81 - 384 - 9264

ASSESSMENT

GEOCHEMICAL REPORT

ON THE

LONG B CLAIMS

TEXADA ISLAND

NANAIMO MINING DIVISON

92F/9W, 49° 37', 124° 17'

BY

J.T. SHEARER, M.Sc.

for

CAROLIN MINES LIMITED

OWNERS: E.T. Johanson, R.W. Miner, R.A. Samuelson

Field work completed between April 3 and May 3, 1981

May 18, 1981
Lear, B.C.

C O N T E N T S

LIST OF ILLUSTRATIONS AND TABLES

TABLES

SUMMARY

1. Soil sampling on the Long B Claims, Texada Island, was carried out between April 3 and May 3, 1981. The claims are owned by E. Johanson, R. Miner and R. Samuelson. Some of the area has undergone juvenile spacing.

2. Previous work includes old trenches and pits on irregular chalcopyrite bearing silicified zones and quartz veins. Recent surveys conducted by the present owners include SP, magnetometer and limited soil sampling. Several small pits were blasted out for assessment purposes.

3. A total of 129 soil samples and eight rock geochem samples were taken during the examination. Results indicate anomalous gold in soils in the Southeast Areas and along the Upper Creek showings. Soil profiles in the Southeast Zone show highly anomalous conditions increasing with depth to definite cut-offs. The southern contact between the intrusive and volcanics is characterized by a high gold in soil content.

4. Rock samples across short widths (less than 30cm) have previously assayed up to 0.59 oz/ton gold in copper-rich sections. Gold values attain 0.076 oz/ton in the present chip sampling over 30 to 60cm.

5. The claims are underlain by a granodiorite to quartz diorite stock in contact with altered Karmutsen Formation mafic-rich volcanics. Chlorite and epidote alteration is common near the intrusive contact. The area is within a weak porphyry copper system and some of the precious metal values could be related to peripherial zoning of this extensive mineralizing event.

6. Anomalous gold values in soil samples, SP, magnetics and VLF EM suggest a relatively narrow linear zone trending 288°, marked by silicified and pyritized rocks in the Southeast Area. Discontinuous exposure of siliceous zones in the Upper Creek Area indicates a narrow mineralized trend nearly perpendicular to the Southeast linear. The anomalous gold in soils near the south intrusive-volcanic contact warrants detail follow-up sampling, geological mapping and prospecting.

INTRODUCTION

Between April 3 and May 3, 1981, the Long Beach Claim Group, Texada Island, was examined. A total of eight Rock chips and 129 soil samples were collected and delivered to Acme Analytical Labs. The property is underlain by a composite quartz diorite to granodiorite (?) stock in contact with altered Karmutsen Formation mafic volcanics.

The area has been mapped by R.G. McConnell in 1908 and 1909 at 1:126,720. J. Muller has included Texada Island in his work on Vancouver Island which is compiled as Open File 463.

Extensive prospecting was conducted throughout Texada Island beginning in the 1870's and particularly between 1890 and 1910. The first recorded work in the Long Beach Area is in 1950 by D.W. Cochran who excavated the Upper Creek trenches (Minister of Mines 1950, pages 178 - 180).

A large claim block was located by R. Samuelson and R. Mickle in late 1969 and optioned to Falconbrige Nickel Mines Ltd. (Wares 1971). Part of this old property encompasses the present Long B claims and was referred to as the Airstrip Grid.

Work by present owners included limited SP, magnetometer and soil sampling. Small hand pits have been blasted into areas of anomalous SP values.

Several small high grade copper-gold mines operated in the early 1900's near Vananda. The Marble Bay Mine produced about 314,000 tons of ore for a total of 50,000 oz. of gold. The main shaft reached a depth of 1,200 feet. Recently, Texada Iron Mines produced copper-iron concentrate from a magnetite skarn deposit from 1952 to 1976, yielding, approximately, from 20 million tons of ore averaging 33% iron, a total of 25,000 oz. of gold. Currently there is a substantial output of limestone for cement and other uses by Lafarge, Ideal, Domtar and Imperial.

Considerable recent preliminary exploration effort has been concentrated on Texada Island by Aquarius-Longbar Minerals, Canada Cement Lafarge, Cambrian Explorations (near Long B), Kitimat Copper, Texada Lime, Ideal Basic Industries, Shima Resources and Arron Mining (near Long B), Bethex and numerous individuals.

CLAIM STATUS AND ACCESS

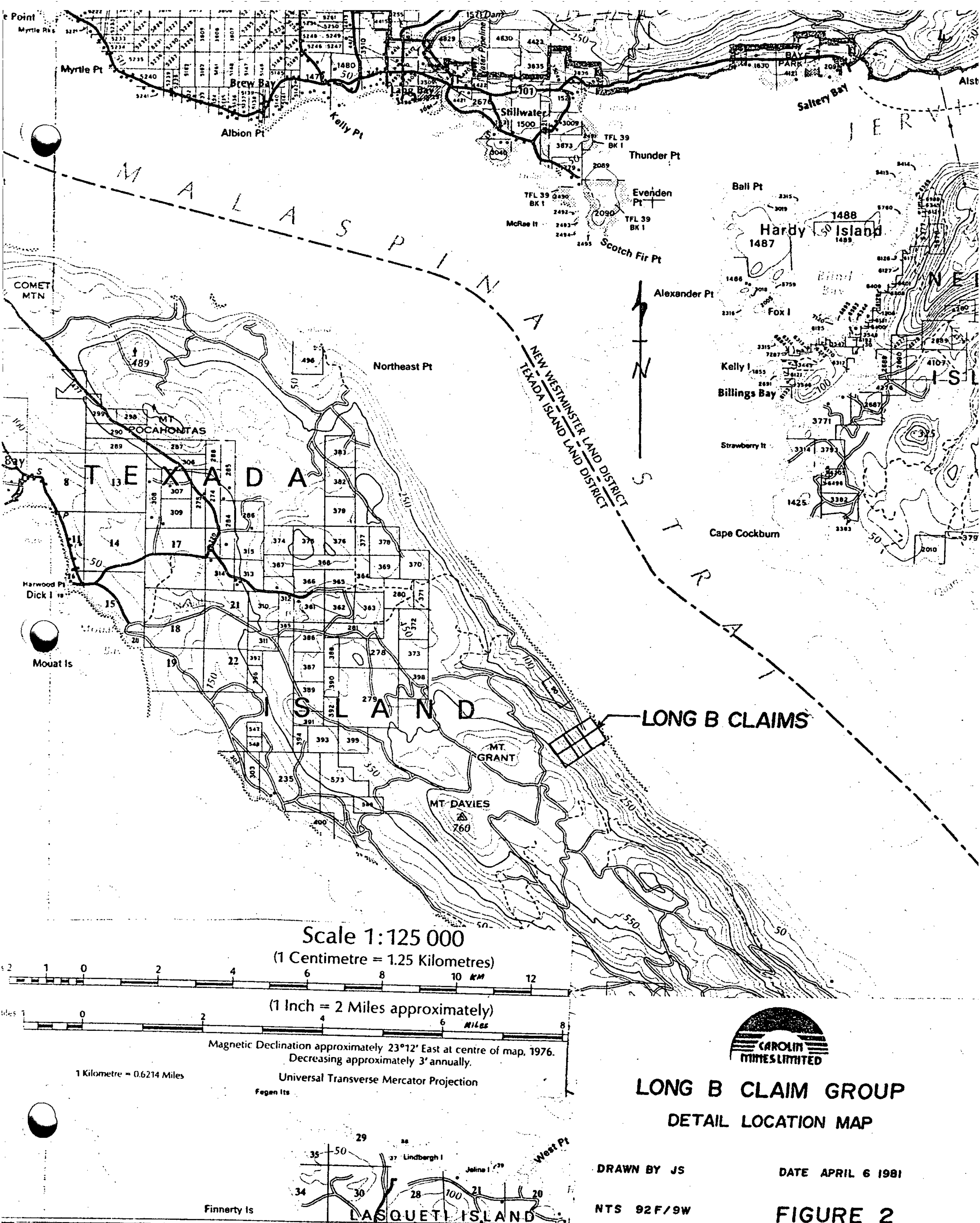
The Long B Claim Group is composed of the following 2-post claims as illustrated in Figure 3:

TABLE 1

LIST OF CLAIMS

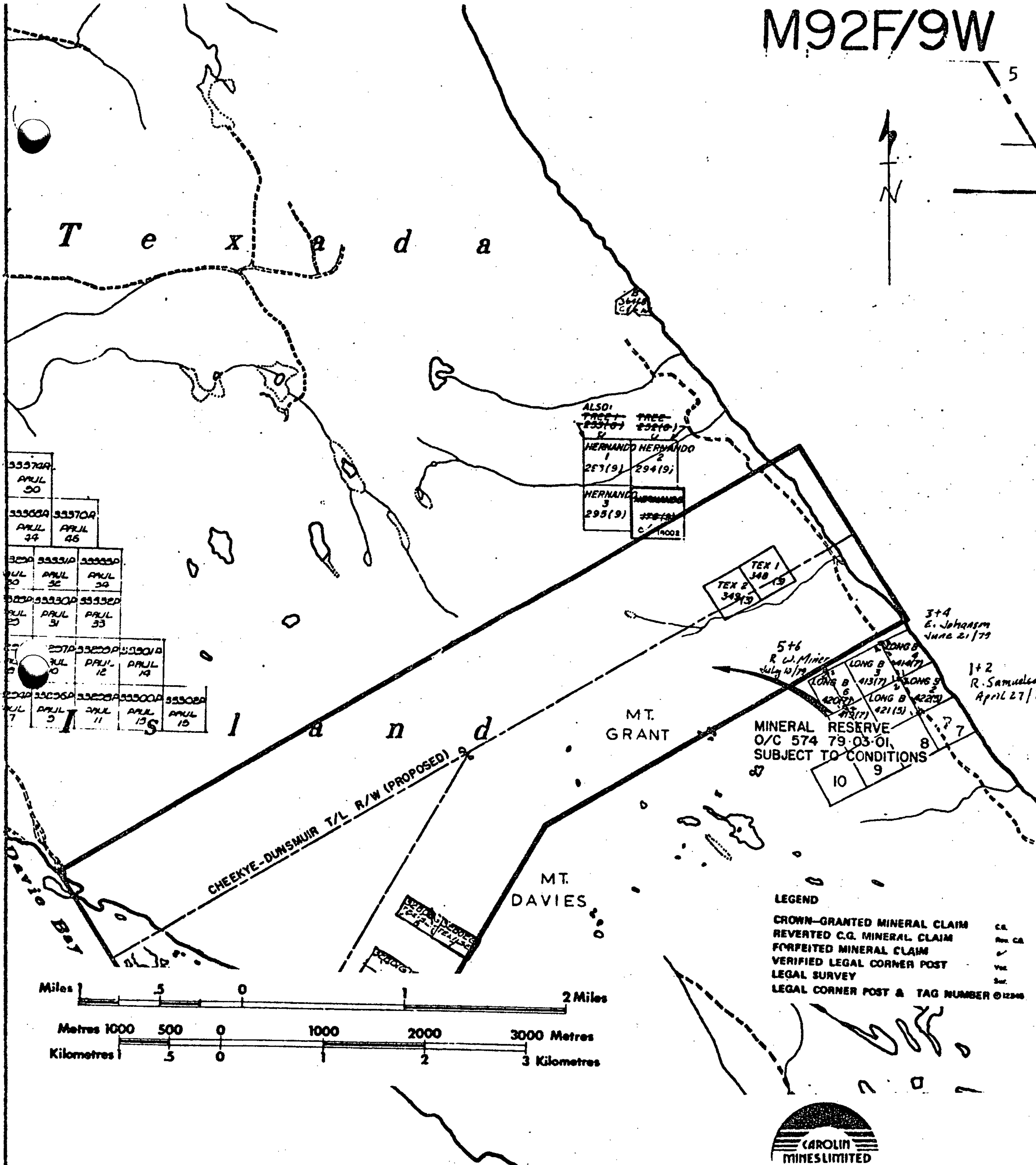
Name	Units	Record Number	Date Recorded	Owner
Long B	1	421 (5)	May 3, 1979	R. Samuelson
Long B 2	1	422 (5)	May 3, 1979	R. Samuelson
Long B 3	1	413 (7)	July 5, 1979	E. Johanson
Long B 4	1	414 (7)	July 5, 1979	E. Johanson
Long B 5	1	419 (7)	July 11, 1979	R. Miner
Long B 6	1	420 (7)	July 11, 1979	R. Miner
Long B 7	1	834 (4)	April 14,1981	E. Johanson
Long B 8	1	835 (4)	April 14,1981	E. Johanson
Long B 9	1	Tag No. 490903M	April 24,1981	R. Samuelson
Long B 10	1	Tag No. 490904M	April 24,1981	R. Samuelson

The claims are situated along the southeast edge of the Cheekye-Dunsmuir high voltage transmission line that is under Mineral Reserve o/c 574 79:03:01 subject to conditions. Access is by improved hydro road to the transmission line area and then by old logging roads into the property as shown in Figures 2 and 4. The main showings are 19 km southeast of the Gillies Bay Airstrip. The old roads are passable with difficulty by two wheel drive vehicle but a 4 x 4 is advisable. Parts of the claim group have undergone juvenile spacing and any future line cutting would be time consuming.



MALASPINA STRAIT
TEXADA ISLAND
LONG B CLAIMS
NEW WESTMINSTER LAND DISTRICT
TEXADA ISLAND LAND DISTRICT
Myrtle Pt
Albion Pt
Kelly Pt
Brew Bay
Lang Bay
Stillwater
Thunder Pt
Evenden Pt
Scotch Fir Pt
McRae It
Saltery Bay
Ball Pt
Hardy Island
Alexander Pt
Fox I
Kelly I
Billings Bay
Strawberry It
Cape Cockburn
COMET MTN
Northeast Pt
MT POCAHONTAS
Harwood Pt
Dick I
Mouat Is
MT GRANT
MT DAVIES
760
Scale 1:125 000
(1 Centimetre = 1.25 Kilometres)
(1 Inch = 2 Miles approximately)
Magnetic Declination approximately 23°12' East at centre of map, 1976. Decreasing approximately 3' annually.
1 Kilometre = 0.6214 Miles
Universal Transverse Mercator Projection
Fegen Its
Lindbergh I
Jelina I
West Pt
Finnerty Is
LASQUETI ISLAND
CAROLIN MINES LIMITED
LONG B CLAIM GROUP
DETAIL LOCATION MAP
DRAWN BY JS
DATE APRIL 6 1981
NTS 92F/9W
FIGURE 2

M92F/9W



CAROLIN MINES LIMITED

LONG B CLAIM GROUP

CLAIM MAP

UNLESS VERIFIED OR SURVEYED, THE MAP POSITION OF A LEGAL CORNER POST IS BASED ON THE LOCATOR'S SKETCH. FOR FURTHER INFORMATION, APPLY TO THE OFFICE OF THE MINING DIVISION CONCERNED.

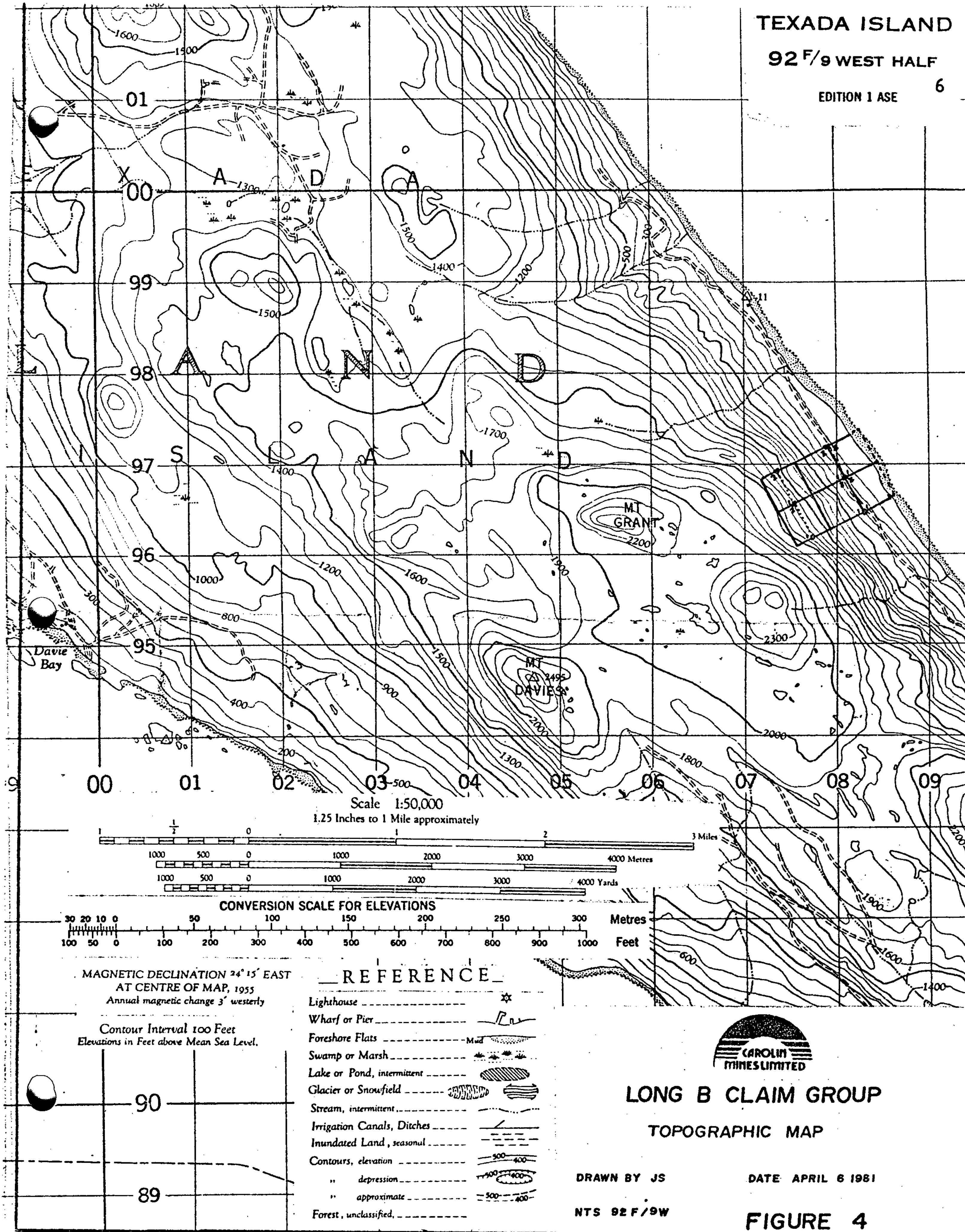
DATE OF MICROFILM: 80-02-28

DRAWN BY JS

DATE APRIL 6 1981

NTS 92 F/9W

FIGURE 3



TEXADA ISLAND
92 F/9 WEST HALF
EDITION 1 ASE
6
MT GRANT
2200
MT DAVIES
2495
Davie Bay
Scale 1:50,000
1.25 Inches to 1 Mile approximately
3 Miles
4000 Metres
4000 Yards
CONVERSION SCALE FOR ELEVATIONS
Metres
Feet
MAGNETIC DECLINATION 24° 15′ EAST
AT CENTRE OF MAP, 1955
Annual magnetic change 3′ westerly
Contour Interval 100 Feet
Elevations in Feet above Mean Sea Level.
REFERENCE
Lighthouse
Wharf or Pier
Foreshore Flats
Mud
Swamp or Marsh
Lake or Pond, intermittent
Glacier or Snowfield
Stream, intermittent
Irrigation Canals, Ditches
Inundated Land, seasonal
Contours, elevation
depression
approximate
Forest, unclassified
CAROLIN MINES LIMITED
LONG B CLAIM GROUP
TOPOGRAPHIC MAP
DRAWN BY JS
DATE APRIL 6 1981
NTS 92 F/9W

FIGURE 4

FIELD PROCEDURES

The soil lines were run with a Silva compass and roughly measured for slope corrections by a Belt Chain calibrated in meters for which the manufacturer gives a 0.1% accuracy. Lines are 150m apart trending 160° and are marked by many orange flags with stations in numbered blue flagging. Soil samples were taken at 30m intervals from the B. horizon at depths ranging between 10 and 40cm by a grubhoe. Samples were put in waterproof Kraft bags and delivered to Acme Analytical Laboratories Ltd., 852 E. Hastings St. Vancouver. Standard soil data sheets were filled out in the field noting such items as sample number, location, depth, horizon, colour, particle size, % organics, pH, slope, vegetation and additional remarks. Analytical procedures are outlined in Appendix IV.

Rock samples were taken as continuous chips over short intervals. Rock description are shown in Appendix VI. Results are ploted on Figure 10 (in pocket) using Hip Chain traverses between soil lines for control.

GEOLOGY

The regional geology of Texada Island is relatively simple as shown on Figure 5. Upper Paleozoic Sicker Formation volcanics, volcanoclastic sediments, and limestone are exposed on the extreme south tip. Most of the Island is underlain by Upper Triassic Karmutsen Formation amygdaloidal, pillowed to massive basalt, breccia and aquagene tuff. This is overlain by a massive Upper Triassic limestone (Quatsino Formation) which occurs mainly in a belt extending across the north end of the Island. Five stocks of quartz diorite to diorite are exposed on the coastline. One of these stocks along Long Beach partially hosts the copper-gold showings on the Long B claims. Near Gillies Bay a fault block of Upper Cretaceous Nanaimo Group coarse clastics has been preserved.

Wares (1971) describes the quartz diorite stock north of the Long B area as a "composite granodiorite intrusion". However, most of intrusive exposures mapped by Wares are identified as quartz diorite. The few granodiorite outcrops could possibly be the result of potassic feldspar alteration as observed on the Long B claims. Alteration appears to vary considerably over short distances. In one locality an intensely chloritized and K-spar rich rock is adjacent to relatively fresh biotite-hornblende diorite.

Karmutsen Formation volcanics were seen in the Upper Creek area and near the initial post for Long B2. These are dark green, very fine grained chloritized and epidotized greenstones. Occasionally 2 to 9mm feldspar phenocrysts were seen on weathered surfaces.

Limited geological observations are plotted on Figure 10 (in pocket). A very pyritic, volcanic agglomerate-breccia was noted 65 meters southwest of 150W + 00. Dark, polymictic, subangular, fine grained fragments averaging 1 to 2cm in diameter predominate. Occasionally clasts range up to 25cm in diameter. This rock contains about 5% pyrite and ran 5ppb gold.

The volcanic-intrusive contact is well exposed in the Main Creek striking 343° and dipping steeply to the west. This contact is sharp with some suggestion of a narrow, banded, chilled margin. A large quartz vein has been uncovered by trenching adjacent to the contact hosted by diorite. The vein structure passes westward into volcanics and becomes progressively less well defined. To the west and south a prominent topographic feature is a line of 30 to 40 meter high cliffs. These cliffs do not mark the volcanic-instrusive contact but rather start about 100m within the volcanic terrain.

All intrusive specimens are moderately to strongly magnetic whereas the volcanics are non-magnetic. Pyrite occurs in the Southeast Area in small lenses up to 15 - 20%, as 3 - 5mm stringers and thin fracture fillings.

MINERALIZATION

Several showings of various dimensions are known on the claims mainly within the intrusive but also in the Upper Creek zone passing into the volcanics, as shown on Figures 6, 7 and 10 (in pocket). King (1950) describes three showings that were sampled with the following results:

Quartz Vein	Thickness	Gold Content
Number 3 Vein	width 12 inches	0.56 oz/ton gold
Southeast showing	width 8 inches	0.39 oz/ton gold
Main or Upper Creek Area	width 14 inches	0.22 oz/ton gold

Chip samples by D.A. Harron in 1980 show gold values over narrow widths up to 0.476 oz/ton gold in the chalcopyrite rich Upper Creek showing.

The old Southeast Vein mentioned by King (1950) has not been positively identified. However, the zone now referred to as the Southeast Area is somewhat farther along "strike" from the apparent location of the 1950 work. The Upper Creek Zone is reported by King as follows:

> "The main vein, on which most of the work has been done, is in a creek near the centre of the group and has been traced nearly 210 feet by rock trenches and stripping. The vein is in a straight definite fracture that strikes north 22 degrees east and dips 66 degrees northwest between walls of andesite slightly mineralized with pyrite. The vein filling is of quartz mineralized with pyrite, chalcopyrite, and secondary bornite."

Rock chips taken in this examination confirm the concept of gold values in two main, narrow, linear zones as shown by Samples 37804 to 37806 (Appendix V). This type of mineralization is to be expected on the periphery of a large porphyry copper-molybdenum system as outlined by Falconbridge (Wares 1971). The tonnage potential of the narrow linear zones outlined to date, appear to be limited. However, more significant would be the location of the bedrock source for the high gold in soil values that have been found in the Southeast Area and at the South contact between the volcanics and intrusive. It is also possible that these high gold in soils are related to the porphyry copper system gold enrichment and inherent high mobility of metals in the presence of abundant pyrite decomposition.

GEOPHYSICS

Geophysical data are plotted on Figure 6 (in pocket). A reconnaissance SP survey was run by E. Johanson along access roads, the central creek and on short lines around the Southeast Showing. Background levels appear to be in the neighbourhood of -20 to -50 mv. Anomalous SP values were recorded across and along the Southeast Area up to -700 mv. This is in an area adjacent to a small creek and slightly below an old pit in which the quartz diorite has been intensely silicified and pyritized.

Proton magnetometer readings were taken over a very small area with some suggestion of variation although there are not enough data to draw definite conclusions. A trend of higher values is suggested toward the volcanic-intrusive contact in the Upper Creek Area.

Rapid VLF EM-16 measurements were made during the present examination. A prominent in-phase crossover was obtained along the lower logging road in the vicinity along strike from the SP anomaly trend. This broad crossover suggests a deeply buried conductor. Local sulphide concentrations may be indicated by short intervals of negative quadrature values. A situation of several adjacent weak conductors could be present toward the edges of the surveyed areas where steep gradients are observed in the vertical field but no actual crossovers. In this case, two adjacent conductors may modify the shape of the resulting anomaly.

GEOCHEMISTRY

Twenty-five soil samples were collected for D.A. Harron by Roy Samuelson in February 1980 and analyzed by Min-En Labs for Mo, Cu, Ag and Au as illustrated on Figure 7 (in pocket). Most of the samples show anomalous copper values with some high Mo. Gold is definitely anomalous in eight samples where values range up to 570 ppb Au. Some of the highest gold in soil sites are located at line 200W to 600W on the Southeast Area grid. A total of 31 soil samples were taken in the present examination as shown on Figures 8 and ~~9~~.7. Two soil profiles,

GEOCHEMISTRY

In February 1980 D.A. Harron collected soil samples near the high SP readings in the Southeast Area. Most of these samples show anomalous copper values with some high Mo and a few anomalous gold up to 570 ppb Au.

A total of 129 soil samples were taken during the present examination as plotted on Figures 6, 7, and 10 (in pocket). Soil development is illustrated by two soil profiles, Figures 8 and 9, that were located around the small pits dug for previous assessment purposes on high SP results. In profile 1, Figure 8, gold content increases and then decreases with depth indicating a transported origin of the soil. This is not surprising since the sampled area is within a wooded stable talus slope. Profile 2, Figure 9, shows a marked increase of gold with depth but a single sample in the lower forward part of the pit gives a much lower value. Other metals do not exhibit any trends through the profile, and cold extraction results are uniformly low. Presumably, hydromorphic dispersion is low in this area. Lead is the only exception with a high cold extractable content in the upper organic rich layer.

The usual truncated population distribution for gold in soils is exhibited by the histogram in Appendix IV. A threshold value of 40 ppb Au is used considering the normal sample inhomogeneity of sieved samples and reproducibility of atomic absorption for gold.

Soil samples near the Upper Creek showings were taken on two short lines as plotted on Figure 7. Gold values are near or below threshold. In contrast soils in the Southeast show, Figure 6, several sample sites with highly anomolous Au content. High gold values in soil along the Southeast Area SP zone have migrated some distance downslope as indicated by talus development and soil profiles.

Soil lines established up slope from the Southeast Area give anomalous gold values on Lines 300E and 150E. A potentially significant area long the volcanic -intrusive contact is indicated by five strongly anomalous samples on Line 150E between 330S and 450S and two anomalous sites 390S and 420S on Line 00. The samples on Line 00 mark the topographic change between the 30 meter high volcanic cliffs and the relatively uniform steep hill-side mainly underlain by intrusive.

A priority in future work will be to trace these anomalous values to a bedrock source by detail prospecting, trenching and geological mapping.

CONCLUSIONS AND RECOMMENDATIONS

Attention in the past, around the Long B Claim Group, has focused on the definition of narrow gold bearing silicified zones and quartz veins. Several gold bearing zones have been outlined in the Upper Creek and Southeast Areas.

The western portion of the claims is characterized by an altered intrusive contact between a composite granitic pluton and Karmutsen Formation chloritic basalt. Local areas of intense chlorite, kaolin and potassic alteration are common within the intrusion. Silicification appears to be accompanied by abundant pyrite in lenses and heavy disseminations.

SP and VLF EM surveys indicate zones of anomalous response that correlate with sulphide rich areas on surface. High gold in soil values are found in the Southeast Area, however, these results are thought to have migrated downslope and the bedrock source should be traced up hill. The area is covered by stable wooded talus sheets. Dr. R.B. Band in Wares (1971) comments that:

> "Steep slopes and generally sparse vegetation cover resulting from a recent (1967?) forest fire favours mechanical down slope dispersion of the soil."

The extent of downslope migration of gold values should be evaluated by additional soil profiles and geological mapping. A potentially significant area of anomalous gold in soil has been outlined on lines 150E and 00 that appears to correlate with the location of the metamorphosed contact between diorite and volcanic agglomerate-breccia to aphanitic altered basalt. This area is not spatially associated with the narrow structure in the Southeast Area and should be considered as a separate zone. Detail soil sampling, prospecting and geological mapping are warranted on lines 150E and 00 with special attention focussed between 300S to 480S. The dense nature of the second growth forest and juvenile spaced sections will require linecutting for control.

A total of $3200 assessment has been applied from soil sampling for 2 years credit on all claims as tabulated in Appendix III.

Respectfully submitted,

J Shearer.

J. T. Shearer, M.Sc, F.G.A.C.
May 18, 1981

REFERENCE

B.C. Minister of Mines Annual Report 1950 R.B. King reporting on Gordon and William Claims, Pages A178 - 180.

Harron, D.A. February 1980 Chemex Lab certificates 684-9264 Dupont of Canada Exploration

Johanson, E. 1979, 1980 Sketch of SP readings, Geochemistry, Magnetometer, Location map 1 inch = 500 feet

McConnell, R.G. 1914 Texada Island, B.C. Geological Survey of Canada, Memoir 58, 112 p

Mathews, W. H. 1947 Calcareous Deposits of the Georgia Strait Area - B.C. Department of Mines, Bulletin 23, 113 pp.

Mathews, W.H. and McCammon, J.W. 1957 Calcareous Deposits of Southwestern B.C. - B.C. Department of Mines, Bulletin 40

Muller, J. 1977 Vancouver Island Open File, Geological Survey of Canada, 3 sheets 1:250,000

Wares, R. April 1971 Mickle - Samuelson Option PN 158 Falconbridge Nickel Mine Ltd., Private Report 12 pp plus 5 appendices and maps (map 158-70-GP-1 missing).

Stevenson, J.S. 1947 Lode Gold Deposits - Southwest British Columbia. B.C. Department of Mines, Bulletin 20 - Part IV, 41 pp.

APPENDIX I

LIST OF PERSONNEL AND DATES WORKED

LONG B CLAIMS

FIELD WORK COMPLETED BETWEEN APRIL 3 AND MAY 3, 1981

APPENDIX I

LIST OF PERSONNEL AND DATES WORKED

Name	Occupation	Address	Dates Worked on Long B Claims, 1981
J.T. Shearer	Geologist	RR #1 Mason Avenue Port Coquitlam, B.C.	April 3, ½ day April 4, ½ day April 30, ½ day May 1, 1 day May 3, ½ day
K.G. Fishbrook	Soil Sampler	19777 Marie St. Silver Creek, B.C.	April 30, ½ day May 1, 1 day May 2, 1 day May 3, ½ day
L.M. Angers	Soil Sampler	#7-680 Coquihalla St. Hope, B.C. VOX 1L0	April 30, ½ day May 1, 1 day May 2, 1 day May 3, ½ day

APPENDIX II

STATEMENT OF QUALIFICATION

J.T. Shearer, M.Sc., F.G.A.C.

LONG B CLAIMS

TEXADA ISLAND

APPENDIX II

I, J.T. SHEARER of the City of Port Coquitlam in the Province of British Columbia, hereby certify that:

1) I am a graduate of the University of British Columbia (1973) B.Sc., and University of London, Imperial College (1977) M.Sc., DIC.

2) I am a Fellow of the Geological Association of Canada.

3) I have worked continuously in Mineral Exploration since 1973 for McIntyre Mines Limited, J.D. Stephen Explorations Ltd, and Carolin Mines Ltd.

4) I personally worked on the Long B Claims between April 3 and May 3, 1981. This report is based on an interpretation of data collected.

Dated at Lear
British Columbia

J Shearer

J.T. SHEARER, M.Sc., F.G.A.C.
May 18, 1981

APPENDIX III

STATEMENT OF COSTS

LONG B CLAIMS

FIELD WORK COMPLETED BETWEEN APRIL 3 TO MAY 3, 1981

APPENDIX III

STATEMENT OF COSTS

LONG B CLAIMS

WAGES AND FRINGE BENEFITS

J.T. Shearer	3 days @ $125.50 per day Apr. 30 - May 3	$376.50
K.G. Fishbrook	3 days @ 82.25 per day " "	246.75
L.M. Angers	3 days @ 82.25 per day " "	246.75

TRANSPORTATION

B.C. Air	4 return flights, Vancouver-Gillies Bay @ $80.00 per flight	320.00
4 x 4 Rental	Gillies Bay Automotive Ltd. @ $35.00 per day plus gas	231.15

MEALS AND ACCOMMODATIONS

3 men	for 4 days @ $61.00 per night	244.00
3 men	meals for 3 days at $21.00 per day	189.00

GEOCHEMISTRY

Acme & Analytical Labs Ltd.

	31 soils for Ag, As, Pb, Zn+Sb 6 rocks: Invoice April 8	495.15
	3 assays for gold in rock Invoice April 20	30.00
	98 soils for Au, 2 rocks, for Au, As, Ag Invoice May 8	377.20

DRAFTING AND REPORDUCTION

23 hours	drafting @ $9.50 per hour	218.50
reproduction		20.00

REPORT PREPARATION AND TYPING

REPORT PREPARATION AND TYPING		350.00
	TOTAL	$3345.00

APPENDIX IV

ANALYTICAL PROCEDURE

ACME ANALYTICAL LABORATORIES LTD.
852 E. Hastings St.
Vancouver, B.C. V6A 1R6
Dean Toye, Chief Geochemist

ACME ANALYTICAL LABORATORIES LTD.
Assaying & Trace Analysis
852 E. Hastings St., Vancouver, B.C. V6A 1R6
Telephone : 253 - 3158

GEOCHEMICAL LABORATORY METHODOLOGY - 1981

SAMPLE PREPARATION

1. Soil samples are dried at 60°C and sieved to -80 mesh.
2. Rock samples are pulverized to -100 mesh.

Geochemical Analysis for Ag*, Bi*, Cd*, Co, Cu, Fe, Mn, Mo, Ni, Pb, Sb*, V, Zn

0.5 gram samples are digested hot dilute aqua regia in a boiling water bath and diluted to 10 ml with dimineralized water.

All the above elements are determined in the acid solution by Atomic Absorption.

* demotes background correction.

Geochemical Analysis for Au

10.0 gram samples that have been ignited overnite at 600°C are digested with hot dilute aqua regia, and the clear solution obtained is extracted with Methyl Isobutyl Ketone.

Au is determined in the MIBK extract by Atomic Absorption using background correction (Detection Limit = 5 ppb direct AA and 1 ppb graphite AA.)

Geochemical Analysis for Au, Pd, Pt, Rh

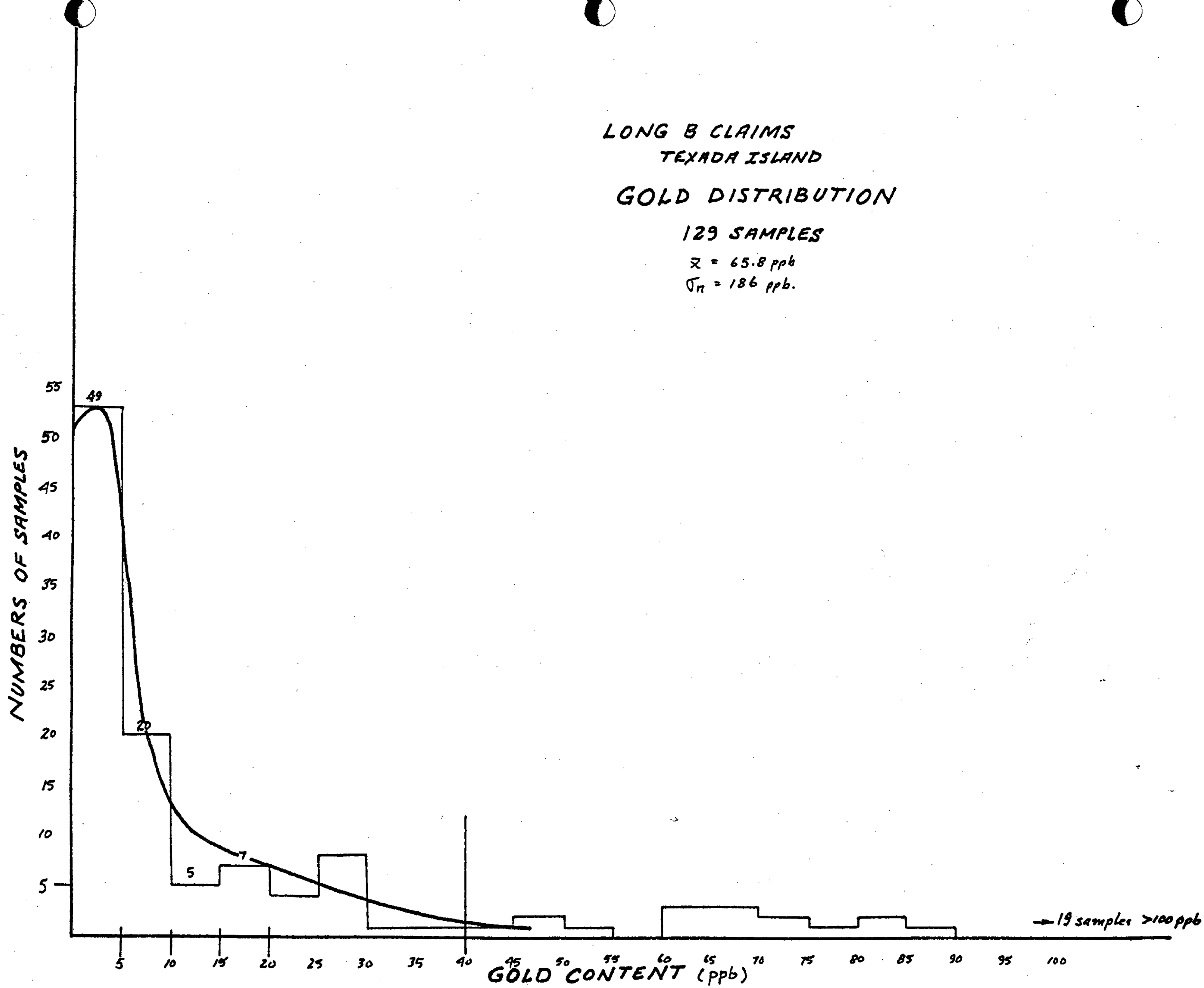
10.0 - 30.0 gram samples are subjected to Fire assay preconcentration techniques to produce silver beads.

The silver beads are dissolved and Au, Pd, Pt, and Rh are determined in the solution by Atomic Absorption.

Geochemical Analysis for As

0.5 gram samples are digested with hot dilute aqua regia and diluted to 10 ml.

As is determined in the solution by Graphite Furnace Atomic Absorption.



LONG B CLAIMS
TEXADA ISLAND
GOLD DISTRIBUTION
129 SAMPLES
$\bar{x}$ = 65.8 ppb
σ_n = 186 ppb.
NUMBERS OF SAMPLES
GOLD CONTENT (ppb)
49
20
5
7
→ 19 samples >100 ppb

APPENDIX V

GEOCHEMICAL ASSAY CERTIFICATE

LONG B CLAIMS

ACME ANALYTICAL LABORATORIES LTD.
852 E. Hastings St., Vancouver, B.C. V6A 1R6
Dean Toye, Chief Geochemist

Joe ?/ To: Carolin Mines Ltd.,
1020 - 475 Howe Street,
Vancouver, B.C.

Attn.: Dr. P.W. Richardson

Assaying & Trace Analysis
852 E. Hastings St., Vancouver, B.C. V6A 1R6
phone: 253 - 3158

File No. 81-0267
Type of Samples Soil & Rock
Disposition

Texada Island.

GEOCHEMICAL ASSAY CERTIFICATE

Project # C-104-1 Hot Total Digestion

ASSAY

1

SAMPLE No.		Ag	As	Pb	Zn	Sb	Au	Hg	Ag oz/ton	Au oz/ton		
1		.2	8	21	21	1	.025	.020			Surface	1
2		.1	7	12	38	1	.045	.045			15 cm depth	2
3		.1	13	16	46	1	.060	.080			30 cm depth	3
4		.1	17	14	39	4	.070	.065			45 cm depth	4
5		.2	23	11	34	5	.150	.065			60 cm depth	5
6		.3	22	12	53	3	.110	.025			75 cm depth	6
7		.1	26	13	34	7	.065	.100			90 cm depth	7
8		.1	11	25	52	1	.130	.015			Surface	8
9		.1	13	15	36	2	.085	.055			15 cm depth	9
10		.1	14	12	38	1	.080	.060			30 cm depth	10
11		.1	13	13	25	1	.510	.060			45 cm depth	11
12		.4	14	13	28	1	+1.800	.040			60 cm depth	12
13		.1	18	12	37	1	.075	.050			75 cm depth	13
14		.1	8	15	39	1	.150	.010			15 cm depth	14
15		.2	4	7	18	1	.230	.015			15 cm depth	15
16		.2	7	11	38	1	.060	.040			15 cm depth	16
17		.4	7	12	42	1	.010	.100				17
18		.3	11	13	102	2	.025	.110				18
19		.3	20	46	226	1	.030	.250				19
20		.2	16	17	252	1	.025	.140				20
21		.5	15	10	37	2	.030	.050				21
22		.2	8	12	37	1	.005	.040				22
23		.2	11	9	28	1	.015	.050				23
24		.7	12	17	61	1	.150	.100				24
25		.1	13	11	73	1	.065	.045				25
26		.3	9	6	36	2	.025	.020				26
27		.2	6	7	29	1	.065	.030				27
28		.3	13	16	50	1	.020	.050				28
29		.2	6	8	36	1	.010	.070				29
30		.1	4	8	24	1	.005	.045				30
31		.2	7	8	45	1	.015	.075				31
												32
												33
37801	R	.1	7			4	.190	.015				34
37802	R	.8	7			3	.300	.010				35
37803	R	.4	9			1	.050	.010				36
37804	R	+27.0	9			10	.810	.010	.78	.035		37
37805	R	+16.0	18			5	+1.800	.020	.52	.031		38
37806	R	+41.0	1			8	+1.800	.010	1.18	.076		39
												40

All results are in PPM.

DIGESTION: ....

DETERMINATION: ....

DATE SAMPLES RECEIVED April 7, 1981

DATE REPORTS MAILED April 14, 1981

ASSAYER

DEAN TOYE, B.Sc.
CHIEF CHEMIST
CERTIFIED B.C. ASSAYER

Assaying & Trace Analysis
852 E. Hastings St., Vancouver, B.C. V6A 1R6
phone:253 - 3158

To: Carolin Mines Ltd.,
1020 - 475 Howe St.,
Vancouver, B.C.
V6C 2B3

Attn.: Dr.P.W.Richardson & Mr.J.T.Shearer

File No. 81-0330
Type of Samples Soils
Disposition

GEOCHEMICAL ASSAY CERTIFICATE

Project : LONG B Claims (TEXADA)

1

SAMPLE No.		Au	
LB 00 + 00 S		.015	1
30		.005	2
60		.005	3
90		.010	4
120		.070	5
150		.010	6
180		.010	7
210		.010	8
240		.005	9
270		.080	10
300		.060	11
330		.020	12
360		.035	13
390		.110	14
420		.165	15
450		.030	16
480		.005	17
510		.005	18
540		.005	19
570		.005	20
600		.005	21
630		.005	22
660		.005	23
690		.005	24
720		.005	25
750		.010	26
780		.005	27
810		.005	28
840		.005	29
870		.005	30
LB 00 + 900 S		.005	31
			32
LB 100E+ 00		.005	33
30 S		.005	34
60		.005	35
90		.005	36
120		.045	37
LB 100E+ 150 S		.280	38
			39
			40

All reports are the confidencial property of clients
All results are in PPM.

DIGESTION:

DETERMINATION:

DATE SAMPLES RECEIVED May 4, 1981

DATE REPORTS MAILED May 8, 1981

ASSAYER

DEAN TOYE, B.Sc.
CHIEF CHEMIST
CERTIFIED B.C. ASSAYER

To: Carolin Mines Ltd.,

Assaying & Trace Analysis
852 E. Hastings St., Vancouver, B. C. V6A 1R6
phone: 253 - 3158

File No. 81-0330

Type of Samples Soil

Disposition

GEOCHEMICAL ASSAY CERTIFICATE

2

SAMPLE No.	Au
LB 100E + 180 S	.010
210	.005
240	.010
270	.020
300	.040
330	.540
360	.180
390	.560
420	.155
450	.330
480	.005
510	.005
540	.005
570	.020
600	.005
630	.005
660	.005
690	.005
720	.005
750	.005
780	.005
810	.005
840	.005
870	.005
LB 100E + 900 S	.005
LB 100E + 30 N	.020
60	.005
LB 100E + 90 N	.030
LB 300E + 00	.010
30 S	.015
60	.175
90	.580
LB 300E + 120 S	.005
LB 300E + 30 N	.020
60	.030
LB 300E + 90 N	.135

All reports are the confidencial property of clients
All results are in PPM.

DIGESTION:

DETERMINATION:

DATE SAMPLES RECEIVED May 4, 1981

DATE REPORTS MAILED May 8, 1981

ASSAYER [signature]

DEAN TOYE, B.Sc.
CHIEF CHEMIST
CERTIFIED B.C. ASSAYER

ACME ANALYTICAL LABORATORIES LTD.
Assaying & Trace Analysis
852 E. Hastings St., Vancouver, B.C. V6A 1R6
phone:253 - 3158

To: Carolin Mines Ltd.,

File No. 81-0330
Type of Samples Soil & Roc
Disposition

GEOCHEMICAL ASSAY CERTIFICATE

3

SAMPLE No.		Ag	As	Au	
150W + 00				.030	1
30 S				.015	2
60				.005	3
90				.010	4
120				.010	5
150				.010	6
180				.010	7
210				.020	8
240				.010	9
270				.010	10
300				.050	11
330				.030	12
360				.005	13
390				.010	14
420				.010	15
450				.005	16
480				.005	17
510				.005	18
540				.005	19
570				.005	20
600				.010	21
630				.030	22
660				.010	23
690				.005	24
150W + 720 S				.005	25
					26
80951	R	.1	5	.005	27
80955	R	.1	6	.060	28
					29
					30
					31
					32
					33
					34
					35
					36
					37
					38
					39
					40

All reports are the confidencial property of clients
All results are in PPM.
DIGESTION:
DETERMINATION:

DATE SAMPLES RECEIVED May 4, 1981
DATE REPORTS MAILED May 8, 1981
ASSAYER D Toye

DEAN TOYE, B.Sc.
CHIEF CHEMIST
CERTIFIED B.C. ASSAYER

Joe Shearer:
G104-1
Texada:
Note Cu

ACME ANALYTICAL LABORATORIES LTD.
253 E. HASTINGS ST. VANCOUVER BC V6A-1R6
(604) 253-3158 TELEX 04-53124

ICP ASSAY ANALYSIS

C-104 is outside project

DIGESTION: 1 GRAM AQUA REGIA
FINAL VOLUME: 100 ML
DETERMINATION: DIRECT READING ICP EMISSION SPECTROMETER
RESULTS: IN PERCENT
W IS SUBJECT TO ZN INTERFERENCES
*

*HO/37804 CAROLIN MINES FILE# 81-0267 PAGE : 1
EGC

BURN # 1 AY16 14:05 20APR81
IS
1361

MO	CU	PB	ZN	AG	NI	CO	MN	FE	AS
.0032	1.290	.0001	.0201	.0025	.0061	.0100	.0249	9.949	.0010
U	IS	TH	IS	CD	SB	BI	V	CA	P
-.002	.0008	-.000	.4516	.0013	.0018	.0013	.0150	1.624	.0988
LA	IN	MG	BA	TI	B	AL	IS	IS	W
.0003	.0018	1.094	.0049	.3335	-.005	3.559	-.003	.0007	.0007

*O/37805
EGC

BURN # 1 AY16 14:06 20APR81
IS
1361

MO	CU	PB	ZN	AG	NI	CO	MN	FE	AS
.0037	1.260	.0013	.0212	.0018	.0044	.0050	.0322	7.565	.0023
U	IS	TH	IS	CD	SB	BI	V	CA	P
-.001	.0013	-.000	.6224	.0012	.0028	.0011	.0165	1.997	.0973
LA	IN	MG	BA	TI	B	AL	IS	IS	W
.0005	.0014	.8114	.0022	.4068	-.004	2.788	-.002	.0008	-.000

*O/37806
EGC

BURN # 1 AY16 14:07 20APR81
IS
1361

MO	CU	PB	ZN	AG	NI	CO	MN	FE	AS
.0030	1.291	.0014	.0080	.0039	.0019	.0061	.0105	5.092	.0009
U	IS	TH	IS	CD	SB	BI	V	CA	P
.0002	.0006	-.000	-.037	.0007	.0012	.0083	.0012	.1693	.0430
LA	IN	MG	BA	TI	B	AL	IS	IS	W
.0001	.0009	.2770	.0005	.0400	-.003	.4128	-.001	.0004	.0029

*

CARC MINES LIMITED

GEOCHEMICAL DATA SHEET — ROCK GEOCHEM SAMPLING

EXPLORATION DEPARTMENT

NTS 92 F/9W

SAMPLER J. Shearer

PROJECT LONG B CLAIMS PN: 1-100
TEXADA ISLAND

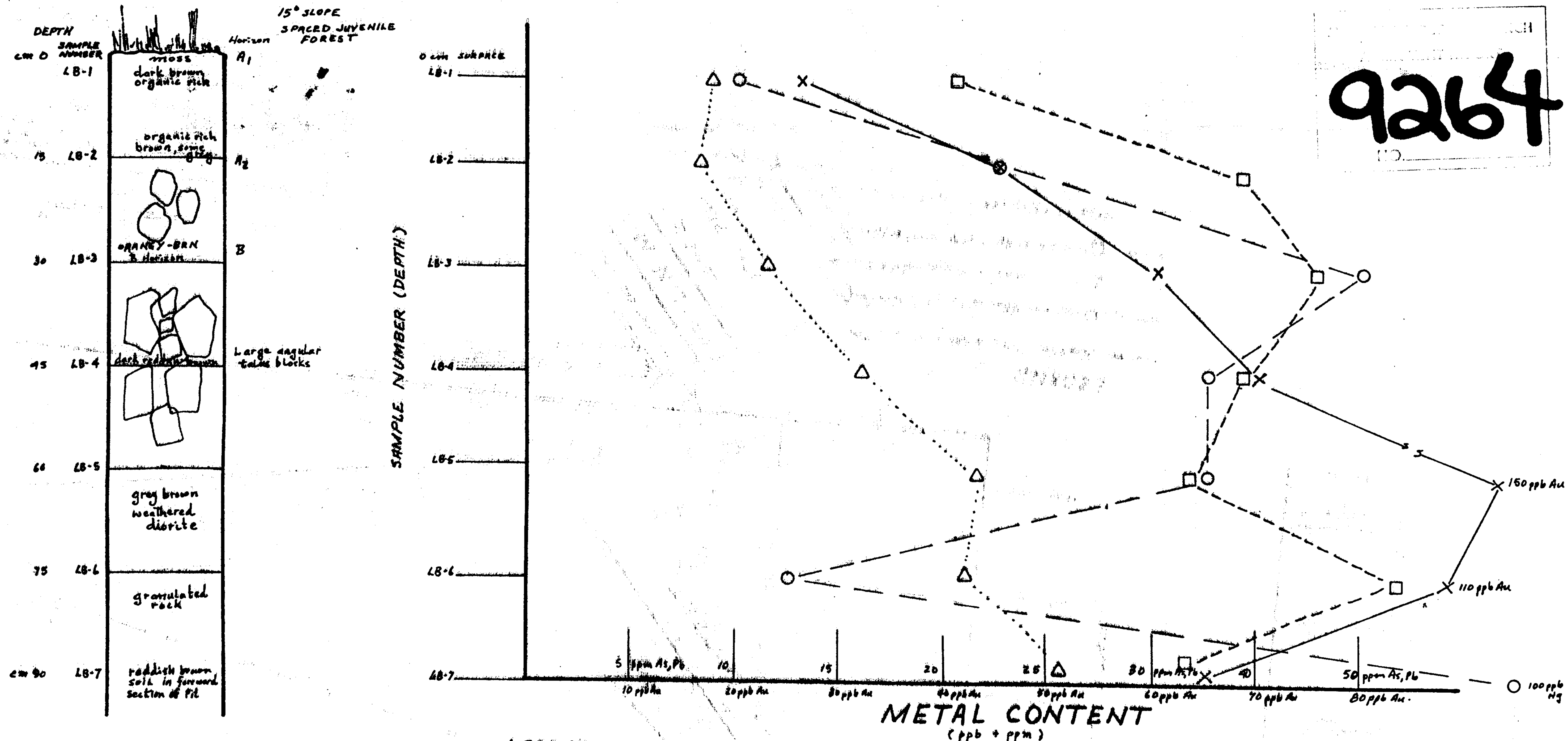
LINE Southeast Area + Upper Creek Showi

DATE April 3+4 1981

AIR PHOTO No.

	SAMPLE NUMBER	LOCATION	ROCK TYPE	ALTERATION	MINERALIZATION	STRIKE / DIP	ADDITIONAL REMARKS	APPARENT WIDTH	TRUE WIDTH	ASSAYS refer to sheets for Hg — Au. ppb	As. ppm	Sb. ppm	Ag ppm
1)	37801	at 470mN SP Station soil profile	quartz vein material in diorite	very rusty crust	heavy pyrite	—	small pit dug by hand over a high gold in soil sample. near 200W.			190	7	4	0.1
2)	37802	near At soil profile ?2 420ppb Au soil	quartz vein material	silicified	pyrite, limonite		small pit surface brecciation			300	7	3	0.8
3)	37803	Pit 3 southeast of 37802	pyritic diorite	very fractured	limonite stained		near pit 3			50	9	1	0.4
4)	37804	Top pit south side	Volcanics silicified	silicified well fractured	very pyritized some chalcopyrite	195°/sub vertical	Upper Creek Area adjacent to creek 2m x 2m x 1.5m pit			810	9	10	+27
5)	37805	rusty lower pit on north side	quartz vein ALT. Intrusive	SiO_2	bunches of chalcopyrite					+1800	18	5	+16
6)	37806	lower end of pits, Large pit	well developed quartz vein	milky quartz	pyrite		Large well defined quartz vein			+1800	1	8	+41
7)													
8)	80951	65m SW of 00+150W	Volcanic agglomerate - breccia	very pyritic some SiO_2	very pyritiz 5-10 %	-	along creek bank, chip.			5	5		0.1
9)	80955	from new trench in Southeast Area.	black, melano diorite - perhaps gabbro	fresh	trace py	-	in new blasted pit., grab.			60	6		0.1
10)													
11)													
12)													
13)													
14)													
15)													
16)													
17)													
18)													
19)													
20)													

9264



LEGEND

——X—— GOLD ppb total extraction

— — ○ — — MERCURY ppb total extraction.

······△······ ARSENIC ppm total extraction

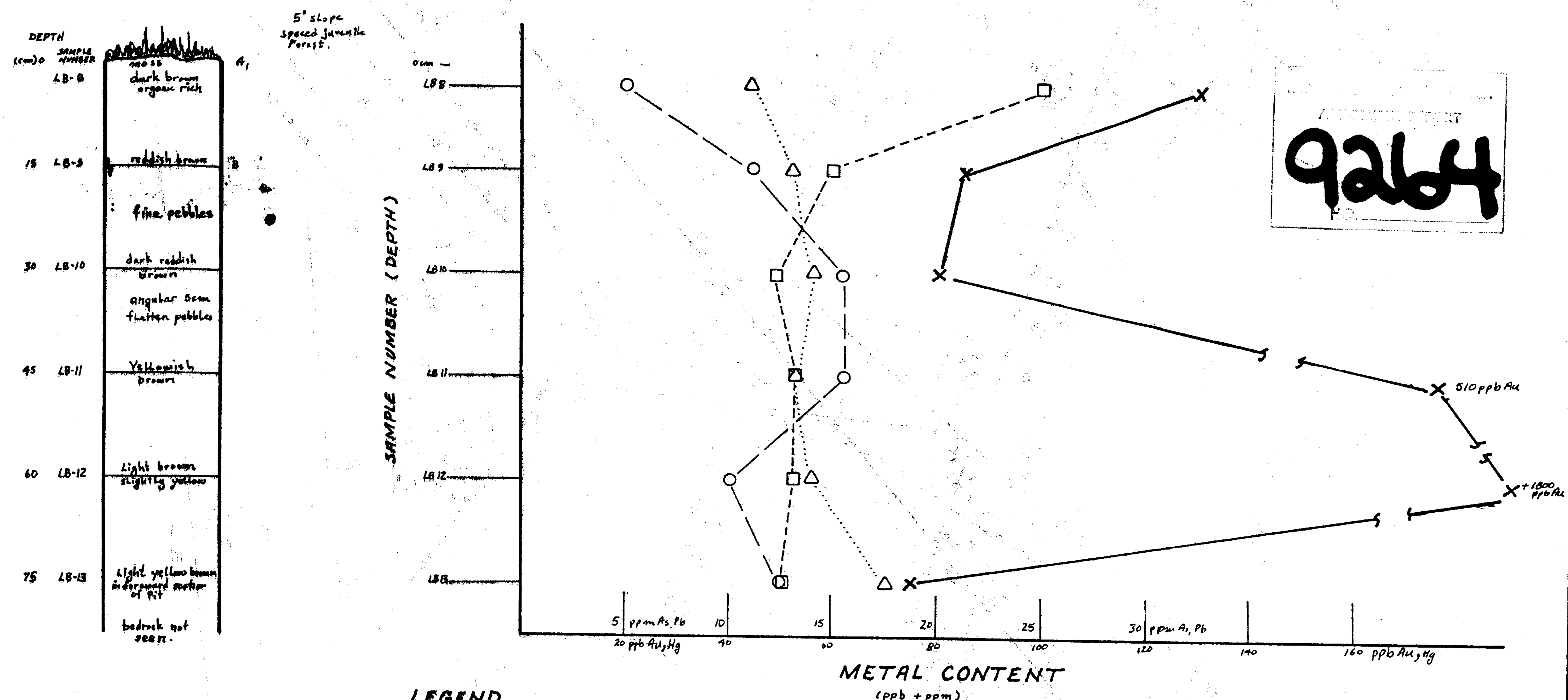
- - -□- - - LEAD ppm total extraction

REFER TO ASSAY CERTIFICATES FOR Sb, Zn, Ag total extraction plus cold extraction Ag, As, Pb, Zn and Sb.

0 10 20 30 cm

VERTICAL SCALE 1:10

CAROLIN MINES LIMITED	
LONG B CLAIM GROUP	
SOIL PROFILE 1 SOUTHEAST AREA	
LOCATION 2W+050N	FIGURE 8.
WORK BY: RS, JS	DRAWN BY : JS
N.T.S.: 92F/9W	DATE : APRIL 6 1981



LEGEND

—X— GOLD in ppb total extraction

— —O— — MERCURY in ppb total extraction

······Δ······ ARSENIC in ppm total extraction

- - -□- - - LEAD in ppm total extraction

REFER TO ASSAY CERTIFICATES FOR Sb, Zn, Ag total extraction plus cold extraction Ag, As, Pb, Zn and Sb.

0 10 20 30

VERTICAL SCALE 1:10

9264

CAROLIN MINES LIMITED

LONG B CLAIM GROUP

SOIL PROFILE 2

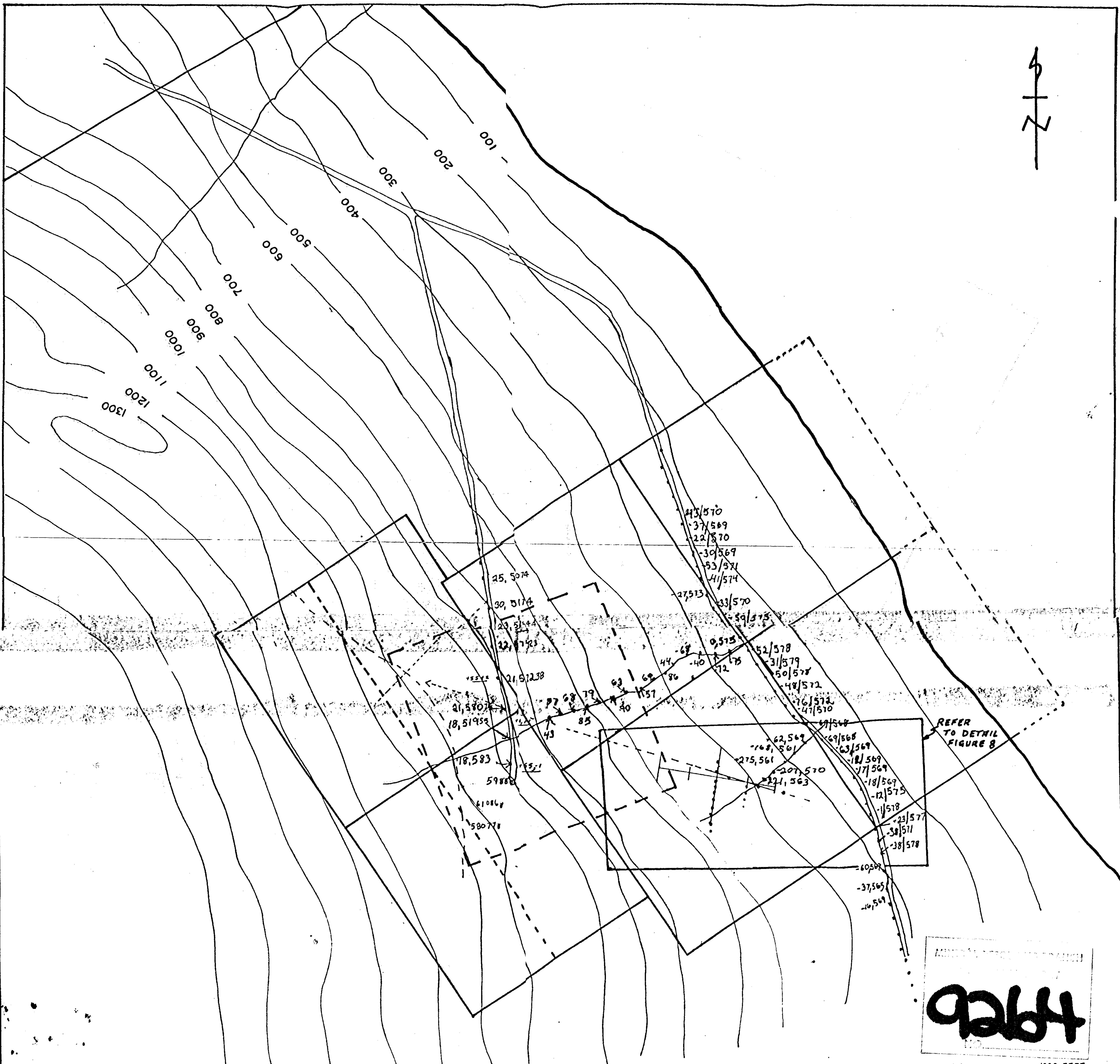
SOUTHEAST AREA

LOCATION : 300W + 75N

FIGURE 9

WORK BY : RS, JS | DRAWN BY : JS

N.T.S. : 92 F/9W | DATE : APRIL 6 1981



0 500 1000 FEET
0 100 200 300 METERS
SCALE 1:6000

LEGEND

- • SURVEY POINT
- -168, 561 SP value in mv, magnetometer in gammas
- +55, 12 EM16 value
- —100— TOPOGRAPHIC CONTOUR in feet
- ROAD
- CLAIM BOUNDARY

CAROLIN MINES LIMITED

LONG B CLAIM GROUP

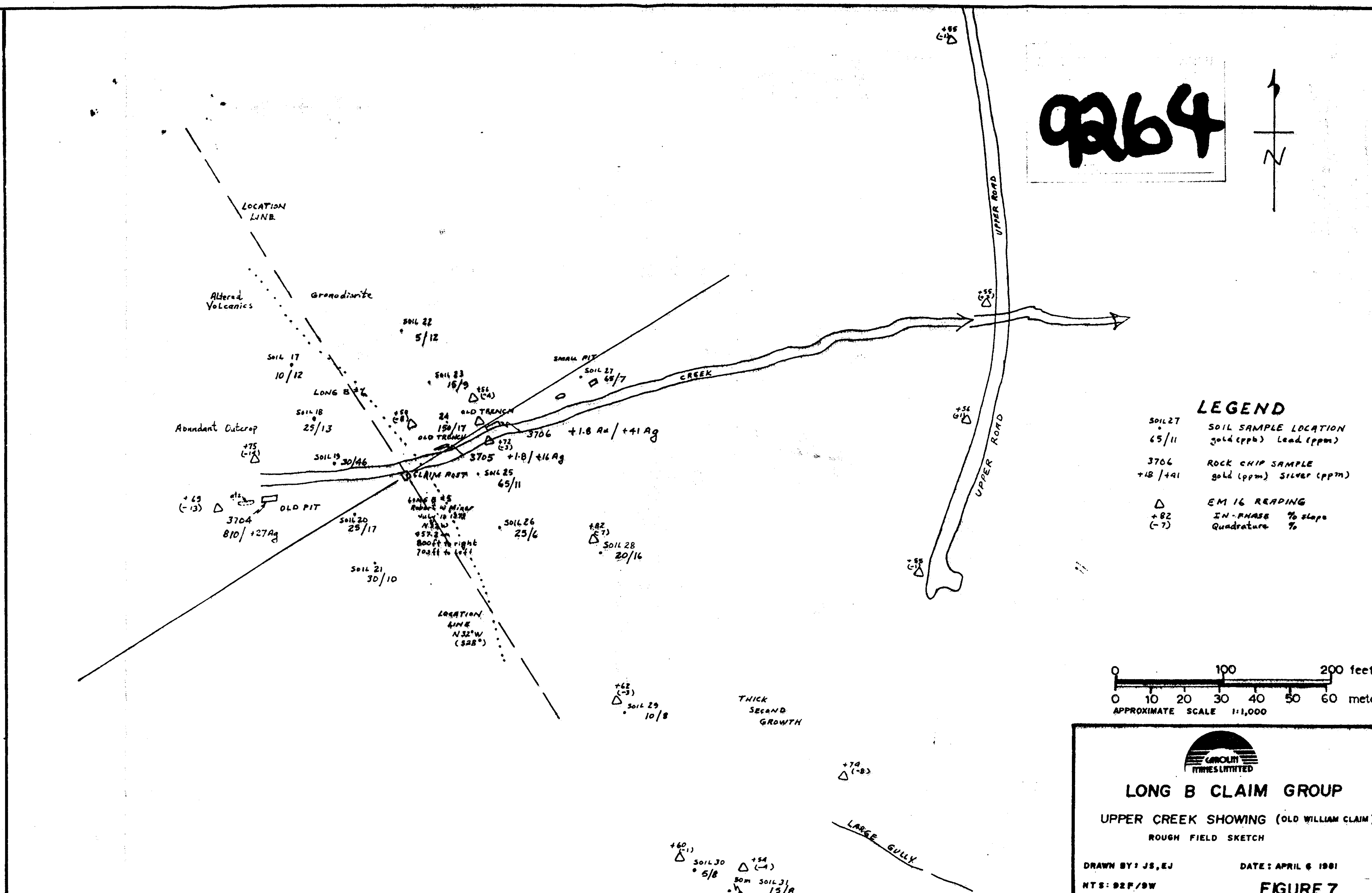
GEOPHYSICS : Self Potential, Magnetometer VLF(EM 16)

DRAWN BY: E Johanson, JS

DATE: APRIL 6 1981

NTS: 92F/9W

FIGURE 6



CAROLIN MINES LIMITED

LONG B CLAIM GROUP

UPPER CREEK SHOWING (OLD WILLIAM CLAIM)

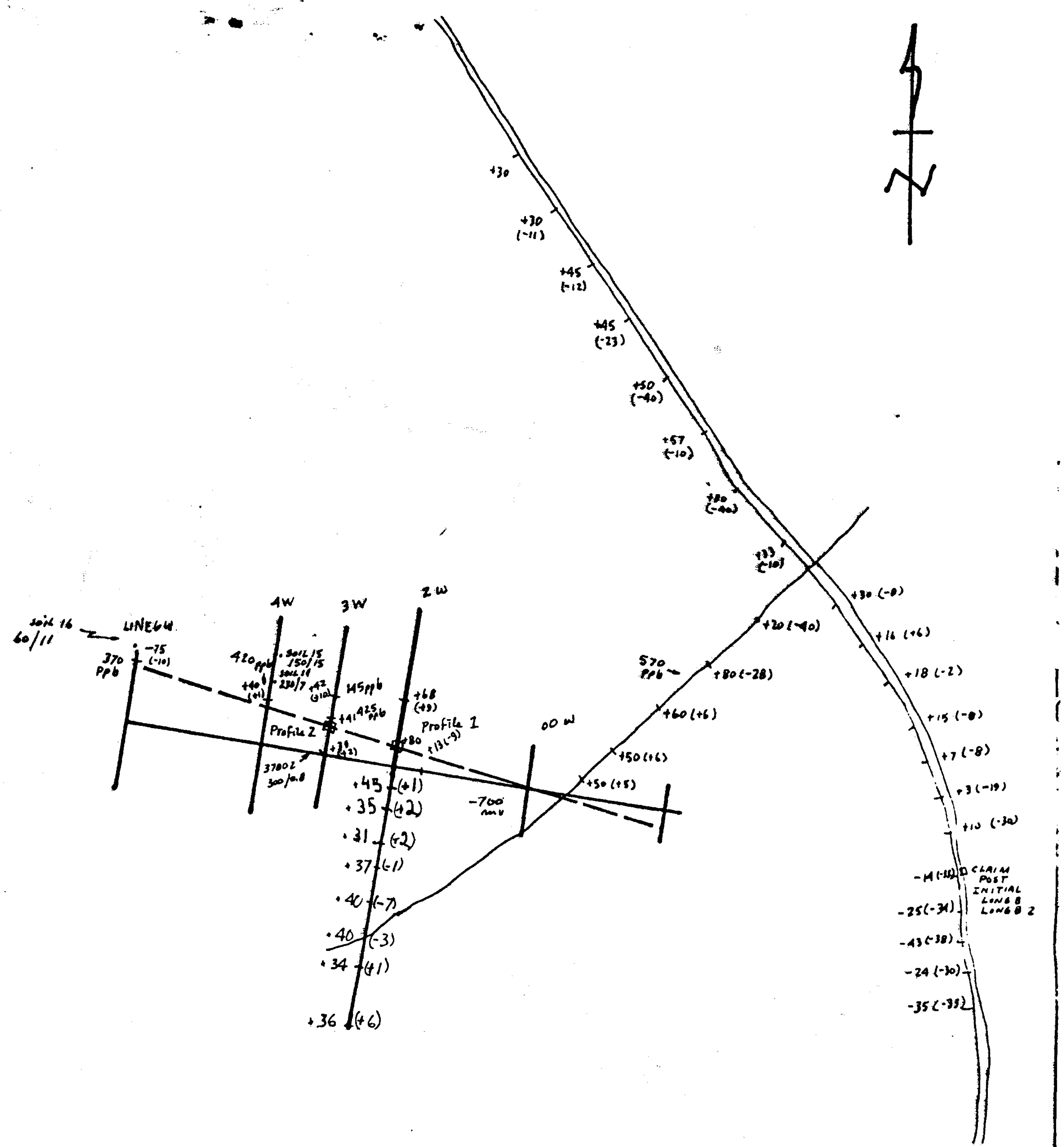
ROUGH FIELD SKETCH

DRAWN BY: JS, EJ

DATE: APRIL 6 1981

NTS: 92F/9W

FIGURE 7



LEGEND

Soil 16 · 60/11	SOIL SAMPLE LOCATION gold (ppb) Lead (ppm)
3701 190/0.1	ROCK CHIP SAMPLE gold (ppm) silver (ppm)
+ +82 (-7)	EM 16 READING IN-PHASE % slope Quadrature %
+370ppb	Gold in Soil 1980 Sample
-700mv	SP READING
□ Profile 1	HAND TRENCH Soil PROFILE
//	ROAD

0 100 200 300 400 FEET

0 40 80 120 METERS

SCALE 1:2400

9264

CAROLIN MINES LIMITED

LONG B CLAIM GROUP

SOUTHEAST SHOWINGS, DETAIL WORK

SELF POTENTIAL AND GEOCHEMISTRY

DRAWN BY: E Johanson, JS. DATE: APRIL 6 1981.

NTS: 92 F/9W. FIGURE 8


LONG B 3
LONG B 7
REFER TO FIGURE 7
REFER TO FIGURE 6
CLAIM POST
CREEK
UPPER ROAD
ROAD
DIORITE
VOLCANICS
diorite
TALUS
SPARSE TIMBER
Approximate Intrusive - Volcanic CONTACT
PRONOUNCED CHANGE IN SLOPE
CLIFF FACE
CLIFF
TRAIL
Small creek
9264
0 20 50 80 100 150 meters
SCALE 1:2500
NOTE: OUTLINE OF CLAIMS ONLY APPROXIMATE
LEGEND
330 GOLD ppb
CREEK DRAINAGE
CLAIM POST B
LOCATION LINE
SOIL SAMPLE
CAROLIN MINES LIMITED
LONG B CLAIM GROUP
GEOCHEMISTRY GOLD (ppb)
DRAWN BY: J SHEARER
DATE: MAY 10 1981
NTS: 92 F/9W
WORK BY: JS, KF, LA

FIGURE 10