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Ontario Geological Survey
Open File Report 6012

Results of Regional Till Sampling in the Western Part of the Shebandowan Greenstone Belt, Northwestern Ontario

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ONTARIO GEOLOGICAL SURVEY

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Results of Regional Till Sampling in the Western Part of the Shebandowan Greenstone Belt, Northwestern Ontario

by

A.F. Bajc

2000

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Contents

FIGURES

TABLES

Abstract

A project of Quaternary geological mapping and regional till sampling was undertaken over the western part of the Shebandowan greenstone belt during the 1999 field season. Quaternary mapping helped to characterize the surficial materials present within the study area and to reconstruct the ice flow history associated with these deposits. This information provided a framework by which the regional materials compositional datasets could be interpreted. The regional sampling program provided information on the background concentrations of various elements in till as well as on the number and character of gold grains and base metal indicator minerals present in till.

The study area contains a relatively simple record of Quaternary events. Most deposits were laid down during the final retreat of ice from the area. Ice flow indicators suggest a consistent pattern of flow towards the south across the eastern half of the study area, becoming more westerly towards the west. Till cover is generally thin and discontinuous over most parts of the study area. Thicker, more extensive till is present within Hagey, Conacher and Blackwell townships. Till samples collected from these townships are less representative of local geology than are samples collected from areas of very thin till. Geochemical and mineralogical interpretations should consider these local variations in till character.

The till sampling program has clearly identified a number of precious and base metal exploration targets within the western Shebandowan greenstone belt. Higher density follow-up sampling surveys are recommended for these areas to determine the significance of the anomalies and more precisely define potential source rocks. The regional character of this survey will assist with the interpretation of local, property-scale geochemical datasets by placing results into context with respect to regional background. The results of this survey clearly support the use of till compositional surveys for mineral exploration. The approach for follow-up sampling programs will be dictated by the type of mineralization sought and the local conditions within a given property.

A complete digital dataset, consisting of locational information, gold grain counts, INAA, ICP-MS, ICP-ES and fire assay geochemical data is being released in conjunction with this report as Miscellaneous Release-Data 50.

Results of regional till sampling in the western part of the Shebandowan greenstone belt, northwestern Ontario.

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Introduction

Although there are presently no operating mines within the Shebandowan greenstone belt of northwestern Ontario, excellent potential for further mineral discoveries exists as evidenced by the wide distribution of a large variety of known mineral occurrences and deposit types. This is supported by the occurrence of several past-producers and the persistent activities of mineral exploration companies and prospectors over the past decade.

Exploration and mining activity within the belt has currently subsided largely in response to the depressed prices of precious and base metals and the inability of junior mining companies to raise funds for exploration. In addition, after almost 3 decades of operation, the INCO Limited Shebandowan nickel mine was decommisioned during the second quarter of 1998.

In response to this recent decline in mining and exploration activity, the Ontario Geological Survey initiated a 2 year program of Quaternary geology and drift geochemistry to further evaluate the mineral resource potential of the region. This was accomplished by detailed (1:50 000 scale) Quaternary geology mapping and regional c-horizon till sampling. Quaternary mapping was undertaken to document the distribution and character of the Quaternary sediments within the region and to reconstruct the ice flow history associated with these deposits. This information is essential for the successful implementation of mineral exploration programs utilizing drift prospecting techniques and surficial geochemistry.

During the 1998 field season, Quaternary mapping and regional humus and c-horizon till sampling were conducted over the eastern half of the belt within the area covered by the Sunshine (52A/12) and Kakabeka Falls (52A/5) 1:50 000 scale National Topographic System (NTS) map sheets (Figure 1). The results of this work are summarized in Ontario Geological Survey Open File Report 5993 (Bajc 1999a). Mapping and sampling was extended westward into the Shebandowan (52B/9) and Burchell Lake (52B/10) 1:50 000 scale NTS map areas during the 1999 field season (Figure 1). This report presents the results of the 1999 field survey. An Ontario Geological Survey preliminary map highlighting the gold grain results of till samples collected as part of this survey was released during the fall of 1999 (Bajc 1999b).

Bedrock Geology

A comprehensive summary of the bedrock geology of the study area is contained in papers by Williams (1991) and Williams et al. (1991) as well as in numerous Ontario Geological Survey maps and reports. The study area is underlain by 2 distinct bedrock domains. Rocks of the Wawa Subprovince, within which the Shebandowan greenstone belt occurs, are fault-bounded to the north by metasedimentary and felsic intrusive rocks of the Quetico Subprovince (Figure 2). Metasedimentary rocks, consisting primarily of turbiditic wackes, arkoses and argillites and their associated paragneisses and migmatites, straddle the subprovincial boundary and occur as discontinuous lenses within granitic terrain further to the north and west. These post- to syndepositional felsic plutons consist of feldspar-megacrystic granite, granodiorite to tonalite and monzonite. Narrow sill-like bodies of mafic and ultramafic affinity occur locally within the Quetico Subprovince in the southwestern corner of the study area.

Rocks of the western Shebandowan greenstone belt are subdivided into an older Burchell assemblage, which generally lies on the north side of Shebandowan Lake, and a younger Greenwater assemblage to the south. Along the eastern side of the study area, younger rocks of the Shebandowan assemblage both unconformably overlie and intrude the Burchell and Greenwater assemblages. The oppositely-facing Burchell and Greenwater assemblages each consist of 3 bimodal volcanic cycles typically consisting of a lower sequence of tholeiitic basalts and an upper sequence of calc-alkalic andesite, dacite and rhyolite (Williams et al. 1991). The Shebandowan assemblage consists of alkalic metavolcanic and intrusive rocks (tuff, breccia, syenite, lamprophyre, quartz and feldspar porphyry, granodiorite and diorite) as well as metasedimentary rocks (arkoses, wackes, conglomerates and oxide-facies iron formation) (Schneiders et al. 1998). This assemblage is interpreted as representing an intracratonic basin assemblage similar to the Timiskaming assemblage of the Abitibi subprovince.

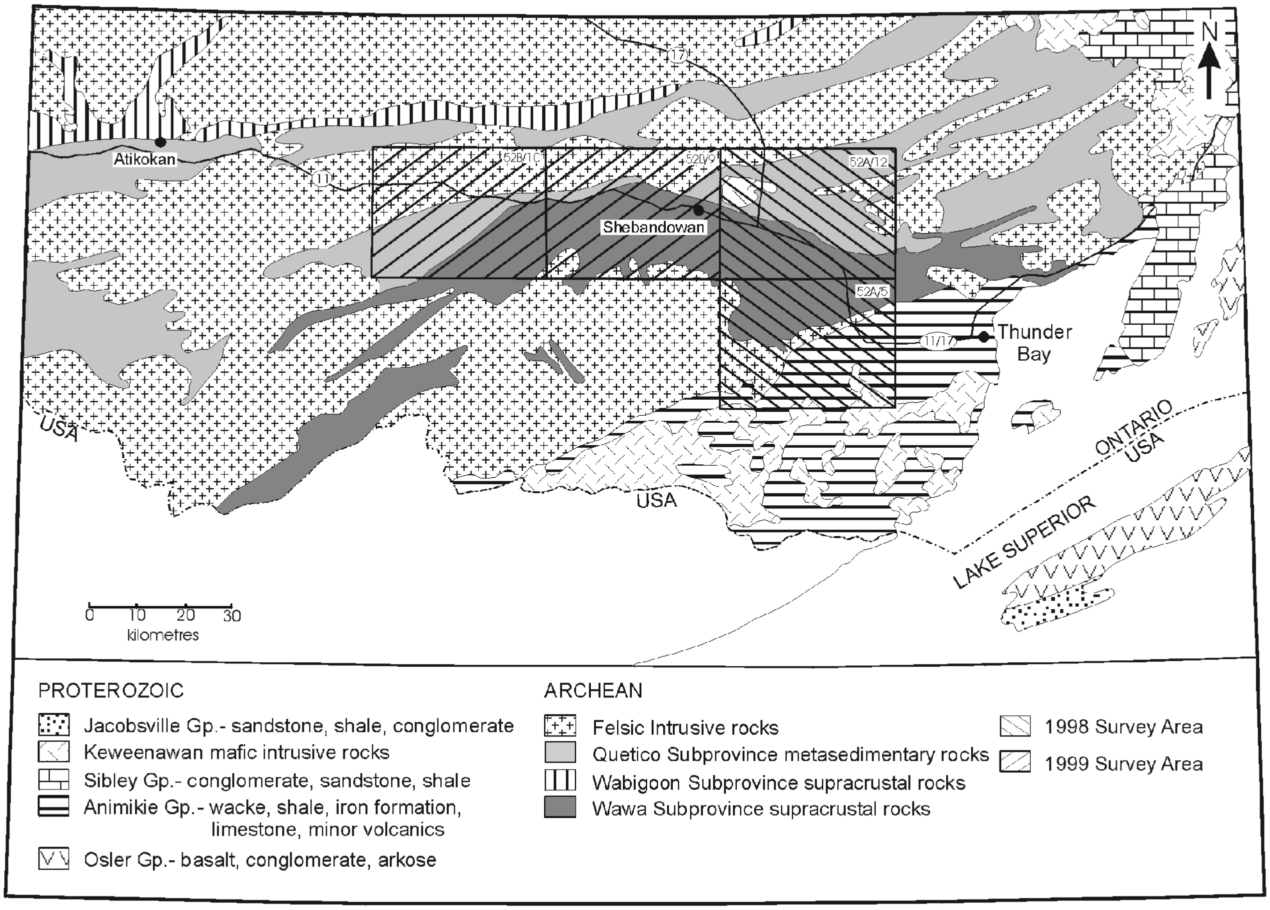

Figure 1. Location map of study area including regional bedrock geology.

Mafic and ultramafic intrusive rocks occur as sills and larger intrusions within both the Burchell and Greenwater assemblages. The Haines Gabbro-Anorthosite Complex represents one of the larger mafic intrusions. It occurs along the southwest shore of Middle Shebandowan Lake and the east shore of Upper Shebandowan Lake. Crude layering of the intrusion has been observed (Hackl 1993).

The western Shebandowan greenstone belt is host to a variety of gold and base metal mineral deposit types. Past producers include the Inco Limited Shebandowan Ni-Cu-PGE mine in Hagey Township, the North Coldstream Cu-Au mine in the Burchell Lake area and the Huronian (Ardeen) mine in Moss Township which was northern Ontario's first gold producer (Figure 2). Advanced exploration in the form of a decline ramp and bulk sample were undertaken at the Snodgrass Lake gold prospect in Moss Township during the late 1980s with additional diamond drilling completed in 1996. Numerous other precious and base metal occurrences and prospects, details of which are summarized in annual reports of the Resident Geologists and other Ontario Geological Survey reports, occur within the study area. The details of some of these occurrences will be addressed as part of the discussion of indicator mineral and geochemical anomalies.

Glacial Geology

The western Shebandowan greenstone belt contains a relatively simple Quaternary record. Evidence for multiple ice flow events is lacking. Most of the deposits recognized are attributed to the final retreat of ice from the region. Ice flow indicators suggest a consistent pattern of flow towards the south (180° Az) across the eastern side of the study area becoming more westerly (215° Az) to the west (Figure 3).

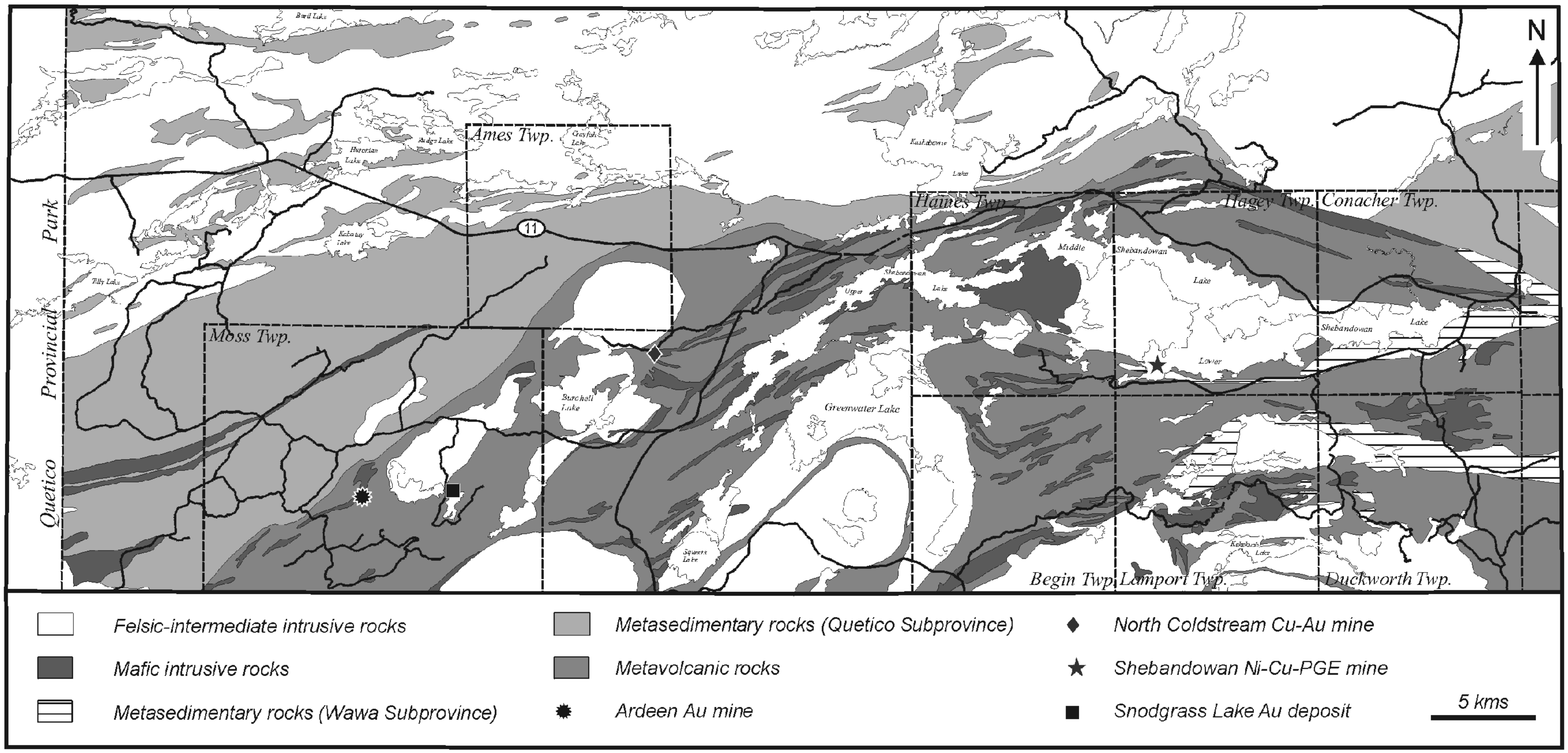

Figure 2. Bedrock geology of the study area.

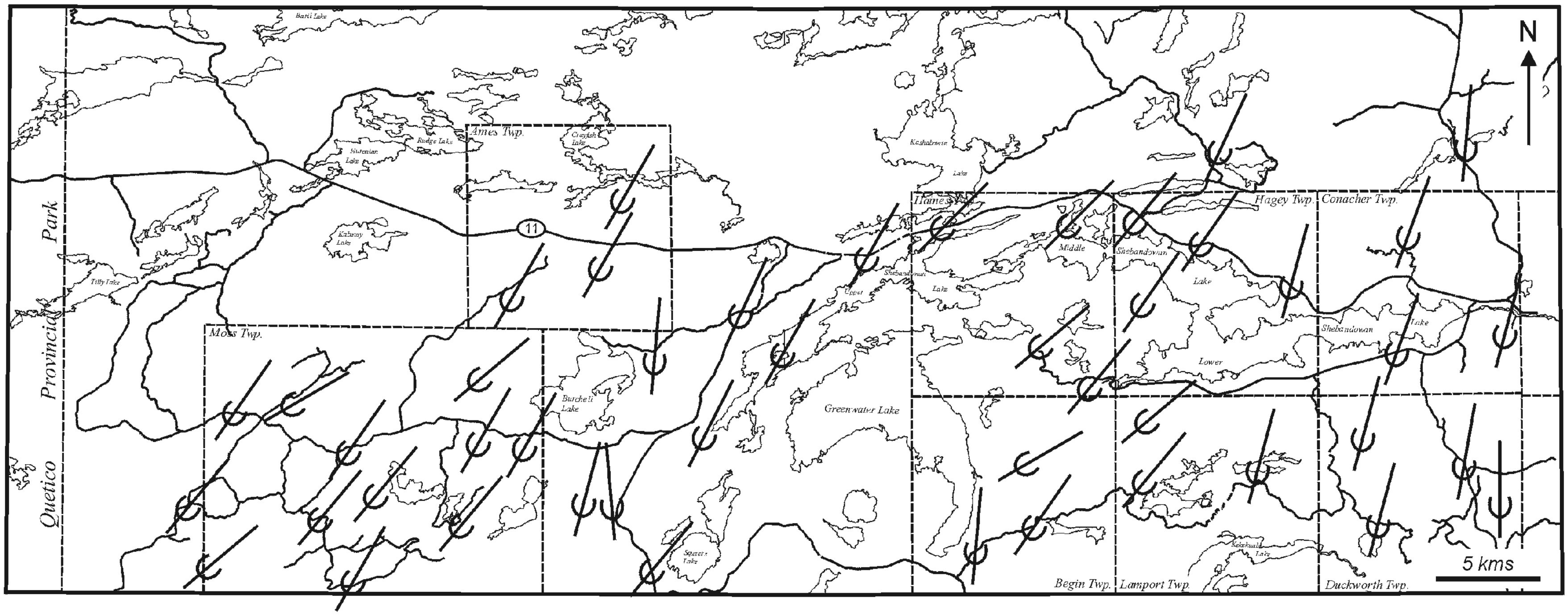

Figure 3. Regional ice flow patterns across the study area.

Aside from local accumulations of thick drift in morainic belts and glaciofluvial complexes, the study area is characterized as a bedrock-dominated terrain. Till occurs as a thin, discontinuous, veneer, generally less than a few metres thick, within this terrain. There is a general trend towards less extensive till cover as one proceeds westward across the study area. In the east, (Hagey, Conacher and Blackwell townships) where till thicknesses exceeding 2 to 3 m are common, the till has a silty sand matrix, is stone-poor and, generally, is less representative of local bedrock composition. Surface till samples collected from within this region may fail to evaluate local mineral potential. In areas where till is less than a metre thick, it tends be coarser-textured and displays a stronger local signature. Till matrix is non-calcareous (i.e., not detectable with 10% HCl). Carbonate lithologies derived from Hudson and James Bay lowlands are rarely observed in the pebble fraction of till.

Ice flow across the eastern half of the study area is at right angles to the general easterly strike of the supracrustal rocks and structures present within this region. Dispersal trains arising from the erosion, transport and deposition of stratiform- and/or structurally-hosted mineralized horizons within this region will therefore be relatively large, attaining a width similar to that of the strike length of the mineralization. The strike of the supracrustals and structures within the western half of the study area shifts toward the southwest, parallel to the regional ice flow direction. The resulting dispersal trains arising from the erosion of stratiform- and/or structurally-hosted mineralized horizons will, therefore, be much narrower and less extensive making them more difficult to identify in regional till sampling programs (Figure 4).

Pauses in the general retreat of the Laurentide Ice Sheet resulted in the formation of large, arcuate, recessional moraines in northwestern Ontario. The Brule Creek Moraine, which traverses southern Begin Township, south of Greenwater Lake, then northwestward towards Burchell Lake represents one of these stillstand positions. Zoltai (1965) correlates the Brule Creek Moraine with the Eagle-Finlayson Moraine to the west. The easterly extension of the moraine beyond the current study area was recognized in Aldina and Marks townships as part of the 1998 field mapping program. The moraine, which reaches widths of several kilometres in places, is defined by a discontinuous belt of morainic ridges composed of till and associated ice-contact stratified deposits. A large ice-contact delta built off the moraine along the south

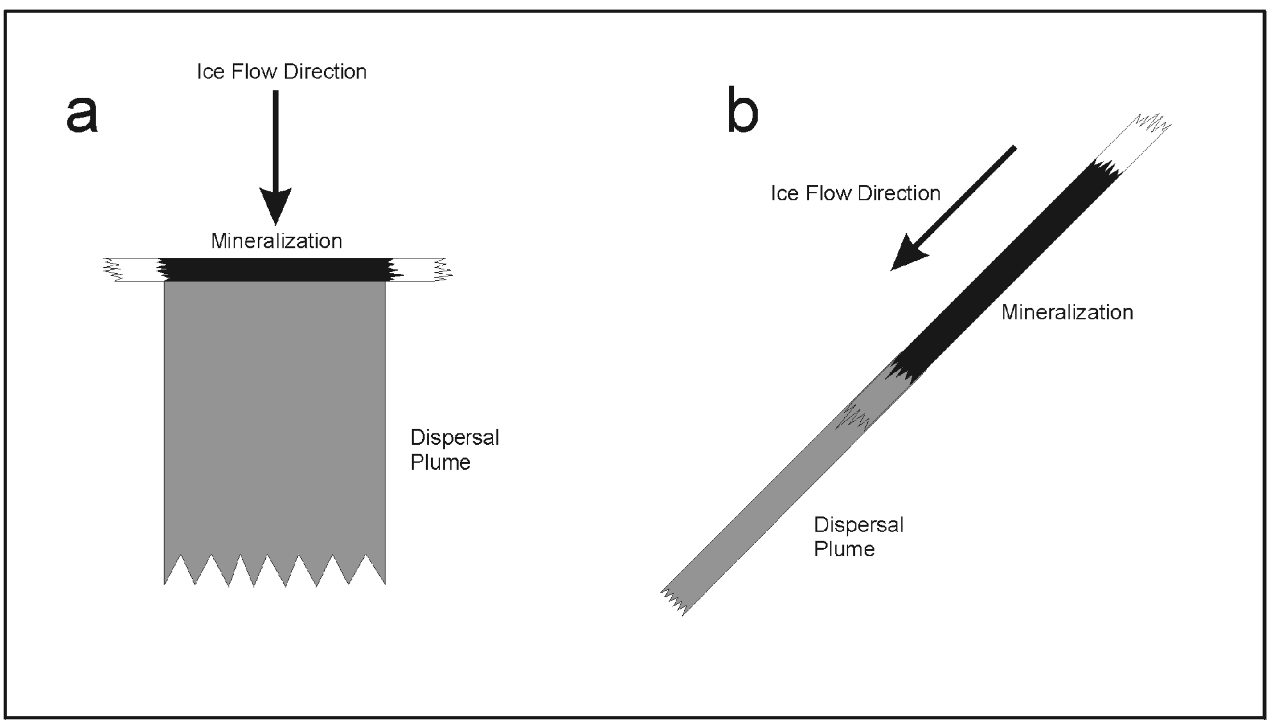

Figure 4. Examples of dispersal train geometry: a) direction of ice flow perpendicular to regional strike; b) direction of ice flow parallel to regional strike.

shore of Burchell Lake is graded to an upper level of Glacial Lake Agassiz. The upper topset surface of the delta occurs at an elevation of 457 to 472 m asl (1500–1550 feet asl).

Extensive deposits of glaciofluvial sand and gravel occupy structurally- and lithologically-controlled low-lying areas within the study area. The most extensive deposits occur: 1) along the upper reaches of the Obadinaw River in Ames and Moss townships; 2) in a lowland extending south from Burchell Lake, through Hermia and Fountain lakes down the Wawiag River valley; 3) along the Greenwater Lakes Conservation Road southwest of Upper Shebandowan Lake; 4) over a large area both north and south of the Brule Creek Moraine south of Greenwater Lake; and 5) along the Swamp River and Gold Creek valleys in the eastern end of the study area.

Red glaciolacustrine clays associated with Glacial Lake Kaministikwia overlie subaerially deposited sands and gravels within the Gold Creek valley (Duckworth and Laurie townships). Similar red clays were observed in lake bottom sediments at the eastern end of Lower Shebandowan Lake (Jay Jackson, Ontario Geological Survey, personal communication 1999) as well as over extensive low-lying areas to the east (Bajc 1999a). Buff-grey sandy and silty glaciolacustrine deposits were observed on Inco property near the Shebandowan mine site at the west end of Lower Shebandowan Lake. Sandy deposits, possibly of glaciolacustrine origin, also occur along the Obadinaw River valley in the southwestern corner of the study area. Varved clay has been reported from the banks of Tilly Creek in the same general area near the southwest corner of Moss Township (Harris 1970). These sediments are likely associated with Glacial Lake Agassiz.

Sample Collection and Processing

A total of 400 c-horizon till samples were collected as part of the regional sampling program. Sampling density over Wawa subprovince supracrustal rocks approaches 1 sample per 3 km^2. A similar sampling density was achieved as part of the 1998 sampling program to the east (Bajc 1999a). Sample distribution is erratic in places, limited by access as well as the nature of the surficial deposits within various areas. Samples were collected at a much lower density over the Quetico subprovince as well as over areas underlain by Archean felsic intrusive rocks in both the Quetico and Wawa subprovinces.

Samples were collected primarily within areas accessible by roads, bush trails and lake access. A short, helicopter-assisted sampling program was undertaken to obtain samples from less accessible areas and to fill in the regional sampling grid. Sample locations were determined using a geographic positioning system (GPS) and differentially corrected to obtain locational accuracy with an error of less than a few metres. Sample locational information is presented in Appendix A and illustrated in Figure 5 (back pocket). Till was collected primarily from shallow (~1 m deep), hand-dug test pits, roadcuts, trench exposures and small borrow pits. Samples were collected from the till-bedrock interface where possible, or from as deep as possible in areas of thick till. Samples were screened in the field to remove the +5 mm fraction; this fraction was saved for lithologic determinations.

At each sample site, 2 samples of c-horizon till were collected for analysis. A 10 kg sample was collected for heavy mineral concentration and subsequent gold grain, kimberlite indicator mineral (KIM) and metamorphic/magmatic massive sulphide indicator mineral (MMSIM)® determinations. Heavy minerals were separated from the –2 mm fraction of these samples by wet gravity tabling, producing a "table concentrate", then further concentrated to >3.2 S.G. using density-dependent settling in methylene iodide. Magnetic minerals were removed from the methylene iodide heavy mineral concentrate (HMC) using an automagnet. Heavy mineral weight data is presented in Appendix B.

At the tabling stage, a preliminary count of gold grains, including size and shape determinations, was undertaken. The gold grain content of the table concentrates was further refined using a secondary panning procedure to obtain more exact grain counts. Only samples containing greater than 10 gold grains at the tabling stage were panned. The size and shape of the panned gold grains were recorded before they were returned to the table concentrate. Information on the total numbers of visible gold grains and their respective shapes are contained in Appendix C. A detailed account of the sizes and numbers of gold grains recovered from the heavy mineral concentrates is provided in MRD 50 (Bajc 2000) which is being released in conjunction with this Open File Report. The non-magnetic heavy mineral fraction of 200 randomly selected till samples were picked for KIMs and MMSIMs®. A companion publication will highlight the results of the indicator mineral analyses performed as part of the 1998 and 1999 field sampling programs.

A second 2 to 3 kg sample of screened c-horizon till was also collected for -63 μm fraction geochemical determinations. A 30 g split of the -63 μm (silt and clay) size fraction of this till matrix was sent for instrumental neutron activation analysis (INAA). The resulting geochemical dataset includes data for 35 elements. A second 20 to 25 g split was sent for Pt-Pd-Au geochemical determinations by lead fire assay/ICP-MS finish. A third split was sent for ICP-OES and ICP-MS determinations following a standard aqua regia digestion. Tables 1 to 3 contain information on data quality as determined by the insertion of blind duplicates and certified and non-certified reference materials. Appendix D contains an abbreviated geochemical dataset of base and precious metals and pathfinder elements derived from the four methods outlined above. A complete geochemical dataset is contained in MRD 50 which is being released in conjunction with this Open File Report (Bajc 2000).

Results

GOLD GRAIN DATA

The presence of significant numbers of gold grains in the heavy mineral fraction of till is of interest in exploration because it can be a direct indication of gold mineralization. Where several adjacent, clustered or structurally aligned (i.e., along a fault zone) till samples yield gold grain counts exceeding the regional background value, it is likely that the source is nearby in the “up-ice” direction. High counts of visible gold are particularly significant when they occur in till samples taken directly above bedrock. Because of the low sampling density associated with this survey, single sample anomalies warrant follow-up work as well, especially if the grains show few signs of extended mechanical transport.

The shape and morphology of the gold grains may be used to either characterize their transport history (Averill 1988; DiLabio 1990) or to provide insights into the style of gold mineralization. This is accomplished by assigning the grains to 1 of 3 categories based on appearance.

Grains classified as pristine occur as angular wires, rods and delicate leaves that probably formed as fracture fillings, and as grains displaying primary surface textures such as crystal faces or grain molds. The transport history of grains assigned to this class may be interpreted in 2 ways. Firstly, the grains may have been eroded from a bedrock source and mechanically transported to the depositional site with little or no modification of their surface textures. Under these circumstances, the transport distance is generally short. Large numbers of pristine grains in till may also be produced by the *in situ* weathering of transported sulphide grains containing fine, particulate gold. In this case, little information is gained on the transport history of the gold, however, important information is acquired on the style of mineralization. The presence of broad anomalies containing samples with high proportions of pristine grains may suggest a style of mineralization involving sulphide-hosted gold.

In the modified class of gold grains, the original shape of the gold grain is retained, however, irregular edges and protrusions are crumpled, folded and curled. Grain molds and primary surface textures are only observed on protected faces of the grains. Modified grains also commonly display striated surfaces. Where a till sample contains above background levels of modified grains, the bedrock source is generally proximal to the sampling site.

Reshaped gold grains fail to retain any of their pristine textures. Grains often display a robust to flattened or rounded profile resulting from the abrasion or repeated folding of leaves, wires and rods. The grain surfaces are typically pitted or etched due to surface leaching of silver. Reshaped grains are usually present in small numbers across most shield terranes of Ontario. These grains can have a complex transport history and are, therefore, difficult to assess in terms of their source. However, the presence of large numbers of reshaped grains within discrete areas should be considered significant. Our current

Table 1. Elements, method detection limits and data quality information obtained from INAA geochemical dataset.

Element	Method	MDL	Duplicate Data		Int. Std.			Till-1				Till-4			
			N	Prec	N	Mean	SD	N	Ref	Mean	SD	N	Ref	Mean	SD
		ppm*		%		ppm*	ppm*		ppm*	ppm*	ppm*		ppm*	ppm*	ppm*
Au	INAA	2	20	95	10	47.4	26.3	5	13	10.2	6.8	5	5	-2	0
Ag	INAA	5	20	NA	10	-5	0.0	5	-	-5	0.0	5	-	-5	0
As	INAA	0.5	20	50	10	7.5	1.0	5	18	18.9	0.6	5	111	112.8	5.3
Ba	INAA	50	20	20	10	577	62	5	702	646	48	5	395	412	37
Br	INAA	0.5	20	40	10	1.0	0.8	5	6.4	7.6	0.5	5	8.6	9.7	0.5
Ca	INAA	1	20	30	10	2.3	0.5	5	-	2.0	0.0	5	-	0.9	0.7
Co	INAA	1	20	15	10	14.4	1.0	5	18	18.2	1.6	5	8	8.4	0.5
Cr	INAA	5	20	15	10	105	7	5	65	59	2	5	53	48	2
Cs	INAA	1	20	90	10	1.4	0.6	5	1	0.6	0.2	5	12	12.2	0.4
Fe	INAA	0.01	20	10	10	2.79	0.13	5	4.81	4.94	0.2	5	3.97	4.06	0.12
Hf	INAA	1	20	25	10	7.4	0.7	5	13	12.6	1.3	5	10	10.0	1.2
Hg	INAA	1	20	NA	10	NA	NA	5	-	NA	NA	5	-	NA	NA
Ir	INAA	5	20	NA	10	NA	NA	5	-	NA	NA	5	-	NA	NA
Mo	INAA	1	20	100	10	NA	NA	5	2	1.8	1.9	5	16	14.0	1.6
Na	INAA	0.01	20	10	10	2.43	0.11	5	-	2.00	0.07	5	-	1.80	0.04
Ni	INAA	20.0	20	110	10	37.5	47.5	5	24	38.2	58.1	5	17	16.9	3.6
Rb	INAA	15.0	20	90	10	51.7	6.6	5	44	50.4	14.1	5	161	149.0	15.0
Sb	INAA	0.1	20	100	10	0.4	0.1	5	7.8	7.8	0.5	5	1	1.2	0.1
Sc	INAA	0.1	20	10	10	11.7	0.6	5	13	14.1	0.6	5	10	11.0	0.3
Se	INAA	3	20	NA	10	NA	NA	5	-	NA	NA	5	-	NA	NA
Sn	INAA	0.01	20	NA	10	NA	NA	5	-	NA	NA	5	-	NA	NA
Sr	INAA	0.05	20	NA	10	NA	NA	5	-	NA	NA	5	-	NA	NA
Ta	INAA	0.5	20	80	10	NA	NA	5	0.7	NA	NA	5	1.6	1.3	0.2
Th	INAA	0.2	20	15	10	4.3	0.3	5	5.6	5.7	0.1	5	17.4	16.8	0.3
U	INAA	0.5	20	100	10	1.6	0.5	5	2.2	2.3	0.3	5	5	4.8	0.7
W	INAA	1	20	NA	10	NA	NA	5	-1	NA	NA	5	204	180.8	6.5
Zn	INAA	50	20	80	10	64.2	19.5	5	98	108.0	12.8	5	70	80.8	9.5
La	INAA	0.5	20	10	10	22.4	1.3	5	28	27.5	0.5	5	41	41.9	0.5
Ce	INAA	3	20	15	10	38.5	2.4	5	71	65.0	6.3	5	78	70.4	5.5
Nd	INAA	5	20	40	10	18.7	3.8	5	26	25.0	5.0	5	30	23.6	4.4
Sm	INAA	0.1	20	15	10	3.8	0.2	5	5.9	5.9	0.4	5	6.1	6.4	0.5
Eu	INAA	0.2	20	15	10	1.0	0.1	5	1.3	1.6	0.1	5	-1	1.2	0.1
Tb	INAA	0.5	20	70	10	0.3	0.1	5	1.1	0.5	0.3	5	1.1	0.6	0.3
Yb	INAA	0.2	20	15	10	1.4	0.1	5	3.9	3.9	0.1	5	3.4	3.4	0.3
Lu	INAA	0.1	20	50	10	0.20	0.03	5	0.6	0.52	0.10	5	0.5	0.45	0.02

Notes:
MDL: method detection limit
ppm*: all values in ppm except Au and Ir which are reported in ppb and Ca, Fe, Na, Sn and Sr which are reported in %
N: number of duplicates or standards
Prec: precision derived from Thompson and Howarth precision control charts (95% confidence)
SD: standard deviation
NA: value not calculated due to most samples containing less than detectable levels of that element
Ref: reported value for Canmet Certified Reference standard

understanding of how glacial processes of erosion, transport and deposition result in the modification of gold grains is not far enough advanced to disregard such occurrences. In general, large numbers of gold grains within any given sample should be treated as potentialy significant regardless of grain shape characterization.

The regional distribution of particulate gold in till is plotted in Figure 6. A complementary plot depicting the ratio of the sum of "modified + pristine" grains to the "total" number of grains [(M+ P)/T] at sites containing 20 or more gold grains is illustrated in Figure 7. Data intervals for the proportional dot plots were established using percentile statistics. The greater than 95th percentile is considered to represent the anomalous population.

Table 2. Elements, method detection limits and data quality information obtained from ICP-MS geochemical dataset.

Element	Method	MDL	Duplicate Data		Int. Std.			Till-1				Till-4			
			N	Prec	N	Mean	SD	N	Ref	Mean	SD	N	Ref	Mean	SD
		ppm*		%		ppm*	ppm*		ppm*	ppm*	ppm*		ppm*	ppm*	ppm*
Ag	ICP-MS	0.01	20	100	10	0.06	0.02	5	0.20	0.23	0.01	5	-0.2	0.19	0.02
Al	ICP-MS	100	20	20	10	8761	938	5	-	19839	1667	5	-	21999	1105
Au	FA	0.6	20	100	10	34.4	15.9	5		15.9	6.8	5		4.8	0.7
Ba	ICP-MS	5	20	15	10	58.2	3.3	5	84	83.0	2.9	5	71	69.4	0.9
Be	ICP-MS	2	20	-	10	NA	NA	5	-	NA	NA	5	-	NA	NA
Ca	ICP-MS	100	20	20	10	3525	423	5	-	3901	571	5	-	1375	49
Cd	ICP-MS	0.5	20	-	10	NA	NA	5	-0.2	NA	NA	5	-0.2	NA	NA
Co	ICP-MS	1	20	10	10	10.3	0.5	5	12	13.7	0.6	5	6	6.3	0.2
Cr	ICP-MS	1	20	15	10	47.1	3.2	5	30	30.4	2.6	5	26	24.8	0.8
Cu	ICP-MS	2	20	15	10	72.7	5.1	5	48	48.4	1.8	5	254	241.0	15.2
Fe	ICP-MS	5	20	10	10	17051	1313	5	31000	36716	2011	5	33000	38084	1551
Ga	ICP-MS	1	20	15	10	1.9	0.1	5	-	4.3	0.2	5	-	3.8	0.2
Li	ICP-MS	1	20	15	10	8.8	0.6	5	-	11.1	1.1	5	-	22.2	0.7
Mg	ICP-MS	20	20	15	10	4190	370	5	-	6371	476	5	-	5719	263
Mn	ICP-MS	0.1	20	10	10	219	16	5	950	1231	39	5	260	314	10
Mo	ICP-MS	1	20	5	10	NA	NA	5	-2	NA	NA	5	14	15.5	0.3
Ni	ICP-MS	5	20	10	10	30.0	1.7	5	18	18.5	1.0	5	15	14.5	0.4
Pb	ICP-MS	0.1	20	10	10	12.4	0.9	5	12	13.5	0.3	5	36	36.5	0.7
Pt	FA	0.3	20	30	10	1.2	0.5	5		0.5	0.3	5		0.2	0.05
Pd	FA	0.7	20	30		1.3	0.5	5		0.7	0.6	5		0.4	0.1
Sb	ICP-MS	0.5	20	-	10	NA	NA	5	-	6.7	0.5	5	-	0.7	0.01
Sc	ICP-MS	0.5	20	15	10	3.7	0.3	5	-	5.9	0.5	5	-	5.0	0.1
Sn	ICP-MS	3	20	-	10	NA	NA	5	-	NA	NA	5	-	5.9	0.1
Tl	ICP-MS	0.05	20	-	10	NA	NA	5	-	0.12	0.01	5	-	0.40	0.01
V	ICP-MS	1	20	20	10	41.7	5.1	5	48	68.8	11.1	5	38	47.4	5.8
W	ICP-MS	0.05	20	70	10	0.64	0.20	5	-	0.16	0.03	5	-	153.4	3.7
Zn	ICP-MS	5	20	10	10	31.5	1.5	5	70	77.0	4.1	5	63	65.4	1.7
Y	ICP-MS	0.5	16	15	10	6.5	0.6	5	-	15.0	1.0	5	-	9.6	0.2
Zr	ICP-MS	1	16	25	10	8.5	0.8	5	-	1.2	0.4	5	-	5.3	0.3

Notes:
MDL: method detection limit
N: number of duplicates or standards
ppm*: all values reported in ppm except Au, Pt and Pd which are reported in ppb
Prec: precision derived from Thompson and Howarth precision control charts (95% confidence)
SD: standard deviation
NA: value not calculated due to most samples containing less than detectable levels of that element
Ref: reported value for Canmet Certified Reference standard

Spatial variations in regional background levels of particulate gold grains exist within the western Shebandowan greenstone belt (Figure 6). Background levels of gold grains over the eastern third of the study area are significantly lower than over the remaining portions. Rather than being a true indication of this region's inherent mineral potential, the depressed gold grain content of till is likely a reflection of the character of till cover within this region. Till cover is generally thicker and more extensive within this area and, therefore, compositionally, probably does not reflect local geology as well as over the western region where till cover is sparse. Regional background over the eastern third is less than 3 gold grains per 10 kg of table feed. Over the western region, background values rise to between 3 and 7 gold grains. Within these 2 areas, local variations in gold grain content exist and probably reflect lithological and structural controls on mineralization.

Background gold is produced by the continuous recycling of grains, over an extended period of time, by glacial and non-glacial processes, with a final depositional site some distance from its source. It may also display a local to semi-local signature that defines a geochemical province of enhanced gold potential. These areas are defined by groups or clusters of samples containing elevated concentrations of reshaped grains. These grains have likely been transported only a short distance from their source; perhaps only a few hundred metres. At the Joburke gold mine, which is located in the Swayze greenstone belt of northeastern Ontario, the ratio of pristine to reshaped grains in till decreases rapidly in response to glacial

Table 3. Elements, method detection limits and data quality information obtained from ICP-ES geochemical dataset.

Element	Method	MDL	Duplicate Data		Int. Std.			Till-1				Till-4			
			N	Prec	N	Mean	SD	N	Ref	Mean	SD	N	Ref	Mean	SD
		ppm		%		ppm	ppm		ppm	ppm	ppm		ppm	ppm	ppm
Al	ICP-ES	30	20	15	10	7175	340	5		17231	1232	5		17737	611
Ba	ICP-ES	3	20	10	10	73.2	5.5	5	84	105	5.9	5	71	90.6	4.4
Be	ICP-ES	3	20	-	10	NA	NA	5		NA	NA	5		NA	NA
Ca	ICP-ES	20	20	15	10	3705	374	5		3927	444.4	5		1383	58
Cd	ICP-ES	2	20	90	10	3.1	1.9	5	-0.2	8.6	4.3	5	-0.2	10.8	1.6
Co	ICP-ES	5	20	15	10	11.3	0.7	5	12.0	16.2	1.1	5	6.0	6.8	0.4
Cr	ICP-ES	4	20	10	10	45.6	2.3	5	30	24.2	1.8	5	26	22.4	1.1
Cu	ICP-ES	5	20	10	10	72.6	3.0	5	48	49.8	2.9	5	254	255	11
Fe	ICP-ES	5	20	10	10	17534	477	5	31000	37437	1610	5	33000	37077	1397
K	ICP-ES	100	20	15	10	326	32	5		497	89	5		2328	99
Li	ICP-ES	3	20	100	10	3.85	2.87	5		2.6	2.5	5		13.9	7.0
Mg	ICP-ES	20	20	10	10	4784	165	5		7180	519	5		6154	159
Mn	ICP-ES	1	20	10	10	217	8	5	950	1191	43	5	260	295	13
Mo	ICP-ES	8	20	-	10	NA	NA	5	-2	NA	NA	5	14	13.0	0.7
Na	ICP-ES	10	20	30	10	115	23	5		312	53	5		274	14.8
Ni	ICP-ES	5	20	10	10	33.9	1.9	5	18	24.4	1.5	5	15	19.2	0.4
P	ICP-ES	50	20	10	10	578	13	5		1020	43	5		897	48
S	ICP-ES	30	20	15	10	67.9	5.4	5		267	11	5		754	16
Sc	ICP-ES	1	20	20	10	3.3	0.5	5		5.2	0.4	5		4.2	0.4
Sr	ICP-ES	1	20	20	10	21.8	3.3	5		12.6	1.9	5		10.4	0.5
Ti	ICP-ES	3	20	15	10	997	106.5	5		1079	136	5		1315	47
V	ICP-ES	5	20	10	10	41.5	2.7	5	48	65.6	4.2	5	38	45.8	1.9
W	ICP-ES	40	20	-	10	NA	NA	5		NA	NA	5		131	10
Y	ICP-ES	2	20	15	10	6.2	0.6	5		12.8	0.8	5		8.2	0.4
Zn	ICP-ES	2	16	10	10	33.6	1.0	5	70	81.2	5.2	5	63	69.2	3.3

Notes:
MDL: method detection limit
N: number of duplicates or standards
Prec: precision derived from Thompson and Howarth precision control charts (95% confidence)
SD: standard deviation
NA: value not calculated due to most samples containing less than detectable levels of that element
Ref: reported value for Canmet Certified Reference standard

transport resulting in a predominance of reshaped grains 300 to 400 m down-ice from source (C. Kaszycki, Ontario Geological Survey, personal communication, 1996). Similar conclusions were drawn from glacial dispersal studies at the Matachewan Consolidated Mine and Ashley Mine of northeastern Ontario (Bajc 1997).

Most gold grains recovered as part of this study are silt sized. The apparent small size of the gold grains is most likely a reflection of the nature of gold mineralization (i.e., fine versus coarse gold). It may also provide information on the transport history (i.e., amount of folding, crumpling, flattening, etc.) of recycled grains. Since the non-magnetic heavy mineral concentrates (HMC) of till samples collected from the Shebandowan greenstone belt are oversized and dominated by clinopyroxenes derived from the Nipigon diabase sills 70 km to the northeast (Bajc 1999a), particulate gold accounts for a very small proportion of the samples by volume. The gold geochemical signature of the non-magnetic HMC will therefore be strongly diluted and overwhelmed by the composition of clinopyroxene resulting in low contrast and possibly, undetectable anomalies. Non-magnetic heavy mineral concentrate geochemistry is therefore not recommended for programs of mineral exploration utilizing surficial geochemistry. Since most of the particulate gold is silt-sized or smaller, the explorationist should consider the fine fraction (i.e., -63 µm size fraction of till) as the preferred fraction for gold geochemical surveys involving till within the study area.

A number of excellent gold exploration targets have been identified within the study area based solely on the gold grain content of tills (Figure 6). These anomalies are, in most cases, defined by clusters of samples with anomalous or elevated gold grain counts. Single sample anomalies have also been identified and are considered significant because of the sampling density. An attempt will be made to discuss each of these anomalies in terms of possible source based on an interpretation of grain shape and local geology.

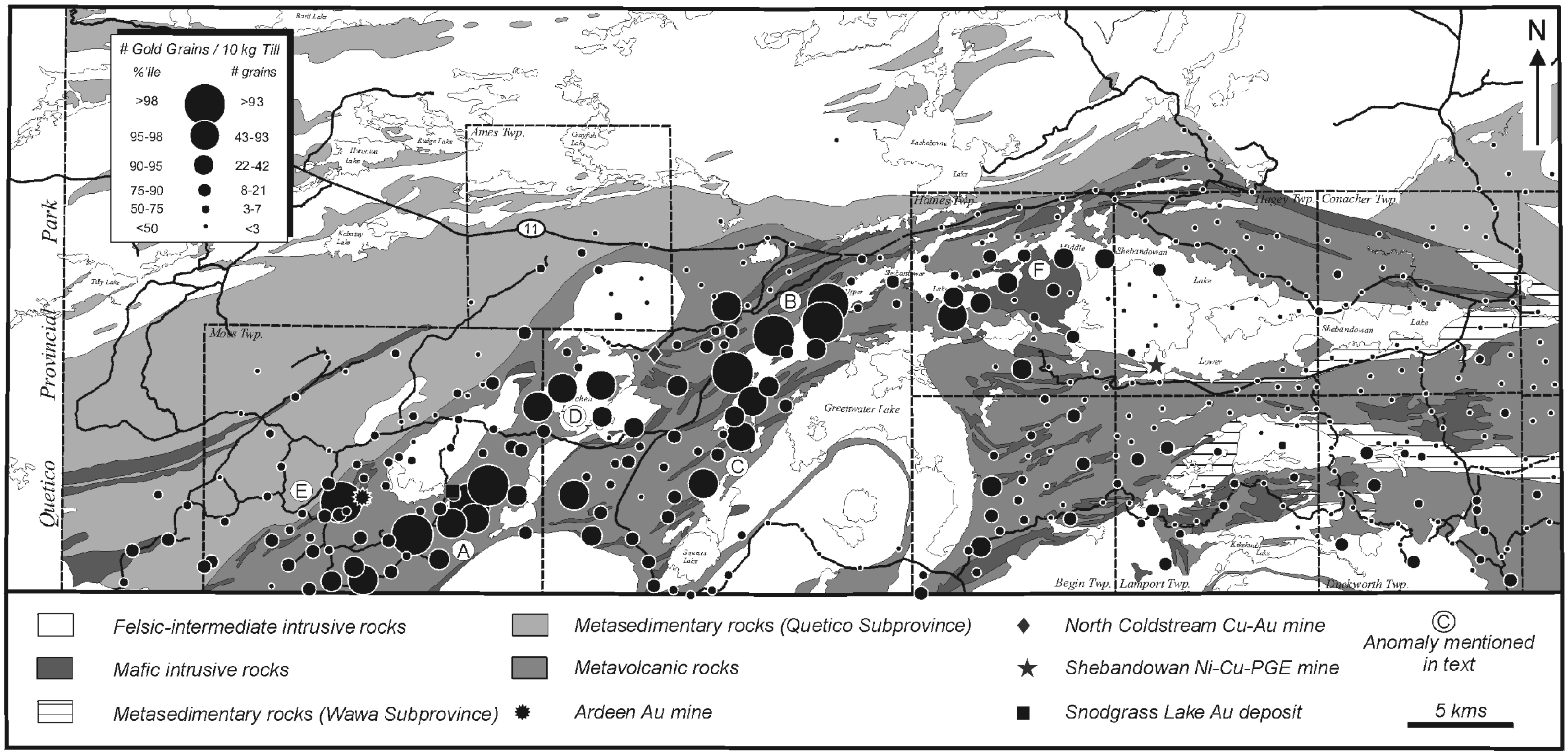

Figure 6. Regional distribution of particulate gold in till.

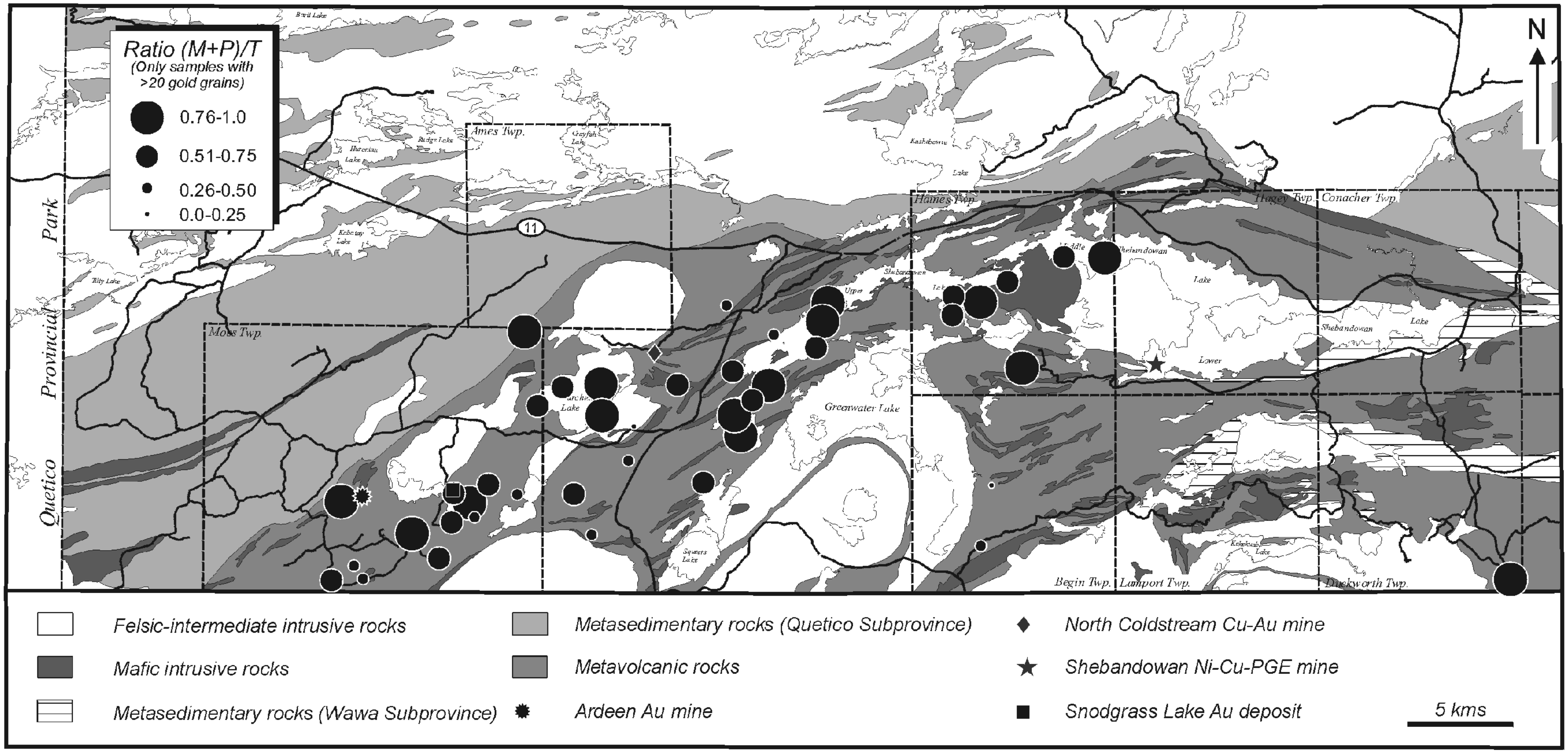

Figure 7. Ratio of modified plus pristine grains to the total number of gold grains. Only samples with 20 or more grains are plotted.

Snodgrass Lake Trend

A 7.5 km long, structurally-aligned cluster of samples extending from just northeast of Snodgrass Lake southwestward through Pearce Lake contain exceptionally high numbers of gold grains (Anomaly A, Figure 6). The tenor of gold grain response within this anomaly is not unlike that which is observed in the vicinity of producing gold mines in other parts of the province (McClenaghan 1999). Sample sites comprising the anomaly include, from northeast to southwest, 300 (536 grains), 299 (1589 grains), 310 (81 grains), 298 (92 grains), 245 (204 grains) and 248 (77 grains). Additional sample sites containing elevated grain counts within this anomaly include: 247; 4312; 311; and 308.

The area is characterized as a bedrock-dominated terrain with thin, discontinuous till cover in upland regions and stratified deposits of sand and gravel in low-lying areas. Glacial striae in the vicinity of the anomaly are directed towards 210 to 220° Az., parallel to the orientation of the anomaly.

Of the 6 extremely anomalous samples listed above, 4 have greater than 50% modified and/or pristine gold grain shapes (Figure 7). Multiple gold sources are suggested by the widely spaced nature of samples containing high proportions of pristine and modified grain shapes. This is also confirmed by the occurrence of several gold showings/prospects coincident with this anomaly (Moss Lake prospect/deposit, Corner Zone, Road Zone and Boundary Zone of Moss Lake Gold Mines Ltd. and the Pearce Lake gold showing of Pele Mountain Resources to name a few).

A till sample collected over the main zone of the Moss Lake prospect (sample 296) which is located at the north end of Snodgrass Lake, returned a gold grain count of only 21, 13 of which are modified and/or pristine. The Moss Lake Deposit has a drill indicated resource of 60 million tonnes grading 1.1 g/tonne Au to a depth of 250 m or 2.1 million contained ounces (Moss Lake Gold Mines Ltd. and Landis Mining Corp. joint press release, October 4, 1999). Samples 299 and 300 were collected to the east in the vicinity of the Road Zone and Boundary Zone, respectively. A drill intersection at the Boundary Zone of 0.986 oz/t Au over 15 feet clearly explains the anomalous till response. The spectacular gold grain count obtained from sample site 299 (1589 gold grains) may not adequately explain the low gold values obtained from the Road Zone (up to 0.051 oz/t Au) over which the sample was collected. This may indicate additional mineralization is present in the up-ice direction.

Sample sites 248, 298 and 245 are not closely associated with known gold mineralization, but they do occur on an important gold mineralized trend suggesting the potential for additional discoveries. All samples have a significant proportion of modified and pristine grains suggesting a proximal source for the gold. Follow-up till sampling at a spacing of 100 m is recommended within the Snodgrass Lake trend to further refine possible exploration target areas.

Upper Shebandowan Lake Trend

Numerous till samples collected from the shores of Upper Shebandowan Lake contained large numbers of gold grains (Anomaly B, Figure 6). The list of sample sites include: 187 (155 grains); 389 (136 grains); 392 (210 grains); and 384 (347 grains). Samples 392 and 384 contain greater than 75% modified and/or pristine grains suggesting a proximal source for the gold.

Ice flow indicators range between 205 and 225° Az. within this area. With the exception of the extreme southwestern end of the lake where thick deposits of glaciofluvial sand and gravel are present, drift accumulations are restricted to isolated patches in topographic depressions.

Much of Upper Shebandowan Lake is underlain by a differentiated sill complex of gabbro and anorthosite. Numerous northeast-striking, subparallel shear zones, collectively referred to as the Upper Shebandowan Shear Zone (USSZ), cut the sill complex and control base metal mineralization. The Copper Island Cu showing represents one of the most significant shear-hosted occurrences within this region (Osmani 1997; Farrow 1993). Sample 187 was collected several hundred metres west of the Shebandowan West Au-Cu-Mo-Ag showing which occurs at the sheared contact between mafic to intermediate fragmentals and a gabbro-anorthosite sill-like intrusion (Osmani 1997). Sample 384 was collected in close proximity to a Cu showing hosted by gabbro-anorthosite on the northwest shore of Upper Shebandowan Lake (Hodgkinson 1968). Samples 392 and 389 were each collected over chlorite schist (Hodgkinson 1968; Osmani 1997) and are not spatially associated with known mineralization.

Higher density till sampling is recommended in the Upper Shebandowan Lake area to further refine possible source rocks for the gold grain anomalies. Historically, this area has received a great deal of exploration for base metals. The results of the till sampling survey suggest that this area has significant precious metal potential as well.

Upper Shebandowan Lake-Firefly Lake-Grouse Lake Trend

Several samples collected along this trend contain anomalous gold grain counts (Anomaly C, Figure 6). These include: samples 386 (37 grains); 387 (84 grains); 388 (26 grains); 328 (64 grains); and 329 (45 grains). All samples contain greater than 50% modified and/or pristine grains and 3 of the 5 contain greater than 75% modified and/or pristine grains. Samples 386, 387, 388 and 328 were all collected from gabbro-anorthosite bedrock terrain. Sample 329 was collected close to the contact between felsic porphyry and felsic metavolcanic rocks. Numerous iron-carbonate altered float boulders were observed several hundered metres down-ice from sample 328. Boulder tracing may help to further refine possible source rocks for the anomaly. No known Au occurrences are present within this anomalous gold grain trend. Additional till sampling and prospecting is recommended to better understand the significance of this anomaly.

Burchell Lake Anomaly

Till samples collected from the shores of the southern half of Burchell Lake contain anomalous concentrations of gold grains (Anomaly D, Figure 6). Samples within this anomaly include: 364 (53 grains); 365 (55 grains); 366 (25 grains); and 367 (86 grains). All samples contain greater than 50% modified and/or pristine grain shapes. Felsic-intermediate metavolcanic rocks underlie samples 364, 365 and 367. Sample 366 is underlain by syenite of the Hermia Stock. The 2 northern samples of the anomaly are spatially associated with Cu-Au-Ag mineralization. On the west side of the lake, strongly sheared felsic flows and feldspar porphyries are mineralized with pyrite, chalcopyrite, bornite and malachite. The 2 southern samples are not spatially associated with known mineralization. Sample 365 is, however, situated along strike with a mineralized north-northeast-trending fault that passes through Span Lake. Sample 366 lies adjacent to the Burchell Lake Fault.

Follow-up programs of geophysics, prospecting and trenching are recommended to better understand the significance of these results. Higher density till sampling programs would be difficult since Burchell Lake is situated in the up-ice direction from all 4 anomalous sample sites. Winter reverse circulation drill programs would be required to obtain till samples from the offshore locations.

Ardeen Mine Anomaly

Several till samples were collected from the region surrounding the Ardeen Mine (Anomaly E, Figure 6). This area includes the Minoletti (Pele North Zone), Beaver, McKellar (Pele Zone) and Fisher Lake occurrences. Gold grain response in close proximity to these occurrences is subdued. Notable responses include: sample 234 which was collected over the McKellar occurrence and returned a gold grain count of 11; and sample 240 which was collected over the Minoletti occurrence and returned a grain count of 13. Most of the grains within both samples were reshaped indicating some degree of mechanical transport. Sample 233, which was collected over the Fisher Zone contained only 6 gold grains. The poor response observed over this area is likely attributed to the narrow, shear-hosted, quartz-carbonate vein style of mineralization. Similar gold grain responses were obtained in a case study at the Ashley Mine which is situated in northeastern Ontario near Matachewan (Bajc 1997). At the Ashley Mine, mineralization is contained within narrow, quartz vein stockworks ranging between 3 to 60 cm wide.

Of particular interest in the Ardeen Mine area is the 316 gold grains recovered from sample 395 which is located approximately 800 m due west of the Ardeen Mine shaft. Over 80% of the grains recovered from this sample have pristine and/or modified shapes. The sample site is coincident with a strong, untested IP anomaly and occurs in association with gabbro and feldspar porphyry (Osmani 1997). Till occurs as a thin veneer over bedrock within this area. Striation orientations range between 220 and 235° Az with 220° being most common. Higher-density till sampling and prospecting followed by trenching is recommended to help locate possible source rocks for the anomaly.

Haines Gabbroic Complex

Numerous till samples collected along the northern fringes of the Haines gabbro-anorthosite complex in Haines Township contain elevated to anomalous concentrations of gold grains (Anomaly F, Figure 6). Notable samples include: 372 (28 grains); 375 (30 grains); and 378 (32 grains). All samples contain greater than 50% modified and/or pristine gold grain shapes suggesting a possible local source for the gold. The main mass of the Haines gabbro-anorthosite complex has been tested largely for its base metal (copper-nickel) potential. The intrusion has received only limited exploration for platinum group elements and gold. The gold grain results suggest that additional work is required to test the intrusion for its precious metal content.

Single Sample Anomalies

In addition to those anomalous areas mentioned above, there are several single sample anomalies that occur within the study area and which require follow-up work. These include: sample 305 (48 grains) which is located 1.5 km east of Fountain Lake; 181 (79 grains) which is located 2.5 km southwest of Whitefish Lake; and 325 (45 grains) which is located 1 km west of Loch Erne between Greenwater and Upper Shebandowan lakes. Several other samples contain elevated responses and may require additional work to determine their significance. These include a couple of samples in west-central Begin Township (samples 160 and 334); a single sample in south-central Haines Township (sample 115); a single sample on the northeast shore of Skimpole Lake (sample 303); a sample just north of Waverly Lake (sample 306); and a single sample on the south shore of Middle Shebandowan Lake by Middle Gap (sample 371). Higher density till sampling and prospecting are required to determine the significance of these results.

MINERALOGY

As part of the heavy mineral processing contract, 200 of the 400 submitted till samples were processed for kimberlite indicator minerals (KIMs) and metamorphosed/magmatic massive sulphide indicator minerals (MMSIM®). The 0.25 to 2.00 mm non-magnetic heavy mineral concentrates were picked for kimberlite indicator minerals (Cr-diopside, chromite, Cr-pyrope garnet, Cr-poor pyrope garnet, eclogitic pyrope (almandine garnet) and Mg-ilmenite. The 0.25 to 0.5 mm non-magnetic and paramagnetic fractions were picked for MMSIMs®. Common metamorphosed massive sulphide indicator minerals include gahnite, Cr-rutile, spessartine, Mn-epidote, staurolite and anthophyllite. Common magmatic massive sulphide indicator minerals include olivine, chromite, bronzite and chalcopyrite. The detailed results of the KIM and MMSIM® investigations will be released as a separate report, however, some comments regarding mineral assemblages and unusual or significant occurrences are warranted.

The non-magnetic heavy mineral concentrate of most till samples collected and analyzed for KIMs and MMSIMs® is dominated by the mineral pigeonite, a brown, Ca-poor clinopyroxene that is gradational to Ca-poor augite. This mineral is so abundant that it has resulted in heavy mineral concentrates with unusually high weights for samples collected from the shield terrane of Ontario. Weights of the -2 mm non-magnetic heavy mineral concentrate (>3.2 S.G.) derived from samples initially weighing 10 kg, commonly exceed 300 or 400 g. Weights in the range of 40 to 50 g are more typical of samples collected from Archean greenstone belts of Ontario.

The pigeonite is most likely derived from the laterally extensive sills of Nipigon diabase that outcrop 70 km northeast of the study area. Pigeonite occurs in lithic fragments of olivine diabase in the coarser fractions of the non-magnetic heavy mineral fractions (0.5-2.0 mm) that were picked. The Nipigon diabase has an aerial extent of over 15 000 km^2 and is composed of approximately 40 to 50% pyroxene

(S. Averill, Overburden Drilling Management, personal communication, 1998). It is therefore likely that the source of the pigeonite is the Nipigon diabase rather than the local bedrock within the study area which contains less than 0.5% heavy minerals.

Because of the extreme dilution of the non-magnetic heavy mineral concentrate with pigeonite, it is not recommended that heavy mineral geochemistry be performed for exploration purposes. The geochemical signature of the concentrate would most likely be overwhelmed by the composition of the pyroxene showing very subtle variations related to local geological conditions. The evaluation of mineral potential based on the isolation of gold grains, KIMs and MMSIMs® from the heavy mineral concentrate is effective since every indicator mineral grain is extracted.

Pyrite

Despite being highly susceptible to surface oxidation, a remarkable number of till samples contain large numbers of pyrite grains in the 0.25 to 0.5 mm non-magnetic heavy mineral fraction (Figure 8). Their occurrence may have economic significance. Of particular note are samples 367 (~35% pyrite), 299 (~25% pyrite), 366 (~15% pyrite), 307 (~10% pyrite), and 331 (~10% pyrite). All of these samples also contain anomalous concentrations of gold grains and, in the case of sample 367, which is located on the east shore of Burchell Lake, anomalous numbers of chalcopyrite and gahnite, a mineral commonly found in metasomatic replacement veins. Aside from these isolated occurrences, elevated to anomalous concentrations of pyrite occur in the non-magnetic heavy mineral concentrates of till samples collected along a broad zone extending from south-central Moss Township, through Burchell Lake and into Upper Shebandowan Lake (Figure 8). This zone contains a number of significant northeast-trending shear zones including the Burchell Lake Fault, the North Coldstream Mine Shear Zone, the Upper Shebandowan Lake Shear Zone system, and the Squeers Lake-Greenwater Lake Fault Zone. These structural elements may have provided conduits along which mineralizing fluids travelled.

Chromite

Significant numbers of chromite grains were recovered from many of the heavy mineral concentrates as part of this survey (Figure 9). Notable grain counts were obtained from samples 356 (~150 grains), 285 (~100 grains), 116 (~50 grains), 154 (~50 grains), 325 (~40 grains), 386 (~40 grains), 328 (~40 grains) and 377 (~30 grains). These samples are clustered into 3 primary areas, namely the southwest end of Upper Shebandowan Lake (Anomaly A, Figure 9), west-central Haines Township (Anomaly B, Figure 9) and central Duckworth Township (Anomaly C, Figure 9). Anomalous grain counts were also obtained from single samples in south-central Haines Township and north-central Hagey Township.

The chromite grains within this region are likely of crustal origin, derived from sill-like intrusions of mafic and ultramafic rocks. For example, samples 386 and 328 which were collected from the extreme southwestern end of Upper Shebandowan Lake, are underlain by mafic intrusive lithologies of gabbroic composition. Samples 325, 377 and 378, which were collected from west-central Haines Township, occur either over or immediately down-ice from the fault-bounded contact of the Haines gabbro-anorthosite complex. The Shebandowan Ni-Cu mine occurs to the southeast along the same fault (Crayfish Creek Fault). Samples 356 and 285 were collected from central Duckworth Township and contained the highest chromite grain counts of the survey. Geological mapping within this area failed to identify possible source rocks for the chromites. Additional work is recommended to further explain this anomaly. Anomalous chromite grain counts were also obtained from samples collected in south-central Haines, north-central Hagey and central Begin townships. In all cases, it would appear that the source rocks are mafic intrusive rocks of gabbroic composition. The chromite anomaly in southeastern Begin Township near the west end of Pinecone Lake may be associated with mapped polysutured/serpentinized flows of ultramafic composition (Osmani 1997). The anomaly in central Moss Township, southwest of the Obadinaw Stock may be related to sills of gabbro/diorite that intrude Quetico Subprovince metasedimentary rocks within this region.

Despite the presence of significant chromite mineralization at the Shebandowan Ni-Cu-PGE mine, there is no apparent chromite in till dispersal train originating from the deposit. This may be attributed to

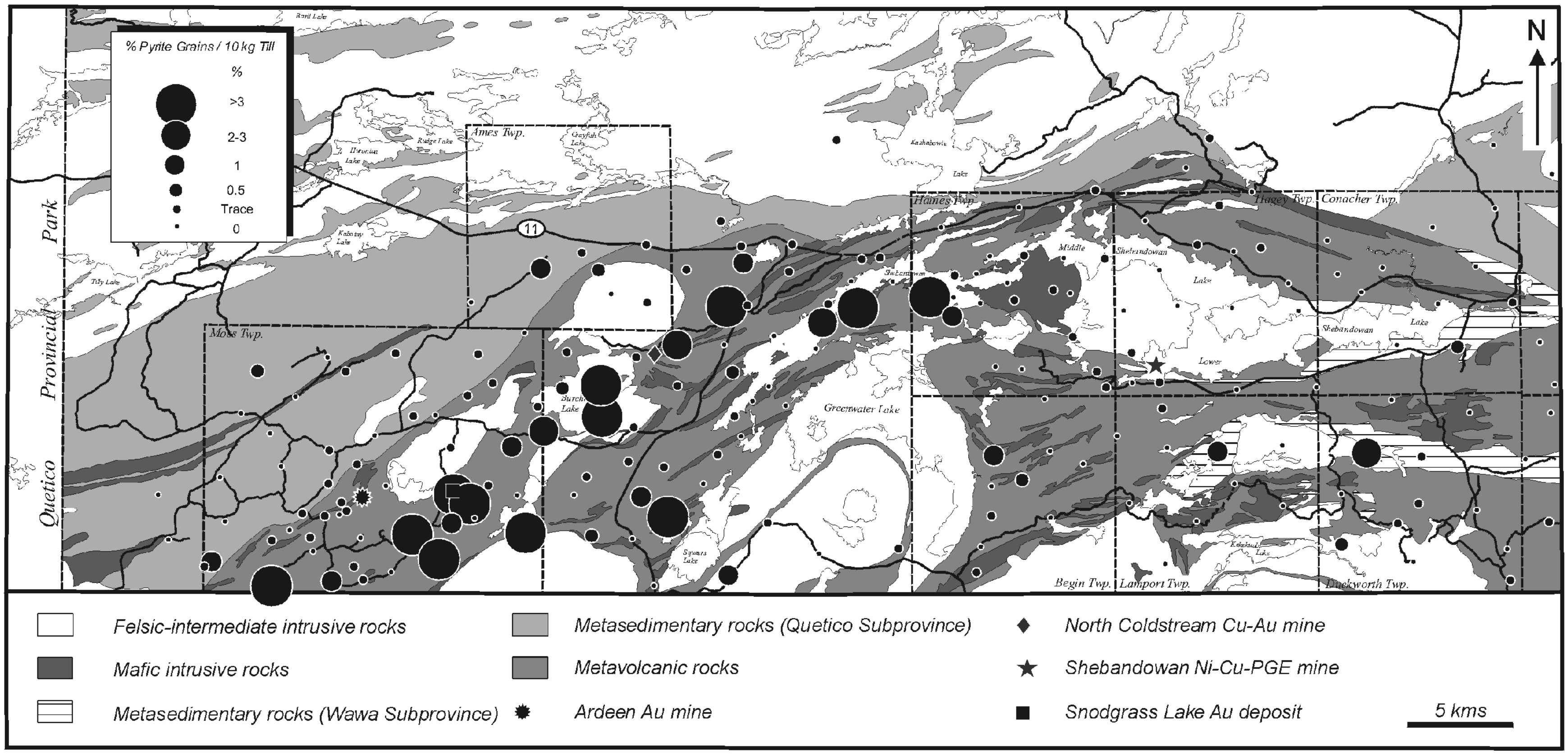

Figure 8. Regional distribution of pyrite in the non-magnetic heavy mineral concentration of till.

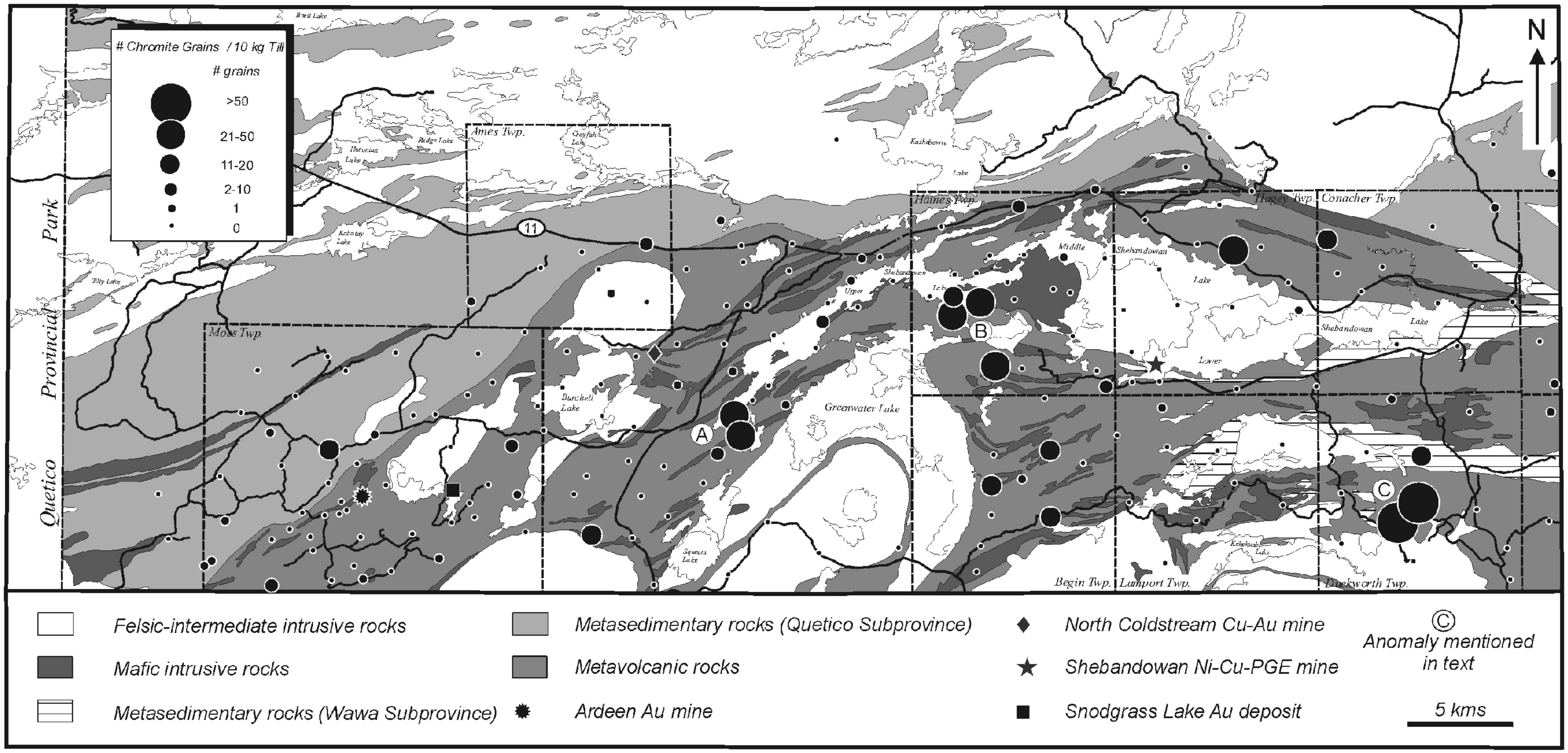

Figure 9. Regional distribution of chromite in the non-magnetic heavy mineral concentrate of till.

the fact that chromite-bearing zones occur primarily adjacent to the Crayfish Creek Fault beneath the lake. The recessive nature of this zone may have prevented the unit's erosion and dispersal by glacial processes.

In an area south of the Shaw Dome within the Abitibi greenstone belt, similarly large numbers of chromite grains were recovered from till samples as part of a regional till sampling program (Bajc 1996, 1997). In this area, the source rocks are most likely komatiitic flows and possibly, ultramafic intrusive lithologies similar to those recently discovered by Band-Ore Resources in Nordica Township, 60 km southeast of Timmins. The chemistry of the chromite grains is being investigated and may yield clues as to the nature of the source rocks and their possible fertility. Studies are ongoing at the Ontario Geological Survey in this regard.

Chrome Diopside

Large numbers of chrome diopside grains were recovered from 3 samples collected in the immediate vicinity of the Shebandowan Ni-Cu-PGE mine in Hagey Township (Anomaly A, Figure 10). These samples include: 120 (18 grains); 104 (16 grains); and 103 (18 grains). Cr-bearing diopside is an important constituent of pyroxenite and peridotite horizons associated with a number of Ni deposits including those at Outokumpo, Finland and within the Thompson Nickel Belt in Manitoba (Averill 1999). In Manitoba, a chrome diopside dispersal train originating at the Thompson Nickel belt and extending 400 km southwestward into Saskatchewan has been identified (Thorliefson and Garrett 1993). Chrome diopside grain counts decline to background values within a few kilometres of the Shebandowan mine site. This example does, however, show the value of performing regional mineralogical surveys for mineral exploration. The Shebandowan mine deposit is clearly recognizable.

The 175 chrome diopside grains obtained from sample 164 (Anomaly B, Figure 10) are difficult to explain. The sample was collected from a rolling till plain situated approximately 400 m north of the Eagle-Finlayson Moraine. Outcrops are not present in the immediate vicinity of the sample site. Pebbles isolated from the till sample are almost exclusively of felsic-intermediate intrusive composition. One would not expect to recover a large number of chrome diopsides from felsic source rocks. Mafic intrusive rocks do, however, outcrop less than a kilometre to the southwest from the sample site. Magnetic information suggests a northeasterly extension of mafic rocks beneath the sample site. Additional sampling and prospecting is recommended to follow-up this anomaly.

TILL GEOCHEMISTRY

Aside from providing information on the background concentration of metals in the surficial environment, the c-horizon till geochemical datasets have identified a number of potentially significant exploration targets. These targets will be subdivided into 3 categories based on type or style of mineralization: 1) lode or shear-hosted gold mineralization including the elements Au, As, Sb, Mo and Ag; 2) VMS base metal mineralization including the elements Cu, Zn, Pb and Cd; and 3) mafic-ultramafic hosted mineralization including the elements Ni-Cr-Co-Pt-Pd.

Au-As-Sb-Mo-Ag

Several gold exploration targets defined by anomalous concentrations of Au±As±Sb±Mo±Ag in till have been identified as part of the geochemical sampling program. Gold concentrations were determined by neutron activation analysis (INAA) and therefore represent the total concentration within the sample. Approximately 30 g aliquots of -63µm till were irradiated, thus reducing the possibility of a nugget effect caused by a few, large grains of gold within a sample. At 1 to 5 times the detection limit for Au (2 to 10 ppb level) precision is estimated at ±95% (95% confidence level). Precision becomes much better at higher concentrations (i.e., ±40% at 15 ppb and ±20% at 50 ppb). The 20 ppb level for Au coincides with the 90th percentile for the population. Values above this concentration are believed to be genuine, reproducible anomalies worthy of follow-up work.

Patterns depicted by the gold geochemical dataset are not unlike those portrayed by the gold grain information. The main difference, however, is in the intensity of response. A strong anomaly persists

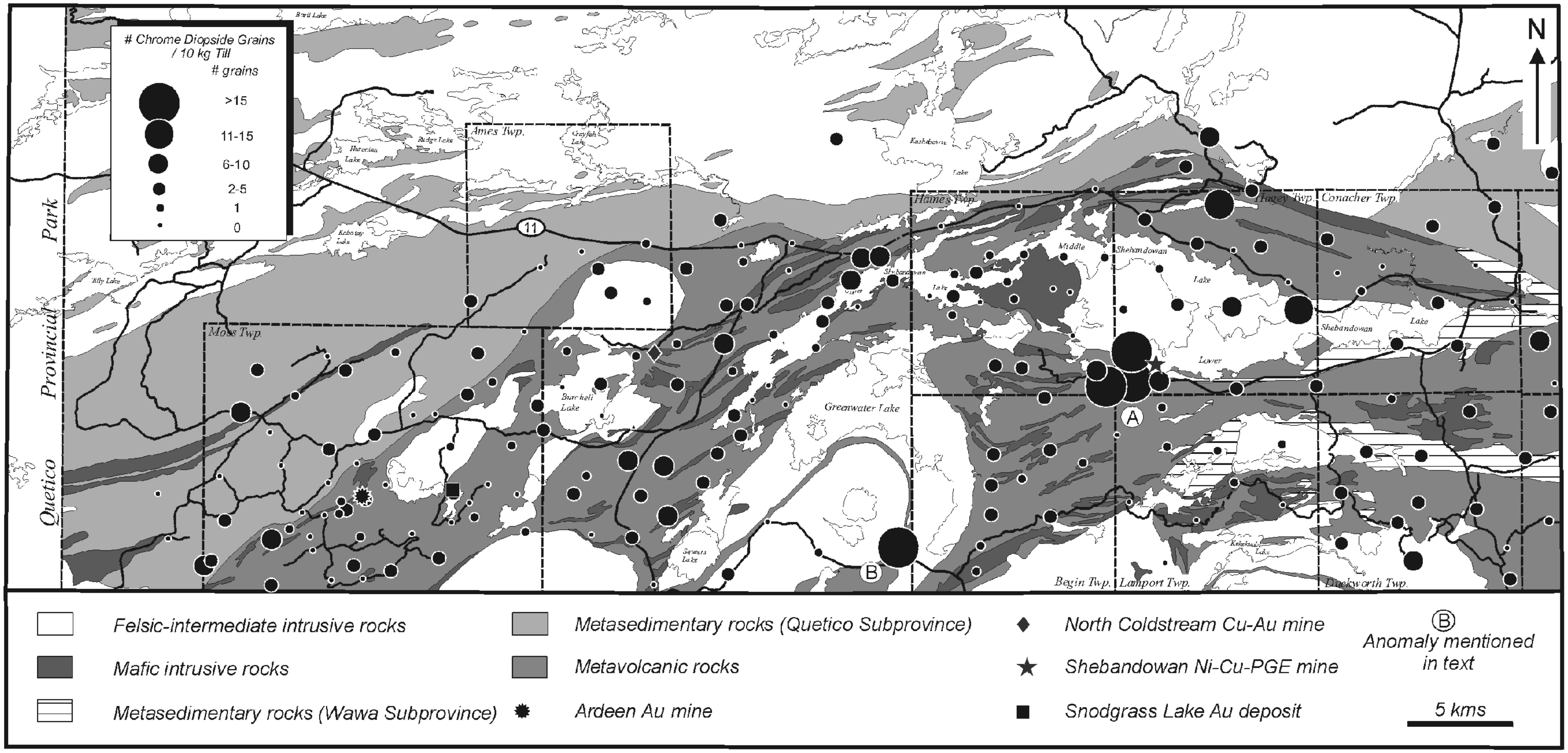

Figure 10. Regional distribution of chrome diopside in the non-magnetic heavy mineral concentrate of till.

along the corridor extending from Pearce Lake through Snodgrass Lake and up to Burchell Lake (Anomaly A, Figure 11). The intensity of the response on Upper Shebandowan Lake is less than that obtained by the gold grain information. The fineness of the gold at these sites may be responsible for this muted response.

A cluster of samples situated south of the Hermia Lake Road between Fountain Lake and the Greenwater Conservation Road contain elevated to anomalous Au values (Anomaly B, Figure 11). These samples lie along the southwest extension of the Upper Shebandowan Lake shear zone system. Further sampling and prospecting is required within this region to determine the significance of this anomaly.

An area of anomalous gold in till (Anomaly C, Figure 11) occurs west of Upper Shebandowan Lake as evidenced by 3 samples with gold values in excess of the 95th percentile (samples 3181, 61 ppb; 3183, 55 ppb; and 3303, 47 ppb). Sample 3303 was collected from the northeast corner of Skimpole Lake in close proximity to a Cu–Ni–Au–Ag showing. Sample 3183 was collected from an exploration trench alongside the Greenwater Conservation Road. The East Coldstream gold prospect is situated approximately 600 m west of the sample site. Sample 3181 has no known mineralization associated with it.

Three samples collected from the southeastern corner of Duckworth Township in the vicinity of Gold Creek returned anomalous to elevated Au geochemical responses despite a complacent gold grain response (Anomaly D, Figure 11). This may indicate that gold occurs in a fine–grained, sulphide–held form within this area. Weak anomalies exist in central Haines Township over the Haines gabbro–anorthosite complex (Anomaly E, Figure 11) as well as in central Moss Township along the Ardeen Mine trend (Anomaly F, Figure 11). Elevated background was observed in south–central Haines Township, east–central Begin Township, northwestern Lamport Township and over the northwestern half of Moss Township where Quetico metasedimentary rocks occur.

The Tilly Creek Cu–Au–Ag prospect, which is currently being evaluated by Tandem Resources Ltd., is situated within this area of elevated background. Elevated Au, As and Sb values also occur west of the Tilly Creek showing and should be investigated further to determine their significance. The Obadinaw River, Elephant Lake and Powell Lake Au prospects occur within this general area. An outcrop sample of quartz diorite from sample site 3270, containing abundant disseminated pyrite and minor chalcopyrite, returned a Au assay of 650 ppb. This occurrence attests to the potential for additional discoveries within the Quetico Subprovince.

The geochemical trends depicted by the As dataset are less organized and quite different from those portrayed by Au (Figure 12). With the exception of a strong multi–sample anomaly in the Gold Creek area of southeastern Duckworth Township (Anomaly A, Figure 12) and scattered anomalies in the Burchell Lake–Snodgrass Lake trend, there does not appear to be a strong association between Au and As geochemical response. The 4 main auriferous zones within the Gold Creek or Jalna group of claims were originally discovered by stripping As anomalies in soil. In general, Au values correlate well with the presence of sericitic and pyritic alteration as well as elevated values of As and S (Chorlton 1987).

Elevated to anomalous concentrations of As also exist within central Begin Township (Anomaly B, Figure 12). In this area, gold mineralization occurs in iron–carbonate altered quartz veins cutting complexly folded chert ± jasper–magnetite banded ironstone (e.g., 670 m south of Horseshoe Lake). Mineralized quartz veins contain pyrite and have returned anomalous concentrations of As (Osmani 1997). The elevated As observed within this area may be in part related to alteration and sulphidization within the ironstone units. Isolated As anomalies also occur on Upper Shebandowan Lake near the entrance to Three Mile Bay, in southwestern Duckworth Township along the edge of the Kekekuab intrusion, between Fountain Lake and the Greenwater Conservation Road and in supracrustal rocks southwest of the Ardeen Mine. Background levels of As are also significantly higher over Quetico metasedimentary rocks in Moss Township and areas to the west.

The trends depicted by the Sb dataset share some characteristics of both the Au and As datasets (Figure 13). Strong Sb anomalies occur in southeastern Duckworth Township (Anomaly A, Figure 13) and in the Burchell Lake area, where both anomalous Au and As values were obtained (Anomaly B, Figure 12). Less well defined anomalies occur in south–central and north–central Begin Township and northwestern Hagey

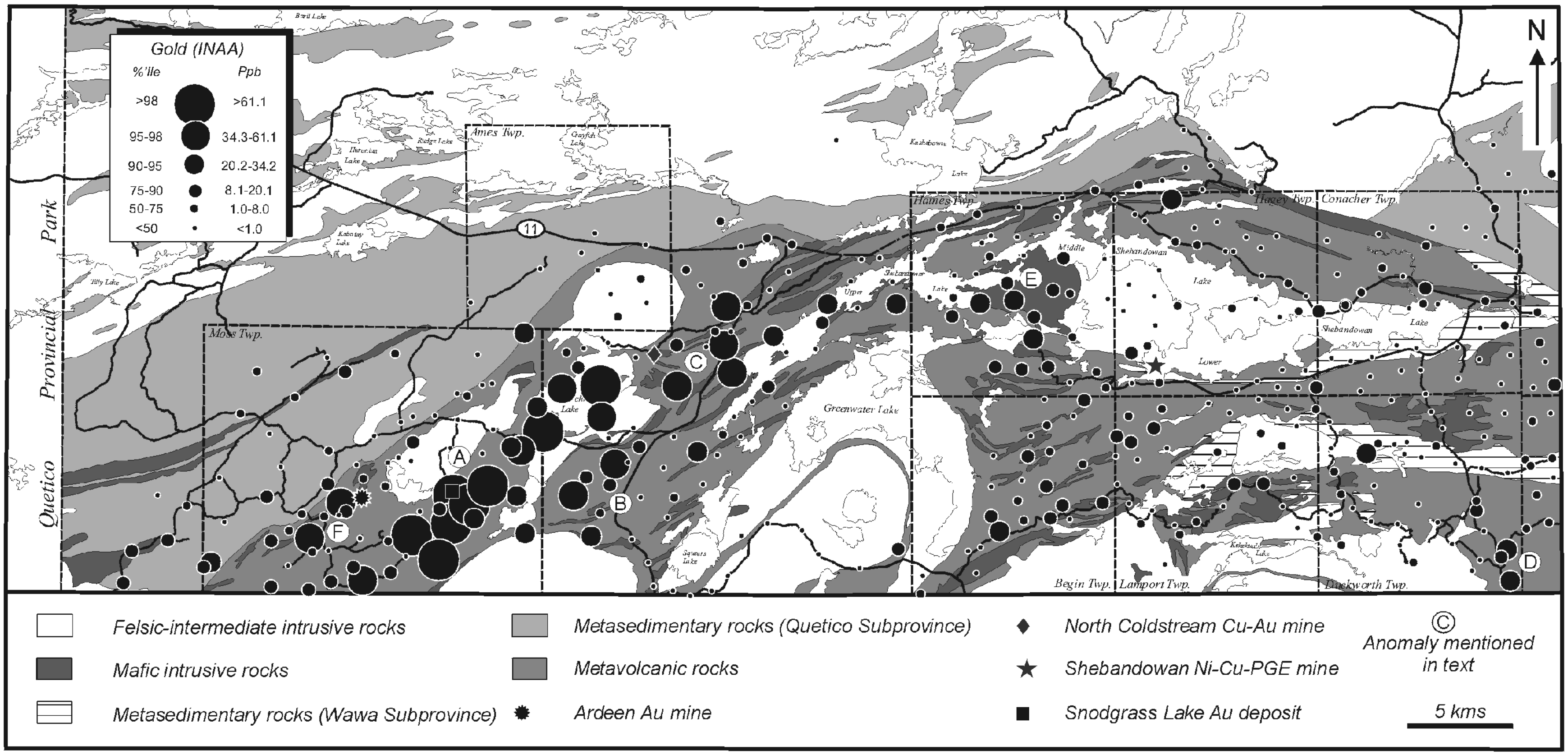

Figure 11. Regional distribution of Au in till (-63 µm fraction).

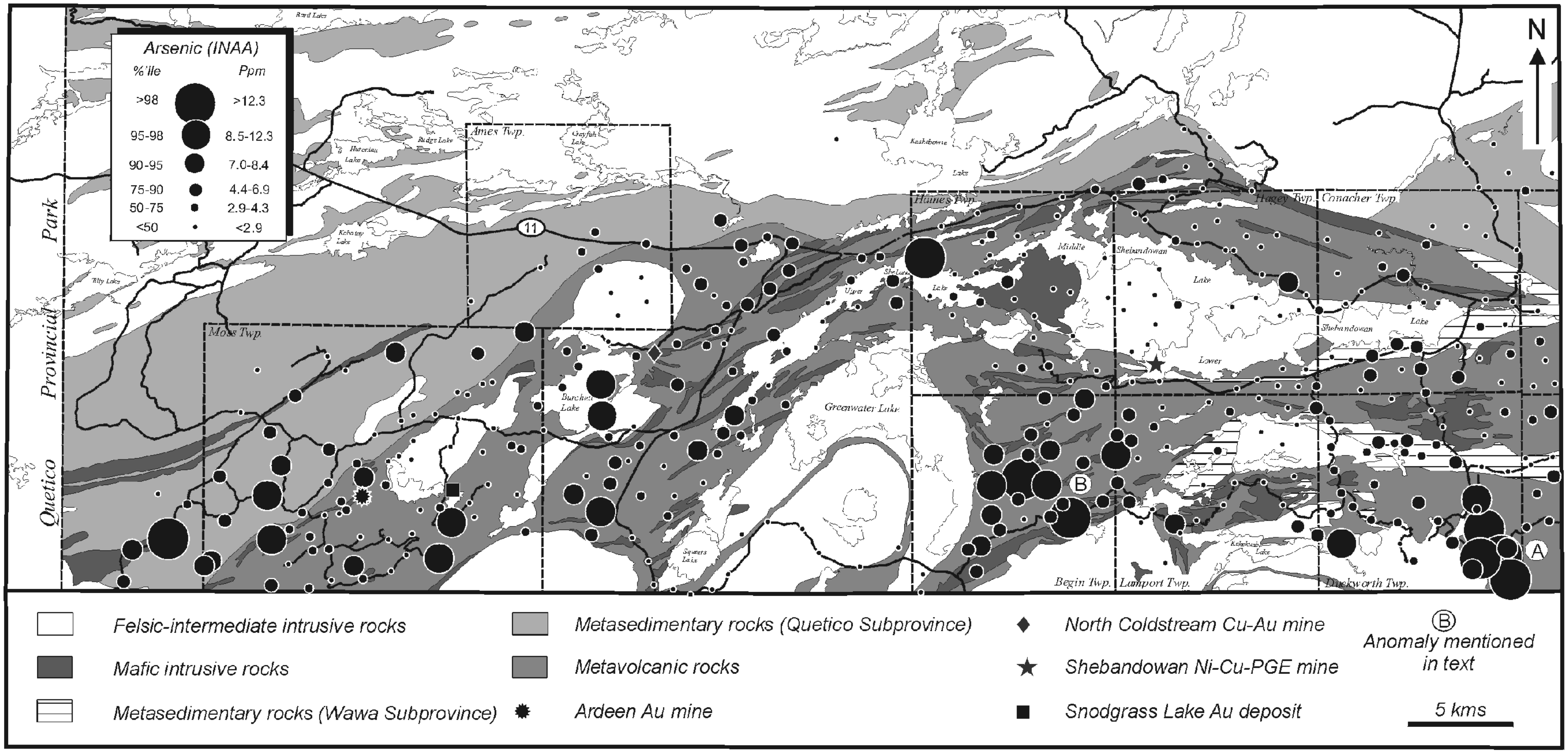

Figure 12. Regional distribution of As in till (-63 μm fraction).

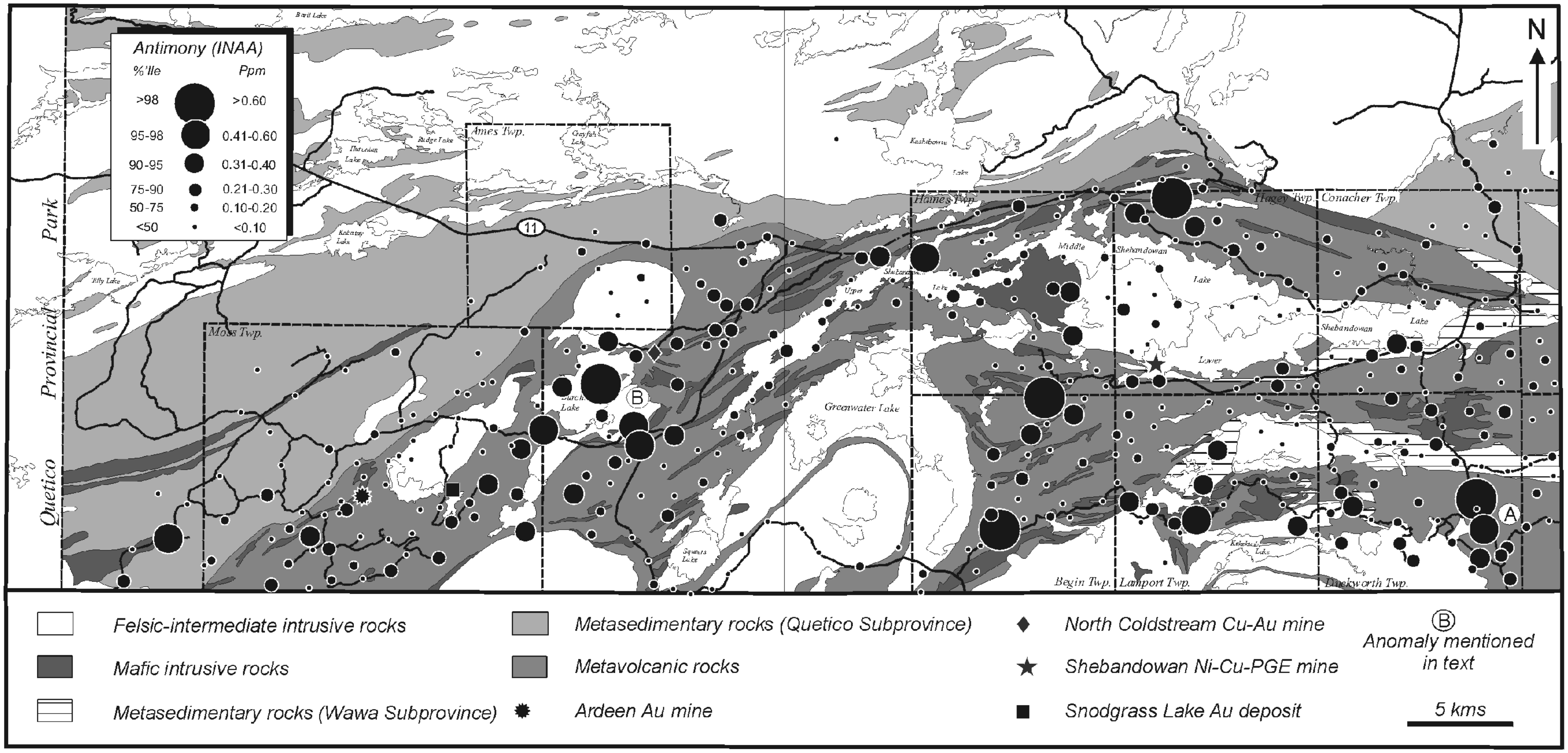

Figure 13. Regional distribution of Sb in till (-63 µm fraction).

Township. Weak anomalies occur in central and west-central Lamport Township and north-central Upper Shebandowan Lake near the Vanguard east and west base metal prospects. Anomalous Sb also occurs over mafic intrusive rocks within the Quetico subprovince along the southwestern corner of the study area.

A well defined Mo anomaly coincident with the Burchell Lake-Snodgrass Lake Au trend is present within the study area (Anomaly A, Figure 14). In the Burchell Lake area, strongly sheared felsic flows and feldspar porphyries, mineralized with pyrite, chalcopyrite, bornite and malachite contain elevated to anomalous concentrations of Cu, Au, As, Sb, Bi and Mo. In the Snodgrass Lake and Span Lake areas, gold mineralization occurs in sheared felsic metavolcanic rocks and in sheared and fractured dioritic to gabbroic intrusive rocks and feldspar and quartz-feldspar porphyries (Osmani 1997). Elevated levels of Mo would not be unexpected within these rock types. A sample of silicified metabasalt from the east-central shore of Snodgrass Lake returned anomalous Mo values as well. Elevated Mo concentrations are also reported from the Hermia Lake Cu-Au showing which is situated along the same trend adjacent to the Burchell Lake Fault (Farrow 1993; Osmani 1997). Thick deposits of glaciofluvial sand and gravel prevented the collection of till samples in the immediate vicinity of the Hermia Lake showing. The association of Cu-Au-Mo within this trend suggests an epithermal or porphyry style of mineralization.

Anomalous Mo values were also obtained from a sample collected near the junction of the North Coldstream Mine Road and the Greenwater Conservation Road (Anomaly B, Figure 14). This sample (3181) also contained anomalous numbers of gold grains. Anomalous Mo values were also obtained from single samples in southeastern Duckworth Township (Gold Creek area), central Haines Township where anomalous gold grain counts were obtained and the southwestern corner of the study area over Quetico metasedimentary rocks.

Anomalous to elevated concentrations of Ag occur along the Burchell Lake-Snodgrass Lake trend as well (Anomaly A, Figure 15). This is not unexpected considering the number of Cu-Au-Ag occurrences that are present in the Burchell Lake area (e.g., North Coldstream Mine, Hermia Lake occurrence). It would appear that Ag is also associated with Au mineralization at Span Lake, Snodgrass Lake and areas to the southwest. Anomalous concentrations of Ag were also obtained from samples 306 (9.98 ppm) and 307 (10.05 ppm) which were collected over supracrustal rocks fringing the Hood Lake stock and from sample 308 (10.01 ppm) which is located just west of Fountain Lake. The Ag values at these sites are well above the regional background anomalous concentration of 0.1 to 0.2 ppm Ag. Further work is recommended to determine the significance of these anomalies. Anomalous to elevated Ag levels were also obtained from samples collected in the Gold Creek area of southeastern Duckworth Township. Isolated anomalies occur in west-central Lamport Township (sample 400), northwestern Haines Township (sample 381) and central Begin Township (sample 333). Elevated levels of Ag also occur over the Quetico subprovince in the vicinity of the Tilly Creek Cu-Au-Ag prospect and areas to the west. Coincident Au, As and Sb anomalies are present in this area as well.

Ni-Cr-Co-Pt-Pd

The patterns depicted by the Ni-Cr-Co results are similar in many respects and closely tied to the distribution of mafic and ultramafic intrusive rocks (Figures 16-18). There are, however, several areas of mafic and ultramafic intrusive rocks where a response in till is muted or non-existent (e.g., Central Lamport). Several areas display anomalies in Ni, Cr and Co. These include: 1) central Begin Township (Anomaly A, Figure 16) where abundant mafic and ultramafic intrusive rocks have been mapped (Osmani 1997); 2) the extreme western end of Upper Shebandowan Lake (Anomaly B, Figure 16) where gabbros, leucogabbros and their derived schists occur (Osmani 1997); 3) north-central Duckworth Township (Anomaly C, Figure 16) over an area mapped as Shebandowan assemblage metasedimentary rocks and within which extensive exploration for Au has occurred. Mafic and ultramafic intrusive rocks have been noted on the periphery of metasedimentary rocks in this area (John Scott, Ontario Geological Survey, personal communication 2000); and 4) south-central Duckworth Township north of the Kekekuab intrusion (Anomaly D, Figure 16). Small monzogabbroic to gabbroic phases of the Kekekuab intrusion have been mapped along the south edge of this anomaly (Rogers and Berger 1995).

Anomalous Cr and elevated to anomalous Ni and Co values were obtained from several samples collected from an area southwest of the Ardeen Mine (Anomaly A, Figure 17). Narrow slivers of gabbro,

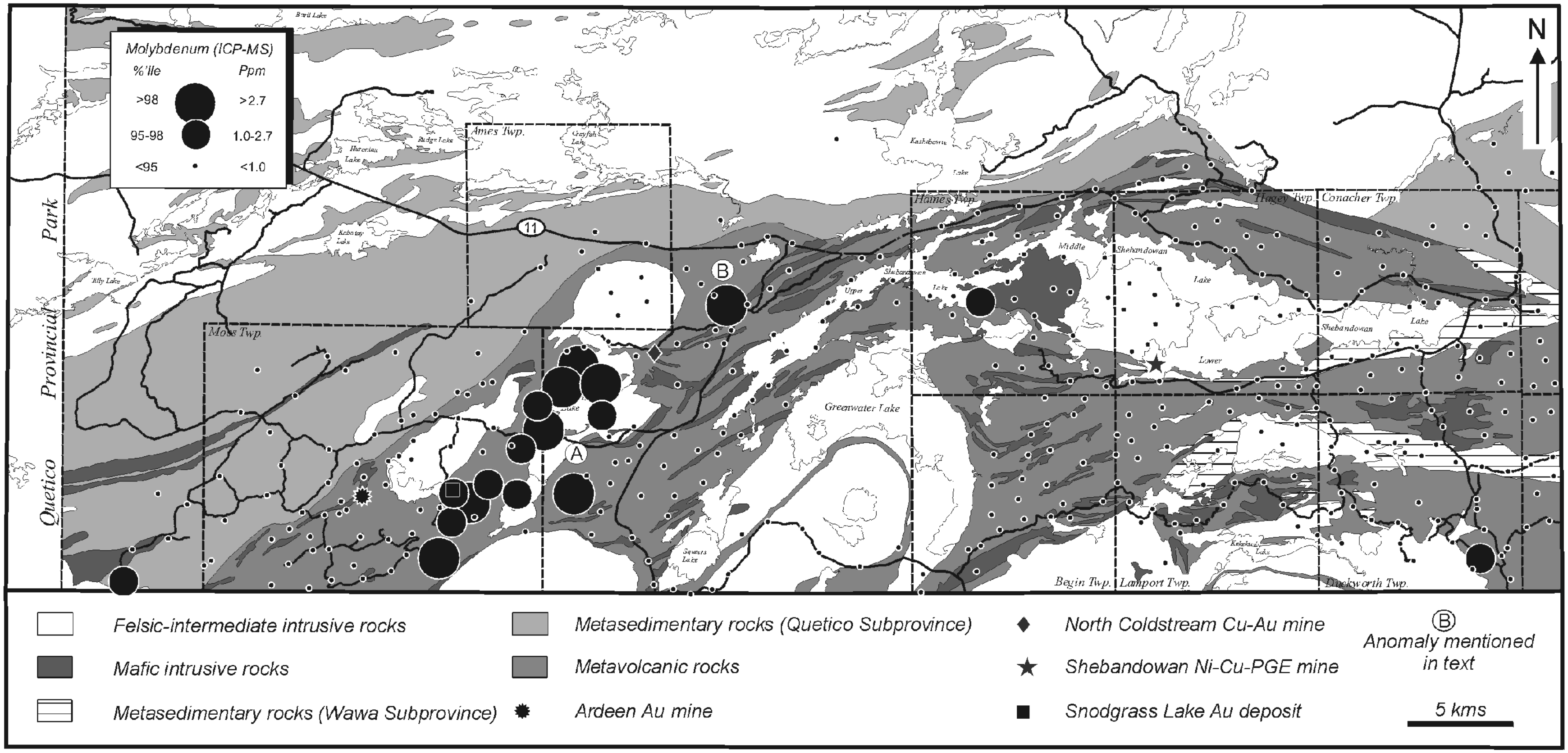

Figure 14. Regional distribution of Mo in till (-63 µm fraction).

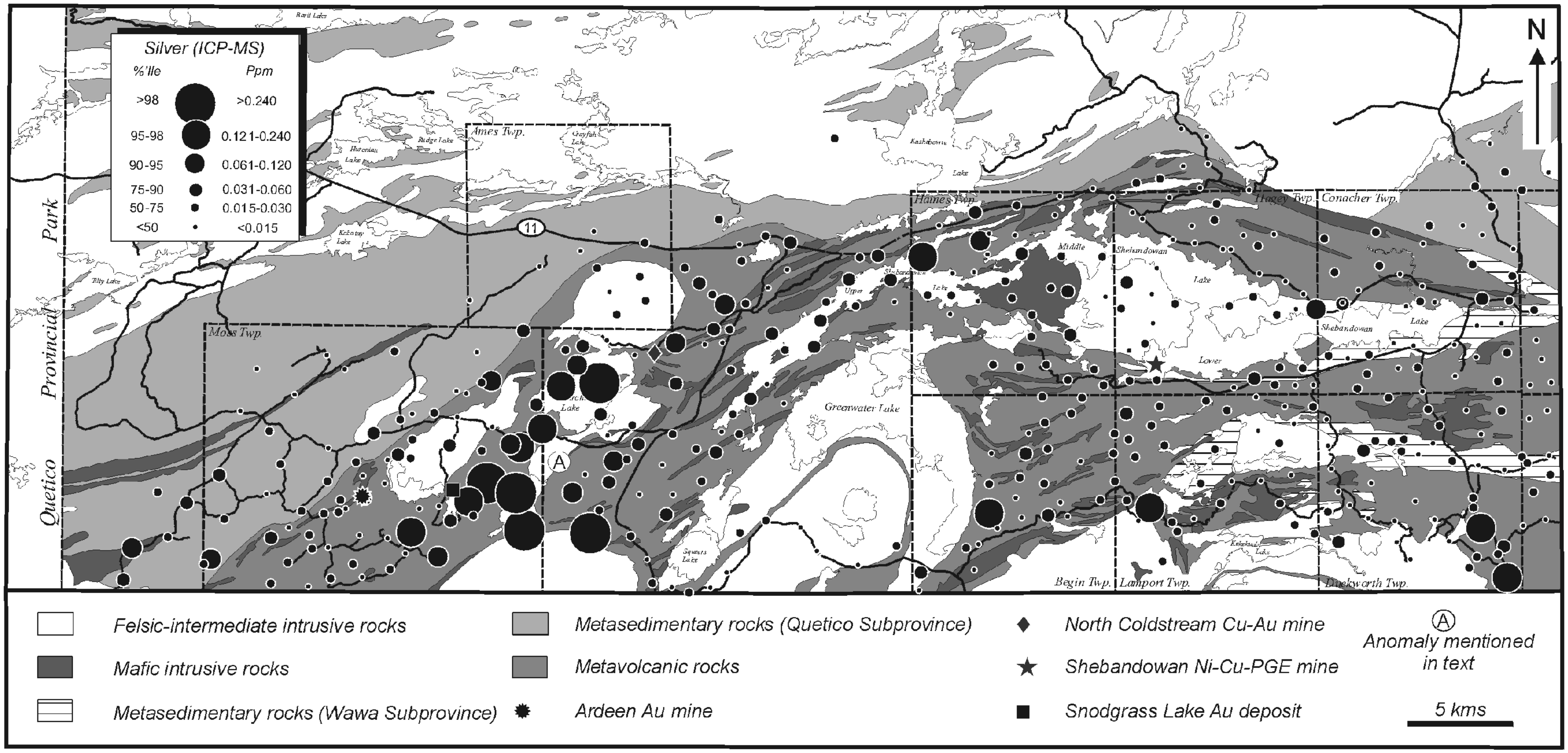

Figure 15. Regional distribution of Ag in till (-63 µm fraction).

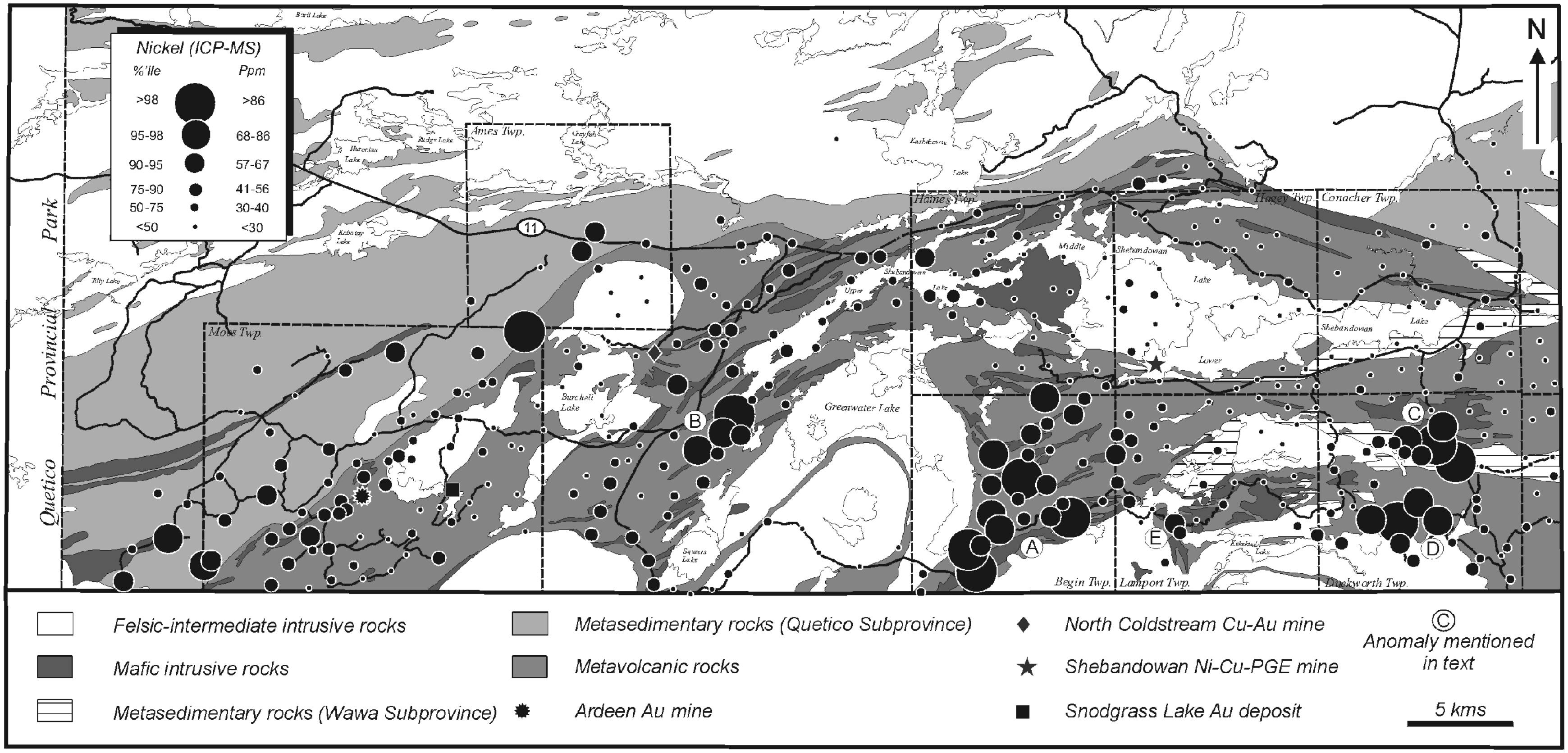

Figure 16. Regional distribution of Ni in till (-63 µm fraction).

leucogabbro and diorite have been mapped within this area and may account for the observed patterns. A single sample from the extreme northeast corner of Moss Township contains extraordinarily anomalous levels of Ni, Cr and Co (Anomaly B, Figure 17). Gabbro and amphibolite occurs within this area (Osmani 1997). Additional sampling and prospecting is suggested within this area to determine the significance of this multi-element anomaly.

Elevated to anomalous concentrations of Ni±Cr±Co also occur within the Quetico subprovince in association with mapped mafic sills. Till samples collected over and adjacent to the Tilly Creek Cu-Au prospect in the southwestern corner of Moss Township contain anomalous Ni and Co concentrations. Elevated to anomalous Co values were obtained on several samples collected from Upper Shebandowan Lake near the entrance to Three Mile Bay.

Abundant gabbro and associated mafic intrusive lithologies occur within this area and probably are responsible for the anomalous pattern. Elevated to anomalous levels of Ni, Cr and Co were also obtained from 2 samples collected just south of Tinto Lake in southwestern Lamport Township (Anomaly E, Figure 16). Gabbro, leucogabbro and amphibolite with minor anorthositic gabbro and peridotite has been mapped within this area and is likely responsible for the observed response.

The apparent lack of response associated with a number of gabbroic and peridotitic intrusions in southern Haines Township is attributed to a lack of samples in close proximity to the sills. Further till sampling is required within this region to fully evaluate the area's potential. There is very little, if any, geochemical evidence of the Shebandowan Ni-Cu-PGE deposit. This is most likely a result of the extremely narrow nature of the peridotite body (less than a few hundred metres) that hosts Ni-Cu mineralization at the mine site, the recessive nature of the orebody (i.e. it lies mostly beneath the lake) and the lack of samples in the immediate down-ice direction from the ore body. Glaciofluvial and glaciolacustrine deposits are abundant proximal to the mine site.

Pt and Pd occur at extremely low levels within the –63μm fraction of tills collected as part of this study. High quality data at these low levels was only achieved by using ovens dedicated to low-level analyses, high quality fluxes and an ICP mass spectrometer for the final determinations. The background levels of Pt and Pd in till are not unlike those obtained from a separate survey in the Sudbury region where Pt and Pd occurs in many of the Ni-Cu sulphide ores (Bajc and Hall in preparation). Background levels of Pt and Pd are significantly higher over the eastern half of the study where sills and intrusions of mafic and ultramafic affinity are common (Figures 19 and 20).

A number of areas have been identified where Pt occurs at elevated to anomalous concentrations (Figure 19). These include: 1) 3 samples collected over mafic and ultramafic intrusive rocks in southern Begin Township (Anomaly A, Figure 19); 2) a cluster of 3 samples in northeastern Conacher Township and adjacent areas to the north (Anomaly B, Figure 19). Bedrock exposure is limited within this area. No apparent source for the anomaly has been recognized; 3) a group of 4 samples in southeastern Conacher Township where gabbroic sills and small intrusions have been mapped (Anomaly C, Figure 19)(Morin 1973); and 4) a cluster of samples over the Shebandowan stock of quartz dioritic composition in west-central Hagey Township (Anomaly D, Figure 19). Significant single sample anomalies occur in central Moss Township, northwestern Haines Township on Upper Shebandowan Lake and just north of central Hagey Township within the Quetico subprovince.

The patterns depicted by the Pd data are similar to those presented for Pt. Anomalous concentrations of Pd occur: 1) at the east end of Lower Shebandowan Lake (Anomaly A, Figure 20); 2) along the southeastern corner of Conacher Township (Anomaly B, Figure 20); 3) in west-central Hagey Township over the Shebandowan stock (Anomaly C, Figure 20); 4) in east-central Lamport Township (Anomaly D, Figure 20); and 5) in north-central Lamport Township (Anomaly E, Figure 20). Significant single sample anomalies occur in central Moss Township, northwestern Haines Township on Upper Shebandowan Lake and in southeastern Duckworth Township within the Gold Creek area.

It is unclear whether the Pt and Pd responses described above are indicative of platinum group element mineralization within the study area. Samples defined as anomalous are only marginally enriched in Pt and

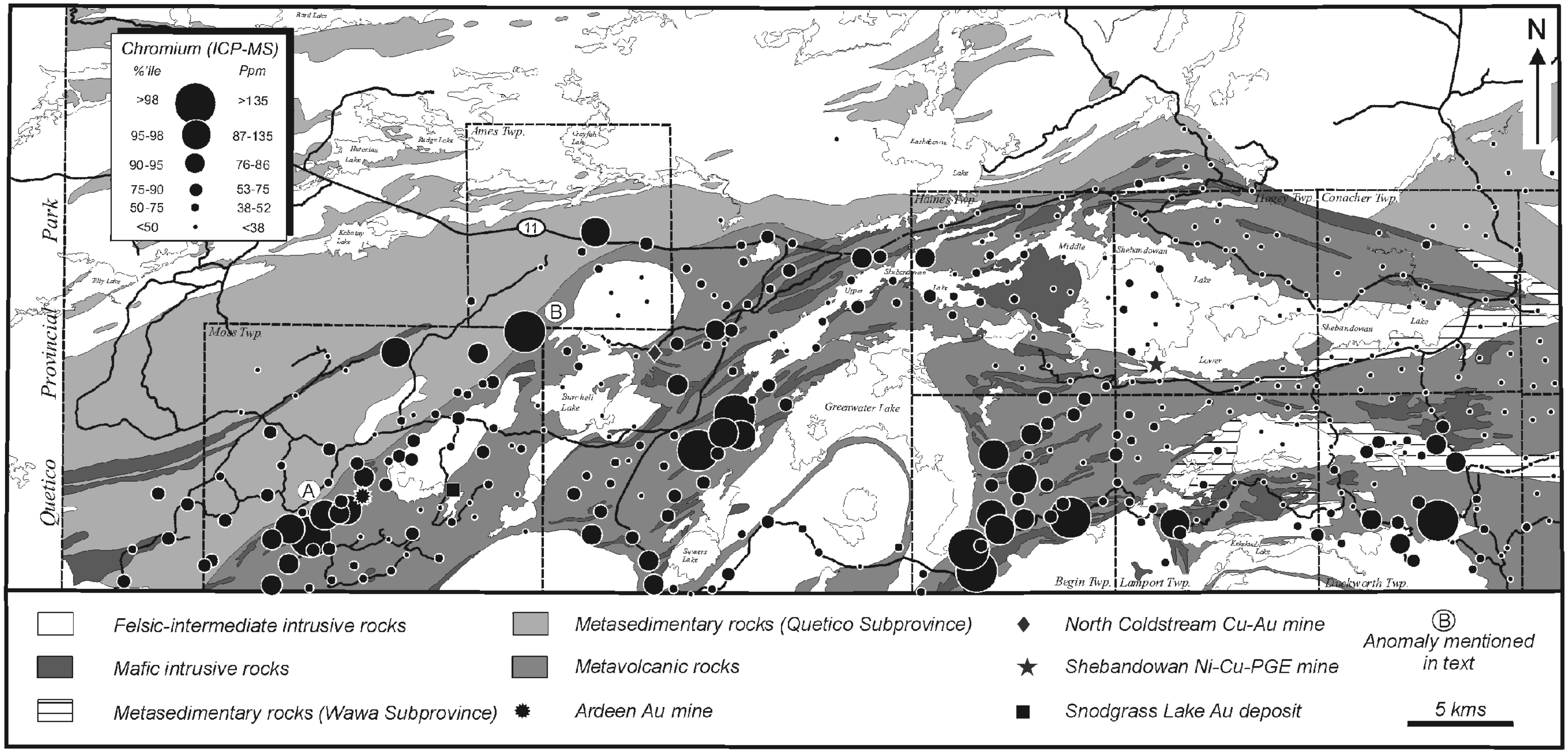

Figure 17. Regional distribution of Cr in till (-63 µm fraction).

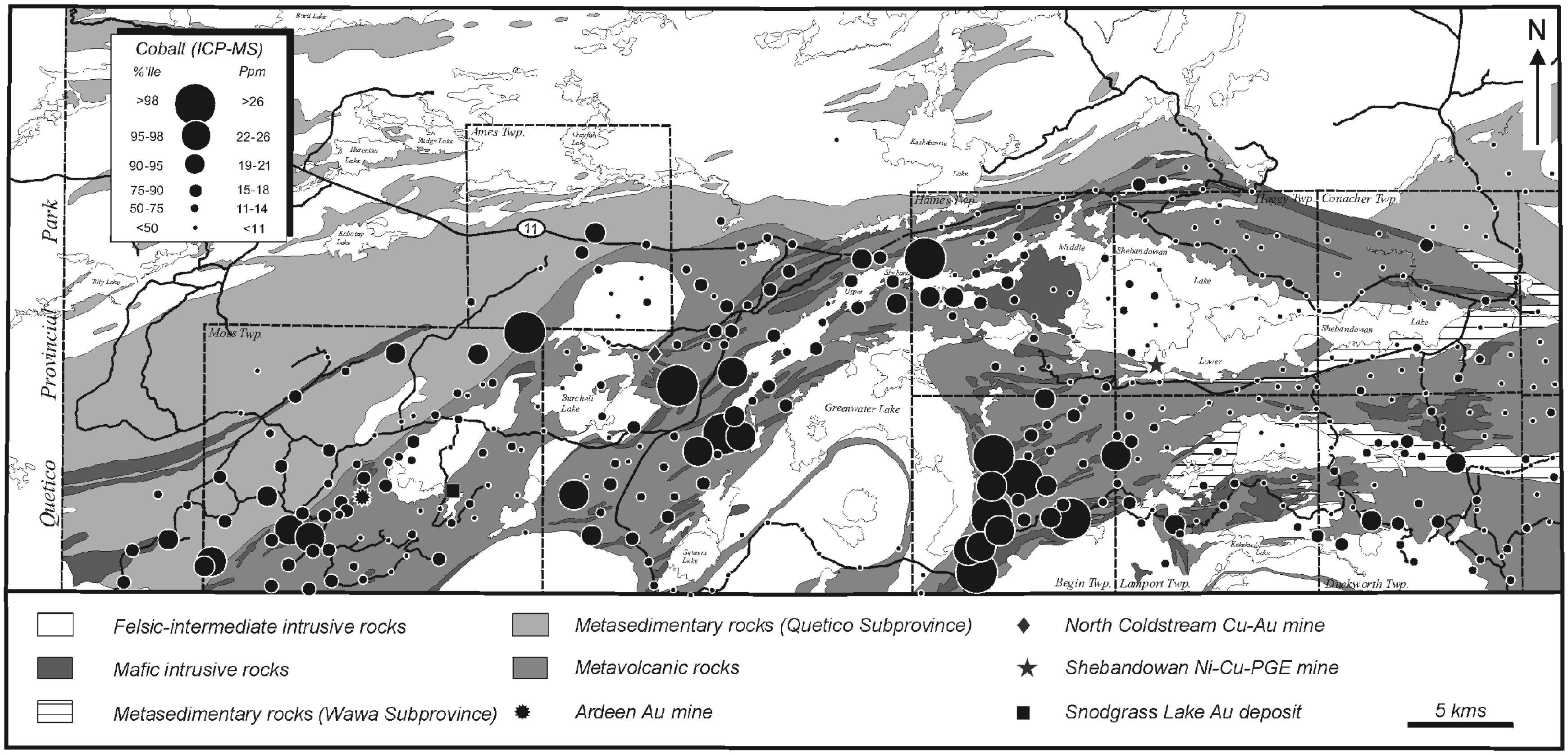

Figure 18. Regional distribution of Co in till (-63 µm fraction).

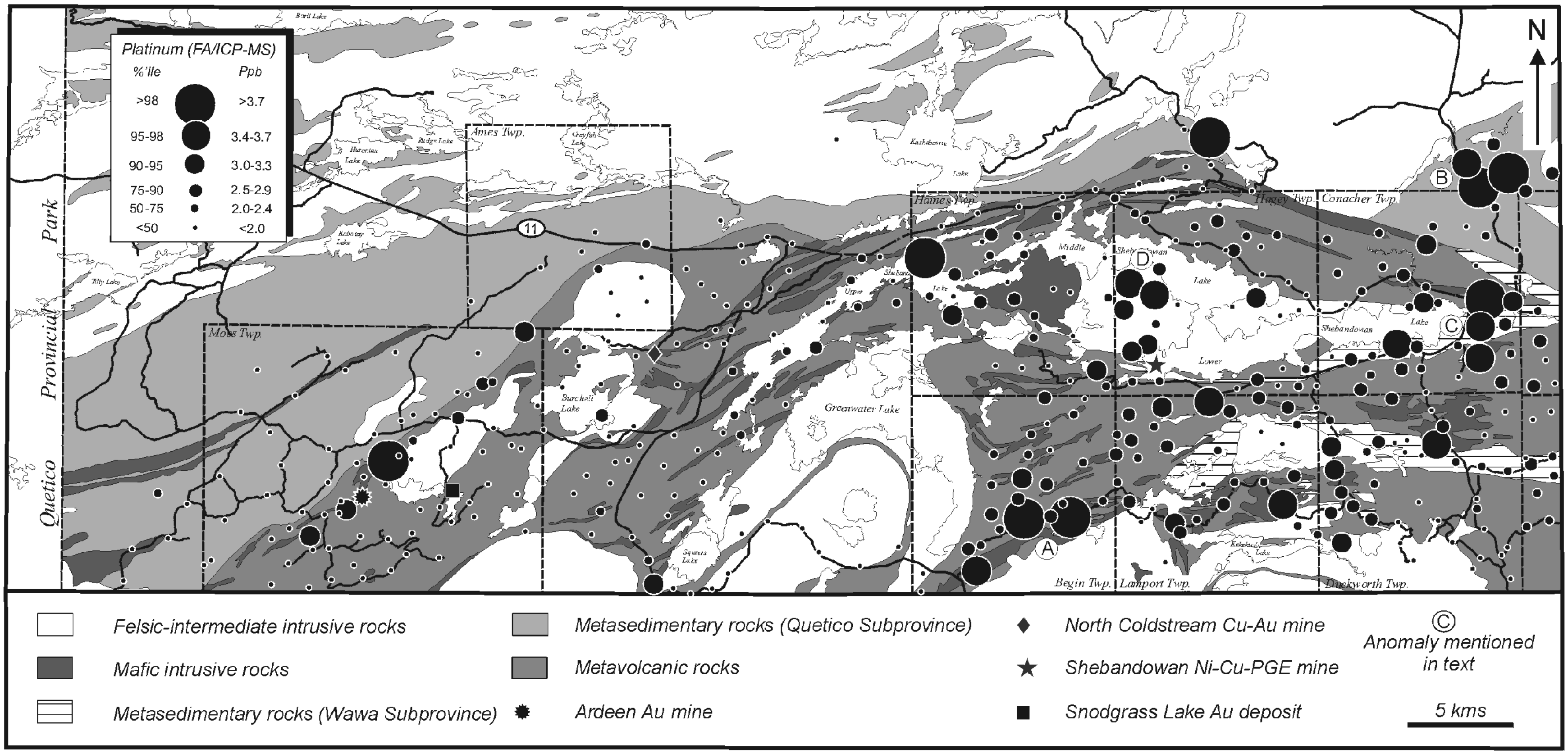

Figure 19. Regional distribution of Pt in till (-63 μm fraction).

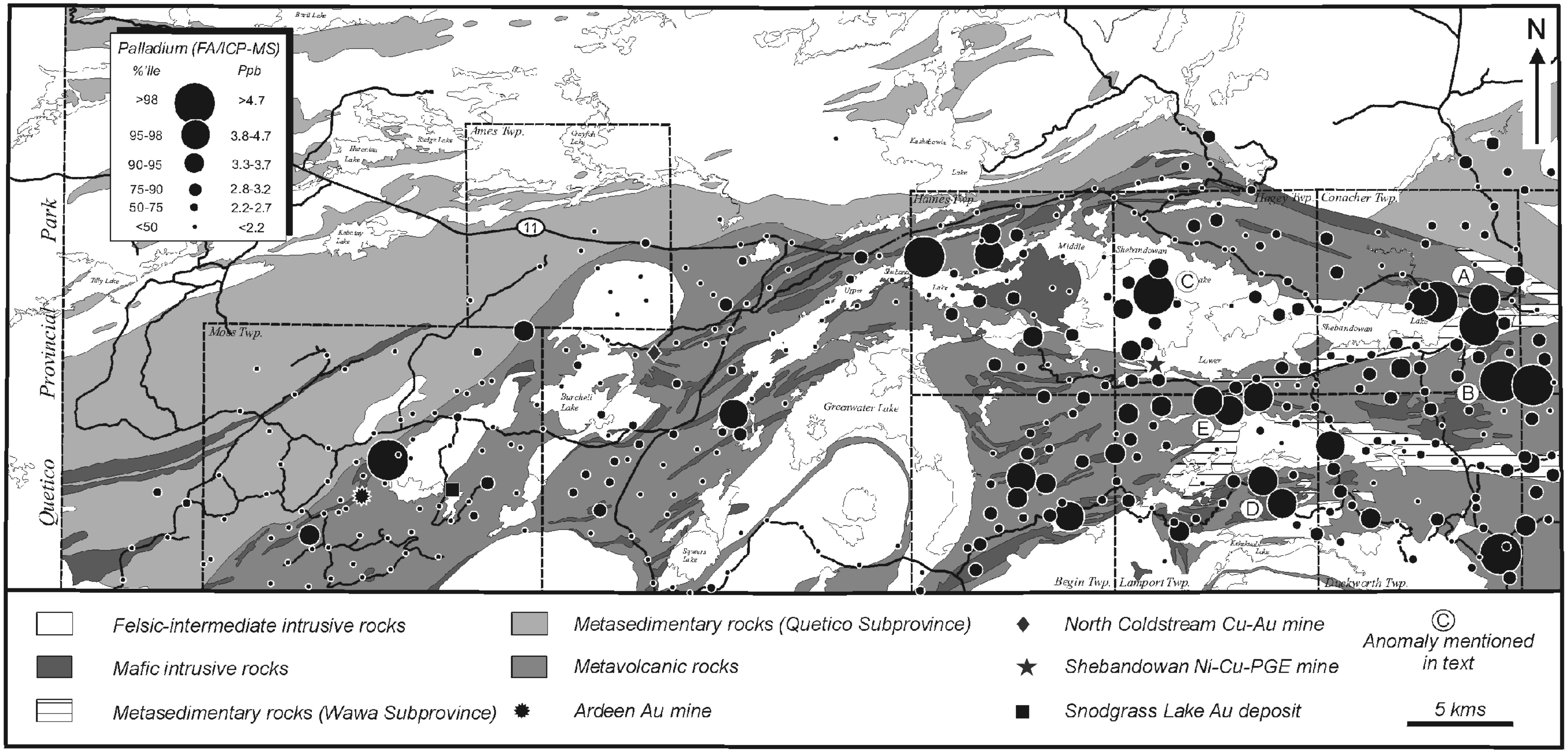

Figure 20. Regional distribution of Pd in till (-63 μm fraction).

Pd. There are no samples that contain exceptionally high levels. A follow-up program might involve some basic prospecting within the areas of elevated Pt and Pd to determine whether suitable source rocks are present. If they are, higher density till sampling may help to further refine potential targets for mineralization. Pt and Pd responses in the immediate vicinity of the Shebandowan Ni-Cu-PGE mine are only slightly elevated above regional background. The reason for this muted response has been discussed earlier with respect to the elements Ni-Cr-Co.

Cu-Zn-Pb-Cd

Anomalous concentrations of Cu, Zn, Pb or Cd in till not only provide information on the base metal potential of the study area but also provide information on the potential for other mineral deposit types where they may occur as auxiliary elements.

The patterns depicted by the Cu dataset are not unlike those depicted by Au. Strong Cu anomalies occur along the Burchell Lake-Snodgrass Lake trend as well as on Upper Shebandowan Lake (Anomaly A, Figure 21). The Cu anomaly following the Burchell Lake-Snodgrass Lake trend occurs in association with Au, Mo and Ag (Anomaly B, Figure 21). This element association supports a porphyry or epithermal model for mineralization. Discussions of mineralization along this trend are contained earlier in this report. Anomalous concentrations of Cu on Upper Shebandowan Lake are most likely related to significant Cu occurrences on/adjacent to the lake including the Shebandowan West (Au-Cu-Mo-Ag), Copper Island (Cu) and Vanguard East and West (Cu-Zn-Au-Ag) prospects.

Anomalous Cu concentrations also occur in till near the junction of the Greenwater Conservation Road and the North Coldstream Mine Road (Anomaly C, Figure 21). Diamond drilling within this area during the late 1950s resulted in Cu intersections of up to 0.12% (Giblin 1964). Based on the strength of this anomaly and its strong association with Au and Mo, it is recommended that additional till sampling and prospecting be undertaken to determine the significance of this anomaly.

A large area of elevated to anomalous Cu in till also occurs in central Begin Township (Anomaly D, Figure 21). This anomaly is likely a result of mafic and ultramafic intrusions that have been mapped within this region (Osmani 1997). Similar intrusive bodies to the north and east fail to respond in a similar manner. This may be attributed to the difference in character (i.e., local versus semi-local nature) of the tills within these 2 regions. On the other hand, it may indicate that there is potential for Cu mineralization within the mafic and ultramafic intrusive rocks of central Begin Township. Tills collected from the region of extensive till cover to the north and east appear to respond geochemically to local variations in bedrock geology (e.g., As, Sb, Ni, Cr and Co).

Other single sample anomalies worth noting include: sample 305, which is situated approximately 1.5 km east of Fountain Lake; sample 200, which was collected along the Greenwater Conservation Road west of Church Lake; and sample 378, which was collected on the southwest shore of Birch Island on Upper Shebandowan Lake. A Cu showing located approximately 500 m northwest of Church Lake in a gabbroic intrusion attests to the potential for further discoveries in the vicinity of sample 200. Sample 305 was collected from an exploration trench where felsic-intermediate volcanic rocks are exposed. A Cu-Ni-Zn showing occurs along strike approximately 1 km southwest of the sample site. Further till sampling and prospecting is recommended within this region to fully evaluate the anomaly. The Cu anomaly on Birch Island of Upper Shebandowan Lake is underlain by amphibole gabbro. Base metal mineralization occurs in similar rocks less than 1 km to the northeast on Northwest Peninsula. Here, mineralization occurs as elongate blebs along shear zones and consists of chalcopyrite and pyrite (Farrow 1993).

Elevated background concentrations of Cu also occur in central Moss Township along the trend of the Boundary Fault Zone as well as to the west into the Quetico subprovince. Elevated Cu also occurs in southern Duckworth Township where numerous mafic intrusions of monzogabbro to gabbro have been identifed (Rogers and Berger 1995).

Of particular importance is the apparent lack of a strong geochemical response associated with the Shebandowan Ni-Cu-PGE deposit. A low tenor response has been identified, however, up to 5 km

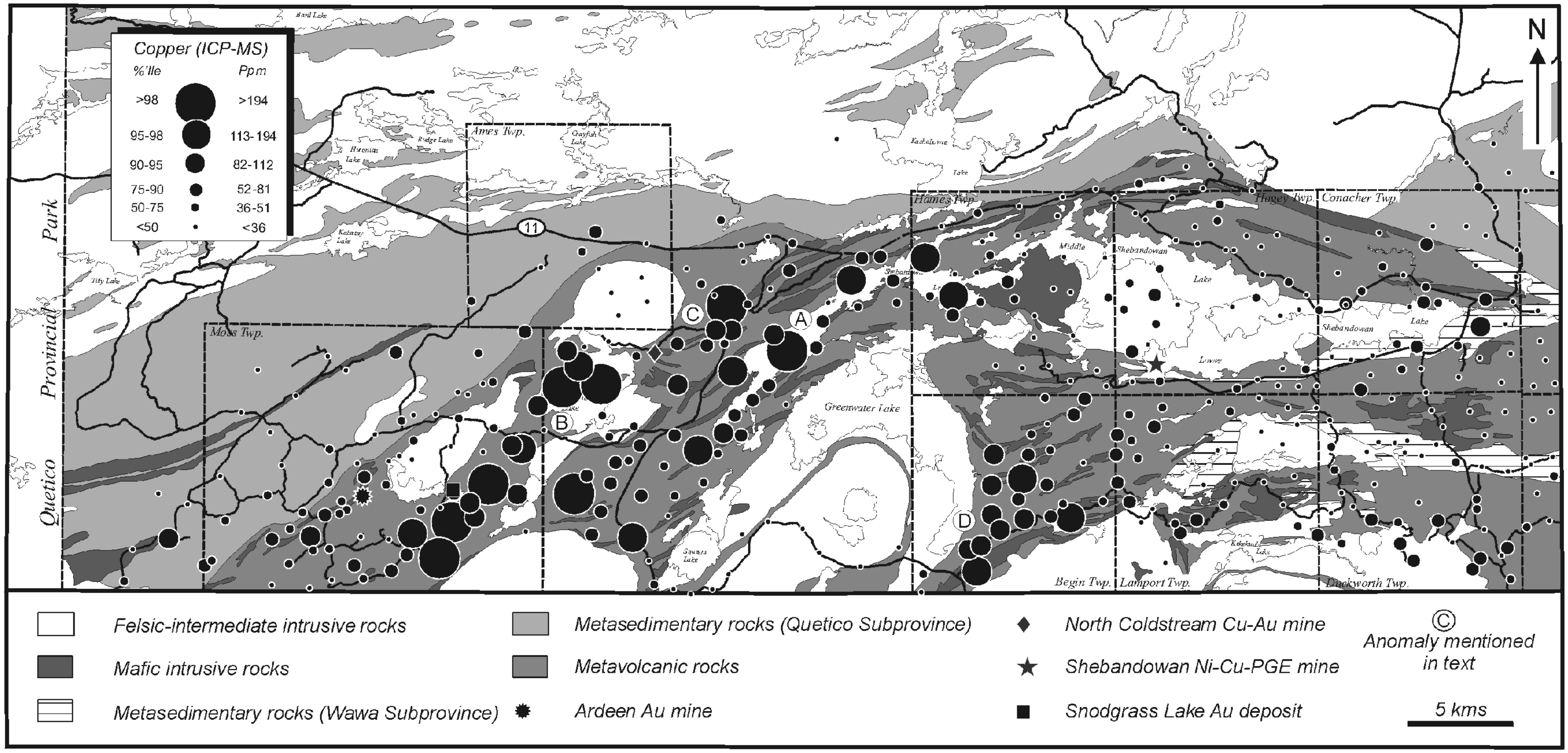

Figure 21. Regional distribution of Cu in till (-63 µm fraction).

southwest of the deposit and consists of several samples containing Cu at levels of the 50th to 90th percentile. The poor response may be attributed to either the recessive nature of the deposit or the semi-local nature of the till in this region. As mentioned earlier, there is a strong chrome diopside response associated with the deposit. Clasts of serpentine, believed to be derived from the ultramafic lithologies present at the mine site, were also recovered from till up to 6 km southwest of the deposit.

Several exploration targets are defined by the Zn geochemical dataset. A multi-sample anomaly in central Begin Township is underlain by mafic metavolcanic rocks with minor mafic intrusive and felsic-intemediate metavolcanic rocks (Anomaly A, Figure 22). Anomalous Zn mineralization occurs in silicified and iron carbonatized amphibole schists with associated pyrite along the southeastern shore of Greenwater Lake (Osmani 1997). Additional till sampling and prospecting is recommended within this anomaly.

Anomalous levels of Zn were also obtained from several samples collected on Upper Shebandowan Lake in the vicinity of the hamlet of Kashabowie (Anomaly B, Figure 22). Till samples collected over the Vanguard East and West base metal prospects account for 2 of the 4 samples that comprise this anomaly. The easternmost sample (381) is situated at the entrance to Three Mile Bay (Upper Shebandowan Lake) and contains 151 ppm Zn. By contrast, till samples collected over the Vanguard East and West prospects returned Zn values of 115 and 88 ppm, respectively. Additional till sampling is recommended, especially south of Three Mile Bay, to refine possible base metal exploration targets. The Whalen base metal showing occurs approximately 1 km southeast of sample 381 and is hosted by highly-strained, felsic-intermediate metavolcanic rocks (Farrow 1994).

Two till samples collected between Fountain Lake and the Greenwater Conservation Road (Anomaly C, Figure 22) returned highly anomalous Zn values (samples 305 and 320). Both samples were collected over felsic-intermediate metavolcanic rocks in close proximity to mafic metavolcanic rocks. Most of the base metal mineralization within this region occurs close to the sheared or fractured contacts between these rock types (Osmani 1997). A Cu-Ni-Zn anomaly occurs just west of this anomaly attesting to the base metal potential of this region.

Anomalous to highly anomalous Zn values were also obtained from 3 samples collected from the northeast shore of Burchell Lake and Skimpole Lake (Anomaly D, Figure 22). No known Zn mineralization has been recognized within this region. The sample collected adjacent to Skimpole Lake (303) is situated a few hundered metres west of a Cu-Ni-Au-Ag occurrence hosted by gabbro. The 2 samples collected on Burchell Lake (317 and 367) are underlain by felsic metavolcanic rocks and occur in close proximity to a Cu-Au-Ag showing on the east shore of the lake. The North Coldstream Cu-Au-Ag mine, which is probably genetically unrelated, is situated less than a kilometre to the northeast of the anomaly.

Elevated to anomalous Zn values were also obtained from several samples collected from the extreme western end of Upper Shebandowan Lake where a strong gold grain and mafic-ultramafic geochemical signal exists (Anomaly E, Figure 22). Two samples collected from east-central Conacher Township returned elevated to anomalous Zn values as well (Anomaly F, Figure 22). No known base metal occurrences are present in this area. A couple of samples collected from southern Begin Township contained anomalous Zn values. Isolated, single sample anomalies occur: 1) at the south end of Snodgrass Lake; 2) north of the Ardeen Mine site; 3) in the extreme northeast corner of Moss Township; 4) over Quetico metasedimentary rocks near Crayfish Creek; and 4) in north-central Duckworth Township. Additional sampling and prospecting is required to evaluate the significance of these anomalies.

With the exception of a few samples, the patterns depicted by the Pb geochemistry shows few similarities with the Cu and Zn datasets (Figure 23). Anomalous concentrations of Pb may be associated with other types of mineralization where galena occurs as an accessory mineral. Anomalous concentrations of Pb occur along the outer edges of the Pinecone Stock in west-central Lamport Township (Anomaly A, Figure 23). A sulphide showing containing pyrite, chalcopyrite and garnet and hosted by a felsic fragmental unit in contact with mafic metavolcanic rock occurs approximately 1 km south of central Tinto Lake and attests to the base metal potential of this area. Additional till sampling and prospecting is recommended within this area to fully evaluate the significance of this anomaly.

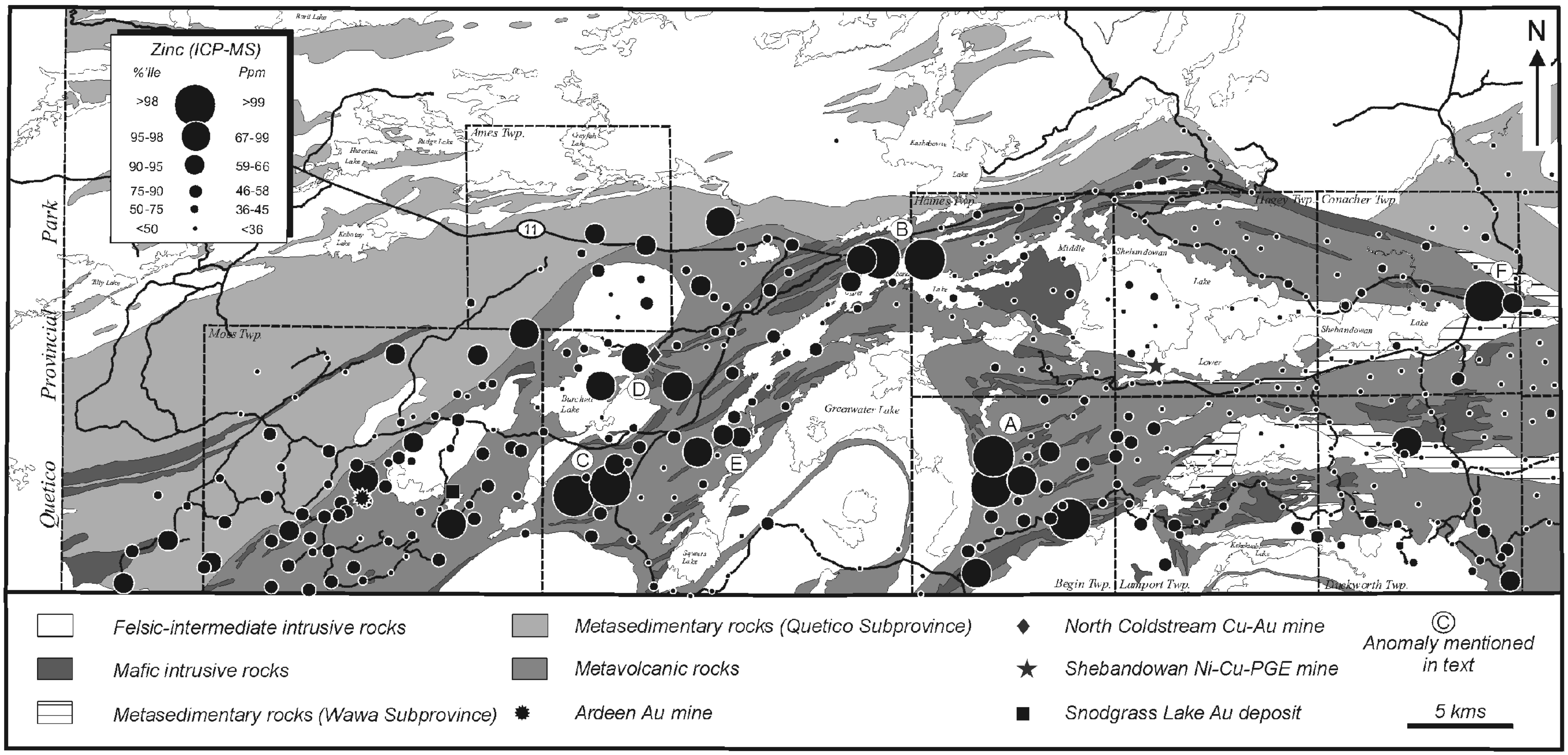

Figure 22. Regional distribution of Zn in till (-63 µm fraction).

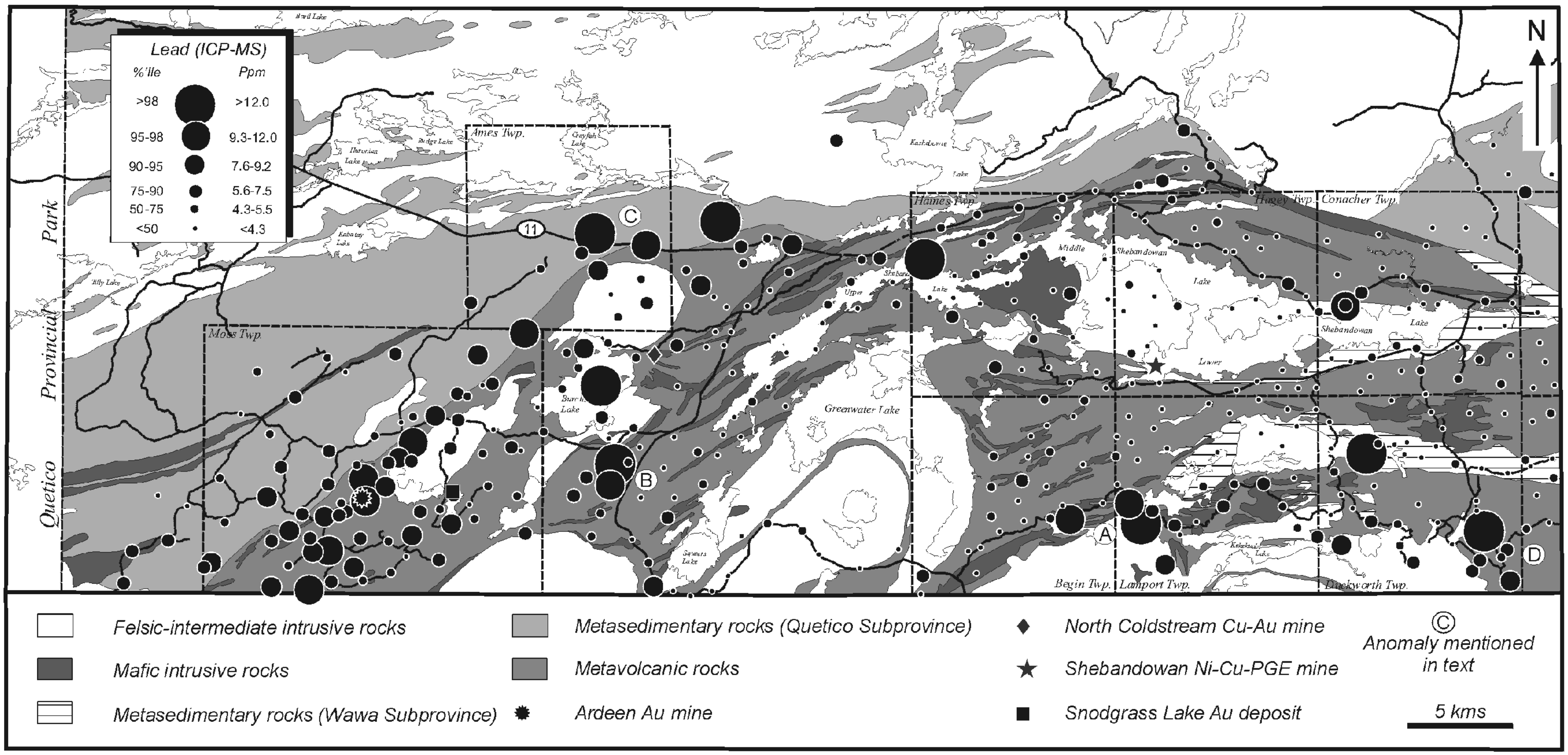

Figure 23. Regional distribution of Pb in till (-63 µm fraction).

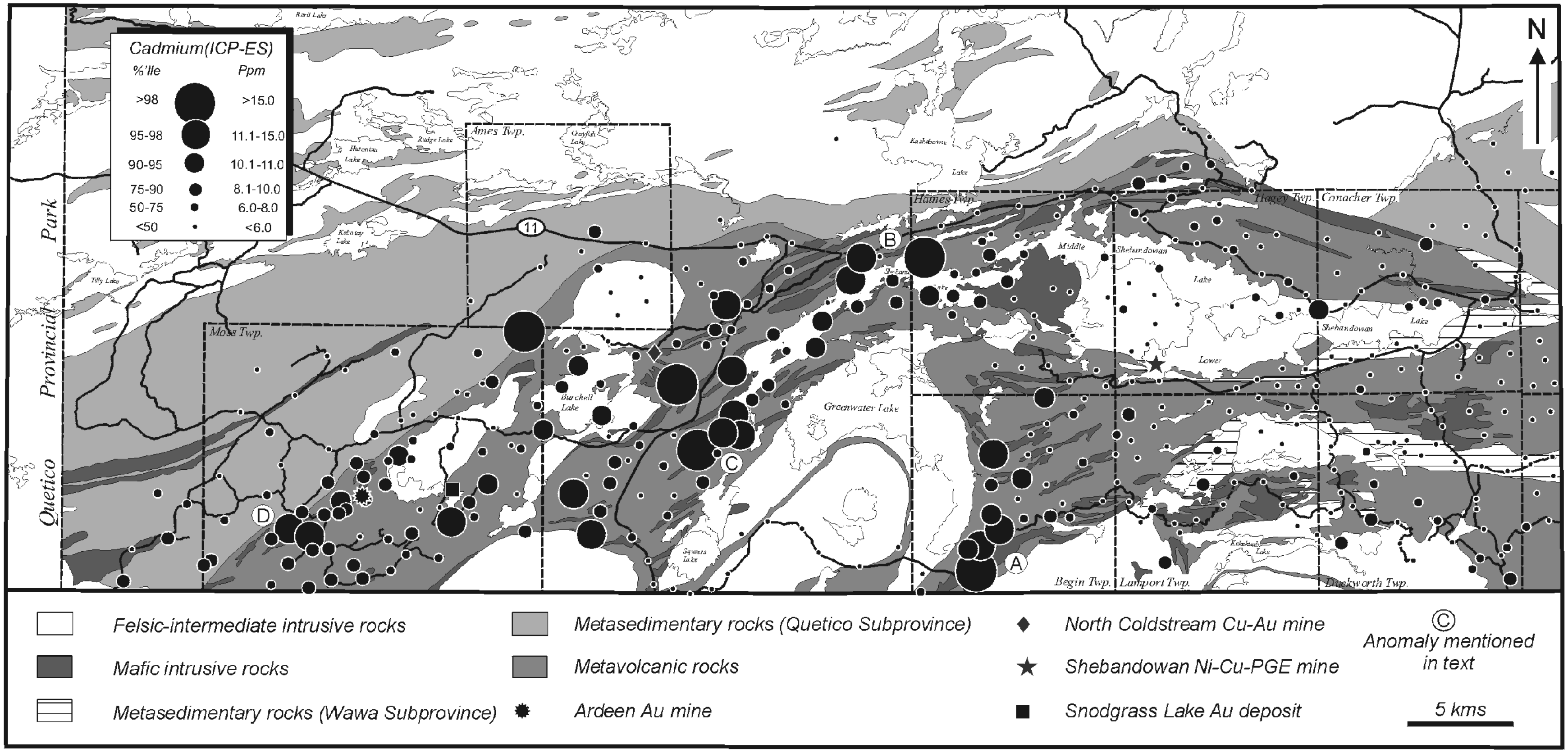

Figure 24. Regional distribution of Cd in till (-63 µm fraction).

Anomalous concentrations of Pb were also obtained from 2 samples sites located just west and south of the Greenwater Conservation and Hermia Lake roads, respectively (Anomaly B, Figure 23). The base metal potential of this region has been discussed previously. The lead results confirm the need for additional work within this region. Anomalous Pb values were also obtained from several samples collected over the Quetico subprovince in Ames Township and adjacent areas to the east (Anomaly C, Figure 23). The significance of these anomalies is not fully known. Thin slivers of gabbroic rock occur within the Quetico metasediments of this region and may have contributed to this response. Elevated to anomalous concentrations of Pb also occur in southeastern Duckworth Township (Anomaly D, Figure 23) in the Gold Creek area (see previous discussions of Au geochemistry). Isolated anomalous Pb values were also obtained from: 1) northwest Duckworth Township where Au mineralization occurs in quartz veins cutting felsic alkalic rocks of the Peewatai Lake intrusion; 2) west-central Conacher Township where sulphide mineralization occurs in brittle shears cutting felsic intrusive rocks of the Shebandowan stock; 3) northwest Haines Township where anomalous Cu and Zn values were obtained; and 4) east-central Burchell Lake where a Cu-Au-Ag showing has been documented.

Elevated to anomalous Pb values also occur over a broad area extending from the northeast corner of Moss Township towards the southwest corner following the general trend of the Boundary Fault Zone. Samples collected in the immediate vicinity of the Ardeen Au Mine are especially anomalous. The quartz±carbonate veins that host Au mineralization contain pyrite, sphalerite, chalcopyrite, galena and tellurides. Osmani (1997) notes that the quartz veins usually contain a high Au content and anomalous to highly anomalous base metal mineralization, especially Pb (up to 555 ppm). Pb geochemistry may prove useful as an indicator of additional Au mineralization. Other anomalies within this general trend should be investigated to determine their significance.

Despite poor data quality (accuracy and precision, see Table 3), the geochemical results presented in Figure 24 for Cd display trends that are worth mentioning. Several areas of elevated to anomalous Cd exist that may be related to base metal mineralization. These include: 1) a cluster of samples in southwestern Begin Township (Anomaly A, Figure 24); 2) a cluster of samples on Upper Shebandowan Lake centred on the Vanguard East and West Prospects (Anomaly B, Figure 24); 3) a cluster of samples at the extreme western end of Upper Shebandowan Lake (Anomaly C, Figure 24); and 4) a couple of samples southwest of the Ardeen Mine in Moss Township (Anomaly D, Figure 24). Single sample anomalies occur: 1) in north-central Begin Township; 2) along the northeast shore of Skimpole Lake; 3) near the intersection of Greenwater Conservation Road and Highway 802 (North Coldstream Mine Road); 4) between Fountain Lake and the Greenwater Conservation Road; 5) at the south end of Snodgrass Lake; and 6) at the extreme northeastern corner of Moss Township. All of these anomalies should be investigated to determine their significance in terms of base metal potential.

Summary of Anomalies

The current study clearly defines a number of precious and base metal exploration targets within the western half of the Shebandowan greenstone belt. Although many of the anomalies identified are associated with known mineralization, the till geochemistry provides valuable information that may assist with the interpretation of the style of mineralization and possible trends along which mineralization may continue. The geochemistry and indicator mineral data also provide useful pathfinder information that may help with property-scale exploration programs. The data presented also provide information on the distibution of particular host lithologies where a particular type of mineralization is likely to occur (e.g., Ni-Cr-Co geochemistry highlights areas of mafic and ultramafic intrusive and extrusive rock types).

Important Au exploration targets are identified primarily on the basis of Au grain content and Au geochemistry. All Au anomalies have a number of other elements that occur at elevated to anomalous levels. In the Gold Creek area (Anomaly K, Figure 25), As, Sb, Ag and Pb are closely associated with Au mineralization. Arsenic in soil anomalies led to the discovery of several of the Au occurrences in the Gold Creek area. In the Ardeen Mine area (Anomaly A, Figure 25), a number of accessory sulphide minerals, including galena, sphalerite and chalcopyrite, occur in association with Au mineralization. Background concentrations of Pb, Zn and Cu in till are elevated within this area. The base metal content of tills

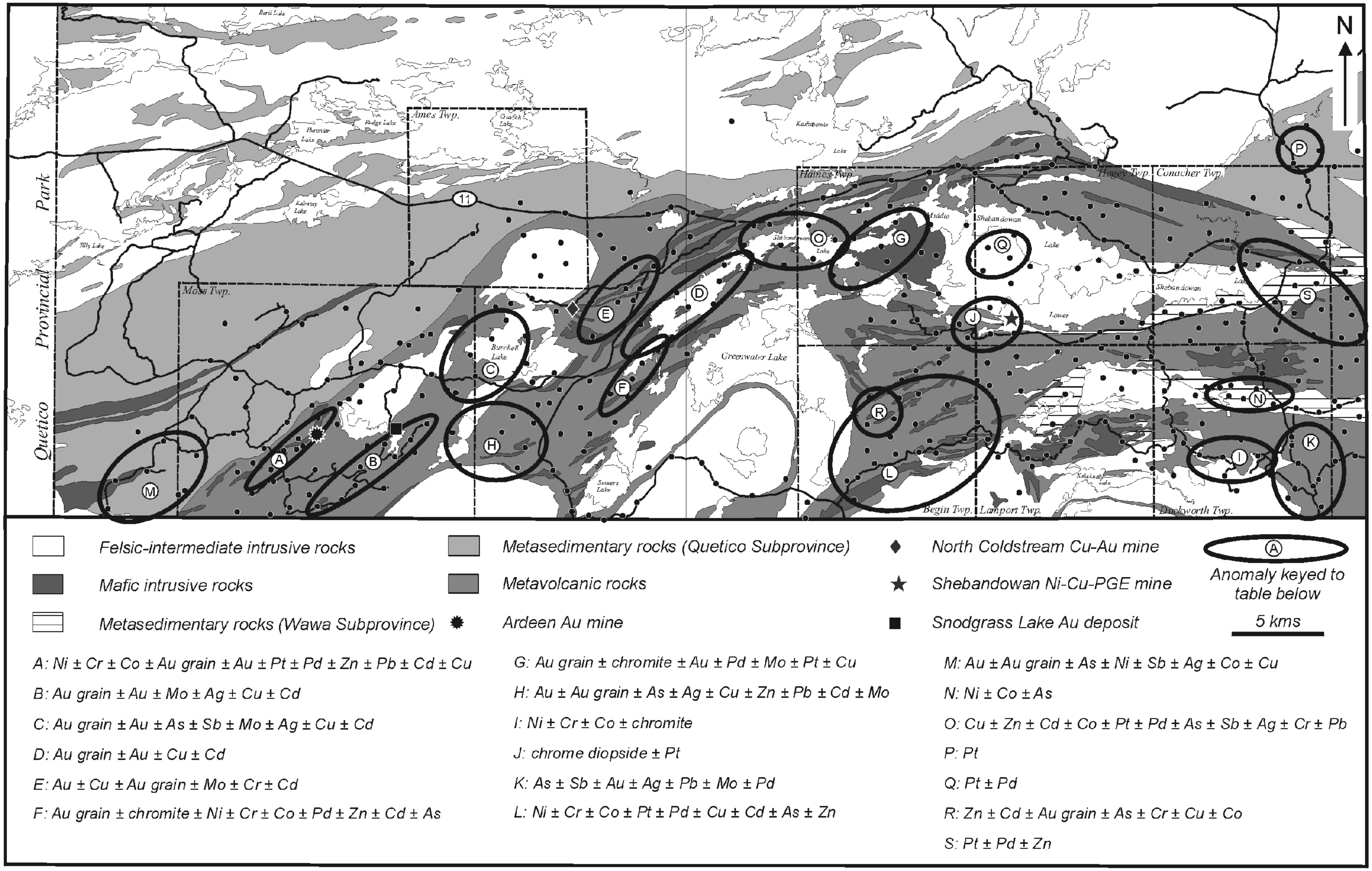

Figure 25. Summary diagram of gold grain, chromite, chrome diopside and geochemical anomalies identified as part of this study. Single sample anomalies are not shown.

collected in high-density sampling programs may therefore provide valuable information on the possible location of additional auriferous quartz veins within this area. Exploration activity on Upper Shebandowan Lake (Anomaly D, Figure 25) has focussed primarily on the region's base metal potential. The Au grain and, to a lesser extent, the Au geochemisty results for this area suggest that there is significant potential for the discovery of Au mineralization as well. The Burchell Lake (Anomaly C, Figure 25) – Snodgrass Lake (Anomaly B, Figure 25) trend is over 15 km long and has tremendous potential for the discovery of additional Au resources. This is evidenced by the occurrence of the Moss Lake Deposit, which has a drill indicated resource of 60 million tonnes grading 1.1 g/tonne Au and the shear magnitude of the gold grain and geochemical response obtained from most samples collected within this trend. The association of Au with Cu, Ag and Mo is one that is often seen in porphyry and/or epithermal type mineral deposits. The potential for the discovery of a large tonnage, porphyry type deposit should be considered high. Other areas with enhanced Au potential include Anomalies E, F, G, H and M (Figure 25).

Base metal targets have been identified almost exclusively on the basis of geochemical response of till. The potential for additional discoveries of base metals within the western Shebandowan greenstone belt is evidenced by the occurrence of the North Coldstream Cu-Au-Ag mine as well as numerous base metal prospects. Notable base metal targets are situated: 1) on Upper Shebandowan Lake where significant showings of Cu occur (Anomaly D, Figure 25); 2) northwest of Upper Shebandowan Lake (Anomaly E, Figure 25) where anomalous Cu, Mo, Cr, Cd and Au responses were obtained; 3) over a large area encompassing Fountain Lake and areas to the east (Anomaly H, Figure 25) where multi-element base and precious metal anomalies were obtained; 4) on Upper Shebandowan Lake near Kashabowie (Anomaly O, Figure 25) where the Vanguard East and West prospects are situated; 5) in central Begin Township (Anomaly R, Figure 25) where 3 closely spaced samples returned anomalous Zn, Cd, Cu, As, Cr, Co and Au grain values; and 6) in east-central Conacher Township (Anomaly S, Figure 25) where 2 samples returned anomalous Zn values. All of these anomalies should be followed up with higher-density till sampling surveys and prospecting to determine possible source rocks for the anomalies.

The distribution of mafic and ultramafic intrusive rocks are clearly delineated by the Ni-Cr-Co geochemistry. These areas have excellent potential for hosting Ni-Cu-PGE mineralization. A strong Ni-Cr-Co-chromite anomaly in south-central Duckworth Township (Anomaly I, Figure 25) is not adequately explained by our current knowledge of bedrock geology. Additional till sampling and prospecting is recommended for this region to fully evaluate the source of the anomaly. A similar anomaly along the extreme western end of Upper Shebandowan Lake should be investigated as well. Mafic intrusive rocks have been mapped in within this area. The large area of elevated to anomalous Ni-Cr-Co within Begin Township defines an area within which favourable source rocks occur. Elevated to anomalous Pt and Pd values from the southern edge of this anomaly are spatially associated with mafic and ultramafic intrusive rocks including gabbros, peridotites and anorthositic gabbros. Additional till sampling and prospecting should be undertaken within this area to more fully investigate the anomaly. A strong signature of mafic and ultramafic rocks occurs southwest of the Ardeen Mine in Moss Township. This anomaly appears to be associated with a series of dioritic and leucogabbroic sills that occur in this area. Elevated to anomalous Pt and Pd values from this area should be investigated with additional till sampling and prospecting. Pt and Pd anomalies within the eastern half of the study area should be interpreted with caution. Follow-up prospecting within these areas should be undertaken to determine whether suitable source rocks are present.

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Appendix A. Sample location information.

Sample #	Easting (NAD27)	Northing (NAD27)	Material
99-AFB-001	717513	5389738	Till
99-AFB-002	718808	5389698	Till
99-AFB-003	720007	5389287	Till
99-AFB-004	714649	5390243	Till
99-AFB-005	713574	5390780	Till
99-AFB-006	711616	5389948	Till
99-AFB-007	710881	5389275	Till
99-AFB-008	710881	5389327	Till
99-AFB-009	709624	5388978	Till
99-AFB-010	709006	5389683	Till
99-AFB-011	708133	5390257	Till
99-AFB-012	706877	5390583	Till
99-AFB-013	705105	5391687	Till
99-AFB-014	703751	5391937	Till
99-AFB-015	702713	5392065	Till
99-AFB-016	701229	5393005	Till
99-AFB-017	699759	5393977	Till
99-AFB-018	698827	5394374	Till
99-AFB-019	697272	5393947	Till
99-AFB-020	695227	5393441	Till
99-AFB-021	693266	5393053	Till
99-AFB-022	691565	5392367	Till
99-AFB-023	688707	5390828	Till
99-AFB-024	684522	5391326	Till
99-AFB-025	683330	5391589	Till
99-AFB-026	682101	5391151	Till
99-AFB-027	679536	5389950	Till
99-AFB-028	680255	5389245	Till
99-AFB-029	677722	5388333	Till
99-AFB-030	676002	5388683	Till
99-AFB-031	677413	5389458	Till
99-AFB-032	677592	5391074	Till
99-AFB-033	681088	5392313	Till
99-AFB-034	686459	5396347	Till
99-AFB-035	718916	5390867	Till
99-AFB-036	718924	5392161	Till
99-AFB-037	717420	5392778	Till
99-AFB-038	719237	5394974	Till
99-AFB-039	720466	5395865	Till
99-AFB-040	717822	5394141	Till
99-AFB-041	717007	5395073	Till
99-AFB-042	716394	5396205	Till
99-AFB-043	717643	5397147	Till
99-AFB-044	718401	5395809	Till
99-AFB-045	717310	5388451	Till
99-AFB-046	718474	5388604	Till
99-AFB-047	720160	5387854	Till
99-AFB-048	718784	5387209	Till
99-AFB-049	720449	5386958	Till
99-AFB-050	718394	5385834	Till
99-AFB-051	716263	5387510	Till
99-AFB-052	717325	5386954	Till
99-AFB-053	716351	5386013	Till
99-AFB-054	719928	5385705	Till
99-AFB-055	718610	5384436	Till
99-AFB-056	720933	5385868	Till
99-AFB-057	720789	5384518	Till
99-AFB-058	716938	5384402	Till
99-AFB-059	715686	5383637	Till
99-AFB-060	716353	5381973	Till
99-AFB-061	717592	5381804	Till
99-AFB-062	717432	5379780	Till
99-AFB-063	717401	5380247	Till
99-AFB-064	717811	5378824	Till
99-AFB-065	718674	5377612	Till
99-AFB-066	718842	5381624	Till
99-AFB-067	719924	5381987	Till
99-AFB-068	720941	5382382	Till
99-AFB-069	715403	5382780	Till
99-AFB-070	714721	5382225	Till
99-AFB-071	715121	5384395	Till
99-AFB-072	714823	5385234	Till
99-AFB-073	714555	5386358	Till
99-AFB-074	714324	5387396	Till
99-AFB-075	713378	5387493	Till
99-AFB-076	712224	5386901	Till
99-AFB-077	711221	5386681	Till
99-AFB-078	712168	5385976	Till
99-AFB-079	710302	5386786	Till
99-AFB-080	709090	5386148	Till
99-AFB-081	708765	5385321	Till
99-AFB-082	708297	5384297	Till
99-AFB-083	707791	5385322	Till
99-AFB-084	706913	5384707	Till
99-AFB-085	707993	5386145	Till
99-AFB-086	706805	5385581	Till
99-AFB-087	709628	5385370	Till
99-AFB-088	709645	5384332	Till
99-AFB-089	710306	5383756	Till
99-AFB-090	710420	5382505	Till
99-AFB-091	710607	5381404	Till
99-AFB-092	710972	5380338	Till
99-AFB-093	710511	5379352	Till
99-AFB-094	709910	5378288	Till
99-AFB-095	708956	5378684	Till
99-AFB-096	708220	5379677	Till
99-AFB-097	707275	5380727	Till
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99-AFB-100	704544	5384442	Till

Sample #	Easting (NAD27)	Northing (NAD27)	Material
99-AFB-101	705555	5384023	Till
99-AFB-102	702168	5385353	Till
99-AFB-103	700875	5385284	Till
99-AFB-104	700804	5386711	Till
99-AFB-105	710451	5390765	Till
99-AFB-106	701552	5387072	Till
99-AFB-107	701901	5388059	Till
99-AFB-108	702915	5389016	Till
99-AFB-109	701798	5389441	Till
99-AFB-110	700584	5389955	Till
99-AFB-111	699599	5389242	Till
99-AFB-112	699174	5385760	Till
99-AFB-113	697930	5385220	Till
99-AFB-114	696882	5385910	Till
99-AFB-115	695621	5385764	Till
99-AFB-116	694357	5385827	Till
99-AFB-117	696125	5387227	Till
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99-AFB-121	698640	5384397	Till
99-AFB-122	702339	5384109	Till
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99-AFB-131	705405	5379590	Till
99-AFB-132	699671	5379560	Till
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99-AFB-134	696974	5380254	Till
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99-AFB-136	697216	5378747	Till
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99-AFB-139	695805	5380500	Till
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99-AFB-142	696158	5382624	Till
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99-AFB-146	705502	5388995	Till
99-AFB-147	707777	5388655	Till
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Sample #	Easting (NAD27)	Northing (NAD27)	Material
99-AFB-151	706770	5391899	Till
99-AFB-152	706064	5392382	Till
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99-AFB-154	705484	5391692	Till
99-AFB-155	703598	5392747	Till
99-AFB-156	700745	5393294	Till
99-AFB-157	702474	5394069	Till
99-AFB-158	696749	5384378	Till
99-AFB-159	694821	5378045	Till
99-AFB-160	693946	5377258	Till
99-AFB-161	693783	5376033	Till
99-AFB-162	691181	5374957	Till
99-AFB-163	691252	5375821	Till
99-AFB-164	690046	5377047	Till
99-AFB-165	703916	5394573	Till
99-AFB-166	706260	5394546	Till
99-AFB-167	704265	5395725	Till
99-AFB-168	703089	5395576	Till
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99-AFB-170	702939	5397367	Till
99-AFB-171	697059	5393043	Till
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99-AFB-173	693950	5392063	Till
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99-AFB-179	675944	5386374	Till
99-AFB-180	682491	5388348	Till
99-AFB-181	681503	5388269	Till
99-AFB-182	680894	5388722	Till
99-AFB-183	681448	5386447	Till
99-AFB-184	680616	5386338	Till
99-AFB-185	681017	5387080	Till
99-AFB-186	681771	5387098	Till
99-AFB-187	681893	5385152	Till
99-AFB-188	678780	5380540	Till
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99-AFB-190	681309	5381219	Till
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99-AFB-192	679225	5382012	Till
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99-AFB-194	676128	5381846	Till
99-AFB-195	677290	5382378	Till
99-AFB-196	673020	5382062	Till
99-AFB-197	671979	5381132	Till
99-AFB-198	677086	5380744	Till
99-AFB-199	677742	5379094	Till
99-AFB-200	677394	5377094	Till

Sample #	Easting (NAD27)	Northing (NAD27)	Material
99-AFB-201	678203	5376012	Till
99-AFB-202	678493	5374896	Till
99-AFB-203	679420	5374722	Till
99-AFB-204	680251	5374499	Till
99-AFB-205	681258	5374768	Till
99-AFB-206	682008	5375515	Till
99-AFB-207	682580	5377430	Till
99-AFB-208	683793	5378059	Till
99-AFB-209	685454	5377775	Till
99-AFB-210	686267	5376678	Till
99-AFB-211	688247	5376079	Till
99-AFB-212	675154	5391549	Till
99-AFB-213	674548	5390596	Till
99-AFB-214	672621	5389782	Till
99-AFB-215	669366	5388071	Till
99-AFB-216	665865	5385523	Till
99-AFB-217	666805	5382569	Till
99-AFB-218	669782	5385608	Till
99-AFB-219	668868	5383726	Till
99-AFB-220	669350	5383627	Till
99-AFB-221	670052	5384165	Till
99-AFB-222	667850	5382647	Till
99-AFB-223	666245	5382280	Till
99-AFB-224	668951	5382485	Till
99-AFB-225	670638	5382083	Till
99-AFB-226	671524	5381275	Till
99-AFB-227	668627	5381133	Till
99-AFB-228	666850	5381348	Till
99-AFB-229	666796	5380456	Till
99-AFB-230	666191	5380603	Till
99-AFB-231	665705	5380340	Till
99-AFB-232	665608	5379214	Till
99-AFB-233	664679	5378482	Till
99-AFB-234	663446	5377772	Till
99-AFB-235	663785	5377960	Till
99-AFB-236	664560	5379543	Till
99-AFB-237	665000	5381590	Till
99-AFB-238	662878	5379228	Till
99-AFB-239	661691	5377771	Till
99-AFB-240	662756	5377685	Till
99-AFB-241	662100	5376640	Till
99-AFB-242	663013	5376079	Till
99-AFB-243	664490	5376708	Till
99-AFB-244	665829	5376621	Till
99-AFB-245	666941	5376939	Till
99-AFB-246	662255	5375990	Till
99-AFB-247	663184	5374603	Till
99-AFB-248	664677	5374719	Till
99-AFB-249	665998	5375137	Till
99-AFB-250	666701	5375922	Till
99-AFB-251	662136	5374191	Till
99-AFB-252	660003	5378531	Till
99-AFB-253	658030	5377266	Till
99-AFB-254	657122	5375095	Till
99-AFB-255	716481	5393189	Till
99-AFB-256	714893	5393141	Till
99-AFB-257	712352	5392741	Till
99-AFB-258	713640	5386298	Till
99-AFB-259	711725	5385265	Till
99-AFB-260	713220	5384877	Till
99-AFB-261	713921	5382351	Till
99-AFB-262	714014	5382920	Till
99-AFB-263	713424	5382781	Till
99-AFB-264	712657	5382808	Till
99-AFB-265	719664	5382271	Till
99-AFB-266	721034	5381462	Till
99-AFB-267	656219	5377979	Till
99-AFB-268	655373	5376318	Till
99-AFB-269	657457	5375340	Till
99-AFB-270	653683	5375749	Till
99-AFB-271	653327	5374218	Till
99-AFB-272	654816	5378441	Till
99-AFB-273	657723	5379358	Till
99-AFB-274	660031	5381523	Till
99-AFB-275	660614	5379969	Till
99-AFB-276	718937	5377982	Till
99-AFB-277	719820	5379002	Till
99-AFB-278	720882	5379334	Till
99-AFB-279	719138	5376503	Till
99-AFB-280	717671	5377439	Till
99-AFB-281	716319	5378150	Till
99-AFB-282	715602	5379161	Till
99-AFB-283	717320	5376914	Till
99-AFB-284	712437	5379110	Till
99-AFB-285	713705	5379022	Till
99-AFB-286	713842	5378014	Till
99-AFB-287	714513	5377222	Till
99-AFB-288	707071	5383106	Till
99-AFB-289	708761	5383498	Till
99-AFB-290	662868	5380809	Till
99-AFB-291	658622	5382435	Till
99-AFB-292	659338	5384467	Till
99-AFB-293	662644	5385228	Till
99-AFB-294	663523	5384583	Till
99-AFB-295	661177	5383304	Till
99-AFB-296	668851	5378917	Till
99-AFB-297	668221	5378218	Till
99-AFB-298	668793	5377542	Till
99-AFB-299	669619	5378492	Till
99-AFB-300	670475	5379395	Till

Sample #	Easting (NAD27)	Northing (NAD27)	Material
99-AFB-301	670164	5380925	Till
99-AFB-302	682226	5390366	Till
99-AFB-303	679301	5384426	Till
99-AFB-304	675123	5379959	Till
99-AFB-305	674552	5379077	Till
99-AFB-306	675458	5377170	Till
99-AFB-307	672318	5377204	Till
99-AFB-308	671864	5378966	Till
99-AFB-309	667290	5378073	Till
99-AFB-310	669871	5377818	Till
99-AFB-311	668253	5375814	Till
99-AFB-312	664224	5375327	Till
99-AFB-313	661117	5375306	Till
99-AFB-314	660342	5374273	Till
99-AFB-315	661111	5376964	Till
99-AFB-316	660283	5376445	Till
99-AFB-317	677290	5385718	Till
99-AFB-318	673993	5385851	Till
99-AFB-319	676468	5380633	Till
99-AFB-320	676266	5379632	Till
99-AFB-321	675849	5378281	Till
99-AFB-322	712573	5391146	Till
99-AFB-323	707512	5392483	Till
99-AFB-324	704739	5393844	Till
99-AFB-325	692236	5388165	Till
99-AFB-326	689567	5388664	Till
99-AFB-327	684465	5383653	Till
99-AFB-328	682385	5382121	Till
99-AFB-329	680677	5379819	Till
99-AFB-330	679333	5379140	Till
99-AFB-331	679047	5378179	Till
99-AFB-332	693364	5377060	Till
99-AFB-333	694402	5378746	Till
99-AFB-334	694358	5380145	Till
99-AFB-335	694416	5381613	Till
99-AFB-336	700360	5388697	Till
99-AFB-337	697794	5389437	Till
99-AFB-338	696986	5389571	Till
99-AFB-339	697985	5387370	Till
99-AFB-340	698152	5383627	Till
99-AFB-341	700769	5383713	Till
99-AFB-342	700240	5382733	Till
99-AFB-343	698671	5381360	Till
99-AFB-344	701257	5381659	Till
99-AFB-345	702635	5382251	Till
99-AFB-346	705043	5382149	Till
99-AFB-347	704416	5380500	Till
99-AFB-348	705888	5380656	Till
99-AFB-349	708095	5382549	Till
99-AFB-350	708707	5381049	Till

Sample #	Easting (NAD27)	Northing (NAD27)	Material
99-AFB-351	703382	5378179	Till
99-AFB-352	702728	5376737	Till
99-AFB-353	711066	5377938	Till
99-AFB-354	712112	5382322	Till
99-AFB-355	712528	5380795	Till
99-AFB-356	714657	5380000	Till
99-AFB-357	720262	5380615	Till
99-AFB-358	717679	5383294	Till
99-AFB-359	719941	5384105	Till
99-AFB-360	717006	5391353	Till
99-AFB-361	714619	5392266	Till
99-AFB-362	709909	5392353	Till
99-AFB-363	674577	5385151	Till
99-AFB-364	673842	5384124	Till
99-AFB-365	672695	5383208	Till
99-AFB-366	675766	5382842	Till
99-AFB-367	675660	5384335	Till
99-AFB-368	702001	5394945	Till
99-AFB-369	700883	5394703	Till
99-AFB-370	701990	5390686	Till
99-AFB-371	699377	5391132	Till
99-AFB-372	697432	5391103	Till
99-AFB-373	695539	5391161	Till
99-AFB-374	693921	5391069	Till
99-AFB-375	694799	5389832	Till
99-AFB-376	693308	5390210	Till
99-AFB-377	693540	5388831	Till
99-AFB-378	692257	5389062	Till
99-AFB-379	691129	5389034	Till
99-AFB-380	692281	5390107	Till
99-AFB-381	690838	5390844	Till
99-AFB-382	689352	5389708	Till
99-AFB-383	687370	5389662	Till
99-AFB-384	686317	5388548	Till
99-AFB-385	687731	5388403	Till
99-AFB-386	682045	5383065	Till
99-AFB-387	682876	5383815	Till
99-AFB-388	683630	5384538	Till
99-AFB-389	683788	5386955	Till
99-AFB-390	684435	5386198	Till
99-AFB-391	685812	5386401	Till
99-AFB-392	686078	5387657	Till
99-AFB-393	670515	5384260	Till
99-AFB-394	671960	5386703	Till
99-AFB-395	663522	5378359	Till
99-AFB-396	664208	5380185	Till
99-AFB-397	679212	5386367	Till
99-AFB-398	676373	5387625	Till
99-AFB-399	675368	5389800	Till
99-AFB-400	702036	5379266	Till

Appendix B. Heavy mineral weight data.

Sample #	Table Split (kg)	+2 mm Clasts (kg)	Table Feed (kg)	Table Conc. (gms)	M.I. Lights (gms)	Conc. Total (gms)	Nonmag (gms)	Mag (gms)	No. V.G.	Calc. PPB
99-AFB-001	10.0	0.5	9.6	552.4	206.4	346.0	281.6	64.4	0	0
99-AFB-002	10.0	0.7	9.3	1039.4	524.5	514.9	439.9	75.0	0	0
99-AFB-003	10.0	1.1	9.0	999.9	481.1	518.8	442.6	76.2	0	0
99-AFB-004	10.0	0.9	9.1	1046.9	410.3	636.6	523.2	113.4	0	0
99-AFB-005	10.0	1.0	9.0	813.4	174.3	639.1	518.6	120.5	1	2
99-AFB-006	10.0	0.7	9.4	535.6	212.0	323.6	269.9	53.7	1	1
99-AFB-007	10.0	0.8	9.2	971.2	396.1	575.1	478.2	96.9	7	2
99-AFB-008	10.0	0.6	9.5	545.7	232.3	313.4	277.1	36.3	1	0
99-AFB-009	10.0	1.2	8.9	808.0	285.4	522.6	440.2	82.4	5	1
99-AFB-010	10.0	1.0	9.1	628.7	340.9	287.8	237.8	50.0	0	0
99-AFB-011	10.0	1.7	8.3	830.9	473.5	357.4	300.2	57.2	0	0
99-AFB-012	10.0	0.8	9.3	692.5	222.9	469.6	387.2	82.4	1	0
99-AFB-013	10.0	0.9	9.1	600.6	199.9	400.7	338.5	62.2	1	0
99-AFB-014	10.0	0.9	9.1	907.8	468.5	439.3	376.1	63.2	0	0
99-AFB-015	10.0	0.7	9.3	607.1	257.1	350.0	294.1	55.9	1	0
99-AFB-016	10.0	0.6	9.4	718.8	263.9	454.9	383.4	71.5	0	0
99-AFB-017	10.0	0.9	9.2	722.1	272.8	449.3	388.5	60.8	0	0
99-AFB-018	10.0	1.6	8.4	607.8	286.3	321.5	270.1	51.4	0	0
99-AFB-019	10.0	1.6	8.5	504.2	243.7	260.5	218.1	42.4	1	0
99-AFB-020	10.0	1.5	8.6	650.4	216.2	434.2	360.5	73.7	0	0
99-AFB-021	10.0	1.3	8.7	765.7	382.1	383.6	327.4	56.2	2	0
99-AFB-022	10.0	1.5	8.6	571.6	259.6	312.0	264.4	47.6	0	0
99-AFB-023	10.0	1.6	8.5	437.4	286.2	151.2	120.7	30.5	1	0
99-AFB-024	10.0	1.4	8.7	670.1	330.3	339.8	283.1	56.7	1	0
99-AFB-025	10.0	1.0	9.0	523.8	284.3	239.5	201.0	38.5	1	0
99-AFB-026	10.0	1.5	8.6	568.0	394.4	173.6	145.4	28.2	2	0
99-AFB-027	10.0	1.4	8.7	592.5	351.2	241.3	206.6	34.7	0	0
99-AFB-028	10.0	2.2	7.9	343.5	127.0	216.5	180.5	36.0	1	0
99-AFB-029	10.0	1.8	8.2	488.8	318.2	170.6	148.7	21.9	0	0
99-AFB-030	10.0	1.1	8.9	606.9	184.4	422.5	363.5	59.0	0	0
99-AFB-031	10.0	1.2	8.9	387.8	205.2	182.6	161.6	21.0	0	0
99-AFB-032	10.0	1.3	8.8	455.8	240.8	215.0	188.0	27.0	0	0
99-AFB-033	10.0	1.3	8.7	564.7	263.4	301.3	262.5	38.8	1	1
99-AFB-034	10.0	1.8	8.3	518.7	221.5	297.2	248.0	49.2	0	0
99-AFB-035	10.0	1.3	8.7	438.3	124.6	313.7	241.9	71.8	0	0
99-AFB-036	10.0	0.5	9.6	419.1	120.0	299.1	246.5	52.6	0	0
99-AFB-037	10.0	0.5	9.5	904.0	406.6	497.4	422.3	75.1	0	0
99-AFB-038	10.0	0.7	9.4	660.7	283.4	377.3	317.6	59.7	0	0
99-AFB-039	10.0	0.6	9.5	784.9	320.7	464.2	389.0	75.2	0	0
99-AFB-040	10.0	0.9	9.2	895.9	332.7	563.2	465.0	98.2	0	0
99-AFB-041	10.0	0.6	9.5	768.2	352.1	416.1	346.8	69.3	0	0
99-AFB-042	10.0	1.1	8.9	717.4	343.2	374.2	313.0	61.2	0	0
99-AFB-043	10.0	0.7	9.3	678.9	211.1	467.8	384.7	83.1	0	0
99-AFB-044	10.0	0.6	9.5	699.8	239.5	460.3	396.5	63.8	0	0
99-AFB-045	10.0	0.6	9.4	835.2	388.0	447.2	366.0	81.2	0	0
99-AFB-046	10.0	0.8	9.3	588.0	255.2	332.8	277.3	55.5	0	0
99-AFB-047	10.0	0.6	9.4	872.3	340.7	531.6	455.0	76.6	1	0
99-AFB-048	10.0	0.6	9.4	899.9	333.1	566.8	482.5	84.3	0	0
99-AFB-049	10.0	0.5	9.5	920.2	423.1	497.1	432.1	65.0	2	0
99-AFB-050	10.0	0.7	9.4	865.5	322.3	543.2	460.7	82.5	1	0
99-AFB-051	10.0	0.5	9.5	932.9	419.1	513.8	434.7	79.1	0	0
99-AFB-052	10.0	0.9	9.2	1116.7	469.3	647.4	521.1	126.3	3	1
99-AFB-053	10.0	1.3	8.7	812.8	284.8	528.0	436.9	91.1	0	0
99-AFB-054	10.0	0.5	9.6	915.7	473.7	442.0	376.2	65.8	0	0
99-AFB-055	10.0	0.5	9.6	589.4	206.7	382.7	319.4	63.3	3	0
99-AFB-056	10.0	0.8	9.2	871.8	405.9	465.9	401.6	64.3	0	0
99-AFB-057	10.0	1.3	8.7	830.4	285.4	545.0	453.4	91.6	0	0
99-AFB-058	10.0	1.3	8.8	654.8	271.7	383.1	324.4	58.7	1	7

Sample #	Table Split (kg)	+2 mm Clasts (kg)	Table Feed (kg)	Table Conc. (gms)	M.I. Lights (gms)	Conc. Total (gms)	Nonmag (gms)	Mag (gms)	No. V.G.	Calc. PPB
99-AFB-059	10.0	0.7	9.4	919.2	441.4	477.8	413.4	64.4	0	0
99-AFB-060	10.0	1.5	8.6	822.2	407.8	414.4	346.6	67.8	2	1
99-AFB-061	10.0	0.5	9.6	627.9	247.7	380.2	323.6	56.6	0	0
99-AFB-062	10.0	1.1	8.9	631.9	301.9	330.0	277.9	52.1	3	0
99-AFB-063	10.0	1.0	9.1	648.5	270.3	378.2	314.2	64.0	3	2
99-AFB-064	10.0	1.0	9.0	661.1	319.8	341.3	288.9	52.4	4	2
99-AFB-065	10.0	0.5	9.5	640.6	274.7	365.9	312.4	53.5	1	0
99-AFB-066	10.0	0.6	9.5	744.7	226.0	518.7	441.4	77.3	0	0
99-AFB-067	10.0	0.5	9.5	712.0	239.5	472.5	400.7	71.8	0	0
99-AFB-068	10.0	0.8	9.3	702.7	226.9	475.8	402.1	73.7	0	0
99-AFB-069	10.0	0.7	9.3	662.8	241.7	421.1	354.6	66.5	0	0
99-AFB-070	10.0	0.8	9.3	806.6	312.9	493.7	396.7	97.0	6	10
99-AFB-071	10.0	1.1	9.0	790.3	289.5	500.8	430.6	70.2	0	0
99-AFB-072	10.0	0.8	9.3	760.8	295.1	465.7	400.1	65.6	0	0
99-AFB-073	10.0	1.1	9.0	871.9	325.8	546.1	468.3	77.8	0	0
99-AFB-074	10.0	1.4	8.6	745.4	256.8	488.6	396.1	92.5	1	0
99-AFB-075	10.0	1.4	8.7	735.6	410.0	325.6	284.7	40.9	0	0
99-AFB-076	10.0	0.9	9.1	809.7	266.0	543.7	465.8	77.9	0	0
99-AFB-077	10.0	1.0	9.1	836.9	297.6	539.3	459.4	79.9	0	0
99-AFB-078	10.0	1.1	9.0	735.3	262.9	472.4	407.7	64.7	0	0
99-AFB-079	10.0	1.0	9.1	705.2	210.6	494.6	424.8	69.8	0	0
99-AFB-080	10.0	0.6	9.5	755.3	316.1	439.2	371.6	67.6	0	0
99-AFB-081	10.0	0.5	9.5	864.2	372.4	491.8	419.1	72.7	0	0
99-AFB-082	10.0	0.9	9.2	727.4	230.0	497.4	425.6	71.8	1	0
99-AFB-083	10.0	0.7	9.3	821.5	254.8	566.7	486.1	80.6	0	0
99-AFB-084	10.0	1.6	8.4	673.0	278.8	394.2	335.5	58.7	0	0
99-AFB-085	10.0	0.9	9.1	738.3	288.2	450.1	382.9	67.2	0	0
99-AFB-086	10.0	0.7	9.3	700.3	322.8	377.5	308.5	69.0	1	1
99-AFB-087	10.0	1.0	9.0	672.9	289.7	383.2	326.1	57.1	0	0
99-AFB-088	10.0	0.5	9.5	836.8	262.4	574.4	482.2	92.2	0	0
99-AFB-089	10.0	0.8	9.3	444.8	258.9	185.9	103.3	82.6	0	0
99-AFB-090	10.0	0.8	9.2	752.0	256.6	495.4	398.3	97.1	0	0
99-AFB-091	10.0	1.3	8.7	761.2	339.0	422.2	342.0	80.2	0	0
99-AFB-092	10.0	1.0	9.0	688.1	336.3	351.8	293.2	58.6	1	0
99-AFB-093	10.0	1.9	8.2	714.0	414.2	299.8	242.6	57.2	0	0
99-AFB-094	10.0	2.0	8.1	812.4	411.4	401.0	324.1	76.9	0	0
99-AFB-095	10.0	1.5	8.6	815.2	370.0	445.2	367.2	78.0	2	0
99-AFB-096	10.0	1.4	8.6	711.0	289.5	421.5	354.3	67.2	0	0
99-AFB-097	10.0	1.6	8.4	749.1	325.7	423.4	354.1	69.3	0	0
99-AFB-098	10.0	0.8	9.3	688.6	360.3	328.3	277.6	50.7	0	0
99-AFB-099	10.0	0.9	9.1	777.2	388.5	388.7	323.9	64.8	0	0
99-AFB-100	10.0	1.2	8.9	833.8	300.2	533.6	443.5	90.1	0	0
99-AFB-101	10.0	0.6	9.4	643.0	293.6	349.4	238.0	111.4	1	0
99-AFB-102	10.0	0.9	9.1	850.3	318.6	531.7	439.8	91.9	2	0
99-AFB-103	10.0	1.3	8.7	774.6	311.1	463.5	384.4	79.1	0	0
99-AFB-104	10.0	1.4	8.7	700.8	356.2	344.6	286.1	58.5	3	1
99-AFB-105	10.0	1.0	9.0	717.6	334.0	383.6	328.4	55.2	3	0
99-AFB-106	10.0	1.0	9.1	916.6	309.9	606.7	512.7	94.0	0	0
99-AFB-107	10.0	1.2	8.8	784.4	299.1	485.3	399.9	85.4	0	0
99-AFB-108	10.0	1.0	9.1	711.4	368.2	343.2	290.8	52.4	0	0
99-AFB-109	10.0	0.8	9.3	426.4	69.2	357.2	270.1	87.1	0	0
99-AFB-110	10.0	0.6	9.5	499.8	318.2	181.6	149.4	32.2	1	0
99-AFB-111	10.0	0.6	9.4	527.4	233.8	293.6	244.7	48.9	1	0
99-AFB-112	10.0	1.1	9.0	682.4	344.2	338.2	279.0	59.2	1	0
99-AFB-113	10.0	1.3	8.8	620.7	270.2	350.5	285.6	64.9	2	2
99-AFB-114	10.0	1.0	9.1	785.5	382.2	403.3	336.5	66.8	0	0
99-AFB-115	10.0	1.5	8.5	650.7	342.6	308.1	261.3	46.8	39	12
99-AFB-116	10.0	0.9	9.2	427.1	134.4	292.7	240.0	52.7	0	0

Sample #	Table Split (kg)	+2 mm Clasts (kg)	Table Feed (kg)	Table Conc. (gms)	M.I. Lights (gms)	Conc. Total (gms)	Nonmag (gms)	Mag (gms)	No. V.G.	Calc. PPB
99-AFB-117	10.0	1.8	8.3	748.7	329.3	419.4	348.5	70.9	0	0
99-AFB-118	10.0	1.4	8.6	593.6	322.8	270.8	233.0	37.8	3	2
99-AFB-119	10.0	1.5	8.5	646.4	421.0	225.4	193.2	32.2	0	0
99-AFB-120	10.0	1.2	8.8	771.6	335.9	435.7	367.6	68.1	1	0
99-AFB-121	10.0	1.2	8.8	783.4	397.7	385.7	331.7	54.0	1	0
99-AFB-122	10.0	1.0	9.1	734.6	307.2	427.4	359.3	68.1	0	0
99-AFB-123	10.0	1.4	8.6	745.9	422.6	323.3	276.8	46.5	0	0
99-AFB-124	10.0	1.5	8.5	730.7	295.8	434.9	371.7	63.2	1	0
99-AFB-125	10.0	2.5	7.5	828.2	253.2	575.0	453.1	121.9	1	0
99-AFB-126	10.0	1.5	8.6	577.5	362.6	214.9	203.1	11.8	3	2
99-AFB-127	10.0	2.6	7.5	763.3	386.3	377.0	320.7	56.3	2	1
99-AFB-128	10.0	2.2	7.9	571.6	239.4	332.2	281.1	51.1	4	3
99-AFB-129	10.0	2.4	7.7	774.8	493.5	281.3	229.1	52.2	1	1
99-AFB-130	10.0	1.8	8.3	668.0	324.5	343.5	287.9	55.6	1	0
99-AFB-131	10.0	2.0	8.0	818.3	421.6	396.7	315.2	81.5	3	2
99-AFB-132	10.0	1.4	8.6	673.6	269.4	404.2	338.6	65.6	2	1
99-AFB-133	10.0	2.5	7.5	443.1	183.9	259.2	213.2	46.0	2	3
99-AFB-134	10.0	2.1	7.9	528.2	214.6	313.6	257.3	56.3	1	0
99-AFB-135	10.0	1.5	8.6	519.9	286.9	233.0	185.8	47.2	9	16
99-AFB-136	10.0	1.3	8.8	870.0	309.8	560.2	461.6	98.6	2	0
99-AFB-137	10.0	2.4	7.6	691.8	445.5	246.3	197.5	48.8	3	2
99-AFB-138	10.0	2.2	7.9	662.9	320.1	342.8	273.0	69.8	6	5
99-AFB-139	10.0	1.7	8.4	482.7	245.3	237.4	196.8	40.6	3	5
99-AFB-140	10.0	1.6	8.5	765.1	377.5	387.6	327.4	60.2	2	1
99-AFB-141	10.0	1.3	8.8	810.1	335.0	475.1	407.3	67.8	0	0
99-AFB-142	10.0	1.2	8.8	578.1	228.9	349.2	282.7	66.5	6	2
99-AFB-143	10.0	1.0	9.1	448.2	202.2	246.0	204.9	41.1	1	0
99-AFB-144	10.0	1.3	8.8	763.2	365.9	397.3	336.6	60.7	0	0
99-AFB-145	10.0	1.6	8.4	630.0	322.6	307.4	263.2	44.2	1	1
99-AFB-146	10.0	0.9	9.2	733.4	367.3	366.1	339.4	26.7	1	0
99-AFB-147	10.0	1.2	8.8	768.2	203.2	565.0	463.6	101.4	2	0
99-AFB-148	10.0	0.6	9.4	582.9	133.2	449.7	366.9	82.8	0	0
99-AFB-149	10.0	1.2	8.9	1002.8	401.7	601.1	508.5	92.6	0	0
99-AFB-150	10.0	0.5	9.5	649.8	375.8	274.0	224.3	49.7	0	0
99-AFB-151	10.0	1.7	8.4	810.3	351.6	458.7	393.2	65.5	0	0
99-AFB-152	10.0	1.1	9.0	737.1	285.0	452.1	381.9	70.2	0	0
99-AFB-153	10.0	2.2	7.8	380.7	61.3	319.4	248.6	70.8	0	0
99-AFB-154	10.0	1.0	9.1	388.1	120.8	267.3	212.5	54.8	1	0
99-AFB-155	10.0	1.7	8.3	562.0	207.7	354.3	287.1	67.2	0	0
99-AFB-156	10.0	0.9	9.1	473.2	158.2	315.0	268.6	46.4	1	0
99-AFB-157	10.0	1.1	9.0	627.3	140.1	487.2	390.0	97.2	2	0
99-AFB-158	10.0	2.9	7.1	829.8	504.8	325.0	273.1	51.9	3	2
99-AFB-159	10.0	2.2	7.9	277.3	116.1	161.2	121.0	40.2	6	4
99-AFB-160	10.0	2.9	7.1	747.7	475.7	272.0	223.4	48.6	22	11
99-AFB-161	10.0	2.1	8.0	648.8	409.5	239.3	186.3	53.0	4	83
99-AFB-162	10.0	1.9	8.1	833.4	561.3	272.1	227.7	44.4	11	13
99-AFB-163	10.0	1.9	8.2	480.8	197.6	283.2	238.8	44.4	4	7
99-AFB-164	10.0	2.1	8.0	574.2	426.4	147.8	129.1	18.7	0	0
99-AFB-165	10.0	0.6	9.4	646.7	255.5	391.2	338.9	52.3	0	0
99-AFB-166	10.0	1.2	8.8	753.8	293.1	460.7	387.9	72.8	2	6
99-AFB-167	10.0	1.6	8.4	931.7	331.5	600.2	496.5	103.7	1	0
99-AFB-168	10.0	1.1	8.9	942.2	385.0	557.2	486.7	70.5	0	0
99-AFB-169	10.0	1.2	8.9	569.1	223.3	345.8	290.2	55.6	1	0
99-AFB-170	10.0	1.0	9.1	615.2	233.9	381.3	321.8	59.5	0	0
99-AFB-171	10.0	1.2	8.9	808.3	427.9	380.4	323.2	57.2	1	0
99-AFB-172	10.0	2.3	7.7	764.1	420.5	343.6	291.6	52.0	1	1
99-AFB-173	10.0	1.2	8.8	612.6	270.3	342.3	288.7	53.6	0	0
99-AFB-174	10.0	1.2	8.9	650.4	296.8	353.6	303.7	49.9	2	3

Sample #	Table Split (kg)	+2 mm Clasts (kg)	Table Feed (kg)	Table Conc. (gms)	M.I. Lights (gms)	Conc. Total (gms)	Nonmag (gms)	Mag (gms)	No. V.G.	Calc. PPB
99-AFB-175	10.0	1.4	8.7	430.6	208.5	222.1	178.4	43.7	7	7
99-AFB-176	10.0	2.1	8.0	487.3	254.5	232.8	197.0	35.8	0	0
99-AFB-177	10.0	1.8	8.3	598.3	266.4	331.9	282.4	49.5	1	1
99-AFB-178	10.0	1.4	8.6	538.5	297.2	241.3	204.8	36.5	2	0
99-AFB-179	10.0	2.6	7.5	465.4	309.2	156.2	128.0	28.2	1	0
99-AFB-180	10.0	1.9	8.1	405.5	261.7	143.8	120.5	23.3	1	0
99-AFB-181	10.0	1.9	8.1	454.9	309.7	145.2	123.1	22.1	79	76
99-AFB-182	10.0	2.9	7.2	479.5	380.8	98.7	82.3	16.4	2	3
99-AFB-183	10.0	1.5	8.5	461.7	273.6	188.1	158.7	29.4	3	2
99-AFB-184	10.0	1.4	8.6	460.0	268.5	191.5	163.2	28.3	14	37
99-AFB-185	10.0	2.1	7.9	538.2	342.7	195.5	158.4	37.1	3	4
99-AFB-186	10.0	1.7	8.4	445.0	287.1	157.9	134.0	23.9	8	3
99-AFB-187	10.0	2.5	7.5	491.4	398.4	93.0	79.6	13.4	155	139
99-AFB-188	10.0	1.0	9.0	694.5	358.4	336.1	285.6	50.5	3	9
99-AFB-189	10.0	2.0	8.0	457.1	313.4	143.7	114.5	29.2	5	3
99-AFB-190	10.0	1.2	8.8	575.8	321.9	253.9	206.4	47.5	12	11
99-AFB-191	10.0	1.4	8.6	443.9	269.0	174.9	138.2	36.7	3	5
99-AFB-192	10.0	0.7	9.3	788.8	313.0	475.8	423.1	52.7	12	3
99-AFB-193	10.0	1.8	8.3	471.6	287.4	184.2	155.7	28.5	4	3
99-AFB-194	10.0	1.6	8.5	556.5	289.0	267.5	233.0	34.5	1	0
99-AFB-195	10.0	1.3	8.7	580.9	289.9	291.0	244.8	46.2	42	34
99-AFB-196	10.0	2.1	8.0	300.8	240.2	60.6	49.3	11.3	18	45
99-AFB-197	10.0	2.0	8.1	417.6	258.2	159.4	137.0	22.4	18	53
99-AFB-198	10.0	1.3	8.7	477.4	210.3	267.1	227.5	39.6	20	42
99-AFB-199	10.0	1.8	8.3	713.1	512.0	201.1	167.4	33.7	1	0
99-AFB-200	10.0	1.7	8.4	505.5	250.1	255.4	223.8	31.6	8	6
99-AFB-201	10.0	0.6	9.4	598.2	289.3	308.9	263.9	45.0	8	3
99-AFB-202	10.0	2.6	7.4	519.1	350.3	168.8	141.6	27.2	9	27
99-AFB-203	10.0	0.9	9.1	447.3	266.2	181.1	146.8	34.3	3	1
99-AFB-204	10.0	0.8	9.3	412.9	167.4	245.5	204.4	41.1	6	3
99-AFB-205	10.0	1.1	9.0	595.1	335.0	260.1	225.0	35.1	4	1
99-AFB-206	10.0	1.5	8.5	508.9	325.8	183.1	153.3	29.8	7	3
99-AFB-207	10.0	0.9	9.1	665.9	419.1	246.8	215.1	31.7	5	3
99-AFB-208	10.0	1.8	8.3	488.0	342.9	145.1	128.7	16.4	0	0
99-AFB-209	10.0	2.1	7.9	544.0	224.1	319.9	261.8	58.1	1	6
99-AFB-210	10.0	0.9	9.1	480.6	325.2	155.4	133.0	22.4	2	3
99-AFB-211	10.0	1.2	8.8	533.1	266.8	266.3	221.4	44.9	1	1
99-AFB-212	10.0	1.4	8.7	686.5	605.9	80.6	70.6	10.0	2	6
99-AFB-213	10.0	1.5	8.6	456.6	277.2	179.4	152.9	26.5	4	5
99-AFB-214	10.0	0.9	9.2	357.4	227.5	129.9	107.8	22.1	7	6
99-AFB-215	10.0	1.7	8.3	541.0	336.5	204.5	177.8	26.7	2	1
99-AFB-216	10.0	2.0	8.1	541.6	347.1	194.5	167.3	27.2	4	11
99-AFB-217	10.0	1.1	9.0	773.8	334.0	439.8	367.7	72.1	4	2
99-AFB-218	10.0	2.2	7.8	446.8	250.3	196.5	167.0	29.5	1	1
99-AFB-219	10.0	0.8	9.3	608.7	352.2	256.5	223.3	33.2	3	1
99-AFB-220	10.0	1.4	8.7	360.6	175.4	185.2	155.5	29.7	2	0
99-AFB-221	10.0	1.2	8.9	490.5	308.9	181.6	151.2	30.4	0	0
99-AFB-222	10.0	1.2	8.9	684.7	468.2	216.5	185.2	31.3	2	4
99-AFB-223	10.0	1.1	8.9	503.0	319.0	184.0	160.6	23.4	0	0
99-AFB-224	10.0	1.3	8.8	436.7	235.1	201.6	166.9	34.7	4	9
99-AFB-225	10.0	1.0	9.0	488.4	312.9	175.5	148.7	26.8	4	15
99-AFB-226	10.0	1.3	8.8	426.9	288.0	138.9	117.5	21.4	15	18
99-AFB-227	10.0	1.1	9.0	526.7	329.5	197.2	164.5	32.7	3	0
99-AFB-228	10.0	2.1	7.9	552.1	365.5	186.6	160.5	26.1	1	2
99-AFB-229	10.0	0.9	9.2	437.0	243.0	194.0	165.6	28.4	6	4
99-AFB-230	10.0	0.9	9.2	457.7	298.4	159.3	134.6	24.7	3	28
99-AFB-231	10.0	1.1	9.0	433.9	233.7	200.2	169.1	31.1	4	6
99-AFB-232	10.0	1.4	8.6	465.3	231.5	233.8	194.5	39.3	3	20

Sample #	Table Split (kg)	+2 mm Clasts (kg)	Table Feed (kg)	Table Conc. (gms)	M.I. Lights (gms)	Conc. Total (gms)	Nonmag (gms)	Mag (gms)	No. V.G.	Calc. PPB
99-AFB-233	10.0	1.2	8.9	473.2	271.1	202.1	169.7	32.4	6	4
99-AFB-234	10.0	1.0	9.1	420.8	255.9	164.9	137.1	27.8	11	8
99-AFB-235	10.0	1.6	8.5	580.3	364.4	215.9	180.8	35.1	3	3
99-AFB-236	10.0	1.9	8.1	465.7	265.0	200.7	169.1	31.6	7	6
99-AFB-237	10.0	1.1	8.9	518.1	295.8	222.3	192.5	29.8	6	2
99-AFB-238	10.0	0.8	9.2	515.8	254.8	261.0	227.2	33.8	14	17
99-AFB-239	10.0	1.4	8.7	545.3	304.5	240.8	205.4	35.4	3	1
99-AFB-240	10.0	1.4	8.7	572.3	379.0	193.3	150.2	43.1	13	24
99-AFB-241	10.0	1.2	8.8	567.9	335.9	232.0	200.2	31.8	4	2
99-AFB-242	10.0	1.6	8.5	488.1	289.5	198.6	167.9	30.7	3	7
99-AFB-243	10.0	1.0	9.0	466.8	236.2	230.6	189.4	41.2	13	5
99-AFB-244	10.0	1.7	8.4	432.5	298.4	134.1	111.3	22.8	18	12
99-AFB-245	10.0	1.5	8.5	520.8	425.9	94.9	79.5	15.4	204	437
99-AFB-246	10.0	1.7	8.4	480.2	291.3	188.9	160.1	28.8	15	7
99-AFB-247	10.0	1.3	8.7	457.4	304.2	153.2	125.2	28.0	31	51
99-AFB-248	10.0	1.5	8.5	541.3	367.3	174.0	148.7	25.3	77	793
99-AFB-249	10.0	1.6	8.4	521.7	364.3	157.4	132.2	25.2	15	21
99-AFB-250	10.0	0.8	9.2	559.8	257.8	302.0	254.4	47.6	6	1
99-AFB-251	10.0	2.5	7.5	468.9	363.0	105.9	85.5	20.4	16	54
99-AFB-252	10.0	1.6	8.4	553.6	293.4	260.2	228.4	31.8	6	3
99-AFB-253	10.0	1.5	8.6	454.3	251.3	203.0	176.4	26.6	4	4
99-AFB-254	10.0	1.9	8.2	414.1	205.2	208.9	181.4	27.5	15	72
99-AFB-255	10.0	0.7	9.3	609.4	221.7	387.7	313.5	74.2	2	0
99-AFB-256	10.0	0.9	9.1	791.6	326.2	465.4	383.5	81.9	0	0
99-AFB-257	10.0	0.9	9.1	716.9	299.7	417.2	337.0	80.2	0	0
99-AFB-258	10.0	1.0	9.0	589.7	255.2	334.5	264.9	69.6	0	0
99-AFB-259	10.0	1.9	8.1	567.9	226.4	341.5	274.3	67.2	0	0
99-AFB-260	10.0	1.1	8.9	511.9	198.4	313.5	250.7	62.8	0	0
99-AFB-261	10.0	1.1	8.9	790.3	329.2	461.1	382.1	79.0	3	2
99-AFB-262	10.0	2.3	7.7	498.3	258.4	239.9	198.4	41.5	2	55
99-AFB-263	10.0	2.1	7.9	872.8	353.9	518.9	405.1	113.8	2	3
99-AFB-264	10.0	1.3	8.7	826.6	346.6	480.0	398.6	81.4	2	0
99-AFB-265	10.0	1.7	8.4	722.1	266.1	456.0	374.6	81.4	1	1
99-AFB-266	10.0	1.5	8.5	475.1	143.1	332.0	264.5	67.5	1	1
99-AFB-267	10.0	0.9	9.2	491.4	301.3	190.1	164.2	25.9	4	1
99-AFB-268	10.0	2.0	8.0	527.5	273.1	254.4	218.4	36.0	15	6
99-AFB-269	10.0	1.5	8.6	503.3	261.8	241.5	205.0	36.5	9	8
99-AFB-270	10.0	1.5	8.5	368.7	212.5	156.2	133.8	22.4	9	121
99-AFB-271	10.0	1.3	8.8	284.2	175.2	109.0	94.6	14.4	4	2
99-AFB-272	10.0	1.6	8.4	623.3	300.4	322.9	272.1	50.8	3	0
99-AFB-273	10.0	2.4	7.6	564.4	360.3	204.1	166.7	37.4	1	0
99-AFB-274	10.0	1.8	8.2	543.2	270.3	272.9	233.7	39.2	4	1
99-AFB-275	10.0	1.7	8.4	595.5	287.9	307.6	256.8	50.8	6	7
99-AFB-276	10.0	1.8	8.3	614.0	258.9	355.1	287.0	68.1	2	1
99-AFB-277	10.0	1.2	8.9	568.7	239.7	329.0	271.0	58.0	1	11
99-AFB-278	10.0	0.6	9.5	609.0	263.4	345.6	284.6	61.0	2	0
99-AFB-279	10.0	1.3	8.7	386.2	253.5	132.7	107.9	24.8	20	15
99-AFB-280	10.0	1.9	8.1	475.7	290.3	185.4	153.4	32.0	7	16
99-AFB-281	10.0	0.6	9.5	747.6	283.9	463.7	388.0	75.7	2	1
99-AFB-282	10.0	1.1	8.9	848.4	640.6	207.8	171.5	36.3	1	0
99-AFB-283	10.0	2.2	7.9	695.5	360.4	335.1	270.3	64.8	0	0
99-AFB-284	10.0	1.6	8.4	632.9	308.4	324.5	255.2	69.3	1	0
99-AFB-285	10.0	1.3	8.7	638.5	353.3	285.2	237.6	47.6	1	0
99-AFB-286	10.0	1.2	8.9	438.0	242.6	195.4	156.5	38.9	0	0
99-AFB-287	10.0	2.3	7.7	533.7	341.8	191.9	160.9	31.0	9	10
99-AFB-288	10.0	0.7	9.4	460.6	170.9	289.7	236.4	53.3	2	0
99-AFB-289	10.0	0.8	9.3	448.5	190.6	257.9	197.8	60.1	0	0
99-AFB-290	10.0	1.4	8.6	369.6	219.9	149.7	125.5	24.2	2	239

Sample #	Table Split (kg)	+2 mm Clasts (kg)	Table Feed (kg)	Table Conc. (gms)	M.I. Lights (gms)	Conc. Total (gms)	Nonmag (gms)	Mag (gms)	No. V.G.	Calc. PPB
99-AFB-291	10.0	1.3	8.7	302.4	122.8	179.6	147.5	32.1	2	48
99-AFB-292	10.0	0.8	9.2	229.7	112.9	116.8	95.3	21.5	2	5
99-AFB-293	10.0	1.0	9.0	366.3	189.7	176.6	149.2	27.4	1	1
99-AFB-294	10.0	1.0	9.0	285.7	113.2	172.5	140.4	32.1	0	0
99-AFB-295	10.0	2.2	7.8	450.3	212.0	238.3	195.5	42.8	3	2
99-AFB-296	10.0	1.5	8.6	261.2	112.2	149.0	120.9	28.1	21	27
99-AFB-297	10.0	1.3	8.7	452.4	265.2	187.2	157.0	30.2	19	6
99-AFB-298	10.0	0.7	9.3	462.1	344.8	117.3	98.5	18.8	92	194
99-AFB-299	10.0	1.4	8.7	396.6	316.7	79.9	61.6	18.3	1589	2638
99-AFB-300	10.0	1.4	8.7	457.8	371.2	86.6	64.1	22.5	536	367
99-AFB-301	10.0	1.6	8.4	796.6	623.9	172.7	143.3	29.4	4	9
99-AFB-302	10.0	0.8	9.2	691.0	363.1	327.9	248.2	79.7	1	0
99-AFB-303	10.0	2.5	7.6	317.5	188.6	128.9	100.6	28.3	38	17
99-AFB-304	10.0	0.9	9.1	377.6	274.8	102.8	82.6	20.2	4	42
99-AFB-305	10.0	1.1	8.9	453.8	251.5	202.3	172.1	30.2	48	38
99-AFB-306	10.0	1.2	8.9	477.7	210.4	267.3	194.6	72.7	22	53
99-AFB-307	10.0	1.7	8.4	354.7	159.9	194.8	155.0	39.8	17	34
99-AFB-308	10.0	1.2	8.9	508.6	338.6	170.0	142.5	27.5	42	18
99-AFB-309	10.0	1.0	9.0	465.6	308.4	157.2	128.6	28.6	7	10
99-AFB-310	10.0	1.1	9.0	522.4	370.7	151.7	131.9	19.8	81	121
99-AFB-311	10.0	1.3	8.8	350.9	211.0	139.9	113.4	26.5	35	28
99-AFB-312	10.0	1.8	8.2	389.6	296.2	93.4	72.9	20.5	27	100
99-AFB-313	10.0	0.9	9.2	405.2	256.3	148.9	120.5	28.4	8	9
99-AFB-314	10.0	2.1	8.0	339.7	241.4	98.3	80.9	17.4	2	0
99-AFB-315	10.0	1.4	8.6	1150.8	939.1	211.7	184.7	27.0	3	2
99-AFB-316	10.0	1.2	8.9	399.9	190.4	209.5	170.9	38.6	8	15
99-AFB-317	10.0	0.9	9.2	291.7	222.7	69.0	56.0	13.0	1	7
99-AFB-318	10.0	1.8	8.2	384.7	255.7	129.0	107.9	21.1	6	25
99-AFB-319	10.0	2.3	7.7	876.9	639.6	237.3	201.2	36.1	5	5
99-AFB-320	10.0	1.9	8.1	438.6	281.9	156.7	131.0	25.7	5	8
99-AFB-321	10.0	1.0	9.0	557.5	333.2	224.3	184.9	39.4	15	41
99-AFB-322	10.0	0.4	9.6	538.3	189.1	349.2	291.6	57.6	1	1
99-AFB-323	10.0	0.3	9.7	584.0	202.2	381.8	311.0	70.8	1	1
99-AFB-324	10.0	0.9	9.1	473.5	157.3	316.2	268.0	48.2	1	0
99-AFB-325	10.0	1.0	9.0	407.9	152.9	255.0	206.8	48.2	45	16
99-AFB-326	10.0	1.0	9.0	357.3	231.8	125.5	94.8	30.7	7	17
99-AFB-327	10.0	1.0	9.0	367.0	314.0	53.0	43.7	9.3	13	27
99-AFB-328	10.0	1.4	8.6	429.8	249.0	180.8	131.7	49.1	64	105
99-AFB-329	10.0	0.6	9.4	407.3	264.4	142.9	104.8	38.1	45	82
99-AFB-330	10.0	0.4	9.6	433.7	232.3	201.4	172.1	29.3	11	85
99-AFB-331	10.0	1.8	8.2	338.8	172.5	166.3	125.0	41.3	19	14
99-AFB-332	10.0	1.5	8.5	466.4	246.2	220.2	171.6	48.6	5	4
99-AFB-333	10.0	1.5	8.5	454.0	203.1	250.9	191.5	59.4	9	11
99-AFB-334	10.0	1.1	8.9	379.3	154.0	225.3	174.0	51.3	28	21
99-AFB-335	10.0	1.5	8.5	191.0	70.3	120.7	93.5	27.2	5	11
99-AFB-336	10.0	0.5	9.5	365.7	69.2	296.5	208.5	88.0	2	2
99-AFB-337	10.0	0.9	9.1	267.8	65.0	202.8	202.1	0.7	1	14
99-AFB-338	10.0	0.4	9.6	238.0	30.9	207.1	154.6	52.5	13	3
99-AFB-339	10.0	0.5	9.5	203.8	50.0	153.8	110.3	43.5	9	27
99-AFB-340	10.0	0.6	9.4	253.0	83.8	169.2	120.3	48.9	17	2
99-AFB-341	10.0	0.4	9.6	321.1	57.0	264.1	180.2	83.9	2	6
99-AFB-342	10.0	1.3	8.7	316.3	107.2	209.1	149.8	59.3	0	0
99-AFB-343	10.0	0.5	9.5	564.2	238.8	325.4	251.2	74.2	9	3
99-AFB-344	10.0	0.7	9.3	443.5	155.6	287.9	225.3	62.6	8	2
99-AFB-345	10.0	0.7	9.3	555.4	190.8	364.6	291.6	73.0	8	3
99-AFB-346	10.0	0.8	9.2	475.3	218.7	256.6	199.0	57.6	7	3
99-AFB-347	10.0	1.2	8.8	420.7	142.6	278.1	222.9	55.2	2	0
99-AFB-348	10.0	1.4	8.6	524.0	208.2	315.8	264.6	51.2	7	2

Sample #	Table Split (kg)	+2 mm Clasts (kg)	Table Feed (kg)	Table Conc. (gms)	M.I. Lights (gms)	Conc. Total (gms)	Nonmag (gms)	Mag (gms)	No. V.G.	Calc. PPB
99-AFB-349	10.0	0.5	9.5	452.2	165.7	286.5	224.3	62.2	5	2
99-AFB-350	10.0	0.7	9.3	430.6	158.9	271.7	207.7	64.0	6	1
99-AFB-351	10.0	1.1	8.9	506.2	238.7	267.5	222.4	45.1	7	1
99-AFB-352	10.0	1.0	9.0	382.7	204.0	178.7	137.2	41.5	14	13
99-AFB-353	10.0	1.3	8.7	541.7	140.9	400.8	296.6	104.2	13	5
99-AFB-354	10.0	0.8	9.2	424.1	179.6	244.5	185.5	59.0	15	11
99-AFB-355	10.0	0.8	9.2	375.0	158.1	216.9	168.0	48.9	8	7
99-AFB-356	10.0	1.0	9.0	503.8	200.2	303.6	232.0	71.6	3	1
99-AFB-357	10.0	0.6	9.4	489.3	176.4	312.9	252.0	60.9	3	1
99-AFB-358	10.0	0.4	9.6	458.4	173.7	284.7	235.4	49.3	0	0
99-AFB-359	10.0	0.4	9.6	514.6	241.3	273.3	224.0	49.3	1	0
99-AFB-360	10.0	0.3	9.7	466.1	206.6	259.5	207.2	52.3	2	1
99-AFB-361	10.0	0.7	9.3	476.2	225.8	250.4	186.8	63.6	0	0
99-AFB-362	10.0	0.7	9.3	619.8	196.4	423.4	340.2	83.2	2	0
99-AFB-363	10.0	2.5	7.5	631.1	250.8	380.3	309.3	71.0	4	2
99-AFB-364	10.0	2.1	7.9	311.2	240.5	70.7	57.3	13.4	53	88
99-AFB-365	10.0	1.3	8.7	377.6	243.8	133.8	110.1	23.7	55	59
99-AFB-366	10.0	2.3	7.7	306.9	221.0	85.9	70.2	15.7	25	31
99-AFB-367	10.0	2.1	7.9	412.4	348.3	64.1	50.8	13.3	86	263
99-AFB-368	10.0	1.3	8.7	426.2	109.0	317.2	243.8	73.4	2	0
99-AFB-369	10.0	1.7	8.3	654.4	194.7	459.7	294.2	165.5	2	1
99-AFB-370	10.0	0.7	9.3	382.9	136.1	246.8	195.8	51.0	19	5
99-AFB-371	10.0	0.9	9.1	465.1	176.1	289.0	239.3	49.7	33	9
99-AFB-372	10.0	1.2	8.8	474.6	158.4	316.2	257.2	59.0	28	22
99-AFB-373	10.0	0.7	9.3	628.8	254.7	374.1	304.6	69.5	13	5
99-AFB-374	10.0	0.9	9.1	498.2	322.6	175.6	149.1	26.5	16	7
99-AFB-375	10.0	2.1	7.9	393.0	270.9	122.1	96.7	25.4	30	41
99-AFB-376	10.0	1.0	9.0	482.9	332.1	150.8	138.5	12.3	7	14
99-AFB-377	10.0	1.5	8.5	455.6	277.4	178.2	144.9	33.3	39	53
99-AFB-378	10.0	2.1	7.9	372.1	202.2	169.9	138.7	31.2	32	25
99-AFB-379	10.0	0.9	9.1	366.9	139.6	227.3	181.8	45.5	5	1
99-AFB-380	10.0	0.8	9.2	481.1	243.7	237.4	202.2	35.2	3	1
99-AFB-381	10.0	1.2	8.8	645.2	234.3	410.9	304.0	106.9	3	7
99-AFB-382	10.0	1.6	8.4	333.8	129.2	204.6	163.1	41.5	16	9
99-AFB-383	10.0	1.9	8.1	509.6	151.3	358.3	281.3	77.0	5	0
99-AFB-384	10.0	0.8	9.2	462.7	276.2	186.5	176.4	10.1	347	254
99-AFB-385	10.0	0.9	9.1	316.7	150.9	165.8	106.9	58.9	6	6
99-AFB-386	10.0	0.8	9.2	280.9	184.9	96.0	79.7	16.3	37	76
99-AFB-387	10.0	1.4	8.6	384.7	207.3	177.4	165.9	11.5	84	675
99-AFB-388	10.0	1.1	8.9	260.9	213.6	47.3	34.0	13.3	26	58
99-AFB-389	10.0	1.5	8.5	602.4	69.8	532.6	348.6	184.0	136	191
99-AFB-390	10.0	1.9	8.1	516.2	258.4	257.8	213.6	44.2	18	12
99-AFB-391	10.0	1.9	8.1	369.0	290.2	78.8	55.9	22.9	22	60
99-AFB-392	10.0	1.6	8.4	441.3	173.5	267.8	201.6	66.2	210	181
99-AFB-393	10.0	1.5	8.5	356.9	191.1	165.8	137.1	28.7	14	17
99-AFB-394	10.0	2.1	7.9	428.0	254.2	173.8	122.5	51.3	21	4
99-AFB-395	10.0	1.0	9.0	542.0	338.4	203.6	168.9	34.7	316	395
99-AFB-396	10.0	0.8	9.2	534.6	262.9	271.7	236.0	35.7	6	1
99-AFB-397	10.0	2.9	7.1	181.1	130.5	50.6	39.4	11.2	5	9
99-AFB-398	10.0	2.1	7.9	469.5	277.5	192.0	162.3	29.7	3	6
99-AFB-399	10.0	1.1	8.9	607.2	331.6	275.6	234.2	41.4	4	4
99-AFB-400	10.0	1.9	8.1	295.1	132.9	162.2	137.5	24.7	17	25

Appendix C. Summary gold grain data.

Sample No.	Easting (NAD27)	Northing (NAD27)	Number of Visible Gold Grains				Non-Mag Weight (gms)	Calculated PPB Visible Gold			
			Total	Reshaped	Modified	Pristine		Total	Reshaped	Modified	Pristine
99-AFB-001	717513	5389738	0	0	0	0	281.6	0	0	0	0
99-AFB-002	718808	5389698	0	0	0	0	439.9	0	0	0	0
99-AFB-003	720007	5389287	0	0	0	0	442.6	0	0	0	0
99-AFB-004	714649	5390243	0	0	0	0	523.2	0	0	0	0
99-AFB-005	713574	5390780	1	1	0	0	518.6	2	2	0	0
99-AFB-006	711616	5389948	1	1	0	0	269.9	1	1	0	0
99-AFB-007	710881	5389275	7	3	3	1	478.2	2	0	1	0
99-AFB-008	710881	5389327	1	1	0	0	277.1	0	0	0	0
99-AFB-009	709624	5388978	5	4	0	1	440.2	1	0	0	0
99-AFB-010	709006	5389683	0	0	0	0	237.8	0	0	0	0
99-AFB-011	708133	5390257	0	0	0	0	300.2	0	0	0	0
99-AFB-012	706877	5390583	1	0	0	1	387.2	0	0	0	0
99-AFB-013	705105	5391687	1	1	0	0	338.5	0	0	0	0
99-AFB-014	703751	5391937	0	0	0	0	376.1	0	0	0	0
99-AFB-015	702713	5392065	1	0	1	0	294.1	0	0	0	0
99-AFB-016	701229	5393005	0	0	0	0	383.4	0	0	0	0
99-AFB-017	699759	5393977	0	0	0	0	388.5	0	0	0	0
99-AFB-018	698827	5394374	0	0	0	0	270.1	0	0	0	0
99-AFB-019	697272	5393947	1	1	0	0	218.1	0	0	0	0
99-AFB-020	695227	5393441	0	0	0	0	360.5	0	0	0	0
99-AFB-021	693266	5393053	2	2	0	0	327.4	0	0	0	0
99-AFB-022	691565	5392367	0	0	0	0	264.4	0	0	0	0
99-AFB-023	688707	5390828	1	0	1	0	120.7	0	0	0	0
99-AFB-024	684522	5391326	1	0	1	0	283.1	0	0	0	0
99-AFB-025	683330	5391589	1	1	0	0	201.0	0	0	0	0
99-AFB-026	682101	5391151	2	0	0	2	145.4	0	0	0	0
99-AFB-027	679536	5389950	0	0	0	0	206.6	0	0	0	0
99-AFB-028	680255	5389245	1	1	0	0	180.5	0	0	0	0
99-AFB-029	677722	5388333	0	0	0	0	148.7	0	0	0	0
99-AFB-030	676002	5388683	0	0	0	0	363.5	0	0	0	0
99-AFB-031	677413	5389458	0	0	0	0	161.6	0	0	0	0
99-AFB-032	677592	5391074	0	0	0	0	188.0	0	0	0	0
99-AFB-033	681088	5392313	1	1	0	0	262.5	1	1	0	0
99-AFB-034	686459	5396347	0	0	0	0	248.0	0	0	0	0
99-AFB-035	718916	5390867	0	0	0	0	241.9	0	0	0	0
99-AFB-036	718924	5392161	0	0	0	0	246.5	0	0	0	0
99-AFB-037	717420	5392778	0	0	0	0	422.3	0	0	0	0
99-AFB-038	719237	5394974	0	0	0	0	317.6	0	0	0	0
99-AFB-039	720466	5395865	0	0	0	0	389.0	0	0	0	0
99-AFB-040	717822	5394141	0	0	0	0	465.0	0	0	0	0
99-AFB-041	717007	5395073	0	0	0	0	346.8	0	0	0	0
99-AFB-042	716394	5396205	0	0	0	0	313.0	0	0	0	0
99-AFB-043	717643	5397147	0	0	0	0	384.7	0	0	0	0
99-AFB-044	718401	5395809	0	0	0	0	396.5	0	0	0	0
99-AFB-045	717310	5388451	0	0	0	0	366.0	0	0	0	0
99-AFB-046	718474	5388604	0	0	0	0	277.3	0	0	0	0
99-AFB-047	720160	5387854	1	1	0	0	455.0	0	0	0	0
99-AFB-048	718784	5387209	0	0	0	0	482.5	0	0	0	0
99-AFB-049	720449	5386958	2	2	0	0	432.1	0	0	0	0
99-AFB-050	718394	5385834	1	1	0	0	460.7	0	0	0	0
99-AFB-051	716263	5387510	0	0	0	0	434.7	0	0	0	0
99-AFB-052	717325	5386954	3	3	0	0	521.1	1	1	0	0
99-AFB-053	716351	5386013	0	0	0	0	436.9	0	0	0	0
99-AFB-054	719928	5385705	0	0	0	0	376.2	0	0	0	0
99-AFB-055	718610	5384436	3	3	0	0	319.4	0	0	0	0
99-AFB-056	720933	5385868	0	0	0	0	401.6	0	0	0	0
99-AFB-057	720789	5384518	0	0	0	0	453.4	0	0	0	0
99-AFB-058	716938	5384402	1	1	0	0	324.4	7	7	0	0
99-AFB-059	715686	5383637	0	0	0	0	413.4	0	0	0	0
99-AFB-060	716353	5381973	2	1	0	1	346.6	1	1	0	0
99-AFB-061	717592	5381804	0	0	0	0	323.6	0	0	0	0

Sample No.	Easting (NAD27)	Northing (NAD27)	Number of Visible Gold Grains				Non-Mag Weight (gms)	Calculated PPB Visible Gold			
			Total	Reshaped	Modified	Pristine		Total	Reshaped	Modified	Pristine
99-AFB-062	717432	5379780	3	3	0	0	277.9	0	0	0	0
99-AFB-063	717401	5380247	3	3	0	0	314.2	2	2	0	0
99-AFB-064	717811	5378824	4	4	0	0	288.9	2	2	0	0
99-AFB-065	718674	5377612	1	1	0	0	312.4	0	0	0	0
99-AFB-066	718842	5381624	0	0	0	0	441.4	0	0	0	0
99-AFB-067	719924	5381987	0	0	0	0	400.7	0	0	0	0
99-AFB-068	720941	5382382	0	0	0	0	402.1	0	0	0	0
99-AFB-069	715403	5382780	0	0	0	0	354.6	0	0	0	0
99-AFB-070	714721	5382225	6	6	0	0	396.7	10	10	0	0
99-AFB-071	715121	5384395	0	0	0	0	430.6	0	0	0	0
99-AFB-072	714823	5385234	0	0	0	0	400.1	0	0	0	0
99-AFB-073	714555	5386358	0	0	0	0	468.3	0	0	0	0
99-AFB-074	714324	5387396	1	1	0	0	396.1	0	0	0	0
99-AFB-075	713378	5387493	0	0	0	0	284.7	0	0	0	0
99-AFB-076	712224	5386901	0	0	0	0	465.8	0	0	0	0
99-AFB-077	711221	5386681	0	0	0	0	459.4	0	0	0	0
99-AFB-078	712168	5385976	0	0	0	0	407.7	0	0	0	0
99-AFB-079	710302	5386786	0	0	0	0	424.8	0	0	0	0
99-AFB-080	709090	5386148	0	0	0	0	371.6	0	0	0	0
99-AFB-081	708765	5385321	0	0	0	0	419.1	0	0	0	0
99-AFB-082	708297	5384297	1	1	0	0	425.6	0	0	0	0
99-AFB-083	707791	5385322	0	0	0	0	486.1	0	0	0	0
99-AFB-084	706913	5384707	0	0	0	0	335.5	0	0	0	0
99-AFB-085	707993	5386145	0	0	0	0	382.9	0	0	0	0
99-AFB-086	706805	5385581	1	1	0	0	308.5	1	1	0	0
99-AFB-087	709628	5385370	0	0	0	0	326.1	0	0	0	0
99-AFB-088	709645	5384332	0	0	0	0	482.2	0	0	0	0
99-AFB-089	710306	5383756	0	0	0	0	103.3	0	0	0	0
99-AFB-090	710420	5382505	0	0	0	0	398.3	0	0	0	0
99-AFB-091	710607	5381404	0	0	0	0	342.0	0	0	0	0
99-AFB-092	710972	5380338	1	1	0	0	293.2	0	0	0	0
99-AFB-093	710511	5379352	0	0	0	0	242.6	0	0	0	0
99-AFB-094	709910	5378288	0	0	0	0	324.1	0	0	0	0
99-AFB-095	708956	5378684	2	1	1	0	367.2	0	0	0	0
99-AFB-096	708220	5379677	0	0	0	0	354.3	0	0	0	0
99-AFB-097	707275	5380727	0	0	0	0	354.1	0	0	0	0
99-AFB-098	711546	5379703	0	0	0	0	277.6	0	0	0	0
99-AFB-099	705847	5385122	0	0	0	0	323.9	0	0	0	0
99-AFB-100	704544	5384442	0	0	0	0	443.5	0	0	0	0
99-AFB-101	705555	5384023	1	1	0	0	238.0	0	0	0	0
99-AFB-102	702168	5385353	2	2	0	0	439.8	0	0	0	0
99-AFB-103	700875	5385284	0	0	0	0	384.4	0	0	0	0
99-AFB-104	700804	5386711	3	3	0	0	286.1	1	1	0	0
99-AFB-105	710451	5390765	3	2	1	0	328.4	0	0	0	0
99-AFB-106	701552	5387072	0	0	0	0	512.7	0	0	0	0
99-AFB-107	701901	5388059	0	0	0	0	399.9	0	0	0	0
99-AFB-108	702915	5389016	0	0	0	0	290.8	0	0	0	0
99-AFB-109	701798	5389441	0	0	0	0	270.1	0	0	0	0
99-AFB-110	700584	5389955	1	1	0	0	149.4	0	0	0	0
99-AFB-111	699599	5389242	1	1	0	0	244.7	0	0	0	0
99-AFB-112	699174	5385760	1	1	0	0	279.0	0	0	0	0
99-AFB-113	697930	5385220	2	2	0	0	285.6	2	2	0	0
99-AFB-114	696882	5385910	0	0	0	0	336.5	0	0	0	0
99-AFB-115	695621	5385764	39	6	5	28	261.3	12	2	1	9
99-AFB-116	694357	5385827	0	0	0	0	240.0	0	0	0	0
99-AFB-117	696125	5387227	0	0	0	0	348.5	0	0	0	0
99-AFB-118	696128	5388260	3	2	1	0	233.0	2	2	0	0
99-AFB-119	695151	5389022	0	0	0	0	193.2	0	0	0	0
99-AFB-120	699643	5385027	1	1	0	0	367.6	0	0	0	0
99-AFB-121	698640	5384397	1	0	0	1	331.7	0	0	0	0
99-AFB-122	702339	5384109	0	0	0	0	359.3	0	0	0	0

Sample No.	Easting (NAD27)	Northing (NAD27)	Number of Visible Gold Grains				Non-Mag Weight (gms)	Calculated PPB Visible Gold			
			Total	Reshaped	Modified	Pristine		Total	Reshaped	Modified	Pristine
99-AFB-123	701981	5383183	0	0	0	0	276.8	0	0	0	0
99-AFB-124	700921	5382484	1	1	0	0	371.7	0	0	0	0
99-AFB-125	700218	5381795	1	1	0	0	453.1	0	0	0	0
99-AFB-126	700333	5380472	3	3	0	0	203.1	2	2	0	0
99-AFB-127	700930	5379570	2	2	0	0	320.7	1	1	0	0
99-AFB-128	701519	5378620	4	4	0	0	281.1	3	3	0	0
99-AFB-129	703121	5378611	1	0	1	0	229.1	1	0	1	0
99-AFB-130	704149	5378812	1	1	0	0	287.9	0	0	0	0
99-AFB-131	705405	5379590	3	3	0	0	315.2	2	2	0	0
99-AFB-132	699671	5379560	2	2	0	0	338.6	1	1	0	0
99-AFB-133	697774	5379377	2	1	1	0	213.2	3	3	0	0
99-AFB-134	696974	5380254	1	1	0	0	257.3	0	0	0	0
99-AFB-135	698140	5378730	9	6	2	1	185.8	16	14	2	0
99-AFB-136	697216	5378747	2	2	0	0	461.6	0	0	0	0
99-AFB-137	695959	5378595	3	2	0	1	197.5	2	1	0	0
99-AFB-138	695645	5379525	6	4	1	1	273.0	5	4	1	0
99-AFB-139	695805	5380500	3	2	0	1	196.8	5	5	0	0
99-AFB-140	696050	5381645	2	1	0	1	327.4	1	1	0	0
99-AFB-141	697082	5381906	0	0	0	0	407.3	0	0	0	0
99-AFB-142	696158	5382624	6	4	2	0	282.7	2	1	1	0
99-AFB-143	696906	5383151	1	1	0	0	204.9	0	0	0	0
99-AFB-144	708674	5388957	0	0	0	0	336.6	0	0	0	0
99-AFB-145	706621	5389469	1	0	1	0	263.2	1	0	1	0
99-AFB-146	705502	5388995	1	1	0	0	339.4	0	0	0	0
99-AFB-147	707777	5388655	2	2	0	0	463.6	0	0	0	0
99-AFB-148	713909	5389270	0	0	0	0	366.9	0	0	0	0
99-AFB-149	715268	5389510	0	0	0	0	508.5	0	0	0	0
99-AFB-150	714570	5389512	0	0	0	0	224.3	0	0	0	0
99-AFB-151	706770	5391899	0	0	0	0	393.2	0	0	0	0
99-AFB-152	706064	5392382	0	0	0	0	381.9	0	0	0	0
99-AFB-153	704658	5393061	0	0	0	0	248.6	0	0	0	0
99-AFB-154	705484	5391692	1	1	0	0	212.5	0	0	0	0
99-AFB-155	703598	5392747	0	0	0	0	287.1	0	0	0	0
99-AFB-156	700745	5393294	1	1	0	0	268.6	0	0	0	0
99-AFB-157	702474	5394069	2	2	0	0	390.0	0	0	0	0
99-AFB-158	696749	5384378	3	3	0	0	273.1	2	2	0	0
99-AFB-159	694821	5378045	6	6	0	0	121.0	4	4	0	0
99-AFB-160	693946	5377258	22	11	7	4	223.4	11	9	2	1
99-AFB-161	693783	5376033	4	3	0	1	186.3	83	82	0	1
99-AFB-162	691181	5374957	11	11	0	0	227.7	13	13	0	0
99-AFB-163	691252	5375821	4	4	0	0	238.8	7	7	0	0
99-AFB-164	690046	5377047	0	0	0	0	129.1	0	0	0	0
99-AFB-165	703916	5394573	0	0	0	0	338.9	0	0	0	0
99-AFB-166	706260	5394546	2	2	0	0	387.9	6	6	0	0
99-AFB-167	704265	5395725	1	1	0	0	496.5	0	0	0	0
99-AFB-168	703089	5395576	0	0	0	0	486.7	0	0	0	0
99-AFB-169	704167	5397024	1	1	0	0	290.2	0	0	0	0
99-AFB-170	702939	5397367	0	0	0	0	321.8	0	0	0	0
99-AFB-171	697059	5393043	1	1	0	0	323.2	0	0	0	0
99-AFB-172	695201	5392031	1	1	0	0	291.6	1	1	0	0
99-AFB-173	693950	5392063	0	0	0	0	288.7	0	0	0	0
99-AFB-174	693540	5391704	2	2	0	0	303.7	3	3	0	0
99-AFB-175	687845	5390725	7	5	2	0	178.4	7	7	0	0
99-AFB-176	683540	5389134	0	0	0	0	197.0	0	0	0	0
99-AFB-177	684413	5390023	1	1	0	0	282.4	1	1	0	0
99-AFB-178	674809	5386073	2	2	0	0	204.8	0	0	0	0
99-AFB-179	675944	5386374	1	1	0	0	128.0	0	0	0	0
99-AFB-180	682491	5388348	1	0	1	0	120.5	0	0	0	0
99-AFB-181	681503	5388269	79	55	19	5	123.1	76	57	15	3
99-AFB-182	680894	5388722	2	2	0	0	82.3	3	3	0	0
99-AFB-183	681448	5386447	3	2	1	0	158.7	2	1	0	0

Sample No.	Easting (NAD27)	Northing (NAD27)	Number of Visible Gold Grains				Non-Mag Weight (gms)	Calculated PPB Visible Gold			
			Total	Reshaped	Modified	Pristine		Total	Reshaped	Modified	Pristine
99-AFB-184	680616	5386338	14	13	1	0	163.2	37	35	2	0
99-AFB-185	681017	5387080	3	3	0	0	158.4	4	4	0	0
99-AFB-186	681771	5387098	8	6	1	1	134.0	3	3	0	0
99-AFB-187	681893	5385152	155	70	15	70	79.6	139	45	19	75
99-AFB-188	678780	5380540	3	2	1	0	285.6	9	8	1	0
99-AFB-189	680371	5381342	5	2	0	3	114.5	3	1	0	2
99-AFB-190	681309	5381219	12	7	2	3	206.4	11	8	2	0
99-AFB-191	681545	5382203	3	2	1	0	138.2	5	4	1	0
99-AFB-192	679225	5382012	12	12	0	0	423.1	3	3	0	0
99-AFB-193	677604	5381483	4	4	0	0	155.7	3	3	0	0
99-AFB-194	676128	5381846	1	1	0	0	233.0	0	0	0	0
99-AFB-195	677290	5382378	42	33	8	1	244.8	34	27	7	0
99-AFB-196	673020	5382062	18	14	2	2	49.3	45	32	11	2
99-AFB-197	671979	5381132	18	12	4	2	137.0	53	5	0	48
99-AFB-198	677086	5380744	20	14	5	1	227.5	42	40	1	0
99-AFB-199	677742	5379094	1	0	1	0	167.4	0	0	0	0
99-AFB-200	677394	5377094	8	8	0	0	223.8	6	6	0	0
99-AFB-201	678203	5376012	8	6	2	0	263.9	3	1	1	0
99-AFB-202	678493	5374896	9	9	0	0	141.6	27	27	0	0
99-AFB-203	679420	5374722	3	3	0	0	146.8	1	1	0	0
99-AFB-204	680251	5374499	6	6	0	0	204.4	3	3	0	0
99-AFB-205	681258	5374768	4	4	0	0	225.0	1	1	0	0
99-AFB-206	682008	5375515	7	7	0	0	153.3	3	3	0	0
99-AFB-207	682580	5377430	5	2	3	0	215.1	3	2	1	0
99-AFB-208	683793	5378059	0	0	0	0	128.7	0	0	0	0
99-AFB-209	685454	5377775	1	1	0	0	261.8	6	6	0	0
99-AFB-210	686267	5376678	2	0	0	2	133.0	3	0	0	3
99-AFB-211	688247	5376079	1	1	0	0	221.4	1	1	0	0
99-AFB-212	675154	5391549	2	2	0	0	70.6	6	6	0	0
99-AFB-213	674548	5390596	4	4	0	0	152.9	5	5	0	0
99-AFB-214	672621	5389782	7	7	0	0	107.8	6	6	0	0
99-AFB-215	669366	5388071	2	2	0	0	177.8	1	1	0	0
99-AFB-216	665865	5385523	4	4	0	0	167.3	11	11	0	0
99-AFB-217	666805	5382569	4	4	0	0	367.7	2	2	0	0
99-AFB-218	669782	5385608	1	1	0	0	167.0	1	1	0	0
99-AFB-219	668868	5383726	3	3	0	0	223.3	1	1	0	0
99-AFB-220	669350	5383627	2	2	0	0	155.5	0	0	0	0
99-AFB-221	670052	5384165	0	0	0	0	151.2	0	0	0	0
99-AFB-222	667850	5382647	2	2	0	0	185.2	4	4	0	0
99-AFB-223	666245	5382280	0	0	0	0	160.6	0	0	0	0
99-AFB-224	668951	5382485	4	3	1	0	166.9	9	7	2	0
99-AFB-225	670638	5382083	4	4	0	0	148.7	15	15	0	0
99-AFB-226	671524	5381275	15	9	4	2	117.5	18	15	3	0
99-AFB-227	668627	5381133	3	3	0	0	164.5	0	0	0	0
99-AFB-228	666850	5381348	1	1	0	0	160.5	2	2	0	0
99-AFB-229	666796	5380456	6	6	0	0	165.6	4	4	0	0
99-AFB-230	666191	5380603	3	3	0	0	134.6	28	28	0	0
99-AFB-231	665705	5380340	4	4	0	0	169.1	6	6	0	0
99-AFB-232	665608	5379214	3	3	0	0	194.5	20	20	0	0
99-AFB-233	664679	5378482	6	4	2	0	169.7	4	4	1	0
99-AFB-234	663446	5377772	11	9	1	1	137.1	8	5	1	1
99-AFB-235	663785	5377960	3	1	2	0	180.8	3	1	2	0
99-AFB-236	664560	5379543	7	7	0	0	169.1	6	6	0	0
99-AFB-237	665000	5381590	6	6	0	0	192.5	2	2	0	0
99-AFB-238	662878	5379228	14	11	2	1	227.2	17	16	0	0
99-AFB-239	661691	5377771	3	3	0	0	205.4	1	1	0	0
99-AFB-240	662756	5377685	13	13	0	0	150.2	24	24	0	0
99-AFB-241	662100	5376640	4	3	1	0	200.2	2	1	1	0
99-AFB-242	663013	5376079	3	1	1	1	167.9	7	6	0	0
99-AFB-243	664490	5376708	13	13	0	0	189.4	5	5	0	0
99-AFB-244	665829	5376621	18	18	0	0	111.3	12	12	0	0

Sample No.	Easting (NAD27)	Northing (NAD27)	Number of Visible Gold Grains				Non-Mag Weight (gms)	Calculated PPB Visible Gold			
			Total	Reshaped	Modified	Pristine		Total	Reshaped	Modified	Pristine
99-AFB-245	666941	5376939	204	4	29	171	79.5	437	29	19	388
99-AFB-246	662255	5375990	15	10	4	1	160.1	7	5	0	1
99-AFB-247	663184	5374603	31	14	3	14	125.2	51	45	3	4
99-AFB-248	664677	5374719	77	43	10	24	148.7	793	777	6	10
99-AFB-249	665998	5375137	15	12	2	1	132.2	21	17	3	0
99-AFB-250	666701	5375922	6	6	0	0	254.4	1	1	0	0
99-AFB-251	662136	5374191	16	12	4	0	85.5	54	45	9	0
99-AFB-252	660003	5378531	6	6	0	0	228.4	3	3	0	0
99-AFB-253	658030	5377266	4	3	1	0	176.4	4	2	2	0
99-AFB-254	657122	5375095	15	9	3	3	181.4	72	62	3	7
99-AFB-255	716481	5393189	2	2	0	0	313.5	0	0	0	0
99-AFB-256	714893	5393141	0	0	0	0	383.5	0	0	0	0
99-AFB-257	712352	5392741	0	0	0	0	337.0	0	0	0	0
99-AFB-258	713640	5386298	0	0	0	0	264.9	0	0	0	0
99-AFB-259	711725	5385265	0	0	0	0	274.3	0	0	0	0
99-AFB-260	713220	5384877	0	0	0	0	250.7	0	0	0	0
99-AFB-261	713921	5382351	3	3	0	0	382.1	2	2	0	0
99-AFB-262	714014	5382920	2	2	0	0	198.4	55	55	0	0
99-AFB-263	713424	5382781	2	2	0	0	405.1	3	3	0	0
99-AFB-264	712657	5382808	2	2	0	0	398.6	0	0	0	0
99-AFB-265	719664	5382271	1	1	0	0	374.6	1	1	0	0
99-AFB-266	721034	5381462	1	1	0	0	264.5	1	1	0	0
99-AFB-267	656219	5377979	4	3	0	1	164.2	1	1	0	0
99-AFB-268	655373	5376318	15	9	0	6	218.4	6	5	0	1
99-AFB-269	657457	5375340	9	7	0	2	205.0	8	7	0	1
99-AFB-270	653683	5375749	9	2	1	6	133.8	121	85	1	35
99-AFB-271	653327	5374218	4	3	0	1	94.6	2	0	0	2
99-AFB-272	654816	5378441	3	3	0	0	272.1	0	0	0	0
99-AFB-273	657723	5379358	1	1	0	0	166.7	0	0	0	0
99-AFB-274	660031	5381523	4	4	0	0	233.7	1	1	0	0
99-AFB-275	660614	5379969	6	6	0	0	256.8	7	7	0	0
99-AFB-276	718937	5377982	2	2	0	0	287.0	1	1	0	0
99-AFB-277	719820	5379002	1	1	0	0	271.0	11	11	0	0
99-AFB-278	720882	5379334	2	2	0	0	284.6	0	0	0	0
99-AFB-279	719138	5376503	20	1	7	12	107.9	15	6	3	6
99-AFB-280	717671	5377439	7	6	1	0	153.4	16	16	0	0
99-AFB-281	716319	5378150	2	2	0	0	388.0	1	1	0	0
99-AFB-282	715602	5379161	1	1	0	0	171.5	0	0	0	0
99-AFB-283	717320	5376914	0	0	0	0	270.3	0	0	0	0
99-AFB-284	712437	5379110	1	1	0	0	255.2	0	0	0	0
99-AFB-285	713705	5379022	1	1	0	0	237.6	0	0	0	0
99-AFB-286	713842	5378014	0	0	0	0	156.5	0	0	0	0
99-AFB-287	714513	5377222	9	8	1	0	160.9	10	6	4	0
99-AFB-288	707071	5383106	2	2	0	0	236.4	0	0	0	0
99-AFB-289	708761	5383498	0	0	0	0	197.8	0	0	0	0
99-AFB-290	662868	5380809	2	2	0	0	125.5	239	239	0	0
99-AFB-291	658622	5382435	2	1	0	1	147.5	48	48	0	0
99-AFB-292	659338	5384467	2	2	0	0	95.3	5	5	0	0
99-AFB-293	662644	5385228	1	1	0	0	149.2	1	1	0	0
99-AFB-294	663523	5384583	0	0	0	0	140.4	0	0	0	0
99-AFB-295	661177	5383304	3	3	0	0	195.5	2	2	0	0
99-AFB-296	668851	5378917	21	7	5	9	120.9	27	16	5	6
99-AFB-297	668221	5378218	19	8	4	7	157.0	6	5	0	1
99-AFB-298	668793	5377542	92	40	31	21	98.5	194	101	23	70
99-AFB-299	669619	5378492	1589	56	231	1302	61.6	2638	764	388	1487
99-AFB-300	670475	5379395	536	264	62	210	64.1	367	173	44	150
99-AFB-301	670164	5380925	4	4	0	0	143.3	9	9	0	0
99-AFB-302	682226	5390366	1	1	0	0	248.2	0	0	0	0
99-AFB-303	679301	5384426	38	18	2	18	100.6	17	9	2	6
99-AFB-304	675123	5379959	4	2	2	0	82.6	42	7	35	0
99-AFB-305	674552	5379077	48	23	3	22	172.1	38	27	0	10

Sample No.	Easting (NAD27)	Northing (NAD27)	Number of Visible Gold Grains				Non-Mag Weight	Calculated PPB Visible Gold			
			Total	Reshaped	Modified	Pristine	(gms)	Total	Reshaped	Modified	Pristine
99-AFB-306	675458	5377170	22	16	1	5	194.6	53	52	1	1
99-AFB-307	672318	5377204	17	11	3	3	155.0	34	20	3	11
99-AFB-308	671864	5378966	42	27	6	9	142.5	18	13	1	4
99-AFB-309	667290	5378073	7	6	0	1	128.6	10	10	0	0
99-AFB-310	669871	5377818	81	52	7	22	131.9	121	42	42	38
99-AFB-311	668253	5375814	35	17	3	15	113.4	28	10	0	18
99-AFB-312	664224	5375327	27	19	2	6	72.9	100	65	30	5
99-AFB-313	661117	5375306	8	7	0	1	120.5	9	9	0	0
99-AFB-314	660342	5374273	2	2	0	0	80.9	0	0	0	0
99-AFB-315	661111	5376964	3	3	0	0	184.7	2	2	0	0
99-AFB-316	660283	5376445	8	8	0	0	170.9	15	15	0	0
99-AFB-317	677290	5385718	1	1	0	0	56.0	7	7	0	0
99-AFB-318	673993	5385851	6	6	0	0	107.9	25	25	0	0
99-AFB-319	676468	5380633	5	5	0	0	201.2	5	5	0	0
99-AFB-320	676266	5379632	5	5	0	0	131.0	8	8	0	0
99-AFB-321	675849	5378281	15	9	3	3	184.9	41	40	1	0
99-AFB-322	712573	5391146	1	1	0	0	291.6	1	1	0	0
99-AFB-323	707512	5392483	1	1	0	0	311.0	1	1	0	0
99-AFB-324	704739	5393844	1	0	1	0	268.0	0	0	0	0
99-AFB-325	692236	5388165	45	16	22	7	206.8	16	3	5	8
99-AFB-326	689567	5388664	7	2	4	1	94.8	17	9	7	1
99-AFB-327	684465	5383653	13	8	4	1	43.7	27	15	12	0
99-AFB-328	682385	5382121	64	13	17	34	131.7	105	55	23	28
99-AFB-329	680677	5379819	45	22	13	10	104.8	82	40	37	4
99-AFB-330	679333	5379140	11	5	2	4	172.1	85	61	17	6
99-AFB-331	679047	5378179	19	4	10	5	125.0	14	1	9	4
99-AFB-332	693364	5377060	5	2	2	1	171.6	4	2	2	0
99-AFB-333	694402	5378746	9	8	0	1	191.5	11	11	0	0
99-AFB-334	694358	5380145	28	23	2	3	174.0	21	12	9	0
99-AFB-335	694416	5381613	5	4	0	1	93.5	11	9	0	2
99-AFB-336	700360	5388697	2	1	0	1	208.5	2	2	0	0
99-AFB-337	697794	5389437	1	1	0	0	202.1	14	14	0	0
99-AFB-338	696986	5389571	13	7	3	3	154.6	3	1	1	1
99-AFB-339	697985	5387370	9	5	0	4	110.3	27	27	0	1
99-AFB-340	698152	5383627	17	15	0	2	120.3	2	2	0	0
99-AFB-341	700769	5383713	2	2	0	0	180.2	6	6	0	0
99-AFB-342	700240	5382733	0	0	0	0	149.8	0	0	0	0
99-AFB-343	698671	5381360	9	8	1	0	251.2	3	3	0	0
99-AFB-344	701257	5381659	8	7	1	0	225.3	2	2	0	0
99-AFB-345	702635	5382251	8	6	0	2	291.6	3	3	0	0
99-AFB-346	705043	5382149	7	5	0	2	199.0	3	1	0	2
99-AFB-347	704416	5380500	2	2	0	0	222.9	0	0	0	0
99-AFB-348	705888	5380656	7	4	3	0	264.6	2	2	0	0
99-AFB-349	708095	5382549	5	3	0	2	224.3	2	2	0	0
99-AFB-350	708707	5381049	6	6	0	0	207.7	1	1	0	0
99-AFB-351	703382	5378179	7	4	0	3	222.4	1	1	0	0
99-AFB-352	702728	5376737	14	9	0	5	137.2	13	11	0	2
99-AFB-353	711066	5377938	13	8	0	5	296.6	5	4	0	0
99-AFB-354	712112	5382322	15	1	1	13	185.5	11	2	0	9
99-AFB-355	712528	5380795	8	3	1	4	168.0	7	7	0	0
99-AFB-356	714657	5380000	3	2	0	1	232.0	1	1	0	0
99-AFB-357	720262	5380615	3	0	1	2	252.0	1	0	1	0
99-AFB-358	717679	5383294	0	0	0	0	235.4	0	0	0	0
99-AFB-359	719941	5384105	1	1	0	0	224.0	0	0	0	0
99-AFB-360	717006	5391353	2	2	0	0	207.2	1	1	0	0
99-AFB-361	714619	5392266	0	0	0	0	186.8	0	0	0	0
99-AFB-362	709909	5392353	2	2	0	0	340.2	0	0	0	0
99-AFB-363	674577	5385151	4	4	0	0	309.3	2	2	0	0
99-AFB-364	673842	5384124	53	22	6	25	57.3	88	40	26	23
99-AFB-365	672695	5383208	55	23	5	27	110.1	59	36	12	11
99-AFB-366	675766	5382842	25	6	3	16	70.2	31	2	8	21

Sample No.	Easting (NAD27)	Northing (NAD27)	Number of Visible Gold Grains				Non-Mag Weight (gms)	Calculated PPB Visible Gold			
			Total	Reshaped	Modified	Pristine		Total	Reshaped	Modified	Pristine
99-AFB-367	675660	5384335	86	16	8	62	50.8	263	39	51	173
99-AFB-368	702001	5394945	2	1	0	1	243.8	0	0	0	0
99-AFB-369	700883	5394703	2	1	0	1	294.2	1	0	0	0
99-AFB-370	701990	5390686	19	8	3	8	195.8	5	4	0	1
99-AFB-371	699377	5391132	33	7	7	19	239.3	9	4	2	3
99-AFB-372	697432	5391103	28	13	4	11	257.2	22	3	2	17
99-AFB-373	695539	5391161	13	5	3	5	304.6	5	2	1	2
99-AFB-374	693921	5391069	16	7	6	3	149.1	7	3	2	1
99-AFB-375	694799	5389832	30	14	1	15	96.7	41	31	1	9
99-AFB-376	693308	5390210	7	2	2	3	138.5	14	5	7	2
99-AFB-377	693540	5388831	39	7	7	25	144.9	53	14	27	12
99-AFB-378	692257	5389062	32	9	4	19	138.7	25	6	3	16
99-AFB-379	691129	5389034	5	1	1	3	181.8	1	0	0	1
99-AFB-380	692281	5390107	3	2	1	0	202.2	1	0	0	0
99-AFB-381	690838	5390844	3	2	1	0	304.0	7	7	0	0
99-AFB-382	689352	5389708	16	2	1	13	163.1	9	2	1	5
99-AFB-383	687370	5389662	5	2	1	2	281.3	0	0	0	0
99-AFB-384	686317	5388548	347	28	10	309	176.4	254	8	91	155
99-AFB-385	687731	5388403	6	3	1	2	106.9	6	5	0	1
99-AFB-386	682045	5383065	37	7	2	28	79.7	76	22	5	49
99-AFB-387	682876	5383815	84	32	8	44	165.9	675	616	29	30
99-AFB-388	683630	5384538	26	6	3	17	34.0	58	24	3	31
99-AFB-389	683788	5386955	136	96	12	28	348.6	191	111	68	13
99-AFB-390	684435	5386198	18	3	4	11	213.6	12	1	6	5
99-AFB-391	685812	5386401	22	10	0	12	55.9	60	27	0	33
99-AFB-392	686078	5387657	210	24	11	175	201.6	181	66	21	93
99-AFB-393	670515	5384260	14	7	0	7	137.1	17	16	0	1
99-AFB-394	671960	5386703	21	3	3	15	122.5	4	1	1	2
99-AFB-395	663522	5378359	316	53	23	240	168.9	395	339	6	51
99-AFB-396	664208	5380185	6	1	1	4	236.0	1	0	1	0
99-AFB-397	679212	5386367	5	2	2	1	39.4	9	3	5	1
99-AFB-398	676373	5387625	3	3	0	0	162.3	6	6	0	0
99-AFB-399	675368	5389800	4	3	1	0	234.2	4	4	1	0
99-AFB-400	702036	5379266	17	7	3	7	137.5	25	2	0	23

Appendix D. Selected geochemical results for till (-63 μm fraction).

Sample #	Easting (NAD27)	Northing (NAD27)	Au ppb	As ppm	Sb ppm	Mo ppm	Ni ppm	Cr ppm	Co ppm	Pt ppb	Pd ppb	Cu ppm	Zn ppm	Pb ppm	Ag ppm	Cd ppm
99-AFB-001	717513	5389738	5	1.6	-0.1	-1.0	32	31	12.1	4.3	3.8	69.0	126	5.1	0.053	7
99-AFB-002	718808	5389698	-2	0.8	-0.1	-1.0	20	20	7.6	3.3	1.5	22.2	64	3.2	0.017	4
99-AFB-003	720007	5389287	4	1.6	-0.1	-1.0	24	22	7.7	2.4	1.5	32.6	37	4.3	0.022	4
99-AFB-004	714649	5390243	15	2.1	-0.1	-1.0	30	32	10.8	2.3	2.3	40.4	37	4.3	0.013	6
99-AFB-005	713574	5390780	-2	5.3	0.2	-1.0	27	26	10.9	2.5	2.2	22.6	34	4.0	0.010	6
99-AFB-006	711616	5389948	7	1.7	0.2	-1.0	24	33	7.0	2.1	1.8	39.2	38	5.8	0.013	5
99-AFB-007	710881	5389275	20	4.1	0.2	-1.0	21	22	8.7	1.5	2.0	25.7	48	11.4	0.049	5
99-AFB-008	710881	5389327	4	1.8	-0.1	-1.0	24	32	7.5	1.7	1.8	56.8	38	5.5	0.010	5
99-AFB-009	709624	5388978	17	3.4	-0.1	-1.0	25	28	11.0	1.5	2.5	45.3	29	4.8	0.084	11
99-AFB-010	709006	5389683	-2	1.1	-0.1	-1.0	23	23	8.9	1.2	1.5	25.5	27	4.0	0.013	5
99-AFB-011	708133	5390257	7	7.3	0.2	-1.0	34	33	13.9	1.9	2.3	47.1	42	5.9	0.012	8
99-AFB-012	706877	5390583	-2	1.5	-0.1	-1.0	21	23	8.3	1.7	1.5	27.8	27	3.0	0.011	4
99-AFB-013	705105	5391687	-2	1.6	-0.1	-1.0	23	25	8.1	2.0	2.1	30.0	32	3.1	-0.010	4
99-AFB-014	703751	5391937	6	1.3	-0.1	-1.0	22	26	8.4	1.4	1.8	28.0	31	3.4	-0.010	4
99-AFB-015	702713	5392065	7	3.2	-0.1	-1.0	23	26	8.3	1.6	1.5	23.8	30	3.9	-0.010	4
99-AFB-016	701229	5393005	-2	1.5	0.2	-1.0	23	26	7.9	2.1	2.1	31.3	32	3.3	-0.010	5
99-AFB-017	699759	5393977	-2	2.5	0.2	-1.0	23	26	8.8	2.1	2.0	26.8	33	3.5	0.008	5
99-AFB-018	698827	5394374	6	3.1	-0.1	-1.0	26	25	9.9	1.2	1.5	33.2	34	3.9	-0.010	4
99-AFB-019	697272	5393947	-2	2.3	-0.1	-1.0	25	29	9.5	1.7	2.2	30.0	31	4.9	0.008	5
99-AFB-020	695227	5393441	-2	2.6	0.3	-1.0	29	25	9.5	1.8	1.9	23.0	37	4.7	0.022	5
99-AFB-021	693266	5393053	7	2.0	-0.1	-1.0	32	28	9.6	1.7	1.5	41.6	38	5.1	0.033	4
99-AFB-022	691565	5392367	5	2.2	-0.1	-1.0	24	32	9.7	1.4	1.9	19.2	33	4.8	0.015	3
99-AFB-023	688707	5390828	-2	3.3	0.4	-1.0	45	72	14.4	1.4	2.0	76.4	115	5.7	0.050	6
99-AFB-024	684522	5391326	6	5.6	-0.1	-1.0	37	44	13.3	1.4	1.7	43.0	56	9.2	0.034	5
99-AFB-025	683330	5391589	6	3.0	0.2	-1.0	35	56	11.8	1.8	1.5	31.0	37	5.2	0.023	6
99-AFB-026	682101	5391151	-2	4.5	0.2	-1.0	30	40	12.0	1.6	1.5	27.8	39	6.8	0.013	4
99-AFB-027	679536	5389950	2	3.7	-0.1	-1.0	38	49	11.1	1.6	1.4	27.8	45	4.8	0.018	4
99-AFB-028	680255	5389245	-2	4.9	0.2	-1.0	43	50	15.3	1.6	1.5	37.6	65	8.6	0.055	6
99-AFB-029	677722	5388333	-2	2.8	-0.1	-1.0	26	38	11.6	1.4	1.3	34.0	47	7.1	0.019	5
99-AFB-030	676002	5388683	-2	1.6	-0.1	-1.0	18	22	8.2	1.4	1.3	11.8	26	3.1	0.006	3
99-AFB-031	677413	5389458	4	1.7	0.2	-1.0	22	32	9.0	1.4	1.2	21.4	37	5.1	0.019	3
99-AFB-032	677592	5391074	-2	4.3	0.2	-1.0	32	54	13.4	2.4	2.5	20.0	59	12.0	0.021	4
99-AFB-033	681088	5392313	4	6.6	0.3	-1.0	38	36	13.8	1.6	1.8	38.8	71	12.9	0.024	4
99-AFB-034	686459	5396347	-2	1.9	-0.1	-1.0	26	27	9.7	1.6	1.8	27.5	36	7.3	0.025	4
99-AFB-035	718916	5390867	-2	2.1	-0.1	-1.0	27	30	10.5	2.0	3.3	23.9	31	3.7	0.016	4
99-AFB-036	718924	5392161	-2	1.7	0.2	-1.0	21	24	8.1	1.5	1.8	15.8	24	3.2	0.014	3
99-AFB-037	717420	5392778	-2	2.4	-0.1	-1.0	35	22	9.6	2.2	2.6	31.8	41	3.5	0.008	3
99-AFB-038	719237	5394974	-2	3.1	-0.1	-1.0	22	25	8.2	2.9	2.7	21.6	27	6.8	0.021	3
99-AFB-039	720466	5395865	3	2.0	-0.1	-1.0	25	27	8.9	2.5	2.5	23.2	29	3.7	0.012	4
99-AFB-040	717822	5394141	3	2.4	0.3	-1.0	24	24	8.7	2.3	2.5	26.0	31	4.2	0.030	4
99-AFB-041	717007	5395073	-2	1.2	0.2	-1.0	20	22	7.4	4.9	2.1	36.3	28	2.9	0.017	3
99-AFB-042	716394	5396205	-2	1.5	0.2	-1.0	24	32	7.5	3.7	2.8	30.7	29	2.9	0.009	4
99-AFB-043	717643	5397147	-2	2.2	0.2	-1.0	23	23	9.3	2.8	3.0	30.3	28	3.0	0.012	3
99-AFB-044	718401	5395809	-2	2.8	-0.1	-1.0	20	22	7.5	5.3	2.5	16.8	25	2.8	0.018	3
99-AFB-045	717310	5388451	-2	3.1	0.2	-1.0	30	35	10.7	3.5	5.2	82.9	36	3.4	0.012	5
99-AFB-046	718474	5388604	5	2.4	-0.1	-1.0	24	27	9.1	2.7	2.9	34.6	26	3.7	0.012	4
99-AFB-047	720160	5387854	5	3.2	-0.1	-1.0	22	24	8.7	2.5	2.8	13.8	27	4.1	0.010	4
99-AFB-048	718784	5387209	-2	3.2	0.2	-1.0	23	23	8.8	2.4	2.7	18.5	30	4.2	0.030	4
99-AFB-049	720449	5386958	-2	2.7	0.2	-1.0	21	22	7.8	2.0	3.2	18.1	25	3.3	0.010	-2
99-AFB-050	718394	5385834	-2	2.7	0.1	-1.0	25	27	9.0	2.9	5.6	23.7	31	5.3	0.018	5
99-AFB-051	716263	5387510	-2	1.9	0.1	-1.0	25	31	7.9	2.4	3.0	41.7	34	3.4	0.007	4
99-AFB-052	717325	5386954	-2	2.3	-0.1	-1.0	29	34	11.7	3.5	3.1	29.4	35	4.3	0.006	5
99-AFB-053	716351	5386013	-2	6.6	0.2	-1.0	34	33	13.5	2.0	2.8	33.4	48	4.7	0.014	5
99-AFB-054	719928	5385705	-2	1.4	0.2	-1.0	22	30	7.3	2.7	7.5	25.8	26	2.8	0.014	3
99-AFB-055	718610	5384436	-2	3.0	0.3	-1.0	21	22	7.8	1.9	2.2	26.8	27	2.8	0.017	2
99-AFB-056	720933	5385868	9	2.3	-0.1	-1.0	22	24	7.4	2.0	2.1	20.6	27	3.7	0.014	3
99-AFB-057	720789	5384518	-2	5.0	-0.1	-1.0	32	29	12.8	1.9	2.2	26.9	41	5.1	0.012	5
99-AFB-058	716938	5384402	-2	2.3	0.2	-1.0	21	23	7.7	2.4	2.4	24.3	27	3.5	0.008	3
99-AFB-059	715686	5383637	-2	1.6	-0.1	-1.0	68	58	9.2	2.7	2.1	34.7	31	2.9	0.017	3
99-AFB-060	716353	5381973	-2	4.5	0.2	-1.0	86	86	18.4	2.1	2.4	46.6	43	5.4	0.021	6
99-AFB-061	717592	5381804	-2	2.3	-0.1	-1.0	27	33	8.2	2.1	2.3	20.9	24	3.1	-0.010	-2
99-AFB-062	717432	5379780	14	3.8	-0.1	-1.0	34	34	10.9	2.3	2.3	41.1	38	4.2	0.019	4
99-AFB-063	717401	5380247	6	8.5	0.8	-1.0	39	39	13.1	2.0	2.7	49.5	38	3.7	0.024	4
99-AFB-064	717811	5378824	-2	24.9	0.6	-1.0	33	39	10.4	2.0	2.6	33.2	46	12.3	0.125	5
99-AFB-065	718674	5377612	19	14.6	0.3	-1.0	29	35	9.6	1.7	8.5	31.1	38	5.2	0.021	2
99-AFB-066	718842	5381624	-2	-0.5	-0.1	-1.0	23	24	8.2	2.2	3.1	25.5	27	3.1	0.014	-2
99-AFB-067	719924	5381987	8	2.6	-0.1	-1.0	29	31	9.8	2.5	3.5	27.4	30	3.4	0.020	3
99-AFB-068	720941	5382382	6	2.2	0.2	-1.0	26	27	9.1	2.4	2.7	26.0	30	3.7	0.010	2
99-AFB-069	715403	5382780	3	3.5	0.3	-1.0	93	77	13.4	3.4	2.5	25.3	29	3.3	-0.010	3
99-AFB-070	714721	5382225	-2	3.5	-0.1	-1.0	63	50	11.2	1.8	2.5	19.7	27	3.6	0.007	6

Sample #	Easting (NAD27)	Northing (NAD27)	Au ppb	As ppm	Sb ppm	Mo ppm	Ni ppm	Cr ppm	Co ppm	Pt ppb	Pd ppb	Cu ppm	Zn ppm	Pb ppm	Ag ppm	Cd ppm
99-AFB-071	715121	5384395	-2	2.8	0.3	-1.0	26	24	12.8	2.0	2.8	32.3	30	3.6	0.022	3
99-AFB-072	714823	5385234	-2	3.0	-0.1	-1.0	22	22	7.7	1.9	2.3	19.1	27	3.6	0.012	2
99-AFB-073	714555	5386358	-2	6.7	-0.1	-1.0	26	24	10.0	2.2	2.8	25.4	33	5.1	0.024	2
99-AFB-074	714324	5387396	-2	6.9	0.3	-1.0	30	30	11.2	2.5	2.3	51.7	32	4.5	0.011	4
99-AFB-075	713378	5387493	-2	5.2	0.4	-1.0	28	34	9.8	3.6	2.8	47.3	38	5.5	0.014	4
99-AFB-076	712224	5386901	-2	5.1	0.3	-1.0	26	30	10.0	2.3	2.3	26.5	30	5.1	0.016	3
99-AFB-077	711221	5386681	-2	1.9	-0.1	-1.0	25	25	9.6	2.7	2.6	24.4	29	3.9	0.013	-2
99-AFB-078	712168	5385976	-2	6.0	-0.1	-1.0	28	27	10.6	2.4	2.9	36.0	31	4.3	0.024	3
99-AFB-079	710302	5386786	-2	-0.5	-0.1	-1.0	20	22	8.3	2.0	2.4	28.4	24	3.3	0.017	-2
99-AFB-080	709090	5386148	-2	1.6	-0.1	-1.0	24	28	7.5	2.3	3.0	39.5	29	3.2	0.018	3
99-AFB-081	708765	5385321	-2	2.2	-0.1	-1.0	20	25	7.6	2.1	2.0	22.9	25	2.8	0.015	-2
99-AFB-082	708297	5384297	-2	2.8	-0.1	-1.0	20	20	6.9	2.6	2.7	28.8	27	3.0	0.012	-2
99-AFB-083	707791	5385322	-2	2.8	0.3	-1.0	20	20	7.4	2.0	2.2	21.8	26	3.0	0.018	-2
99-AFB-084	706913	5384707	-2	2.0	-0.1	-1.0	21	24	7.9	2.7	3.8	24.5	25	3.5	0.012	-2
99-AFB-085	707993	5386145	-2	2.5	0.3	-1.0	25	26	9.4	2.0	2.8	29.9	26	3.6	0.022	3
99-AFB-086	706805	5385581	-2	2.9	-0.1	-1.0	23	30	6.9	2.5	2.7	35.8	33	3.4	0.034	3
99-AFB-087	709628	5385370	10	3.9	-0.1	-1.0	18	21	6.7	2.0	2.2	25.3	23	2.7	0.008	-2
99-AFB-088	709645	5384332	7	4.5	-0.1	-1.0	24	23	9.1	2.0	2.6	26.8	30	3.8	0.016	3
99-AFB-089	710306	5383756	-2	3.8	-0.1	-1.0	23	24	8.1	2.3	2.4	17.8	26	3.1	0.012	-2
99-AFB-090	710420	5382505	-2	3.2	0.2	-1.0	30	34	10.1	3.0	4.2	50.9	36	3.7	0.007	2
99-AFB-091	710607	5381404	5	4.3	-0.1	-1.0	36	45	11.7	3.1	3.0	37.6	34	5.1	0.006	3
99-AFB-092	710972	5380338	5	3.9	0.3	-1.0	28	34	8.1	2.8	3.0	27.2	23	3.7	-0.010	-2
99-AFB-093	710511	5379352	-2	3.7	0.2	-1.0	33	40	9.3	2.9	2.4	30.3	27	4.0	0.021	-2
99-AFB-094	709910	5378288	4	5.4	-0.1	-1.0	47	62	14.7	2.4	2.8	52.1	49	6.3	0.024	5
99-AFB-095	708956	5378684	-2	4.6	0.4	-1.0	39	42	12.1	2.3	2.7	40.4	52	5.1	0.026	2
99-AFB-096	708220	5379677	-2	2.3	-0.1	-1.0	27	30	9.7	3.6	3.9	27.7	36	4.6	0.021	3
99-AFB-097	707275	5380727	17	2.0	-0.1	-1.0	24	28	9.1	2.3	4.5	26.6	31	6.2	0.010	-2
99-AFB-098	711546	5379703	-2	3.7	0.4	-1.0	25	31	8.2	2.5	2.5	20.9	24	3.0	-0.010	-2
99-AFB-099	705847	5385122	-2	-0.5	-0.1	-1.0	22	27	7.0	1.9	3.1	40.4	33	3.0	0.013	2
99-AFB-100	704544	5384442	-2	1.6	-0.1	-1.0	21	21	8.4	3.6	4.4	30.6	27	2.7	0.022	-2
99-AFB-101	705555	5384023	-2	3.0	-0.1	-1.0	28	38	8.6	2.8	4.1	50.6	34	3.5	0.017	3
99-AFB-102	702168	5385353	6	2.8	0.3	-1.0	28	27	8.5	2.4	3.1	47.9	31	3.4	0.018	-2
99-AFB-103	700875	5385284	-2	-0.5	0.3	-1.0	27	27	10.7	2.1	2.9	29.0	29	3.5	0.020	2
99-AFB-104	700804	5386711	12	-0.5	-0.1	-1.0	31	42	11.4	3.3	3.3	55.0	43	4.3	0.012	4
99-AFB-105	710451	5390765	-2	1.9	-0.1	-1.0	27	32	8.9	2.3	2.9	35.2	31	3.5	0.021	-2
99-AFB-106	701552	5387072	8	-0.5	-0.1	-1.0	21	23	8.8	3.0	2.9	32.1	29	3.5	0.021	3
99-AFB-107	701901	5388059	-2	1.7	0.2	-1.0	27	31	10.3	2.3	2.8	36.6	29	3.2	0.012	2
99-AFB-108	702915	5389016	8	3.8	0.2	-1.0	22	25	8.5	2.0	2.3	35.6	30	4.6	0.016	2
99-AFB-109	701798	5389441	-2	2.3	-0.1	-1.0	32	46	11.7	3.5	5.8	66.4	43	2.5	0.012	4
99-AFB-110	700584	5389955	-2	-0.5	-0.1	-1.0	31	51	12.6	3.4	3.2	42.6	39	4.6	0.033	3
99-AFB-111	699599	5389242	-2	-0.5	-0.1	-1.0	25	36	8.6	2.3	2.6	46.4	32	3.4	0.012	3
99-AFB-112	699174	5385760	6	2.3	-0.1	-1.0	28	30	9.6	3.3	2.0	31.0	28	3.3	0.026	-2
99-AFB-113	697930	5385220	-2	2.0	-0.1	-1.0	29	31	10.3	1.7	1.9	28.3	36	4.0	0.020	-2
99-AFB-114	696882	5385910	14	3.0	0.2	-1.0	19	22	7.8	1.9	2.2	20.1	26	3.2	0.018	-2
99-AFB-115	695621	5385764	15	3.1	-0.1	-1.0	24	32	9.4	1.9	2.4	25.6	27	3.8	0.024	-2
99-AFB-116	694357	5385827	9	2.9	-0.1	-1.0	28	38	11.6	1.5	3.0	35.6	42	6.0	0.020	3
99-AFB-117	696125	5387227	26	2.2	-0.1	-1.0	28	33	11.2	2.3	3.5	29.8	30	4.3	0.029	-2
99-AFB-118	696128	5388260	10	1.4	-0.1	-1.0	21	29	8.4	2.1	2.0	25.9	27	3.6	0.019	-2
99-AFB-119	695151	5389022	22	2.5	-0.1	-1.0	28	39	11.7	2.6	2.9	43.2	31	4.1	0.027	-2
99-AFB-120	699643	5385027	5	3.7	-0.1	-1.0	32	39	13.0	2.1	2.5	35.0	31	4.3	0.018	-2
99-AFB-121	698640	5384397	10	8.4	-0.1	-1.0	44	54	12.8	2.0	3.1	61.6	42	4.6	0.020	-2
99-AFB-122	702339	5384109	7	2.9	-0.1	-1.0	38	38	9.4	3.0	3.4	42.7	31	3.0	0.019	-2
99-AFB-123	701981	5383183	11	3.6	-0.1	-1.0	39	48	13.7	2.4	2.3	59.3	47	3.8	0.017	-2
99-AFB-124	700921	5382484	9	5.3	-0.1	-1.0	44	43	15.7	2.6	3.1	49.8	50	3.8	0.020	-2
99-AFB-125	700218	5381795	-2	8.9	-0.1	-1.0	65	68	22.8	2.7	3.6	66.0	50	5.0	0.029	-2
99-AFB-126	700333	5380472	-2	5.8	-0.1	-1.0	44	44	12.7	2.4	2.7	73.0	44	3.8	0.024	-2
99-AFB-127	700930	5379570	-2	4.9	0.4	-1.0	41	47	17.4	2.5	3.0	64.0	44	10.1	0.018	-2
99-AFB-128	701519	5378620	3	-0.5	-0.1	-1.0	28	50	11.2	1.6	1.8	32.9	57	20.9	0.014	-2
99-AFB-129	703121	5378611	-2	7.7	0.3	-1.0	57	87	18.9	3.3	2.7	47.7	58	6.3	0.020	-2
99-AFB-130	704149	5378812	8	-0.5	0.5	-1.0	28	37	10.8	2.4	2.7	56.1	30	4.3	0.013	-2
99-AFB-131	705405	5379590	-2	2.7	-0.1	-1.0	36	52	12.7	2.5	2.6	48.1	39	7.2	0.028	-2
99-AFB-132	699671	5379560	17	5.8	-0.1	-1.0	39	41	13.8	2.3	2.6	48.2	37	3.9	0.022	-2
99-AFB-133	697774	5379377	14	6.9	-0.1	-1.0	45	53	18.0	2.3	2.6	38.3	38	3.6	0.011	-2
99-AFB-134	696974	5380254	13	10.1	-0.1	-1.0	65	68	19.5	2.9	3.4	76.4	53	4.2	0.016	-2
99-AFB-135	698140	5378730	-2	49.2	-0.1	-1.0	345	398	44.9	4.2	3.8	153.2	118	11.0	0.012	7
99-AFB-136	697216	5378747	13	6.1	0.2	-1.0	63	58	18.4	2.5	3.2	79.0	51	4.3	0.045	10
99-AFB-137	695959	5378595	7	2.8	-0.1	-1.0	54	77	17.8	3.9	2.7	111.8	50	3.6	0.010	8
99-AFB-138	695645	5379525	2	4.9	-0.1	-1.0	43	61	15.0	2.5	3.5	60.6	38	3.4	0.009	4
99-AFB-139	695805	5380500	-2	20.0	0.3	-1.0	96	119	30.3	3.0	4.1	138.9	90	6.2	0.027	11
99-AFB-140	696050	5381645	11	4.9	-0.1	-1.0	47	43	13.9	2.2	2.8	55.9	39	3.9	0.031	3

Sample #	Easting (NAD27)	Northing (NAD27)	Au ppb	As ppm	Sb ppm	Mo ppm	Ni ppm	Cr ppm	Co ppm	Pt ppb	Pd ppb	Cu ppm	Zn ppm	Pb ppm	Ag ppm	Cd ppm
99-AFB-141	697082	5381906	3	7.7	-0.1	-1.0	35	35	13.2	1.7	2.6	38.0	63	4.6	0.030	2
99-AFB-142	696158	5382624	-2	6.2	0.4	-1.0	58	83	16.4	2.1	2.7	45.6	36	3.9	0.007	3
99-AFB-143	696906	5383151	8	2.5	-0.1	-1.0	44	56	12.2	1.6	1.9	31.9	30	3.4	0.023	2
99-AFB-144	708674	5388957	3	-0.5	-0.1	-1.0	23	25	8.9	1.9	3.0	25.5	27	3.8	0.010	-2
99-AFB-145	706621	5389469	-2	2.7	-0.1	-1.0	29	33	10.6	3.2	3.1	47.0	33	4.3	0.026	8
99-AFB-146	705502	5388995	5	1.7	-0.1	-1.0	24	32	7.2	1.5	1.8	23.6	30	4.2	0.024	6
99-AFB-147	707777	5388655	-2	2.5	-0.1	-1.0	25	23	9.2	2.0	3.2	31.1	35	3.7	0.022	8
99-AFB-148	713909	5389270	-2	-0.5	-0.1	-1.0	30	34	10.8	2.1	2.3	26.6	32	3.2	0.008	8
99-AFB-149	715268	5389510	-2	-0.5	-0.1	-1.0	26	24	9.4	2.4	5.3	38.9	34	3.7	0.012	7
99-AFB-150	714570	5389512	5	2.2	-0.1	-1.0	26	28	9.7	3.2	4.6	51.2	35	3.3	0.023	7
99-AFB-151	706770	5391899	-2	1.4	0.2	-1.0	24	28	9.2	2.0	2.5	19.6	25	3.4	0.017	6
99-AFB-152	706064	5392382	-2	-0.5	-0.1	-1.0	21	23	8.2	2.1	1.8	16.2	25	2.8	0.007	6
99-AFB-153	704658	5393061	-2	1.2	0.2	-1.0	27	34	10.8	2.9	2.9	46.9	31	4.8	0.021	8
99-AFB-154	705484	5391692	-2	-0.5	0.3	-1.0	24	30	8.9	2.6	1.9	22.1	30	3.0	0.010	8
99-AFB-155	703598	5392747	-2	1.1	0.4	-1.0	25	27	9.6	2.4	3.1	33.2	29	2.9	0.011	7
99-AFB-156	700745	5393294	-2	-0.5	0.4	-1.0	21	22	7.2	2.3	2.0	23.8	27	2.9	-0.010	7
99-AFB-157	702474	5394069	27	0.8	0.7	-1.0	25	24	10.4	1.6	2.1	21.2	29	4.4	0.015	8
99-AFB-158	696749	5384378	-2	4.6	0.8	-1.0	72	67	18.1	2.7	3.1	42.0	38	5.2	0.018	11
99-AFB-159	694821	5378045	33	6.6	0.8	-1.0	79	88	22.5	2.3	2.6	88.8	44	3.3	0.008	13
99-AFB-160	693946	5377258	-2	7.9	0.1	-1.0	59	68	21.5	2.4	2.9	90.2	39	3.8	0.009	12
99-AFB-161	693783	5376033	-2	5.2	0.1	-1.0	191	239	42.5	3.6	3.1	122.3	78	3.5	0.009	18
99-AFB-162	691181	5374957	3	1.5	-0.1	-1.0	33	46	8.5	1.5	2.3	24.3	29	4.1	0.011	7
99-AFB-163	691252	5375821	-2	-0.5	0.2	-1.0	37	42	10.9	1.5	1.5	36.6	33	6.9	0.032	6
99-AFB-164	690046	5377047	15	1.3	-0.1	-1.0	23	46	6.8	1.6	1.1	22.0	20	4.3	0.028	4
99-AFB-165	703916	5394573	-2	1.2	0.2	-1.0	18	21	6.4	1.6	1.9	15.2	21	2.6	0.012	6
99-AFB-166	706260	5394546	-2	1.5	-0.1	-1.0	21	23	8.8	1.9	2.4	20.8	25	3.7	0.010	6
99-AFB-167	704265	5395725	-2	-0.5	-0.1	-1.0	27	27	10.3	1.9	1.8	30.2	34	4.3	0.015	8
99-AFB-168	703089	5395576	-2	-0.5	-0.1	-1.0	23	24	9.2	1.9	2.7	11.6	26	3.2	0.008	7
99-AFB-169	704167	5397024	-2	1.6	0.1	-1.0	23	27	8.3	4.0	3.0	31.6	26	3.7	0.014	6
99-AFB-170	702939	5397367	-2	-0.5	-0.1	-1.0	23	22	8.8	2.0	2.0	14.8	27	6.1	0.006	5
99-AFB-171	697059	5393043	-2	2.2	-0.1	-1.0	28	34	9.3	2.3	2.1	23.8	29	3.9	0.007	6
99-AFB-172	695201	5392031	-2	2.6	-0.1	-1.0	30	33	11.4	2.1	3.1	28.6	34	5.3	0.007	6
99-AFB-173	693950	5392063	-2	3.5	-0.1	-1.0	30	30	12.0	2.8	3.7	34.9	36	4.7	-0.010	6
99-AFB-174	693540	5391704	-2	1.5	-0.1	-1.0	29	31	10.8	1.7	2.2	26.2	36	4.6	0.073	7
99-AFB-175	687845	5390725	-2	3.6	0.3	-1.0	42	76	18.6	2.3	2.9	54.4	88	4.4	0.024	13
99-AFB-176	683540	5389134	-2	4.5	-0.1	-1.0	35	43	14.5	1.6	1.8	32.3	47	3.3	0.014	8
99-AFB-177	684413	5390023	-2	4.5	-0.1	-1.0	53	57	15.9	1.8	2.0	54.1	40	5.4	0.010	7
99-AFB-178	674809	5386073	-2	2.3	-0.1	-1.0	17	21	7.0	1.5	2.1	25.8	42	7.7	0.037	5
99-AFB-179	675944	5386374	-2	2.5	0.4	-1.0	16	23	8.6	1.5	2.2	16.3	42	5.4	0.010	6
99-AFB-180	682491	5388348	4	4.5	0.3	-1.0	31	44	14.0	1.7	1.6	48.4	33	3.2	0.016	8
99-AFB-181	681503	5388269	61	3.7	0.3	2.8	40	51	17.3	1.8	2.8	300.3	43	3.7	0.061	12
99-AFB-182	680894	5388722	-2	2.2	0.3	-1.0	23	29	9.8	0.8	0.8	30.2	42	3.4	0.017	7
99-AFB-183	681448	5386447	55	2.7	0.2	-1.0	34	37	13.3	1.8	1.9	46.7	31	2.8	-0.010	6
99-AFB-184	680616	5386338	-2	3.1	0.2	-1.0	43	46	13.8	2.0	2.2	59.4	34	3.3	0.015	7
99-AFB-185	681017	5387080	8	3.3	0.3	-1.0	56	79	17.4	1.5	2.1	84.2	42	4.1	0.033	10
99-AFB-186	681771	5387098	-2	-0.5	0.3	-1.0	51	56	14.7	1.4	1.7	87.2	42	2.8	0.018	8
99-AFB-187	681893	5385152	40	3.1	-0.1	-1.0	54	52	22.8	2.4	2.3	168.6	52	2.7	0.020	14
99-AFB-188	678780	5380540	-2	2.2	-0.1	-1.0	30	39	13.2	1.3	2.1	45.6	35	3.0	0.012	8
99-AFB-189	680371	5381342	22	8.4	-0.1	-1.0	85	139	25.3	1.7	2.2	127.9	73	4.5	0.028	20
99-AFB-190	681309	5381219	-2	3.2	-0.1	-1.0	48	57	13.6	1.7	2.0	47.6	34	2.8	0.033	8
99-AFB-191	681545	5382203	7	5.2	-0.1	-1.0	81	135	27.1	1.9	2.5	91.2	59	3.1	0.014	15
99-AFB-192	679225	5382012	-2	3.1	0.4	-1.0	34	43	11.8	1.6	2.3	54.2	46	3.3	0.017	6
99-AFB-193	677604	5381483	9	3.1	0.6	-1.0	27	39	9.9	1.9	2.4	76.3	51	4.3	0.047	7
99-AFB-194	676128	5381846	-2	3.3	-0.1	-1.0	21	23	8.5	1.6	1.9	37.4	37	4.0	0.013	3
99-AFB-195	677290	5382378	-2	2.8	0.5	-1.0	32	24	14.8	1.5	2.7	47.5	43	5.1	0.030	7
99-AFB-196	673020	5382062	64	2.8	0.6	13.3	27	34	10.1	0.9	1.2	-2.0	42	4.6	0.122	11
99-AFB-197	671979	5381132	55	4.1	0.4	1.7	26	39	10.3	1.5	1.7	194.0	47	4.2	0.199	7
99-AFB-198	677086	5380744	-2	2.7	-0.1	-1.0	25	36	9.6	1.7	2.1	41.1	45	4.6	0.017	6
99-AFB-199	677742	5379094	-2	3.3	-0.1	-1.0	28	32	12.8	1.3	1.3	53.0	28	2.3	0.015	6
99-AFB-200	677394	5377094	-2	2.3	-0.1	-1.0	41	61	16.5	1.4	2.2	117.4	37	3.9	0.027	7
99-AFB-201	678203	5376012	-2	2.3	0.1	-1.0	42	82	13.4	2.4	2.0	28.1	31	5.0	0.010	6
99-AFB-202	678493	5374896	-2	2.0	0.2	-1.0	44	80	13.2	3.1	2.0	42.9	39	7.8	0.024	6
99-AFB-203	679420	5374722	-2	-0.5	-0.1	-1.0	29	39	7.3	1.1	1.2	15.6	22	2.5	0.007	3
99-AFB-204	680251	5374499	-2	-0.5	-0.1	-1.0	23	35	8.7	1.8	2.2	18.8	25	3.6	0.019	3
99-AFB-205	681258	5374768	-2	1.8	-0.1	-1.0	24	48	7.2	1.3	2.6	19.4	24	4.0	0.012	4
99-AFB-206	682008	5375515	-2	-0.5	-0.1	-1.0	33	67	7.8	1.5	1.1	23.3	30	3.3	0.007	4
99-AFB-207	682580	5377430	-2	-0.5	-0.1	-1.0	24	45	7.8	1.1	1.6	16.2	24	4.0	0.018	3
99-AFB-208	683793	5378059	-2	1.5	-0.1	-1.0	33	74	10.0	1.4	1.8	35.3	50	5.4	0.019	3
99-AFB-209	685454	5377775	-2	-0.5	-0.1	-1.0	23	39	9.7	1.5	1.8	20.3	25	4.7	0.011	3
99-AFB-210	686267	5376678	-2	1.5	-0.1	-1.0	27	40	8.1	1.9	1.8	26.6	27	3.4	0.009	3

Sample #	Easting (NAD27)	Northing (NAD27)	Au ppb	As ppm	Sb ppm	Mo ppm	Ni ppm	Cr ppm	Co ppm	Pt ppb	Pd ppb	Cu ppm	Zn ppm	Pb ppm	Ag ppm	Cd ppm
99-AFB-211	688247	5376079	-2	-0.5	0.2	-1.0	25	37	8.1	1.4	1.6	21.0	24	3.0	-0.010	-2
99-AFB-212	675154	5391549	-2	3.5	-0.1	-1.0	60	114	20.4	1.8	1.9	52.7	66	12.1	0.009	9
99-AFB-213	674548	5390596	-2	3.7	0.2	-1.0	61	45	16.9	1.5	2.2	47.2	42	6.4	0.013	4
99-AFB-214	672621	5389782	-2	-0.5	-0.1	-1.0	20	25	7.3	1.6	2.2	13.5	25	4.3	-0.010	3
99-AFB-215	669366	5388071	-2	2.8	-0.1	-1.0	39	48	12.2	1.2	2.0	39.9	45	6.0	0.006	4
99-AFB-216	665865	5385523	5	7.5	0.2	-1.0	58	94	19.2	1.8	1.9	67.2	64	6.8	0.020	8
99-AFB-217	666805	5382569	-2	-0.5	-0.1	-1.0	24	30	9.4	1.7	2.2	30.6	30	4.8	0.015	3
99-AFB-218	669782	5385608	-2	5.5	-0.1	-1.0	56	85	19.6	1.8	2.3	43.8	64	9.2	0.007	8
99-AFB-219	668868	5383726	-2	2.3	-0.1	-1.0	30	45	11.1	1.7	2.0	24.8	38	6.0	-0.010	5
99-AFB-220	669350	5383627	3	2.5	-0.1	-1.0	28	42	9.9	1.8	1.3	23.5	35	4.3	0.010	3
99-AFB-221	670052	5384165	-2	1.7	-0.1	-1.0	30	48	9.2	2.9	2.1	34.1	39	4.1	0.018	4
99-AFB-222	667850	5382647	-2	2.4	-0.1	-1.0	35	47	12.8	1.8	1.8	29.7	45	7.8	0.018	4
99-AFB-223	666245	5382280	-2	2.2	-0.1	-1.0	33	41	10.8	2.0	2.2	37.9	41	4.3	0.016	2
99-AFB-224	668951	5382485	-2	2.8	-0.1	-1.0	37	62	12.5	2.7	2.3	39.9	51	6.9	-0.010	6
99-AFB-225	670638	5382083	-2	2.4	0.2	-1.0	24	39	7.9	1.7	1.7	36.3	34	4.0	0.010	3
99-AFB-226	671524	5381275	28	4.0	-0.1	-1.0	25	33	11.4	1.4	1.8	81.6	54	6.0	0.064	6
99-AFB-227	668627	5381133	-2	2.6	-0.1	-1.0	31	48	10.6	2.0	1.9	30.0	42	6.6	0.039	7
99-AFB-228	666850	5381348	10	2.9	-0.1	-1.0	39	53	15.1	2.3	2.0	48.8	61	9.7	0.025	8
99-AFB-229	666796	5380456	-2	2.2	-0.1	-1.0	37	63	11.3	1.6	2.1	34.8	44	6.6	0.021	8
99-AFB-230	666191	5380603	-2	2.9	-0.1	-1.0	42	74	13.8	1.7	2.1	35.0	51	8.1	0.043	11
99-AFB-231	665705	5380340	-2	1.8	-0.1	-1.0	33	50	12.0	4.3	8.3	26.6	41	6.1	0.013	8
99-AFB-232	665608	5379214	6	3.3	-0.1	-1.0	40	58	14.3	1.9	2.2	41.6	53	8.3	0.010	9
99-AFB-233	664679	5378482	-2	4.2	0.2	-1.0	36	50	12.9	2.0	1.8	33.6	54	10.1	0.032	9
99-AFB-234	663446	5377772	-2	2.5	-0.1	-1.0	41	78	11.3	1.7	2.2	50.2	51	6.0	0.018	9
99-AFB-235	663785	5377960	12	3.6	0.3	-1.0	45	126	16.0	3.0	2.2	49.5	57	7.4	0.014	10
99-AFB-236	664560	5379543	5	7.0	-0.1	-1.0	51	79	16.3	1.9	2.1	56.9	90	10.8	0.007	10
99-AFB-237	665000	5381590	-2	2.7	0.2	-1.0	25	32	9.8	1.8	2.0	22.7	33	5.3	0.038	7
99-AFB-238	662878	5379228	15	3.0	-0.1	-1.0	33	50	12.0	1.5	1.3	38.0	42	5.8	0.019	9
99-AFB-239	661691	5377771	2	3.9	-0.1	-1.0	36	45	15.3	1.4	1.3	49.9	51	7.1	0.017	9
99-AFB-240	662756	5377685	6	2.8	-0.1	-1.0	51	91	15.8	2.0	2.1	58.2	58	8.3	0.027	10
99-AFB-241	662100	5376640	47	3.5	0.4	-1.0	60	259	21.4	3.3	3.4	108.0	54	6.9	0.024	14
99-AFB-242	663013	5376079	-2	3.1	0.3	-1.0	41	62	15.9	1.8	1.7	48.8	51	10.8	0.009	9
99-AFB-243	664490	5376708	-2	-0.5	-0.1	-1.0	17	25	7.8	0.8	0.7	17.3	34	6.7	0.013	5
99-AFB-244	665829	5376621	8	2.0	0.1	-1.0	24	34	9.3	1.2	1.3	30.9	39	5.5	0.015	7
99-AFB-245	666941	5376939	378	-0.5	-0.1	-1.0	32	53	12.8	2.0	2.2	165.9	40	7.7	0.179	9
99-AFB-246	662255	5375990	8	3.2	-0.1	-1.0	39	70	14.6	1.6	1.2	38.7	45	7.8	0.027	9
99-AFB-247	663184	5374603	9	2.5	0.2	-1.0	31	49	15.5	1.2	1.0	27.2	46	5.8	0.017	9
99-AFB-248	664677	5374719	38	3.3	-0.1	-1.0	27	46	11.8	1.1	1.3	47.6	40	4.4	0.011	9
99-AFB-249	665998	5375137	9	1.6	0.3	-1.0	27	42	10.2	1.9	1.6	69.8	36	4.6	0.017	8
99-AFB-250	666701	5375922	-2	1.4	-0.1	-1.0	26	37	9.1	1.8	1.7	52.8	31	2.5	0.012	7
99-AFB-251	662136	5374191	13	3.8	-0.1	-1.0	30	52	14.5	0.9	1.2	32.9	52	9.9	0.009	9
99-AFB-252	660003	5378531	10	9.9	0.3	-1.0	57	66	19.9	1.5	1.6	42.6	50	7.5	0.008	8
99-AFB-253	658030	5377266	-2	5.1	0.2	-1.0	45	66	15.3	1.6	1.5	42.2	50	5.3	0.022	8
99-AFB-254	657122	5375095	10	8.0	-0.1	-1.0	70	58	19.0	1.2	1.5	57.6	49	7.4	0.017	9
99-AFB-255	716481	5393189	-2	-0.5	-0.1	-1.0	23	25	8.4	1.8	2.5	24.2	26	2.5	0.009	6
99-AFB-256	714893	5393141	-2	-0.5	-0.1	-1.0	29	26	9.7	2.3	2.6	24.1	33	3.8	0.020	5
99-AFB-257	712352	5392741	-2	-0.5	-0.1	-1.0	22	22	8.3	2.1	2.0	21.0	28	3.1	0.026	6
99-AFB-258	713640	5386298	-2	1.7	0.2	-1.0	26	32	8.8	2.9	3.6	42.3	29	3.2	0.014	6
99-AFB-259	711725	5385265	-2	2.5	-0.1	-1.0	37	33	12.1	2.7	2.5	55.8	31	3.8	0.023	7
99-AFB-260	713220	5384877	-2	1.6	0.3	-1.0	26	31	9.7	2.7	3.1	27.8	28	3.5	0.022	6
99-AFB-261	713921	5382351	-2	4.3	0.2	-1.0	44	37	12.0	1.8	1.9	25.6	43	4.2	0.027	6
99-AFB-262	714014	5382920	-2	5.6	0.1	-1.0	67	39	16.0	2.0	1.9	26.5	72	3.8	0.018	5
99-AFB-263	713424	5382781	-2	4.0	-0.1	-1.0	46	37	12.9	1.7	2.1	27.9	36	3.8	0.020	6
99-AFB-264	712657	5382808	8	4.9	0.2	-1.0	46	69	12.2	2.7	2.7	31.9	35	4.6	0.019	6
99-AFB-265	719664	5382271	5	1.9	-0.1	-1.0	28	27	11.2	2.0	2.8	20.8	32	4.4	0.027	6
99-AFB-266	721034	5381462	-2	5.4	-0.1	-1.0	33	38	12.9	2.1	2.9	39.7	35	4.6	0.020	6
99-AFB-267	656219	5377979	7	3.1	-0.1	-1.0	35	65	12.6	1.9	2.4	28.6	44	4.2	0.052	8
99-AFB-268	655373	5376318	16	16.4	0.5	-1.0	67	64	19.9	1.3	1.6	84.7	61	6.9	0.019	9
99-AFB-269	657457	5375340	27	7.2	0.2	-1.0	57	69	21.1	1.5	1.9	47.7	62	9.2	0.114	10
99-AFB-270	653683	5375749	11	7.4	-0.1	-1.0	37	50	14.2	1.3	1.5	30.7	48	7.4	0.095	6
99-AFB-271	653327	5374218	11	6.3	0.3	1.2	56	74	15.6	1.4	2.2	42.3	64	6.2	0.055	9
99-AFB-272	654816	5378441	-2	2.2	-0.1	-1.0	36	53	12.4	2.3	2.5	31.8	38	4.2	0.028	7
99-AFB-273	657723	5379358	-2	4.6	-0.1	-1.0	35	48	14.1	1.6	1.8	23.7	39	4.8	0.035	6
99-AFB-274	660031	5381523	-2	5.2	-0.1	-1.0	39	61	12.8	1.9	2.1	34.3	50	5.4	0.029	7
99-AFB-275	660614	5379969	-2	7.7	-0.1	-1.0	41	40	16.3	1.4	1.8	35.8	44	6.8	0.021	5
99-AFB-276	718937	5377982	24	7.2	0.3	-1.0	39	37	12.1	2.0	2.4	53.4	49	5.7	0.033	7
99-AFB-277	719820	5379002	7	3.6	0.2	-1.0	35	41	12.1	2.4	3.7	46.8	33	4.3	0.011	7
99-AFB-278	720882	5379334	6	3.2	-0.1	-1.0	29	32	9.3	2.1	2.5	35.5	29	3.0	0.011	5
99-AFB-279	719138	5376503	33	21.4	0.3	-1.0	32	36	13.4	2.0	2.8	50.3	62	9.1	0.136	10
99-AFB-280	717671	5377439	-2	14.5	0.4	1.4	38	45	13.1	1.9	1.9	51.8	40	6.0	0.024	7

Sample #	Easting	Northing	Au	As	Sb	Mo	Ni	Cr	Co	Pt	Pd	Cu	Zn	Pb	Ag	Cd
	(NAD27)	(NAD27)	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppb	ppm	ppm	ppm	ppm	ppm
99-AFB-281	716319	5378150	-2	5.9	0.2	-1.0	31	28	9.4	1.8	2.2	32.9	31	3.7	-0.010	6
99-AFB-282	715602	5379161	-2	3.6	-0.1	-1.0	76	158	15.8	2.0	3.0	77.4	32	4.3	-0.010	8
99-AFB-283	717320	5376914	-2	7.4	0.2	-1.0	40	49	13.4	1.7	2.3	57.1	41	7.4	0.021	7
99-AFB-284	712437	5379110	-2	3.6	0.1	-1.0	73	77	19.6	2.8	3.5	67.4	47	5.6	-0.010	10
99-AFB-285	713705	5379022	-2	3.8	0.2	-1.0	86	75	17.4	1.5	1.8	47.1	38	4.5	-0.010	6
99-AFB-286	713842	5378014	-2	2.8	0.3	-1.0	64	81	12.6	1.6	1.9	55.1	41	5.4	-0.010	5
99-AFB-287	714513	5377222	3	4.3	0.3	-1.0	47	61	12.9	1.8	2.6	57.1	39	6.7	-0.010	5
99-AFB-288	707071	5383106	3	1.5	-0.1	-1.0	20	23	8.0	1.7	2.5	22.9	22	2.9	-0.010	2
99-AFB-289	708761	5383498	-2	1.5	-0.1	-1.0	21	23	8.1	2.1	2.6	19.5	25	2.9	-0.010	3
99-AFB-290	662868	5380809	3	5.0	0.2	-1.0	49	67	16.9	1.6	1.8	47.6	50	6.8	-0.010	6
99-AFB-291	658622	5382435	7	2.4	-0.1	-1.0	25	37	9.2	1.3	1.8	26.2	29	3.9	-0.010	4
99-AFB-292	659338	5384467	3	2.7	-0.1	-1.0	31	38	10.4	1.8	1.6	24.4	29	4.7	-0.010	5
99-AFB-293	662644	5385228	-2	2.8	-0.1	-1.0	30	38	10.0	1.6	2.2	34.3	36	4.6	-0.010	3
99-AFB-294	663523	5384583	13	2.2	0.1	-1.0	43	33	11.1	1.6	1.7	34.3	31	3.1	-0.010	3
99-AFB-295	661177	5383304	3	4.4	-0.1	-1.0	29	33	14.2	1.2	1.7	35.1	32	5.6	-0.010	4
99-AFB-296	668851	5378917	96	4.3	0.1	1.4	20	26	10.2	2.2	1.4	71.6	31	7.5	0.020	5
99-AFB-297	668221	5378218	15	3.8	-0.1	-1.0	22	29	9.7	1.2	1.3	31.8	31	4.9	-0.010	4
99-AFB-298	668793	5377542	75	8.9	0.3	2.6	33	42	13.6	1.4	1.9	230.9	86	7.7	0.053	12
99-AFB-299	669619	5378492	282	2.8	0.2	3.8	18	25	12.2	1.1	1.5	104.5	37	2.6	0.127	10
99-AFB-300	670475	5379395	392	2.9	0.4	2.1	25	43	9.2	1.2	2.9	553.1	55	4.4	0.264	11
99-AFB-301	670164	5380925	-2	2.2	0.1	-1.0	35	60	13.9	1.5	1.7	28.1	50	5.3	0.017	8
99-AFB-302	682226	5390366	3	3.8	0.2	-1.0	26	41	10.5	1.9	2.4	19.8	33	4.9	0.023	8
99-AFB-303	679301	5384426	47	4.8	0.3	-1.0	57	83	28.3	1.4	2.3	92.3	71	4.2	0.038	16
99-AFB-304	675123	5379959	14	2.2	0.2	-1.0	28	52	9.4	1.7	2.3	53.8	44	5.6	0.015	5
99-AFB-305	674552	5379077	53	7.8	0.4	2.8	39	54	21.9	1.7	2.3	275.1	397	5.7	0.076	15
99-AFB-306	675458	5377170	22	4.7	0.2	-1.0	52	82	18.5	1.6	2.2	56.6	53	5.4	9.981	12
99-AFB-307	672318	5377204	33	4.0	0.4	-1.0	20	13	7.2	1.6	2.2	7.6	38	5.6	10.054	10
99-AFB-308	671864	5378966	27	2.5	0.3	1.3	21	31	9.4	1.4	1.7	91.4	42	5.4	10.014	6
99-AFB-309	667290	5378073	-2	2.5	-0.1	-1.0	22	37	7.3	1.5	2.0	38.1	37	6.3	0.009	5
99-AFB-310	669871	5377818	30	2.8	0.2	-1.0	23	31	9.9	1.7	2.6	88.2	49	4.5	0.030	8
99-AFB-311	668253	5375814	70	12.3	0.3	6.2	46	50	14.6	1.8	1.8	201.5	53	7.2	0.076	8
99-AFB-312	664224	5375327	13	7.2	0.2	-1.0	33	52	13.5	1.1	1.2	51.2	58	8.9	0.018	10
99-AFB-313	661117	5375306	-2	2.8	0.2	-1.0	40	78	15.2	1.8	1.5	40.4	46	5.4	0.022	9
99-AFB-314	660342	5374273	10	6.1	0.3	-1.0	41	77	16.8	1.5	1.3	35.4	58	8.1	0.017	8
99-AFB-315	661111	5376964	5	4.2	0.2	-1.0	46	92	21.6	1.7	1.7	44.3	64	7.9	0.015	12
99-AFB-316	660283	5376445	14	8.5	-0.1	-1.0	42	80	14.9	1.7	1.9	54.0	53	7.2	0.031	9
99-AFB-317	677290	5385718	-2	3.9	0.3	-1.0	24	35	9.6	1.5	1.9	42.0	97	4.6	0.015	7
99-AFB-318	673993	5385851	7	3.8	-0.1	-1.0	27	44	9.2	0.9	1.3	81.8	45	5.3	0.022	4
99-AFB-319	676468	5380633	49	5.8	0.3	-1.0	31	47	13.4	1.7	2.4	63.8	60	16.8	0.073	9
99-AFB-320	676266	5379632	16	4.5	-0.1	-1.0	41	43	14.8	1.7	2.6	57.9	153	10.4	0.036	10
99-AFB-321	675849	5378281	6	8.6	0.2	-1.0	44	72	13.4	2.2	2.9	76.9	53	5.0	0.027	10
99-AFB-322	712573	5391146	4	3.5	0.2	-1.0	26	32	7.9	2.3	2.1	40.9	40	3.6	0.019	5
99-AFB-323	707512	5392483	-2	2.1	-0.1	-1.0	21	25	7.7	2.1	2.4	20.4	24	2.6	0.015	4
99-AFB-324	704739	5393844	-2	2.9	-0.1	-1.0	21	25	6.7	1.6	2.2	37.8	30	3.1	0.018	4
99-AFB-325	692236	5388165	18	2.3	0.2	-1.0	35	46	12.8	3.0	3.0	53.8	35	6.6	0.014	7
99-AFB-326	689567	5388664	23	4.4	0.2	-1.0	35	52	19.2	2.3	2.2	39.3	35	4.7	0.012	9
99-AFB-327	684465	5383653	-2	3.7	0.1	-1.0	36	69	14.6	1.4	1.6	28.5	40	3.7	0.008	8
99-AFB-328	682385	5382121	-2	3.4	0.2	-1.0	66	128	24.0	2.4	2.9	68.8	60	3.3	0.019	15
99-AFB-329	680677	5379819	-2	2.9	0.2	-1.0	47	75	15.9	2.0	1.9	42.2	43	4.9	0.016	10
99-AFB-330	679333	5379140	3	-0.5	-0.1	-1.0	33	66	12.6	2.0	2.2	39.2	36	2.8	-0.010	6
99-AFB-331	679047	5378179	-2	3.3	0.3	-1.0	33	61	14.5	1.4	1.2	30.4	42	6.3	0.050	7
99-AFB-332	693364	5377060	-2	4.6	-0.1	-1.0	103	168	25.3	2.8	2.6	89.4	51	4.0	0.018	11
99-AFB-333	694402	5378746	15	8.0	0.3	-1.0	69	99	28.2	2.6	2.8	87.9	46	4.5	0.135	11
99-AFB-334	694358	5380145	-2	11.7	0.2	-1.0	64	73	21.9	2.3	2.3	83.5	103	5.1	0.018	9
99-AFB-335	694416	5381613	-2	7.1	0.3	-1.0	79	97	27.7	2.2	1.9	98.9	133	5.2	0.011	14
99-AFB-336	700360	5388697	-2	2.6	0.3	-1.0	31	41	12.1	3.0	3.7	46.9	36	2.2	0.023	7
99-AFB-337	697794	5389437	4	2.8	0.4	-1.0	22	27	7.0	1.9	1.0	8.7	38	6.4	0.032	-2
99-AFB-338	696986	5389571	19	2.1	0.3	-1.0	20	26	8.3	1.4	2.2	15.2	24	2.9	0.025	5
99-AFB-339	697985	5387370	8	2.9	0.4	-1.0	20	28	8.3	1.8	3.0	21.1	25	2.9	0.055	5
99-AFB-340	698152	5383627	-2	4.5	0.4	-1.0	56	67	15.2	2.3	2.4	74.8	34	3.0	0.019	8
99-AFB-341	700769	5383713	3	4.4	0.2	-1.0	37	45	13.1	2.6	3.6	42.2	40	4.2	0.039	10
99-AFB-342	700240	5382733	10	5.2	0.2	-1.0	43	39	13.3	2.4	2.2	53.8	47	3.8	0.030	8
99-AFB-343	698671	5381360	4	4.5	0.2	-1.0	34	37	13.9	2.3	3.1	30.3	46	4.0	0.014	8
99-AFB-344	701257	5381659	-2	2.4	0.2	-1.0	34	32	10.6	2.1	2.5	38.3	31	3.3	0.020	6
99-AFB-345	702635	5382251	-2	2.7	-0.1	-1.0	24	25	10.0	2.5	2.6	19.8	31	3.8	0.026	5
99-AFB-346	705043	5382149	5	3.0	0.4	-1.0	33	45	12.3	2.1	2.1	29.2	35	4.1	0.020	7
99-AFB-347	704416	5380500	-2	2.6	0.4	-1.0	31	45	12.3	1.9	2.1	29.3	33	4.7	0.018	9
99-AFB-348	705888	5380656	9	2.8	-0.1	-1.0	26	28	11.3	2.1	3.2	31.0	32	4.8	0.015	6
99-AFB-349	708095	5382549	3	2.7	-0.1	-1.0	25	31	9.3	2.0	1.8	25.4	29	3.7	0.027	6
99-AFB-350	708707	5381049	-2	2.2	0.2	-1.0	25	35	8.6	2.8	2.6	35.6	29	3.5	0.010	7

Sample #	Easting (NAD27)	Northing (NAD27)	Au ppb	As ppm	Sb ppm	Mo ppm	Ni ppm	Cr ppm	Co ppm	Pt ppb	Pd ppb	Cu ppm	Zn ppm	Pb ppm	Ag ppm	Cd ppm
99-AFB-351	703382	5378179	7	2.5	-0.1	-1.0	44	53	12.7	2.7	3.3	59.8	39	4.2	0.027	6
99-AFB-352	702728	5376737	-2	2.2	-0.1	-1.0	31	44	12.7	1.8	1.2	33.3	50	8.4	0.022	9
99-AFB-353	711066	5377938	7	10.2	0.3	-1.0	45	41	15.7	3.3	2.6	47.6	40	8.5	0.037	10
99-AFB-354	712112	5382322	21	3.6	-0.1	-1.0	39	59	11.2	2.2	2.7	28.6	31	14.2	0.039	7
99-AFB-355	712528	5380795	-2	3.4	0.2	-1.0	34	37	9.7	2.1	2.1	26.3	29	3.6	0.014	7
99-AFB-356	714657	5380000	-2	5.8	0.2	-1.0	77	57	13.1	1.8	2.0	31.6	35	4.1	0.014	7
99-AFB-357	720262	5380615	3	3.8	0.2	-1.0	26	30	9.2	2.3	3.2	35.2	27	3.7	0.020	6
99-AFB-358	717679	5383294	-2	2.4	0.2	-1.0	23	22	7.9	1.6	1.8	18.1	22	3.0	0.013	5
99-AFB-359	719941	5384105	5	3.5	0.1	-1.0	21	24	7.6	1.9	2.8	13.8	24	3.2	0.013	6
99-AFB-360	717006	5391353	-2	1.7	-0.1	-1.0	19	24	7.5	1.7	1.9	16.4	24	2.4	0.017	6
99-AFB-361	714619	5392266	2	3.0	0.2	-1.0	39	52	15.6	3.0	2.7	59.5	38	4.1	0.013	9
99-AFB-362	709909	5392353	-2	-0.5	0.2	-1.0	21	22	8.5	2.1	2.8	29.5	26	3.0	0.017	5
99-AFB-363	674577	5385151	12	3.2	-0.1	8.4	33	46	13.8	1.9	2.3	175.0	42	5.2	0.092	11
99-AFB-364	673842	5384124	55	3.5	0.4	7.4	21	28	8.5	1.2	1.5	325.8	34	4.4	0.226	10
99-AFB-365	672695	5383208	29	3.5	-0.1	1.0	25	37	10.6	1.4	1.2	88.3	34	4.2	0.033	7
99-AFB-366	675766	5382842	60	9.3	0.3	2.7	26	35	11.7	2.7	2.4	47.2	35	6.8	0.045	11
99-AFB-367	675660	5384335	80	9.8	4.6	3.7	23	27	11.5	1.2	1.1	325.5	99	14.8	0.424	8
99-AFB-368	702001	5394945	-2	3.8	-0.1	-1.0	37	35	12.2	1.7	2.1	33.5	37	6.6	0.028	8
99-AFB-369	700883	5394703	6	5.4	-0.1	-1.0	44	48	15.2	1.9	1.6	41.2	44	5.3	0.027	10
99-AFB-370	701990	5390686	-2	1.5	0.2	-1.0	29	42	9.3	2.8	3.6	41.2	34	3.2	0.012	8
99-AFB-371	699377	5391132	-2	2.8	0.2	-1.0	28	31	12.6	1.7	1.7	19.7	34	3.2	0.026	8
99-AFB-372	697432	5391103	16	2.1	-0.1	-1.0	22	25	9.2	1.7	1.7	19.2	26	3.2	0.026	6
99-AFB-373	695539	5391161	-2	2.3	0.2	-1.0	30	40	11.9	2.4	2.3	31.7	37	4.6	0.037	7
99-AFB-374	693921	5391069	3	2.2	-0.1	-1.0	28	43	9.0	2.2	4.2	48.7	33	3.6	0.010	9
99-AFB-375	694799	5389832	14	5.6	0.2	-1.0	32	35	16.0	1.8	1.5	55.0	36	3.0	0.027	9
99-AFB-376	693308	5390210	-2	2.4	0.2	-1.0	30	39	11.3	1.4	1.3	31.6	24	4.8	0.009	7
99-AFB-377	693540	5388831	27	3.2	0.2	1.0	37	46	15.5	2.5	2.8	40.0	33	3.3	0.008	9
99-AFB-378	692257	5389062	4	3.7	0.3	-1.0	47	52	20.5	1.9	1.6	138.9	38	3.9	0.028	10
99-AFB-379	691129	5389034	-2	2.7	0.1	-1.0	45	65	21.0	2.3	1.4	50.6	42	4.1	0.020	11
99-AFB-380	692281	5390107	-2	1.8	-0.1	-1.0	23	32	8.1	2.6	2.3	24.7	26	3.6	0.007	7
99-AFB-381	690838	5390844	-2	58.1	0.6	-1.0	67	80	26.1	4.3	8.1	166.0	151	13.4	0.144	18
99-AFB-382	689352	5389708	-2	6.6	0.1	-1.0	40	51	16.8	1.8	2.0	64.6	42	4.2	0.032	10
99-AFB-383	687370	5389662	-2	3.2	-0.1	-1.0	40	51	17.9	2.3	2.4	150.5	61	5.1	0.034	12
99-AFB-384	686317	5388548	28	-0.5	0.2	-1.0	18	25	6.9	1.1	0.8	20.9	29	4.7	0.023	6
99-AFB-385	687731	5388403	-2	-0.5	-0.1	-1.0	33	54	15.7	2.1	1.6	50.0	40	3.3	0.029	10
99-AFB-386	682045	5383065	-2	7.8	0.2	-1.0	113	154	19.6	2.4	4.7	81.0	55	2.9	0.019	15
99-AFB-387	682876	5383815	-2	4.2	-0.1	-1.0	40	51	13.3	1.6	2.1	63.2	42	4.4	0.033	10
99-AFB-388	683630	5384538	9	2.9	0.2	-1.0	36	56	14.1	2.0	2.1	56.5	36	2.5	0.007	9
99-AFB-389	683788	5386955	30	5.2	0.2	-1.0	33	44	15.9	1.7	1.5	81.1	53	2.5	0.034	10
99-AFB-390	684435	5386198	-2	3.5	0.3	-1.0	42	34	12.9	2.2	2.2	339.3	37	3.6	0.019	7
99-AFB-391	685812	5386401	-2	2.9	0.2	-1.0	33	49	15.2	2.6	1.8	51.1	50	3.9	0.048	11
99-AFB-392	686078	5387657	15	1.8	0.2	-1.0	31	47	12.5	2.0	2.2	56.7	34	2.7	0.036	11
99-AFB-393	670515	5384260	-2	2.6	-0.1	-1.0	37	61	13.5	2.1	1.9	39.3	44	6.2	0.072	9
99-AFB-394	671960	5386703	34	7.8	0.2	-1.0	100	330	30.2	3.0	3.5	72.7	71	9.7	0.037	16
99-AFB-395	663522	5378359	50	3.1	-0.1	-1.0	41	73	15.8	2.0	2.1	37.9	51	5.1	0.019	11
99-AFB-396	664208	5380185	-2	3.4	-0.1	-1.0	34	65	13.0	1.7	1.7	31.8	48	5.4	0.022	9
99-AFB-397	679212	5386367	11	3.0	0.3	-1.0	38	66	12.8	2.0	1.9	58.3	40	6.5	0.095	8
99-AFB-398	676373	5387625	4	1.9	0.1	-1.0	20	27	8.6	1.0	1.6	18.4	35	4.7	0.025	6
99-AFB-399	675368	5389800	-2	4.2	-0.1	-1.0	31	50	12.2	2.2	2.0	30.3	54	8.8	0.028	7
99-AFB-400	702036	5379266	-2	1.9	0.3	-1.0	29	49	10.1	1.5	2.0	24.6	36	6.4	0.124	7

Metric Conversion Table

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	chains	1 chain	20.116 8	m
1 km	0.621 371	miles (statute)	1 mile (statute)	**1.609 344**	km
		AREA			
1 cm^2	0.155 0	square inches	1 square inch	**6.451 6**	cm^2
1 m^2	10.763 9	square feet	1 square foot	**0.092 903 04**	m^2
1 km^2	0.386 10	square miles	1 square mile	2.589 988	km^2
1 ha	2.471 054	acres	1 acre	0.404 685 6	ha
		VOLUME			
1 cm^3	0.061 023	cubic inches	1 cubic inch	**16.387 064**	cm^3
1 m^3	35.314 7	cubic feet	1 cubic foot	0.028 316 85	m^3
1 m^3	1.307 951	cubic yards	1 cubic yard	0.764 554 86	m^3
		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	0.035 273 962	ounces (avdp)	1 ounce (avdp)	28.349 523	g
1 g	0.032 150 747	ounces (troy)	1 ounce (troy)	**31.103 476 8**	g
1 kg	2.204 622 6	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 3	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 90**	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)	31.103 477	grams per ton (short)
1 gram per ton (short)	0.032 151	ounces (troy) per ton (short)
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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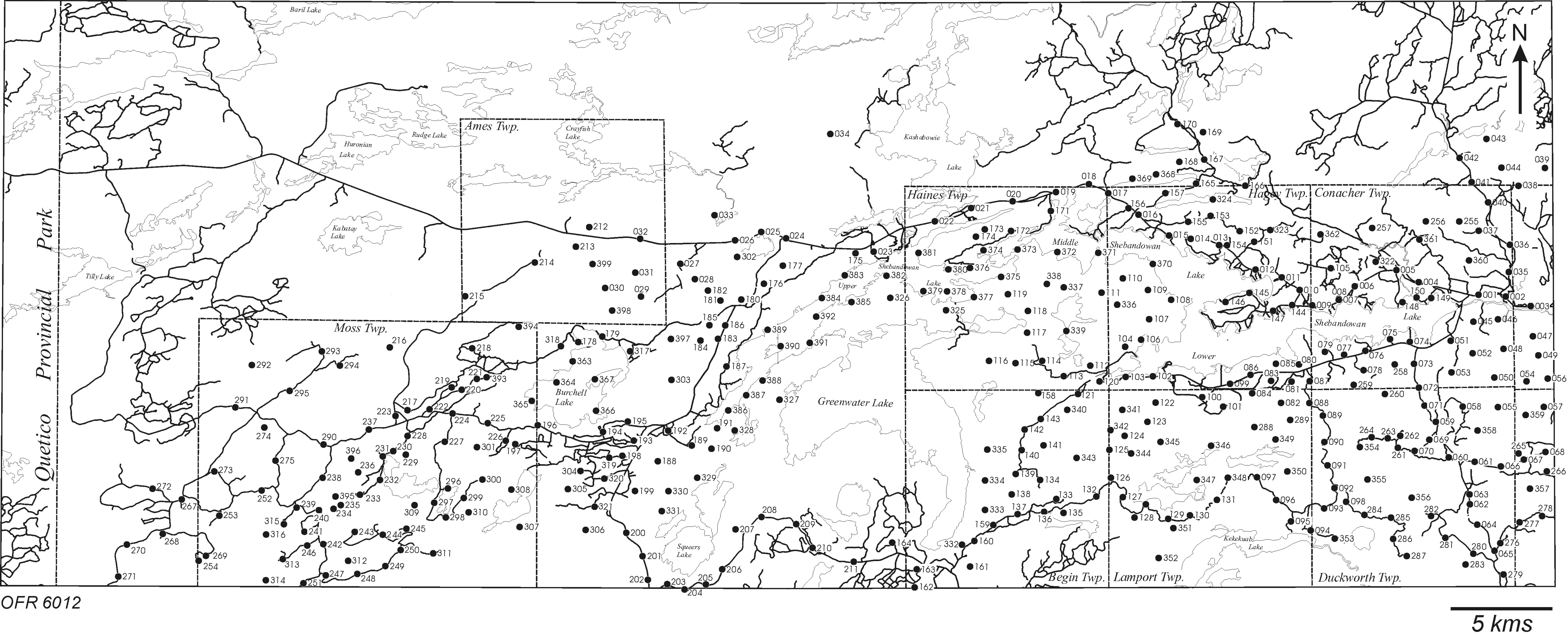

OFR 6012

Figure 5. Till sample location map.