink and black speckled only. These zones are associated with very frequent carbonate stringers.
			315.84	316.34		PP-A			BK	MA					4		POT	4	3 DI MG	50			
								MD	GN	PA							pro	4					
									GY								SER	5					
																							PLAGIOCLASE PORPHYRY- A - Core is highly fractured - very distinct; no textural evidence for faulting; pyrite stringers present (<30cm zones); looks like typical plagioclase porphyry texture
			316.34	331.53		PP-A		DK	GN	MA									3 DI 5 DI				
									BK	PA													
																							PLAGIOCLASE PORPHYRY- A - sericite alteration and silicification - zone of strong sericite alteration and patches of silicification; stockwork pyrite stringers are frequent; rubbley core is gougey/clay altered
			331.53	333.10		PP-A		DK	GN	MA					4		SER	4	2 DI 5				
									BK	MA													

Geology Log

GENERAL INTERVAL			DETAILED INTERVAL			LITHOLOGY					ALTERATION								MINERALS			Photo	DETAILED DESCRIPTION
From (m)	To (m)	Interval (m)	From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Shade	Colour	Texture	Propylitic	Argillic	Phyllic	Potassic	Silic	Limonitic	Other		Pyrite	Other			
																	Type	Intensity		Type	Conc. (%)		
			333.10	340.46		PP-A		DK	GN BK	MA PA									3 DI 5 DI				PLAGIOCLASE PORPHYRY- A - Core is highly fractured - very distinct; no textural evidence for faulting; pyrite stringers present (<30cm zones); looks like typical plagioclase porphyry texture
			340.46	341.25		PP-A			BK GN GY	MA PA					4		POT pro SER	4 4 5	3 DI MG	50			PLAGIOCLASE PORPHYRY-A - Texturally similar to 266.04m - 298.12m interval. Black, green, pinkish white flecked medium to coarse-grained massive plagioclase-Kspar-magnetite-chlorite+/-pyrite bearing diorite with strong potassic-chlorite alteration. Zones of silicification common; chlorite+/-pyrite stringers to veinlets with potassic envelope common. Most of interval is moderate to strongly magnetite (magnetite <50%). Minor white bleached zone of sericite alteration (clay present, 5%pyrite). Local strong-intense potassic alteration where unit is pink and black specked only. These zones are associated with very frequent carbonate stringers.
			341.25	345.35		PP-A			BK PK GN								POT	5	1 DI ak	2			PLAGIOCLASE PORPHYRY-A - intense potassic alteration and frequent carbonate stringers (stockwork) 0-70 degrees to core axis (15/m), 2% milky ankerite(?) infill
			345.35	345.68		PP-A			BK GN	MA									1 DI				PLAGIOCLASE PORPHYRY-A - Two massive fine-grained, subangular magnetite-rich clasts/dikes(?) (13cm each)
			345.68	372.60		PP-A			BK PK GN								POT	5	1 DI ak	2			PLAGIOCLASE PORPHYRY-A - intense potassic alteration and frequent carbonate stringers (stockwork) 0-70 degrees to core axis (15/m), 2% milky ankerite(?) infill
			372.60	377.67		PP-A			BK GN	BX PA							POT	4					PLAGIOCLASE PORPHYRY-A - potassic alteration/breccia - black and dark green patchy moderate-strongly magnetic, brecciated potassic altered Plagioclase Porphyry-A. Breccia texture is faint; clasts (2cm avg.) are subrounded-rounded; pink Kspar-rich matrix (20%) with medium-grained magnetite. Chlorite locally present in matrix
377.67	393.13					PP			BK PK GN	PO PA							POT	5	2 DI				PLAGIOCLASE PORPHYRY - see 341.25m - 372.60m interval - very similar except for two zones of massive white carbonate veinlets and minor crackle breccia infill. Weak to strongly magnetic core. Top 3m of zone Kspar>magnetite with Kspar-rich vein(?) or matrix(?) (<2cm wide) associated with potassic alteration. Looks like phase has changed back to plagioclase porphyry.
393.13	396.76					PP-A			PK BK								POT	2					PLAGIOCLASE PORPHYRY-A - weak to moderate potassic alteration - Pink with black specks. Coarse-grained Kspar-magnetite altered diorite.
396.76	420.29					PP	FG		BK	PA							POT	4					PLAGIOCLASE PORPHYRY? - fine-grained - cannot determine if PP or PP-A or either. Weak to strongly magnetic. Fine-grained chlorite-abundant, patchy Kspar and Kspar veining. Frequent calcite+/-chlorite stringers (sheeted). Matrix-supported cobble breccia zones (metre-scale) common. Magnetite-rich matrix(?)

Geology Log

GENERAL INTERVAL			DETAILED INTERVAL			LITHOLOGY					ALTERATION							MINERALS			Photo	DETAILED DESCRIPTION			
From (m)	To (m)	Interval (m)	From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Shade	Colour	Texture	Propylitic	Argillic	Phyllic	Potassic	Silic	Limonitic	Other		Pyrite	Other					
																	Type	Intensity		Type			Conc. (%)		
			396.76	414.33		PP	FG		BK	PA								POT	4	3 DI gn	2		PLAGIOCLASE PORPHYRY? - fine-grained - cannot determine if PP or PP-A or either. Weak to strongly magnetic. Fine-grained chlorite-abundant, patchy Kspar and Kspar veining. Frequent calcite+/-chlorite stringers (sheeted). Matrix-supported cobble breccia zones (metre-scale) common. Magnetite-rich matrix(?)		
			414.33	419.71		PP		LT	GY	PA								POT	3				PLAGIOCLASE PORPHYRY? - medium-grained plagioclase in milky white and black crystalline matrix throughout interval. Sericite overprint over earlier potassic alteration (white stringers/envelopes are associated with sericite alteration).		
						PP-A		DK	GY									SER	3						
			419.71	420.29		PP	FG		BK	PA								POT	4	3 gn CP	5 X 3		PLAGIOCLASE PORPHYRY? - fine-grained - cannot determine if PP or PP-A or either. Weak to strongly magnetic. Fine-grained chlorite-abundant, patchy Kspar and Kspar veining. Frequent calcite+/-chlorite stringers (sheeted). Matrix-supported cobble breccia zones (metre-scale) common. Magnetite-rich matrix(?)		
420.29	435.61					IPD		LT	GN	PO								SER	4				INTERMEDIATE PORPHYRY DIKE - strong sericite alteration for 2m - core bleached, variable grain size (medium to coarse-grained) 20cm zone of irregular flow banding is associated fracture controlled coarse-grained galena and blebby chalcopyrite+/-pyrite. Disseminated galena throughout sericite alteration(?)		
								LT	GY	FL															
			420.29	422.55		IPD		LT	GY	FL								SER	4				INTERMEDIATE PORPHYRY DIKE - 20cm zone of irregular flow banding is associated fracture controlled coarse-grained galena and blebby chalcopyrite+/-pyrite (described in interval above)		
			422.55	435.61		IPD		LT	GN	PO										3 ST 1 DI			INTERMEDIATE PORPHYRY DIKE - felsic - chlorite-phyric in greenish white, milky crystalline matrix. Weak clay alteration. Dark gry flow bands present		
								LT	GY	FL															
435.61	450.19					PP				PO								pot	4				PLAGIOCLASE PORPHYRY - potassic altered(?) - plagioclase-phyric (coarse-grained) in black, magnetite-rich fine-grained to crystalline matrix. No Kspar present. Fine-grained chlorite-present		
	EOH																						EOH @ 450.19m		

Contact Log

Hole: DDH-M12-05 Logger Name: Nick Bueckert

Date: August 2012

Depth (m)	DESCRIPTION
82.50	VOLCANIC 1 (andesite) - INTERMEDIATE PORPHYRY DIKE - 0 degrees to core axis - contact is subtle; Intermediate Porphyry dike is distinctly plagioclase-phyric
83	INTERMEDIATE PORPHYRY DIKE - PLAGIOCLASE PORPHYRY - orientation of contact unknown
183.19	PLAGIOCLASE PORPHYRY - INTERMEDIATE PORPHYRY DIKE - 90 degrees to core axis; irregular texture and colour change; flow bands in Intermediate Porphyry 30 degrees to core axis
205.60	INTERMEDIATE PORPHYRY DIKE - PLAGIOCLASE PORPHYRY-A - contact runs along core axis for 35cm and crosscuts the axis at 90 degrees (uphole) and 15 degrees (downhole). Intermediate porphyry dike is chilled at contact (1cm wide); Plagioclase Porphyry is brecciated at contact
271.05	PLAGIOCLASE PORPHYRY-A -INTERMEDIATE PORPHYRY DIKE - 35 degrees to core axis; contact sharp, decrease in grain size and transition to black colour. Plagioclase porphyry-a clasts (<3cm) in dike
271.57	INTERMEDIATE PORPHYRY DIKE - PLAGIOCLASE PORPHYRY - 25 degrees to core axis; contact sharp, increase in grain size
306.12	PLAGIOCLASE PORPHYRY - INTERMEDIATE PORPHYRY DIKE - 60 degrees to core axis; undulatory contact
306.80	INTERMEDIATE PORPHYRY DIKE - PLAGIOCLASE PORPHYRY - 60 degrees to core axis; undulatory contact
393.13	PLAGIOCLASE PORPHYRY - PLAGIOCLASE PORPHYRY-A - 40 degrees to core axis; sharp contact, colour change from black to pink
396.76	PLAGIOCLASE PORPHYRY-A - PLAGIOCLASE PORPHYRY - 90 degrees to core axis; sharp contact
420.29	PLAGIOCLASE PORPHYRY - INTERMEDIATE PORPHYRY DIKE - 35 degrees to core axis; sharp, irregular contact
435.01	INTERMEDIATE PORPHYRY DIKE - PLAGIOCLASE PORPHYRY(?) - 40 degrees to core axis; sharp undulatory-irregular contact

Secondary Structure Log

Hole: M12-05

Logger Name:

Date: August 2012

[illegible]

Secondary Structure Log

2° Structure Type	From (m)	To (m)	Attitude (TCA)	Attitude (TRFE)	Count	MINERALS		DESCRIPTION
						Type	Conc. (%)	
VN	297.06	297.20	40		1	py	50	Vuggy grey quartz and pyrite vein (1cm) in white bleached envelope (no clay alteration). Wide envelope of greyish ?silicified? host rock
VT	319.13	319.14	20			py	8	Grey quartz +/-pyrite veinlet in white weakly silicified zone.
VT	335.60	335.69	60		3	py	<50	Three sheeted grey quartz veinlets with <50% pyrite in grey silicified zone (20cm)
VT	377.67	393.13	65		3/m	py	3	chlorite+/-pyrite veinlets minor (15 < 65 degrees to core axis). Kspar associated with magnetite vein (1cm) @ 25 degrees to core axis
VT	387.77	388.73	25		15	py	3	White calcite+/-pyrite veinlets, approximately sheeted and calcite infill of minor crackle breccia. Light grey envelopes (<4cm) in zone with fine-grained pyrite (sericite alteration). Locally frequent grey quartz stringers present (stockwork)
VT	393.13	396.76	10		7			Chlorite and calcite stringers infrequent (10-20 degrees to core axis); magnetite stringers (<40 degrees to core axis) present at lower contact
VN	410.57	410.87	30		4	py	10	Zone of four milky white and grey quartz veinlets (3mm-1cm) hosting pyrite+/-galena(?). Sericite and chlorite selvages (2cm) occur with veining
						gn	<10	
VN	414.33	419.71				py	3	Pyrite and galena(?) veins (<1cm) in plagioclase-phyric envelopes present. Intense stockwork quartz-calcite veining (stringers).
						gn?	2	
ST	435.61	450.19	25		7/m	py	2	Chlorite stringers present. Local quartz+/-pyrite veinlets! Stockwork calcite stringers common

Sample Log

Hole: M12-05

Date: AUG 2012

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery (%)	Sample Number	Batch	Au (g/t)	Ag (g/t)	As (ppm)	Comments
11.01	14.32	3.31	3.00	90.6	M677639	19				
14.32	17.37	3.05	2.67	87.5	M677640	19				
17.37	20.42	3.05	2.64	86.6	M677641	19				
20.42	23.46	3.04	2.48	81.6	M677642	19				
					M677643	19				STANDARD ML-2
23.46	26.51	3.05	2.90	95.1	M677644	19				
26.51	29.56	3.05	2.75	90.2	M677645	19				1 sawed - Volcanic 1 (sericite altered)
29.56	32.61	3.05	2.65	86.9	M677646	19				
32.61	33.85	1.24	1.05	84.7	M677647	19				
					M677648	19				1/4 DUPLICATE
33.85	35.66	1.81	1.64	90.6	M677649	19				
35.66	38.71	3.05	1.75	57.4	M677650	19				Core fractured - very poor recovery
38.71	41.76	3.05	2.40	78.7	M677651	19				
41.76	44.81	3.05	2.60	85.2	M677652	19				
44.81	47.86	3.05	1.90	62.3	M677653	19				Core fractured - poor recovery
					M677654	19				BLANK
47.86	50.90	3.04	2.11	69.4	M677655	19				Core fractured - poor recovery
50.90	53.95	3.05	2.56	83.9	M677656	19				
53.95	57.00	3.05	2.69	88.2	M677657	19				Batch 19 starts on DDH-M12-05
57.00	60.05	3.05	2.37	77.7	M677658	20				
60.05	63.09	3.04	2.79	91.8	M677659	20				
63.09	66.14	3.05	2.54	83.3	M677660	20				
66.14	69.19	3.05	2.98	97.7	M677661	20				
					M677662	20				1/4 DUPLICATE
69.19	72.24	3.05	2.65	86.9	M677663	20				
72.24	75.29	3.05	2.80	91.8	M677664	20				
75.29	78.33	3.04	2.79	91.8	M677665	20				1 sawed - fine-grained magnetite-rich Volcanic 1? Potassic alteration?
78.33	81.38	3.05	2.46	80.7	M677666	20				
					M677667	20				STANDARD ML-2
81.38	83.40	2.02	1.67	82.7	M677668	20				
83.40	85.12	1.72	1.60	93	M677669	20				
85.12	87.48	2.36	1.88	79.7	M677670	20				
87.48	90.52	3.04	2.64	86.8	M677671	20				
					M677672	20				BLANK
90.52	93.57	3.05	2.77	90.8	M677673	20				
93.57	96.62	3.05	3.00	98.4	M677674	20				
96.62	99.67	3.05	3.00	98.4	M677675	20				
99.67	102.72	3.05	2.93	96.1	M677676	20				
					M677677	20				COARSE REJECT DUPLICATE
102.72	105.77	3.05	2.53	83	M677678	20				
105.77	108.81	3.04	2.80	92.1	M677679	20				
108.81	111.86	3.05	2.93	96.1	M677680	20				
111.86	113.16	1.30	1.30	100	M677681	20				
113.16	114.91	1.75	1.70	97.1	M677682	20				
					M677683	20				STANDARD ML-2
114.91	117.96	3.05	2.95	96.7	M677684	20				
117.96	120.01	2.05	2.03	99	M677685	20				
120.01	122.64	2.63	2.63	100	M677686	20				
122.64	125.40	2.76	2.55	92.4	M677687	20				
125.40	127.57	2.17	2.05	94.5	M677688	20				
					M677689	20				BLANK
127.57	128.92	1.35	1.20	88.9	M677690	20				
128.92	130.79	1.87	1.84	98.4	M677691	20				
130.79	132.91	2.12	2.12	100	M677692	20				1 piece sawed - potassic alteration (Kspar + magnetite + chlorite veinlet)
132.91	136.01	3.10	3.00	96.8	M677693	20				
136.01	138.31	2.30	2.16	93.9	M677694	21				
138.31	141.46	3.15	3.00	95.2	M677695	21				
141.46	143.56	2.10	2.10	100	M677696	21				
143.56	145.39	1.83	1.73	94.5	M677697	21				1 saw magnetite 'blowout'
					M677698	21				1/4 DUPLICATE
145.39	148.44	3.05	2.95	96.7	M677699	21				
148.44	151.49	3.05	2.93	96.1	M677700	21				
151.49	153.75	2.26	2.18	96.5	M677701	21				
153.75	155.95	2.20	2.05	93.2	M677702	21				
155.95	157.58	1.63	1.55	95.1	M677703	21				
					M677704	21				BLANK
157.58	160.63	3.05	2.85	93.4	M677705	21				
160.63	163.68	3.05	2.75	90.2	M677706	21				
163.68	166.73	3.05	2.50	82	M677707	21				
166.73	169.11	2.38	2.23	93.7	M677708	21				
169.11	171.26	2.15	1.94	90.2	M677709	21				
					M677710	21				STANDARD ML-2

Sample Log

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery (%)	Sample Number	Batch	Au (g/t)	Ag (g/t)	As (ppm)	Comments
171.26	173.34	2.08	1.81	87	M677711	21				
173.34	175.87	2.53	2.20	87	M677712	21				
175.87	178.92	3.05	2.70	88.5	M677713	21				
178.92	181.00	2.08	1.68	80.8	M677714	21				
181.00	183.19	2.19	2.03	92.7	M677715	21				
					M677716	21				BLANK
183.19	185.01	1.82	1.73	95.1	M677717	21				
185.01	188.06	3.05	3.05	100	M677718	21				
188.06	191.11	3.05	2.98	97.7	M677719	21				
191.11	194.16	3.05	3.05	100	M677720	21				
					M677721	21				COARSE REJECT DUPLICATE
194.16	197.21	3.05	3.00	98.4	M677722	21				
197.21	200.25	3.04	3.02	99.3	M677723	21				
200.25	202.53	2.28	2.26	99.1	M677724	21				
202.53	205.61	3.08	2.95	95.8	M677725	21				
					M677726	21				STANDARD ML-2
205.61	206.71	1.10	1.10	100	M677727	21				
206.71	208.60	1.89	1.73	91.5	M677728	21				
208.60	210.93	2.33	2.33	100	M677729	21				
210.93	212.06	1.13	1.12	99.1	M677730	21				
212.06	214.50	2.44	2.27	93	M677731	22				
214.50	216.87	2.37	2.37	100	M677732	22				
216.87	218.54	1.67	1.50	89.8	M677733	22				
218.54	221.59	3.05	2.93	96.1	M677734	22				
					M677735	22				STANDARD ML-2
221.59	224.65	3.06	2.96	96.7	M677736	22				1 piece sawed - Plagioclase Porphyry (Kspar) + magnetite breccia
224.65	227.68	3.03	3.00	99	M677737	22				
227.68	230.35	2.67	1.88	70.4	M677738	22				
230.35	232.62	2.27	2.00	88.1	M677739	22				
					M677740	22				BLANK
232.62	235.64	3.02	3.00	99.3	M677741	22				1 piece sawed - Plagioclase Porphyry - A; Kspar present
235.64	238.05	2.41	2.11	87.6	M677742	22				
238.05	239.88	1.83	1.53	83.6	M677743	22				
239.88	242.93	3.05	2.72	89.2	M677744	22				
242.93	245.98	3.05	2.92	95.7	M677745	22				
					M677746	22				COARSE REJECT DUPLICATE
245.98	249.02	3.04	2.92	96.1	M677747	22				1 piece sawed - Plagioclase Porphyry - A; Kspar present
249.02	252.07	3.05	2.74	89.8	M677748	22				
252.07	255.12	3.05	2.96	97	M677749	22				
255.12	258.17	3.05	3.05	100	M677750	22				
258.17	261.21	3.04	2.84	93.4	M650051	22				
					M650052	22				STANDARD ML-2
261.21	264.26	3.05	2.69	88.2	M650053	22				
264.26	267.31	3.05	2.79	91.5	M650054	22				
267.31	270.36	3.05	2.62	85.9	M650055	22				
270.36	271.62	1.26	1.26	100	M650056	22				
					M650057	22				1/4 DUPLICATE
271.62	273.27	1.65	1.57	95.2	M650058	22				Plagioclase Porphyry dike
273.27	276.12	2.85	2.85	100	M650059	22				
276.12	278.93	2.81	2.73	97.2	M650060	22				
278.93	282.14	3.21	3.05	95	M650061	22				1 piece sawed - hematite stringer in potassic alteration
282.14	284.78	2.64	2.50	94.7	M650062	22				
					M650063	22				BLANK
284.78	287.78	3.00	3.00	100	M650064	22				
287.78	289.78	2.00	2.00	100	M650065	22				
289.78	291.70	1.92	1.92	100	M650066	23				
291.70	294.74	3.04	2.80	92.1	M650067	23				
294.74	296.77	2.03	2.00	98.5	M650068	23				
296.77	298.14	1.37	1.37	100	M650069	23				
					M650070	23				1/4 DUPLICATE
298.14	300.84	2.70	2.70	100	M650071	23				
300.84	303.89	3.05	3.05	100	M650072	23				
303.89	305.73	1.84	1.61	87.5	M650073	23				
305.73	306.93	1.20	1.04	86.7	M650074	23				
					M650075	23				STANDARD ML-2
306.93	309.98	3.05	2.81	92.1	M650076	23				
309.98	313.02	3.04	2.93	96.4	M650077	23				
313.02	316.08	3.06	2.60	85	M650078	23				1 piece sawed - sheeted magnetite stringers
316.08	319.13	3.05	1.90	62.3	M650079	23				core rubble, poor recovery
					M650080	23				BLANK
319.13	322.17	3.04	2.60	85.5	M650081	23				core rubble, poor recovery
322.17	325.22	3.05	2.35	77	M650082	23				core rubble, poor recovery
325.22	328.27	3.05	2.10	68.9	M650083	23				core rubble, poor recovery
328.27	331.32	3.05	2.43	79.7	M650084	23				core rubble, poor recovery
331.32	333.50	2.18	1.86	85.3	M650085	23				
					M650086	23				COARSE REJECT DUPLICATE
333.50	337.24	3.74	3.00	80.2	M650087	23				
337.24	340.46	3.22	2.98	92.5	M650088	23				

Sample Log

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery (%)	Sample Number	Batch	Au (g/t)	Ag (g/t)	As (ppm)	Comments
340.46	343.51	3.05	2.85	93.4	M650089	23				1 piece sawed - strong potassic alteration; magnetite-rich
343.51	346.55	3.04	2.98	98	M650090	23				
					M650091	23				STANDARD ML-2
346.55	349.60	3.05	2.86	93.8	M650092	23				
349.60	352.65	3.05	2.90	95.1	M650093	23				
352.65	355.70	3.05	3.00	98.4	M650094	23				
355.70	358.75	3.05	2.90	95.1	M650095	23				
					M650096	23				BLANK
358.75	361.80	3.05	3.05	100	M650097	23				
361.80	364.85	3.05	2.88	94.4	M650098	23				
364.85	367.90	3.05	2.93	96.1	M650099	23				
367.90	370.94	3.04	2.95	97	M650100	23				
370.94	373.99	3.05	2.70	88.5	M650101	23				
373.99	377.04	3.05	2.85	93.4	M650102	24				
377.04	380.09	3.05	2.68	87.9	M650103	24				
380.09	383.13	3.04	2.96	97.4	M650104	24				1 piece sawed - potassic altered breccia (Plagioclase Porphyry - A)
383.13	386.18	3.05	2.90	95.1	M650105	24				
386.18	389.23	3.05	3.05	100	M650106	24				1 piece sawed - calcite veinlets - sericite envelope; potassic alteration
					M650107	24				COARSE REJECT DUPLICATE
389.23	392.28	3.05	3.05	100	M650108	24				
392.28	395.33	3.05	3.05	100	M650109	24				1 piece sawed - Contact: magnetite-Kspar alteration
395.33	398.37	3.04	2.95	97	M650110	24				
398.37	401.42	3.05	2.97	97.4	M650111	24				
401.42	404.46	3.04	3.05	100	M650112	24				
					M650113	24				STANDARD ML-2
404.46	407.52	3.06	2.94	96.1	M650114	24				
407.52	409.22	1.70	1.70	100	M650115	24				1 piece sawed - potassic altered cobble breccia
409.22	411.95	2.73	2.59	94.9	M650116	24				
411.95	414.32	2.37	2.18	92	M650117	24				
414.32	416.67	2.35	2.17	92.3	M650118	24				Box 90-91 sawed - Contact potassic alteration-felsic dike (Intermediate Porphyry Dike)
					M650119	24				BLANK
416.67	418.36	1.69	1.56	92.3	M650120	24				
418.36	420.29	1.93	1.90	98.4	M650121	24				
420.29	422.57	2.28	1.91	83.8	M650122	24				
422.57	424.77	2.20	2.20	100	M650123	24				
					M650124	24				1/4 DUPLICATE
424.77	426.87	2.10	2.10	100	M650125	24				
426.87	428.85	1.98	1.98	100	M650126	24				
428.85	431.90	3.05	2.95	96.7	M650127	24				
431.90	434.06	2.16	2.16	100	M650128	24				
					M650129	24				STANDARD ML-2
434.06	435.70	1.64	1.64	100	M650130	24				1 piece sawed - Contact - Intermediate Porphyry Dike- Plagioclase Porphyry (potassic altered
435.70	438.00	2.30	2.05	89.1	M650131	24				
438.00	441.04	3.04	2.98	98	M650132	24				
441.04	444.09	3.05	2.65	86.9	M650133	24				
					M650134	24				BLANK
444.09	447.14	3.05	2.77	90.8	M650135	24				
447.14	450.19	3.05	2.80	91.8	M650136	24				EOH @ 450.19m 1 piece sawed - Plagioclase Porphyry with magnetite-rich matrix

Geotechnical Log

DDH-M12-05

Tech Name: Liz Bueckert

Date: August 17th 2012

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery (%)	RQD (m)	RQD (%)	Strength	Joint Sets				DESCRIPTION
								Freq (/m)	Attitude (tca)	Shape	Roughness	
11.27	14.32	3.05	2.83		1.16		3s	0.12	55	2	1	joint breaks are more "irregular" than "undulating"
14.32	17.37	3.05	2.63		0.88		3s	0.1	65	2	1	joint breaks are more "irregular" than "undulating"
17.37	20.42	3.05	2.66		0.5		3s	0.12	52	2	1	joint breaks are more "irregular" than "undulating" 40-65 tca range
20.42	23.46	3.04	2.71		0.28		3s	0.15	75	2	1	"undulating"
23.46	26.51	3.05	3.03		1.65		3s	0.13	65	1	1	
26.51	29.56	3.05	2.75		0.85		3s	0.16	60	2	1	"undulating"
29.56	32.61	3.05	2.38		0.58		3s	0.14	65	1	1	
32.61	35.66	3.05	2.58		0.23		3s	0.1	70	2	1	"undulating"
35.66	38.71	3.05	2.3		0.41		3s	0.13	70	2	1	"undulating"
38.71	41.76	3.05	2.43		0.52		3s	0.12	60	2	1	"undulating"
41.76	44.81	3.05	2.52		0.7		3s	0.12	65	2	1	"undulating"
44.81	47.86	3.05	2.09		0.1		3s	0.19	60	2	1	"undulating"
47.86	50.9	3.04	2.34		0.13		3s	0.16	60	2	1	"undulating"
50.9	53.95	3.05	2.58		0.78		3s	0.13	70	2	1	"undulating"
53.95	57	3.05	2.62		1.31		3s	0.2		2	1	a lot of rubble
57	60.05	3.05	2.41		0.84		3s	0.13	60	2	1	"undulating"
60.05	63.09	3.04	2.73		0.72		3s	0.13	55	2	1	"undulating"
63.09	66.14	3.05	2.6		0.9		3s	0.17	55	2	1	"undulating"
66.14	69.19	3.05	2.97		1.95		3s	0.16	65	2	1	"undulating"
69.19	72.24	3.05	2.45		0.32		3s	0.2	65	1	1	
72.24	75.29	3.05	2.65		1.11		3s	0.11	55	2	1	"undulating"
75.29	78.33	3.04	2.81		1.63		3s	0.12	50	1	1	range 37 to 75 degree range
78.33	81.38	3.05	2.54		0.98		3s	0.15	75	1	1	
81.38	84.43	3.05	2.82		0.91		3s	0.16	60	2	1	"undulating"
84.43	87.48	3.05	2.41		1.13		3s	0.2	60	2	1	"undulating"
87.48	90.52	3.04	2.75		1.65		3s	0.17	70	1	1	

Geotechnical Log

90.52	93.57	3.05	2.91		2.05		3s	0.27	55	2	1	joint breaks are more "irregular" than "undulating"
93.57	96.62	3.05	3.05		2.14		3s	0.23	60	1	1	
96.62	99.67	3.05	2.98		2.52		3s	0.25	25	1	1	
99.67	102.72	3.05	3.04		2.07		3s	0.2	50	1	1	
102.72	105.77	3.05	2.77		0.62		3s	0.16	65	2	1	joint breaks are more "irregular" than "undulating"
105.77	108.81	3.04	2.7		1.88		3s	0.23	65	1	1	
108.81	111.86	3.05	2.83		1.25		3s	0.21	70	1	1	
111.86	114.91	3.05	2.91		1.85		3s	0.25	65	1	1	
114.91	117.96	3.05	3.01		2.57		3s	0.27	65	1	1	
117.96	121	3.04	2.99		2.78		3s	0.27	70	1	1	
121	124.05	3.05	3.01		1.88		3s	0.25	65	2	1	joint breaks are more "irregular" than "undulating"
124.05	127.1	3.05	2.83		1.25		3s	0.21	70	1	1	
127.1	130.15	3.05	2.84		1.85		3s	0.21	65	2	1	joint breaks are more "irregular" than "undulating"
130.15	133.2	3.05	3.05		2.57		3s	0.25	65	2	2	joint breaks are more "irregular" than "undulating"
133.2	136.25	3.05	2.8		2.78		3s	0.25	60	2	1	joint breaks are more "irregular" than "undulating"
136.25	139.3	3.05	2.91		2.34		3s	0.23	60	2	1	joint breaks are more "irregular" than "undulating"
139.3	142.34	3.04	2.93		1.88		3s	0.25	52	2	1	joint breaks are more "irregular" than "undulating" 35-70 degree range
142.34	145.39	3.05	3.05		2.28		3s	0.23	65	2	2	joint breaks are more "irregular" than "undulating" 50-80 degree range
145.39	148.44	3.05	2.95		2.67		3s	0.2	65	1	1	
148.44	151.49	3.05	2.98		1.62		3s	0.2	55	2	2	joint breaks are more "irregular" than "undulating"
151.49	154.53	3.05	3.01		2.43		3s	0.16	60	2	2	joint breaks are more "irregular" than "undulating"
154.53	157.58	3.04	2.62		1.14		3s	0.17	60	2	1	joint breaks are more "irregular" than "undulating"
157.58	160.63	3.05	2.72		2.51		3s	0.19	70	2	1	joint breaks are more "irregular" than "undulating"
160.63	163.68	3.05	2.78		2.43		3s	0.25	65	2	2	joint breaks are more "irregular" than "undulating"
163.68	166.73	3.05	2.7		1.48		3s	0.23	55	2	1	joint breaks are more "irregular" than "undulating"

Geotechnical Log

166.73	169.77	3.04	2.9		1.49		3s	0.15	60	2	1	joint breaks are more "irregular" than "undulating"
169.77	172.82	3.05	2.64		0.82		3s	0.14	60	2	1	joint breaks are more "irregular" than "undulating"
172.82	175.87	3.04	2.63		0.65		3s	0.13	55	2	1	joint breaks are more "irregular" than "undulating"
175.87	178.92	3.05	2.78		0.62		3s	0.15	60	2	1	joint breaks are more "irregular" than "undulating"
178.92	181.97	3.05	2.32		0.6		3s	0.16	65	2	1	joint breaks are more "irregular" than "undulating"
181.97	185.01	3.05	2.84		1.76		3s	0.13	75	2	2	joint breaks are more "irregular" than "undulating"
185.01	188.06	3.05	3.05		1.96		3s	0.13	75	2	2	joint breaks are more "irregular" than "undulating"
188.06	191.11	3.05	3.02		2.03		3s	0.16	70	2	1	joint breaks are more "irregular" than "undulating"
191.11	194.16	3.05	3.03		2.02		3s	0.3	70	2	2	joint breaks are more "irregular" than "undulating"
194.16	197.21	3.05	3		1.85		3s	0.25	60	2	1	joint breaks are more "irregular" than "undulating"
197.21	200.25	3.04	3		2.3		3s	0.17	70	2	2	joint breaks are more "irregular" than "undulating"
200.25	203.3	3.05	2.95		2.29		3s	0.3	65	1	1	
203.3	206.35	3.05	2.95		2.35		3s	0.25	55	2	1	joint breaks are more "irregular" than "undulating"
206.35	209.4	3.05	3		1.91		3s	0.2	55	2	2	joint breaks are more "irregular" than "undulating" 40-70 degree range
209.4	212.45	3.05	2.99		1.86		3s	0.27	52	2	1	joint breaks are more "irregular" than "undulating" 35-70 degree range
212.45	215.5	3.04	2.87		2.42		3s	0.27	55	1	1	
215.5	218.54	3.05	2.91		1.77		3s	0.2	55	1	1	
218.54	221.59	3.05	2.73		2.03		3s	0.22	60	1	1	
221.59	224.64	3.05	3.02		2.44		3s	0.25	60	1	1	
224.64	227.68	3.05	2.89		1.7		3s	0.17	65	1	1	
227.68	230.73	3.05	2.85		0.86		3s	0.25	60	1	1	rubble section
230.73	233.78	3.04	2.45		1.98		3s	0.2	50	2	1	joint breaks are more "irregular" than "undulating"
233.78	236.83	3.05	2.72		2.01		3s	0.19	60	1	1	
236.83	239.88	3.05	2.76		1.46		3s	0.21	60	2	1	joint breaks are more "irregular" than "undulating"

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239.88	242.93	3.04	2.53		1.73		3s	0.23	60	1	1	
242.93	245.98	3.05	2.54		1.9		3s	0.16	60	1	1	
245.98	249.02	3.05	2.63		2.12		3s	0.34	60	1	1	
249.02	252.07	3.05	2.83		1.96		3s	0.23	55	1	1	
252.07	255.12	3.05	2.8		2.31		3s	0.17	60	1	1	
255.12	258.17	3.05	2.93		2.38		3s	0.25	65	1	1	
258.17	261.21	3.05	3.02		1.39		3s	0.19	60	1	1	
261.21	264.26	3.04	2.73		1.31		3s	0.15	65	2	1	joint breaks are more "irregular" than "undulating"
264.26	267.31	3.05	2.87		1.68		3s	0.21	65	1	1	
267.31	270.36	3.05	2.7		1.07		3s	0.2	60	2	1	joint breaks are more "irregular" than "undulating"
270.36	273.41	3.05	2.5		1.85		3s	0.2	65	1	1	
273.41	276.46	3.04	2.96		2.36		3s	0.23	60	1	1	
276.46	279.5	3.05	2.95		2.41		3s	0.23	65	1	1	
279.5	282.55	3.05	2.86		2.34		3s	0.2	60		1	
282.55	285.6	3.05	2.9		2.67		3s	0.38	60	1	1	
285.6	288.65	3.05	3.05		1.99		3s	0.3	60	2	1	joint breaks are more "irregular" than "undulating"
288.65	291.7	3.05	2.96		2.55		3s	0.27	65	1	1	
291.7	294.74	3.04	2.87		1.583		3s	0.16	65	1	1	
294.74	297.79	3.05	3.01		2.44		3s	0.17	55	1	1	
297.79	300.84	3.05	2.99		1.63		3s	0.16	60	1	1	
300.84	303.89	3.05	3.02		1.7		3s	0.14	60	1	1	
303.89	306.93	3.05	2.9		0.66		3s	0.11	65	1	1	
306.93	309.98	3.04	2.9		0.76		3s	0.13	60	2	1	joint breaks are more "irregular" than "undulating"
309.98	313.03	3.05	2.82		1.14		3s	0.17	65	2	1	joint breaks are more "irregular" than "undulating" 50-80 degree range
313.03	316.08	3.05	2.97		1.26		3s	0.15	70	2	1	joint breaks are more "irregular" than "undulating"
316.08	319.13	3.05	2.63		0.92		3s	0.27	70	2	1	joint breaks are more "irregular" than "undulating"
319.13	322.17	3.04	2.45	nill			3s	0.15	60	2	1	joint breaks are more "irregular" than "undulating"
322.17	325.22	3.05	2.66		0.11		3s	0.23	65	2	1	joint breaks are more "irregular" than "undulating"
325.22	328.27	3.05	2.8	nill			3s	n/a		2	1	all rubble no avg tca
328.27	331.32	3.05	2.09		0.33		3s	0.12	65	1	1	

Geotechnical Log

331.32	334.37	3.04	2.73		0.85		3s	0.13	60	2	1	joint breaks are more "irregular" than "undulating"
334.37	337.41	3.04	2.5		0.25		3s	0.16	70	2	1	joint breaks are more "irregular" than "undulating"
337.41	340.46	3.05	2.75		0.62		3s	0.1	60	2	1	
340.46	343.51	3.05	2.91		1.08		3s	0.15	75	2	1	range 60-90
343.51	346.55	3.05	2.8		2.24		3s	0.19	65	2	1	50-80
346.55	349.6	3.05	3.04		1.14		3s	0.13	67	2	1	55-80
349.6	352.65	3.05	2.9		2.07		3s	0.16	63	2	1	45-80
352.65	355.7	3.05	2.89		1.84		3s	0.18	55	2	1	30-80
355.7	358.75	3.05	2.98		1.31		3s	0.16	70	1	1	
358.75	361.8	3.04	2.93		2.72		3s	0.27	65	1	1	40-90
361.8	364.85	3.05	3.05		2.21		3s	0.2	75	2	1	60-90
364.85	367.9	3.05	2.87		1.52		3s	0.2	60	2	1	40-80
367.9	370.94	3.05	2.94		2.25		3s	0.19	65	2	1	50-80
370.94	373.99	3.05	2.76		1.25		3s	0.19	65	2	1	40-90
373.99	377.04	3.05	2.78		0.93		3s	0.16	75	2	1	60-90
377.04	380.09	3.05	2.92		1.14		3s	0.15	65	2	1	
380.09	383.13	3.05	3.05		2.27		3s	0.25	70	1	1	60-80
383.13	386.18	3.04	2.9		2.45		3s	0.25	65	2	1	50-80
386.18	389.23	3.05	3.05		2.45		3s	0.3	80	1	1	
389.23	392.28	3.05	3.05		2.75		3s	0.3	75	2	1	
392.28	395.33	3.04	3.04		2.55		3s	0.28	75	2	1	
395.33	398.37	3.04	2.92		2.34		3s	0.27	75	2	1	
398.37	401.42	3.05	2.93		2.52		3s	0.3	70	2	1	
401.42	404.47	3.05	3.05		2.7		3s	0.23	70	2	1	
404.47	407.52	3.05	2.78		2.04		3s	0.3	70	2	1	
407.52	410.57	3.05	2.94		2.37		3s	0.25	75	2	1	60-90
410.57	413.61	3.04	3		2.12		3s	0.25	55	2	1	30-80
413.61	416.67	3.05	2.74		1.73		3s	0.18	52	2	1	30-75
416.67	419.71	3.05	2.85		1.6		3s	0.18	65	2	1	
419.71	422.76	3.05	2.8		2.09		3s	0.16	65	2	1	
422.76	425.81	3.05	3.04		2.46		3s	0.16	70	2	1	
425.81	428.85	3.04	3.03		2.75		3s	0.43	65	1	1	
428.85	431.9	3.06	3		2.48		3s	0.38	60	1	1	
431.9	434.94	3.04	3		2.39		3s	0.27	60	1	1	
434.94	438	3.05	2.57		1.14		3s	0.18	60	2	1	
438	441.04	3.05	2.9		1.35		3s	0.14	60	2	1	
441.04	444.09	3.04	2.62		1.6		3s	0.15	50-90	2	1	50-90
444.09	447.14	3.05	2.82		1.32		3s	0.16	30-90	2	1	30-90

Geotechnical Log

447.14	450.19	3.04	1.45		1.2		3s	0.19	75	1	1	EOH

Magnetic Susceptibility Log

Hole: 3DH-M12-05

Depth (m)	Magnetic Susceptibility	DESCRIPTION
11.00	1.500	
12.00	0.519	
13.00	6.031	
14.00	4.632	
15.00	1.002	
16.00	0.551	
17.00	0.834	
18.00	1.156	
19.00	1.438	
20.00	0.145	
21.00	0.781	
22.00	0.129	
23.00	0.818	
24.00	0.453	
25.00	1.881	
26.00	5.207	
27.00	3.338	
28.00	n/a	not enough recovery
29.00	1.527	
30.00	0.143	
31.00	0.153	
32.00	0.197	
33.00	0.529	
34.00	0.124	
35.00	0.093	
36.00	1.174	
37.00	1.209	
38.00	0.369	
39.00	0.152	
40.00	0.115	
41.00	0.286	
42.00	0.945	
43.00	0.372	
44.00	0.486	
45.00	1.227	
46.00	0.989	
47.00	0.035	
48.00	0.441	
49.00	0.355	
50.00	0.130	
51.00	0.220	
52.00	0.171	
53.00	0.201	
54.00	0.107	
55.00	0.451	
56.00	0.303	
57.00	0.282	
58.00	0.199	
59.00	0.361	
60.00	0.226	

Magnetic Susceptibility Log

Depth (m)	Magnetic Susceptibility	DESCRIPTION
61.00	0.143	
62.00	0.273	
63.00	0.303	
64.00	0.118	
65.00	0.049	
66.00	0.044	
67.00	0.218	
68.00	1.570	
69.00	0.232	
70.00	0.036	
71.00	0.154	
72.00	0.099	
73.00	0.395	
74.00	0.646	
75.00	5.677	
76.00	0.958	
77.00	1.799	
78.00	8.295	
79.00	2.140	
80.00	8.031	
81.00	0.946	
82.00	1.419	
83.00	0.242	
84.00	10.490	
85.00	0.718	
86.00	0.652	
87.00	1.726	
88.00	1.166	
89.00	1.061	
90.00	0.656	
91.00	0.723	
92.00	7.605	
93.00	4.073	
94.00	0.912	
95.00	0.521	
96.00	1.176	
97.00	10.740	
98.00	2.691	
99.00	3.584	
100.00	9.363	
101.00	3.110	
102.00	0.939	
103.00	0.268	
104.00	6.376	
105.00	5.598	
106.00	3.355	
107.00	3.478	
108.00	0.549	
109.00	0.867	
110.00	0.964	
111.00	4.211	

Magnetic Susceptibility Log

Depth (m)	Magnetic Susceptibility	DESCRIPTION
112.00	1.190	
113.00	0.836	
114.00	0.995	
115.00	0.749	
116.00	2.300	
117.00	0.600	
118.00	0.811	
119.00	3.843	
120.00	1.281	
121.00	2.776	
122.00	1.545	
123.00	2.563	
124.00	2.928	
125.00	0.967	
126.00	n/a	not enough recovery
127.00	3.587	
128.00	4.105	
129.00	9.421	
130.00	2.581	
131.00	1.102	
132.00	1.146	
133.00	2.075	
134.00	3.761	
135.00	3.794	
136.00	0.971	
137.00	0.621	
138.00	1.575	
139.00	0.689	
140.00	1.726	
141.00	0.315	
142.00	0.375	
143.00	0.172	
144.00	2.083	
145.00	2.587	
146.00	2.859	
147.00	15.670	
148.00	2.834	
149.00	2.624	
150.00	2.691	
151.00	0.636	
152.00	0.354	
153.00	1.363	
154.00	0.205	
155.00	0.492	
156.00	0.249	
157.00	0.277	
158.00	1.133	
159.00	2.225	
160.00	1.152	
161.00	5.226	
162.00	3.391	

Magnetic Susceptibility Log

Depth (m)	Magnetic Susceptibility	DESCRIPTION
163.00	1.366	
164.00	4.202	
165.00	1.595	
166.00	3.047	
167.00	1.522	
168.00	4.001	
169.00	0.876	
170.00	0.778	
171.00	0.621	
172.00	0.500	
173.00	1.764	
174.00	0.879	
175.00	0.833	
176.00	0.281	
177.00	0.426	
178.00	0.298	
179.00	0.228	
180.00	0.414	
181.00	0.046	
182.00	0.335	
183.00	0.816	
184.00	0.478	
185.00	0.385	
186.00	0.261	
187.00	0.345	
188.00	0.225	
189.00	0.458	
190.00	0.361	
191.00	0.294	
192.00	0.481	
193.00	0.323	
194.00	0.421	
195.00	0.312	
196.00	0.281	
197.00	0.334	
198.00	0.800	
199.00	1.823	
200.00	1.002	
201.00	0.462	
202.00	0.309	
203.00	0.226	
204.00	1.370	
205.00	0.381	
206.00	0.577	
207.00	0.359	
208.00	0.202	
209.00	0.348	
210.00	0.661	
211.00	1.087	
212.00	0.472	
213.00	0.745	

Magnetic Susceptibility Log

Depth (m)	Magnetic Susceptibility	DESCRIPTION
214.00	0.625	
215.00	0.912	
216.00	0.545	
217.00	0.357	
218.00	1.481	
219.00	1.028	
220.00	0.961	
221.00	0.348	
222.00	0.221	
223.00	0.859	
224.00	0.394	
225.00	0.962	
226.00	1.752	
227.00	2.515	
228.00	1.876	
229.00	0.613	
230.00	0.477	
231.00	0.562	
232.00	5.367	
233.00	11.700	
234.00	4.942	
235.00	20.670	
236.00	10.650	
237.00	6.292	
238.00	2.440	
239.00	2.030	
240.00	1.557	

Box Log

Hole: DDH-M12-05

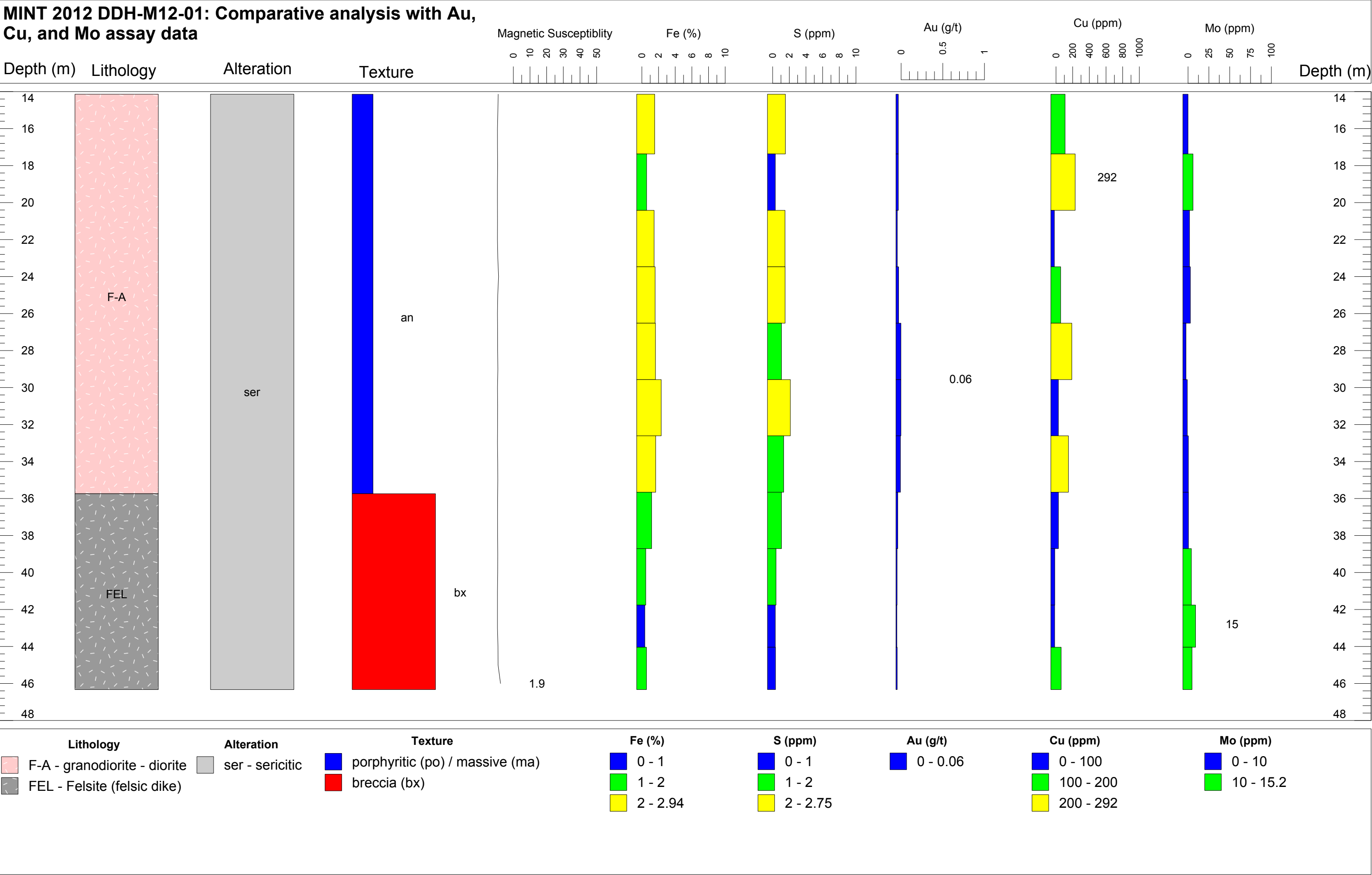
Date: AUG

Box #	From (m)	To (m)
1	11.01	16.35
2	16.35	20.95
3	20.95	26.11
4	26.11	31.38
5	31.38	36.01
6	36.01	40.85
7	40.85	45.32
8	45.32	50.80
9	50.80	55.95
10	55.95	61.01
11	61.01	66.14
12	66.14	72.29
13	72.29	76.77
14	76.77	82.01
15	82.01	86.05
16	86.05	91.80
17	91.80	91.80
18	97.43	97.43
19	102.72	102.72
20	108.15	108.15
21	113.45	113.45
22	119.31	119.31
23	124.84	124.84
24	130.62	130.62
25	136.25	136.25
26	141.86	141.86
27	147.24	147.24
28	152.75	152.75
29	157.61	162.64
30	162.64	167.70
31	167.70	173.07
32	173.07	178.41
33	178.41	189.55
34	183.55	189.01
35	189.01	194.65
36	194.65	200.25
37	200.25	205.93
38	205.93	211.22
39	211.22	215.50
40	215.50	219.69
41	219.69	223.88
42	223.88	227.95
43	227.95	232.05
44	232.05	236.45
45	236.45	240.46
46	240.46	245.08

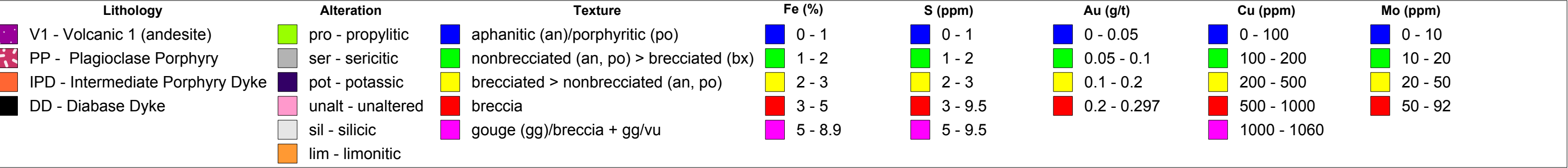
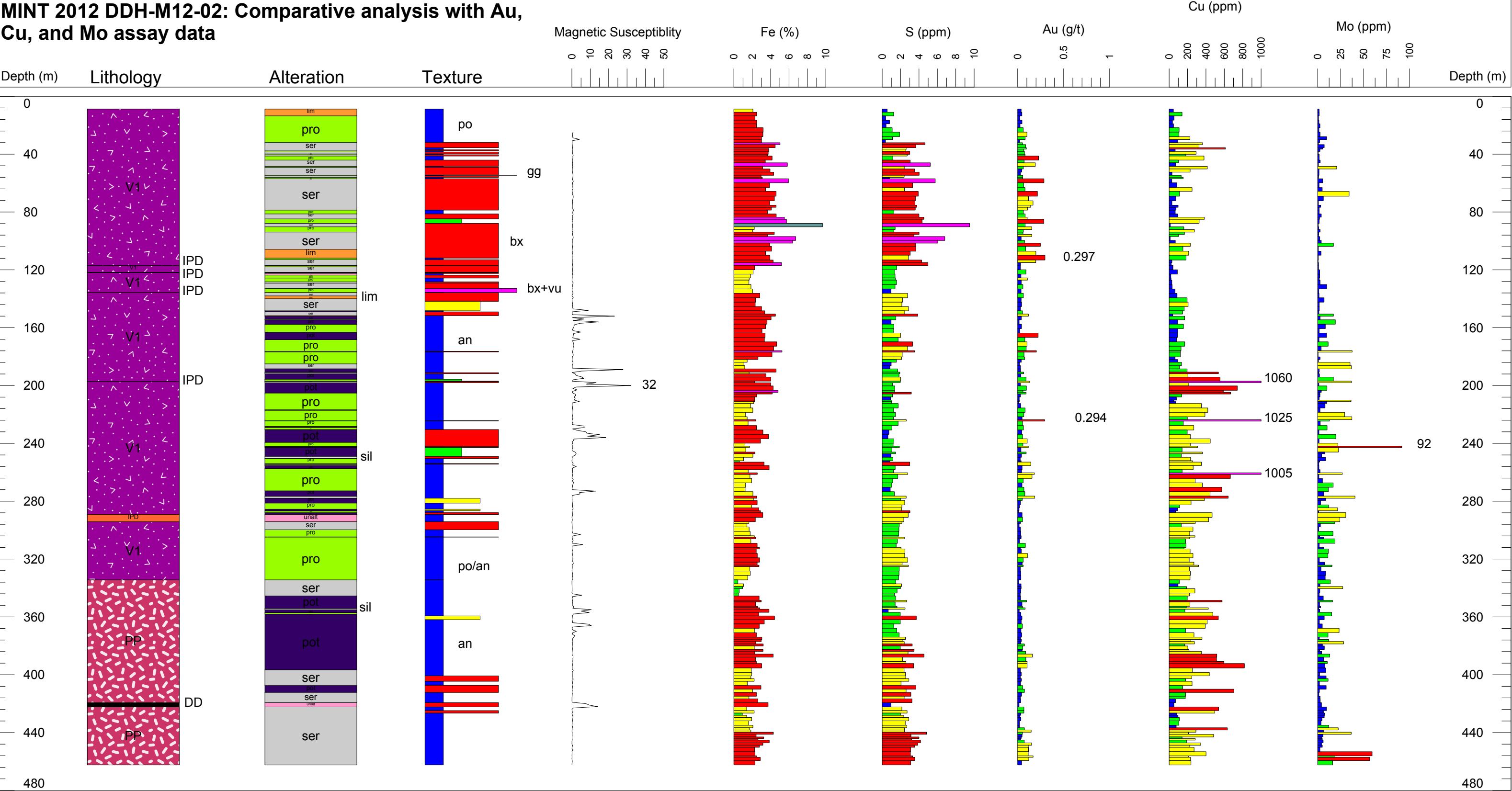
APPENDIX VIII

DRILL CORE PHYSICAL AND GEOCHEMICAL COMPARATIVE ANALYSIS

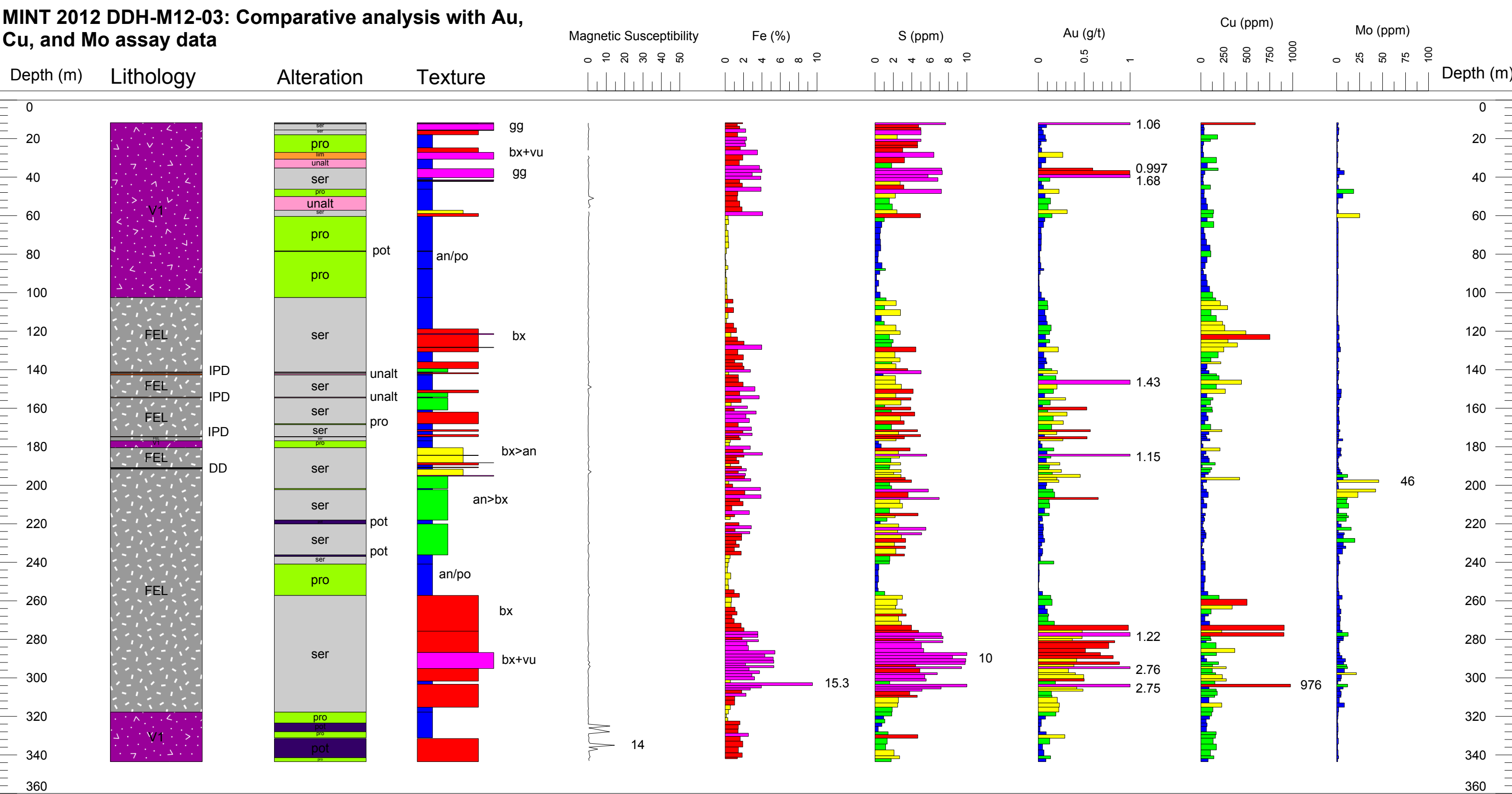
MINT 2012 DDH-M12-01: Comparative analysis with Au, Cu, and Mo assay data



MINT 2012 DDH-M12-02: Comparative analysis with Au, Cu, and Mo assay data

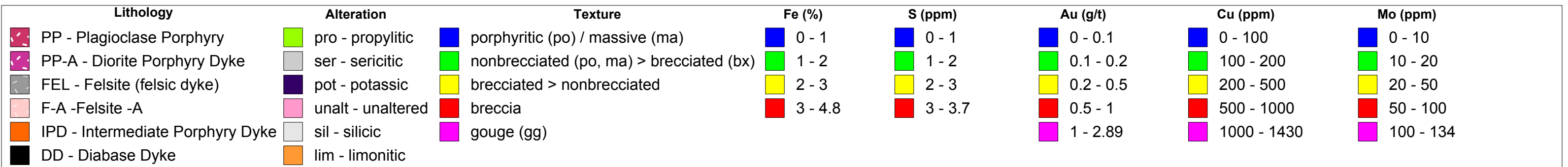
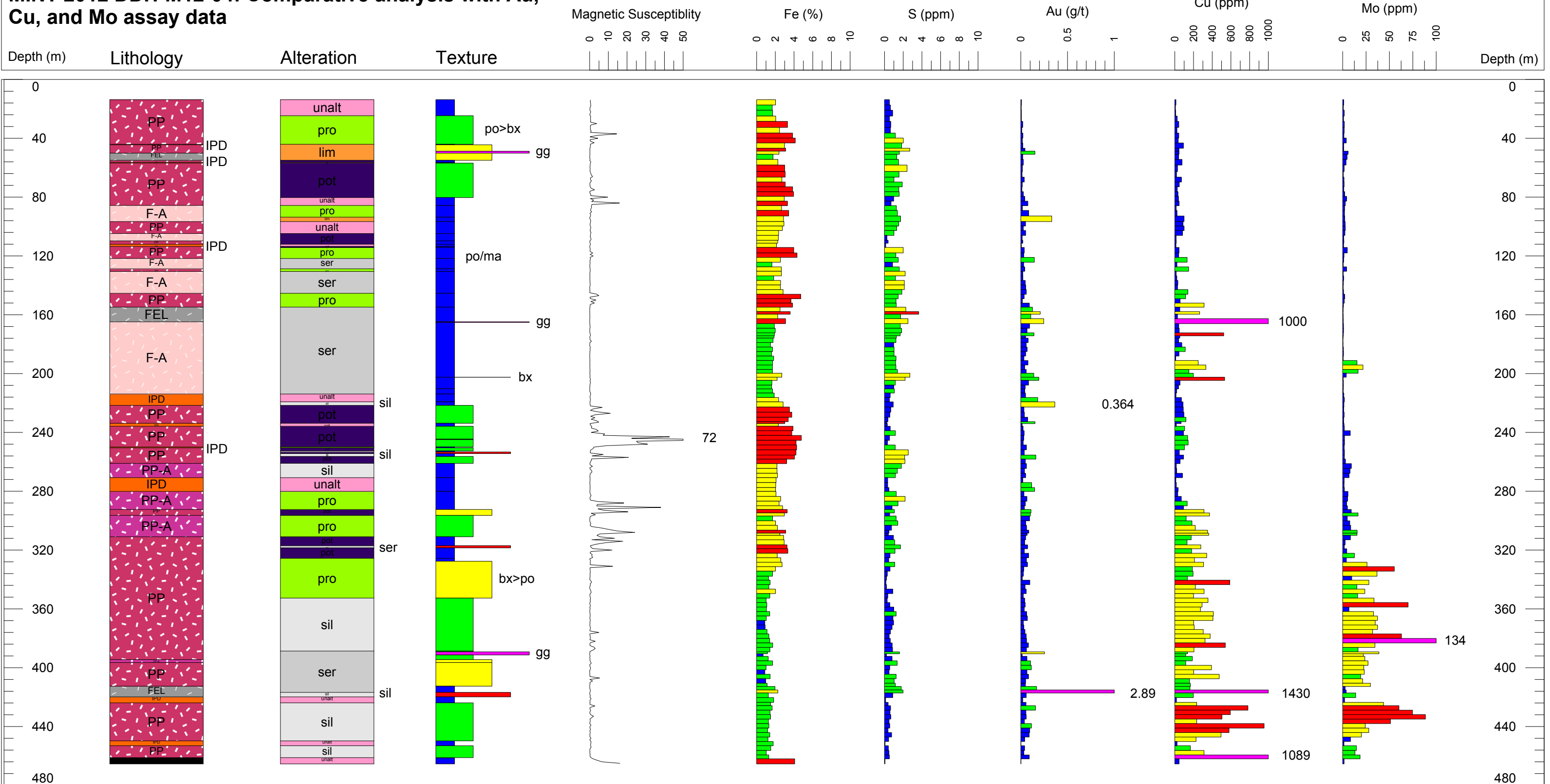


MINT 2012 DDH-M12-03: Comparative analysis with Au, Cu, and Mo assay data

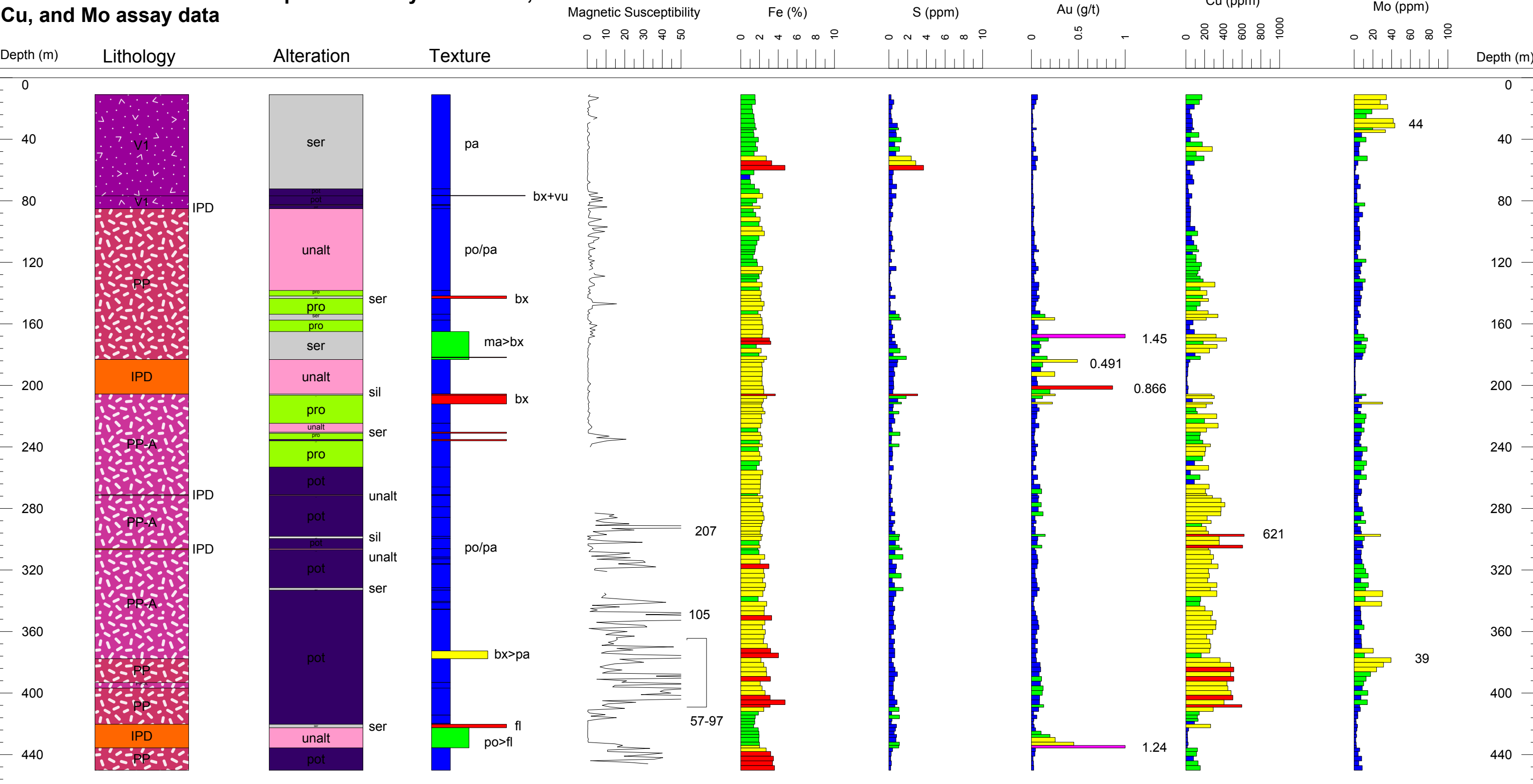


Lithological Unit	Alteration type	Texture	Fe (%)	S (ppm)	Au (g/t)	Cu (ppm)	Mo (ppm)
V1 - Volcanic 1 (andesite)	ser - sericitic	aphanitic (an)/porphyritic (po)	0 - 1	0 - 1	0 - 0.1	0 - 100	0 - 10
FEL - Felsite (felsic dyke)	pro - propylitic	aphanitic > brecciated (bx)	1 - 2	1 - 2	0.1 - 0.2	100 - 200	10 - 20
IPD - Intermediate Porphyry Dyke	pot - potassic	brecciated > aphanitic	2 - 3	2 - 3	0.2 - 0.5	200 - 500	20 - 46
DD - Diabase Dyke	lim - limonitic	breccia	3 - 5	3 - 5	0.5 - 1	500 - 976	
	unalt - unaltered	gouge (gg)/breccia + gg/vu	5 - 15.3	5 - 10	1 - 2.76		

MINT 2012 DDH-M12-04: Comparative analysis with Au, Cu, and Mo assay data

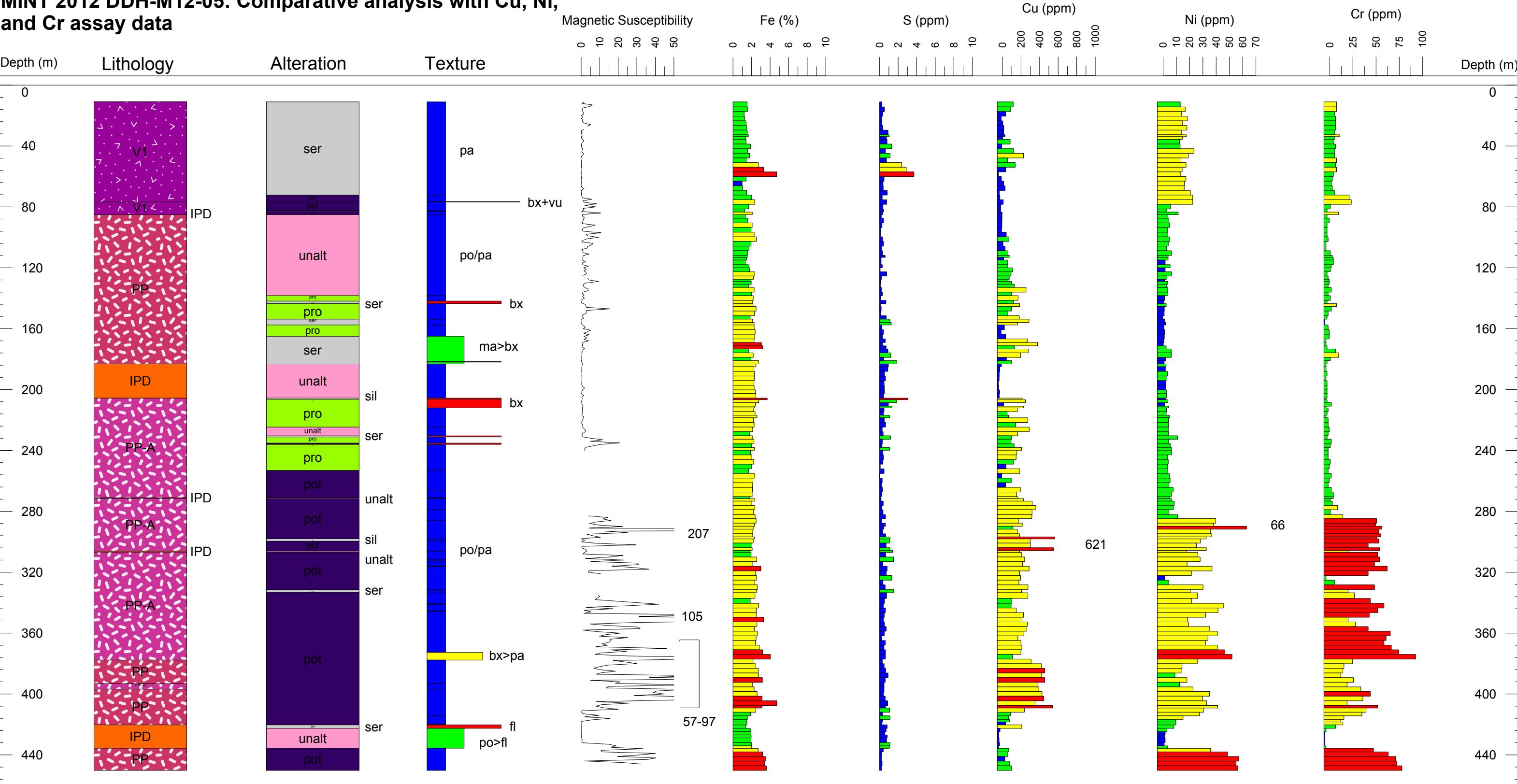


MINT 2012 DDH-M12-05: Comparative analysis with Au, Cu, and Mo assay data



Lithology	Alteration	Texture	Fe (%)	S (ppm)	Au (g/t)	Cu (ppm)	Mo (ppm)
V1 - Volcanic 1 (andesite)	pro - propylitic	porphyritic (po)/patchy (pa)	0 - 1	0 - 1	0 - 0.1	0 - 100	0 - 10
PP - Plagioclase Porphyry	ser - sericitic	nonbrecciated (po, pa) > brecciated (bx)	1 - 2	1 - 2	0.1 - 0.2	100 - 200	10 - 20
PP-A - Diorite Porphyry Dyke	pot - potassic	brecciated > nonbrecciated	2 - 3	2 - 3	0.2 - 0.5	200 - 500	20 - 44
IPD - Intermediate Porphyry Dyke	unalt - unaltered	breccia/flow banded (fl)	3 - 4.8	3 - 3.7	0.5 - 1	500 - 621	
	sil - silicic	breccia + vuggy (vu)			1 - 1.46		
	lim - limonitic						

MINT 2012 DDH-M12-05: Comparative analysis with Cu, Ni, and Cr assay data



Lithology	Alteration	Texture	Fe (%)	S (ppm)	Cu (ppm)	Ni (ppm)	Cr (ppm)
V1 - Volcanic 1 (andesite)	pro - propylitic	porphyritic (po)/patchy (pa)	0 - 1	0 - 1	0 - 100	0 - 10	0 - 10
PP - Plagioclase Porphyry	ser - sericitic	nonbrecciated (po, pa) > brecciated (bx)	1 - 2	1 - 2	100 - 200	10 - 20	10 - 20
PP-A - Diorite Porphyry Dyke	pot - potassic	brecciated > nonbrecciated	2 - 3	2 - 3	200 - 500	20 - 50	20 - 50
IPD - Intermediate Porphyry Dyke	unalt - unaltered	breccia/flow banded (fl)	3 - 4.8	3 - 3.7	500 - 621	50 - 66	50 - 95
	sil - silicic	breccia + vuggy (vu)					
	lim - limonitic						

APPENDIX IX

**PETROGRAPHIC REPORT ON 15 SAMPLES FROM MINT PROPERTY, YUKON,
VANCOUVER PETROGRAPHICS LTD., NOVEMBER 2012**

PETROGRAPHIC REPORT ON 15 SAMPLES FROM MINT PROPERTY, YUKON

Report for: Heather Burrell, P. Geo.
Archer Cathro & Associates (1981) Ltd.
1016 – 510 West Hastings Street
Vancouver, B.C. V6B 1L8 (604) 688-2568

Invoice 121060

Nov. 27, 2012.

SUMMARY:

Although commonly obscured by strong alteration, the samples may be roughly divided into possibly dacitic porphyry (7 samples), andesitic porphyry (3 samples), breccia (mainly hydrothermal) or fragmental (4 samples), and one sample of vein. Both porphyry types contain relict plagioclase and mafic phenocryst sites, but the more felsic (dacitic?) type locally also contains quartz phenocrysts and typically has significant quartz in the (pale-coloured) groundmass, whereas the less felsic (andesitic?) type appears to have little free quartz (no phenocrysts, and relatively little in the darker coloured groundmass; Kspar in its groundmass may be partly/largely secondary). Mainly very fine-grained, barely phaneritic to almost aphanitic groundmass in most samples suggests hypabyssal intrusives (except M677727, where minimal amounts of groundmass are coarser, suggesting approach to deeper, plutonic levels). In the breccias, clasts are typically of the porphyry types described above. Veins mostly composed of quartz-carbonate-sulfides-sericite or muscovite, local chlorite or clay (M677240)-rare barite (M677727) locally grade to breccia matrix of similar minerals in narrow zones ranging from less than a few cm up to more than the size of the hand sample provided. In potassic alteration, thin veinlets of magnetite, secondary biotite, carbonate and trace chalcopyrite also occur.

Alteration ranges from mainly phyllic (quartz-sericite-carbonate-pyrite $\pm$ rutile) or rarely phyllic/argillic with the addition of possible clay mineral (possibly kaolinite-group?) in M677330 and 727 plus the vein sample M677240, through transitional propylitic-potassic to potassic (alkali feldspar, including oligoclase-albite?-Kspar, and variable secondary amphibole, biotite or its chloritized equivalent, quartz, magnetite or its oxidized equivalent hematite, local sericite, carbonate, sulfides and rutile). The potassic alteration seems to be best developed (or preserved?) in the darker, possibly andesitic porphyry. Phyllic alteration locally overprints relict potassic or transitional propylitic-potassic alteration (e.g. strongly Kspar altered clasts in the hydrothermal pyrite-carbonate-Kspar-muscovite breccia matrix of sample M677410).

Sulfides include mainly pyrite, minor chalcopyrite (rare trace bornite $\pm$ digenite?) and local sphalerite, relatively rare galena, with base-metal sulfides typically associated with most intense pyrite, veins and/or breccia matrix. Rare trace possible sulfosalt (tetrahedrite?) occurs included at the margins of chalcopyrite in breccia matrix sulfides of one sample (M677410). Minor covellite replaces margins of sulfides in M677240 (with possible Pb/Zn oxides?).

Capsule descriptions are as follows:

M677012: appears to represent strongly phyllic (quartz-sericite-carbonate-pyrite-trace rutile) altered, possibly originally plagioclase-biotite/hornblende (?) phyrlic hypabyssal porphyry of dacitic (?) composition, cut by a network of vuggy pyrite-quartz-carbonate veins with sericite envelopes; trace inclusions of chalcopyrite, bornite and digenite rarely occur within the coarse pyrite.

M677234: strongly phyllic (quartz-sericite-carbonate-pyrite-trace rutile) altered, possibly originally plagioclase-biotite/hornblende (?) phyrlic hypabyssal porphyry of dacitic (?) composition, cut by a

network of vuggy pyrite-quartz-carbonate veins with sericite envelopes; trace inclusions of chalcopyrite, bornite and digenite rarely occur within the coarse pyrite.

M677111: appears to represent breccia of intensely phyllic (quartz-sericite-pyrite-trace rutile) altered angular heterolithic clasts of variably porphyritic hypabyssal and/or volcanic rock, cemented by a hydrothermal matrix of pyrite-chalcopyrite-quartz-sericite-minor carbonate.

M677156: relict plagioclase-mafic phyric porphyry altered to Kspar-chlorite in an outer envelope (cut by thin pyrite $\pm$ carbonate-muscovite veinlets) surrounding an inner sericite envelope to a poorly defined, pyrite-quartz-carbonate-chlorite-muscovite vein zone.

M677096: appears to represent strongly phyllic/relict weak potassic? (albite?-quartz-sericite-carbonate-pyrite-chlorite-minor chalcopyrite, rutile) altered, possibly originally fragmental volcanic or breccia, in association with thin veinlets of quartz-sulfide.

M677240: unusual vein assemblage of brownish sericite (after plagioclase, some of which remains), possible kaolinite-group clay mineral, and slightly magnesian chlorite, plus coarse sphalerite, pyrite and galena all partly oxidized at rims to fine-grained covellite and possible Pb and Zn oxide minerals.

M677294: appears to represent breccia of intensely phyllic (quartz-sericite-pyrite-trace rutile) altered angular heterolithic clasts of very finely porphyritic volcanic (?) rock, cemented by a hydrothermal matrix of vuggy pyrite-carbonate-sericite-minor quartz-trace rutile.

M677330: appears to represent strongly phyllic/argillic (clay?/sericite-quartz-pyrite-carbonate-trace rutile-apatite) altered, very finely plagioclase-mafic-rare quartz phyric volcanic or hypabyssal porphyry, cut by irregular veins of vuggy pyrite-carbonate-quartz-trace rutile-unidentified mineral.

M677410: breccia composed of strongly phyllic (sericite-Kspar-minor pyrite-rutile) altered clasts of finely feldspar-mafic phyric porphyry in a hydrothermal matrix of pyrite (lesser sphalerite, chalcopyrite, trace galena, sulfosalt?)-Kspar-carbonate-muscovite.

M677429: appears to represent strongly phyllic/propylitic (albite?-sericite-carbonate-chlorite-minor quartz-pyrite-rutile) altered, fine plagioclase-possible hornblende-biotite (?) phyric porphyry possibly originally of dacitic composition (?).

M677432: appears to represent transitional propylitic/potassic (oligoclase?-amphibole-biotite-sericite-minor quartz-magnetite-carbonate-pyrite) altered, fine seriate plagioclase-possible hornblende-biotite (?) phyric porphyry possibly originally of andesitic composition (?).

M677602: less altered, dacitic (?) porphyry (relict, sericitized plagioclase and carbonate-sericite-pyrite-rutile altered mafic sites in an aphanitic, quartz-feldspathic groundmass altered to clay?/sericite) and phyllic envelope thoroughly altered to sericite-pyrite $\pm$ chalcopyrite-local minor quartz, centered on a vein of carbonate-pyrite-chalcopyrite-sphalerite-trace quartz.

M677707: appears to represent transitional propylitic/potassic (albite?-Kspar-quartz-biotite/chlorite-minor sericite-magnetite-carbonate-chalcopyrite) altered/veined, fine plagioclase-possible hornblende-biotite (?) phyric porphyry possibly originally of andesitic composition (?).

M677727: appears to represent possibly crowded porphyritic dacite/quartz diorite strongly altered to albite?-sericite-carbonate-minor pyrite-rutile, around a breccia/vein zone in which coarse pyrite-

lesser chalcopyrite-minor sphalerite is associated with carbonate-quartz-local barite and a wider zone of intense phyllic (quartz-sericite-clay?-carbonate-pyrite) alteration.

M650118: appears to represent transitional propylitic/potassic (albite?-Kspar-quartz- chlorite-carbonate-hematite) altered, fine plagioclase-possible hornblende-biotite (?) phyrlic porphyry possibly originally of andesitic composition (?), strongly phyllic (sericite-quartz-pyrite-rutile) altered along wide envelopes around thin carbonate-quartz-sericite-pyrite-sphalerite-chalcopyrite veins.

Detailed petrographic descriptions and photomicrographs are appended (on CD). If you have any questions regarding the petrography, please do not hesitate to contact me.

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M677012: STRONGLY PHYLIC (QUARTZ-SERICITE-CARBONATE-PYRITE-MINOR RUTILE) ALTERED PLAGIOCLASE?-BIOTITE? PHYRIC HYPABYSSAL PORPHYRY, CUT BY VUGGY COARSE PYRITE-QUARTZ-CARBONATE VEINS, SERICITE ENVELOPES

Hand specimen shows pale beige-buff colored, fine-grained, strongly phyllic altered, relict porphyritic (volcanic or hypabyssal?) rock cut by irregular pyritic veins and thin carbonate fractures. The rock is not magnetic, shows only trace reaction to cold dilute HCl (mainly only where scratched, with difficulty, by steel), and no stain for K-feldspar in the etched offcut. Modal mineralogy in polished thin section is approximately:

Quartz (partly/largely secondary?)	50%
Sericite (after feldspar), muscovite (after mafic phases)	30%
Carbonate (mainly dolomite/ankerite?)	10%
Pyrite (mainly in veins, minor disseminated)	8-10%
Rutile	~1%
Chalcopyrite, bornite, unidentified (inclusions in vein pyrite)	traces

This sample consists mainly of about 25-30% relict (sericite-local carbonate altered) plagioclase and ~10% relict (sericite/muscovite, local carbonate, accessory pyrite, rutile) mafic phenocrysts, set in a fine-grained quartz-sericite groundmass, cut by veins of vuggy pyrite-quartz-local carbonate.

Relict plagioclase phenocryst sites show sub/euhedral outlines up to about 2 mm in diameter, pseudomorphed by randomly oriented, finely matted sericite as sub/euhedral flakes in the 25-50 μm size range locally (near carbonate-bearing veins/veinlets) by carbonate as interlocking subhedra mostly <0.2 mm (possibly mostly dolomite to judge by the lack of reaction in hand specimen unless powdered?).

Relict mafic mineral phenocryst sites are typically smaller, with mainly euhedral outlines <1 mm long, typically pseudomorphed by coarser flakes of sericite or muscovite (euhedral, up to ~0.2 mm, aligned with the length of the relic, suggestive of former biotite although some could have been amphibole (?). In places, lesser carbonate (interlocking sub/anhedra mostly <0.4 mm, partly brownish especially at the margins, suggestive of Fe-bearing dolomite, i.e. ankerite?) also replaces mafic sites. Rarely, minor pyrite (rounded sub/euhedra <0.3 mm) is found in both relict mafic and plagioclase sites, as are small irregular/subhedral aggregates of rutile (up to 0.12 mm, composed of randomly oriented, minute stubby dark brown euhedra mainly <15 μm long).

The groundmass consists of quartz (interlocking to rounded subhedra mostly <25 μm , possibly partly secondary?) and interstitial sericite (randomly oriented subhedral flakes mostly <20 μm), rare traces of pyrite (subhedra <0.1 mm) and rutile (as described above).

Veins are sub-planar to irregular/anastomose, up to about 2.5 mm thick, with vugs up to several mm long partly filled by extremely fine-grained (<15 μm) chalcedonic quartz, otherwise composed mainly of coarse pyrite (sub/euhedral aggregates up to about 3 mm long, oriented along the vein, porous at margins due to inclusions of quartz, carbonate and minor sericite all mostly <0.1 mm), minor quartz (mostly interlocking sub/anhedra <0.2 mm long) and local carbonate (ragged subhedra up to ~1 mm, possibly dolomite and ankerite?). Alteration envelopes immediately adjacent to veins are irregular, but locally up to 3 mm wide, and consist mainly of increased sericite. There are trace inclusions of rutile (euhedra <20 μm) in some pyrite, as well as rare base-metal sulfides (chalcopyrite, bornite partly altered to digenite?) both <15 μm , but no precious-metal minerals were identified.

In summary, this appears to represent strongly phyllic (quartz-sericite-carbonate-pyrite-trace rutile) altered, possibly originally plagioclase-biotite/hornblende (?) phyric hypabyssal porphyry of dacitic (?) composition, cut by a network of vuggy pyrite-quartz-carbonate veins with sericite envelopes; trace inclusions of chalcopyrite, bornite and digenite rarely occur within the coarse pyrite.

M677234: STRONGLY PHYLIC (QUARTZ-SERICITE-CARBONATE-PYRITE-MINOR RUTILE) ALTERED PLAGIOCLASE?-BIOTITE? $\pm$ QUARTZ PHYRIC HYPABYSSAL PORPHYRY, THIN PLANAR PYRITE-QUARTZ $\pm$ CARBONATE-CHALCOPYRITE VEINS

Hand specimen shows pale grey-buff colored, fine-grained, strongly phyllic altered, relict porphyritic (volcanic or hypabyssal?) rock cut by thin planar pyrite $\pm$ carbonate veins. The rock is not magnetic, shows only trace reaction to cold dilute HCl (mainly only where scratched, with difficulty, by steel), and no stain for K-feldspar in the etched offcut. Modal mineralogy in polished thin section is approximately:

Quartz (rare phenocrysts, partly secondary)	45%
Sericite (after feldspar), muscovite (after mafic phases)	35%
Carbonate (mainly dolomite/ankerite?)	10%
Pyrite (mainly in veins, minor disseminated)	8-10%
Rutile	~1%
Chalcopyrite (included in vein pyrite)	<<1%
Unidentified (inclusions in vein pyrite)	trace

This sample consists of about 25-30% relict (sericite-local carbonate altered) plagioclase, ~10% relict (sericite/muscovite, local carbonate, pyrite, accessory rutile) mafic and rare quartz phenocrysts, set in a fine-grained quartz-sericite groundmass, cut by veins of vuggy pyrite-quartz-local carbonate.

Relict plagioclase phenocryst sites show sub/euhedral outlines up to 2.7 mm long (glomeratic to 3.5 mm), pseudomorphed by randomly to radially oriented, finely matted sericite as sub/euhedral flakes in the 50 μ m-0.15 mm size range, locally (especially near carbonate-bearing veins/veinlets) with carbonate as interlocking subhedra up to 0.3 mm (possibly mostly dolomite to judge by the lack of reaction in hand specimen unless powdered?), and pyrite (rounded subhedra to 0.3 mm).

Relict mafic phenocryst sites are typically smaller (but may be confused with plagioclase sites), with mainly euhedral outlines <1 mm long, typically pseudomorphed by coarser flakes of sericite or muscovite (subhedral, up to ~0.5 mm, aligned with the length of the relic, suggestive of former biotite although some could have been amphibole (?), variable carbonate (interlocking sub/anhedra mostly <0.35 mm, typically clear, suggestive of dolomite?). Commonly, disseminated pyrite (rounded sub/euhedra <0.3 mm) is also found in relict mafic sites, as are irregular/subhedral aggregates of rutile (up to 0.15 mm, composed of randomly oriented, minute stubby dark brown euhedra mainly <20 μ m long).

Rare quartz phenocrysts have rounded (strongly resorbed?) subhedral outlines mostly <1 mm across (up to 1.5 mm in offcut), with narrow (<50 μ m) overgrowth rims or alteration haloes of secondary sericite-quartz. The quartz phenocrysts are not strained (show no undulose extinction).

The groundmass consists of quartz (interlocking to rounded subhedra mostly <30 μ m, possibly partly secondary?) and interstitial sericite (randomly oriented subhedral flakes mostly <25 μ m), minor pyrite (subhedra <50 μ m) and rutile (as described above).

Veins are planar, up to about 1.5 mm thick, with vugs up to ~1 mm long partly filled by fine-grained (<50 μ m) somewhat chalcedonic quartz and carbonate as euhedra to 0.5 mm, otherwise composed mainly of coarse pyrite (sub/euhedral crystals mostly <1 mm, in aggregates many mm long, oriented along the vein, locally with inclusions of quartz, carbonate and minor sericite all mostly <65 μ m, down the center), selvages of quartz (interlocking sub/euhedra <0.6 mm long with comb texture) and local carbonate (euhedra <0.5 mm, possibly dolomite?). Within poorly defined alteration envelopes immediately adjacent to veins <1 mm wide, sericite is abundant and locally distinctly brown. There are local ragged sub/anhedra inclusions of chalcopyrite up to 0.25 mm, and a rare grey, possibly anisotropic (?) soft phase <35 μ m in size that would require SEM analysis to identify.

In summary, this appears to represent strongly phyllic (quartz-sericite-carbonate-pyrite-trace rutile) altered, possibly originally plagioclase-biotite/hornblende (?) phyric hypabyssal porphyry of dacitic (?) composition, cut by a network of vuggy pyrite-quartz-carbonate veins with sericite envelopes; trace inclusions of chalcopyrite, bornite and digenite rarely occur within the coarse pyrite.

M677111: BRECCIA: CLASTS QUARTZ-SERICITE-PYRITE±RUTILE ALTERED PORPHYRY IN MATRIX OF PYRITE-CHALCOPYRITE-SERICITE-QUARTZ-CARBONATE

Hand specimen shows pale grey-buff colored, strongly phyllic altered, breccia composed of relict porphyritic (volcanic or hypabyssal?) rock in a matrix of pyrite-chalcopyrite ±carbonate. The rock is not magnetic, shows only rare trace reaction to cold dilute HCl (even where scratched, fairly readily, by steel), and no stain for K-feldspar in the etched offcut. Modal mineralogy in polished thin section is approximately:

Quartz (rare phenocrysts, partly/largely secondary)	45%
Sericite (after feldspar), muscovite (after mafic phases)	40%
Pyrite (mainly in vein matrix, lesser disseminated)	7-8%
Carbonate (mainly ankerite?)	5%
Chalcopyrite (veins, included in vein pyrite; trace sphalerite)	2%
Rutile	<1%

This sample consists of mainly intensely phyllic (quartz-sericite-pyrite-trace rutile) altered angular heterolithic clasts of variably porphyritic hypabyssal and/or volcanic rock, cemented by a hydrothermal matrix of pyrite-chalcopyrite-quartz-sericite-minor carbonate that grades to a vein stockwork of similar composition in adjacent rock.

Clasts are typically angular, mostly <1.5 cm in diameter (although up to about 3 cm and rounded in adjacent rock not sectioned). Although the intense alteration to sericite and quartz, minor disseminated pyrite obscures the original lithologies as seen in thin section, the offcut emphasizes differences between clasts that appear to represent hypabyssal plagioclase-phyric porphyries as seen in the previous two samples, as well as more aphanitic rock that may be volcanic (?) in origin. In the section, relict plagioclase sites have mainly euhedral outlines up to about 2 mm across (in some clasts, mostly <<0.5 mm; these could represent volcanics?). The sites are pseudomorphed by sericite as randomly oriented, sub/euhedral flakes mostly <35 μ m, but locally to 0.15 mm, and variable secondary quartz (aggregates of interlocking sub/anhedra mostly <0.2 mm) and pyrite (sub/euhedral crystals mostly <0.15 mm). Possible relict mafic sites are more difficult to identify and define, but are probably represented by irregular shaped patches up to about 1.7 mm across composed of variable proportions of pyrite (subhedra to 0.5 mm) and much lesser chalcopyrite (subhedra <0.2 mm), sericite/coarser muscovite as subhedra flakes to 0.25 mm, and secondary quartz as rounded subhedra to 0.35 mm (most common near the breccia matrix or veinlets) plus accessory rutile (aggregates to 0.2 mm of dark golden brown sub/euhedral <25 μ m). Local possible quartz phenocrysts have rounded sub/euhedral outlines up to 1.5 mm, distinguished by well-developed, thick overgrowth or reaction rims up to 0.2 mm thick of (probably secondary) quartz, optically continuous with the inner crystal but containing inclusions of sericite similar to those in the adjacent matrix. However, some of these are difficult to distinguish from vein matrix quartz. The groundmass in clasts is as described above for the previous samples (finely intermixed quartz, possibly partly secondary, and sericite).

In the hydrothermal vein/breccia matrix, sulfides and sericite are abundant; quartz and carbonate are subordinate. Pyrite forms cubic sub/euhedral mostly <1 mm, commonly with inclusions of chalcopyrite in the <20 to 100 μ m range, or intergrown with fine-grained chalcopyrite interstitial to pyrite; pyrite also contains inclusions of rutile (euhedral mostly <35 μ m). Chalcopyrite forms ragged, irregular aggregates to 0.5 cm composed of sub/anhedra mainly <50 μ m (rarely with inclusions of or associated with minute colourless, i.e. low Fe, sphalerite <30 μ m), but up to 0.5 mm. Sericite forms randomly oriented, matted subhedra flakes rarely over about 25 μ m in diameter, in an irregular zone enveloping the sulfides. Quartz and lesser carbonate are typically more closely associated with or in contact with the sulfides, forming euhedral to subhedra bladed crystals up to ~0.5 mm long and subhedra mostly <0.25 mm respectively; the carbonate may be ankerite since it is very difficult to get it to react to HCl in hand specimen.

In summary, this appears to represent breccia of intensely phyllic (quartz-sericite-pyrite-trace rutile) altered angular heterolithic clasts of variably porphyritic hypabyssal and/or volcanic rock, cemented by a hydrothermal matrix of pyrite-chalcopyrite-quartz-sericite-minor carbonate.

M677156: PYRITE-QUARTZ-CARBONATE-CHLORITE-MUSCOVITE VEIN ZONE, INNER SERICITE-PYRITE, OUTER KSPAR-CHLORITE-CARBONATE-SERICITE ENVELOPES

Hand specimen shows dark brownish-grey colored, fine-grained plagioclase phyric porphyry cut by buff-coloured, strongly phyllic altered zones associated with strong pyrite $\pm$ carbonate veins. The rock is not magnetic, shows only trace reaction to cold dilute HCl (mainly only in vein zones, only where scratched, with difficulty, by steel), and minor stain for K-feldspar in the etched offcut (only outside of vein zones). Modal mineralogy in polished thin section is approximately:

Relict alkali feldspar (mainly plagioclase?)	25%
Quartz (largely secondary; minor relict primary?)	20%
Sericite (after feldspar), muscovite (after mafics; vein zone)	20%
Chlorite (vein zone and outer envelope, magnesian?)	15%
K-feldspar (outer envelope to vein, likely secondary?)	10%
Pyrite (vein, disseminated)	8-10%
Carbonate (vein zone and envelopes, dolomite/ankerite?)	5%
Rutile	<1%
Pyrrhotite (minute inclusions in pyrite)	trace

This sample displays relict plagioclase-mafic phyric porphyry altered to Kspar-chlorite in an outer envelope surrounding an inner sericite envelope to a poorly defined, pyrite-quartz-carbonate-chlorite-muscovite vein zone. Other thin pyrite $\pm$ carbonate-muscovite veinlets cut the outer envelope area.

In the outer envelope, relict plagioclase phenocrysts with euhedral but locally corroded outlines up to ~2 mm long are random oriented and commonly 15-30% replaced by very fine, random to crystallographically oriented sub/euhedral flakes of sericite and lesser carbonate as ragged subhedra both <30 μ m (local trace chlorite of similar size). In addition, the phenocrysts appear on the basis of pale yellow stain in the etched offcut to be partly replaced by Kspar, particularly at the cores, in irregular-shaped areas. Relict mafic phenocryst sites with rounded subhedral to irregular anhedral outlines up to ~1.5 mm are pseudomorphed by variable combinations of chlorite (aggregates to 0.5 mm of randomly oriented subhedral flakes mostly <0.1 mm, almost colourless to faintly green, length-fast weak first-order grey birefringence suggestive of F:M around 0.4?), secondary quartz (subhedra to 0.2 mm), pyrite (euhedra to 0.25mm; aggregates to 0.5 mm) and rutile (sparingly distributed as aggregates to 0.2 mm of dark golden brown sub/euhedra <50 μ m). The groundmass is difficult to be certain of but appears to comprise laths of Kspar (possibly secondary?) with a somewhat seriate texture but mostly in the 0.5-0.1 mm size range, scattered small aggregates of quartz <0.35 mm across (recrystallized primary?), chlorite flakes (euhedral, randomly to radially oriented, up to 0.2 mm, magnesian as described above) and patches of carbonate (ragged, <0.1 mm) all set in microcrystalline alkali feldspar and sericite both mostly <15 μ m. Thin planar veinlets <1 mm thick consist of pyrite with minor inclusions of carbonate and narrow selvages of muscovite.

In the inner envelope, which is up to about 1 cm thick on either side of the central vein zone, sericite is abundant as randomly oriented, matted subhedral flakes <50 μ m, grading to muscovite as locally radially oriented subhedral flakes to almost 0.2 mm, associated with secondary quartz as subhedra to 0.25 mm and relict Kspar (largely sericite $\pm$ carbonate altered) up to 0.65 mm long.

In the vein zone, which is poorly defined but ~1 cm thick, secondary quartz forms aggregates to 2 mm of subhedra <1 mm with weak strain (undulose extinction), intergrown with muscovite as euhedral, locally radiating flakes to 0.5 mm and chlorite as sheafs of sub-radiating euhedral flakes to ~1 mm, carbonate as subhedra to 0.5 mm (possibly dolomite or ankerite?). Pyrite occurs as heavy dissemination s locally aggregating to vein-like patches up to 4 mm across composed of interlocking sub/euhedra up to about 1 mm in diameter, rarely with inclusions of pyrrhotite as rounded subhedra mostly <70 μ m long (rarely to 0.15 mm), or rutile euhedra <50 μ m long. The pyrite is closely associated with muscovite, carbonate and chlorite and intergrown with secondary quartz.

In summary, this appears to represent relict plagioclase-mafic phyric porphyry altered to Kspar-chlorite in an outer envelope (cut by thin pyrite $\pm$ carbonate-muscovite veinlets) surrounding an inner sericite envelope to a poorly defined, pyrite-quartz-carbonate-chlorite-muscovite vein zone.

M677096: STRONGLY PHYLIC/RELICT WEAK POTASSIC? (ALBITE?-QUARTZ-SERICITE-CARBONATE-CHLORITE-PYRITE±CHALCOPYRITE-RUTILE) ALTERED, QUARTZ VEINED, POSSIBLY FRAGMENTAL VOLCANIC OR BRECCIA

Hand specimen shows pale grey-buff colored, fine-grained, strongly phyllic altered, relict fragmental (volcanic?) rock with disseminated sulfides. The rock is not magnetic, shows only trace reaction to cold dilute HCl (mainly only where scratched, with difficulty, by steel), and no stain for K-feldspar in the etched offcut. Modal mineralogy in polished thin section is approximately:

Relict plagioclase (albite-sericite ±carbonate altered)	45%
Quartz (recrystallized primary?/largely secondary)	20%
Sericite (after feldspar), muscovite (after mafic phases)	15%
Carbonate (mainly dolomite/ankerite?)	10%
Pyrite (mainly in veins, minor disseminated)	5%
Chlorite (magnesian?)	3-5%
Chalcopyrite (disseminated)	<1%
Rutile	<1%
Pyrrhotite (rare trace inclusions in pyrite)	trace

This sample consists of what appear to be about 50% angular, <1 to ~3 cm diameter clasts of variably relict plagioclase-mafic phyric porphyry in a finer-grained, altered matrix, cut by hairline irregular to planar veinlets of secondary quartz partly to largely controlling the fine sulfides.

In the clasts, which range from relatively aphyric to crowded phyric, relict plagioclase phenocrysts have mainly tabular euhedral outlines <1.5 mm long (even where glomeratic), generally 20-40% replaced by randomly oriented minute flakes of sericite <20 μ m and lesser carbonate as subhedra <50 μ m (likely dolomite to judge by the lack of reaction in hand specimen?). Remnant plagioclase shows only vague relict twinning but has negative relief compared to adjacent quartz, suggestive of albite composition (likely secondary, given the level of alteration present). Relict mafic phenocryst sites (rounded to irregular, also mostly <1 mm) are pseudomorphed by variable mixtures of chlorite (aggregates to 0.5 mm of sub/euhedral flakes <0.1 mm with pale green pleochroism and length-fast pale grey-greenish anomalous birefringence suggestive of F:M 0.4-0.5?), pyrite (ragged subhedra to 0.5 mm), sericite <50 μ m commonly intimately intergrown with carbonate (<0.15 mm, dolomite or ankerite?) plus accessory rutile (aggregates to 0.2 mm of dark brown minute sub/euhedra <15 μ m in size). Quartz locally occurs in skeletal/corroded, composite subhedral crystals up to ~0.5 mm that could represent recrystallized primary phenocrysts (?) but are difficult to separate from similar-sized patches of likely secondary quartz (subhedra <50 μ m). The groundmass appears to consist of smaller (partly seriate-textured) relict plagioclase crystals, altered as described above, and patches of carbonate-chlorite-sericite-pyrite-minor rutile, after mafics, set in aphanitic randomly oriented relict plagioclase, sericite, carbonate, minor sulfide all mostly <20 μ m in size.

The matrix is more difficult to define in thin section, but appears to consist of similar material to that in the clasts, somewhat more strongly altered to carbonate, quartz, sericite, sulfides, minor chlorite and accessory rutile (relict plagioclase is less abundant), all more or less as described above or somewhat coarser-grained. Secondary quartz is commonly more or less controlled along networks of irregular to planar, hairline veinlets commonly <0.2, but locally swelling up to ~1 mm, thick, composed of tightly interlocking, sub/anhedra mostly <50 μ m, associated with pyrite (ragged subhedra mainly <0.6 mm), locally intergrown/associated with lesser chalcopyrite (ragged subhedra to 0.3 mm) and rare rutile (dark red-brown euhedra to 0.1 mm). Pyrite contains traces of chalcopyrite and rare pyrrhotite as rounded subhedra mainly <25 μ m.

In summary, this appears to represent strongly phyllic/relict weak potassic? (albite?-quartz-sericite-carbonate-pyrite-chlorite-minor chalcopyrite, rutile) altered, possibly originally fragmental volcanic or breccia, in association with thin veinlets of quartz-sulfide.

M677240: VEIN OF SERICITE-CLAY?-RELICT PLAGIOCLASE-CHLORITE-SULFIDES (SPHALERITE, PYRITE, GALENA ALL PARTLY OXIDIZED TO COVELLITE AND OXIDES)

Hand specimen shows sulfide-rich (pyrite, sphalerite, galena bearing) vein with crumbly, friable nature due to intervening silicate minerals being mainly either buff-tan or white coloured, soft minerals (both easily scratched by steel, easily eroded during section preparation). The rock is locally weakly magnetic, shows no reaction to cold dilute HCl (even where scratched), and no stain for K-feldspar in the etched offcut. Modal mineralogy in polished thin section is approximately:

Sericite	30%
Clay (?), possibly kaolinite-group (?)	25%
Relict (sericitized) plagioclase	10%
Sphalerite (with minute inclusions of chalcopyrite at rims)	10%
Pyrite	10%
Chlorite (magnesian?)	8%
Galena	5%
Covellite (replacing sulfide margins)	1%
Secondary zinc/lead minerals (?) with covellite	1%

This is a highly friable vein sample composed mainly of sheet silicates (sericite, possible clay, possibly after plagioclase, some of which remains, and chlorite, possibly after former mafics) plus variable sulfides (sphalerite, pyrite and galena) but no quartz or carbonate.

The bulk of the vein consists of brownish stained, fine-grained sericite (partly to largely after plagioclase, relict crystals of which have sub- to euhedral outlines up to about 1.5 mm in diameter, with random orientations). Twinning is still vaguely visible in some of the plagioclase crystals, with extinction on 010 up to about 16 degrees, suggestive (but not conclusive, lacking quartz to compare refractive indices with) of albite, possibly a secondary composition since it appears to have been a vein mineral (?). Sericite replacing 50-100% of the plagioclase typically occurs as more or less randomly oriented, subhedral flakes <35 µm in diameter, characterized by a pale brownish colour (possibly due to minor limonite staining derived by oxidation of fine pyrite disseminated as cubic euhedra <0.1 mm?), which causes the tan-buff colour in hand specimen.

Portions of the vein that are pure white in hand specimen are relatively clear in thin section, and consist of partly coarser-grained, apparently sheet silicate with lower birefringence than sericite or muscovite, but similarly length-slow, suggestive of a clay mineral such as kaolinite or kaolinite-group (?). This tentative identification is supported by the soft nature of the white mineral in the offcut, where it is easily scratched or dug out by steel. It occurs as either large “super-crystals” with optical continuity up to ~0.75 mm, or matted randomly oriented flakes mostly <25 µm in diameter. Highest birefringence seen is first-order white, and it is length-slow, in contrast to the chlorite.

Chlorite occurs in irregular patches or vein-like areas up to ~2 mm thick by <5 mm long, composed of more or less randomly oriented, sub/euhedral flakes mostly <45 µm in diameter, with almost no colour and length-fast, weak first order grey birefringence suggestive of F:M around 0.4 (?)

Sphalerite forms large subhedra up to about 0.5 cm across that are fractured and have pale greenish colour, indicative of low Fe content. They typically show zones <1 mm thick around their margins in which minute rounded blebs of chalcopyrite <5 µm in size are present (rarely concentrated in the fractures to subhedra <40 µm long). Pyrite forms sub/euhedra up to 2.5 mm, locally with porous cores due to silicate inclusions <0.1 mm, and intergrown at margins with sphalerite and pyrite. Galena forms crudely euhedral crystals to 3 mm, intergrown at margins with pyrite and sphalerite. All three major sulfide minerals are partly replaced at rims by very fine-grained (matted, subhedral flakes mostly <15 µm) covellite, typically mixed with what are likely secondary Pb-Zn oxide minerals of uncertain identity as clear to yellow/brownish, sub/euhedral crystals up to 0.1 mm long.

In summary, this appears to represent an unusual vein assemblage of brownish sericite (after plagioclase, some of which remains), possible kaolinite-group clay mineral, and slightly magnesian chlorite, plus coarse sphalerite, pyrite and galena all partly oxidized at rims to fine-grained covellite and possible Pb and Zn oxide minerals.

M677294: BRECCIA: CLASTS QUARTZ-SERICITE-PYRITE±RUTILE ALTERED VOLCANIC IN VUGGY MATRIX OF PYRITE-CARBONATE-SERICITE-MINOR QUARTZ

Hand specimen shows pale white-buff colored, strongly phyllic altered, breccia composed of relict porphyritic (volcanic or hypabyssal?) rock in a matrix of vuggy pyrite-carbonate. The rock is not magnetic, shows only rare trace reaction to cold dilute HCl (even where scratched, fairly readily, by steel), and no stain for K-feldspar in the etched offcut. Modal mineralogy in polished thin section is approximately:

Quartz (mainly secondary)	40%
Sericite (in wallrock clasts), muscovite (breccia matrix)	35%
Pyrite (mainly in breccia matrix, lesser disseminated)	15%
Carbonate (mainly ankerite?)	5%
Vugs (in breccia matrix)	3-5%
Relict plagioclase (albite?)	<1%
Rutile	<1%

This sample consists of mainly intensely phyllic (quartz-sericite-pyrite-trace rutile) altered angular heterolithic clasts of variably porphyritic hypabyssal and/or volcanic rock, cemented by a hydrothermal matrix of pyrite-chalcopryrite-quartz-sericite-minor carbonate that grades to a vein stockwork of similar composition in adjacent rock.

Clasts are typically angular, up to at least 2.5 cm in diameter (although up to at least 8 cm in adjacent rock not sectioned). The intense alteration to sericite and quartz, minor disseminated pyrite obscures the original lithologies, making identification of protolith (volcanic or hypabyssal, plagioclase-phyrlic porphyries as seen in previous samples) difficult. In the section, relict texture is fine-grained, with relict plagioclase sites having mainly euhedral outlines mostly <0.6 mm long (suggestive of volcanics?). The sites are pseudomorphed by sericite as randomly oriented, sub/euhedral flakes mostly <35 μ m, but locally to 0.1 mm, and variable secondary quartz (aggregates of interlocking sub/anhedra mostly <50 μ m) plus local pyrite (sub/euhedral crystals mostly <0.2 mm). Remnant plagioclase shows local twinning with extinction on 010 up to 14 degrees and possibly negative relief against quartz of the groundmass, suggestive of albite (likely a secondary composition). Possible relict mafic sites are more difficult to identify and define, but are possibly represented by irregular shaped patches <0.65 mm across composed of variable proportions of pyrite (subhedra to 0.2 mm), sericite/coarser muscovite as subhedral flakes to 0.2 mm, and secondary quartz as rounded subhedra mostly <50 μ m plus local accessory rutile (aggregates to 0.2 mm of dark golden brown sub/euhedra <25 μ m). No relict quartz phenocrysts are identified. The groundmass in clasts is composed of finely intermixed quartz mostly <50 (rarely to 65) μ m, likely partly to largely secondary, and lesser, interstitial sericite as subhedral flakes mostly <30 μ m in size). The clasts are cut by narrow sericite-rich hairline fractures mainly <0.2 mm thick in which sericite/muscovite forms semi-radiating subhedral flakes up to 0.15 mm.

In the distinctly vuggy hydrothermal vein/breccia matrix, pyrite and carbonate are abundant; sericite and especially quartz are subordinate to almost absent. Pyrite forms cubic sub/euhedra up to about 5 mm, locally porous at centers due to silicate inclusions in the <20 μ m range, but not containing any visible chalcopryrite inclusions. Locally, associated rutile forms relatively coarse euhedral crystals up to ~75 μ m. Carbonate occurs as interlocking subhedra up to about 0.75 mm in size, likely ankerite to judge by the brownish colour in thin section and almost complete lack of reaction to HCl in hand specimen. Sericite forms randomly to radially oriented, matted subhedral flakes up to about 0.2 mm in diameter, typically included within carbonate-rich zones. Quartz, forming sub/anhedra crystals up to 0.5 mm, is relatively rare; most is finer-grained (<0.1 mm) and may merely represent silicified wallrock fragments. Vugs are typically <1 mm wide but may be up to many mm long, separating pyrite from wallrock or thin selvages of sericite/muscovite and carbonate.

In summary, this appears to represent breccia of intensely phyllic (quartz-sericite-pyrite-trace rutile) altered angular heterolithic clasts of very finely porphyritic volcanic (?) rock, cemented by a hydrothermal matrix of vuggy pyrite-carbonate-sericite-minor quartz-trace rutile.

M677330: INTENSE PHYLIC/ARGILLIC (SERICITE-CLAY?-QUARTZ-PYRITE-CARBONATE-RUTILE-APATITE) ALTERED FINE PORPHYRY, VEINS OF PYRITE-CARBONATE-QUARTZ±RUTILE, UNIDENTIFIED

Hand specimen shows chalky-white to very pale greenish colored, fine-grained, intensely phyllic or argillic altered, relict porphyritic (volcanic or hypabyssal?) rock cut by irregular pyritic veins and thin carbonate fractures. The rock is not magnetic, shows only trace reaction to cold dilute HCl (mainly only where scratched, with difficulty, by steel), and only faint yellow stain (not for K-feldspar?) in the etched offcut. Modal mineralogy in polished thin section is approximately:

Sericite (after feldspar), muscovite (after mafic phases)	45%
Quartz (partly/largely secondary?)	30%
Clay (largely plucked out to leave voids?)	15%
Pyrite (mainly coarse disseminated)	5-7%
Carbonate (ankerite?)	3-5%
Rutile	~1%
Apatite	<<1%
Unidentified	trace

This sample is strongly altered to sericite-clay?-quartz-pyrite-minor carbonate-accessory rutile-apatite, but appears to be finely porphyritic, composed of very small (mostly <0.5 mm) relict plagioclase feldspar and mafic, rare quartz phenocrysts in an aphanitic, strongly phyllic altered groundmass, cut by narrow and irregular, locally vuggy veinlets of pyrite-carbonate ±quartz.

Relict plagioclase phenocryst sites are locally difficult to recognize due to intense replacement by clay?/sericite that blends in with the sericitized groundmass, but appear to mostly have euhedral outlines <0.6 (rarely to 1) mm, with smaller ones typically replaced by sericite (randomly oriented subhedral flakes mostly <25, rarely to 40, μ m) and larger examples by what may be clay (?) mostly as minute flakes <15 μ m but typically aligned into streaks up to 60 μ m long highlighting former cleavage, twinning, or locally zoning, or rarely forming “super-crystals” optically continuous for up to 0.6 mm long. Low birefringence suggests the clay (?) mineral could belong to the kaolinite group. In places, the sites are pseudomorphed by minute flakes of distinctly brown material, possibly microcrystalline clay (?) as minute flakes mostly <10 μ m in size.

Possible relict mafic sites are better defined, mostly smaller (<0.3, rarely to 0.6) mm long, and are pseudomorphed by coarser sericite or muscovite, as mostly euhedral flakes <0.2 to rarely 0.6 mm in size, aligned with the length of the site (suggestive of former biotite?). However, some of these sites are difficult to distinguish from relict plagioclase sites unless they contain accessory rutile (aggregates to 0.15 mm of pale brown euhedra mostly <25 μ m long).

Small relict quartz crystals or aggregates (microphenocrysts) are scattered, subhedral and mostly <0.25 mm in size, locally partly recrystallized to interlocking subhedra <0.1 mm (likely due to secondary quartz activity).

The groundmass consists of very fine-grained quartz (subhedra mostly <30 μ m) and abundant sericite (mostly <35 μ m, after plagioclase and mafics?) or brownish clay (as described above).

The irregular vein systems are anastomose and pinch/swell from <0.2 mm up to ~2 mm thick. They consist primarily of coarse pyrite (cubic subhedra up to 2.5 mm, in loose aggregates up to ~5 mm, locally partly porous due to inclusions of silicates such as quartz or muscovite mostly <0.2 mm), associated with coarse carbonate (sub/euhedra up to 1.5 mm, possibly ankerite since there is almost no reaction to HCl in hand specimen) that commonly contains small included quartz crystals as bladed euhedra <0.2 mm long, all locally growing into or coating vugs <1 mm in size. Rarely, euhedral apatite up to 0.25 mm long is also associated with these vugs, and traces of rutile (euhedra to 30 μ m) and an unidentified opaque mineral (slightly lower reflectivity than pyrite, softer, somewhat scratched, weakly anisotropic?) forms subhedra <35 μ m that would require SEM analysis.

In summary, this appears to represent strongly phyllic/argillic (clay?/sericite-quartz-pyrite-carbonate-trace rutile-apatite) altered, very finely plagioclase-mafic-rare quartz phyric volcanic or hypabyssal porphyry cut by irregular veins of vuggy pyrite-carbonate-quartz-trace rutile-unidentified.

M677410: BRECCIA: STRONGLY PHYLIC (SERICITE-KSPAR±PYRITE-RUTILE) ALTERED CLASTS IN HYDROTHERMAL MATRIX OF PYRITE (±SPHALERITE, CHALCOPYRITE, TRACE GALENA, SULFOSALT?), KSPAR, CARBONATE, MUSCOVITE

Hand specimen shows breccia composed of clasts of pale white-buff, strongly phyllic altered volcanic or hypabyssal rock in a grey, highly pyritic, vuggy matrix. The rock is not magnetic, and shows no reaction to cold dilute HCl (even where scratched, with difficulty, by steel), but there is major stain for K-feldspar (presumably secondary?) in the etched offcut. Modal mineralogy in polished thin section is approximately:

Pyrite (mainly in breccia matrix, lesser disseminated)	30%
K-feldspar (mainly secondary?)	25%
Carbonate (matrix, mainly ankerite?)	15%
Quartz (mainly primary, in clasts)	15%
Sericite, muscovite (in wallrock clasts and breccia matrix)	10%
Sphalerite (mostly breccia matrix)	3%
Chalcopyrite (breccia matrix)	~1%
Galena, possible sulfosalt (tetrahedrite?)	<1% each
Rutile	<1%

Heavily phyllic (sericite-pyrite-accessory rutile) altered clasts in this breccia locally preserve their relict porphyritic texture (phenocryst sites of plagioclase and mafic minerals) grade to a relatively coarse-grained, hydrothermal matrix of sulfides (pyrite, minor sphalerite, chalcopyrite), K-feldspar (presumably secondary), carbonate and sericite or muscovite.

In the most recognizable clasts, which display sub-angular outlines up to about 2 cm in diameter, small feldspar phenocryst sites have mainly euhedral outlines <0.5 mm in size, and are all K-feldspar to judge by the staining in etched offcut; however, by comparison to other samples in this suite, this is likely to be secondary, after former plagioclase. Some are partly to largely replaced by sericite as subhedral, randomly oriented flakes mostly <50 µm in size. Mafic phenocryst sites are typically somewhat smaller and pseudomorphed by coarse sericite/muscovite as subhedral flakes up to 0.3 mm, accessory rutile as 0.2 mm crystals or aggregates of subhedra <30 µm, but there are similar muscovite-altered relicts up to ~2 mm that could be either mafic (or feldspar?) sites. The groundmass consists of microcrystalline (rarely over 15 µm) K-feldspar and quartz (to judge by the contrast in relief between the two) and lesser sericite, accessory pyrite and rutile. Relatively coarse disseminated pyrite (euhedra up to 0.25 mm) is not clearly attributable to mafic or feldspar sites.

The matrix is not well-defined, with a gradational transition from fine-grained clast to coarse-grained matrix composed of pyrite (cubic euhedra up to about 2 mm, but in aggregates up to almost 1 cm across), variable K-feldspar (sub/euhedral, somewhat rounded, blastic (secondary) crystals up to almost 1 mm and carbonate (somewhat ragged subhedra mostly <0.5 mm, possibly ankerite since no reaction noted in hand specimen), minor sericite/muscovite as sub/euhedral flakes mostly <0.25 mm. In places, pyrite is accompanied by/intergrown with minor base-metal sulfides, mostly sphalerite, forming ragged subhedra up to 2.5 mm across with weak yellowish colour indicative of probable low Fe content except around margins where abundant microscopic inclusions of chalcopyrite are mostly <5 µm in size. Sphalerite also occurs as smaller subhedra <0.5 mm enclosed in adjacent Kspar and carbonate. Chalcopyrite also occurs as local ragged subhedra to ~1 mm in diameter, intergrown with sphalerite and pyrite. The pyrite locally contains small (<0.1 mm) inclusions of sphalerite and chalcopyrite. Chalcopyrite rarely contains traces around the margins of galena and a grey, apparently isotropic sulfosalt (tetrahedrite?), that could be Ag-bearing both mostly <50 µm in size.

In summary, this appears to represent breccia composed of strongly phyllic (sericite-Kspar-minor pyrite-rutile) altered clasts of finely feldspar-mafic phyric porphyry in a hydrothermal matrix of pyrite (lesser sphalerite, chalcopyrite, trace galena, sulfosalt?)-Kspar-carbonate-muscovite.

M677429: STRONGLY PHYLIC/PROPYLITIC (ALBITE?-SERICITE-CARBONATE-CHLORITE-MINOR QUARTZ?-PYRITE-RUTILE) ALTERED, FINELY PLAGIOCLASE-MAFIC PHYRIC, POSSIBLY DACITIC VOLCANIC/HYPABYSSAL PORPHYRY

Hand specimen shows pale greenish-grey colored, fine-grained, strongly phyllic altered, relict porphyritic (volcanic or hypabyssal?) rock with minor disseminated iron sulfides. The rock is locally slightly magnetic, shows widespread but slow reaction to cold dilute HCl (even where scratched, with difficulty, by steel), and no stain for K-feldspar in the etched offcut. Modal mineralogy in polished thin section is approximately:

Relict plagioclase (albite-sericite $\pm$ carbonate altered)	40%
Quartz (recrystallized primary/minor secondary?)	20%
Sericite (after feldspar), muscovite (after mafic phases)	15%
Carbonate (mainly dolomite/ankerite?)	15%
Chlorite	7-8%
Pyrite (mainly in relict mafic sites)	1-2%
Rutile	~1%

This sample consists of about 25-30% small relict (sericite-carbonate) altered plagioclase and lesser (10-15%?) relict (chlorite-sericite-carbonate-pyrite-rutile) altered mafic phenocryst sites in an almost aphanitic, quartzo-feldspathic groundmass altered to chlorite, sericite and carbonate.

Relict plagioclase phenocryst sites show sub/euhedral outlines up to almost 2 mm in diameter, pseudomorphed by randomly oriented, finely matted sericite as sub/euhedral flakes in the 25-50 μ m size range and by similar abundances of carbonate as interlocking subhedra mostly <0.2 mm (possibly mostly dolomite to judge by the slow reaction in hand specimen?). Remnant plagioclase (both relict phenocrysts and matrix) is generally untwinned or shows vague twinning, but has distinct negative relief compared to quartz, suggestive of albite composition in the An₀₋₁₀ range. This is likely secondary, given the level of alteration to sericite and carbonate in the rest of the crystal.

Relict mafic mineral phenocryst sites are typically smaller, with mainly euhedral outlines <1 mm (locally to 1.75 mm long that are suggestive of amphibole?), typically pseudomorphed by chlorite as aggregates to 0.75 mm of matted, somewhat radiating, subhedral flakes mostly <75 μ m with bright green pleochroism and length-slow, anomalous bluish-green birefringence suggestive of F:M around 0.6 (?), coarser flakes of sericite or muscovite (subhedral, to 0.15 mm, aligned with the length of the relic, suggestive of former biotite ?). In places, lesser carbonate (interlocking sub/anhedra mostly <0.25 mm, partly brownish especially at the margins, suggestive of Fe-bearing dolomite, i.e. ankerite?) also replaces mafic sites. Pyrite occurs as rounded to irregular (skeletal) subhedra mostly <0.5 mm, commonly with inclusions <50 μ m of silicates or rarely rutile. Rutile more commonly occurs as aggregates to ~0.2 mm of dark brown subhedra mostly <50 μ m in size, intergrown mostly with the sericite, possibly representing former ilmeno-magnetite (?) sites and accounting for the slight magnetism locally detected in the sample.

The groundmass consists of plagioclase (randomly oriented sub/euhedral laths mostly <0.1 mm long, interstitial quartz (interlocking to rounded subhedra mostly <35 μ m, possibly partly secondary?) and interstitial chlorite and sericite (both randomly oriented subhedral flakes mostly <25 μ m), carbonate (subhedra <65 μ m, mainly dolomite?) and minor rutile (much as described above). Rare very small (<0.15 mm) resorbed quartz microphenocrysts occur, widely scattered.

In summary, this appears to represent strongly phyllic/propylitic (albite?-sericite-carbonate-chlorite-minor quartz-pyrite-rutile) altered, fine plagioclase-possible hornblende-biotite (?) phyric porphyry possibly originally of dacitic composition (?).

M677432: TRANSITIONAL PROPYLITIC/POTASSIC (ALKALI FELDSPAR?-AMPHIBOLE-BIOTITE-SERICITE-MINOR QUARTZ-MAGNETITE-CARBONATE-PYRITE) ALTERED, FINELY PLAGIOCLASE-MAFIC PHYRIC, ANDESITIC HYPABYSSAL PORPHYRY (?)

Hand specimen shows dark greenish-grey colored, fine-grained, strongly (potassic?) altered, relict porphyritic (volcanic or hypabyssal?) rock with minor veinlet/disseminated magnetite. The rock is strongly magnetic, shows no reaction to cold dilute HCl (even where scratched, with great difficulty, by steel), and only partial faint yellowish stain for K-feldspar in the etched offcut. Modal mineralogy in polished thin section is approximately:

Alkali feldspar (mainly oligoclase, partly/largely secondary?)	55%
Amphibole (mainly secondary, actinolitic?)	25%
Secondary biotite	7-8%
Sericite	5%
Quartz (recrystallized primary/minor secondary?)	2-3%
Magnetite (largely secondary; fracture controlled)	1-2%
Carbonate (mainly fractures, ankerite?)	1-2%
Pyrite	~1%
Rutile	trace

This sample consists of about 35-40% small, seriate, crowded plagioclase and lesser (15-20%) relict (amphibole-biotite-magnetite-trace sulfides) altered mafic phenocryst sites in an almost aphanitic, alkali feldspar-amphibole-minor magnetite altered groundmass, cut by thin irregular magnetite and later sericite or planar carbonate veinlets.

Plagioclase phenocrysts are mainly euhedral and <1 mm in diameter, with a seriate texture that grades to larger, locally glomeratic, aggregates up to 2 mm. They are randomly oriented, generally twinned and relatively fresh-looking, with extinction on 010 up to 16 degrees but has indistinct negative relief compared to quartz, suggestive of oligoclase-andesine composition in the An₂₀₋₃₀ range; presence of local zoning suggests this may be a primary composition. Where the crystals are locally partly altered to amphibole, minor secondary biotite or sericite as subhedra mostly <50 μ m, remnant plagioclase has a recrystallized, secondary appearance.

Relict mafic mineral phenocryst sites are of similar size, with mainly rounded subhedral to irregular, ragged outlines up to 1.75 mm long that are suggestive of former amphibole and biotite(?), typically pseudomorphed by secondary amphibole as aggregates of matted, fibrous, subhedral crystals mostly <75 μ m with pale green pleochroism and small (<15 degree) extinction angle suggestive of actinolite (?), local secondary biotite (matted, euhedral, <0.1 mm flakes with pale to medium brown pleochroism, locally greenish where partly chloritized). Magnetite occurs as subhedral to irregular (partly skeletal) crystals or aggregates mostly <0.5 mm, locally with inclusions <25 μ m of sulfides. Most magnetite is controlled along irregular, discontinuous, poorly defined veinlets up to 0.5 mm thick in which magnetite is associated with amphibole, local secondary quartz (aggregates to 3 mm of rounded subhedra <0.4 mm) and sericite. Most sulfide is pyrite, forming skeletal sub/euhedra mostly <0.15 mm, typically closely associated with or replacing the magnetite.

The groundmass consists of plagioclase (interlocking randomly oriented mainly euhedral laths <0.25 mm long but grading to the seriate-textured phenocrysts, with interstitial alkali feldspar and abundant amphibole both mostly <25 μ m in size. Only minor quartz is definitely identified, forming aggregates to ~0.5 mm (interlocking to rounded subhedra mostly 0.25 mm, possibly partly secondary?). The groundmass feldspar does not show relief against phenocryst feldspar, but could be somewhat more sodic, and could contain minor orthoclase molecule, to explain the faint yellow stain in etched offcut. It is locally partly altered to or mixed with minor sericite (subhedral flakes mostly <25 μ m, in part controlled along fractures where it may form flakes to 0.15 mm, centered on or cut by thin carbonate fractures <0.1 mm thick (filled with subhedra <15 μ m, mainly ankerite?).

In summary, this appears to represent transitional propylitic/potassic (oligoclase?-amphibole-biotite-sericite-minor quartz-magnetite-carbonate-pyrite) altered, fine seriate plagioclase-possible hornblende-biotite (?) phyric porphyry possibly originally of andesitic composition (?).

M677602: CLAY?/SERICITE-ALBITE?-MINOR QUARTZ-CARBONATE-PYRITE-RUTILE
ALTERED PLAGIOCLASE-MAFIC PHYRIC PORPHYRY CUT BY VEIN OF CARBONATE-
PYRITE-CHALCOPYRITE-SPHALERITE/MAJOR ENVELOPE OF SERICITE-PYRITE

Hand specimen shows pale beige-white colored, fine-grained relict porphyritic (volcanic or hypabyssal?) rock, cut by a dark greenish grey envelope of strongly phyllic altered rock with strongly disseminated sulfides around a planar carbonate-sulfide vein. The rock is non-magnetic, shows only trace slow reaction to cold dilute HCl (even where scratched, with difficulty, by steel), but distinct slow reaction in the vein, and no stain for K-feldspar in the etched offcut. Modal mineralogy in polished thin section is approximately:

<u>Wallrock (least altered)</u>		<u>Envelope/Vein Zone</u>	
Clay?/sericite (after plagioclase)	40%	Sericite, muscovite	50%
Relict plagioclase (albitized, sericitized)	35%	Pyrite	15%
Quartz (groundmass, rare secondary)	20%	Carbonate (mainly dolomite?)	15%
Carbonate (after mafics; thin veinlets)	2-3%	Quartz (partly secondary)	15%
Pyrite (after both plagioclase and mafics)	1-2%	Chalcopyrite	2-3%
Rutile (in relict mafic sites)	<1%	Sphalerite	2-3%
Apatite	<1%	Rutile	<1%

The thin sectioned area comprises about 50% each of less altered wallrock and vein/envelope areas. The former consists mainly of ~35% relict (sericitized) plagioclase feldspar sites and ~10% smaller (carbonate-sericite-pyrite-rutile) altered mafic sites in an aphanitic, quartzo-feldspathic groundmass altered to clay?/sericite. The latter comprises the same rock but much more thoroughly altered to sericite-sulfides-local minor quartz, centered on the vein of carbonate-sulfides-trace quartz.

In the least altered wallrock, relict plagioclase phenocrysts with euhedral tabular outlines up to 3.5 mm long and random orientations are mostly (50-90%) replaced by sericite as matted, randomly oriented subhedral flakes mostly <35 μ m, with local remnant enclaves of relict plagioclase mostly <0.2 mm across, but optically continuous over the length of the former phenocryst. Remaining plagioclase composition is not determinable, but is likely secondary, possibly albitic (?) to judge by the level of alteration. Relict mafic phenocrysts have euhedral, locally acicular outlines up to ~1.5 mm long and are pseudomorphed by carbonate (interlocking ragged subhedra to 0.25 mm, possibly dolomite since reaction is slow), pyrite (euhedra <0.4 mm), local sericite/muscovite (subhedral flakes <50 μ m), rutile (aggregates to 0.1 mm of dark brown subhedra mostly <20 μ m) and apatite (euhedra <50 μ m long). The groundmass consists of randomly oriented plagioclase mostly <50 μ m long and interstitial quartz <30 μ m, partly altered to clay?/sericite as euhedral flakes mostly <25 μ m in size.

In the strongly phyllic altered envelope, ~1 cm thick on either side of the vein, plagioclase sites are pseudomorphed by sericite (randomly oriented subhedral flakes <20 μ m) and sulfides (mostly pyrite, cubic euhedra <0.75 mm that locally replace the entire relict; rare chalcopyrite as subhedra <0.15 mm). Mafic relics (also locally with acicular outlines suggestive of former amphibole, i.e. hornblende/) are pseudomorphed by slightly coarser-grained sericite or muscovite as randomly oriented subhedral flakes <65 μ m, and characterized by aggregates of dark brown rutile as described above. The groundmass comprises finely matted sericite, lesser quartz both <25 μ m.

In the vein zone, which is 3-4 mm thick and planar to irregular (offshoots at ~90 degrees to it), a matrix of carbonate (either ribboned subhedra mostly <0.2 mm, in strips sub-parallel to vein walls <0.5 mm thick, or subhedra to almost 1 mm forming breccia matrix to sericitized wallrock clasts, both likely dolomite to judge by the slow reaction) hosts pyrite (subhedra mostly <1 mm, in strips <1.5 mm thick elongated parallel to vein walls), chalcopyrite (subhedra <0.6 mm), sphalerite (colourless, low Fe) as irregular subhedra <1 mm, and rare quartz (skeletal subhedra <0.5 mm). Pyrite contains minute (<20 μ m) inclusions of rutile, rare chalcopyrite and possible galena?).

In summary, this sample consists of less altered porphyry (relict, sericitized plagioclase and carbonate-sericite-pyrite-rutile altered mafic sites in an aphanitic, quartzo-feldspathic groundmass altered to clay?/sericite) and phyllic envelope more thoroughly altered to sericite-pyrite $\pm$ chalcopyrite-local minor quartz, centered on the vein of carbonate-pyrite-chalcopyrite-sphalerite-trace quartz.

M677707: WEAK POTASSIC (ALBITE?-KSPAR-QUARTZ-BIOTITE/CHLORITE-SERICITE-MAGNETITE-CARBONATE-CHALCOPYRITE) ALTERED/VEINED, FINE PLAGIOCLASE-MAFIC PHYRIC, ANDESITIC HYPABYSSAL PORPHYRY (?)

Hand specimen shows dark greenish-grey colored, fine-grained, strongly (potassic?) altered, relict porphyritic (volcanic or hypabyssal?) rock with planar quartz vein, minor veinlet/disseminated magnetite. The rock is distinctly magnetic, shows minor slow reaction to cold dilute HCl (where scratched, with great difficulty, by steel), and only minor yellowish stain for K-feldspar in the etched offcut. Modal mineralogy in polished thin section is approximately:

Alkali feldspar (zoned oligoclase phenocrysts, groundmass)	55%
(K-feldspar, mainly secondary?)	10%
Quartz (mostly secondary, minor recrystallized primary?)	15%
Secondary biotite (chloritized), chlorite	15%
Sericite	1-2%
Magnetite (largely secondary; oxidized to hematite)	1-2%
Carbonate (mafic sites, fractures, dolomite/ankerite?)	1-2%
Chalcopyrite	<1%
Rutile, trace apatite	<1%

This sample consists of about 35-40% somewhat seriate plagioclase and lesser (15-20%) relict (biotite/chlorite-magnetite-carbonate $\pm$ sulfide-rutile-apatite) altered mafic phenocryst sites in a barely phaneritic, alkali feldspar-quartz-minor biotite-magnetite altered groundmass, cut by planar to thin irregular quartz $\pm$ magnetite-biotite-carbonate-sulfide veins/veinlets with Kspar envelopes.

Plagioclase phenocrysts are mainly euhedral, <1.5 mm, seriate (grading to locally glomeratic crystals up to 2.5 mm), randomly oriented, generally twinned and fresh-looking, with extinction on 010 up to 15 degrees but has distinct positive relief compared to groundmass feldspar, suggestive of oligoclase-andesine composition in the An₂₀₋₃₀ range; common zoning suggests this is likely a primary composition. Where the crystals are altered to secondary biotite (euhedral flakes to 0.2 mm) or minor sericite as subhedral flakes mostly <30 μ m, or at rims or near veins adjacent to secondary Kspar, remnant plagioclase has a recrystallized, secondary appearance and could be albite (?).

Relict mafic mineral phenocryst sites are of similar size, with mainly rounded subhedral to irregular, ragged outlines up to 1.75 mm long that may suggest former amphibole and biotite (?), typically pseudomorphed by secondary biotite (matted, euhedral, <0.1 mm flakes with pale to medium brown pleochroism, locally greenish where altered to chlorite as matted subhedral flakes <50 μ m with length-slow, anomalous bluish birefringence (F:M ~0.5?) and local carbonate as ragged subhedra <0.1 mm, possibly dolomite or ankerite?). Magnetite forms subhedral to irregular (partly skeletal) crystals or aggregates up to 1.5 mm, mostly 50% replaced by hematite <50 μ m. Most magnetite is disseminated or controlled along quartz veins to 2 mm or discontinuous, poorly defined veinlets <0.5 mm thick in which magnetite is associated with Kspar, secondary quartz (aggregates to 3 mm of rounded subhedra <0.4 mm) and sericite. Most sulfide is chalcopyrite, forming skeletal sub/euhedra mostly <0.1 mm, typically closely associated with/replacing magnetite.

The groundmass consists of plagioclase (interlocking randomly oriented mainly sub/anhedra <0.1 mm long, with interstitial quartz (interlocking to rounded subhedra mostly <35 μ m, likely partly secondary, especially near veins and veinlets, with Kspar). The groundmass feldspar typically shows negative relief against phenocryst feldspar, so is likely somewhat more sodic, and could contain minor orthoclase molecule, to explain the faint yellow stain in etched offcut, although most of the stain is due to secondary Kspar (subhedra mainly <50 μ m except near quartz veins where it is up to 0.25 mm). All alkali feldspar is locally partly altered to minor sericite (subhedral flakes mostly <25 μ m), especially near veins or fractures <0.1 mm thick partly filled with quartz, carbonate (mainly ankerite?), biotite/chlorite, magnetite and rare chalcopyrite as subhedra all <50 μ m.

In summary, this appears to represent transitional propylitic/potassic (albite?-Kspar-quartz-biotite/chlorite-minor sericite-magnetite-carbonate-chalcopyrite) altered/veined, fine plagioclase-possible hornblende-biotite (?) phyric porphyry possibly originally of andesitic composition (?).

M677727: QUARTZ-ALBITE?-SERICITE-PYRITE-CARBONATE-CLAY?-RUTILE ALTERED, PORPHYRITIC QUARTZ DIORITE/DACITE (?), CUT BY BRECCIA/VEIN ZONE OF PYRITE-CARBONATE-QUARTZ-BARITE-CHALCOPYRITE-SPHALERITE

Hand specimen shows pale greenish-buff colored, fine-grained, altered looking porphyritic (volcanic or hypabyssal?) rock cut by a brecciated, strongly phyllic altered zone several cm wide with abundant pyrite, minor chalcopyrite. The rock is not magnetic, shows minor slow reaction to cold dilute HCl (where scratched, with difficulty, by steel), and no stain for K-feldspar in the etched offcut. Modal mineralogy in polished thin section is approximately:

Quartz (largely secondary)	25%
Relict plagioclase (sericitized, albite?)	20%
Sericite	20%
Pyrite (mainly breccia/vein zone)	10%
Carbonate (mainly dolomite?)	10%
Clay (?)	10%
Chalcopyrite (breccia vein zone)	2-3%
Barite (breccia/vein zone only)	1-2%
Sphalerite	<1%
Rutile	<1%

In the least altered wallrock, closely crowded, randomly oriented relict feldspar laths mostly <2 mm long, typically strongly altered to sericite, carbonate and possible clay (?) are still recognizable, set in a matrix of (possibly partly to largely secondary), relatively coarse-grained quartz (subhedra mostly <0.2 mm) and relict plagioclase of similar size, suggestive of the groundmass of a porphyritic intrusive rock around quartz diorite/dacite in composition. Remaining plagioclase has negative relief compared to quartz, suggestive of composition near albite (?), possibly secondary. Mafic relics are not recognizable but may be represented by scattered patches of disseminated pyrite (ragged subhedra <0.6 mm), carbonate (subhedra to 0.2 mm, likely dolomite?), sericite/muscovite (subhedral flakes <0.15 mm) and traces of rutile (minute sub/euhedra <20 μ m).

The main breccia/vein zone, which ranges up to 2.5 cm wide, varies from sulfide-carbonate-barite rich to partly vuggy, quartz-sericite-clay? rich (minor pyrite); base metal sulfides are locally present in the former. In the sulfide-rich zone, pyrite occurs as either coarse-grained aggregates up to ~1.2 cm across composed of subhedra up to 3 mm in diameter, locally intergrown with chalcopyrite as irregular subhedra to 1.5 mm, aggregating to ~1 cm long, carbonate as subhedra to 0.5 mm (likely dolomite or ankerite?), quartz as mainly euhedral, bladed crystals up to 1.2 mm long, and local barite as somewhat sheaf-like aggregates of bladed euhedra up to 2 mm long. Rarely, sphalerite occurs in irregular aggregates to ~1 mm composed of subhedra <0.25 mm with pale yellowish colour indicative of low Fe content (although rims contain minute inclusions of chalcopyrite mostly <10 μ m in size, making the rims almost opaque). Chalcopyrite locally contains minute (<15 μ m) inclusions of sphalerite and rare galena (?), typically attached to inclusions of carbonate and quartz <0.1 mm.

In the rest of the zone, quartz forming rounded sub/anhedra mostly <0.25 mm long (partly to largely secondary, as indicated by common to abundant overgrowth rims up to 0.1 mm thick) is set in a matrix of sericite (randomly oriented subhedral flakes mostly <0.1 mm in diameter, locally making up 50% of the rock) or, in places, a brownish, finer-grained flaky mineral as subhedra mostly <10 μ m with lower birefringence that could be a clay (?) mineral possibly belonging to the kaolinite group (?). It could be mixed with lesser quartz, to explain the relative hardness of these zones in hand specimen. Pyrite in this zone is typically disseminated as sub/euhedra rarely over 0.3 mm in size, and traces of rutile occur as brown sub/euhedral stubby acicular crystals mostly <25 μ m long.

In summary, this appears to represent possibly crowded porphyritic dacite/quartz diorite strongly altered to albite?-sericite-carbonate-minor pyrite-rutile, around a breccia/vein zone in which coarse pyrite-lesser chalcopyrite-minor sphalerite is associated with carbonate-quartz-local barite and a wider zone of intense phyllic (quartz-sericite-clay?-carbonate-pyrite) alteration.

M650118: POTASSIC (ALBITE-KSPAR-QUARTZ-CHLORITE-SERICITE-CARBONATE-HEMATITE)/PHYLIC (SERICITE-CARBONATE) ALTERED ANDESITIC PORPHYRY (?)

Hand specimen shows dark greenish-grey colored, fine-grained, altered looking porphyritic (volcanic or hypabyssal?) rock cut by a network of pale buff coloured, phyllic altered zones mostly <5 mm wide with minor pyrite. The rock is locally slightly magnetic, shows minor slow reaction to cold dilute HCl (even where not scratched, with difficulty, by steel), and minor faint yellowish stain for K-feldspar in the etched offcut (could be secondary, in groundmass of background rock peripheral to phyllic altered envelopes). Modal mineralogy in polished thin section is approximately:

Alkali feldspar (zoned andesine phenocrysts, groundmass albite?)	35%
(K-feldspar, mainly secondary?)	10%
Sericite	20%
Quartz (partly secondary, minor recrystallized primary?)	20%
Chlorite (after mafics)	7%
Carbonate (plagioclase, mafic sites, dolomite/ankerite?)	5%
Pyrite	2%
Hematite (after magnetite?)	<1%
Sphalerite, trace chalcopyrite (along some veinlets)	<1%
Rutile, trace apatite	<1%

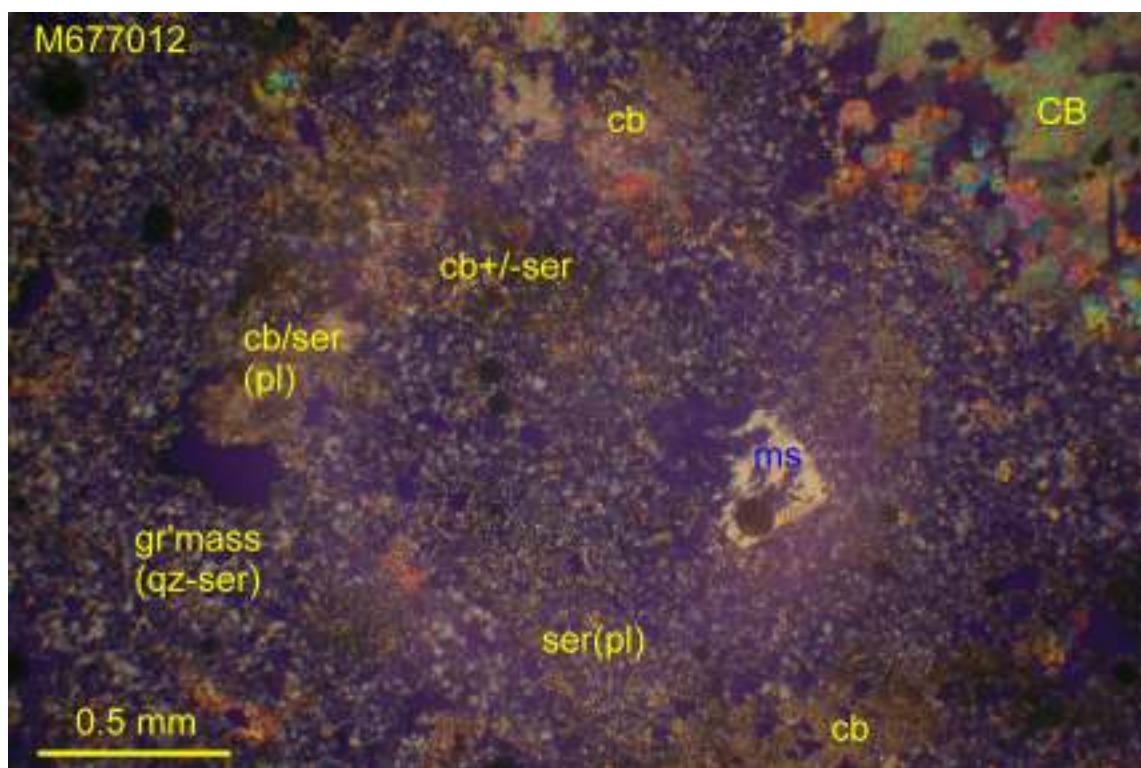
This sample consists of about 35-40% somewhat seriate plagioclase and lesser (15-20%) relict (chlorite-carbonate $\pm$ sulfide-rutile-apatite) altered mafic phenocryst sites in a barely phaneritic, alkali feldspar-quartz-minor sericite-carbonate-chlorite altered groundmass, cut by planar sericite altered zones with outer Kspar envelopes, centered on thin carbonate-quartz $\pm$ sericite-pyrite-sphalerite veins.

Plagioclase phenocrysts are mainly euhedral, <1 mm, seriate (grading to locally glomeratic crystals up to 1.5 mm), randomly oriented, generally twinned, zoned and fresh-looking, with extinction X^{001} from 6 to 0 degrees core to rim, slight positive relief compared to groundmass feldspar, suggestive of sodic andesine composition in the An_{30-35} range, likely a primary composition. Where the crystals are altered (as the phyllic envelopes are approached), they are replaced or pseudomorphed by sericite as matted subhedral flakes mostly <25 μ m and variable carbonate as ragged subhedra mostly <0.2 mm long (likely mostly dolomite?). Veinlets coring the phyllic altered rock are mostly planar, <1 mm thick, and consist of vuggy carbonate (subhedra <0.35 mm, likely dolomite?) with minor quartz (subhedra mainly <0.1 mm), local sericite (subhedral flakes mostly <50 μ m), pyrite (sub/euhedra mainly <0.2 mm) and rare sphalerite (colourless, low Fe ragged anhedral <1.2 mm). Sphalerite contains minor chalcopyrite inclusions up to 0.2 mm in size.

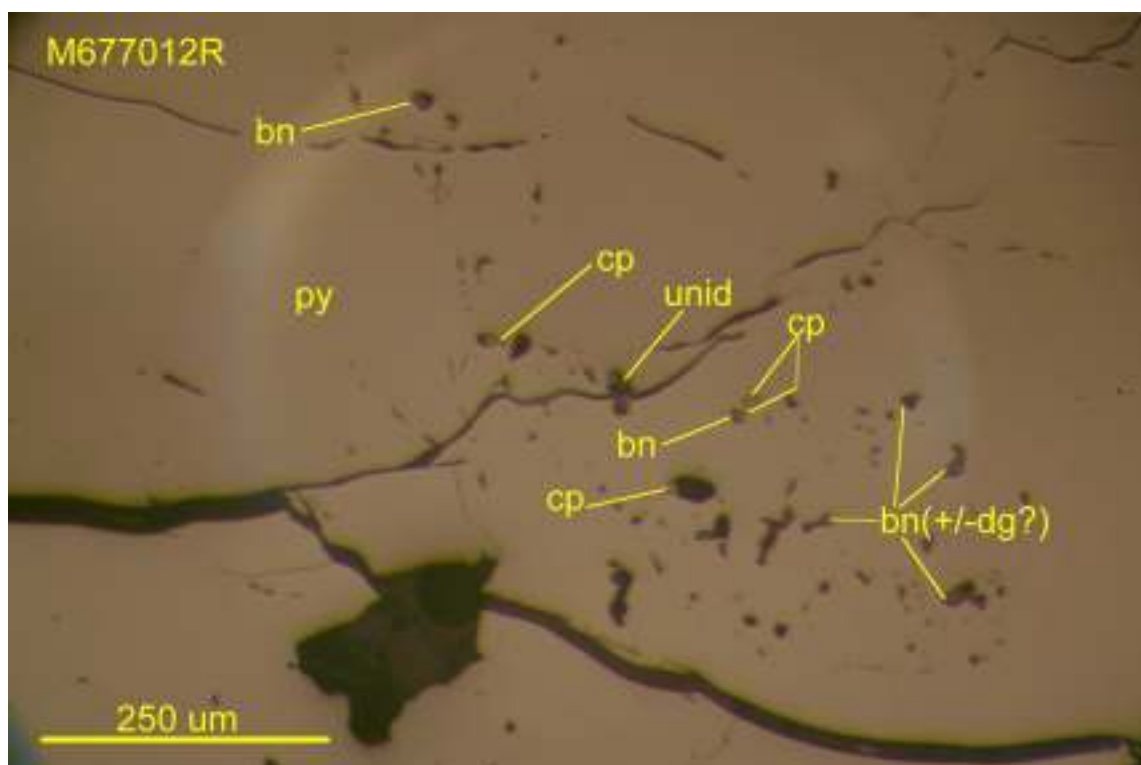
Relict mafic mineral phenocryst sites are smaller, with mainly rounded subhedral to irregular, ragged outlines rarely to 1.5 mm long that may suggest former amphibole and/or biotite (?), typically pseudomorphed by chlorite as pale green subhedral flakes <50 μ m with length-slow, anomalous bluish birefringence (F:M $\sim$ 0.5?), brown carbonate as ragged subhedra <0.1 mm, possibly ankerite?), rare hematite (subhedra <0.2 mm). Pyrite, forms skeletal sub/euhedra mostly <0.3 mm, typically closely associated with hematite and traces of dark brown rutile as aggregates <0.1 mm.

The groundmass consists of plagioclase (interlocking randomly oriented mainly sub/anhedral <0.1 mm long, with interstitial quartz (interlocking to rounded subhedra mostly <35 μ m, likely partly secondary, especially near veins and veinlets, intergrown with similar sized alkali feldspar). The groundmass feldspar typically shows negative relief against phenocryst feldspar, so is likely more sodic, with minor orthoclase molecule, to explain the faint yellow stain in etched offcut, although most of the stain is likely due to Kspar (subhedra mainly <20 μ m, likely secondary?). All alkali feldspar is locally partly altered to minor sericite (subhedral flakes mostly <25 μ m), especially near veins or fractures zones described above, where replacement varies from <15% up to $\sim$ 100%.

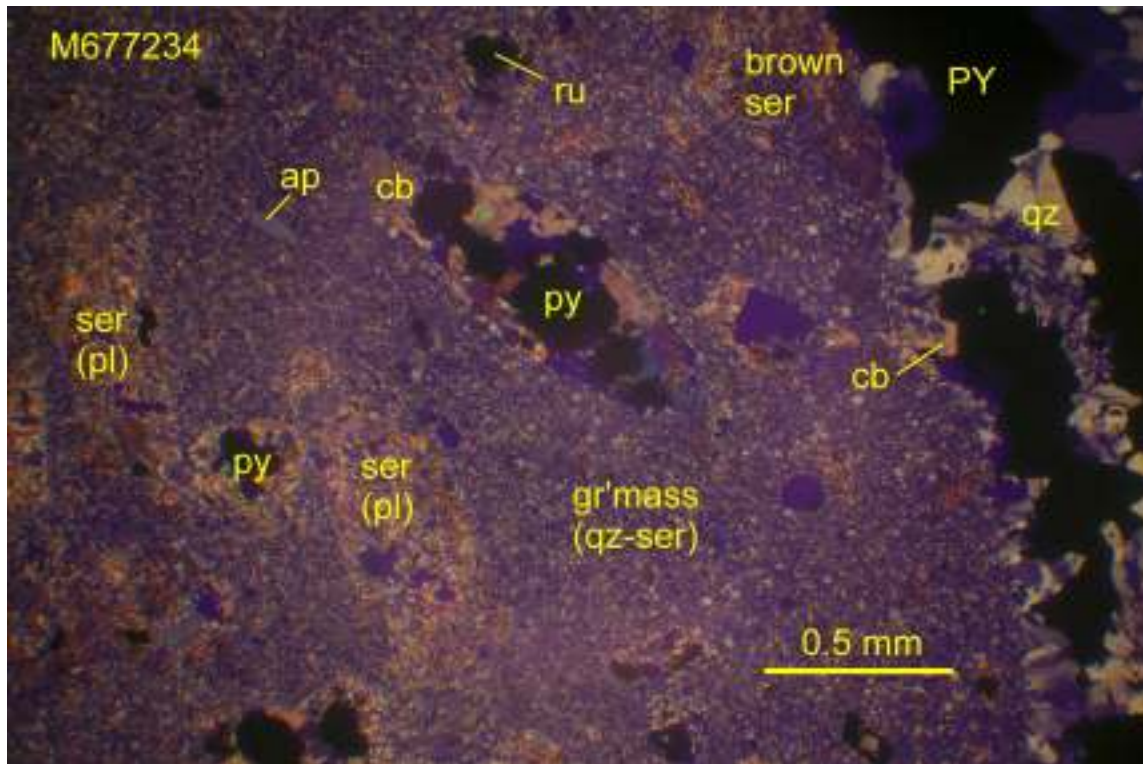
In summary, this appears to represent transitional propylitic/potassic (albite?-Kspar-quartz-chlorite-carbonate-hematite) altered, fine plagioclase-possible hornblende-biotite (?) phyric porphyry possibly originally of andesitic composition (?), strongly phyllic (sericite-quartz-pyrite-rutile) altered along wide envelopes around thin carbonate-quartz-sericite-pyrite-sphalerite-chalcopyrite veins.



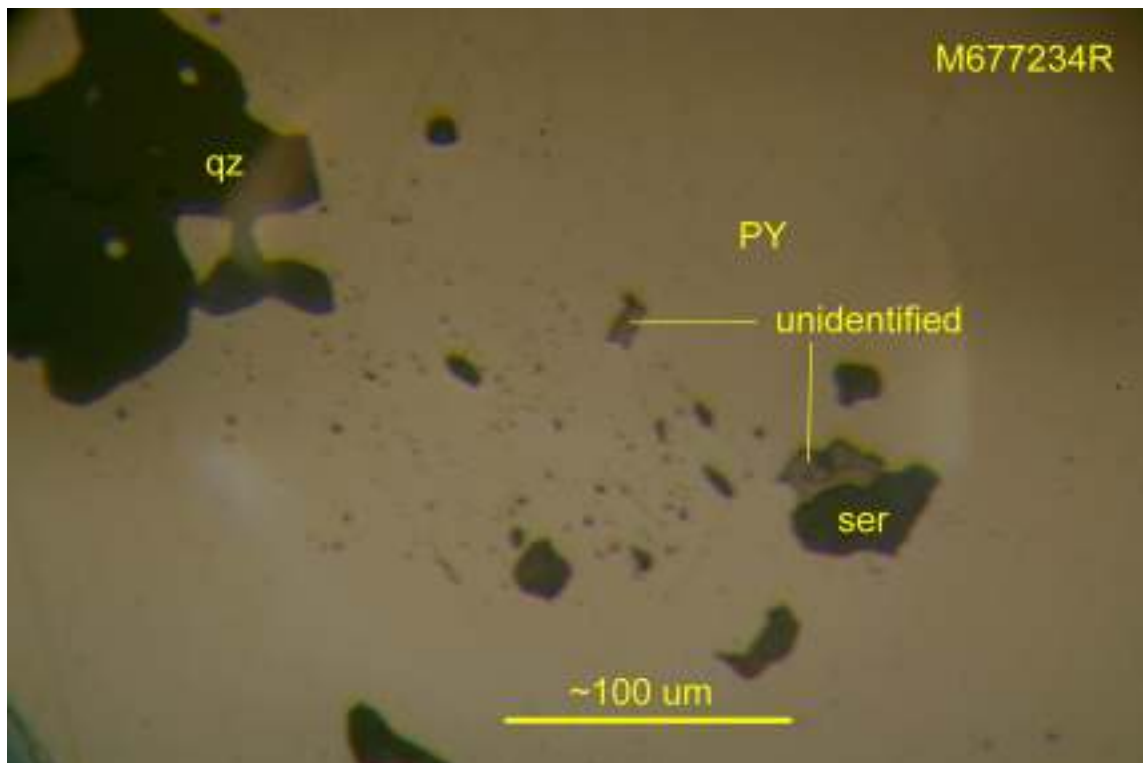
M677012: Relict plagioclase phenocrysts altered to sericite (ser) or carbonate (cb), and mafic (originally biotite?) sites altered to muscovite (ms) or carbonate, near irregular poorly defined veinlet of carbonate (CB) and pyrite (out of view). Groundmass consists of fine-grained quartz and sericite. Transmitted light, crossed polars, field of view 3.0 mm wide.



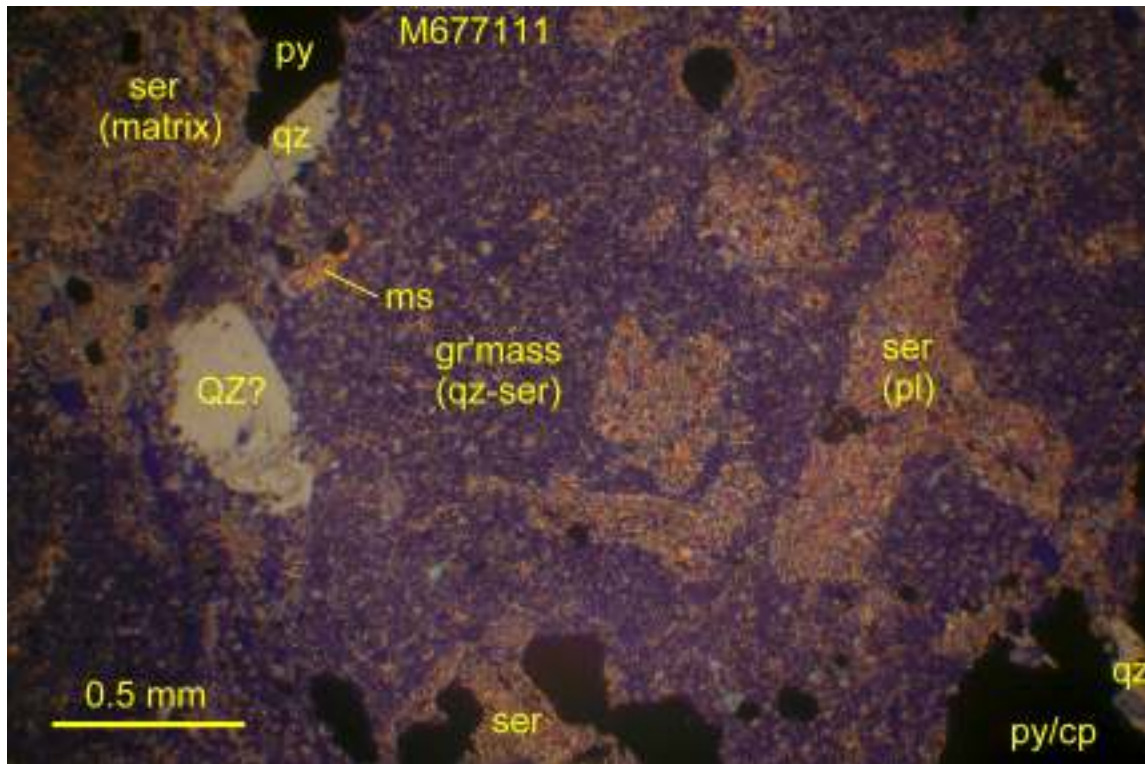
M677012R: Detailed view to show minute inclusions of base-metal sulfides (chalcopyrite, cp, and bornite, bn, ±digenite, dg?) within coarse subhedral vein pyrite (py) host. Grey phases near center of photo are unidentified, requiring SEM analysis. Reflected light, uncrossed polars, field of view ~1.0 mm wide.



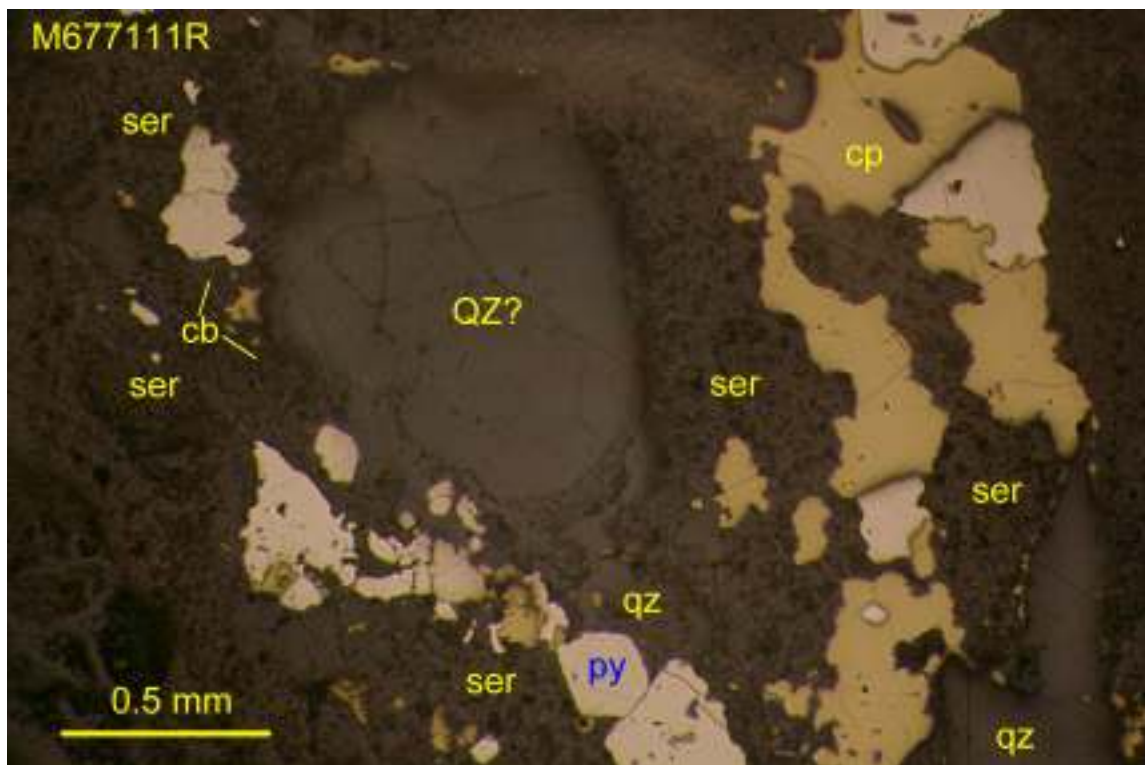
M677234: Relict plagioclase phenocrysts altered to sericite (ser) and local pyrite (opaque, py), mafic sites to carbonate (cb) and pyrite, local rutile (ru), near vein of comb-textured quartz (qz) and pyrite cutting groundmass of fine-grained quartz-sericite, local apatite (ap). Transmitted light, crossed polars, field of view 3.0 mm wide.



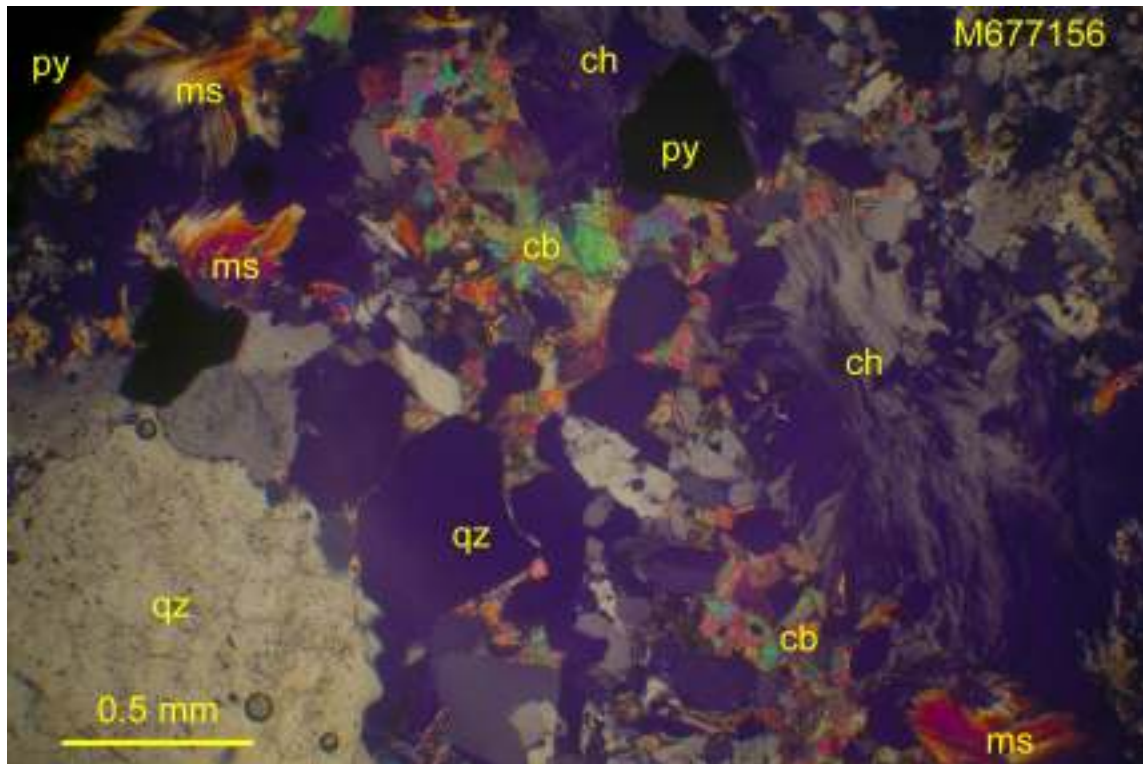
M677234R: Very high magnification to show minute grey, possibly anisotropic, soft, unidentified inclusions in coarse vein pyrite (PY). Silicate inclusions are of quartz (qz) and sericite (ser). Reflected light, uncrossed polars, field of view ~440 um wide.



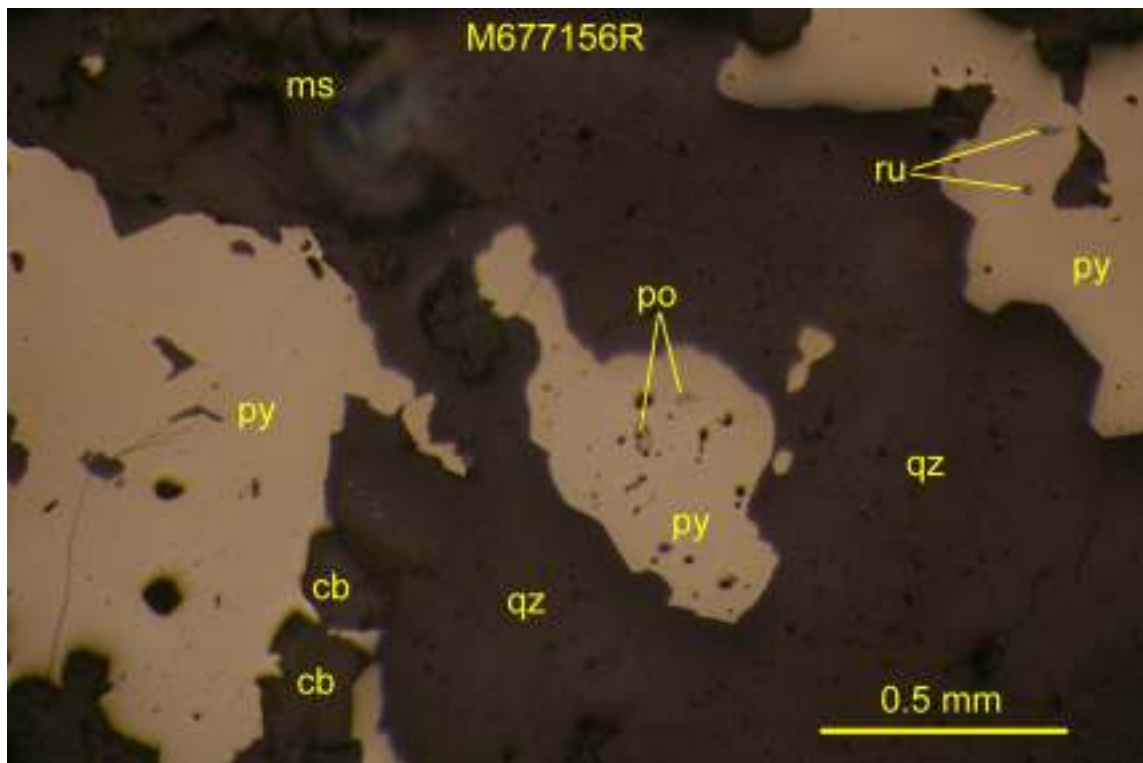
M677111: Clasts of relict plagioclase-minor mafic phyric porphyry (now represented by rectangular patches of sericite, ser, or muscovite, ms, respectively, in fine-grained quartz-sericite altered groundmass), cemented by veins/breccia matrix of sulfides (opaque), sericite and secondary quartz (qz, difficult to distinguish from possible relict quartz phenocryst with overgrowth rim, QZ). Transmitted light, crossed polars, field of view 3.0 mm wide.



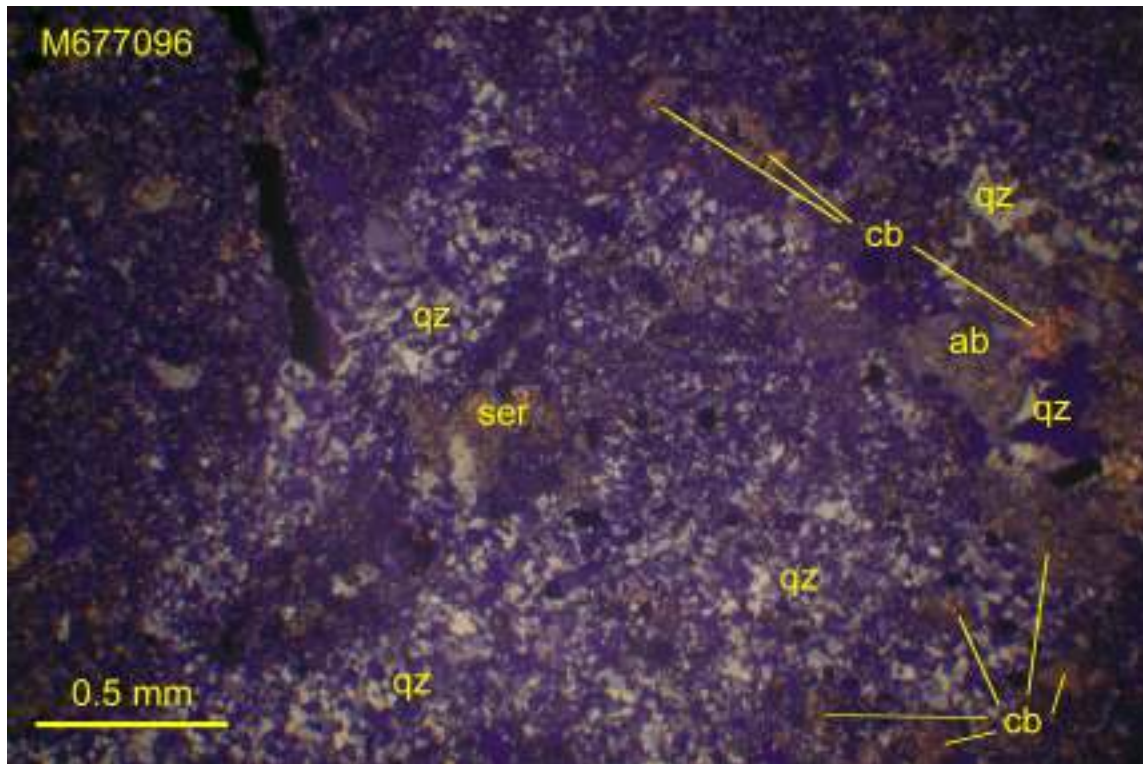
M677111R: Chalcopyrite (cp) and pyrite (py) associated with secondary quartz (locally forming overgrowth rims of possible relict quartz phenocrysts, QZ) and sericite (ser), local carbonate (cb) in hydrothermal matrix. Reflected light, uncrossed polars, field of view 2.75 mm wide.



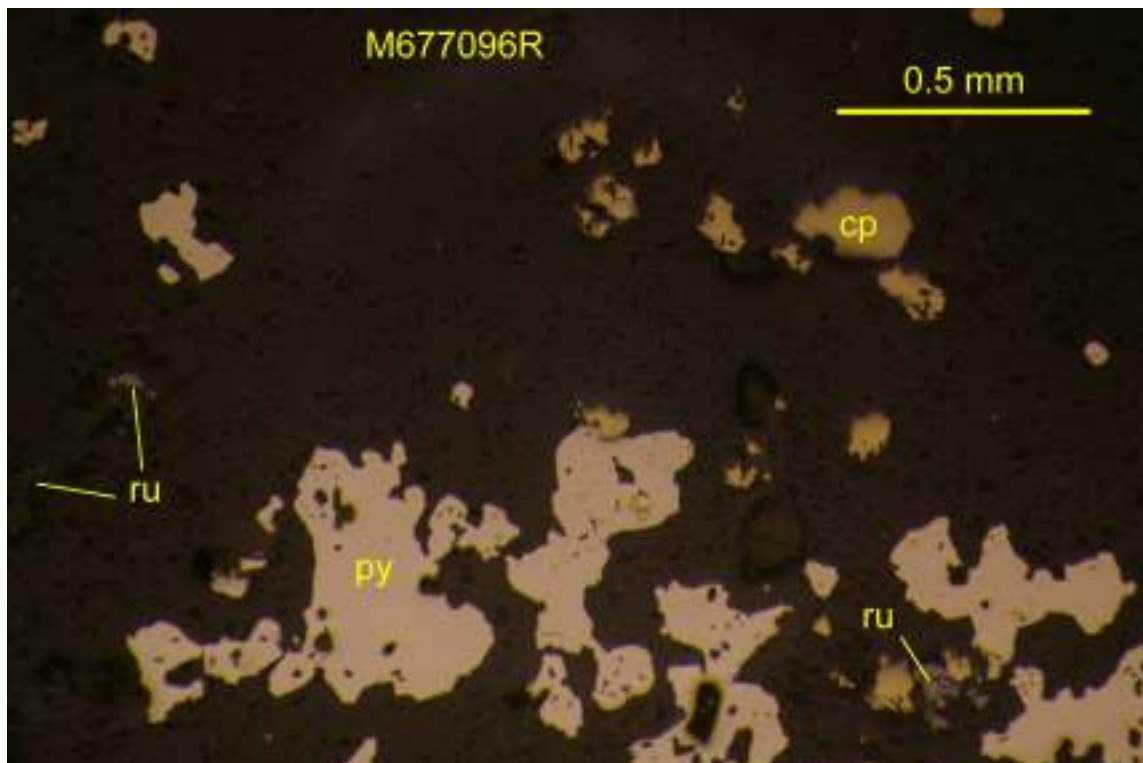
M677156: Poorly defined core of vein zone composed of coarse secondary quartz (qz), carbonate (cb), pyrite (py, opaque; see below), somewhat sheaf-like to radiating chlorite (ch) and muscovite (ms). Transmitted light, crossed polars, field of view 3.0 mm wide.



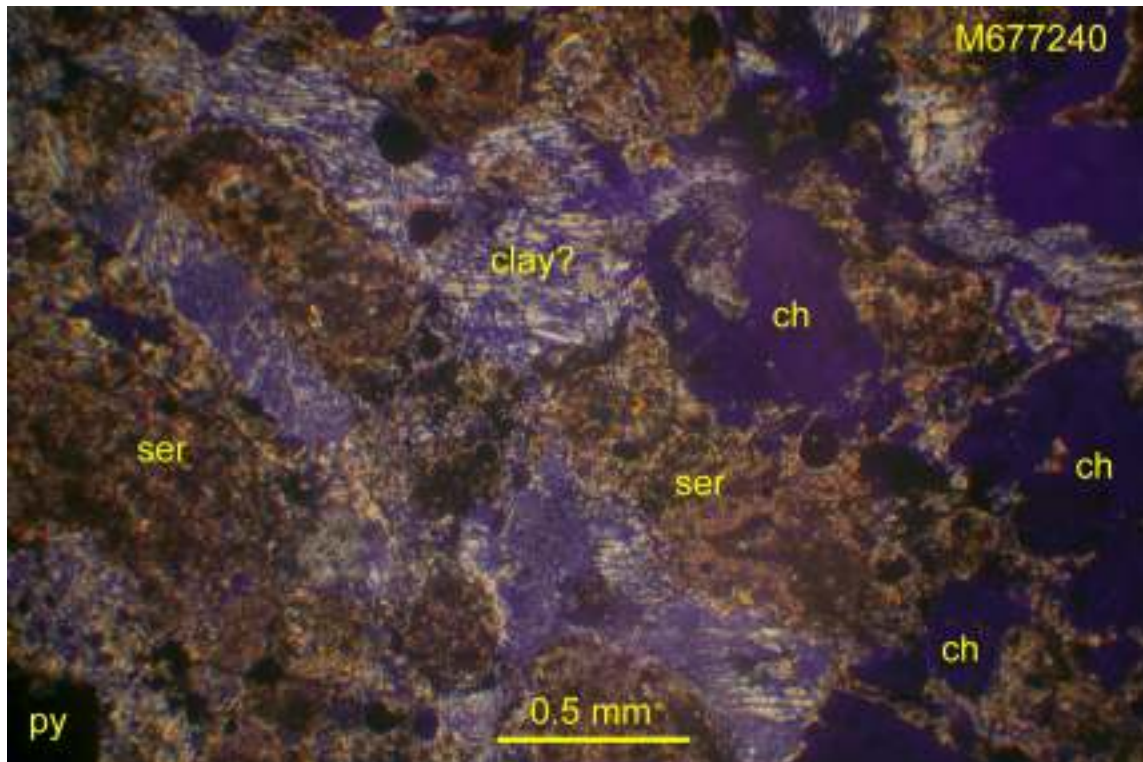
M677156R: Coarse-grained subhedral pyrite (py) with rare inclusions of pyrrhotite (po) or rutile (ru), intergrown with secondary quartz (qz) and locally associated with carbonate (cb) and muscovite (ms). Reflected light, uncrossed polars, field of view 2.25 mm wide.



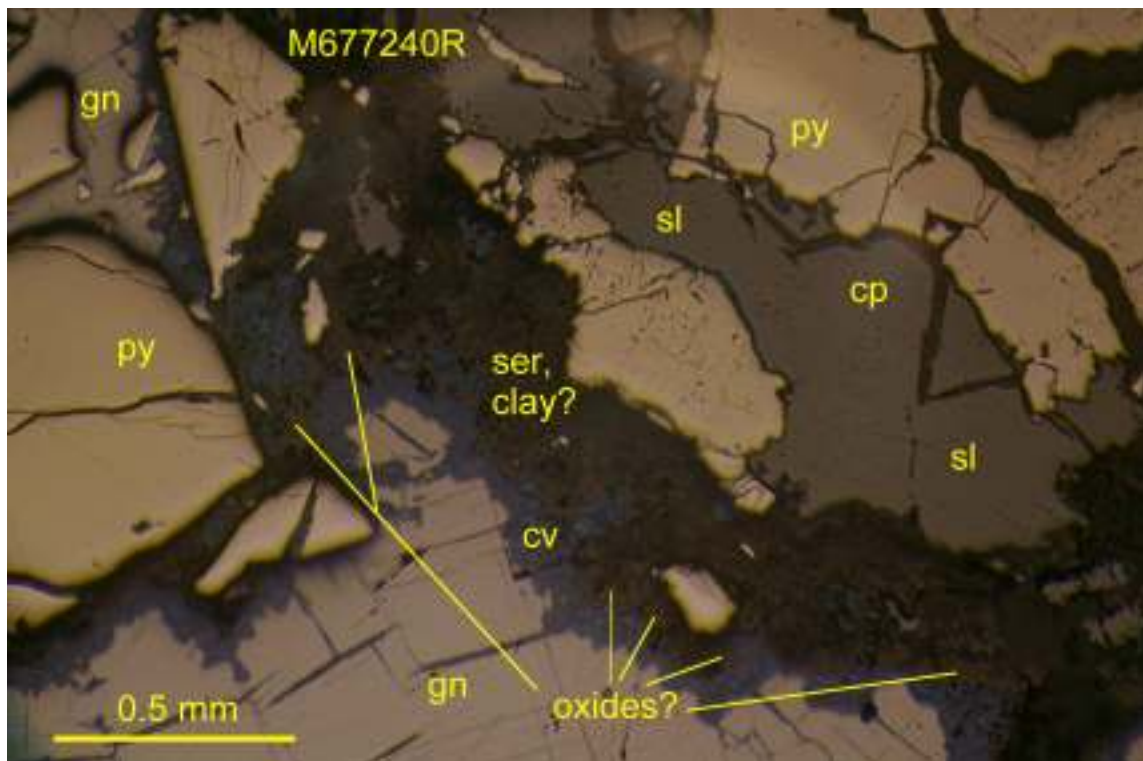
M677096: Irregular to hairline veinlets of quartz (qz) and sulfide (mainly pyrite, opaque) cutting relict porphyry strongly altered to sericite, carbonate (cb) and local relict plagioclase (now likely albite, ab). Transmitted light, crossed polars, field of view 3.0 mm wide.



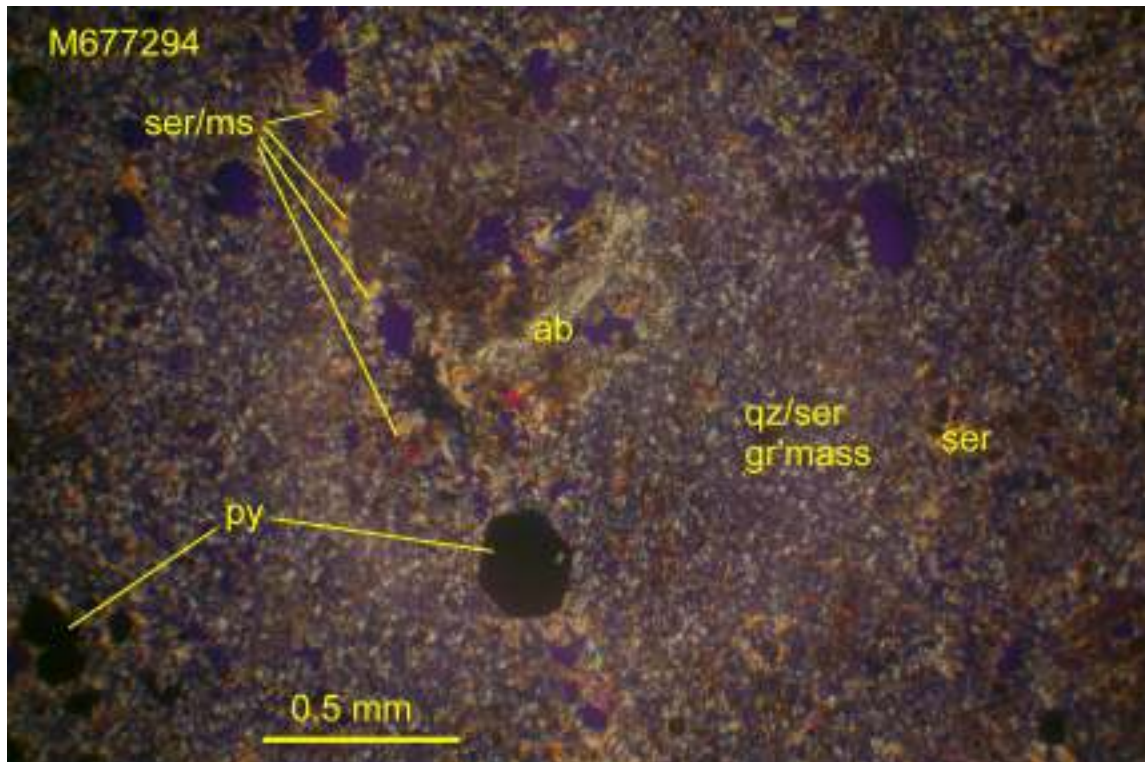
M677096R: Pyrite (py) and lesser chalcopyrite (cp), minor rutile (ru) in aggregate associated with/replacing strongly sericite-carbonate-minor chlorite-quartz altered matrix material in fragmental (volcanic or breccia?) rock. Reflected light, uncrossed polars, field of view 2.25 mm wide.



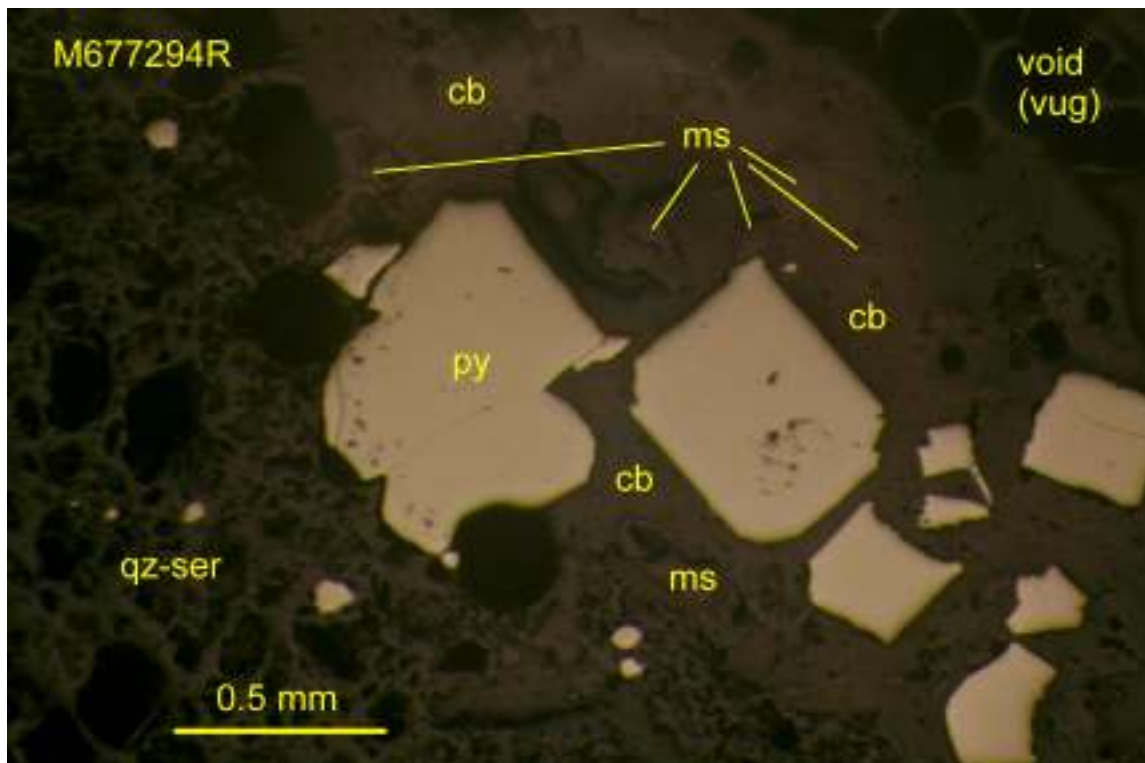
M677240: Silicate matrix to vein sulfides, consisting of fine-grained, matted sericite (ser), possible clay (?) as larger “super-crystals” that are clear in plane light, patches of chlorite (ch) with almost zero birefringence, and minor pyrite (py, opaque). Transmitted light, crossed polars, field of view 3.0 mm wide.



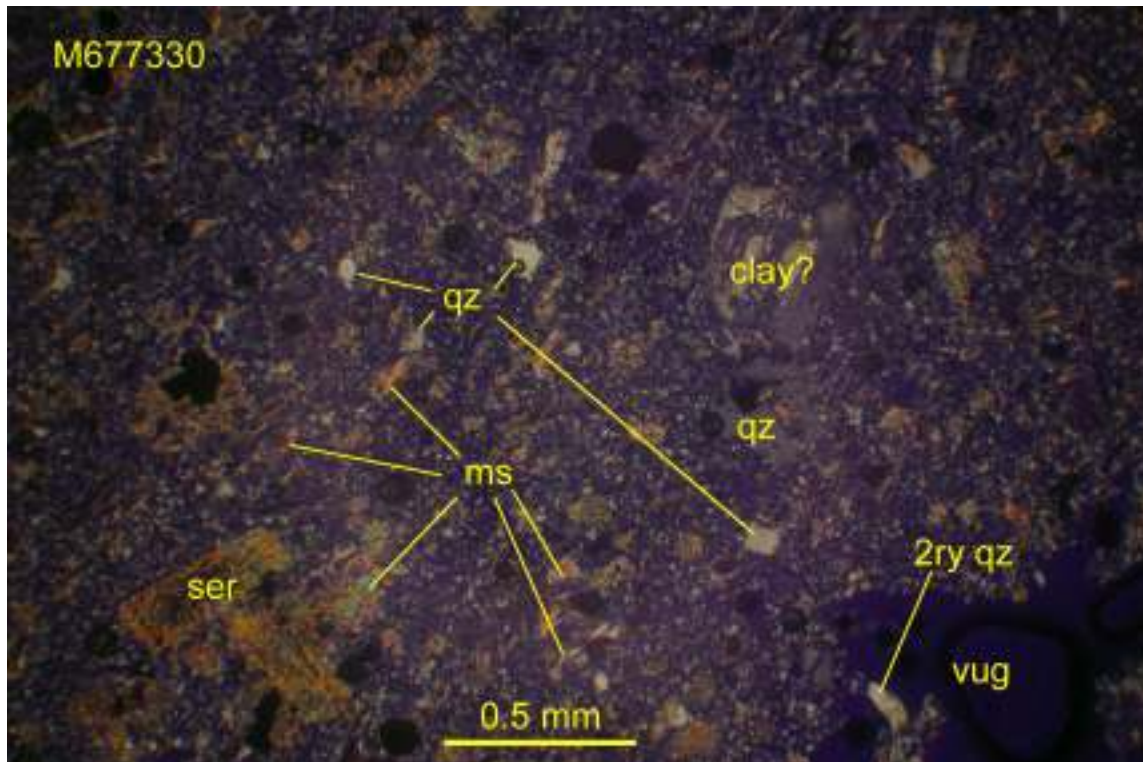
M677240R: Coarse-grained sulfides, including sphalerite (sl, with minute chalcopyrite inclusions barely visible at this scale), pyrite (py) and galena (gn), partly oxidized at rims to mixtures of blue covellite (cv) and possible Pb- and Zn-oxide minerals. Reflected light, uncrossed polars, field of view 2.25 mm wide.



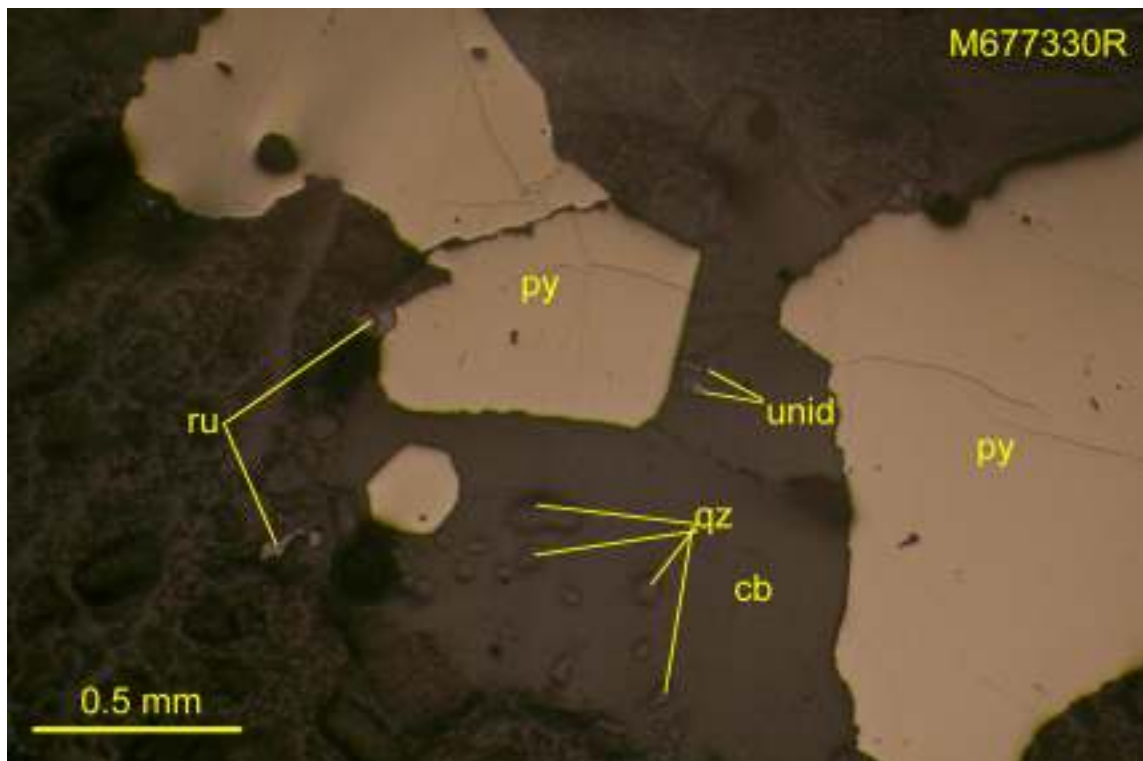
M677294: Wallrock clast composed of relict plagioclase (albitized, sericitized, ab?) and possible mafic sites (with pyrite, py) in fine groundmass of (largely secondary?) quartz and sericite, cut by thin sericite/muscovite hairline veinlet, locally with cubic pyrite. Transmitted light, crossed polars, field of view 3.0 mm wide.



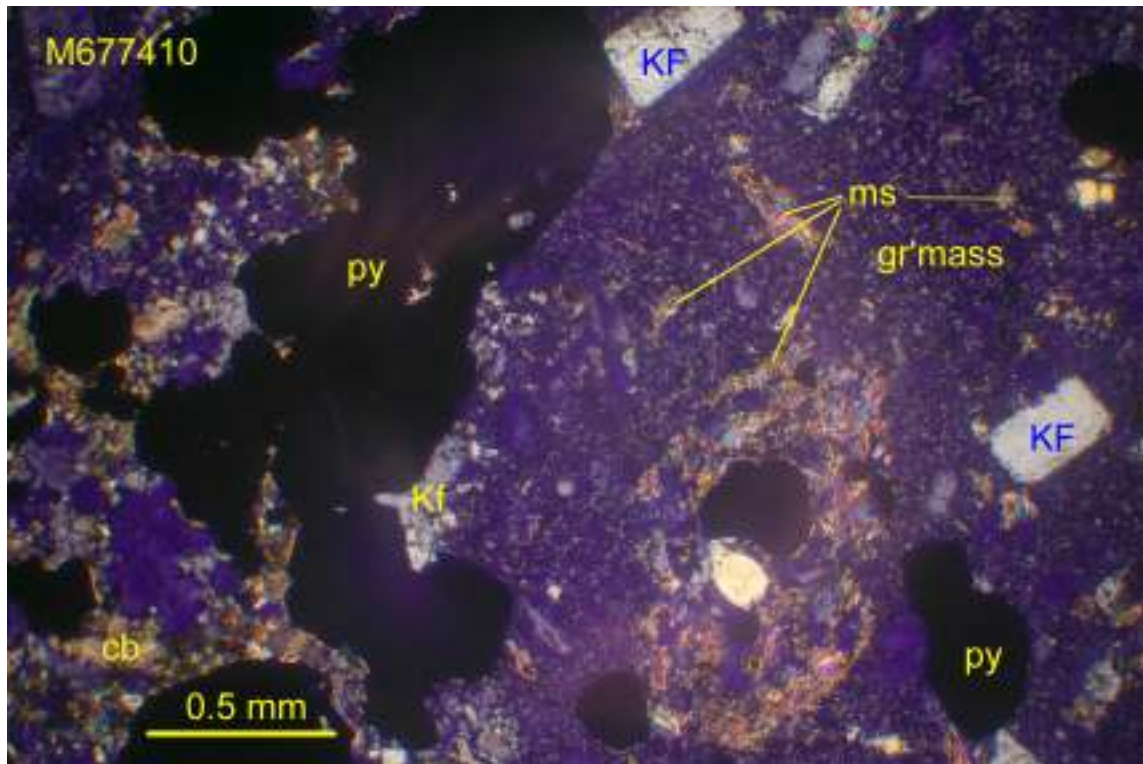
M677294R: Vein/matrix assemblage of coarse, cubic pyrite (py, locally with porous cores or rims due to silicate inclusions) intergrown with carbonate (cb) and sericite/muscovite (ms, locally in radiating patches); note vugs and adjacent quartz-sericite altered wallrock (qz-ser). Reflected light, uncrossed polars, field of view 2.75 mm wide.



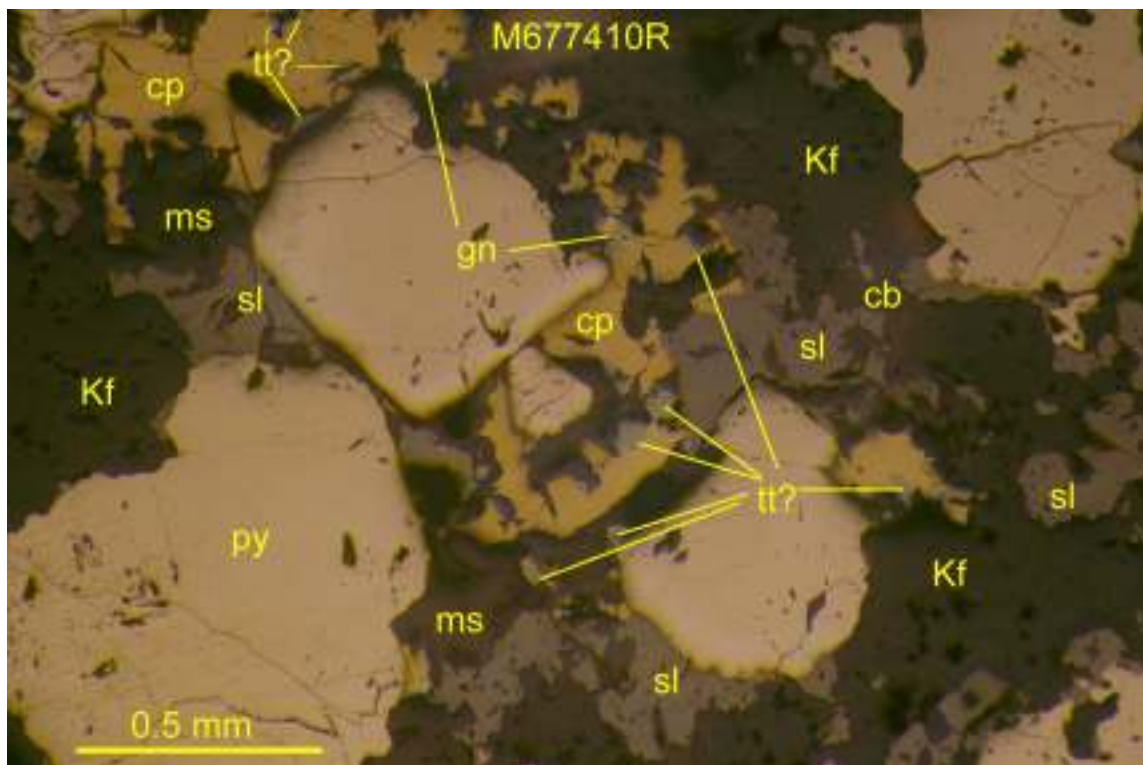
M677330: Strongly phyllic/argillic altered, very fine porphyry/volcanic rock with phenocrysts of plagioclase replaced by sericite (ser) or clay? (cl?), smaller mafics by muscovite (ms), and small skeletal quartz (qz) in aphanitic quartz-sericite groundmass with local vugs partly lined by secondary quartz. Transmitted light, crossed polars, field of view 3.0 mm.



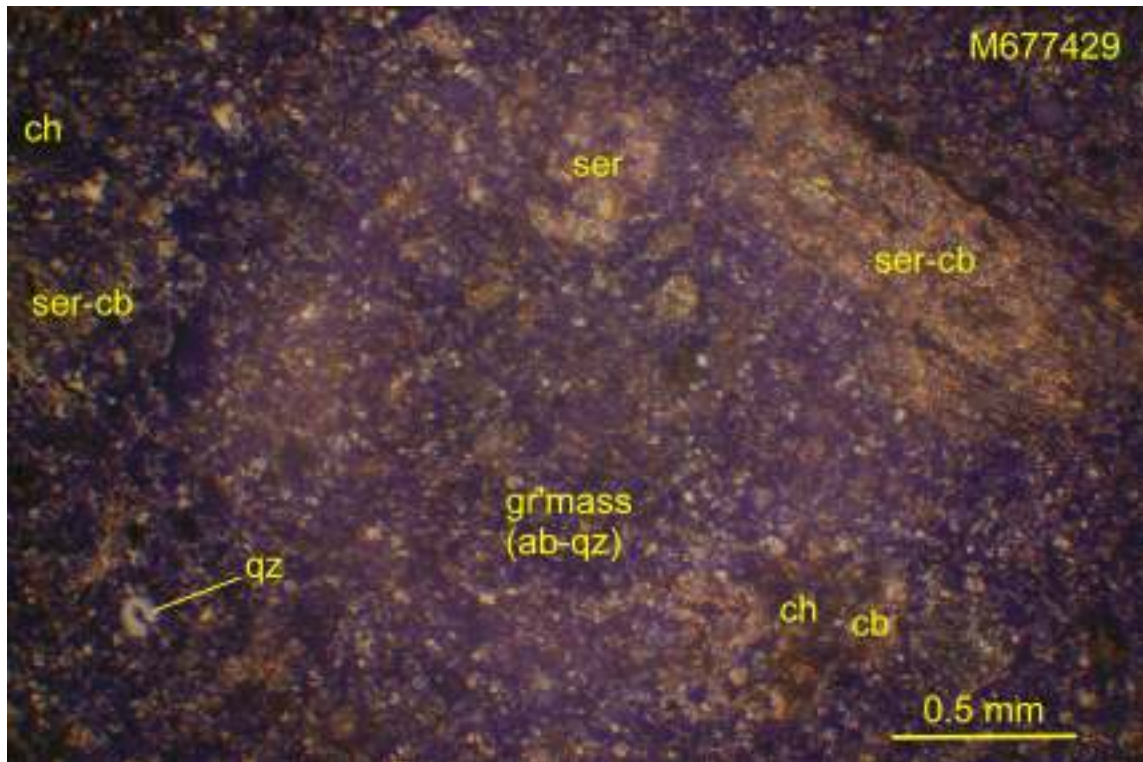
M677330R: Vuggy irregular veinlet composed of coarse cubic pyrite (py) set in or coated by carbonate (cb) containing minor bladed euhedral quartz (qz) and traces of accessory rutile (ru) and an unidentified mineral. Reflected light, uncrossed polars, field of view 2.75 mm wide.



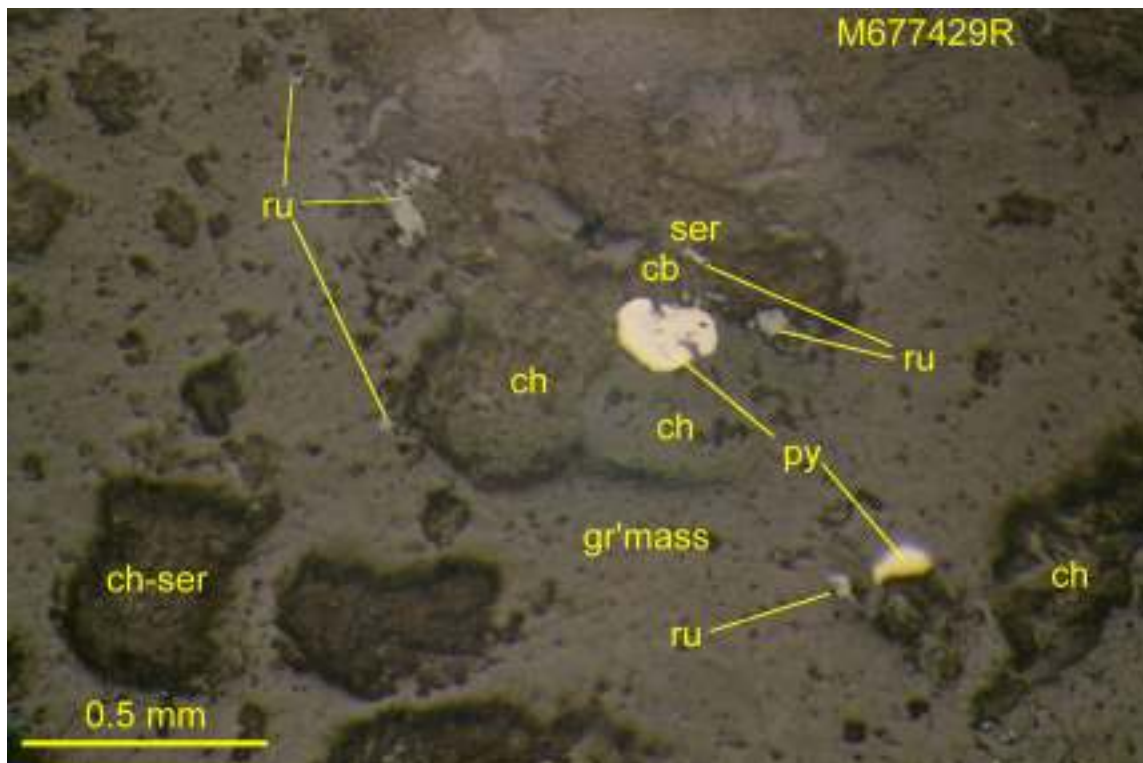
M677410: Contact between finely porphyritic clast (on right, with Kspar (KF) altered feldspar phenocrysts and sericite-muscovite (ms) altered mafic sites, disseminated pyrite crystals in aphanitic Kspar-quartz groundmass), and coarse hydrothermal matrix of pyrite (py, opaque), Kspar (Kf) and carbonate (cb). Transmitted light, crossed polars, field of view 3.0 mm.



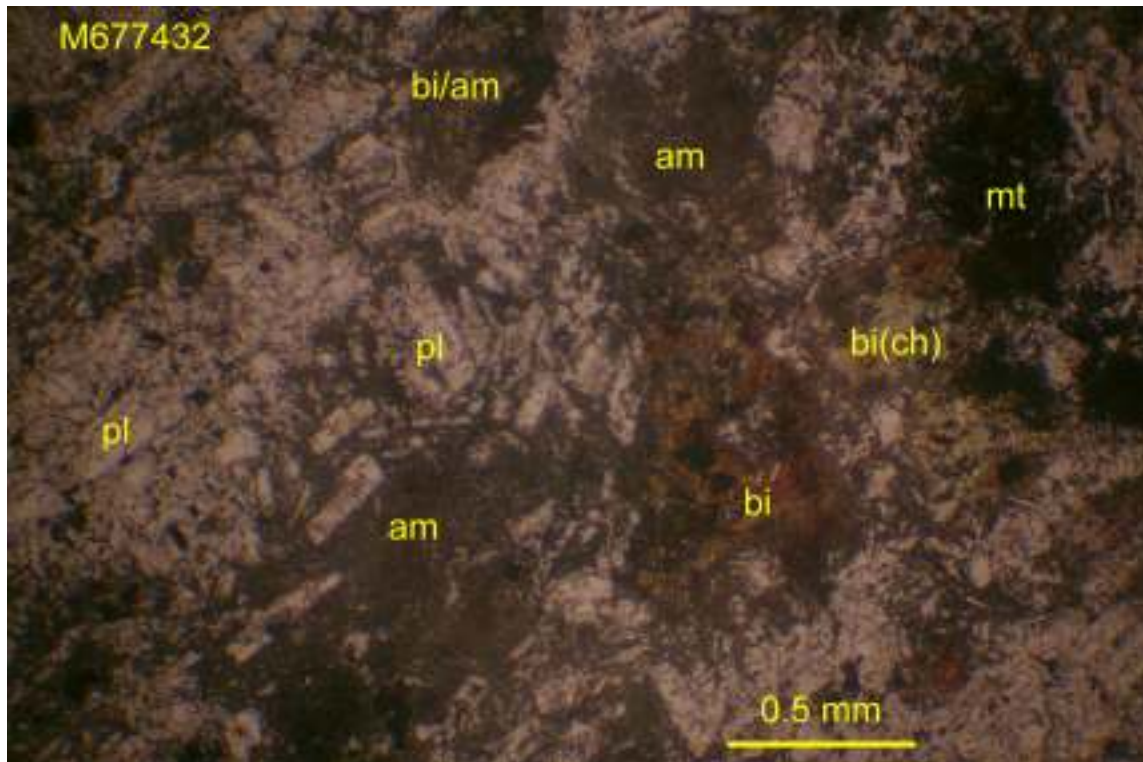
M677410R: Coarse cubic pyrite (py) intergrown with ragged sphalerite (sl) and local chalcopryite (cp) which contains rare inclusions of galena (gn) and grey possible sulfosalt (tetrahedrite, tt?) intergrown with Kspar (Kf), muscovite (ms) and carbonate (cb). Reflected light, uncrossed polars, field of view 2.25 mm wide.



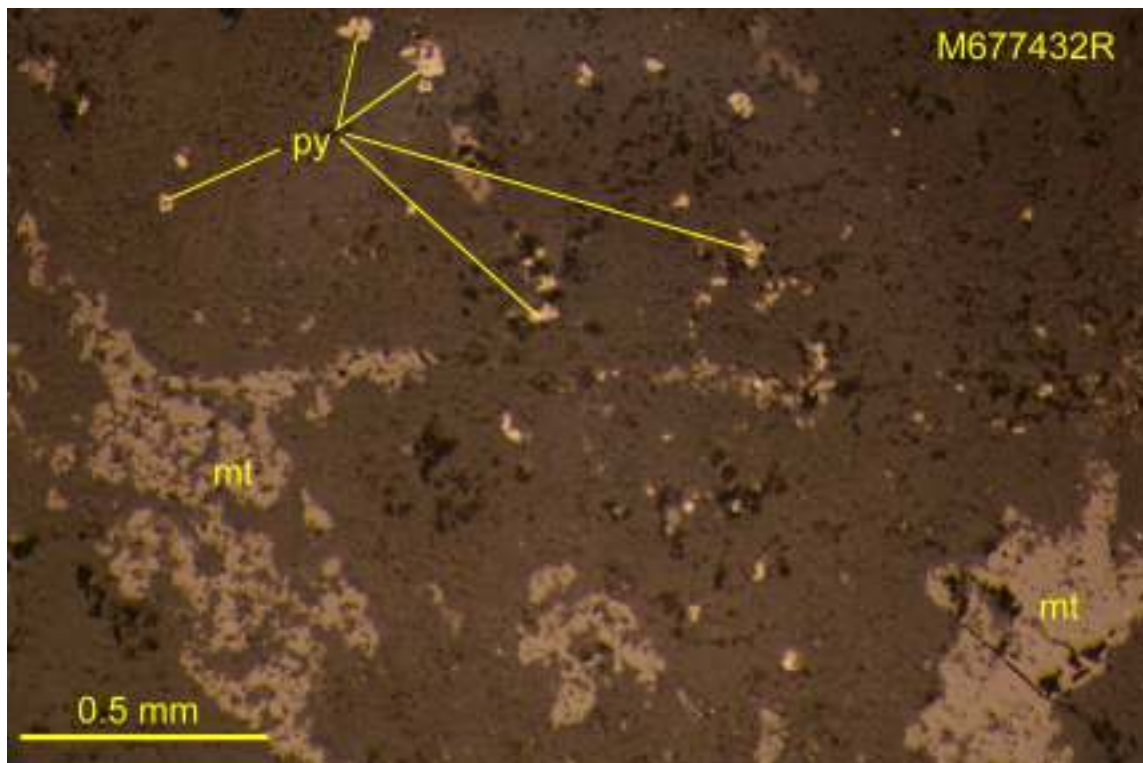
M677429: Relict plagioclase phenocrysts altered to sericite-carbonate (ser-cb), mafics to chlorite-carbonate (ch-cb), rare strongly resorbed quartz microphenocrysts (qz), in fine-grained groundmass of plagioclase (mainly albite?), quartz, sericite, chlorite and carbonate. Transmitted light, crossed polars, field of view 3.0 mm wide.



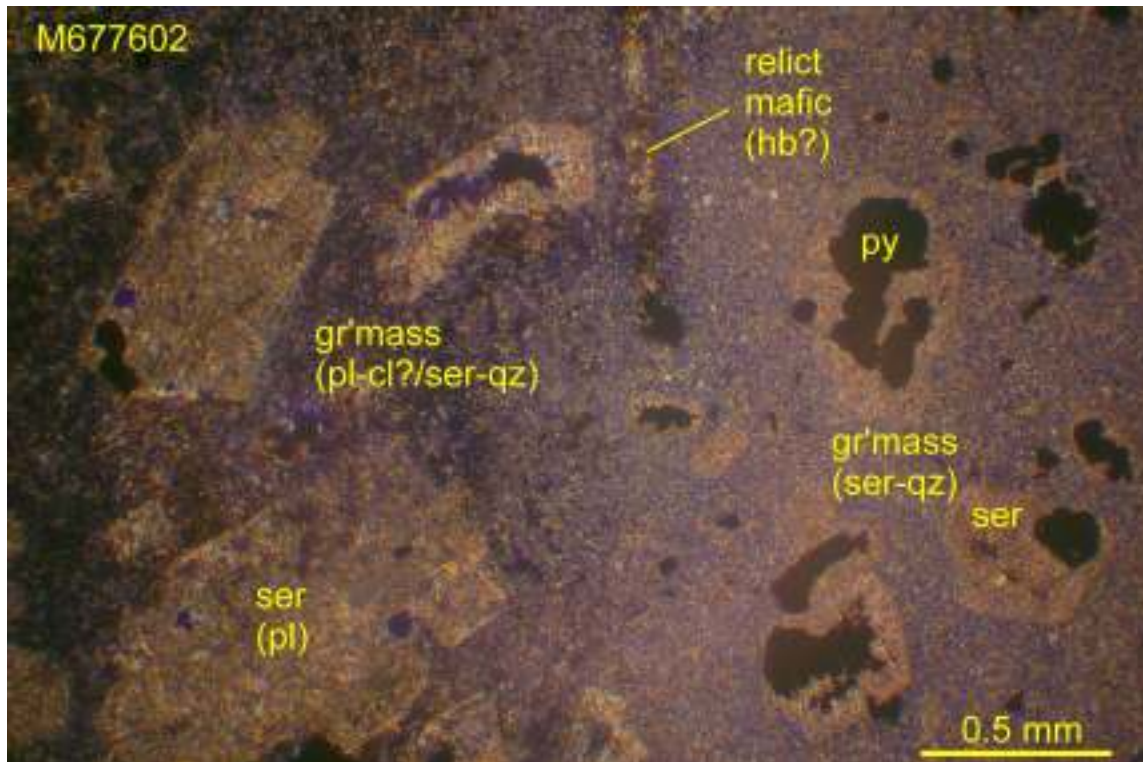
M677429R: Relict mafic sites altered to chlorite (ch) and sericite (ser), with accessory carbonate (cb), subhedral pyrite (py) and rutile (ru) in smaller, irregular-shaped aggregates that could represent former ilmeno-magnetite (?) sites. Reflected light, uncrossed polars, field of view 2.25 mm wide.



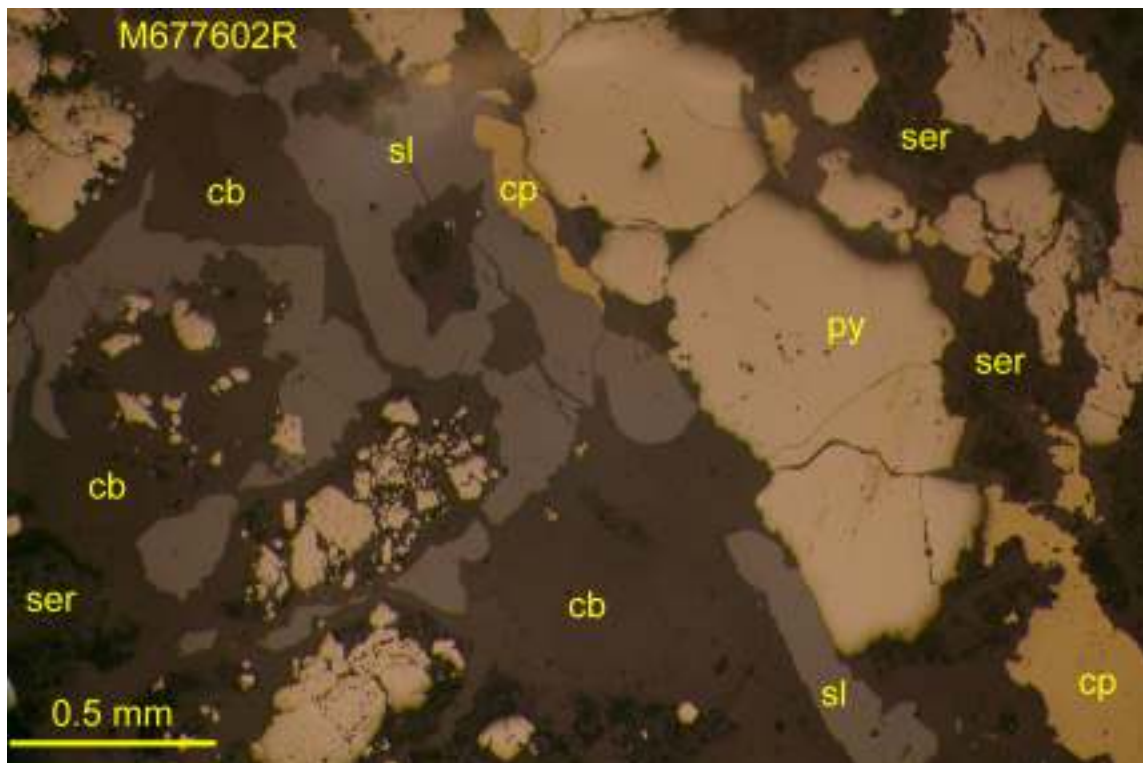
M677432: Crowded porphyritic rock composed of small, euhedral, seriate-textured plagioclase and local variably amphibole (am) or secondary biotite (bi) or magnetite (opaque, mt) altered mafic phenocrysts in a groundmass of finer alkali feldspar and interstitial amphibole, likely mostly secondary. Transmitted plane light, field of view 3.0 mm wide.



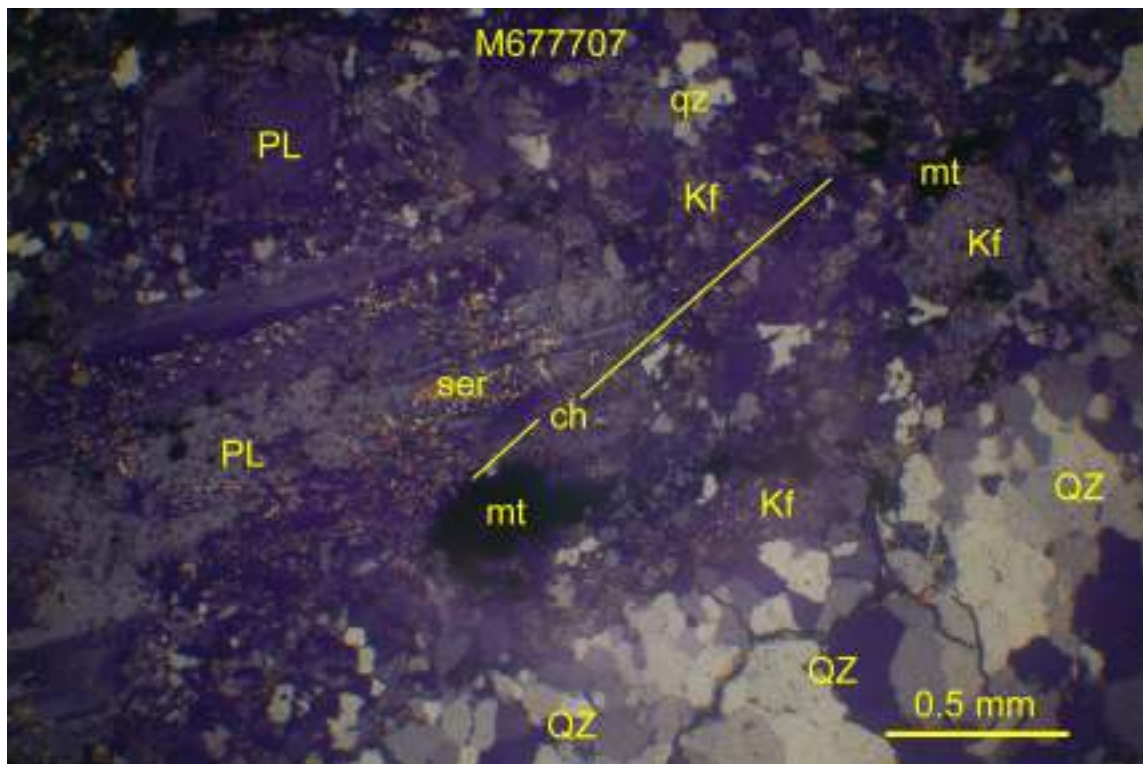
M677432R: Partly fracture controlled, largely secondary magnetite (mt) partly replaced by minor pyrite (py). Reflected light, uncrossed polars, field of view 2.25 mm wide.



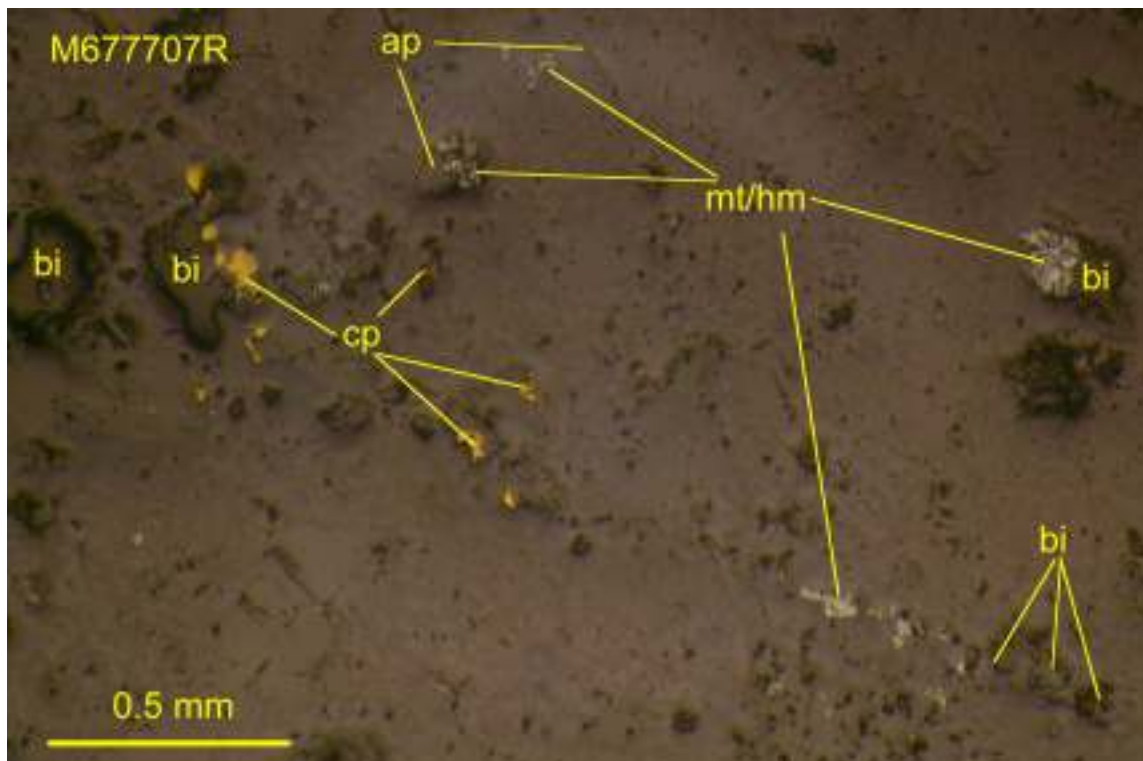
M677602: Contact between less altered wallrock (on left) and intensely sericitized envelope zone (on right); both contain sericite-pyrite altered relict plagioclase and locally needle-like relict mafic sites, in aphanitic groundmass variably altered to sericite. Transmitted light, crossed polars, field of view 3.0 mm wide.



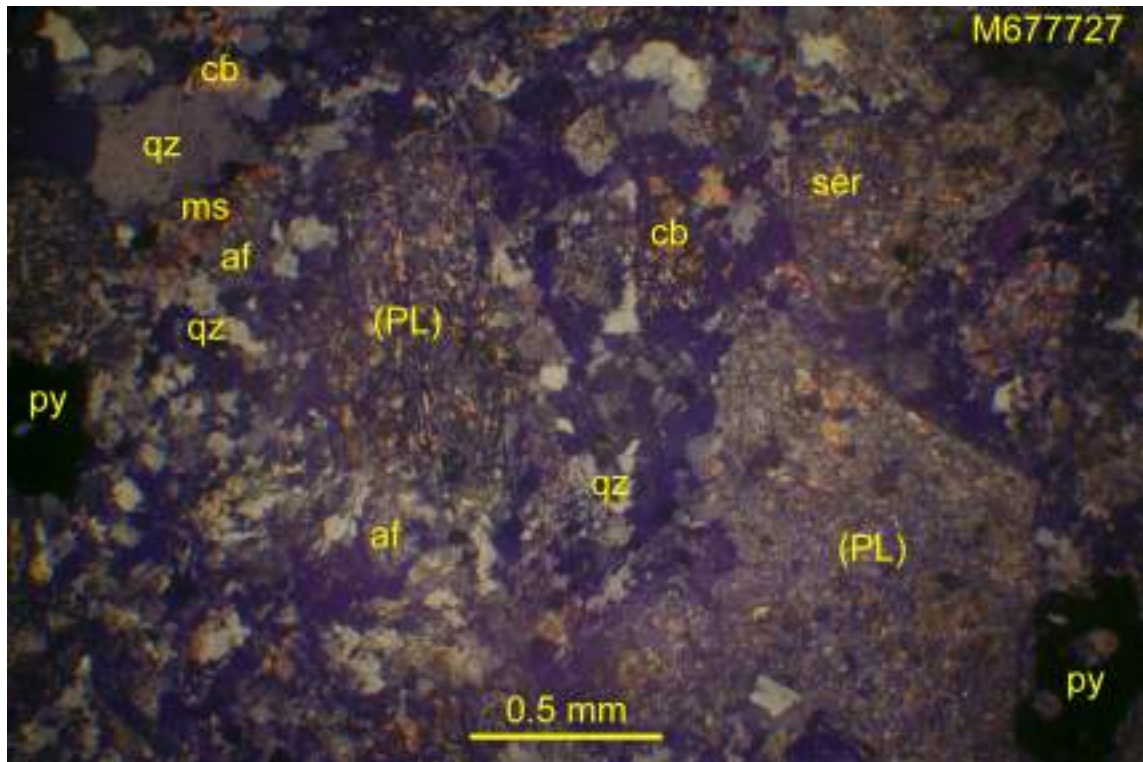
M677602R: Vein zone composed of pyrite (py), local chalcopyrite (cp) and sphalerite (sl), in matrix of carbonate (cb) and intensely sericitized wallrock (ser). Reflected light, uncrossed polars, field of view 2.75 mm wide.



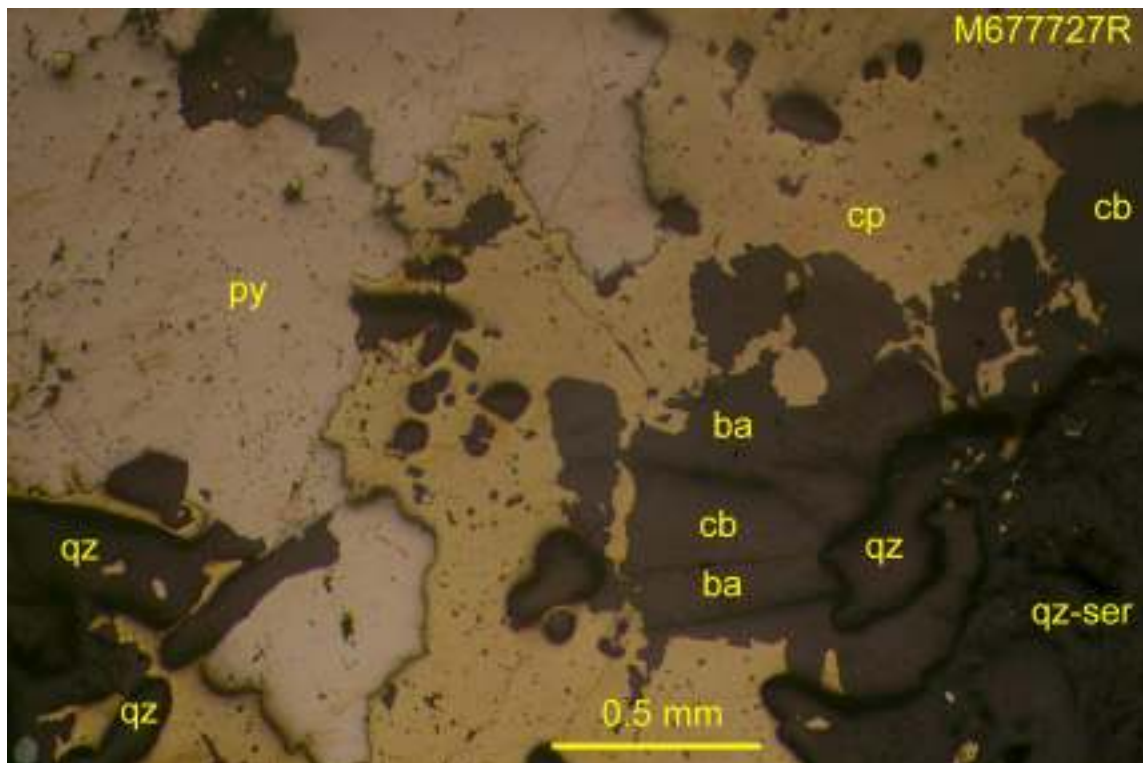
M677707: Plagioclase (PL) phenocryst partly altered to minor sericite (highlighting zoning) and relict mafic sites to magnetite (mt, opaque) and minor chlorite, in groundmass strongly recrystallized to secondary Kspar (Kf) adjacent to quartz (qz) vein. Transmitted light, crossed polars, field of view 3.0 mm wide.



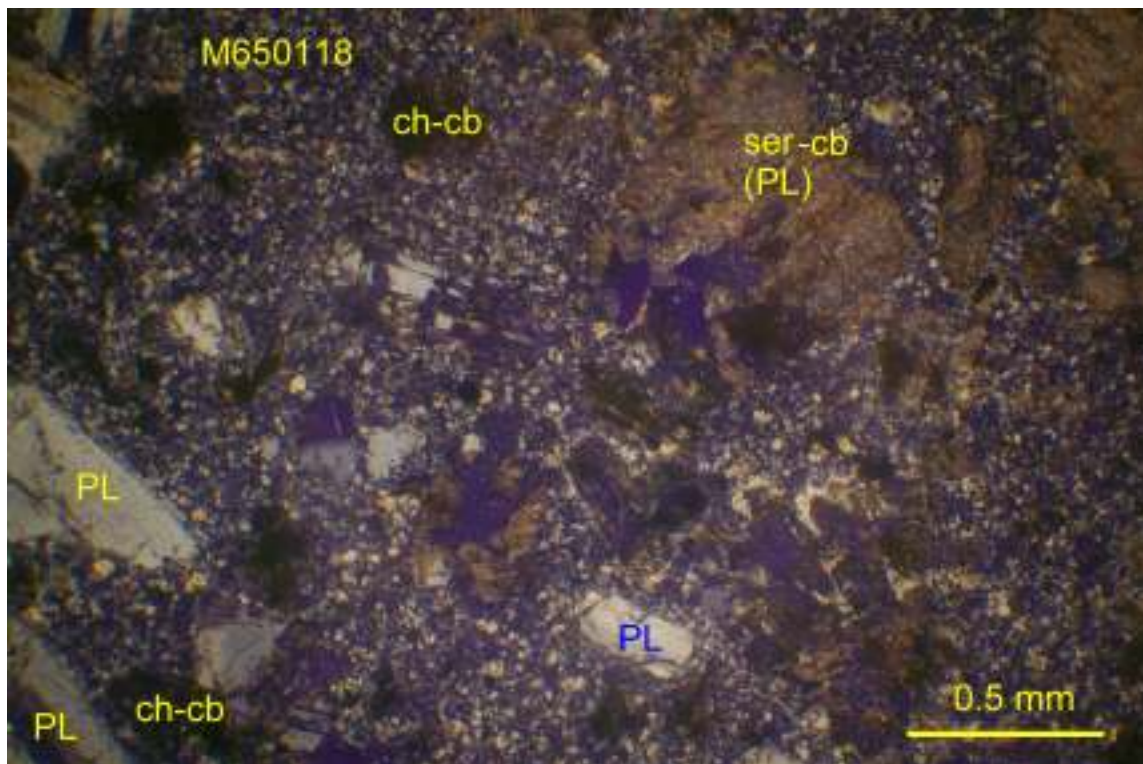
M677707R: Magnetite (mt, partly oxidized to hematite, hm) either disseminated in mafic sites with secondary biotite (bi) and accessory apatite (ap) or loosely controlled along narrow fracture with chalcopyrite (cp), carbonate, quartz and alkali feldspar (partly secondary). Reflected light, uncrossed polars, field of view 2.25 mm wide.



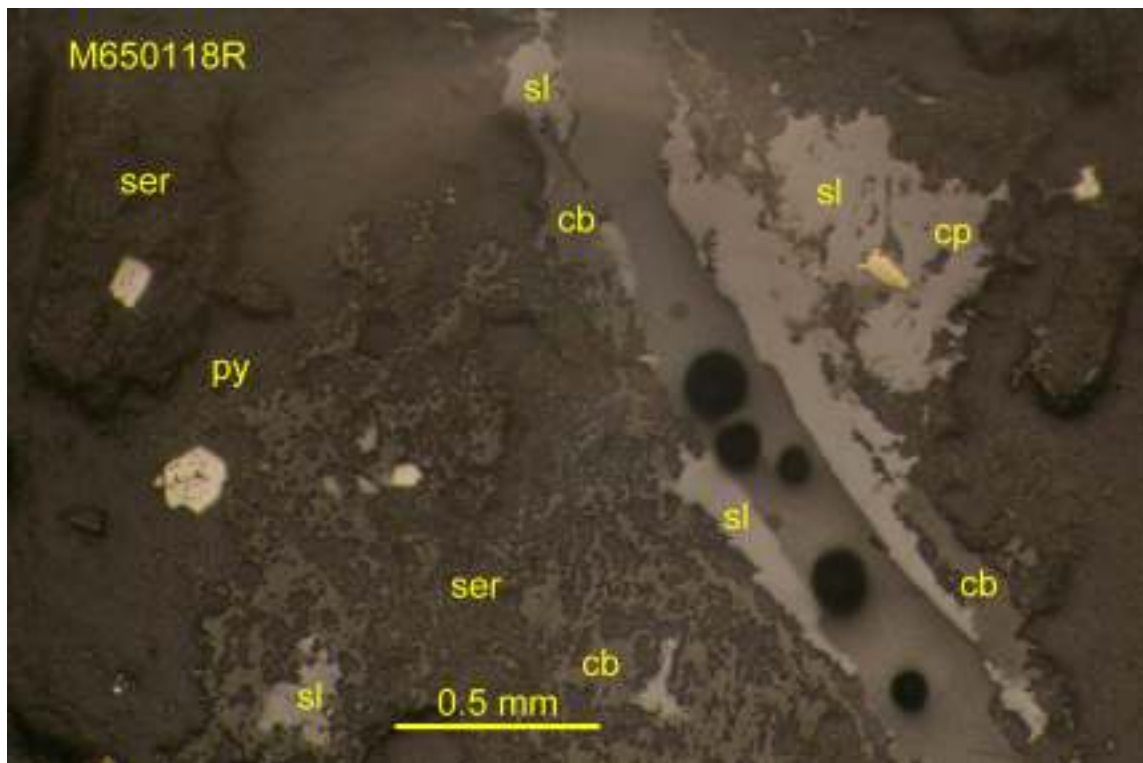
M677727: Strongly altered, crowded porphyritic felsic intrusive (?) composed of relict plagioclase (sericitized, albitized?) phenocrysts in a groundmass of quartz (partly secondary, qz), alkali feldspar (sericitized, albitized?), local sericite, carbonate and pyrite (opaque, py) possibly representing mafics. Transmitted light, crossed polars, field of view 3.0 mm.



M677727R: Pyrite (py) and chalcopyrite (cp) intergrown with and including carbonate (cb), quartz (qz) and minor bladed barite (ba), adjacent to intensely quartz-sericite (qz-ser) altered wallrock. Reflected light, uncrossed polars, field of view 2.75 mm wide.



M650118: Transition across alteration front from fresh plagioclase (PL) and chlorite-carbonate (ch-cb) altered mafic phenocrysts, to sericite-carbonate altered relics of both in phyllic altered rock on right. Transmitted light, crossed polars, field of view 3.0 mm wide.



M650118R: Irregular sphalerite (sl), with rare inclusions of chalcopyrite (cp), along partly opened veinlet of carbonate (cb); surrounding envelope is strongly altered to sericite (ser) and carbonate, minor pyrite (py) and rare sphalerite. Reflected light, uncrossed polars, field of view 2.75 mm wide.

Overviews of thin sections and offcuts (blue semi-circles mark photomicrograph locations).



APPENDIX X
THIN SECTION DESCRIPTIONS

MINT 2012 – LIST OF REP SAMPLES FROM DRILL CORE

DDH-M12-02

#	Sample	Au (g/t)	Cu (ppm)	Picture/ Thin Section Description
1	M677012 32.48- 32.61m	0.053	154	
M677012: appears to represent strongly phyllic (quartz-sericite-carbonate-pyrite-trace rutile) altered, possibly originally plagioclase-biotite/hornblende (?) phyrlic hypabyssal porphyry of dacitic (?) composition, cut by a network of vuggy pyrite-quartz-carbonate veins with sericite envelopes; trace inclusions of chalcopyrite, bornite and digenite rarely occur within the coarse pyrite (Leitch, 2012).				
2	M677096 198.00- 198.35m	0.127	1060	
M677096: appears to represent strongly phyllic/relict weak potassic? (albite?-quartz-sericite-carbonate-pyrite-chlorite-minor chalcopyrite, rutile) altered, possibly originally fragmental volcanic or breccia, in association with thin veinlets of quartz-sulfide (Leitch, 2012).				
3	M677111 224.25- 224.58m	0.294	1025	
M677111: appears to represent breccia of intensely phyllic (quartz-sericite-pyrite-trace rutile) altered angular heterolithic clasts of variably porphyritic hypabyssal and/or volcanic rock, cemented by a hydrothermal matrix of pyrite-chalcopyrite-quartz-sericite-minor carbonate (Leitch, 2012).				

4	M677156 312.80- 312.95m	0.031	162		
M677156: relict plagioclase-mafic phyric porphyry altered to Kspar-chlorite in an outer envelope (cut by thin pyrite $\pm$ carbonate-muscovite veinlets) surrounding an inner sericite envelope to a poorly defined, pyrite-quartz-carbonate-chlorite-muscovite vein zone (Leitch, 2012).					
5	M677234 452.80- 452.95m	0.118	1060		
M677234: strongly phyllic (quartz-sericite-carbonate-pyrite-trace rutile) altered, possibly originally plagioclase-biotite/hornblende (?) phyric hypabyssal porphyry of dacitic (?) composition, cut by a network of vuggy pyrite-quartz-carbonate veins with sericite envelopes; trace inclusions of chalcopyrite, bornite and digenite rarely occur within the coarse pyrite (Leitch, 2012).					

DDH-M12-03

	Sample #	Au (g/t)	Cu (ppm)	Picture/ Thin Section Description
6	M677240 12.25- 12.35m	1.055	592	
M677240: unusual vein assemblage of brownish sericite (after plagioclase, some of which remains), possible kaolinite-group clay mineral, and slightly magnesian chlorite, plus coarse sphalerite, pyrite and galena all partly oxidized at rims to fine-grained covellite and possible Pb and Zn oxide minerals (Leitch, 2012).				

7	M677294 118.65- 118.95m	0.123	260		
M677294: appears to represent breccia of intensely phyllic (quartz-sericite-pyrite-trace rutile) altered angular heterolithic clasts of very finely porphyritic volcanic (?) rock, cemented by a hydrothermal matrix of vuggy pyrite-carbonate-sericite-minor quartz-trace rutile (Leitch, 2012).					
8	M677330 175.65- 175.87m	0.531	66		
M677330: appears to represent strongly phyllic/argillic (clay?/sericite-quartz-pyrite-carbonate-trace rutile-apatite) altered, very finely plagioclase-mafic-rare quartz phyrlic volcanic or hypabyssal porphyry, cut by irregular veins of vuggy pyrite-carbonate-quartz-trace rutile-unidentified mineral (Leitch, 2012).					
9	M677410 294.60- 295.30m	2.75	276		
M677410: breccia composed of strongly phyllic (sericite-Kspar-minor pyrite-rutile) altered clasts of finely feldspar-mafic phyrlic porphyry in a hydrothermal matrix of pyrite (lesser sphalerite, chalcopyrite, trace galena, sulfosalt?)-Kspar-carbonate-muscovite (Leitch, 2012).					
10	M677429 321.60- 321.90m	0.033	57		
M677429: appears to represent strongly phyllic/propylitic (albite?-sericite-carbonate-					

chlorite-minor quartz-pyrite-rutile) altered, fine plagioclase-possible hornblende-biotite (?) phyrlic porphyry possibly originally of (?) dacitic composition(Leitch, 2012).				
1 1	M677432 326.65- 326.95m	0.018	60	
M677432: appears to represent transitional propylitic/potassic (oligoclase?-amphibole-biotite-sericite-minor quartz-magnetite-carbonate-pyrite) altered, fine seriate plagioclase-possible hornblende-biotite (?) phyrlic porphyry possibly originally of (?) andesitic composition (Leitch, 2012)..				

DDH-M12-04

	Sample #	Au (g/t)	Cu (ppm)	Picture/ Thin Section Description
1 2	M677602 415.00	2.89	1430	
M677602: less altered, dacitic (?) porphyry (relict, sericitized plagioclase and carbonate-sericite-pyrite-rutile altered mafic sites in an aphanitic, quartzo-feldspathic groundmass altered to clay?/sericite) and phyllic envelope thoroughly altered to sericite-pyrite ±chalcopyrite-local minor quartz, centered on a vein of carbonate-pyrite-chalcopyrite-sphalerite-trace quartz (Leitch, 2012).				

DDH-M12-05

	Sample #	Au (g/t)	Cu (ppm)	Picture/ Thin Section Description
13	M677707 164.1- 164.40m	0.059	91	
M677707: appears to represent transitional propylitic/potassic (albite?-Kspar-quartz-biotite/chlorite-minor sericite-magnetite-carbonate-chalcopyrite) altered/veined, fine plagioclase-possible hornblende-biotite (?) phyrlic porphyry possibly originally of (?) andesitic composition (Leitch, 2012).				
14	M677727 205.60- 205.93m	0.254	227	
M677727: appears to represent possibly crowded porphyritic dacite/quartz diorite strongly altered to albite?-sericite-carbonate-minor pyrite-rutile, around a breccia/vein zone in which coarse pyrite-lesser chalcopyrite-minor sphalerite is associated with carbonate-quartz-local barite and a wider zone of intense phyllic (quartz-sericite-clay?-carbonate-pyrite) alteration (Leitch, 2012)..				
15	M650118 416.67- 46135m	0.058	123	
M650118: appears to represent transitional propylitic/potassic (albite?-Kspar-quartz-chlorite-carbonate-hematite) altered, fine plagioclase-possible hornblende-biotite (?) phyrlic porphyry possibly originally of andesitic composition (?), strongly phyllic (sericite-quartz-pyrite-rutile) altered along wide envelopes around thin carbonate-quartz-sericite-pyrite-sphalerite-chalcopyrite veins (Leitch, 2012)..				

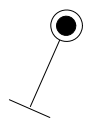
APPENDIX XI
STATEMENT OF EXPENDITURES

Statement of Expenditures
Bund 1-4, 11-12, 31-50, Mint 1-104, 107-212 &
Slag 1-14 Mineral Claims
March 6, 2013

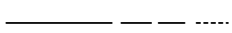
Contract Diamond Drilling

Platinum Diamond Drilling Inc.

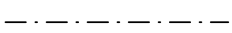
\$307,039.36



Diamond drill hole



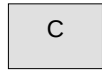
Contact (known, inferred)



Talus/scree



Fracture (strike/dip)



Covered areas

WRANGELL LAVAS

MIOCENE TO PIOCENE AND YOUNGER

NWd

Feeder diabase dykes (scree/outcrop)

NWp

Fragments of feldspar porphyry and maroon andesite with pyroclastics

NWi

Basic to intermediate volcanic flows and feldspar tuff assemblages

WRANGELL SUITE

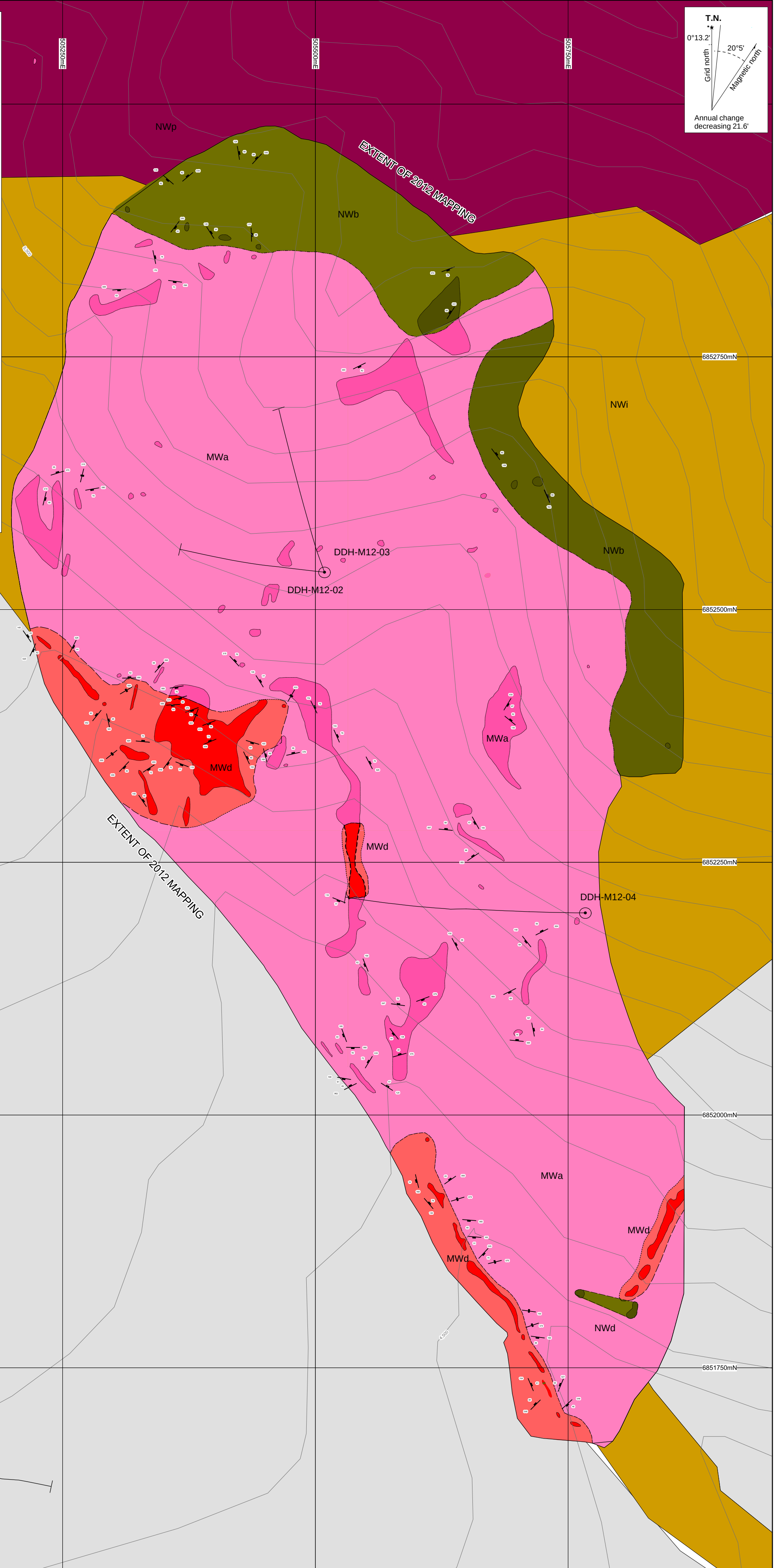
MID TO LATE MIOCENE

MWa

Subvolcanic andesite (scree/outcrop)

MWd

Plagioclase diorite, feeder dykes (scree/outcrop)



SILVER RANGE RESOURCES LTD.

FIGURE 6

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

GEOLOGY - DRILL AREA

MINT PROPERTY

0

500 m

UTM ZONE 7, NAD 83, 115F/15

FILE:2012/MINT/Figures/F_6_Drill_Area_Geology.wor DATE: FEB 2013

