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1990 GEOCHEMICAL AND GEOLOGICAL REPORT

on the

JOSH CLAIM GROUP

KUTCHO CREEK AREA, NORTHWESTERN B.C.

Liard Mining Division
NTS: 104I/1
Latitude: 58 12'N Longitude: 128 22'

Owned and Operated by :

Homestake Mining (Canada) Limited
1000-700 West Pender Street
Vancouver, B.C. V6C 1G8

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GEOLOGICAL BRANCH
ASSESSMENT REPORT

20,337

TABLE OF CONTENTS

APPENDICES

LIST OF FIGURES

LIST OF TABLES

SUMMARY

The Josh claim group is located in the Liard Mining Division, approximately 100km east of Dease Lake. The claim group lies immediately to the south of, and is contiguous with, claims hosting the Kutcho Creek volcanogenic massive sulphide deposits.

Exploration work in the area of the claim group, was sporadic between 1968 and 1983. Since 1984 and 85, when geological mapping and a Questor airborne INPUT survey identified EM conductors within areas of favourable geology, exploration has been conducted on an annual basis. This report describes soil geochemical orientation surveys in two areas and geology and lithogeochemistry from one of these areas.

The orientation surveys determined that standard sampling methods are suitable in most areas but that extreme variations in the type and depth of overburden greatly influence the nature of the geochemical response and therefore a good understanding of the surficial geology at a local scale is necessary for geochemical interpretation. Multi-element analyses and careful statistical evaluation provide insights into the nature of the overburden and type of dispersion thereby increasing the productivty of the overall survey.

Four areas with clusters of base metal and related anomalies are thought to be indicative of mineralization and warrant further sampling.

1.0 INTRODUCTION

1.1 Location and Access

The Kutcho Creek property is located within the Liard Mining Divison, NTS 104I/1, approximately 100 km east of Dease Lake, in northwest British Columbia (Figure 1.1). Geodetic coordinates are 58° 12′ N and 128° 22′ W.

Access to the property is by fixed-wing aircraft from Smithers, Dease Lake or Watson Lake to the 1100m gravel airstrip located beside Kutcho Creek. The property is connected to the airstrip by an 8km long road, however, the large size of the property requires helicopter access to the 88 claim groups.

1.2 Climate and Physiography

Located within the Cassiar Mountains, on the divide between Arctic and Pacific watersheds, the area is moderately rugged with elevations ranging from 1400m to 2200m. Most of the area is alpine, with treeline at approximately 1500m. Snow cover can persist for nine months of the year. Structural fabric and two periods of glaciation have produced an intersecting pattern of east-west and north-south ridges. Major valleys are often filled with a deep layer of till.

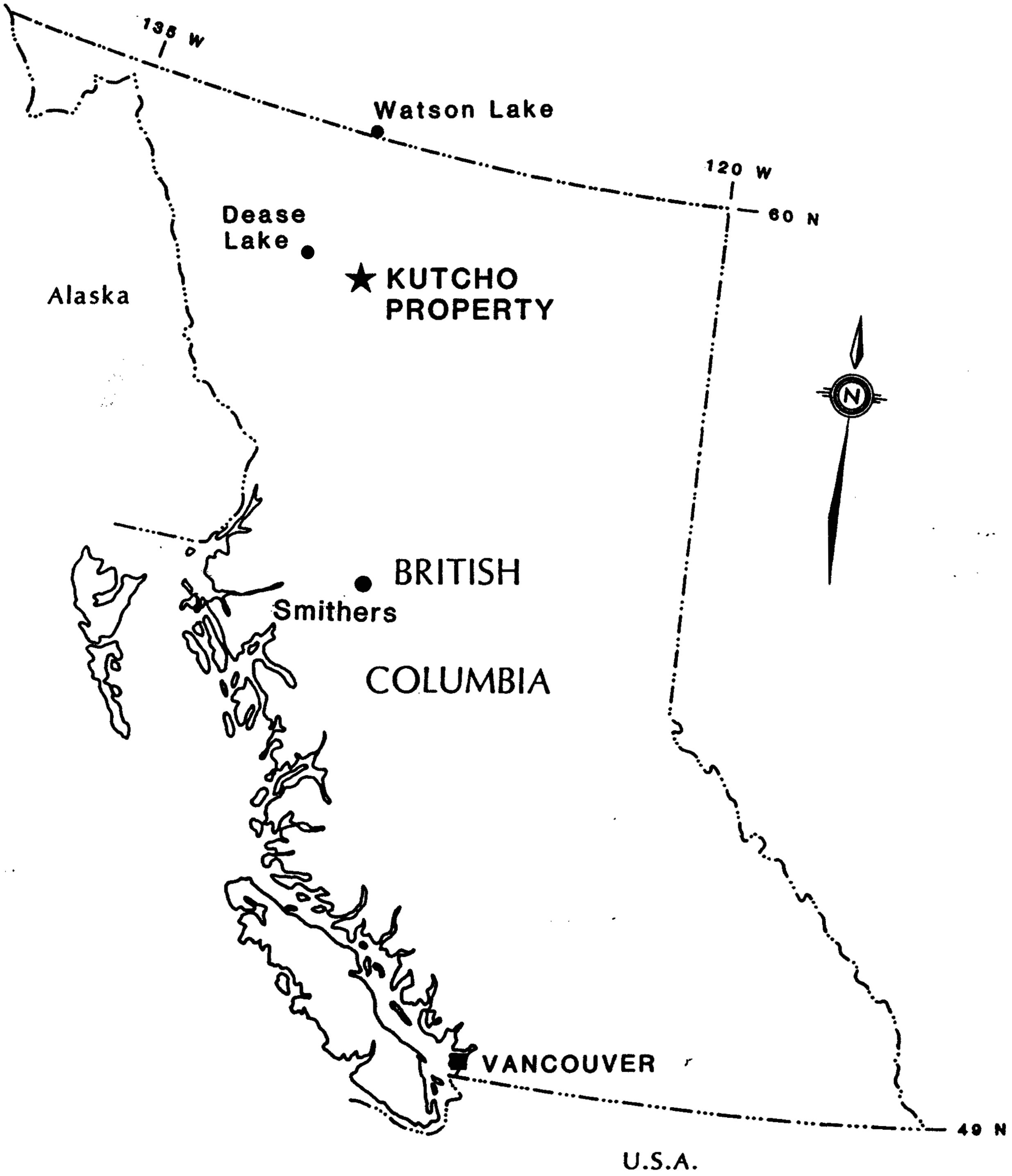


Figure 1.1 Property location map.

TABLE 1.1 - CLAIM STATUS

JOSH GROUP

CLAIM NAME	UNITS	EXPIRY DATE	RECORD NUMBER
PHIL 2	12	Jul. 7/91	3565
PHIL 3	4	Jul. 7/91	3566
JOSH 2	18	Jul. 17/91	3359
JOSH 5	20	Aug. 19/91	3371
JOSH 3	18	Jul. 17/91	3360
JOSH 4	18	Jul. 17/91	3361

1.3 Property and History

The claim group lies to the south of, and is contiguous with, claims covering the Kutcho Creek polymetallic volcanogenic massive sulphide deposits. The claim group and location of the 1990 grid work is shown on Figure 1.2. Claim status is summarized in Table 1.1.

Various portions of the property have been held and worked by different companies in the past. The most significant exploration was carried out by Imperial Oil Ltd. (Esso Minerals Canada) who, in 1975, drilled four short holes to test airborne EM conductors located along the western and southern periphery of the property. Geological mapping in 1984 and 1985 suggested that altered felsic volcanics on the property were structurally related to rocks hosting the Kutcho deposits. A Questor airborne MKVII INPUT EM and Magnetic survey flown in November 1985 identified a number of conductors within areas of favourable geology on the property. Since then, evaluation of the airborne conductors, consisting of geological mapping, ground geophysics, and geochemical surveys, has been carried out on an annual basis.

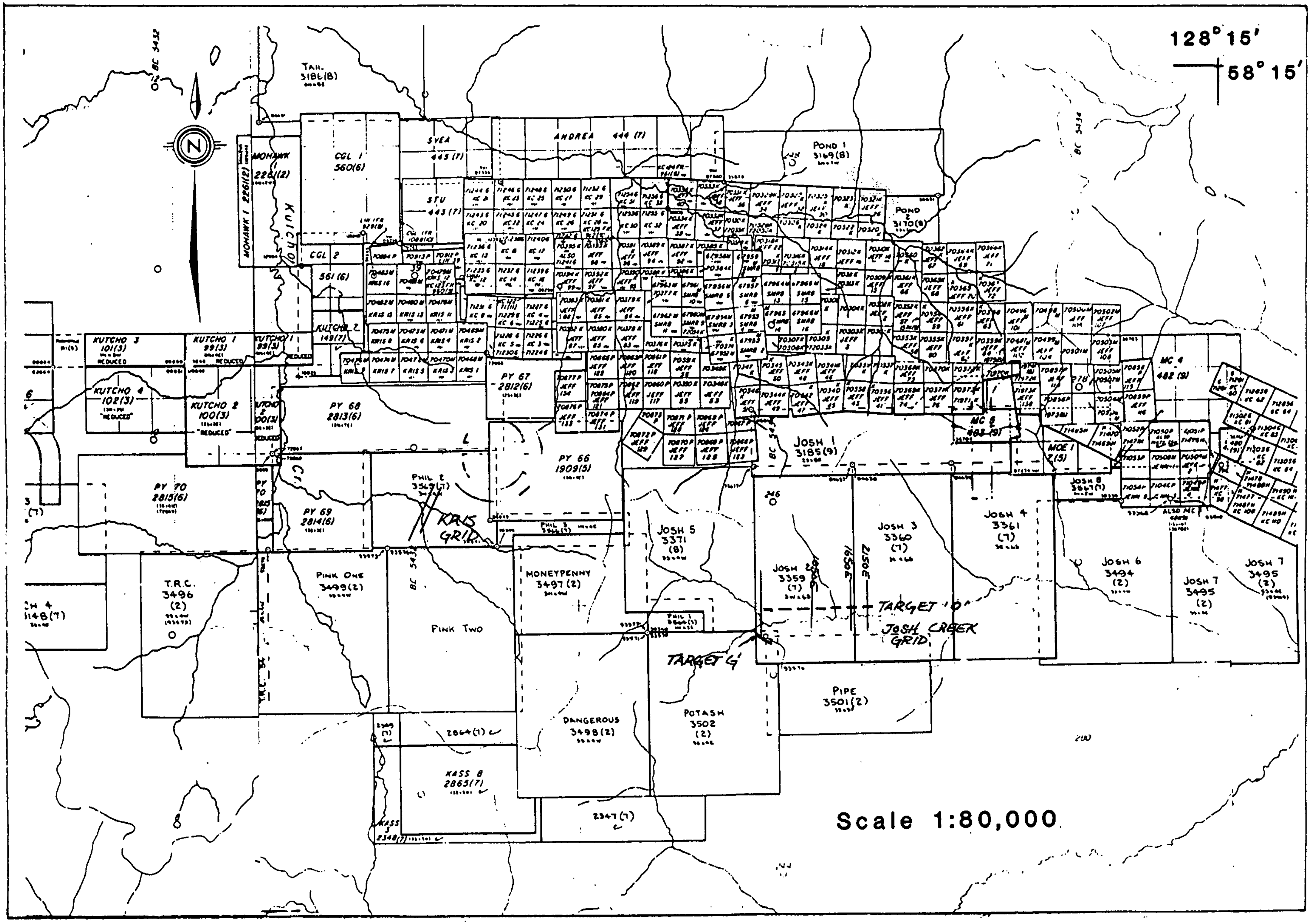


Figure 1.2 Claim Map

1.4 Current Work

The work discussed in this report was carried out between June 31 and July 6, 1990, and was part of a geochemical orientation survey conducted prior to a major exploration program. The orientation survey was designed to test which areas and sampling methods would be most amenable for follow-up surveys.

Approximately 6 line kilometers of grid and soil sampling were completed over three target areas (Kris, O and G). The soil grid consisted of 25m sample spacing on lines spaced at least 200m apart along the trend of the target area, usually an EM conductor. A total of 308 soil samples, 9 stream sediment samples and 9 lithogeochemical samples were ollected.

The exploration crew was mobilized from Vancouver or Smithers and lodged at the Esso/Sumac camp located on the north side of the Kutcho deposit area. A Bell 47 helicopter with a turbine conversion was contracted from Northern Mountain Helicopters to transport the crew from the camp to the grid areas.

2.0 GEOLOGY

2.1 Regional Geology

The Kutcho property lies within the King Salmon Allochthon, a narrow belt of Triassic island arc volcanics and Jurassic sediments sandwiched between two northerly dipping thrust faults. Penetrative foliation and axial planes of the major folds are parallel to these bounding faults. The belt of volcanics is thickest in the area where it hosts volcanogenic massive sulphide deposits; due in part to primary deposition, but also to stratigraphic repetition by folding and thrusting. Major folds are delineated by the Sinwa Limestone and the contact between Kutcho Formation volcanics and Inklin Formation argillites (Fig. 2.1).

Volcanogenic mineralization of the Kutcho deposits occurs at the contact between footwall lapilli tuffs and hanging wall quartz and quartz-feldspar crystal tuffs. The main sulphide bearing horizon is marked by extensive hydrothermal alteration and the presence of thinly bedded ash tuffs, the latter indicating a temporary hiatus in volcanic activity. This sulphide horizon is geochemically, and often visually, recognizable over a strike length of 8 km.

The coarsest grained pyroclastic rocks of the Kutcho Formation occur in the vicinity of the known sulphide deposits and become noticeably finer grained towards the south and east. The major center of volcanism is postulated to be northeast of the Kutcho sulphide lens, although subordinate centers may exist elsewhere on the property.

2.2 Property Geology

Rocks which underlie the Josh claim group are part of the Kutcho formation and consist of pyroclastic, flow and minor sedimentary units of mafic and felsic compositions. Lithological units tend to be thinly bedded and are finer grained than their compositional counterparts which host the Kutcho sulphide deposits. All rock units dip steeply to moderately to the north.

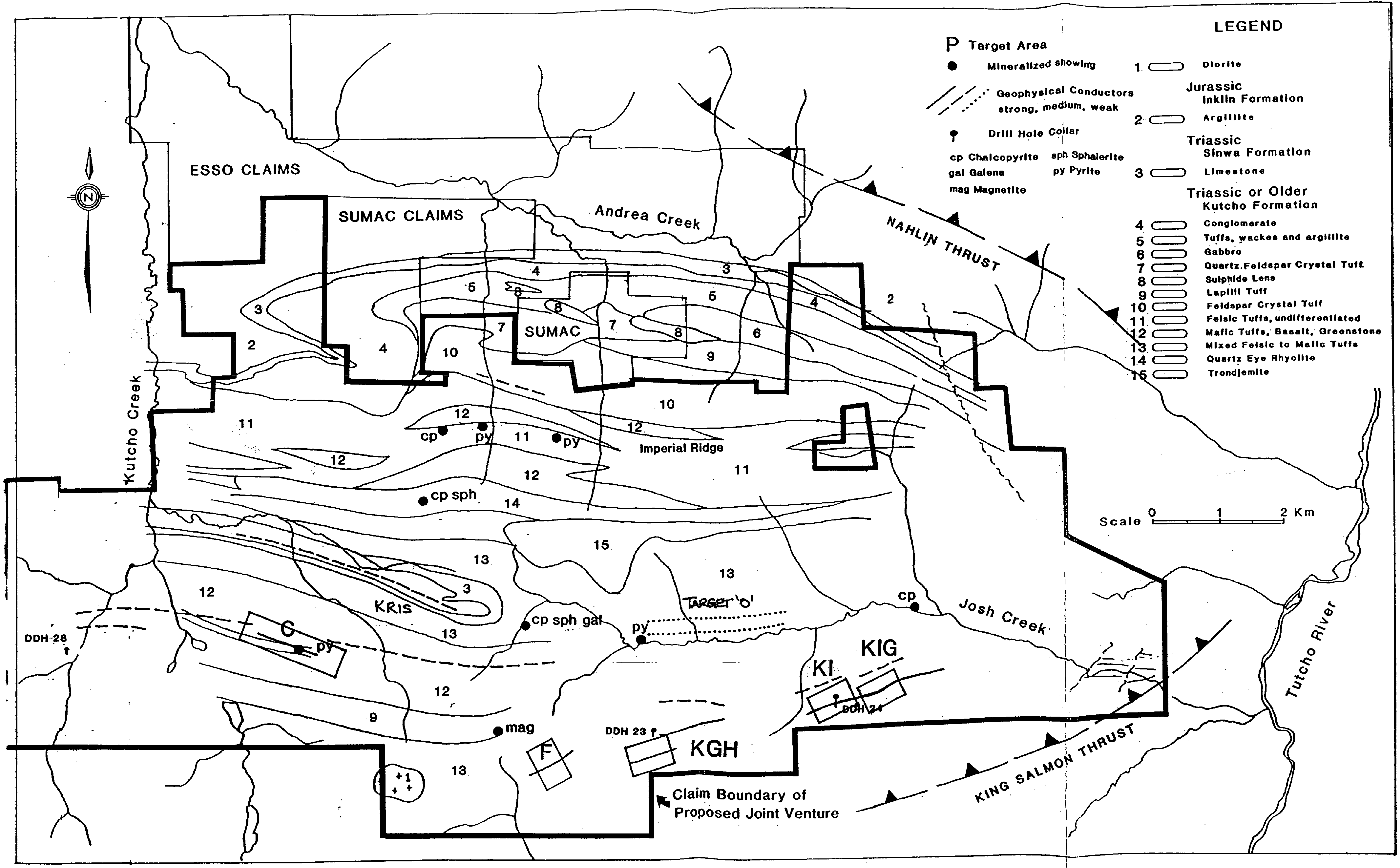


FIGURE 2.1 GENERALIZED GEOLOGY AND TARGET GRID LOCATIONS.

Geology of the Kris target (Fig. 3.2) is not well understood due to a paucity of outcrop. A synclinal keel of Sinwa limestone and Inklin Formation argillite is inferred to underlie the northern part of the Phil 2 claim based on better rock exposure to the east and west of the claim area, and on the surface trace of an airborne EM anomaly interpreted to correlate with the argillite. Approximately 200m to the south of the argillite, in the southern fork of Kris Creek, is an outcrop of altered felsic ash tuffs which may contain exhalative material (Fig. 3.2). In the vicinity of the Kutcho sulphide deposits the Sinwa limestone is separated from the mineralized stratigraphy by 400m of conglomerate and a unit consisting of interbedded sediments and mafic intrusive and extrusive rocks (tuff-argillite unit). The proximity of felsic tuffs to the Sinwa limestone in the Kris Creek area suggests that the conglomerate and tuff-argillite unit are thin or absent and that the felsic tuffs are probably stratigraphic equivalents of the Kutcho sulphide bearing sequence. A detailed geological description and lithogeochemical results for the Kris Creek outcrop are discussed in Section 3.

The O target parallels the central part of Josh Creek with the EM conductors located on the north side of the Creek in areas of deep and swampy overburden. Rocks exposed in the stream bed consist of siliceous and sericitic schists derived from felsic ash tuffs. Pyritic layers, up to 30cm wide and traceable over 100m along strike, occur on the cliffs along the stream gully in the geochemical grid area. Neither the EM conductors nor the gravity anomalies (Holbek, 1988) correlate well with the pyritic exposures.

2.3 Surficial Geology

Depth and type of overburden is extremely variable on the roperty. Thick till deposits, kame terraces and eskers are common in the valleys or at lower elevations. On the Kris grid bedrock exposure is restricted to stream beds and a small area near line 10+00W, 9+00N. The area between the north and south tributaries of Kris Creek is a remnant of a glacial outwash deposit consisting of a 5 to 30m thickness of coarse to fine bedded gravels.

In the Josh Creek area (targets O and G) outcrops are restricted to the Josh Creek canyon and the area south of line 4+50E and 9+00S. Soil development on the north side of Josh Creek is poor consisting of 10 to 40cm of organic-rich material overlying clay-rich boulder till. The water table is at or near surface in most areas. Diamond drilling subsequent to this survey revealed that thickness of the till ranges from 7 to 68m. The presence of outcrop south of the G target suggests that the cover is thinner in that direction.

3.0 GEOCHEMISTRY

3.1 Methods

Soil samples were collected at 25m stations along chained and flagged grid lines. Line spacing was variable depending upon target character and size. Samples were collected from the B horizon where possible, at depths between 20-40cm using mattocks. Where a good soil profile was present samples were collected from each soil horizon (denoted with subscript B or C following the sample number on the list of analytical results). Duplicate samples were collected with a soil auger from depths of 50 to 150cm along Line 10+00W on the Kris target area (denoted with subscript A following the sample number). Samples were placed in kraft paper bags and air dried before shipment.

Analyses were performed by Acme Analytical Ltd. of Vancouver using Induction Coupled Plasma methods for 30 elements. Gold was analyzed by aqua-regia digestion and atomic absorbtion techniques. Samples are sieved to -80 mesh and a 0.5g subsample is digested in 3ml of hot aqua regia for 1 hour and then diluted to 10ml with water prior to analysis.

Of the 31 elements analyzed 13 are deemed insignificant due to a combination of high detection limits, partial digestion and low background values. Analytical results for the remaining elements, which consist of Mo, Cu, Pb, Zn, Ag, Ni, Co, Mn, Fe, As, Ca, P, La, Cr, Mg, Ba, Al and Au, were statistically evaluated using Geomicro Systems' computer program GEOCHEM. Sample locations and copper and zinc values are plotted on 1:5,000 scale maps in Figures 3.1 and 3.2.

3.2 Description of Results

Previous geochemical surveys in the property area established that copper and zinc, being major components of the sulphide deposits, were the best geochemical indicators. Arsenic and silver, although very minor components of the sulphide lenses, were also found to be useful as they were less influenced by background lithological changes.

Similarly, lead and barium, trace components of the sulphide deposits, are useful geochemical indicators due to their different dispersion characteristics in the surficial environment, relative to copper and zinc. Rocks which underlie the grid area consist of interlayered basalt flows and tuffs and felsic ash tuffs. Sulphide deposits are typically hosted by altered felsic rocks. It was thought that the altered felsic rocks would have a detectable difference in soil geochemical signature from the basaltic rocks, particularly for Ni, Co, Cr, Al, Mg and Ca, and therefore element plots would help with geological mapping in overburden areas. However, this does not appear to be the case, the distribution of these elements seems to be, at best, a function of type and depth overburden.

Table 3.1 is a summary of the basic statistics for the 18 elements investigated. Histograms and cumulative probability plots (Sinclair, 1974) were produced for each element and "threshold" values were chosen to separate different sample populations where appropriate. Extreme outliers in the sample data were culled prior to plotting histograms. In many cases, particularly for the major elements, sample populations were normally or log normally distributed and threshold values were of questionable significance. The elements associated with sulphide deposits typically have bimodal populations and threshold values are selected to separate background from anomalous (mineralized) populations. For those metals that did not have two (or more) distinct populations on the cumulative probability plots, thresholds were subjectively chosen between values at the mean plus one standard deviation and the 90th percentile.

To aid in the evaluation of multi-element data, element correlations were investigated (Table 3.2). Both expected and unexpected correlations were noted. Elements associated with mafic lithologies (Mg, Cr, Co, and Ni) display a high degree of intercorrelation with the exception of Fe which is weakly correlated with Zn and Al. Although Cu and Zn are strongly correlated the other elements associated with mineralization

Table 3.1

```
Kutcho                    Elementary Statistics                  Wed Sep 5, 1990


Variable:                           Mo ppm   Cu ppm   Pb ppm    Zn ppm   Ag ppm   Ni ppm    Co ppm     Mn ppm    Au ppb

Number of Samples Selected:         311      311      311       311      311      311       311        311       311
Number of Missing or Null Values:     0        0        0         0        0        0         0          0         0

Minimum:                              1.000   11.000    2.000    40.000   0.100    5.000     3.000     72.000     1.000
Maximum:                             39.000  412.000   20.000   676.000   1.100  124.000    31.000   5816.000   272.000
Range:                               38.000  401.000   18.000   636.000   1.000  119.000    28.000   5744.000   271.000
Mean:                                 1.296   36.672    9.341   108.768   0.154   58.650    13.492    702.608     5.064
Median:                               1.000   33.000    9.000   103.000   0.100   57.000    13.000    611.000     3.000

Variance:                             4.839  650.201    9.356  1977.136   0.016  350.498    12.494  218015.391  256.041
Standard Deviation:                   2.200   25.499    3.059    44.465   0.127   18.722     3.535    466.921    16.001
Standard Error:                       0.125    1.446    0.173     2.521   0.007    1.062     0.200     26.477     0.907

Coefficient of Variation (%):       169.751   69.533   32.747    40.880  82.263   31.921    26.199     66.455   315.962
Coefficient of Skewness:             16.224   10.547    0.062     6.976   3.794    0.293     1.045      6.601    15.127
Coefficient of Kurtosis:            277.601  151.850    3.348    86.357  21.127    3.250     7.085     62.436   249.653

Log 10 Transformed Mean:              0.051    1.525    0.941     2.015  -0.884    1.743     1.115      2.802     0.491
Log 10 Variance:                      0.178    0.238    0.248     0.197   0.000    0.240     0.166      0.243     0.506
Log 10 Standard Deviation:            0.422    0.488    0.498     0.444   0.000    0.490     0.408      0.493     0.711



Variable:                            Fe %      As ppm    Ca %      P %      La ppm   Cr ppm    Mg %    Ba ppm    Al %

Number of Samples Selected:          311       311       311       311      311      311       311     311       311
Number of Missing or Null Values:      0         0         0         0        0        0         0       0         0

Minimum:                               0.960     2.000     0.070     0.026    5.000    10.000    0.280   52.000   1.050
Maximum:                               8.020    26.000     1.560     0.208   71.000   128.000    1.660  565.000   5.760
Range:                                 7.060    24.000     1.490     0.182   66.000   118.000    1.380  513.000   4.710
Mean:                                  4.027     7.794     0.433     0.067   16.453    63.489    1.003  219.543   2.676
Median:                                3.890     7.000     0.400     0.063   15.000    64.000    1.040  204.000   2.570

Variance:                              0.645    15.758     0.049     0.001   55.701   174.481    0.052 8574.119   0.571
Standard Deviation:                    0.803     3.970     0.221     0.026    7.463    13.209    0.229   92.597   0.756
Standard Error:                        0.046     0.225     0.013     0.001    0.423     0.749    0.013    5.251   0.043

Coefficient of Variation (%):         19.937    50.931    51.063    38.824   45.360    20.805   22.822   42.177  28.245
Coefficient of Skewness:               0.884     0.841     1.355     2.208    2.716     0.043   -0.531    0.746   1.000
Coefficient of Kurtosis:               5.662     4.472     6.463    10.676   15.987     5.353    3.499    3.632   4.713

Log 10 Transformed Mean:               0.596     0.828    -0.419    -1.200    1.182     1.792   -0.013    2.301   0.411
Log 10 Variance:                       0.126     0.396     0.000     0.000    0.255     0.144    0.000    0.302   0.188
Log 10 Standard Deviation:             0.355     0.629     0.000     0.000    0.505     0.380    0.000    0.550   0.433
```

Table 3.2

Kutcho Correlation Coefficients Wed Sep 5, 1990 Page 1 of 3
Kutcho

	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn
Mo	1.000 (311)	0.824 (311)	0.016 (311)	0.253 (311)	0.003 (311)	-0.155 (311)	-0.063 (311)	0.048 (311)
Cu		1.000 (311)	0.038 (311)	0.462 (311)	0.083 (311)	0.156 (311)	0.157 (311)	0.159 (311)
Pb			1.000 (311)	0.058 (311)	0.199 (311)	0.089 (311)	0.042 (311)	0.133 (311)
Zn				1.000 (311)	-0.015 (311)	0.137 (311)	0.160 (311)	0.268 (311)
Ag					1.000 (311)	-0.108 (311)	0.035 (311)	0.279 (311)
Ni						1.000 (311)	0.468 (311)	0.083 (311)
Co							1.000 (311)	0.651 (311)
Mn								1.000 (311)

Table 3.2 con't

Kutcho   Correlation Coefficients   Wed Sep 5, 1990   Page 2 of 3
Kutcho

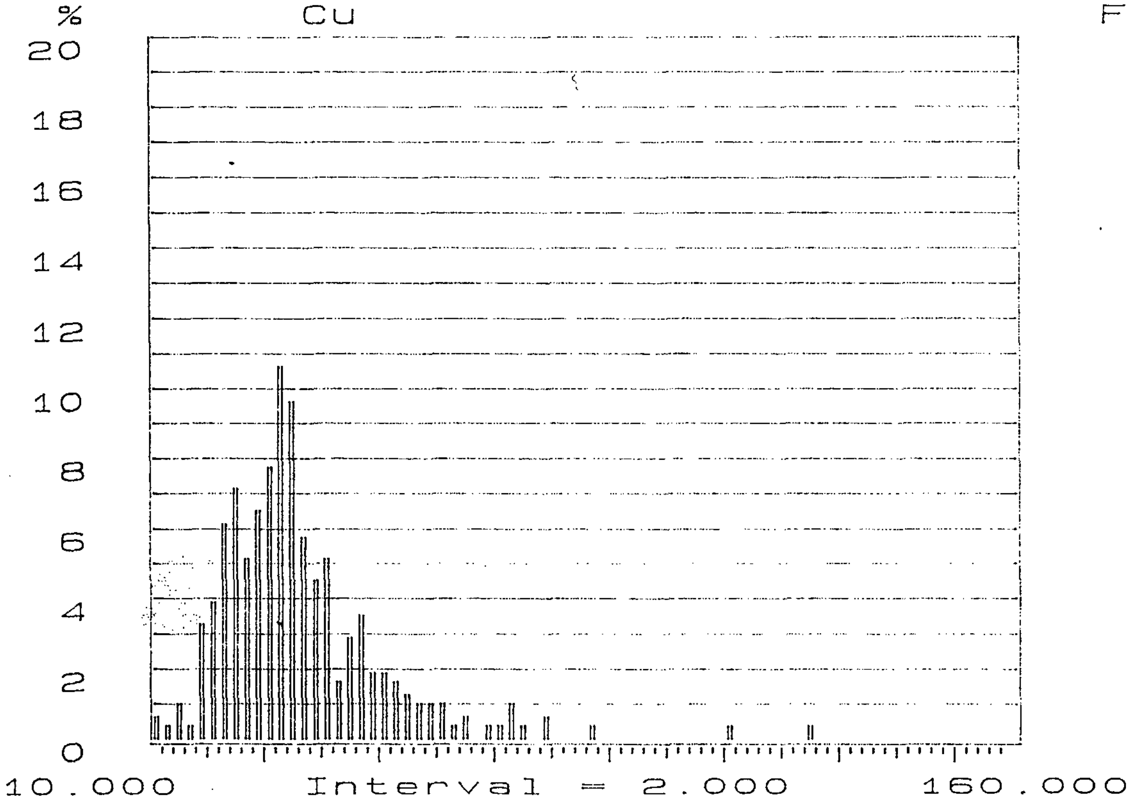
	Fe	As	Ca	P	La	Cr	Mg	Ba	Al	Au
Mo	0.215 (311)	0.030 (311)	−0.086 (311)	0.141 (311)	−0.052 (311)	−0.209 (311)	−0.128 (311)	−0.096 (311)	−0.066 (311)	0.017 (311)
Cu	0.306 (311)	0.121 (311)	0.130 (311)	0.290 (311)	0.226 (311)	−0.012 (311)	0.069 (311)	0.171 (311)	0.149 (311)	0.043 (311)
Pb	0.218 (311)	0.181 (311)	−0.045 (311)	0.176 (311)	0.297 (311)	−0.011 (311)	−0.128 (311)	0.193 (311)	0.409 (311)	0.001 (311)
Zn	0.420 (311)	0.174 (311)	0.235 (311)	0.285 (311)	0.207 (311)	0.004 (311)	0.040 (311)	0.325 (311)	0.263 (311)	0.015 (311)
Ag	0.051 (311)	0.024 (311)	−0.080 (311)	0.413 (311)	0.273 (311)	−0.044 (311)	−0.191 (311)	0.110 (311)	0.240 (311)	−0.009 (311)
Ni	0.193 (311)	0.061 (311)	0.383 (311)	0.165 (311)	0.355 (311)	0.755 (311)	0.718 (311)	0.572 (311)	0.387 (311)	0.079 (311)
Co	0.405 (311)	0.120 (311)	0.167 (311)	0.284 (311)	0.112 (311)	0.473 (311)	0.538 (311)	0.164 (311)	0.151 (311)	0.092 (311)
Mn	0.361 (311)	0.050 (311)	0.164 (311)	0.557 (311)	0.358 (311)	0.049 (311)	0.051 (311)	0.214 (311)	0.149 (311)	0.054 (311)
Fe	1.000 (311)	0.257 (311)	−0.130 (311)	0.353 (311)	0.235 (311)	0.237 (311)	0.051 (311)	0.105 (311)	0.554 (311)	0.008 (311)
As		1.000 (311)	−0.058 (311)	0.073 (311)	−0.078 (311)	0.084 (311)	0.016 (311)	−0.011 (311)	0.056 (311)	0.072 (311)
Ca			1.000 (311)	0.300 (311)	0.462 (311)	0.094 (311)	0.320 (311)	0.631 (311)	0.087 (311)	0.069 (311)
P				1.000 (311)	0.501 (311)	0.071 (311)	−0.068 (311)	0.442 (311)	0.428 (311)	0.007 (311)
La					1.000 (311)	0.056 (311)	−0.024 (311)	0.616 (311)	0.605 (311)	0.010 (311)
Cr						1.000 (311)	0.740 (311)	0.278 (311)	0.224 (311)	0.046 (311)
Mg							1.000 (311)	0.281 (311)	0.104 (311)	0.078 (311)
Ba								1.000 (311)	0.495 (311)	0.032 (311)
Al									1.000 (311)	−0.012 (311)
Au										1.000 (311)

(Pb, Ag, As, and Ba) are not intercorrelated. P, La, Ba, Ca, Al and Mn are moderately to strongly intercorrelated and suggest a "felsic suite" of elements.

Calculated correlations can be somewhat misleading because they do not take into account spatial associations. Proportional symbol plots, or even scanning the data shows some interesting spatial associations. In general, areas with elevated Cu and Zn also have elevated values of Fe, Mn, La, Ba and Al. Ag, As and Mo are sometimes associated with areas of anomalous base metals.

Copper values have a skewed, slightly log normal distribution which could contain a small secondary population related to mineralization (Fig. 3.3). Threshold value was selected at 50ppm, at the break between the two populations. This threshold value is half of what has been used on past surveys on the property. There are four clusters of anomalous copper values approximately centered on the following grid points: 10+00W, 950N; 4+50E, 7+50N; 4+50E, 7+50S and 21+00E, 7+50N. The actual copper values at these points are not high and the areas are small (<200m), but clustering of anomalous values and their association with other element anomalies, particularly zinc, suggest that the values are related to mineralization. Other anomalous values do occur but lack of clustering or association with other element anomalies makes interpretation ambiguous.

The Zinc population is similar to copper but has improved range and contrast (Fig. 3.3). Threshold for zinc is 150ppm which is the same as for previous surveys. The most prominent zinc anomalies are associated with the copper anomalies described above. There are fewer isolated zinc highs than copper, likely due to the selection of higher (relatively) threshold value.


%
Cu
Freq
20
18
16
14
12
10
8
6
4
2
0
62
56
50
43
37
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19
12
6
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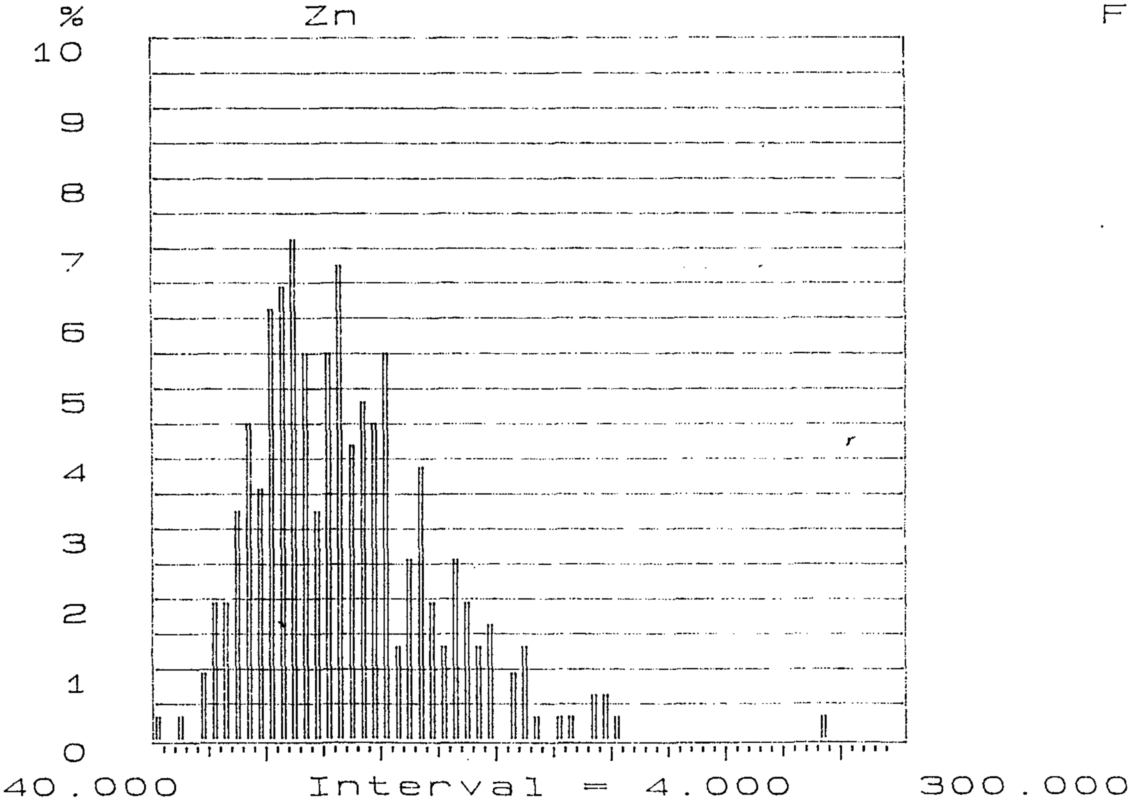
%
Zn
Freq
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8
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16
12
9
6
3
0
40.000
Interval = 4.000
300.000

Figure 3.3

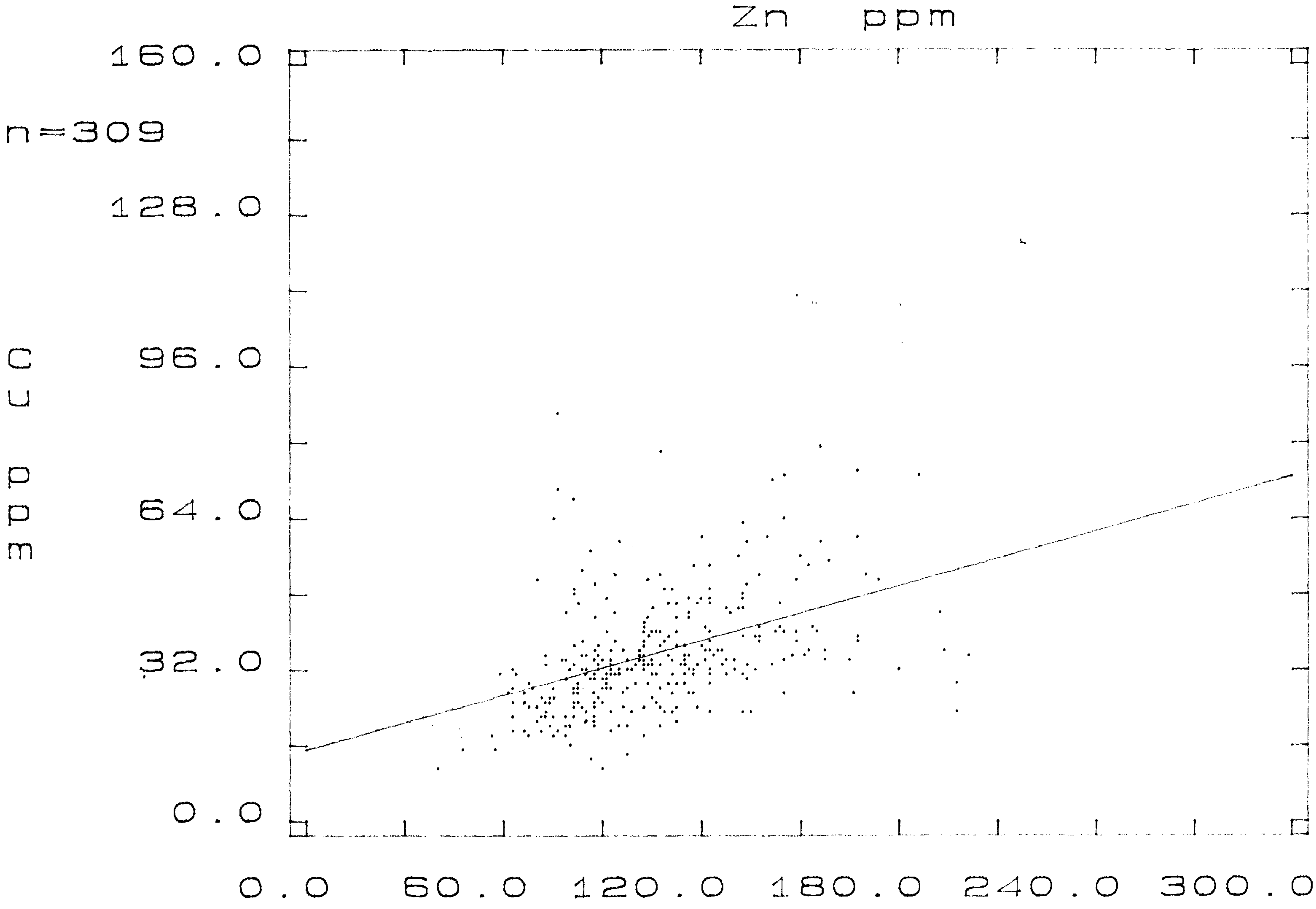
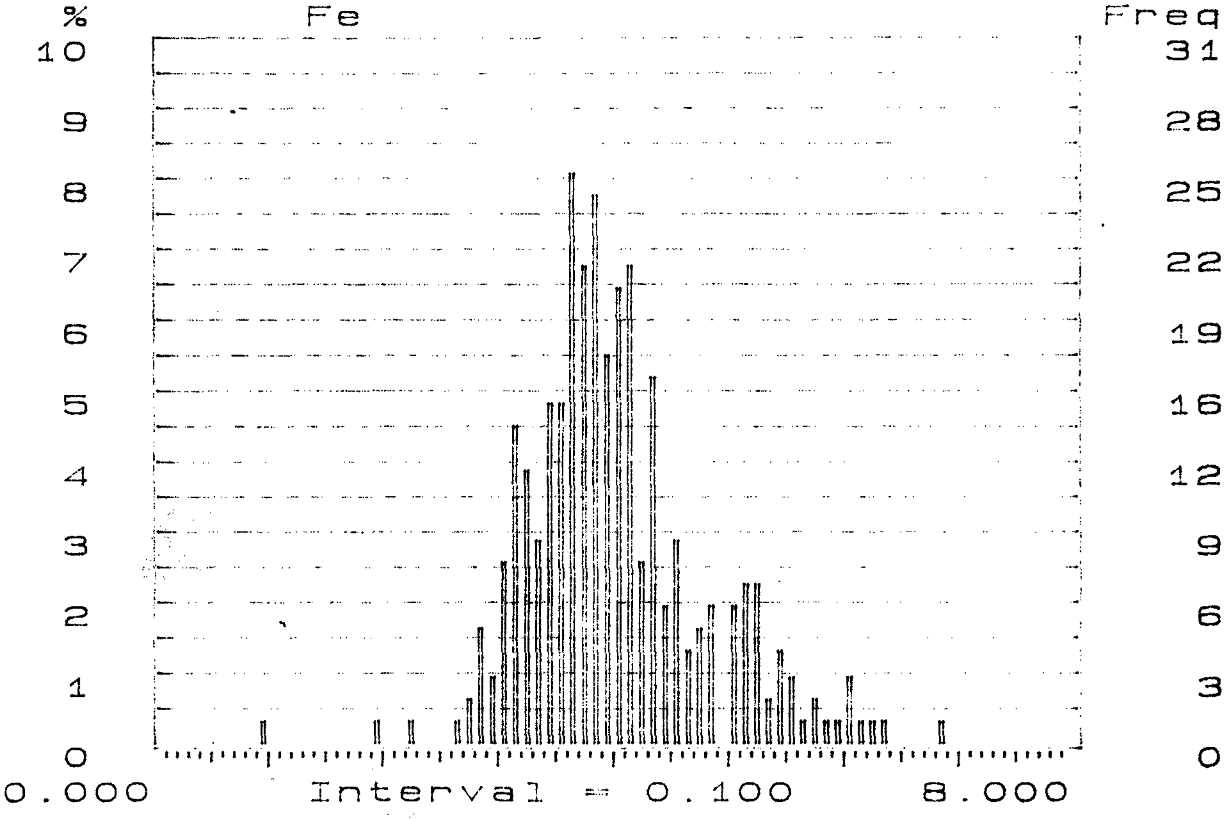

Zn ppm
Cu ppm
n=309
160.0
128.0
96.0
64.0
32.0
0.0
0.0
60.0
120.0
180.0
240.0
300.0

Figure 3.4

Lead values are low and have very low contrast. The distribution appears to be a single normal population. There is some association of high lead values with copper and zinc but it is inconsistent. The low lead values and weak association with copper and zinc suggest that hydromorphic dispersion is a significant factor.

Silver values are like those of lead. Apart from the anomaly at 10+00W, 9+50N, which is close to bedrock, there is little association of silver highs with those of copper and zinc. Molybdenum, commonly associated with exhalative rocks of the Kutcho Formation (Holbek and Heberlein, 1986), is virtually flat in this survey. A single anomalous value of 39ppm is associated with a high copper value at 20+50E, 2+50N, a sample taken from a rusty seep o n the south bank of Josh Creek.

Manganese has a skewed population distribution that is bimodal (Fig. 3.5). The small anomalous population appears to be associated with mineralization. Manganese does not have a high correlation coefficient with either copper or zinc but does display a pronounced spatial association with base metal anomalies. Iron has a normal, bimodal distribution (Fig. 3.5). Anomalous iron values correlate well with other element anomalies. Barium has a skewed log-normal distribution that appears to be unimodal (Fig. 3.6). Anomalous values of barium are reasonably well correlated, both mathematically and spatially with copper and zinc.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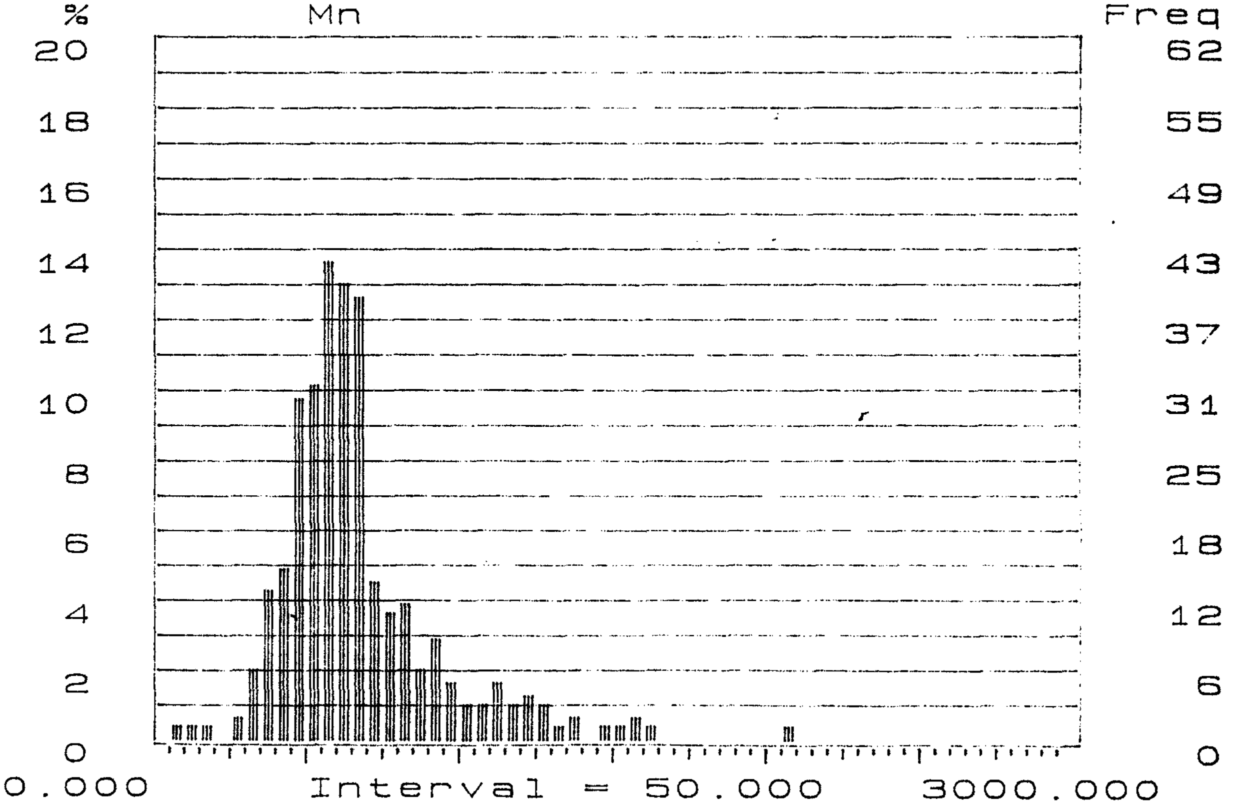
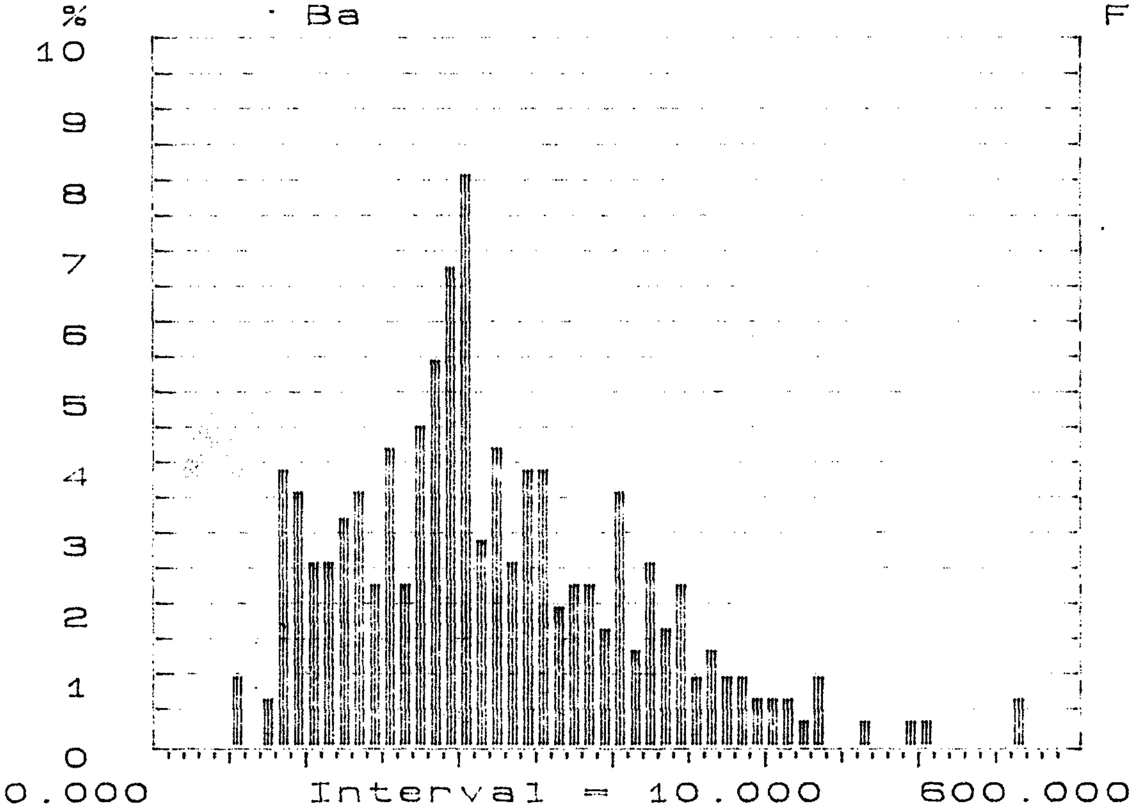

%
Mn
Freq
20
18
16
14
12
10
8
6
4
2
0
62
55
49
43
37
31
25
18
12
6
0
0.000
Interval = 50.000
3000.000

Figure 3.5


%
Ba
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10
9
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7
6
5
4
3
2
1
0
31
28
25
22
19
16
12
9
6
3
0
0.000
Interval = 10.000
600.000

Figure 3.6

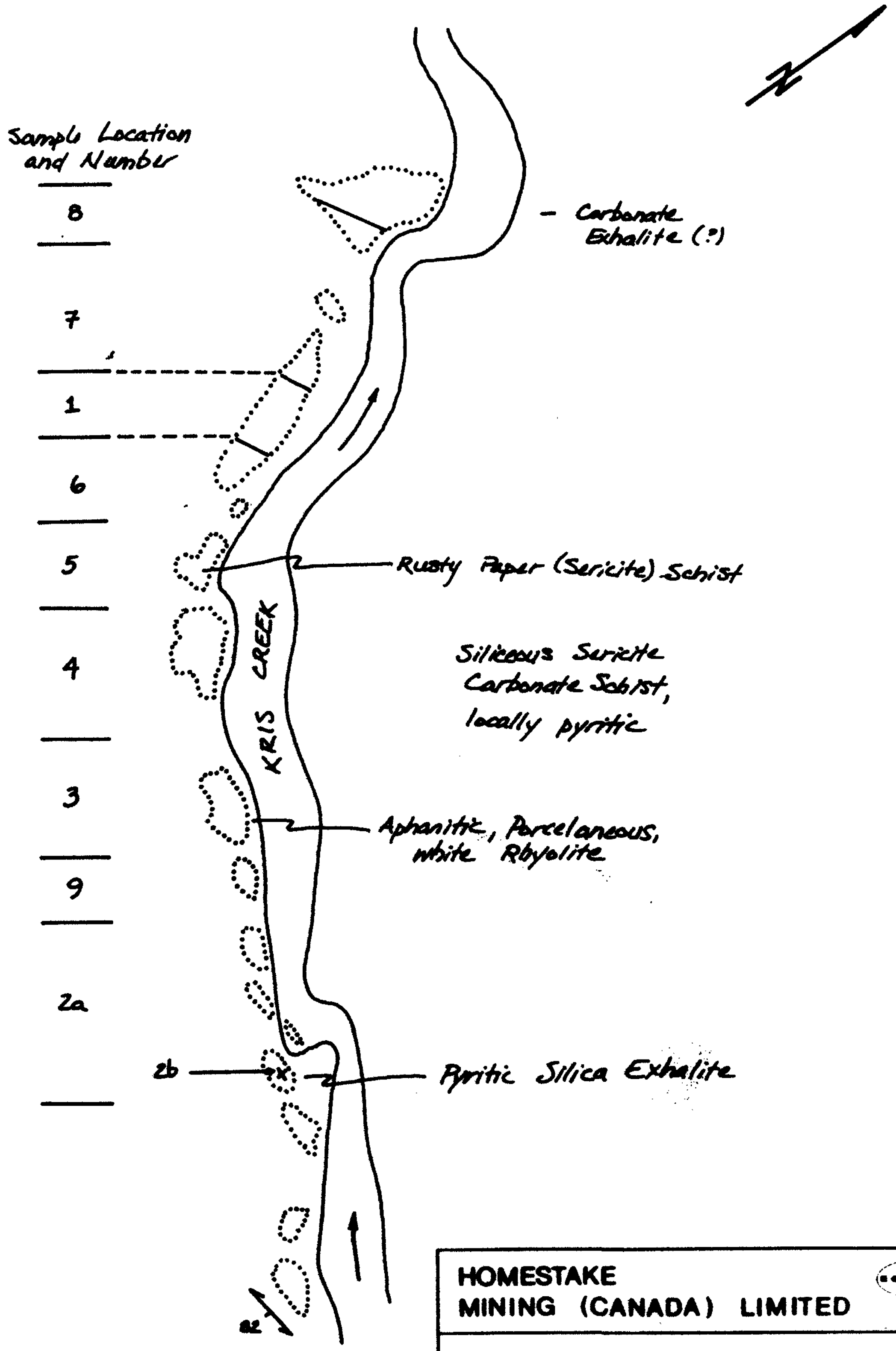
3.3 Comparison of Sampling Methods

For the most part, there is not a significant difference between analytical results from auger and mattock samples. A notable exception is sample 10+00W, 9+75N where the auger sample yielded a high copper and the highest zinc values while the corresponding mattock sample had values below threshold. This could be a random effect or one of the few cases on the property where sample depth is significant. The sample was taken near an outcrop containing anomalous base metals. For most of the survey area, where till cover is considerable, it would appear that element dispersion is hydromorphic and that sample depth is not a critical factor in concentration.

No anomalies were detected in the few locations where both B and C horizons were sampled and therefore the preference of one sample horizon over the other remains moot.

3.4 Lithogeochemistry

Approximately 100m of sub-continuous outcrop is exposed along the south bank of the south tributary of Kris Creek (Fig. 3.1). Rocks consist of fine-grained, siliceous, commonly pyritic sericite schists. The western end of the outcrop contains a 3m thickness of rusty weathering carbonate rich rock which resembles exhalative carbonate from the Kutcho deposit. The outcrop was chip sampled along its length (9 samples). Samples varied from 3 to 18m in length (Fig. 3.7) with sample length being determined by changes in lithology or alteration.



HOMESTAKE MINING (CANADA) LIMITED

LITHOGEOCHEMICAL SAMPLE LOCATIONS FROM THE KRIS CREEK EXPOSURE

DRAWN	DATE	NTS	FIGURE
HG	OCTOBER 1990	104I/2	3.7
Revised			

Samples were analyzed by International Plasma Labs. of Vancouver. Ag, Al, As, Ca, Co, Cu, Fe, K, Mg, Mn, Mo, Na, Pb, Sr and Zn are analyzed by ICP methods. Au is analyzed by fire assay with atomic absorbtion finish and F is analyzed by specific ion electrode. Ca, Fe, Mg, Mn and Sr are reanalyzed by ICP methods following a hot HCl selective extraction.

Apart from the carbonate rich sample, which was highly anomalous in copper and anomalous in zinc, iron and fluorine, samples did not display element enrichments or trends commonly observed in similar rocks near the Kutcho deposit. There does not appear to be any zonation of elements towards the anomalous carbonate rich unit.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The 1990 exploration program on the Josh claim group was designed to test whether the Kris, G and O target areas were amenable to evaluation by soil geochemistry and if so, which sampling methods would be most useful. Approximately 6 line-km, totaling 308 samples were collected from the three target areas. All three targets contained anomalous areas although the best anomaly was obtained in an area of shallow overburden on a single line on the Kris target. The type and depth of overburden is highly variable over the property and even within individual target areas. Because the nature of the overburden can profoundly influence the distribution of elements within soils, an understanding of the surficial geology is a prerequisite for interpretation geochemical results. The type of overburden will also determine which sampling method will work best. In areas of relatively thin, dry overburden, the soil auger may give results with improved contrast by collecting material closer to the bedrock surface. On the other hand, in areas of thick till cover where the water table is near surface, and elemental dispersion is by hydromorphic means the method of sample collection does not appear to be significant. The extreme variation in the nature of overburden on the property necessitates that each grid area have its own orientation survey, and its own set of threshold values.

The potential variation in threshold values due to overburden and other variations on the property makes interpretation of geochemical results difficult. The use of multi-element analyses and careful statistical evaluation can increase confidence in the interpretation and thereby increase the overall productivity of geochemical surveys at very little additional cost.

The O target, located along the north side of Josh Creek, corresponds to weak EM conductors near altered felsic volcanic rocks. The alteration zone within the Creek has a weak soil expression. Values over the entire grid are relatively low; quite reasonably due to exceesive depths of glacial till (up to 68m). Poorly clustered, weakly anomalous results near 7+50N on all tho O grid lines may correspond to a weak EM conductor. The best response is on line 4+50E and additional sampling is warranted in this area. Weakly anomalous samples near the south end of line 4+50E, target G, also warrant additional sampling.

Lines of the C grid should be extended to the north to cover the western extension of the Kris grid anomaly (10+00W, 9+50N). Additionally, because the Kris grid anomaly occurs on the south limb of a syncline the grid lines should be extended far enough to cover the north limb of the syncline. Weak zinc highs on the north ends of 10+00W and 8+00W maycorrespond to the north limb.

APPENDIX I

STATEMENT OF COSTS

LABOUR - June 31 to July 5, 1990		
P. Holbek - 5 days @ 250/day	1250	
J. Smith - 5 days @ 180/day	900	
G. Bickerton - 5 days @ 110/day	550	
D. Holbek - 5 days @ 80/day	400	

		$ 3100
FOOD AND ACCOMMODATION		
25 man days @ $50/day		$ 1250
EQUIPMENT RENTAL		
Computer Hardware & Software		180

GEOCHEMICAL ANALYSIS		
308 soil samples @ 11.00 (incl. prep.)	3388	
9 silt samples @ 11.00	99	
9 Lithogeochem samples @ 24.00	216	
Freight	75	

		$ 3778
TRANSPORTATION		
Canadian Airlines	920	
Central Mtn. Air - 206	640	
Northern Mountain Helicopters - B47 5 hours @ 625 (incl. fuel)	3125	

		$ 4685
Report Preparation		$ 400

TOTAL		$13,393

STATEMENT OF QUALIFICATIONS

I, Peter Holbek, DO HEREBY CERTIFY THAT:

1) I am a project geologist presently employed by Homestake Mining (Canada) Limited, located at 1000-700 West Pender Street, Vancouver, BC V6C 1G8.

2) I graduated from the University of British Columbia with a B.Sc. (Hons.) in geology in 1980 and an M.Sc. in geology in 1988.

3) I have actively practiced my profession in North America since 1975.

4) The work described herein was done by me or under my direct supervision.

DATED THIS 9th DAY OF JANUARY, 1990 AT VANCOUVER, B.C.

Peter Holbek

APPENDIX III

GEOCHEMICAL DATA

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

104I-01

Homestake International Minerals PROJECT 3174 KUTCHO File # 90-2567 Page 1

1000 - 700 W. Pender St., Vancouver BC V6C 1G8

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au** ppb
L10+10W 6+25N	2	29	4	113	.2	45	16	625	8.02	12	5	ND	1	16	1.8	2	2	82	.18	.056	9	95	.71	156	.18	2	2.98	.01	.05	1	3
L10+05W 5+80N	1	18	2	75	.1	46	13	441	4.40	11	5	ND	1	18	1.1	2	2	73	.21	.030	7	76	.97	128	.12	2	2.41	.01	.05	1	2
L10+00W 17+00N	1	23	2	198	.1	38	12	733	3.88	7	5	ND	1	35	.2	2	2	53	.48	.058	7	54	1.05	191	.06	4	2.39	.01	.09	1	1
L10+00W 16+75N	1	44	15	193	.1	51	14	692	4.01	8	5	ND	1	51	.8	2	2	55	.93	.069	15	58	1.25	233	.07	5	2.68	.02	.10	1	3
L10+00W 16+50N	1	33	6	141	.1	41	12	571	3.60	7	5	ND	1	52	.9	2	3	51	.94	.063	13	54	1.17	208	.08	2	2.21	.02	.08	1	4
L10+00W 16+25N	1	32	5	130	.1	40	14	1034	3.79	6	5	ND	1	45	1.1	2	4	54	.66	.040	13	52	1.13	201	.08	2	2.25	.02	.08	1	2
L10+00W 16+00N	1	31	3	106	.1	38	12	639	3.80	6	5	ND	1	38	.5	2	2	57	.63	.028	12	55	1.24	177	.11	2	2.36	.02	.06	1	17
L10+00W 15+75N	1	37	10	115	.1	45	13	695	3.70	5	5	ND	1	45	.2	2	2	58	.68	.047	13	60	1.19	265	.06	2	2.89	.02	.08	1	6
L1 W 15+50N	3	44	10	129	.1	51	16	354	4.04	3	5	ND	1	40	.9	2	2	70	.58	.059	15	58	1.06	219	.09	3	2.64	.02	.08	1	10
W 15+25N A	1	31	2	91	.1	50	14	637	3.99	8	5	ND	1	36	.4	2	2	58	.31	.049	15	63	1.00	192	.13	2	2.46	.02	.07	1	5
0+00W 15+00N	1	28	4	69	.1	48	12	546	3.08	7	5	ND	1	35	.3	2	2	48	.32	.047	13	52	.76	155	.09	3	1.67	.02	.06	1	3
L10+00W 14+75N	1	28	5	63	.1	51	11	557	3.18	9	5	ND	1	44	.2	2	3	48	.45	.050	15	52	.86	195	.11	3	1.74	.02	.06	1	1
L10+00W 14+50N	1	32	3	84	.1	57	13	554	4.04	4	5	ND	2	34	.7	2	2	52	.43	.060	20	52	.81	195	.19	6	2.73	.03	.05	1	2
L10+00W 14+25N A	1	26	4	89	.1	49	12	600	3.53	9	5	ND	1	47	.2	2	2	53	.52	.058	13	60	.95	179	.11	5	1.93	.02	.07	1	5
L10+00W 14+00N	1	39	14	136	.1	61	13	688	4.19	7	5	ND	1	60	1.0	2	2	56	.73	.078	20	64	1.00	383	.09	2	3.06	.02	.09	1	3
L10+00W 13+75N	2	36	7	157	.2	61	17	982	4.58	16	5	ND	1	48	.2	3	2	64	.43	.080	11	66	1.04	268	.05	3	2.61	.01	.11	1	1
L10+00W 13+75N A	1	36	6	125	.1	52	15	822	4.43	7	5	ND	1	43	.2	2	2	61	.45	.069	13	61	.99	252	.05	3	2.97	.01	.11	1	3
L10+00W 13+50N	1	28	2	98	.1	43	11	579	3.69	9	5	ND	1	39	.2	2	2	55	.34	.063	11	55	.93	202	.07	2	2.30	.01	.09	1	4
L10+00W 13+50N A	1	25	7	74	.1	36	13	660	3.15	6	5	ND	1	40	.2	2	2	48	.41	.060	12	47	.84	149	.10	2	1.57	.02	.06	1	1
L10+00W 13+25N	1	29	6	110	.1	49	14	611	4.39	6	5	ND	1	28	.2	3	2	60	.21	.048	12	55	.94	190	.07	2	2.78	.01	.09	1	4
L10+00W 13+25N A	1	22	6	72	.1	35	12	610	3.04	2	5	ND	1	44	.2	2	2	46	.34	.054	13	40	.73	192	.07	4	1.86	.01	.07	1	2
L10+00W 13+00N	1	33	7	114	.4	34	11	401	4.13	8	5	ND	1	31	.2	2	2	66	.20	.109	12	53	.65	209	.02	2	3.57	.01	.13	1	2
L10+00W 13+00N A	1	34	6	92	.1	43	15	689	3.79	7	5	ND	1	45	.2	2	2	54	.46	.065	13	53	.96	184	.08	2	2.31	.01	.09	1	2
L10+00W 12+75N	1	27	11	81	.1	47	13	610	3.49	7	5	ND	2	36	.2	2	2	48	.26	.038	14	42	.78	183	.05	5	2.54	.01	.09	1	1
L10+00W 12+75N A	1	27	12	88	.2	42	12	537	3.68	11	5	ND	2	33	.2	2	2	54	.22	.036	13	45	.76	186	.06	2	2.61	.01	.09	1	2
L10+00W 12+50N	1	30	16	87	.1	45	13	662	3.77	8	5	ND	1	56	.2	2	2	53	.36	.053	16	43	.76	209	.10	2	2.53	.02	.10	1	5
L W 12+50N A	1	31	12	128	.1	47	14	614	5.42	2	5	ND	2	23	.8	2	2	63	.29	.076	17	51	.90	153	.24	2	4.12	.03	.08	1	1
W 12+25N	1	28	10	92	.1	49	14	658	4.70	4	5	ND	3	48	.2	2	2	60	.45	.058	20	47	.96	186	.24	2	2.94	.04	.08	1	1
+00W 12+25N A	1	30	8	91	.1	48	15	693	3.99	8	5	ND	2	45	.2	2	2	54	.39	.045	16	46	.90	184	.15	2	2.65	.03	.09	1	5
0+00W 12+00N	1	23	8	85	.1	44	13	620	3.82	2	5	ND	2	36	.2	2	2	52	.29	.043	15	49	.89	201	.12	2	2.44	.02	.07	1	11
L10+00W 12+00N A	1	24	13	81	.1	40	12	693	3.19	6	5	ND	1	40	.2	2	2	46	.30	.046	15	40	.69	206	.08	2	2.11	.02	.08	1	3
L10+00W 11+75N	1	24	15	67	.1	35	11	565	2.91	2	5	ND	2	34	.2	2	2	40	.26	.037	15	37	.63	171	.06	2	1.93	.01	.08	1	2
L10+00W 11+75N A	1	25	16	87	.1	39	12	617	3.85	6	5	ND	1	35	.2	2	2	54	.30	.055	14	45	.76	179	.12	2	2.38	.02	.08	1	5
L10+00W 11+50N	1	32	3	103	.1	48	13	600	3.97	5	5	ND	1	34	.2	2	2	53	.26	.050	17	48	.80	222	.08	4	2.65	.01	.09	1	3
L10+00W 11+50N A	1	25	10	81	.1	35	11	638	3.06	4	5	ND	1	50	.2	2	2	44	.36	.056	16	37	.65	208	.07	2	1.86	.02	.08	1	2
L10+00W 11+25N	1	28	6	108	.2	48	11	469	3.88	6	5	ND	1	26	.2	2	2	56	.25	.052	11	56	.88	204	.05	2	2.72	.01	.08	1	3
L10+00W 11+25N A	1	36	11	121	.1	48	14	632	4.67	2	5	ND	1	26	.2	2	2	59	.24	.066	14	57	.85	188	.08	2	2.83	.01	.07	1	2
STANDARD C/AU-S	18	60	44	132	7.1	69	29	1040	4.20	39	20	7	36	52	18.8	16	18	55	.54	.098	36	60	.94	179	.07	36	2.00	.06	.14	11	51

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: P1-P9 Soil P10 Stream Sed. AU** ANALYSIS BY FA\ICP FROM 10 GM SAMPLE.

DATE RECEIVED: JUL 17 1990 **DATE REPORT MAILED:** July 23/90 **SIGNED BY** ....D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au** ppb
L10+00W 11+00N	2	27	10	166	.1	51	10	556	4.28	7	5	ND	1	35	.6	2	2	54	.37	.091	20	48	.63	288	.08	2	3.21	.02	.07	2	6
L10+00W 10+75N	1	27	5	117	.1	41	15	1366	4.74	11	5	ND	1	20	.8	3	2	73	.13	.073	18	71	.64	184	.11	2	2.54	.01	.05	1	4
L10+00W 10+50N	2	22	17	79	.1	41	13	545	4.01	9	5	ND	2	13	.8	2	2	52	.15	.041	8	53	.77	92	.11	5	2.65	.01	.04	1	5
L10+00W 10+25N	1	70	14	76	.1	55	30	1273	5.22	18	5	ND	1	22	.7	2	2	61	.31	.097	9	80	1.25	120	.10	2	2.08	.01	.05	1	7
L10+00W 10+00N	2	52	7	107	.1	55	17	600	3.97	9	5	ND	1	26	.2	2	3	57	.28	.065	16	67	1.07	199	.07	3	2.56	.01	.05	1	10
L10+00W 10+00N A	2	40	4	102	.1	49	16	732	3.83	5	5	ND	1	29	.3	2	3	56	.33	.056	13	65	1.07	193	.07	2	2.35	.02	.06	1	5
L10+00W 9+75N	2	11	15	40	.2	9	4	139	2.28	5	5	ND	1	11	.2	2	3	78	.09	.034	7	34	.29	57	.22	2	1.31	.01	.03	1	6
L10+00W 9+75N A	3	124	6	676	.1	15	14	1614	6.25	17	5	ND	1	12	3.1	2	2	59	.07	.055	7	33	.28	52	.12	5	1.05	.01	.03	1	9
L10+00W 9+50N	2	73	7	186	.6	69	21	2083	5.67	9	5	ND	1	27	1.2	2	2	59	.59	.208	22	80	1.09	300	.02	2	3.67	.01	.08	1	1
L10+00W 9+50N A	2	46	5	144	.1	38	18	3531	5.12	2	5	ND	1	28	1.4	2	3	66	.56	.133	31	44	.78	254	.08	2	2.56	.02	.06	1	7
L1[illegible]W 9+25N	4	73	20	145	.8	58	29	4295	5.41	6	5	ND	1	30	1.3	2	4	53	.61	.201	53	59	.85	376	.02	2	3.73	.01	.08	1	5
[illegible]W 9+25N A	3	60	14	140	.8	53	31	5816	5.13	4	5	ND	1	28	.8	2	2	48	.56	.196	47	51	.82	360	.02	2	3.46	.01	.08	1	11
[illegible]+00W 9+00N	2	35	2	72	.1	30	13	563	3.54	5	5	ND	1	14	.3	2	5	53	.19	.045	8	51	.84	87	.08	4	1.97	.01	.04	1	9
L10+00W 9+00N A	1	53	4	84	.2	37	16	559	4.13	7	5	ND	1	13	.7	3	3	51	.21	.047	8	53	1.02	74	.10	5	1.93	.01	.04	1	7
L10+00W 8+75N	3	19	18	66	.1	25	10	459	3.89	10	5	ND	1	12	.2	2	2	51	.11	.070	10	41	.44	85	.07	2	2.16	.01	.04	1	11
L10+00W 8+75N A	1	18	8	79	.1	35	10	437	3.84	3	5	ND	1	15	.3	2	2	51	.19	.050	9	48	.76	88	.09	2	2.07	.01	.04	1	2
L10+00W 8+50N	1	34	6	77	.2	44	12	407	4.30	9	5	ND	1	15	1.1	3	2	54	.20	.057	7	62	.94	101	.07	2	2.92	.01	.04	1	1
L10+00W 8+50N A	1	37	9	81	.3	26	8	379	3.74	4	5	ND	1	20	.2	2	2	50	.16	.079	11	46	.53	140	.04	2	2.35	.01	.04	1	1
L10+00W 8+25N	1	31	6	59	.1	52	15	645	3.40	6	5	ND	1	29	.7	2	2	55	.38	.043	10	66	1.09	137	.12	3	1.81	.02	.04	1	3
L10+00W 8+25N A	1	21	15	70	.1	43	10	378	3.91	8	5	ND	1	17	.2	2	2	61	.18	.054	7	64	.90	99	.07	5	2.17	.01	.04	1	1
L10+00W 8+00N	1	27	7	61	.1	46	14	612	3.36	4	5	ND	1	28	.2	2	2	55	.39	.045	10	65	1.08	120	.13	2	1.70	.02	.04	1	2
L10+00W 8+00N A	1	25	2	66	.1	55	14	592	3.65	8	5	ND	1	27	.4	4	2	59	.27	.035	9	67	1.05	144	.09	2	2.24	.01	.04	1	12
L10+00W 7+75N	2	18	10	68	.1	30	11	483	5.04	7	5	ND	1	10	.9	2	2	99	.12	.041	6	69	.75	59	.21	2	1.81	.01	.04	1	1
L10+00W 7+75N A	1	35	5	103	.1	53	13	515	4.19	6	5	ND	1	18	.4	2	2	51	.17	.047	9	60	.84	112	.08	3	2.21	.01	.05	1	4
L10+00W 7+50N	4	22	11	81	.3	30	9	319	4.74	7	6	ND	1	19	.6	2	2	66	.20	.050	10	63	.58	110	.14	3	1.60	.01	.04	1	6
L10+00W 7+50N A	2	22	5	75	.1	29	10	406	3.87	2	5	ND	1	20	.4	2	2	65	.25	.050	9	56	.79	99	.15	3	1.67	.02	.04	1	1
L10+00W 7+25N	4	19	5	92	.1	34	12	941	4.34	2	5	ND	1	17	.5	2	2	67	.14	.055	10	78	.70	125	.10	2	1.68	.01	.05	1	4
L10+00W 7+25N A	2	25	13	106	.1	49	17	933	4.18	7	5	ND	1	21	.2	2	2	52	.27	.052	8	73	1.07	133	.07	2	1.89	.01	.06	1	1
L10+00W 7+00N	1	54	3	118	.1	82	16	371	3.40	7	5	ND	1	43	.6	2	2	59	.66	.066	14	74	1.36	289	.10	4	2.17	.02	.06	1	4
L1[illegible]W 6+75N	1	44	13	79	.1	68	16	565	3.66	4	5	ND	1	24	.7	2	2	58	.26	.031	10	74	1.08	151	.07	2	2.36	.01	.05	1	1
[illegible]+00W 6+50N	1	57	13	86	.1	73	17	725	4.04	9	5	ND	1	27	.7	2	2	56	.40	.026	10	74	1.34	172	.10	2	2.38	.02	.05	1	3
L10+00W 6+25N	1	60	8	120	.1	61	16	887	4.54	8	5	ND	1	30	.8	3	2	55	.76	.064	15	68	1.30	277	.10	2	2.68	.02	.08	1	2
L10+00W 6+00N	1	24	7	70	.1	54	13	462	3.79	4	5	ND	1	19	.5	3	2	57	.23	.041	8	72	1.04	115	.08	4	2.29	.01	.04	1	2
L10+00W 5+75N	1	79	9	156	.1	94	19	1387	5.78	9	5	ND	2	37	2.7	2	2	62	1.01	.082	30	64	1.31	307	.30	2	3.27	.05	.07	1	1
L9+80W 7+00N	3	20	5	107	.1	25	10	526	4.31	2	5	ND	1	14	.4	2	2	67	.17	.042	10	60	.53	110	.14	2	1.38	.01	.05	1	10
STANDARD C/AU-S	19	61	37	132	7.1	73	31	1052	4.06	40	22	7	37	52	18.6	16	22	56	.55	.096	38	60	.96	180	.07	39	2.05	.06	.14	11	54

Homestake International Minerals PROJECT 3174 KUTCHO FILE # 90-2567

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au** ppb
L8+00W 18+00N	1	21	9	112	.1	37	14	1155	3.20	8	5	ND	1	40	.4	2	2	58	.48	.039	9	52	1.03	132	.16	3	1.91	.02	.07	1	1
L8+00W 17+75N	1	29	9	123	.2	40	12	722	3.91	12	5	ND	3	51	.4	2	2	68	.69	.057	15	56	1.12	228	.11	7	2.45	.02	.12	1	6
L8+00W 17+50N	1	34	10	157	.2	53	13	608	4.73	15	5	ND	2	44	.4	2	2	78	.54	.045	18	62	1.15	267	.12	6	3.40	.02	.12	2	3
L8+00W 17+25N	1	27	10	145	.1	47	13	675	4.18	10	5	ND	2	41	.2	2	2	70	.50	.061	13	61	1.12	215	.11	7	2.83	.02	.12	1	4
L8+00W 17+00N	1	51	12	149	.2	56	15	711	4.53	10	5	ND	2	37	.4	2	2	74	.41	.060	18	64	1.25	246	.09	3	3.39	.01	.14	2	1
L8+00W 16+75N	1	36	12	194	.3	51	18	1117	4.39	5	5	ND	3	51	.7	2	2	71	.57	.064	15	65	1.23	245	.09	8	3.05	.02	.16	2	4
L8+00W 16+50N	1	23	8	111	.1	41	13	602	3.37	7	5	ND	3	45	.4	3	3	61	.52	.051	12	58	1.08	154	.16	10	2.03	.03	.09	1	6
L8+00W 16+25N	1	29	10	198	.1	45	13	674	3.84	9	5	ND	2	42	.8	3	2	62	.59	.053	15	58	1.10	180	.10	9	2.55	.02	.12	1	3
L8+00W 16+00N	1	29	9	100	.2	42	13	769	3.60	14	5	ND	4	49	.5	2	2	59	.54	.040	13	52	.95	190	.12	9	1.93	.02	.12	1	5
L8+00W 15+75N	1	50	8	134	.1	44	12	627	3.47	11	5	ND	2	52	.4	2	2	59	.73	.056	20	57	1.07	184	.13	3	2.23	.02	.10	1	4
L8[illegible] 15+50N	1	41	10	154	.2	48	14	595	4.39	8	5	ND	2	49	.4	2	2	66	.68	.058	23	59	1.13	236	.08	2	2.88	.02	.13	1	4
[illegible] 15+00N	1	41	11	102	.2	51	10	375	4.01	10	5	ND	2	57	.3	2	2	68	.71	.080	19	71	1.14	333	.05	6	3.62	.02	.13	2	5
[illegible]0W 14+75N	1	25	8	66	.1	40	9	465	2.98	8	5	ND	2	55	.2	3	2	54	.45	.048	15	56	.94	189	.14	3	1.79	.02	.07	1	2
L8+00W 14+50N	1	15	7	57	.3	25	7	383	3.06	8	5	ND	2	19	.2	2	2	53	.23	.045	7	47	.69	86	.13	3	1.98	.01	.06	1	6
L8+00W 14+25N	1	32	10	95	.1	63	14	672	3.56	14	5	ND	2	43	.3	2	2	61	.50	.056	16	70	1.03	219	.09	9	2.13	.02	.10	1	19
L8+00W 14+00N	1	11	8	90	.1	40	11	432	3.21	8	5	ND	4	50	.2	3	3	55	.67	.063	11	61	1.01	157	.15	3	1.86	.02	.09	1	11
L8+00W 13+75N	1	28	9	81	.1	46	10	469	3.49	8	5	ND	3	53	.2	2	4	59	.66	.055	18	60	.91	246	.16	2	2.40	.02	.09	1	5
L8+00W 13+50N	1	72	13	141	.1	94	19	1199	4.84	23	5	ND	3	30	.8	2	2	65	.36	.080	11	69	1.20	185	.12	4	2.84	.02	.12	1	1
L8+00W 13+25N	1	44	10	116	.1	61	19	849	5.75	19	5	ND	2	20	.4	2	2	73	.20	.076	13	68	.93	135	.10	6	3.31	.01	.08	1	3
L8+00W 13+00N	1	26	11	71	.3	33	8	323	3.52	8	5	ND	1	26	.2	2	2	67	.18	.046	11	59	.78	162	.07	6	2.57	.01	.09	1	2
L8+00W 12+75N	1	19	12	71	.1	28	7	311	2.89	4	5	ND	1	27	.2	2	2	58	.16	.053	11	41	.58	138	.07	3	2.12	.01	.09	1	2
L8+00W 12+50N	1	22	12	73	.3	34	8	323	3.49	7	5	ND	2	19	.2	2	2	68	.20	.043	10	55	.85	106	.09	2	2.35	.01	.10	1	4
L8+00W 12+25N	1	25	11	82	.2	42	12	492	3.42	2	5	ND	2	29	.2	2	2	65	.29	.047	10	56	.90	141	.13	2	2.34	.01	.10	1	4
L8+00W 12+00N	1	42	13	103	.1	59	13	650	4.19	16	5	ND	3	36	.3	2	2	68	.27	.031	13	67	1.19	199	.09	6	3.01	.01	.13	1	3
L8+00W 11+75N	1	30	10	86	.2	40	10	415	3.83	11	5	ND	1	25	.2	3	2	74	.20	.028	10	62	.98	152	.11	6	2.80	.01	.10	1	62
L8+00W 11+50N	1	30	12	90	.3	47	13	553	3.82	4	5	ND	3	31	.2	2	3	64	.30	.045	13	59	.95	186	.14	6	2.78	.01	.11	1	5
L8+00W 11+25N	1	28	13	75	.3	41	12	544	3.17	7	8	ND	4	47	.3	2	3	59	.38	.042	16	48	.82	199	.12	2	2.09	.02	.11	1	3
L8+00W 11+00N	1	29	11	104	.6	46	15	647	4.29	9	5	ND	1	34	.2	3	2	74	.17	.100	12	61	.86	294	.03	6	4.28	.01	.15	2	3
L8+00W 10+75N	1	22	12	63	1.1	29	5	150	3.91	16	5	ND	2	23	.2	2	2	55	.11	.092	15	47	.46	181	.04	2	2.71	.01	.10	1	10
L8[illegible] 10+50N	1	35	10	84	.1	49	9	326	3.19	7	5	ND	2	27	.2	2	2	51	.23	.059	18	53	.73	153	.12	8	2.71	.02	.07	1	2
[illegible]0W 10+25N	1	18	8	56	.1	36	8	323	2.68	9	5	ND	2	27	.2	2	2	48	.27	.053	11	47	.71	95	.12	3	1.76	.01	.06	1	3
L8+00W 10+00N	1	32	14	89	.6	36	7	254	3.59	13	5	ND	2	22	.2	2	2	59	.12	.075	18	52	.59	162	.08	7	3.21	.01	.10	1	3
L8+00W 9+75N	1	22	14	71	.2	33	9	372	2.77	3	5	ND	2	27	.2	2	3	46	.15	.033	15	36	.55	165	.06	2	2.45	.01	.10	1	1
L8+00W 9+50N	1	15	11	48	.1	25	7	376	1.98	4	5	ND	4	55	.2	2	2	37	.38	.034	17	31	.51	183	.12	2	1.28	.02	.07	1	3
L8+00W 9+25N	1	21	16	85	.2	38	16	1325	6.10	16	5	ND	2	20	.2	2	2	104	.19	.131	13	72	.93	111	.15	2	2.52	.01	.07	1	5
L8+00W 9+00N	1	37	14	107	.3	64	14	527	3.86	13	5	ND	3	38	.5	3	2	62	.39	.063	13	79	.92	217	.07	9	3.17	.02	.12	1	1
STANDARD C/AU-S	18	58	41	132	7.3	72	29	1000	3.90	40	25	8	39	52	18.6	16	21	58	.50	.092	39	61	.91	182	.09	34	1.95	.06	.16	11	58

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au** ppb
L8+00W 8+75N	1	35	11	101	.2	60	19	980	4.36	16	5	ND	2	23	.4	2	2	60	.21	.083	11	70	.85	148	.09	3	3.03	.01	.07	1	4
L8+00W 8+50N	1	27	9	66	.1	51	11	443	2.85	14	5	ND	4	29	.3	2	3	50	.25	.049	12	52	.81	161	.10	2	1.98	.01	.07	1	2
L8+00W 8+25N	1	47	8	122	.1	64	15	549	3.74	12	5	ND	3	41	.3	2	2	65	.66	.062	14	73	1.27	188	.11	4	2.32	.02	.11	1	4
L8+00W 8+00N	1	28	9	83	.1	48	15	686	3.67	11	5	ND	3	24	.2	2	2	62	.34	.064	10	69	1.19	99	.15	2	2.10	.01	.07	1	3
L8+00W 7+75N	1	24	14	88	.3	38	9	457	3.36	10	5	ND	4	20	.3	2	2	46	.12	.038	15	38	.61	139	.03	2	2.63	.01	.11	1	24
L8+00W 7+50N	1	36	13	96	.1	47	9	440	3.44	13	5	ND	3	30	.3	2	2	52	.19	.036	16	43	.79	193	.04	2	2.87	.01	.12	1	5
L8+00W 7+25N	1	31	14	95	.5	42	7	296	3.21	15	5	ND	3	33	.3	2	2	54	.32	.093	15	51	.70	247	.01	2	3.60	.01	.11	1	3
L4+50E 9+00N	1	35	10	124	.4	53	12	628	4.36	7	5	ND	3	20	.3	2	2	67	.21	.049	11	62	.93	138	.11	2	2.63	.01	.11	1	3
L4+50E 8+75N	1	40	14	112	.4	43	8	376	3.97	10	5	ND	3	20	.3	2	2	69	.16	.087	21	61	.74	224	.06	2	3.42	.01	.14	1	1
L4+50E 8+50N	1	55	11	159	.1	69	12	562	5.23	15	5	ND	3	21	.4	2	2	62	.18	.080	28	63	.86	273	.10	2	4.30	.02	.13	1	2
L4 8+25N	1	60	9	168	.6	77	18	1573	5.44	5	10	ND	5	38	.3	2	2	78	.33	.141	24	78	1.14	565	.03	2	5.23	.01	.18	1	3
8+00N	1	43	9	113	.2	58	10	580	4.07	8	5	ND	3	29	.3	2	2	66	.25	.063	19	63	1.02	298	.04	2	3.59	.01	.13	1	1
0E 7+75N	1	46	9	112	.3	54	10	608	3.69	8	5	ND	2	34	.2	2	2	59	.34	.077	22	60	1.02	288	.04	2	2.97	.01	.11	1	3
L4+50E 7+50N	1	54	11	153	.1	69	11	595	4.87	10	5	ND	2	29	.2	2	2	68	.27	.071	27	66	1.01	325	.07	2	4.15	.01	.13	1	3
L4+50E 7+25N	1	56	12	150	.1	69	11	541	4.75	9	5	ND	2	34	.3	2	2	67	.36	.087	30	66	1.03	364	.07	2	4.34	.01	.13	1	2
L4+50E 7+00N	1	45	13	131	.1	62	11	632	4.53	9	5	ND	4	44	.3	2	2	69	.41	.055	24	58	.98	320	.11	2	3.39	.02	.12	1	3
L4+50E 6+75N	1	56	13	131	.3	68	10	464	4.56	11	5	ND	1	36	.3	2	2	66	.36	.099	28	64	.99	326	.05	2	4.47	.01	.13	1	4
L4+50E 6+50N	1	39	12	138	.1	66	10	527	4.44	9	5	ND	3	38	.3	2	2	67	.38	.066	25	64	1.05	342	.08	2	3.66	.02	.11	1	3
L4+50E 6+25N	2	59	10	156	.1	87	14	837	5.14	13	5	ND	5	45	.4	2	2	71	.49	.072	29	78	1.19	430	.06	2	4.55	.01	.18	1	3
L4+50E 6+00N	1	32	10	116	.1	62	11	549	3.86	12	5	ND	3	41	.3	2	2	61	.46	.060	21	67	1.12	322	.08	2	3.01	.01	.10	1	2
L4+50E 5+75N	1	86	8	76	.9	48	8	465	3.64	2	5	ND	4	62	.8	2	2	43	.81	.162	71	49	.59	389	.02	2	4.51	.01	.08	1	6
L4+50E 5+25N	1	37	9	120	.2	63	11	566	4.00	7	5	ND	3	33	.3	2	2	61	.33	.072	23	68	1.10	259	.07	2	3.36	.01	.10	1	3
L4+50E 5+00N	1	33	9	104	.2	59	12	552	4.06	9	5	ND	4	38	.3	2	2	64	.37	.043	18	75	1.18	254	.10	2	2.80	.01	.10	1	2
L4+50E 4+75N	1	34	9	111	.1	60	12	661	4.08	10	5	ND	2	40	.2	2	2	64	.43	.078	17	69	1.19	302	.07	2	3.04	.01	.09	1	3
L4+50E 4+50N	1	32	9	136	.1	61	11	530	4.15	9	5	ND	2	33	.2	2	2	57	.31	.053	20	71	1.15	229	.08	2	2.95	.01	.09	1	3
L4+50E 4+25N	1	45	11	128	.2	68	11	531	4.73	11	5	ND	2	34	.2	2	2	66	.33	.080	27	72	1.03	301	.08	2	3.92	.01	.11	1	6
L4+50E 4+00N A	1	34	10	105	.3	55	11	507	3.72	10	5	ND	4	32	.2	2	2	65	.30	.044	12	71	1.03	163	.12	2	2.52	.01	.10	1	2
L4+50E 3+75N	1	31	9	85	.5	56	12	587	3.55	6	7	ND	5	33	.2	2	2	57	.33	.057	14	68	1.13	133	.12	7	2.15	.02	.10	1	1
L4+50E 3+50N	1	27	10	116	.1	58	12	738	3.58	8	5	ND	1	47	.3	2	2	56	.50	.071	16	67	1.13	299	.06	2	2.62	.01	.09	1	4
L4 3+00N	1	33	10	103	.2	72	12	629	3.34	8	5	ND	2	47	.2	2	2	53	.55	.063	16	66	1.08	288	.07	2	2.40	.01	.07	1	5
JE 2+75N	1	33	12	119	.2	62	12	682	3.85	9	5	ND	2	44	.2	2	2	59	.52	.067	18	69	1.11	308	.07	2	2.88	.01	.10	1	3
L4+50E 2+50N	1	33	10	115	.3	68	12	633	3.88	4	5	ND	3	46	.2	2	2	60	.54	.070	20	71	1.14	302	.10	2	2.89	.01	.10	1	4
L4+50E 2+25N	1	33	10	92	.2	56	12	587	3.39	8	5	ND	2	38	.2	2	2	56	.38	.071	13	66	1.04	238	.08	2	2.40	.01	.08	1	3
L4+50E 2+00N	1	30	8	79	.1	45	12	620	3.18	10	5	ND	1	30	.2	2	2	56	.29	.060	10	59	.91	143	.08	2	1.95	.01	.07	1	3
L4+50E 1+75N	2	38	9	168	.3	62	15	857	4.57	11	8	ND	2	21	.2	2	2	62	.16	.058	10	71	1.10	194	.04	2	3.23	.01	.12	1	4
L4+50E 1+25N A	1	46	8	83	.3	73	15	821	3.61	7	5	ND	4	52	.2	2	2	58	.58	.063	13	70	1.24	214	.10	2	2.08	.02	.12	1	4
STANDARD C/AU-S	18	59	41	137	7.3	72	28	1000	3.91	37	16	7	40	52	18.6	15	19	58	.50	.093	39	60	.91	182	.09	35	1.95	.06	.13	13	51

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au** ppb
L4+50E 1+00N A	3	49	13	122	.1	68	18	1555	4.38	10	5	ND	4	46	.5	3	2	67	.60	.078	22	71	1.03	333	.09	4	3.53	.02	.12	1	8
L4+50E 0+75N	2	38	12	94	.1	76	13	598	4.17	3	5	ND	4	44	.2	2	4	59	.56	.065	24	63	.99	242	.22	4	2.91	.02	.11	1	5
L4+50E 0+50N	1	36	8	87	.1	67	14	876	3.70	5	5	ND	4	47	.3	2	2	59	.52	.064	17	69	1.09	243	.11	2	2.41	.01	.11	1	4
L4+50E 0+25N A	1	31	9	95	.3	58	12	614	3.86	9	6	ND	4	43	.3	3	2	61	.51	.060	17	70	1.05	253	.12	6	2.49	.01	.12	1	4
L4+50E 0+00S	1	26	12	74	.1	52	12	683	3.29	6	5	ND	5	55	.4	2	4	56	.50	.052	16	58	.93	244	.13	3	2.06	.02	.11	1	5
L4+50E 0+25S A	1	43	13	116	.1	72	13	728	4.31	9	5	ND	4	49	.3	2	2	59	.49	.067	31	68	1.04	340	.11	7	3.07	.02	.14	1	4
L4+50E 0+50S	1	24	7	84	.2	52	13	573	3.68	5	6	ND	3	32	.2	2	2	62	.30	.032	11	67	1.19	122	.12	2	2.28	.01	.11	1	4
L4+50E 0+75S	1	33	9	119	.4	55	13	626	3.58	4	6	ND	4	40	.3	3	3	59	.47	.065	12	71	1.18	220	.11	5	2.34	.02	.13	1	1
L4+50E 1+00S	1	45	10	105	.1	77	18	1147	4.54	6	5	ND	1	45	.4	2	2	74	.45	.063	19	87	1.24	349	.10	5	3.30	.01	.12	1	2
L4+50E 1+25S	1	34	12	98	.1	64	15	577	4.08	5	5	ND	4	33	.3	2	4	65	.30	.045	19	76	1.08	212	.17	5	2.91	.01	.09	1	4
L4[illegible] 1+50S	1	38	10	103	.1	65	13	668	3.72	2	5	ND	2	31	.3	2	2	61	.31	.074	21	74	1.05	247	.10	7	3.24	.01	.11	1	1
[illegible] 1+75S	1	37	11	112	.1	70	13	623	3.95	2	5	ND	2	39	.2	2	2	63	.39	.068	16	76	1.07	340	.10	4	3.20	.01	.12	1	1
[illegible]0E 2+00S	1	49	13	111	.2	82	15	797	4.44	3	6	ND	5	42	.3	2	6	65	.40	.052	19	79	1.13	321	.16	2	3.08	.01	.14	1	5
L4+50E 2+25S	1	43	10	87	.1	72	15	602	4.01	2	5	ND	6	39	.3	2	3	63	.40	.058	19	82	1.14	184	.20	5	2.55	.01	.12	1	5
L4+50E 2+50S	1	44	11	94	.4	73	19	785	4.00	8	8	ND	5	29	.3	2	3	66	.34	.070	12	80	1.26	126	.14	2	2.84	.01	.14	1	4
L4+50E 2+75S	1	39	9	110	.3	65	15	645	3.94	3	6	ND	4	29	.2	2	3	62	.29	.058	19	74	1.00	221	.13	3	2.86	.01	.11	1	3
L4+50E 3+00S A	1	43	12	104	.1	71	14	477	3.61	5	5	ND	4	35	.3	4	4	64	.35	.067	32	76	1.03	308	.12	3	3.04	.01	.11	1	7
L4+50E 3+25S	1	34	9	90	.1	56	12	509	3.46	5	5	ND	2	41	.2	2	3	58	.42	.058	15	68	1.11	202	.11	3	2.44	.01	.10	1	1
L4+50E 3+25S A	1	49	9	109	.2	82	14	664	4.13	7	5	ND	3	45	.3	2	2	62	.49	.083	23	77	1.08	301	.14	4	3.02	.02	.12	1	2
L4+50E 3+50S	1	48	9	81	.1	83	17	672	3.64	12	5	ND	2	32	.2	2	2	60	.35	.066	16	82	1.14	179	.12	4	2.33	.01	.09	1	5
L4+50E 3+75S	1	51	8	70	.2	86	16	664	3.54	11	5	ND	4	41	.3	2	3	60	.43	.055	15	87	1.29	200	.12	7	2.21	.01	.10	1	8
L4+50E 4+00S	1	39	9	104	.2	77	14	700	3.72	2	5	ND	2	38	.3	3	4	62	.39	.100	14	97	1.29	258	.07	2	2.90	.01	.11	1	1
L4+50E 4+25S	1	64	10	145	.1	119	18	847	5.02	5	5	ND	3	32	.4	2	2	83	.23	.150	19	128	1.66	501	.05	4	4.42	.01	.17	1	4
L4+50E 4+50S	1	64	10	75	.1	106	16	605	4.14	5	5	ND	4	30	.2	2	4	61	.35	.053	19	101	1.31	197	.18	3	3.00	.01	.11	1	3
L4+50E 4+75S	1	32	11	80	.4	72	26	1268	5.23	14	6	ND	4	22	.3	4	5	75	.27	.082	10	87	1.17	103	.18	5	2.29	.01	.08	1	5
L4+50E 5+00S B	1	31	9	64	.2	62	13	603	3.51	7	5	ND	3	21	.2	2	3	55	.28	.063	11	66	1.01	77	.19	11	1.98	.01	.07	1	6
L4+50E 5+00S C	1	49	10	81	.3	88	20	1069	3.67	12	7	ND	5	26	.2	3	4	57	.34	.069	12	83	1.31	98	.14	4	2.24	.01	.10	1	1
L4+50E 5+25S	1	32	11	63	.1	62	19	1206	5.04	26	5	ND	3	19	.2	2	2	77	.24	.074	9	78	1.10	89	.19	2	1.87	.01	.05	1	1
L4+50E 5+50S	1	54	8	123	.1	84	18	778	6.89	2	5	ND	4	13	.2	2	2	80	.28	.063	23	80	1.32	102	.42	5	4.98	.03	.08	1	1
L4[illegible] 5+75S 'B'	2	23	12	93	.1	36	9	412	6.03	2	5	ND	5	11	.2	2	7	81	.13	.058	21	62	.55	87	.50	4	3.53	.02	.06	1	3
[illegible]0E 5+75S 'C'	1	31	9	88	.2	78	19	719	4.38	4	5	ND	4	23	.2	2	2	63	.28	.052	16	86	1.46	99	.24	6	3.00	.01	.06	1	4
[illegible]50E 6+00S	2	24	15	119	.1	41	12	662	5.88	2	5	ND	6	9	.2	6	3	56	.24	.076	34	45	.73	80	.36	2	5.76	.04	.07	1	1
L4+50E 6+25S	1	50	11	88	.1	86	20	847	5.15	11	5	ND	5	21	.2	2	2	67	.31	.055	22	79	1.53	112	.35	6	3.61	.03	.08	1	2
L4+50E 6+50S	1	78	10	107	.2	110	18	805	5.56	4	5	ND	6	31	.3	4	6	65	.38	.066	38	78	1.25	230	.28	3	4.74	.02	.11	1	2
L4+50E 6+75S	2	34	13	101	.2	48	14	950	4.81	9	5	ND	2	15	.2	2	4	56	.16	.083	20	55	.61	90	.26	2	3.07	.01	.05	1	4
L4+50E 7+00S	2	74	12	167	.1	63	10	1282	5.53	11	5	ND	3	93	.3	2	2	56	1.07	.115	56	68	.61	327	.18	5	3.85	.02	.08	1	3
STANDARD C/AU-S	18	58	41	137	7.3	73	30	1006	3.92	40	16	8	39	52	18.7	16	23	59	.50	.093	40	61	.92	183	.09	35	1.95	.06	.13	11	48

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au** ppb
L4+50E 7+50S	1	111	9	149	.1	83	17	570	3.96	17	5	ND	4	72	.6	2	2	55	1.07	.074	31	66	.87	370	.24	3	3.47	.03	.08	2	18
L9+50E 0+00N	1	33	5	89	.1	54	18	1452	5.43	9	5	ND	2	52	.3	2	2	52	.69	.067	15	54	.81	254	.08	3	1.66	.02	.07	1	7
L10+50E 10+00N	1	32	6	93	.1	55	13	507	3.89	9	5	ND	2	24	.2	2	2	67	.21	.054	9	71	1.05	117	.10	3	2.27	.01	.10	1	3
L10+50E 9+75N	1	59	10	95	.1	68	18	930	3.65	8	5	ND	5	100	.4	2	2	58	.70	.054	18	64	1.29	294	.09	3	2.54	.03	.19	1	4
L10+50E 9+50N	1	35	9	85	.1	51	17	811	3.22	7	5	ND	3	50	.2	2	2	56	.40	.038	14	65	1.10	206	.13	2	2.05	.03	.10	1	2
L10+50E 9+25N	1	47	9	91	.1	67	14	603	3.69	5	5	ND	3	26	.2	2	2	57	.22	.055	15	65	.99	152	.12	2	2.67	.01	.09	1	2
L10+50E 9+00N	1	33	5	73	.1	56	15	629	3.29	10	5	ND	3	30	.2	2	2	57	.31	.055	10	65	1.11	104	.12	3	1.97	.02	.07	1	2
L10+50E 8+75N	1	51	9	104	.1	84	15	494	3.78	6	5	ND	2	40	.3	2	2	61	.37	.040	17	78	1.30	205	.09	5	3.12	.02	.11	1	1
L10+50E 8+50N	1	36	10	92	.2	54	10	481	4.64	10	8	ND	3	21	.2	2	2	54	.21	.086	10	66	.76	106	.06	4	3.00	.01	.09	2	1
L10+50E 8+25N	1	40	6	106	.1	62	18	748	4.23	6	5	ND	2	23	.2	2	2	68	.29	.056	9	75	1.40	102	.11	4	2.98	.01	.07	1	2
L1[illegible]E 8+00N	1	27	7	96	.1	49	11	550	3.78	6	5	ND	1	29	.3	2	2	71	.25	.040	12	62	1.00	190	.11	3	2.35	.01	.07	1	4
L[illegible]E 7+75N	1	20	11	98	.1	44	12	585	4.10	6	5	ND	2	18	.2	2	2	80	.14	.068	11	66	.91	104	.12	3	2.07	.01	.09	1	1
[illegible]0E 7+50N	1	20	8	74	.1	31	8	434	2.82	2	5	ND	2	28	.2	2	2	60	.22	.058	9	53	.82	170	.05	2	2.24	.01	.10	1	3
L10+50E 7+25N	1	34	7	165	.1	76	12	595	3.84	4	5	ND	3	54	.3	2	2	60	.60	.100	20	73	1.17	394	.05	3	3.64	.02	.12	1	2
L10+50E 7+00N	1	21	7	85	.1	46	12	459	3.04	6	5	ND	3	42	.2	2	2	53	.44	.039	13	58	1.14	178	.10	4	2.00	.02	.08	1	42
L10+50E 6+75N	1	31	9	105	.1	60	17	927	3.70	7	5	ND	2	40	.4	2	2	62	.47	.062	16	64	1.06	311	.07	2	2.97	.02	.10	1	3
L10+50E 6+50N	1	47	10	116	.1	97	15	653	4.53	7	5	ND	4	41	.2	2	2	66	.47	.049	21	76	1.13	273	.18	2	2.97	.02	.12	1	2
L10+50E 6+25N	1	33	9	100	.1	81	14	551	4.15	2	5	ND	4	47	.2	2	2	66	.53	.066	20	83	1.35	216	.15	3	2.65	.02	.11	1	3
L10+50E 6+00N	1	34	8	103	.1	82	13	447	3.85	2	5	ND	3	39	.2	2	2	59	.43	.062	22	77	1.13	223	.13	4	2.99	.02	.09	1	11
L10+50E 5+75N	1	33	11	105	.1	75	12	499	4.14	2	5	ND	3	40	.2	2	2	63	.47	.053	23	63	1.02	255	.13	3	3.09	.02	.11	1	3
L10+50E 5+50N	1	29	9	83	.1	74	14	554	3.52	2	5	ND	3	42	.2	2	2	58	.41	.053	14	79	1.27	164	.14	3	2.08	.02	.09	1	3
L10+50E 5+25N A	1	34	6	88	.1	97	15	578	3.69	8	5	ND	4	49	.2	2	2	60	.48	.054	18	90	1.34	242	.13	4	2.46	.02	.09	1	21
L10+50E 5+00N A	1	33	10	126	.1	124	15	426	4.07	3	5	ND	4	39	.2	2	2	60	.61	.057	17	82	1.43	265	.20	4	2.81	.02	.10	2	4
L10+50E 4+75N	1	32	8	99	.1	78	14	589	3.77	6	5	ND	2	45	.2	2	2	58	.55	.070	17	78	1.26	227	.13	4	2.60	.02	.09	1	4
L10+50E 4+50N	1	32	8	85	.1	73	13	440	3.60	4	5	ND	3	36	.2	2	2	56	.38	.043	16	70	1.21	164	.14	13	2.47	.02	.08	1	4
L10+50E 4+25N	1	37	9	102	.1	79	13	566	4.14	4	5	ND	3	41	.2	2	2	61	.38	.045	18	68	1.09	249	.12	3	2.88	.02	.10	1	2
L10+50E 4+00N	1	20	7	79	.1	69	14	563	3.29	2	5	ND	3	40	.2	2	2	56	.41	.031	11	76	1.24	457	.16	4	1.83	.02	.08	1	1
L10+50E 3+75N	1	18	8	102	.1	67	12	484	3.46	6	5	ND	3	44	.2	2	2	57	.44	.044	13	78	1.16	191	.13	3	2.24	.02	.10	1	2
L10+50E 3+50N	1	22	7	81	.1	61	12	467	3.06	5	5	ND	2	52	.2	2	2	53	.48	.044	14	67	1.09	202	.12	2	2.00	.02	.07	1	1
L1[illegible]E 3+25N	1	27	8	111	.1	74	14	467	3.56	4	5	ND	3	54	.2	2	2	59	.77	.072	18	75	1.31	230	.10	4	2.43	.02	.10	1	20
L[illegible]0E 3+00N	1	33	9	115	.1	76	12	567	3.82	5	5	ND	2	49	.2	2	2	62	.54	.067	13	77	1.24	258	.09	4	2.64	.02	.11	1	3
L10+50E 2+75N	1	34	8	145	.1	91	14	511	3.68	2	5	ND	2	57	.2	2	2	58	.71	.077	18	83	1.35	334	.06	7	3.08	.02	.11	1	2
L10+50E 2+50N	1	24	8	96	.1	75	15	801	3.70	2	5	ND	3	48	.2	2	2	62	.54	.059	16	78	1.34	201	.15	5	2.16	.02	.08	1	3
L10+50E 2+25N	1	29	7	68	.1	72	16	675	3.14	3	5	ND	4	57	.2	2	2	54	.45	.064	17	72	1.04	196	.15	5	1.58	.04	.09	1	3
L10+50E 2+00N	1	38	8	84	.2	77	22	934	4.08	3	5	ND	2	38	.2	2	2	63	.32	.068	10	91	1.18	202	.07	2	2.09	.01	.10	1	2
L10+50E 1+75N	1	34	10	130	.1	70	15	698	4.33	8	5	ND	2	33	.2	2	2	68	.27	.052	13	81	1.33	193	.08	5	2.66	.02	.11	1	2
STANDARD C/AU-S	18	57	38	132	7.3	72	31	1010	3.95	39	20	7	40	52	18.4	16	20	57	.50	.091	39	59	.92	182	.09	34	1.95	.06	.13	11	50

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au** ppb
L10+50E 1+50N	1	23	7	72	.1	60	16	706	3.10	9	5	ND	2	38	.2	2	2	52	.39	.054	12	62	1.01	148	.14	3	1.60	.02	.06	1	1
L10+50E 1+25N	1	19	7	63	.1	45	12	679	2.74	9	5	ND	2	37	.2	2	2	47	.36	.045	12	52	.85	130	.15	4	1.46	.02	.07	1	2
L10+50E 1+00N	1	25	7	73	.1	48	14	664	3.11	14	5	ND	2	42	.2	2	2	52	.38	.057	12	57	.95	152	.16	8	1.69	.02	.07	1	2
L10+50E 0+75N	1	24	6	70	.1	50	12	518	3.11	9	5	ND	2	24	.2	2	2	53	.31	.060	8	58	.90	94	.12	6	1.59	.01	.05	1	1
L10+50E 0+50N	1	40	11	105	.1	88	12	533	4.19	10	5	ND	2	34	.2	2	2	60	.46	.052	20	78	1.18	242	.14	4	2.86	.01	.07	1	3
L10+50E 0+25N	1	41	11	137	.1	97	15	809	4.43	9	7	ND	1	41	.3	4	2	63	.62	.087	18	97	1.37	313	.08	6	2.99	.02	.09	1	4
L10+50E 0+00N	2	23	10	135	.1	78	13	555	4.06	7	5	ND	2	28	.2	3	2	60	.34	.061	15	78	1.11	227	.15	5	2.70	.01	.08	1	1
L16+50E 9+00N	1	40	14	142	.1	85	12	540	4.31	6	5	ND	1	34	.2	3	2	59	.37	.099	20	72	1.03	282	.12	4	3.51	.01	.11	1	3
L16+50E 8+75N	1	31	8	115	.1	72	15	483	3.73	17	5	ND	1	40	.2	2	2	58	.49	.069	17	75	1.25	252	.13	7	2.54	.02	.08	1	3
L16+50E 8+50N	1	34	8	115	.1	69	12	492	3.62	12	5	ND	1	37	.2	4	2	54	.40	.062	14	65	1.11	216	.14	6	2.45	.02	.08	1	4
L1[illegible]E 8+25N	1	40	12	155	.2	92	13	575	4.26	8	6	ND	1	41	.3	3	2	59	.48	.085	20	75	1.10	373	.09	4	3.69	.01	.12	1	6
[illegible]E 8+00N	1	31	9	123	.1	72	12	622	3.97	14	5	ND	2	42	.2	2	2	60	.50	.061	18	73	1.14	277	.14	4	2.63	.02	.09	1	3
[illegible]50E 7+75N	2	39	15	168	.1	84	17	909	5.28	10	7	ND	2	42	.3	2	2	72	.55	.077	26	77	1.13	380	.10	4	3.80	.02	.12	1	3
L16+40E 7+50N	1	68	5	81	.3	32	3	72	.96	2	9	ND	1	58	2.0	2	2	24	1.05	.081	27	40	.28	214	.03	4	1.72	.01	.05	2	8
L16+50E 7+25N	3	23	7	122	.1	54	14	393	6.06	9	5	ND	3	36	.3	4	2	87	.45	.072	12	60	1.29	176	.14	3	2.76	.01	.05	1	1
L16+50E 7+00N	1	29	10	115	.1	80	14	537	4.26	10	5	ND	1	44	.2	2	2	61	.55	.081	13	84	1.25	259	.08	4	2.86	.02	.10	1	4
L16+50E 6+75N	2	35	15	147	.1	88	14	696	5.25	20	5	ND	1	47	.4	5	2	68	.65	.083	19	82	1.18	332	.10	5	3.18	.02	.09	1	6
L16+50E 6+50N	1	30	9	134	.1	83	11	531	4.28	12	5	ND	2	40	.2	2	2	58	.50	.054	18	70	1.08	276	.18	4	2.82	.02	.09	2	4
L16+50E 6+25N	1	23	10	99	.1	72	11	465	3.48	11	5	ND	3	42	.2	3	2	53	.49	.057	14	73	1.24	190	.19	5	2.09	.02	.07	1	6
L16+50E 6+00N	1	20	5	80	.1	68	11	354	2.89	10	5	ND	2	48	.2	2	2	49	.53	.064	13	65	1.14	188	.16	5	1.72	.03	.07	1	2
L16+50E 5+75N	1	33	7	134	.1	84	12	516	4.18	11	5	ND	1	40	.2	3	2	61	.38	.054	17	71	1.10	350	.11	5	3.12	.02	.09	1	4
L16+50E 5+50N	1	26	8	75	.1	56	11	467	3.04	9	5	ND	2	42	.2	2	2	49	.40	.032	11	62	1.08	177	.15	3	1.75	.02	.06	1	3
L16+50E 5+25N	1	23	8	109	.1	67	11	517	3.79	7	5	ND	2	48	.2	2	2	58	.54	.044	16	65	1.05	282	.13	3	2.47	.02	.08	1	1
L16+50E 5+00N	1	24	9	102	.1	54	11	468	3.65	5	5	ND	1	50	.2	2	2	56	.57	.058	14	61	1.05	248	.12	3	2.29	.02	.09	2	14
L16+50E 4+75N	1	28	7	90	.1	52	11	499	3.61	6	5	ND	2	51	.2	2	2	58	.53	.056	14	62	1.08	223	.15	3	2.21	.04	.10	1	5
L16+50E 4+50N	1	27	11	82	.1	51	12	545	3.38	9	5	ND	3	46	.2	3	2	56	.44	.049	13	58	1.02	179	.16	3	1.88	.04	.09	1	1
L16+50E 4+25N	1	20	10	87	.1	49	11	491	3.36	7	5	ND	2	46	.2	3	2	56	.43	.048	11	62	1.09	198	.13	3	2.03	.04	.10	2	4
L16+50E 4+00N	1	28	4	91	.1	67	14	582	3.47	13	5	ND	2	42	.2	2	3	59	.49	.068	10	68	1.37	175	.13	4	2.04	.02	.09	1	3
L16+50E 3+75N	1	33	8	107	.1	62	20	588	5.32	7	5	ND	1	23	.3	2	2	52	.24	.047	10	62	1.08	130	.07	4	1.86	.02	.08	2	1
L1[illegible]E 3+00N	1	13	2	86	.1	5	6	690	3.94	2	5	ND	1	18	.2	2	2	38	.22	.140	10	10	.31	94	.01	3	1.14	.01	.06	1	1
[illegible]50E 2+75N	1	35	6	110	.1	49	15	625	4.08	8	5	ND	1	23	.2	2	2	56	.22	.050	11	66	1.06	122	.08	3	2.07	.01	.05	1	5
L16+50E 2+50N	1	30	9	79	.1	43	9	370	3.23	9	5	ND	1	21	.2	2	2	57	.18	.049	11	52	.75	157	.10	10	2.20	.01	.07	1	4
L16+50E 2+25N	1	25	3	63	.1	48	12	528	2.81	9	5	ND	3	47	.2	2	2	50	.42	.061	12	51	.88	155	.13	3	1.42	.02	.06	1	3
L16+50E 2+00N	2	16	12	80	.1	26	8	533	4.69	9	5	ND	1	14	.2	2	2	59	.11	.063	14	45	.47	119	.24	2	3.06	.02	.05	1	4
L16+50E 1+75N	3	14	17	98	.1	24	8	640	5.17	7	6	ND	5	8	.2	2	3	43	.18	.073	27	32	.50	87	.31	2	5.40	.04	.05	1	3
L16+50E 1+50N	1	19	12	76	.1	38	14	1235	4.87	15	5	ND	2	17	.2	2	2	78	.15	.082	9	55	.74	82	.20	4	1.99	.01	.05	1	3
STANDARD C/AU-S	17	58	39	132	7.2	69	31	1039	3.98	38	25	7	38	52	18.3	15	18	55	.52	.090	37	58	.93	179	.09	33	1.94	.06	.13	11	54

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au** ppb
L16+50E 1+25N	1	22	10	88	.1	38	12	1114	5.00	14	5	ND	1	17	.2	2	2	63	.16	.183	9	63	.58	83	.08	3	2.78	.01	.04	1	1
L16+50E 1+00N	1	23	9	133	.1	50	18	721	5.01	7	6	ND	5	15	.2	2	2	58	.37	.068	20	41	.93	130	.43	2	4.57	.03	.06	1	1
L16+50E 0+75N	2	20	9	95	.1	33	11	891	5.28	14	5	ND	2	14	.2	2	2	74	.14	.065	13	51	.59	85	.24	4	2.57	.02	.04	1	1
L16+50E 0+50N	1	31	13	118	.2	50	18	1047	4.49	7	6	ND	3	21	.2	4	3	58	.29	.085	12	53	.86	123	.23	3	3.74	.02	.06	1	6
L16+50E 0+25N	1	31	11	111	.2	43	13	721	5.31	10	5	ND	4	15	.2	4	2	53	.29	.100	14	49	.78	92	.28	3	5.47	.02	.04	1	1
L16+50E 0+00N	1	24	8	102	.1	34	12	790	5.13	4	5	ND	1	14	.2	3	2	59	.16	.103	11	54	.63	125	.14	3	3.21	.01	.03	1	1
L19+50E 4+00N	1	46	10	119	.1	95	20	1131	4.51	12	5	ND	2	53	.3	2	2	66	.66	.083	18	79	1.35	285	.11	4	2.90	.02	.10	1	272
L19+50E 3+75N	1	34	11	121	.1	56	12	595	4.38	7	5	ND	1	42	.2	2	2	71	.44	.134	16	68	.90	313	.08	3	2.93	.01	.07	1	4
L19+50E 3+50N	2	41	14	121	.1	67	14	675	5.55	13	5	ND	2	31	.2	2	2	64	.36	.069	21	57	.82	206	.30	4	3.65	.02	.06	1	1
L19+50E 3+25N	1	31	9	94	.1	59	15	663	3.37	9	5	ND	2	51	.2	2	3	59	.53	.067	12	64	1.19	205	.14	3	1.96	.02	.09	1	3
L1[illegible]E 3+00N	1	35	5	89	.1	70	21	923	3.97	4	5	ND	2	37	.2	2	2	64	.40	.057	9	71	1.43	178	.11	5	2.09	.02	.08	1	2
[illegible]E 2+50N	39	412	8	273	.1	22	8	407	5.90	10	5	ND	2	12	.5	2	2	59	.20	.114	5	19	.77	86	.03	3	1.56	.03	.05	1	10
L[illegible]0E 8+75N	1	36	12	122	.1	59	13	490	3.67	9	5	ND	2	51	.2	2	3	62	.55	.064	16	62	1.10	271	.13	4	2.31	.03	.10	2	7
L21+00E 8+50N	1	34	13	128	.1	70	17	826	4.04	9	5	ND	2	50	.4	3	2	65	.56	.070	20	69	1.19	344	.11	4	2.74	.02	.10	1	2
L21+00E 8+25N	1	40	11	107	.1	66	13	471	3.65	13	5	ND	4	55	.2	3	2	59	.56	.067	21	60	1.02	269	.22	4	2.27	.04	.10	2	3
L21+00E 8+00N	1	52	12	170	.1	80	19	1155	5.26	14	5	ND	2	57	.3	2	3	75	.75	.094	24	73	1.23	411	.12	4	3.63	.02	.12	1	7
L21+00E 7+75N	1	35	10	116	.1	68	13	616	4.10	13	5	ND	2	47	.2	2	2	61	.55	.071	19	66	1.13	269	.15	4	2.59	.02	.09	1	3
L21+00E 7+50N	1	51	9	174	.1	73	14	1246	3.10	5	5	ND	1	95	1.5	2	2	42	1.56	.132	31	48	.87	562	.03	4	3.12	.01	.13	1	3
L21+00E 7+25N	1	40	12	149	.1	79	16	770	4.36	9	5	ND	2	50	.2	2	3	67	.62	.076	17	64	1.07	430	.08	3	3.51	.02	.12	1	5
L21+00E 7+00N	1	32	10	117	.1	68	14	505	3.77	11	5	ND	1	53	.2	2	2	62	.63	.086	17	62	1.04	333	.09	3	2.92	.02	.09	1	3
L21+00E 6+75N	1	35	13	151	.2	79	19	792	4.24	8	5	ND	2	59	.6	2	2	72	.77	.107	15	69	1.08	430	.05	3	3.63	.02	.13	1	1
L21+00E 6+50N	1	21	7	87	.1	51	12	680	3.82	13	5	ND	2	48	.2	2	2	58	.54	.070	14	56	.97	208	.14	4	1.93	.03	.07	1	11
L21+00E 6+25N	2	39	13	132	.1	75	16	1106	5.10	13	5	ND	1	58	.2	2	3	74	.69	.107	20	66	1.04	401	.06	3	3.39	.02	.12	1	1
L21+00E 6+00N	1	38	11	149	.1	86	14	880	4.85	15	5	ND	2	55	.6	3	2	68	.65	.074	21	65	.93	395	.13	3	3.38	.02	.11	1	2
L21+00E 5+75N	2	59	13	134	.1	108	15	650	6.08	10	5	ND	3	48	.5	3	2	89	.58	.061	30	71	.86	411	.22	4	4.21	.02	.11	1	2
L21+00E 5+50N	1	36	12	153	.1	85	12	573	4.24	9	5	ND	3	45	.2	2	2	60	.53	.060	21	63	.99	294	.27	4	2.65	.03	.09	1	4
L21+00E 5+25N	1	52	12	137	.1	83	13	651	5.08	5	5	ND	1	49	.3	2	2	70	.56	.096	26	69	1.02	324	.15	4	3.68	.02	.10	1	5
L21+00E 5+00N	1	32	9	97	.1	62	12	551	3.70	10	5	ND	2	39	.2	2	3	57	.42	.051	16	61	.96	206	.13	3	2.21	.02	.09	1	2
L21+00E 4+75N	1	47	9	133	.5	91	12	463	3.93	3	6	ND	1	68	.2	2	2	56	.83	.109	21	64	1.05	493	.04	3	3.79	.01	.12	1	2
L2[illegible]E 4+50N	1	36	9	126	.1	79	12	506	4.15	10	5	ND	2	47	.3	2	2	61	.53	.073	21	64	.95	317	.13	3	3.02	.02	.09	1	4
L[illegible]0E 4+25N	1	45	7	132	.1	85	11	473	3.47	9	5	ND	1	76	.2	2	2	49	.99	.101	32	61	.99	423	.04	3	3.28	.01	.10	1	4
L21+00E 4+00N	1	31	6	93	.1	66	11	480	3.43	5	5	ND	2	43	.2	2	3	55	.49	.064	15	62	1.06	202	.11	4	2.16	.02	.09	1	1
L21+00E 3+75N	1	47	9	120	.1	77	16	916	4.15	7	5	ND	1	67	.2	2	2	63	.77	.108	21	66	1.14	352	.06	3	3.09	.02	.12	1	3
L21+00E 3+50N	1	46	8	123	.1	82	12	586	4.33	5	5	ND	1	50	.2	2	3	60	.61	.087	27	66	.99	325	.11	3	3.35	.02	.09	1	2
L21+00E 3+25N	1	26	8	105	.1	59	15	755	3.59	9	5	ND	2	54	.3	2	2	60	.62	.079	14	59	1.16	222	.10	4	2.16	.02	.10	1	4
L21+00E 3+00N	1	24	7	107	.1	51	12	651	3.34	5	5	ND	1	62	.4	3	3	55	.74	.078	16	54	1.02	252	.08	5	2.08	.02	.08	1	4
STANDARD C/AU-S	18	59	39	132	7.2	70	31	1025	3.93	38	21	7	37	53	18.4	15	22	55	.51	.092	37	58	.93	179	.09	34	1.91	.06	.14	11	52

Homestake International Minerals PROJECT 3174 KUTCHO FILE # 90-2567

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au** ppb
L21+00E 2+75N	1	38	8	109	.1	71	17	911	4.18	3	5	ND	2	38	.5	2	2	68	.40	.058	12	62	1.21	204	.10	5	2.48	.01	.09	1	4
L21+00E 2+50N	1	40	7	122	.1	69	19	973	3.99	2	5	ND	1	41	.4	2	2	67	.42	.077	13	70	1.25	195	.10	4	2.47	.02	.10	2	6
L21+00E 2+25N	1	52	5	94	.1	76	20	1076	4.07	6	5	ND	4	65	.2	2	2	72	.67	.071	15	66	1.44	239	.14	4	2.35	.02	.13	1	12
L21+00E 2+00N	1	40	10	91	.1	58	16	784	3.55	7	5	ND	2	55	.4	2	2	64	.50	.075	14	55	1.11	209	.13	6	2.06	.02	.10	1	11
L21+00E 1+75N	1	36	9	101	.1	73	17	871	3.78	7	5	ND	1	50	.4	3	2	62	.59	.079	15	72	1.24	223	.12	5	2.17	.02	.09	1	6
L21+00E 1+50N	1	37	7	89	.1	60	11	516	3.21	6	5	ND	2	47	.2	3	2	56	.52	.065	18	57	.89	237	.13	4	1.96	.02	.08	1	5
L21+00E 1+25N	1	34	7	79	.2	57	12	511	3.01	2	5	ND	2	40	.3	2	2	53	.43	.054	14	56	.88	204	.11	4	1.91	.01	.07	1	6
L21+00E 1+00N	1	63	15	133	.2	84	18	957	4.85	10	6	ND	3	61	.6	5	2	68	.80	.086	37	67	1.08	463	.09	5	3.81	.02	.14	1	3
L21+00E 0+75N	1	29	10	91	.2	46	10	571	2.97	2	5	ND	2	59	.3	2	2	50	.79	.073	15	45	.82	231	.10	3	1.88	.01	.11	1	4
L21+00E 0+50N	1	35	7	115	.1	61	13	653	3.27	6	5	ND	2	53	.3	3	2	57	.73	.078	20	59	.99	302	.09	4	2.56	.01	.10	1	2
L2 E 0+25N	1	33	5	81	.2	60	14	685	3.24	9	5	ND	3	52	.2	3	2	59	.58	.083	15	59	1.04	171	.14	5	1.75	.02	.08	1	1
E 0+00N	1	46	10	110	.1	69	13	610	3.88	9	5	ND	2	53	.2	3	2	64	.72	.075	21	61	1.01	278	.17	5	2.75	.02	.09	1	1
NDARD C/AU-S	18	58	38	132	7.2	71	31	1003	3.83	38	22	7	38	53	18.4	15	19	56	.50	.092	38	59	.90	180	.09	34	1.88	.06	.13	11	54

Homestake International Minerals PROJECT 3174 KUTCHO FILE # 90-2567

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au** ppb
L9+90W 15+50N 'S'	2	48	11	132	.1	46	15	1226	6.35	7	5	ND	2	64	1.3	2	2	58	.88	.073	19	49	.86	405	.06	3	2.47	.02	.09	1	7
L4+35E 3+20S 'S'	1	40	8	145	.2	83	18	767	4.05	6	5	ND	2	34	.2	4	2	62	.37	.076	19	76	1.12	344	.11	3	3.30	.01	.10	1	5
L4+50E 4+45N 'S'	1	32	9	180	.1	57	15	1511	3.16	7	5	ND	1	58	.8	3	2	46	.71	.100	22	54	.88	356	.06	5	2.78	.02	.20	1	3
L4+50E 0+60S 'S'	1	32	7	122	.1	51	17	846	3.95	6	5	ND	2	35	.3	2	2	63	.58	.069	11	67	1.25	129	.19	2	1.92	.01	.11	1	4
L4+50E 3+90S 'S'	1	38	8	123	.1	88	19	1046	3.83	12	5	ND	1	45	.6	3	2	59	.67	.082	14	89	1.50	203	.14	6	2.32	.01	.10	1	4
L4+50E 7+25S 'S'	1	41	11	144	.1	56	10	372	3.27	7	5	ND	3	78	.2	3	3	45	1.23	.097	37	50	.60	349	.28	5	3.11	.04	.06	1	5
L4+60E 2+50N 'S'	1	24	11	112	.1	59	13	678	3.59	4	5	ND	2	44	.2	2	2	58	.55	.067	17	64	1.04	306	.11	3	2.76	.01	.10	1	1
L4+60E 1+50S 'S'	1	31	12	133	.1	67	14	780	3.47	2	5	ND	1	48	.4	2	2	55	.52	.070	15	71	1.08	361	.12	2	2.54	.02	.13	1	4
L20+40E 2+30N 'S'	1	38	8	138	.2	68	14	734	3.16	2	5	ND	2	66	.8	2	2	49	1.33	.101	19	64	1.17	300	.06	14	2.42	.02	.14	1	5
L20+50E 0+00N 'S'	1	35	10	201	.1	68	15	1072	3.64	6	5	ND	2	68	1.2	3	2	53	1.34	.118	23	62	1.07	361	.07	5	3.11	.02	.16	1	4
L20[illegible] 4+27N 'S'	1	25	7	90	.1	67	13	655	3.16	4	5	ND	2	52	.2	2	2	57	.61	.066	16	59	.99	229	.11	5	1.99	.02	.09	1	1

Report: 9000647 R Homestake Mining (Canada) Ltd. Project: 3174 Page 1 of 1 Section 1 of 2

Sample Name	Type	Au ppb	F ppm	Ag ppm	Al %	As ppm	Ca %	Ca %	Co ppm	Cu ppm	Fe %	Fe %	K %	Mg %	Mg %	Mn ppm
Blank	Pulp	<5	<10	0.1	<0.01	<5	<0.01	<0.01	<1	<1	<0.01	<0.01	<0.01	<0.01	<0.01	1
R90KJ 1	Rock	5	186	<0.1	>5.00	<5	0.12	0.03	2	21	1.64	0.55	0.78	0.55	0.45	113
R90KJ 2	Rock	<5	99	<0.1	>5.00	<5	0.11	0.01	1	26	1.93	1.19	0.29	0.62	0.57	181
R90KP 1	Rock	<5	123	<0.1	>5.00	<5	0.47	0.44	1	4	1.43	1.46	0.08	0.13	0.13	147
R90KP 2A	Rock	<5	139	<0.1	>5.00	<5	0.29	0.26	2	7	1.55	0.73	0.06	0.17	0.18	68
R90KP 2B	Rock	<5	45	<0.1	>5.00	5	0.06	0.01	1	9	1.58	0.55	0.05	0.02	0.01	62
R90KP 5	Rock	<5	181	<0.1	>5.00	<5	0.30	0.28	2	6	1.39	1.14	0.33	0.27	0.27	126
R90KP 7	Rock	<5	114	<0.1	>5.00	<5	1.00	0.70	3	6	1.09	0.67	0.20	0.45	0.36	218
R90KP 8	Rock	5	520	<0.1	>5.00	<5	3.21	3.21	31	2686	>5.00	4.45	0.19	3.06	3.12	1710
R90KP 9	Rock	<5	59	<0.1	>5.00	<5	0.60	0.56	1	18	1.00	0.62	0.07	0.37	0.38	127
R90KP 10	Rock	10	506	<0.1	>5.00	<5	1.08	0.15	3	7	3.16	1.87	0.25	1.84	1.51	153
R90KP 11	Rock	5	213	<0.1	>5.00	<5	0.26	0.17	3	57	1.76	0.99	0.12	0.49	0.47	148
R90PK 3	Rock	5	73	<0.1	>5.00	<5	0.89	0.90	2	11	0.98	0.64	0.07	0.51	0.54	149
R90PK 4	Rock	5	136	<0.1	>5.00	5	0.54	0.45	3	6	1.21	1.01	0.16	0.53	0.58	152
R90PK 6	Rock	5	242	<0.1	>5.00	<5	0.59	0.56	1	4	1.60	1.55	0.41	0.26	0.25	104
Standard	Pulp	190	300	1.6	>5.00	25	0.29	0.21	16	354	>5.00	>5.00	3.85	1.07	0.64	207
Minimum Detection		5	10	0.1	0.01	5	0.01	0.01	1	1	0.01	0.01	0.01	0.01	0.01	1
Maximum Detection		10000	10000	100.0	5.00	10000	10.00	10.00	10000	20000	5.00	5.00	10.00	10.00	10.00	10000
Method		GeoSp	GeoSp	ICP	ICP	ICP	ICP	ICPHCl	ICP	ICP	ICP	ICPHCl	ICP	ICP	ICPHCl	ICP

-- = Not Analysed unr = Not Requested ins = Insufficient Sample

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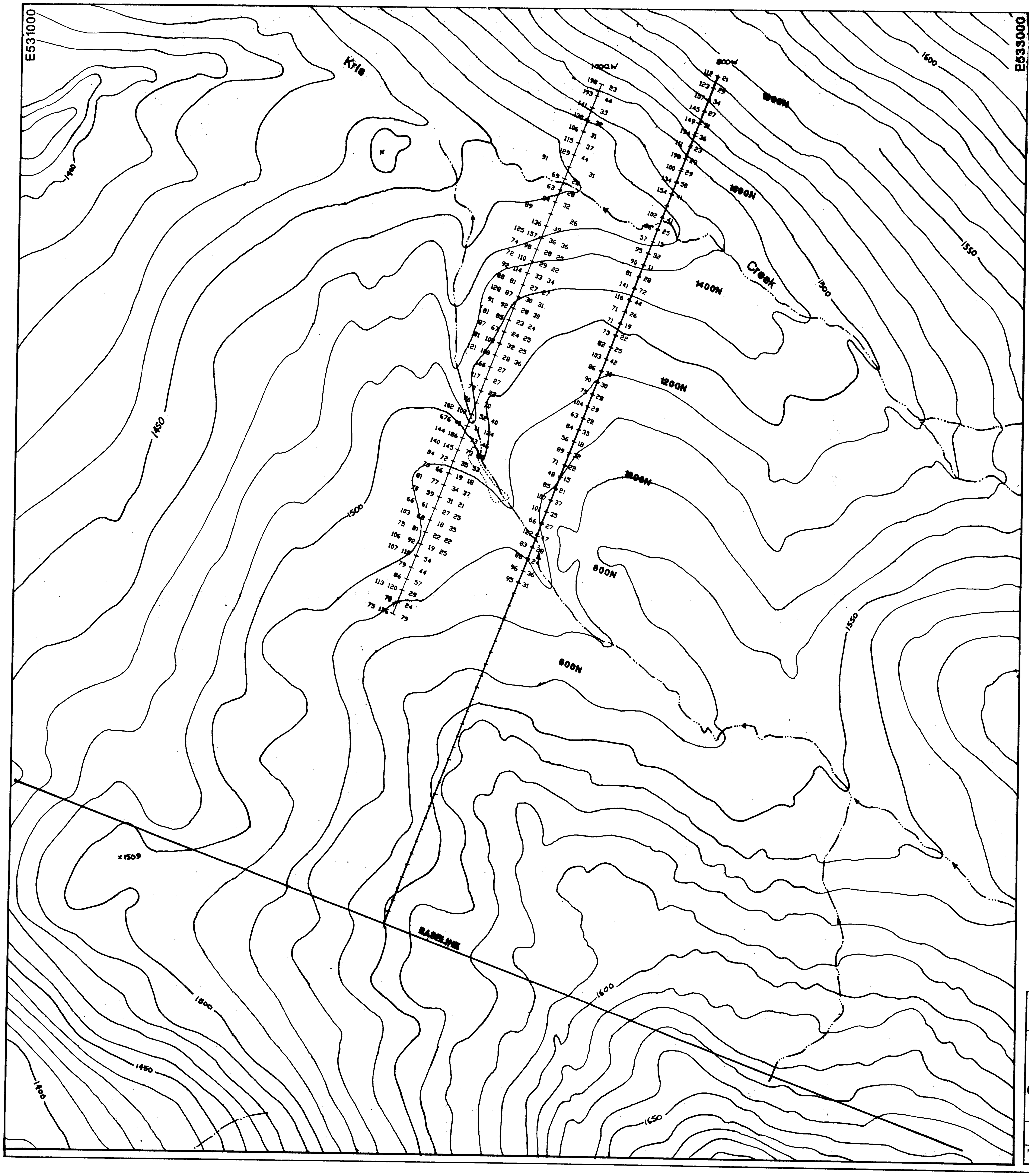
Report: 9000647 R Homestake Mining (Canada) Ltd. Project: 3174 Page 1 of 1 Section 2 of 2

Sample Name	Mn ppm	Mo ppm	Na %	Pb ppm	Sr ppm	Sr ppm	Zn ppm
Blank	<1	1	<0.01	2	<1	<1	1
R90KJ 1	104	4	3.25	<2	42	3	31
R90KJ 2	173	1	3.81	<2	30	1	34
R90KP 1	152	<1	4.06	<2	27	3	13
R90KP 2A	75	5	4.03	<2	19	2	16
R90KP 2B	33	2	3.98	2	17	1	7
R90KP 5	135	2	3.27	<2	25	5	12
R90KP 7	180	3	4.04	<2	66	9	24
R90KP 8	1722	15	2.38	<2	48	22	166
R90KP 9	130	1	3.62	<2	24	4	12
R90KP 10	111	23	>5.00	2	107	15	39
R90KP 11	150	2	4.33	<2	40	6	73
R90PK 3	161	4	3.66	<2	29	7	12
R90PK 4	165	3	3.75	<2	39	9	14
R90PK 6	103	4	3.45	<2	27	5	14
Standard	162	43	0.44	12	127	16	64
Minimum Detection	1	1	0.01	2	1	1	1
Maximum Detection	10000	1000	5.00	20000	10000	10000	20000
Method	ICPHCl	ICP	ICP	ICP	ICP	ICPHCl	ICP

-- = Not Analysed unr = Not Requested ins = Insufficient Sample

N6449250



Zn assay value (ppm) — Cu assay value (ppm)

79 ┼ 22 — soil sample location

76 ┼ 70

102 107 ┼ 52 40 — outer Cu & Zn values indicate duplicate sample taken from site. Sample collected by auger

—·—·— creek

contour interval is 10 m

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

20,337

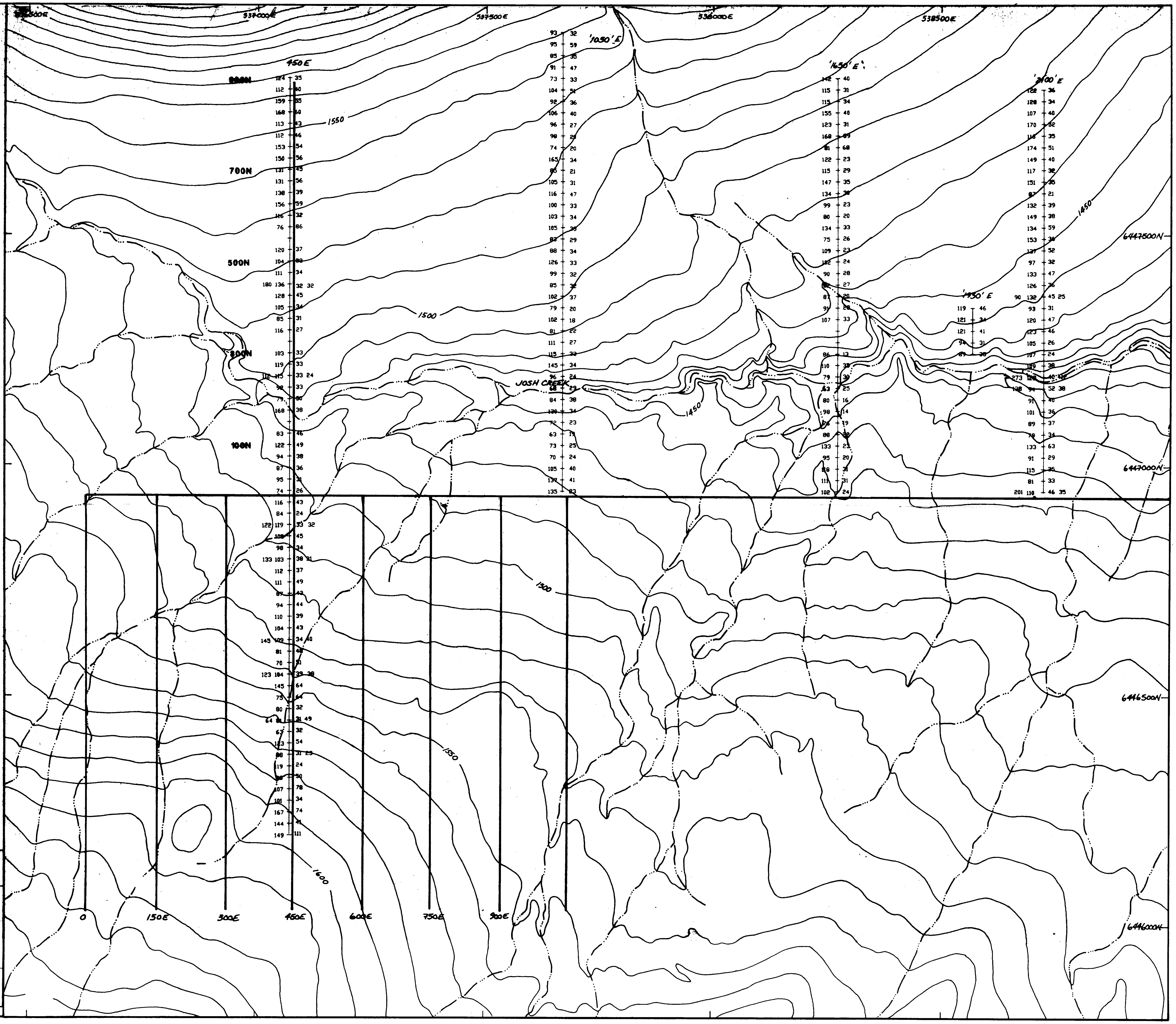
scale 1:5000

HOMESTAKE
MINING (CANADA) LIMITED

KUTCHO PROJECT

"C" GRID
GEOCHEMICAL ORIENTATION SURVEY

DRAWN	DATE	NTS	
PH/HO	OCTOBER 1990	104 I/1	Fig. 3.1
Revised			



LEGEND

Zn assay value (ppm) 110 — 39 Cu assay value (ppm)	soil sample location
104 — 43	
145 109 — 34 40	outer Cu & Zn values indicate duplicate sample taken from site
—··—··—	creek

contour interval is 10 m

GEOLOGICAL BRANCH ASSESSMENT REPORT

20,337

Scale 1:5000

HOMESTAKE
MINING (CANADA) LIMITED

KUTCHO PROJECT

'O' TARGET, JOSH CREEK
SOIL GEOCHEMISTRY

DRAWN	DATE	NTS	
HO	OCTOBER 1990	104I/1	Fig. 3.2
Revised			