WALLBRIDEGE MINING COMPANY

Assessment Report

Mapping, Prospecting and Surface Geophysics
Foy North Property
Tyrone Township

11/17/2014

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1 Property Description and Location:

The Foy North property is located approximately 45km northwest of the City of Greater Sudbury in Leinster and Tyrone Townships (Figure 1). The property consists of 11 claims: 1241797, 4212987, 4218570, 4245185, 4273200, 4273201, 4273202, 4273203, 4273204, 4273205, and 4277618. The claims cover an area of 576 ha.

2 Accessibility, Infrastructure and Physiography

Access to the claims is provided by the #700 logging road located approximately 13km (by road) north of the town of Cartier. The 700 road provides access to unnamed logging roads that cut south to the claim blocks. Access is seasonal and easily travelled by 4x4 pickup trucks and other off road vehicles.

Local terrain is composed primarily of Archean rocks that provide rolling hills, which are typically elongated in a NW direction in the claim area. The map area consists of marshy lowlands and foliage is primarily coniferous being composed of black spruce and jack pine. Alders and other deciduous trees can be found in the claim areas as well. Overburden tends to be thickest in the valleys which are home to alders and deciduous trees. Locally an abundance of water can be found in the marshy swamps and numerous streams, and would be adequate for exploration purposes.

Snowfall generally begins in November and extends into late March, early April. Lakes are usually passable with adequate ice thickness from late December through to mid-March. Between 45 and 100 mm of monthly rainfall is normal from April to October. The mean temperature is –13.6°C in January and 19°C in July.

A full range of services, supplies, and accommodations are provided by the city of Sudbury, Ontario.

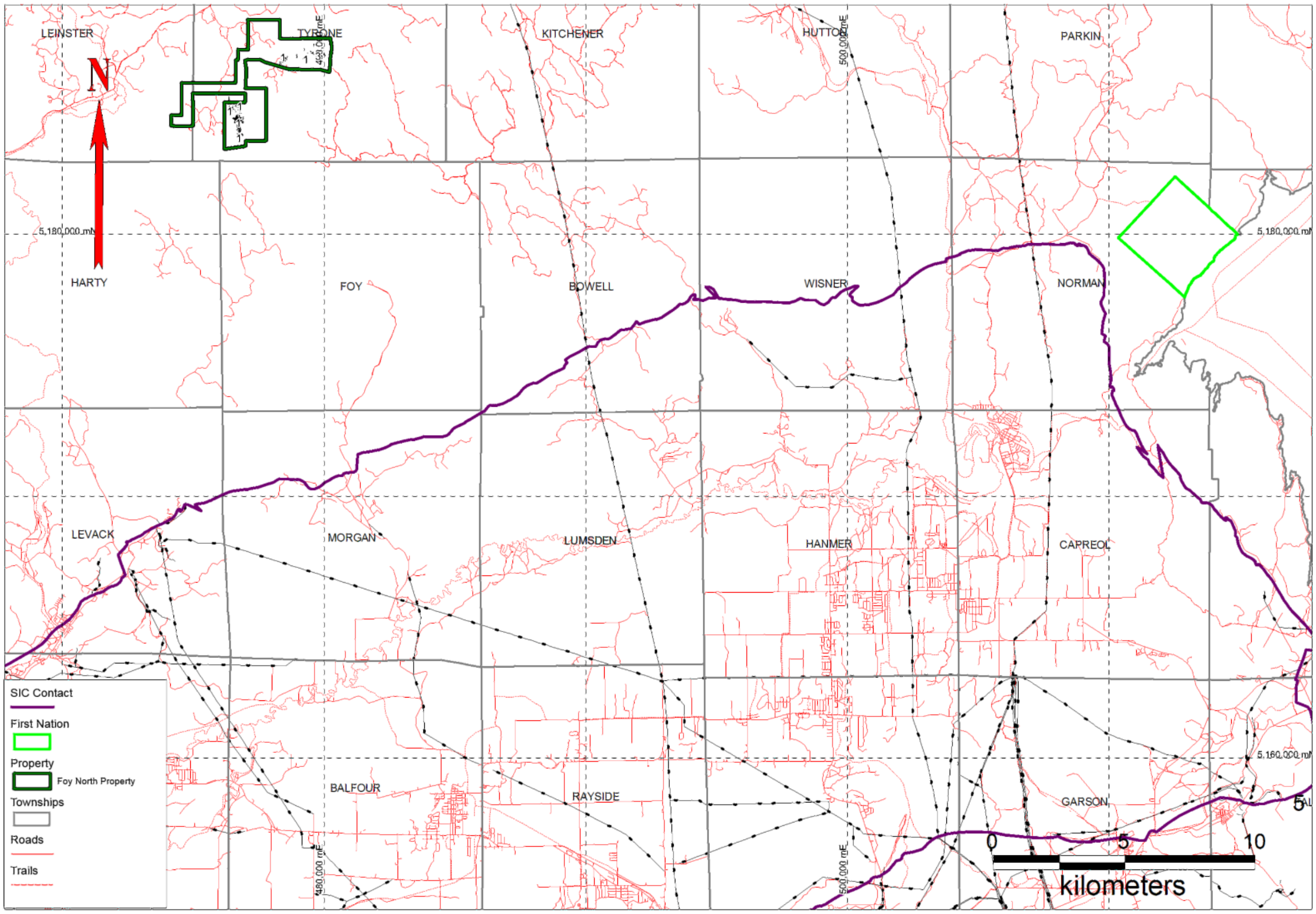


Figure 1: Foy North property Location

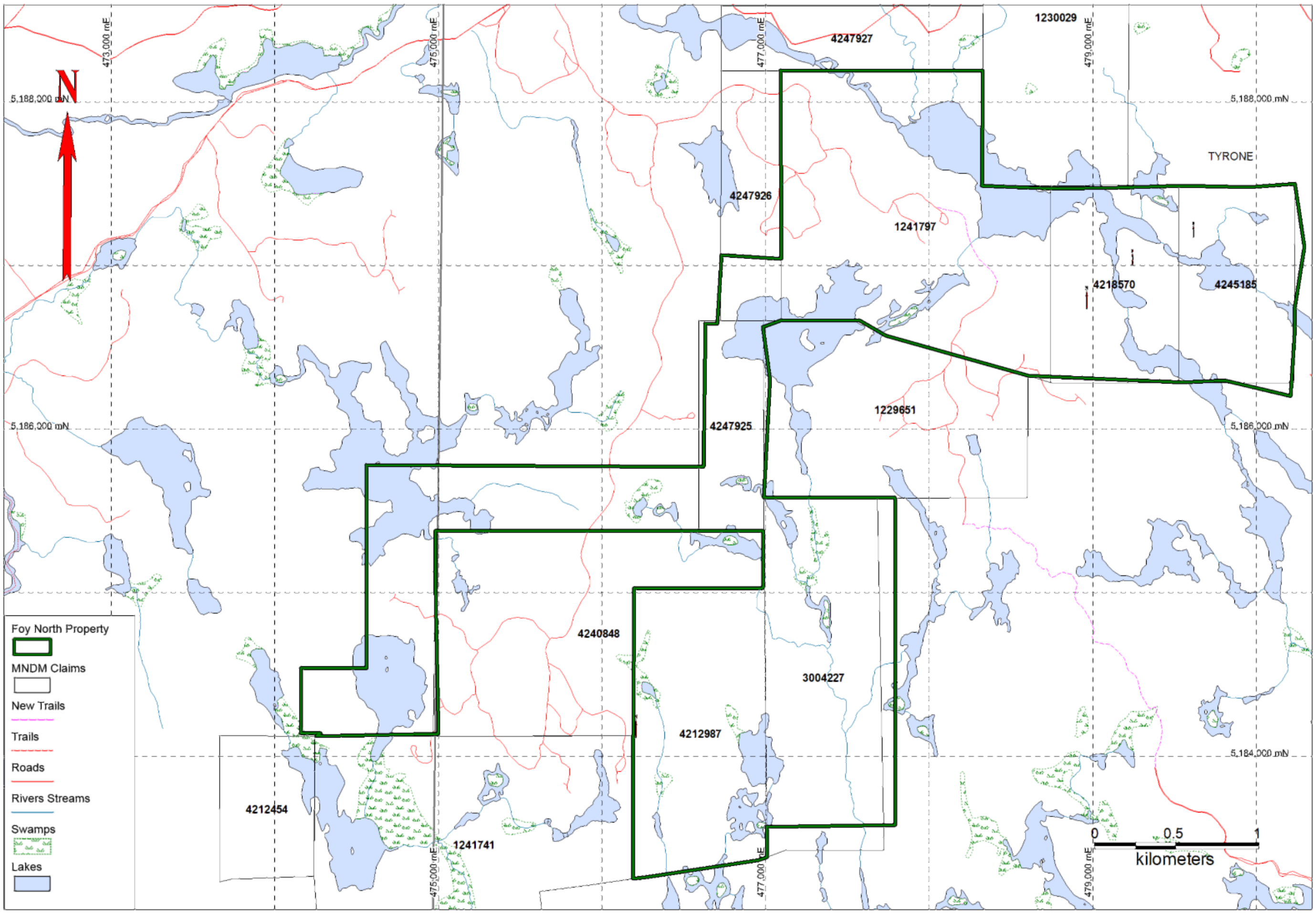


Figure 2: Foy North property Map

Table 1: Foy North Claim Status as of November 17, 2014.

number	township	area (ha)	units	holder	recorded date	work due date	required	reserve
1241797	Tyrone	256	16	WMCL	11-Feb-2009	11-Feb-2019	6,400	237,056
4212987	Tyrone	144	9	WMCL	11-Feb-2009	11-Feb-2019	3,600	37,667
4218570	Tyrone	96	6	WMCL	22-Oct-2012	22-Oct-2019	2,400	0
4245185	Tyrone	80	5	WMCL	22-Oct-2012	22-Oct-2019	2,000	0
4273200	Tyrone	16	1	WMCL	02-Jul-2014	02-Jul-2016	400	0
4273201	Tyrone	48	3	WMCL	02-Jul-2014	02-Jul-2016	1,200	0
4273202	Tyrone	64	4	WMCL	02-Jul-2014	02-Jul-2016	1,600	0
4273203	Leinster	48	3	WMCL	02-Jul-2014	02-Jul-2016	1,200	0
4273204	Leinster	32	2	WMCL	02-Jul-2014	02-Jul-2016	800	0
4273205	Leinster	112	7	WMCL	02-Jul-2014	02-Jul-2016	2,800	65
4277618	Tyrone	160	10	WMCL	14-Aug-2014	14-Aug-2016	4,000	0

3 History

3.1 Work prior to Wallbridge

Claim S4212987 is located in the Southwest corner of Tyrone Township and has had several periods of work performed since the 1950's. The work performed includes: diamond drilling, mechanical stripping, geophysics, geological mapping, and geochemistry. During April 1967, INCO Ltd drilled two diamond drill holes, (33316 and 33318) on the southern part of the property totaling 451 feet to test the extents of the Foy-Hess Offset Dyke intersection. INCO Ltd. also drilled another hole (32870) in 1967, to a depth of 324 feet; however this hole is just off the eastern side of the northern part of the property and did not encounter any quartz diorite. In December 1971 Flint Rock Mines Ltd performed a MAG & EM survey and followed it up in June 1972 by drilling the northern portion of the claim with two holes (#1 and #2) totaling 1223 feet to test the possible extension of the Foy Offset Dyke to the north. In October 1989, BP Resources Canada Limited drilled seven holes (V-71-01 to V-71-07), three of which are located on the property. These three holes, V-71-04, V-71-06, and V-71-07 total approximately 1167 feet and were drilled to better define the Foy Offset dyke near the Foy-Hess Offset intersection.

Throughout 1949 and 1950, Falconbridge Nickel Mines Ltd carried out geological mapping on the Foy North property. However, during the 1949 mapping, the Nipissing Gabbro intrusions in the area were misidentified as quartz diorite and quartz diorite breccia. During the 1950's, a magnetometer survey was carried out by Falconbridge Nickel Mines Ltd. in Foy and Tyrone townships as well as drilling in 1952 (F-1 to F-4) and 1968 (TYR-5 to TYR-8) in order to identify quartz diorite offset dykes along with associated Ni-Cu-PGE mineralization. However, the drill holes are located just south of the property.

During 1950, Inco Ltd drilled four diamond drill holes (5966 to 5969) throughout the area of the claim blocks. However, only the one hole (5966) falls within the currently property boundary. It was a -80 dip hole and cored 400 feet of quartz diorite.

During June 1967, McPhar Geophysics Ltd carried out an Induced Polarization and Resistivity Survey on behalf of Anaconda American Brass Ltd at various locations on the property.

In 1972, Alchib Development Company Ltd performed a magnetic survey on the eastern edge of the claim as well as farther off to the east; however, they came up with only one small magnetic anomaly.

Drilling conducted by BP Resources Canada Ltd during 1980's uncovered several localities of quartz diorite in the vicinity of the claims.

In 2001 Crowflight Minerals Incorporated flew a Helicopter-Borne AEROTEM Electromagnetic – Magnetic Survey across the area of the property and identified an extension of anomalously mineralized quartz-diorite interpreted to be an extension of the Foy Offset Dyke across the eastern side of the Sandcherry Creek Fault.

More recently, Tearlach resources has completed several areas of mechanical stripping and washing of the offset dyke junction of the Hess and Foy offsets as well as ground geophysics surveys centered over top of the known areas of offset dyke.

3.2 WALLBRIDGE WORK HISTORY

- The original property was staked in early February 2009 additional claims were added over in 2012 and 2014.
- In 2009 mechanical stripping of the Foy-Hess Offset dyke intersection was completed on claim S4212987. Wallbridge also completed reconnaissance mapping and sampling of the entire 1.4 km^2 claim and detailed mapping and sampling of the Offset dyke exposures.
- In 2010 diamond drill hole WFN-001 was completed to a depth a 150.50 meters, on claim S1241797. Also, Crone Geophysics was contracted to complete several ground geophysics and a borehole PEM survey.
- 2012 detailed mapping at the 1:100 scale was performed on claim 4212987. Re-mapping of the area also lead to the delineation of the Foy offset dyke south of the trenches.
- In 2013 Wallbridge completed contracted Geotech to complete an 86 km VTEM Max survey over the entire property.
- Five diamond drill holes totalling 1,135.6m were completed on the Foy North Property in summer 2013. These holes targeted favourable geology as well as geophysical anomalies identified by exploration work carried out in the past years. Drill hole locations are shown on Error! Reference source not found.. A total of 152 samples were taken from drill cores and assayed by ALS Chemex Ltd. along with additional 19 samples for quality control. Lamontagne Geophysics Ltd. carried out borehole-EM surveys on drill holes WFN-002, -003 and -006. Gyro surveys performed on one drill hole (WFN-003) by Halliburton Group Canada.

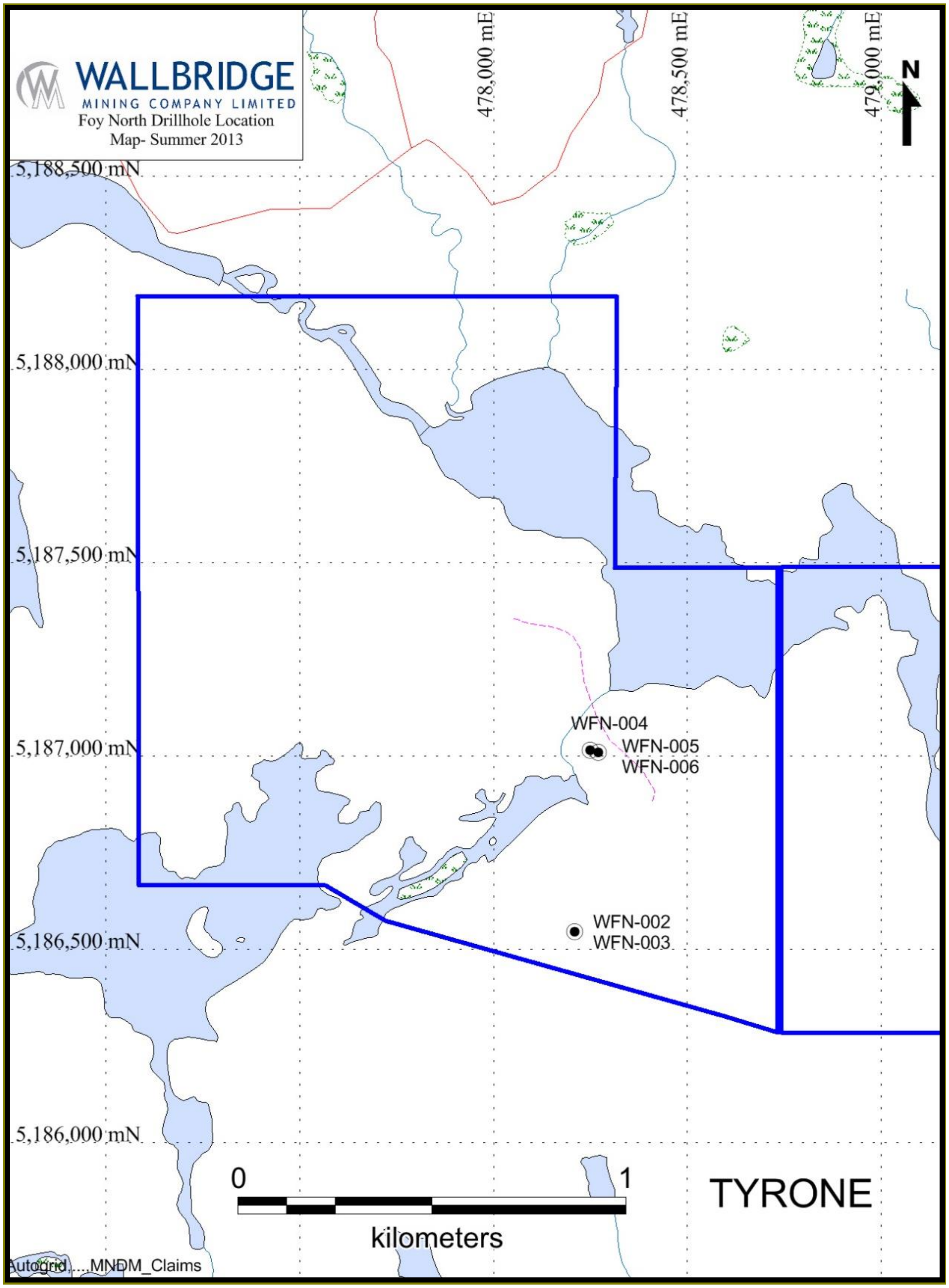


Figure 3: Location of drill holes drilled during the summer 2013 exploration program at Foy North Property. Coordinates are in NAD 27, UTM zone 17.

4 Geological Setting

The Sudbury area hosts one of the most prolific Ni-Cu-PGE mining camps in the world. Sudbury geology is unique – the ore deposits are associated with the Sudbury Igneous Complex (SIC) and related rocks, which record what is generally accepted as a major, mid-Proterozoic meteorite impact event which occurred 1,850 million years ago (1850 Ma or 1.85 Ga). Despite over one hundred years of academic and industry scrutiny, many aspects of Sudbury ore deposits geology are still hotly disputed and significant new discoveries continue to be made.

4.1 Regional Geologic setting

The project area is located near the southern margin of the Archean (2.7 Ga) Superior Province of the Canadian Shield. In this region of the Superior Province upper greenschist to lower amphibolite metasedimentary and metavolcanic rocks of the Benny Greenstone belt are complexly folded and foliated granitic to tonalitic batholiths. Near the margins of greenstone belts, the supercrustal rocks occur as irregular outliers that are complexly folded and showing signs of incipient migmatization. A major unit oxide-facies iron-formation occurs in the eastern portion of the Benny Greenstone. Paleo-proterozoic sedimentary and volcanic rocks of the Huronian Supergroup were deposited unconformably on the Archean basement in an elongate belt parallel to the craton margin and subsequently intruded by sill-like Nipissing gabbros and feeder dykes.

The SIC formed at ~1.85 Ga during metamorphism and folding related to the Penokean Orogeny. The southern boundary of the SIC is located about 10 km north of the Grenville Front, an elongate belt of high metamorphic grade gneiss that formed during the Grenvillian Orogeny ~1.0 Ga.

The SIC straddles the unconformity between the gneisses and granitoid plutons of the Archean Superior Province and overlying Huronian supracrustal rocks of the Paleoproterozoic Southern Province. It is geographically divided into the North, South, and East Ranges. It defines a deformed, deeply eroded, impact melt- and sediment-filled meteorite impact crater (the Sudbury Basin) and its surrounding brecciated rocks. The oval-shaped crater has dimensions of 60 km in a northeast direction and 27 km in a northwest direction. The brecciated footwall rocks of the SIC extend for 70 to 80 kilometers beyond the crater remnant. All pre-SIC rocks are cut by varying quantities of Sudbury Breccia.

Sudbury Breccia consists of rounded and milled, millimeter- to hundred meter-sized fragments of country rock hosted within a fine-grained, variably recrystallized matrix. Small veinlets of Sudbury Breccia occur throughout nearly every earlier lithology in the footwall environment. Generally, it is only distinguished as a distinct lithological unit when the Sudbury Breccia matrix accounts for greater than 15 volume percent of the host rock. Concentrations of Sudbury Breccia often occur along pre-existing structures and weaknesses in the Archean and Paleoproterozoic footwall rocks, such as along the contact between rock types of contrasting competencies. It is commonly found along the margins of diabase dykes. Trace pyrite is common within the Sudbury Breccia matrix, particularly when it occurs in the surrounding rocks and dominant fragment types. Background precious metal concentrations in Sudbury Breccia are typically below the limits of detection for standard assay or ICP analyses (i.e. <5 ppb).

The crater fill consists of igneous rocks that comprise the Sudbury Igneous Complex (SIC) and overlying sedimentary rocks of the Whitewater Group.

The SIC consists of a discontinuous, variably mineralized, basal Sublayer unit lying along the crater wall. Offset dykes intruded up to tens of kilometers into the underlying brecciated country rocks. The formation of the SIC as a superheated meteorite impact melt sheet that was heavily contaminated by crustal rocks is strongly supported by research, although, other theories have been postulated in the past. At its base, the SIC intrudes brecciated rocks of the crater wall. At its top, the SIC Granophyre intrudes the Onaping Formation of the Whitewater Group of sedimentary rocks, primarily as minor dykes and sills.

The Whitewater Group consists, from bottom to top, of the Onaping, Onwatin, and Chelmsford Formations. The Onaping Formation is a poorly stratified 1600 m thick breccia, thought to be a Fallback Breccia that formed following the impact event. The Onwatin Formation is a several hundred meters thick, deepwater, black, graphitic slate. The uppermost formation, the Chelmsford, is a shallow water turbidite. No Whitewater Group sedimentary rocks have been found beyond the boundaries of the Sudbury Structure.

The Fecunis Lake and Sandcherry Creek Faults (Card and Meyn, 1969) are major fault zones that cross the North Range. The Fecunis Lake Fault, a major north-south trending fault that sinistrally offsets the SIC and footwall rocks by about 1 km and the Hess Offset by about 1.75 km. This fault crosses the eastern end of the Property (Figure 8). The Sandcherry Creek Fault occurs within the Foy North property. The Sandcherry Creek sinistrally offsets the Foy and Hess Offset Dykes.

4.2 Property Geology

The property is dominated by the Archean-aged Cartier Batholith which, in this area, consists dominantly of massive to weakly foliated quartz monzonite to granodiorite (~2640 Ma) and contains inclusions of gneissic material that likely correlate with the Levack Gneiss Complex. Paleoproterozoic

Matachewan diabase dykes (2473 +16/-9 Ma and 2446 ±3 Ma; Heaman, 1997) and Nipissing mafic intrusive suite (2210-2217 Ma; Corfu and Andrews, 1986; Noble and Lightfoot, 1992; Buchan et al., 1998) cut the Cartier Batholith. All of the above units are cut by occurrences of Sudbury Breccia (SDBX), which is classified using an alphanumeric scheme (Table 2).

Over 2 km strike length of the Hess/Foy Offset dykes has been delineated on the property. The Offset dykes are up to 75 meters wide and have many of the characteristics of mineralized environments of other QD dykes around the Sudbury basin including mineralization, extensive inclusion bearing phases, flexures, pinches, bends, and terminations in the dikes. Assays of Offset dyke from trenches in the southern part of the property contained anomalous TPM values of up to 232 ppb. Detailed mapping, geochemistry, and petrography, suggest the Foy and Hess Offset dykes are a single fluent dyke. This is based mainly on available field observations but more work needs to be done to conclusively say for sure. Lithological succession in the dykes follow the typical progression from the center of the dyke outwards; large-inclusion bearing QD to small-inclusion bearing QD, to non-inclusion bearing QD, to either a chilled margin.

Post-SIC Sudbury Olivine Diabase dykes cross-cut the property with a northwest-southeast trend.

Pleistocene glaciation removed soil from local topographic highs and filled topographic lows with unconsolidated glacio-fluvial sediments.

4.3 Property Lithology Descriptions

The lithologies encountered on the Property are: quartz diorite, granite gneiss, un-subdivided metasediments, hornblende biotite schist, metavolcanics, Nipissing metagabbro, amphibolite, migmatite, granite, granodiorite, tonalite, quartz gabbro. These units are described in more detail below.

<u>Quartz Diorite:</u> Petrographic examination shows that the QD is composed of euhedral plagioclase and amphibole, with minor amounts of biotite, titanite, apatite, and sometimes complex intergrowths of quartz and feldspar. The texture is variable, with very fine-grained chill margins, stellate or acicular amphibole crystals in the fine-grained sections of the dike, and coarser, interlocking igneous textures in the core of the dike. Xenoliths of various rock types, including gabbro and granite, are found in parts of the dike. The inclusions range in size from less than 1 centimeter to almost 2 meters.

<u>Granite Gneiss:</u> On weathered surfaces the gneiss appears light to medium grey with differential weathering. Foliation in the gneiss is not always easily identified on weathered surfaces, but is much more obvious on fresh surfaces. On the fresh surfaces augen texture can be seen within the gneissic foliation. Iron staining and leaching is visible on weathered surfaces. The gneiss is intruded by diabase, gabbro, and felsic intrusions. The composition of the gneiss is 35% quartz, 20% albite, 20% K-spar and

18% biotite. Accessory minerals include epidote, titanite, chlorite and opaques (dominantly pyrite and hematite).

Metasediment: On weathered surfaces, the metasediments appears bleached and light to medium grey-green. Foliation is visible due to differential weathering. Outcrop appearances differ due to compositional variance and the degree of deformation. On fresh surfaces the metasediment is grey to green-grey and, if present, the foliation is clearly visible. This unit is cut by all the intrusive rock units. The metasedimentary rocks are comprised of 35% biotite, 33% quartz, 25% chlorite with accessory garnet, epidote and opaques (dominantly pyrite). Epidote fracture fillings are interpreted to have formed during a later episode of hydrothermal alteration.

Hornblende Biotite Schist: On weathered surfaces the schist is similar to the metasediment as it is bleached and light grey to light brown/grey in colour. Quartz veinlets, commonly 1.0cm wide, often follow and cross-cut the foliation. The schist units are generally found in association with migmatite and quartz-rich shear zones. On fresh surfaces the schist is grey with foliation defined by dark grey to black bands of hornblende. The schist is comprised of 75% hornblende, 15% quartz and plagioclase, and 5% epidote with accessory biotite and pyrite.

Metavolcanics: The metavolcanic rocks include mafic, intermediate, and felsic rock types. On weathered surfaces the mafic metavolcanic are dark green-brown, whereas on fresh surfaces they appear dark green to dark grey. The intermediate metavolcanic rocks are medium- to fine-grained and green-grey, in colour. Felsic metavolcanic units are light green-grey to pale green on fresh surfaces and light green-brown to light grey on weathered surfaces. Mafic and intermediate metavolcanic rocks typically occur in massive units whereas felsic units typically have well-developed banding/layering interpreted as primary bedding planes. Mafic and felsic intrusive rocks cut the metavolcanic rocks. The metasedimentary and metavolcanic rocks are inter-bedded in some portions of the property.

Metagabbro: The metagabbro unit is medium grained, equigranular, medium to dark green, and weathers to intermediate grey with a bluish staining along fracture planes. Thin section examination showed that the gabbro to consists of 74% amphibolized pyroxene and plagioclase, 18% plagioclase feldspar, 3% opaques, 2% alkali-feldspar, 2% chlorite, and 1% quartz. Alteration of the metagabbro is displayed as pyroxene altering to amphibole, and feldspar altering to sericite and saussurite. Minor quartz veins with opaque minerals are visible in thin section with the dominant opaque mineral being hematite. A magmatic texture is well-preserved despite an amphibolite-facies metamorphic overprint.

Amphibolite: Amphibolite outcrops are usually medium to dark green in color, appear light to medium green grey, and have a medium-grained gneissic texture due to dynamic recrystallization. The majority of amphibolite occurs within the metavolcanic units and are interpreted as metamorphosed basalt. Some outcrops of amphibolite occur as xenoliths in the granite gneiss and have been interpreted as dismembered and recrystallised mafic dykes.

Migmatite: Migmatite is commonly found along the boundary between granite gneiss and metasedimentary rock units. On weathered surfaces, the leucosome appears light grey brown whereas the melanosome is light to dark brown. In outcrop, quartz lenses follow foliation and iron staining, which likely results from the oxidation of pyrite. There is a slight differential weathering between leucosome and melanosome bands, with the melanosome weathering recessively because of its lower quartz content. The leucosomes are dominated by quartz (85%) with minor amounts of alkali- and plagioclase feldspar, biotite, and garnet. The melanosome is comprised of biotite (75%) with minor to trace amounts of alkali- and plagioclase feldspar, quartz, garnet and biotite.

Granite: On weathered surfaces the granite is grey to grey brown, but it can also be bleached to a white or light pink color. The grain size ranges on the regional scale, being medium-grained within larger bodies and very fine-grained within radial dykes from the main intrusions. Granitic bodies generally are massive to weakly foliated. Granite outcrops are intruded by olivine diabase and quartz gabbro intrusions. The composition of the granite is: 45% quartz, 3% potassium feldspar, 10% plagioclase and 5% biotite with accessory opaque oxides, epidote and hematite.

Granodiorite: The granodiorite unit is aphanitic, light to dark grey in color, and weathers to a bleached light grey color. Outcrops are rounded, extensively weathered and typically found in low-lying areas. Fresh surfaces show evidence of leaching from weathered exposure. The granodiorite unit contains clasts (up to 3m wide) of various lithologies. Granodiorite is interpreted as a late intrusive unit because it cross-cuts quartz gabbro and granite units. Granodiorite is comprised of quartz, biotite, plagioclase, hornblende, and opaque minerals.

Tonalite: Outcrops of tonalite are inequigranular and commonly white to pale pink in color with light grey weathered surfaces.. Mineralogy consists of 75% plagioclase and 25% quartz with accessory epidote, hematite, biotite, chlorite and opaque minerals. The opaque minerals are likely pyrite or hematite.

Quartz Gabbro: The quartz gabbro unit is aphanitic, medium to dark green in color, and weathers light green to grey. Quartz gabbro is composed of 50% clinopyroxene, 20% plagioclase, 15% quartz, 5% chlorite and 5% opaques. Accessory minerals include biotite and epidote.

Table 2: Sudbury Breccia Codes

	Code	Description
Colour Index	1	Mafic
	2	Intermediate
	3	Felsic
Clast Composition	A	Mafic
	B	Intermediate

	C D E	Felsic Granitoid Sedimentary
Matrix Recrystallization	1 2 3 4 5	Sub-igneous Medium-grained porphyroblastic Fine-grained porphyroblastic Fine-grained recrystallized Aphanitic

5 Mineralization

Pyrite-pyrrhotite-pentlandite-chalcopyrite mineralization is hosted within the quartz diorite (QD) and inclusion quartz diorite (IQD) phases at several localities on the Property particularly near the contacts of the IQD and the QD on the west half of the Foy offset and the south half of the Hess offset. At these occurrences pyrite ± pyrrhotite ± chalcopyrite ± pentlandite occurs as 0.5cm to 1.5cm blebs as well as remobilized stringers and fracture controlled in the case of chalcopyrite. Locally, there are several pits mined for their Nickel and Copper contents just south of the property along the Foy offset sometime pre 1965.

Higher concentrations of sulfide mineralization have been found at several locations within the southern part of the property along the the Offset dykes. Pyrrhotite ± pyrite ± chalcopyrite ± pentlandite was found at several locations along the western half of the Foy Offset and the Southern half of the Hess Offset. Trace to 1% occurrences of sulfides occur throughout the remainder of the Offset dyke.

Sampling on the northern block was limited to the nineteen samples taken throughout drill hole WFN-001. Most of the mineralization consisted of 2mm averaged sized pyrrhotite ± pyrite ± chalcopyrite blebs restricted to an Inclusion Quartz Diorite (IQD) unit from approximately 45 to 85 meters depth. There is a high sulfide zone located between 76.66 and 78.00 meters containing ~ 8-10% sulfide blebs.

There has been no major mineralization discoveries in any of the metagabbroic bodies or Trap dykes on the property. However, these bodies should not be ignored, considering net textured to semi-massive mineralization occurs in a Nipissing metagabbro intrusion nearby on the eastern side of McGrindle Lake. The mineralization in the Nipissing metagabbro is of high interest because of moderate grades and possible high tonnages similar to that of the Shakespeare deposit.

6 Exploration Program

6.1 Mapping and Beep Mat Prospecting

Mapping, beep matting, and prospecting was carried out by Geologist in Training, Nicholas Wray and field assistant, Parker Cudney. The work was performed on Claims 1241797, 4218570, 4245185 and 4212987 at a 1:2000 scale in NAD 27 Canada Zone 17 aided by aerial photos, compass, and Garmin Etrex GPS's. A total of 34 samples were taken over the four claims. Access to the claims was gained via 4x4 pickup truck.

Two days were spent on claim 1241797 prospecting the known Foy Offset and following up on results from 2013. A total of three samples were taken from this claim P444609, P444610, and P444611.

Three days were spent mapping on claims 4218570 and 4245185. The objective of the mapping was to follow up on the extension of the Hess Offset east of the Foy Offset Dyke. Eleven samples were taken on this claim over the three days, samples N985434, N985437, N985438, and N985439.

Six days of mapping and Beep Matting was carried out on claim 4212987. Mapping of this claim was concentrated in the central portion of the claim where detailed mapping had not previously been performed. It targeted a weak conductive trend outlined by a VTEM airborne EM survey flown in 2013. A total of 20 samples were taken on this claim.

In total, 28 of the samples taken in the field were sent away for base and precious metal analysis. Two standards and two blanks were also submitted for analysis (QA/QC purposes).

Table 3 Sample location and type (NW= Nicholas Wray, QD= Quartz Diorite, Py= Pyrite, Po=Pyrrhotite, CPY= Chalcopyrite)

Sample	E_NAD27	N_NAD27	Sample Type	Length (m)	Geologist	Date Sampled	Rock Type	PY %	PO %	CPY %	Field Description
N986325	476179.80	5183744.00	CHANNEL	0.56	NW	6/12/2014	QD	2			2% pyrite mineralization
N986326	476179.80	5183743.20	CHANNEL	0.8	NW	6/12/2014	QD	3	3	2	5% mineralization (py, po, cpy)
N986327	476179.80	5183742.40	CHANNEL	0.63	NW	6/12/2014	QD	3	2	2	5% mineralization (py, po, cpy)
N986328	476179.80	5183741.45	CHANNEL	0.4	NW	6/12/2014	QD		3	3	5% mineralization (po, cpy)
N986329	476179.80	5183740.88	CHANNEL	0.83	NW	6/12/2014	QD				<1% mineralization
N986330	476444.00	5183799.00	CHANNEL	0.6	NW	6/12/2014	QD		2	2	3% mineralization (po, cpy)
N986331	476444.00	5183798.40	CHANNEL	0.8	NW	6/12/2014	QD		2	2	3% mineralization (po, cpy)
N986332	476444.00	5183797.60	CHANNEL	0.82	NW	6/12/2014	QD		1	1	2% mineralization (po, cpy)
N986333	476444.00	5183796.78	CHANNEL	0.86	NW	6/12/2014	QD		1	1	2% mineralization (po, cpy)
N986334	476451.60	5183798.20	CHANNEL	0.9	NW	6/12/2014	QD		1	1	1% mineralization (po, cpy)
N986335	476451.60	5183797.30	CHANNEL	0.7	NW	6/12/2014	QD		1	1	1% mineralization (po, cpy)
N986336	476451.60	5183796.50	CHANNEL	1.18	NW	6/12/2014	QD		1		<1% mineralization (po, cpy)
N986319	479193.82	5186722.85	GRAB		NW	6/10/2014	LAMP				Very soft, dark, micaceous

N986344	479359.93	5186782.79	FLOAT		NW	6/13/2014	DIA				Fine grain, possibly QD
N986345	479615.47	5186865.84	GRAB		NW	6/13/2014	DIA				Coarse grained, magnetic gabbro
N986346	479568.95	5186911.52	GRAB		NW	6/16/2014	DIA				Coarse grained, magnetic, rusty gabbro
N986347	479489.22	5186973.82	GRAB		NW	6/16/2014	DIA				Coarse grained, non-magnetic, gabbro
N986350			Standard								Standard
P444601			Blank								Blank
P444607	479950.18	5186970.05	Grab		NW	6/13/2014	QD				taken to confirm lithology
P444608	476884.53	5183775.35	Grab		NW	6/23/2014	DIA	2			diabase is cut by 2mm vein of pyrite
P444609	478514.94	5186622.21	Grab		NW	6/19/2014	DIA				taken to confirm lithology
P444610	478567.81	5186724.51	Grab		NW	6/20/2014	DIA				taken to confirm lithology
P444611	478551.47	5186677.72	Grab		NW	6/20/2014	DIA	1			minor pyrite in QD, hematite and epidote altered, contained weathered out cavities

6.2 Trench mapping

During two weeks in August, Geological Technician David Tremblay and Field Assistant Parker Cudney washed the outcrop of an area that had been excavated by William Day Construction on claim 4212987 (Figure 3). The trench targeted a weak conductive trend outlined by a VTEM airborne EM survey flown in 2013. Nicholas Wray (GIT) mapped the exposed outcrop at a scale of 1:250 (Figure 4).

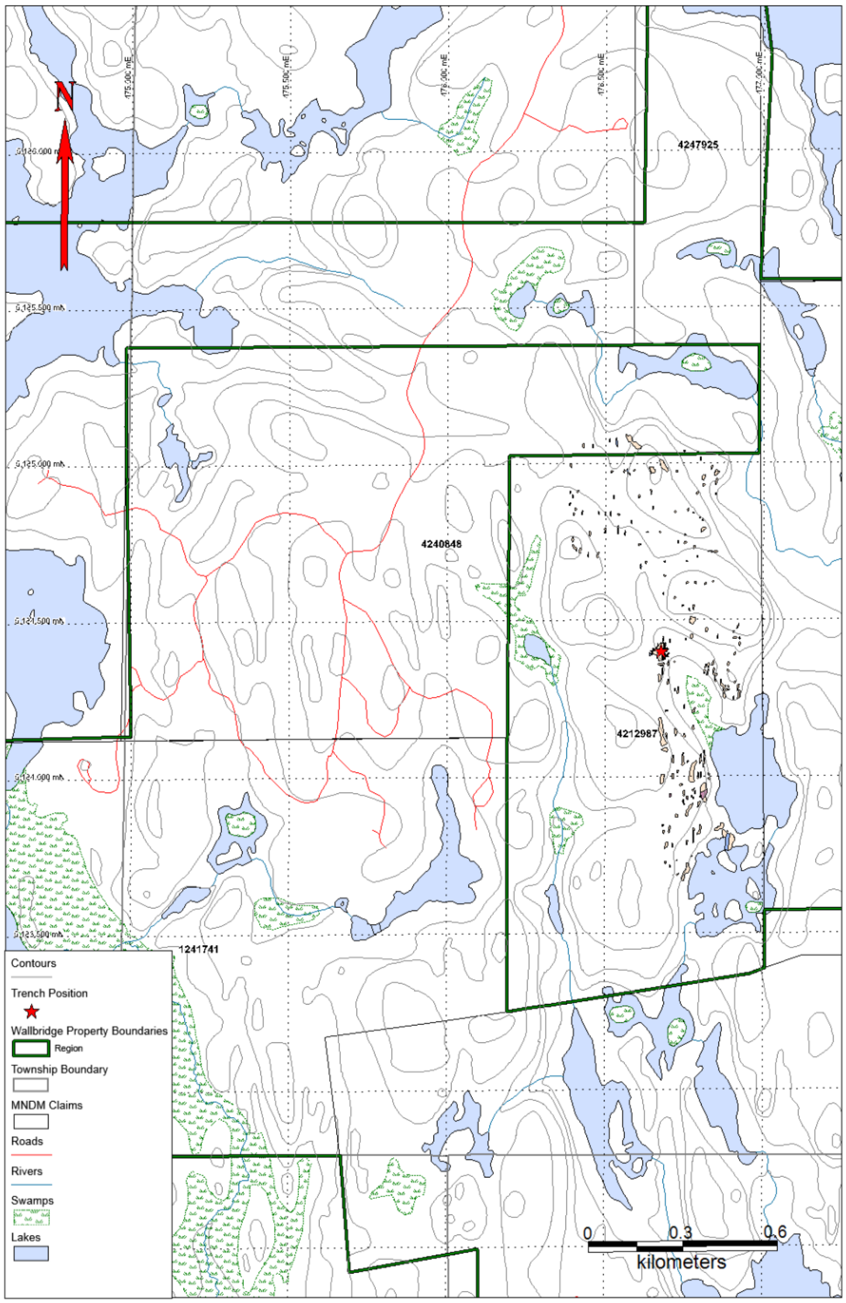


Figure 4: Location of trenching on claim 4212987

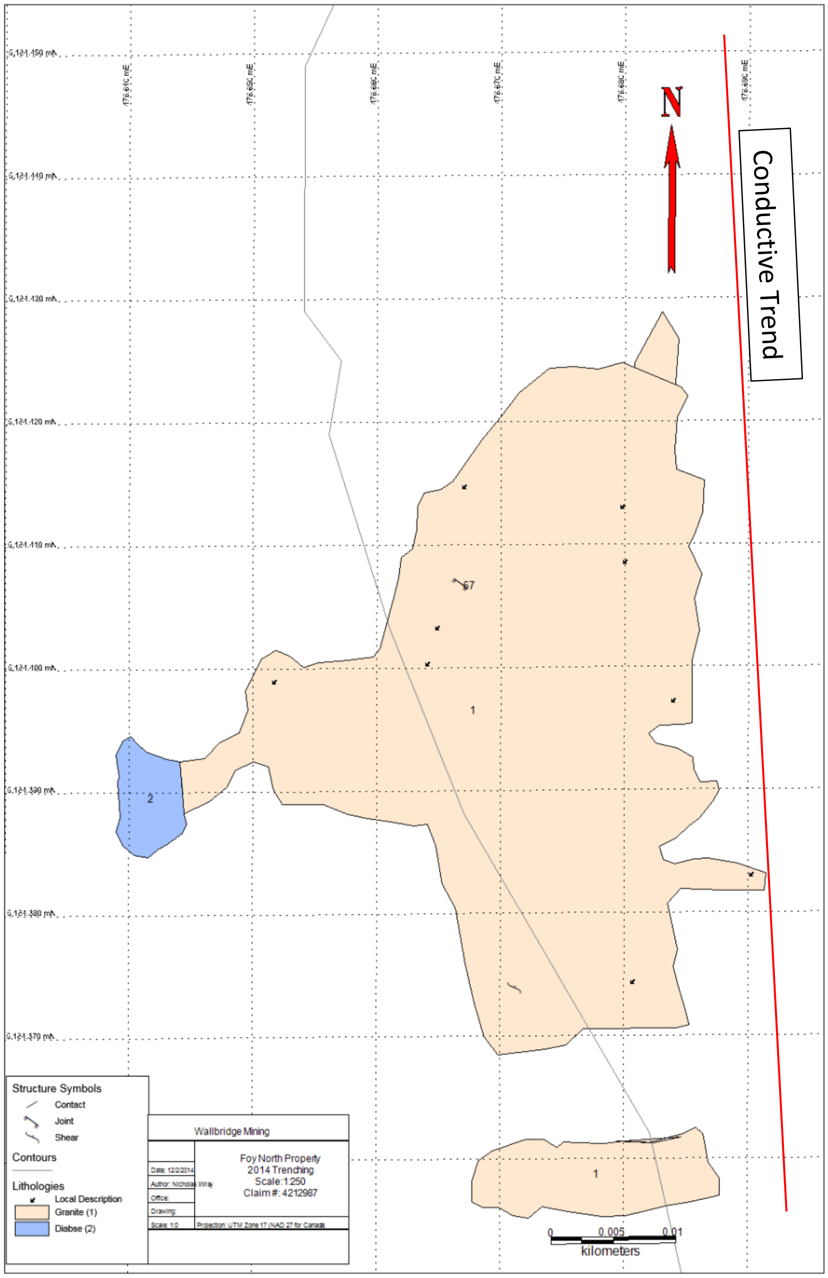


Figure 5: Trench map on claim 4212987

Channel sampling was conducted on a previously washed trench in the Southwest corner of claim 4212987. It targeted a patch of mineralization in the Hess Offset dyke.

6.3 UTEM V Surface EM Survey

Please Appendix D for a copy of the contractors report.

To complete the survey, Wallbridge Mining Company incurred costs in addition to that for the services provided by Lamontagne Geophysics.

Consultant Alan King was contracted by Wallbridge to review and interpret the results of the survey. Wallbridge Mining contracted Daniel Gauthier Exploration Inc. out of Abitibi, Quebec to cut the 20 line kilometer grid. Canadian Exploration Services Ltd. were contracted to perform DGPS surveys. Les Abatteurs was contracted to do road work and maintenance so the other contractors could access the property.

Wallbridge employees Tom Johnson, Jesse Bagnell and Dave Coventry were responsible for supervising the contractors. Dave Smith and Natalie MacLean were responsible for planning the survey, sequestering, supervising and coordinating contractors, and review of the results. Peter Anderson was responsible for data preparation and management. Nick Wray was responsible for assembling the assessment report. Wallbridge's trucks, trailers and snowmobiles were used for the purpose of supervision and establishing access.

6.4 Max-Min Survey

Please Appendix D for a copy of the contractors report.

To complete the survey, Wallbridge Mining Company incurred costs in addition to that for the services provided by Canadian Exploration Services Ltd.

Consultant Alan King was contracted by Wallbridge to review and interpret the results of the survey.

Wallbridge employees Dave Smith and Natalie MacLean were responsible for planning the survey, sequestering, supervising and coordinating contractors, and review of the results. Nick Wray was responsible for assembling the assessment report.

6.5 Results

The Hess offset dyke was extended to the east due to an occurrence of QD at the east side of claim 4245185 (sample P444607). The dyke was approximately 2m wide and exposed along the eastern shore of a small lake.

The trenching and washing that was conducted on claim 4212987 did not explain the geophysical anomaly. The area of interest is under the water table and therefore could not be exposed for mapping or sampling.

The geophysics did not outline any significant anomalies.

7 Interpretation

Mapping and prospecting has shown that the highest concentration of sulphides can be found in the quartz diorite proximal to the transition to inclusion quartz diorite. The magnetic areas delineated are likely result of higher magnetite concentration in the rock.

8 Recommendations

Future work should include drilling along the conductive trend outlined in figure 5, as well as, drilling the offset dikes in other locations below the penetration depth of the geophysical data.

9 Qualifications

I, Nicholas Wray, do hereby certify that:

1. I reside at 859 Adelaide st, Sudbury, Ontario, Canada, P3E 4B7.

2. I am a graduate from Laurentian University in 2014 with my Bachelor of Science (Hons.) in Geology and have been practicing my profession ever since.

3. I am a Geologist in Training with Wallbridge Mining Limited.

4. I have personally performed the work carried out in 2014.

5. As an employee, and an insider, of Wallbridge Mining Company, I do not qualify as an independent Qualified Person.

Nicholas Wray.

Wallbridge Mining Company Ltd.

129 Fielding Rd.

Lively, Ont. P3Y 1L7

10 References

Baird, S. J., 2007 Crowflight Property Exploration Area 2 – Tyrone Township, in house report prepared for Wallbridge Mining Company Limited.

Card, K. D., Innes, D. G., 1981 Geology of the Benny Area, District of Sudbury. Ontario Geological Survey, Report 206.

Card, K. D., and Meyn, H.D. 1969 Geology of the Lenister-Bowell Area. Ontario Department of Mines - Geological Report 65.

Collins, G. 2005 North Range Project – Sudbury Technical Overview and Recommendations. Crowflight Minerals Inc.

Dressler, B.O., 1984, Geology of the Emo, Rhodes, and Botha Townships – District of Sudbury. Ontario Geological Survey, Report 196.

Dressler, B.O., 1984: Chapter 4, General Geology of the Sudbury Area, in The Geology and Ore Deposits of the Sudbury Structure, Pye, E.G., Naldrett, A.J., and Giblin, P.E.(eds), Ontario Geological Survey, Special volume 1.

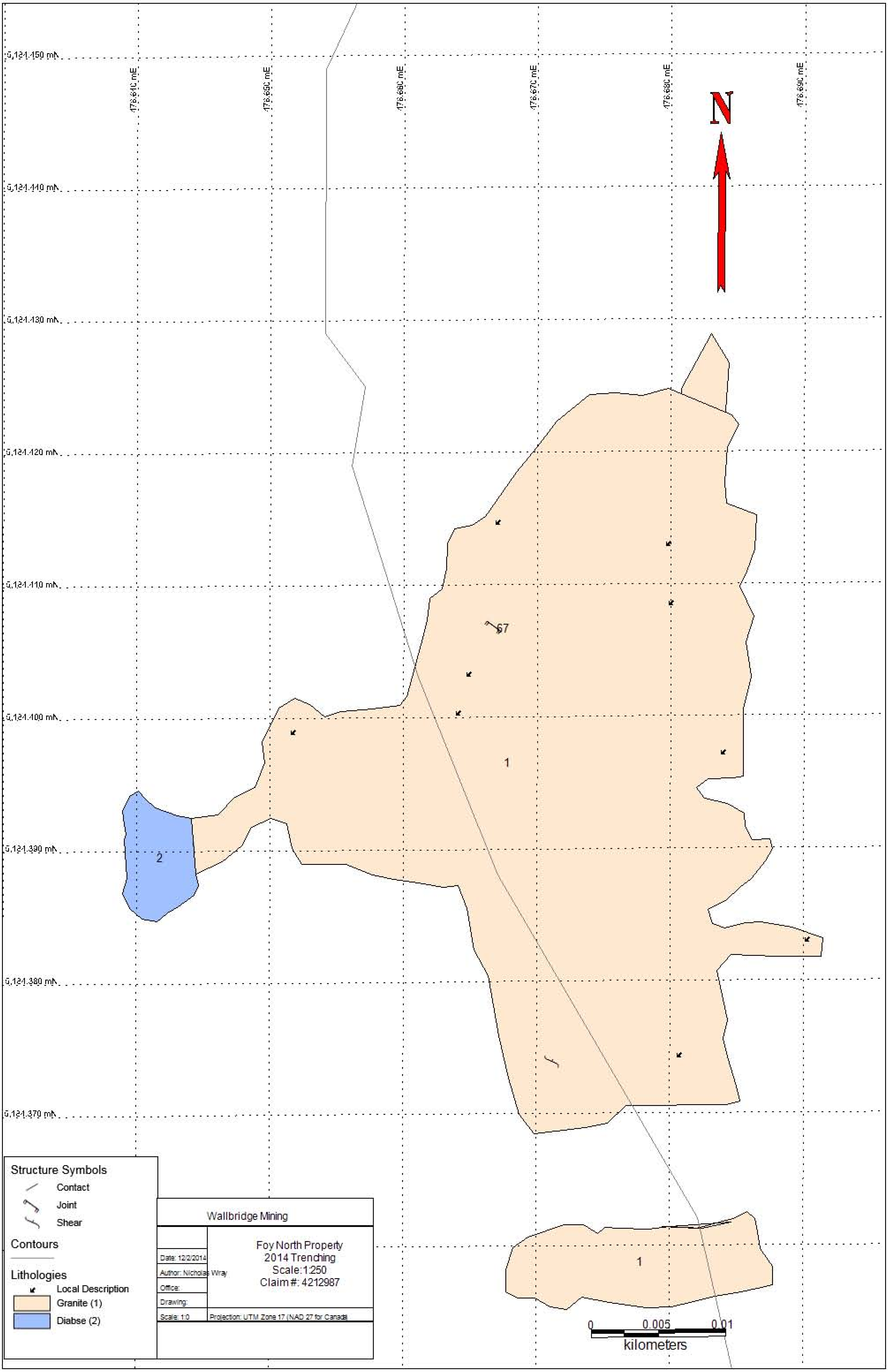
Hanley, J.H. 2002 The Distribution of the Halogens in Sudbury Breccia Matrix as Pathfinder Elements for Footwall Cu-PGE Mineralization at the Fraser Cu Zone, Barnet Main Copper Zone, and Surrounding Margin of the Sudbury Igneous Complex, Onaping-Levack Area, Ontario, Canada. M.Sc. thesis, University of Toronto, Toronto, Ontario.

Franklin, J.M., Gibson, H.L., Jonasson, I.R., Galley, A.G. 2005 Volcanogenic Massive Sulfide Deposits, in Economic Geology 100th Anniversary Volume, Hedenquist, J.W., Thompson, J.F.H., Goldfarb, R.J., Richards, J.P. (editors), The Economic Geology Publishing Company.

Lightfoot, P.C., Farrow, C.E., 2002, Geology, Geochemistry, and Mineralogy of the Worthington Offset Dike: A Genetic Model for Offset Dike Mineralization in the Sudbury Igneous Complex: Economic Geology, v. 97, p. 1419 – 1445.

Naldrett, A. J., Asif, M., Scandl, E., Searcy, T., Morrison, G. G., Binney, W. P., Moore, C. 1999 Platinum-group elements in the Sudbury ores; significance with respect to the origin of different ore zones and to the exploration for footwall orebodies: Economic Geology, v. 94, p.185-210.

Sproule, R. A., Sutcliffe, R., Tracanelli, H., Lesher, C. M. 2007 Paleoproterozoic Ni-Cu-PGE mineralization in the Shakespeare intrusion, Ontario, Canada: a new style of Nipissing gabbro-hosted mineralisation: Applied Earth Science (Trans. Inst. Min. Matall. B), v. 116, no. 4 p.188-200.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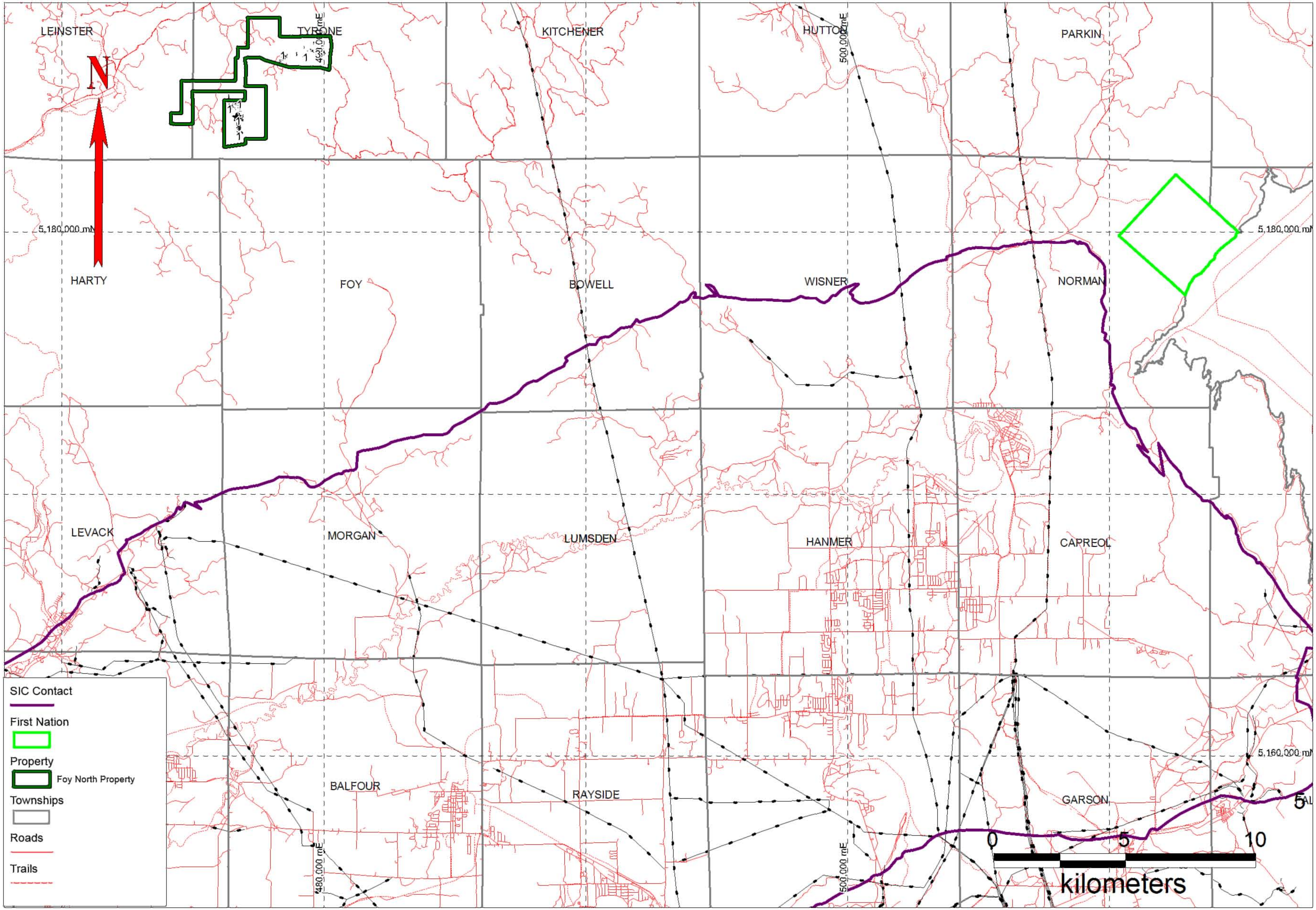
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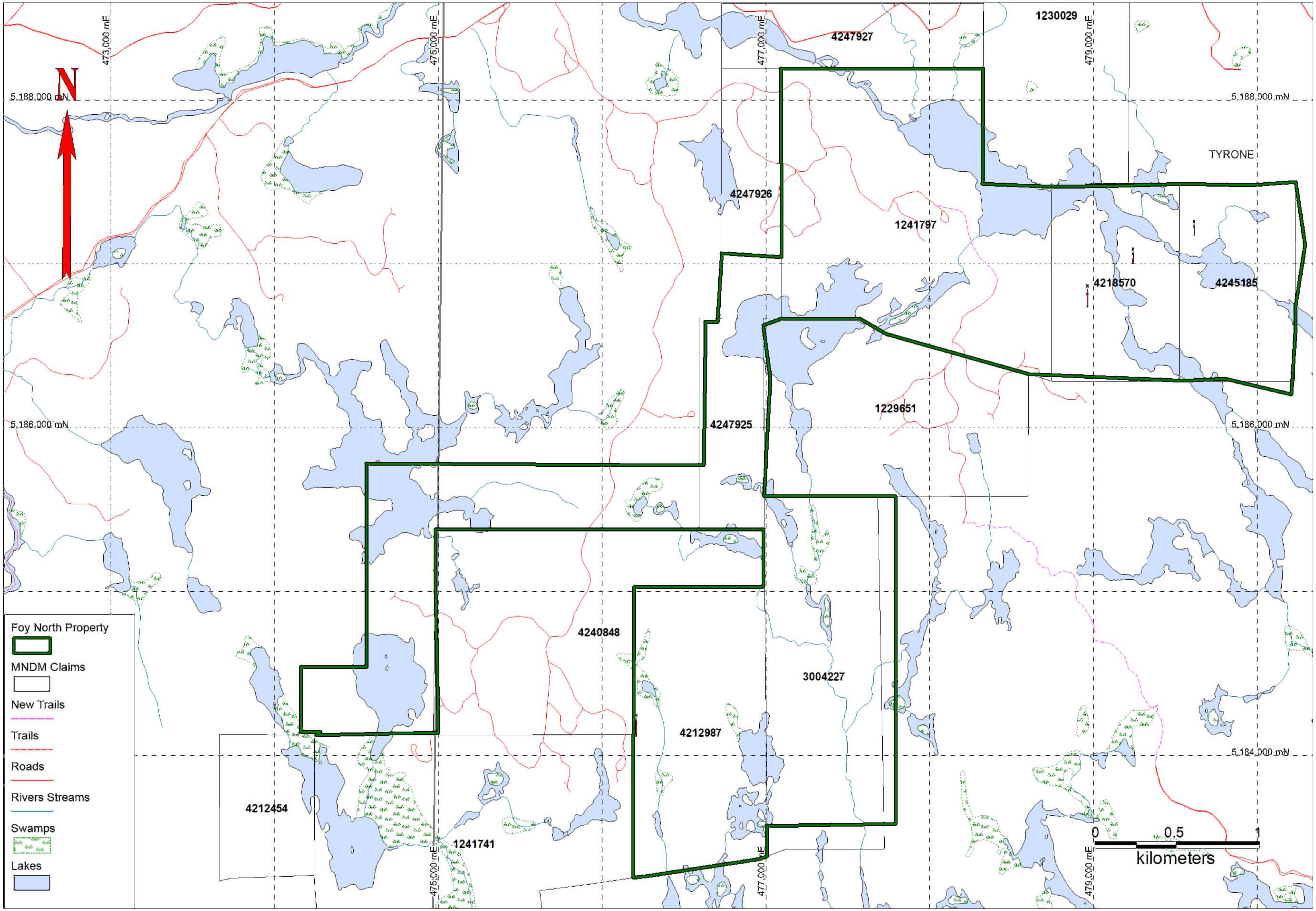
Roads
Trails



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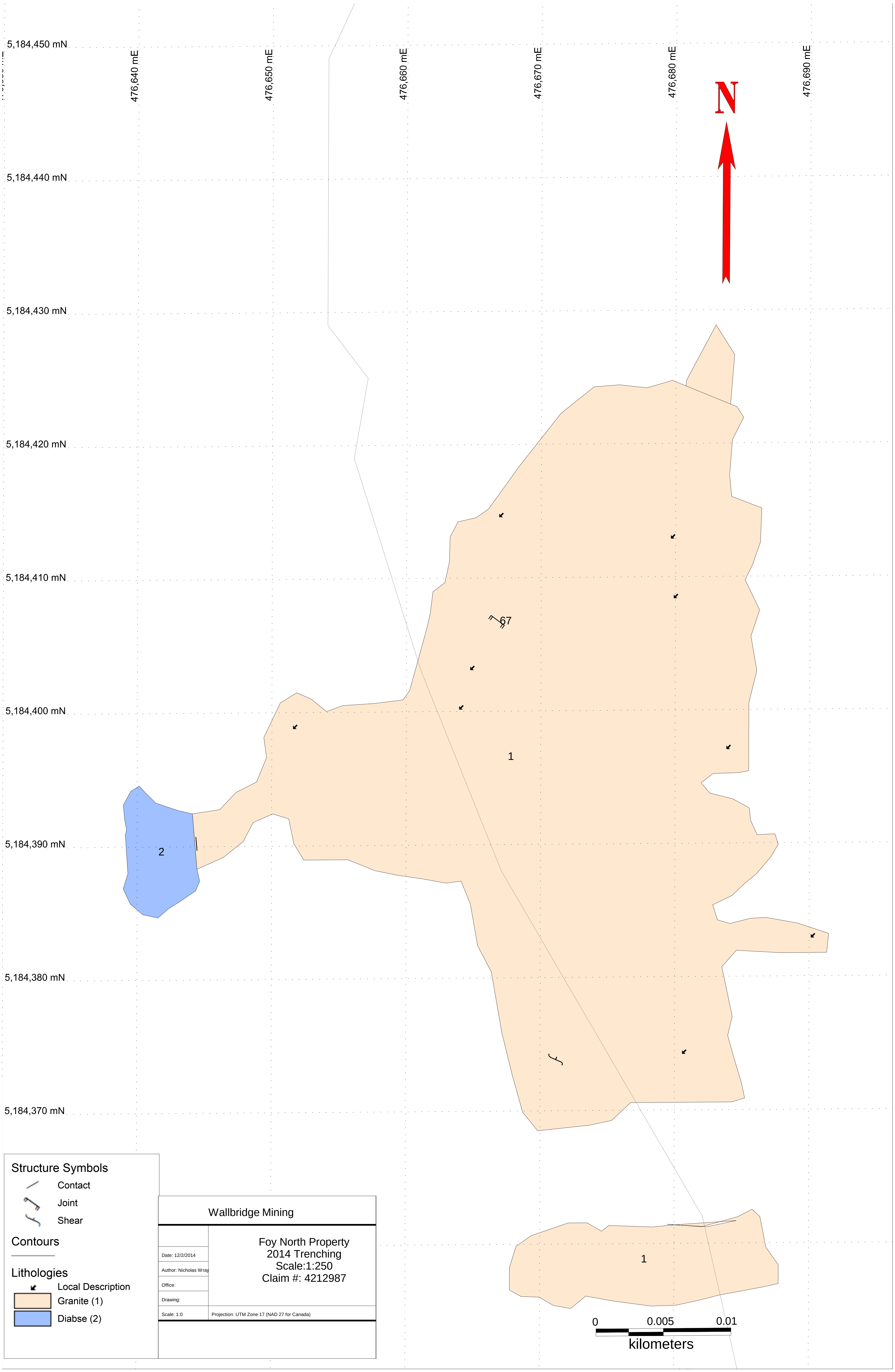
Lakes



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Contours
Lithologies
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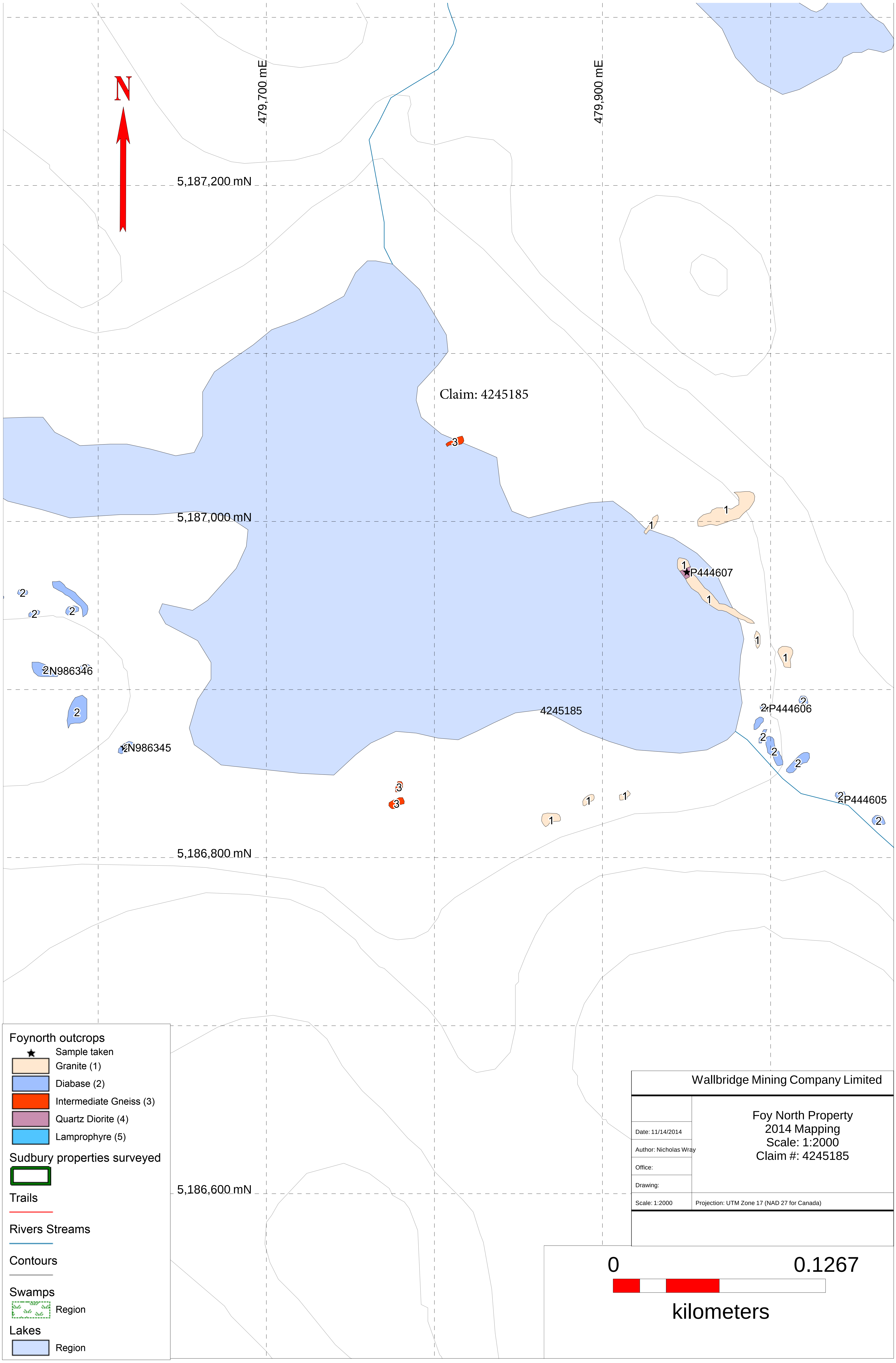
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Quartz Diorite (4)
Lamprophyre (5)
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Contours
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Region
Lakes
Region
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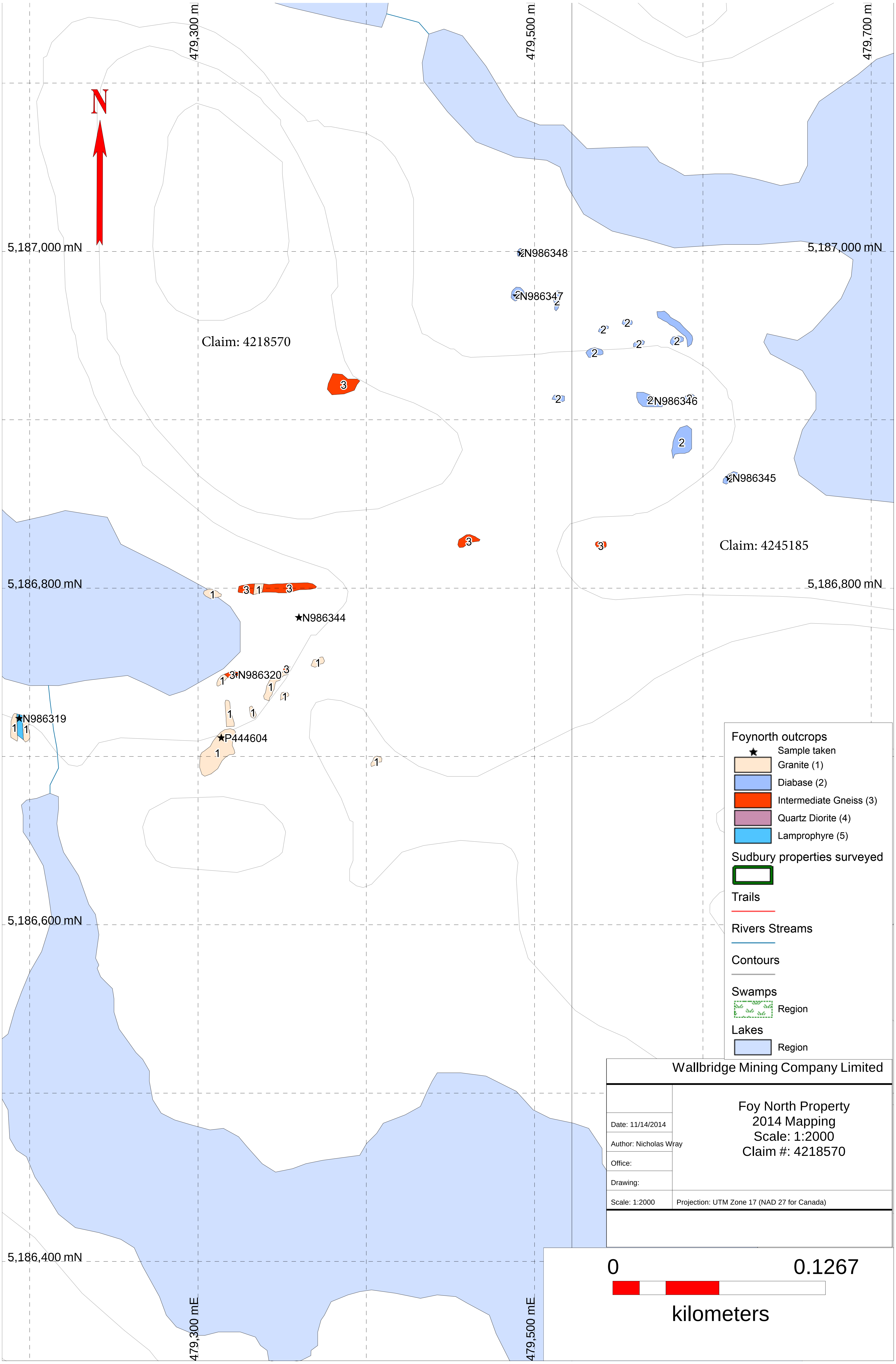

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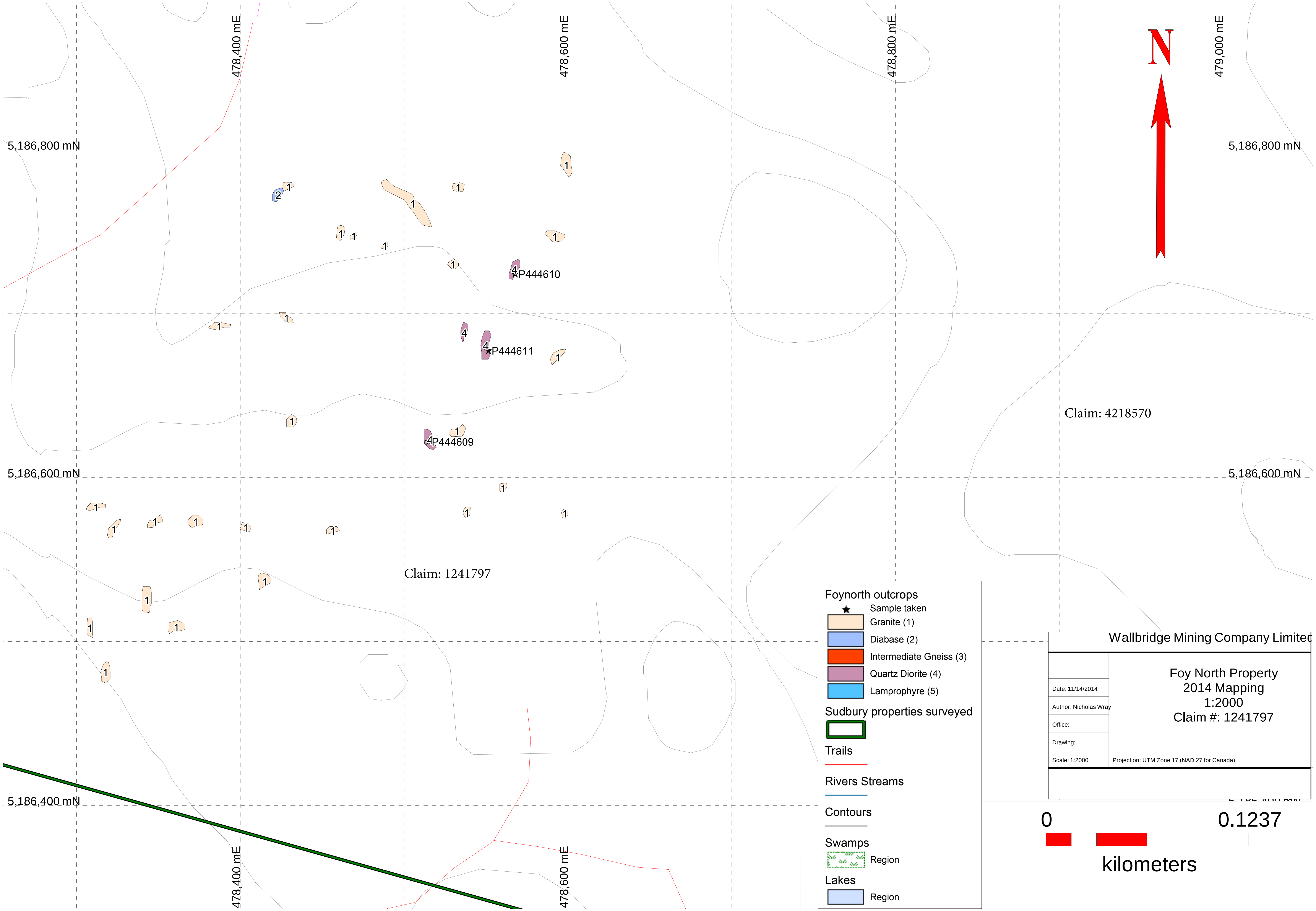

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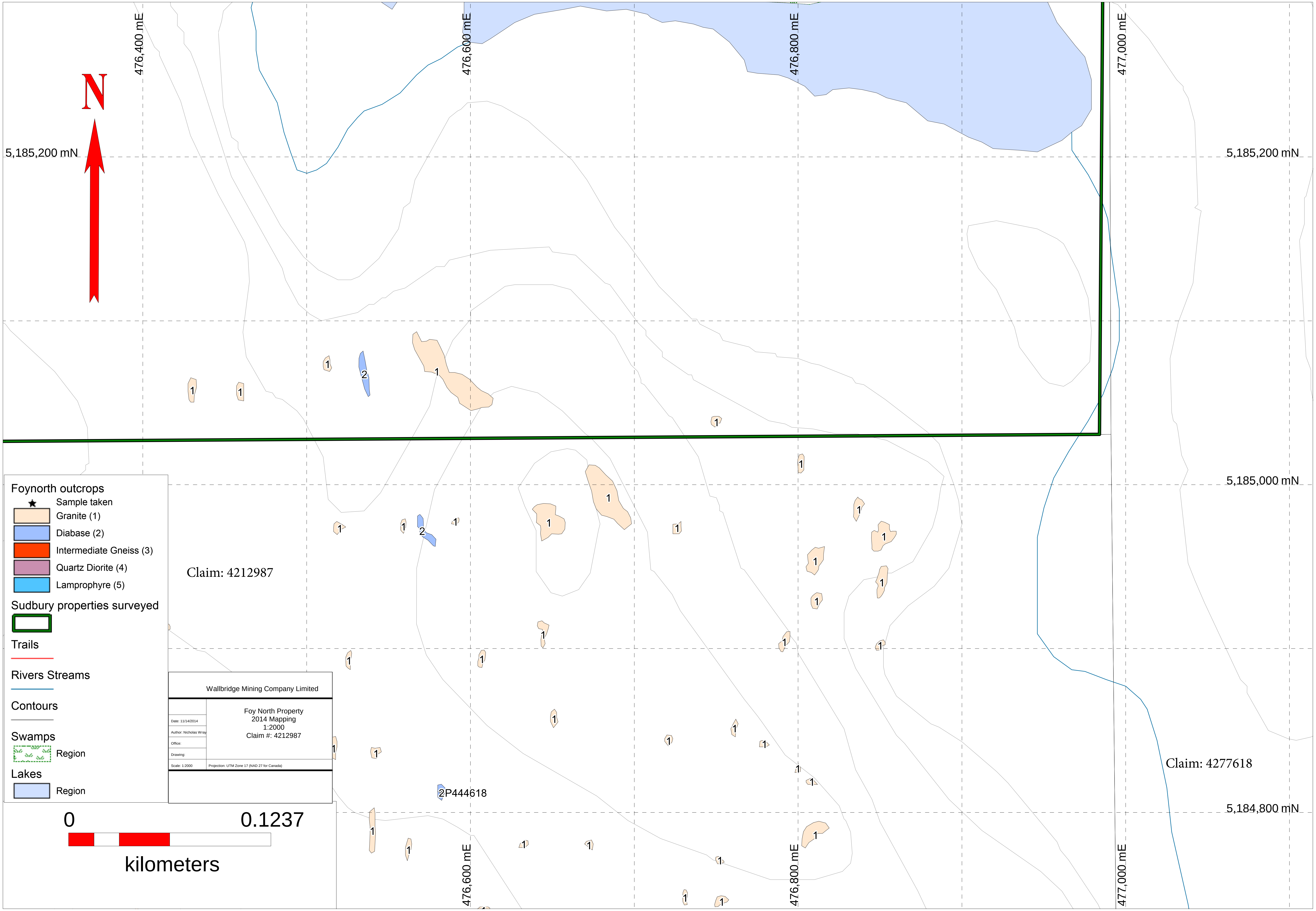
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Swamps
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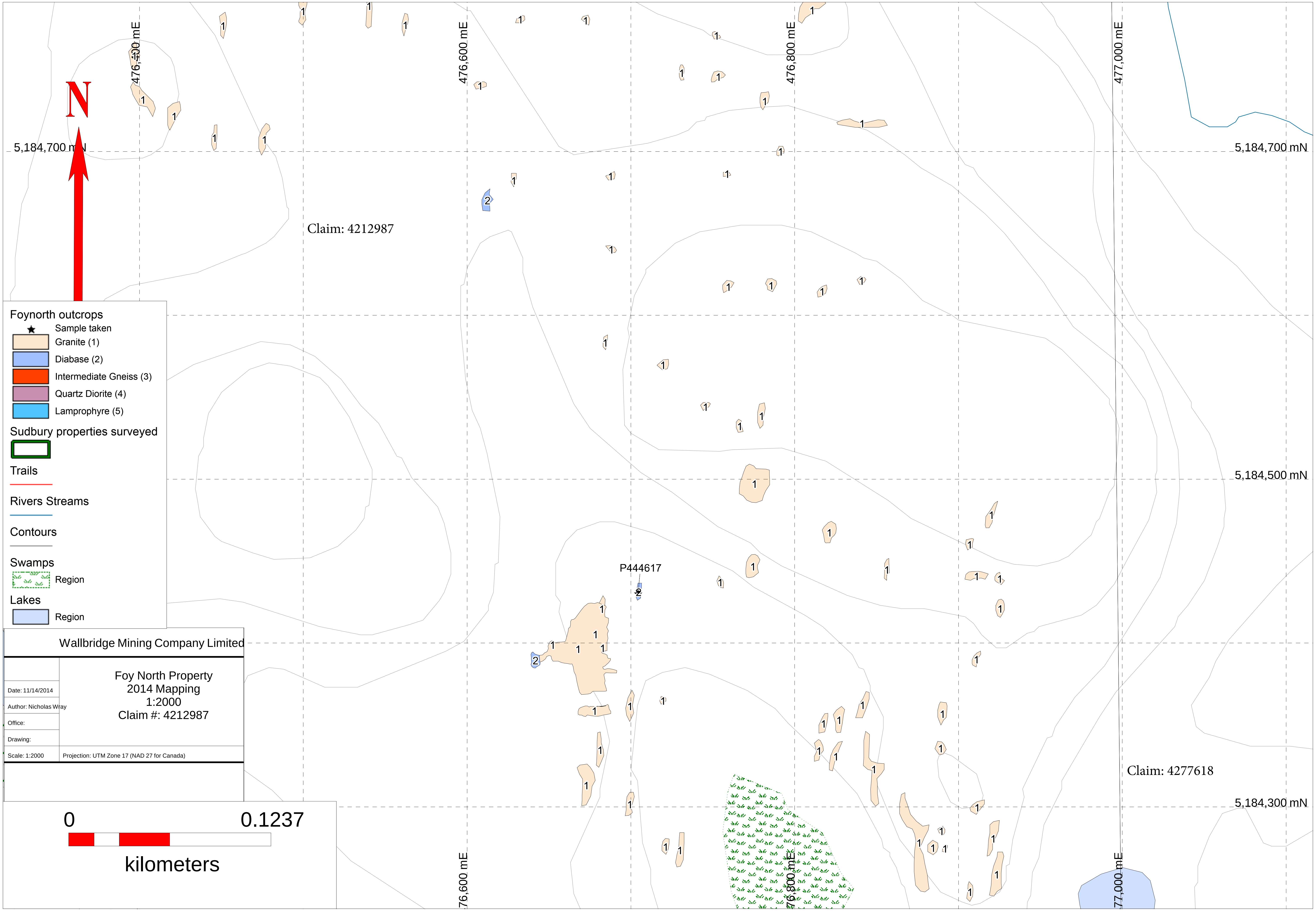
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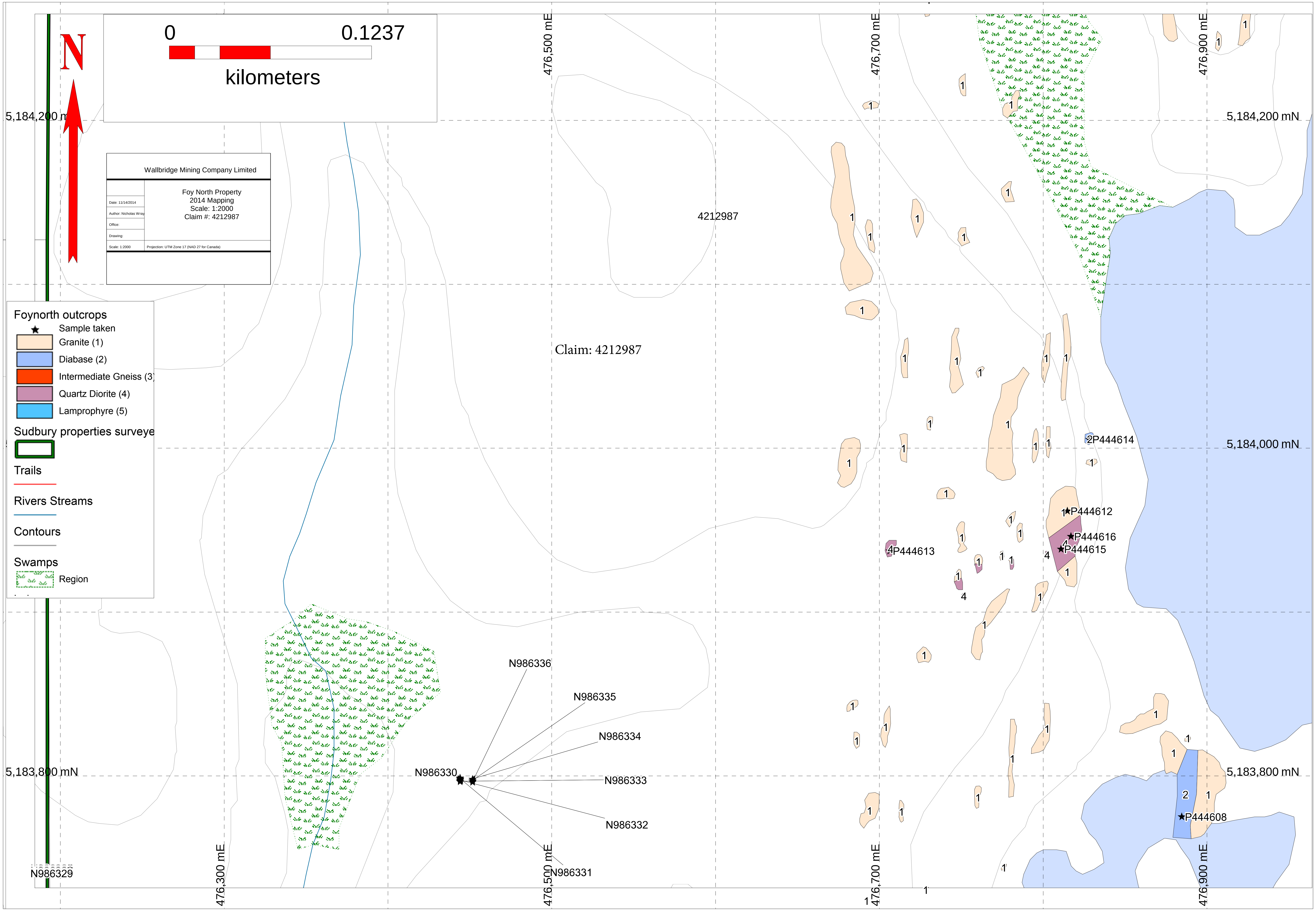

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Author: Nicholas Wray
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Foynorth outcrops
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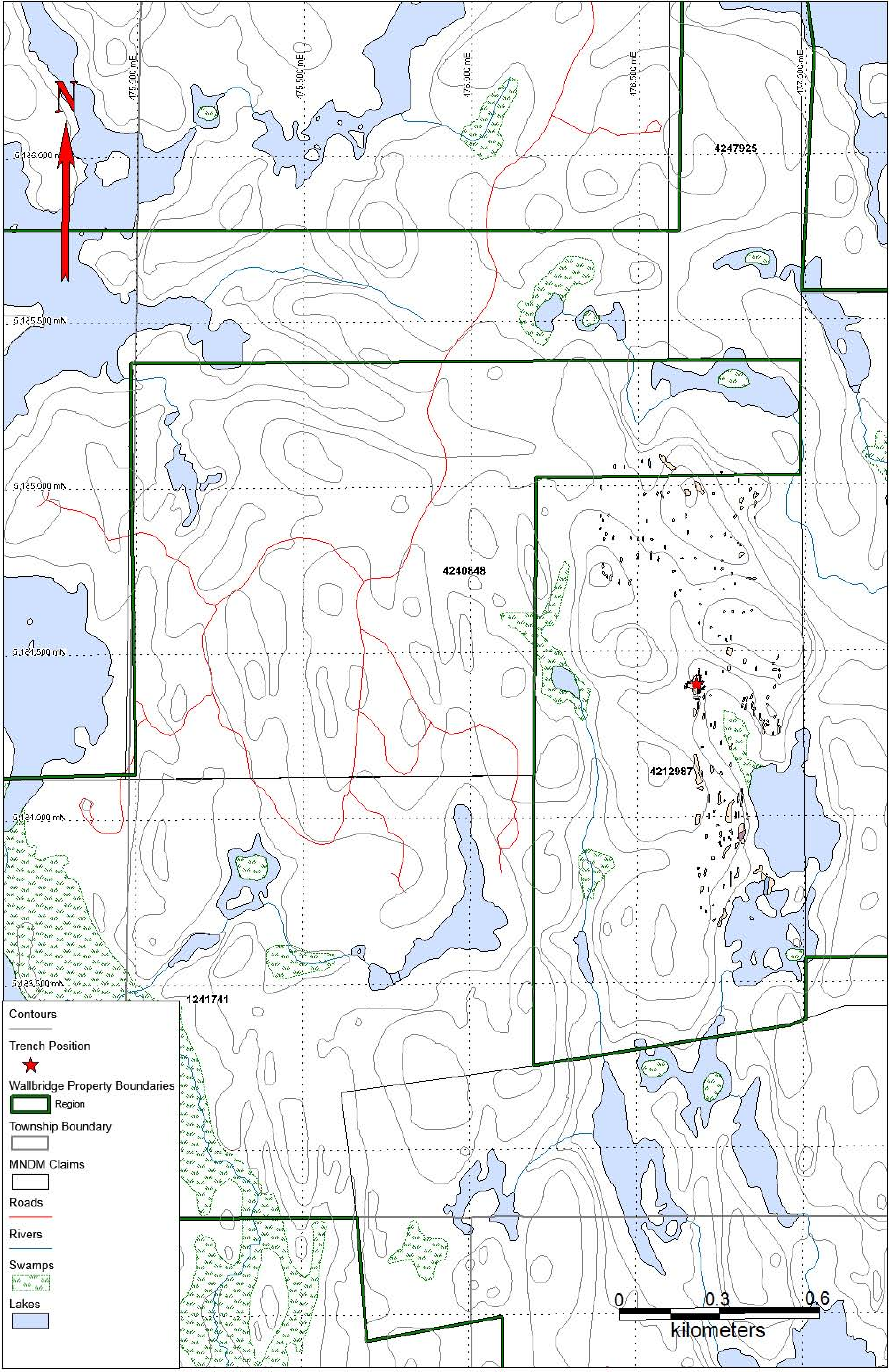
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Contours
Trench Position
Wallbridge Property Boundaries
Region
Township Boundary
MNDM Claims
Roads
Rivers
Swamps
Lakes
0
0.3
0.6
kilometers

CANADIAN EXPLORATION SERVICES LTD
PO Box 219, 14579 Government Road, Larder Lake, Ontario, P0K 1L0, Canada
Phone (705) 643-2345 Fax (705) 643-2191 www.cxsltd.com

WALLBRIDGE MINING COMPANY LIMITED

MAX-MIN HLEM Survey Over the FOY NORTH PROPERTY South Grid

Tyrone Township, Ontario

C Jason Ploeger, B.Sc, P.Geo
April 1, 2014

TABLE OF CONTENTS

LIST OF APPENDICES

LIST OF TABLES AND FIGURES

1. SURVEY DETAILS

1.1 PROJECT NAME

This project is known as the **Foy North Property – South Grid**.

1.2 CLIENT

Wallbridge Mining Company Limited

129 Fielding Road
Lively, Ontario
P3Y 1L7

1.3 LOCATION

The Foy North Property is located approximately 27km north of Chelmsford, Ontario. The grid area is located in Tyrone Township and cover a portion of mining claims 4240848, 1241741,4212987, 3004227, and 3009809 along with mining leases S133790 and S133791, within the Sudbury Mining Division.

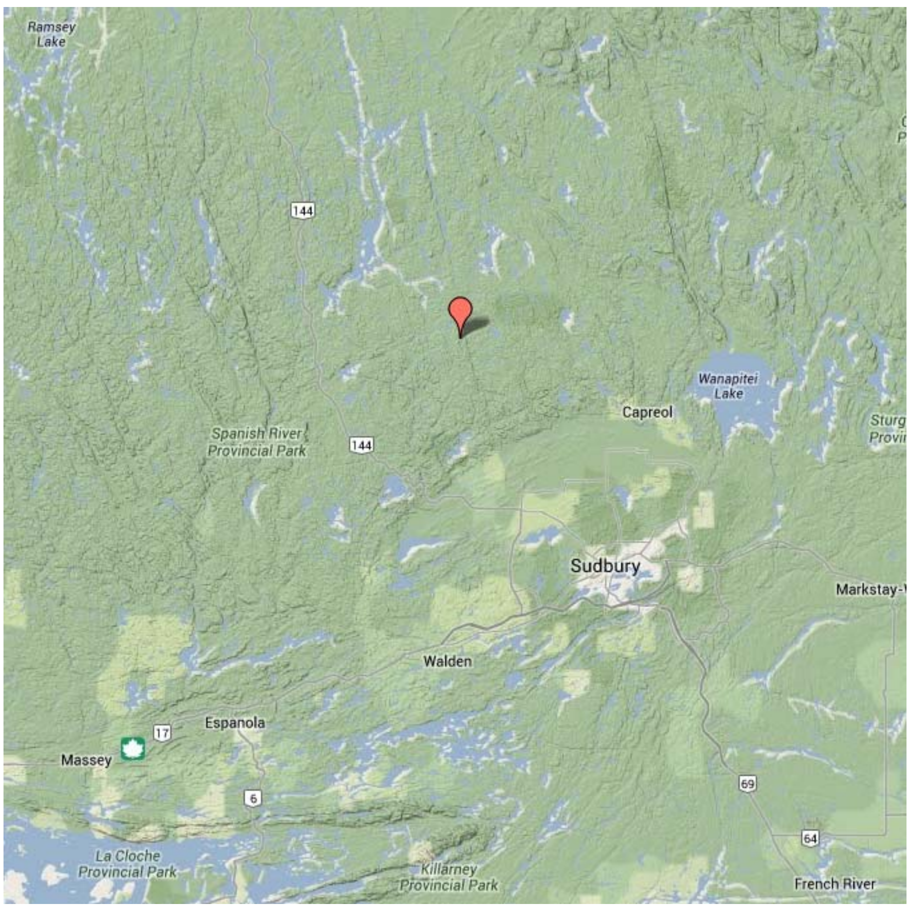


Figure 1: Location of Foy North Property

1.4 Access

Access to the property was via a 4x4 pickup truck along with a snowmachine. Forestry access Road 700 is located 12 km north of Cartier, Ontario along highway 144. Road 700 was travelled eastward for approximately 28km where a snowmachine was need to travel the remaining kilometer to the survey area.

1.5 Survey Grid

The grid was established prior to survey execution and consisted of a total of 5.025 kilometers of grid lines. The survey lines were spaced at 250 meters and stations were picketed at 25m intervals with the baseline running at 180°N for a total of 1800 meters.

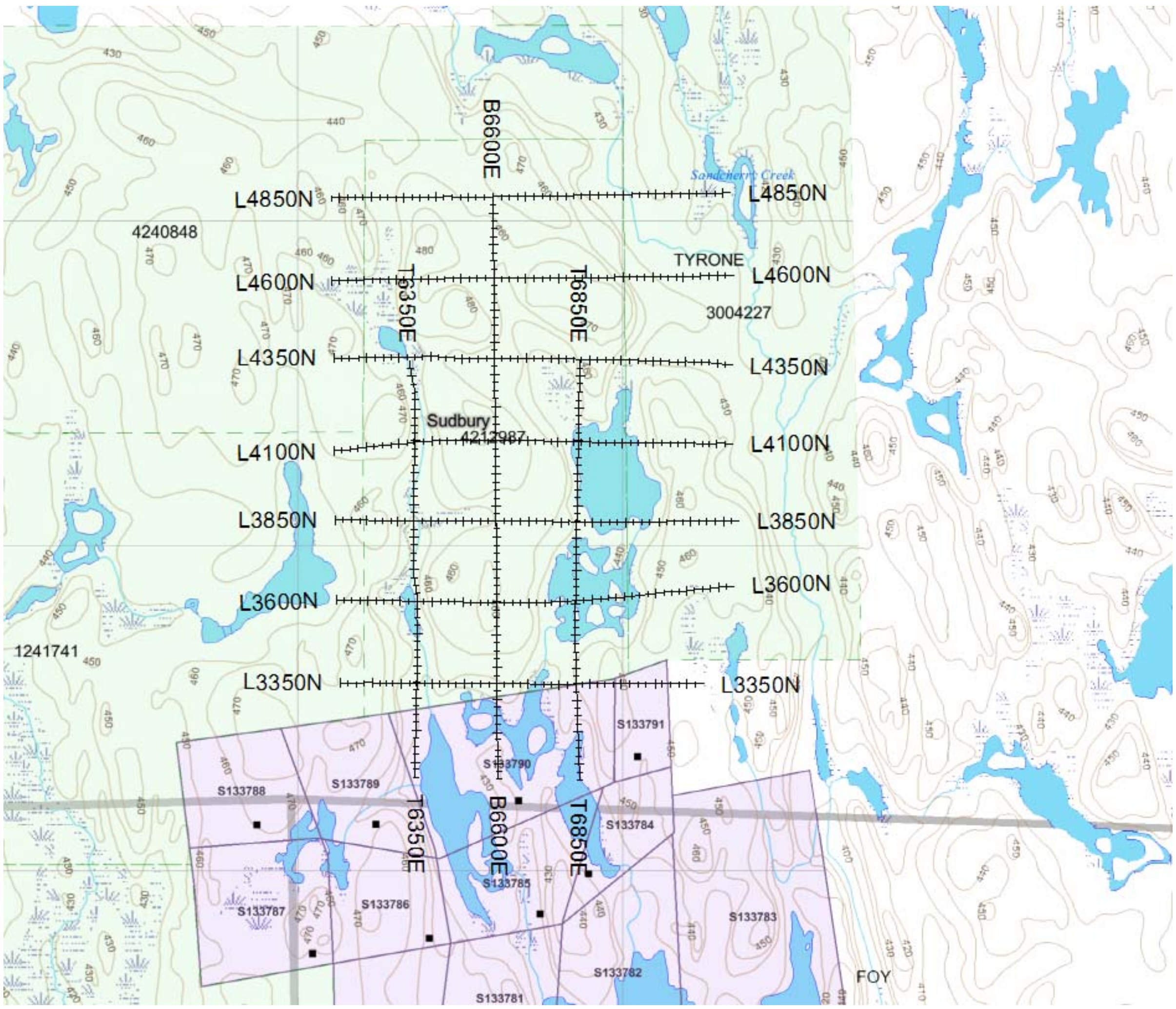


Figure 2: Claim Map with Foy North Property-South Grid

2. SURVEY WORK UNDERTAKEN

2.1 Survey Log

Date	Description	Line	Min Extent	Max Extent	Total Survey (m)
March 12, 2014	Locate survey lines and perform max-min survey.	3850N	6350E	7000E	650
		4100N	6350E	7000E	650
		4350N	6350E	7000E	650

Table 1: Survey Log

2.2 Personnel

Jason Ploeger of Larder Lake, Ontario, operated the MaxMin receiver and Bruce Lavalley of Britt, Ontario, Ontario, operated the MaxMin transmitter.

2.3 Survey Specifications

The survey was conducted with an APEX PARAMETRICS MAXMIN II. Frequencies 222Hz, 444Hz, 888Hz, 1777Hz and 3555Hz were used with a 150m coil separation. A Suunto PM-5 clinometer was used to measure slopes between picketed stations. These slopes were averaged over 150m to determine the correct tilt readings.

A total of 1.95 line kilometers of MaxMin was read on the Foy North Grid on March 12th, 2014. This consisted of a total of 78 samples taken in 222Hz, 444Hz, 888Hz, 1777Hz and 3555Hz at a 25m sample interval.

3. OVERVIEW OF SURVEY RESULTS

3.1 SUMMARY INTERPRETATION

Within the area, it was noted that there was a low frequency noise. This was more apparent in frequency 222Hz and occasionally crept into frequency 444Hz. When this noise was noted, many repeats were taken until two back to back readings repeated themselves. Generally, the higher frequencies were stable once the initial reading was taken.

The topography was difficult on this grid. This includes steep inclines and sidehills throughout the grid. Care was taken to keep the coil and receiver coaxial at a properly corrected distance between transmitter and receiver. This being said there may be some minor topographical variances within the dataset.

No obvious anomalies occur over the three survey lines. However, one subtle trend may be present in the data. This trend occurs as a slight in phase negative anomaly that extends from 6575E on line 4350N through 6625E on line 3850N. There is no out phase response associated with the slight negative in phase movement. The extent of this anomaly makes it difficult to characterize.

APPENDIX A

STATEMENT OF QUALIFICATIONS

I, C. Jason Ploeger, hereby declare that:

1. I am a professional geophysicist with residence in Larder Lake, Ontario and am presently employed as a Geophysicist and Geophysical Manager of Canadian Exploration Services Ltd. of Larder Lake, Ontario.

2. I am a Practicing Member of the Association of Professional Geoscientists, with membership number 2172.

3. I have Special Authorization number 270 by l'Ordre des Geologues du Quebec to practice geoscience in Quebec.

4. I graduated with a Bachelor of Science degree in geophysics from the University of Western Ontario, in London Ontario, in 1999.

5. I have practiced my profession continuously since graduation in Africa, Bulgaria, Canada, Mexico and Mongolia.

6. I am a member of the Ontario Prospectors Association, a Director of the Northern Prospectors Association and a member of the Society of Exploration Geophysicists.

7. I do not have nor expect an interest in the properties and securities of **WALLBRIDGE MINING COMPANY LIMITED**

8. I am responsible for the final processing and validation of the survey results and the compilation of the presentation of this report. The statements made in this report represent my professional opinion based on my consideration of the information available to me at the time of writing this report.

C. Jason Ploeger, P.Geo., B.Sc.
Geophysical Manager
Canadian Exploration Services Limited.

Larder Lake, ON
April 1, 2014

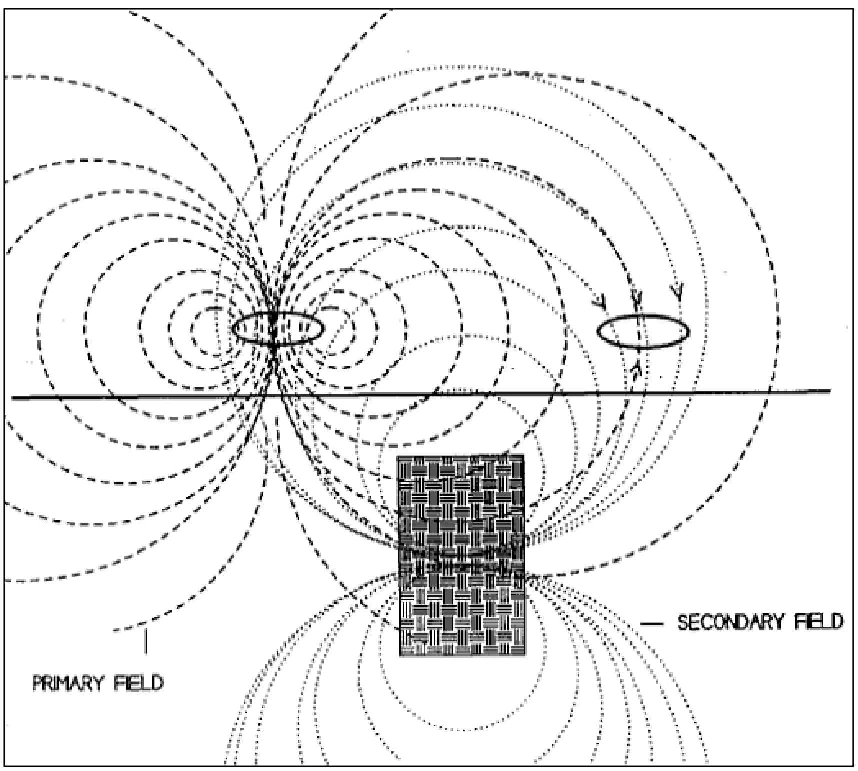
APPENDIX B

THEORETICAL BASIS AND SURVEY PROCEDURES

HLEM Electromagnetic

The HLEM method involves the use of a pair of separated horizontal coils (Figure MMI). Most commonly, the surveys are conducted in the frequency domain. In this method, a sine wave of variable frequency is sent through one of the coils to create a time-varying vertical magnetic dipole source. The second coil is a receiver which detects both the primary signal from the transmitting coil and a secondary signal created by magnetic induction in a conductive target in the earth.

The HLEM method requires that a sample of the transmitted signal be sent along a wire to the receiver where it is used to synchronize the phase of the receiver with the transmitter. This permits the receiver to remove the effect of the transmitter signal (primary field) and to split the remaining secondary field into two components. One phase with the primary field (in-phase component). The second component is the portion of the secondary field which lags the primary field by one quarter cycle (90' - quadrature component). The ratio of the in-phase to quadrature components is used to determine the electrical conductance of a target.



MMI: HLEM source field

HLEM instruments remove the primary filed from the signal to leave only the secondary field. By convention, a secondary field in the same direction as the primary field is recorded as positive while a secondary field in the opposite direction to the primary field is recorded as negative. HLEM data is commonly plotted as profiles with the reading plotted at the midpoint between the transmitter and receiver. The reason for this is that the response from a steeply dipping conductor, the most common target of this method, is strongest when the two coils straddle the conductor.

APPENDIX C

APEX PARAMETRICS MAXMIN II

Specifications

Advanced spheric and powerline interference rejection results in faster and more accurate surveys, particularly at the larger coil separations.

The Maxmin Computer or MMC is offered for digital data processing, display, storage and transfer. The MMC displays and stores the inphase and quadrature readings, their standard deviations, and the corresponding apparent ground conductivity values. Rough terrain surveys are also simplified with the MMC.

Data interpretation and presentation programs are available for layered earth parametric soundings and discrete conductor surveys.

Frequencies
222, 444, 886, 1777, 3555Hz

Coil Separations
50, 100, 200 meters (selected with grid switch in receiver)

Modes of Operation
MAX 1: Horizontal loop or slingram— Transmitter and receiver coil planes horizontal and coplanar.
MAX 2: Vertical coplanar loop mode— Transmitter and receiver coil planes vertical and coplanar.
MIN 1: Perpendicular mode 1—Transmitter coil plane horizontal and receiver coil plane vertical.

MIN 2: Perpendicular mode 2—Transmitter coil plane vertical and receiver coil plane horizontal.

Parameters Measured

In-phase and quadrature components of the secondary magnetic field. Measures percent of primary field.

Readouts

Analog direct edgewise meter readouts for in-phase, quadrature and tilt. Additional digital LCD readouts provided in the optional MMC computer. Interfacing and controls are provided for ready plug-in of the MMC.

Ranges of Readouts

Switch activated analog in-phase and quadrature scales: 0±4%, 0±20% and 0±100%, and digital 0±199.9% autorange with optional MMC Analog tilt 0±75% and 0±99% grade with MMC.

Resolution

Analog in-phase and quadrature 0.1 to 1% of primary field, depending on scale used, digital 0.01% with autoranging MMC; tilt 1% grade.

Repeatability

0.01 to 1% of primary field typical, depending on frequency, coil separation and conditions.

Signal Filtering

Powerline comb filter, continuous spheric noise clipping, auto adjusting time constant, and more.

Warning Lights

Receiver signal and reference warning lights to indicate potential error conditions.

Survey Depth Penetration

From surface down to 1.5 times coil separations for large horizontal targets, and 0.75 times coil separation for large vertical targets are typical values.

Reference Cable:

Lightweight unshielded 4/2 conductor teflon cables for maximum operating temperature range and for minimum pulling friction.

Intercom

Voice communication link provided for operators via the reference cable.

Temperature Range:

-30 to +60 degrees Celsius, operating range.

Receiver Batteries
Four standard 9V - 0.6 Ah alkaline batteries. Life: 25 hours continuous duty, less in cold weather. Optional 1.2 Ah extended life lithium batteries available (recommended for very cold weather).

Transmitter Batteries
Standard rechargeable gel-type lead-acid 6V-26 Ah batteries (4 x 6V - 6.5 Ah) in nylon belt pack. Optional rechargeable long life 6V-28 Ah Nicd batteries (20 x 1.2V - 7 Ah) with Nicd chargers (best choice for cold climates).

Transmitter BatteryChargers
Lead acid battery charger: 7.3V @ 2.8A Nicd battery charger with 2.8 A @ 8V nominal output. Operation from 110-120 and 220-240VAC, 50-60Hz, and 12-15VDC supply

Receiver Weight
8Kg carrying weight (including the two ferrite cored antenna coils), 9Kg with MMC computer.

Transmitter Weight
16Kg carrying weight

Shipping Weight
60Kg plus weight of reference cables at 2.8Kg per 100 meters, plus optional items if any Shipped in two aluminum-lined field I shipping cases

APPENDIX D

LIST OF MAPS (IN MAP POCKET)

Posted Profiled Plan Map (1:2500)

1) WALLBRIDGE-FOY-MAXMIN-222
2) WALLBRIDGE-FOY-MAXMIN-444
3) WALLBRIDGE-FOY-MAXMIN-888
4) WALLBRIDGE-FOY-MAXMIN-1777
5) WALLBRIDGE-FOY-MAXMIN-3555

Grid Sketch on Claim Map (1:20000)

6) WALLBRIDGE-FOY-GRID

TOTAL MAPS = 6

ONTARIO CANADA

MINISTRY OF NORTHERN DEVELOPMENT AND MINES

PROVINCIAL MINING RECORDER'S OFFICE

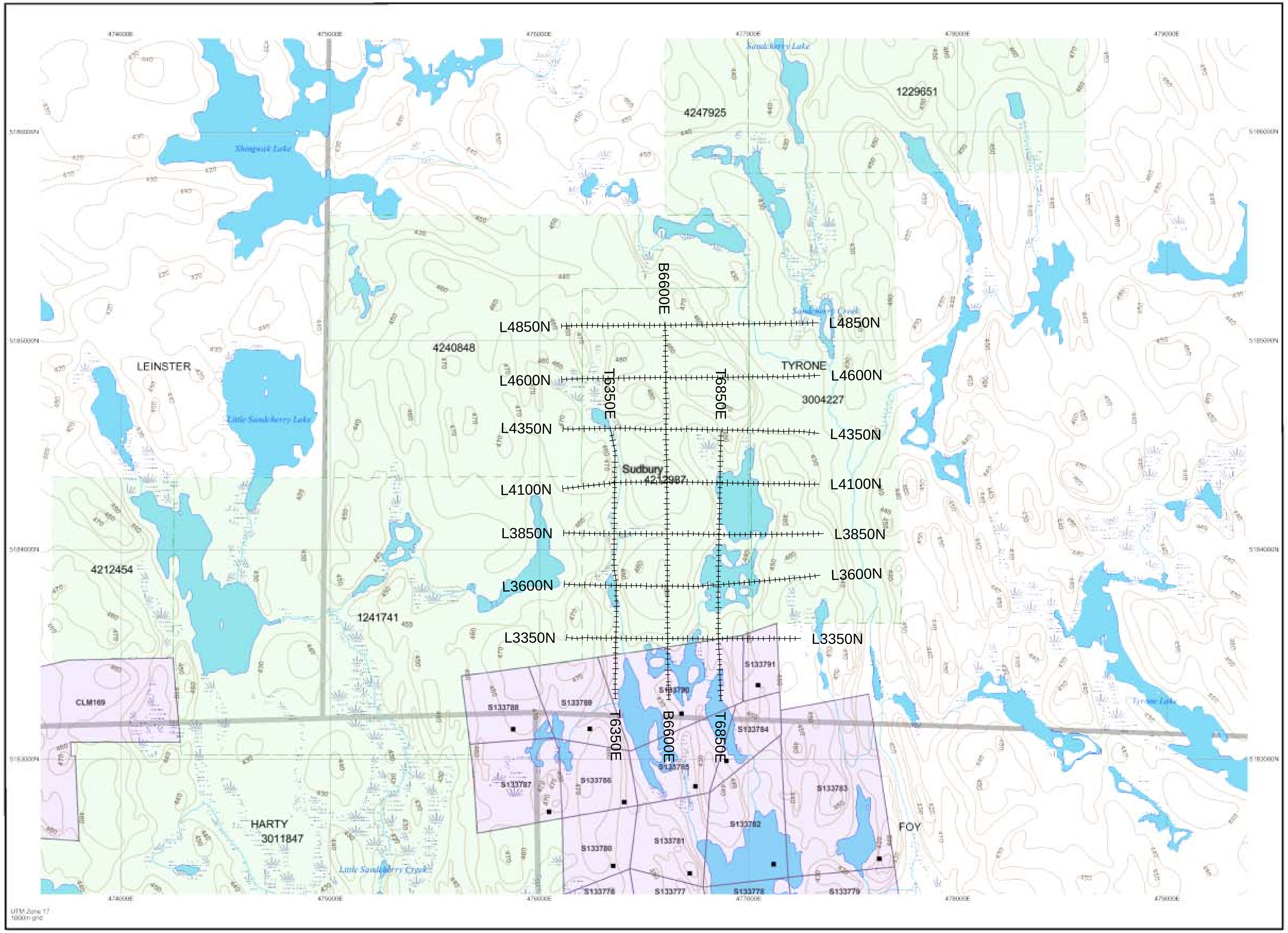
Mining Land Tenure Map

Date / Time of Issue   Tue Apr 01 08:02:05 EST 2014

TOWNSHIP / AREA	PLAN
TYRONE	G-4116

ADMINISTRATIVE DISTRICTS / DIVISIONS

Mining Division	Sudbury
Land Titles/Registry Division	SUDBURY
Ministry of Natural Resources District	SUDBURY



TOPOGRAPHIC

- Administrative Boundaries
- Township
- Concession, Lot
- Provincial Park
- Indian Reserve
- Cliff, Pit & Pile
- Contour
- Mine Shafts
- Mine Headframe
- Railway
- Road
- Trail
- Natural Gas Pipeline
- Utilities
- Tower

Land Tenure

Freehold Patent

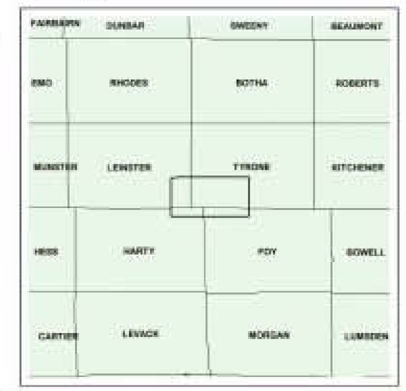
- Surface And Mining Rights
- Surface Rights Only
- Mining Rights Only

Leasehold Patent

- Surface And Mining Rights
- Surface Rights Only
- Mining Rights Only

Licence of Occupation

- Uses Not Specified
- Surface And Mining Rights
- Surface Rights Only
- Mining Rights Only
- Land Use Permit
- Order In Council (Not open for staking)
- Water Power Lease Agreement
- 1234567 Mining Claim
- 1234567 Filed Only Mining Claims



LAND TENURE WITHDRAWALS

- 1234 Areas Withdrawn from Disposition

Mining Acts Withdrawal Types
- Wsm Surface And Mining Rights Withdrawn
- Ws Surface Rights Only Withdrawn
- Wm Mining Rights Only Withdrawn

Order In Council Withdrawal Types
- W'sm Surface And Mining Rights Withdrawn
- W's Surface Rights Only Withdrawn
- W'm Mining Rights Only Withdrawn

IMPORTANT NOTICES

Scale 1:20000

Those wishing to stake mining claims should consult with the Provincial Mining Recorders' Office of the Ministry of Northern Development and Mines for additional information on the status of the lands shown hereon. This map is not intended for navigational, survey, or land title determination purposes as the information shown on this map is compiled from various sources. Completeness and accuracy are not guaranteed. Additional information may also be obtained through the local Land Titles or Registry Office, or the Ministry of Natural Resources.

The information shown is derived from digital data available in the Provincial Mining Recorders' Office at the time of downloading from the Ministry of Northern Development and Mines web site.

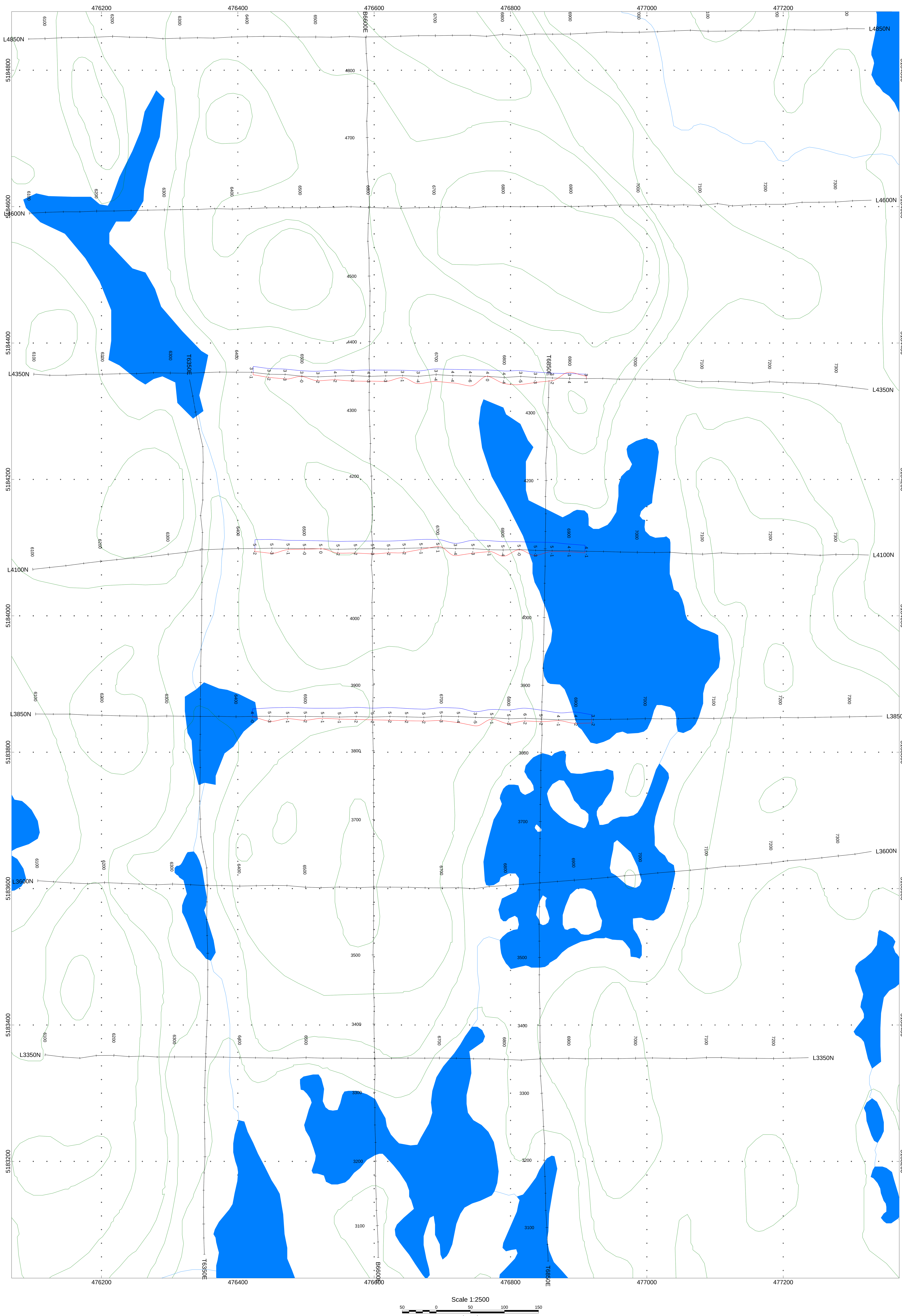
General Information and Limitations

Contact Information:
Provincial Mining Recorders' Office
Willet Green Miller Centre 933 Ramsey Lake Road
Sudbury ON P3E 6B5
Home Page: www.mndm.gov.on.ca/MNDM/MINES/LANDS/mlsmnpge.htm

Toll Free
Tel: 1 (888) 415-9845 ext 5742
Fax: 1 (877) 670-1444

Map Datum: NAD 83
Projection: UTM (6 degree)
Topographic Data Source: Land Information Ontario
Mining Land Tenure Source: Provincial Mining Recorders' Office

This map may not show unregistered land tenure and interests in land including certain patents, leases, easements, right of ways, flooding rights, licences, or other forms of disposition of rights and interest from the Crown. Also certain land tenure and land uses that restrict or prohibit free entry to stake mining claims may not be illustrated.



WALLBRIDGE
MINING COMPANY LIMITED

FOY PROPERTY
NORTH GRID
SOUTH PART
Tyrone Township, Ontario

MAX-MIN PROFILED PLAN MAP
3555 Hz - 150m Cable Seperation

In Phase: Posted Right/Bottom (Red)
Quadrature: Posted Left/Top (Blue)

Vertical Profile Scales: 1%/mm
Vertical Quadrature Profile Scales: 1%/mm

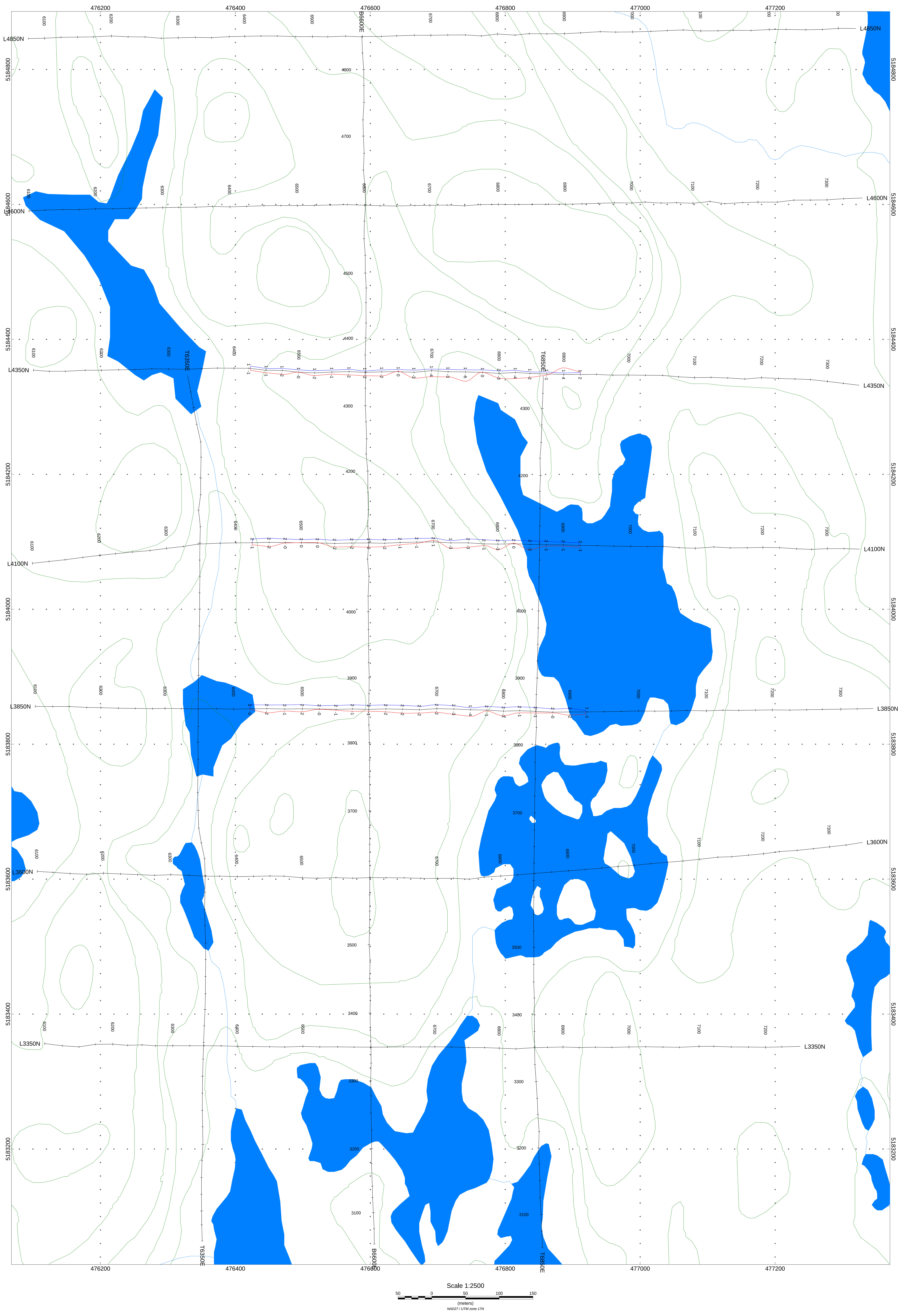
Station Seperation: 25 meters
Posting Level: 0

APEX PARAMETRICS MAXMIN II

Reciever Operated By: C Jason Ploeger, B.Sc.
Transmitter Operated By: Bruce Lavalley
Processed by: C Jason Ploeger, P.Geo, B.Sc.
Map Drawn By: C Jason Ploeger, P.Geo, B.Sc.
March 2014

CXS
CANADIAN EXPLORATION SERVICES LTD

Drawing: WALLBRIDGE-FOY-MAXMIN-3555



WALLBRIDGE
MINING COMPANY LIMITED

FOY PROPERTY
NORTH GRID
SOUTH PART
Tyrone Township, Ontario

MAX-MIN PROFILED PLAN MAP
1777 Hz - 150m Cable Seperation

In Phase: Posted Right/Bottom (Red)
Quadrature: Posted Left/Top (Blue)

Vertical Profile Scales: 1%/mm
Vertical Quadrature Profile Scales: 1%/mm

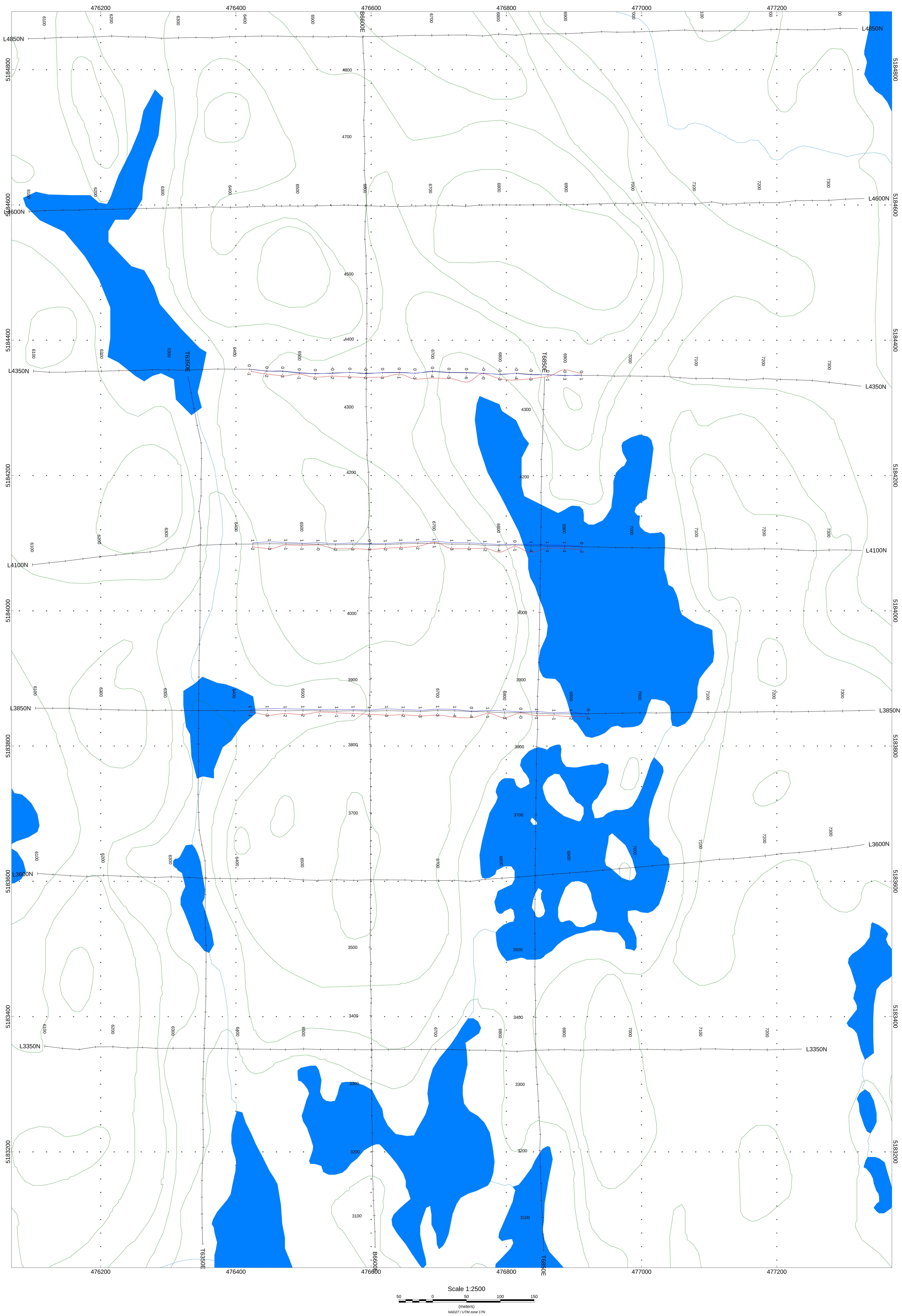
Station Seperation: 25 meters
Posting Level: 0

APEX PARAMETRICS MAXMIN II

Reciever Operated By: C Jason Ploeger, B.Sc.
Transmitter Operated By: Bruce Lavalley
Processed by: C Jason Ploeger, P.Geo, B.Sc.
Map Drawn By: C Jason Ploeger, P.Geo, B.Sc.
March 2014

CXS CANADIAN EXPLORATION SERVICES LTD

Drawing: WALLBRIDGE-FOY-MAXMIN-1777



WALLBRIDGE MINING COMPANY LIMITED

FOY PROPERTY
NORTH GRID
SOUTH PART
Tyrone Township, Ontario

MAX-MIN PROFILED PLAN MAP
888 Hz - 150m Cable Seperation

In Phase: Posted Right/Bottom (Red)
Quadrature: Posted Left/Top (Blue)

Vertical Profile Scales: 1%/mm
Vertical Quadrature Profile Scales: 1%/mm

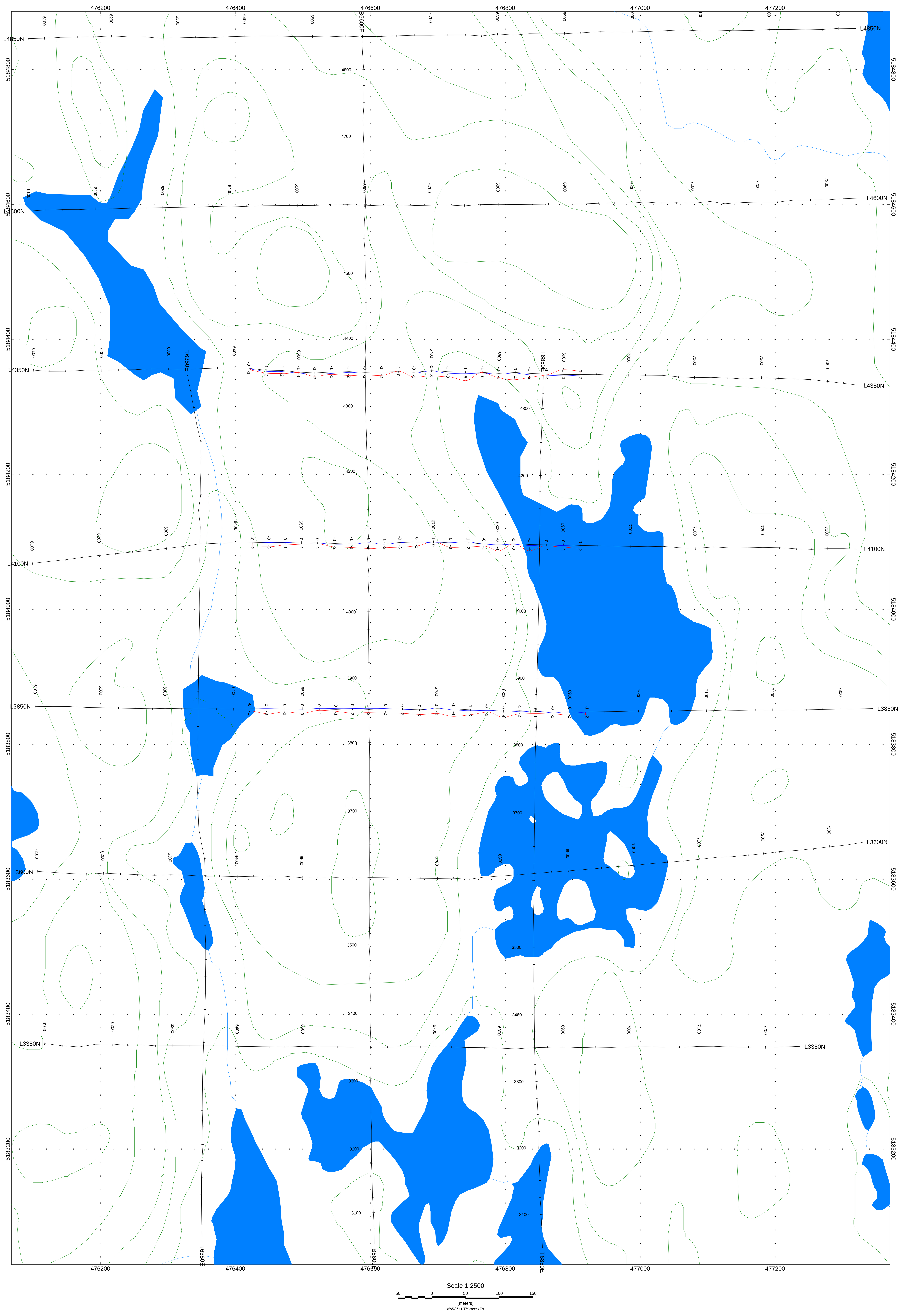
Station Seperation: 25 meters
Posting Level: 0

APEX PARAMETRICS MAXMIN II

Reciever Operated By: C Jason Ploeger, B.Sc.
Transmitter Operated By: Bruce Lavalley
Processed by: C Jason Ploeger, P.Geo, B.Sc.
Map Drawn By: C Jason Ploeger, P.Geo, B.Sc.
March 2014

CANADIAN EXPLORATION SERVICES LTD

Drawing: WALLBRIDGE-FOY-MAXMIN-888



WALLBRIDGE MINING COMPANY LIMITED

FOY PROPERTY
NORTH GRID
SOUTH PART
Tyrone Township, Ontario

MAX-MIN PROFILED PLAN MAP
444 Hz - 150m Cable Seperation

In Phase: Posted Right/Bottom (Red)
Quadrature: Posted Left/Top (Blue)

Vertical Profile Scales: 1%/mm
Vertical Quadrature Profile Scales: 1%/mm

Station Seperation: 25 meters
Posting Level: 0

APEX PARAMETRICS MAXMIN II

Reciever Operated By: C Jason Ploeger, B.Sc.
Transmitter Operated By: Bruce Lavalley
Processed by: C Jason Ploeger, P.Geo, B.Sc.
Map Drawn By: C Jason Ploeger, P.Geo, B.Sc.
March 2014

CXS CANADIAN EXPLORATION SERVICES LTD

Drawing: WALLBRIDGE-FOY-MAXMIN-444

WALLBRIDGE MINING COMPANY LIMITED

FOY PROPERTY
NORTH GRID
SOUTH PART
Tyrone Township, Ontario

MAX-MIN PROFILED PLAN MAP
222 Hz - 150m Cable Seperation

In Phase: Posted Right/Bottom (Red)
Quadrature: Posted Left/Top (Blue)

Vertical Profile Scales: 1%/mm
Vertical Quadrature Profile Scales: 1%/mm

Station Seperation: 25 meters
Posting Level: 0

APEX PARAMETRICS MAXMIN II

Reciever Operated By: C Jason Ploeger, B.Sc.
Transmitter Operated By: Bruce Lavalley
Processed by: C Jason Ploeger, P.Geo, B.Sc.
Map Drawn By: C Jason Ploeger, P.Geo, B.Sc.
March 2014

CXS CANADIAN EXPLORATION SERVICES LTD

Drawing: WALLBRIDGE-FOY-MAXMIN-222

-2014 UTEM5 Survey Report-
Foy North Grid
Sudbury District
for
Wallbridge Mining Company Ltd.

LAMONTAGNE GEOPHYSICS LTD
GEOPHYSIQUE LTEE

March, 2014

Rob Langridge, M.Sc.

CONTENTS

Figures

Appendices

INTRODUCTION

During the period of February 6th 2014 through February 20th 2014 a UTEM5 survey (surveying days: February 8th - February 19th) was carried out by Lamontagne Geophysics Limited personnel for Wallbridge Mining Company Ltd. on the Foy North Grid in the Sudbury District. The location/layout of the Foy North survey is shown in Figures 1 and 2. The UTEM5 survey was carried out to test anomalies outlined by an airborne survey, to detect/outline new conductors and to detect/outline deeper features and potential depth continuations of shallow features.

A total of 15.550 line km of Hz/Hx/Hy UTEM5 data was collected with the UTEM5 receiver using a five transmitter loops (Figure 2). For all stations on EastWest lines surveyed on the Foy North Grid, a total of 13.550 line km, three-component data were collected from two loops simultaneously. The survey frequencies for the main Foy North Grid were as follows:

- 12Ch UTEM5 two loop coverage (13.550 line km) of the Foy North Grid
  actual frequencies (in the ratio of 2:1) were:

northern loops

2.045Hz (outside-the-loop - loop to the west)	Loop 1459
4.090Hz (outside-the-loop - loopfront parallel to line)	Loop 1460

southern loops

2.045Hz (outside-the-loop - loop to the west)	Loop 1463
4.090Hz (outside-the-loop - loopfront parallel to line)	Loops 1461/62

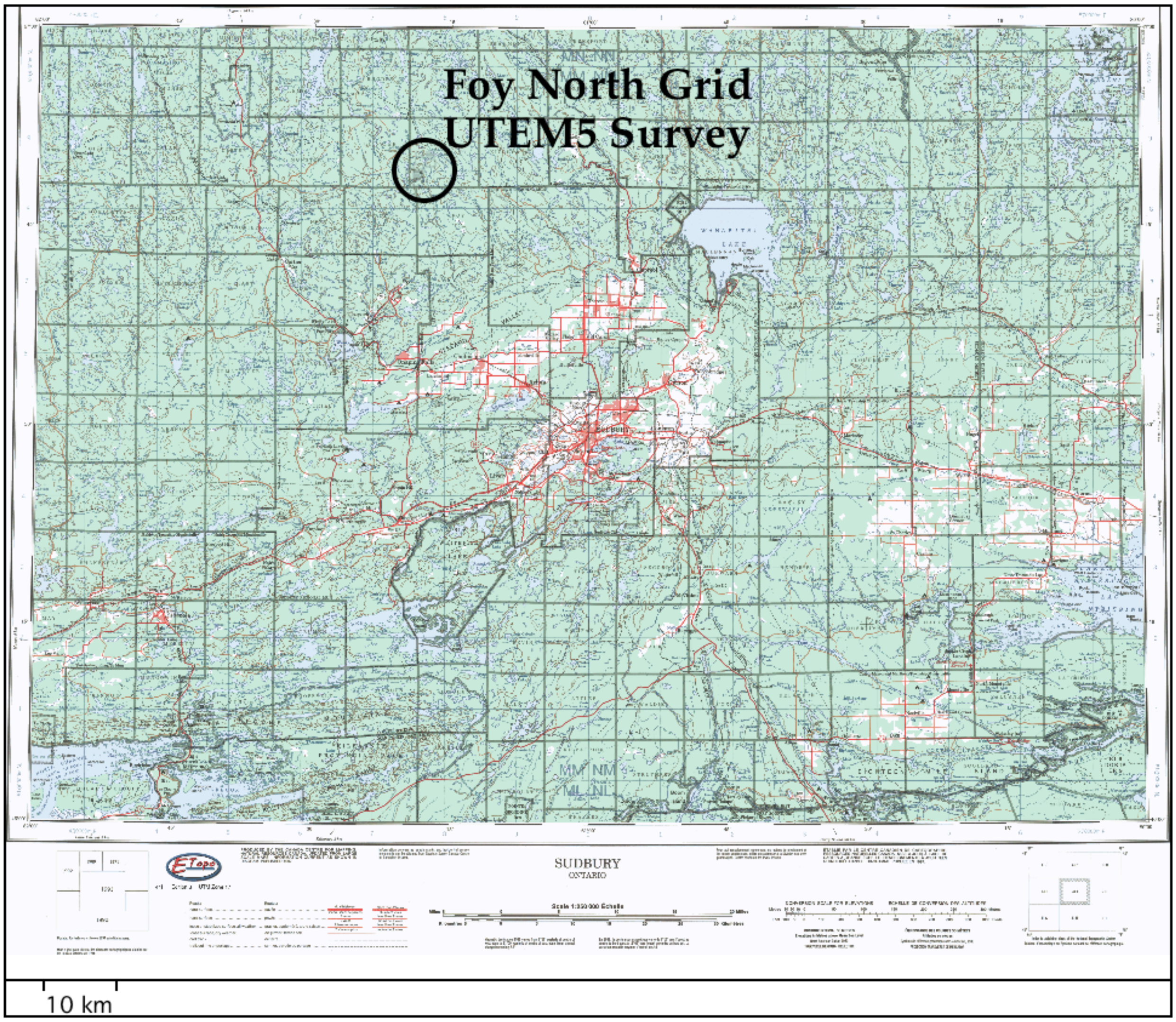
In addition two NorthSouth lines were surveyed on the Foy North Grid section covered by the southern loops - Lines 3500E and 6600E - totalling 2.000 line km. These two eastern extension lines were surveyed from a single loop - Loop 1463. The survey frequency for the Foy North Grid southern loops NorthSouth lines:

- 12Ch UTEM5 one loop coverage (2.000 line km) of the Foy North NorthSouth lines
  actual frequency:
  2.045Hz (outside-the-loop - loop to the west) Loop 1463

This report documents the UTEM5 survey in terms of logistics, survey parameters and field personnel, outlines the data processing and discusses the results. Appendix A contains the data presented as Hz/Hx/Hy profiles.

Other appendices contain:

-	List of Personnel/Production Diary	(Appendix B)
-	an outline of the UTEM5 System	(Appendix C)
-	Note on sources of anomalous Ch0	(Appendix D)



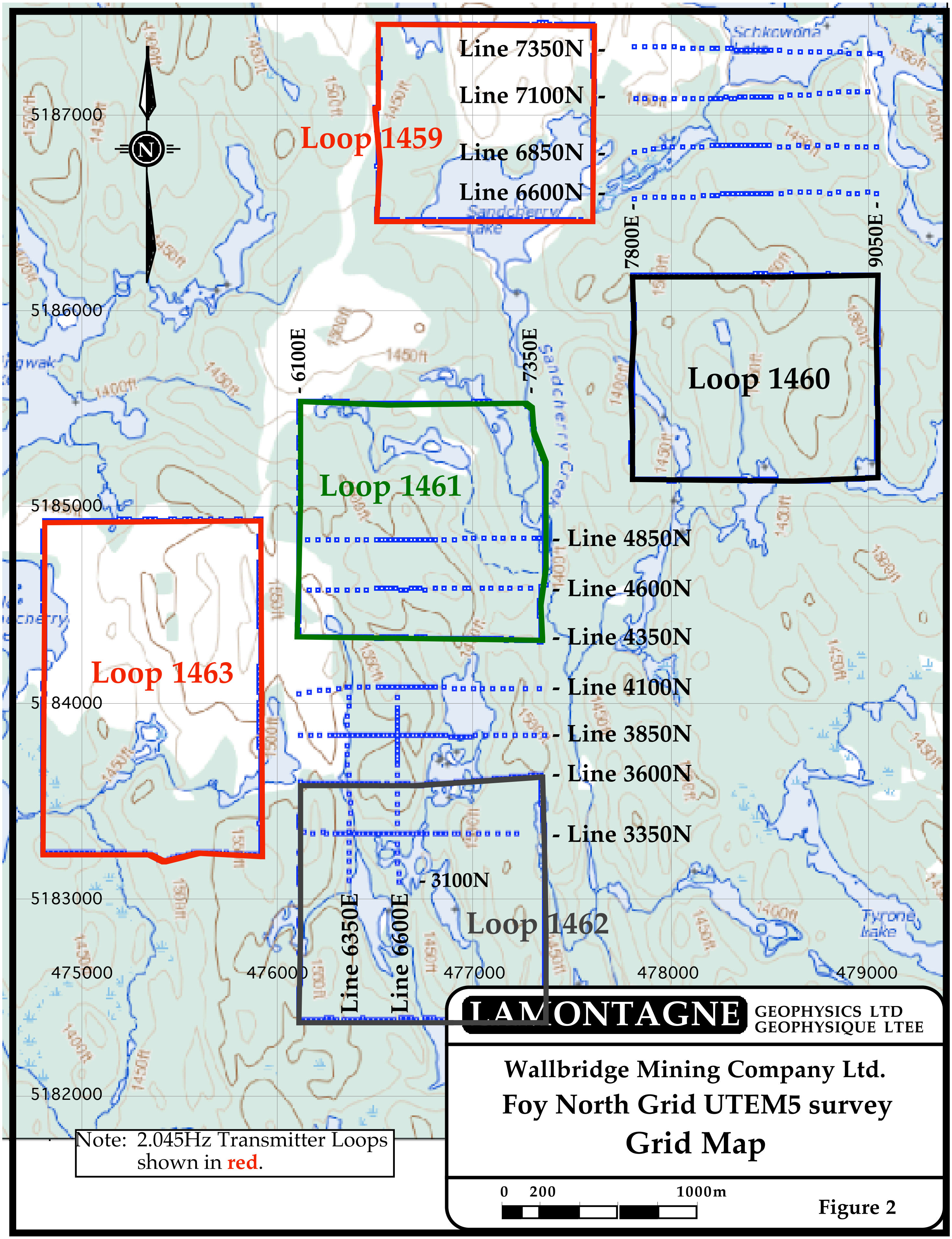
LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE

Wallbridge Mining Company Ltd.

Foy North Grid UTEM5 survey

Location Map

Figure 1



Loop 1459
Line 7350N
Line 7100N
Line 6850N
Line 6600N
7800E
9050E
Loop 1460
6100E
7350E
Loop 1461
Line 4850N
Line 4600N
Line 4350N
Loop 1463
Line 4100N
Line 3850N
Line 3600N
Line 3350N
3100N
Loop 1462
Line 6350E
Line 6600E
5187000
5186000
5185000
5184000
5183000
5182000
475000
476000
477000
478000
479000
Sandcherry Lake
Sandcherry Creek
Tyrone Lake
LAMONTAGNE
GEOPHYSICS LTD
GEOPHYSIQUE LTEE
Wallbridge Mining Company Ltd.
Foy North Grid UTEM5 survey
Grid Map
0 200 1000m
Figure 2
Note: 2.045Hz Transmitter Loops
shown in red.

SURVEY DESIGN

The UTEM survey was planned and carried out to test anomalies outlined by an airborne survey, to detect/outline new conductors and to detect/outline deeper features and potential depth continuations of shallow features.

The grid and loop layout was designed by Wallbridge Mining Company Ltd. personnel in consultation with Lamontagne Geophysics. Loop size and location were selected to provide good coupling with the expected targets, to allow efficient coverage of the area of interest and to minimise .

The survey parameters employed are as follows:

- line spacing of 250m adjusted in places to detail airborne anomalies
- station interval of 50m/25m in areas of interest (Figure 2)
- a total of 5 transmitter loops - 2 northern loops and 3 southern loops
- three component measurements, collected from two Tx loops simultaneously:
    - outside-the-loop (loop to the west) 2.045Hz coverage
    - outside-the-loop (loopfront parallel to line) 4.090Hz coverage
- 12 Ch/161s single stacking (with duplicate readings as required).
- frequencies for main grid coverage (in the ratio 2:1) (Figure 3):
    - 2.045Hz (outside-the-loop - loop to the west) Loops 1459/1463
stacking: 330 full-cycles/ 660 half-cycles
    - 4.090Hz (outside-the-loop - loopfront parallel to line) Loops 1460/61/62
stacking: 660 full-cycles/1320 half-cycles
- single loop coverage of the southern loops
- frequency for southern loops NorthSouth lines (Figure 3):
    - 2.045Hz (outside-the-loop - loop to the east Loop 1463
stacking: 330 full-cycles/ 660 half-cycles

Wallbridge Mining Company Ltd. provided GPS (NAD 27) locations for all survey stations and the transmitter loops. The LGL crews routinely collect handheld-GPS (Garmin eTrex) data for all transmitter loops for the purpose of control.

Note: Geometric control should be considered a mandatory part of the interpretation of any UTEM survey where the target is potentially non-decaying. Poor geometric control has the potential to both mask and invent Ch0 (latest time) conductors (Appendix D).

in-loop frequency		4.090910 Hz	
	period	0.24444 s	
(5MHz clock)	half period	611110 0.2μs cycles	
(narrowest Ch=1unit)	XNP	**4248** /halfperiod	
	width of unit channel	2.87717e-5 s	
	width of unit channel	28.7717 μs	
(symbol) channel	peak of tapered Ch (μs)	tapered Ch begins - unit -	tapered Ch - unit -
timing Ch13	14.39	-0.5	1.5
Z 12	43.16	0.5	3
◢ 11	86.32	1.5	6
⊵ 10	172.63	3	12
⌧ 9	345.26	6	24
Σ 8	690.52	12	48
◤ 7	1381.04	24	96
□ 6	2762.08	48	192
⧉ 5	5524.17	96	384
\ 4	11048.33	192	768
< 3	22096.67	384	1536
/ 2	44193.34	768	3072
> 1	88386.67	1536	4171
I 0	120006.77	3072	4246.5
timing Ch15	122179.04	4171	4247.5
timing Ch14	122207.81	4246.5	4248+0.5
	sub-stack time =	**1.466666** s	
	number of substacks =	**110** substacks	
	stacking time =	161.33 s	
	cycles stacked =	660 cycles	
	half-cycles stacked =	1320 half-cycles	

in-loop frequency		2.045455 Hz	
	period	0.48889 s	
(5MHz clock)	half period	1222221 0.2μs cycles	
(narrowest Ch=1unit)	XNP	**4248** /halfperiod	
	width of unit channel	5.75434e-5 s	
	width of unit channel	57.5434 μs	
(symbol) channel	peak of tapered Ch (μs)	tapered Ch begins - unit -	tapered Ch ends - unit -
timing Ch13	28.77	-0.5	1.5
Z 12	86.32	0.5	3
◢ 11	172.63	1.5	6
⊵ 10	345.26	3	12
⌧ 9	690.52	6	24
Σ 8	1381.04	12	48
◤ 7	2762.08	24	96
□ 6	5524.17	48	192
⧉ 5	11048.33	96	384
\ 4	22096.67	192	768
< 3	44193.34	384	1536
/ 2	88386.67	768	3072
> 1	176773.34	1536	4171
I 0	240013.55	3072	4246.5
timing Ch15	244358.08	4171	4247.5
timing Ch14	244415.62	4246.5	4248+0.5
	sub-stack time =	**1.466666** s	
	number of substacks =	**110** substacks	
	stacking time =	161.33 s	
	cycles stacked =	330 cycles	
	half-cycles stacked =	660 half-cycles	

A target frequency is entered for each UTEM transmitter and the local powerline frequency are entered in the UTEM receiver. The actual frequencies used are selected by the receiver sofware to be as close to the entered target frequencies as possible while optimizing rejection of the other transmitters and powerline noise. In this instance the two frequencies are in the ratio **2:1**.

The minimum substack time is set by the receiver software to the shortest time that will include an integer number of cycles of each frequency used and 30Hz (the first harmonic of the 60 Hz powerline frequency).

Allowable stacking times are required to be a multiple of the minimum substack time.

Where responses extend to the latest time-channel measured (Ch0) the survey frequency can be lowered. Reducing the number of channels from 12 to 10 allows for a wider anti-aliasing filter bandwidth. This can help improve S/N (signal-to-noise ratio) when dealing with high-frequency noise - eg. wind “whistling”.

LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE

Wallbridge Mining Company Ltd.

UTEM5 survey

12Ch base frequencies: details

Figure 3

Survey Logistics

A Lamontagne Geophysics crew mobilized the UTEM5 survey equipment from Kingston, Ontario, to Sudbury on January 13th. The Lamontagne Base of operations in the Sudbury District is in Chelmsford and the crew was housed in the Valley Inn Motel Hotel in nearby Azilda. The initial crew consisted of Gerry Lafortune (crew chief/operator), Phil Guimond (asst. crew chief/Rx operator), Rob Sinclair (geophysicist/operator), Bill Dingwall (Tx operator/electronics), Richard Lahaye (Rx/Tx operator) and Tyler Gallant (Tx operator) with Dale Pitman (field assistant) joining the crew from January 24th onward.

The crew received their site orientation Wallbridge personnel. An advance two-person crew headed out February 6th to check access and to begin to lay out the initial loops on the Wallbridge Foy North Project. The initial loops were completed by the full crew the following day and surveying began on the Foy North Grid on February 8th. Transportation to and from the grid was by pickup - approximately 100km/90mins each way. Transport onsite was by snowmobile/on snowshoe as required/feasible. The location of the Foy North Grid is shown in Figures 1 and 2.

The UTEM5 surveying on the Foy North Grid (detailed in Appendix B - the Production Diary) continued through fairly severe winter weather. Coverage was completed on February 19th. The wire pick up was completed the following day - February 20th - and crew began work for Wallbridge on another property in the Sudbury District.

The survey equipment consisted of two UTEM5 receiver/coils, 2 UTEM4 Transmitters as well as all necessary accessories, support equipment and backup equipment. Data was reduced on a field computer (PowerBook) and UTEM profiles and digital data were made available/emailed to the client's personnel as the data became available.

SURVEY RESULTS

The results of the survey are summarized and presented as UTEM profiles in Appendix A. The final grid and loop locations are presented in Figure 2. The data presented in Appendix A are reduced with a UTM grid (NAD27) produced from DGPS points provided by the client.

Overall the UTEM data quality is considered good. Note: the latest time profiles (Ch0) should be considered in conjunction with other available information (Appendix D).

For each line surveyed the continuously normalized profiles have been plotted for the three components collected. Profiles are listed by Loop number and presented as 3-axis profiles in the following order:

Foy North Grid

northern loops

Loop 1459	**Hz** (HZ) **continuous norm**	2.045Hz	**(blue separator)**
	Hx (HL) **continuous norm**	2.045Hz	(blue separator)
	Hy (HT) **continuous norm**	2.045Hz	(blue separator)
Loop 1460	**Hz** (HZ) **continuous norm**	4.090Hz	**(pink separator)**
	Hx (HL) **continuous norm**	4.090Hz	(yellow separator)
	Hy (HT) **continuous norm**	4.090Hz	(yellow separator)

southern loops

Loop 1461	**Hz** (HZ) **continuous norm**	4.090Hz	**(pink separator)**
	Hx (HL) **continuous norm**	4.090Hz	(yellow separator)
	Hy (HT) **continuous norm**	4.090Hz	(yellow separator)
Loop 1462	**Hz** (HZ) **continuous norm**	4.090Hz	**(pink separator)**
	Hx (HL) **continuous norm**	4.090Hz	(yellow separator)
	Hy (HT) **continuous norm**	4.090Hz	(yellow separator)
Loop 1463	**Hz** (HZ) **continuous norm**	2.045Hz	**(blue separator)**
	Hx (HL) **continuous norm**	2.045Hz	(blue separator)
	Hy (HT) **continuous norm**	2.045Hz	(blue separator)

Note: in future reports UTEM5 data will be presented as:

- HZ the vertical component (currently Hz)
- HL the in-line horizontal component (currently Hx)
- HT the transverse horizontal component (currently Hy)

Outline of profile type

Hz Hx Hy continuous norm ***Ch0 reduced***

Continuous normalization is useful for detection of the presence of anomalies at any position on a profile. The anomaly shape is distorted by normalization to the local field. Near the wire (large field) the continuously normalized Ch0 tends towards zero.

Note: Ch0 is later in time and narrower than Ch1 (Appendix C).

The Hz/Hx/Hy continuously normalized data are presented as 3-axis profiles:

for the 12Ch @ 4.090/2.045Hz data:

top axis - Ch6-12	*Ch0 Reduced*
middle axis - Ch1-6	*Ch0 Reduced*
bottom axis - Ch0	*Primary Field Reduced*
bottom axis - topo	*some vertical exaggeration*

A description of the standard plotting formats used and of the UTEM System is presented in Appendix C.

Appendix A

1401 UTEM5 Profiles

UTEM5 Survey

Foy North Grid
Sudbury District

for

Wallbridge Mining Company Ltd.

Presentation

The results of the survey are summarized and presented as UTEM profiles in Appendix A. The final grid and loop locations are presented in Figure 2. The data presented in Appendix A are reduced with a UTM grid (NAD27) produced from DGPS points provided by the client.

Overall the UTEM data quality is considered good. Note: the latest time profiles (Ch0) should be considered in conjunction with other available information (Appendix D).

For each line surveyed the continuously normalized profiles have been plotted for the three components collected. Profiles are listed by Loop number and presented as 3-axis profiles in the following order:

Foy North Grid

northern loops

Loop 1459	**Hz** (HZ) **continuous norm**	2.045Hz	**(blue separator)**
	Hx (HL) **continuous norm**	2.045Hz	(blue separator)
	Hy (HT) **continuous norm**	2.045Hz	(blue separator)
Loop 1460	**Hz** (HZ) **continuous norm**	4.090Hz	**(pink separator)**
	Hx (HL) **continuous norm**	4.090Hz	(yellow separator)
	Hy (HT) **continuous norm**	4.090Hz	(yellow separator)

southern loops

Loop 1461	**Hz** (HZ) **continuous norm**	4.090Hz	**(pink separator)**
	Hx (HL) **continuous norm**	4.090Hz	(yellow separator)
	Hy (HT) **continuous norm**	4.090Hz	(yellow separator)
Loop 1462	**Hz** (HZ) **continuous norm**	4.090Hz	**(pink separator)**
	Hx (HL) **continuous norm**	4.090Hz	(yellow separator)
	Hy (HT) **continuous norm**	4.090Hz	(yellow separator)
Loop 1463	**Hz** (HZ) **continuous norm**	2.045Hz	**(blue separator)**
	Hx (HL) **continuous norm**	2.045Hz	(blue separator)
	Hy (HT) **continuous norm**	2.045Hz	(blue separator)

Note: in future reports UTEM5 data will be presented as:

- HZ the vertical component (currently Hz)
- HL the in-line horizontal component (currently Hx)
- HT the transverse horizontal component (currently Hy)

<u>Outline of profile type</u>

Hz Hx Hy continuous norm ***Ch0 reduced***

Continuous normalization is useful for detection of the presence of anomalies at any position on a profile. The anomaly shape is distorted by normalization to the local field. Near the wire (large field) the continuously normalized Ch0 tends towards zero.

Note: Ch0 is later in time and narrower than Ch1 (Appendix C).

The Hz/Hx/Hy continuously normalized data are presented as 3-axis profiles:

for the 12Ch @ 4.090/2.045Hz data:

top axis - Ch6-12	*Ch0 Reduced*
middle axis - Ch1-6	*Ch0 Reduced*
bottom axis - Ch0	*Primary Field Reduced*
bottom axis - topo	*some vertical exaggeration*

A description of the standard plotting formats used and of the UTEM System is presented in Appendix C.

List of Data Collected and Plotted

Wallbridge Mining Company Ltd. (1401)
Foy North Grid - 12Ch @ 4.090/2.045Hz

	Line	Coverage		
northern loops				
Loop 1459	Line 6600N	7800E - 9050E	1250m	Hz/Hx/Hy
(@ 2.045Hz)	Line 6850N	7800E - 9050E	1250m	Hz/Hx/Hy
	Line 7100N	7800E - 9000E	1200m	Hz/Hx/Hy
	Line 7350N	7800E - 9050E	1250m	Hz/Hx/Hy
Loop 1460	Line 6600N	7800E - 9050E	1250m	Hz/Hx/Hy
(@ 4.090Hz)	Line 6850N	7800E - 9050E	1250m	Hz/Hx/Hy
	Line 7100N	7800E - 9000E	1200m	Hz/Hx/Hy
	Line 7350N	7800E - 9050E	1250m	Hz/Hx/Hy
southern loops				
Loop 1461	Line 3350N	6100E - 7225E	1125m	Hz/Hx/Hy
(@ 4.090Hz)	Line 3600N	6125E - 7350E	1225m	Hz/Hx/Hy
	Line 3850N	6100E - 7350E	1250m	Hz/Hx/Hy
Loop 1462	Line 4100N	6100E - 7350E	1250m	Hz/Hx/Hy
(@ 4.090Hz)	Line 4350N	6100E - 7350E	1250m	Hz/Hx/Hy
	Line 4600N	6100E - 7350E	1250m	Hz/Hx/Hy
	Line 4850N	6100E - 7350E	1250m	Hz/Hx/Hy
Loop 1463	Line 3350N	6100E - 7225E	1125m	Hz/Hx/Hy
(@ 2.045Hz)	Line 3600N	6125E - 7350E	1225m	Hz/Hx/Hy
	Line 3850N	6100E - 7350E	1250m	Hz/Hx/Hy
	Line 4100N	6100E - 7350E	1250m	Hz/Hx/Hy
	Line 4350N	6100E - 7350E	1250m	Hz/Hx/Hy
	Line 4600N	6100E - 7350E	1250m	Hz/Hx/Hy
	Line 4850N	6100E - 7350E	1250m	Hz/Hx/Hy
U5 Hz/Hx/Hy 2 loop coverage: Totals			13550m	Hz/Hx/Hy
Loop 1463	Line 6350E	3100N - 4100N	1000m	Hz/Hx/Hy
(@ 2.045Hz)	Line 6600E	3100N - 4100N	1000m	Hz/Hx/Hy
U5 Hz/Hx/Hy 1 loop coverage: Totals			2000m	Hz/Hx/Hy
Foy North Grid UTEM5 coverage Total			**15550m**	**Hz/Hx/Hy**

Foy North Grid Survey totals:

13550m UTEM5 2 loop 6-component coverage
2000m UTEM5 1 loop 3-component coverage (2.045Hz)

- •15550m UTEM5 Hz/Hx/Hy line coverage
- equalling: •29100m UTEM5 three-component coverage
- equalling: •87300m UTEM5 single component coverage

Foy North Grid - UTEM5

Loops 1459/1460 - northern loops

Loop 1459	Line 6600N	7800E - 9050E	1250m	Hz/Hx/Hy
(@ 2.045Hz)	Line 6850N	7800E - 9050E	1250m	Hz/Hx/Hy
	Line 7100N	7800E - 9000E	1200m	Hz/Hx/Hy
	Line 7350N	7800E - 9050E	1250m	Hz/Hx/Hy
Loop 1460	Line 6600N	7800E - 9050E	1250m	Hz/Hx/Hy
(@ 4.090Hz)	Line 6850N	7800E - 9050E	1250m	Hz/Hx/Hy
	Line 7100N	7800E - 9000E	1200m	Hz/Hx/Hy
	Line 7350N	7800E - 9050E	1250m	Hz/Hx/Hy

Foy North Grid

Loop 1459

Hz

2.045Hz frequency

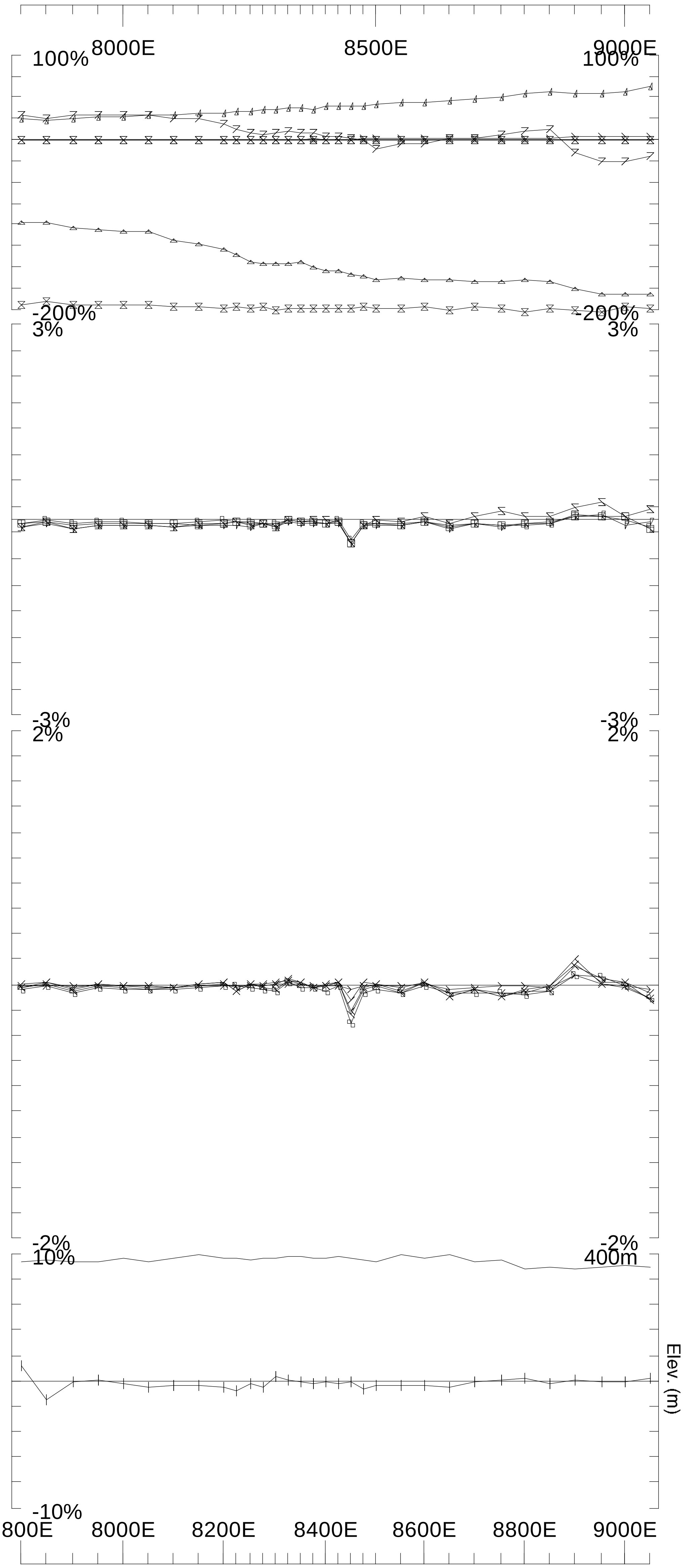
continuous norm

12Ch - Ch0 reduced

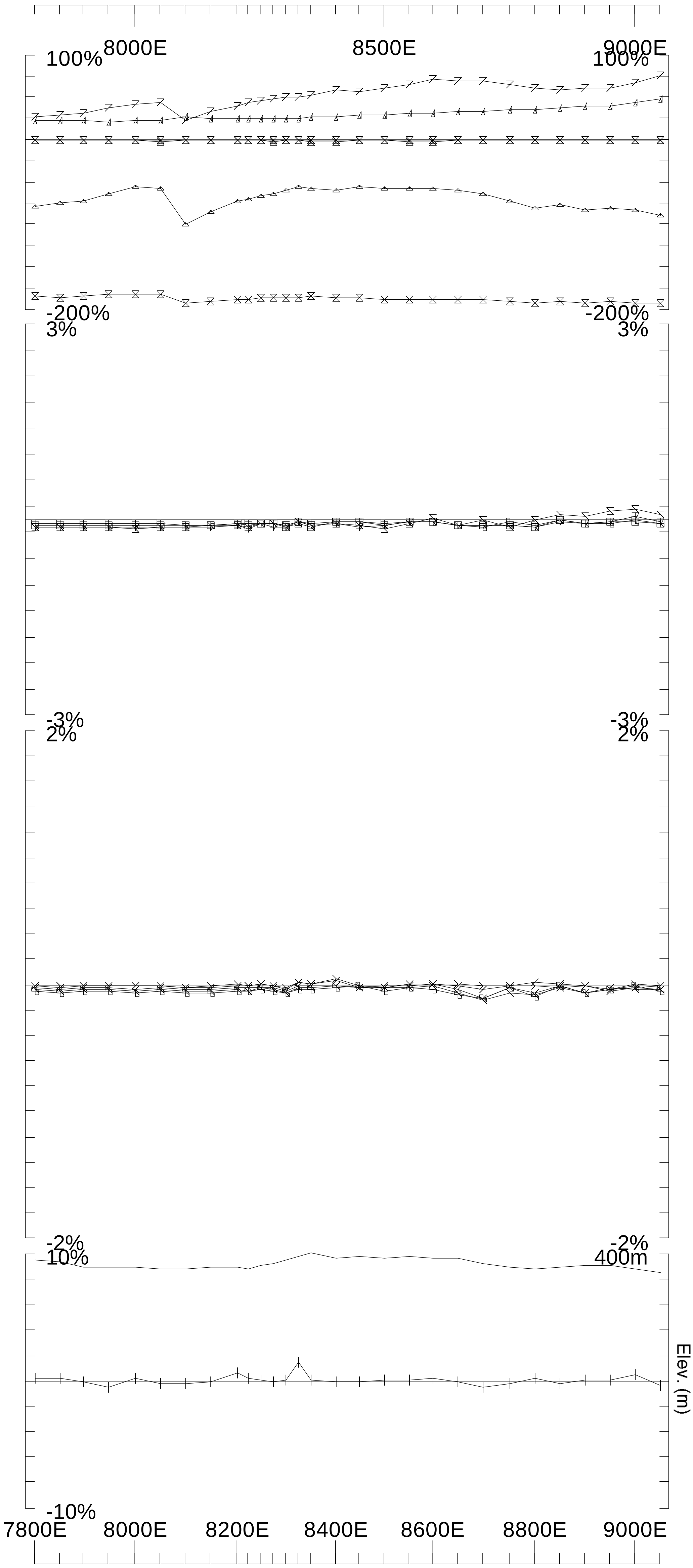
Loop 1459 @2.045Hz

Line 6600N	7800E - 9050E	1250m	Hz/Hx/Hy
Line 6850N	7800E - 9050E	1250m	Hz/Hx/Hy
Line 7100N	7800E - 9000E	1200m	Hz/Hx/Hy
Line 7350N	7800E - 9050E	1250m	Hz/Hx/Hy

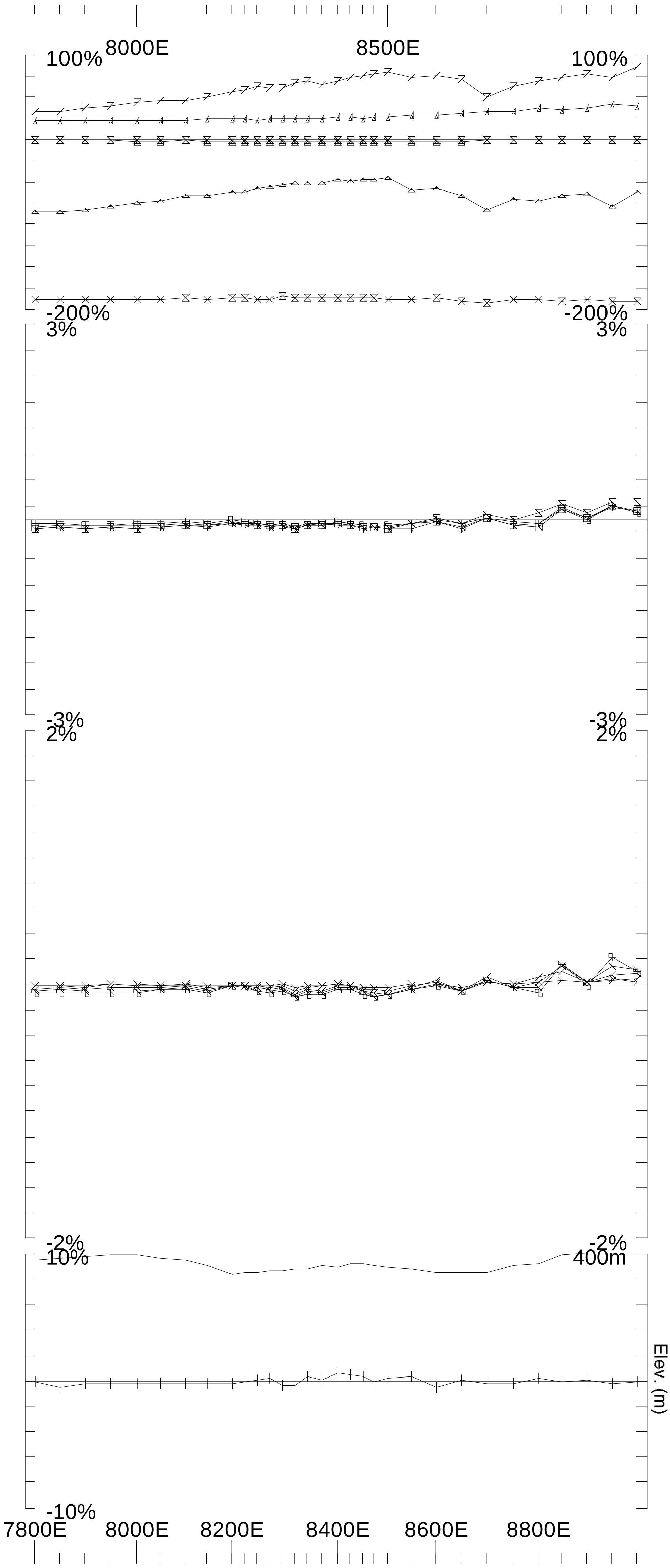
Loop 1459 - Hz



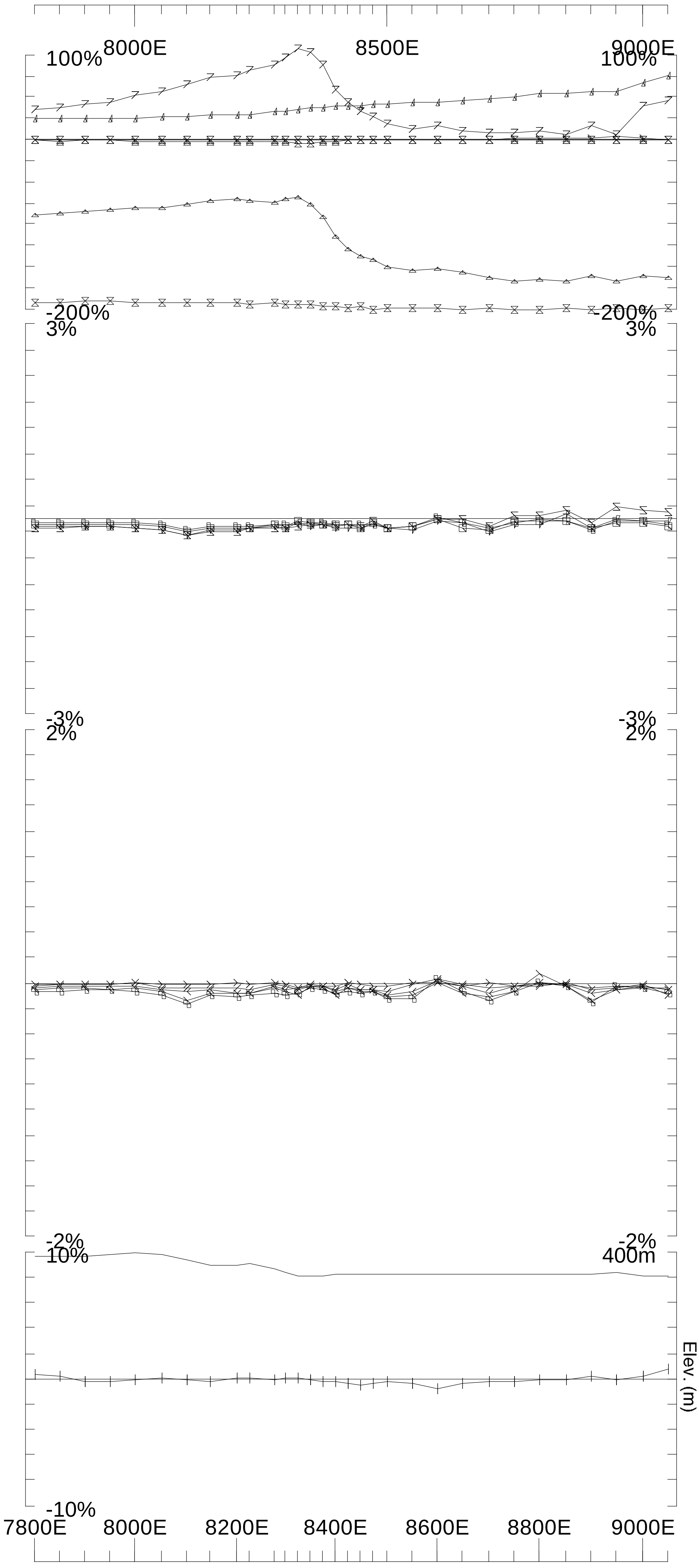
Loop: 1459S2	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 6600E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hz	Base Freq. 2.045 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 21/3/14



Loop: 1459S2	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 6850E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hz	Base Freq. 2.045 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 21/3/14



Loop: 1459S2	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 7100E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hz	Base Freq. 2.045 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 21/3/14



Loop: 1459S2	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 7350E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hz	Base Freq. 2.045 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 21/3/14

Foy North Grid

Loop 1459

Hx

2.045Hz frequency

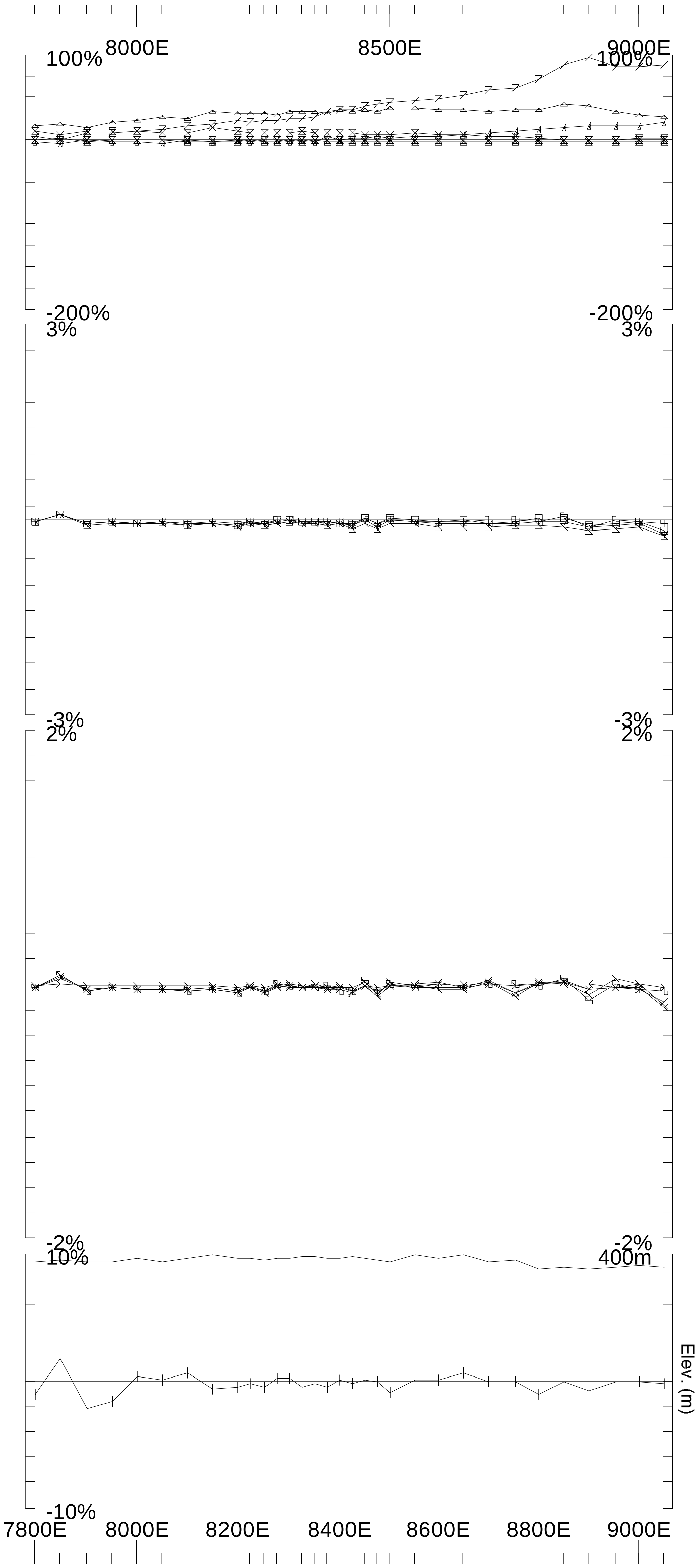
continuous norm

12Ch - Ch0 reduced

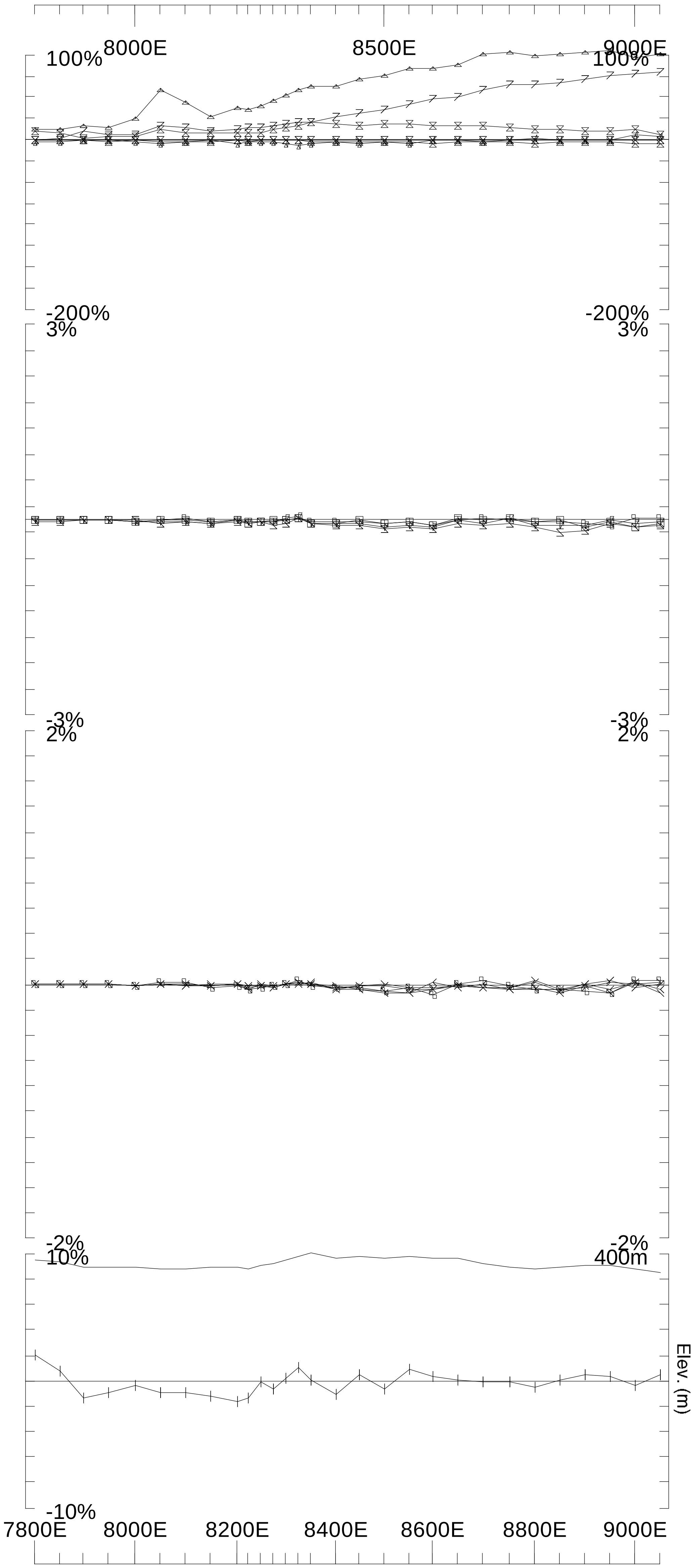
Loop 1459 @2.045Hz

	Line 6600N	7800E - 9050E	1250m	Hz/Hx/Hy
	Line 6850N	7800E - 9050E	1250m	Hz/Hx/Hy
	Line 7100N	7800E - 9000E	1200m	Hz/Hx/Hy
	Line 7350N	7800E - 9050E	1250m	Hz/Hx/Hy

Loop 1459 - Hx



Loop: 1459S2	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 6600E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hx	Base Freq. 2.045 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 21/3/14



Loop: 1459S2
Line: 6850E
Compt: Hx

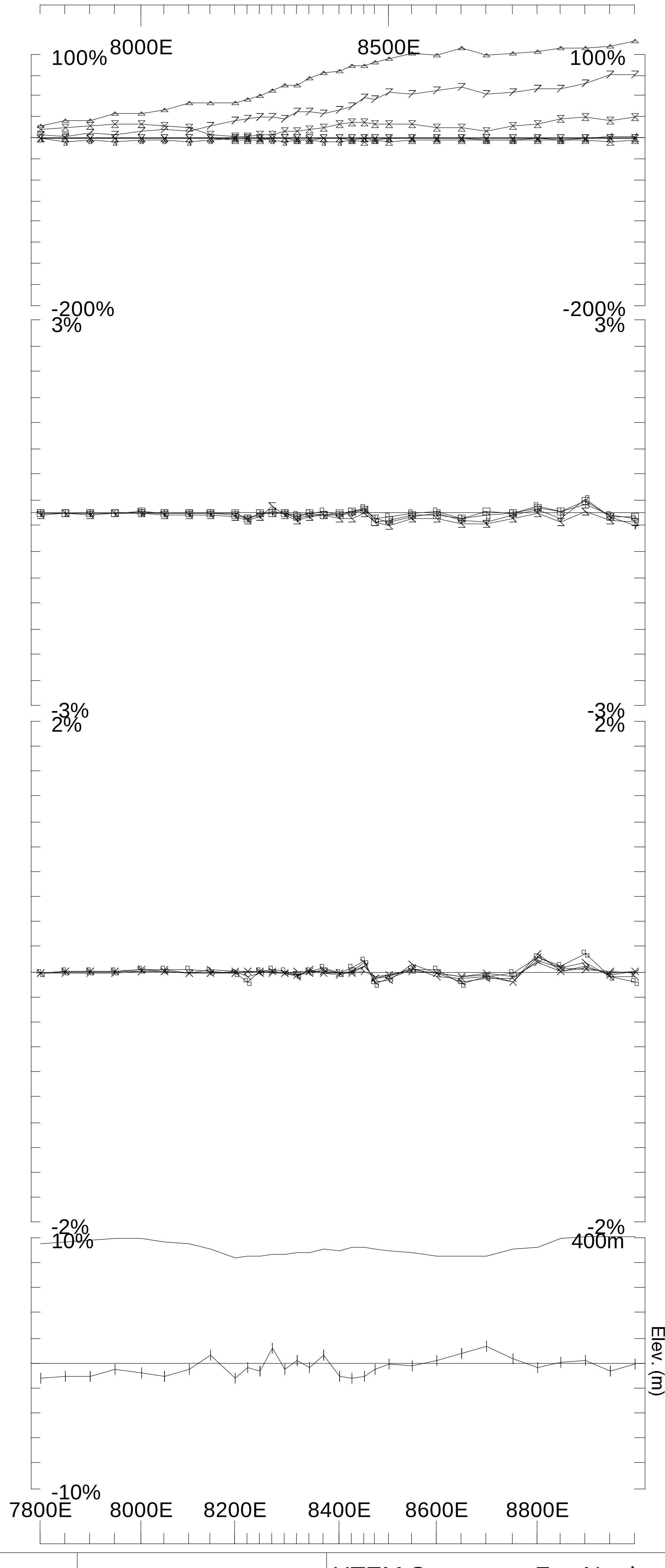
Secondary, (Chn - Ch0)/|Hp|
Contin. Norm at depth of 0 m
Base Freq. 2.045 Hz

UTEM Survey at: Foy North
For: Wallbridge

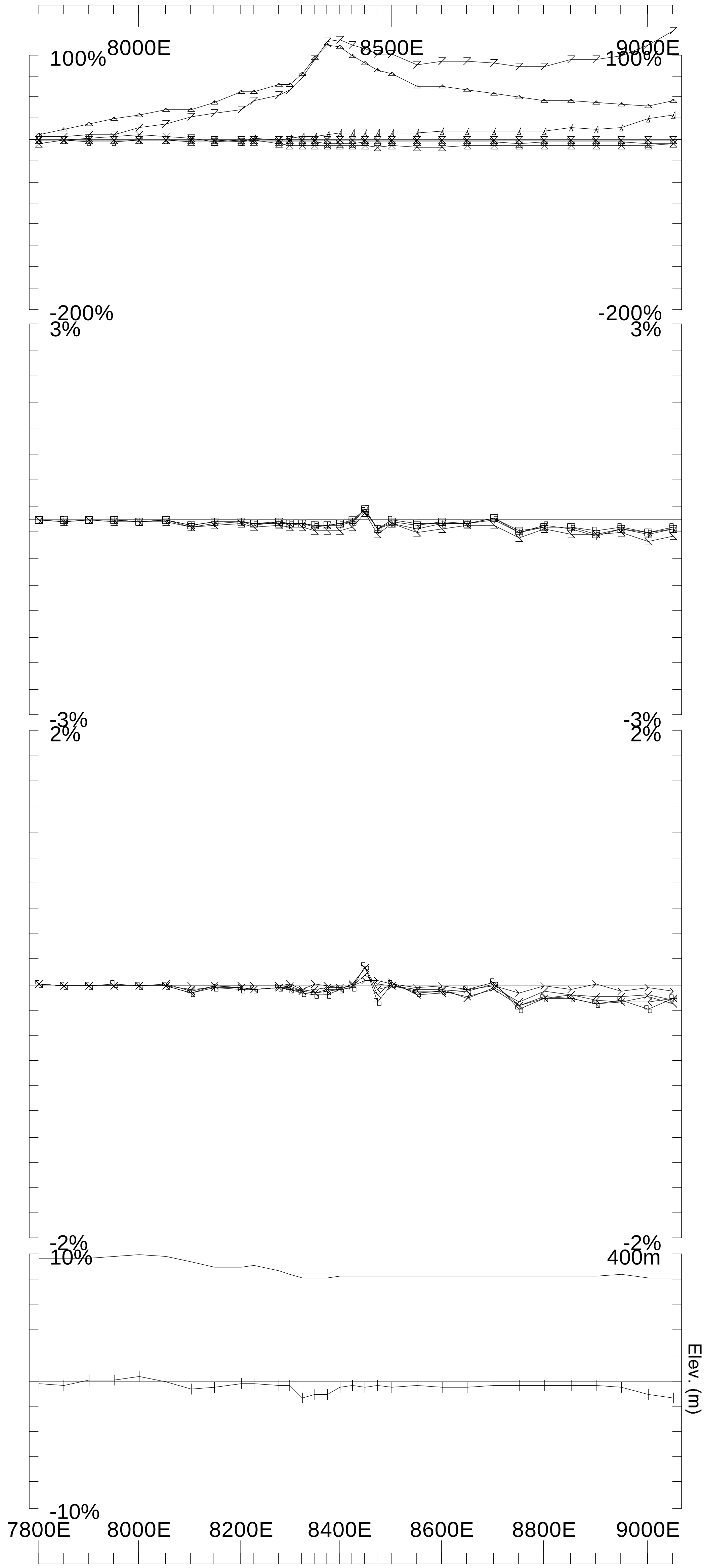
LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE

Job 1401

Plotted : 21/3/14



Loop: 1459S2	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 7100E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hx	Base Freq. 2.045 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 21/3/14



Loop: 1459S2
Line: 7350E
Compt: Hx

Secondary, (Chn - Ch0)/|Hp|
Contin. Norm at depth of 0 m
Base Freq. 2.045 Hz

UTEM Survey at: Foy North
For: Wallbridge

LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE

Job 1401

Plotted : 21/3/14

Foy North Grid

Loop 1459

Hy

2.045Hz frequency

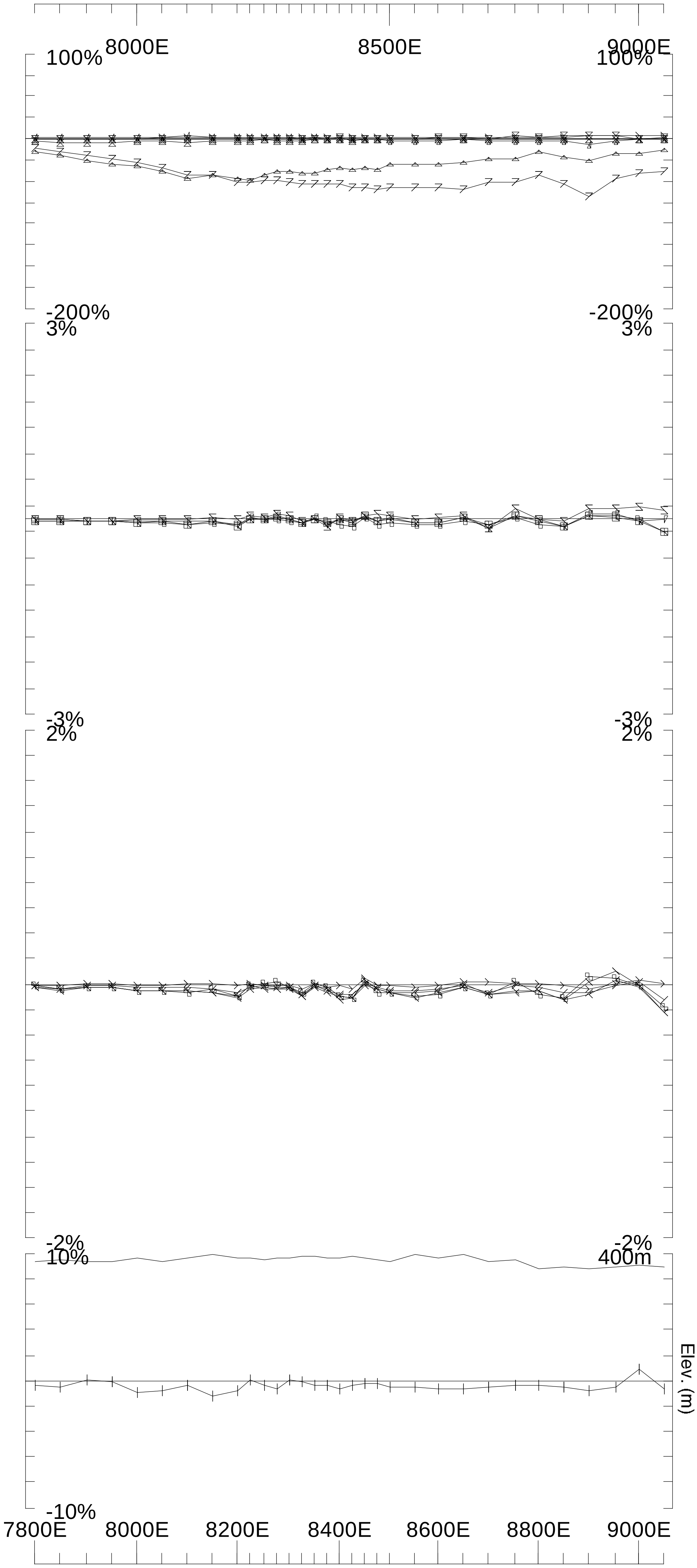
continuous norm

12Ch - Ch0 reduced

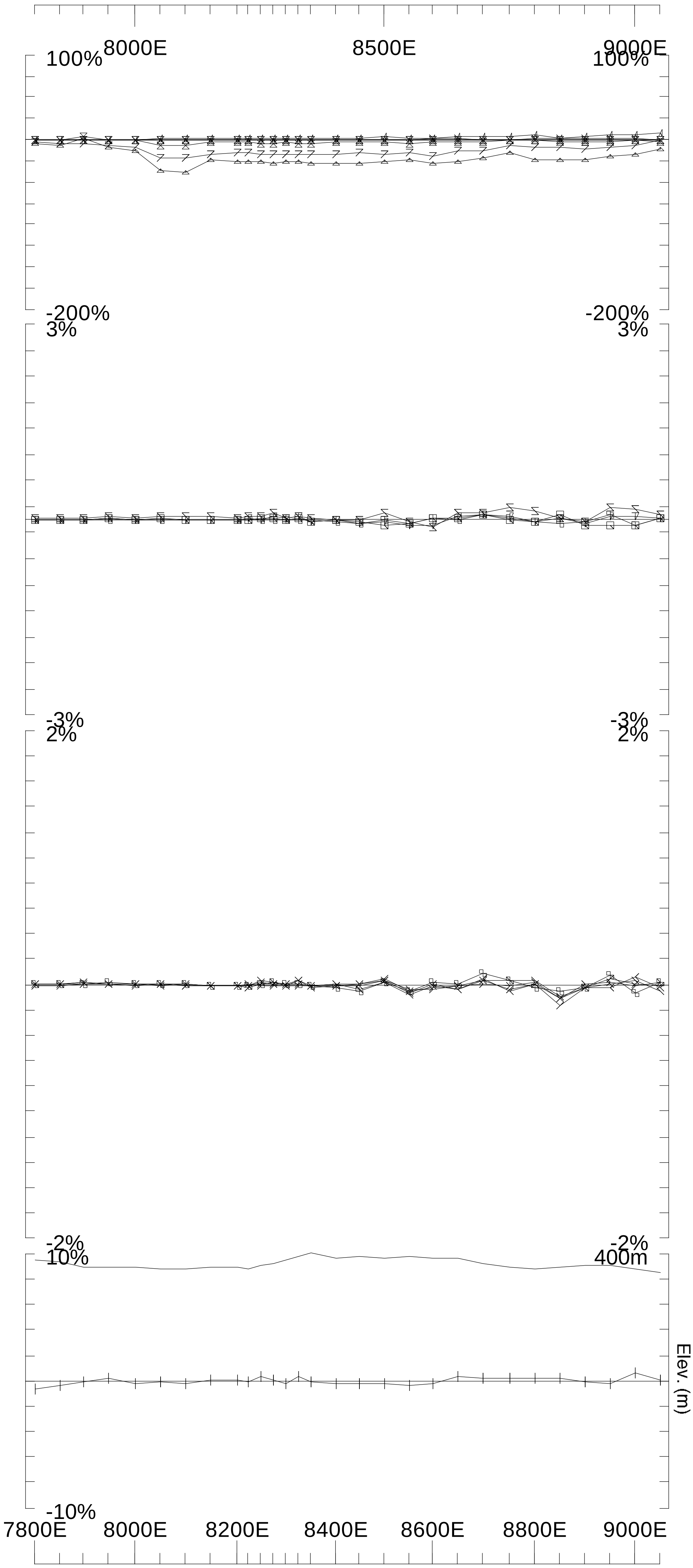
Loop 1459 @2.045Hz

Line 6600N	7800E - 9050E	1250m	Hz/Hx/Hy
Line 6850N	7800E - 9050E	1250m	Hz/Hx/Hy
Line 7100N	7800E - 9000E	1200m	Hz/Hx/Hy
Line 7350N	7800E - 9050E	1250m	Hz/Hx/Hy

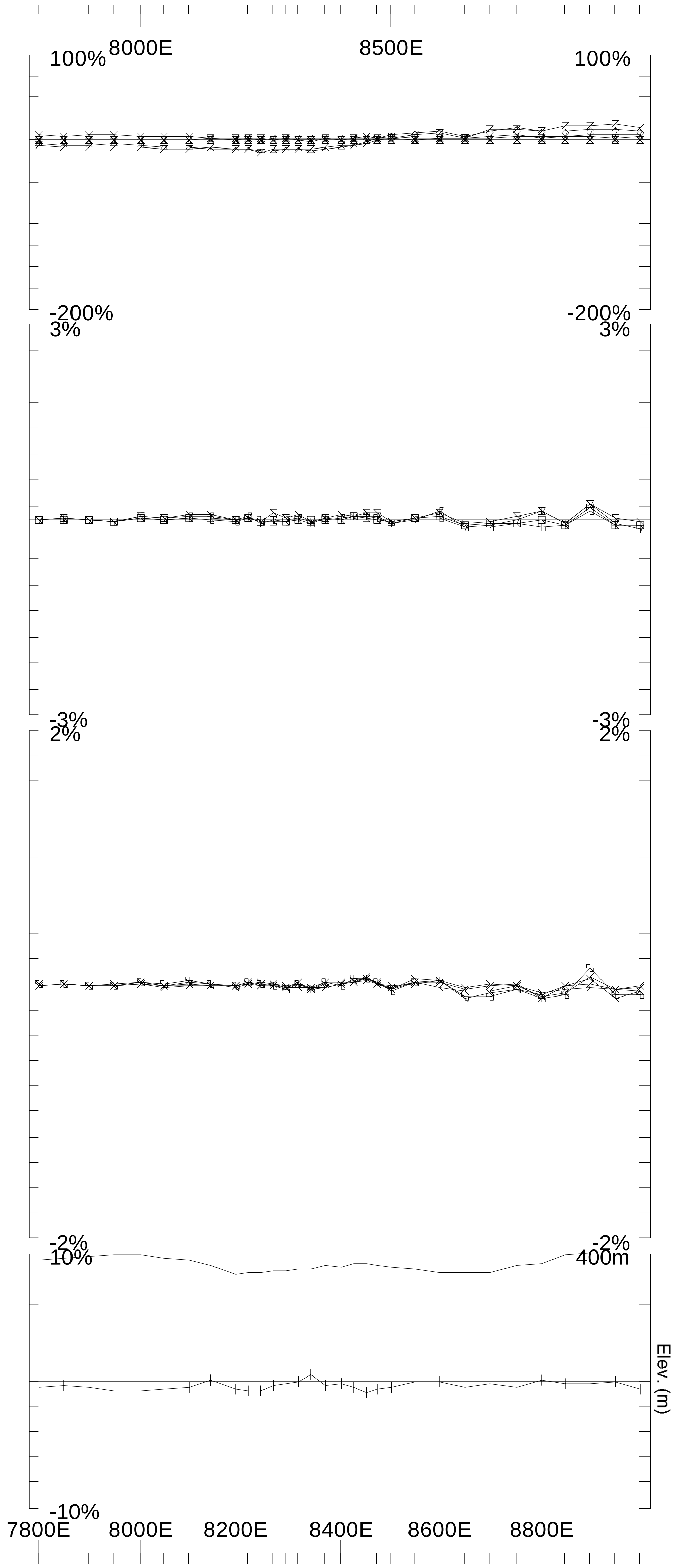
Loop 1459 - Hy



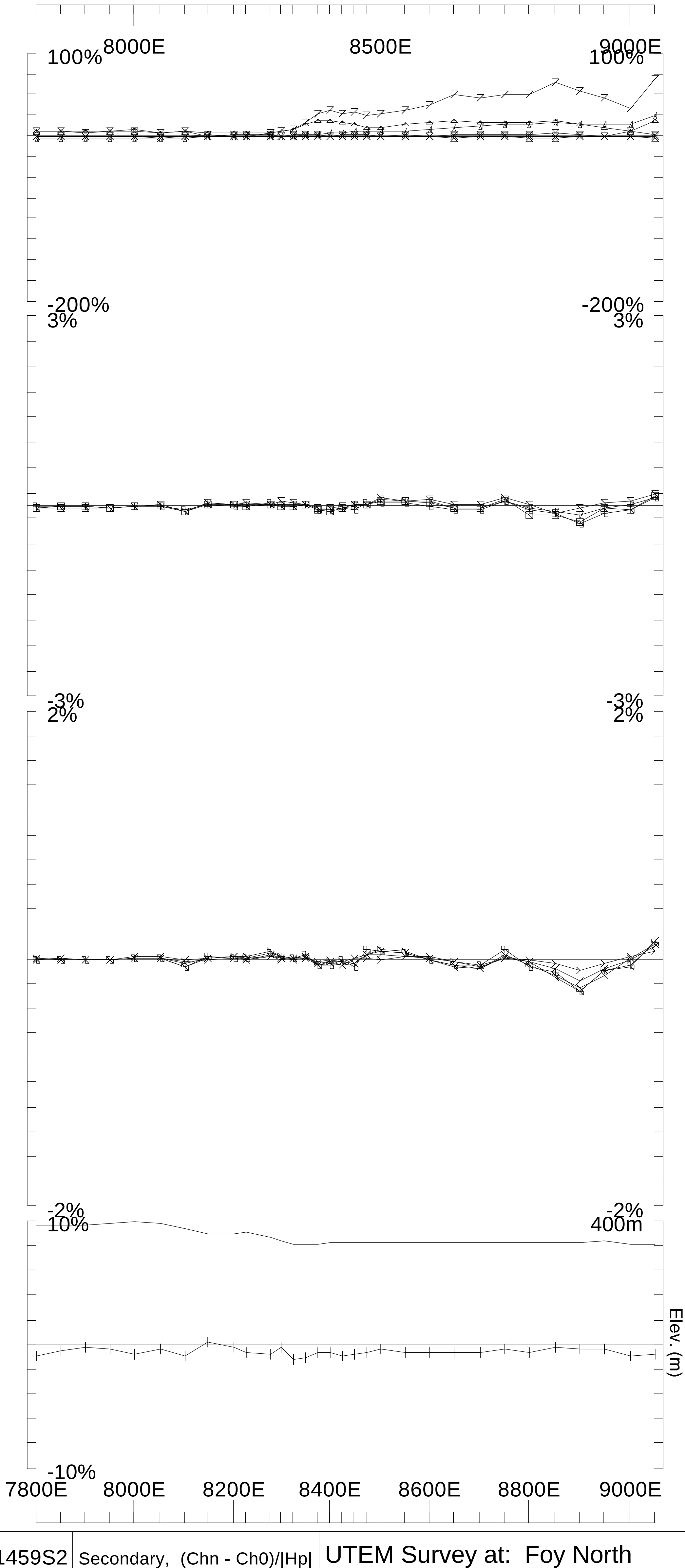
Loop: 1459S2	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 6600E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hy	Base Freq. 2.045 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE — Job 1401 — Plotted : 21/3/14



Loop: 1459S2	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 6850E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hy	Base Freq. 2.045 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 21/3/14



Loop: 1459S2	Secondary, (Chn - Ch0/|Hp|	UTEM Survey at: Foy North
Line: 7100E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hy	Base Freq. 2.045 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 21/3/14



Loop: 1459S2	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 7350E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hy	Base Freq. 2.045 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 21/3/14

Foy North Grid

Loop 1460

Hz

4.090Hz frequency

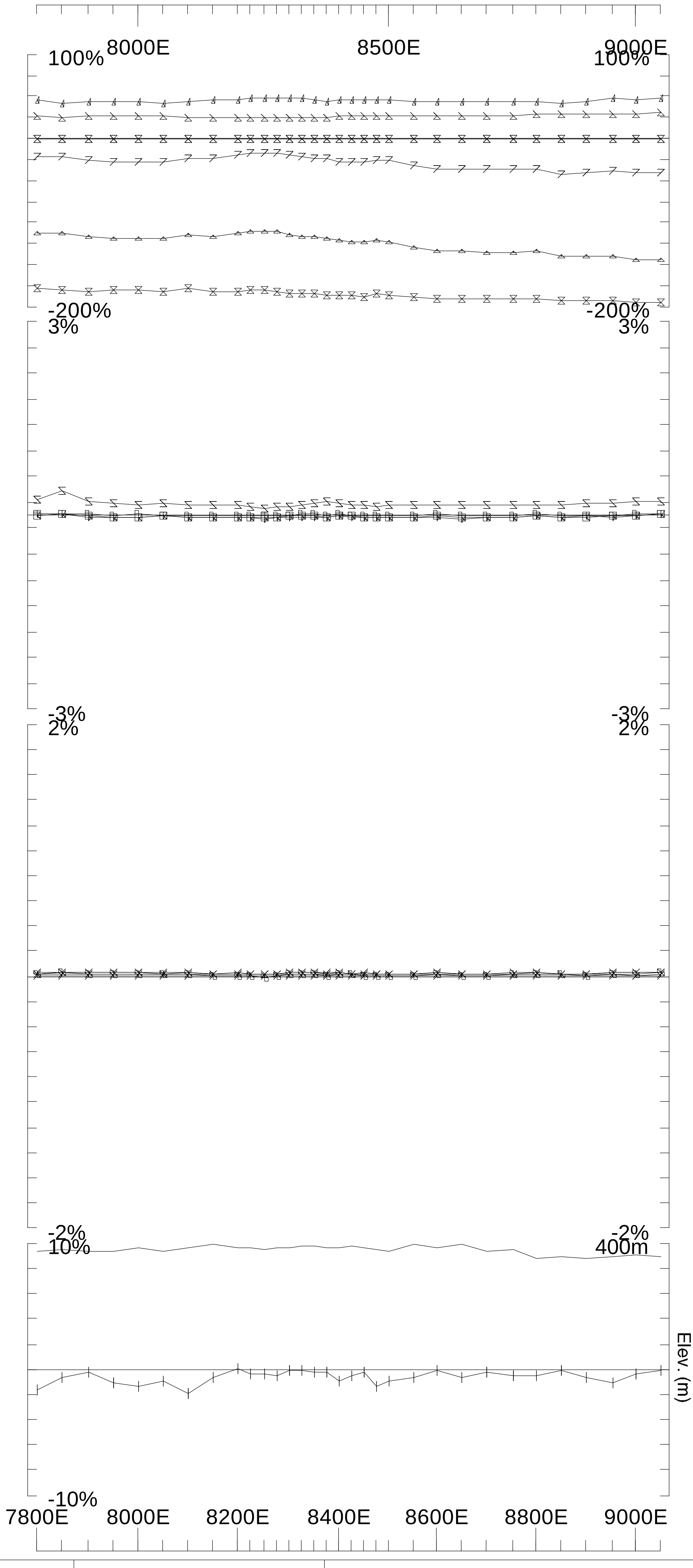
continuous norm

12Ch - Ch0 reduced

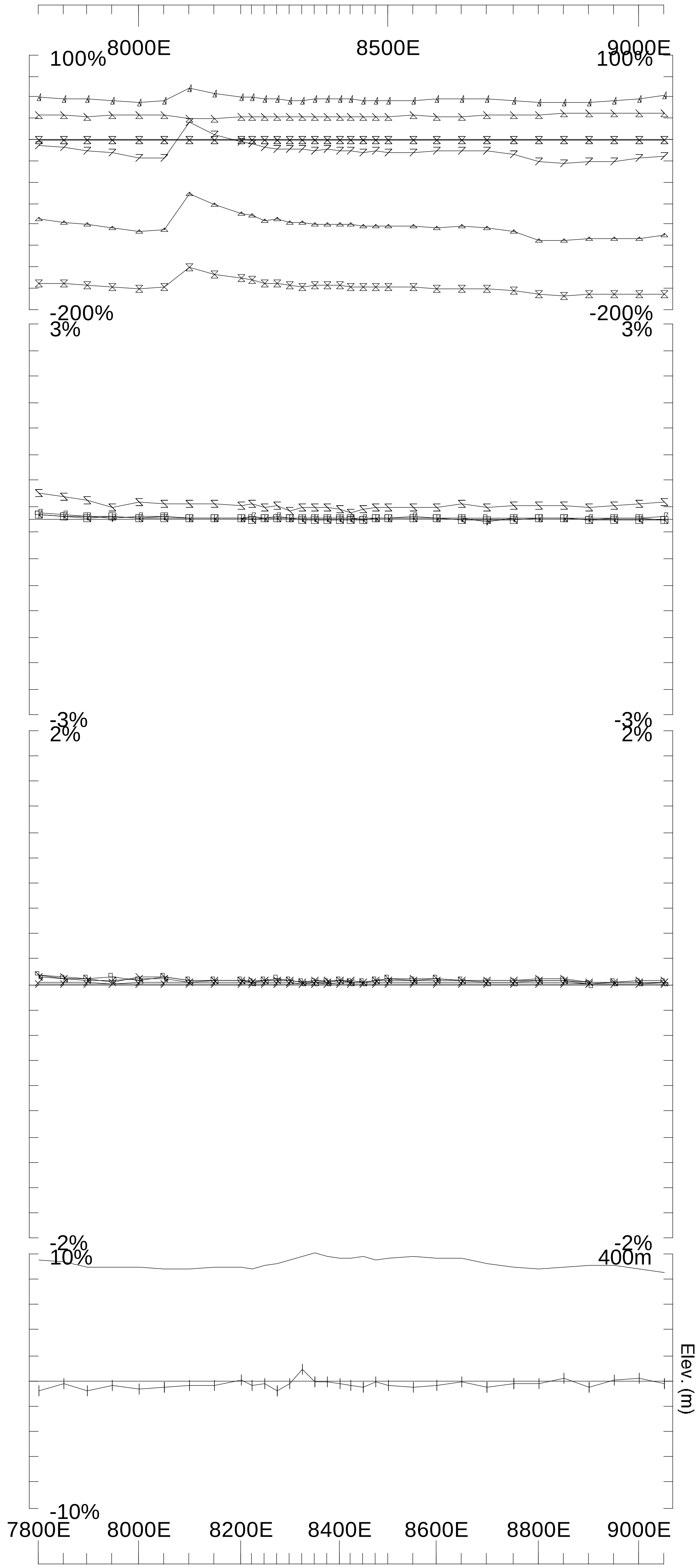
Loop 1460 @4.090Hz

Line 6600N	7800E - 9050E	1250m	Hz/Hx/Hy
Line 6850N	7800E - 9050E	1250m	Hz/Hx/Hy
Line 7100N	7800E - 9000E	1200m	Hz/Hx/Hy
Line 7350N	7800E - 9050E	1250m	Hz/Hx/Hy

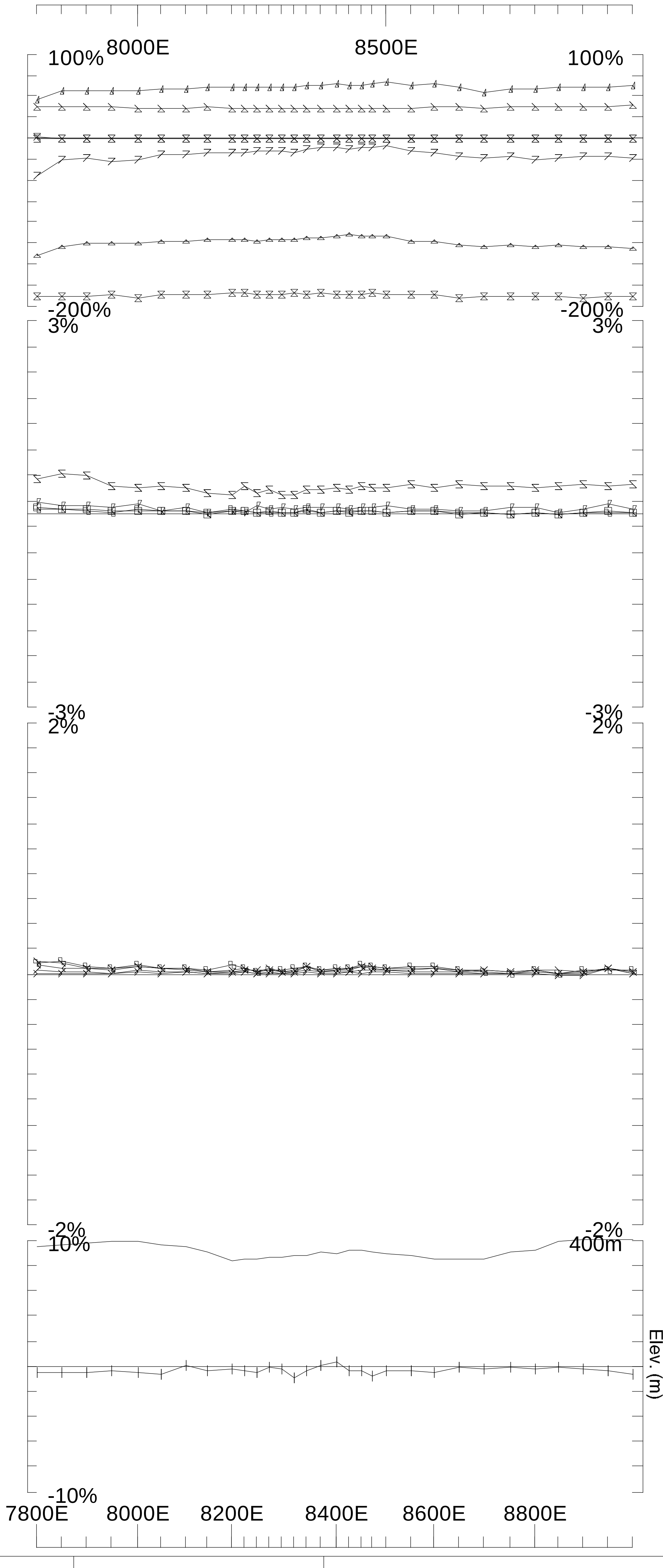
Loop 1460 - Hz



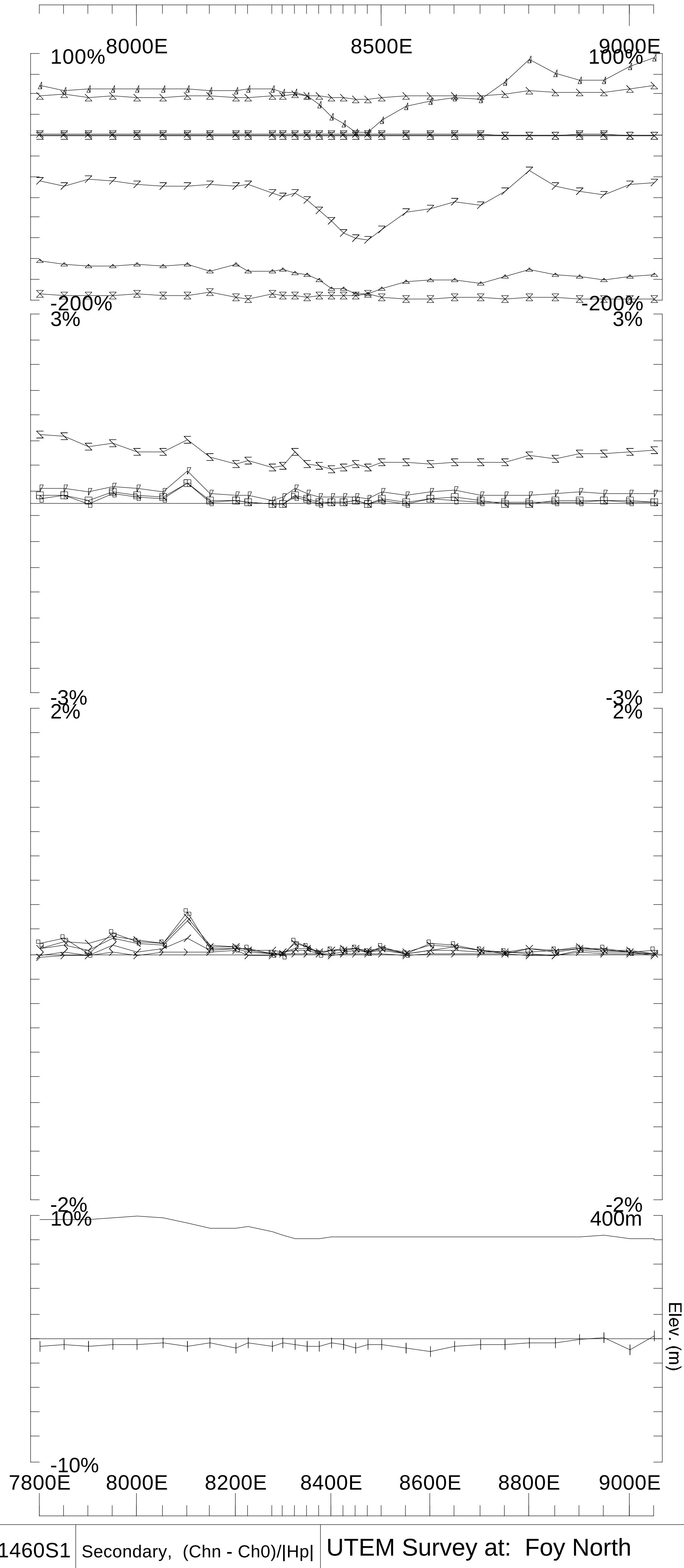
Loop: 1460S1	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 6600E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hz	Base Freq. 4.090 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 21/3/14



Loop: 1460S1	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 6850E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hz	Base Freq. 4.090 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 21/3/14



Loop: 1460S1	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 7100E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hz	Base Freq. 4.090 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 21/3/14



Loop: 1460S1
Line: 7350E
Compt: Hz

Secondary, (Chn - Ch0)/|Hp|
Contin. Norm at depth of 0 m
Base Freq. 4.090 Hz

UTEM Survey at: Foy North
For: Wallbridge

LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE

Job 1401

Plotted : 21/3/14

Foy North Grid

Loop 1460

Hx

4.090Hz frequency

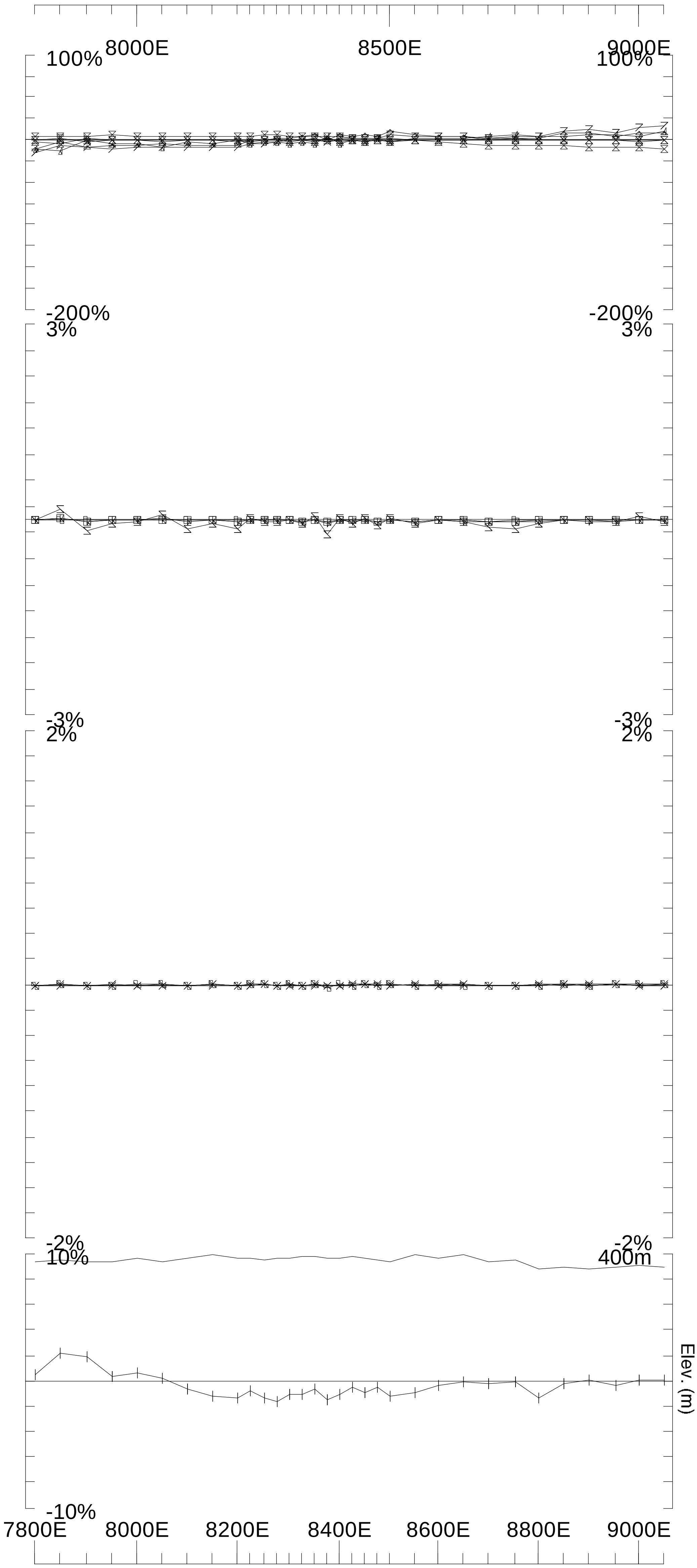
continuous norm

12Ch - Ch0 reduced

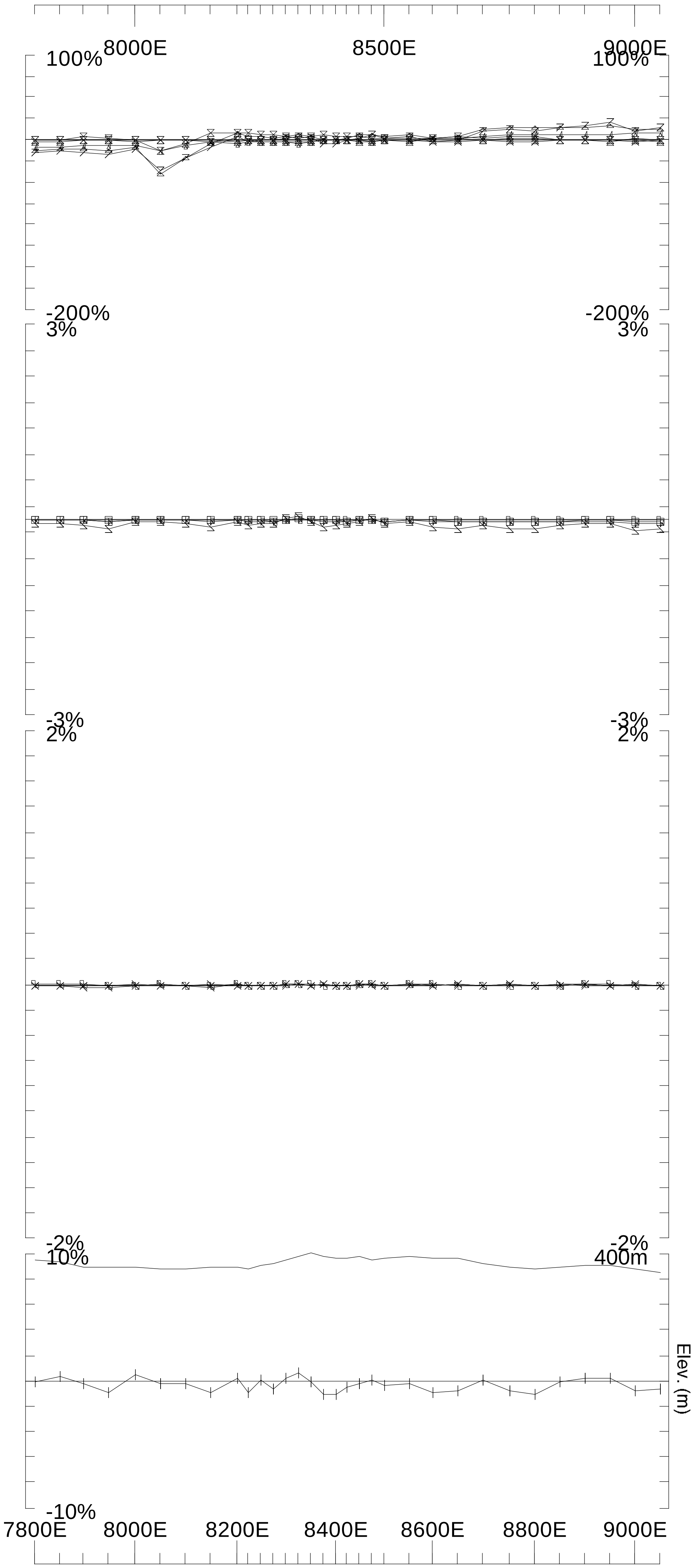
Loop 1460 @4.090Hz

Line 6600N	7800E - 9050E	1250m	Hz/Hx/Hy
Line 6850N	7800E - 9050E	1250m	Hz/Hx/Hy
Line 7100N	7800E - 9000E	1200m	Hz/Hx/Hy
Line 7350N	7800E - 9050E	1250m	Hz/Hx/Hy

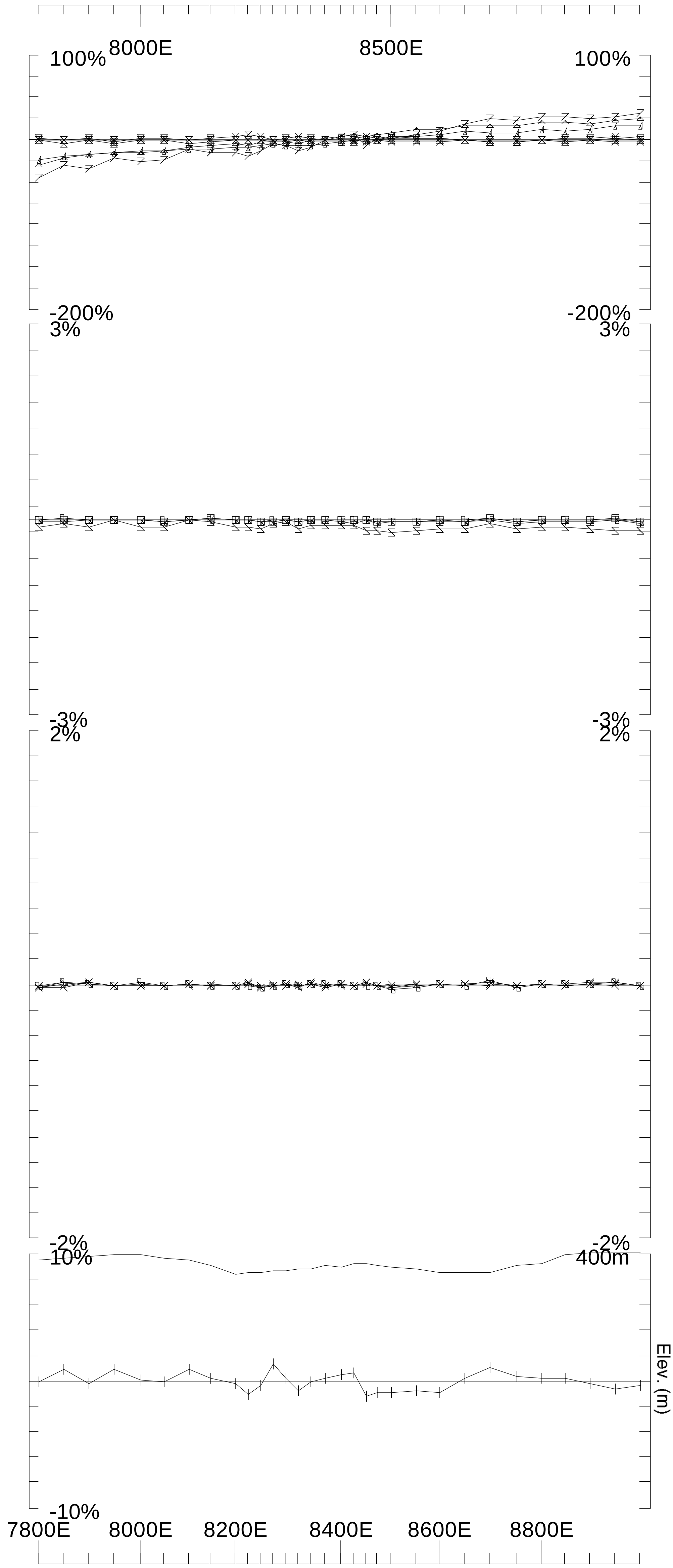
Loop 1460 - Hx



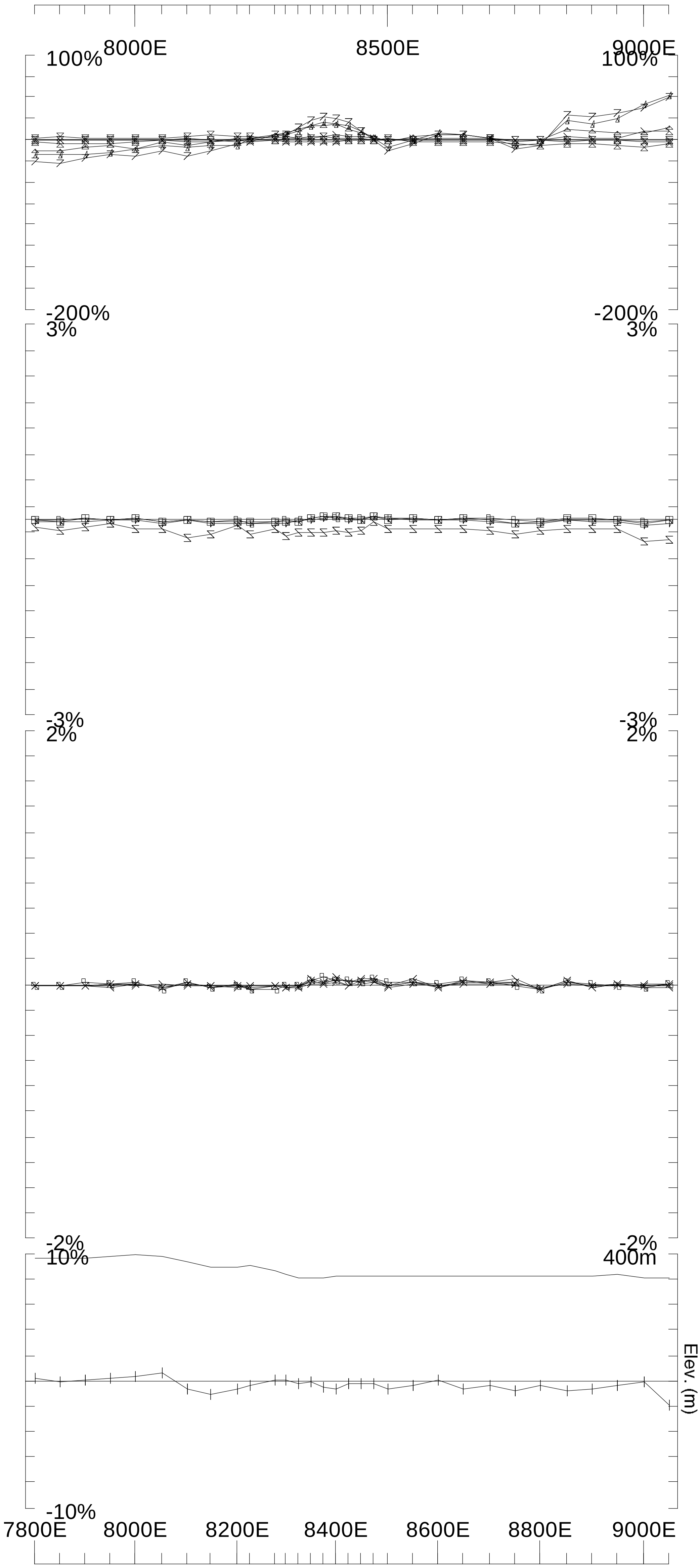
Loop: 1460S1	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 6600E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hx	Base Freq. 4.090 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 21/3/14



Loop: 1460S1	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 6850E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hx	Base Freq. 4.090 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 21/3/14



Loop: 1460S1	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 7100E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hx	Base Freq. 4.090 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 21/3/14



Loop: 1460S1	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 7350E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hx	Base Freq. 4.090 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 21/3/14

Foy North Grid

Loop 1460

Hy

4.090Hz frequency

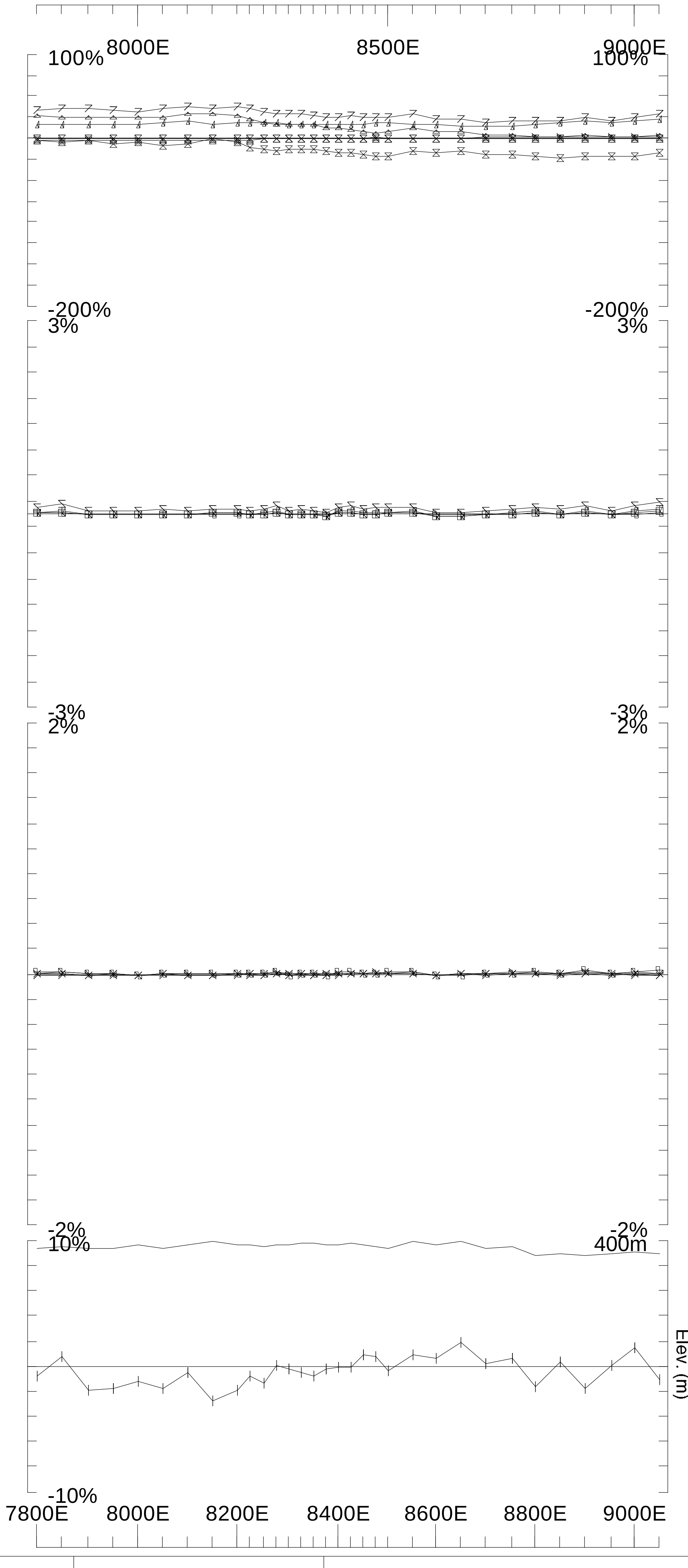
continuous norm

12Ch - Ch0 reduced

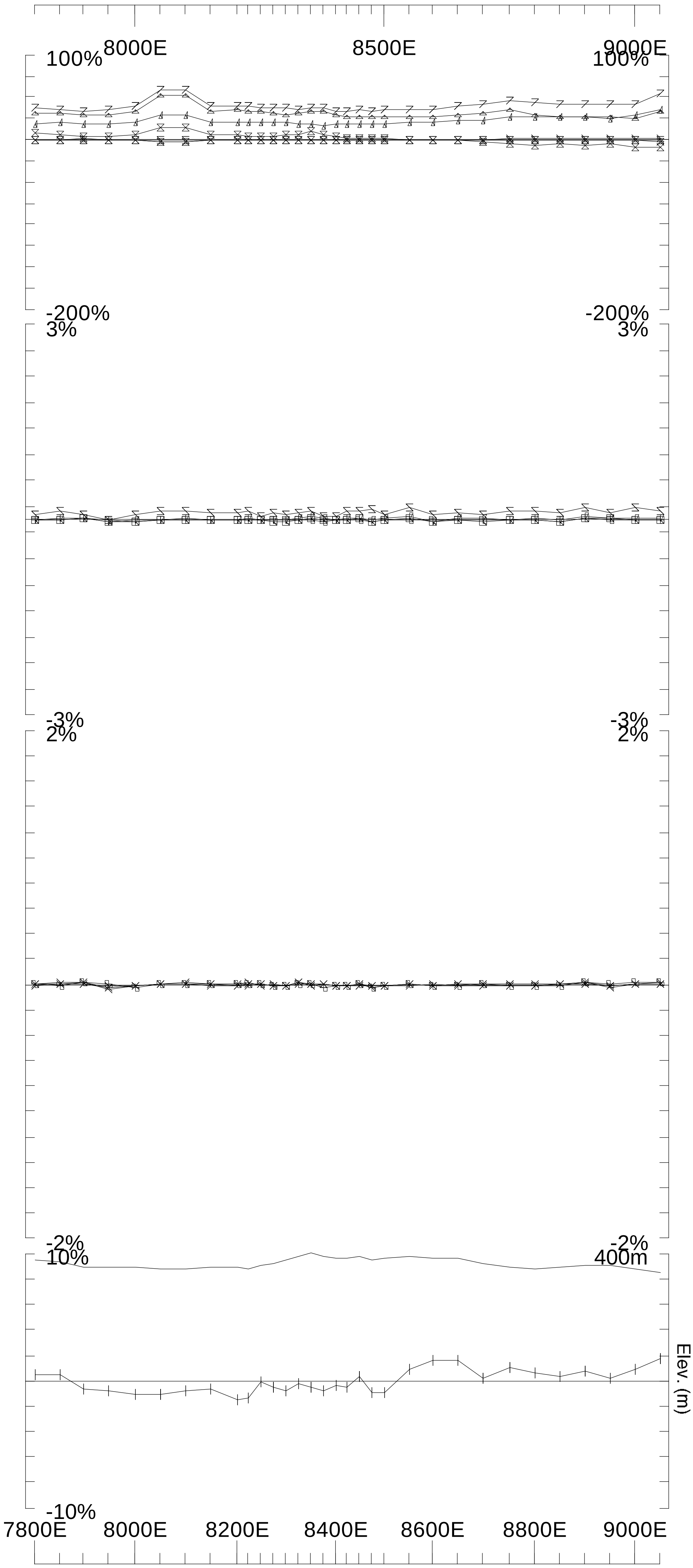
Loop 1460 @4.090Hz

Line 6600N	7800E - 9050E	1250m	Hz/Hx/Hy
Line 6850N	7800E - 9050E	1250m	Hz/Hx/Hy
Line 7100N	7800E - 9000E	1200m	Hz/Hx/Hy
Line 7350N	7800E - 9050E	1250m	Hz/Hx/Hy

Loop 1460 - Hy



Loop: 1460S1	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 6600E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hy	Base Freq. 4.090 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 21/3/14



Loop: 1460S1
Line: 6850E
Compt: Hy

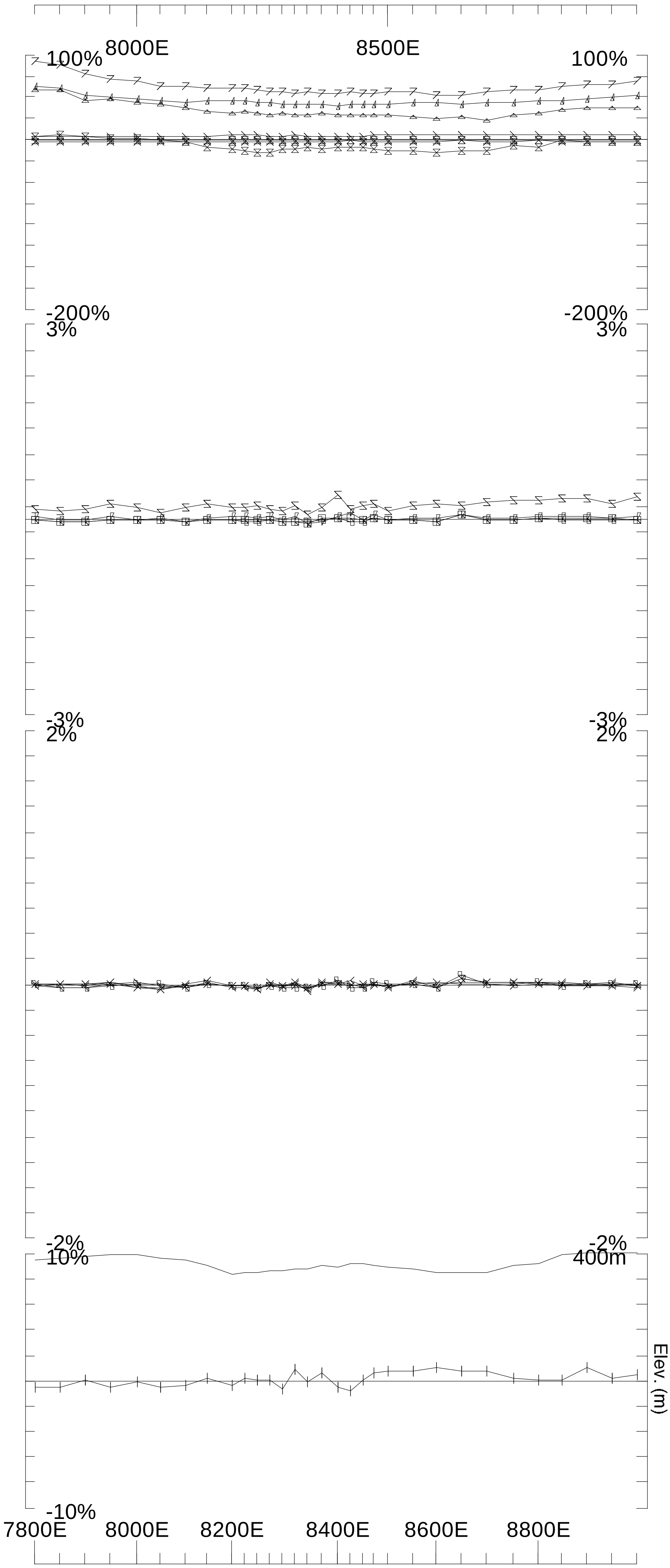
Secondary, (Chn - Ch0)/|Hp|
Contin. Norm at depth of 0 m
Base Freq. 4.090 Hz

UTEM Survey at: Foy North
For: Wallbridge

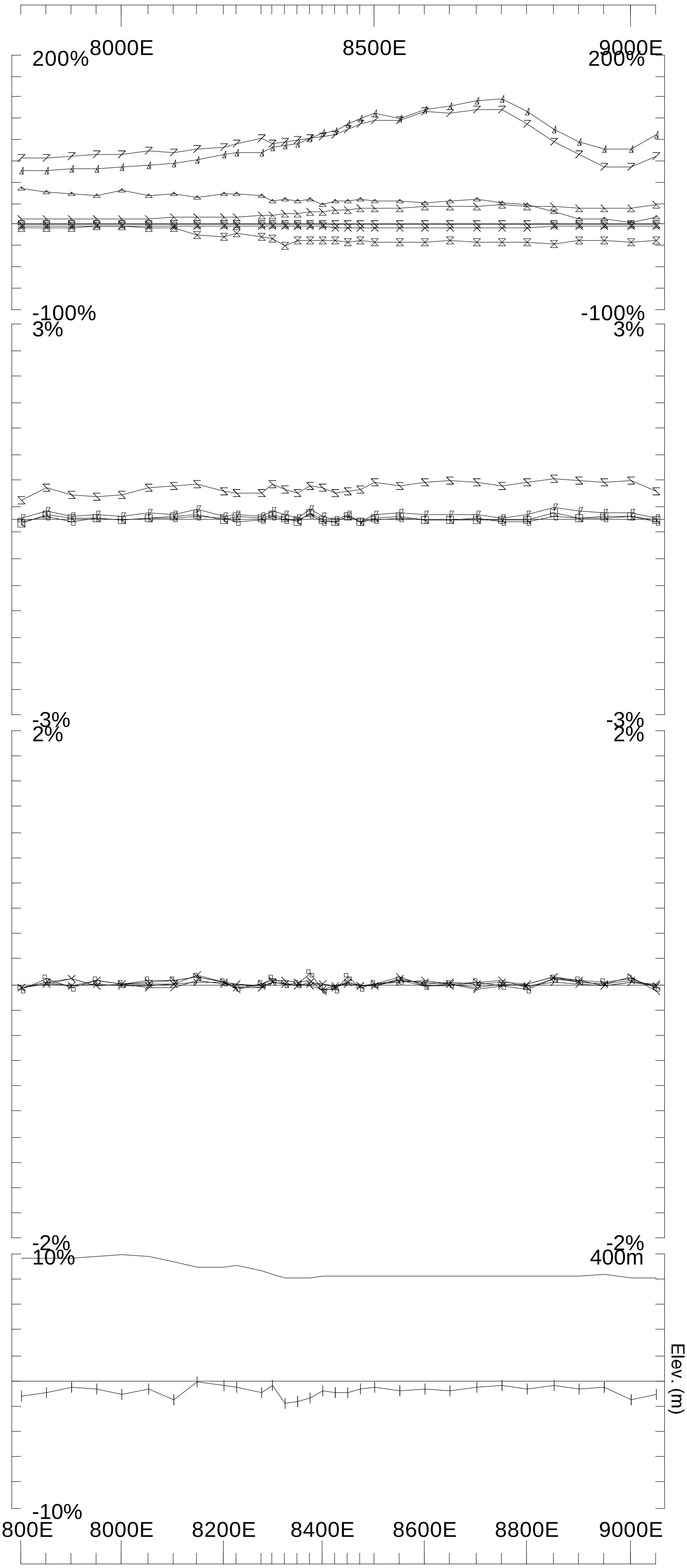
LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE

Job 1401

Plotted : 21/3/14



Loop: 1460S1	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 7100E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hy	Base Freq. 4.090 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 21/3/14



Loop: 1460S1	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 7350E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hy	Base Freq. 4.090 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 21/3/14

Foy North Grid - UTEM5

Loops 1461/1462/1463 - southern loops

Loop 1461	Line 3350N	6100E - 7225E	1125m	Hz/Hx/Hy
(@ 4.090Hz)	Line 3600N	6125E - 7350E	1225m	Hz/Hx/Hy
	Line 3850N	6100E - 7350E	1250m	Hz/Hx/Hy
Loop 1462	Line 4100N	6100E - 7350E	1250m	Hz/Hx/Hy
(@ 4.090Hz)	Line 4350N	6100E - 7350E	1250m	Hz/Hx/Hy
	Line 4600N	6100E - 7350E	1250m	Hz/Hx/Hy
	Line 4850N	6100E - 7350E	1250m	Hz/Hx/Hy
Loop 1463	Line 3350N	6100E - 7225E	1125m	Hz/Hx/Hy
(@ 2.045Hz)	Line 3600N	6125E - 7350E	1225m	Hz/Hx/Hy
	Line 3850N	6100E - 7350E	1250m	Hz/Hx/Hy
	Line 4100N	6100E - 7350E	1250m	Hz/Hx/Hy
	Line 4350N	6100E - 7350E	1250m	Hz/Hx/Hy
	Line 4600N	6100E - 7350E	1250m	Hz/Hx/Hy
	Line 4850N	6100E - 7350E	1250m	Hz/Hx/Hy

NS lines

Loop 1463	Line 6350E	3100N - 4100N	1000m	Hz/Hx/Hy
(@ 2.045Hz)	Line 6600E	3100N - 4100N	1000m	Hz/Hx/Hy

Foy North Grid

Loop 1461/1462

Hz

4.090Hz frequency

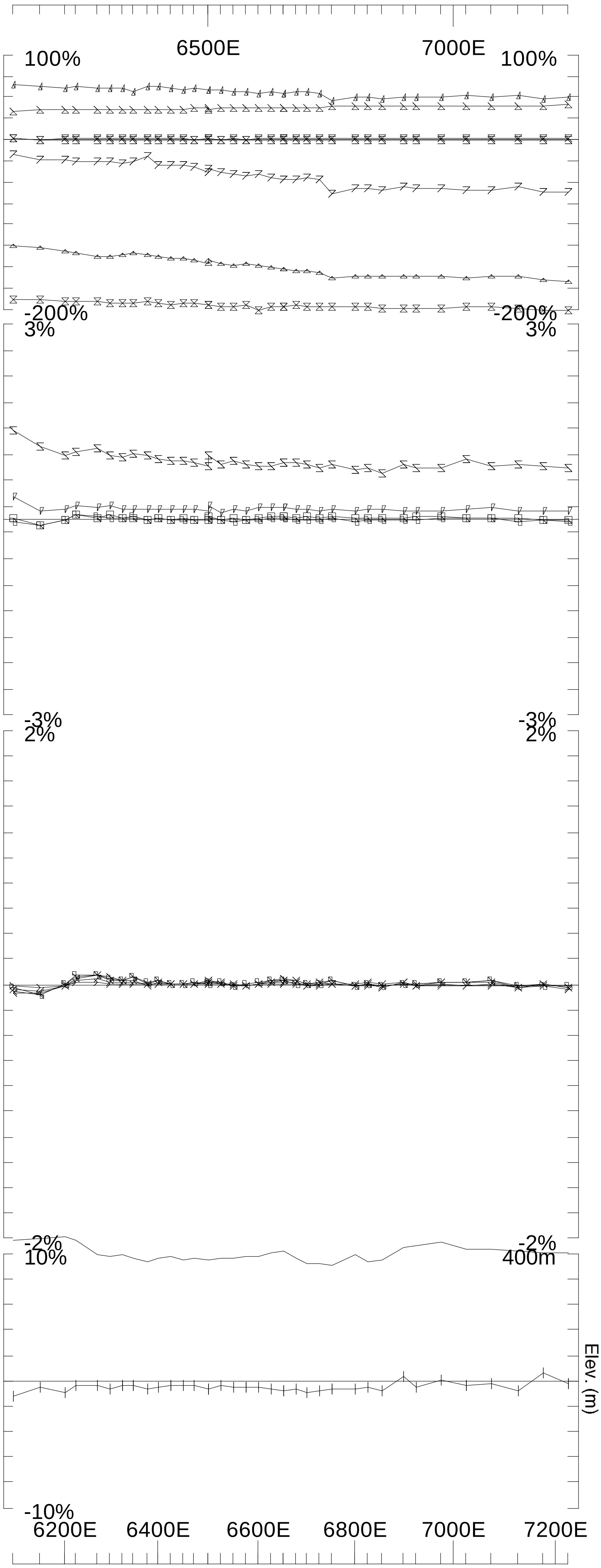
continuous norm

12Ch - Ch0 reduced

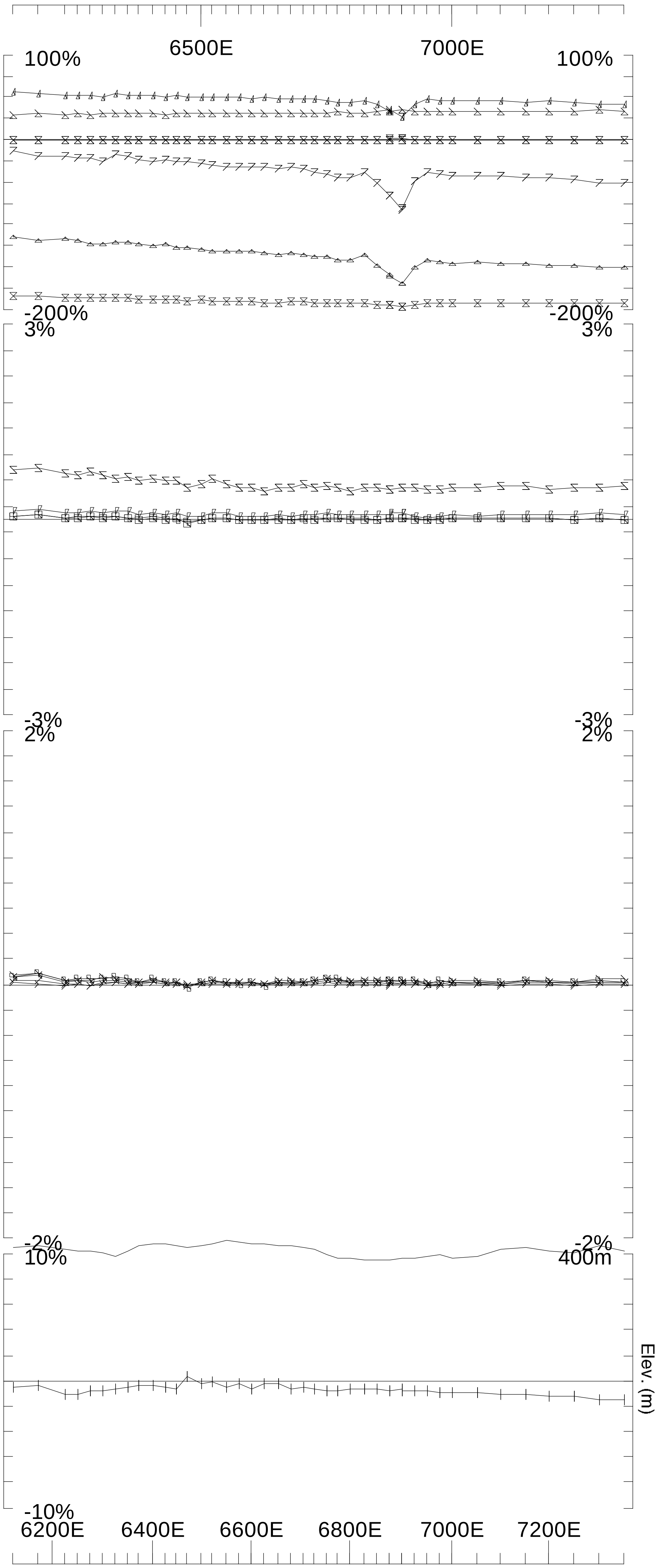
Loop 1461/1462 @4.090Hz

Loop 1461	Line 3350N	6100E - 7225E	1125m	Hz/Hx/Hy
	Line 3600N	6125E - 7350E	1225m	Hz/Hx/Hy
	Line 3850N	6100E - 7350E	1250m	Hz/Hx/Hy
Loop 1462	Line 4100N	6100E - 7350E	1250m	Hz/Hx/Hy
	Line 4350N	6100E - 7350E	1250m	Hz/Hx/Hy
	Line 4600N	6100E - 7350E	1250m	Hz/Hx/Hy
	Line 4850N	6100E - 7350E	1250m	Hz/Hx/Hy

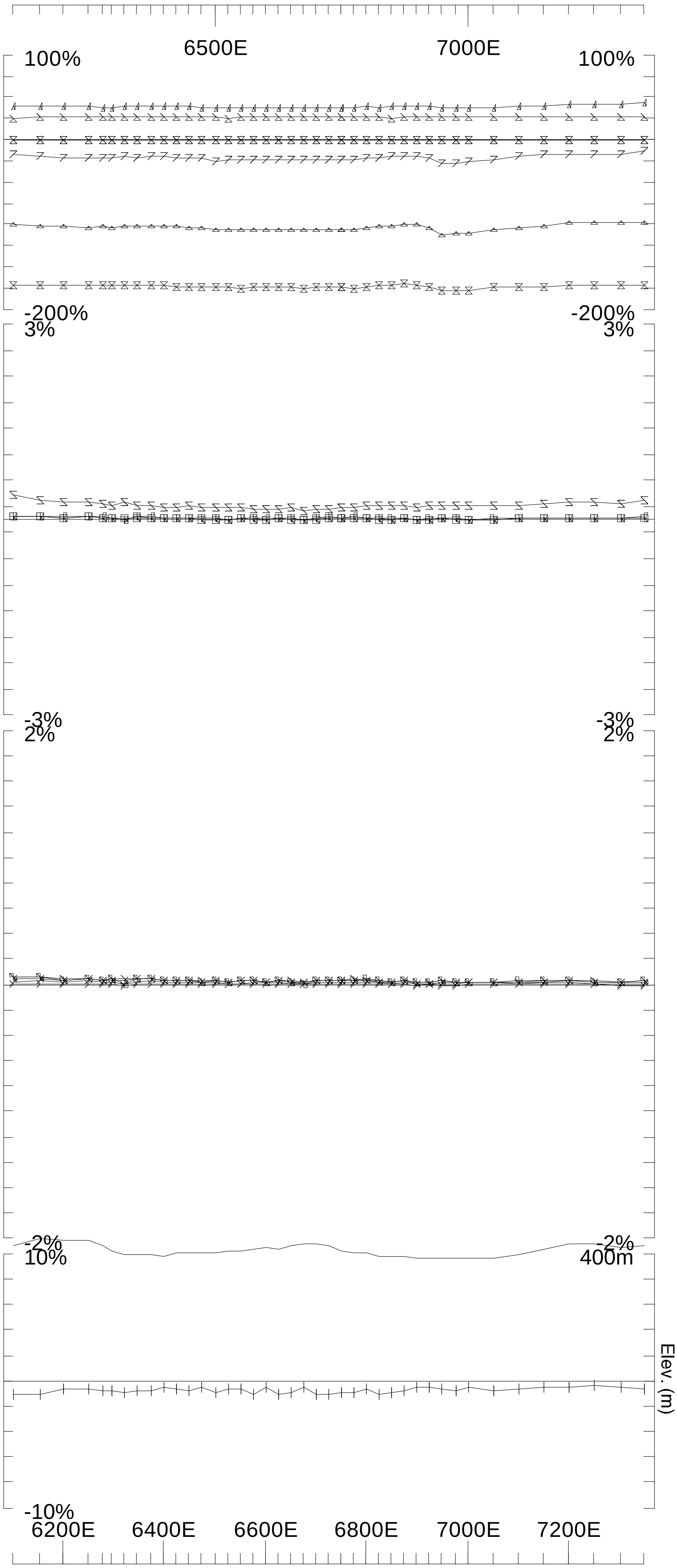
Loop 1461/62 - Hz



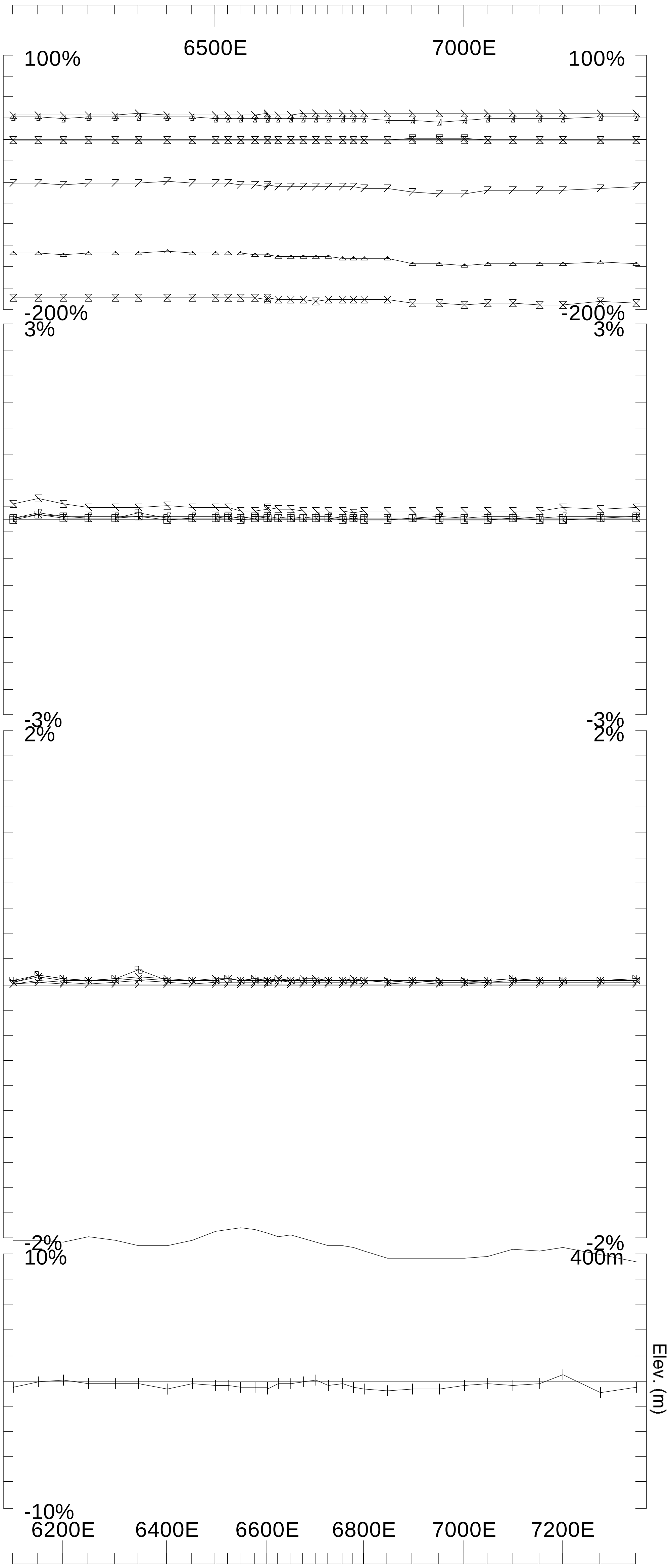
Loop: 1461S1	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 3350E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hz	Base Freq. 4.090 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 24/3/14



Loop: 1461S1	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 3600E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hz	Base Freq. 4.090 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 24/3/14



Loop: 1461S1	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 3850E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hz	Base Freq. 4.090 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 24/3/14



Loop: 1462S1
Line: 4100E
Compt: Hz

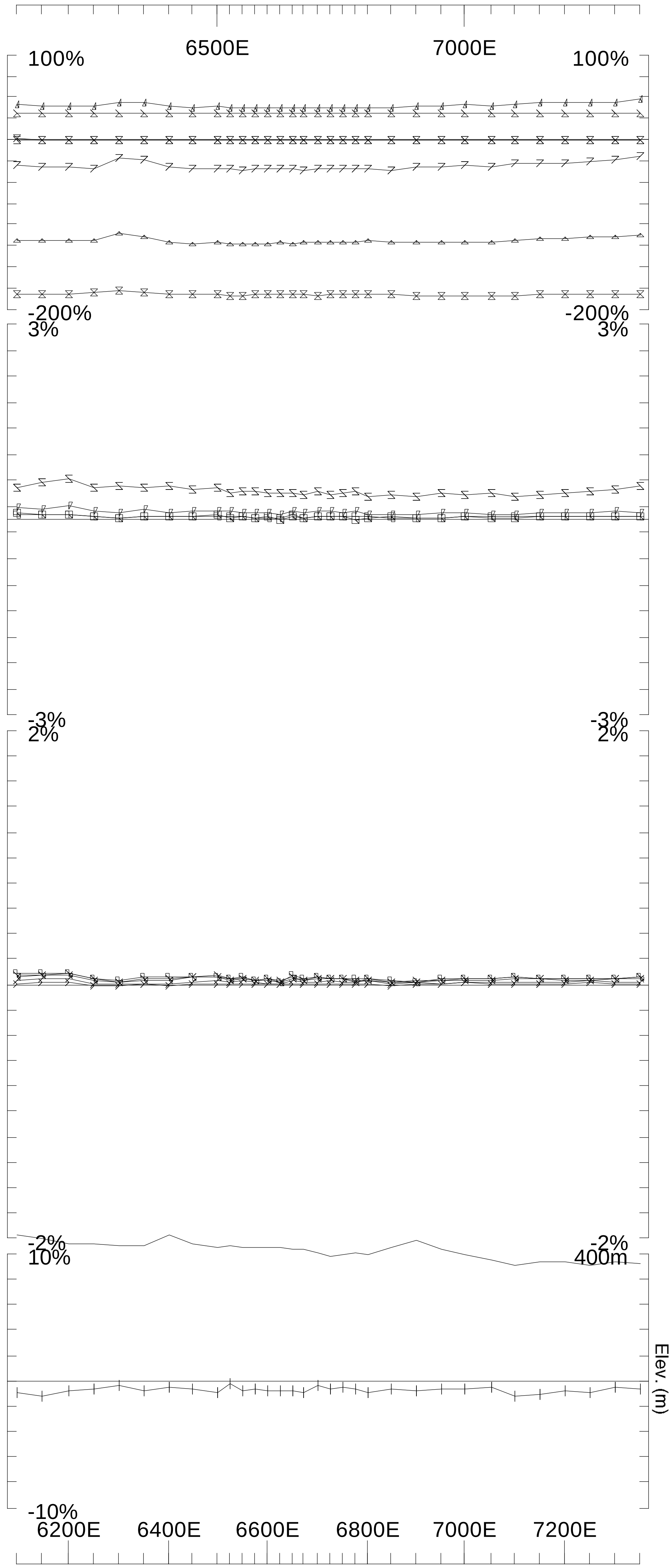
Secondary, (Chn - Ch0)/|Hp|
Contin. Norm at depth of 0 m
Base Freq. 4.090 Hz

UTEM Survey at: Foy North
For: Wallbridge

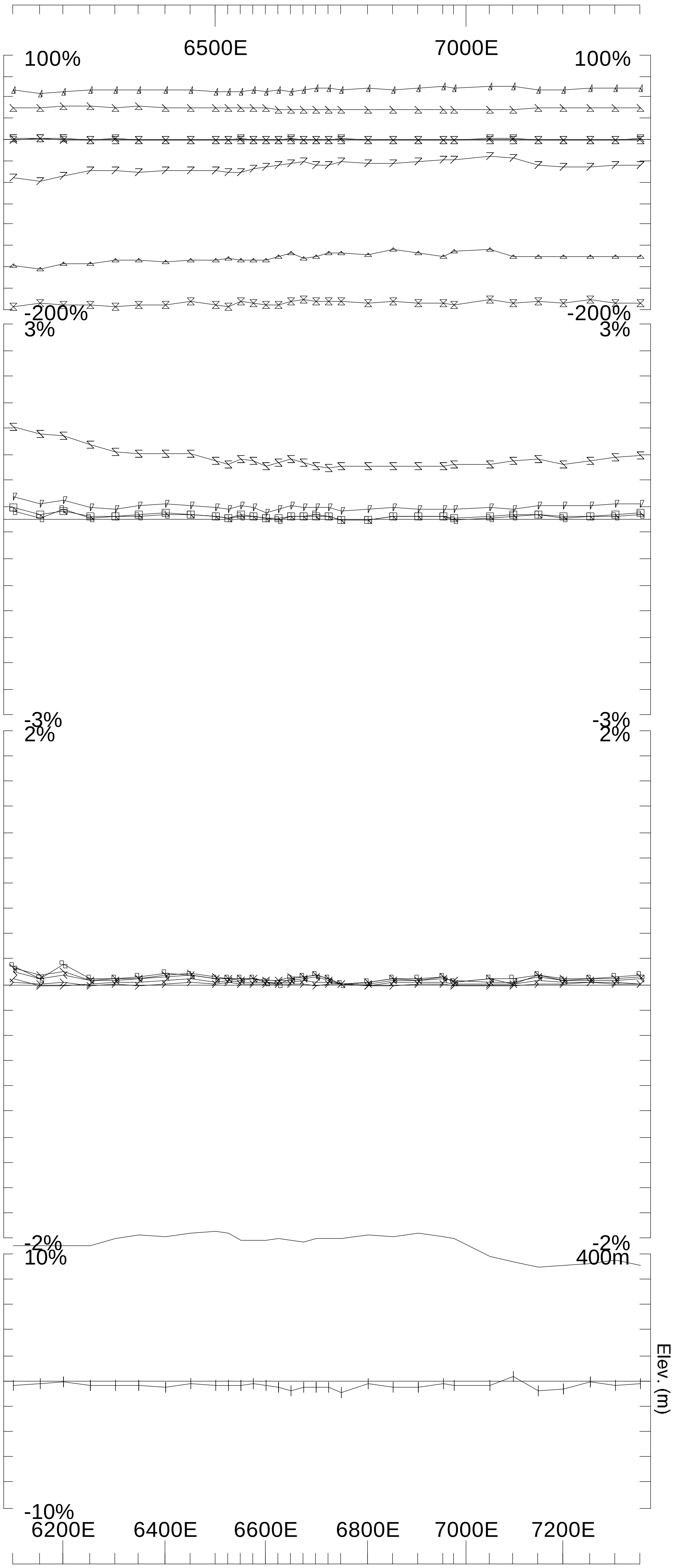
LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE

Job 1401

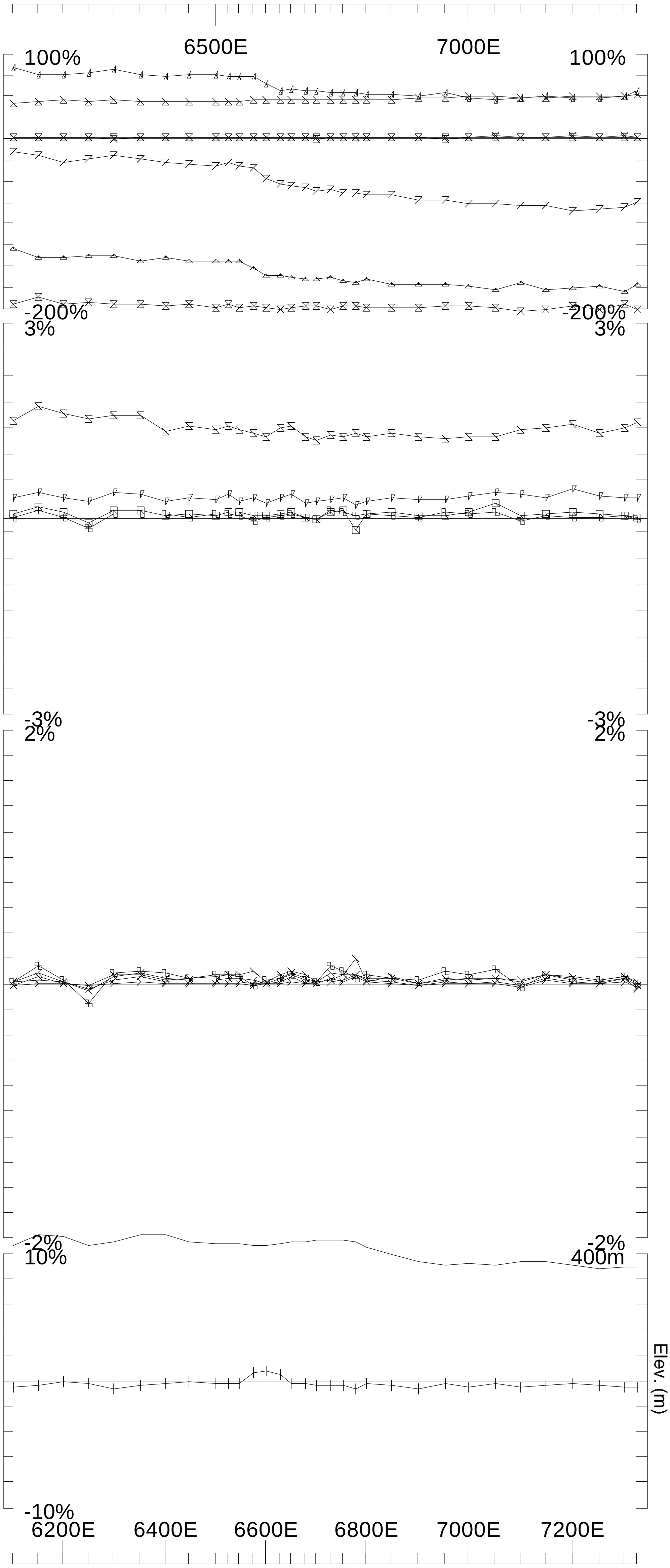
Plotted : 24/3/14



Loop: 1462S1	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 4350E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hz	Base Freq. 4.090 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 24/3/14



Loop: 1462S1	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 4600E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hz	Base Freq. 4.090 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 23/3/14



Loop: 1462S1	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 4850E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hz	Base Freq. 4.090 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 23/3/14

Foy North Grid

Loop 1461/1462

Hx

4.090Hz frequency

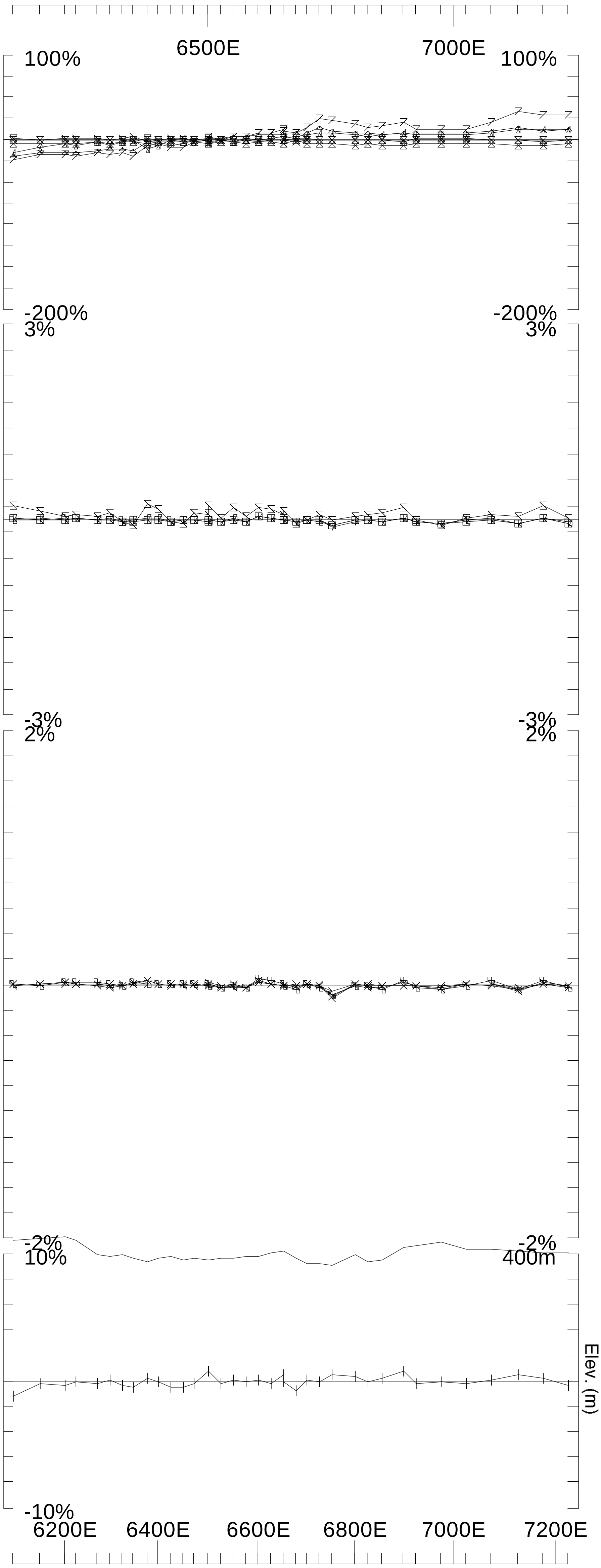
continuous norm

12Ch - Ch0 reduced

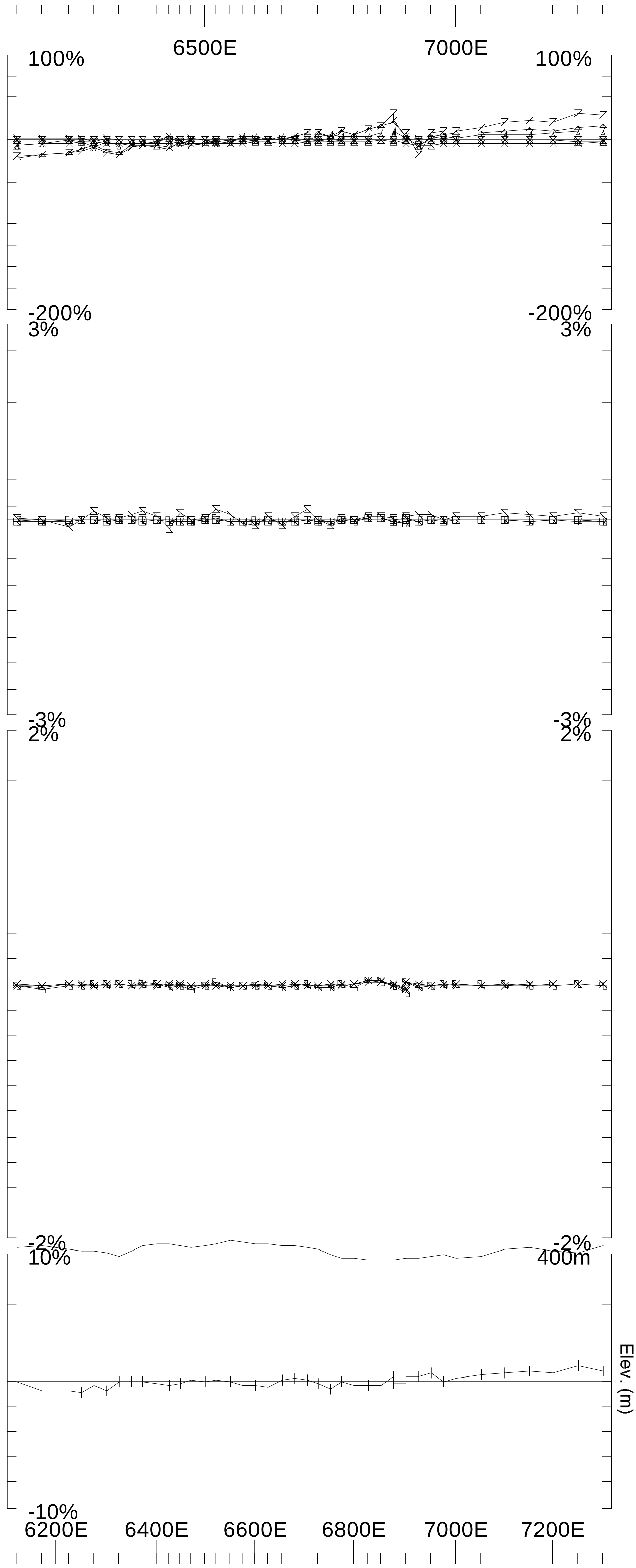
Loop 1461/1462 @4.090Hz

Loop 1461	Line 3350N	6100E - 7225E	1125m	Hz/Hx/Hy
	Line 3600N	6125E - 7350E	1225m	Hz/Hx/Hy
	Line 3850N	6100E - 7350E	1250m	Hz/Hx/Hy
Loop 1462	Line 4100N	6100E - 7350E	1250m	Hz/Hx/Hy
	Line 4350N	6100E - 7350E	1250m	Hz/Hx/Hy
	Line 4600N	6100E - 7350E	1250m	Hz/Hx/Hy
	Line 4850N	6100E - 7350E	1250m	Hz/Hx/Hy

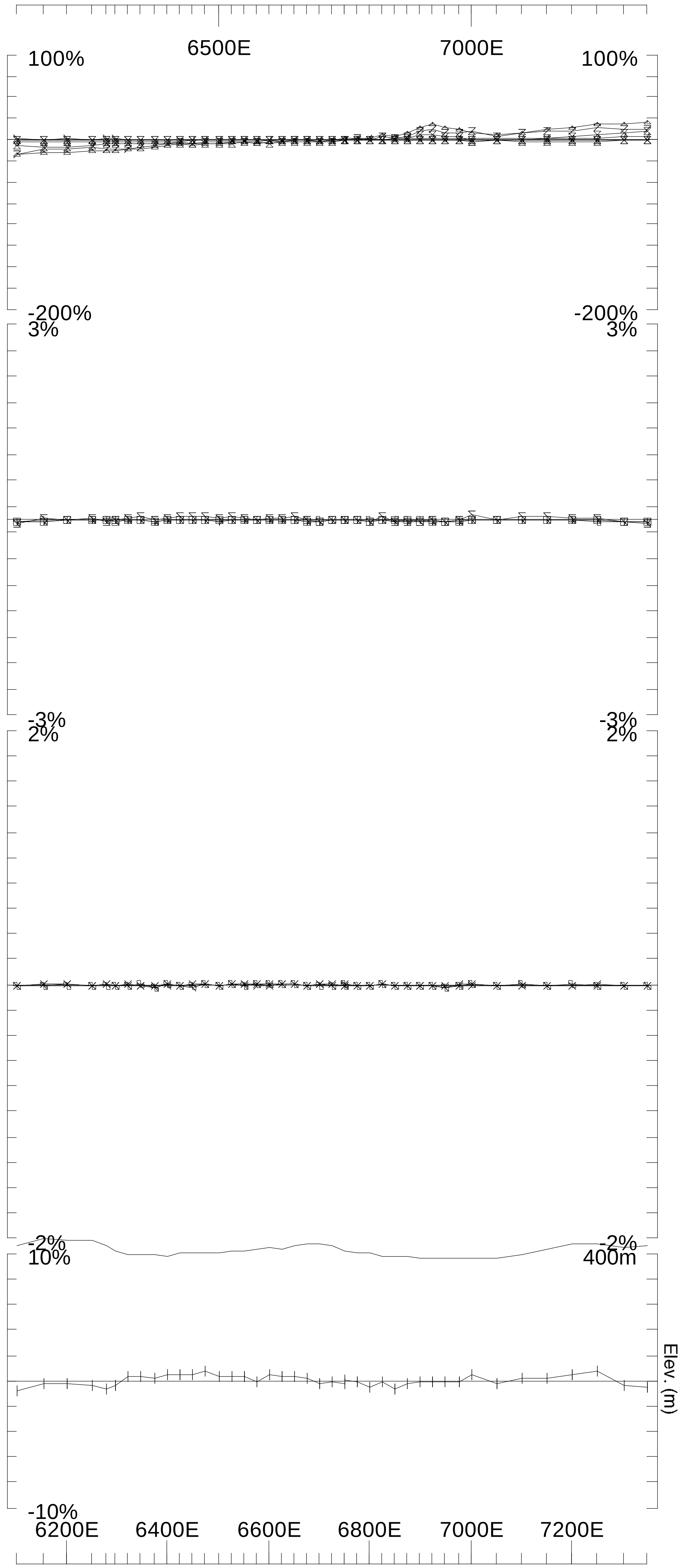
Loop 1461/62 - Hx



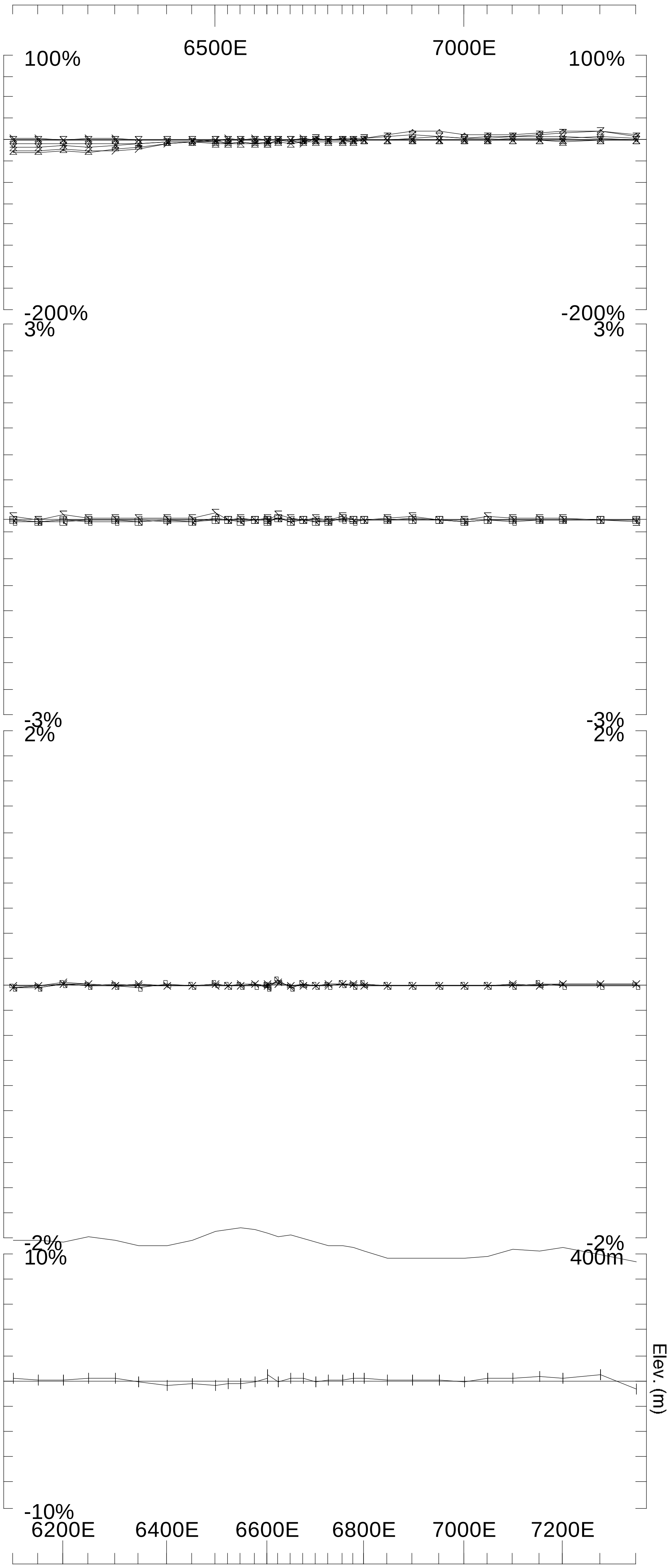
Loop: 1461S1	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 3350E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hx	Base Freq. 4.090 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 24/3/14



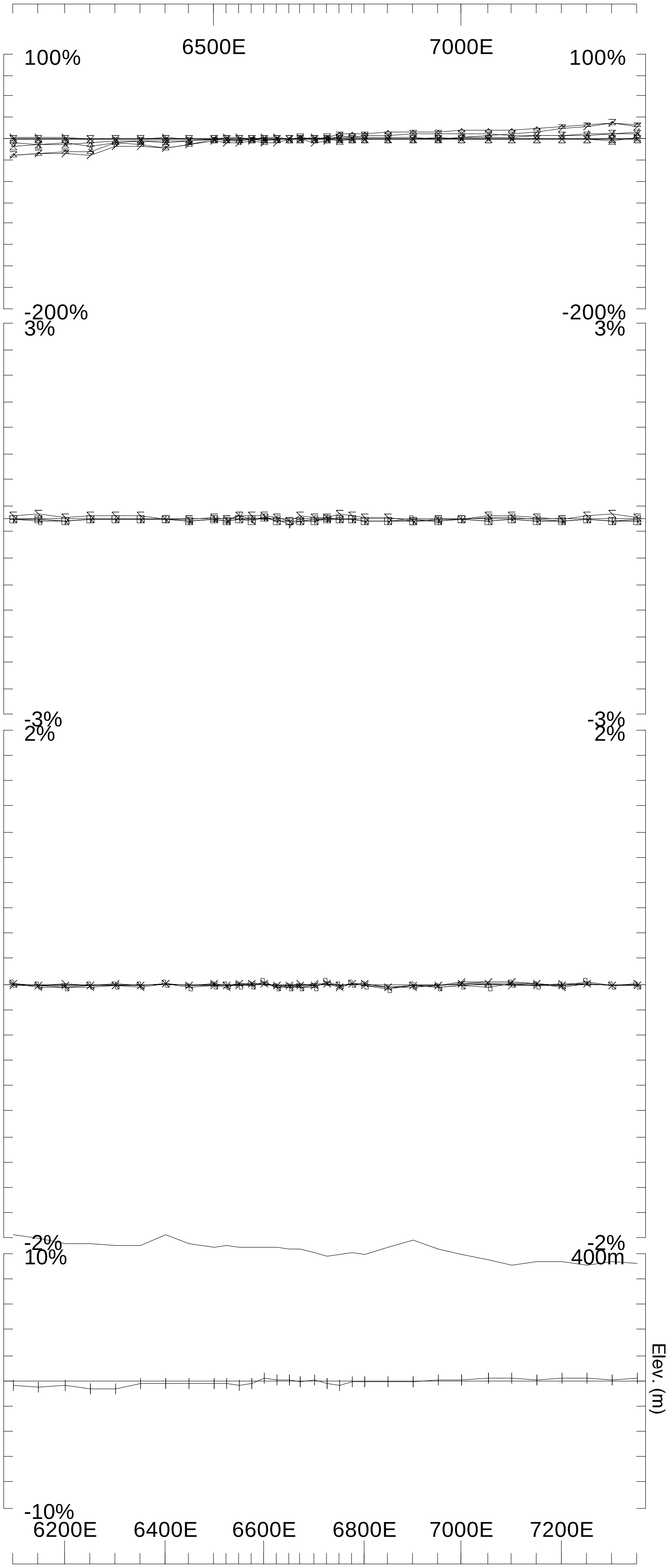
Loop: 1461S1	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 3600E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hx	Base Freq. 4.090 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 24/3/14



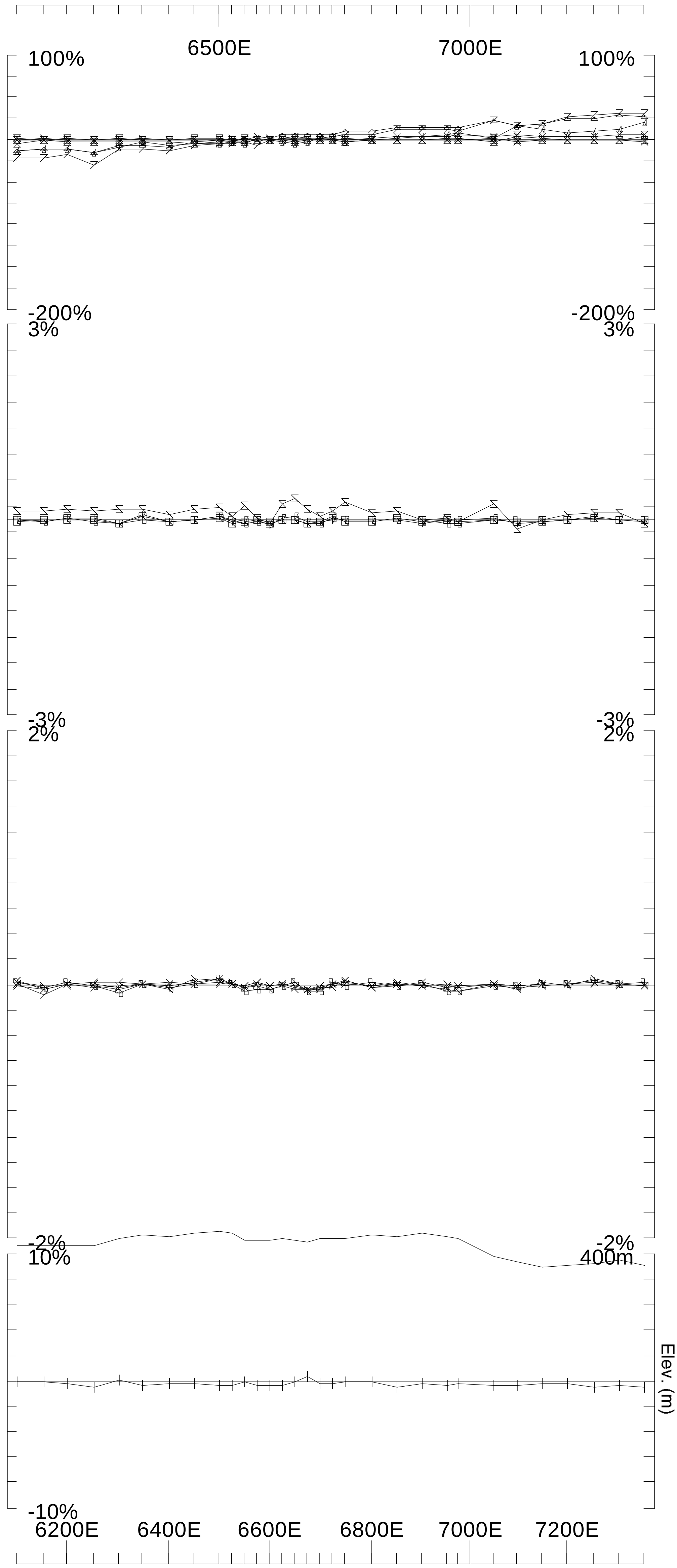
Loop: 1461S1	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 3850E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hx	Base Freq. 4.090 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 24/3/14



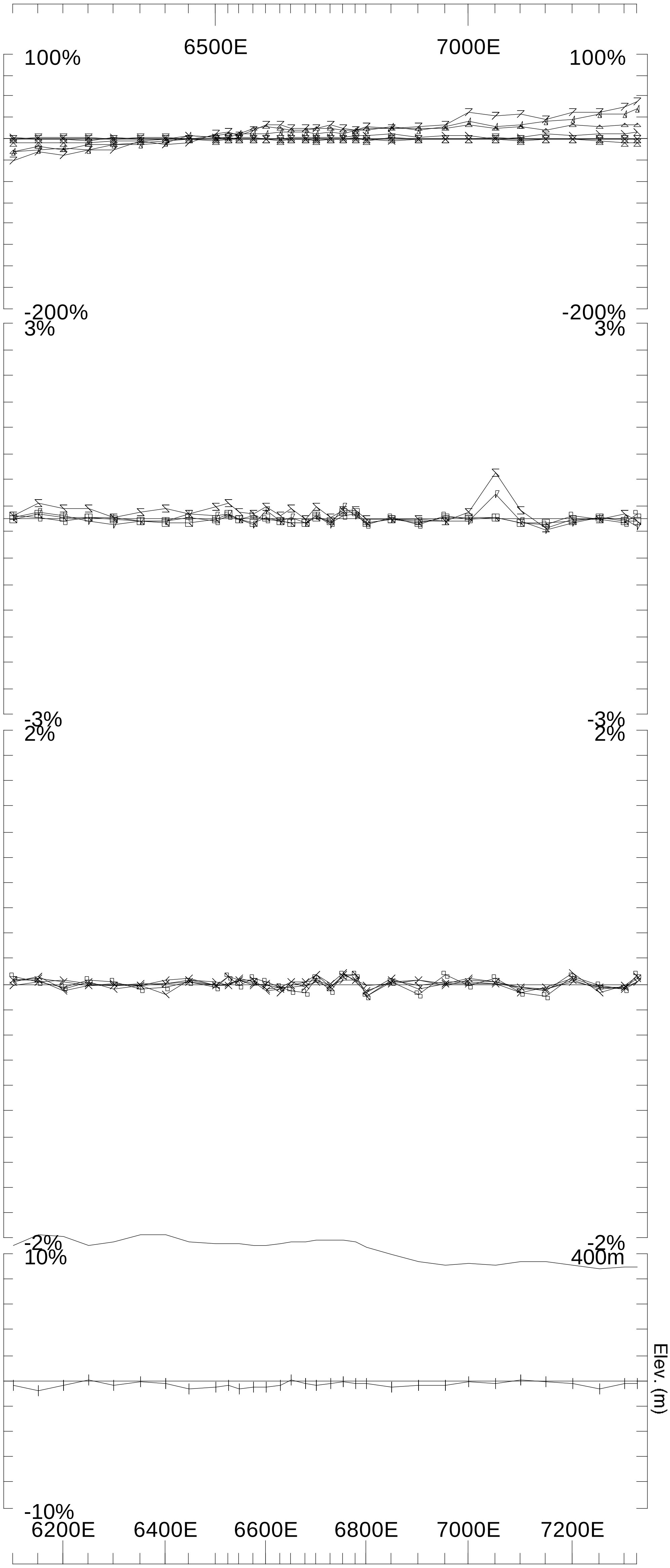
Loop: 1462S1	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 4100E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hx	Base Freq. 4.090 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 24/3/14



Loop: 1462S1	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 4350E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hx	Base Freq. 4.090 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 24/3/14



Loop: 1462S1	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 4600E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hx	Base Freq. 4.090 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 23/3/14



Loop: 1462S1	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 4850E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hx	Base Freq. 4.090 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 23/3/14

Foy North Grid

Loop 1461/1462

Hy

4.090Hz frequency

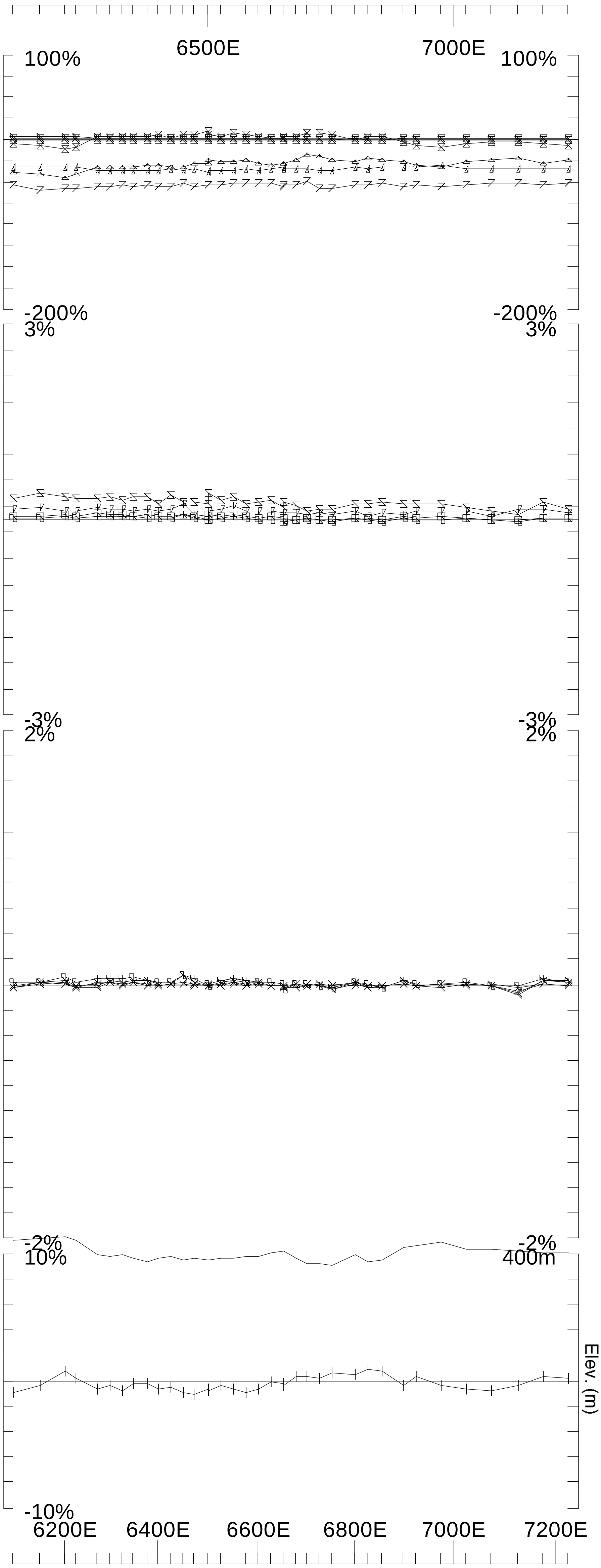
continuous norm

12Ch - Ch0 reduced

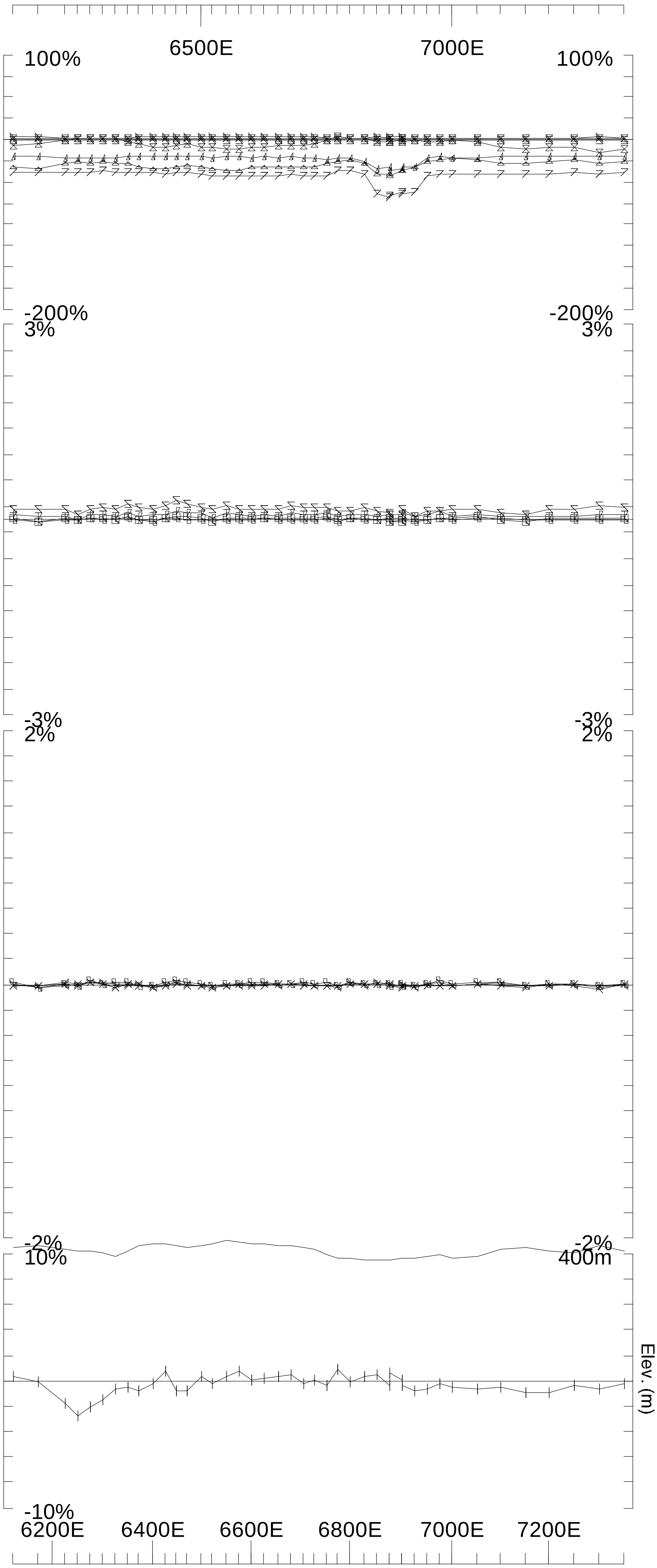
Loop 1461/1462 @4.090Hz

Loop 1461	Line 3350N	6100E - 7225E	1125m	Hz/Hx/Hy
	Line 3600N	6125E - 7350E	1225m	Hz/Hx/Hy
	Line 3850N	6100E - 7350E	1250m	Hz/Hx/Hy
Loop 1462	Line 4100N	6100E - 7350E	1250m	Hz/Hx/Hy
	Line 4350N	6100E - 7350E	1250m	Hz/Hx/Hy
	Line 4600N	6100E - 7350E	1250m	Hz/Hx/Hy
	Line 4850N	6100E - 7350E	1250m	Hz/Hx/Hy

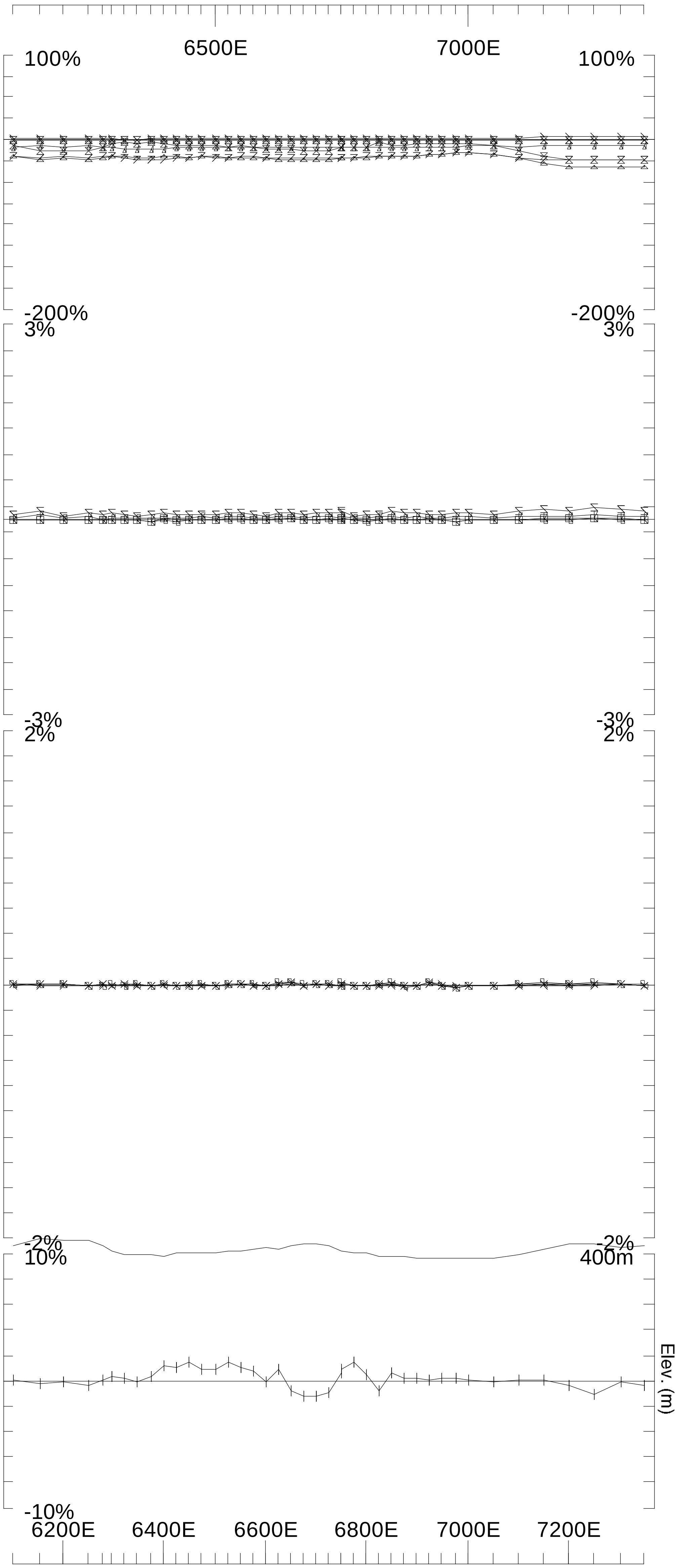
Loop 1461/1462 - Hy



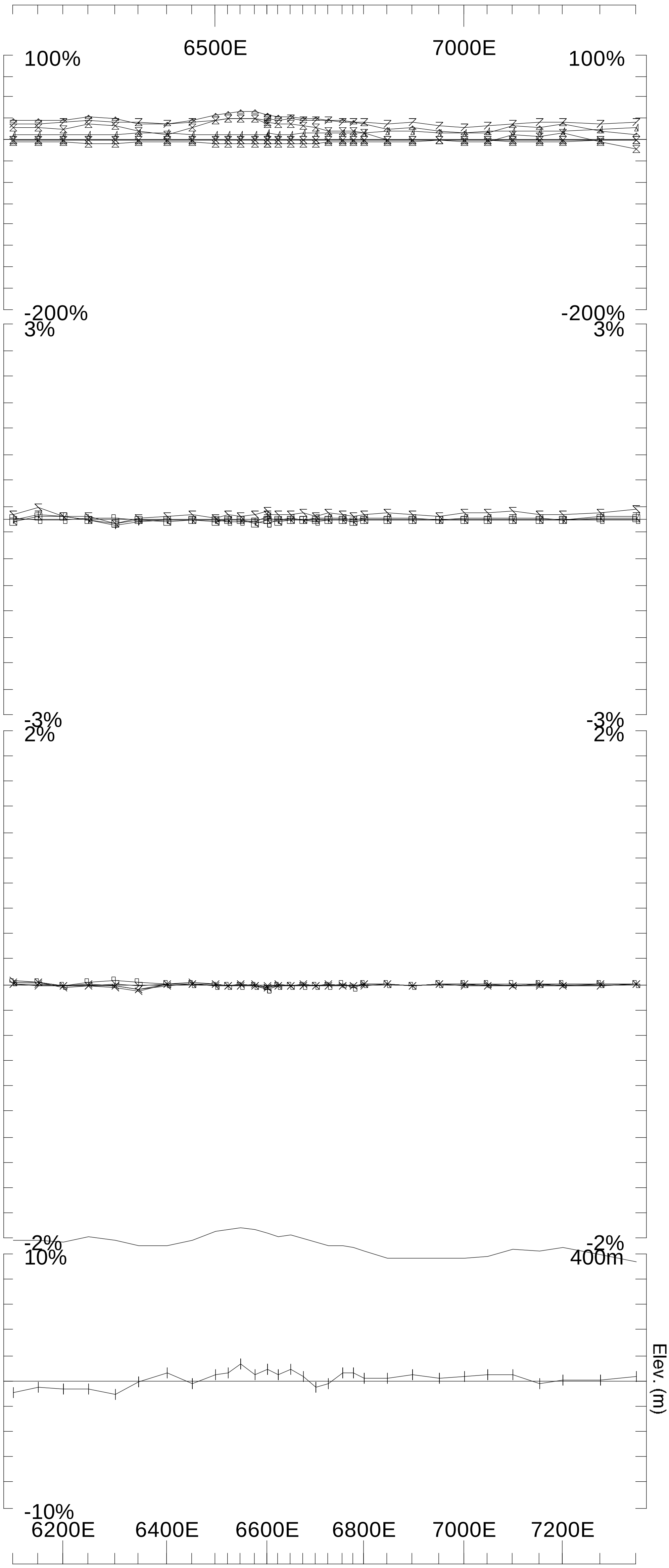
Loop: 1461S1	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 3350E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hy	Base Freq. 4.090 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 24/3/14



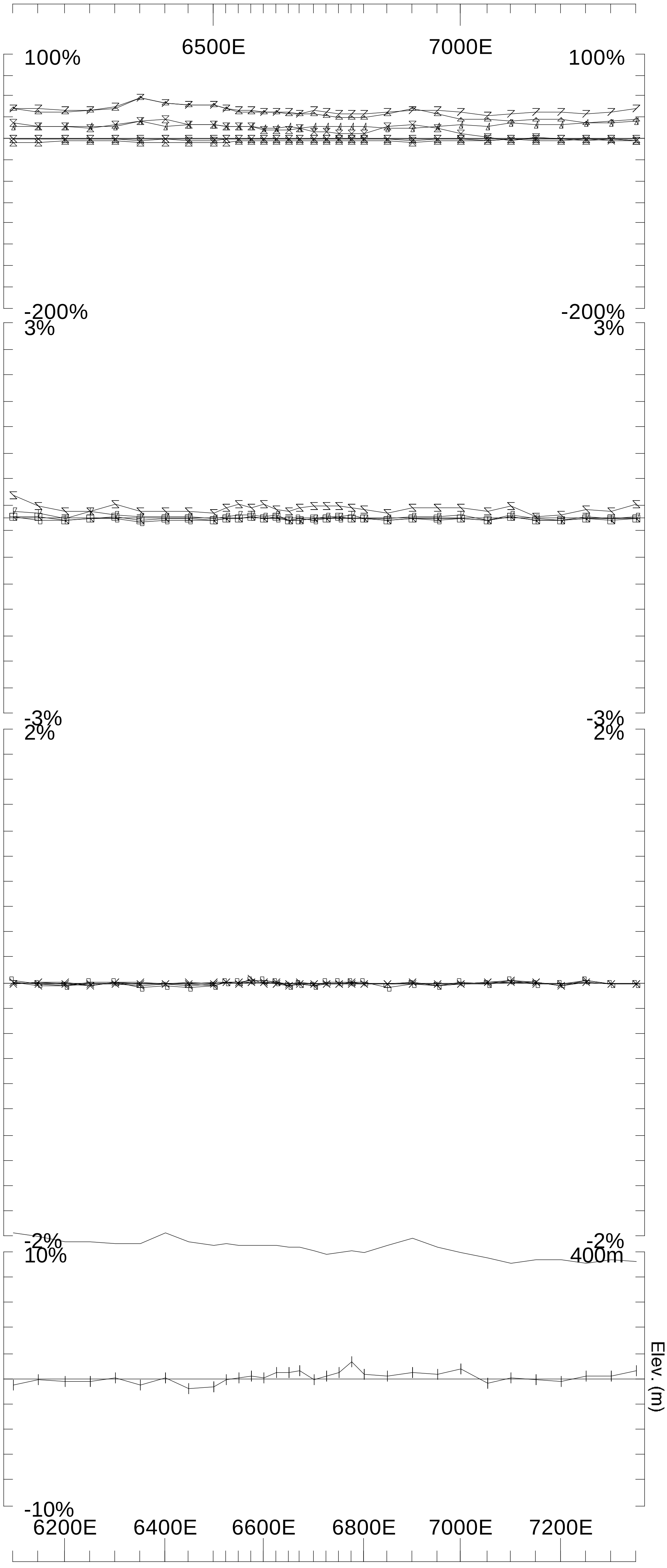
Loop: 1461S1	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 3600E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hy	Base Freq. 4.090 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 24/3/14



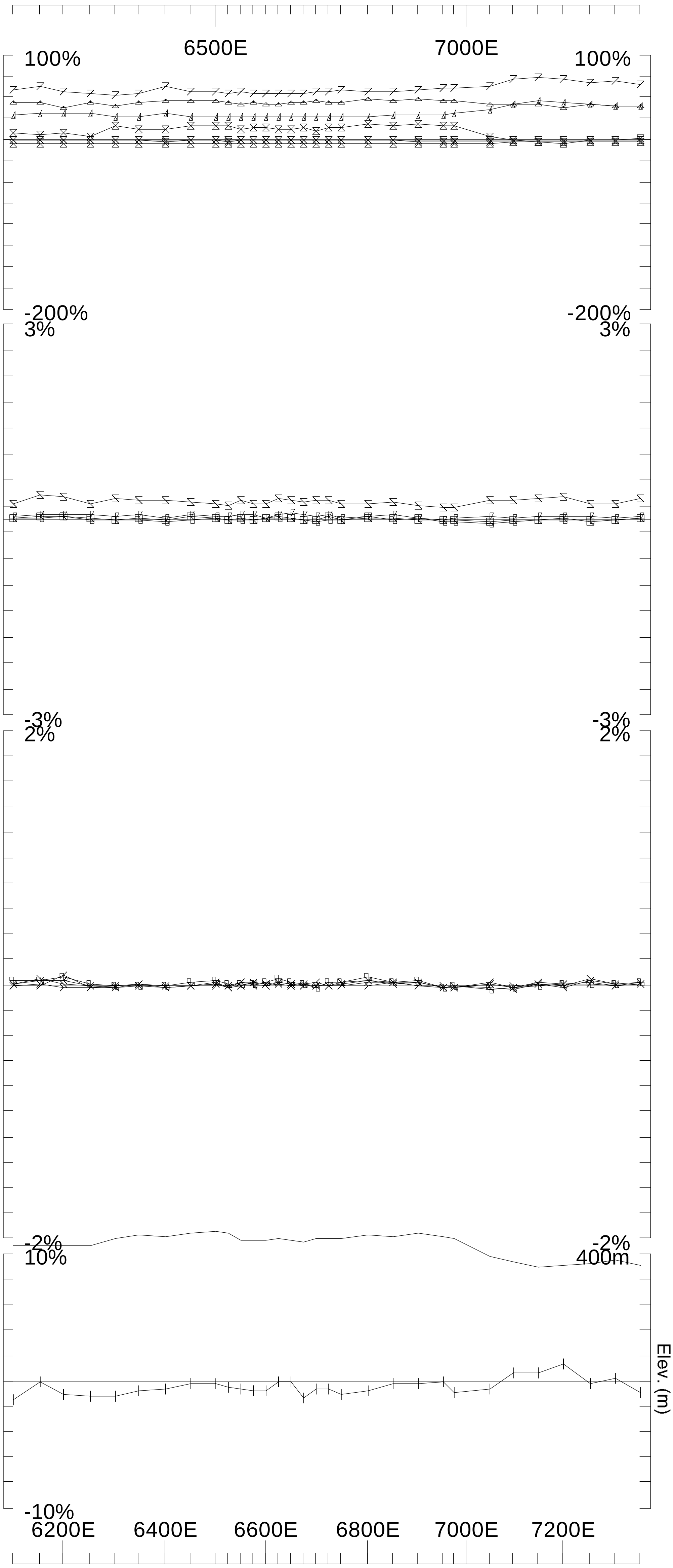
Loop: 1461S1	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 3850E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hy	Base Freq. 4.090 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 24/3/14



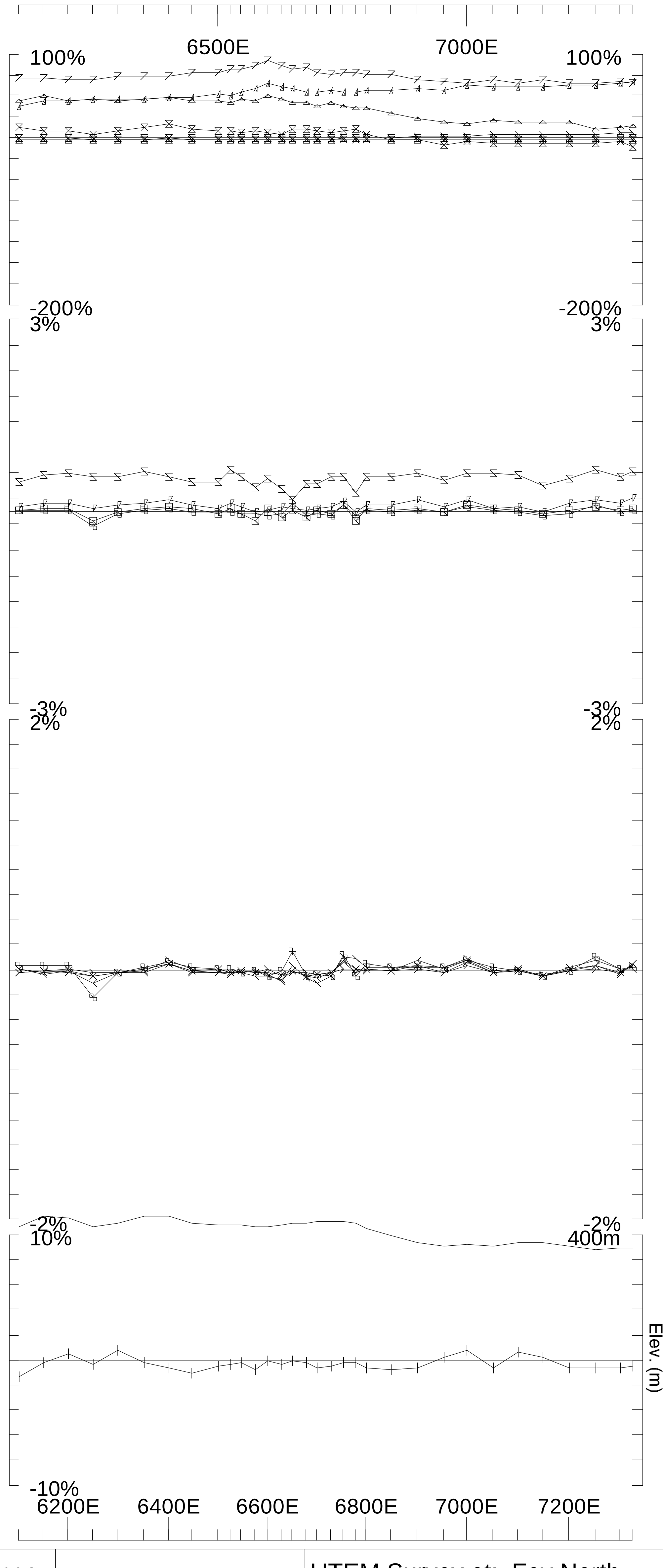
Loop: 1462S1	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 4100E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hy	Base Freq. 4.090 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 24/3/14



Loop: 1462S1	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 4350E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hy	Base Freq. 4.090 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 24/3/14



Loop: 1462S1	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 4600E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hy	Base Freq. 4.090 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 23/3/14



Loop: 1462S1	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 4850E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hy	Base Freq. 4.090 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 23/3/14

Foy North Grid

Loop 1463

Hz

2.045Hz frequency

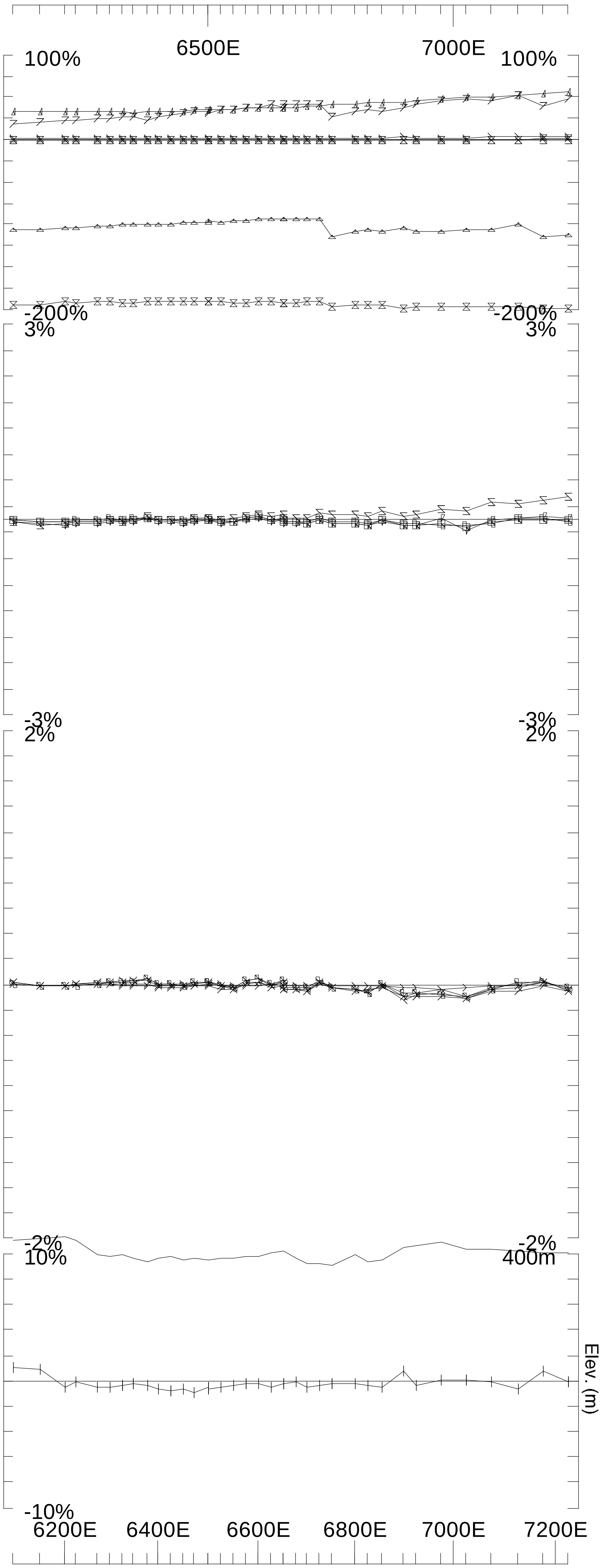
continuous norm

12Ch - Ch0 reduced

Loop 1463 @2.045Hz

Line 3350N	6100E - 7225E	1125m	Hz/Hx/Hy
Line 3600N	6125E - 7350E	1225m	Hz/Hx/Hy
Line 3850N	6100E - 7350E	1250m	Hz/Hx/Hy
Line 4100N	6100E - 7350E	1250m	Hz/Hx/Hy
Line 4350N	6100E - 7350E	1250m	Hz/Hx/Hy
Line 4600N	6100E - 7350E	1250m	Hz/Hx/Hy
Line 4850N	6100E - 7350E	1250m	Hz/Hx/Hy

Loop 1463 - Hz



Loop: 1463S2
Line: 3350E
Compt: Hz

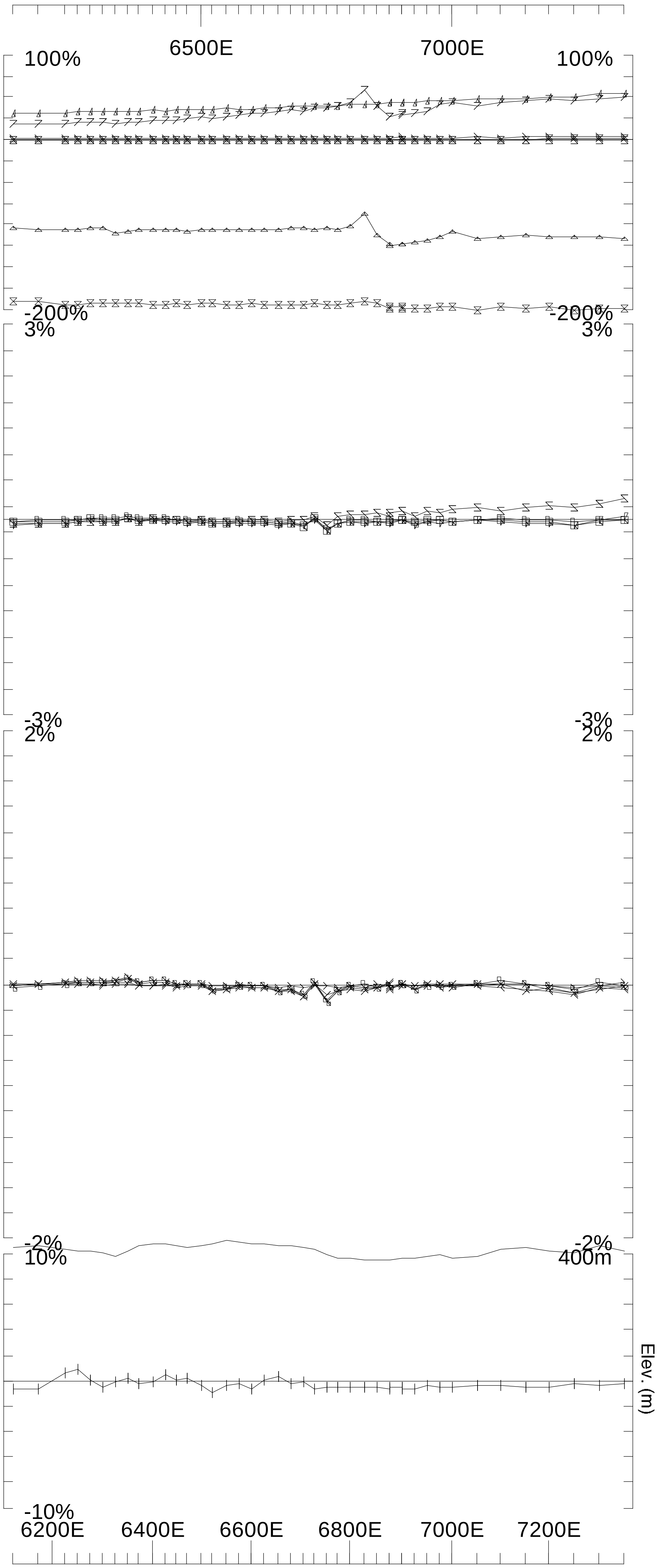
Secondary, (Chn - Ch0)/|Hp|
Contin. Norm at depth of 0 m
Base Freq. 2.045 Hz

UTEM Survey at: Foy North
For: Wallbridge

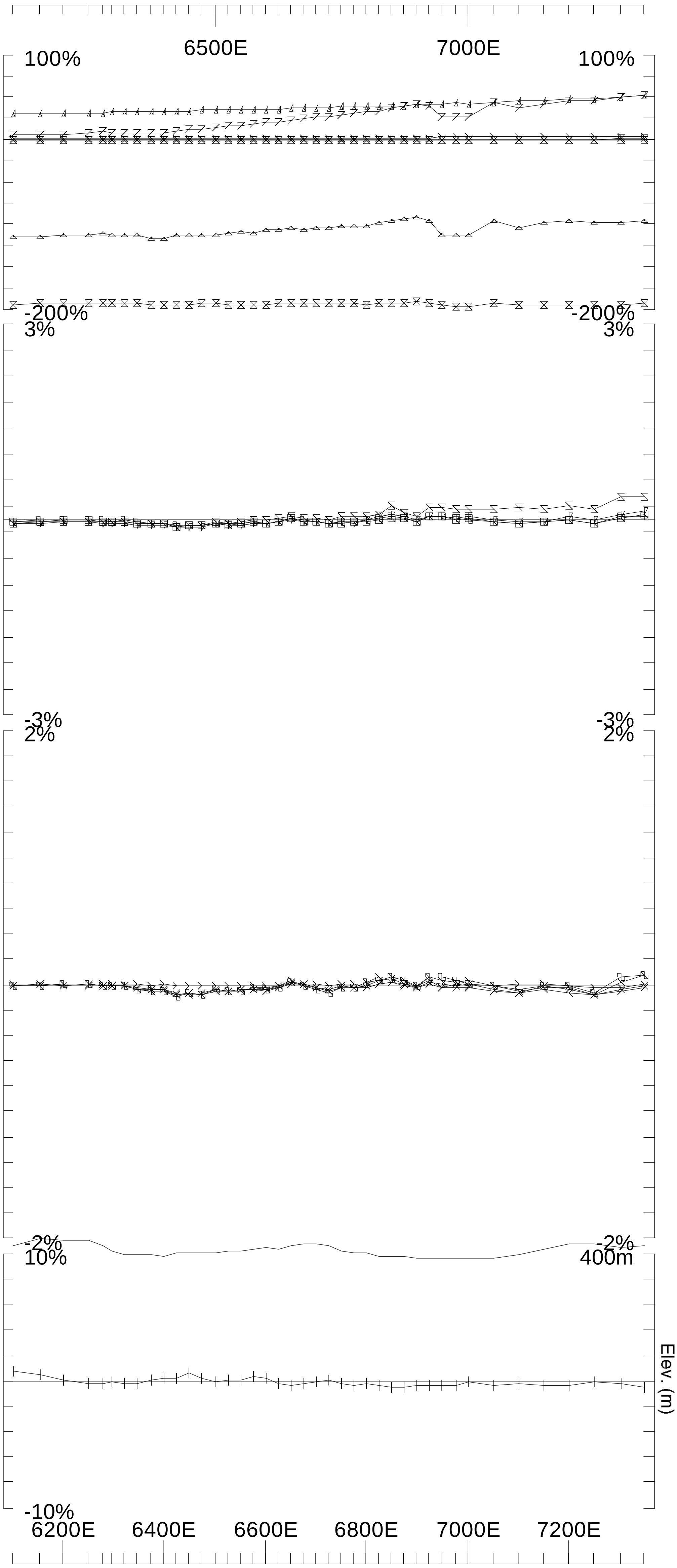
LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE

Job 1401

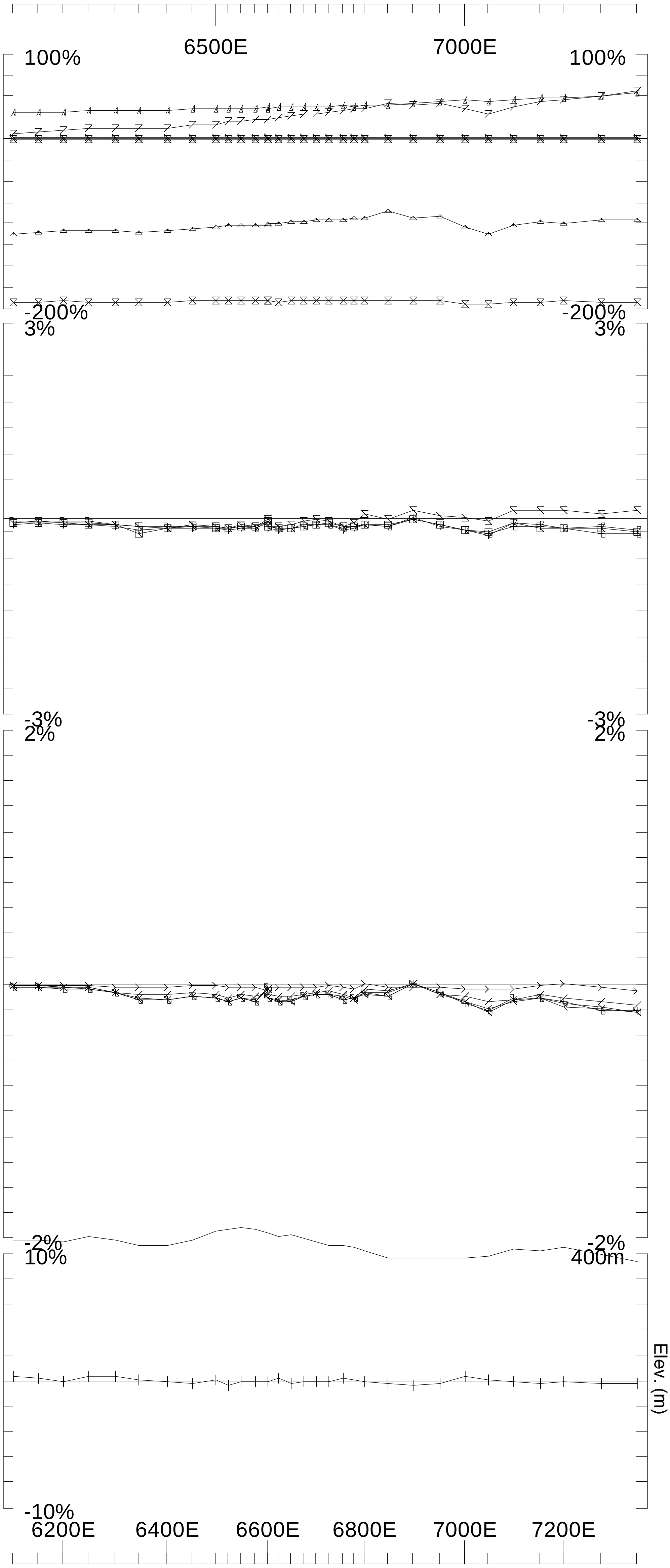
Plotted : 24/3/14



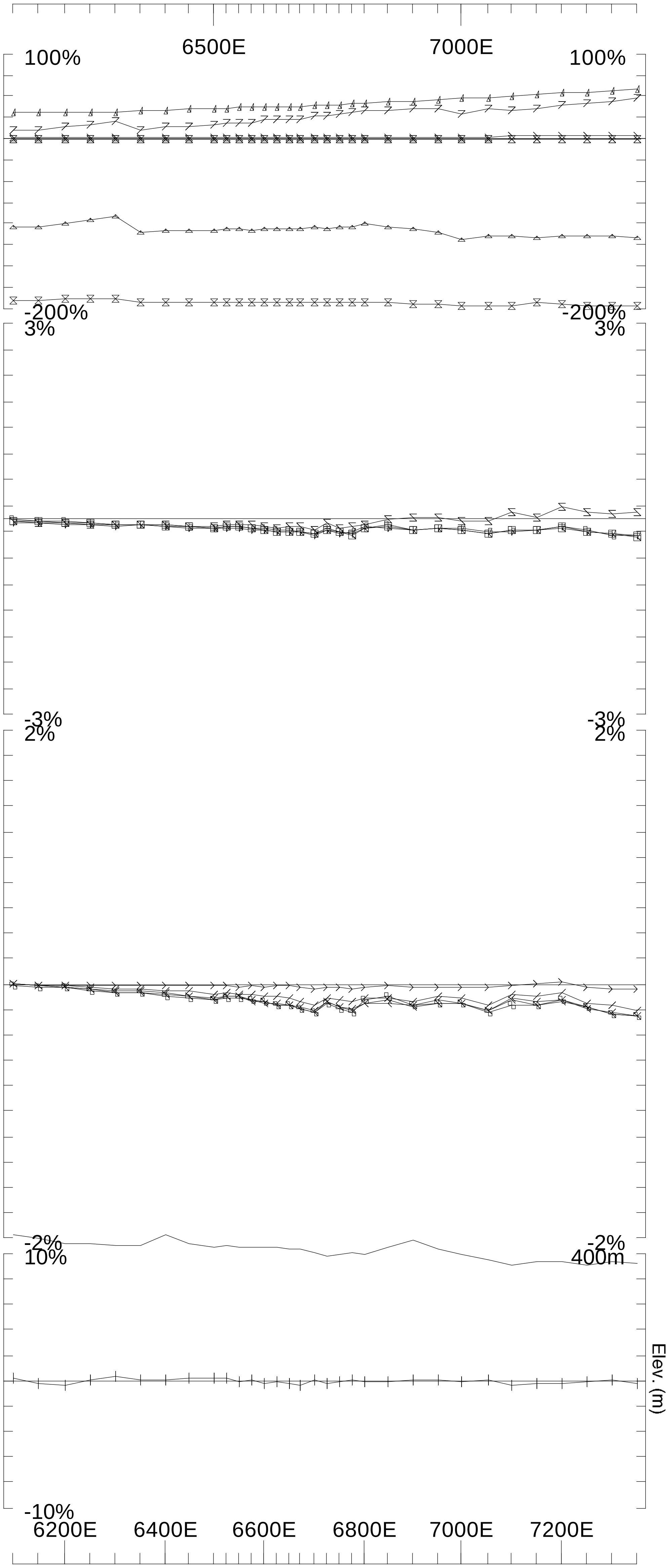
Loop: 1463S2	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 3600E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hz	Base Freq. 2.045 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 24/3/14



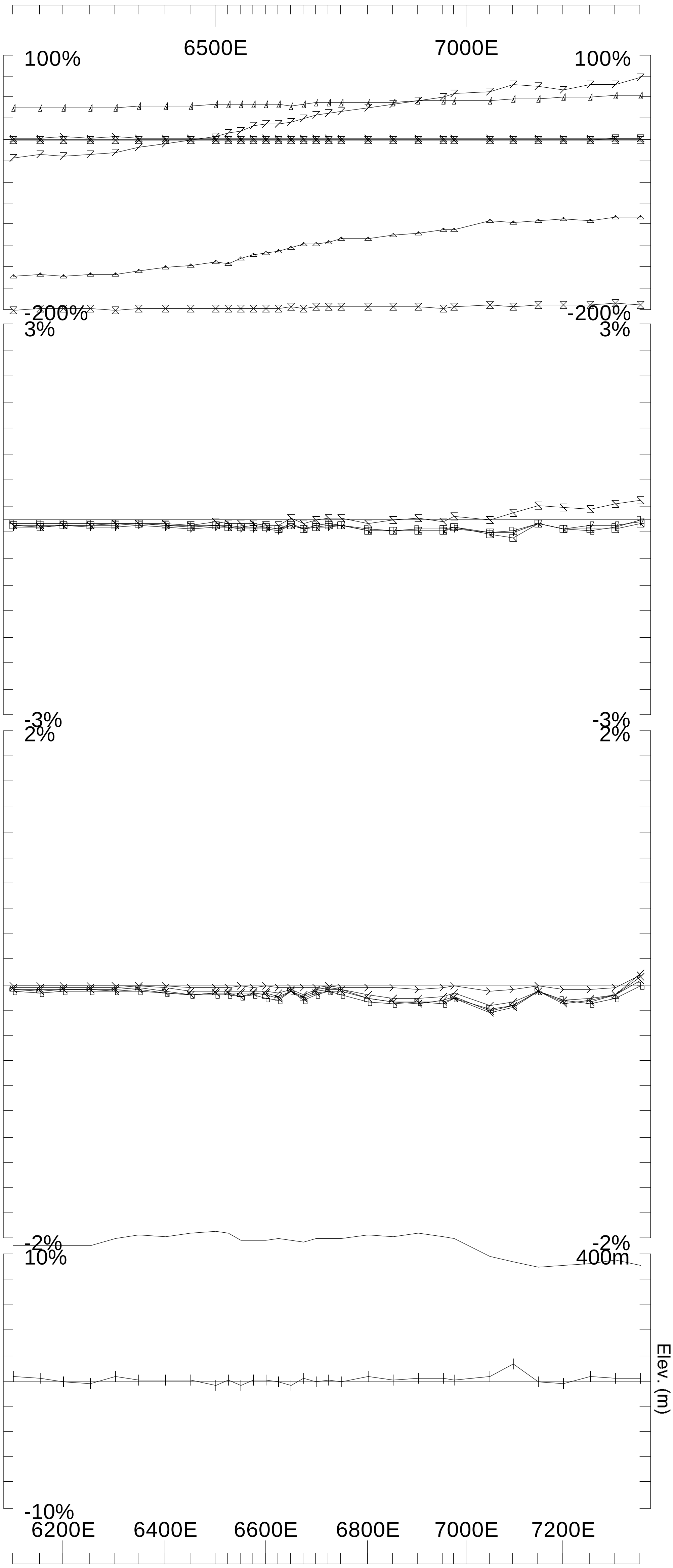
Loop: 1463S2	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 3850E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hz	Base Freq. 2.045 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 24/3/14



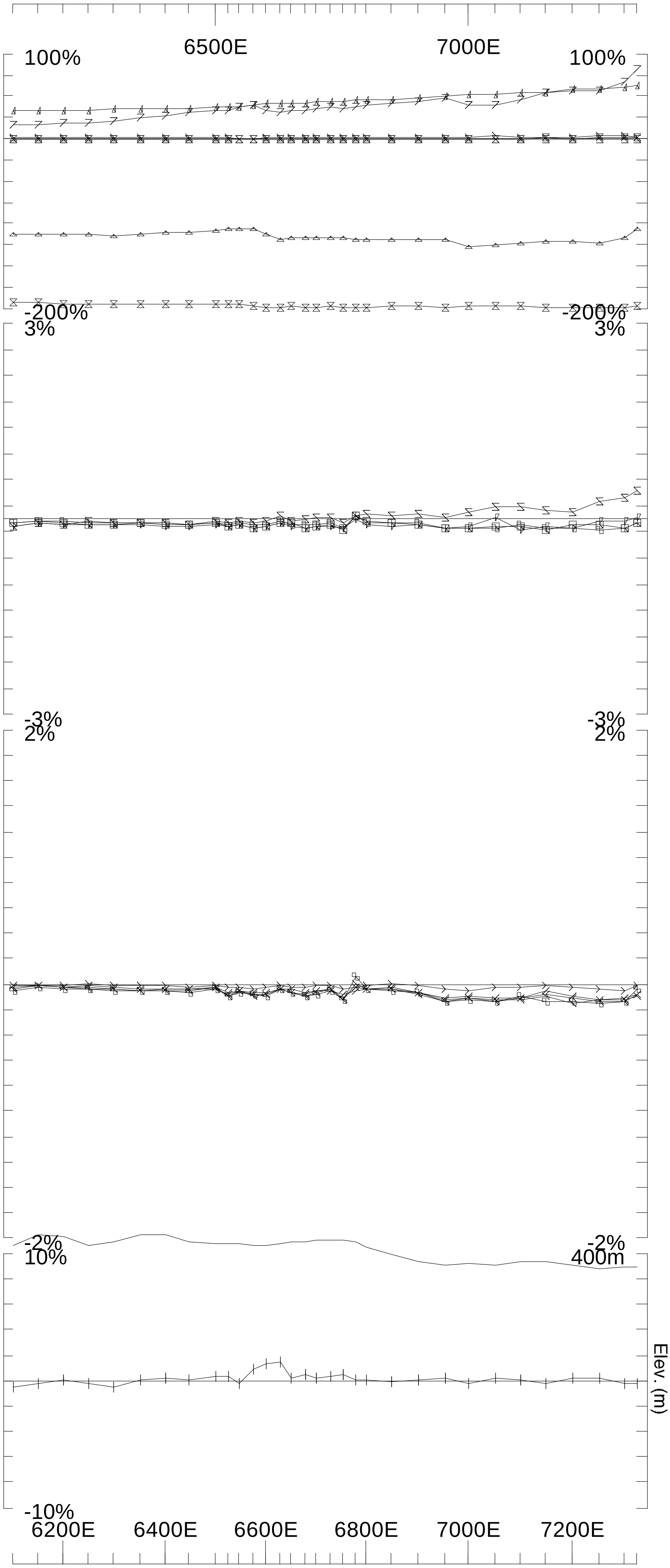
Loop: 1463S2	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 4100E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hz	Base Freq. 2.045 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 24/3/14



Loop: 1463S2	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 4350E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hz	Base Freq. 2.045 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 24/3/14



Loop: 1463S2	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 4600E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hz	Base Freq. 2.045 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 23/3/14



Loop: 1463S2	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 4850E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hz	Base Freq. 2.045 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 24/3/14

Foy North Grid

Loop 1463

Hx

2.045Hz frequency

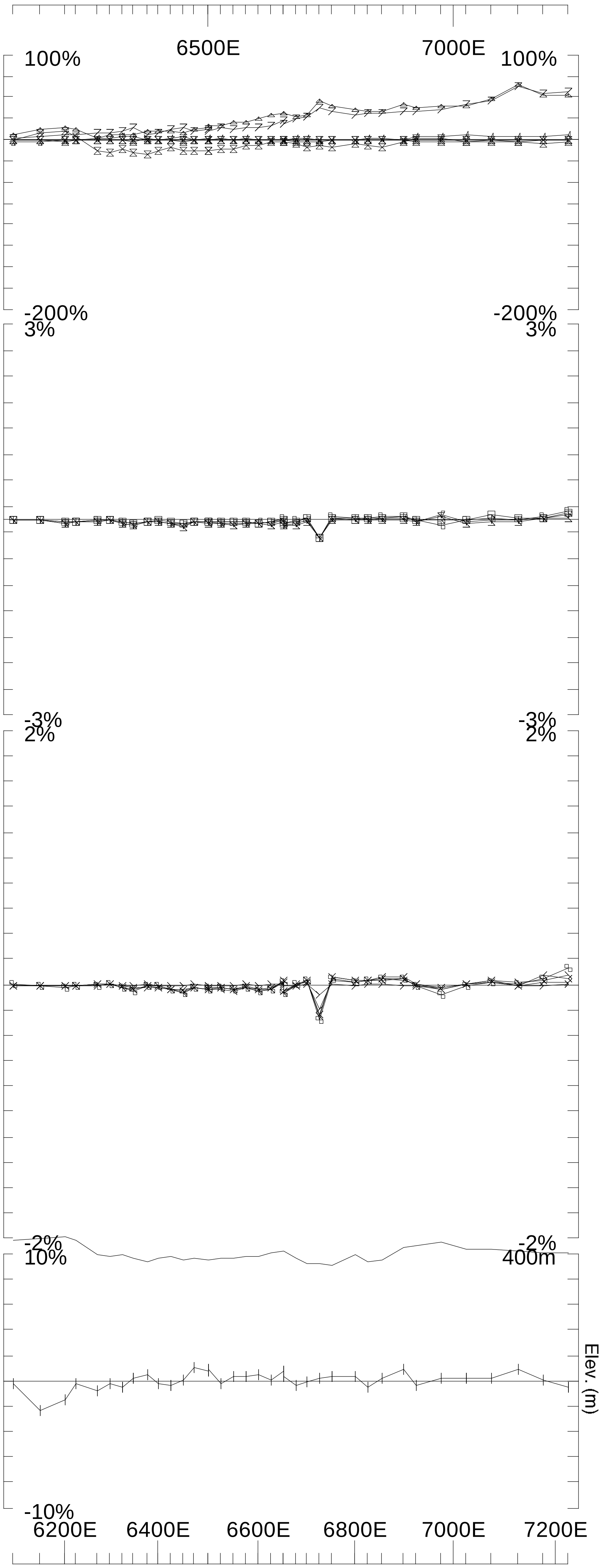
continuous norm

12Ch - Ch0 reduced

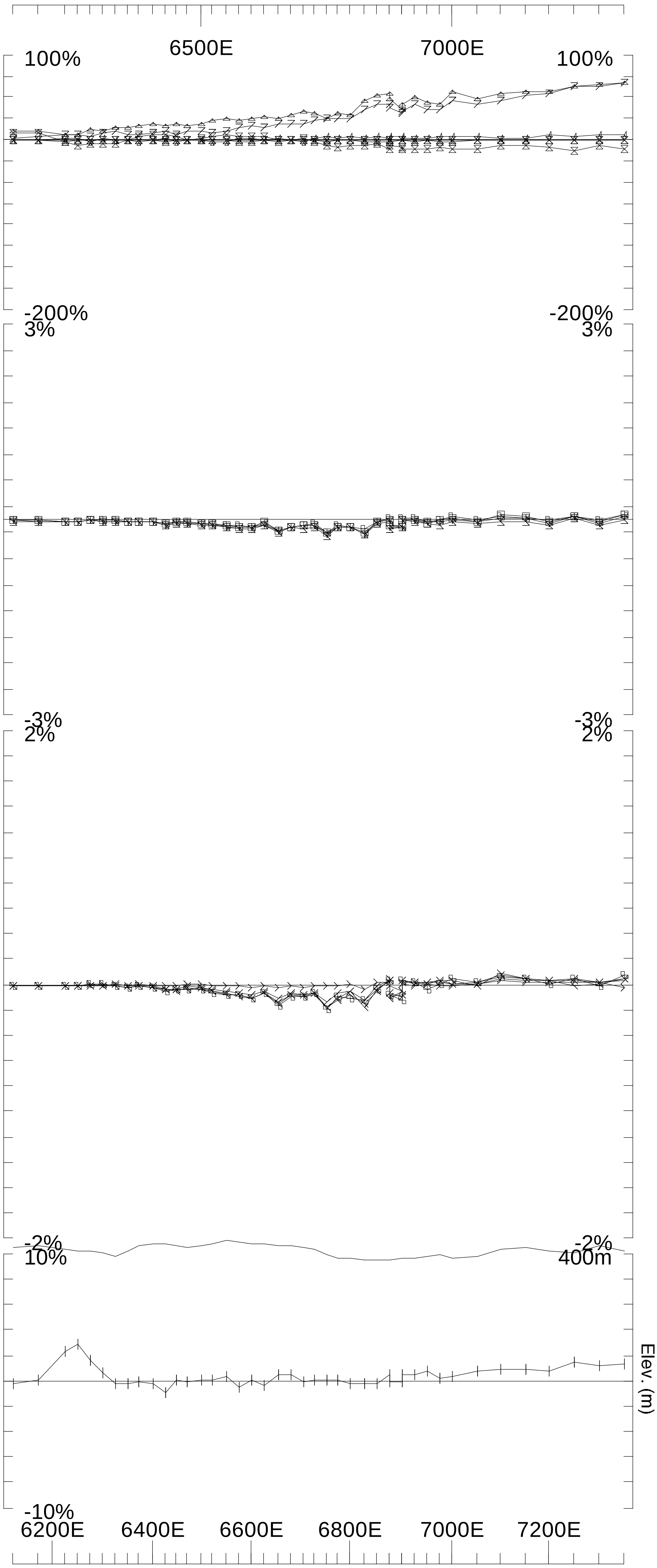
Loop 1463 @2.045Hz

Line 3350N	6100E - 7225E	1125m	Hz/Hx/Hy
Line 3600N	6125E - 7350E	1225m	Hz/Hx/Hy
Line 3850N	6100E - 7350E	1250m	Hz/Hx/Hy
Line 4100N	6100E - 7350E	1250m	Hz/Hx/Hy
Line 4350N	6100E - 7350E	1250m	Hz/Hx/Hy
Line 4600N	6100E - 7350E	1250m	Hz/Hx/Hy
Line 4850N	6100E - 7350E	1250m	Hz/Hx/Hy

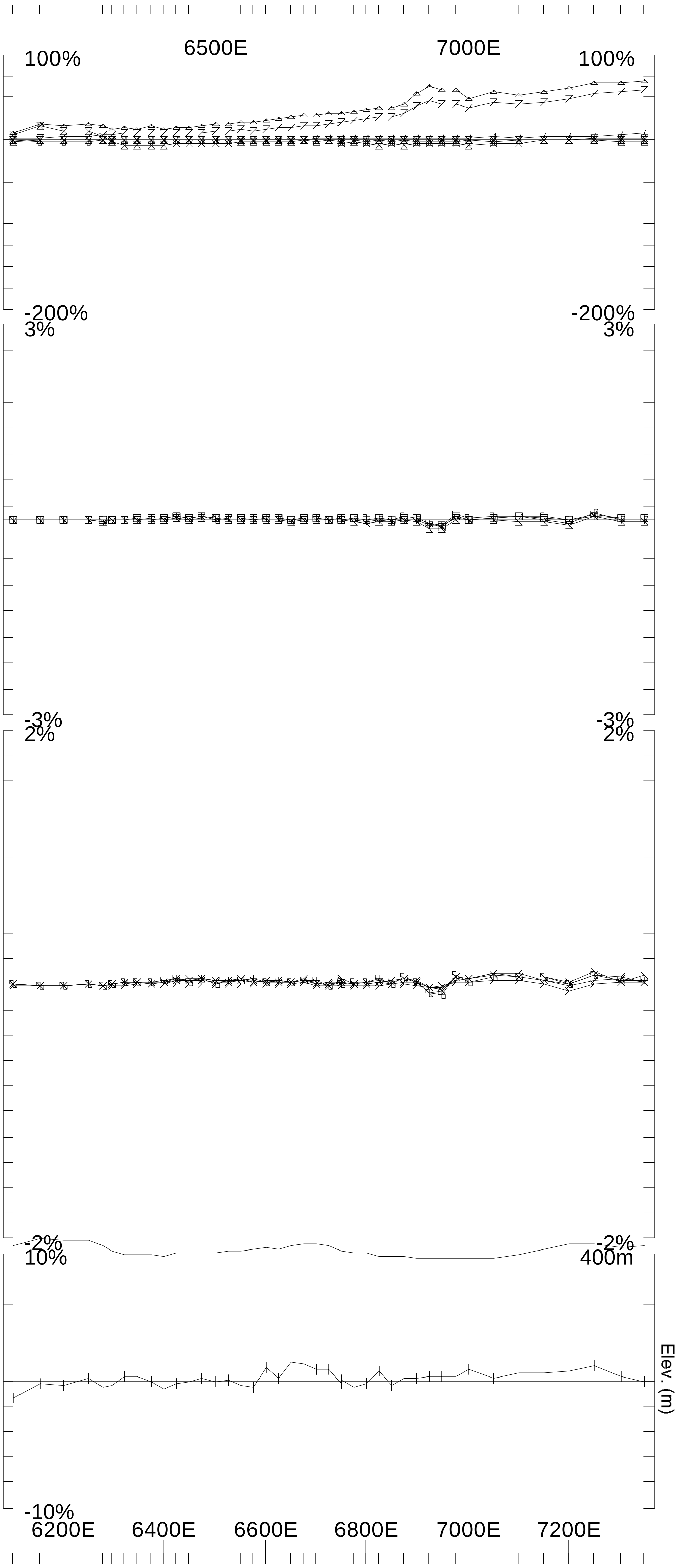
Loop 1463 - Hx



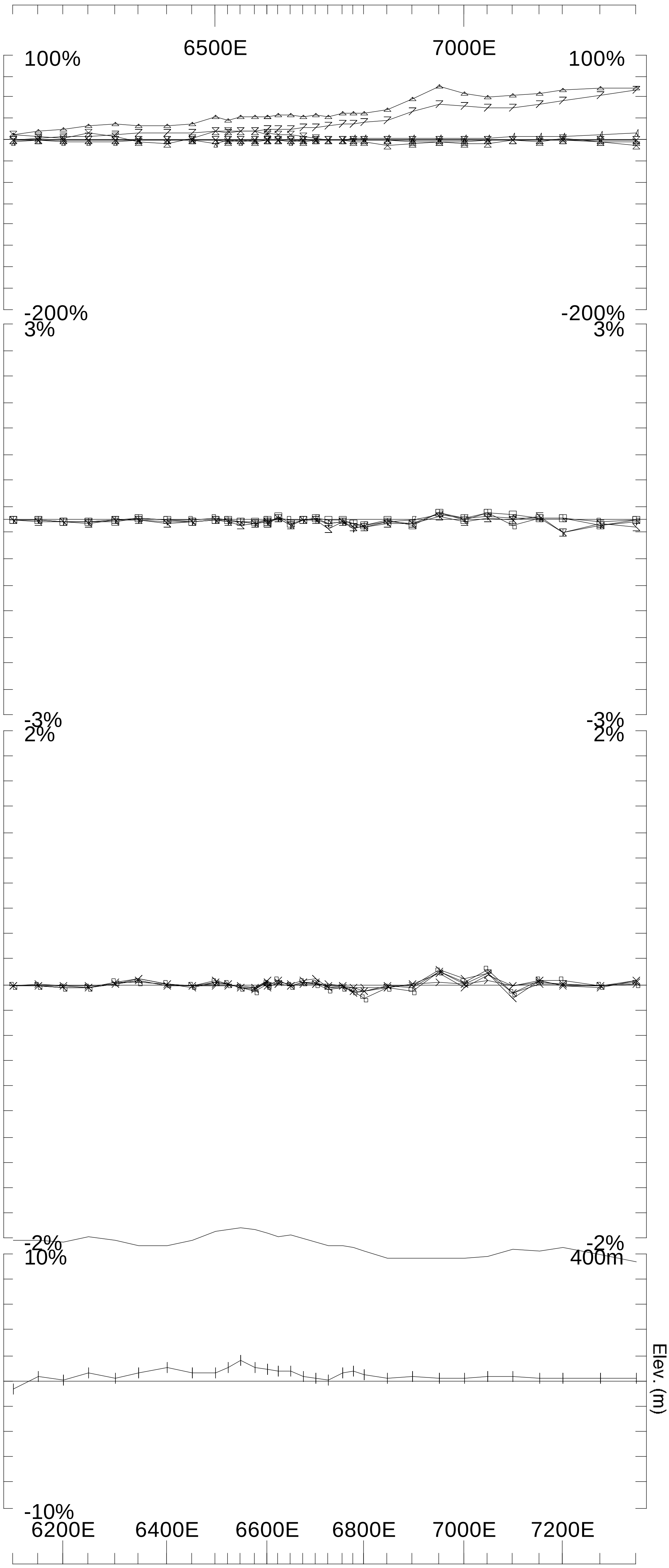
Loop: 1463S2	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 3350E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hx	Base Freq. 2.045 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 24/3/14



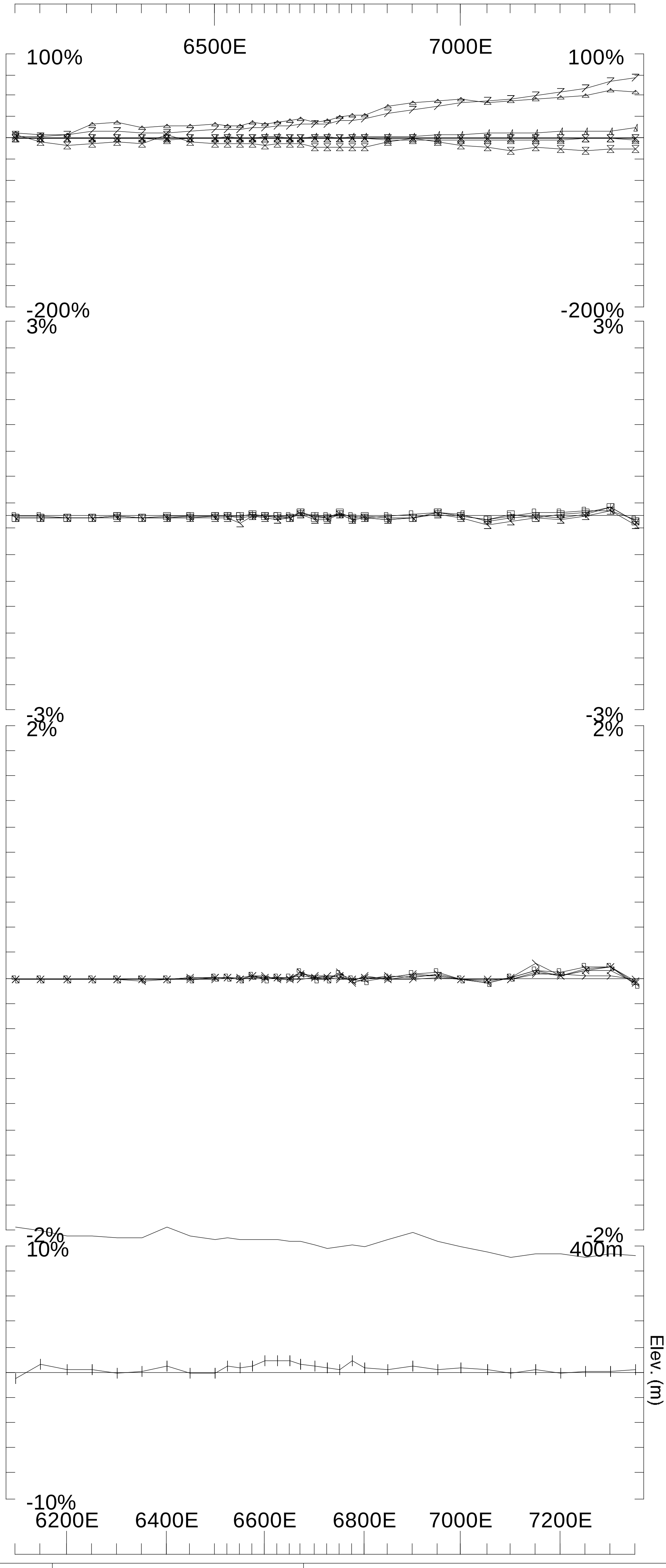
Loop: 1463S2	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 3600E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hx	Base Freq. 2.045 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 24/3/14



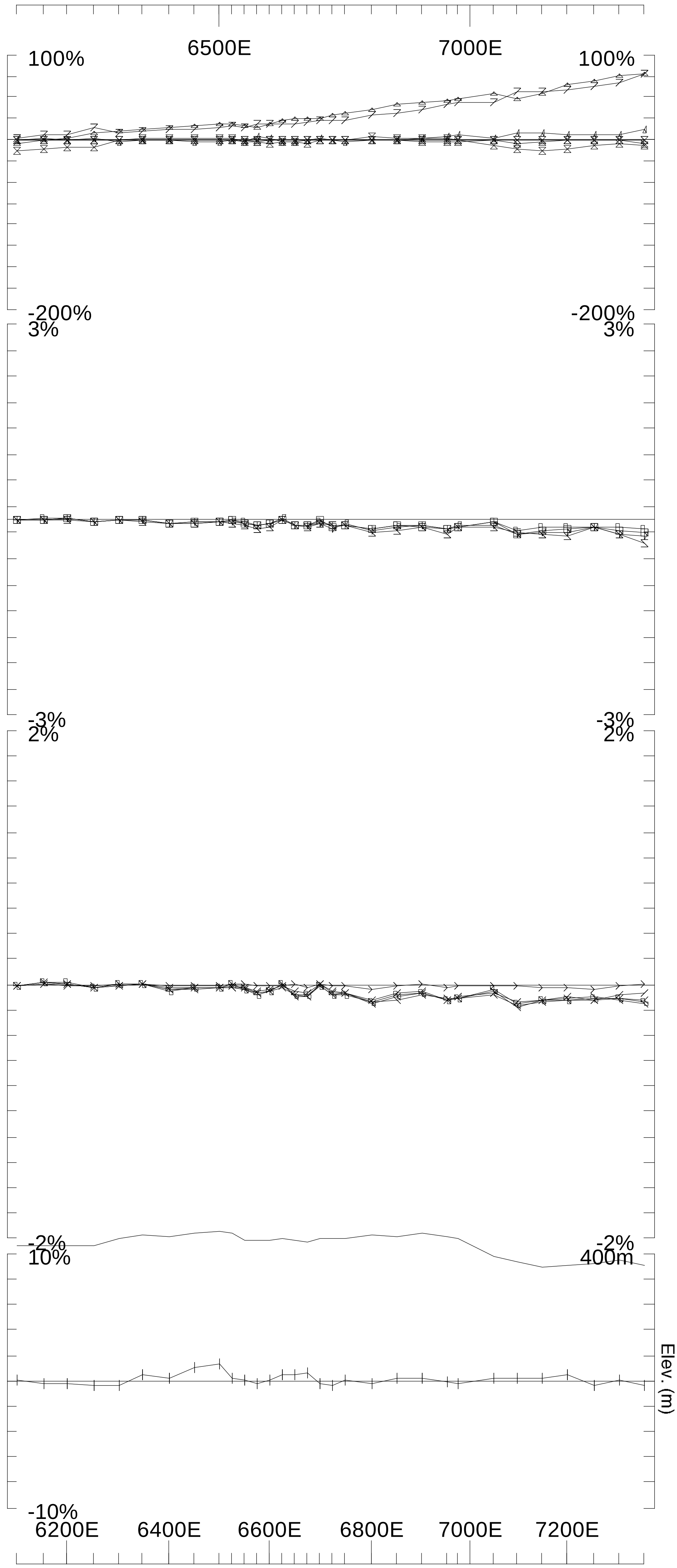
Loop: 1463S2	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 3850E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hx	Base Freq. 2.045 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 24/3/14



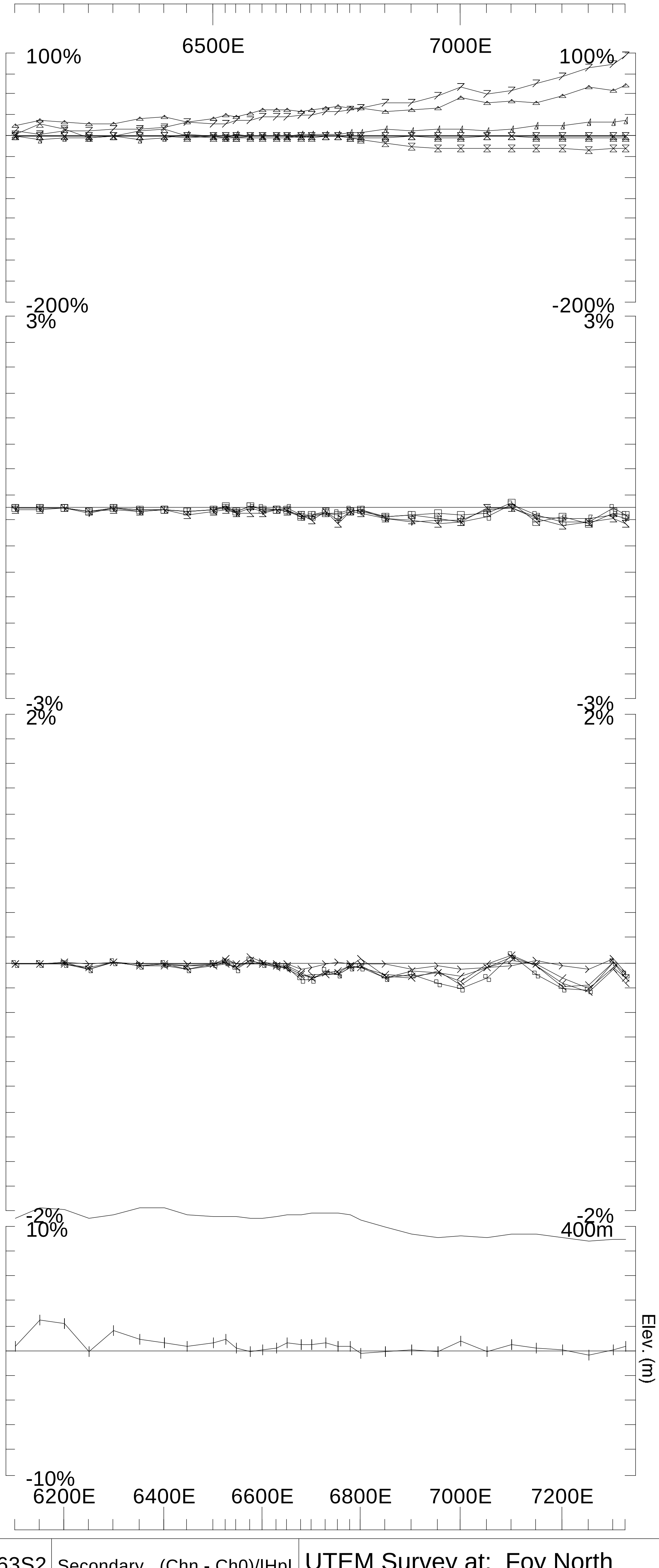
Loop: 1463S2	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 4100E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hx	Base Freq. 2.045 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 24/3/14



Loop: 1463S2	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 4350E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hx	Base Freq. 2.045 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 24/3/14



Loop: 1463S2	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 4600E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hx	Base Freq. 2.045 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 23/3/14



Loop: 1463S2
Line: 4850E
Compt: Hx

Secondary, (Chn - Ch0)/|Hp|
Contin. Norm at depth of 0 m
Base Freq. 2.045 Hz

UTEM Survey at: Foy North
For: Wallbridge

LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE

Job 1401

Plotted : 23/3/14

Foy North Grid

Loop 1463

Hy

2.045Hz frequency

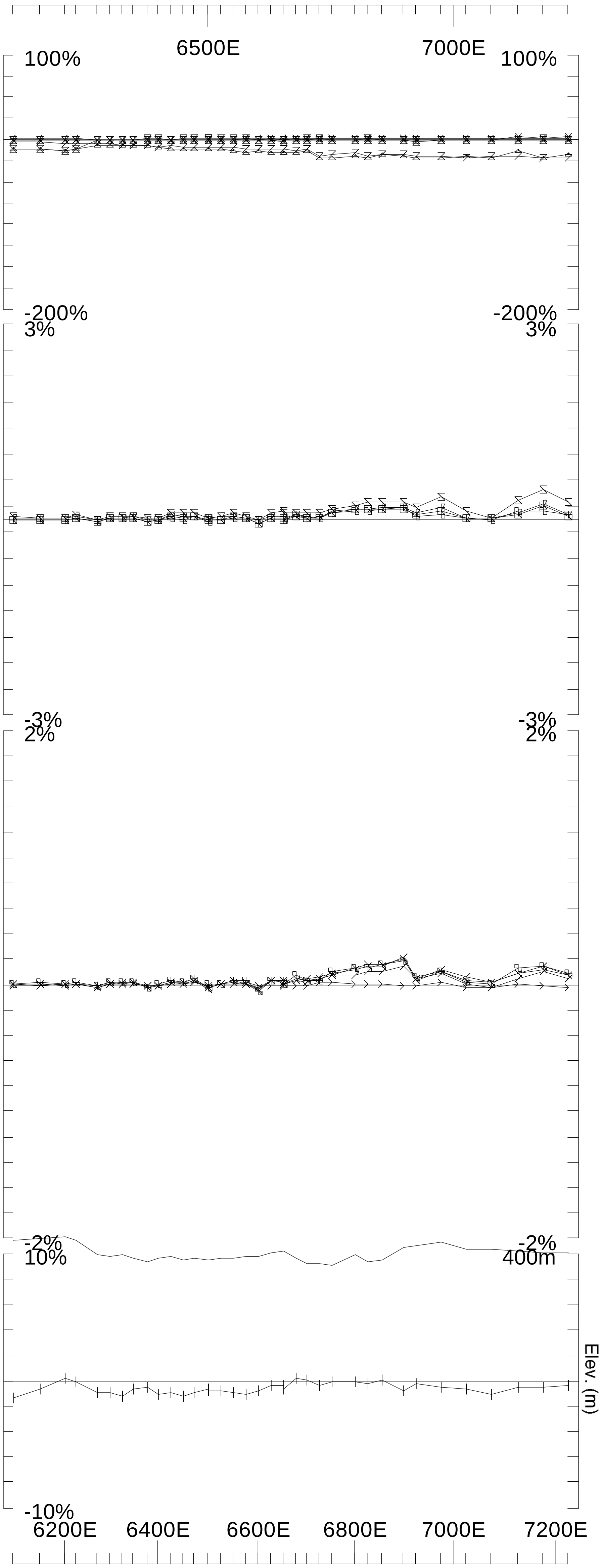
continuous norm

12Ch - Ch0 reduced

Loop 1463 @2.045Hz

Line 3350N	6100E - 7225E	1125m	Hz/Hx/Hy
Line 3600N	6125E - 7350E	1225m	Hz/Hx/Hy
Line 3850N	6100E - 7350E	1250m	Hz/Hx/Hy
Line 4100N	6100E - 7350E	1250m	Hz/Hx/Hy
Line 4350N	6100E - 7350E	1250m	Hz/Hx/Hy
Line 4600N	6100E - 7350E	1250m	Hz/Hx/Hy
Line 4850N	6100E - 7350E	1250m	Hz/Hx/Hy

Loop 1463 - Hy



Loop: 1463S2
Line: 3350E
Compt: Hy

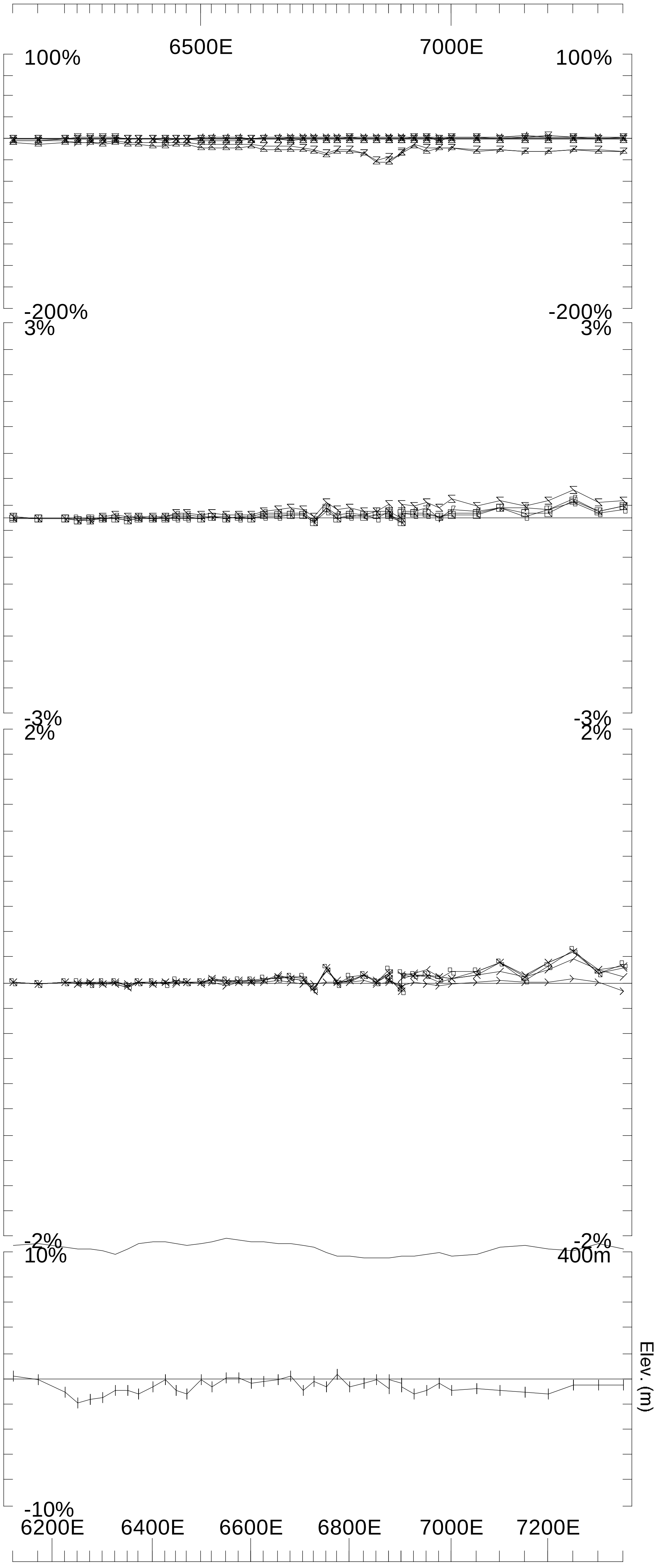
Secondary, (Chn - Ch0)/|Hp|
Contin. Norm at depth of 0 m
Base Freq. 2.045 Hz

UTEM Survey at: Foy North
For: Wallbridge

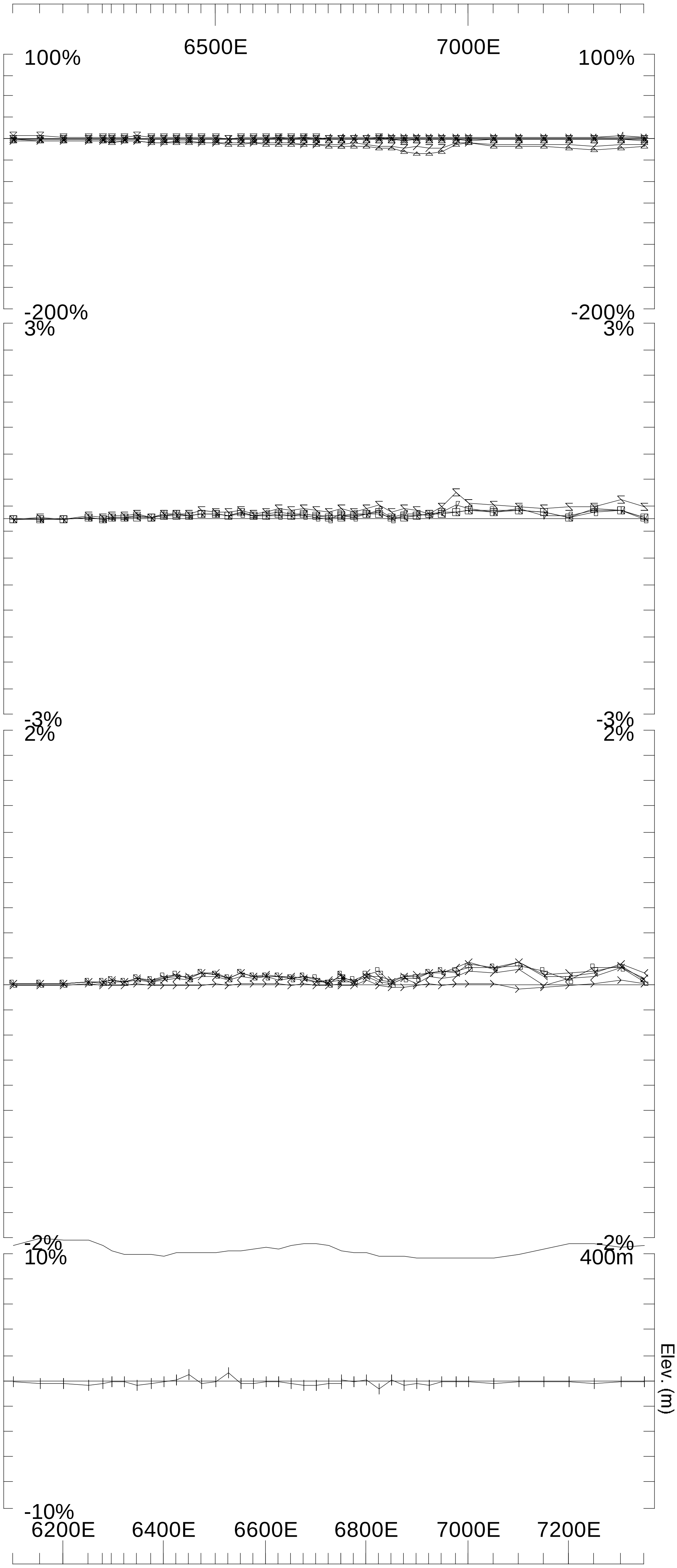
LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE

Job 1401

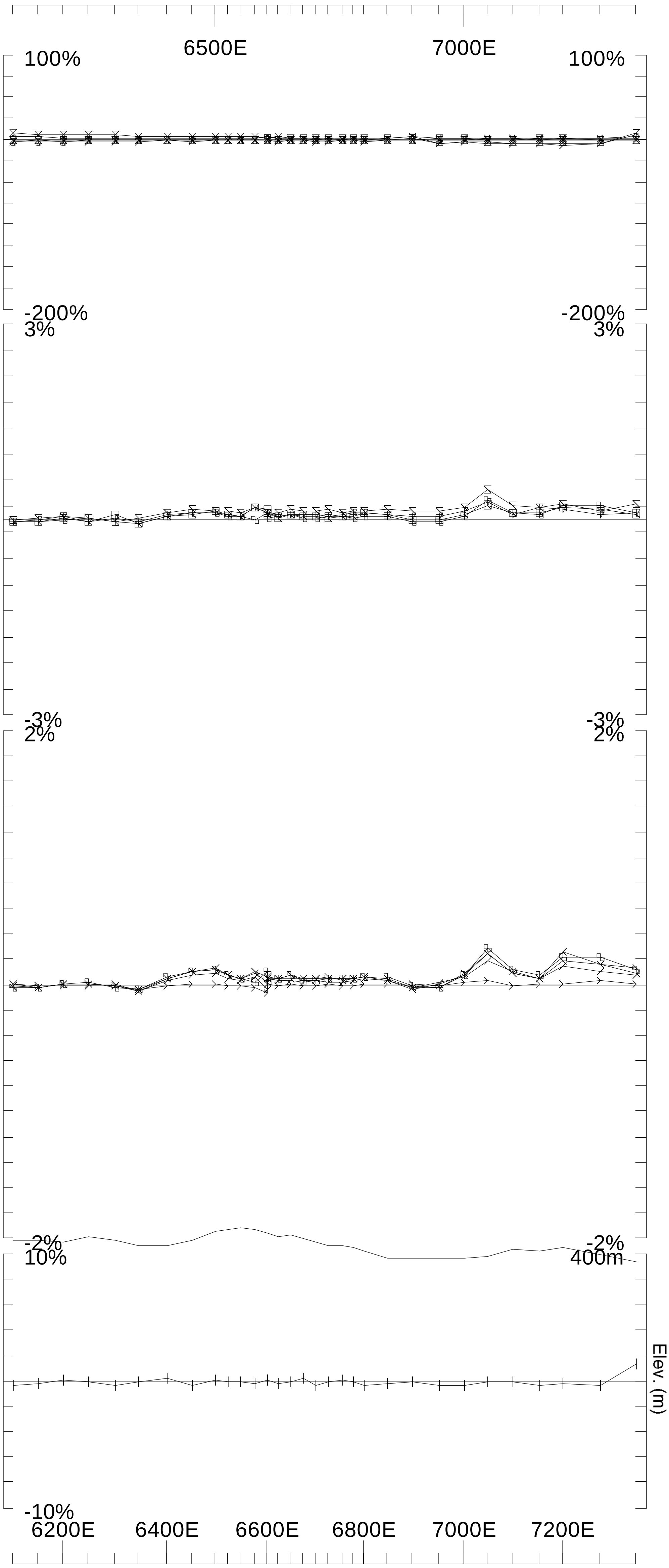
Plotted : 24/3/14



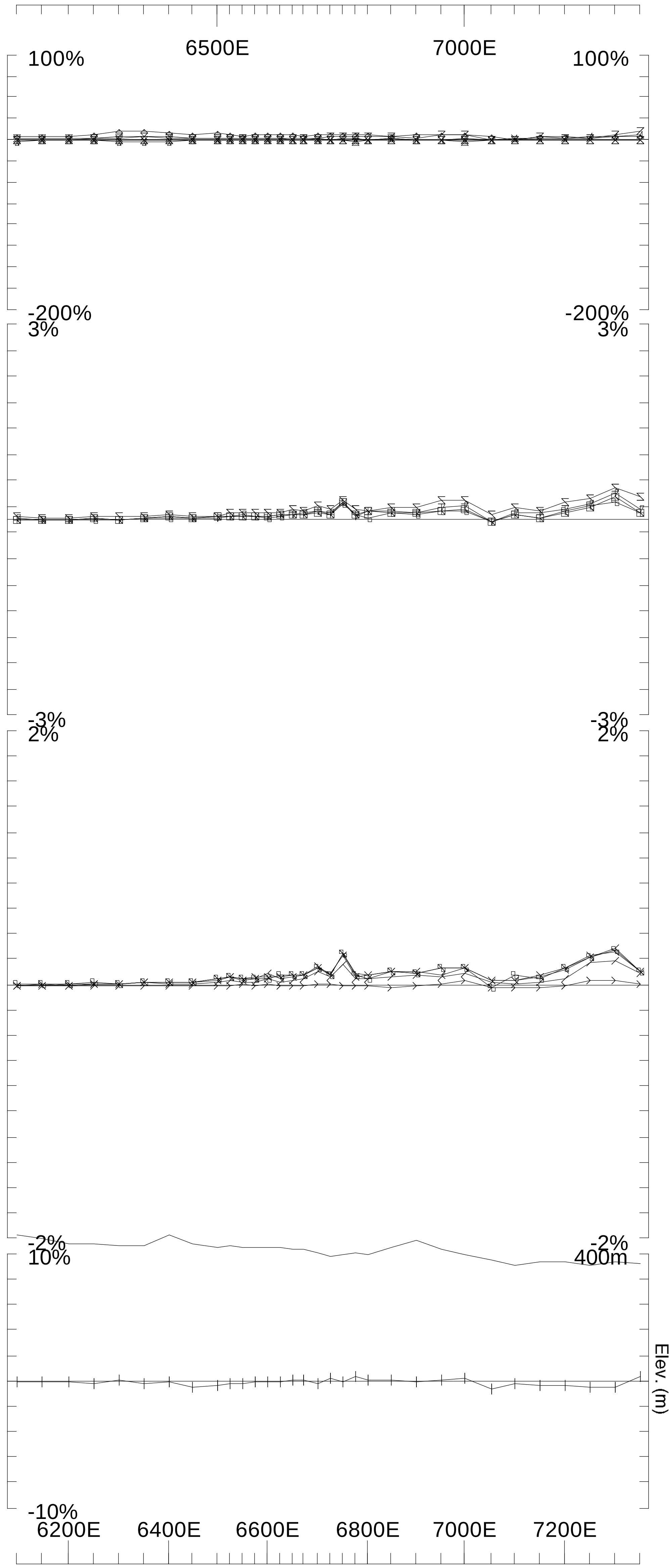
Loop: 1463S2	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 3600E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hy	Base Freq. 2.045 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 24/3/14



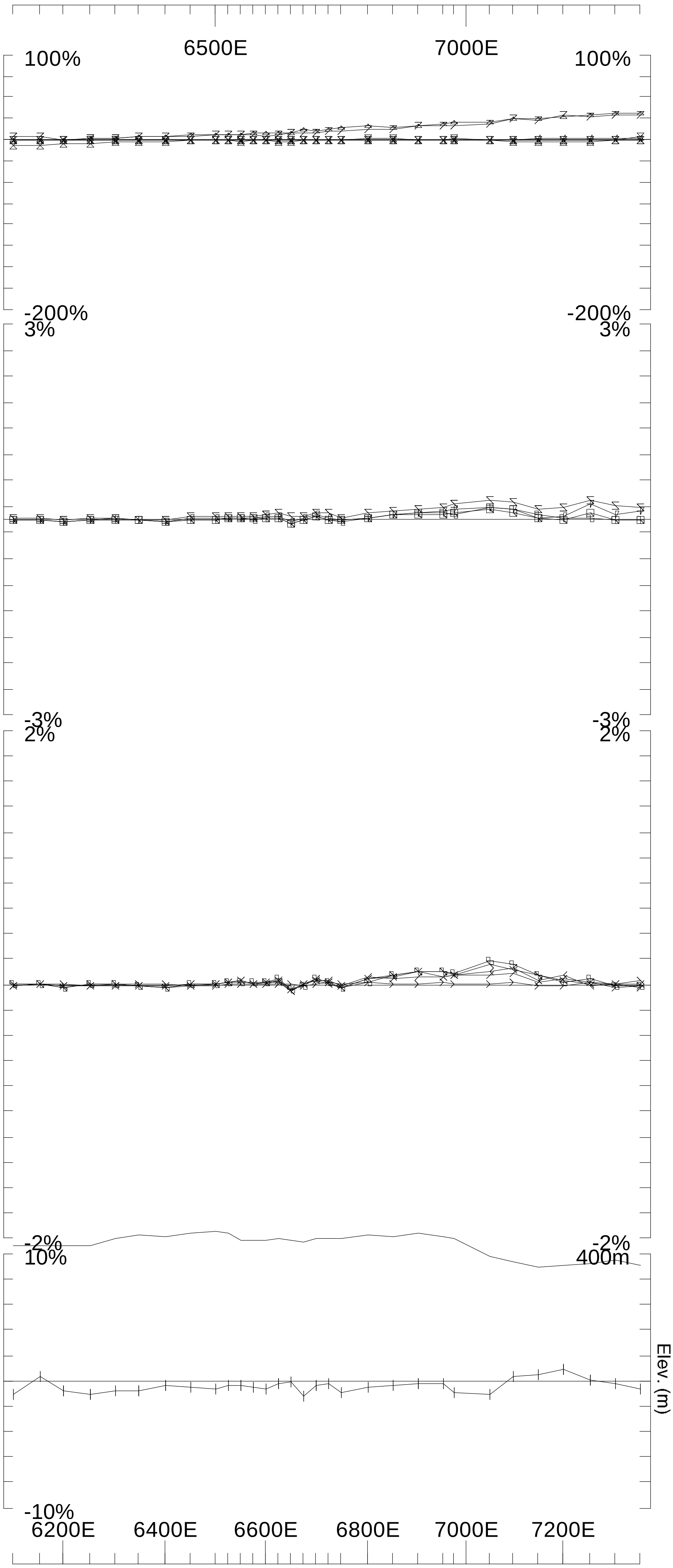
Loop: 1463S2	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 3850E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hy	Base Freq. 2.045 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 24/3/14



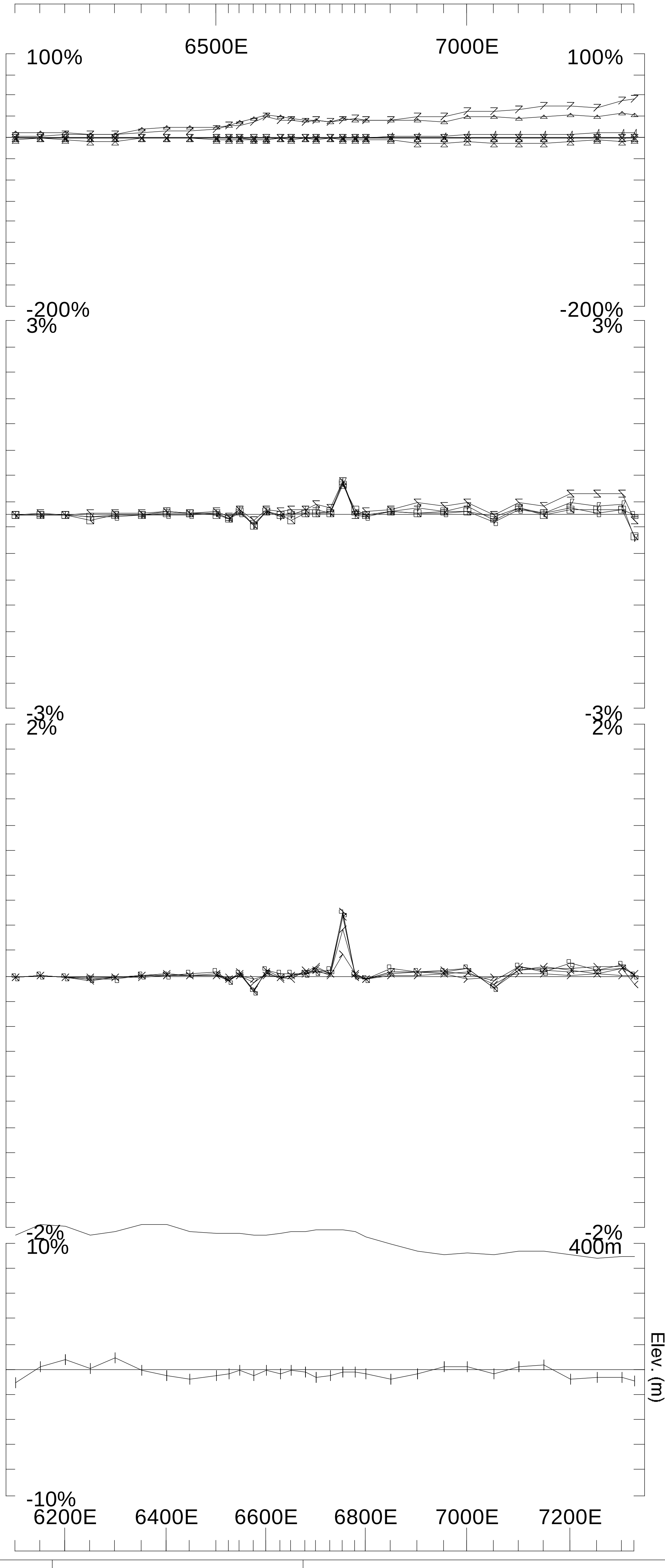
Loop: 1463S2	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 4100E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hy	Base Freq. 2.045 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 24/3/14



Loop: 1463S2	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 4350E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hy	Base Freq. 2.045 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 24/3/14



Loop: 1463S2	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 4600E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hy	Base Freq. 2.045 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 23/3/14



Loop: 1463S2	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 4850E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hy	Base Freq. 2.045 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 23/3/14

Foy North Grid

Loop 1463 NS Lines

Hz

2.045Hz frequency

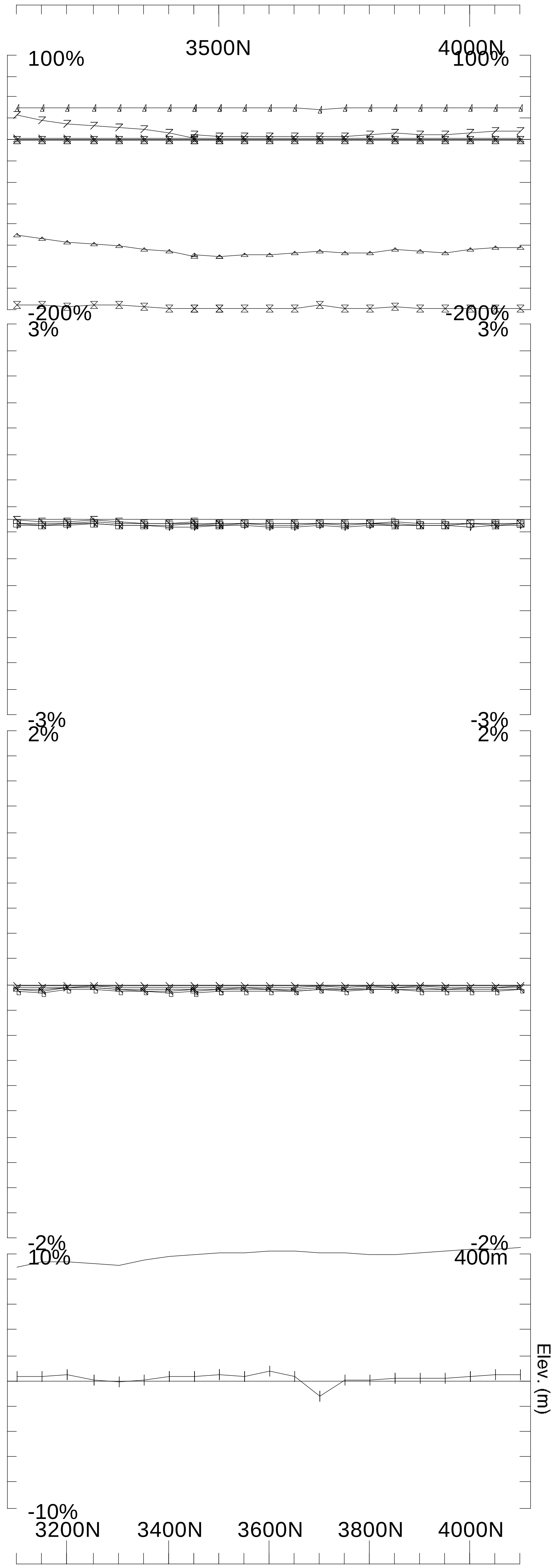
continuous norm

12Ch - Ch0 reduced

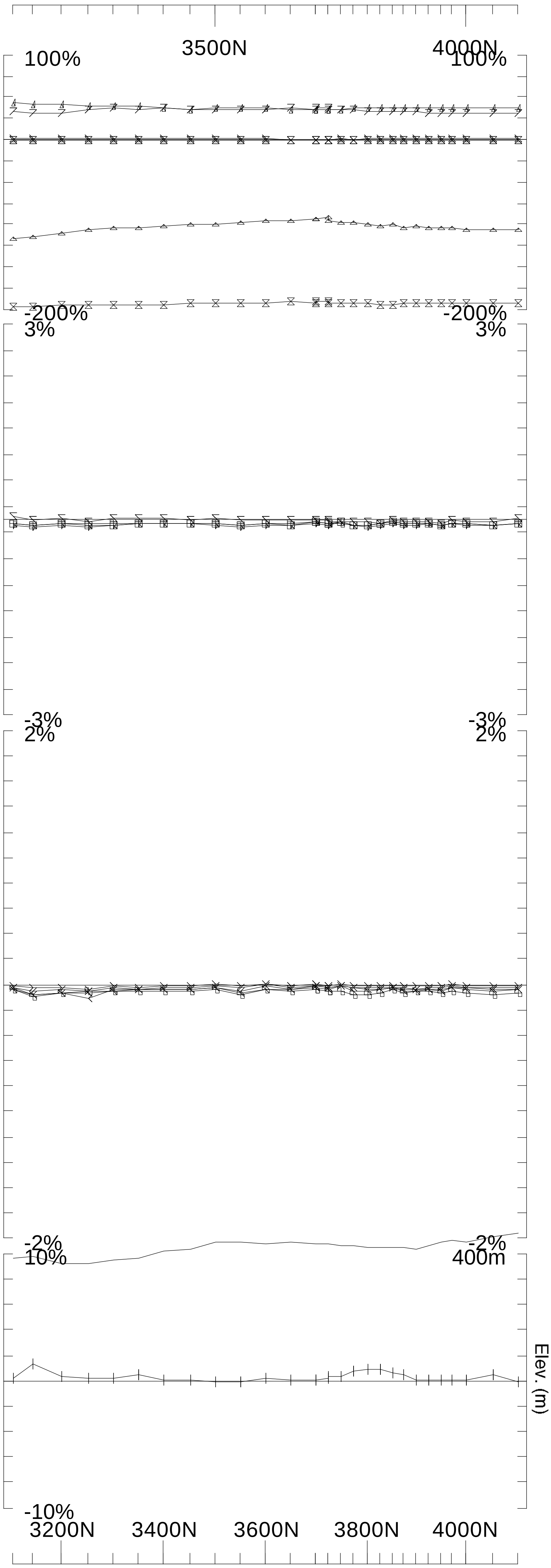
Loop 1463 NS lines @2.045Hz

Line 6350E	3100N - 4100N	1000m	Hz/Hx/Hy
Line 6600E	3100N - 4100N	1000m	Hz/Hx/Hy

Loop 1463 - Hz



Loop: 1463S2	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 6350E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hz	Base Freq. 2.045 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 23/3/14



Loop: 1463S2	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 6600E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hz	Base Freq. 2.045 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 23/3/14

Foy North Grid

Loop 1463 NS Lines

Hx

2.045Hz frequency

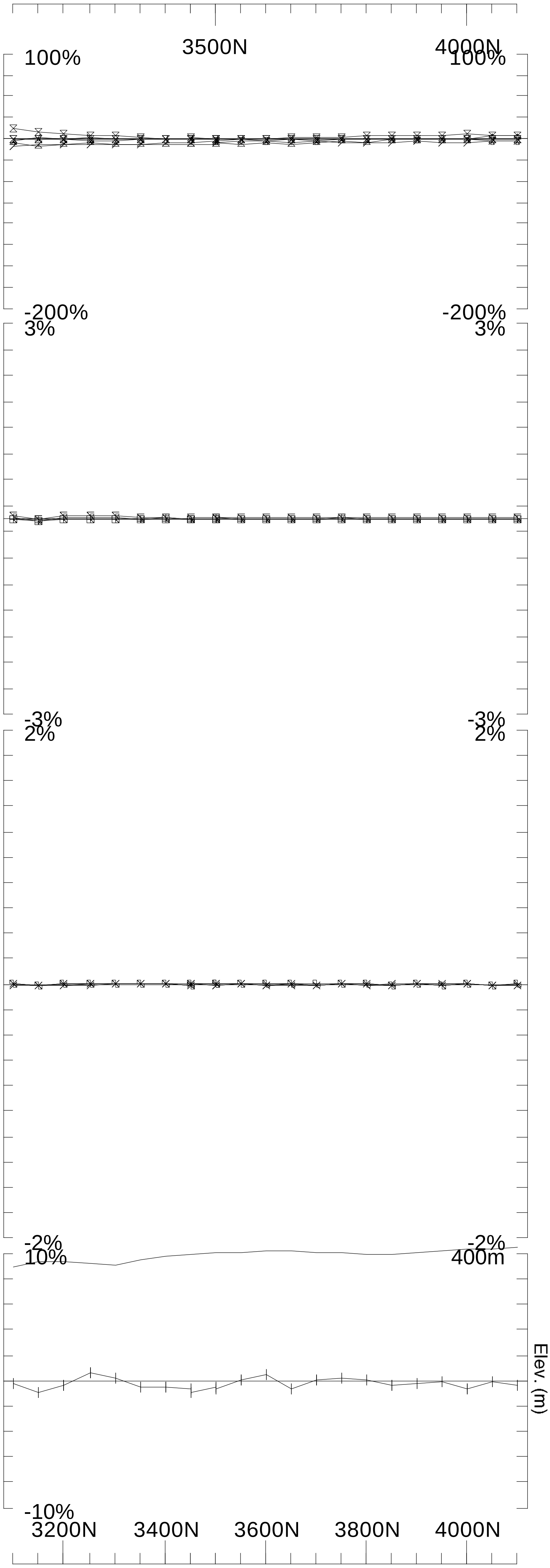
continuous norm

12Ch - Ch0 reduced

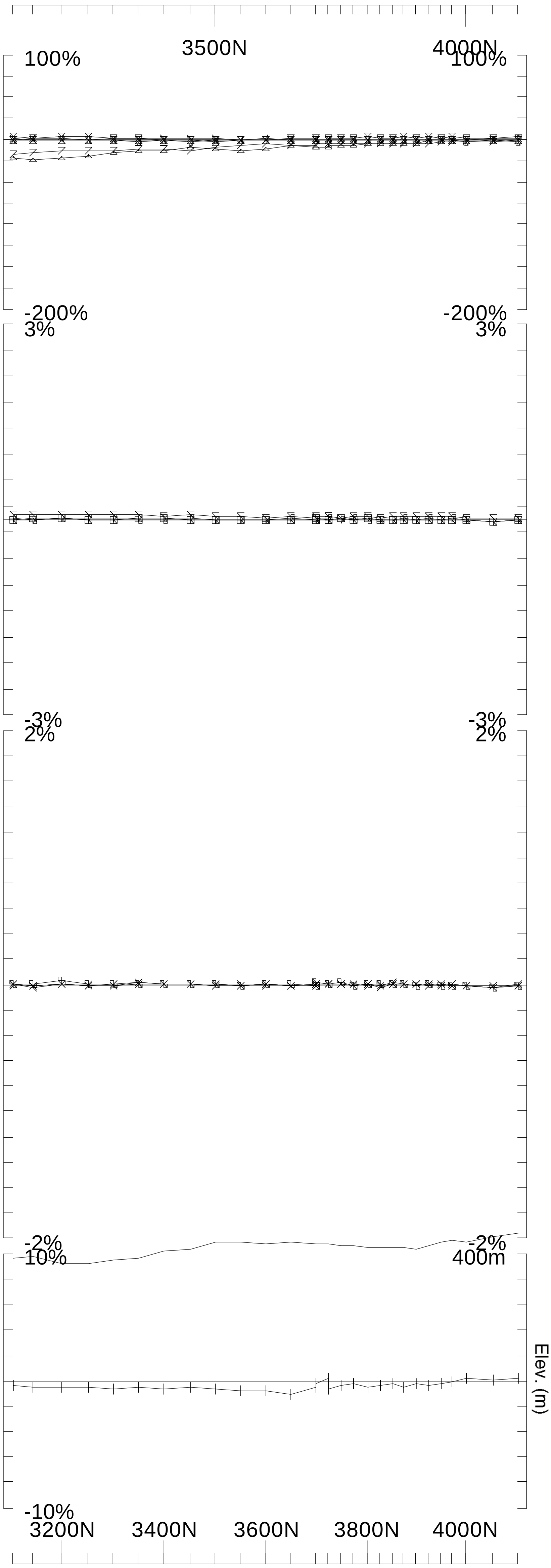
Loop 1463 NS lines @2.045Hz

Line 6350E	3100N - 4100N	1000m	Hz/Hx/Hy
Line 6600E	3100N - 4100N	1000m	Hz/Hx/Hy

Loop 1463 - Hx



Loop: 1463S2	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 6350E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hx	Base Freq. 2.045 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 23/3/14



Loop: 1463S2
Line: 6600E
Compt: Hx

Secondary, (Chn - Ch0)/|Hp|
Contin. Norm at depth of 0 m
Base Freq. 2.045 Hz

UTEM Survey at: Foy North
For: Wallbridge

LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE

Job 1401

Plotted : 23/3/14

Foy North Grid

Loop 1463 NS Lines

Hy

2.045Hz frequency

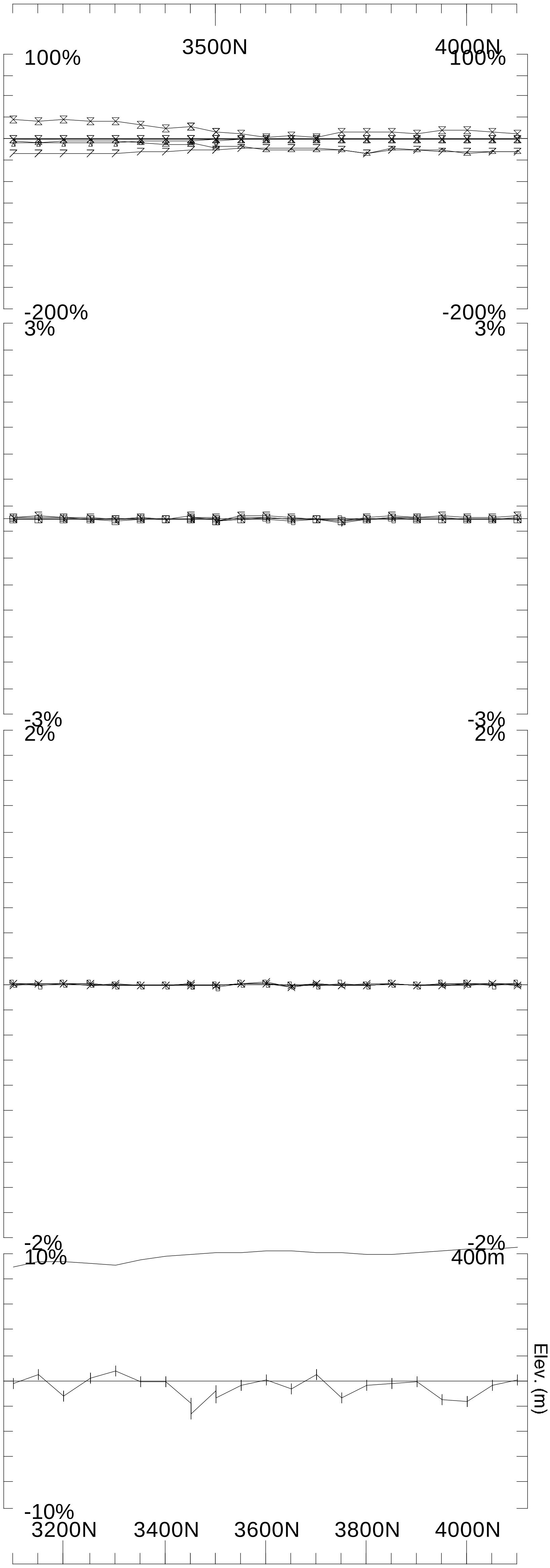
continuous norm

12Ch - Ch0 reduced

Loop 1463 NS lines @2.045Hz

Line 6350E	3100N - 4100N	1000m	Hz/Hx/Hy
Line 6600E	3100N - 4100N	1000m	Hz/Hx/Hy

Loop 1463 NS lines - Hy



Loop: 1463S2
Line: 6350E
Compt: Hy

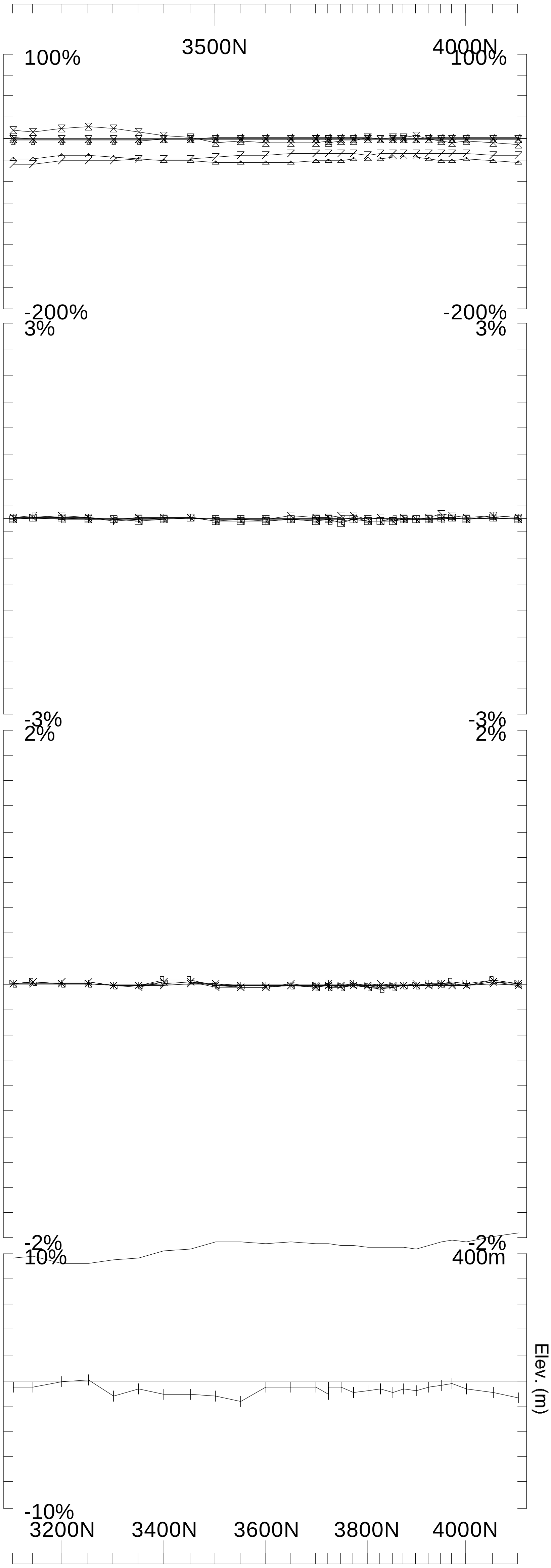
Secondary, (Chn - Ch0)/|Hp|
Contin. Norm at depth of 0 m
Base Freq. 2.045 Hz

UTEM Survey at: Foy North
For: Wallbridge

LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE

Job 1401

Plotted : 23/3/14



Loop: 1463S2	Secondary, (Chn - Ch0)/|Hp|	UTEM Survey at: Foy North
Line: 6600E	Contin. Norm at depth of 0 m	For: Wallbridge
Compt: Hy	Base Freq. 2.045 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 1401 Plotted : 23/3/14

Appendix B

1401 Production Diary

UTEM5 Survey

Foy North Grid
Sudbury District

for

Wallbridge Mining Company Ltd.

Production Log (1401)

UTEM 5 Survey - Foy North Grid
Wallbridge Mining Company Ltd.

Date	Rate - Production		Comments
January 13	Mob	-	Travel from Kingston (T. Gallant,R.Lahaye) and Toronto (P.Guimond,R.Sinclair) to Sudbury

Crew: T.Gallant,P.Guimond,R.Sinclair,R.Lahaye

Date	Rate - Production		Comments
January 14 - February 05		-	Crew works for Wallbridge on other properties in the Sudbury District.
February 06	0.25 n/c-5 0.75 AL-4 AL-2	200m	One Rx crew finishes surveying 200m of L7400E. Four men pick up all of Loop 1353 and ~half of Loop 1352 (9.35km of wire). Two men at Foy North to check out access. Lay 2 sides of Loop 1463. Foy crew back at 19:00.

Loop 1353		**S1-Tx3**	**4.0909Hz_12Ch**
Loop 1352		**S2-Tx4**	**2.0455Hz_12Ch**
Line 7400E	**6500N -**	**6300N**	**R1/RD2**
		2013 to date:	10.775 km

Crew: G.Lafortune,T.Gallant,P.Guimond,R.Sinclair,R.Lahaye,B.Dingwall,D.Pittman

Date	Rate - Production		Comments
February 07	AL-6		Six men out to Foy North - ~90km, 1hr45min trip. Finish Loops 1461 and 1463. Back at 19:15.

Crew: G.Lafortune,T.Gallant,P.Guimond,R.Sinclair,R.Lahaye,D.Pittman

Date	Rate - Production		Comments
February 08	0.5P(2/2)-6 0.5D(2/2)-6	675m	Move gear into the commom transmitter site, run leads from the 2 loops and set up the 2 transmitters. Start surveying by 12:30 and read until 16:15. Loop break at the end of the day. One man breaks trail and flags in west side of Loop 1462. Back at 18:30.

Loop 1461		**S1-Tx3**	**4.0909Hz_12Ch**
Loop 1463		**S2-Tx4**	**2.0455Hz_12Ch**
Line 3600N	**6125E -**	**6475E**	**R5/RD1**
Line 3850N	**6100E -**	**6775E**	**R2/RD2**
		Foy North to date:	0.675 km
		2013 to date:	11.450 km

Crew: G.Lafortune,T.Gallant,P.Guimond,R.Sinclair,R.Lahaye,D.Pittman

Date	Rate - Production	Comments
February 09	P(2/2)-6 1800m	Fix loop break first thing in the morning. Start surveying by 11:00. Re-read section of Line 3600N surveyed with noisy RD1 coil. Coil P1 preamp battery dies at 15:30. Line 3600N finished with R2/RD2 at 16:35. One man breaks trail and flags in part of the south side of Loop 1462. Back at 19:30. Gerry has his sore arm checked out by a doctor.

Loop 1461		**S1-Tx3**	**4.0909Hz_12Ch**	
Loop 1463		**S2-Tx4**	**2.0455Hz_12Ch**	
Line 3600N	**6125E -**	**6900E**	**R5/P1**	
Line 3600N	**6900E -**	**7350E**	**R2/RD2**	
Line 3850N	**6775E -**	**7350E**	**R2/RD2**	
	Foy North to date:		2.475 km	
	2013 to date:		13.250 km	

Crew: T.Gallant,P.Guimond,R.Sinclair,R.Lahaye,B.Dingwall,D.Pittman

February 10	P(2/2)-6 1125m	Read L3350N with two Rxs, starting at 10:25, finishing at 14:40. One man lays south side of Loop 1462. Move gear into the commom transmitter site for Loops 1462/1463 at the end of the day. Back at 17:30. Gerry takes a day off to rest his sore elbow.

Loop 1461		**S1-Tx3**	**4.0909Hz_12Ch**
Loop 1463		**S2-Tx4**	**2.0455Hz_12Ch**
Line 3350N	**6100E -**	**6675E**	**R5/P1**
Line 3350N	**6675E -**	**7225E**	**R2/RD2**
	Foy North to date:		3.600 km
	2013 to date:		14.375 km

Crew: T.Gallant,P.Guimond,R.Sinclair,R.Lahaye,B.Dingwall,D.Pittman

February 11	L(2/2)5	Five men out to Foy North. Finish setting up the new transmitter site and set up R1/RD2 at L3850N/6350E to monitor Tx#6 powering Loop 1463 (S2). Finish laying Loop 1462 and pick up the south side of Loop 1461 which lies on survey line 4350.. Also pick up ~600m of wire along the western side. Back at 18:00. Gerry takes a day off to rest his sore elbow.

Crew: T.Gallant,P.Guimond,R.Sinclair,R.Lahaye,D.Pittman

February 12	P(2/2)-7 2500m	Control Unit #4 cannot start up in the morning. Switch to C.U.#6/Tx#6. which delays surveying until 11:30. Two men spend the day breaking trail to the northern loops and the east side of the grid. R1 is set up to take continuous readings with the new coil P2. Back at 19:00.

Loop 1462		**S1-Tx3**	**4.0909Hz_12Ch**
Loop 1463		**S2-Tx6**	**2.0455Hz_12Ch**
Line 4100N	**6100E -**	**7300E**	**R2/RD2**
Line 4850N	**6100E -**	**7300E**	**R5/P1**
	Foy North to date:		6.100 km
	2013 to date:		16.875 km

Crew: G.Lafortune,T.Gallant,P.Guimond,R.Sinclair,R.Lahaye,B.Dingwall,D.Pittman

Date	Rate - Production		Comments
February 13	P(2/2)-7	2500m	Finish reading the two remaining lines of the southern grid, finishing at 16:00. Two men lay 2 1/2 sides of Loop 1459. R1 is set up to take continous readings with coil RD1. Back at 18:30.

Loop 1462			**S1-Tx3**	**4.0909Hz_12Ch**
Loop 1463			**S2-Tx6**	**2.0455Hz_12Ch**
Line 4350N	**6100E -**	**7300E**		**R2/RD2**
Line 4600N	**6100E -**	**7300E**		**R5/P1**
	Foy North to date:			8.600 km
	2013 to date:			19.375 km

Crew: G.Lafortune,T.Gallant,P.Guimond,R.Sinclair,R.Lahaye,B.Dingwall,D.Pittman

February 14	P(2/1)-7	2000m	Read L6350E and L6600E from Loop 1463, starting at 10:35, finishing at 15:00. Two men pick up Loop 1462. Back at 17:15.

Loop 1463			**S2-Tx6**	**2.0455Hz_12Ch**
Line 6350E	**3100N -**	**4100N**		**R5+R2**
Line 6600E	**3100N -**	**4100N**		**R2+R5**
	Foy North to date:			10.600 km
	2013 to date:			21.375 km

Crew: G.Lafortune,T.Gallant,P.Guimond,R.Sinclair,R.Lahaye,B.Dingwall,D.Pittman

February 15	L(2/2)-6	-	Two men pick all Loop 1463 (S2). Four men finish laying Loop 1459 and lay two sides of Loop 1460. Back at 18:00.

Crew: G.Lafortune,T.Gallant,P.Guimond,R.Sinclair,R.Lahaye,D.Pittman

February 16	L(2/2)-6	-	Two men travel to the Trill property to pick up the remaining two sides of Loop 1352. Four men finish laying Loop 1460 at Foy North and set up two transmitter sites in preparation for surveying tomorrow. Back at 17:00.

Crew: G.Lafortune,T.Gallant,P.Guimond,R.Sinclair,R.Lahaye,D.Pittman

February 17	P(2/2)-7	2450m	Move gear into the two transmitter sites and read the first two lines of the northern grid, starting at 11:15, finishing at 16:10. One man picks up the remaining two sides of Loop 1461. Back at 18:15.

Loop 1460			**S1-Tx3**	**4.0909Hz_12Ch**
Loop 1459			**S2-Tx6**	**2.0455Hz_12Ch**
Line 7100N	**7800E -**	**9000E**		**R2/RD2**
Line 7350N	**7800E -**	**9050E**		**R5/P1**
	Foy North to date:			13.050 km
	2013 to date:			23.825 km

Crew: G.Lafortune,T.Gallant,P.Guimond,R.Sinclair,R.Lahaye,B.Dingwall,D.Pittman

Date	Rate - Production		Comments
February 18	P(2/2)-7	2500m	Finish reading the remaining two lines of the northern grid. One man breaks trail for better access for wire pickup. Back at 18:30.

Loop 1460		**S1-Tx3**	**4.0909Hz_12Ch**	
Loop 1459		**S2-Tx6**	**2.0455Hz_12Ch**	
Line 6600N	**7800E -**	**9050E**		**R5/P1**
Line 6850N	**7800E -**	**9050E**		**R2/RD2**
	Foy North to date:		15.550 km	
	2013 to date:		26.325 km	

Crew: G.Lafortune,T.Gallant,P.Guimond,R.Sinclair,R.Lahaye,B.Dingwall,D.Pittman

February 19	n/c-5	-	Re-read two lines from Loop 1459 (S2).
	AL-2		Two men out to Wisner to check out access. Lay 1 1/2 sides of Loop 1453. Back at 18:00.

Loop 1459		**S2-Tx6**	**2.0455Hz_12Ch**	
Line 6850N	**7800E -**	**9050E**		**R2/RD2**
Line 7100N	**7800E -**	**9000E**		**R1/P1**
	Foy North to date:		15.550 km	
	2013 to date:		26.325 km	

Crew: G.Lafortune,T.Gallant,P.Guimond,R.Sinclair,R.Lahaye,B.Dingwall,D.Pittman

February 20	AL-6	-	Six men out to Foy North to pick up all of Loop 1459 and Loop 1460 and the remaining gear at the transmitter site. Bring skidoos back to the office. Back at 15:30.

Crew: G.Lafortune,T.Gallant,P.Guimond,R.Sinclair,R.Lahaye,D.Pittman

February 21	S(AL)?-6	-	Freezing rain during the night made the roads hazardous. Crew stayed home as weather was not improving.

This completed the Foy North UTEM5 Survey.
The crew continue to work for Wallbridge on another property in the Sudbury District.

LEGEND

P(n/n)-x	Surface Production	(# of Rx/Tx) - # of personnel
D(n/n)-x	Down	(# of Rx/Tx) - # of personnel
AL(n/n)-x	Advance Looping	(# of Rx/Tx) - # of personnel
L(n/n)-x	Looping	(# of Rx/Tx) - # of personnel
S(n/n)-x	Standby	(# of Rx/Tx) - # of personnel
n/c(n/n)-x	no charge	(# of Rx/Tx) - # of personnel

Appendix C

The UTEM SYSTEM
- UTEM5 -

- Introduction to UTEM5 -

The UTEM System

UTEM Data Reduction and Plotting Conventions

Data Presentation

UTEM5

The UTEM5 system collects 3-component data from up to 3 transmitter loops - three coupling angles - simultaneously - translating to superior target definition and improved detection of all targets. In addition:

- UTEM5 precision is at least an order of magnitude better than the UTEM3 surface system. Our current estimate is that the UTEM5 surface coil precision will prove to be better by a factor of 10-40 times. Improved sensitivity equals better depth penetration. It also translates to significantly shorter stacking times or alternatively, better precision for the same stacking time. The improvement in precision is greater at lower frequencies (<4Hz).
- UTEM5 surface equipment has a greater advantage at low frequency - <4Hz. The UTEM5 technical advantage is greatest in the search for targets that are deeper and more highly-conductive when (very) large-loops (geometry of the applied field is simpler). UTEM5, however, will be found to be extremely useful in numerous other applications.
- Figure C1 shows the UTEM5 channels when 12Ch sampling is selected. Channels are spaced in a binary, geometric progression across each half-cycle of the received waveform - giving just over 3 channels per decade. Ch**12**, the earliest channel, is (~)$1/2^{12}$ of the half-cycle wide. Ch**1**, the latest channel, is (~)$1/2^{1}$ of the half-cycle wide. The use of UTEM4/5 Transmitters and UTEM5 Receivers allows for the implementation of:
  - Ch0 - a narrow Ch later than Ch1. Making Ch0 normalization an option.
  - 3 timing channels - Ch13/14/15 (Figure C1) for 12Ch UTEM5 The timing Chs improve the operator's ability to monitor Rx/Tx(s) synchronisation and allow for more precise phase correction/improved deconvolution.
- the UTEM5 rejection of non-survey frequencies including powerline noise is far superior to previous UTEM systems. One of the many features of the UTEM5 system that add up to the improved rejection is the option of tapered channel sampling (Figure C1).

The ability to simultaneously collect higher-precision, 3-component data from multiple transmitters (coupling angles) at low frequency is really what the UTEM5 system is designed for - to be efficient and precise. To date UTEM5 surveys using multiple transmitters operating at base frequencies as low as 0.25Hz have confirmed that both the sensitivity of the system and the rejection of non-survey frequencies (powerline noise etc.) is far superior to previous UTEM systems.

In terms of BH operations, UTEM5 Rx coupled with our existing BHUTEM system allows for the collection of 3-component data from multiple transmitters simultaneously. The precision improvement may not be that noticeable near surface - in high field strengths. But at depth - low field strength - we estimate up to a factor of 5 improvement in precision. That improvement, and the multiple transmitter option, will add up to a considerable increase in the ability to resolve deep, highly-conductive targets - allowing for the detection of smaller targets and targets more distant from the hole.

The UTEM SYSTEM

UTEM uses a large, fixed, horizontal transmitter loop as its source. Loops range in size from 300x300m to 4000x4000m and larger. Smaller loops are generally used over conductive terrain or for shallow sounding work. Larger loops are used over resistive terrain or where the ability of the system to resolve a response can be aided by the simpler geometry of the applied field. The UTEM receiver(s)/transmitter(s) are typically synchronised at the beginning of a survey day and the Rx(s) operates remotely after that point. The Rx/Tx clocks are sufficiently accurate to maintain synchronisation.

Measurements are routinely taken to a distance of twice the loop dimensions and can be continued further depending on the local noise levels. Lines are typically surveyed:

- off-loop: out from an edge of the loop when the target is steeply dipping.
- inside-the-loop: when the target is ~flat-lying

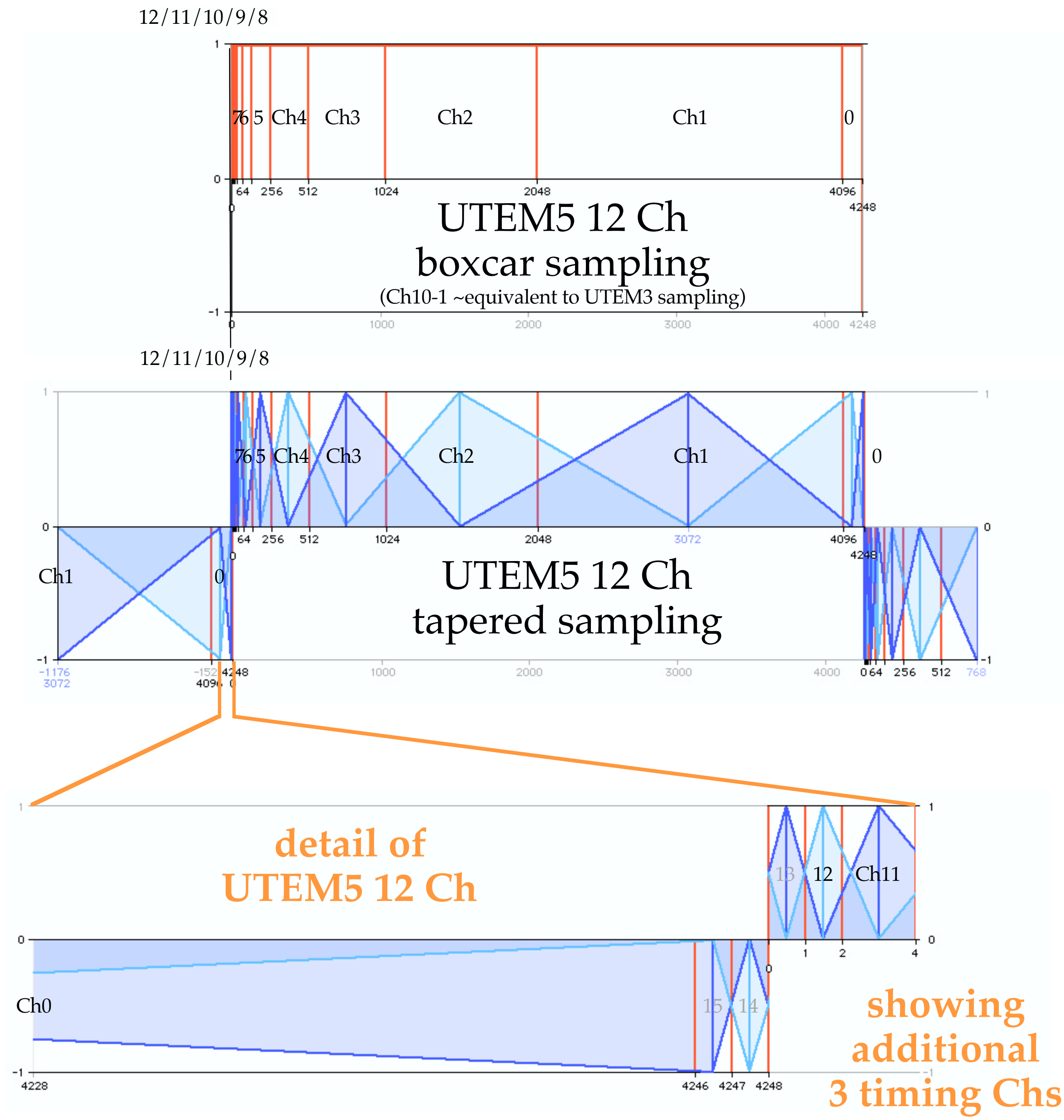
BHUTEM - the borehole version of UTEM -surveys have been carried out to depths up to 3000+ metres.

System Waveform

A UTEM transmitter passes a low-frequency current of a precisely regulated triangular waveform through the transmitter loop. The frequency can be set to any value within the operating range of the transmitter. A target frequency for each UTEM transmitter and the local powerline frequency are entered. The actual frequencies used are selected to be as close to the target frequencies as possible while optimising rejection of the other transmitters and powerline noise (60 Hz in North America/generally 50Hz elsewhere). Since the receiver coils responds to the time derivative of the magnetic field, the UTEM system really "sees" the step response of the ground. UTEM is the only time domain system which measures the step response of the ground. All other TDEM systems to date transmit a modified step current and "see" the (im)pulse response of the ground at the receiver. In practice, the UTEM waveform is filtered - pre-whitened - to optimize signal-to-noise. Deconvolution techniques produce the equivalent to the conceptual “step response” at the receiver.

System Sampling

The UTEM receiver measures the time variation of the magnetic field in the direction of the receiver coil at (typically) channels or delay times. UTEM channels are spaced in a binary, geometric progression across each half-cycle of the received waveform. Channel **12 (or Ch10)** is the earliest channel and it is $1/2^{12}$ of the half-cycle wide. Channel **1**, the latest channel, is $1/2^{1}$ of the half-cycle wide (see UTEM3 10Ch figure below and Figure C1). The measurements obtained for each of channels are accumulated over many half-cycles. The final channel value stored is the average of the measurements. The number of half-cycles averaged depends on the signal strength and the ambient noise.

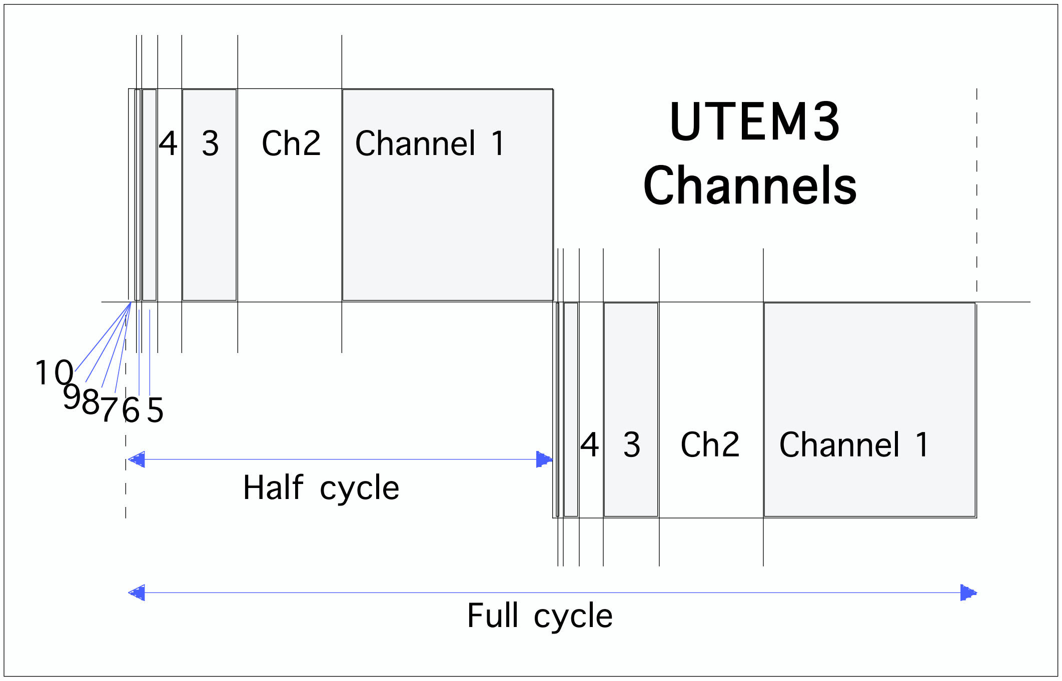


Notes:
- boxcar sampling equivalent to UTEM3 sampling
- tapered sampling: improved powerline rejection
- the use of UTEM4/5 Transmitters and UTEM5 Receivers improves syncing/timing and allows for the implementation of:
  - Ch0 - a narrow Ch after (later than) Ch1.
    - Ch0 normalization is an option
  - 3 timing channels - Ch13/14/15 shown for 12Ch UTEM5
    - improved ability to monitor Rx/Tx(s) synchronisation.
    - improved deconvolution/phase correction.

LAMONTAGNE GEOPHYSICS LTD
GEOPHYSIQUE LTEE

UTEM5 12Ch Sampling
boxcar/tapered options

Figure C1



System Configurations

During a surface UTEM5 survey the 3-component receiver coil is oriented along the survey line and the coil orientation is determined from the data from a set of three orthogonal accelerometers in the coil in combination with the GPS coordinates of the line. The 3 measured (raw) components of the magnetic field - uvw - are oriented and resolve into:

- u the horizontal transverse component ~ Hy = HT(ransverse)
- v the vertical component ~ Hz = HL(ine)
- w the horizontal in-line component ~ Hz = HZ

Note that the UTEM System is also capable of measuring the electric field, The two horizontal components,Ex and Ey can be measured using a dipole sensor comprised of two electrodes. E-field measurements are generally used for outlining resistive features to which the magnetic field is not very sensitive.

BHUTEM4 surveys employ a 3-component receiver coil - longer and smaller in diameter than the surface coil. The borehole receiver coil forms part of a down-hole receiver package used to measure the axial (along-borehole) and the two transverse components of the magnetic field. Due to the distance between coil and receiver in borehole surveys the signal must be transmitted up to the receiver. In BHUTEM the signal is transmitted to surface digitally using a kevlar-reinforced fibre-optic cable as a data link. Using a fibre-optic link avoids signal degradation problems and allows surveying of boreholes to 3000+m. The cable is also very light - the specific gravity is ~1.0 - making the cable handling hardware quite portable.

The EM Induction Process

Any time-varying transmitted ("primary") field induces current flow in conductive regions of the ground below and around the transmitter loop (i.e. in the earth or "half-space"). This current flow produces a measurable EM field, the secondary field, which has an inherent "inertia" that resists the change in primary field direction. This "inertial" effect is called self-inductance; it limits the rate at which current can change and is only dependent on the shape and size of a conductive path.

It takes a certain amount of time for the transmitted current flow to be redirected (reversed) and re-established to full amplitude after the rate-of-change of the primary field reverses direction. This measurable reversal time is characteristic for a given conductor. In general, for a good conductor this time is greater than that of a poor conductor. This is because in a good conductor the terminal current level is greater, whereas its rate of change is limited by the inductance of the current path. The time-varying current causes an EMF in the sensor proportional to the time derivative of the current. This EMF decays with time - it vanishes when the reversal is complete - and the characteristic time of the EMF decay as measured by the sensor is referred to as the **decay time** of the conductor.

The large-scale current which is induced in the half-space by the primary field produces the half-space response as seen in typical UTEM profiles. This background response is influenced by the finite conductivity of the surrounding rock. Other currents may be induced in locally more conductive zones (conductors) that have longer decay times than the half-space response. The responses of these conductors are superimposed upon the background response. The result is that the UTEM receiver detects:

- the primary field waveform, a square-wave
- the half-space (background) response of the surrounding rock
- a slight-to-large response due to any conductors present.

The result is that in the presence of conductors the primary field waveform is substantially (and anomalously) distorted.

UTEM DATA REDUCTION and PLOTTING CONVENTIONS

The UTEM data as it appears in the data files is in total field, continuously normalized form. In this form, the magnetic field data collected by the receiver is expressed as a % of the calculated primary magnetic field vector magnitude at the station. These are total field values - the UTEM system measures during the "on-time" and as such samples both the primary and secondary fields.

For plotting purposes, the reduced magnetic field data (as it appears in the data file) are transformed to other formats as required. The following is provided as a description of the various plotting formats used for the display of UTEM data. A plotting format is defined by the choice of the *normalization* and *field type* parameters selected for display.

NORMALIZATION

UTEM results are always expressed as a % of a normalizing field at some point in space.

In **continuously normalized** form the normalizing factor (the denominator) is the magnitude of the computed local primary field vector. As the primary exciting field magnitude diminishes with increasing distance from the transmitter loop the response is continuously amplified as a function of offset from the loop. Although this type of normalization considerably distorts the response shape, it permits anomalies to be easily identified at a wide range of distances from the loop.

Note: An optional form of continuous normalization permits the interpreter to normalize the response to the magnitude of the primary field vector at a fixed depth below each station. This is useful for surface profiles which come very close to the loop. Without this adjustment option, the normalizing field is so strong near the loop that the secondary effects become too small in the presence of such a large primary component. In such circumstances interpretation is difficult, however; by "normalizing at some depth" the size of the normalizing field, near the loop in particular, is reduced and the resulting profile can be more effectively interpreted to a very close distance from the transmitter wire. The usual choice for the depth is the estimated target depth.

In **point normalized** form the normalizing factor is the magnitude of the computed primary field vector at a single point in space. When data is presented in this form, the point of normalization is displayed in the title block of the plot. Point normalized profiles show the non-distorted shape of the field profiles. Unfortunately, the very large range in magnitude of anomalies both near and far from the loop means that small anomalies, particularly those far from the loop, may be overlooked on this type of plot in favour of presenting larger amplitude anomalies.

Note: Selecting the correct plot scales is critical to the recognition of conductors over the entire length of a point normalized profile. Point normalized data is often used for interpretation where an analysis of the shape of a specific anomaly is required. Point normalized profiles are therefore plotted selectively as required during interpretation. An exception to this procedure occurs where surface data has been collected entirely inside a transmitter loop. The primary field does not vary greatly inside the loop, therefore, the benefits of continuous normalization are not required in the display of such results. In these cases data is often point normalized to a fixed point near the loop centre.

FIELD TYPE

The type of field may be either the **Total field** or the **Secondary field.** In general, it is the secondary field that is most useful for the recognition and interpretation of discrete conductors.

UTEM Results as Secondary Fields

Because the UTEM system measures during the transmitter on-time the determination of the secondary field requires that an estimate of the primary signal be subtracted from the observations. Two estimates of the primary signal are available:

1) UTEM Channel 0

One estimate of the primary signal is the value of the latest time channel observed by the UTEM System, Channel 0. When Channel 0 is subtracted from the UTEM data the resulting data display is termed ***Channel 0 Reduced***. This reduction formula is used in situations where it can be assumed that all responses from any target bodies have decayed away by the latest time channel sampled. The Channel 0 value is then a reasonable estimate of the primary signal present during Channels 1....10/12.

In practice the ***Channel 0 Reduced*** form is most useful when the secondary response is very small at the latest delay time. In these cases Channel 0 is indeed a good estimate of the primary field and using it avoids problems due to geometric errors or transmitter loop current/system sensitivity errors.

2) Calculated primary field

An alternate estimate of the primary field is obtained by computing the primary field from the known locations of the transmitter loop and the receiver stations. When the computed primary field is subtracted from the UTEM data the resulting data display is termed ***Primary Field Reduced*** .

The calculated primary field will be in error if the geometry is in error - mislocation of the survey stations or the loop vertices - or if the transmitter loop current/system sensitivity is in error. Mislocation errors from loop/station geometry may give rise to very large secondary field errors depending on the accuracy of the loop and station location method used. Transmitter loop current/system sensitivity error is rarely greater than 2%. ***Primary Field Reduced*** is plotted in situations where a large Channel 0 response is observed. In this case the assumption that the Channel 0 value is a reasonable estimate of the primary field effect is not valid.

Note: When UTEM data is plotted in the ***Channel 0 Reduced*** form the secondary field data for Channel 0 itself are always presented in ***Primary Field Reduced*** form and are plotted on a separate axis. This plotting format serves to show any long time-constant responses, magnetostatic anomalies and/or geometric errors present in the data.

Mathematical Formulations

In the following expressions:

$\mathbf{Rn_j}$ is the result plotted for the n^{th} UTEM channel,

$\mathbf{R1_j}$ is the result plotted for the latest-time UTEM channel, Channel 0,

$\mathbf{Chn_j}$ is the raw component sensor value for the n^{th} channel at station j,

$\mathbf{Ch1_j}$ is the raw component sensor value for Channel 0 at station j,

$\mathbf{H^P_j}$ is the computed primary field component in the sensor direction

$|\mathbf{H^P}|$ is the magnitude of the computed primary field at:
- a fixed station for the entire line (point normalized data)
- the local station of observation (continuously normalized data)
- a fixed depth below the station (continuously normalized at a depth).

Channel 0 Reduced Secondary Fields : Here, the latest time channel, Channel 0 is used as an "estimate" of the primary signal and channels 2-10 are expressed as:

$$Rn_j = (Chn_j - Ch1_j) / |H^P| \quad x\ 100\%$$

Channel 0 itself is reduced by subtracting a calculation of the primary field observed in the direction of the coil, $\mathbf{H^P}$ as follows:

$$R1_j = (Ch1_j - H^P{}_j) / |H^P| \quad x\ 100\%$$

Primary Field Reduced Secondary Fields **:** In this form all channels are reduced according to the equation used for Channel 0 above:

$$Rn_j = (Chn_j - H^P{}_j) / |H^P| \quad x\ 100\%$$

This type of reduction is most often used in cases where very good geometric control is available (leading to low error in the calculated primary field, $\mathbf{H^P{}_j}$) and where very slowly decaying responses result in significant secondary field effects remaining in Channel 0 observations.

UTEM Results as a Total Field

In certain cases results are presented as a % of the **Total Field**. This display is particularly useful, in borehole surveys where the probe may actually pass through a very good conductor. In these cases the shielding effect of the conductor will cause the observed (total) field to become very small below the intersection point. This nullification due to shielding effects on the total field is much easier to see on a separate ***Total Field*** plot. In cases where the amplitude of the anomalies relative to the primary field is small, suggesting the presence of poorly conductive bodies, the ***Total Field*** plot is less useful.

The data contained in the UTEM reduced data files is in ***Total Field***, continuously normalized form if:

$$Rn_j = Chn_j / |H^P| \ x\ 100\%$$

DATA PRESENTATION

All UTEM5 survey results are presented as profiles in an appendix of this report. For BHUTEM surveys the requisite Vectorplots, presented as plan and section views showing the direction and magnitude of the calculated primary field vectors for each transmitter loop, are presented in a separate appendix.

The symbols used to identify the channels on all plots (Appendix A) as well as the mean delay time for each channel (3.750Hz/10Ch) is shown in the following table (for details of frequencies used in this survey see figures in the report):

outside frequency		3.750000 Hz	
	period	0.26667 s	
(5MHz clock)	half period	666666	0.2μs cycles
(narrowest Ch=1unit)	XNP	**1062**	half-period
	width of unit channel	1.255493e-4 s	
	width of unit channel	125.5493 μs	
(symbol) channel	midpoint of ch (microseconds)	tapered Ch begins - unit -	tapered Ch ends - unit -
timing Ch11	62.77	-0.5	1.5
10	188.32	0.5	3
9	376.65	1.5	6
8	753.30	3	12
7	1506.59	6	24
6	3013.18	12	48
5	6026.37	24	96
4	12052.73	48	192
3	24105.47	96	384
2	48210.93	192	768
1	96421.86	384	1042
0	130822.37	768	1060.5
timing Ch13	133145.03	1042	1061.5
timing Ch12	133270.58	1060.5	1062+0.5

Note: With UTEM5 there is the option of expanding the 10Ch (+Ch0) sampling to earlier time Chs - rountinely to 12Chs. There are tradeoffs involved in measuring additional earlier-time Chs - stacking time can be greatly increased by adding too many narrow(er) Chs. That said, when operating at a frequency of ~4Hz or lower, 2 Chs can be added without incurring significant penalty. 12Ch (+Ch0) sampling @4Hz brings the earliest delay time (Ch12) to 47.08μs - the equivalent of the earliest delay time when operating @15Hz with 10Ch sampling.

Notes on Standard plotting formats:

Channel 0 Reduced form - The data are typically displayed on three separate axes. This permits scale expansion and allows for the accurate determination of signal decay rates. The standard configuration is:

Top axis - early time channels and a repeat of the latest channel from the centre axis for comparison are plotted at a reduced scale.

Center axis - intermediate-to-late-time channels are plotted on the centre axis using a suitable scale.

Bottom axis - the latest time channel (Ch0) is plotted alone in ***Primary Field Reduced*** form using the same scale as the center axis.

UTEM data in ***Primary Field Reduced*** form:

All channels are displayed on a single axis. Typically they are plotted using peak-to-peak scale values of up to -200% - 200%.

BHUTEM4 data plotted as total field profiles:

The 3 components are expressed directly as a percentage of the ***Total Field***. Each three-axis data plot shows peak values of up to 100%.
Note: the measured total field value is plotted as a polarity-reference tool.

BHUTEM data plotted as secondary field profiles:

Check the title block of the plot to determine if the data is in:
Channel 0 Reduced form or in ***Primary Field Reduced*** form.
Note: the measured total field value is plotted as a polarity-reference tool.

Appendix D

Note on sources of anomalous Ch0

Note: The data presented in this report are *channel 0 normalized* - the latest time chanel plotted is Ch0. Traditionally in UTEM data the latest time channel plotted has been Ch1.

Note on sources of anomalous Ch0

This section outlines the possible sources of anomalous channel 0 which is not correlated to the Ch1-10/12 profiles on the upper axes of a *channel 0 normalized* plot.

1) **Mislocation of the transmitter loop and/or survey stations**

Mislocating the transmitter loop and/or the survey stations results in an error in the calculated primary field at the station and appears as an anomalous Ch0 value not correlated to *channel 0 normalized* Ch1-10/12. The effect is amplified near the loop front. This can be seen in the profiles - the error in Ch0 generally increases approaching the loop. As a rule a 1% error in measurement of the distance from the loop will result in, for outside-the-loop surveys, an error in the Hz (vertical component) Ch0 of:

- 1% near the loop front (long-wire field varies as $1/r$)
- 3% at a distance from the loop front (dipolar field varies as $1/r^3$)
- 2% at intermediate distances (intermediate field varies as $\sim 1/r^2$)

The in-loop survey configuration generally diminishes geometric error since the field gradients are considerably lower. At the centre of the loop the gradient in the vertical field is essentially zero so it is difficult to introduce geometric anomalies near the loop centre. Near the loop sides and at the closest approach of the lines to the wire mislocation of the loop and the station becomes more critical. Typically loop sides are designed to be >200m from any survey stations.

Errors in elevation result in smaller errors in Hz but they can affect the chainage and accumulate along the line. Erroors in elevation have a stronger affect on the two horizontal components, Hx and Hy.

2) **Magnetostatic UTEM responses**

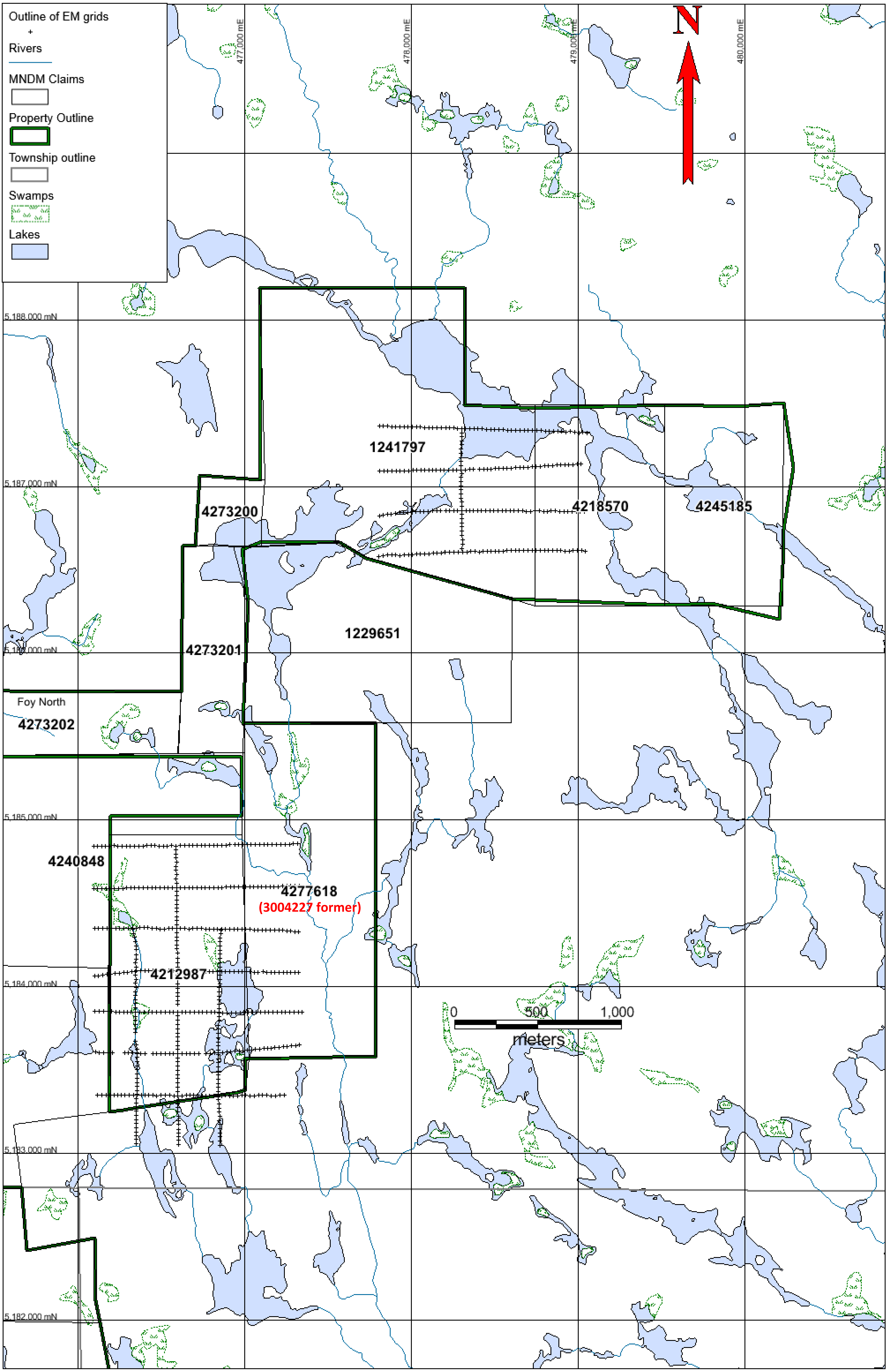
Magnetostatic UTEM responses arise over rocks which generate magnetic anomalies. Such magnetic materials will amplify the total (primary + secondary) field of the UTEM transmitter which is sensed by the receiver coil. The secondary field is generated by subtracting a computed primary which does not include magnetic effects. This can give rise to strong and abrupt channel 0 anomalies when the source of the magnetics is at or near surface. This is the case in a number of places on these grids. UTEM magnetostatic anomalies differ from DC magnetic anomalies in the following three major ways:

1) In the case of DC magnetics the field is dipping N and is very uniform over the scale of the survey area while the UTEM field in-loop is vertical and it is stronger near the loop edges.
2) Most aeromagnetics are collected as total field while with UTEM we measure components - HZ, Hx and Hy..
3)DC magnetic instruments observe the total magnetization of the causative body which is due to its susceptibility as well as any remnant magnetization. An AC method such as UTEM will not respond to the remnant portion of the magnetization.

The larger amplitude of the UTEM Ch0 response is explained by the fact that the UTEM primary field is often more favourably coupled (magnetostatically speaking) to magnetic mineralization as compared to the earths field. Another factor could be the presence of a reverse remnant component to the magnetization.
Note that positive (*negative*) magnetic anomalies will cause:
- positive (*negative*) Ch0 anomalies in data collected outside the loop
- negative (*positive*) Ch0 anomalies in data collected inside the loop

3) **Extremely good conductors**

An extremely good conductor will be characterized by a time constant much longer than the half-period (@ 30Hz >>16ms). This will give rise to an anomalous Ch0 which is not correlated to the Ch1-10/12 data plotted on the upper axes of a *channel 0 normalized* plot.


Outline of EM grids
Rivers
MNDM Claims
Property Outline
Township outline
Swamps
Lakes
477,000 mE
478,000 mE
479,000 mE
480,000 mE
N
5,188,000 mN
5,187,000 mN
5,186,000 mN
5,185,000 mN
5,184,000 mN
5,183,000 mN
5,182,000 mN
1241797
4273200
4218570
4245185
1229651
4273201
Foy North
4273202
4240848
4277618
(3004227 former)
4212987
0
500
1,000
meters