COGEMA Resources Inc..

Geology and Geochemistry

TONKA PROPERTY
(Nechako Project)
1994

Omenica Mining Division
British Columbia

NTS 93F/12E

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(in pocket)

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INTRODUCTION

The Tonka Property was acquired by staking in 1994; it is located in the Nechako Basin in central British Columbia (Figure 1). Mineral showings and deposits with both high-grade vein and low-grade bulk tonnage potential occur in this region.

The property lies in the central part of the Stikine Terrane. The geology of this part of the Stikine Terrane contains three volcanic stratigraphic groups of latest Upper Cretaceous to Miocene age, underlain by Cretaceous and older basement rocks. Mineralization is associated with an Eocene tectonic event that involved crustal extension, felsic and basic volcanism, unroofed metamorphic complexes, large and small scale calderas and associated plutons, pull-apart sedimentary basins, and basin and range geomorphology. This Eocene tectonic-metallogenic belt extends from northwestern British Columbia and crosses all major geologic terranes of the northern Cordillera to the Columbia River basalt plateau in Washington State. The Tertiary tectonic evolution and volcanism of the Nechako Basin are similar to that of the Great Basin of Nevada and adjacent States and the potential for volcanic-hosted and hot-spring type epithermal deposits is similar.

Two epithermal precious metals deposits are currently being mined within this Eocene metallogenic province: the Cannon mine (Wenatchee District), and the Golden Promise in the Republic District. Three have recently been mined out the Equity Silver Mine, the Blackdome, and the Kettle deposits. High sulphide replacement deposits of the Republic graben, although not strictly epithermal, are part of the same metallogenic event.

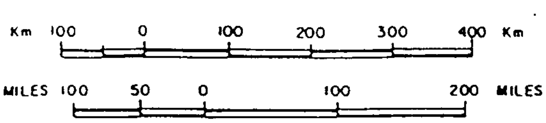
PHYSIOGRAPHY AND ACCESS

The Nechako Basin is part of the Interior Plateau of the Canadian Cordillera, comprising the Nechako Plateau north of the Blackwater River, and the Fraser Plateau south of it.

The North of the basin, where the Tonka property is located, is a plateau with a fairly constant overall elevation, but quite dissected at the local scale in a distinctive basin and range (horst and graben) topography producing more abundant outcrop than in the other two areas. Elevations vary from 1,417 m at the top of Deerhorn Hill to 715 m on François Lake. To the west, the area abuts on the Quanchus Range with a chain of peaks in the 2,100 to 2,300 m range.

Access is good. Major highways give access to the Nechako Basin: to the north (Hwy. 16), the east (Hwy. 97) and the south (Hwy 20), and a paved road reaches Nazko. More locally, access is through several networks of forestry roads starting in the South at Alexis Creek and at Nazko, in the Centre, at Vanderhoof and for the easternmost part at Nazko, and in the North from Vanderhoof and various points along Highway 16 west to Burns Lake.

BW	BREWSTER LAKE
CT	CUTOFF
HC	HOLY CROSS
LD	LAIDMAN
LC	LUCAS
LW	LUCAS WEST
SD	SAUNDERS
QL	QUARTZ LAKE
SN	SNAG
TM	TAM
TK	TONKA
YM	YELLOW MOOSE



COGEMA Resources Inc.

BRITISH COLUMBIA

NECHAKO PROJECT

LOCATION OF PROPERTIES

Figure 1

The main economic activity is logging. There are a few ranches in the South along Highway 20 and along the Nazko River, in the Centre along Chedakuz River and in the North along the lower Nechako River, and some farming northwest of Cheslatta Lake in the Takysie-Grassy Plains area. Tourism is a minor activity and consists mostly of fishing and, in the fall, hunting. Vegetation is dominated by evergreens (pine and spruce) with poplar and cottonwood in low-lying areas.

It is a region with no obvious environmental concerns, nor are there any parks proposed, except for the Ilgachuz Range which is outside of the area of interest per se.

The Tonka property lies immediately south off Intata Reach and can be reached from Highway 16 by the Holy Cross and Marilla Forestry roads and a ferry across Intata Reach. Local relief, within the property, is subdued; the dominant topographic feature is a valley that cuts the property from North to South and probably marks a structure. There has been little logging on the property. Outcrop conditions are relatively poor over most of the property, except along the central valley.

REGIONAL GEOLOGY

The Tertiary geologic elements of the Nechako Basin are part of a regional extensional system that extends from the Republic area of northern Washington State, northwesterly for some 1000 kilometres into the Babine district of north central British Columbia. This belt trends northwest with the approximate dimensions of 1000 X 200 kilometres. It crosses major terrane boundaries and underlies the Quesnel, Kootenay and Omineca Terranes in the south and the Stikine Terrane in the north, crossing the oceanic Cache Creek Group. It overlaps the southern margin of the Bowser Basin where it continues northward as a thin strip along the eastern margin of the Coast Range.

Stratigraphic and intrusive rocks in the Stikine Terrane range in age from Palaeozoic to Pleistocene. With respect to the Eocene mineral setting, the geologic elements of the Stikine Terrane may be divided into three separate packages: basement rocks, latest Upper Cretaceous-Eocene rocks associated with mineralization, and cover rocks (Table 1).

Basement Rocks - Lower Upper Cretaceous and Older

Basement rocks to the Tertiary in the Nechako Basin comprise Upper Triassic to lower Upper Cretaceous strata grouped into two major time-stratigraphic assemblages.

The oldest assemblage consists of arc volcanics of Upper Triassic to Middle Jurassic age which includes submarine and marine island arc volcanics and sediments of the Carnian to Norian subalkaline, basaltic Stuhini (Takla) Group, and the Sinemurian to Bajocian calc-alkaline Hazelton Group.

Table 1: Main Geologic Map Units of the Nechako Basin

Stratified Rocks	Intrusive and Metamorphic Rocks
11. Anahim Volcanics (Pliocene-Pleistocene)	
10. Chilcotin Volcanics (Miocene	
9. Endako Group (Eocene-Oligocene)	
8. Ootsa Lake Group (Eocene and Palaeocene)	G. Eocene (stocks, plugs, dykes, rhyolite, felsite, porphyry, diorite, gabbro)
7. Kasalka-Kingsvale Groups (Upper Cretaceous)	F. Upper Cretaceous-Palaeocene (Quanchus Intrusions: stocks and batholiths, diorite to quartz monzonite)
6. Skeena-Jackass Mountain Groups (Lower Cretaceous)	
	E. Mid-Cretaceous (mainly tonalite to quartz monzonite of Coast Range complex)
5. Gambier Group (Upper Jurassic-Lower Cretaceous)	
	D. Jurassic-Cretaceous (François Lake Batholith; quartz diorite to granite, includes quartz-feldspar porphyry)
4. Relay Mountain-Bowser Groups (Upper Jurassic-Lower Cretaceous)	
3. Hazelton Group (Lower and Middle Jurassic)	C. Middle Jurassic (locally foliated granodiorite and quartz monzonite)
2. Stuhini Group (Upper Triassic)	
1. Cache Creek Group (Upper Palaeozoic)	B. Permian (mainly granodiorite in lower Chilcotin River)
	A. Metamorphic Rocks (gneiss, schist, metavolcanics, cataclasites)

The arc volcanic assemblages are overlain by two sedimentary assemblages, the Middle Jurassic to Lower Cretaceous Bowser Lake Group and the Lower and Upper Cretaceous Skeena Group. Deltaic assemblages of the Bowser Lake Group were deposited mainly in the Bower Basin to the North, except for its basal, the Ashman Formation, a black clastic-chert pebble conglomerate, sandstone and siltstone unit that outcrops below the waters of the eastern end of the Nechako Reservoir (Tipper, 1963). Marine and nonmarine sediments of the Neocomian to Cenomanian Skeena Group blanketed much of the Stikine Terrane and sourced from the east, off the Cache Creek, Quesnel and Omineca Terranes. The blanket of Skeena Group clastics across Stikinia outlines a regional datum to which deformation and deposition of younger strata may be related. The basement rocks have been affected by regional compressive tectonics. Westerly verging compression along the east margin of the Stikine Terrane, associated with the amalgamation of Stikinia, Quesnellia and the Cache Creek Terranes to the North American Craton, affects rocks as young as Upper Jurassic. Easterly verging compression along the west margin of the Stikine Terrane, associated with the amalgamation of the Wrangellia with Stikinia affects rocks as young as Late Cretaceous.

Intrusive rocks associated with the basement strata include the Upper Jurassic-Lower Cretaceous François Lake intrusions to the northeast of the reconnaissance area, and mid-Cretaceous plutons of the Coast Crystalline Complex.

Many of the northwest and northeast trending fault zones that control the distribution of the Tertiary geologic elements are fault zones whose activity can be traced back to the Upper Triassic and Lower Jurassic.

Upper Cretaceous to Miocene

The Upper Cretaceous to Eocene metallogenic event is associated with three stratigraphic assemblages, the late Upper Cretaceous andesitic Kasalka Group, the felsic Eocene Ootsa Lake Group and the basaltic Eocene to Oligocene Endako Group. These assemblages represent a generalized cycle of early andesitic volcanism, explosive felsic volcanism, bimodal felsite-basic volcanism and later basic volcanism. The early andesitic Kasalka Group, and the felsic Ootsa Lake Group strata were deposited in calderas and caldera complexes. The distribution of the older facies of the Endako Group are in part controlled by the felsic calderas. The felsic calderas are large, composite features that may measure more than 50 kilometres in diameter and are nested caldera complexes. The volcanic assemblages are associated with a fault array whose main expression is extensional. This sequence of caldera associated volcanism and extensional faulting is a common sequence through the length of the extensional belt, from the Mexican border to Babine Lake and is associated with a vast array of significant mineral deposits.

The Kasalka Group volcanics (McIntyre, 1985) occur as a number of caldera basins throughout west-central British Columbia, on the Stikine Terrane, between the Blackwater Linear zone and the north flank of the Skeena Arch. They are mainly feldspathic andesitic volcanics but local basins include explosive and passive felsic volcanism. They are associated with granodioritic stocks and plugs of the Quanchus and Bulkley Intrusions. In a number of locations in central B. C., red and green polylithic volcanic and granitic cobble conglomerate underlies basal Kasalka strata. The age of the Kasalka volcanics and associated intrusives range from 85 My to 60 My and fall mainly in the 72 to 67 My interval.

The Ootsa Lake Group (Duffel, 1959) is typified by light coloured felsic volcanics. They underlie broad areas of the southern Stikine Terrane from Babine Lake to the Chilcotin River and include a variety of depositional types. They occur in structurally controlled basins and in large caldera complexes. Subvolcanic intrusives are common; coeval plutonic rocks are rare within the caldera complexes, but common in the basement. The Ootsa Lake Group ranges in age from 58 to 47 My with the interval of 52 to 48 My representing the timing of the main felsic eruptive events.

The Endako Group (Armstrong, 1949) is a wide ranging assemblage of mainly basaltic rocks. In a general sense, the Endako Group overlies and is younger than the Ootsa Lake Group. Basaltic and andesitic rocks are commonly associated with felsic rocks in the calderas. Ages of the Endako Group show a range from 50 to 37 My. Post-Ootsa Lake Group basaltic volcanism occurred intermittently throughout the area, from 45 My to Recent. (Mathews, 1989; Rouse, 1988). Basaltic volcanics younger than 35 My are correlated with the Chilcotin Group.

Pliocene-Pleistocene

The Anahim Group peralkaline basalts occur only in the Southwest of the Nechako Basin.

"During the Pleistocene all of Central British Columbia was covered by glacier ice that moulded a multitude of features from which the glacial events can be interpreted" (Tipper, 1971). The bulk of glacial features in Central British Columbia have been produced by the Fraser Glaciation, the last major advance. Minor late re-advances are observed around the Anahim volcanoes and along the Coast Ranges.

Within the Nechako Basin, glacial transport direction varies from N O° to 30°, south of the Blackwater lineament, to N 60° to 90° north of it. Glacial deposits consist mostly of lodgement till with some areas of ablation till, esker systems, and fluvio-glacial material. A thin veneer of ablation till may occasionally overlie lodgement till. There are no extensive glacial lake deposits (sands and clays). Evidence of multiple glaciation are observed in a few localities in the form of lodgement till overlying fluvio-glacial deposits.

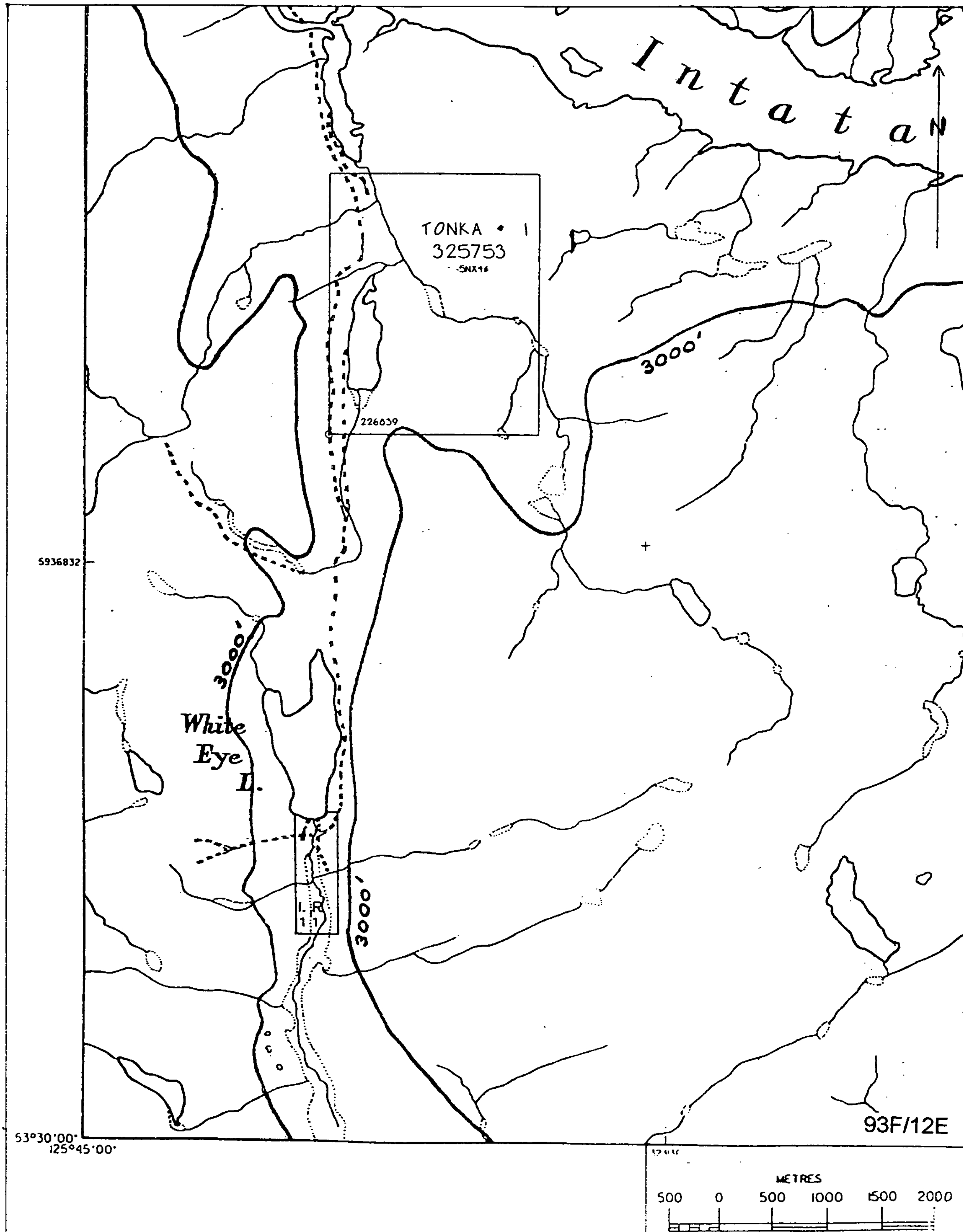
LEGAL DESCRIPTION AND HISTORY OF THE PROPERTY

The Tonka property consists of 1 claim of 20 units. It is owned 100% by COGEMA Resources Inc. See table 1 and figure 2.

The only earlier work on the property is in 1988 by Mingold (Yarrow, 1989), who found the Tonka showing, did some prospecting, and a soil geochemical grid around the showing.

Table 2 List of Claims: Tonka Property

NAME	RECORD No	UNITS	STAKED DATE	STAKED YEAR	GOOD UNTIL	MINING DIVISION	NTS
TONKA PROPERTY							
TONKA-1	325753	20	27-May	1994	1999	OMINECA	93F/12E
	Total	20					



ADMINISTRATIVE AREA

MINING DIVISION : OMINECA

Figure 2 Claim Map of the Tonka Property

METHODOLOGY

The Tonka property was accessed from a camp south of Intata Reach, near the ferry crossing.

Bedrock mapping was done by systematically traversing areas liable to have outcrops as deduced from air photos and topography. Mapping concentrated on finding as many outcrops as possible, especially in areas of poor outcrop to obtain the best possible coverage.

Prospecting was done in a few selected areas only. More thorough prospecting will be required in 1995 to uncover new showings.

Till samples were taken along flagged compass and hip chain lines spaced about 200-400 metres with samples taken every 50-100 metres. The line orientation were chosen perpendicular to the average ice transport direction as deduced from air photo lineaments (drumlinoids and scour features). Samples were taken with a split spoon auger, at 0.5 to 1.25 metres depth with the objective to obtain a sample as fresh, un-oxidized, as possible. Sample description included four parameters (Table 3), as well as on-site interpretation of the probable facies: lodgement, ablation, fluvial glacial, or colluvium. This interpretation is subjective but takes into account the description parameters as well as the terrain morphology as observed by the samplers,all well seasoned prospectors. A total of 233 till samples were collected.

The till and rock sample locations were digitized in the field using Autocad and the description entered on Excel spreadsheets, plotted in the office using Techbase, and transferred onto Autocad drawings for presentation.

Analyses were done by Acme Analytical Laboratories Ltd. The analytical procedures were as follows:

Au:	Aqua regia digestion, MIBK extraction, atomic absorption; 50 g for till;
30 Elements:	Aqua regia digestion, ICP on 0.5 g for till and rock
Hg:	Flameless atomic absorption

Aqua regia digestion results in partial analysis for the following elements: Ca, Mg, Fe, Mn, Cr, Ba, Sr, U, Th, La, Ti, B, Al, Na, K.

Table 3 Till Sample Description Parameters

Roundness:	1.	Non-eroded, sharp-edge, angular. Clear fractured surfaces typical of individual rock types.	
	2.	Slightly eroded, slightly worn at edges, angular. Still clear fractured surfaces typical of individual rock types.	
	3.	Eroded, edges eroded and rounded. Original form still easily definable, fractured surfaces still retained.	
	4.	Rounded. Original form difficult to define.	
	5.	Highly rounded. Original form can no longer be defined.	
Compactness:	1.	Extremely loose	
	2.	Loose	
	3.	Normal	
	4.	Compact	
	5.	Extremely compact, concrete-like	
Stone Content:	1.	Stoneless	0 per sample
	2.	Few stones	1-4 per sample
	3.	Normal	5-10 per sample
	4.	Abundant stones	11-15 per sample
	5.	Extremely abundant stones	>15 per sample
Colour:			

Till Prospecting and Geochemistry

Till deposits cover the vast majority of the surface of the region. Although this is a hindrance for it hides the bedrock, till can be used as an exploration tool. Glacial processes increase the size of the exploration targets, both in length and width, by dispersing material down-ice from mineralized areas within the till, where it can be detected by prospecting, finding mineralized boulders, and by geochemistry, analysing the fine fraction or the heavy fraction of the till. This dispersion has also a another effect which must be taken into consideration, that of reducing the grade of the mineralized material very rapidly by dilution with surrounding material. For this method to work properly several conditions must be met: the mineralized material must have been eroded by glacial action, it must have been deposited within reasonable distance, the deposited till must be preserved (not eroded by later processes), and it must be close to surface where it can be sampled, and not covered by a thick mantle of later deposits.

The purpose of the till sampling programme was to define anomalous areas for further, detailed, geochemistry and prospecting to find mineralization in situ or in boulders. The chosen spacing between lines and of samples along the lines was a compromise between what could be done with the available means applied to the property area and the goal, to find indications of gold mineralization. Although an economic deposit could easily fit between sample lines, the effect of glacial processes can be used to locate targets of such size with a relatively wide sample grid.

The use of Au and Ag for tracing mineralization presents special problems. In the case of Au, the main problem is nugget effect and, to a lesser degree, the analytical detection limit, which is about at the level of the Au background in rocks and till. The nugget effect results in non-reproducibility of analyses, be there replicate analyses or analyses of duplicate samples. In the case of Ag, the main problem is analytical detection limit which is about twice the Ag background in rocks and till. As a result Ag analyses become significant only at about 10 times background. Both Au and Ag must thus be used with care in the low ranges. Sb suffers from the same problem as Ag; its analytical detection limit is about 10 times its background in rocks and tills.

Other elements within the analyzed group, which are diagnostic of epithermal mineralization are As and Hg. The base metals, Cu, Pb, Zn, and Mo, are not normally strongly enriched in epithermal mineralization, although they may be in the 100 to 300 ppm range in some cases. This level of anomaly in rock translates to a very slight enrichment in the till, except if the source area is very large, i.e if it supplies a large proportion of the till material.

GEOLOGY

The property is located near the southwestern border of the Cheslatta Caldera Complex at the edge of the northwestern extension of the Nechako Arch and is underlain by volcanic and sedimentary assemblages of Upper Cretaceous to Eocene age. The main unit is Upper Cretaceous Kasalka Group andesite (Map 1).

Kasalka Group

It consists of a monotonous massive grey green feldspar and hornblende phyric fine grained almost equigranular to crowded porphyritic andesite that resembles the microdiorite occurring along Intata Reach to the Northwest and on the Snag property. It is un-metamorphosed. Some propylitization may be visible on most outcrops.

Tertiary Rocks

Ootsa Lake Group rhyolite and dacite as well as a yellow clay (argillite?) that may be part of the Ootsa Lake or the Endako Group outcrop 1 km east of the property and the eastern part of the property is liable to be underlain by these rocks.

MINERALIZATION

The Tonka property was staked because of the presence of a quartz structure which gave up to 1.0 g/t Au (Tonka showing) and several high Au values in the 1988 Mingold soil survey.

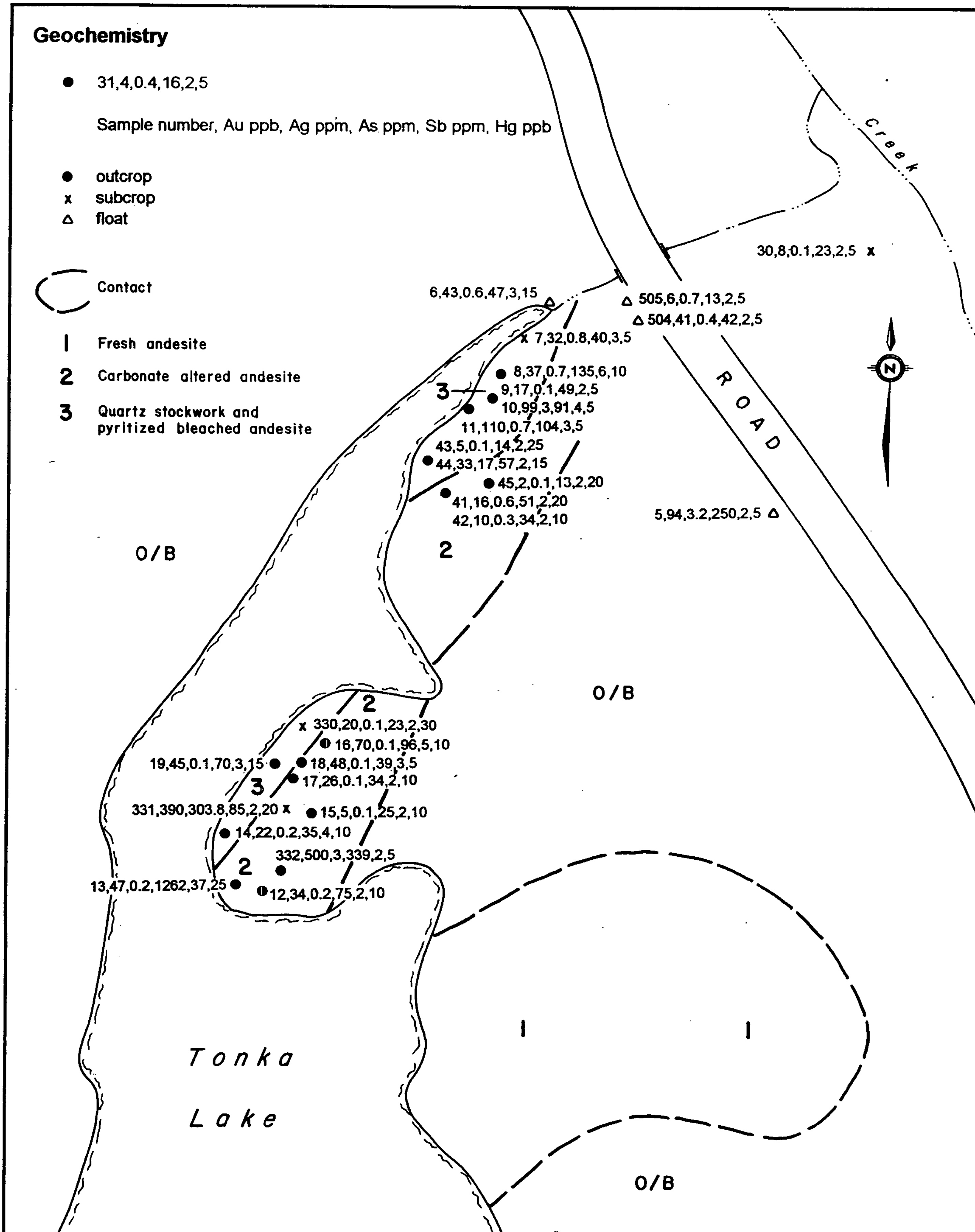


Fig. 3 Tonka Showing: Geology and Rock Geochemistry

SCALE 1:3000

The showing area was mapped and prospected. It consists of an impressive zone of dense quartz stockwork outcropping for about 350 m along the shore of Tonka Lake and 30 to 40 m wide (unit 1 on figure 3). Within this zone more massive quartz structures reach 3 to 10 m wide and trend N0-20°/90-80°W. The quartz stockwork zone is accompanied by a halo of pyritized and bleached andesite, followed by an outer alteration zone of calcite-veined andesite, 50 to 75 m wide. Although the 1989 assessment report mentions a grab sample at 1 g/t Au, 1994 analyses range up to 500 ppb Au, with highs of 304 g/t Ag and 1262 ppm As; Sb, Hg and base metals are low.

Similar alteration with pyritization but no quartz, and only slightly anomalous Au and tracers, occurs just north of the claims in a quarry along the bay and as subcrop along the road east of the showing. Altered andesite boulders, again with only low Au and tracers, occur in several places along the road east and southeast of Tonka Lake.

GEOCHEMISTRY

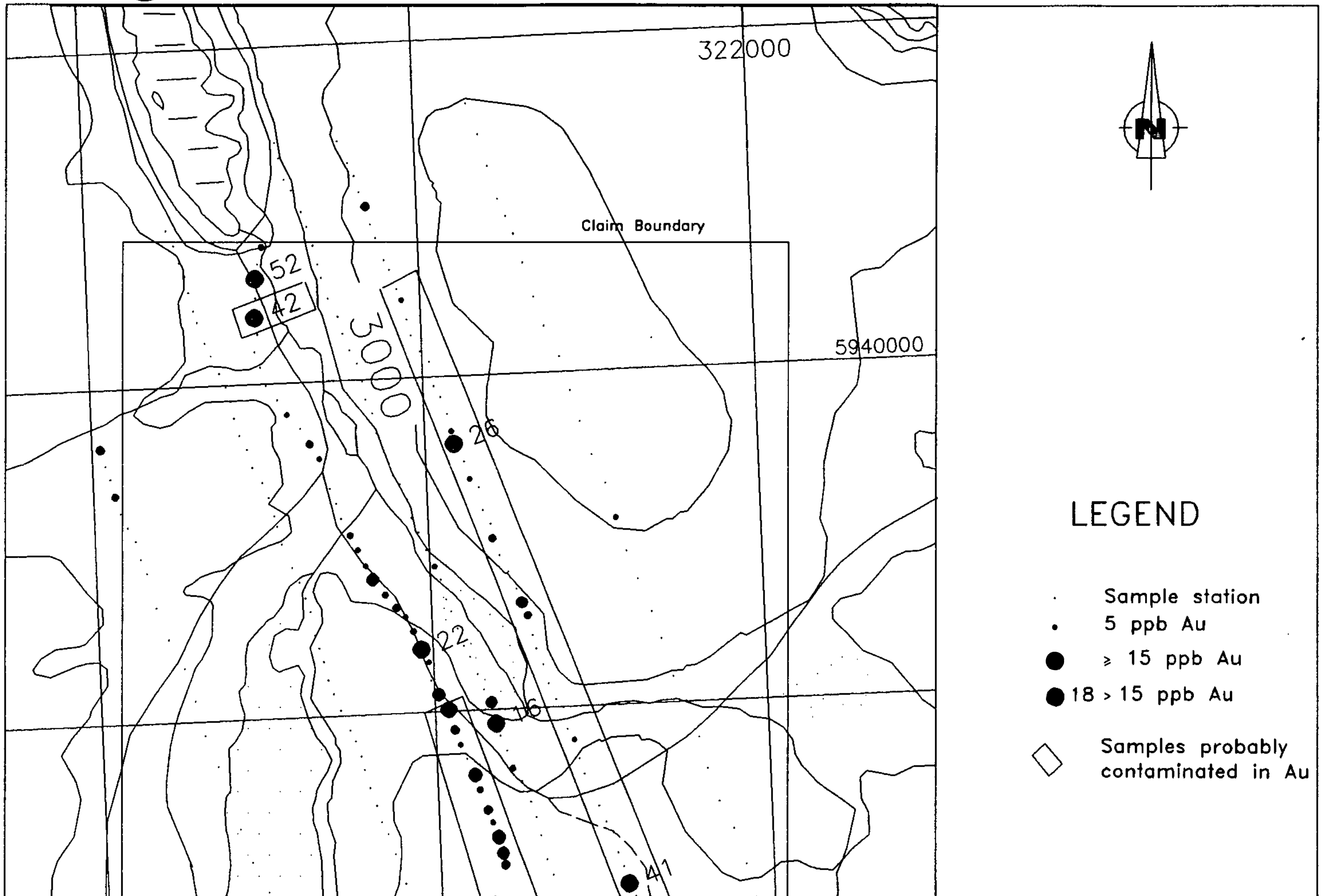
Till geochemistry

Till sampling on the Tonka property gave a reasonably good coverage. Tills are predominantly lodgment tills west of the creek flowing through the centre of the property and thick ablation till to the East. (Map 3).

Results are presented as posted Au ppb values on map 1 and as dot anomaly maps on figures 4 to 13. The Au values (Map 2 and Figure 4) are systematically high on several lines and there is a good correlation between high Au's and one of the sampler indicating Au contamination at the sampling stage. On map 2 these samples are flagged with an asterisk ("*"). The northern part of line 100E was resampled for verification resulting in overall lower Au values.

The table of statistics (Table 5) is somewhat unusual by the large number of significant correlation coefficients. This suggests that a significant portion of the variance is related to the analytical digestion process. The correlation coefficients show the usual patterns, with good correlations amongst the "majors elements " group. No significant correlation is present amongst the Au-Ag-tracer element group, with exception of Cu-As, Ag, Hg and Hg-Ag. The meaning of these correlation is not understood.

The distribution of the main elements of interest is shown on figure 4 to 13. There are strong Au anomalies east and north of the showing accompanied by As and Cu. Ag and Hg, as well as Pb, Zn, and Ba show scattered highs with no clear pattern. There are two samples east of Tonka Lake with high Ag, Hg, Cu, Pb, Ba, La, and K; these samples are also high in Fe and Mn, and the "anomaly" is probably due to Fe-Mn trapping or easier analytical digestion of the samples.



COGEMA Resources Inc.

SCALE 0 1 KILOMETRES

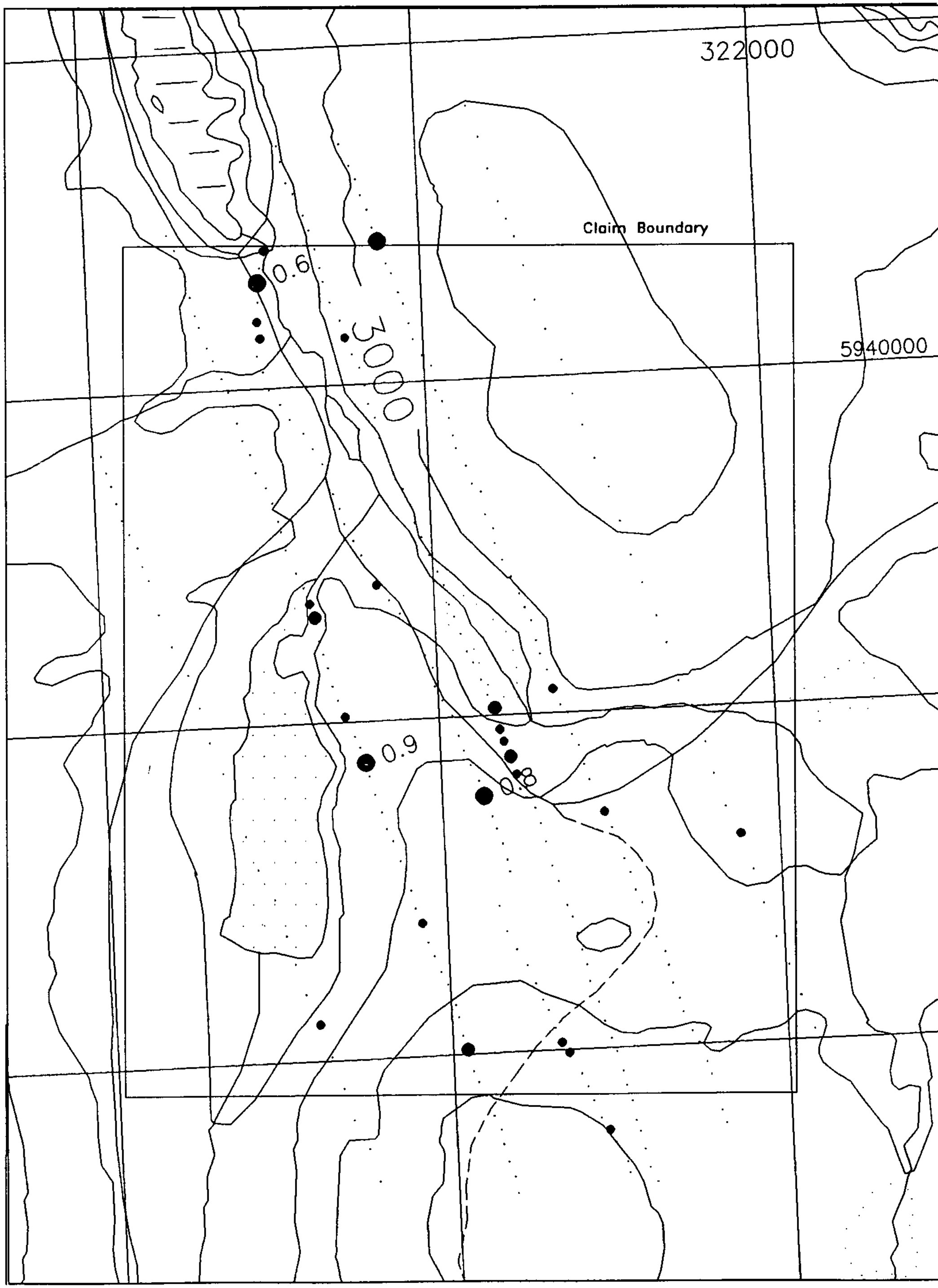
NECHAKO PROJECT

TONKA PROPERTY

Till Geochemistry

Au

Figure 4



N

LEGEND

- Sample station
- 0.3 ppm Ag
- ≥ 0.5 ppm Ag
- 0.7> 0.5 ppm Ag

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Resources Inc.

SCALE
0 — 1
KILOMETRES

NECHAKO PROJECT

TONKA PROPERTY

Till Geochemistry

Ag

Figure 5

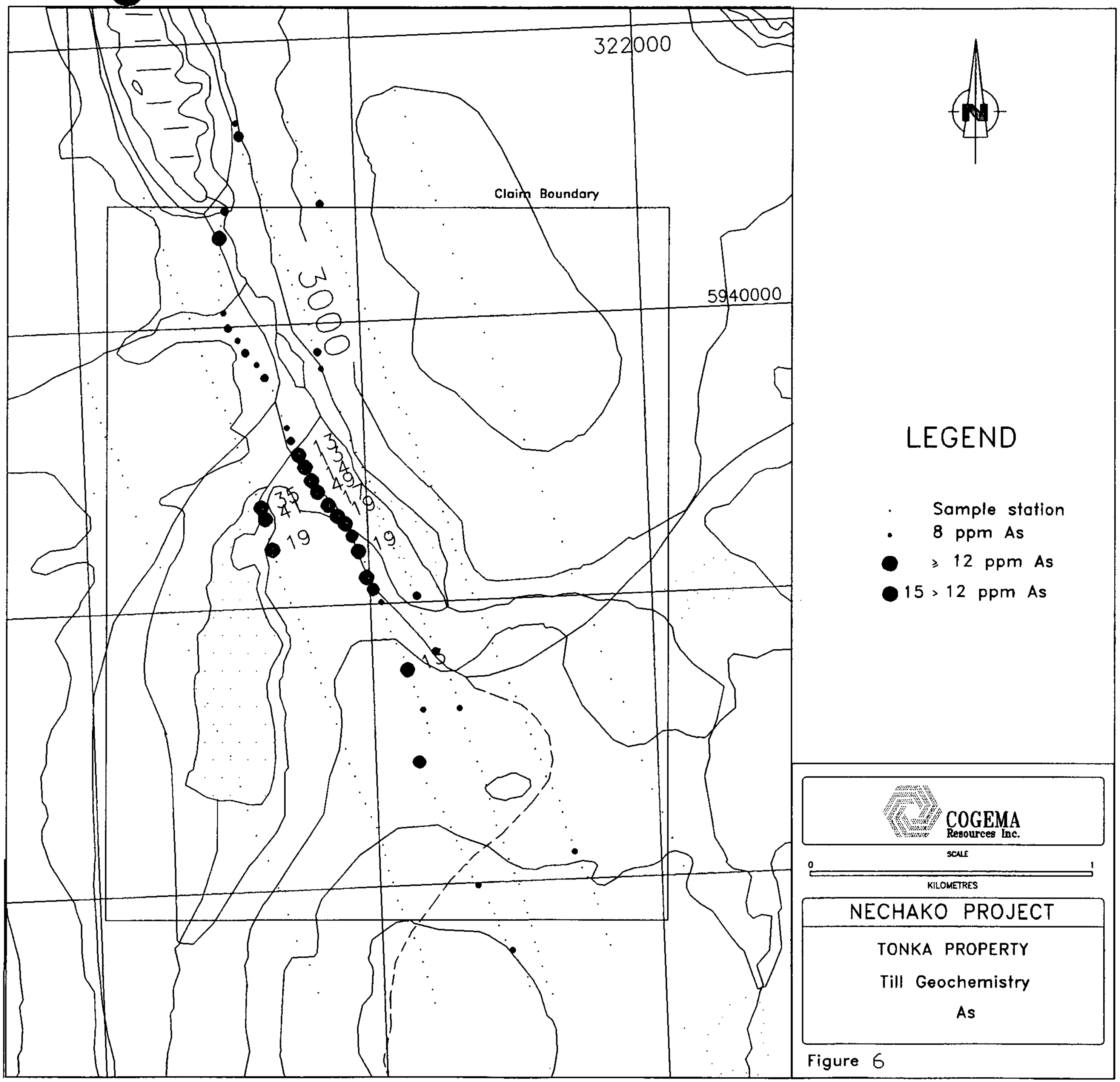
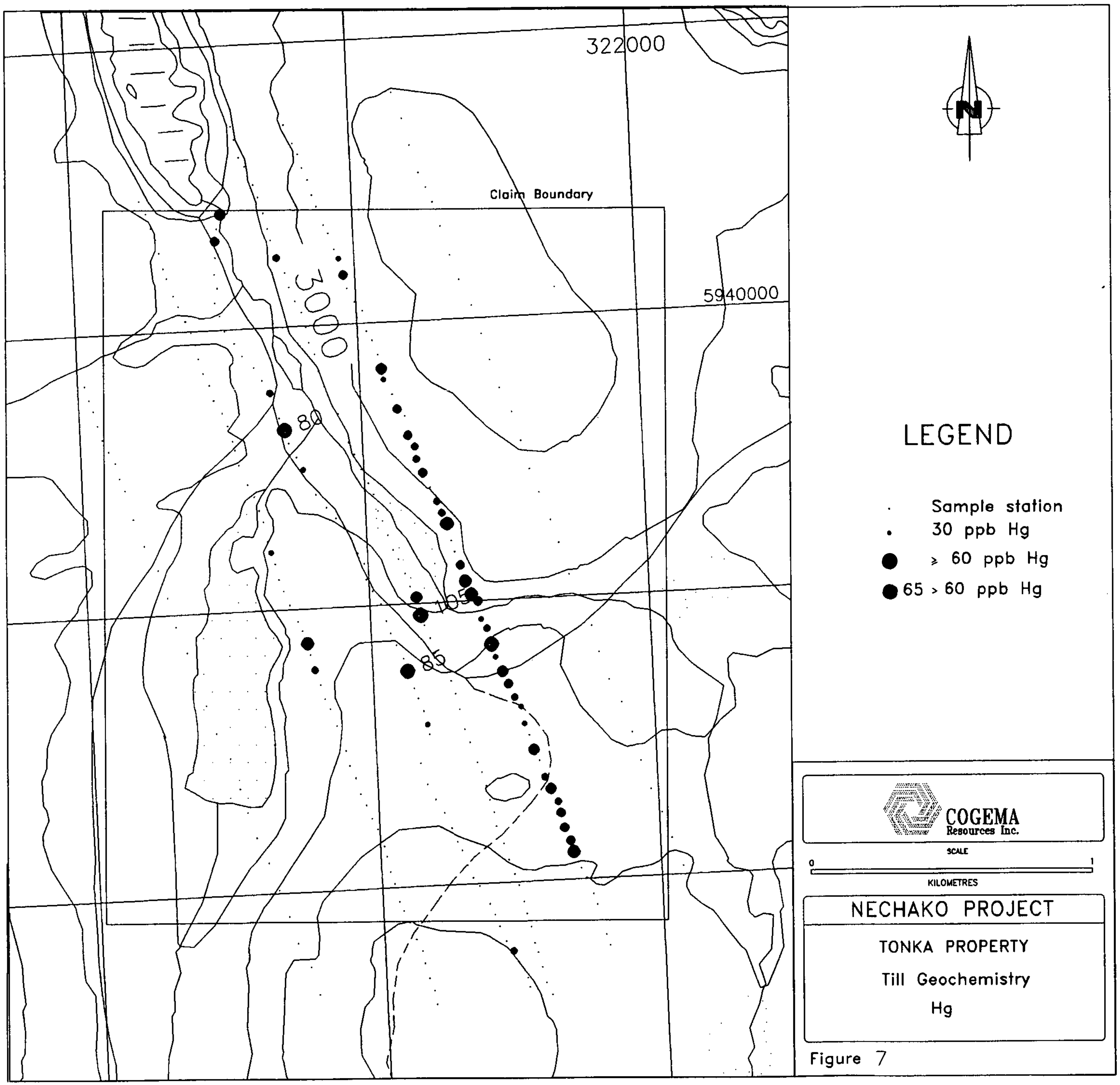

322000
5940000
Claim Boundary
3000
13
13
14
49
19
19
35
4
19
19
15
LEGEND
Sample station
8 ppm As
≥ 12 ppm As
15 > 12 ppm As
COGEMA Resources Inc.
SCALE
0
1
KILOMETRES
NECHAKO PROJECT
TONKA PROPERTY
Till Geochemistry
As

Figure 6



322000
5940000
Claim Boundary
3000
80
105
85
N
LEGEND
Sample station
30 ppb Hg
≥ 60 ppb Hg
65 > 60 ppb Hg
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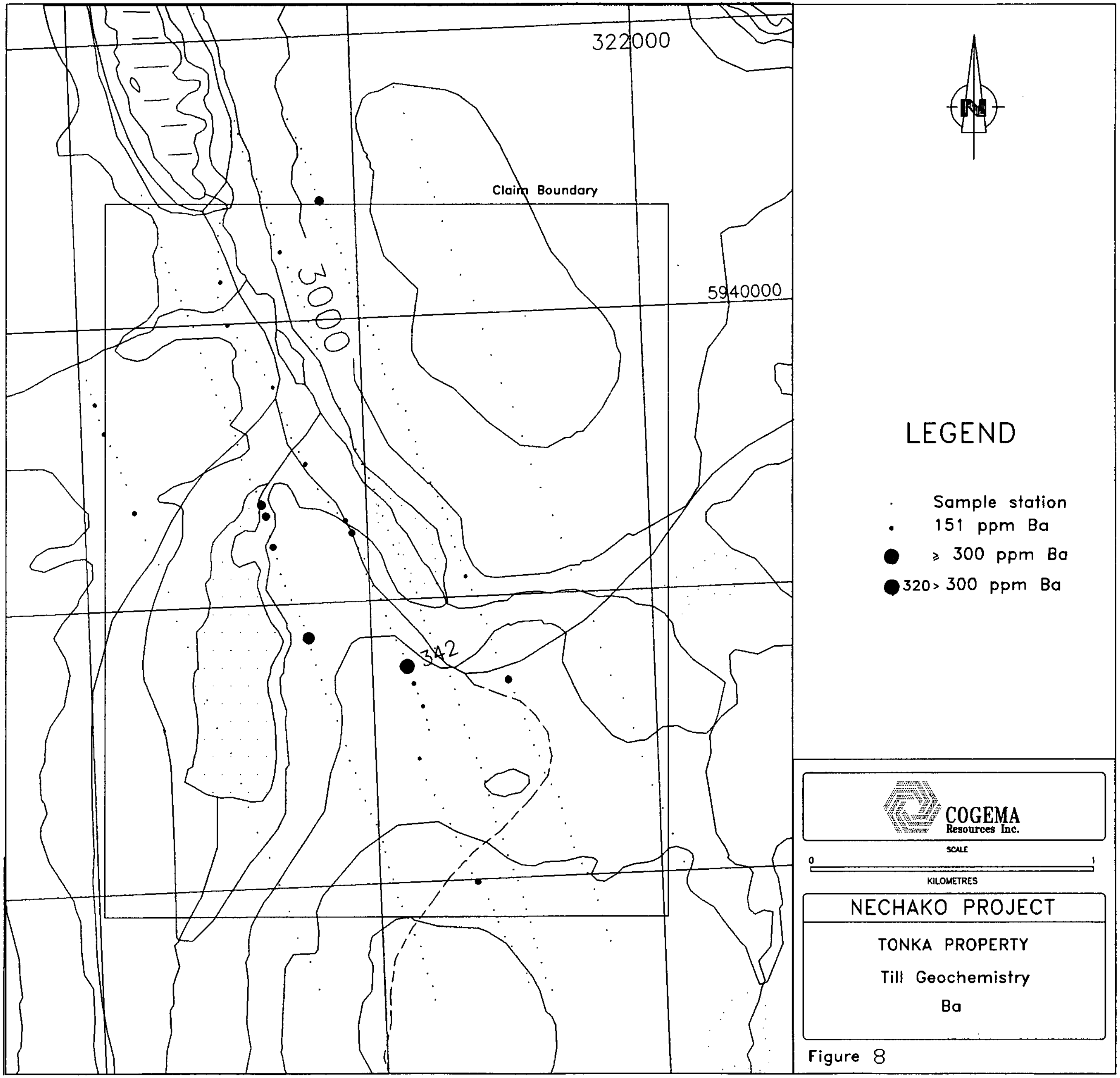
Resources Inc.
SCALE
0
1
KILOMETRES
NECHAKO PROJECT
TONKA PROPERTY
Till Geochemistry
Hg

Figure 7



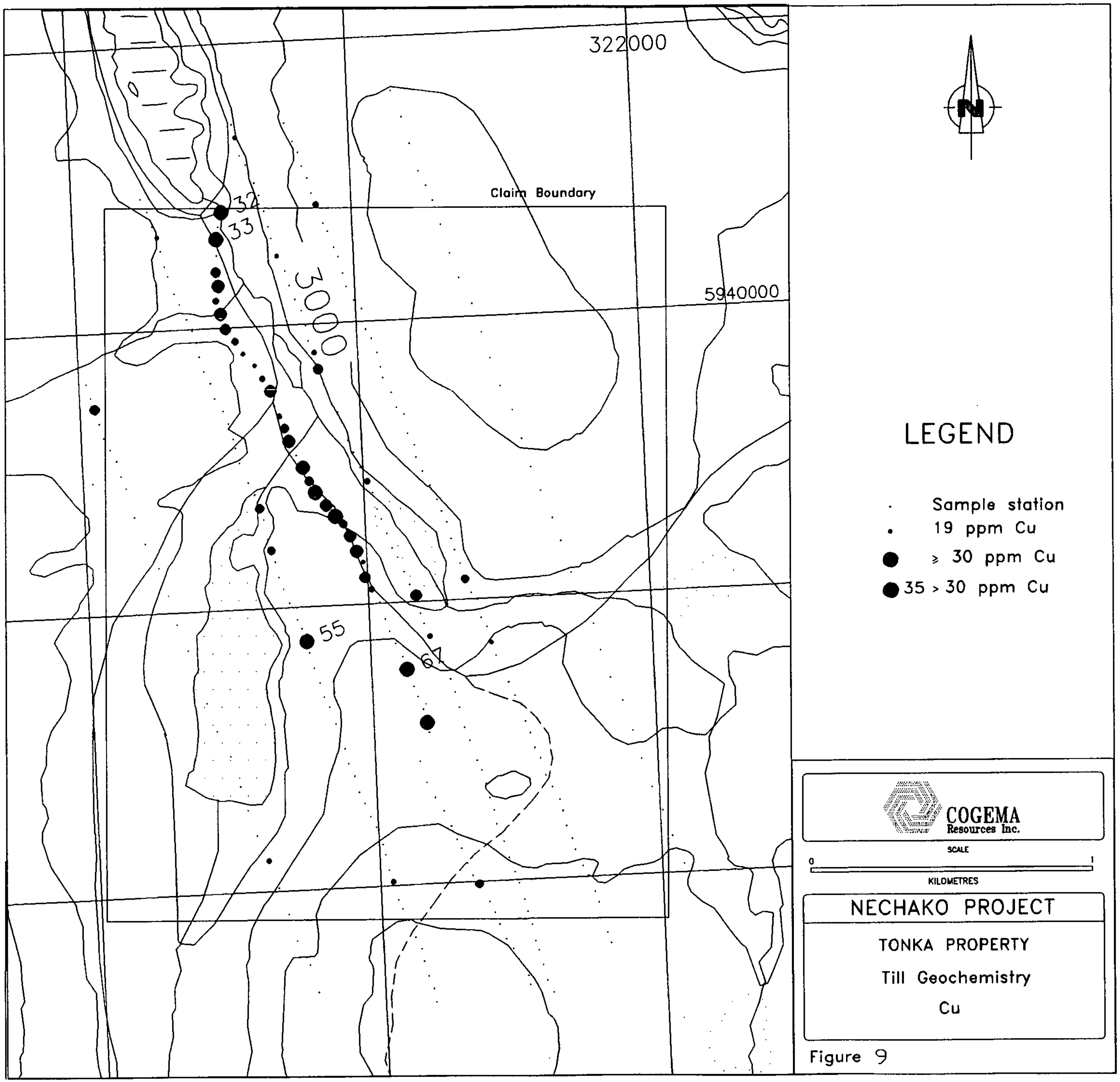
NECHAKO PROJECT

TONKA PROPERTY

Till Geochemistry

Ba

Figure 8



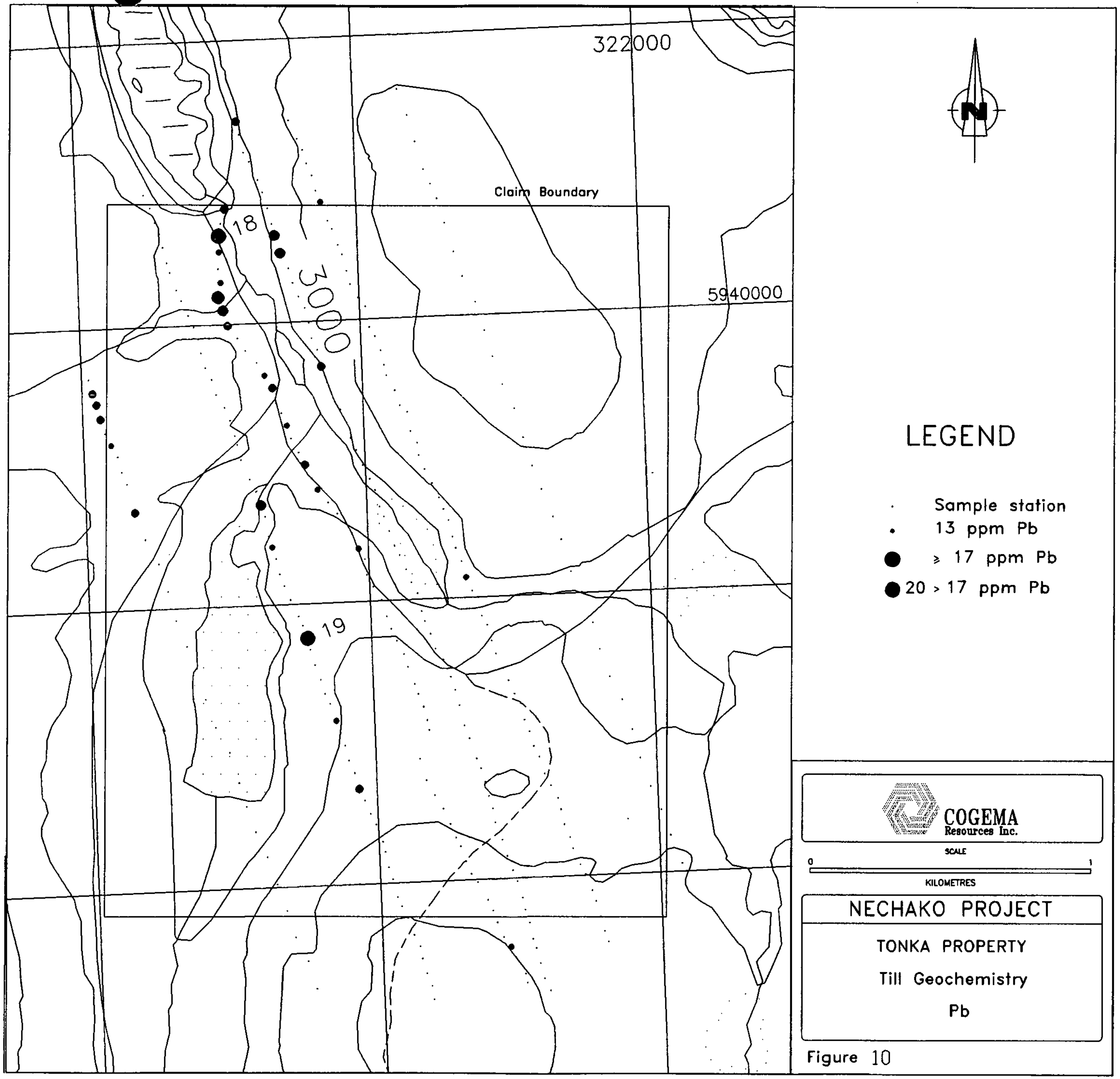
NECHAKO PROJECT

TONKA PROPERTY

Till Geochemistry

Cu

Figure 9



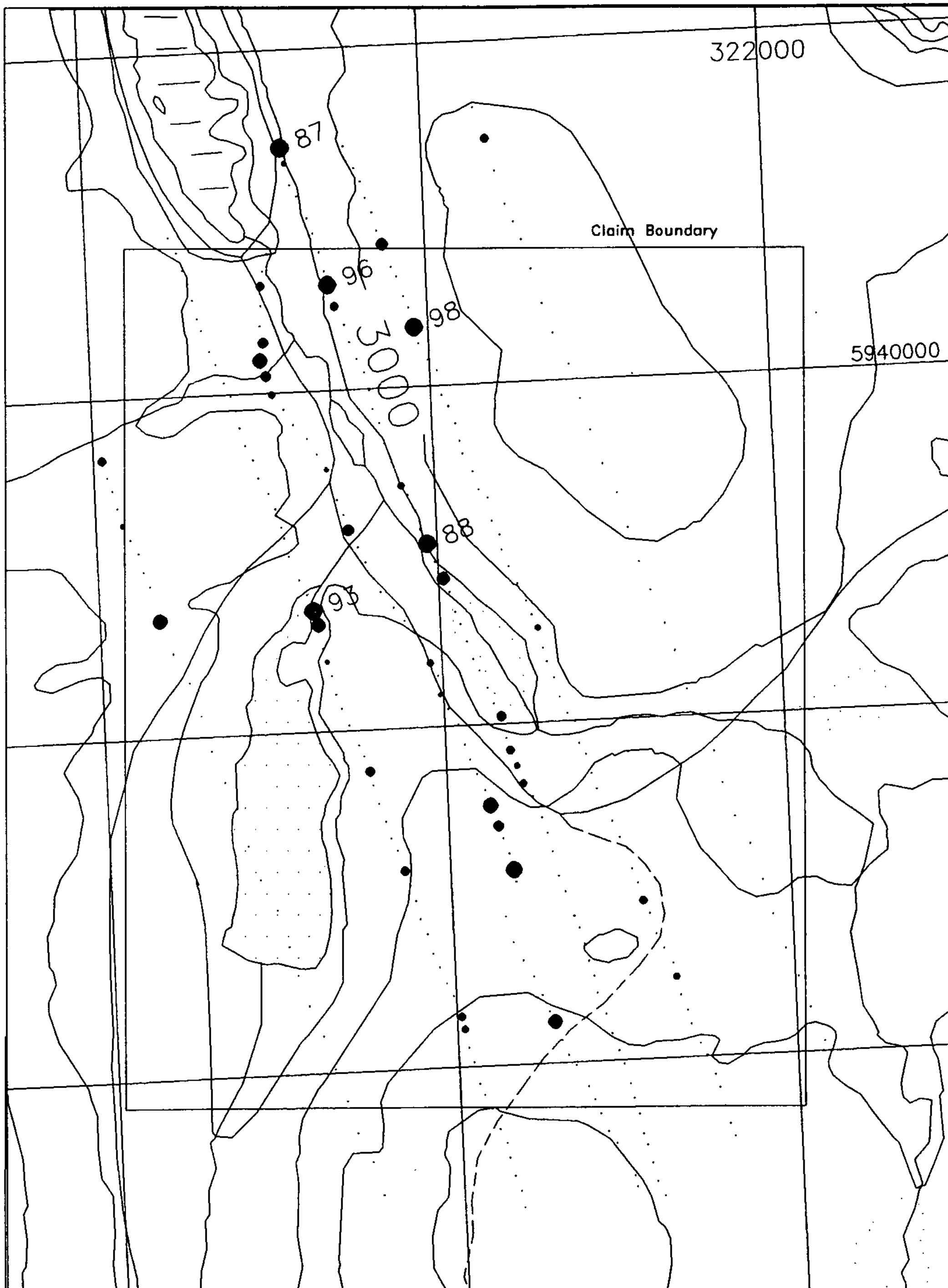
NECHAKO PROJECT

TONKA PROPERTY

Till Geochemistry

Pb

Figure 10



LEGEND

- Sample station
- 61 ppm Zn
- ⩾ 85 ppm Zn
- 90 > 85 ppm Zn

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SCALE

0 1

KILOMETRES

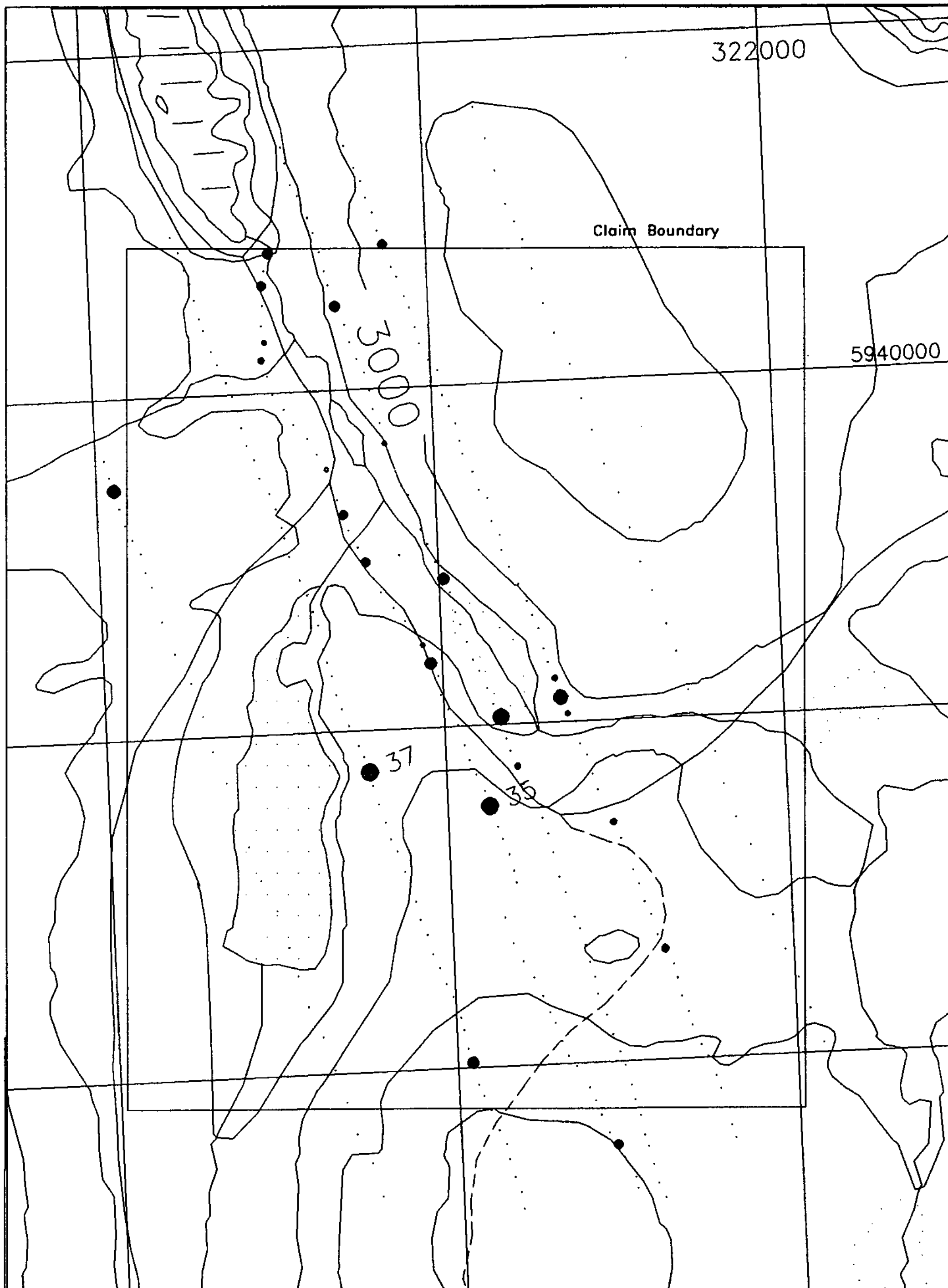
NECHAKO PROJECT

TONKA PROPERTY

Till Geochemistry

Zn

Figure 11



LEGEND

- · Sample station
- • 21 ppm La
- ● ≥ 30 ppm La
- ● 32 > 30 ppm La

COGEMA Resources Inc.

SCALE
0 — 1
KILOMETRES

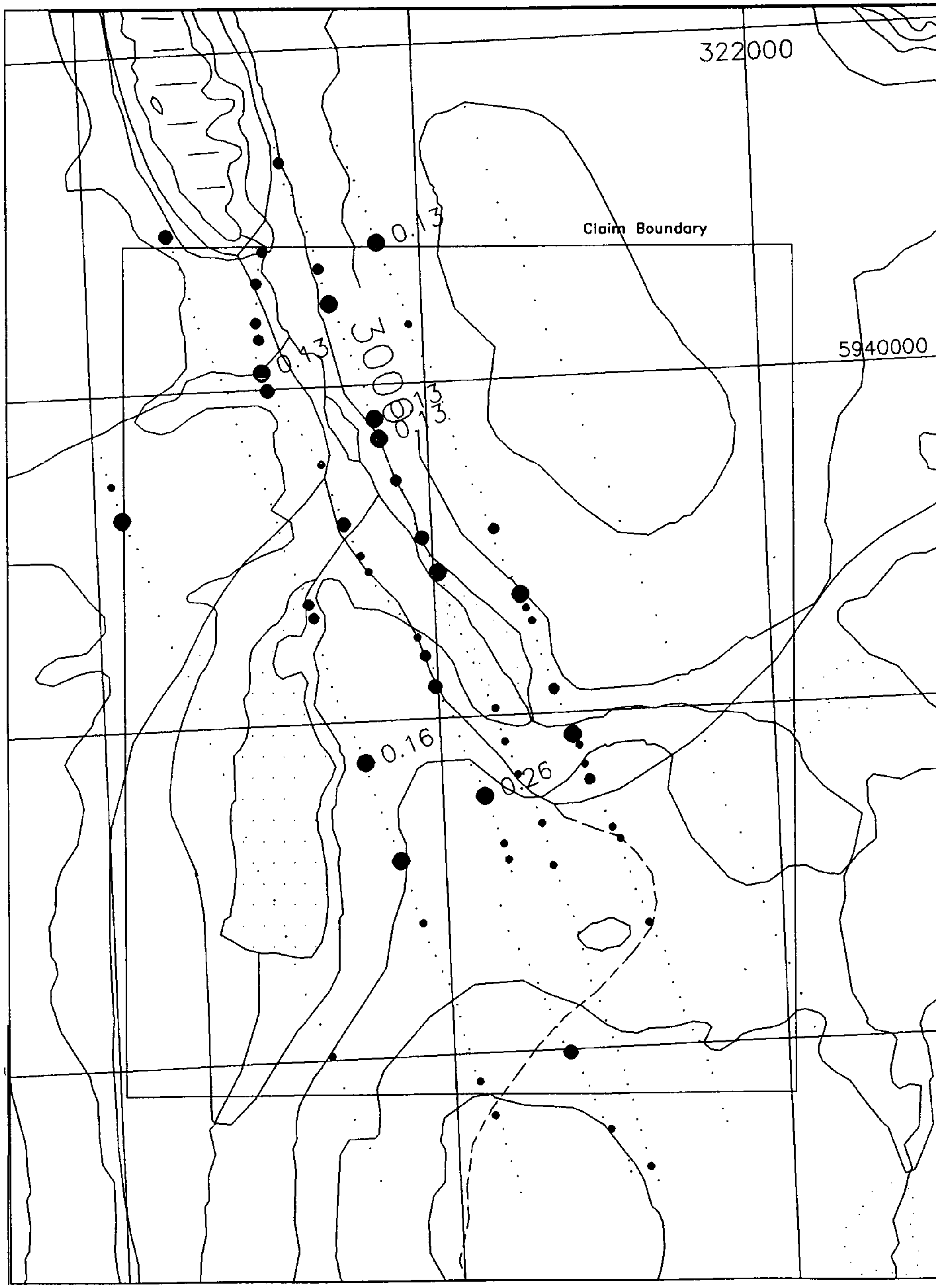
NECHAKO PROJECT

TONKA PROPERTY

Till Geochemistry

La

Figure 12



N

LEGEND

- Sample station
- 0.09% K
- ≥ 0.12% K
- 0.15 > 0.12% K

COGEMA Resources Inc.

SCALE
0 1
KILOMETRES

NECHAKO PROJECT

TONKA PROPERTY

Till Geochemistry

K

Figure 13

Table 4 Tonka Property: Correlation Coefficients and Statistics of Till Samples

	Au	Ag	As	Sb	Hg	Mo	Cu	Pb	Zn	Ba	Ni	Cr	Co	Mn	Fe	V	Sr	Mg	Ca	Ti	P	La	U	Th	Cd	Bi	B	W	Al	Na	K
Au	1.000																														
Ag	.115	1.000																													
As	.133	.344	1.000																												
Sb	.029	-.061	-.012	1.000																											
Hg	.193	.404	.131	-.048	1.000																										
Mo	.009	.364	.609	-.015	.129	1.000																									
Cu	.137	.677	.480	-.001	.437	.246	1.000																								
Pb	.011	.365	.319	.106	.249	.169	.499	1.000																							
Zn	.135	.298	.362	.126	.345	.217	.478	.534	1.000																						
Ba	.120	.605	.430	.026	.464	.357	.708	.420	.578	1.000																					
Ni	.134	.540	.376	.065	.470	.182	.846	.533	.644	.747	1.000																				
Cr	.076	.358	.233	.065	.493	.011	.633	.453	.512	.535	.797	1.000																			
Co	.190	.479	.573	.067	.416	.256	.791	.542	.663	.750	.895	.719	1.000																		
Mn	.087	.565	.547	-.056	.358	.460	.656	.480	.551	.719	.608	.408	.712	1.000																	
Fe	.189	.504	.489	-.009	.554	.256	.742	.442	.626	.744	.844	.816	.849	.577	1.000																
V	.162	.199	.391	.003	.414	.038	.485	.332	.491	.455	.653	.826	.710	.322	.864	1.000															
Sr	.110	.455	.419	-.057	.303	.101	.745	.420	.327	.562	.679	.529	.734	.529	.544	.430	1.000														
Mg	.142	.546	.396	-.100	.509	.174	.807	.410	.434	.685	.798	.636	.785	.580	.778	.567	.775	1.000													
Ca	.047	.479	.358	-.069	.326	.090	.735	.404	.286	.540	.635	.488	.658	.485	.536	.347	.901	.804	1.000												
Ti	.035	-.302	-.146	.016	.073	-.347	-.113	.011	-.072	-.276	.077	.442	.049	-.262	.065	.401	.106	.050	-.020	1.000											
P	.243	.090	.261	.107	.205	.029	.315	.221	.566	.378	.449	.353	.513	.259	.471	.435	.298	.266	.227	-.022	1.000										
La	.061	.613	.292	-.015	.498	.150	.773	.472	.298	.541	.614	.579	.596	.541	.557	.371	.697	.722	.733	.000	.134	1.000									
U	-.022	-.035	-.029	.284	-.031	-.009	.027	.114	.145	.102	.139	.069	.141	.037	.040	.018	-.002	-.059	-.025	-.034	.165	-.025	1.000								
Th	.054	.293	.217	-.035	.218	.039	.383	.246	.188	.286	.351	.264	.366	.169	.284	.227	.440	.424	.414	.045	.216	.327	-.020	1.000							
Cd	.242	.179	.205	-.026	.044	.009	.353	.213	.182	.198	.352	.191	.431	.287	.225	.222	.459	.367	.393	.117	.204	.284	-.015	.182	1.000						
Bi	.082	-.034	.032	.091	-.062	-.024	.023	.156	-.065	-.064	.000	.079	-.003	-.050	.003	.037	-.007	-.064	-.007	.075	-.061	.041	-.012	-.011	-.043	1.000					
B	.172	.055	.255	.002	.166	-.015	.278	.202	.228	.156	.325	.317	.406	.162	.273	.340	.407	.311	.323	.227	.309	.208	-.025	.304	.297	-.071	1.000				
W	.006	-.010	-.006	-.022	-.091	-.025	-.046	.029	-.091	-.105	-.072	.019	-.088	-.088	-.020	.009	-.038	-.013	-.009	.070	-.070	-.057	-.013	-.059	-.045	.268	-.073	1.000			
Al	.086	.607	.145	.087	.517	.208	.591	.359	.528	.786	.687	.517	.553	.495	.684	.357	.237	.560	.317	-.284	.251	.449	.110	.147	-.013	-.052	.040	-.067	1.000		
Na	.097	.215	.214	-.068	.157	-.072	.488	.220	.117	.273	.419	.367	.469	.242	.301	.282	.844	.604	.737	.281	.160	.510	-.031	.405	.394	.023	.346	.028	.000	1.000	
K	.079	.510	.276	-.054	.483	.244	.678	.385	.546	.618	.653	.494	.626	.564	.672	.417	.450	.644	.513	-.165	.266	.571	.015	.255	.156	-.050	.106	-.110	.644	.261	1.000

		Au	Ag	As	Sb	Hg	Mo	Cu	Pb	Zn	Ba	Ni	Cr	Co	Mn	Fe	V	Sr	Mg	Ca	Ti	P	La	U	Th	Cd	Bi	B	W`	Al	Na	K
Percentiles		ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%
	99%	41.7	0.57	29.9	3	73.6	2	32.7	15.7	91.4	222	34	36	13	1578	4.22	74	93	0.76	1.01	0.2	0.13	28.7	5	3	0.4	4	4	2	3.18	0.07	0.13
	98%	27.4	0.4	19	2	55	2	30	15	84.4	205	31	32.7	13	1331	3.86	73	90	0.7	0.91	0.2	0.12	26.4	5	3	0.34	4	3.36	2	2.51	0.06	0.13
	95%	12	0.3	12	2	50	1	27.4	14	74.8	161	27	30.4	12	957	3.71	70.8	82.4	0.56	0.7	0.18	0.09	24	5	3	0.3	2.4	3	1	2.34	0.05	0.11
	90%	8	0.3	9	2	45	1	23.8	13	68	149	22	29	10	747	3.57	67.8	68.6	0.52	0.64	0.17	0.08	21	5	2	0.2	2	3	1	1.94	0.04	0.1
	80%	6	0.2	7	2	33	1	18	12	59	133	19	27	8	608	3.3	64	45.6	0.44	0.49	0.16	0.07	19	5	2	0.2	2	2	1	1.73	0.03	0.09
	50%	2	0.1	4	2	20	1	12	10	46	109	14	23	6	383	2.79	56	31	0.35	0.32	0.14	0.05	13	5	2	0.2	2	2	1	1.47	0.02	0.07
Max		73	0.9	49	5	105	5	67	19	98	342	47	41	17	2270	6.11	79	108	1.02	1.32	0.25	0.21	37	7	5	0.5	8	4	3	5.56	0.1	0.26
Min		1	0.1	2	2	1	1	6	4	25	62	7	12	3	190	1.49	32	16	0.14	0.14	0.02	0.01	7	5	2	0.2	2	2	1	0.84	0.01	0.03
N		233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233

Biogeochemistry

Bark samples were collected from lodgepole pine with a diameter of about 20-30 cm; samples were collected with a paint-scraper around the trunk at about eye-level. Only the dead bark was collected. Dead bark is believed to produce a sample free of seasonal variations and integrating several years of growth. It is also easy to collect; about half a standard soil kraft paper bag is sufficient for an analysis: instrumental neutron activation of a 15 g pressed pellet of dried and macerated material, done at Activation Laboratories Ltd. The analysis supplies 35 elements several of which are systematically below detection limit, in particular some in the Rare Earth group.

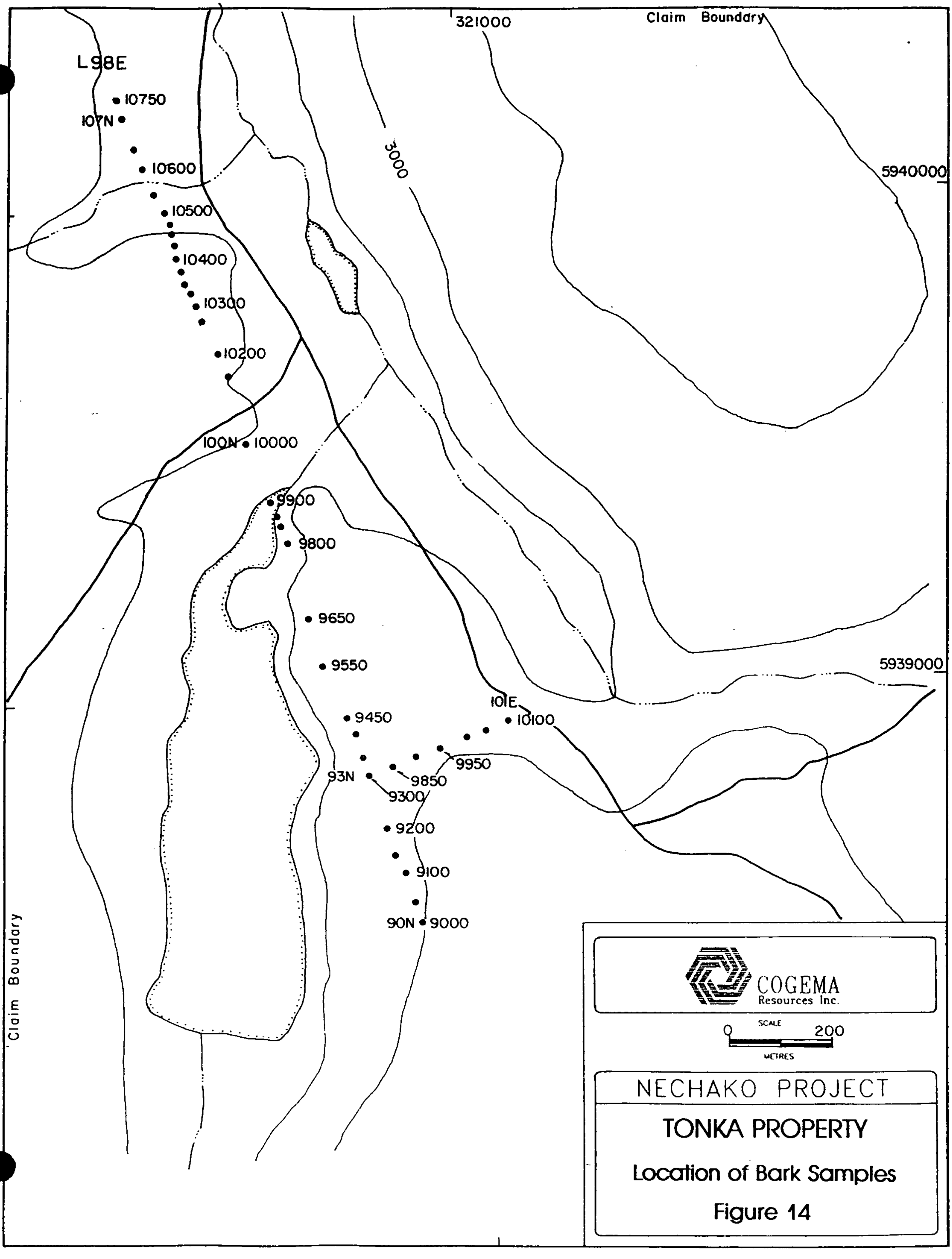
Elements of interest in the case of epithermal gold mineralization are Au, Cs, Mo, Ba, Br, As, Hg. Examination of samples from the Tonka property and an other property as well as principal component analysis of data from that other property show that the variance of the data is related not only to differences in the source of the elements analyzed, i.e. till and underlying bedrock, but that a major part of this variance is biogenic. This expresses itself among others by the Fe Factor, a strong correlation of Fe with most elements except a group composed of Hg, Br, Ba, Ca Sr, and Zn. The best correlation of Au is with Cs which is generally considered to be a good indicator of epithermal mineralization, although somewhat affected by the Fe Factor. The Nechako Basin region has been observed to have unusually weak biogeochemical response to mineralization (C. Dunn, pers. comm.), which means that weak Au and tracer element responses must not be disregarded.

Figure 14 shows the location of the samples taken and figures 15 and 16 are multielement profiles along line 98E of lodgepole pine samples. Note that on figure 15, some of the sample from 9900 to 9000 may be contaminated and the Au values are suspect. The profiles show no strikingly obvious anomalous portion, but one may note the combination of high Au, Cs, Br, and Cr in the northern half (right side) of the profile which correlates well with observation from the till geochemistry.

CONCLUSIONS

The Tonka showing produced only moderate Au (0.5 g/t Au), but some high Ag (304 g/t Ag). The till geochemistry and prospecting produced indications that the mineralizing system is more extensive along the North-South lineament. Biogeochemistry indicates an anomalous domain north of Tonka Lake where tills are also anomalous in Au and tracer elements.

Recommendation for further work include a geophysical survey to obtain resistivity information, for example a VLF-R survey, followed by an IP survey in anomalous areas, and a more extensive bark sampling programme to obtain a better coverage along the North-South lineament. One or two-drill hole fences across the Tonka showing are needed to cut not only the silicified structure, but also the hanging wall of the structure that does not outcrop and may contain higher grade mineralization.



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Location of Bark Samples

Figure 14

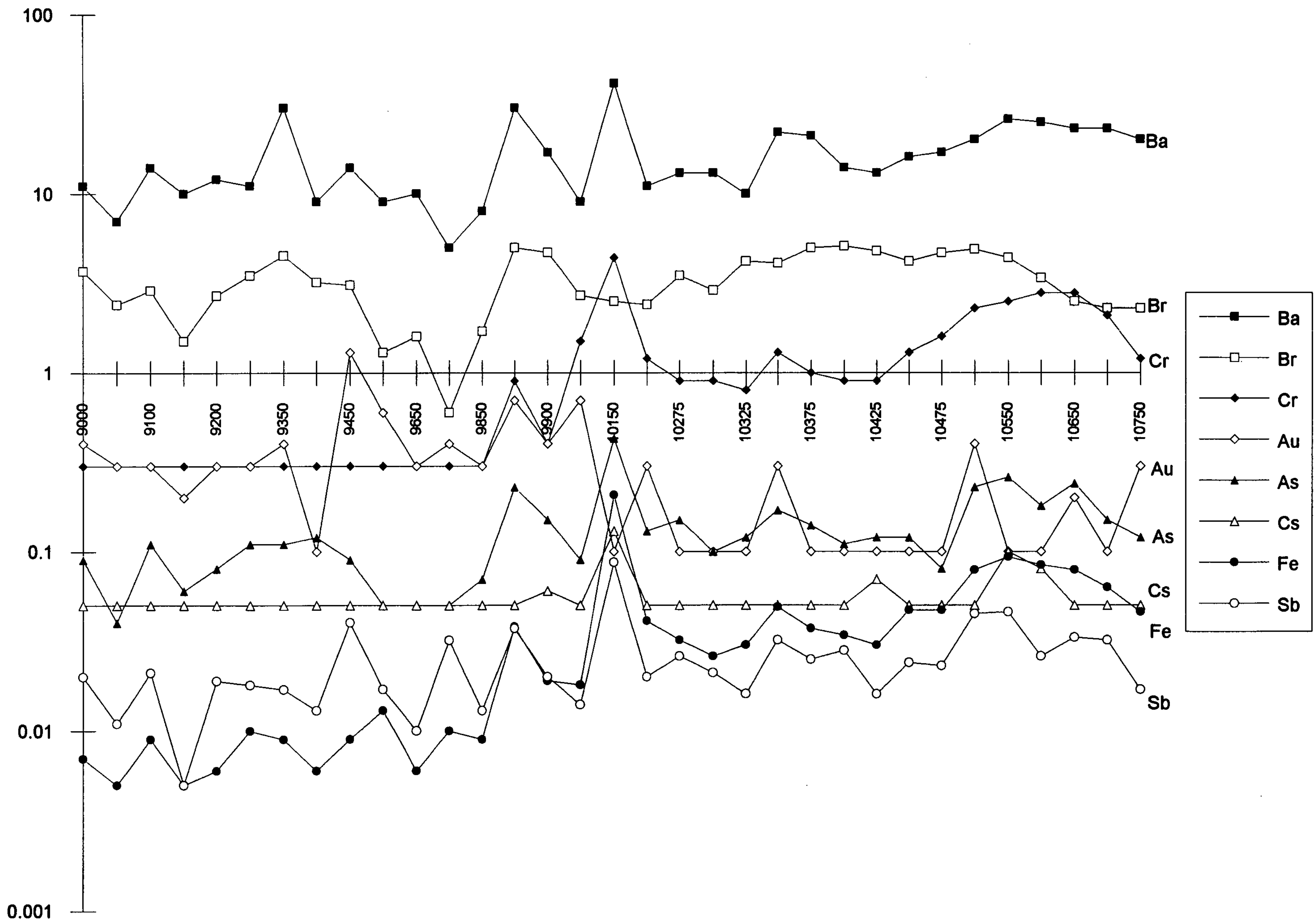

Figure 15 Tonka Property: Bark Geochemistry Profile L98E, part1.

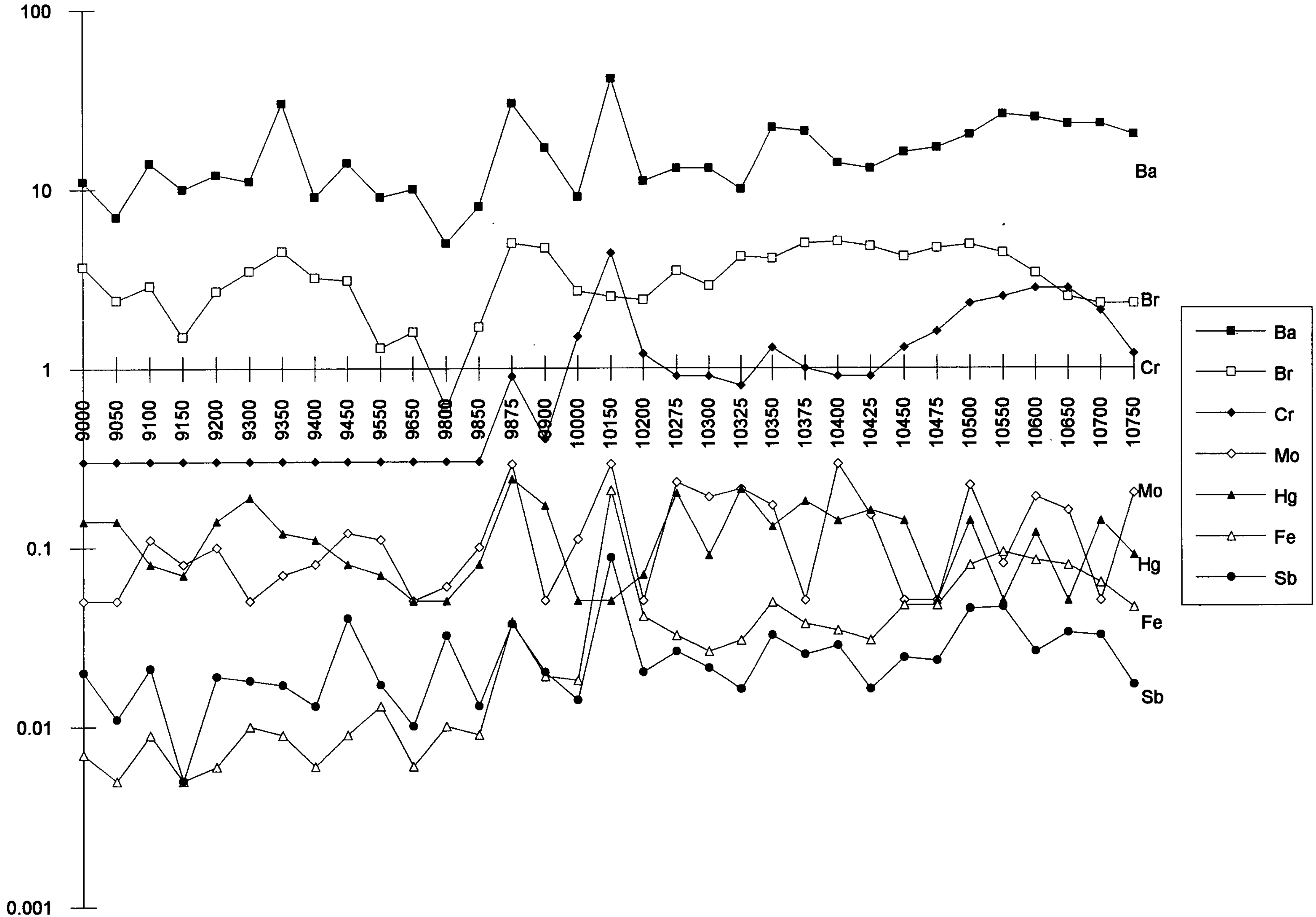

Figure 16 Tonka Property: Bark Geochemistry Profile L98E, part 2.

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Appendix 1

Till Descriptions and Analyses

EAST	NORTH	UTME	UTMN	TYPE	SAMPLER
9400	8200	320759	5937644	L	DM
9400	8300	320731	5937742	N/S	DM
9400	8400	320690	5937828	N/S	DM
9400	8500	320664	5937923	L	DM
9400	8600	320632	5938017	L	DM
9400	8700	320601	5938114	A	DM
9400	8800	320562	5938204	N/S	DM
9400	8900	320534	5938294	N/S	DM
9400	9000	320511	5938378	N/S	DM
9400	9100	320481	5938486	N/S	DM
9400	9200	320435	5938577	N/S	DM
9400	9300	320404	5938676	N/S	DM
9400	9400	320377	5938788	N/S	DM
9400	9500	320345	5938865	N/S	DM
9400	9600	320309	5938958	A	DM
9400	9700	320284	5939062	A	DM
9400	9800	320254	5939160	N/S	DM
9400	9900	320210	5939248	L	DM
9400	10000	320176	5939344	L	DM
9400	10100	320151	5939447	N/S	DM
9400	10150	320134	5939490	L	DM
9400	10200	320122	5939544	L	DM
9400	10250	320100	5939585	L	DM
9400	10300	320079	5939627	L	DM
9400	10350	320065	5939678	L	DM
9400	10400	320052	5939730	L	DM
9400	10450	320039	5939770	L	DM
9400	10500	320026	5939819	L	DM
9800	8000	321173	5937588	L	DM
9800	8050	321166	5937637	L	DM
9800	8100	321149	5937682	A	DM
9800	8150	321135	5937735	L	DM
9800	8200	321128	5937778	C	DM
9800	8250	321109	5937820	L	DM
9800	8300	321088	5937880	L	DM
9800	8350	321069	5937922	C	DM
9800	8400	321055	5937954	L	DM
9800	8450	321040	5938019	L	DM
9800	8500	321027	5938061	C	DM
9800	8550	321018	5938115	C	DM
9800	8600	321010	5938152	C	DM
9800	8650	320990	5938213	C	DM
9800	8700	320971	5938251	L	DM
9800	8750	320953	5938299	C	DM
9800	8800	320935	5938340	C	DM
9800	8850	320921	5938397	L	DM
9800	8900	320902	5938442	L	DM
9800	8950	320891	5938495	L	DM
9800	9000	320876	5938541	L	DM
9800	9050	320863	5938583	C	DM
9800	9100	320844	5938643	C	DM
9800	9150	320826	5938680	L	DM
9800	9200	320813	5938729	L	DM
9800	9250	320795	5938783	L	DM
9800	9300	320781	5938838	L	DM
9800	9350	320773	5938878	A	DM
9800	9400	320757	5938923	L	DM
9800	9450	320744	5938956	A	DM
9800	9500	320717	5939016	L	DM
9800	9550	320698	5939066	N/S	DM
9800	9600	320683	5939108	L	DM
9800	9650	320672	5939163	N/S	DM
9800	9700	320660	5939204	A	DM
9800	9750	320649	5939244	N/S	DM
9800	9800	320639	5939313	A	DM
9800	9850	320625	5939354	A	DM
9800	9900	320608	5939402	N/S	DM
9800	9950	320588	5939447	N/S	DM
9800	10000	320561	5939517	L	DM
9800	10050	320549	5939571	N/S	DM
9800	10100	320542	5939603	L	DM
9800	10150	320527	5939657	N/S	DM
9800	10200	320510	5939703	L	DM
9800	10250	320482	5939749	L	DM
9800	10300	320469	5939803	L	DM
9800	10350	320448	5939846	N/S	DM
9800	10400	320434	5939898	N/S	DM
9800	10450	320426	5939947	L	DM
9800	10500	320412	5939990	L	DM
9800	10550	320394	5940031	L	DM

EAST	NORTH	UTME	UTMN	TYPE	SAMPLER
9800	10600	320371	5940084	L	DM
9800	10650	320355	5940123	L	DM
9800	10700	320334	5940185	N/S	DM
9800	10750	320323	5940219	N/S	DM
9800	10800	320311	5940273	N/S	DM
9800	10850	320301	5940322	L	DM
9800	10900	320285	5940361	N/S	DM
9800	10950	320271	5940412	L	DM
9800	11000	320249	5940457	L	DM
10000	8000	321507	5937635	L	LA
10000	8050	321502	5937667	A	LA
10000	8100	321471	5937727	A	LA
10000	8150	321454	5937764	L	LA
10000	8200	321430	5937800	A	LA
10000	8250	321409	5937852	N/S	LA
10000	8300	321395	5937894	F	LA
10000	8350	321378	5937933	A	LA
10000	8400	321343	5937996	A	LA
10000	8450	321322	5938027	A	LA
10000	8500	321305	5938071	A	LA
10000	8550	321287	5938125	A	LA
10000	8600	321272	5938155	A	LA
10000	8650	321253	5938204	A	LA
10000	8700	321230	5938259	N/S	LA
10000	8750	321202	5938307	N/S	LA
10000	8800	321174	5938361	A	LA
10000	8850	321153	5938437	L	LA
10000	8900	321191	5938537	A	LA
10000	8950	321185	5938572	A	LA
10000	9000	321173	5938620	A	LA
10000	9050	321157	5938665	A	LA
10000	9100	321144	5938702	A	LA
10000	9150	321123	5938763	A	LA
10000	9200	321110	5938808	L	LA
10000	9250	321087	5938857	N/S	LA
10000	9300	321069	5938900	A	LA
10000	9350	321055	5938944	A	LA
10000	9400	321039	5939005	C	LA
10000	9450	321011	5939051	A	LA
10000	9500	320990	5939094	L	RB
10000	9550	320986	5939149	L	RB
10000	9600	320965	5939187	L	RB
10000	9650	320944	5939242	L	RB
10000	9700	320922	5939286	A	RB
10000	9750	320895	5939314	F	RB
10000	9800	320864	5939354	F	RB
10000	9850	320828	5939401	F	RB
10000	9900	320808	5939442	L	RB
10000	9950	320787	5939491	L	RB
10000	10000	320766	5939535	C	RB
10000	10050	320741	5939586	L	RB
10000	10100	320728	5939632	L	RB
10000	10150	320711	5939676	L	RB
10000	10200	320694	5939712	L	RB
10000	10250	320683	5939766	L	RB
10000	10300	320656	5939811	L	RB
10000	10350	320630	5939858	L	RB
10000	10400	320591	5939901	L	RB
10000	10450	320565	5939946	L	RB
10000	10500	320532	5939990	L	RB
10000	10550	320517	5940044	L	RB
10000	10600	320502	5940091	L	RB
10000	10650	320513	5940142	L	RB
10000	10700	320506	5940191	L	LA
10000	10750	320511	5940249	L	RB
10000	10800	320512	5940306	L	RB
10000	10850	320521	5940349	N/S	RB
10000	10900	320535	5940399	L	RB
10200	8000	321589	5937604	L	KM
10200	8050	321569	5937648	L	KM
10200	8100	321556	5937702	L	KM
10200	8150	321543	5937756	L	KM
10200	8200	321532	5937788	L	KM
10200	8250	321523	5937847	A	KM
10200	8300	321510	5937893	A	KM
10200	8350	321502	5937935	A	KM
10200	8400	321485	5937994	A	KM
10200	8450	321471	5938033	A	KM
10200	8500	321453	5938084	F	KM
10200	8550	321438	5938142	A	KM

EAST	NORTH	UTME	UTMN	TYPE	SAMPLER
10200	8600	321415	5938204	A	KM
10200	8650	321409	5938253	A	KM
10200	8700	321395	5938297	A	KM
10200	8750	321384	5938348	A	KM
10200	8800	321370	5938395	A	KM
10200	8850	321356	5938430	L	KM
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10200	9000	321302	5938620	F	KM
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10200	9350	321179	5938958	A	KM
10200	9400	321167	5939022	A	KM
10200	9450	321146	5939061	N/S	KM
10200	9500	321130	5939108	N/S	KM
10200	9550	321108	5939159	A	KM
10200	9600	321091	5939193	A	KM
10200	9650	321075	5939245	N/S	KM
10200	9700	321059	5939297	N/S	KM
10200	9750	321045	5939333	N/S	KM
10200	9800	321031	5939392	N/S	KM
10200	9850	321014	5939432	F	KM
10200	9900	320991	5939482	A	KM
10200	9950	320971	5939536	L	KM
10200	10000	320952	5939579	A	KM
10200	10050	320941	5939634	F	KM
10200	10100	320921	5939681	L	KM
10200	10150	320902	5939729	A	KM
10200	10200	320878	5939782	L	KM
10200	10250	320858	5939835	F	KM
10200	10300	320847	5939894	A	KM
10200	10350	320828	5939936	A	KM
10200	10400	320820	5939990	A	KM
10200	10450	320808	5940043	A	KM
10200	10500	320787	5940084	A	KM
10200	10550	320768	5940133	A	KM
10200	10600	320755	5940184	A	KM
10200	10650	320728	5940238	L	KM
10200	10700	320710	5940301	L	KM
10200	10750	320701	5940342	L	KM
10200	10800	320689	5940397	A	KM
10200	10850	320672	5940453	A	KM
10200	10900	320657	5940497	F	KM
10200	10950	320629	5940562	A	KM
10200	11000	320611	5940595	F	KM
10200	11050	320597	5940658	A	KM
10200	11100	320587	5940704	A	KM
10400	8000	321803	5937768	L	LA
10400	8050	321791	5937806	L	LA
10400	8100	321778	5937858	F	LA
10400	8150	321764	5937913	N/S	LA
10400	8200	321752	5937951	A	LA
10400	8250	321731	5938009	F	LA
10400	8300	321713	5938043	F	LA
10400	8350	321689	5938101	F	LA
10400	8400	321679	5938141	F	LA
10400	8450	321660	5938187	F	LA
10400	8500	321650	5938240	A	LA
10400	8550	321642	5938280	A	LA
10400	8600	321618	5938326	L	LA
10400	8650	321597	5938368	F	LA
10400	8700	321580	5938428	N/S	LA
10400	8750	321562	5938466	F	LA
10400	8800	321549	5938518	N/S	LA
10400	8850	321533	5938559	A	LA
10400	8900	321523	5938619	A	LA
10400	8950	321501	5938653	A	LA
10400	9000	321481	5938701	A	LA
10400	9050	321463	5938746	A	LA
10400	9100	321440	5938798	A	LA
10400	9150	321427	5938844	A	LA
10400	9200	321413	5938901	A	LA
10400	9250	321394	5938934	A	LA
10400	9300	321385	5938998	A	LA
10400	9350	321363	5939023	A	LA
10400	9400	321344	5939071	L	LA

EAST	NORTH	UTME	UTMN	TYPE	SAMPLER
10400	9450	321329	5939128	A	LA
10400	9500	321310	5939176	N/S	LA
10400	9550	321300	5939216	N/S	LA
10400	9600	321288	5939276	L	LA
10400	9650	321272	5939315	A	LA
10400	9700	321257	5939356	A	LA
10400	9750	321234	5939408	N/S	LA
10400	9800	321210	5939459	A	LA
10400	9850	321190	5939509	A	LA
10400	9900	321187	5939553	A	LA
10400	9950	321164	5939594	A	LA
10400	10000	321155	5939662	N/S	LA
10400	10050	321129	5939688	A	LA
10400	10100	321114	5939741	N/S	LA
10400	10150	321086	5939794	A	LA
10400	10200	321080	5939832	A	LA
10400	10250	321070	5939883	N/S	LA
10400	10300	321052	5939934	N/S	LA
10400	10350	321033	5939967	N/S	LA
10400	10400	321023	5940040	N/S	LA
10400	10450	320997	5940071	N/S	LA
10400	10500	320972	5940120	N/S	LA
10400	10550	320961	5940167	A	LA
10400	10600	320947	5940225	A	LA
10400	10650	320934	5940258	A	LA
10400	10700	320915	5940316	A	DM
10400	10750	320900	5940345	A	DM
10400	10800	320877	5940411	A	DM
10400	10850	320862	5940452	A	DM
10400	10900	320850	5940505	A	DM
10400	10950	320832	5940548	A	DM
10400	11000	320820	5940596	N/S	DM
10400	11050	320803	5940635	A	DM
10400	11100	320774	5940701	N/S	DM
10800	8200	322075	5938035	A	DM
10800	8300	322040	5938134	A	DM
10800	8400	322009	5938225	N/S	DM
10800	8500	321974	5938309	N/S	DM
10800	8600	321943	5938410	N/S	DM
10800	8700	321917	5938511	N/S	DM
10800	8800	321883	5938618	A	DM
10800	8900	321844	5938700	A	DM
10800	9000	321812	5938799	N/S	DM
10800	9100	321790	5938893	N/S	DM
10800	9200	321756	5939002	N/S	DM
10800	9300	321718	5939077	A	DM
10800	9400	321688	5939191	N/S	DM
10800	9500	321663	5939272	N/S	DM
10800	9600	321624	5939371	N/S	DM
10800	9700	321594	5939455	N/S	DM
10800	9800	321567	5939556	A	DM
10800	9900	321538	5939660	L	DM
10800	10000	321500	5939746	L	DM
10800	10100	321469	5939845	N/S	DM
10800	10200	321442	5939938	A	DM
10800	10300	321414	5940040	N/S	DM
10800	10400	321371	5940132	N/S	DM
10800	10500	321342	5940219	N/S	DM
10800	10600	321315	5940321	C	DM
10800	10700	321290	5940407	A	DM
10800	10750	321268	5940460	A	DM
10800	10800	321245	5940512	A	DM
10800	10900	321218	5940609	A	DM
10800	11000	321193	5940704	N/S	DM
10800	11100	321160	5940797	N/S	DM

East	North	Au	Ag	As	Sb	Hg	Mo	Cu	Pb	Zn	Ba	Ni	Cr	Co	Mn	Fe	V	Sr	Mg	Ca	Ti	P	La	U	Th	Cd	Bi	B	W	Al	Na	K	Weight
		ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	g
9400	8500	1	0.1	2	2	15	1	11	12	36	75	12	19	6	332	2.31	46	27	0.22	0.29	0.13	0.03	14	5	2	0.2	2	2	1	1.1	0.02	0.08	93
9400	8600	3	0.1	7	2	20	1	12	8	41	109	14	18	6	309	2.55	48	25	0.22	0.3	0.1	0.06	9	5	2	0.2	2	2	1	1.3	0.01	0.09	118
9400	8700	2	0.3	6	2	20	1	20	9	37	94	16	21	6	415	2.48	47	36	0.28	0.45	0.09	0.04	17	5	2	0.2	2	2	1	1.31	0.02	0.07	77
9400	9600	1	0.1	2	2	10	1	14	10	50	86	18	28	7	626	2.71	53	34	0.28	0.36	0.17	0.03	11	5	2	0.2	2	2	1	1.53	0.03	0.07	68
9400	9700	1	0.1	2	2	10	1	12	9	49	101	17	21	6	260	2.42	46	27	0.25	0.28	0.15	0.04	12	5	2	0.2	2	2	1	1.42	0.02	0.06	71
9400	9900	1	0.1	3	2	5	1	10	8	28	83	11	20	4	218	2.02	42	23	0.2	0.26	0.15	0.03	11	5	2	0.2	2	2	1	1.01	0.02	0.05	160
9400	10000	2	0.1	3	3	15	1	17	14	79	166	28	28	12	627	3.2	58	37	0.26	0.32	0.12	0.12	13	7	2	0.2	2	2	1	2.36	0.02	0.08	51
9400	10150	2	0.1	2	2	5	1	11	12	50	84	11	18	5	225	1.79	39	23	0.17	0.24	0.13	0.03	12	5	2	0.2	3	2	1	1.16	0.02	0.06	138
9400	10200	2	0.1	4	2	1	1	11	12	34	83	12	23	5	277	2.14	48	32	0.23	0.36	0.18	0.05	16	5	3	0.2	4	2	1	1.07	0.03	0.06	112
9400	10250	1	0.1	2	2	10	1	13	13	46	113	16	24	7	282	2.51	51	39	0.26	0.42	0.14	0.03	15	5	2	0.2	4	2	1	1.49	0.03	0.07	92
9400	10300	1	0.2	3	2	15	1	18	10	62	157	23	32	9	720	3.39	54	52	0.39	0.64	0.12	0.04	16	5	2	0.2	2	2	1	2.47	0.03	0.12	57
9400	10350	7	0.1	7	3	15	1	14	14	57	135	19	25	9	276	3.22	62	28	0.22	0.28	0.12	0.12	12	5	2	0.2	2	2	1	1.97	0.01	0.07	73
9400	10400	1	0.2	6	2	25	1	25	14	49	159	23	30	8	712	3.12	56	58	0.32	0.68	0.12	0.04	27	5	2	0.2	2	2	1	2.18	0.03	0.09	64
9400	10450	2	0.2	4	2	20	1	17	14	44	126	18	29	8	520	2.68	56	45	0.27	0.54	0.15	0.04	20	5	2	0.2	4	2	1	1.57	0.03	0.07	104
9400	10500	8	0.1	2	5	20	1	14	12	68	112	17	25	7	227	2.53	52	24	0.24	0.23	0.15	0.05	15	5	2	0.2	3	2	1	1.95	0.02	0.06	124
9800	8000	1	0.1	2	2	5	1	8	8	32	73	9	18	4	258	1.85	40	25	0.31	0.27	0.17	0.03	13	5	2	0.2	2	2	1	1.15	0.02	0.05	162
9800	8050	1	0.1	2	2	5	1	8	11	31	76	10	16	4	257	1.82	40	22	0.29	0.24	0.16	0.02	12	5	2	0.2	2	2	1	1.22	0.02	0.05	127
9800	8100	1	0.1	3	2	5	1	9	10	39	90	12	21	5	280	2.51	55	25	0.33	0.28	0.16	0.04	13	5	2	0.2	2	2	1	1.4	0.02	0.05	128
9800	8150	1	0.1	3	2	10	1	8	11	39	91	10	17	4	451	2.03	42	24	0.3	0.26	0.15	0.02	12	5	2	0.2	2	2	1	1.33	0.02	0.06	95
9800	8200	9	0.1	5	2	20	1	10	10	35	78	12	19	5	270	2.58	57	29	0.29	0.29	0.14	0.03	11	5	2	0.2	3	2	1	1.25	0.02	0.06	71
9800	8250	1	0.2	5	2	10	1	10	11	53	88	15	21	7	419	2.78	57	26	0.3	0.31	0.13	0.05	12	5	2	0.2	2	4	1	1.7	0.02	0.09	116
9800	8300	2	0.2	5	2	5	1	12	10	38	109	13	23	6	347	2.79	59	31	0.32	0.28	0.16	0.02	10	5	2	0.2	2	3	1	1.48	0.02	0.05	128
9800	8350	1	0.1	7	2	5	1	12	10	47	100	13	20	6	395	2.84	56	32	0.32	0.33	0.12	0.06	10	5	2	0.2	2	2	1	1.49	0.02	0.09	75
9800	8400	1	0.1	2	2	10	1	10	11	34	83	9	15	4	347	1.79	38	30	0.26	0.31	0.13	0.02	13	5	2	0.2	2	2	1	1.33	0.02	0.07	150
9800	8450	1	0.4	4	2	30	1	20	12	36	122	16	21	7	966	2.39	44	53	0.35	0.6	0.11	0.03	26	5	2	0.2	2	2	1	2.1	0.03	0.06	92
9800	8500	1	0.2	3	2	20	1	8	10	46	107	15	20	6	287	2.64	55	24	0.27	0.23	0.14	0.04	10	5	2	0.2	2	2	1	1.65	0.02	0.05	89
9800	8550	8	0.1	2	2	15	1	8	10	65	116	10	20	6	516	2.47	49	26	0.19	0.22	0.12	0.16	11	5	2	0.2	2	2	1	1.32	0.02	0.07	97
9800	8600	1	0.1	4	2	15	1	10	12	67	133	10	20	7	953	2.4	48	36	0.21	0.35	0.13	0.08	10	5	2	0.2	2	2	1	1.33	0.02	0.07	85
9800	8650	1	0.2	2	2	5	1	8	9	45	83	9	17	4	263	2.2	46	22	0.24	0.23	0.12	0.05	10	5	2	0.2	2	2	1	1.28	0.02	0.06	104
9800	8700	2	0.1	5	2	25	1	15	12	51	100	13	22	6	379	2.6	51	41	0.35	0.43	0.14	0.05	16	5	2	0.2	2	2	1	1.47	0.03	0.08	112
9800	8750	1	0.2	4	2	10	1	8	11	56	74	13	23	6	299	2.81	57	17	0.3	0.17	0.13	0.06	12	5	2	0.2	2	2	1	1.56	0.02	0.08	60
9800	8800	2	0.1	6	2	5	1	9	14	40	79	12	25	5	209	2.92	63	18	0.24	0.17	0.15	0.03	9	5	2	0.2	4	2	2	1.47	0.01	0.05	123
9800	8850	1	0.3	2	2	10	1	17	12	44	131	15	24	5	538	3.09	46	55	0.45	0.66	0.12	0.02	14	5	2	0.2	2	2	1	2.32	0.05	0.09	87
9800	8900	2	0.1	2	2	5	1	8	10	30	82	8	18	3	260	1.85	38	32	0.27	0.34	0.15	0.02	12	5	2	0.2	2	2	1	1.15	0.04	0.06	158
9800	8950	1	0.1	2	2	5	1	8	9	36	71	8	18	3	274	1.91	41	26	0.25	0.26	0.16	0.02	13	5	2	0.2	2	2	1	1.15	0.03	0.08	184
9800	9000	2	0.1	5	2	10	1	11	11	49	90	15	28	6	276	2.99	64	27	0.29	0.28	0.2	0.05	11	5	2	0.2	2	2	2	1.38	0.02	0.06	141
9800	9050	1	0.2	5	2	15	1	8	13	69	110	11	21	6	274	3	58	33	0.25	0.39	0.11	0.13	10	5	2	0.2	2	2	1	1.66	0.01	0.12	90
9800	9100	1	0.1	4	2	10	1	10	12	39	85	14	27	6	292	2.76	61	28	0.28	0.32	0.18	0.04	16	5	2	0.2	2	2	1	1.3	0.03	0.06	131
9800	9150	3	0.1	4	2	10	1	9	11	38	89	9	16	4	395	1.94	38	30	0.34	0.34	0.14	0.04	13	5	2	0.2	2	2	2	1.3	0.03	0.07	138
9800	9200	1	0.1	2	2	5	1	6	7	31	71	9	14	4	247	1.94	37	23	0.27	0.25	0.11	0.03	9	5	2	0.2	2	2	1	0.9	0.01	0.05	112
9800	9250	1	0.2	2	2	40	1	15	11	36	126	14	20	6	940	2.66	43	44	0.35	0.5	0.09	0.03	17	5	2	0.2	2	2	1	1.57	0.02	0.07	58
9800	9300	2	0.2	3	2	10	1	10	10	40	75	12	17	5	280	2.64	49	23	0.31	0.27	0.08	0.04	9	5	2	0.2	2	2	1	1.32	0.01	0.06	105
9800	9350	2	0.9	7	2	55	2	55	19	70	263	44	36	12	1334	4.89	55	83	0.82	1.02	0.03	0.06	37	5	2	0.2	2	2	1	4.73	0.02	0.16	137
9800	9400	2	0.2	5	2	15	1	11	10	40	80	13	18	6	422	2.67	50	28	0.34	0.32	0.11	0.04	10	5	2	0.2	2	2	1	1.08	0.02	0.08	105
9800	9450	1	0.1	2	2	5	1	8	7	55	105	12	19	5	391	2.45	46	18	0.26	0.19	0.1	0.07	8	5	2	0.2	2	2	1	1.33	0.01	0.05	122
9800	9500	3	0.3	2	2	15	1	11	9	41	112	13	22	5	389	2.51	50	20	0.32	0.3	0.12	0.02	8	5	2	0.2	2	2	1	1.37	0.01	0.05	82
9800	9600	1	0.2	4	2	10	1	10	7	37	91	13	18	5	334	2.39	48	24	0.33	0.26	0.12	0.03	9	5	2	0.2	2	2	1	1.12	0.02	0.04	154
9800	9700	1	0.2	19	2	35	2	23	13	61	195	19	26	10	2270	3.58	56	28	0.46	0.31	0.08	0.06	10	5	2	0.2	2	2	1	1.66	0.01	0.08	55
9800	9800	1	0.4	41	2	30	5	12	12	78	210	15	15	10	1597	3.45	52	40	0.32	0.27	0.02	0.05	14	5	2	0.2	2	2	1	1.58	0.01	0.1	54
9800	9850	1	0.3	35	2	20	1	24	15	93	221	17	21	11	1329	3.82	69	40	0.5	0.47	0.07	0.05	16	5	2	0.2	2	2	1	2.42	0.01	0.1	60
9800	10000	1	0.2	2	2	15	1	11	8	46	92	15	23	6	438	2.55	51	24	0.34	0.25	0.16	0.05	10	5	2	0.2	2	2	1	1.17	0.02	0.04	83
9800	10100	1	0.1	2	2	15	1	9	5	51	106	14	21	5	223	2.72	53	16	0.25	0.14	0.13	0.05	7	5	2	0.2	2	2	1	1.58	0.01	0.05	116
9800	10200	1	0.1	2	2	5	1	7	8	43	97	11	18	4	398	2.41	48	22	0.24	0.22	0.11	0.07	9	5	2	0.2	2	2	1	1.14	0.01	0.07	87
9800	10250	1	0.1	3	2	20	1	11	9	50	109	15	18	5	263	2.46	44	19	0.23	0.19	0.1	0.09	9	5	2	0.2	2	2	1	1.76	0.01	0.05	122
9800	10300	2	0.1	2	2	10	1	9	9	44	117	14	18	5	322	2.32	44	21	0.25	0.22	0.12	0.08	10	5	2	0.2	2	2	1	1.4	0.01	0.05	98
9800	10450	1	0.1	2	2	10	1	8	8	41	97	11	17	5	547	2.36	48	26	0.23	0.25	0.11	0.05	8	5	2	0.2	2	2	1	1.21	0.01	0.04	128
9800	10500	3	0.1	4	2	10	1	11	9	37	148	15	22	5	325	2.67	53	22	0.3	0.22	0.13	0.05	9	5	2	0.2	2	2	1	1.45	0.02	0.05	65
9800	10550	4	0.1	2	2	20	1	10	12	31	105	10	17	4	246	2.1	41	31	0.31	0.3	0.12	0.02	12	5	2	0.2	2	2	1	1.27	0.02	0.04	93
9800	10600	1	0.1	2	2	10	1	12	10	35	79	13	24	5	236	2.71	58	28	0.3	0.25	0.16	0.04	12	5	2	0.2	2	2	1	1.18	0.02	0.04	152

East	North	Au	Ag	As	Sb	Hg	Mo	Cu	Pb	Zn	Ba	Ni	Cr	Co	Mn	Fe	V	Sr	Mg	Ca	Ti	P	La	U	Th	Cd	Bi	B	W	Al	Na	K	Weight
		ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	g
9800	10650	2	0.1	2	2	10	1	7	10	42	107	12	20	5	478	2.35	48	25	0.25	0.25	0.12	0.04	8	5	2	0.2	2	2	1	1.13	0.01	0.07	122
9800	10850	4	0.1	6	2	15	1	19	10	29	117	13	22	5	308	2.73	54	39	0.3	0.47	0.11	0.03	13	5	2	0.2	2	2	1	1.33	0.03	0.04	103
9800	10950	1	0.1	2	2	20	1	14	9	34	93	12	18	5	376	2.36	45	33	0.36	0.39	0.11	0.03	15	5	2	0.2	2	2	1	1.33	0.02	0.05	103
9800	11000	2	0.2	5	2	30	1	16	9	39	117	15	21	6	455	2.6	48	38	0.37	0.45	0.11	0.06	15	5	2	0.2	2	2	1	1.36	0.02	0.11	82
10000	8000	4	0.1	5	2	20	1	12	7	38	103	15	23	6	286	2.65	56	32	0.37	0.34	0.14	0.04	15	5	2	0.2	2	2	1	1.48	0.02	0.06	93
10000	8050	30	0.1	4	2	25	1	11	11	42	108	14	20	6	427	2.52	50	34	0.36	0.37	0.13	0.04	15	5	2	0.2	4	2	1	1.36	0.02	0.07	80
10000	8100	5	0.1	4	2	15	1	11	10	38	104	14	23	6	383	2.77	56	35	0.37	0.43	0.14	0.04	15	5	2	0.2	2	2	1	1.45	0.03	0.07	80
10000	8150	3	0.3	8	2	40	1	15	13	45	138	17	25	8	533	3.26	59	54	0.52	0.62	0.13	0.07	24	5	3	0.2	2	2	1	1.72	0.04	0.09	73
10000	8200	7	0.1	6	2	10	1	10	11	35	87	12	22	5	316	2.34	50	33	0.33	0.39	0.16	0.04	14	5	2	0.2	2	2	1	1.15	0.02	0.06	117
10000	8300	5	0.1	2	2	10	1	7	6	25	79	8	15	3	233	1.65	34	27	0.28	0.3	0.14	0.05	13	5	2	0.3	2	2	1	1.04	0.03	0.05	105
10000	8350	6	0.2	2	2	15	1	9	9	42	80	9	19	4	308	2.25	46	28	0.3	0.29	0.14	0.03	11	5	2	0.2	2	2	1	1.3	0.02	0.07	100
10000	8400	2	0.3	8	2	25	1	23	7	53	183	17	22	8	623	3.21	61	87	0.55	0.68	0.13	0.07	18	5	3	0.2	2	2	1	1.75	0.1	0.11	67
10000	8450	6	0.3	3	2	10	1	9	7	27	113	10	19	4	227	1.93	40	40	0.31	0.38	0.15	0.06	16	5	3	0.2	2	2	1	1.3	0.04	0.06	146
10000	8500	8	0.1	2	2	15	1	10	6	36	99	12	19	5	404	2.21	43	34	0.37	0.37	0.12	0.03	14	5	2	0.2	2	2	1	1.57	0.03	0.07	59
10000	8550	1	0.2	4	2	20	1	12	12	78	112	19	24	7	374	3.13	58	28	0.36	0.31	0.13	0.07	12	5	4	0.2	2	2	1	1.73	0.02	0.07	96
10000	8600	8	0.2	7	2	15	1	13	8	43	127	17	24	7	601	2.97	57	32	0.35	0.28	0.14	0.04	13	5	2	0.2	2	2	1	1.63	0.02	0.06	73
10000	8650	5	0.2	4	2	15	1	10	8	33	79	12	23	4	273	2.62	53	31	0.32	0.36	0.15	0.04	15	5	2	0.2	2	2	1	1.17	0.03	0.05	92
10000	8800	7	0.1	7	2	10	1	13	9	46	125	16	25	7	320	3.21	64	29	0.39	0.24	0.15	0.04	11	5	2	0.2	2	2	1	1.81	0.02	0.06	75
10000	8850	5	0.1	11	2	10	1	11	12	42	151	16	19	8	323	3.69	65	45	0.48	0.48	0.1	0.06	15	5	2	0.2	2	2	1	1.85	0.03	0.06	56
10000	8900	8	0.1	2	2	25	1	11	8	51	105	10	18	6	825	2.09	45	36	0.28	0.34	0.08	0.05	14	5	2	0.2	2	2	1	1.64	0.02	0.08	81
10000	8950	11	0.2	6	2	35	1	30	9	83	143	27	26	8	441	3.57	60	28	0.45	0.31	0.1	0.21	12	5	2	0.2	2	2	1	2.44	0.02	0.09	54
10000	9000	12	0.1	8	2	25	1	13	9	47	155	19	24	7	442	3.2	62	28	0.4	0.28	0.15	0.07	10	5	2	0.2	2	2	1	1.92	0.02	0.09	74
10000	9050	5	0.1	2	2	30	1	9	9	56	116	15	21	6	432	2.73	52	26	0.31	0.27	0.12	0.08	10	5	2	0.2	2	2	1	1.68	0.02	0.08	65
10000	9100	8	0.1	3	2	30	1	17	12	71	161	25	21	7	394	3.08	50	28	0.4	0.29	0.12	0.1	10	5	2	0.2	2	2	1	2.59	0.02	0.08	65
10000	9150	6	0.8	13	2	85	2	67	11	80	342	47	38	17	1537	6.11	73	76	1.02	0.86	0.03	0.04	35	5	3	0.2	2	2	1	5.56	0.03	0.26	107
10000	9200	12	0.1	6	2	25	1	11	10	54	107	14	20	6	320	2.92	57	23	0.34	0.26	0.11	0.07	11	5	2	0.2	3	2	1	1.64	0.02	0.07	72
10000	9300	5	0.1	7	2	15	1	12	9	55	125	18	23	7	335	3.14	60	25	0.37	0.25	0.14	0.05	11	5	2	0.2	2	2	1	1.85	0.02	0.08	101
10000	9350	8	0.1	2	2	5	1	9	7	38	80	9	17	4	212	1.83	38	24	0.26	0.25	0.15	0.02	11	5	2	0.2	2	2	1	1.12	0.03	0.05	119
10000	9400	14	0.1	8	2	15	1	15	10	45	120	20	28	8	499	3.31	63	33	0.44	0.34	0.17	0.06	13	5	2	0.2	2	2	2	1.7	0.02	0.07	105
10000	9450	11	0.2	11	2	25	1	21	12	41	106	18	29	8	537	3.44	65	50	0.44	0.47	0.16	0.06	20	5	2	0.2	8	2	2	1.34	0.04	0.07	153
10000	9500	4	0.1	12	2	15	1	26	8	61	131	21	22	11	741	3.20	56	80	0.64	1.32	0.10	0.072	19	5	2	0.3	2	3	1	1.44	0.04	0.11	51
10000	9550	5	0.1	7	2	15	1	19	9	48	118	18	25	8	526	2.98	61	51	0.46	0.49	0.15	0.063	20	5	2	0.2	2	4	1	1.34	0.03	0.07	63
10000	9600	22	0.2	19	2	20	2	28	13	65	101	22	24	13	966	4.35	67	35	0.69	0.56	0.11	0.118	26	5	2	0.3	2	2	1	1.64	0.02	0.10	39
10000	9650	6	0.2	11	2	20	1	27	10	59	195	26	25	13	963	3.55	66	82	0.56	0.71	0.14	0.080	21	5	2	0.4	2	2	1	1.48	0.05	0.09	60
10000	9700	5	0.2	12	2	15	1	23	12	53	169	21	26	10	849	3.38	68	70	0.46	0.63	0.15	0.083	20	5	2	0.4	2	3	1	1.34	0.04	0.07	45
10000	9750	7	0.2	19	2	15	1	30	10	53	135	19	25	10	809	3.32	63	80	0.46	0.64	0.15	0.083	20	5	2	0.2	2	2	1	1.14	0.05	0.06	100
10000	9800	6	0.2	17	2	20	1	27	12	58	130	23	28	13	791	3.40	65	88	0.52	0.65	0.16	0.084	20	5	2	0.3	2	3	1	1.25	0.06	0.07	88
10000	9850	11	0.3	49	2	20	2	30	13	58	114	22	26	12	704	3.55	64	86	0.47	0.74	0.15	0.081	19	5	3	0.2	2	3	1	1.05	0.05	0.07	128
10000	9900	5	0.2	14	2	20	1	24	10	58	133	22	25	11	687	3.35	63	77	0.52	0.79	0.14	0.078	19	5	3	0.2	2	3	1	1.34	0.05	0.09	53
10000	9950	5	0.2	13	2	35	1	29	14	60	161	24	30	11	914	3.81	72	74	0.55	0.66	0.14	0.076	24	5	3	0.2	2	3	1	1.69	0.04	0.09	52
10000	10000	6	0.1	13	3	5	1	11	9	44	90	15	26	7	405	2.71	57	33	0.38	0.39	0.15	0.073	15	5	2	0.2	2	3	1	1.30	0.02	0.05	53
10000	10050	2	0.2	9	2	20	1	28	12	73	144	35	29	14	809	3.73	68	102	0.76	0.99	0.17	0.083	20	5	3	0.4	2	2	1	1.61	0.07	0.11	51
10000	10100	3	0.2	8	2	80	1	24	13	57	136	27	36	11	699	3.65	74	69	0.58	0.58	0.20	0.076	24	5	3	0.2	2	3	1	1.68	0.04	0.08	35
10000	10150	2	0.1	6	2	15	1	20	9	56	131	23	27	10	633	3.14	64	90	0.50	0.64	0.18	0.085	18	5	2	0.2	2	3	1	1.18	0.06	0.08	110
10000	10200	2	0.1	6	2	20	1	15	10	44	130	19	28	8	624	2.99	66	80	0.43	0.55	0.16	0.074	17	5	2	0.2	2	2	1	1.07	0.05	0.05	66
10000	10250	5	0.1	7	2	40	1	27	14	61	153	30	31	13	863	3.66	69	89	0.63	0.67	0.17	0.079	21	5	3	0.4	2	3	1	1.60	0.06	0.09	51
10000	10300	7	0.2	9	2	25	1	21	13	50	126	18	25	9	663	2.96	61	76	0.40	0.53	0.15	0.073	17	5	2	0.2	2	3	1	1.09	0.05	0.07	86
10000	10350	4	0.2	8	2	20	1	19	10	53	138	18	25	9	747	2.96	61	78	0.41	0.59	0.15	0.080	19	5	3	0.2	2	3	1	1.07	0.05	0.08	125
10000	10400	5	0.1	9	2	15	1	19	11	50	135	19	28	9	614	3.09	65	54	0.47	0.47	0.16	0.072	20	5	2	0.3	2	4	1	1.50	0.04	0.08	111
10000	10450	2	0.2	8	2	15	1	22	11	53	120	21	26	10	640	3.00	62	91	0.46	0.61	0.16	0.080	18	5	2	0.3	2	4	1	1.13	0.06	0.07	97
10000	10500	3	0.1	9	2	25	1	26	14	65	156	30	29	12	663	3.56	66	90	0.64	0.93	0.15	0.078	19	5	3	0.2	2	3	1	1.60	0.06	0.11	48
10000	10550	4	0.1	8	2	25	1	28	15	71	149	31	29	12	725	3.62	66	94	0.75	1.07	0.16	0.085	20	5	3	0.3	2	3	1	1.60	0.07	0.13	65
10000	10600	2	0.2	4	2	30	1	21	16	79	125	19	29	9	596	2.93	60	50	0.37	0.59	0.13	0.082	22	5	2	0.2	2	3	1	1.49	0.03	0.07	63
10000	10650	3	0.3	6	2	25	1	28	13	71	158	32	31	13	782	3.80	73	108	0.72	0.81	0.17	0.086	21	5	3	0.2	2	3	1	1.72	0.07	0.10	40
10000	10700	42	0.3	7	2	20	1	25	11	60	142	22	23	11	842	3.52	60	81	0.56	0.62	0.15	0.08	19	5	2	0.2	2	2	1	1.44	0.06	0.1	76
10000	10750	2	0.1	7	2	20	1	18	13	55	126	21	29	9	501	3.15	66	40	0.44	0.36	0.16	0.071	17	5	2	0.2	2	3	1	1.53	0.03	0.07	35
10000	10800	52	0.6	12	2	45	1	33	18	68	149	26	30	13	1062	3.77	74	85	0.53	0.62	0.17	0.088	24	5	3	0.5	2	3	1	1.54	0.05	0.10	40
10000	10900	6	0.3	9	2	50	1	32	14	59	144	24	32	10	606	3.66	67	67	0.62	0.7	0.14	0.081	25	5	5	0.2	2	3	1	1.91	0.04	0.10	28
10200	8000	3	0.1	6	2	5	1	10	7	39	118	15	26	7	294	3.07	66	28	0.32	0.25	0.16	0.03	10	5	2	0.2	2	2	1	1.61	0.02	0.06	103

East	North	Au	Ag	As	Sb	Hg	Mo	Cu	Pb	Zn	Ba	Ni	Cr	Co	Mn	Fe	V	Sr	Mg	Ca	Ti	P	La	U	Th	Cd	Bi	B	W	Al	Na	K	Weight
		ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	g
10200	8050	1	0.1	3	2	5	1	12	7	45	93	15	23	6	465	2.61	54	29	0.38	0.3	0.14	0.02	13	5	2	0.3	2	2	1	1.53	0.03	0.09	66
10200	8100	2	0.1	3	2	10	1	9	8	39	78	13	21	5	262	2.49	54	24	0.31	0.27	0.14	0.04	11	5	2	0.2	2	2	1	1.25	0.02	0.07	142
10200	8150	3	0.1	3	2	10	1	11	8	33	98	11	23	5	318	2.15	45	38	0.35	0.42	0.14	0.06	17	5	2	0.2	2	2	1	1.31	0.03	0.07	130
10200	8200	6	0.1	4	2	5	1	6	5	29	94	9	17	5	211	2.15	51	24	0.27	0.26	0.13	0.01	9	5	2	0.2	2	2	1	1.26	0.02	0.05	134
10200	8250	2	0.1	2	2	20	1	7	11	39	95	10	20	5	536	1.92	39	36	0.34	0.43	0.13	0.02	12	5	2	0.2	2	2	1	1.39	0.03	0.07	111
10200	8300	3	0.1	2	2	20	1	8	10	35	98	10	19	5	361	2.05	42	40	0.36	0.48	0.15	0.05	15	5	2	0.2	2	2	1	1.23	0.03	0.07	106
10200	8350	2	0.1	2	2	20	1	8	8	49	90	11	21	5	219	2.67	53	21	0.18	0.21	0.11	0.1	13	5	2	0.2	2	2	1	1.58	0.02	0.07	79
10200	8400	1	0.1	2	2	30	1	9	9	51	109	13	21	6	396	2.43	49	34	0.29	0.31	0.12	0.08	13	5	2	0.2	2	2	1	1.6	0.02	0.08	81
10200	8450	1	0.1	5	2	15	1	13	8	47	93	17	25	8	332	3.15	64	26	0.35	0.25	0.15	0.07	12	5	2	0.2	2	2	1	1.78	0.02	0.08	87
10200	8500	2	0.2	7	2	25	1	11	9	46	117	18	25	8	342	3.17	65	27	0.31	0.26	0.13	0.09	11	5	2	0.2	2	2	1	1.73	0.02	0.07	37
10200	8550	9	0.2	6	2	15	1	18	8	45	109	16	28	7	455	3.24	68	45	0.36	0.38	0.17	0.06	20	5	2	0.2	2	2	1	1.22	0.03	0.07	88
10200	8600	7	0.1	3	2	15	1	10	11	50	114	17	31	7	332	3.57	79	24	0.27	0.24	0.16	0.05	11	5	2	0.2	2	2	1	1.71	0.02	0.06	79
10200	8650	2	0.1	4	2	5	1	11	11	46	106	16	29	7	387	3.21	70	30	0.37	0.32	0.2	0.04	13	5	2	0.2	2	2	1	1.48	0.02	0.08	114
10200	8700	2	0.1	3	2	15	1	10	9	59	132	17	25	7	376	2.94	61	31	0.35	0.3	0.16	0.05	12	5	2	0.2	2	2	1	1.77	0.02	0.07	75
10200	8750	1	0.1	3	2	5	1	8	9	36	96	12	20	5	284	2.34	50	24	0.36	0.27	0.15	0.04	13	5	2	0.2	2	2	1	1.29	0.02	0.05	125
10200	8800	2	0.1	4	2	5	1	9	8	32	99	10	19	5	257	2.12	45	28	0.33	0.31	0.15	0.04	13	5	2	0.2	2	2	1	1.27	0.02	0.05	98
10200	8850	2	0.2	6	2	30	1	18	8	46	138	17	26	7	490	3.28	61	52	0.41	0.5	0.13	0.06	20	5	2	0.2	2	2	1	1.45	0.03	0.07	68
10200	8900	1	0.1	4	2	10	1	11	7	43	100	15	25	6	284	2.92	64	29	0.35	0.28	0.15	0.04	10	5	2	0.2	2	2	1	1.46	0.02	0.06	180
10200	8950	2	0.1	6	2	10	1	18	10	48	111	18	27	8	501	3.2	63	39	0.44	0.39	0.15	0.04	17	5	2	0.2	2	2	1	1.51	0.03	0.09	74
10200	9000	3	0.1	8	2	5	1	10	9	40	69	12	22	6	304	2.78	61	25	0.32	0.29	0.12	0.04	11	5	2	0.2	2	2	2	1.15	0.02	0.06	210
10200	9050	2	0.1	7	2	20	1	16	7	44	119	17	27	7	605	3.26	64	44	0.39	0.45	0.15	0.05	19	5	2	0.2	3	2	1	1.29	0.03	0.09	91
10200	9200	6	0.3	9	2	25	1	10	11	66	102	20	25	8	380	3.14	61	29	0.36	0.31	0.13	0.08	11	5	2	0.2	2	2	1	1.79	0.02	0.09	65
10200	9250	2	0.4	7	2	30	1	20	12	64	113	21	29	8	608	3.29	60	46	0.48	0.52	0.15	0.02	22	5	2	0.2	2	2	1	1.96	0.04	0.08	45
10200	9300	3	0.3	7	2	20	1	15	11	68	143	20	26	9	545	3.48	66	43	0.48	0.45	0.15	0.04	15	5	2	0.2	2	2	1	1.89	0.03	0.09	43
10200	9350	16	0.3	7	2	105	1	17	11	58	122	19	30	8	668	3.44	65	45	0.46	0.49	0.17	0.04	19	5	2	0.2	2	2	1	1.77	0.03	0.08	77
10200	9400	10	0.4	9	2	50	1	26	10	70	143	28	31	10	1052	3.64	62	49	0.52	0.58	0.13	0.04	29	5	2	0.3	2	2	1	2.39	0.03	0.09	49
10200	9550	2	0.1	5	2	10	1	16	11	45	97	17	29	7	391	3.02	64	37	0.41	0.39	0.17	0.05	20	5	2	0.2	2	2	1	1.39	0.03	0.06	87
10200	9600	2	0.1	6	2	20	1	13	11	54	110	18	28	7	386	3.15	64	32	0.4	0.35	0.18	0.06	13	5	2	0.2	2	2	1	1.59	0.02	0.07	81
10200	9850	5	0.2	4	2	20	1	21	11	76	126	17	27	7	675	3.18	58	35	0.36	0.34	0.12	0.05	26	5	2	0.2	2	2	1	1.87	0.02	0.12	75
10200	9900	4	0.1	6	2	10	1	12	12	45	113	12	22	5	439	2.79	59	26	0.29	0.29	0.13	0.06	13	5	2	0.2	2	2	1	1.24	0.02	0.08	101
10200	9950	1	0.1	2	2	20	1	12	11	88	133	14	21	6	747	2.57	49	28	0.3	0.29	0.12	0.07	20	5	2	0.2	2	2	1	1.55	0.02	0.11	96
10200	10000	1	0.1	4	2	15	1	11	9	40	84	11	21	5	305	2.54	55	28	0.27	0.3	0.13	0.05	14	5	2	0.2	2	2	1	1.1	0.02	0.08	79
10200	10050	1	0.1	2	2	15	1	10	11	44	88	12	21	5	283	2.55	55	22	0.26	0.25	0.13	0.05	11	5	2	0.2	2	2	1	1.24	0.02	0.08	78
10200	10100	1	0.1	5	2	10	1	12	8	38	78	10	20	5	322	2.53	55	28	0.3	0.35	0.15	0.06	16	5	2	0.2	2	2	1	1.11	0.02	0.07	126
10200	10150	1	0.1	6	2	20	1	13	11	65	102	15	24	6	561	3.13	63	29	0.35	0.34	0.12	0.07	14	5	2	0.2	2	2	1	1.3	0.02	0.1	54
10200	10200	1	0.1	3	2	20	1	10	9	48	79	9	17	4	329	2.08	43	26	0.28	0.3	0.13	0.03	13	5	2	0.2	2	2	1	1.08	0.02	0.07	75
10200	10250	2	0.2	8	2	30	1	25	14	55	132	20	24	9	639	3.39	58	46	0.53	0.55	0.1	0.06	21	5	3	0.2	2	2	1	1.73	0.04	0.13	74
10200	10300	1	0.2	9	2	25	1	20	11	45	94	16	21	8	553	3.06	58	35	0.42	0.46	0.11	0.05	20	5	2	0.2	2	2	1	1.39	0.03	0.13	69
10200	10350	2	0.1	4	2	20	1	13	12	54	108	18	28	7	356	3.01	65	28	0.38	0.28	0.19	0.05	13	5	2	0.2	2	2	1	1.47	0.02	0.07	76
10200	10400	1	0.1	5	2	15	1	11	9	39	73	10	22	5	299	2.71	59	25	0.3	0.28	0.15	0.03	14	5	2	0.2	2	2	1	1.09	0.02	0.07	119
10200	10450	1	0.1	3	2	15	1	9	10	44	81	10	19	4	293	2.28	49	24	0.28	0.29	0.14	0.03	13	5	2	0.2	2	2	1	1.15	0.02	0.07	85
10200	10500	1	0.1	4	2	20	1	12	10	44	83	12	24	5	346	2.74	58	31	0.32	0.35	0.16	0.03	15	5	2	0.2	2	2	1	1.21	0.03	0.08	77
10200	10550	1	0.3	2	2	25	1	11	12	59	103	15	24	6	544	2.62	52	30	0.36	0.33	0.16	0.04	18	5	2	0.2	2	2	1	1.37	0.02	0.08	66
10200	10600	1	0.1	2	2	10	1	10	10	46	90	12	22	5	320	2.52	54	25	0.29	0.27	0.16	0.02	13	5	2	0.2	2	2	2	1.1	0.02	0.07	63
10200	10650	3	0.1	3	2	40	1	19	15	68	159	24	30	11	1113	3.4	59	51	0.54	0.49	0.13	0.05	25	5	2	0.2	2	2	1	2.39	0.03	0.12	45
10200	10700	2	0.1	4	2	20	1	9	15	96	132	13	20	6	588	2.31	43	25	0.28	0.26	0.13	0.07	12	5	2	0.2	2	2	1	1.57	0.02	0.06	77
10200	10750	1	0.1	4	2	25	1	13	12	53	119	16	23	6	583	2.73	50	40	0.44	0.42	0.14	0.05	19	5	2	0.2	2	2	1	1.71	0.03	0.1	56
10200	10800	1	0.1	3	2	20	1	10	11	49	87	12	19	5	379	2.29	48	28	0.31	0.31	0.13	0.04	13	5	2	0.2	2	2	1	1.18	0.02	0.06	54
10200	10850	3	0.1	3	2	10	1	10	8	42	68	9	19	4	330	2.34	53	27	0.27	0.28	0.15	0.02	13	5	2	0.2	2	2	1	0.93	0.02	0.07	110
10200	10900	1	0.1	4	2	15	1	13	8	42	70	11	22	5	326	2.98	66	28	0.34	0.33	0.14	0.04	13	5	2	0.2	2	2	1	1.04	0.02	0.06	82
10200	10950	1	0.1	3	2	20	1	14	12	47	90	17	24	6	368	3.09	63	28	0.36	0.31	0.13	0.07	13	5	2	0.2	2	2	1	1.34	0.02	0.07	65
10200	11000	2	0.1	4	2	15	1	13	9	43	82	10	18	5	323	2.54	56	29	0.27	0.32	0.11	0.05	15	5	2	0.2	2	2	1	1.01	0.02	0.07	130
10200	11050	1	0.1	10	2	15	1	19	12	62	88	18	24	7	381	3.3	64	32	0.39	0.33	0.12	0.06	11	5	2	0.2	3	2	1	1.54	0.02	0.1	95
10200	11100	2	0.1	8	2	25	1	15	14	87	126	16	27	8	647	3.55	72	33	0.4	0.37	0.11	0.06	18	5	2	0.2	2	2	1	1.66	0.02	0.08	50
10400	8000	2	0.1	2	2	15	1	9	10	30	126	9	19	4	216	2.11	39	42	0.38	0.45	0.12	0.04	16	5	2	0.2	2	2	1	1.45	0.04	0.05	73
10400	8050	8	0.1	2	2	20	1	9	9	49	133	16	19	7	286	2.6	45	42	0.44	0.44	0.1	0.03	14	5	2	0.2	2	2	1	1.67	0.03	0.05	88
10400	8100	3	0.1	4	2	25	1	10	9	57	138	14	22	6	406	2.92	55	23	0.3	0.24	0.11	0.09	11	5	2	0.2	2	2	1	1.78	0.02	0.06	73
10400	8200	13	0.1	4	2	20	1	11	8	47	143	13	23	6	325	2.96	60	21	0.29	0.19	0.12	0.06	10	5	2	0.2	2	2	1	1.65	0.02	0.06	95
10400	8250	73	0.1	5	2	15	1	9	6	58	127	13	21	6	321	2.91	55	30	0.31	0.31	0.11	0.09	10	5	2	0.2	2	2	1	1.56	0.02	0.08	45

East	North	Au	Ag	As	Sb	Hg	Mo	Cu	Pb	Zn	Ba	Ni	Cr	Co	Mn	Fe	V	Sr	Mg	Ca	Ti	P	La	U	Th	Cd	Bi	B	W	Al	Na	K	Weight
		ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	g
10400	8300	12	0.1	2	2	30	1	11	8	49	142	13	22	6	408	2.77	53	25	0.32	0.24	0.11	0.06	11	5	2	0.2	2	2	1	1.8	0.01	0.07	55
10400	8350	11	0.1	8	2	55	1	10	9	48	130	17	24	8	373	3.58	69	21	0.32	0.21	0.13	0.1	11	5	2	0.2	2	3	1	2.23	0.02	0.08	49
10400	8400	4	0.1	3	2	45	1	9	11	46	147	15	22	10	488	2.98	61	31	0.4	0.31	0.14	0.06	10	5	2	0.2	2	2	1	1.77	0.02	0.08	51
10400	8450	19	0.1	6	2	45	1	11	8	52	102	15	23	8	713	3.23	65	19	0.34	0.23	0.14	0.1	12	5	2	0.2	2	3	1	1.72	0.02	0.06	110
10400	8500	6	0.1	7	2	45	1	11	10	65	129	19	29	8	365	3.58	72	33	0.37	0.33	0.18	0.08	12	5	2	0.2	2	3	1	1.94	0.02	0.08	90
10400	8550	5	0.2	6	2	40	1	12	10	59	132	17	28	8	400	3.14	63	24	0.34	0.25	0.18	0.08	14	5	3	0.2	2	3	1	2.01	0.01	0.08	127
10400	8600	3	0.2	6	2	50	1	17	10	37	119	11	24	4	321	2.84	55	41	0.41	0.43	0.14	0.06	23	5	2	0.2	2	2	1	1.49	0.02	0.08	170
10400	8650	6	0.1	4	2	40	1	12	10	44	117	14	24	7	463	3.23	64	42	0.45	0.4	0.18	0.05	18	5	2	0.2	2	2	1	1.64	0.03	0.09	76
10400	8750	41	0.1	6	2	50	1	14	10	67	135	21	26	9	383	3.7	69	24	0.41	0.23	0.14	0.09	12	5	2	0.2	2	4	1	2.59	0.02	0.08	48
10400	8850	3	0.1	6	2	35	1	13	9	47	95	13	24	7	314	3.05	63	28	0.34	0.28	0.16	0.05	12	5	2	0.2	2	2	1	1.61	0.02	0.08	137
10400	8900	3	0.2	4	2	35	1	12	8	48	119	18	29	8	447	3.49	72	31	0.42	0.36	0.19	0.06	13	5	2	0.2	2	2	1	1.72	0.02	0.09	111
10400	8950	2	0.1	7	2	40	1	13	10	50	139	21	28	9	454	3.74	73	39	0.44	0.32	0.18	0.04	12	5	2	0.2	2	2	1	2.24	0.02	0.09	98
10400	9000	2	0.3	4	2	45	1	7	9	34	202	13	24	8	278	3.92	68	58	0.57	0.9	0.08	0.09	22	5	3	0.2	2	2	1	2.4	0.03	0.07	59
10400	9050	3	0.1	7	2	50	1	13	9	52	118	17	24	7	427	3.22	63	35	0.4	0.36	0.14	0.05	17	5	2	0.2	2	2	1	1.69	0.02	0.08	80
10400	9100	1	0.2	4	2	35	1	12	10	44	99	15	25	7	372	3.22	64	28	0.4	0.32	0.16	0.05	13	5	2	0.2	2	2	1	1.59	0.02	0.1	146
10400	9150	1	0.2	7	2	60	1	19	10	56	135	20	29	9	608	3.54	69	47	0.47	0.48	0.18	0.07	19	5	2	0.2	2	2	1	1.76	0.03	0.09	105
10400	9200	5	0.1	4	2	40	1	11	10	47	96	12	23	6	338	3	48	58	0.5	0.73	0.14	0.05	14	5	2	0.2	2	3	1	1.54	0.06	0.09	88
10400	9250	4	0.2	4	2	35	1	13	7	50	107	13	23	7	451	2.89	57	32	0.34	0.31	0.13	0.07	17	5	2	0.2	2	2	1	1.43	0.02	0.12	85
10400	9300	4	0.1	4	2	45	1	17	9	50	125	19	30	8	415	3.62	73	37	0.41	0.33	0.2	0.05	15	5	2	0.2	2	2	1	1.86	0.02	0.07	88
10400	9350	1	0.1	4	2	55	1	17	10	43	113	18	30	7	430	3.32	64	50	0.46	0.56	0.19	0.04	21	5	2	0.2	2	2	1	1.77	0.06	0.08	102
10400	9400	2	0.3	3	2	55	1	23	13	47	151	22	31	7	367	3.22	61	58	0.52	0.52	0.12	0.04	28	5	2	0.2	2	2	1	2.02	0.03	0.1	71
10400	9450	2	0.2	2	2	45	1	14	7	40	105	14	34	6	362	3.16	68	41	0.36	0.43	0.22	0.06	22	5	2	0.2	2	2	1	1.38	0.03	0.06	226
10400	9600	7	0.1	6	2	55	1	12	10	63	111	18	28	7	418	3.45	68	35	0.42	0.35	0.19	0.04	14	5	2	0.2	2	2	1	1.71	0.02	0.09	69
10400	9650	10	0.1	4	2	40	1	10	10	51	102	13	22	6	321	2.7	52	32	0.36	0.34	0.14	0.03	14	5	2	0.2	2	2	1	1.53	0.03	0.09	100
10400	9700	4	0.1	2	2	40	1	12	9	47	107	12	23	6	396	2.98	58	39	0.37	0.43	0.15	0.05	14	5	2	0.2	2	2	1	1.36	0.03	0.12	136
10400	9800	2	0.2	2	2	45	1	13	10	44	95	14	24	6	366	2.84	57	34	0.41	0.35	0.2	0.03	20	5	2	0.2	2	3	1	1.39	0.03	0.08	79
10400	9850	7	0.1	2	2	40	1	10	9	50	83	11	19	4	457	2.35	47	29	0.31	0.32	0.14	0.04	14	5	2	0.2	2	2	1	1.23	0.03	0.08	90
10400	9900	3	0.1	2	2	40	1	13	9	45	90	13	24	6	471	3.08	62	36	0.4	0.44	0.14	0.06	17	5	2	0.2	2	2	1	1.34	0.02	0.1	95
10400	9950	3	0.2	2	2	45	1	11	10	42	94	11	19	4	334	2.43	48	30	0.32	0.31	0.14	0.03	14	5	2	0.2	2	2	1	1.39	0.02	0.07	87
10400	10050	5	0.2	4	2	45	1	14	11	45	110	17	23	7	486	3.09	59	33	0.44	0.38	0.16	0.06	18	5	2	0.2	2	2	1	1.63	0.03	0.08	86
10400	10150	26	0.1	2	2	35	1	9	7	34	80	9	17	3	281	2.08	43	25	0.3	0.28	0.16	0.02	13	5	2	0.2	2	2	1	1.13	0.02	0.06	81
10400	10200	5	0.1	2	2	50	1	12	10	44	106	14	19	4	361	2.57	51	33	0.41	0.35	0.14	0.04	15	5	2	0.2	2	2	1	1.65	0.02	0.06	79
10400	10550	1	0.1	2	2	45	1	13	11	98	125	31	41	10	503	3.95	76	37	0.46	0.38	0.25	0.12	11	5	2	0.2	2	3	1	2.19	0.02	0.09	72
10400	10600	5	0.1	2	2	35	1	8	8	37	94	10	18	4	384	2.15	41	29	0.32	0.3	0.14	0.03	13	5	2	0.2	2	2	1	1.43	0.03	0.07	79
10400	10650	4	0.1	2	2	30	1	8	11	42	85	11	18	4	340	2.26	45	25	0.31	0.28	0.15	0.03	12	5	2	0.2	2	2	2	1.33	0.02	0.06	59
10400	10700	1	0.1	2	2	15	1	8	9	35	74	10	15	4	215	1.89	37	20	0.14	0.21	0.09	0.05	10	5	2	0.2	2	2	1	1.03	0.01	0.06	80
10400	10800	2	0.5	9	2	30	1	21	13	74	223	27	27	13	2126	3.79	58	59	0.54	0.51	0.06	0.1	24	5	2	0.2	2	2	1	3.46	0.02	0.13	94
10400	10850	2	0.1	4	2	10	1	8	7	27	64	9	14	3	213	1.83	39	20	0.15	0.21	0.1	0.03	10	5	2	0.2	2	2	1	0.84	0.02	0.05	93
10400	10900	8	0.1	3	2	10	1	10	7	26	65	8	13	3	255	1.68	34	22	0.17	0.24	0.1	0.03	11	5	2	0.2	2	2	1	0.9	0.02	0.06	70
10400	10950	1	0.1	4	2	10	1	10	6	27	62	9	14	4	245	1.76	37	22	0.17	0.24	0.1	0.03	12	5	2	0.2	2	2	1	0.93	0.02	0.06	99
10400	11050	1	0.1	5	2	15	1	10	7	55	79	10	15	5	308	2.1	41	20	0.17	0.25	0.09	0.07	11	5	2	0.2	2	2	1	1.08	0.01	0.07	71
10800	8200	1	0.1	3	2	5	1	10	8	44	116	12	23	7	355	3.02	60	28	0.36	0.27	0.14	0.05	13	5	2	0.2	2	2	1	1.54	0.03	0.07	191
10800	8300	1	0.2	3	2	15	1	9	8	31	92	9	20	4	252	2.24	46	27	0.35	0.29	0.14	0.04	15	5	2	0.2	2	2	1	1.22	0.02	0.04	149
10800	8800	4	0.3	3	2	20	1	15	8	42	112	12	23	5	270	2.77	52	53	0.46	0.67	0.11	0.06	16	5	2	0.2	2	2	3	1.45	0.05	0.05	106
10800	8900	2	0.2	3	2	25	1	16	7	40	102	10	21	4	280	2.58	48	57	0.41	0.69	0.1	0.07	17	5	2	0.2	2	2	1	1.19	0.04	0.05	118
10800	9300	2	0.1	3	2	10	1	9	9	50	111	13	21	6	379	2.73	51	25	0.34	0.25	0.14	0.06	12	5	2	0.2	2	2	1	1.57	0.02	0.06	52
10800	9800	5	0.1	3	2	20	1	10	4	41	118	11	21	5	260	2.75	54	22	0.3	0.24	0.11	0.06	12	5	3	0.2	2	3	1	1.55	0.02	0.06	96
10800	9900	4	0.2	2	2	15	1	8	10	34	83	8	15	4	264	1.81	36	21	0.32	0.24	0.11	0.03	11	5	3	0.2	2	2	1	1.35	0.02	0.04	98
10800	10000	1	0.1	3	2	15	1	8	7	25	88	8	15	4	212	1.79	36	27	0.3	0.3	0.11	0.04	14	5	2	0.2	2	2	1	1.18	0.02	0.05	98
10800	10200	2	0.2	2	2	5	1	7	8	25	85	7	12	3	190	1.49	32	22	0.28	0.25	0.12	0.02	11	5	2	0.2	2	2	1	1.09	0.02	0.03	145
10800	10600	1	0.2	3	2	20	1	9	10	55	116	10	15	5	283	2.15	40	31	0.22	0.31	0.07	0.04	12	5	2	0.2	2	2	1	1.81	0.01	0.05	90
10800	10700	1	0.1	3	2	15	1	8	7	28	72	8	14	4	234	1.95	40	22	0.3	0.27	0.1	0.03	12	5	2	0.2	2	2	1	1.16	0.02	0.05	109
10800	10750	1	0.1	2	2	15	1	10	9	44	104	11	18	6	584	2.41	45	30	0.36	0.31	0.1	0.04	14	5	2	0.2	2	2	1	1.56	0.02	0.07	50
10800	10800	2	0.1	2	2	15	1	9	9	59	114	10	16	5	267	2.26	41	23	0.32	0.23	0.07	0.03	11	5	2	0.2	2	2	1	1.89	0.02	0.05	70
10800	11000	3	0.1	2	2	20	1	10	12	68	100	11	18	5	456	2.52	48	29	0.36	0.33	0.09	0.05	14	5	2	0.2	2	2	1	1.68	0.02	0.06	95

Appendix 2

Bark Analyses

East	North	AU	AS	SB	HG	BA	BR	FE	CR	MO	CS	CA	CO	HF	K	NA	RB	SC	SE	SR	U	ZN	LA	CE	ND	SM	YB	LU	Mass
		ppb	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g
Lodgepole Pine																													
Line 98 main data set																													
9800	9000	0.4	0.09	0.020	0.14	11	3.7	0.007	0.3	0.05	0.05	0.53	0.2	0.05	0.11	34.8	1	0.02	0.1	10	0.02	38	0.06	0.3	0.5	0.01	0.005	0.001	15.25
9800	9050	0.3	0.04	0.011	0.14	7	2.4	0.005	0.3	0.05	0.05	0.37	0.1	0.05	0.14	21.6	1	0.01	0.1	20	0.01	23	0.03	0.3	0.5	0.01	0.005	0.001	15.40
9800	9100	0.3	0.11	0.021	0.08	14	2.9	0.009	0.3	0.11	0.05	1.10	0.2	0.05	0.10	38.3	1	0.03	0.1	38	0.01	39	0.07	0.3	0.5	0.01	0.005	0.001	15.35
9800	9150	0.2	0.06	0.005	0.07	10	1.5	0.005	0.3	0.08	0.05	0.96	0.1	0.05	0.09	22.9	1	0.01	0.1	27	0.01	54	0.03	0.3	0.5	0.01	0.005	0.001	15.52
9800	9200	0.3	0.08	0.019	0.14	12	2.7	0.006	0.3	0.10	0.05	0.73	0.1	0.05	0.11	29.2	1	0.02	0.1	17	0.01	38	0.05	0.3	0.5	0.01	0.005	0.001	15.12
9800	9300	0.3	0.11	0.018	0.19	11	3.5	0.010	0.3	0.05	0.05	0.85	0.2	0.05	0.09	42.4	1	0.03	0.1	10	0.01	35	0.07	0.3	0.5	0.01	0.005	0.001	15.65
9800	9350	0.4	0.11	0.017	0.12	30	4.5	0.009	0.3	0.07	0.05	0.70	0.2	0.05	0.18	47.8	1	0.03	0.1	28	0.01	27	0.07	0.3	0.5	0.01	0.007	0.001	15.15
9800	9400	0.1	0.12	0.013	0.11	9	3.2	0.006	0.3	0.08	0.05	0.87	0.2	0.05	0.10	45.5	1	0.02	0.1	27	0.01	47	0.05	0.3	0.5	0.01	0.005	0.001	15.54
9800	9450	1.3	0.09	0.040	0.08	14	3.1	0.009	0.3	0.12	0.05	0.84	0.2	0.05	0.09	41.6	1	0.03	0.1	34	0.01	40	0.07	0.3	0.5	0.01	0.010	0.001	15.24
9800	9550	0.6	0.05	0.017	0.07	9	1.3	0.013	0.3	0.11	0.05	0.35	0.1	0.05	0.05	48.3	1	0.04	0.1	10	0.01	26	0.10	0.3	0.5	0.02	0.012	0.002	15.67
9800	9650	0.3	0.05	0.010	0.05	10	1.6	0.006	0.3	0.05	0.05	0.72	0.1	0.05	0.07	33.5	1	0.02	0.1	23	0.01	22	0.05	0.3	0.5	0.01	0.007	0.001	15.19
9800	9800	0.4	0.05	0.032	0.05	5	0.6	0.010	0.3	0.06	0.05	0.20	0.1	0.05	0.06	40.7	1	0.03	0.1	10	0.01	21	0.09	0.3	0.5	0.02	0.012	0.001	15.69
9800	9850	0.3	0.07	0.013	0.08	8	1.7	0.009	0.3	0.10	0.05	0.73	0.1	0.05	0.13	43.1	1	0.03	0.1	20	0.01	61	0.08	0.3	0.5	0.01	0.005	0.001	15.08
9800	9875	0.7	0.23	0.037	0.24	30	5.0	0.038	0.9	0.29	0.05	1.60	0.4	0.05	0.15	165.0	1	0.12	0.1	34	0.01	51	0.31	0.5	0.5	0.05	0.031	0.002	15.65
9800	9900	0.4	0.15	0.020	0.17	17	4.7	0.019	0.4	0.05	0.06	1.10	0.3	0.05	0.18	98.0	1	0.06	0.1	37	0.01	64	0.16	0.3	0.5	0.03	0.015	0.002	15.47
9800	10000*	0.7	0.09	0.014	0.05	9	2.7	0.018	1.5	0.11	0.05	0.64	0.2	0.05	0.13	76.4	1	0.05	0.1	10	0.01	37	0.12	0.3	0.5	0.02	0.018	0.001	15.40
9800	10150*	0.1	0.43	0.087	0.05	41	2.5	0.207	4.4	0.29	0.13	0.44	0.8	0.29	0.24	867.0	3	0.68	0.1	40	0.07	25	1.50	2.8	1.2	0.25	0.158	0.021	15.54
9800	10200*	0.3	0.13	0.020	0.07	11	2.4	0.041	1.2	0.05	0.05	0.50	0.2	0.07	0.12	188.0	1	0.14	0.1	10	0.01	33	0.31	0.6	0.5	0.05	0.031	0.005	15.59
9800	10275*	0.1	0.15	0.026	0.20	13	3.5	0.032	0.9	0.23	0.05	0.65	0.2	0.05	0.06	142.0	2	0.11	0.1	20	0.01	40	0.25	0.4	0.5	0.04	0.029	0.004	15.78
9800	10300*	0.1	0.10	0.021	0.09	13	2.9	0.026	0.9	0.19	0.05	0.61	0.2	0.05	0.11	112.0	1	0.09	0.1	30	0.01	44	0.22	0.4	0.5	0.04	0.020	0.003	15.87
9800	10325*	0.1	0.12	0.016	0.21	10	4.2	0.030	0.8	0.21	0.05	0.62	0.2	0.05	0.11	134.0	1	0.10	0.1	10	0.01	41	0.22	0.4	0.5	0.04	0.005	0.003	15.91
9800	10350*	0.3	0.17	0.032	0.13	22	4.1	0.049	1.3	0.17	0.05	0.65	0.3	0.08	0.12	220.0	1	0.17	0.1	17	0.01	41	0.34	0.6	0.6	0.06	0.039	0.004	15.41
9800	10375*	0.1	0.14	0.025	0.18	21	5.0	0.037	1.0	0.05	0.05	0.67	0.2	0.07	0.12	166.0	1	0.13	0.1	10	0.02	33	0.27	0.6	0.5	0.05	0.028	0.005	15.18
9800	10400*	0.1	0.11	0.028	0.14	14	5.1	0.034	0.9	0.29	0.05	0.64	0.3	0.05	0.14	144.0	1	0.11	0.2	35	0.01	47	0.25	0.5	0.5	0.04	0.025	0.003	15.23
9800	10425*	0.1	0.12	0.016	0.16	13	4.8	0.030	0.9	0.15	0.07	0.94	0.2	0.05	0.15	134.0	1	0.10	0.1	38	0.01	47	0.21	0.4	0.5	0.04	0.018	0.004	15.63
9800	10450*	0.1	0.12	0.024	0.14	16	4.2	0.047	1.3	0.05	0.05	0.74	0.2	0.06	0.18	197.0	1	0.15	0.1	24	0.01	36	0.30	0.5	0.5	0.05	0.038	0.006	15.83
9800	10475*	0.1	0.08	0.023	0.05	17	4.7	0.047	1.6	0.05	0.05	0.52	0.2	0.05	0.19	199.0	1	0.15	0.1	10	0.01	46	0.32	0.6	0.5	0.06	0.039	0.005	15.65
9800	10500*	0.4	0.23	0.045	0.14	20	4.9	0.079	2.3	0.22	0.05	0.49	0.3	0.12	0.16	343.0	3	0.26	0.1	10	0.04	37	0.51	1	0.5	0.09	0.050	0.008	15.77
9800	10550*	0.1	0.26	0.046	0.05	26	4.4	0.093	2.5	0.08	0.10	0.44	0.4	0.16	0.20	399.0	2	0.31	0.1	22	0.05	36	0.64	1.1	0.7	0.11	0.076	0.011	15.36
9800	10600*	0.1	0.18	0.026	0.12	25	3.4	0.084	2.8	0.19	0.08	0.56	0.4	0.10	0.15	360.0	2	0.28	0.1	10	0.03	33	0.61	1.1	0.5	0.10	0.070	0.009	15.77
9800	10650*	0.2	0.24	0.033	0.05	23	2.5	0.079	2.8	0.16	0.05	0.58	0.4	0.12	0.16	324.0	2	0.27	0.1	21	0.01	33	0.59	1.3	0.7	0.10	0.055	0.009	15.62
9800	10700*	0.1	0.15	0.032	0.14	23	2.3	0.063	2.1	0.05	0.05	0.49	0.3	0.10	0.09	275.0	1	0.21	0.1	10	0.01	36	0.47	0.9	0.5	0.08	0.053	0.007	15.58
9800	10750*	0.3	0.12	0.017	0.09	20	2.3	0.046	1.2	0.20	0.05	0.52	0.3	0.07	0.10	206.0	1	0.16	0.1	10	0.01	30	0.35	0.7	0.5	0.06	0.032	0.005	15.21
	* resampled																												
Line 98 first sample serie (possible contamination by Au																													
9800	9000	0.4	0.09	0.020	0.14	11	3.7	0.007	0.3	0.05	0.05	0.53	0.2	0.05	0.11	34.8	1	0.02	0.1	10	0.02	38	0.06	0.3	0.5	0.01	0.005	0.001	15.25
9800	9050	0.3	0.04	0.011	0.14	7	2.4	0.005	0.3	0.05	0.05	0.37	0.1	0.05	0.14	21.6	1	0.01	0.1	20	0.01	23	0.03	0.3	0.5	0.01	0.005	0.001	15.40
9800	9100	0.3	0.11	0.021	0.08	14	2.9	0.009	0.3	0.11	0.05	1.10	0.2	0.05	0.10	38.3	1	0.03	0.1	38	0.01	39	0.07	0.3	0.5	0.01	0.005	0.001	15.35
9800	9150	0.2	0.06	0.005	0.07	10	1.5	0.005	0.3	0.08	0.05	0.96	0.1	0.05	0.09	22.9	1	0.01	0.1	27	0.01	54	0.03	0.3	0.5	0.01	0.005	0.001	15.52
9800	9200	0.3	0.08	0.019	0.14	12	2.7	0.006	0.3	0.10	0.05	0.73	0.1	0.05	0.11	29.2	1	0.02	0.1	17	0.01	38	0.05	0.3	0.5	0.01	0.005	0.001	15.12
9800	9300	0.3	0.11	0.018	0.19	11	3.5	0.010	0.3	0.05	0.05	0.85	0.2	0.05	0.09	42.4	1	0.03	0.1	10	0.01	35	0.07	0.3	0.5	0.01	0.005	0.001	15.65
9800	9350	0.4	0.11	0.017	0.12	30	4.5	0.009	0.3	0.07	0.05	0.70	0.2	0.05	0.18	47.8	1	0.03	0.1	28	0.01	27	0.07	0.3	0.5	0.01	0.007	0.001	15.15
9800	9400	0.1	0.12	0.013	0.11	9	3.2	0.006	0.3	0.08	0.05	0.87	0.2	0.05	0.10	45.5	1	0.02	0.1	27	0.01	47	0.05	0.3	0.5	0.01	0.005	0.001	15.54
9800	9450	1.3	0.09	0.040	0.08	14	3.1	0.009	0.3	0.12	0.05	0.84	0.2	0.05	0.09	41.6	1	0.03	0.1	34	0.01	40	0.07	0.3	0.5	0.01	0.010	0.001	15.24
9800	9550	0.6	0.05	0.017	0.07	9	1.3	0.013	0.3	0.11	0.05	0.35	0.1	0.05	0.05	48.3	1	0.04	0.1	10	0.01	26	0.10	0.3	0.5	0.02	0.012	0.002	15.67

East	North	AU	AS	SB	HG	BA	BR	FE	CR	MO	CS	CA	CO	HF	K	NA	RB	SC	SE	SR	U	ZN	LA	CE	ND	SM	YB	LU	Mass
		ppb	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g
9800	9650	0.3	0.05	0.010	0.05	10	1.6	0.006	0.3	0.05	0.05	0.72	0.1	0.05	0.07	33.5	1	0.02	0.1	23	0.01	22	0.05	0.3	0.5	0.01	0.007	0.001	15.19
9800	9800	0.4	0.05	0.032	0.05	5	0.6	0.010	0.3	0.06	0.05	0.20	0.1	0.05	0.06	40.7	1	0.03	0.1	10	0.01	21	0.09	0.3	0.5	0.02	0.012	0.001	15.69
9800	9850	0.3	0.07	0.013	0.08	8	1.7	0.009	0.3	0.10	0.05	0.73	0.1	0.05	0.13	43.1	1	0.03	0.1	20	0.01	61	0.08	0.3	0.5	0.01	0.005	0.001	15.08
9800	9875	0.7	0.23	0.037	0.24	30	5.0	0.038	0.9	0.29	0.05	1.60	0.4	0.05	0.15	165.0	1	0.12	0.1	34	0.01	51	0.31	0.5	0.5	0.05	0.031	0.002	15.65
9800	9900	0.4	0.15	0.020	0.17	17	4.7	0.019	0.4	0.05	0.06	1.10	0.3	0.05	0.18	98.0	1	0.06	0.1	37	0.01	64	0.16	0.3	0.5	0.03	0.015	0.002	15.47
9800	10000	0.9	0.08	0.010	0.09	10	1.9	0.012	0.3	0.08	0.05	0.64	0.1	0.05	0.11	63.8	1	0.04	0.1	10	0.01	33	0.09	0.3	0.5	0.02	0.008	0.001	15.36
9800	10150	1.2	0.25	0.054	0.11	27	1.6	0.121	2.2	0.17	0.09	0.42	0.6	0.17	0.15	490.0	3	0.39	0.1	10	0.05	23	0.96	2	1.0	0.17	0.100	0.013	15.27
9800	10200	0.4	0.09	0.035	0.09	10	1.7	0.024	0.5	0.07	0.05	0.64	0.2	0.05	0.08	110.0	1	0.08	0.1	22	0.01	36	0.19	0.4	0.5	0.03	0.015	0.003	15.63
9800	10250	1.0	0.14	0.028	0.13	14	2.7	0.026	0.5	0.13	0.05	0.66	0.2	0.05	0.09	102.0	1	0.08	0.1	24	0.01	40	0.20	0.4	0.5	0.03	0.019	0.002	15.50
9800	10300	0.4	0.14	0.025	0.15	14	2.5	0.023	0.5	0.20	0.05	0.61	0.2	0.05	0.11	94.4	1	0.08	0.1	22	0.03	44	0.19	0.4	0.5	0.03	0.017	0.003	15.62
9800	10325	0.9	0.08	0.019	0.17	7	2.7	0.021	0.5	0.15	0.05	0.57	0.2	0.05	0.08	88.7	1	0.07	0.1	15	0.01	33	0.15	0.3	0.5	0.03	0.017	0.003	15.79
9800	10350	2.3	0.17	0.031	0.15	19	3.2	0.043	0.8	0.24	0.05	0.63	0.3	0.06	0.11	201.0	2	0.15	0.2	10	0.01	38	0.34	0.7	0.5	0.06	0.035	0.005	15.39
9800	10375	1.3	0.15	0.027	0.18	17	3.8	0.029	0.6	0.22	0.05	0.69	0.3	0.05	0.12	130.0	1	0.10	0.1	22	0.01	30	0.24	0.5	0.5	0.04	0.024	0.003	15.24
9800	10400	1.1	0.20	0.032	0.25	19	4.5	0.036	0.8	0.08	0.05	0.74	0.3	0.05	0.16	155.0	2	0.12	0.1	38	0.01	53	0.27	0.5	0.5	0.05	0.022	0.004	15.24
9800	10425	3.2	0.14	0.017	0.15	14	3.9	0.023	0.5	0.21	0.05	0.92	0.2	0.05	0.15	108.0	2	0.08	0.1	31	0.01	49	0.18	0.5	0.5	0.03	0.021	0.002	15.02
9800	10450	1.8	0.12	0.021	0.17	14	3.1	0.030	0.6	0.10	0.05	0.78	0.3	0.05	0.16	128.0	1	0.09	0.1	22	0.01	38	0.23	0.4	0.5	0.04	0.021	0.003	15.58
9800	10500	8.0	0.25	0.042	0.19	19	5.1	0.068	1.3	0.33	0.05	0.60	0.4	0.11	0.18	307.0	2	0.23	0.1	23	0.01	42	0.52	1.1	0.6	0.09	0.054	0.007	15.38
Cross line (93 N)																													
9850	9300	0.6	0.16	0.025	0.23	14	5.0	0.012	0.3	0.20	0.05	0.79	0.3	0.05	0.18	51.5	2	0.04	0.1	28	0.01	50	0.09	0.3	0.5	0.01	0.005	0.001	15.22
9900	9300	0.1	0.09	0.008	0.24	16	4.4	0.007	0.3	0.05	0.05	0.62	0.2	0.05	0.11	39.8	1	0.03	0.1	27	0.01	48	0.07	0.3	0.5	0.01	0.005	0.002	15.36
9950	9300	0.1	0.11	0.025	0.19	23	5.6	0.022	0.4	0.18	0.05	1.30	0.3	0.05	0.12	84.0	3	0.07	0.1	37	0.01	74	0.14	0.3	0.5	0.03	0.016	0.002	15.32
10000	9300	0.1	0.13	0.021	0.14	13	3.9	0.019	0.3	0.10	0.05	0.57	0.2	0.05	0.12	79.5	2	0.06	0.1	23	0.01	38	0.14	0.3	0.5	0.02	0.012	0.002	15.63
10050	9300	0.2	0.14	0.020	0.20	17	5.8	0.019	0.4	0.05	0.05	0.62	0.3	0.05	0.13	88.0	1	0.06	0.1	10	0.01	53	0.14	0.3	0.5	0.03	0.017	0.002	15.56
10100	9300	0.2	0.29	0.039	0.19	23	4.7	0.073	1.3	0.14	0.05	0.66	0.4	0.11	0.11	276.0	1	0.24	0.1	18	0.04	39	0.52	1.1	0.5	0.09	0.054	0.008	15.50
Spruce Bark																													
S9800	9300	0.4	0.05	0.008	0.13	230	3.1	0.005	0.3	0.05	0.05	1.40	0.1	0.05	0.23	33.0	3	0.02	0.1	72	0.01	76	0.04	0.3	0.5	0.01	0.005	0.001	15.28
S9800	9350	0.3	0.07	0.009	0.17	360	4.9	0.006	0.3	0.05	0.05	1.40	0.3	0.05	0.24	39.3	2	0.02	0.1	120	0.01	68	0.07	0.3	0.5	0.01	0.005	0.001	15.20
S9800	9400	0.2	0.06	0.007	0.13	400	3.0	0.005	0.3	0.09	0.05	1.40	0.2	0.05	0.30	31.0	2	0.02	0.1	120	0.01	72	0.06	0.3	0.5	0.01	0.005	0.001	15.34
S9800	9450	0.3	0.05	0.006	0.13	330	3.2	0.007	0.3	0.05	0.05	1.10	0.2	0.08	0.20	32.9	2	0.02	0.1	83	0.01	66	0.06	0.3	0.5	0.01	0.005	0.001	15.63
S9800	9550	0.2	0.05	0.008	0.12	140	2.5	0.007	0.3	0.10	0.15	1.00	0.1	0.05	0.21	40.0	3	0.02	0.1	38	0.01	53	0.01	0.3	0.5	0.01	0.005	0.001	15.73
S9800	9650	0.5	0.07	0.007	0.12	200	3.8	0.007	0.3	0.05	0.08	1.30	0.2	0.05	0.24	48.8	3	0.02	0.1	69	0.01	77	0.06	0.3	0.5	0.01	0.005	0.001	15.38
S9800	9800	0.4	0.05	0.007	0.08	160	1.9	0.007	0.3	0.06	0.05	1.20	0.1	0.05	0.20	33.2	2	0.03	0.1	100	0.01	130	0.05	0.3	0.5	0.01	0.005	0.001	15.81
S9800	9850	0.4	0.08	0.006	0.15	250	3.1	0.010	0.3	0.10	0.09	1.10	0.2	0.07	0.46	55.3	4	0.04	0.1	69	0.01	83	0.09	0.3	0.5	0.01	0.007	0.002	15.29
S9800	9875	0.2	0.09	0.010	0.09	110	2.9	0.009	0.3	0.05	0.12	1.10	0.1	0.05	0.58	61.2	6	0.03	0.1	65	0.01	82	0.08	0.3	0.5	0.01	0.005	0.001	15.12
S9800	9900	0.2	0.08	0.006	0.10	72	2.8	0.011	0.3	0.13	0.10	1.20	0.2	0.05	0.37	52.4	4	0.04	0.1	44	0.01	80	0.08	0.3	0.5	0.01	0.006	0.001	15.35

Appendix 3

Rock Descriptions and Analyses

Numb	UTME	UTMN	Type	Size	Name	Description
5	320860	5939380	FLT	0	rhyolite	15 cm/1; lt to dk grey silicified rhy. ; diss. coarse (1 mm) py. (not Tonka style of qz)
6	320715	5939500	FLT	0	qz	local flt ; massive sugary qz
7	320700	5939480	SC	0	qz	multistaged veins of massive sugary qz
8	320685	5939460	OC	0	andesite	silicified grey andesite Fp porphyry; 5% py some qz veining
9	320680	5939445	OC	0	qz breccia	quartz brx structure, abt. 5% py, fgx of silicified andesite, some dk gray qz patches
10	320680	5939445	OC	0	qz breccia	quartz brx structure, abt. 5% py, fgx of silicified andesite, some dk gray qz patches
11	320665	5939440	OC	0	andesite	very lt green aph. andesite (silicified) with a few qz stringers, strog fracturation
12	320535	5939160	OC	8 m	andesite	propyl. andesite with qz stringers and Cc veins
13	320520	5939165	OC	0	andesite	rusty propyl. andesite with Cc veins;
14	320515	5939195	OC	0	qz breccia	qz breccia structure, semi-massive, rare py, white
15	320565	5939205	OC	0	andesite	propyl. Fp porph. andesite, fractured, diss py
16	320575	5939245	OC	0	qz breccia	qz breccia structure, semi-massive, rare py, white
17	320555	5939225	OC	0	qz breccia	qz breccia structure, semi-massive, rare py, white
18	320560	5939235	OC	0	qz breccia	qz breccia structure, semi-massive, rare py, white
19	320545	5939235	OC	0	qz breccia	qz breccia structure, semi-massive, rare py, white
29	320968	5936785	FLT	0	andesite	60 cm/R2-3; hard, silicified andesite, 5% py, glacial striae
30	320905	5939523	SC	0	andesite	bleached hard andesite, 1-2 % py some minor qz veilets
31	320499	5940643	OC	0	andesite	andesite from E side of quarry, carb. veined and cemented andesite, up to 5% py, propylitized
40	322100	5939500	OC	0	clay	lt br. silty clay; Ootsa or Endako sediment; on road east of Tonka property
41	320650	5939390	OC	0		rusty patch in qz stockwork abt 1 m wide
42	320650	5939390	OC	0		qz stockwork
43	320640	5939410	OC	0		white quartz stockwork at water edge
44	320640	5939410	OC	0		qz stockwork in green rusty andesite
45	320675	5939395	OC	0		very rusty bleached andesite, py little qz veining
211	321167	5938639	FLT	0	qz	11 cm/R2 qz breccia
330	320562	5939255	SC	0	tuff?	siliceous with diss. Py
331	320551	5939208	SC	0	tuff?	silica alt. tuff with diss Py & Galena
332	320546	5939171	OC	0	tuff?	siliceous; diss Py
504	320771	5939489	FLT	0	felsite	siliceous felsite , py
505	320772	5939503	FLT	0	felsite	siliceous felsite , py

Appendix 4

Statement of Expenditures

STATEMENT OF EXPENDITURES

TONKA PROPERTY

Geology and Geochemistry,

June to December 1994

Personnel	K. Schimann	3 days @ $438	$ 1 314
	K. McDonald	3 days @ $157	$ 471
	R. Bilquist, and L. Allen	10 days @ $201	$ 2 010
Field Costs		16 days @ $131	$ 2 096
(Food, camp, truck and ATV rentals, freight and misc. supplies)			
Rock analyses		30 samples @ $15	$ 450
Till analyses		262 samples @ $15	$ 3 930
Bark analyses		61 samples @ $16	$ 976
Data processing and report preparation			$ 900
		Total	**$ 12 147**

Appendix 5

Statement of Qualifications

APPENDIX V

STATEMENT OF QUALIFICATIONS

I, **Karl Schimann**, residing at 5442 Columbia Street, Vancouver, B.C., hereby states that:

1. I am the author of the report *Geology and Geochemistry, Tonka Property (Nechako Project), 1994, Omineca Mining Division.*

2. I have worked on the property from June to December 1994 for COGEMA Resources Inc. and supervised the work described in this report.

3. I graduated from the Université de Montréal with a B.Sc. in Geology in 1968.

4. I graduated from the University of Alberta with a Ph.D. in Geology in 1978.

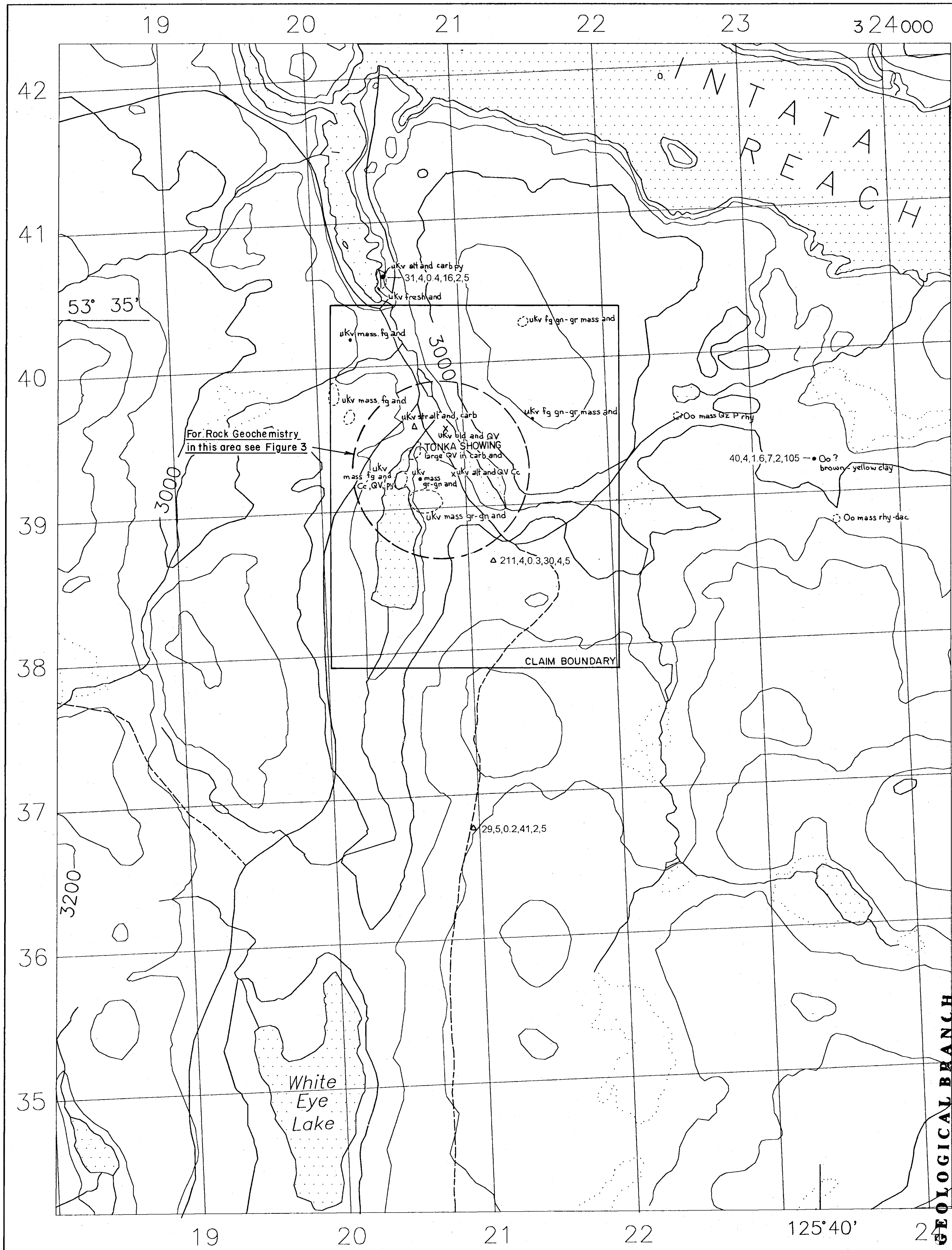
5. I am a Fellow of the Geological Association of Canada.

6. I am a member in good standing of the Association of Professional Engineers and Geoscientists of British Columbia

PROFESSIONAL
PROVINCE OF
K. SCHIMANN
BRITISH COLUMBIA
GEOSCIENTIST

Karl Schimann
District Geologist

Number	Au	Ag	As	Sb	Hg	Mo	Cu	Pb	Zn	Ba	Ni	Cr	Co	Mn	Fe	V	Sr	Mg	Ca	Ti	P	La	U	Th	Cd	Bi	B	W	Al	Na	K
	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%
5	94	3.2	250	2	5	8	8	26	23	203	7	7	1	52	1.91	3	41	0.02	0.08	0.01	0.048	6	5	2	0.2	2	2	1	0.32	0.01	0.26
6	43	0.6	47	3	15	9	4	13	13	78	9	10	1	54	0.64	2	8	0.01	0.02	0.01	0.01	5	5	2	0.2	2	2	1	0.13	0.01	0.1
7	32	0.8	40	3	5	15	6	20	21	39	8	11	1	165	0.72	2	11	0.01	0.12	0.01	0.01	8	5	2	0.2	2	2	2	0.18	0.01	0.16
8	37	0.7	135	6	10	14	6	13	34	98	9	6	4	88	2.89	10	14	0.06	0.25	0.01	0.105	25	5	2	0.2	2	2	2	0.46	0.01	0.2
9	17	0.1	49	2	5	4	5	21	25	28	8	9	1	82	0.76	2	7	0.02	0.1	0.01	0.022	7	5	2	0.2	2	2	1	0.23	0.01	0.14
10	99	3	91	4	5	110	6	25	9	55	8	8	1	34	1.12	5	5	0.01	0.04	0.01	0.03	7	5	2	0.2	2	2	1	0.21	0.01	0.16
11	110	0.7	104	3	5	17	5	16	21	32	5	6	1	125	1.35	2	5	0.04	0.05	0.01	0.021	11	5	2	0.2	3	2	1	0.3	0.01	0.15
12	34	0.2	75	2	10	27	5	18	60	48	6	5	1	473	2.35	5	31	0.5	0.79	0.01	0.056	18	5	2	0.2	4	2	1	1.02	0.01	0.23
13	47	0.2	1262	37	25	2	73	7	47	47	10	9	10	223	8.4	147	13	0.81	0.14	0.01	0.081	4	5	2	0.2	2	2	1	2.15	0.01	0.18
14	22	0.2	35	4	10	10	9	7	8	25	8	11	1	88	1.02	4	10	0.04	0.05	0.01	0.028	6	5	2	0.2	3	2	3	0.22	0.01	0.12
15	5	0.1	25	2	10	3	10	22	120	89	12	11	7	749	3.57	47	14	0.83	0.41	0.01	0.134	52	5	2	0.2	2	2	1	1.46	0.03	0.14
16	70	0.1	96	5	10	9	7	9	12	31	9	10	1	123	1.26	9	10	0.04	0.06	0.01	0.022	3	5	2	0.2	2	2	1	0.2	0.01	0.11
17	26	0.1	34	2	10	5	7	8	46	45	16	21	4	435	1.78	16	14	0.26	0.33	0.01	0.064	6	5	2	0.2	2	2	2	0.59	0.01	0.16
18	48	0.1	39	3	5	7	4	16	14	35	8	8	1	49	0.61	2	7	0.01	0.02	0.01	0.01	10	5	2	0.2	2	2	1	0.18	0.01	0.16
19	45	0.1	70	3	15	6	3	12	14	64	6	7	1	74	1.08	2	13	0.02	0.09	0.01	0.044	13	5	2	0.2	3	2	1	0.28	0.01	0.2
29	5	0.2	41	2	5	3	29	26	63	40	14	6	26	1720	6.75	61	50	0.55	1.09	0.19	0.189	7	5	2	0.2	2	2	1	1.78	0.05	0.21
30	8	0.1	23	2	5	6	5	13	12	78	3	5	1	350	0.52	2	24	0.01	0.55	0.01	0.003	6	5	16	0.2	2	2	1	0.25	0.01	0.23
31	4	0.4	16	2	5	3	35	3	69	18	107	77	21	743	5.12	80	171	3.76	4.71	0.01	0.14	15	5	2	0.2	2	2	1	2.98	0.02	0.05
40	4	1.6	7	2	105	1	23	22	101	187	22	21	10	608	3.32	42	47	0.27	0.4	0.05	0.031	35	5	9	0.3	2	2	1	1.77	0.02	0.11
41	16	0.6	51	2	20	2	48	12	47	37	20	54	7	304	4.46	103	7	1.42	0.06	0.01	0.071	4	5	2	0.2	2	2	2	1.93	0.02	0.12
42	10	0.3	34	2	10	9	9	9	34	54	4	4	3	410	2.03	17	7	0.27	0.17	0.01	0.064	6	5	2	0.2	2	2	3	0.86	0.02	0.21
43	5	0.1	14	2	25	2	11	6	59	36	6	5	3	929	2.48	16	99	0.54	3	0.01	0.065	9	5	2	0.3	2	2	2	1.07	0.01	0.16
44	33	17	57	2	15	14	10	11	24	23	12	15	3	232	2.83	49	8	0.64	0.07	0.01	0.035	3	5	2	0.2	2	2	1	1.06	0.01	0.14
45	2	0.1	13	2	20	4	48	3	50	92	6	29	5	385	7.37	114	45	0.69	0.14	0.02	0.135	7	5	2	0.2	2	2	1	1.66	0.03	0.26
211	4	0.3	30	4	5	9	6	6	6	66	3	5	1	170	0.65	2	8	0.01	0.01	0.01	0.006	13	5	4	0.2	2	2	2	0.21	0.01	0.22
330	20	0.1	23	2	30	2	4	7	52	51	7	3	2	764	3.71	10	161	0.89	2.38	0.02	0.048	16	5	2	0.2	2	2	1	1.75	0.07	0.22
331	390	303.8	85	2	20	50	6	42	31	37	5	6	2	160	1.72	11	12	0.16	0.13	0.01	0.048	5	5	2	0.2	2	2	2	0.44	0.01	0.16
332	500	3	339	2	5	15	10	14	7	45	3	3	2	50	2.91	7	9	0.03	0.17	0.01	0.058	6	5	2	0.2	2	2	2	0.33	0.01	0.27
504	41	0.4	42	2	5	3	4	3	7	18	8	9	1	107	0.67	2	3	0.01	0.05	0.01	0.009	4	5	2	0.2	2	2	2	0.15	0.01	0.1
505	6	0.7	13	2	5	1	5	6	3	25	3	6	1	154	0.51	2	6	0.01	0.07	0.01	0.002	5	5	11	0.2	2	2	3	0.23	0.01	0.17



N

LEGEND

Geology

Oo	Ootsa Lake Group	rhyolite, sediment
uKv	Kasalka Group	andesite

- outcrop
- x subcrop
- Δ float

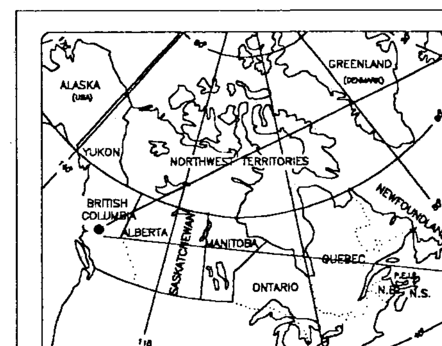
Abbreviations

and	andesite
bld	bleached
carb	carbonated
Cc	calcite
fg	fine
Fp	feldspar
gn	green
gr	grey
P	porphyritic
Py	pyrite
QV	quartz vein
Qz	quartz
rhy	rhyolite
rhy-dac	rhyo-dacite
sil	silicified
str	strong

Geochemistry

Δ— 31,4,0.4,16,2,5

Sample number, Au ppb, Ag ppm, As ppm, Sb ppm, Hg ppb



E/16	F/13	F/14	F/15
E/9	F/12	F/11	F/10
E/8	F/5	F/6	F/7
E/1	F/4	F/3	F/2

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INDEX TO ADJOINING N.T.S. SHEETS

COGEMA Resources Inc.

SCALE 1:20,000

0 500 1000 1500 METRES

NECHAKO PROJECT

TONKA PROPERTY

GEOLOGY & GEOCHEMISTRY

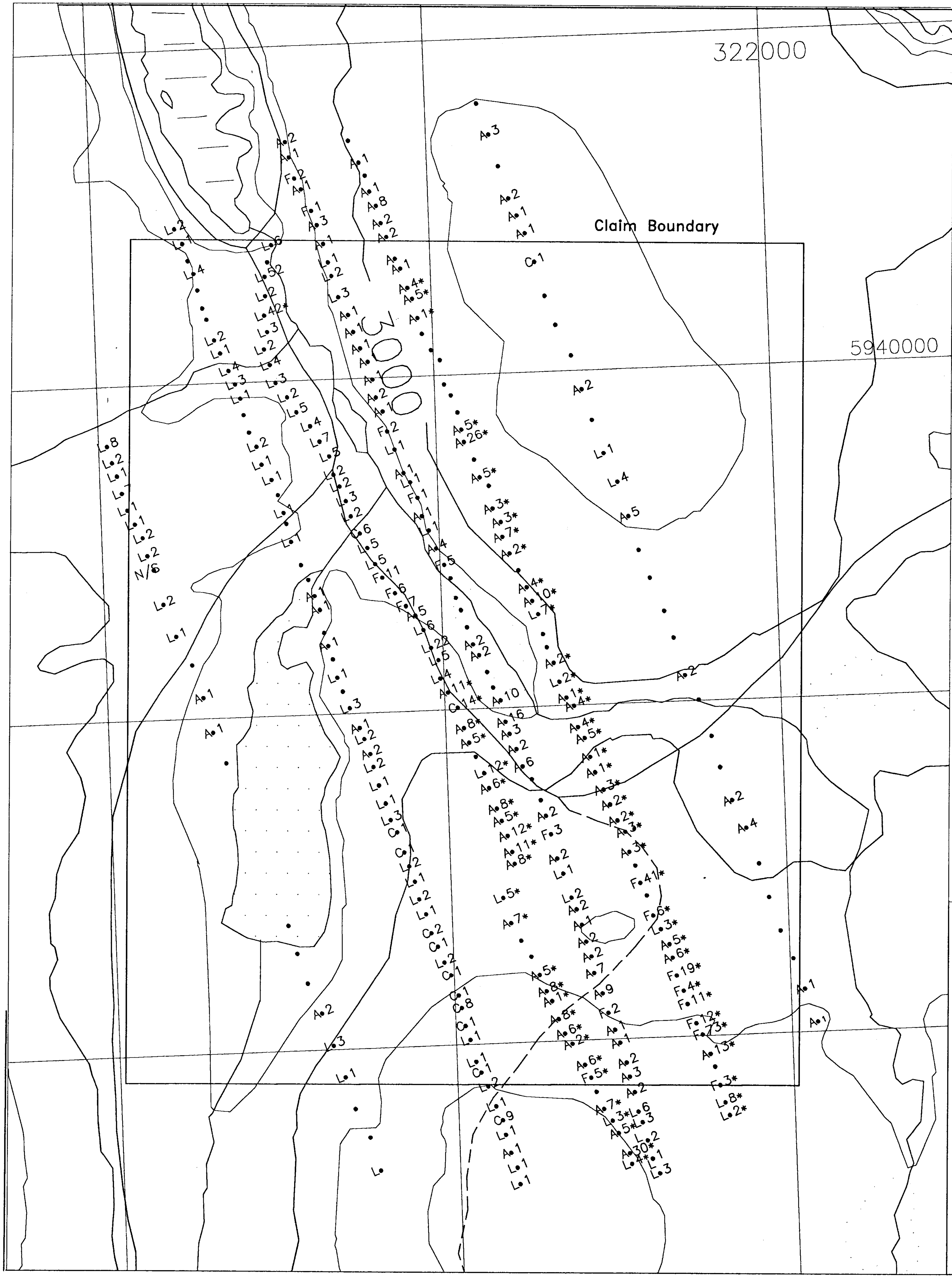
GEOLOGICAL BRANCH ASSESSMENT REPORT

23,750

Compiled by : KS
Drafted by :
Base map :
Revised by :
Date : NOV.94

Report no. : 94-CND-78-8
Annex no. :
MAP NO : 1

CHONG



LEGEND

L•2 — Au ppb (when absent = no sample taken)
— Sample location
— Till type
- F fluvioglacial
- A ablation
- L lodgment
- C colluvium
- O organic

7* Sample Probably Contaminated With Au

GEOLOGICAL BRANCH
ASSESSMENT REPORT

23,750

COGEMA Resources Inc.

SCALE 1: 10 000

0 — 1

KILOMETRES

NECHAKO PROJECT

TONKA PROPERTY

Till Geochemistry
Au

Map 2

Report 94-CDN-78-8