Ministry of
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Ontario Geological Survey
Open File Report 5917

A Zinc-Cadmium-Copper Anomaly: Preliminary Results of the Cow River Geochemical Mapping Project, Batchawana Greenstone Belt

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ONTARIO GEOLOGICAL SURVEY

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By

S.M. Hamilton, J.A.C. Fortescue and A.S. Hardy

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ABSTRACT

A regional lake sediment survey of the Cow River area in the northeastern portion of the Batchawana greenstone belt has revealed a prominent anomaly in zinc, cadmium and copper. Coincident with this anomaly are less significantly elevated concentrations of lead, gold and other metals. The anomaly is centred on Percy Lake and trends west for approximately 2 km and east for 8 km. The zinc anomaly, with associated concentrations ranging from 215 ppm to 900 ppm is the most significant zinc occurrence in lake sediments in the Batchawana greenstone belt, both in terms of magnitude and distribution. The anomaly in cadmium also appears to be the most significant in the belt. The anomalous area straddles a drainage divide and elevated concentrations are noted in numerous small catchments on both sides of the divide.

The anomalous catchments all overlie mafic to felsic metavolcanic rocks of a probable age between 2700 and 2730 ma. Lead, zinc and copper mineral showings are known within 6 km of the anomaly, 2 of which are along strike to the east. The assemblage of anomalous elements in lake sediments is similar to the lithogeochemical signature typical of a volcanogenic massive sulphide (VMS) occurrence. The anomaly is coincident with a weakly conductive airborne electromagnetic anomaly.

The Percy Lake zinc-cadmium-copper anomaly: preliminary results of the Cow River geochemical mapping project; Batchawana greenstone belt.

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Funding for this project was provided by the Ministry of Northern Development and Mines.

THE PERCY LAKE ZINC-CADMIUM-COPPER ANOMALY: PRELIMINARY RESULTS OF THE COW RIVER GEOCHEMICAL MAPPING PROJECT, BATCHAWANA GREENSTONE BELT

INTRODUCTION

This report contains preliminary results of a reconnaissance-scale lake sediment geochemical program carried out in the northeastern portion of the Batchawana greenstone belt. The study area, referred to herein as the Cow River area, encompasses 800 km^2 and is located approximately 90 km northeast of Sault St. Marie, Ontario (Figure 1).

Fieldwork took place in the summer of 1991 (Fortescue et al. 1991) and the broadsheet, to be published as part of the Geophysical/Geochemical Map Series, is still in preparation. It will be the last in a series of 5 geochemical maps that cover most of the Batchawana greenstone belt including:

Trout Lake (Fortescue and Vida 1989)
Hanes Lake (Fortescue and Vida 1990)
Pancake Lake (Fortescue and Vida 1991a)
Montreal River (Fortescue and Vida 1991b)

During preparation of the Cow River broadsheet it became apparent that previously unknown coincident anomalies in zinc, cadmium and copper occur in lake sediments within the study area. Lead and other metals are associated with these anomalies but are less significant. The purpose of this report is to highlight significant findings prior to the release of the broadsheet.

The complete digital data set gathered as part of the project is released in conjunction with this report and includes: sample site codes, coordinates, field data, loss-on-ignition analyses, data on 40 element geochemical analyses and quality control data.

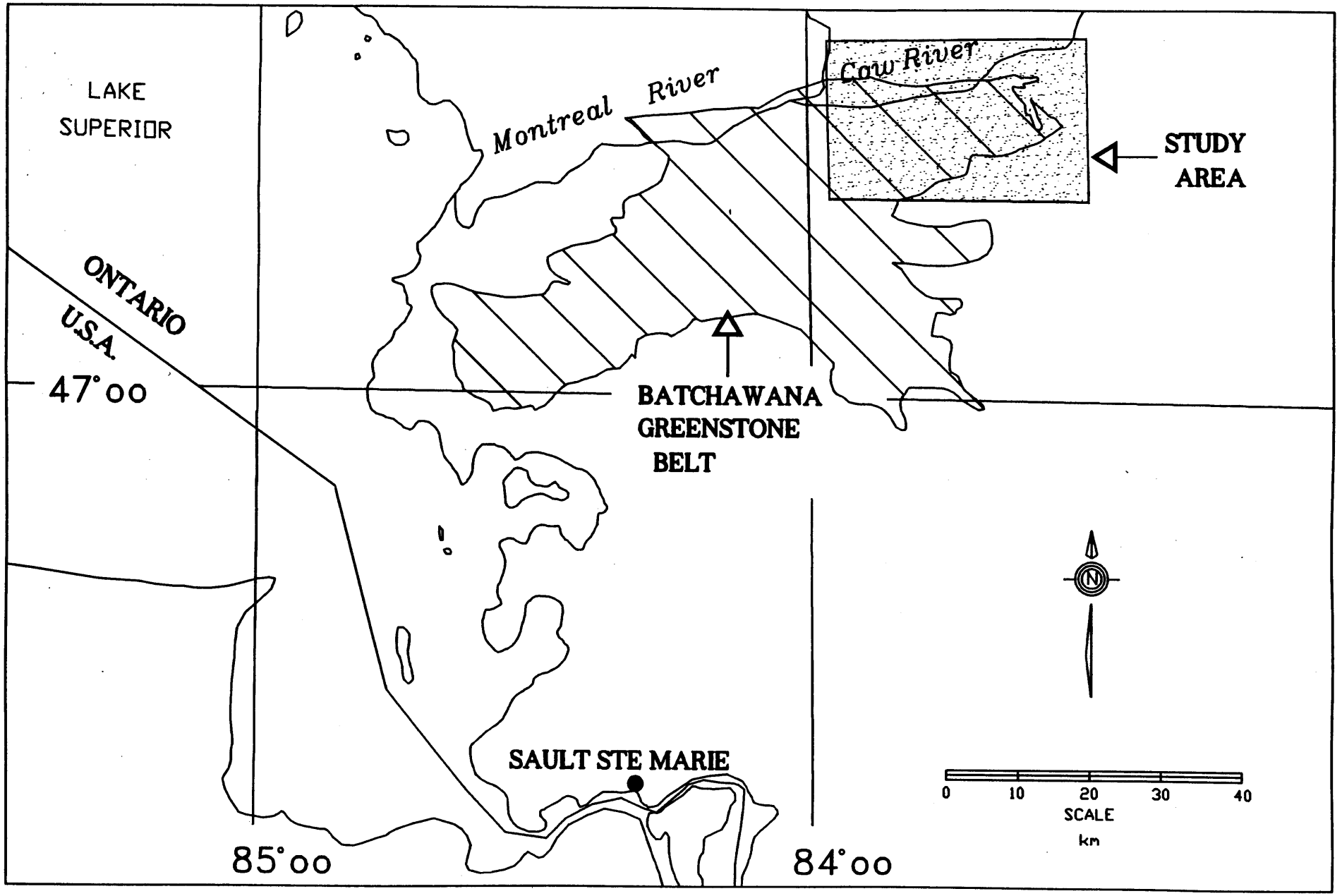


Figure 1. Location of study area

REGIONAL BEDROCK GEOLOGY

The Batchawana greenstone belt is underlain by mafic to felsic metavolcanic rocks and clastic metasedimentary rock. In the Cow River area (Figure 2), the package of metavolcanic rock consists of a sequence of 2700 to 2720 ma (Corfu and Grunsky 1987) calc-alkalic mafic to felsic metavolcanic rocks (Dismal assemblage; Jackson and Fyon 1991), intruded by 2676 ma (Corfu and Grunsky 1987) tonalite (Grunsky 1987). Felsic metavolcanic rocks in the southeastern part of the belt, southeast of the Percy Lake anomaly, range in age from about 2700 to 2720 ma (Corfu and Grunsky 1987). The western part of the Batchawana greenstone belt is underlain by a 2730 ma (Corfu and Grunsky 1987) sequence of tholeiitic basalt (Grunsky 1987), named the Griffin assemblage (Jackson and Fyon 1991). Turbidite-facies metasedimentary rocks (Wart assemblage; Jackson and Fyon 1991) occupy an area between these 2 units (Grunsky 1987).

A northeast-striking regional lineament, possibly representing a fault, transects the Cow River area. This fault appears to post-date folding. In addition, a major splay of the Montreal River Fault defines the northern boundary between greenstone and plutonic terrane (Figure 2).

Bedrock in the Cow River area as mapped by Grunsky (1987) consists primarily of east-striking massive and pillowed mafic flows, and minor interflow metasedimentary rocks. In Moen and Moggy townships, the distribution of rock types remains uncertain, due to poor exposure. To the south of Percy Lake, in Schembri and Scriven townships, thin units of interflow metasedimentary rocks crop out. To the east, in Neill Township, felsic metavolcanic rocks appear to be more abundant, but exposure is poor. A hypothesised east-northeast striking regional syncline passes through the Percy Lake area.

PHYSIOGRAPHY AND SURFICIAL GEOLOGY

Surficial geology of the Cow River Area has been mapped at a scale of 1:100 000 by Roed and Hallett (1980) as part of the Northern Ontario Engineering Geology Terrain Study. Overburden within the region is characterized by thin ground moraine (0 to 3m in thickness) overlying bedrock. Relief in the northern part of the region is moderate ranging from 15 to 60 m. Rugged bedrock uplands characterize the southern part of the study area with local relief greater than 60 m. Glacial ice flow direction was to the south-southwest.

The northern boundary between greenstone and plutonic terrain is marked by a prominent scarp immediately south of Cow River and north of the Percy Lake area. This scarp marks a drainage divide between the Batchawana River watershed to the south and the Cow River watershed to the north.

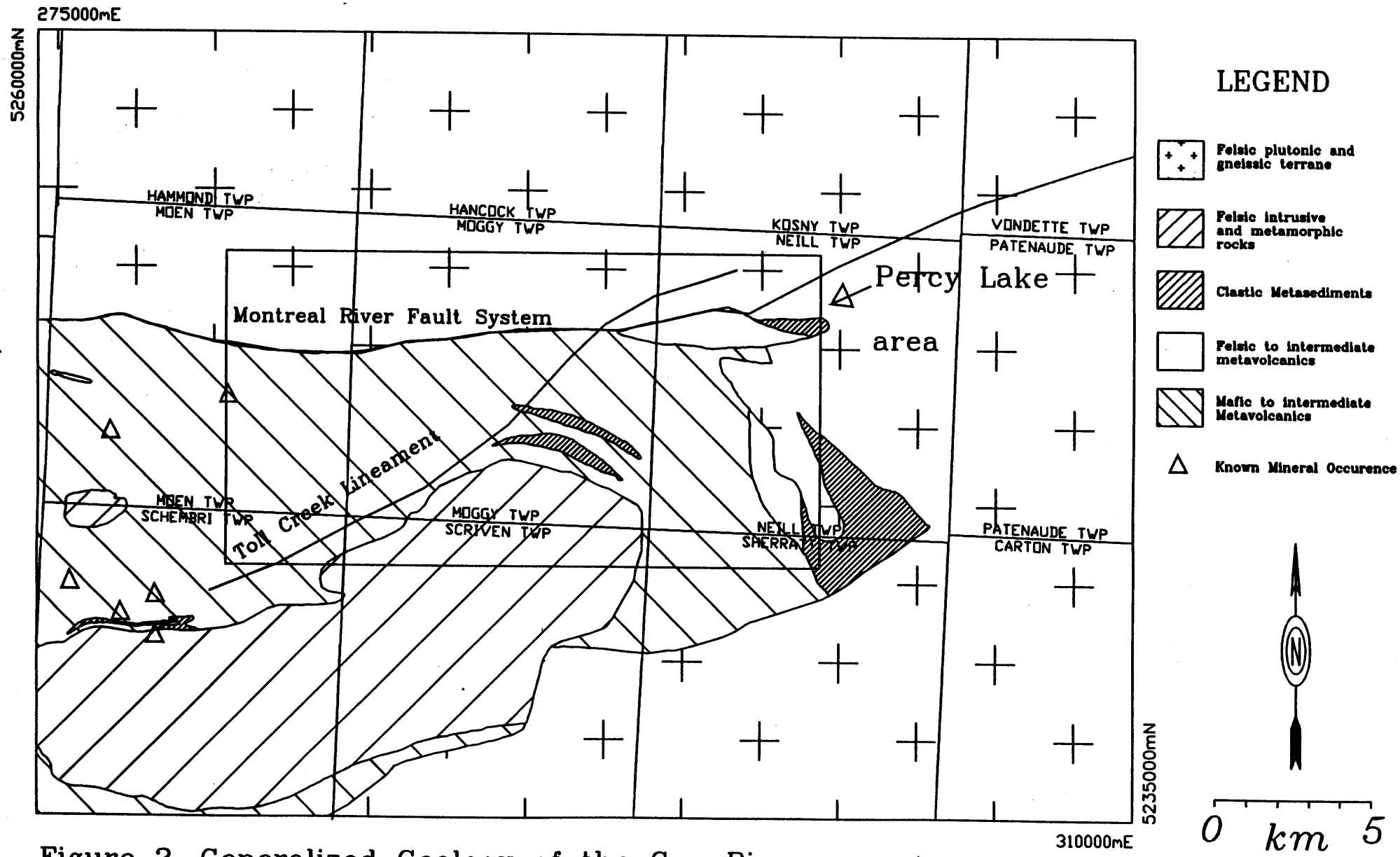


Figure 2. Generalized Geology of the Cow River area (Grunsky 1987)

METHODOLOGY

Field Work

Lake sediment samples were collected using a gravity core sampler from a helicopter equipped with floats. Cores were extruded on the float and where possible sediments were sampled from below the top 20 cm (pre-*ambrosia*). This interval is thought to represent sediments reflecting geologic conditions without anthropogenic influences (Dickman and Fortescue 1984). Where it was not possible to sample below 20 cm, samples were collected from the upper portion of the core and are referred to herein as "post-*ambrosia*" samples. At sites where the core sediment mixed in the sleave, samples were collected and are referred to herein as "mixed" samples. The post-*ambrosia* and mixed samples have been set apart in the database provided on the diskette but are not discussed seperately herein. A total of 80 samples out of the 933 samples collected contain material from above 20 cm depth and only 2 of these are located within the Percy Lake anomalous area.

In addition to lake sediment, waters were sampled at each site and pH was measured in the field within 24 hours of sample collection. The water sample was kept for later analysis of metals.

Sample Preparation and Analysis

Undesiccated samples were shipped in bags to Bondar Clegg Laboratories in Ottawa. Sample preparation included oven drying, pulverizing and "total extraction" of the -100 mesh size fraction in an HF-HClO-HNO_3-HCl leach. Samples were analyzed using: instrumental neutron activation (INAA) for As, Au, Br, Ce, Cs, Hf, La, Lu, Rb, Sb, Sc, Ta, Th, U, W and Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP) for Ag, Al, Ba, Be, Bi, Br, Ca, Cd, Co, Cr, Cu, Fe, Ga, K, Li, Mn, Mg, Mo, Na, Nb, Ni, Pb, Sr, Ti, Va, and Zn.

Loss-on-ignition was also determined and an ICP scan was carried out on the water samples.

Reference materials were sequenced with the lake sediment samples such that approximately 20% of the total consisted of standards. Four CANMET lake sediment standards (LKSD-1 to LKSD-4) and 2 standards prepared in the field (CHA-1 and CHA-2) were used.

Data Interpretation Procedures

Immediately after analytical results became available the results for standards were examined to ensure adequate quality control. The analytical data was then combined with field data to produce a single file and a new numbering system was applied ("Lake Codes"). Frequency histograms (on a log scale) of each element were produced to enable anomalous populations within the data set to be identified. Based on the histograms, increments of the upper background and anomalous populations were chosen at approximately logarithmic intervals for each element. These increments were used to produce proportional dot diagrams for the study area for all the chalcophile and siderophile elements analyzed.

RESULTS

Sample locations are shown on Figure 3 (back pocket). All field observations and analytical results of sediments, waters and reference materials are available on diskette. Concentrations of zinc, cadmium, copper and lead in lake sediments are included in Appendix A.

Quality Control

The results of standards analysis for zinc, cadmium, copper and lead are presented on Figures 4 to 7, respectively. Included on these figures are the anomalous samples for each of these metals (discussed below). The figures indicate that the analytical precision for zinc, copper and lead was reasonably good but for cadmium was poorer. Comparison of the results with the "provisional values" for LKSD-1 to LKSD-4 (Bowman 1990) show that the accuracy of zinc and lead analysis is within 10% of the published values. Copper, however, is being reported approximately 20% higher than the published values. There are no provisional values for cadmium.

Comparison of the Cow River standards analyses with the analytical results of blind standards from the other 4 map areas in the Batchawana belt shows that the analytical performance, in particular the precision, of the Cow River data set is somewhat better for most elements.

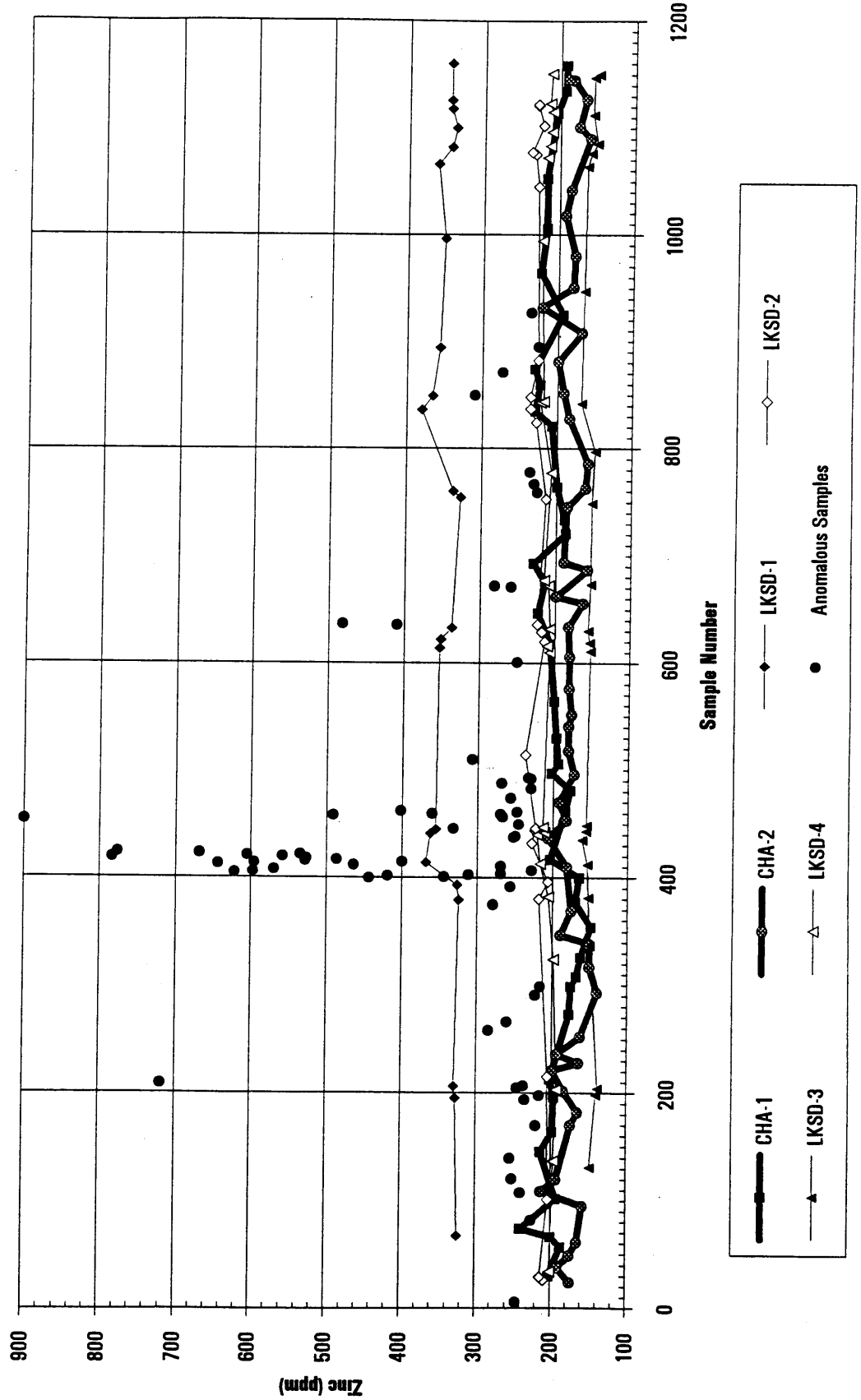
Based on the quality control results the data are considered to be of satisfactory quality.

Regional Distribution of Elements

Figures 8 to 11 show the spatial distribution of zinc, cadmium, copper and lead in the Cow River study area. An anomaly predominant in zinc but also significant in cadmium and copper is located in the central portion of the map area. Lead, gold (not shown) and other metals show somewhat elevated but less significant concentrations in this area. These samples all exhibit elevated zinc concentrations centred on Percy Lake and trending at least 2 km to the west and 8 km to the east into the Toll Creek watershed. The anomaly is defined by approximately 40 samples all of which were collected from numerous small drainage basins in the Percy Lake, Toll Creek and Cow River watersheds (Figure 12, back pocket). Anomalous concentrations of zinc range from 215 ppm to 900 ppm. The modal background concentration of zinc is approximately 100 ppm.

The Percy Lake anomaly straddles the Cow River-Batchawana River drainage divide (Figure 12, back pocket). Anomalous samples were collected from 4 small catchments that flow north into Cow River and at least 20 small catchments that flow southward as part of the Batchawana River watershed. The boundary of the anomaly in the north sharply coincides with the greenstone/plutonic contact. The boundary to the south is less distinct.

Figure 4: Analytical Results for Zinc in Standards and Anomalous (> 215 ppm) Samples: Cow River



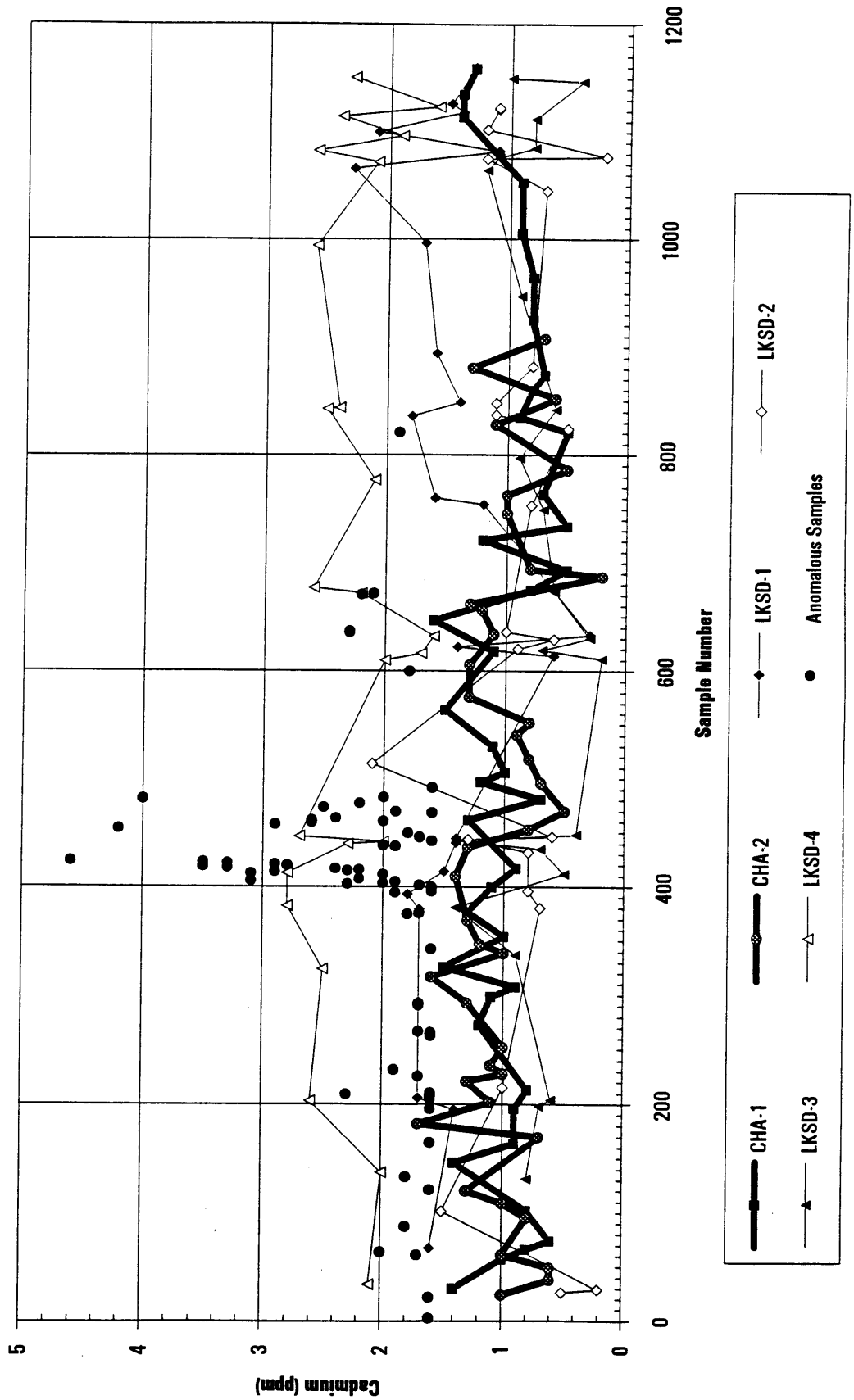


Figure 5: Analytical Results for Cadmium in Standards and Anomalous (> 1.6 ppm) Samples: Cow River

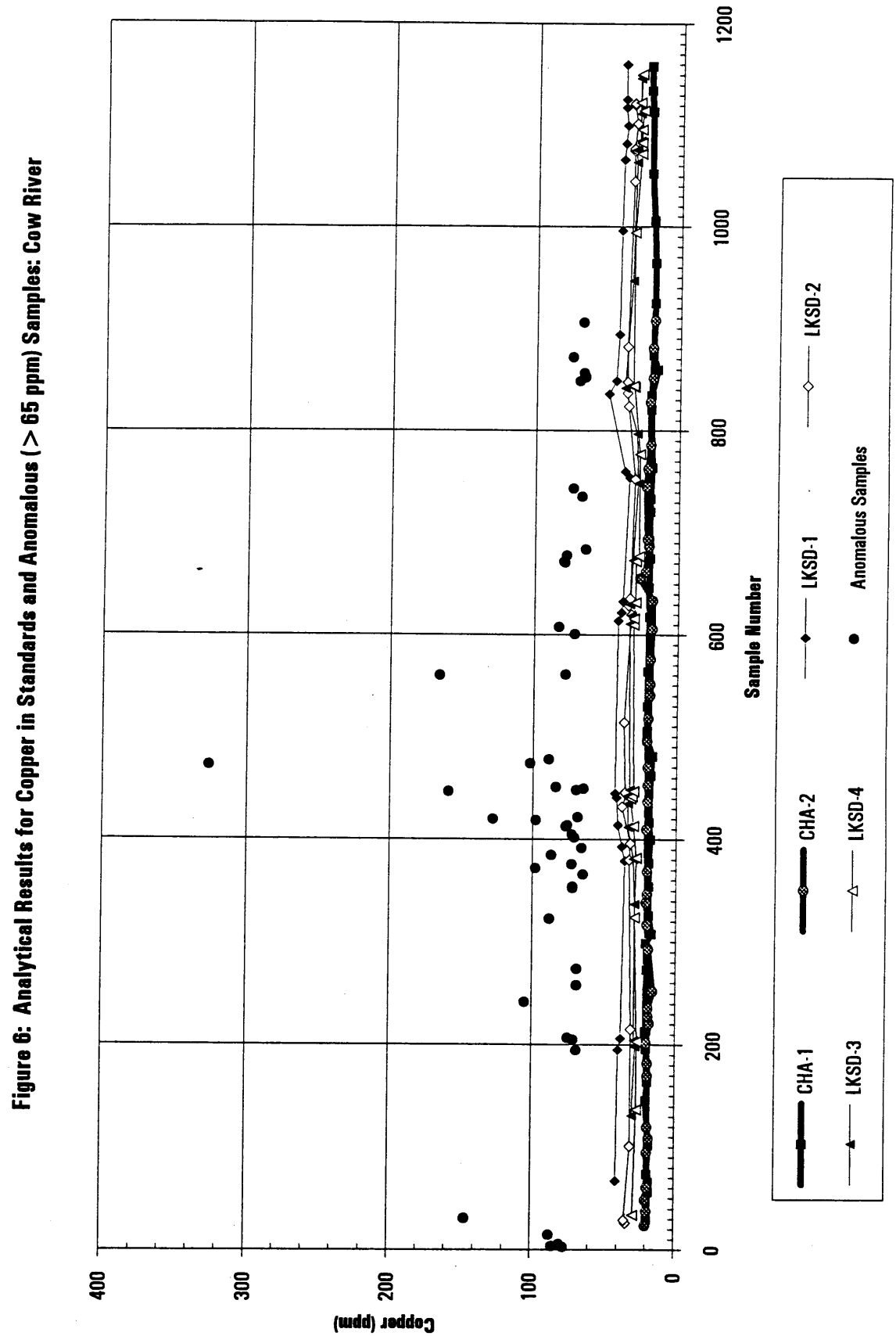


Figure 6: Analytical Results for Copper in Standards and Anomalous (> 65 ppm) Samples: Cow River

Figure 7: Analytical Results for Lead in Standards and Anomalous (> 32 ppm) Samples: Cow River

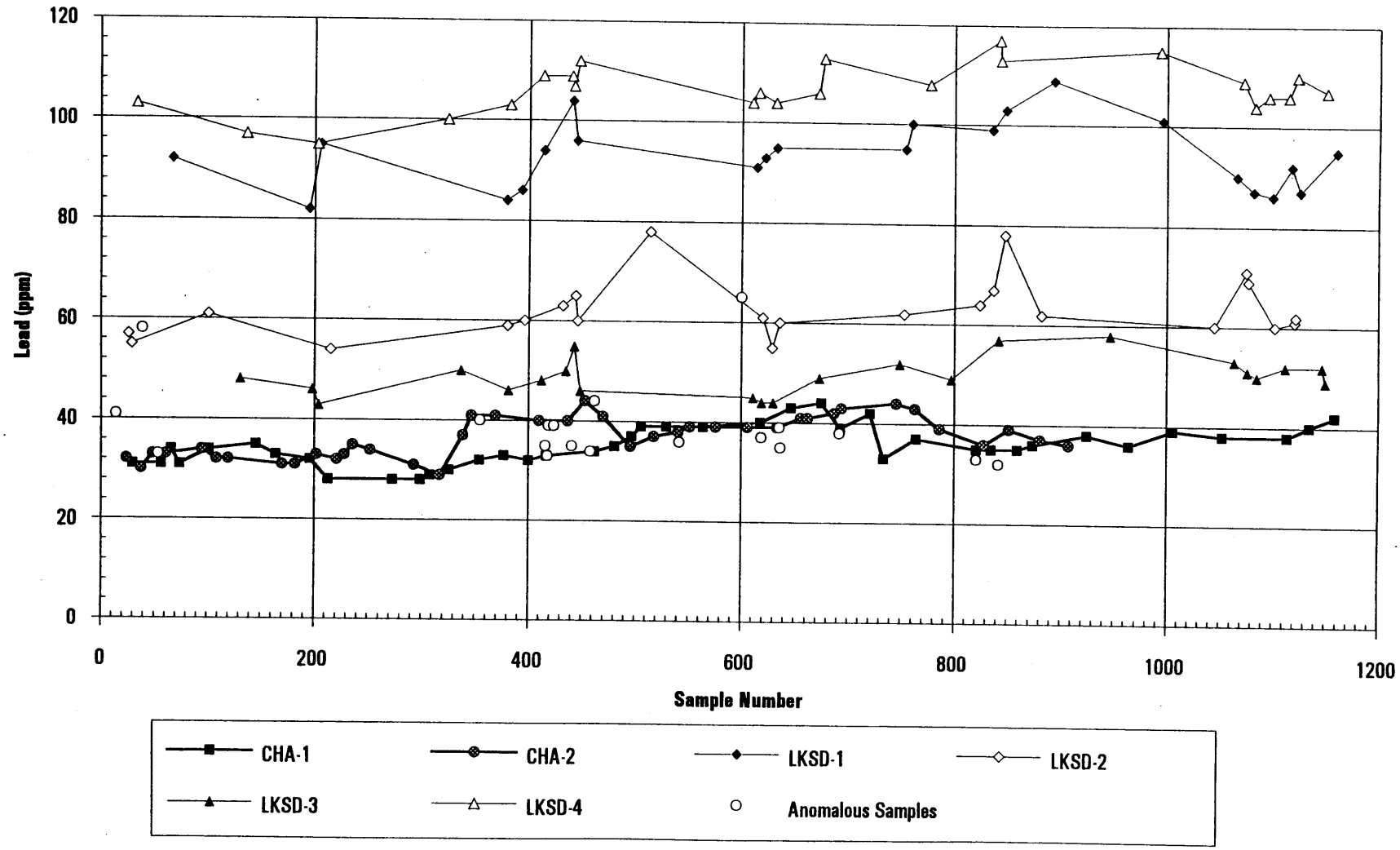


Figure 8. Regional Distribution of Zinc: Cow River Study Area

(see Figure 2 for definition of bedrock geology)

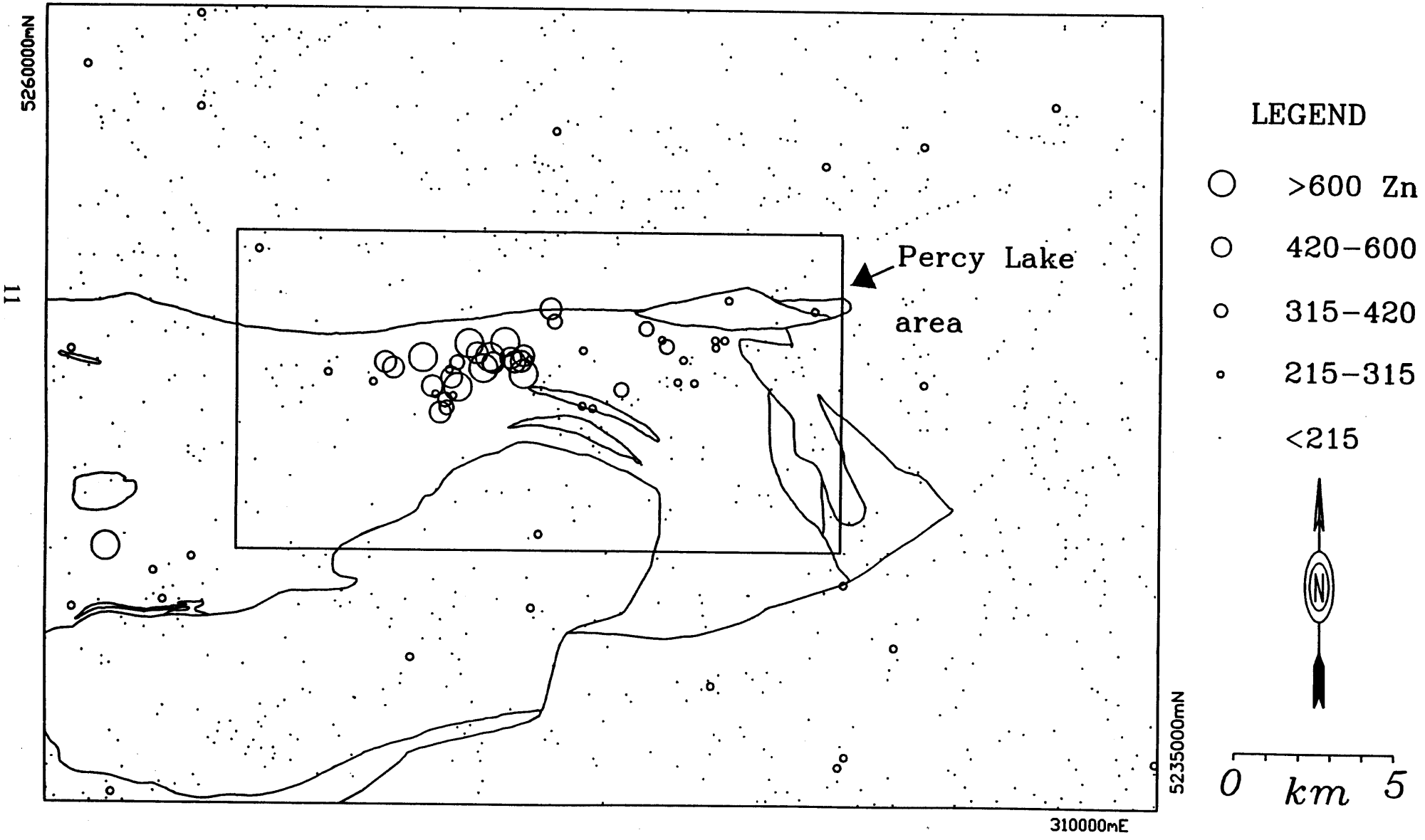


Figure 9. Regional Distribution of Cadmium: Cow River Study Area

(see Figure 2 for definition of bedrock geology)

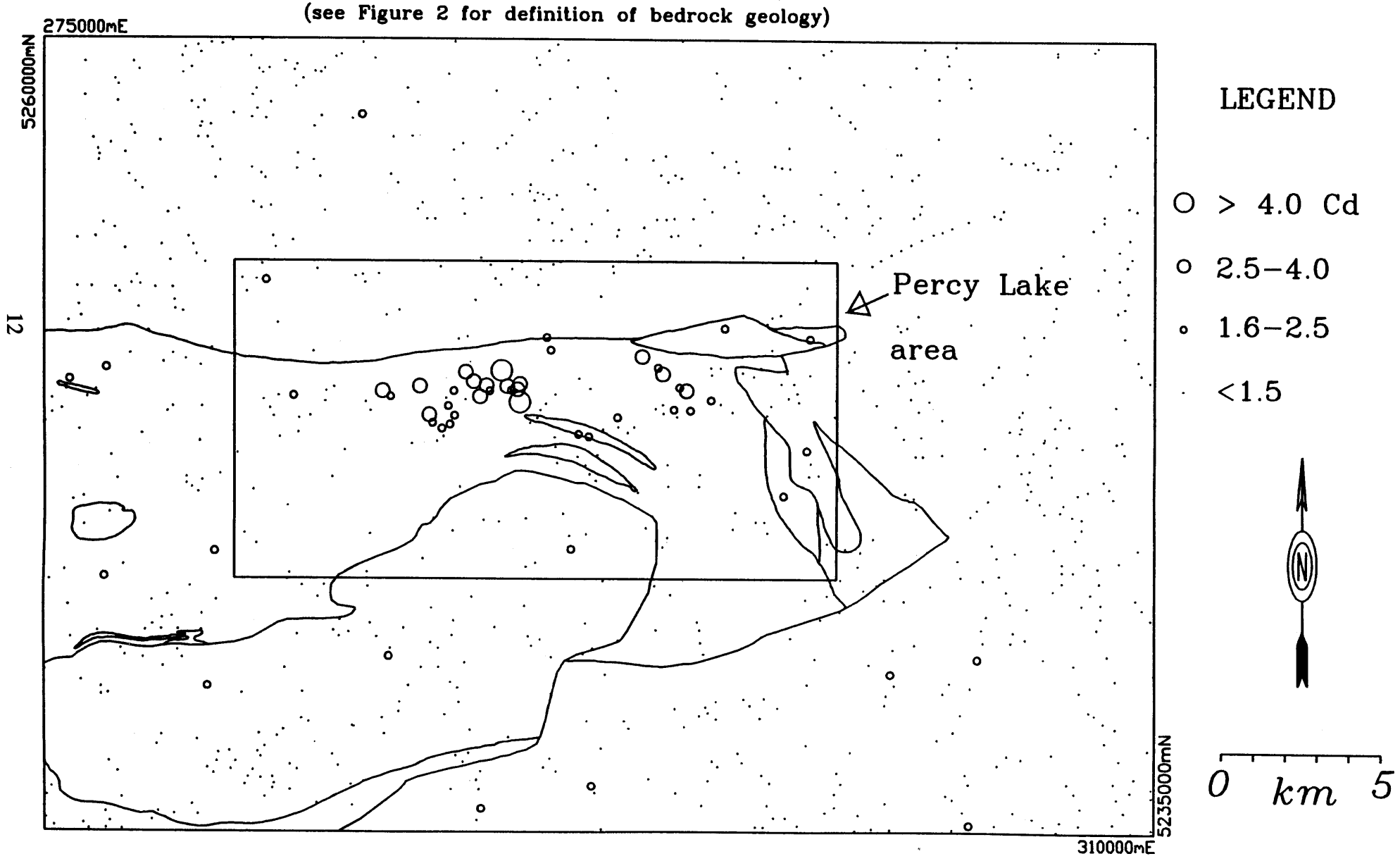


Figure 10. Regional Distribution of Copper: Cow River Study Area

(see Figure 2 for definition of bedrock geology)

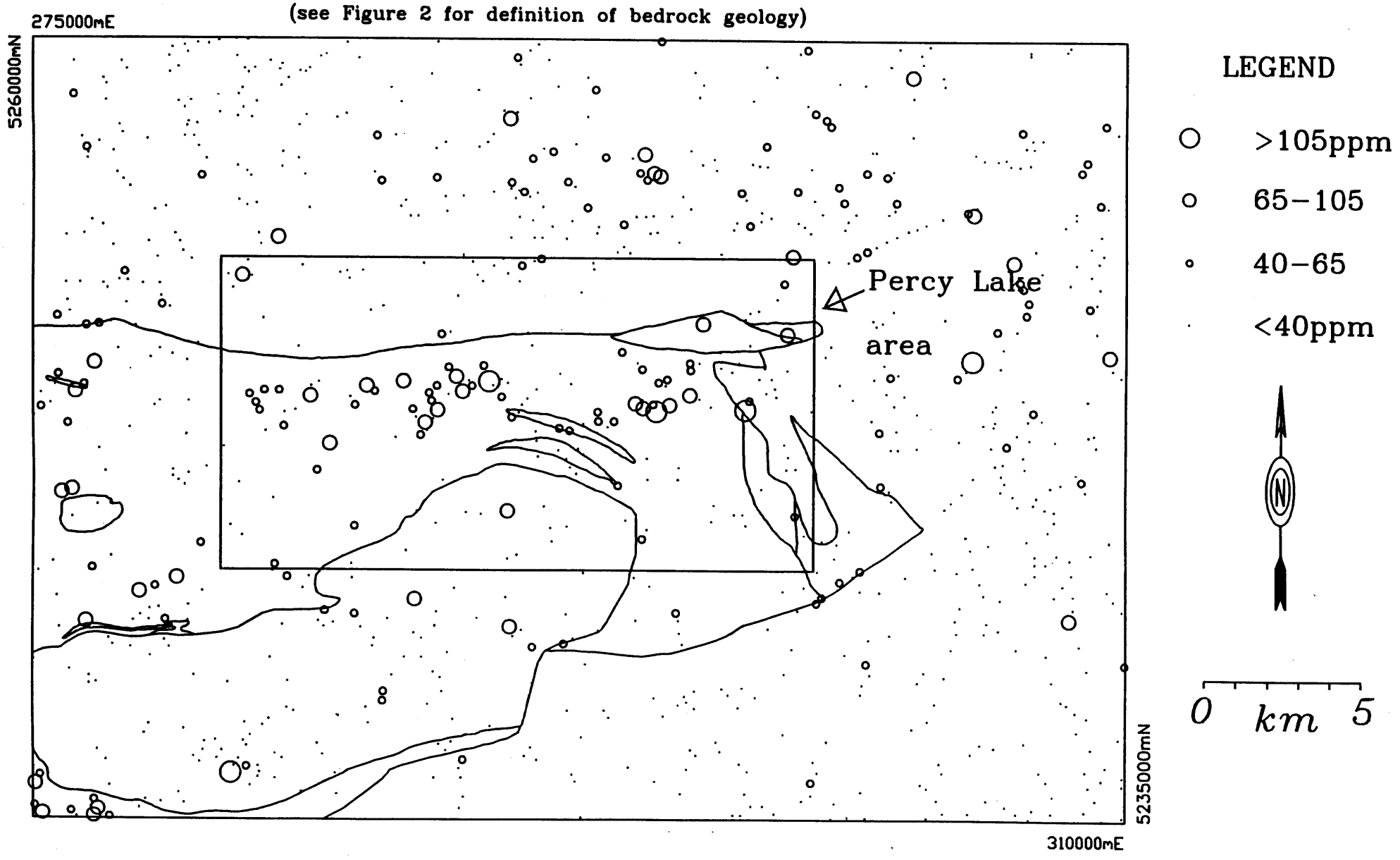
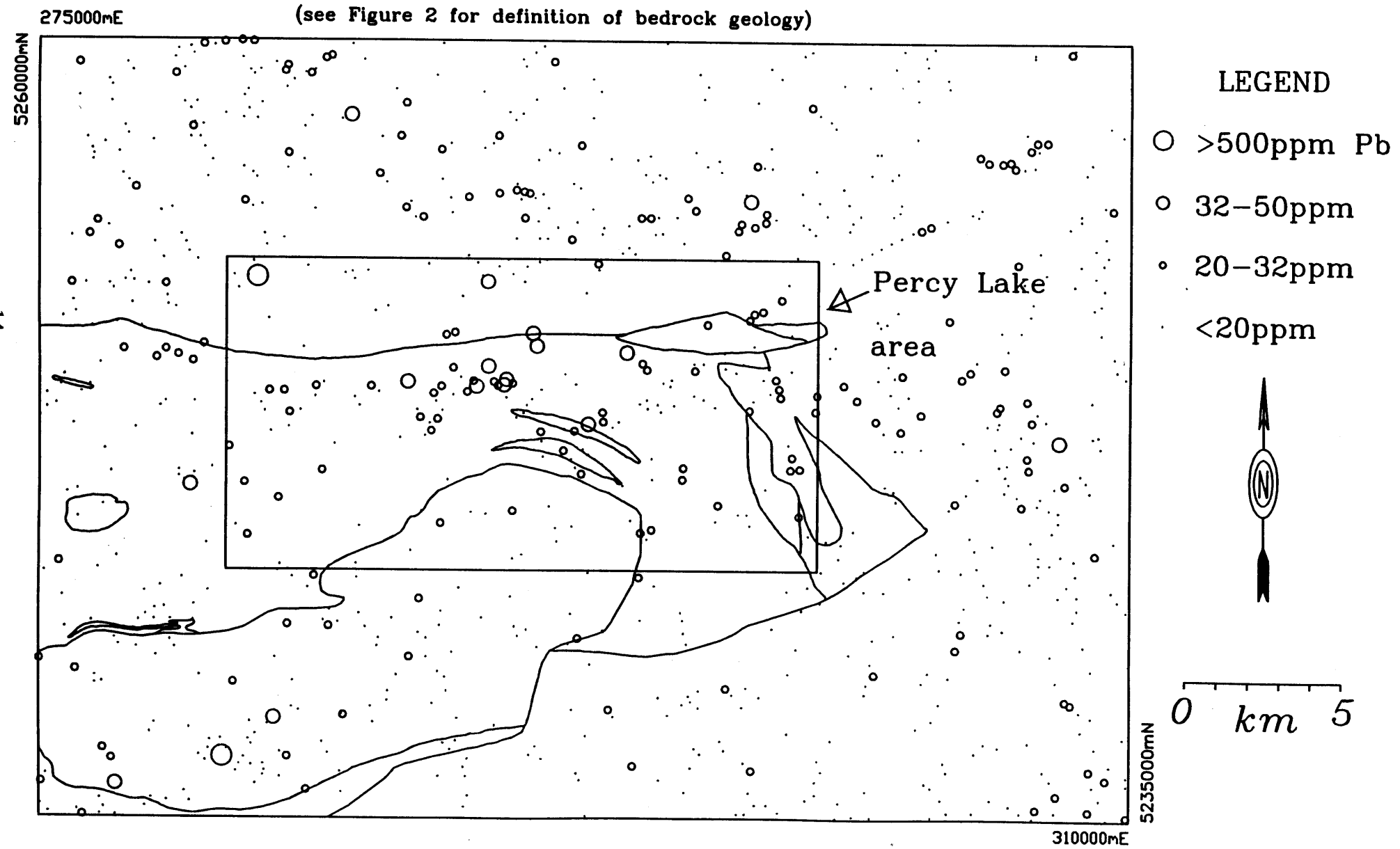


Figure 11. Regional Distribution of Lead: Cow River Study Area



Figures 13 to 16 illustrate zinc, cadmium, copper and lead concentrations for the entire Batchewana greenstone belt. The Percy Lake anomaly is clearly the most well defined and significant zinc-cadmium anomaly in the belt. More pronounced copper anomalies exist elsewhere but this is not unexpected considering the metallogeny of the Batchawana greenstone belt (Blecha 1974). Note the obvious analytical problem for cadmium data in the central portion of the Trout Lake Sheet (Figure 14). This should be ignored.

DISCUSSION

Significance of Lake Sediment Metal Association:

Certain metallic mineral deposit types are characterized by specific metal associations. Assuming the metal association of the lake sediment geochemical anomaly reflects the metal association in the local bedrock, the coincident anomalous concentrations of zinc, copper, and cadmium are consistent with metal associations typical of Archean, volcanic-associated, base metal, massive sulphide deposits (VMS), such as Winston Lake. A slightly elevated concentration of gold in the lake sediments (not shown), coincident with the zinc anomaly, is also consistent with a metal association of VMS deposits.

In the immediate area of the Percy Lake area anomaly, bedrock consists of massive and pillowed mafic flows, interlayered with minor amounts of lapilli ash-crystal tuffs and interflow metasedimentary rocks (Grunsky 1987). Poor bedrock exposure precludes a more comprehensive assessment of the bedrock geology; however, the geology of the area is favourable to host volcanic-associated, base metal, massive sulphide mineralisation.

Known Mineral Occurrences in the Cow River Area

No exposed bedrock mineral occurrences have been reported in the immediate area of the geochemical anomaly in the Percy lake area (Grunsky 1987), however, several base metal occurrences crop out to the west and south west (Figure 2). Occurrences documented by Grunsky (1987) consist of interflow concentrations of pyrite, pyrrhotite and chalcopyrite. Three of these copper, zinc, lead occurrences crop out 6 km to the southwest of the Percy lake anomaly. Copper and copper-zinc occurrences crop out 4 to 6 km along strike to the west of the Percy Lake anomaly. These 2 occurrences lie along the interpreted surface trace of the regional syncline.

Hence, the Percy Lake anomaly occurs in a region of known copper, zinc, and lead occurrences (Grunsky 1987).

Figure 13.
Regional Distribution of Zinc:
Batchawana Greenstone Belt

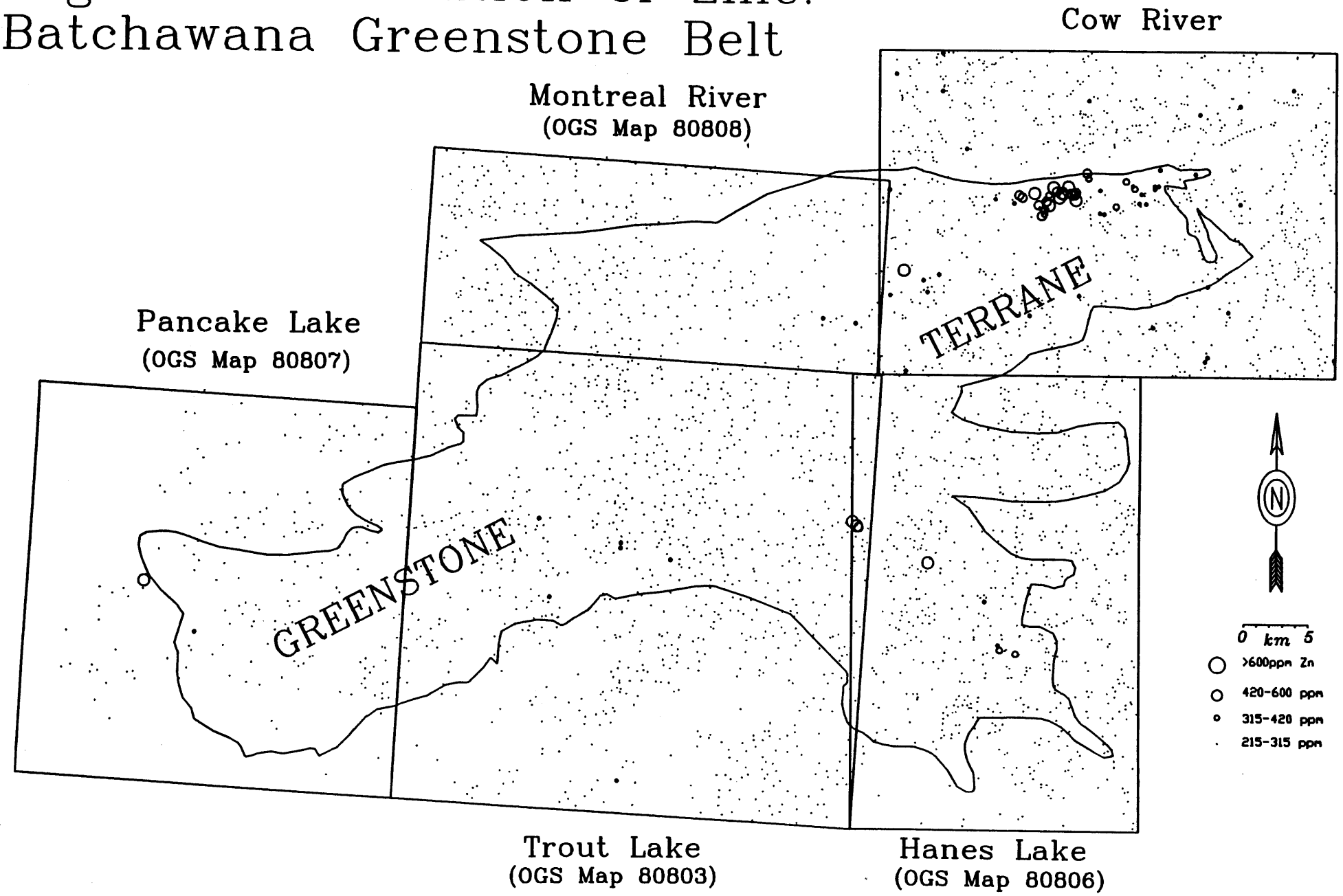


Figure 14.
Regional Distribution of Cadmium: Batchawana Greenstone Belt

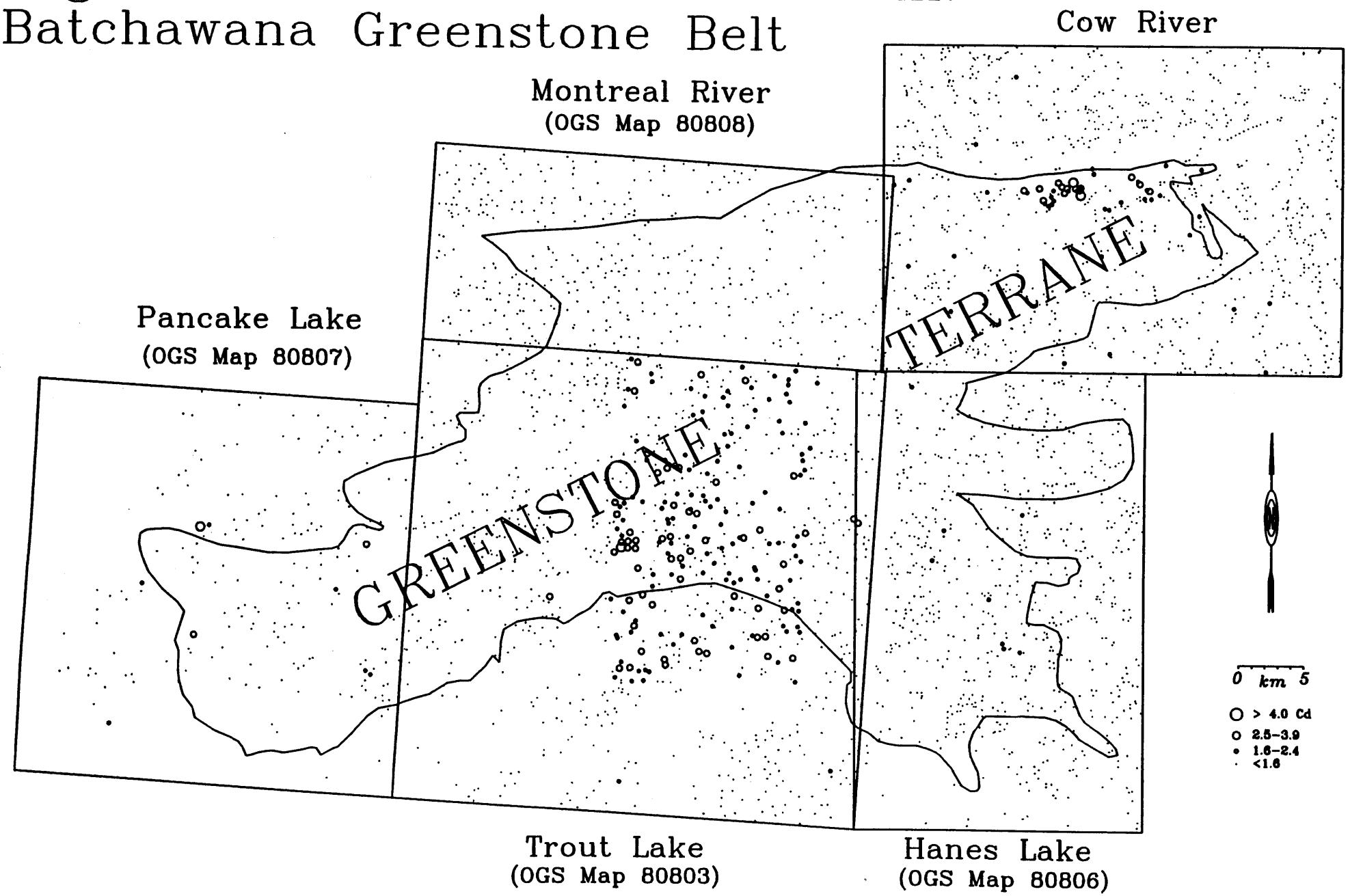


Figure 15.
Regional Distribution of Copper: Batchawana Greenstone Belt

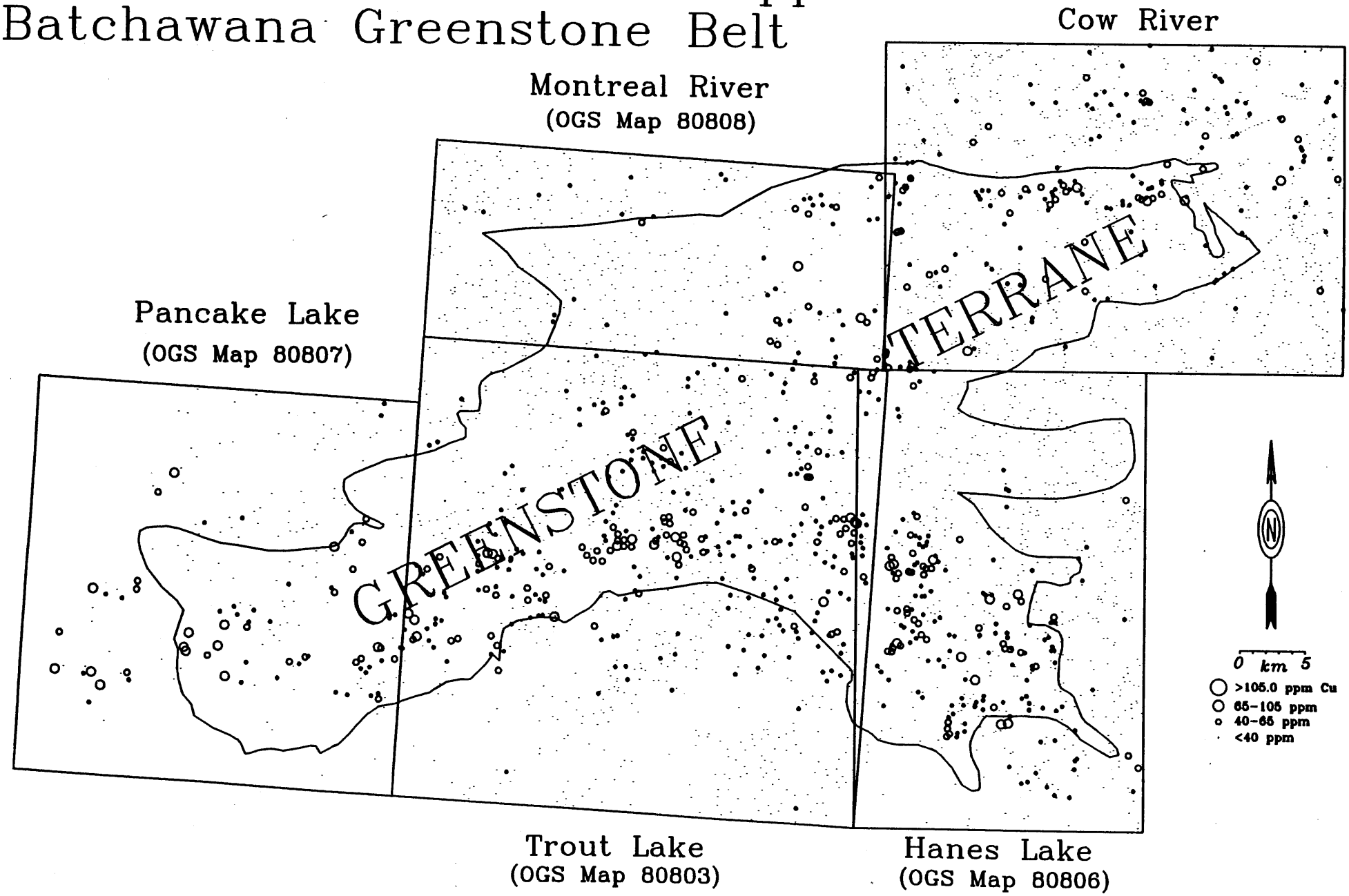
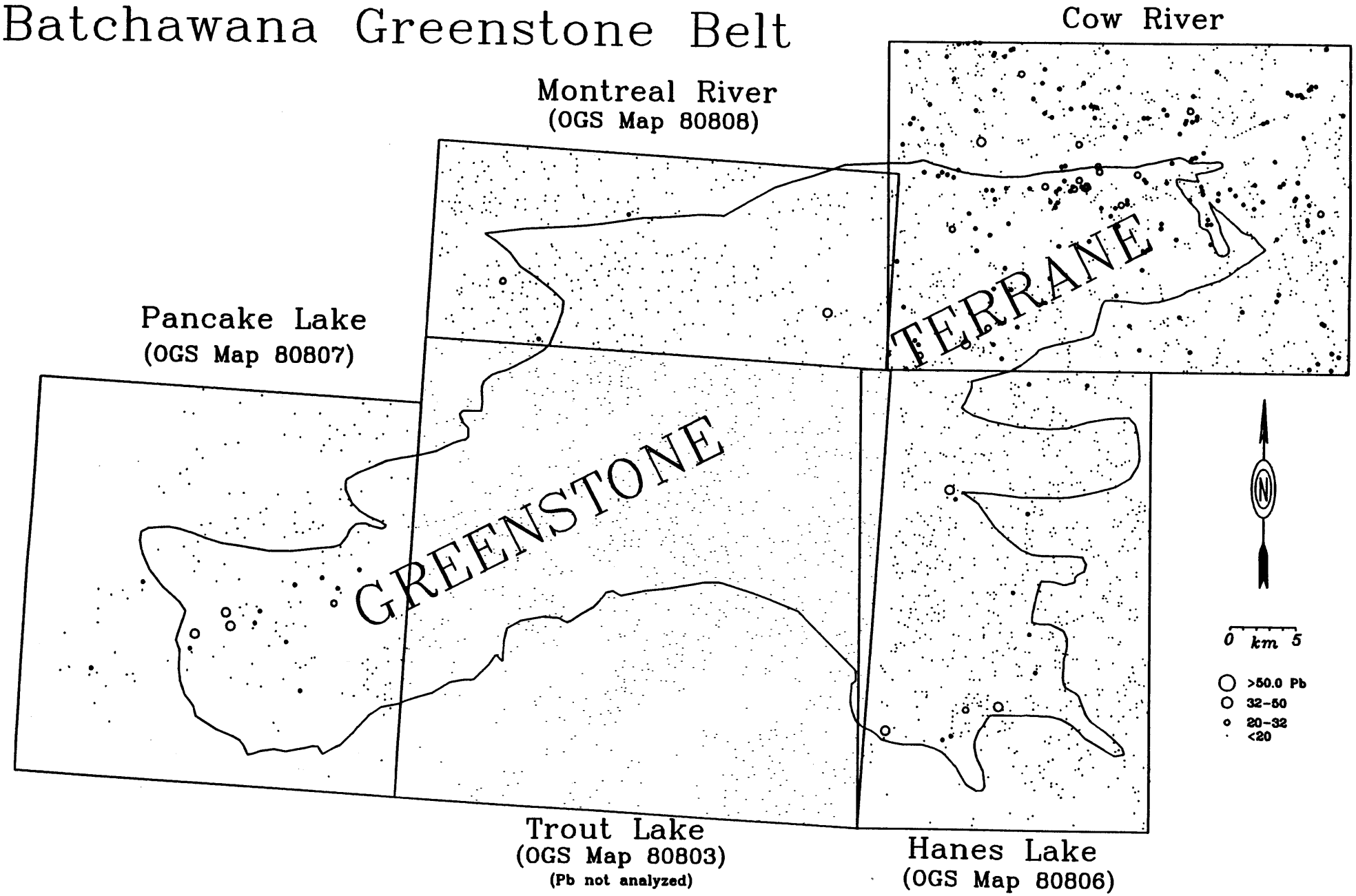


Figure 16.
Regional Distribution of Lead:
Batchawana Greenstone Belt



Geophysical Signature of the Percy Lake Area

The Percy Lake area is characterised by several weak electromagnetic conductors (Ontario Geological Survey 1990). Several of these weak conductors are continuous over several hundred metres and may represent weakly conductive bedrock features (e.g. sphalerite-rich sulphide concentrations or faults). The interpretation of the airborne electromagnetic data for the Percy Lake area is complicated by the proximity of a major high-tension power transmission line in the immediate area. Thus, additional analysis of the geophysical data is required to further assess the significance of the coincident, weak airborne geophysical anomalies.

CONCLUSIONS

The lake sediment geochemical survey in the Cow River area has revealed significant anomalies in zinc (215 ppm to 900 ppm), cadmium and copper and less significantly elevated concentrations of lead, gold and other metals. The anomalous catchments are part of the Percy Creek, Toll Creek and Cow River watersheds and all overlie felsic to mafic metavolcanic rocks. Known mineral occurrences of zinc, and/or copper and lead occur within the map area and 2 occur along strike within 6 km to the west of the occurrences. The assemblage of anomalous elements in lake sediments is similar to the lithogeochemical signature typical of volcanogenic massive sulphide (VMS) occurrences. The anomaly is coincident with a weakly conductive airborne electromagnetic anomaly.

The areal distribution and magnitude of the anomalies in conjunction with their geological setting suggest that the results reported herein may warrant further investigation by the mineral industry.

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APPENDIX A

Analytical Data for Zinc, Cadmium, Copper and Lead

LAKE CODES	FIELD NO.	UTME	UTMN	Cd ppm	Cu ppm	Pb ppm	Zn ppm	LAKE CODES	FIELD NO.	UTME	UTMN	Cd ppm	Cu ppm	Pb ppm	Zn ppm
A1-001	2	276400	5235075	0.6	25	23	76	A3-062	76	289550	5235000	1.1	16	10	128
A1-002	5	277450	5235075	1.2	41	19	183	A3-063	77	288675	5235375	0.8	27	10	162
A1-003	4	276950	5235100	1.6	77	18	176	A3-064	1055	288800	5235750	2	24	15	197
A1-004	1	275300	5235175	0.9	85	17	193	A3-065	80	287850	5236375	0.5	24	8	113
A1-005	3	276225	5235250	0.8	60	11	150	A3-066	78	288725	5236375	0.3	15	16	88
A1-006	6	277075	5235325	1.5	80	14	246	A3-067	43	285100	5236625	0.3	20	18	85
A1-007	13	278400	5235375	0.9	33	11	146	A3-068	79	288650	5236675	0.4	16	14	91
A1-008	11	275050	5235425	0.8	59	9	144	A3-069	81	288775	5236950	1	47	11	128
A1-009	18	279850	5235550	0.8	16	6	156	A3-070	82	288225	5237250	1.2	29	10	177
A1-010	15	279100	5235575	0.9	18	8	102	A3-071	83	288000	5237450	1	33	10	186
A1-011	7	276950	5235625	0.4	61	17	181	A3-072	84	288400	5237525	1	18	14	111
A1-012	14	278600	5235650	1.3	34	14	150	A3-073	85	289650	5238025	0.2	17	4	45
A1-013	17	279675	5235875	0.8	13	11	127	A3-074	71	285750	5238125	0.8	29	10	105
A1-014	10	277450	5236100	0.3	21	41	95	A3-075	86	288450	5238250	0.8	11	19	80
A1-015	8	275075	5236150	0.5	87	24	120	A3-076	70	285675	5238625	0.5	18	13	70
A1-016	9	275225	5236425	0.8	49	18	159	A3-077	87	287650	5238725	0.3	32	15	155
A1-017	12	277325	5236925	0.5	4	25	42	A3-078	72	286200	5238825	0.2	43	11	135
A1-018	1043	277050	5237250	0.9	9	24	63	A3-079	73	286225	5239125	0.7	50	13	153
A1-019	19	278550	5237775	0.6	16	8	79	A3-080	88	288100	5239125	0.8	30	9	175
A1-020	21	279825	5237925	0.9	15	11	108	A3-081	89	288050	5239575	0.7	24	7	98
A1-021	20	278700	5238075	1.5	17	10	113	A3-082	75	286500	5239650	0.8	16	16	226
A1-022	1044	276800	5239350	1.6	16	10	91	A3-083	90	287825	5239750	1.4	17	10	122
A1-023	22	277025	5239400	0.6	13	13	64	A4-084	91	292575	5235075	0.5	35	19	85
A1-024	16	276800	5239600	1.5	23	13	91	A4-085	92	292375	5236250	0.8	19	15	84
A1-025	1046	276175	5239800	0.9	10	25	76	A4-086	99	294925	5236250	1	21	4	107
A2-026	28	284750	5235850	0.5	22	13	104	A4-087	93	292275	5236475	1.8	19	13	117
A2-027	27	283625	5235925	0.8	24	25	141	A4-088	100	294075	5236700	1	4	22	29
A2-028	31	281975	5236125	0.7	24	11	184	A4-089	94	291150	5236950	1.3	20	12	141
A2-029	33	282775	5236350	0.4	38	13	138	A4-090	96	290750	5237075	1.3	35	11	176
A2-030	32	282225	5236400	0.8	25	19	97	A4-091	97	290950	5237350	1.3	13	16	93
A2-031	35	281350	5236525	0.6	146	13	134	A4-092	98	292575	5237675	1.1	31	9	149
A2-032	42	284700	5236525	0.8	40	12	175	A4-093	1057	293450	5238300	0.6	18	15	103
A2-033	41	282275	5236550	0.6	17	11	65	A4-094	103	292125	5238525	0.8	16	12	103
A2-034	39	281850	5236725	0.4	43	2	144	A4-095	104	293300	5238525	1.3	18	22	125
A2-035	36	281450	5236750	0.7	33	10	138	A4-096	105	294900	5238925	1.3	17	9	140
A2-036	40	282225	5236750	0.5	21	12	27	A4-097	1054	291000	5239400	0.5	22	12	93
A2-037	48	280350	5236875	1	16	7	138	A4-098	1058	292700	5240000	0.7	25	10	85
A2-038	37	281600	5236975	0.6	16	5	107	A5-099	107	297450	5235150	0.5	18	11	51
A2-039	54	280900	5237000	0.4	15	58	147	A5-100	108	297700	5235150	1.4	16	15	75
A2-040	45	283000	5237000	0.7	25	23	123	A5-101	110	298775	5235200	0.8	23	3	97
A2-041	1047	280150	5237050	0.6	15	18	99	A5-102	112	298025	5235450	0.7	14	13	65
A2-042	44	284300	5237125	1	30	18	132	A5-103	111	298400	5235450	0.7	18	7	64
A2-043	46	282775	5237150	0.8	25	15	150	A5-104	1062	299650	5235625	1.1	16	20	99
A2-044	50	280450	5237250	0.6	25	7	202	A5-105	114	299950	5235800	1.4	31	9	207
A2-045	53	281050	5237250	0.6	17	9	176	A5-106	106	295750	5235850	0.7	28	9	110
A2-046	55	281850	5237400	0.7	10	19	72	A5-107	113	297825	5235850	0.9	19	8	92
A2-047	47	284125	5237475	1.2	32	18	110	A5-108	115	299950	5236225	1.2	58	8	240
A2-048	51	280500	5237525	0.9	17	12	197	A5-109	1059	297900	5236575	0.6	11	21	68
A2-049	1048	281750	5237550	1.3	34	18	140	A5-110	118	295950	5236650	0.7	19	8	92
A2-050	52	280850	5237575	1.1	17	7	173	A5-111	1060	297650	5236825	0.3	17	14	87
A2-051	56	281975	5237725	1.2	23	8	138	A5-112	119	296250	5237100	1	12	7	77
A2-052	59	282375	5238050	0.5	30	5	168	A5-113	122	297025	5237225	1.1	13	11	67
A2-053	58	281800	5238125	1.3	18	13	102	A5-114	121	296075	5237275	1.5	11	11	61
A2-054	60	282575	5238250	1.1	21	33	205	A5-115	123	296900	5237525	0.5	12	14	68
A2-055	64	284800	5238350	0.3	15	23	58	A5-116	134	299050	5237775	0.3	17	6	146
A2-056	65	284750	5238375	0.6	32	17	136	A5-117	124	295200	5238350	1.5	6	5	151
A2-057	63	283375	5238500	0.2	34	12	72	A5-118	126	296200	5238600	0.7	9	12	85
A2-058	62	283150	5238600	0.3	22	12	70	A5-119	1063	297600	5238625	0.4	16	17	62
A2-059	1049	281250	5239400	1.2	13	28	90	A5-120	125	295675	5238700	0.8	16	4	187
A2-060	68	283175	5239450	0.4	19	14	89	A5-121	127	295950	5238800	1.6	12	7	251
A2-061	69	280150	5239625	1.7	16	11	177	A5-122	133	298150	5238950	0.2	20	10	113

LAKE CODES	FIELD NO.	UTME	UTMN	Cd ppm	Cu ppm	Pb ppm	Zn ppm	LAKE CODES	FIELD NO.	UTME	UTMN	Cd ppm	Cu ppm	Pb ppm	Zn ppm
A5-123	128	295875	5238975	1.3	11	3	158	A7-184	1071	307925	5238850	0.6	7	25	57
A5-124	130	297275	5239025	1.2	23	12	171	A7-185	190	307625	5239475	0.3	11	19	51
A5-125	129	296200	5239150	0.5	19	10	175	A7-186	192	308750	5239850	0.9	22	8	103
A5-126	132	397075	5239225	1.1	9	23	82	B1-187	23	275025	5240125	0.2	8	21	54
A5-127	136	297725	5239250	0.8	12	3	126	B1-188	214	278750	5240250	1.2	14	7	99
A5-128	135	299075	5239700	0.9	18	7	141	B1-189	212	278125	5240525	1	34	5	194
A6-129	139	300600	5235050	1.1	32	7	201	B1-190	216	279350	5240525	0.7	28	11	105
A6-130	141	301700	5235075	1	13	5	89	B1-191	211	277550	5240600	1.1	28	6	208
A6-131	144	303650	5235075	0.9	30	10	136	B1-192	217	279200	5240750	0.6	37	10	135
A6-132	140	301125	5235100	0.6	11	18	91	B1-193	210	277425	5240800	0.9	35	3	198
A6-133	145	304175	5235225	1.8	28	14	211	B1-194	199	275850	5241150	1.5	37	8	235
A6-134	147	304975	5235225	0.8	24	8	198	B1-195	209	276700	5241350	1.2	69	10	163
A6-135	142	300700	5235550	0.8	14	4	107	B1-196	223	278200	5241375	1.6	24	14	127
A6-136	148	303975	5235650	0.9	22	11	115	B1-197	218	279950	5241375	0.9	25	15	62
A6-137	143	301550	5235925	0.8	15	17	90	B1-198	222	278700	5241400	1	38	10	216
A6-138	149	303650	5236050	1.2	24	12	182	B1-199	220	279225	5241400	1.4	55	4	142
A6-139	150	303450	5236175	1.3	30	8	177	B1-200	224	278425	5241550	1.5	24	7	113
A6-140	116	300150	5236550	0.9	40	11	254	B1-201	225	278725	5241750	1.5	25	12	124
A6-141	151	304150	5236550	1.2	27	9	158	B1-202	226	279025	5241800	1.4	35	11	141
A6-142	152	304050	5236850	0.6	21	10	108	B1-203	227	279975	5241875	1.1	37	7	144
A6-143	117	300025	5236900	1	36	12	183	B1-204	200	275775	5242150	1.1	31	6	183
A6-144	138	300450	5237550	0.8	24	6	129	B1-205	229	278400	5242300	1.6	71	15	246
A6-145	153	303175	5237950	1	15	7	84	B1-206	230	278900	5242475	1.1	42	17	177
A6-146	154	303675	5238200	1.2	19	18	113	B1-207	231	279600	5242750	1.2	75	11	237
A6-147	156	303900	5238750	1	21	15	111	B1-208	201	275175	5242950	1.6	28	6	113
A6-148	157	301525	5239050	1.2	29	12	189	B1-209	207	276900	5243050	2.3	51	11	718
A6-149	155	301575	5239350	1.2	35	7	197	B1-210	1073	275650	5243250	0.9	24	24	44
A6-150	158	303350	5239425	0.6	23	9	75	B1-211	208	277500	5243425	1.6	30	8	139
A6-151	1070	304200	5239600	0.2	16	14	37	B1-212	205	276250	5244675	0.5	11	15	66
A6-152	1067	301825	5239675	1.1	18	21	113	B2-213	238	282600	5240200	0.6	19	15	103
A6-153	159	303550	5239750	0.9	29	7	132	B2-214	246	284325	5241200	1.1	36	30	165
A7-154	161	305925	5235000	1.4	18	16	155	B2-215	1079	283000	5241250	1.5	16	28	129
A7-155	169	309250	5235025	1.1	19	17	104	B2-216	247	284625	5241325	1.1	20	4	159
A7-156	166	306900	5235050	0.9	24	12	140	B2-217	245	284150	5241375	1.1	33	14	184
A7-157	171	309900	5235125	1	17	21	95	B2-218	244	284350	5241700	1.1	45	16	159
A7-158	163	306500	5235225	1.5	24	13	148	B2-219	234	280425	5242325	1.1	29	7	169
A7-159	167	307600	5235250	1.1	20	12	127	B2-220	243	283650	5242425	1.3	23	9	120
A7-160	168	308675	5235300	0.2	13	21	48	B2-221	242	283150	5242775	1	45	7	142
A7-161	165	307000	5235350	0.6	7	22	90	B2-222	1080	283850	5242800	0.6	14	25	53
A7-162	162	306150	5235450	1	30	4	192	B2-223	239	282675	5242975	0.9	29	9	105
A7-163	1069	305550	5235650	1.2	11	19	72	B2-224	241	283000	5243000	1.3	36	10	132
A7-164	172	309025	5235675	1	22	13	125	B2-225	240	282750	5243175	1.5	42	9	154
A7-165	191	307650	5235800	1.6	17	25	101	B2-226	235	280375	5243850	1.7	54	12	167
A7-166	173	308800	5236100	0.9	22	14	136	B2-227	1081	281700	5244100	0.2	28	25	60
A7-167	175	309900	5236150	0.5	18	4	147	B2-228	237	281325	5244425	1.1	35	10	150
A7-168	179	307450	5236275	1	26	9	119	B3-229	256	286900	5240225	1.1	13	23	44
A7-169	174	309225	5236325	0.6	25	22	118	B3-230	1078	287450	5240225	1.1	14	18	92
A7-170	176	309900	5236425	1	17	9	220	B3-231	261	288275	5240375	1.3	21	6	103
A7-171	180	307225	5236575	0.8	14	17	114	B3-232	248	285875	5240575	1.9	23	14	195
A7-172	178	308700	5236600	0.5	9	24	75	B3-233	249	285925	5240825	1.3	29	6	172
A7-173	177	309350	5236750	0.5	10	20	83	B3-234	259	287450	5240825	0.3	12	19	50
A7-174	181	305050	5237150	1.2	22	8	104	B3-235	260	287200	5241000	0.4	16	15	75
A7-175	197	308875	5237325	0.3	14	14	99	B3-236	251	285500	5241175	0.8	24	9	115
A7-176	184	305800	5237350	0.6	39	8	136	B3-237	262	287875	5241225	0.9	27	4	154
A7-177	183	305350	5237450	0.8	19	7	94	B3-238	257	286350	5241450	0.7	15	17	99
A7-178	185	306750	5237500	1.2	27	8	124	B3-239	264	289225	5241475	1.1	20	20	85
A7-179	186	309775	5237650	1	13	4	137	B3-240	250	285300	5241600	1.1	60	6	89
A7-180	187	308425	5237875	0.5	7	19	63	B3-241	263	287925	5241675	0.8	33	11	189
A7-181	188	308750	5238325	0.8	8	19	66	B3-242	265	287225	5242075	0.2	105	21	71
A7-182	193	308375	5238500	0.7	10	16	69	B3-243	266	288500	5242425	0.3	22	14	37
A7-183	189	308100	5238750	1.2	11	21	81	B3-244	253	285225	5242750	0.4	15	16	78

LAKE CODES	FIELD NO.	UTME	UTMN	Cd ppm	Cu ppm	Pb ppm	Zn ppm	LAKE CODES	FIELD NO.	UTME	UTMN	Cd ppm	Cu ppm	Pb ppm	Zn ppm
B3-245	254	285200	5243200	0.5	32	5	126	B6-306	312	300125	5242975	0.7	14	6	63
B3-246	258	286950	5243625	1.3	22	6	141	B6-307	331	304600	5242975	0.7	23	6	101
B3-247	255	285300	5244400	1.4	60	12	132	B6-308	323	301500	5243000	0.9	51	12	160
B3-248	292	287900	5244500	1	16	21	83	B6-309	332	303900	5243075	1	36	6	139
B3-249	289	289350	5244800	1.2	13	8	114	B6-310	313	300675	5243400	0.8	31	10	128
B3-250	290	288875	5244850	0.6	10	4	114	B6-311	333	303800	5243600	0.8	25	11	95
B3-251	291	287300	5244900	1	29	17	207	B6-312	315	300750	5243850	1.1	12	16	74
B4-252	267	291000	5240550	0.7	44	14	168	B6-313	314	300275	5243950	0.8	16	15	108
B4-253	277	292000	5240650	1.2	44	9	150	B6-314	334	304875	5244100	1	25	11	137
B4-254	1084	292300	5240825	1	33	21	167	B6-315	316	301150	5244275	1	21	5	121
B4-255	268	290375	5240900	1.5	38	10	175	B7-316	194	309975	5240025	1	57	13	114
B4-256	278	293100	5241075	1.2	24	12	91	B7-317	348	307450	5240325	0.9	25	14	132
B4-257	269	290650	5241100	0.8	36	13	163	B7-318	346	306500	5240525	0.6	28	9	109
B4-258	270	290275	5241200	1.3	69	6	284	B7-319	349	308500	5240625	1.2	16	6	134
B4-259	279	294300	5241400	0.8	28	7	106	B7-320	335	305475	5241025	0.9	33	14	97
B4-260	281	292075	5241600	1.3	20	19	109	B7-321	344	305925	5241125	1.1	24	10	82
B4-261	271	290150	5242150	0.6	19	6	133	B7-322	336	305550	5241350	0.5	17	12	62
B4-262	282	294750	5242500	1.4	36	12	119	B7-323	350	308175	5241450	1.1	88	16	85
B4-263	283	294250	5242775	1.6	32	30	140	B7-324	353	309875	5241750	0.9	29	16	127
B4-264	280	292625	5242925	0.8	11	17	46	B7-325	351	308300	5241800	0.9	22	17	115
B4-265	272	290200	5243375	1	20	9	193	B7-326	355	309600	5242075	0.8	34	15	122
B4-266	274	290500	5243500	1.6	15	9	260	B7-327	345	305975	5242100	1.1	16	11	64
B4-267	276	291625	5243925	1.7	36	8	125	B7-328	357	307700	5242200	1.4	29	16	145
B4-268	284	294500	5244000	1.1	45	9	141	B7-329	352	308300	5242225	1.3	25	14	107
B4-269	1086	294300	5244200	0.7	11	24	96	B7-330	338	305450	5242250	1	24	8	102
B4-270	1087	294650	5244300	0.4	9	25	69	B7-331	356	309400	5242375	0.6	25	20	120
B4-271	286	291575	5244350	1	14	18	77	B7-332	358	307975	5242550	0.9	18	19	91
B4-272	285	292100	5244400	0.3	14	19	75	B7-333	340	305325	5242625	1.1	25	9	95
B4-273	287	293975	5244600	1.2	35	13	106	B7-334	359	306800	5242650	0.8	11	18	64
B4-274	1088	290200	5244900	0.3	69	23	49	B7-335	360	307075	5242900	1.3	22	16	97
B4-275	288	294675	5245925	1	11	19	53	B7-336	361	308250	5242900	0.5	8	20	63
B5-276	303	299325	5240500	0.9	13	16	54	B7-337	341	305100	5243125	0.9	19	11	89
B5-277	294	295800	5240650	0.4	26	10	85	B7-338	366	307075	5243250	0.8	21	14	127
B5-278	295	295700	5241000	0.9	26	10	77	B7-339	365	307425	5243250	0.7	12	6	142
B5-279	304	298550	5241150	0.8	13	6	131	B7-340	362	308200	5243375	0.9	21	18	111
B5-280	296	295675	5241400	0.8	26	9	95	B7-341	367	307075	5243500	0.6	17	16	76
B5-281	297	295600	5241650	0.2	47	12	80	B7-342	364	307775	5243525	1	14	12	78
B5-282	305	299500	5241725	1.3	20	18	150	B7-343	363	308875	5243550	1.6	25	21	155
B5-283	306	299025	5242350	0.8	13	9	130	B7-344	342	305025	5243700	1	24	9	107
B5-284	1089	299700	5242475	0.8	33	19	125	B7-345	343	305600	5243850	1.1	23	8	100
B5-285	307	299700	5244125	1.3	17	11	117	B7-346	370	309475	5243950	0.4	22	16	72
B5-286	300	297825	5244450	1.4	26	10	158	B7-347	368	306825	5243975	0.8	24	7	85
B5-287	298	296725	5244575	1	22	13	89	B7-348	371	307500	5244275	1	30	16	93
B5-288	1092	299400	5244750	0.9	51	21	126	B7-349	372	307700	5244600	0.9	12	18	64
B5-289	302	297450	5244800	1.2	17	11	159	B7-350	373	307700	5244925	0.9	22	16	85
B5-290	301	297725	5244800	1	21	12	144	B7-351	374	307400	5245000	0.4	10	14	41
B6-291	160	301700	5240025	1.7	44	10	222	C1-352	378	277050	5245075	0.5	17	17	92
B6-292	309	301025	5240325	1.2	19	10	114	C1-353	375	275900	5245475	1.4	72	14	141
B6-293	327	304425	5240500	1.7	21	22	118	C1-354	376	276225	5245575	1.5	72	13	152
B6-294	319	301775	5240800	1.5	17	15	102	C1-355	397	279850	5245725	1.2	19	40	141
B6-295	320	302450	5240950	1	15	9	116	C1-356	398	279650	5245875	0.9	32	13	38
B6-296	328	304600	5241025	1	26	25	86	C1-357	399	279475	5246000	1	34	5	108
B6-297	329	304550	5241425	0.6	20	11	64	C1-358	402	279975	5246100	0.8	25	11	209
B6-298	330	304700	5241850	0.6	15	14	79	C1-359	383	277300	5246150	1.1	19	15	97
B6-299	310	300100	5241975	1.1	53	17	216	C1-360	401	279475	5246200	1	34	8	127
B6-300	311	300275	5242150	1	57	15	144	C1-361	1094	277100	5246875	0.4	21	18	94
B6-301	1091	302125	5242325	0.2	9	12	29	C1-362	1095	279900	5247325	0.3	13	18	91
B6-302	321	301500	5242350	0.8	29	6	147	C1-363	395	278075	5247550	1.3	30	14	113
B6-303	318	300850	5242650	1	53	3	163	C1-364	384	276100	5247675	1.4	51	10	118
B6-304	325	302950	5242800	0.7	19	9	70	C1-365	385	275025	5247925	0.9	40	13	124
B6-305	322	301275	5242825	1	26	6	115	C1-366	386	275250	5248200	1.5	65	9	169

LAKE CODES	FIELD NO.	UTME	UTMN	Cd ppm	Cu ppm	Pb ppm	Zn ppm	LAKE CODES	FIELD NO.	UTME	UTMN	Cd ppm	Cu ppm	Pb ppm	Zn ppm
C1-367	403	278875	5248250	0.6	27	18	92	C4-428	490	292400	5246100	1.3	29	25	181
C1-368	387	275550	5248325	0.8	35	15	124	C4-429	491	292200	5246300	1	29	16	149
C1-369	404	279050	5248400	0.8	24	20	111	C4-430	492	292075	5246575	0.9	34	15	168
C1-370	405	279975	5248400	1.2	20	16	79	C4-431	501	294650	5246600	0.4	38	16	85
C1-371	388	275250	5248650	1.2	34	14	134	C4-432	483	291175	5246650	0.4	18	18	56
C1-372	391	276350	5248700	1.3	98	9	114	C4-433	493	292625	5246725	0.5	34	14	147
C1-373	389	275700	5248925	1.1	18	8	115	C4-434	489	291825	5246850	0.4	24	22	81
C1-374	392	276625	5248925	0.9	56	19	151	C4-435	494	292450	5246900	1.2	32	19	143
C1-375	390	275800	5249250	1.8	50	10	279	C4-436	488	291125	5247150	0.8	36	11	87
C1-376	394	276950	5249625	1.7	73	8	203	C4-437	1106	291100	5247450	0.2	19	29	86
C1-377	409	279925	5249700	0.6	2	22	24	C4-438	495	292175	5247475	1.9	62	21	252
C1-378	406	278750	5249800	0.3	2	24	19	C4-439	1108	291850	5247550	2	59	15	250
C1-379	407	279450	5249900	0.2	2	23	26	C4-440	502	293400	5247600	0.8	34	20	126
C2-380	411	282700	5245300	0.6	18	25	79	C4-441	498	292625	5247700	1.5	28	35	174
C2-381	1099	281600	5245800	0.8	14	23	87	C4-442	504	293100	5247775	0.9	50	27	174
C2-382	415	284100	5246200	1.1	60	22	113	C4-443	503	293600	5247775	1.6	62	17	167
C2-383	408	280550	5246300	1.1	29	18	127	C4-444	484	290325	5247900	0.5	53	16	100
C2-384	1097	281100	5246950	1.5	26	26	85	C4-445	485	290550	5248050	0.9	34	9	160
C2-385	416	284500	5247050	0.2	87	11	132	C4-446	505	293075	5248075	1.7	52	26	333
C2-386	418	282450	5247450	0.8	35	5	110	C4-447	521	294950	5248100	0.5	159	16	106
C2-387	419	283025	5247600	0.5	46	8	174	C4-448	1113	294525	5248200	0.7	70	9	114
C2-388	1098	283050	5248050	0.2	20	24	59	C4-449	486	290650	5248300	0.8	32	11	179
C2-389	421	282250	5248100	0.8	47	18	168	C4-450	522	294850	5248325	1.8	65	15	246
C2-390	420	283400	5248125	0.5	29	6	83	C4-451	507	294275	5248350	0.8	84	16	96
C2-391	422	282125	5248350	0.8	45	20	206	C4-452	1116	294500	5248475	0.9	37	13	91
C2-392	426	283875	5248575	1.5	66	16	256	C4-453	1104	290825	5248500	0.8	32	11	146
C2-393	423	281925	5248625	1	49	20	187	C4-454	480	290000	5248550	4.2	54	19	900
C2-394	424	282400	5248750	0.8	54	25	153	C4-455	1105	291125	5248800	0.9	33	9	159
C2-395	425	282875	5248750	1.9	58	25	141	C4-456	1109	292225	5248975	1.5	34	18	183
C2-396	427	283900	5248900	1.6	34	22	178	C4-457	478	290200	5249000	1.1	10	30	267
C2-397	428	284150	5249025	0.9	30	13	178	C4-458	479	290000	5249125	2.9	31	34	492
C3-398	436	288125	5245900	1.1	14	12	133	C4-459	487	291875	5249300	1.5	33	6	270
C3-399	438	286600	5247250	0.9	27	8	137	C4-460	508	294500	5249450	2.6	48	31	361
C3-400	455	287400	5247325	1.6	56	18	444	C4-461	509	294350	5249650	2	27	27	248
C3-401	456	287600	5247475	1.4	34	25	345	C4-462	510	293850	5250000	2.6	47	44	402
C3-402	457	287550	5247725	1.7	71	13	419	C5-463	511	296800	5245100	0.2	11	23	44
C3-403	458	287800	5247850	2.3	31	22	312	C5-464	515	298325	5245625	2.4	21	14	123
C3-404	460	287250	5247900	2	31	21	269	C5-465	512	295650	5245925	0.9	14	30	105
C3-405	459	287950	5248125	1.9	73	16	622	C5-466	516	299125	5246250	1.2	30	21	129
C3-406	461	287150	5248150	3.1	57	12	597	C5-467	517	299425	5246275	1.1	30	24	146
C3-407	439	285300	5248275	0.9	64	8	228	C5-468	513	295675	5246300	0.8	20	21	150
C3-408	463	287750	5248425	2.2	62	13	570	C5-469	519	299175	5246650	1.6	23	27	120
C3-409	450	285150	5248550	0.9	18	4	150	C5-470	520	299050	5247050	1.9	37	18	128
C3-410	467	288300	5248635	1.2	19	17	102	C5-471	1119	299925	5248125	0.7	7	22	57
C3-411	464	287675	5248675	0.6	57	21	269	C5-472	1117	297800	5248150	1.1	326	22	98
C3-412	452	285925	5248725	2	51	15	464	C5-473	524	296700	5248250	0.8	33	12	132
C3-413	468	288750	5248725	3.1	77	25	644	C5-474	523	295375	5248300	2.5	102	16	256
C3-414	451	285675	5248900	2.9	76	29	596	C5-475	532	297925	5248450	1	46	18	150
C3-415	466	287925	5248900	2.3	43	24	400	C5-476	529	296325	5248500	0.8	17	16	108
C3-416	469	289050	5248900	2.2	44	35	529	C5-477	540	298800	5248575	0.7	18	25	118
C3-417	476	289725	5248925	2.4	39	27	487	C5-478	528	296025	5248625	2.2	89	19	143
C3-418	477	289925	5248950	3.3	39	33	527	C5-479	1120	299975	5248650	0.5	8	23	54
C3-419	465	286850	5249050	3.5	98	39	783	C5-480	1124	298475	5248700	0.8	21	16	153
C3-420	475	289600	5249050	2.8	128	27	558	C5-481	542	298750	5248850	0.8	20	24	103
C3-421	471	288950	5249075	2.9	35	29	605	C5-482	525	295250	5248925	4	14	2	59
C3-422	472	288550	5249200	3.3	69	15	535	C5-483	527	295025	5249025	2	62	12	229
C3-423	473	288300	5249500	3.5	50	31	669	C5-484	526	295300	5249125	0.9	52	17	87
C3-424	474	289425	5249550	4.6	52	39	776	C5-485	1125	298250	5249150	0.8	21	17	87
C4-425	482	291375	5245050	0.6	28	11	111	C5-486	543	298650	5249150	1	21	21	129
C4-426	499	293725	5245725	0.3	41	8	104	C5-487	537	297375	5249375	0.6	35	11	148
C4-427	500	293500	5245900	1	22	16	91	C5-488	533	296050	5249425	1.2	47	21	268

LAKE CODES	FIELD NO.	UTME	UTMN	Cd ppm	Cu ppm	Pb ppm	Zn ppm	LAKE CODES	FIELD NO.	UTME	UTMN	Cd ppm	Cu ppm	Pb ppm	Zn ppm
C5-489	545	299150	5249425	0.6	33	12	176	C7-550	596	306850	5247825	1	12	27	100
C5-490	536	297025	5249500	0.9	31	15	201	C7-551	597	307300	5247850	0.9	26	19	178
C5-491	544	298425	5249500	0.7	25	19	157	C7-552	598	307025	5248100	0.8	43	14	200
C5-492	535	296025	5249650	1.6	44	18	229	C7-553	580	305725	5248175	0.8	16	31	120
C5-493	534	296325	5249650	1.3	23	11	233	C7-554	581	305825	5248325	0.7	15	30	113
C5-494	538	297600	5249650	0.5	31	11	149	C7-555	604	308775	5248475	0.2	19	9	98
C5-495	539	297000	5250000	0.7	27	15	147	C7-556	599	306700	5248500	0.3	24	22	115
C6-496	547	304200	5245000	0.4	21	18	92	C7-557	605	309850	5249250	0.5	34	13	97
C6-497	548	304400	5245200	0.3	17	23	89	C7-558	607	309575	5249475	0.6	37	14	102
C6-498	1129	302500	5245250	1.2	28	16	154	C7-559	582	305975	5249525	1.5	28	22	125
C6-499	549	304750	5245500	0.9	23	15	118	C7-560	1136	305075	5249750	1.4	166	14	126
C6-500	546	302425	5245575	0.2	25	19	84	C7-561	608	309475	5249900	0.2	78	13	120
C6-501	1128	302150	5245725	0.7	60	17	102	D1-562	615	277700	5250075	0.2	4	21	30
C6-502	550	302475	5246900	0.6	33	6	167	D1-563	621	279050	5250075	0.2	8	26	72
C6-503	551	302700	5246900	0.4	28	8	148	D1-564	623	276700	5250800	0.4	54	18	189
C6-504	553	303300	5246950	0.6	26	12	121	D1-565	617	278275	5250800	0.3	11	16	55
C6-505	554	304650	5247175	1	35	10	139	D1-566	624	277100	5250850	0.4	49	16	139
C6-506	1131	302100	5247450	0.5	53	16	72	D1-567	625	277475	5250925	0.2	34	19	105
C6-507	1130	302650	5247500	1	29	22	79	D1-568	626	275775	5251100	0.7	46	17	171
C6-508	1132	301850	5247825	0.7	23	24	90	D1-569	627	276175	5251250	0.5	23	11	64
C6-509	555	303300	5248050	0.9	37	28	69	D1-570	653	279375	5251400	0.7	17	12	62
C6-510	556	302575	5248300	0.6	22	5	308	D1-571	654	279125	5251475	0.8	59	13	158
C6-511	1133	301250	5248500	0.2	11	22	37	D1-572	646	277975	5251525	0.3	33	10	98
C6-512	557	302900	5248625	0.2	28	5	131	D1-573	628	276100	5251600	0.4	22	9	65
C6-513	558	302325	5248700	0.2	14	6	128	D1-574	655	279100	5251750	0.7	36	19	121
C6-514	1134	300825	5248975	0.2	10	24	51	D1-575	645	277375	5252000	0.9	34	12	123
C6-515	559	301925	5249150	0.9	32	18	113	D1-576	648	277250	5252150	1	40	15	134
C6-516	565	304600	5249200	0.2	47	21	93	D1-577	652	278500	5252150	0.9	31	10	82
C6-517	560	302450	5249225	0.7	61	20	191	D1-578	657	279050	5252150	0.8	39	22	115
C6-518	561	302700	5249300	0.2	22	24	104	D1-579	631	276050	5252175	0.2	7	23	32
C6-519	566	304875	5249425	1.1	23	22	88	D1-580	635	276500	5252175	0.2	13	18	44
C6-520	562	302250	5249600	0.2	27	4	119	D1-581	650	278025	5252250	0.6	26	13	118
C6-521	563	300375	5249875	0.3	22	11	135	D1-582	649	277750	5252275	0.8	23	13	104
C7-522	567	306525	5245100	0.2	6	30	105	D1-583	651	277925	5252525	0.9	56	19	167
C7-523	583	307025	5245150	1	24	16	122	D1-584	658	278975	5253000	0.2	22	13	78
C7-524	584	307125	5245375	0.5	19	17	112	D1-585	1138	279800	5253200	0.4	25	19	47
C7-525	568	306375	5245425	0.4	20	20	109	D1-586	644	277550	5253375	0.8	19	24	93
C7-526	569	305975	5245575	0.7	16	17	107	D1-587	659	278700	5253500	0.7	33	8	146
C7-527	587	308700	5245575	0.6	20	19	112	D1-588	663	279700	5253500	0.3	30	7	79
C7-528	585	307575	5245700	0.7	21	6	123	D1-589	637	276050	5253700	0.4	21	16	137
C7-529	586	307900	5245800	0.6	25	21	95	D1-590	641	276625	5253750	1.3	19	24	144
C7-530	570	306100	5245850	1.1	22	17	117	D1-591	661	279550	5253750	0.2	14	17	61
C7-531	588	308575	5245900	0.7	47	15	191	D1-592	643	277225	5254025	1	24	14	126
C7-532	572	305100	5246000	0.4	22	10	69	D1-593	642	276875	5254175	0.7	17	23	123
C7-533	571	306000	5246075	0.9	22	18	104	D1-594	660	278900	5254500	0.8	33	17	160
C7-534	589	308400	5246125	0.7	34	14	130	D1-595	664	279250	5254600	0.9	30	16	130
C7-535	590	306750	5246300	0.6	29	25	106	D2-596	674	283500	5250150	0.8	21	9	199
C7-536	573	305800	5246400	1.4	19	19	110	D2-597	670	280275	5250250	0.2	11	29	58
C7-537	574	306050	5246450	0.4	18	19	105	D2-598	676	282375	5251050	0.5	15	14	122
C7-538	591	306700	5246675	0.6	29	23	136	D2-599	666	281400	5252025	0.6	16	19	80
C7-539	575	305675	5246975	0.4	16	10	83	D2-600	668	282000	5252400	1.8	31	65	202
C7-540	601	309050	5247000	0.8	28	10	120	D2-601	667	281700	5252425	0.9	72	6	250
C7-541	593	306175	5247025	0.9	42	17	168	D2-602	665	281250	5252450	0.6	20	9	94
C7-542	600	307725	5247175	0.8	16	36	159	D2-603	679	284825	5252525	0.6	26	16	119
C7-543	594	306900	5247225	0.5	26	20	135	D2-604	681	283625	5252750	0.4	19	19	97
C7-544	602	308800	5247325	0.5	25	16	92	D2-605	669	281875	5252900	0.4	35	10	113
C7-545	595	306500	5247375	0.9	29	17	147	D2-606	1137	280075	5252950	0.7	14	9	62
C7-546	603	308975	5247375	0.7	35	12	116	D2-607	682	282300	5253425	0.7	15	20	70
C7-547	578	305750	5247650	0.2	15	13	41	D2-608	683	282850	5253650	1	83	17	82
C7-548	577	305425	5247700	0.2	11	17	47	D2-609	684	282225	5253775	0.9	26	14	142
C7-549	579	305800	5247800	0.4	21	15	114	D2-610	689	283850	5254575	0.8	35	12	171

LAKE CODES	FIELD NO.	UTME	UTMN	Cd ppm	Cu ppm	Pb ppm	Zn ppm	LAKE CODES	FIELD NO.	UTME	UTMN	Cd ppm	Cu ppm	Pb ppm	Zn ppm
D2-611	686	281850	5254650	0.6	28	20	143	D5-672	747	296450	5250900	2.1	80	22	281
D2-612	688	282150	5254725	0.4	28	16	123	D5-673	752	297800	5251050	0.8	10	27	131
D2-613	685	281600	5254825	1.3	40	21	156	D5-674	755	297950	5251250	0.9	37	24	151
D3-614	695	288075	5250550	0.4	44	21	86	D5-675	756	298225	5251325	0.6	35	22	105
D3-615	696	288350	5250625	1.4	24	27	185	D5-676	757	298825	5251700	0.9	32	21	112
D3-616	690	285800	5251300	0.7	27	15	139	D5-677	758	299050	5252200	1.2	51	10	135
D3-617	691	286200	5251450	0.9	18	19	111	D5-678	759	299325	5253075	0.2	78	7	85
D3-618	697	288600	5251775	0.5	35	19	152	D5-679	761	297025	5253150	0.3	18	26	94
D3-619	698	289400	5252250	1.3	35	37	150	D5-680	762	295675	5253525	0.4	40	12	147
D3-620	678	285125	5252325	1	29	17	158	D5-681	775	299900	5253825	0.8	21	8	126
D3-621	699	289225	5252450	0.3	24	11	70	D5-682	765	297425	5253925	1.3	22	23	93
D3-622	680	285050	5252575	0.7	25	17	157	D5-683	776	299700	5254025	0.9	36	9	175
D3-623	692	285550	5252600	0.2	15	11	35	D5-684	766	297950	5254050	0.3	65	28	60
D3-624	700	289750	5252750	0.2	40	12	154	D5-685	770	297525	5254150	1.1	24	21	90
D3-625	702	287500	5252825	1.1	34	13	187	D5-686	774	299500	5254150	0.7	35	15	170
D3-626	706	289075	5252875	0.7	18	5	211	D5-687	767	298300	5254200	0.6	23	22	81
D3-627	703	287850	5253000	0.8	27	13	143	D5-688	768	298625	5254300	0.7	32	13	143
D3-628	1139	288775	5253100	0.5	16	10	116	D5-689	771	295450	5254350	0.2	33	11	149
D3-629	704	287075	5254325	0.3	27	13	140	D5-690	769	298325	5254475	0.2	13	28	69
D3-630	705	287325	5254325	0.3	19	24	117	D5-691	772	296050	5254575	1.5	31	22	103
D3-631	709	288250	5254475	0.7	26	15	144	D5-692	773	297825	5254875	0.2	10	38	105
D3-632	707	286775	5254625	1	15	21	107	D5-693	1141	295800	5254975	1.1	21	26	116
D3-633	708	286925	5254825	0.8	18	18	112	D6-694	779	300550	5250200	0.6	19	10	122
D3-634	710	288200	5254950	0.2	26	18	56	D6-695	780	302000	5250850	1.3	36	10	204
D3-635	711	288775	5254975	0.9	27	23	116	D6-696	781	302200	5250950	1.3	30	16	213
D4-636	712	290975	5250200	2.3	37	39	410	D6-697	782	301900	5251025	1.2	27	17	195
D4-637	713	290850	5250600	2.3	29	35	482	D6-698	784	304200	5251075	0.5	14	24	72
D4-638	714	292550	5251900	0.7	15	12	95	D6-699	783	302550	5251325	0.8	34	16	199
D4-639	715	290575	5252250	0.8	30	11	114	D6-700	787	301100	5252900	1.2	36	14	169
D4-640	716	290200	5252500	0.2	28	8	112	D6-701	785	300475	5252925	0.8	30	11	97
D4-641	720	292950	5252650	0.9	27	18	125	D6-702	788	301375	5253075	1.2	42	13	165
D4-642	717	290650	5252750	0.8	43	6	171	D6-703	789	301700	5253250	1.4	48	18	174
D4-643	1140	292925	5252850	1.2	20	25	101	D6-704	790	302000	5253400	0.5	37	18	128
D4-644	718	291050	5252900	0.3	35	14	167	D6-705	791	302325	5253575	0.9	34	19	104
D4-645	701	290050	5252975	0.9	30	15	139	D6-706	792	302650	5253725	0.7	27	14	105
D4-646	719	291275	5252975	0.9	47	11	173	D6-707	793	303025	5253900	1	38	17	150
D4-647	723	294100	5253175	0.6	29	19	143	D6-708	798	301000	5253950	0.8	23	15	132
D4-648	722	293700	5253200	1.1	35	18	127	D6-709	794	303300	5253975	1.1	21	21	84
D4-649	724	293900	5253375	1.2	33	18	144	D6-710	795	303600	5254100	0.7	17	21	103
D4-650	729	292075	5253625	0.4	18	28	72	D6-711	799	301100	5254200	0.9	28	15	179
D4-651	732	290300	5253650	0.6	29	12	122	D6-712	796	304125	5254300	0.2	32	15	73
D4-652	730	291050	5253650	0.4	40	11	159	D6-713	801	300275	5254425	0.6	26	9	81
D4-653	731	291300	5253650	0.9	35	11	146	D6-714	800	301350	5254425	1.1	21	17	127
D4-654	725	293050	5253800	0.9	37	13	185	D6-715	803	302400	5254425	0.4	26	13	113
D4-655	727	294750	5253800	0.7	23	15	102	D6-716	806	304925	5254500	0.2	47	15	104
D4-656	728	294975	5253825	0.4	28	11	114	D6-717	804	302600	5254550	0.8	31	12	138
D4-657	733	291625	5254000	0.9	30	10	155	D6-718	802	300975	5254800	0.9	46	14	201
D4-658	726	293100	5254000	0.6	25	13	129	D6-719	805	302650	5254800	0.4	42	12	155
D4-659	742	293900	5254075	1	42	17	200	D6-720	778	300025	5254850	1.1	32	20	182
D4-660	735	292250	5254175	1	40	12	164	D7-721	1142	306075	5250125	1.2	25	18	114
D4-661	736	291000	5254200	0.7	25	20	105	D7-722	810	309050	5250650	0.2	37	13	91
D4-662	737	290575	5254300	0.7	22	22	118	D7-723	809	305875	5250700	0.5	42	17	116
D4-663	743	294300	5254325	1.5	38	24	165	D7-724	1143	306500	5250700	1	23	19	91
D4-664	744	294600	5254325	0.5	20	24	119	D7-725	811	306800	5251225	0.5	47	18	99
D4-665	745	294850	5254350	1.3	38	19	168	D7-726	818	308825	5251450	0.9	43	13	138
D4-666	741	292750	5254600	0.9	63	15	166	D7-727	819	309050	5251575	0.6	34	18	113
D4-667	738	291325	5254625	0.7	21	10	107	D7-728	812	306875	5251625	0.2	51	11	172
D4-668	739	290450	5254900	0.6	30	15	152	D7-729	813	306700	5252075	0.7	60	13	188
D4-669	740	290900	5254950	0.5	18	14	60	D7-730	820	309150	5252075	0.2	16	5	124
D5-670	748	297950	5250225	0.6	27	11	136	D7-731	822	308200	5252200	0.8	18	10	144
D5-671	751	299150	5250575	2.2	79	14	259	D7-732	814	306600	5252275	0.7	54	17	138

LAKE CODES	FIELD NO.	UTME	UTMN	Cd ppm	Cu ppm	Pb ppm	Zn ppm	LAKE CODES	FIELD NO.	UTME	UTMN	Cd ppm	Cu ppm	Pb ppm	Zn ppm
D7-733	823	308875	5252475	0.6	16	12	133	E2-794	902	281550	5257500	0.7	19	13	94
D7-734	817	307300	5252575	0.6	29	9	184	E2-795	899	283750	5257550	0.6	15	14	88
D7-735	1144	308400	5252850	0.7	14	11	138	E2-796	903	280975	5257625	0.8	29	19	119
D7-736	815	306400	5252900	0.7	68	23	119	E2-797	904	281725	5257775	0.5	16	12	90
D7-737	825	309125	5252900	0.4	20	8	128	E2-798	905	282150	5257975	1.3	36	15	165
D7-738	826	309275	5253150	0.8	20	11	139	E2-799	889	280050	5258000	0.6	38	13	113
D7-739	816	307100	5253275	0.4	27	14	104	E2-800	906	281575	5258200	1.2	16	18	104
D7-740	827	308875	5253375	0.2	16	6	162	E2-801	907	281700	5258400	1.2	28	12	144
D7-741	829	309200	5253750	0.5	10	5	97	E2-802	909	282950	5258475	1.1	26	19	141
D7-742	830	308050	5254050	0.9	27	13	147	E2-803	910	283175	5258725	1.3	26	17	162
D7-743	831	308400	5254300	0.5	26	8	207	E2-804	919	281900	5258900	0.7	18	10	86
D7-744	807	305125	5254425	0.8	74	15	168	E2-805	911	283725	5258925	0.8	8	26	47
D7-745	832	308400	5254475	0.3	21	16	185	E2-806	913	283550	5258950	0.2	14	20	106
D7-746	808	305225	5254650	0.2	21	7	77	E2-807	914	282900	5259000	1	24	24	66
D7-747	833	309425	5254650	0.2	26	21	80	E2-808	920	281775	5259025	0.2	18	10	82
D7-748	834	309175	5254750	0.3	43	10	110	E2-809	918	282100	5259050	0.6	13	19	82
E1-749	850	278100	5255250	0.9	24	21	115	E2-810	912	283850	5259050	1	27	15	140
E1-750	851	277875	5255475	0.2	29	19	31	E2-811	915	282975	5259175	0.6	5	31	51
E1-751	853	277675	5255700	0.7	40	16	117	E2-812	916	282600	5259275	0.4	18	9	92
E1-752	855	276725	5256150	0.9	37	11	131	E2-813	921	281525	5259425	0.9	32	9	140
E1-753	856	276750	5256325	0.4	29	14	74	E2-814	928	284200	5259425	0.5	6	26	54
E1-754	854	277556	5256400	0.3	20	14	91	E2-815	929	284375	5259500	0.8	10	22	83
E1-755	857	276700	5256500	0.2	43	15	93	E2-816	923	280625	5259825	0.9	21	18	108
E1-756	859	277100	5256700	0.7	32	13	140	E2-817	922	280275	5259850	1.4	37	21	184
E1-757	861	278650	5256775	0.8	30	15	147	E2-818	924	280950	5259925	0.3	24	23	134
E1-758	858	276550	5256850	0.9	40	20	130	E2-819	927	281875	5259950	0.2	9	23	71
E1-759	862	279850	5256875	1	33	10	226	E2-820	926	281500	5259975	0.6	12	22	91
E1-760	863	277850	5256975	1.3	27	12	148	E3-821	936	285025	5257600	1.9	14	33	110
E1-761	871	279925	5257200	0.7	17	21	189	E3-822	930	285050	5259875	1	34	12	130
E1-762	864	277750	5257225	0.6	24	18	97	E3-823	931	285425	5259375	0.3	16	18	68
E1-763	888	279975	5257325	0.9	22	17	121	E3-824	934	285925	5255725	1.3	29	22	140
E1-764	872	279850	5257775	0.7	24	17	129	E3-825	935	286000	5256900	0.7	50	15	135
E1-765	873	279650	5257975	1.1	28	15	121	E3-826	933	286150	5255450	1.2	45	16	123
E1-766	865	277325	5258000	0.8	28	11	120	E3-827	939	286450	5258425	0.3	28	16	130
E1-767	866	276300	5258175	1.1	46	12	230	E3-828	937	286600	5256925	0.3	18	28	47
E1-768	867	277350	5258525	0.7	34	17	124	E3-829	938	286775	5257975	1	17	22	134
E1-769	868	277250	5258700	0.9	33	15	93	E3-830	949	287750	5258875	0.5	26	17	131
E1-770	875	279375	5258900	1.3	14	21	84	E3-831	945	287900	5256500	0.9	11	26	72
E1-771	869	278000	5259000	0.6	25	14	119	E3-832	940	287925	5255550	0.7	49	15	98
E1-772	876	279650	5259075	0.2	14	5	83	E3-833	950	287950	5259900	1	26	12	154
E1-773	845	276300	5259250	0.6	12	29	90	E3-834	946	288200	5256700	1	19	19	107
E1-774	870	277825	5259250	0.8	27	17	96	E3-835	948	289250	5258350	0.9	31	10	178
E1-775	877	279350	5259425	0.5	38	12	116	E3-836	942	289275	5256550	0.7	21	11	98
E1-776	879	279950	5259550	1.3	32	18	202	E3-837	943	289550	5256700	0.4	25	11	110
E1-777	878	279450	5259700	0.8	34	18	148	E3-838	944	289725	5256950	0.6	17	25	83
E1-778	880	279850	5259775	1.5	34	20	236	E3-839	941	289750	5255100	1.2	34	24	137
E2-779	883	280400	5255600	1.2	52	15	117	E4-840	956	291150	5255075	1.3	39	14	162
E2-780	890	281975	5255600	0.9	29	19	146	E4-841	955	290725	5255100	0.6	42	29	57
E2-781	893	283700	5255650	1.1	35	13	161	E4-842	954	290550	5255150	0.7	22	32	86
E2-782	891	281850	5255750	0.3	26	14	109	E4-843	953	290300	5255200	1.2	23	23	101
E2-783	895	282975	5255900	0.7	39	12	160	E4-844	957	292350	5255275	1	31	19	132
E2-784	892	281550	5255925	0.8	20	14	91	E4-845	952	290325	5255400	0.7	42	20	109
E2-785	884	280550	5256150	0.5	26	19	128	E4-846	1148	292125	5255425	0.8	48	17	119
E2-786	896	283500	5256175	0.8	15	6	73	E4-847	969	294650	5255500	0.7	42	16	127
E2-787	897	283000	5256375	0.4	23	23	62	E4-848	970	294425	5255725	1.1	41	20	128
E2-788	885	280300	5256550	1.1	28	20	105	E4-849	971	294875	5255725	1.2	70	16	208
E2-789	886	280150	5256875	1.3	29	19	141	E4-850	958	291000	5256175	1.1	52	12	310
E2-790	898	283525	5257225	0.7	21	14	102	E4-851	974	294175	5256200	0.4	33	6	138
E2-791	887	280250	5257275	0.4	31	15	110	E4-852	968	293325	5256225	1	41	13	125
E2-792	901	282000	5257475	0.4	14	10	65	E4-853	973	294575	5256325	1.5	66	14	159
E2-793	900	284725	5257475	0.6	32	12	174	E4-854	960	291650	5256400	1.1	41	12	165

LAKE CODES	FIELD NO.	UTME	UTMN	Cd ppm	Cu ppm	Pb ppm	Zn ppm	LAKE CODES	FIELD NO.	UTME	UTMN	Cd ppm	Cu ppm	Pb ppm	Zn ppm
E4-855	959	291350	5256500	0.7	39	16	162	E7-916	1023	306925	5256025	0.3	22	14	74
E4-856	1149	292375	5256650	1	14	23	111	E7-917	1030	308750	5256125	0.3	63	16	69
E4-857	961	290275	5257450	1	67	12	210	E7-918	1027	305900	5256150	1.1	28	23	115
E4-858	967	292750	5257525	0.4	31	11	98	E7-919	1028	305450	5256175	0.5	30	24	92
E4-859	962	290500	5257650	0.7	25	19	111	E7-920	1026	306150	5256200	0.9	19	23	80
E4-860	963	290075	5257700	0.7	28	14	135	E7-921	1029	305175	5256350	1	20	21	88
E4-861	965	290925	5258100	0.5	25	17	105	E7-922	1031	307050	5256550	0.5	28	19	101
E4-862	975	293000	5258375	1.3	49	11	161	E7-923	1032	306800	5256575	0.5	27	22	105
E4-863	966	291800	5258475	0.7	35	18	106	E7-924	1034	307000	5256825	0.6	22	27	104
E4-864	976	292750	5258775	0.2	29	14	131	E7-925	1033	307325	5256825	0.2	21	24	102
E4-865	978	290600	5259175	1.2	35	16	128	E7-926	1036	309750	5257025	0.2	38	9	109
E4-866	977	291500	5259325	1.2	36	23	127	E7-927	1035	306675	5257075	0.7	44	9	236
E4-867	979	290500	5259400	0.8	46	20	137	E7-928	1037	309350	5257300	0.6	46	4	199
E4-868	981	290900	5259625	1.2	20	19	114	E7-929	1161	309975	5258625	0.3	34	8	61
E4-869	982	291175	5259825	0.9	35	12	176	E7-930	1038	306925	5259550	0.6	23	19	50
E5-870	983	297675	5255100	1.3	43	13	161	E7-931	1039	306925	5259650	0.5	32	14	64
E5-871	984	299475	5255150	1.2	48	12	273	E7-932	1040	308100	5259675	0.3	14	24	73
E5-872	972	295075	5255625	0.9	75	12	197	E7-933	1041	308200	5259800	0.6	13	18	88
E5-873	985	296875	5255825	0.9	28	5	156								
E5-874	990	299925	5255875	1	31	10	107								
E5-875	989	298500	5255950	0.3	30	19	78								
E5-876	988	298250	5255975	0.8	34	15	108								
E5-877	1152	296425	5256000	0.4	21	19	55								
E5-878	987	298025	5256025	0.7	28	25	112								
E5-879	1153	296800	5256175	0.7	12	9	91								
E5-880	986	296050	5256450	0.5	27	6	99								
E5-881	992	298475	5256600	1.2	44	13	135								
E5-882	1000	299800	5257900	0.8	37	21	81								
E5-883	998	298050	5258050	0.2	20	20	99								
E5-884	993	296325	5258150	0.7	26	15	113								
E5-885	991	296450	5258550	0.5	17	13	82								
E5-886	1001	298800	5258825	0.6	30	13	111								
E5-887	995	296175	5258950	0.7	18	15	63								
E5-888	1002	298475	5259150	0.2	29	16	97								
E5-889	1003	299550	5259575	0.6	40	16	134								
E5-890	1004	299800	5259700	1.1	44	18	127								
E5-891	997	295100	5259950	0.7	43	12	124								
E6-892	1005	300800	5255300	1.1	47	18	98								
E6-893	1008	302350	5255625	1.1	41	9	192								
E6-894	1007	301700	5255750	0.9	41	17	174								
E6-895	1009	302550	5255800	1.2	36	9	226								
E6-896	1011	301875	5256425	0.3	23	7	109								
E6-897	1010	302000	5256425	0.6	22	18	84								
E6-898	1014	303175	5256925	0.2	21	4	100								
E6-899	1012	300550	5257250	0.9	57	13	141								
E6-900	1013	300400	5257450	0.4	63	19	121								
E6-901	999	300050	5257650	1.5	52	16	131								
E6-902	1154	303200	5258150	0.8	31	13	78								
E6-903	1020	304200	5258550	0.7	28	8	125								
E6-904	1016	301650	5258575	0.2	14	10	106								
E6-905	1015	300825	5258625	0.6	23	7	96								
E6-906	1017	303175	5258825	0.2	68	10	81								
E6-907	1021	304150	5258825	0.3	27	9	113								
E6-908	1019	302475	5259175	1.3	39	10	144								
E6-909	1156	303500	5259250	0.4	23	13	93								
E6-910	1157	303450	5259550	0.7	25	13	98								
E6-911	1155	302750	5259750	0.2	23	13	80								
E6-912	1158	303725	5259825	0.4	23	9	80								
E7-913	1022	308575	5255800	0.8	41	7	81								
E7-914	1024	306600	5255975	0.4	29	6	56								
E7-915	1025	306300	5256000	1	19	24	103								

CONVERSION FACTORS FOR MEASUREMENTS IN ONTARIO GEOLOGICAL SURVEY PUBLICATIONS

Conversion from SI to Imperial			Conversion from Imperial to SI		
SI Unit	*Multiplied by*	*Gives*	*Imperial Unit*	*Multiplied by*	*Gives*
		LENGTH			
1 mm	0.039 37	inches	1 inch	**25.4**	mm
1 cm	0.393 70	inches	1 inch	**2.54**	cm
1 m	3.280 84	feet	1 foot	**0.304 8**	m
1 m	0.049 709 7	chains	1 chain	20.116 8	m
1 km	0.621 371	miles (statute)	1 mile (statute)	**1.609 344**	km
		AREA			
1 cm@	0.155 0	square inches	1 square inch	**6.451 6**	cm@
1 m@	10.763 9	square feet	1 square foot	**0.092 903 04**	*m@
1 km@	0.386 10	square miles	1 square mile	2.589 988	km@
1 ha	2.471 054	acres	1 acre	0.404 685 6	ha
		VOLUME			
1 cm#	0.061 02	cubic inches	1 cubic inch	**16.387 064**	cm#
1 m#	35.314 7	cubic feet	1 cubic foot	0.028 316 85	m#
1 m#	1.308 0	cubic yards	1 cubic yard	0.764 555	m#
		CAPACITY			
1 L	1.759 755	pints	1 pint	0.568 261	L
1 L	0.879 877	quarts	1 quart	1.136 522	L
1 L	0.219 969	gallons	1 gallon	**4.546 090**	L
		MASS			
1 g	0.035 273 96	ounces (avdp)	1 ounce (avdp)	28.349 523	g
1 g	0.032 150 75	ounces (troy)	1 ounce (troy)	**31.103 476 8**	g
1 kg	2.204 62	pounds (avdp)	1 pound (avdp)	**0.453 592 37**	kg
1 kg	0.001 102 3	tons (short)	1 ton (short)	**907.184 74**	kg
1 t	1.102 311	tons (short)	1 ton (short)	**0.907 184 74**	t
1 kg	0.000 984 21	tons (long)	1 ton (long)	**1016.046 908 8**	kg
1 t	0.984 206 5	tons (long)	1 ton (long)	**1.016 046 908 8**	t
		CONCENTRATION			
1 g/t	0.029 166 6	ounce (troy)/ ton (short)	1 ounce (troy)/ ton (short)	34.285 714 2	g/t
1 g/t	0.583 333 33	pennyweights/ ton (short)	1 pennyweight/ ton (short)	1.714 285 7	g/t

OTHER USEFUL CONVERSION FACTORS

	Multiplied by	
1 ounce (troy) per ton (short)	20.0	pennyweights per ton (short)
1 pennyweight per ton (short)	0.05	ounces (troy) per ton (short)

Note: Conversion factors which are in bold type are exact. The conversion factors have been taken from or have been derived from factors given in the Metric Practice Guide for the Canadian Mining and Metallurgical Industries, published by the Mining Association of Canada in co-operation with the Coal Association of Canada.

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ISSN 0826–9580
ISBN 0-7778-3825-7

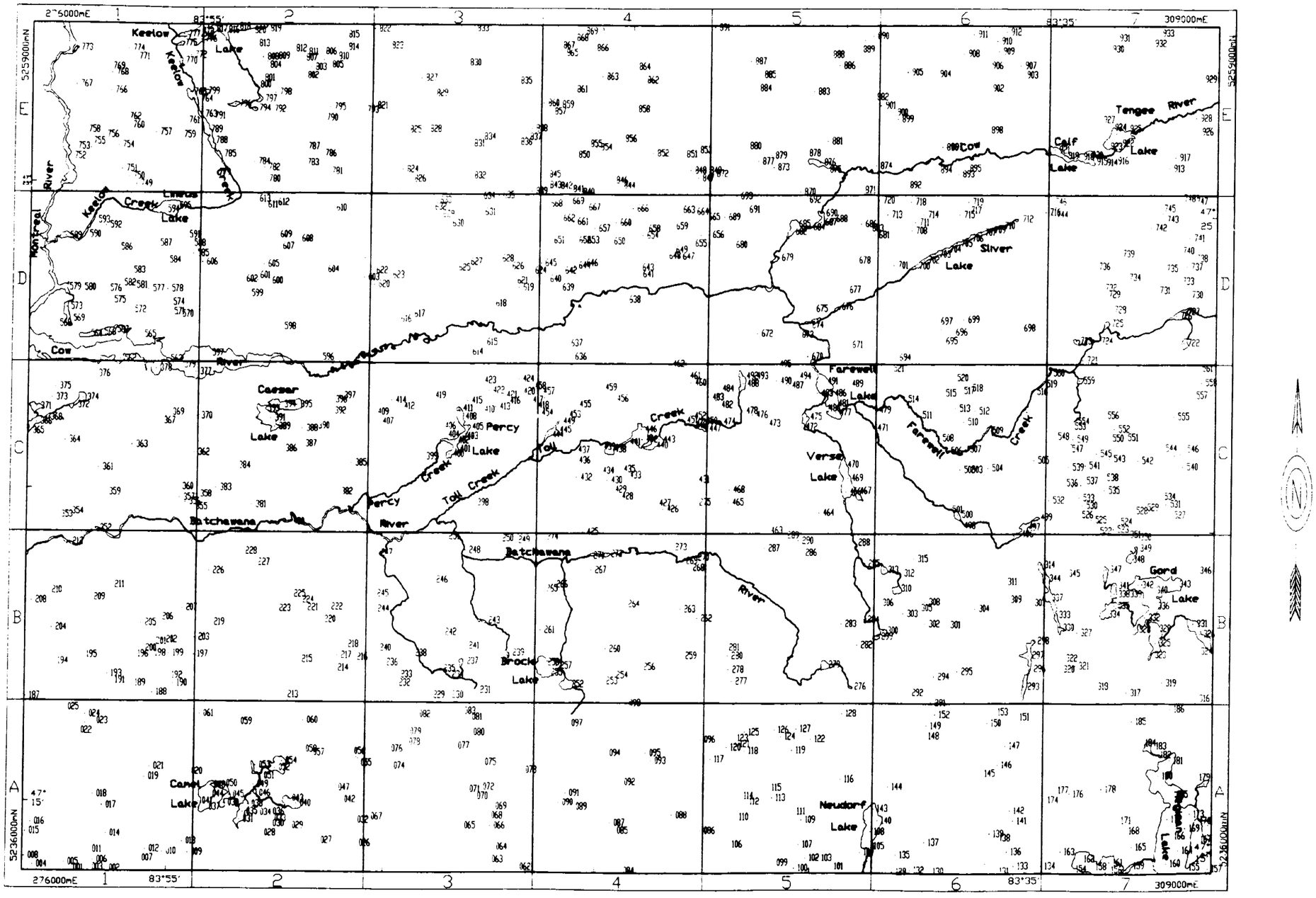

Figure 3. Sample location.

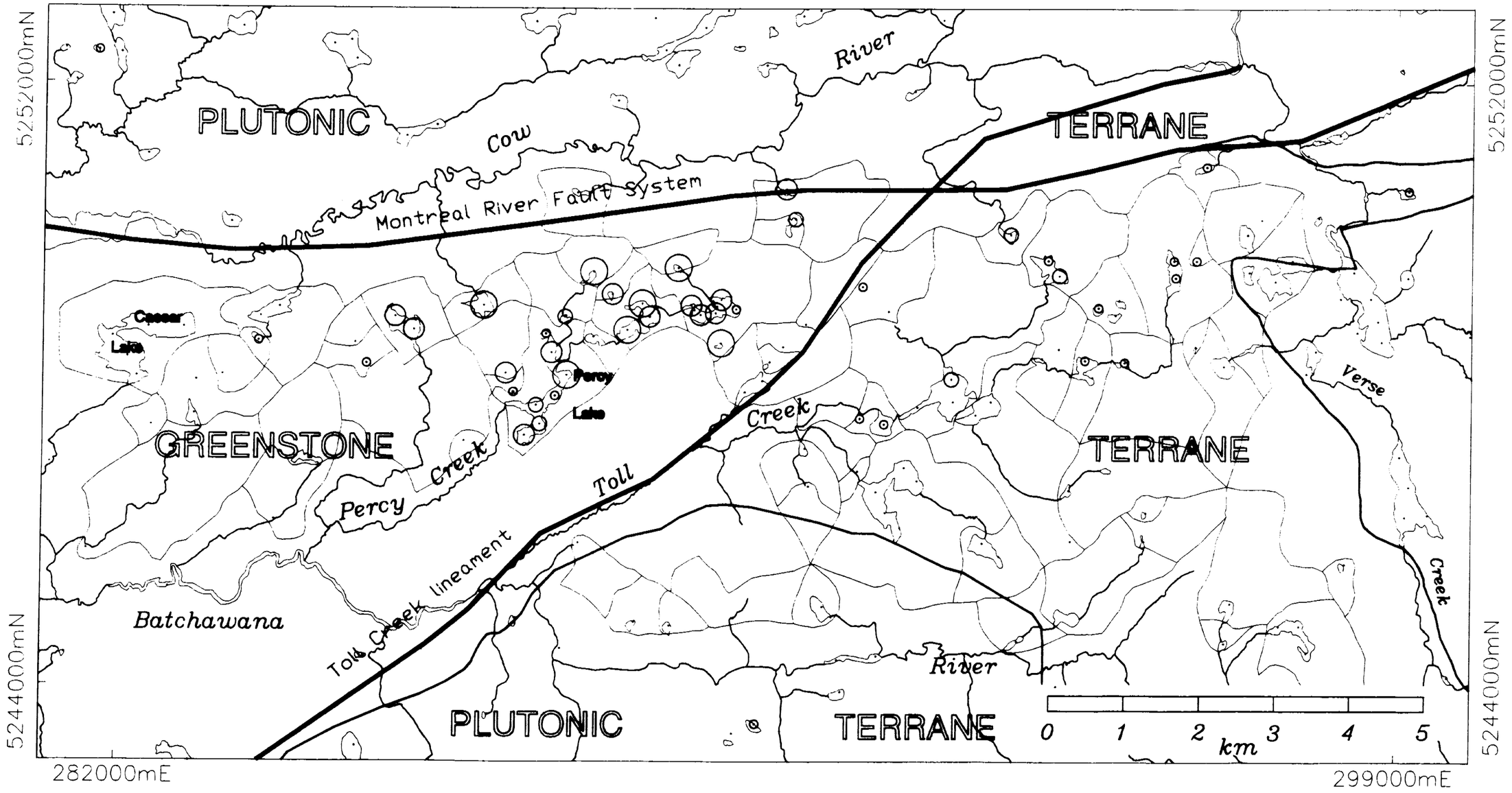

Figure 12. Distribution of zinc relative to catchments: Percy Creek area