

A Review of B-Horizon Soil Geochemical Survey Results from Cascadero Copper Properties, Swayze Greenstone Belt and Recommendations for Further Work

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EXECUTIVE SUMMARY

The survey has successfully demonstrated that strong partial digestions on B-Horizon soil samples collected from variable depths can isolate precious and base metal anomalies that are likely related to glacially dispersed particulate sulphide, silicate and oxide mineral particles in the soil. Commodity element anomalous responses on the survey grids include (1) Ag-As-Mo-Zn, (2) Ni-Cu, and (3) Au-Ag-As as single sample, linear and ovoid anomalous responses and these anomalies provide focused targets for follow-up exploration. The presence of multi-sample anomalies on the property is not readily apparent however this was not the general aim of the program which was to define follow-up anomalies that could be re-visited with additional soil geochemical surveys and geophysics in order to define drill targets. The recognition of the multi-sample anomaly at Fingal North and Fingal South should be considered as highly significant.

The quality of analytical data is generally good however scatter/variance in the B-Horizon dataset is apparent. This is due to the nature of the particulate mineral species present in the B-Horizon soil samples and the difficulty in acquiring a homogeneous sample in the field and in the laboratory during the analytical phase of the program. Variability of analyses is common at or close to the lower limit of detection but generally the analytical data is of good quality and not a hindrance to the recognition of *bona fide* base and precious metal anomalies. Duplicate field samples were not collected but should be considered as an important part of any subsequent surveys. Sampling materials collected for B-Horizon analysis are effective and appropriate sample media for the Swayze Recon survey however B-Horizon sampling materials collected for analysis should avoid the incorporation of organic material into the sample.

Prior to undertaking any geophysical surveys or drill programs where the targets are based, in part, on B-Horizon soil geochemical data it is suggested that a review of the glacial history of the survey area be undertaken. To assist in the alleviation of defining drill targets based in part on glacially dispersed materials and post-depositional modification of these anomalies by

hydromorphic processes a component of Mobile Metal Ions soil geochemistry should be incorporated into the follow-up program. Prior to diamond drill testing, the B-Horizon and any other geochemical datasets should be integrated with all available geophysical and geological survey data so that multivariate drill targets can be determined. There are numerous follow-up geochemical anomalies that have been detected by the Swayze Recon survey and the single point, linear and multi-sample ovoid anomalies should be expanded and/or truncated by additional soil geochemical surveys to define and prioritize geochemical targets. Future analytical requests should insist on the reporting of replicate analyses of the analytical blank and standard reference materials. Consistency of analytical protocols should also be standardized.

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INTRODUCTION AND PURPOSE OF THE SURVEY

The Swayze reconnaissance B-Horizon soil geochemical exploration survey undertaken by Cascadero Copper Corp. ("CCD") was designed to assess the various properties for geochemical signatures related to base and precious metal mineralization utilizing traditional B-horizon analysis of soil samples. The approach was not to identify a bona fide follow-up anomaly but to attempt to bring focus to particular areas within a number of townships where detailed soil geochemical and geophysical surveys could be undertaken. It is noted that the geological setting of the properties is prospective for precious and base metals, with potential to host volcanic-, sedimentary- and/or intrusion-hosted magmatic sulphide (Cu-Ni-PGM-Au) mineralization, base metal massive sulphide-type mineralization and structurally-controlled Au mineralization.

Sample collection for this survey was undertaken between December 22, 2011 and February 26, 2012. The invoices for this work are attached to this report.

PROPERTY LOCATION

The properties from which B-Horizon soil samples were collected occur within Benton, Edith, Esther, Fingal, Groves, Hong Kong, Marion and Osway townships. The locations of the properties are given in **Figures 1 to 4**. **Table 1** lists claims information.

Figure 1. Location of Townships sampled for the Swayze Reconnaissance B-Horizon soil geochemical scoping survey (Benton, Edith, Esther, Fingal, Hong Kong, Marion, and Osway). See Figure 2 for Groves Township.

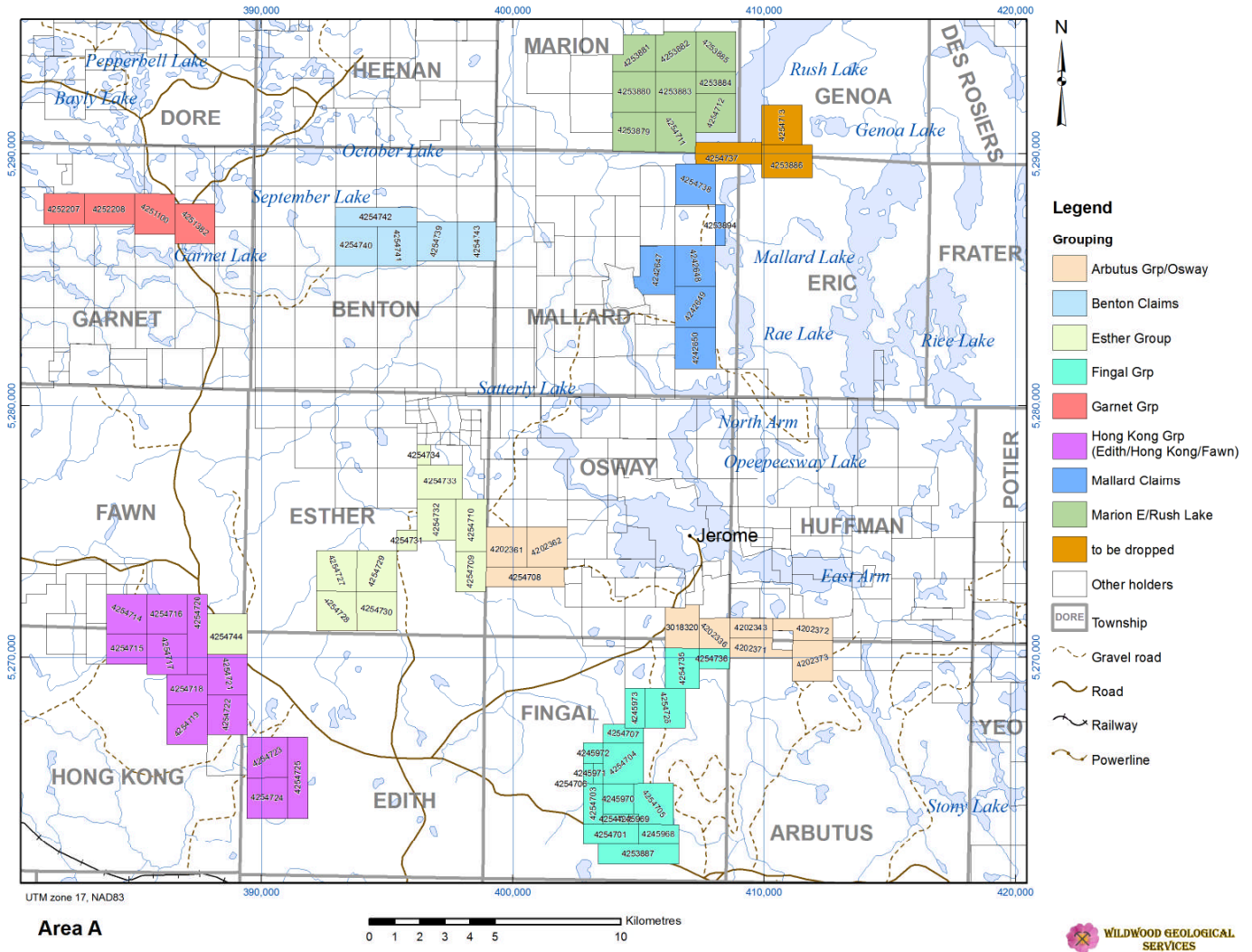


Figure 2. Location of Groves Township in the Swayze Greenstone Belt.

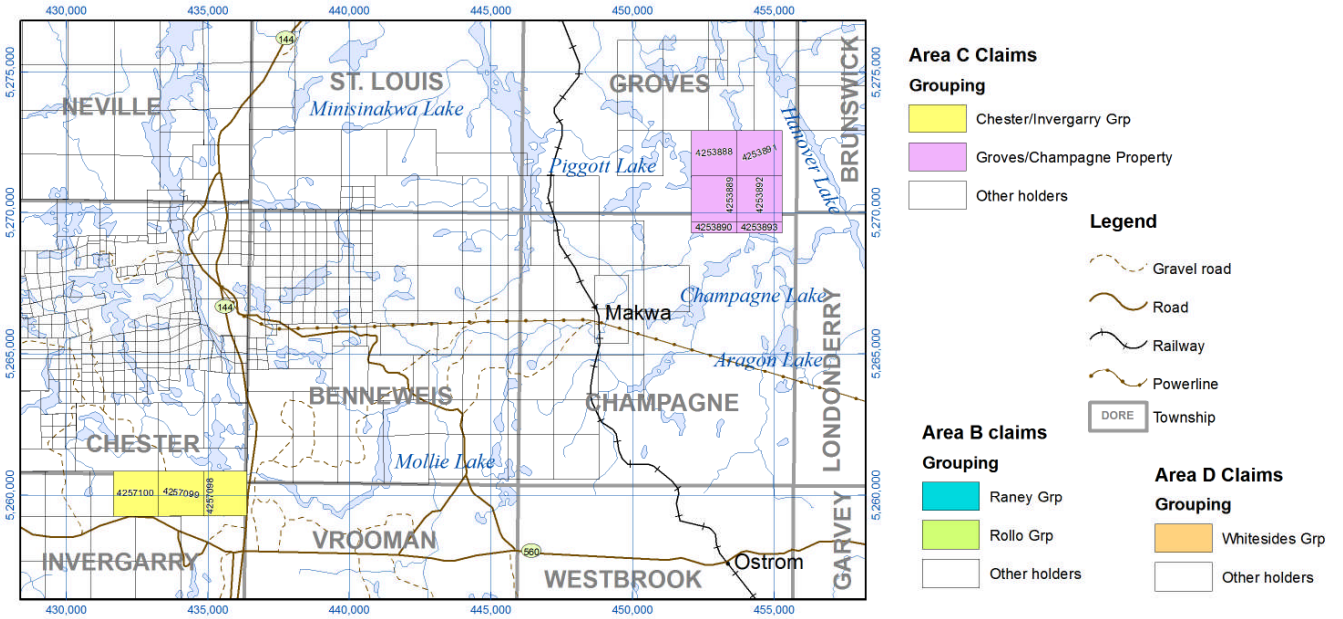


Figure 3. Location of survey areas with detailed sampling sites and nomenclature.

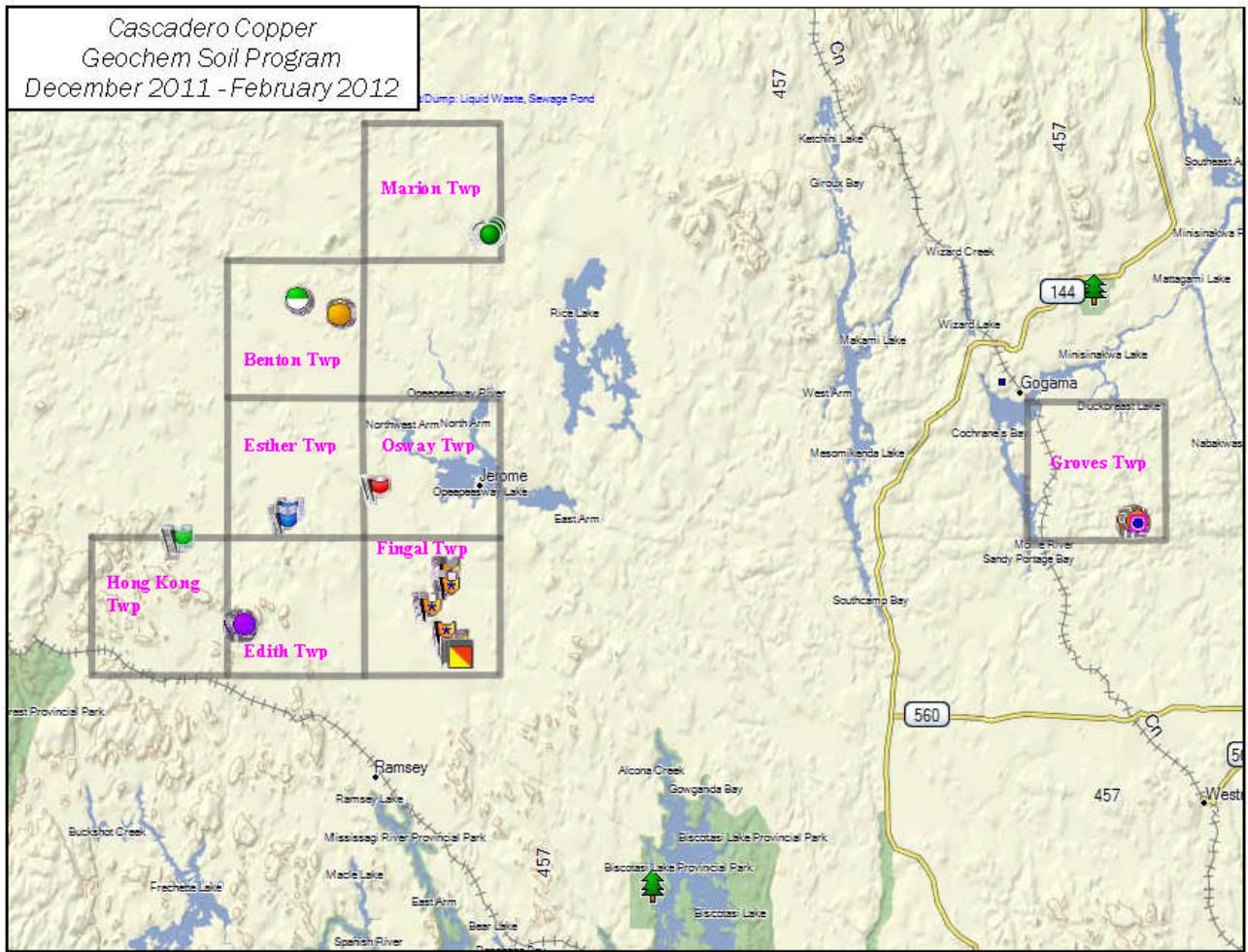


Figure 4. Location of township-based survey areas and survey specifications.

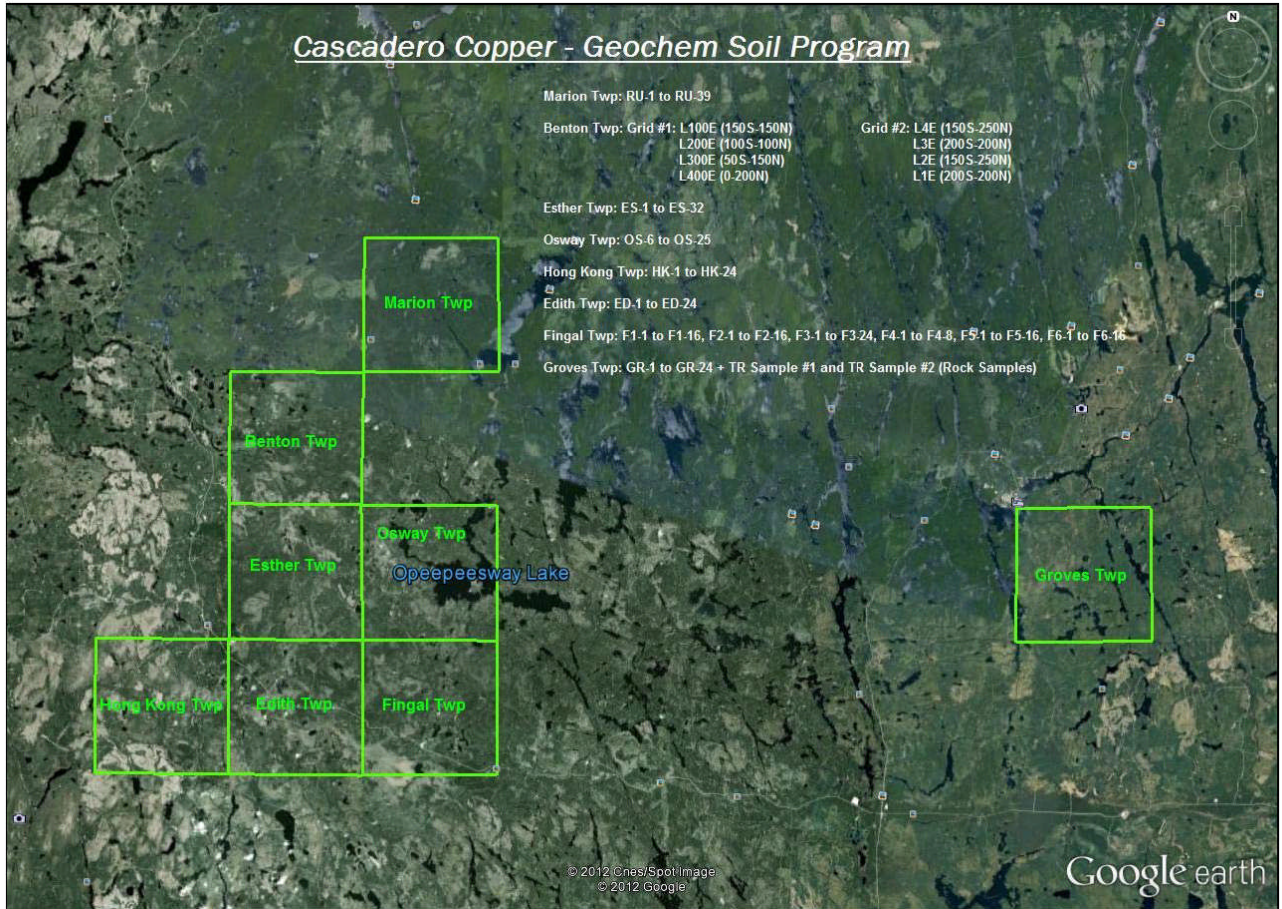


Table 1. Summary of properties/townships in the Porcupine Mining Division from which B-Horizon soil samples were collected (as of May 23rd, 2012).

Township /Area	Client #	Claim #	Recording Date	Claim Due Date	Status	Percent Option	Work Required	Total Applied	Total Reserve	Claim Bank
OSWAY	408311 Cascadero Copper Corp.	4254708	2010-Apr-07	2013-Apr-08	A	100%	\$12,800	\$0	\$2,336	\$0
OSWAY	111562 John Brady	3018320	2007-Jul-13	2013-Jul-13	A	50%	\$1,200	\$24,800	\$0	\$0
OSWAY	111562 John Brady	4202336	2007-Feb-16	2013-Feb-16	A	50%	\$2,800	\$15,200	\$0	\$0
OSWAY	111562 John Brady	4202361	2007-Feb-16	2012-Dec-17	A	50%	\$5,541	\$20,059	\$0	\$0
OSWAY	111562 John Brady	4202362	2007-Feb-16	2012-Dec-17	A	50%	\$5,514	\$20,589	\$0	\$0
BENTON	408311 Cascadero Copper Corp.	4254739	2010-Apr-07	2013-Apr-08	A	100%	\$12,800	\$0	\$0	\$0
BENTON	408311 Cascadero Copper Corp.	4254740	2010-Apr-07	2013-Apr-08	A	100%	\$12,800	\$0	\$0	\$0
BENTON	408311 Cascadero Copper Corp.	4254741	2010-Apr-07	2013-Apr-08	A	100%	\$12,800	\$0	\$0	\$0
BENTON	408311 Cascadero Copper Corp.	4254742	2010-Apr-07	2013-Apr-08	A	100%	\$12,800	\$0	\$0	\$0
BENTON	408311 Cascadero Copper Corp.	4254743	2010-Apr-07	2013-Apr-08	A	100%	\$12,800	\$0	\$0	\$0
ESTHER	408311 Cascadero Copper Corp.	4254709	2010-Apr-07	2013-Apr-08	A	100%	\$9,600	\$0	\$0	\$0
ESTHER	408311 Cascadero Copper Corp.	4254710	2010-Apr-07	2013-Apr-08	A	100%	\$12,000	\$0	\$0	\$0
ESTHER	408311 Cascadero Copper Corp.	4254727	2010-Apr-07	2013-Apr-08	A	100%	\$12,800	\$0	\$0	\$0
ESTHER	408311 Cascadero Copper Corp.	4254728	2010-Apr-07	2013-Apr-08	A	100%	\$12,800	\$0	\$0	\$0
ESTHER	408311 Cascadero Copper Corp.	4254729	2010-Apr-07	2013-Apr-08	A	100%	\$12,800	\$0	\$0	\$0
ESTHER	408311 Cascadero Copper Corp.	4254730	2010-Apr-07	2013-Apr-08	A	100%	\$12,800	\$0	\$0	\$0
ESTHER	408311 Cascadero Copper Corp.	4254731	2010-Apr-07	2013-Apr-08	A	100%	\$3,200	\$0	\$0	\$0
ESTHER	408311 Cascadero Copper Corp.	4254732	2010-Apr-07	2013-Apr-08	A	100%	\$12,800	\$0	\$0	\$0
ESTHER	408311 Cascadero Copper Corp.	4254733	2010-Apr-07	2013-Apr-08	A	100%	\$12,800	\$0	\$0	\$0
ESTHER	408311 Cascadero Copper Corp.	4254734	2010-Apr-07	2013-Apr-08	A	100%	\$1,600	\$0	\$0	\$0
ESTHER	408311 Cascadero Copper Corp.	4254744	2010-May-07	2013-Apr-08	A	100%	\$6,400	\$0	\$0	\$0
GROVES	408311 Cascadero Copper Corp.	4253888	2010-Jun-04	2013-Apr-08	A	100%	\$6,400	\$0	\$0	\$0
GROVES	408311 Cascadero Copper Corp.	4253889	2010-Jun-04	2013-Apr-08	A	100%	\$6,400	\$0	\$0	\$0

GROVES	408311 Cascadero Copper Corp.	4253891	2010-Jun-04	2013-Apr-08	A	100%	\$6,400	\$0	\$0	\$0
GROVES	408311 Cascadero Copper Corp.	4253892	2010-Jun-04	2013-Apr-08	A	100%	\$6,400	\$0	\$0	\$0
EDITH	408311 Cascadero Copper Corp.	4254721	2010-Apr-07	2013-Apr-08	A	100%	\$12,800	\$0	\$0	\$0
EDITH	408311 Cascadero Copper Corp.	4254722	2010-Apr-07	2013-Apr-08	A	100%	\$12,800	\$0	\$0	\$0
EDITH	408311 Cascadero Copper Corp.	4254723	2010-Apr-07	2013-Apr-08	A	100%	\$12,800	\$0	\$0	\$0
EDITH	408311 Cascadero Copper Corp.	4254724	2010-Apr-07	2013-Apr-08	A	100%	\$12,800	\$0	\$0	\$0
EDITH	408311 Cascadero Copper Corp.	4254725	2010-Apr-07	2013-Apr-08	A	100%	\$12,800	\$0	\$0	\$0
HONG KONG	408311 Cascadero Copper Corp.	4254715	2010-Apr-07	2013-Apr-08	A	100%	\$9,600	\$0	\$0	\$0
HONG KONG	408311 Cascadero Copper Corp.	4254717	2010-Apr-07	2013-Apr-08	A	100%	\$12,800	\$0	\$0	\$0
HONG KONG	408311 Cascadero Copper Corp.	4254718	2010-Apr-07	2013-Apr-08	A	100%	\$9,600	\$0	\$0	\$0
HONG KONG	408311 Cascadero Copper Corp.	4254719	2010-Apr-07	2013-Apr-08	A	100%	\$12,800	\$0	\$0	\$0
FINGAL	408311 Cascadero Copper Corp.	4253887	2010-May-07	2013-Apr-08	A	100%	\$6,400	\$0	\$0	\$0
FINGAL	408311 Cascadero Copper Corp.	4254701	2010-Apr-07	2013-Apr-08	A	100%	\$9,600	\$0	\$0	\$0
FINGAL	408311 Cascadero Copper Corp.	4254702	2010-Apr-07	2013-Apr-08	A	100%	\$1,200	\$1,200	\$0	\$0
FINGAL	408311 Cascadero Copper Corp.	4254703	2010-Apr-07	2013-Apr-08	A	100%	\$6,400	\$0	\$0	\$0
FINGAL	408311 Cascadero Copper Corp.	4254704	2010-Apr-07	2013-Apr-08	A	100%	\$6,400	\$6,400	\$0	\$0
FINGAL	408311 Cascadero Copper Corp.	4254705	2010-Apr-07	2013-Apr-08	A	100%	\$6,400	\$6,400	\$0	\$0
FINGAL	408311 Cascadero Copper Corp.	4254706	2010-Apr-07	2013-Apr-08	A	100%	\$800	\$1,030	\$570	\$0
FINGAL	408311 Cascadero Copper Corp.	4254707	2010-Apr-07	2013-Apr-08	A	100%	\$3,200	\$6,400	\$0	\$0
FINGAL	408311 Cascadero Copper Corp.	4254726	2010-Apr-07	2013-Apr-08	A	100%	\$6,400	\$12,800	\$0	\$0
FINGAL	408311 Cascadero Copper Corp.	4254735	2010-Apr-07	2013-Apr-08	A	100%	\$6,400	\$12,800	\$0	\$0
FINGAL	408311 Cascadero Copper Corp.	4254736	2010-Apr-07	2013-Apr-08	A	100%	\$2,000	\$4,000	\$0	\$0
FINGAL	111562 John Brady	4245968	2009-Mar-24	2013-Mar-24	A	100%	\$3,200	\$6,400	\$0	\$0
FINGAL	111562 John Brady	4245969	2009-Mar-24	2013-Mar-24	A	100%	\$400	\$800	\$0	\$0
FINGAL	111562 John Brady	4245970	2009-Mar-24	2013-Mar-24	A	100%	\$3,600	\$7,200	\$0	\$0
FINGAL	111562 John Brady	4245971	2009-Mar-24	2013-Mar-24	A	100%	\$800	\$1,600	\$0	\$0

FINGAL	111562 John Brady	4245972	2009-Mar-24	2013-Mar-24	A	100%	\$1,600	\$3,200	\$0	\$0
FINGAL	111562 John Brady	4245973	2009-Mar-24	2013-Mar-24	A	100%	\$3,200	\$6,400	\$0	\$0
MARION	408311 Cascadero Copper Corp.	4253881	2010-May-07	2013-Apr-08	A	100%	\$6,400	\$0	\$0	\$0
MARION	408311 Cascadero Copper Corp.	4253882	2010-May-07	2013-Apr-08	A	100%	\$6,400	\$0	\$0	\$0
MARION	408311 Cascadero Copper Corp.	4253884	2010-May-07	2013-Apr-08	A	100%	\$3,200	\$0	\$0	\$0
MARION	408311 Cascadero Copper Corp.	4253885	2010-May-07	2013-Apr-08	A	100%	\$6,400	\$0	\$0	\$0
MARION	408311 Cascadero Copper Corp.	4254711	2010-Apr-07	2013-Apr-08	A	100%	\$12,800	\$0	\$0	\$0
MARION	408311 Cascadero Copper Corp.	4254712	2010-Apr-07	2013-Apr-08	A	100%	\$12,800	\$0	\$0	\$0

SAMPLE COLLECTION

Traditional B-horizon soils were collected from the oxidized B-horizon at no fixed depth. A combination of shovels and augers were used to acquire the samples. **Table 2** summarizes where the B-Horizon samples were collected in the Swayze Recon survey. Multi-element analysis for the B-horizon soils was by two methods summarized in **Table 3**.

Table 2. Summary of B-Horizon Soils collected from the Cascadero Properties, Swayze greenstone belt (n=287).

Township	B-Horizon Soil Samples
Benton	38
Edith	23
Esther	28
Fingal	95
Groves	24
Hong Kong	24
Marion	35
Osway	20

Table 3. Summary of analytical protocol (SGS Mineral Services) for b-horizon soil samples, Swayze Recon.

Method	FAI313
Element	Au
Description	Au by lead collection fire assay on a 30 g sample with ICP-AES finish and a detection range of 1-10,000 ppb
Method	ICM12B

Elements	Al, B, Ba, Ca, Cr, Cu, Fe, K, Li, Mg, Mn, Na, Ni, P, S, Sr, Ti, V, Zn, Zr, Ag, As, Be, Bi, Cd, Ce, Co, Cs, Ga, Ge, Hf, Hg, In, La, Lu, Mo, Pb, Rb, Sb, Sc, Se, Sn, Ta, Tb, Te, Th, Tl, U, W, Y, Yb
Description	52 elements by aqua-regia digestion and ICP-AES and ICP-MS finish

DATA TREATMENT AND PRESENTATION

In exploration surveys where sampling and analytical protocols have been determined by an orientation survey, analytical data is examined visually for analyses less than the lower limit of detection (<LLD) for ICP-MS. Data <LLD are replaced with a value $\frac{1}{2}$ of the LLD for statistical calculations and graphical representation. For the Swayze Recon survey the interpretation is based on concentration for traditional B-horizon analyses plotted as arithmetic ranges on bubble plots.

Analytical data as received from SGS Mineral Services is presented in **Appendix 1**. Analytical data from analytical duplicates, replicate analyses of standard MMI reference materials and analytical blanks are given in **Appendix 2**. The variation in concentration of b-horizon elements in the Swayze Recon surveys is discussed in a geochemical narrative based on bubble plots produced with MAPINFO software. The bubble plots are presented in **Appendix 3** as are plots for Simple Linear Regression treatment of analytical duplicates.

RESULTS

Quality Control

Standard Reference Materials and Analytical Blank Replicates

Neither of these control sample analyses was reported by SGS Mineral Services.

Analytical Duplicates

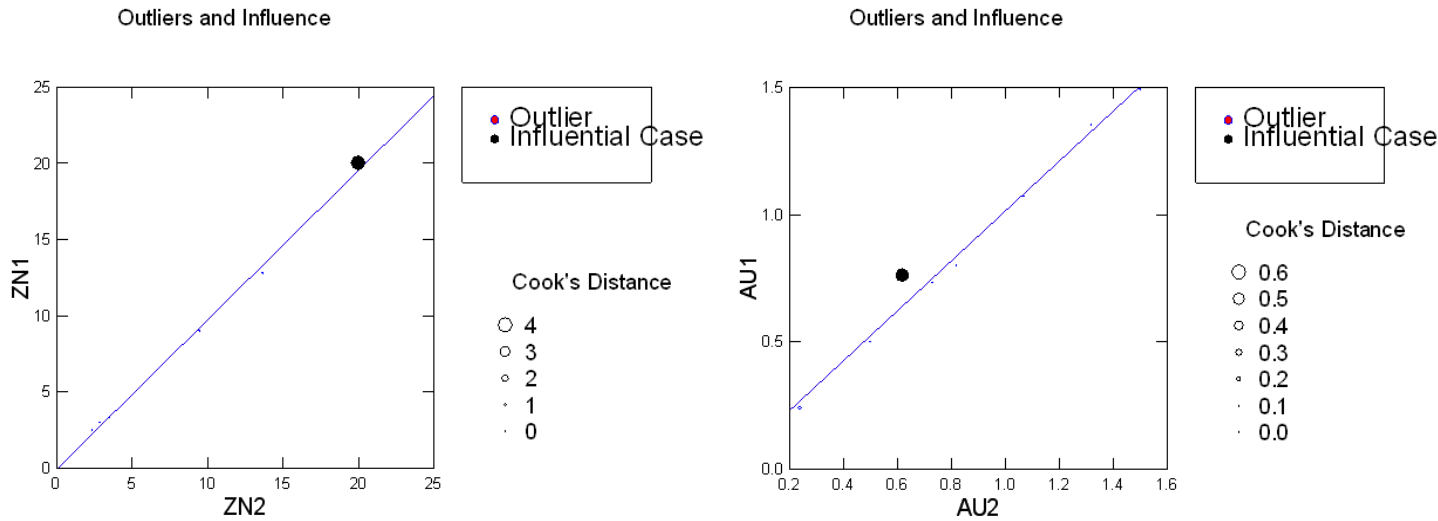
The results for B-Horizon soil geochemical data are less reliable in terms of reproducibility as indicated by the increased scatter in the data and the higher Cook's Distances. This is to be expected in geochemical analyses of samples that contain mineral particulates with variable

specific gravities. **Table 4** summarizes available data for analytical duplicates and demonstrates excellent reproducibility. The same result is demonstrated with Simple Linear regression plots for Au and Zn in **Figure 5**.

Table 4. Summary of analytical duplicates for important commodity and related elements, Swayze recon survey.

ANALYTE	Au1	Au2	Cu1	Cu2	Ni1	Ni2	Zn1	Zn2
METHOD	FAI313		ICM12B		ICM12B		ICM12B	
DETECTION	1		0.5		0.5		1	
UNITS	ppb		ppm		ppm		ppm	
RU-23	0.5	0.5	11.4	11.5	21.3	20.5	20	20
ES-26	0.76	0.62	0.03	0.03	0.005	0.02	3	2.9
ES-31	1.35	1.32	0.02	0.02	0.01	0.01	3.5	NA
ES-30	0.73	0.73	0.02	0.02	0.005	0.005	2.2	NA
ED-9	1.49	1.5	0.02	0.02	0.02	0.02	3.3	3.5
L1E-200N	0.8	0.82	0.02	0.02	0.005	0.005	2.5	2.4
GR-22	0.24	0.24	0.04	0.04	0.19	0.19	12.8	13.7
F5-14	1.07	1.07	0.02	0.02	0.02	0.02	9	9.5
Ag1	Ag2	As1	As2	Mo1	Mo2	Pb1	Pb2	
ICM12B		ICM12B		ICM12B		ICM12B		
0.01		1		0.05		0.2		
ppm		ppm		ppm		ppm		
0.06	0.05	2	2	0.51	0.47	7.9	7	

Figure 5. Simple linear regression plots for analytical duplicates, B-Horizon soil geochemical survey data, Swayze Recon surveys.



Data Description

A significant numbers of samples of B-Horizon soils have a number of elements that are at or below the LLD. These include B, Au, As, Ge, Hg, In, Sb, Se, Sn, Ta, Te and W. There are, however an equal number of elements with the majority of their elements that are >LLD. For this preliminary review of the significance of geochemical responses in the Swayze Recon survey only the elements As, Ag, Au, Cu, Mo, Pb, Zn and Ni are considered. These elements are well above the LLD in most samples. **Table 5** summarizes these ranges in concentration for elements of interest and their 95th and 99th percentiles.

Table 5. Summary of range in concentration and 95th and 99th percentiles for important commodity elements, Swayze Recon B-Horizon Soil Geochemistry.

Township	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ni (ppm)	Au (ppb)	Ag (ppm)	As (ppm)	Mo (ppm)
Benton	0.6-46	1.6-58.7	4-267	2.4-66.8	0.5-17	na	na	na
Edith	1.8-57.8	2-29.3	50868	4.8-25.4	0.5-8	na	na	na
Esther	2.4-168	2.6-35.7	8-223	6.8-62.8	0.5-14	na	na	na
Fingal	1-331	2-80.6	7-271	3.8-70.1	0.5-75	na	na	na
Groves	3.9-318	2.3-15.2	4-94	2.7-102	0.5-12	na	na	na
Hong Kong	1.3-85.7	1.9-9.2	5-88	4.7-29.4	0.5-13	na	na	na
Marion	3.1-1620	4.3-58.2	13-183	8.6-52.5	0.5-5	0.02-0.63	1-6	0.2-43.2
Osway	6.2-262	2.5-17.5	11-265	11.1-50.9	1-4	na	na	na
Township	95th/99 th Percentile	95th/99 th Percentile	95th/99 th Percentile	95th/99 th Percentile	95th/99 th Percentile	95th/99 th Percentile	95th/99 th Percentile	95th/99 th Percentile
Benton	44/46	51.6/58.7	252/267	31.4/66.8	15.4/17	na	na	na
Edith	52.6/57.8	27.6/29.3	668.8/868	25.4/25.4	8/8	na	na	na
Esther	131.9/168	28.6/35.7	192.8/223	48.6/62.8	12/14	na	na	na
Fingal	131.5/331	27.9/80.6	77.2/271	43.2/70.1	18.2/75	na	na	na
Groves	233.7/318	14.5/15.2	76.9/94	89.5/102	9.6/12	na	na	na
Hong Kong	68.5/85.7	7.7/9.2	66.1/88	24.6/29.4	13/13	na	na	na
Marion	541.2/1620	26.7/58.2	98.3/183	36.4/52.5	5/5	0.32/0.63	3.9/6	16.4/43.2
Osway	238.6/262	16.2/17.5	243.3/265	49.9/50.9	3.9/4	na	na	na

Figure 6 presents the elements of immediate interest in this review as histograms and illustrates the positively skewed distributions for most elements and the long “tail” of elevated analyses. The skewed nature of the distributions can be attributed to a large number of samples

having very low contents of these metals and hence they plot to the left portion of the histogram and to the presence of a few high responses that sit out on the tail or right hand side of the histogram. The presence of a tail of elevated responses is often the indication of the presence of a second data population that often represents the anomalous population of interest. Another method of reviewing the range in concentration of the elements of interest is to plot Tukey Box plots on a common axis (**cf. Figure 7**). Wide ranges in concentration are noted for Cu and Zn but lesser for the remainder of this element suite.

When concentration-only data is reviewed, such as the data in the B-Horizon soil geochemical survey, unique “spikes” or anomalous responses are assessed. When response ratios are used there are general guidelines brought to bear on the interpretation. Generally, a response ratio of 1RR-10RR is generally interpreted as little more than “background”, 11RR-20RR is of limited interest, >20RR or 20 times background is an initial indication of a low-contrast anomalous response although this “threshold” is not universal. A response of between 20RR and 50RR is used as a moderate response with RR>50 being referred to as high-contrast. Often, pattern recognition in the interpretation of geochemical data is paramount. To aid in the recognition of unique element associations data is examined with a correlation coefficient matrix (Spearman-Rank-see below) and with concentration-based bubble plots based on concentration.

Figure 6. Histograms for significant commodity and related elements, Swayze B-Horizon soil geochemical reconnaissance survey.

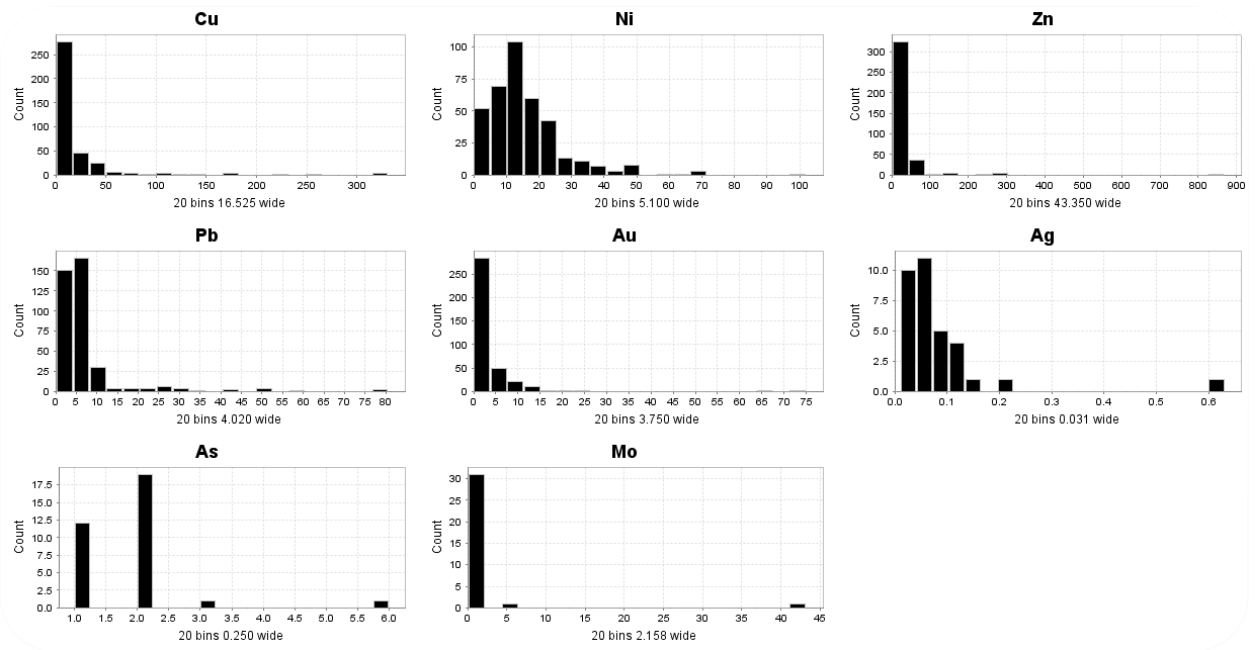
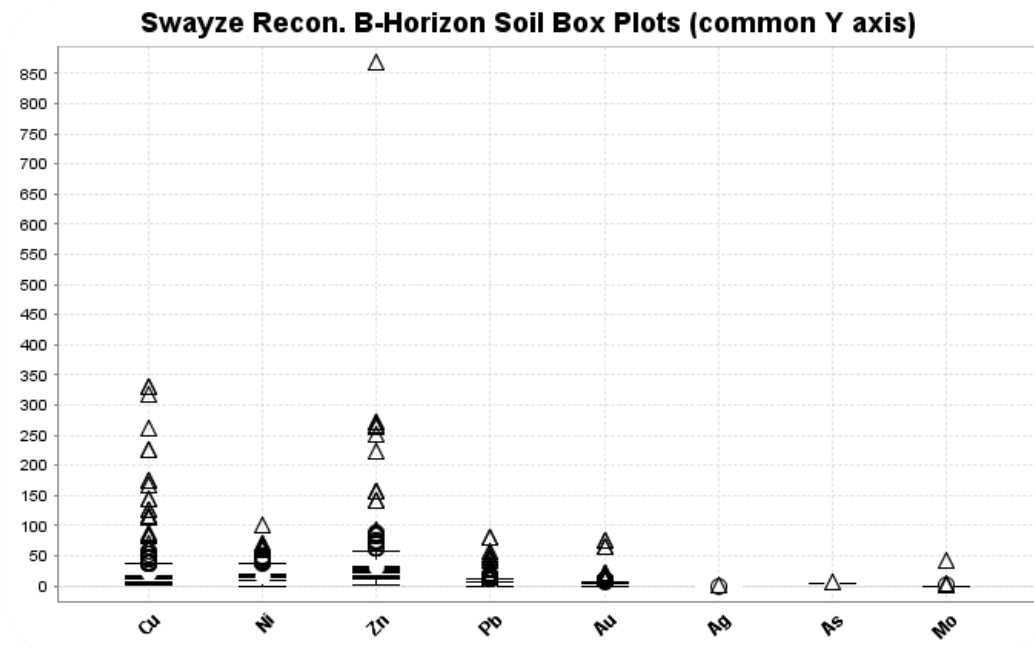


Figure 7. Swayze reconnaissance B-Horizon soil geochemical box plots, commodity/ related elements.



Spearman-Rank Correlation Coefficient Matrix

The Swayze Recon B-Horizon soil geochemical multi-element database was assessed with a Spearman-Rank correlation coefficient matrix. This assessment identifies significantly correlated element pairs and recognizes element associations capable of producing anomalous geochemical responses related to mineralization amongst other signatures in the data. The entire Spearman-Rank matrix is presented in **Table 6**. Elevated base- and precious metal associations are apparent in the important commodity elements used in the analysis. The strongest elemental associations characterized by significantly elevated correlation coefficient “r” values includes Ag-As-Mo-Zn, moderate coefficients are present for Ni-Cu and modest correlations are present for Au-Ag-As. These associations are typical for Ni-Cu magmatic-type sulphide mineralization, structurally-controlled Au mineralization associated with As haloes in the Swayze greenstone belt (Au-Ag-As) and for pathfinder or base metal massive sulphide type affiliations as indicated by Ag-As-Mo-Zn.

Table 6. Correlation Coefficient Matrix, Swayze reconnaissance B-Horizon soil geochemical survey.

Correlation	Cu	Ni	Zn	Pb	Au	Ag	As	Mo
Cu	1	0.58	0.4	0.57	-0.017	0.61	0.69	0.64
Ni	0.58	1	0.35	0.46	0.13	0.08	0.037	0.18
Zn	0.4	0.35	1	0.6	0.0081	0.84	0.85	0.85
Pb	0.57	0.46	0.6	1	-0.0057	0.34	0.48	0.42
Au	-0.017	0.13	0.0081	-0.0057	1	0.44	0.33	0.48
Ag	0.61	0.08	0.84	0.34	0.44	1	0.84	0.93
As	0.69	0.037	0.85	0.48	0.33	0.84	1	0.82
Mo	0.64	0.18	0.85	0.42	0.48	0.93	0.82	1

AREAL DISTRIBUTION OF ANOMALOUS RESPONSES IN THE SWAYZE SURVEY AREA

MAPINFO Bubble Plots

The variation in concentration and the resulting morphologies of anomalous responses in the B-Horizon geochemical database from the 2012 Swayze Recon surveys are described in the following section. The data is examined with MAPINFO bubble plots depicting the sampled areas on the property. Detailed sampling was carried out on eight individual townships and often on more than one grid. The geochemical narrative below addresses the datasets one township at a time. Sample locations from each of these grids and bubble plots accompany the geochemical narrative for each Township.

Benton Township

B-Horizon soil sampling in Benton Township was undertaken on two small grids depicted in **Figures 8, 9 and 10**. The results of B-Horizon surveys on each are discussed in turn.

Grid One (Figures 11 through 15)

The results from Grid One indicate a general lack of base metal responses for Cu, Pb and Zn and a broad, modest Ni response (10-50 ppm) likely indicating the predominance of mafic lithologies in the survey area. There is a single sample elevated response for Au (11-50 ppb) present on the southeast portion of the grid that is open to the east. Additional sampling should be done in the vicinity of this Au response and should comprise additional geochemical surveys and prospecting.

Grid Two (Figures 16 through 20)

Grid Two is somewhat different in the responses from the B-Horizon surveys. Although there are no Cu responses of merit on the grid there are two strongly elevated Pb responses (51-100

ppm) on the west side of the grid that correspond to two weakly elevated Zn responses (101-300 ppm). These responses are open to the west. A broad but low-contrast Ni response is present and likely indicates the predominance of mafic lithologies underpinning the survey area. There are also three samples with low-contrast Au responses (6-10 ppb) present. The base metal responses on the west side of the grid should be followed up with additional soil geochemical surveys and prospecting.

Figure 8. General location of Grids one and two, Benton Township.

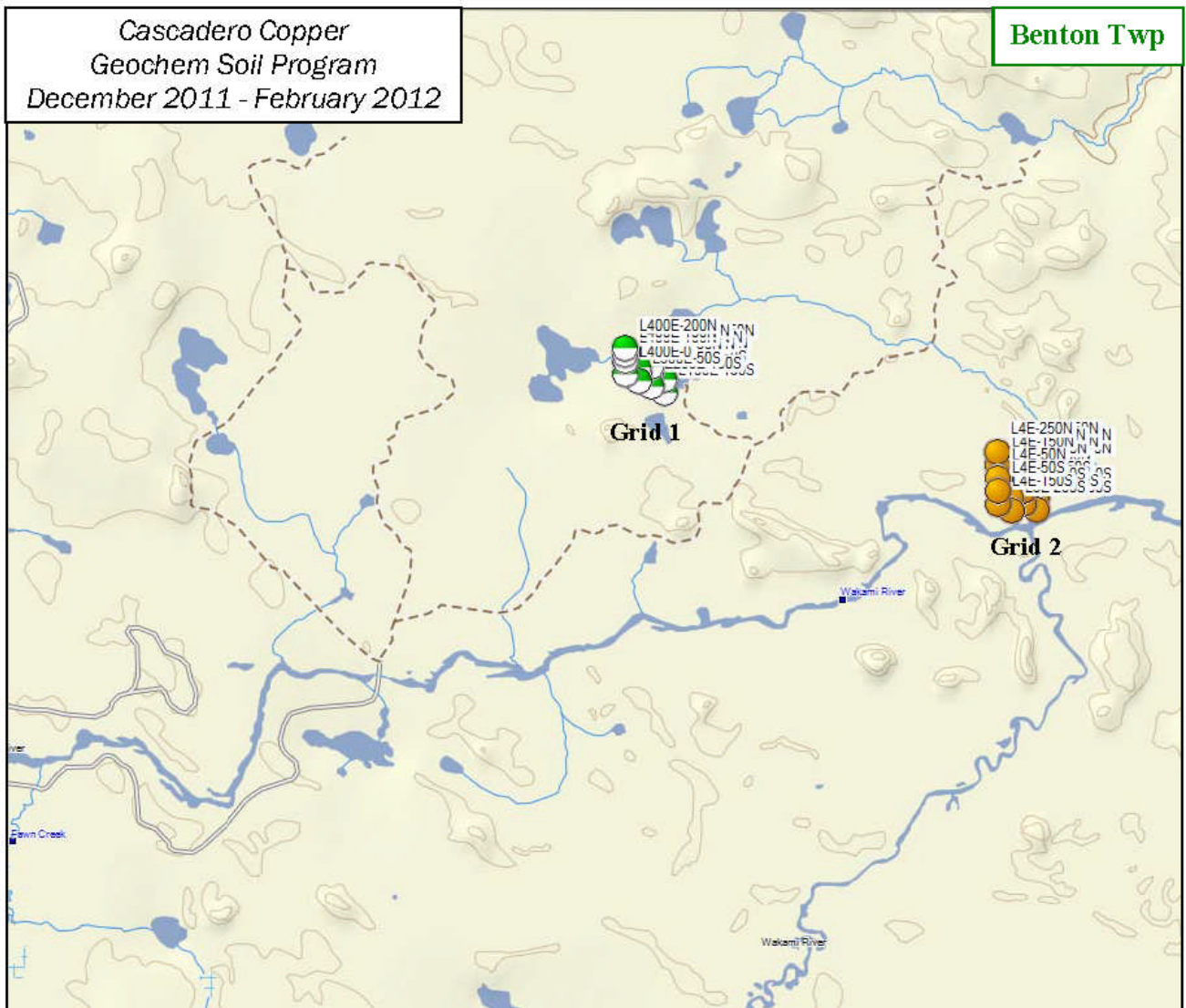


Figure 9. Detailed sample location Benton Township Grid 1.

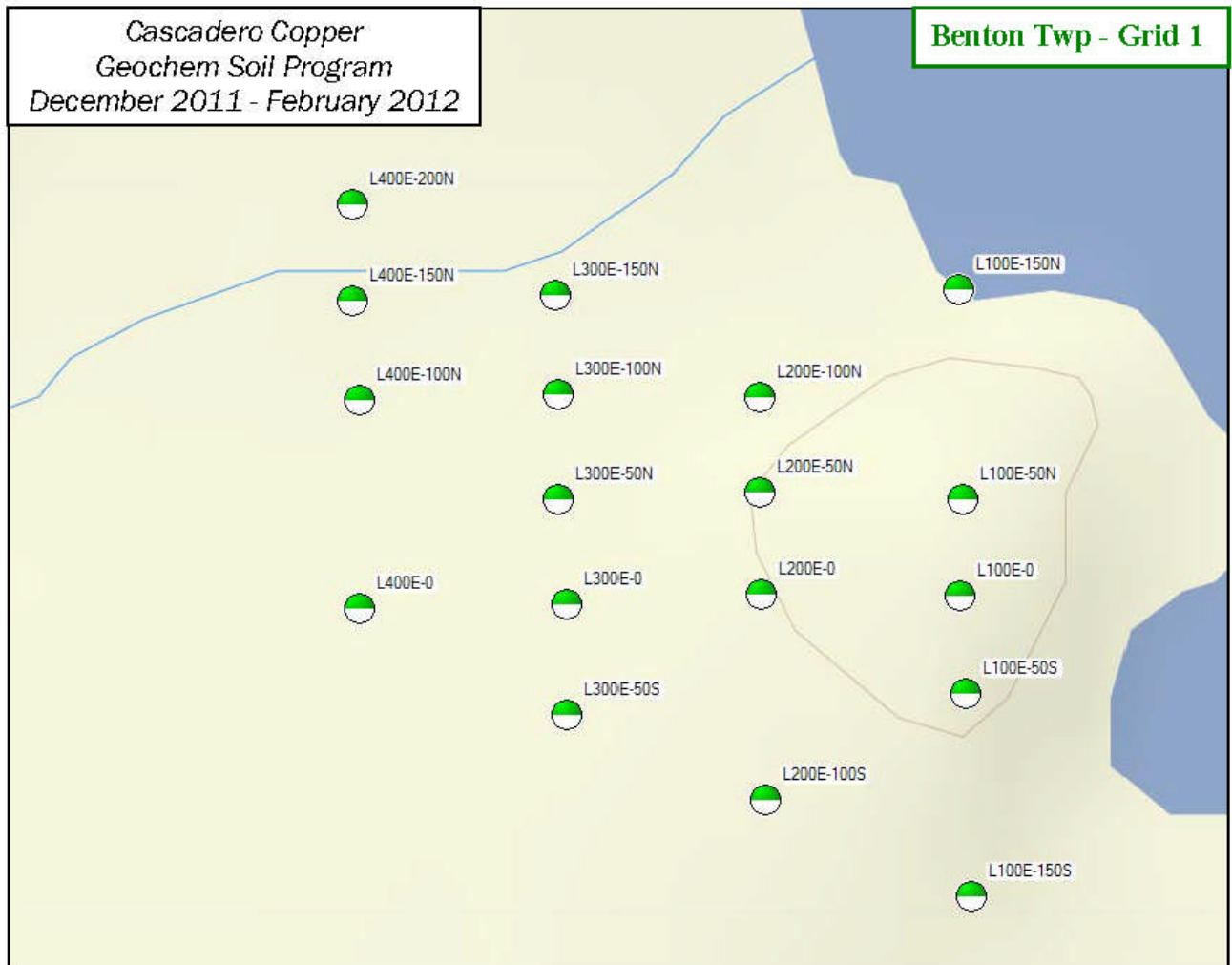


Figure 10. Detailed sample location Benton Township Grid 2.

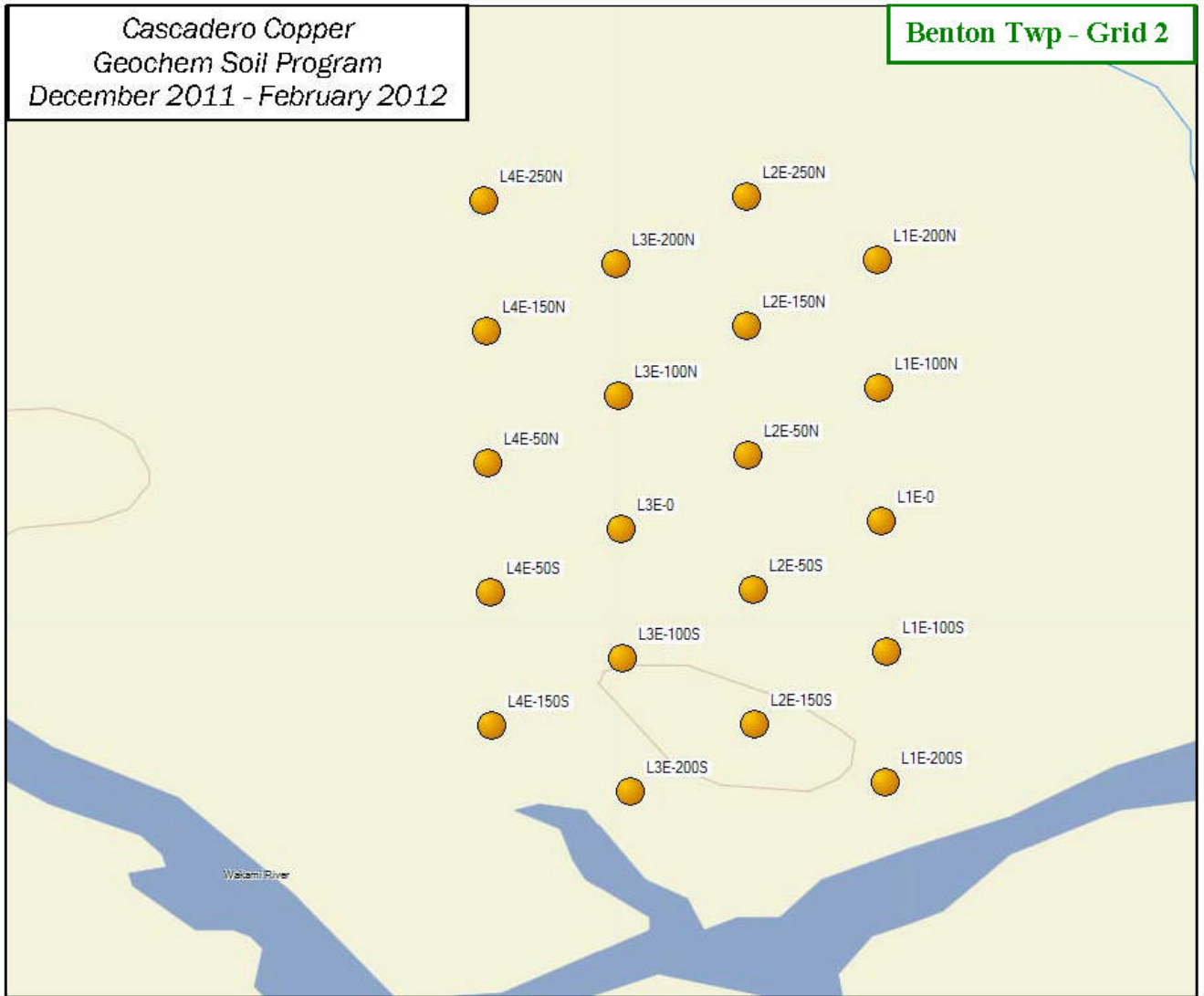


Figure 11. Gold contents in B-Horizon soil, Benton Township, Grid 1.

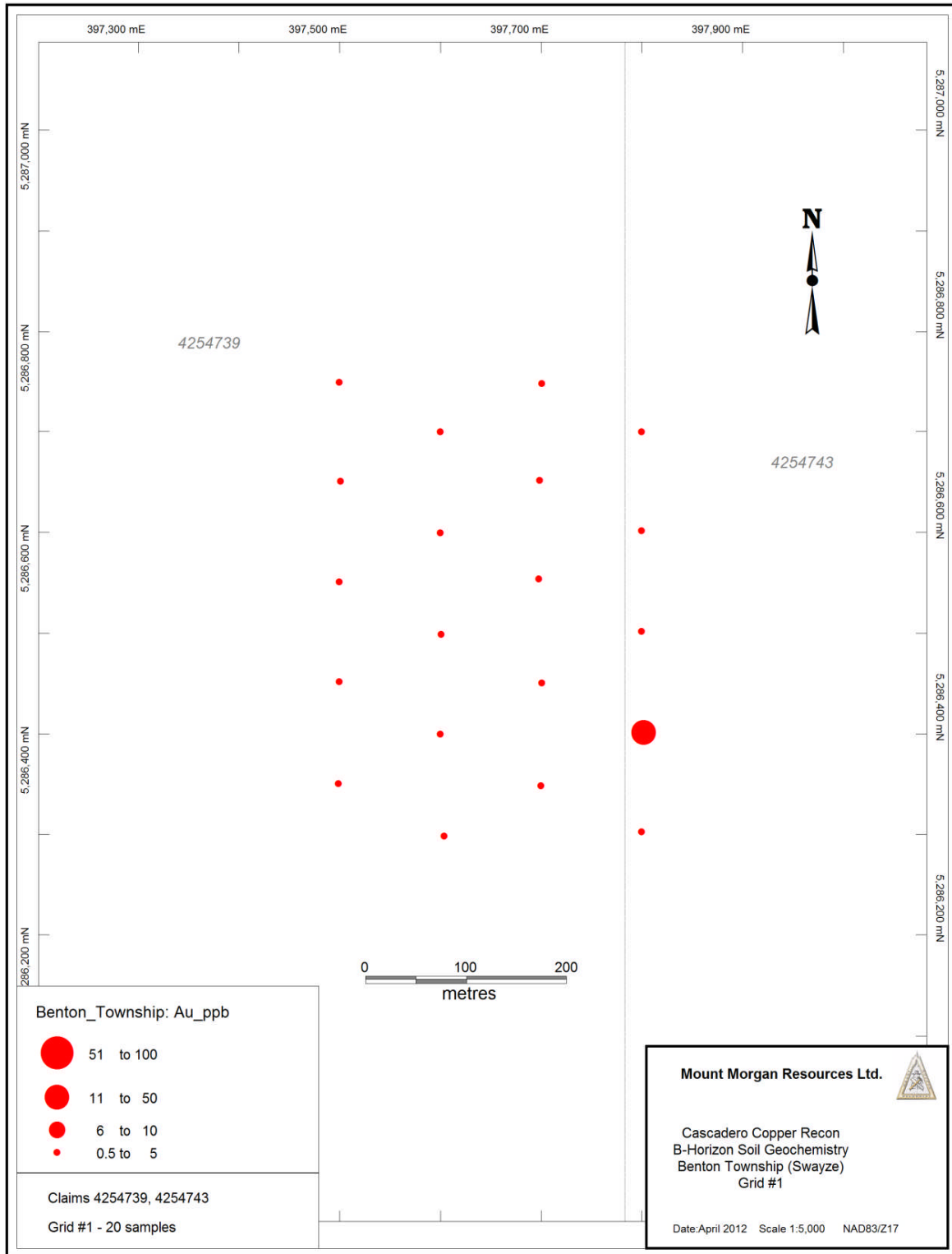


Figure 12. Copper contents in B-Horizon soil, Benton Township, Grid 1.

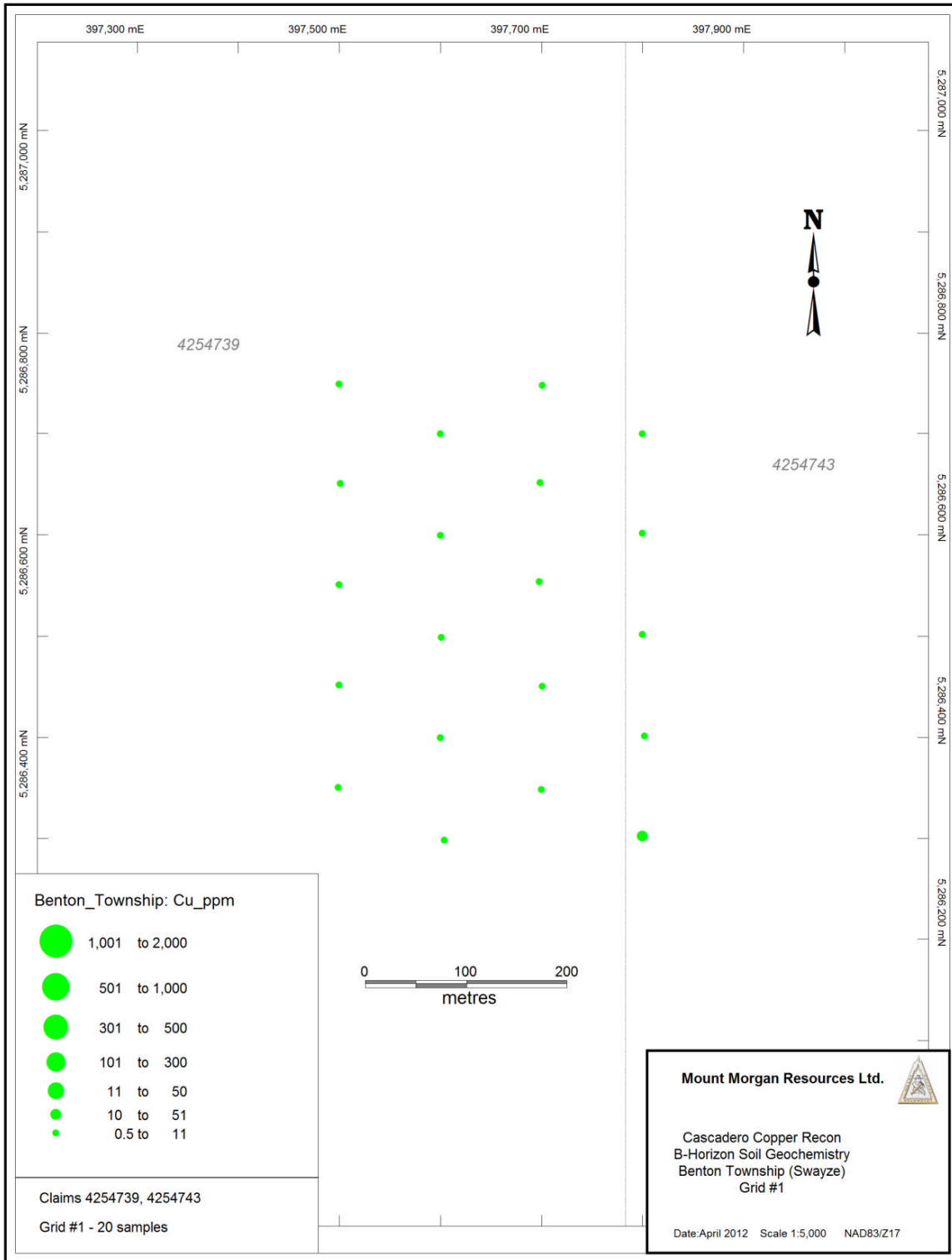


Figure 13. Nickel contents in B-Horizon soil, Benton Township, Grid 1.

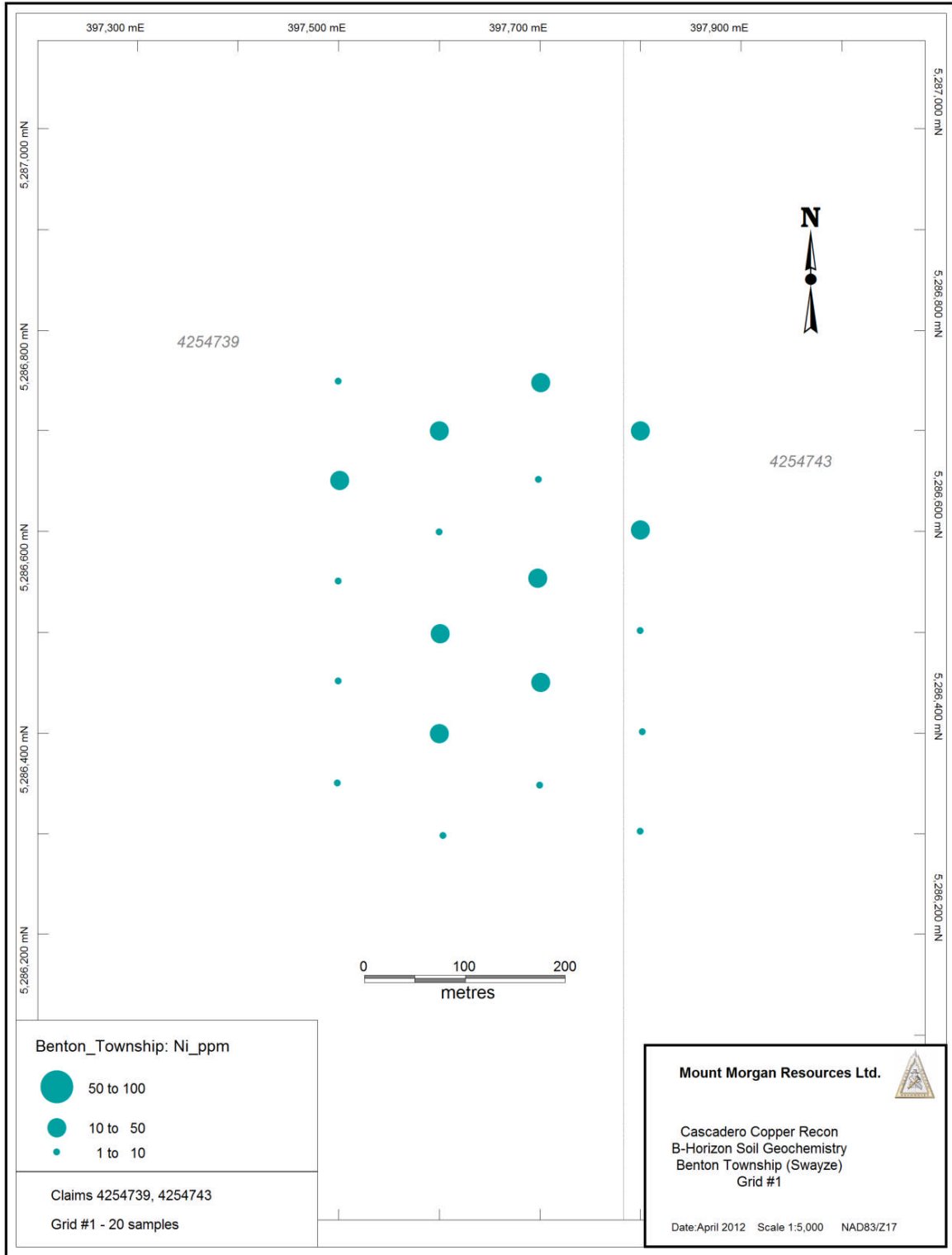


Figure 14. Lead contents in B-Horizon soil, Benton Township, Grid 1.

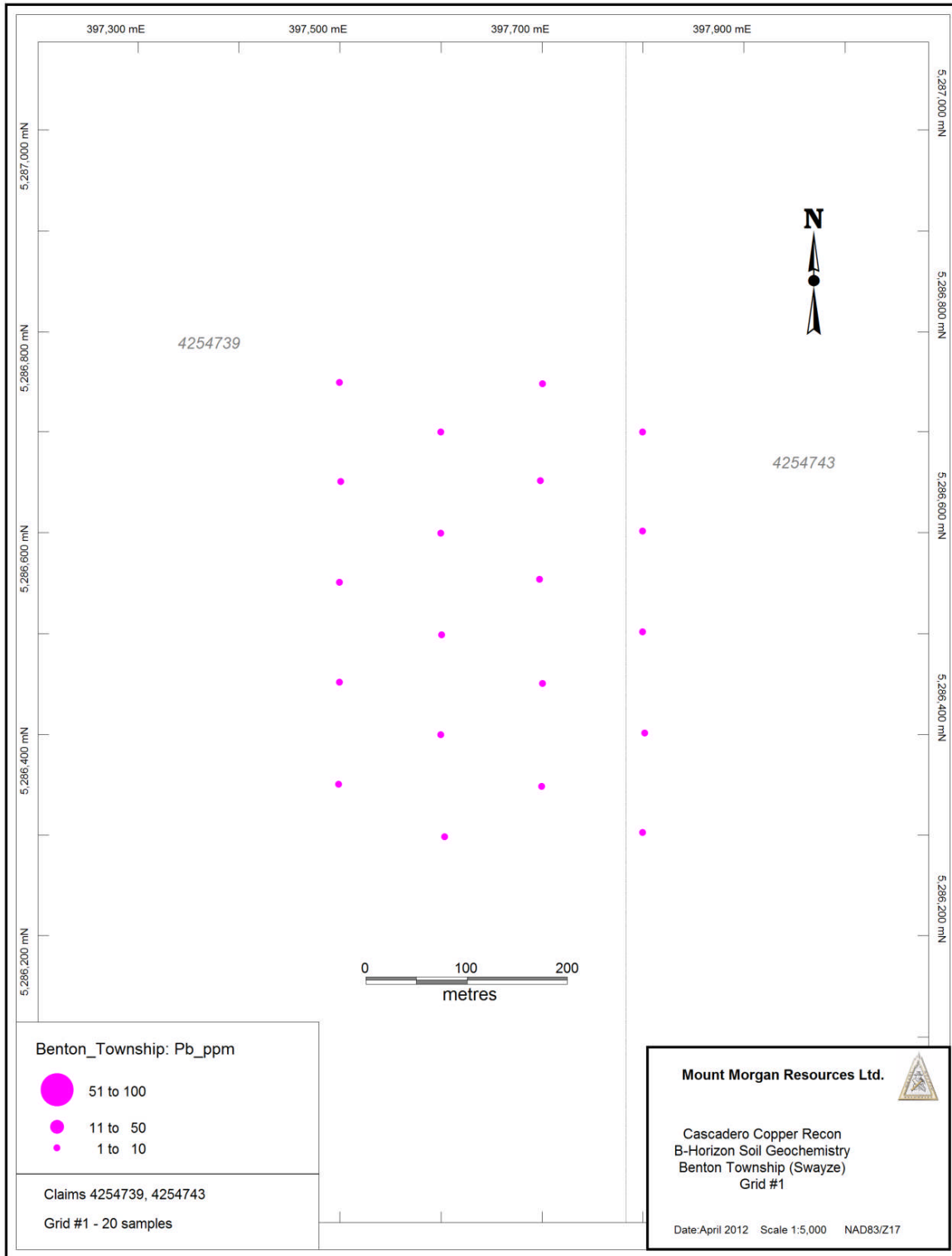


Figure 15. Zinc contents in B-Horizon soil, Benton Township, Grid 1.

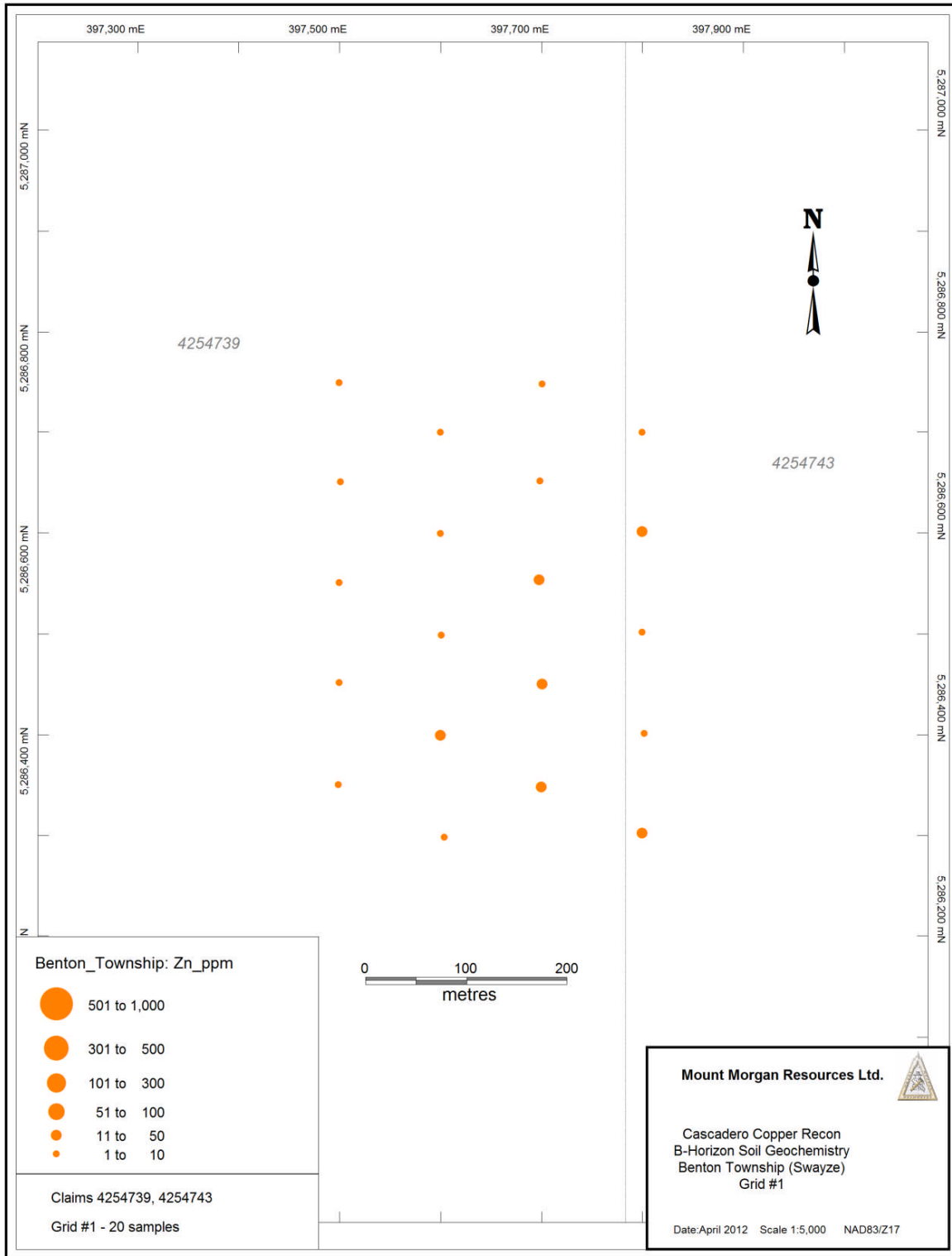


Figure 16. Gold contents in B-Horizon soil, Benton Township, Grid 2.

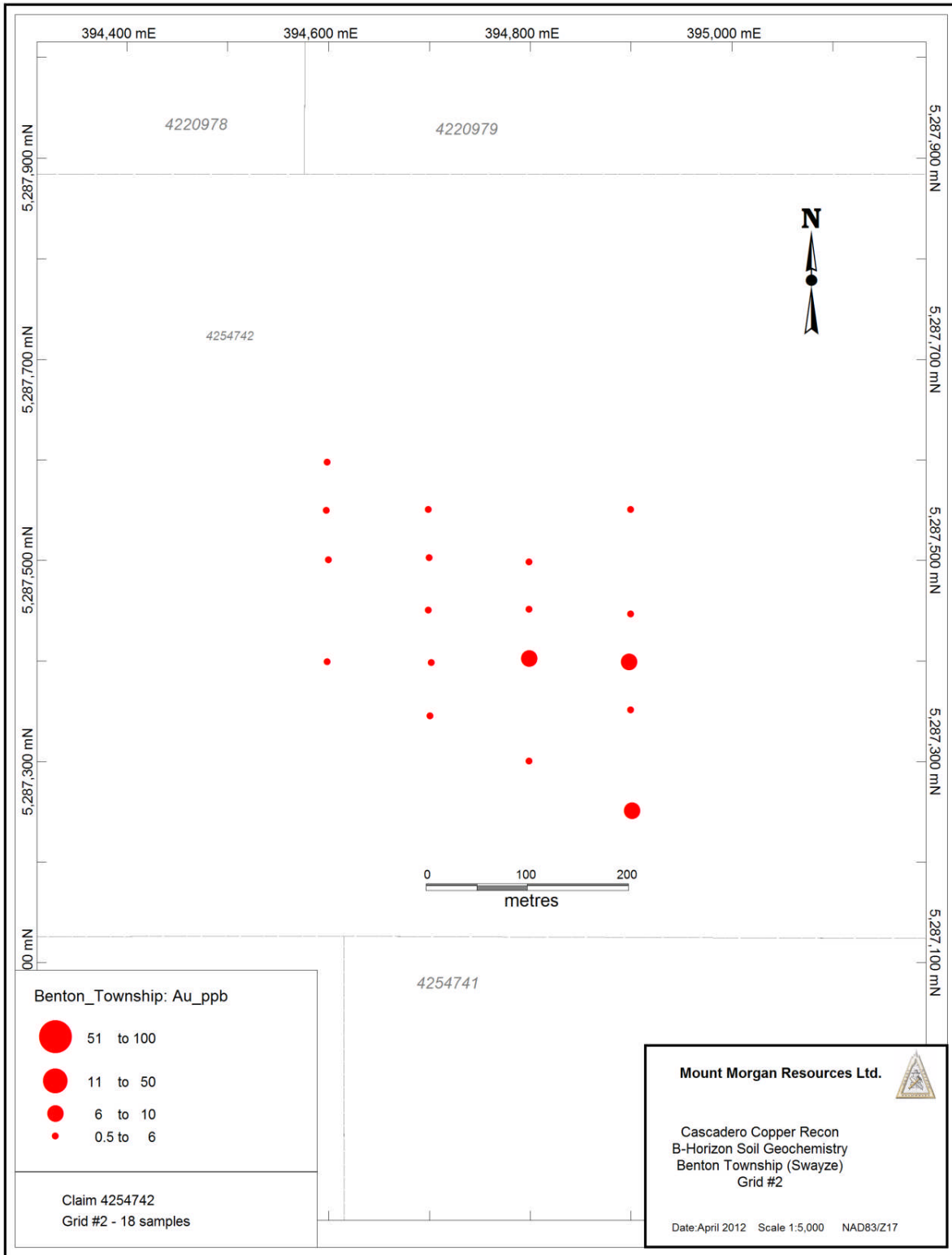


Figure 17. Copper contents in B-Horizon soil, Benton Township, Grid 2.

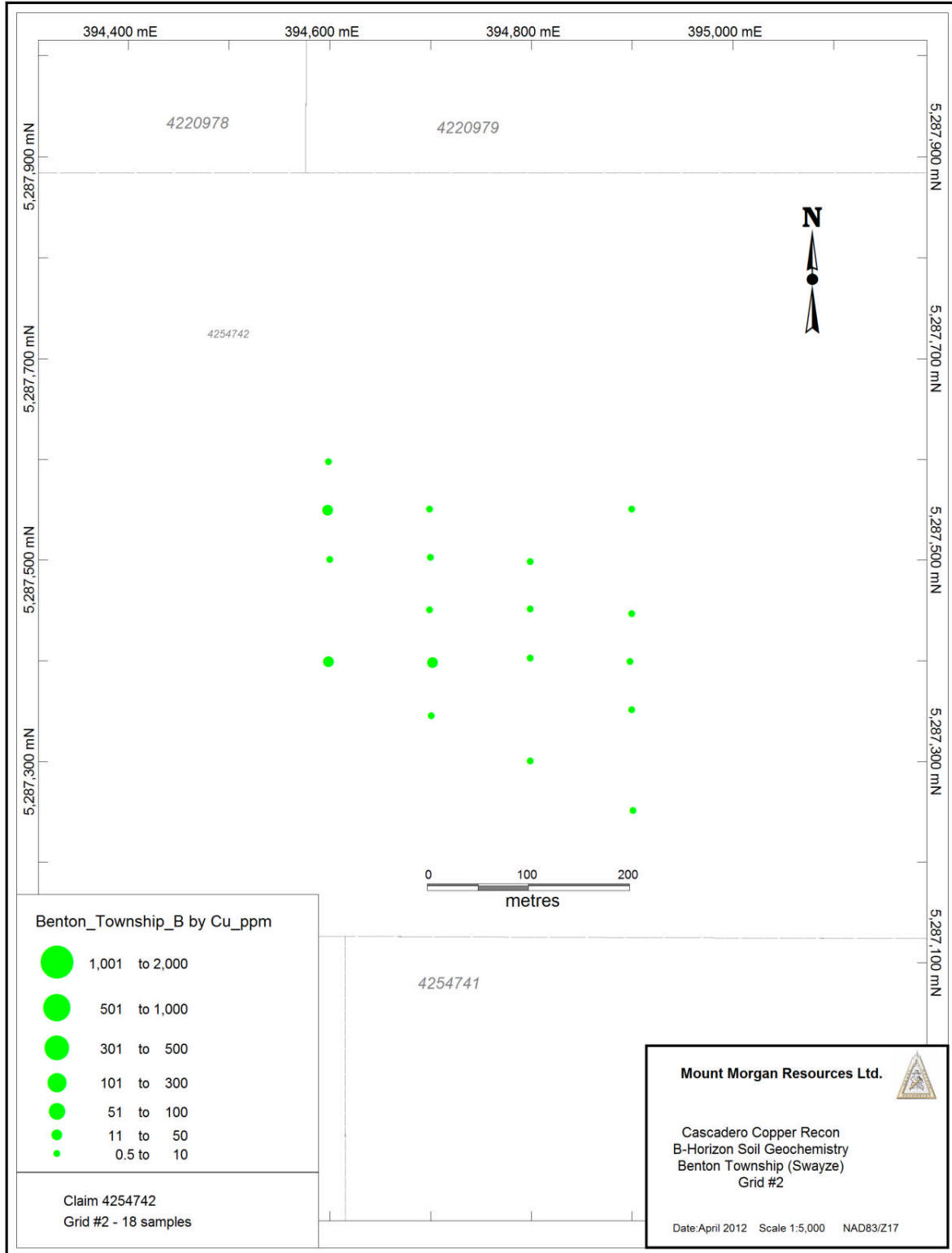


Figure 18. Lead contents in B-Horizon soil, Benton Township, Grid 2.

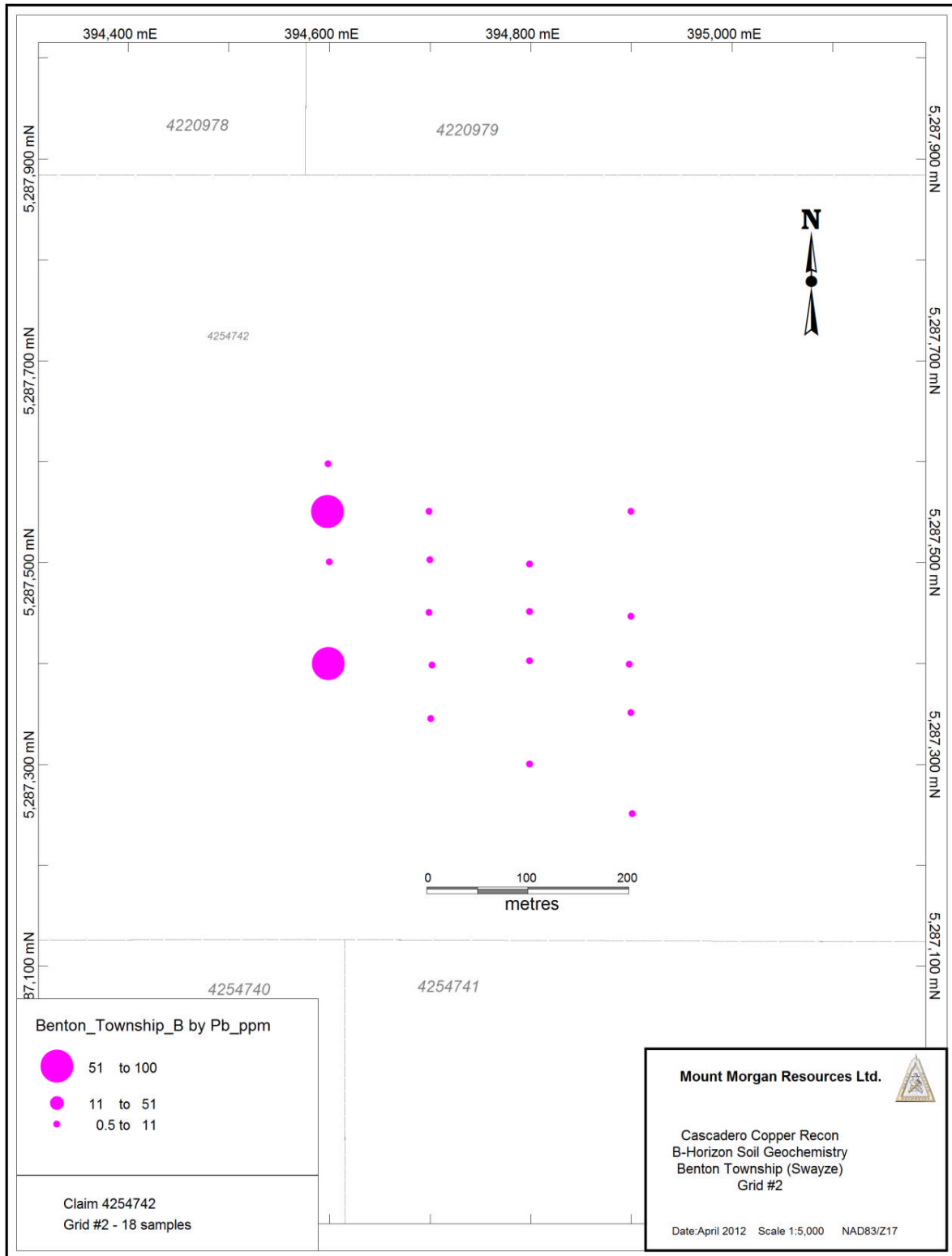


Figure 19. Zinc contents in B-Horizon soil, Benton Township, Grid 2.

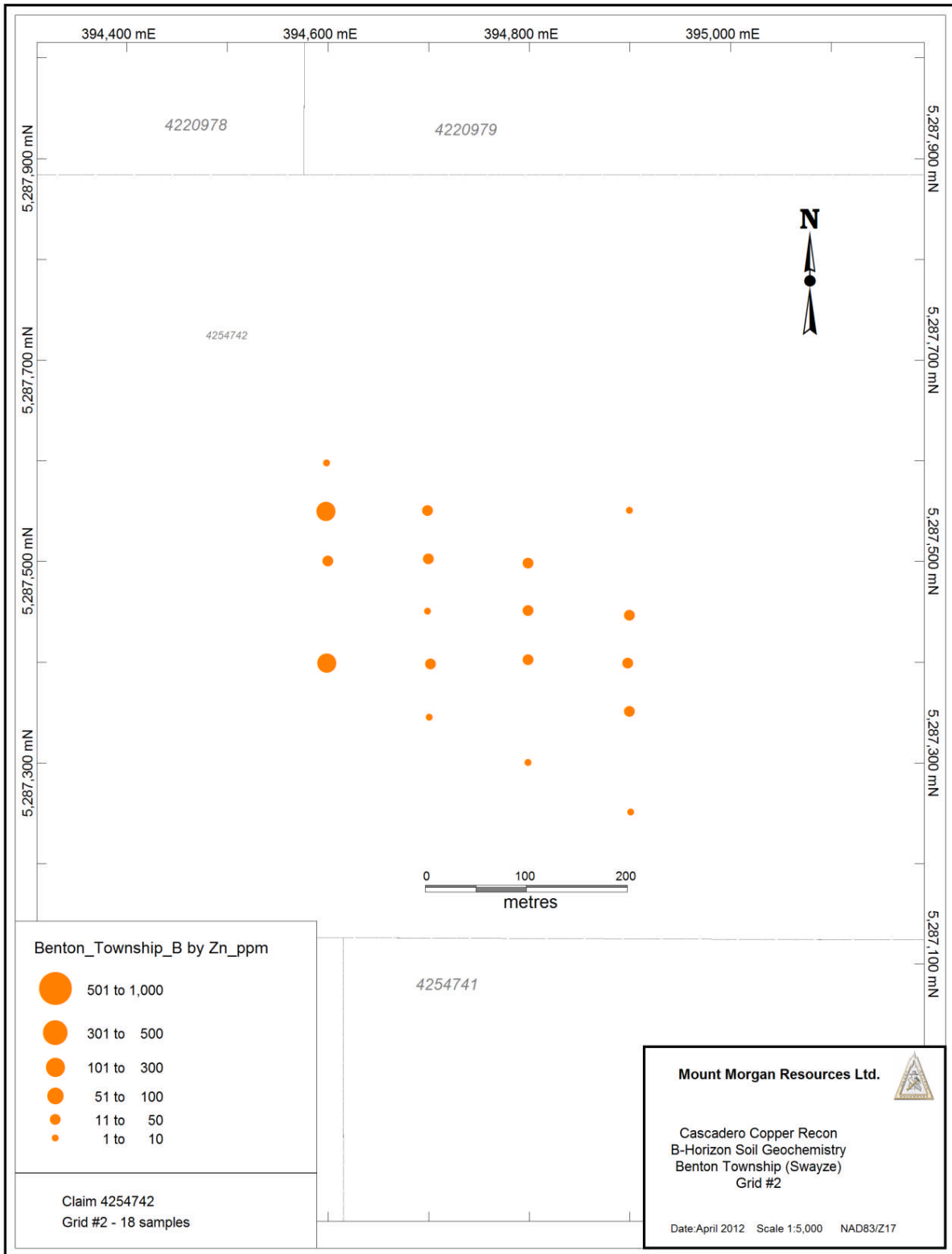
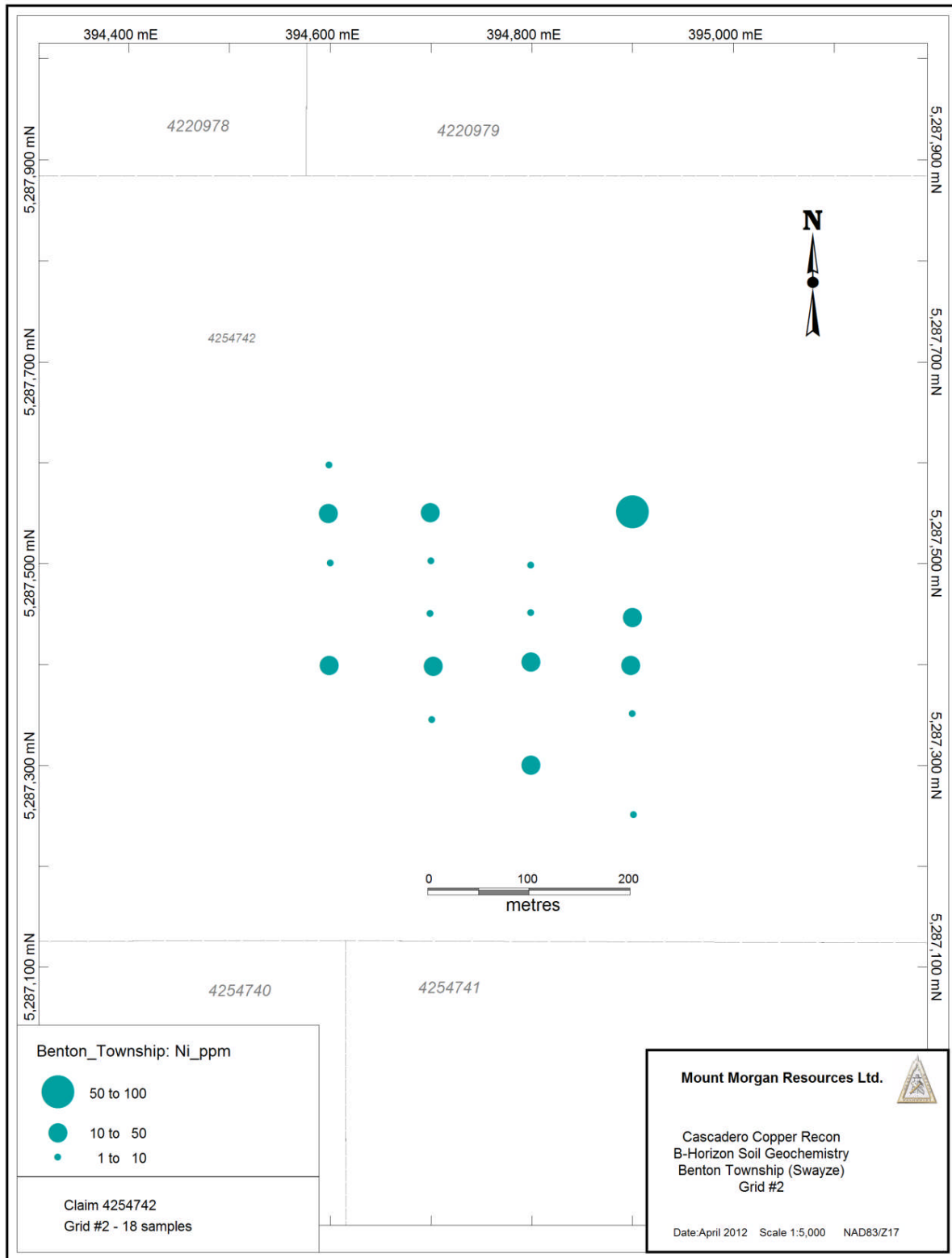


Figure 20. Nickel contents in B-Horizon soil, Benton Township, Grid 2.



Edith Township

A single rectangular survey of B-Horizon soil samples was collected from Edith Township (Figure 21). The survey documents one high-contrast Zn response on the southwest corner of the grid (501-1000 ppm), is open to the west and is a definite base metal follow-up target. There are no significant Cu, Pb or Ni responses on the grid and Au response is limited to two low-contrast (6-10 ppb) responses. Responses are illustrated in Figures 22 through 26.

Figure 21. Detailed sample location Edith Township.

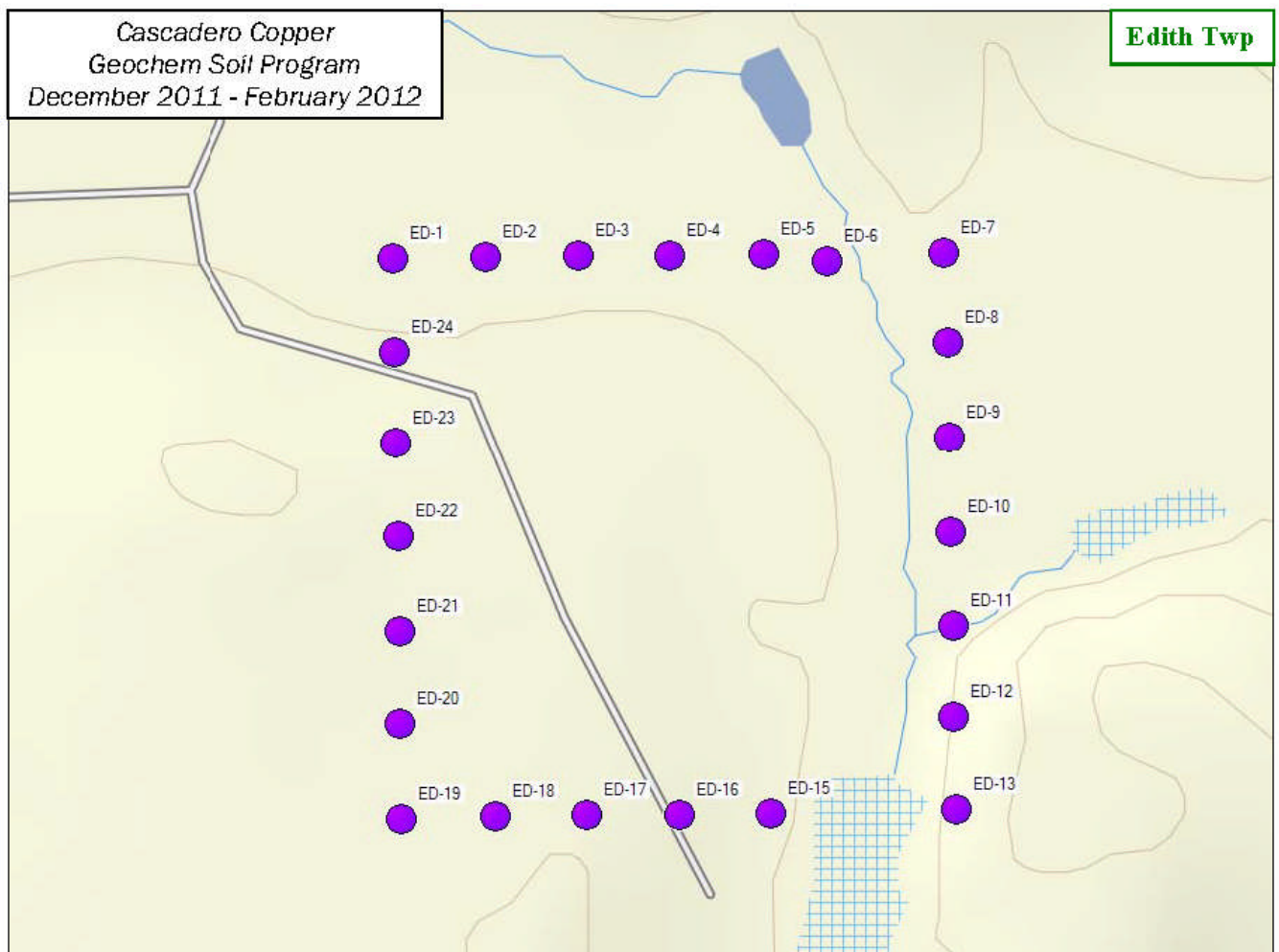


Figure 22. Gold content in B-Horizon soil, Edith Township.

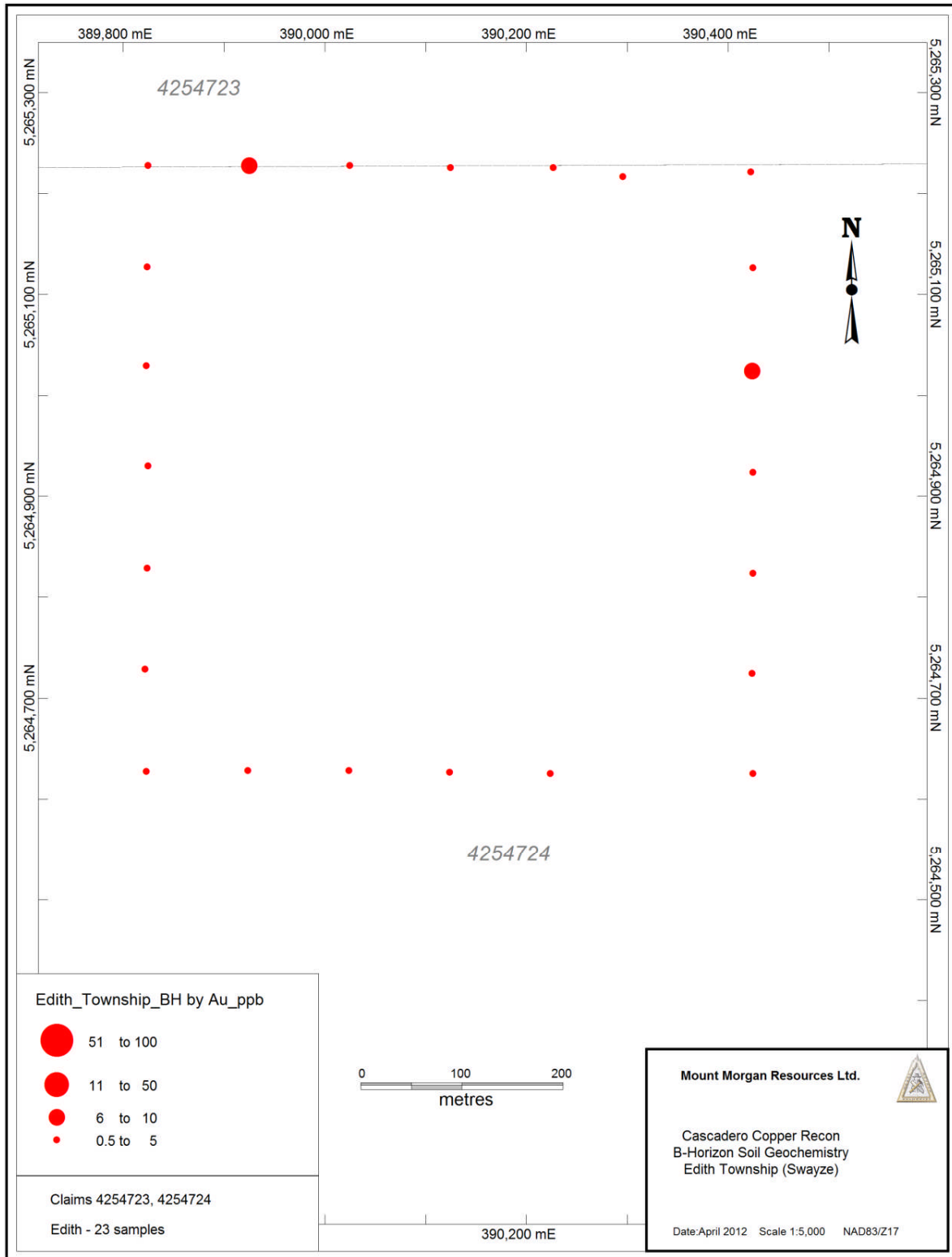


Figure 23. Copper contents in B-Horizon soil, Edith Township.

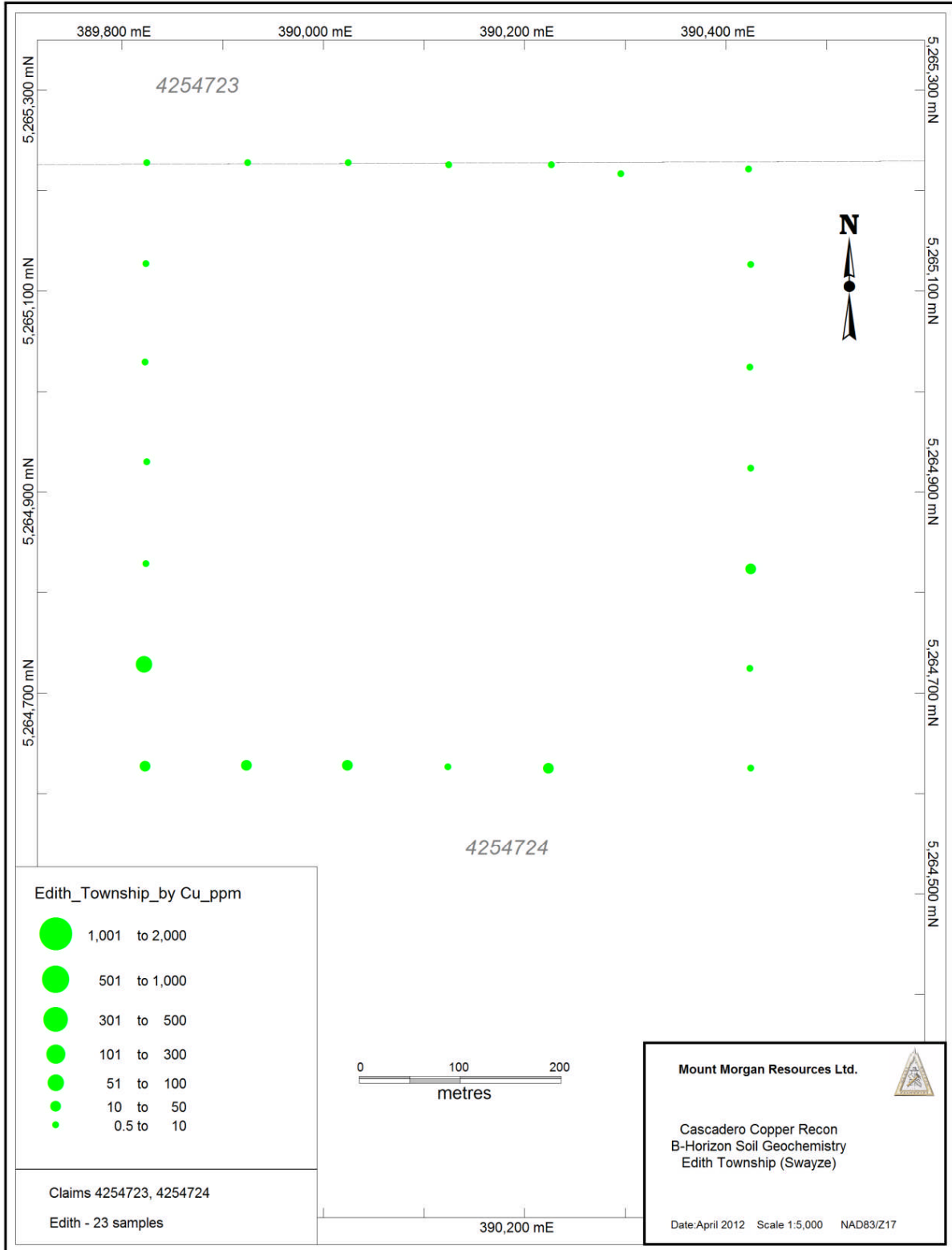


Figure 24. Lead contents in B-Horizon soil, Edith Township.

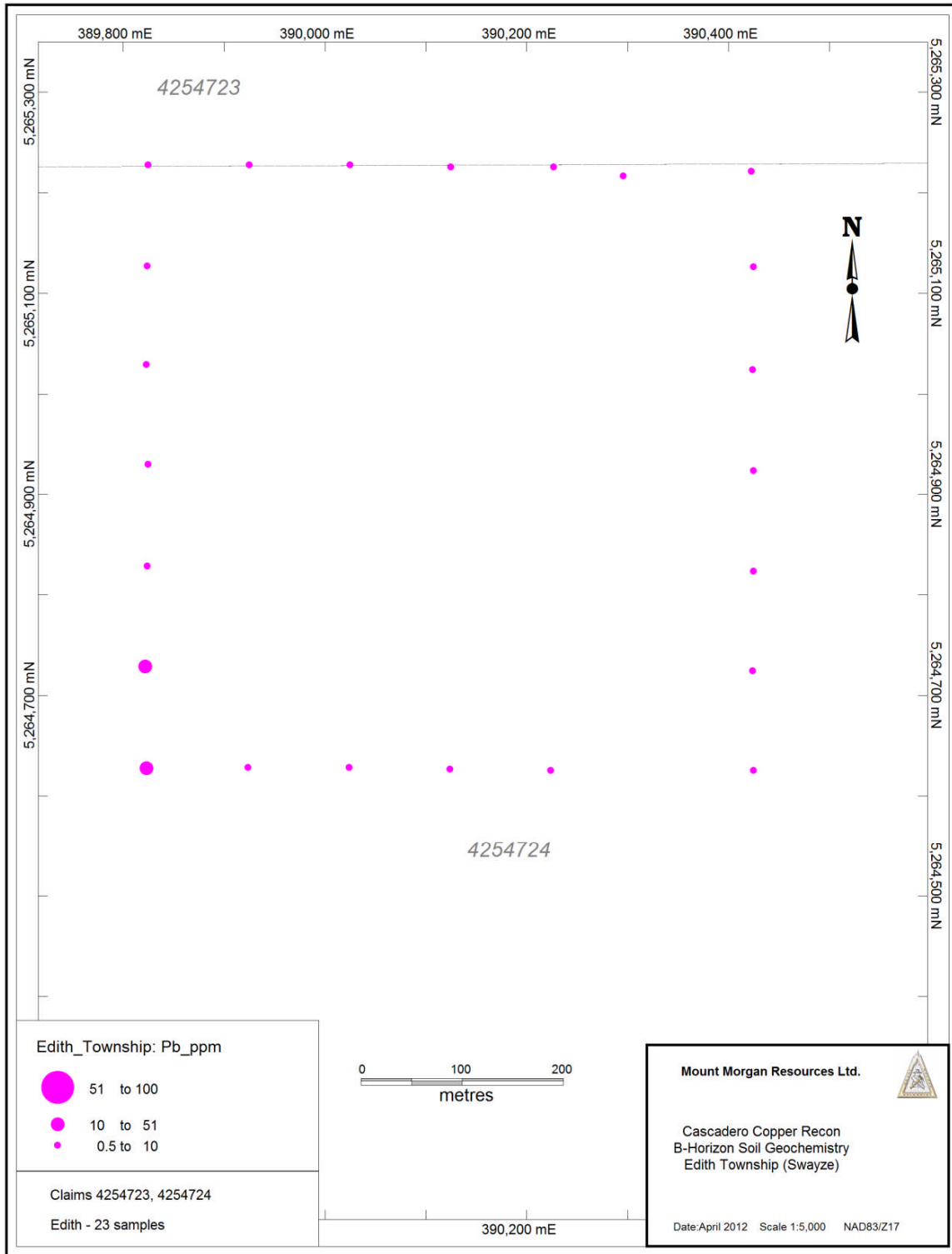


Figure 25. Zinc contents in B-Horizon soil, Edith Township.

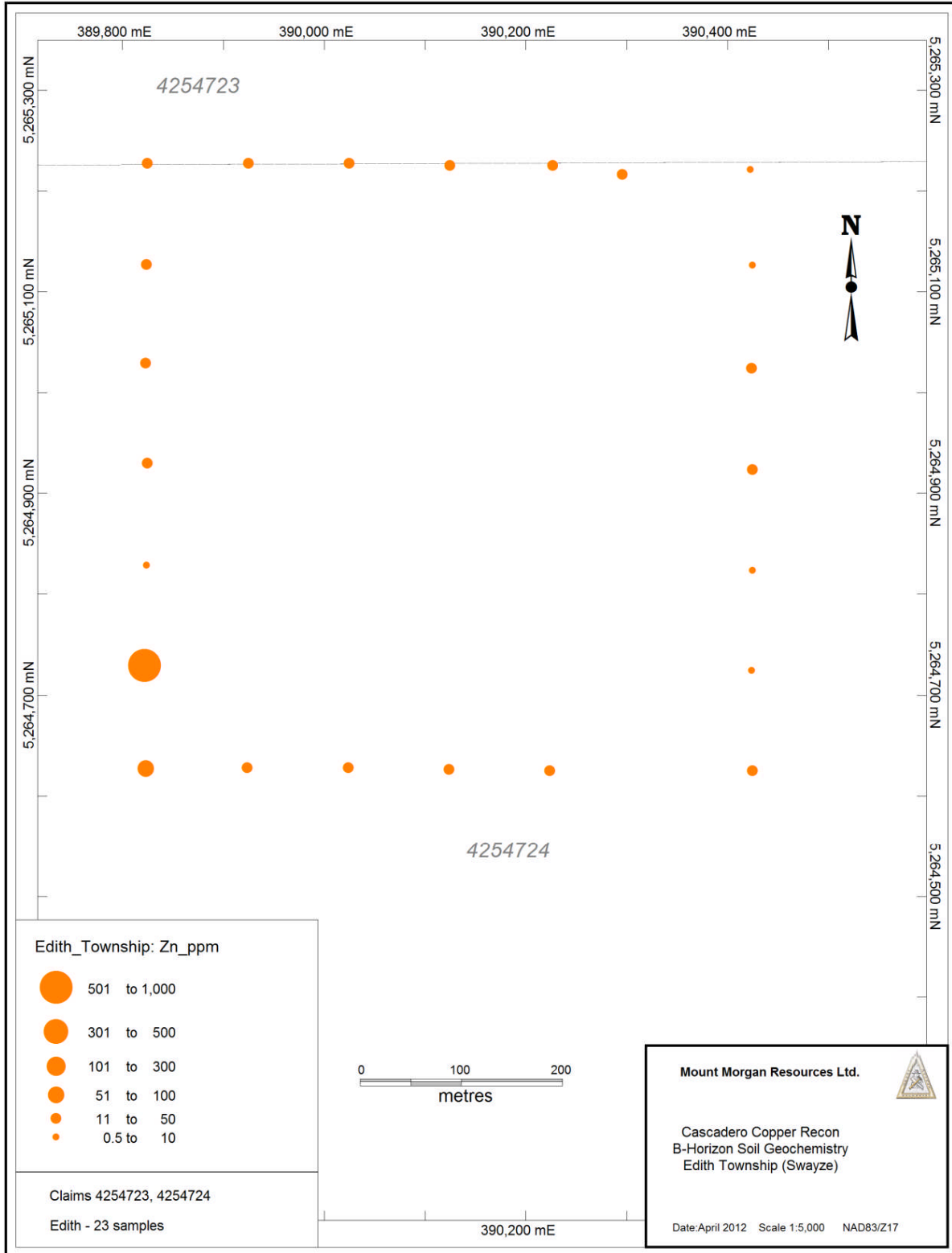
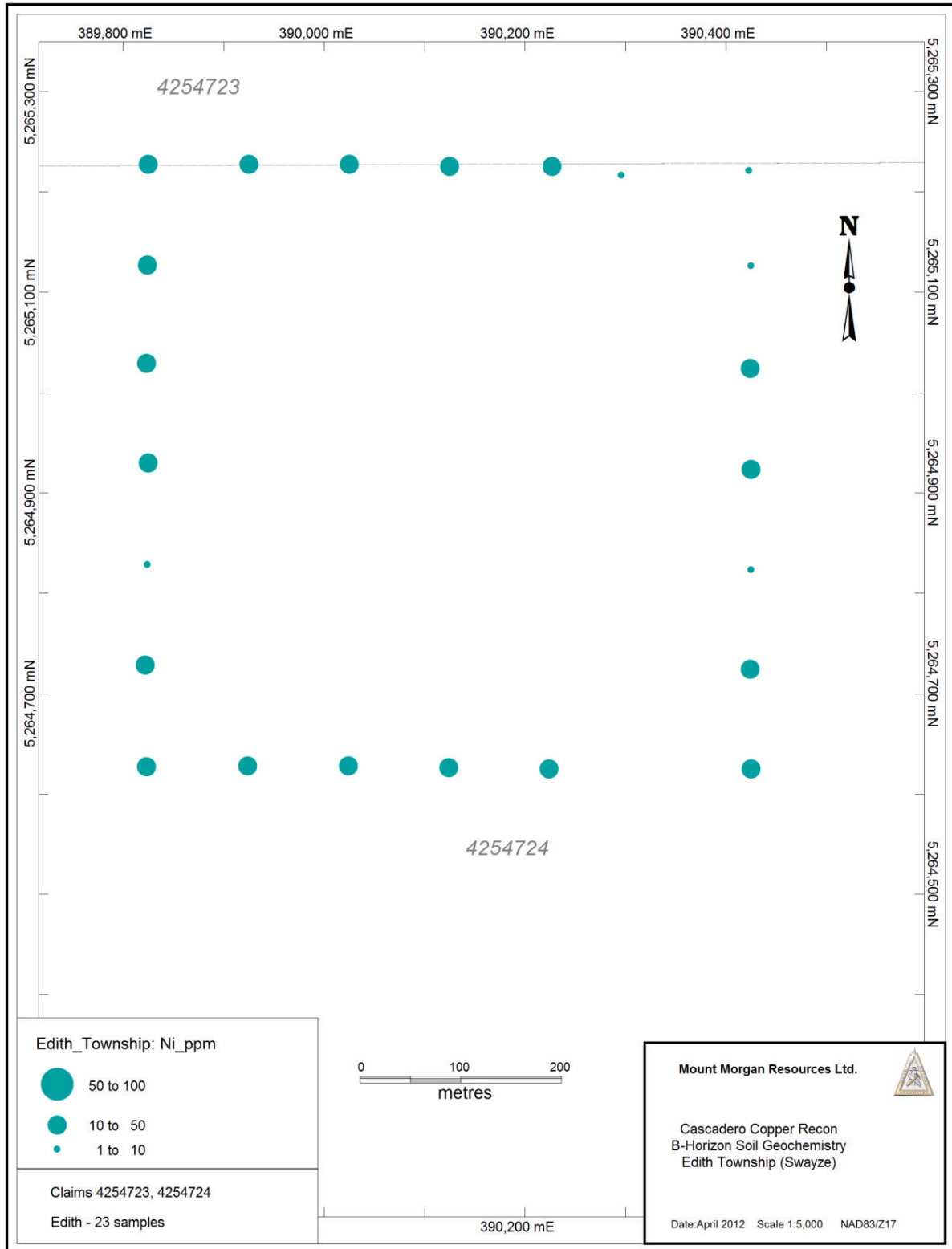


Figure 26. Nickel contents in B-Horizon soil, Edith Township.



Esther Township

Two adjacent grids were established and sampled in Esther Township (**Figure 27**). There are two areas of follow-up indicated by the survey results (**Figures 28 through 32**).

The first is a more-or-less adjacent two-sample Au response with one sample having a low-contrast response of 6-10 ppb and the second having a higher 11-50 ppb response. This anomaly could be open in a linear fashion from northwest to southeast.

The second area of interest is the northeast corner of the grid where there is a two sample copper anomaly with 101-300 ppm that coincides with two elevated Zn responses (300-500 ppm), two weakly elevated Pb responses (10-51 ppm) and one elevated Ni response (50-100 ppm). This anomaly is a good base metal follow-up target. It is open to the northeast.

Figure 27. Sample location map, Esther Township.

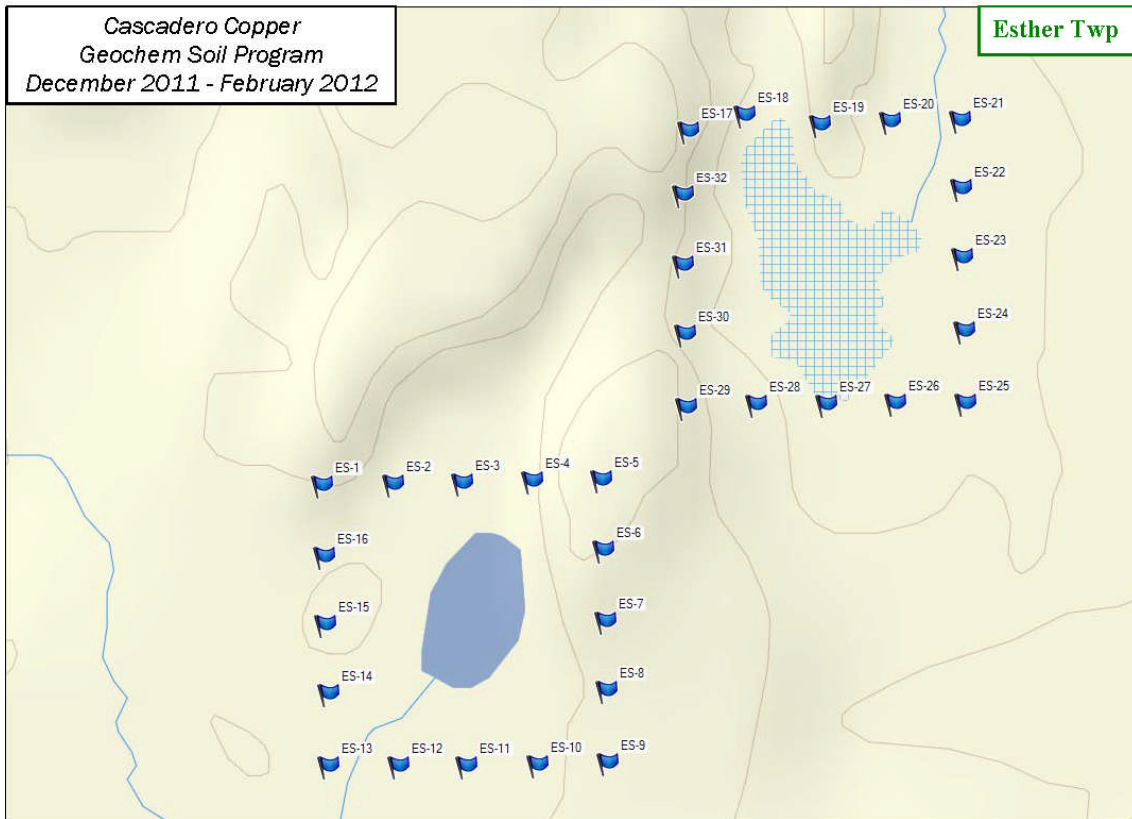


Figure 28. Gold contents in B-Horizon soil, Esther Township.

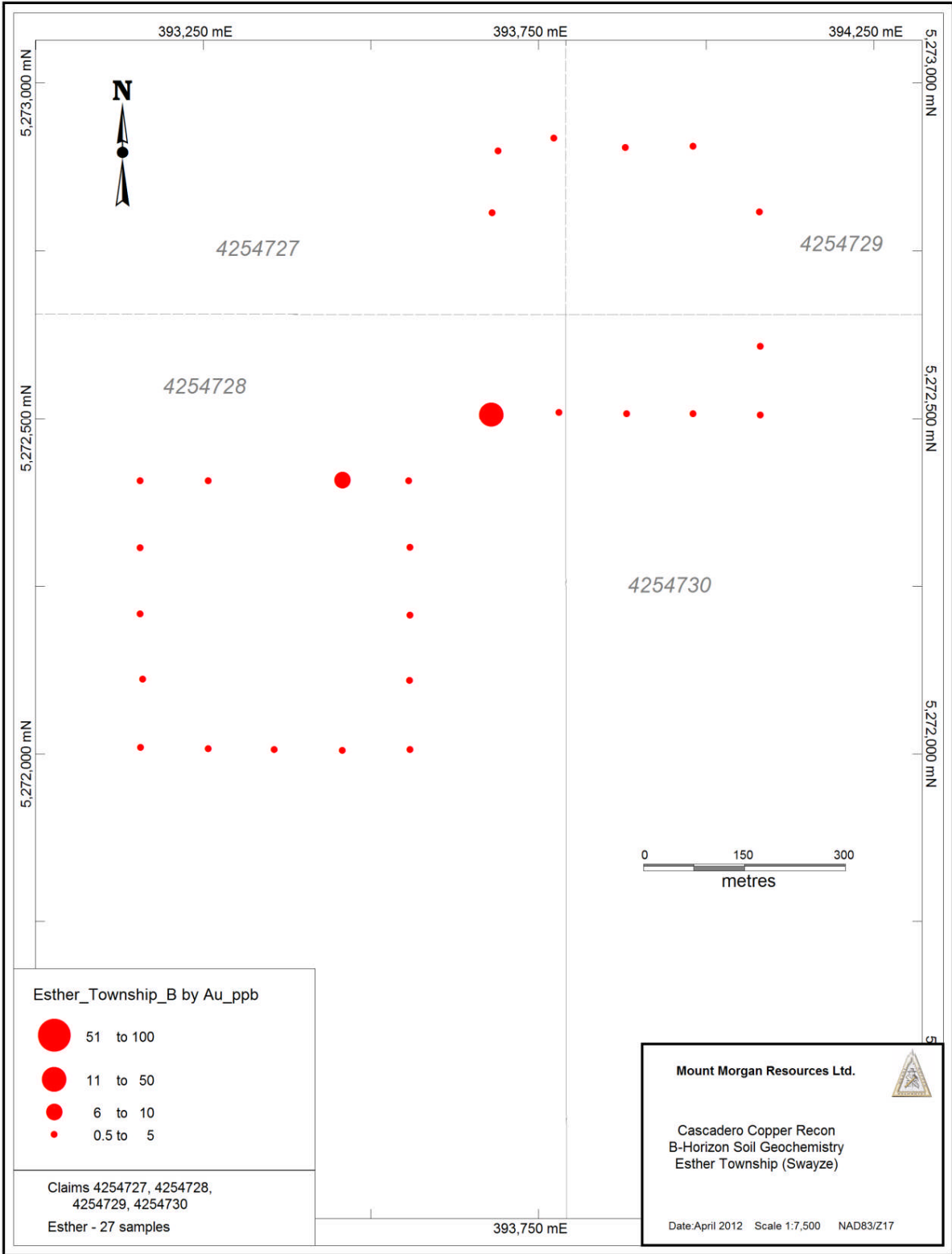


Figure 29. Copper contents in B-Horizon soil, Esther Township.

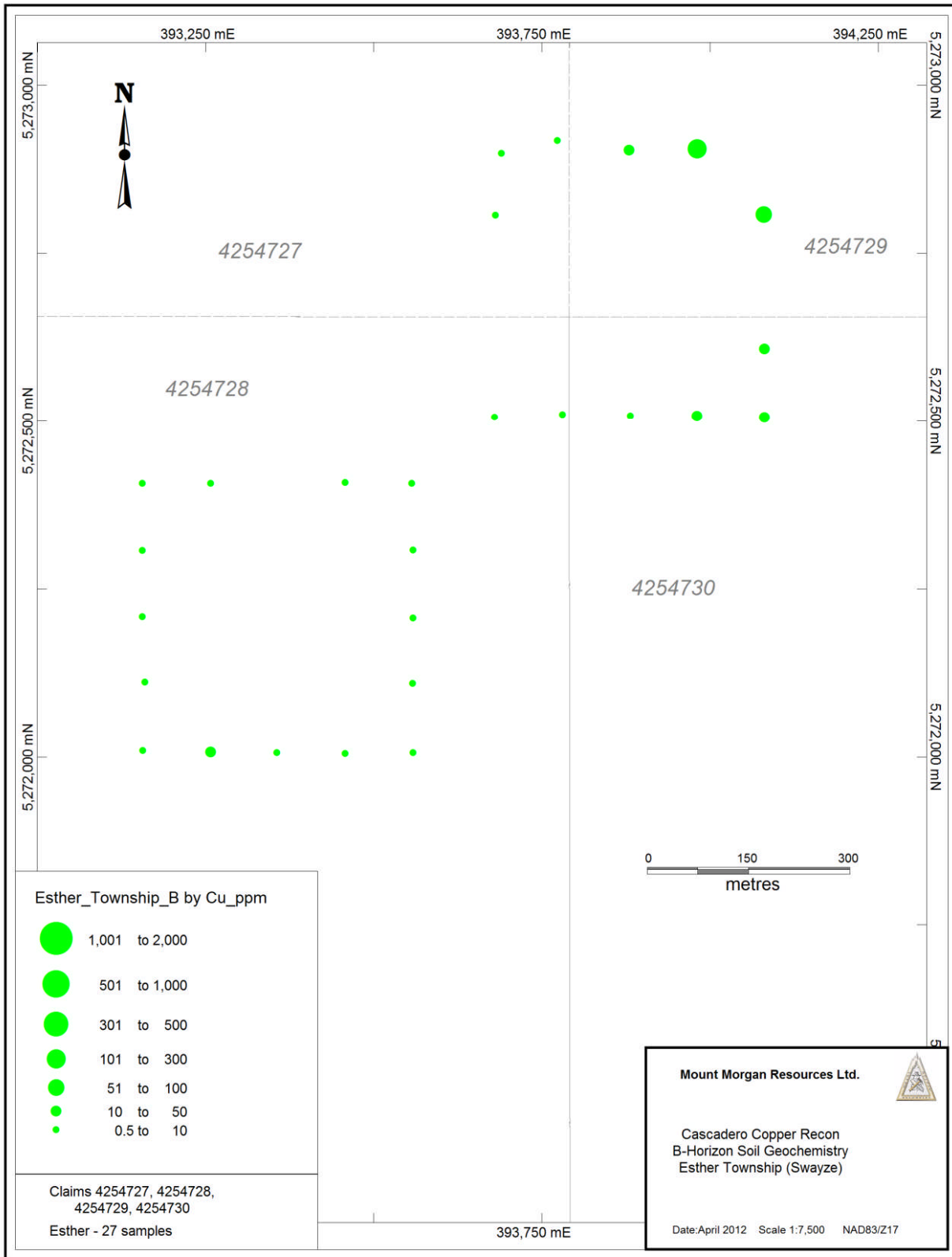


Figure 30. Lead contents in B-Horizon soil, Esther Township.

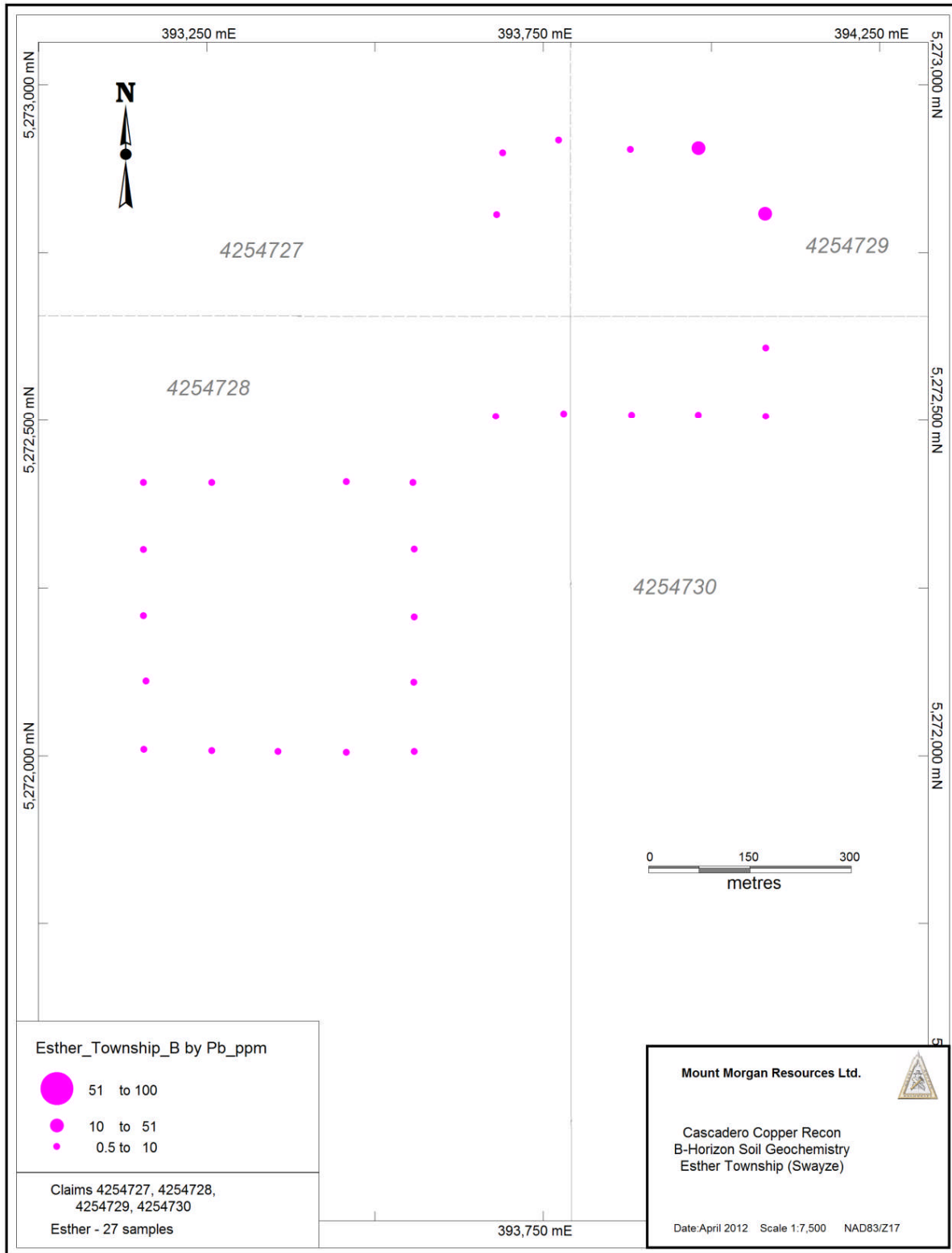


Figure 31. Zinc contents in B-Horizon soil, Esther Township.

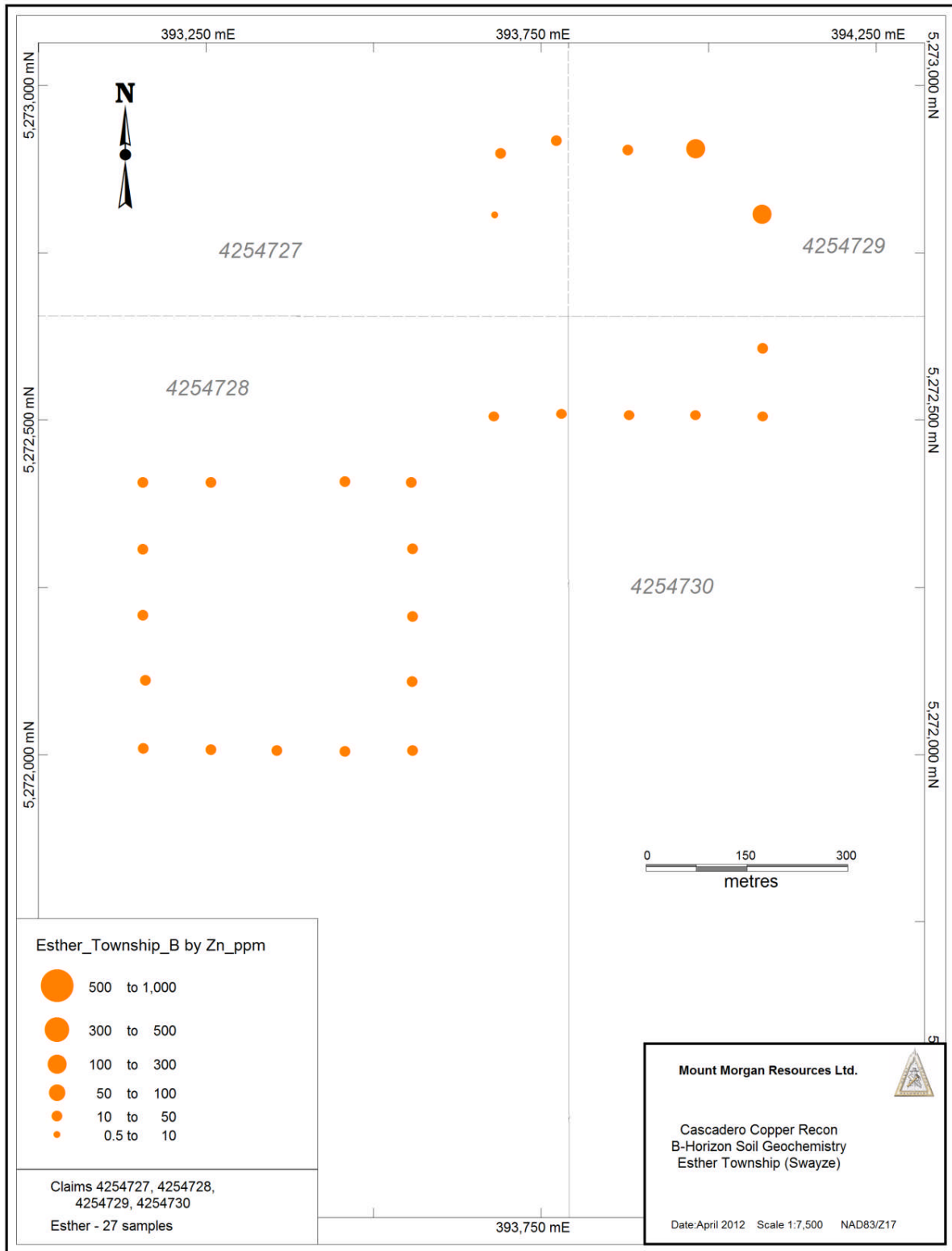
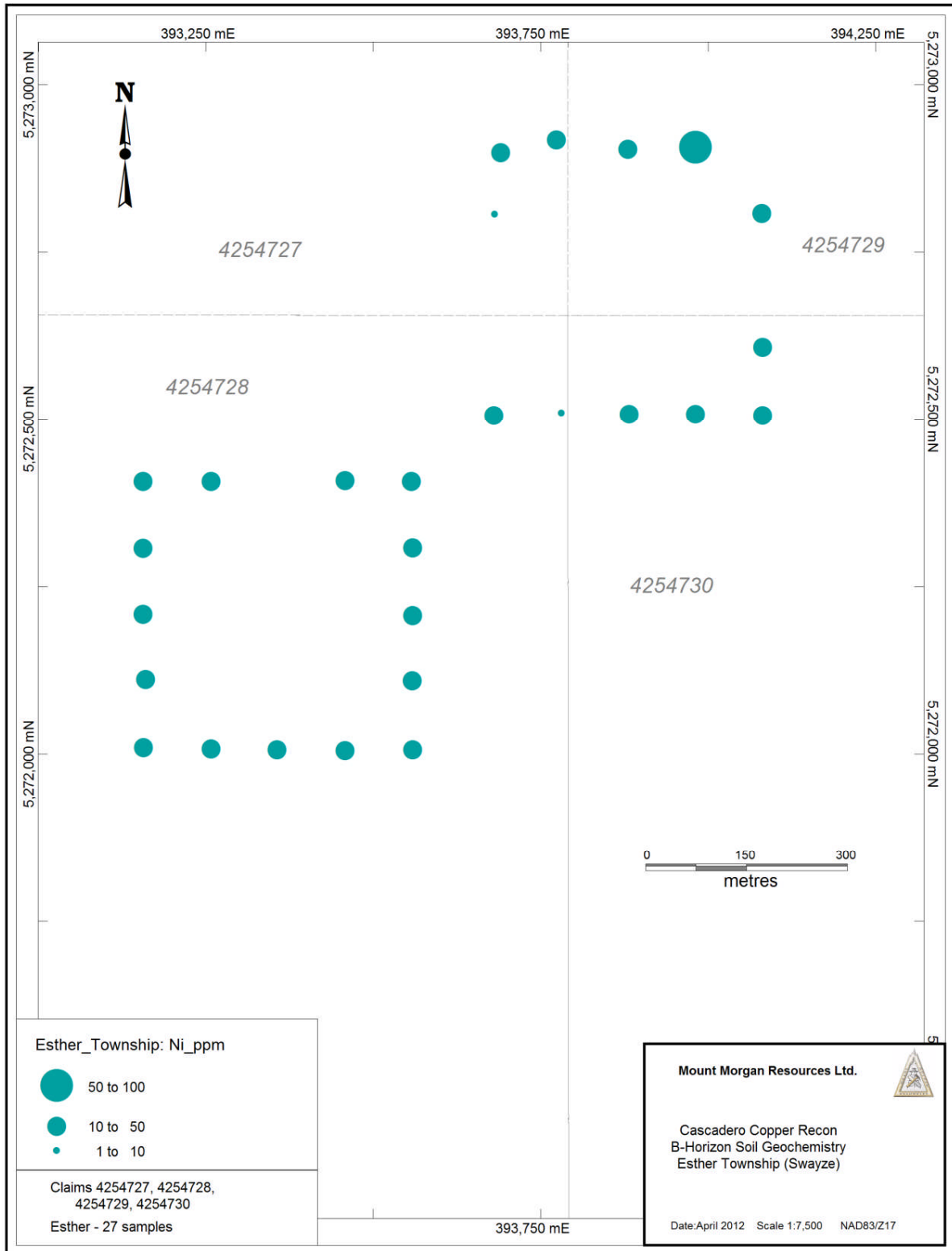


Figure 32. Nickel contents in B-Horizon soil, Esther Township.



Fingal Township

A total of six grids were established in Fingal Township (**Figures 33 through 37**) and are labeled F1 through F6. The results are discussed in turn according to the groupings when nomenclature was assigned.

Grid F3, F4 and F6 (**Figures 38 through 42**) are marked by a large number of moderately elevated (10-50 ppb) Au responses. The area of this large number of responses should be gridded and additional soil surveys undertaken as well as prospected. In addition to the Au responses there are generally low Cu responses to 300 ppm and a single elevated Pb response (50-100 ppm).

Each of Grids F1, F2 and F5 (**Figures 43 through 47**) are marked by multiple samples of moderately elevated (10-50 ppb) Au and strongly elevated (51-100 ppb) Au. Grids F1, F2 and F5 should be individually gridded and re-surveyed with additional soil geochemical surveys. There are a large number of elevated Au responses on these grids. The grids should be based on 50 m north-south lines with 25 m sample spacing. The areas of the Au responses are accompanied by up to 1000 ppm Cu, 100-300 ppm Zn and low Pb and Ni.

Both Fingal Township North and South should be considered priority follow-up target areas.

Figure 33. General location map for six areas of sample collection (F1 through F6), Fingal Township.

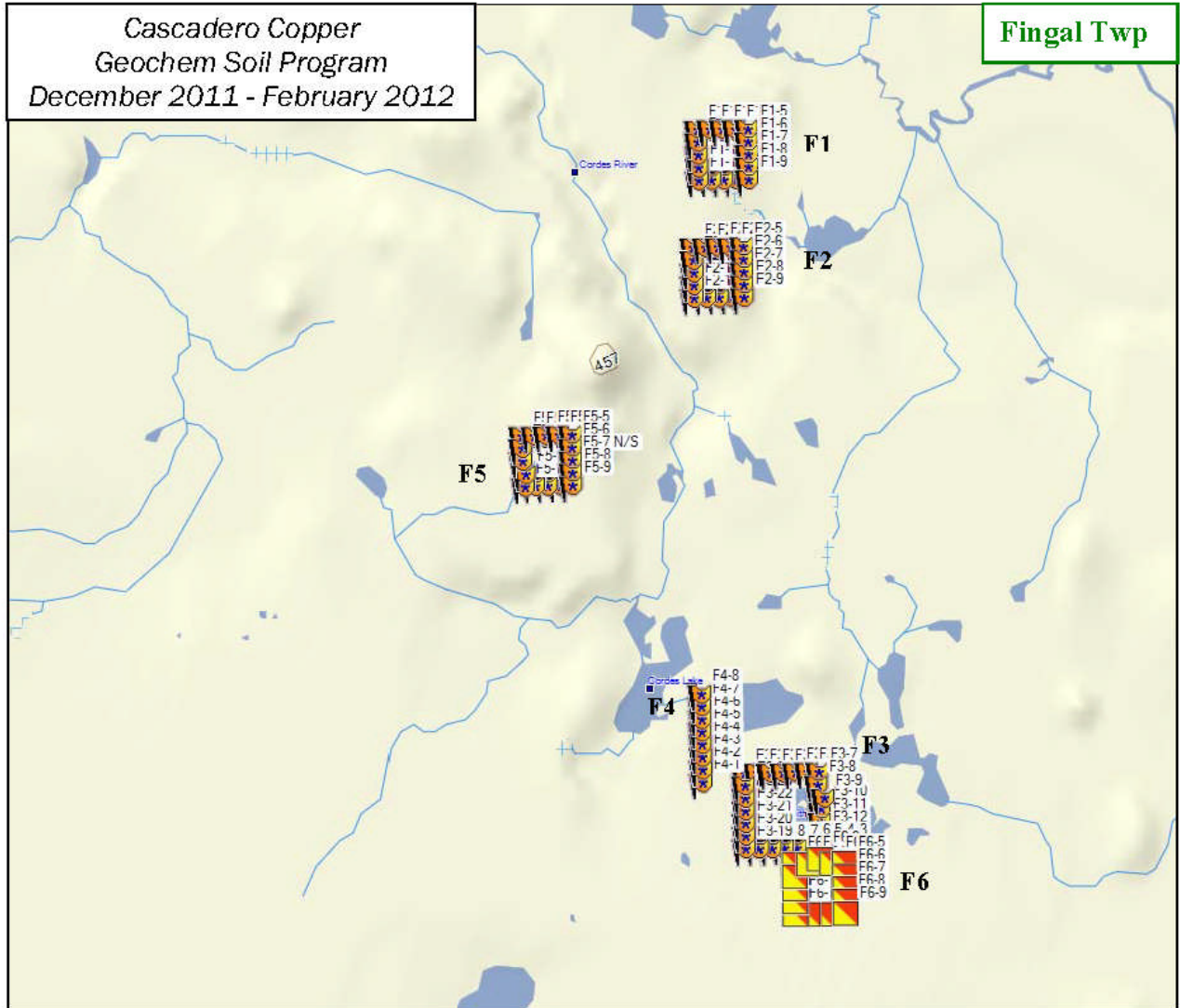


Figure 34. Sample location map for Grids F1 and F2, Fingal Township.

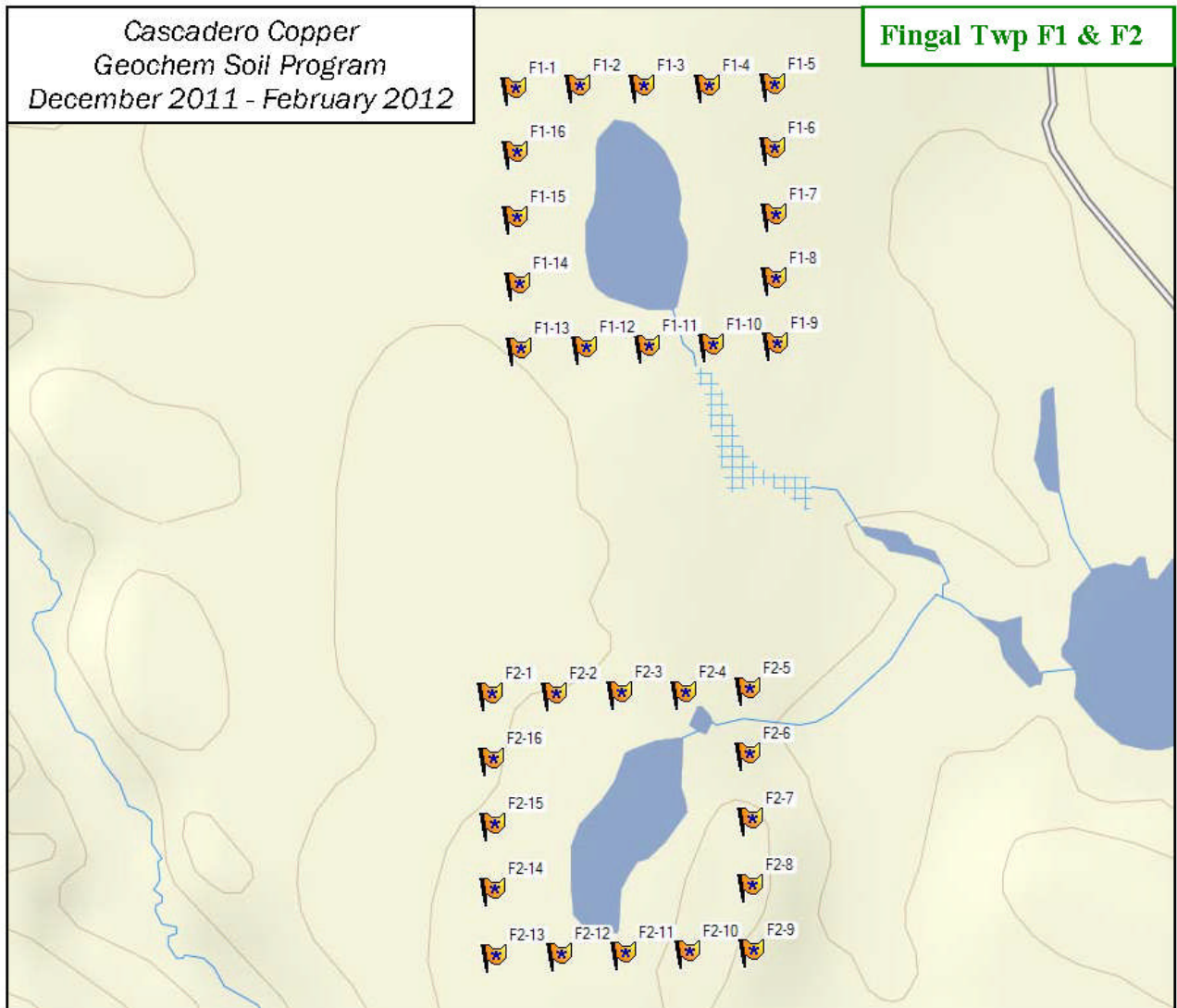


Figure 35. Sample location map for Grids F3 and F4, Fingal Township.

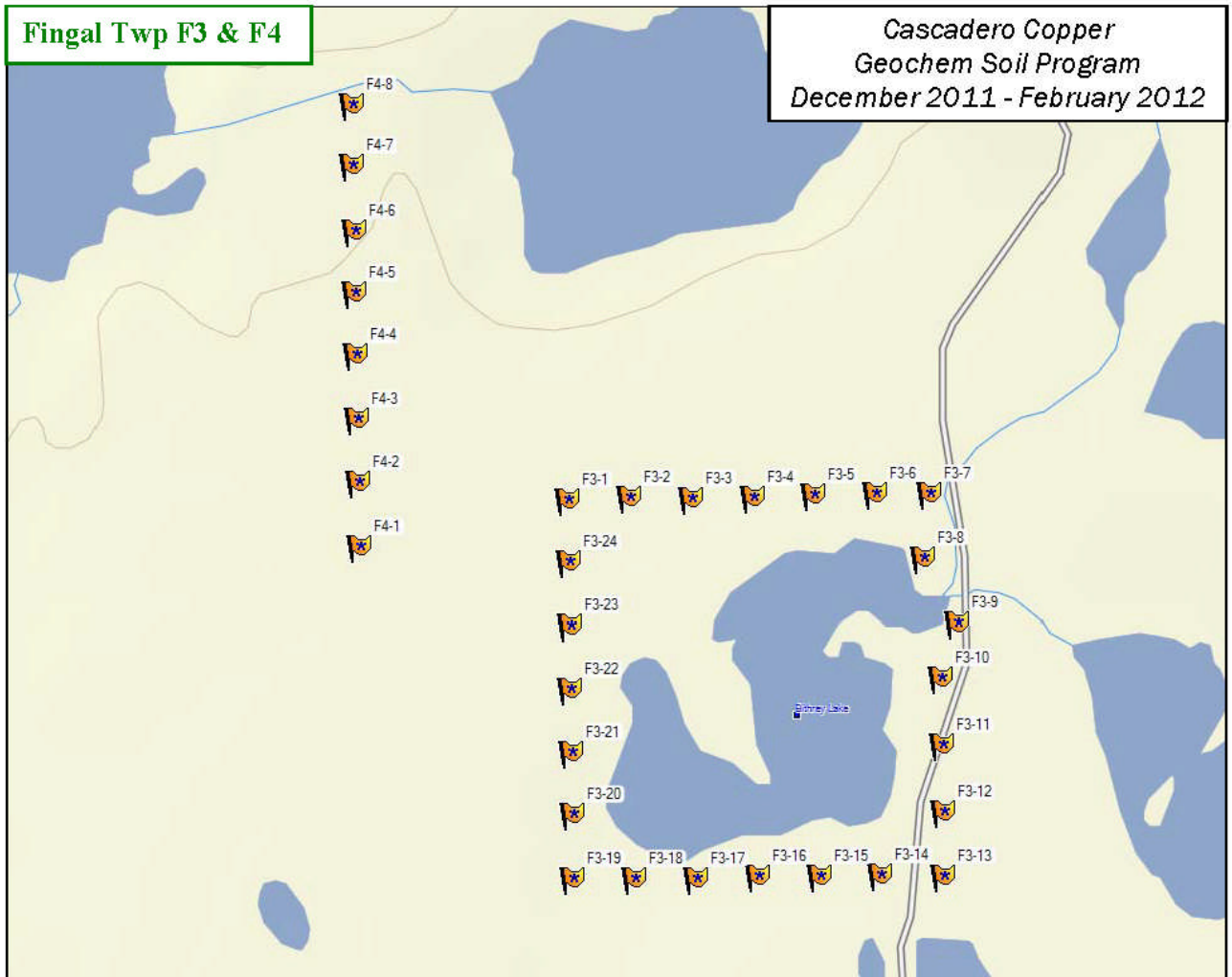


Figure 36. Sample location map for Grid F5, Fingal Township.

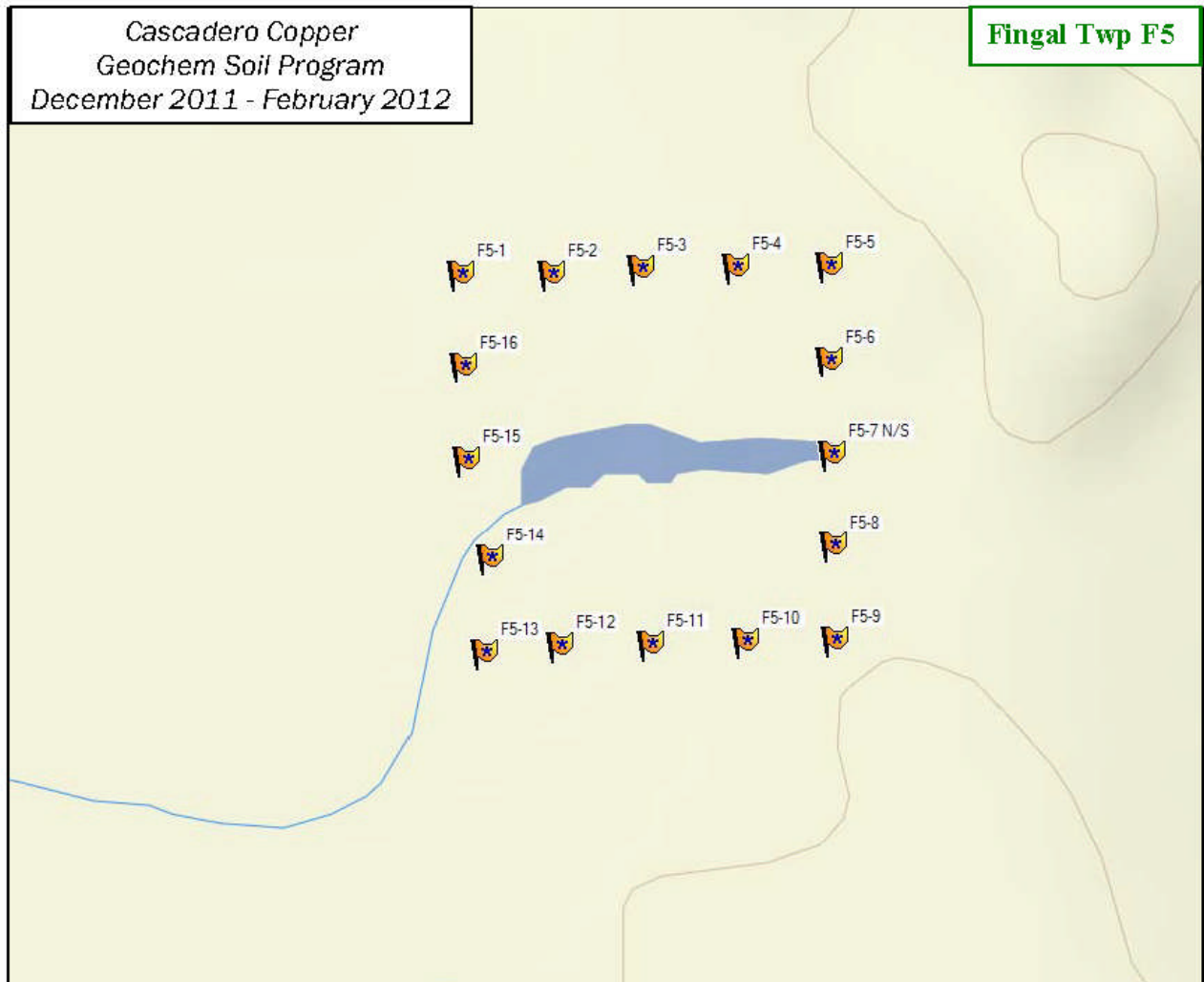


Figure 37. Sample location map for Grid F6, Fingal Township.

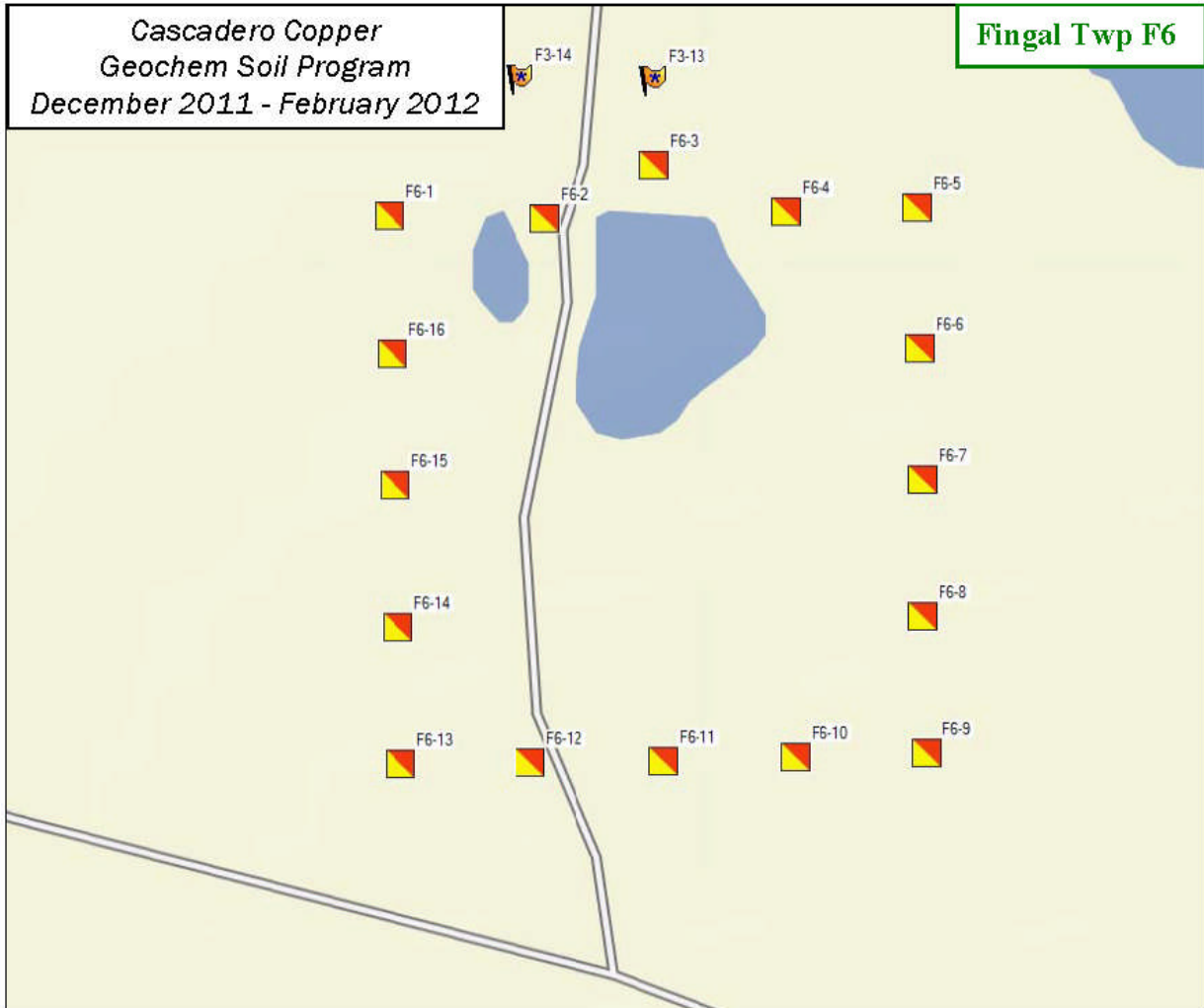


Figure 38. Gold contents in B-Horizon soil, Grids F3, F4 and F6, Fingal Township south.

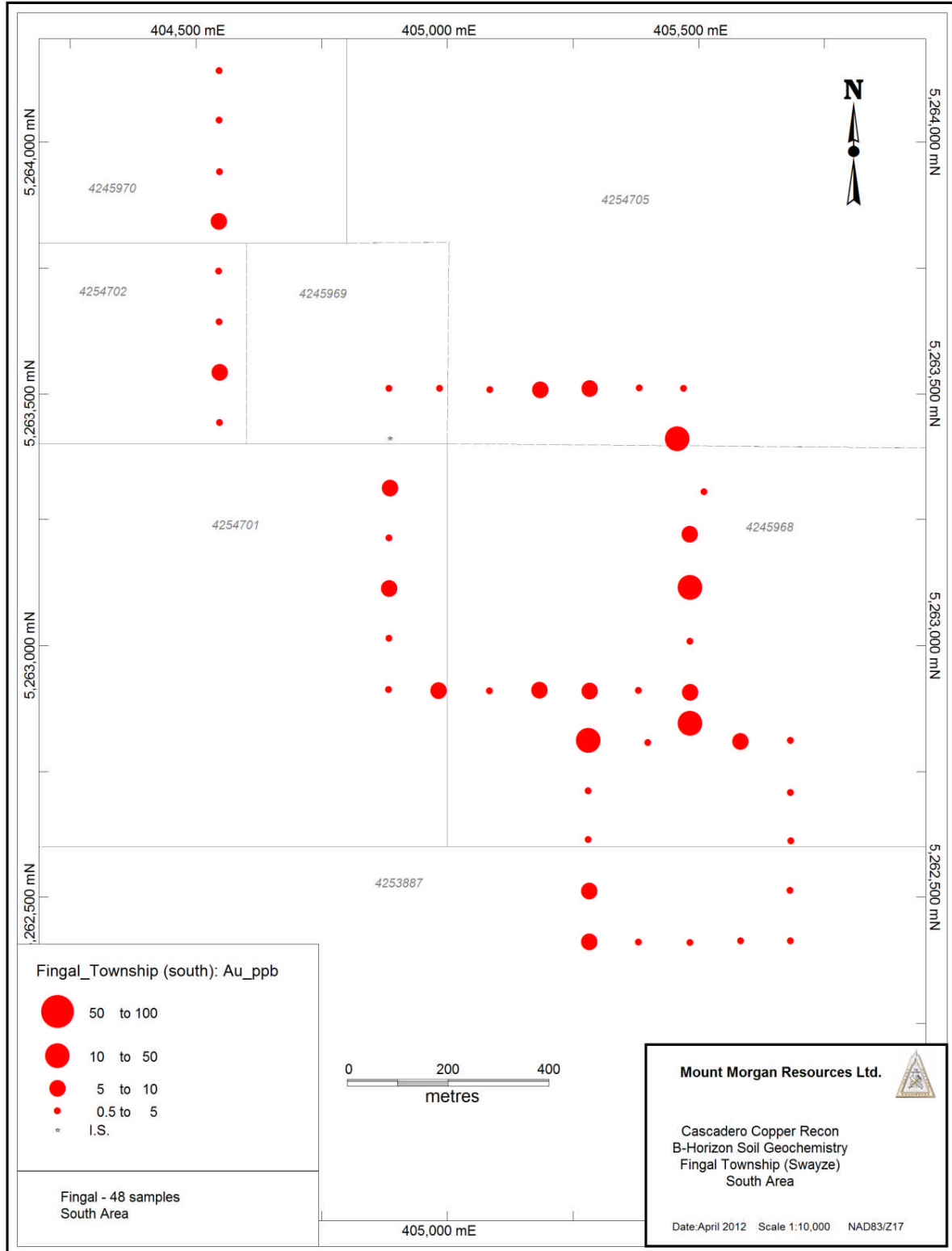


Figure 39. Copper contents in B-Horizon soil, Grids F3, F4 and F6, Fingal Township south.

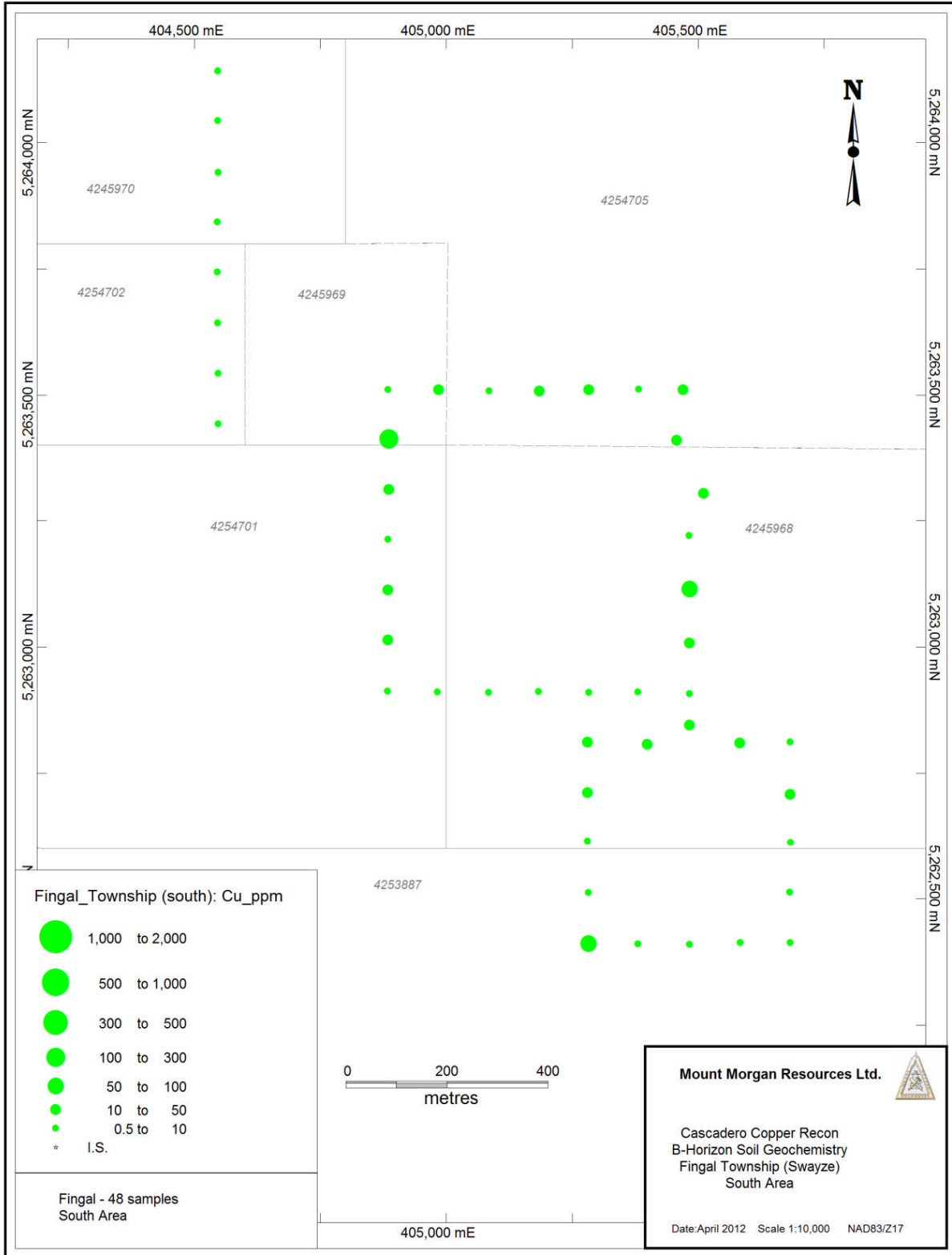


Figure 40. Lead contents in B-Horizon soil, Grids F3, F4 and F6, Fingal Township south.

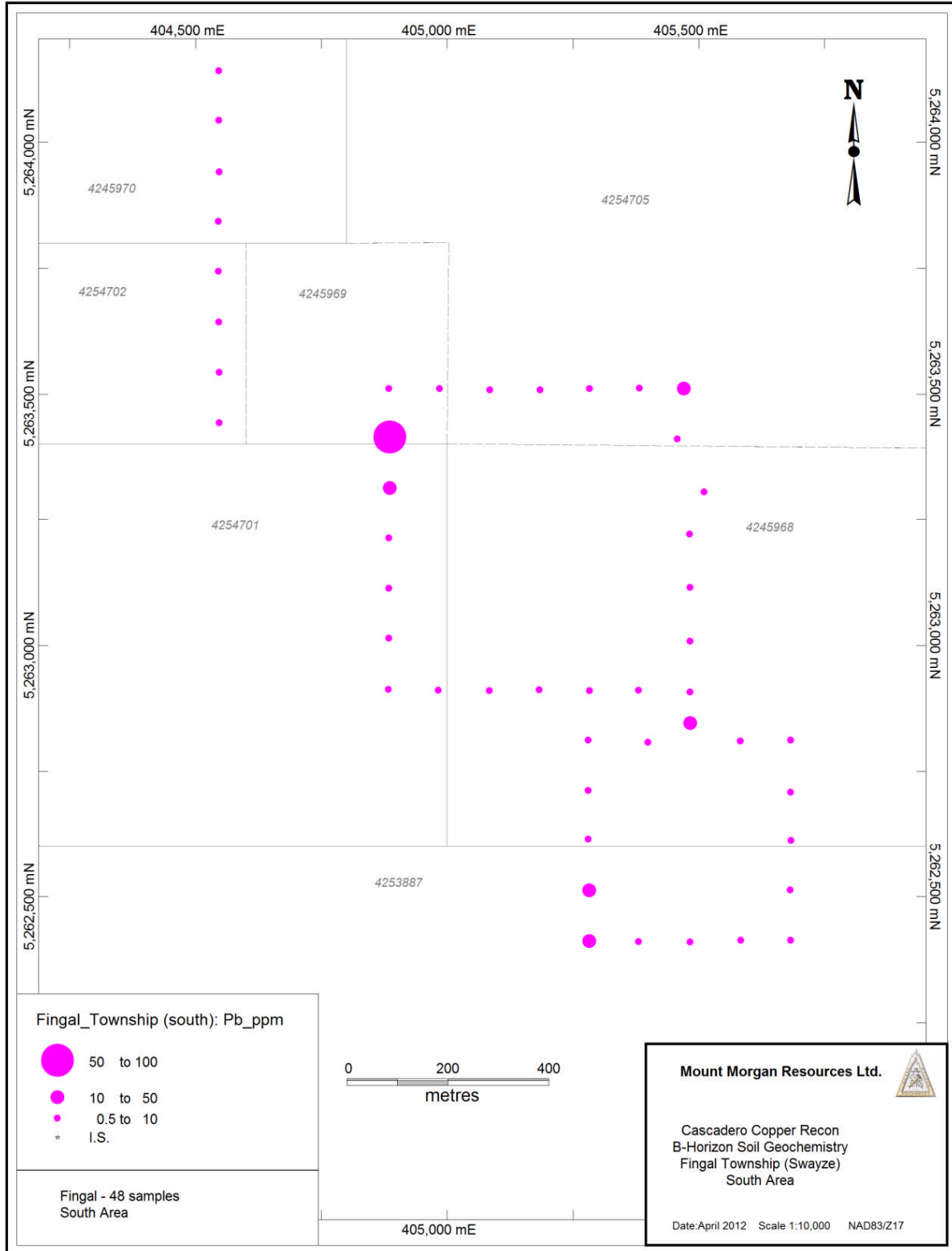


Figure 41. Zinc contents in B-Horizon soil, Grids F3, F4 and F6, Fingal Township south.

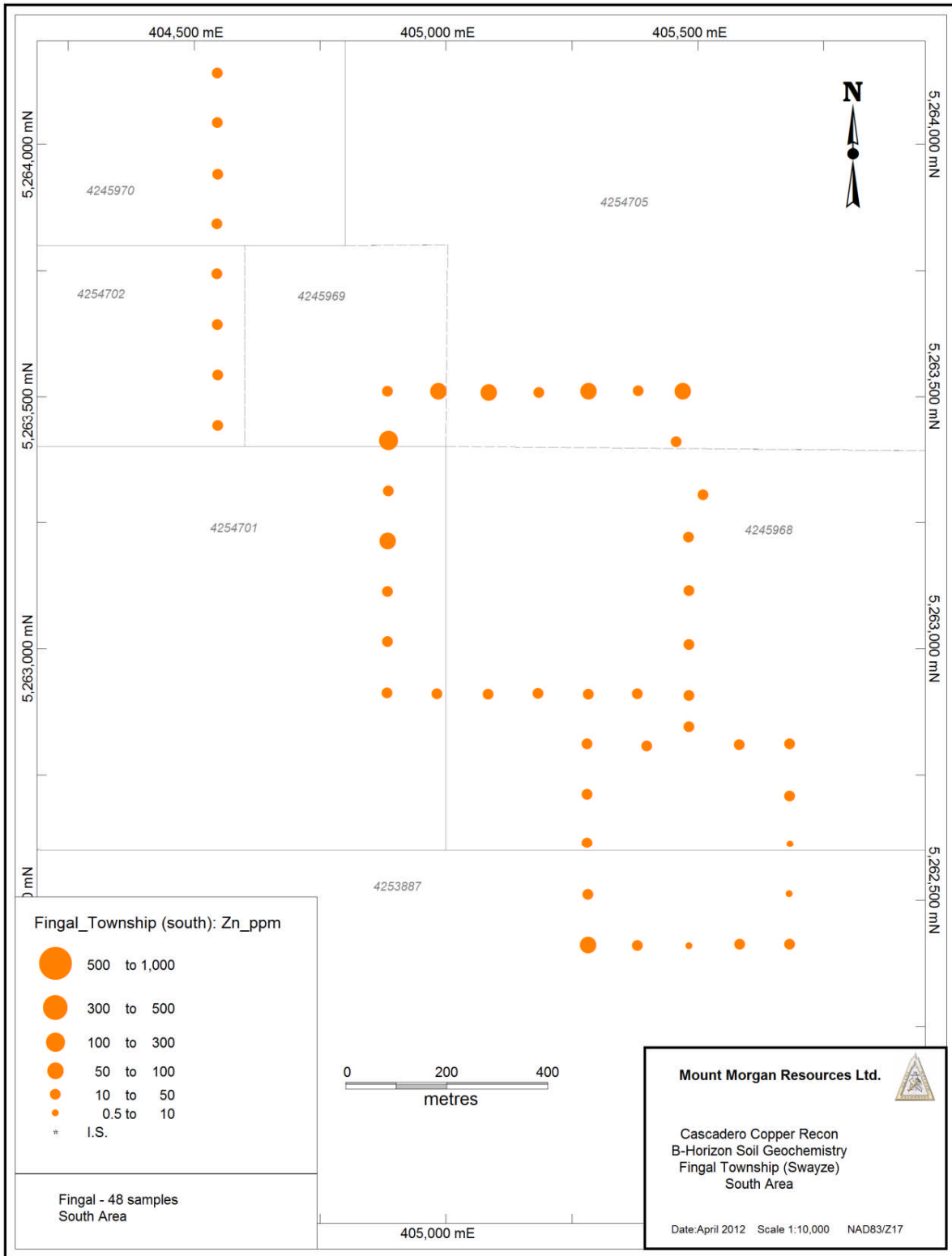


Figure 42. Nickel contents in B-Horizon soil, Grids F3, F4 and F6, Fingal Township south.

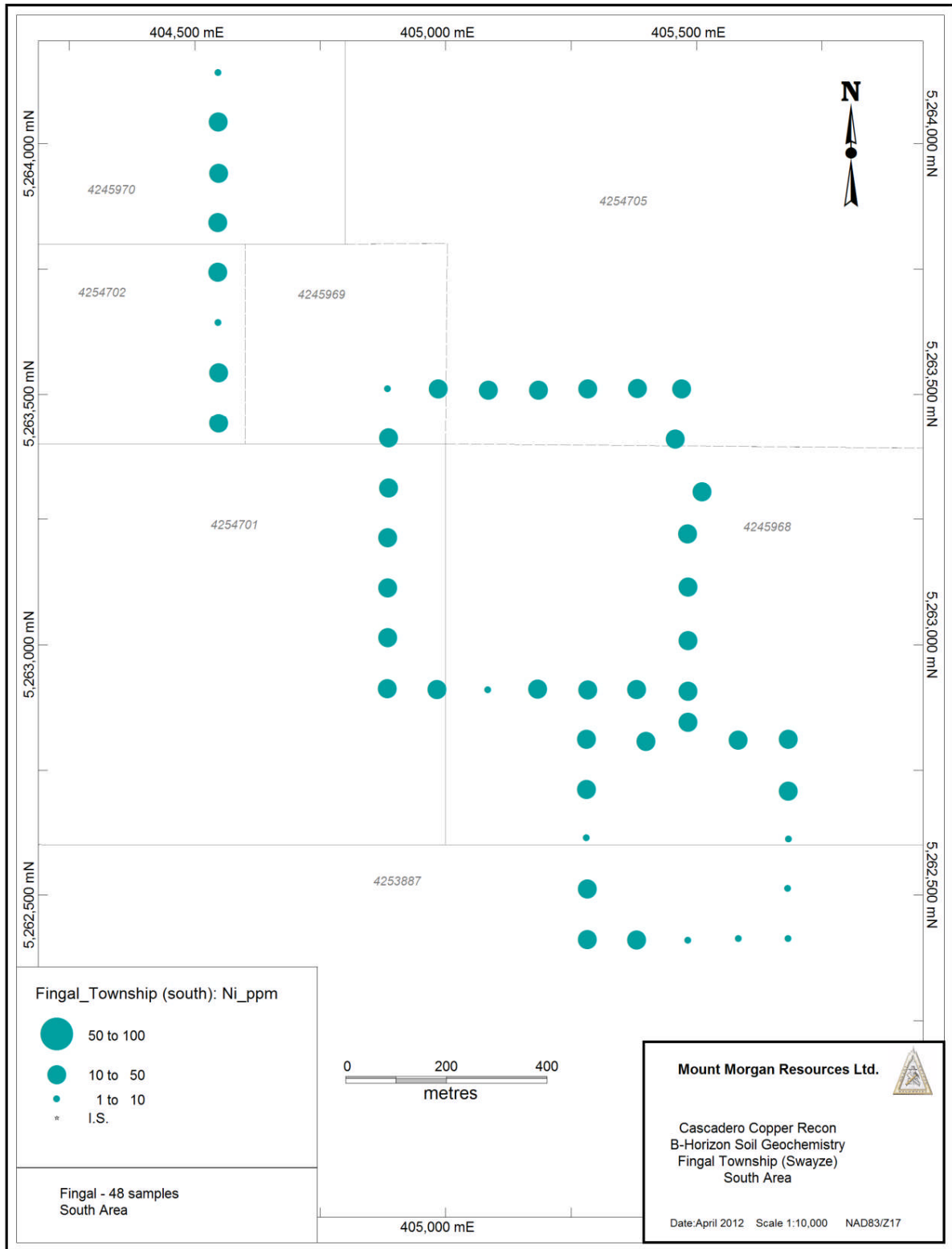


Figure 43. Gold contents in B-Horizon soil, Grids F1, F2 and F5, Fingal Township north.

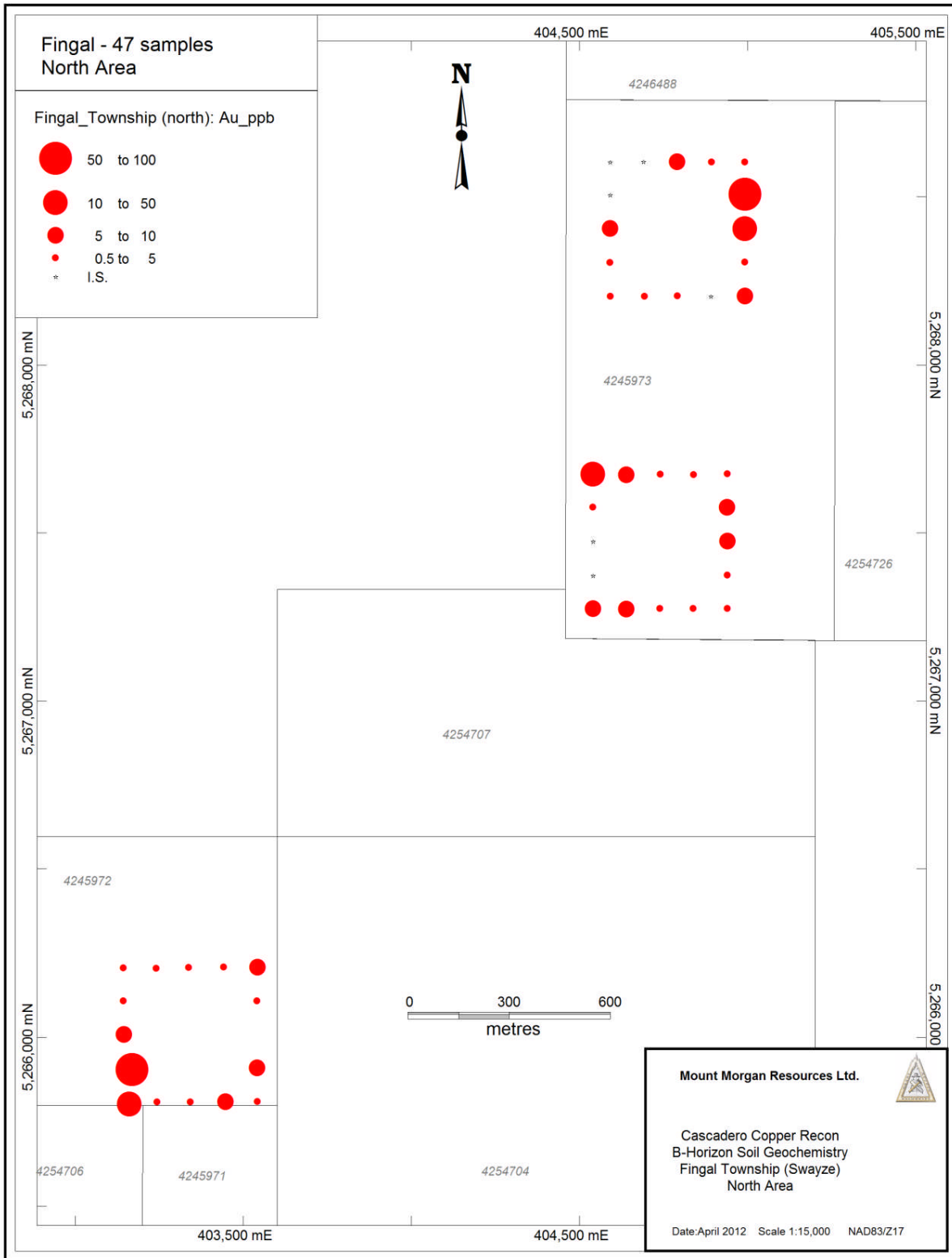


Figure 44. Copper contents in B-Horizon soil, Grids F1, F2 and F5, Fingal Township north.

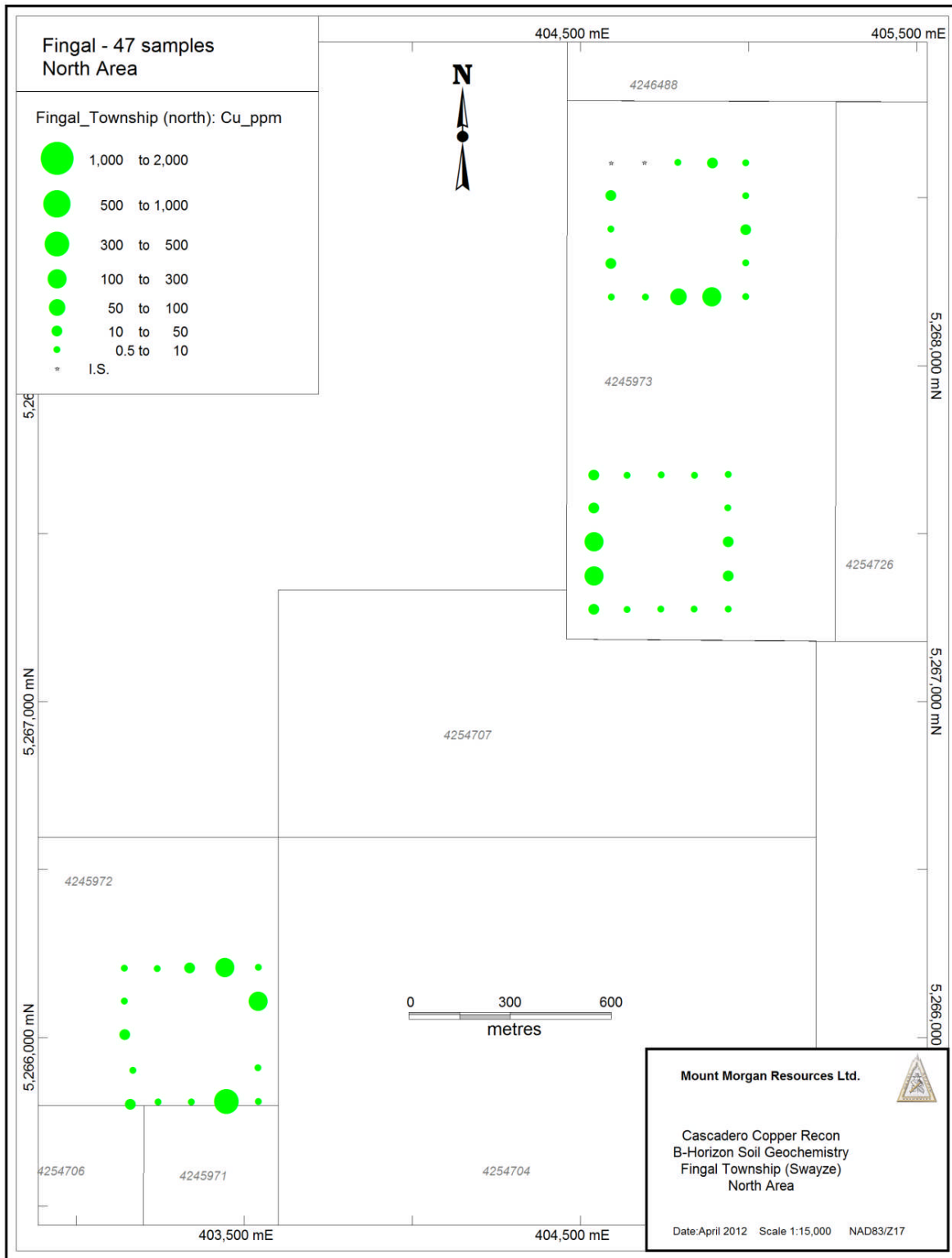


Figure 45. Lead contents in B-Horizon soil, Grids F1, F2 and F5, Fingal Township north.

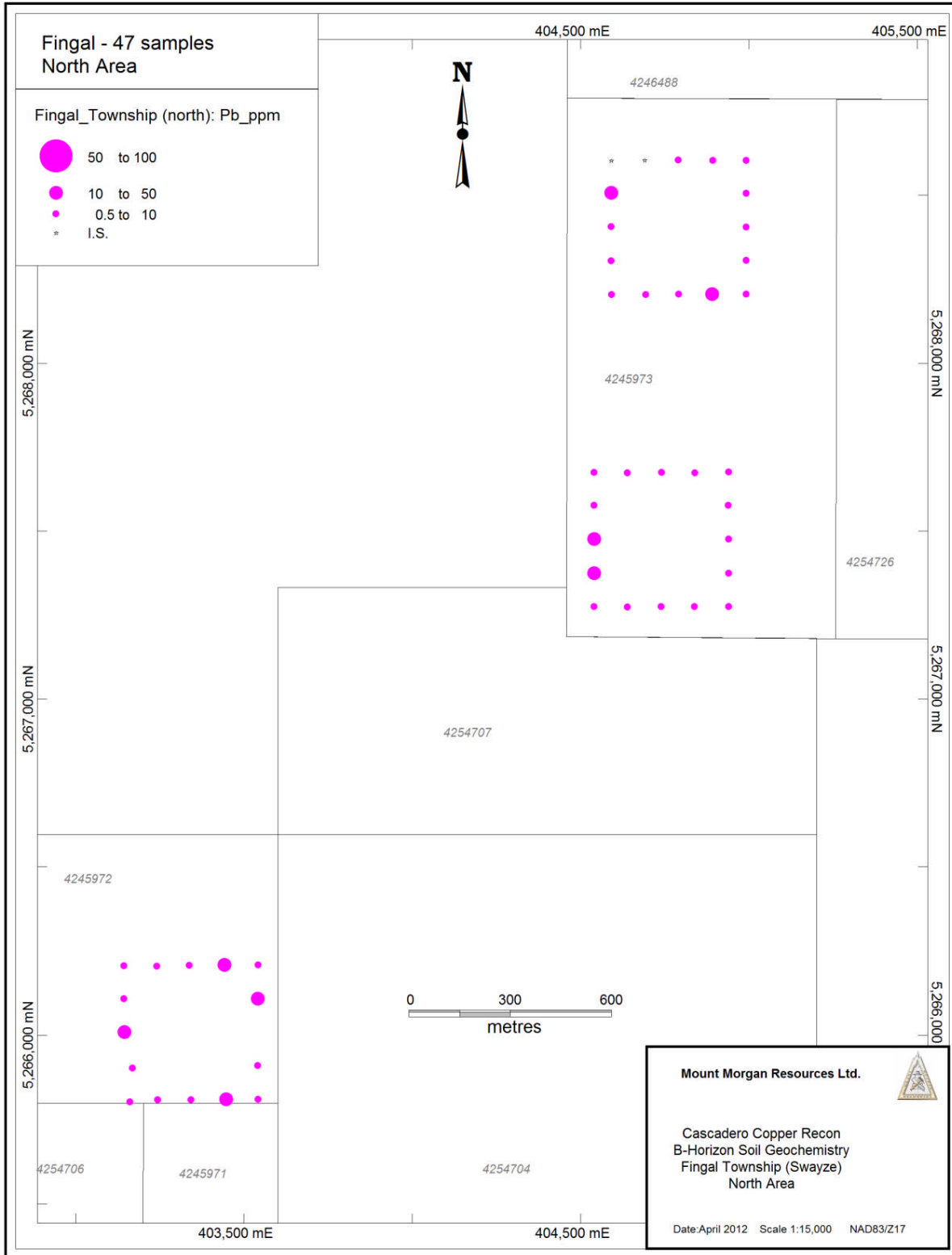


Figure 46. Zinc contents in B-Horizon soil, Grids F1, F2 and F5, Fingal Township north.

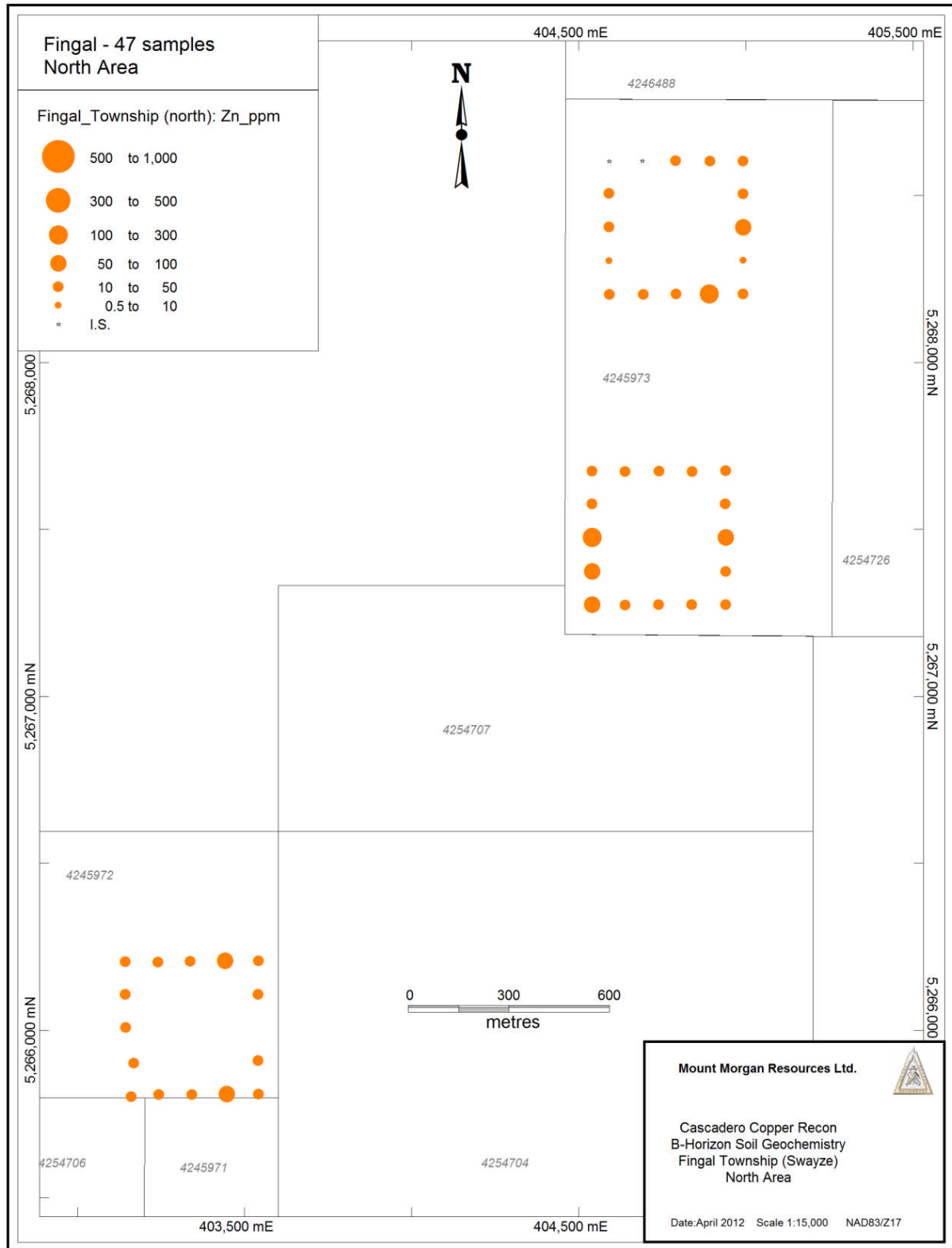
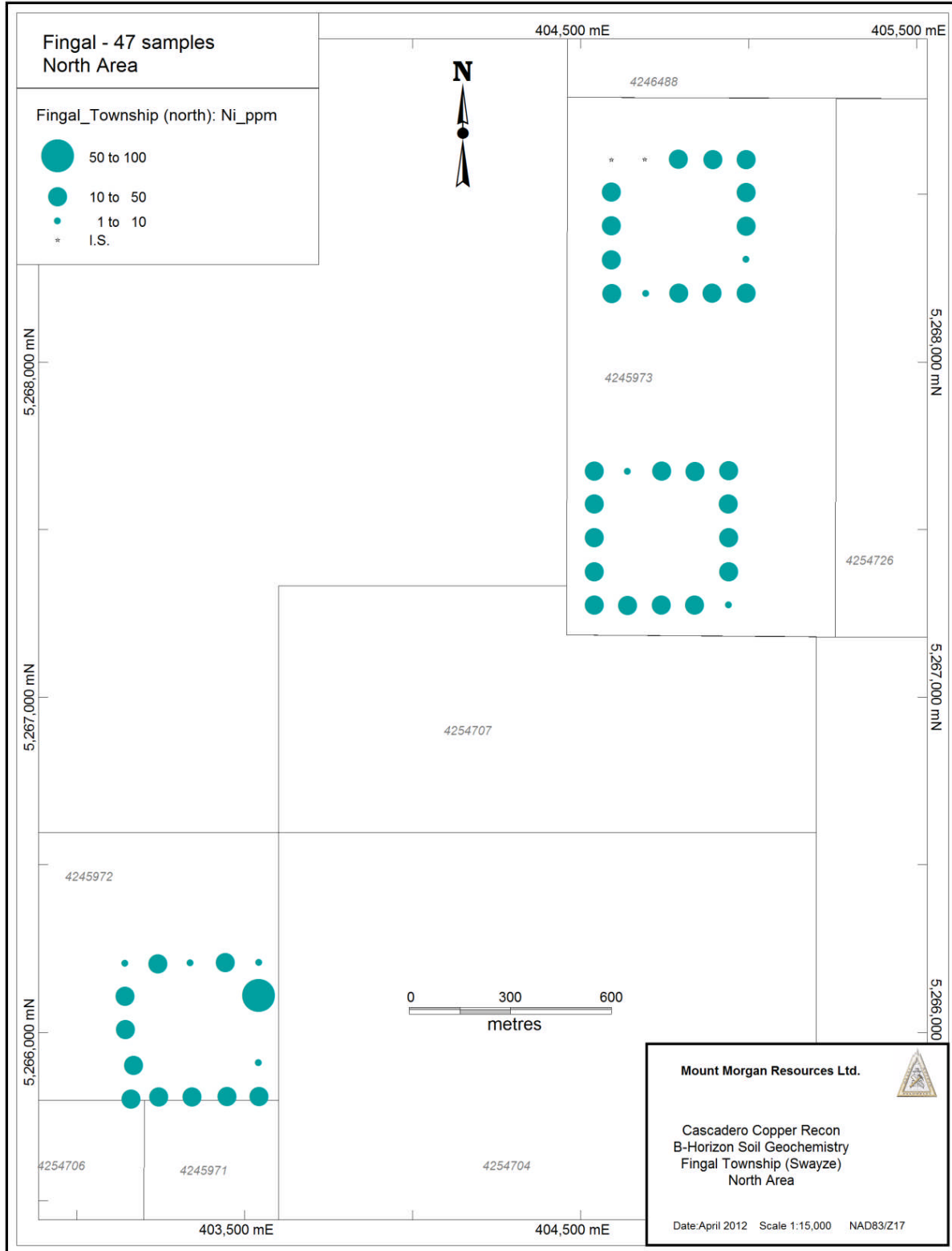


Figure 47. Nickel contents in B-Horizon soil, Grids F1, F2 and F5, Fingal Township north.



Groves Township

A single grid for B-Horizon soil sampling was established in Groves Township (**Figure 48**). In addition to the B-Horizon soil samples two representative rock chip samples were also collected. These samples (TR Sample 1 and TR Sample 2) were assayed and had the following results: <1-9 ppb Au, 2.7-4.5 ppm Cu, 0.7 ppm Pb, 5-9 ppm Zn, 1.2-2.8 ppm Ni and <0.01%S.

Results for B-Horizon soil samples (**Figures 49 through 53**) indicate primarily single sample anomalies are present on the grid. A single sample Au response (11-50 ppb) occurs on the west edge of the grid and may be open to the west whereas a single sample Cu response (301-500 ppm) is present on the southwest corner of the grid and may also be open to the west. Single east-west oriented transects of soil samples should be collected over each of these responses to determine whether the sample is a **bona fide** single sample anomaly or extends westward. A low-contrast (10-50 ppm) and moderate-contrast (51-100 ppm) Ni anomaly characterizes the general area of the grid and likely indicates mafic lithologies in the bedrock that underpins the survey area. Lead and Zn contents are low.

Figure 48. Sample location map for B-Horizon soil samples, Groves Township.

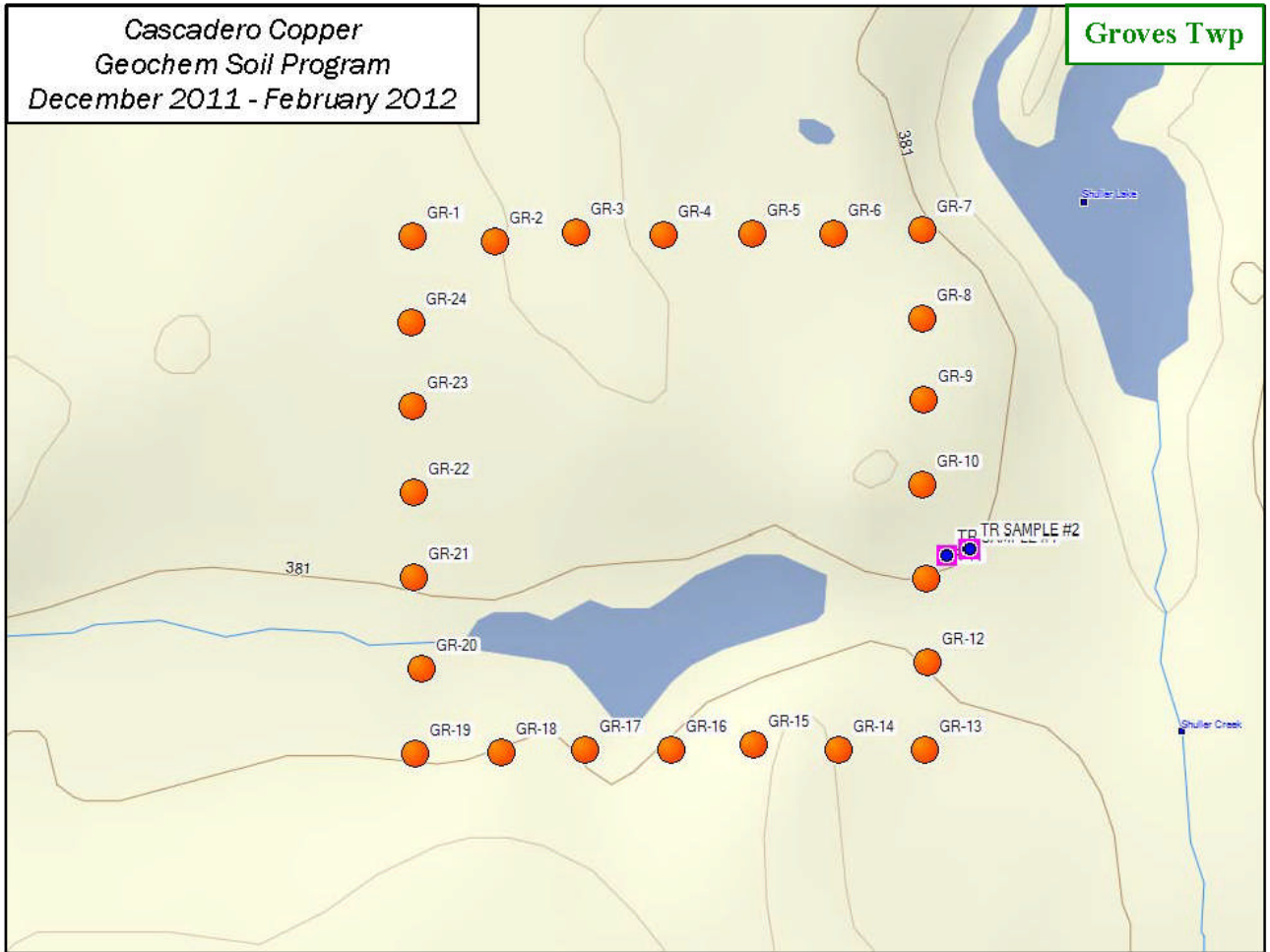


Figure 49. Gold contents in B-Horizon soil, Groves Township.

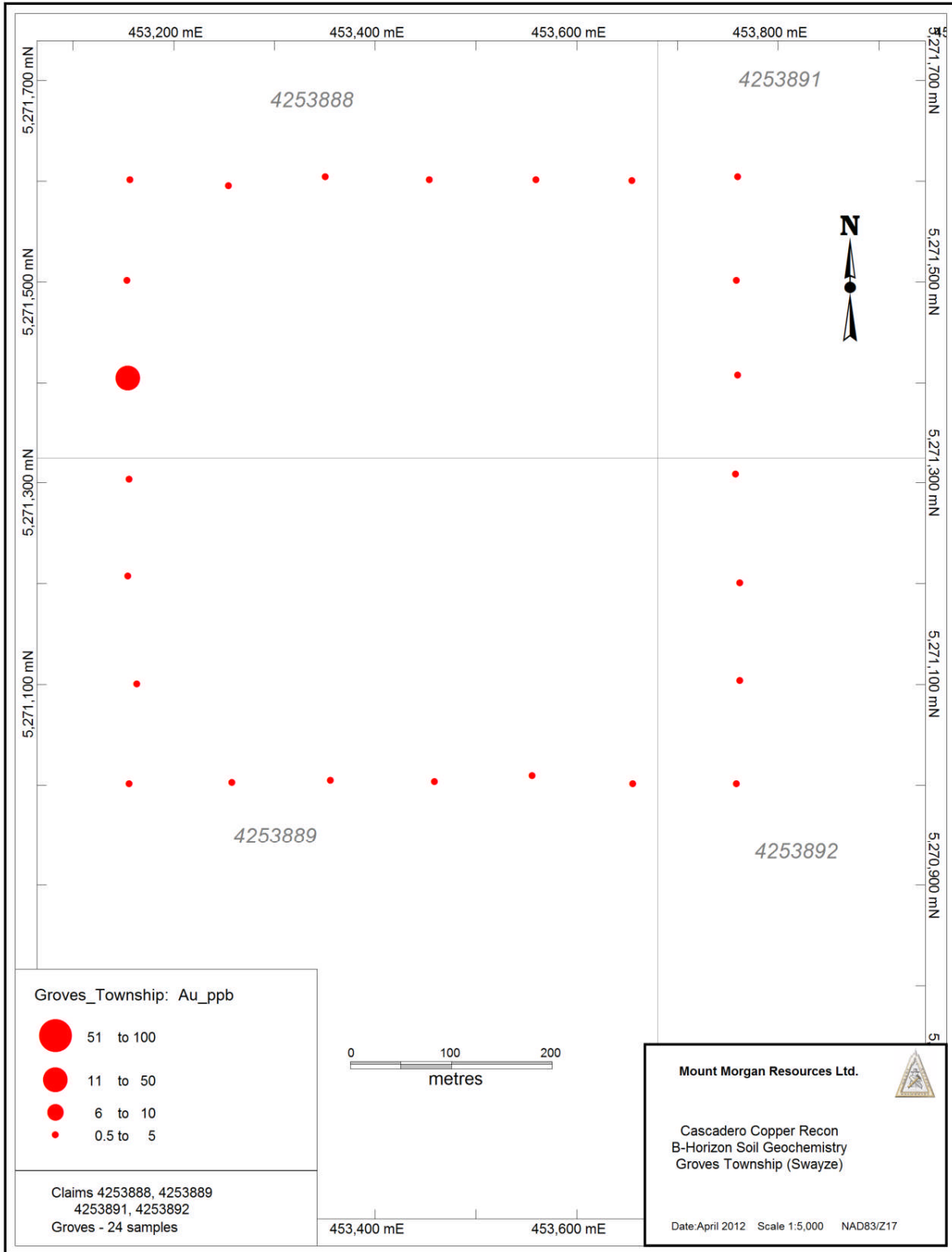


Figure 50. Copper contents in B-Horizon soil, Groves Township.

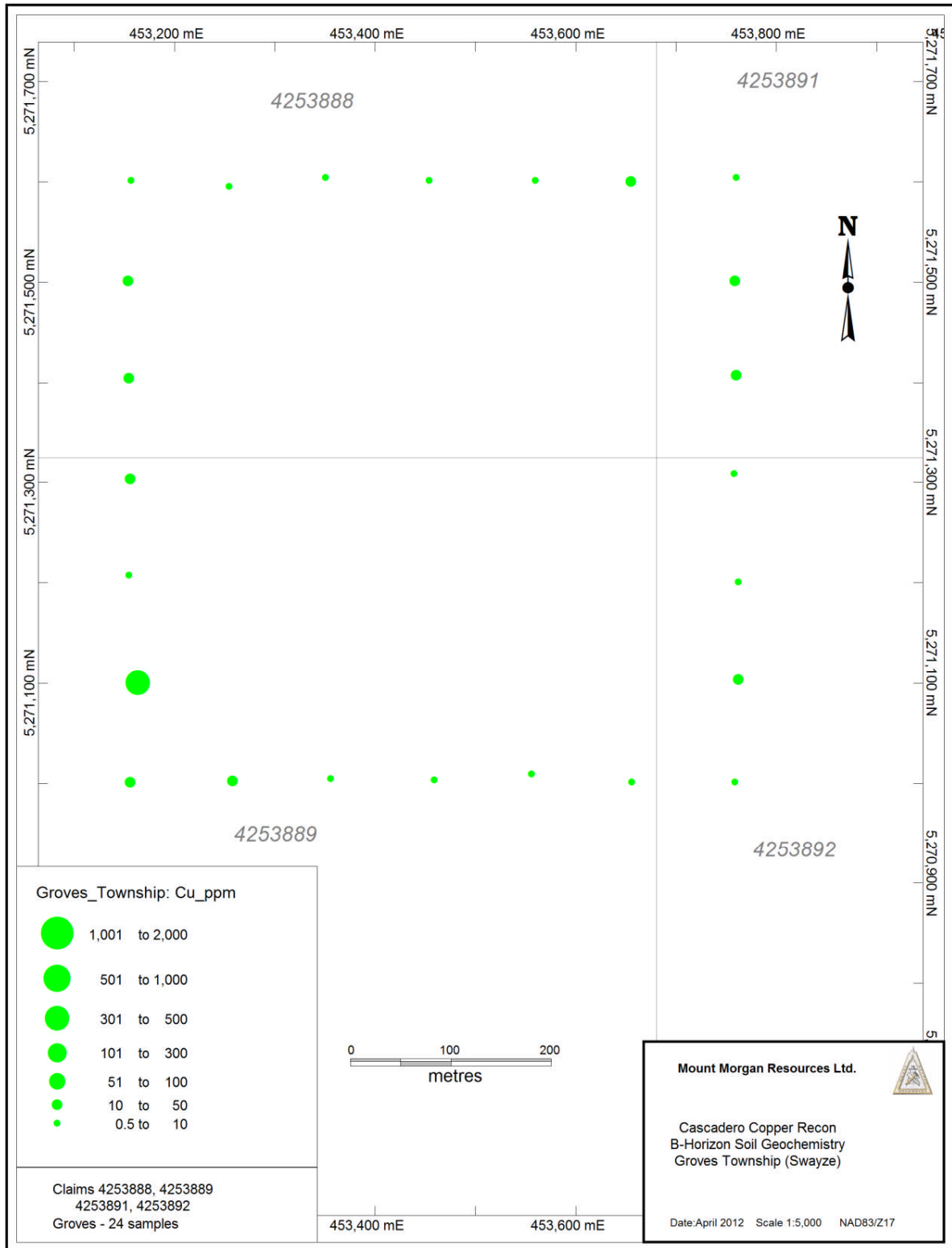


Figure 51. Lead contents in B-Horizon soil, Groves Township.

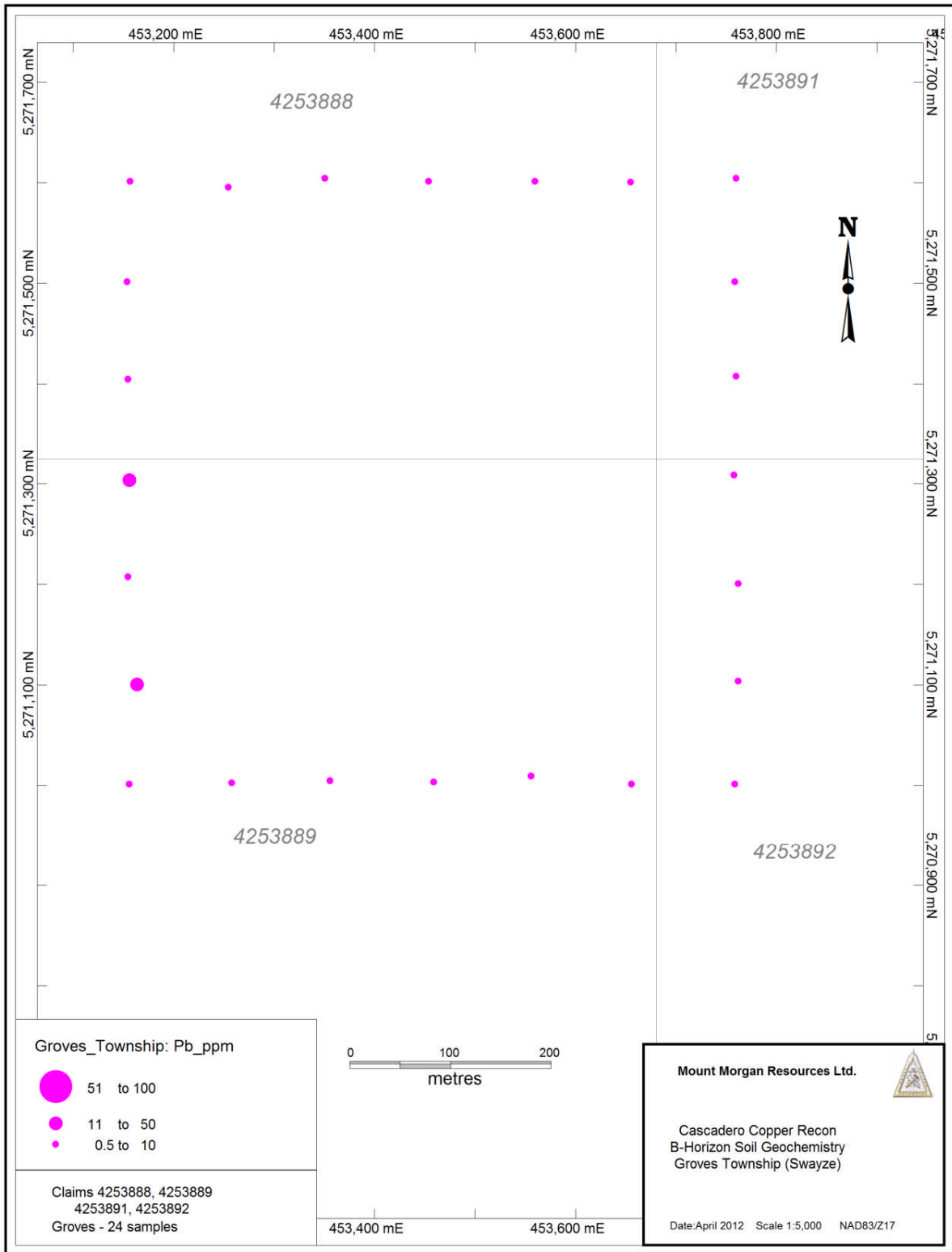


Figure 52. Zinc contents in B-Horizon soil, Groves Township.

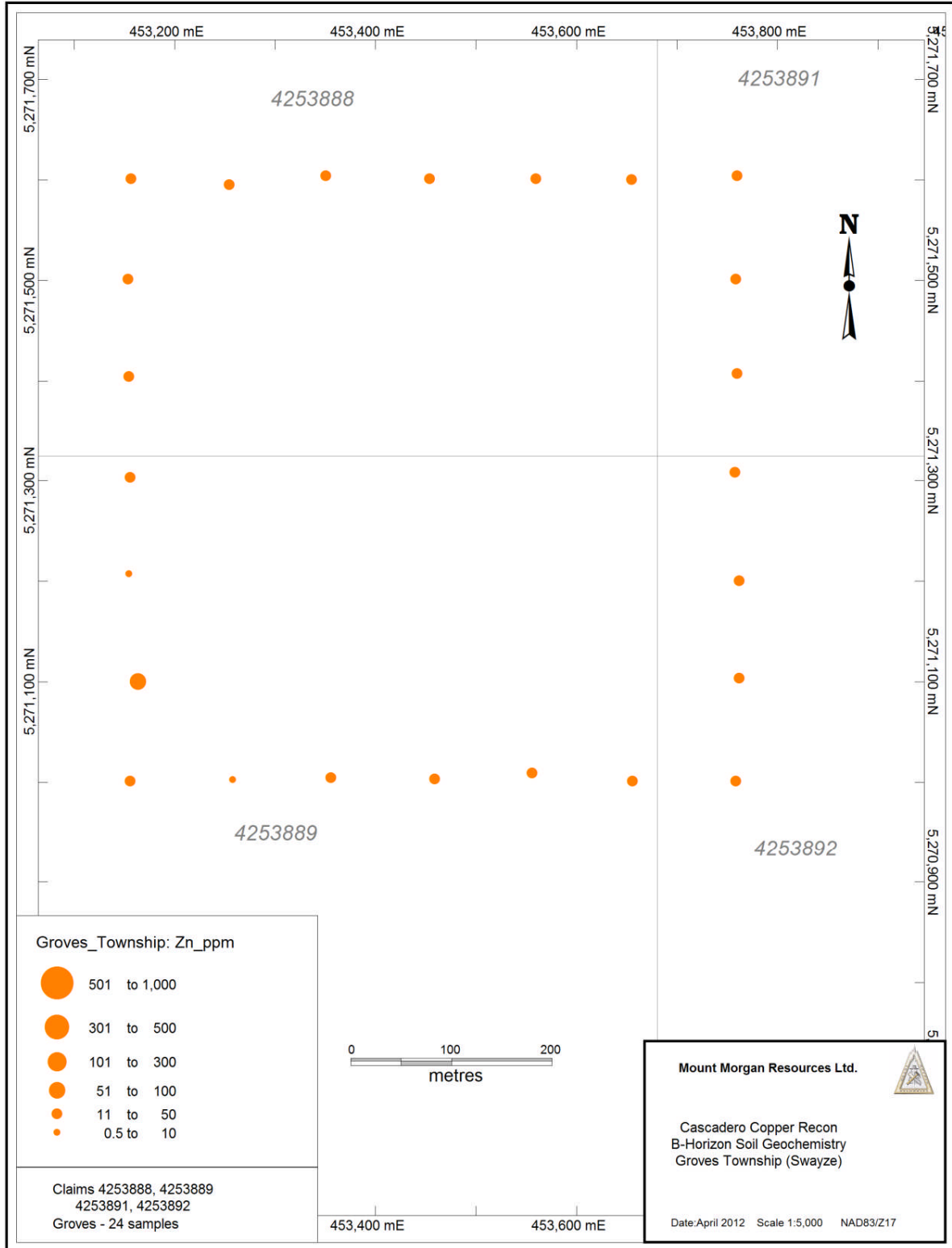
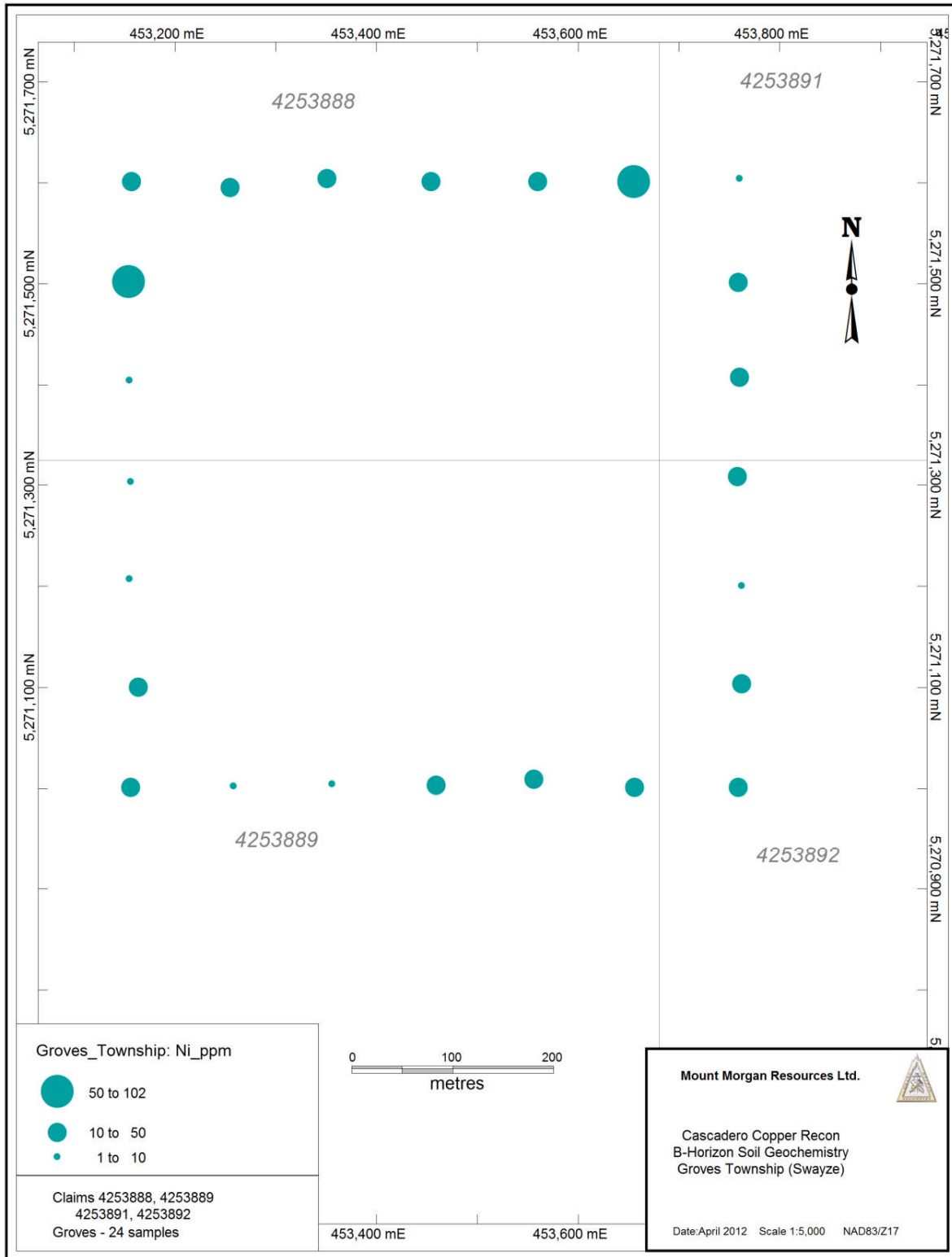


Figure 53. Nickel contents in B-Horizon soil, Groves Township.



Hong Kong Township

Similar to Groves Township, Hong Kong Township had a single grid established for B-Horizon soil surveys (**Figure 54**). A total of 24 samples were collected from this rectangular survey area.

Results of these surveys (**Figures 55 through 59**) indicate low Cu, Pb and Zn values are present and a persistent moderate-contrast Ni response (10-50 ppm) is documented suggesting predominantly mafic lithologies in the survey area. A single sample Au response (11-50 ppb) occurs near the southwest corner of the grid. A single line of soil samples in an east-west orientation should be established over this response to determine if it extends to the west.

Figure 54. Sample location map for B-Horizon soil samples, Hong Kong Township.

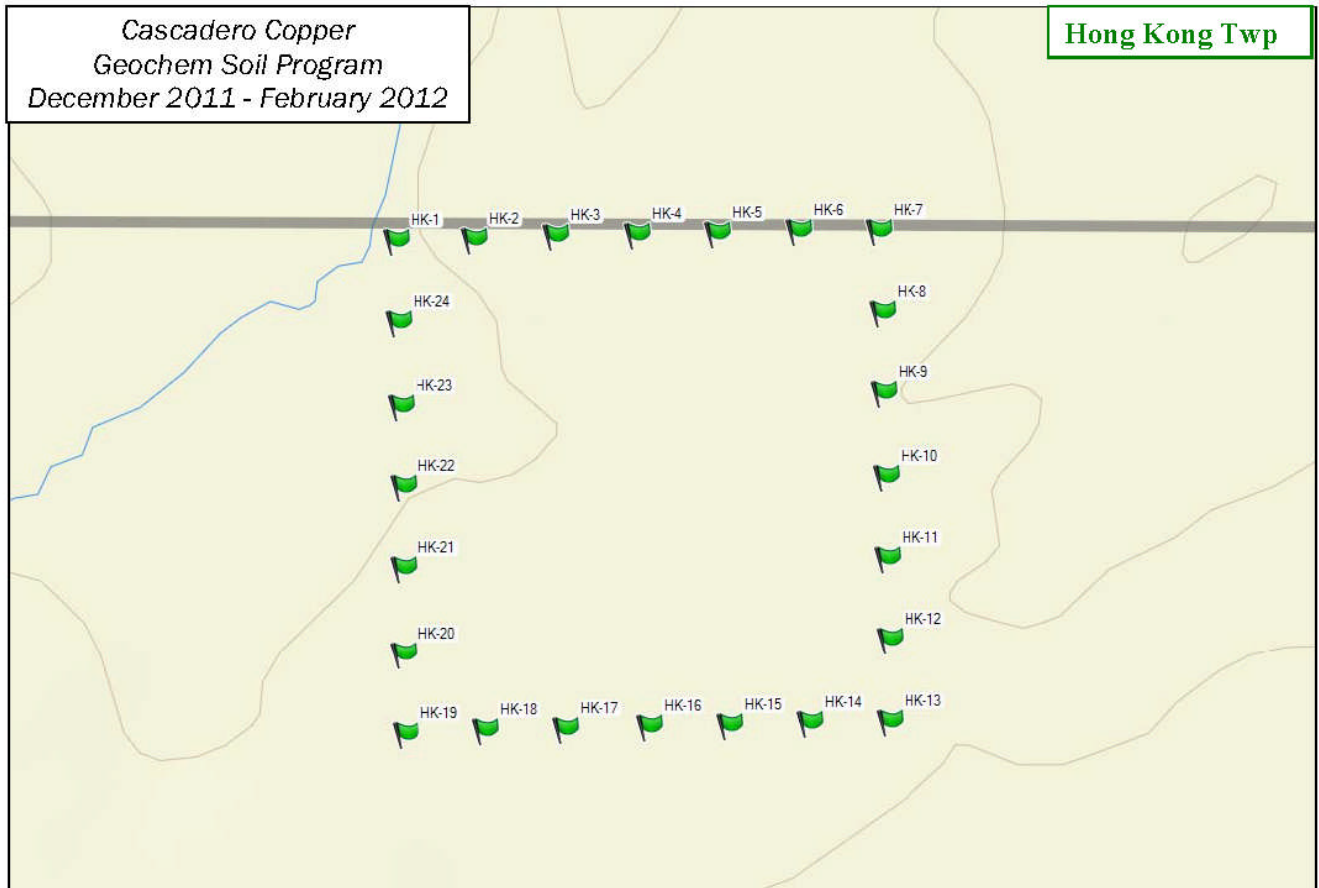


Figure 55. Gold contents in B-Horizon soil, Hong Kong Township.

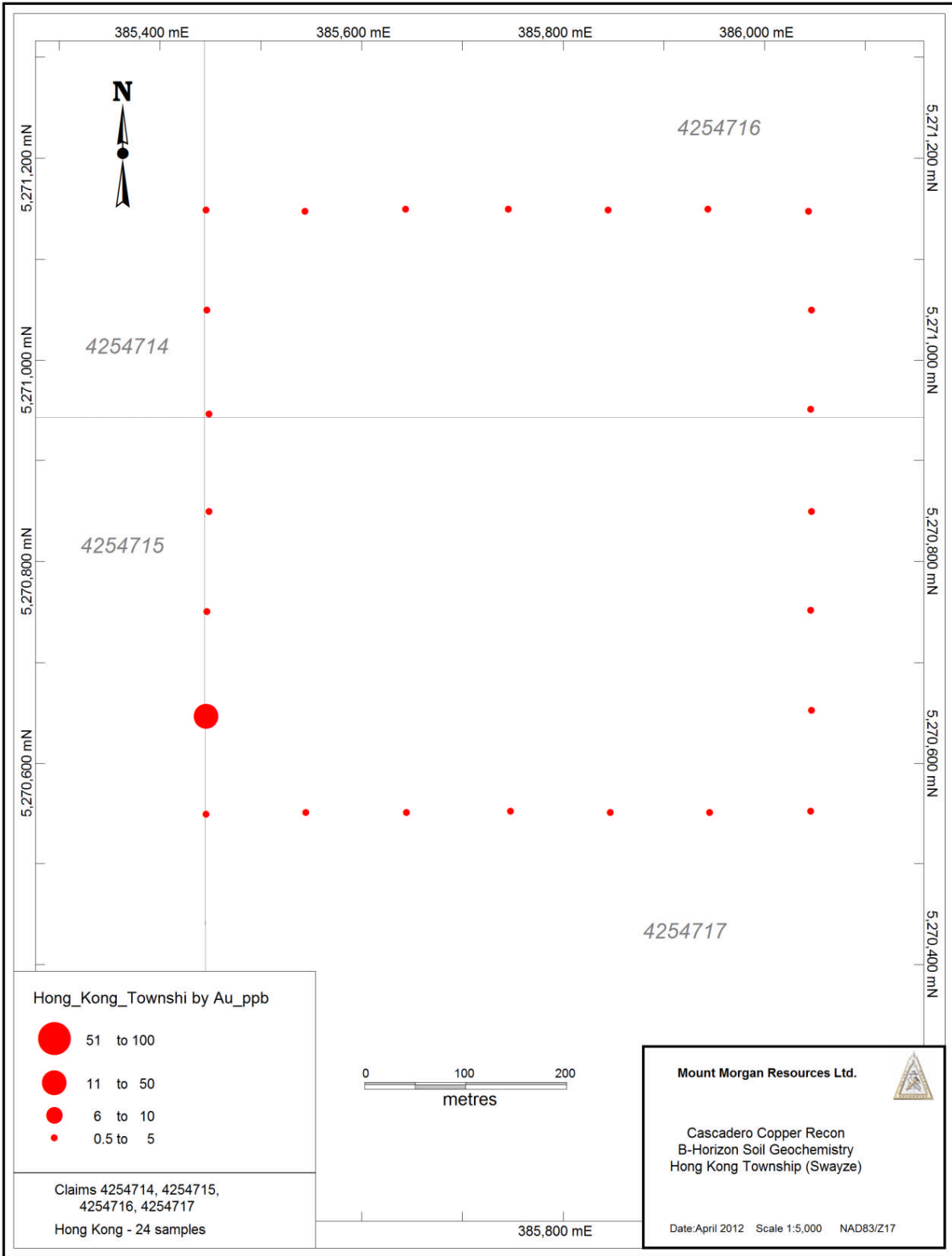


Figure 56. Copper contents in B-Horizon soil, Hong Kong Township.

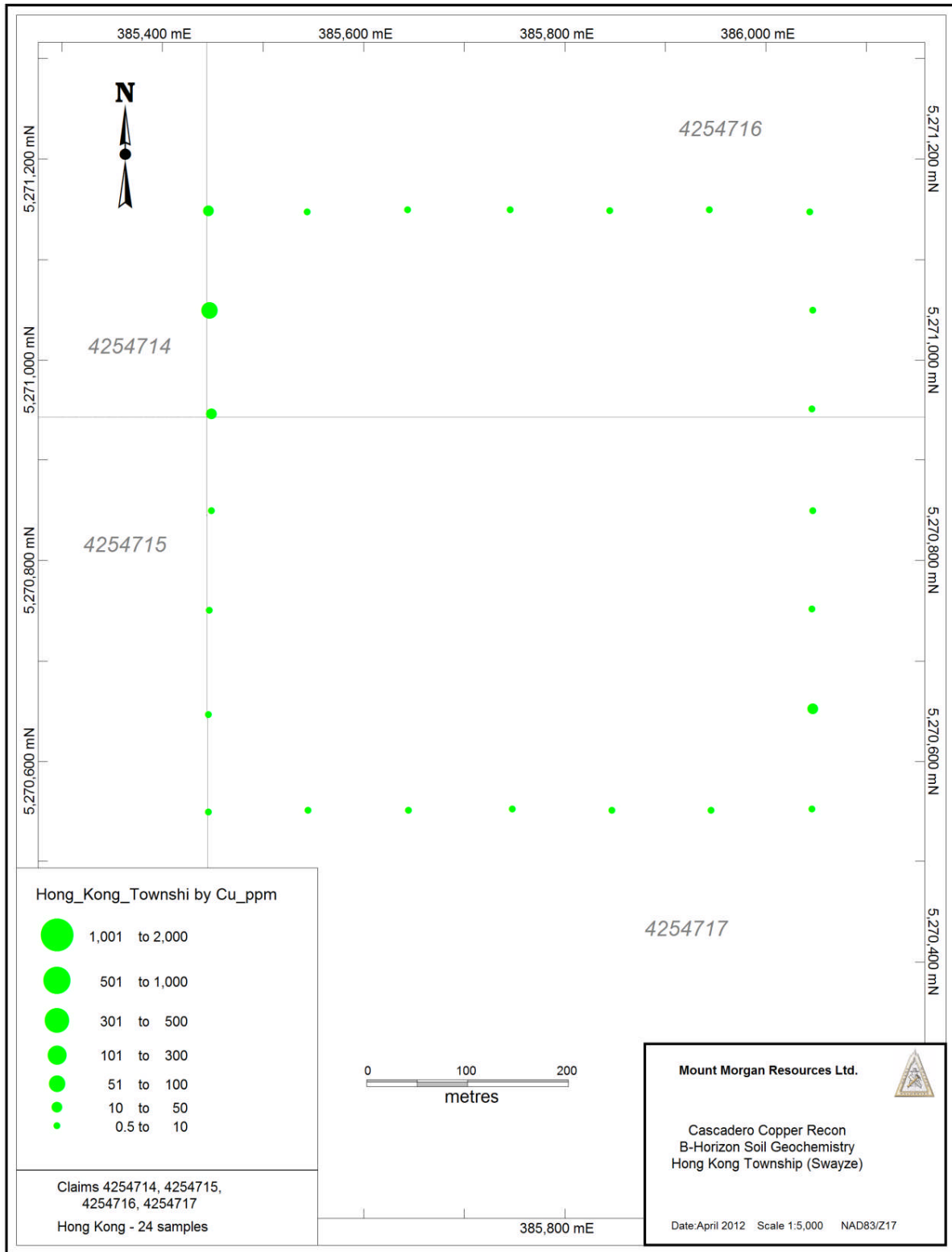


Figure 57. Lead contents in B-Horizon soil, Hong Kong Township.

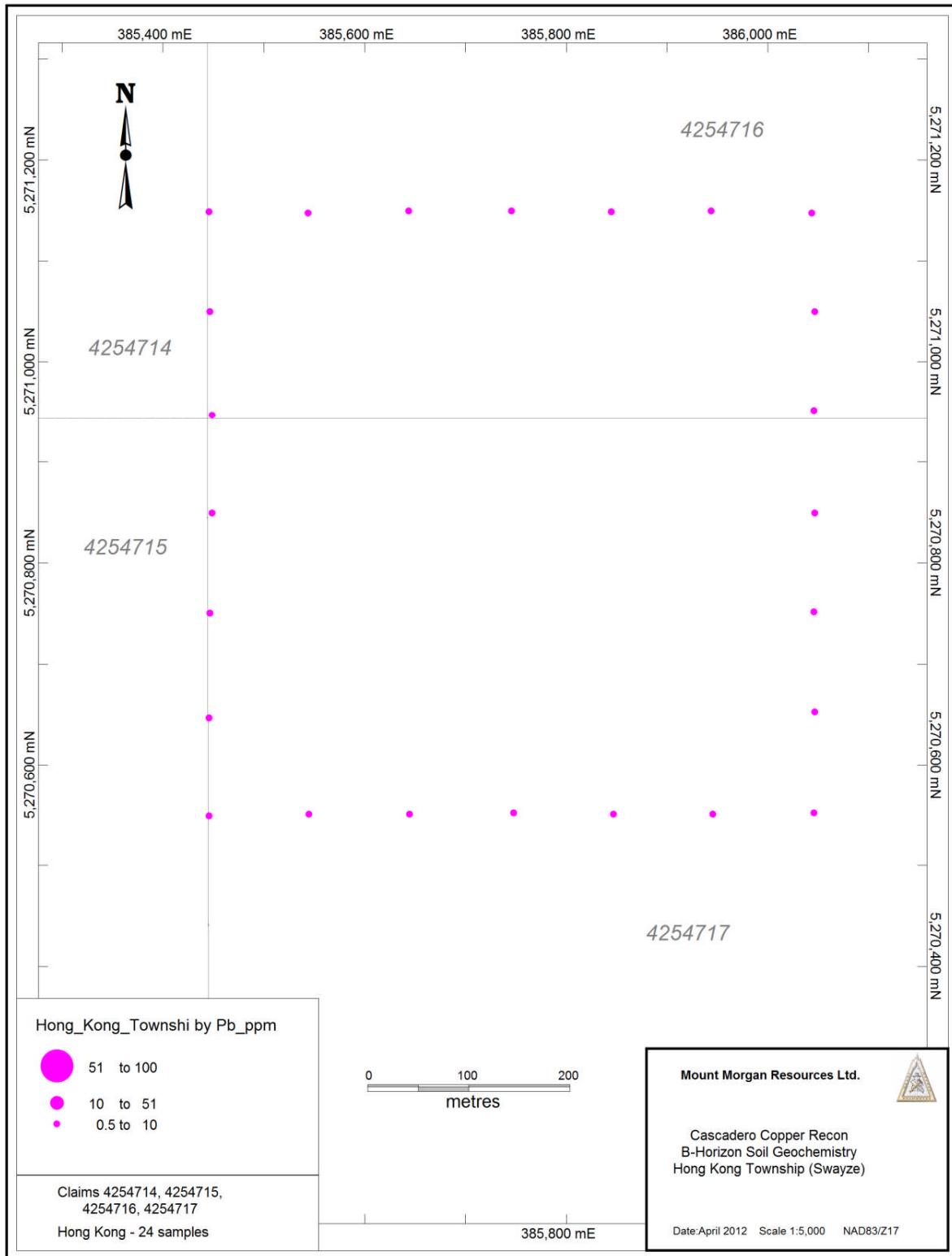


Figure 58. Zinc contents in B-Horizon soil, Hong Kong Township.

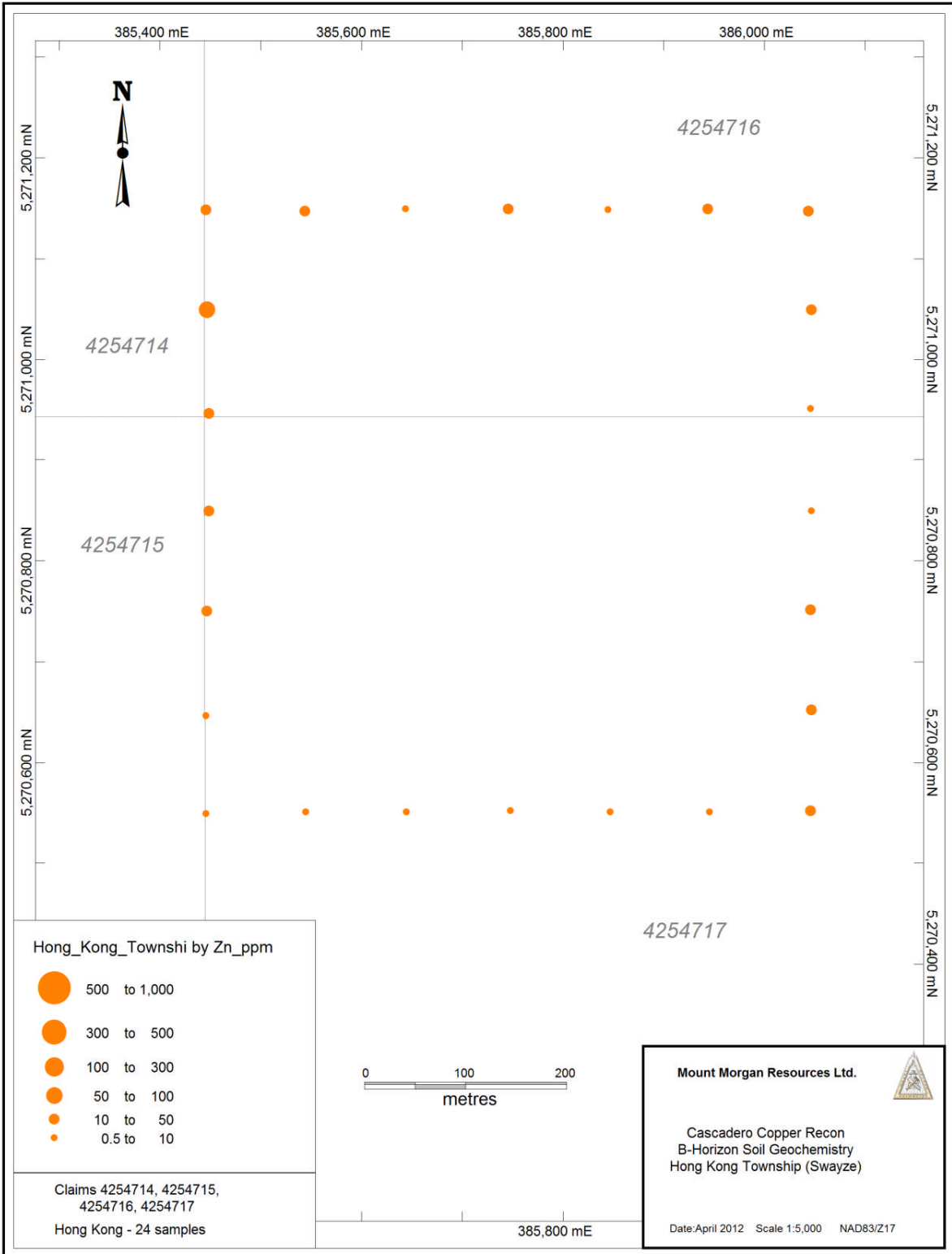
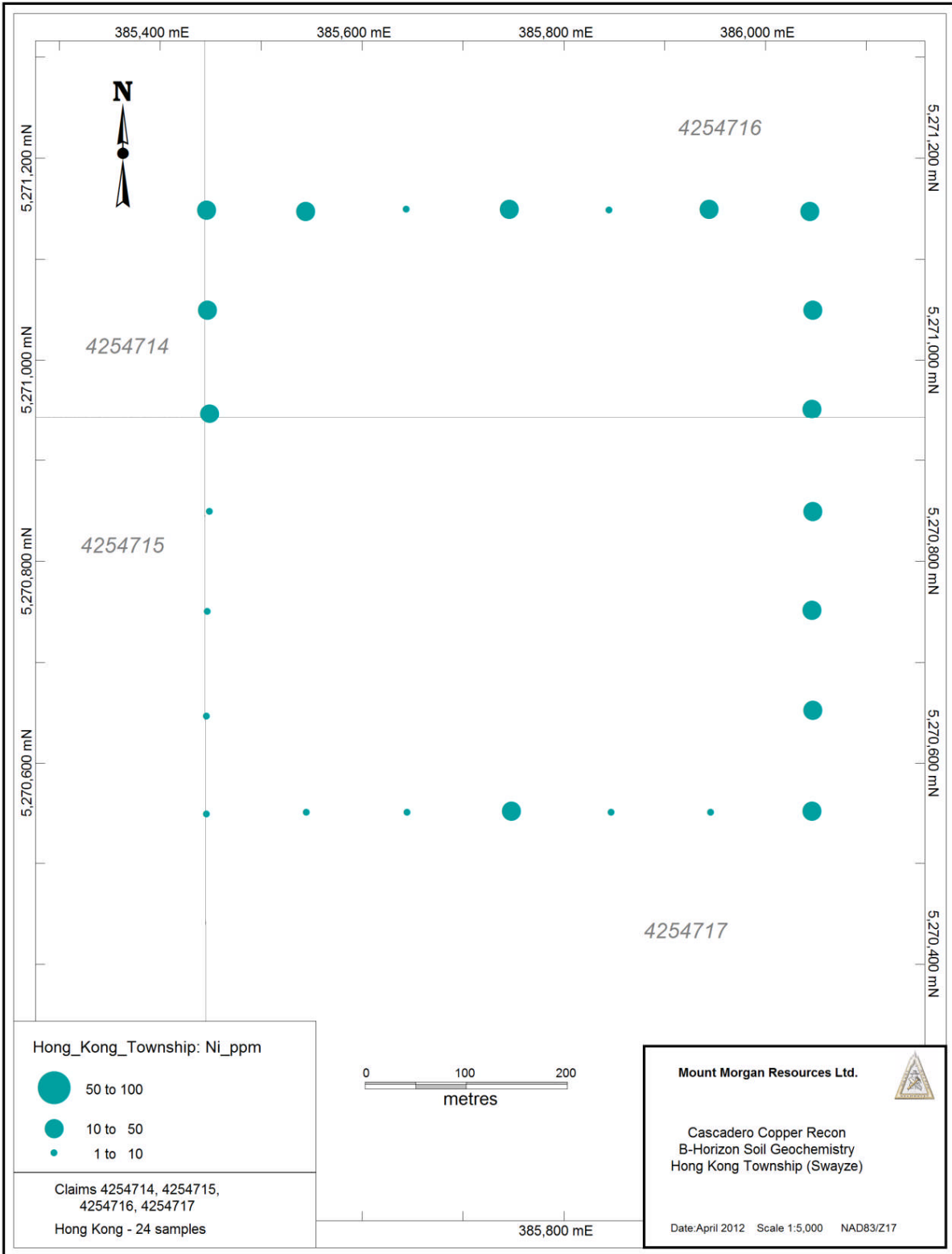


Figure 59. Nickel contents in B-Horizon soil, Hong Kong Township.



Marion Township

An irregular network of B-Horizon soil samples was collected from east-west and north south oriented transects adjacent to a lake (**Figure 60**). Thirty-two B-Horizon soil samples were collected.

Results (**Figure 61 through 68**) document a single sample but multi-element response at station RU-37. The B-Horizon soil sample at this location has elevated Ag (0.61-0.70 ppm), As (5-10 ppm), Cu (1001-2000 ppm), Mo (40.1-50 ppm), Pb (51-100 ppm), Zn (101-300 ppm) and Ni (50-100 ppm). The site from which the sample was collected occurs at the end of a north-south-trending transect close to the lake shore. The area should be gridded and additional soil samples collected and prospected to determine whether a bedrock source to this anomaly can be located.

Figure 60. Location map for B-Horizon soil samples, Marion Township.

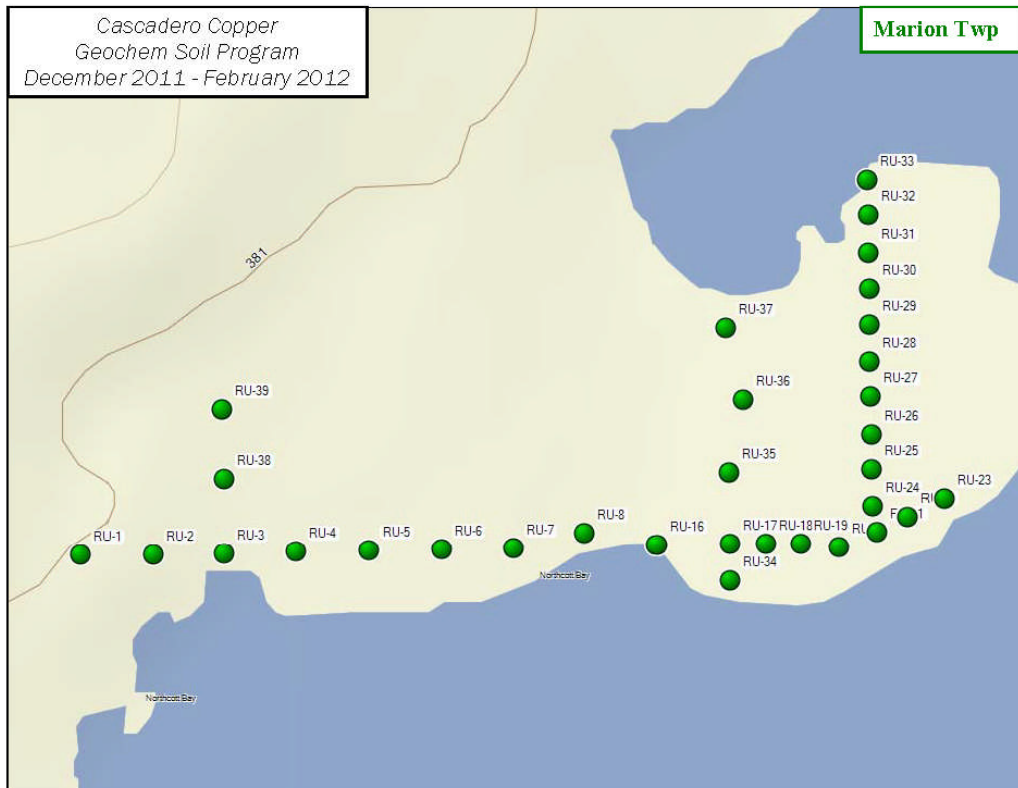


Figure 61. Silver contents in B-Horizon soil, Marion Township.

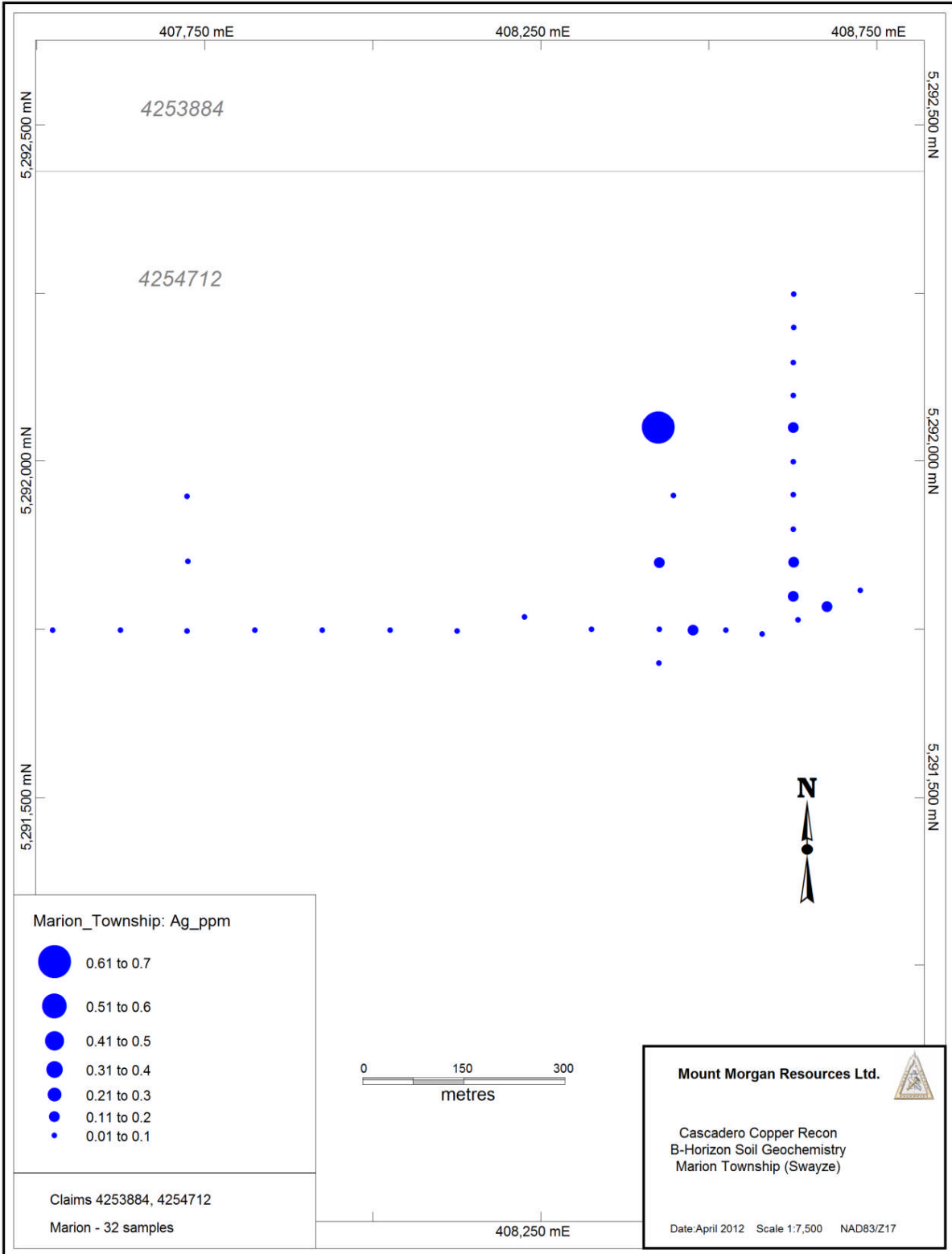


Figure 62. Arsenic contents in B-Horizon soil, Marion Township.

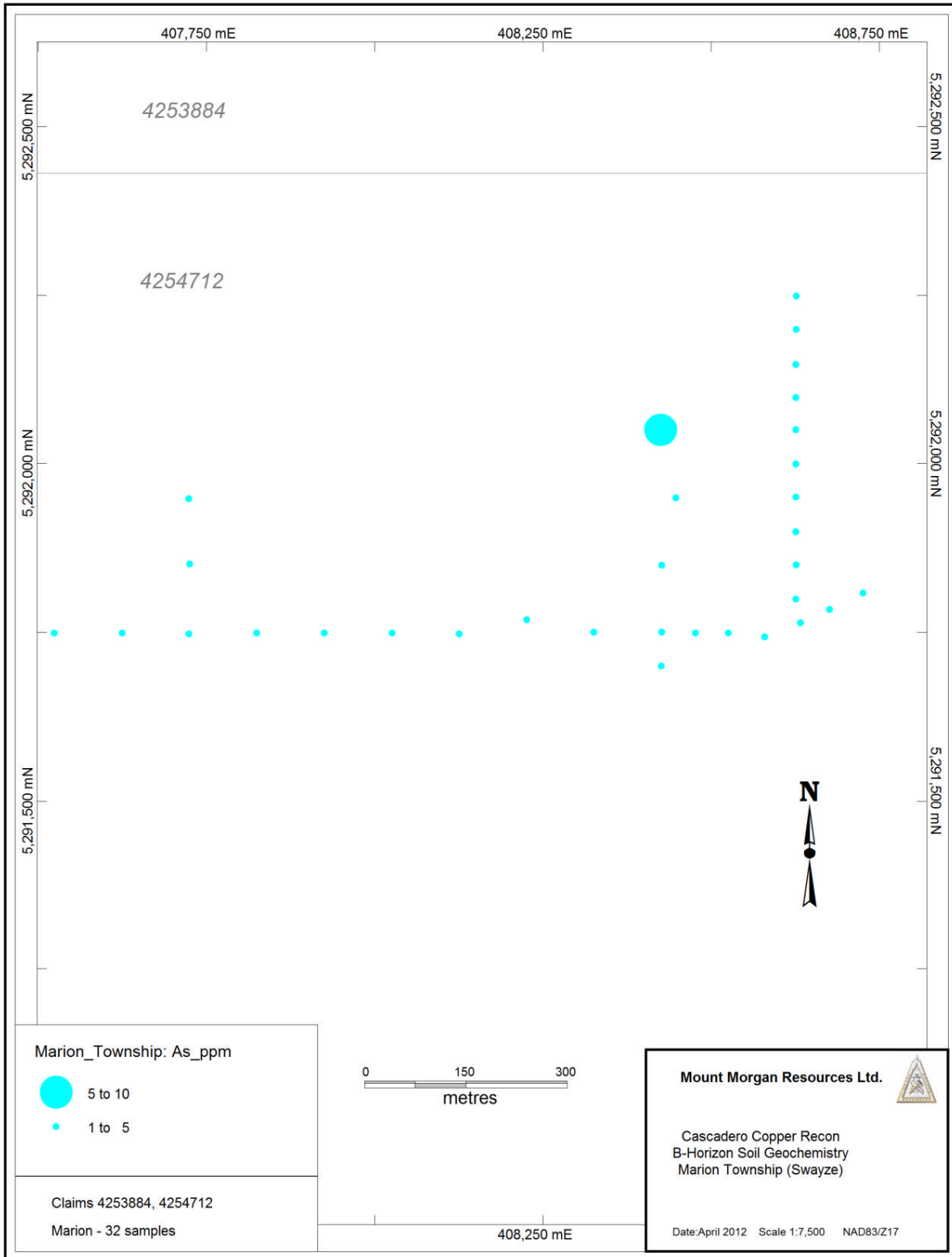


Figure 63. Gold contents in B-Horizon soil, Marion Township.

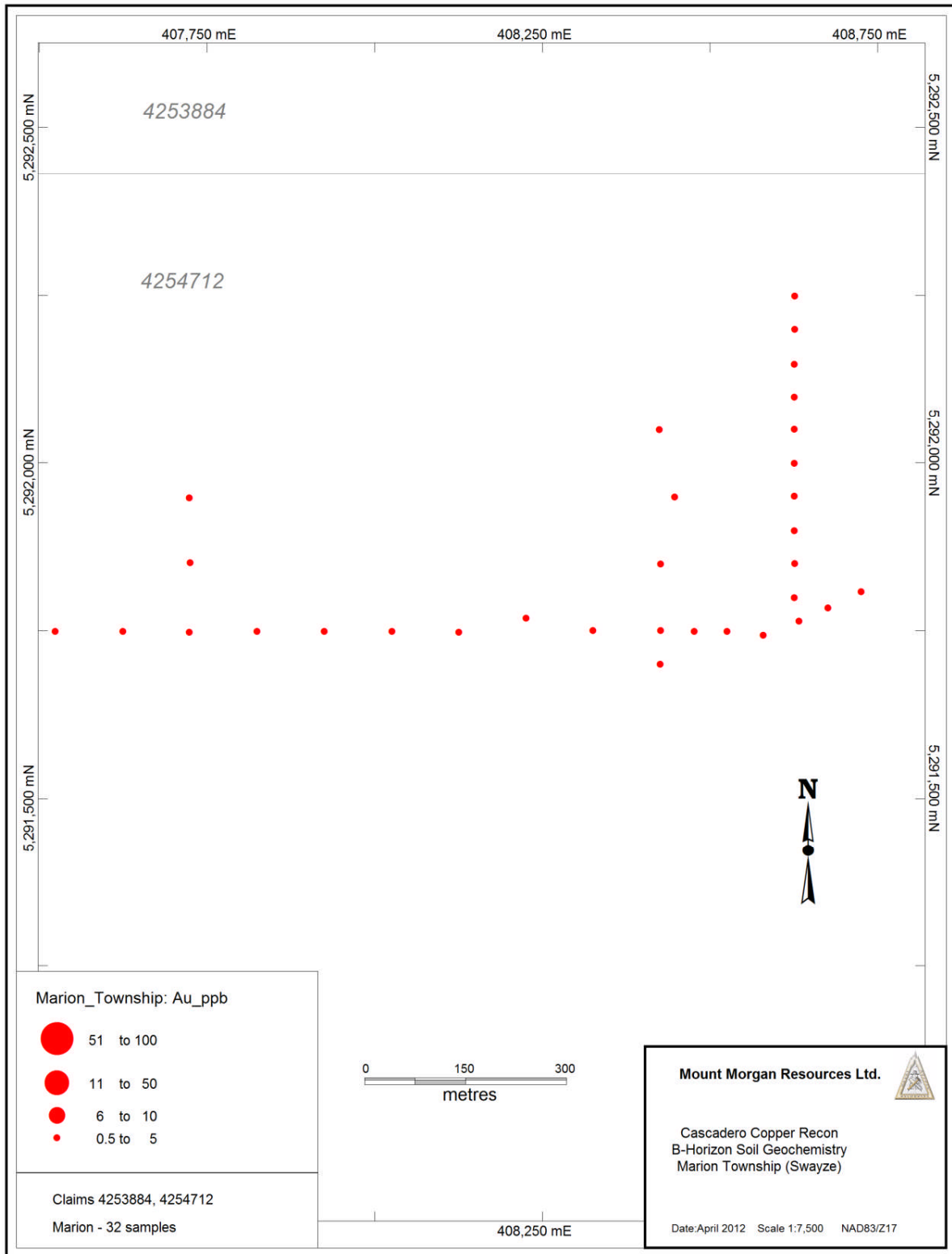


Figure 64. Copper contents in B-Horizon soil, Marion Township.

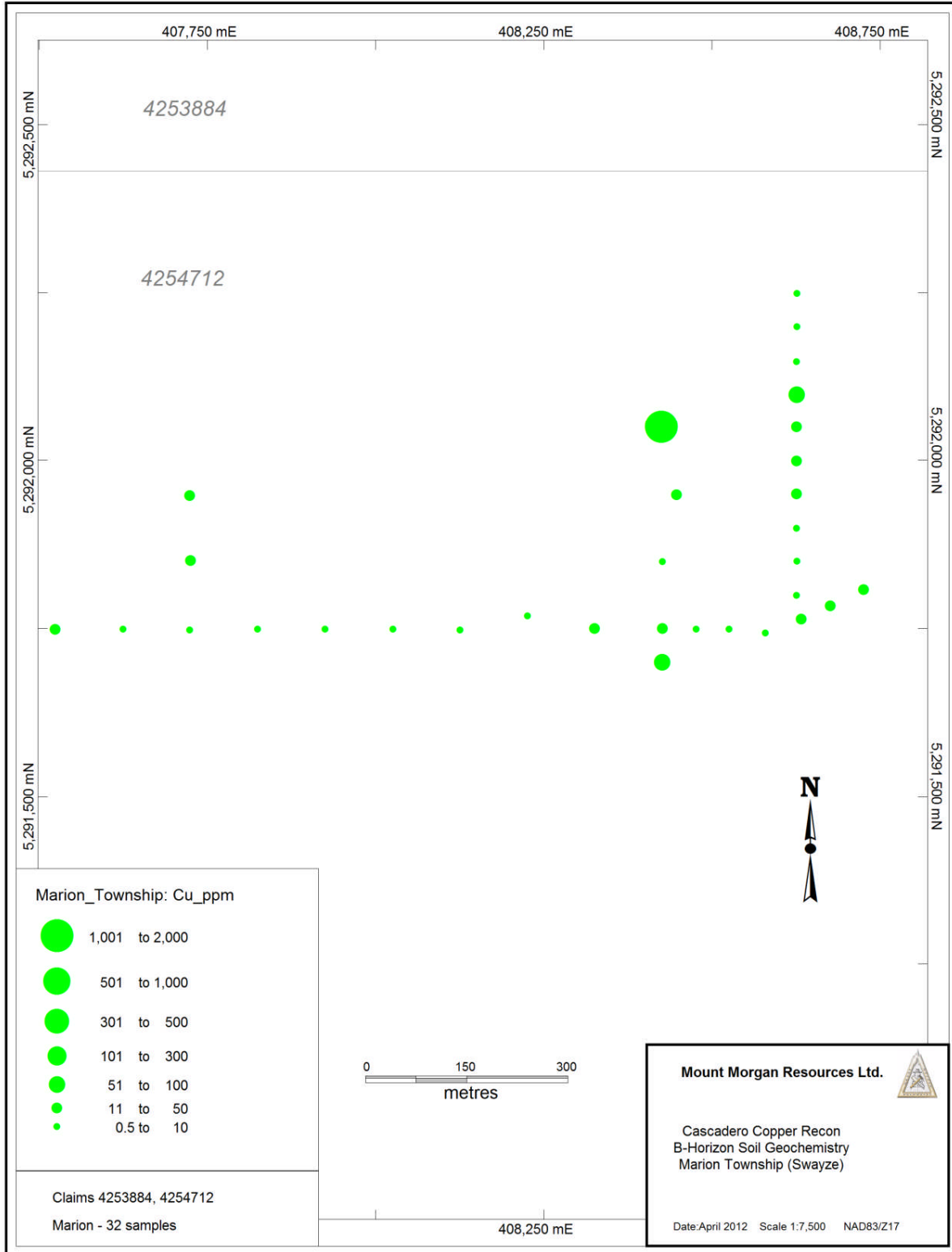


Figure 65. Molybdenum contents in B-Horizon soil, Marion Township.

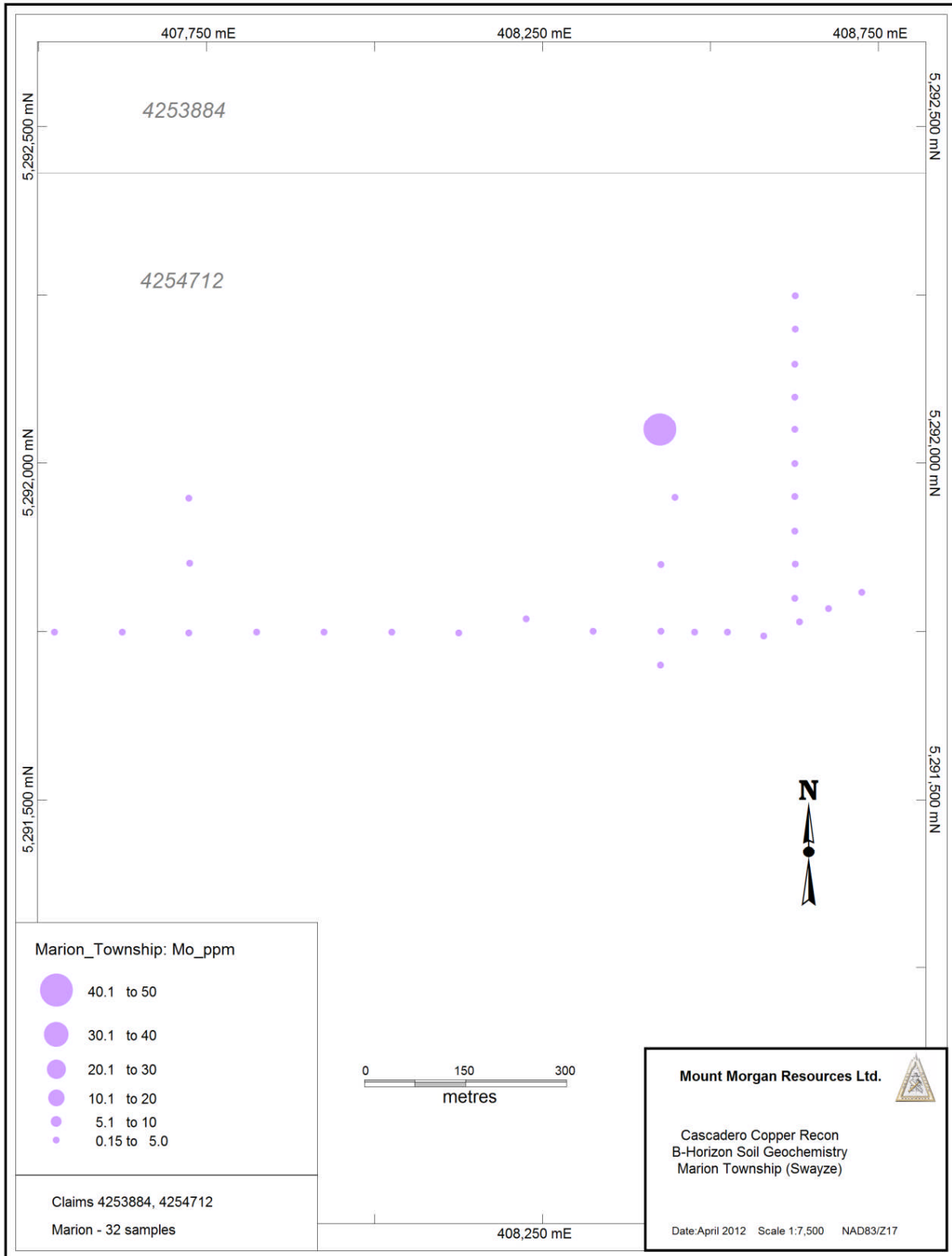


Figure 66. Lead contents in B-Horizon soil, Marion Township.

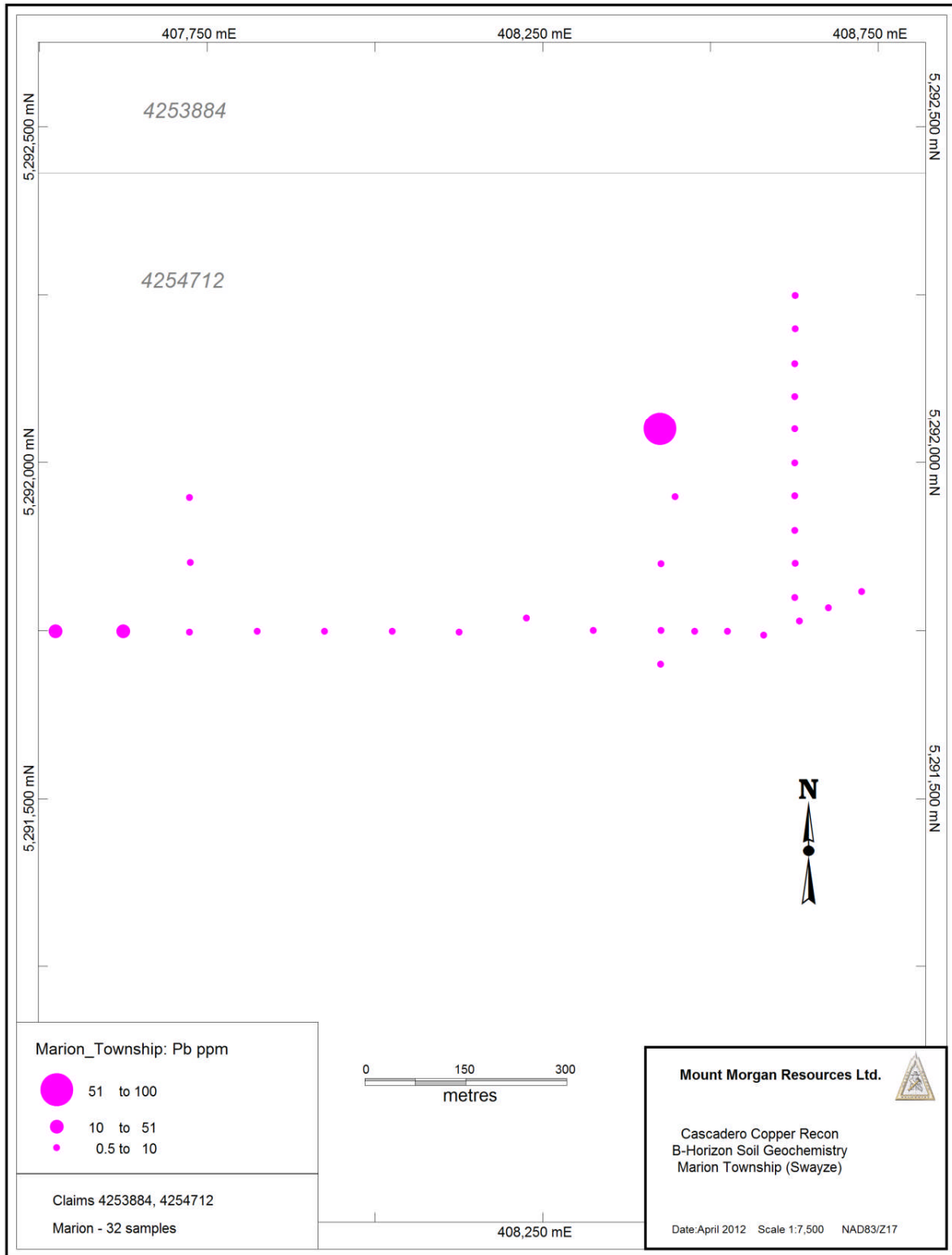


Figure 67. Zinc contents in B-Horizon soil, Marion Township.

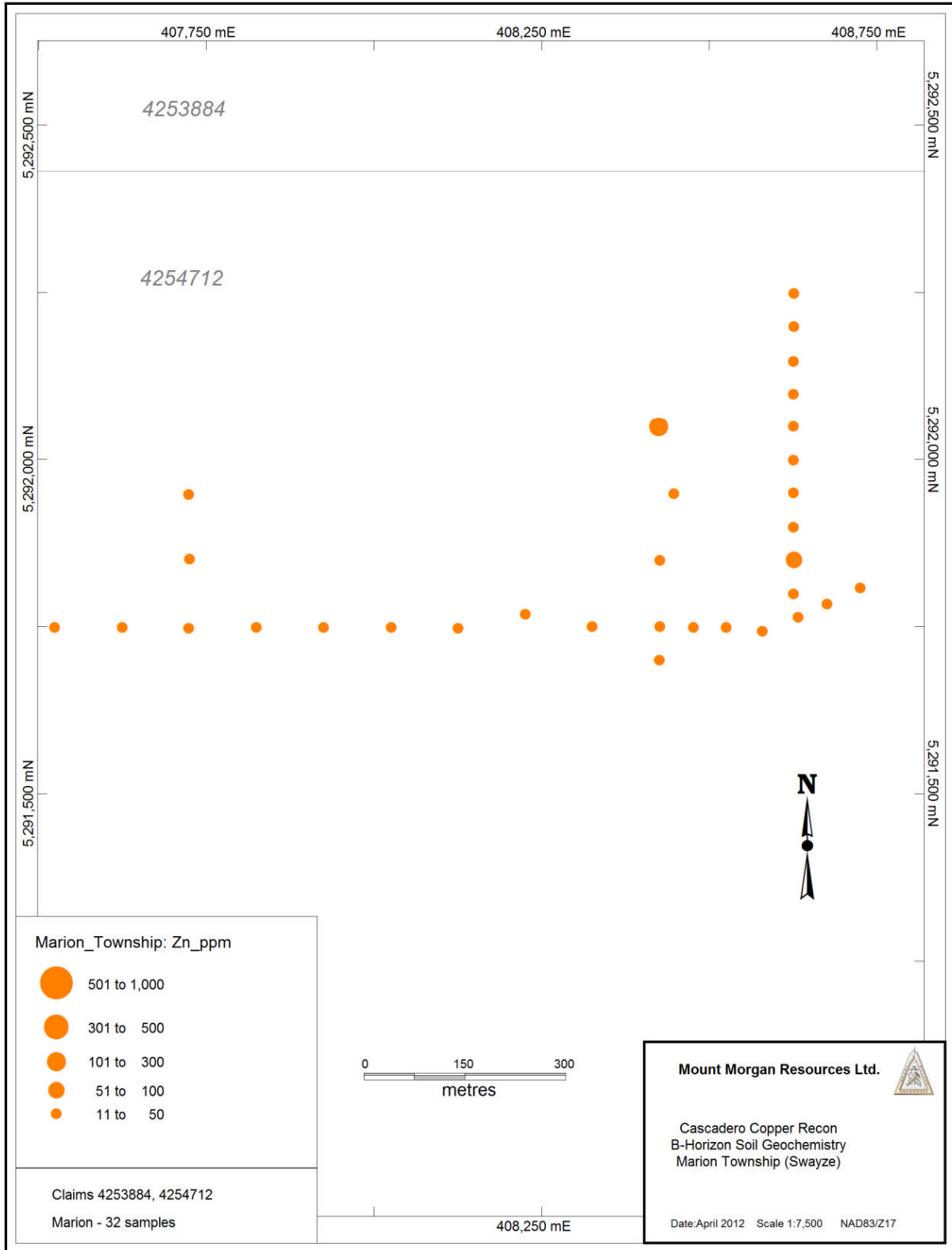
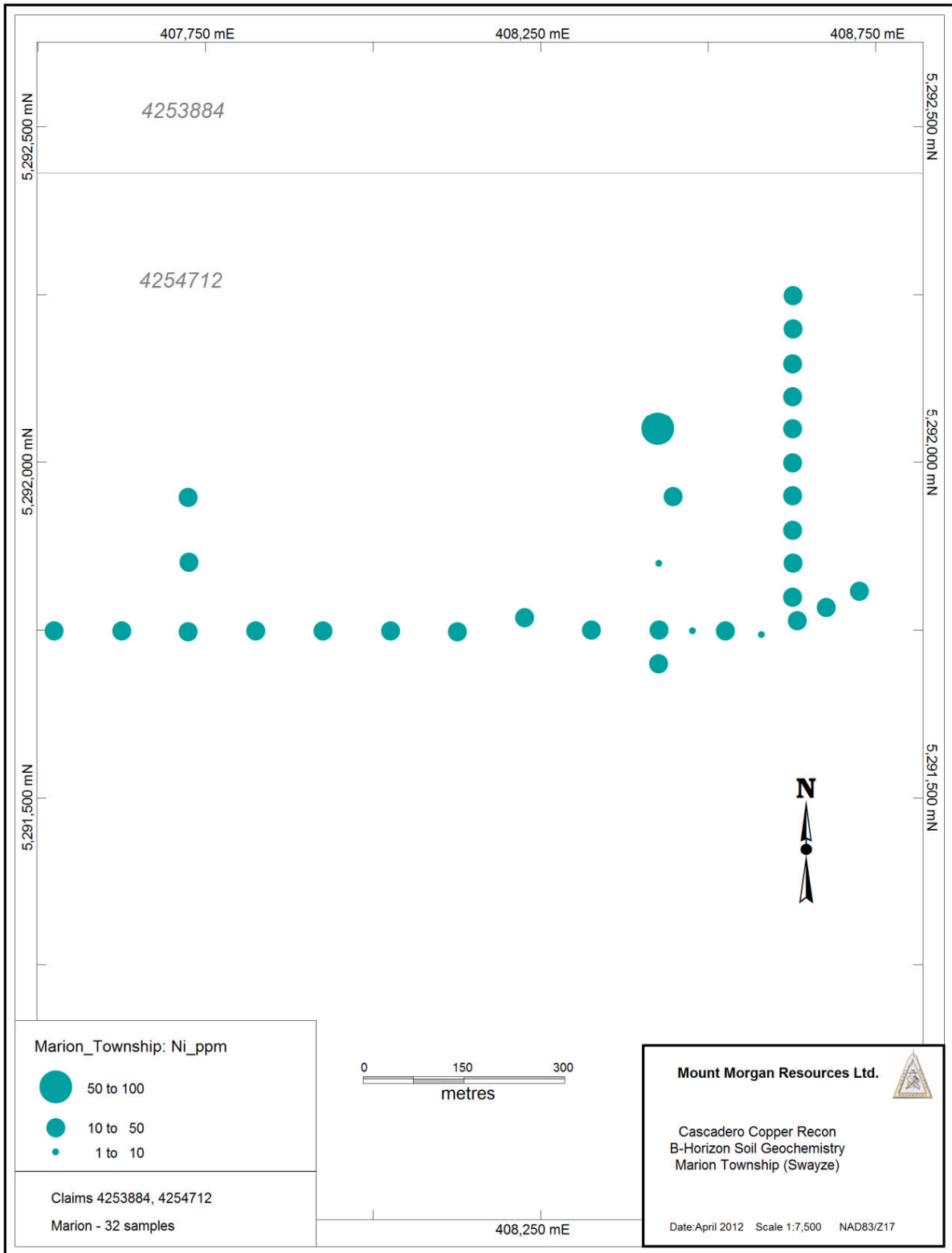


Figure 68. Nickel contents in B-Horizon soil, Marion Township.



Osway Township

B-Horizon soils were collected from a single rectangular grid in Osway Township (**Figure 69**).

Twenty samples were collected.

Figures 70 through 74 document low values for all elements for the samples collected at Osway. There is a weakly elevated single sample response for all elements that is present at the southwest corner of the grid. A single transect in this area should be sampled to sterilize this site or determine whether additional elevated responses are nearby.

Figure 69. Location map for B-Horizon soil samples, Osway Township.

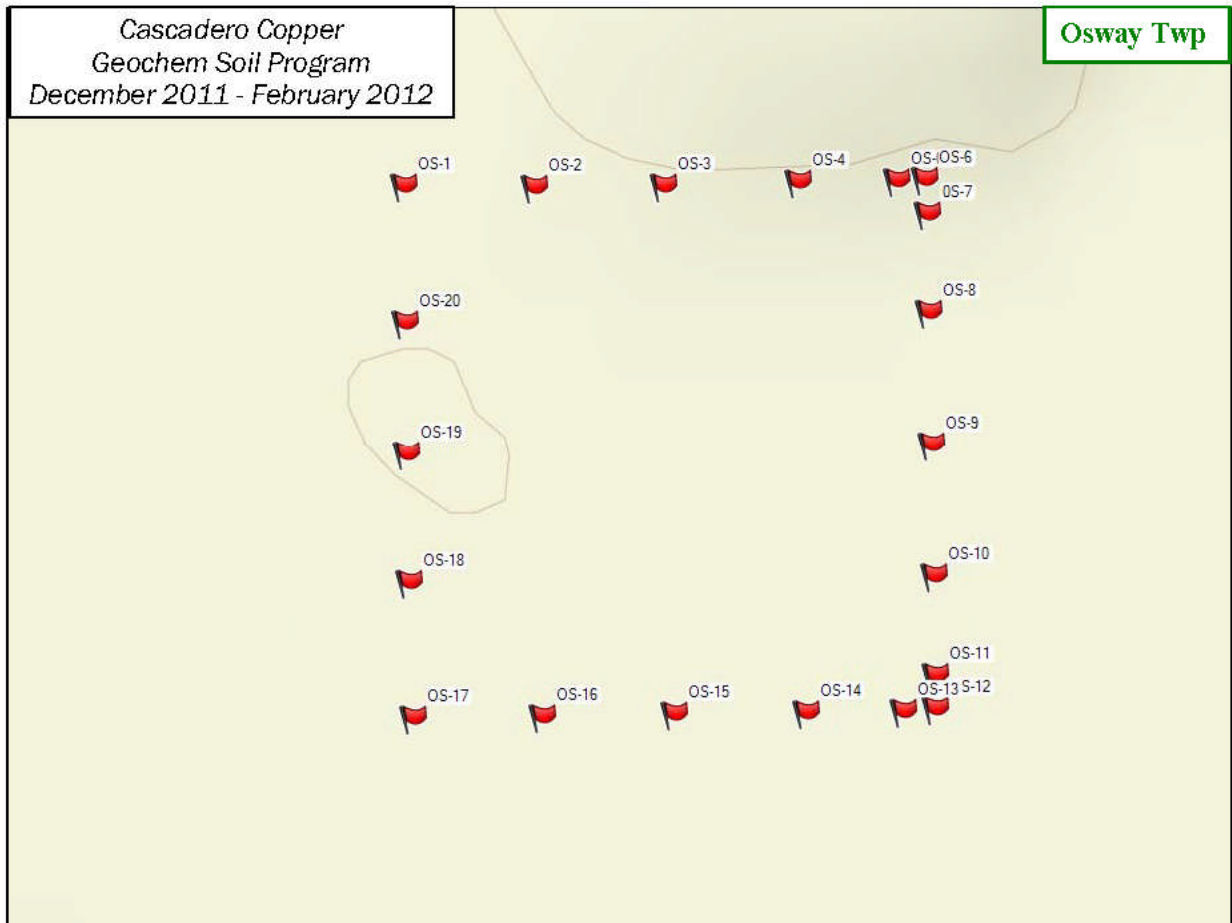


Figure 70. Gold contents in B-Horizon soil, Osway Township.

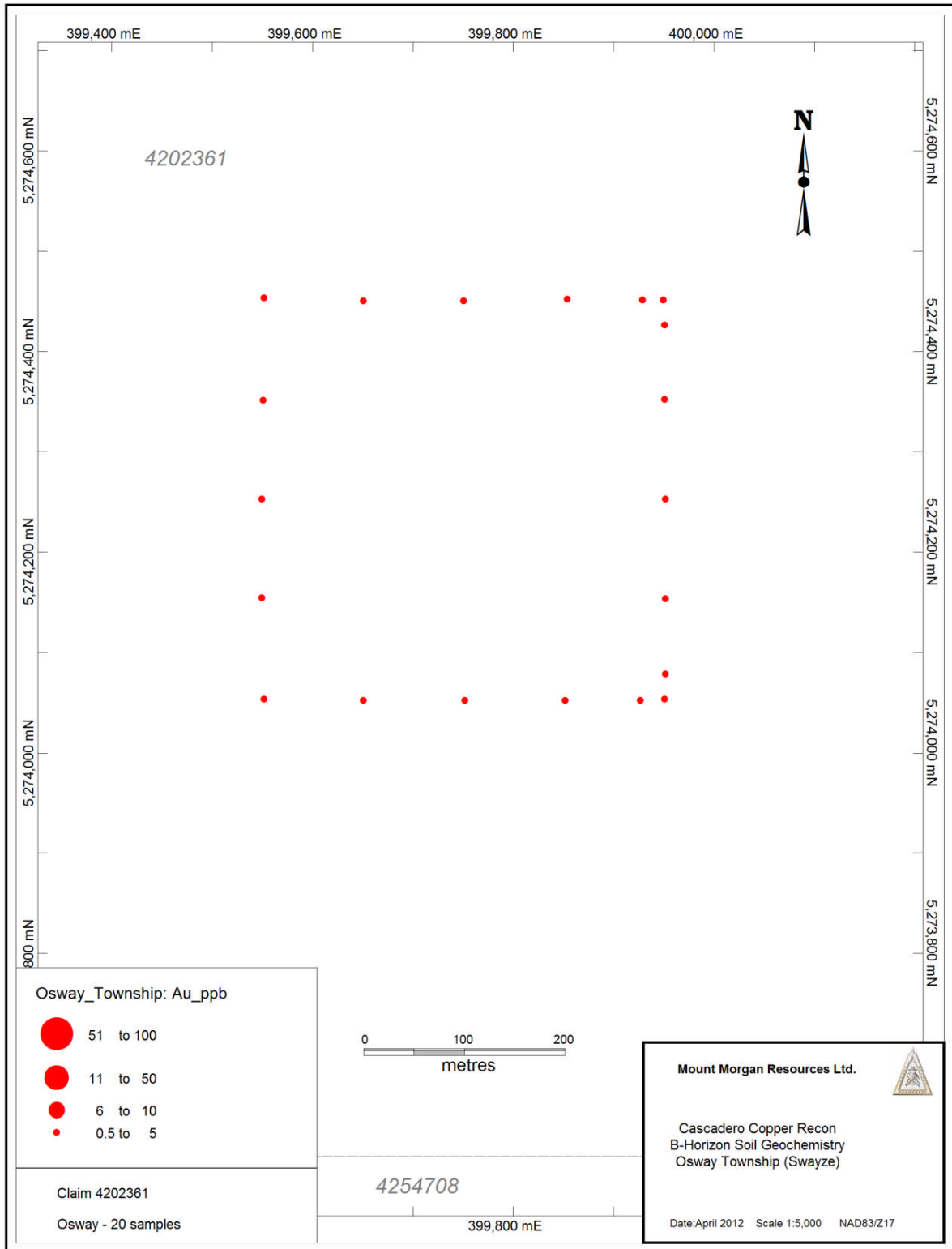


Figure 71. Copper contents in B-Horizon soil, Osway Township.

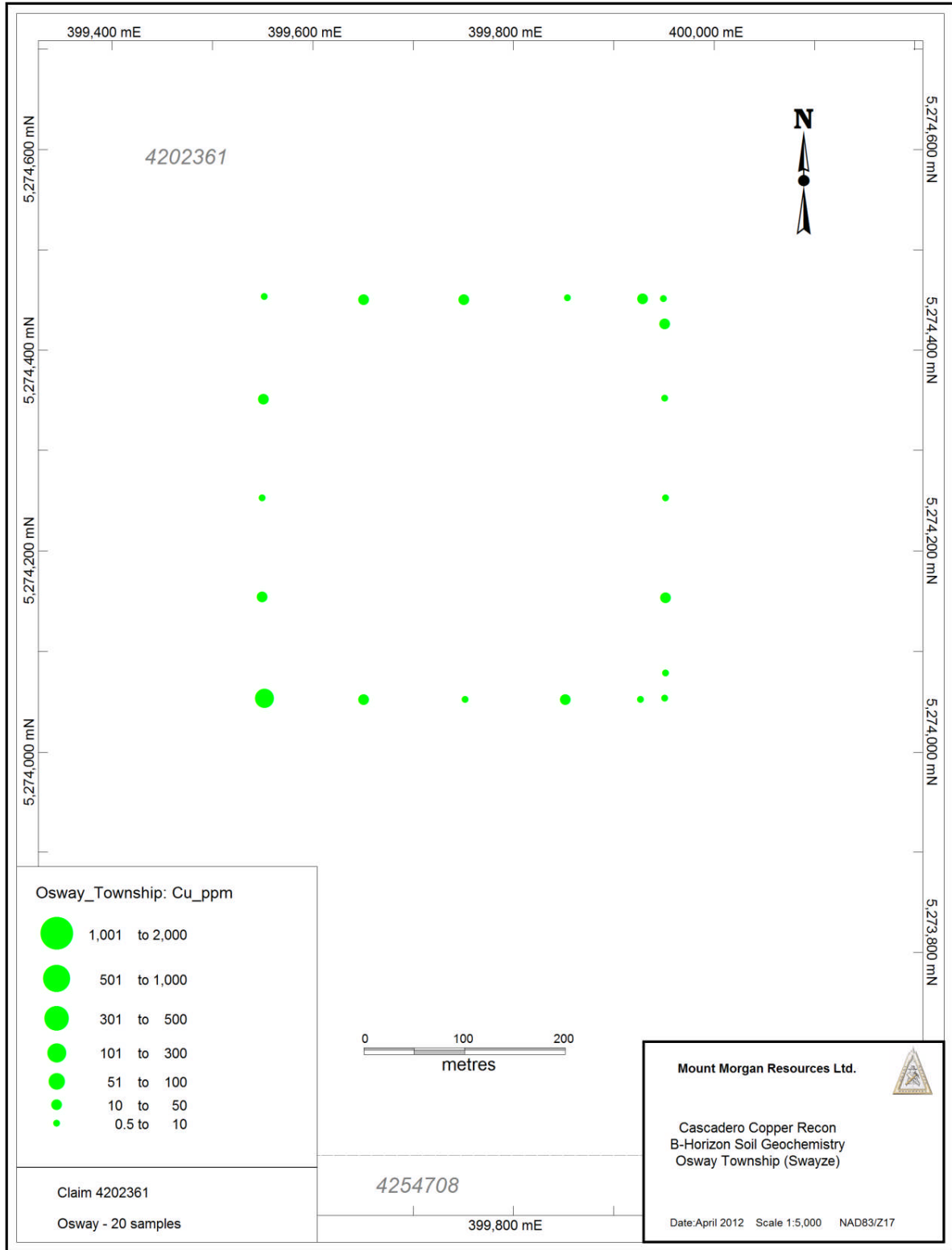


Figure 72. Lead contents in B-Horizon soil, Osway Township.

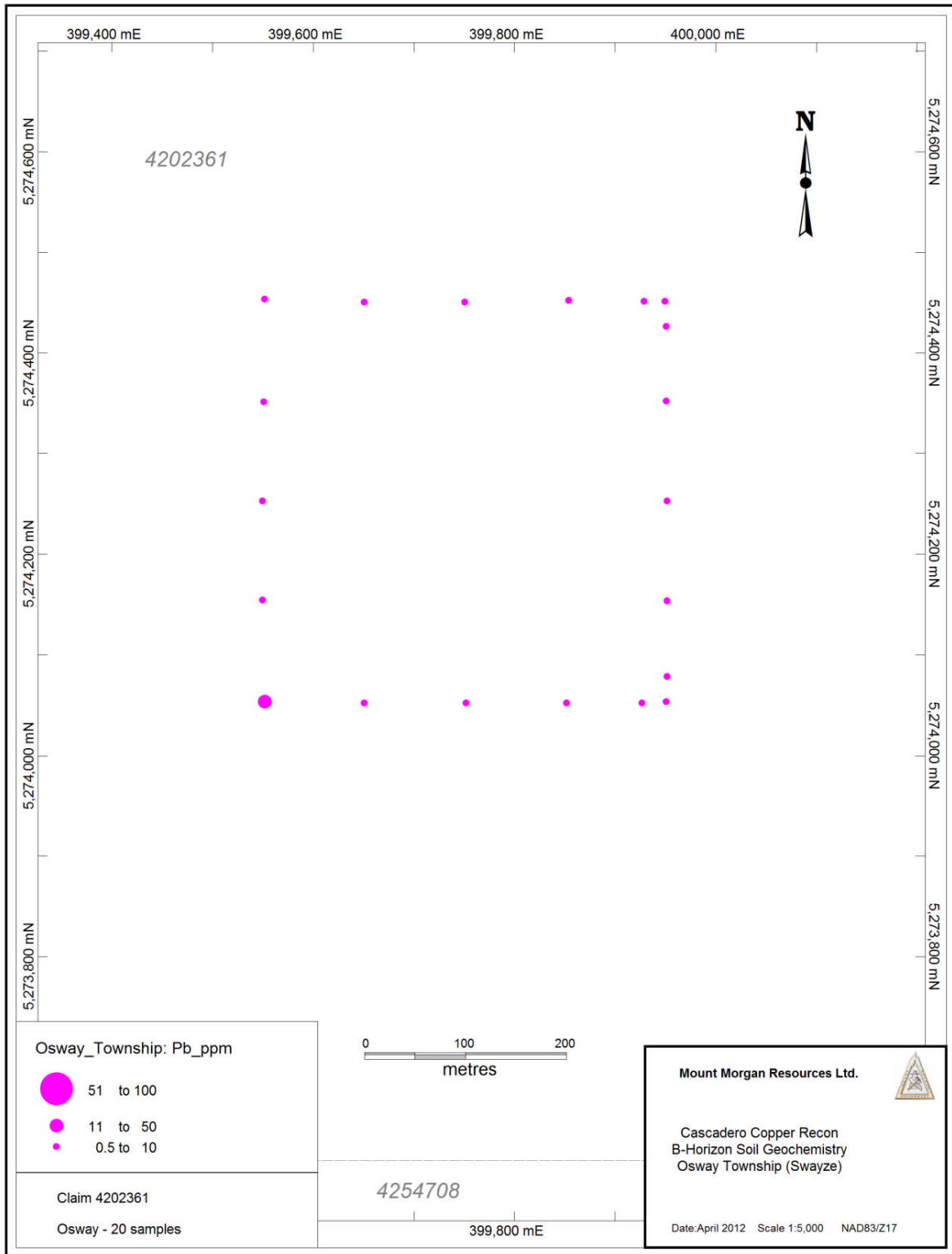


Figure 73. Zinc contents in B-Horizon soil, Osway Township.

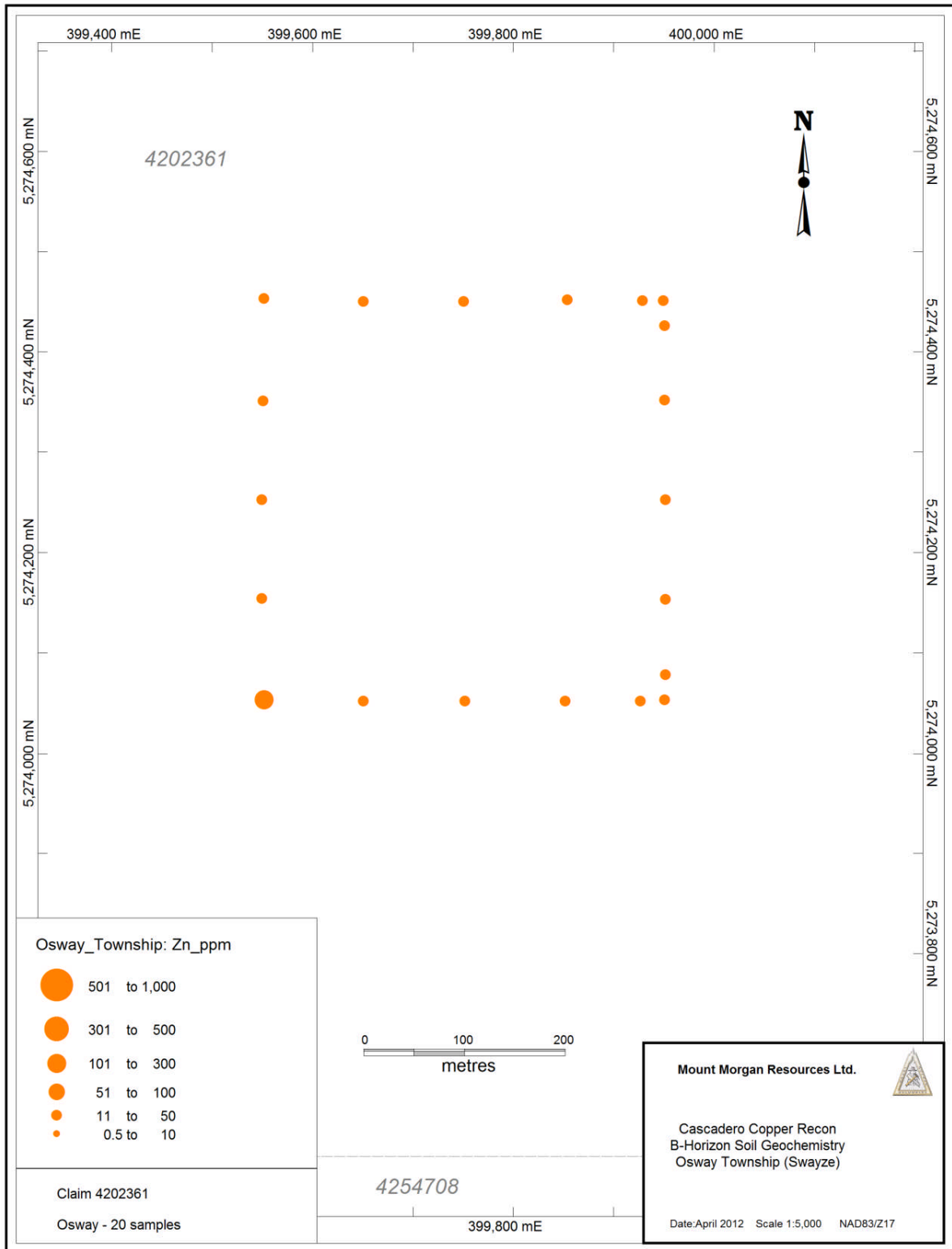
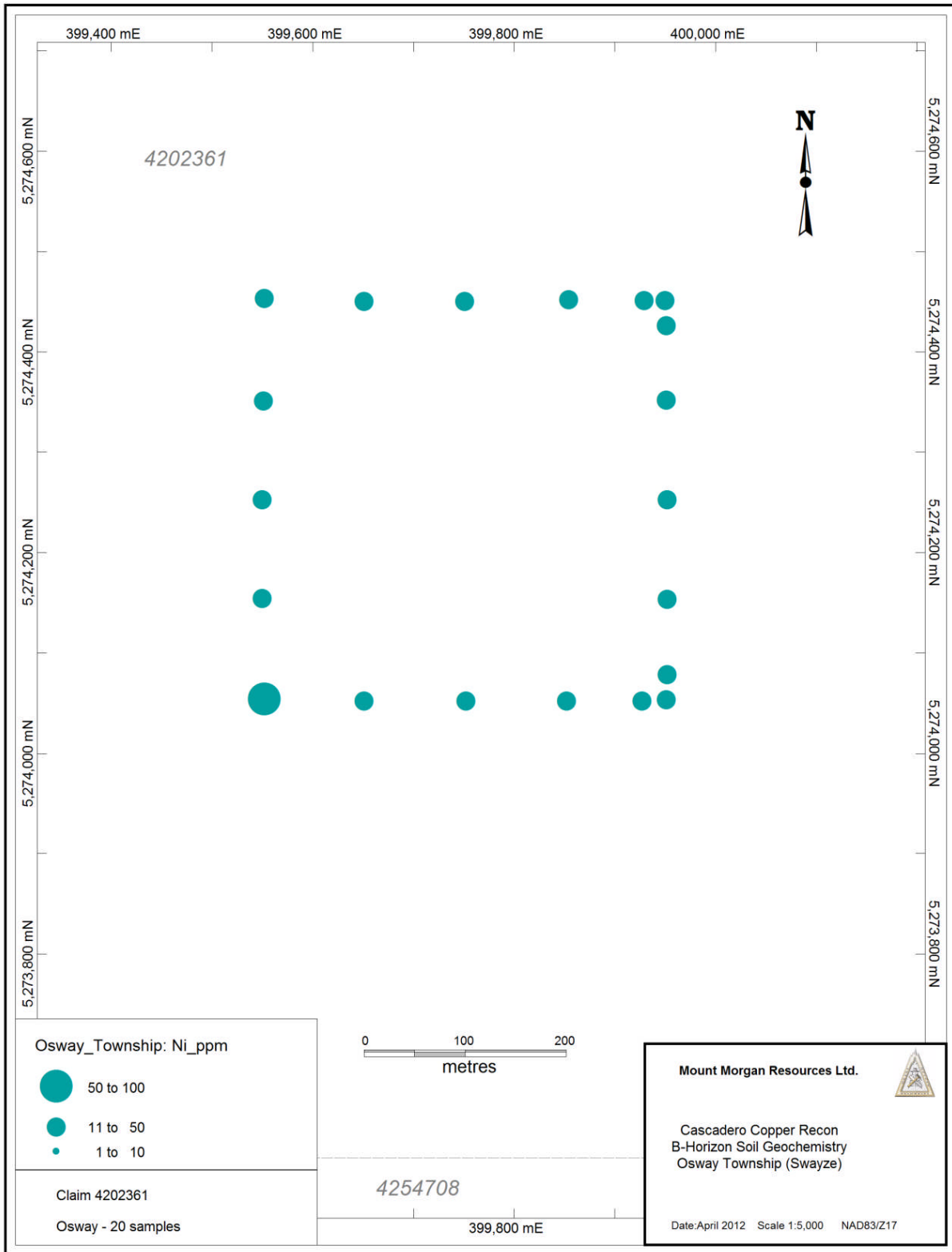


Figure 74. Nickel contents in B-Horizon soil, Osway Township.



OBSERVATIONS AND DISCUSSION

The purpose of the Swayze recon B-Horizon soil geochemical surveys was to define follow-up sites where focus can be brought to any specific area and additional surveys/geophysics can be utilized to define drill targets. Results suggest this approach has succeeded and numerous follow-up sites have been identified. In some instances the follow-up could be in the form of single sampling transects over single sample anomalies or as grids established in areas where numerous elevated responses have been obtained. Individual topics relevant to the Swayze recon surveys are discussed below.

Data Quality

Based on the assessment of analytical duplicates with simple linear regression and the calculation of Cook's Distances to identify outlier samples, the B-Horizon geochemical databases are interpreted to be reasonably accurate and precise and adequate for the recognition of anomalies. Very few outliers are recognized. The accuracy of the analyses is difficult to assess, as is the potential for laboratory contamination since analytical standards and analytical blank results were not reported by the Laboratory (SGS Mineral Services). Standard reference materials and analytical blanks should be inserted as checks into the analytical stream for the analysis of B-Horizon soils. The inclusion of field duplicates collected every 50 samples or so would have provided a check on the reproducibility of any anomalous responses or alternatively any anomalies missed in the survey. The B-horizon soil geochemical database is generally reproducible but has the capability of suffering from the presence of dispersed minerals with variable specific gravities (sulphides, silicates, oxides, etc) in the sample and the inherent inhomogeneity this brings to a representative analysis. Hydromorphic alteration of sulphide particulates in the B-Horizon soil samples can also remove or significantly modify an anomalous response and creates another potentially hazardous situation in terms of anomaly recognition.

Element Assemblages (Spearman-Rank Correlation Coefficient Matrix)

The associations between the elements analyzed in this survey were reviewed with a Spearman-Rank correlation coefficient matrix. Results for the B-Horizon soils illustrate obvious mineralogical associations likely related to sulphide mineralization. The element associations of (1) Ag-As-Mo-Zn, (2) Ni-Cu, and (3) Au-Ag-As have been recognized in the review of MAPINFO bubble plots prepared for the data generated by this survey. These associations are typical for Ni-Cu magmatic-type sulphide mineralization, structurally-controlled Au mineralization that are often associated with As haloes to Au mineralized zones in the Swayze greenstone belt (Au-Ag-As) and for pathfinder or base metal massive sulphide type affiliations as indicated by Ag-As-Mo-Zn. The use of a correlation coefficient matrix does provide insights into potentially useful elements for anomaly definition and potential mineral deposit types that may be found in the survey area.

Anomaly Morphology

The Swayze Recon B-Horizon soil geochemical surveys have documented several styles of anomalous response based on single and multiple sample and multi-commodity element responses. The most obvious of these is the single or two-sample anomalies that present themselves as isolated responses. These responses accomplish the task that was set out for the survey and that is to isolate a base or precious metal anomaly in one or two samples and establish a focus for more extensive follow-up surveys. This style of response is noted for most elements. An excellent example in this survey would be the single sample but multi-element anomaly defined in the Marion Township survey.

Linear and ovoid-type responses for the commodity and related element assemblage are less common but excellent examples exist. The Fingal Township surveys, both Fingal North and Fingal South demonstrate the presence of multi-sample elevated Au responses that can be

described as linear and ovoid. The multitude of elevated Au responses in the Fingal surveys identify the area as an important focus for follow-up soil geochemical surveys and detailed prospecting.

CONCLUSIONS AND RECOMMENDATIONS

The following conclusions are evident from B-Horizon soil geochemical scoping surveys undertaken on the Swayze Recon Townships.

The survey has successfully demonstrated that strong partial digestions on B-Horizon soil samples collected from variable depths can isolate precious and base metal anomalies that are likely related to glacially dispersed particulate sulphide, silicate and oxide mineral particles in the soil.

Commodity element anomalous responses on the survey grids include (1) Ag-As-Mo-Zn, (2) Ni-Cu, and (3) Au-Ag-As as single sample, linear and ovoid anomalous responses and these anomalies provide focused targets for follow-up exploration.

The presence of multi-sample anomalies on the property is not readily apparent however this was not the general aim of the program which was to define follow-up anomalies that could be re-visited with additional soil geochemical surveys and geophysics in order to define drill targets. The recognition of the multi-sample anomaly at Fingal North and Fingal South should be considered as highly significant.

The quality of analytical data is generally good however scatter/variance in the B-Horizon dataset is apparent. This is due to the nature of the particulate mineral species present in the B-Horizon soil samples and the difficulty in acquiring a homogeneous sample in the field and in the laboratory during the analytical phase of the program. Variability of analyses is common at or close to the lower limit of detection. Generally the analytical data is of good quality and not a hindrance to the recognition of *bona fide* base and precious metal anomalies.

Duplicate field samples were not collected but should be considered as an important part of any subsequent surveys.

Sampling materials collected for B-Horizon analysis are effective and appropriate sample media for the Swayze Recon survey however B-Horizon sampling materials collected for analysis should avoid organic material.

The recommendations that flow from this survey are as follows:

Prior to undertaking any geophysical surveys or drill programs where the targets are based on B-Horizon soil geochemical data it is suggested that a review of the glacial history of the survey area be reviewed. To assist in the alleviation of defining drill targets based in part on glacially dispersed materials and post-depositional modification of these anomalies by hydromorphic processes a component of Mobile Metal Ions soil geochemistry should be incorporated into the follow-up program.

Prior to diamond drill testing, the B-Horizon and any other geochemical datasets should be integrated with all available geophysical and geological survey data so that multivariate drill targets can be determined.

There are numerous follow-up geochemical anomalies that require additional surveys. The single point, linear and multi-sample ovoid anomalies should be expanded and/or truncated by additional soil geochemical surveys.

Future analytical requests should insist on the reporting of replicate analyses of the analytical blank and standard reference materials. Consistency of analytical protocols should also be standardized.

Mark Fedikow

May 19, 2012
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Mount Morgan Resources Ltd.



Lac du Bonnet, Manitoba

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CERTIFICATE of AUTHOR

I, Mark A.F. Fedikow, HB.Sc., M.Sc., Ph.D., P.Eng., P.Geo., C.P.G. do hereby certify that:

I am currently a self-employed Consulting Geologist/Geochemist with a field office at:

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I graduated with a degree in Honors Geology (B.Sc.) from the University of Windsor (Windsor, Ont.) in 1975. In addition, I earned a M.Sc. in geophysics and geochemistry from the University of Windsor and a Doctor of Philosophy (Ph.D.) in exploration geochemistry from the School of Applied Geology, University of New South Wales (Sydney) in 1982.

I am a Member of the Association of Professional Engineers and Geoscientists of Manitoba. I am also a Fellow of the Association of Applied Geochemists, and a Member of the Prospectors and Developers Association of Canada. I hold valid Prospectors licenses in Manitoba and Ontario. I am registered as a Certified Professional Geologist with the American Institute of Professional Geologists (Colorado, U.S.A.).

I have worked as a geologist for a total of thirty-five years since my graduation from university; as a graduate student, as an employee of major and junior mining companies, the Manitoba Geological Survey and as an independent consultant.

I have read the definition of “qualified person” set out in National Instrument 43-101 (“NI 43-101”) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “qualified person” for the purposes of NI 43-101.

I am responsible for the preparation of the technical report titled “A Review of B-Horizon Soil Geochemical Survey results from Cascadero Copper Properties, Swayze Greenstone Belt and Recommendations For Further Work” Cascadero Copper Corporation, Sudbury District, Ontario”.

I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

I consent to the filing of the Technical Report with any stock exchanges or other regulatory authority and any publication by them, including electronic publication in the public company files on the web sites accessible by the public, of the Technical Report.

Dated this 19th Day of May, 2012

Mark Fedikow

Signature of Qualified Person



"M.A.F. Fedikow"

Print name of Qualified Person

Original Signed by Mark Fedikow