

REPORT ON
ASSESSMENT WORK
ON OLD CORONA CLAIM #1
NEAR MERRITT
NICOLA MINING DIVISION, B.C.

BY

SHERWIN F. KELLY, P.ENG.

OCTOBER 27, 1983

Report on
Assessment Work
by
Geochemical Soil Survey

on the
Old Corona #1 Claim
on Swakum Mtn.
NNE of Merritt
Nicola Mining Division, B.C.
50° 16' N, 120° 43' W
Q2I/7E

by
Sherwin F. Kelly, P.Eng.
Geophysicist & Geologist
Owner of the Claim
Oct. 27, 1983

on Work Done
June 28-29, 1983
by
Pacific Northwest Geotech Ltd.
Kamloops, B.C.
the Operator

to be Applied to the
Old Corona #1 & #2
Old Complex #2 & #3
Swakum #1, #2 & #3
Claims
all in the Corona Group

GEOLOGICAL BRANCH
ASSESSMENT REPORT

11,483

REPORT ON
ASSESSMENT WORK
ON OLD CORONA CLAIM #1

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MAPS

GENERAL LOCATION MAP.....	facing p. 1
CLAIM MAP.....	facing p. 2

BOUND IN BACK OF TEXT

Eco-Tech Geochemical Analyses report
and invoice.
Geochemical sample value maps for
Copper, Silver, Lead & Zinc.

REPORT ON
ASSESSMENT WORK
ON OLD CORONA CLAIM #1
NEAR MERRITT,
NICOLA MINING DIVISION, B. C.
BY
SHEPWIN F. KELLY, P. ENG.

INTRODUCTION

This report is to record the assessment work performed in 1983 on the reverted Crown Grant claim, Corona 1 (also called Old Corona 1) Lot #4512, on the summit of Swakum Mtn., north of Merritt, B.C. The area lies within the Nicola Mining Division. The claim is registered in my name; with various other claims, it is included in the Corona Group. The assessment work recorded is being applied to seven claims in that Group.

LOCATION AND ACCESS

The Corona 1 claim is about three kilometres SW of the peak of Swakum Mtn. (elev. 5666 ft.) some 18 kilometres NNE of Merritt. The elevation in the claim area is between 5,100 and 5,300 ft. The Corona Group of claims lies in the SW $\frac{1}{4}$ of the SE $\frac{1}{4}$ of map 92 I/7 of the N.T.S. maps, the Mamit Lake sheet at the scale of 1:50,000. The co-ordinates of Corona 1 are $120^{\circ} 43' W$ and $50^{\circ} 16' N$. The bulk of the Corona Group extends north for five kilometres.

The general location map, Fig. 1, faces this page.

The holdings are readily accessible by car from Merritt, but four-wheel drive or pick-up truck is advisable. From the traffic light at the intersection of Highways #5 and #8 in Merritt, the road to Kamloops (#5) is followed for 3.7 km where a gravel road turns off to the north (left). About 21.5 km from the highway, a dirt road is crossed which is followed to the left (north). It leads to the summit of the mountain. Some 3 km north along this road a small bridge over

Shuta Creek is encountered. The claim Corona 1 lies 600 m to the left (west). Numerous logging roads give access to much of the group area. The broad summit of Swakum Mtn. is generally of rolling topography, close to the tree line.

CLAIM

The Old Corona reverted Crown Grants, numbers 1 and 2, were acquired by me on July 3, 1979, on payment of the requisite fee. The Lot Number 4512, Old Corona 1, was given the Record Number of 654; Old Corona 2 is Lot No. 4513 and carries Record No. 655. Both were valid to July, 1983. The Claim Map, Fig. 2, faces this page.

EXPLORATION WORK

The exploration work carried out on Corona 1 claim, consisted of cutting and flagging three grid lines and collecting samples at 25 metre intervals along them. These three lines were intermediate to the lines previously cut and sampled, as described in my report on assessment work on the Old Corona claims, dated June 30, 1981.

The lines thus run and sampled were: L 1+10S, from which 21 samples were gathered; L 2+60S, with 17 samples; and L 3+75S, which yielded 21 samples. All told, 59 samples were taken and assayed. Line 3+75S is half-way between the prior lines, 3+00S and 4+50S. The other two, however, are off-set from the midway position and are only 40 m from the nearest, old line, 1+50S and 3+00S. This was done to check on how well the readings correlated from line to line at the different spacings. The results could be used to help decide line spacings in future, detail work.

The usual procedure was followed, taking samples from the "B" horizon, packing them in kraft envelopes and shipping them to a laboratory for analyses. The Eco-Tech Laboratories Ltd., in Kamloops,

received the samples, sieved them to -80 mesh, subjected them to aqua regia extraction and tested them by atomic absorption for copper, lead, zinc and silver. Copies of Eco-Tech's "Geochemical Analyses" report are bound in the back of this text, along with their invoice No. ET208 dated June 30, 1983.

EVALUATION OF GEOCHEMICAL DATA

The values reported by Eco-Tech have been entered on the grid maps for the same metals that were included in my report of June 30, 1981. The grid lines for that survey were spaced 150m apart and the samples were taken at 50m intervals. Scope Exploration Services of Merritt conducted the field work and the samples were analysed by Bondar-Clegg & Co. of Vancouver. Note, however, that there were no analyses made for lead in the earlier work, so the lead values of the present sampling have been entered on the old grid map for zinc. The maps for copper, lead, zinc and silver are bound in back of the text.

The general level of values for copper seems to be slightly higher in the Eco-Tech report than in the earlier, Bondar-Clegg one. I determined the background to be 30 ppm (parts per million) in copper for the earlier survey, but the present one gives a background of about 42 ppm. I shall use 40 ppm for ease in calculations. Threshold is therefor 80 ppm and anomalous is 120 ppm. In the earlier survey, anomalous was 90 ppm.

There are no anomalies on the northern line, L 1+10S, although there are some near-threshold readings of 77 and 78 ppm and a nearly anomalous one of 101 ppm at the west end of the line, just west of the Base Line. Aside from these readings, the general level of values on this line appears slightly higher than on the southern

line, L 3+75S, on which two anomalous readings appear.

The strongest anomaly, of 164 ppm lies on L 2+60S at station 3+75E, corresponding well with the 96 ppm anomaly at station 4+00E just to the south, on L 3+00S of the older survey. These line up with another anomaly of the present survey, on L 3+75S at station 4+00E, with a value of 146 ppm. These three readings mark an anomaly with a northerly strike, measured over a distance of 115 m. It does not show on the southernmost line, L 4+50S, nor on the next line to the north, L 1+50S. As is evident from the readings on L 3+75S, however, it could pass between two stations at 50 m apart and give no sign of its presence.

Another anomaly of 126 ppm lies further west along L 3+75S, at station 1+00E. It has no reflection in the readings at 50 m spacings on L 3+00S to the north or on L 4+50S to the south. An anomaly of 178 ppm at station 3+00E on L 4+50S, has no reflection in the new survey line to the north, 3+75S, unless a near-threshold value of 70 ppm at the same station, 3+00E, represents a "tailing-off" of its effect.

The narrowness of the anomalies and their sporadic distribution, indicate the desirability of filling in past surveys and conducting new geochemical surveys in this area, with lines spaced no farther apart than 50 m and readings at no greater intervals than 25 m.

The map of zinc anomalies shows that the present survey indicates a general increase in values going north from the southern line, 3+75S. Using that line as reference, the background value is 70 ppm. In the previous survey it was 62 ppm. Neither survey yielded values as high as threshold, let alone anomalous.

The increase in values towards the north is made evident by

comparing the distribution of the stronger readings. On L 1+10S, there are eight stations at which values between 101 and 121 ppm were recorded. On L 2+60S, there are three readings between 104 and 108 ppm. On L 3+75S, there are no values recorded as high as 100 ppm. Zinc is a very mobile ion and readily becomes widespread. This distribution may well indicate that, on proceeding north, we may be approaching a centre of mineralisation from which the zinc ion was widely dispersed. This merits further investigation.

The lead values, as previously noted, are plotted on the old zinc map, for comparative purposes; the prior survey samples were not run for lead. Background works out at 17.5ppm, which may be rounded to 18 ppm. There are no values even as high as threshold, which would be 36 ppm. Lead is not a very mobile ion, so the only conclusion to be drawn is, that there probably is not a strong lead mineralisation within the confines of Corona 1.

The silver values from this present survey have been plotted on the silver map of the prior study. It is immediately evident that the current readings are considerably higher than those recorded in the prior work, a discrepancy requiring further investigation, whenever continuing investigations are pursued. Nevertheless, the trends of the results in both surveys are similar.

The background value for silver in the present survey, works out at 0.8 ppm versus 0.2 in the 1981 survey. In the present study, threshold is 1.6 ppm and anomalous is 2.4 ppm. There are no anomalous readings in this survey, but there are four thresholds; in the earlier survey, there were two anomalies but no threshold values. When making comparisons, however, it must be kept in mind that the lines of the present survey do not coincide with those of the prior

one and that the reading interval is 25 m versus twice that, 50 m in the 1981 work.

The most striking silver indications occur in the southeast corner of the claim, coinciding with the copper anomalies described above in the first full paragraph on p. 4. A threshold silver value of 1.9 ppm lies at station 4+00E on L 3+75S, corresponding with a silver anomaly of 0.7 ppm (per scale used in prior survey) at the same station on Line 3+00S. It seems to continue, slightly west of north, through a near-anomalous reading of 2.0 ppm at station 3+75E on L 2+60S and a threshold one of 1.7 ppm at station 3+50E on L 1+10S. This gives a measured length of 265 m. The trend crosses the old survey line of L 1+50S between two 50-metre stations which record only background values (0.2 ppm). To the south, on L 4+50S at the south boundary of the claim, there are only background values as recorded in the prior survey, with 50-metre intervals between stations.

To the west of the above-described anomalies, there is a threshold value of 1.7 ppm for silver, on Line 3+75S, at station 1+00E, coinciding with a copper anomaly of 126 ppm at the same station. There is no clear extension, north or south, from these anomalous and threshold readings.

To the north, on L 2+60S, except for the high threshold value of 2.0 ppm for silver, above mentioned, at 3+75E, the silver readings are below threshold, in the range of 0.8 to 1.2 ppm. On the northernmost line, L 1+10S, the readings are below threshold, 0.6 to 1.2 ppm, except for the threshold one of 1.7 ppm at station 3+50E, above mentioned. It is interesting to note, however, that at the west end of this line, on the 0+00 station and for three more to the west, the silver readings range between 1.0 and 1.2 ppm, just below threshold, where the copper readings are above and below threshold, at

72 to 101 ppm.

CONCLUSIONS

The evidence from this, present geochemical survey and the one performed in 1980 (reported 1981) indicates that the copper and silver anomalies tend to occur together. There are no lead anomalies. Although there are no zinc anomalies, the general level of values seems to increase towards the north, suggesting a source of underlying mineralisation in that direction. This concept is re-enforced by the geochemical results on the New Alameda claim, also included in the Corona Group, which lies about 2 km north of the Corona 1. The geochemical survey was performed in 1981 and covered in my report of Feb. 9, 1982. The copper and silver anomalies are more numerous on the New Alameda than on the Corona 1.

There is a zoning sequence evident in the various deposits which have been examined and operated in this area of the Swakum Mtn. peak.

At the Lucky Mike shaft, some 3,800 m NNE of the Corona 1, the mineralisation is a high temperature type, consisting of a skarn deposit carrying copper and tungsten. A thousand metres south of that shaft is the Old Alameda shaft, from which minerals of a lower (intermediate) temperature zone were extracted, carrying lead, zinc, copper, silver and gold. Another kilometre and a half south, the old Thelma operations yielded lower temperature minerals, carrying lead, zinc and silver. That shaft lies about 750 m NE of Corona 1.

There is no exposure of igneous rock on Swakum which might have been the source of the mineralising solutions. The aeromagnetic map for this area, however, shows a strong magnetic anomaly underlying the peak of Swakum Mtn. It is of the type recorded to the west, on the Guichon batholith, a granodiorite which is both source and

host rock for the copper deposits mined in the Highland Valley.

The aeromagnetic map is Map 5212G, Sheet 92 1/7, "Mamit Lake" sheet, scale one inch to one mile, of the Aeromagnetic Series. The area was flown in 1967. An impressive anomaly of over 3,000 gammas, measuring about 1 mile in diameter, lies tangent to the NW side of the peak of Swakum Mtn. It underlies the New Alameda and Irene claims, at the northern end of the Corona Group. In a report of October, 1978 to Darva Resources, I proposed that "The magnetic reaction strongly suggests an underlying plug of intrusive igneous rock. The molten magma from which it solidified could well have been the source of mineralising solutions. Emanating from that cooling mass, these would have made their way along faults and shears and interformational contacts intersected by the intruding plug. Where favourable conditions were encountered, deposition of metallic minerals would take place."

The copper-tungsten skarn deposits at the Lucky Mike shaft are the closest to the presumed igneous plug, whereas the lower temperature lead-zinc-silver deposits in the Thelma workings are the most distant from the presumed plug. This zonation is consistent with the hypothesis of the mineralisation originating in an igneous intrusion underlying the strong magnetic anomaly adjacent to the peak of Swakum Mtn.

COSTS OF WORK

The field work was carried out by Pacific Northwest Geotech of Kamloops, under the direction of Keith D'Angelo, Field Manager of that firm. The laying out and sampling of the grid was performed on June 28 and 29, 1983. The samples were tested for copper, silver, lead and zinc by Eco-Tech Laboratories Ltd., of Kamloops. Fifty nine samples were gathered and tested.

Blazing & flagging 1.4 km of grid line.....	\$280.00
Gathering and shipping 59 samples.....	98.00
Analysing 59 samples for silver, copper, lead and zinc.....	309.45
Cost of this report.....	500.00
	<u>\$1187.45</u>

It is requested that \$1100 of this cost be applied to seven claims in the Corona Group. The claims in the Corona Group, as set forth in the Supplementary Notice to Group, filed Sep. 2, 1983 with the Gold Commissioner's office in Merritt, Nicola Mining Division,

are:-

<u>Name of claim</u>	<u>Units</u>	<u>Record No. & Mo.</u>
Corona 1 & 2	2	654/5 - 7
Complex 2 & 3	2	656/7 - 7
Swakum 1 - 3	3	1418/20 - 7
Dam 1	1	1444 - 8
Old Alameda 2-7	6	932/7 - 8
New Alameda	6	960 - 9
Irene	6	1350 - 2

It is desired to apply one year's work to each of the following six claims:-

Corona #1, 654(7), Complex #2, 656(7)
 Complex #3 657(7), Swakum #1, 1418(7)
 Swakum #2, 1419(7), Swakum #3, 1420(7)

The application of one year's requirements to Complex #2, 656(7) includes a credit of \$100.

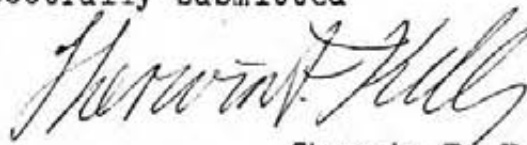
It is desired to apply two years' requirements to the claim-

Corona #2, 655(7)

which also includes a credit of \$100.

The unclaimed balance of \$87.45 may be utilised at a later date.

Respectfully submitted



Sherwin E. Kelly, P.Eng.

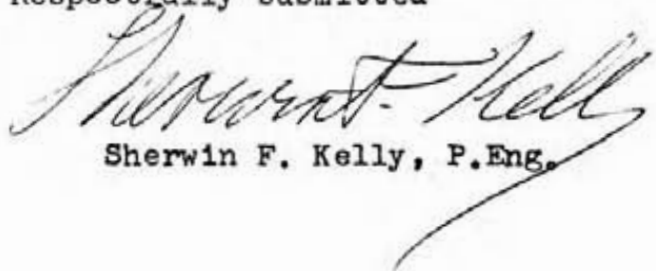
Box, 277
 Merritt
 B.C., VOK 2B0
 October 27, 1983

CERTIFICATE OF QUALIFICATIONS

I, Sherwin F. Kelly, P.Eng., residing in Merritt, B.C.,
certify that:-

- (1) I am a registered Professional Engineer in the Province of British Columbia.
- (2) I received the degree of Bachelor of Science in Mining Engineering from the University of Kansas in 1917. I pursued graduate studies in geology and mineralogy at the University of Kansas, the University of Toronto, the Université de Paris (the Sorbonne) and the Ecole des Mines in Paris. I received my instruction in geophysics from Prof. Conrad Schlumberger of the Ecole des Mines.
- (3) I have practised as a geophysicist and geologist in Europe, North Africa, North, Central and South America and the Caribbean, since 1920.
- (4) I am the author of the "Report on Assessment Work on Old Corona Claim #1 near Merritt, Nicola Mining Division, B.C." dated Oct. 27, 1983.
- (5) I am the owner of the claim.

Respectfully submitted



Sherwin F. Kelly, P.Eng.

P.O. Box 277
Merritt, B.C.
VOK 2B0
Oct. 27, 1983



ENVIRONMENTAL TESTING
GEOCHEMISTRY
ANALYTICAL CHEMISTRY
ASSAYING

LABORATORIES LTD.

783 Notre Dame Drive, Kamloops, B.C. V2C 5N8 — Telephone (604) 372-9700 Telex 048-8393

DATE June 30 1983

Attention: Mr. K. D'Angelo

CLIENT Pacific Northwest Geotech Ltd.
P. O. Box 3064
KAMLOOPS, B. C.

INVOICE NO. ET208

DESCRIPTION	AMOUNT
58 Sample Preps @ \$0.60 ea.	\$ 34 80
1 Sample Prep @ \$3.25 ea.	3 25
59 Ag/Cu/Pb/Zn Geochems @ \$4.60 ea.	<u>271 40</u>
TOTAL DUE AND PAYABLE UPON RECEIPT	<u>\$ 309 45</u>

TERMS: Net 30 days. Interest at the rate of 1½% per month may be charged on overdue accounts.

KAMLOOPS — CALGARY — BURNABY



ENVIRONMENTAL TESTING
GEOCHEMISTRY
ANALYTICAL CHEMISTRY
ASSAYING

LABORATORIES LTD. 783 Notre Dame Drive, Kamloops, B.C. V2C 5N8 - Telephone (604) 372-9700

Telex: 048-8393

July 7, 1983

GEOCHEMICAL ANALYSES

CLIENT: Pacific Northwest Geotech Ltd.
P. O. Box 3064
KAMLOOPS, B. C.
V2C 6B7

ATTENTION: Mr. K. D'Angelo

SAMPLE IDENTIFICATION: 59 samples received June 30, 1983

*From
Claim Old Corona #1*

CERTIFICATE OF ANALYSIS NUMBER: ET208

<u>Description</u>	<u>Ag (ppm)</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
0+75S				
0+00E	0.7	47	18	90
0+25E	0.6	32	16	76
0+50E	1.1	72	18	68
0+75E	1.2	101	18	104
1+00E	1.0	78	20	111
1+25E	1.2	77	23	101
1+50E	0.9	63	20	87
1+75E	0.9	48	18	95
2+00E	0.9	48	17	114
2+25E	1.0	55	18	97
2+50E	0.7	40	17	90
2+75E	0.9	58	19	95
3+00E	0.9	50	17	89
3+25E	0.9	54	17	88
3+50E	0.9	40	16	104
3+75E	0.9	48	17	89
4+00E*	0.9	60	16	111
4+25E	0.9	42	17	93
4+50E	1.1	71	19	121
4+75E	1.7	69	22	120
5+00E	1.0	47	18	87

.../2

<u>Description</u>	<u>Ag (ppm)</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
2+25S 1+00E	1.1	85	18	90
1+25E	0.9	50	17	96
1+50E	0.9	57	17	90
1+75E	1.2	73	19	89
2+00E	0.8	46	16	96
2+25E	1.0	60	17	82
2+50E	0.9	58	17	92
2+75E	1.0	71	19	85
3+00E	0.8	52	16	91
3+25E	0.9	48	17	87
3+50E	1.2	97	20	98
3+75E	1.2	70	19	89
4+00E	1.0	59	19	107
4+25E	0.9	46	17	77
4+50E	1.0	41	19	108
4+75E	0.9	37	18	104
5+00E	2.0	164	22	70
3+75E 0+00E	0.7	46	17	73
0+25E	0.8	42	15	72
0+50E	1.0	68	22	68
0+75E	0.9	38	16	60
1+00E	1.7	126	22	72
1+25E	0.9	46	17	72
1+50E	0.9	71	19	60
1+75E	0.7	45	17	58
2+00E	0.6	41	18	72
2+25E	0.6	32	15	84
2+50E	0.7	42	17	69
2+75E	0.7	44	16	90
3+00E	0.9	70	16	71
3+25E	0.7	37	17	75
3+50E	0.7	39	18	73
3+75E	0.7	38	16	76
4+00E	1.9	146	20	70
4+25E	0.8	42	16	72
4+50E	0.9	46	18	97
4+75E	1.0	39	17	87
5+00E	0.7	34	18	89

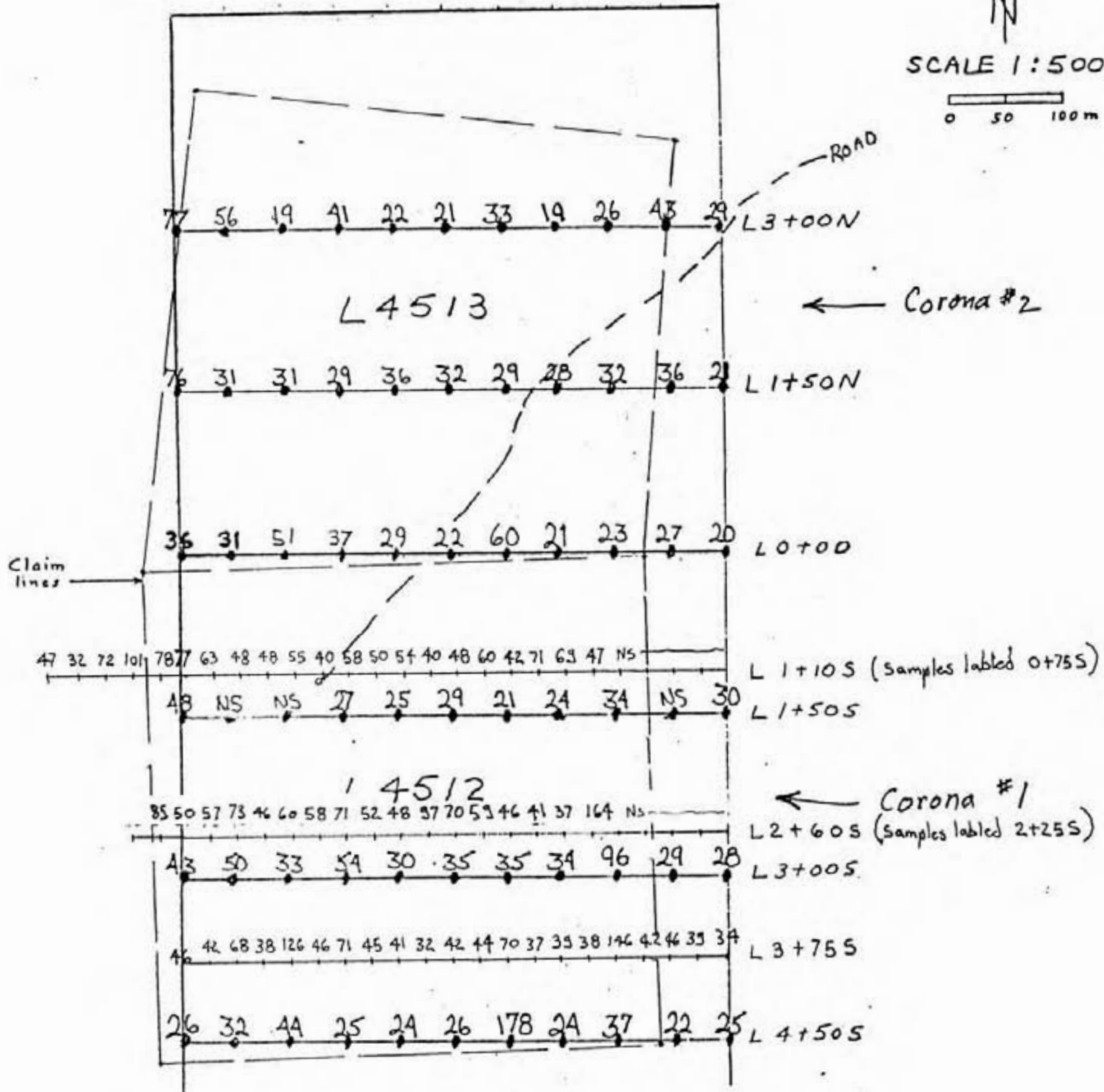
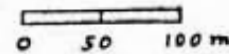
NOTES: * Rock sample pulverized

C. Klapstein
 ECO-TECH LABORATORIES LTD.
 C. Klapstein

0+00E
0+50E
1+00E
1+50E
2+00E
2+50E
3+00E
3+50E
4+00E
4+50E
5+00E



SCALE 1:5000



4512 - Corona Geochem June/83

CU Values in ppm [Eco-Tech certificate ET208]

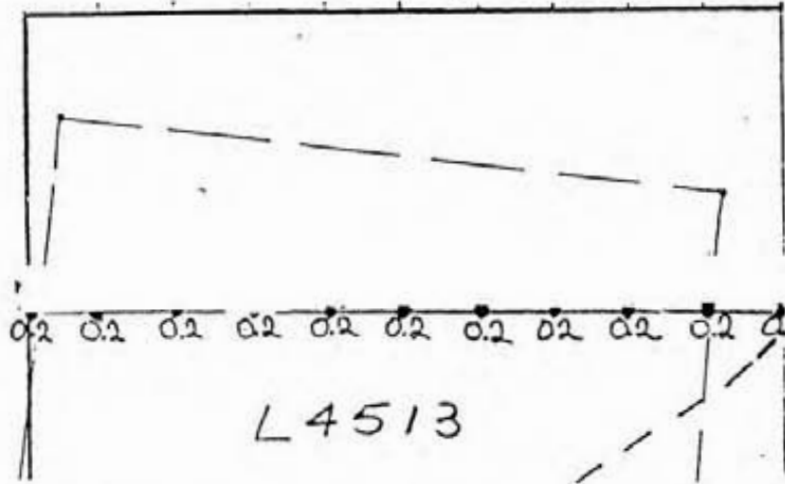
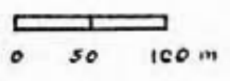
lines 1+10S } Samples at 25 m intervals
2+60S }
3+75S }

Values at 50 m intervals are from 1980 survey

0+00E 1+00E 2+00E 3+00E 4+00E 5+00E



SCALE 1:5000

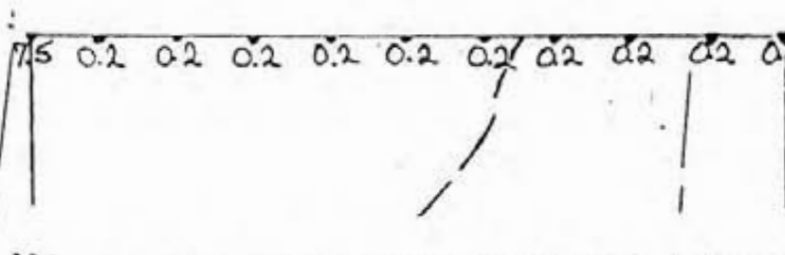


L4513

ROAD

L3+00N

← Corona #2



L1+50N

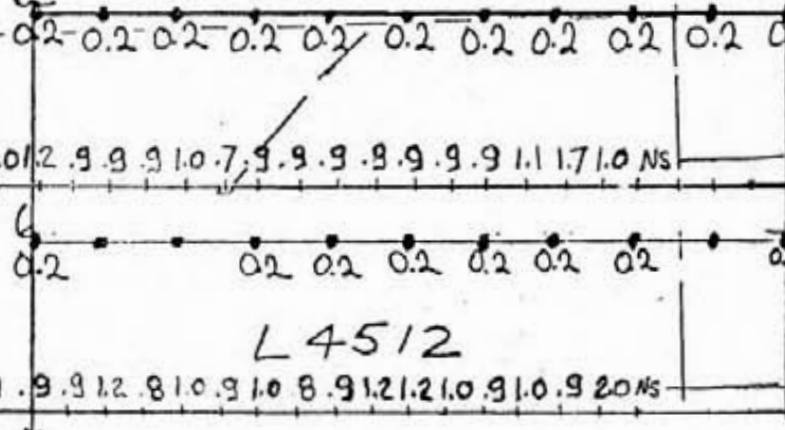
L0+00

L1+10S - samples labeled 0+75S

L1+50S

← Corona #1

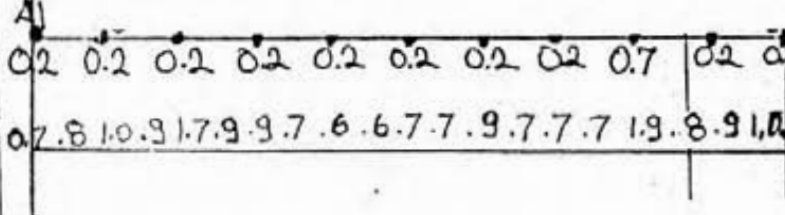
L2+60S - samples labeled 2+25S



L4512

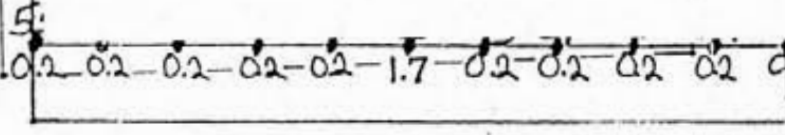
Claim lines

0.7 0.6 1.1 1.2 1.0 1.2 0.9 0.9 0.9 1.0 0.7 0.9 0.9 0.9 0.9 0.9 0.9 1.1 1.7 1.0 NS



L3+00S

L3+75S



L4+50S

Ag L4512 CORONA

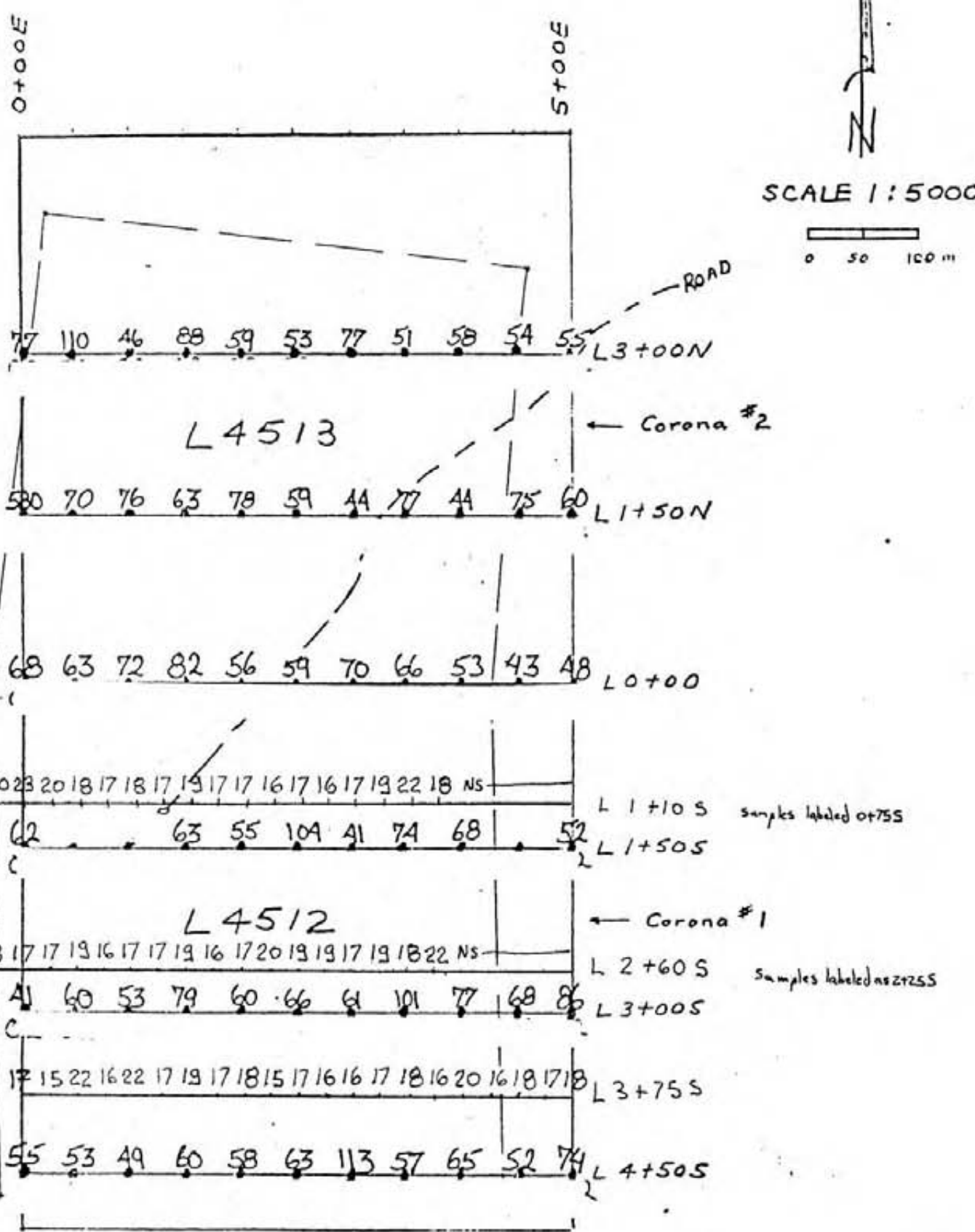
Geochem samples values in ppm

lines 1+10S June '83 values above the line
2+60S
3+75S

Values below the line are from the 1980 survey

mm
ADA
SKY

(5)



Pb Values in ppm

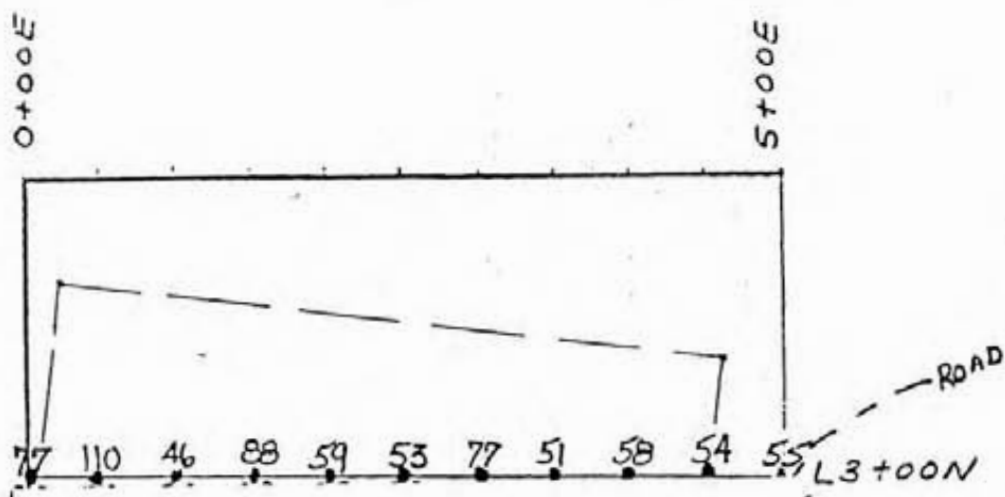
June 1983 Geochem soil sampling
of L 4512 Old Corona

lines 1+10S }
2+60S } samples at 25 meter intervals for lead
3+75S }

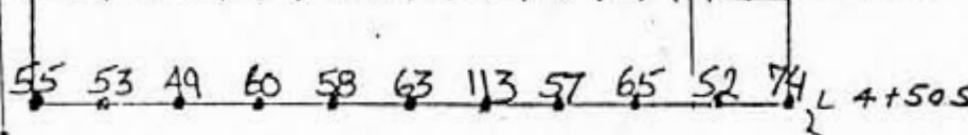
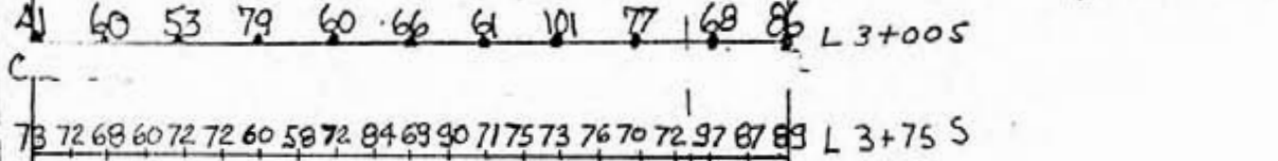
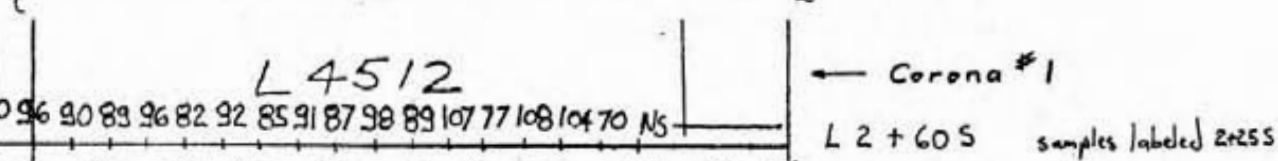
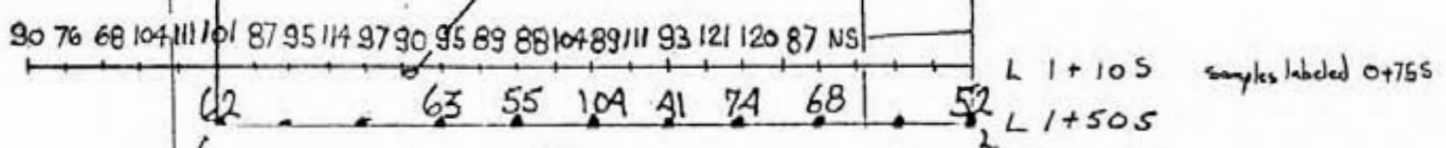
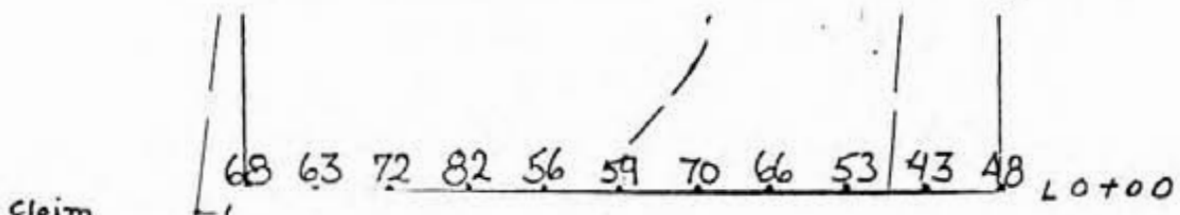
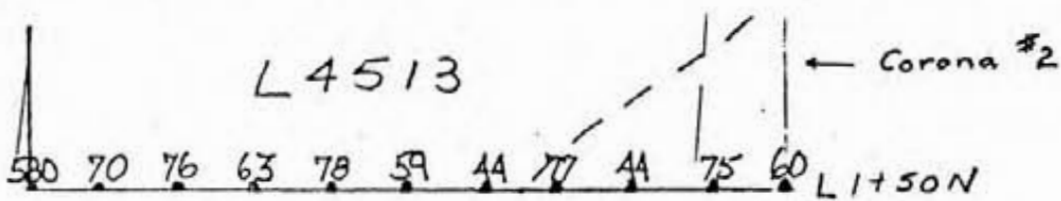
Values at 50 m intervals are from 1980 survey
for zinc

mm
100
sky

-5)



SCALE 1:5000
0 50 100 m



1+00E 2+00E 3+00E 4+00E 5+00E

L4512 - Corona
Geochem June 83 program | Lines 1+10S
2+60S
3+75S
Lines 1+10S sample interval
2+60S 25 meters for zinc.
3+75S

Values at 50 m intervals are from 1980 survey

Values in ppm

Zn

mm
KDA
SKK

5)