LINECUTTING, GEOLOGICAL MAPPING

AND

GEOCHEMISTRY

ON THE

ELF NORTH GROUP CLAIMS

NTS: 94F/7E&W

BY: TECK EXPLORATION LTD.

FOR: CIRQUE OPERATING CORP.

R. FARMER
NOVEMBER 1997

SUMMARY

A program comprising linecutting, geological mapping and soil geochemical sampling was carried out on the Elf North Group claims between July 23 and August 3, 1997. The purpose of the program was to assess two areas previously identified as prospective, by establishing grids to facilitate detailed geological mapping and soil sampling, with a view towards identifying potential drill targets.

A total of 14.5 line kilometres of linecutting was completed on two grids. A total of 6.8 line kilometres were completed on the Ian Creek Grid. On the Joel creek Grid, only the northwestern portion of the grid is included in the Elf North Group, totaling 7.7 line kilometres. The southeastern portion is described in a separate report.

A total of 14.5 line kilometres of grid controlled geological mapping were completed on the two grids, and a total of 520 soil samples and one rock sample collected on Elf North Group claims.

Exploration on the Ian Creek Grid has identified two parallel horizons of prospective siliceous shale, both of which contain barite mineralization. The eastern horizon is associated with two high contrast geochemical anomalies. One anomaly, a Pb-Zn-Ag multielement response continues southward off the grid, and has been previously tested by a drill hole which intersected massive barite. This anomaly should be fully delineated by extending the grid southwards. Both anomalies may warrant additional drill testing.

On the Joel Creek grid, a thick section of Gunsteel shales again contains two parallel siliceous shale horizons. The western horizon is the thickest and most prospective. Both horizons are associated with multielement soil anomalies, however the western horizon has a higher contrast Pb-Zn-Ag (Ba) response, a ferricrete zone and remains untested. Two drill holes may be warranted to test this horizon.

RECOMMENDATIONS

1. Extend the Ian Creek grid southeastwards to fully delineate the strong multielement soil anomaly near the eastern end of line 160N.

2. Re-log existing drill core from the Ian Creek grid area to assess the nature and extent of barite mineralization intersected in hole 81-E-11.

3. Upon completion of Nos. 1&2 above, diamond drill all favourable geological and geochemical targets.

4. Test the multielement soil anomaly on line 148N at the baseline on the Joel Creek grid and the ferricrete zone near 98+50E on line 145N by hand trenching.

5. On the Joel Creek grid, drill test the western siliceous shale horizon, in the area of strong multielement soil geochemistry. The best targets are lines 146N and 143N.

TABLE OF CONTENTS

Page No.

LIST OF FIGURES

Following Page No.

LIST OF TABLES

Page No.

LIST OF APPENDICES

INTRODUCTION

The Elf property is located in the Akie River area, southern Kechika trough, in northeastern B.C. The property is underlain by a thick succession of black shale and chert of the Upper Devonian Gunsteel Formation, Earn Group. The Cirque deposit (30 MT @ 8% Zn, 2% Pb, 37g/t Ag), located 35 kilometres to the northwest, is hosted by these same shales. The Elf property consists of 161 contiguous units and this report describes work carried out on the northwestern portion of the property, grouped as Elf North Group (96 units).

During 1997 a program comprising linecutting, grid controlled geological mapping and soil geochemistry was carried out on the northwestern portion of the Elf property, grouped as Elf North Group. Work was carried out on two grids; the Ian Creek Grid and the Joel Creek Grid. The purpose of the program was to establish a grids in the Ian Creek and Joel Creek areas where favourable stratigraphy and baritic mineralization had been identified in 1995, to allow detailed geological mapping and soil sampling in an attempt to locate additional mineralization in this area.

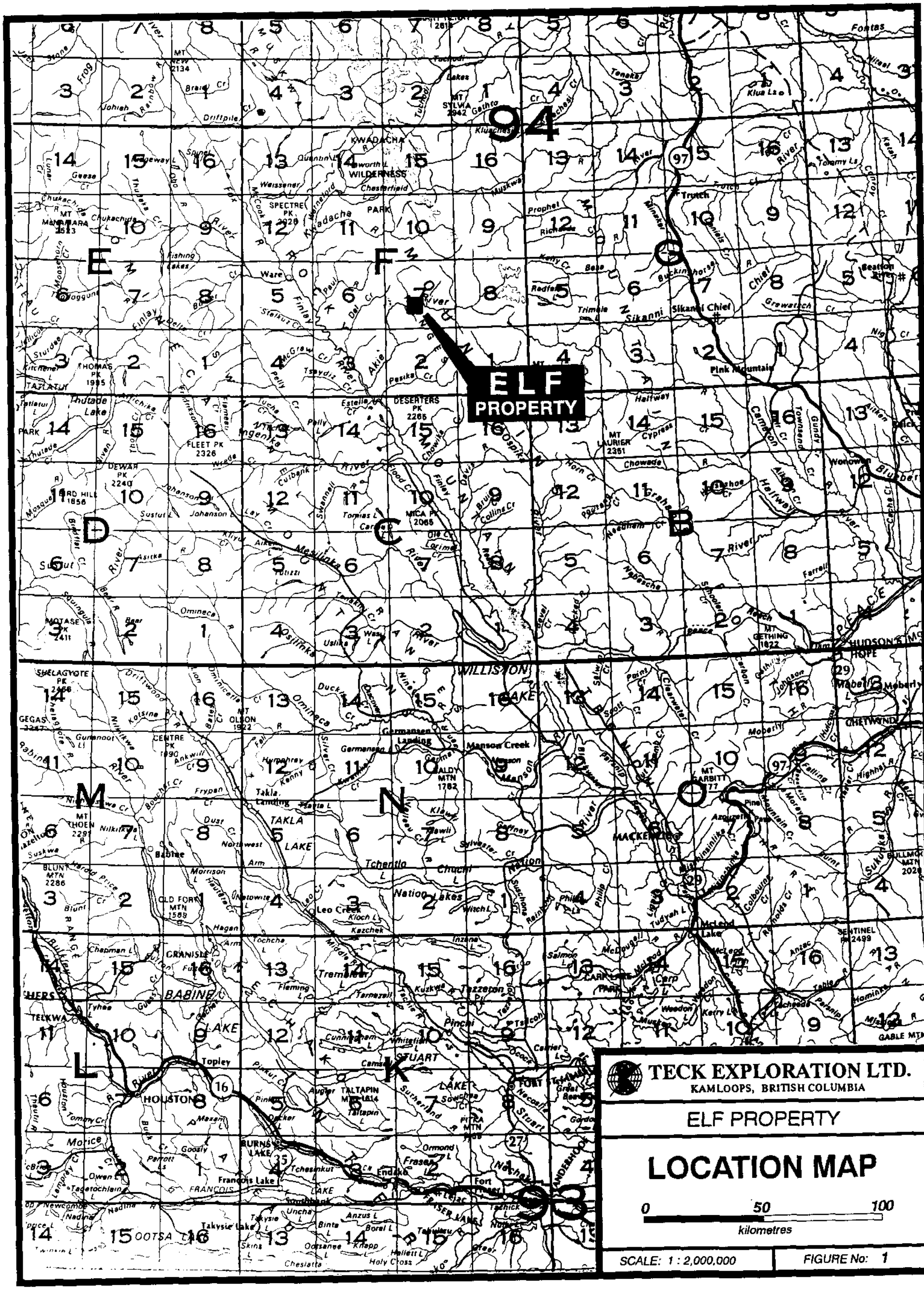
This report describes the work carried out on the Elf property, Elf North Group claims, and provides an interpretation of results obtained.

LOCATION AND ACCESS

The Elf property is located on the south slope of the Akie River, approximately 45 kilometres east-southeast of the village of Fort Ware, B.C. (figure 1). The center of the claims are located at latitude 57° 18' N, longitude 124° 42' W, on NTS mapsheets 94F/7 E&W.

Access to the property is via helicopter only, with the nearest base located at the logging camp of Finbow, 40 kilometres west of the property. Assess to Finbow camp is by fixed wing aircraft or barge from the town of Mackenzie, B.C., a distance of 250 kilometres. The 1997 program was based out of the Finbow Camp located 40 km northwest of the property, utilizing helicopter transport to the property on a daily basis.

The Elf claims cover the steep south slope of the Akie River. Slopes are generally heavily timbered with spruce and fir, higher elevations on ridge tops are above tree line. Despite heavy timber, slopes are very steep (often 30-50°), with much timber on the ground. Elevations on the property vary between 930 and 1600 metres, with several steeply incised creek valleys cutting across the predominant northwest topographic alignment.



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ELF PROPERTY

LOCATION MAP

0 50 100
kilometres

SCALE: 1 : 2,000,000 FIGURE No: 1

CLAIMS

The Elf property comprises 21 claims totaling 165 units (figure 2). The current registered owner of all claims is Cirque Operating Corp. This report concerns a portion of these claims, 11 claims totaling 96 units, comprising Elf North Group. Table 1 below provides a summary of claim statistics.

Table 1
Claim Statistics

Claim Name	Record Number	Number of Units	Owner	Expiry Date*
Elf 1•	237990	6	Cirque Operating Corp.	23 Jun 2001
Elf 2	237991	6	Cirque Operating Corp.	23 Jun 2001
Elf 3•	237992	4	Cirque Operating Corp.	23 Jun 2001
Elf 4	237993	10	Cirque Operating Corp.	23 Jun 2001
Elf 5	237994	4	Cirque Operating Corp.	23 Jun 2001
Elf 6•	237995	10	Cirque Operating Corp.	23 Jun 2001
Elf 7	237996	4	Cirque Operating Corp.	23 Jun 2001
Elf 8•	237997	18	Cirque Operating Corp.	23 Jun 2001
Elf 9•	237998	8	Cirque Operating Corp.	23 Jun 2001
Elf 10	237999	8	Cirque Operating Corp.	23 Jun 2001
Elf 11	238000	12	Cirque Operating Corp.	23 Jun 2001
Elf 12•	238001	1	Cirque Operating Corp.	23 Jun 2001
Elf 13•	238007	20	Cirque Operating Corp.	18 Jul 2001
Elf 14•	238008	20	Cirque Operating Corp.	18 Jul 2001
Elf 15•	238009	2	Cirque Operating Corp.	18 Jul 2001
Elf 15	238029	9	Cirque Operating Corp.	01 Aug 2001
Elf 16	238128	5	Cirque Operating Corp.	22 Jun 2001
Elf 17•	238129	3	Cirque Operating Corp.	22 Jun 2001
Elf 18•	238144	4	Cirque Operating Corp.	13 Aug 2001
Elf 19	238287	4	Cirque Operating Corp.	11 Jul 2001
Elf 21	238336	3	Cirque Operating Corp.	11 Sept 2001

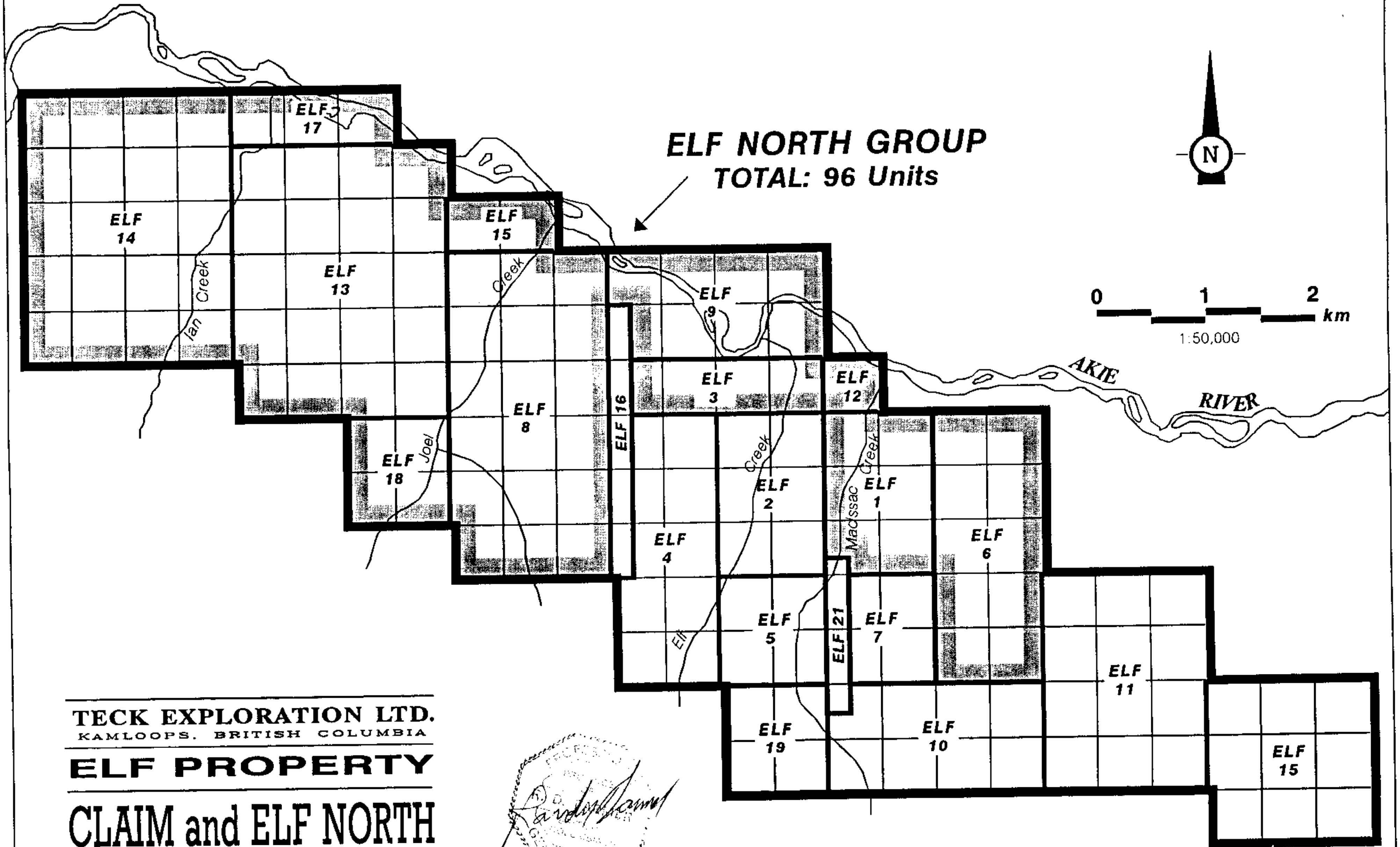
Total: 96 Units

- **Grouped as Elf North Group**

* **Expiry of Elf North Group Claims Based on Acceptance of this Report**

PREVIOUS WORK

The Elf claims were explored between 1978 and 1982 by Cyprus Anvil Mining Corporation. Work carried out during that period included, geological mapping, stream and soil geochemical sampling, linecutting, orthophoto base map construction, horizontal loop EM and diamond drilling.



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ELF PROPERTY

CLAIM and ELF NORTH GROUP LOCATION

FIGURE 2

Follow-up of stream sediment anomalies and mineralized float led to the 1979 discovery of a high grade barite-lead-zinc showing in Elf Creek. Between 1979 and 1982 a total of 26 diamond drill holes (10,500 metres) were drilled on the property, 23 in the area of the Elf Creek Showing and three to test soil anomalies in the northern portion of the claims, one of these in the area now covered by the Joel Creek Grid, and two in the area now covered by the Ian Creek grid. Significant mineralization was intersected in eight holes directly under the Elf showing, with the best being 3.65% Pb, 10.13% Zn, 27.2 g/t Ag over a true width of 10.9 metres. A further 15 holes drilled in the vicinity of the of the showing failed to intersect the mineralized horizon due to bad drilling conditions (10 holes), or intersected a barren zone at the targeted horizon (5 holes). Three holes drilled to test soil anomalies several kilometres to the northwest, failed to intersect significant mineralization. The majority of this drilling was undertaken on what is now the Elf South Group of claims.

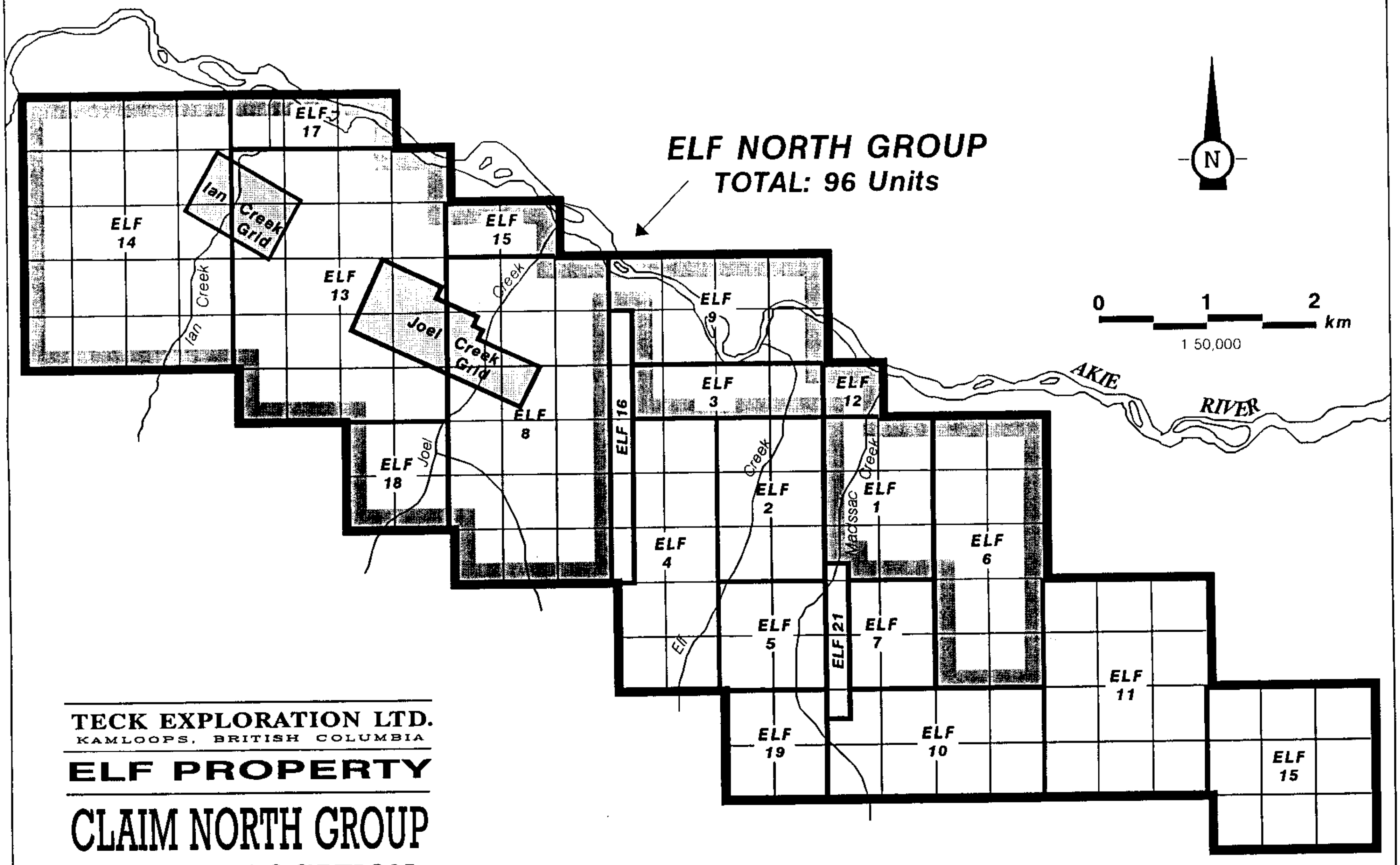
In 1995, a program comprising regional scale geological traverses, linecutting, soil geochemical sampling and grid controlled geological mapping were carried out by Teck Exploration Ltd.

CURRENT PROGRAM

During the period July 23 to August 3, 1997 a program consisting of linecutting, grid controlled geological mapping and soil geochemical sampling was carried out on two grids within the Elf North Group claims. On the Ian Creek Grid, work comprised establishing a grid in an area previously identified as being geochemically anomalous (Roberts, 1979). At Joel Creek, approximately 3 km to the southeast, a grid was established to cover an area of favourable stratigraphy containing barite mineralization identified in 1995 (Farmer, 1995). Only a portion of the Joel Creek grid is reported on here, the northwest portion, located on the Elf 13 claim (figure 3). The remainder of the grid is covered in a separate report on the Elf South Group of claims. The claim boundary marking the limit of work described here is indicated on all grid maps (figures 6 and 11-14). The purpose of the program was to attempt to locate significant mineralization or proximal stratigraphy which may warrant drill testing on both the Ian Creek and Joel Creek grids. A total of 14.5 line kilometres of linecutting and geological mapping were completed, and 520 soil samples, along with one rock chip sample collected as part of the 1997 program. Geology and soil geochemical results are plotted on 1:2500 scale grid maps included as figures 5 to 14.

LINECUTTING

Linecutting was carried out by Twin Mountain Enterprises Ltd. of Whitehorse, YT. Linecutting on Elf North Group claims in 1997 consists of a total of 14.5 line kilometres, including 6.8 line kilometres on the Ian Creek Grid and 7.7 line kilometres on the northwestern portion of the Joel creek Grid. On the Joel Creek Grid only the portion



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ELF PROPERTY

CLAIM NORTH GROUP and GRID LOCATION

FIGURE 3

of the grid located northwest of the Elf 13 claim boundary is included for assessment and described here. This includes portions of lines 140N to 143N, all of lines 144N to 151N and the baseline from 140N to 151N. On both grids baselines were established at an azimuth of 300° with crosslines run at an azimuth of 030° and spaced 100 metres apart. All lines were cut using a power saw. Azimuths were turned off using a brunton compass and maintained utilizing sight pickets. Distances were chained and slope corrected. Stations were established every 25 metres on cross lines and the baseline and are marked by wooden pickets with metal tags. The linecutting was done from July 23 to August 1, 1997 (9 days). Grid locations are shown on figure 3 and accurate grid lines are plotted on figures 5 to 14.

GEOLOGY

A. Regional Geology (Figure 4)

The best description of the geology of the Gataga district - Akie River area, including the Elf property area is provided by MacIntyre (1981, 1992).

The Elf property is located within the Rocky Mountain Fold and Thrust belt of northeastern B.C. The property is located within Paleozoic, miogeoclinal basinal facies rocks of ancestral North America affinity (MacIntyre, 1992). These rocks were deposited in the Kechika Trough, a southeast extension of the Selwyn Basin, and are bounded to the east by platformal carbonates of the Macdonald Platform and to the west by carbonates of the Cassiar Platform. The Kechika Trough is underlain by predominantly clastic rocks, ranging from Proterozoic to Triassic in age which form a northwest trending linear belt. The Elf property is underlain by black shale, siliceous shale and chert of the Gunsteel Formation, Lower Earn Group, of Upper Devonian age. The Stronsay (Cirque) deposit, located 30 kilometres to the northwest (38.5 mt @ 8.0% Zn, 2.2% Pb, 47.2g/t Ag), is hosted by the same Gunsteel Formation shales. Northeast directed compression has resulted in complex thrusting and related folding, resulting in difficult srtatigraphic correlation.

Cyprus Anvil Mining Corporation carried out extensive work on the Elf property during the period 1978-1982, including regional and detailed mapping and diamond drilling. From this work a showing was discovered near Elf creek, consisting of laminated massive barite and galena, named the Elf Showing. This showing is associated with black, siliceous shale.

B. Property Geology - 1997 Work

Geological mapping in 1997 included, detailed grid controlled mapping on two grids, the Ian Creek and Joel Creek grids, comprising 6.8 line kilometres and 7.7 line kilometres, respectively. Mapping was facilitated by traversing grid lines and areas between lines and outcrops or other features were plotted in relation to the nearest grid

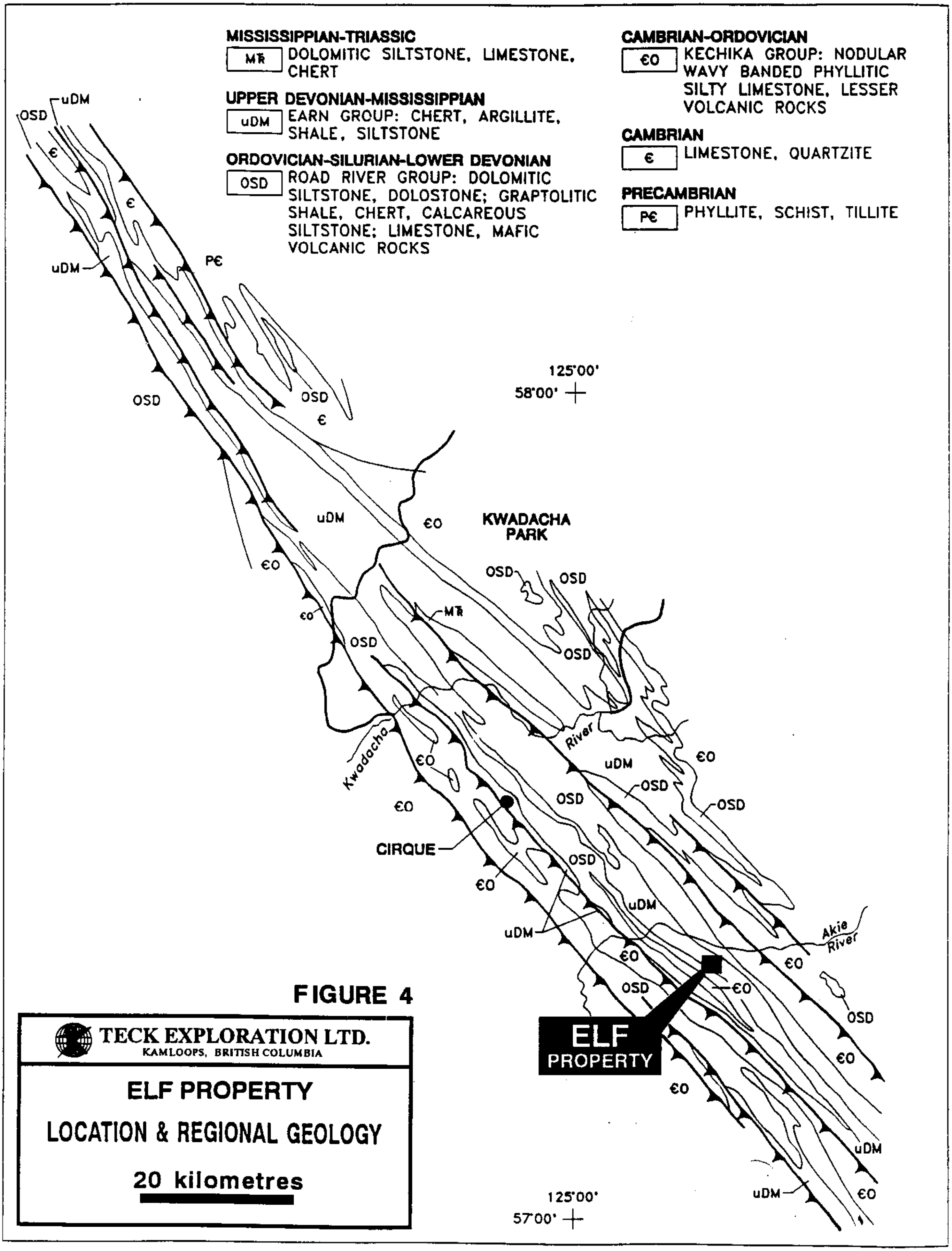

FIGURE 4

TECK EXPLORATION LTD.
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ELF PROPERTY

LOCATION & REGIONAL GEOLOGY

20 kilometres

AFTER MacINTYRE, 1983

station. Geological mapping was carried out between July 28 and August 1, 1997. A single rock sample was collected during the course of mapping. Geology for the Ian Creek grid is plotted on figure 5 and for Joel Creek Grid, on figure 6.

The Gunsteel sequence on the property trends in a northwest - southeast manner across the claims and is bounded to the southwest by Silurian calcareous siltstone, which has been thrust northeastwards onto the younger Gunsteel shales. To the northeast the Gunsteel shales are overlain by a siltstone/shale package termed by previous operators as the Conundrum Siltstone. The nature of the contact is not clear, but likely is a fault.

Gunsteel shales form a belt several hundred metres thick on the property, however structural repetition is likely. Mapping in 1997 has recognized five distinctive subdivisions based on lithology, but relative stratigraphic relationships are unknown. The subdivisions include; silty, fissile shales (unit 3e), siltite laminated shale (unit 3d), chert (unit 3c), black "speckled" shale (unit 3b) and siliceous, graphitic shale (unit 3a). Siliceous graphitic shale of unit 3a is the host to mineralization at the Elf Showing, in the southern portion of the property. A description of lithological units is included in the "Lithology" section below. These different lithologies are distinctive in the field, however contacts are gradational resulting in areas with characteristics of more than one lithology, and several outcrops are often necessary to distinguish lithological units.

The shales have a general northwest strike with shallow to moderate dips to the southwest. Cleavage is generally subparallel to bedding but usually has a steeper, subvertical dip. Locally variable strikes and dips indicate complex structure, in terms of both folding and faulting. Small scale (10's of metres), tight to isoclinal, often overturned folds are common. Cliffs near the Joel Creek Showing show a variety of low to high angle faulting with offsets varying from a few centimetres to tens of metres and more. These faults are difficult to recognize anywhere other than cliff faces.

On the Ian Creek grid (figure 5), bedrock exposure was found to be poor, except along Ian Creek, on lines 160N and 161N and, along the northeastern portion of the grid, where bedrock is fairly well exposed. The Ian Creek Grid is underlain entirely by shales of the Gunsteel sequence (Unit 3). Siltstones of units 2 and 4 are not exposed in the grid area, confirming that the Gunsteel sequence is in excess of 600 metres wide in this area.

Although bedrock is fairly well exposed in portions of the grid area, the outcrops tend to be small and not well exposed, lending some difficulty to obtaining bedding and cleavage measurements. Lithologies tend to strike southeast (120-130°) with cleavage subparallel. Dips are to the west and variable. Two main bands of siliceous shale of unit 3a are present, trending across the grid separated by 300-400 metres of generally silty shale of unit 3e. One band roughly parallels the baseline, while the other occurs along the northeastern end of the lines. A poorly exposed third band is present between the other two. It is not clear whether these bands represent separate horizons or fold repetitions of a single horizon. Multiple bands (horizons?) of siliceous shale were not recognized by previous operators and may have implications for the location and delineation of mineralization.

Nodular to laminated barite hosted by black siliceous shale was identified in two locations along Ian Creek, near the end of line 166N and, along the baseline between lines 165N and 166N. The exposure along the baseline was sampled (#51254), and although not anomalous in Pb, Zn or Ag, graded 24% Ba over 1.5 metres. The sample location and results are plotted on figure 5. Barite nodules and minor pyrite were observed in several localities, generally within siliceous shale.

Siltite laminated shale (Unit 3d) was identified in two locations, near 103E on line 161N and, near 99E on lines 160N and 161N. In both cases poor exposure prevented tracing the lithology any distance. Two exposures of black speckled shale (Unit 3b) were identified near 102+50E on line 160N, but could not be traced any distance.

On the Joel Creek Grid (figure 6), located approximately 3 kilometres southeast of the Ian Creek Grid, 7.7 line kilometres of mapping were carried out over the northwestern portion of the grid, northwest of the Elf 13 claim boundary. Only work carried out northwest of this claim boundary is discussed here. Results for the entire grid are shown on figure 6 for completeness however the southeastern portion of the grid is the subject of a separate report.

Mapping on the northwestern portion of the Joel Creek Grid has shown that nearly the entire grid area is underlain by Gunsteel Formation shales (unit 3). The contact with Silurian dolomitic siltstone of unit 2 is located approximately 100 metres towards grid east of the baseline on line 141N and previous mapping (Farmer, 1995) has shown that the same contact lies approximately 50 metres west of the baseline near 150N. Bedding in the grid area has a fairly consistent strike of 120-130° with moderate dips to the west. Cleavage, though locally variable, has a strike subparallel to bedding with steep west dip. Outcrop exposure is reasonably good, particularly in the northern and eastern portions of the grid.

Two belts of siliceous shale (unit 3a) were identified and bedding/cleavage relationships do not suggest a fold repetition. The western belt occurs near the baseline at the northern end of the grid, swinging into the center of the grid southwards. This belt is on the order of 200 metres wide at the north end, thinning to about 50 metres southeastwards. This belt of siliceous shale is interbedded with black, ribbon bedded chert, is locally strongly graphitic, with disseminated pyrite, barite nodules and concretions. Hydrozincite was recognized in two locations. Between lines 147N and 145N ferricrete rubble and subcrop were identified, possibly indicating the presence of significant sulphide mineralization. Silty shales of unit 3e are exposed west of this siliceous shale horizon, which are variably siliceous near lines 150N and 151N, possibly indicating they are interbedded with unit 3a in this area.

The eastern belt of siliceous shale is located 200 to 300 metres to the east, separated by siltite laminated shale of unit 3d and silty shale of unit 3e. This horizon is much more weakly siliceous and is often interbedded with silty shale of unit 3e and speckled shale of unit 3b. Previous mapping (Farmer, 1995) had suggested a discrete unit of spotted shale in this area, however detailed grid mapping now indicates that spotted shales only occur as interbeds in a dominantly siliceous shale sequence. Of the two, the western horizon of unit 3a seems far more prospective as a host to mineralization.

A previous drill hole, collared at approximately 100E on line 143N and drilled towards grid east tested the eastern horizon of siliceous shale and did not encounter significant mineralization. The western horizon remains untested.

Direct evidence for folding was not identified in the mapped area.

C. Lithology

The following section describes lithologic units used on geological maps included in this report. Units are numbered from stratigraphically lowest to highest, although stratigraphic relationships within the Gunsteel Formation are not known at this time. Contacts between units belonging to the Gunsteel Formation (3a-3e) are gradational.

UNIT 1 - ORDOVICIAN STRATIGRAPHY

This unit includes limestone (Unit 1a) and mafic volcanic rocks of the Ospika Volcanics (Unit 1b). Unit 1a consists of massive to thick bedded grey limestone forming prominent ridges and cliffs in the southeastern portion of the property. The age of the limestone is uncertain, but because it occurs in the same thrust panel as Ospika Volcanics is considered to be Ordovician. Unit 1b consists of limonitic to ankeritic weathering, carbonate-rich, mafic volcanic flows and breccias. Rocks of Unit 1 are exposed in a thrust panel in the southeastern corner of the Elf claims, and are not exposed in the northern portion of the property, which is the subject of this report, and will not be discussed further here.

UNIT 2 - SILURIAN SILTSTONE

This is a distinctive package of rocks, including several lithologies which have not been subdivided. The most common and distinctive lithology consists of brown to buff weathering dolomitic siltstone. The siltstone varies from thin to thick bedded and locally contains thin interbeds of grey calcareous, shale. Occasionally, dark grey massive limestone is present as beds varying from a few centimetres to several ten's of metres thick. A lithology consisting of light grey calcareous mudstone containing 70% grey "pancake shaped" discontinuous limestone beds to 10 centimetres thick is also present locally. Rocks of Unit 2 have been thrust in a northeast direction over Devonian Gunsteel stratigraphy.

UNIT 3 - GUNSTEEL SHALES

Gunsteel shales are Upper Devonian in age and consist of grey to black shale, mudstone and chert. The sequence is host to Sedex Pb-Zn-Ag-Ba mineralization throughout the Kechika Trough and Selwyn Basin. Geological mapping on the Elf property has recognized five subdivisions within the Gunsteel shales, here designated as units 3a to 3e.

Subunit 3a consists of siliceous, graphitic black shale which locally contains carbonate concretions, nodular barite and/or disseminated to laminated pyrite. This subunit is the direct host to mineralization on the property. Due to the very siliceous to cherty nature of these rocks they tend to be non-fissile, in spite of being intensely graphitic and strongly cleaved. In addition, when present, concretions, barite nodules and pyrite laminations make this subunit readily identifiable. Carbonate concretions vary from less than one centimetre to in excess of one metre in diameter. Generally small lenses of black chert are often interbedded with the siliceous shales.

Subunit 3b consists of a very distinctive massive, black, silty shale containing abundant, pinhead sized grey spots, lending a speckled appearance to the lithology on fresh surface. Composition of the spots is not known but is most likely barite. Speckled shale of subunit 3b locally seems to form a readily mappable lithological unit, but in other areas occurs only as interbeds in other units. On the Joel Creek grid, speckled or spotted texture has been identified in siltstone and shale of unit 4 locally, perhaps suggesting that the texture may be a later (alteration or metamorphic?) event.

Chert (subunit 3c) is present, locally, throughout the Elf property. It occurs as interbeds a few tens of centimetres thick within siliceous shale of subunit 3a and as a distinct lithology 10 to 20 metres thick within and adjacent to subunit 3a. Cherts are also present far removed from siliceous shale stratigraphy where they form discrete horizons within siltite laminated shales of subunit 3d or silty shales of subunit 3e. As such they do not appear to be restricted to a particular portion of stratigraphy, but rather occur throughout the Gunsteel stratigraphy. Cherts are black and vary from massive to thinly bedded. Thinly bedded varieties contain millimetre scale shale interbeds, producing a "ribbon bedded" texture. They are characteristically rusty weathered on fracture surfaces due to a minor content of disseminated pyrite. Chert horizons can seldom be traced for any distance along strike, suggesting a discontinuous nature to their presence.

Subunit 3d consists of a grey to black, siltite laminated shale. Siltite laminations are light grey in colour and a few millimetres to one centimetre thick, often imparting a striped appearance to shales. This texture is best recognized on weathered surfaces. Rocks of subunit 3d are always non-siliceous, and often silty looking. They are commonly very fissile in outcrop and are generally associated with undivided shale of subunit 3e. Siltite laminated shales are always distal from mineralization and combined with silty fissile shale of subunit 3e probably form the bulk of Gunsteel stratigraphy.

Unit 3e includes silty, fissile grey to black shales to mudstones. These shales are non-siliceous and non-graphitic. They often have a "silty" appearance and may locally grade into siltstone or mudstone. A ubiquitous slaty cleavage is particularly well developed in unit 3e, producing commonly fissile shale, locally to the point of paper thin plates. Unit 3e includes all undivided Gunsteel shales.

UNIT 4 - CONUNDRUM SILTSTONE

Unit 4 overlies the Gunsteel shales but is likely still of Upper Devonian age. This unit probably correlates with the Conundrum Siltstone as described by Cyprus Anvil geologists (Roberts, 1979; Jefferson, 1980), and consists of a siltstone dominant sequence. Main rock types include; grey, brown, to black weathering, grey to black, thick bedded (2-50cm) siltstone. Locally, grey shale interbeds produce a well bedded siltstone- shale lithology. Occasional coarser, gritty beds may be present. The siltstone and shale are often, but not always, mildly calcareous. Contact relationships between units 3 and 4 are not known however, bedding reversals across the contact suggest a fault or unconformity. There is some suggestion of a broad transition between upper Gunsteel Fm. and Conundrum siltstone. This transition is in the form of increasing siltstone content towards the top of the Gunsteel Fm., becoming siltstone dominant in Unit 4. Additional work is necessary to confirm this however, if correct, may be indicative of a marine regression in the uppermost Devonian, allowing a rapid influx of coarser clastic material. The position of unit 4 to the east of the Gunsteel sequence (west dipping), also suggests a regional unconformity or structural emplacement.

D. Mineralization

One significant showing was previously known on the Elf property, the Elf Showing discovered by Cyprus Anvil Mining Corp. in 1979. A second, baritic occurrence was discovered in Joel Creek in 1995 (Farmer, 1995). The following showing descriptions are from Farmer, 1995.

The Elf Showing, located on the Elf Grid and mapped in detail in 1995 consists of massive, well laminated barite at least four metres thick, originally exposed in three trenches and several pits. The barite is host to considerable galena as disseminations and thin (<2 cm, max 10 cm) massive laminations, as well as minor pyrite and trace sphalerite. Additional hand trenching in 1995 extended the known surface strike length of the showing to 50 metres. Mineralization is overlain and underlain by siliceous black shale. Concretion bearing shale is present in the structural hanging wall and a greenish, sericitic shale is locally present in the structural footwall. Barite nodules are also present for at least 10 metres above and below mineralization. Locally, the immediate footwall to mineralization, particularly at the northwest end, is a coarse, crystalline calcite vein, up to several metres thick, often containing patchy recrystallized galena and sphalerite. The veining may be indicative of a fault on the footwall side of mineralization. Bedding / cleavage relationships suggest the mineralization is on the west limb of an overturned antiform. To the west, within 50 metres, Silurian siltstone has been thrust over the Gunsteel package containing the mineralization. On surface, mineralization grades up to 0.22% Zn, 10.46% Pb, 22.58 g/t Ag over 4.0 metres.

The Joel Creek Showing (Figure 6) was discovered in 1995. Mineralization is exposed in a cliff on the northwest side of Joel Creek, and consists of beds of nodular to blebby barite (5-20%) and laminated pyrite (10-30%) within black, graphitic, siliceous to cherty shale. The mineralized zone is approximately 4 metres thick. Individual barite-pyrite beds are 10-20 cm thick. The mineralized zone forms a gossan, enhanced by two Fe-seeps which seem to drain a high angle fault two metres into the hanging wall. The mineralized zone is also characterized by abundant hydrozincite and hemimorphite surface coatings. Bedding strikes 110° to 120° and dips 60° to the southwest. The hanging wall to mineralization consists of a thick succession of black siliceous to cherty shale containing occasional concretions to 10 cm, as well as local mm-scale pyrite laminations and barite nodules. The footwall to mineralization is a grey to black, silty, well laminated shale also containing local mm-scale pyrite laminations and barite nodules. The sequence is cut by a series of high angle faults, subparallel to either bedding or cleavage which have a west side down or, left lateral (strike slip) sense of movement.

Mapping in 1997 discovered a new baritic occurrence, similar to the Joel Creek occurrence described above, in Ian Creek. Here, siliceous shale is host to nodular barite and barite laminations a few centimetres thick. Minor disseminated pyrite is locally present. The baritic interval is approximately 10 metres thick and a sample over 1.5 metres graded, 24% Ba, but was not anomalous in Pb or Zn.

GEOCHEMISTRY

A total of 520 soil samples and one rock chip sample were collected as part of the 1997 exploration program, comprising 246 soil samples and one rock sample from the Ian Creek Grid and 274 soil samples form the northeastern portion of the Joel Creek grid. Soil samples were collected at 25 metre intervals along grid lines and at 50 metre intervals along the baseline. An attempt was made to sample the "B" soil horizon whenever possible. Soil development was generally good on both grids. A hand type soil auger was utilized for soil collection and proved effective for penetrating talus and reaching deep "B" horizons in some areas. Sampling was carried out between July 27 and August 2, 1997.

All samples were placed in Kraft paper bags and sent to Cominco laboratories in Vancouver, B.C. for analysis, where all were analyzed for Pb, Zn, Ag, and total Ba. Sample locations and results for Pb, Zn, Ag, Ba are shown on figures 7-10 for the Ian Creek Grid and figures 11-14 for the Joel Creek Grid. Complete results are listed on the Certificates of Analyses located in Appendix III. Analytical procedures are included in Appendix IV, and Soil Sample Descriptions in Appendix V.

The following section provides an interpretation and description of the geochemical results. Figures 7-14 show plotted values for the elements Pb, Zn, Ag and Ba respectively and anomalous values have been contoured. Grid station numbers are the sample numbers and as such, a separate sample location map is not included. The anomalous threshold was determined by visual examination of the plotted data. A background was estimated and the anomalous threshold was selected at two times the estimated background. Experience in the belt has shown that discrimination of anomalies by visual examination of data is an effective method of determining anomalous thresholds for soil geochemical data. Threshold values for the Ian Creek Grid are; Pb - 75ppm, Zn - 1000ppm, Ag - 1.0ppm and Ba - 7500ppm and for the Joel Creek Grid; Pb - 100ppm, Zn - 1000ppm, Ag - 1.0ppm and Ba 8000ppm.

A. Ian Creek Grid (Figures 7-10)

Soil results for the Ian Creek Grid show are dominated by two striking, high contrast Pb anomalies. The first is located near the northeastern edge of the grid between lines 164N and 168N, and is comprised of two lobate forms which could represent two discrete anomalies. Maximum values exceed 200ppm against a background of about 40ppm. Strong Ba (to 20,000ppm) and weak Ag (to 3ppm) anomalies are coincident with the Pb response. The second anomaly is located between 103E and 104E on lines 160N and 161N, and trends southeastward off the grid. Maximum values exceed 900ppm Pb and the anomaly is coincident with a strong Zn response (to 18,900ppm) and weak Ag (>2ppm). Both anomalies are associated with the eastern siliceous shale horizon. Two previous drill holes were collared near L160N and drilled towards grid east. The first was collared near the end of the line and would not have tested the soil anomaly nor the siliceous shale horizon. The second, collared near 102E on L160N should have tested the anomaly as well as the favourable stratigraphy. This hole did not clearly explain the Pb and Zn anomaly, but did intersect semi-massive to massive barite mineralization. Drill holes are plotted on the geology map (figure 5). Further work is warranted to trace the anomaly southeastwards and to test the strike and dip extent of the barite mineralization.

A narrow, linear Ba anomaly is present at about 101E between lines 164N and 169N and a weak Ag response is coincident with the northern portion of the Ba anomaly. The anomaly follows the eastern contact of the western siliceous shale horizon, and likely indicates the presence of barite. Lack of a Pb or Zn response does not make this anomaly a priority for follow-up.

A circular, high contrast Ba anomaly (to >28,000ppm) is present west of the baseline on line 165N. There is weak, erratic Pb, Zn, and Ag associated with the area anomalous in Ba. Outcrop was not located in this area, however more detailed sampling and prospecting may be warranted to look for a local source.

B. Joel Creek Grid (Figures 11-14)

On the Joel Creek Grid, soil quality is generally very good, with good BF horizons developed over much of the area. The BF horizon is often found at moderate depths however, often >30cm. Where a good BF was not present samples were collected from a light to medium brown B horizon of a grey to brown C horizon with abundant locally derived fragments.

Pb geochemistry (figure 11), displays five main anomalies. Anomaly 1 is a linear anomaly located along the northeastern end of lines 143N to 148N and continues southwards out of the area covered by this report, towards Joel Creek. Maximum value exceeds 600ppm and a weak Ag anomaly (to 3ppm) is coincident. The anomaly is slightly east of and downslope of the eastern siliceous shale horizon. This anomaly has been tested by a previous drill hole near L143N, with negetive results.

Pb anomaly 2 is located near the eastern end of line 150N and may be related to anomaly 1 although it plots as a single line response. This anomaly is very high contrast (to >1100ppm) and is coincident with a strong Ag (6.8ppm) and weak Ba (11,000ppm) response. This anomaly is located in flat, boggy ground with no obvious source.

Pb anomaly 3 is located between 100E and 101E on lines 149N and 150N, and is circular in shape. The response is low contrast (max. 200ppm), but is coincident with the north end of a broad Zn anomaly which exceeds 4000ppm in this area. Bedrock in the area is unmineralized siltite laminated shale. This anomaly may be transported as topography is steep and pyritic/baritic shales are located within 100 metres upslope.

Pb anomaly 4 is a small circular one line response located near 98+25E on line 150N. Maximum value exceeds 600ppm and it is coincident with weak Zn (2000ppm) and Ag (1.5ppm) anomalies. Exposures underlying this anomaly are mineralized with nodular barite and hydrozincite.

Pb anomaly 5 is a large, high contrast anomaly extending from 98E on line 142N to the baseline at 150N. This anomaly parallels the western contact of the western siliceous shale horizon, and exceeds 1000ppm on line 148N and 500ppm on line 142N. A weak Ba (11,000ppm) and moderate Ag (3-4ppm) response is coincident on the baseline at 148N and 150N. From line 142N to 146N a strong Zn response is parallel to and located just downslope from the Pb anomaly. Zn exceeds 11,000ppm on L146N and 6000ppm on L143N. Small, weak Ag is coincident with Pb and Zn on line 146N and lines 142-143N. This is a strong, multielement response related to prospective siliceous shale stratigraphy, and is untested.

A strong Zn anomaly extends from line 145N between 98E and 99E, southwards past line 142N and out of the area covered by this report. The anomaly exceeds 5000ppm on line 145N at its upslope termination, where it overlies a subcropping ferricrete zone. The ferricrete could be the source and should be examined further.

CONCLUSIONS

A program including linecutting, geological mapping and soil geochemical sampling was undertaken on the Elf North Group claims in 1997. The program comprised 14.5 line kilometres of linecutting, and geological mapping and 520 soil samples carried out on two grids, the Ian Creek Grid and the northwestern portion of the Joel Creek Grid. Work was carried out between July 23 and August 3, 1997.

Exploration on the Ian Creek Grid has identified two parallel horizons of prospective siliceous shale, both of which contain barite mineralization. The eastern horizon is associated with two high contrast geochemical anomalies. One anomaly, a Pb-Zn-Ag multielement response continues southward off the grid, and has been previously tested by a drill hole which intersected massive barite. This anomaly should be fully delineated by extending the grid southwards. Both anomalies may warrant additional drill testing.

On the Joel Creek grid, a thick section of Gunsteel shales again contains two parallel siliceous shale horizons. The western horizon is the thickest and most prospective. Both horizons are associated with multielement soil anomalies, however the western horizon has a higher contrast Pb-Zn-Ag (Ba) response, a ferricrete zone and remains untested. Two drill holes may be warranted to test this horizon.

REFERENCES

Cecile, M.P. and Norford, B.S. (1979): Basin to platform transition, lower Paleozoic strata of Ware and Trutch map-areas, northeastern B.C.; in Current Research, Part A, GSC Paper 79-1A, Report 36.

Farmer, R. (1995): Geology, Geochemistry and linecutting on the Elf Property, B.C. Assessment Reports #24079 and #24101.

Jefferson, C.W. (1980): Geological, Geochemical and Diamond Drilling Report on the Elf Group. Cyprus Anvil Mining Corporation, Inhouse Report.

MacIntyre, D.G. (1981): Geology of the Akie River Ba-Pb-Zn mineral district; B.C. Ministry of Energy, Mines and Petroleum Resources, Preliminary Map 44.

MacIntyre, D.G. (1982): Geologic setting of recently discovered stratiform barite-sulphide deposits in northeast B.C.; CIM Bulletin 75, No. 840.

MacIntyre, D.G. (1992): Geological setting and genesis of sedimentary exhalative barite and barite-sulphide deposits, Gataga District, Northeastern B.C.; Explor. Mining Geol., Vol. 1, No. 1.

Roberts, W.J. (1979): Geological, Geochemical and Geophysical Report on the Elf Group. Cyprus Anvil Mining Corporation, Inhouse Report.

Roberts, W.J. (1979): Geological Report on the Elf Group. Cyprus Anvil Mining Corporation, Inhouse Report.

Roberts, W.J. (1981): Diamond Drilling Report on the Elf Group. Cyprus Anvil Mining Corporation, Inhouse Report.

Taylor, G.C., and MacKenzie, W.S. (1970): Devonian stratigraphy of northeast B.C.; GSC Bulletin 186.

Taylor, G.C., Cecile, M.P., Jefferson, C.W. and Norford, B.S. (1979): Stratigraphy of the Ware E1/2 map area; in Current Research, Part A, GSC Paper 79-1A, Report 37.

APPENDIX I:

COST STATEMENT

ELF NORTH GROUP
COST STATEMENT

1. **Linecutting** (Twin Mountain Enterprises, July 23-Aug.1)

2 men for 2 days (July 23-24) @ $260.00 each	$1,040.00
4 men for 1 day (July 25) @ $260.00 each	$1,040.00
4 men for 2 days (July 27, 28)	$2,080.00
2 men for 2days (July 29, 30)	$1,040.00
6 men for 1 day (July 31) @ $260.00	$1,560.00
4 men for 1 day (Aug. 1)	$1,040.00
Subtotal	**$7,800.00**

2. **Geology and Geochemistry**

a) Geologist (R.Farmer) (July 28-Aug.2), 6 days @ $300.00/day	$1,800.00
b) Geologist (S.Smith) (July 28-Aug.2), 6 days @ $250.00/day	$1,500.00
c) Soil Samplers(Twin Mtn)(July 27-Aug.2),7 days@$260.00/day	$1,820.00
Subtotal	**$5,120.00**

3. **Analytical** (Cominco Laboratories, Vancouver)

520 soil samples (Pb,Zn,Ag,Ba) @ $8.00 each	$4,160.00
1 rock chip sample (Pb,Zn,Ag,Ba) @ $8.00	$8.00
Subtotal	**$ 4,168.00**

4. **Helicopter** (Northern Mtn. Helicopters) (July 23-Aug.2)

a) A-Star, 17.95 hrs. @ $875.00/hr.	$15,706.25
b) Fuel, 3400.5 litres @ $1.15/litre	$3,910.57
Subtotal	**$19,616.82**

5. **Accommodation** (Room & Board) (Finbow Camp)

July 23 - Aug. 2, 1997
80 mandays @ $96.30/manday $7,704.00

Subtotal $7,704.00

6. **Mob/Demob** (Proportionate Share)

a) Personnel (Aug.3)
(R.Farmer & S.Smith) 1 day @ $550.00 .... $550.00
7 men (Twin Mtn.)(6 cutters & 1 Soiler) 1 day @ $910.00 .... $910.00

b) Fixed Wing Charters (Williston Lake Air)
1/3 of 4 flights (MacKenzie-Finbow) $1,460.00

Subtotal $2,920.00

7. **Report and Drafting**

a) Interpretation & Report Writing
5 days @ $300.00/day $1,500.00

b) Drafting, 3 days @ $100.00/day $300.00

Subtotal .... $ 1,800.00

Total Cost of Program $49,128.82

R. D. FARMER

APPENDIX II:

STATEMENT OF QUALIFICATIONS

I, Randy Farmer, do hereby certify that:

1) I am a geologist and have practised my profession for more than 17 years.

2) I graduated from Lakehead University in Thunder Bay, Ontario with an Honours Bachelor of Science degree, (Geology), in 1980.

3) I conducted the exploration program on the Elf Property, interpreted the results, and authored the report contained herein.

4) All data contained within this report and conclusions drawn from it are true and accurate to the best of my knowledge.

5) I hold no personal interest, direct or indirect, in the Elf Property or its results, which is the subject of this report.

6) I am a Professional Geoscientist registered in the Province of British Columbia (Registration No. 20192).

PROFESSIONAL PROVINCE R. D. FARMER

Randy Farmer

Randy Farmer, P. Geo.
District Manager, Kamloops
October, 1997

APPENDIX III:

CERTIFICATES OF ANALYSES

TECK/ELF-X97
Job V 97-0703R

IAN Report date 21 AUG 1997

LAB NO	FIELD NUMBER	Pb ppm	Zn ppm	Ag ppm	Ba(4) ppm
R9716430	#1-51254	44	249	.6	E242992

I=insufficient sample X=small sample E=exceeds calibration C=being checked R=revised
If requested analyses are not shown ,results are to follow

ANALYTICAL METHODS
Pb Aqua regia decomposition / AAS
Zn Aqua regia decomposition / AAS
Ag Aqua regia decomposition / AAS
Ba(4) X-Ray fluorescence / pressed pellet

TECK/ELF-X97

Job V 97-06848

JOEL CR.

Report date 15 AUG 1997

LAB NO.	FIELD NUMBER	East+ West-	North+ South-	Pb ppm	Zn ppm	Ag ppm	Ba ppm
S9717450		+9600	J151	16	98	<.4	4014
S9717451		+9625	J151	25	69	<.4	1531
S9717452		+9650	J151	20	279	<.4	5388
S9717453		+9675	J151	20	153	<.4	5277
S9717454		+9700	J151	33	180	1.2	4254
S9717455		+9725	J151	34	423	.7	6352
S9717456		+9750	J151	30	215	<.4	3480
S9717457		+9775	J151	45	719	<.4	4067
S9717458		+9800	J151	38	430	<.4	5003
S9717459		+9825	J151	30	2870	1	4388
S9717460		+9850	J151	30	182	<.4	3005
S9717461		+9875	J151	42	1090	<.4	3620
S9717462		+9900	J151	69	537	<.4	4976
S9717463		+9925	J151	40	109	<.4	2887
S9717464		+9950	J151	38	145	1.3	2440
S9717465		+9975	J151	31	169	<.4	3399
S9717466		+10000	J151	33	159	.8	2462
S9717467		+10025	J151	70	279	<.4	5373
S9717468		+10050	J151	44	335	<.4	4103
S9717469		+10075	J151	54	838	<.4	5226
S9717470		+10100	J151	18	6960	<.4	4164
S9717471		+10125	J151	14	9040	<.4	2708
S9717472		+10150	J151	30	206	<.4	3898
S9717473		+10175	J151	22	297	<.4	3907
S9717474		+10200	J151	29	573	.8	5207
S9717475		+10225	J151	24	985	.7	5419
S9717476		+10250	J151	60	910	.7	E10716
S9717477		+10275	J151	63	710	.5	8603
S9717478		+10300	J151	56	530	<.4	5146

89717530	+9600	J148	1220	133	4.5	E12447
89717531	+9625	J148	365	330	1.1	4961
89717532	+9650	J148	459	224	6.2	4406
89717533	+9675	J148	235	131	1	6030
89717534	+9700	J148	139	72	.8	5139
89717535	+9725	J148	173	432	.4	4505
89717536	+9750	J148	104	370	<.4	8139
89717537	+9775	J148	121	74	.9	6167
89717538	+9800	J148	183	52	.6	5601
89717539	+9825	J148	77	38	.6	4709
89717540	+9850	J148	70	52	.8	4861
89717541	+9875	J148	74	129	.7	5511
89717542	+9900	J148	50	346	.8	5385
89717543	+9925	J148	5	3640	<.4	1523
89717544	+9950	J148	17	4440	<.4	3373
89717545	+9975	J148	37	693	<.4	5648
89717546	+10000	J148	51	656	.9	5951
89717547	+10025	J147	39	2100	.5	5596
89717548	+10050	J147	60	428	.9	5320
89717549	+10075	J147	28	1960	.9	3479
89717550	+10100	J147	37	983	.6	E15061
89717551	+10125	J147	34	424	<.4	E11116
89717552	+10150	J147	38	688	.4	E13761
89717553	+10175	J147	40	674	.5	9224
89717554	+10225	J147	95	1000	.4	E10306

LAB NO.	FIELD NUMBER	East+ West-	North+ South-	Pb ppm	Zn ppm	Ag ppm	Ba ppm
S9717555		+10250	J147	104	2300	.6	E11504
S9717556		+10275	J147 148	67	1640	.6	E11125
S9717557		+10300	J147	139	1820	.8	7557
S9717558		+9600	J147	40	348	<.4	3232
S9717559		+9625	J147	82	1170	.8	3238
S9717560		+9650	J147	264	875	.8	5744
S9717561		+9675	J147	141	285	.4	5781
S9717562		+9700	J147	161	361	.5	6385
S9717563		+9725	J147	57	200	<.4	3687
S9717564		+9750	J147	45	76	<.4	3504
S9717565		+9775	J147	131	264	<.4	4586
S9717566		+9800	J147	98	246	.7	6353
S9717567		+9825	J147	44	376	<.4	6671
S9717568		+9850	J147	36	965	.5	6503
S9717569		+9875	J147	37	524	.7	6533
S9717570		+9900	J147	33	716	.6	4950
S9717571		+9925	J147	25	1780	.7	5792
S9717572		+9950	J147	31	1910	.6	5516
S9717573		+9975	J147	32	1560	.5	4956
S9717574		+10000	J147	49	2080	.6	5358
S9717575		+10025	J147	21	2420	.4	2053
S9717576		+10050	J147	37	2260	.8	4034
S9717577		+10075	J147	37	1040	2.1	2521
S9717578		+10100	J147	24	1200	.8	5332
S9717579		+10125	J147	30	1450	.4	6999
S9717580		+10150	J147	29	2330	.6	5545
S9717581		+10175	J147	46	82	<.4	2232
S9717582		+10200	J147	176	426	.8	7442
S9717583		+10225	J147	34	20	2.5	1937
S9717584		+10250	J147	167	133	1.5	3657
S9717585		+10275	J147	137	164	.7	3649
S9717586		+10300	J147	117	664	.6	6985
S9717592		+9600	+14050	26	77	<.4	2275
S9717593		+9600	+14150	15	77	<.4	1798
S9717594		+9600	+14250	24	177	<.4	3099
S9717595		+9600	+14350	105	371	<.4	2906
S9717596		+9600	+14450	17	224	<.4	2858
S9717597		+9600	+14550	32	300	<.4	2633
S9717598		+9600	+14650	146	572	1	4684
S9717599		+9600	+14750	35	322	.4	2916
S9717600		+9600	+14850	238	184	1	4585
S9717601		+9600	+14950	55	128	.8	2652
S9717602		+9600	+15050	25	160	<.4	2995
S9717603		+9600	J149	238	176	.7	4224
S9717604		+9625	J149	105	234	<.4	4273
S9717605		+9650	J149	45	225	<.4	2267
S9717606		+9725	J149	41	231	.8	2229
S9717607		+9750	J149	55	198	.9	3759
S9717608		+9775	J149	26	56	<.4	2734

LAB NO.	FIELD NUMBER	East+ West-	North+ South-	Pb ppm	Zn ppm	Ag ppm	Ba ppm
S9717609		+9800	J149	35	250	<.4	6641
S9717610		+9825	J149	18	168	<.4	4644
S9717611		+9850	J149	5	159	<.4	1449
S9717612		+9875	J149	70	749	<.4	4586
S9717613		+9900	J149	131	658	<.4	4058
S9717614		+9925	J149	104	2060	.7	4432
S9717615		+9950	J149	96	1430	<.4	3644
S9717616		+9975	J149	142	4720	.6	3078
S9717617		+10000	J149	214	2420	.6	3516
S9717618		+10025	J149	162	2630	.7	3017
S9717619		+10050	J149	168	2320	.8	3340
S9717620		+10075	J149	129	3560	.4	3249
S9717621		+10100	J149	115	2870	.4	5101
S9717622		+10125	J149	37	758	.8	4580
S9717623		+10150	J149	105	1740	<.4	5328
S9717624		+10175	J149	70	2690	.6	9426
S9717625		+10200	J149	41	1530	.9	7041
S9717626		+10225	J149	61	1240	<.4	6896
S9717627		+10250	J149	67	443	.4	4216
S9717628		+10275	J149	93	2670	1	8649
S9717629		+10300	J149	76	2170	.4	5317
S9717630		+9600	J150	270	39	3	R11154
S9717631		+9625	J150	9	29	1.7	3544
S9717632		+9650	J150	313	179	1.1	8126
S9717633		+9675	J150	91	15	.7	3858
S9717634		+9700	J150	23	61	3.5	6737
S9717635		+9725	J150	28	269	<.4	3744
S9717636		+9750	J150	30	248	<.4	4342
S9717637		+9775	J150	96	1760	.5	3940
S9717638		+9800	J150	667	1650	1.5	4281
S9717639		+9825	J150	298	2100	1.2	3943
S9717640		+9850	J150	153	1340	.9	3785
S97[illegible]		+9875	J150	90	796	<.4	3484
S9717642		+9900	J150	38	197	<.4	2654
S97[illegible]		+9925	J150	62	212	<.4	2295
S9717644		+9950	J150	24	114	1.5	1778
S9717645		+9975	J150	76	1180	<.4	4197
S97[illegible]		+10000	J150	83	382	<.4	2627
S9717647		+10025	J150	55	202	<.4	4251
S9717648		+10050	J150	104	256	<.4	3530
S9717649		+10100	J150	116	1070	.4	4804
S9717650		+10125	J150	115	2800	.7	3981
S9717651		+10150	J150	89	730	.5	5119
S9[illegible]		+10175	J150	70	1860	<.4	4610
S9717653		+10200	J150	86	1140	.6	4944
S9717654		+10225	J150	57	2540	.4	4408
S9717655		+10250	J150	87	1350	.7	4961
S9717656		+10275	J150	1140	254	6.8	R11534
S9717657		+10300	J150	192	696	1	5836
S9717658		+9600	J146	24	325	<.4	2537
S9717659		+9625	J146	27	279	<.4	2717
S9717660		+9650	J146	153	398	.7	2927
S9717661		+9675	J146	107	359	.8	5182
S9717662		+9700	J146	182	561	1.3	5709

LAB NO.	FIELD NUMBER	East+ West-	North+ South-	Pb ppm	Zn ppm	Ag ppm	Ba ppm
S9717663		+9725	J146	207	1010	1.3	6110
S9717664		+9750	J146	317	997	2.2	9554
S9717665		+9775	J146	<4	E11600	.5	1375
S9717666		+9800	J146	44	198	<.4	4366
S9717667		+9825	J146	79	274	<.4	6579
S9717668		+9850	J146	66	221	<.4	5537
S9717669		+9875	J146	48	382	1	6174
S9717670		+9900	J146	52	813	<.4	3634
S9717671		+9925	J146	19	437	<.4	6026
S9717672		+9950	J146	22	174	<.4	3932
S9717673		+9975	J146	26	429	<.4	5276
S9717674		+10000	J146	16	1760	.6	4431
S9717675		+10025	J146	19	2010	.5	3398
S9717676		+10050	J146	35	1030	<.4	7072
S9717677		+10075	J146	30	439	<.4	5530
S9717678		+10100	J146	29	103	<.4	3490
S9717679		+10125	J146	47	637	.6	6682
S9717680		+10150	J146	29	285	1.6	1982
S9717681		+10175	J146	624	440	.5	5058
S9717682		+10200	J146	270	525	.7	6080
S9717683		+10225	J146	188	282	.7	3036
S9717684		+10250	J146	243	305	<.4	5101
S9717685		+10275	J146	35	183	.4	5044
S9717686		+10300	J146	29	830	<.4	2757
S9717687		+9600	J145	17	233	<.4	2784
S9717688		+9625	J145	17	215	<.4	2547
S9717689		+9650	J145	30	720	.7	1631
S9717690		+9675	J145	44	301	<.4	2245
S9717691		+9725	J145	35	1340	.5	2345
S9717692		+9750	J145	40	809	.5	2766
S9717693		+9775	J145	148	3310	.9	5025
S9717694		+9800	J145	54	518	<.4	4856
S9717695		+9825	J145	33	250	<.4	6300
S9717696		+9850	J145	21	1890	<.4	5691
S9717697		+9875	J145	25	3240	<.4	2397
S9717698		+9900	J145	28	5960	.6	5274
S9717699		+9925	J145	31	1570	.9	5030
S9717700		+9950	J145	19	1850	.4	3552
S9717701		+9975	J145	23	2400	.7	3708
S9717702		+10025	J145	11	825	<.4	5769
S9717703		+10050	J145	18	2060	.5	3893
S9717704		+10075	J145	36	1080	.6	E11131
S9717705		+10100	J145	113	49	<.4	2420
S9717706		+10125	J145	23	379	<.4	2929
S9717707		+10150	J145	280	478	<.4	3401
S9717708		+10175	J145	79	775	.4	2788
S9717709		+10200	J145	83	653	.5	2800
S9717710		+10225	J145	119	186	3	3302
S9717711		+10250	J145	99	657	1.1	2353
S9717712		+10275	J145	53	286	1.8	3123
S9717713		+10300	J145	41	1200	.7	3064
S9717714		+9600	J144	18	595	.4	2131
S9717715		+9625	J144	25	210	<.4	1649
S9717716		+9650	J144	20	201	.4	2533

LAB NO.	FIELD NUMBER	East+ West-	North+ South-	Pb ppm	Zn ppm	Ag ppm	Ba ppm
S9717717		+9675	J144	16	256	<.4	2865
S9717718		+9700	J144	16	123	<.4	1905
S9717719		+9725	J144	20	170	<.4	2769
S9717720		+9750	J144	22	152	<.4	2513
S9717721		+9775	J144	19	257	<.4	2495
S9717722		+9800	J144	37	1010	<.4	3257
S9717723		+9825	J144	106	295	<.4	2578
S9717724		+9850	J144	95	402	<.4	2132
S9717725		+9875	J144	89	796	<.4	4010
S9717726		+9900	J144	124	852	<.4	3149
S9717727		+9925	J144	115	255	<.4	3377
S9717728		+9950	J144	19	2010	.4	2461
S9717729		+9975	J144	128	2540	1	5371
S9717730		+10000	J144	26	144	<.4	2864
S9717731		+10025	J144	25	134	<.4	3072
S9717732		+10050	J144	14	331	<.4	1651
S9717733		+10075	J144	21	618	.8	1659
S9717734		+10100	J144	47	387	<.4	2634
S9717735		+10125	J144	88	155	<.4	3396
S9717736		+10150	J144	56	99	.8	2007
S9717737		+10175	J144	132	369	<.4	2563
S9717738		+10200	J144	174	454	1.7	3291
S9717739		+9600	J143	23	259	<.4	3562
S9717740		+9625	J143	146	688	<.4	4168
S9717741		+9650	J143	82	295	<.4	3658
S9717742		+9675	J143	85	472	<.4	3022
S9717743		+9700	J143	143	402	<.4	3150
S9717744		+9725	J143	30	200	<.4	2570
S9717745		+9750	J143	20	246	<.4	1603
S9717746		+9775	J143	12	153	.4	1484
S9717747		+9800	J143	43	637	<.4	2633
S9717748		+9825	J143	242	6520	2.8	2324
S9717749		+9850	J143	95	3500	.7	6314
S9717750		+9875	J143	70	6860	.6	4129
S9717751		+9900	J143	27	3160	<.4	4084
S9717752		+9925	J143	67	414	<.4	3498
S9717753		+9950	J143	62	1770	<.4	4233
S9717754		+9975	J143	26	974	<.4	3050
S9717755		+10000	J143	12	326	<.4	3274
S9717756		+10025	J143	<4	125	<.4	1944
S9717757		+10050	J143	247	42	<.4	2526
S9717758		+10075	J143	13	134	<.4	1687
S9717759		+10100	J143	113	267	.9	2722
S9717760		+10125	J143	107	214	.8	3628
S9717764		+9600	J142	13	138	<.4	2771
S9717765		+9625	J142	16	121	<.4	2739
S9717766		+9650	J142	18	185	<.4	2679
S9717767		+9675	J142	22	186	<.4	2719
S9717768		+9700	J142	63	324	<.4	3078
S9717769		+9725	J142	46	340	.7	3017
S9717770		+9750	J142	95	582	<.4	3364

LAB NO.	FIELD NUMBER	East+ West-	North+ South-	Pb ppm	Zn ppm	Ag ppm	Ba ppm
S9717771		+9775	J142	29	431	<.4	2390
S9717772		+9800	J142	593	229	3.3	7976
S9717773		+9825	J142	74	1510	.4	4211
S9717774		+9850	J142	60	1120	.4	5374
S9717775		+9875	J142	48	112	<.4	E11360
S9717776		+9900	J142	29	1970	<.4	5374
S9717777		+9925	J142	16	1370	<.4	2930
S9717778		+9950	J142	32	736	.9	5183
S9717788		+9600	J141	27	170	<.4	2338
S9717789		+9625	J141	112	287	<.4	2652
S9717790		+9650	J141	42	242	<.4	2329
S9717791		+9675	J141	129	315	<.4	3469
S9717792		+9700	J141	42	105	<.4	2800
S9717793		+9725	J141	63	203	<.4	3815
S9717794		+9750	J141	78	301	<.4	4106
S9717795		+9775	J141	57	210	<.4	3433
S9717813		+9600	J140	20	222	<.4	1912

TECK/ELF-X97

Job V 97-0702S

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Report date 20 AUG 1997

LAB NO.	FIELD NUMBER	East+ West-	North+ South-	Pb ppm	Zn ppm	Ag ppm	Ba ppm
[redacted]							
S9718334		+9800	I168	13	230	.6	3390
S9718335		+9825	I168	11	257	.5	7308
S9718336		+9850	I168	15	216	.7	3097
S9718337		+9875	I168	14	143	.5	2714
S9718338		+9900	I168	19	238	.8	1912
S9718339		+9925	I168	18	163	.6	4672
S9718340		+9950	I168	56	90	.9	3411
S9718341		+9975	I168	22	132	.6	4205
S9718342		+10000	I168	14	159	1.1	5304
S9718343		+10025	I168	7	115	<.4	1678
S9718344		+10050	I168	52	434	1	7145
S9718345		+10075	I168	46	225	.8	3550
S9718346		+10100	I168	67	378	1.9	E11736
S9718347		+10125	I168	61	237	2.1	3024
S9718348		+10150	I168	42	215	.7	4135
S9718349		+10175	I168	62	373	1.5	5314
S9718350		+10200	I168	42	191	.6	5066
S9718351		+10225	I168	63	691	1.5	7234
S9718352		+10250	I168	34	258	.5	6979
S9718353		+10300	I168	70	845	1.2	E13238
S9718354		+10325	I168	87	747	<.4	E12553
S9718355		+10350	I168	75	904	1.1	E11156
S9718356		+10375	I168	85	693	1.2	E11646
S9718357		+10400	I168	68	636	1.2	E12755
S9718358		+9800	I167	8	167	<.4	3216
S9718359		+9825	I167	8	120	<.4	1501
S9718360		+9850	I167	9	155	<.4	4338
S9718361		+9875	I167	7	139	.8	1530
S9718362		+9900	I167	4	119	<.4	1401
S9718363		+9925	I167	10	142	.6	1535
S9718364		+9950	I167	9	120	.5	2566
S9718365		+9975	I167	23	215	.6	4912
S9718366		+10000	I167	21	258	.5	4565
S9718367		+10025	I167	32	304	.7	5122
S9718368		+10050	I167	20	209	.7	4473
S9718369		+10075	I167	25	295	.7	4752
S9718370		+10100	I167	46	298	1.2	6598
S9718371		+10125	I167	53	504	.6	E11268
S9718372		+10150	I167	38	325	1	7158
S9718373		+10175	I167	55	439	1.2	5964
S9718374		+10200	I167	29	243	.7	3993
S9718375		+10225	I167	29	331	.4	4019
S9718376		+10250	I167	40	605	.7	6409
S9718377		+10275	I167	32	588	1.1	6706
S9718378		+10300	I167	198	590	1.3	E11488
S9718379		+10325	I167	76	548	.9	E13287
S9718380		+10375	I167	275	577	2.6	E20088

LAB NO.	FIELD NUMBER	East+ West-	North+ South-	Pb ppm	Zn ppm	Ag ppm	Ba ppm
S9718381		+10400	I167	103	587	1.8	7574
S9718382		+10000	+16650	33	231	.7	4498
S9718383		+10000	+16750	6	183	.6	1996
S9718384		+10000	+16850	4	37	.6	1407
S9718385		+10000	+16050	31	164	1.1	5490
S9718386		+10000	+16150	29	207	1.7	7486
S9718387		+10000	+16250	11	21	.9	2280
S9718388		+10000	+16350	25	139	1.1	6056
S9718389		+10000	+16450	23	297	.6	E10109
S9718390		+9800	I164	25	229	1	4778
S9718391		+9825	I164	87	254	.8	8387
S9718392		+9850	I164	43	251	1	9083
S9718393		+9875	I164	18	138	.7	7498
S9718394		+9900	I164	11	233	.7	7643
S9718395		+9925	I164	29	3510	1.6	E13526
S9718396		+9950	I164	14	793	.8	E12557
S9718397		+9975	I164	5	231	.5	3509
S9718398		+10000	I164	17	170	1	5759
S9718399		+10025	I164	22	162	1.8	5164
S9718400		+10050	I164	22	294	.9	6269
S9718401		+10075	I164	12	317	.7	9574
S9718402		+10150	I164	17	1560	<.4	1709
S9718403		+10175	I164	18	545	<.4	2161
S9718404		+10200	I164	19	1280	.7	3626
S9718405		+10225	I164	18	503	<.4	3944
S9718406		+10250	I164	18	736	.6	1882
S9718407		+10275	I164	49	66	.5	1993
S9718408		+10300	I164	46	322	<.4	5835
S9718409		+10325	I164	33	140	1	2481
S9718410		+10350	I164	90	203	.6	3936
S9718411		+10375	I164	70	240	<.4	E13740
S9718412		+10400	I164	52	184	<.4	6037
S9718413		+9800	I165	95	225	<.4	6983
S9718414		+9825	I165	65	186	.6	E12527
S9718415		+9850	I165	70	127	.9	E28982
S9718416		+9875	I165	102	330	1.5	9106
S9718417		+9900	I165	41	152	<.4	E15470
S9718418		+9925	I165	40	777	.9	E13867
S9718419		+9950	I165	52	293	<.4	E21393
S9718420		+9975	I165	38	814	.9	E12068
S9718421		+10025	I165	20	245	<.4	3553
S9718422		+10050	I165	39	699	.5	9526
S9718423		+10075	I165	30	257	<.4	3681
S9718424		+10100	I165	29	616	.6	4488
S9718425		+10150	I165	38	236	<.4	3754
S9718426		+10175	I165	31	610	.5	4263
S9718427		+10200	I165	20	974	.6	3647
S9718428		+10225	I165	30	1660	.4	3968
S9718429		+10250	I165	15	2100	.7	2236
S9718430		+10275	I165	39	429	.4	4145
S9718431		+10300	I165	32	2190	.6	3085
S9718432		+10325	I165	35	51	2	1628
S9718433		+10350	I165	72	81	.6	3535
S9718434		+10375	I165	118	142	3.8	6235

LAB NO.	FIELD NUMBER	East+ West-	North+ South-	Pb ppm	Zn ppm	Ag ppm	Ba ppm
S9718435		+10400	I165	59	113	2.5	2424
S9718436		+9800	I169	15	207	<.4	2493
S9718437		+9825	I169	23	268	.4	2687
S9718438		+9850	I169	19	216	<.4	3918
S9718439		+9875	I169	20	241	.5	2552
S9718440		+9900	I169	17	248	<.4	2179
S9718441		+9925	I169	22	357	<.4	3149
S9718442		+9950	I169	75	937	<.4	E23866
S9718443		+9975	I169	28	315	.9	7507
S9718444		+10000	I169	24	213	3.2	3616
S9718445		+10025	I169	60	565	1.9	2008
S9718446		+10050	I169	21	135	<.4	E11829
S9718447		+10075	I169	17	142	<.4	6237
S9718448		+10100	I169	80	645	1.2	E10030
S9718449		+10125	I169	68	510	<.4	9979
S9718450		+10150	I169	40	336	<.4	9276
S9718451		+10175	I169	53	643	<.4	5803
S9718452		+10200	I169	47	448	<.4	7636
S9718453		+10225	I169	41	500	<.4	E10421
S9718454		+10250	I169	28	373	<.4	5866
S9718455		+10275	I169	42	658	<.4	E10913
S9718456		+10300	I169	38	387	<.4	8269
S9718457		+10325	I169	54	618	<.4	E10844
S9718458		+10350	I169	66	546	.8	8880
S9718459		+10375	I169	56	746	.7	8822
S9718460		+10400	I169	59	653	.8	9674
S9718461		+9800	I166	62	732	.4	4969
S9718462		+9825	I166	14	111	<.4	3958
S9718463		+9850	I166	15	256	<.4	5870
S9718464		+9875	I166	14	402	<.4	5365
S9718465		+9900	I166	14	269	<.4	5359
S9718466		+9925	I166	17	169	.4	3418
S9718467		+9950	I166	18	207	<.4	4346
S9718468		+9975	I166	10	187	.9	4540
S9718469		+10000	I166	8	218	<.4	2993
S9718470		+10025	I166	16	198	<.4	4618
S9718471		+10050	I166	24	241	<.4	4805
S9718472		+10075	I166	16	164	<.4	4466
S9718473		+10100	I166	46	390	.7	E11007
S9718474		+10125	I166	42	342	<.4	6103
S9718475		+10150	I166	51	296	.7	4377
S9718476		+10175	I166	36	390	.4	6459
S9718477		+10200	I166	42	357	<.4	6932
S9718478		+10250	I166	215	323	.4	8953
S9718479		+10275	I166	308	189	1.9	4792
S9718480		+9800	I163	38	97	<.4	7170
S9718481		+9825	I163	18	123	<.4	3583
S9718482		+9850	I163	19	138	.4	3347
S9718483		+9875	I163	15	47	<.4	3724
S9718484		+9900	I163	52	158	.7	6803
S9718485		+9925	I163	31	337	.8	2360
S9718486		+9950	I163	21	420	.5	6070
S9718487		+9975	I163	31	557	.9	6169
S9718488		+10000	I163	9	192	<.4	2224

LAB NO.	FIELD NUMBER	East+ West-	North+ South-	Pb ppm	Zn ppm	Ag ppm	Ba ppm
S9718489		+10025	I163	15	54	<.4	3389
S9718490		+10050	I163	30	318	.5	3974
S9718491		+10075	I163	24	362	<.4	3101
S9718492		+10100	I163	30	158	<.4	2824
S9718493		+10125	I163	10	146	.5	3306
S9718494		+10150	I163	31	250	1	3033
S9718495		+10175	I163	29	413	.5	7650
S9718496		+10200	I163	21	576	1	4424
S9718497		+10225	I163	20	395	<.4	3918
S9718498		+10250	I163	27	172	<.4	4626
S9718499		+10275	I163	43	275	.6	5029
S9718500		+10300	I163	58	190	1.3	5501
S9718501		+10325	I163	52	324	<.4	7024
S9718502		+10350	I163	34	36	.4	5415
S9718503		+10375	I163	57	417	.4	7892
S9718504		+10400	I163	45	540	.5	7128
S9718505		+9800	I162	28	160	<.4	4131
S9718506		+9825	I162	47	148	<.4	6915
S9718507		+9850	I162	19	92	<.4	3983
S9718508		+9875	I162	23	175	<.4	3359
S9718509		+9900	I162	37	167	.5	4803
S9718510		+9925	I162	22	84	.9	3148
S9718511		+9950	I162	11	38	<.4	5804
S9718512		+9975	I162	25	180	.4	6252
S9718513		+10000	I162	28	99	<.4	4926
S9718514		+10025	I162	26	135	<.4	4980
S9718515		+10050	I162	28	252	.4	7660
S9718516		+10075	I162	31	408	.4	E10933
S9718517		+10100	I162	30	363	.5	7492
S9718518		+10125	I162	24	186	<.4	5523
S9718519		+10150	I162	36	360	1.4	8555
S9718520		+10175	I162	29	521	1.4	8208
S9718521		+10200	I162	20	903	.8	6976
S9718522		+10225	I162	24	910	.6	7352
S9718523		+10250	I162	35	373	<.4	6134
S9718524		+10275	I162	53	325	<.4	5577
S9718525		+10300	I162	46	340	.5	5967
S9718526		+10325	I162	50	459	<.4	9699
S9718527		+10350	I162	64	417	.5	5628
S9718528		+9800	I161	33	157	<.4	3194
S9718529		+9825	I161	30	161	<.4	2721
S9718530		+9850	I161	18	53	.5	2562
S9718531		+9875	I161	56	118	3.5	2691
S9718532		+9900	I161	19	114	1.3	2439
S9718533		+9925	I161	36	128	1	8911
S9718534		+9950	I161	54	66	1.8	4053
S9718535		+9975	I161	7	44	<.4	2540
S9718536		+10000	I161	34	198	<.4	9525
S9718537		+10025	I161	31	226	.9	9055
S9718538		+10050	I161	34	594	1.2	8289
S9718539		+10075	I161	27	387	.5	E11092
S9718540		+10100	I161	33	556	1.4	E10529
S9718541		+10125	I161	29	591	1.2	8518
S9718542		+10175	I161	32	614	1.3	9174

LAB NO.	FIELD NUMBER	East+ West-	North+ South-	Pb ppm	Zn ppm	Ag ppm	Ba ppm
S9718543		+10200	I161	38	553	.7	7283
S9718544		+10225	I161	39	836	1	8664
S9718545		+10250	I161	51	1460	.9	7252
S9718546		+10275	I161	72	1090	<.4	4460
S9718547		+10300	I161	115	843	.6	5178
S9718548		+10325	I161	290	1110	2.6	5508
S9718549		+10350	I161	57	666	.5	5592
S9718550		+10375	I161	68	1860	1.4	7795
S9718551		+10400	I161	46	803	<.4	5388
S9718552		+9800	I160	96	277	2	2414
S9718553		+9825	I160	27	141	<.4	2749
S9718554		+9850	I160	73	347	2.1	1849
S9718555		+9875	I160	43	313	<.4	6161
S9718556		+9900	I160	48	159	.6	7645
S9718557		+9925	I160	8	16	1.2	4796
S9718558		+9950	I160	48	105	1	3606
S9718559		+9975	I160	20	81	<.4	2505
S9718560		+10000	I160	28	339	.7	7421
S9718561		+10025	I160	<4	17	<.4	1840
S9718562		+10050	I160	11	10	.7	2427
S9718563		+10075	I160	28	77	6.2	1889
S9718564		+10100	I160	29	93	1.1	4892
S9718565		+10125	I160	38	246	.9	7263
S9718566		+10150	I160	44	248	.4	8579
S9718567		+10175	I160	25	176	<.4	3579
S9718568		+10200	I160	28	197	<.4	4225
S9718569		+10225	I160	20	272	.4	5931
S9718570		+10250	I160	63	1950	.8	4569
S9718571		+10275	I160	56	3050	.7	3879
S9718572		+10300	I160	867	5110	2.3	4187
S9718573		+10350	I160	980	2710	2.1	5749
S9718574		+10375	I160	198	E18900	1.9	3756
S9718575		+10400	I160	84	E12300	1.4	4790

I=insufficient sample X=small sample E=exceeds calibration C=being checked R=revised
If requested analyses are not shown ,results are to follow

ANALYTICAL METHODS

Pb Reverse Aqua Regia / AAS
Zn Reverse Aqua Regia / AAS
Ag Reverse Aqua Regia / AAS
Ba X-Ray fluorescence / loose powder

APPENDIX IV:

ANALYTICAL PROCEEDURES

COMINCO EXPLORATION RESEARCH LABORATORY
ANALYTICAL METHODS PERFORMED ON TECK SAMPLES

Reverse Aqua Regia / AAS (Cu, Pb, Zn analysis)

0.5 grams per sample is weighed into clean dry test tubes. 1 mL of concentrated Nitric acid and 3 mL concentrated Hydrochloric acid are added. Test tubes are placed on a sand bath at 90° - 95° for 3 hours and shaken at intervals of 20 minutes. Samples are cooled to room temperature then diluted to 20 mLs with de-ionized distilled water. Solids are given time to settle. The samples are then analyzed on a Atomic Absorption Spectrophotometer. Quality control standards are inserted every 15 samples and repeats every 10 samples.

X-RAY FLUORESCENCE / LOOSE POWDER (Ba - pressed pellet)

5 grams of 100 - 200 mesh sample are milled with 5 grams Boric acid for 3 minutes. The milled samples are then pressed at a pressure of 20 tonnes per square inch for 50 seconds to produce 40 mm pressed pellets. Different excitation X-ray tubes are employed to analyze different trace elements to try to get the maximum intensities and high resolution with overlapped element peaks. All trace element analysis calibration curves are set up by using commericial standards. Compton scattering calculation is used to compensate absorption and anhancement effects. Every 25 samples prepared includes 1 repeated sample and every 10 samples analysed includes running 1 commerical standard.

APPENDIX V:

SOIL SAMPLE DESCRIPTIONS

SOIL SAMPLE FORMS - COLUMN DESCRIPTION

DEPTH: Top of sample interval (cm)

THICKNESS: Thickness of samples interval (cm)

HORIZON:

- **LH.** Leaf, humus layer, undecomposed vegetation lying on the ground surface (do not sample)
- **AH.** Dark grey to black, organic - rich mineral horizon usually no deeper than 15cm from the surface (do not sample)
- **AE.** Grey to white (occasionally brown) leached mineral horizon near ground surface, usually sandy; accompanied by BF or BT horizon at depth (do not sample)
- **BH.** Black, organic-rich mineral horizon at depths greater than 15cm (do not sample)
- **BF.** Red-brown, iron-rich horizon
- **BT.** Brown, clay-rich horizon
- **BG.** Horizon which is water-saturated most of the year, identified by red-brown mottles
- **BM.** Brown horizon which is only slightly different in appearance from underlying parent material
- **C1, C2, C3, etc.** Parent material for soil
- **CA.** White calcium carbonate precipitate in C horizon
- **01, 02, 03, etc.** Bog sample at various depths.
- **TF.** Talus fines

COLOUR:

LB	Light Brown	BL	Black
MB	Medium Brown	YO	Yellow
DB	Dark Brown	GR	Grey
RB	Red Brown	RD	Red
YB	Yellow Brown	WH	White
MO	Mottled Red Brown (Red Brown Patches)		

PARTICLE SIZE: Sand/Silt/Clay

% FRAGMENTS: Estimated % Fragments

FRAGMENT ROUNDNESS:

- WR - Well Rounded
- SR - Sub Rounded
- SA - Sub Angular
- VA - Very Angular

FRAGMENT COMPOSITION:

- M Mafic Volcanic
- F Felsic Volcanic
- I Intrusive
- A Argillite
- S Sediment
- SS Sericite Schist
- L Limestone
- MM Mineralized

SLOPE: Estimated local slope in degrees

SEEPAGE: Indicate with a "S" if sample is a seepage zone

COMMENTS: Till, outwash, residual; details on any of the above

1997 SOIL SAMPLES PROPERTY PROJECT IANCK GRID-ELF SAMPLER RF

SAMPLE NO.	GRID LOCATION	DEPTH (cm)	THICK (cm)	HORIZON	COLOUR	PARTICLE SIZE	FRAGMENTS %	ROUND	COMP	SLOPE	SEEPAGE	COMMENTS
I160N	104+00E	40	10	Bm?	mB	S/S	30	SR	M	10E		
I160N	103+75E	70	10	TF	DGy	S/S	40	SA	SH	"		Fe Segregation Fe Fracture IN SAMPLE
I160N	103+50E	70	10	TF	"	"	50	"	"	20E		Poor.
I160N	103+25E	100	10	TF/BT	Gy/BR	SSC	"	"	"	10E		3cm Fe OXIDE HORIZ. INCL. C layer
I160N	103+00									20E		NO SAMPLE ONLY ROCK BELOW HUMUS
I160N	102+75E	100	10	BF	YB	S/S	25	"	"	10E		Below Blk Talus/Humus.
I160N	102+50E	100	10	BF?	YB	SANDY	30 SAND	A	"	"		Below Leached - looks like sand made up of ground up shale.
I160N	102+25E	30	10	BF	YB	S/S	SM 20	SA	"	5E		2cm leached above
I160N	102+00E	25	10	BF	RB	"	"	"	"	"		" "
I160N	98+00E	26	8	BF	OB	"	15	"	"	5W		Good sample.
I160N	98+25E	35	10	BF	"	"	"	"	"	"		"
I160N	98+50E	"	"	"	"	"	"	"	"	"		"
I160N	98+75E	40	"	"	"	"	"	"	"	5E		"
I160N	99+00E	50	10	BF	RB	"	"	"	"	"		SANDIER - GOOD LEACHED ABOVE
I160N	99+25E	40	5	C	Gy-BR	"	80	A	SH	15E		Good leached straight to outcrop
I160N	99+50E	60	10	B?C	LB.	"	50	A	SH	20E		Poor.
I160N	99+75E	40	10	BF	OB	"	30	A	SH	5E		TALUS - Horiz MIXED SLUMPAGE?
I160N	100+00E	40	10	Bm?	mB	"	"	"	"	FLAT		still mixing of Horiz.
I160+50N	100+00E	50	10	~~BM~~ BM?	MB	SANDY	20	SA	"	"		
I160N	100+25E	40	10	BF/Bm	YB	S/S	40	A	"	FLAT		
I160N	100+50E	50	8	C?	GY	SC	50	A	"	10E		POSS LEACHED - MOSS/HUMUS/ROCK - NO SOIL
I160N	100+75E	40	10	BF?	RB	SANDY	20	SR	"	5E		LEACHED ABOVE V. SANDY
I160N	101+00E	45	10	BF	YB	S/S	20	"	"	"		Still somewhat Sandy
I160N	101+25E	50	10	BF	RB	S/S	15	"	"	10E		" " "
I160N	101+50E	40	8	BF	OB	"	"	"	"	5E		Good.
I160N	101+76E	35	5	BF	"	"	"	"	"	"		"

I-16
1A/V

GRID LOCO	DEPTH	HORIZON	COLOUR	FRAG	COMMENTS
9800-E	.4	BT	GR	SA 40%	CL
9825-E	.5	BF	RB	SA SIL	20%
9850-E	.4	BF	RB	SA SIL	10%
9875-E	.5	BT	GR	SA 20%	SIL
9900-E	.3	BF	RB	SA 10%	SIL
9925-E	.4	BF	RB	VA SA 20%	SIL
9950-E	.5	BT GR BF RB		VA 10%	CL
9975 E	.5 m	BT	GR	VA SA 25%	SIL CL4 POO[illegible]
100 00 E	Bm BF .5	Bm BF	GR RB	VA SA 35%	CL
100+25 E	.5	BF	RB	SA 20%	
100+50 E	.4	BF	RB	SA 20%	CL
100+75 E	.4	BT	GR	SA 40%	
101+00 E	.5	BM BF	BL RB	VA 90%	POOR
101+25 E	.4	BM-T	VH GR	VA 90%	POOR GOUGE ?
101+50 E	.4	BF	RB	SA 20%	SIL
101+75 E	.4	BF	RB	SA 25%	SIL CL
102+00 E	4	T-BT	GR	VA 30%	CL
102+25 E	.4	BF	LB	VA SA 20%	SIL
102+50 E	.4	BF	RB	SA 20%	SIL
102+75 E	.4	BF	RB	SA 15%	SIL
103+00 E	.4	BF	LRB	SA 15%	SIL
103+25 E	4	BF	RB	SA 15%	SIL
103+50 E	5	BF	LRB	SA SR 15%	SIL
103+75 E	.4m	BF	LRB	SA SR 10%	SIL
104+00 E	[illegible]m	BF	LRB	VA SA 20%	CL

GRID	DEPTH	HORIZON	TAN-IGHN COLOUR	FRAG	COMMENTS
102+00E	.5	BT	GR	(VA) SA	SIL 15%
102+25E	.5	BT BF	GR	VA/SA	SAN 20%
102+50E	.6	BT	GR	VA	SIL 20%
102+75E	.9	BT BF	GR LB	SA	SIL 30%
103+00E	.5	BT BF	LB	VA	SIL 40%
103+25E	.5	BT	GR	SA	SIL 30%
103+50E	.8	BT	GR	SA SR	SIL 20%
103+75E	.9	BT	GR	SA SR	SIL 5%
101+75E	.9	BT	GR	SA	CL 5%
101+50E	.8	BT	GR	SA	CL 10%
[illegible]	.8	BT	BMB	SA SR	20%
101+00E	.8	BF	RB	SA SR	15% SIL
100+75E	.8	BF	LB	SA	10% SIL CL
100+50E	.8	BT	GR	SA	SIL 5%
100+25E	.3	BF	RB	SA	SIL 5%
100+00E	.3	BF	RB	SA	SIL CL 10%
9975-E	.3	BF POOR	RB	VA	CL 70% BEDROCK
9950-E	.3	T	BL WH	VA	CL 85%
9925-E	.4	BF POOR	RB	VA	30% SIL
9900-E	.3	BF	RB	VA	90% CL
9875 E	.3	BF	RB	VA	30% SIL CL
9850E	.3	BF POOR	RB	VA	90% CL
9825 E	.4	BF	RB	VA	68% SIL
9800 E	3	BF	RB	SA VA	20% SIL
[illegible]+50N	.4	BF	RB	SA	5% GR SIL

GRID	DEPTH	HORIZON	T-L COLOUR	62	N FRAG	COMMENTS
9800-E	.4	BF	RB		SA 15%	CL
9825-E	.5	BF	RB		(SA) 10%	CL
9850-E	.5	BF	RB		SA 1%	CL SIL
9875-E	.5	BF	RB		SA 15%	CL
9900-E	.4	BF	RB		SA 20%	CL SIL
9925-E	.4	BF	RB		SA 10%	CL SIL
9950 E	.3	BM	BL WH		VA 30%	CL (POOR GOUGE?)
9975 E	.4	BF	RB		SA 10%	SIL CL
100+00E	.5	BF	RB		SA 15%	CL
100+25E	.5	BF	RB		SA 5%	SIL CL
100+50 E	.4	BF	RB		SA 10%	SIL
100+75E	.4	BF	RB		SA 10%	SIL
101+00 E	.6	BT	GR		SA SR 20%	SIL SAN
101+25-E	.6	BT	MB		SA VA 20%	CL
101+50-E	.6	BT	MB		SA SR 15%	CL
101+75-E	.5	BT	MB		SA SR 10%	SAN
102+00-E	.4	BT	MB		SA 10%	SIL SAN
102+25-E	.4	BT	MB		SA 20%	SIL SAN
102+50E	.3	BF	RB		SA SR 15%	SAN SIL
102+75 E	.4	BF	RB		SA 10%	SAN SIL
103+00 E	.5	BF	RB		SA SR 15%	SIL
103+25 E	.4	BF	RB		SA SR 10%	SIL SAN
103+50 E	.3	T-BM	WH BL MB		VA 99%	BEDROCK
103+75E		NS				
104+00 E		NS				

I-164N

NTS GRID	DEPTH	HORIZON	COLOUR	FRAG	COMMENTS
9800-E	5	BT	GR	SA 25%	SIL SAN
9825-E	4	BT	GR	SA 25%	SIL CLY
9850-E	5	BT	GR	SA 35%	CLY
9875-E	4	BF	RB	SA 30%	CL SIL
9900-E	4	BF	RB	SA 30%	SIL
9925-E	1.M	?	SAND SILT	0%	POOR NEXT TO GR
9950-E	.6	BF	RB	SA VA 30%	SIL
9975-E	.5	BF	RB	SA 25	SIL
10000E					
(163+50)	5	BM	GR	VA 25%	CL
162+50	5	BF	RB	SA 20	SIL

19~~89~~97 SOIL SAMPLES PROPERTY PROJECT ELF SAMPLER CAMAS

SAMPLE NO.	GRID LOCATION	DEPTH (cm)	THICK (cm)	HORIZON	COLOUR	PARTICLE SIZE	FRAGMENTS %	FRAGMENTS ROUND	FRAGMENTS COMP	SLOPE	SEEPAGE	COMMENTS
I164N	101+50E	100		BT	LB							WET/CLAYEY
	101+75E	50		BT	LB		15	SA				
	102+00E	50		BF/BT	L.RB		20	VA				
	102+25E	60		BT	LB		5	SA				
	102+50E	70		BT/C	LB/Gy		40	VA				
	102+75E	60		C	Gy		60	VA				
	103+00E	50		BF	RB		40	SR				
	103+25E	30		BF	RB		20	SA				
	103+50E	25		BF	RB		10	SA				
	103+75E	30		BF/BT	LB		10	SA				
	104+00E	30		BF/BT	LB		20	SA				

198997 SOIL SAMPLES PROPERTY PROJECT ELF SAMPLER CAMAS

SAMPLE NO.	GRID LOCATION	DEPTH (cm)	THICK (cm)	HORIZON	COLOUR	PARTICLE SIZE	FRAGMENTS %	ROUND	COMP	SLOPE	SEEPAGE	COMMENTS
I 165N	98+00E	15		BF	LB		10	SA				
	98+25E	25		BT/BF	LB		5	SA				
	98+50E	30		BF?	LB		5	SA				
	98+75E	40		BT	LB/Gy		10	SA				
	99+00E	20		BF	LB		20	SR				
	99+25E	75		BT?	Gy		40	VA				CREEK
	99+50E	60		C	Gy		70	VA				
	99+75E	110		C	Gy		70	VA				
	100+00E											NO SAMPLE STEEP-TALUS BOULDERS
	100+25E	25		BF	RB		5	SA				
	100+50E	50		BT	LB		40	SA				
	100+75E	25		BT	LB		65	VA				
	101+00E	30		BT/BF	LB		25	SA				
	101+25E	100		?	?		?					CLAY
	101+50E	25		BF	RB		20	SA				
	101+75E	100		BT	LB/Gy		35	SA				
	102+00E	100		C	Gy		70	VA				
	102+25E	50		BF	RB		20	SA				
	102+50E	50		BF	RB		10	VA				
	102+75E	50		BT	LB/Gy		50	VA				
	103+00E	50		BF	LB/RB		40	SA				
	103+25E	20		BF	LB		25	VA				
	103+50E	30		BF	Br/Rd		10	SA				
	103+75E	25		BF	RB		10	SA				
	104+00E	30		BF	LB		5	SA				
I 164+50N	100+00E	70		BT	LB		35	VA				
I 164N	100+00E	30		BF	LB		20	SA				
	100+25E	40		BF	LB		15	SA				
	100+50E	30		BF	BR		15	SR				
	100+75E	30		BT	LB		25	VA				
	101+00E	100		—	—		—	—				VERY WET - CLAY
	101+25E	100		—	—		—	—				" " "

(m)

1989	SOIL SAMPLES					PROPERTY PROJECT ELF (Ian Cr Grid)		SAMPLER SWS				
SAMPLE NO.	GRID LOCATION	DEPTH (cm)	THICK (cm)	HORIZON	COLOUR	PARTICLE SIZE	FRAGMENTS %	ROUND	COMP	SLOPE	SEEPAGE	COMMENTS
I166N	98+00E	.3	.15	BF	RB	Slt	25	SA	S	35		
	25	.5	.15	BF	RB	Slt	35			10		
	50	.4	.1	BF	RB	Slt	25			15		
	75	.3	.15	BT	MB	Sa/Slt	30			15		
	49+00E	.4	.15	BT	MB	Slt	30			20		
	25	.6	.15	BT	MB	Sa	35			30		
	50	.5	.25	BF	RB	Slt	35			20		
	75	.3	.15	BF/TF	RB/GR	Sa	65			40		
↓	100+00E	.6	.2	BT	LB	Slt	35	↓	↓	10		
I166N	101+25E	.4	.2	BF	RB	Slt	30	SA	S	20		
	50	.2	.1	BF?	RB	Sa	60	SA		55		No leach zone
	75	.25	.1	BF?	RB	Sa	70	SA		45		No leach zone
	102+00E	.2	.1	BT	LB	Sa	65	VA	↓	50		
	25	No Sample										
	50	.5	.15	BT	LB	Slt	40	SA	S	55		
	75	.2	.1	BM	Gr	Sa	70	VA	S	50		
↓	103+00E	No Sample										
I167N	100+25E	.4	.15	BF	RB	Slt	20	SA	S	5		
	50	.4	.2	BF	RB		20			5		
	75	.4	.2				20			10		
	101+00E	.4	.2				20			15		
	25	.3	.2				20			15		
	50	.4	.15				30			15		
	75	.3	.15				20			10		
	102+00E	.3	.15				20			15		
	25	.3	.1	↓	↓		25			15		
	50	.4	.2	BT	MB	↓	30			30		
	75	.4	.2	BT	DB	Sa	40	↓		35		
	103+00	.5	.1	TF	GR	Sa	80	VA		50		
	25	.4	.15	BT	LB	Sa	40	SA	↓	50		
	50	No Sample										
	75	.4	.2	BT/TF	MB/GR	Sa	75	VA	S	50		
	104+00E	.3	.23	TF	GR	Sa	85	VA	S	55		

GRID LOC	DEPTH	HORIZON	COLOUR	FRAG	COMMENTS
	I-166N				
100+25E	.3 m	BF	RB	VA 20%	CL
100+50 E	.4 m	BF	RB	VA 20%	CL
100+75 E	.4 m	BF	RB	VA 30%	CL
101+00	.2 m	BF	RB	VA 10%	CL
100+50N 100+00E	.4 m	BF	RB	SA 10%	SIL
[illegible]+50N 100+00E	.3 m	BF	RB	SA 10%	SIL
	I-167N				
100+00E	.3 m	BF	RB	SA 15%	SIL
99+75E	.4 m	BF	RB	SA 15%	SIL
99+50E	.5 m	BF	RB	SA 10%	SIL
99+25E	.5 m	BF	RB	SA 1%	CLY
99+00 E	.4 m	BF	RB	SA 1%	CL
98+75 E	.4 m	BF	MB	SA 1%	CL
98+50 E	.5 m	BF	RB	SA 10%	SIL
98+25 E	.3 m	BF	MB	SA 1%	CL
98+00 E	.4 m	BF	RB	SA 10%	SIL
	I-168N				
9800 E	.7 m	BF	RB	SA 10%	SIL
9825 E	.8 m	BF	MB	SA 1%	CL
9850 E	.4 m	BF	MB	SA 1%	CL

I-168N

GRID LOCA	DEPTH	HORRIZON	COLOUR	FRAG	COMMENTS
98.75E	.4	BF	RB	SA 15%	SIL
99.00E	.3	BF	MB	SA 5%	SIL CL
99.25E	.4	BF	RB	SA 20%	SIL
99.50E	.2	BF	RB	SA 20%	SIL
99.75E	.4	BF	RB	SA 25%	SIL
100+00E	.3	BF	RB	SA 10%	SIL
I-168+50N 100+00E	.2	BF	RB	SA VA 10%	SIL

198992	SOIL SAMPLES			PROPERTY PROJECT ELF-JAN CK GRID						SAMPLER RF		
SAMPLE NO.	GRID LOCATION	DEPTH (cm)	THICK (cm)	HORIZON	COLOUR	PARTICLE SIZE	FRAGMENTS %	FRAGMENTS ROUND	FRAGMENTS COMP	SLOPE	SEEPAGE	COMMENTS
I168N -	104+00E	40	10	Bm	MB	S/S	25	SA	SA	15SE		
I168N -	103+75E	40	10	Bm?	MB	SANDY	"	"	"	25E		NO LEACHED & SANDY
I168N -	103+50E	55	10	Bm?	"	S/S	"	"	"	"		Below sandy of above sample.
I168N -	103+25E	65	10	?	LB	SANDY	15	"	"	25SE		Couldn't get through sandy
I168N -	103+00E	50	10	Bm?	MB	SS	25	SR/SA	"	"		
I168N -	102+75E											CLIFF - No SAMPLE
I168N -	102+50E	50	8	BF	RB	SS	20	"	"	10SE		BELOW THKIC, POOR LEACHED
I168N -	102+25E	25	4	BF	OB	S/S	15	"	"	5E		Below 2cm leached
I168N -	102+00E	25	6	BF	OB	"	"	"	"	"		"
I168N -	101+75E	"	"	BF	"	"	"	"	"	"		3cm LEACHED
I168N -	101+50E	25	5	BF	"	"	"	"	"	"		4cm LEACHED
I168N -	101+25E	"	8	BF	RB	S/S	"	"	"	"		a little sandier
I168N -	101+00E	35	5	BF	OB	"	"	"	"	10E		
I168N -	100+75E	"	"	"	"	"	"	"	"	"		
I168N -	100+50E	30	"	"	"	"	"	"	"	5E		
I168N -	100+25E	25	5	BF?	RB	S/C	5	SR	MN.	FLAT		BROWN CLAY RICH W/ 5CM RB CLAY RICH (MOTTLED) INTERV.

1989 SOIL SAMPLES PROPERTY PROJECT Elf (Ian Cr Grid) SAMPLER SWS

SAMPLE NO.	GRID LOCATION	DEPTH (cm)	THICK (cm)	HORIZON	COLOUR	PARTICLE SIZE	FRAGMENTS %	ROUND	COMP	SLOPE	SEEPAGE	COMMENTS
I169N	98+00E	.3	.2	BF	RB	C	20	SA	S	0		Boggy
	25	.9	.3	BG	Mo	C	20			0		
	50	.5	.2	BG	mo	C	25			0		
	75	.6	.3	BG	mo	C	20			0		
	99+00E	.9	.3	BG	mo	C	15			0		
	25	.6	.3	BG	mo	C	15			0		
	50	.4	.2	BT	mB	Slt	30			5		Dry
	75	.4	.2	BT	mB	Sa	50	VA		5		
	100+00E	.3	.15	BF	RB	Slt	30	SA		5		
	25	.3	.15	BF	RB	Slt	20			0		
	50	.4	.2	BF	RB	Slt	35			0		
	75	.3	.15	BT	LB	Sa	45			5		
	101+00E	.3	.2	BF	RB	Slt	25			20		
	25	.4	.2	BF	RB	Slt	30			20		
	50	.3	.15	BF	RB	Slt	20			15		
	75	.3	.15	BF	RB	Slt	25			10		
	102+00E	.4	.25	BT	mB	Slt	30			20		
	25	.7	.2	BT	LB	Sa	30			10		
	50	.6	.15	BF	RB	Sa	35			15		
	75	.6	.2	BT	LB	Slt	40			15		
	103+00E	.5	.2	BT	LB	Slt	25			20		
	25	.5	.2	BT	mB	Sa	40			45		No Leach Zone
	50	.7	.3	BT	mB	Slt	35			40		
	75	.7	.2	BT	mB	Sa	35			35		
	104+00E	.6	.2	BT	mB	Sa	30			25		

J140+50N	96+00E	50		BF	RB	SILT	15	SA					
J140N	96+00E	40		BF	RB		40	VA					

J 141N	96+00E	50		BF	BR		20					
	96+25E			BF	BR		20	SA				
	96+50E	70		BF	BR		15	SA				
	96+75E	60		BF	BR	SILT	15	SA				
	97+00E	50		BF	BR	CLY	15	VA/SA				
	97+25E	40		BF	BR	SILT	20	VA				
	97+50E	50		BF	BR	SILT	20	SA				
	97+75E	50		BT	BR	CLY	15	SA				

J141+50N	96+00E	50		BF	BR	SILT	25	SA				

199197	SOIL SAMPLES				PROPERTY PROJECT	ELF					SAMPLER	B.W.
SAMPLE NO.	GRID LOCATION	DEPTH (cm)	THICK (cm)	HORIZON	COLOUR	PARTICLE SIZE	FRAGMENTS %	ROUND	COMP	SLOPE	SEEPAGE	COMMENTS
J142N	96+00E	30		BF/BT	LB		5	SA				POOR
	96+25E	50		BF	RB		10					
	96+50E	40		BF	RB		10					
	96+75E	80		BT/BF	BR	SANDY	5	SA				
	97+00E	60		BT	GY		15	SA				
	97+25E	100		GY	LGY	SILT/CLY	0					
	97+50E											NO SAMPLE
	97+75E	100		?	BL/GY	SILT	0					
	98+00E	110		ORGANIC	BL	SILT						POOR - CAN'T GET SAMPLE
	98+25E	60		TF	GY	SANDY	10					
	98+50E	30		TF	GY	SAND						ROCK BLUFF - POOR
	98+75E	50		TF?	GY							POOR
	99+00E	50		TF?	GY	SAND						WET
	99+25E											NO SAMPLE
	99+50E	70		TF?	GY	SANDY		VA				WET
	99+75E	40		BT	GY	SANDY		VA				WET
	100+00E	40		BF	LB	SILT	10	SA				
	100+25E	30		BF	LB	SILT	10	SA				
	100+50E	30		BF	BR	SILT	15	SA				
	100+75E	30		BF	BR	SILT	15	SA				
	101+00E	40		BF	BR	CLY	40	VA				
	101+25E	50		BF	BR	CLY	70	VA				
	101+50E	50		BF	BR	SILT	10	VA/SA				
	101+75E	60		BF	BR	SILT	15	SA				
	102+00E	50		BF	BR	SILT	30	SA/SR				
J142+50N	96+00E	40		BF	RB	CLY + SANDY						
J143N	102+00E	40		BF	RB		80	VA				
	101+75E	50		BF	BR	CLY	60	VA				
	101+50E	80		BF	BR	CLY	95	VA				
	101+25E	40		BF	BR	CLY	95	VA				
	101+00E	50		BF	BR	SILT	10	SA				
	100+75E	50		BF	BR	SILT	20	VA				

199197 SOIL SAMPLES PROPERTY PROJECT ELF SAMPLER B.W

SAMPLE NO.	GRID LOCATION	DEPTH (cm)	THICK (cm)	HORIZON	COLOUR	PARTICLE SIZE	FRAGMENTS %	FRAGMENTS ROUND	FRAGMENTS COMP	SLOPE	SEEPAGE	COMMENTS
J143N	100+50E	40		TF	GY		95	VA				
	100+25E	60		TF/BT	GY	CLY	2	SA				
	100+00E	30		BF	BR	SILT	5	SA				
	99+75E	40		BT	GY	SANDY	30	SA/SR				WET
	99+50E	80		BT	GY	CLY	10	SA				WET
	99+25E	80		BF	RB	SANDY	10	SA/SR				
	99+00E	70		?	GY	SANDY		SA				CK WASH?
	98+75E	90		BF	RB	SILT	10	SA				
	98+50E	90		BT	BR	CLY	15	SA				
	98+25E	100		BF	RB	CLY/SILT	10	SA				
	98+00E	80		BF	BR	SILT/CLY	15	VA				
	97+75E	60		TF	GY		75	VA				
	97+50E	80		TF	GY/BL		75	VA				SOME SOIL
	97+25E	70		BF	BR	SILT	50	VA				
	97+00E	60		BF?	LBR	SILT	20	VA				
	96+75E	60		BF	LBR	SILT	15	SA				
	96+50E	40		BF	LB	SILT	20	VA				
	96+25E	60		BF	LB	CLY	20	SA				
	96+00E	40		BF	LB	SILT	20	SA				
J143+50N	96+00E	40		BF	LB	SILT	20	SA/VA				
J144N	96+00E	40		BF/BT	RB	SILT	20					
	96+25E	50		BF/BT	RB	SILT	25					
	96+50E	50		BT	GY	SANDY	10					
	96+75E	40		BT	GY/BR	CLY	10					
	97+00E	40		BT	GY/BR	SILT	20					
	97+25E	60		TF?	GY	SANDY	0					WET - POOR
	97+50E	50		TF?	GY	SANDY	0					WET - POOR
	97+75E	70		TF?	GY	SANDY						WET - POOR
	98+00E	60		BT	GY	SILT	10	VA				CREEK
	98+25E	50		BF	RB	SILT	60	SA				
	98+50E	30		BF	RB	CLY	80	VA				
	98+75E	60		BF	RB	SILT	40	VA				

199197 SOIL SAMPLES PROPERTY PROJECT ELF SAMPLER B.W

SAMPLE NO.	GRID LOCATION	DEPTH (cm)	THICK (cm)	HORIZON	COLOUR	PARTICLE SIZE	FRAGMENTS %	FRAGMENTS ROUND	COMP	SLOPE	SEEPAGE	COMMENTS
J144N	99+00E	50		BF	RB	SILT	10	SA				
	99+25E	40		BF	RB	SILT	5	SA				
	99+50E	40		BT	GY	CLY	5	SA				
	99+75E	50		BT	GY	SAND/CLY	15	SA				
	100+00E	30		BF	RB	CLY	15	SA				SAMPLE TAKEN 9M E OF STATION
	100+25E	60		BF	RB	SILT	1	SA/SR				
	100+50E	40		BF/BT	RB/GY	SILT/CLY	10	SA				
	100+75E	30		BF	RB	CLY	5	VA				
	101+00E	30		BF	RB	SILT	10	SR				
	101+25E											
	101+50E											
	101+75E											
	102+00E											
J145+50N	96+00E	40		BT	GY	CLY	20	SA				
J145N	96+00E											
	96+25E	40		BF	BR	SILT	20	SA				
	96+50E	30		BT/BF	GY/BR		65	VA				
	96+75E	60		BT	GY	SILT	35	SA/VA				
	97+00E	80		BT	GY	SILT	20	SA				
	97+25E	60		BF	BR	SILT	10	SA				
J148+50N	96+00E	40		BF	LRB	SILT	10	VA				
J145N	97+50E	50		BT	GY	SAND	20	SA				
	97+75E	30		BF	BR		10	SA				
	98+00E	40		BF	BR		1	SA				
	98+25E	50		BF	BR		10	SA				
	98+50E	50		BF	BR		15	SA				
	98+75E	60		BF	BR		10	SA				
	99+00E	40		BF	BR		10	SA				
	99+25E	50		BT	GY	CLY	15	SA				
	99+50E	70		BF	GY/RB	SILT		SA				
	99+75E	100		TF	GY	SILT	10	SA				POOR
	100+00E											NO SAMPLE - SWAMP

1991 97	SOIL SAMPLES				PROPERTY PROJECT ELF						SAMPLER BW	
SAMPLE NO.	GRID LOCATION	DEPTH (cm)	THICK (cm)	HORIZON	COLOUR	PARTICLE SIZE	FRAGMENTS %	FRAGMENTS ROUND	COMP	SLOPE	SEEPAGE	COMMENTS
J 145N	100+25E	100		TF?	GY	SANDY	50	SA				
	100+50E	80		TF?	GY	SANDY	50	SA				
	100+75E	80		TF?	GY	SANDY	50	SA				
	101+00E	60		TF?	GY	SANDY	50	SA				
	101+25E	40		TF?	GY	CLY	0					
	101+50E	50		TF?	GY	SILT	0					
	101+75E	60		BF	RB	SILT	10	VA				
	102+00E	70		BF	RB	SILT	10	VA				
J 146N	96+00E	50		BF	LB	SILT	20	SA				
	96+25E	50		BF	RB	SILT	25	SA				
	96+50E	70		BT	GY	CLY	30	SA/VA				
	96+75E	80		BT	GY	SILT	40	VA/SA				
J 147+50N	96+00E	50		BF	LRB	SILT	10	SA				
J 146N	97+00E	70		BT	GY	SILT	30	SA/SR				
	97+25E	80		BT	GY	SILT/CLY	20	SA/SR				
	97+50E	50		BT	GY	SILT/SAND	25	SA/SR				
	97+75E	60		BF	DBR	CLY	30	SA				
	98+00E	60		BF	RB	SILT	30	SA/SR				
	98+25E	70		BF	RB	CLY	30	SA				
	98+50E	40		BF	RB	SILT	20	SA				
	98+75E	50		BT	GY	SILT	25	SR				
	99+00E	60		BF	RB	SILT	15	SR				
	99+25E	50		BT	GY	SILT	25	SR				
	99+50E	30		TF	GY			VA				
	99+75E	60		BF	RB	SILT/CLY	35	SA/SR				
	100+00E	70		BT	GY	CLY	30	SA				
	100+25E	40		BT	GY	SILT	15	SA				
	100+50E	40		BM	BL/GY	CLY	10	VA				
	100+75E	60		TF/BT	BR/GY			SA				TAKEN 9M E. OF STATION
	101+00E	40		TF	GY		75	VA				
	101+25E	60		TF	GY	CLY	75					WET - POOR
	101+50E	40		BF	RB	SILT	10	VA				

1997	SOIL SAMPLES				PROPERTY PROJECT JOEL-ELF						SAMPLER BW	
SAMPLE NO.	GRID LOCATION	DEPTH (cm)	THICK (cm)	HORIZON	COLOUR	PARTICLE SIZE	FRAGMENTS %	FRAGMENTS ROUND	COMP	SLOPE	SEEPAGE	COMMENTS
J146N	101+75E	40		BF	RB	SILT	75	VA				POOR
	102+00E	50		BF	RB	SILT	75	VA				
	102+25E	40		BF	RB	SILT	20					
	102+50E											
	102+75E											
	103+00E											
J146+50N	96+00E	50		BF	LB	SILT	15	SA				
J147N	96+00E	60		BT		SILT/CLY	30	SA/SR				
	96+25E	90		BT		CLY	25	SA				
	96+50E	80		BT		CLY	20	VA/SA				
	96+75E	50		BF	RB	SILT/CLY	20	SA				
	97+00E	50		BF	RB	SILT/CLY	15	SA				
	97+25E	40		BF	RB	SILT	15	VA/SA				
	97+50E	50		BF	RB	SILT	10	VA/SA				
	97+75E	50		BF	RB	SILT/CLY	20	SR				
	98+00E	40		BF	RB	SILT	15	SA/VA				
	98+25E	50		BT	GY/RB	SILT	20	SR/SA				
	98+50E	60		BT	GY	CLY/SAND	25	SA				
	98+75E	50		BT	GY	CLY	10	SR				
	99+00E	40		BT	GY	CLY	10	VA				
	99+25E	60		?	GY	SAND/SILT						
	99+50E	30		?	GY	SAND/SILT						
	99+75E	100		?	GY	SANDY						
	100+00E	70		BT	GY	CLY		VA				
	100+25E	70		?	BR	SAND/SILT						CREEK
	100+50E	50		?	BR	SAND/SILT						CREEK
	100+75E	40		?	BR	SAND/SILT						CREEK
	101+00E	40		BT	BR	SAND		SA				
	101+25E	50		BT	GY	SAND		SA				
	101+50E	80		?	GY/BL	SAND/SILT						
	101+75E	50		BT	GY		10	SA				
	102+00E	40		BT	GY	CLY	25	SA				

1994 97 SOIL SAMPLES PROPERTY PROJECT ELF SAMPLER B.W.

SAMPLE NO.	GRID LOCATION	DEPTH (cm)	THICK (cm)	HORIZON	COLOUR	PARTICLE SIZE	FRAGMENTS %	FRAGMENTS ROUND	COMP	SLOPE	SEEPAGE	COMMENTS
J147N	102+25E	30		?	WH	CLY	70					BEDROCK
	102+50E	40		BF	RB		40	VA				
	102+75E	40		BF	RB	SILT	30	VA				
	103+00E	40		BF	RB	SILT	25	VA				
J148N	96+00E	70		BF	GY/LB	SILT	10	SA				
	96+25E	50		BF	BR/GY	CLY	15	SA				
	96+50E	60		BF	RB	CLY	20	SA				
	96+75E	60		BF	RB	SILT	45	VA				
	97+00E	50		BF	RB	SILT	60	VA				
	97+25E	60		BF	RB	SILT	10	SA				
	97+50E	70		BT	GY	SILT	25	SR				
	97+75E	70		BF	RB	SILT/CLY	30	SA				
	98+00E	70		BF	RB	SILT/CLY	20	SA				
	98+25E	60		BT	GY	CLY/SILT	15	SA/SR				
	98+50E	50		BT	GY	CLY	10	SR				

1989 SOIL SAMPLES PROPERTY PROJECT E/E (Joel C Grid) SAMPLER EWS

SAMPLE NO.	GRID LOCATION	DEPTH (cm)	THICK (cm)	HORIZON	COLOUR	PARTICLE SIZE	FRAGMENTS %	ROUND	COMP	SLOPE	SEEPAGE	COMMENTS
J 150N	100+25E	.7	.15	BT	GR	Slt/C	35	VA	S	40		
	50E	.4	.15	BT	GR	C	25	SA	S	40		
	75E	No Sample										
	101+00E	.5	.25	BT	MB	SH/C	25	SA	S	15		
	25E	.5	.25	BT	MB	SH/C	25	SA	S	30		
	50E	.4	.25	TF	GR	Sa	75	VA	S	30		
	75E	.5	.15	TF	GR	C	75	VA	S	15		
	102+00E	.5	.2	TF	GR	C	75	VA	S	15		
	25E	.7	.15	BT	GR	Sa/C	55	VA	S	10		
	50E	.5	.2	BT	GR	Sa	55	VA	S	15		
	75E	.6	.25	TF	GR	Sa	70	VA	S	30		
J 150N	103+00E	.5	.2	BT	MB	Sh	20	SA	S	25		
J148N	103+00E	.8	.3	BT	MB	Slt	30	SA	S	10		
	102+75E	.7	.3	BT	MB	Slt/Sa	30	SA	S	5		
	50E	.7	.4	BT	DB	Sa	35	SA	S	30		
	25E	.3	.15	BT/BF	RB	Sa	25	SA	S	25		
	00E		No Sample									
	101+75E	.5	.2	BT/TF	MB/GR	Slt	55	VA	S	15		
	50E	.6	.3	BT	MB	Sa	40	VA	S	15		
	25E	.5	.2	BT	MB	Sa	25	SA	S	20		
	00E	.5	.3	BT	MB	Sa	35	SA	S	20		
	100+75E	.8	.2	TF	GR	Sa	80	VA	S	30		
	50E	.5	.15	BT	MB	Slt	30	SA	S	30		
	25E	.4	.2	BF	RB	Sa	25	SA	S	15		
	00E	.7	.3	BT	DB	Slt/Cl	10	SR	S	10		Boggy
	99+75E	.5	.15	BF	RB	Slt	30	SA	S	20		
	50E	.4	.15	BF?	RB	Sa	60	SR	S	35		*maybe ferricrete
	25E	.8	.3	BF	RB	Slt	40	SA	S	30		
	00E	.8	.6	BT	MB	Slt	35	SA	S	35		
J148N	98+75E	.6	.2	BF	RB	SH	30	SA	S	15		

198997	SOIL SAMPLES				PROPERTY PROJECT ELF-JOEL CK GRID.					SAMPLER RF		
SAMPLE NO.	GRID LOCATION	DEPTH (cm)	THICK (cm)	HORIZON	COLOUR	PARTICLE SIZE	FRAGMENTS %	ROUND	COMP	SLOPE	SEEPAGE	COMMENTS
J149N-	103+00E	70	10	?	LB	SANDY	40	SR	VAR	FLAT		Poor sandy under gravel
J149N-	102+75E	50	10	BG?	MB	S/S	15	SA	"	"		WET SAMPLE
J149N-	102+50E	25	5	BF?	RB	"	20	SA	"	5E		Sandy clays from lt o/B TO DK RB.
J149N-	102+25E	70	10	TF?	Gy/BR	SANDY	50	SA	SH.	10E		SUBCROP RIGHT ON TOP OF BEDROCK
J149N-	102+00E	100	10	BT?	L.Gy/BR	S/C	15	"	"	5E		BG? Clayey w/red/Br blotches, MOIST
J149N-	101+75E	45	10	Bm?	M BR	S/S	35	SR/SA	"	"		PROB. Poor - TRANSP.?
J149N-	101+50E	50	10	?	M BR	SANDY	50	A-SH SR-MIXED	"	"		OUTWASH OR STREAMBED? - Poor
J149N-	101+25E	25	5	BF?	YB	S/S	25	SA	MIXED	"		2cm leached above.
J149N-	101+00E	60	10	TF	MB	Sandy	60	A	SH	"		V. Poor No Dev. SH TALUS.
J149N-	100+75E	30	10	BF?	RB	S/S	15	A	SH	15E		Below v. thin leached.
J149N-	100+50E	30	10	BF?	MB	"	"	"	"	10E		Poor Sandy, rocky frag. rich Horiz.
J149N-	100+25E	35	10	B??	MB	SANDY	"	"	"	"		SOLID FERRICRETE @ 50cm DEPTH.
J149N-	100+00E	50	10	BF?	MB	Sandy	"	"	"	"		FERRICRETE COBBLES
J149N-	99+75E	40	4	BF	OB	S/S	15	"	"	5E		WK leached above. 4cm thick BF.
J149N-	99+50E	40	10	TF	Gy/B	Sandy	60	"	"	10E		Poor PROB NSS.
J149N-	99+25E	90	10	Bm?	Gy/Br.	"	35	"	"	10E		Poor
J149N-	99+00E	50	"	TF?	"	"	40	"	"	"		"
J149N-	98+75E	40	"	BF?	YB	S/S	30	"	"	"		
J149N-	98+50E	45	"	BF/TF	YB	"	20	A	"	"		Poor BF in Talus
J149N-	98+25E	30	10	BT?	YB	S/C	15	"	"	"		
J149N-	98+00E	40	"	BF?	LB	S/S	15	"	"	"		
J149N-	97+75E	40	"	BF	MB	"	"	"	"	"		2CM LEACHED
J149N-	97+50E	30	6	BF	RB	"	"	"	"	"		Good BF.
J149N-	97+25E	"	10	BF	RB	"	20	"	"	15		
J149N	97+00											NO Sam. Has Boulder Talus
J149N	96+75											O/C CLIFF
J149N	96+50	40	10	BF	YB	"	"	"	"	20		
J149N	96+25	25	5	BF	YB	"	"	"	"	FLAT		GOOD LEACHED
J149N	96+00E	"	"	"	"	"	"	"	"	"		"
J149+50	96+00E	"	"	"	"	"	"	"	"	"		" "

1989/1997 SOIL SAMPLES				PROPERTY PROJECT ELF							SAMPLER CAMAS	
SAMPLE NO.	GRID LOCATION	DEPTH (cm)	THICK (cm)	HORIZON	COLOUR	PARTICLE SIZE	FRAGMENTS %	ROUND	COMP	SLOPE	SEEPAGE	COMMENTS
J151N	- 96+00E	25		BF	Br		10	VA				
J151N	- 96+25E	20		T	LB		40	VA				STEEP SLOPE E.
J151N	- 96+50E	70		BT	LB		20	VA				
J151N	- 96+75E	40		BT	LB		30	SA				
J151N	- 97+00E	60		T	BK		30	SA				
J151N	- 97+25E	100		BT/BF	RB/Gy		20	SA				
J151N	- 97+50E	20		BF	RB		35	SA				UNDER STUMP
J151N	- 97+75E	50		BT/BF	RB/Gy		35	SA				
J151N	- 98+00E	40		BF	RB		15	SA				
J151N	- 98+25E	100		BT/BF	RB		30	SA				
J151N	- 98+50E	35		BT/BF	RB		20	SA				
J151N	- 98+75E	40		BT	LB		10	SA				
J151N	- 99+00E	50		BT/BF	LB		20	SA				
J151N	- 99+25E	50		BF	LB		25	SA				
J151N	- 99+50E	40		BT/BF	"		45	VA				
J151N	- 99+75E	50		BF	RB		35	SA				
J151N	- 100+00E	50		BF	"		50	VA				
J151N	- 100+25E	50		BF	"		40	SA				
J151N	- 100+50E	45		BT/BF	LB		25	SA				
J151N	- 100+75E	50		BT	LB		30	SA				HIT BEDROCK
J151N	- 101+00E	70		BF	RB		30	SA				
J151N	- 101+25E	75		BF	RB		5	SA				WET
J151N	- 101+50E	40		BF	RB		25	SA				
J151N	- 101+75E	50		BF	RB		10	SA				
J151N	- 102+00E	70		BT	LB		25	SR				
J151N	- 102+25E	90		BT	LB/G		10	SA				
J151N	- 102+50E	100		BT	LB/G		30	VA				
J151N	- 102+75E	100		BT/BF	"		10	SA				
J151N	- 103+00E	100		BT	"		30	SA				
J150+50N	- 96+00E	30		BF	RB		5	SA				
J150N	- 96+00E	40		T	LB		60	VA				
J150N	- 96+25E	50		T	Gy/BR		70	VA				

19~~86~~97 SOIL SAMPLES PROPERTY PROJECT ELF SAMPLER CAMAS

SAMPLE NO.	GRID LOCATION	DEPTH (cm)	THICK (cm)	HORIZON	COLOUR	PARTICLE SIZE	FRAGMENTS %	ROUND	COMP	SLOPE	SEEPAGE	COMMENTS
J150N-	96+50E	60		T	Gy/Br		80	VA				V. STEEP
J150N-	96+75E	60		T	"		70	VA				"
J150N-	97+00E	40		T	"		70	VA				"
J150N-	97+25E	50		T/BF	LB		30	SR				
J150N-	97+50E	50		BF	LB		20	SR				
J150N-	97+75E	100		BT/BF	"		15	SR				
J150N-	98+00E	100		BT	Gy/Br		5	SA				
J150N-	98+25E	50		T	Gy		10	SR				CREEKSIDE
J150N-	98+50E	60		BT/BF	Gy/BR		10	SR				"
J150N-	98+75E	40		BF	RB		30	SA				
J150N-	99+00E	40		BF	RB		20	SR				
J150N-	99+25E	50		T/BF	RB		80	VA				
J150N-	99+50E	50		"	"		80	VA				
J150N-	99+75E	70		BF	RB		60	VA				
J150N-	100+00E	50		BT/BF	RB		60	VA				

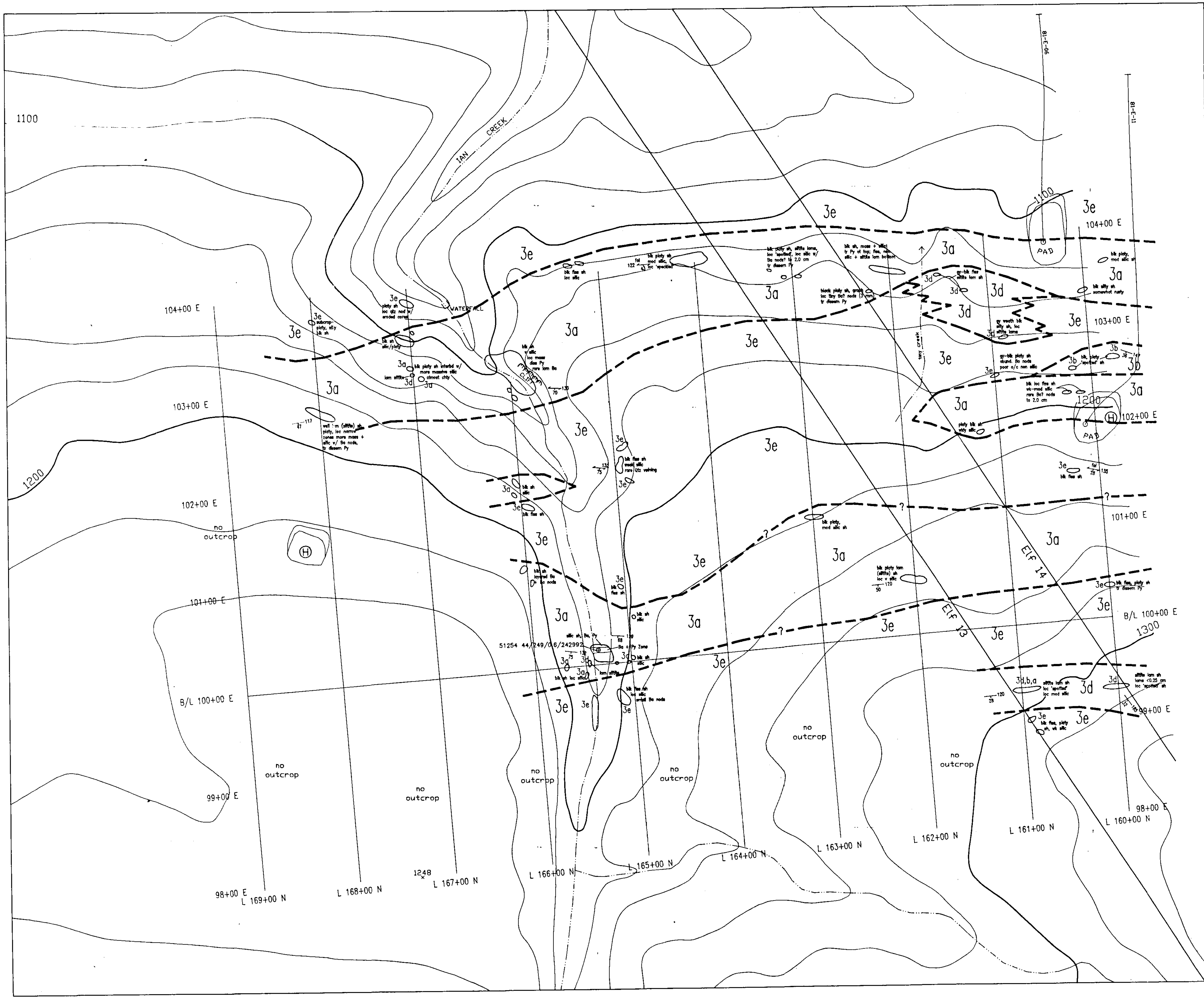


FIGURE 5

TECK EXPLORATION LTD.
KAMLOOPS, BRITISH COLUMBIA

ELF PROPERTY

IAN CREEK GRID

GRID GEOLOGY

MAP 1

DATE DRAWN: JULY 11, 1997	SCALE: 1:2,500	DWG. NAME: IAN--GEO
COMPILED BY: R. Farmer	JOB No: 1755	
DRAWN BY: S.A.	NTS No: 94F/7	

FIGURE 6

TECK EXPLORATION LTD.
KAMLOOPS, BRITISH COLUMBIA

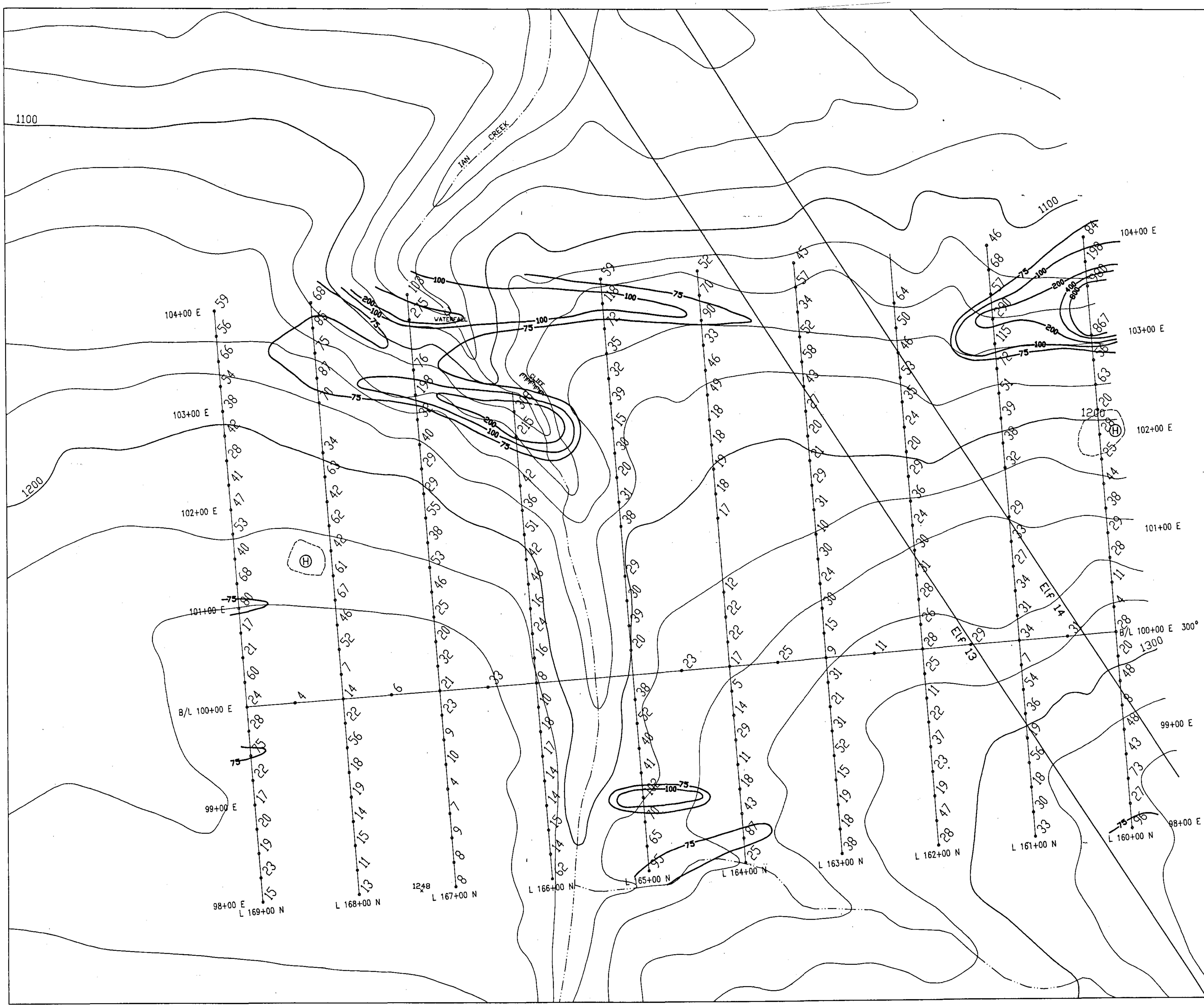
ELF PROPERTY

JOEL CREEK GRID

GRID GEOLOGY

MAP2

DATE DRAWN: JULY 11, 1997	SCALE: 1:2,500	DWG. NAME: ELF-JOEL
COMPILED BY: R. Farmer	JOB No: 1755	
DRAWN BY: S.A.	NTS No: 94F/7	



Legend

- 75 ppm Pb
- 100 ppm Pb
- 200 ppm Pb
- 400 ppm Pb
- 800 ppm Pb
- CREEKS
- (H) HELIPAD

0 50 100 metres

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ASSESSMENT REPORT

25,223

FIGURE 7

TECK EXPLORATION LTD.
KAMLOOPS, BRITISH COLUMBIA

ELF PROPERTY

IAN CREEK GRID

Soil Geochemistry

Pb ppm

MAP 3

DATE DRAWN: AUG. 26, 1997	SCALE: 1:2,500	DWG. NAME: IAN–PB
COMPILED BY: R. Farmer	JOB No: 1755	
DRAWN BY: S.A.	NTS No: 94F/7	

4

DECLINATION 25°

Legend

- 1000 ppm Zn
- 2000 ppm Zn
- 4000 ppm Zn
- 8000 ppm Zn
- 16000 ppm Zn
- CREEKS
- (H) HELIPAD

0 50 100
metres

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

25,223

FIGURE 8

TECK EXPLORATION LTD.
KAMLOOPS, BRITISH COLUMBIA

ELF PROPERTY

IAN CREEK GRID
Soil Geochemistry
Zn ppm

MAP 4

DATE DRAWN: AUG. 26, 1997	SCALE: 1:2,500	DWG. NAME:
COMPILED BY: R. Farmer	JOB No: 1755	IAN-ZN
DRAWN BY: S.A.	NTS No: 94F/7	

Legend

1 ppm Ag
2 ppm Ag
CREEKS
Ⓗ HELIPAD

0 50 100
metres

R. D. FARMER

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

25,223

FIGURE 9

TECK EXPLORATION LTD.
KAMLOOPS, BRITISH COLUMBIA

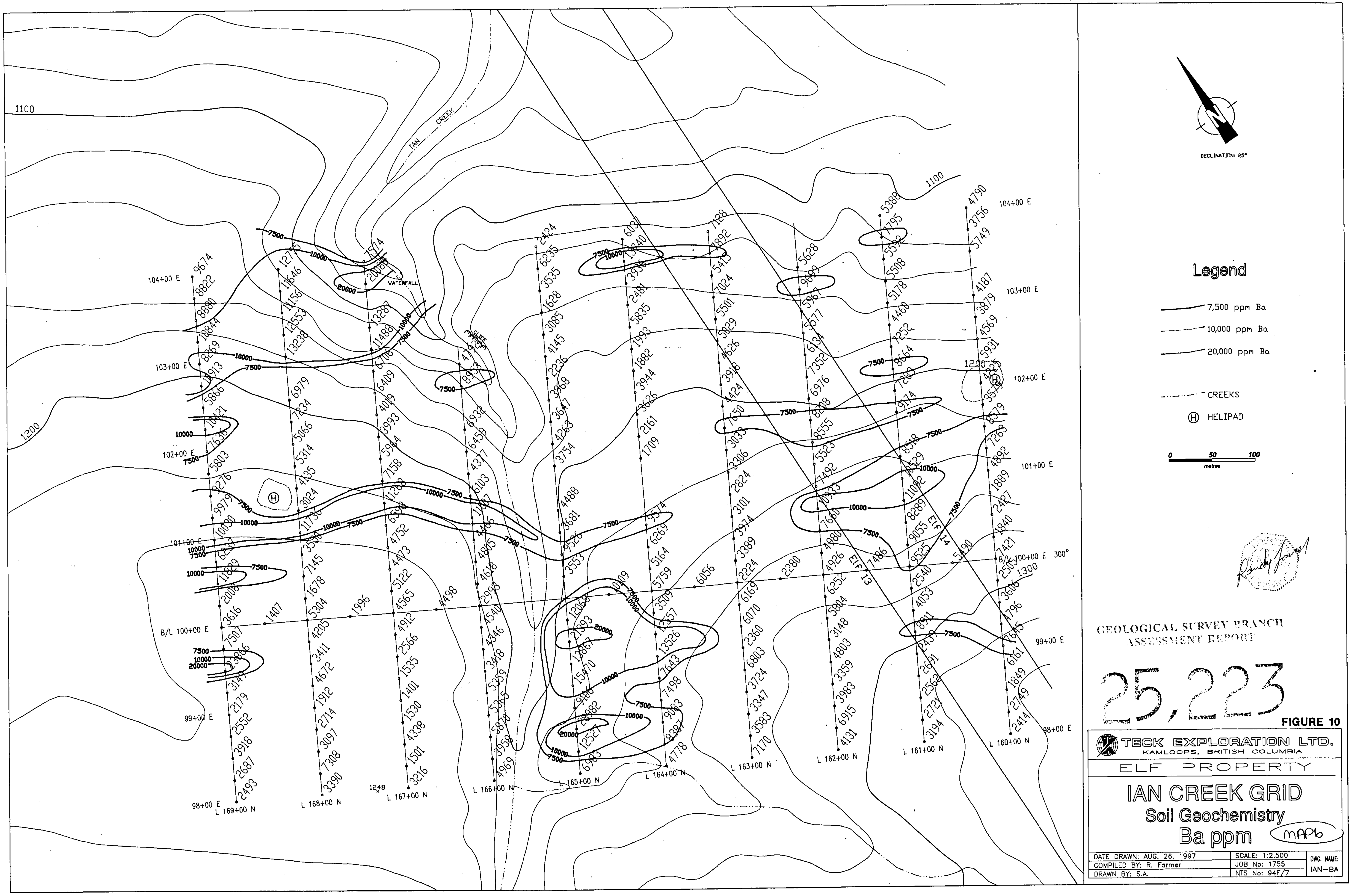
ELF PROPERTY

IAN CREEK GRID

Soil Geochemistry
Ag ppm

MAP 5

DATE DRAWN: AUG. 26, 1997	SCALE: 1:2,500	DWG. NAME:
COMPILED BY: R. Farmer	JOB No: 1755	IAN-AG
DRAWN BY: S.A.	NTS No: 94F/7	



6
IAN CREEK
WATERFALL
CLIFF
1100
1200
1300
DECLINATION: 25°
Legend
7,500 ppm Ba
10,000 ppm Ba
20,000 ppm Ba
CREEKS
HELIPAD
0 50 100
metres
L 169+00 N
L 168+00 N
L 167+00 N
L 166+00 N
L 165+00 N
L 164+00 N
L 163+00 N
L 162+00 N
L 161+00 N
L 160+00 N
B/L 100+00 E
B/L 100+00 E 300°
104+00 E
103+00 E
102+00 E
101+00 E
99+00 E
98+00 E
ELF 13
ELF 14
GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT
25,223
FIGURE 10
TECK EXPLORATION LTD.
KAMLOOPS, BRITISH COLUMBIA
ELF PROPERTY
IAN CREEK GRID
Soil Geochemistry
Ba ppm
MAP6
DATE DRAWN: AUG. 26, 1997
COMPILED BY: R. Farmer
DRAWN BY: S.A.
SCALE: 1:2,500
JOB No: 1755
NTS No: 94F/7
DWG. NAME: IAN-BA

FIGURE 11

TECK EXPLORATION LTD.
KAMLOOPS, BRITISH COLUMBIA

ELF PROPERTY

JOEL CREEK GRID
Soil Geochemistry
Pb ppm
MAP 7

DATE DRAWN: AUG. 25, 1997	SCALE: 1:2,500	DWG. NAME: JOEL-PB
COMPILED BY: R. Farmer	JOB No: 1755	
DRAWN BY: S.A.	NTS No: 94F/7	

8
1100
1200
1300
1400
Legend
1000 ppm Zn
2000 ppm Zn
4000 ppm Zn
8000 ppm Zn
CREEKS
HELIPAD
DECLINATION 25°
0 50 100
metres
100+00 E
99+00 E
98+00 E
97+00 E
B/L 96+00 E
BASELINE 300°
L 151+00 N
L 150+00 N
L 149+00 N
L 148+00 N
L 147+00 N
L 146+00 N
L 145+00 N
L 144+00 N
L 143+00 N
L 142+00 N
L 141+00 N
L 140+00 N
L 139+00 N
L 138+00 N
L 137+00 N
L 136+00 N
L 135+00 N
L 134+00 N
Joel Creek Showing
JOEL CREEK
ELF 8
ELF 13
GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT
25,223
FIGURE 12
TECK EXPLORATION LTD.
KAMLOOPS, BRITISH COLUMBIA
ELF PROPERTY
JOEL CREEK GRID
Soil Geochemistry
Zn ppm
MAP8
DATE DRAWN: AUG. 25, 1997
COMPILED BY: R. Farmer
DRAWN BY: S.A.
SCALE: 1:2,500
JOB No: 1755
NTS No: 94F/7
DWG. NAME: JOEL-ZN

(9)

DECLINATION 25°

Legend

1 ppm Ag
2 ppm Ag
4 ppm Ag
CREEKS
(H) HELIPAD

0 50 100
metres

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

25,223

FIGURE 13

TECK EXPLORATION LTD.
KAMLOOPS, BRITISH COLUMBIA

ELF PROPERTY

JOEL CREEK GRID
Soil Geochemistry
Ag ppm (MAP 9)

DATE DRAWN: AUG. 25, 1997	SCALE: 1:2,500	DWG. NAME:
COMPILED BY: R. Farmer	JOB No: 1755	JOEL-AG
DRAWN BY: S.A.	NTS No: 94F/7	

DECLINATION 25°

Legend

8000 ppm Ba

10000 ppm Ba

CREEKS

(H) HELIPAD

0 50 100
metres

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

25,223

FIGURE 14

TECK EXPLORATION LTD.
KAMLOOPS, BRITISH COLUMBIA

ELF PROPERTY

JOEL CREEK GRID
Soil Geochemistry
Ba ppm

MAP 10

DATE DRAWN: AUG. 25, 1997	SCALE: 1:2,500	DWG. NAME:
COMPILED BY: R. Farmer	JOB No: 1755	JOEL-BA
DRAWN BY: S.A.	NTS No: 94F/7	