Assessment Report on the

2011 KENO-LIGHTNING

Geophysical, Trench Mapping, Soil Geochemistry and

Diamond Drilling Program

Homestake 1 to 5 (YC38987 to YC38991)
Homestake 6 to 26 (YC39474 to YC39494)
Homestake 27 to 32 (YC39564 to YC39569)
Homestake 33 to 36 (YC39890 to YC39893)
Homestake 37 to 39 (YC57031 to YC57033)
Homestake 37 to 39 (YC57462 to YC57464)
Homestake 40 Fraction (YC68018)
Murray 1 to 4 (YC39000 to YC39003)
Murray 5 to 11 (YC38963 to YC38969)
Murray 12 to 17 (YC56160 to YC56165)
HS 1 to 5 (YD34912-YD34916)

Maja 1 to 8 (YC38992 to YC38999)
Maja 9 to 14 (YC39004 to YC39008, YC39543)
Maja 15 to 24 (YC39878 to YC39887)
Maja 25 to 36 (YC57465 to YC57476)
Ski 1 to 42 (YC39009 to YC39050)
Ski 43 to 48 (YC39451 to 454, YC39888 to 889)
Ski 49 to 90 (YC56166-75, YC67504-35
Ski 91 to 190 (YC68194-287, 328-33)
Aho 21 to 56 (YD11271-282, 289-300, YD22789-800
Blanche, Blanche Fr (YC00365, YC69939)

NTS: 105M/14, 15

Latitude 63°54'N Longitude 135°11'W

Mayo Mining District

Work performed between
June 15 and September 30, 2011.

For
Monster Mining Corp.
750-580 Hornby Street
Vancouver, British Columbia
V6C 3B6

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1 Executive Summary

Monster Mining Corp.'s 2011 exploration program at Keno-Lightning comprised a property-wide airborne SkyTEM time domain electromagnetic and magnetic geophysical survey, 100 m^3 of trenching at Caribou Hill, 14 diamond drill holes for 1201 m at Caribou Hill and 11 diamond drill holes for 618 m at Homestake, and a 167-sample soil geochemical program. Monster also undertook fish species and habitat, and water quality surveys, and rehabilitated a number of historic trenches at Homestake. The work program was based on the recommendations of Pautler (2010) and followed up on previous results. The fish and water surveys were conducted to establish baseline environmental data and support an application to amend the existing Class 3 Mining Land Use permit.

SkyTEM Surveys APS conducted a 1460 line kilometre time domain electromagnetic (TDEM) survey over the Keno-Lightning project. The survey was designed to generate exploration targets outside of the known occurrences and assist in structural interpretations of the geology and mineralization on Keno-Lightning. Results of the broad scale interpretation at Keno-Lightning indicate that both the EM and magnetic data sets are effective in identifying structural targets in the appropriate orientation, and the EM data appears to map lithology. The survey identified five untested areas on the property cross-cut by favourably oriented structures, which displayed similar geophysical characteristics to zones known to host mineralization. These are areas of high resistivity, interpreted to reflect the presence of quartzite or dolerite, and structural complexity, features which have historically correlated to higher grade and tonnage in the district (Cathro, 2006)

A 167-sample soil geochemical program was conducted between Faith Gulch and Caribou Hill over an area interpreted to be the intersection between the Caribou vein, Caribou fault and two north-east trending longitudinal veins. This program expanded on a small survey conducted in 2009 that returned anomalous gold and silver values in soils and a coincident high-grade grab sample that returned 4708 g/t Ag, 1.13 g/t Au, 34.1 % Pb and 5.73 % Zn. The 2011 survey extended the 2009 survey to the north and delineated a 900 m x 700 m zone of coincident Au and As anomalism, which is open to the east.

A program of trenching and trench mapping was conducted at Caribou Hill to test for near-surface extensions south of the outcropping Caribou Hill vein. Where the trenches reached bedrock, they exposed Keno Hill quartzite to the west and thin-bedded quartzite with intercalated calcareous schist and subordinate quartz-sericite-chlorite schist; however, they did not intersect the vein. Samples collected from trench CH08-01, excavated in 2008 but not previously mapped or sampled, returned best results of up to 3.3 m of 2332 g/t Ag, 1.38 g/t Au, 8.5 % Pb and 1.1 % Zn from an oxidized, gossanous breccia zone exposed within the trench.

Homestake trenches 1, 3, 4, 5 and 6 were mapped and resampled prior to rehabilitation and returned best results of 0.7 m of up to 1155 g/t Ag, 0.30 g/t Au, 6.27 % Pb and 10.09 % Zn from oxidized and gossanous material exposed in Trench Tr04, and 1 m x 1 m (panel) of 11.05 g/t Au, from strongly oxidized arsenopyrite and scorodite-bearing brecciated quartz veins exposed in trench HS-TR01.

Drilling at Caribou Hill (Minfile No. 105M 062) targeted the outcropping Caribou Hill galena-siderite vein and followed up on mineralized intersections identified during the 2008 field season. All 14 holes drilled at Caribou Hill intersected variably oxidized and sulfide-bearing material, interpreted to be subsurface extensions of the outcropping Caribou Hill vein, at depths between 10 and 30 m below surface. Eleven of the 14 holes returned intervals greater than 100 g/t Ag, from, with three holes returning intervals greater than 1000 g/t Ag. Drilling delineated 300 m of strike-continuous silver mineralization > 100 g/t, which is open along strike to the south and at depth.

At Homestake (Minfile No. 105M 011) drilling targeted subsurface expressions of outcropping mineralization in No. 1 vein, exposed in Trench 04, and strike extensions of the No. 2a vein, intersected in drill holes 08HS009 and HS10-006 and 009. The Homestake drilling program did not return any significant results; however, recoveries were generally poor, averaging 74 % throughout the program, and significantly less in vein and fault zones.

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2 Introduction

Between June 15th and September 30th Monster Mining Corp. conducted an exploration program at Keno-Lightning comprising a 1460 line kilometre SkyTEM time domain electromagnetic (TDEM) survey of the Keno-Lightning property, a trenching, mapping and sampling program at the Caribou Hill and Homestake prospects, a 167-sample soil geochemical program at Faith Gulch and 25 diamond drill holes for 1819.3 m at Caribou Hill and Homestake. Monster also commissioned fish habitat and species, and water quality surveys of relevant creek crossings, and rehabilitated 7 historic trenches at Homestake

SkyTEM Surveys ApS conducted a property wide, 1460 line kilometre TDEM and magnetic survey over the project area. The survey was designed to identify sulfide veins and structures below surface and outside of areas of known mineralization, to generate new targets and to assist in structural interpretations of the geology and mineralization at Keno-Lightning. Results of the survey mapped resistive areas, interpreted to reflect underlying quartzite and/or dolerite, both of which are favourable host rocks for mineralization, and identified more than 40 structures in the correct orientation that had not been previously recognized. Five areas with favourable geology and structural architecture were identified on the property for follow up exploration. The survey also downgraded the prospectivity of the Homestake area immediately adjacent to the outcropping veins, as resistivity data indicate that the prospect is dominated by unfavourable schist, an observation that is confirmed by diamond drill core.

Monster personnel conducted a small 167-sample soil geochemical program at Faith Gulch, immediately to the south of the Caribou Hill prospect. The survey expanded on a much smaller program conducted during 2009, which identified some Ag and Au anomalism, and targeted the interpreted intersection in quartzite of the Caribou Hill vein, the Caribou fault, and two northeast-southwest trending faults. The survey delineated a 900 m x 700 m zone of coincident Au and As, open to the east and south, and which is a high priority for follow-up with trenching and drilling.

A program of trenching and trench mapping was conducted at Caribou Hill to test for near surface extensions to the outcropping Caribou Hill vein. Three trenches were excavated, but for the most part failed to reach bedrock and the vein was not exposed. Trench CH08-01, which was excavated in 2008, was mapped and sampled, and returned best results of 3.3 m of 2332 g/t Ag, 1.38 g/t Au, 8.5 % Pb and 1.1 % Zn. Homestake trenches 1, 3, 4, 5 and 6, were mapped and resampled prior to rehabilitation. This program returned a best result of 0.7 m of 1155 g/t Ag, 5.72 % pb and 1.50 % Zn from oxidized and gossanous material collected from trench Tr04.

Fourteen diamond drill holes for 1201.2 m at Caribou Hill targeted subsurface extensions of the Caribou Hill silver vein intermittently exposed at surface, and mineralized intersections identified during the 2008 drilling program. Drilling at Caribou Hill utilized HQ diameter triple-tube rods to reduce core loss, particularly in faulted and mineralized zones, and to assist in core orientation, for structural interpretation purposes. Results of the drilling confirmed the continuation of the Caribou Hill vein to at least 25 m below surface, and delineated continuous sulfide and/or oxide mineralization returning grades > 100 g/t Ag over a 300 m strike length.

Drilling at Homestake targeted extensions of mineralization identified during the 2008 and 2010 drilling programs and the outcropping No. 1 vein, exposed in Trench 04, and strike extensions of the No. 2a vein, intersected in drill holes 08HS009 and HS10-006 and 009. None of the Homestake drill holes intersected massive sulfide and did not return any significant results. Recoveries were generally poor, averaging 74 % throughout the program, and significantly less in vein and fault zones. Drilling at Homestake also utilized triple-tube rods, however with less success than at Caribou Hill. Drilling continues to be a challenge at Homestake due to broken ground and fault gouge.

3 Qualified Persons and Participating Personnel

The 2010 exploration program was conducted by Monster Mining Corp. contract personnel under the supervision of Joanna Ettlinger, PhD, P.Geo, a “Qualified Person” in the context of National Instrument 43-101. Ms. Daria Duba (MSc.) mapped and sampled the trenches, and Ms. Duba and Dr. Ettlinger logged the core and supervised the sampling, which was conducted by Ms. Julianna Kaiser, Mr. Kieran McIntosh and Mr. Gilbert Guay, all of whom were employed by Monster Mining Corp. on a contract basis. Mr. Jean-Paul Salley managed all logistical aspects of the program. Mr. Daniel Schünemann, who was employed by Monster on a contract basis managed the camp and assisted with core sampling. Mr. Matthias Bindig provided a property orientation tour and supervised the soil geochemical sampling. SkyTEM Surveys ApS of Beder, Denmark conducted the airborne geophysical survey, with helicopter support provided by Abitibi Helicopter Services Ltd. of Calgary, Alberta. Drilling services were provided by E. Caron Diamond Drilling of Whitehorse, Yukon and Lyncorp Drilling Services of Smithers, British Columbia. Core Expediting and Hotshot provided expediting services. Analytical services were provided by Acme Analytical Laboratories (Vancouver) Ltd. and Inspectorate Exploration and Mining Services Ltd. at their Whitehorse, Yukon preparation facilities and Vancouver, British Columbia analytical laboratories.

4 Property Description and Location

4.1 Location, Access and Local Resources

The Keno-Lightning project is located 465 km north of Whitehorse and 55 km north of Mayo in the Mayo Mining District, central Yukon (Figure 1). The property covers the eastern end of Keno Hill and the northern slope of Bunker Hill, 4 to 12 km east of Keno City. It is located within NTS map sheets 105M/14 and 15 and centred at 63° 54’ N, 135° 11’ W. Access from Whitehorse is via the paved Klondike Highway to Stewart Crossing and the unpaved Silver Trail Highway to Keno City, both of which are accessible year-round. Access to the property is via two wheel drive gravel roads and four wheel drive mining roads. Silver Basin is accessed from Signpost Road to the top of Keno Hill, then by a 4WD-accessible road to the old workings and 2010 drill site. Homestake is accessed by crossing Lightning Creek at Thunder Gulch, then heading east towards Bunker Hill.

Keno City has a population of approximately 25 with a snack bar, cabins for rent, a small mining oriented labour force and some local heavy equipment availability. Mayo, 56 km by road southwest of Keno City, is the main service and supply center for the region. The town of Mayo has a population of approximately 400 and has a gravel airstrip suitable for medium sized aircraft (DC-3, etc.) and a helicopter base. Facilities include a police station, nursing station, grocery store, hotels, restaurant and fuel supply. Some heavy equipment is available for contract mining work.

4.2 Land Tenure

The Keno-Lightning project covers approximately 6000 hectares and comprises 329 unsurveyed two-post Yukon Quartz claims (See Fig. 2, Table 1, Appendix 1) in six groups of contiguous claims. The claims were staked according to the Yukon Quartz Mining Act and are located in the Mayo Mining District. The claims are located on claim sheets 105M/14 and 105M/15, available for viewing at the Dawson Mining Recorders Office or on the Yukon Mining Recorder's web site at http://www.yukonminingrecorder.ca/.

With the exception of the Aho and Blanche claims, all claims within the Keno-Lightning project are owned by Mr. Matthias Bindig (60%), Mr. Bill Harris (30%) and Mr. Ron Robertson (10%). Mr. Bindig of Keno City, Yukon Territory is the registered owner of these claims. Monster Mining Corp. is the registered owner of the Aho claims, subject to an underlying option agreement outlined below. The registered owners of the Blanche claim are 50% Mr. Moriarty, 25% Mr. Walden and 25% Mr. Bindig, the latter of which is subject to the option agreement below. An agreement has been made with Moriarty for his percentage. In an agreement dated August 31, 2007, Monster Mining Corp. has an option to earn a 100% interest in the Keno-Lightning Project through a series of exploration expenditures, staged payments and issuance of shares over 5 years, totalling $300,000 in expenditures (completed), $120,000 cash payments and 700,000 shares. The vendor will retain a 3% underlying net smelter return (NSR), of which 1% may be purchased for $300,000 and a further 1% for $1.2 million

Table 1 Keno-Lightning claim data

Claim Name	Grant No	No. of Claims	Record Date	Expiry Date
Homestake 1-5	YC38987-991	5	February 14, 2005	December 1, 2017
Homestake 6-26	YC39474-94	21	June 3, 2005	December 1, 2020
Homestake 27-32	YC39564-569	6	July 19, 2005	December 1, 2020
Homestake 33-36	YC39890-893	4	September 27, 2005	December 1, 2020
Homestake 37, 39	YC57031, 033	2	August 2, 2007	December 1, 2020
Homestake 38	YC57032	1	August 2, 2007	December 1, 2017
Homestake 37-39	YC57462-464	3	September 24, 2008	December 1, 2020
Homestake 40 Frac.	YC68018	1	May 8, 2008	December 1, 2017
Maja 1-8	YC38992-999	8	March 10, 2005	December 1, 2017
Maja 9-14	YC39004-008, 543	6	March 17, 2005	December 1, 2020
Maja 15-24	YC39878-887	10	September 27, 2005	December 1, 2020
Maja 25-35	YC57465-475	11	September 24, 2007	December 1, 2020
Maja 36	YC57476	1	September 24, 2007	December 1, 2017
Murray 1-2	YC39000-001	3	March 10, 2005	December 1, 2015
Murray 3	YC39002	1	March 10, 2005	December 1, 2017
Murray 4	YC39003	1	March 10, 2005	December 1, 2017
Murray 5-10	YC38963-968	6	March 13, 2005	December 1, 2017
Murray 11	YC38969	1	March 13, 2005	December 1, 2011
Murray 12-15	YC56160-165	4	June 13, 2007	December 1, 2018
Murray 16-17	YC56160-165	2	June 13, 2008	December 1, 2016
Ski 1-11	YC39009-019	11	March 17, 2005	December 1, 2017
Ski 12-22	YC39020-030	11	March 17, 2005	December 1, 2020
Ski 23-46	YC39031-54	24	March 31, 2005	December 1, 2020
Ski 47-48	YC39455-456	2	September 27, 2005	December 1, 2020
Ski 49-58	YC56166-175	10	June 13, 2007	December 1, 2018
Ski 59-90	YC67504-535	32	April 4, 2008	December 1, 2017
Ski 91-184	YC68194-287	94	June 18, 2008	December 1, 2017
Ski 185-190	YC68328-333	6	June 18, 2008	December 1, 2017
Aho 21-56	YD11271-82,89-300,22789-800	36	November 13, 2009	November 13, 2015
Blanche	YC00365	1	January 9, 1998	January 9, 2015
Blanche Fr	YC69939	1	September 2, 2008	September 2, 2014
HS 1-5	YD34912-916	5	August 19, 2010	August 20, 2011
TOTAL		**329**		

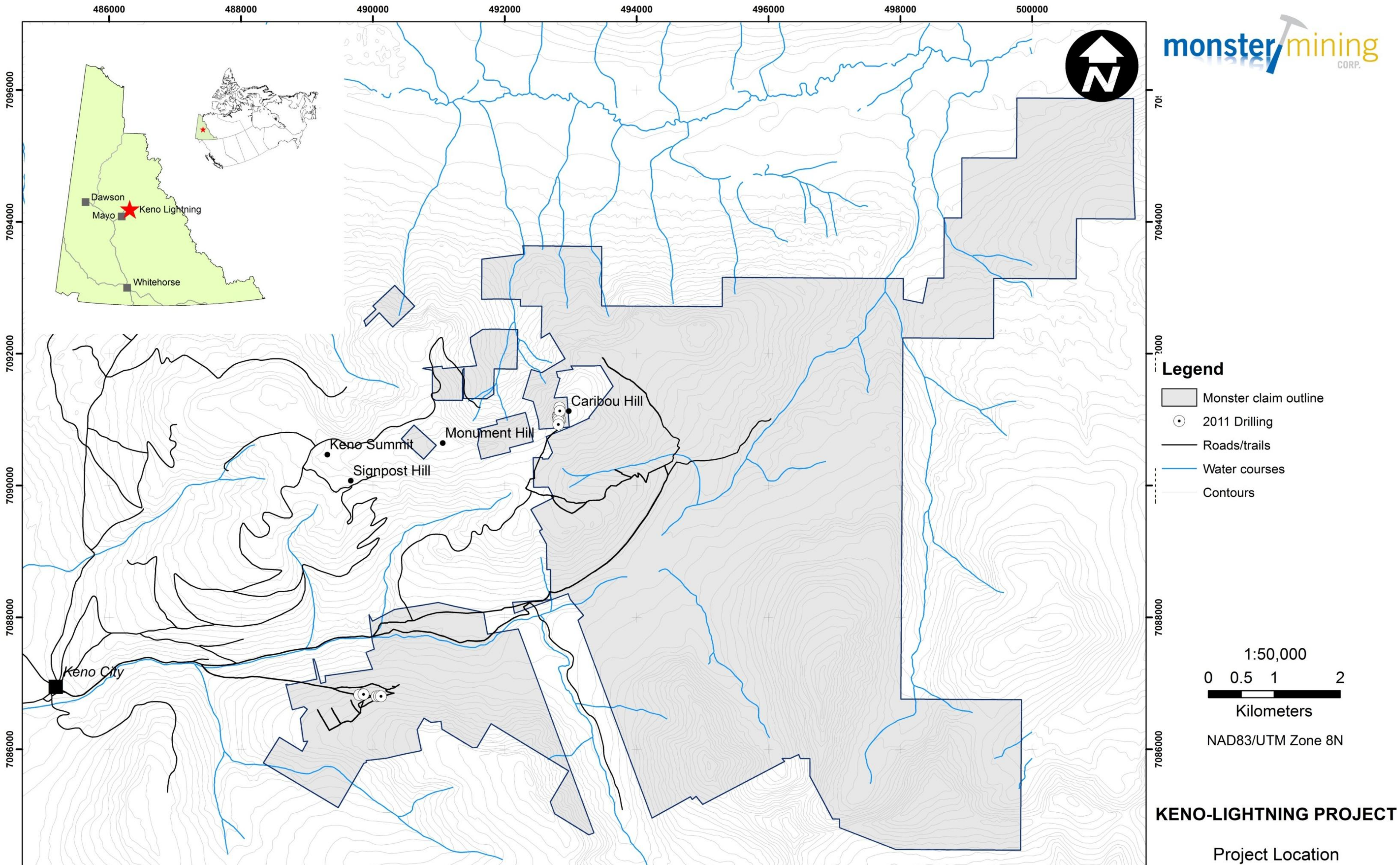


Figure 1. Keno-Lightning project location

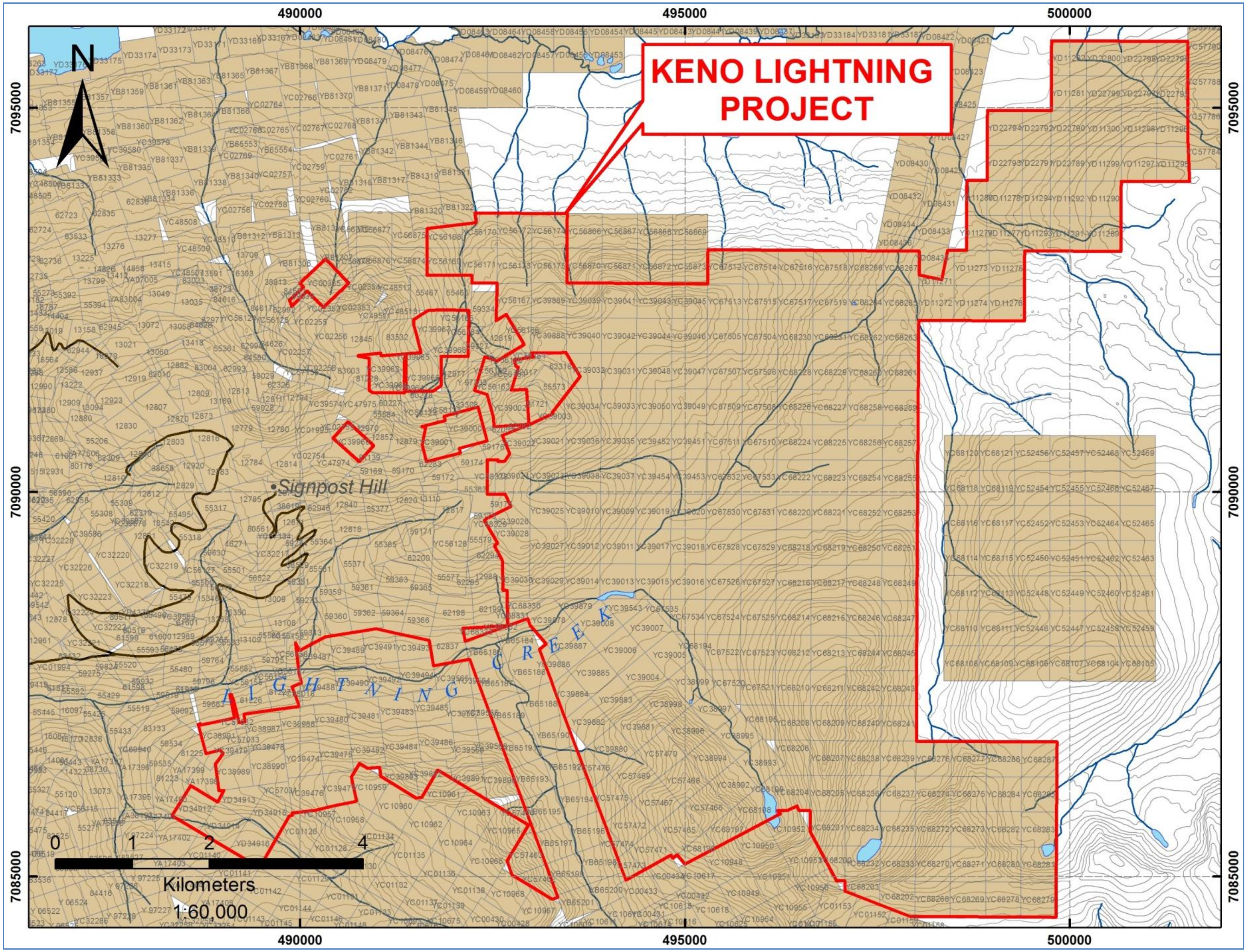


Figure 2 Keno-Lightning claim map

5 Physiography and Climate

5.1 Physiography and Climate

The following excerpt is taken directly from Pautler (2010).

"The Keno-Lightning Project is located on Keno Hill and the north flank of Bunker Hill, on the western side of the Wernecke Mountains (which make up part of the western Rocky Mountains) in the northeastern part of the Yukon Plateau (Figure 1). The terrain is mountainous, commonly with precipitous north slopes. Southern slopes are less steep. Ridge tops can be sharp and narrow or broad and open. Elevations within the claim area range from 1080m ASL along Lightning Creek to over 1750m ASL at the summit of Caribou Hill. Total relief from the valley floors to the summits approaches 1000m.

Tree line is located near 1300m ASL with upper slopes consisting of alpine tundra with poorly developed soil, talus, grasses and moss cover. Dwarf willows are common in sheltered areas. Dense stands of black spruce are widespread below tree line with poplar and alder common on south facing slopes and as second growth where the spruce has been burned or logged out.

Outcrop is sparse, except on steeper slopes and knolls, but amounts to less than 1%. The exceptions are gulches and cirque headwalls, particularly on north slopes. In the remaining areas the primary source of geological information is float rock that has been frost-heaved to surface through the overburden cover. Below tree line there is extensive glacial till cover which deepens downslope to depths in excess of 100m on the floors of the major valleys.

Permafrost is extensive through the region reaching depths up to 150m on Keno Hill, which hampers prospecting in that the frozen ground masks soil geochemical responses from bedrock, transports soil and soil geochemical anomalies downslope by solifluction, and inhibits trenching by hand or machine.

The area has a northern interior climate with warm summers, long cold winters and light precipitation (average 313 mm annually), one-third of which is snow. The exploration season lasts from late May until October. Drilling can be conducted in the winter. Summer daily temperatures average 23o Celsius, 9oC at night, and winter temperatures average -20 °C, -31 °C at night. Mayo has the greatest range of annual temperatures in North America, with temperatures reaching over 35 °C in summer and below -50 °C in winter."

6 History

The Keno-Lightning project covers eight Minfile occurrences; Nabob (Minfile No. 105M 006), Silver Basin (Minfile No. 105M 005), Duncan (Minfile No. 105M 003), Caribou (Minfile No. 105M 062), Avenue (Minfile No. 105M 053), Faith (Minfile No. 105M 002), Bema (Minfile No. 105M 073), Homestake (Minfile No. 105M 011). With the exception of the Bema occurrence, which was discovered in 1966, the showings were discovered and staked in the late 1910's and early 1920's, and worked by hand (trenching, underground and open-cut mining) until about 1928. Four of the occurrences (Duncan, Caribou, Faith and Homestake) were hand mined in the 1920's, the most productive of which was the Caribou showing (78.9 tons of ore grading 6,103.9 g/t Ag and 70% Pb). Between the late 1940's and late

1980's most of the showings experienced some mechanized trenching, and minor soil geochemical surveying was conducted over the Faith, Avenue and Bema showings. For a comprehensive description of the property history see Pautler (2010).

In 2005, Mr. Matthias Bindig of Keno City staked 121 claims, which covered the original eight Minfile occurrences. Between 2005 and 2006 he completed minor prospecting and soil geochemical sampling programs, and undertook reclamation work on some of the old workings (Robertson, 2005; McFaull, 2007). In 2007 additional claims were added to the property and the project was optioned to Northex Ventures (now Monster Mining Corp.) who undertook a trenching and geophysics program on the Homestake prospect (Pautler, 2008). In 2008 Monster Mining Corp. completed 1,765.7m of diamond drilling in 17 holes at Homestake and Caribou and 1510m of rotary air blast drilling in 53 holes at Homestake, and excavated additional trenches at Homestake, Caribou and Faith (McFaull, 2009). The Aho claims were added to the claim group in 2009, and a program of soil geochemical sampling was conducted on the Homestake, Faith and Mt McFaull grids (Blackburn, 2010). In 2010, Monster completed 2,251m of diamond drilling (Ettlinger, 2011) and added the HS 1-5 claims to the claim group.

7 Geology

7.1 Regional Geology

Keno-Lightning is located within Neoproterozoic to late Paleozoic slope-to-basin facies strata of the epicratonic Selwyn Basin (Ross, 1991, Figure 3). Selwyn Basin strata are characterized by off-shelf deep water clastic (shale, chert, basinal limestone) rocks, and are bound by the Mackenzie Platform, to the northeast and truncated by the Tintina fault to the southwest (Pigage, 2006).

The basin was subject to northeast directed compression during the Jurassic and early Cretaceous, caused by plate convergence and accretion of pericratonic terranes onto ancient North America. This resulted in thrust faulting, the development of open to tight similar folds within relatively incompetent Selwyn Basin strata (compared to the bounding carbonate platforms), and greenschist facies metamorphism. Widespread granitic magmatism during the early to mid-Cretaceous led to the formation of at least five main intrusive suites between 112 and 90 Ma and a younger suite at 65 Ma. Strike-slip faulting along the Tintina Fault zone during the late Cretaceous and early Tertiary displaced the western margin of the Selwyn Basin at least 450 km into what is now Alaska.

7.2 Local Geology

The Keno-Lightning project is underlain by highly deformed rocks of Mississippian Keno Hill Quartzite and phyllitic metasedimentary rocks of the Devono-Mississippian Earn Group, with lesser Mississippian felsic volcanic schist, all of which are intruded by Triassic dolerites and Cretaceous aplite dykes and sills. The project sits within the Dawson Thrust sheet, which is bound by the Dawson Thrust to the northeast and the Tombstone Thrust to the southwest. Deformation of the host rocks, which is characterized by intense foliation, appears to be related to displacement along the Tombstone thrust fault. North- to northeast- and northwest-trending faults are evident throughout the area.

Locally, stratigraphy within the Keno mining camp has been divided into three units; the Upper Schist, Central Quartzite and Lower Schist. The Upper Schist and Central Quartzite units correlate to the early

Carboniferous Keno Hill Quartzite Formation and the Lower Schist correlates to the Middle to Late Devonian Earn Group phyllite and Felsic Volcanic Members, and includes some thick bedded quartzite of the Keno Hill Quartzite Formation. Metamorphosed diorite and gabbro sills and lenses are conformable with stratigraphy.

The Upper Schist comprises graphitic schist and phyllite, thin bedded quartzite, quartz-mica schist, calcareous schist and minor limestone, and quartz-sericite metavolcanic schist. The Central Quartzite contains thick and thin-bedded quartzite, massive quartzite, minor graphitic phyllite, schist and calcareous schist. This unit is up to 700m in thickness and hosts many of the principal silver deposits of the camp. It is most prevalent at Homestake, with narrower bands underlying the Silver Basin, Caribou, Faith and Duncan areas. The Lower Schist includes graphitic schist and phyllite, argillite, thin-bedded quartzite, calcareous schist, slate and sericite schist and two bands of thick and thin-bedded quartzite with lesser phyllite and graphitic schist. Stratigraphy principally strikes east-west and dips 20° to 30° south.

7.3 Deposit Style and Mineralization

7.3.1 Deposit Style

Mineralization in the Keno district is representative of a clastic metasediment hosted silver-lead-zinc enriched polymetallic vein deposit, examples of which include the Coeur d'Alene district of Idaho and the Freiberg district of Germany. Typically, mineralization occurs as quartz-carbonate (siderite±ankerite, calcite)-sulfide (sphalerite, galena, pyrite, tetrahedrite-tennantite, chalcopyrite, arsenopyrite, stibnite) veins, with silver minerals most commonly hosted as inclusions in galena. Wall-rock alteration, which generally consists of sericitization, silicification and pyritization, is typically of limited extent (< 1 m). Regional faults, fault sets and fractures are an important ore control, although veins are typically associated with second order structures and postdate deformation and metamorphism. Significant deposits are restricted to competent lithologies.

7.3.2 Mineralization

The following section is taken directly from Pautler (2010)

"Silver-lead-zinc lode deposits within the Keno mining camp are hosted by a series of vein faults which strike 035 to 080º (longitudinal veins) and 360 to 035º (transverse veins), both dipping 50 to 80º southeast (after Boyle, 1965). Longitudinal veins were the main productive veins of the camp, with significant strike extent and the transverse veins are dilational zones between en-echelon longitudinal faults, limited in strike but locally rich in grade. The vein faults range in width from 0.3m to over 30m and generally show left lateral movement with offsets of up to 150m (Boyle, 1965). The mineralized vein faults are offset by two types of unmineralized faults, cross-faults trending 155º to 180º/40 to 60ºSW (which generally show right lateral movement and offset longitudinal veins by as much as 600m), and bedding plane thrust faults (Boyle, 1965; McFaull, personal communication). Mineralization can be locally caught up within the cross-faults (McFaull, personal communication).

The Keno mining camp produced silver from 1914 until 1989. Production from 1921 to 1988 totaled 4,872,423 tonnes averaging 1,389 g/t Ag, 5.6% Pb and 3.1% Zn (Deklerk and Traynor, 2005). The above grade and tonnage figures are not necessarily indicative of the mineralization on the Keno-Lightning project which is the subject of this report. Over 65 deposits and prospects have been recognized in the district (Watson, 1984). The main lode deposits occur within the Central Quartzite where fracturing of competent quartzite rock has produced open spaces for mineral deposition. Where vein faults pass into less competent schist rock units they become narrow and poorly mineralized. Ore zones also occur in other competent rock types in the Lower Schist such as greenstone horizons.

The most favourable structural sites for ore shoots are at the junction of vein faults, the junction of a vein fault and cross-fault, where veins change direction, and at the upward transition from competent quartzite to less competent schist rock units often referred to as "schist caps" (Boyle, 1965; Aho, 2006; McFaull, personal communication). It should be noted that individual vein systems have consistent overall silver-lead ratios but each ore shoot within it varies (Aho, 2006), which may be useful in predicting continuity of veins, possibly across faults and at depth.

Vein faults can occur as simple veins, breccia zones or sheeted zones. Simple veins consist of siderite gangue, with occasional quartz and discontinuous bands of silver bearing sulphides. Breccia zones consist of angular rock fragments (quartzite, phyllite, greenstone) in a matrix of siderite, commonly with some quartz. Sheeted zones have slabs of greenstone separated by narrow fractures filled with breccia or gouge. Breccia fragments and slabs are cemented by siderite, sulphides and some quartz. The principal gangue mineral is siderite. The main ore minerals are argentiferous galena, argentiferous tetrahedrite (freibergite) and pyrargerite (ruby silver). Polybasite, stephanite, argentite and native silver are silver bearing minerals that occur locally in minor amounts. Other ore minerals such as sphalerite, chalcopyrite and lead sulphosalts (jamesonite, boulangerite etc.) are present in varying amounts. Pyrite, arsenopyrite and barite occur in many veins.

Two stages of vein mineralization have been recognized in the district. The first stage deposited quartz, pyrite and some arsenopyrite with trace gold and some sulphosalts in the vein faults. A second stage deposited siderite, galena, sphalerite, pyrite, freibergite and pyrargyite, more typical in the central part of the Keno mining camp. Several writers have described district-wide metal and mineral zoning patterns (Franzen, 1986: Lynch, 1986; Tessari and Sinclair, 1980). "

8 Airborne Geophysical Survey

SkyTEM Surveys APS conducted a 1460 line kilometre time domain electromagnetic (TDEM) survey over the Keno-Lightning project between June 2nd and June 16th, 2011 (Table 2). The survey was flown at 100 m line spacing and nominally 30 m above ground, with allowances made for terrain and weather conditions. Helicopter services were provided by Abitibi Helicopters of Calgary, Alberta. For detailed specifications of the survey please see Appendix 1. The survey was designed to generate exploration targets outside of the known occurrences and assist in structural interpretations of the geology and mineralization on Keno-Lightning. Interpretation of the inverted data was completed by Mr. Tom Weis, consulting geophysicist and principal of Thomas V. Weis and Associates (Appendix 2). For complete geophysical data refer to the enclosed CD.

Table 2. SkyTEM survey summary

Client		Monster Mining Corp. Suite 750 -580 Hornby Street Vancouver BC V6C 3B6, Canada
Field crew		Ib Faber Mads Kristensen
Field work		June 2 to June 16, 2011
Flown line km		1917.7 km
Flight operation	Helicopter type Average flight speed Nominal terrain clearance (above any obstacles or hazards)	Eurocopter AS350FX2, operated by Abitibi Helicopters Ltd 60 km/h 30 -40 m
Pilot		Richard Berube Pierre Otis
Report	Data processing and presentation QC by	Per Gisselø Flemming Effersø
Contact Person at SkyTEM		Bill Brown Email: bb@skytem.com

8.1 Results and Interpretation

Results of the broad scale interpretation at Keno-Lightning indicate that both the EM and magnetic data sets are effective in identifying structural targets in the appropriate orientation, and the EM data appears to map lithology. There are a number of features in both the EM and magnetic data sets that correlate with known veins and vein faults, and significantly, more than 40 structural features in the correct orientation that have not been previously identified. The EM response has identified a number of highly resistive zones, which correlate extremely well with metamorphosed intrusive bodies, where these bodies are known and have been mapped (Fig 3).

A number of the resistive zones do not appear to be related to mapped outcrops, and may represent buried diorite and dolerite, or quartzite, all of which have historically proven to be good mineralization hosts due to their brittle nature. Interestingly, Homestake, which has so far proven disappointing in terms of consistent drill results beneath outcropping veins, is associated with a resistivity low, indicating a lack of quartzite and/or greenstone in the prospect area and a prevalence of schist, which is a barrier to mineralization and the formation of mineralized sulfide veins. This is consistent with observations made in drill core, where there is a predominance of thin-bedded quartzite and intercalated graphitic and quartz-sericite-chlorite schists, and a lack of the preferred host thick-bedded Keno Hill quartzite.

In contrast, the Caribou Hill prospect, which also hosts outcropping silver mineralization, and returned favourable drill results from the 2011 diamond drilling program, demonstrated both structural features in favourable northeast-southwest orientations and high resistivity responses, indicating the presence of quartzite or dolerite host rocks. This is consistent with observations made in drill core, where intersected lithologies predominantly comprise thick- and thin-bedded quartzite, with subordinate amounts of sericite and graphite schist.

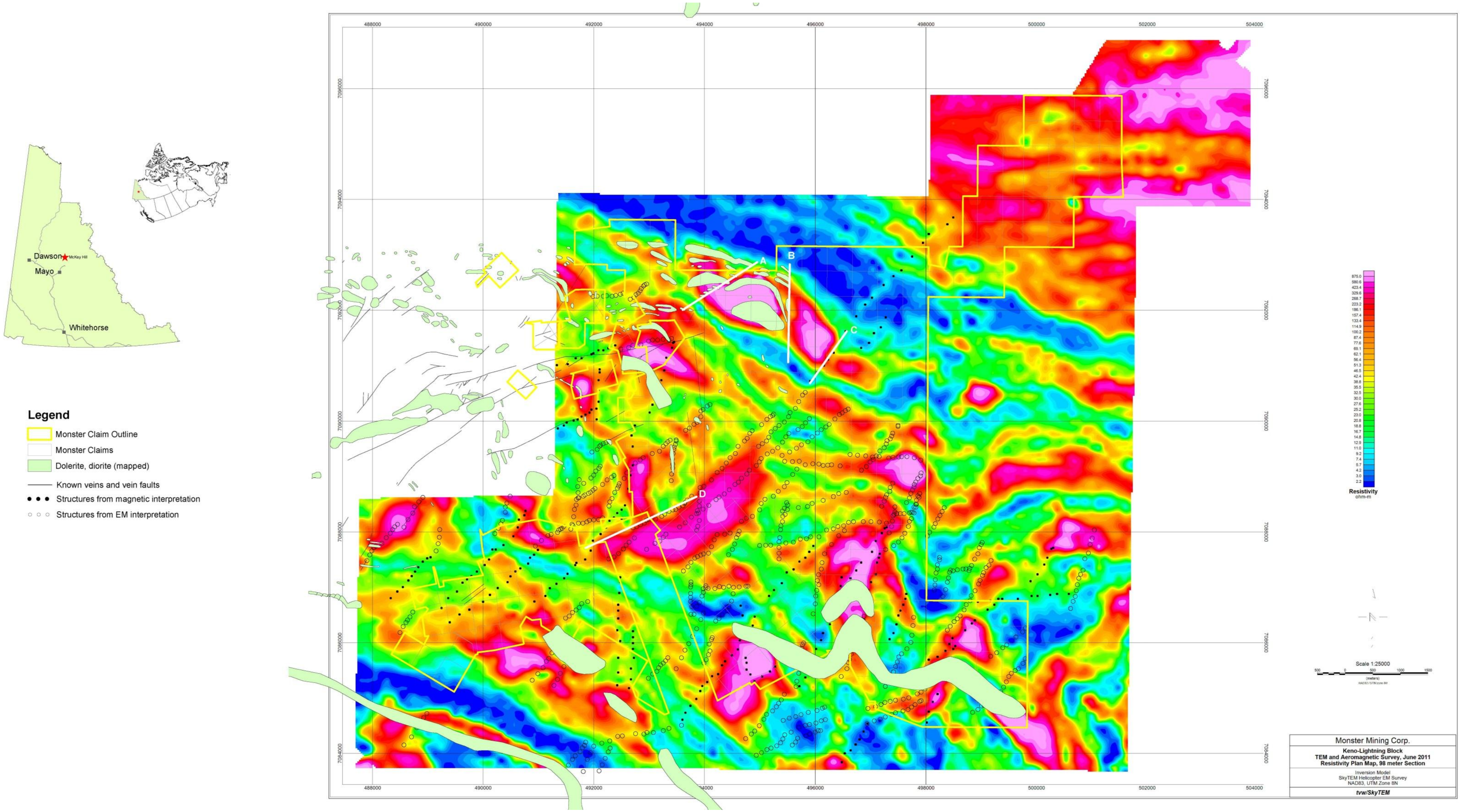


Figure 3. Resistivity inversion model of Keno-Lightning with mapped diorite and dolerite intrusions overlain. Note the good correlation between the mapped intrusions and areas of high resistivity (shown in red). Other highly resistive bodies may reflect the presence of buried mafic intrusions, which have historically proven to be good mineralization hosts due to their brittle nature and ability to propagate mineralized veins. White lines on the map (annotated A through D) reflect possible structures within the intrusions that may host mineralization, and are targets for future exploration. The map also illustrates structures identified from the magnetic (solid dots) and EM (open circles) interpretations.

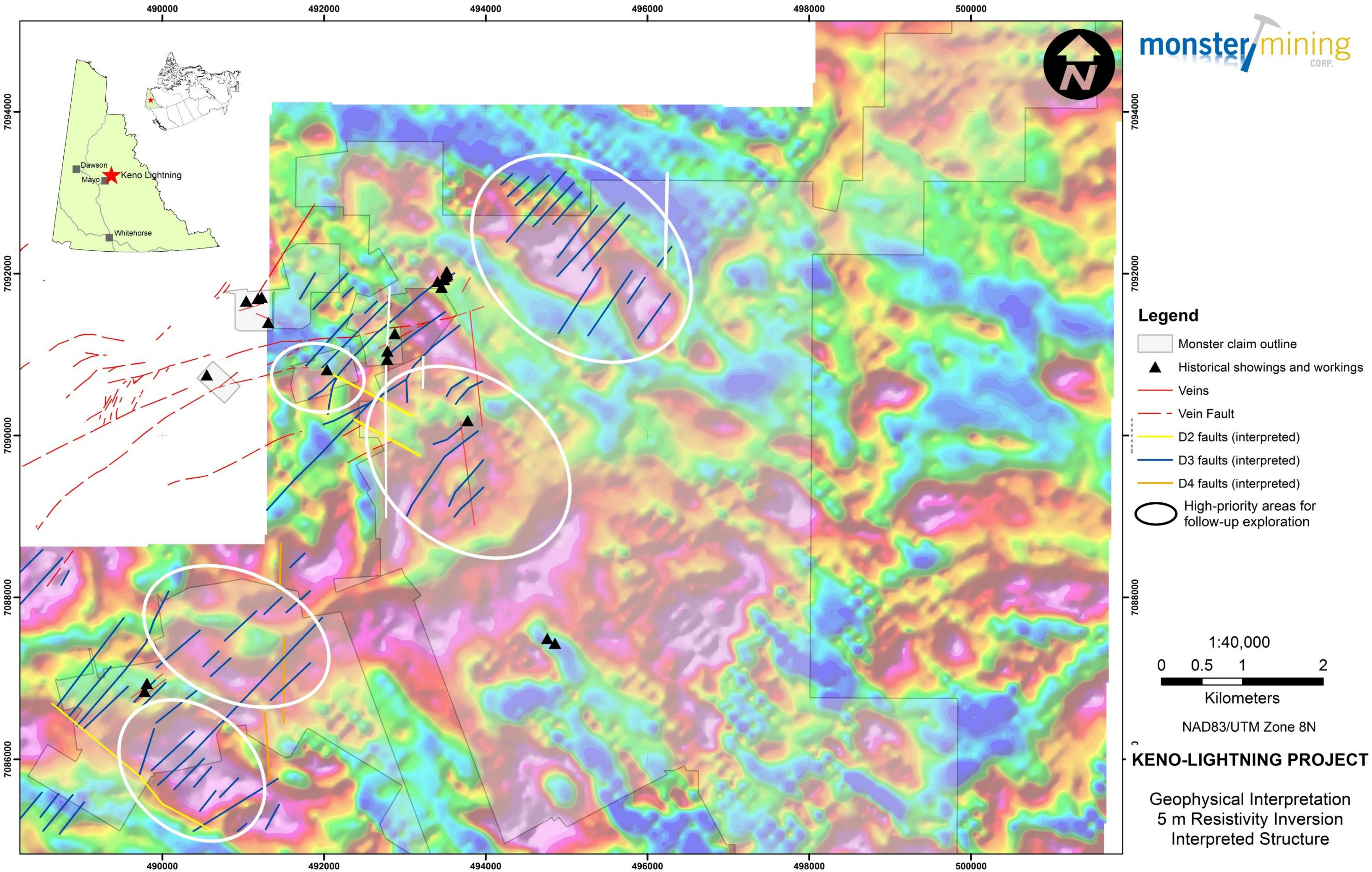


Figure 4. EM inversion of Keno-Lightning highlighting areas of structural complexity and potentially favourable host rocks.

The survey identified five untested areas on the property cross-cut by favourably oriented structures, which displayed similar geophysical characteristics to Caribou Hill (Fig. 4). These are areas of high resistivity, interpreted to reflect the presence of quartzite or dolerite, and structural complexity, as evidenced by the presence of northeast-southwest striking features, which may represent longitudinal veins or vein faults, historically the types of veins that have been responsible for the majority of Ag-Pb-Zn production (Boyle, 1965). Two of these areas (Faith, Duncan) are known historically to host mineralization and have outcropping veins; the remaining three are unexplored, and will be followed up with mapping and prospecting, soil geochemical surveys, trenching and diamond drilling. Results of the survey have significantly enhanced the prospectivity of the project, and expanded the number of targets on the property. Prior to the completion of the geophysical survey targets on the property were restricted to known outcropping veins. Results of the survey have identified areas on the property with the potential to host buried mineralization, and downgraded the Homestake prospect based on its lack of favourable geophysical characteristics.

9 Soil Geochemistry

A 167-sample soil geochemical program was conducted between Faith Gulch and Caribou Hill over an area interpreted to be the intersection between the Caribou vein, Caribou fault and two north-east trending longitudinal veins. This program expanded on a small survey conducted in 2009 that returned anomalous gold and silver values in soils and a coincident high-grade grab sample that returned 4708 g/t Ag, 1.13 g/t Au, 34.1 % Pb and 5.73 % Zn. The 2011 survey extended the 2009 survey to the north and delineated a 900 m x 700 m zone of coincident Au and As anomalism (Figures 5-7), which is open to the east.

10 Trenching and Trench Mapping

A program of trenching and trench mapping was conducted at Caribou Hill to test for near-surface extensions south of the outcropping Caribou Hill vein. Trenches CH-TR11-07 and CH-TR11-08 were excavated to the north of the outcropping Caribou Hill vein whereas trench CH-TR11-09 was excavated to the south. Where the trenches reached bedrock, they exposed Keno Hill quartzite to the west and thin-bedded quartzite with intercalated calcareous schist and subordinate quartz-sericite-chlorite schist, however, they did not intersect the vein. Samples were also collected from trench CH08-01, excavated in 2008 but not previously mapped or sampled. These samples returned best results of 3.3 m of 2332 g/t Ag, 1.38 g/t Au, 8.5 % Pb and 1.1 % Zn, 2.0 m of 2953 g/t Ag, 1.01 g/t Au and 8.11 % Pb, 0.3 m of 1855 g/t Ag, 41.5 % Pb and 530 ppm Zn, 0.4 m of 0.62 ppm Au, 1026 g/t Ag, 2.75 % Pb and 6417 ppm Zn, and 0.7 m of 0.57 ppm Au, 982 g/t Ag, 9.33 % Pb and 1.35 % Zn. Table 3 presents selected best results. Trench maps are enclosed in the back pocket.

Homestake trenches 1, 3, 4, 5 and 6 were mapped and resampled prior to rehabilitation. This program returned best results of 0.7 m of 1155 g/t Ag, 0.30 g/t Au, 6.27 % Pb and 10.09 % Zn and 0.35 m of 761.4 g/t Ag, 5.72 % Pb and 1.50 % Zn from oxidized and gossanous material exposed in Trench Tr04, and 1 m x 1 m (panel) of 11.05 g/t Au, 0.35 m (chip) of 9.13 g/t Au, 0.35 m (chip) of 7.80 g/t Au and 0.5 m (chip) of 3.11 g/t Au from strongly oxidized arsenopyrite and scorodite-bearing brecciate quartz veins exposed in trench HS-TR01.

Prospect	Sample No	Location	Easting	Northing	Sample Width (m)	Au (ppm)	Ag (ppm)	Pb (%)	Zn (%)
Caribou	580003	TR-06	492801	7091187	2	0.26	454.1		
Caribou	580004	TR-06	492801	7091189	0.5	0.12	127.1	1.15	
Caribou	580011	CH TR08-01	492796	7091079	0.4	0.616	1026	2.75	
Caribou	580013	CH TR08-01	492800	7091070	0.8	0.495	450.1	2.75	
Caribou	580014	CH TR08-01	492800	7091067	0.7	0.571	981.6	9.33	1.35
Caribou	580016	CH TR08-01	492787	7091058	0.3	0.093	1855.7	41.5	
Caribou	580018	CH TR08-01	492781	7091050	1.2	0.301	107.6		
Caribou	580022	CH TR08-01	492781	7091053	1.5	0.028	96.5		
Caribou	580024	CH TR08-01	492795	7091038	1.7	1.676	3332.7	13.88	1.07
Caribou	580025	CH TR08-01	492793	7091038	1.6	1.074	1268.4	2.76	1.12
Caribou	580026	CH TR08-01	492793	7091036	1.6	0.222	194.2	0.98	
Caribou	580028	CH TR08-01	492789	7091009	1.5	0.481	954.2	4.81	1.05
Caribou	580030	CH TR08-01	492791	7090997	1.5	0.251	539	2.13	1.05
Caribou	580031	CH TR08-01	492791	7091042	2.0	1.005	2953.1	8.11	
Caribou	580032	CH TR08-01	492796	7091028	0.5	0.344	109.3	2.19	
Caribou	580033	CH TR08-01	492781	7090961	0.8	0.106	138.5	1.35	
Homestake	580102	TR04	489780	7086838	1.1	0.052	283.6	1.41	2
Homestake	580114	TR04	489840	7086856	0.35	0.056	761.4	5.72	1.5
Homestake	580116	TR04	489844	7086857	0.4	0.07	227.9		
Homestake	580119	TR04	489852	7086866	0.7	0.295	1155.3	6.27	10.09
Homestake	580128	TR01	489988	7086794	1x1 panel	11.05	27.5	1.79	
Homestake	580129	TR01	489988	7086794	0.35	7.795	166.9	11.76	2.68
Homestake	580132	TR01	489986	7086792	0.35	9.131	19.7	2.11	
Homestake	580134	TR01			0.5	3.113	65.6		1.95
Homestake	580137	TR05	490229	7086890	1.5	2.241	89.4	4.13	
Homestake	580138	TR05	490229	7086890	1.2x0.5 panel	0.13	1.7		
Homestake	580139	TR05	490229	7086886	0.8	1.502	84.8	3.05	
Homestake	580148	TR west of TR05	490206	7086876	1.5	1.137	36.4		

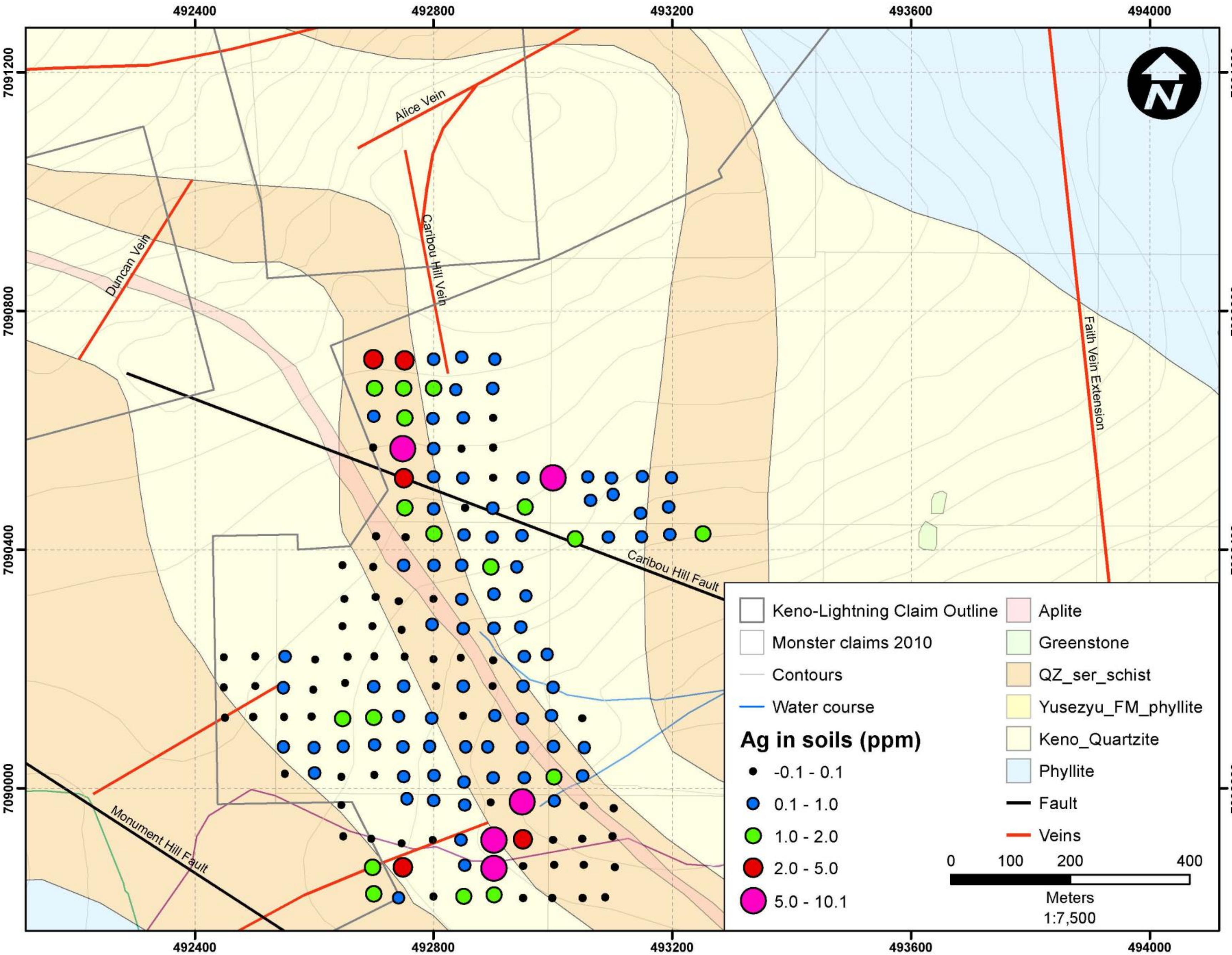


Figure 5. Ag in soils, Faith Gulch

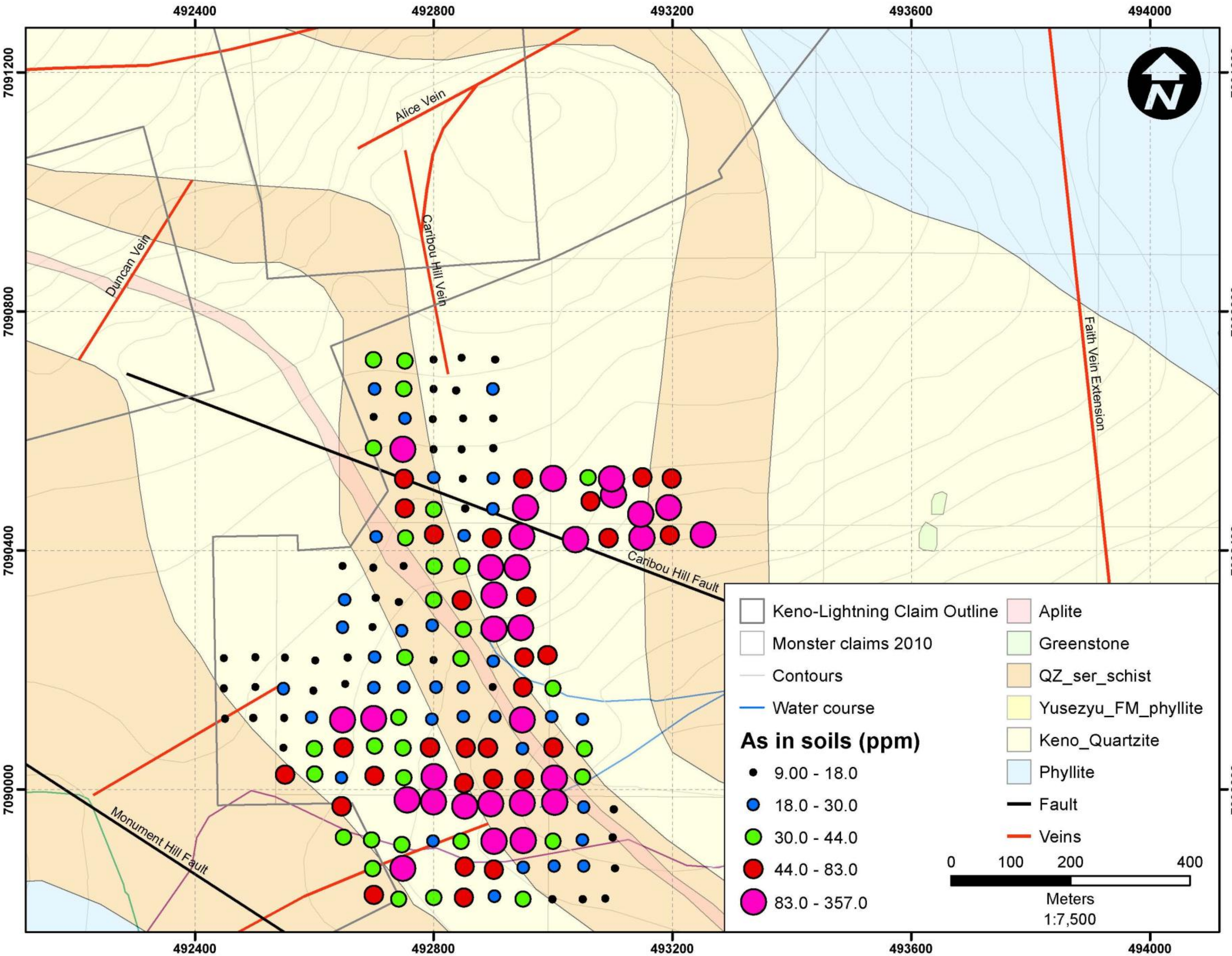


Figure 6. As in soils (ppm), Faith Gulch

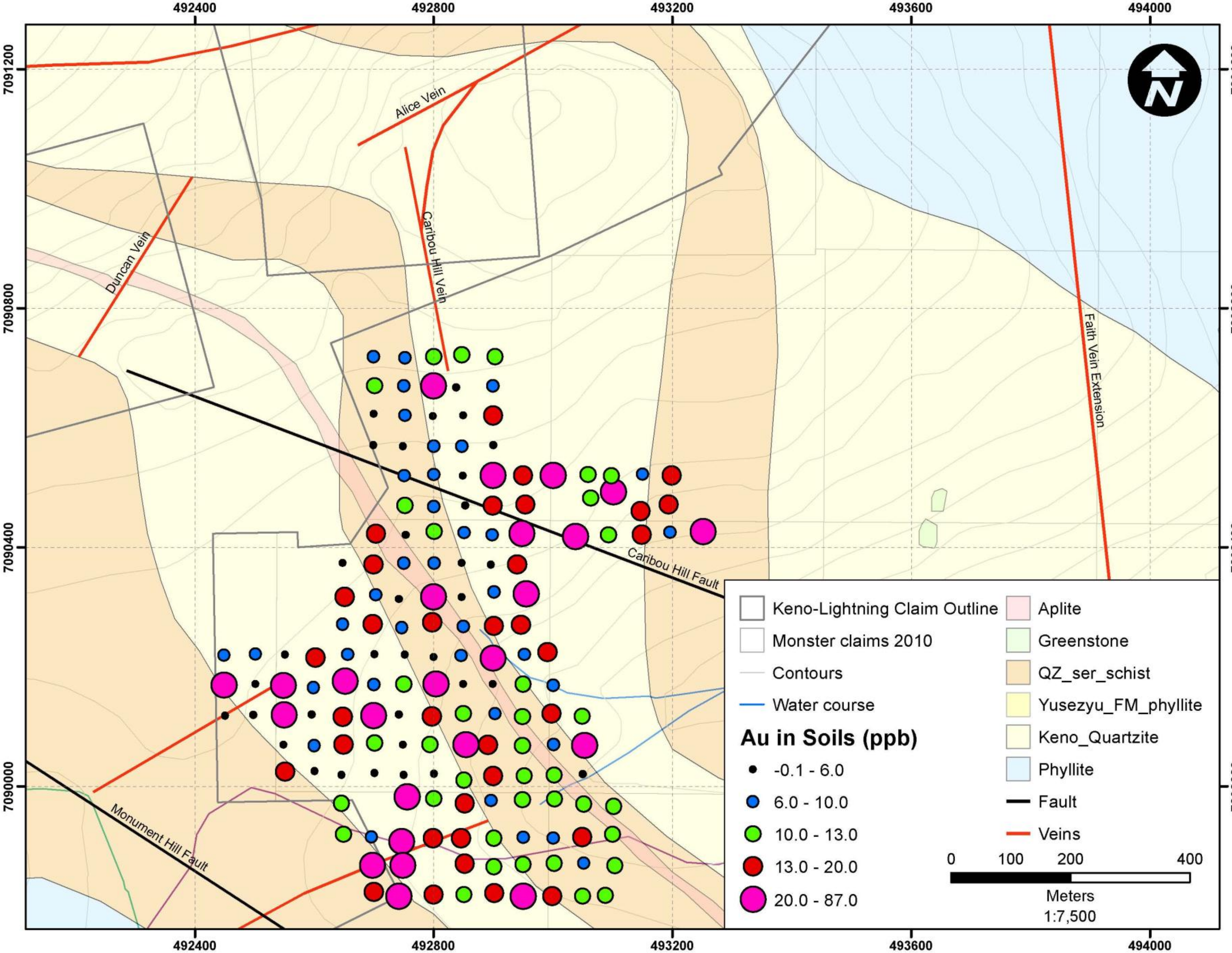


Figure 7. Au in soils (ppb), Faith Gulch

11 Diamond Drilling

11.1 2011 Drilling

Monster Mining Corp. completed 25 diamond drill holes for a total of 1819.3 m (Table 3) on the Keno-Lightning project between August 20th and September 17th 2010. Drilling was conducted on the Caribou Hill (14 holes, 1201.2 m) and Homestake (11 holes, 618.1 m) prospects. E Caron Diamond Drilling of Whitehorse, Yukon, conducted the Caribou Hill program using HQ3 diameter triple tube rods. Lyncorp Drilling Services of Smithers, British Columbia conducted the Homestake program using NQ3 triple tube rods. Diamond drill recoveries averaged 90 % at Caribou Hill and 73.6 % at Homestake, with production averaging 15.8 m/shift at Caribou Hill (Caron) and 14.04 m/shift at Homestake (Lyncorp). Numerous problems were encountered during the drilling program, predominantly related to broken ground conditions, and inexperienced drilling staff. Water at Caribou Hill was sourced from Faith Creek, 400 vertical metres below the drill site and pumped and trucked to the drill. At Homestake, the Homestake adit and run-off in a drainage adjacent to the access road provided drilling water. Upon completion of the 2011 drilling program, the drill core was stored in racks adjacent to the core logging and processing facility at Homestake, (489731 mE, 7086825 mN; NAD 83, zone 8), or the Homestake Adit (489820 mE, 7086937 mN).

Drilling at Caribou Hill targeted depth and strike extensions of the Caribou Hill vein, which is intermittently exposed in trenches and outcrop, and tested mineralized intersections delineated in the 2008 drilling program. Eleven of the 14 holes drilled at Caribou Hill returned intervals greater than 100 g/t Ag, with three holes returning intervals greater than 1000 g/t Ag. Diamond drilling at Caribou Hill has delineated 300 m of strike-continuous silver mineralization > 100 g/t and is open along strike to the south and at depth. At Homestake, drill holes were targeted beneath the outcropping No. 1 vein (holes HS11-012 to 018) and at strike and down-dip extensions of the No. 2 and 2a veins, exposed in trenches HS-TR08-03, TR5 and TR6. Drilling at Homestake did not intersect any significant mineralization and the company will be re-evaluating the geology of the prospect before drilling more holes at Homestake.

Table 4 summarizes the significant intersections identified during the 2010 exploration program; figures 8-36 present collar plans and sections for both prospects. For complete results refer to appendix VI. The following sections briefly describe the diamond drill holes and summarize the results.

Table 3. 2010 diamond drill hole specifications

Prospect	HoleID	Easting	Northing	Elev. (m)	Depth (m)	Dip	Azi.	Recovery %	# of samples
Caribou Hill	CH11-007	492814	7091010	1764	120.1	-60	270	88.2	23
Caribou Hill	CH11-008	492812	7091032	1773	140.9	-60	270	82.7	17
Caribou Hill	CH11-009	492807	7091057	1778	107.3	-60	270	87.3	25
Caribou Hill	CH11-010	492829	7091093	1798	103.5	-60	270	93.7	11
Caribou Hill	CH11-011	492842	7090997	1772	68.2	-60	270	90.0	8
Caribou Hill	CH11-012	492842	7090997	1772	91.1	-75	270	90.8	10
Caribou Hill	CH11-013	492814	7091010	1764	60.7	-75	270	92.0	10
Caribou Hill	CH11-014	492814	7091010	1764	66.4	-90	0	95.7	11
Caribou Hill	CH11-015	492831	7091183	1800	76.2	-60	270	90.4	12
Caribou Hill	CH11-016	492831	7091183	1800	60.8	-75	270	91.7	14
Caribou Hill	CH11-017	492837	7091130	1800	81.0	-60	270	91.9	21
Caribou Hill	CH11-018	492837	7091130	1800	83.5	-75	270	86.1	13
Caribou Hill	CH11-019	492819	7090972	1760	67.1	-60	270	82.5	7
Caribou Hill	CH11-020	492815	7090925	1755	74.4	-60	270	96.4	8
Homestake	HS11-012	489865	7086834	1390	59.7	-60	330	60.2	1
Homestake	HS11-013	489865	7086834	1390	84.4	-70	330	83.3	3
Homestake	HS11-014	489832	7086832	1390	66.1	-60	330	81.2	9
Homestake	HS11-015	489795	7086824	1390	42.4	-55	315	75.9	4
Homestake	HS11-016	489795	7086824	1390	47.9	-75	315	74.6	9
Homestake	HS11-017	489795	7086824	1390	71.6	-55	285	73.5	1
Homestake	HS11-018	489795	7086824	1390	63.1	-60	340	81.3	7
Homestake	HS11-019	490057	7086802	1395	59.1	-60	330	70.9	8
Homestake	HS11-020	490095	7086804	1395	41.8	-60	330	64.0	8
Homestake	HS11-021	490095	7086804	1395	55.5	-75	330	68.8	7
Homestake	HS11-022	490125	7086803	1395	26.5	-60	330	76.1	2

Hole ID	Prospect	From	To	Interval	Ag g/t	Au ppb	Pb (%)	Zn (%)
CH11-07	Caribou Hill	15.9	17.2	1.3	770		3.43	
CH11-08	Caribou Hill	13.4	14.8	1.4	493		10.49	4.93
CH11-09	Caribou Hill	15.5	16.9	1.4	1696*	457.34*	9.42*	0.94*
CH11-10	Caribou Hill	35.21	35.84	0.63	447		2.34	3.07
CH11-11	Caribou Hill	39.7	40.6	0.9	119	521.00	1.76	0.96
CH11-12	Caribou Hill	No significant results						
CH11-13	Caribou Hill	16.5	17.7	1.2	401		2.95	1.02
CH11-14	Caribou Hill	No significant results						
CH11-15	Caribou Hill	13.5	15	1.5	116			
and		16.4	18.4	2	221		1.90	0.14
CH11-16	Caribou Hill	11.4	13.4	2	352		0.75	0.14
CH11-17	Caribou Hill	22.9	23.4	0.5	1787	1394.10	18.67	1.29
CH11-18	Caribou Hill	24.1	25	0.9	1151		7.16	1.03
and		34.7	36.3	1.6	1183		12.51	0.08
CH11-19	Caribou Hill	No significant results						
CH11-20	Caribou Hill	22.5	23.5	1	380		2.29	2.31
HS11-12	Homestake	No significant results						
HS11-13	Homestake	No significant results						
HS11-14	Homestake	No significant results						
HS11-15	Homestake	No significant results						
HS11-16	Homestake	No significant results						
HS11-17	Homestake	No significant results						
HS11-18	Homestake	No significant results						
HS11-19	Homestake	No significant results						
HS11-20	Homestake	No significant results						
HS11-21	Homestake	No significant results						
HS11-22	Homestake	No significant results						

* weighted average

11.1.1 Diamond Drill Results – Caribou Hill

11.1.1.1 CH11-007 to 009, 013 to 014

Holes CH11-007 to 009 and 013 to 014 targeted down-dip extensions of the Caribou Hill vein beneath trench TR08-01, where the vein is exposed. All five holes intersected moderately to thickly-bedded quartzite with minor quartz-sericite schist and intercalated graphite schist, and intervals of strongly oxidized, brecciated, broken sulfide veins.

Hole CH11-007 intersected one vein zone between 15.8 and 18.5 m down hole. The vein zone comprises pervasively oxidized quartz ±siderite(?)-quartzite breccia within a gossanous FeO-MnO matrix and a narrow massive fine-grained galena vein between 15.8 and 15.9 m with white anglesite at the contacts.. Hole CH11-008 intersected a gossanous vein zone between 14.8 and 17.7 m down hole. The zone was characterized by extremely oxidized, locally gossanous, mineralized, brecciated grey quartzite with lesser graphitic phyllite and 2-3 % medium-grained disseminated galena. Hole CH11-009 intersected an extremely oxidized gossanous vein zone between 15.5 and 16.9 m down hole. Mineralization was characterized by FeO and MnO altered fault breccia with 1-3 % disseminated galena and 1-2 % freibergite. Holes 013 and 014 intersected one vein, between 16.5 and 20.1 m and 18.1 to 24.0 m, respectively, which in both holes was described as an intensely oxidized fault breccia within thin-bedded quartzite and quartz-sericite schist.

Hole CH11-009 returned best results of the program, at 1.4 m of 1696 g/t Ag and 457.3 ppb Au from 15.5 m, while holes 007 and 008 returned best results of 1.3 m of 770 g/t Ag from 15.9 and 0.7 m of 493 g/t Ag from 14.8 m, respectively. Hole 013 returned 1.2 m of 401 g/t Ag from 16.5 m; hole 014 did not return any significant results.

11.1.1.2 CH11-010, 015 to 018

Holes CH11-010, 015, 016, 017 and 018 were drilled to the north of holes 007-009 at Caribou Hill and the vein outcropping in trench TR08-01, and targeted strike extensions of mineralization observed in holes 007 to 009. Hole CH11-010 intersected intercalated massive to strongly foliated quartzite and graphite schist, and two vein zones at 35.21 m and 39.70 m down hole. Mineralization comprised a completely oxidized, vughy quartzite interval with trace sulfide that returned 0.63 m of 447 g/t Ag from 35.21 m. An interval of thick-bedded, weakly foliated quartzite hosting 2-3 % coarse-grained vughy quartz veins with relict sulfides returned 0.9 m of 119 g/t Ag from 39.70 m. Holes CH11-015 to 018 intersected thin-bedded, weakly to moderately foliated quartzite with variable amounts of intercalated graphite schist and massive to locally weakly foliated thick bedded quartzite. Hole 015 intersected one vein zone, between 11.5 and 20.4 m, hosted within thin-bedded quartzite and characterized by locally gossanous quartzite in brecciated, fractured and gouged material with no visible sulfides. The hole returned two narrow mineralized intervals greater than 100 g/t Ag at 13.5 m (1.5 m of 116 g/t Ag) and 16.4 m (2.0 m of 221 g/t Ag). Holes 016 and 17 both intersected one vein zone, in both holes characterized by strongly oxidized graphitic gouge and minor quartz rubble within thin bedded quartzite. Hole 016 returned 2.0 m of 352 g/t Ag from 11.4 m and hole 017 returned 1.5 m of 1787 g/t Ag from 35.2 m. Hole 018 intersected two vein zones – the first between 24.1 and 25.0 m and the second between 34.7 m and 36.3 m. The upper zone is characterized by a strongly oxidized, rusty orange brown breccia with manganese-iron carbonate- and iron oxide-rich material cementing angular quartzite and heavily oxidized fragments. Hosted at the contact between thin-bedded quartzite and crackle-brecciated thick-bedded quartzite, the interval is vughy and lacks visible sulfides. The lower zone is heavily crushed and broken with strongly oxidized graphitic gouge and contains minor small (10-20 mm) pieces of siderite-sulfide breccia hosting up to 15% galena blebs coated by anglesite. The upper and lower intervals returned 0.9 m of 1151 g/t Ag from 24.1 m and 1.6 m of 1183 g/t Ag from 34.7 m, respectively.

11.1.1.3 CH11-011, 012, 019 and 020

Holes CH11-011, 012, 019 and 020 were drilled to the south of the outcropping vein in Trench TR08-01 and were designed to test for mineralized strike extensions to the south. All four holes intersected intervals of weakly to moderately foliated thin-bedded quartzite with intercalated graphite and quartz sericite schist, and massive to weakly foliated thick-bedded quartzite. Hole 011 intersected a strongly oxidized quartz-galena vein hosted in silicified massive thick-bedded quartzite, between 39.7 m and 42.1 m, which returned a best result of 0.9 m of 119 g/t Ag from 39.7 m. Hole 012 did not intersect any mineralization. Hole 019 intersected a strongly oxidized, brecciated vein zone hosted at the contact between thinly bedded quartzite+phyllite and moderately bedded quartzite, at a depth of 23.1 m down hole. The interval contained a narrow zone of quartz-siderite breccia containing 3 % galena and 1 % sphalerite between 25.3 m and 25.6 m, which returned high Pb results (4496.2 ppm) but no significant silver mineralization. Hole 020 intersected one vein zone at 21.3 m to 23.5 m, characterized by strongly oxidized graphitic gouge with rare brecciated quartzite clasts and 2 % galena. Assays from this intersection returned 1.0 m at 380 g/t Ag from 22.5 m.

11.1.2 Diamond Drill Results – Homestake

11.1.2.1 HS11-012 to 018

Diamond drill holes HS11-012 to 018 targeted strike and depth extensions of the No. 1 and Shaft veins, both of which outcrop in Trench TR-04, and which intersect at the western end of the trench. In past exploration programs, the No. 1 vein has returned best results of 519 g/t Ag, 0.27 g/t Au, 6.9 % Pb and 1.26 % Zn over 1.3 m including 1,592 g/t Ag, 0.6 g/t Au, 22.7 % Pb and 0.91 % Zn 0.3 m (Sample 526161) and the Shaft vein has returned values up to 3,168 g/t Ag, 4.67 g/t Au, 0.15% Pb, 2.56% Zn and 2.83% Cu with >10,000 ppm Sb over 0.9m (Sample 526250).

All holes intersected a sequence of thin-bedded quartzite with intercalated graphitic schist, interbedded thick-bedded quartzite, a foliated diorite dyke and minor sandy limestone. Broken and faulted ground was encountered in all drill holes, which resulted in significant core loss, particularly in fault gouge zones, and despite utilizing triple tube core barrels. In some zones core recovery was 0 %. None of the holes intersected any mineralization, or returned any significant results.

11.1.2.2 HS11-019-022

Diamond drill holes HS11-019 to 022 targeted strike extensions of the No.2/2a veins, exposed in trenches TR08-03, H-TR5 and H-TR6, and drill holes 08HS-009, HS10-001 and HS10-009. All holes intersected thin-bedded quartzite with graphitic schist, phyllite and sericite schist, minor thick-bedded quartzite with calcareous sandstone/sandy limestone, and a diorite dyke. Hole 019 intersected a possible vein zone at 14.3 m to 17.4 m and hole 20 intersected a possible vein zone at 11.2 m to 13.9 m. Hole 021 intersected a possible vein zone at 14.3 m to 16.6 m. Hole 022, which was abandoned at 26.5 m, did not intersect any mineralization. Recovery from all four holes was poor, particularly in fault zones, and in some zones was 0 %. None of the holes intersected mineralization, or returned any significant results

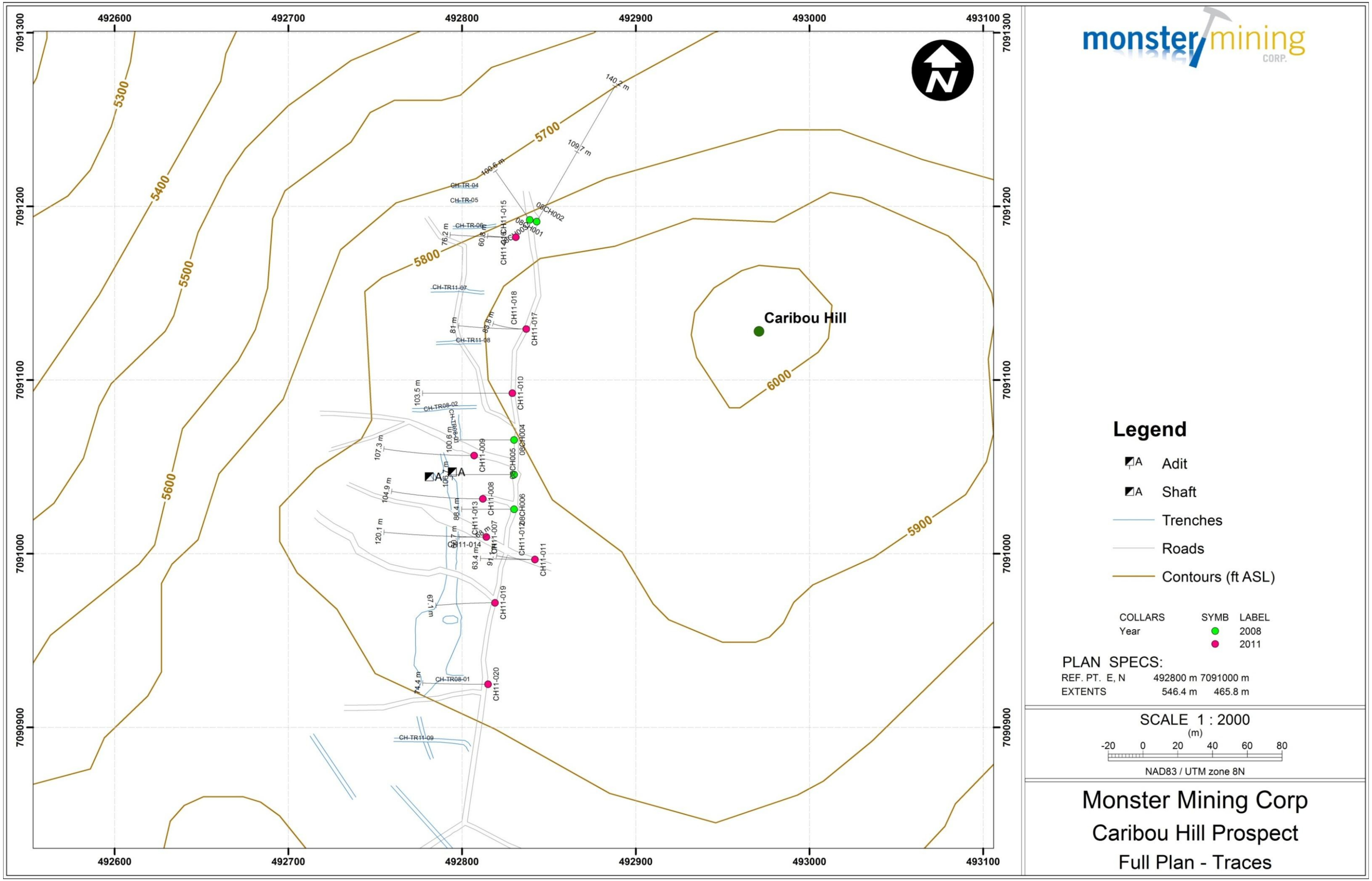


Figure 8. Caribou Hill collar plan

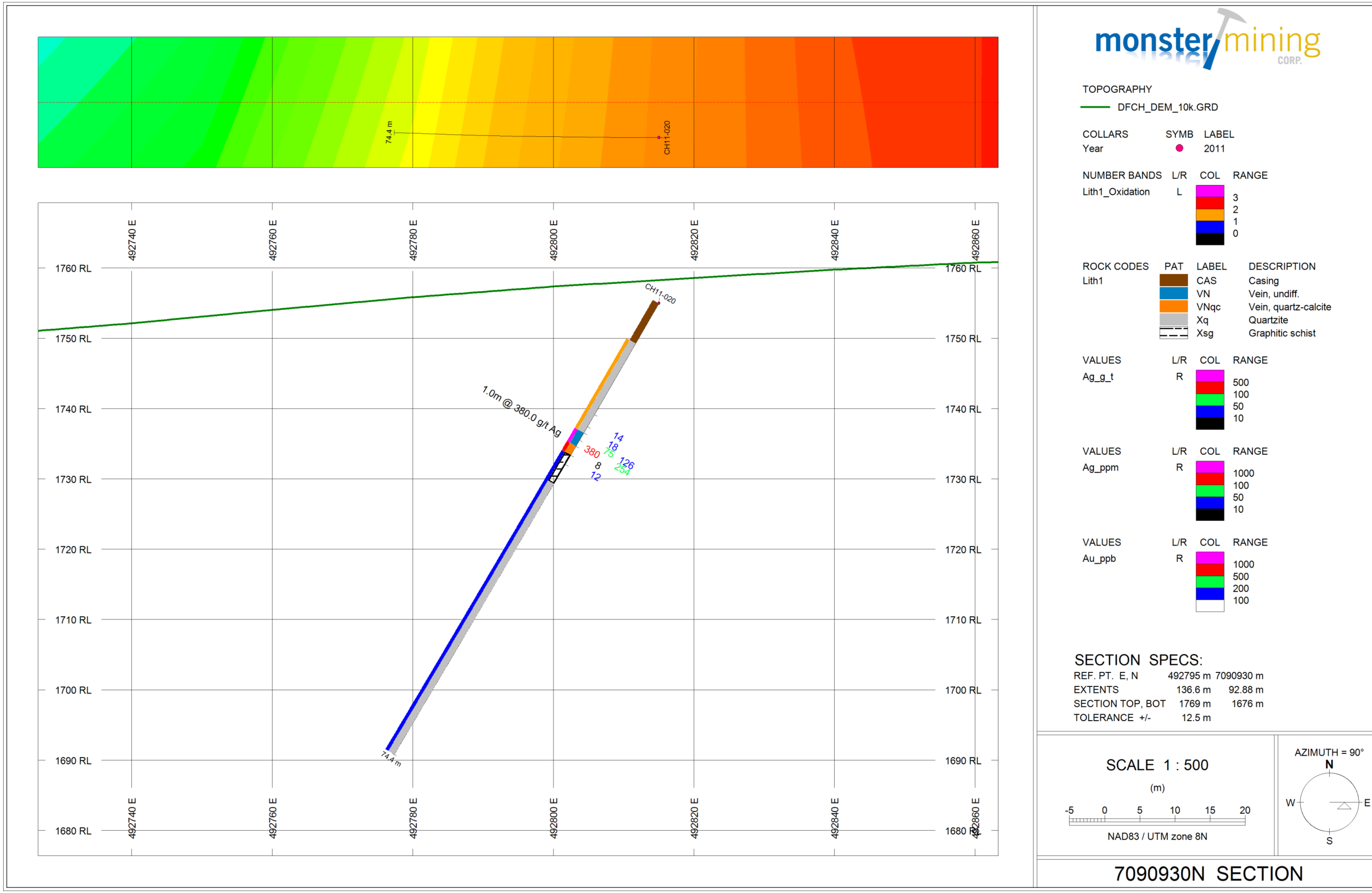


Figure 9. Section 7090930 N, Caribou Hill

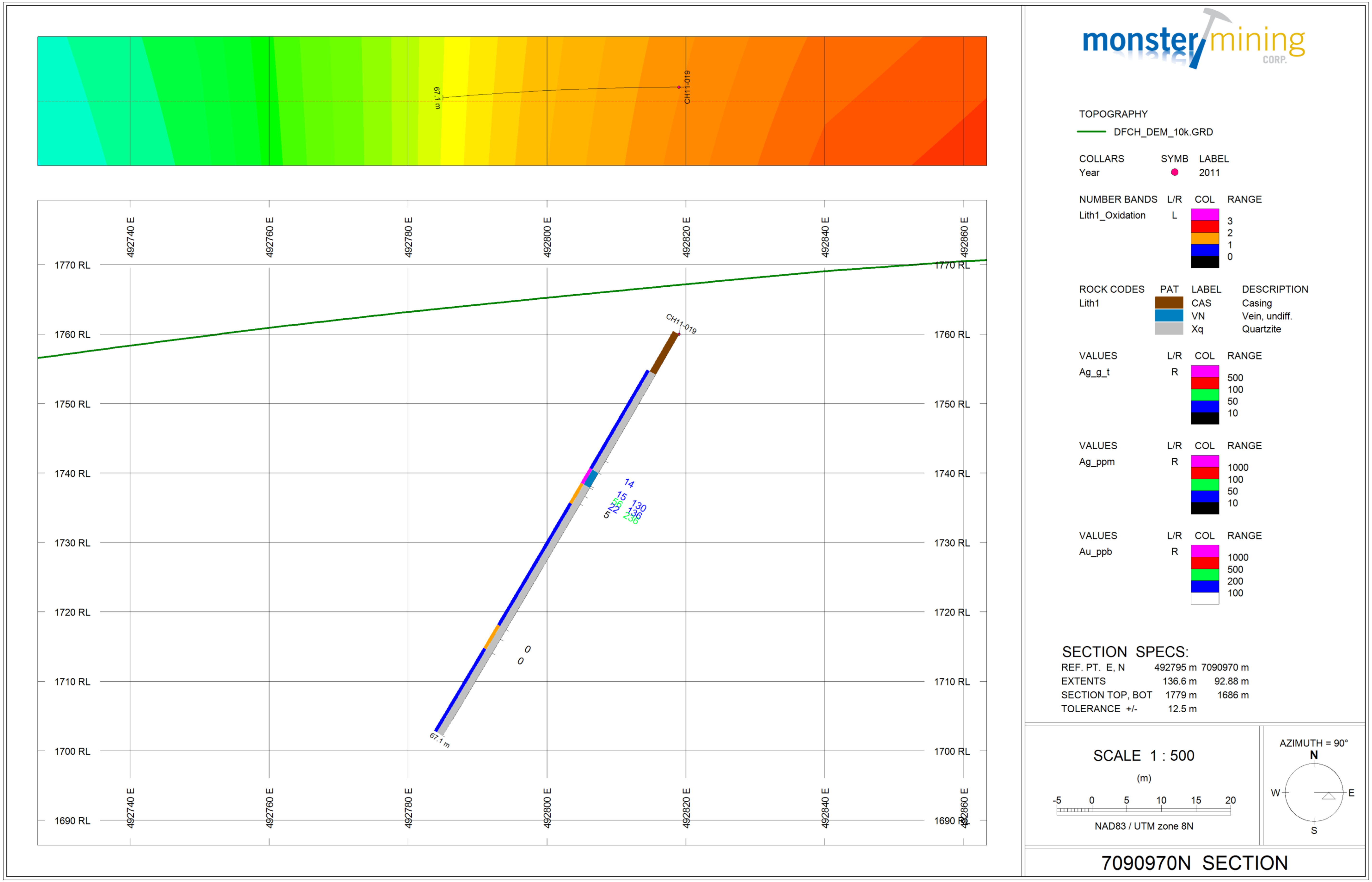


Figure 10. Section 7090970 N, Caribou Hill

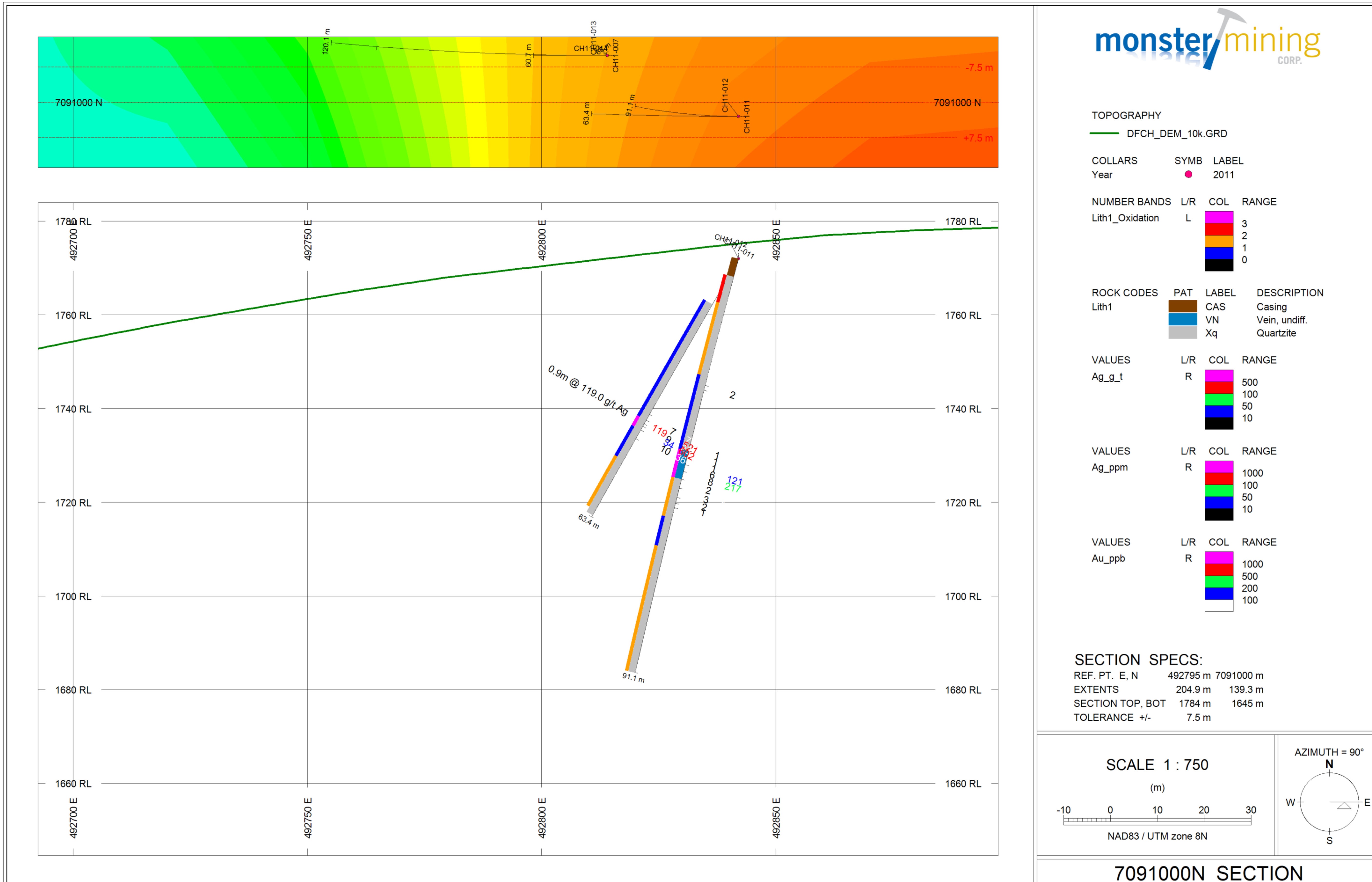


Figure 11. Section 7091000 N, Caribou Hill

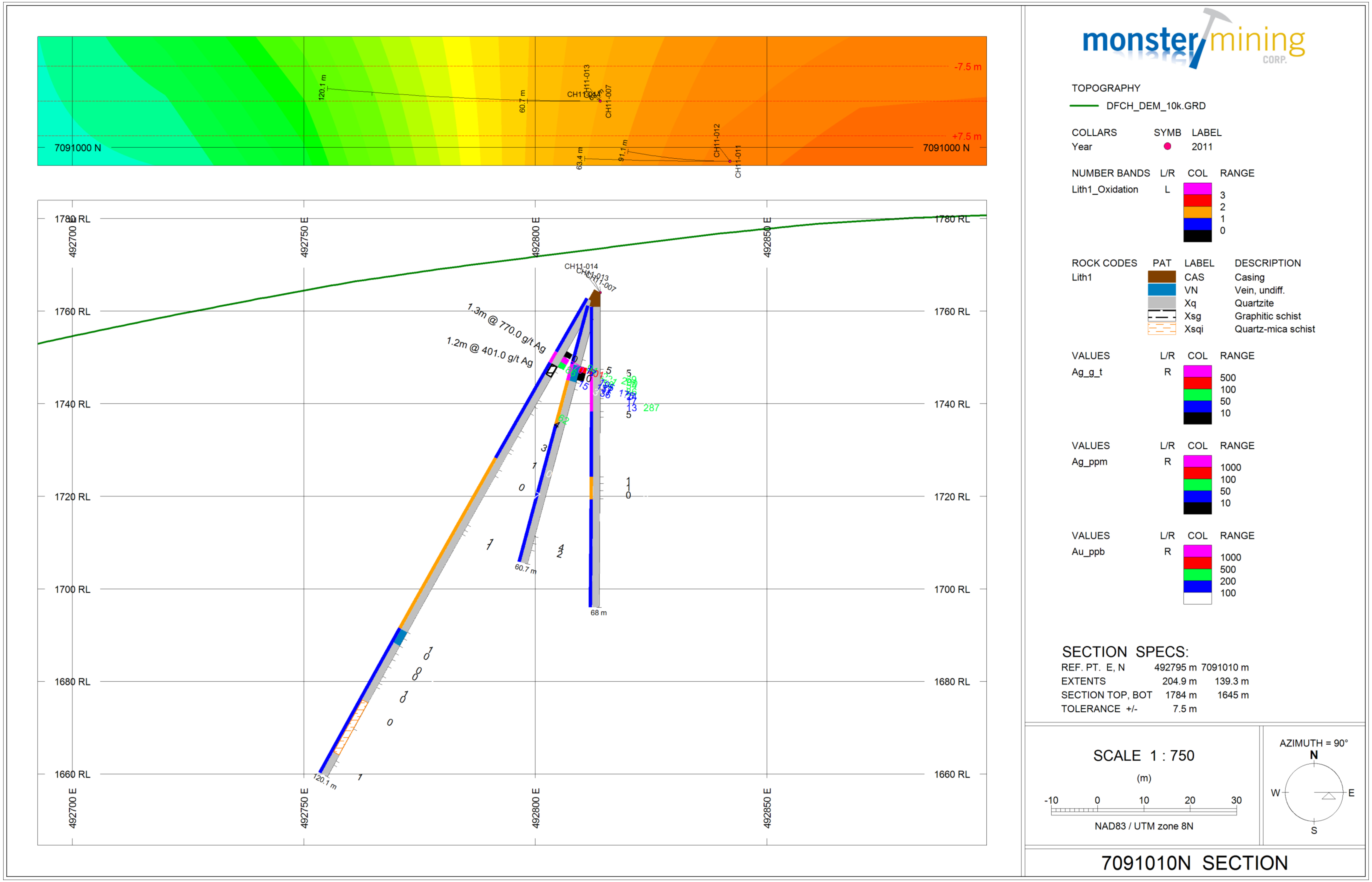


Figure 12. Section 7091010 N, Caribou Hill

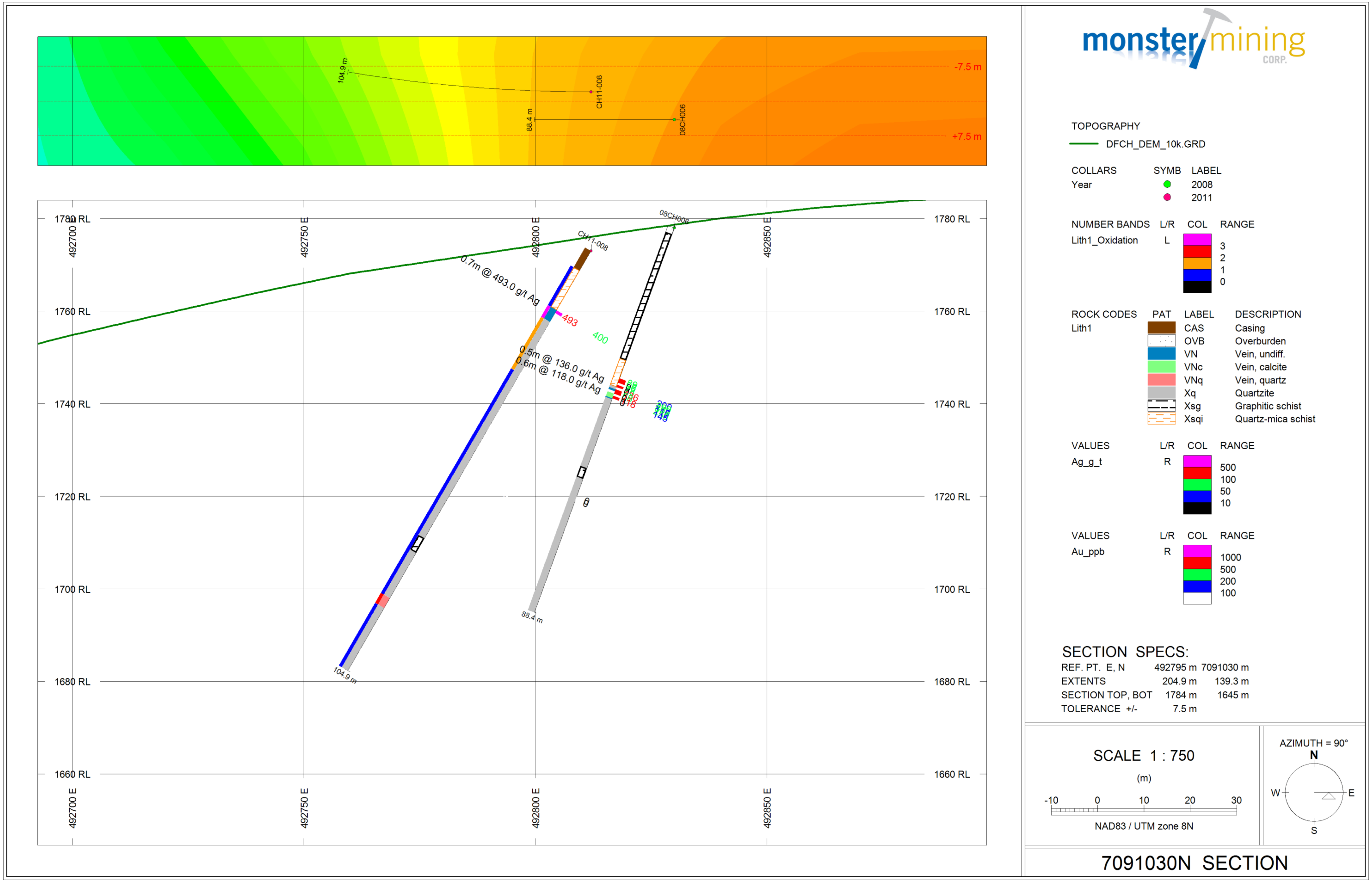


Figure 13. Section 7091030 N, Caribou Hill

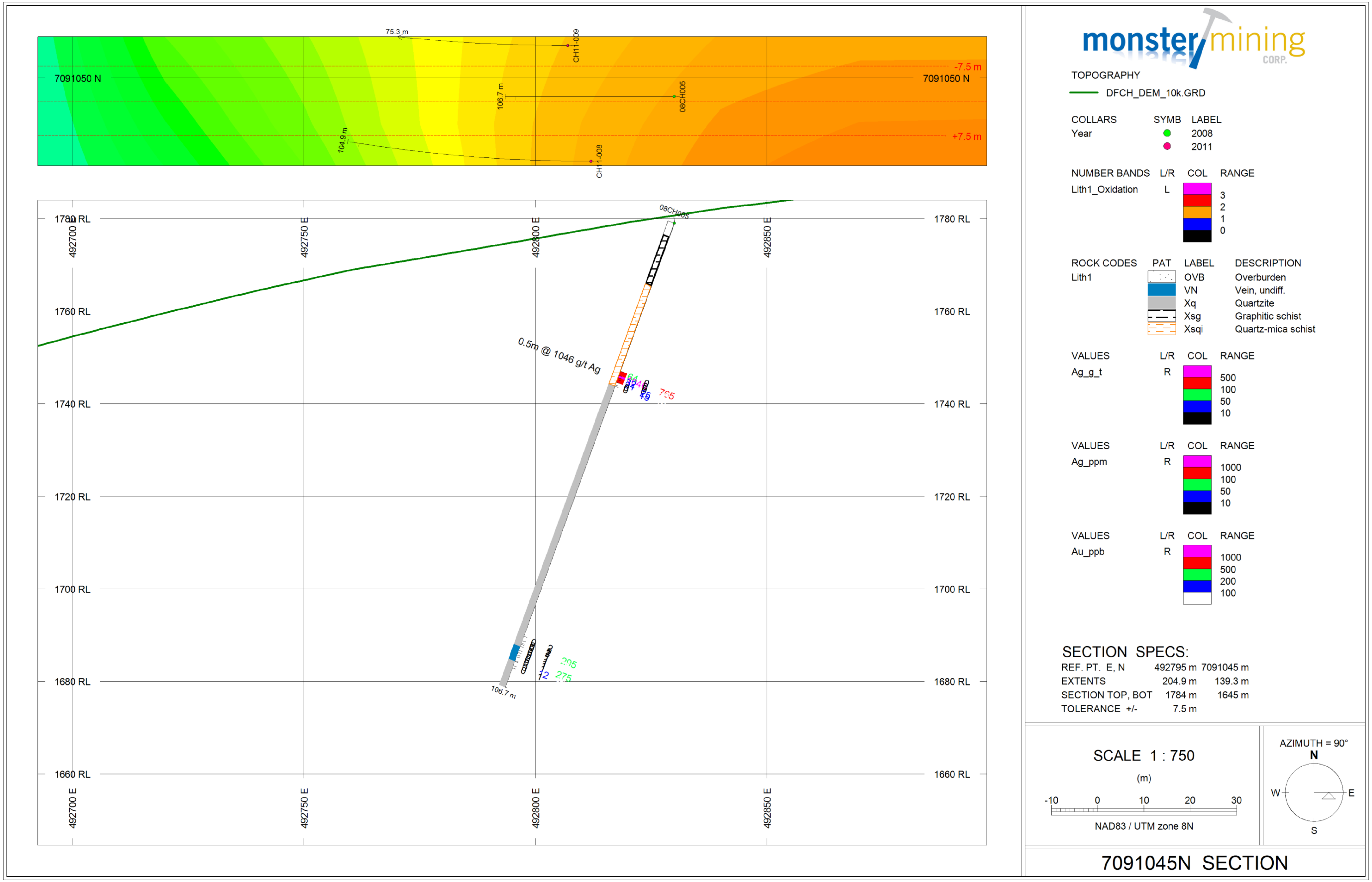


Figure 14. Section 7091045 N, Caribou Hill

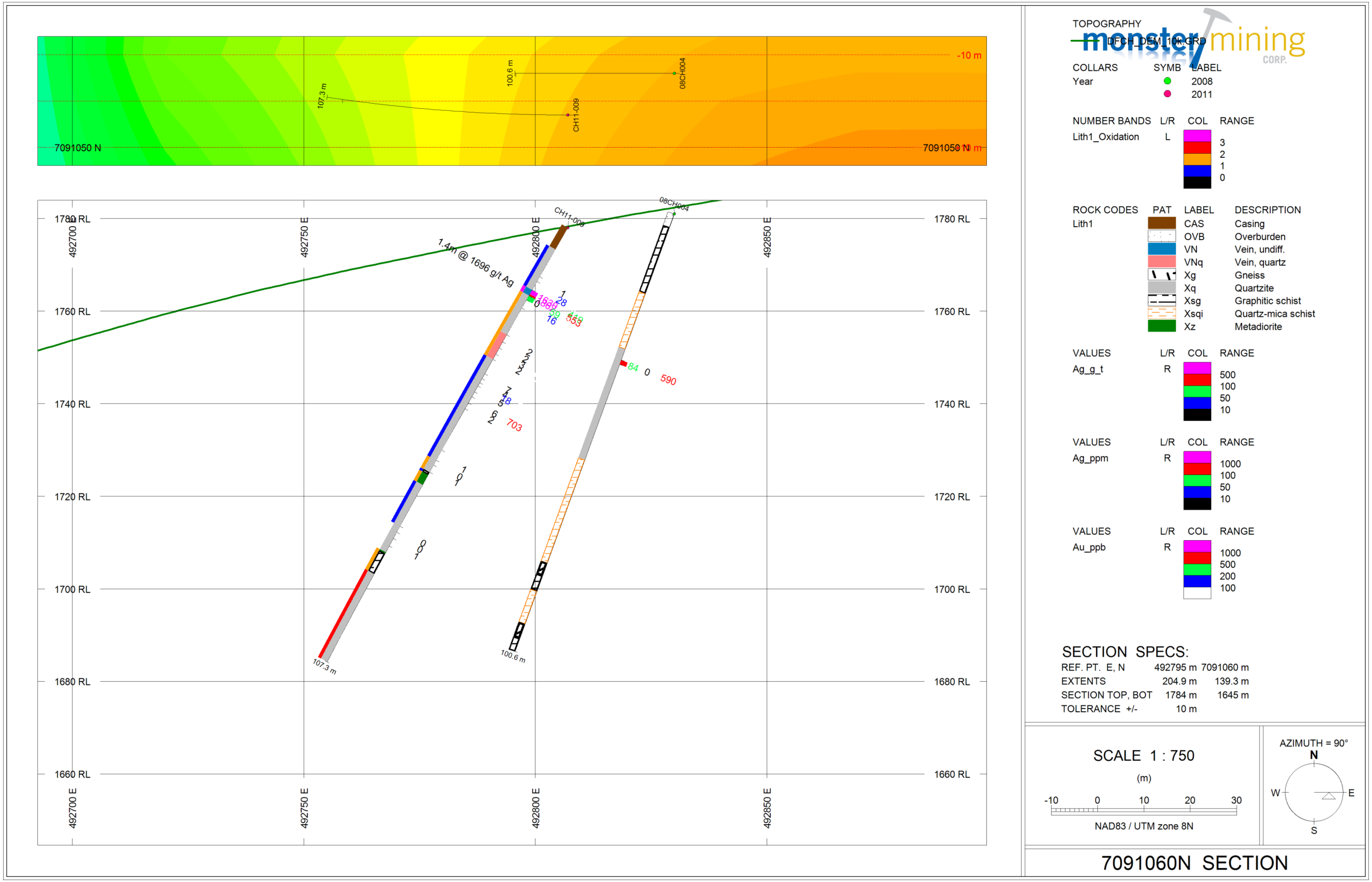


Figure 15. Section 7091060 N, Caribou Hill

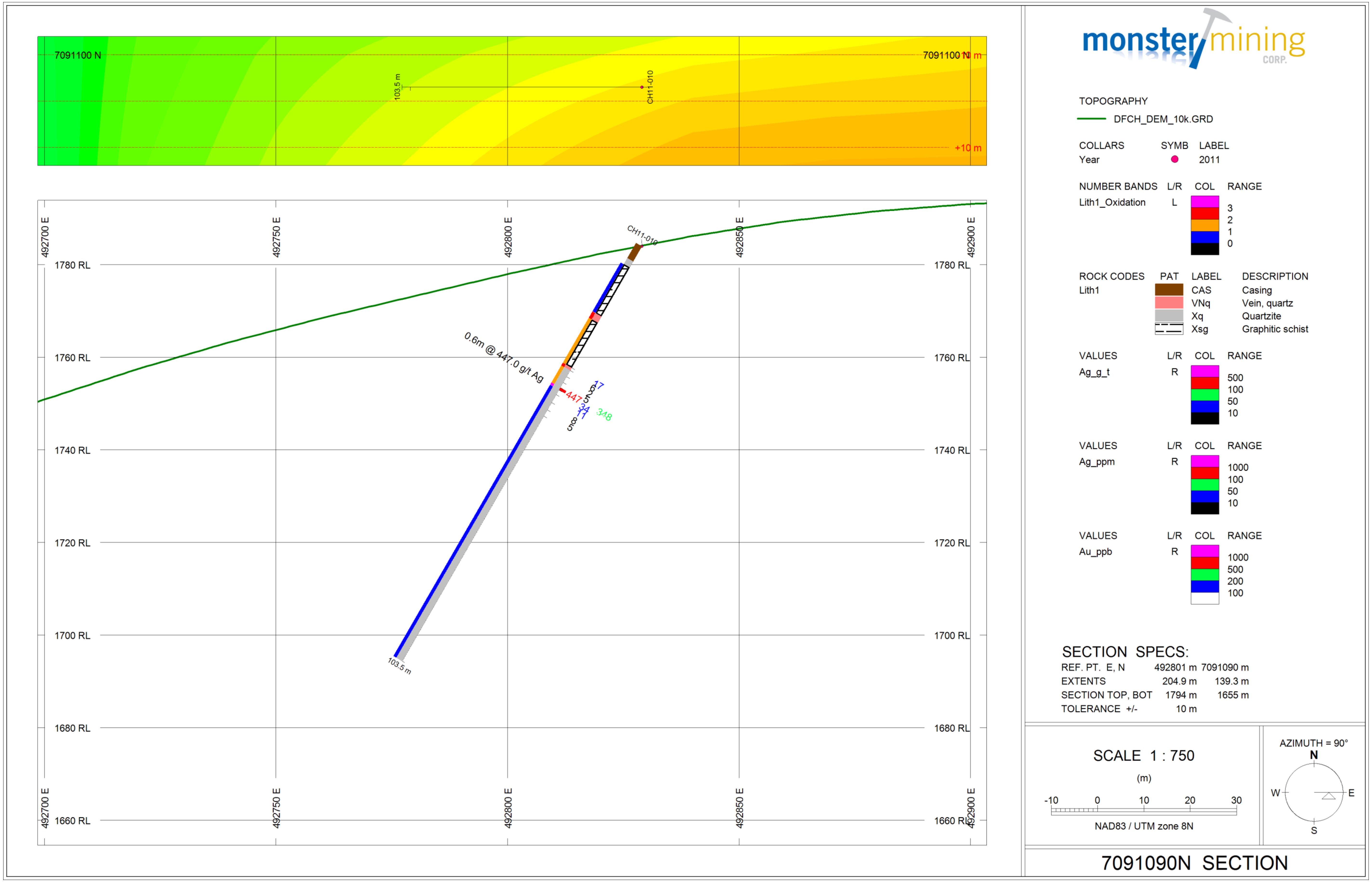


Figure 16. Section 7091090 N, Caribou Hill

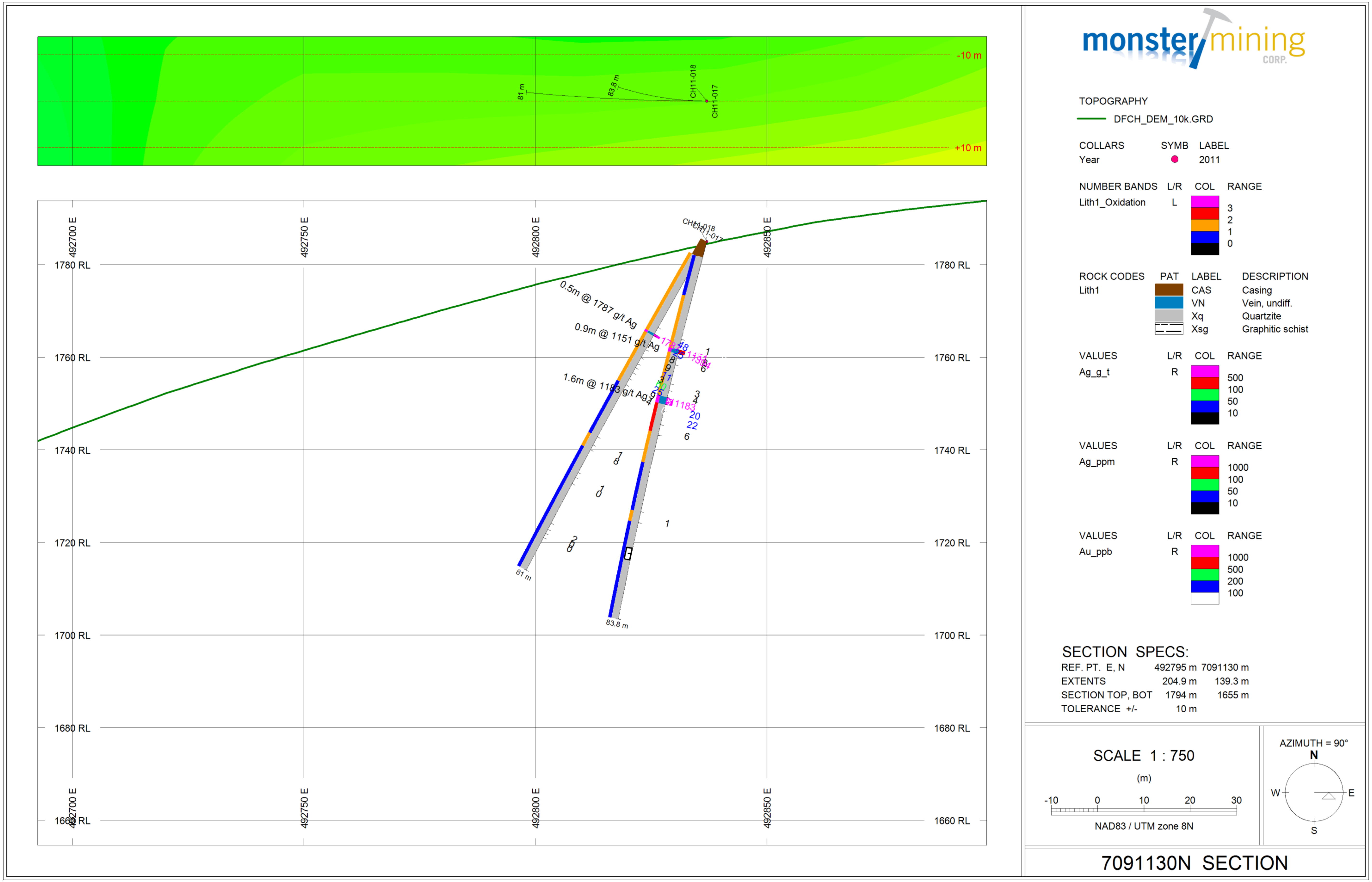


Figure 17. Section 7091130 N, Caribou Hill

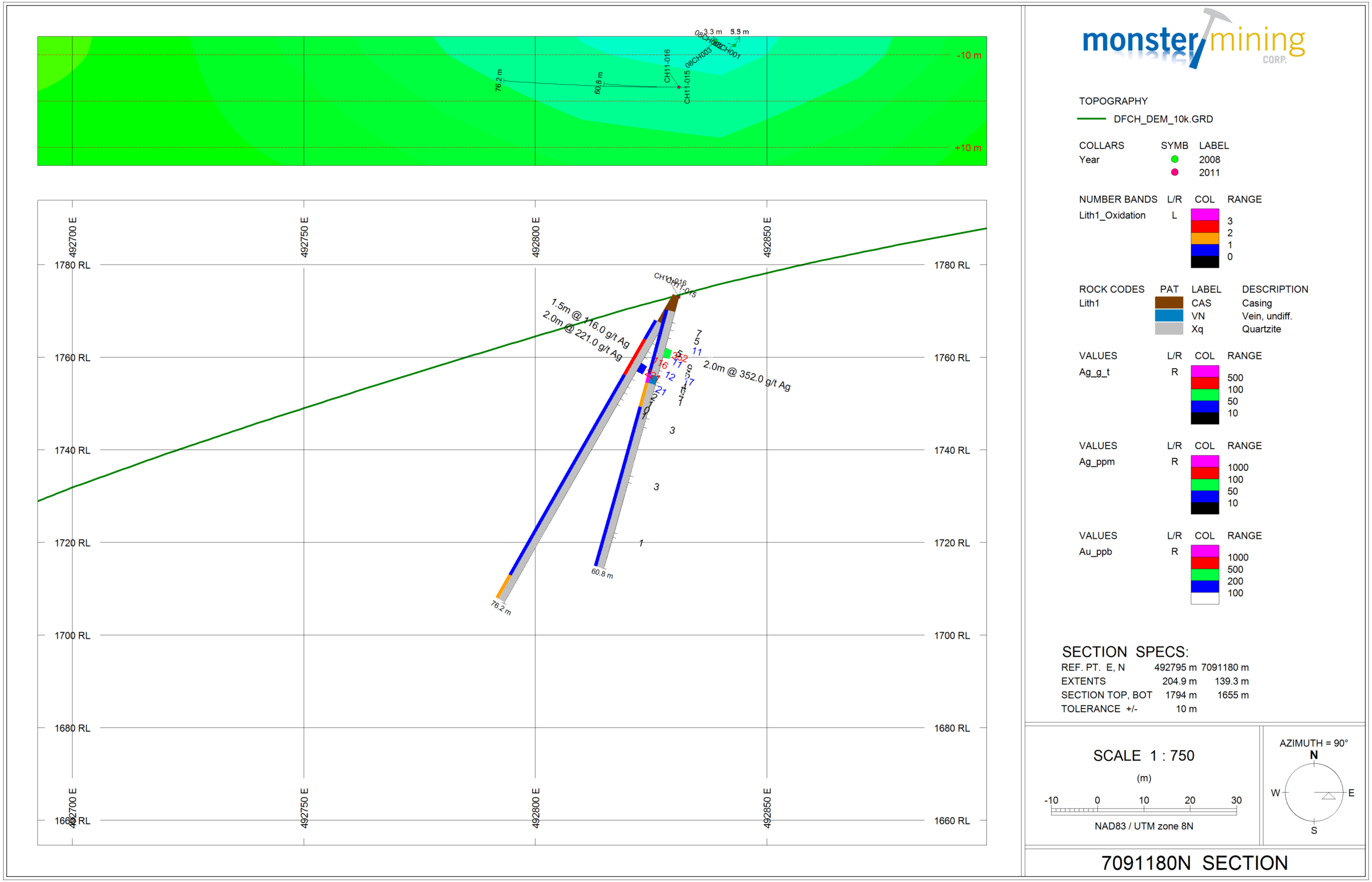


Figure 18. Section 7091180 N, Caribou Hill

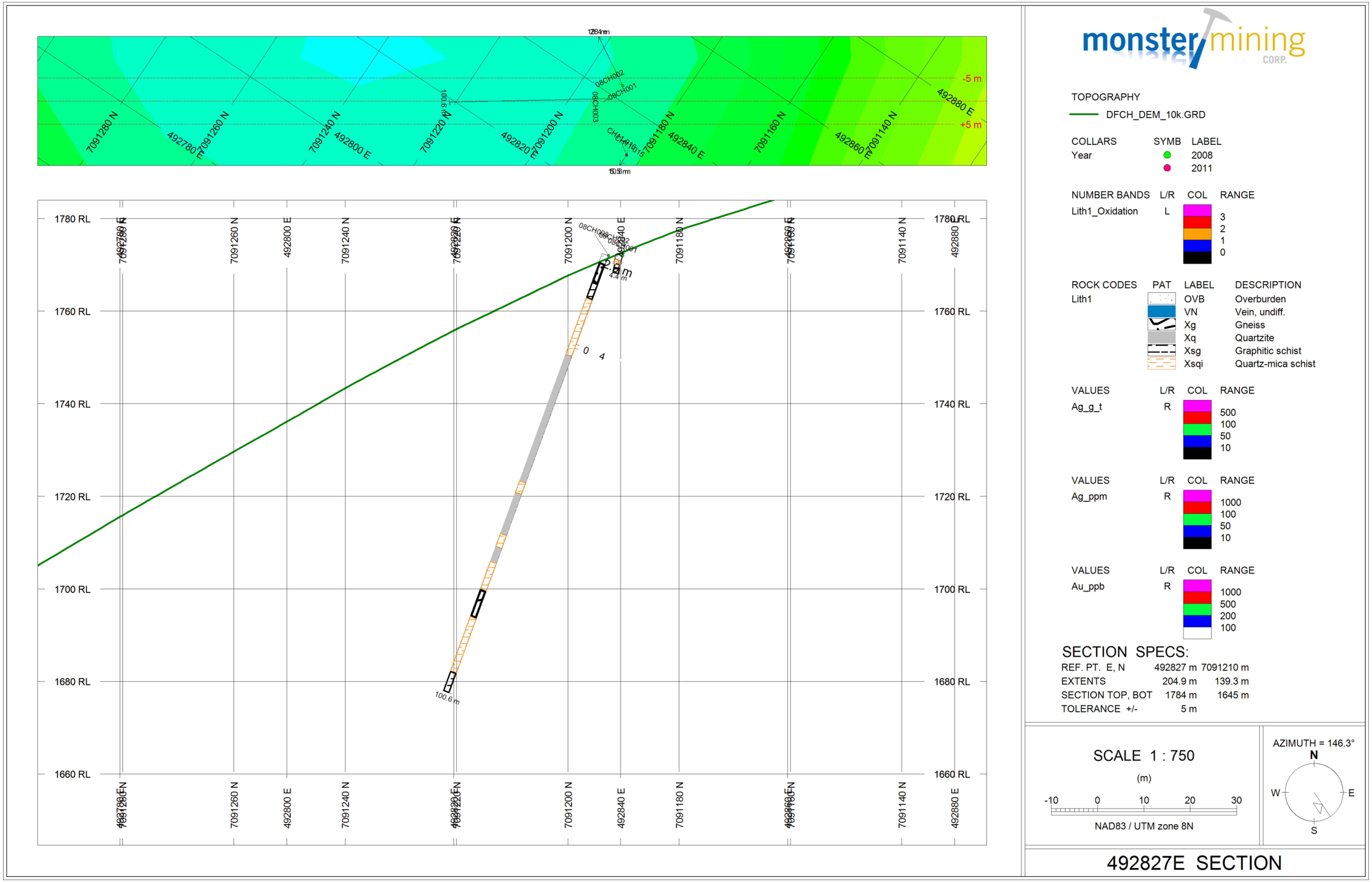


Figure 19. Section 492827 E, Caribou Hill

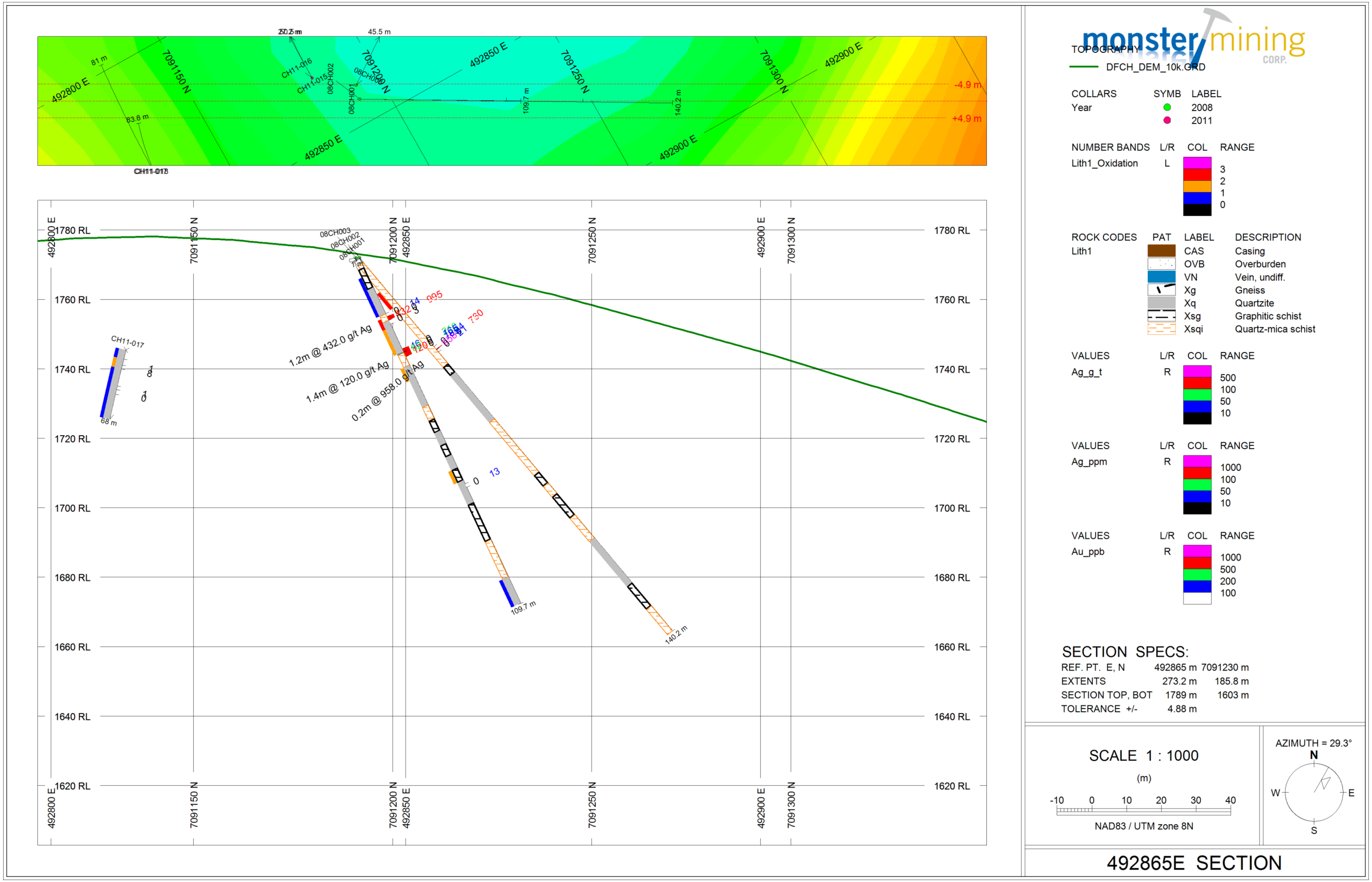


Figure 20. Section 492865 E, Caribou Hill

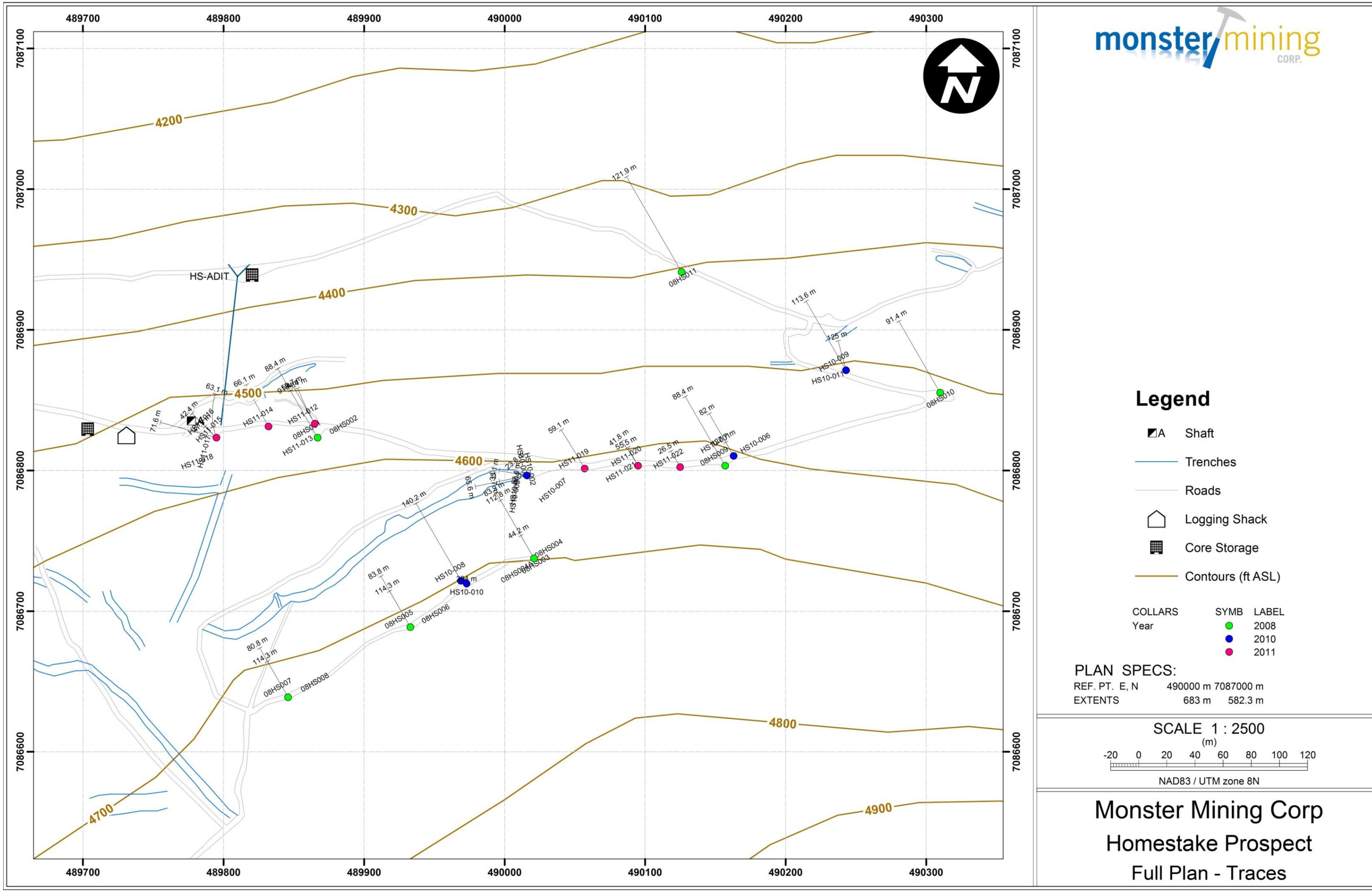


Figure 21. Homestake collar plan

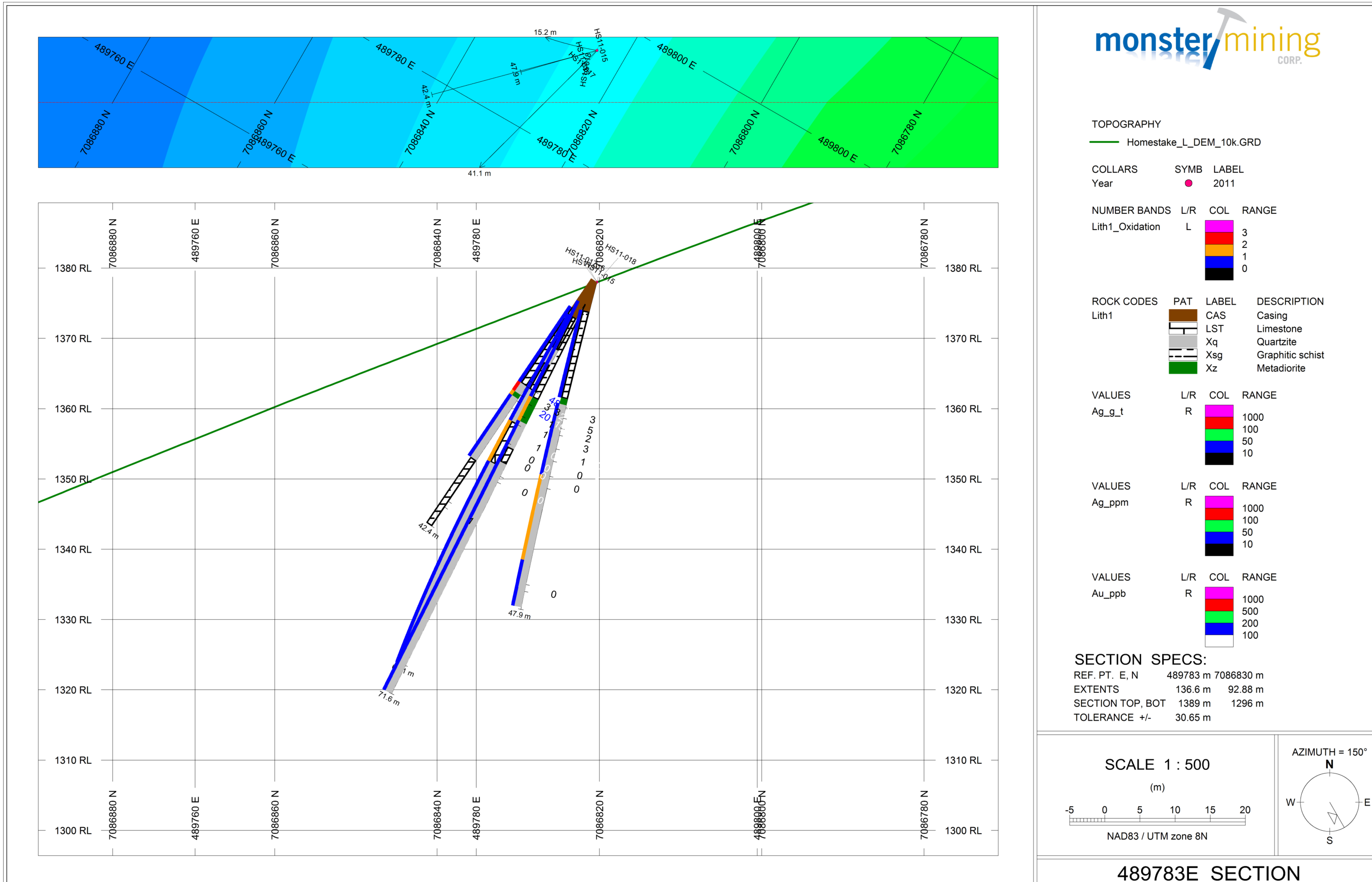


Figure 22. Section 489783 E, Homestake

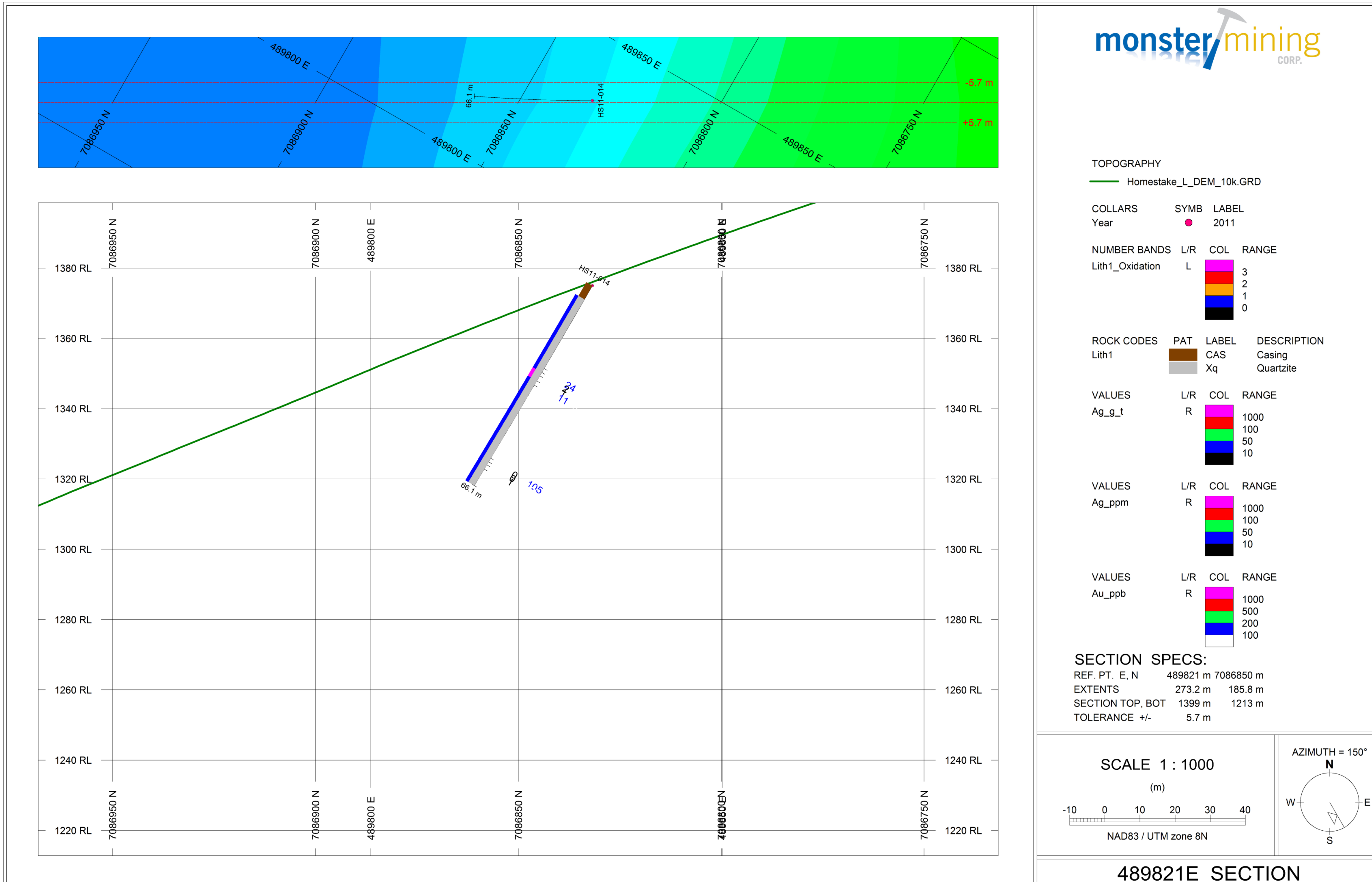
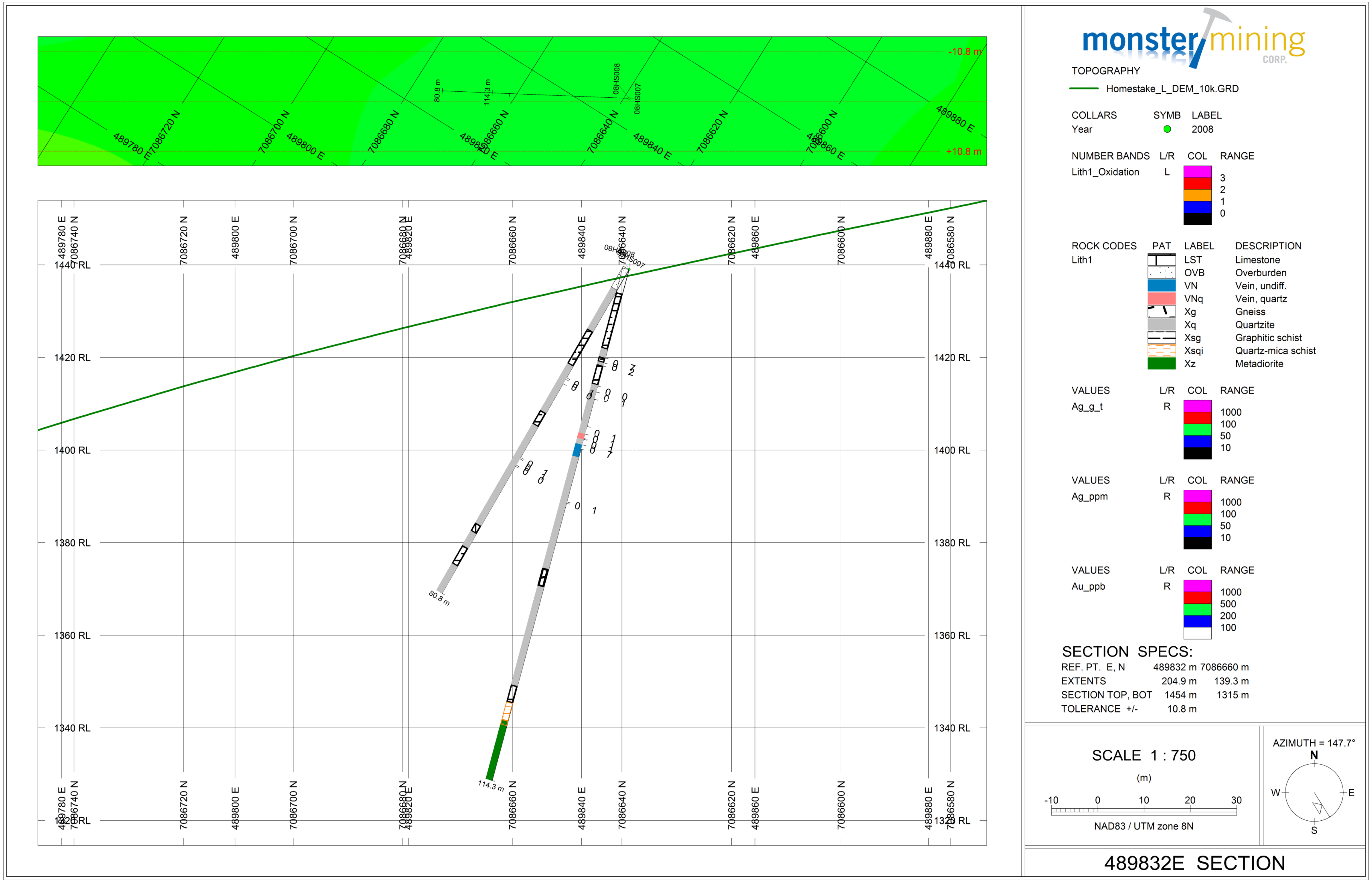


Figure 23. Section 489821 E, Homestake



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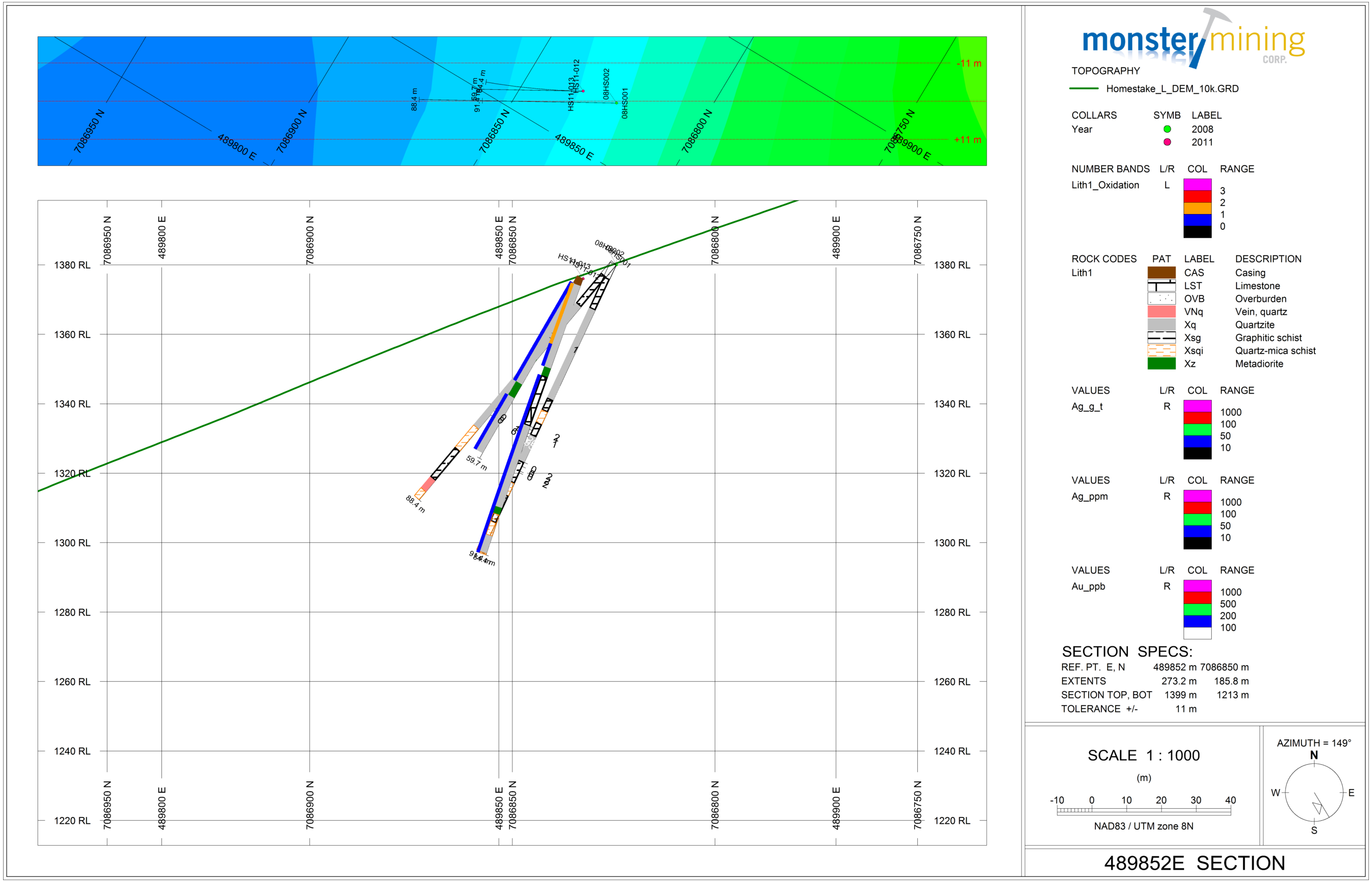

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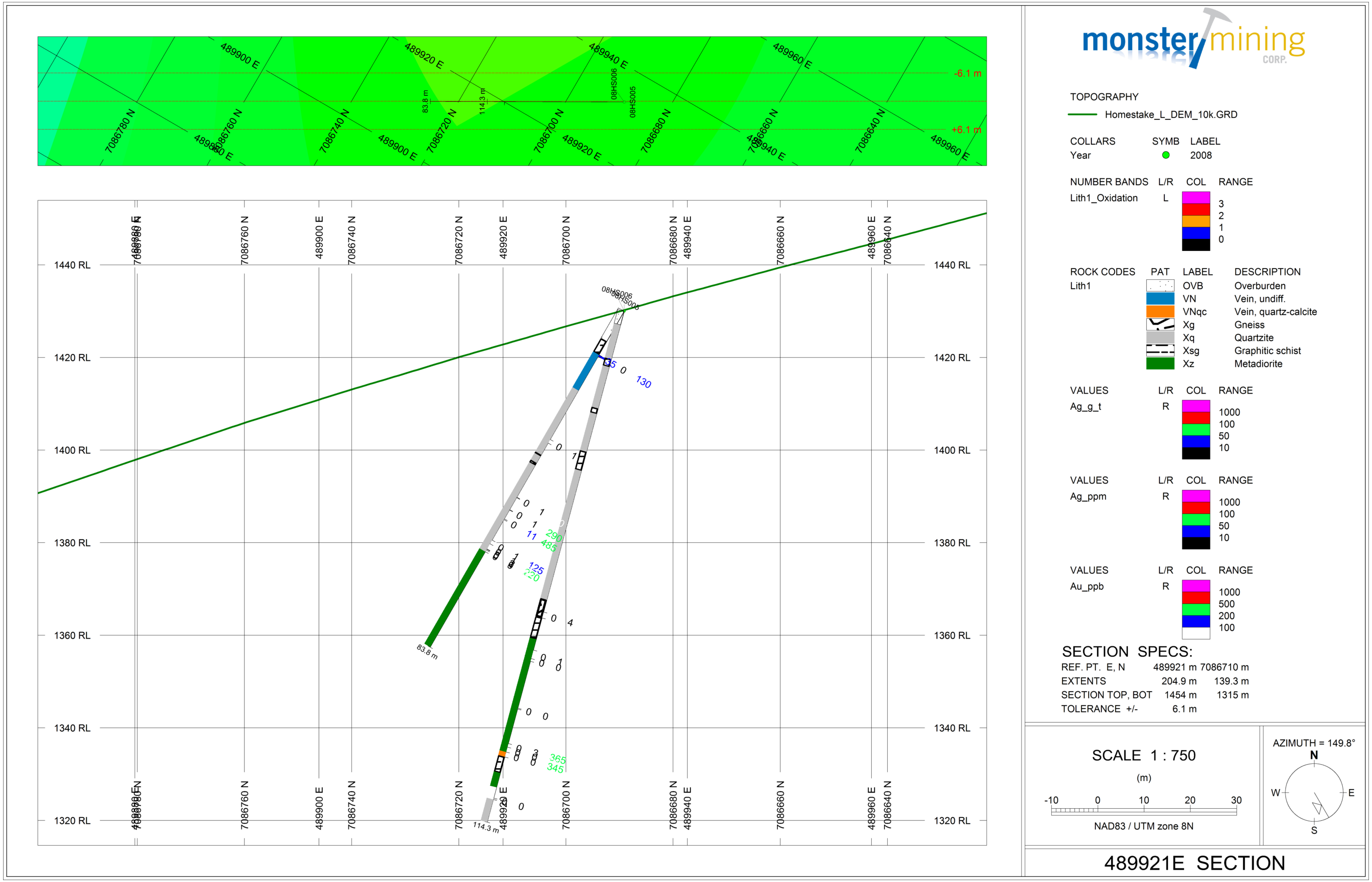

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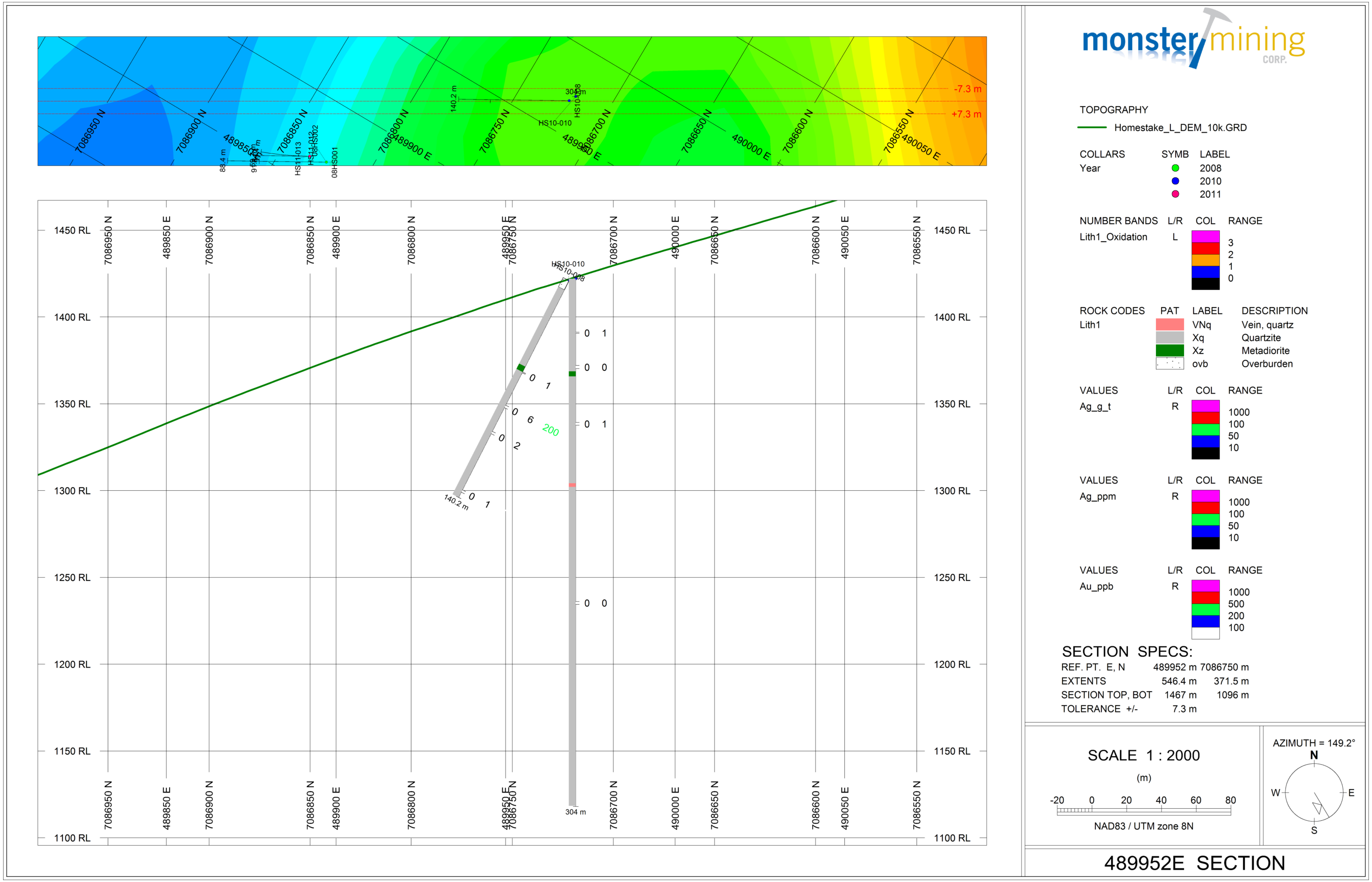

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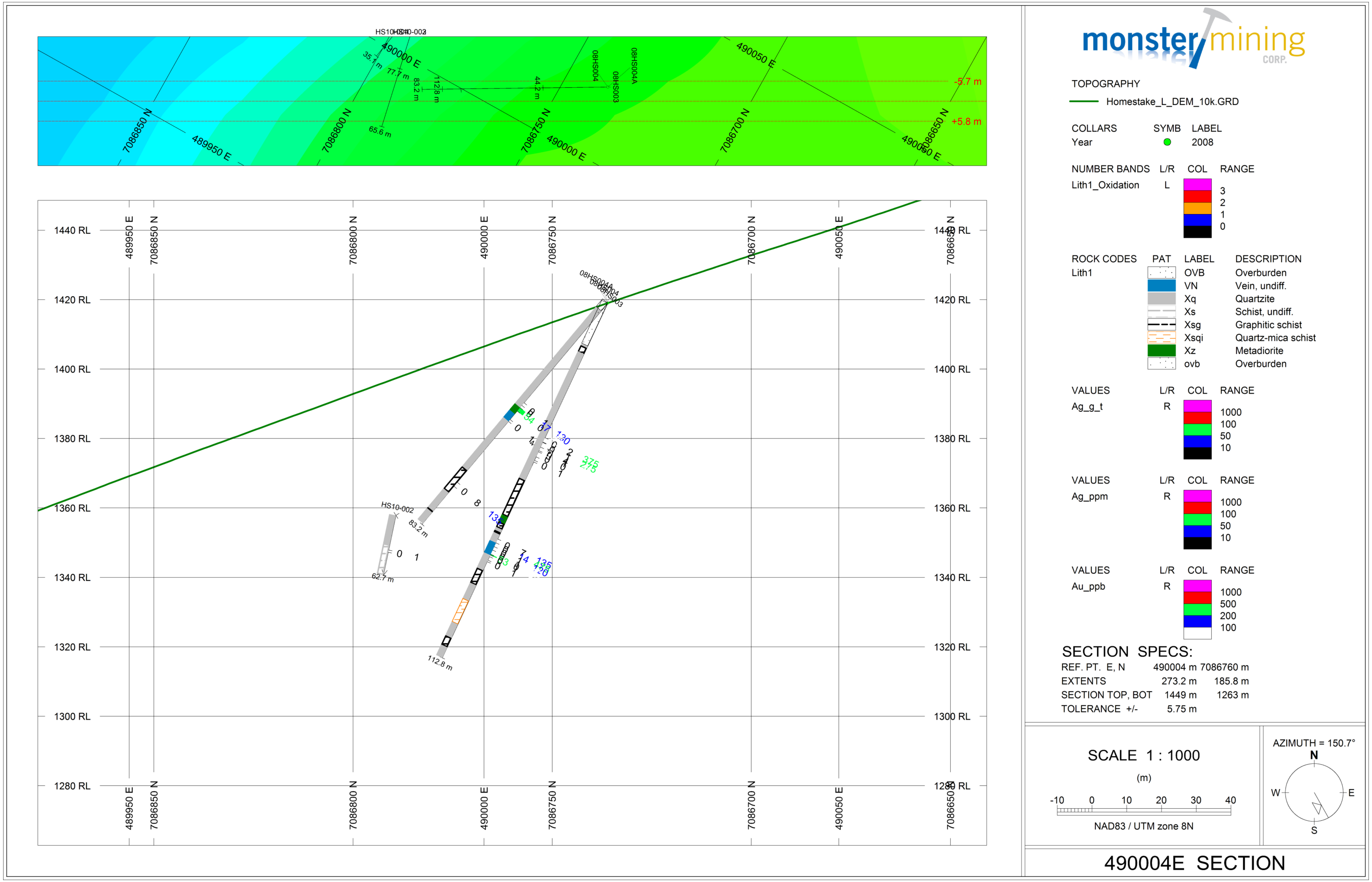


Figure 28. Section 490004 E, Homestake

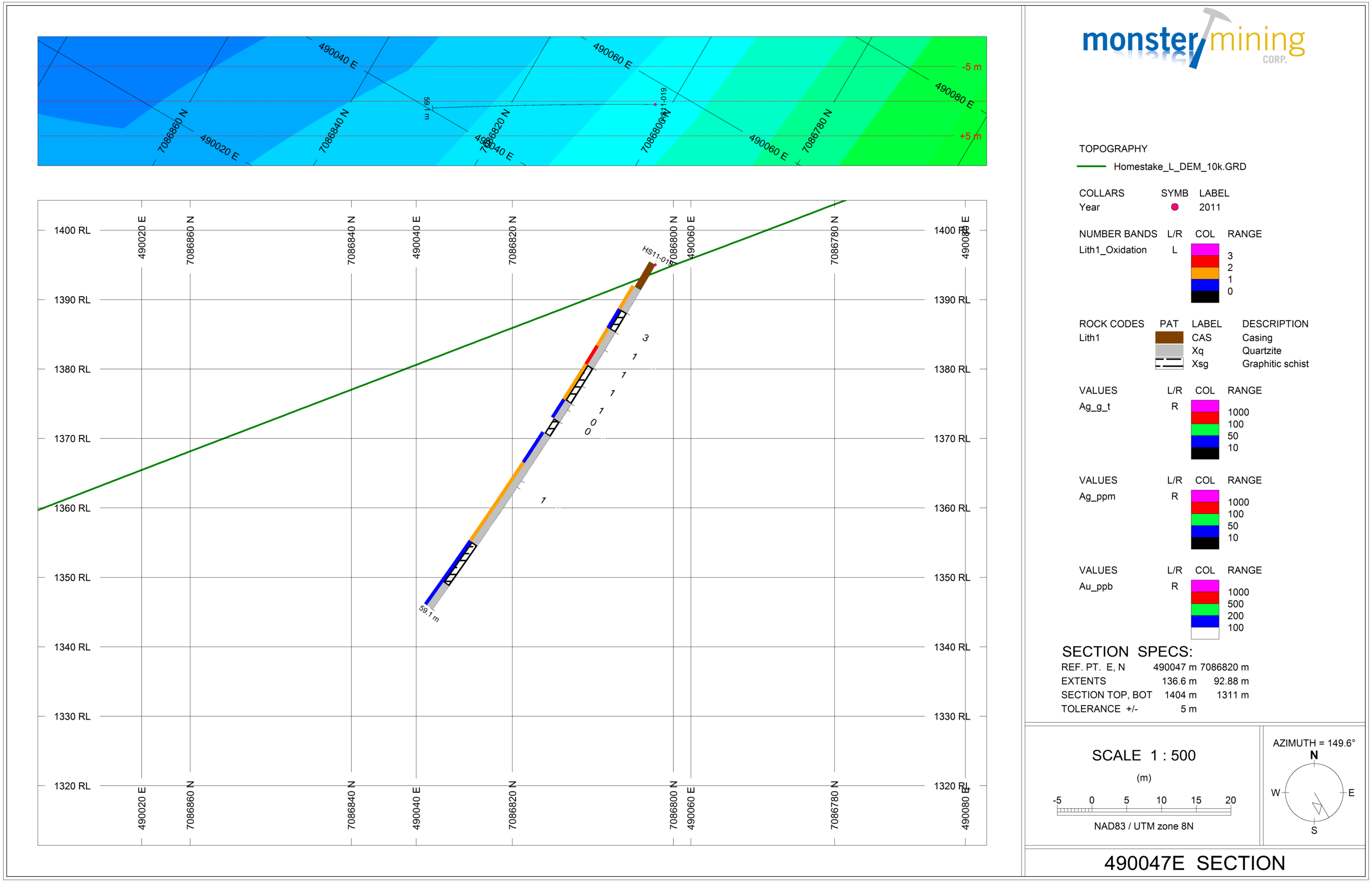
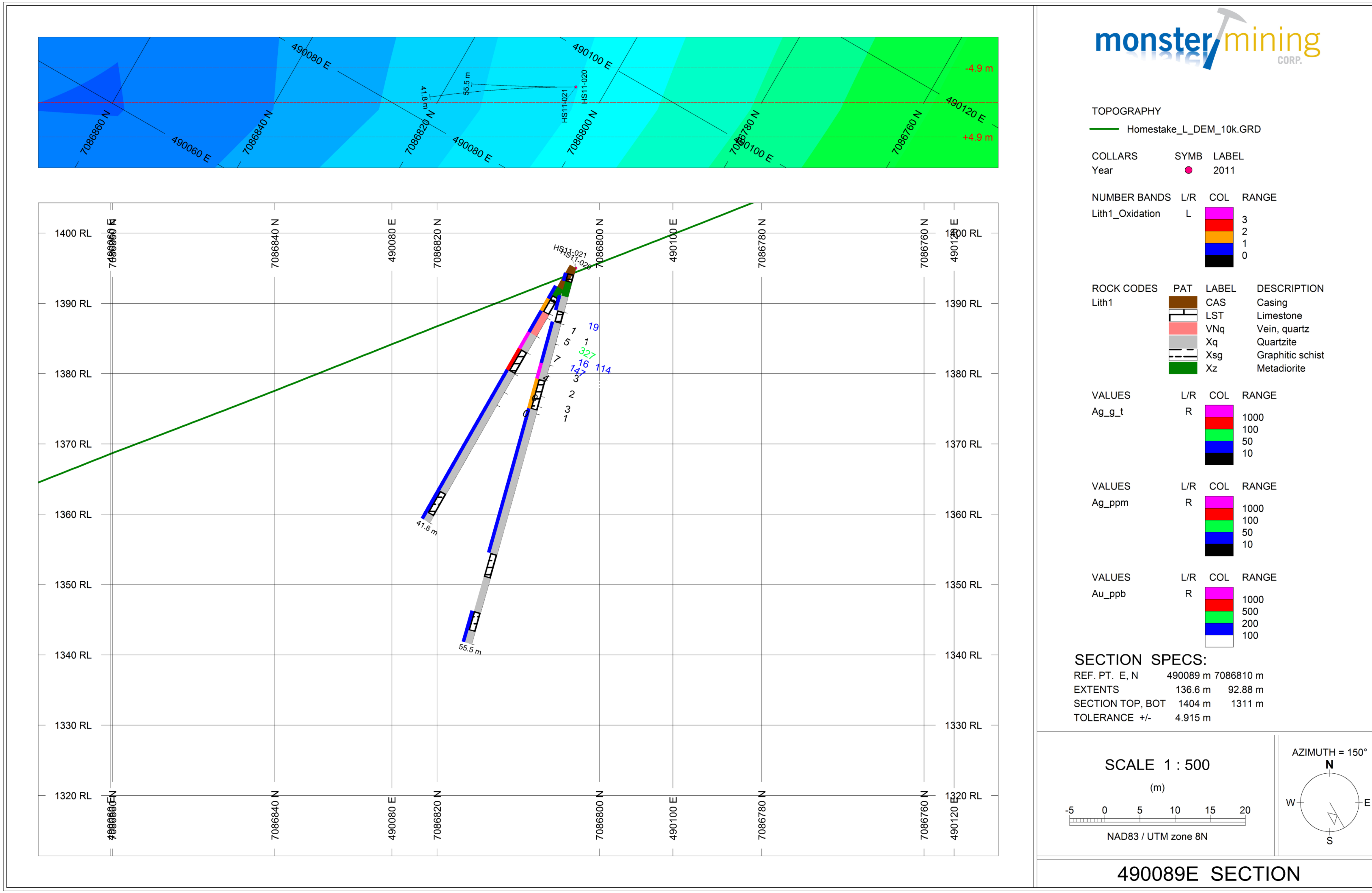


Figure 29. Section490047 E, Homestake



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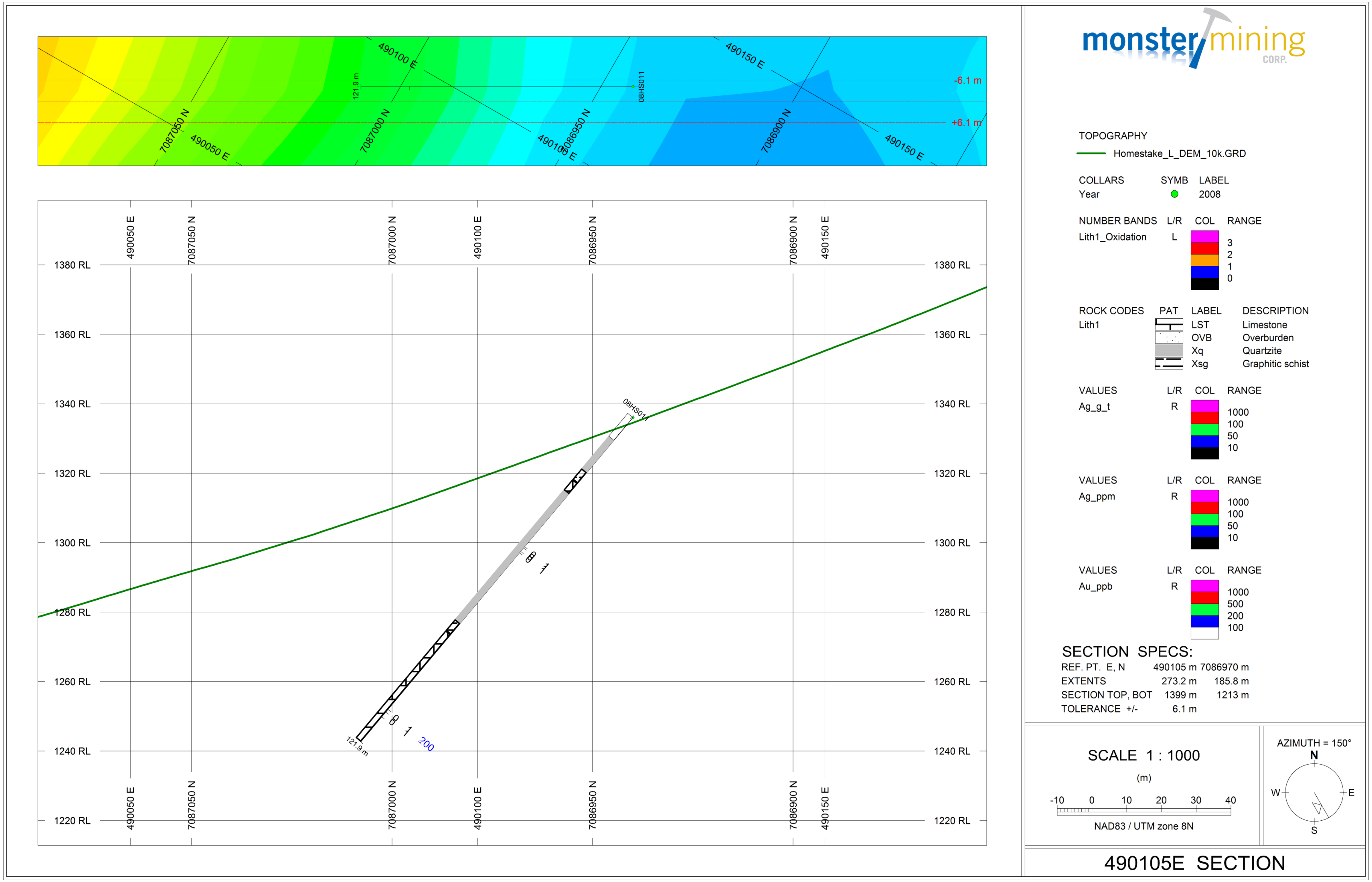

Figure 31. Section 490105 E, Homestake

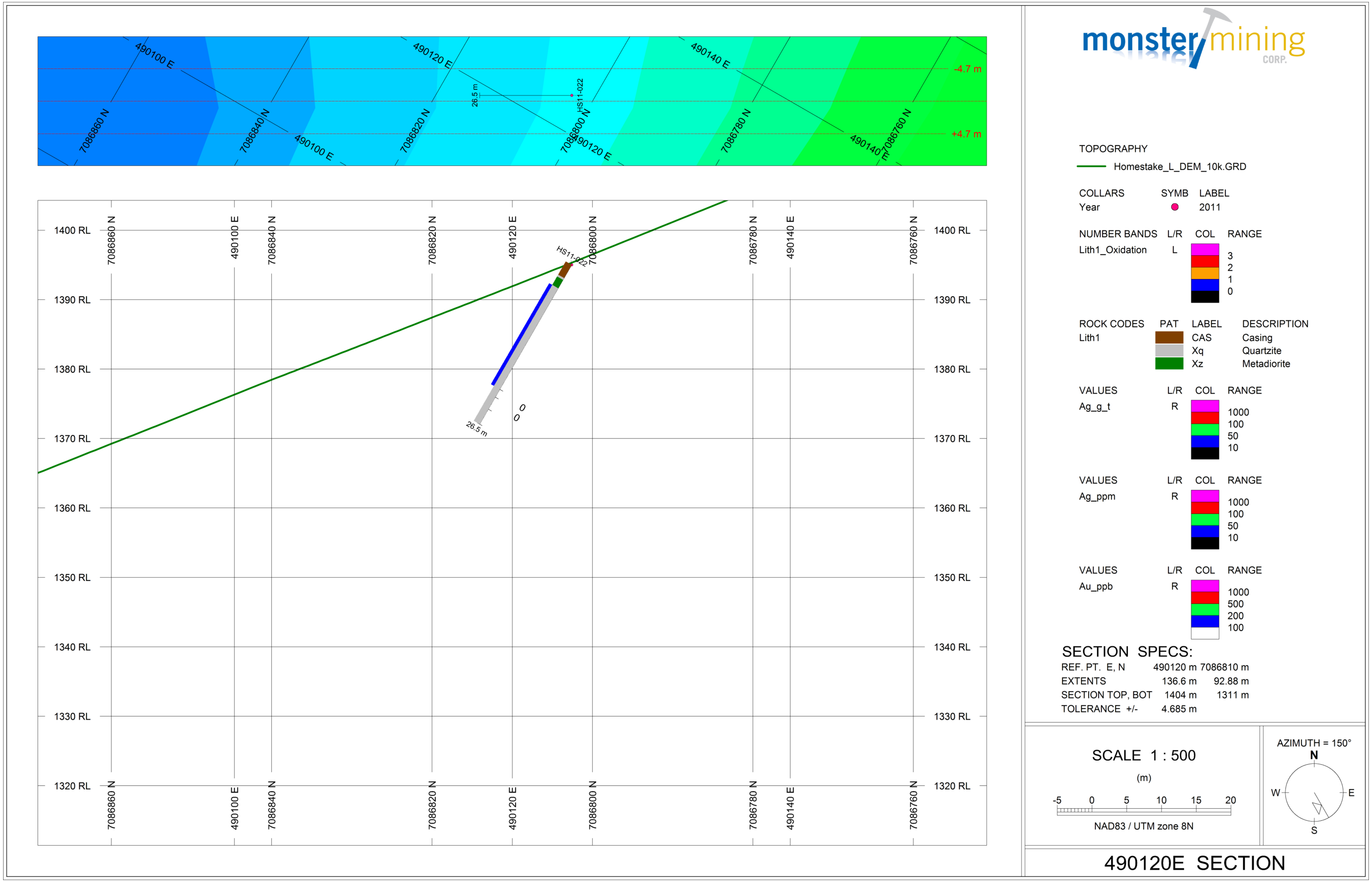

Figure 32. Section 490120 E, Homestake

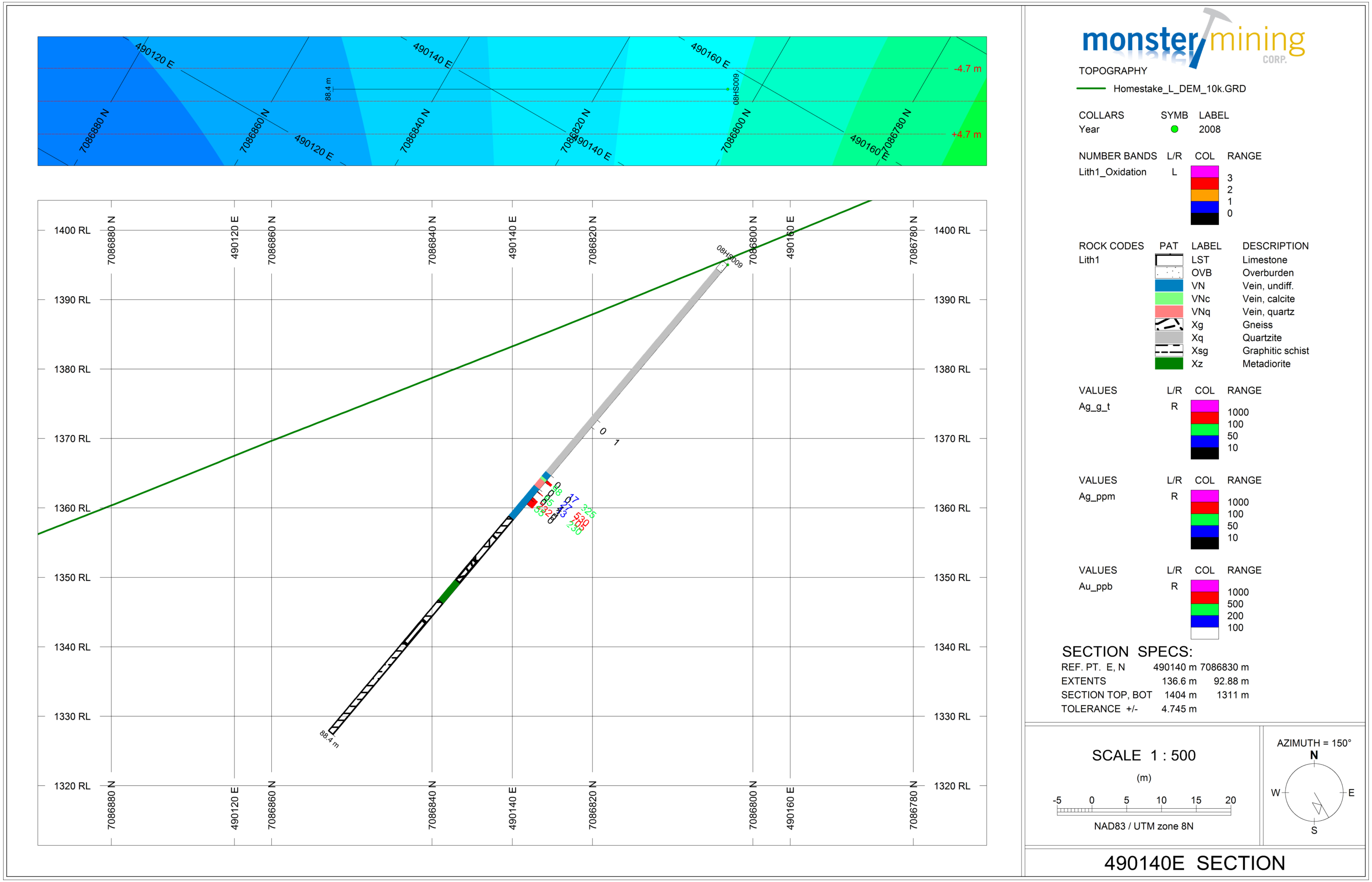

Figure 33. Section 490140 E, Homestake

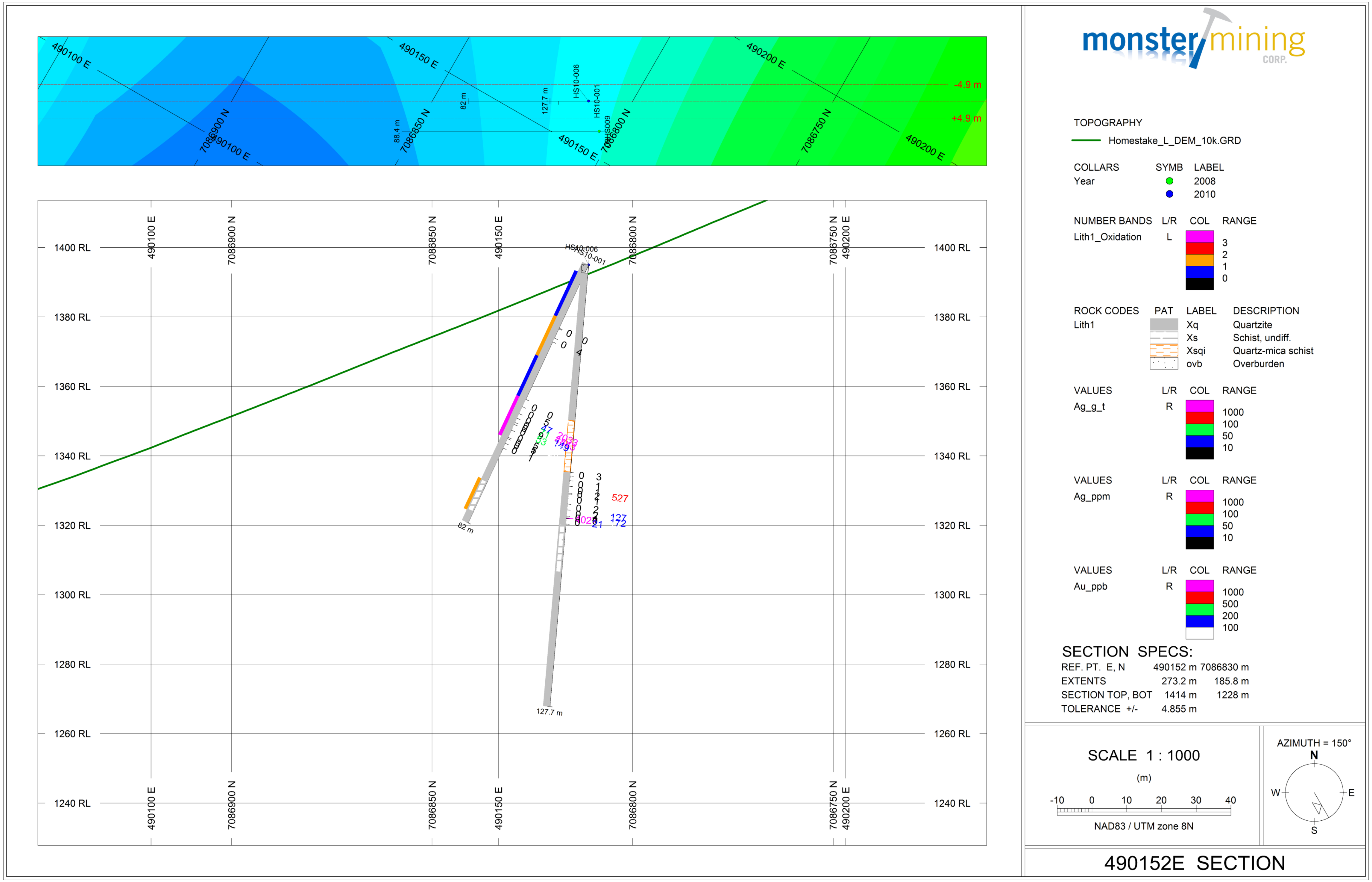

Figure 34. Section 490152 E, Homestake

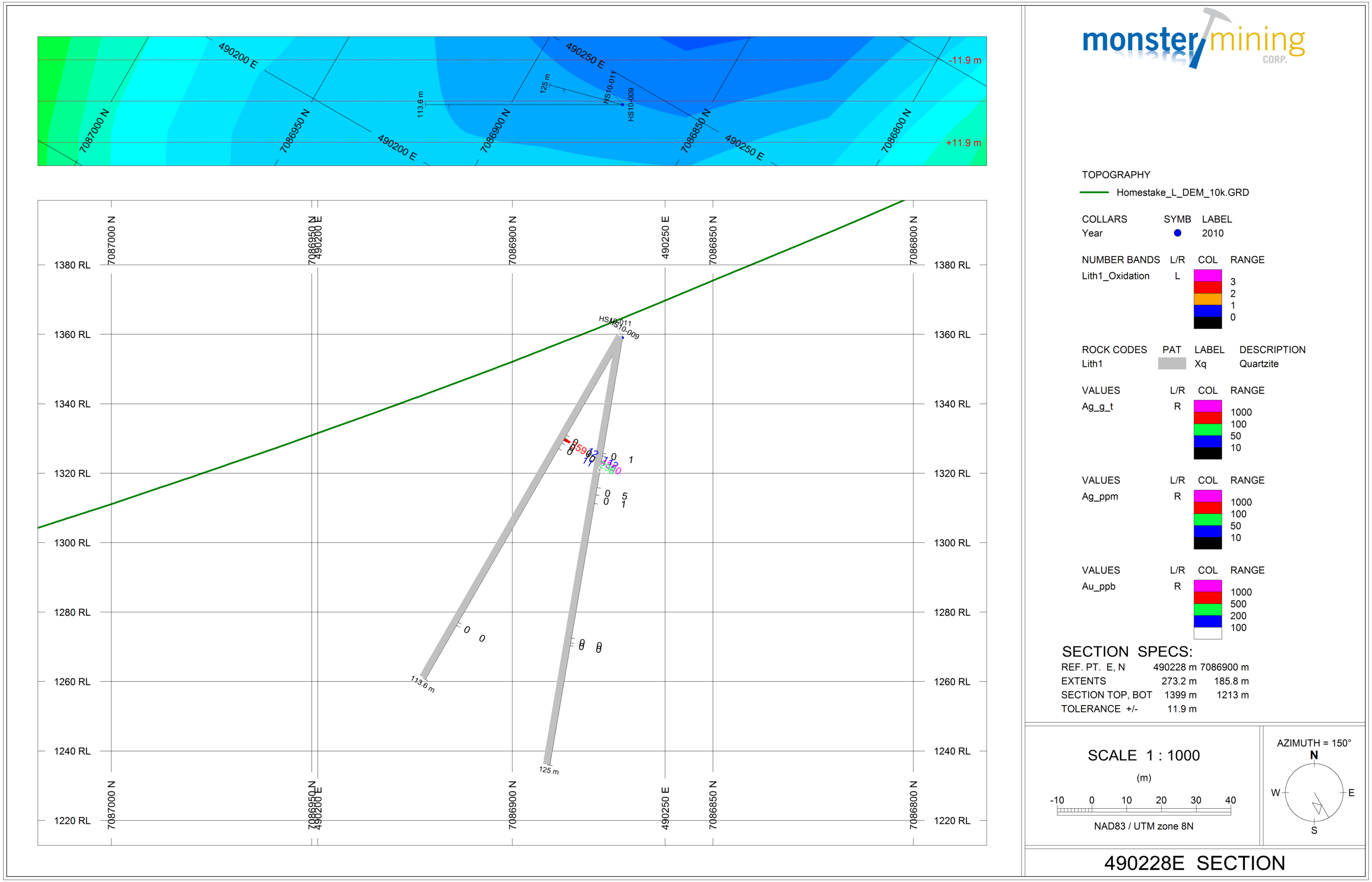

Figure 35. Section 490228 E, Homestake

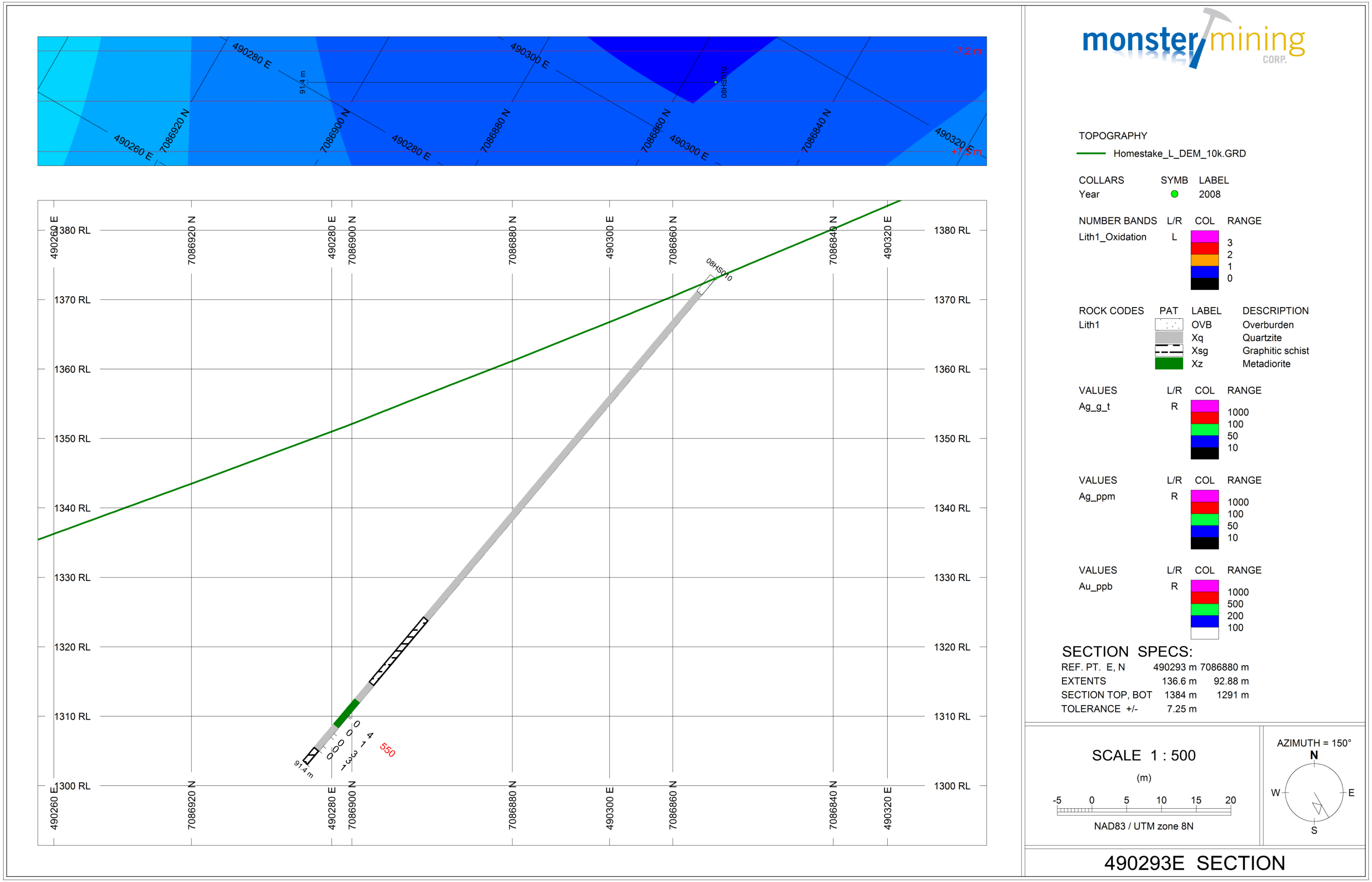

Figure 36. Section 490293 E, Homestake

12 Sampling Method and Approach, Sample Preparation, Analysis and Security

12.1 Soil and Trench Samples

Soil samples were located at 50 m intervals along 50 m spaced lines using a handheld GPS and collected using a swede pick. Samples were collected from the B Horizon, and details of the colour, sample depth, media, matrix, slope angle, drainage, slope direction and topographic location were recorded by the collector. The samples were dried in camp, then sealed into plastic sample bags with numbered zip ties and delivered by Monster contract personnel to Inspectorate Exploration and Mining Services Ltd.'s Whitehorse preparation laboratory where they were dried at 60° C, sieved to -80 mesh and riffle split, then sent internally to their Richmond laboratory for analysis. Trench samples were collected either as lines or panels of chips across the trenches. Samples were generally 1 m wide, although variations for natural lithological breaks were incorporated. Samples were placed into a labelled plastic bag with their sample tag, then sealed into a labelled rice bag with a numbered zip tie. The samples were delivered to by Monster Mining Corp. contract personnel to Inspectorate's Whitehorse preparation laboratory where they were dried for 24 hours, crushed, riffle split to ~250 g then pulverised to >85 % passing -200 mesh. For both sets of samples, Monster Mining Corp. maintained sample security from site to Inspectorate's Whitehorse facility, at which time sample security was assumed by Inspectorate.

Samples were analyzed using Inspectorate's GENX-30 package, which analyzes Ag, Al, As, Ba, Bi, Ca, Cd, Co, Cr, Cu, Fe, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Sc, Sr, Ti, Tl, V, W, Zn and Zr using an aqua-regia (1:1:1 HCl-HNO_3-H_2O) digest and ICP-MS (inductively coupled plasma mass spectroscopy) analysis, Au by fire assay with an atomic absorption (AA) finish and Hg by cold vapour analysis with an AA finish. Overlimit Au Ag, Pb and Zn were analyzed by fire assay with a gravimetric finish (Au, Ag) or ICP-AA with an aqua regia digest (Pb, Zn). Laboratory-inserted blanks (analytical and method), standards and duplicates (pulp and preparation) verify internal quality assurance/quality control procedures. Sample preparation, security and analytical procedures were all acceptable and there is no evidence of any tampering with, or contamination of the samples during collection, shipping, analytical preparation or analysis.

12.2 Diamond Drilling Samples

During the 2011 drilling program, 249 samples were collected from diamond drill core. The core was sampled at natural lithological breaks, but at intervals generally ranging between 0.2 m and 2.0 m, except where poor recovery made narrower sample intervals impractical. Intervals greater than 1 m that were interpreted in the field to be potentially mineralized were sampled at 1 m intervals. Core recovery at Caribou Hill was generally good, averaging 90 %, however, recoveries at Homestake were poor, averaging 73 %, and significantly less (up to 100 % core loss) in broken, friable zones, which in some holes were interpreted to represent vein faults.

Diamond drill core was transported from the drill at the end of each shift to core logging and processing facilities located at the camp, situated on Alexco Resource Corp.'s Onek waste dump. The core was logged, and select intervals split or sawn at the respective core shacks. Ms. Daria Duba and Dr. Joanna Ettlinger logged the core, and supervised the sampling, which was conducted by Monster Mining Corp.

contract personnel. Samples were either split using a manual splitter or sawn using a diamond saw, placed with their sample tag into a labeled plastic bag, then sealed and placed into a labeled rice bag secured with a numbered zip tag for shipment. Samples were securely stored in the locked splitting shed at the camp. The rice bags were delivered by Monster contract personnel to Acme Analytical Laboratories' Whitehorse preparation facility, where they were crushed and pulped, then sent internally to Acme's Vancouver analytical facility for analysis. Sample security was maintained by Monster Mining Corp. from the drill to the preparation facility in Whitehorse, at which time sample security was assumed by Acme Analytical Laboratories Inc. The remaining core is stored in racks at the Homestake (489731mE / 7086825mN, NAD 83, zone 8) prospect.

Samples were submitted to the lab with standards, blanks and field duplicates to check for quality assurance and quality control at the laboratory. Quality control samples were inserted at regular intervals in every hole, and particularly after a vein zone to detect contamination. Thirteen blanks, 11 standards and six field duplicates were inserted for a total of 30 QA/QC samples. Both the Whitehorse preparation facility and the Vancouver analytical facility are ISO9001:2008 registered (Certificate No. FM 63007).

All 279 samples were submitted to Acme Analytical Laboratories for analysis of Ag, Al, As, Au, B, Ba, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, Hg, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sc, Se, Sr, Te, Th, Ti, Tl, V, W and Zn using an aqua-regia (1:1:1 HCl-HNO_3-H_2O) digest and ICP-MS (inductively coupled plasma mass spectroscopy) analysis, on a 15 g sample (analytical method 1DX2). Samples returning > 500 ppb Au or > 100 ppm Ag were re-analyzed by fire assay with an atomic absorption (AA) finish. Samples returning > 5000 ppm Cu, Pb or Zn were reanalyzed by ICP-ES. Laboratory-inserted blanks (analytical and method), standards and duplicates (pulp and preparation) verify internal quality assurance/quality control procedures. Sample preparation, security and analytical procedures were all acceptable and there is no evidence of any tampering with, or contamination of the samples during collection, shipping, analytical preparation or analysis.

For a complete description of analytical methods refer to Appendix 4.

13 Interpretation and Conclusions

13.1 SkyTEM Airborne Geophysical Survey

The SkyTEM airborne geophysical survey proved successful in identifying areas on the project with suitable host rocks, and delineated more than 40 previously unidentified structures with orientations consistent with longitudinal veins and vein faults. Interpretation of the survey has identified at least five areas on the property with similar geophysical and structural characteristics to areas of known mineralization, which have been targeted for follow up with mapping and prospecting, soil geochemical sampling, diamond drilling and possibly RAB drilling. The survey also indicated that the Homestake prospect is unfavourably located with respect to host rocks, in an area characterized by low resistivity (correlated with schist-dominated areas) and few correctly oriented structures. This is consistent with observations made of drill core at Homestake, in which schist is the abundant lithology and quartzite only a minor component. This has downgraded the Homestake area for immediate follow up, and has highlighted the necessity for ongoing structural work on the property to better understand lithological and structural constraints on mineralization. It appears from the SkyTEM survey that mineralization at Homestake has been faulted to the southwest, and this is consistent with observations made by Dr. Kirsten Nicholson who spent two days documenting structures in Homestake trench TR-01 (K. Nicholson, pers. comm.)

13.2 Soil Geochemical Survey

The soil geochemical survey conducted in the Faith Gulch area extended a small survey completed in 2009 and targeted the interpreted intersection of strike extensions of the Caribou Hill vein, Caribou fault, and two northeast-southwest trending faults within quartzite. The original survey covered a small waste dump that returned 4708 g/t Ag, 1.13 g/t Au, 34.1 % Pb and 5.73 % Zn from a grab sample and identified anomalous gold and silver in soils. Results of the survey completed in 2011 delineated a 900 x 800 m zone of coincident Au and As anomalism in soils, with associated Ag values up to 10.1 ppm. The anomalous zone is open to the south and east, and results of the survey have advanced the area as a drill target for 2012

13.3 Diamond Drilling

Drilling at Caribou Hill targeted strike and depth extensions of the Caribou Hill vein, exposed near the top of the hill and in trench TR08-01, and followed up on mineralization identified during the 2008 drilling program. Eleven of the 14 holes drilled at Caribou Hill intersected mineralization, and three of the 11 returned results > 1000 g/t Ag. Results of the program defined 300 m of strike-continuous silver mineralization > 100 g/t Ag between 11 m and 35 m down-hole, with best results of 1.4 m of 1696 g/t Ag from 15.5 m (CH11-009), 1.6 m of 1183 g/t Ag from 24.1 m (CH11-018), 0.9 m of 1183 g/t Ag from 34.7 m (CH11-018) and 0.5 m of 1787 g/t Ag from 22.9 m (CH11-017). Results of the program indicate the potential for the discovery of additional mineralization along strike to the south and at depth. Follow up diamond drilling to confirm continuity of mineralization is recommended.

Drilling at Homestake targeted strike and depth extensions of the No. 1 and Shaft veins (HS11-012 to 018) and the No. 2 and 2a veins (HS11-019 to 022). None of the Homestake holes intersected visible mineralization, nor did they return any significant results. These results have downgraded Homestake as a target for 2012, and while Monster does not consider that the prospect has been adequately tested, further work on the structural controls on mineralization in the prospect area need to be better understood before committing to more diamond drilling.

13.4 Conclusions

Results of the 2011 exploration program have significantly enhanced the prospectivity of the Keno-Lightning project and increased the number of targets on the property, outside of the known mineralized areas. The SkyTEM airborne geophysical survey has identified two areas known to host mineralization as high priority areas for follow up with diamond drilling in 2012, and three unexplored areas without known mineralization as high priority areas for follow up with mapping and prospecting, soil geochemical sampling and RAB and/or diamond drilling. Results of the soil geochemical survey at Faith Gulch, which returned an 800 x 900 m zone of concomitant Au and As anomalism with associated Ag anomalies, have elevated the area as a high priority for testing with diamond drilling in 2012. The identification of 300 strike continuous metres of mineralization assaying > 100 g/t Ag at Caribou Hill means that this prospect remains a high priority for continued diamond drilling in 2012, to identify strike and depth continuations to previously identified mineralization. The poor results at Homestake, combined with the geophysical signature identified in the SkyTEM survey, which indicates a lack of suitable host rocks has downgraded the prospect. Detailed studies on the structural architecture of Homestake and surrounds will be needed before conducting further drilling on the prospect.

14 References

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15 Statement of Expenditures

Geophysics	Line Km	Rate/Kilometre	Cost
SkyTEM Airborne EM Survey	1460	$160.00	$233,600.00
SkyTEM Report			$6,000.00
Geophysical Intepretation (T.V Weis)			$9,931.36
Senior Geologist	10	$500.00	$5,000.00
TOTAL			**$254,531.36**

16 Certificate of Qualifications

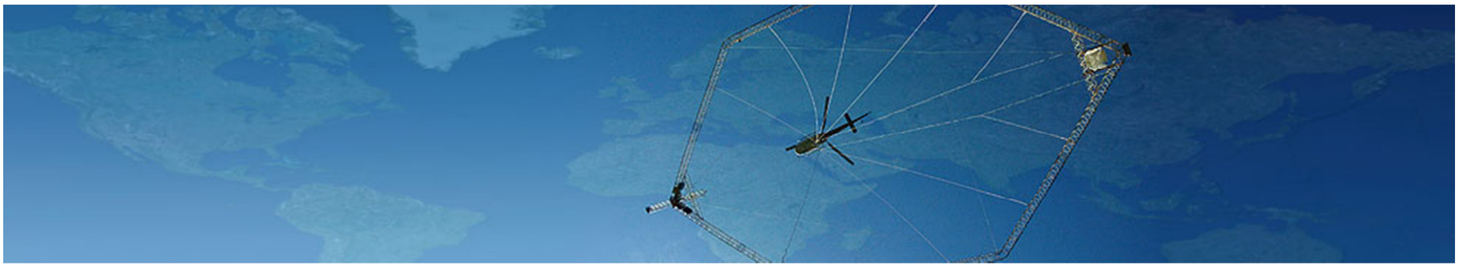
I, Joanna Lynette Ettlinger, of 207 East Queens Road, Vancouver, BC V7N 4N7 do hereby declare that:

1. I am currently employed as Vice President Exploration by Monster Mining Corp. of 750-580 Hornby Street Vancouver, British Columbia V6C 3B6.
2. I graduated with a Bachelor of Science degree from the University of Auckland in 1995, a Master of Science degree with First Class Honours from the University of Auckland in 1997 and a PhD in geology from the in 2011.
3. I have twelve years of mineral exploration experience in New Zealand, Australia and Canada, and have worked in the Yukon on gold, silver and base-metal projects since 2007. Relevant experience includes previous work on the Keno-Lightning project, and a background in hydrothermal geochemistry research, during the course of my Masters' and doctoral degrees.
4. I am a Professional Geoscientist registered with the Association of Professional Engineers and Geoscientists of British Columbia (licence number 36703) and a Chartered Professional (Geology) member of the Australasian Institute of Mining and Metallurgy (Membership No. 305534) and as such am considered a "Qualified Person" as defined by National Instrument 43-101.
5. I have visited the Keno-Lightning property, which is the subject of this report, and conducted and supervised the exploration program detailed herein. I am a "Qualified Person" in the context of National Instrument 43-101
6. I am not aware of any material fact or material change with respect to the subject matter of this report, the omission to disclose which makes this report misleading.
7. I am not independent of the issuer applying all tests in Section 1.5 of NI 43-101 in that I own shares and have options to purchase shares in the company.

Dated this 30th day of April, 2012 in Vancouver, British Columbia

Joanna Lynette Ettlinger, PhD, P.Geo, MAusIMM(CP)

Appendix 1
Geophysical Report – SkyTEM Surveys ApS



SkyTEM Survey:
Keno Lightening and McKay Hill Blocks, Canada
Data report

Client: Monster Mining Corp.

Date: August 2011

Contents

This data report covers the data acquisition of a time domain electromagnetic and magnetic survey carried out in Keno Lightening and McKay Hill Blocks, Canada 2011, by SkyTEM Surveys ApS.

Contact person at SkyTEM: Bill Brown Tel. +1 519-502-1436
Email: bb@skytem.com

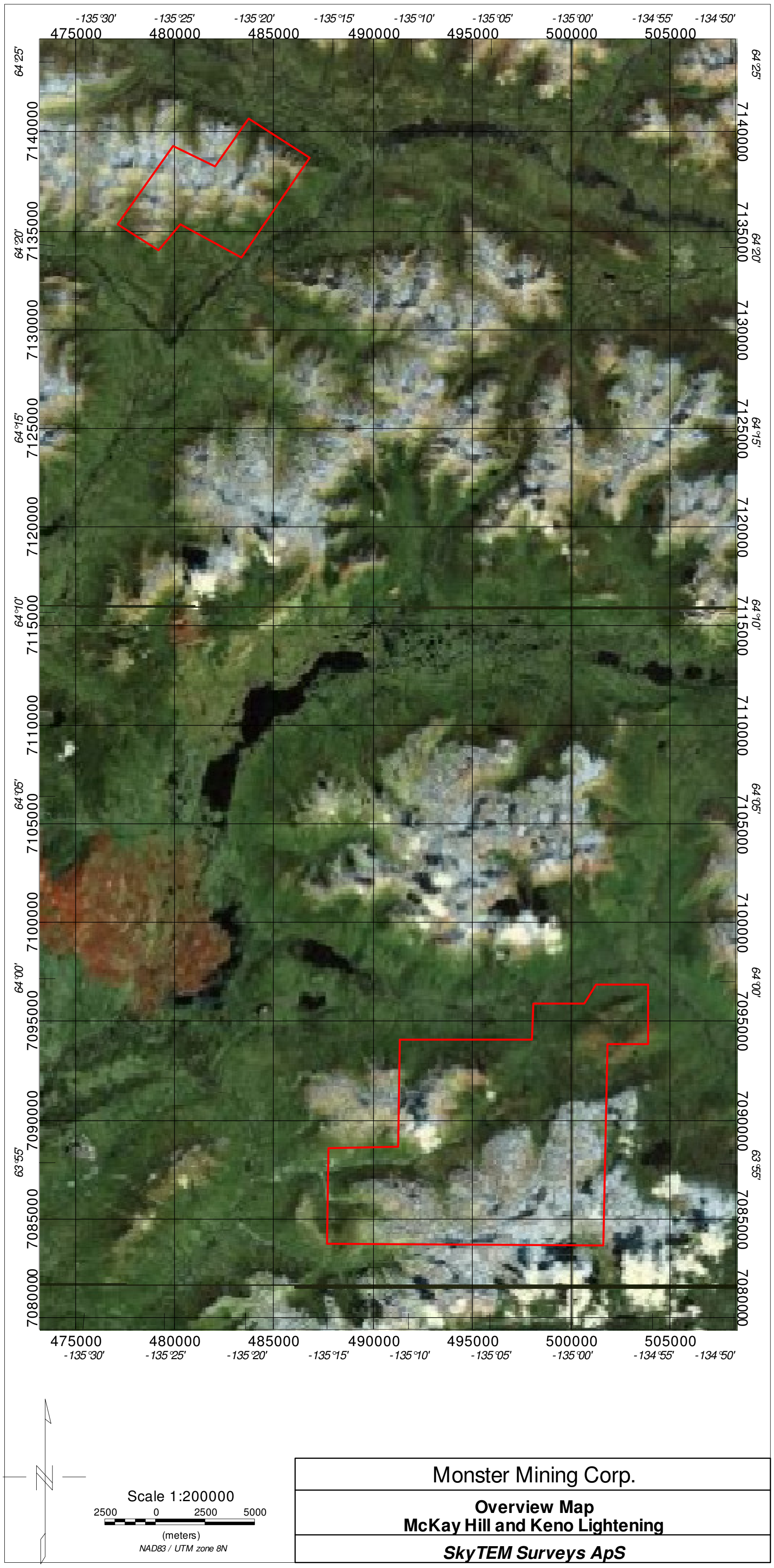


Figure 1 Project overview with the location of the McKay Hill and Keno Lightening blocks.

Introduction

From June 2 to June 16, 2011 a combined time domain electromagnetic and magnetic survey was performed by SkyTEM Surveys ApS in Keno Lightening and McKay Hill Blocks, Canada, see Figure 1.

The survey requested by Monster Mining Corp. was planned to consist of 1917.7 km flight lines in total.

SkyTEM Surveys ApS has agreed to deliver the electromagnetic and magnetic raw data measured during the flights together with the standard SkyTEM processing and inversion.

This report does not include any geological interpretations of the geophysical datasets.

Client		Monster Mining Corp. Suite 750 - 580 Hornby Street Vancouver BC V6C 3B6, Canada
Field crew		Ib Faber Mads Kristensen
Field work		June 2 to June 16, 2011
Flown line km		1917.7 km
Flight operation	Helicopter type Average flight speed Nominal terrain clearance (above any obstacles or hazards)	Eurocopter AS350FX2, operated by Abitibi Helicopters Ltd 60 km/h 30 - 40 m
Pilot		Richard Berube Pierre Otis
Report	Data processing and presentation QC by	Per Gisselø Flemming Effersø
Contact Person at SkyTEM		Bill Brown Email: bb@skytem.com

Definition of the areas

The survey areas are defined below by vertex points given in the following tables.

Coordinate systems used are UTM Zone 8N (NAD83).

The flight line orientations in the Keno Lightening and McKay Hill blocks are NW/SE with NE/SW Tie Lines.

Keno Vertex	UTM E (Z8)	UTM N (Z8)	Orientation/Line# planned
1	501634	7083686	NW – SE 100600 – 120400 NE – SW 200000 – 201400
2	487680	7083749	
3	487764	7088602	
4	491278	7088665	
5	491341	7094104	
6	498056	7094062	
7	498077	7095883	
8	500647	7095897	
9	501248	7096871	
10	503872	7096878	
11	503879	7093880	
12	501808	7093866	
13	501634	7083686	

McKay Hill Vertex	UTM E (Z8)	UTM N (Z8)	Orientation/Line# planned
1	486831	7138718	NW – SE 300100 – 309000 NE – SW 400000 – 400600
2	483325	7133638	
3	480269	7135358	
4	479198	7134048	
5	477121	7135371	
6	479912	7139327	
7	482015	7138282	
8	483748	7140676	

Instruments and parameter setup

The instrumentation involves a time domain electromagnetic system including a data acquisition system, a magnetometer, two DGPS', two inclinometers and two altimeters, see Figure 2.

A thorough description of the setup is given in Appendix 1.

The equipment setup has been chosen as a dual moment configuration including a Low moment (LM) with a peak moment of ~3,140 NIA and a High Moment (HM) with a peak moment of ~150,000 NIA.

The main benefit of the dual moment system is the possibility to measure the early time gates when transmitting in LM mode while still having the deep penetration obtained with the HM mode.

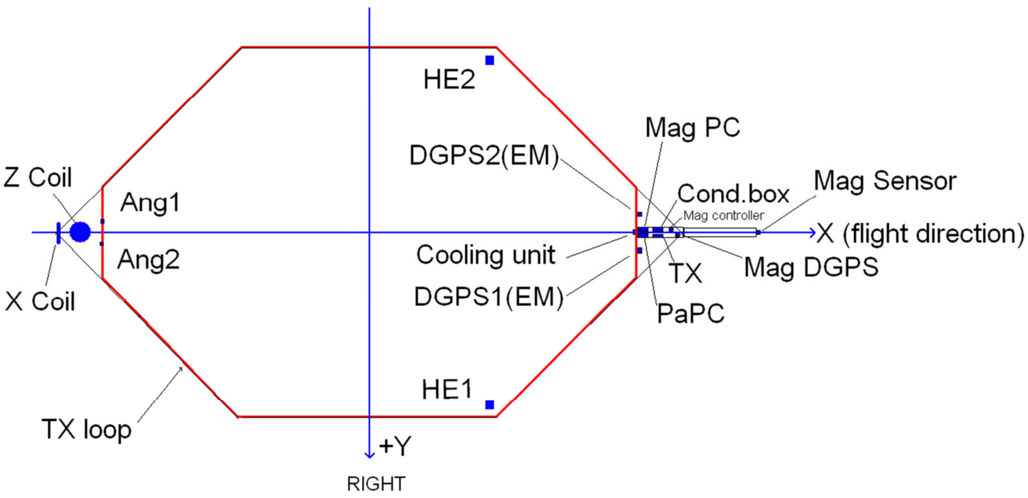


Figure 2 Sketch showing the frame and the position of the instruments. The red line defines the transmitter loop. The horizontal plane is defined by (x, y).

The location of instruments in respect to the frame is shown in Figure 2.

X and y define the horizontal plane. Z is perpendicular to (x, y). X is positive in the flight direction, y is positive to the right of the flight direction, and z is positive downwards.

The DGPS systems are mounted in the front of the frame.

The generator used for powering the transmitter is positioned 10 m below the helicopter.

A more thorough description of the system and individual instruments can be found in ref /1/ and Appendix 1.

Synchronizing the data

All recorded data are marked with a time stamp used to link the different data types. The time stamp is in UTC/GMT.

The time stamp formats are either

1. yyyy/mm/dd hh:mm:ss.sss – Values defined as year/month/day/hours/minutes/seconds.

or

2. Ddddd.ssssssssss - Datetime values defined as the number of days since 1900-01-01 and seconds of the day.

Calibration of the TEM system

Special note on Calibration (50/60 Hz)

Due to the fact that the electrical power supply grid in North America runs with a frequency of 60Hz, whereas the European grid uses 50 Hz, the calibration at the Danish National Reference site has not been conducted with the exact same timing for the transmitter and receiver (referred to as "the script"). This is done in order to avoid noise from the 50 Hz power grid while calibrating the system.
The following table describes the difference between the script used for calibration in Denmark and the script used for production in North America.

Parameter	50 Hz script	60 Hz script
ON-time HM	10000 µs	8000 µs
OFF-time HM	10000 µs	8667 µs
ON-time LM	800 µs	800 µs
OFF-time LM	1450 µs	1283 µs
Base frq. HM	25 Hz	30 Hz
Base frq. LM	222.2 Hz	240 Hz

The calibration parameters found at the reference site is not depending on the timing and can be used regardless of the frequency setup. The following paragraphs and Appendix 3 hence refer to the 50 Hz script calibration, but the parameters are valid for the 60 Hz script as well.

Calibration at the National Danish Reference Site

The complete SkyTEM equipment has been tested and calibrated at the Danish National Reference Site in March 2011.
The calibration includes measurements of the transmitter waveform and data level in different altitudes. By these measurements it has been documented that the instrumentation can reproduce the reference site using constant calibration parameters independent of the flight altitude.

The calibration results and parameters are shown below:

Low moment:
Shift factor: 0.96 (on the raw dB/dt data)
Time shift: -1.1e-6

High Moment:
Shift factor: 0.96 (on the raw dB/dt data)
Time shift: -1.1e-6

All data has been processed using the above stated calibration parameters.
SkyTEM inversion software (iTEM) handles time shift calibration during import of data. If third party processing or inversion software is used the calibrated gate centre times in Appendix 2 should be used.

The waveform, as well as the reproduced soundings in different altitudes, are shown in Appendix 3.

High altitude test

A high altitude test was performed on May 14, 2011 at 1500 masl. The test was performed in order to establish that the internal noise was below contractual specs and that no drift was present in the system. The test was performed with exactly the same equipment and configuration as used during the survey.

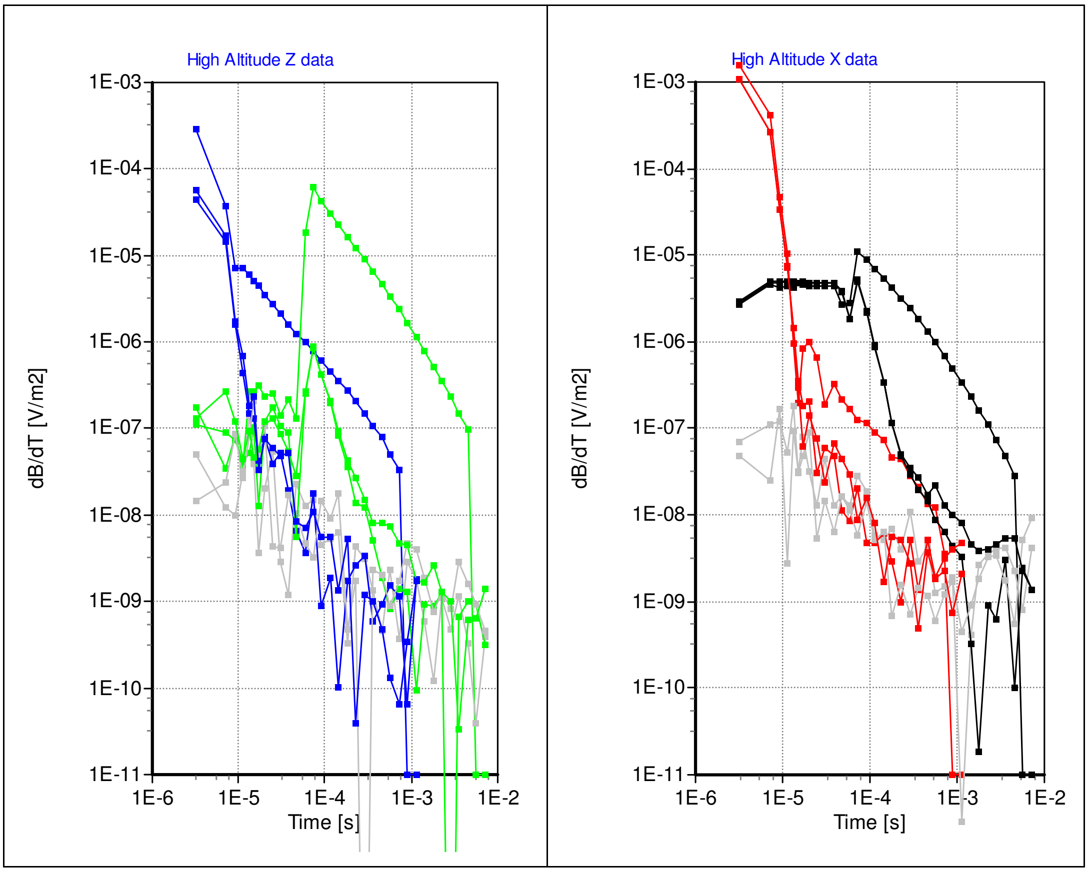


Figure 3 Z-coil and X-coil data. High altitude tests performed May 14, 2011 at 1500 masl. A comparison of the background noise level (grey curves) with the signal when the transmitter is on (green and blue curves for Z-coil HM and LM, and black and red curves for X-coil HM and LM). A typical production response is transposed for comparison. The data unit is V/m^2 (data normalized with the receiver coil area only).

In high altitude the background noise and the signal with the transmitter on are very much alike after the front gate opens (Figure 3). Because of the high altitude no signal from the ground is present. Therefore it can be concluded that there was no noise in the system. It is also evident that the production response is 2 to 3 decades higher than the noise level for Z coil data and 1 to 2 decades higher for X coil data.

Data acquisition

The planned flight lines covering the Keno Lightening and McKay Hill are shown in Figure 4 and Figure 5 respectively. The lines are parallel-spaced 100 m apart and striking in a NW/SE direction.

The flight lines are numbered from 100600 - 400600.

Block	In-line	Tie-Line
Keno Lightening	100600 – 120400	200000 – 201400
McKay Hill	300100 – 309000	400000 – 400600

The nominal terrain clearance is 30 m above any obstacles or hazards, with an increase over forests, power lines, etc. It is always the pilot who decides the safety height for the operation.

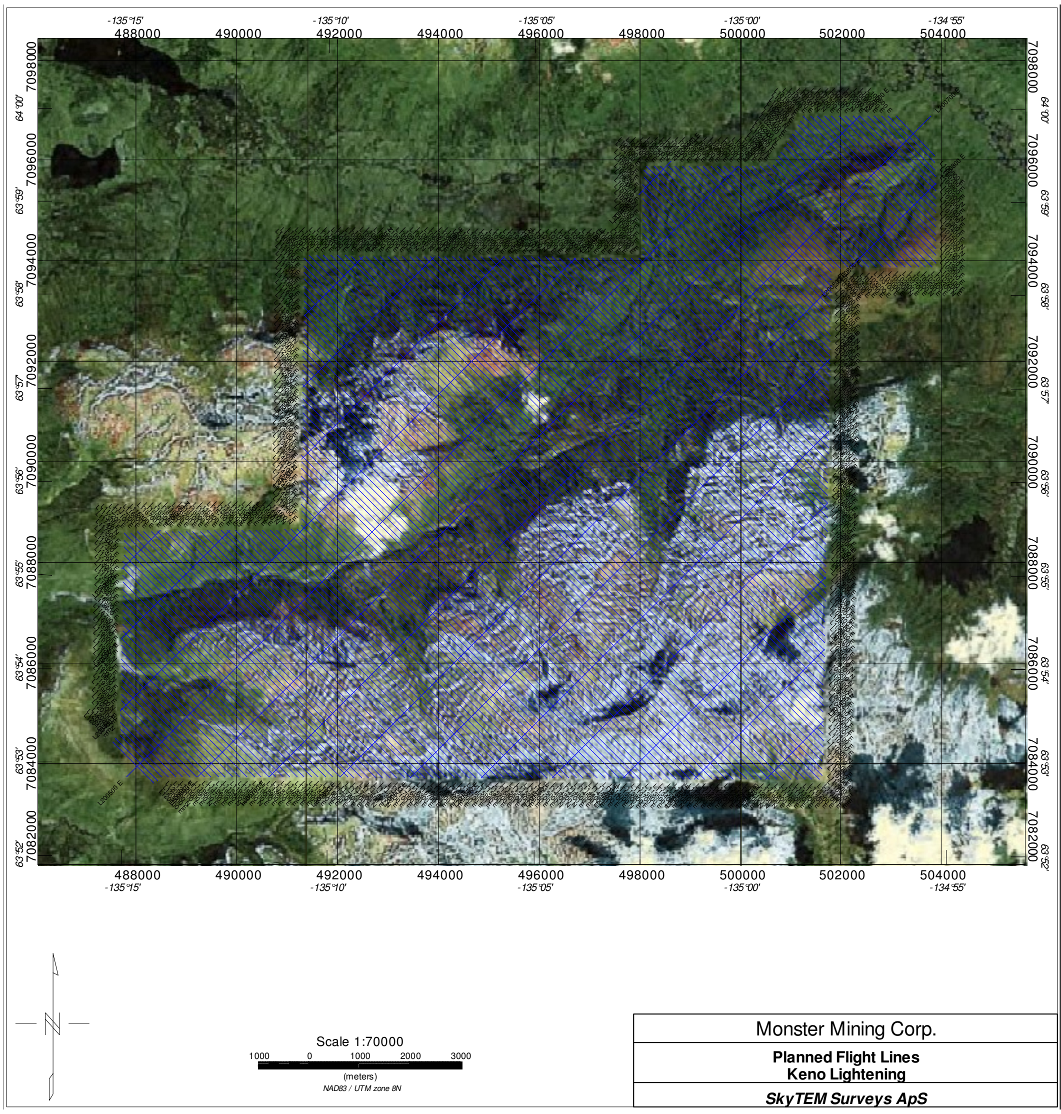


Figure 4 Planned flight lines (blue) for the Keno Lightening block UTM Z8 (NAD83).

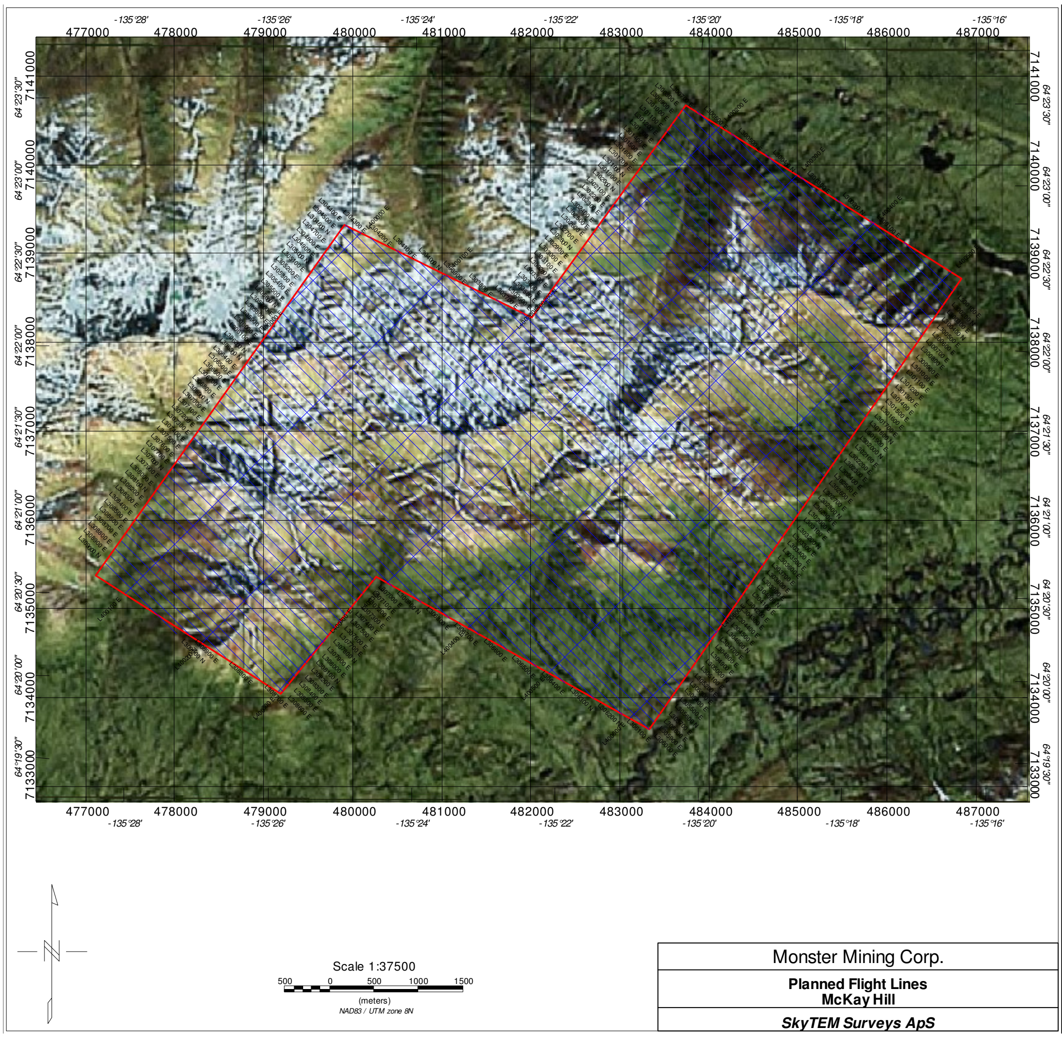


Figure 5 Planned flight lines (blue) for the McKay Hill block UTM Z8 (NAD83).

The helicopter airspeed was planned to be 85 km/h above a flat topography and in no wind. This may vary in areas of rugged terrain and/or windy conditions.
Actually flown lines can be seen in Figure 6 and Figure 7. Discrepancies from the planned lines occur when possible noise sources are present, or the nature of the ground like roads, buildings and antennas has called for a diversion.

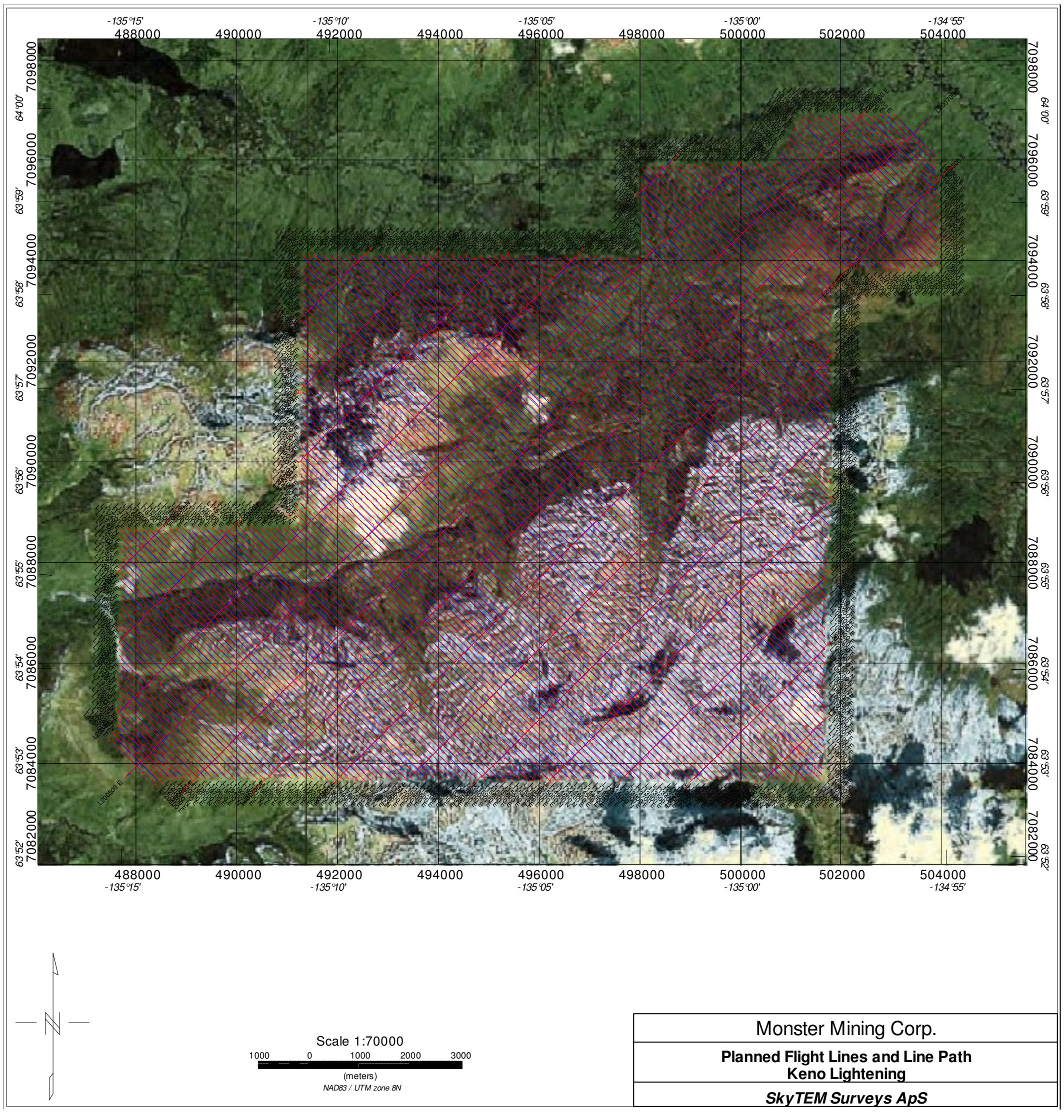


Figure 6 Red lines represent actually flown lines in respect to planned flight lines (blue lines) for the Keno Lightening block. Coordinate system: UTM Z8 (NAD83).

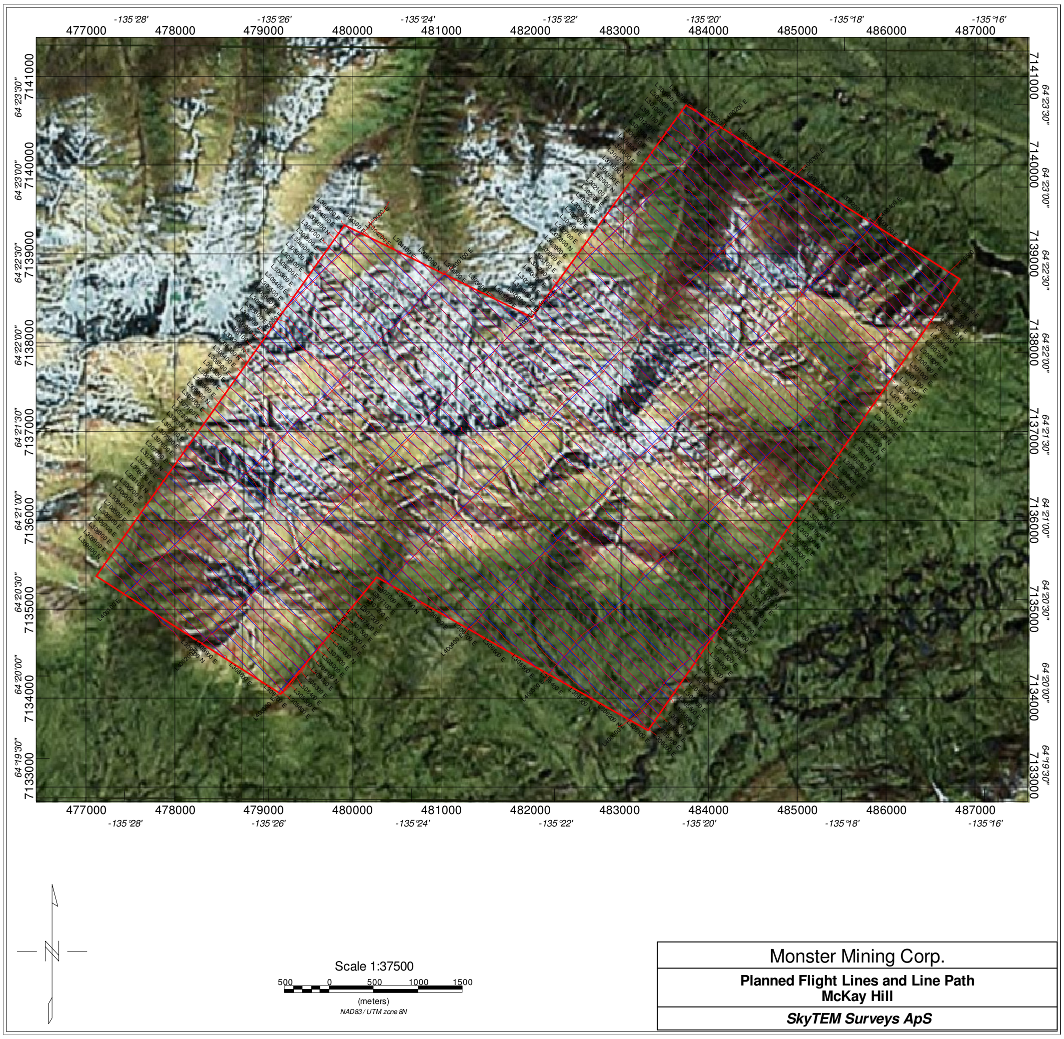


Figure 7 Red lines represent actually flown lines in respect to planned flight lines (blue lines) for the McKay Hill block. Coordinate system: UTM Z10 (NAD83).

Ground Base Stations

The DGPS and magnetic base stations were positioned at Rackla airstrip as the closest accessible place to the survey areas.

DGPS base station

Utmost effort was made to ensure that the DGPS base station was placed at a location of maximum possible view to satellites and out of any metallic objects that could influence the GPS antenna.

Table showing DGPS base station location (lat/Lon (WGS84)):

Area	Lat	Lon	Ell. Height
Keno	63°55”05.67695’	-135°19”15.69833’	890 m

Magnetometer base station

Great effort was made to ensure that the base station magnetometer was placed in a location of low magnetic gradient, away from electrical transmission lines and moving metallic objects, such as motor vehicles and aircrafts.

The location of the magnetic base stations can be seen in the table below (Lat/Lon, WGS84, decimal degrees).

Magnetometer Base station	Lat	Lon
Keno	63° 54' 33.3468"	-135° 19' 0.4398"

Flight reports

For each flight, a report with key information regarding the data gathering was made. Listed in the reports are details on the weather, special data parameters and other events which may influence the data. Selected information from the flight reports are shown in the table below:

Weather

Flight	Temperature (⁰C)	Wind (m/s)	Visibility	Description
20110602.01	5 - 10	5 NNE	ok	High sealing
20110602.02	10 - 15	8 - 12 NNE	good	High sealing
20110603.01	0	3 N	good	Clear sky
20110603.02	5	3 N	good	Clear sky
20110603.01	5	5NE	ok	High sealing
20110604.02	15	7 - 10 SE	ok	Heavy clouds coming in from south
20110605.01	10	5 E	ok	High sealing
20110605.02	18	5 E	ok	High sealing, wind picking up
20110606.01	5 - 10	0	ok	Highsealing
20110606.02	10 - 15	5 S	good	Clear sky
20110606.03	10 - 15	7 S	good	Clear sky
20110607.01	5 - 10	0	ok	Highsealing
20110607.02	5 - 10	0	ok	Highsealing
20110607.03	10 - 15	3 E	good	Highsealing
20110608.01	6 - 8	1 -3 SW	good	Highsealing
20110609.01	6-10	1 - 3 SW	Poor	Rain and low cloud base in the morning
20110610.01	10 - 15	0 - 3	good	blue sky, few high thin clouds
20110610.02	10 - 15	0 - 3	good	blue sky, few high thin clouds
20110611.01	5 - 8	2 - 4	good	Overcast, high thin clouds
20110611.02	4 - 7	2 - 6	good	Partially overcast, high clouds, light snow at altitude
20110612.01	2 - 5	0 - 3	good	blue sky, few high thin clouds
20110612.02	15 - 18	4 - 8	good	blue sky, few high thin clouds
20110613.01	12 - 16	4 - 8	good	blue sky, shovers in afternoon
20110614.01	15 - 18	3 - 9	good	Some clouds, later quite windy, shovers
20110615.01	7 - 10	2 - 4	good	Few clouds, light wind
20110616.01	4 - 8	3 - 6	good	Mostly overcast, few light shovers
20110616.02	12 - 15	1 - 3	good	Mostly overcast, few light shovers

Daily Diary

Date	Description
20110602	Production McKay Hill. Two flights
20110603	Production Keno Lightning. Two flights. 36 drums delivered.
20110604	Production Keno Lightning. Two flights.
20110605	Production Keno Lightning. Two flights.
20110606	Production Keno Lightning. Three flights.
20110607	Production Keno Lightning. Three flights.
20110608	Production Keno Lightning. One flight
20110609	0-Position Flights 1&2
20110610	Production Keno Lightning, 2 flights
20110611	Production, Keno Lightning Tie-Lines & McKay Lines
20110612	Production, McKay Lines
20110613	Helicopter down for maintanace
20110614	One production flight.
20110615	Flight aborted due to high wind in survey area
20110616	1½ flights finished project, all lines acounted for.

Processed data

Selected control parameters are plotted in Appendix 4. The plots contain information about the flight altitude, speed, angle of the frame, transmitted current, transmitter voltage and transmitter temperature.

Mean values and standard deviations of control parameters are found in the table below.

Control parameter		Mean Value	Standard Deviation
Ground speed*)		48. 3 km/h	19.0 km/h
Processed height		56.2 m	22.7 m m
Tilt angle	X	16.9 degrees	11.4 degrees
	Y	-0.9 degrees	3.26 degrees
Tx Voltage**)	Tx_off	70.5 V	-
	Tx_on	68 V	-
Low moment Current**)		9.61 A	0.06 A
High Moment Current**)		109.8 A	1.22 A
Tx temperature**)		35 °C	-

**) Actual speed varies as a function of day and flight direction due to different wind directions and magnitude.*
***) Few spikes are seen in the temperature, current and voltage data. These are not caused by errors in the instruments but are a matter of digital drop outs.*

EM processing

All data are resampled to 10Hz in the SkyTEM in-house software SkyPRO.

The data are normalized in respect to effective Rx coil area, Tx coil area, number of turns and current giving the unit: pV/(m^4·A).

The raw HM EM data are filtered using a third order polynomial filter with varying filter width increasing at late gate times.

The raw LM EM data are filtered using a Box-car filter with a width of 3.6 s

All auxiliary devices (DGPS, Laser altimeters, inclinometers) are moved to the centre of the frame as based on the values stated in Appendix 1.

After merging auxiliary data together with EM data in SkyPRO additional filters in Oasis Montaj Geosoft has been applied. This include for both LM and HM:

1. Gaps from HM/LM series are interpolated using B-Spline filter
    a) Smoothness= 0.55
    b) Tension= 0.0

2. Transferring data channels into Oasis Montaj Geosoft Array channels

Tilt processing

The X and Y angle processing involves manual and automated routines using a combination of the SkyTEM in-house software SkyPRO and Oasis Montaj Geosoft.
The processing involves the following steps:

1. 3 sec box filter (SkyPRO)
2. Manual editing for spikes (Geosoft)
3. Akima interpolation of edited gaps (Geosoft)
4. Low pass filtering of 3.5 sec. (Geosoft)

Height processing

The height processing involves manual and automated routines using a combination of the SkyTEM in-house software SkyPRO and Oasis Montaj Geosoft.
The processing involves the following steps:

1. Keeping the 2 highest values pr. second and discarding the rest to correct for the canopy effect (treetop filter)
2. 2 sec running box filter (smoothing filter)
3. Tilt correction
4. Averaging of the two laser values
5. Additional filters in Geosoft involving:
    a. Editing of spurious data (i.e. missing data over lakes etc.)
    b. Small data gaps interpolated (Akima interpolation)
    c. Low pass filter of 3.5 sec

DGPS processing

The DGPS has been processed using the Waypoint GrafNav Lite Differential GPS processing tool. The standard airborne settings have been used.

1. Import of base station (Master)
2. Import of Airborne files (Rover)
3. Calculation of forward and reverse DGPS solution
4. Export as .txt file

The DGPS.txt files are used as input to the SkyPRO software assuring DGPS corrected data in the processed files.
In the unlikely event that DGPS data are not available the SkyPRO software will automatically use the raw GPS data as input.

The ground speed, altitude, latitude and longitude from the processed DGPS are merged into the final GDB. Afterwards the coordinates are transformed into UTM Zone 8N (NAD83).
A low pass filter of 3.5 sec has been applied to the above mentioned parameters .

Digital elevation model

A digital elevation model (DEM) channel has been calculated by subtracting the filtered laser altimeter data from the DGPS elevation.
The Processing to the final DEM involves the following steps:

1. Filtering and processing of the laser altimeter height as described above
2. DEM data received by subtraction of final filtered laser data from final processed DGPS altitude data
3. Grids produced using the minimum curvature method – grid cell size 30. Afterwards a Hanning filter has been applied to the grid.

The DEM channel was produced and gridded (see Figure 8 and Figure *9*) as described above in Geosoft format and included in the data delivery catalogue.

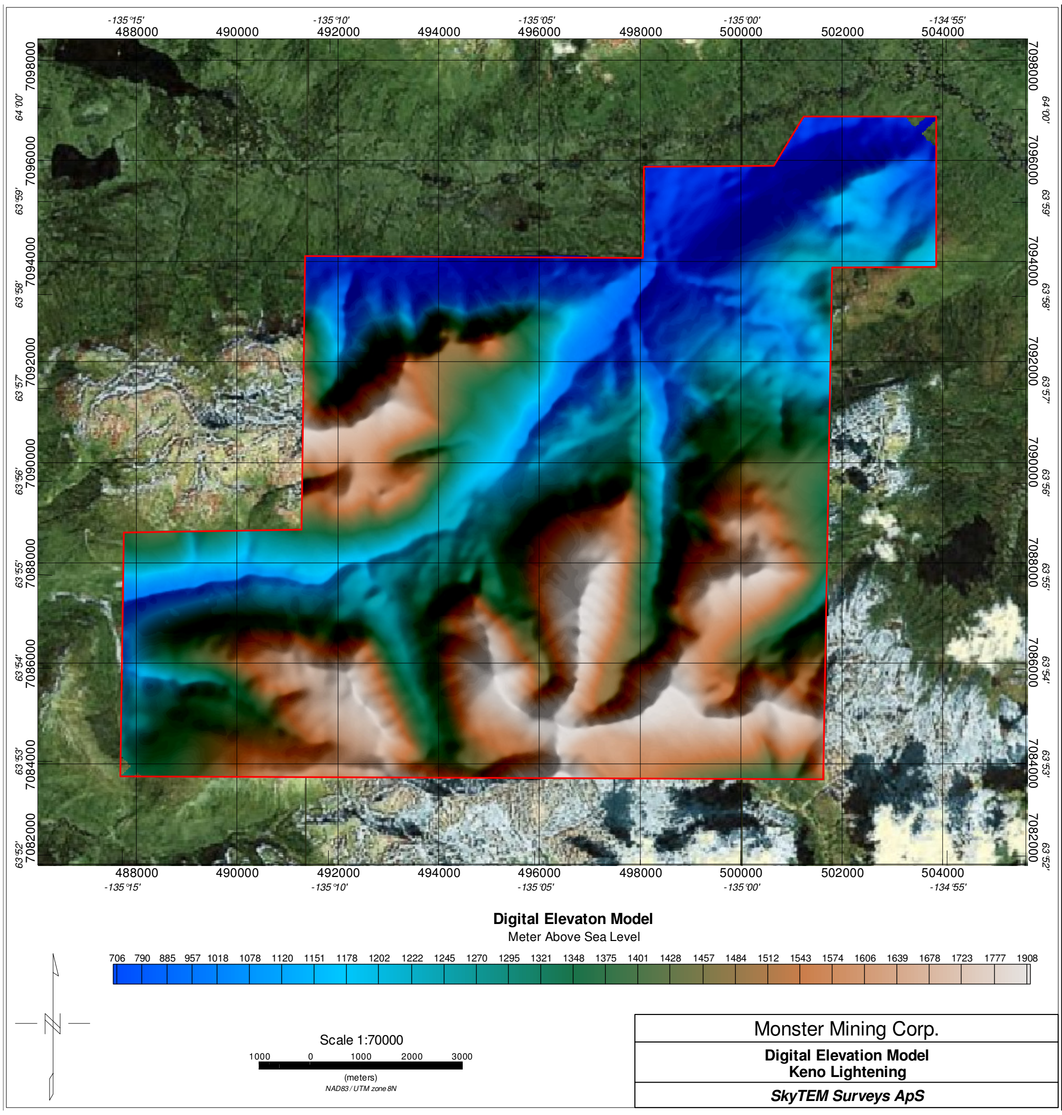


Figure 8 *Digital Elevation Model of the Keno Lightening block in Meters above sea level. UTM Zone 8N (NAD83).*

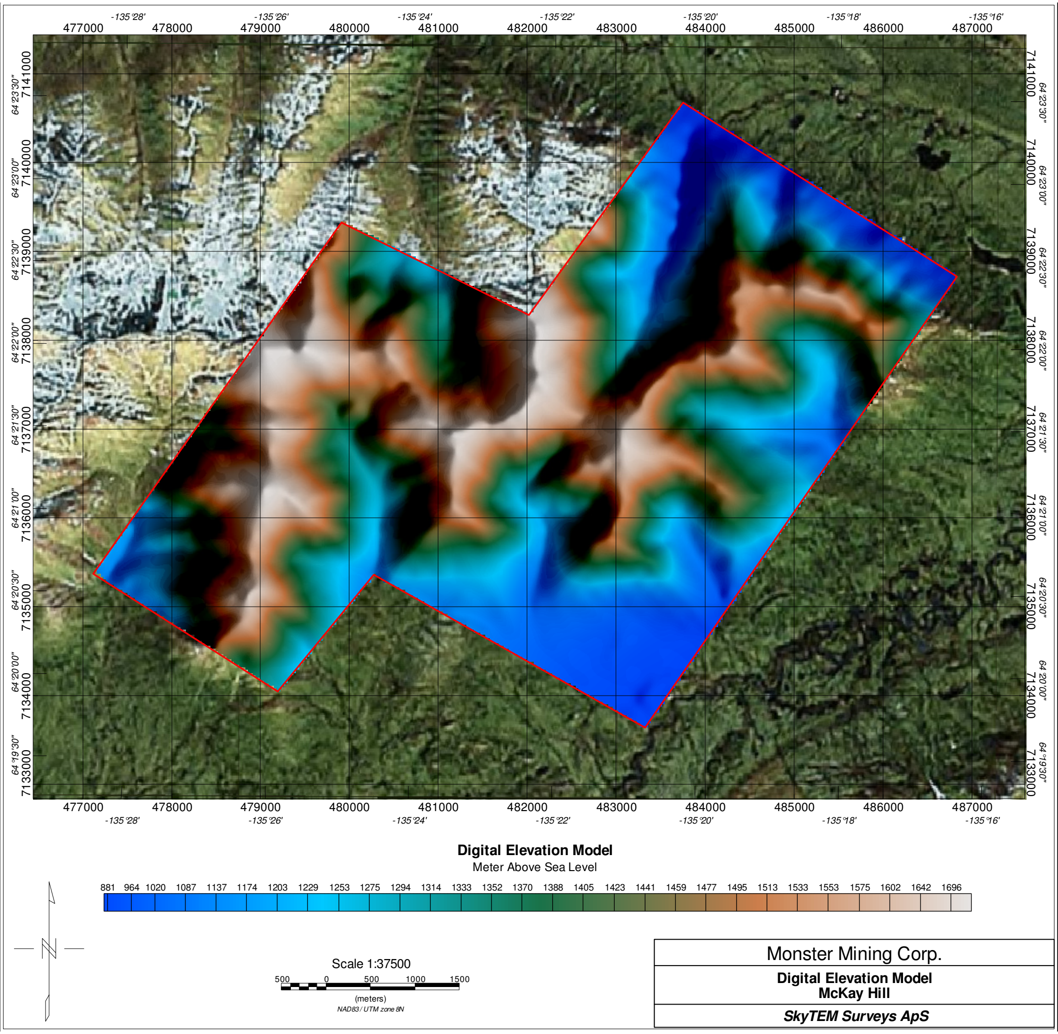


Figure 9 *Digital Elevation Model of the McKay Hill block in Meters above sea level. UTM Zone 8N (NAD83).*

EM GDB-files

The EM GDB files are the foremost result of the SkyTEM survey, containing all the collected and processed EM data and information used for the interpretation and inversion.

Data in the files are split at the beginning and end of each planned flight line.
The raw EM data and auxiliary data are filtered and processed as described above. All parameters in the GDB-file hence refer to the origo of the frame.

The GDB can be used as input for further processing and gridding and as input to inversion and interpretation software.

The projection of the GDB is given as Latitude/longitude, WGS84 and UTM Zone 8N (NAD83).

The header of the EM GDB-file gives the following information:

Parameter	Explanation	Unit
Fid	Unique Fiducial number. Fid with the value of 0.0 is equal to midnight on the date of 2011/05/15	seconds
Line	Line number	LLLLLL
Flight	Name of flight	yyyymmdd.ff
DateTime	DateTime format	Decimal days
Date	Date	yyyymmdd
Time	Time	hhmmss.zzz
AngleX	Angle in flight direction	Degrees
AngleY	Angle perpendicular to flight direction	Degrees
Height	Filtered height measurement	Meters
DEM	Digital Elevation Model	Meters above mean sea level
Lon	Latitude/longitude, WGS84	Decimal degrees
Lat	Latitude/longitude, WGS84	Decimal degrees
E	UTM Zone 8N (NAD83)	Meter
N	UTM Zone 8N (NAD83)	Meter
Alt	DGPS Altitude	Meters above mean sea level
GdSpeed	Ground Speed	[km/h]
Curr_1	Current, high moment	Amps
Curr_2	Current, low moment	Amps
LM_Z_G5[xx]	Normalized LM Z-coil value: gate 5-26. [xx] refer to geosoft array channel number*	pV/(m4*A)
HM_Z_G16 [xx]**	Normalized HM Z-coil value: gate 16-34. [xx] refer to geosoft array channel number*	pV/(m4*A)
LM_X_G10[xx]	Normalized LM X-coil value: gate 10-26. [xx] refer to geosoft array channel number*	pV/(m4*A)
HM_X_G19[xx]**	Normalized HM Z-coil value: gate 19-34. [xx] refer to geosoft array channel number*	pV/(m4*A)

*) If Geosoft array channels are exported, the numbers in the brackets starts from [0]. I.e. LM_Z_G5[4] corresponds to LM Z gate 9. The same names are kept as grid names of the EM channels.

Presentation of GDB-files

High and low moment z coil gates from the GDB-file have been exported as Geosoft .grd files. The files are included in the data delivery catalogue. Figure 10 shows an example of the HM data.

Please note that no height correction has been applied on the raw EM data. This can cause striations in the data set when looking at the grids. This is due to the fact that variations in height will change the magnitude of the EM signal.

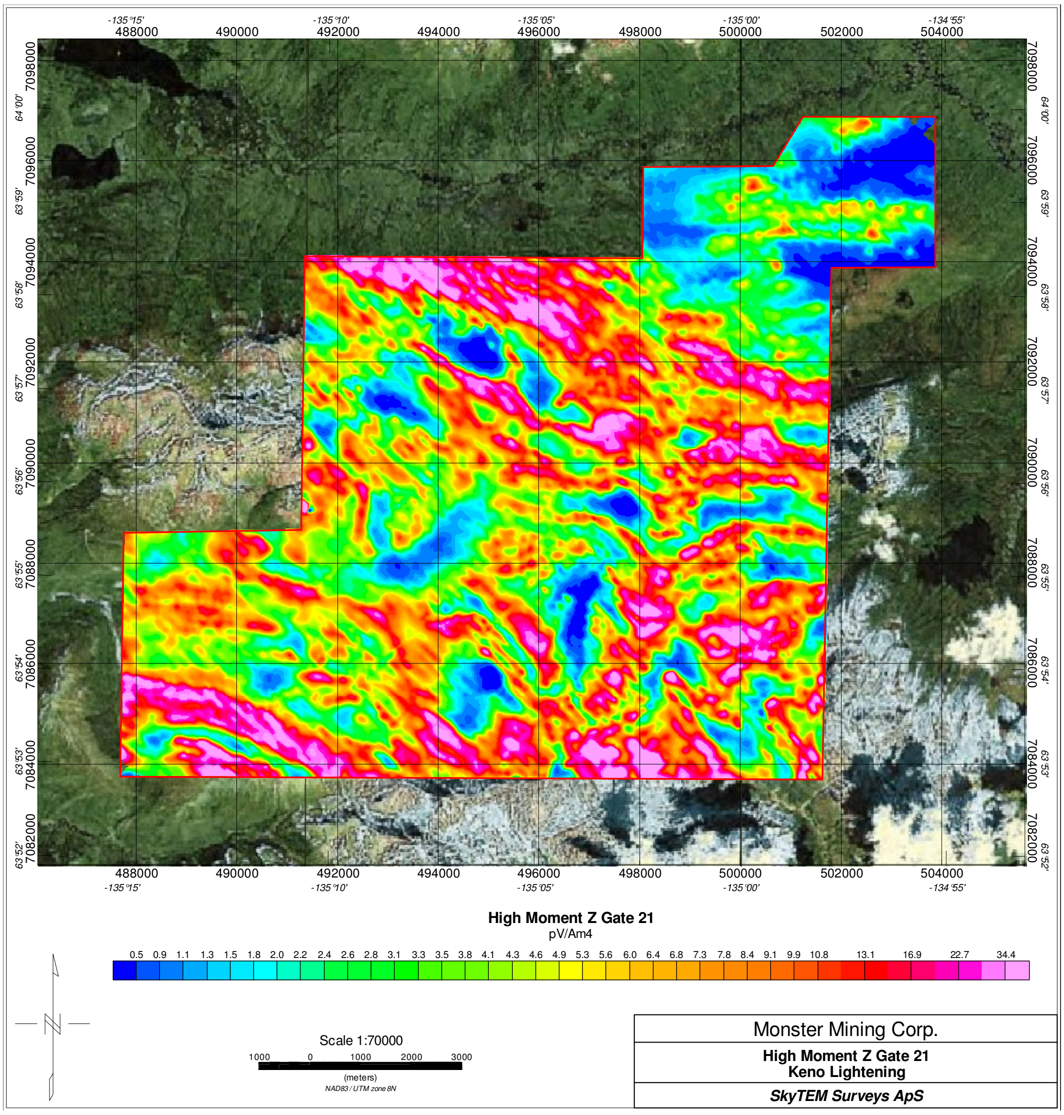


Figure 10 Plot of raw HM Z coil data from Gate 21 of the Keno Lightning block. Gate plots can be found as Geosoft Montaj .grd files in the data delivery catalogue. Warm colors (red) represent high signal and cold colors (blue) represent low signal.

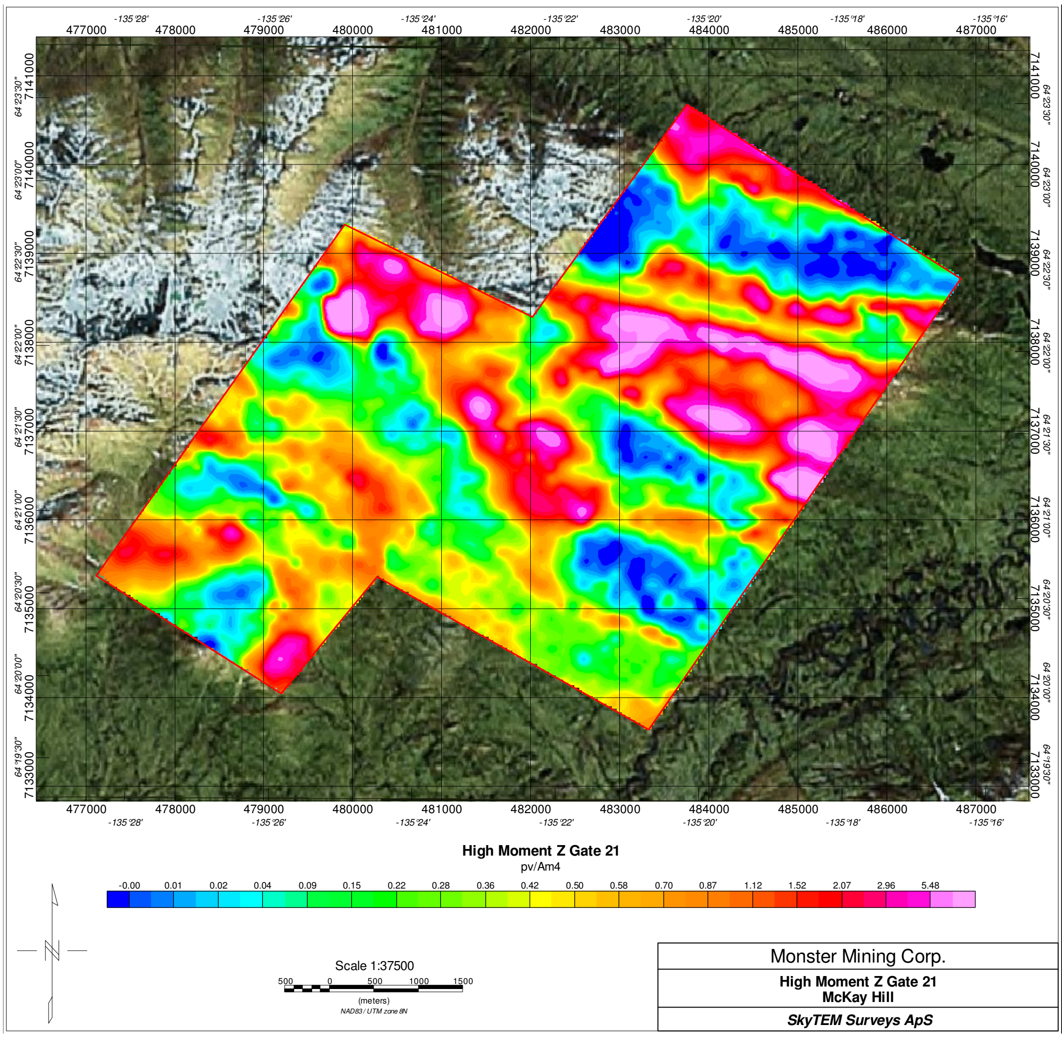


Figure 11 Plot of raw HM Z coil data from Gate 21 of the McKay Hill block. Gate plots can be found as Geosoft Montaj .grd files in the data delivery catalogue. Warm colors (red) represent high signal and cold colors (blue) represent low signal.

Mag processing

Final processing of the magnetic data involved the application of traditional corrections to compensate for diurnal variation and heading effects prior to gridding.

Advanced full processing of magnetic data was implemented in Geosoft's Oasis Montaj software as follows:

- Processing of static magnetic data acquired on magnetic base station
- Pre-processing of airborne magnetic data
  - Stacking of data from 60 Hz to 10 Hz in SkyPro.
  - Moving positions to the centre of the sensor in SkyPro.
  - Adapting auxiliary data channels from EM GDB (processed height, Angles, Speed and DEM)

- Processing and filtering of airborne magnetic data
- Standard corrections to compensate the diurnal variation and heading effect
- IGRF correction
- Levelling
- Gridding

Processing of base station magnetic data

The base station magnetometer data was transferred into the base station Geosoft GDB database on a daily basis for further processing. A non-linear filter to remove spikes and a low-pass filter was applied to smooth the magnetic data.

IGRF was calculated and subtracted from TMI data to obtain residual magnetic field and remove secular variation.
Diurnal variation was calculated from residual magnetic field by subtracting the mean value averaged from all observations received on magnetic base station in course of the survey.

Processing and Filtering of airborne magnetic data

No spikes or data out of range was observed on airborne TMI data therefore no manual editing or non-linear filtering of the data was required. TMI data was filtered and interpolated as follows:

- Adjacent record at the beginning and end of each 0.3 sec gap in magnetic data not measured during low moment TEM data acquisition was deleted. These records may still be influenced by B-field generated during low moment TEM data acquisition.
- Bi-cubic spline (tension of 0.1 and smoothness of 0.5) was applied as low-pass filter – this filter also interpolates the gaps in magnetic data not acquired during low moment TEM data acquisition (0.3 sec gaps)

Corrections to the magnetic data

The processing of the data involved the application of the following corrections:

Airborne magnetometer data was corrected for diurnal variations. Calculated diurnal variation was subtracted from the filtered airborne magnetic data.

No time lag correction is necessary since the positions are shifted to the sensor location to account for the distance between the GPS position and the position of the magnetic sensor.

The heading correction test flown during the survey shows the heading errors as indicated in the following table.

Direction	Heading Correction
0 deg	0.01 nT
90 deg	0.6 nT
180 deg	-0.18 nT
270 deg	0.11 nT

The coefficient as listed above were so low that no heading correction was applied to the data.

IGRF correction

The International Geomagnetic Reference Field (IGRF) is a long-wavelength regional magnetic field calculated from permanent observatory data collected around the world. The IGRF is updated and determined by an international committee of geophysicists every 5 years. Secular variations in the Earth's magnetic field are incorporated into the determination of the IGRF.

The IGRF model for all blocks was calculated before levelling using the following parameters for the survey area:

IGRF model year: IGRF 11th generation
Date: variable according to date channel in database
Position: variable according to GPS WGS84 longitude and latitude
Elevation: variable according to magnetic sensor altitude derived from DGPS data

Tie-line levelling and micro-levelling of magnetic data

After applying the above corrections to the profile data, statistical levelling of control lines followed by full levelling of traverse lines and micro-levelling is usually applied as a standard procedure.

The following steps were adapted on the data:

- Statistical levelling on control lines applied
- Statistical levelling on trend lines applied
- Full levelling on traverse lines applied
- Micro levelling applied on traverse lines
    - Decurrogation cutoff wavelength = 2000 m
    - max amplitude limit 1.6 nT
    - Naudy filter length, tolerance 1000 m, 0.0001

The corrected data were then used to generate the final grids free of line directional noise.

TMI recalculation

Residual magnetic field (RMF) was the outcome of processed magnetic data after all corrections and levelling was applied.
Total magnetic intensity was recalculated to add back the IGRF using the following parameters.

IGRF model year: IGRF 11th generation
Date: variable as flown
Position: variable according to GPS WGS84 longitude and latitude
Elevation: variable according to magnetic sensor altitude derived from DGPS data

MAG GDB-files

The GDB file is the main result of the magnetic survey, containing all the processed magnetic data and information for the interpretation and gridding.

The projection of the GDB-file is UTM Zone 8N (NAD83).

The header of the magnetic GDB-file gives the following information:

Channel Name	Description	Units
Line	Line number	LLLLLS
Flight	Flight number	YYYYMMDD.FF
Date	UTC date	YYYYMMDD
Time	UTC time	HH:MM:SS.S
Lon	Longitude using WGS84 datum	Decimal-deg.
Lat	Latitude using WGS84 datum	Decimal-deg.
E	Easting in UTM Zone 8N (NAD83)	Meter
N	Northing in UTM Zone 8N (NAD83)	Meter
Alt	Mag sensor GPS altitude – mean sea level altitude – geoid EGM96	Meter
Height	Processed laser altimetry – mag sensor above ground level	Meter
DEM	Calculated digital elevation model – mean sea level	Meter
IGRF_TMI	calculated IGRF-11 - total magnetic intensity	nT
IGRF_Inc	calculated IGRF-11 - magnetic inclination	Degrees
IGRF_Dec	calculated IGRF-11 - magnetic declination	Degrees
Bmag_TMI	Total Magnetic Intensity – raw magnetic data – magnetic base station	nT
Bmag_diur	Diurnal variation– magnetic base station data	nT
mag_raw	raw magnetic data – total magnetic intensity - despiked	nT
Mag_cor	residual magnetic field - corrected for diurnal, lag, heading and IGRF-11	nT
RMF	Residual magnetic field – IGRF removed - final corrected and levelled magnetic data	nT
TMI	Total magnetic intensity – final corrected and levelled magnetic data; IGRF recalculated.	nT

Gridding of magnetic data

The corrected data was used to generate the Residual Magnetic Field (RMF) and Total Magnetic Intensity (TMI) grid. Corrected magnetic line data was interpolated between survey lines using a minimum curvature gridding algorithm to yield x-y grid values for a standard grid cell size of 30. A hanning filter was used to remove residual noise.

Figure 12 and Figure 13 shows a contoured map after processing data from the magnetometer.

All grids from the areas can be found in the data delivery folder.

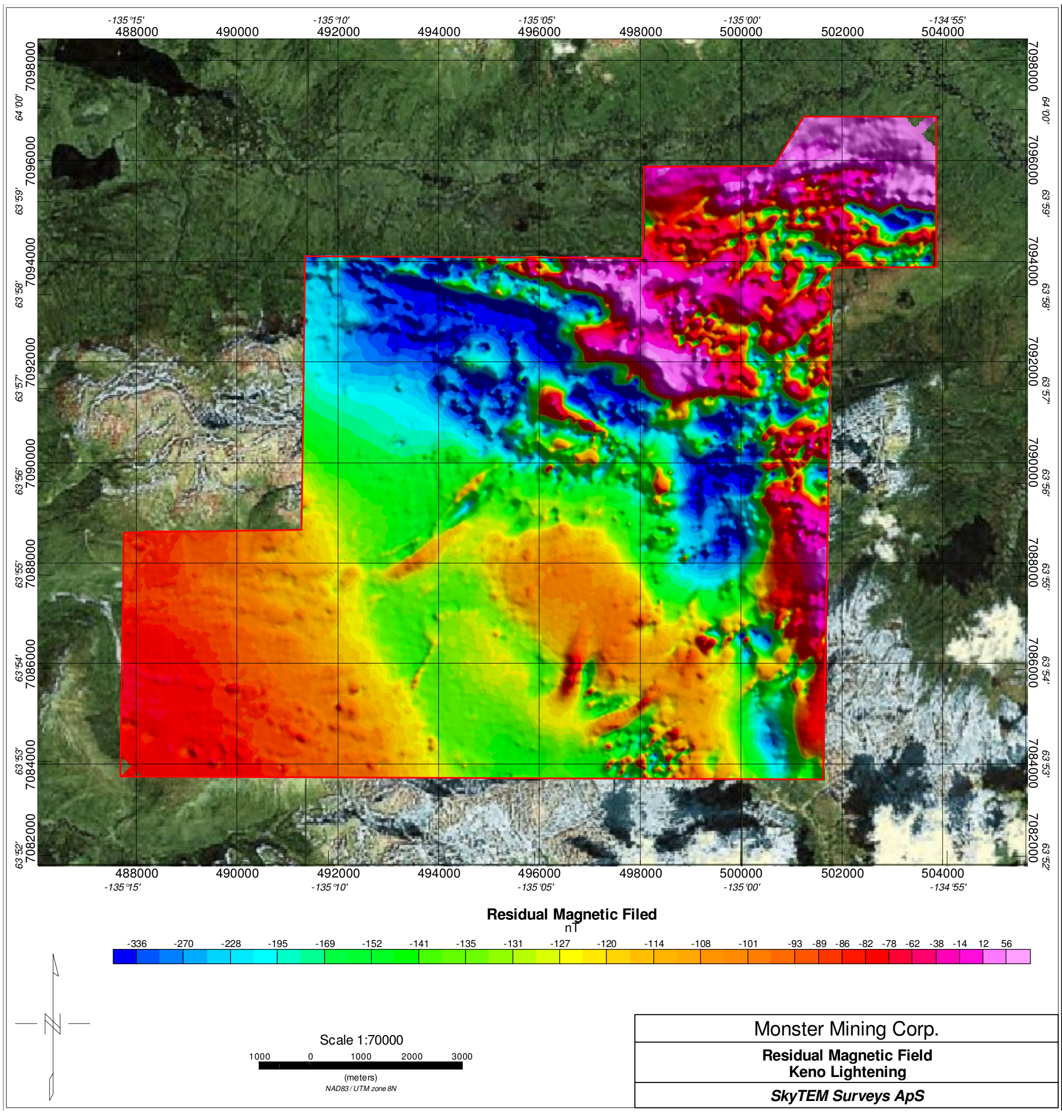


Figure 12. RMF grid for the Keno Lightning block.

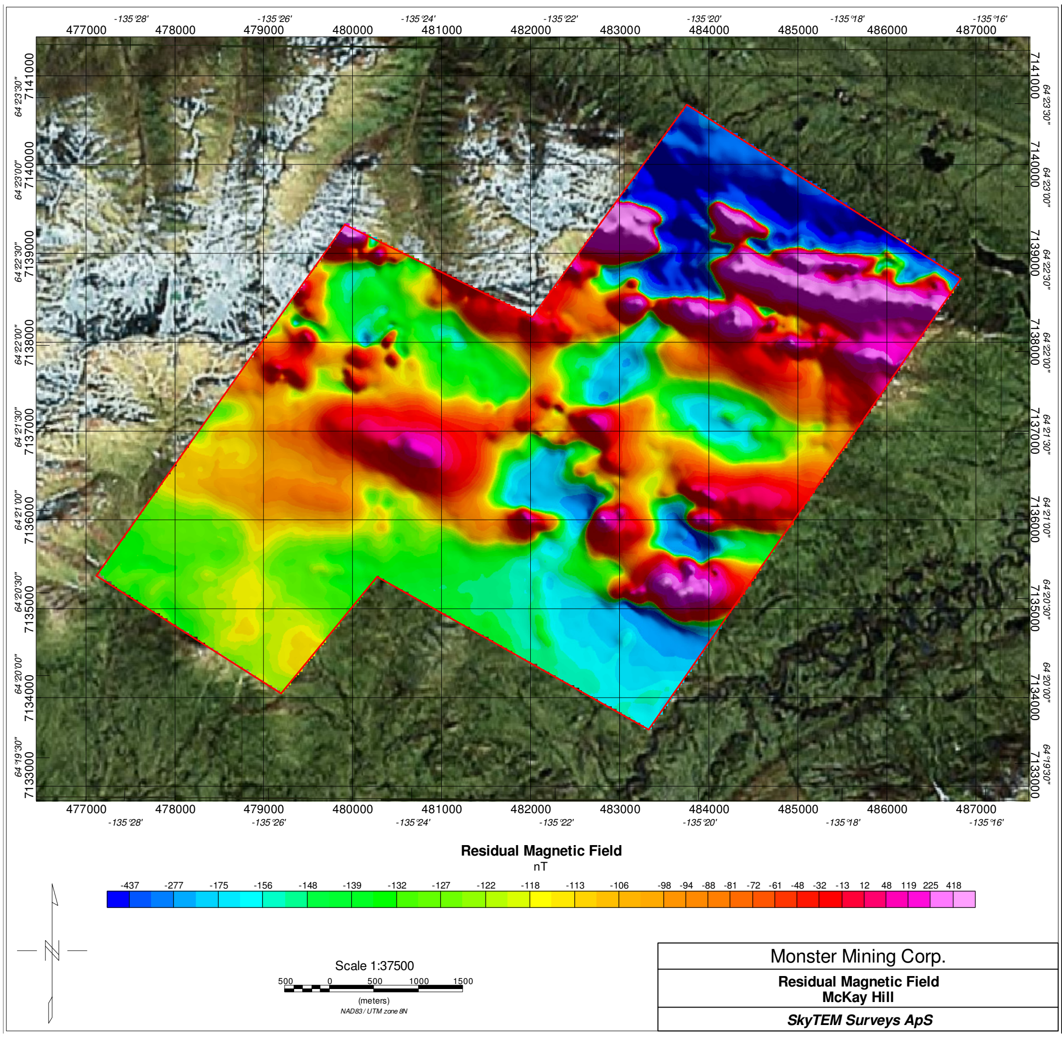


Figure 13. RMF grid for the McKay Hill block.

Inversion of SkyTEM data

In this section, the particulars of modelling and inversion of SkyTEM data from Keno Lightening and McKay Hill Blocks, Canada will be described with reference to the more general material found in Appendix 5. The inversion code is named SELMA, ref /2/ and /3/. However, recent developments including the lateral parameter correlation, not yet published, have enhanced the accuracy of the code.

Initial model and optimization norm

The inversion is performed as a regularized, damped, least-squares inversion on individual sounding data along the profiles with a one-dimensional (1D), multi-layer model (MLM) with 30 layers. In the inversion, the thickness of the layers are kept constant and only the layer resistivities are allowed to vary in order to let the model fit the measured data.
To obtain laterally smooth model sections, the Lateral Parameter Correlation (LPC) procedure is used (/3/ and /4/).

In the inversion the thickness of the first layer is 5 m and the depth to the deepest layer boundary is 500 m. Thicknesses and depths to top of layers for all layers are stated in the table below. In the top of the model, the layer thickness increases slowly, giving a linear sampling of the subsurface, while layer thickness increases exponentially at the deeper parts of the model.

The input data to the inversion is the z-component of the EM-data described in the chapter 'Processed data'.

In the Keno Lightening and McKay Hill survey the resistivity of the initial model for the inversion is set to 500 Ωm. Resistivities are allowed to vary within the interval of 0.1 to 10000 Ωm. Optimization is performed using the L2-norm.

In the Keno Lightening and McKay Hill area the inversions are based on a 5 Hz input file giving a model for approx. every 4 m.

Layer #	Layer Thickness [m]	Layer depth [m]
1	5.00	0.00
2	5.06	5.00
3	5.17	10.06
4	5.34	15.22
5	5.56	20.56
6	5.85	26.12
7	6.21	31.97
8	6.63	38.18
9	7.13	44.81
10	7.70	51.93
11	8.36	59.63
12	9.11	67.99
13	9.97	77.11
14	10.93	87.08
15	12.02	98.01
16	13.24	110.03
17	14.60	123.26
18	16.13	137.86
19	17.83	153.99
20	19.74	171.82
21	21.86	191.56
22	24.22	213.41
23	26.85	237.64
24	29.78	264.49
25	33.04	294.27
26	36.66	327.31
27	40.70	363.97
28	45.18	404.67
29	50.16	449.84
30	N/A	500.00

Regularization

A statistical broadband approach is used in the regularization of the multi-layer model. Nine different correlation lengths with a maximum of 10 000 km and a standard deviation of 1 were used to define the correlation matrix. (See Appendix 5 for more detail).

Noise model

In the Keno Lightening and McKay Hill survey, the noise parameters for both inversions were chosen as:

Low moment
V_0 = 2.5e-12 in field units normalized with Tx moment
t_0 = 1 ms
slope = -0.5

High Moment
V_0 = 2.5e-13 in field units normalized with Tx moment
t_0 = 1 ms
slope = -0.5

Negative data values caused by e.g. capacitive coupling and values lower than 0.01*noise level, were excluded in the inversion.

Inversion results

The results of the inversion are presented in a GDB file included in the data delivery catalogue. The file contains the resistivities for each layer in the model. The header of the GDB file is described in the table below (also see Appendix 6 for more detail).

Parameter	Explanation	Unit
FID	Fiducial number	
LINE	Line number	
E	UTM Zone 8N (NAD83)	Meter
N	UTM Zone 8N (NAD83)	Meter
DTM	Digital Elevation Model	Meters above mean sea level
ResI1	Residual of data	-
ResI2	Residual of prior information of thickness parameters (not included in this survey)	-
ResI3	Residual of vertical constraints (not included in this survey)	-
ResI4	Residual total	-
Height	Height above ground	Meter
Layer	Number of layers in model	-
DOI	Depth of Investigation	Meter
Elev[xx]	Elevation of top of layer. [xx] refer to geosoft array channel number.	Meter
Res[xx]	Resistivity of layer. [xx] refer to geosoft array channel number.	Ωmeter
RUnc[xx]	Relative uncertainty of layer. [xx] refer to geosoft array channel number.	-

Presentations - Model sections and grids

The models resulting from the inversion are presented as model sections/profiles including analytic sections that display the normalized standard deviation of the resistivity sections along with the DOI (Figure 16) and as grids of resistivity in each model layer (Figure 14).

The model sections and grids are enclosed in digital form. A brief description is given in Appendix 6.

The model sections have a large vertical exaggeration which will make the structures look more vertical than they are.

Residuals

The quality of the inversion results can be evaluated by inspecting the residuals.

The data residual is calculated by comparing the measured data with the response of the resulting model after inversion. If the residual is in the range of 1, the misfit between the response of the final model and the data is, on average, equal to the noise. If the residual is high, it might be caused by data that are noisier than the noise model takes into account. This can be seen where resistivities are very high and the signal consequently very low. A high data residual can also be due to the inconsistency between the model assumed in the inversion and the 2D/3D character of the real world. These are found primarily at the edges of sharp lateral conductivity contrasts. Finally, coupling effects due to power lines and other manmade conductors can also be a source of a high residual.

The total residual is a weighted sum of the data residual and the model residual, where the latter is a measure of the roughness of the model, i.e. the deviation of the final model from the initial homogeneous half space model.

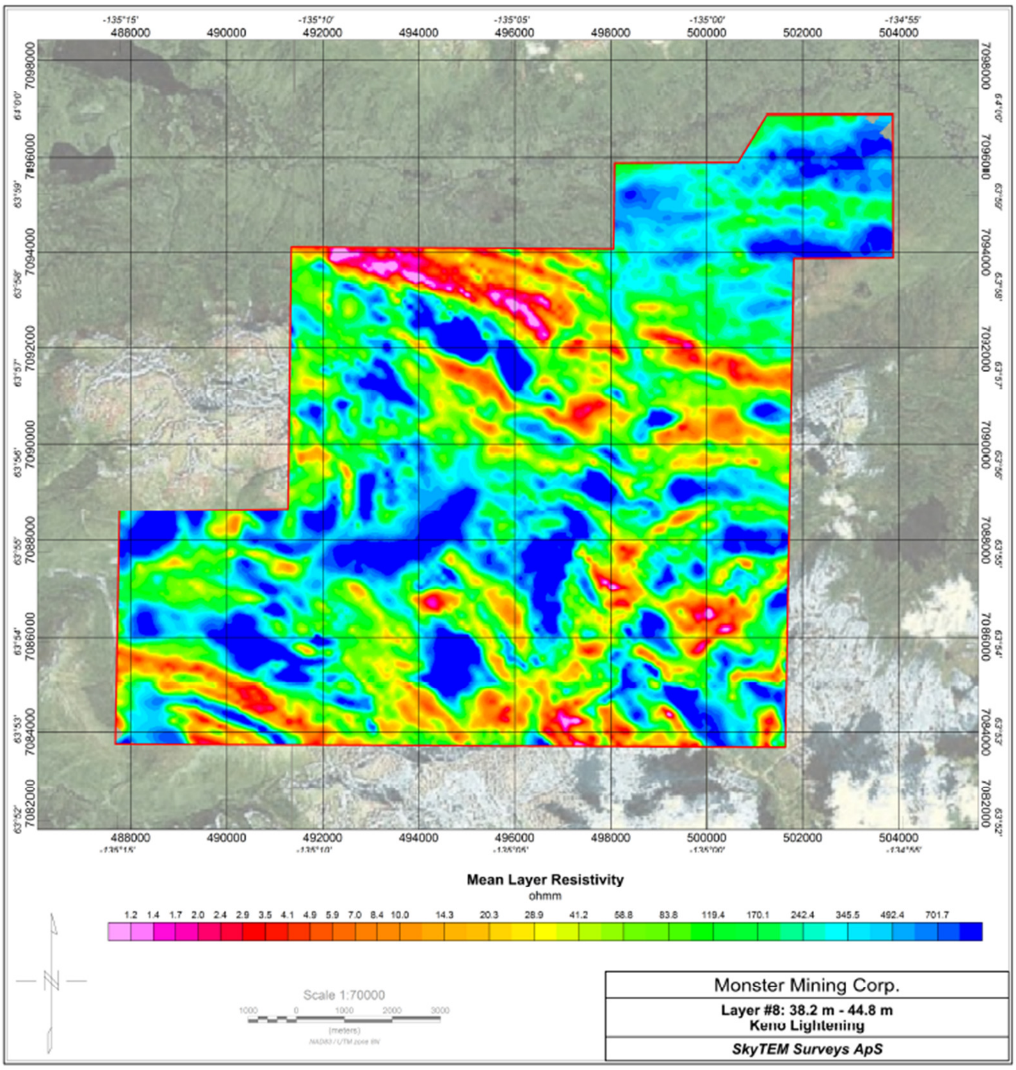


Figure 14. Screen dump of enclosed PDF's displaying the inversion results. Geosoft grids and PDF's are found in the data delivery folder.

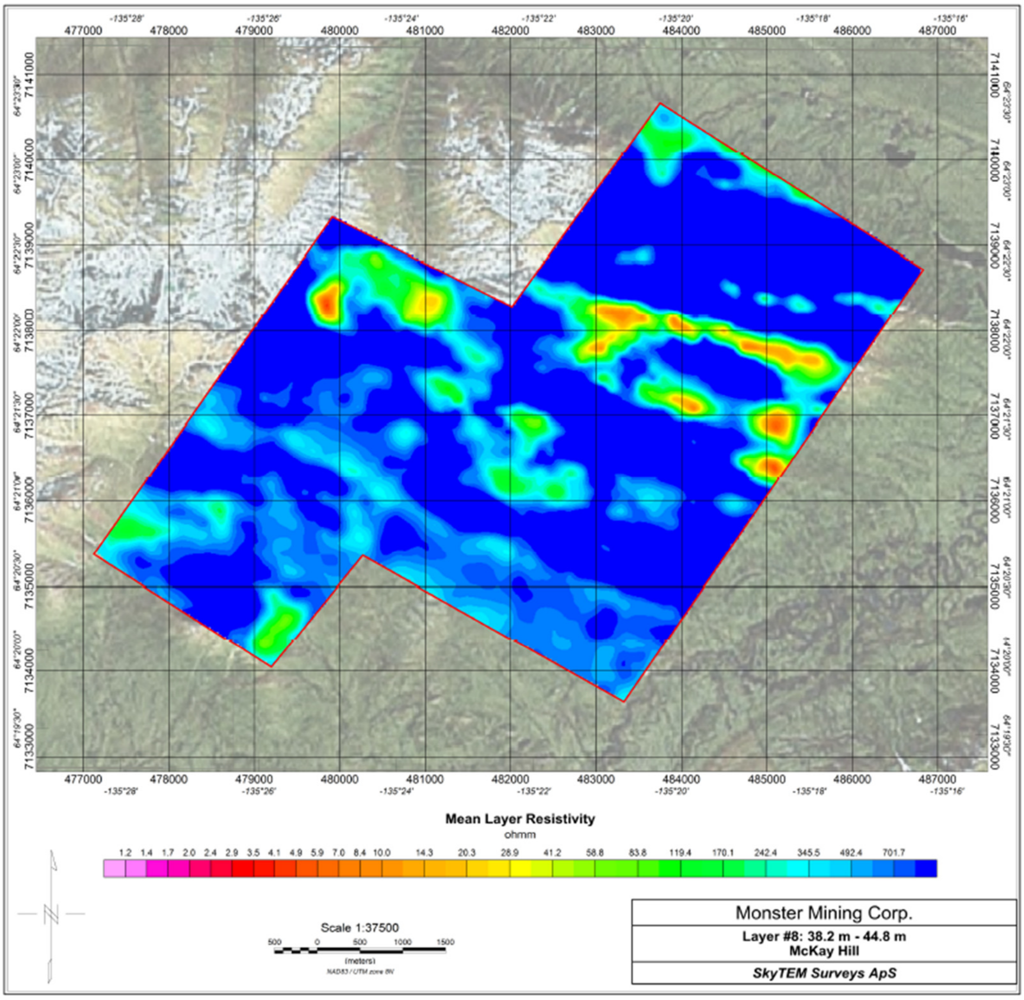


Figure 15. Screen dump of enclosed PDF's displaying the inversion results. Geosoft grids and PDF's are found in the data delivery folder.

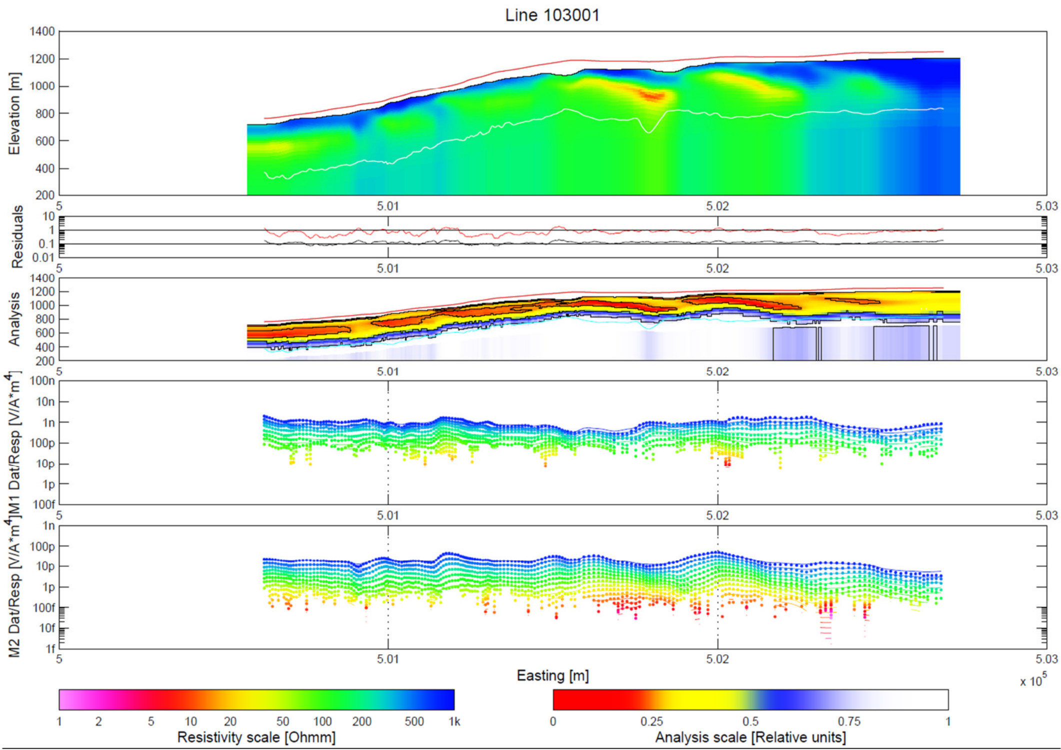


Figure 16. Sample of the model section plots enclosed as PDF's. Top plot: Resistivity section with flight height (red) and depth of investigation (white line) indicated. Data and total residuals are displayed in the second plot. The third plot show the analysis section. The bottom plots are the low and high moment data (dots) and model response (full line). All lines are found as PDF's in the data delivery folder.

References

/1/ Sorensen, K. I. and Auken, E. (2004). SkyTEM - A new high-resolution helicopter transient electromagnetic system, Exploration Geophysics, 35, 191-199.

/2/ Christensen, N. B. (2002). A generic 1-D imaging method for transient electromagnetic data. Geophysics, 67, 438-447.

/3/ Christensen, N.B., Reid, J.E. and Halkjær, M. (2009). Fast, laterally smooth inversion of airborne time-domain electromagnetic data, Near Surface Geophysics, 7, 599-612

/4/ Christensen N.B. and Tølbøll R.J. 2009, A lateral model parameter correlation procedure for one-dimensional inverse modelling. Geophysical Prospecting 57, 919-929. DOI: 10.1111/j.1365-2478.2008.00756.x

Appendix list

Appendix 1: Instruments

Instrument positions

The instrumentation involves a time domain electromagnetic system, two inclinometers, two altimeters and two DGPS'.

The measurements were carried out, using a setup as described below.

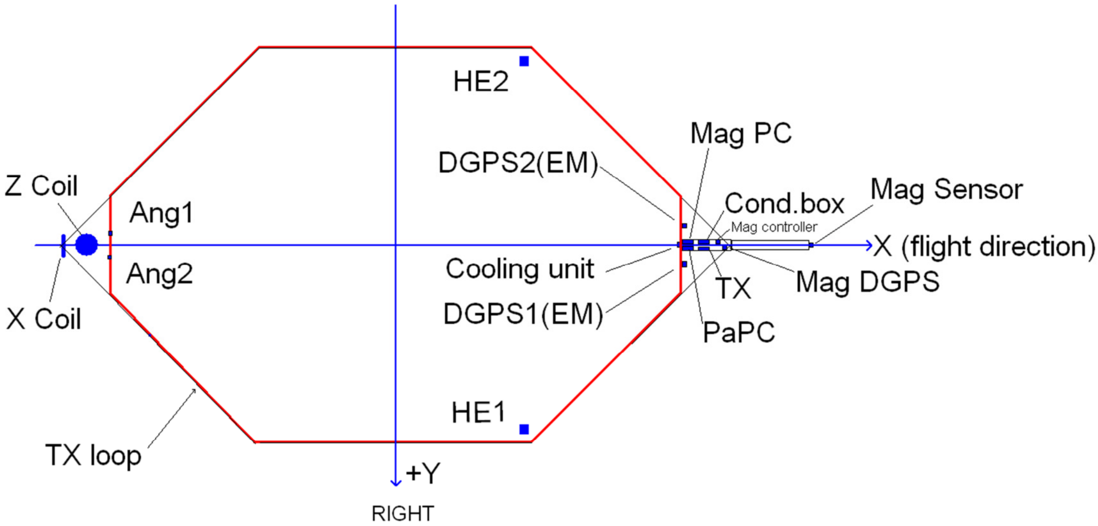


Figure 1 Sketch showing the frame and the position of the basic instruments. The red line defines the transmitter loop. The horizontal plane is defined by (x, y).

The location of instruments in respect to the frame is shown in Figure 1 and is given in (x, y, z) coordinates in the table below.

X and y define the horizontal plane. Z is perpendicular to (x, y). X is positive in the flight direction, y is positive to the right of the flight direction, and z is positive downwards.

The generator used for powering of the transmitter is 10 m below the helicopter.

Device	X	Y	Z
DGPS1 (EM)	12.00	0.80	-020
DGPS2 (EM)	12.00	-0.80	-0.20
HE1 (altim.)	5.14	7.80	0.00
HE2 (altim.)	5.14	-7.80	0.00
Inclinometer 1	-11.80	-0.50	-0.35
Inclinometer 2	-11.80	0.50	-0.35
RX (Z Coil)	-12.82	0.00	-2.18
RX (X Coil)	-13.82	0.00	0.00
TX (transmit.)	12.70	0.10	-0.40
Condensator	12.70	-0.10	-0.40

For the location of instruments see Figure 1.

Transmitter

The time domain transmitter loop can be described as an octagon with the corners listed below:

X	Y
-11.87	-2.03
-5.68	-8.22
5.68	-8.22
11.87	-2.03
11.87	2.03
5.68	8.22
-5.68	8.22
-11.87	2.03

The total area of the transmitter coil defined by the corner points is 314 m^2 and 65.9 m in circumference.

The key parameters defining the transmitter set up are:

Low moment

Parameter	Value
Number of transmitter turns	1
Transmitter area	314 m^2
Peak current	9.76
Peak moment	~3,140 NIA
Repetition frequency	240 Hz
On-time	800 µs
Off-time	1283 µs
Duty cycle	62 %
Wave form	Square
Turn on wave form exp. decay constant	44000 s^{-1}
Turn off linear ramp	4.46e6 A/s
Turn off current end avalanche mode	1.5 A
Turn off free decay exp. decay constant	-3.00e6 s^{-1}

High Moment

Parameter	Value
Number of transmitter turns	4
Transmitter area	314 m^2
Peak current	116.2
Peak moment	~150,000 NIA
Repetition frequency	30 Hz
On-time	8000 µs
Off-time	8667 µs
Duty cycle	52 %
Wave form	Square
Turn on wave form exp. decay constant	410 s^{-1}
Turn off linear ramp	2.38e6 A/s
Turn off current end avalanche mode	1.0 A
Turn off free decay exp. decay constant	-1.29e6 s^{-1}

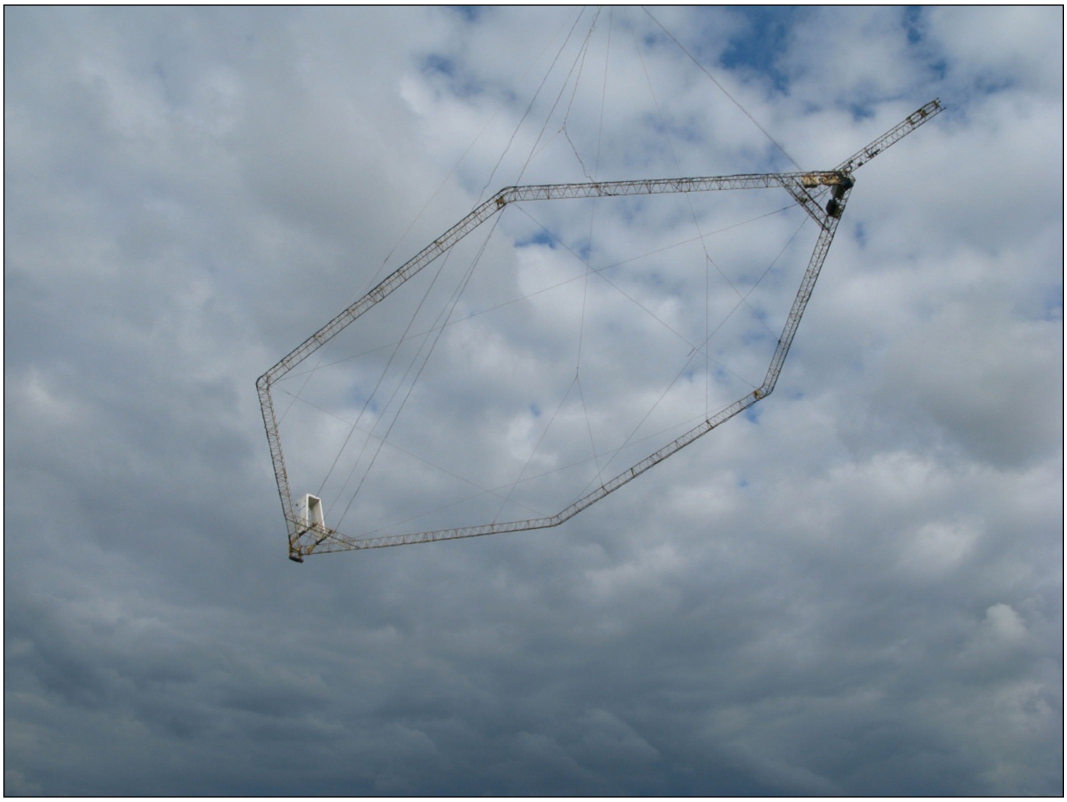


Figure 2 The 314 m² frame in production mode.

Receiver system

The decay of the secondary magnetic field is measured using two independent active induction coils. The Z coil is the vertical component, and the X coil is the horizontal in-line component. Each coil has an effective receiver area of 105 m² .

The receiver coils are placed in a null-position:

Z coil (x, y, z) = (-12.82 m, 0.0 m, -2.18 m)
X coil (x, y, z) = (-13.82 m, 0.0 m, 0.0 m)

In the null-position, the primary field is damped with a factor of 0.01.

Figure 3 Rudder containing the Z coil located approximately in the top part of the tower.

The key parameters defining the receiver set up are:

Receiver parameters		
Sample rate		All decays are measured
Number of output gates		34 (HM) and 26 (LM)
Receiver coil low pass filter		450 kHz
Receiver instrument low pass filter		300 kHz
Repetition frequency	LM HM	240 Hz 30 Hz
Front gate	LM HM	0.0 μs 60.0 μs

Receiver gate times are measured from the start of the transmitter current turn-off. A complete list describing gate open, close and centre times are listed in Appendix 2.

Inclination

Instrument type: Bjerre Technology

The inclination of the frame is measured with 2 independent inclinometers. The x and y angles are measured 2 times per second in both directions. The inclinometers are placed in the rear of the frame as close to the z coil as possible, see Figure 1.

The angle data are stored as x, y readings. X is parallel to the flight direction and positive when the front of the frame is above horizontal. Y is perpendicular to the flight direction and negative when the right side of the frame is above horizontal.

The angle is checked and calibrated manually within 1.0 degree by use of a level meter.

DGPS airborne unit and base stations

Chipset: OEMV1-L1 14-channel rate.
Antenna: Trimble, Bullet III GPS Antenna

The differential GPS receiver is on top of the boom in front of the frame.

The DGPS delivers one dataset per second. The raw coordinates are given in Latitude/longitude, WGS84.

The uncertainty in the xyz-directions is ± 1 m after processing.
The processed DGPS data is combined with the EM data in the xyz-files, giving the precise position.

DGPS parameters	
Sample rate	1 Hz
Uncertainty	± 1 m

Altimeter

Instrument type: MDL ILM300R

Two independent laser units mounted on each side of the frame measure the distance from the frame to the ground, see Figure 1.

Each laser delivers 30 measurements per second, and covers the interval from 1.5 m to approximately 130 m.

Dark surfaces including water surfaces will reduce the reflected signal. Consequently, it may occur that some measurements do not result in useful values.

The altimeter measurements are given in meters with two decimals. The uncertainty is 10 - 30 cm. The lasers are checked on a regular basis against well defined targets.

Laser parameters	
Sample rate	30 Hz
Uncertainty	10 - 30 cm
Min/ max range	1.5 m / 130 m

Magnetometer airborne unit

Instrument type: Geometrics G822A sensor and Kroum KMAG4 counter.

The Geometrics G822A sensor and Kroum KMAG4 counter is a high sensitivity cesium magnetometer. The basic of the sensor is a self-oscillating split-beam Cesium Vapor (non-radioactive) Principe, which operates on principles similar to other alkali vapor magnetometers.

The sensitivity of the Geometrics G822A sensor and Kroum KMAG4 counter is stated as <0.0005 nT/√Hz rms. Typically 0.002 nT P-P at a 0.1 second sample rate, combined with absolute accuracy of 3nT over its full operating range.

The magnetometer is synchronized with the TEM system. When the TEM signal is on, the counter is closed. In the TEM off-time the magnetometer data is measured from 100 microseconds until the next TEM pulse is transmitted. The data are averaged and sampled as 60 Hz.

Parameter	Value
Sample frequency	60 Hz (in between each HM EM pulse)
Magnetometer on	HM Cycles
Magnetometer off	LM Cycles

Magnetometer base station

Instrument type: GEM Overhauser.

The GEM Overhauser is a portable high-sensitivity precession magnetometer.

The GEM Overhauser is a secondary standard for measurement of the Earth's magnetic field with 0.01 nT resolutions, and 1 nT absolute accuracy over its full temperature range.

The base station data are sampled with 1 Hz frequency.

Appendix 2: Time gates

Gate	GateOpen (µs)	Gatewidth (µs)	GateClose (µs)	Raw GateCenter (µs)	GateCenter Applied time shift calibration for HM and LM (µs)	Comment
1	0.390	5.610	6.000	3.195	2.095	Not used
2	6.390	1.610	8.000	7.195	6.095	Not used
3	8.390	1.610	10.000	9.195	8.095	Not used
4	10.390	1.610	12.000	11.195	10.095	Not used
5	12.390	1.610	14.000	13.195	12.095	LM Z only
6	14.390	1.610	16.000	15.195	14.095	LM Z only
7	16.390	1.610	18.000	17.195	16.095	LM Z only
8	18.390	3.610	22.000	20.195	19.095	LM Z only
9	22.390	4.610	27.000	24.695	23.595	LM Z only
10	27.390	6.610	34.000	30.695	29.595	LM only
11	34.390	7.610	42.000	38.195	37.095	LM only
12	42.390	9.610	52.000	47.195	46.095	LM only
13	52.390	12.610	65.000	58.695	57.595	LM only
14	65.390	15.610	81.000	73.195	72.095	LM only
15	81.390	20.610	102.000	91.695	90.595	LM only
16	102.390	25.610	128.000	115.195	114.095	LM & HM Z
17	128.390	31.610	160.000	144.195	143.095	LM & HM Z
18	160.390	41.610	202.000	181.195	180.095	LM & HM Z
19	202.390	50.610	253.000	227.695	226.595	LM & HM
20	253.390	64.610	318.000	285.695	284.595	LM & HM
21	318.390	81.610	400.000	359.195	358.095	LM & HM
22	400.390	102.610	503.000	451.695	450.595	LM & HM
23	503.390	129.610	633.000	568.195	567.095	LM & HM
24	633.390	162.610	796.000	714.695	713.595	LM & HM
25	796.390	205.610	1002.000	899.195	898.095	LM & HM
26	1002.390	258.610	1261.000	1131.695	1130.595	LM & HM
27	1261.390	325.610	1587.000	1424.195	1423.095	HM only
28	1587.390	409.610	1997.000	1792.195	1791.095	HM only
29	1997.390	516.610	2514.000	2255.695	2254.595	HM only
30	2514.390	649.610	3164.000	2839.195	2838.095	HM only
31	3164.390	818.610	3983.000	3573.695	3572.595	HM only
32	3983.390	1030.610	5014.000	4498.695	4497.595	HM only
33	5014.390	1297.610	6312.000	5663.195	5662.095	HM only
34	6312.390	1632.610	7945.000	7128.695	7127.595	HM only

Note: The first gates are not used in any of the moments in the present survey as it is in the transition zone.

SkyTEM inversion software (iTEM) handles time shift calibration during import of data.

If third party processing software is used the calibrated Gate centre times should be used.

Appendix 3: Calibration of the TEM system

As described in the main document the system has been calibrated in a 50 Hz power supply grid setting (In Denmark), but the data was recorded in a 60 Hz environment (USA).

The wave form is measured with the 60 Hz script with a repetition frequency of 240 Hz for LM and with a repetition frequency of 30 Hz HM. Figure 1 to Figure 4 show the up and down ramp, respectively.

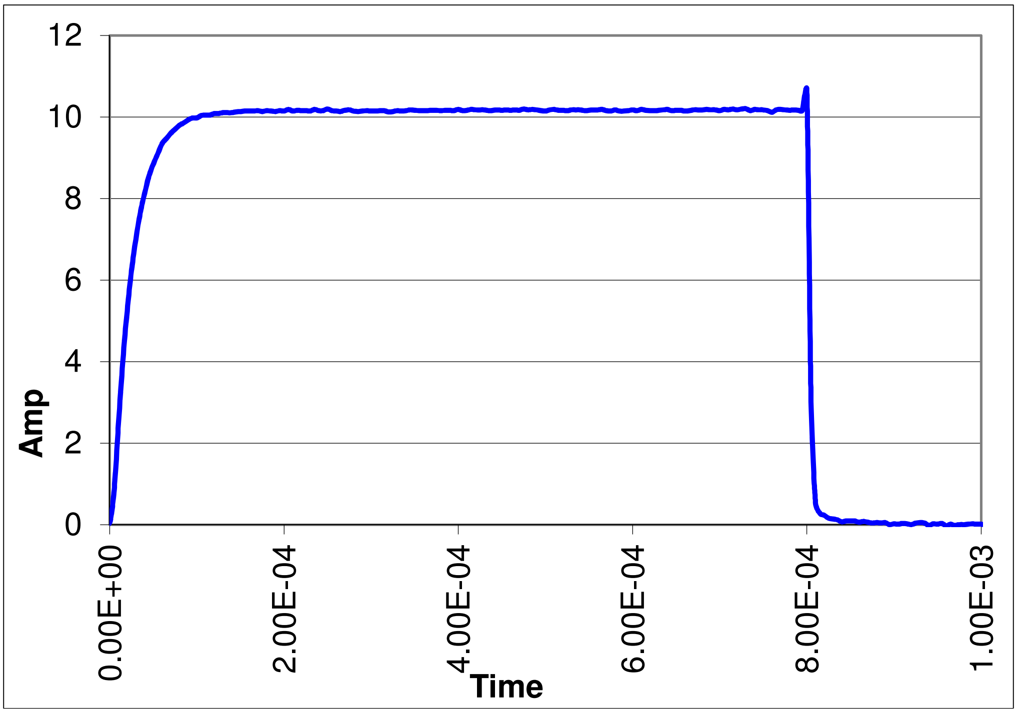


Figure 1 Ramp up at 240 Hz. Blue curve is the measured wave form. Red curve is the function that fits the data. The current is 10 A and the decay constant τ = 44000 s^{-1}.

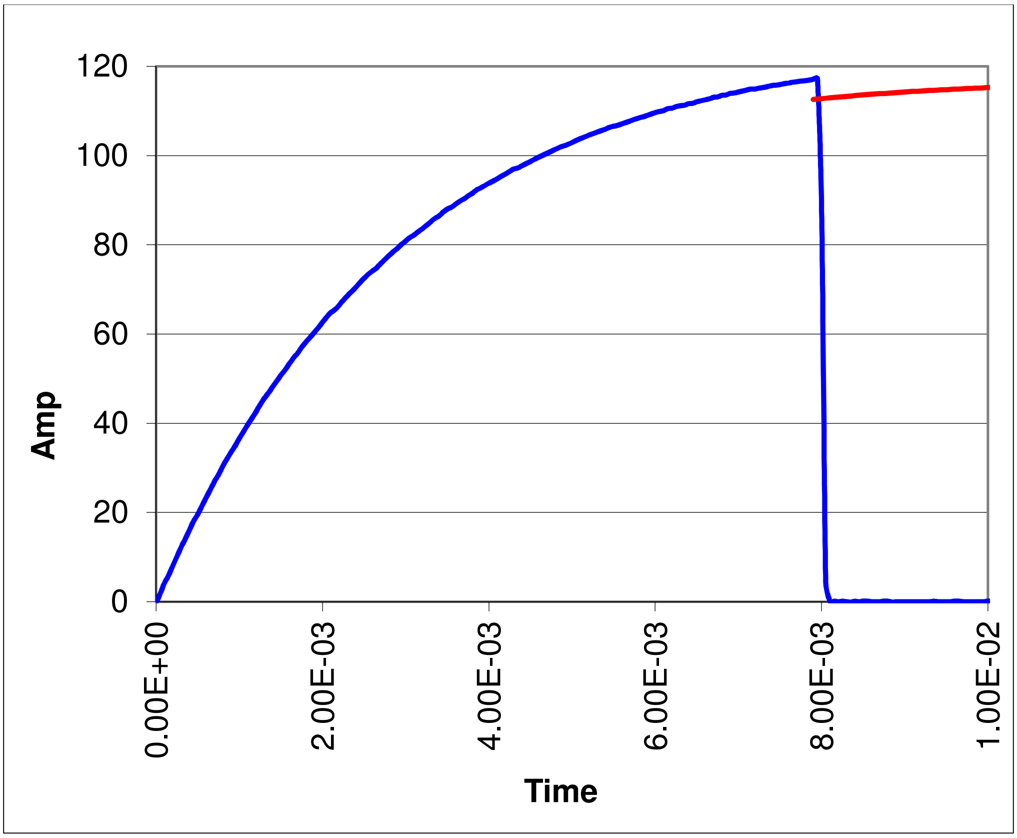


Figure 2 Ramp up at 30 Hz. Blue curve is the measured wave form. Red curve is the function that fits the data. The current is 117 A and the decay constant τ = 410 s^{-1}.

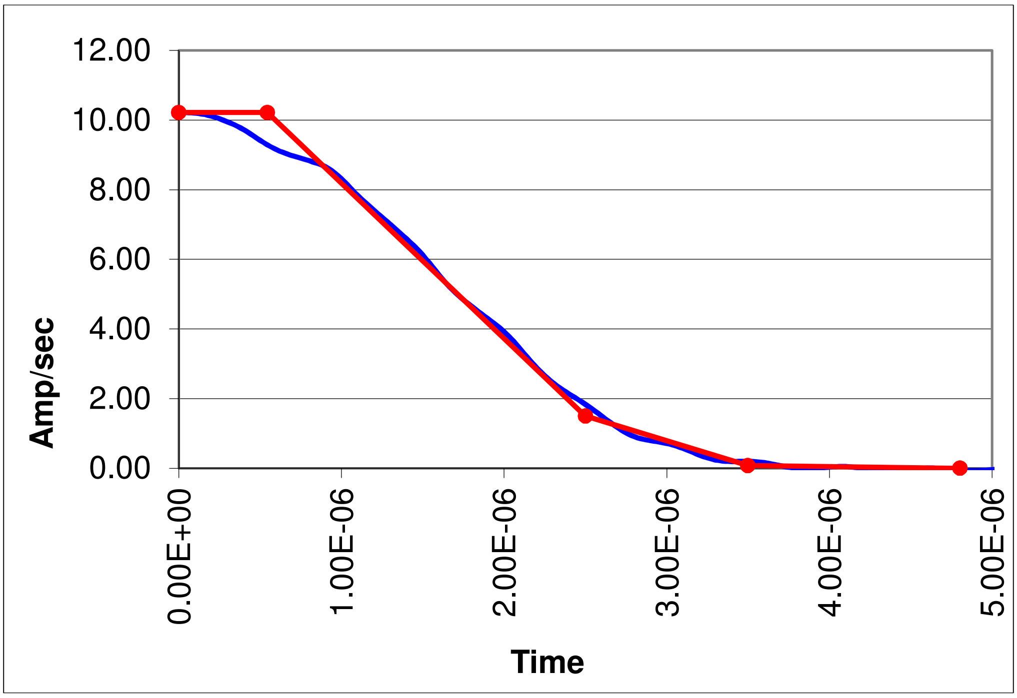


Figure 3 Ramp down at 240 Hz. Blue curve is the measured wave form. Red curve is the piecewise linear function that fits the data. Decay constant - 3.00e6 s^{-1}.

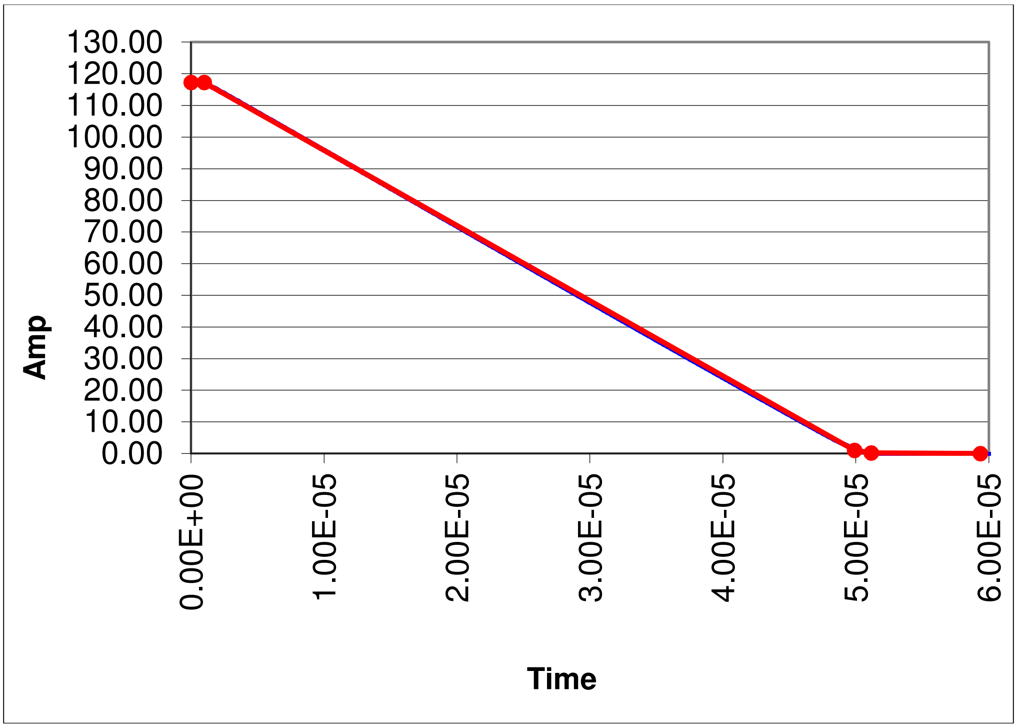


Figure 4 Ramp down at 30 Hz. Blue curve is the measured wave form. Red curve is the piecewise linear function that fits the data. Decay constant - 1.29e6 s^{-1}.

LM

	Parameter	Value
Ramp up	Repetition frequency	240 Hz
	Decay constant, τ	44000 s^{-1}
Ramp Down	Avalanche mode	1.96 µs
	Linear ramp dI/dt	4.46e6 A/s
	End avalanche mode current	1.5 A
	Decay const exp mode, τ	-3.00e6 s^{-1}

HM

	Parameter	Value
Ramp up	Repetition frequency	30 Hz
	Decay constant, τ	410 s^{-1}
Ramp Down	Avalanche mode	48.9 µs
	Linear ramp dI/dt	2.38e6 A/s
	End avalanche mode	1.0 A
	Decay const exp mode, τ	-1.29e6 s^{-1}

The complete SkyTEM equipment has been calibrated at the National Danish Reference Site. The following plots, Figure 5 to Figure 8, show the measured data as well as the expected response in altitudes 5 m, 10 m, 15 m, 20 m and 30 m.

The reference data for both LM and HM data are shown as blue curves and the measured data for LM and HM as red curves.

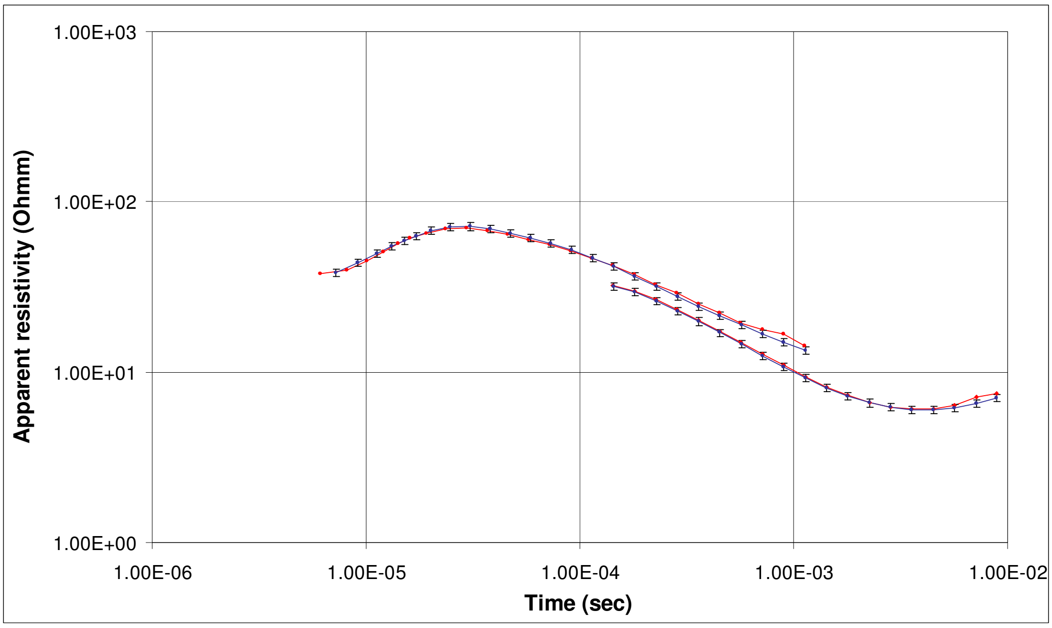


Figure 5 The frame is in 5 m altitude. Blue curves with 5% error bars are the expected response, and red curves are the actual measurements.

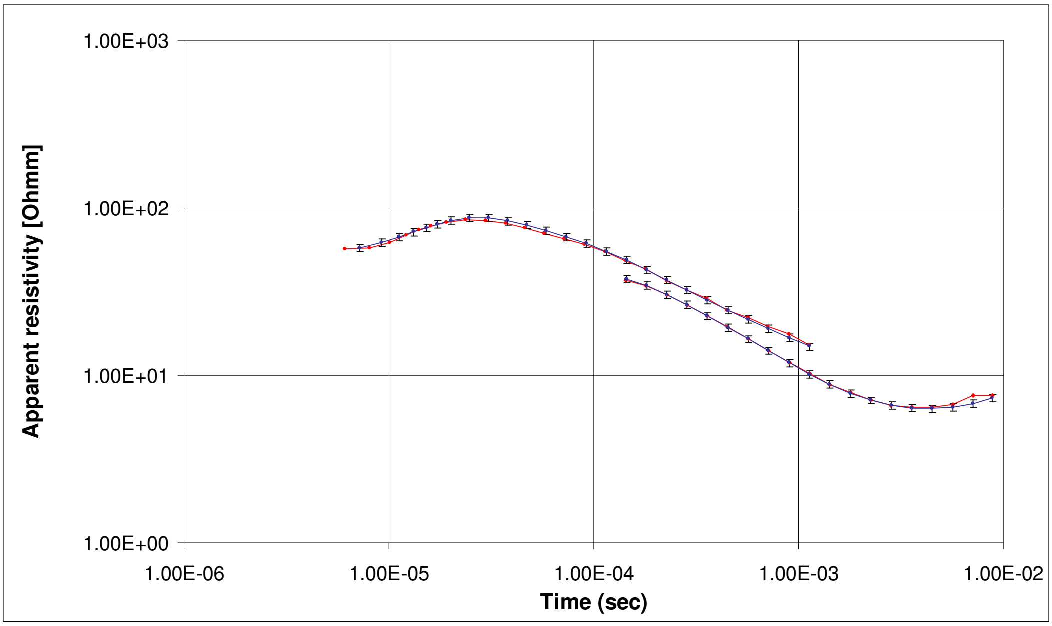


Figure 6 The frame is in 10 m altitude. Blue curves with 5% error bars are the expected response, and red curves are the actual measurements.

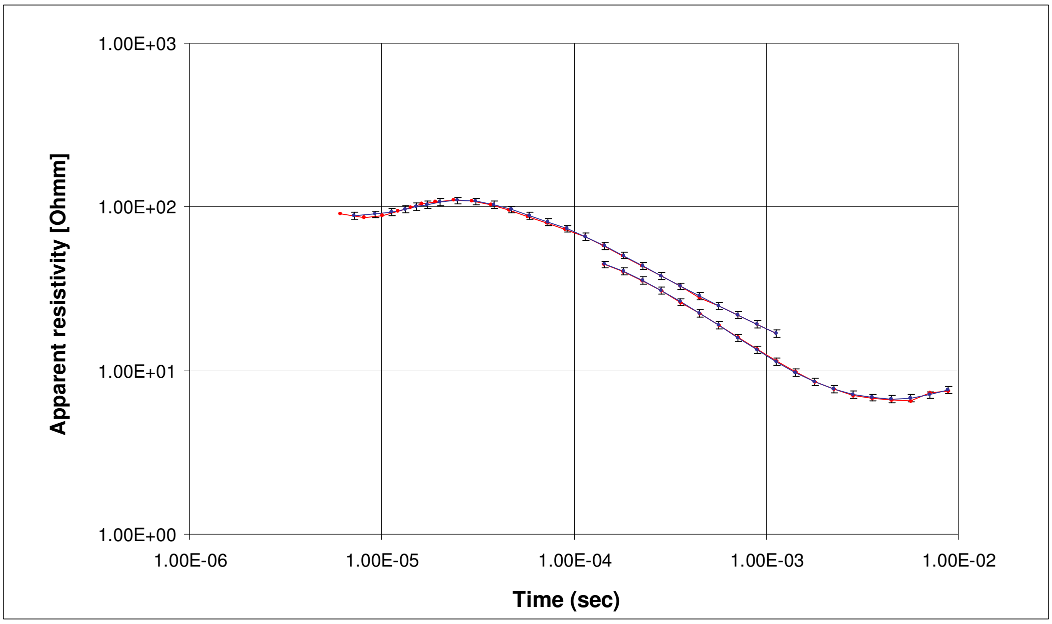


Figure 7 The frame is in 15 m altitude. Blue curves with 5% error bars are the expected response, and red curves are the actual measurements.

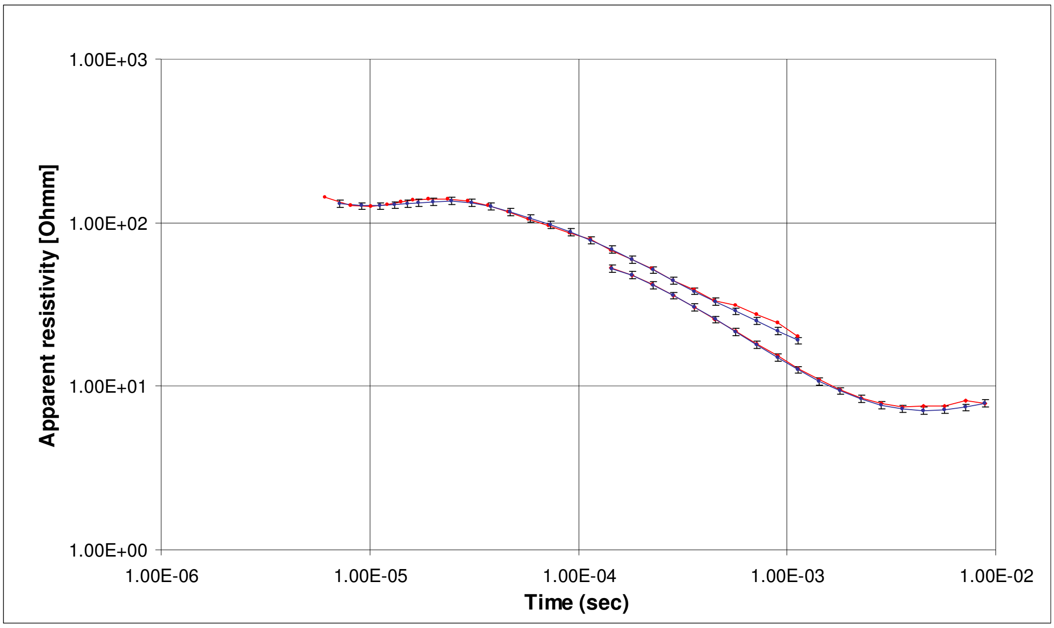


Figure 8 The frame is in 20 m altitude. Blue curves with 5% error bars are the expected response and red curves are the actual measurements.

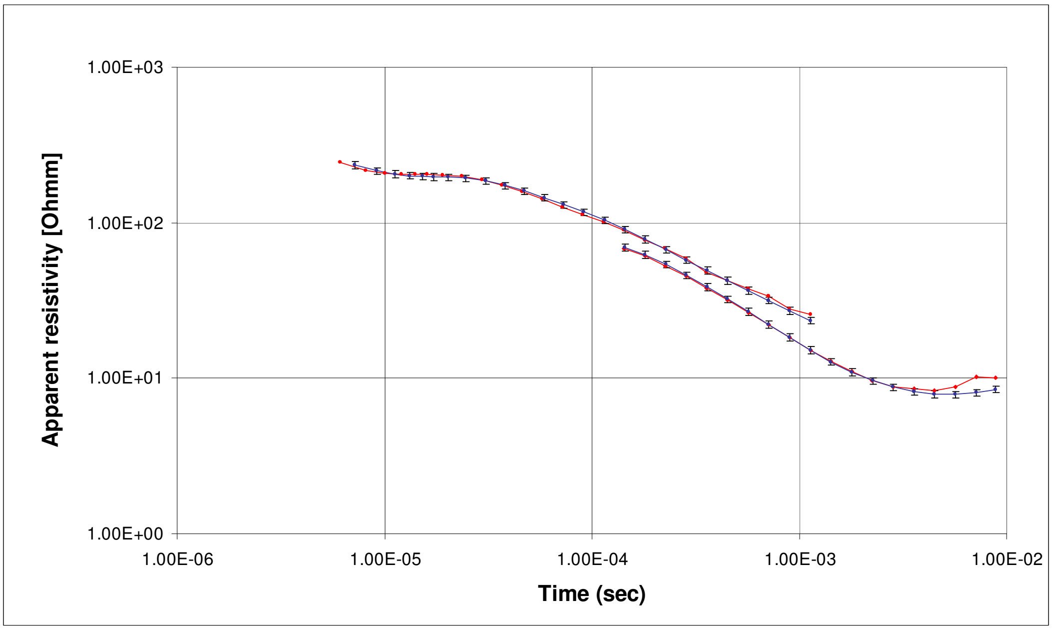


Figure 9 The frame is in 30 m altitude. Blue curves with 5% error bars are the expected response and red curves are the actual measurements

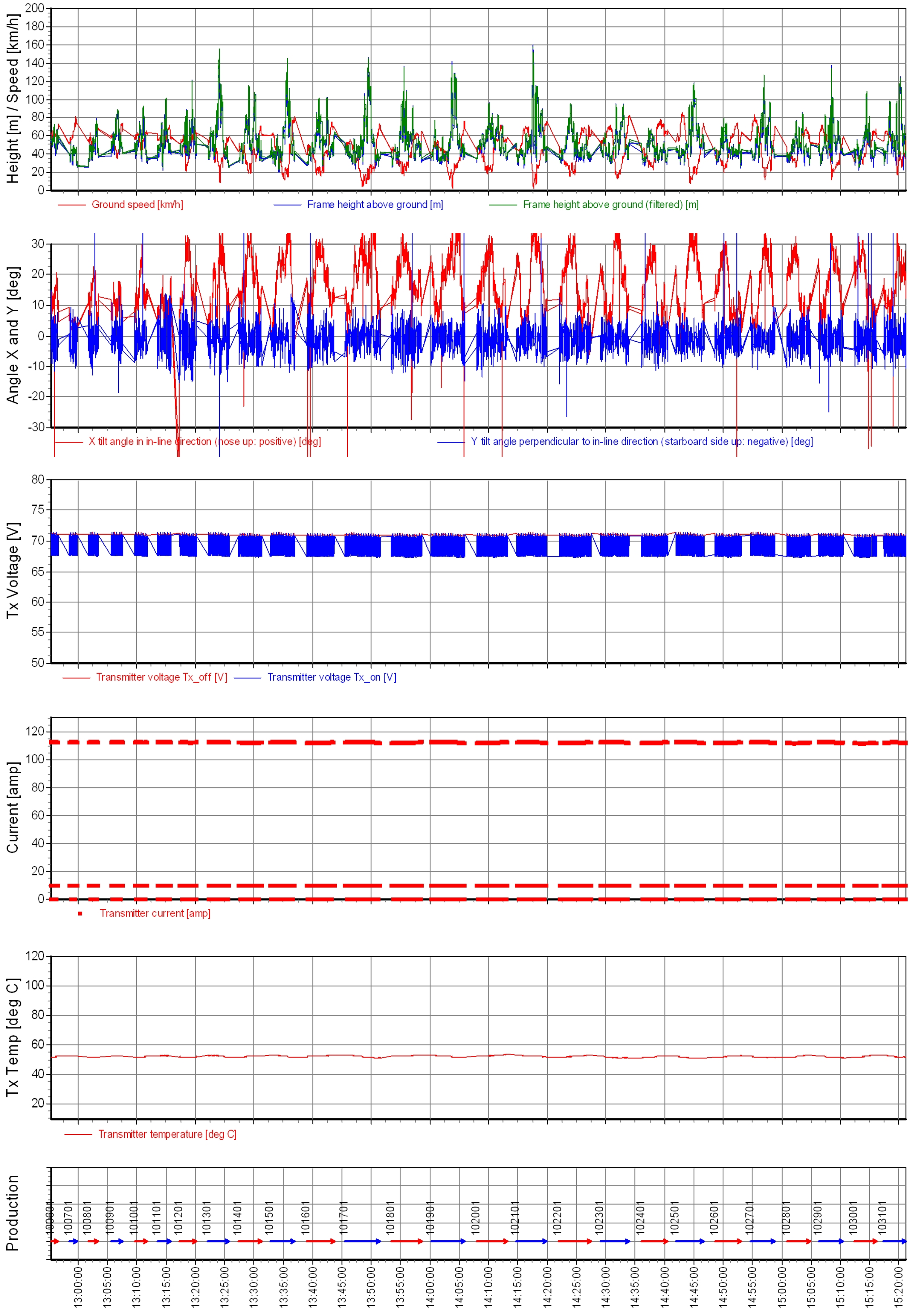
Appendix 4: Control parameters

The following plots show the speed, altitude and the angle of the frame for every flight. Variations in the current, voltage on the transmitter and transmitter temperature are also shown.

The green line, depicting processed frame height, shows the SkyPRO input from HE1 and HE2 after the frame has been corrected from deviations, away from the horizontal plane and any obstacles on the ground e.g. trees.

Turns at the end of flight lines and transport are shown as gaps in the bottom of the display.

The ground speed in the uppermost window displays the signal from both gps GP1 and GP2.


Height [m] / Speed [km/h]
Ground speed [km/h]
Frame height above ground [m]
Frame height above ground (filtered) [m]
Angle X and Y [deg]
X tilt angle in in-line direction (nose up: positive) [deg]
Y tilt angle perpendicular to in-line direction (starboard side up: negative) [deg]
Tx Voltage [V]
Transmitter voltage Tx_off [V]
Transmitter voltage Tx_on [V]
Current [amp]
Transmitter current [amp]
Tx Temp [deg C]
Transmitter temperature [deg C]
Production
100701
100801
100901
101001
101101
101201
101301
101401
101501
101601
101701
101801
101901
102001
102101
102201
102301
102401
102501
102601
102701
102801
102901
103001
103101
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13:50:00
13:55:00
14:00:00
14:05:00
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14:15:00
14:20:00
14:25:00
14:30:00
14:35:00
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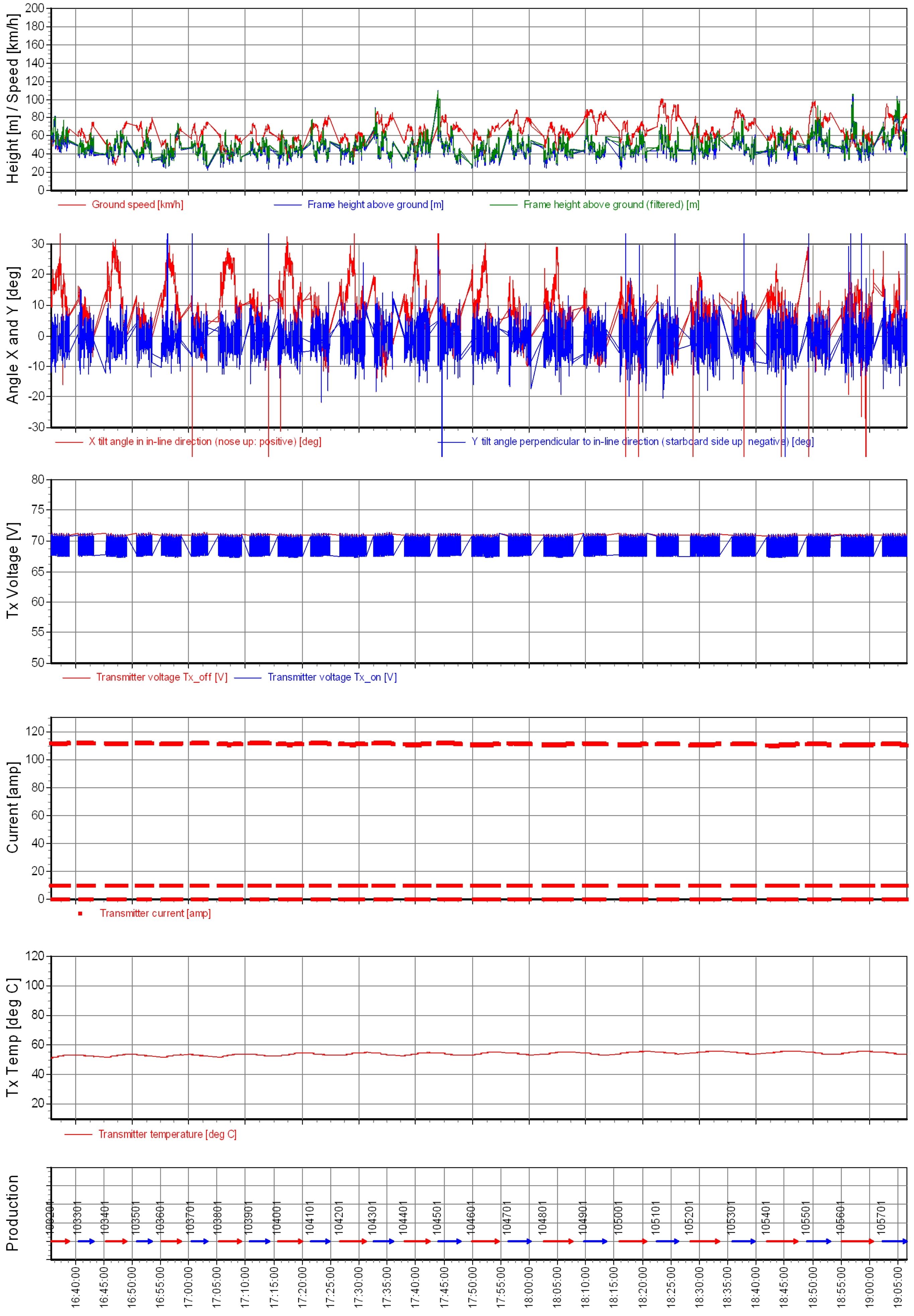
15:15:00
15:20:00


Height [m] / Speed [km/h]
Ground speed [km/h]
Frame height above ground [m]
Frame height above ground (filtered) [m]
Angle X and Y [deg]
X tilt angle in in-line direction (nose up: positive) [deg]
Y tilt angle perpendicular to in-line direction (starboard side up: negative) [deg]
Tx Voltage [V]
Transmitter voltage Tx_off [V]
Transmitter voltage Tx_on [V]
Current [amp]
Transmitter current [amp]
Tx Temp [deg C]
Transmitter temperature [deg C]
Production
103201
103301
103401
103501
103601
103701
103801
103901
104001
104101
104201
104301
104401
104501
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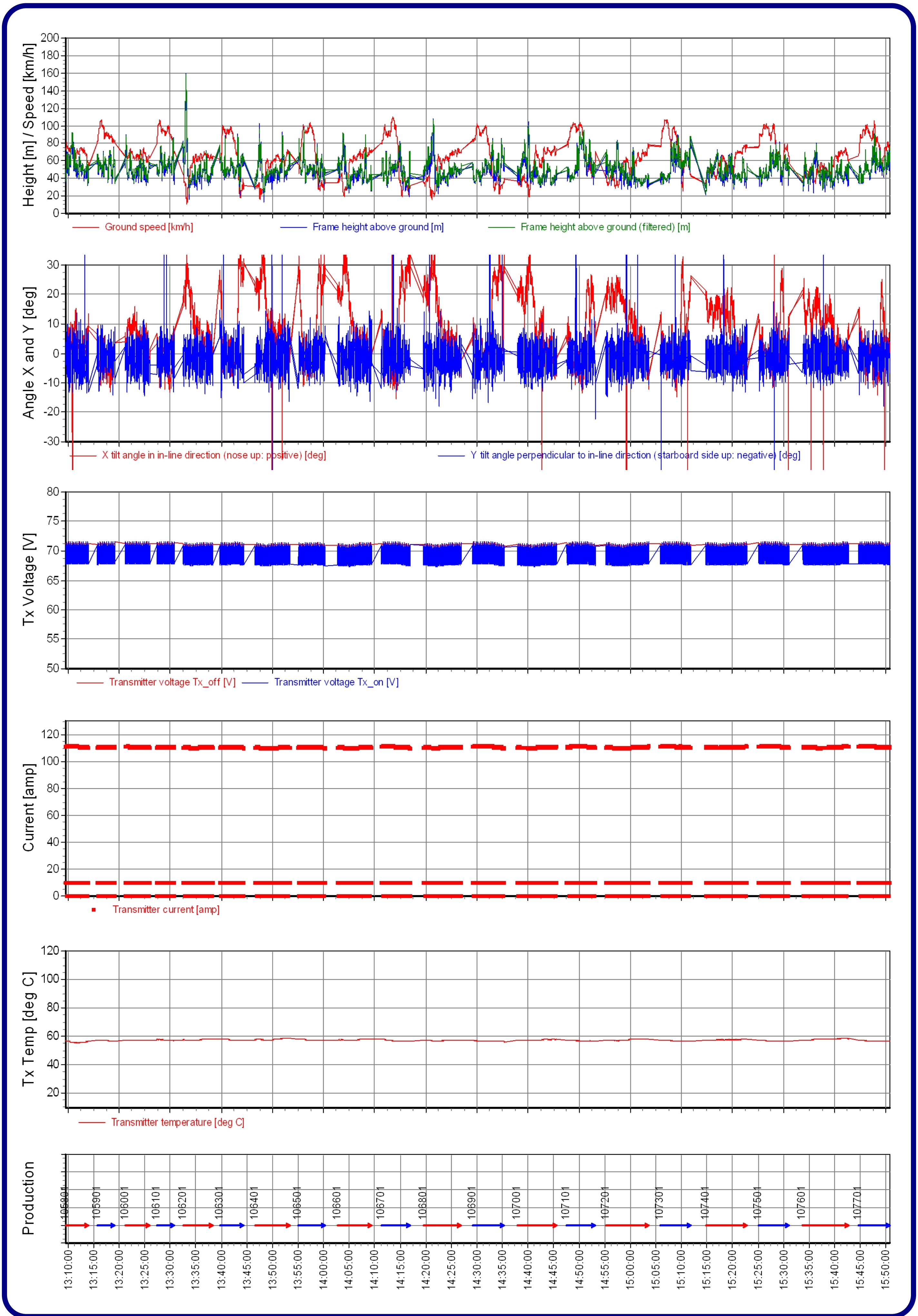
105501
105601
105701


Height [m] / Speed [km/h]
Ground speed [km/h]
Frame height above ground [m]
Frame height above ground (filtered) [m]
Angle X and Y [deg]
X tilt angle in in-line direction (nose up: positive) [deg]
Y tilt angle perpendicular to in-line direction (starboard side up: negative) [deg]
Tx Voltage [V]
Transmitter voltage Tx_off [V]
Transmitter voltage Tx_on [V]
Current [amp]
Transmitter current [amp]
Tx Temp [deg C]
Transmitter temperature [deg C]
Production
105901
106001
106101
106201
106301
106401
106501
106601
106701
106801
106901
107001
107101
107201
107301
107401
107501
107601
107701
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13:15:00
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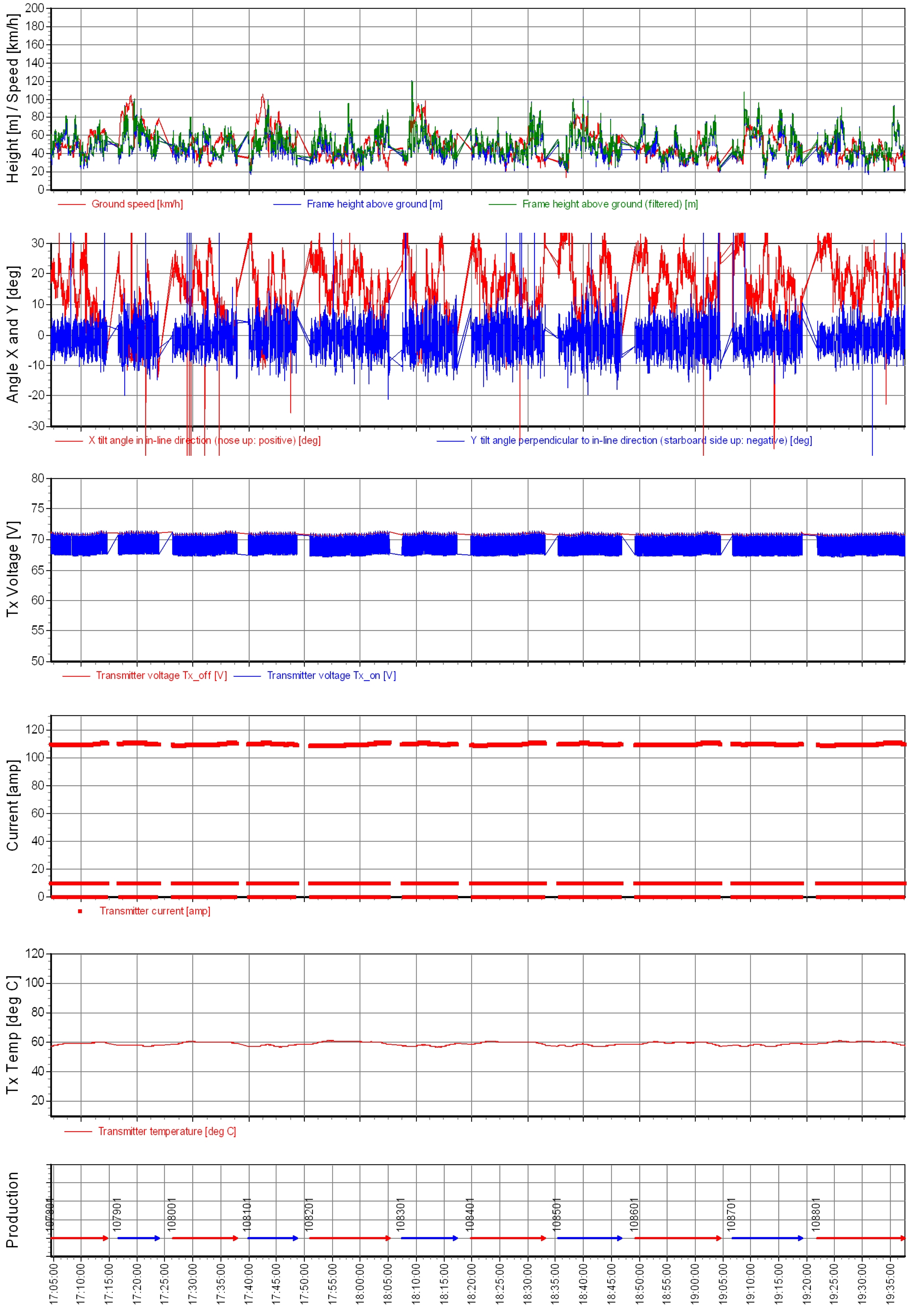
15:50:00


Height [m] / Speed [km/h]
Ground speed [km/h]
Frame height above ground [m]
Frame height above ground (filtered) [m]
Angle X and Y [deg]
X tilt angle in in-line direction (nose up: positive) [deg]
Y tilt angle perpendicular to in-line direction (starboard side up: negative) [deg]
Tx Voltage [V]
Transmitter voltage Tx_off [V]
Transmitter voltage Tx_on [V]
Current [amp]
Transmitter current [amp]
Tx Temp [deg C]
Transmitter temperature [deg C]
Production
107901
107901
108001
108101
108201
108301
108401
108501
108601
108701
108801
17:05:00
17:10:00
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17:35:00
17:40:00
17:45:00
17:50:00
17:55:00
18:00:00
18:05:00
18:10:00
18:15:00
18:20:00
18:25:00
18:30:00
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18:40:00
18:45:00
18:50:00
18:55:00
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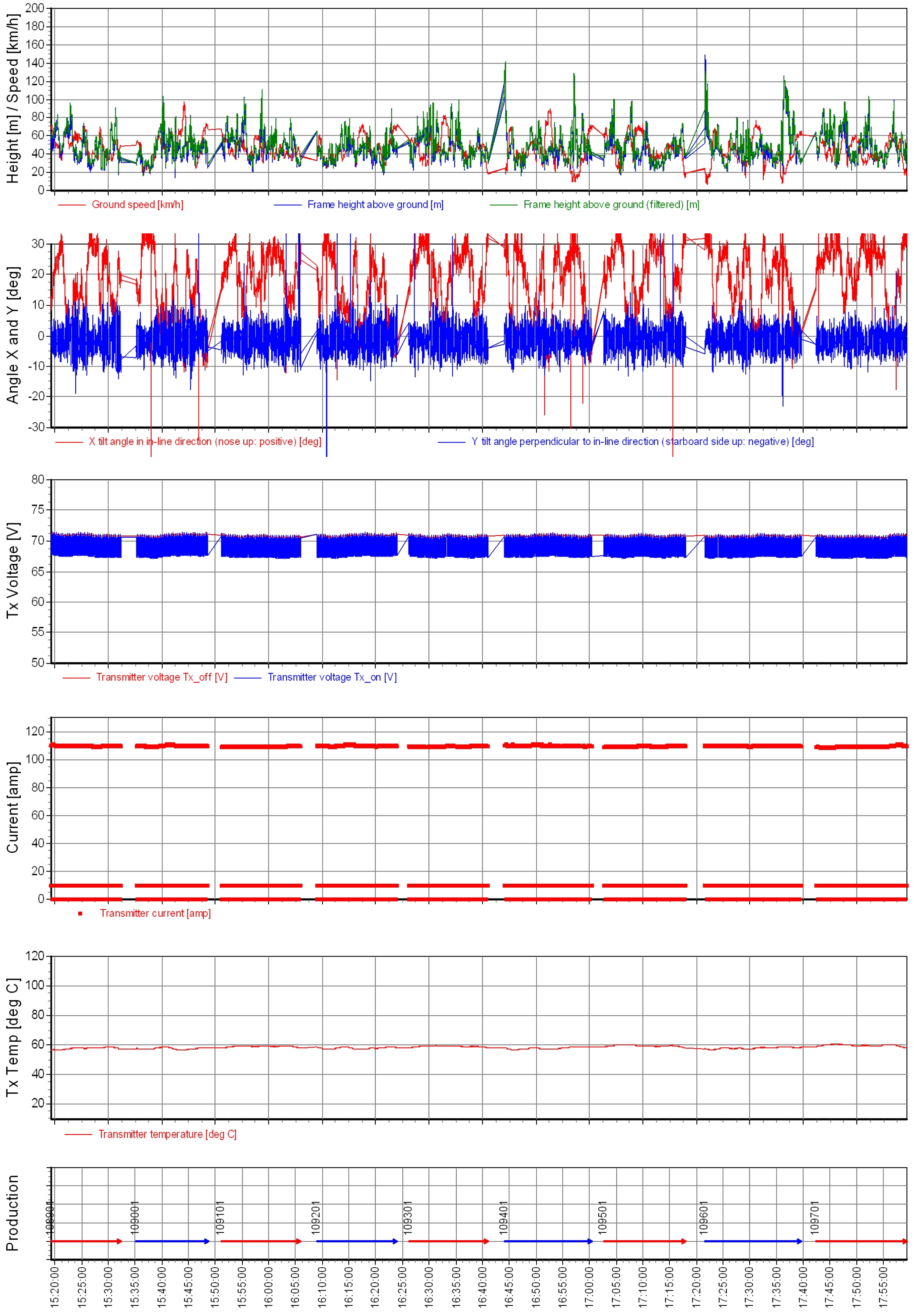
19:35:00


Height [m] / Speed [km/h]
Ground speed [km/h]
Frame height above ground [m]
Frame height above ground (filtered) [m]
Angle X and Y [deg]
X tilt angle in in-line direction (nose up: positive) [deg]
Y tilt angle perpendicular to in-line direction (starboard side up: negative) [deg]
Tx Voltage [V]
Transmitter voltage Tx_off [V]
Transmitter voltage Tx_on [V]
Current [amp]
Transmitter current [amp]
Tx Temp [deg C]
Transmitter temperature [deg C]
Production
109001
109101
109201
109301
109401
109501
109601
109701
15:20:00
15:25:00
15:30:00
15:35:00
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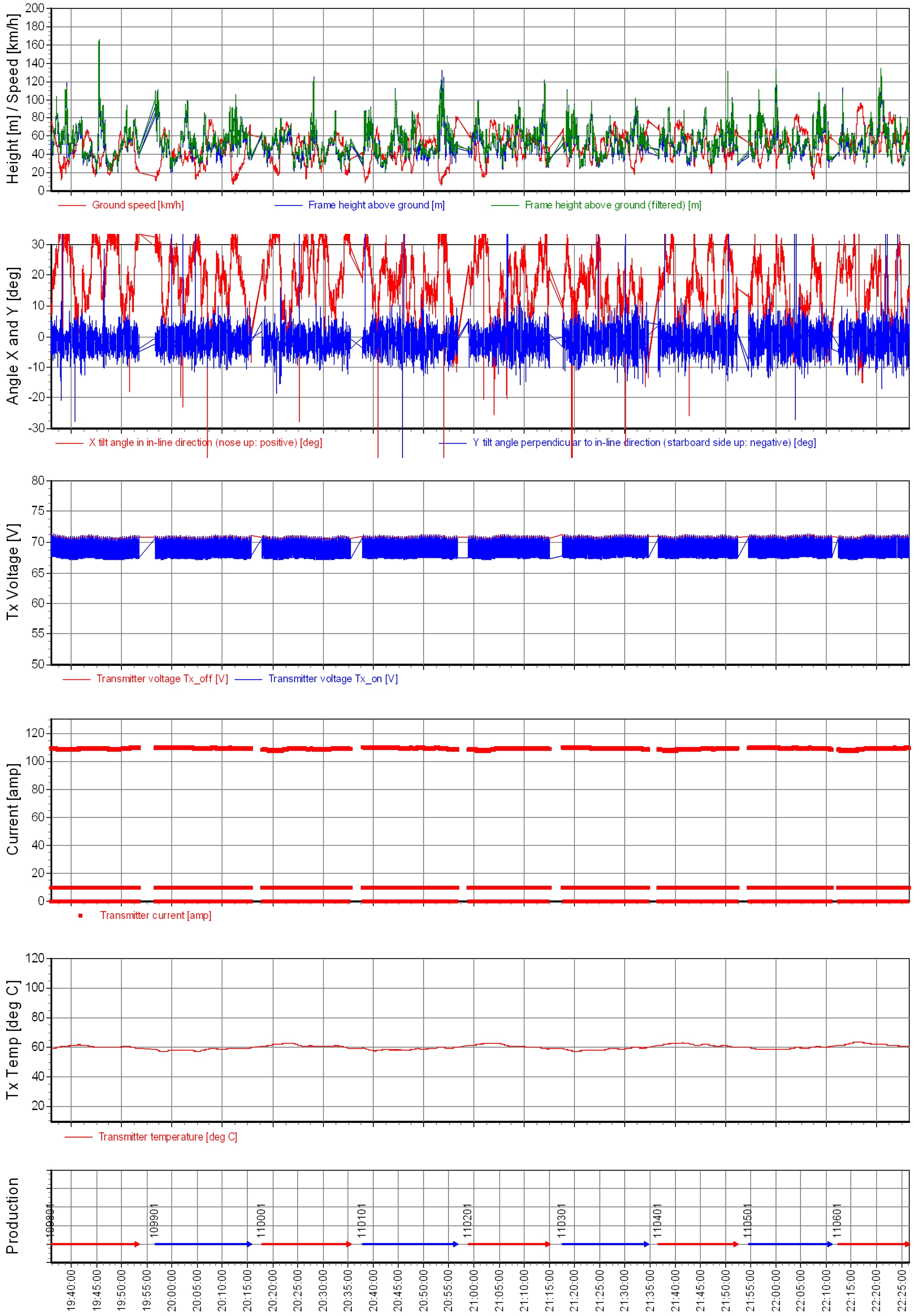
17:50:00
17:55:00



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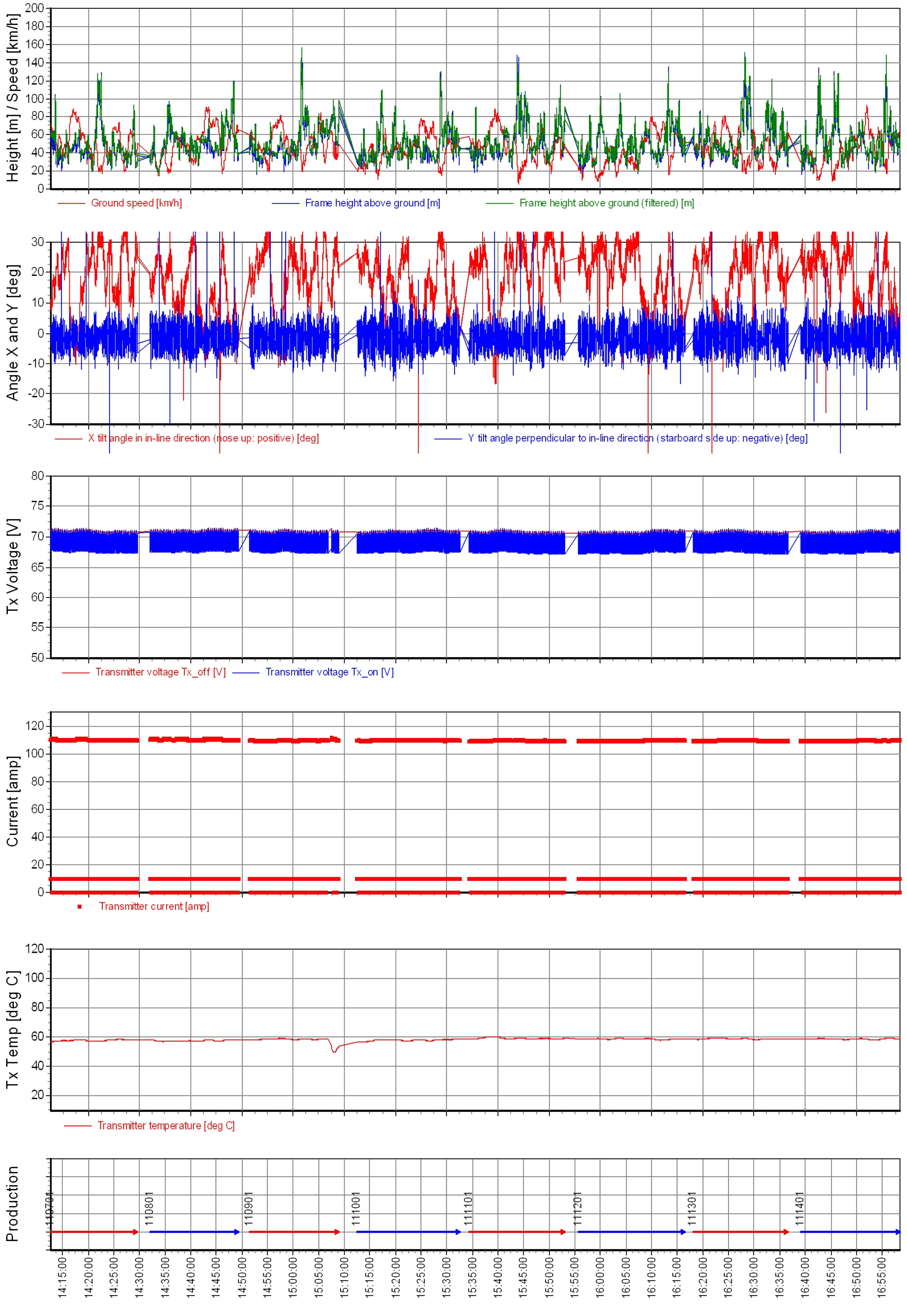
Height [m] / Speed [km/h]
Ground speed [km/h]
Frame height above ground [m]
Frame height above ground (filtered) [m]
Angle X and Y [deg]
X tilt angle in in-line direction (nose up: positive) [deg]
Y tilt angle perpendicular to in-line direction (starboard side up: negative) [deg]
Tx Voltage [V]
Transmitter voltage Tx_off [V]
Transmitter voltage Tx_on [V]
Current [amp]
Transmitter current [amp]
Tx Temp [deg C]
Transmitter temperature [deg C]
Production
110701
110801
110901
111001
111101
111201
111301
111401
14:15:00 14:20:00 14:25:00 14:30:00 14:35:00 14:40:00 14:45:00 14:50:00 14:55:00 15:00:00 15:05:00 15:10:00 15:15:00 15:20:00 15:25:00 15:30:00 15:35:00 15:40:00 15:45:00 15:50:00 15:55:00 16:00:00 16:05:00 16:10:00 16:15:00 16:20:00 16:25:00 16:30:00 16:35:00 16:40:00 16:45:00 16:50:00 16:55:00

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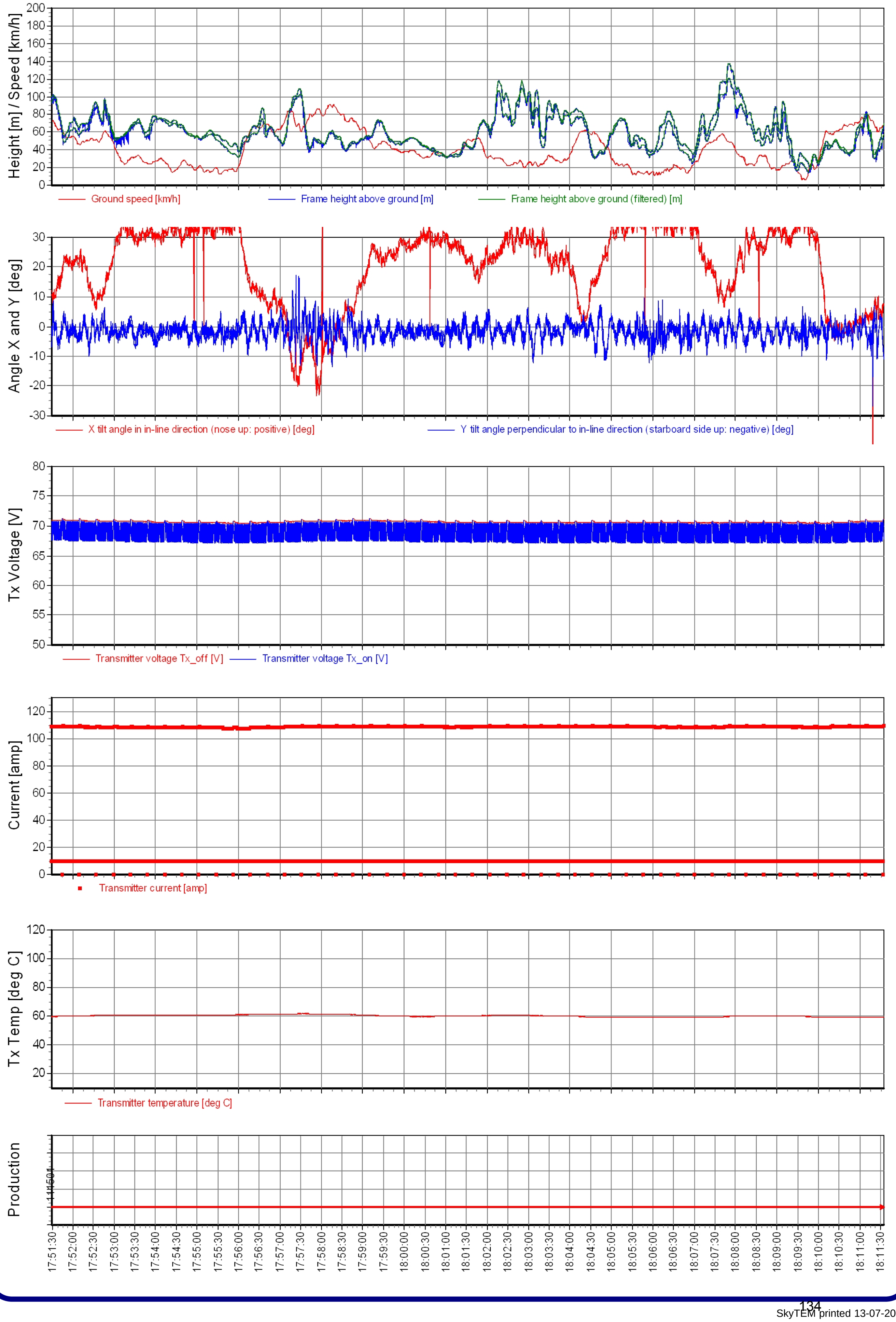
Height [m] / Speed [km/h]
Ground speed [km/h]
Frame height above ground [m]
Frame height above ground (filtered) [m]
Angle X and Y [deg]
X tilt angle in in-line direction (nose up: positive) [deg]
Y tilt angle perpendicular to in-line direction (starboard side up: negative) [deg]
Tx Voltage [V]
Transmitter voltage Tx_off [V]
Transmitter voltage Tx_on [V]
Current [amp]
Transmitter current [amp]
Tx Temp [deg C]
Transmitter temperature [deg C]
Production
17:51:30
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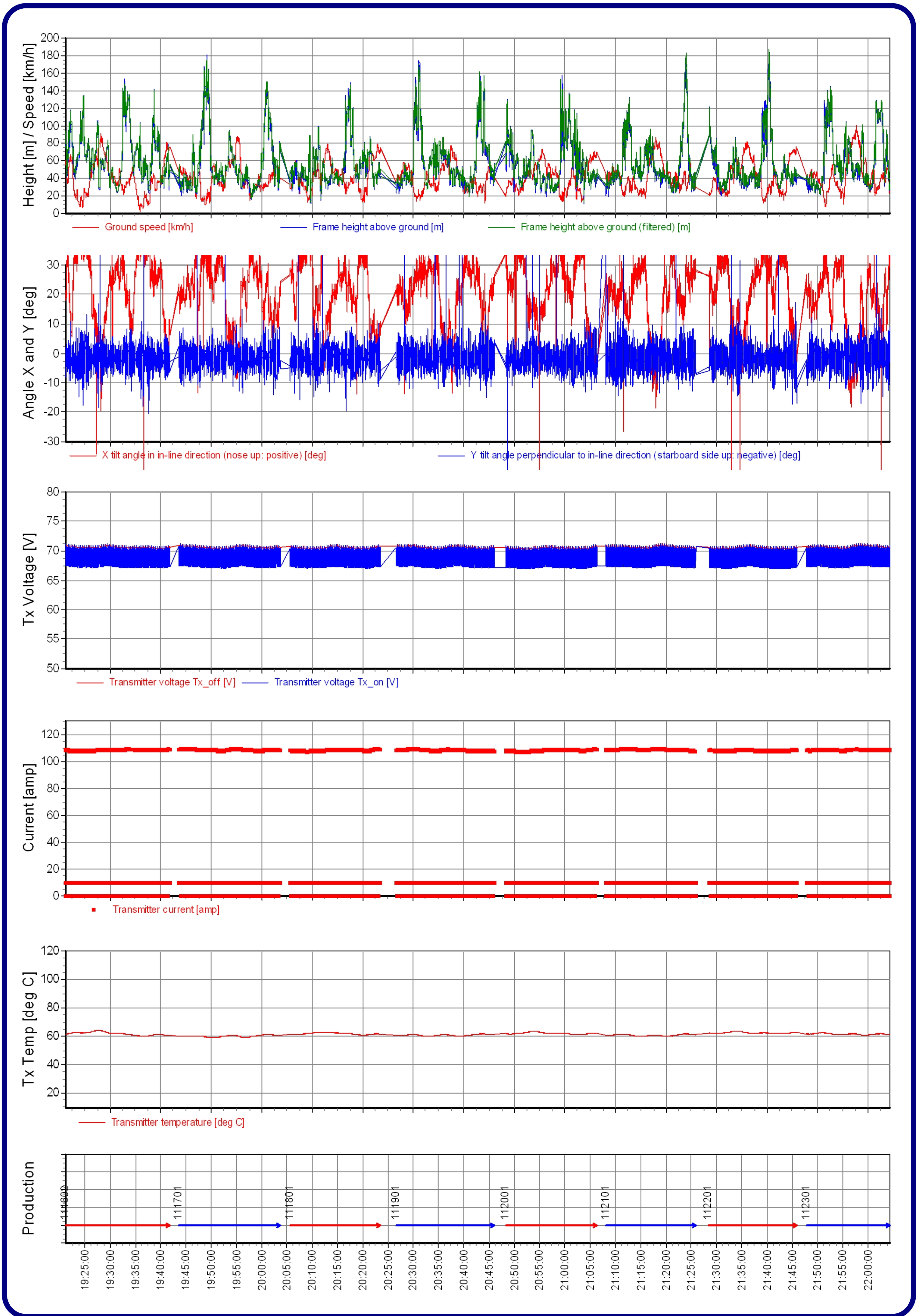

Height [m] / Speed [km/h]
Ground speed [km/h]
Frame height above ground [m]
Frame height above ground (filtered) [m]
Angle X and Y [deg]
X tilt angle in in-line direction (nose up: positive) [deg]
Y tilt angle perpendicular to in-line direction (starboard side up: negative) [deg]
Tx Voltage [V]
Transmitter voltage Tx_off [V]
Transmitter voltage Tx_on [V]
Current [amp]
Transmitter current [amp]
Tx Temp [deg C]
Transmitter temperature [deg C]
Production
111602
111701
111801
111901
112001
112101
112201
112301
19:25:00
19:30:00
19:35:00
19:40:00
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19:55:00
20:00:00
20:05:00
20:10:00
20:15:00
20:20:00
20:25:00
20:30:00
20:35:00
20:40:00
20:45:00
20:50:00
20:55:00
21:00:00
21:05:00
21:10:00
21:15:00
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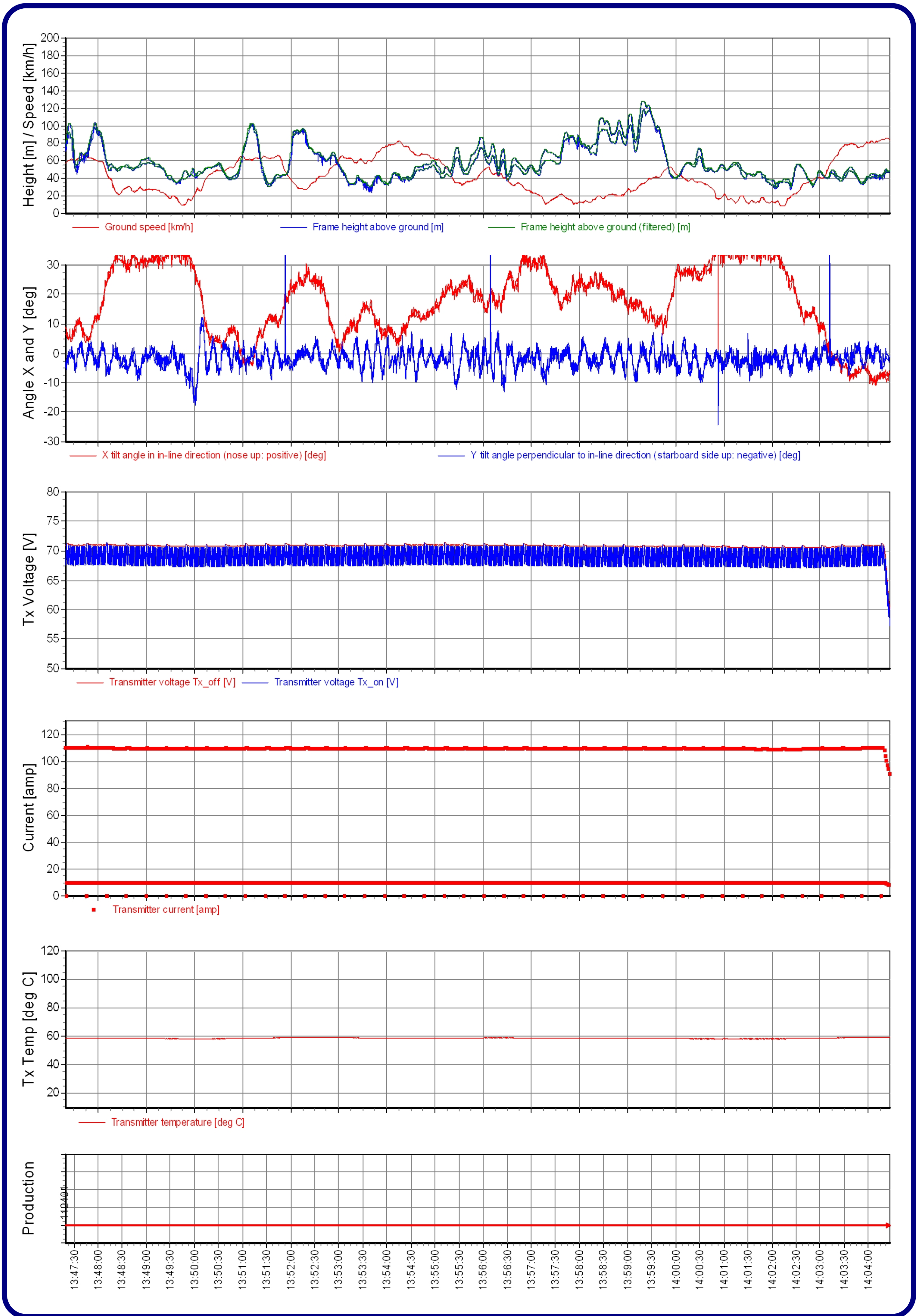
22:00:00



Height [m] / Speed [km/h]
Ground speed [km/h]
Frame height above ground [m]
Frame height above ground (filtered) [m]
Angle X and Y [deg]
X tilt angle in in-line direction (nose up: positive) [deg]
Y tilt angle perpendicular to in-line direction (starboard side up: negative) [deg]
Tx Voltage [V]
Transmitter voltage Tx_off [V]
Transmitter voltage Tx_on [V]
Current [amp]
Transmitter current [amp]
Tx Temp [deg C]
Transmitter temperature [deg C]
Production
13:47:30
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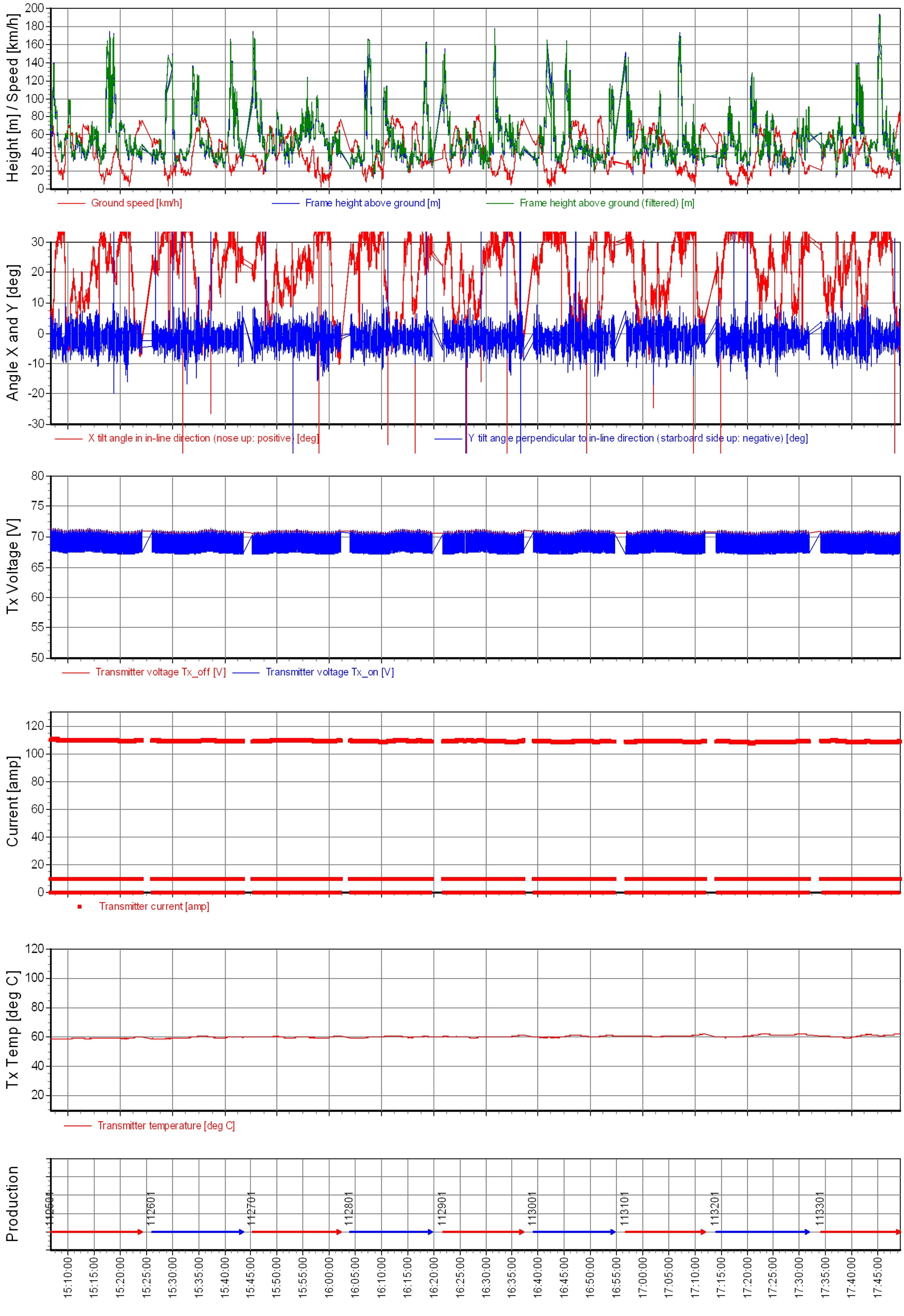
Height [m] / Speed [km/h]
Ground speed [km/h]
Frame height above ground [m]
Frame height above ground (filtered) [m]
Angle X and Y [deg]
X tilt angle in in-line direction (nose up: positive) [deg]
Y tilt angle perpendicular to in-line direction (starboard side up: negative) [deg]
Tx Voltage [V]
Transmitter voltage Tx_off [V]
Transmitter voltage Tx_on [V]
Current [amp]
Transmitter current [amp]
Tx Temp [deg C]
Transmitter temperature [deg C]
Production
112501
112601
112701
112801
112901
113001
113101
113201
113301
15:10:00
15:15:00
15:20:00
15:25:00
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16:45:00
16:50:00
16:55:00
17:00:00
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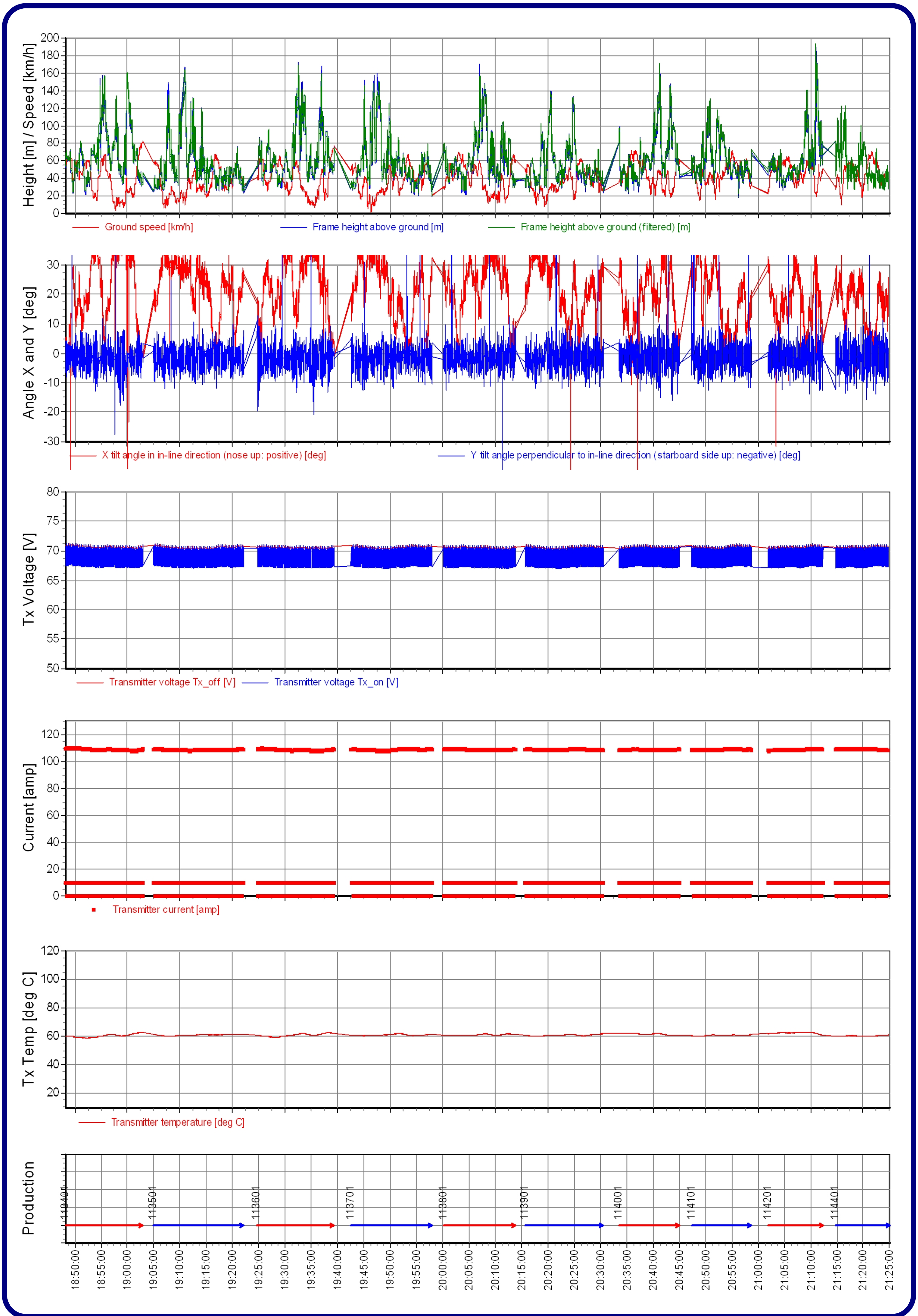
17:40:00
17:45:00


Height [m] / Speed [km/h]
Ground speed [km/h]
Frame height above ground [m]
Frame height above ground (filtered) [m]
Angle X and Y [deg]
X tilt angle in in-line direction (nose up: positive) [deg]
Y tilt angle perpendicular to in-line direction (starboard side up: negative) [deg]
Tx Voltage [V]
Transmitter voltage Tx_off [V]
Transmitter voltage Tx_on [V]
Current [amp]
Transmitter current [amp]
Tx Temp [deg C]
Transmitter temperature [deg C]
Production
113401
113501
113601
113701
113801
113901
114001
114101
114201
114401
18:50:00
18:55:00
19:00:00
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19:55:00
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20:05:00
20:10:00
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20:25:00
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20:40:00
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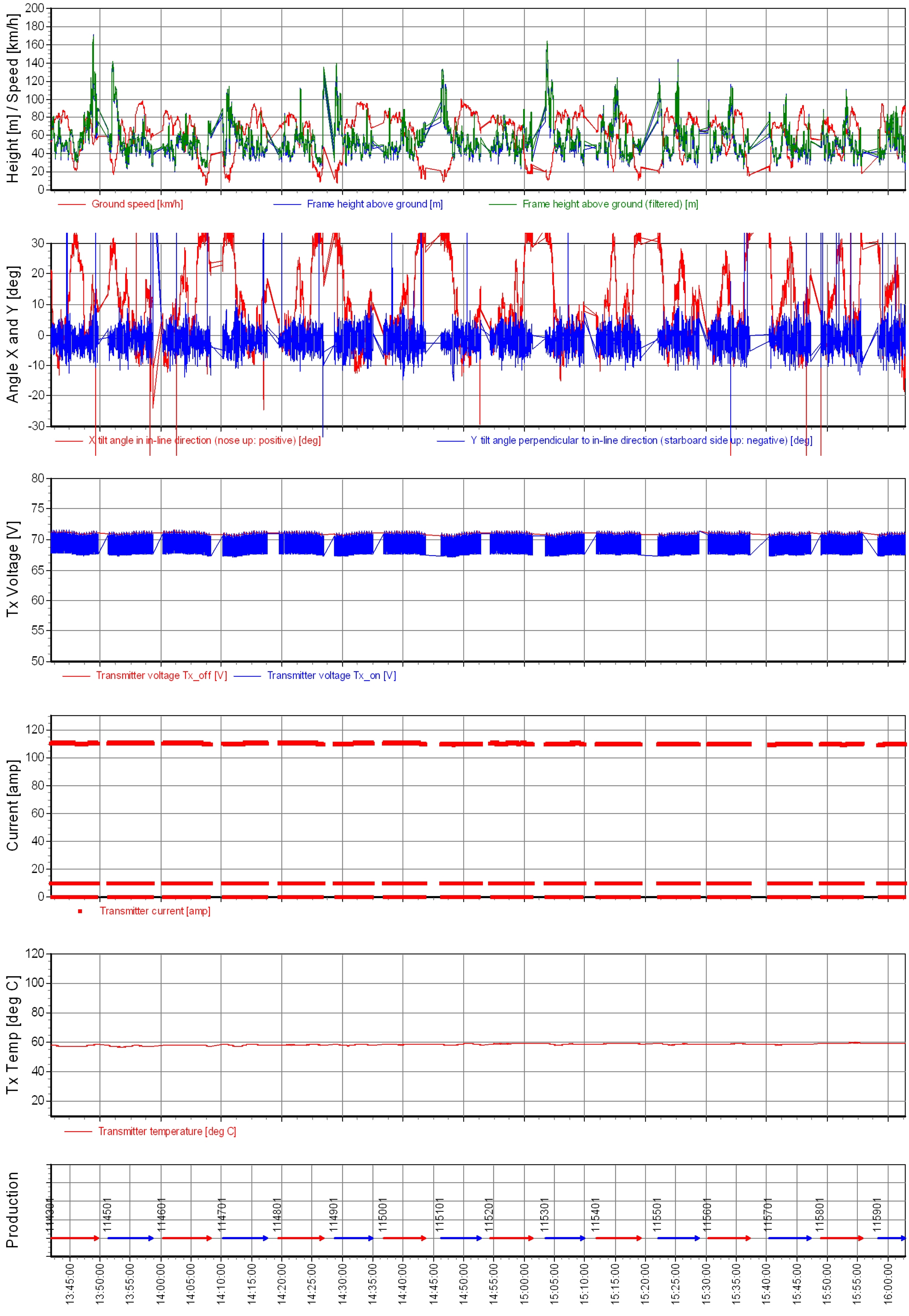
21:25:00



Height [m] / Speed [km/h]
Ground speed [km/h]
Frame height above ground [m]
Frame height above ground (filtered) [m]
Angle X and Y [deg]
X tilt angle in in-line direction (nose up: positive) [deg]
Y tilt angle perpendicular to in-line direction (starboard side up: negative) [deg]
Tx Voltage [V]
Transmitter voltage Tx_off [V]
Transmitter voltage Tx_on [V]
Current [amp]
Transmitter current [amp]
Tx Temp [deg C]
Transmitter temperature [deg C]
Production
114301
114501
114601
114701
114801
114901
115001
115101
115201
115301
115401
115501
115601
115701
115801
115901
13:45:00
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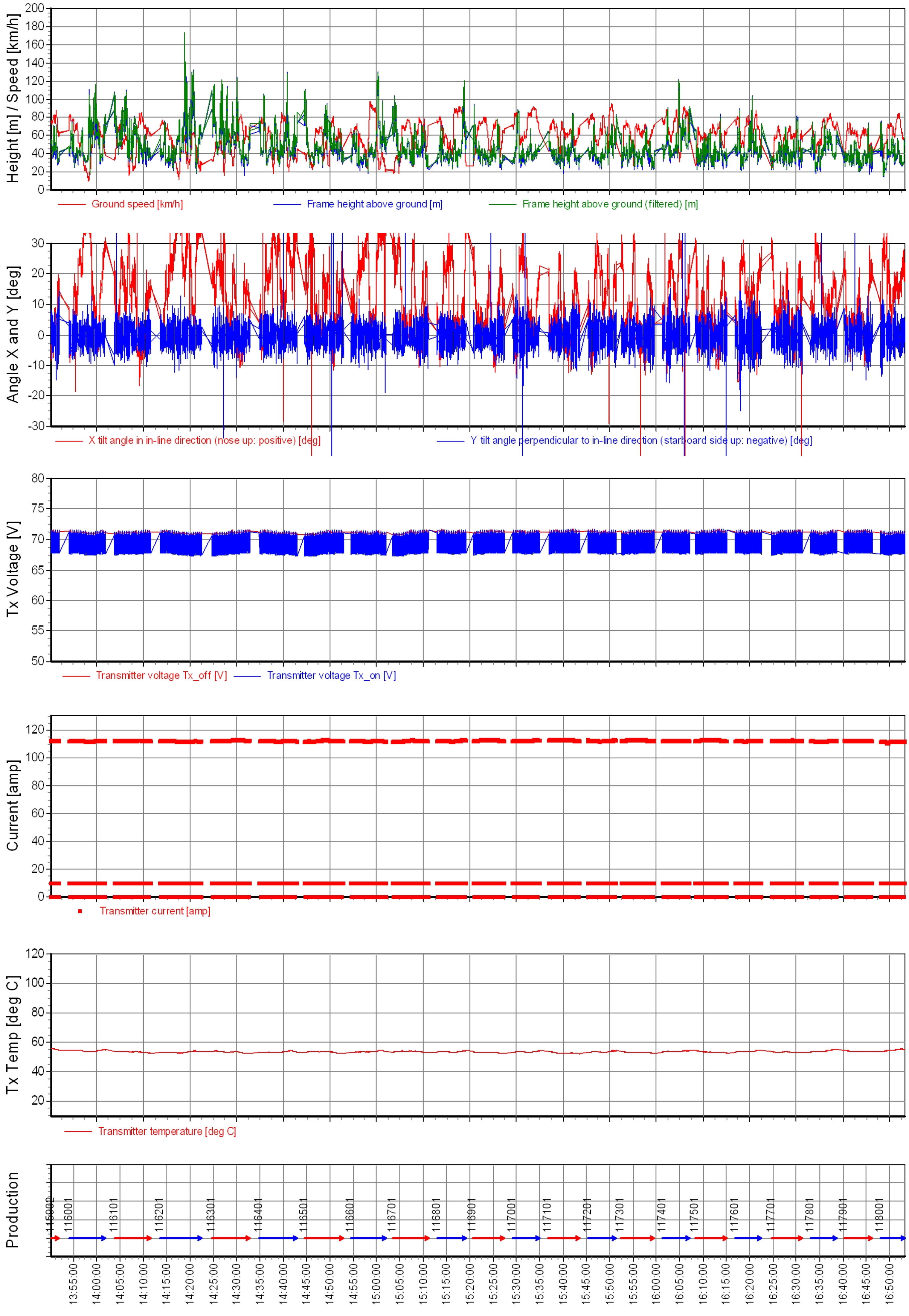
16:00:00


Height [m] / Speed [km/h]
Ground speed [km/h]
Frame height above ground [m]
Frame height above ground (filtered) [m]
Angle X and Y [deg]
X tilt angle in in-line direction (nose up: positive) [deg]
Y tilt angle perpendicular to in-line direction (starboard side up: negative) [deg]
Tx Voltage [V]
Transmitter voltage Tx_off [V]
Transmitter voltage Tx_on [V]
Current [amp]
Transmitter current [amp]
Tx Temp [deg C]
Transmitter temperature [deg C]
Production
116001
116101
116201
116301
116401
116501
116601
116701
116801
116901
117001
117101
117201
117301
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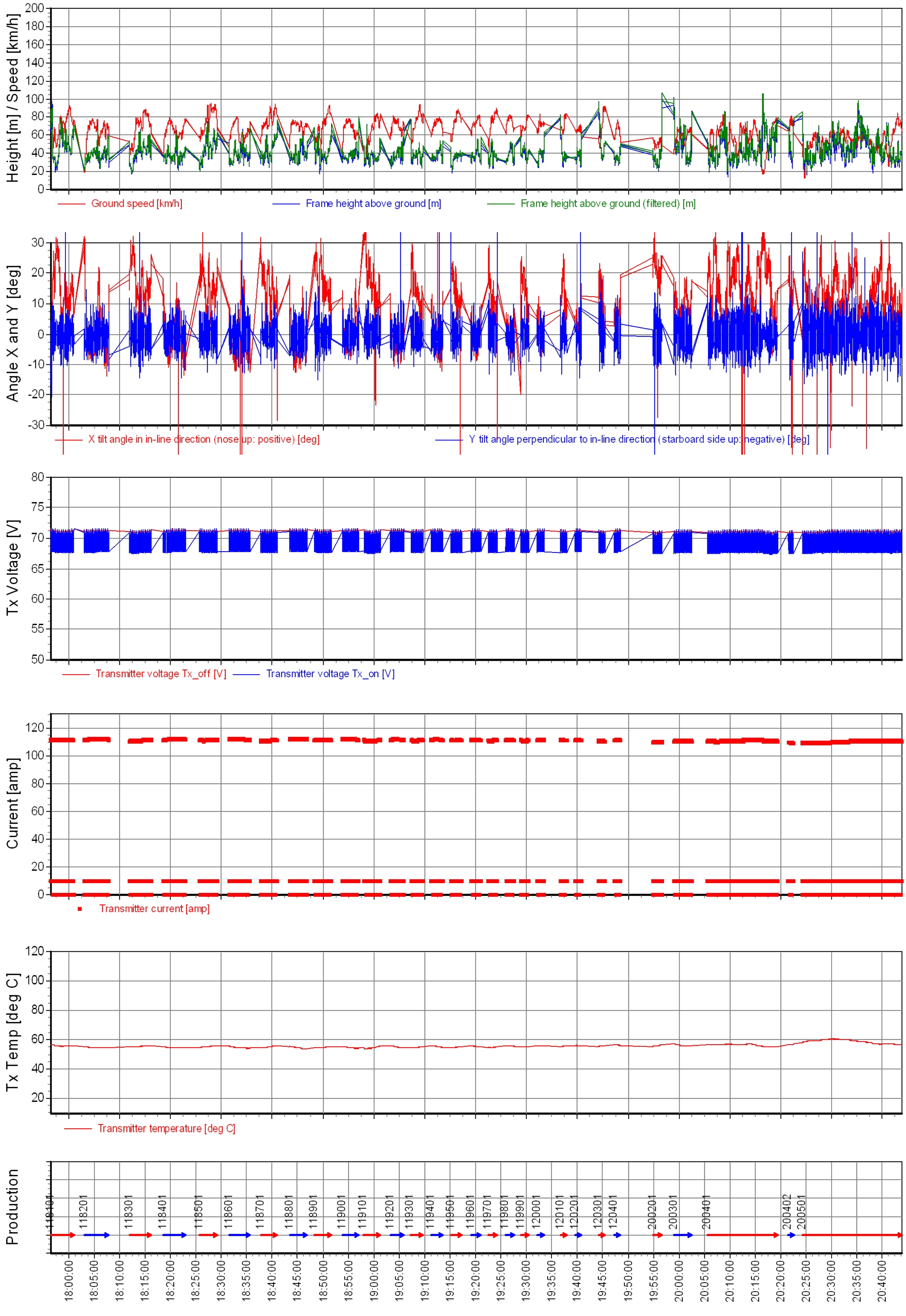
16:50:00


Height [m] / Speed [km/h]
Ground speed [km/h]
Frame height above ground [m]
Frame height above ground (filtered) [m]
Angle X and Y [deg]
X tilt angle in in-line direction (nose up: positive) [deg]
Y tilt angle perpendicular to in-line direction (starboard side up: negative) [deg]
Tx Voltage [V]
Transmitter voltage Tx_off [V]
Transmitter voltage Tx_on [V]
Current [amp]
Transmitter current [amp]
Tx Temp [deg C]
Transmitter temperature [deg C]
Production
118101
118201
118301
118401
118501
118601
118701
118801
118901
119001
119101
119201
119301
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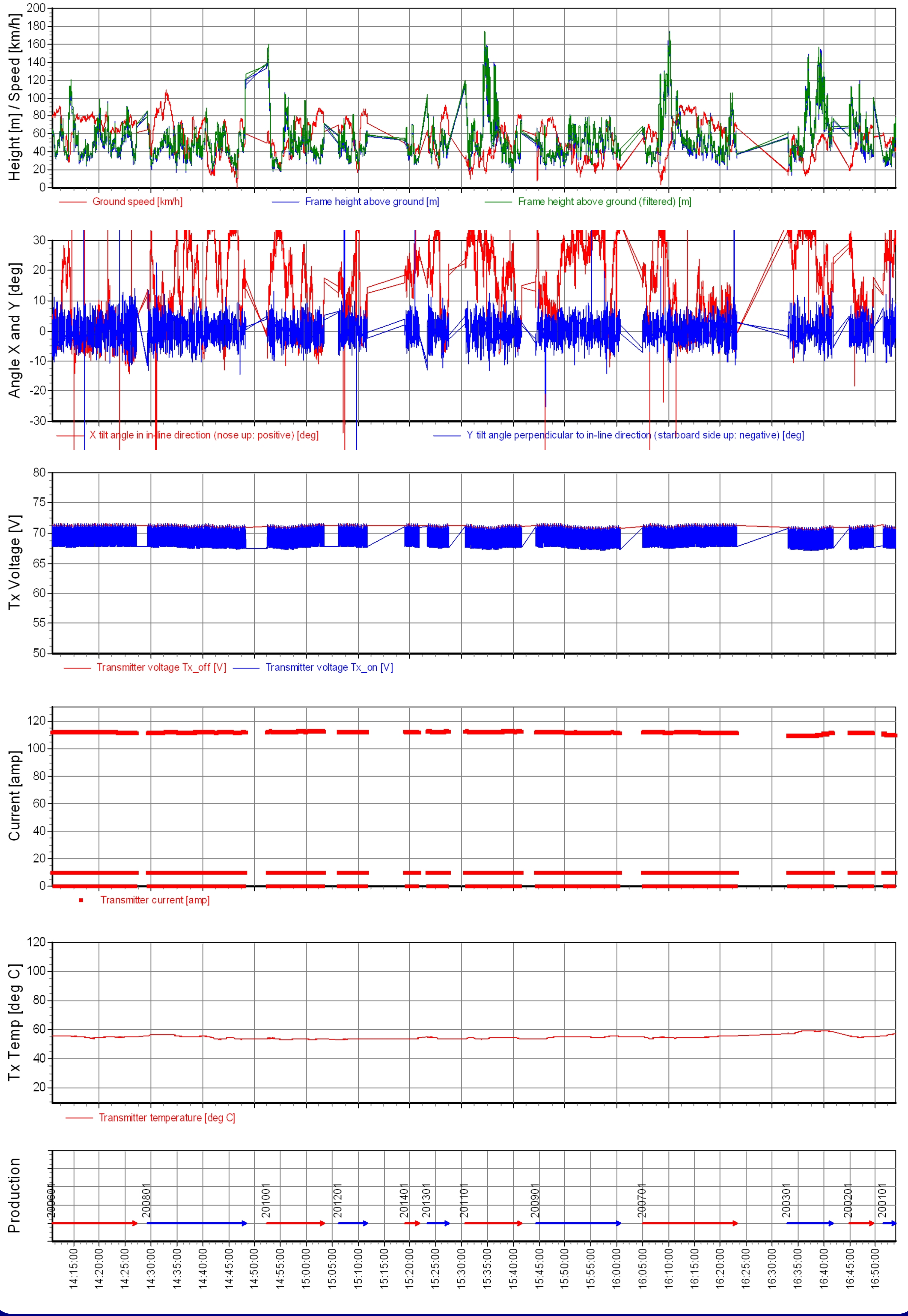
Height [m] / Speed [km/h]
Ground speed [km/h]
Frame height above ground [m]
Frame height above ground (filtered) [m]
Angle X and Y [deg]
X tilt angle in in-line direction (nose up: positive) [deg]
Y tilt angle perpendicular to in-line direction (starboard side up: negative) [deg]
Tx Voltage [V]
Transmitter voltage Tx_off [V]
Transmitter voltage Tx_on [V]
Current [amp]
Transmitter current [amp]
Tx Temp [deg C]
Transmitter temperature [deg C]
Production
200601
200801
201001
201201
201401
201301
201101
200901
200701
200301
200201
200101
14:15:00
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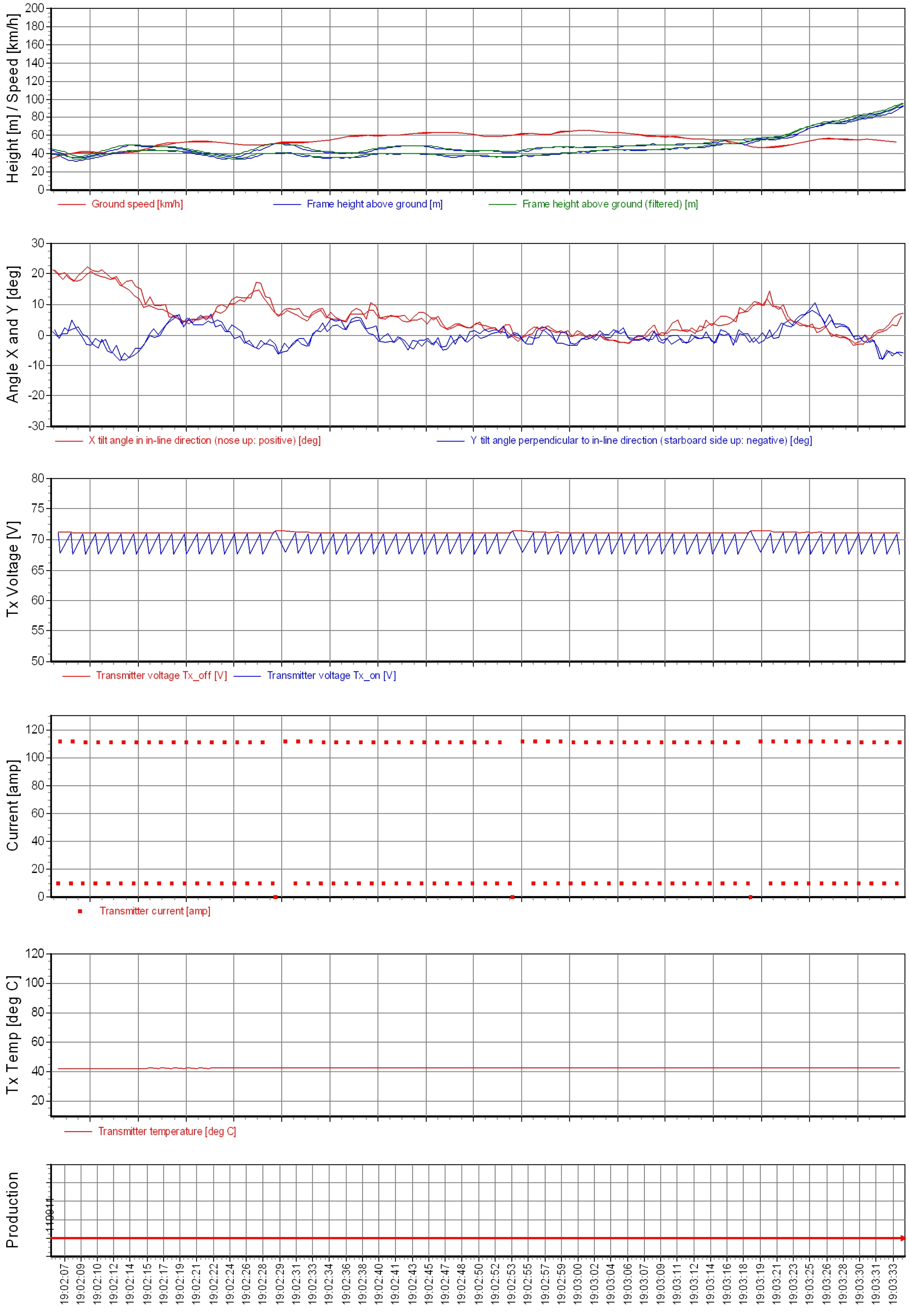
16:50:00



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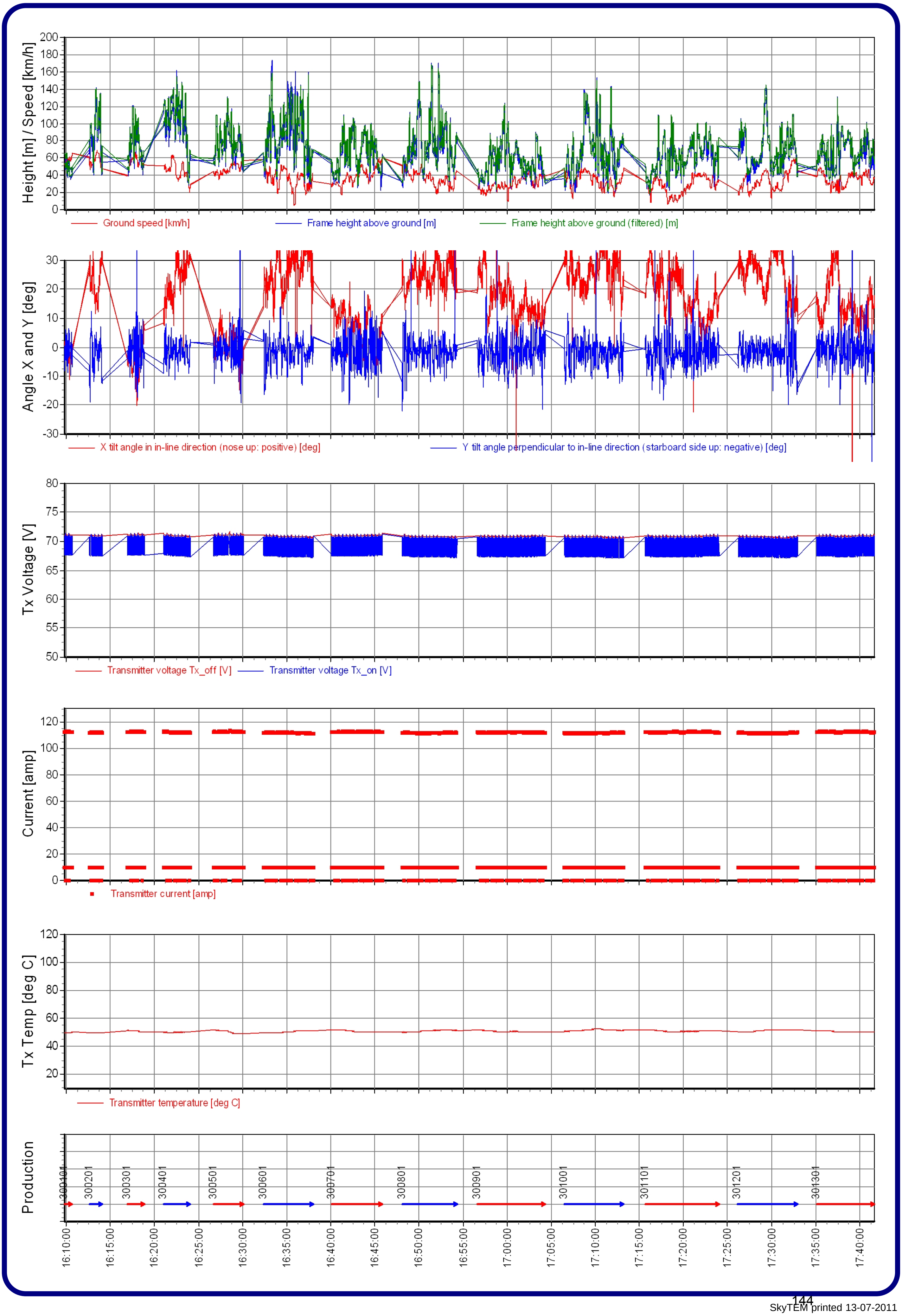
Height [m] / Speed [km/h]
Ground speed [km/h]
Frame height above ground [m]
Frame height above ground (filtered) [m]
Angle X and Y [deg]
X tilt angle in in-line direction (nose up: positive) [deg]
Y tilt angle perpendicular to in-line direction (starboard side up: negative) [deg]
Tx Voltage [V]
Transmitter voltage Tx_off [V]
Transmitter voltage Tx_on [V]
Current [amp]
Transmitter current [amp]
Tx Temp [deg C]
Transmitter temperature [deg C]
Production
300101
300201
300301
300401
300501
300601
300701
300801
300901
301001
301101
301201
301301
16:10:00
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16:50:00
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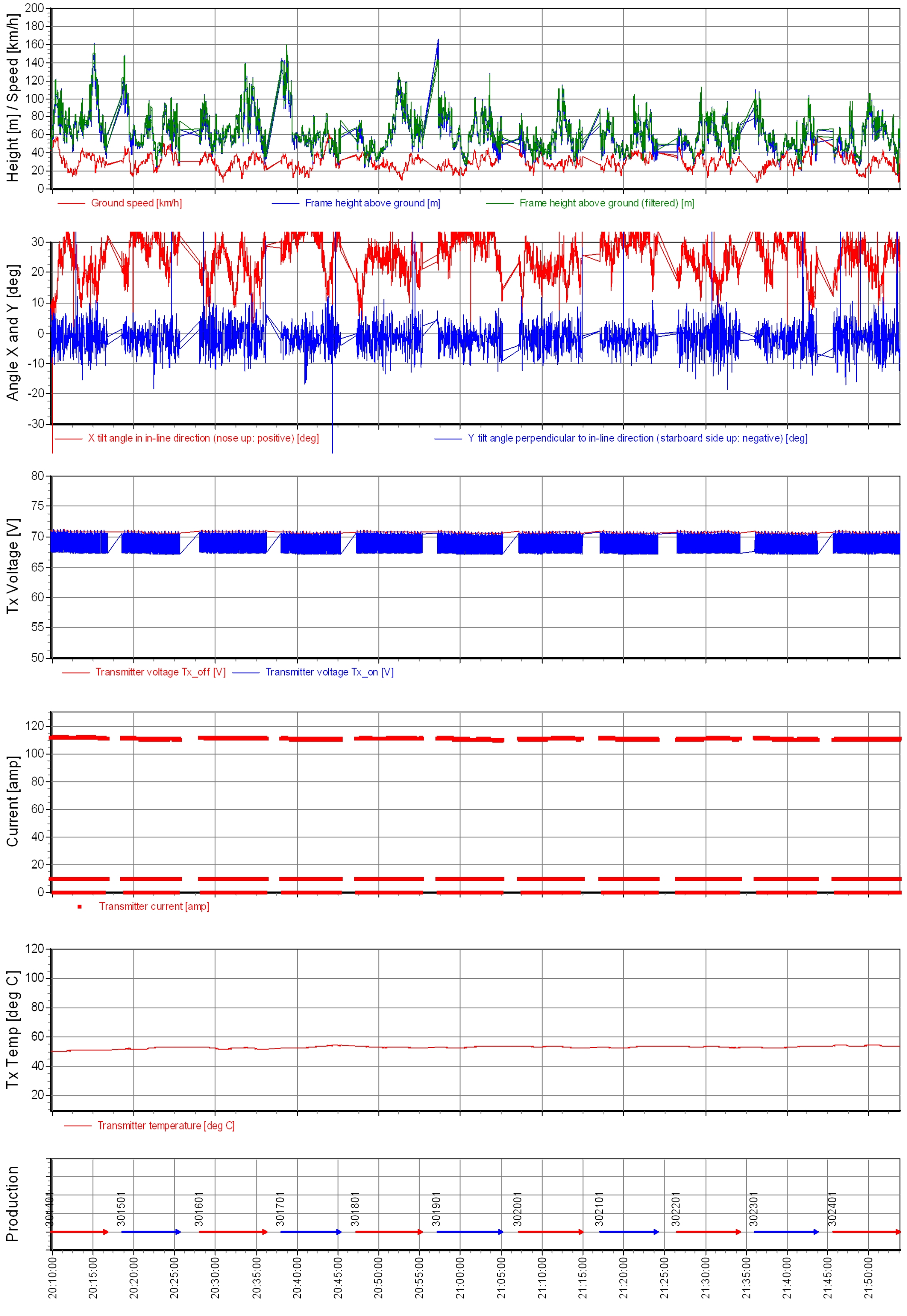
17:40:00


Height [m] / Speed [km/h]
Ground speed [km/h]
Frame height above ground [m]
Frame height above ground (filtered) [m]
Angle X and Y [deg]
X tilt angle in in-line direction (nose up: positive) [deg]
Y tilt angle perpendicular to in-line direction (starboard side up: negative) [deg]
Tx Voltage [V]
Transmitter voltage Tx_off [V]
Transmitter voltage Tx_on [V]
Current [amp]
Transmitter current [amp]
Tx Temp [deg C]
Transmitter temperature [deg C]
Production
301401
301501
301601
301701
301801
301901
302001
302101
302201
302301
302401
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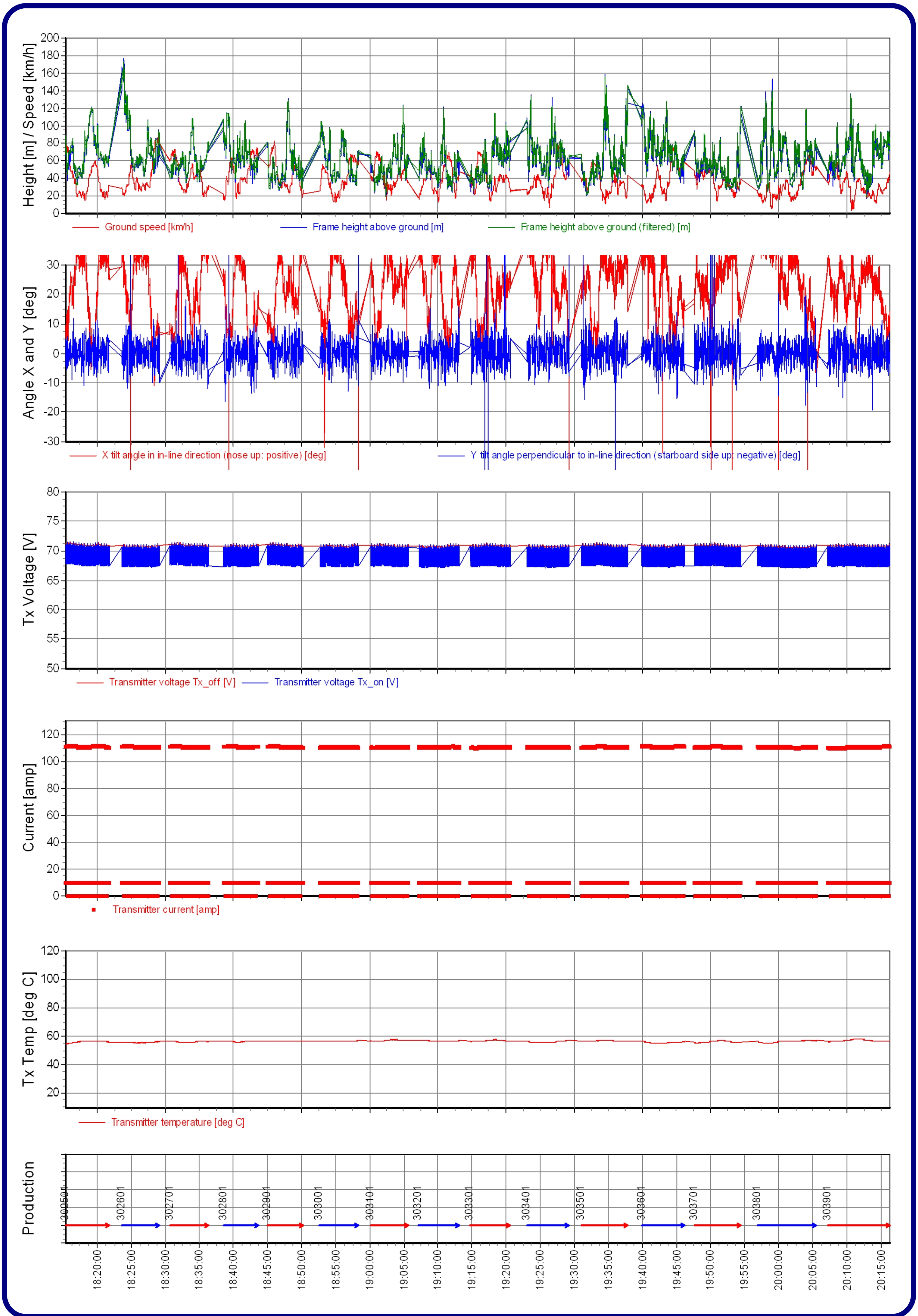
Height [m] / Speed [km/h]
Ground speed [km/h]
Frame height above ground [m]
Frame height above ground (filtered) [m]
Angle X and Y [deg]
X tilt angle in in-line direction (nose up: positive) [deg]
Y tilt angle perpendicular to in-line direction (starboard side up: negative) [deg]
Tx Voltage [V]
Transmitter voltage Tx_off [V]
Transmitter voltage Tx_on [V]
Current [amp]
Transmitter current [amp]
Tx Temp [deg C]
Transmitter temperature [deg C]
Production
302501
302601
302701
302801
302901
303001
303101
303201
303301
303401
303501
303601
303701
303801
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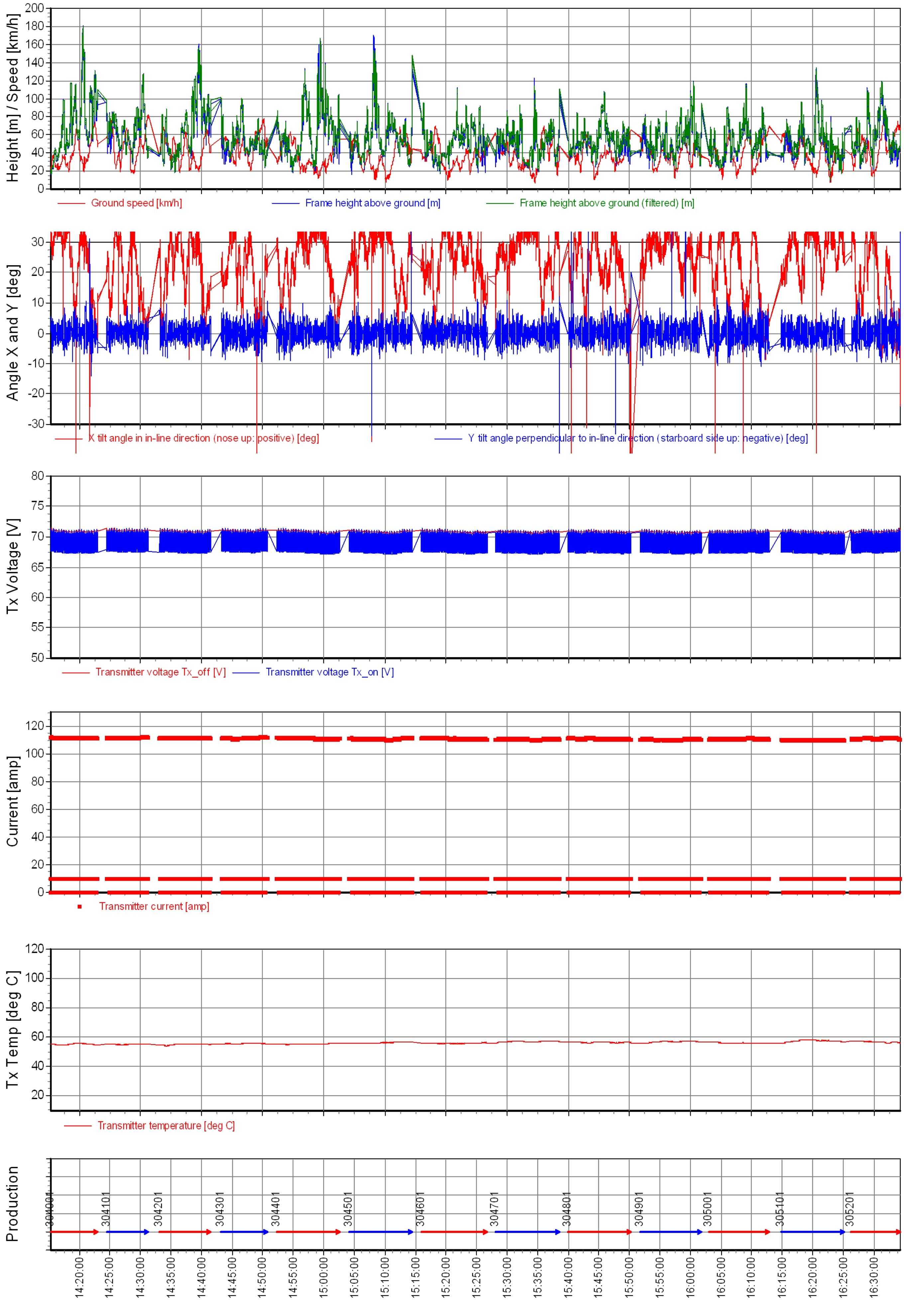

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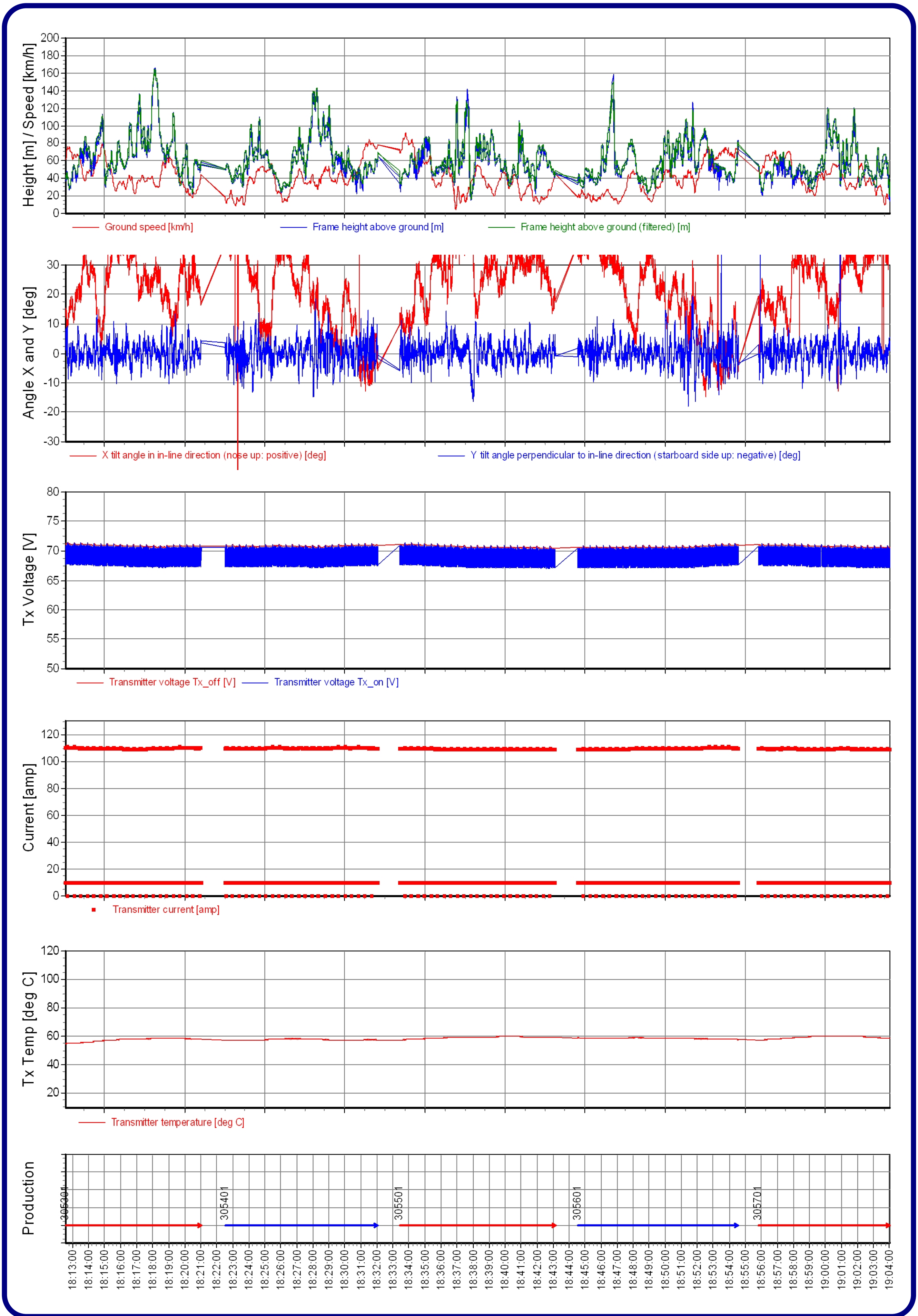
Height [m] / Speed [km/h]
Ground speed [km/h]
Frame height above ground [m]
Frame height above ground (filtered) [m]
Angle X and Y [deg]
X tilt angle in in-line direction (nose up: positive) [deg]
Y tilt angle perpendicular to in-line direction (starboard side up: negative) [deg]
Tx Voltage [V]
Transmitter voltage Tx_off [V]
Transmitter voltage Tx_on [V]
Current [amp]
Transmitter current [amp]
Tx Temp [deg C]
Transmitter temperature [deg C]
Production
305401
305501
305601
305701
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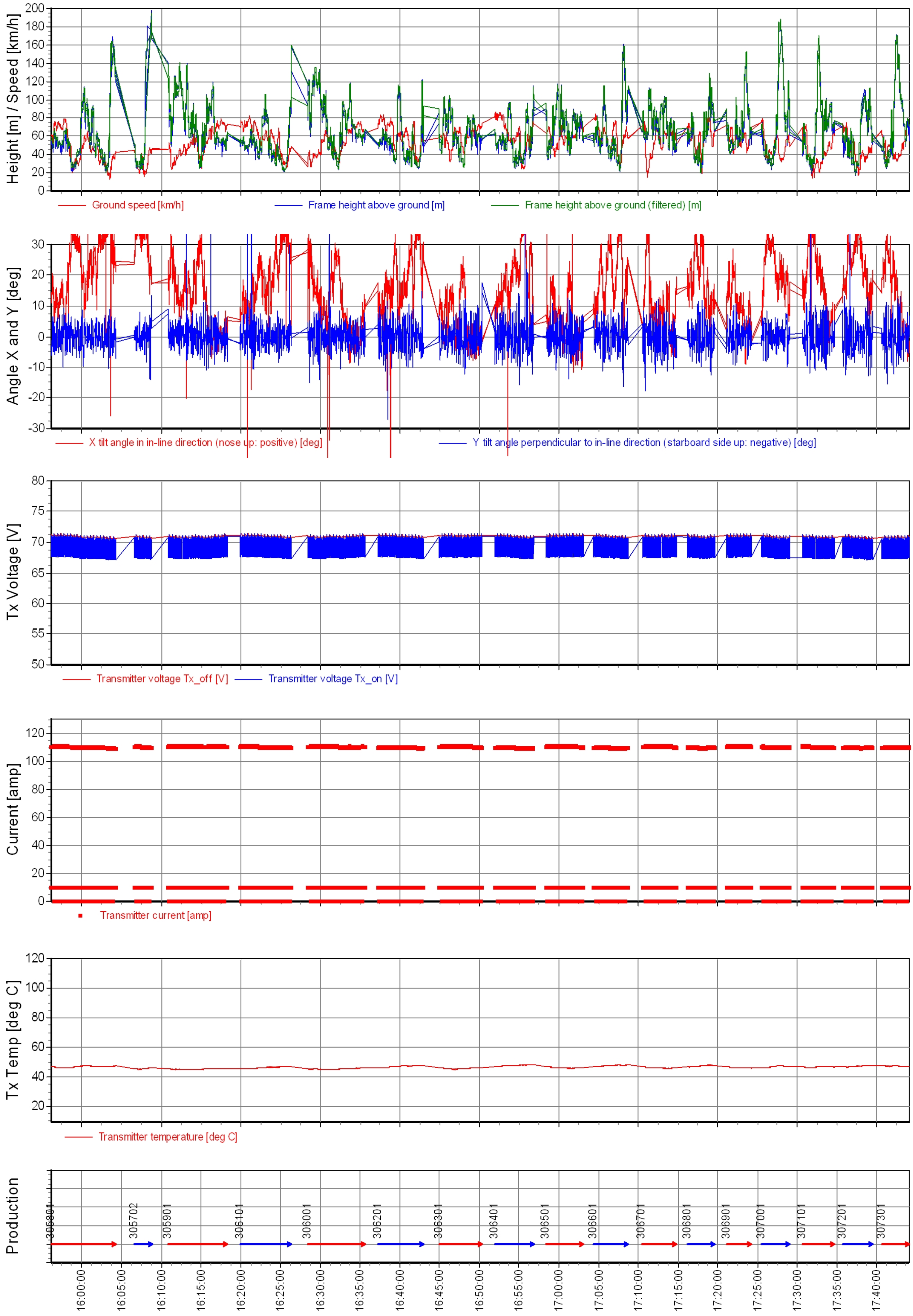
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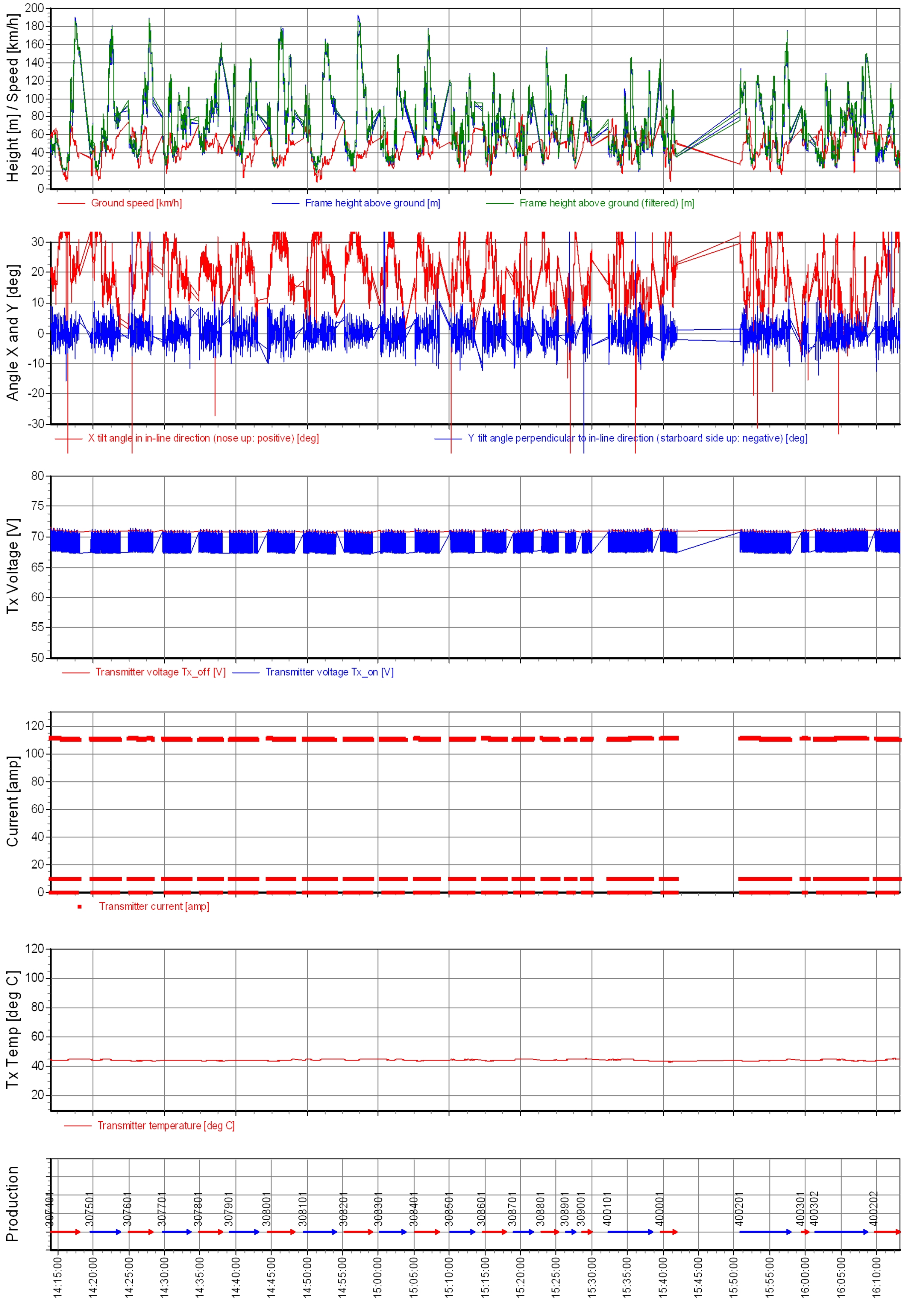
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Y tilt angle perpendicular to in-line direction (starboard side up: negative) [deg]
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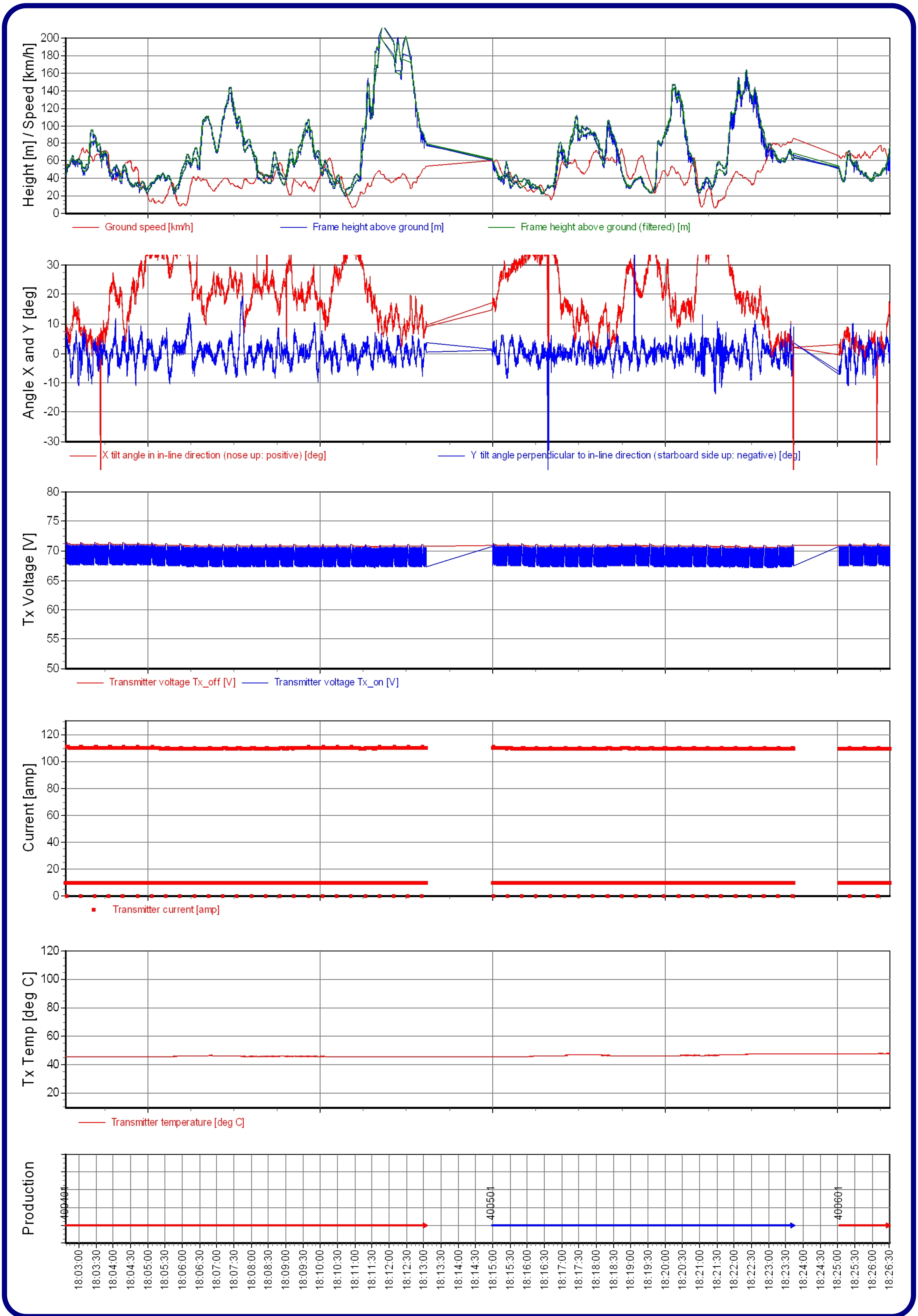
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Frame height above ground (filtered) [m]
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X tilt angle in in-line direction (nose up: positive) [deg]
Y tilt angle perpendicular to in-line direction (starboard side up: negative) [deg]
Tx Voltage [V]
Transmitter voltage Tx_off [V]
Transmitter voltage Tx_on [V]
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Appendix 5: Modelling and inversion of TEM Data

This appendix gives a brief introduction to modelling and inversion of SkyTEM data.

The model

The model used for inversion of SkyTEM data is a 1D multi-layer model (MLM) with typically 30 layers. The layer thicknesses increase downwards as a hyperbolic sine function of the layer number. This means that the depth to the layer boundaries increases linearly for small depths, so that the top layers are all of approximately the same thickness. For large depths, the depth to the layer boundaries increases exponentially with depth, so that the thickness of a layer is a factor times the previous one.

Inversion - The initial model

The initial model for the deep inversion is a 30-layer MLM with a homogeneous resistivity for all layers, i.e. the initial model is essentially a homogeneous half space. Model optimization can be carried out in both a L1- and a L2- norm formulation where the former produces more blocky models than the latter.

Data and noise model

The inaccuracy of TEM data is influenced by the ambient noise. This noise is reduced by selective stacking of delay time series, and by applying appropriate filters in the receiver system.

Experience with SkyTEM data suggests that the noise voltage most often can be described with a simple model: log(noise) is a linear function of log(time). When the width of the time gates increases proportional to delay time - as is the case with the SkyTEM system - the slope of the linear function is close to -0.5. The noise model used can therefore be described as:

$$V = V_0 \cdot \left(\frac{t}{t_0} \right)^{\alpha}$$

Where V is the noise voltage, V_0 is the noise voltage at time t_0 and α is the slope of the noise voltage as a function of time in a double logarithmic plot. Choosing t_0 = 1 ms, the noise model is defined by the values of V_0 and α. These values are chosen pragmatically by inspection of a subset of the data volume.

V_0 = 2.5e-12 in field units normalized with Tx moment (LM)
V_0 = 2.5e-13 in field units normalized with Tx moment (HM)
t_0 = 1 ms
slope = -0.5

Regularization

Inversion of TEM data is highly non-linear which means regularization is needed in order to guide the inversion routine to produce feasible geological models. In the initial inversion, a vertical smoothness constraint is implemented through a broadband model covariance matrix. This matrix is constructed by stacking single-scale exponential covariance functions with different correlation lengths, describing the covariance between any two points in the sub-surface. This approach has proven to be very robust and stable as the expected subsurface variability can be described through the prior covariance matrix (/3/).

To obtain laterally smooth model sections, the Lateral Parameter Correlation (LPC) procedure is used (/3/ and /4/). Through an inversion process, a smooth version of the resistivity variation is predicted from the results of the initial inversion. In this approach, all parameter values are correlated with all other values in the plane. After the LPC procedure, data are subjected to a final inversion constrained by the LPC models to improve the data fit.

Data insufficiency

For SkyTEM data, the insufficiency lies primarily in the limited delay time range that can be obtained. The earliest obtainable time gate is determined by the turnoff of the Tx current, and the latest useful time gate is determined by the signal to noise ratio. Increasing the Tx moment will give better measurements at late times, and thus improve the depth penetration, but also increase the turnoff time and thus remove early-time gates, thereby making the near-surface resolution poorer. This trade-off is solved by transmitting an alternating sequence of (1) a low moment that can be turned off quickly to give good near-surface resolution, and (2) a high moment that will improve the signal-to-noise ratio at late times, thus improving depth penetration.

Model inconsistency

When using 1D models in the interpretation of SkyTEM data, inconsistency arises where the lateral gradient of conductivity is not small, e.g. typically in mining applications. However, also in environmental investigations, inconsistencies can arise, typically where near-surface good conductors have abrupt boundaries. Often such inconsistency is indicated by the data residual being high and one should look upon the inversion results with some caution at these locations. 3D effects can also reveal themselves by the so-called ‘pant legs’, i.e. conductive or resistive structures projecting at an angle of approximately 30 degrees from the horizontal at the edges of high contrast structures.

Appendix 6: Model sections and resistivity intervals

Model sections and analysis sections are delivered in digital form as PDF files.

Model sections

The Model sections can be found in the data delivery folder as PDF's.

The model section plot consists of five subplots. The top plot shows the inverted models, with topography, where the resistivity of the individual layers is colour coded according to the colour bar. The resistivity is shown on a logarithmic scale and conductive and resistive features appear with the same weight. The actual flight elevation is shown with a red line above the model section. The white line in the model section indicates the estimated depth of investigation (DOI). Starting from the bottom layer of the model, the DOI is equal to the depth of the first layer having a conductance uncertainty of less than 0.5. If the resistivity uncertainty is too high, the layer resistivity is unresolved.

Below the model section is a plot of the normalized data residual (red line) and normalized total residual (black line) of the inversions. The total residual is a weighted sum of the data residual and the model residual, where the latter is a measure of the roughness of the model, i.e., the deviation of the final model from the initial homogeneous halfspace model.

Below the residual section is the analysis section. The resistivity of the inverted models is determined partly by the measured data and partly by the regularization – the vertical and horizontal smoothness constraints – used in the inversion. To illustrate the relative importance of the data and the smoothness constraints an analysis section is produced. The analysis section has the same appearance as the model section, but rather than plotting the layer resistivities the normalized relative uncertainty of the layer resistivities are plotted. The values of the normalized relative uncertainty are colour coded according to the colour scale. The colour scale consists of four colours: red, yellow, blue, and blue fading into white.

The red colour indicates that data have contributed considerably to the inverted resistivity, i.e., the resistivity is well determined.

The yellow colour indicates that data has had more influence on the inverted resistivity than the regularization, i.e., the resistivity is fairly well determined.

The blue colour indicates that the regularization has had more influence than the data in determining the inverted resistivity, i.e., the resistivity is poorly determined.

Where the blue colour fades into the white, the inverted resistivity is determined almost exclusively by the regularization, i.e., the resistivity is essentially undetermined.

In short, one can say that data has had more influence than the regularization when values are below 1 – the red and yellow colours – and that the regularization has had more influence than the data where the values are above 1 – the blue and white colours.

Please take note that in some parts of the analysis sections, where the near-surface resistivity is very high, the top part of the model can be seen as undetermined. In this situation the TEM method cannot determine the resistivity.

Below the analysis section are two plots of the measured data (dots) together with the response of the inverted models (solid lines). M1 is low moment data and M2 is high moment data. For both plots, every second gate is plotted starting with the earliest gate, and data are plotted with a density of 8 points per centimetre along the profile.

Layer Resistivity Maps

The Model sections can be found in the data delivery folder as PDF's as well as geosoft . grd files.

The resistivity maps show the inverted resistivity for each of the model layers.

As the thickness of the model layers increases downwards the maps represent a varying thickness interval. The depth interval is stated on the pdf files and is in meters below the surface.

Appendix 7: Digital data

The digital data are listed in the following folders. The folders 01 to 04 are located in folders Joy and Mervyn holding the data for each block respectively.

Data delivery folder	Sub folder	Sub folder	File format	Comment
01_TEM_data	01_Data		Geosoft.gdb	Database ready for import in Geosoft
	02_EM_Channels_ grid	HM_Z	Geosoft.grd	Channel plots of raw data. Gate 16-34
		LM_Z	Geosoft.grd	Channel plots of raw data. Gate 5-26
02_MAG_data	01_Data		Geosoft.gdb	Database ready for import in Geosoft
	02_Grids		Geosoft.grd	TMI and RMF
	03_Maps		.pdf Geosoft.map	Maps of RMF and TMI
03_Inversion	01_Data		Geosoft.gdb ASCII.xyz	Database ready for import in Geosoft ASCII text file
	02_Layer_Resistivity_Grids		Geosoft.grd	Grids of the resistivity in each layer
	03_Layer_Resistivty_Maps		.pdf Geosoft.map	Maps of the resistivity in each layer
	04_Sections		.pdf	Resistivity and analysis of all lines
04_MISC	DEM		Geosoft.grd .pdf Geosoft.map	Digital Elevation Model of the area
	LinePath		.pdf .map	Path in UTM z8N.
	PlannedFlightLines		.pdf .map .gdb	Path + coordinates of start and end of line in UTM z8N
05_Report			.pdf	The report and appendices

Appendix 2
Geophysical Interpretation
Thomas V. Weis & Associates

Thomas V Weis and Associates

7200 East Dry Creek Road, Suite F-203

Centennial, Colorado 80112 USA

Geophysical Report

To: Joanna Ettlinger - Monster Mining Corp.

From: Tom Weis

Date: October 12, 2011

Subject: Keno-Lightning SkyTEM Survey

Summary of Results

The SkyTEM time-domain helicopter electromagnetic system was flown over Monster Mining's Keno-Lightning property in the Yukon Territory of Canada. 1457 line kilometers of data, flight lines and tie lines, were surveyed. The purpose of the survey was to map mineralized (Ag, Pb, Zn) structures occurring in the Keno Hill Quartzite. The Quartzite is a very prospective unit as it is brittle, fractures easily and is the primary host for the mineralized veins. The surrounding meta-sedimentary units, shale and schist, are not as brittle or easy to fracture and therefore not as well mineralized.

Exploration for narrow, high grade veins is an extremely difficult proposition at best. There are three aspects in this exploration task. The first is mapping the prospective quartzite and other lithologic units. The second is mapping the structure containing the Ag/Pb/Zn veins. The third is mapping the conductive Pb mineralization within the vein itself.

Based on the work with this data set at a small scale and with minimal geologic input the following are the initial conclusions:

1. The magnetic data set does not seem to map the Keno Hill Quartzite as a distinct unit from the surrounding meta-sediments. The EM data however does seem to map lithology.
2. Both the magnetic and EM data sets identify structural targets with the correct orientation (NE-SW) to host potential mineralized veins.
3. At this time no direct detection of conductive Pb sulfides has been identified however that may be a function of the scale at which this data set has been interpreted.

Survey Details

Two survey areas, Keno-Lightning and McKay-Hill were flown for Monster Mining Corporation in June of 2011. This report pertains to the Keno-Lightning work only (see Figure 1).

The flight line direction is NW-SE (azimuth 135 degrees) based on geologic requirements (see below). The flight line spacing is 100 meters. Tie line spacing is 1000m (orthogonal or NE-SW). The nominal terrain clearance is 30 to 40 meters depending on steepness of terrain, obstructions and weather conditions. Ultimately terrain clearance was determined by the pilot based on safety concerns.

The SkyTEM system is an extremely interesting system and is probably the best helicopter EM (HEM) system to use for exploring Keno-Lightning. That is because it is actually two systems in one. A high moment system (HM) with a 30 Hz base frequency and a low moment system (LM) with a 240 Hz base frequency. The HM system has 4 turns on the transmitter loop which results in a larger electromagnetic moment that explores later times and deeper. This is good for detecting large conductive bodies at depth. It is not so good for mapping near surface resistivity variations due to the relatively slow transmitter turn off time. The LM system has a single turn transmitter loop which allows a fast turn off time and is good for near surface resistivity mapping. The combination of these two systems makes the SkyTEM system useful at Keno-Lightning. An intermediate time (HM Z G16-1) in the overlap between HM and LM systems was used in this interpretation.

The SkyTEM system also has a Cesium vapor magnetometer system on board which maps the total magnetic intensity (TMI) of the earth's field. This data set turns out to be extremely useful in mapping structure at Keno-Lightning.

Dataset utility for geological mapping

The original goal for this combined EM and Magnetic survey was to map Ag/Pb/Zn "transverse" veins, striking from N-S to N70E, within the Keno Hill Quartzite. To do this the system was required to 1)map conductive sulfide mineralization within the vein systems, 2)map faults that may contain the mineralized vein systems and 3)map lithology, i.e. the Keno Hill Quartzite. As the mineralized veins strike NE-SW a flight line direction of N45W was chosen to highlight these transverse structures and minimize the effect of post-ore longitudinal structures striking N45W which tend to be un-mineralized. One complication with the data set occurred when the SkyTEM processors left the NE-SW tie-lines in the data when gridding both the magnetic and electromagnetic data sets. This created subtle NE-SW striking features which were confused with structures of interest. Both Magnetic and EM data sets were reprocessed prior to interpretation of the data set.

No obvious conductive sulfide responses have been detected in the data set. This is not to say that there will not be any but with the current geologic knowledge of the area none have been identified.

A series of very weak N-S to NE-SW to N70E striking magnetic features have been identified in the first vertical derivative (1VD) and the second vertical derivative (2VD) magnetic data sets. Examples are shown below in Figures 2 to 4. The features were identified because they are in the direction of the targeted transverse structures. In several cases (Figure 3) these interpreted magnetic structures coincide with mapped vein/structures shown by the Arcview 'shape files' provided from geological mapping.

A second set of interpreted structures were generated from various EM channel grids (Figures 10 and 11). The primary channel used to demonstrate this was HM Z G16-1. These interpreted structures also agree well with the mapped vein and fault shape files and with the interpreted magnetic structures.

The interpreted magnetic and EM structures are the primary product of this interpretation exercise but they are not a complete list. There are a large number of possible structures that need to be interpreted at the prospect scale (1:5000) in areas highlighted by geology, geochemistry or drilling (Figures 15 to 17 and 21).

At first glance there is no obvious magnetic character that will allow the quartzite, quartz sericite schist and phyllite units to be distinguished from each other (Figures 5 to 9). There is a contact in the magnetic character between magnetic units (Greenstone?) to the NE and sedimentary host rocks, to the SW (Figure 22).

The EM data and the inversion model of that data are useful in mapping lithology. Figures 12, 13 and 14 show a correlation between folded EM variations and mapped contacts of quartzite, quartz sericite schist and phyllite units. The inverted EM data shown as a resistivity grid (98 meter depth slice) maps these lithologic units and the greenstone bodies (resistivity highs) as well (Figures 18 to 21).

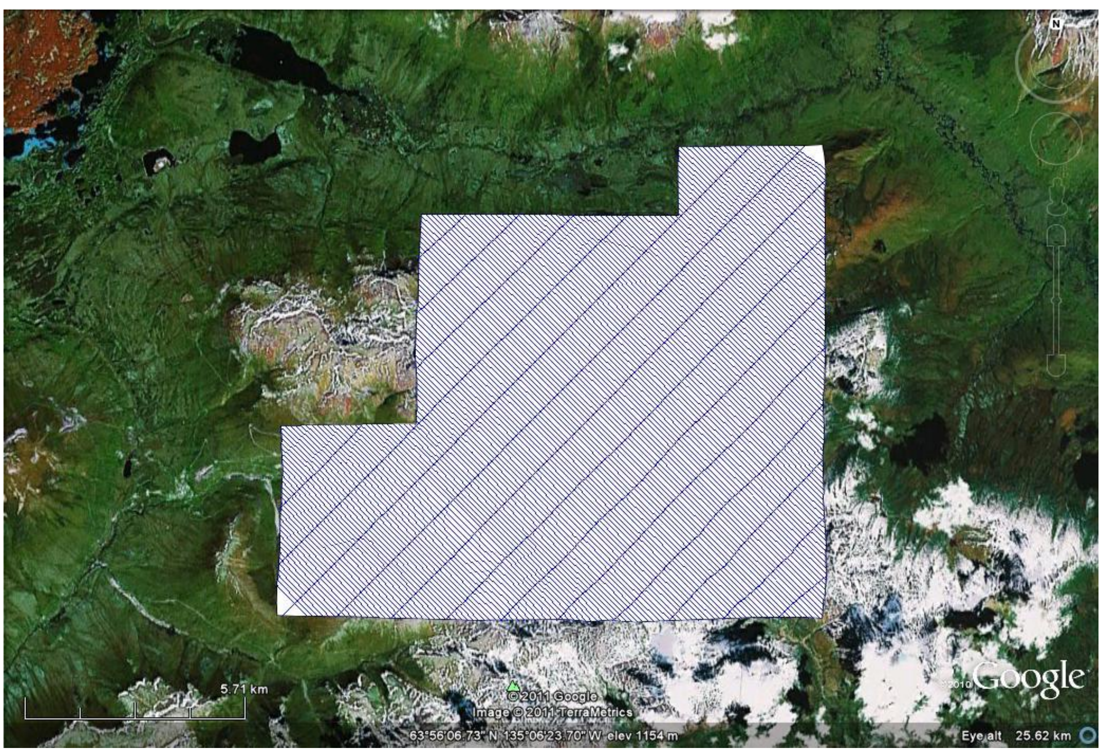

Figure 1 – Keno Lightning survey location map. Flight lines on Google Earth image. Line direction N45W at 100 meter spacing. Tie Line direction N45E at 1000 meter spacing.

Comparison of Magnetic and EM data to structure and lithology

Figures 2 through 21 demonstrate the utility of the magnetic and electromagnetic data sets in mapping structure and lithology. Only a small portion of the entire data set is used where geological constraints in the form of Arcview 'shape files' exist. Note that there is a low degree of confidence in the exact position of these shape files. However correlation between the shape files and the magnetic and electromagnetic response are good enough to encourage the use of the EM and Mag data sets for mapping lithology and structure through the remainder of the survey area where no 'shape files' exist. The GPS coordinates of the structural targets are accurate to a couple of meters. This will allow the location of the features using hand held GPS devices in the field.

The description of each of the figure is given in the annotation below the figure.

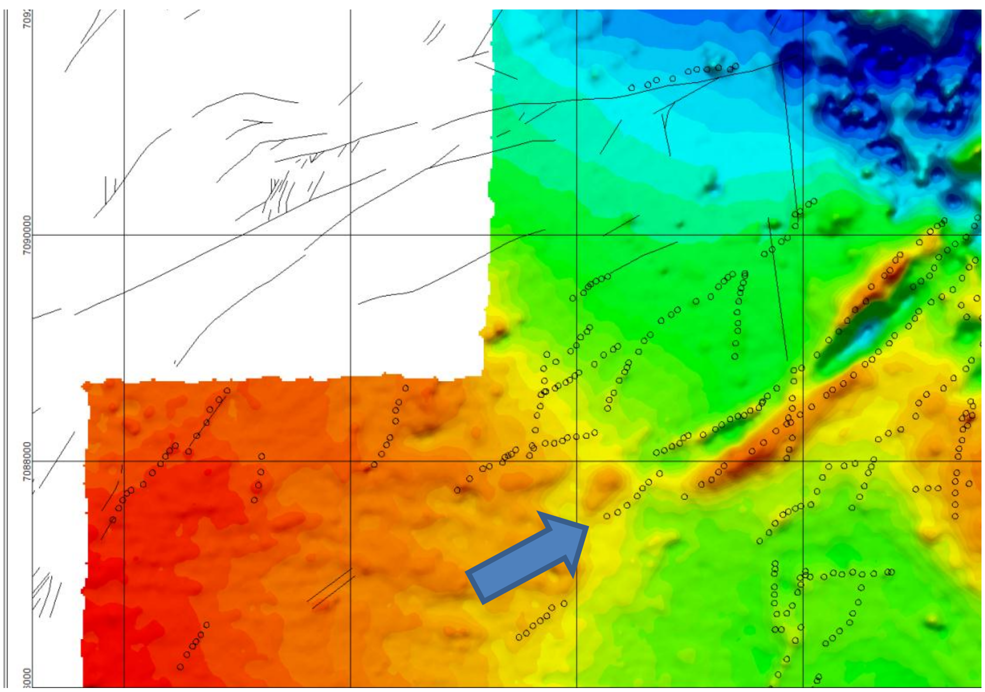

Figure 2 – Structures, observed and interpreted, plotted on RTP magnetic image. Lines are from Arcview 'Shape files' of mapped structures. Circles are interpreted structures from first and second vertical derivative magnetic maps (see below). The blue arrow points at a structurally controlled anomaly associated with a major stream drainage in the area. Possible sources of the anomaly are intrusions along the structure or heavy mineral sediment concentrations along the river running through the drainage. Structures associated with this drainage are in the target direction and might be associated with mineralized veins.

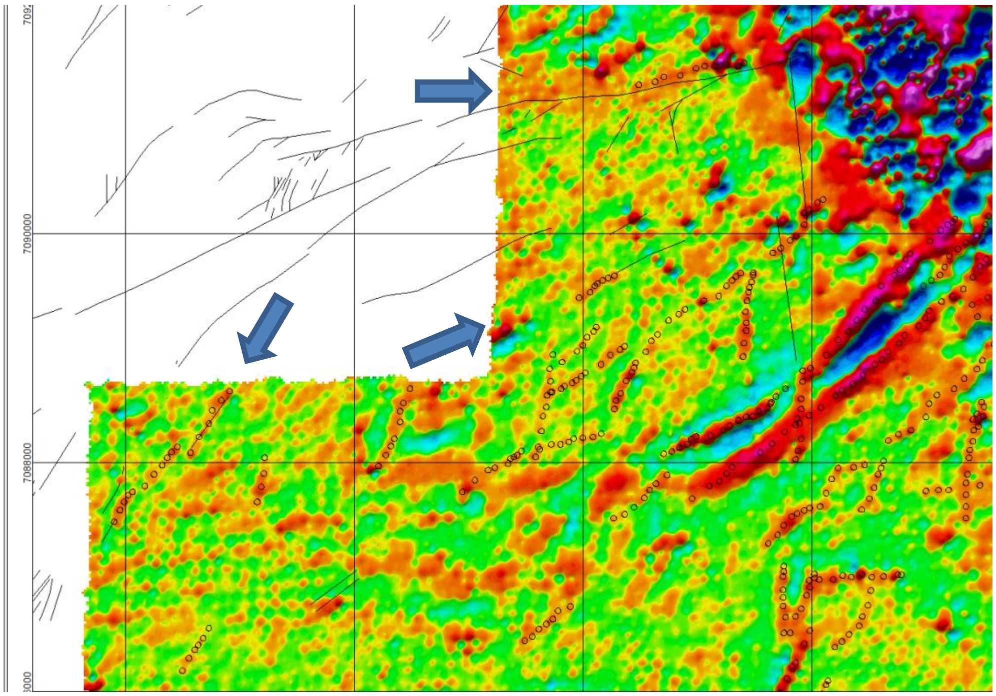

Figure 3 – Observed (lines) and interpreted (circles) structures on 1VD magnetic image. Interpreted structures were picked from this and 2VD image. Note the close correlation between weak magnetic highs and observed and interpreted structures as indicated by arrows. The sources of these weak highs are geological but unexplained.

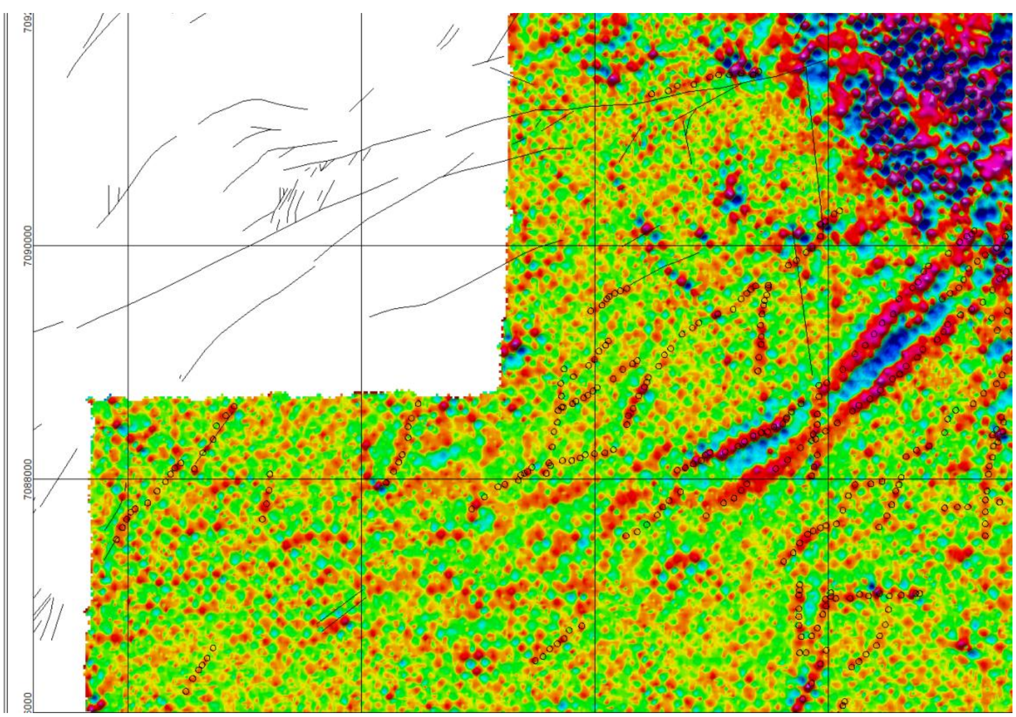

Figure 4 - Observed (lines) and interpreted (circles) structures on 2VD magnetic image. Interpreted structures were picked from this and 1VD image.

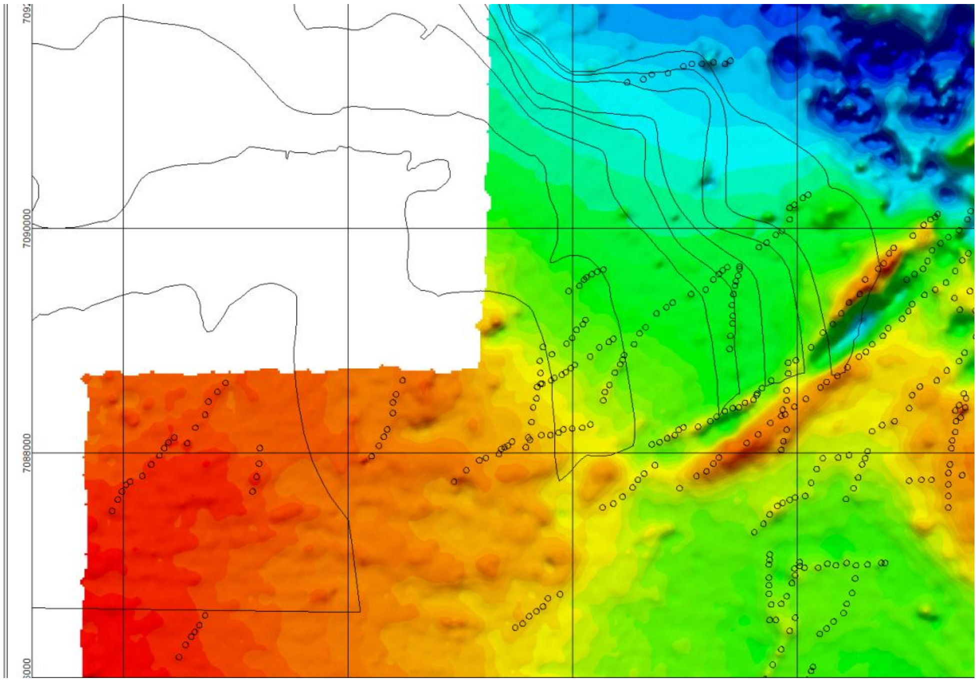

Figure 5 – Keno Hill Quartzite 'shape file' plotted on RTP image. The quartzite unit occurs within the closed polygon. Spaces between are other units.

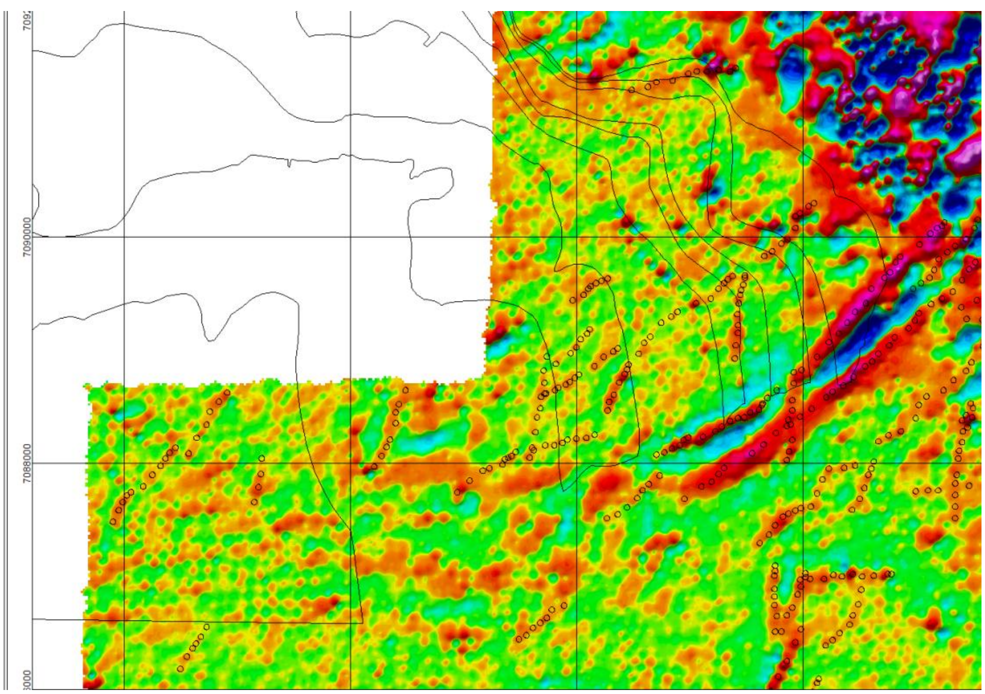

Figure 6 – Keno Hill Quartzite plotted on First Vertical Derivative (1VD) image. There is no obvious correlation between the quartzite and the magnetic field.

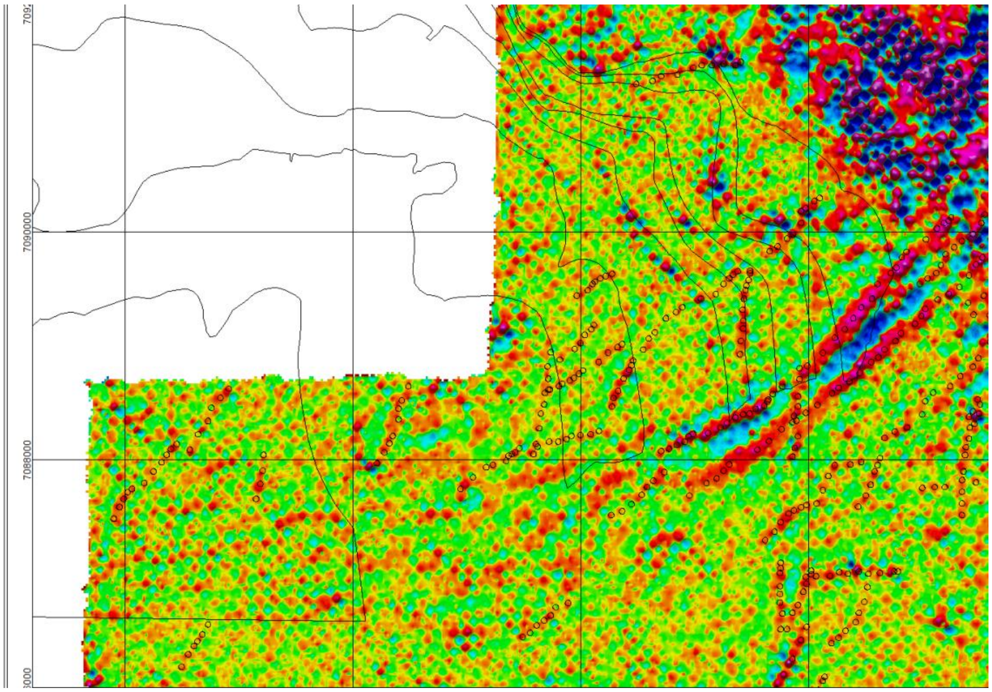

Figure 7 – Keno Hill Quartzite plotted on the Second Vertical Derivative (2VD) image. No correlation obvious.

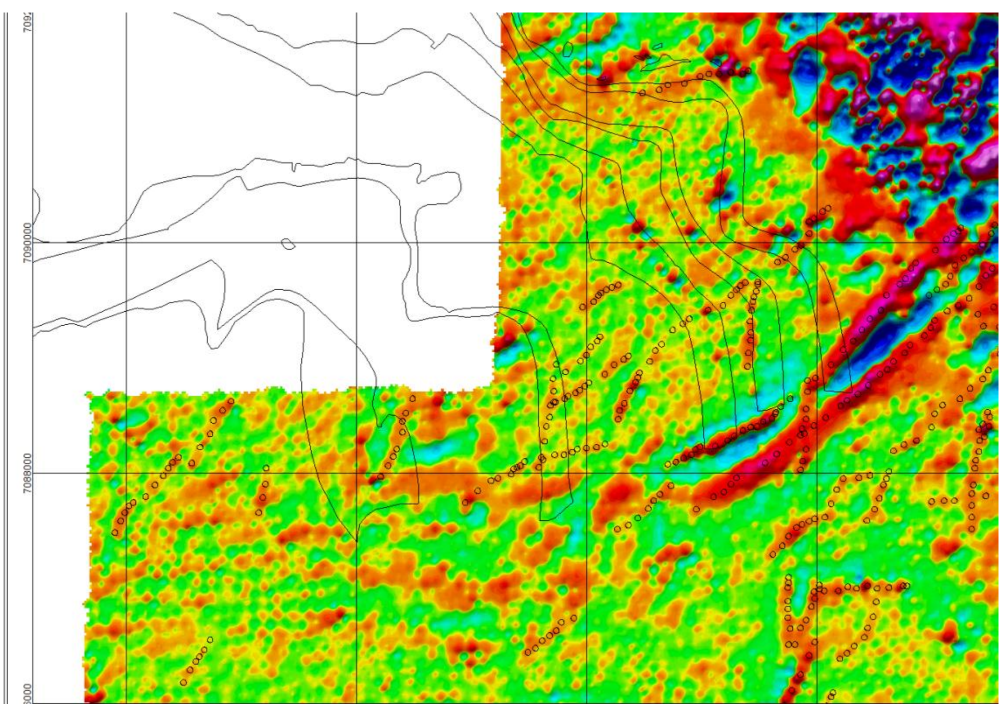

Figure 8 - Quartz Sericite Schist plotted on First Vertical Derivative (1VD) image. No obvious correlation.

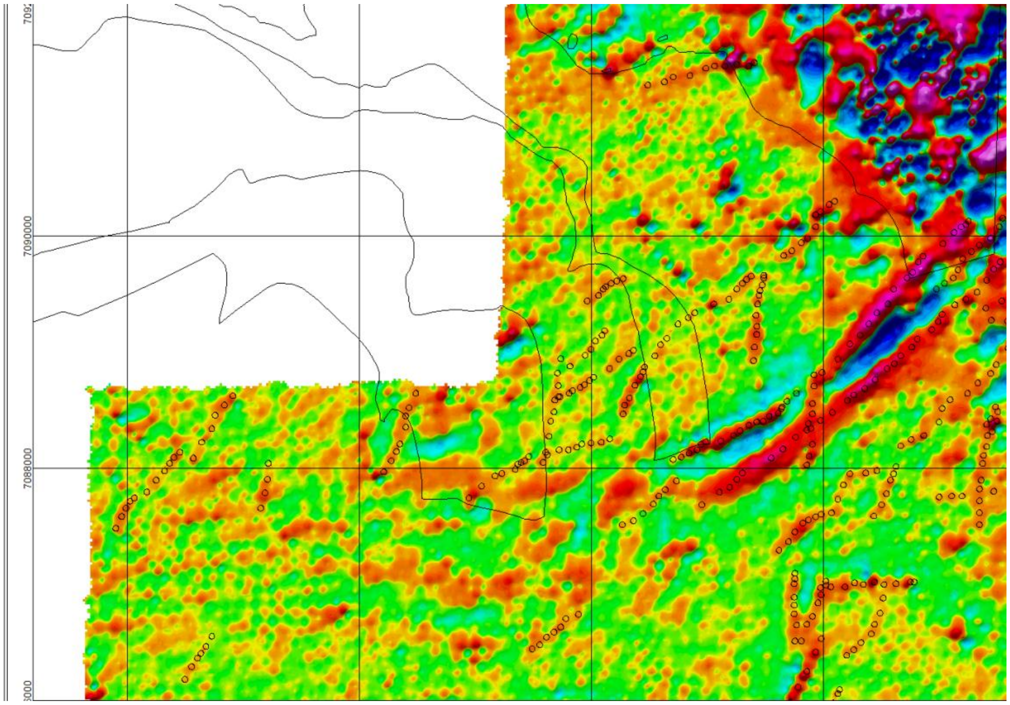

Figure 9 – Phyllite unit plotted on First Vertical Derivative (1VD) image. No obvious correlation.

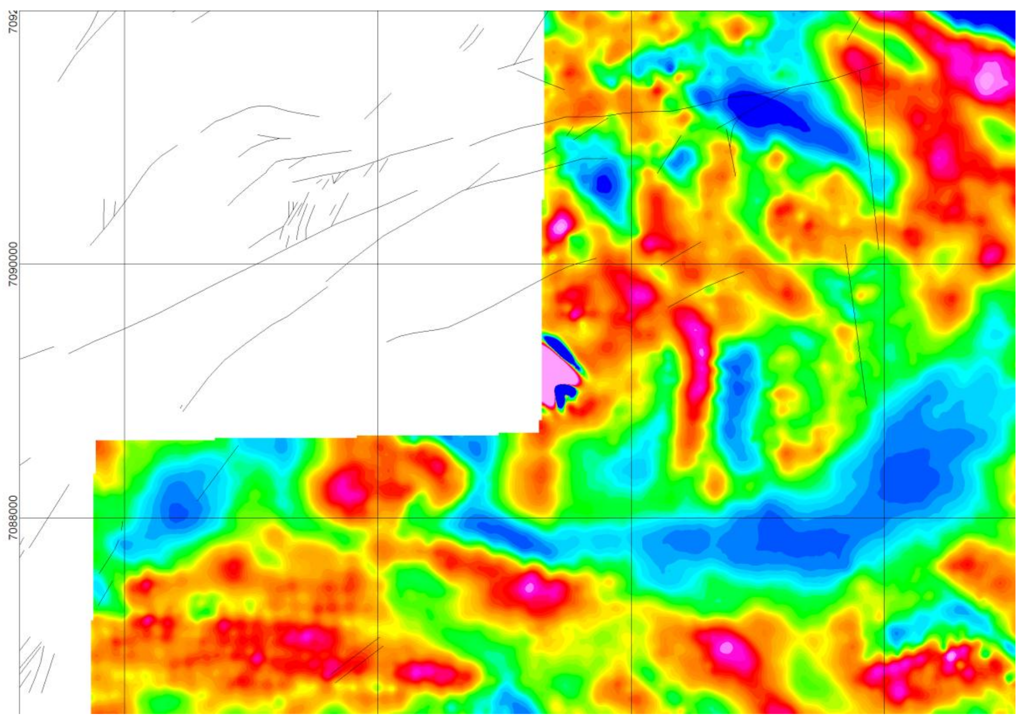

Figure 10 – HM Z G16-1 channel image with vein/fault 'shape file' plotted on top. The red colors indicate an enhanced EM response (higher secondary voltage) which indicates low resistivity. Blues are high resistivity. Note that this is the opposite color scheme as the resistivity inversion models shown below. In general the structures are indicated by termination of resistivity features and not necessarily by the location of the resistivity features themselves.

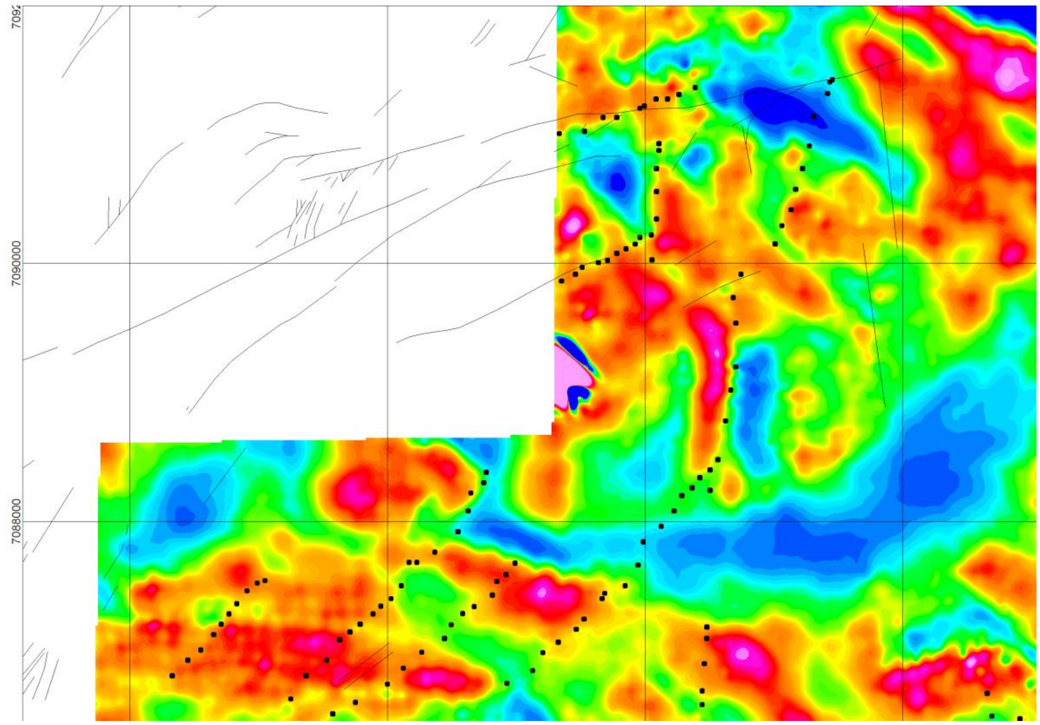

Figure 11 – Interpreted structures (dots) compared with 'shape file' veins/faults plotted on HM Z G16-1 channel image. Note the good agreement between some 'shape file' structures and interpreted EM structures.

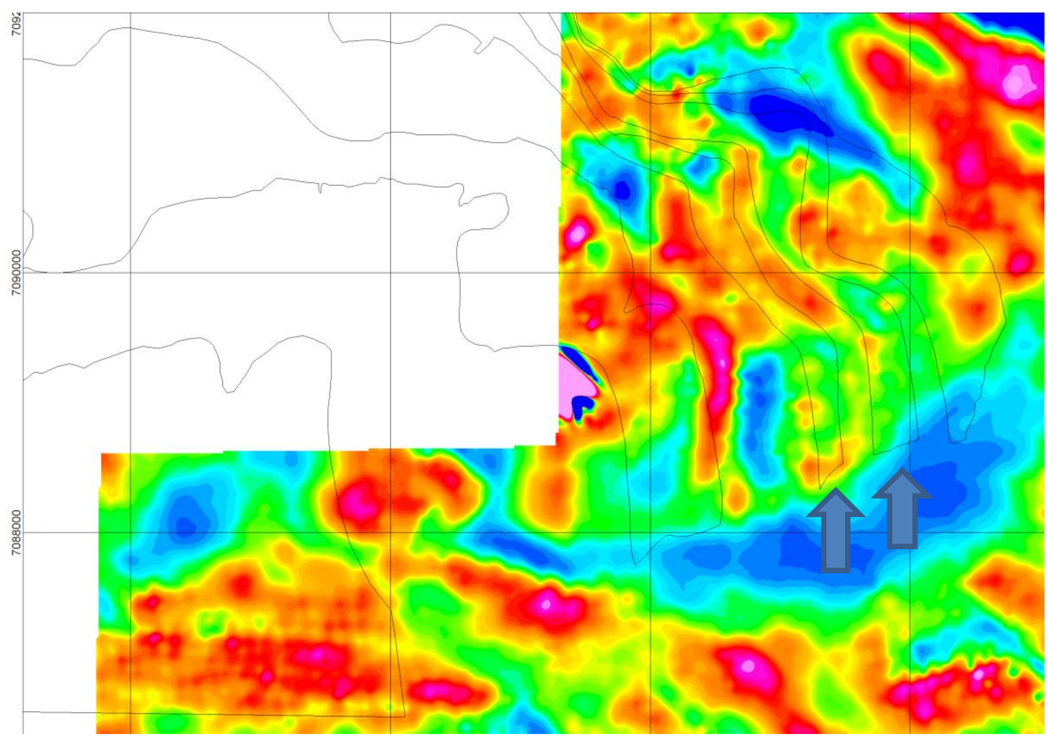

Figure 12 – Keno Hill Quartzite 'shape file' plotted on the HM Z G16-1 channel image. Note the good correlation between quartzite and more resistive zones between surrounding low resistivity zones.

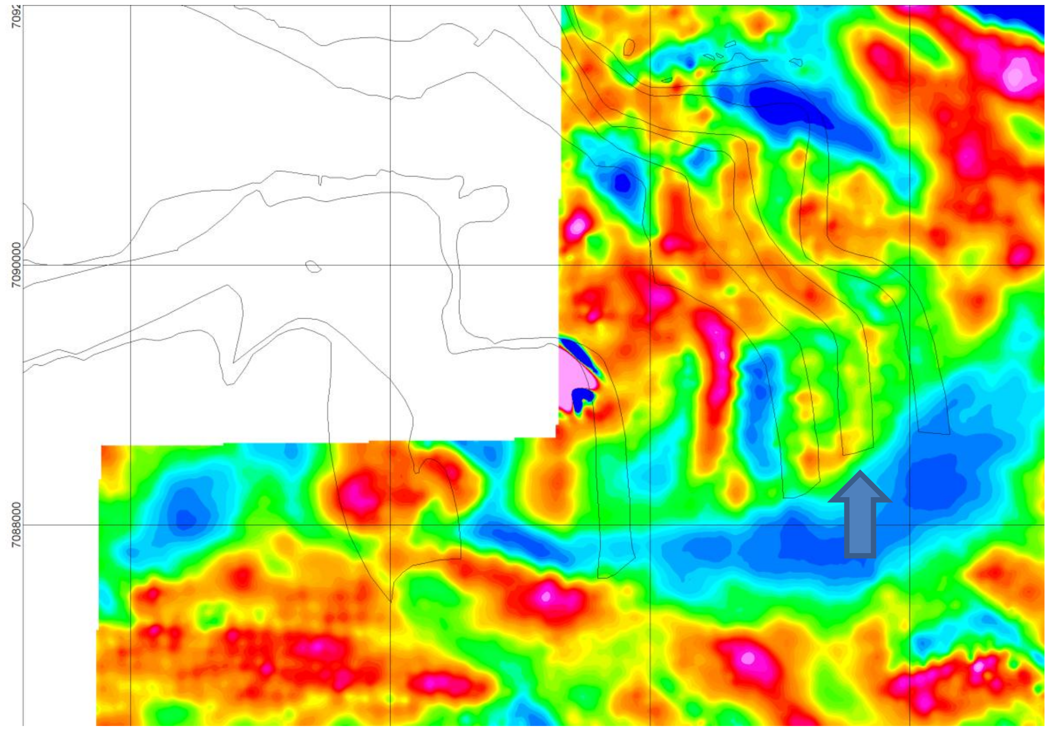

Figure 13 – Quartz Sericite Schist shape file plotted on the HM Z G16-1 channel image. Lower resistivity zone.

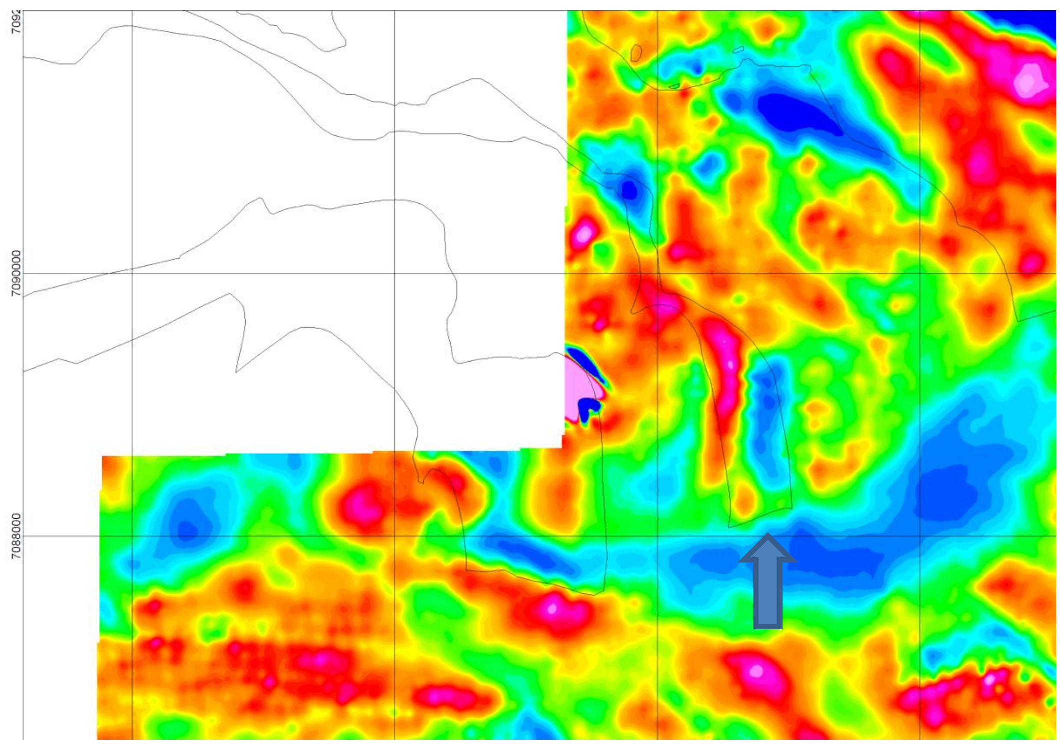

Figure 14 – Phyllite shape file plotted on the HM Z G16-1 channel image. Lower resistivity zone.

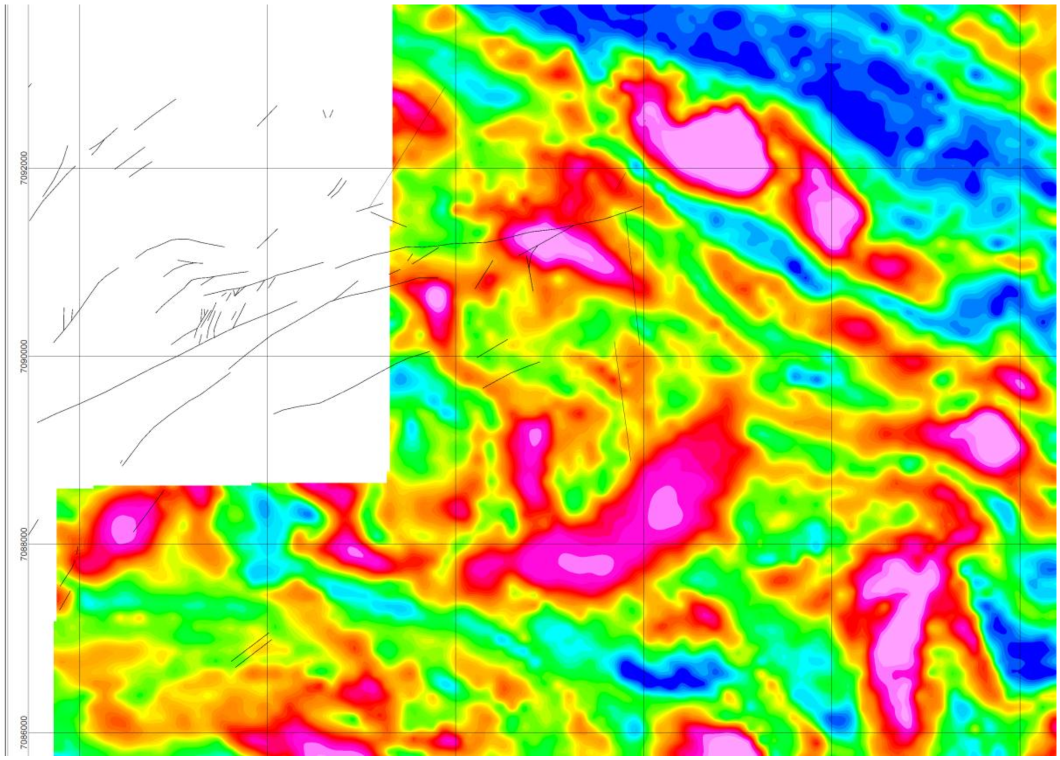

Figure 15 – Resistivity inversion model image from a 98 meter depth slice through the model. The resistivity is in ohm-m and the reds are high resistivity and blues low resistivity. Note veins/faults terminate resistivity features.

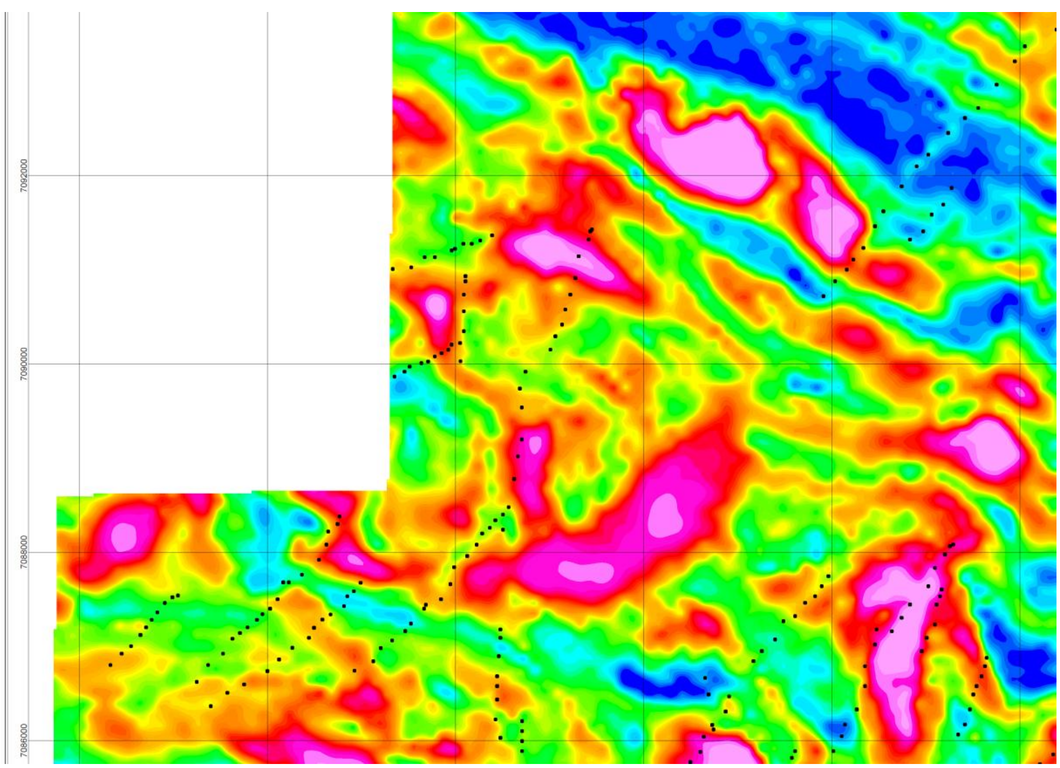

Figure 16 – Interpreted structures from EM channel grids plotted on resistivity inversion models.

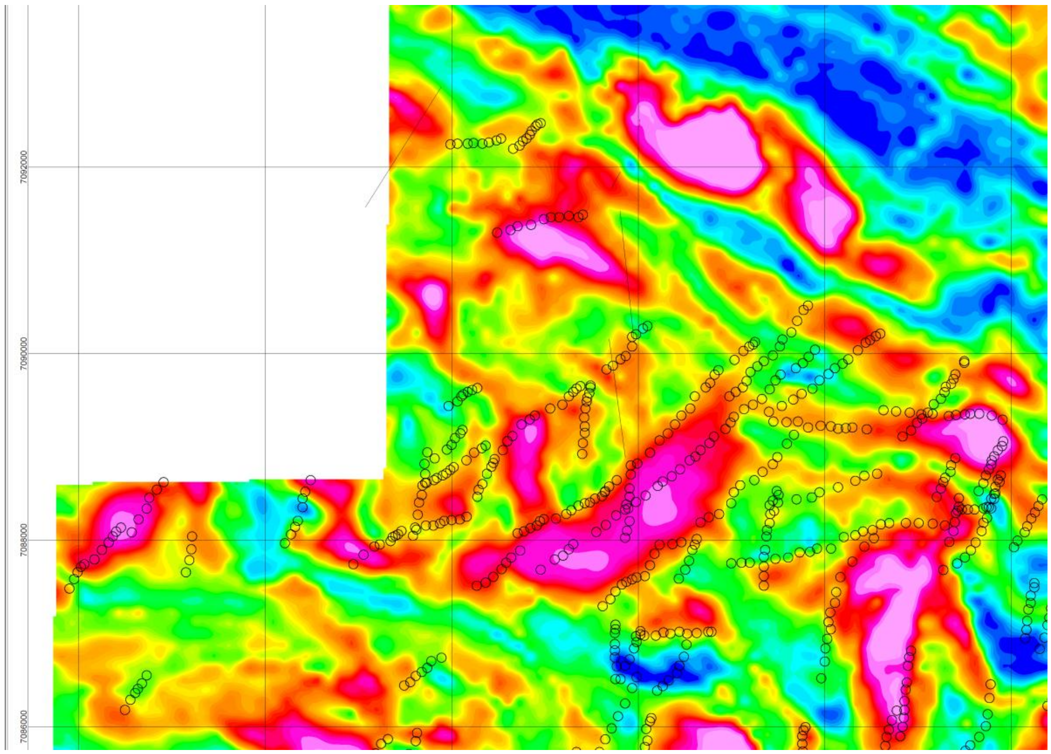

Figure 17 - Structures from magnetic interpretation. They were picked independent of the EM data but note the good correlation with the resistivity inversion model and edges of resistivity bodies.

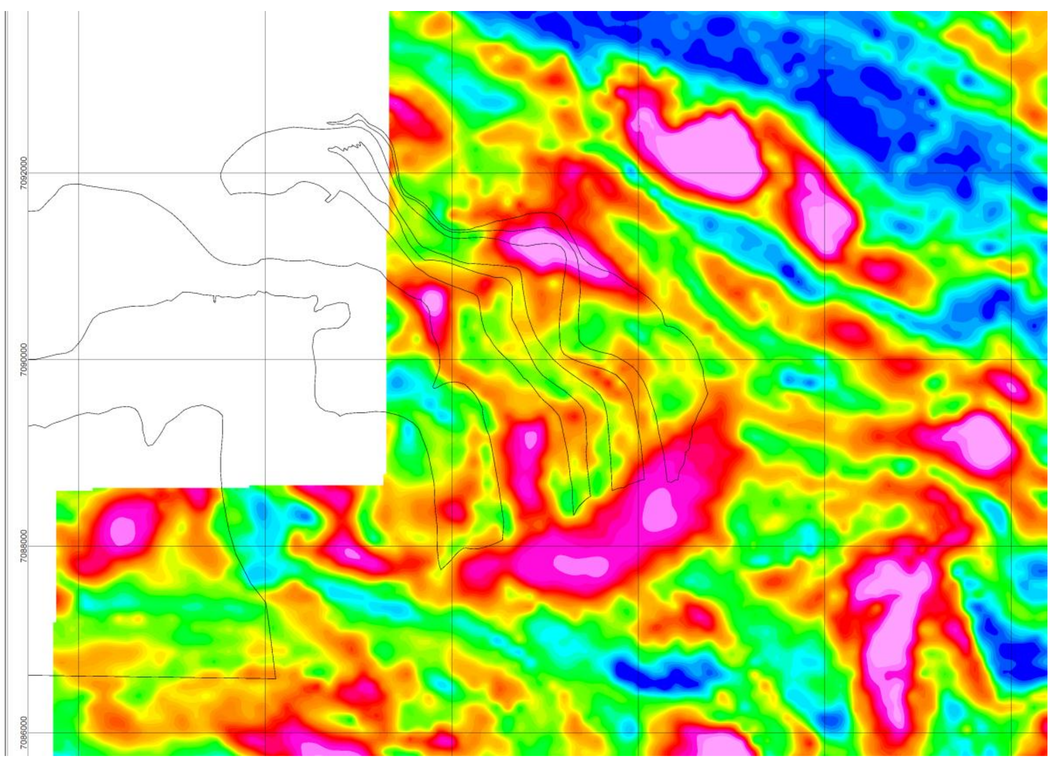

Figure 18 – Keno Hill Quartzite ‘shape file’ on resistivity inversion model. A general correlation exists between shape of mapped units and resistivity model.

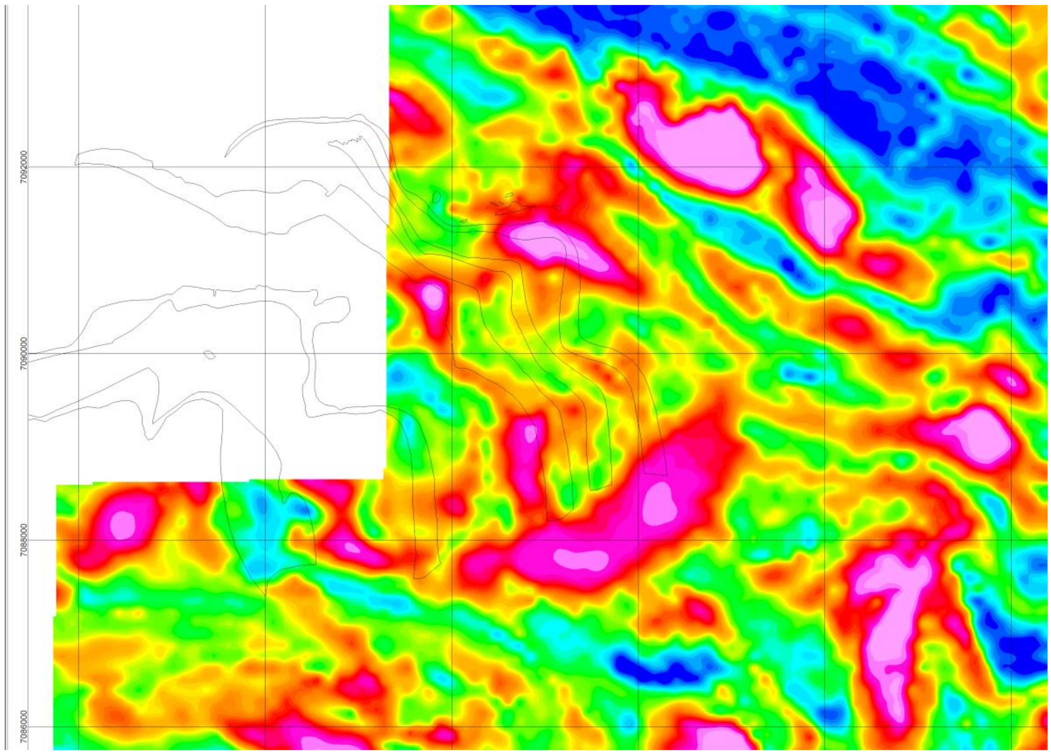

Figure 19 – Qtz Sericite Schist ‘shape file’ plotted on resistivity inversion model. Greens and blues are lower resistivity so results generally agree with time channel grids above.

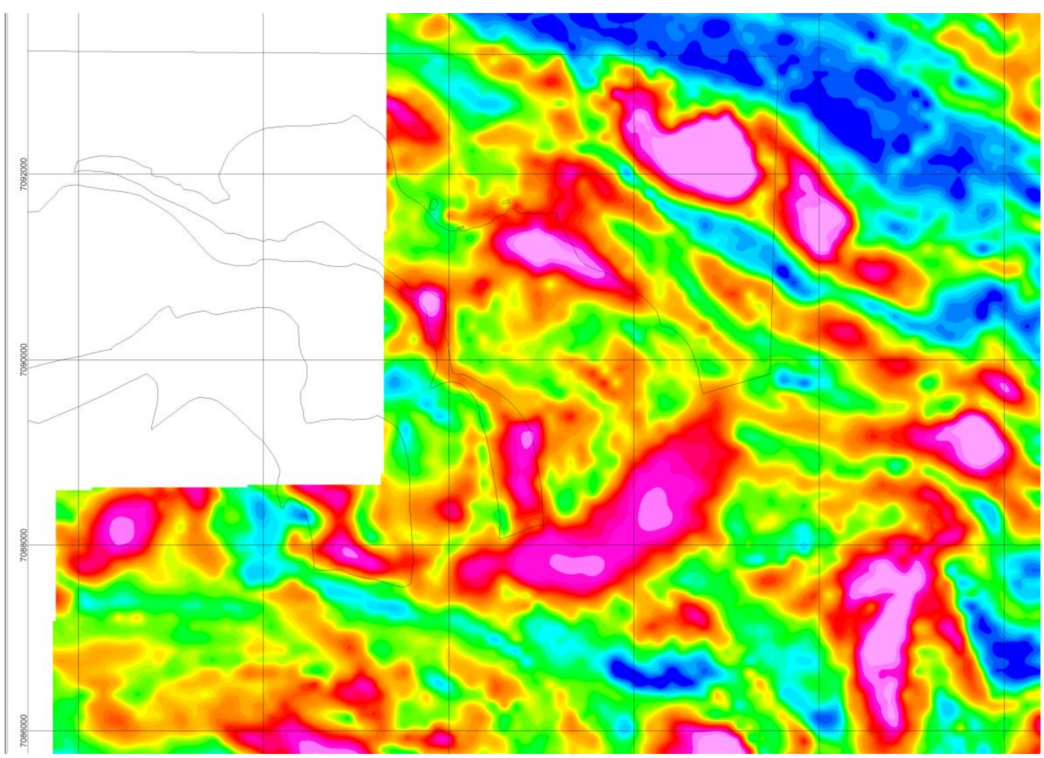

Figure 20 – Phyllite ‘shape file’ on resistivity inversion model.

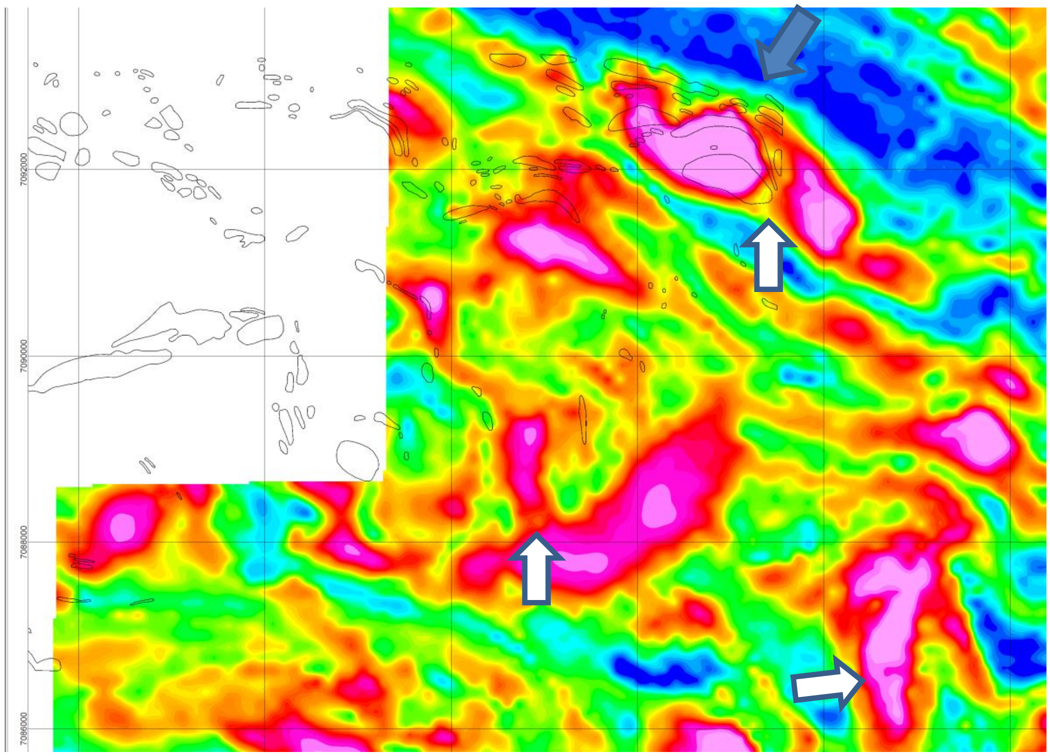

Figure 21 – Greenstone 'shape file' on resistivity inversion model. Note the extremely good correlation between high resistivity (red) anomaly and mapped greenstone body. In fact a number of these highly resistive bodies may actually be greenstones. **There is some mineralization associated with faults/veins in the greenstone units and this image suggests that some of the gaps in the greenstone bodies may be structurally controlled and may be interesting exploration targets (see white arrows).**

Figures 22, 23 and 24 extend the above observations to the entire data sets over the Keno-Lightning survey block. Plots of these figures in GeoTiff format at 1:25,000 scale are included with this report.

Magnetic Structure interpretation

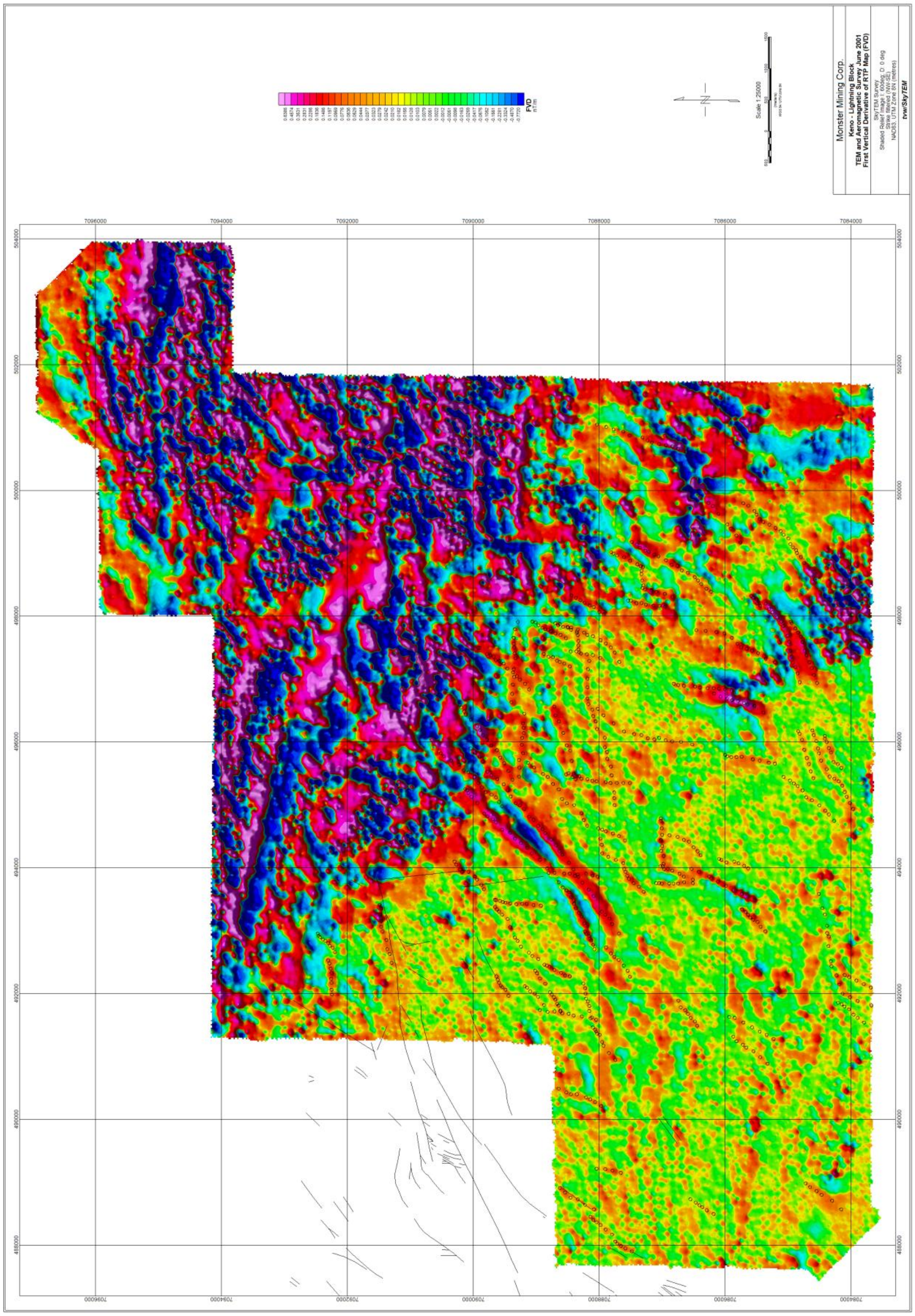

Figure 22 – Magnetic structural interpretation on 1VD image. 1:25,000 scale.

<u>**EM Structure Interpretation**</u>

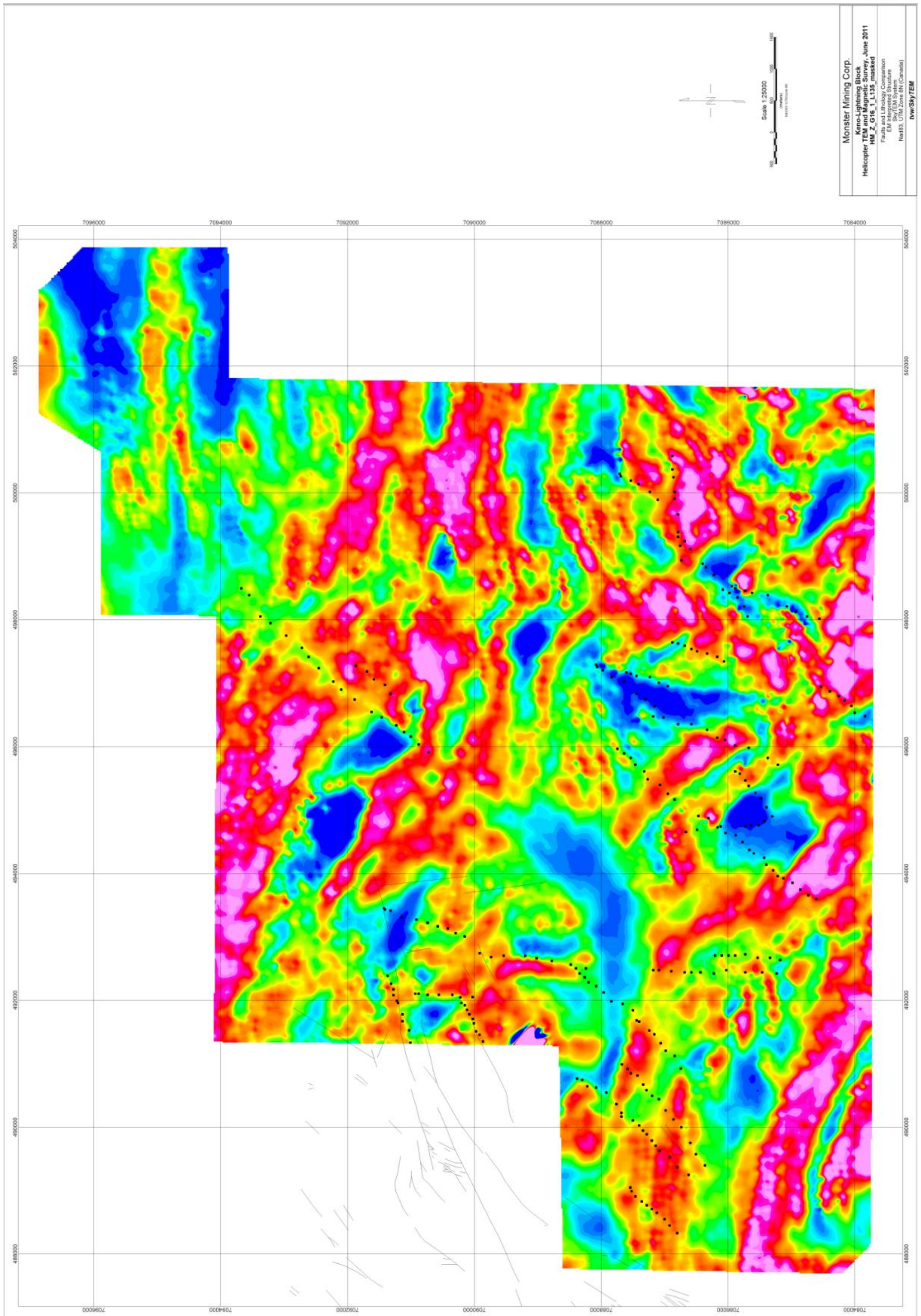

Figure 23 – EM structural interpretation on HM Z G16-1 EM channel image. 1:25,000 scale.

EM Inversion Structural Interpretation

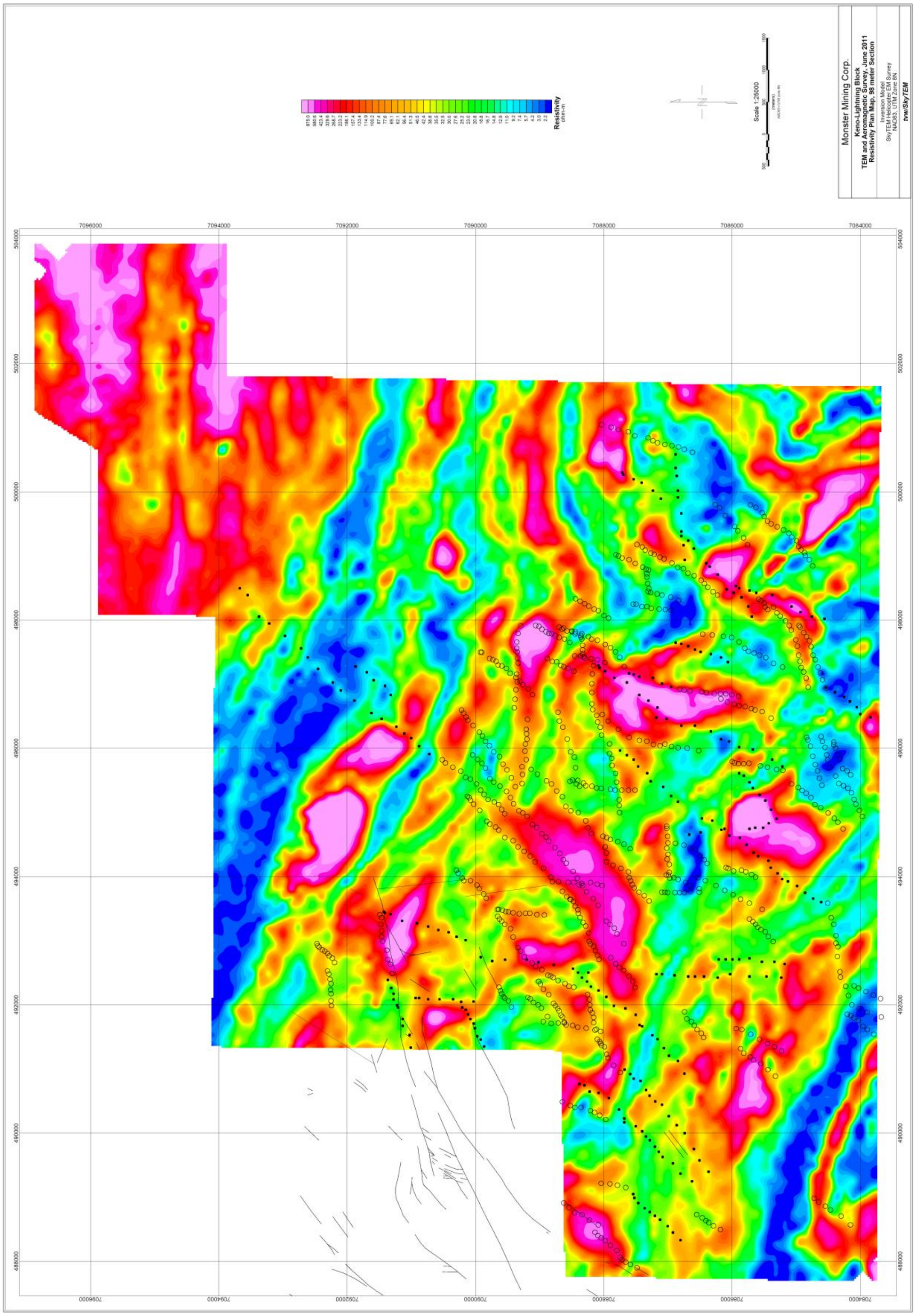

Figure 24 – Magnetic and EM structural Interpretation on resistivity inversion image. 1:25,000 scale.

Conclusion

Exploring for high grade vein systems is an extremely difficult exercise in a covered environment. The targets are small and difficult to detect by geophysical and geochemical methods and difficult to drill. The SkyTEM airborne EM system does not seem to be able to directly detect the sulfide rich mineralization but has proven useful in mapping lithology and structure associated with the target Ag/Pb/Zn veins at the Keno-Lightning project area.

This report is not a complete interpretation of all features within the Keno-Lightning block but suggests a method to be applied in detailed areas within the survey block.

The approach would be:

1. Define a smaller target area based on geological and geochemical indications of interest.
2. Extract a portion of the EM/magnetic/inversion grid that falls over the detailed area of interest.
3. Produce a 1:5000 or more detailed scale map that will allow interpretation of lithology and structure within that area of interest.
4. Test the interpreted structure by geologic mapping, surface geochemical surveying, trenching or drilling to confirm the presence of the interpreted structure.
5. If the position of a mineralized vein is known then attempt to extend the vein under cover using the interpreted structure map.

Structural and lithologic interpretation of the SkyTEM EM and magnetic data has generated vein targets to be investigated. Geologic mapping, geochemistry, trenching and drilling should be used to test these targets.

Appendix 3:
Analytical Results – Trench Sampling

Prospect	Sample ID	Location	Easting	Northing	Sample Type	Sample Width (m)	Ag (g/t)	Ag (ppm)	Au (g/t)	Au (ppb)	Pb (%)	Pb (ppm)	Zn (%)	Zn (ppm)	Cu (ppm)	Description
Homestake	580101	HS_TR4	489780	7086838	chip	0.5		4.8		11		161		6915	0.9	Shaft vein zone; hangingwall thin bedded dark grey phyllite, lesser grey quartzite, FeO on So and fracture surfaces
Homestake	580102	HS_TR4	489780	7086838	chip	1.1	283.6			52	1.41		2		492	Shaft vein-dark brown, gossanous, Fe-carbonate (siderite) breccia vein, strong Fe and MnO, weak galena (1%) and sphalerite (<0.5%)
Homestake	580103	HS_TR4	489780	7086838	panel	0.5x0.5		18.6		123		471		2244	6	Foot-wall; thin bedded phyllite, dark grey, lesser quartzite, minor white quartz stringers
Homestake	580104	HS_TR4	489793	7086842	chip	1		15.7		4		2409		631	0.9	Hanging wall 1m high section; interbedded thin bedded medium grey quartzite, lesser graphitic phyllite, FeO stained So/F1 and fractures
Homestake	580105	HS_TR4	489789	7086842	chip	0.9		11.2		4		257		4198	0.9	Vein zone; extremely rusty, Fe-MnO stained zone, siderite-quartz (+/-quartzite) breccia, galena and sphalerite
Homestake	580106	HS_TR4	489789	7086842	panel	1x1		9.8		251		126		1414	153	Footwall; medium green, fine grained diorite (diabase?), possibly metasediment-greywacke?
Homestake	580107	HS_TR4	489789	7086842	panel	1.5x0.2		5.3		13		165		593	23	Silver rusty-yellow to orange, Fe-oxide stained sericite schist; faulted contact with the diorite sill?
Homestake	580108	HS_TR4	489801	7086852	chip	0.95		4.4		14		70		3392	0.9	Vein zone; extremely rusty and gossanous breccia, siderite, galena, sphalerite and freibergite (tetrahydrite)?
Homestake	580109	HS_TR4	489801	7086852	panel	0.6x0.4		3.9		156		139		1146	0.9	Footwall; thin bedded quartzite and graphitic phyllite, white quartz stringers/stockwork
Homestake	580110	HS_TR4	489830	7086858	chip	0.8		8.1		12		116		4366	0.9	Vein zone; rusty, Fe-Mn oxide altered, gossanous breccia, carbonate-quartzite and Pb-Zn sulfides
Homestake	580111	HS_TR4	489838	7089860	chip	1		8.1		5		75		2138	0.9	Extension of vein zone?, strong Fe-Mn oxide stained breccia zone, phyllite-quartzite>Fe-carbonate
Homestake	580112	HS_TR4	489838	7089860	chip	1.2		8.5		20		261		2619	0.9	Quartzite breccia with lesser lensoid siderite, strong oxidation (Fe-Mn)
Homestake	580113	HS_TR4	489839	7089858	panel	0.5x0.5		4.3		10		290		1734	0.9	Footwall; Fe-oxide stained thin bedded phyllite, lesser quartzite, minor quartz stringers
Homestake	580114	HS_TR4	489840	7086856	chip	0.35	761.4			56	5.72		1.5		995	No.1 vein; ~10cm seam of solid galena, gossanous Fe-carbonate-quartzite breccia, strong Fe oxide
Homestake	580115	HS_TR4	489840	7086856	panel	1x1		3.3		20		163		984	7	Hanging wall, thin bedded quartzite, minor FeO on fractures
Homestake	580116	HS_TR4	489844	7086857	chip	0.4	227.9			70		710		5137	492	Vein; Fe-carbonate vein breccia, gossanous, strong Fe-Mn oxides, no visible sulfides
Homestake	580117	HS_TR4	489845	7086859	chip	0.6		6		10		410		4299	0.9	Hanging wall; strongly oxidized (Fe-Mn oxides), thin bedded grey quartzite, lesser black phyllite, minor Fe-carbonate lenses
Homestake	580118	HS_TR4	489845	7086859	panel	0.5x1		2.6		4		309		1453	0.9	At the contact with strongly gossanous vein zone to NW, thin bedded quartzite, minor phyllite
Homestake	580119	HS_TR4	489852	7086866	chip	0.7	1155.3			295	6.27		10.09		1226	No.1 vein; crumbly, yellow organge, extremely oxidized and argillized breccia, siderite-galena-scorodite-"honey"sphalerite
Homestake	580120	HS_TR4	489851	7086867	chip	1.2		4.4		4		296		1181	0.9	Footwall; thin bedded quartzite, lesser graphitic phyllite
Homestake	580121	HS_TR4	489851	7086869	chip	2		1.7		4		210		1330	0.9	Thin bedded quartzite with lesser graphitic phyllite intercalations, rare FeO on So/F1 and fractures
Homestake	580122	HS_TR4	489851	7086870	chip	1.5		2.4		32		227		932	0.9	Thin to moderately bedded quartzite>>phyllite, weak FeO on fractures
Homestake	580123	HS_TR4	489850	7086870	chip	0.4		4.4		16		181		1733	0.9	Vein; gossanous, rusty dark brown and orange siderite-quartzite breccia, strong Fe oxide, to 0.5% fg galena, tretrahedrite?
Homestake	580124	HS_TR4	489849	7086871	panel	0.7x1		5.9		39		550		1494	0.9	Footwall; thin bedded quartzite, rusty Fe-oxide stained white quartz stockwork and stringers, Fe-Mn oxide on fractures
Homestake	580125	HS_TR4	489865	7086873	panel	1x1		8.4		46		1010		3385	0.9	Hanging wall; thin bedded quartzite, lesser phyllite, strong Fe>Mn oxide on weathering surface
Homestake	580126	HS_TR4	489866	7086872	chip	0.3		18.3		245		219		3593	0.9	Gossanous vein breccia, siderite-Fe-Mn oxides, no visible sulfides
Homestake	580127	HS_TR4	489866	7086872	chip	1.3		7.1		12		580		2311	0.9	Footwall well foliated grey phyllite, lesser thin-moderately bedded quartzite, minor white quarts stringers
Homestake	580128	TR01	489988	7086794	panel	1x1		27.5	11.05		1.79			4710	32	HW- moderately-thick bedded grey quartzite, narrow quartz stringers, vuggy, rusty cavities (after py?) II & cross-cutting to So/F1
Homestake	580129	TR01	489988	7086794	chip	0.35	166.9		7.8		11.76		2.68		223	No.2 vein; rusty, FeO stained white quartz stockwork, 1-3% fg galena, 0.5% arsenopyrite, trace pyrite, yellow scordite (1%), grey quartzite host rock
Homestake	580130	TR01	489988	7086794	panel	0.6x0.7		12.4		324		3967		767	34	FW- grey quartzite w/white quartz stringers, trace fg euhedral pyrite
Homestake	580131	TR01	489986	7086792	panel	0.5x0.8		2.7		193		1048		618	5	HW-strongly oxidized microdiorite, moderately foliated, white quartz stringers/stockwork, to 1% euhedral pyrite disseminations, trace arsenopyrite, trace fine grained galena?
Homestake	580132	TR01	489986	7086792	chip	0.35		19.7	9.13		2.11			6249	8	No.2 vein, white quartz stockwork, strong Fe0, 1% pyrite disseminations, trace arsenopyrite, to 0.5% galena, grey quartzite host rock
Homestake	580133	TR01	489986	7086792	panel	0.5x1.2		1.6		127		256		327	9	FW-medium grey, thin-moderate bedded quartzite, common narrow white quartz stringers, trace to 0.5% fg pyrite dissemination, moderate Fe0 on So and fractures
Homestake	580134	TR01	489983	7086792	chip	0.5		65.6	3.11			6365	1.95		137	No.2 vein, FeO strained quartz stockwork, to 2% arsenopyrite, 1% galena, 1% pyrite, in grey quartzite
Homestake	580135	TR01	490002	7086792	chip	0.4		0.5		85		71		142	3	White quartz vein (050/90+/-), FeO on fractures, thin bedded quartzite
Homestake	580136	TR05	490230	7086894	chip	1.7		4.9		141		92		3943	75	Footwall; strongly oxidized (Fe-MnO), well foliated, quartz-sericite schits?, largely obliterated primary textures, minor FeO stained white quartz stringers
Homestake	580137	TR05	490229	7086890	chip	1.5		89.4	2.24		4.13			592	37	No.2a vein, white quartz, FeO stained fractures, locally vuggy, patches of massive fg galena (1-2%), minor sphalerite (<0.5%), trace scordite
Homestake	580138	TR05	490229	7086890	panel	1.2x0.5		1.7		13		208		300	5	Hanging wall; moderate bedded grey quartzite, common white quartz stringers, So parallel and cross-cutting, FeO staining both veins an host rocks, trace euhedral pyrite
Homestake	580139	TR05	490229	7086886	chip	0.8		84.8	1.5		3.05			170	65	No.2a vein; fractured, FeO stained white quartz/quartz breccia, fg galena (0.5%) fracture filling, <0.5% arsenopyrite, trace pyrite and yellow scordite

Prospect	Sample ID	Location	Easting	Northing	Sample Type	Sample Width (m)	Ag (g/t)	Ag (ppm)	Au (g/t)	Au (ppb)	Pb (%)	Pb (ppm)	Zn (%)	Zn (ppm)	Cu (ppm)	Description
Homestake	580140	TR05	490239	7086910	chip	1		11.2		351		4917		100	5	No.2a vein, white quartz vein, FeO on fractures, minor arsenopyrite?, fg galena, euhedral fg pyrite disseminations
Homestake	580141	TR06	490309	7086951	chip	2		1.2		104		182		405	5	HW-thin bedded quartzite and graphitic phyllite, minor white quartz stringers, weak FeO on So/F1 and fractures
Homestake	580142	TR06	490309	7086951	chip	1.5		6.9		74		799		969	6	HW-similar to 58141, interbedded graphitic phyllite and thin bedded, grey quartzite,
Homestake	580143	TR06	490311	7086949	chip	0.6		1.1		100		395		124	1	Vein zone; quartz stockwork, trace cubic cavities after pyrite, FeO stained fractures in the host and quartz, pale grey quartzite host rock
Homestake	580144	TR06	490321	7086948	panel	1x1		0.9		79		72		931	2	Vein zone, suboutcrop; rusty, FeO stained, vuggy quartz stockwork and stringers, to 0.5% cubic cavities after pyrite
Homestake	580145	TR06	490321	7086948	grab			5.7		62		180		8591	0.9	Dump pile from trenching; heavily oxidized, gossanous quartz breccia, strong Fe>MnO, galena-sphalerite?
Homestake	580146	TR05	490229	7086886	panel	1x1		1.5		207		200		607	5	HW-thin bedded quartzite>graphitic phyllite, strong white quartz stringers/stockwork, vein So parallel and cross-cutting
Homestake	580147	HS TR08-3	490206	7086876	panel	1.5x1		1.3		71		156		488	4	HW-thin bedded, massive, grey quartzite, common,narrow white quartz stringer, both bedding parallel and cross-cutting
Homestake	580148	HS TR08-3	490206	7086876	chip	1.5		36.4	1.14			9616		2369	47	No.2a vein, white, strongly FeO>MnO stained quartz breccia, rare fg galena specks, scodorite, sphalerite?
Homestake	580149	HS TR08-3	490206	7086876	panel	1.5x1.5		0.5		85		83		1240	8	FW-thin bedded quartzite intercalated with lesser graphitic phyllite, minor quartz stringers
CaribouHill	580001	TR-05	492798	7091202	chip	2.5		77.6		82		963		1642	103	Projected northern extent of Cariboo vein; rusty, strong Fe-oxide stained, fractured, white qtz stringers, bedding ll and cross-cutting, host rock is thin bedded/foliated, black graphitic phyllite, other sulfides besides Py?
CaribouHill	580002	TR-06	492799	7091189	chip	1.5		53.8		41		2256		581	54	Sub-oc; northern projection of Cariboo vein-narrow, white qtz stringers, strong fracture-controlled Fe-oxide, minor cubic cavities after pyrite?, to 0.5% rusty euhedral py, med to dark grey thin bedded quartzite and graphitic phyllite host, possibly other
CaribouHill	580003	TR-06	492801	7091187	chip	2	454.1			260		5408		1331	142	Vein hanging wall-heavily Fe-stained and Mn-oxide coated, locally gossanous(?) and brecciated with obscured primary textures, quartzite and quartz-mica schist/phyllite intercalations
CaribouHill	580004	TR-06	492801	7091189	chip	0.5	127.1			12	1.15			2648	193	North side of the trench, sub-outcrop; very strongly oxidized, rusty brown and medium grey quartzite breccia, Fe and Mn oxides coated fragments and matrix, no visible sulfides
CaribouHill	580005	CH TR08-02	492805	7091085	chip	1		4.2		7		116		161	6	Projected Cariboo vein; white, rusty-Feoxide stained white quartz veins & stringers, bedding parallel>cross-cutting in medium grey, thin bedded quartzite, lesser black phyllite, to 1% rusty specks, (<1mm) after PY?, other sulfides?
CaribouHill	580006	CH TR08-02	492799	7091086	chip	1.1		84.3		292		4197		4710	103	Sub-outcrop; fractured, rusty orange, Fe-oxide stained white qtz, host is strongly oxidized, medium grey, "dirty" quartzite/quartzite breccia
CaribouHill	580007	CH TR08-02	492783	7091084	chip	1.2		2.3		9		152		52	10	White quartz stringers, bedding parallel and cross-cutting, in black phyllite>quartzite
CaribouHill	580008	CH TR08-02	492780	7091084	chip	0.4		1.3		26		78		84	9	Narrow zone (40cm) of Fe-oxide stained, white quartz stockwork, thin bedded, silver grey quartzite, strong Fe & Mn oxide on fractures
CaribouHill	580009	S of TR02	492781	7091075	chip	0.3		0.6		9		22		18	6	Approximately 12 m south of #58008; 25-35 cm wide white quartz vein, oxidized, attitude 355/70
CaribouHill	580010	CH TR08-01	492796	7091079	chip	1.3		31.2		54		2231		1113	36	FW; medium grey, thin-medium bedded quartzite, lesser sericite-rich lamina, mod to strong Fe-Mn oxides on fracture, to 0.3% rusty cubic cavities and Fe-oxide stained Py, 1-2mm
CaribouHill	580011	CH TR08-01	492796	7091079	chip	0.4	1026			616	2.75			6417	466	Projection of the Cariboo vein; heavily oxidized, "gossanous" zone, grey quartzite breccia, minor Fe-oxide stained white quartz fragments
CaribouHill	580012	CH TR08-01	492798	7091081	chip	1.7		5.3		9		276		556	14	Hanging wall; thin bedded quartzite, lesser intercalated black, graphitic phyllite, common white quartz stringers, bedding ll
CaribouHill	580013	CH TR08-01	492800	7091070	chip	0.8	450.1			495	2.75			4677	168	Cariboo vein?, strong Fe-Mn oxide stained quartz-sericite schist/breccia zone, white qtz vein fragments
CaribouHill	580014	CH TR08-01	492800	7091067	chip	0.7	981.6			571	9.33		1.35		644	Cariboo vein zone?; heavily oxidized (Fe & Mn), "gossanous" zone/breccia?, remnant sericite suggesting qtz-sericite schist host rock, largely obliterated textures
CaribouHill	580015	CH TR08-01	492798	7091067	chip	1		3.8		8		200		333	12	HW, thin bedded grey, weakly oxidized quartzite, subordinate black phyllite, common bedding ll and lesser cross-cutting narrow white quartz stringers (to 1cm; 235-240/80+)
CaribouHill	580016	CH TR08-01	492787	7091058	chip	0.3	1855.7			93	41.5			530	176	Cariboo vein; high grade sulfide zone, semi-massive galena (30%), fg steel grey freibergite (5%) in a dark grey quartzite, to 3-5% light grey anglesite
CaribouHill	580017	CH TR08-01	492789	7091048	chip	1.5		43.5		12		2366		569	42	FW metasedimentary rocks; thin bedded black phyllite, Fe-oxide stained bedding/fracture surfacs, So/F1 30/28
CaribouHill	580018	CH TR08-01	492781	7091050	chip	1.2	107.6			301		4245		621	54	Cariboo vein zone; dark rusty brown, heavily oxidized, orange-rusty brown fault breccia; lesser light-medium grey, massive quartzite cut by narrow white stringers
CaribouHill	580019	CH TR08-01	492781	7091050	chip	1.2		97.4		171		1396		237	37	FW; thin bedded quartzite with 10% black phyllite intercalations, 1-2% quartz veins, rusty Fe-oxide stained fractures
CaribouHill	580020	CH TR08-01	492783	7091049	chip	1.9		97.2		48		6573		339	35	Wk to mod oxidized, thin bedded grey quartzite>>black phyllite, minor Fe-oxide stained white quartz veinlets

Prospect	Sample ID	Location	Easting	Northing	Sample Type	Sample Width (m)	Ag (g/t)	Ag (ppm)	Au (g/t)	Au (ppb)	Pb (%)	Pb (ppm)	Zn (%)	Zn (ppm)	Cu (ppm)	Description
CaribouHill	580021	CH TR08-01	492781	7091053	chip	1.6		55.9		30		1914		165	31	Thin bedded grey quartzite, fracture-controlled Fe-oxide, common Fe-oxide stained white quartz veins (350-360/80+, <1cm) and So parallel lenses
CaribouHill	580022	CH TR08-01	492781	7091053	chip	1.5	96.5			28		2194		266	61	Medium to dark grey quartzite, to 40cm wide, fractured, strongly oxidized white qtz vein (355/78), to 1% rusty cubic cavities after Py
CaribouHill	580023	CH TR08-01	492771	7091053	chip	2		78.6		43		1918		188	48	Thin to medium bedded quartzite, med to dark grey, rare narrow white qtz stringers (340/steep E)
CaribouHill	580024	CH TR08-01	492795	7091038	chip	1.7	3332.7		1.68		13.88		1.07		2532	Sub oc? of Cariboo vein; extremely oxidized, "gossanous", dark rusty brown, vuggy, fault brecia zone, grey fragmented quartzite in strongly oxidized fg matrix, siderite>quartz gangue, to 3% cg galena
CaribouHill	580025	CH TR08-01	492793	7091038	chip	1.6	1268.4		1.07		2.76		1.12		739	FW of the Cariboo vein; fault breccia, extremely oxidized, vuggy, "gossanous", angular, quartzite and vein qtz fragments in dark rusty brown, fg groundmass, weak galena veinlets and disseminations (0.5%)
CaribouHill	580026	CH TR08-01	492793	7091036	chip	1.6	194.2			222	0.98			4342	491	Similar to 580026; heavily oxidized, vuggy and gossanous fault breccia, fg Fe-Mn oxide rich matrix, cut by to 40 cm white, rusty Fe-oxide stained quartz vein (345/dip?), undulating contact
CaribouHill	580027	CH TR08-01	492785	7091038	chip	1.5		67.1		63		2122		286	34	Medium grey, moderately bedded quartzite, to 30cm bedding ll (120/dip?) white qtz vein
CaribouHill	580028	CH TR08-01	492789	7091009	chip	1.5	954.2			481	4.81		1.05		719	Cariboo vein; strongly oxidized/gossanous, fault breccia, angular fragments (quartzite, sericite schist, qtz) in fg, vuggy, Fe-Mn oxide rich matrix, 1-2% cg galena, freibergite
CaribouHill	580029	CH TR08-01	492788	7090997	chip	1		25.8		74		4054		395	71	Pale to medium grey quartzite, cut by white quartz stringers, rusty Fe-oxide stained fractures (360-010/90+/-)
CaribouHill	580030	CH TR08-01	492791	7090997	chip	1.5	539			251	2.13		1.05		401	Caribou vein zone?; extremely oxidized, vuggy, "gossanous fault breccia, quartzite+qtz fragments, obliterated textures, fg galena (0.5-1%)
CaribouHill	580031	CH TR08-01	492791	7091042	chip	2	2953.1		1.01		8.11			6425	1368	Caribou vein; extremely oxidized, gossanous breccia zone, rusty orange-brown, beige siderite gangue, 5% fg galena, freibergite?, minor quartz
CaribouHill	580032	CH TR08-01	492796	7091028	chip	0.5		109.3		344	2.19			8281	68	Sub-outcrop (float?), another mineralized vein; gossanous, extremely oxidized breccia, siderite-rich, to 10% galena and freibergite?
CaribouHill	580033	CH TR08-01	492781	7090961	chip	0.8		138.5		106	1.35			1697	301	Sub-outcrop (float?); quartzite breccia with strong Fe-Mn oxide alteration, gossanous fragments, some quartz, to 1% galena
CaribouHill	580034	CH TR08-01	492779	7090964	chip	1.4		11.5		16		887		252	13	Footwall zone; thin bedded grey quartzite, lesser black phyllite, to 8 cm Fe-oxide stained white quartz veinlets (340/90+/-)
CaribouHill	580035	CH TR08-01	492786	7090978	chip	0.5		57.1		261		2565		4437	0.9	Sub-outcrop?; heavily oxidized fault breccia, grey quartzite-quartz fragments in Fe-Mn-oxide rich matrix, minor galena and freibergite?
CaribouHill	580036	TR-07	492810	7091150	chip	1		4.8		61		124		213	26	Sub-outcrop at the bottom of the trench; white quartz stringers, strong Fe-oxide stained, graphitic phyllite
CaribouHill	580037	TR-07	492800	7091152	chip	1.5		0.5		9		34		182	16	Strongly oxidized dark grey quartzite, locally to 2% euhedral py dissem, minor white quartz rubble (projection of Cariboo vein)
CaribouHill	580038	TR-07	492789	7091152	grab			3.9		36		326		297	15	Sub-outcrop?, heavily oxidized grey quartzite breccia, Fe-oxide rich matrix
CaribouHill	580039	TR-08	492798	7091122	chip	0.15		1		4		37		36	6	Sub-outcrop; 10-15cm wide white quartz vein, strong Fe-oxide on fractures, grey quartzite host rock
CaribouHill	580040	TR-09	492790	7090899	grab			20.9		10		1381		1447	0.9	Sub-outrocrop; heavily oxidized, gossanous quartzite(?) breccia, obliterated textures, minor galena and sphalerite?
CaribouHill	580041	TR-09	492791	7090892	chip	0.8		2.4		78		71		299	14	White quartz veins, to 10cm wide, So ll and cross-cutting, grey quartzite intebedded with phyllite
undecided	580042		490630	7090608	grab			0.3		4		41		544	5	Float; rusty Fe-oxide stained white quartz, host medium grey, moderately bedded quartzite
undecided	580043		490636	7090576	grab			47.6		28		6578		3728	29	High grade sample from a dump next to shaft; extremely oxidized, gossanous breccia, <5% galena-spalerite(?)-freibergite

Appendix 4:
Analytical Results – Soil Geochemistry

Sample No.	Easting	Northing	Elevation	Media	Matrix 1	Matrix 2	Matrix 3	Colour	Horizon	Sample Depth	Drainage	Organic Content	Slope Direction	Topo Position	Comments	Au (ppm)	Ag (ppm)	As (ppm)
14621	493050	7090020	1486	Residual	Clay	Silt		MD BRN	B	35	well	minor	NE	Midslope		-0.005	0.6	36
14622	493002	7090018	1490	Residual	Clay	Silt	Sand	MD BRN	B	35	well	none	E	Midslope	LOCATED CLOSE TO CREEK	0.012	1.1	114
14623	492952	7090017	1503	Residual	Clay	Silt		MD BRN	B	35	well	none	SE	Midslope		0.012	0.4	46
14624	492900	7090017	1524	Residual	Clay	Sand		md brn	B	35	well	none	SE	Midslope	located close to road; large rocks present	0.016	0.3	76
14625	492851	7090010	1541	Residual	Clay	Sand		md brn	B	25	well	none	SE	Midslope	rock chips/rocks present	0.013	0.2	83
14626	492801	7090021	1556	Residual	Clay			md brn	B	30	well	none	SE	Midslope	located in between 2 kat trenches	0.006	0.5	97
14627	492750	7090019	1569	Residual	Clay	Sand		md brn	B	40	well	none	SE	Midslope	sm gravel chips	-0.005	0.4	39
14628	492701	7090022	1584	Residual	Clay	Sand		md gray brn	B	25	well	none	SE	Midslope	located in between boulder field	0.006	-0.1	51
14629	492646	7090019	1603	Residual	Clay	Silt	Sand	md brn	B	30	well	none	SE	Bench	lots of rock chips	0.005	-0.1	23
14630	492601	7090025	1611	Residual	Clay	Sand		md brn	B	35	well	none	SE	Bench	lots of rock chips	0.006	0.2	35
14631	492551	7090024	1618	Residual	Clay	Sand		md brn	B	20	well	none	SE	Bench	lots of rock chips	0.014	0.1	56
14632	492549	7090069	1618	Residual	Clay	Silt	Sand	md brn	B	30	well	none	SE	Bench		0.005	0.2	18
14633	492600	7090068	1614	Residual	Clay	Sand		md brn	B	25	well	none	SE	Bench		0.008	0.2	38
14634	492649	7090070	1604	Residual	Clay	Silt	Sand	md brn	B	25	well	none	SE	Midslope		0.019	0.3	65
14635	492701	7090072	1588	Residual	Clay	Silt	Sand	md gray brn	B	25	well	none	SE	Midslope		0.013	0.3	44
14636	492749	7090069	1578	Residual	Clay	Silt	Sand	drk brn w/ red	B	30	well	none	SE	Midslope	very rocky soil	0.006	0.6	40
14637	492794	7090070	1566	Residual	Clay	Silt		lite brn	B	30	well	none	SE	Midslope	beside boulder field	0.011	0.4	69
14638	492854	7090069	1551	Residual	Clay	Silt	Sand	md gray brn	B	35	well	none	SE	Midslope	beside boulder field	0.043	0.7	67
14639	492891	7090069	1538	Residual	Clay	Silt		md gray brn	B	30	well	none	SE	Midslope	sm gravel chips	0.017	0.3	55
14640	492949	7090068	1522	Residual	Clay	Silt		md brn	B	30	well	none	SE	Midslope		0.011	0.2	24
14641	493001	7090070	1506	Residual	Clay	Silt	Sand	drk brn w/ red	B	20	well	none	SE	Midslope	sm gravel chips; located between boulder fields	0.01	0.6	47
14642	493053	7090068	1483	Residual	Clay	Silt	Sand	md brn	B	40	well	none	SE	Midslope	sm gravel chips; located between boulder fields	0.024	0.3	36
14643	492451	7090118	1618	Residual	Clay	Silt		md brn	B	25	well	none	SE	Midslope	very rocky soil	-0.005	-0.1	15
14644	492498	7090119	1623	Residual	Clay	Silt	Sand	md brn	B	30	well	none	SE	Midslope	very rocky soil	0.005	-0.1	17
14645	492550	7090119	1621	Residual	Clay	Silt		md brn	B	30	well	none	SE	Midslope	sm gravel chips	0.028	-0.1	18
14646	492596	7090120	1622	Residual	Clay	Silt	Sand	md brn	B	35	well	none	SE	Midslope	very rocky soil	-0.005	-0.1	20
14647	492648	7090116	1612	Residual	Clay	Silt		md brn	B	35	well	minor	E	Midslope	very rocky soil	0.015	1.2	172
14648	492700	7090118	2598	Residual	Clay	Silt		md brn	B	30	well	none	SE	Midslope	located below rock field	0.079	1.3	171
14649	492742	7090120	1586	Residual	Clay	Silt		md brn	B	25	well	minor	E	Midslope		-0.005	0.2	33
14650	492797	7090117	1570	Residual	Clay	Silt		md brn	B	25	well	none	SE	Midslope	sm rock chips; located beside boulder field	0.015	0.2	26
14651	492850	7090121	1560	Residual	Clay	Silt		md brn	B	30	well	none	SE	Midslope		0.011	0.1	30
14652	492903	7090121	1550	Residual	Clay	Silt		md brn	B	35	well	none	SE	Midslope	sm rock chips	0.01	0.2	23
14653	492949	7090116	1535	Residual	Clay	Silt		md brn	B	35	well	minor	E	Midslope		0.012	0.6	90
14654	492998	7090121	1517	Residual	Clay	Silt		md brn	B	30	well	none	SE	Midslope	large rocks, middle of boulder field	0.015	0.2	27
14655	493049	7090117	1502	Residual	Clay	Silt		md brn	B	30	well	none	SE	Midslope	rocky, small gravel chunks	0.011	0.1	23
14656	493000	7090169	1509	Residual	Clay	Silt		md brn	B	25	well	minor	E	Midslope	rocky	0.009	0.3	39
14657	492950	7090171	1530	Residual	Clay	Silt	Sand	md brn	B	30	well	none	E	Midslope	small rocks/ gravel	0.011	0.7	50
14658	492899	7090171	1547	Residual	Clay	Silt		md gray brn	B	25	well	none	E	Midslope	small rock fragments	0.006	-0.1	14
14659	492850	7090171	1559	Residual	Clay	Silt		md brn	B	35	well	none	E	Midslope	small rock fragments	0.006	0.2	21
14660	492804	7090171	1572	Residual	Clay	Silt	Sand	md brn	B	30	well	none	E	Midslope	gravel/ angular rocks	0.023	-0.1	28
14661	492750	7090171	1588	Residual	Clay	Silt		md brn	B	40	well	minor	E	Midslope		0.011	0.2	30
14662	492700	7090170	1602	Residual	Clay	Silt		md brn	B	35	well	minor	E	Midslope		0.008	0.4	26
14663	492652	7090176	1613	Residual	Clay	Silt	Sand	md brn	B	30	well	none	E	Midslope	rocky	0.025	-0.1	15
14664	492599	7090165	1630	Residual	Clay	Silt		md brn	B	20	well	minor	E	Midslope	gravel/ md sized rocks	0.009	0.1	15
14665	492549	7090168	1637	Residual	Clay	Silt		md brn	B	30	well	none	E	Midslope		0.024	0.2	20
14666	492502	7090171	1641	Residual	Clay	Silt		md brn	B	30	well	none	E	Midslope		0.006	-0.1	11
14667	492449	7090169	1645	Residual	Clay	Silt		md gray brn	B	30	well	none	E	Midslope		0.025	-0.1	17
14668	492449	7090219	1651	Residual	Clay	Silt		md brn	B	35	well	none	E	Midslope	large and small rocks	0.008	-0.1	9
14669	492502	7090221	1647	Residual	Clay	Silt		md brn	B	35	well	none	E	Midslope	small rocks/ gravel	0.007	0.1	15
14670	492551	7090220	1643	Residual	Clay	Silt		md brn	B	30	well	none	E	Midslope	rock fragments	0.006	0.2	14
14671	492602	7090215	1633	Residual	Clay	Silt	Sand	md brn	B	30	well	none	E	Midslope	beside boulder field	0.018	0.1	16
14672	492656	7090220	1620	Residual	Clay	Silt		md brn	B	35	well	none	E	Midslope	rock fragments	0.008	0.1	16
14673	492701	7090221	1613	Residual	Clay	Silt		md brn	B	35	well	none	E	Midslope		-0.005	0.1	25
14674	492752	7090220	1599	Residual	Clay	Silt		md brn	B	30	well	minor	E	Midslope	rocky, next to boulder field	0.006	0.1	38
14675	492800	7090216	1580	Residual	Clay	Silt		md brn	B	30	well	none	E	Midslope	rocky	-0.005	-0.1	12
14676	492846	7090218	1566	Residual	Clay	Silt	Sand		B	30	well	none	E	Midslope	located on steep slope	0.007	0.1	37
14677	492900	7090214	1545	Residual	Clay	Silt		md gray brn	B		well	minor	E	Midslope		0.035	-0.1	25

Sample No.	Easting	Northing	Elevation	Media	Matrix 1	Matrix 2	Matrix 3	Colour	Horizon	Sample Depth	Drainage	Organic Content	Slope Direction	Topo Position	Comments	Au (ppm)	Ag (ppm)	As (ppm)
14678	492952	7090220	1524	Residual	Clay	Silt		light brn w/ red	B	30	well	none	E	Midslope		0.008	0.9	56
14679	492991	7090224	1515	Residual	Clay	Silt		md brn	B	30	well	minor	E	Midslope	located middle of boulder field	0.014	0.6	81
14680	492801	7090373	1610	Residual	Clay	Silt		md brn	B	40	well	none	SE	Midslope	small rock chips in soil	0.007	0.3	37
14681	492750	7090373	1622	Residual	clay	silt		md brn	B	30	well	minor	SE	midslope		0.007	0.3	14
14682	492699	7090371	1634	Residual	Clay	silt		md brn	B	30	well	none	SE	midslope		0.019	-0.1	16
14683	492648	7090373	1642	Residual	Clay	Silt		md brn	B	25	well	none	SE	midslope		0.006	-0.1	17
14684	492651	7090317	1635	Residual	clay	silt		md brn	B	30	well	none	SE	Midslope		0.018	-0.1	20
14685	492703	7090320	1624	Residual	clay	silt		md brn	B	25	well	minor	SE	Midslope	beside boulder field	0.01	-0.1	18
14686	492742	7090313	1613	Residual	clay	silt		md brn	B	30	well	minor	SE	Midslope		-0.005	-0.1	16
14687	492800	7090317	1596	Residual	clay	silt		md gray brn	B	30	moderate	minor	SE	Midslope		0.031	-0.1	39
14688	492847	7090316	1578	Residual	Clay	silt		md brn	B	35	well	minior	SE	Midslope	sm gravel chips	0.006	0.9	72
14689	492901	7090325	1576	Residual	clay	silt		light brn w/yellow	B	25	well	none	S	Midslope	rock chips in soil	0.01	1	88
14690	492955	7090322	1565	Residual	clay	silt		light brn w/yellow	B	30	well	none	S	Midslope	beside boulder field	0.035	0.9	67
14691	492946	7090270	1540	Residual	clay	silt	sand	md brn	B	35	well	none	S	Midslope		0.016	0.8	168
14692	492901	7090268	1546	Residual	clay	silt		md brn w/yellow	B	30	well	none	SE	Midslope		0.014	0.2	94
14693	492850	7090267	1563	Residual	Clay	Silt		md brn	B	30	well	minor	SE	Midslope		0.01	0.3	37
14694	492798	7090274	1580	Residual	clay	Silt		md brn	B	35	well	none	SE	Midslope		0.014	0.2	28
14695	492747	7090265	1600	Residual	Clay	silt		md brn	B	30	well	minor	SE	Midslope		0.008	-0.1	22
14696	492698	7090271	1613	Residual	clay	silt		md brn	B	30	well	minor	SE	Midslope		0.016	-0.1	16
14697	492648	7090271	1620	Residual	clay	silt	sand	md brn	B	25	well	none	SE	Midslope	very rocky soil	0.008	-0.1	23
14700	492699	7090719	1700	Residual	Clay	Sand	Silt	md brn	B	30	well	none	SE	Midslope	very rocky soil	0.01	3.3	40
14701	492752	7090717	1699	Residual	Sand	Silt	Clay	md brn	B	30	well	minor	SE	Midslope	lots of rock chips & beside old trench	0.009	2.4	34
14702	492800	7090719	1700	Residual	Sand	Silt	Clay	md brn	B	30	well	none	SE	Midslope	very rocky soil & clost to trench and boulderfield	0.011	0.8	13
14703	492847	7090722	1700	Residual	Sand	Silt		md brn	B	20	well	none	SE	Midslope	very rocky soil & in boulderfield	0.011	0.2	14
14704	492903	7090719	1702	Residual	Clay	Silt		md brn	B	30	well	none	SE	Midslope	large rocks in soil & in between boulderfields	0.011	0.2	14
14705	492899	7090670	1688	Residual	Silt	Clay		md gray brn	B	20	well	none	SE	Midslope	very rocky soil with lots of rock chips & beside boulderfield	0.01	0.4	27
14706	492838	7090667	1686	Residual	Silt	Clay		light brn w/gray	B	30	well	minor	SE	Midslope	moved 10m out of massive boulder field, very rocky soil with rock chips	0.006	0.6	18
14707	492800	7090670	1685	Residual	Sand	Silt		md brn	B	30	well	none	SE	Midslope	between boulderfields	0.038	1.7	18
14708	492750	7090670	1683	Residual	Sand	Silt	Clay	md brn	B	25	well	none	SE	Midslope	rock chips in soil	0.007	1.2	32
14709	492701	7090670	1685	Residual	Sand	Silt	Clay	md brn	B	25	well	none	SE	Midslope	rocky soil	0.011	1.3	19
14710	492700	7090623	1675	Residual	Clay	Silt	Sand	md gray brn	B	35	well	none	SE	Midslope	rock chips in soil	0.005	0.5	17
14711	492752	7090620	1666	Residual	Clay	Sand		md gray brn	B	20	well	none	SE	Midslope	rocky soil & beisde old trench	0.007	1.3	29
14712	492799	7090619	1665	Residual	Clay	Silt	Sand	md gray brn	B	30	well	none	SE	Midslope	very rocky soil & in between boulderfields	-0.005	0.3	10
14713	492850	7090620	1664	Residual	Sand	Clay		light/md brn	B	30	well	none	SE	Midslope	rock chips in soil & close to boulderfield	-0.005	0.2	16
14714	492900	7090620	1660	Residual	Sand			md brn	B	25	well	none	SE	Midslope	very rocky soil & in boulderfield	0.017	0.1	14
14715	492900	7090571	1652	Residual	Sand			md brn w/ red	B	25	well	none	SE	Midslope	only soil area in massive boulderfield	0.006	0.1	11
14716	492847	7090569	1656	Residual	Sand	Clay		light brn w/gray	B	20	well	none	SE	Midslope	rock chips in soil	0.009	0.1	15
14717	492800	7090569	1659	Residual	Clay	Silt		md gray brn	B	25	well	none	SE	Midslope	rocky soil	0.01	0.5	14
14718	492749	7090569	1660	Residual	Sand	Silt	Clay	md brn	B	25	well	none	SE	Midslope		0.005	5.5	88
14719	492699	7090571	1664	Residual	Clay	Silt		light brn w/gray	B	25	well	none	SE	Midslope	lots of clay with traces of rock chips	0.006	0.1	44
14720	492751	7090519	1647	Residual	Sand			md brn	B	25	well	none	SE	Midslope		0.007	2.2	75
14721	492800	7090521	1647	Residual	Clay	Silt		md brn	B	40	well	none	SE	Midslope		0.008	1	19
14722	492849	7090519	1647	Residual	Sand	Silt		light brn	B	20	well	none	SE	Midslope	rock chips in soil & beside boulderfield	-0.005	0.3	13
14723	492900	7090520	1645	Residual	Sand			md brn w/ red	B	25	well	none	SE	Midslope	between boulderfields	0.036	-0.1	30
14724	492950	7090520	1640	Residual	Sand			light/md brn	B	25	well	none	SE	Midslope	rock chips in soil & inbetween boulderfields	0.016	0.2	54
14725	493000	7090520	1633	Residual	Sand			md brn w/ red	B	25	well	none	SE	Midslope	very rocky soil & in boulderfield	0.066	5.6	94
14726	493059	7090521	1611	Residual	Sand			md brn	B	20	well	none	SE	Midslope	have to move over 8m due to massive boulderfield, very rocky soil	0.011	0.3	44
14727	493098	7090519	1586	Residual	Sand			md brn	B	25	well	none	SE	Midslope	rock chips in soil & inbetween boulderfields therefore change in location	0.012	0.4	84
14728	493150	7090522	1573	Residual	Sand	Clay		md brn	B	20	well	none	SE	Midslope	very rocky soil & in boulderfield	0.008	0.3	69
14729	493199	7090520	1566	Residual	Clay	Silt		light brn w/ red	B	20	well	none	SE	Midslope	rock chips in soil & beside boulderfield	0.014	0.2	48
14730	492752	7090470	1647	Residual	Clay	Silt		md gray brn	B	30	well	minor	SE	Midslope	rocky soil	0.013	1.7	72
14731	492800	7090468	1640	Residual	Clay	Silt		md brn	B	35	well	minor	SE	Midslope	large rocks	0.008	0.4	31
14732	492853	7090470	1637	Residual	Clay	Silt		md brn	B	35	well	minor	SE	Midslope	rock chips in soil	0.005	-0.1	18
14733	492899	7090469	1637	Residual	Clay	silt		light brn	B	15	well	moderate	S	Midslope	rocky soil	0.02	0.4	29
14735	492954	7090471	1632	Residual	Clay	silt	Sand	md brn	B	30	well	none	SE	Midslope	middle of boulder field & marked as LN 9 in field	0.014	1.7	128
14736	493063	7090482	1601	Residual	Clay	silt	Sand	md brn	B	20	well	none	S	Midslope	rock chips in soil & inbetween boulderfields therefore change in location	0.011	0.3	52
14737	493101	7090492	1577	Residual	Clay	silt		md brn	B	30	well	none	E	Midslope	rocky soil	0.022	0.5	127

Sample No.	Easting	Northing	Elevation	Media	Matrix 1	Matrix 2	Matrix 3	Colour	Horizon	Sample Depth	Drainage	Organic Content	Slope Direction	Topo Position	Comments	Au (ppm)	Ag (ppm)	As (ppm)
14738	493147	7090460	1566	Residual	Clay	Silt	Sand	md gray brn	B	30	well	none	E	Midslope	marked as LN 9 in field	0.014	0.9	100
14739	493194	7090471	1560	Residual	Clay	silt		md brn	B	25	well	none	s	Midslope	rock chips in soil	0.02	0.9	357
14740	493252	7090426	1532	Residual	clay	silt		md brn	B	30	well	minor	S	Midslope	rocky soil	0.071	1.3	99
14741	493196	7090425	1543	Residual	Clay	silt		md brn	B	30	well	none	S	Midslope	off course due to bushes	0.008	0.4	65
14742	493149	7090421	1548	Residual	Clay	silt		md brn	B	20	well	none	S	Midslope		0.02	0.5	105
14743	493093	7090420	1560	Residual	Clay	silt		md brn	B	25	well	moderate	S	Midslope	large rocks	0.013	0.9	83
14744	493038	7090418	1587	Residual	clay	silt		md brn	B	20	well	minor	S	Midslope	rock chips in soil	0.087	1.3	191
14746	492948	7090423	1615	Residual	Clay	Silt	Sand	md gray brn	B	30	well	none	S	Midslope	rock chips in soil	0.024	0.9	100
14747	492898	7090420	1608	Residual	Clay	Silt	Sand	md brn	B	20	well	minor	S	Midslope	located in middle of boulderfield	0.009	0.6	48
14748	492851	7090424	1607	Residual	Clay	Silt		md brn	B	35	well	minor	S	Midslope	rock chips in soil	0.008	0.3	22
14749	492801	7090426	1609	Residual										Midslope		0.011	1.7	68
14750	492753	7090420	1613	Residual										Midslope		0.005	0.1	32
14751	492704	7090422	1617	Residual	clay	silt		md gray brn	B	30	well	minor	SE	Midslope	located 10 M off due to boulderfield	0.016	-0.1	19
14752	492940	7090371	1596	Residual	clay	silt	sand	md brn	B	25	well	none	S	Midslope	located 10 M off due to boulderfield	0.02	0.8	97
14753	492896	7090371	1602	Residual	Clay	Silt		md brn	B	20	well	moderate	S	Midslope	located 10 M off due to boulderfield	-0.005	1.2	96
14754	492847	7090373	1603	Residual	Clay	Silt		md brn	B	30	well	minor	S	Midslope	small rock chips in soil	0.006	0.3	35
11563	492646	7089971	1609	residual	clay	silt		md brn	B	30	well	minor	E	midslope		0.013	-0.1	56
11564	492756	7089982	1570	residual	clay	silt	sand	md brn	B	30	well	none	E	midslope	rocky soil; off course due to boulder field	0.027	0.3	124
11565	492800	7089979	1560	residual	clay	silt		md brn	B	20	well	none	E	midslope	located beside boulderfield	0.012	0.3	109
11566	492852	7089971	1547	residual	clay	silt		md brn	B	25	well	none	E	midslope	rocky soil	0.019	0.4	272
11567	492896	7089976	1527	residual	clay	silt		md brn	B	35	well	moderate	E	midslope		0.008	-0.1	180
11568	492949	7089977	1506	residual	clay	silt		md brn	B	25	moderate	minor	E	midslope	located beside watersource	0.011	5.1	162
11569	493003	7089978	1501	residual	clay	silt		md brn	B	30	well	minor	SE	midslope		0.011	0.3	92
11570	493052	7089970	1492	residual	clay	silt		md brn	B	30	well	minor	E	midslope		0.013	-0.1	21
11571	493102	7089966	1494	residual	clay	silt		md brn	B	25	well	minor	E	midslope	rocky soil	0.012	-0.1	15
11572	493100	7089919	1506	residual	clay	silt	sand	md brn	B	30	well	none	E	midslope		0.011	-0.1	15
11573	493049	7089915	1514	residual	clay	silt		md brn	B	30	well	none	E	midslope	sm rocks	0.015	-0.1	22
11574	493000	7089913	1523	residual	clay	silt		md brn	B	30	moderate	minior	E	midslope	located beside watersource	0.01	-0.1	38
11575	492950	7089914	1534	residual	clay	silt		md brn	B	30	well	minor	E	midslope		0.01	5	92
11576	492901	7089913	1542	residual	clay	silt		md brn	B	25	well	none	E	midslope		0.013	10.1	182
11577	492846	7089913	1552	residual	clay	silt		md brn	B	30	poor	none	E	midslope	sm rocks	0.017	1	44
11578	492799	7089913	1567	residual	clay	silt		md brn	B	35	well	none	E	midslope		0.016	-0.1	28
11579	492747	7089907	1578	residual	clay	silt	sand	md brn	B	35	well	none	E	midslope	rocky soil	0.033	-0.1	36
11580	492696	7089915	1591	residual	clay	silt	sand	md brn	B	35	well	none	E	midslope		0.009	-0.1	35
11581	492649	7089919	1601	residual	clay	silt	sand	md brn	B	40	well	minor	E	midslope		0.012	-0.1	41
11583	492698	7089867	1594	residual	clay	silt		md brn	B	30	well	none	E	midslope		0.069	1.5	37
11584	492749	7089867	1583	residual	clay	silt		md brn	B	35	well	minor	E	midslope		0.024	3.4	85
11585	492801	709869	1573	residual	clay	silt		md brn	B	35	poor	minor	E	midslope	located beside watersource	0.022	1	69
11586	492852	7089870	1565	residual	clay	silt		md brn gry	B	30	well	minor	E	midslope		0.016	0.7	49
11587	492901	7089865	1555	residual	clay	silt		md brn gry	B	25	well	minor	E	midslope	located near boulderfeild; very rocky	0.013	5.4	79
11588	492950	7089869	1545	residual	clay	silt		md brn	B	30	well	none	E	midslope		0.011	-0.1	20
11589	493002	7089871	1539	residual	clay	silt		md brn	B	25	well	minor	E	midslope		0.012	-0.1	24
11590	493052	7089871	1528	residual	clay	silt		md brn gry	B	30	poor	none	E	midslope	rocky soil	0.01	-0.1	25
11591	493104	7089867	1526	residual	clay	silt		md brn gry	B	35	well	none	N	midslope		0.013	-0.1	18
11592	493088	7089817	1539	residual	clay	silt		lite brn	B	30	well	none	E	midslope	located next to trench	0.012	-0.1	17
11593	493050	7089816	1540	residual	clay	silt		md brn	B	35	well	none	N	midslope		0.012	-0.1	15
11594	492999	7089816	1544	residual	clay	silt		md brn	B	25	well	none	NE	midslope		0.017	-0.1	18
11595	492950	7089816	1551	residual	clay	silt		md brn	B	30	well	none	E	midslope		0.021	-0.1	33
11596	492902	7089821	1557	residual	clay	silt		md brn	B	25	well	minor	E	midslope		0.015	1.1	25
11597	492851	7089818	1565	residual	clay	silt		md brn	B	25	poor	moderate	E	midslope		0.012	1.2	55
11598	492800	7089818	1575	residual	clay	silt		md brn	B	30	well	minor	E	midslope	rocky soil	0.014	-0.1	38
11599	492742	7089816	1586	residual	clay	silt		md brn gry	B	30	well	none	E	midslope		0.024	0.3	44
11600	492700	7089823	1593	residual	clay	silt		md brn	B	30	poor	minor	E	midslope		0.016	1.4	58

Appendix 5:
Diamond Drill Logs

Project:	**K_L**	**UTM:**		**Logged By:**	DD
Prospect:	**Caribou**	**Easting:**	**492813**	**Core Size:**	NQ3
Hole ID:	**CH11-07**	**Northing:**	**7091009**	**Drilling Company:**	T.Caron Drilling
Total Depth:	**120.1 m**	**Dip:**	**-60**	**Start Date:**	19-Aug-11
		Azim:	**270**	**Finish Date:**	26-Aug-11
		Elevation:	**1760 m**		

Purpose: **Strike and down-dip extension of the Caribou vein and other sheeted vein systems**

Box #	From_m	To_m	Colour	Grain Size	Texture	Comments	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
1	0	2.5				**CASING/OVERBURDEN**					So/F1					
							583501	14.6	15.8	Wk FeO	65 @3.1	QTZ	5	45-50		
1-3	2.5	15.8	Med grey Dark grey to black	FG	Fol/Inter Faulted/ gouged	**INTERBEDDED THIN BEDDED QUARTZITE (QUARTZ-MUSCOVITE SCHIST?), LESSER GRAPHITIC PHYLLITE** Moderately foliated, light grey, thin bedded quartzite (quartz-muscovite schist) interbedded with 40-50% dark grey/black phyllite, laminated to thin bedded. Poorly competent, common crushed and crumbly intervals, about 30%. Weak oxidation, FeO, on fractures/F1 surfaces. Locally tightly folded, core scale crenulations. To 5% narrow, few mm to 5cm, white	583502	15.8	15.9							
							583503	15.9	17.2		35 @7.3					
							583504	17.2	18.5							
							583505	18.5	19.7		45 @15.0					
							583506	Blank								
							583507	Std 1132								
							583508	26.8	28.5							
							583509	28.5	30.2							
							583510	34.4	35.8							
							583511	39	39.9							
							583512	44.1	45.7							
							583513	57.8	59.1							
							583514	59.1	60.1							
3	15.8	18.5	Rusty brown white	cg	BXD Gouge	**VEIN ZONE/GOSSANOUS QUARTZ-GALENA-FE-MN OXIDE FAULT BRECCIA** Extremely gossanous vein fault zone. Quartz+/-siderite(?)-quartzite breccia with gossanous FeO-MnO matrix. Minor massive galena. Very strong pervasive oxidation. @15.8-15.9m, Massive, fg galena. White anglesite on contacts. UC and LC at about 80 TCA.Poorly competent core with locally strong gouge. @15.9-16.7m, Partly soft and crumbly, heavily gossanous (Fe-Mn oxides) breccia. @16.7-17.2m, Quartz-grey quartzite stockwork/ breccia with strong Fe-Mn oxide filling fractures.@17.2-17.7m, Heavily oxidized gossanous breccia with angular quartzite fragments cemented by Mn-Fe oxide-rich matrix. To 0.5% fg galena disseminations.@17.7-18.1m, Strongly oxidized breccia consisting of angular white quartz-siderite fragments in quartzite host; Fe-MnO-rich matrix. Also oxide-rich, narrow, breccia veinlets cutting the breccia. @18.1-18.5m, Crushed, soft core, fault zone at the lower vein contact.				Strong FeO, MnO Sid		Qtz Ank? Ga	90	80		
										ANG		Ga	95	80	Ga	95
										FeO, MnO						
										FeO, MnO Sid					Ga	0.5
3-4	18.5	21.2	Med grey	FG	Gouge	**FAULT ZONE/GRAPHITIC PHYLLITE, LESSER QUARTZITE** Extremely soft and crumbly zone; > 90% . Fault zone at the vein footwall. Graphitic phyllite interbedded with lesser grey, thin bedded quartzite. Weak to lesser moderate oxidation, on fractures and F1 (So). Upper contact broken core. To 3-5% white quartz, vuggy stringers. Weak patchy FeO associated with veining. @18.5-18.8 Rusty, FeO stained quartzite with lesser graphitic phyllite. Abundant white, oxidized quartz stringers.@18.8-21.2 Strongly broken up, locally crumbly core with graphitic clay gouge. Common white quartz rubble and occasional quartz stringers, ~5%. Lower FZ at 40 TCA.					LC 40		5		Py	Trace
										Wk FeO						

Box #	From_m	To_m	Colour	Grain Size	Texture	Comments	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
4-8	21.2	39.4	Med grey	FG	MAS/ wk FOL	**MASSIVE TO WEAKLY FOLIATED QUARTZITE** Medium, lesser light grey, massive to weakly foliated, fg quartzite. Alignment of platy (muscovite and green chlorite) minerals. Locally to 1-3% dark grey graphite-rich lamina defining foliation. Fracture-controlled FeO, overall weak. To 8-10% narrow, to 1-3cm wide, rare to 25 cm, white quartz, commonly vuggy, veins/stringers, foliation concordant and discordant. Minor quartz-rich tension gashes, orthogonal to F1.Several % rusty, limonitic cavities and specks in veins after pyrite. Rare FeO specks and cavities in quartzite after pyrite, overall trace. More abundant quartz veining with locally strong FeO at: 29.3-29.5 and 30.7-31.2m.@33.7-34.4m, Heavily Fe-MnO stained, fg, weakly foliated quartzite. Sharp alteration front contacts, 40-60 TCA.@34.75-36.2m, To 15% white, rusty (FeO stained) narrow quartz stringers and irregular lenses.@39.2-39.45m, Orange-white, FeO stained, vuggy quartz>>calcite lense.				weak FeO	F1 40 @22.6		10			
8	39.4	42.2	Med grey dark grey	FG	Blocky Fol	**THIN BEDDED QUARTZITE AND LESSER INTERBEDDED GRAPHITIC PHYLLITE** Partially blocky with graphitic gouge, interbedded thin bedded, medium grey, fg quartzite and lesser (40%) dark grey-black graphitic phyllite, laminated to thin bedded. Overall, weak FeO on So/F1 and fracture surfaces. Blocky core with locally developed gouge (mostly in graphitic phyllite).To 3% orange-white, vuggy, quartz veinlets, locally strong FeO. Trace fg pyrite disseminations in host rocks, occasionally in veins. @41.3-42.1m, Crumbly and soft graphitic phyllite with 10% quartz, F1/So veinlets, to 1-1.5cm. About 80% lost core.				weak FeO						
8-18	42.2	84.4	Med grey	FG	Mas wk Fol	**THICK BEDDED QUARTZITE** Similar to 21.2-39.4m. Medium grey, massive to weakly foliated quartzite w/to 10% graphitic lamina and platy chlorite. Weak fracture-controlled FeO. Locally weak calcite associated with quartz veining. On average 1% quartz veinlets, locally 5-10%. White, vuggy with 2-5% FeO stained, limonitic cavities after pyrite. Veinlets are typically foliation parallel, lesser discordant, hairline to 10cm, average <3cm. Tension gashes filled quartz, 60-80 TCA. Trace fg euhedral pyrite and specks/cavities, limonite filled after pyrite. @44.1-45.7 Strong fracturing, 34-40 and 60-80 TCA, with FeO filling. Quartz stringers (stockwork), ~20%, to 1-2cm wide, random orientations, pink-white, FeO stained. @57.8-58.1m, strong Fe-MnO stained interval, FeO is fairly pervasive, MnO fracture-controlled.				weak FeO		qz	1		Py	trace
										weak CC						
18	84.4	87.8	White/ orange		BXD	**QUARTZ VEIN/STOCKWORK/WEAKLY FOLIATED QUARTZITE** White and orange, FeO stained, cg, vuggy, quartz vein zone/stockwork and lesser quartz stringers with to 15% grey, massive grey quartzite inclusions. Quartzite is weakly foliated, graphitic lamina (5%). Trace pyrite disseminations. Locally drusy quartz and FeO after pyrite in vein cavities. Minor MnO on fractures. Minor blocky with core rubble and clay gouge at 84.9-85.0m	583515	84.4	86	weak FeO		QTZ	85		Py	trace
							583516	86	87.8		FOL (F1)					
							583517	89.6	91.1							
							583518	91.1	92.9							
							583519	95.3	97							

Box #	From_m	To_m	Colour	Grain Size	Texture	Comments	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
18-21	87.8	101.8	Med grey/ Black	FG	Fol Interbed	**GREY QUARTZITE, LESSER GRAPHITIC PHYLLITE** Massive grey quartzite interbedded with lesser, 30-35% black graphitic phyllite. FeO, weak, So/F1 and on fractures, to rarely moderate and pervasive over narrow width, <10-20cm. To 10%, on average, quartz veinlets/stringers, few mm to 10+cm, commonly F1 parallel. White, FeO stained, vuggy. Trace to 0.1% euhedral pyrite disseminations.@94.5-97.0m, Blocky core over about 40% of this interval. To 20% white to orange quartz stringers and lenses, F1/So parallel (metamorphogenic), lesser discordant, vuggy, FeO stained, rare MnO. @97.0-101.8m,Very blocky and locally crumbly core with common FeO stained quartz stringer and oxidized fractures/So-F1 surfaces. More than 60% core loss. Fault zone?	583520	DUPL								
							583521	97	98							
							583522	98	108.3							
							583523	116.2	117.2							
21-24	101.8	114.8	White-grey black	FG	Fol Interbed	**QUARTZ-MUSCOVITE SCHIST, GRAPHITIC PHYLLITE AND QUARTZITE** Thinly bedded, white to grey quartz-muscovite schist interbedded with black, graphitic phyllite, 50:50 ratio. Minor thin bedded quartzite, 15%. Orange, locally FeO stained, mg, white quartz veinlets, 5-8%. Typically metamorphogenic, F1 parallel. Few mm to 30 cm.To 0.5% pyrite, mg, euhedral disseminations, clusters/blebs, in veins and host lithologies. Veins are at: 111.0-111.3 and 111.6-111.9m. @110.0 to 111.6m, numerous blocky and soft sections with locally graphitic gouge.				weak FeO		QZ	7		Py	0.5
												VN				
24-25	114.8	120.1	Dark grey/ black	FG	Fol intercal	**WEAKLY FOLIATED QUARTZITE, LESSER GRAPHITIC PHYLLITE** Dark grey, weakly foliated quartz with abundant black, graphitic lamina (to 3%). Intercalated with lesser, 30% graphitic phyllite.Quartz veinlets, to 10%, dominantly foliation parallel, 5 to 40 cm, vuggy. Locally weak FeO on vein fractures. Several large sheeted vein systems at: 115.0-115.3, 116.2-117.0 and 118-118.6 m, numerous to 1-7cm wide, foliation parallel white quartz veinlets. Pyrite blebs, clusters and disseminations, to 0.1-0.3%.Weak late calcite filling fractures.				weak FeO		QTZ	10		Py	0.2
										weak CC						
25	120.1	EOH				**EOH**										

Project:	K_L	**UTM:**		**Logged By:**	DD
Prospect:	Caribou	**Easting:**	**492813**	**Core Size:**	NQ3
Hole ID:	CH11-08	**Northing:**	**7091030**	**Drilling Company:**	T. Caron Drilling
Total Depth:	104.9 m	**Dip:**	**-60**	**Start Date:**	26-Aug-11
		Azim:	**270**	**Finish Date:**	29-Aug-11
		Elevation:	**1780 m?**		

Purpose: **Strike and down-dip continuity Caribou Hill vein and other sheeted vein systems**

Box #	From_m	To_m	Colour	Grain Size	Texture	Comments	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
1	0	4.9				**CASING/OVERBURDEN**										
1-3	4.9	14.8	Med grey	fg	Foliated	**INTERBEDDED QUARTZ-MUSCOVITE SCHIST WITH LESSER GRAPHITIC PHYLLITE**										
			Dark grey		blocky	Moderately foliated, fg, medium grey, quartz>muscovite schist intercalated with dark grey/black graphitic phyllite, 65:35. Common to 10% graphite and chlorite-rich lamina in schist. Weak fracture-controlled FeO, minor pervasive over <2cm widths. Common, to 1-3% limonitic cavities and specks after pyrite. To 5% white quartz veinlets/stringers, typically F1 parallel (metamorphogenic), vuggy and pitted. Minor FeCO3. Few mm-2-3 cm, rare 10 cm.			wk FeCO3	Weak FeO	6.3 @40	QTZ	5	45		
			black													
											9.8 @50					
3	14.8	17.7	Orange	CG	Gouge	**VEIN FAULT breccia/GREY QUARTZITE-lesser graphitic phyllite** Orange-brown, extremely oxidized (FeO and MnO), locally gossanous, vein fault mineralized breccia in grey quartzite, lesser graphitic phyllite. Blocky and crumbly core with gouge. @14.8-15.5m, Core rubble-upper vein fault contact. Galena, 2-3%, mg disseminations. Heavily oxidized gossanous angular fragments in Mn-FeO matrix. @15.5-16.2m, Vuggy, quartzite breccia with strongly oxidized cement. Dominantly crackle brecciated. FeO>MnO as fracture-filling and lesser pervasive replacement. Minor intermittently gossanous. @16.2-17.7m, Fault zone (core loss >60%). Rusty brown rubble with gouge. Light grey argillization.				Strong FeO		qtz			Ga	3
			brown		BXD					pervasive						
										pervasive MnO						
							583524	13.4	14.8	Clay						
							583525	14.8	15.5	FeCO3?						
							583526	15.5	17.7							
							583527	17.7	18.9							
							583528	18.9	20.2							
							583529	20.2	21.8							
3-5	17.7	26.3	Med grey	FG	Mas	**THICK BEDDED QUARTZITE** Partly blocky (17.7-18m) and faulted (18.0-18.4m) at the vein hanging wall. Medium grey, massive to weakly foliated, moderate-thickly bedded quartzite. Numerous white quartz veins and stockwork-like masses, 10-12%, vuggy, FeO stained and +>FeCO3. Hairline to >30cm, dominantly F1 ll and lesser discordant. Weak to moderate fracture-controlled FeO and lesser MnO. @18.7-20.2m, Heavily fractured quartzite with Fe and MnO healing randomly oriented fractures. Also pervasive Fe>MnO. To 5% white quarts stringers. @20.2-20.4m, Soft, graphitic gouge. Narrow fault zone. @21-21.4m, White to rusty orange quartz>FeCO3 stockwork, vuggy. Locally drusy quartz. @25-26.3m, To 70% quartz veins, F1 parallel, and stockwork; vuggy, white and stained by FeO. Numerous cubic pits after pyrite?	583530	25	26.3			QZ	10	35		
					blocky		583531	26.3	27.1							
							583532	30.6	31.6	FeCO3	24.1 @35					
							583533	36.7	37.7	FeO						
							583534	42.4	44							
							583535	44	45.8							
							583536	55	56.2							
							583537	86.7	88.1							
							583538	88.1	89.2							
							583539	89.2	90.9							
							583540	Blank								

Box #	From_m	To_m	Colour	Grain Size	Texture	Comments	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
5-6	26.3	30.6	Med grey	FG	Inter	**GREY QUARTZITE, LESSER GRAPHITIC PHYLLITE** Massive grey quartzite interbedded with lesser, black graphitic phyllite. Partly poorly competent, blocky core. Moderate fracture-controlled and pervasive FeO, lesser MnO.White quartz veins, to 20%, vuggy, weakly FeO stained fractures. Locally FeCO3. From 26.7 to 27.1m, white to orange, strongly oxidized quartz stockwork, vuggy with cavities filled with Fe-carbonate				Mod FeCO3	27.5 @45	QTZ	20			
			dark grey/ black							Wk MnO FeO						
6-12	30.6	56.2	Med-dark	FG	Mas	**THICK BEDDED QUARTZITE** Massive, thick bedded, medium to dark grey quartzite. Locally vuggy (after calcite?).Moderately to locally strongly fractured, FeO, lesser MnO stained. Overall 2-5% white quartz, narrow stringers, few mm to 3cm, average, vuggy and limonitic>MnO, on fractures and in cavities. FeO after pyrite(?) to 10% in some quartz stringers.Trace euhedral pyrite disseminations, fg, and some in vugs of quartzite.@37.0-37.5m, Numerous to 3cm wide white quartz stringers, variable orientations to core axis. Vuggy and FeO stained fractures and cavities. @42.4-42.5m, to 10cm wide quartz, vuggy, FeO>MnO stained fractures. More blocky core below 43.0m w/stronger oxidation. @50.0-50.5m, White quartz stringers and stockwork. Vuggy and limonitic, fractures and cavities. @52.9-56.2m, Numerous few mm to 10 cm wide zones of white, vuggy quartz veinlets, 15-40 TCA. Weak FeO on fractures and cavities filled with limonite.										
			grey							Wk FeO wk MnO		QTZ	3		Py	1
12-13	56.2	61.5	Med grey	FG	Interbed	**MODERATELY BEDDED QUARTZITE AND LESSER GRAPHITIC PHYLLITE** Grey, massive, moderately bedded quartzite. 35% dark grey to black graphitic phyllite, laminated to thin bedded with lesser white quartz rich lamina (locally poorly competent). Blocky and clay gouged intervals: 56.2-56.5m, 58.9-59.4m, 59.8-60.3m and 60.9-61.3m. Common FeO on foliation and fracture surfaces. Rare quartz veinlets, <0.2-0.3 cm, foliation parallel, to 0.5%. Trace pyrite disseminations and in vein cavities and both lithologies.						QZ-Sulf				
			Black		Fol					Wk FeO	58.8 @45	QZ str Sfol	0.5	45	Py	1
13-15	61.5	71.8	Med grey	FG	Mas	**THICK BEDDED QUARTZITE** Similar to the above 30.6-56.2m. Fg, grey, massive, thickly bedded quartzite. Locally weakly foliated, defined by graphitic layering. Less than 1% graphitic lamina, increasing with depth, to 10% below 71.3m. Rare quartz veinlets, <0.5%, hairline to 3mm, randomly oriented to core axis. Weak FeO on fractures				Wk FeO		QTZ	0.5			
15-16	71.8	75.4	Med grey	FG	Fol	**BLACK GRAPHITIC PHYLLITE, LESSER THIN BEDDED QUARTZITE** Interbedded black phyllite, thin bedded to laminated and 40% grey, thin bedded quartzite. Below 74m, decrease in graphitic lamina and gradual transition to massive quartzite. Phyllite is generally poorly competent, crumbly with locally developed gouge. Rare quartz veinlets, 1-3mm. Very weak limonite on fractures and So/F surfaces.										
			Black		Interbed					very weak FeO		QTZ	0.1			

Box #	From_m	To_m	Colour	Grain Size	Texture	Comments	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
16-19	75.4	86.7	Med grey	FG	Mas	**THICK BEDDED GREY QUARTZITE** Med grey, massive to weakly foliated, thick bedded grey quartzite. Weak FeO on fractures. White quartz+/->>calcite veining, to 3-5%, hairline to 10 cm, both concordant and discordant to F. To 1% Py, commonly rusty brown oxidized. Overall trace Py, mostly associated with quartz+/-calcite veining.				v.weak FeO Weak CC in qtz veins		QC	4		PY	1
19	86.7	89.2	White/ orange Med grey/ black		BXD	**QUARTZ VEIN/INTERBEDDED BLACK PHYLLITE AND QUARTZITE** White, orange stained (FeO), coarse grained, vuggy quartz veins and stockwork, 80%. Vein are both So/F1 concordant and discordant. Thinly bedded grey quartzite and black phyllite, 50:50. To 5% white quartz lamina. Pyrite, fg euhedral/subhedral disseminations, 1%, in host lithologies and locally in quartz veins. Moderate FeO (limonite) on fractures and So/F.				Mod FeO Wk CC		QTZ	80		PY	1
19-22	89.2	104.9	Med grey black		Interbed	**MODERATELY BEDDED QUARTZITE, LESSER GRAPHITIC PHYLLITE** Interbedded grey, massive to weakly foliated, moderately-thick bedded quartzite with 40% black, graphitic phyllite, thin bedded to laminated w/minor white quartz lamina. White quartz veinlets and irregular lenses/masses about 10%, few mm to 20 cm. Commonly FeO, rarely MnO stained fractures and veins (vugs). Overall trace. fg, euhedral pyrite disseminations, in some qtz veins and host rocks.				wk FeO w MnO		QTZ qtz-sulf VN	10		PY	1
	104.9	EOH				**EOH**										

Project:	KL	**UTM:**			**Logged By:**	**DD/JE**
Prospect:	Caribou	**Easting:**	**492810**		**Core Size:**	**NQ3**
Hole ID:	CH11-09	**Northing:**	**7091055**		**Drilling Company:**	**Caron Drilling**
Total Depth:	107.3m	**Dip:**	**-60**		**Start Date:**	**29-Aug-11**
		Azim:	**270**		**Finish Date:**	**1-Sep-11**
		Elevation:				

Purpose: **Strike and dip extension of the Caribou vein and other vein systems**

Box #	From_m	To_m	Colour	Grain Size	Texture		Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
1	0	5.4				**CASING/OVERBURDEN**										
1-2	5.4	15.5	Med grey white	FG	Fol Blocky/	**THIN BEDDED, FOLIATED QUARTZITE AND GRAPHITIC PHYLLITE** Light grey/off white to medium grey, thin bedded quartzite interbedded with black, graphitic phyllite, about 65-70: 30-35. Quartzite with numerous graphite and chlorite-rich lamina defining foliation. Blocky core, especially in graphitic phyllite with minor gouge. More poorly competent down-hole at the contact with fault vein.Quartz veining/stringers and lenses, typically metamorphogenic, So/F1 parallel; about 5%. Vuggy, white, FeO stained to rusty orange with to 5-10% rusty specks and cavities (after pyrite?). Few mm to 4 cm width.Weak to moderate FeO and lesser MnO, fracture/So (F1) controlled.Weak calcite in late fractures, dominantly in quartz veins. @5.4-5.8m, poorly competent, soft core with gouge. Narrow fault zone. To 10% rusty quartz rubble.Poorly competent intervals with minor gouge: 9.1-9.6m, 13.2-13.4 and 15.2-15.5m; last interval is at vein contact).				Wk-Mod FeO wk MnO		Qtz+/-CC	5			
			black		minor gouge	.	583541	12.2	13.5	rare CC						
							583542	13.5	15.5							
							583543	15.5	16.5							
							583544	Blank								
							583545	Std 1132								
							583546	16.5	16.9							
							583547	16.9	18							
2	15.5	16.9	Rusty brown		BXD Gouge	**VEIN FAULT BRECCIA ZONE** Blocky core with minor gouge at the hanging wall contact.Extremely rusty, gossanous vein, FeO and MnO altered vein fault breccia.To 1 % galena, mg, and 1-2% freibergite (tetrahedrite)?@15.5-15.65m, soft crumbly core with strong rusty orange, FeO-FeCO3 rich gouge. @15.65-16.5m, gossanous, siderite(?)-FeO-MnO breccia with minor mg galena disseminations (1-3%). At 16.3-16.5m, partly soft core with some gouge. @16.2-16.6 Strong fault gouge, rusty orange-brown.@16.6-16.9 Less oxidized, quartzite-white quartz breccia with FeO-MnO rich matrix. Heavily blocky with gouge.	583548	18	20	Strong FeO					GA	1
							583549	26.6	28.4	Strong MnO					Freibergite	2
							583550	28.4	29.9	FeCO3						
							583551	29.9	31.4							
							583552	31.4	32.7							

Box #	From_m	To_m	Colour	Grain Size	Texture		Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
2-4	16.9	26.6	Med grey		Interbed	**GREY QUARTZITE AND SUBORDINATE BLACK, GRAPHITIC PHYLLITE**				weak/mod FeO						
			light grey		Fol	Similar to the unit above, 5.4-15.5m. Interbedded thin bedded light to medium grey quartzite with lesser, 25% black, graphitic phyllite. Unit is well foliated to 19.5m. Below 19.5m, moderately bedded, weakly foliated, grey quartzite with to 15% graphite>chlorite lamina.Weak to lesser moderate FeO, fracture and bedding/foliation controlled. Also in vein cavities and fractures.To 10% fractured, Fe-Mn oxide stained quartz veining, lesser stockwork, strongly vuggy with oxides (Fe) coating cavities. Vein widths, hairline to 10 cm wide zones. MnO overall weak, rarely moderate. @21.03 to 21.3m, quartz stockwork zone. Heavily vuggy with Fe-Mn oxides in fractures and cavities.				wk MnO						
			black													
4-5	26.6	32.7	White	FG	Blocky	**QUARTZ VEINS/THIN BEDDED QUARTZITE AND GRAPHITIC PHYLLITE**				Wk FeO		QZ	70			
			Med grey		Veined	Heavily quartz veined interval (70%) in interbedded thin bedded quartzite and lesser graphitic phyllite (25-30%). Graphitic phyllite is commonly blocky with gouge.Quartz veins: white, fractured, vuggy, locally with oxide coated fractures and cavities, from 3cm to 1.5m core lengths.FeO and MnO on fractures and F/So surfaceS and lesser, locally pervasive alteration. @26.6-27.9m, Numerous to 3 to 40cm wide fractured, white quartz veins, So/F parallel. Strong FeO-MnO as fracture filling in quartz veins. @28.4-29.9m, Fractured, white, vuggy, quartz vein. Broken contacts. Weak Fe-MnO-graphite on fractures. @29.5-31.7m, blocky interval with minor gouge. Moderate FeO>MnO on fractures and So, and lesser pervasive over 3-<10cm widths. @31.7-32.1m, heavily vuggy quartz vein with contacts at 35-40 TCA. MnO>FeO in cavities. Minor calcite.				mod MnO						
			black		Fol					wk CC in veins						
							114088	36.3	37.5							
							114089	37.5	38.5							
							114090	38.5	39.3							
							114091	39.3	40.8							
5-8	32.7	41.99	Med grey	FG	Interbed	**MASSIVE QUARTZITE, LESSER GRAPHITIC PHYLLITE**				FeOx	45	qz-Fe	3	75		
			Black			Massive to weakly foliated quartzite with narrow graphitic schist interbeds and associated vughy oxidized quartz veins. Narrow (mineralized) crackle breccia with unknown silver-purple mineral on weathered surface - 0.25m zone from 39.00 to 39.25 m. 2-3 % thin (1-2 mm) ox qz veins (1), < 1 % thicker (2-5 mm) pink qz veins (2). Narrow zone of graphite schist.						Qz	<1	30		
8	41.99	45	Dgy	FG	Mass	**BRECCIATED QUARTZITE**										
						Dark grey, fine grained, massive to weakly foliated quartzite with 20-30 % coarse-grained vughy open fill quartz vein with well developed crystals. Oxidized veins almost parallel to core axis. Wide (5-40 mm). Large quartz points up to 1 cm	583553	41.99	43.5	FeOx		qz	30			
							583554	43.5	45							

Box #	From_m	To_m	Colour	Grain Size	Texture		Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
8-11	45	55.25	Dgy	Fg	wfol	**QUARTZITE** Weakly foliated oxidized quartzite with 1-2 % narrow (1-3mm) orange vughy quartz veins.				FeOx	15					
11	55.25	57.7	Dgy	FG	Mfol	**MODERATELY FOLIATED QUARTZITE** Dark grey moderately foliated quartzite with 10 % vughy orange oxidized quartz±sulfide veins. Narrow (5cm) aplite dike (?). Weak disseminated FeCO3 alteration, bright orange. Quartz veins 0.5-30mm. Vughy, coarse grained, 1-2 % coarse grained aspy, anhedral. Veins almost parallel TCA	583555	55.25	57.7	FeCO3	45	qz-slf	10	20	aspy	1
11-12	57.7	60.66	Dgy	FG	Wfol Mfol	**FOLIATED QUARTZITE WITH MINOR SULFIDE VEINS**	583556	57.7	58.9	FeCO3	30	qz-slf	1	0	aspy	1
						Dark gray, fine-grained, weakly to moderately foliated quartzite. Trace to 1 % fine-grained anhedral disseminated silvery sulfide (aspy?). Trace euhedral disseminated pyrite. 1 % narrow (1-2mm) vughy quartz-carbonate±suldfide (oxidized pyrite?) veins. Veins contain cubic oxidized vughs → weathered pyrite? Quartzite also vughy in patches → oxidized sulfide pits?	583557	58.9	60.66							
12	60.66	61.25	Bk Wh	Fg	Sch	**GRAPHITIC SCHIST** Fine-grained black graphitic schist with minor dark grey quartzite interbeds. 1-2 % qz veins parallel to schistosity. Soft, broken, gougy. Fine grained euhedral relict sulfide pits parallel to foliation				grp	45	qz	1	45	py	1
12	61.25	63.84	Dgy	Fg	Por Wfol	**DIORITE** Dark grey, fine grained porphyritic diorite. Upper margin diffuse, finer grained→ chill? Weakly foliated. Weak FeCO3 alteration (orange), diss. 2-3 % medium to coarse-grained vughy quartz veins, rare thicker milky qz vein at 61.60 m. Broken.				FeCO3	45	qz-slf	2	py	1	
12-15	63.84	73.99	Gy	Fg	Wfol Sch	**QUARTZITE WITH MINOR GRAPHITIC SCHIST INTERBEDS** Grey, weakly to moderately foliated thin-bedded quartzite with intercalated graphitic schist. 2% coarse-grained oxidized vughy quartz veins, perpendicular to foliation. Foln of quartzite variable, but generally sub-parallel TCA. Schist zones highly fractured, broken, minor gouge. Some leaching					10	qz	2	85		
15-16	73.99	78.86	orgy	Fg	Mas	**MASSIVE THICK BEDDED QUARTZITE WITH MASSIVE QUARTZ VEIN**	583558	73.99	75.5							
							583559	75.5	77							
							583560	75.5	77							
							583561	77	78.86							
16	78.86	80.36	DGY	FG	WFOL	**MASSIVE THICK BEDDED QUARTZITE** 2-3 % quartz-ankerite veins, 0.5 - 30 mm thick. 1 % cg euhedral pyrite in vein quartz. Weak patchy ankerite alteration						qz-py qz-py	2 1	60 85		
16	80.36	80.68	gnbn	FG		**DIORITE DYKE** Fine-grained, leached. Very porous; only silica remaining. Oxidized in patches. Sharp upper contact. Lower contact quartz vein.										
16-18	80.68	85.68	gybk	Fg	Sch	**GRAPHITIC SCHIST WITH MINOR INTERCALATED THIN BEDDED QUARTZITE** Broken, poor recovery. Oxidized. 30 % coarse-grained vughy, foliated (metamorphic) quartz veins. Minor moderately foliated fine grained quartzite interbeds. Interval very broken, friable.				Ank	30	qz	30	10		

Box #	From_m	To_m	Colour	Grain Size	Texture		Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
	85.68	107.3	dgy	Fg	Mfol	**THIN-BEDDED QUARTZITE AND INTERCALATED GRAPHITIC SCHIST**				Ank	30	qz (met)	10	30 (var)		
						Thick interval of moderately foliated quartzite and intercalated graphitic schist. Foliation/schistosity variable, between 0 and 45 deg TCA. Small scale tight folding evident in schistose beds. Up to 20 % deformed metamorphic quartz veins in schist, commonly orange oxide stained. Up to 5 % discordant vughy quartz- (sulfide?) veins perpendicular TCA, mostly evident in Quartzite. Interval very broken in places						Qz-Ank	5	45		
	107.3					**EOH**										

Project:	**KL**	**UTM:**			**Logged By:**	**JLE**		
Prospect:	**Caribou**	**Easting:**			**Core Size:**	**NQ3**		
Hole ID:	**CH11-10**	**Northing:**			**Drilling Company:**	**Caron Drilling**		
Total Depth:	103.5	**Dip:**	**-60**		**Start Date:**	**######**		
		Azim:	**270**		**Finish Date:**	**######**		
		Elevation:						
Purpose:	**Extension of CH vein south of TR08-02**							

Box #	From_m	To_m	Colour	Grain Size	Texture	Description	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
	0	3.8				**CASING - NO RECOVERY**										
1	3.8	5.33	dgy	fg	fol mot	**QUARTZITE** Moderately foliated, mottled texture. Patchy lighter alteration, foliation parallel unknown mineral. Trace medium-grained euhedral disseminated pyrite									py	<1
1-4	5.33	17.5	dgy	fg	sch	**GRAPHITIC SCHIST** Broken, gouge/clay in some zones. Weak oxidation, predominantly on joint surfaces. 2-3 % foliation parallel deformed quartz veins (metamorphic). Foliation mainly 45 deg TCA but some variability near upper contact; 10-20 deg TCA. Small scale folding ins chist. Abundant vughs - up to % relict py (pits) → metamorphic?					45	qz-ank	3	45		
4	17.5	19.07	or	cg		**VEIN QUARTZ** Massive friable oxidized quartz vein in schist. Foliated. Strongly oxidized. Stained. Foliation parallel					30	qz	90	30		
4-6	19.07	30.3	dgy	fg	sch	**GRAPHITIC SCHIST WITH MINOR THIN QUARTZITE INTERBEDS** Broken, weak- to moderately oxidized graphite schist. Foliation TCA variable, with minor small scale folding evident. 10-15 % qz, predominantly foliation parallel veins, deformed. 1-2 % thicker deformed veins, also foliation parallel →metamorphic				grp	35	qz	15	35		
7	30.3	31	or	Cg		**QUARTZ VEIN** Coarse-grained, oxidized, friable vughy quartz vein	583563	30.3	31	FeO		qz	90	45 (at lower contact)		
7-8	31	35.21	gy	fg		**QUARTZITE** Broken. Weakly foliated, minor oxidation, perdominantly at joint surfaces. 1-2 % narrow (1-3 mm) qz + cc veinlets, mostly discordant to foliation. Veinlet frequency increasing with depth towards lower contact, as is oxidation strength. Quartzite becoming vughy (sulfide pits) toward lower contact.	583563	31	32.5							
							583564	32.5	34							
							583565	34	35.21							
8	35.21	35.84	RdBn	Fg	Mas	**QUARTZITE/SULFIDE VEIN** Dark red-brown, completely oxidized. Heavy sulfide vein in quartzite. Broken, rubbly. Rare sulfide evident in interval→ completely oxidized vein? Oxidized upper and lower contacts. Vughy	583566	35.21	35.84							
							583567	STANDARD PM1134								
							583568	BLANK								
8-13	35.84	56.73	dgy	fg	mas	**THICK BEDDED QUARTZITE** Massive to weakly foliated quartzite. Weak oxidation, decreasing with depth and away from vein at upper contact. Mostly competent with rare broken intervals. 2-3 % coarse-grained vughy discordant quartz veins with some evidence of relict sulfides. Rare narrow graphitic bands	583569	35.84	37	FeO	45	qz	3	20		
							583570	37	39							
							583571	39	40.84							
							583572	40.84	42.36							

Box #	From_m	To_m	Colour	Grain Size	Texture		Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
13-23	56.73	103.5	dgy	fg	fol sch	**INTERBEDDED QUARTZITE AND GRAPHITIC SCHIST** Moderately to strongly foliated quartzite and graphitic schist. Variable foliation angle TCA → folding. Up to 5 % coarse grained friable quartz vein, oxide stained, predominantly foliation parallel. Fault zone between 57.00 and 59.04 - graphitic fault gouge, broken quartz vein, orange oxide staining. Graphitic schist increasing in aboundance towards BOH				grp	20	qz	3	20		

Project: KL
Prospect: Caribou
Hole ID: CH11-11
Total Depth: 63.0 m

UTM:
Easting 492842
Northin 7090997
Dip: -60
Azim: 270
Elevatic 1772 m

Logged By: JLE
Core Size: NQ3
Drilling Compan E. Caron Drilling
Start Date: 4-Sep-11
Finish Date: 6-Sep-11

Purpose: Caribou vein strike and depth extent

Box #	From_ m	To_m	Colour	Grain Size	Texture		Sample #	From_ m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
1	0.0	11.2				NO CORE, LOST IN THE WINDSTORM										
2-5	11.2	25.9	DGY	FG	FOL	**THIN BEDDED QUARTZITE WITH GRAPHITIC SCHIST INTERBEDS** Moderately to strongly foliated, FeCO3 altered quartzite with 40% quartz-graphite schist interbeds. Intermittently weakly oxidized, predominantly on joints/fractures. Broken core with minor narrow gouge zone.Foliation variable 30-45. Folded. 2-3% cg, vuggy quartz-limonite veins. Foliation parallel sericite.				FeCO3	30-45	QZ-Fe	2	30		
					SCHIST					ser						
5-6	25.9	32.6	dgy	fg	wfol	**THING BEDDED QUARTZITE WITH +/-MINOR INTERCALATED SERICITE SCHIST** Weakly-moderately foliated quartzite. Minor (10%) narrow (10-50cm) ser+/-graphite schist. Minor discontinues FeCO3 alteration. 5% pink-orange, cg, vuggy, discordant quartz veins, oxidized. Relict sulphide pits.	583573	38.3	39.7	FeCO3		qtz-sulf	0	2		
							583574	39.7	40.6	ser	45	qtz-Fe	45			
							583575	40.6	41.2							
							583576	41.2	42.1							
							583577	STD 1134?								
6-8	32.6	39.7	dgy	fg	Mas	**THICK BEDDED QUARTZITE** Fg. Weakly foliated to massive quartzite. Minor narrow sericite-schist interbeds, <10cm. Broken, weakly oxidized, predominantly on joint surfaces. 2-3% cg vuggy orange quartz-FeO quartz veins. Patch of sandy, porous carbonate altered quartz @34.56-34.93, orange stained, porous	583578	Blank								
										Carb	30	Qtz-Fe	2	30		
8	39.7	42.1	or	cg	BXD	**QUARTZ-GALENA VEIN IN MASSIVE, THICK BEDDED QUARTZITE** Rusty orange, gossanous breccia in thick bedded, silicified quartzite. Fg galena stringers. Angular, brecciated fragments cemented by gossanous material. Dark grey gouge zone (vein fault?) at 40.61-41.21m. Quartz (where massive) while bleached.										
8-10	42.1	49.5	dgy	fg	Mas	**THICK BEDDED QUARTZITE WITH GRAPHITIC SCHIST INTERBEDS** Wfoliated, silicified and FeCO3 altered quartzite. Broken. Weak oxidation mostly on joints. 50cm wide quartz-graphite interbed at 44.24m. Pale, cg, vuggy white quartz veins.	583579	42.1	44.2	FeCO3	45	qtz	0.5	45		
					wFol		583580	42.1	44.2	Sil						
									dupl							

Box #	From_ m	To_m	Colour	Grain Size	Texture		Sample #	From_ m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
10-13	49.5	61.7	dgy	fg	Fol	**FOLIATED QUARTZITE INTERCALATED WITH GRAPHITIC SCHIST AND QUARTZ VEINS** Moderately foliate quartzite with minor narrow schist interbeds. Abundant veins 1. Discordant, vuggy, oxidized, cg, qtz-FeO veins, 2. Fg, deformed, metamorphogenic quartz veins.				SER	40	QTZ	5	40		
												def qtz-FeO	3	0		
13-14	61.7	63.0	dgy	fg	wfol	**QUARTZITE** Massive to weakly foliated, unaltered, weakly oxidized with rare graphitic foliae										
	63.0					**EOH**										

Project:	KL	**UTM:**	
Prospect:	Caribou	**Easting:**	492842
Hole ID:	CH11-12	**Northing:**	7090997
Total Depth:	91.1m	**Dip:**	**-75**
		Azim:	**270**
		Elevation:	1772

Purpose: **Caribou vein strike and dip extension**

Logged By:	JLE/DD
Core Size:	NQ3
Drilling Company:	Caron Drilling
Start Date:	6-Sep-11
Finish Date:	8-Sep-11

Box #	From_m	To_m	Colour	Grain Size	Texture	Description	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
	0.0	4.0				**CASING/OVERBURDEN**										
1-2	4.0	10.1	DGY	FG	FOL	**THIN BEDDED QUARTZITE W/MINOR GRAPHITIC PHYLLITE** Strongly folded, thin bedded quartzite. Moderate oxidation, partings along foliation and fracture surfaces. Broken. Quartz veins, 2-3%, cg, vuggy, white.				FeO	Fol 60	qz	2	60		
					SCHIST											
2-3	10.1	18.0	Dgy	fg	fol	**THIN BEDDED QUARTZITE** Weakly-moderately foliated, thin bedded quartzite. Rusty, broken core.Moderate oxidation on joints and adjacent to quartz veins.										
										FeO	Fol 45	qz	3	45		
												qz-Fe-Cb	2	0		
2-5	18.0	23.1	Grey	fg	FOL	**THIN BEDDED QUARTZITE AND LESSER QUARTZ-SERICITE (CHLORITE, GRAPHITE) SCHIST** Grey, thin to locally moderately bedded quartzite and lesser (30%) silver-light grey quartz-sericite+/-chlorite schist and common graphitic lamina (3%).Well foliated schistose units, weakly foliated quartzite. Weak rusty brown oxidized fractures.Vuggy, white, stained to orange quartz veins, <5%, typically So/F parallel, lesser cross-cutting, hairline to 20 cm. Drusy quartz in cavities. Rusty specks in quartz veins after pyrite. @18-19 Blocky core w/numerous narrow quartz veinlets in schist.@19.1-19.3 Vuggy, white, FeO stained quartz with drusy qtz filled cavities. Contacts 50-65 TCA. @19.2-19.5 Crushed core with gouge. @21.3-22.6 Blocky core broken up to discs, qtz-ser schist with occasional qtz veins.				wk FeO	Fol/S1 55	QZ	5	55		
					Blocky					(FeCO3?)						
										tr MnO						

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Box #	From_m	To_m	Colour	Grain Size	Texture		Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
5-6	23.1	26.0	Grey	fg	wk fol	**THIN BEDDED/WEAKLY FOLIATED QUARTZITE** Grey, thinly bedded, weakly foliated quartzite. Locally moderately bedded. To 5% graphite lamina defining foliation. Abundant FeCO3 clots forming banding/foliation parallel. Vuggy, white quartz veinlets (3%), few mm to 3cm. Common cavities (cubic) stained with FeO. Weak fracture controlled FeO/FeCO3?, lesser on F/So surfaces and associated MnO.				wk-m FeO banded FeCO3 wk MnO	Fol 55	QZ	3			
6	26.0	29.0	Silver grey	fg	Fol	**THIN BEDDED QUARTZITE/LESSER QUARTZ-SERICITE SCHIST** Silver grey, well foliated, thin bedded quartzite and/or quartz-sericite-chlorite+/-graphite schist. Partly blocky core. To 3% foliation parallel quartz veinlets and lesser irregular quartz masses.Weak orange FeO on fractures. @28.1-28.3 Strong fracture-controlled and lesser pervasive FeCO3 and MnO alteration, minor FeO.				wk FeO	Fol 55	QZ	3	variable		
							583581	28	29							
6-8	29.0	36.8	Grey	fg	Mas	**THICK BEDDED QUARTZITE WITH SUBORDINATE QUARTZ-SERICITE SCHIST and GRAPHITIC PHYLLITE** Thick bedded, massive to weakly foliated, grey quartzite to 35.3m. Minor, <3% black graphitic lamina and rare graphitic phyllite zone (29.9-30.4m). To 10% white, FeO (orange) stained quartz lenses and irregular masses. @35.5-36.8m, dominantly quartz-sericite schist with minor intercalations of massive quartzite and 5% vuggy quartz veins. @34.95-35.1 Narrow zone of rusty brown pervasive Fe-carbonate. @36.7-36.8 Strong grey fault gouge.				Wk FeO locally FeCO3		QZ	10	variable		
8-9	36.8	42.4	Grey	Mg	Mas	**THICK BEDDED QUARZITE WITH QUARTZ VEINS, RARE GRAPHITIC PHYLLITE** Medium grey, thick bedded, massive quartzite with 35% white to orange, Fe-stained quartz veins. Veins are vuggy and have large cavities after FeCO3? Numerous small cubic cavities, some filled with rusty FeO (after Py). Weaker MnO on fractures, dominantly in veins.@41.95-42.15 Graphitic phyllite.				wk MnO		QZ	35	var. 55-80		
			white	Fg	Veined					wk FeO wk FeCO3?						

Box #	From_m	To_m	Colour	Grain Size	Texture		Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
9-10	42.4	48.6	Orange	Cg	BXD	**VEIN FAULT BRECCIA (GREY QUARTZITE and QUARTZ)** Heavily oxidized, brecciated vein fault zone. Blocky and crumbly, locally with gouge.Medium grey, angular, quartzite and subordinate white quartz fragments in a crumbly, rusty orange brown, $FeCO_3$, FeO and MnO-rich matrix. Minor quartz veining in less fragmental intervals. Lack of visible sulfides. @42.4m, 3cm wide zone of very strong gossan. @42.4-42.6m, Crumbly, shattered and soft core with gouge. @43.2-43.4 Shattered core with orange-brown clay gouge. @45.4-48.7m,Heavily gossanous breccia with locally obliterated textures by intense Fe-carbonate (FeO) and MnO. Minor pyrite.										
			brown		GG					Strong FeO		QZ	5		Py	1
										Strong MnO						
										Mod $FeCO_3$						
										Sil						
							583582	41.2	42.4							
							583583	42.4	43.9							
							583584	43.9	45.4							
							583585	45.4	46.9							
							583586	46.9	48.6							
							583587	48.6	50.6							
							583588	50.6	52.6							
							583589	52.6	53.9							
							583590	53.9	54.9							
10-11	48.6	57.1	Grey	Fg	Fol	**THIN BEDDED QUARTZITE AND LESSER GRAPHITIC PHYLLITE** Thin bedded to locally moderately bedded, weakly foliated grey quartzite and subordinate black, graphitic phyllite (35%).Phyllite is laminated to thin bedded and well foliated; to 0.5% Pyrite disseminations.Numerous clots of rusty FeO, some forming veinlets in quartzite. Patchy and more pervasive (over <10cm) zone of $FeCO_3$?Strong quartz veining, 35%, white to orange, vuggy and pitted (cavities after pyrite, trace fg, subhedral as clusters and disseminations), some with FeO fill. Quartz only veins dominantly F1 ll (metamorphogenic), lesser discordant.Overall trace pyrite.					Fol 50	QZ	20	var	Py	1
			Black		VN					Mod FeO		QC	15	25-30		
										wk $FeCO_3$		(Fe)				
										wk MnO						
11-13	57.1	63.6	Grey	fg	Fol	**THIN BEDDED QUARTZITE** Grey, thin bedded quartzite. Weakly foliated.Rare quartz veins, to 1%.Weak fracture-controlled FeO and MnO.										
										Wk FeO	Fol 60	QZ	1	var 60-80		
										Wk MnO						

Box #	From_m	To_m	Colour	Grain Size	Texture		Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
13-16	63.6	74.8	Grey	fg	Fol	**THIN BEDDED QUARTZITE and LESSER BLACK GRAPHITIC PHYLLITE** Thin and rarely moderately bedded, well foliated, locally folded grey quartzite with lesser graphitic phyllite intercalations (40%). Below 71.0m, decrease in graphitic beds.To 0.3% pyrite as veinlets stretched to F1 and disseminations in graphitic units. 3% white quartz vein, +/-vuggy, weak FeO on fractures. @69-72m, numerous quartz veins, 25%. White, orange stained, fractured (FeO>>MnO fill), vuggy and dominantly foliation/bedding parallel. Minor FeCO3.				wk Fe-MnO						
			Black		Def					Sil	Fol 50-70 var	QZ	3	var 60-80	PY	1
16-20	74.8	91.1	Grey	fg		**THIN BEDDED QUARTZITE, RARE GRAPHITIC PHYLLITE** Thin bedded grey quartzite, weak-moderately foliated, and 10% graphitic phyllite interbeds. These occur at: 78.6-78.9m, 83.5-84.5m and 86.6-86.9m. Typically phyllite is blocky and locally crushed with gouge.Weak quartz veining, 1-3%, as foliation parallel lamina to 4cm wide (F1 parallel) veinlets. Occasional subhedral pyrite and clots of FeO (after pyrite) associated with veining.Locally numerous cubic cavities after pyrite, especially in graphitic intervals. Trace Py disseminations in all lithologies.Weak to locally moderate FeO, foliation and fracture controlled. Weak MnO on fractures. @78.6-78.8m, Crushed core in graphitic phyllite, narrow fault zone?				wk-mod FeO	Fol 55	QZ	3	60	Py	1
										wk MnO						
	91.1					EOH										

Project:	KL	**UTM:**		**Logged By:**	DD
Prospect:	Caribou	**Easting:**	492814	**Core Size:**	NQ3
Hole ID:	CH11-13	**Northing:**	7091010	**Drilling Company:**	Caron Drilling
Total Depth:	60.7 m	**Dip:**	**-75**	**Start Date:**	8-Sep-11
		Azim:	**270**	**Finish Date:**	10-Sep-11
		Elevation:	**1764**		

Purpose: Srike and depth extension of the Caribou vein and other vein systems

Box #	From_m	To_m	Colour	Grain Size	Texture	Comments	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
1	0	3.4				**CASING-OVERBURDEN**										
1-3	3.4	16.5	Silver grey	Fg	Fol	**THIN BEDDED QUARTZITE, SUBORDINATE QUARTZ-SERICITE SCHIST AND GRAPHITIC PHYLLITE**				Sil	Fol 65	QZ	2	65		
			white		deformed	Grey, thin bedded, well foliated quartzite with intercalated 30% quartz-sericite+/-chlorite schist and 20% black graphitic phyllite.Minor core-scale folding.Blocky and locally crushed over narrow intervals (graphitic schist).Foliation (bedding) and lesser fracture controlled weak FeO.Quartz veins, lamina (<1mm) to 3cm parallel to F1 (metamorphogenic). Larger veins vuggy with locally FeO filling cavities. Some with drusy quartz.All lithologies and veins are pitted, commonly cubic, <1-2mm on average, after pyrite? @14.9 to 16.5m, more massive quartzite, decrease in thin bedded schistose intercalation. Narrow intervals of patchy FeCO3, overall weak.				wk FeO						
			black		blocky											
3-4	16.5	20.1	Orange grey	Fg	Flt gouge	**VEIN FAULT BRECCIA** Vein fault breccia. Most of this unit (95%) is extremely broken up, crumbly core with strong clay gouge. Orange-brown to grey, strong pervasive oxidation, dominated by Fe-oxide/carbonate, lesser MnO.@16.5 to 16.7m, strongly oxidized qtz-ser schist breccia with FeO/FeCO3>>MnO rich matrix. @16.7-17.7 Mostly crumbly, heavily gossanous breccia with largely obliterated primary textures.Strong, pervasive FeO/FeCO3, moderate MnO. @17.7-18.0 Crumbly breccia/qtz-ser schist with moderately oxidized matrix. @18.0-18.5 Grey, sandy+clay-rich gouge. @18.5-19.4 Crumbly qtz-ser schist-quartzite- rare quartz breccia. Angular, poorly sorted clasts in weakly oxidized clay-rich matrix. @19.4-19.5 Rusty, orange brown gouge with minor gossanous (Fe-Mn oxide) rubble. @19.5-20.1 Blocky, more massive, less altered core. Thick bedded, grey, pitted quartzite with moderate to locally strong, over <10cm interval, fracture-controlled and lesser pervasive FeCO3?/FeO and lesser MnO alteration.White quartz stringers, 5%, with limonite stained cavities (after pyrite), variably oriented.	583591	15	16.5							
							583592	16.5	17.7	Str FeO						
							583593	17.7	19.5	FeCO3						
							583594	19.5	20.1	mod MnO						
						.	583595	STD 1134								
							583596	Blank								
							583597	20.1	21.6							

Box #	From_m	To_m	Colour	Grain Size	Texture	Comments	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
4-6	20.1	29.9	Grey	Fg	Fol	**THIN BEDDED QUARTZITE/MINOR GRAPHITIC PHYLLITE**				wk FeO	Fol 50	QZ+/-				
			mionr blk			Grey, thin bedded to lesser moderately bedded quartzite and subordinate, well foliated graphitic phyllite (5%), at 29.4-29.5m.White quartz+/-FeCO3(?) veins, hairline to 3 cm, moderate orange-brown oxidation, vuggy; numerous pits (after pyrite) line with FeO/Fe-carbonate? Locally drusy quartz.Weak fracture-controlled FeO>MnO and occasional, tan, patchy Fe-carbonate alteration (at 25.7-26.0m). FeO specks/blebs as disseminations throughout this unit (1-2%).Quartzite is pitted throughout, 1-3%, after pyrite disseminations? Trace Py disseminations.				wk FeCO3	So 50	FeCO3	5		Py	1
										wk MnO						
7-13	29.9	60.7	Grey	Fg	Mas	**THICK BEDDED QUARTZITE, RARE GRAPHITIC PHYLLITE**										
						Grey, thick bedded, massive to weakly foliated quartzite with rare dark grey/black graphitic lamina and lesser interbeds, 3%. Locally elevated sericite (metamorphogenic?). Overall weakly fractured, locally moderate to strong with blocky core and oxidized fractures.Common weak fracture controlled FeO and lesser MnO, overall weak. Numerous, 2-3% limonite specks.Quartz veining, 5-30%, averaging 5%, white stained to orange by FeO, fracture controlled, some with FeCO3. Veins, both F1 parallel and discordant.Trace Py disseminations in occasional quartz vein. @31.5-32.2 Narrow zone of graphitic phyllite. @38.5-42.7 Moderately fractured with FeO>MnO as fracture coating.Minor crackle breccia intervals, <15cm, with orange, oxidized matrix. @52-52.5 White, orange stained quartz veins, 30%, locally vuggy, variably oriented TCA. @56.1-60.7m, Numerous white quartz and quartz+FeCO3 veinlets/lenses, hairline to 25 cm, vuggy with rusty orange material in cavities. Common orientation 0 to 50 TCA. Occasional Py surrounded by FeO. Weakly to moderately fractured.				wk FeO		Fol 35-40			PY	1
										wk MnO						
										wk FeCO3						
										mod FeO/						
							583598	54.6	56.1	MnO						
							583599	56.1	57.6							
							583600 DUP	56.1	57.6	Str Fe-Mn						
	60.7					**EOH**										

Project:	KL	**UTM:**			**Logged By:**	DD	
Prospect:	Caribou	**Easting:**	492814		**Core Size:**	NQ3	
Hole ID:	CH11-14	**Northing:**	7091010		**Drilling Company:**	Caron Drilling	
Total Depth:	68.0m	**Dip:**	**-90**		**Start Date:**	10-Sep-11	
		Azim:			**Finish Date:**	11-Sep-11	
		Elevation:	1764				

Purpose: Caribou vein strike and dip extension

Box #	From_m	To_m	Colour	Grain Size	Texture		Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
	0	3.1				**CASING/OVERBURDEN**										
1-4	3.1	18.1	Silver grey	Fg	Fol	**THIN BEDDED QUARTZITE, LESSER QUARTZ-SERICITE SCHIST AND GRAPHITIC PHYLLITE**				wk MnO						
			grey		blocky	Thin bedded, grey quartzite intercalated with 30% quartzite with high sericite component (quartz-sericite schist?) and 15% black graphitic schist. Minor moderately bedded quartzite with individual beds to 35 cm in thickness.Generally blocky core broken up to discs.Minor quartz, white, locally vuggy, foliation parallel (metamorphogenic), 2%, averaging 1-2cm.Patchy to banded, intermittent tan alteration, stronger down-hole towards vein fault contact, ankerite? White quartz, foliation parallel, vuggy, locally FeO in cavities, 2-3%. Overall weak fracture and lesser F1 controlled FeO, lesser MnO.				wk FeO	Fol 50-70	QZ	2	60		
			black							wk FeCarb patchy/banded						
							114051	16.6	18.1							
4-5	18.1	24	Orange-brown		BXD	**VEIN FAULT BRECCIA IN THIN BEDDED QUARTZITE** Intermittently brecciated and altered vein fault zone in light grey, thin bedded sericitic quartzite with minor graphitic lamina. @18.1-18.4 Partly crumbly, dark brown, lesser orange, heavily gossanous zone. Strong FeO, MnO and Fe-carbonate? @18.8-19.3 Crackle breccia with patchy, strongly developed gossan. Vuggy after Fe-carbonate? @19.5-19.6 Strongly gossanous. @19.9-20.2 Dark brown gossanous veins, HR-1cm and <5cm zones; 20 to 70 TCA. @20.9-21.3 Partly crumbly, heavily oxidized breccia zone in light grey quartzite. @21.3-21.7 Crumbly breccia with weakly oxidized clay matrix. @21.7-22.4 More than 50% of this interval soft and crumbly, patchy rusty oxidation. Strong clay gouge. @22.4-24.0 Strongly brecciated, crackled to fully broken up w/rotated fragments. Intermittently developed strong gossan.	114052	18.1	19.3	strong FeO						
			grey				114053	19.3	20.9	strong MnO						
							114054	20.9	21.9	Mod FeCO3						
							114055	21.9	22.9							
							114056	22.9	24							
							114057	24	25.7							
							114058	25.7	26.9							
						.	114059	39.8	41.3							
							114060	41.3	42.8							
							114061	42.8	44.6							

Box #	From_m	To_m	Colour	Grain Size	Texture		Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
5-8	24	39.8	Grey	Fg	Mas	**THICK BEDDED QUARTZITE, RARE GRAPHITIC PHYLLITE**										
						Grey, massive to subordinate weakly foliated quartzite. Rare black, well foliated graphitic phyllite intersections, 26.9-27.2m and 39.4-39.8m.Overall weak to moderately fractured with FeO>MnO fill. Strongly crackled at the contact with vein fault breccia from 24 to 26.9m. Also strong fracturing, blocky at 38.1-39.8m.White quartz-Fe-carbonate (2%) and white quartz veins, 1%. Both with FeO on fractures. Random orientation TCA. @24.0-26.9 White qtz-Fe-carbonate (5%) and 2% quartz veinlet, variable orientation. Moderate FeO, locally weak clay and MnO on fractures.				Wk FeCO3		QZ+FeCarb	2			
										wk FeO		QZ	1			
										wk MnO						
9-10	39.8	44.7	Grey	Fg	Mas	**QUARTZ VEINS IN MASSIVE QUARTZITE, MINOR GRAPHITIC PHYLLITE**										
			white		VN	Grey, thick bedded quartzite with to 40% white, locally orange stained, vuggy, white quartz and white quartz>Fe-carbonate veins (<5 to 10%). Irregular vein contacts, variably oriented TCA. Hairline to 50 cm, averaging >5cm.Graphitic phyllite interbeds, 41.15-41.3m.Weak FeO on fractures. Numerous specks and clots of FeO (after py?), 3%.Sericite on foliation, metamorphogenic? @38.1m, 10cm wide zone of quartzite breccia with rusty clay-rich matrix.				wk FeO	Fol 80	QZ	20			
			rusty orange									minor FeCarb QZ	20			
11-14	44.7	62.5	Grey	Fg	Mas	**THICK BEDDED QUARTZITE AND SUBORDINATE GRAPHITIC PHYLLITE**										
						Grey, thick bedded, massive to weakly foliated quartzite with 3-5% graphitic partings/lamina defining foliation. Interbeds of black graphitic phyllite, 15%.Quartz veins+/- Fe-carbonate to 15%, white and stained to rusty orange. Vuggy with cavities filled with Fe-carb and FeO (after sulfides). Few mm to 30 cm widths, variable trends to core axis, common both F1 concordant and discordant (~50:50).Weak fracture-controlled FeO and MnO.Rare, pervasive tan-orange alteration, ankerite? at 48.2-48.5m.Trace fg pyrite disseminations.				wk FeO	Fol 50	QZ	20		Py	1
										wk MnO wk Ank		minor FeCarb				

Box #	From_m	To_m	Colour	Grain Size	Texture		Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
14-15	62.5	68	Grey Black	FG	Fol	**INTERBEDDED THIN BEDDED QUARTZITE and GRAPHITIC PHYLLITE** Interbedded, well foliated, thin bedded, grey quartzite (65%) and black graphitic phyllite (35%).White, vuggy quartz veins (5%), dominantly foliation parallel. Many are deformed and dismembered. Average width, 2-3cm. Rare FeO on fractures.Pyrite, 0.5%, euhedral (1-2mm), fg and stretched to foliation blebs, dominantly in graphitic beds.				rare FeO	Fol 55	QZ	5	55	PY	1
	68					**EOH**										

Project:	KL	**UTM:**		**Logged By:**	DD
Prospect:	Caribou	**Easting:**	**492820?**	**Core Size:**	NQ3
Hole ID:	CH11-15	**Northing:**	**709185?**	**Drilling Company:**	E. Caron Drilling
Total Depth:	74.9 m	**Dip:**	**-60**	**Start Date:**	11-Sep-11
		Azim:	**270**	**Finish Date:**	13-Sep-11
		Elevation:			

Purpose:

Box #	From_m	To_m	Colour	Grain Size	Texture	Description	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
						CASING OVERBURDEN										
1	6.8	11.5	White grey	FG	wFol Blocky	**THIN BEDDED QUARTZITE AND LESSER GRAPHITIC PHYLLITE** Thin bedded, grey quartzite with to 5% graphite lamina, weakly foliated. Interbedded with 25% black graphitic phyllite.Heavily blocky, poorly competent core.White quartz, lamina in graphitic phyllite, and to 1cm deformed veinlets, foliation concordant (5%). Typically vuggy with FeO filling (after pyrite).Wk FeO fractures and foliation surfaces, lesser MnO.				wk FeO	Fol 58	QZ	5	55-60		
			black							vw MnO						
2-3	11.5	20.4	Grey Brown		Blocky BXD	**BRECCIATED/FAULTED THIN BEDDED QUARTZITE, rare GRAPHITIC PHYLLITE (CARIBOU VEIN FAULT?)** Very blocky over most of this interval, narrow sections of fault gouge; faulted Caribou vein? Thin bedded quartzite w/rare graphitic phyllite (5%) host rocks. Graphitic beds typically soft with gouge. Intermittently heavily crackle brecciated from 13.5 to 15.0 m. Lesser quartzite-white quartz and quartz only breccia with rusty oxidized matrix, locally clay rich. Numerous white, stained orange, vuggy quartz veining (30%), hairline to 15cm, minor +/-FeCO3, variably oriented TCA. Rusty orange cavities after weathered Fe-carb and smaller cubic after py.Narrow faults of soft and crumbly gouge at 11.5-11.6m and 13.5-13.6m, and numerous narrow gouged zones below 16.4 m.MnO and FeO dominantly fracture-controlled, weak-moderate. Rare pervasive over <5-10cm intervals. Locally gossanous, dark grey fracture-controlled fill, hairline to 0.5 cm. Lack of visible sulfides.				Mod MnO		QZ	30	var		
			White				114062	9.5	11.5	Wk-mod FeO		+/-FeCO3				
							114063	11.5	13.5							
							114064	13.5	15							
							114065	15	16.4							
							114066	16.4	18.4							
							114067	18.4	20.4							
							114068	20.4	22.3							
							114069	Blank								

Box #	From_m	To_m	Colour	Grain Size	Texture		Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
4-5	20.4	26.7	grey	FG	Mas	**QUARTZ VEINS IN THICK BEDDED QUARTZITE, LESSER GRAPHITIC PHYLLITE**	114070	STD 1134								
			white		Vn	Grey, thick bedded, weakly foliated quartzite with to 25% white, rusty orange stained quartz vein. Common graphitic lamina defining F1. @20.4-21.0m and 25.3-25.9m, minor (10%) graphitic phyllite, soft and broken up w/gouge.Veins: vuggy, +/-FeCO3, minor cubic casts after pyrite, few mm to 6 cm width, average 2-3cm. Some are deformed. Dominantly F1 parallel.@26.5-26.7m, very blocky core to lesser crumbly core with gouge. Strong quartz veining, stained rusty orange. Oxidized F1 and fracture surfaces.Weak FeO on fractures in host lithologies and in qtz veins.	114071	22.3	23.8	Wk FeO	Fol 50	QZ+/- Fe-car	25	40-60		
							114072	23.8	25.3			deform				
							114073	25.3	26.7			mg				
5-16	26.7	70.2	Dark grey	FG	mas	**THICK BEDDED QUARTZITE, RARE GRAPHITIC PHYLLITE**					Fol 45	QZ	2	40-60		
						Dark grey, weakly foliated "dirty" quartzite with 10% black graphitic phyllite intercalations. Pitted (to 1-2%). Foliation defined by discontinuous white quartz lamina, graphite and sericite.Graphitic unit is well foliated, generally poorly competent, blocky and locally crushed with clay gouge.Overall competent, weakly to moderately fractured. Weak>moderate FeO/Fe-carbonate coating and locally MnO.White qtz (2%) and qtz>>FeCO2 (2%; carb forms few to 25%) stringers/veinlets, vuggy, drusy crystals, mg, HR to 5cm, average ~1 cm, 40-60 (aver 50). Dominantly foliation concordant, lesser discordant. Common tension gashes filled with quartz+/-rusty specks (pyrite/FeCO3?), 80-90 TCA. @69.3-70.0m, to 20% deformed white, some rusty orange stained, quartz stringers, foliation ll.				Wk MnO		mg				
										wk FeO		QZ+FeCar	2	50		
										wk FeCO3		deformed				
												QZ	20	45		
												str				
15-16	70.2	75.9	Dgy	fg	Fol	**THIN BEDDED QUARTZITE**										
						Dark grey, thin bedded quartzite, massive to weakly foliated, with to 5% black graphite lamina. Gradational to 10% quartz-graphite+/-chlorite schist. Competent. Locally abundant bright orange specks and foliae of Fe-carbonate (overall weak). To 2% quartz+Fe-carbonate veins and lenses, 45 TCA <1 to 4cm, cg. Minor <1cm white quartz stringers, F1 ll. Trace pyrite disseminations.				wk Fe-car	Fol 40	Qz-fe-carb	2	40		
												vein				
	75.9					**EOH**						QZ	0.5	40		
												str				

Project:	**KL**	**UTM:**		**Logged By:**	DD
Prospect:	**Caribou**	**Easting:**	**492820**	**Core Size:**	NQ3
Hole ID:	**HS11-16**	**Northing:**	**7091185**	**Drilling Company:**	E. Caron Drilling
Total Depth:	**60.7 m**	**Dip:**	**-75**	**Start Date:**	13-Sep-11
		Azim:	**270**	**Finish Date:**	17-Sep-11
		Elevation:	**1800 m**		

Purpose: Strike and dip extension of the Caribou vein

Box #	From_m	To_m	Colour	Grain Size	Texture	Comments	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
	0	3.3				**CASING/OVERBURDEN**										
1-3	3.3	13.4	dark grey black	fg	fol deform	**THIN BEDDED QUARTZITE AND GRAPHITIC PHYLLITE** Strongly foliated, and deformed (folded) thin bedded dark grey quartzite and lesser graphitic phyllite (40%). Poorly competent, blocky core with locally developed gouge, +/-graphitic, +/-rusty oxidized. To 3% deformed white quartz, orange stained (FeO), stringers (<2cm on average), foliation ll, locally folded and dismembered into lenses. Overall to 3% qtz+<FeCO3, 25-40 TCA, mg-cg, vuggy, stained orange. FeO/FeCO3, wk-moderate, on fractures and in veins and their contacts. Numerous pits in quartzite, after pyrite? @11.4-13.4m, fault zone/extremely crushed zone with strong rusty orange-black graphitic gouge, and minor quartz rubble.				mod FeCO3	65	QZ+/-FeO	3	65		
					blocky					wk FeO		STR QTZ+Fe-carb VN	3	25-40		
							114074	5.7	7.3							
							114075	7.3	9.1							
							114076	9.1	11.4							
							114077	11.4	13.4							
3-4	13.4	17.7	M grey	fg	FRC	**STRONGLY FRACTURED, THICK BEDDED GREY QUARTZITE, LESSER GRAPHITIC PHYLLITE**	114078	13.4	14.9	Mod FeCO3	Fol 60	QZ+fe-carb	5	3		
					Mass	Strongly crackled, grey, thick bedded, massive to locally weakly foliated quartzite with mod-strong fracture-controlled rusty FeCO3 (FeO). To 5% graphite lamina defining F1.To 5%, randomly oriented, <0.5% white quartz+Fe-carb (<<FeO) stringers and veins, HR to 3cm. @16.4-17.7m, one zone of graphitic argillite>>quartzite. @16.4-17.7m, fault zone with strong gouge developed in the graphitic bed, crushed and soft core. Minor rubble of rusty stained quartzite (20%). @13.4-13.9m, strong veining from 25%, 40-65 (orthogonal) Qz+Fe-carb veins, cutting early, deformed, metamorphogenic stringers (Qtz+/-FeO).	114079	14.9	16.4	wk FeO		VN/str				
							114080	16.4	17.7							
							114081	17.7	19							
							114082	19	19.6							
							114083	19.6	21.1							
							114084	21.1	22.6							
							114085	27.1	29.1							
							114086	40	41.5							

Box #	From_m	To_m	Colour	Grain Size	Texture	Comments	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
4	17.7	19.6	Orange- brown		BXD blocky	**VEIN FAULT BRECCIA/ THIN BEDDED QUARTZITE, GRAPHITIC PHYLLITE** Blocky, poorly competent, extremely rusty brown, locally gossanous quartzite breccia and brecciated white quartz>Fe-carbonate veins. @17.7-18m, Heavily crackled, massive quartzite with fractures healed by FeCO3.@18-18.4m, Heavily oxidized, gossanous quartzite brecca with FeCO3-MnO rich matrix. @18.4m, crushed core rubble with quartz. @18.4-19m, White, rusty orange stained, fractured quartz>>Fe-carbonate/FeO, in quartzite host (20%). Broken up contact.Graphite in fractures. Weak Py disseminations. @19-19.6m, Very blocky interval. Thin bedded quartzite-black phyllite with 5% white quartz stringers, both foliation concordant and discordant. Also quartz rubble.	114087	52.8	53.8	Mod Fecarb wk Feo mod MnO		QZ-fecarb cg	80		Py	1
4-5	19.6	25	Dk grey black	fg	fol	**MODERATELY TO THIN BEDDED QUARTZITE, LESSER GRAPHITIC PHYLLITE** Moderately to thin bedded, grey to dark grey quartzite and lesser (40%) black graphitic phyllite. To 3% rusty orange stained quartz+/- lesser Fe-carbonate stringers, HR to 5 cm, average <2cm. @19.6-20.3m, minor vein, >5cm massive veins. Wk to moderate FeCO3 on fractures>F1 surfaces and in veins, vein contacts. Wk FeO.				wk FeO wk-mod FeCO3	50	QZ+/-Fecarb	1	30-50		
6-12	25	53.8	Dk Grey	fg	mas	**THICK BEDDED QUARTZITE, rare graphitic phyllite** Gradational to dark grey, thick bedded quartzite, massive to weakly foliated, locally to 3-5% graphitic partings. Rare graphitic phyllite (3%). Moderate rusty orange FeCO3 (minor FeO?), on fractures and in veinlets/their contacts. Moderately crackle brecciated. 2-3% white qtz, commonly stained to orange, HR to 10cm, 0 to 75 TCA. Numerous tension gashes, 80-90 TCA, filled with quartz+-Fe-carb. Overall competent core with minor, narrow crushed sections, 37.6-38.0m (graphitic phyllite bed). @40-41.3m, to 25% white, orange stained (FeO?/) quartz+>FeCarb vein to stockwork, lesser veinlets , to 15cm width, 50-75 TCA, vuggy and cg. Some drusy qtz in cavities. Commonly irregular contacts. @50.9-52.5m, white quartz, foliation ll veins an sheeted veins (<1 to10+ cm widths, average 3cm), to 40%, rarely vuggy. Patchy weak rusty staining.@52.8-53.5m,Heavily oxidized Qtz-Fecarb veinlets/veins (30%), variably oriented TCA, 30-60, cg.					mod FeCO3 wk FeO	50	QZ+/-Fecarb str	3	var 0-75	
													QZ+/-Fecarb VN/stockwork	25	75	
													QZ-Fecarb	30	30-60	
12-13	53.8	60.8	Dk grey black	fg	Fol	**THIN BEDDED QUARTZITE AND lesser GRAPHITIC PHYLLITE** Moderately foliated, thin bedded quartzite with to 10% white quartz lamina/partings. Lesser, 20%, black graphitic phyllite intercalation. To 5% white metamorphogenic quartz stringers+specks of dark brown siderite. Veins are vuggy, few mm to 10 cm				wk FeO Wk FeCO3	fol 50	QZ+sid str	5	50		
	60.8					**EOH**										

Project: KL **UTM:**
Prospect: Caribou **Easting:** 492832
Hole ID: CH11-17 **Northing:** 7091130
Total Depth: 81.0 m **Dip:** -60
Azim: 270
Elevation: 1800 m
Purpose: strike and dip extension of the Caribou vein

Logged By: DD
Core Size: NQ3
Drilling Company: E.Caron Drilling
Start Date: 9/18/2011
Finish Date: 9/19/2011

Box #	From_m	To_m	Colour	Grain Size	Texture	Comments	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
	0.0	3.8				**CASING/OVERBURDEN**										
1-5	3.8	22.9	Grey Black	fg	Def fol	**THIN BEDDED QUARTZITE AND GRAPHITIC PHYLLITE** Deformed, well foliated, thin bedded quartzite with numerous graphite lamina interbedded with 30-40% black graphitic phyllite and quartz-graphite phyllite. To 10% foliation parallel, white, FeO stained quartz>Fe-carbonate stringers/veins and lenses, <few mm to 10cm wide, average 3cm. Some are deformed and broken up to lenses. Trace to 0.5% cubic pits, <1-2mm, after pyrite. Pyrite disseminations, to 0.5%. Partly blocky core. Weak-moderate FeO, locally FeCO3 on fractures and foliation surface. @21.8-22.9m, blocky core with 20% white quartz-Fe-carb veins, vuggy, F1 ll. Moderate FeO on fractures.				wk-mod FeO wk FeCO3	Fol 40	Qz-Fecar 10		40	Py	1
5	22.9	23.4	Orange brown	cg	BXD	**STRONGLY OXIDIZED VEIN FAULT** Heavily gossanous fault breccia. Fe-MnO replacement of angular fragments and major component of the groundmass. Lack of visible sulfides. In part soft and crumbly.	114092	21.3	22.9							
							114093	22.9	23.4							
5-7	23.4	31.3	Grey black	fg	fol def	**THIN BEDDED QUARTZITE AND BLACK PHYLLITE WITH QUARTZ VEINS** Thin bedded quartzite intercalated with minor (20%) black, graphitic phyllite. Tighly folded unit, core scale. Numerous, to 20%, white to pink, quartz+/-Fe-carbonate stringers and veins/lenses, few mm to 5cm wide, fg, commonly vuggy, stringers deformed. Lesser to 10% white-pink discordant quartz>Fe-carbonate veins, >10cm, variably oriented TCA, 0 to 30. Locally drusy quartz and Fe-carb in cavities. Vein density increasing with depth. To 2%, to 2-5m wide rusty brown, gossanous, MnO-rich, veinlets, 10-85 TCA. Also minor Fe-carbonate only stringers, 1-3mm, and fracture coating. To 1% pits after pyrite. Weak FeO in fractures, veins and host rocks.	114094	Blank		wk FeO						
							114095	Std 1134		Wk-mod FeCO3			QZ	20	40	Ga
							114096	23.3	24.8	wk-mod MnO			def, fol, fg			Py
7-8	31.3	35.5	Grey	fg	BX	**STRONGLY CRACKLE BRECCIATED MASSIVE QUARTZITE** Strongly crackle brecciated, grey to dark grey, thick bedded/massive quartzite. @34-35.3m, quartzite breccia with strong FeCO3 cement. @35.3-35.5 Fault zone. Soft and crumbly core with strong graphitic and rusty orange (FeO) gouge. Some quartz rubble. Overall to 3% heavily fractured quartz veins+FeO-MnO fracture fill. These are cut by numerous to 1.5cm dark brown gossanous irregular stringers forming weak stockwork (10%). Locally strong fracture-controlled FeO	114097	24.8	26.8				Qz+Fe carb	10	20	
							114098	26.8	28.8	mod FeO			cg			
							114099	28.8	30.3	mod-str FeCO3						
							114100	28.8	30.3dupl	mod MnO						
							114101	30.3	31.3							
							114102	31.3	32.5							
8-11	35.5	48.3	dark grey	fg	wfol blocky	**MASSIVE TO WEAKLY FOLIATED, THIN BEDDED QUARTZITE, RARE GRAPHITIC PHYLLITE** Gradational to less intensely fractured, moderate to locally strongly fractured, dark grey, weakly foliated, thin-moderately bedded quartzite. Rare to 5% graphitic lamina and graphitic phyllite. Random fractures healed by HR to 5mm quartz-Fe-carbonate filling (5%). @39.3-39.6 and 43-43.2, minor (2%) 5-30 cm white quartz veins, 30-35 TCA, cg, FeCO3 on vein fractures. @43.9-44.0m, graphitic gouge. Numerous bright orange specks and slivers throughout (FeCO3). <0.5% cubic pits, 1-2mm, in veins and quartzite, after pyrite.	114103	32.5	34.0	Mod FeCO3	Fol 45					
							114104	34.0	35.5	wk FeO			QZ	2	30	
							114105	35.5	37.0				cg			
							114106	48.3	50.3							
							114107	50.3	51.5							

Box #	From_m	To_m	Colour	Grain Size	Texture	Comments	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
11	48.3	51.5	grey	fg	wfol	**WEAKLY FOLIATED QUARTZITE WITH QUARTZ VEINS**	114108	57.1	58.3							
					blocky	Similar to 35.5-48.3m, weakly foliated dark grey quartzite with rare graphite interbeds. Overall, very blocky, poorly competent. Moderate to strong fracturing. @50.5-51.0m, fault zone. Crumbly, soft core with strong gouge. To 35-40% white quartz-Fe-carbonate veins with irregular contacts. Vuggy, variably oriented, 0 to 80, HL to 70cm, complex cross-cutting relationships (stockwork-like), some have graphite on fractures. Largest veins at: 48.3-48.6 and 49.2-50.2. Weak to moderate fracture-controlled FeO and >FeCO3.	114109	58.3	59.8	wk-mod FeO			Qz+Fe carb	35		
					gg		114110	69.5	71.0	wk FeCO3			cg			
							114111	71.0	72.0							
11-15	51.5	65.2	grey	fg	wfol	**MASSIVE TO WEAKLY FOLIATED, THICK BEDDED QUARTZITE, RARE GRAPHITIC PHYLLITE**	114112	72.0	73.0							
					blocky	Gradational to less quartz veined massive to lesser weakly foliated, grey quartzite. Blocky core, more heavily to 58.5m. Moderate to strongly fractured. To 20% white, some stained rusty orange, variably oriented stringers and veins, HL to 10cm, +/-Fe-carbonate, 0 to 80 TCA, weakly developed stockwork. Commonly vuggy with locally drusy quartz+Fe-carb. Minor (<0.5%) cubic pits after pyrite (in veins and quartzite). Weak-mod FeO/FeCO3 on fractures.				wk-mod FeO/Fe carb			QZ+Fe carb	20		
													stwk			
15-16	65.2	68.6	grey	fg	Fol	**THIN BEDDED QUARTZITE, GRAPHITIC PHYLLITE (QUARTZ-GRAPHITE PHYLLITE)**										
			black		defor	Intercalated, deformed unit of thin bedded quartzite (50%) and graphitic phyllite with common quartz foliae (quartz-graphite phyllite), 50%. Abundant graphite lamina in quartzite. To 2% white quartz +Fe-carb veins, vuggy, foliation ll, to 3cm wide. Minor FeO on vein fractures. Abundant bright orange specks and lesser (FeCO3) throughout. Overall moderate FeCO3.					Fol 35		QZ+Fe car	2	35	
													stringer			
16-19	68.6	81.1	grey	fg	wfol	**MODERATELY BEDDED QUARTZITE, SUBORDINATE GRAPHITIC PHYLLITE**										
						Gradational to moderately, lesser thin bedded, weakly foliated quartzite with 15% graphitic phyllite. To 20% weakly to strongly oxidized white-rusty orange quartz+/-Fe-carb veins, some strongly fractured (FeO-graphite fill), dominantly F1 ll (35-40 TCA), mg. Generally blocky unit, especially in zones of strong quartz veining, more competent downhole. Locally numerous rusty orange specks and cavity filling-FeCO3>FeO, small cubic one after pyrite, larger weathered out carbonate. @69.4-73.0m, to 40% rusty orange quartz+/-Fecarbonate/FeO veins, both concordant and discordant to foliation.				Wk FeO	Fol 35		qtz-fe carb	20	var	
										Wk-mod FeCO3						
	81.1					**EOH**										

Project:	KL	**UTM:**		**Logged By:**	DD
Prospect:	Caribou	**Easting:**		**Core Size:**	NQ3
Hole ID:	CH11-18	**Northing:**		**Drilling Company:**	E. Caron Drilling
Total Depth:	74.1 m	**Dip:**	-75	**Start Date:**	
		Azim:	270	**Finish Date:**	
		Elevation:	1370?		

Purpose:

Box #	From_m	To_m	Colour	Grain Size	Texture	Comments	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
	0	3.5				**CASING/OVERBURDEN**										
1-2	3.5	12.4	grey black	fg	fol deform	**THIN BEDDED QUARTZITE, LESSER GRAPHITIC PHYLLITE** Grey, thinly bedded, weakly foliated quartzite intercalated with locally tightly folded, 25% black graphic phyllite. To 12% foliation parallel, commonly deformed, few lamina and to 3cm white quartz, stained to rusty orange, FeO, stringers/veins, vuggy with +/-Fe carbonate fill. Dominant host is graphitic unit. Cubic cavities after pyrite in veins and quartzite-phyllite. To 1-2% orange specks throughout, FeO/FeCO3. Mod Fe carbonate+/-FeOx on fractures and lesser lamina to 10cm wide intervals of more pervasive alteration.				wk FeO mod	fol 60	Qz+	12	60		
										FeCO3		feO fg				
2-5	12.4	24.1	Grey	fg	wfol	**THIN BEDDED QUARTZITE, RARE GRAPHITIC BEDS** Gradational to less graphitic intercalations. Dominantly thin bedded grey quartzite, weakly foliated, with locally to 5% graphite lamina and narrow to 15cm interbeds. To 10% white quartz+Fe carb veinlets, few to 15cm wide, 2-3cm average, foliation ll (40-60 TCA). Minor blocky core especially in graphitic beds and wider areas of quartz veining. Moderate FeCO3 on fractures, lesser FeOx. @21.9-24.1m, blocky zone with minor crushed zone and gouge. To 20% white quartz, stained rusty orange, concordant and discordant to foliation.	114113	21.8	24.1	mod FeCar	fol 55	Qz+Fecarb	10	40-60		
							114114	24.1	25							
5	24.1	25	orange brown	cg	bxd	**STRONGLY OXIDIZED VEIN FAULT BRECCIA** Heavily oxidized, rusty orange brown breccia with Mn-FeCO3/FeO rich material cementing angular quartzite and heavily oxidized fragments. Locally vuggy. Lack of visible sulfides.	114115	25	26							
							114116	26	27.5	strong FeCO3/FeO						
							114117	31.7	33.2	strong MnO						
							114118	33.2	34.7							
							114119	34.7	36.3							
5-8	25	34.7	dgy	fg	brc blocky	**HEAVILY CRACKLED THICK BEDDED QUARTZITE** Contact fault zone with graphitic gouge at 25.0-25.2m. Blocky throughout. Heavily crackle brecciated, dark grey, thick bedded quartzite. Fracture healed by hl to 10mm randomly oriented quartz and quartz-FeCO3 veinlets; larger veins at 20-35 TCA, vuggy; overall to 3-4% white quartz veins. Some with drusy quartz and MnO in cavities. Mod-strong FeOx+FeCO3 on fractures. @33.4-33.6m, quartzite breccia; angular fragment in dark brown, MnO-rich, fg gossanous cement. @34.5-34.7m, heavily fractured quartzite with some rotated fragments, orange, FeCO3 and dark brown MnO cementing fragments.	114120	Blank								
							114121	STD 1132		mod/str FeCO3		qtz	4	30		
							114122	36.3	37.8			+Fe carb				
							114123	37.8	40.8			fg				
							114124	40.8	43.1							
							114125	60.1	62.5							

Box #	From_m	To_m	Colour	Grain Size	Texture	Comments	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
8	34.7	36.3	grey	mg	gg	**MINERALIZED FAULT ZONE (CARIBOU VEIN?)**										
					fol	Heavily crushed and broken up zone with strong, intermittently developed rusty orange and black, graphitic gouge. More than 50% core loss. @34.8-34.9m, black graphitic gouge. @34.9-35.1m, grey-rusty orange gouge with broken core carrying rubble and several, few cm solid pieces of siderite-sulfide breccia with to 15% galena blebs coated by anglesite. Trace euhedral rusty pyrite disseminations.				graph					ga	5
															Py	1
8	36.3	42.6	Grey	fg	F	**FOOTWALL FAULT ZONE/QUARTZITE-GRAPHITIC PHYLLITE**					Fol 65					
			black			Strongly broken up zone with graphitic gouge, footwall to Caribou vein (34.7-36.3m). Locally white quartz rubble. Host is thin bedded quartzite and graphitic phyllite. To 3% foliation parallel quartz stringers+Fe-carbonate. Mod Fe-carbonate on fractures and lesser to 3mm lamina replacement.				mod Fecarb		qtz+fe carb	3	65		
8-10	42.6	49.5	dark grey	fg	frc	**MODERATELY BEDDED QUARTZITE, LESSER GRAPHITIC PHYLLITE**					fol 55					
			black		def	Dark grey, moderately to thin bedded quartzite, interbedded with subordinate, 20% graphitic phyllite. Core scale, tight folding in graphitic beds. To 10% white quartz, orange stained, + Fe-carbonate, veins and lenses, F1 ll and discordant. Moderate FeCO3 on fractures				mod Fe carb		qtz-fe car	10	55		
												mg				
10-12	49.5	60.1	dr grey	fg	fol	**THIN BEDDED QUARTZITE, LESSER GRAPHITIC PHYLLITE AND CALCAREOUS QUARTZITE (SANDY LMST?)**				wk FeOx						PY
					def	Thin bedded, grey quartzite interbedded with lesser, 30%, deformed, black graphitic phyllite and grey, calcareous coarser grained (mg) quartzite (sandy limestone), 10%. Variable foliation, 45-60. To 10-12%, dominantly foliation ll, fractured white to rusty orange quartz-Fe-carb-graphite veins and lenses, 45-65 TCA, <1 to 15cm width. Mod Fe-carb, on fractures and 1-3mm lamina/beds replacement. Pyrite, fg euhedral disseminations throughout, more common in graphitic beds and locally in qtz veins, to 1%.				mod Fecar	Fol 45-65	qtz-fe car	12	55		
12-13	60.1	62.5	dr grey	fg	fol	**THIN BEDDED QUARTZITE, LESSER GRAPHIC PHYLLTE WITH QUARTZ VEINS**				perv, mod sil						
						Similar to above 49.5-60, thin bedded grey quartzite and 25-30% deformed, tightly folded graphitic phyllite, with to 35% white, stained rusty orange, quartz+minor graphite+Fe-carb veins and irregular masses, dominantly foliation ll (45-70 TCA). Some deformed. Numerous bright orange specks and fracture-filling Fe-carbonate in veins and host rocks. Lesser fracture-filling FeOx. Very hard, pervasively silicified? Overall moderate FeCO3, weak-mod FeOx. Trace Py disseminations, fg subhedral/euhedral grains. Variable foliation, 45-70 TCA.				wk-mod	fol 45-70	qtz-fe carb	35	45-70		PY
										FeCO3/FeOx		deform				

Box #	From_m	To_m	Colour	Grain Size	Texture	Comments	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
13-14	62.5	68.1	dr grey	fg	wfol fol	**THIN BEDDED QUARTZITE, RARE BLACK PHYLLITE** Dark grey, moderately bedded gradational to thin bedded, well foliated quartzite with 5% black discontinuous graphitic partings. Slightly folded. Rare quartz+Fe-carb veins, to 1%, foliation parallel, 1-3cm, 60 TCA. Foliation more consistent at 60 TCA.				wk FeO	fol 60	qtz	1	60		
												fe carb				
14-15	68.1	70.9	black	fg	fol blocky	**BLACK GRAPHITIC PHYLLITE, LESSER QUARTZITE** Gradational to dominantly black graphitic phyllite interbedded with lesser, 35% dark grey, thin bedded quartzite. Locally tightly folded. Blocky core with some gouge. Weak quartz veining, 2%, F1 ll stringers, to 3cm stringers. To 1% pyrite in veins/as clusters and disseminations, fg, subhedral, throughout.					Fol 60	qtz	2			
																Py
15-18	70.9	83.8	dr grey	fg	fol blocky	**THIN BEDDED QUARTZITE, SUBORDINATE GRAPHITIC PHYLLITE** Dark-medium grey, thin bedded, foliated quartzite intercalated with 10-15% graphitic phyllite. To 10% white, stained rusty orange (FeOx/FeCO3) stringers and veins, dominantly F1 parallel, few mm to 15cm, commonly strongly fractured with graphite and Fe-carb+oxides filling fractures. @72.2-75.2m, blocky core with locally minor gouge. 35% fractured white-orange stained quartz, to 15cm, dominantly F1 ll.				wk FeO/Fecar	Fol 50-65	qtz+fecarb	10	55		
	83.8					**EOH**										

Project:	KL	**UTM:**		**Logged By:**	DD
Prospect:	Caribou	**Easting:**	**492820**	**Core Size:**	NQ3
Hole ID:	CH11-19	**Northing:**	**7090**	**Drilling Company:**	E. Caron Drilling
Total Depth:	67.1 m	**Dip:**	**-60**	**Start Date:**	21-Sep-11
		Azim:	**270**	**Finish Date:**	23-Sep-11
		Elevation:	**1780 m**		

Purpose:

Box #	From_m	To_m	Colour	Grain Size	Texture	Comments	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
	0	6.7				CASING/OVERBURDEN										
1-3	6.7	23.1	Grey	fg	blocky deform	**THIN BEDDED QUARTZITE AND BLACK PHYLLITE** Poorly competent, very blocky with common sandy gouge. Deformed, locally tightly folded unit. Thin bedded, lesser moderately, grey quartzite with minor sericite-rich lamina, intercalated with 40% black graphitic phyllite with numerous (5%) white quartz lamina. Overall 8-10% white quartz, dominantly foliation parallel, fractured stringers, to 2-3cm, vuggy and pitted (after pyrite). Below 19.0m, moderately bedded quartzite with subordinate phyllite. @21-23.1, very blocky contact zone to mineralized vein; 25% rusty stained (FeOx) white quartz veining, random orientation, stockwork-like.	114126	21.1	23.1	wk FeOx	Fol 45	qz	10	45		
							114127	23.1	25.3							
							114128	25.3	25.6	(0.3m)-high grade galena>sphalerite						
3-4	23.1	25.6	Orange brown	cg	bxd blocky	**STRONGLY OXIDIZED VEIN BRECCIA ZONE WITH GALENA/GREY QUARTZITE** Broken up and locally crumbly, heavily oxidized, brown-orange breccia, with partially obliterated textures. Lesser light yellow-tan quartz>>siderite breccia with galena mineralization. More than 50% core loss. @23.1-25.3m, Vuggy, crumbly, heavily oxidized breccia. Pale yellow quartz>siderite and gossanous angular fragments cemented by rusty brown, fg, Fe-MnO and carbonate material. Speck of mg galena in core rubble. @25.3-25.6m, grey quartzite with white quartz rubble. Tan-pale yellow quartz>>siderite breccia with interstitial and blebs of galena (3%) and lesser sphalerite (1%).	114129	25.6	27	Str Fecarb						
							114130	27	28.3	strong FeO					ga	1
							114131	49.3	50.9	str MnO					sph	1
							114132	50.9	53.2							
4	25.6	28.9	Grey	fg	blocky mas	**Moderately BEDDED QUARTZITE WITH QUARTZ VEINS** Footwall to mineralized vein (Caribou vein?). Blocky core. Grey, massive to weakly foliated, moderately bedded quartzite with 30% vuggy, white, FeOx stained quartz+/-Fe-carbonate veins>stringers, foliation parallel (50 TCA) and lesser (5%) 0 to 30 TCA. Both, <1 to 3cm, on average, commonly vuggy, oxidized. @26.1-26.2m, white quartz-Fe-carb stockwork. Blocky section with minor rusty gouge. @27.5-27.8m, vuggy white quartz-FeOx-Fe-carb vein zone, variable trends, 0 to 50 TCA.				Mod FeCarb		qtz-fe car	30	50		
												qtz-Fe carb	5			
												str		0-30		

Box #	From_m	To_m	Colour	Grain Size	Texture	Comments	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
4-9	28.9	49.3	grey	fg	wfol	**MASSIVE TO WEAKLY FOLIATED QUARTZITE, SUBORDINATE BLACK PHYLLITE**									py	1
						Grey, massive to weakly foliated, moderately bedded, lesser thin bedded grey quartzite with to few % graphitic lamina and 20% black graphitic phyllite, increasing with depth. Latter forms 0.5 to <1m wide well foliated beds. To 5% white quartz stringers, +/-Fe-carbonate, foliation ll and lesser discordant, orthogonal sets, <0.5-2cm, on average. More common to 31.8m, below predominantly HL to <0.5cm stringers, expect in graphitic beds. Those have to 2-3cm white quartz stringers, foliation ll (metamorphogenic). Larger graphic phyllite beds at: 29.7-30.2, 43.2-43.9, 47.1-47.6 and 48.1-48.4m. Trace to 1% pyrite dominantly in graphitic beds; fg, subhedral disseminations and foliation parallel slivers.				wk FeOx	fol 50	qtz-fe car	5			
10-11	49.3	53.2	dk grey	fg	wfol	**GREY QUARTZITE WITH QUARTZ VEINS**										
						Dark grey, massive to weakly foliated, thick bedded quartzite with 35% vuggy, white quartz>>Fe-carbonate veins, foliation parallel, locally deformed, and ~5% white quart-Fe carb+/-trace rusty stained, euhedral pyrite-FeOx, oblique to F1, 40 TCA. Both, few mm to 25cm, vuggy. Overall trace fg pyrite disseminations and cubic casts after pyrite, in vein and host rocks.					Fol 55	qt+Fe car	35	55	py	1
												fol ll/def qt+Fe car	5	40		
11-13	53.2	67.1	dk grey	fg	wfol	**MASSIVE TO WEAKLY FOLIATED QUARTZITE, RARE GRAPHITIC PHYLLITE**				wk cc						
						Similar to above, 49.3-53.2, massive to weakly foliated quartzite. Rare graphitic phyllite, 3-4%; poorly competent core with gouge. Moderately fractured throughout. Minor quartz stringers and tension gashes, to 3%, hl to 3mm, rare 2cm, white quartz+/-calcite and quartz+/-Fe-carbonate/FeOx, 35-80 TCA. Weak fracture-controlled FeCO3 and FeOx. Vfg to fg pyrite disseminations, trace. Locally numerous bright orange specks and pits, after FeCO3?				wk FeCO3	fol 35	qtz			py	1
										wk FeOx		qtz+fe ca	3	35-80		
	67.1					EOH										

Project:	KL	**UTM:**		**Logged By:**	DD
Prospect:	Caribou	**Easting:**		**Core Size:**	NQ3
Hole ID:	CH11-20	**Northing:**		**Drilling Company:**	E. Caron Drilling
Total Depth:	74.4m	**Dip:**	-60	**Start Date:**	23-Sep-11
		Azim:	270	**Finish Date:**	25-Sep-11
		Elevation:	1760 m		

Purpose: Caribou vein strike and dip extension

Box #	From_m	To_m	Colour	Grain Size	Texture	Comments	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
	0	6.6				**CASING/OVERBURDEN**										
1-3	6.6	18.3	Grey	fg	deform fol	**INTERBEDDED QUARTZITE AND GRAPHITIC PHYLLITE** Interbedded grey, thin bedded grey quartzite with lesser, 10%, quartz-sericite lamina and 35% black, graphitic phyllite. Moderately-strongly foliated. Locally contorted and convoluted bedding, especially in phyllite. 10% locally folded, F1 ll white quartz stringers, to 3cm, vuggy and pitted after Fe-carbonate and pyrite, respectively, oxidized. 1-2% fg pyrite disseminations throughout. Wk-mod fracture controlled FeO and FeCO3, rare MnO. Variable foliation 40-55, average 50 TCA.				wk FeCO3 wk-mod FeOx	Fol 40-55	Qz	10	50	Py	1
										wk MnO		FeOx				
							114133	18.3	20.3							
3-4	18.3	21.3	grey-green	fg	deform	**FRACTURED & STRONGLY FOLIATED QUARTZITE-GRAPHITIC PHYLLITE**	114134	20.3	21.3		FOL 55					
					blocky	Strongly foliated and moderately fractured, blocky and locally gouged. Thin bedded quartzite with graphitic lamina (25%) and minor sericite-chlorite partings. 5% white quartz, foliation parallel veinlets. Discordant, 70-80 TCA, Fe-carbonate, 1-3mm, +/-quartz, 1%. @21.0-21.3m, broken up with gouge at the vein contact.	114135	21.3	22.5	mod Fecarb		qtz	5	50		
							114136	22.5	23.5			Fe-carb	1	75		
							114137	blank								
4	21.3	23.5	brown	cg	bxd	**CARIBOU VEIN(?) OXIDIZED BRECCIA-VEIN FAULT**	114138	std 1134								
			orange		gg	Heavily oxidized, poorly competent/crumbly over majority of this vein fault. Orange-brown. @21.3-22.5m, 80% crushed rock with strong black-brown graphitic and locally oxidized gouge. Rare competent sections of grey quartzite-white quartz breccia w/ gossanous, Fe-Mn oxide-rich groundmass. @22.5-23.2m, pale yellow quartz-siderite breccia in strongly oxidized, FeO-Mn0 groundmass. Interstitial galena (2%) and lesser sphalerite (1%). Also heavily gossanous breccia rubble with obliterated textures. @23.3-23.5m, vuggy grey quartzite>white quartz fragments with patchy gossanous matrix.	114139	23.5	25						ga	1
			pale yellow				114140	25	26.5						sph	1
5	23.5	25	white	mg	bxd	**BRECCIATED WHITE QUARTZ-RARE SIDERITE VEIN** Broken up contacts. White, rusty orange stained (FeOx), fractured and vuggy, mg quartz-rare siderite vein. Also minor, rusty orange Fe-carb in cavities. 20% grey quartzite xenoliths. Graphite and fg euhedral pyrite specks/clusters in fractures. Rare (trace) galena, sphalerite and yellow scordite in siderite part of the vein.						wk FeOx qtz	80		py	1
												Fecarb mg			ga sh	1 1

Box #	From_m	To_m	Colour	Grain Size	Texture	Comments	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
5-6	25	29.7	black	fg	fol blocky	**BLACK PHYLLITE, LESSER GREY QUARTZITE** Black graphitic phyllite interbedded with 40% thin bedded grey quartzite. Blocky, poorly competent core. Rare quartz stringers and foliation parallel lamina (2-3%). Minor locally associated Fe-carbonate. Weak FeOx>FeCO3 on fractures. 1% pyrite, fg disseminations on foliation surfaces.				wk FeCO3	Fol 30				py	1
6-12	29.7	54.8	dk grey	fg	wfol	**THICK BEDDED QUARTZITE, RARE GRAPHITIC PHYLLITE** Moderately to thick bedded quartzite, massive to weakly foliated. Moderately fractured. 3-5% white quartz+/-Fe carb veinlets, hl to 4cm, average <1cm, some are vuggy, 30-80 TCA. Numerous tension gashes 65-80 TCA, filled with quartz and Fe-carb+/-quartz. Wk FeCO3-FeOx>MnO on fractures				wk FeO wk MnO/FeCO3	Fol 40	qtz	3	var 30-80		
12-13	54.8	60.3	dr grey black	fg	fol	**THIN BEDDED QUARTZITE AND LESSER GRAPHITIC PHYLLITE** Dark grey thin bedded quartzite intercalated with 40% black graphitic phyllite. Well foliated unit. 3% foliation parallel white quartz->calcite foliae and to few cm wide stringers. Rare FeOx staining. Some vuggy. To 1% pyrite, fg disseminations, slivers (F1 ll) and concentrations on foliation surface of graphitic beds.				v wk FeOx wk cc	Fol 35	qtz-c	3	35	py	1
13-16	60.3	74.4	dr grey	fg	fol	**GREY QUARTZITE, MINOR GRAPHITIC PHYLLITE** Similar to above, 54.8-60.3m, with subordinate graphitic phyllite lamina and intercalations (10%). 7-8% white quartz veinlets, hl to 2-3cm, rarely folded. Minor discordant white quartz stringers +/- minor Fecarb. Wk FeO/Fecarb on fractures. Occasional tension gashes filled with white quartz and drusy quartz, locally +/-calcite.				wk FeOx	Fol 40	qtz	8	40		
	74.4					**EOH**										

Project: KL **UTM:**
Prospect: Homest **Easting:**
Hole ID: HS11-12 **Northing:**
Total Depth: 58.0 m **Dip:** -60
Azim: 330
Elevation:

Logged By: DD
Core Size: HQ
Drilling Company: Lyncorp Drilling
Start Date:
Finish Date:

Purpose: Strike and dip continuity of No.1 vein

Box #	From_m	To_m	Colour	Grain Size	Texture		Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
	0	2.4				**CASING-OVERBURDEN**										
1-3	2.4	18	Grey black	Fg	Fol blocky	**THIN BEDDED QUARTZITE AND LESSER GRAPHITIC PHYLLITE** Well foliated, thin bedded grey quartzite and lesser (35%) black graphitic phyllite.Numerous, narrow intervals (<2 m widths), of strongly broken up core and locally clay gouge commonly associated with graphitic beds. Generally poor core recovery. These occur at: 3-3.2, 5-5.4, 6.1-9.0, 12.3-12.4, 13.2-14.0, 17.3-18.0m).Narrow, white quartz stringers, vuggy, typically HR to 2cm, foliation (bedding) parallel/lesser cross-cutting. Minor to 5-10cm veins (QZ+/-Fe carb), 14-16.1m. Total (stringers+veins) ~3-5%.Alteration is weak, mostly fracture-controlled FeO and FeCO3? Weak calcite on fractures.				wk FeO Wk Fe carb	Fol 60	QZ QZ+Fecar	3 1	60 60		
			white		GG					Wk CC						
3-6	18	35.2	Grey	Fg	Mas	**THICK BEDDED QUARTZITE** Gradational to thick bedded, grey, massive to weakly foliated quartzite. Sections of poorly competent, shattered to pebbles sections with signicant core loss (18-18.5, 21-21.3, 24.1-25.5, 30.1-31.2m).To 5% white quartz veins, few mm to >10cm zone of sheeted veins, typically foliation parallel. Average, 1-3cm. Vuggy, FeO stained and locally Fe-carb.Wk FeO on fractures.	113251	18	19.5	Wk FeO						
6-7	35.2	39.7	grey-green	Fg	w fol	**WEAKLY FOLIATED DIORITE SILL** A sharp contact at 80 TCA. Light grey-green, fg, feldspar phyric diorite. Feldspar, to 25%, light grey, partially stretched to foliation.Extremely clay altered, soft and crumbly at several interval and contacts: 35.2-35.4m, 38.5-38.7, and 39.1-39.2m. A sharp lower contact, 80 TCA.				Str clay	Fol 65	QZ				
												def				
7-10	39.7	49.5	Grey grey-green	Fg/mg	Fol blocky	**THIN BEDDED QUARTZITE, FG CALCAREOUS SANDSTONE (SANDY LMST) AND RARE GRAPHITIC PHYLLITE** Grey, thin bedded quartzite intercalated with thin to moderately bedded fine grained, grey-green to buff quartz-rich calcareous sandstone (sandy lmst), 50:50 ratio and rare (<5%) dark grey/black graphitic phyllite.Broken, poorly competent core over most of this interval with common, soft and crumbly beds.About 5% white quartz veins>stringers, HR to 20 cm width, average 2cm, vuggy. Wk FeO in cavities (after py) and fracture fill.Overall very weak fracture-controlled FeO.Very fg Py disseminations, vein boundarie and graphitic beds.@49.0-49.5 Fault zone. Heavily broken up with rounded pebble sized rubble and 10cm wide clay gouge.Late calcite fracture filling, weak.				v wk FeO wk CC	Fol 80	QZ mg	5	75	Py	1
										perv FRC		deform				
10-11	49.5	58	Grey	Fg	Mas blocky	**THIN TO THICK BEDDED QUARTZITE, SUBORDINATE GRAPHITIC PHYLLITE** Grey, fg, thin to lesser thickly bedded bedded quartzite and subordinate black graphitic phyllite (5-8%). Locally weakly foliated.Intermittenly strongly broken up core. Occasional shattered with strong medium grey clay gouge, mostly in thin graphitic beds (lost core). Narrow fault zones at: 50-51.1, 51.7-52.0 and 54.6-54.85m. Contacts of gouged zones are 80 TCA.White quartz stringers, 3%, vuggy, HR to 1-2cm width, dominantly foliation ll.Weak fracture-controlled rusty orange FeO. @57.7-58.0m, fault zone-grey clay gouge. Lost the hole.Trace to 1% fg, euhedral pyrite disseminations, average 0.5%, throughout.				Wk FeO	Fol 70	QZ	3	70	Py	1
					F											
	58					**EOH**										

Project: KL
Prospect: Homestake
Hole ID: HS11-13
Total Depth: 84.4 m

UTM:
Easting: 489871
Northing: 7086836
Dip: -70
Azim: 330
Elevation: 1390 m

Logged By: DD
Core Size: NQ3
Drilling Company: Lyncorp Drilling
Start Date: 9-Sep-11
Finish Date: 12-Sep-11

Purpose: Strike and dip extent of No.1 Vein

Box #	From_m	To_m	Colour	Grain Size	Texture		Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
	0	2.2				**CASING-OVERBURDEN**										
1-5	2.2	20.7	Grey	Fg	Fol	**THIN BEDDED QUARTZITE AND LESSER SANDY LIMESTONE AND BLACK GRAPHITIC PHYLLITE**				wk-mod FeO	Fol 80	QZ	3	80		
			Tan	mg	GG/F	Strongly broken up, medium grey, thin bedded quartzite and 20% black graphitic phyllite. Rare, massive, tan to slightly orange, snd limestone (2.8-4.1m). Intermittently faulted unit with common fault gouge.The faulted sections (poor core recovery) are at: 2.7-3.5, 4.4-5, 10.5-10.6, 12.6-12.7, 13.7-13.9, and a major fault zones at 5.3-8.4 m (3.1m), 15.7-17.1 (1.4m) and 18.2-20.5 (2.3m). Srong gouge has associated moderate FeO and calcite.To 5% QZ stringers, HR to 5cm, average 2cm, and to 10cm QZ-rusty FeCO3/CC +/-FeO veins.Variable FeO (some FeCO3) weak to moderate, fracture-controlled, lesser patchy/pervasive over 10-20cm intervals, in vein and host rocks.				wk CC		QZ+FeCO3	2			
										wk Fe-carb						
					F											
5-7	20.7	27.5	GREY	FG	MAS	**THICK BEDDED QUARTZITE** Gradational to thick bedded quartzite, grey and massive.Deformed white quartz stringers, HR to 1cm on average, to 2%. Typically at 40-75 TCA. Occasionally vuggy.Wk fracture-controlled FeO. Minor in vein cavities. Some cubic casts after pyrite? @26.5-27.5m, blocky core at the lower contact with diorite sill.				Wk FeO	Fol 75	QZ	2	var		
												def				
7-8	27.5	30.2	light grey-green	FG	Fol	**WEAKLY FOLIATED DIORITE SILL** A sharp upper contact, 75-80 TCA.Light grey green, fg with light grey feldspar phenocrysts (25%) partially stretched/aligned to foliation. @22-27.65 m, completely altered to light green clay.Lower contact at 75 TCA.										

Box #	From_m	To_m	Colour	Grain Size	Texture		Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
8-11	30.2	45.2	ligt grey	fg	Blocky	**SANDY LIMESTONE, LESSER QUARTZITE AND GRAPHITIC PHYLLITE**										
					fol	Blocky, poorly competent unit of massive to weakly foliated, sandy limestone, lesser (15%) fg grey quartzite. Intercalated 10% graphitic phyllite lamina and thin beds. White quartz veins>>stringers, <0.5cm to 30cm width, average 5cm, 45-80 TCA. Locally vuggy with drusy crystals.Weak calcite on fractures. Trace FeO. @35-35.15, white quartz vein, contacts at 80 TCA. @38.3m, 30 cm massive QZ vein, white , vuggy, cg. UC broken, LC at 45 TCA. Drusy quatz. @43.8-45.2 Numerous <0.5cm light beige, fg quartz+/-ank stringers and tension gashes.				wk CC	Fol 75	QZ	10	var 45-80	Py	1
										Tr (vw) FeO		VN QZ+Ank STR	0.5	var 20-80		
11-13	45.2	56.7	Grey black	FG	Mas Blocky	**THICK BEDDED QUARTZITE, MINOR GRAPHITIC PHYLLITE** Blocky but lesser than above (30.2-40.4m). Interbedded grey, thick bedded quartzite interbedded with to 15% well foliated, black graphitic phyllite.Blocky, with numerous <15cm wide zones of crushed core throughout.Severa (8-10%), >15cm, white, quartz+/-to 10% Fe-carbonate, massive to brecciated and lesser, to 5% white quartz stringers, foliation ll, hairline to 10cm, average 1-2cm.Overall trace py, as foliation ll disseminations in graphitic beds. @45.2-47.1 Crushed core with strong grey clay gouge/fault vein breccia. Brecciated white quartz>>Fe-carbonate. UC at 80 TCA, LC at 50 TCA.Minor graphitic phyllite (10%). Weak FeO on fractures. @53.95-55.46m, old mine workings, 1.5m high cross-cut (no core).	113252	45.2	46.1	wk FeO	Fol 85	QZ+Fe-car	8	80	Py	1
							113253 113254	46.1 47.2	47.2 48.2			VN QZ STR	5	80		
13-19	56.7	70.1	Grey	fg	Fol	**THIN TO THICKLY BEDDED QUARTZITE AND LESSER GRAPHITIC PHYLLITE**				v weak FeO	Fol 70-85	QZ	5	80	PY	1
			black		Folded	Gradational to thin bedded quartzite and more abundant zones of locally folded, black graphitic phyllite (35%) with numerous white quartz lamina (5%). Quartzite beds range from <1cm to 1.5m wide intercalation, weakly foliated.Overall, more competent core than in the upper part of this hole.Overall, to 5% white quartz stringers/veinlets, few mm to 5cm, averaging 2cm, fg; some are folded. Typically foliation ll.Pyrite, trace, disseminations, mostly in graphitic beds.					av 78	SFOL				
												deform fg				
19-20	70.1	72.2	Light grey-green	Fg	Fol	**WEAKLY FOLIATED DIORITE, MINOR QUARTZITE**					Fol 70					
			Grey			Sharp contacts at 80 TCA. Light grey green, fg, weakly foliated diorite with partially stretched to foliation light grey feldspar laths (25%).Minor quartzite (15%) with locally graphitic partings.Rare white quartz stringers, F1 parallel, 2%.Trace fg pyrite disseminations. Weak FeO on fractures, lesser F1 surfaces.				Wk FeO		QZ	2	70	Py	1
												STR fg				

Box #	From_m	To_m	Colour	Grain Size	Texture		Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
20-22	72.2	78.7	Light grey-green-yellow		Fol Folded	**QUARTZ SERICITE-CHLORITE SCHIST** Well foliated, kink folded, quartz sericite>chlorite schist intercalated with rare (3%) beds of thin bedded quartzite interbedded with graphitic phyllite.Trace, fg-mg euhedral pyrite disseminations in all lithologies.To 3% white quartz lamina and stringers, <1-3cm width, cg, foliation parallel				Wk FeO	Fol 65	QZ	3		Py	1
												STR deform				
22-23	78.7	83.9	Grey	Fg	Fol	**THIN BEDDED QUARTZITE AND LESSER GRAPHITIC PHYLLITE, QUARTZ SERICITE SCHIST AND DIORITE**					Fol 75	QZ	2		Py	1
			White		GG	Foliated and poorly competent, blocky unit with one zone of strong gouge.Grey, thin bedded quartzite interbedded with 30% of black graphitic phyllite.One narrow diorite sill, light grey-green, weakly foliated, feldspar phyric, at 81.3-81.6m. To 1% fg subhedral pyrite disseminations.Quartz-sericite schist, rare, <5cm wide beds (3%).White quartz narrow beds, foliation parallel, lesser cross-cutting, <1cm widths throughout, to 2%.Weak rusty orange FeO/FeCO3? on fractures and in some veins. Weak pervasive CC, as cement? @79.9-81.4 Fault zone. Crushed and soft core with clay gouge.Minor white quart rubble at 81.4m.Pyrite, to 1%, fg disseminations along F1.				wk FeO		SFOL				
					blocky					wk Fe-carb? wk CC						
23	83.9	84.4	Silver grey-green	Fg	Fol Blocky	**QUARTZ SERICITE SCHIST** Blocky and locally crushed core.Light grey-green quartz sericite schit, tightly foliated. Weak FeO on F1. @84.2-84.4m, crushed core. White to minor rusty quartz vein.				Wk FeO	Fol 70					
	84.4					**EOH**										

Project:	KL	**UTM:**			**Logged By:**	DD
Prospect:	HS	**Easting:**	489832		**Core Size:**	HQ
Hole ID:	HS11-14	**Northing:**	7086833		**Drilling Company:**	Lyncorp Drilling
Total Depth:	66.1 m	**Dip:**	-60		**Start Date:**	13-Sep-11
		Azim:	330		**Finish Date:**	15-Sep-11
		Elevation:	1390 m			

Purpose: No.1 vein dip and strike extent

Box #	From_m	To_m	Colour	Grain Size	Texture		Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
	0	4.5				**CASING-OVERBURDEN**										
1-4	4.5	21.2	Grey	Fg	GG	**THIN BEDDED QUARTZITE AND BLACK GRAPHITIC PHYLLITE**										
			Black		Fol	Heavily broken up and gouged thin bedded quartzite and 40-50% graphitic phyllite.White quartz vein, lesser stringers, 2-5cm wide on average, white, locally vuggy, dominantly foliation parallel, 5%.To 1% pyrite disseminations in all lithologies. @4.7-7.5 Numerous intervals of soft, crushed core with grey to dark grey graphitic gouge. @7.5-7.8 Crushed core rubble with strong rusty FeCO3/FeO? and white quartz, orange stained. @8.1-9.5 Core rubble with locally graphitic gouge. @11.9-17.3 Heavily crushed graphitic phyllite over most of this interval. Minor quartzite. Strong gouge. @20.0-20.8 Soft and crumbly core (graphitic phyllite and white quartz) with strong black, graphite-rich gouge.@20.4-21.2m, partly broken up zone with white quartz rubble. Quartz veins (80%) in quartzite.				wk FeO	Fol 75	QZ	5	75	Py	1
						.										
						.										
												QZ	80	75		
5-7	21.2	28.6	Grey	Fg	Blocky	**THICK BEDDED QUARTZITE, MINOR WEAKLY FOLIATED DIORITE**				wk FeO	Fol 70	QZ+	1	70	Py	1
					Mas	Massive, grey, fg, thick bedded quartzite.Blocky core with locally light grey gouge from 25.5 to 28.6m.Minor white quartz stringers+/- rare, fg, euhedral pyrite, foliation ll and discordant, vuggy, to 1%, <1-2cm widths. Associated weak Fe-carbonate (to 5%). Overall weak Fe-Mn oxides, fracture-controlled. @27.7-28.2m, blocky core/fault zone? Moderate fracture-controlled FeO & MnO. Common rusty orange and light grey gouge. Host rocks foliated feldspar phyric diorite>thin bedded quartzite with graphitic lamina. @28.2-28.6m, Competent core. Weakly foliated, pale grey, bleached, diorite with light grey feldspar lath stretched to F1.				Wk MnO		FeCO3				
												str				

Box #	From_m	To_m	Colour	Grain Size	Texture		Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
7-8	28.6	31.4	Tan		Blocky	**VEIN FAULT BRECCIA/THIN BEDDED QUARTZITE AND GRAPHITIC PHYLLITE**	113255	27.3	28.6	Mod FeO	Fol 75	QZ	5	75	Sp	1
			rusty brown		GG	Variably oxidized, partially gossanous, fault breccia with strong MnO-Fe-carbonate>>FeO-quartz (sulfides?/spalerite). Host rocks are thin bedded grey quartzite and black graphitic phyllite. @28.6-29.5m, Breccia zone, quartzite-white quartz in mg-cg siderite-MnO>>FeO matrix. To 1-2% sphalerite? @29.5-29.6m, Quartz-siderite-quartzite breccia with graphitic gouge. Weaker oxidation. @29.7-29.9m, Crumbly, soft core with strong rusty orange and graphitic gouge. White quartz-graphitic phyllite breccia. @29.9-30.9m, Numerous white, locally vuggy and rusty stained quartz veins, >0.3 to 5cm width, typically foliation ll, mg. Some have associated Fe-carbonate (to 10%).Lesser quartz+/-tan Fe-carb stringers, variable orientations to CA. @30.9-31.2m, Blocky core. Quartz-siderite breccia>>quartzite w/fracture-controlled MnO. @31.2-31.4 m, Grey quartzite with numberous white quartz+/-Fe-carb stringers, <0.5cm; stockwork-like.Strong fracture-controlled gossanous MnO-siderite, 40 TCA (0.5cm), at 31.3m.	113256	28.6	29.7	Str MnO		QZ-Fecarb	2			
			orange		gossan		113257	29.7	31.4	Fe-carb						
							113258	Blank								
							113259	Std #924								
							113260	31.4	32.8							
												QZ vein	30			
												QC (Fe) Str	5			
												QC (Fe)	95			
												QZ-QC_Fe	35			
8-10	31.4	37.7	Grey	Fg	Fol	**THIN BEDDED QUARTZITE AND BLACK GRAPHITIC PHYLLITE**										
			Black		blocky	Grey, thin bedded grey quartzite interbedded with 30-50% black graphitic phyllite lamina and thin beds. Graphitic intercalation diminish with depth.Weak quartz veining, to 2%. Mostly as few mm white quartz lamina in thin bedded quartzite/phyllite, foliation ll. Several to white quartz, cg, veins, to 5cm, 30 TCA, and stockwork like <10cm zones. @31.4-35.0m, blocky and locally crushed core with clay gouge.				Wk FeO	Fol 70	QZ	1	70		
												Vn QZ str	1			
10-15	37.7	57	Grey	fg	Fol	**THICK BEDDED QUARTZITE, LESSER THIN BEDDED QUARTZITE AND GRAPHITIC PHYLLITE**										
			black			Thick bedded grey quartzite, interbedded with 35% thin bedded quartzite and graphitic phyllite.Locally blocky core with grey and black graphitic gouge; 38.8-38.9, 42.2-42.5, 46.7-47.0, 48.1-48.3, and 54.5-54.7m.White quartz veins, to 5%, HR to 20cm width, variably oriented TCA (35-70). Rare QZ+weak Fe-carbonate veining (0.5%)				Wk FeO	Fol 65	QZ	5	var 35-70		
												QZ-Fe-carb mg	0.5			

Box #	From_m	To_m	Colour	Grain Size	Texture		Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
15-16	57	60.6	Grey	FG	blocky	**QUARTZ VEINS IN THICK BEDDED QUARTZITE, LESSER GRAPHITIC PHYLLITE-THIN BED QUARTZITE**	113261	57	58.2							
			white		vn	Grey, thick bedded quartzite and lesser thin bedded quartzite-graphitic phyllite (30%). Graphitic beds with quartz are heavily crushed, at 59.2-60.6m.To 30% white, locally vuggy, fractured quartz and stained to rusty orange, 35 to 70 TCA, mg to cg. Foliation ll veins are cut by 30-35 veins. @57-57.5m, Quartz veins/stockwork with graphitic material in fractures (85% vein). Thick bedded quartzite host.Minor fuschite, pyrite and aspy (sulfides trace) in late, cross-cutting veins (70 cut by 30). @58.9-59.2m, late quartz vein w/trace euhedral pyrite>>rare crystals of aspy. @59.2-60.6m, Fault zone. Heavily crushed, soft thin bedded graphitic phyllite>quartzite with strong graphite-rich gouge. To 40% fractured white quartz veins. Trace, fg, euhedral pyrite. Minor rusty oxidation on fractures.	113262	58.2	59.2	Wk FeO	Fol 63	QZ	30	var 30-70	Py	1
					FRC		113263	59.2	60.6						Aspy	1
												QZ	85		Py	1
												stwork			Aspy	1
												mg-cg				
												QZ	80		py	1
															aspy	1
												QZ	40		py	1
												frc				
16-18	60.6	66.1	Grey	fg	fol	**THIN BEDDED QUARTZITE AND GRAPHITIC PHYLLITE, LESSER THICK BEDDED QUARTZITE**				wk FeO	Fol 70	QZ	65-75		Py	1
			Black			Dominantly thin bedded quartizite and 40% black graphitic phyllite, and 20% thick bedded intercalation.Minor quartz stringers, F1 ll, to 2.5cm, and lesser quartz lamina in thin bedded/laminated units.Weak FeO (+/-FeCO3) on fractures.Pyrite disseminations and blebs along to F1, 1%. @64.2-66.6m, weakly foliated, light grey green diorite sill. Stretched to F1 light grey feldspar phenocrysts (1-2mm, 25%). Both contacts have to 0.5-1 cm wide sericitic rims/chilled margins. Contacts at 70 TCA.						stringer				
	66.1					**EOH**										

Project:	KL	**UTM:**			**Logged By:**	DD
Prospect:	HS	**Easting:**			**Core Size:**	HQ
Hole ID:	HS11-15	**Northing:**			**Drilling Company:**	Lyncorp Drilling
Total Depth:	42.4m	**Dip:**	**-55**		**Start Date:**	15-Sep-11
		Azim:	**330**		**Finish Date:**	17-Sep-11
		Elevation:	**1390m**			

Purpose: Shaft/No.1 Vein dip and strike extent

Box #	From_m	To_m	Colour	Grain Size	Texture		Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
	0	5				CASING/OVERBURDEN										
1-3	5	18.1	dgy bk	fg	fol blocky	**GRAPHITIC PHYLLITE, LESSER THIN BEDDED QUARTZITE** Deformed, black, foliated graphitic schist with minor white quartz foliae (2-3%). Intercalated with to 30% dark grey, thin bedded quartzite. Heavily broken up, locally crushed with well developed gouge. Faulted intervals with gouge (core loss): 5.0-8.2, 9.4-12.3, 13.3-13.6, 16.1-16.3, 17.2-18.1m. White>>FeO veinlets (<1-2cm) and veins (to 6cm), 3%, foliation ll and some quartz rubble. Lesser discordant stringers (few mm-2cm), white to tan, mg, +/-Fe-carb. Overall weak FeO-FeCO3 on fractures and F1 surfaces. @17.6-17.8m, crushed, faulted pale grey-green, feldspar phyric diorite. Quartz-Fe-carbonate rubble at the lower contact. @17.8-18.1m, quartzite rubble.				wk FeO wk FeCO3	70	qz-feo qz	2 1	70 15-30		
					gg def											
							113264	17.2	18.1	Mod FeO						
4	18.1	19.6	grey tan	cg	BXD blocky	**VEIN FAULT/GREY QUARTZITE** Faulted upper contact. Heavily fractured and crackle brecciated grey quartzite. Fe-carbonate stockwork. @19.4-19.6m, Fe-carb-quartzite breccia, vuggy, with moderate MnO>FeO. Overall weak-moderate MnO>FeO fracture and cavity fillings.	113265 113266	18.1 19.6	19.6 20.6	FeO str FeCO3						
							113267	38.1	39.1							
4	19.6	20.3	pale grey	fg	wfol	**DIORITE SILL** Bleached pale grey, weakly foliated, strongly sericitized, diorite sill. Stretched to foliation light grey feldspar. Blocky to lesser crumbly with orange, oxidized (FeCO3?) clay gouge. Sharp upper and lower contacts, at 65 TCA (foliation parallel).				str ser						
4-6	20.3	26.4	grey black		fol blocky	**THIN BEDDED QUARTZITE INTERBEDDED WITH GRAPHITIC PHYLLLITE, MINOR DIORITE SILL** Blocky core with gouge 20.3-20.4m. Thin bedded quartzite, weakly foliated, interbeddedwith 25-30% graphitic phyllite, latter with 2-5% white quartz foliae. In part blocky core with some gouge (24.6-34.5m). Wk-moderate FeCO3 on fractures and foliation parallel, few mm, lamina. Wk FeO (fractures/F1). White, locally vuggy, stringers/veins (3-30mm), cg, +/-CC+/-Fe-carbonate. Trace to 0.5% py dissemination. @23.4-25.9m, abundat Fe-carbonate lamina in quartz-graphite phyllite.				Mod FeCO3 wk FeO	Fol 68	QZ Str/vein	2	65		
												cg				
6-7	26.4	31	black	fg	GG Fol	**FAULT ZONE/THIN BEDDED QUARTZITE AND GRAPHITIC PHYLLITE** Fault zone. Heavily crushed and soft core with strong black graphitic gouge and weakly rusty grey. Thin bedded, locally folded quartz-graphite phyllite with to 5% white quartz partings. Intercalated lesser, 30%, grey, thin bedded quartzite. Minor, 1-2% quartz-calcite veins, F1 parallel, some rubble.										

Box #	From_m	To_m	Colour	Grain Size	Texture		Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
6-10	31	42.4	grey		Intercal	**THINLY BEDDED GRAPHITIC PHYLLITE AND QUARTZITE, MINOR QUARTZ SERICITE SCHIST, LIMESTONE AND DIORITE**				Wk FeCO3	Fol 70	QZ	3	70		
			black		blocky	Locally folded, graphite-quartz phyllite (45%) interbedded with thin bedded, grey quartzite (40%) and subordinate, 3% pale yellow sericite+/-quartz schist (<10cm beds), 5% light grey-green sandy limestone (to 5cm beds, commonly with graphitic lamina) and weakly foliated diorite sill (3%; at 33.7-34.5m, sharp contacts 70 TCA, wk calcareous). Trace-0.5% py disseminations and clusters, in most lithologies. Weak Fe-carbonate on foliation surfaces, lesser fractures. @34.7-35.4m, strong pervasive silica (quartzite w/numerous F ll white stringers). Quartz veining, dominantly foliation ll, <3mm to 1-2cm on avarage,3%. Lesser, 1%, cg, white, vuggy quartz-CC>>FeO-pyrite, discordant (30-40 TCA), to 1cm. Weak Fe-carbonate & FeO, fractures and F1 surfaces. Late calcite veinlets, to 2mm, random and F1 ll, and in qtz veins. @38.2-38.7m, fault zone-crushed core with strong graphitic gouge; several to 5cm, quartz+/-CC+/-Fe-carbonate veins, 35-60 TCA.				Per Sil		QCC-sulf	1	35		
										CC		str				
	42.4					**EOH**										

Project: KL
Prospect: HS
Hole ID: HS11-16
Total Depth: 47.9 m

UTM:
Easting:
Northing:
Dip: -75
Azim: 315
Elevation: 1390 m

Logged By: DD
Core Size: HQ
Drilling Company: Lyncorp Drilling
Start Date: 17-Sep-11
Finish Date: 19-Sep-11

Purpose: **Strike and dip extension of the Shaft vein**

Box #	From_m	To_m	Colour	Grain Size	Texture	Comments	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
	0	4.4				**CASING/OVERBURDEN**										
1-2	4.4	11.4	black	fg	Deform Blocky gg	**BLACK GRAPHITIC PHYLLITE** Blocky, locally heavily broken up and gouged, thin bedded, well foliated black graphitic phyllite with lesser quartz-graphite phyllite. Crumbly and gouged over large part of this unit. Fault zone? Weak FeCO3/FeO on fractures, lesser F1 surfaces.Trace pyrite disseminations and clusters				Wk FeO Wk FeCO3	Fol 80				Py	1
2-4	11.4	17.2	Grey Black	fg	Fol blocky	**THIN BEDDED QUARTZITE AND GRAPHITIC PHYLLITE** Thin bedded graphitic phyllite with quartz lamina, 5%, and 40-50% grey quartzite. To 1% foliaton parallel white quartz stringers, and rare white+tan, 0.5%, qtz-ankerite, 25-30 TCA, to 0.5cm stringers.Very weak alteration, fracture controlled FeCO3. To 1% pyrite disseminations and foliation parallel discontinuous stringers.	113268 113269	18.4 20.0	20.0 21.5			qtz qtz-Fecarb	1 0.5	80 25		
4	17.2	18.1	light grey green	fg		**DIORITE SILL** Sharp contacts at 80-85 TCA. Light grey green, weakly foliated, fg, light plagioclase laths stretched to foliation (80 TCA). Argillized feldspar. Weak calcite in groundmass and after feldspar.	113270 113271 113272	21.5 22.5 blank	22.5 24.5	clay	Fol 80					
							113273 113274 113275 113276	24.5 26.3 28.5 44.3	26.3 28.5 30.3 45.3	wk CC						
4-5	18	21.5	Grey		blocky gg	**THICK BEDDED QUARTZITE, LESSER THIN BEDDED GRAPHITIC PHYLLITE AND QUARTZITE** Grey, massive, thick bedded quartzite (18-20.0m) interbedded with lesser poorly competent, thin bedded quartzite and graphitic phyllite. Soft and locally crumbly fault zone with strong graphitic gouge at 21.0-21.5m. 5% white, locally vuggy+/-Fecarbonate+/-fg euhedral pyrite veins, to 10cm, foliation parallel (80 TCA) and minor white quatz-ankerite stringers, <0.5cm, 0 TCA (1%). Weak FeCO3 on fractures.				wk FeCO3		Qtz-py qtz-fecar	5 1	20 0		

Box #	From_m	To_m	Colour	Grain Size	Texture	Comments	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
5-6	21.5	28.5	Grey	fg	BXD F	**FAULTED/BRECCIATED QUARTZITE AND QUARTZ VEINS (No.1 vein?)** Poorly competent, faulted No.1 vein(?) with significant core loss. Heavily crackle brecciated grey quartzite with locally moderately developed, white-rusty orange stockwork. White qtz-Fe-carb stringers, mg-cg, <3-30cm veins, 25%, 30-80 TCA, vuggy. Weak-mod FeO, FeCO3 and lesser MnO, fractures in veins and host rocks. Fault gouge and extremely blocky intervals: 21.8-22.1, 22.8-23.5, 25.8-25.9 & 26.3-26.5, 28-28.5m. Large brecciated, white-rusty organge quartz-Fe-car vein at 26.3-27.0 (70cm), UC at 30 TCA, LC crushed core with gouge. @27-28.5m, rubble of thin bed quartizite and white quartz.				wk-mod Fe-MnO wk FeCO3		Qz Fecarb	25	var 30-80	 Py	 1
6-9	28.5	40.9	Grey	fg	Intercal foliated	**THIN BEDDED QUARTZITE AND GRAPHITIC PHYLLITE, SUBORDINATE LIMESTONE** Intercalated, weakly-moderatly foliated, thin bedded grey quartzite (50%), black graphitic phyllite (40%) and subordinate light grey-green sandy limestone and (5%) and yellow-tan sericite schist (5%). Common blocky sections with locally developed gouge in graphitic beds. To 10% dominantly F1 parallel stringers and veins, white, locally vuggy, HR to 2cm widths on average, mg, minor FeCO3. Wk FeO on F1 and fractures. To 1% euhedral/subhedral, fg pyrite disseminations and lesser clusters.				Wk-mod FeCO3	Fol 70	 QZ	 10	 70	Py	1
9-11	40.9	47.6	Grey	fg	wfol	**THICK BEDDED QUARTZITE, MINOR GRAPHITIC PHYLLITE** Massive to lesser weakly foliated grey quartzite with 15% black thin bedded graphitic phyllite-quartz graphite phyllite; latter forming to 20-25 cm interbeds. Common, 1-3%, white quartz lamina, F1 parallel (75 TCA). White quartz stringers and veins (to 50cm), some with pyrite metamorphogenic, vuggy, mg. @44.3-45.3m, 80% white quartz veins, sheeted systems, irregular contacts, ~75TCA, to 1-3% pyrite, euhedral disseminations and to 1cm in dia clusters. Locally rusty vugs and staining on fractures. Overall 1% Py in veins, vein contacts and host quartzite/graphitic phyllite.				wk FeO	Fol 75				py	1
	47.6					**EOH**										

Project: KL **UTM:**
Prospect: HS **Easting:**
Hole ID: HS11-17 **Northing:**
Total Depth: 71.6 m **Dip:** -55
Azim: 285
Elevation: 1390 m

Logged By: DD
Core Size: HQ3
Drilling Company: Lyncorp Drilling
Start Date:
Finish Date:

Purpose: Shaft and No.1 vein strike and dip extent

Box #	From_m	To_m	Colour	Grain Size	Texture	Comments	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
	0	3.9				CASING/OVERBURDEN										
1-3	3.9	20.5	Black	fg	Fol GG	**GRAPHITIC PHYLLITE, MINOR THIN BEDDED QUARTZITE** Well foliated and locally deformed black graphitic phyllite intercalated with 10% medium grey, 0.1-2 m wide zones of moderately bedded quartzite. Minor quartz lamina in phyllite (2-3%). To 1% fg pyrite, foliation ll slivers and disseminations. Weak quartz veining, 2%, white, vuggy veins to irregular masses, dominantly in quartzite, common foliation concordant trends (60-70 TCA), HL to 3cm. Fe-carb as vein fracture and vug filling. Cut by 1% tan, ankerite, to 1cm stringers, variaby oriented. Common soft, crumbly gouge and blocky core throughout, >50% of this unit.	113278	33.8	34.8	v w FeCO3	Fol 60				Py	1
3-4	20.5	24.7	light green	fg	gg	**DIORITE DYKE/SILL, MINOR THIN BEDDDED QUARTZITE AND BLACK PHYLLITE** Sharp UC at 70 TCA; 3cm wide brecciated contact zone with dark grey angular fragments in pale grey-green diorite. Pale grey-green, bleached?, fg, diorite sill with to 20% dark green, hornblende phenocrysts, weakly stretched to foliation. @ 20.5-22.0m, Fault zone. Poorly competent, crumbly and soft core with strong pale grey to rusty orange gouge. More competent core strong FeO-MnO-FeCO3 on fractures. @23.7-23.8m, strong gouge. @23.8-24.2m, thin bedded quartzite and graphitic phyllite. @24.2-24.6 Blocky core with strong FeCO3 on fractures. Folded at the lower contact with thin bedded metasediments, 0 TCA. Blocky core at the lower contact with gouge, 45 TCA. Wk to mod fracture controlled FeCO3, wk FeO and pervasive sericite.				wk-mod FeCO3 mod ser	fol 45				Qz+/-Fe car	
4-6	24.7	29.1	grey black	fg	inter fol	**THIN BEDDED QUARTZITE INTERBEDDED WITH GRAPHITIC PHYLLITE AND SANDY LIMESTONE** Thin bedded, grey quartzite (40%) interbedded with quartz graphite phyllite (25%), locally kink folded, and grey, impure (sandy) limestone (35%). Blocky core with minor gouge @24.7-27.0m. Associated strong FeCO3 on fractures. To 2% white quartz-calcite+/-minor Fe-carb stringers, HL to1 cm, foliation ll. Rare orthogonal to 3cm white quartz veins. Also rusty orange, FeCO3>>qtz veinlets, 40-45 TCA (<1%)				Mod FeO Mod fe-carb	fol 45-60				Qz-cc	2
6-7	29.1	31.7	black grey	fg	fol blocky	**GRAPHITIC PHYLLITE LESSER THIN BED QUARTZITE** Black graphitic phyllite with minor white quart foliae interbedded with 30% grey thin bedded quartzite. Blocky core over most of this unit. Locally common grey quartzite boudins. To 1%, few mm to 2cm foliation ll white quartz>>calcite veinlets. Moderate fracture controlled FeCO3.				mod Fe-carb	Fol 75				stringer qz-cc	1

Box #	From_m	To_m	Colour	Grain Size	Texture	Comments	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %	
7-13	31.7	55.1	Grey	fg	blocky	**GREY QUARTZITE, LESSER GRAPHITIC PHYLLITE, QUARTZ-SERICITE SCHIST AND CALCAREOUS QUARTZITE (IMPURE LMST?)**				mod CC pervasive							1
			black		fol	Grey quartzite, thin to moderately bedded, weakly foliated, intercalated with 30% black graphitic phyllite with locally few % quartz foliae, 15% grey, massive calcareous mg quartzite and 10%, 5-30cm, tan to yellow-green, well foliated quartz-sericite schist with numerous foliation parallel calcite-rich lamina. Larger calcarous quartzite (sandy lmst?) intervals: 31.7-32.6 and 34.1-34.8m. Foliation variable 45-65, average 50. White quartz stringers/veins (4%), hl to 8cm, dominantly F1 ll and concentrated in competent quartzite, lesser in phyllite and schist. Discordant, 1-2%, to 5cm white quartz+/->>Fe-carb+/-rare pyrite, orthogonal, 35-60, mg-cg. Graphitic beds have common soft-crumbly sections with gouge: 33-33.15, 36.6-36.7, 37.7, 40.3-40.5, 41.6-42 (40 cm FZ), 45.8-45.9, 47.65, 50.6, 55.0-55.1m. Overall wk FeO and FeCO3 on fractures. Localized pervasive calcite, and calcite stringers, wk-mod. Pyrite to 0.5%, euhedral, fg, dominantly in graphitic phyllite, rare in qtz veins.				wk-mod Fe-car	Fol 50				qz	5	
13-16	55.1	61.4	Grey black	fg	blocky wfol	**MODERATELY BEDDED QUARTZITE, RARE GRAPHITIC PHYLLITE** Moderately, lesser thin bedded quartzite with rare graphitic phyllite,<5cm wide beds (5%). Massive to weakly foliated. 5-7% white quartz>>calcite, dominantly foliation parallel veins, hl to 5cm,+/-minor Fe-carb. Trace to 0.1% fg, euhedral pyrite, mostly in graphitic beds				wk FeO/FeCO3	fol 50				qtz+cc	7	1
16-18	61.4	71.6	grey	fg	fol folded	**THIN BEDDED QUARTZITE AND GRAPHITIC PHYLLITE** Gradational transition to thin bedded quartzite intercalated with 30% graphitic phyllite with 3-5% white quartz foliae. Core scale deformation. Quartzite beds to 1-1.5m. Total ~10% quartz veins, 8% white quartz+/-cc, 40-65 (metamorphogenic), hl to 30cm. To 2% orthogonal, younger vein set, 20-60 TCA, to 10cm, +/-Fe-carb+/-weak pyrite. Overall very weak alteration, fracture-controlled FeO, FeCO3 and rare CC. Tension gashes, to 1%, filled with quartz and quartz-fecarbonate. Trace to 0.5% pyrite, dominantly in graphitic beds, disseminations and slivers, F1 ll, and locally in vein selvages. Foliation variable 35-65.				v wk FeO							1
										Wk FeCO3	Fol 35-65				Qtz fol ll	8	
															qtz discord	2	
	71.6					EOH									cg		

Project:	KL	**UTM:**	
Prospect:	HS	**Easting:**	
Hole ID:	HS11-18	**Northing:**	
Total Depth:	63.1m	**Dip:**	-60
		Azim:	340
		Elevation:	1390 m

Purpose: Shaft vein-dip and strike extension

Logged By:	
Core Size:	HQ3
Drilling Company:	Lyncorp Drilling
Start Date:	
Finish Date:	

Box #	From_m	To_m	Colour	Grain Size	Texture	Comments	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
	0	6				**CASING/OVERBURDEN**										
1-2	6	11.3	black	fg	GG	**FAULT ZONE-GRAPHITIC PHYLLITE**										
					Fol	Heavily crushed, well foliated, black graphitic phyllite. Fault zone. Graphitic gouge over majority of this interval. Minor white quartz rubble at 6-6.5m. Rare foliation parallel white quartz-Fe carb stringer, to 1cm, 0.5%. Weak fracture-controlled FeCO3, lesser foliation planes				wk FeCO3	fol 75	Qz+fe car	0.5	75		
2-3	11.3	13.7	grey	fg	mas	**THICK BEDDED QUARTZITE**										
						A sharp transition, ~80 TCA, from gouge to massive, lesser weakly foliated, thick bedded, grey quartzite. Minor 1-2% quartz-Fe carb stringers, <0.5-1cm on average, foliation ll. Numerous suparallel TCA (10-15) tension gashed filled with tan ankerite and quartz+bright orange Fe-carbonate. @13.5-13.7m, fault zone; rubble of white quartz>>grey quartzite. Weak fracture-controlled MnO and FeOx				Wk FeO	fol 70	qz+fe ca	1	70		
										wk MnO						
3	13.7	18.1	black	fg	gg	**FAULT ZONE/BLACK GRAPHITIC PHYLLITE**									py	1
						Strongly crushed, faulted zone with commonly strong graphitic gouge. Interbedded graphitic phyllite with to 35% thin bedded, grey quartzite. To 0.5% py fg euhedral disseminations through this unit. Weak quartz rubble. Wk fracture-controlled Fe-carbonate.				wk FeCO3		qtz	1			
4-5	18.1	23.4	grey	fg	blocky	**FRACTURED (FAULTED?) GREY QUARTZITE, SUBORDINATE GRAPHITIC PHYLLITE**	113278	18.1	20.1						Py	1
					f?	Shaft vein fault?/Strongly crackle brecciated and fractured, thick bedded grey quartzite with 10% black, graphitic phyllite intercalations. Strongly blocky. 5% white quartz+/-Fe carbonate veins, few cm to 20 cm, fractured with graphite+carbonate filling, 0-25 TCA. 2-3% tan ankerite veining, hL to 1-2cm, commonly 0-35 TCA. Moderate fracture-controlled Fe-carbonate. Trace fg euhedral pyrite in quartz veins. Rare breccia with angular quartzite fragments in fg tan-orange Fe-carbonate groundmass. Trace pyrite.	113279	20.1	22.1		mod fecar	qtz	5			
							113280	22.1	23.5			vein				
							113281	23.5	26.5			ank	2			
							113282	26.5	27.6			strin				
							113283	27.6	29.1							
							113284	27.6	29.1	dupl						

Box #	From_m	To_m	Colour	Grain Size	Texture	Comments	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
5	23.4	27.6	grey rusty	vfg	gg	**FAULT ZONE/GREY SANDY GOUGE** Fault zone of grey and rusty brown sandy, moderately calcareous gouge. Footwall fault to Shaft vein? More solid core is thin bedded sandy limestone/calcareous quartzite. Rusty pale orange, pervasive, FeOx. Fault contacts are 70-80 TCA.				mod cc mod FeOx						
5-6	27.6	30.1	grey	fg	fol	**SANDY LIMESTONE, LESSER GRAPHITIC PHYLLITE AND THIN BED QUARTZITE** Weakly foliated, grey sandy limestone (55%), interbedded with lesser graphitic phyllite lamina and few cm wide beds (25%) and thin bedded quartzite (20%). To 3% quartz>>calcite stringers and lenses, to 2cm, 75 TCA. Weak-mod fracture-controlled FeOx and calcite				wk-mod FeOx mod cc	Fol 75	Qz-cc	3	75	Py	1
6-8	30.1	38.5	grey	fg	fol	**THIN BEDDED QUARTZITE, LESSER GRAPHITIC PHYLLITE AND MINOR SERICITE SCHIST AND DIORITE** Thin bedded, grey quartzite (50%) intercalated with 40% graphitic phyllite, 5% diorite sill and minor <5cm yellow-tan sericite schist beds. Locally pervasive calcareous cement in quartzite beds. Well foliated unit (70-80 TCA). 5% dominantly F1 ll white quartz>>calcite stringers and veins, few mm lamina in phyllite to 5cm veins/sheeted vein zones. Occasional <5-10cm intervals of graphitic and light grey, calcareous gouge. Minor rusty orange FeOx/FeCO3 on fractures and F1 surfaces. To 1-2% pyrite euhedral disseminations and foliation ll slivers in graphitic beds, overall, <0.5%. @36.8-37.1m (30cm) light grey-green, weakly foliated (70-75 TCA) diorite sill. Contacts 75 TCA. Cut by few foliation ll quartz veinlets, one at the lower contact. Weak to moderate locally pervasive calcite (calcareous quartzite). Py, to 0.5%, fg disseminations, slivers and clusters, in graphitic phyllite, minor in quartzite.				perv cc/wk mod wk FeOx	fol 80	qz-cc	5	80	py	1
9-16	38.5	63.1	grey black	fg	inter	**THIN TO MODERATELY BEDDED GREY QUARTZITE, SUBORDINATE GRAPHITIC PHYLLITE** Thin to moderately bedded grey quartzite, massive to weakly foliated. Intercalated with to 1m wide zones of thin bedded graphitic phyllite-quartzite. Graphitic phyllite to 25%. Occasionally blocky with crushed core and gouge, typically in softer, foliated phyllite beds. 10-12% white quartz>>calcite veins, to <0.5 to 50cm, vuggy, some fractured with graphite+/-Fe-carbonate fill. Rare pyrite in vein fractures. Pyrite, to 1-2%, fg disseminations, clusters and veinlets, dominantly in graphitic beds, overall ~0.5%. Larger quartz veins at: 48.9-49.05, 53-53.5, 59.7-59.8, 62.1-62.3 and 63.0-63.1m. @56.7-57.25m, vuggy white quartz-Fe carbonate stringers/stockwork, drusy quartz in cavities. Overall, weak fracture-controlled FeO-FeCO3.				wk FeOx wk Fecarb	fol	qz-cc	12	75-80	py	1
	63.1					**EOH**										

Project:
Prospect:
Hole ID:
Total Depth:

UTM:
Easting:
Northing:
Dip: -60
Azim: 330
Elevation:

Logged By: DD
Core Size: HQ3
Drilling Company: Lyncorp Drilling
Start Date:
Finish Date:

Purpose: Dip and strike extent of No.2/No.2a vein

Box #	From_m	To_m	Colour	Grain Size	Texture	Comments	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
	0	4.2				CASING/OVERBURDEN										
							113285	8.1	11.3							
1	4.2	8.1	grey-orange	fg	blocky	**THIN BEDDED CALCAREOUS QUARTZITE (SANDY LIMESTONE?), SUBORDINATE GRAPHITIC PHYLLITE**	113286	11.3	14.3	mod cc						
			brown		fol	Thin bedded, grey to weakly rusty orange-brown quartzite, weakly foliated quartzite with calcareous cement (sandy limestone?), numerous rusty orange specks after FeCO3. Interbedded, 10% black graphitic phyllite lamina and thin beds, commonly crushed and gouged. Moderate pervasive and fracture-controlled FeCO3 and moderate pervasive calcite.	113287	14.3	17.4	mod per	fol 65	qz	2	65		
							113288	17.4	20.4	Fe-carb						
							113289	20.4	23.4							
							113290	23.4	24.4							
1-2	8.1	11.3	black	fg	gg	**FAULT ZONE/GRAPHITIC PHYLLITE, MINOR QUARTZITE**	113291	24.4	26.5							
						Fault zone. Broken up and crushed core over majority of this unit. Interbedded black graphitic phyllite, well foliated with about 30% thin bedded grey quartzite. @8.1-10m, black phyllite-quartzite with strong graphitic gouge, moderate FeCO3 on fractures and rubble. @10-11.3m, crushed core with rusty brown>black graphitic gouge.	113292	36.6	37.7							
										mod Fe carb						
2	11.3	14.3	grey	fg	blocky	**THICK BEDDED GREY QUARTZITE**										
					mas	Blocky core with minor crushed to rubble sections. Thick bedded, massive to lesser weakly foliated, grey quartzite with few % graphite and chlorite? slivers, discontinuous lamina (F1 ll). 20% white quartz veins, vuggy, <1cm to 10cm, 65 TCA. Wk-mod FeOx and wk MnO on fractures				wk-mod FeOx						
										wk MnO	fol 65	qz	20	65		
2	14.3	17.4	rusty	fg	blocky	**FAULT ZONE/OXIDIZED QUARTZITE and QUARTZ-SERICITE SCHIST WITH QUARTZ VEINS (No.2a vein?)**				mod cc						
			orange		gg	Heavily broken up with gouge fault zone. Expression of No.2a vein? Thin bedded, yellow-green to rusty orange quartzite and quartz-sericite schist, well foliated, mod-strongly oxidized (FeOx)-FeCO3 altered with 40% white quartz rubble. Gouge is rusty yellow. Moderately calcareous, pervasive (cement in metaseds?).				mod-str		qtz	40			
			tan		foliated					Fe carb						

Box #	From_m	To_m	Colour	Grain Size	Texture	Comments	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
3	17.4	23.4	black	fg	blocky f	**FAULT ZONE/QUARTZ SERICITE SCHIST, QUARTZITE AND GRAPHITIC PHYLLITE** Faulted, dominantly graphitic phyllite, lesser, 30% rusty yellow quartz-sericite schist and 20% thin bedded and quartz veined, medium grey quartzite. Blocky core with locally well developed gouge especially in graphitic beds. To 10% quartz rubble and foliation ll veinlets in more competent quartzite. Weakly calcareous as cement, or sandy limestone.				wk cc	fol 70	qtz	10	65		
3-4	23.4	26.5	grey	fg	blocky deform	**THIN BEDDED QUARTZITE, SUBORDINATE PHYLLITE AND QUARTZ VEINS** Blocky unit of grey, thin bedded quartzite interbedded with tightly folded, graphitic phyllite (30%). White quartz>>FeOx stained, cg veins, 45%. @23.6-24.0m, white quartz-FeOx stained vein w/10% host quartzite fragments, contacts are broken up. @26.0-26.2m, white quartz-Fe-carbonate-calcite veins,foliation concordant and discordant, w/15% foliated graphitic material. Trace rusty pyrite, fg euhedral dissemination, especially in graphitic beds.						Qtz FeOx cg	45		Py	1
4	26.5	29	black	fg	fol	**GRAPHITIC PHYLLITE, MINOR GREY QUARTZITE** Strongly foliated black phyllite, interbedded with 15% white quartz lamina> grey quartzite (to 5%). Wawy foliation. Trace vfg pyrite dissemination. Locally narrow sections of graphitic gouge, narrow fault zones: 26.5-26.8 and 28.9-29.0m. Rare to 2cm white quartz stringers, foliation ll. Weak FeCO3 on fractures. Py, fg euhedral dissemininations, <1%.				Wk fe carb	fol 70	qtz	1		py	1
4-6	29	34.2	grey	fg	wfol blocky	**THIN-MODERATELY BEDDED QUARTZITE, RARE GRAPHITIC PHYLLITE** Thin to moderately bedded grey quartzite with rare, <5% graphitic phyllite, narrow interbeds. Blocky core. To 15% white quartz veins, vuggy, FeOx stained, commonly foliation parallel (70 TCA), few mm to 10cm.				wk FeOx	fol 70	qtz fg	15	70		

Box #	From_m	To_m	Colour	Grain Size	Texture	Comments	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
6-10	34.2	47.9	grey	fg	fol blocky	**THIN BEDDED QUARTZITE, LESSER GRAPHITIC PHYLLITE AND SERICITE SCHIST** Thinly bedded grey, altered to tan-orange quartzite intercalated with 20% graphitic phyllite and rare (1-2%) tan to yellow green sericite schist bed, to 3cm wide. Banded Fe-carbonate alteration and locally bright orange specks and pits, predominantly in quartzite. Graphitic beds are commonly poorly competent with crushed core and gouge: 36.0-36.1, 36.6-36.9, 44.6-44.8, and 45.2-45.5m. 10% white quartz, locally stained rusty orange +Fe carbonate+/-calcite, predominantly foliation parallel (75 TCA), fg-mg, few mm to 15cm. Trace vfg-fg euhedral pyrite disseminatons throughout.				wk FeOx wk FeCO3	fol 75	qtz-fe-carb	10	75	py	1
11-12	47.9	55	black grey	fg	fol deform	**BLACK GRAPHITIC PHYLLITE AND THIN BEDDED QUARTZITE** Black , well foliated and locally deformed graphitic phyllite interbedded with 50% grey, thin bedded quartzite. Graphitic beds are poorly competent and blocky, locally minor gouge. 8% white quartz, as lamina in phyllite and few mm to 25cm veined zones, vuggy +/-FeOx on fractures and in cavities, . Rare Fe-carbonate. Some are folded to F1. Late associated calcite. @47.9-49m, fault zone.Strong white quartz veining+Fe-carbonate, vuggy and folded. Some quartz rubble. 20cm zone of core with graphitic and calcareous gouge. @49.8-50.4m, 75% white quartz stringers and veins, some deformed and locally FeOx stained. Trace fg pyrite disseminations, mostly in graphitic beds.				v wk FeOx	fol 80	qtz	8	78	py	1
12-13	55	59.1	grey	fg	mas	**THICK BEDDED QUARTZITE, rare graphitic phyllite** Thin bedded, grey quartzite gradational to thick bedded quartzite with rare graphitic beds, 3-5%. Occasional graphitic gouge zone, <5cm. Minor, 2%, white quartz stringers, hl to 1cm, with weak FeOx on vein fractures, 10-80 TCA. Weak FeOx-FeCO3 on fractures. Weak calcite in quartz veins. Trace fg-mg euhedral/subhedral pyrite disseminations, in veins and host rock.				wk cc wk FeOx- Fe carb		qtz stringers	2	var 10-80	py	1
	59.1					**EOH**										

Project:	KL	**UTM:**			**Logged By:**	DD	
Prospect:	HS	**Easting:**			**Core Size:**	HQ3	
Hole ID:	HS11-20	**Northing:**			**Drilling Company:**	Lyncorp	
Total Depth:	41.8 m	**Dip:**	**-60**		**Start Date:**		
		Azim:	**330**		**Finish Date:**		
		Elevation:	**1395 m**				

Purpose: Strke continuity of No.2/No.2a vein

Box #	From_m	To_m	Colour	Grain Size	Texture	Comments	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
	0	3.6				**CASING/OVERBURDEN**										
1	3.6	5	Light green	fg	wfol	**DIORITE SILL** Weakly foliated, light green, diorite sill. Moderately calcareous, as cement. 2-3%, narrow, F1 ll, few mm calcite stringers. Chloritized mafics. Wk FeOx on fractures. Faulted lower contact.				wk Chl mod cc	fol 75	cc	3	75		
										wk FeOx						
1	5	6.8	dk brown	fg	gg	**FAULT ZONE/GRAPHITIC PHYLLITE-THIN BEDDED QUARTZITE** Fault zone. Black, graphitic and weakly rusty brown gouge with minor graphitic phyllite-grey quartzite solid core rubble.	113293 113294	7.5 8.2	8.2 11.2							
							113295 113296 113297	11.2 blank std #1134	13.9							
1-2	6.8	8.2	light grey	fg	blocky	**THIN BEDDED, CALCAREOUS QUARTZITE (SANDY LIMESTONE?) AND LESSER THIN BEDDED QUARTZITE ND GRAPHITIC PHYLLITE AND SERICITE SCHIST**										
					gg	Light grey-green, thin bedded calcareous quartzite with calcite cement and minor foliation ll stringers. Interbedded with lesser, to 3cm wide tan-rusty orange stained sericite schist (3-5%) and 20% grey, thin bedded quartzite and graphitic phyllite. 3-5% white quartz stringers, <0.5cm, dominantly in quartzite, and as quartz rubble. @7.7-8.2m, heavily crushed core, to small pebbles and 20cm of grey-brown gouge. Host is graphitic phyllite-quartzite. Strong FeO-FeCO3 on fractures.	113298	13.9	17.4	mod cc	fol 75	qz	3			
							113299 113300	17.4 20.4	20.4 22.5			str				
2	8.2	11.2	white grey	cg	F	**FAULT ZONE/WHITE QUARTZ VEIN** Fault zone; significant core loss. White quartz, cg, rubble with 20% grey quartzite xenoliths. Broken contacts. @8.2-8.4m, vein is crumbly, porous and vuggy with strong FeOx on fractures and cavites. @11.1-11.2m, common FeOx on fractures.				wk FeO						
2	11.2	13.9	orange	cg	bxd	**STRONGLY OXIDIZED AND FRACTURED ZONE/NO. 2 VEIN (THIN BEDDED QUARTZITE)**				Str FeCO3						
			brown		blocky	Rusty orange-brown, heavily oxidized and fractured zone with blocky core and some gouge. Host is thin bedded quartzite. @11.2-13.2m, blocky to lesser shuttered, and heavily Fe-MnO and FeCO3 pervasively altered. Also discrete dark brown, gossanous veinlets (to 3mm), randomly oriented. @13.2-13.9m, commonly crushed with pale yellow and rusty orange gouge. Strong oxidation, FeO and MnO. Lack of visible sulfides.				Str FeO, MnO	fol 75					

Box #	From_m	To_m	Colour	Grain Size	Texture	Comments	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
2-3	13.9	17.4	orange-brown black	fg	gg	**FAULT ZONE/SERICITE SCHIST AND GRAPHITIC PHYLLITE** Footwall fault zone. Extremely crushed and crumbly zone with strong gouge. @13.9-14.0m, rubble of rusty orange, FeO stained sericite schist. @14.0-14.3m, dark grey, graphitic and bright orange, FeOx gouge. Rubble of slickensided graphitic phyllite. @14.0-17.4m, black graphitic phyllite crushed zone with strong gouge. Lesser grey quartzite				mod FeO						
3-7	17.4	37.1	grey	fg	fol blocky	**THIN BEDDED QUARTZITE, LESSER GRAPHITIC PHYLLITE** Well foliated unit of grey, thin to moderately bedded, quartzite and 20-30% graphitic phyllite and dark grey-green schist. 10% calcareous, moderately bedded grey interbeds, calcareous quartzite or sandy quartzite. Latter is cut by foliation ll calcite stringers. 20% white quartz+/-Fe carbonate, predominantly foliation parallel, hl to 25cm, fg to mg, vuggy. Minor <5mm stringers, randomly oriented TCA. Several cm wide quartz+/-pyrite (FeO) veins, 0-10 TCA (<1%). @24-24.1m, graphite-FeOx rich gouge. @24.3-25.0m, calcareous bed. Overall weak FeO and wk-mod FeCO3 on fractures. @27.3m, 50cm medium brown sand seam.				wk FeO wk cc	fol 65	qz-Fe car	10	65	py	1
										wk-mod Fecar		qt-feOx	1	5		
7-8	37.1	40.7	black grey	fg	inter blocky	**BLACK GRAPHITIC PHYLLITE AND THIN BEDDED QUARTZITE** Tightly foliated, thin bedded black graphitic phyllite, typically poorly competent with gouge at 37.1-37.9m. Intercalated with grey quartzite; @37.2-39.2m, 25-30% grey quartzite increasing to 65% down hole. 5% white quartz>few-carb stringers, to 2cm, mostly in quartzite and rare quartz lamina in phyllite, both F1 ll. Locally rusty brown FeCO3 replacing lamina in phyllite, also coating on fractures. @39.6-40.1m, white quartz vein with 50% quartz rubble, contacts foliation ll (70 TCA). To 1% pyrite euhedral disseminations in graphitic beds; overall trace.				mod fecarb	fol 70	qtz-fecarb	5	65	Py	1
9	40.7	41.8	grey	fg	wfol	**THICK BEDDED QUARTZITE** Grey, thick bedded, massive to weakly foliated quartzite. Rare quartz stringers, hl to 2cm, dominantly 75 TCA (metamorphogenic), 1%, and one, at 30 TCA (0.5%). Numerous orange specks, FeO, throughout. FeOx (FeCO3?) on fractures.				wk FeO	fol 75	qtz	1	75		
												qtz-FeO	0.5	30		
	41.8					**EOH**										

Project:	KL	**UTM:**		**Logged By:**	DD
Prospect:	HS	**Easting:**		**Core Size:**	HQ3
Hole ID:	HS11-21	**Northing:**		**Drilling Company:**	Lyncorp Drilling
Total Depth:	55.5 m	**Dip:**	**-75**	**Start Date:**	26-Sep-11
		Azim:	**330**	**Finish Date:**	28-Sep-11
		Elevation:	**1395 m**		

Purpose: Strike and depth extent of No.2/No.2a vein

Box #	From_m	To_m	Colour	Grain Size	Texture	Comments	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
	0	1				**CASING/OVERBURDEN**										
1	1	2.2	black	fg	gg	**BLACK GRAPHITIC PHYLLITE** Black graphitic phyllite; soft core with locally strong gouge. Well foliated unit, 80 TCA. Moderate, banded FeCO3 (FeOx) replacing lamina.				mod FeOx	fol 80					
							113301	6.5	8.2	FeCO3						
							113302	8.2	11.2							
							113303	11.2	14.3							
							113304	14.3	15.9							
1-2	2.2	4.3	light grey green	fg	wfol	**DIORITE SILL, LESSER CALCAREOUS MG QUARTZITE** Weakly foliated, light grey-green diorite porphyry sill. To 20% stretched to foliation pale grey feldspar phenocrysts. Weakly calcareous, in matrix and 3% white quartz-calcite stringers. @2.2-2.7m, calcareous quartzite (sandy limestone?), light grey, mg. @2.7m, gradational/smeared(?) contact and similar lower contact, both at 85 TCA	113305	15.9	18.9							
							113306	18.9	20.4		fol 85	qtz-cc	3	85		
							113307	20.4	21.5							
2	4.3	6.5	light grey	fg	wfol	**INTERBEDDED CALCAREOUS SANDSTONE, GRAPHITIC PHYLLITE AND LESSER SERICTE SCHIST** Thin bedded calcareous unit, quartzite/fg sandstone, and graphitic phyllite, and 10% rusty orange-brown stained, sericite schist. Overall moderately foliated. Minor sandy gouge on foliation surfaces. @6.2-6.5m, rusty brown, oxidized sericite schist. Moderately calcareous, as cement, and calcite stringers.				mod per cc	fol 85	cc	2	85		
2	6.5	8.2	dk brown	fg	gg	**FAULT ZONE-GRAPHITIC PHYLLITE AND QUARTZITE** Hanging wall fault zone. Dark brown sandy gouge with minor rubble of graphitic phyllite and grey quartzite with white quartz vein material.										
2-3	8.2	14.3	grey	fg	blocky BRC	**STRONGLY FRACTURED, THICK BEDDED QUARTZITE** Strongly crackle brecciated, grey, thick bedded quartzite. Poorly competent, blocky and rubbley core. Moderate to lesser strong fracture-controlled FeOx, and strong, white quartz stockwork development @8.2-8.9m, more intense in the lower part of this unit. Locally vuggy quartz, also cubic cavities and rusty specks after py. @8.9-9.0m, brown sandy gouge. @11.2-11.3m, light grey clay gouge. @11.3-12.8m, poorly competent, very blocky section. White quartz stockwork rubble with moderate FeOx on fractures. 12.8-14.33m, 100% lost core.				mod FeOx						

Box #	From_m	To_m	Colour	Grain Size	Texture	Comments	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
3	14.3	16.6	orange brown	fg	gg	**HEAVILY OXIDIZED FAULT BRECCIA ZONE/No.2 vein** Strongly oxidized crushed and crumbly fault zone with strong Fe-Mn oxides and FeCO3. No.2 vein fault. Tan to rusty brown quartzite and lesser sericite schist(?) host rocks. Minor white quartz rubble. Lack of sulfide mineralization.				ser strong Fe-MnO strong FeCO3						
4	16.6	21	grey	fg	gg	**FAULT ZONE/GRAPHITIC PHYLLITE AND QUARTZITE, MINOR QUARTZ-SERICITE SCHIST** Crushed and crumbly core with strong dark grey and lesser pale rusty yellow, oxidized gouge. Footwall fault. More competent rubble of graphitic phyllite, grey quartzite with numerous white, rusty yellow stained quartz veins, and subordinate tan sericite+/-quartz schist. @16.6-17.4m, 100% lost core. @20.6-21.0m, more competent rubble of grey quartzite and white quartz. Absence of gouge										
4-10	21	42.3	grey	fg	wfol	**WEAKLY FOLIATED QUARTZITE, LESSER GRAPHITIC PHYLLITE AND RARE SERICITE SCHIST** Thin to moderately bedded, weakly foliated grey quartzite interbedded with 30% tightly foliated, locally folded graphitic phyllite and <5% rusty stained tan sericite+/-quartz schist, to 10cm wide beds. 5% white quartz veins, predominantly foliation parallel, hl to 8cm, some are vuggy, and rarely folded. Most common host massive quartzite. Veins are locally strongly fractured with FeO-Fe-carb filling. Phyllite is dark grey to grey-green, variably graphitic. Wk to locally moderate FeCO3 alteration, on fractures and banded, lamina replacement. Weak FeO. Locally weak calcite, cement and veining. @21.5-21.65m, tan, FeO stained sericite-quartz schist, mod cc cement and rare stringers. @22.3m, porous, mg quartzite. @24.5-25.1m, 15% to 5cm wide sericite beds. Overall, trace fg pyrite disseminations, predominantly in graphitic beds.				wk-mod Fecarb wk FeO wk cc	fol 75	qtz fg	5	75	py	1
10-11	42.3	45.8	black	fg	fol blocky	**BLACK GRAPHITIC PHYLLITE, LESSER QUARTZITE** Black, strongly foliated graphitic phyllite with 10% white quartz foliae and 20% thin bedded quartzite intercalation. Core scale folding, crenulation. @42.6-43.3, narrow, to 10cm sections of strong graphitic gouge. Rare, 1-2%, several cm, foliation parallel white quartz veins w/minor FeOx staining. Rare fg euhedral pyrite disseminations				fol 75		qtz	1	75	py	1
11-12	45.8	50.9	grey	fg	mas	**THICK BEDDED QUARTZITE** Gradational to thick bedded grey quartzite. 5% white quartz-calcite>>Fe-carbonate extensional veinlets, hl to 3cm, vuggy, 15-30 TCA. Rare 75-80 TCA. Weak FeOx on fractures.						qtz-cc Fe-carb	5	var 15-30		

Box #	From_m	To_m	Colour	Grain Size	Texture	Comments	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
13	50.9	53.7	black	fg	fol blocky	**GRAPHITIC PHYLLITE, LESSER GREY QUARTZITE** Thin bedded, tightly foliated black graphitic phyllite with to 7-8% white quartz foliae and 25% thin bedded, grey quartzite. Rare, 2%, deformed, foliation ll, white quartz-calcite veinlets, to 1-2cm. Common narrow crushed sections with graphitic gouge. Mod Fe-carb on fractures and lesser foliation surface, foliae replacement. Trace pyrite disseminations and blebs.			mod FeCO3 FeO	fol 78		qtz-cc	2	80		
13-14	53.7	55.5	grey	fg	wfol	**THIN BEDDED CALCAREOUS QUARTZITE, RARE GRAPHITIC PHYLLITE** Thin bedded, weakly foliated calcareous quartzite. Moderate calcite as foliation parallel stringers, cement and fracture-filling. Weak FeO/FeCO3 on fractures. Rare quartz-Fe-carbonate veinlets, to 1.5cm, 50-60 TCA. Trace euhedral pyrite.			mod cc wk FeOx	fol 80		qtz-fecarb	2	60		
	55.5					**EOH**										

Project: KL
Prospect: HS
Hole ID: HS11-22
Total Depth:

UTM:
Easting:
Northing:
Dip: -60
Azim: 330
Elevation: 1395 m

Logged By: DD
Core Size: HQ3
Drilling Company: Lyncorp Drilling
Start Date: 28-Sep-11
Finish Date: 29-Sep-11

Purpose:

Box #	From_m	To_m	Colour	Grain Size	Texture	Comments	Sample #	From_m	To_m	Alteration	Bed angle tca	Vein	Vein %	Vein angle tca	Min	Min %
	0	2.2				**CASING/OVERBURDEN**										
1	2.2	3.9	green	fg	BLOCKY	**THIN BEDDED QUARTZITE AND GRAPHITIC PHYLLITE, AND DIORITE SILL**				mod chl						
			grey		FOL	Poorly competent, blocky core. @2.2-2.5m, thin bedded quartzite and lesser graphitic phyllite. Broken upper contact with diorite. Diorite is medium green, weakly foliated, chloritized and stretched to foliaton feldspars. Weak-mod calcareous, matrix and foliation parallel, rare (2%) quartz-calcite veinlets.	113307	20.7	22	wk cc	fol 80	qtz-cc	2	80		
							113308	22	24							
1-2	3.9	8.3	black	fg	deform interca	**THIN BEDDED GREY QUARTZITE AND GRAPHITIC PHYLLITE** Lower contact with diorite is blocky with clay gouge; 80 TCA. Thin bedded, grey quartzite interbedded with 40% variably graphitic, locally tightly folded black phyllite. % of phyllite intercalation decrease down hole. Blocky unit with locally gouge on foliation surfaces. To 3% white quartz>calcite and calcite stringers, F1 ll, hl to 2-3cm. Moderate, banded (foliation ll) FeCO3 replacement and coating on fractures				mod Fecarb	fol 80	qtz-cc	3	80		
												cc	1	80		
2-6	8.3	20.7	grey	fg	blocky	**THIN TO MODERATELY BEDDED QUARTZITE WITH MINOR GRAPHITIC PHYLLITE** Similar to 3.9-8.3m, weakly foliated quartzite with lesser 20% graphitic phyllite interbeds. Heavily blocky, poorly competent. Crushed core with gouge in graphitic beds. Moderate to strong crackle brecciation and fracturing. Numerous few mm to 10mm white quartz+/-FeO stained stringers,vuggy, 10%, dominant 80 TCA. <2% variable orientations, dominant 80 TCA (metamorphogenic). Mod FeO and FeCO3 on fractures. Locally strongly pitted, some after pyrite and Fe-carbonate?				mod FeO	fol 80	qtz-FeO	10	80		
6-7	20.7	26.5	grey	fg	blocky	**GREY QUARTZITE WITH QUARTZ VEINS, RARE GRAPHITIC PHYLLITE** Blocky quartzite, thin to moderately bedded with overall 20% FeO stained, white quartz vein, both F1 parallel and minor discordant. Black graphitic phyllite beds, 3-5%.@20.7-22.2m, very blocky interval. To 30% quartz-strongly FeO stained, to <1 to 5cm veins, 80 TCA and discordant, no orientation because of blocky core. Below 22.2m, numerous white quartz, metamorphogenic veins. Common mod FeO in vein fractures and host rocks.						qtz-FeO	20	80		
	26.5					**EOH**										

Appendix 6:
Analytical Results – Diamond Drilling

Prospect	Hole ID	Sample ID	From (m)	To (m)	Ag (g/t)	Ag (ppm)	Au (ppb)	Au (g/t)	Pb (ppm)	Pb (%)	Zn (ppm)	Zn (%)	Cu (ppm)	Cu (%)	As (ppm)
Caribou Hill	CH11-007	583501	14.6	15.8	0	94.3	231.3			85.56	21		54.8		3.2
Caribou Hill	CH11-007	583502	15.8	15.9		17.3	17.9		2057		873		56.6		405.5
Caribou Hill	CH11-007	583503	15.9	17.2	770		195.3			3.43	6927		496.8		490.7
Caribou Hill	CH11-007	583504	17.2	18.5	86		110.8			0.98	9000		347.2		1333.1
Caribou Hill	CH11-007	583505	18.5	19.7		14.7	2.5		893.1		805		28.3		238.4
Caribou Hill	CH11-007	583508	26.8	28.5		62.3	9.2		252.5		33		128.7		61.5
Caribou Hill	CH11-007	583509	28.5	30.2		3.9	18.3		174.5		94		7.8		116.9
Caribou Hill	CH11-007	583510	34.4	35.8		2.8	6		76.7		390		7.2		81.7
Caribou Hill	CH11-007	583511	39	39.9		0.9	0.4		68.6		73		3.7		50.5
Caribou Hill	CH11-007	583512	44.1	45.7		0.4	7.2		20.2		270		7.1		71.7
Caribou Hill	CH11-007	583513	57.8	59.1		0.8	2.4		229.1		1451		2.4		15.3
Caribou Hill	CH11-007	583514	59.1	60.1		0.7	0.9		92.4		2645		7		27.6
Caribou Hill	CH11-007	583515	84.4	86		1.1	47.6		85.7		55		6.3		483.6
Caribou Hill	CH11-007	583516	86	87.8		0.3	10.4		16		46		4.8		119.9
Caribou Hill	CH11-007	583517	89.6	91.1		0.1	1.9		13.9		308		14.2		27.2
Caribou Hill	CH11-007	583518	91.1	92.9		0.1	1.3		8.7		359		12.4		16.2
Caribou Hill	CH11-007	583519	95.3	97		0.9	0.4		78.8		261		22.2		24.5
Caribou Hill	CH11-007	583521	97	98		0.4	0.9		30.7		113		20.1		16.3
Caribou Hill	CH11-007	583522	98	108.3		0.2	0.9		12.9		96		25.2		17.6
Caribou Hill	CH11-007	583523	116.2	117.2		0.6	1.3		42.7		253		37.2		22.3
Caribou Hill	CH11-008	583524	13.4	14.8		10.4	2.1		1184.5		688		54.6		164.4
Caribou Hill	CH11-008	583525	14.8	15.5	493		400.4			10.49		0.93	720.2	0.49	1723.3
Caribou Hill	CH11-008	583526	15.5	17.7		57.3	86.5		8227.5		4660		129.8		1573.1
Caribou Hill	CH11-008	583527	17.7	18.9		33.1	9.7		2758.3		836		42.2		240.3
Caribou Hill	CH11-008	583528	18.9	20.2		9.6	2.1		1069.1		389		19.7		109.5
Caribou Hill	CH11-008	583529	20.2	21.8		4.9	1.3		675.4		305		11.8		86.5
Caribou Hill	CH11-008	583530	25	26.3		5	0.5		577.4		201		10.2		60.2
Caribou Hill	CH11-008	583531	26.3	27.1		8.5	7		689.1		401		9.9		144.5
Caribou Hill	CH11-008	583532	30.6	31.6		4.2	0.4		289.6		72		2.9		26.1
Caribou Hill	CH11-008	583533	36.7	37.7		1.9	0.4		61		68		2.6		21.4
Caribou Hill	CH11-008	583534	42.4	44		1.5	1.8		75.2		129		4.7		30.7
Caribou Hill	CH11-008	583535	44	45.8		0.2	1.5		10		180		4		34.6
Caribou Hill	CH11-008	583536	55	56.2		2.5	21.8		183		66		1.6		21.1
Caribou Hill	CH11-008	583537	86.7	88.1		2.4	4.3		73.6		41		7.6		162.2
Caribou Hill	CH11-008	583538	88.1	89.2		1.1	1.3		46.5		91		16.5		143
Caribou Hill	CH11-008	583539	89.2	90.9		3.6	0.9		107.4		157		24		59.2
Caribou Hill	CH11-009	583541	12.2	13.4		0.5	0.4		44.3		471		58.8		19.8
Caribou Hill	CH11-009	583542	13.4	15.5		27.8	4.8		3551.2		730		65.5		388.9
Caribou Hill	CH11-009	583543	15.5	16.5	1630		419			11.89	9784	1.05	1469.8	0.16	1186.9
Caribou Hill	CH11-009	583544	16.5	16.9	1862		553.2	1.93		3.23	5993	0.67	947.3	0.1	1355.3
Caribou Hill	CH11-009	583547	16.9	18	0	58.8	3.5		7947.4	0.79	2068	0.21	98.1	0.01	154.9
Caribou Hill	CH11-009	583548	18	20		16.3	1.8		911.5		496		15.9		44.6
Caribou Hill	CH11-009	583549	26.6	28.4		2.3	0.4		131.2		2363		25.8		30.2
Caribou Hill	CH11-009	583550	28.4	29.9		2.2	0.5		63.3		510		6.9		10.9
Caribou Hill	CH11-009	583551	29.9	31.4		3	0.4		106.5		1067		21		52.1
Caribou Hill	CH11-009	583552	31.4	32.7		1.9	0.4		120		1085		17.2		57.9
Caribou Hill	CH11-009	114088	36.3	37.5		6.8	3.9		449.1		325		13		30.9
Caribou Hill	CH11-009	114089	37.5	38.5		3.9	1.9		230.1		600		7.3		107
Caribou Hill	CH11-009	114090	38.5	39.3		17.8	7.8		824.4		2748		36.8		88.5
Caribou Hill	CH11-009	114091	39.3	40.8		4.6	3.2		227.2		643		5.6		58.1
Caribou Hill	CH11-009	583553	41.99	43.5		5.6	702.9	0.08	404.3		224		7.5		171.8
Caribou Hill	CH11-009	583554	43.5	45		2.1	8.6		104.3		113		2.6		111.4
Caribou Hill	CH11-009	583555	55.25	57.7		0.9	20.8		58.5		155		5.3		952.6
Caribou Hill	CH11-009	583556	57.7	58.9		0.3	30.4		22.5		107		4		146.4
Caribou Hill	CH11-009	583557	58.9	60.66		0.8	7.8		81.4		93		6.8		264.7
Caribou Hill	CH11-009	583558	73.99	75.5		0.09	2.3		4.2		176		3.7		47.6
Caribou Hill	CH11-009	583559	75.5	77		0.2	0.4		9.2		44		4.1		82

Prospect	Hole ID	Sample ID	From (m)	To (m)	Ag (g/t)	Ag (ppm)	Au (ppb)	Au (g/t)	Pb (ppm)	Pb (%)	Zn (ppm)	Zn (%)	Cu (ppm)	Cu (%)	As (ppm)
Caribou Hill	CH11-009	583561	77	78.86		0.6	0.4		24		38		5.6		118.8
Caribou Hill	CH11-010	583562	30.3	31		17.2	5.2		4036.8		491		30		81.1
Caribou Hill	CH11-010	583563	31	32.5		5.9	1		449.1		169		8.2		98.8
Caribou Hill	CH11-010	583564	32.5	34		2.4	2		117.8		47		2.4		58.2
Caribou Hill	CH11-010	583565	34	35.21		4.5	5.5		255		204		8.1		160.4
Caribou Hill	CH11-010	583566	35.21	35.84	447		348			2.34		3.07	615.6	0.07	338.8
Caribou Hill	CH11-010	583569	35.84	37		34	12.6		1824.1		501		17.7		412.4
Caribou Hill	CH11-010	583570	37	39		10.7	5		233.3		92		4.2		33.6
Caribou Hill	CH11-010	583571	39	40.84		7.5	0.4		206.4		39		1.6		26.3
Caribou Hill	CH11-010	583572	40.84	42.36		4.6	0.6		382.2		81		3.2		71.4
Caribou Hill	CH11-011	583573	38.3	39.7		6.7	7		1469.6		750		9.3		167.2
Caribou Hill	CH11-011	583574	39.7	40.6	119		521.1	0.49		1.76		0.96	194.1	0.02	1153.6
Caribou Hill	CH11-011	583575	40.6	41.2		9	22.9		524.4		3997		31.6		569.2
Caribou Hill	CH11-011	583576	41.2	42.1		34.3	601.9	0.72	3232.3	0.32	9655	0.88	65	0.01	2428.9
Caribou Hill	CH11-011	583579	42.1	44.2		10	36.3		676.8		355		58.4		459.7
Caribou Hill	CH11-012	583581	28	29		1.5	0.8		139.1		613		22.2		23.3
Caribou Hill	CH11-012	583582	41.2	42.4		1.4	6		277		520		5		46.5
Caribou Hill	CH11-012	583583	42.4	43.9		1.4	10.9		65.5		2241		25.7		259.2
Caribou Hill	CH11-012	583584	43.9	45.4		0.9	12.2		43.5		997		12.5		237.3
Caribou Hill	CH11-012	583585	45.4	46.9		6.3	120.9		454.2		2827		30.1		1004.3
Caribou Hill	CH11-012	583586	46.9	48.6		7.9	216.9		715.3		1801		12.8		2331.5
Caribou Hill	CH11-012	583587	48.6	50.6		2.3	6.1		137.7		338		16		201.1
Caribou Hill	CH11-012	583588	50.6	52.6		3.1	1.2		124.2		450		33.6		133.7
Caribou Hill	CH11-012	583589	52.6	53.9		2.3	0.8		117.3		237		53.5		372.1
Caribou Hill	CH11-012	583590	53.9	54.9		0.5	2.2		30.7		28		17.8		286.6
Caribou Hill	CH11-013	583591	15	16.5		4.9	2.6		575.6		620		22.4		440.6
Caribou Hill	CH11-013	583592	16.5	17.7	401		200.1			2.95	8995	1.02	629.9	0.07	1736.9
Caribou Hill	CH11-013	583593	17.7	19.5	0	58.2	4.6		7089.5	0.68	4297	0.45	146.9	0.01	825.2
Caribou Hill	CH11-013	583594	19.5	20.1		36.7	174.7		2572.7		3153		36.6		1334.9
Caribou Hill	CH11-013	583597	20.1	21.6		35.7	54.8		1069.2		274		10.9		305
Caribou Hill	CH11-013	583598	54.6	56.1		3.7	14.7		305.3		135		13.6		314
Caribou Hill	CH11-013	583599	56.1	57.6		2	3		175.7		55		7.3		92.6
Caribou Hill	CH11-014	114051	16.6	18.1		5.3	13.7		65.5		350		28.3		727.8
Caribou Hill	CH11-014	114052	18.1	19.3		69	67.9		5562	0.52	4947	0.45	138.7	0.01	899.3
Caribou Hill	CH11-014	114053	19.3	20.9		54	44.3		755.6		2000		115.7		304.1
Caribou Hill	CH11-014	114054	20.9	21.9		86	85.2		4725.6	0.46	5416	0.6	236.8	0.02	1346.8
Caribou Hill	CH11-014	114055	21.9	22.9		23.6	57.9		3640.8	0.36	5132	0.54	39		949.4
Caribou Hill	CH11-014	114056	22.9	24		16.5	83		4888.1		4255		13.2		705.7
Caribou Hill	CH11-014	114057	24	25.7		13.4	287.1		3717.4		1354		5.6		1313.3
Caribou Hill	CH11-014	114058	25.7	26.9		4.8	6.8		905.8		205		2.8		465.7
Caribou Hill	CH11-014	114059	39.8	41.3		1.1	4.7		69.2		200		3.3		55.7
Caribou Hill	CH11-014	114060	41.3	42.8		0.8	1.5		19.7		39		2.2		30.2
Caribou Hill	CH11-014	114061	42.8	44.6		0.3	0.4		17.6		224		9.1		33.8
Caribou Hill	CH11-015	114062	9.5	11.5		4.5	0.4		151.3		265		24.4		245.9
Caribou Hill	CH11-015	114063	11.5	13.5		11.3	2.7		1788.2		1550		22.9		136.6
Caribou Hill	CH11-015	114064	13.5	15	116		5.9		2513.4		1257		40.7		98.2
Caribou Hill	CH11-015	114065	15	16.4		11.7	5.4		1667.9		375		15.4		126.8
Caribou Hill	CH11-015	114066	16.4	18.4	221		32.4			1.9	1289	0.14	148.7	0.02	401.7
Caribou Hill	CH11-015	114067	18.4	20.4		20.9	4.5		136.5		277		20.1		61.6
Caribou Hill	CH11-015	114068	20.4	22.3		1.8	1.4		56.6		48		4.9		12.8
Caribou Hill	CH11-015	114071	22.3	23.8		0.8	0.4		20.2		27		3.5		12.1
Caribou Hill	CH11-015	114072	23.8	25.3		0.4	0.4		10.8		40		3.4		10.4
Caribou Hill	CH11-015	114073	25.3	26.7		0.5	0.4		11.4		58		11.9		11.5
Caribou Hill	CH11-016	114074	5.7	7.3		6.8	9.6		149.1		260		46.7		755.1
Caribou Hill	CH11-016	114075	7.3	9.1		4.7	10.2		37.8		66		6.6		201
Caribou Hill	CH11-016	114076	9.1	11.4		11	9.1		211.3		215		18.6		334
Caribou Hill	CH11-016	114077	11.4	13.4	352		16.5		6776.9	0.75	1230	0.14	138.5	0.02	373.9

Prospect	Hole ID	Sample ID	From (m)	To (m)	Ag (g/t)	Ag (ppm)	Au (ppb)	Au (g/t)	Pb (ppm)	Pb (%)	Zn (ppm)	Zn (%)	Cu (ppm)	Cu (%)	As (ppm)
Caribou Hill	CH11-016	114078	13.4	14.9		9	1.2		841.8		436		15.9		72
Caribou Hill	CH11-016	114079	14.9	16.4		5.5	2.3		676.6		244		8		145.1
Caribou Hill	CH11-016	114080	16.4	17.7		17.3	0.4		1318.5		207		11.1		98.3
Caribou Hill	CH11-016	114081	17.7	19		4.3	1.2		694.5		947		39.2		121.6
Caribou Hill	CH11-016	114082	19	19.6		6.1	0.4		483.6		450		13.8		115.2
Caribou Hill	CH11-016	114083	19.6	21.1		4.1	0.4		140		143		8.3		53.5
Caribou Hill	CH11-016	114084	21.1	22.6		1.2	0.4		90		156		8.5		33.3
Caribou Hill	CH11-016	114085	27.1	29.1		3.3	0.4		76		110		9.3		72.5
Caribou Hill	CH11-016	114086	40	41.5		3.1	0.4		49.8		58		2.8		46.3
Caribou Hill	CH11-016	114087	52.8	53.8		0.6	0.7		35.5		89		7.5		49.4
Caribou Hill	CH11-017	114092	21.3	22.9		47.9	39.7		3952.7		628		46		557.8
Caribou Hill	CH11-017	114093	22.9	23.4	1787		1394.1			18.67		1.29	459.2	0.06	2224.1
Caribou Hill	CH11-017	114096	23.3	24.8		25	8.6		2951.3		202		30.9		122.7
Caribou Hill	CH11-017	114097	24.8	26.8		8.2	3.3		1897.5		1056		17.7		92.5
Caribou Hill	CH11-017	114098	26.8	28.8		9.2	1.6		1811.3		1373		11.8		81.6
Caribou Hill	CH11-017	114099	28.8	30.3		10.9	0.7		2092.9		234		5.9		101.4
Caribou Hill	CH11-017	114101	30.3	31.3		3.4	0.5		327.3		139		5.4		49.9
Caribou Hill	CH11-017	114102	31.3	32.5		60.1	9.6		2271.8		1257		35.7		128.6
Caribou Hill	CH11-017	114103	32.5	34		24.7	8.8		209.6		4699		49.7		133.5
Caribou Hill	CH11-017	114104	34	35.5		9.4	2.5		285.6		2061		82.8		236.8
Caribou Hill	CH11-017	114105	35.5	37		3.5	0.4		48.8		92		10.8		78.6
Caribou Hill	CH11-017	114106	48.3	50.3		1.2	3.3		110.9		72		6.5		65.3
Caribou Hill	CH11-017	114107	50.3	51.5		7.9	0.5		203.8		151		11.7		668.9
Caribou Hill	CH11-017	114108	57.1	58.3		0.9	1.2		31.5		39		7.1		27.8
Caribou Hill	CH11-017	114109	58.3	59.8		0.4	0.5		39.7		42		5.2		30.1
Caribou Hill	CH11-017	114110	69.5	71		2	0.4		91.2		114		10.4		62.6
Caribou Hill	CH11-017	114111	71	72		0.2	0.4		6.9		12		3.4		31.5
Caribou Hill	CH11-017	114112	72	73		0.2	0.4		13.2		47		11.5		165.3
Caribou Hill	CH11-018	114113	21.8	24.1		0.8	0.4		90.1		539		19.8		40.9
Caribou Hill	CH11-018	114114	24.1	25	1151		54.8			7.16	9417	1.03	508.7	0.05	997.5
Caribou Hill	CH11-018	114115	25	26		8.4	2.2		682.8		3537		19.9		208.4
Caribou Hill	CH11-018	114116	26	27.5		6	3		380.2		344		5.6		88.2
Caribou Hill	CH11-018	114117	31.7	33.2		2.5	1		275.6		149		8.3		144.8
Caribou Hill	CH11-018	114118	33.2	34.7		3.8	13.4		385.7		2858		16.8		213
Caribou Hill	CH11-018	114119	34.7	36.3	1183		32.5			12.51	854	0.08	132.8	0.01	620.8
Caribou Hill	CH11-018	114122	36.3	37.8		19.6	9		587.7		116		10		177.8
Caribou Hill	CH11-018	114123	37.8	40.8		21.5	3.7		1435.8		287		46		498
Caribou Hill	CH11-018	114124	40.8	43.1		5.9	1.5		372.3		189		17.4		247
Caribou Hill	CH11-018	114125	60.1	62.5		0.5	1.3		39		167		24.6		8.6
Caribou Hill	CH11-019	114126	21.1	23.1		13.6	27		366.5		233		14		369.6
Caribou Hill	CH11-019	114127	23.1	25.3		15.4	129.8		935.7	0.1	9660	1	285.6		726.2
Caribou Hill	CH11-019	114128	25.3	25.6		56.2	135.7			2.98		1.47	28.2		88.8
Caribou Hill	CH11-019	114129	25.6	27		21.5	236.3		4496.2		326		9		1643.3
Caribou Hill	CH11-019	114130	27	28.3		4.9	37.2		754.1		159		4.4		386.6
Caribou Hill	CH11-019	114131	49.3	50.9		0.4	1.2		85.1		186		3.5		14.1
Caribou Hill	CH11-019	114132	50.9	53.2		0.4	0.4		27.9		549		3.1		9.3
Caribou Hill	CH11-020	114133	18.3	20.3		13.6	70.2		840.8		256		10.6		413
Caribou Hill	CH11-020	114134	20.3	21.3		18	64.6		1872.2		548		20.2		700
Caribou Hill	CH11-020	114135	21.3	22.5		74.8	125.5		6961.9	0.63	1189	0.1	119.8		627
Caribou Hill	CH11-020	114136	22.5	23.5	380		254			2.29		2.21	449.2	0.04	820.1
Caribou Hill	CH11-020	114139	23.5	25		7.5	8		438.6		356		16.3		101.6
Caribou Hill	CH11-020	114140	25	26.5		12	2.8		614.6		416		26.1		184.4
Homestake	HS11-012	113251	18	19.5		0.9	9.7		90.1		338		3		100
Homestake	HS11-013	113252	45.2	46.1		2.4	0.4		476.2		905		9.2		353.2
Homestake	HS11-013	113253	46.1	47.2		0.6	5.4		29.7		200		3.6		132.1
Homestake	HS11-013	113254	47.2	48.2		0.8	0.4		42.6		244		7.6		66.8
Homestake	HS11-014	113255	27.3	28.6		24.2	18.8		664.5		3328		52.5		182.5

Prospect	Hole ID	Sample ID	From (m)	To (m)	Ag (g/t)	Ag (ppm)	Au (ppb)	Au (g/t)	Pb (ppm)	Pb (%)	Zn (ppm)	Zn (%)	Cu (ppm)	Cu (%)	As (ppm)
Homestake	HS11-014	113256	28.6	29.7		1.5	75.1		63.1		2418		4.9		1031
Homestake	HS11-014	113257	29.7	31.4		0.5	5.1		38.6		726		2.7		356.2
Homestake	HS11-014	113260	31.4	32.8		10.6	3.4		1127.5		4187		14.6		92.8
Homestake	HS11-014	113261	57	58.2		0.1	105.4		2.1		21		1.6		519.3
Homestake	HS11-014	113262	58.2	59.2		0.3	62.7		6		32		10.5		301.9
Homestake	HS11-014	113263	59.2	60.6		0.7	26.8		11.4		175		22.4		296.6
Homestake	HS11-015	113264	17.2	18.1		48.1	19.4		5819.5	0.57	2722	0.29	40		102
Homestake	HS11-015	113265	18.1	19.6		2.9	22.9		161.8		587		3.3		94.7
Homestake	HS11-015	113266	19.6	20.6		20.4	14.6		1443.4		4227		26.3		137.6
Homestake	HS11-015	113267	38.1	39.1		0.6	8.5		17.6		108		36.1		37.4
Homestake	HS11-016	113268	18.4	20		2.9	0.4		1420		1275		3.1		35.1
Homestake	HS11-016	113269	20	21.5		4.6	0.4		414.3		1647		10.7		77.4
Homestake	HS11-016	113270	21.5	22.5		1.7	0.4		222.5		786		4.4		74.7
Homestake	HS11-016	113271	22.5	24.5		3.2	1.9		232.4		672		4.7		60.6
Homestake	HS11-016	113273	24.5	26.3		0.9	0.4		191.3		1936		2.3		28.6
Homestake	HS11-016	113274	26.3	28.5		0.1	8		24.8		231		6.8		123.7
Homestake	HS11-016	113275	28.5	30.3		0.2	0.4		8.9		76		8.2		42
Homestake	HS11-016	113276	44.3	45.3		0.09	0.4		3.8		18		3.2		19.4
Homestake	HS11-017	113277	33.8	34.8		0.09	0.4		2		22		1.7		4.2
Homestake	HS11-018	113278	18.1	20.1		3.1	1.5		253		954		6.4		173.6
Homestake	HS11-018	113279	20.1	22.1		0.7	13.9		54.4		425		6.6		403
Homestake	HS11-018	113280	22.1	23.5		1	0.4		61		1670		4.2		30.1
Homestake	HS11-018	113281	23.5	26.5		1.3	0.4		355.4		989		5.6		172.2
Homestake	HS11-018	113282	26.5	27.6		0.2	0.4		7		367		9.1		96.9
Homestake	HS11-018	113283	27.6	29.1		0.3	0.4		9.2		168		13.7		47.5
Homestake	HS11-019	113285	8.1	11.3		3	22.5		359		1516		37.1		1737.2
Homestake	HS11-019	113286	11.3	14.3		0.5	16.4		85.6		102		3.5		158.1
Homestake	HS11-019	113287	14.3	17.4		0.9	3.6		38.9		763		51.5		170.2
Homestake	HS11-019	113288	17.4	20.4		0.5	0.4		20.2		291		32.7		98.1
Homestake	HS11-019	113289	20.4	23.4		0.6	0.4		12.1		58		16.3		41.6
Homestake	HS11-019	113290	23.4	24.4		0.09	0.4		6.8		40		4.1		16.8
Homestake	HS11-019	113291	24.4	26.5		0.4	0.4		12.3		84		13.3		39.6
Homestake	HS11-019	113292	36.6	37.7		0.6	0.4		10		92		56.4		318.5
Homestake	HS11-020	113293	7.5	8.2		0.5	2.9		19.4		221		14.3		130.6
Homestake	HS11-020	113294	8.2	11.2		4.6	326.6		502.8		87		10.9		2907.5
Homestake	HS11-020	113295	11.2	13.9		6.8	146.8		1603.8		3268		55.1		2254.4
Homestake	HS11-020	113298	13.9	17.4		4.4	6.1		93.3		912		42.8		913.6
Homestake	HS11-020	113299	17.4	20.4		0.3	0.8		8.3		130		4.1		63.8
Homestake	HS11-020	113300	20.4	22.5		0.3	0.4		8.8		158		5.8		86.4
Homestake	HS11-021	113301	6.5	8.2		18.9	3.2		20.8		432		77		142.8
Homestake	HS11-021	113302	8.2	11.2		1.3	22.5		55.2		102		5.2		203.6
Homestake	HS11-021	113303	11.2	14.3		16.2	114.3		535.1		142		56		1480.6
Homestake	HS11-021	113304	14.3	15.9		3	63.1		324.7		4255		21.3		2666.4
Homestake	HS11-021	113305	15.9	18.9		1.9	1.2		123		1192		13.5		231.5
Homestake	HS11-021	113306	18.9	20.4		3.3	8.2		249.8		343		14.7		704.3
Homestake	HS11-021	113307	20.4	21.5		1.2	3.9		52.7		661		18.7		560
Homestake	HS11-022	113308	20.7	22		0.4	0.6		21.1		280		7.9		329
Homestake	HS11-022	113309	22	24		0.2	1.4		10.9		364		7.5		91.4

Appendix 7:
Assay Certificates

AcmeLabs Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada

www.acmelab.com

Client: **Monster Mining Corp.**
750 - 580 Hornby Street
Vancouver BC V6C 3B6 Canada

Submitted By:	Joanna Ettlinger
Receiving Lab:	Canada-Whitehorse
Received:	August 17, 2011
Report Date:	October 11, 2011
Page:	1 of 2

CERTIFICATE OF ANALYSIS WHI11001235.1

CLIENT JOB INFORMATION

Project:	Keno Lightning
Shipment ID:	
P.O. Number	
Number of Samples:	23

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
R200-250	23	Crush split and pulverize 250g drill core to 200 mesh			WHI
1DX2	23	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN

SAMPLE DISPOSAL

STOR-PLP	Store After 90 days Invoice for Storage
DISP-RJT	Dispose of Reject After 90 days

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

ADDITIONAL COMMENTS

Invoice To: Monster Mining Corp.
750 - 580 Hornby Street
Vancouver BC V6C 3B6
Canada

CC: Dasha Duba

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

AcmeLabs Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada
Phone (604) 253-3158 Fax (604) 253-1716
www.acmelab.com

Client: **Monster Mining Corp.**
750 - 580 Hornby Street
Vancouver BC V6C 3B6 Canada

Project: Keno Lightning
Report Date: October 11, 2011

CERTIFICATE OF ANALYSIS WHI11001235.1

Method		WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca
Unit		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%
MDL		0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01
580051	Drill Core	2.50	1.7	48.4	17.8	194	0.4	47.4	5.8	411	2.77	7.0	1.6	1.1	3.0	18	1.7	1.4	0.1	13	0.05
580052	Drill Core	3.56	0.8	36.5	16.4	140	0.3	34.3	5.7	231	2.29	7.9	0.9	<0.5	3.0	23	0.8	1.8	0.2	10	0.09
580053	Drill Core	2.18	0.8	31.4	16.3	151	0.2	38.2	6.9	250	3.35	4.3	1.1	<0.5	5.1	24	0.6	1.7	0.3	16	0.08
580054	Drill Core	5.69	0.2	8.0	336.2	177	8.3	1.4	0.5	575	0.74	161.7	0.4	16.6	0.7	4	12.0	7.7	<0.1	<2	<0.01
580056	Drill Core	5.32	0.3	5.0	493.4	116	8.4	1.0	0.4	979	0.63	139.4	0.2	39.5	1.0	4	5.9	6.5	<0.1	<2	<0.01
580058	Drill Core	5.41	0.2	4.3	795.4	103	4.9	0.9	0.4	57	0.67	203.4	0.1	20.5	1.1	4	7.2	8.7	<0.1	<2	<0.01
580059	Drill Core	2.41	0.1	14.0	267.9	201	1.8	1.0	0.3	92	0.93	229.1	0.5	7.5	1.1	5	4.2	2.3	<0.1	<2	<0.01
580060	Drill Core	3.18	0.2	3.7	45.3	263	0.4	2.5	1.0	692	1.05	65.0	0.4	4.5	1.3	6	3.6	3.0	<0.1	<2	<0.01
580061	Drill Core	4.68	0.2	1.9	127.5	179	0.7	1.0	0.5	115	0.89	63.2	0.3	6.8	1.8	4	1.7	1.9	<0.1	<2	<0.01
580062	Drill Core	4.14	0.3	2.0	32.0	58	0.5	0.9	0.4	38	0.46	22.5	0.1	<0.5	1.2	7	1.5	3.0	<0.1	<2	<0.01
580063	Drill Core	3.01	0.2	8.8	8.2	54	0.4	3.2	0.7	32	0.56	68.1	0.2	1.0	1.3	6	2.4	1.7	<0.1	<2	<0.01
580064	Drill Core	2.78	0.3	18.3	6.0	82	0.1	11.6	2.4	94	1.64	33.2	0.5	<0.5	3.2	7	0.3	0.7	<0.1	9	0.01
580065	Drill Core	3.57	0.2	3.4	289.0	173	2.3	1.0	0.5	47	0.85	182.3	0.2	6.3	1.2	4	9.5	3.8	<0.1	<2	<0.01
580066	Drill Core	4.49	0.2	3.5	288.4	160	4.3	0.8	0.4	57	0.78	156.7	0.2	25.0	1.2	5	9.2	3.9	<0.1	<2	<0.01
580067	Drill Core	3.89	0.2	2.8	62.3	848	0.6	2.9	1.5	9192	1.07	75.1	0.2	3.8	0.9	7	24.1	1.1	<0.1	<2	0.56
580068	Drill Core	4.27	0.3	4.6	59.7	393	0.8	1.5	0.4	1513	0.65	99.5	0.2	1.2	0.9	5	23.3	1.4	<0.1	<2	0.07
580069	Drill Core	3.04	0.3	3.3	91.6	126	1.0	1.2	0.3	76	0.68	44.8	0.2	0.6	1.4	8	1.5	2.3	<0.1	<2	<0.01
580070	Drill Core	2.19	0.2	12.6	759.7	671	8.8	0.9	0.4	295	1.98	886.9	0.2	55.6	1.0	9	18.9	14.3	<0.1	<2	<0.01
580071	Drill Core	2.16	0.2	6.8	293.5	454	2.0	1.0	1.2	1017	1.10	156.7	0.3	6.7	1.2	5	15.0	7.0	<0.1	<2	<0.01
580072	Drill Core	1.91	0.2	15.3	130.0	567	1.7	1.0	0.5	1678	1.35	100.8	0.4	13.3	1.0	5	16.0	7.4	<0.1	<2	<0.01
580073	Drill Core	2.62	0.3	14.7	181.8	1667	1.6	1.5	0.6	3632	3.95	305.3	0.4	39.8	1.8	4	47.5	4.9	<0.1	<2	<0.01
580074	Drill Core	2.54	0.6	19.6	6.5	78	0.1	16.3	2.5	110	1.47	8.5	0.4	<0.5	3.6	17	7.5	1.1	<0.1	9	0.19
580075	Drill Core	3.56	0.6	22.9	10.4	130	0.3	17.6	3.8	106	2.10	14.7	0.5	1.6	2.5	11	3.7	1.9	<0.1	11	0.05

AcmeLabs Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada
Phone (604) 253-3158 Fax (604) 253-1716
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Client: **Monster Mining Corp.**
750 - 580 Hornby Street
Vancouver BC V6C 3B6 Canada

Project: Keno Lightning
Report Date: October 11, 2011

CERTIFICATE OF ANALYSIS WHI11001235.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
	Unit	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
580051	Drill Core	0.046	9	14	0.30	49	<0.001	<1	0.82	0.010	0.07	<0.1	0.02	1.2	0.1	<0.05	2	0.8	<0.2
580052	Drill Core	0.064	9	11	0.22	39	<0.001	<1	0.64	0.007	0.06	<0.1	<0.01	1.1	0.1	<0.05	1	1.0	<0.2
580053	Drill Core	0.055	14	17	0.49	64	<0.001	1	1.31	0.012	0.10	<0.1	<0.01	1.4	<0.1	<0.05	3	0.5	<0.2
580054	Drill Core	0.008	3	2	<0.01	20	<0.001	<1	0.06	0.002	0.02	<0.1	0.02	0.1	<0.1	0.08	<1	<0.5	<0.2
580056	Drill Core	0.006	5	3	<0.01	23	<0.001	<1	0.05	0.003	0.03	<0.1	0.03	<0.1	<0.1	<0.05	<1	<0.5	<0.2
580058	Drill Core	0.010	3	2	<0.01	16	<0.001	<1	0.04	0.002	0.02	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
580059	Drill Core	0.011	3	3	<0.01	18	<0.001	<1	0.05	0.002	0.02	0.2	0.02	0.3	<0.1	0.06	<1	0.5	<0.2
580060	Drill Core	0.014	5	3	0.01	17	<0.001	1	0.08	0.002	0.03	<0.1	<0.01	0.2	<0.1	<0.05	<1	<0.5	<0.2
580061	Drill Core	0.013	7	3	<0.01	15	<0.001	<1	0.05	0.002	0.03	<0.1	0.04	0.1	<0.1	<0.05	<1	<0.5	<0.2
580062	Drill Core	0.008	5	3	<0.01	13	<0.001	<1	0.05	0.002	0.03	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
580063	Drill Core	0.019	5	3	<0.01	29	<0.001	2	0.08	0.003	0.04	<0.1	<0.01	0.1	<0.1	0.16	<1	<0.5	<0.2
580064	Drill Core	0.017	6	8	0.22	45	<0.001	2	0.53	0.006	0.07	<0.1	<0.01	0.8	<0.1	<0.05	1	0.7	<0.2
580065	Drill Core	0.010	5	3	<0.01	17	<0.001	<1	0.05	0.002	0.02	<0.1	0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
580066	Drill Core	0.011	4	3	<0.01	19	<0.001	<1	0.05	0.002	0.02	<0.1	0.02	<0.1	<0.1	<0.05	<1	<0.5	<0.2
580067	Drill Core	0.014	2	2	0.07	12	<0.001	<1	0.04	0.002	0.02	<0.1	0.01	<0.1	<0.1	0.19	<1	<0.5	<0.2
580068	Drill Core	0.013	3	3	0.01	14	<0.001	<1	0.04	0.002	0.02	<0.1	<0.01	0.1	<0.1	0.12	<1	<0.5	<0.2
580069	Drill Core	0.012	6	3	<0.01	22	<0.001	1	0.08	0.004	0.04	<0.1	0.02	0.1	<0.1	<0.05	<1	<0.5	<0.2
580070	Drill Core	0.009	4	2	<0.01	14	<0.001	1	0.04	0.002	0.02	<0.1	0.09	<0.1	<0.1	<0.05	<1	<0.5	<0.2
580071	Drill Core	0.011	5	3	<0.01	12	<0.001	<1	0.04	0.002	0.02	<0.1	0.03	<0.1	<0.1	<0.05	<1	<0.5	<0.2
580072	Drill Core	0.009	4	3	<0.01	13	<0.001	<1	0.05	0.002	0.02	<0.1	0.10	0.1	<0.1	<0.05	<1	<0.5	<0.2
580073	Drill Core	0.014	5	3	<0.01	16	<0.001	<1	0.06	0.003	0.03	<0.1	0.22	0.2	<0.1	<0.05	<1	<0.5	<0.2
580074	Drill Core	0.020	8	11	0.25	61	<0.001	<1	0.57	0.013	0.09	<0.1	<0.01	0.9	<0.1	<0.05	1	<0.5	<0.2
580075	Drill Core	0.022	7	14	0.25	46	<0.001	<1	0.63	0.010	0.07	<0.1	<0.01	0.9	<0.1	0.14	2	0.6	<0.2

AcmeLabs Acme Analytical Laboratories (Vancouver) Ltd.
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Client: **Monster Mining Corp.**
750 - 580 Hornby Street
Vancouver BC V6C 3B6 Canada

Project: Keno Lightning
Report Date: October 11, 2011

QUALITY CONTROL REPORT WHI11001235.1

	Method	WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%
	MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01
Pulp Duplicates																					
580062	Drill Core	4.14	0.3	2.0	32.0	58	0.5	0.9	0.4	38	0.46	22.5	0.1	<0.5	1.2	7	1.5	3.0	<0.1	<2	<0.01
REP 580062	QC		0.2	2.2	31.2	59	0.5	0.8	0.4	37	0.46	22.8	0.1	<0.5	1.2	7	1.4	2.8	<0.1	<2	<0.01
Core Reject Duplicates																					
580067	Drill Core	3.89	0.2	2.8	62.3	848	0.6	2.9	1.5	9192	1.07	75.1	0.2	3.8	0.9	7	24.1	1.1	<0.1	<2	0.56
DUP 580067	QC		0.3	2.7	66.4	855	0.6	3.3	1.5	9023	1.12	82.1	0.2	6.3	1.0	7	25.0	1.1	<0.1	<2	0.55
Reference Materials																					
STD DS8	Standard		12.5	110.7	131.6	313	1.8	36.4	7.4	582	2.45	26.0	2.7	103.9	6.8	61	2.4	5.4	7.3	38	0.65
STD DS8 Expected			13.44	110	123	312	1.69	38.1	7.5	615	2.46	26	2.8	107	6.89	67.7	2.38	5.7	6.67	41.1	0.7
BLK	Blank		<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.1	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01
Prep Wash																					
G1	Prep Blank		0.1	2.2	4.0	51	<0.1	2.3	3.9	544	1.92	<0.5	1.7	2.9	4.7	54	<0.1	<0.1	0.1	34	0.45
G1	Prep Blank		0.1	1.9	3.2	44	<0.1	2.0	3.6	507	1.78	<0.5	1.2	1.1	4.6	47	<0.1	<0.1	<0.1	32	0.38

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Project: Keno Lightning
Report Date: October 11, 2011

QUALITY CONTROL REPORT WHI11001235.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
	Unit	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
Pulp Duplicates																			
580062	Drill Core	0.008	5	3	<0.01	13	<0.001	<1	0.05	0.002	0.03	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
REP 580062	QC	0.008	4	3	<0.01	13	<0.001	<1	0.05	0.002	0.03	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
Core Reject Duplicates																			
580067	Drill Core	0.014	2	2	0.07	12	<0.001	<1	0.04	0.002	0.02	<0.1	0.01	<0.1	<0.1	0.19	<1	<0.5	<0.2
DUP 580067	QC	0.015	3	3	0.08	14	<0.001	<1	0.04	0.002	0.02	<0.1	<0.01	<0.1	<0.1	0.19	<1	<0.5	<0.2
Reference Materials																			
STD DS8	Standard	0.081	13	112	0.60	266	0.108	3	0.86	0.081	0.39	3.1	0.20	1.8	5.7	0.16	4	4.9	5.0
STD DS8 Expected		0.08	14.6	115	0.6045	279	0.113	2.6	0.93	0.0883	0.41	3	0.192	2.3	5.4	0.1679	4.7	5.23	5
BLK	Blank	<0.001	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
Prep Wash																			
G1	Prep Blank	0.077	10	5	0.50	161	0.110	<1	0.90	0.091	0.46	<0.1	<0.01	1.7	0.4	<0.05	5	<0.5	<0.2
G1	Prep Blank	0.072	9	5	0.46	150	0.103	<1	0.84	0.084	0.44	<0.1	<0.01	1.6	0.3	<0.05	4	<0.5	<0.2

Acme Analytical Laboratories (Vancouver) Ltd.
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Client: **Monster Mining Corp.**
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Submitted By: Joanna Ettlinger
Receiving Lab: Canada-Whitehorse
Received: August 29, 2011
Report Date: November 25, 2011

CERTIFICATE OF ANALYSIS WHI11001553.1

CLIENT JOB INFORMATION

Project: Keno Lightning
Shipment ID:
P.O. Number
Number of Samples: 40

SAMPLE DISPOSAL

STOR-PLP Store After 90 days Invoice for Storage
STOR-RJT Store After 90 days Invoice for Storage

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

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
R200-250	37	Crush split and pulverize 250g drill core to 200 mesh			SMI
1DX2	40	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN
7AR	5	1:1:1 Aqua Regia Digestion ICP-ES Finish	1	Completed	VAN
G6Gr	4	Lead collection fire assay 30G fusion - Grav finish	30	Completed	VAN
7AR.1	2	1:1:1 Aqua Regia Digestion ICP-ES Finish	0.1	Completed	VAN
G817	1	Lead Assay by Classical Titration	0.5	Completed	VAN

ADDITIONAL COMMENTS

Invoice To: Monster Mining Corp.
750 - 580 Hornby Street
Vancouver BC V6C 3B6
Canada

CC: Art Ettlinger

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

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Project: Keno Lightning
Report Date: November 25, 2011

CERTIFICATE OF ANALYSIS WHI11001553.1

Method		WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca
Unit		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%
MDL		0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01
583501	Drill Core	1.88	0.2	54.8	>10000	21	94.3	<0.1	<0.1	3	0.01	3.2	0.2	231.3	<0.1	<1	40.2	>2000	5.9	<2	<0.01
583502	Drill Core	0.48	2.5	56.6	2057	873	17.3	13.0	2.5	143	3.27	405.5	1.1	17.9	6.2	20	4.5	90.0	0.4	5	0.01
583503	Drill Core	1.69	1.2	496.8	>10000	6927	>100	16.6	4.2	>10000	15.20	490.7	6.1	195.3	1.2	7	37.7	321.0	0.3	10	<0.01
583504	Drill Core	1.91	1.9	347.2	>10000	9000	>100	11.9	4.8	>10000	20.80	1333	12.0	110.8	2.7	40	563.5	95.4	0.1	13	0.01
583505	Drill Core	2.26	1.4	28.3	893.1	805	14.7	8.8	2.2	2558	2.19	238.4	5.1	2.5	8.1	19	42.6	20.2	0.1	5	<0.01
583506	Rock Pulp	0.09	<0.1	1.5	15.5	42	0.4	3.1	4.2	489	1.64	<0.5	2.1	2.0	3.6	39	0.1	1.3	<0.1	33	0.39
583507	Rock Pulp	0.08	10.1	2679	>10000	5527	>100	9.5	10.1	751	3.11	310.9	0.4	197.7	0.6	61	60.5	466.4	1.0	17	2.29
583508	Drill Core	2.65	0.4	128.7	252.5	33	62.3	0.5	0.3	88	0.37	61.5	<0.1	9.2	1.0	2	2.1	1.9	<0.1	<2	<0.01
583509	Drill Core	2.60	0.3	7.8	174.5	94	3.9	0.5	0.4	63	0.54	116.9	0.1	18.3	1.0	3	1.4	3.3	0.4	<2	<0.01
583510	Drill Core	2.14	0.3	7.2	76.7	390	2.8	1.9	0.8	1030	0.45	81.7	0.1	6.0	2.0	5	23.8	3.3	<0.1	<2	0.10
583511	Drill Core	1.53	1.0	3.7	68.6	73	0.9	1.5	0.6	46	0.53	50.5	0.2	<0.5	3.8	11	1.5	2.9	0.1	3	<0.01
583512	Drill Core	2.38	0.5	7.1	20.2	270	0.4	2.4	1.1	1687	1.40	71.7	0.5	7.2	1.4	3	1.0	2.7	<0.1	<2	<0.01
583513	Drill Core	2.09	0.2	2.4	229.1	1451	0.8	9.3	4.2	4081	0.86	15.3	0.3	2.4	1.4	8	52.9	1.3	<0.1	<2	0.02
583514	Drill Core	1.71	0.3	7.0	92.4	2645	0.7	24.6	9.3	5166	0.89	27.6	0.5	0.9	2.4	9	39.8	2.3	<0.1	<2	0.04
583515	Drill Core	2.06	0.2	6.3	85.7	55	1.1	1.1	0.5	64	0.52	483.6	0.2	47.6	1.6	12	3.6	3.6	0.2	<2	<0.01
583516	Drill Core	2.20	0.2	4.8	16.0	46	0.3	1.1	0.5	58	0.29	119.9	0.1	10.4	0.9	3	1.1	1.2	<0.1	<2	<0.01
583517	Drill Core	2.23	0.7	14.2	13.9	308	0.1	11.2	2.9	411	1.03	27.2	0.3	1.9	2.6	26	12.2	1.7	<0.1	3	0.27
583518	Drill Core	2.79	0.5	12.4	8.7	359	0.1	9.8	2.8	399	0.97	16.2	0.3	1.3	2.3	10	13.9	1.5	<0.1	3	0.10
583519	Drill Core	0.96	0.5	22.2	78.8	261	0.9	7.9	2.2	139	1.03	24.5	0.8	<0.5	3.1	6	6.4	3.9	<0.1	3	0.03
583520	Drill Core	0.98	0.6	30.8	110.3	285	1.5	10.4	3.0	194	1.20	29.0	1.0	0.8	3.1	8	13.4	4.7	<0.1	3	0.04
583521	Drill Core	0.94	0.3	20.1	30.7	113	0.4	9.4	1.7	54	0.61	16.3	0.9	0.9	1.6	6	1.3	2.5	<0.1	2	0.03
583522	Drill Core	0.83	0.4	25.2	12.9	96	0.2	8.1	2.1	37	0.75	17.6	0.5	0.9	1.1	5	2.0	1.6	<0.1	<2	0.03
583523	Drill Core	1.68	0.4	37.2	42.7	253	0.6	26.5	6.1	1053	1.72	22.3	0.5	1.3	3.3	24	6.3	2.3	<0.1	11	0.44
583524	Drill Core	2.34	1.4	54.6	1184	688	10.4	16.3	2.6	282	3.09	164.4	1.4	2.1	4.4	23	8.6	29.1	0.1	6	0.01
583525	Drill Core	0.61	1.3	720.2	>10000	>10000	>100	14.5	3.3	>10000	20.55	1723	8.6	400.4	2.1	16	161.6	1149	2.3	13	0.01
583526	Drill Core	1.62	0.8	129.8	8227	4660	57.3	7.8	2.0	7527	11.31	1573	4.6	86.5	0.9	6	40.3	165.2	<0.1	6	<0.01
583527	Drill Core	1.95	0.8	42.2	2758	836	33.1	3.9	1.4	4055	2.80	240.3	3.0	9.7	3.7	9	15.1	27.5	<0.1	4	<0.01
583528	Drill Core	2.16	0.3	19.7	1069	389	9.6	2.7	1.0	753	1.38	109.5	1.8	2.1	1.5	3	3.5	3.8	<0.1	<2	<0.01
583529	Drill Core	2.60	0.4	11.8	675.4	305	4.9	1.3	0.8	1251	1.05	86.5	0.8	1.3	1.8	6	11.4	3.4	<0.1	<2	<0.01
583530	Drill Core	2.03	0.2	10.2	577.4	201	5.0	3.7	0.9	584	0.78	60.2	0.4	0.5	2.7	5	6.5	2.4	<0.1	<2	<0.01

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CERTIFICATE OF ANALYSIS WHI11001553.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	7AR	G6Gr
	Analyte	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Pb	Ag
	Unit	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	gm/t
	MDL	0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	0.01	50
583501	Drill Core	<0.001	<1	<1	<0.01	3	<0.001	<1	<0.01	0.001	<0.01	<0.1	0.12	<0.1	0.6	>10	<1	8.7	<0.2	>4	
583502	Drill Core	0.063	15	3	<0.01	60	<0.001	2	0.24	0.008	0.11	0.4	0.29	0.8	0.2	0.05	<1	1.3	<0.2		
583503	Drill Core	0.027	1	5	<0.01	20	<0.001	<1	0.27	0.003	0.03	1.0	3.05	1.1	0.2	0.37	<1	2.1	<0.2	3.43	770
583504	Drill Core	0.059	5	3	0.03	62	<0.001	4	0.32	0.007	0.10	22.3	4.14	0.9	0.6	0.15	2	3.1	<0.2	0.98	86
583505	Drill Core	0.047	18	7	<0.01	49	<0.001	<1	0.24	0.006	0.08	2.6	0.08	0.7	0.1	<0.05	<1	1.2	<0.2		
583506	Rock Pulp	0.070	4	28	0.56	218	0.117	1	0.77	0.028	0.47	<0.1	0.01	1.3	0.3	<0.05	4	<0.5	<0.2		
583507	Rock Pulp	0.042	2	15	0.70	77	0.047	<1	0.86	0.026	0.18	0.3	0.91	0.6	0.1	1.51	3	2.6	<0.2	2.05	2220
583508	Drill Core	0.005	4	2	<0.01	18	<0.001	1	0.05	0.002	0.03	>100	0.04	<0.1	<0.1	<0.05	<1	<0.5	<0.2		
583509	Drill Core	0.008	4	11	<0.01	16	<0.001	<1	0.05	0.002	0.02	1.7	0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2		
583510	Drill Core	0.017	6	4	0.02	22	<0.001	<1	0.06	0.002	0.03	1.6	0.02	<0.1	<0.1	0.10	<1	<0.5	<0.2		
583511	Drill Core	0.014	12	9	<0.01	60	<0.001	1	0.12	0.005	0.10	1.1	0.02	0.3	<0.1	0.05	<1	0.7	<0.2		
583512	Drill Core	0.020	3	3	0.01	11	<0.001	<1	0.08	0.002	0.02	0.4	0.01	0.3	<0.1	<0.05	<1	<0.5	<0.2		
583513	Drill Core	0.013	5	8	<0.01	14	<0.001	<1	0.08	0.003	0.03	0.7	0.03	0.3	<0.1	0.07	<1	<0.5	<0.2		
583514	Drill Core	0.015	6	3	0.02	18	<0.001	<1	0.12	0.003	0.03	0.3	0.02	0.4	<0.1	0.24	<1	<0.5	<0.2		
583515	Drill Core	0.013	4	13	<0.01	25	<0.001	<1	0.05	0.002	0.03	0.3	0.02	0.1	<0.1	0.06	<1	<0.5	<0.2		
583516	Drill Core	0.010	3	2	<0.01	13	<0.001	1	0.04	0.002	0.02	0.8	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2		
583517	Drill Core	0.048	6	12	0.05	43	<0.001	<1	0.13	0.006	0.07	0.1	0.02	0.3	<0.1	0.32	<1	1.6	<0.2		
583518	Drill Core	0.029	6	4	0.05	34	<0.001	<1	0.13	0.005	0.06	0.6	0.01	0.4	<0.1	0.24	<1	0.6	<0.2		
583519	Drill Core	0.022	7	8	<0.01	41	<0.001	<1	0.15	0.006	0.07	0.1	0.02	0.6	<0.1	0.24	<1	0.6	<0.2		
583520	Drill Core	0.028	7	3	<0.01	44	<0.001	2	0.17	0.007	0.08	0.7	0.02	0.6	<0.1	0.33	<1	0.8	<0.2		
583521	Drill Core	0.019	4	10	<0.01	30	<0.001	<1	0.16	0.005	0.05	0.2	<0.01	0.4	<0.1	0.15	<1	<0.5	<0.2		
583522	Drill Core	0.017	3	2	<0.01	25	<0.001	1	0.12	0.004	0.04	0.8	<0.01	0.3	<0.1	0.29	<1	<0.5	<0.2		
583523	Drill Core	0.024	5	21	0.37	109	<0.001	<1	0.55	0.007	0.08	<0.1	0.01	0.9	<0.1	0.26	1	1.2	<0.2		
583524	Drill Core	0.057	12	4	<0.01	55	<0.001	1	0.18	0.008	0.10	0.6	0.08	1.0	0.2	<0.05	<1	1.0	<0.2		
583525	Drill Core	0.032	3	4	<0.01	68	<0.001	1	0.30	0.006	0.06	0.1	6.76	1.6	0.7	0.23	2	2.6	<0.2	>4	493
583526	Drill Core	0.035	2	2	<0.01	25	<0.001	<1	0.14	0.002	0.02	0.2	1.13	0.8	0.2	0.15	<1	1.0	<0.2		
583527	Drill Core	0.032	11	8	<0.01	44	<0.001	<1	0.16	0.004	0.07	0.8	0.29	0.4	0.1	<0.05	<1	<0.5	<0.2		
583528	Drill Core	0.021	5	2	<0.01	17	<0.001	<1	0.09	0.002	0.03	0.5	0.13	0.2	<0.1	<0.05	<1	<0.5	<0.2		
583529	Drill Core	0.016	7	12	<0.01	28	<0.001	1	0.09	0.003	0.04	<0.1	0.08	<0.1	<0.1	<0.05	<1	<0.5	<0.2		
583530	Drill Core	0.022	10	3	<0.01	31	<0.001	2	0.09	0.003	0.04	0.7	0.03	0.1	<0.1	<0.05	<1	<0.5	<0.2		

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750 - 580 Hornby Street
Vancouver BC V6C 3B6 Canada

Project: Keno Lightning
Report Date: November 25, 2011

CERTIFICATE OF ANALYSIS WHI11001553.1

	Method	7AR.1	7AR.1	G817
	Analyte	Pb	Zn	Pb
	Unit	%	%	%
	MDL	0.01	0.01	0.01
583501	Drill Core	74.98	<0.01	85.56
583502	Drill Core			N.A.
583503	Drill Core			N.A.
583504	Drill Core			N.A.
583505	Drill Core			N.A.
583506	Rock Pulp			N.A.
583507	Rock Pulp			N.A.
583508	Drill Core			N.A.
583509	Drill Core			N.A.
583510	Drill Core			N.A.
583511	Drill Core			N.A.
583512	Drill Core			N.A.
583513	Drill Core			N.A.
583514	Drill Core			N.A.
583515	Drill Core			N.A.
583516	Drill Core			N.A.
583517	Drill Core			N.A.
583518	Drill Core			N.A.
583519	Drill Core			N.A.
583520	Drill Core			N.A.
583521	Drill Core			N.A.
583522	Drill Core			N.A.
583523	Drill Core			N.A.
583524	Drill Core			N.A.
583525	Drill Core	10.49	0.93	N.A.
583526	Drill Core			N.A.
583527	Drill Core			N.A.
583528	Drill Core			N.A.
583529	Drill Core			N.A.
583530	Drill Core			N.A.

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Report Date: November 25, 2011

CERTIFICATE OF ANALYSIS WHI11001553.1

	Method	WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%
	MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01
583531	Drill Core	1.01	0.4	9.9	689.1	401	8.5	4.3	1.2	524	2.03	144.5	0.6	7.0	3.3	9	10.7	5.4	<0.1	2	<0.01
583532	Drill Core	1.66	0.3	2.9	289.6	72	4.2	0.6	0.3	37	0.50	26.1	0.2	<0.5	0.9	4	1.1	1.4	<0.1	<2	<0.01
583533	Drill Core	1.54	0.3	2.6	61.0	68	1.9	0.8	0.3	97	0.41	21.4	0.2	<0.5	1.3	3	2.0	1.6	<0.1	<2	<0.01
583534	Drill Core	2.48	0.3	4.7	75.2	129	1.5	1.1	0.5	418	0.62	30.7	0.2	1.8	1.6	11	2.8	2.0	<0.1	<2	0.02
583535	Drill Core	2.66	0.3	4.0	10.0	180	0.2	1.7	0.8	871	0.81	34.6	0.3	1.5	0.7	5	2.7	1.7	<0.1	<2	0.01
583536	Drill Core	1.98	0.2	1.6	183.0	66	2.5	0.5	0.3	132	0.29	21.1	<0.1	21.8	1.4	4	0.5	2.1	<0.1	<2	<0.01
583537	Drill Core	2.09	0.6	7.6	73.6	41	2.4	2.2	0.8	28	0.65	162.2	0.3	4.3	2.9	11	0.4	5.8	0.2	<2	<0.01
583538	Drill Core	1.83	0.4	16.5	46.5	91	1.1	4.9	1.0	31	0.82	143.0	0.4	1.3	3.2	8	0.2	4.1	0.2	2	<0.01
583539	Drill Core	2.66	0.2	24.0	107.4	157	3.6	3.7	0.9	49	0.75	59.2	0.6	0.9	2.2	10	3.3	9.0	0.1	<2	0.02
583540	Rock Pulp	0.07	<0.1	1.7	2.2	46	<0.1	3.7	4.3	516	1.79	<0.5	2.0	0.5	3.9	46	<0.1	<0.1	<0.1	35	0.41

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CERTIFICATE OF ANALYSIS WHI11001553.1

Method		1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	7AR	G6Gr
Analyte		P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Pb	Ag
Unit		%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	gm/t
MDL		0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	0.01	50
583531	Drill Core	0.036	10	10	<0.01	43	<0.001	2	0.13	0.005	0.07	0.1	0.05	0.2	<0.1	<0.05	<1	0.5	<0.2		
583532	Drill Core	0.010	3	2	<0.01	14	<0.001	<1	0.05	0.001	0.02	0.6	0.02	<0.1	<0.1	<0.05	<1	<0.5	<0.2		
583533	Drill Core	0.009	4	12	<0.01	14	<0.001	<1	0.05	0.001	0.02	0.4	0.02	<0.1	<0.1	<0.05	<1	<0.5	<0.2		
583534	Drill Core	0.016	6	12	<0.01	25	<0.001	2	0.09	0.003	0.04	0.5	0.03	0.1	<0.1	0.05	<1	0.5	<0.2		
583535	Drill Core	0.011	3	2	<0.01	14	<0.001	1	0.06	0.002	0.03	0.1	<0.01	0.1	<0.1	<0.05	<1	<0.5	<0.2		
583536	Drill Core	0.008	5	10	<0.01	11	<0.001	<1	0.05	0.001	0.02	0.4	0.05	0.1	<0.1	<0.05	<1	0.8	<0.2		
583537	Drill Core	0.040	6	3	<0.01	47	<0.001	2	0.12	0.005	0.07	<0.1	0.02	0.4	<0.1	0.22	<1	1.6	<0.2		
583538	Drill Core	0.053	9	13	<0.01	50	<0.001	1	0.13	0.005	0.07	0.8	0.01	0.3	<0.1	0.08	<1	1.1	<0.2		
583539	Drill Core	0.033	7	3	<0.01	28	<0.001	2	0.13	0.004	0.05	<0.1	0.03	0.4	<0.1	0.12	<1	0.7	<0.2		
583540	Rock Pulp	0.083	5	29	0.59	234	0.134	1	0.82	0.031	0.52	<0.1	<0.01	1.5	0.3	<0.05	4	<0.5	<0.2		

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Report Date: November 25, 2011

CERTIFICATE OF ANALYSIS WHI11001553.1

	Method	7AR.1	7AR.1	G817
	Analyte	Pb	Zn	Pb
	Unit	%	%	%
	MDL	0.01	0.01	0.01
583531	Drill Core			N.A.
583532	Drill Core			N.A.
583533	Drill Core			N.A.
583534	Drill Core			N.A.
583535	Drill Core			N.A.
583536	Drill Core			N.A.
583537	Drill Core			N.A.
583538	Drill Core			N.A.
583539	Drill Core			N.A.
583540	Rock Pulp			N.A.

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Project: Keno Lightning
Report Date: November 25, 2011

QUALITY CONTROL REPORT WHI11001553.1

Method		WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca
Unit		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%
MDL		0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01
Pulp Duplicates																					
583501	Drill Core	1.88	0.2	54.8	>10000	21	94.3	<0.1	<0.1	3	0.01	3.2	0.2	231.3	<0.1	<1	40.2	>2000	5.9	<2	<0.01
REP 583501	QC																				
REP 583514	QC		0.3	6.9	97.0	2630	0.7	25.0	9.6	5247	0.91	27.1	0.5	1.4	2.5	8	40.0	2.4	<0.1	<2	0.05
583525	Drill Core	0.61	1.3	720.2	>10000	>10000	>100	14.5	3.3	>10000	20.55	1723	8.6	400.4	2.1	16	161.6	1149	2.3	13	0.01
REP 583525	QC																				
583534	Drill Core	2.48	0.3	4.7	75.2	129	1.5	1.1	0.5	418	0.62	30.7	0.2	1.8	1.6	11	2.8	2.0	<0.1	<2	0.02
REP 583534	QC		0.3	4.6	72.2	129	1.4	1.1	0.5	414	0.63	30.0	0.2	0.7	1.5	11	2.8	2.0	<0.1	<2	0.02
583540	Rock Pulp	0.07	<0.1	1.7	2.2	46	<0.1	3.7	4.3	516	1.79	<0.5	2.0	0.5	3.9	46	<0.1	<0.1	<0.1	35	0.41
REP 583540	QC		<0.1	1.8	2.0	46	<0.1	4.0	4.3	505	1.79	<0.5	2.1	<0.5	4.1	45	<0.1	<0.1	<0.1	36	0.42
Core Reject Duplicates																					
583514	Drill Core	1.71	0.3	7.0	92.4	2645	0.7	24.6	9.3	5166	0.89	27.6	0.5	0.9	2.4	9	39.8	2.3	<0.1	<2	0.04
DUP 583514	QC		0.2	6.5	88.3	2823	0.6	24.3	9.9	5551	0.90	25.6	0.5	0.5	2.2	8	40.9	2.3	<0.1	<2	0.06
Reference Materials																					
STD AGPROOF	Standard																				
STD CCU-1C	Standard																				
STD CCU-1C	Standard																				
STD CDN-ME-3	Standard																				
STD CPB-2	Standard																				
STD CZN-3	Standard																				
STD CZN-3	Standard																				
STD DS8	Standard		12.0	106.1	111.6	282	1.6	35.4	7.3	543	2.28	21.3	2.5	104.2	6.4	55	1.9	4.6	5.3	39	0.71
STD DS8	Standard		14.6	114.4	129.8	315	1.8	37.9	7.6	608	2.56	26.0	3.3	120.5	7.7	64	2.3	4.9	6.2	42	0.73
STD DS8	Standard		13.8	114.1	128.4	326	1.8	38.2	7.8	628	2.60	25.7	3.0	125.0	7.7	75	2.6	6.0	7.6	43	0.77
STD GBM997-6	Standard																				
STD GBM997-6	Standard																				
STD OREAS153AR	Standard																				
STD OREAS131B-A	Standard																				
STD PTC-1A	Standard																				

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QUALITY CONTROL REPORT WHI11001553.1

Method		1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	7AR	G6Gr
Analyte		P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Pb	Ag
Unit		%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	gm/t
MDL		0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	0.01	50
Pulp Duplicates																					
583501	Drill Core	<0.001	<1	<1	<0.01	3	<0.001	<1	<0.01	0.001	<0.01	<0.1	0.12	<0.1	0.6	>10	<1	8.7	<0.2	>4	
REP 583501	QC																				
REP 583514	QC	0.016	5	3	0.02	16	<0.001	<1	0.12	0.003	0.03	0.3	0.02	0.3	<0.1	0.25	<1	<0.5	<0.2		
583525	Drill Core	0.032	3	4	<0.01	68	<0.001	1	0.30	0.006	0.06	0.1	6.76	1.6	0.7	0.23	2	2.6	<0.2	>4	493
REP 583525	QC																			>4	
583534	Drill Core	0.016	6	12	<0.01	25	<0.001	2	0.09	0.003	0.04	0.5	0.03	0.1	<0.1	0.05	<1	0.5	<0.2		
REP 583534	QC	0.015	6	11	<0.01	24	<0.001	1	0.08	0.003	0.04	0.5	0.02	0.1	<0.1	0.06	<1	<0.5	<0.2		
583540	Rock Pulp	0.083	5	29	0.59	234	0.134	1	0.82	0.031	0.52	<0.1	<0.01	1.5	0.3	<0.05	4	<0.5	<0.2		
REP 583540	QC	0.082	6	30	0.59	232	0.138	1	0.82	0.030	0.51	<0.1	<0.01	1.5	0.3	<0.05	5	<0.5	<0.2		
Core Reject Duplicates																					
583514	Drill Core	0.015	6	3	0.02	18	<0.001	<1	0.12	0.003	0.03	0.3	0.02	0.4	<0.1	0.24	<1	<0.5	<0.2		
DUP 583514	QC	0.016	6	3	0.02	17	<0.001	<1	0.12	0.003	0.03	0.6	0.03	0.4	<0.1	0.26	<1	<0.5	<0.2		
Reference Materials																					
STD AGPROOF	Standard																				99
STD CCU-1C	Standard																				
STD CCU-1C	Standard																				
STD CDN-ME-3	Standard																				278
STD CPB-2	Standard																				
STD CZN-3	Standard																				
STD CZN-3	Standard																				
STD DS8	Standard	0.068	13	114	0.57	234	0.107	3	0.85	0.080	0.38	2.5	0.17	1.7	4.5	0.16	4	5.0	4.3		
STD DS8	Standard	0.080	17	122	0.63	287	0.126	2	0.91	0.085	0.42	3.1	0.23	2.0	5.5	0.17	5	4.8	5.9		
STD DS8	Standard	0.081	16	121	0.66	284	0.131	3	1.02	0.098	0.44	3.1	0.20	2.2	5.6	0.17	5	5.2	5.1		
STD GBM997-6	Standard																				
STD GBM997-6	Standard																				
STD OREAS153AR	Standard																			<0.01	
STD OREAS131B-A	Standard																			1.81	
STD PTC-1A	Standard																				

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QUALITY CONTROL REPORT WHI11001553.1

	Method	7AR.1	7AR.1	G817
	Analyte	Pb	Zn	Pb
	Unit	%	%	%
	MDL	0.01	0.01	0.01
Pulp Duplicates				
583501	Drill Core	74.98	<0.01	85.56
REP 583501	QC			85.56
REP 583514	QC			
583525	Drill Core	10.49	0.93	N.A.
REP 583525	QC			
583534	Drill Core			N.A.
REP 583534	QC			
583540	Rock Pulp			N.A.
REP 583540	QC			
Core Reject Duplicates				
583514	Drill Core			N.A.
DUP 583514	QC			N.A.
Reference Materials				
STD AGPROOF	Standard			
STD CCU-1C	Standard	0.35	4.17	
STD CCU-1C	Standard	0.40	3.97	
STD CDN-ME-3	Standard			
STD CPB-2	Standard			63.73
STD CZN-3	Standard	0.13	52.46	
STD CZN-3	Standard	0.11	52.67	
STD DS8	Standard			
STD DS8	Standard			
STD DS8	Standard			
STD GBM997-6	Standard	22.39	16.32	
STD GBM997-6	Standard	21.41	15.22	
STD OREAS153AR	Standard			
STD OREAS131B-A	Standard			
STD PTC-1A	Standard	0.10	0.11	

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750 - 580 Hornby Street
Vancouver BC V6C 3B6 Canada

Project: Keno Lightning
Report Date: November 25, 2011

QUALITY CONTROL REPORT WHI11001553.1

		WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca
		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%
		0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01
STD PTC-1A	Standard																				
STD CDN-ME-3 Expected																					
STD AGPROOF Expected																					
STD DS8 Expected			13.44	110	123	312	1.69	38.1	7.5	615	2.46	26	2.8	107	6.89	67.7	2.38	5.7	6.67	41.1	0.7
STD OREAS131B-A																					
STD CZN-3 Expected																					
STD CCU-1C Expected																					
STD GBM997-6 Expected																					
STD CPB-2 Expected																					
BLK	Blank		<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.1	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01
BLK	Blank																				
BLK	Blank																				
BLK	Blank		<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.1	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01
BLK	Blank																				
BLK	Blank		<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.1	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01
BLK	Blank																				
BLK	Blank																				
Prep Wash																					
G1	Prep Blank		0.2	3.1	11.7	45	<0.1	2.4	3.8	518	1.74	0.9	1.5	2.8	5.3	52	<0.1	0.4	<0.1	33	0.42
G1	Prep Blank		0.3	4.1	51.3	59	0.7	2.4	4.0	531	1.87	1.0	1.8	1.4	6.3	57	<0.1	0.7	<0.1	35	0.47

AcmeLabs Acme Analytical Laboratories (Vancouver) Ltd.
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		1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	7AR	G6Gr
		P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Pb	Ag
		%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	gm/t
		0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	0.01	50
STD PTC-1A	Standard																				
STD CDN-ME-3 Expected																					276
STD AGPROOF Expected																					94
STD DS8 Expected		0.08	14.6	115	0.6045	279	0.113	2.6	0.93	0.0883	0.41	3	0.192	2.3	5.4	0.1679	4.7	5.23	5		
STD OREAS131B-A																				1.86	
STD CZN-3 Expected																					
STD CCU-1C Expected																					
STD GBM997-6 Expected																					
STD CPB-2 Expected																					
BLK	Blank	<0.001	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2		
BLK	Blank																				<50
BLK	Blank																				<50
BLK	Blank	<0.001	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2		
BLK	Blank																				
BLK	Blank	<0.001	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2		
BLK	Blank																			<0.01	
BLK	Blank																				
Prep Wash																					
G1	Prep Blank	0.067	10	4	0.48	144	0.113	1	0.84	0.069	0.42	0.4	0.01	1.6	0.3	<0.05	4	<0.5	<0.2		
G1	Prep Blank	0.068	12	8	0.47	139	0.117	1	0.89	0.078	0.42	<0.1	0.02	1.6	0.3	<0.05	4	<0.5	<0.2		

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		7AR.1	7AR.1	G817
		Pb	Zn	Pb
		%	%	%
		0.01	0.01	0.01
STD PTC-1A	Standard	0.04	0.13	
STD CDN-ME-3 Expected				
STD AGPROOF Expected				
STD DS8 Expected				
STD OREAS131B-A				
STD CZN-3 Expected		0.113	49.75	
STD CCU-1C Expected		0.34	3.99	
STD GBM997-6 Expected		23.75	15.83	
STD CPB-2 Expected				63.52
BLK	Blank			
BLK	Blank			
BLK	Blank			
BLK	Blank			
BLK	Blank	<0.01	<0.01	
BLK	Blank			
BLK	Blank			
BLK	Blank	<0.01	<0.01	
Prep Wash				
G1	Prep Blank			N.A.
G1	Prep Blank			N.A.

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Submitted By:	Joanna Ettlinger
Receiving Lab:	Canada-Whitehorse
Received:	September 30, 2011
Report Date:	December 19, 2011
Page:	1 of 5

CERTIFICATE OF ANALYSIS WHI11001764.2

CLIENT JOB INFORMATION

Project:	Keno Lightning
Shipment ID:	#2
P.O. Number	
Number of Samples:	118

SAMPLE DISPOSAL

STOR-PLP	Store After 90 days Invoice for Storage
STOR-RJT	Store After 90 days Invoice for Storage

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

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

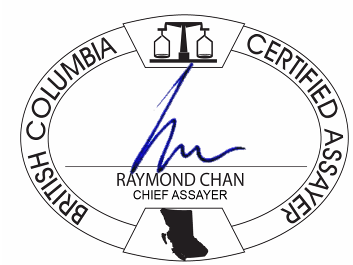
Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
R200-250	108	Crush split and pulverize 250g drill core to 200 mesh			WHI
1DX2	118	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN
G6Gr	13	Lead collection fire assay 30G fusion - Grav finish	30	Completed	VAN
7AR1	19	1:1:1 Aqua Regia digestion ICP-ES analysis	1	Completed	VAN
G601	8	Fire Assay fusion Au by ICP-ES	30	Completed	VAN
7AR.1	1	1:1:1 Aqua Regia Digestion ICP-ES Finish	0.1	Completed	VAN

ADDITIONAL COMMENTS

Version 2; 7AR, G601 analyses included

Invoice To: Monster Mining Corp.
750 - 580 Hornby Street
Vancouver BC V6C 3B6
Canada

CC: Dasha Duba



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

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Report Date: December 19, 2011

CERTIFICATE OF ANALYSIS WHI11001764.2

Method		WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca
Unit		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%
MDL		0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01
583541	Rock	1.33	0.7	58.8	44.3	471	0.5	21.8	6.0	528	2.76	19.8	1.0	<0.5	3.5	22	3.7	2.1	0.3	18	0.10
583542	Rock	1.51	0.6	65.5	3551	730	27.8	14.7	3.6	1451	2.73	388.9	1.1	4.8	5.8	20	9.1	34.2	0.3	7	0.02
583543	Rock	1.90	2.2	1470	>10000	9784	>100	9.3	2.8	>10000	23.57	1187	5.8	419.0	1.8	46	152.9	1328	0.1	<2	0.01
583544	Rock	0.68	0.9	947.3	>10000	5993	>100	5.6	1.2	6082	13.72	1355	5.5	553.2	2.2	17	59.0	>2000	0.3	12	<0.01
583545	Rock Pulp	0.09	<0.1	3.2	20.2	51	0.3	3.9	4.2	506	1.73	1.1	2.0	<0.5	3.7	45	<0.1	2.0	<0.1	36	0.42
583546	Rock Pulp	0.10	10.5	2697	>10000	5383	>100	9.2	10.2	812	3.21	335.9	0.4	242.4	0.6	77	65.0	577.1	1.1	20	2.24
583547	Rock	1.63	0.6	98.1	7947	2068	58.8	6.5	2.9	>10000	2.66	154.9	2.6	3.5	2.9	18	116.6	34.1	<0.1	4	0.03
583548	Rock	2.80	0.5	15.9	911.5	496	16.3	7.4	3.4	2150	1.16	44.6	0.5	1.8	2.6	9	21.4	33.5	<0.1	2	<0.01
583549	Rock	2.43	0.6	25.8	131.2	2363	2.3	31.6	9.4	4646	1.91	30.2	0.4	<0.5	5.7	22	32.7	8.0	<0.1	5	0.12
583550	Rock	2.50	0.1	6.9	63.3	510	2.2	6.7	2.4	971	0.50	10.9	0.1	0.5	1.3	5	8.4	7.5	<0.1	<2	0.04
583551	Rock	1.92	0.5	21.0	106.5	1067	3.0	14.1	3.0	1787	1.29	52.1	0.6	<0.5	2.8	11	23.9	11.3	<0.1	3	0.03
583552	Rock	1.92	0.7	17.2	120.0	1085	1.9	18.4	4.3	1490	1.49	57.9	0.6	<0.5	5.0	96	16.1	7.3	<0.1	3	1.91
583553	Rock	2.20	0.2	7.5	404.3	224	5.6	1.3	0.9	80	0.76	171.8	0.1	702.9	0.8	7	7.6	10.7	3.8	<2	0.01
583554	Rock	2.22	0.1	2.6	104.3	113	2.1	0.9	0.5	33	0.43	111.4	<0.1	8.6	0.8	7	3.5	5.7	0.5	<2	<0.01
583555	Rock	4.46	0.2	5.3	58.5	155	0.9	2.9	0.7	70	0.84	952.6	0.2	20.8	2.0	23	1.0	3.0	<0.1	<2	0.02
583556	Rock	2.21	0.1	4.0	22.5	107	0.3	2.0	0.8	196	0.45	146.4	0.2	30.4	1.2	7	1.9	2.0	<0.1	<2	0.02
583557	Rock	3.32	0.1	6.8	81.4	93	0.8	2.0	0.5	141	0.45	264.7	0.2	7.8	1.5	13	2.2	2.3	<0.1	<2	0.02
583558	Rock	2.99	0.1	3.7	4.2	176	<0.1	4.3	1.3	288	0.42	47.6	0.2	2.3	1.7	4	1.9	0.8	<0.1	<2	0.02
583559	Rock	1.18	0.1	4.1	9.2	44	0.2	1.4	0.6	25	0.40	82.0	0.1	<0.5	1.6	6	0.4	1.1	<0.1	<2	<0.01
583560	Rock	1.37	<0.1	3.3	8.0	38	0.2	1.4	0.6	21	0.35	78.1	<0.1	<0.5	1.6	5	0.5	1.0	<0.1	<2	<0.01
583561	Rock	3.33	0.2	5.6	24.0	38	0.6	1.5	0.7	24	0.36	118.8	0.1	<0.5	1.7	6	0.6	2.4	<0.1	<2	<0.01
583562	Rock	1.26	0.2	30.0	4037	491	17.2	2.5	2.7	939	2.01	81.1	0.5	5.2	4.4	22	3.5	17.8	<0.1	3	<0.01
583563	Rock	2.37	0.3	8.2	449.1	169	5.9	1.3	0.6	51	1.05	98.8	0.5	1.0	3.4	9	4.9	11.9	<0.1	4	<0.01
583564	Rock	2.71	<0.1	2.4	117.8	47	2.4	0.6	0.5	22	0.34	58.2	<0.1	2.0	1.0	3	1.7	6.9	<0.1	<2	<0.01
583565	Rock	1.68	0.1	8.1	255.0	204	4.5	1.1	1.1	133	1.03	160.4	0.2	5.5	1.4	3	4.5	23.4	<0.1	<2	<0.01
583566	Rock	0.84	1.7	615.6	>10000	>10000	>100	6.6	2.1	>10000	27.38	338.8	4.0	348.0	2.6	43	435.0	655.1	<0.1	<2	0.01
583567	Rock Pulp	0.09	1030	>10000	3198	4652	>100	34.5	14.4	942	2.90	185.4	2.5	1662	1.0	142	188.1	641.0	3.1	29	6.06
583568	Rock Pulp	0.08	0.5	10.4	6.3	52	0.3	4.1	4.5	533	1.87	<0.5	2.4	<0.5	3.8	52	0.1	0.4	<0.1	38	0.47
583569	Rock	1.25	0.3	17.7	1824	501	34.0	0.9	0.8	482	1.85	412.4	0.3	12.6	1.2	3	2.6	36.4	<0.1	<2	<0.01
583570	Rock	3.92	0.1	4.2	233.3	92	10.7	0.6	0.3	237	0.31	33.6	<0.1	5.0	0.7	1	1.3	8.7	<0.1	<2	<0.01

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	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	G6Gr	7AR
	Analyte	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Ag	Cu
	Unit	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	gm/t	%
	MDL	0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	50	0.001
583541	Rock	0.054	10	15	0.36	296	0.001	2	0.85	0.008	0.11	<0.1	<0.01	1.8	<0.1	0.09	2	0.5	<0.2		N.A.
583542	Rock	0.027	15	8	0.06	104	<0.001	5	0.32	0.008	0.13	0.1	0.15	1.2	0.2	0.09	<1	0.6	<0.2		N.A.
583543	Rock	0.028	2	3	<0.01	50	<0.001	2	0.27	<0.001	0.05	<0.1	7.10	2.6	0.6	0.44	3	2.4	<0.2	1630	0.164
583544	Rock	0.056	3	6	<0.01	43	<0.001	9	0.31	<0.001	0.04	0.3	17.16	2.7	0.4	0.22	3	6.8	<0.2	1862	0.102
583545	Rock Pulp	0.080	5	32	0.58	236	0.129	3	0.82	0.029	0.49	<0.1	0.03	1.6	0.4	<0.05	4	<0.5	<0.2		N.A.
583546	Rock Pulp	0.044	3	15	0.70	103	0.066	1	0.89	0.028	0.20	0.3	1.03	1.0	0.2	1.54	3	3.4	<0.2	2191	0.279
583547	Rock	0.072	9	8	<0.01	57	<0.001	2	0.19	0.004	0.07	0.1	0.27	1.2	0.3	<0.05	<1	1.0	<0.2		0.008
583548	Rock	0.028	10	13	<0.01	50	<0.001	1	0.11	0.004	0.05	<0.1	0.19	0.4	<0.1	<0.05	<1	<0.5	<0.2		N.A.
583549	Rock	0.083	18	21	0.02	117	<0.001	2	0.26	0.010	0.13	0.9	0.04	1.3	0.1	0.07	<1	1.1	<0.2		N.A.
583550	Rock	0.017	5	23	<0.01	33	<0.001	2	0.06	0.002	0.03	<0.1	0.05	0.2	<0.1	<0.05	<1	<0.5	<0.2		N.A.
583551	Rock	0.039	8	13	<0.01	45	<0.001	1	0.15	0.004	0.06	<0.1	0.02	0.6	<0.1	<0.05	<1	0.5	<0.2		N.A.
583552	Rock	0.076	13	18	0.03	67	<0.001	2	0.20	0.007	0.10	0.2	0.03	1.0	0.1	<0.05	<1	0.6	<0.2		N.A.
583553	Rock	0.008	3	15	<0.01	27	<0.001	1	0.04	0.002	0.02	<0.1	0.03	0.2	<0.1	<0.05	<1	0.9	<0.2		N.A.
583554	Rock	0.004	4	17	<0.01	28	<0.001	<1	0.04	0.002	0.02	<0.1	0.03	0.1	<0.1	<0.05	<1	<0.5	<0.2		N.A.
583555	Rock	0.016	6	20	<0.01	29	<0.001	<1	0.06	0.001	0.03	0.2	<0.01	0.3	<0.1	<0.05	<1	<0.5	<0.2		N.A.
583556	Rock	0.014	5	14	<0.01	23	<0.001	<1	0.06	0.001	0.03	<0.1	<0.01	0.2	<0.1	<0.05	<1	<0.5	<0.2		N.A.
583557	Rock	0.016	5	15	<0.01	24	<0.001	<1	0.06	0.001	0.03	<0.1	0.02	0.2	<0.1	<0.05	<1	<0.5	<0.2		N.A.
583558	Rock	0.015	5	22	<0.01	17	<0.001	<1	0.05	0.001	0.02	<0.1	0.01	0.2	<0.1	<0.05	<1	<0.5	<0.2		N.A.
583559	Rock	0.015	6	17	<0.01	24	<0.001	1	0.06	0.002	0.03	<0.1	<0.01	0.2	<0.1	<0.05	<1	<0.5	<0.2		N.A.
583560	Rock	0.016	6	15	<0.01	23	<0.001	<1	0.05	0.002	0.03	<0.1	0.01	0.2	<0.1	<0.05	<1	<0.5	<0.2		N.A.
583561	Rock	0.013	6	21	<0.01	25	<0.001	1	0.06	0.002	0.03	<0.1	0.01	0.2	<0.1	<0.05	<1	<0.5	<0.2		N.A.
583562	Rock	0.070	7	13	<0.01	32	<0.001	3	0.12	0.004	0.06	0.1	0.16	0.7	0.1	0.12	<1	0.8	<0.2		N.A.
583563	Rock	0.027	13	16	<0.01	50	<0.001	1	0.15	0.004	0.08	0.2	0.04	0.5	<0.1	<0.05	<1	0.9	<0.2		N.A.
583564	Rock	0.005	5	17	<0.01	14	<0.001	<1	0.04	<0.001	0.02	<0.1	0.04	0.1	<0.1	<0.05	<1	<0.5	<0.2		N.A.
583565	Rock	0.013	5	20	<0.01	19	<0.001	1	0.05	0.001	0.02	<0.1	0.05	0.2	<0.1	<0.05	<1	<0.5	<0.2		N.A.
583566	Rock	0.050	1	7	<0.01	9	<0.001	1	0.21	<0.001	<0.01	<0.1	5.58	2.5	0.1	0.11	3	4.3	<0.2	447	0.072
583567	Rock Pulp	0.038	3	21	0.54	52	0.046	2	0.81	0.026	0.11	1.0	4.72	1.6	0.2	0.99	3	4.3	0.8	736	1.745
583568	Rock Pulp	0.086	6	33	0.61	248	0.140	2	0.86	0.034	0.51	<0.1	0.01	1.8	0.4	<0.05	5	<0.5	<0.2		N.A.
583569	Rock	0.013	3	12	<0.01	16	<0.001	<1	0.06	0.001	0.02	<0.1	0.10	0.2	<0.1	<0.05	<1	<0.5	<0.2		N.A.
583570	Rock	0.002	4	19	<0.01	19	<0.001	<1	0.04	0.001	0.02	<0.1	0.05	0.1	<0.1	<0.05	<1	<0.5	<0.2		N.A.

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Project: Keno Lightning
Report Date: December 19, 2011

CERTIFICATE OF ANALYSIS WHI11001764.2

	Method	7AR	7AR	G6	7AR.1
	Analyte	Pb	Zn	Au	Pb
	Unit	%	%	gm/t	%
	MDL	0.01	0.01	0.005	0.01
583541	Rock	N.A.	N.A.	N.A.	
583542	Rock	N.A.	N.A.	N.A.	
583543	Rock	>4	1.05	N.A.	11.89
583544	Rock	3.23	0.67	1.932	
583545	Rock Pulp	N.A.	N.A.	N.A.	
583546	Rock Pulp	1.92	0.60	N.A.	
583547	Rock	0.79	0.21	N.A.	
583548	Rock	N.A.	N.A.	N.A.	
583549	Rock	N.A.	N.A.	N.A.	
583550	Rock	N.A.	N.A.	N.A.	
583551	Rock	N.A.	N.A.	N.A.	
583552	Rock	N.A.	N.A.	N.A.	
583553	Rock	N.A.	N.A.	0.082	
583554	Rock	N.A.	N.A.	N.A.	
583555	Rock	N.A.	N.A.	N.A.	
583556	Rock	N.A.	N.A.	N.A.	
583557	Rock	N.A.	N.A.	N.A.	
583558	Rock	N.A.	N.A.	N.A.	
583559	Rock	N.A.	N.A.	N.A.	
583560	Rock	N.A.	N.A.	N.A.	
583561	Rock	N.A.	N.A.	N.A.	
583562	Rock	N.A.	N.A.	N.A.	
583563	Rock	N.A.	N.A.	N.A.	
583564	Rock	N.A.	N.A.	N.A.	
583565	Rock	N.A.	N.A.	N.A.	
583566	Rock	2.34	3.07	N.A.	
583567	Rock Pulp	0.34	0.51	1.627	
583568	Rock Pulp	N.A.	N.A.	N.A.	
583569	Rock	N.A.	N.A.	N.A.	
583570	Rock	N.A.	N.A.	N.A.	

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Project: Keno Lightning
Report Date: December 19, 2011

CERTIFICATE OF ANALYSIS WHI11001764.2

	Method	WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%
	MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01
583571	Rock	3.14	0.1	1.6	206.4	39	7.5	0.5	0.2	22	0.25	26.3	<0.1	<0.5	0.7	3	0.1	10.3	<0.1	<2	<0.01
583572	Rock	2.60	0.2	3.2	382.2	81	4.6	0.8	0.3	50	0.56	71.4	<0.1	0.6	1.1	4	0.3	14.7	<0.1	<2	<0.01
583573	Rock	2.01	0.3	9.3	1470	750	6.7	2.8	0.9	954	2.55	167.2	0.9	7.0	3.1	12	8.2	19.1	<0.1	3	<0.01
583574	Rock	1.57	2.1	194.1	>10000	>10000	>100	4.5	1.5	>10000	29.94	1154	1.7	521.1	0.5	9	640.2	1523	0.1	5	0.11
583575	Rock	0.87	1.1	31.6	524.4	3997	9.0	11.8	13.2	>10000	6.79	569.2	9.1	22.9	3.5	45	85.7	229.8	<0.1	9	0.02
583576	Rock	1.50	1.3	65.0	3232	9655	34.3	4.9	2.9	>10000	20.97	2429	2.3	601.9	1.0	12	284.6	51.2	<0.1	8	0.04
583577	Rock	0.09	1022	>10000	3274	4882	>100	34.7	14.8	1222	3.17	188.1	2.5	1576	1.0	146	191.2	625.9	3.1	30	6.13
583578	Rock	0.08	0.8	13.5	40.2	89	0.7	4.8	4.9	733	2.47	12.9	2.4	6.9	4.5	79	2.5	1.9	<0.1	42	0.58
583579	Rock	1.55	2.8	58.4	676.8	355	10.0	1.2	0.7	175	1.20	459.7	0.5	36.3	1.7	5	13.3	11.7	<0.1	<2	0.02
583580	Rock	1.54	0.2	8.4	870.7	520	10.2	1.2	0.9	200	1.60	578.0	0.6	37.9	1.5	4	13.4	12.4	<0.1	<2	<0.01
583581	Rock	1.99	1.1	22.2	139.1	613	1.5	19.9	5.4	2669	1.57	23.3	0.4	0.8	2.9	122	8.0	4.4	<0.1	3	2.56
583582	Rock	2.31	0.2	5.0	277.0	520	1.4	1.3	0.4	2518	0.92	46.5	0.3	6.0	1.1	5	8.6	2.0	<0.1	<2	0.02
583583	Rock	1.51	0.6	25.7	65.5	2241	1.4	7.9	4.9	5997	7.12	259.2	2.1	10.9	3.4	30	24.8	4.8	<0.1	6	0.03
583584	Rock	0.75	0.2	12.5	43.5	997	0.9	6.7	1.2	574	3.38	237.3	1.1	12.2	2.5	5	8.9	2.6	<0.1	3	<0.01
583585	Rock	1.58	0.7	30.1	454.2	2827	6.3	11.5	6.6	>10000	10.26	1004	3.7	120.9	2.0	21	60.4	20.4	<0.1	5	0.02
583586	Rock	2.69	0.6	12.8	715.3	1801	7.9	4.6	1.7	>10000	8.75	2331	1.7	216.9	2.4	12	52.1	22.9	<0.1	5	0.02
583587	Rock	2.28	0.3	16.0	137.7	338	2.3	7.6	2.8	619	1.23	201.1	0.7	6.1	2.3	11	9.4	5.3	<0.1	4	0.04
583588	Rock	3.72	0.5	33.6	124.2	450	3.1	10.4	2.9	403	1.68	133.7	0.8	1.2	4.1	17	10.1	11.3	<0.1	5	0.07
583589	Rock	2.43	0.8	53.5	117.3	237	2.3	11.2	2.5	748	1.49	372.1	0.8	0.8	5.0	13	3.9	10.0	0.3	4	0.03
583590	Rock	2.01	0.2	17.8	30.7	28	0.5	1.3	0.6	365	0.46	286.6	0.2	2.2	1.5	4	0.6	1.7	<0.1	<2	0.02
583591	Rock	2.62	0.5	22.4	575.6	620	4.9	6.3	1.9	341	2.72	440.6	0.8	2.6	3.9	9	10.4	15.2	<0.1	4	0.01
583592	Rock	1.53	1.1	629.9	>10000	8995	>100	20.0	4.0	>10000	18.83	1737	14.5	200.1	2.4	23	87.0	456.1	0.2	6	0.01
583593	Rock	2.65	1.4	146.9	7089	4297	58.2	19.6	6.0	>10000	8.75	825.2	17.1	4.6	4.9	18	77.7	20.8	0.1	8	0.02
583594	Rock	1.03	0.6	36.6	2573	3153	36.7	3.8	1.0	>10000	10.47	1335	1.7	174.7	0.7	4	61.4	36.5	<0.1	4	<0.01
583595	Rock Pulp	0.09	1052	>10000	3448	4823	>100	36.3	15.6	1142	3.11	192.8	2.5	1722	1.0	144	196.6	674.9	3.1	29	6.32
583596	Rock Pulp	0.08	0.4	7.0	4.4	51	0.2	4.2	4.5	533	1.84	<0.5	2.2	<0.5	3.8	49	<0.1	0.3	<0.1	36	0.46
583597	Rock	2.54	0.2	10.9	1069	274	35.7	1.2	0.5	160	1.08	305.0	0.3	54.8	1.1	4	3.3	9.6	<0.1	<2	<0.01
583598	Rock	1.46	0.5	13.6	305.3	135	3.7	1.4	0.6	234	1.28	314.0	0.4	14.7	4.0	12	10.4	4.1	0.1	3	<0.01
583599	Rock	1.26	0.3	7.3	175.7	55	2.0	0.9	0.5	61	0.65	92.6	0.2	3.0	1.4	8	3.2	2.0	<0.1	<2	<0.01
583600	Rock	1.03	0.3	6.1	174.8	46	1.7	0.8	0.7	51	0.58	80.5	0.2	1.8	1.5	9	2.7	1.9	<0.1	<2	<0.01

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Project: Keno Lightning
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CERTIFICATE OF ANALYSIS WHI11001764.2

Method		1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	G6Gr	7AR
Analyte		P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Ag	Cu
Unit		%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	gm/t	%
MDL		0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	50	0.001
583571	Rock	0.003	5	16	<0.01	16	<0.001	<1	0.04	0.001	0.02	<0.1	0.02	<0.1	<0.1	<0.05	<1	<0.5	<0.2		N.A.
583572	Rock	0.007	5	17	<0.01	16	<0.001	<1	0.04	0.001	0.02	<0.1	0.02	<0.1	<0.1	<0.05	<1	<0.5	<0.2		N.A.
583573	Rock	0.050	9	24	<0.01	37	<0.001	3	0.12	0.003	0.05	<0.1	0.21	0.4	<0.1	<0.05	<1	0.8	<0.2		N.A.
583574	Rock	0.009	<1	4	0.41	9	<0.001	3	0.09	<0.001	0.01	<0.1	2.52	0.6	0.2	0.80	3	6.2	<0.2	119	0.016
583575	Rock	0.061	7	12	0.02	46	<0.001	3	0.42	0.004	0.08	0.2	0.79	1.1	0.2	0.11	1	4.8	<0.2		N.A.
583576	Rock	0.018	2	10	0.14	15	<0.001	2	0.10	0.001	0.02	0.3	1.24	0.7	<0.1	0.33	1	2.3	<0.2		0.005
583577	Rock	0.039	3	21	0.56	69	0.041	3	0.96	0.041	0.16	1.1	4.69	1.8	0.2	0.99	3	4.3	1.1	741	1.755
583578	Rock	0.083	10	33	0.62	271	0.161	2	1.14	0.124	0.59	<0.1	0.02	2.3	0.4	<0.05	6	<0.5	<0.2		N.A.
583579	Rock	0.010	6	13	<0.01	18	<0.001	1	0.08	0.002	0.04	<0.1	0.07	0.2	<0.1	<0.05	<1	<0.5	<0.2		N.A.
583580	Rock	0.010	5	12	<0.01	17	<0.001	<1	0.07	0.002	0.03	<0.1	0.07	0.2	<0.1	0.06	<1	0.5	<0.2		N.A.
583581	Rock	0.049	9	21	0.03	44	<0.001	<1	0.13	0.006	0.06	0.2	<0.01	0.6	<0.1	<0.05	<1	<0.5	<0.2		N.A.
583582	Rock	0.011	4	16	0.02	14	<0.001	<1	0.07	0.002	0.02	<0.1	0.03	0.3	<0.1	0.12	<1	<0.5	<0.2		N.A.
583583	Rock	0.093	6	13	<0.01	30	<0.001	2	0.25	0.004	0.06	0.2	0.07	1.1	0.1	<0.05	<1	0.9	<0.2		N.A.
583584	Rock	0.059	5	12	<0.01	26	<0.001	<1	0.15	0.002	0.03	0.1	<0.01	0.3	<0.1	<0.05	<1	<0.5	<0.2		N.A.
583585	Rock	0.038	3	13	0.02	26	<0.001	2	0.28	0.003	0.05	0.3	0.05	0.9	<0.1	0.21	<1	1.7	<0.2		N.A.
583586	Rock	0.033	4	18	0.03	25	<0.001	4	0.14	0.004	0.05	0.2	0.10	0.6	<0.1	0.15	<1	1.8	<0.2		N.A.
583587	Rock	0.030	6	16	0.05	32	0.002	2	0.17	0.005	0.06	<0.1	0.01	0.6	<0.1	0.15	<1	1.0	<0.2		N.A.
583588	Rock	0.059	11	18	0.02	61	<0.001	2	0.20	0.006	0.10	<0.1	0.02	0.9	<0.1	0.16	<1	1.8	<0.2		N.A.
583589	Rock	0.028	11	24	0.02	79	<0.001	2	0.20	0.007	0.11	<0.1	<0.01	0.7	0.1	0.63	<1	2.0	<0.2		N.A.
583590	Rock	0.018	5	17	<0.01	26	<0.001	1	0.06	0.003	0.03	<0.1	<0.01	0.2	<0.1	0.08	<1	<0.5	<0.2		N.A.
583591	Rock	0.025	10	12	0.02	45	<0.001	2	0.17	0.005	0.09	<0.1	0.01	0.9	0.1	0.12	<1	0.7	<0.2		N.A.
583592	Rock	0.049	3	7	<0.01	32	<0.001	2	0.95	0.002	0.05	0.5	3.74	3.3	0.2	0.25	1	13.8	<0.2	401	0.067
583593	Rock	0.105	10	12	0.01	66	<0.001	2	0.75	0.008	0.11	25.8	0.52	1.9	0.2	0.08	1	2.4	<0.2		0.014
583594	Rock	0.019	1	9	<0.01	14	<0.001	2	0.09	0.001	0.02	0.1	0.48	0.3	0.1	0.09	<1	1.1	<0.2		N.A.
583595	Rock Pulp	0.041	3	21	0.56	51	0.041	5	0.84	0.027	0.11	1.1	4.90	1.6	0.2	1.01	3	4.9	1.0	771	1.777
583596	Rock Pulp	0.086	6	33	0.61	250	0.138	2	0.83	0.031	0.51	<0.1	<0.01	1.7	0.4	<0.05	5	<0.5	<0.2		N.A.
583597	Rock	0.009	4	15	<0.01	18	<0.001	<1	0.06	0.002	0.02	0.4	0.15	0.1	<0.1	<0.05	<1	<0.5	<0.2		N.A.
583598	Rock	0.028	13	14	<0.01	68	<0.001	<1	0.14	0.005	0.08	0.1	0.02	0.3	<0.1	<0.05	<1	<0.5	<0.2		N.A.
583599	Rock	0.016	5	14	<0.01	25	<0.001	<1	0.06	0.002	0.03	<0.1	<0.01	0.2	<0.1	<0.05	<1	<0.5	<0.2		N.A.
583600	Rock	0.015	6	10	<0.01	32	<0.001	<1	0.07	0.003	0.04	<0.1	<0.01	0.2	<0.1	<0.05	<1	<0.5	<0.2		N.A.

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	Method	7AR	7AR	G6	7AR.1
	Analyte	Pb	Zn	Au	Pb
	Unit	%	%	gm/t	%
	MDL	0.01	0.01	0.005	0.01
583571	Rock	N.A.	N.A.	N.A.	
583572	Rock	N.A.	N.A.	N.A.	
583573	Rock	N.A.	N.A.	N.A.	
583574	Rock	1.76	0.96	0.486	
583575	Rock	N.A.	N.A.	N.A.	
583576	Rock	0.32	0.88	0.718	
583577	Rock	0.34	0.53	1.411	
583578	Rock	N.A.	N.A.	N.A.	
583579	Rock	N.A.	N.A.	N.A.	
583580	Rock	N.A.	N.A.	N.A.	
583581	Rock	N.A.	N.A.	N.A.	
583582	Rock	N.A.	N.A.	N.A.	
583583	Rock	N.A.	N.A.	N.A.	
583584	Rock	N.A.	N.A.	N.A.	
583585	Rock	N.A.	N.A.	N.A.	
583586	Rock	N.A.	N.A.	N.A.	
583587	Rock	N.A.	N.A.	N.A.	
583588	Rock	N.A.	N.A.	N.A.	
583589	Rock	N.A.	N.A.	N.A.	
583590	Rock	N.A.	N.A.	N.A.	
583591	Rock	N.A.	N.A.	N.A.	
583592	Rock	2.95	1.02	N.A.	
583593	Rock	0.68	0.45	N.A.	
583594	Rock	N.A.	N.A.	N.A.	
583595	Rock Pulp	0.34	0.53	1.492	
583596	Rock Pulp	N.A.	N.A.	N.A.	
583597	Rock	N.A.	N.A.	N.A.	
583598	Rock	N.A.	N.A.	N.A.	
583599	Rock	N.A.	N.A.	N.A.	
583600	Rock	N.A.	N.A.	N.A.	

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Client: **Monster Mining Corp.**
750 - 580 Hornby Street
Vancouver BC V6C 3B6 Canada

Project: Keno Lightning
Report Date: December 19, 2011

CERTIFICATE OF ANALYSIS WHI11001764.2

Method		WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca
Unit		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%
MDL		0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01
114051	Rock	1.23	0.6	28.3	65.5	350	5.3	5.9	1.6	96	1.98	727.8	0.6	13.7	5.7	17	1.0	31.8	0.2	6	0.02
114052	Rock	2.17	1.7	138.7	5562	4947	69.0	7.6	2.3	>10000	14.60	899.3	2.2	67.9	5.1	31	119.6	84.0	0.2	10	0.02
114053	Rock	3.14	0.6	115.7	755.6	2000	54.0	2.3	0.8	9414	4.63	304.1	0.7	44.3	2.4	8	58.2	36.8	<0.1	5	<0.01
114054	Rock	1.50	1.1	236.8	4726	5416	86.0	14.5	4.1	>10000	12.55	1347	7.6	85.2	2.1	12	78.2	87.7	<0.1	6	0.01
114055	Rock	1.40	0.5	39.0	3641	5132	23.6	7.9	2.2	9519	10.68	949.4	2.2	57.9	2.1	8	47.4	19.3	<0.1	5	0.01
114056	Rock	2.35	1.0	13.2	4888	4255	16.5	7.7	2.0	>10000	15.33	705.7	1.8	83.0	0.9	2	129.9	44.8	<0.1	4	0.03
114057	Rock	3.01	0.2	5.6	3717	1354	13.4	2.1	1.4	2008	4.32	1313	0.2	287.1	1.0	5	5.1	83.5	<0.1	2	<0.01
114058	Rock	2.32	0.4	2.8	905.8	205	4.8	1.0	0.4	443	1.52	465.7	0.2	6.8	2.1	8	5.5	16.0	<0.1	3	<0.01
114059	Rock	2.82	0.5	3.3	69.2	200	1.1	1.1	0.8	1519	0.72	55.7	0.4	4.7	2.3	5	4.0	2.3	0.1	<2	0.01
114060	Rock	3.18	0.4	2.2	19.7	39	0.8	2.3	0.4	23	0.34	30.2	0.1	1.5	1.4	4	0.7	2.4	<0.1	<2	<0.01
114061	Rock	3.26	0.3	9.1	17.6	224	0.3	5.9	1.3	291	0.65	33.8	0.3	<0.5	1.7	5	8.7	2.0	<0.1	<2	0.03
114062	Rock	2.30	1.1	24.4	151.3	265	4.5	8.3	1.4	65	1.88	245.9	1.1	<0.5	4.8	18	0.9	21.3	0.1	5	0.01
114063	Rock	2.60	0.6	22.9	1788	1550	11.3	4.3	0.9	2846	2.48	136.6	0.7	2.7	2.6	7	4.8	14.3	<0.1	2	<0.01
114064	Rock	1.97	0.5	40.7	2513	1257	>100	3.7	1.3	4896	2.45	98.2	0.9	5.9	1.9	5	13.2	55.5	<0.1	<2	<0.01
114065	Rock	1.78	1.0	15.4	1668	375	11.7	2.3	0.7	292	1.45	126.8	0.5	5.4	2.6	5	4.6	13.7	<0.1	3	<0.01
114066	Rock	1.37	0.6	148.7	>10000	1289	>100	3.6	5.7	3003	2.90	401.7	0.9	32.4	3.2	27	56.4	166.7	<0.1	3	<0.01
114067	Rock	2.48	0.6	20.1	136.5	277	20.9	4.1	1.2	119	1.65	61.6	0.4	4.5	4.5	10	1.1	6.3	<0.1	7	<0.01
114068	Rock	3.08	0.5	4.9	56.6	48	1.8	2.9	1.0	63	0.74	12.8	0.2	1.4	2.4	7	0.4	3.0	<0.1	4	<0.01
114069	Rock Pulp	0.13	0.2	2.8	8.6	50	0.1	4.3	4.6	619	2.22	0.9	2.4	<0.5	4.7	88	<0.1	0.1	<0.1	42	0.66
114070	Rock Pulp	0.08	826.6	>10000	3035	4714	>100	31.0	12.7	936	2.78	166.2	2.1	1507	0.8	113	175.4	568.6	2.2	25	5.75
114071	Rock	2.81	0.4	3.5	20.2	27	0.8	2.6	1.0	35	0.59	12.1	0.1	<0.5	1.6	8	0.2	3.2	<0.1	3	<0.01
114072	Rock	2.32	0.3	3.4	10.8	40	0.4	2.9	0.9	43	0.56	10.4	0.1	<0.5	1.7	5	0.1	2.1	<0.1	4	<0.01
114073	Rock	2.52	0.4	11.9	11.4	58	0.5	5.5	1.3	55	0.82	11.5	0.2	<0.5	2.4	7	0.3	2.6	<0.1	3	<0.01
114074	Rock	2.35	1.1	46.7	149.1	260	6.8	18.9	2.8	145	3.09	755.1	1.5	9.6	7.9	42	1.4	11.4	0.1	14	0.06
114075	Rock	2.85	1.2	6.6	37.8	66	4.7	2.6	0.7	36	0.72	201.0	0.3	10.2	3.4	16	0.4	6.3	<0.1	4	0.01
114076	Rock	1.55	0.8	18.6	211.3	215	11.0	8.2	1.6	48	1.90	334.0	0.8	9.1	4.7	29	1.0	13.0	<0.1	7	0.03
114077	Rock	2.88	1.1	138.5	6777	1230	>100	5.9	1.0	2427	3.52	373.9	1.3	16.5	5.6	24	5.5	100.6	<0.1	5	<0.01
114078	Rock	2.97	0.4	15.9	841.8	436	9.0	2.0	0.5	283	1.33	72.0	0.5	1.2	1.8	6	1.5	6.4	<0.1	2	<0.01
114079	Rock	2.56	0.4	8.0	676.6	244	5.5	1.2	0.5	100	1.23	145.1	0.4	2.3	2.1	4	0.9	5.6	<0.1	2	<0.01
114080	Rock	1.52	1.3	11.1	1318	207	17.3	0.7	0.1	159	1.07	98.3	0.4	<0.5	3.6	7	1.1	16.5	<0.1	4	<0.01

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CERTIFICATE OF ANALYSIS WHI11001764.2

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	G6Gr	7AR
	Analyte	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Ag	Cu
	Unit	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	gm/t	%
	MDL	0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	50	0.001
114051	Rock	0.018	20	9	0.01	94	<0.001	4	0.25	0.008	0.15	0.1	<0.01	0.9	0.2	<0.05	<1	<0.5	<0.2		N.A.
114052	Rock	0.032	5	9	0.03	65	<0.001	3	0.26	0.005	0.11	0.3	0.84	2.0	0.3	0.10	2	2.3	<0.2		0.012
114053	Rock	0.016	6	13	0.01	44	<0.001	<1	0.15	0.004	0.07	0.3	0.51	0.5	0.1	<0.05	<1	0.7	<0.2		N.A.
114054	Rock	0.047	4	10	0.05	37	0.001	2	0.40	0.004	0.06	4.7	1.72	1.2	0.2	0.11	1	4.5	<0.2		0.021
114055	Rock	0.034	4	12	0.04	37	<0.001	2	0.30	0.004	0.06	0.9	1.14	0.5	0.1	0.22	<1	1.8	<0.2		0.003
114056	Rock	0.014	2	12	0.13	13	<0.001	<1	0.16	<0.001	0.02	0.6	0.30	0.3	<0.1	0.17	1	1.2	<0.2		N.A.
114057	Rock	0.014	4	15	<0.01	19	<0.001	1	0.06	0.002	0.03	0.8	0.33	0.1	<0.1	0.10	<1	<0.5	<0.2		N.A.
114058	Rock	0.011	9	20	<0.01	32	<0.001	1	0.11	0.003	0.06	0.4	0.03	0.2	<0.1	<0.05	<1	0.6	<0.2		N.A.
114059	Rock	0.076	8	16	0.02	38	0.001	2	0.11	0.003	0.05	<0.1	0.03	0.4	<0.1	<0.05	<1	0.9	<0.2		N.A.
114060	Rock	0.017	6	17	<0.01	28	<0.001	2	0.08	0.003	0.05	<0.1	<0.01	0.3	<0.1	<0.05	<1	0.6	<0.2		N.A.
114061	Rock	0.025	5	17	0.02	23	<0.001	2	0.10	0.002	0.04	<0.1	<0.01	0.3	<0.1	<0.05	<1	<0.5	<0.2		N.A.
114062	Rock	0.050	11	14	<0.01	53	<0.001	3	0.24	0.004	0.10	0.1	0.03	0.7	0.1	<0.05	<1	1.4	<0.2		N.A.
114063	Rock	0.035	6	13	<0.01	36	<0.001	5	0.14	0.002	0.06	0.2	0.14	0.4	0.1	0.08	<1	0.8	<0.2		N.A.
114064	Rock	0.021	6	14	<0.01	36	<0.001	3	0.15	0.003	0.07	0.1	0.10	0.4	0.1	0.07	<1	1.0	<0.2	116	N.A.
114065	Rock	0.021	9	17	<0.01	42	<0.001	4	0.15	0.004	0.08	0.1	0.16	0.4	0.2	0.07	<1	0.7	<0.2		N.A.
114066	Rock	0.029	5	10	<0.01	37	<0.001	3	0.27	0.002	0.08	0.2	0.94	0.5	0.4	0.37	<1	3.7	<0.2	221	0.015
114067	Rock	0.035	16	26	<0.01	68	<0.001	2	0.22	0.008	0.12	0.1	0.03	0.5	0.1	0.05	<1	1.0	<0.2		N.A.
114068	Rock	0.014	10	17	<0.01	57	<0.001	1	0.13	0.007	0.10	<0.1	0.02	0.3	<0.1	0.08	<1	0.5	<0.2		N.A.
114069	Rock Pulp	0.084	12	35	0.64	282	0.159	2	1.29	0.162	0.65	<0.1	<0.01	2.6	0.4	<0.05	6	<0.5	<0.2		N.A.
114070	Rock Pulp	0.033	2	17	0.49	44	0.030	2	0.71	0.024	0.11	0.9	4.11	1.2	0.2	0.89	2	4.5	0.9	773	1.758
114071	Rock	0.026	6	17	<0.01	33	<0.001	<1	0.09	0.006	0.06	<0.1	0.01	0.2	0.1	0.07	<1	<0.5	<0.2		N.A.
114072	Rock	0.011	6	17	<0.01	28	<0.001	<1	0.09	0.005	0.06	<0.1	0.01	0.2	<0.1	<0.05	<1	<0.5	<0.2		N.A.
114073	Rock	0.019	8	16	<0.01	37	<0.001	2	0.13	0.006	0.08	<0.1	<0.01	0.4	<0.1	0.06	<1	<0.5	<0.2		N.A.
114074	Rock	0.067	14	17	0.27	69	<0.001	4	0.80	0.006	0.12	0.2	<0.01	1.3	0.2	0.05	2	1.6	<0.2		N.A.
114075	Rock	0.026	14	12	0.02	67	<0.001	3	0.19	0.005	0.11	0.1	<0.01	0.5	0.2	<0.05	<1	0.8	<0.2		N.A.
114076	Rock	0.046	11	17	0.08	63	<0.001	3	0.34	0.006	0.11	0.1	0.06	0.7	0.2	<0.05	<1	1.4	<0.2		N.A.
114077	Rock	0.049	10	9	<0.01	55	<0.001	2	0.28	0.004	0.10	0.4	0.75	0.6	0.2	0.19	<1	3.3	<0.2	352	0.015
114078	Rock	0.016	6	16	<0.01	29	<0.001	2	0.14	0.003	0.06	0.1	0.06	0.4	<0.1	<0.05	<1	1.3	<0.2		N.A.
114079	Rock	0.016	7	15	<0.01	37	<0.001	1	0.13	0.003	0.06	0.1	0.06	0.3	0.1	<0.05	<1	1.8	<0.2		N.A.
114080	Rock	0.018	9	8	<0.01	43	<0.001	7	0.14	0.004	0.09	0.4	0.18	0.3	0.1	0.09	<1	4.9	<0.2		N.A.

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	Method	7AR	7AR	G6	7AR.1
	Analyte	Pb	Zn	Au	Pb
	Unit	%	%	gm/t	%
	MDL	0.01	0.01	0.005	0.01
114051	Rock	N.A.	N.A.	N.A.	
114052	Rock	0.52	0.45	N.A.	
114053	Rock	N.A.	N.A.	N.A.	
114054	Rock	0.46	0.60	N.A.	
114055	Rock	0.36	0.54	N.A.	
114056	Rock	N.A.	N.A.	N.A.	
114057	Rock	N.A.	N.A.	N.A.	
114058	Rock	N.A.	N.A.	N.A.	
114059	Rock	N.A.	N.A.	N.A.	
114060	Rock	N.A.	N.A.	N.A.	
114061	Rock	N.A.	N.A.	N.A.	
114062	Rock	N.A.	N.A.	N.A.	
114063	Rock	N.A.	N.A.	N.A.	
114064	Rock	N.A.	N.A.	N.A.	
114065	Rock	N.A.	N.A.	N.A.	
114066	Rock	1.90	0.14	N.A.	
114067	Rock	N.A.	N.A.	N.A.	
114068	Rock	N.A.	N.A.	N.A.	
114069	Rock Pulp	N.A.	N.A.	N.A.	
114070	Rock Pulp	0.35	0.53	1.469	
114071	Rock	N.A.	N.A.	N.A.	
114072	Rock	N.A.	N.A.	N.A.	
114073	Rock	N.A.	N.A.	N.A.	
114074	Rock	N.A.	N.A.	N.A.	
114075	Rock	N.A.	N.A.	N.A.	
114076	Rock	N.A.	N.A.	N.A.	
114077	Rock	0.75	0.14	N.A.	
114078	Rock	N.A.	N.A.	N.A.	
114079	Rock	N.A.	N.A.	N.A.	
114080	Rock	N.A.	N.A.	N.A.	

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	Method	WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%
	MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01
114081	Rock	2.20	0.4	39.2	694.5	947	4.3	3.7	0.8	1837	2.67	121.6	1.1	1.2	1.6	4	2.1	9.8	<0.1	3	<0.01
114082	Rock	0.93	1.0	13.8	483.6	450	6.1	3.9	0.7	276	2.14	115.2	0.9	<0.5	5.9	10	1.1	6.2	<0.1	3	<0.01
114083	Rock	2.45	0.5	8.3	140.0	143	4.1	2.3	0.4	133	0.84	53.5	0.3	<0.5	3.0	7	0.5	4.9	<0.1	2	<0.01
114084	Rock	2.51	0.8	8.5	90.0	156	1.2	3.7	0.8	240	1.33	33.3	0.3	<0.5	3.9	11	0.9	3.2	<0.1	4	0.02
114085	Rock	3.55	0.4	9.3	76.0	110	3.3	2.7	0.6	104	0.85	72.5	0.2	<0.5	2.1	6	0.4	6.7	0.2	<2	<0.01
114086	Rock	2.80	0.2	2.8	49.8	58	3.1	0.7	0.2	203	0.44	46.3	<0.1	<0.5	0.9	2	0.3	4.6	<0.1	<2	<0.01
114087	Rock	1.80	0.3	7.5	35.5	89	0.6	6.4	1.2	111	0.72	49.4	0.2	0.7	1.9	9	0.3	3.2	<0.1	<2	0.21
114088	Rock	2.34	0.1	13.0	449.1	325	6.8	1.7	0.7	2440	0.90	30.9	0.2	3.9	1.1	7	7.0	10.0	<0.1	<2	<0.01
114089	Rock	2.11	0.4	7.3	230.1	600	3.9	3.0	1.7	3380	1.56	107.0	0.6	1.9	3.3	27	15.1	4.7	0.2	<2	0.03
114090	Rock	1.37	0.3	36.8	824.4	2748	17.8	3.4	1.7	>10000	3.38	88.5	0.7	7.8	2.3	22	64.1	27.0	0.1	<2	0.03
114091	Rock	3.19	0.1	5.6	227.2	643	4.6	1.6	0.9	4417	1.39	58.1	0.4	3.2	1.2	9	25.3	6.1	<0.1	<2	<0.01
113251	Rock	4.24	0.2	3.0	90.1	338	0.9	4.2	1.4	1661	0.75	100.0	0.2	9.7	1.7	5	4.1	3.2	<0.1	<2	0.06
113252	Rock	3.76	0.5	9.2	476.2	905	2.4	22.8	6.8	7600	2.81	353.2	0.7	<0.5	3.8	6	8.1	11.3	<0.1	3	0.16
113253	Rock	4.49	0.2	3.6	29.7	200	0.6	6.2	2.3	533	0.65	132.1	0.2	5.4	1.6	6	1.0	3.5	<0.1	<2	0.22
113254	Rock	3.43	0.3	7.6	42.6	244	0.8	13.8	4.3	806	1.12	66.8	0.3	<0.5	3.2	11	1.7	5.7	<0.1	4	0.35
113255	Rock	5.55	0.3	52.5	664.5	3328	24.2	66.4	25.6	>10000	6.15	182.5	0.2	18.8	0.6	36	35.8	31.9	0.1	17	2.44
113256	Rock	3.71	1.3	4.9	63.1	2418	1.5	23.8	9.2	>10000	30.56	1031	1.8	75.1	1.1	60	23.8	32.9	0.1	<2	0.74
113257	Rock	4.56	2.0	2.7	38.6	726	0.5	10.3	4.1	>10000	4.51	356.2	0.5	5.1	2.3	23	8.5	4.7	<0.1	<2	0.14
113258	Rock Pulp	0.09	0.1	1.7	1.7	47	<0.1	4.3	4.3	502	1.82	1.2	2.2	<0.5	3.8	43	<0.1	<0.1	<0.1	36	0.43
113259	Rock Pulp	0.07	4.0	165.3	11.0	53	>100	8.2	11.0	490	2.91	145.6	1.0	9166	3.1	81	0.3	5.1	10.5	85	1.57
113260	Rock	2.96	1.1	14.6	1128	4187	10.6	40.0	15.8	>10000	4.91	92.8	0.6	3.4	3.7	12	44.8	11.7	0.3	7	0.37
113261	Rock	4.40	0.1	1.6	2.1	21	0.1	2.2	0.8	162	0.49	519.3	0.1	105.4	1.1	14	<0.1	1.3	<0.1	<2	0.39
113262	Rock	4.03	0.2	10.5	6.0	32	0.3	4.6	2.3	137	1.02	301.9	0.2	62.7	1.4	11	0.2	5.0	<0.1	2	0.48
113263	Rock	3.93	2.7	22.4	11.4	175	0.7	29.9	7.9	154	2.11	296.6	0.8	26.8	4.8	17	0.8	6.7	0.1	6	0.59
113264	Rock	2.21	0.8	40.0	5819	2722	48.1	35.2	10.7	>10000	4.11	102.0	0.7	19.4	7.6	8	31.9	44.7	0.1	4	0.44
113265	Rock	5.21	0.6	3.3	161.8	587	2.9	9.6	2.8	>10000	10.65	94.7	0.9	22.9	1.4	4	4.9	10.9	<0.1	<2	0.19
113266	Rock	4.03	1.0	26.3	1443	4227	20.4	24.9	9.1	>10000	8.16	137.6	0.6	14.6	3.0	12	59.2	19.1	<0.1	10	0.59
113267	Rock	3.04	0.7	36.1	17.6	108	0.6	31.4	10.2	500	2.73	37.4	0.3	8.5	3.9	115	1.2	3.5	0.1	22	5.60

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750 - 580 Hornby Street
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Project: Keno Lightning
Report Date: December 19, 2011

CERTIFICATE OF ANALYSIS WHI11001764.2

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	G6Gr	7AR
	Analyte	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Ag	Cu
	Unit	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	gm/t	%
	MDL	0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	50	0.001
114081	Rock	0.023	4	28	<0.01	23	<0.001	2	0.19	0.002	0.05	0.3	0.11	0.8	0.1	0.10	<1	2.0	<0.2		N.A.
114082	Rock	0.053	14	15	<0.01	61	<0.001	2	0.18	0.006	0.10	0.5	0.06	0.9	<0.1	0.09	<1	1.0	<0.2		N.A.
114083	Rock	0.025	10	19	<0.01	44	<0.001	2	0.13	0.004	0.07	0.2	0.03	0.4	<0.1	<0.05	<1	1.0	<0.2		N.A.
114084	Rock	0.058	12	20	<0.01	67	<0.001	3	0.17	0.007	0.12	0.2	0.02	0.5	0.2	0.18	<1	1.6	<0.2		N.A.
114085	Rock	0.026	8	23	<0.01	45	<0.001	2	0.12	0.003	0.06	<0.1	0.02	0.3	<0.1	0.07	<1	1.1	<0.2		N.A.
114086	Rock	0.008	3	15	<0.01	14	<0.001	1	0.04	0.002	0.02	<0.1	0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2		N.A.
114087	Rock	0.032	5	18	0.01	25	<0.001	1	0.09	0.002	0.04	<0.1	<0.01	0.2	<0.1	0.21	<1	0.5	<0.2		N.A.
114088	Rock	0.014	4	12	<0.01	20	<0.001	<1	0.06	0.001	0.03	<0.1	0.06	0.2	<0.1	0.05	<1	0.5	<0.2		N.A.
114089	Rock	0.038	12	16	<0.01	55	<0.001	2	0.14	0.004	0.07	<0.1	0.02	0.4	<0.1	0.06	<1	<0.5	<0.2		N.A.
114090	Rock	0.034	9	12	<0.01	44	<0.001	1	0.12	0.003	0.06	<0.1	0.67	0.5	0.1	<0.05	<1	<0.5	<0.2		N.A.
114091	Rock	0.018	4	13	<0.01	19	<0.001	<1	0.06	0.001	0.03	<0.1	0.09	0.3	<0.1	<0.05	<1	<0.5	<0.2		N.A.
113251	Rock	0.022	4	25	0.01	13	<0.001	2	0.07	0.002	0.03	0.2	0.04	0.6	<0.1	0.07	<1	0.7	<0.2		N.A.
113252	Rock	0.034	1	12	0.12	28	<0.001	2	0.19	0.006	0.07	0.3	0.05	1.4	0.1	0.63	<1	0.8	<0.2		N.A.
113253	Rock	0.012	2	15	0.07	20	<0.001	1	0.12	0.003	0.04	0.1	0.01	0.4	<0.1	0.15	<1	<0.5	<0.2		N.A.
113254	Rock	0.023	4	7	0.10	28	<0.001	2	0.21	0.006	0.06	0.2	0.03	0.9	<0.1	0.22	<1	<0.5	<0.2		N.A.
113255	Rock	0.035	2	25	0.80	58	<0.001	3	0.25	0.032	0.12	1.2	0.16	9.4	0.4	0.29	<1	<0.5	<0.2		N.A.
113256	Rock	0.017	<1	5	0.93	25	<0.001	4	0.13	<0.001	0.06	0.8	0.07	5.1	0.2	0.29	1	2.4	<0.2		N.A.
113257	Rock	0.017	2	16	0.10	32	<0.001	2	0.14	0.006	0.08	0.1	0.04	1.5	0.2	0.73	<1	0.6	<0.2		N.A.
113258	Rock Pulp	0.081	6	33	0.59	241	0.121	2	0.84	0.036	0.51	<0.1	<0.01	1.6	0.4	<0.05	5	<0.5	<0.2		N.A.
113259	Rock Pulp	0.056	7	14	0.82	146	0.154	3	2.04	0.257	0.31	4.6	0.31	2.8	<0.1	0.12	5	3.6	1.6	I.S.	N.A.
113260	Rock	0.041	2	19	0.29	44	<0.001	2	0.22	0.015	0.11	0.3	0.19	3.6	0.3	0.70	<1	1.0	<0.2		N.A.
113261	Rock	0.008	2	28	0.10	15	<0.001	<1	0.07	0.002	0.02	<0.1	0.01	0.2	<0.1	0.09	<1	<0.5	<0.2		N.A.
113262	Rock	0.010	3	38	0.16	16	<0.001	<1	0.18	0.002	0.02	<0.1	0.01	0.3	<0.1	0.38	<1	<0.5	<0.2		N.A.
113263	Rock	0.028	1	22	0.18	53	<0.001	<1	0.31	0.013	0.08	0.8	0.04	0.9	<0.1	0.93	<1	1.9	<0.2		N.A.
113264	Rock	0.089	5	12	0.26	38	<0.001	3	0.27	0.010	0.13	1.8	0.19	2.0	0.3	0.62	<1	0.9	<0.2		0.004
113265	Rock	0.012	2	14	0.29	34	<0.001	2	0.10	<0.001	0.05	0.2	0.03	2.3	0.1	<0.05	<1	0.8	<0.2		N.A.
113266	Rock	0.065	3	22	0.39	29	<0.001	6	0.35	0.004	0.19	0.3	0.32	5.8	0.5	0.29	<1	0.6	<0.2		N.A.
113267	Rock	0.044	1	33	0.91	46	<0.001	<1	0.83	0.028	0.07	<0.1	0.02	2.8	<0.1	0.57	2	1.1	<0.2		N.A.

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Project: Keno Lightning
Report Date: December 19, 2011

CERTIFICATE OF ANALYSIS WHI11001764.2

	Method	7AR	7AR	G6	7AR.1
	Analyte	Pb	Zn	Au	Pb
	Unit	%	%	gm/t	%
	MDL	0.01	0.01	0.005	0.01
114081	Rock	N.A.	N.A.	N.A.	
114082	Rock	N.A.	N.A.	N.A.	
114083	Rock	N.A.	N.A.	N.A.	
114084	Rock	N.A.	N.A.	N.A.	
114085	Rock	N.A.	N.A.	N.A.	
114086	Rock	N.A.	N.A.	N.A.	
114087	Rock	N.A.	N.A.	N.A.	
114088	Rock	N.A.	N.A.	N.A.	
114089	Rock	N.A.	N.A.	N.A.	
114090	Rock	N.A.	N.A.	N.A.	
114091	Rock	N.A.	N.A.	N.A.	
113251	Rock	N.A.	N.A.	N.A.	
113252	Rock	N.A.	N.A.	N.A.	
113253	Rock	N.A.	N.A.	N.A.	
113254	Rock	N.A.	N.A.	N.A.	
113255	Rock	N.A.	N.A.	N.A.	
113256	Rock	N.A.	N.A.	N.A.	
113257	Rock	N.A.	N.A.	N.A.	
113258	Rock Pulp	N.A.	N.A.	N.A.	
113259	Rock Pulp	N.A.	N.A.	I.S.	
113260	Rock	N.A.	N.A.	N.A.	
113261	Rock	N.A.	N.A.	N.A.	
113262	Rock	N.A.	N.A.	N.A.	
113263	Rock	N.A.	N.A.	N.A.	
113264	Rock	0.57	0.29	N.A.	
113265	Rock	N.A.	N.A.	N.A.	
113266	Rock	N.A.	N.A.	N.A.	
113267	Rock	N.A.	N.A.	N.A.	

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Project: Keno Lightning
Report Date: December 19, 2011

QUALITY CONTROL REPORT WHI11001764.2

	Method	WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%
	MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01
Pulp Duplicates																					
583544	Rock	0.68	0.9	947.3	>10000	5993	>100	5.6	1.2	6082	13.72	1355	5.5	553.2	2.2	17	59.0	>2000	0.3	12	<0.01
REP 583544	QC																				
583574	Rock	1.57	2.1	194.1	>10000	>10000	>100	4.5	1.5	>10000	29.94	1154	1.7	521.1	0.5	9	640.2	1523	0.1	5	0.11
REP 583574	QC																				
Core Reject Duplicates																					
583564	Rock	2.71	<0.1	2.4	117.8	47	2.4	0.6	0.5	22	0.34	58.2	<0.1	2.0	1.0	3	1.7	6.9	<0.1	<2	<0.01
DUP 583564	QC		0.1	2.5	105.7	47	2.4	0.7	0.6	24	0.39	57.7	<0.1	1.7	1.0	4	1.8	6.9	<0.1	<2	<0.01
583599	Rock	1.26	0.3	7.3	175.7	55	2.0	0.9	0.5	61	0.65	92.6	0.2	3.0	1.4	8	3.2	2.0	<0.1	<2	<0.01
DUP 583599	QC		0.2	4.8	182.2	59	1.9	0.8	0.5	79	0.66	92.9	0.2	2.6	1.4	8	3.3	2.2	<0.1	<2	<0.01
114084	Rock	2.51	0.8	8.5	90.0	156	1.2	3.7	0.8	240	1.33	33.3	0.3	<0.5	3.9	11	0.9	3.2	<0.1	4	0.02
DUP 114084	QC		0.7	9.1	98.0	161	1.1	3.7	0.7	255	1.42	34.9	0.3	<0.5	4.1	12	1.1	3.6	0.1	5	0.02
Reference Materials																					
STD AGPROOF	Standard																				
STD CCU-1C	Standard																				
STD CDN-ME-3	Standard																				
STD CZN-3	Standard																				
STD GBM997-6	Standard																				
STD OREAS153AR	Standard																				
STD OREAS131B-A	Standard																				
STD OXH82	Standard																				
STD OXH82	Standard																				
STD OXH82	Standard																				
STD OXK79	Standard																				
STD OXK79	Standard																				
STD OXK79	Standard																				
STD PTC-1A	Standard																				
STD SP49	Standard																				
STD SP49	Standard																				

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QUALITY CONTROL REPORT WHI11001764.2

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	G6Gr	7AR
	Analyte	**P**	**La**	**Cr**	**Mg**	**Ba**	**Ti**	**B**	**Al**	**Na**	**K**	**W**	**Hg**	**Sc**	**Tl**	**S**	**Ga**	**Se**	**Te**	**Ag**	**Cu**
	Unit	**%**	**ppm**	**ppm**	**%**	**ppm**	**%**	**ppm**	**%**	**%**	**%**	**ppm**	**ppm**	**ppm**	**ppm**	**%**	**ppm**	**ppm**	**ppm**	**gm/t**	**%**
	MDL	**0.001**	**1**	**1**	**0.01**	**1**	**0.001**	**1**	**0.01**	**0.001**	**0.01**	**0.1**	**0.01**	**0.1**	**0.1**	**0.05**	**1**	**0.5**	**0.2**	**50**	**0.001**
Pulp Duplicates																					
583544	Rock	0.056	3	6	<0.01	43	<0.001	9	0.31	<0.001	0.04	0.3	17.16	2.7	0.4	0.22	3	6.8	<0.2	1862	0.102
REP 583544	QC																				0.100
583574	Rock	0.009	<1	4	0.41	9	<0.001	3	0.09	<0.001	0.01	<0.1	2.52	0.6	0.2	0.80	3	6.2	<0.2	119	0.016
REP 583574	QC																				
Core Reject Duplicates																					
583564	Rock	0.005	5	17	<0.01	14	<0.001	<1	0.04	<0.001	0.02	<0.1	0.04	0.1	<0.1	<0.05	<1	<0.5	<0.2		N.A.
DUP 583564	QC	0.004	5	18	<0.01	17	<0.001	1	0.04	0.001	0.02	<0.1	0.04	0.2	<0.1	<0.05	<1	<0.5	<0.2		N.A.
583599	Rock	0.016	5	14	<0.01	25	<0.001	<1	0.06	0.002	0.03	<0.1	<0.01	0.2	<0.1	<0.05	<1	<0.5	<0.2		N.A.
DUP 583599	QC	0.016	5	15	<0.01	28	<0.001	<1	0.07	0.002	0.03	<0.1	0.01	0.2	<0.1	<0.05	<1	<0.5	<0.2		N.A.
114084	Rock	0.058	12	20	<0.01	67	<0.001	3	0.17	0.007	0.12	0.2	0.02	0.5	0.2	0.18	<1	1.6	<0.2		N.A.
DUP 114084	QC	0.062	12	19	<0.01	72	<0.001	2	0.18	0.008	0.12	0.2	0.03	0.5	0.2	0.18	<1	1.7	<0.2		N.A.
Reference Materials																					
STD AGPROOF	Standard																			92	
STD CCU-1C	Standard																				
STD CDN-ME-3	Standard																			277	
STD CZN-3	Standard																				
STD GBM997-6	Standard																				
STD OREAS153AR	Standard																				0.713
STD OREAS131B-A	Standard																				0.021
STD OXH82	Standard																				
STD OXH82	Standard																				
STD OXH82	Standard																				
STD OXK79	Standard																				
STD OXK79	Standard																				
STD OXK79	Standard																				
STD PTC-1A	Standard																				
STD SP49	Standard																			57	
STD SP49	Standard																			55	

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QUALITY CONTROL REPORT WHI11001764.2

	Method	7AR	7AR	G6	7AR.1
	Analyte	Pb	Zn	Au	Pb
	Unit	%	%	gm/t	%
	MDL	0.01	0.01	0.005	0.01
Pulp Duplicates					
583544	Rock	3.23	0.67	1.932	
REP 583544	QC	3.16	0.66		
583574	Rock	1.76	0.96	0.486	
REP 583574	QC			0.481	
Core Reject Duplicates					
583564	Rock	N.A.	N.A.	N.A.	
DUP 583564	QC	N.A.	N.A.	N.A.	
583599	Rock	N.A.	N.A.	N.A.	
DUP 583599	QC	N.A.	N.A.	N.A.	
114084	Rock	N.A.	N.A.	N.A.	
DUP 114084	QC	N.A.	N.A.	N.A.	
Reference Materials					
STD AGPROOF	Standard				
STD CCU-1C	Standard				0.36
STD CDN-ME-3	Standard				
STD CZN-3	Standard				0.11
STD GBM997-6	Standard				21.67
STD OREAS153AR	Standard	<0.01	<0.01		
STD OREAS131B-A	Standard	1.77	3.04		
STD OXH82	Standard			1.254	
STD OXH82	Standard			1.258	
STD OXH82	Standard			1.357	
STD OXK79	Standard			3.685	
STD OXK79	Standard			3.513	
STD OXK79	Standard			3.689	
STD PTC-1A	Standard				0.05
STD SP49	Standard				
STD SP49	Standard				

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		WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca
		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%
		0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01
STD CDN-ME-3 Expected																					
STD SP49 Expected																					
STD AGPROOF Expected																					
STD OXH82 Expected																					
STD OXK79 Expected																					
STD OREAS153AR																					
STD OREAS131B-A																					
STD CZN-3 Expected																					
STD CCU-1C Expected																					
STD GBM997-6 Expected																					
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
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BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
Prep Wash																					
G1	Prep Blank		0.1	2.1	9.7	56	<0.1	3.4	4.3	556	1.90	1.9	1.7	3.8	5.3	63	0.1	0.2	0.1	36	0.47
G1	Prep Blank		0.1	3.2	6.0	49	<0.1	3.2	4.1	541	1.88	1.2	1.7	1.8	5.6	64	<0.1	0.1	<0.1	36	0.47

AcmeLabs Acme Analytical Laboratories (Vancouver) Ltd.
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Client: **Monster Mining Corp.**
750 - 580 Hornby Street
Vancouver BC V6C 3B6 Canada

Project: Keno Lightning
Report Date: December 19, 2011

QUALITY CONTROL REPORT WHI11001764.2

		1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	G6Gr	7AR
		P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Ag	Cu
		%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	gm/t	%
		0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	50	0.001
STD CDN-ME-3 Expected																				276	
STD SP49 Expected																				60.2	
STD AGPROOF Expected																				94	
STD OXH82 Expected																					
STD OXK79 Expected																					
STD OREAS153AR																					0.705
STD OREAS131B-A																					0.0216
STD CZN-3 Expected																					
STD CCU-1C Expected																					
STD GBM997-6 Expected																					
BLK	Blank																			<50	
BLK	Blank																			<50	
BLK	Blank																			<50	
BLK	Blank																			<50	
BLK	Blank																			<50	
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				<0.001
BLK	Blank																				
Prep Wash																					
G1	Prep Blank	0.077	10	13	0.55	250	0.134	1	0.97	0.071	0.46	<0.1	<0.01	2.0	0.3	<0.05	5	<0.5	<0.2		N.A.
G1	Prep Blank	0.074	10	11	0.54	214	0.135	2	0.98	0.079	0.46	<0.1	<0.01	2.1	0.3	<0.05	5	<0.5	<0.2		N.A.

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Report Date: December 19, 2011

QUALITY CONTROL REPORT WHI11001764.2

		7AR	7AR	G6	7AR.1
		Pb	Zn	Au	Pb
		%	%	gm/t	%
		0.01	0.01	0.005	0.01
STD CDN-ME-3 Expected					
STD SP49 Expected					
STD AGPROOF Expected					
STD OXH82 Expected				1.278	
STD OXK79 Expected				3.532	
STD OREAS153AR			0.0051		
STD OREAS131B-A		1.86	3.03		
STD CZN-3 Expected					0.113
STD CCU-1C Expected					0.34
STD GBM997-6 Expected					23.75
BLK	Blank				
BLK	Blank				
BLK	Blank				
BLK	Blank				
BLK	Blank				
BLK	Blank			<0.005	
BLK	Blank			<0.005	
BLK	Blank			<0.005	
BLK	Blank			<0.005	
BLK	Blank			<0.005	
BLK	Blank			<0.005	
BLK	Blank	<0.01	<0.01		
BLK	Blank				<0.01
Prep Wash					
G1	Prep Blank	N.A.	N.A.	N.A.	
G1	Prep Blank	N.A.	N.A.	N.A.	

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Client: **Monster Mining Corp.**
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Submitted By:	Art Ettlinger
Receiving Lab:	Canada-Whitehorse
Received:	October 04, 2011
Report Date:	November 28, 2011
Page:	1 of 5

CERTIFICATE OF ANALYSIS WHI11001804.1

CLIENT JOB INFORMATION

Project:	Keno Lightning
Shipment ID:	#3|Sept 30|2011
P.O. Number	
Number of Samples:	91

SAMPLE DISPOSAL

STOR-PLP	Store After 90 days Invoice for Storage
DISP-RJT	Dispose of Reject After 90 days

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

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
R200-250	82	Crush split and pulverize 250g drill core to 200 mesh			WHI
1DX2	91	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN
G6Gr	8	Lead collection fire assay 30G fusion - Grav finish	30	Completed	VAN
7AR	11	1:1:1 Aqua Regia Digestion ICP-ES Finish	0.4	Completed	VAN
7AR.1	2	1:1:1 Aqua Regia Digestion ICP-ES Finish	0.1	Completed	VAN

ADDITIONAL COMMENTS

Invoice To: Monster Mining Corp.
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Vancouver BC V6C 3B6
Canada

CC:

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Client: **Monster Mining Corp.**
750 - 580 Hornby Street
Vancouver BC V6C 3B6 Canada

Project: Keno Lightning
Report Date: November 28, 2011

CERTIFICATE OF ANALYSIS WHI11001804.1

	Method	WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%
	MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01
113268	Drill Core	4.45	0.4	3.1	1420	1275	2.9	4.6	1.8	7407	2.32	35.1	0.3	<0.5	1.5	10	12.8	6.7	<0.1	3	0.70
113269	Drill Core	4.67	1.2	10.7	414.3	1647	4.6	26.4	7.3	8420	2.84	77.4	0.6	<0.5	4.7	12	17.6	7.1	0.2	6	0.57
113270	Drill Core	2.52	0.6	4.4	222.5	786	1.7	12.8	4.4	>10000	3.64	74.7	0.4	<0.5	2.7	7	9.4	6.1	<0.1	6	0.33
113271	Drill Core	2.95	0.3	4.7	232.4	672	3.2	3.6	1.4	8637	2.32	60.6	0.2	1.9	1.7	6	8.2	5.9	<0.1	3	0.43
113272	Rock Pulp	0.09	0.1	1.8	1.3	44	<0.1	4.2	4.4	507	1.79	<0.5	1.9	<0.5	3.2	42	<0.1	<0.1	<0.1	37	0.42
113273	Drill Core	3.24	0.4	2.3	191.3	1936	0.9	5.1	2.1	8521	2.35	28.6	0.2	<0.5	2.4	5	20.0	2.6	<0.1	3	0.15
113274	Drill Core	2.68	0.3	6.8	24.8	231	0.1	7.5	2.5	>10000	5.74	123.7	0.3	8.0	1.0	6	1.3	3.6	0.1	4	0.16
113275	Drill Core	3.81	0.4	8.2	8.9	76	0.2	12.9	4.3	175	1.10	42.0	0.3	<0.5	3.2	38	0.4	1.9	<0.1	6	1.52
113276	Drill Core	3.80	0.1	3.2	3.8	18	<0.1	1.9	1.1	139	0.60	19.4	0.2	<0.5	1.5	59	<0.1	4.9	<0.1	2	2.47
113277	Drill Core	4.31	<0.1	1.7	2.0	22	<0.1	2.2	0.8	69	0.32	4.2	<0.1	<0.5	1.1	26	0.2	0.4	<0.1	<2	0.89
113278	Drill Core	3.92	0.4	6.4	253.0	954	3.1	6.9	3.4	>10000	3.02	173.6	0.2	1.5	2.0	7	10.9	6.3	<0.1	3	0.39
113279	Drill Core	6.19	0.5	6.6	54.4	425	0.7	9.7	5.0	8288	2.86	403.0	0.3	13.9	1.9	32	4.6	4.3	<0.1	3	1.34
113280	Drill Core	4.19	0.3	4.2	61.0	1670	1.0	2.3	1.8	5598	1.65	30.1	0.2	<0.5	1.6	3	20.7	2.6	<0.1	<2	0.07
113281	Drill Core	2.75	0.7	5.6	355.4	989	1.3	17.7	5.2	8134	3.38	172.2	0.8	<0.5	3.1	46	14.3	6.5	<0.1	5	1.86
113282	Drill Core	3.17	0.4	9.1	7.0	367	0.2	19.4	5.5	164	1.54	96.9	0.6	<0.5	3.0	9	2.1	12.6	<0.1	7	1.62
113283	Drill Core	1.87	0.4	13.7	9.2	168	0.3	15.8	6.2	207	1.48	47.5	0.3	<0.5	3.1	99	1.2	4.2	<0.1	6	4.49
113284	Drill Core	2.04	0.3	12.4	7.6	139	0.2	14.1	6.1	194	1.46	42.4	0.3	<0.5	2.8	92	1.1	3.4	<0.1	7	4.30
113285	Drill Core	2.90	1.1	37.1	359.0	1516	3.0	23.5	8.0	749	3.45	1737	2.2	22.5	7.1	65	24.3	22.2	0.3	17	0.29
113286	Drill Core	1.74	0.2	3.5	85.6	102	0.5	2.0	0.6	108	0.43	158.1	0.2	16.4	1.4	6	2.0	8.9	<0.1	<2	0.06
113287	Drill Core	2.74	0.4	51.5	38.9	763	0.9	44.8	16.0	1195	3.56	170.2	0.4	3.6	0.9	34	3.3	11.3	<0.1	49	3.00
113288	Drill Core	1.69	0.7	32.7	20.2	291	0.5	25.1	6.1	758	2.94	98.1	0.5	<0.5	2.0	38	5.2	4.8	0.2	33	2.99
113289	Drill Core	2.47	1.4	16.3	12.1	58	0.6	23.1	7.2	267	2.10	41.6	0.6	<0.5	6.2	97	0.3	2.3	0.1	11	3.13
113290	Drill Core	2.74	0.3	4.1	6.8	40	<0.1	6.1	2.0	195	0.74	16.8	0.2	<0.5	1.9	107	0.2	1.0	<0.1	3	2.91
113291	Drill Core	3.26	0.7	13.3	12.3	84	0.4	19.4	5.7	157	1.54	39.6	0.3	<0.5	5.1	30	0.2	1.9	0.2	6	1.07
113292	Drill Core	3.96	0.6	56.4	10.0	92	0.6	22.2	9.7	378	3.05	318.5	0.4	<0.5	2.9	84	0.2	9.0	0.1	24	2.96
113293	Drill Core	2.44	1.5	14.3	19.4	221	0.5	19.3	5.3	327	1.58	130.6	0.8	2.9	3.1	16	1.9	4.4	<0.1	10	0.60
113294	Drill Core	3.58	0.6	10.9	502.8	87	4.6	3.1	1.0	59	0.81	2908	0.5	326.6	0.6	13	1.9	38.1	<0.1	3	0.10
113295	Drill Core	5.09	0.7	55.1	1604	3268	6.8	67.2	34.6	>10000	7.87	2254	1.9	146.8	0.5	109	64.0	13.6	<0.1	24	2.22
113296	Rock Pulp	0.09	<0.1	2.4	1.5	44	<0.1	3.7	4.3	515	1.75	<0.5	2.0	<0.5	3.4	40	<0.1	<0.1	<0.1	35	0.39
113297	Rock Pulp	0.08	904.4	>10000	3246	4831	>100	32.2	13.8	1102	2.88	170.4	2.3	1505	0.9	132	175.8	557.5	2.3	26	5.89

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Client: **Monster Mining Corp.**
750 - 580 Hornby Street
Vancouver BC V6C 3B6 Canada

Project: Keno Lightning
Report Date: November 28, 2011

CERTIFICATE OF ANALYSIS WHI11001804.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	G6Gr	7AR
	Analyte	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Ag	Cu
	Unit	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	gm/t	%
	MDL	0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	50	0.001
113268	Drill Core	0.026	3	3	0.28	28	<0.001	3	0.10	0.006	0.04	0.1	0.07	0.6	0.1	0.26	<1	<0.5	<0.2		
113269	Drill Core	0.056	1	4	0.23	44	<0.001	3	0.24	0.011	0.10	0.4	0.11	1.5	0.2	0.74	<1	<0.5	<0.2		
113270	Drill Core	0.058	2	6	0.23	29	<0.001	3	0.20	0.006	0.06	0.2	0.05	1.3	0.2	0.35	<1	<0.5	<0.2		
113271	Drill Core	0.018	3	3	0.20	27	<0.001	3	0.08	0.002	0.03	0.6	0.04	0.9	<0.1	0.16	<1	<0.5	<0.2		
113272	Rock Pulp	0.081	5	30	0.58	233	0.118	2	0.80	0.031	0.51	<0.1	<0.01	1.4	0.3	<0.05	5	<0.5	<0.2		
113273	Drill Core	0.033	4	3	0.15	29	<0.001	3	0.13	0.004	0.05	0.3	0.09	0.7	0.1	0.15	<1	<0.5	<0.2		
113274	Drill Core	0.022	<1	1	0.21	18	<0.001	2	0.08	0.003	0.03	0.2	0.01	1.4	0.3	0.06	<1	0.5	<0.2		
113275	Drill Core	0.029	2	8	0.19	46	<0.001	<1	0.29	0.013	0.05	<0.1	0.02	0.7	<0.1	0.29	<1	<0.5	<0.2		
113276	Drill Core	0.018	4	7	0.10	27	0.001	<1	0.13	0.002	0.02	0.1	0.01	0.1	<0.1	0.11	<1	<0.5	<0.2		
113277	Drill Core	0.007	2	3	0.05	38	<0.001	<1	0.09	0.003	0.03	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2		
113278	Drill Core	0.040	2	3	0.20	31	<0.001	3	0.11	0.004	0.05	0.5	0.05	0.9	0.1	0.35	<1	<0.5	<0.2		
113279	Drill Core	0.051	2	17	0.21	22	<0.001	2	0.13	0.005	0.05	0.2	0.06	0.7	0.1	0.39	<1	<0.5	<0.2		
113280	Drill Core	0.014	3	2	0.06	30	<0.001	3	0.07	0.002	0.03	0.2	0.10	0.3	<0.1	0.12	<1	<0.5	<0.2		
113281	Drill Core	0.044	1	3	0.23	37	<0.001	2	0.18	0.006	0.06	0.3	0.06	1.4	0.1	0.30	<1	<0.5	<0.2		
113282	Drill Core	0.057	4	6	0.08	35	<0.001	<1	0.27	0.006	0.05	0.2	0.08	1.1	<0.1	0.08	<1	<0.5	<0.2		
113283	Drill Core	0.045	2	5	0.45	53	<0.001	<1	0.28	0.008	0.06	<0.1	0.04	1.1	<0.1	0.12	<1	<0.5	<0.2		
113284	Drill Core	0.042	3	6	0.49	51	<0.001	1	0.31	0.009	0.07	<0.1	0.03	1.0	<0.1	0.10	<1	<0.5	<0.2		
113285	Drill Core	0.120	5	16	0.09	90	<0.001	1	0.94	0.010	0.07	0.5	0.19	2.4	0.5	0.09	2	0.7	<0.2		
113286	Drill Core	0.008	5	<1	<0.01	24	<0.001	2	0.06	0.001	0.02	0.2	0.05	0.1	0.2	<0.05	<1	<0.5	<0.2		
113287	Drill Core	0.028	3	65	1.40	21	<0.001	<1	1.16	0.018	0.04	0.8	0.02	7.3	0.1	<0.05	3	<0.5	<0.2		
113288	Drill Core	0.046	2	34	0.92	31	<0.001	1	0.82	0.012	0.05	0.2	0.03	4.4	<0.1	<0.05	2	<0.5	<0.2		
113289	Drill Core	0.057	2	9	0.25	51	<0.001	<1	0.57	0.014	0.07	1.2	0.01	1.4	<0.1	0.32	1	0.5	<0.2		
113290	Drill Core	0.018	2	4	0.08	25	<0.001	<1	0.16	0.005	0.04	0.1	<0.01	0.5	<0.1	0.10	<1	<0.5	<0.2		
113291	Drill Core	0.038	3	19	0.19	43	<0.001	<1	0.42	0.011	0.07	<0.1	0.02	0.9	<0.1	0.23	1	0.6	<0.2		
113292	Drill Core	0.055	1	23	0.63	32	<0.001	<1	0.60	0.011	0.05	<0.1	0.04	2.7	0.1	0.61	2	0.7	<0.2		
113293	Drill Core	0.034	5	18	0.11	36	<0.001	1	0.33	0.010	0.05	0.2	0.03	1.3	0.1	<0.05	<1	<0.5	<0.2		
113294	Drill Core	0.010	1	7	0.06	26	0.004	1	0.12	0.003	0.03	1.0	0.11	0.4	0.3	<0.05	<1	<0.5	<0.2		
113295	Drill Core	0.056	2	24	0.20	39	0.002	3	0.35	0.016	0.16	1.3	0.08	11.1	0.7	0.20	1	<0.5	<0.2		
113296	Rock Pulp	0.079	5	30	0.58	228	0.114	1	0.78	0.028	0.49	<0.1	<0.01	1.2	0.3	<0.05	4	<0.5	<0.2		
113297	Rock Pulp	0.034	3	18	0.53	45	0.030	1	0.72	0.028	0.10	0.9	4.34	1.1	0.2	0.92	2	4.7	1.0	775	1.765

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Project: Keno Lightning
Report Date: November 28, 2011

CERTIFICATE OF ANALYSIS WHI11001804.1

	Method	7AR	7AR	7AR.1
	Analyte	Pb	Zn	Pb
	Unit	%	%	%
	MDL	0.01	0.01	0.01
113268	Drill Core			
113269	Drill Core			
113270	Drill Core			
113271	Drill Core			
113272	Rock Pulp			
113273	Drill Core			
113274	Drill Core			
113275	Drill Core			
113276	Drill Core			
113277	Drill Core			
113278	Drill Core			
113279	Drill Core			
113280	Drill Core			
113281	Drill Core			
113282	Drill Core			
113283	Drill Core			
113284	Drill Core			
113285	Drill Core			
113286	Drill Core			
113287	Drill Core			
113288	Drill Core			
113289	Drill Core			
113290	Drill Core			
113291	Drill Core			
113292	Drill Core			
113293	Drill Core			
113294	Drill Core			
113295	Drill Core			
113296	Rock Pulp			
113297	Rock Pulp	0.31	0.51	

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Client: **Monster Mining Corp.**
750 - 580 Hornby Street
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CERTIFICATE OF ANALYSIS WHI11001804.1

	Method	WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%
	MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01
113298	Drill Core	3.17	5.1	42.8	93.3	912	4.4	23.1	7.9	1953	2.76	913.6	1.2	6.1	5.6	28	9.3	14.8	<0.1	7	0.06
113299	Drill Core	4.93	0.9	4.1	8.3	130	0.3	4.5	1.5	257	0.44	63.8	0.2	0.8	1.3	3	1.2	1.7	<0.1	<2	0.05
113300	Drill Core	6.35	1.9	5.8	8.8	158	0.3	8.9	2.6	280	1.00	86.4	0.3	<0.5	2.2	15	0.5	2.7	<0.1	3	0.37
113301	Drill Core	3.83	5.1	77.0	20.8	432	18.9	22.6	5.7	412	1.91	142.8	1.0	3.2	3.1	15	6.1	5.9	0.2	5	0.49
113302	Drill Core	4.30	0.3	5.2	55.2	102	1.3	1.8	0.5	52	0.52	203.6	0.2	22.5	1.0	8	1.4	8.4	0.1	<2	0.07
113303	Drill Core	2.48	0.4	56.0	535.1	142	16.2	3.2	0.7	793	0.74	1481	0.3	114.3	0.6	9	3.9	16.2	0.1	<2	0.08
113304	Drill Core	2.32	1.7	21.3	324.7	4255	3.0	19.3	5.8	>10000	9.13	2666	1.7	63.1	3.3	71	93.2	20.2	0.5	6	0.29
113305	Drill Core	1.21	0.6	13.5	123.0	1192	1.9	19.6	6.4	3758	2.24	231.5	0.9	1.2	3.6	20	9.0	6.0	0.3	2	0.19
113306	Drill Core	3.44	0.7	14.7	249.8	343	3.3	10.9	2.7	500	1.62	704.3	1.0	8.2	4.7	28	5.3	18.3	0.2	3	0.10
113307	Drill Core	3.56	0.7	18.7	52.7	661	1.2	10.8	3.3	4801	2.01	560.0	0.5	3.9	2.8	17	8.8	7.8	0.2	<2	0.11
113308	Drill Core	4.59	0.6	7.9	21.1	280	0.4	4.7	1.2	76	1.85	329.0	1.3	0.6	3.5	18	2.8	12.7	0.2	5	0.09
113309	Drill Core	7.04	0.4	7.5	10.9	364	0.2	7.9	2.4	844	1.45	91.4	0.6	1.4	2.2	14	14.6	4.4	0.2	4	0.60
114092	Drill Core	2.85	0.4	46.0	3953	628	47.9	3.7	0.8	158	1.71	557.8	0.5	39.7	1.9	18	12.7	76.1	0.4	6	0.02
114093	Drill Core	0.68	0.3	459.2	>10000	>10000	>100	2.0	0.6	>10000	17.70	2224	1.8	1394	0.2	53	116.8	>2000	1.7	<2	0.02
114094	Rock Pulp	0.09	<0.1	3.7	47.1	48	0.3	3.7	3.9	489	1.66	1.9	1.9	3.4	3.1	39	0.1	3.3	0.3	36	0.39
114095	Rock Pulp	0.09	934.9	>10000	3069	4651	>100	33.3	13.3	1097	2.81	176.0	2.1	1556	0.8	130	182.9	558.8	2.6	25	6.09
114096	Drill Core	2.43	1.5	30.9	2951	202	25.0	2.5	0.4	113	1.18	122.7	0.1	8.6	0.9	7	2.6	53.8	0.1	<2	0.02
114097	Drill Core	3.72	0.3	17.7	1898	1056	8.2	1.3	0.4	1680	2.15	92.5	0.2	3.3	1.4	6	12.4	45.2	<0.1	<2	<0.01
114098	Drill Core	3.96	0.2	11.8	1811	1373	9.2	2.2	0.6	4004	2.19	81.6	0.2	1.6	1.1	3	12.8	273.1	<0.1	<2	<0.01
114099	Drill Core	1.54	0.2	5.9	2093	234	10.9	1.0	0.5	80	1.34	101.4	0.1	0.7	1.4	4	1.0	23.9	<0.1	<2	<0.01
114100	Drill Core	1.32	0.1	5.5	1820	241	10.4	0.9	0.4	78	1.35	107.3	0.1	0.6	1.4	5	1.0	27.3	<0.1	<2	0.01
114101	Drill Core	1.99	0.2	5.4	327.3	139	3.4	0.8	0.5	52	0.94	49.9	0.2	0.5	1.3	4	0.4	5.2	<0.1	<2	<0.01
114102	Drill Core	2.60	0.3	35.7	2272	1257	60.1	2.7	0.8	3405	2.97	128.6	0.3	9.6	1.2	4	26.4	82.6	<0.1	<2	<0.01
114103	Drill Core	2.95	0.4	49.7	209.6	4699	24.7	5.2	1.5	>10000	5.66	133.5	0.4	8.8	0.8	4	127.2	40.2	<0.1	<2	<0.01
114104	Drill Core	2.64	0.4	82.8	285.6	2061	9.4	4.8	3.3	2170	3.46	236.8	0.9	2.5	2.1	10	31.0	8.1	<0.1	<2	<0.01
114105	Drill Core	1.02	0.6	10.8	48.8	92	3.5	1.2	1.0	138	0.76	78.6	0.2	<0.5	2.2	10	2.5	3.5	<0.1	<2	<0.01
114106	Drill Core	3.78	0.2	6.5	110.9	72	1.2	0.8	0.8	78	0.29	65.3	<0.1	3.3	0.6	2	1.1	3.4	<0.1	<2	<0.01
114107	Drill Core	2.36	0.9	11.7	203.8	151	7.9	2.4	0.8	140	1.32	668.9	0.2	0.5	3.4	12	1.1	14.2	0.1	3	0.22
114108	Drill Core	2.18	0.2	7.1	31.5	39	0.9	0.8	0.8	48	0.35	27.8	<0.1	1.2	0.8	2	0.5	3.4	<0.1	<2	0.02
114109	Drill Core	3.03	0.1	5.2	39.7	42	0.4	1.1	1.1	56	0.37	30.1	<0.1	0.5	0.8	4	0.5	0.8	<0.1	<2	0.04

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Method		1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	G6Gr	7AR
Analyte		P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Ag	Cu
Unit		%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	gm/t	%
MDL		0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	50	0.001
113298	Drill Core	0.032	12	5	0.01	49	<0.001	2	0.25	0.012	0.10	0.7	0.08	1.7	0.3	<0.05	<1	<0.5	<0.2		
113299	Drill Core	0.010	3	14	<0.01	16	<0.001	<1	0.08	0.003	0.04	0.2	<0.01	0.3	<0.1	<0.05	<1	<0.5	<0.2		
113300	Drill Core	0.020	3	5	0.06	36	<0.001	2	0.25	0.005	0.06	0.3	<0.01	0.6	<0.1	0.08	<1	<0.5	<0.2		
113301	Drill Core	0.037	4	28	0.11	46	<0.001	2	0.27	0.009	0.05	98.3	<0.01	1.1	0.1	<0.05	<1	<0.5	<0.2		
113302	Drill Core	0.006	2	17	<0.01	15	<0.001	2	0.07	0.003	0.02	5.4	0.06	0.2	0.4	<0.05	<1	<0.5	<0.2		
113303	Drill Core	0.004	2	3	<0.01	33	<0.001	37	0.06	0.004	0.03	>100	0.16	0.5	0.6	0.07	<1	<0.5	<0.2		
113304	Drill Core	0.051	4	18	0.21	53	<0.001	5	0.26	0.014	0.15	2.9	0.28	7.6	0.5	0.21	2	0.7	<0.2		
113305	Drill Core	0.053	3	4	0.02	46	<0.001	2	0.18	0.011	0.07	1.2	0.04	1.3	0.2	0.05	<1	1.3	<0.2		
113306	Drill Core	0.037	8	9	0.01	56	<0.001	2	0.21	0.010	0.10	6.0	0.08	0.8	0.4	0.05	<1	0.6	<0.2		
113307	Drill Core	0.022	3	4	0.06	44	<0.001	2	0.17	0.011	0.07	1.4	0.02	1.1	0.1	0.08	<1	0.9	<0.2		
113308	Drill Core	0.107	6	15	<0.01	20	<0.001	<1	0.18	0.004	0.05	<0.1	0.02	1.5	0.4	<0.05	<1	<0.5	<0.2		
113309	Drill Core	0.032	6	7	0.14	21	<0.001	2	0.17	0.002	0.02	0.2	<0.01	1.0	0.1	<0.05	<1	<0.5	<0.2		
114092	Drill Core	0.049	6	9	0.07	42	<0.001	2	0.27	0.004	0.06	<0.1	0.39	0.8	0.2	0.12	<1	2.9	<0.2		
114093	Drill Core	0.007	<1	<1	0.01	11	<0.001	2	0.06	0.002	<0.01	<0.1	5.23	0.4	0.9	3.64	2	2.3	<0.2	1787	0.055
114094	Rock Pulp	0.077	4	28	0.59	224	0.110	2	0.81	0.029	0.51	<0.1	<0.01	1.4	0.3	<0.05	4	<0.5	<0.2		
114095	Rock Pulp	0.038	3	19	0.51	43	0.027	1	0.68	0.024	0.11	0.8	4.22	1.3	0.2	1.00	3	5.8	0.9	768	1.726
114096	Drill Core	0.014	5	6	<0.01	53	<0.001	2	0.07	0.004	0.07	<0.1	0.23	0.2	0.3	0.22	<1	0.6	<0.2		
114097	Drill Core	0.023	5	11	<0.01	24	<0.001	3	0.08	0.003	0.05	<0.1	0.22	0.4	0.1	0.13	<1	0.5	<0.2		
114098	Drill Core	0.017	3	3	<0.01	21	<0.001	2	0.05	0.002	0.02	<0.1	0.03	0.3	<0.1	0.06	<1	<0.5	<0.2		
114099	Drill Core	0.019	5	14	<0.01	20	<0.001	2	0.07	0.003	0.03	<0.1	0.13	0.2	<0.1	0.07	<1	<0.5	<0.2		
114100	Drill Core	0.023	5	2	<0.01	28	<0.001	1	0.07	0.003	0.04	0.1	0.11	0.2	<0.1	0.07	<1	<0.5	<0.2		
114101	Drill Core	0.014	5	15	<0.01	15	<0.001	<1	0.05	0.002	0.03	0.2	0.19	0.2	<0.1	<0.05	<1	1.0	<0.2		
114102	Drill Core	0.021	3	4	<0.01	17	<0.001	2	0.11	0.001	0.02	<0.1	0.21	0.3	<0.1	0.09	<1	1.0	<0.2		
114103	Drill Core	0.012	2	8	<0.01	9	<0.001	1	0.07	0.001	0.02	0.2	0.04	0.4	<0.1	0.09	<1	1.1	<0.2		
114104	Drill Core	0.031	6	3	<0.01	24	<0.001	2	0.27	0.002	0.04	<0.1	0.18	0.6	<0.1	0.10	<1	3.1	<0.2		
114105	Drill Core	0.032	9	9	<0.01	36	<0.001	2	0.11	0.004	0.07	<0.1	<0.01	0.2	<0.1	0.06	<1	0.7	<0.2		
114106	Drill Core	0.002	3	2	<0.01	20	<0.001	1	0.03	0.002	0.02	<0.1	<0.01	0.1	<0.1	<0.05	<1	<0.5	<0.2		
114107	Drill Core	0.065	7	12	<0.01	81	<0.001	2	0.14	0.007	0.11	0.9	<0.01	0.4	0.1	0.35	<1	0.9	<0.2		
114108	Drill Core	0.003	4	2	<0.01	15	<0.001	2	0.04	0.002	0.02	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2		
114109	Drill Core	0.004	4	12	<0.01	15	<0.001	1	0.05	0.002	0.02	<0.1	<0.01	<0.1	<0.1	0.05	<1	<0.5	<0.2		

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	Analyte	Pb	Zn	Pb
	Unit	%	%	%
	MDL	0.01	0.01	0.01
113298	Drill Core			
113299	Drill Core			
113300	Drill Core			
113301	Drill Core			
113302	Drill Core			
113303	Drill Core			
113304	Drill Core			
113305	Drill Core			
113306	Drill Core			
113307	Drill Core			
113308	Drill Core			
113309	Drill Core			
114092	Drill Core			
114093	Drill Core	>10	1.29	18.67
114094	Rock Pulp			
114095	Rock Pulp	0.37	0.50	
114096	Drill Core			
114097	Drill Core			
114098	Drill Core			
114099	Drill Core			
114100	Drill Core			
114101	Drill Core			
114102	Drill Core			
114103	Drill Core			
114104	Drill Core			
114105	Drill Core			
114106	Drill Core			
114107	Drill Core			
114108	Drill Core			
114109	Drill Core			

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	Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%
	MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01
114110	Drill Core	2.63	0.2	10.4	91.2	114	2.0	2.8	1.2	127	1.19	62.6	0.3	<0.5	1.9	10	1.5	7.7	<0.1	<2	0.20
114111	Drill Core	1.93	<0.1	3.4	6.9	12	0.2	1.2	0.7	43	0.51	31.5	<0.1	<0.5	0.8	5	0.2	2.0	<0.1	<2	0.07
114112	Drill Core	1.74	0.5	11.5	13.2	47	0.2	2.5	1.1	62	1.56	165.3	0.3	<0.5	3.4	15	0.6	3.6	<0.1	6	0.15
114113	Drill Core	2.65	0.3	19.8	90.1	539	0.8	5.7	1.2	443	1.27	40.9	0.4	<0.5	2.0	8	8.6	17.5	<0.1	3	0.02
114114	Drill Core	1.71	0.7	508.7	>10000	9417	>100	5.7	1.5	>10000	13.76	997.5	2.1	54.8	2.4	78	99.9	1475	0.9	<2	0.02
114115	Drill Core	1.44	0.5	19.9	682.8	3537	8.4	3.2	0.7	7029	3.51	208.4	1.2	2.2	1.8	7	46.0	17.0	<0.1	<2	0.01
114116	Drill Core	2.82	<0.1	5.6	380.2	344	6.0	0.7	0.3	163	0.97	88.2	0.1	3.0	1.1	4	2.4	12.4	<0.1	<2	<0.01
114117	Drill Core	2.99	<0.1	8.3	275.6	149	2.5	0.6	0.4	78	0.57	144.8	0.1	1.0	0.9	3	2.5	8.0	<0.1	<2	<0.01
114118	Drill Core	2.98	0.2	16.8	385.7	2858	3.8	2.5	0.6	>10000	3.50	213.0	0.2	13.4	0.9	4	56.6	5.2	<0.1	3	<0.01
114119	Drill Core	1.69	0.4	132.8	>10000	854	>100	1.7	0.4	1121	3.22	620.8	2.4	32.5	2.8	14	133.7	1031	<0.1	4	0.02
114120	Rock Pulp	0.09	<0.1	1.8	51.5	45	0.3	3.8	4.2	523	1.80	<0.5	2.3	1.6	3.4	45	<0.1	0.4	<0.1	38	0.43
114121	Rock Pulp	0.07	9.8	2603	>10000	5269	>100	8.7	9.2	760	3.02	312.2	0.4	202.1	0.5	67	58.9	550.3	0.9	18	2.17
114122	Drill Core	1.00	0.3	10.0	587.7	116	19.6	0.6	0.4	106	0.46	177.8	0.1	9.0	1.3	5	3.3	17.1	<0.1	<2	<0.01
114123	Drill Core	1.25	0.7	46.0	1436	287	21.5	2.0	0.6	127	1.45	498.0	0.4	3.7	4.5	11	6.5	23.6	0.1	4	0.02
114124	Drill Core	3.47	1.1	17.4	372.3	189	5.9	5.1	1.0	160	1.22	247.0	0.4	1.5	3.4	25	3.7	9.1	0.1	4	0.70
114125	Drill Core	5.17	0.4	24.6	39.0	167	0.5	12.0	3.8	401	1.09	8.6	0.2	1.3	2.5	20	3.9	2.1	<0.1	6	0.54
114126	Drill Core	3.25	0.5	14.0	366.5	233	13.6	3.0	1.9	133	1.43	369.6	0.4	27.0	3.4	12	11.1	12.9	<0.1	4	<0.01
114127	Drill Core	2.34	1.0	285.6	935.7	9660	15.4	15.2	7.7	>10000	25.49	726.2	10.3	129.8	1.8	40	231.6	150.3	<0.1	8	0.02
114128	Drill Core	0.57	1.1	28.2	>10000	>10000	56.2	1.5	0.8	>10000	23.11	88.8	0.3	135.7	0.1	1	526.0	>2000	<0.1	21	0.15
114129	Drill Core	2.39	0.2	9.0	4496	326	21.5	0.8	1.1	286	1.63	1643	0.4	236.3	1.1	5	6.8	436.5	<0.1	<2	<0.01
114130	Drill Core	2.28	0.2	4.4	754.1	159	4.9	1.3	0.5	206	0.85	386.6	0.3	37.2	1.7	6	4.2	34.6	<0.1	<2	<0.01
114131	Drill Core	3.60	0.2	3.5	85.1	186	0.4	2.7	0.7	67	0.37	14.1	0.1	1.2	1.1	2	8.8	7.8	<0.1	<2	0.01
114132	Drill Core	4.47	0.3	3.1	27.9	549	0.4	3.9	1.3	964	0.44	9.3	0.1	<0.5	1.1	3	8.2	2.0	<0.1	<2	0.06
114133	Drill Core	3.66	0.8	10.6	840.8	256	13.6	3.8	0.9	86	1.16	413.0	0.3	70.2	3.1	10	2.9	103.3	<0.1	3	<0.01
114134	Drill Core	1.81	0.7	20.2	1872	548	18.0	4.8	0.8	103	2.49	700.0	0.4	64.6	3.7	14	4.6	196.0	0.1	4	<0.01
114135	Drill Core	2.56	0.7	119.8	6962	1189	74.8	6.5	3.8	4677	3.97	627.0	1.9	125.5	2.8	18	7.8	350.2	0.1	6	<0.01
114136	Drill Core	2.20	1.2	449.2	>10000	>10000	>100	7.7	6.3	>10000	27.25	820.1	2.8	254.0	0.4	9	525.1	>2000	<0.1	14	0.08
114137	Rock Pulp	0.06	0.1	2.0	10.3	48	0.1	4.0	4.0	524	1.73	<0.5	2.0	0.8	3.1	41	0.2	0.8	<0.1	37	0.40
114138	Rock Pulp	0.08	1002	>10000	3276	4960	>100	35.6	14.9	1173	2.92	188.6	2.4	1530	0.9	148	189.7	673.0	2.8	30	6.89
114139	Drill Core	2.92	0.5	16.3	438.6	356	7.5	2.0	0.5	1893	1.19	101.6	0.2	8.0	0.9	2	11.1	32.0	<0.1	<2	0.01

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Project: Keno Lightning
Report Date: November 28, 2011

CERTIFICATE OF ANALYSIS WHI11001804.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	G6Gr	7AR
	Analyte	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Ag	Cu
	Unit	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	gm/t	%
	MDL	0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	50	0.001
114110	Drill Core	0.083	6	5	<0.01	29	<0.001	2	0.12	0.003	0.04	0.1	<0.01	0.3	0.3	0.21	<1	1.0	<0.2		
114111	Drill Core	0.021	4	17	<0.01	16	<0.001	2	0.04	0.002	0.03	0.1	<0.01	0.1	<0.1	0.11	<1	0.9	<0.2		
114112	Drill Core	0.061	6	9	<0.01	53	<0.001	2	0.14	0.007	0.08	0.3	<0.01	0.4	0.2	0.32	<1	1.7	<0.2		
114113	Drill Core	0.018	7	14	0.05	46	<0.001	3	0.23	0.004	0.07	<0.1	<0.01	0.6	<0.1	<0.05	<1	0.6	<0.2		
114114	Drill Core	0.036	1	3	0.02	26	<0.001	4	0.27	0.004	0.06	<0.1	4.75	1.1	1.8	1.26	2	2.7	<0.2	1151	0.051
114115	Drill Core	0.044	4	8	<0.01	20	<0.001	2	0.13	0.002	0.03	<0.1	0.06	0.8	0.1	0.09	<1	1.1	<0.2		
114116	Drill Core	0.011	4	2	<0.01	19	<0.001	2	0.05	0.001	0.02	<0.1	0.04	0.2	<0.1	<0.05	<1	0.8	<0.2		
114117	Drill Core	0.008	4	10	<0.01	15	<0.001	<1	0.04	0.001	0.02	<0.1	0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2		
114118	Drill Core	0.010	3	2	0.01	23	<0.001	1	0.06	0.001	0.02	<0.1	0.03	0.2	<0.1	0.11	<1	<0.5	<0.2		
114119	Drill Core	0.049	5	8	0.01	31	<0.001	5	0.16	0.004	0.07	<0.1	0.49	0.4	0.2	2.63	<1	0.9	<0.2	1183	0.010
114120	Rock Pulp	0.078	5	29	0.61	240	0.124	2	0.89	0.032	0.53	<0.1	<0.01	1.4	0.4	<0.05	5	<0.5	<0.2		
114121	Rock Pulp	0.042	3	14	0.67	90	0.048	1	0.85	0.033	0.19	0.3	0.96	0.7	0.1	1.47	3	3.0	<0.2	2201	0.270
114122	Drill Core	0.009	7	3	<0.01	30	<0.001	1	0.08	0.003	0.04	<0.1	0.06	0.2	<0.1	<0.05	<1	0.7	<0.2		
114123	Drill Core	0.039	13	10	<0.01	76	<0.001	3	0.17	0.006	0.11	<0.1	0.07	0.4	0.1	0.15	<1	2.4	<0.2		
114124	Drill Core	0.083	7	4	<0.01	75	<0.001	4	0.16	0.007	0.13	<0.1	0.02	0.5	0.2	0.73	<1	1.4	<0.2		
114125	Drill Core	0.018	5	16	0.22	38	<0.001	3	0.27	0.006	0.07	<0.1	<0.01	0.6	<0.1	0.23	<1	0.7	<0.2		
114126	Drill Core	0.017	7	2	<0.01	51	<0.001	4	0.14	0.005	0.07	0.9	0.11	0.5	0.1	<0.05	<1	1.0	<0.2		
114127	Drill Core	0.035	2	4	0.04	38	<0.001	2	0.42	0.008	0.07	1.2	2.03	3.4	0.1	0.11	2	11.0	<0.2		0.027
114128	Drill Core	0.002	<1	<1	0.55	17	<0.001	5	0.02	<0.001	<0.01	<0.1	0.76	<0.1	0.3	1.29	3	2.0	<0.2		<0.001
114129	Drill Core	0.013	4	11	<0.01	16	<0.001	1	0.06	0.002	0.02	<0.1	0.21	<0.1	<0.1	0.09	<1	4.8	<0.2		
114130	Drill Core	0.012	5	3	<0.01	29	<0.001	2	0.08	0.002	0.03	<0.1	0.04	<0.1	<0.1	<0.05	<1	1.0	<0.2		
114131	Drill Core	0.015	4	12	<0.01	12	<0.001	1	0.05	0.001	0.03	<0.1	0.01	0.1	<0.1	0.06	<1	0.8	<0.2		
114132	Drill Core	0.015	4	2	<0.01	19	<0.001	1	0.06	0.002	0.03	1.0	<0.01	0.3	<0.1	0.10	<1	0.7	<0.2		
114133	Drill Core	0.018	10	4	<0.01	43	<0.001	3	0.14	0.004	0.08	<0.1	0.06	0.4	0.2	<0.05	<1	<0.5	<0.2		
114134	Drill Core	0.035	10	2	<0.01	54	<0.001	4	0.17	0.004	0.09	0.1	0.15	0.5	0.2	0.06	<1	2.2	<0.2		
114135	Drill Core	0.038	6	9	<0.01	30	<0.001	6	0.26	0.003	0.07	0.4	1.56	0.7	0.2	0.07	<1	1.8	<0.2		0.008
114136	Drill Core	0.014	<1	<1	0.27	56	<0.001	5	0.16	<0.001	0.05	<0.1	1.86	0.6	0.3	0.98	3	8.6	<0.2	380	0.040
114137	Rock Pulp	0.074	5	28	0.60	220	0.115	2	0.83	0.031	0.52	<0.1	<0.01	1.3	0.3	<0.05	4	<0.5	<0.2		
114138	Rock Pulp	0.038	3	20	0.53	49	0.035	<1	0.76	0.033	0.12	0.9	4.76	1.4	0.2	0.98	3	5.1	1.0	803	1.758
114139	Drill Core	0.014	2	16	0.01	16	<0.001	1	0.06	0.003	0.03	0.2	0.04	0.1	<0.1	0.15	<1	0.5	<0.2		

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CERTIFICATE OF ANALYSIS WHI11001804.1

	Method	7AR	7AR	7AR.1
	Analyte	Pb	Zn	Pb
	Unit	%	%	%
	MDL	0.01	0.01	0.01
114110	Drill Core			
114111	Drill Core			
114112	Drill Core			
114113	Drill Core			
114114	Drill Core	7.16	1.03	
114115	Drill Core			
114116	Drill Core			
114117	Drill Core			
114118	Drill Core			
114119	Drill Core	>10	0.08	12.51
114120	Rock Pulp			
114121	Rock Pulp	1.74	0.56	
114122	Drill Core			
114123	Drill Core			
114124	Drill Core			
114125	Drill Core			
114126	Drill Core			
114127	Drill Core	0.10	1.00	
114128	Drill Core	2.98	1.47	
114129	Drill Core			
114130	Drill Core			
114131	Drill Core			
114132	Drill Core			
114133	Drill Core			
114134	Drill Core			
114135	Drill Core	0.63	0.10	
114136	Drill Core	2.29	2.21	
114137	Rock Pulp			
114138	Rock Pulp	0.33	0.51	
114139	Drill Core			

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CERTIFICATE OF ANALYSIS WHI11001804.1

	Method	WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%
	MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01
114140	Drill Core	3.39	1.5	26.1	614.6	416	12.0	15.8	3.9	124	2.32	184.4	0.7	2.8	6.6	10	2.3	31.3	0.2	4	<0.01

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CERTIFICATE OF ANALYSIS WHI11001804.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	G6Gr	7AR
	Analyte	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Ag	Cu
	Unit	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	gm/t	%
	MDL	0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	50	0.001
114140	Drill Core	0.055	7	4	<0.01	54	0.003	2	0.16	0.006	0.10	0.1	0.07	0.8	<0.1	1.22	<1	2.8	<0.2		

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CERTIFICATE OF ANALYSIS WHI11001804.1

	Method	7AR	7AR	7AR.1
	Analyte	Pb	Zn	Pb
	Unit	%	%	%
	MDL	0.01	0.01	0.01
114140	Drill Core			

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QUALITY CONTROL REPORT WHI11001804.1

Method		WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca
Unit		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%
MDL		0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01
Pulp Duplicates																					
113282	Drill Core	3.17	0.4	9.1	7.0	367	0.2	19.4	5.5	164	1.54	96.9	0.6	<0.5	3.0	9	2.1	12.6	<0.1	7	1.62
REP 113282	QC		0.4	9.4	7.8	393	0.2	20.0	5.7	178	1.62	101.8	0.6	<0.5	2.9	10	1.9	12.2	<0.1	7	1.72
113299	Drill Core	4.93	0.9	4.1	8.3	130	0.3	4.5	1.5	257	0.44	63.8	0.2	0.8	1.3	3	1.2	1.7	<0.1	<2	0.05
REP 113299	QC		0.7	3.4	8.6	132	0.3	4.5	1.5	250	0.43	62.0	0.2	<0.5	1.2	4	1.1	1.7	<0.1	<2	0.05
114098	Drill Core	3.96	0.2	11.8	1811	1373	9.2	2.2	0.6	4004	2.19	81.6	0.2	1.6	1.1	3	12.8	273.1	<0.1	<2	<0.01
REP 114098	QC		0.2	12.0	1903	1412	9.4	2.1	0.6	4067	2.25	82.8	0.2	1.0	1.1	3	14.4	283.5	<0.1	<2	<0.01
114113	Drill Core	2.65	0.3	19.8	90.1	539	0.8	5.7	1.2	443	1.27	40.9	0.4	<0.5	2.0	8	8.6	17.5	<0.1	3	0.02
REP 114113	QC		0.3	20.8	90.2	538	0.8	5.8	1.2	444	1.28	40.4	0.4	<0.5	2.1	8	8.1	18.5	<0.1	3	0.01
114119	Drill Core	1.69	0.4	132.8	>10000	854	>100	1.7	0.4	1121	3.22	620.8	2.4	32.5	2.8	14	133.7	1031	<0.1	4	0.02
REP 114119	QC																				
114125	Drill Core	5.17	0.4	24.6	39.0	167	0.5	12.0	3.8	401	1.09	8.6	0.2	1.3	2.5	20	3.9	2.1	<0.1	6	0.54
REP 114125	QC		0.4	24.0	35.5	163	0.6	11.9	3.8	384	1.07	8.4	0.2	<0.5	2.4	20	3.8	1.8	<0.1	5	0.54
Core Reject Duplicates																					
113274	Drill Core	2.68	0.3	6.8	24.8	231	0.1	7.5	2.5	>10000	5.74	123.7	0.3	8.0	1.0	6	1.3	3.6	0.1	4	0.16
DUP 113274	QC		0.3	7.0	23.7	232	<0.1	7.2	2.5	>10000	5.62	120.5	0.3	10.0	1.0	6	1.2	3.6	<0.1	4	0.17
113309	Drill Core	7.04	0.4	7.5	10.9	364	0.2	7.9	2.4	844	1.45	91.4	0.6	1.4	2.2	14	14.6	4.4	0.2	4	0.60
DUP 113309	QC		0.4	7.4	10.8	362	0.1	7.2	2.3	813	1.44	90.2	0.6	1.2	2.2	14	14.1	4.3	0.2	4	0.60
114126	Drill Core	3.25	0.5	14.0	366.5	233	13.6	3.0	1.9	133	1.43	369.6	0.4	27.0	3.4	12	11.1	12.9	<0.1	4	<0.01
DUP 114126	QC		0.4	12.9	382.8	224	12.7	2.8	2.0	127	1.39	373.0	0.4	28.9	3.4	12	11.3	12.5	<0.1	3	<0.01
Reference Materials																					
STD AGPROOF	Standard																				
STD CCU-1C	Standard																				
STD CDN-ME-3	Standard																				
STD CZN-3	Standard																				
STD DS8	Standard		13.0	106.4	124.3	297	1.7	35.7	7.1	592	2.40	23.7	2.6	114.7	6.6	68	2.4	5.5	6.4	43	0.71
STD DS8	Standard		12.2	102.0	122.8	295	1.8	34.9	7.1	569	2.37	25.7	2.6	94.5	6.4	58	2.0	4.4	5.3	41	0.67
STD DS8	Standard		11.9	101.7	119.0	295	1.7	35.5	7.1	587	2.40	23.2	2.6	103.3	6.1	61	2.4	4.7	6.5	41	0.69
STD DS8	Standard		12.7	99.4	118.0	301	1.6	37.4	7.6	605	2.39	25.4	2.5	138.5	5.9	56	2.2	5.0	5.8	39	0.67

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QUALITY CONTROL REPORT WHI11001804.1

Method		1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	G6Gr	7AR
Analyte		P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Ag	Cu
Unit		%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	gm/t	%
MDL		0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	50	0.001
Pulp Duplicates																					
113282	Drill Core	0.057	4	6	0.08	35	<0.001	<1	0.27	0.006	0.05	0.2	0.08	1.1	<0.1	0.08	<1	<0.5	<0.2		
REP 113282	QC	0.055	4	7	0.08	35	<0.001	<1	0.27	0.006	0.05	<0.1	0.05	1.3	<0.1	0.09	<1	<0.5	<0.2		
113299	Drill Core	0.010	3	14	<0.01	16	<0.001	<1	0.08	0.003	0.04	0.2	<0.01	0.3	<0.1	<0.05	<1	<0.5	<0.2		
REP 113299	QC	0.010	3	14	<0.01	16	<0.001	<1	0.09	0.002	0.04	0.1	<0.01	0.3	<0.1	<0.05	<1	<0.5	<0.2		
114098	Drill Core	0.017	3	3	<0.01	21	<0.001	2	0.05	0.002	0.02	<0.1	0.03	0.3	<0.1	0.06	<1	<0.5	<0.2		
REP 114098	QC	0.019	4	3	<0.01	22	<0.001	1	0.05	0.002	0.02	0.1	0.03	0.2	<0.1	0.06	<1	<0.5	<0.2		
114113	Drill Core	0.018	7	14	0.05	46	<0.001	3	0.23	0.004	0.07	<0.1	<0.01	0.6	<0.1	<0.05	<1	0.6	<0.2		
REP 114113	QC	0.017	8	12	0.06	48	<0.001	1	0.24	0.004	0.07	<0.1	<0.01	0.5	<0.1	<0.05	<1	<0.5	<0.2		
114119	Drill Core	0.049	5	8	0.01	31	<0.001	5	0.16	0.004	0.07	<0.1	0.49	0.4	0.2	2.63	<1	0.9	<0.2	1183	0.010
REP 114119	QC																				0.010
114125	Drill Core	0.018	5	16	0.22	38	<0.001	3	0.27	0.006	0.07	<0.1	<0.01	0.6	<0.1	0.23	<1	0.7	<0.2		
REP 114125	QC	0.017	6	16	0.22	39	<0.001	2	0.26	0.005	0.07	<0.1	<0.01	0.6	<0.1	0.24	<1	0.8	<0.2		
Core Reject Duplicates																					
113274	Drill Core	0.022	<1	1	0.21	18	<0.001	2	0.08	0.003	0.03	0.2	0.01	1.4	0.3	0.06	<1	0.5	<0.2		
DUP 113274	QC	0.021	<1	3	0.21	20	<0.001	2	0.08	0.003	0.03	0.3	<0.01	1.4	0.1	0.05	<1	0.5	<0.2		
113309	Drill Core	0.032	6	7	0.14	21	<0.001	2	0.17	0.002	0.02	0.2	<0.01	1.0	0.1	<0.05	<1	<0.5	<0.2		
DUP 113309	QC	0.033	6	7	0.14	21	<0.001	1	0.17	0.002	0.03	0.2	<0.01	1.0	0.1	<0.05	<1	<0.5	<0.2		
114126	Drill Core	0.017	7	2	<0.01	51	<0.001	4	0.14	0.005	0.07	0.9	0.11	0.5	0.1	<0.05	<1	1.0	<0.2		
DUP 114126	QC	0.016	8	3	<0.01	52	<0.001	3	0.15	0.005	0.08	0.6	0.12	0.5	0.1	<0.05	<1	0.6	<0.2		
Reference Materials																					
STD AGPROOF	Standard																			92	
STD CCU-1C	Standard																				
STD CDN-ME-3	Standard																			271	
STD CZN-3	Standard																				
STD DS8	Standard	0.074	15	110	0.62	267	0.115	4	1.00	0.092	0.42	2.9	0.20	1.9	5.1	0.17	5	4.5	4.1		
STD DS8	Standard	0.072	14	109	0.58	235	0.103	1	0.87	0.079	0.39	2.5	0.17	1.7	5.3	0.16	4	4.9	5.2		
STD DS8	Standard	0.076	13	108	0.60	245	0.104	3	0.89	0.083	0.40	2.8	0.17	1.9	5.3	0.16	4	5.7	4.5		
STD DS8	Standard	0.070	14	110	0.58	270	0.100	2	0.89	0.089	0.40	2.9	0.19	1.9	5.3	0.16	5	5.0	4.9		

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Report Date: November 28, 2011

QUALITY CONTROL REPORT WHI11001804.1

		7AR	7AR	7AR.1
	Method	**7AR**	**7AR**	**7AR.1**
	Analyte	**Pb**	**Zn**	**Pb**
	Unit	**%**	**%**	**%**
	MDL	**0.01**	**0.01**	**0.01**
Pulp Duplicates				
113282	Drill Core			
REP 113282	QC			
113299	Drill Core			
REP 113299	QC			
114098	Drill Core			
REP 114098	QC			
114113	Drill Core			
REP 114113	QC			
114119	Drill Core	>10	0.08	12.51
REP 114119	QC	>10	0.08	
114125	Drill Core			
REP 114125	QC			
Core Reject Duplicates				
113274	Drill Core			
DUP 113274	QC			
113309	Drill Core			
DUP 113309	QC			
114126	Drill Core			
DUP 114126	QC			
Reference Materials				
STD AGPROOF	Standard			
STD CCU-1C	Standard			0.37
STD CDN-ME-3	Standard			
STD CZN-3	Standard			0.08
STD DS8	Standard			
STD DS8	Standard			
STD DS8	Standard			
STD DS8	Standard			

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		WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca
		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%
		0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01
STD GBM997-6	Standard																				
STD GC-7	Standard																				
STD GC-7	Standard																				
STD PTC-1A	Standard																				
STD SP49	Standard																				
STD SP49	Standard																				
STD CDN-ME-3 Expected																					
STD GC-7 Expected																					
STD SP49 Expected																					
STD AGPROOF Expected																					
STD DS8 Expected			13.44	110	123	312	1.69	38.1	7.5	615	2.46	26	2.8	107	6.89	67.7	2.38	5.7	6.67	41.1	0.7
STD CZN-3 Expected																					
STD CCU-1C Expected																					
STD GBM997-6 Expected																					
BLK	Blank		<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	7	<0.01	<0.5	<0.1	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01
BLK	Blank		<0.1	<0.1	1.2	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.1	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank		<0.1	<0.1	1.4	4	<0.1	<0.1	<0.1	<1	0.01	<0.5	<0.1	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01
BLK	Blank																				
Prep Wash																					
G1	Prep Blank		0.3	5.1	2.6	48	<0.1	3.2	5.4	551	1.91	64.9	1.8	<0.5	4.8	52	<0.1	0.2	<0.1	36	0.43
G1	Prep Blank		0.3	5.3	3.0	47	<0.1	2.9	5.4	558	1.92	64.6	1.8	0.6	5.1	54	<0.1	0.2	<0.1	36	0.46

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		1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	G6Gr	7AR
		P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Ag	Cu
		%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	gm/t	%
		0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	50	0.001
STD GBM997-6	Standard																				
STD GC-7	Standard																				0.548
STD GC-7	Standard																				0.560
STD PTC-1A	Standard																				
STD SP49	Standard																			53	
STD SP49	Standard																			55	
STD CDN-ME-3 Expected																				276	
STD GC-7 Expected																					0.555
STD SP49 Expected																				60.2	
STD AGPROOF Expected																				94	
STD DS8 Expected		0.08	14.6	115	0.6045	279	0.113	2.6	0.93	0.0883	0.41	3	0.192	2.3	5.4	0.1679	4.7	5.23	5		
STD CZN-3 Expected																					
STD CCU-1C Expected																					
STD GBM997-6 Expected																					
BLK	Blank	<0.001	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2		
BLK	Blank	<0.001	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2		
BLK	Blank																			<50	
BLK	Blank																			<50	
BLK	Blank																			<50	
BLK	Blank																				<0.001
BLK	Blank																			<50	
BLK	Blank																			<50	
BLK	Blank	<0.001	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2		
BLK	Blank																				
Prep Wash																					
G1	Prep Blank	0.071	16	6	0.53	202	0.103	3	0.89	0.068	0.45	<0.1	0.01	1.8	0.3	<0.05	5	<0.5	<0.2		
G1	Prep Blank	0.074	15	6	0.54	198	0.116	1	0.91	0.073	0.46	0.3	0.02	1.9	0.3	<0.05	5	<0.5	<0.2		

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		7AR	7AR	7AR.1
		Pb	Zn	Pb
		%	%	%
		0.01	0.01	0.01
STD GBM997-6	Standard			22.57
STD GC-7	Standard	>10	21.94	
STD GC-7	Standard	9.75	22.42	
STD PTC-1A	Standard			0.04
STD SP49	Standard			
STD SP49	Standard			
STD CDN-ME-3 Expected				
STD GC-7 Expected		10.44	22.06	
STD SP49 Expected				
STD AGPROOF Expected				
STD DS8 Expected				
STD CZN-3 Expected				0.113
STD CCU-1C Expected				0.34
STD GBM997-6 Expected				23.75
BLK	Blank			
BLK	Blank			
BLK	Blank			
BLK	Blank			
BLK	Blank			
BLK	Blank	<0.01	<0.01	
BLK	Blank			
BLK	Blank			
BLK	Blank			
BLK	Blank			<0.01
Prep Wash				
G1	Prep Blank			
G1	Prep Blank			

Appendix 8:
Methodology