

GEOCHEMICAL AND GEOLOGICAL EXPLORATION OF

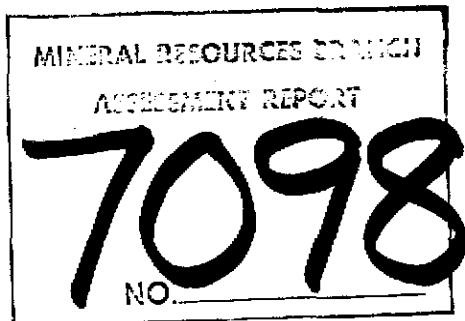
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CLAIMS, CROWN GRANTS AND LICENCES

HELD BY DOLLY VARDEN RESOURCES LTD.

IN THE KITSALT VALLEY, SKEENA MINING DIVISION

BRITISH COLUMBIA VOL. I

D. A. C. LTD.



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P. D. Michna

Toronto, Ontario
November 30, 1978

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SUMMARY

A field programme of geochemical exploration, prospecting and geological correlation was carried out by Derry, Michener & Booth on the properties held by Dolly Varden Resources Ltd. from July 15th to September 30th, 1978. During this period 1,283 "B" horizon soil samples and 48 rock samples were taken and assayed for silver, lead and zinc. A total of seven areas containing distinctly anomalous silver content were discovered as a result of the geochemical survey. Upon detail investigation it was found that all these areas occur at, or adjacent to, known mineral showings and in addition there is field evidence of intensive local prospecting throughout the valley.

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INTRODUCTION

During the period July 15th to September 30th, 1978 Derry, Michener & Booth, Consultants, carried out a field programme of geochemical exploration, prospecting and geological correlation over several properties held by Dolly Varden Resources Ltd. in the Kitsault River area near Alice Arm, British Columbia.

The objective of this programme was to discover additional silver-lead veins, similar to those mined previously by Dolly Varden and by Torbrit Mines Ltd., which could be additional sources of mill feed for any potential resumption of mining operations in the Alice Arm district.

A review of the voluminous data available in the Dolly Varden files for this district showed that all but one of the veins had been discovered by conventional prospecting and that there was evidence of extensive overburden cover in the Kitsault Valley. It was therefore assumed that soil geochemical surveys for silver, lead and zinc would be an effective means of outlining new mineralization in the district that could have been overlooked in the earlier prospecting phases.

In conjunction with this it was proposed that synthesis of the known and reported geology be made, augmented by examination of the exposed stream sections, known veins and near surface workings. No attempt was made to remap the valley since this had been carried out in

various stages over the past 30 years, principally by M. A. Mitchell for Dolly Varden, but also by the Geological Survey of Canada and the British Columbia Department of Petroleum and Mineral Resources.

Similarly no attempt was made to validate or to re-estimate ore reserves or to sample the numerous vein deposits occurring within the Kitsault valley.

The programme was carried out under the auspices of a B.C. Mineral Exploration Incentive Programme (MEIP) at an approximate cost, including pre-season planning and final preparation of reports and maps, of about \$63,000.

The field work was directed by P. D. Michna, a geologist with Derry, Michener & Booth, with the assistance of a prospector and two geological assistants, under the overall supervision of I. S. Thompson, P.Eng., and following the recommendations of a report dated December 29th, 1977 to Dolly Varden Resources Ltd. by Dr. C. E. Michener.

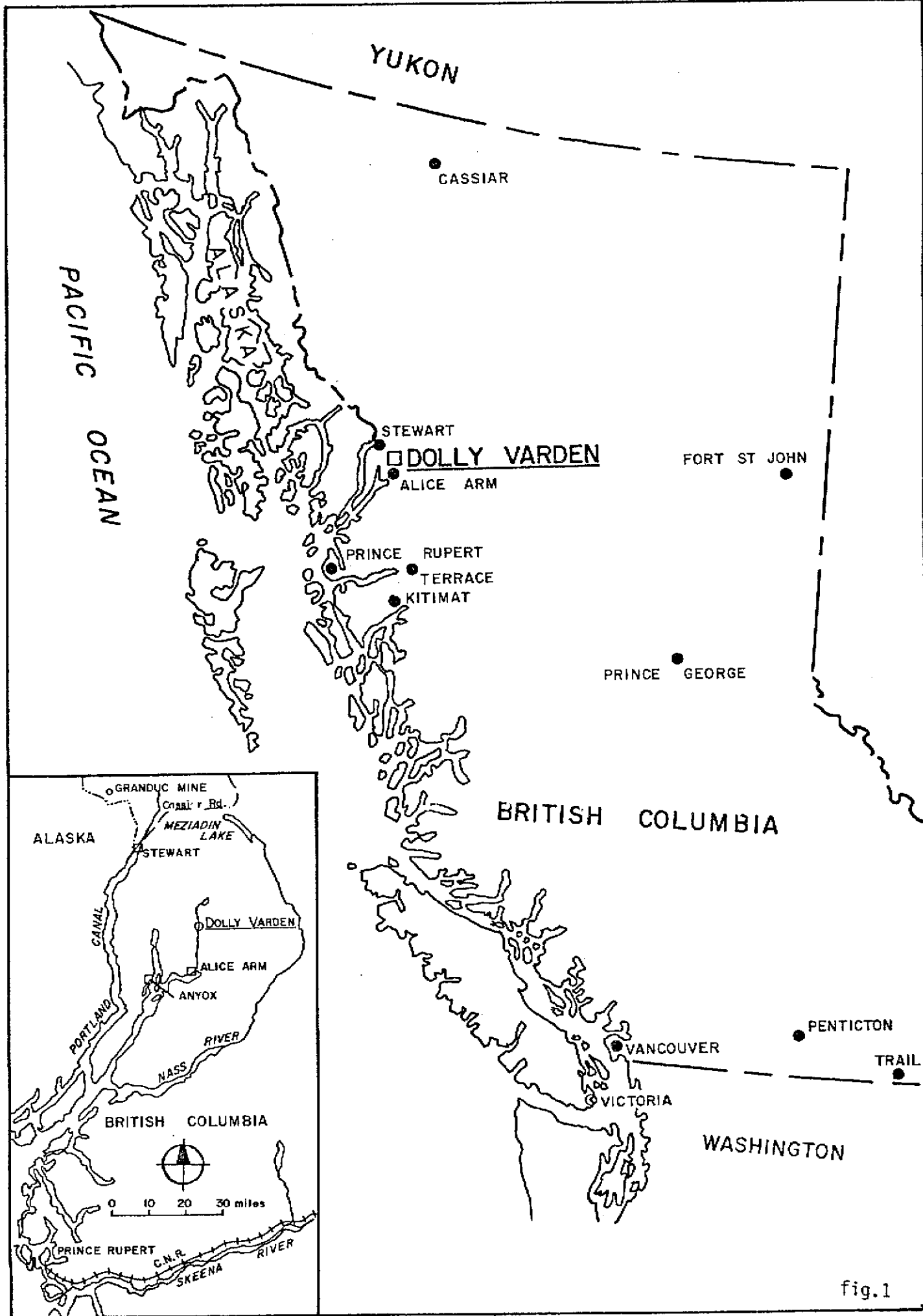


fig.1

LOCATION AND ACCESS

The properties held by Dolly Varden Resources Ltd. straddle the Kitsault River over a 9-mile length, from 16 to 25 miles, upstream from the coastal settlement of Alice Arm, British Columbia. Alice Arm and the inactive Climax Moly Mine at Kitsault, 1 1/2 miles across the Arm, are serviced weekly by a Transprovincial Airlines Grumman Goose from Prince Rupert, 115 miles to the south (Fig. 1).

The old mine road from Alice Arm extending through the property to the Torbrit Mine power station, and last used in 1973, has degenerated to a footpath and only one bridge remains. Walking time to the south limit of the property is 5 hours. Access and service trips were accordingly provided by Vancouver Island Helicopters based at Stewart, approximately 30 miles NW; in clear weather the journey over the Cambria Icefield is only 20 minutes, a definite saving in support costs. *At present surveying is nearly complete for a proposed road which would link Kitsault with the Nass River Road.* A microwave telephone system and power line already join Kitsault with the outside.

The property is located on both sides of a steep-walled valley at a minimum elevation of just over 1,000 ft. and rising to the tree line at about 3,300 ft. The valley is covered with a mature rain forest dissected by thickly overgrown slide areas. The old Torbrit road crosses the glacier-fed Kitsault River at the south end of the property and then follows the eastern bank of the river throughout the length of

the property. A few old overgrown trails and some shallow stream beds comprise the remainder of access routes. Terrain is steep and slippery, requiring the climbing of a vertical foot for each horizontal foot traversed.

PROPERTIES

The properties are located at Latitude $55^{\circ}42'N$; Longitude $129^{\circ}31'W$ (N.T.S. 103P/12 and 103P/11) and comprise:-

Crown Grants: 934, 935, 936, 937, 3192, 3193, 3194, 3195, 3196, 3197, 3198, 3634, 3794, 3795, 3796, 3797, 3798, 3806, 3807, 3808, 3809, 3810, 3814, 3815, 3816, 3818, 3819, 3825, 3826, 3827, 4066, 4067, 4068, 4069, 4070, 4071, Tiger, Lion and Plutus Fraction - no number, 4211, 4217, 4265, 4335, 4336, 4337.

Claims: Fr. 4260, 14218, 15347, 15348, 15311, 19605, 19607, 19609, 15604, 15806, 15807, 15808, 15809, 21159, 21160, 21161, 21162, 21333, 21334, 21735, 28821, 28822, 28823, 28824, 28825, 28826, 28827, 28828, 33523, 33524, 33525, 33526, 33528, 35410, 35411, 35412, 35413, 35414, 35415.

Licenses: L22-941, L22-942, L38-4213, L38-4214, L38-4215, L57-3802, L57-3803, L57-3804, L57-3805, L36-3519, L39-3828, L40-4263, L41-4202.

HISTORY OF EXPLORATION

Over 20 million ounces of silver and 10 million pounds of lead have been produced from the Torbrit and Dolly Varden Mines with a calculated average mine grade of 15.45 oz./ton Ag and 7.8 lbs./ton Pb as shown in Table 1.

Table 1

Metal Production in Kitsault Valley 1919-1959

<u>Property</u>	<u>Period</u>	<u>Short Tons of Ore Produced</u>	<u>Production</u>	
			<u>Oz. Silver</u>	<u>Lbs. Lead</u>
Dolly Varden Mines Co.	1919-1921	36,600	1,305,000	(none reported)
Torbrit Silver Mines Ltd.	1949-1959	<u>1,377,800</u>	<u>18,759,000</u>	<u>10,800,000</u>
TOTAL:		<u>1,414,400</u>	<u>20,064,000</u>	<u>10,800,000</u>

Dolly Varden ore was mined selectively and shipped without beneficiation to base metal smelters, mainly to the Anyox Copper Smelter of Granby Mines. The Torbrit ore was milled on the property for the production of a high-grade silver-lead concentrate and silver bullion. No other mining properties in the Alice Arm district have any recorded production.

Numerous mineral showings, on which a variety of development, via drilling, trenching or tunneling has been done, occur throughout the area. The majority of these were discovered in the period between the First and Second World Wars by individual and small company prospecting and as a result exploration records are minimal.

In this period a great number of small copper-gold-silver veins and pods, associated with a rusty pyrite-rich zone on the east ridge of a diorite intrusive, were found and explored. None of these "Copper Belt" showings have the continuity in grade and tonnage of the silver-lead veins.

During the 10-year operation of the Torbrit Mine systematic exploration, drilling and initial development was carried out on several prospects, including the North Star vein, which was blind to surface and discovered by drilling. However, by the time the Torbrit reserves were nearly exhausted, it was decided that it was not economical to extend operations to other prospects. F. A. Campbell, in a research study in 1959, summarized the geological and mineralogical features of the Torbrit Mine.

Dolly Varden Mines, the predecessor company to Dolly Varden Resources, explored the district from 1969 to 1973 under the field direction of M. A. Mitchell, company geologist. This exploration consisted of regional geological mapping, the drilling of numerous veins, including extensions of the Dolly Varden vein, and soil geochemical surveys over most of the Copper Belt showings on the west side of the Kitsault Valley and on seven claims on the east side of the valley between Tiger and Wolverine Creeks and south of the Wolf mine. During this period the Mitchell vein was found by prospecting and confirmed by a geochemical survey.

Numerous comprehensive reports were prepared by Mitchell describing the exploration results and his reports and maps are the foundation upon which our current programme and report are based.

Our review of numerous reports prepared by and for Dolly Varden over the years showed a general consensus of opinion that ore tonnages, in addition to those already known, would have to be found to justify a renewal of mining operations.

REGIONAL GEOLOGY

The Dolly Varden properties lie near the centre of a 40-mile by 15-mile panel of Lower Jurassic volcanic and sedimentary rocks of the Hazelton Assemblage which have been intruded by the Glacier Creek diorite and granodiorite stocks of Cretaceous and/or Tertiary age. To the west the panel is bounded by Tertiary felsic plutons of the Coast Crystalline Belt, and to the east and south by Middle and Upper Jurassic marine sediments of the Bowser Assemblage. An erosional unconformity occurs between the Hazelton and Bowser rocks; however, their ages are locally uncertain.

The Hazelton Assemblage is regionally folded along NNW-trending and somewhat arcuate axes which are normal to cogenetic lineations and minor folds. The area has been one of almost continuous tectonic activity since Jurassic times and the folding, uplift and erosion have formed linear belts of volcanic and sedimentary rocks which parallel the axis of the Tertiary plutons.

The Hazelton rocks in Upper Jurassic and Cretaceous times lay along a boundary zone between the subsiding Bowser Basin and the rising Stikine and Skeena arches, to the north and south, and the Omineca Crystalline Belt to the east. Deep fractures between these negative and positive tectonic elements are thought to have provided conduits for the Glacier Creek intrusions which are also oriented NNW.

NE-trending faults and younger, NNW-trending, strike-slip and thrust faults and younger NW-trending mafic dyke swarms complicate structure on both regional and local scales.

PROPERTY GEOLOGY AND MINERALIZATION

(1) Stratigraphy - Hazelton Assemblage

The Hazelton Assemblage consists of interstratified and inter-fingering clastic and pelitic sedimentary rocks and mafic volcanic breccias, tuffs and flows of Jurassic age. These were deposited at a time of periodic volcanism resulting in wedging, lensing and mixing of members and accompanied by rapid changes in colour and texture.

The Hazelton rocks generally exhibit a clastic or apparent fragmental texture; however, Grove (1971) noted that there were significantly more sedimentary features observable on the relatively unweathered surfaces. It is therefore possible that a greater proportion of the Hazelton is of a sedimentary or epiclastic nature than was previously recognized.

At least three periods of volcanism have interrupted the sedimentation and therefore the assemblage has been subdivided into three volcanic and two sedimentary members as shown in Table 2. The extent of these members beyond the area examined is unknown. However, it may be noted that detailed stratigraphic studies by Tipper and

Richards (in Souther, 1977) on Hazelton rocks, well to the south of the area, also indicated three volcanic units and a total thickness of 4,500 m for the Hazelton Assemblage.

Black (1951) divided the Hazelton Group into four formations comprising two sedimentary formations, "A" and "C", and two volcanic/volcanic-epiclastic formations, "B" and "D". This subdivision was also followed by Campbell (1959) and Mitchell (1973), the lower volcanic member not having been recognized on the property at that time. (See Maps 5 & 6)

The oldest volcanic member observed is a grey-coloured rock, comprising rhyolitic breccia, with 3" to 4" sized fragments, hornblende porphyry, tuff and massive mafic volcanics. The rocks dip westerly and total thickness is unknown.

The exposures, which are found at high elevations on the east limb of the syncline, on the east property boundary, consist of angular, closely-packed blocks upon which a white surface weathering produces a pavement-like texture. Rocks are altered to green colours around fractures. The upper unit of this member is green and contains chlorite and pyrite, i.e. typical propylitic alteration. A small breccia zone containing sphalerite and pyrite was found in these altered rocks.

The rocks appear similar to descriptions of the Monitor Lake rhyolite breccia which occurs at the base of the Bowser Assemblage to well north of the properties (Grove 1971).

Lower sedimentary unit "A" appears to overlies the volcanic member unconformably and is thought to be separated from it by a prominent fault; however, the extent of movement or direction of the fault cannot be determined. This member consists of volcanic tuffs, fine-grained breccia and agglomerate grading upwards into conglomerates, greywacke and to an upper, thinly-bedded argillite, the latter commonly isoclinally folded and cut by quartz-carbonate veining. Fossils are absent. A thickness of 500 ft. to 1,000 ft. was estimated by Mitchell.

Lower volcanic, volcanic-epiclastic member "B" conformably overlies member "A" and consists of typically massive, fine-grained tuffs with little sign of bedding but with rapid change in colour from green to brown to purple. These rocks are intruded by the young, steep-dipping mafic dykes and by a few small felsic stocks.

The majority of the silver-lead veins occur within this member but also occur near or in small stocks which may represent the remains of small diatremes. In the vicinity of the veins the rock is propylitized. Mitchell assumes a thickness of 3,000 ft. and describes a hematite-rich marker bed within this member, which caps the hills on the west side of the valley, but was not recognized on the east side.

Upper sedimentary member "C" conformably overlies volcanic unit "B". In limited exposures in the areas visited it comprises argillaceous sediments and sandstone containing rare fossils and tentatively classified as Jurassic. Minor mineralized breccia zones

Table 2

Upper Kitsault Valley Formations

Tertiary?		Dykes of andesitic composition Intrusive Contact
Cretaceous?	Glacier Creek Intrusions	Diorite-Granodiorite Intrusive Intrusive Contact
Jurassic?	Hazelton Assemblage	Youngest volcanic member "D" - fine grain tuffs, gritty tuffs thickness not known
		Sedimentary member "C" - argillaceous sediments, fossiliferous sandstone thickness 500'+?
		Volcanic, epiclastic member "B" - massive fine grained tuffs, breccia thickness 3,000'?
		Oldest sedimentary member "A" - argillite, tuffs, conglomerate, greywacke thickness 500-1,000' Local Unconformity?
		Oldest volcanic member - grey rhyolitic breccia, hornblende, porphyry, tuff, massive mafic volcanics thickness not known

occur within this member. A lower conglomerate, greywacke and limy shale, as reported by Mitchell (1973) and Black (1951), was not seen. Thickness is reported by Mitchell to be greater than 500 ft.

Upper volcanic member "D" was not observed on the property.

Mitchell and Black describe it as being similar to "B" and grading from gritty tuffs into fossiliferous marine sandstones and suggest that it postdates emplacement of ore minerals.

(2) Structure and Metallogeny

The Hazelton Assemblage occupies a synform whose axis trends NNW parallel to the Kitsault River. The axis of a complementary antiform lies about 2 miles east of the valley. About 3 miles south of the Torbrit Mine the synform is arched along a northeast axis which causes it to plunge north-northwesterly over the properties.

The Hazelton rocks are intruded by a diorite to granodiorite body, 4 miles long and 1 mile wide, whose east margin lies near the axial plane of the synform.

Thick, rusty, pyritic rhyolite flows with which many of the Copper Belt showings are associated lie on the east margin of this intrusive.

This epizonal pluton, although dated as Cretaceous/Tertiary by Carter (1971), is thought to be related to the source of the Hazelton volcanics and to the mineralization in the district since

the mutual contacts are gradational. It is also possible that the Hazelton could be closer in age to the intrusives as its precise age in the district is reported to be somewhat uncertain.

The transition from gradational contacts between the intrusives and the Hazelton volcanics on the west margin, to an abrupt contact on the east margin, is thought to indicate an eastward movement of a volcanic vent with the east margin representing a periodically active fissure zone (Mitchell 1973, Tipper and Richards 1977, in Souther 1977).

Smaller felsic intrusive bodies and young diabase and lamprophyre dyke swarms occur both to the east and west of the synformal axis and may be related to minor mineralization, but not to the ore veins, in the district.

Two sets of major faults, trending northeast and northwest, dominate the topography and influence the direction of many of the streams. The dextrally-displaced northeast set represents normal fault displacement whereas the sinistrally-displaced northwest set represents cross-cutting strike slip/thrust faulting. Thin diabase and lamprophyre dyke swarms occupy many of the northeast fault trends; however, since they weather low they are difficult to identify in the field. Some of the silver-bearing veins, particularly the Wolf, parallel the northeast fault set. However, within these veins the extent of mineralization appears to be controlled by the displacement and attitude of the cross-cutting northwest fault set (Mitchell 1973).

(3) Mineralization

Mineral veins on the Dolly Varden properties occur as:-

- (a) Quartz-carbonate-pyrite with minor chalcopyrite. Textures are simple and the wall rocks are commonly propylitized. These are assumed to be first generation mesothermal veins.
- (b) Crustiform and colloform galena, argentiferous galena, sphalerite, marcasite, pyrargyrite and native silver occurring within quartz-calcite and barite gangue. Wall rock alteration is minor. Barite appears to be associated with the better lead and zinc values.

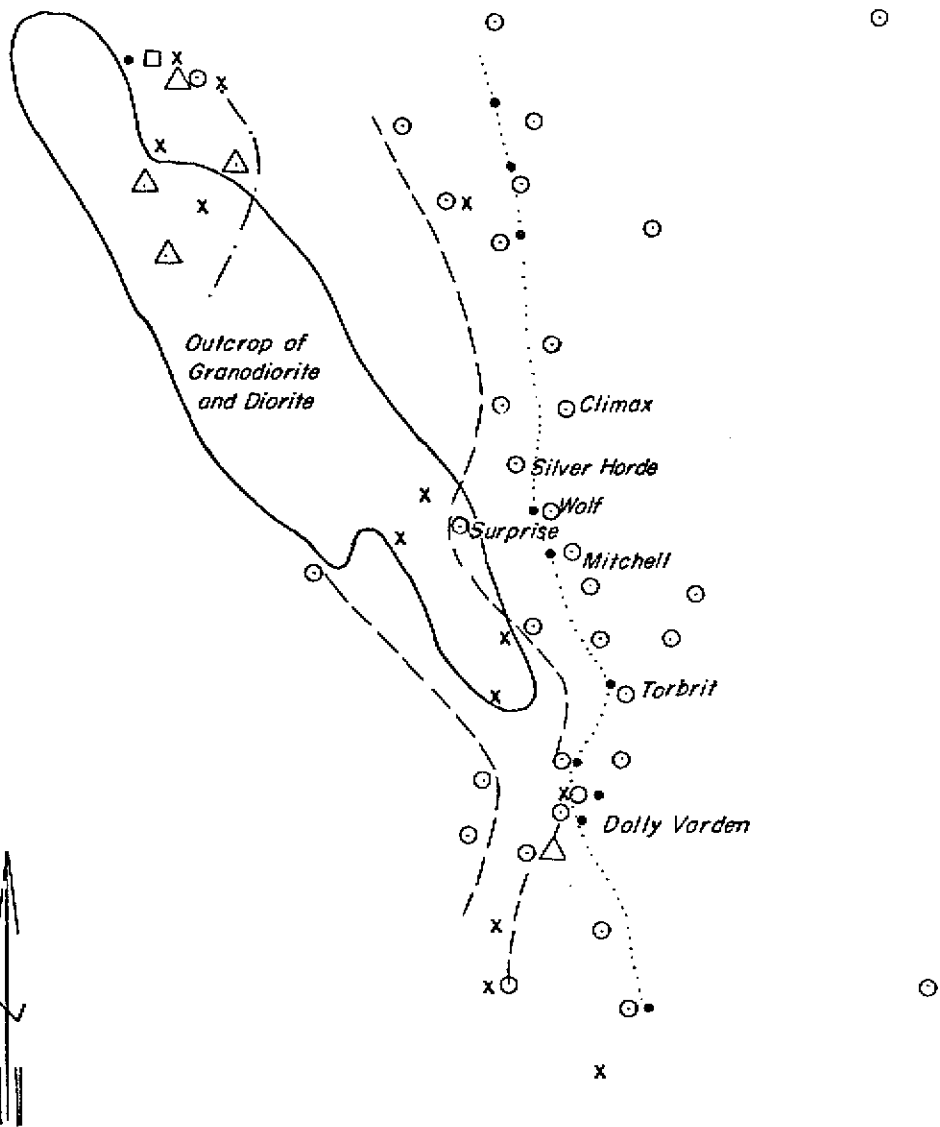
These are assumed to be second generation epithermal veins and constitute the economic mineralization of the district, i.e. Dolly Varden, Torbrit, Wolf, North Star, Mitchell, and Silver Horde.

Mitchell has suggested that the mineralization is structurally controlled and related to a ring-dyke complex and that much of the 1st generation mineralization was replaced by epithermal mineralization emanating from a volcanic vent area along favourable beds, primarily in the Lower volcanic, volcanic-epiclastic member "B".

Epithermal zoning can be identified from a plot of the various showings and veins in the Alice Arm district. In Fig. 2, derived from the map to accompany Bulletin 63, at least four zones are believed to occur, each one progressively outward and eastward from the diorite-granodiorite pluton:-

- (a) Gold-copper mineralization within and along the northeast extremity of the pluton (Copper Belt in part).
- (b) (i) Copper within pluton (Copper Belt in part).
(ii) Copper-silver in Hazelton rocks on the east margin of the pluton, e.g. Surprise showing.
- (c) Silver and silver-lead within Hazelton rocks, e.g. Dolly Varden, Torbrit, Wolf, North Star, Mitchell, Silver Horde and possibly the Climax showing.
- (d) Silver - prospects east of property boundary.

The distribution of the mineralization is naturally a function of the historic prospecting and, as discussed at the close of this report, the prospecting has been particularly thorough in the Alice Arm district.



- Ag ○
- Pb ●
- Zn □
- Cu x
- Au △

DERRY, MICHENER & BOOTH		
DOLLY VARDEN		
Known Mineral Showings Suggesting Epithermal Zonation		
Compiled:	Date:	fig.2
P. MICHNA	1978	

GEOCHEMISTRY

(1) Orientation Surveys

Originally plans had been made to carry out test profile and grid sampling over some of the more accessible Ag-Pb veins to determine:-

- (a) the optimum sample grid,
- (b) down-slope migration of anomalous metal content,
- (c) which parts of the soil profile showed the maximum contrast between background and anomalous metal content, particularly silver, in soil.

Fortunately, just prior to commencement of field operations a further search of company records located a comprehensive report and map concerning grid soil geochemical surveys carried out on the Wolverine, D'Artagnan #1, Hill Billy, Athos, Porthos and Armes claim groups which were sampled by Mitchell in 1971. These samples, collected on a 200 ft. by 400 ft. chained grid with detailing on a 100 ft. by 100 ft. grid, were collected from the "B" zone at a depth of about 18 in. below surface and analyzed for lead, zinc and silver. The data quite clearly show excellent correlation between all elements and known veins such as the North and South Musketeer veins and in addition four new geochemically anomalous zones were found in this survey.

As a result the only orientation work undertaken was a soil traverse over a vein in the Tiger claim which had been explored by an adit, and also by nearby trenching. The geochemical data, on Map 2-2A, show strongly anomalous silver and lead over the projected position of this vein.

Mitchell established the following anomalous levels:-

lead	160 ppm
zinc	300 ppm
silver	3 ppm

The outlines of the anomaly areas discovered in the 1971 survey are shown on the 300 scale geochemical compilation map and two of the anomalies were prospected this season.

(2) Soils

The soil profile in the Kitsault Valley varies with elevation. In the lowest portion the residual soils are overlain by glacial silts deposited from spring flooding, or are absent, and therefore in general such areas were not sampled. Above the flood plain the organic horizon is up to 2 ft. in thickness and is underlain by 12 in. to 18 in. of oxidized material and by angular bedrock rubble. As altitude increases the soil becomes thinner and the highly oxidized portion representing the B horizon immediately underlies the grassroots and within 2 in. to 4 in. of the underlying rubble.

As expected, soil creep is significant in this area of extreme relief despite the presence of the stable virgin forest cover and therefore anomalous trains from veins tend to be quite long which reduces the usefulness of rigorously drawn geochemical contours. Accordingly, we have merely size-coded the values to distinguish those threshold and anomalous samples.

(3) Field Operations

A total of 1,159 reconnaissance and 124 detail soil samples and over 200 rock samples were collected during the period July 15th to September 27th, 1978. All soils and 48 of the rock samples were sent to Chemex Laboratories in Vancouver for geochemical analysis and assay for Pb, Zn and Ag content. Soil samples were taken at 200 ft. intervals in the reconnaissance phase along pace and compass lines 300 ft. apart. In the detail phase samples were taken at approximately 100 ft. intervals. Due to the severity of the slopes, normally 45° , the lines were run parallel to topographic contours which cross the geological trend at an angle of approximately 30° . Pocket altimeter readings were taken at each sample site for local control and were corrected daily to base elevations established along the mine road. Sample sites were marked in black waterproof ink on 24 in. long orange flagging tape.

The most rusty and darkest red-brown material from the B horizon, normally occurring at a depth of 18" to 24", was taken with a hammer-mattock at each sample site. Local float exposed during the digging was routinely examined and checked for mineralization. During the survey small pockets of local glacial till and slag from old roasting operations were encountered and care was taken to avoid collection of such material, particularly the slag. Considerable effort was similarly taken to obtain optimum quality consistent material. In some areas this entailed the digging of several trial holes and a minimum of 15 minutes to obtain the requisite 4-6 oz. sample needed to fill an 8 in. by 3 in. Kraft paper sample bag.

The sample numbers and values were plotted on base maps derived from Mitchell's 300 scale base maps, these being the most reliable property maps in a general sense. Nevertheless, there are numerous discrepancies between calculated and actual field positions of the sample lines with respect to the elevation contours and the resultant location of the samples is a "best fit". Starting and ending points of each line were marked in the field with respect to creeks and thus any sample point can be found with minimal difficulty should further sampling be undertaken.

(4) Geochemical Analysis

Soil samples were oven-dried in Chemex's laboratories, crushed lightly and sieved through 80 mesh screening. A cut of the -80 mesh fraction was digested completely in HCl.HNO_3 and the resultant solution aspirated into an atomic absorptiometer for determination of lead, zinc and silver content. The limits of detection for silver are 0.1 and 20 ppm Ag.

After receipt of 25% of the reconnaissance sample analyses preliminary statistical calculations were carried out from which we established threshold levels of 3 ppm Ag, 210 ppm Pb and 270 ppm Zn. These levels were in general agreement with levels previously determined by Mitchell in his survey of the Musket Creek area in 1971, and therefore all areas containing in excess of 3 ppm Ag were selected for detailed sampling. This fairly low threshold gate was selected to ensure that any possible areas of interest would not be screened out in the detailed sampling phase.

(5) Interpretation of Geochemical Data

A statistical evaluation of the geochemical data was carried out with the aid of a Texas Instruments TI-59 programmable calculator fitted with a statistics module and a PC-100A printer unit. A ten-cell classification was used and all samples including erratic highs were entered with the exception of 85 samples representing the barren youngest argillites (Member C) lying in the axis of the synform. Values with the argillite area are all below the mean and no significant mineralization, historic or recent, has been found in these rocks. Similarly, data from detailed sampling was excluded since these would introduce a statistical bias. Frequency distribution and cumulative frequency distribution histograms were also prepared for Ag, Pb and Zn (Fig. 3, 3A, 4, 4A, 5 and 5A).

All three elements show lognormal distribution with a single population for lead and two populations for silver and zinc.

In accordance with commonly accepted statistical treatment, and as shown in Table 3, the data were classified as:-

Background - values below the mean plus 2 standard deviations ($\bar{x} + 2 \text{ SD}$)

Threshold - $\bar{x} + 2 \text{ SD}$ to $\bar{x} + 4 \text{ SD}$

Anomalous - $> \bar{x} + 4 \text{ SD}$.

$$\text{Mean of x-array} = \bar{x} = \frac{\sum x}{N}$$

$$\text{Standard Deviation of x-array} = \text{S.D.} = \frac{\sum x^2 - \frac{(\sum x)^2}{N}}{N-1}$$

Table 3

Statistical Classification of
Reconnaissance Geochemical Data

(Excluding Argillite in Synform)

	<u>Lead</u>	<u>Zinc</u>	<u>Silver</u>
Number of Samples	1077	1074	1074
Range	1-6800 ppm	1-2500 ppm	0.1-20 ppm limit
Mean \bar{x}	70 ppm	126 ppm	1.16 ppm
Standard Deviation-S.D.	260 ppm	188 ppm	2.53 ppm
Calculated Threshold	590 ppm	507 ppm	6.22 ppm
Calculated Anomalous	> 1109 ppm	> 878 ppm	> 11.3 ppm

5 10 15 20

(6) Discussion of Results

(a) Silver

The cumulative frequency histograms shows at least two sample populations which confirm the occurrence of silver as argentiferous galena, pyrargyrite and in native form within the veins of the district. Exploration reports indicate only a general correlation between silver and lead mineralization and therefore those values lying between 4.1 and 8.0 ppm Ag, marked by the slope breaks in the curve representing the mixing zone of the sample populations, are thought to be significant even although the calculated threshold is 6.22 ppm.

As shown on the geochemical plans values are grouped and size-codes as follows:-

		<u>No. of Samples</u>
Background	0 to 4.0 ppm Ag	982
Threshold	4.1 to 8.0 ppm Ag	67
Anomalous	8.1 ppm Ag	25

For comparison, Mitchell's classification (1971) for only 151 samples in the Musket Creek area was:-

Background	0 to 0.5 ppm
Threshold	0.6 to 0.9 ppm
Anomalous	1.0 ppm Ag +

Mitchell found, however, that the anomalies were too erratic and widely distributed at the 1 ppm level and accordingly drew contours at 3 and 5 ppm which then confirmed the lead anomalies.

(b) Lead

Lead occurs solely in galena and it would appear that its content is generally uniform within the Hazelton Assemblage (excluding the youngest argillites).

There are only 6 threshold and 11 anomalous samples and all of these are accompanied by threshold or anomalous silver content.

(c) Zinc

Zinc reports as two populations, believed to represent the two mineral forms, sphalerite and rhodochrosite. Values between 400 ppm and 800 ppm Zn, marking the points of slope break of the curve, represent a zone of mixing. In view of the historical fact, however, that zinc does not always accompany the silver-lead veins, the higher calculated threshold level of 507 ppm has been selected as being significant. There are accordingly a total of 31 threshold samples and 12 anomalous samples.

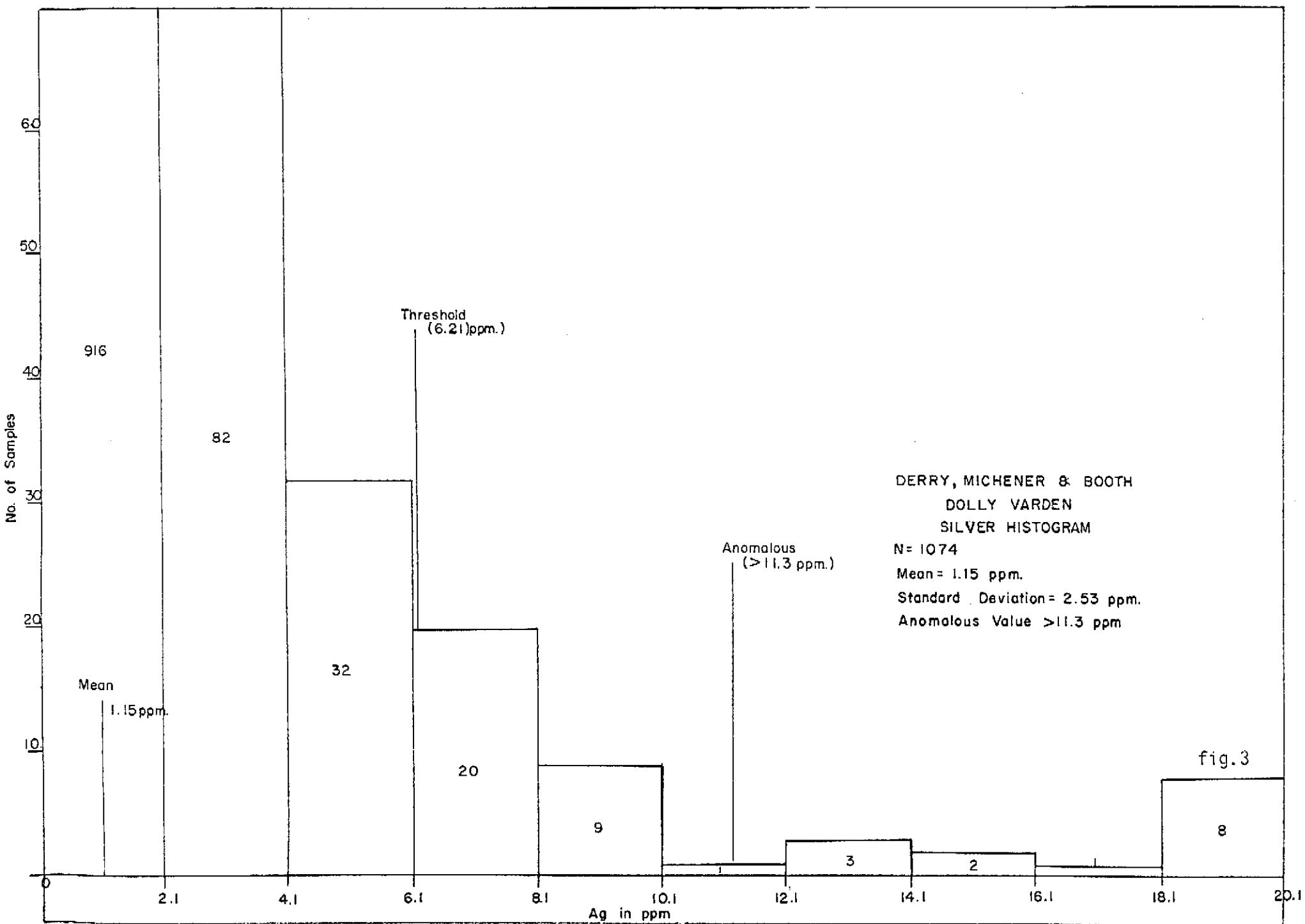
(d) General

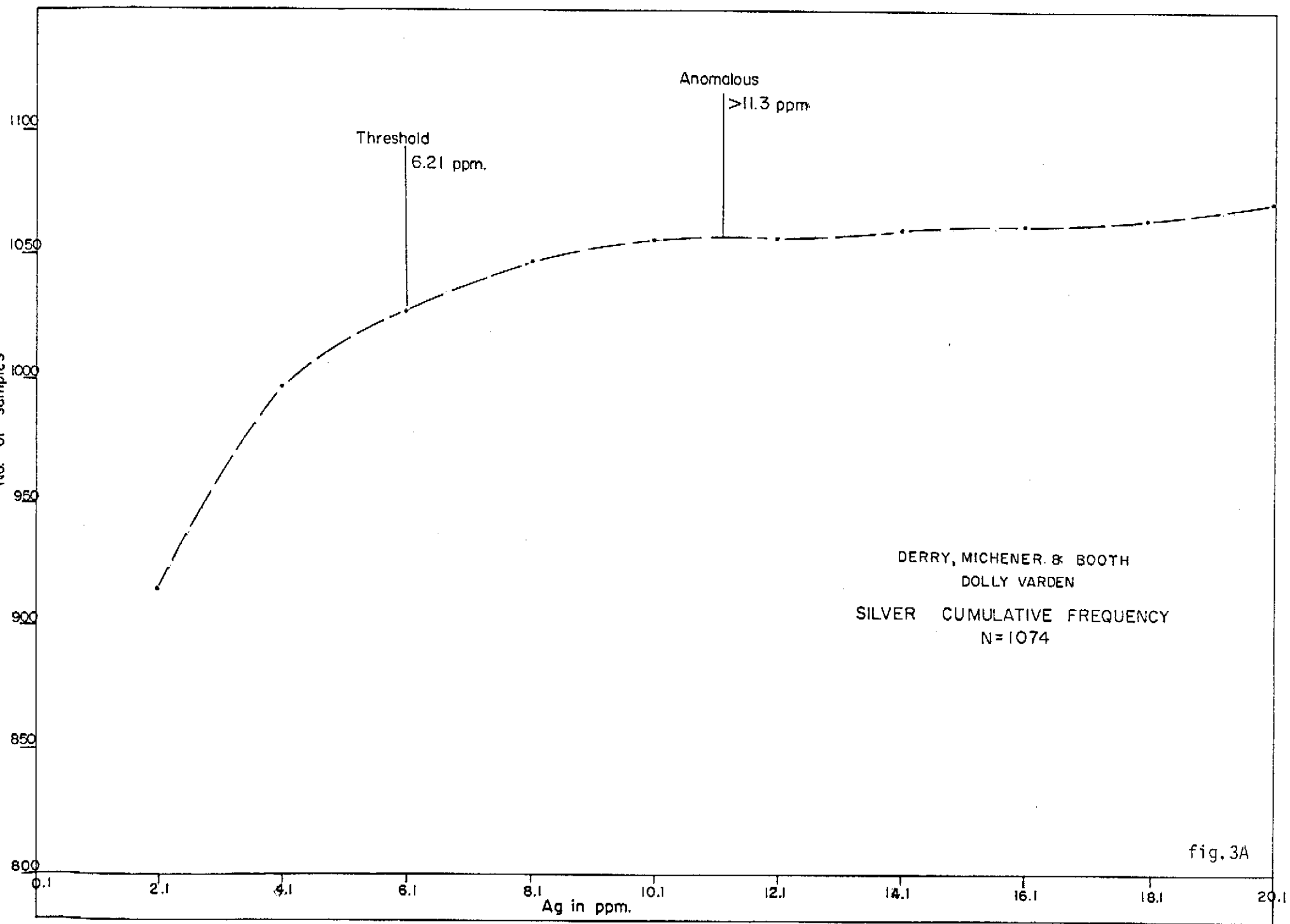
A review of the distribution of threshold and anomalous values of silver-lead, and to a lesser degree of zinc, show that only seven anomaly areas, including the Mitchell vein extension, have been found in this programme. These were outlined early in the survey and in addition to several single point anomalies were accordingly investigated by prospecting and detailed soil sampling on a scale of 1"=100'.

All of these anomaly areas have been corroborated by the discovery of rusty and/or mineralized bedrock rubble and we have observed that the overburden cover, although extensive, is actually very thin, beyond the alluvial flood-plain.

Geochemical results for these areas are described in the following section.

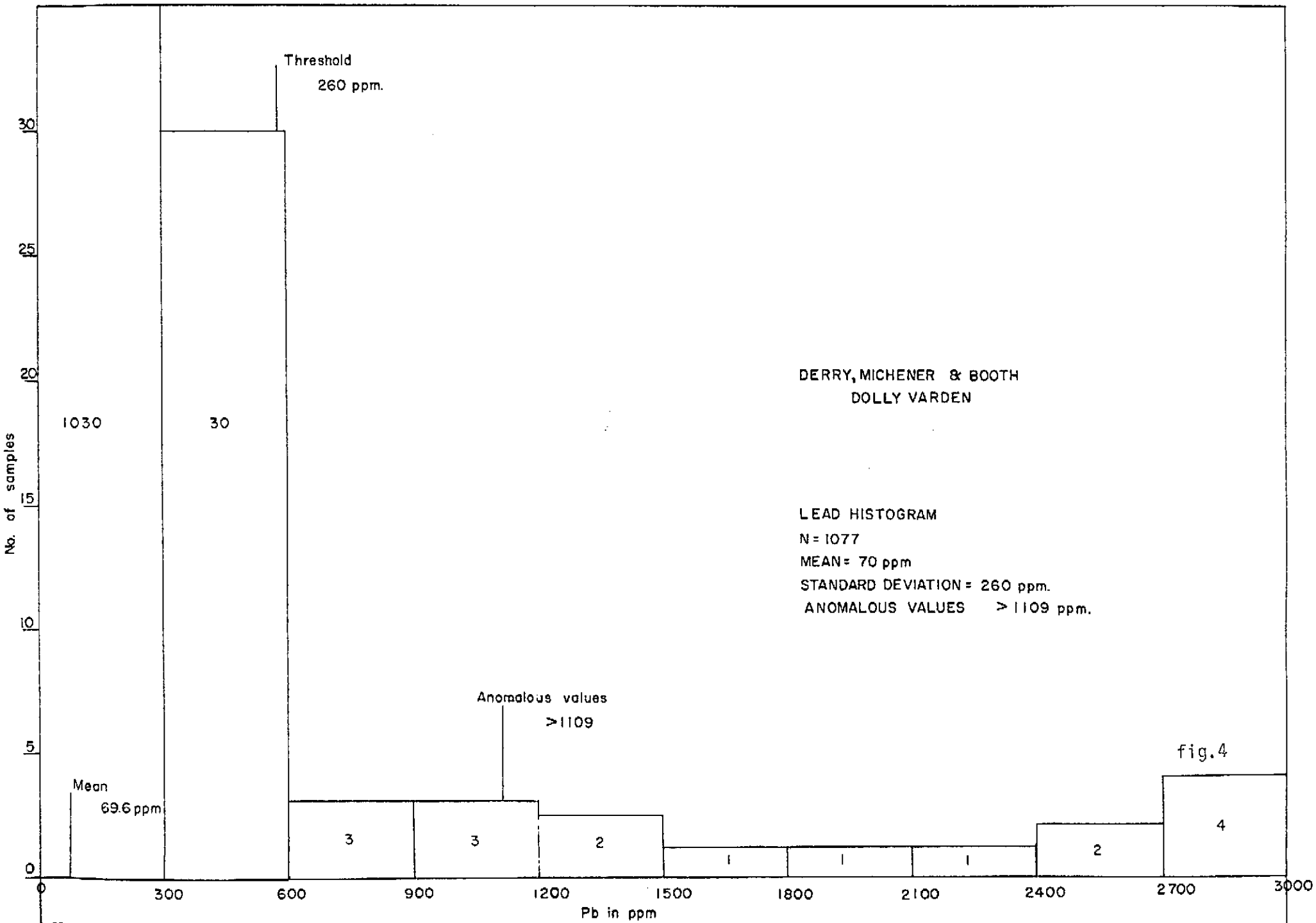
3 1/2 1/2

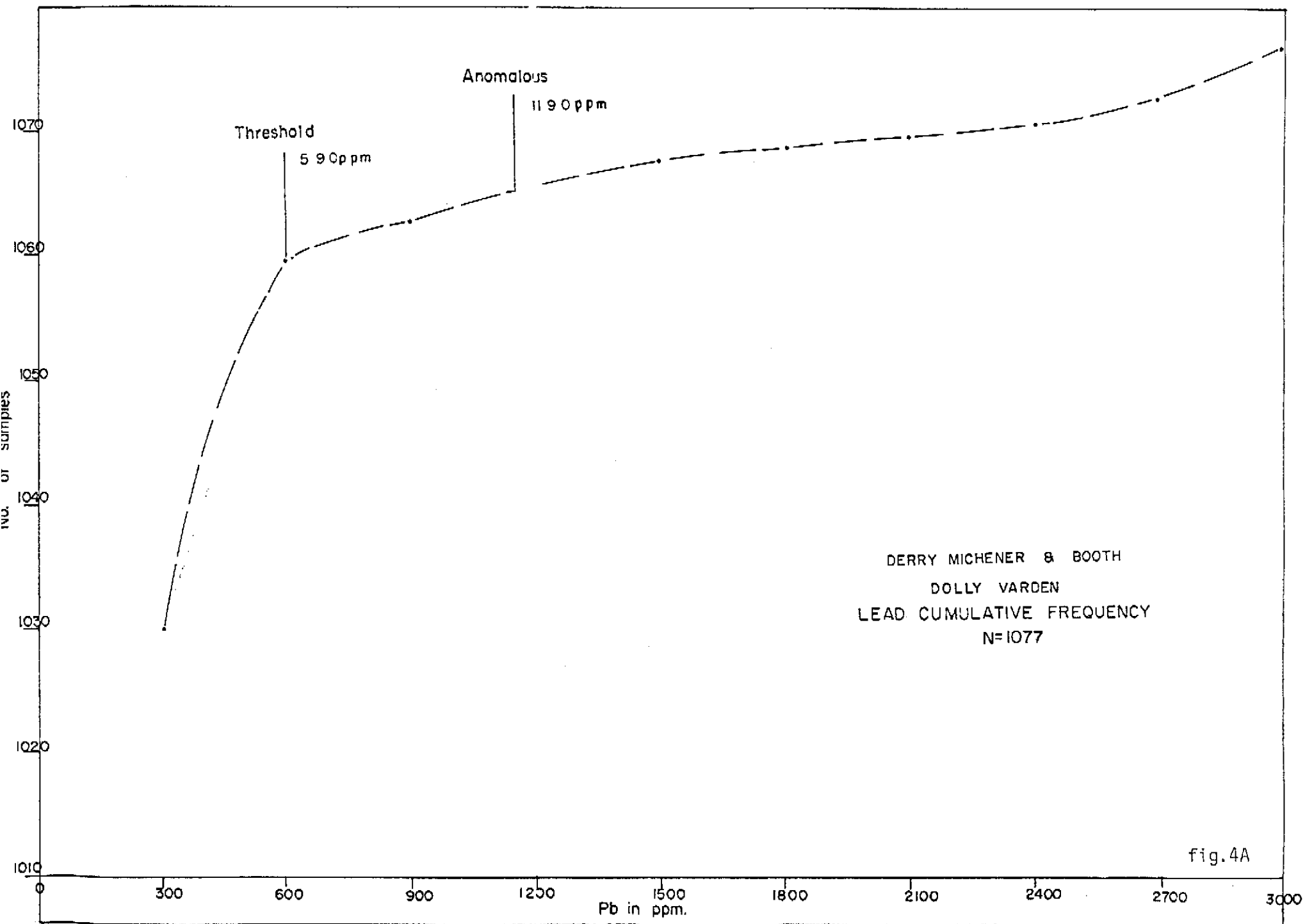


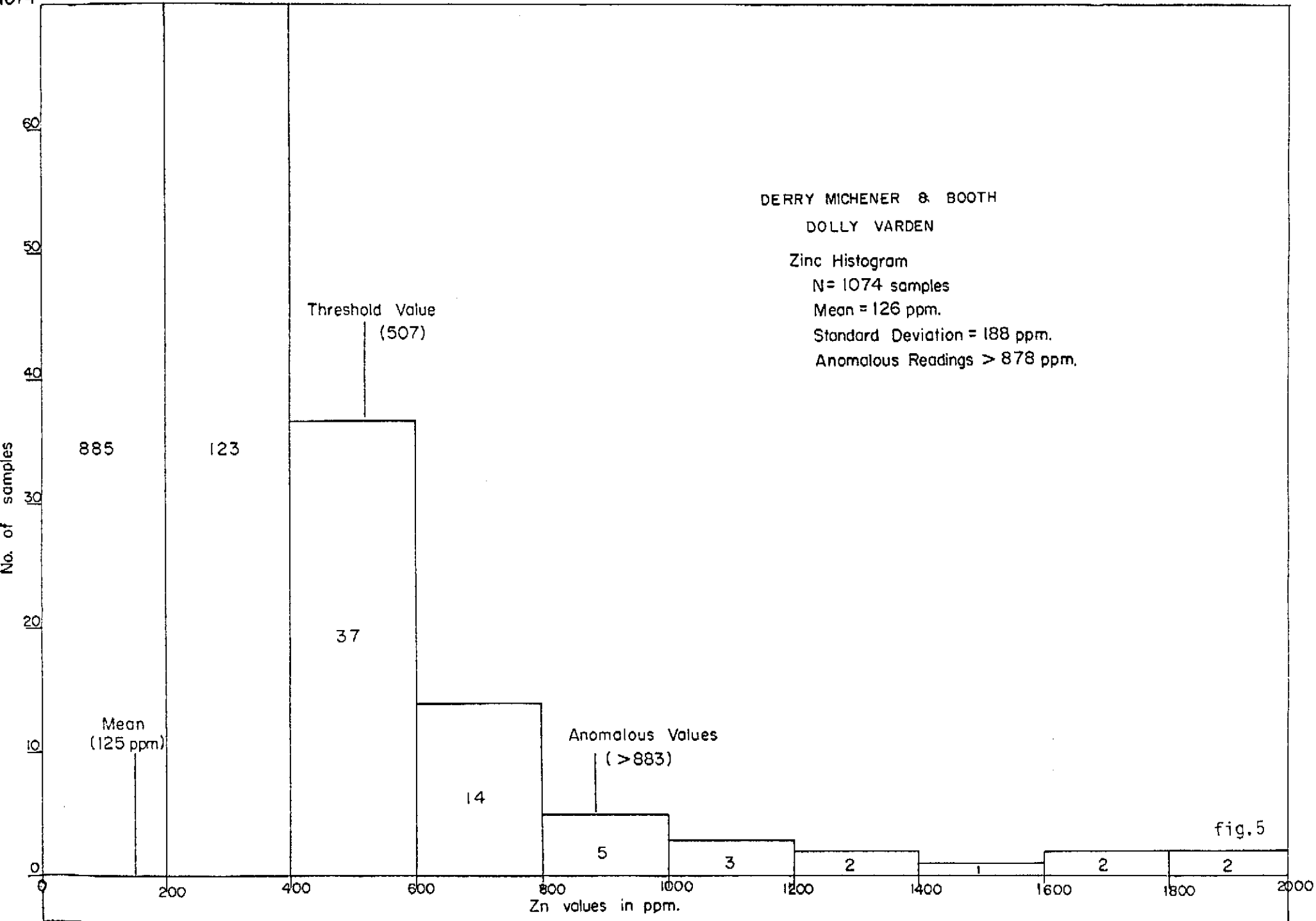


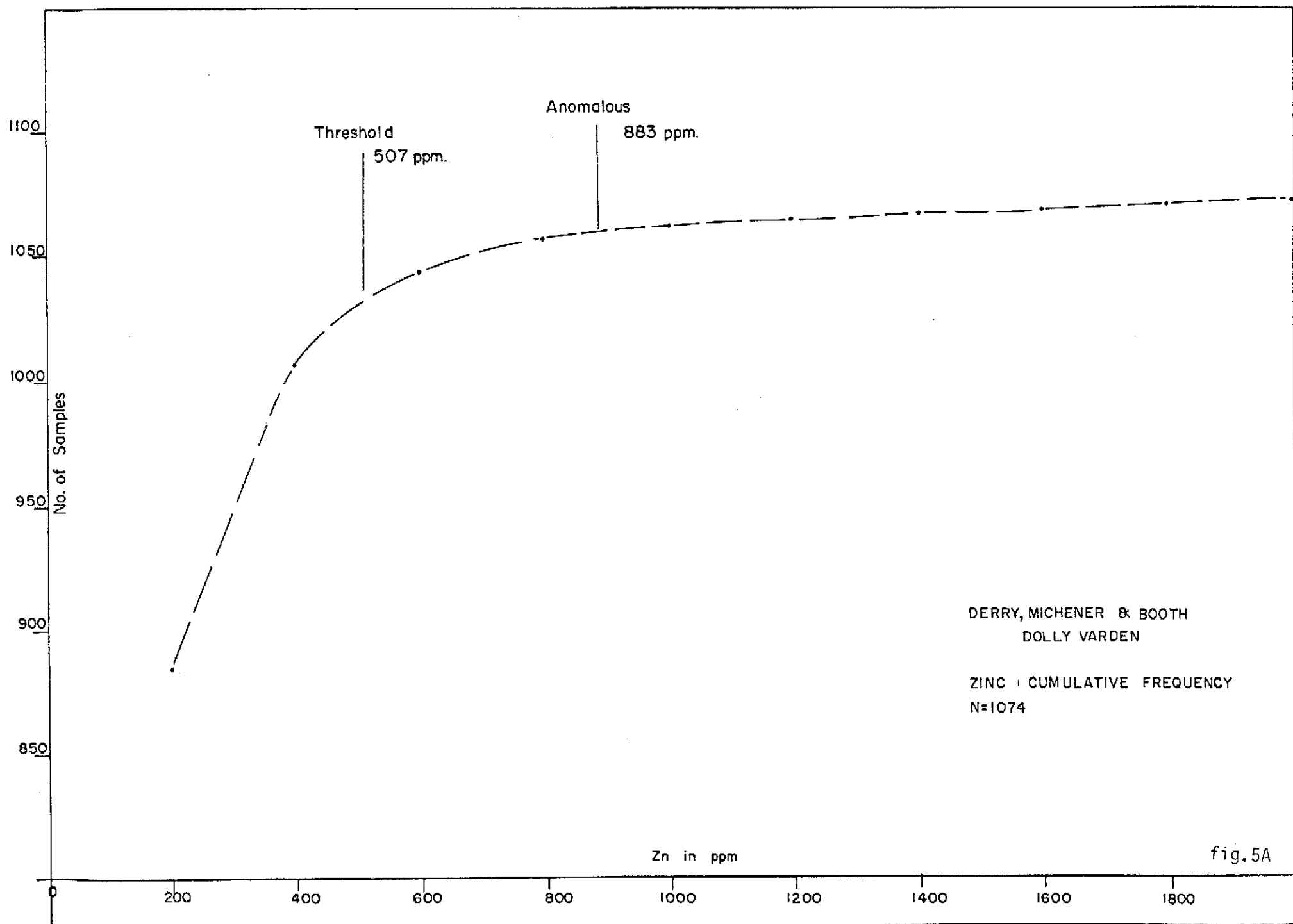
DERRY, MICHENER & BOOTH
DOLLY VARDEN
SILVER CUMULATIVE FREQUENCY
N=1074

fig. 3A









ANOMALOUS AREAS - FROM SOUTH TO NORTH

(1) Dolly Varden #3 Claim 33523 - Detail Dwg. #1-1A

This property, the former Wild Cat, E and D, Bobcat claim, is reached by an old trail beginning beside a cabin just south of the mouth of Homestead Creek. Homestead Creek parallels a major NW fault which may limit the mineralized zone. The prospect, originally based on copper, consists of three short adits (one hand-steeped in 35 ft.) which follow quartz-carbonate veins along the south side of the creek in propylitized massive volcanics possibly overlain by intermediate volcanics. Chalcopyrite is found in the rubble below the adits. An assay of a galena-bearing quartz-carbonate vein yielded 0.8% Pb, 0.8% Zn and 7.9 oz./ton Ag. A single anomalous soil sample, 3950 ppm Pb, 2500 ppm Zn, led to the detail follow-up sampling programme which was done above the adits due to the extensive debris lying below them. No geochemical extension to the veins was indicated in 16 follow-up samples. The presence of old drill steel suggests that the property has been drilled. A rock sample with 14.8% copper was taken.

(2) Moose-Lamb Crown Grants 936-937 - Map #1-1A

Values up to 3150 ppm Pb, 540 ppm Zn and >20 ppm Ag were encountered in the area between the Moose-Lamb vein and the Torbrit Mine. Slightly to the south, four other anomalous soil samples yielded values ranging from 550 ppm to 1800 ppm Zn and 3.4 ppm to 5.0 ppm Ag. Records show the Moose-Lamb vein has been closely investigated and

drilled. The area is littered with debris from previous work causing possible contamination; however, known silver mineralization occurs in the vicinity and therefore the area is one of continuing interest. Thin soil and severe terrain prevent comprehensive soil sampling, thus efforts were concentrated on other areas. This area requires further investigation.

(3) Tiger Crown Grant - No Number - Detail Dwg. #2-2A.

Silver values in soil samples were encountered part way up the creek where it forks at a northwest-trending fault. A single line of samples, reporting up to 12 ppm Ag and 760 ppm Zn, extend southwards for nearly 1,000 ft. to the middle of the Tiger Crown Grant where known mineralization and highly anomalous soil values of 1750 ppm Pb, 1000 ppm Zn and >20 ppm Ag are found. Numerous cliffs and slides in the area limit comprehensive coverage but 26 follow-up samples were taken to substantiate the earlier values. The results suggest an additional mineralized zone to those previously known lying northwest of the present veins. The size, continuity and limits of this zone cannot be determined at this time.

During this investigation an old prospect not shown on recent maps was located along an overgrown trail just north of Tiger Creek. Minor galena-quartz-calcite mineralization extends for only a few feet and evidence of at least three diamond drill sites was seen.

(4) D'Artagnan #1/Wolverine, Crown Grants 4069 & 3797 - Dwg. #3-3A - Mitchell Vein Extension

This area of high metal values, which is an extension of the Mitchell vein, can be reached by traversing due east from the northern end of Musket Creek flats. Detail geochemical sampling was carried out in the vicinity of a known galena-sphalerite-silver-pyrite showing in D'Artagnan #1 where values up to 3200 ppm Pb, 1150 ppm Zn and 4.0 ppm Ag occur. Rock samples taken for assay are listed below:-

<u>Sample Number</u>	<u>Rock Assays</u>		
	<u>% Pb</u>	<u>% Zn</u>	<u>Oz./Ton Ag</u>
A-366	11.0	4.40	2.32
A-367	0.21	1.35	1.84
A-370	0.24	0.08	0.82
A-374	0.28	0.14	23.08

A total of 32 follow-up soil samples were collected and a strong geochemical anomaly 500 ft. long and 70 ft. wide, trending NW-SE, with values up to 4450 ppm Pb, 1150 ppm Zn and 13 ppm Ag was outlined. These values indicate an anomalous area extending ESE for 800 ft. from the Mitchell vein extension to a pyritic siliceous "plug" which commands the ridge above Musket Creek. Soil values and the float train taper off within the last 300 ft. WNW of the "plug".

Three vein segments, each progressively offset to the south as you move east, were noted. In each segment the quartz-carbonate vein measures 4 ft. long by 1 ft. wide. The vein occurs in propylitized

volcanics and contains colliform structures with rhodochrosite and a white crustiform coating on pyrite clusters. Notable is the green, lustrous, fractured sphalerite that surrounds some galena grains. It is quite unlike the honey-brown and green-brown sphalerite found elsewhere. Trenching by previous workers appears to have been minimal. Additional work to expose more of the vein is recommended.

(5) Wolverine Crown Grant 3797 between Wolf & Wolverine Creeks - Detail Dwg. #4-4A

Mitchell (1971) found a soil anomaly in this area but never initiated follow-up sampling. To check this anomalous area 38 soil samples were taken and 4 anomalous sites reporting 15 ppm Ag and >20 ppm Ag in the northwest and 7.8 ppm Ag and 13 ppm Ag in the southwest were found. A lack of outcrop in the area makes it difficult to connect the two highs. Trenching could not be carried out this season due to a lack of time. The values, however, are sufficiently high to indicate that samples were collected directly over or near mineralized material of unknown dimensions. Additional sampling to the west and trenching would help to clarify the situation.

(6) Silver Horde - L57-3804 - Detail Map #4-4A

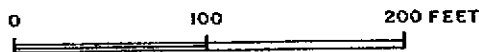
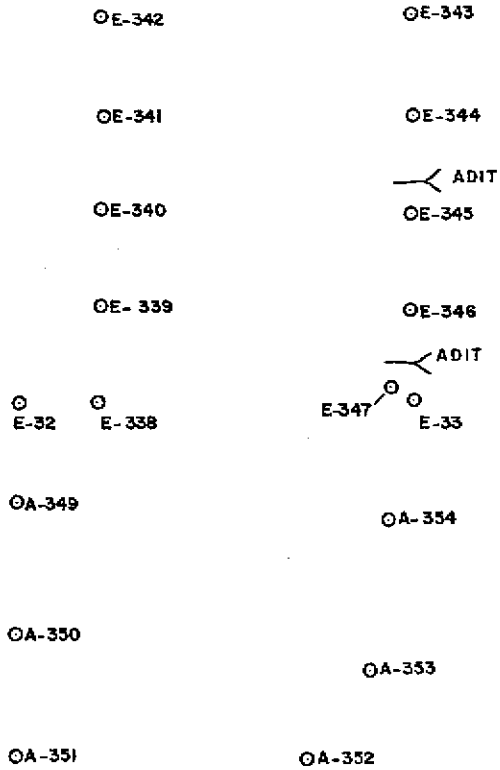
A relatively large area of silver and lead geochemical anomalies trending 1,200 ft. N-S over a 100 ft. width occurs just north of the Wolf Mine. Soil sample values of up to 6800 ppm Pb, 1616 ppm Zn and >20 ppm Ag are found in the area, which has been outlined in previous

geological investigations. A total of 41 soil samples were collected, some of which were anomalous; however, they did little to more precisely define the area. A rock assay from one of the known showings yielded 0.63% Pb, 0.04% Zn and 6.06 oz./ton Ag. Of the two known narrow galena-sphalerite-silver-pyrite vein showings in the area, one may have been drilled by a small portable drill and both have been trenched. A third vein segment near the Wolf Mine was undoubtedly drilled from the flood plain of the valley (by Bralorne?).

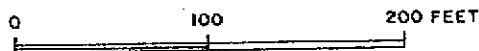
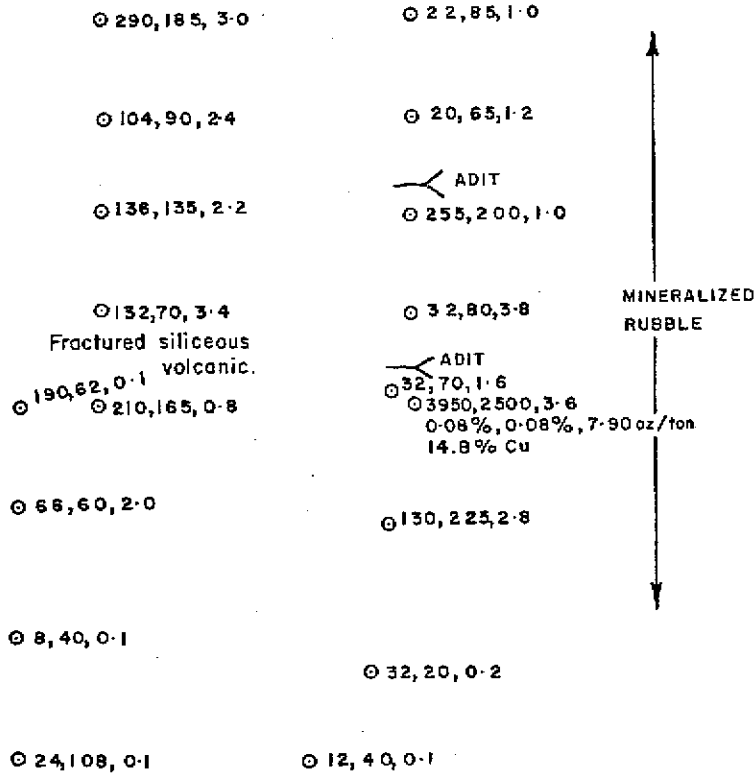
Showings occur at the top of slides in narrow rhyolitic breccia veins which are topographically overlain by a massive intermediate to acid volcanic ridge and coarse fragmental. The area downslope from the mineralized breccia is obliterated by slides suggesting that a soft or friable bed exists. The steep slopes probably cause a much wider geochemical expression than would be found on more level ground. Further work in the area should be concentrated on exposing and defining the veins.

(7) Silver Horde #2, L22-3805 - Detail Map #4-4A

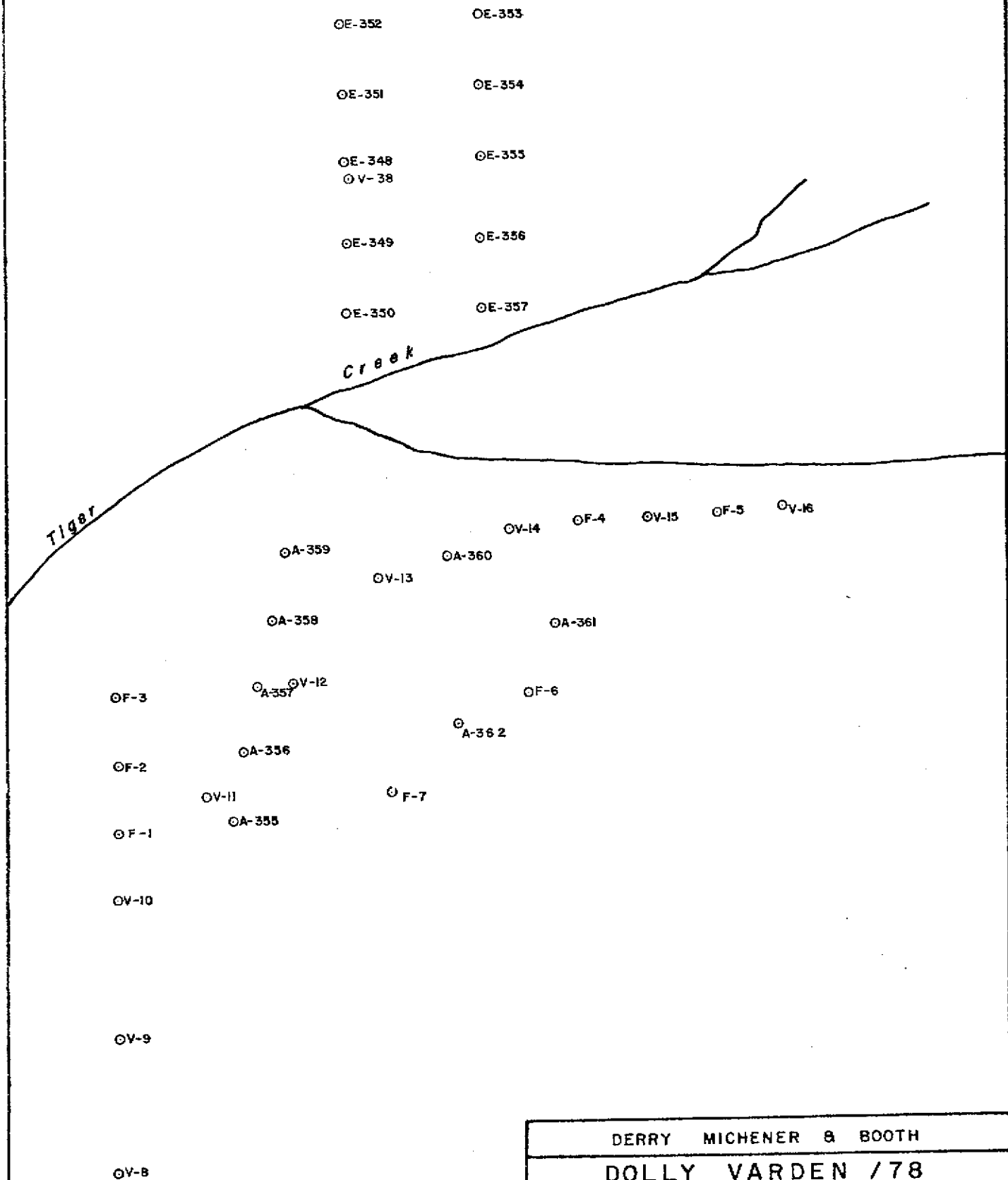
The Climax, York and Moose showings all occur in the vicinity of this area. Soil sample values of up to 575 ppm Pb, 700 ppm Zn and 18.0 ppm Ag were found scattered over a large area. Rock samples in the claim yielded the following results:-



DERRY MICHENER & BOOTH		
DOLLY VARDEN / 78		
DOLLY VARDEN # 3 CLAIM 33523		
DETAIL GEOCHEMICAL SAMPLE LOCATIONS		
Date: Nov. '78	By: P.D.M.	Dwg. No. 1

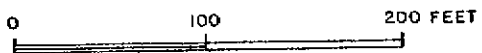
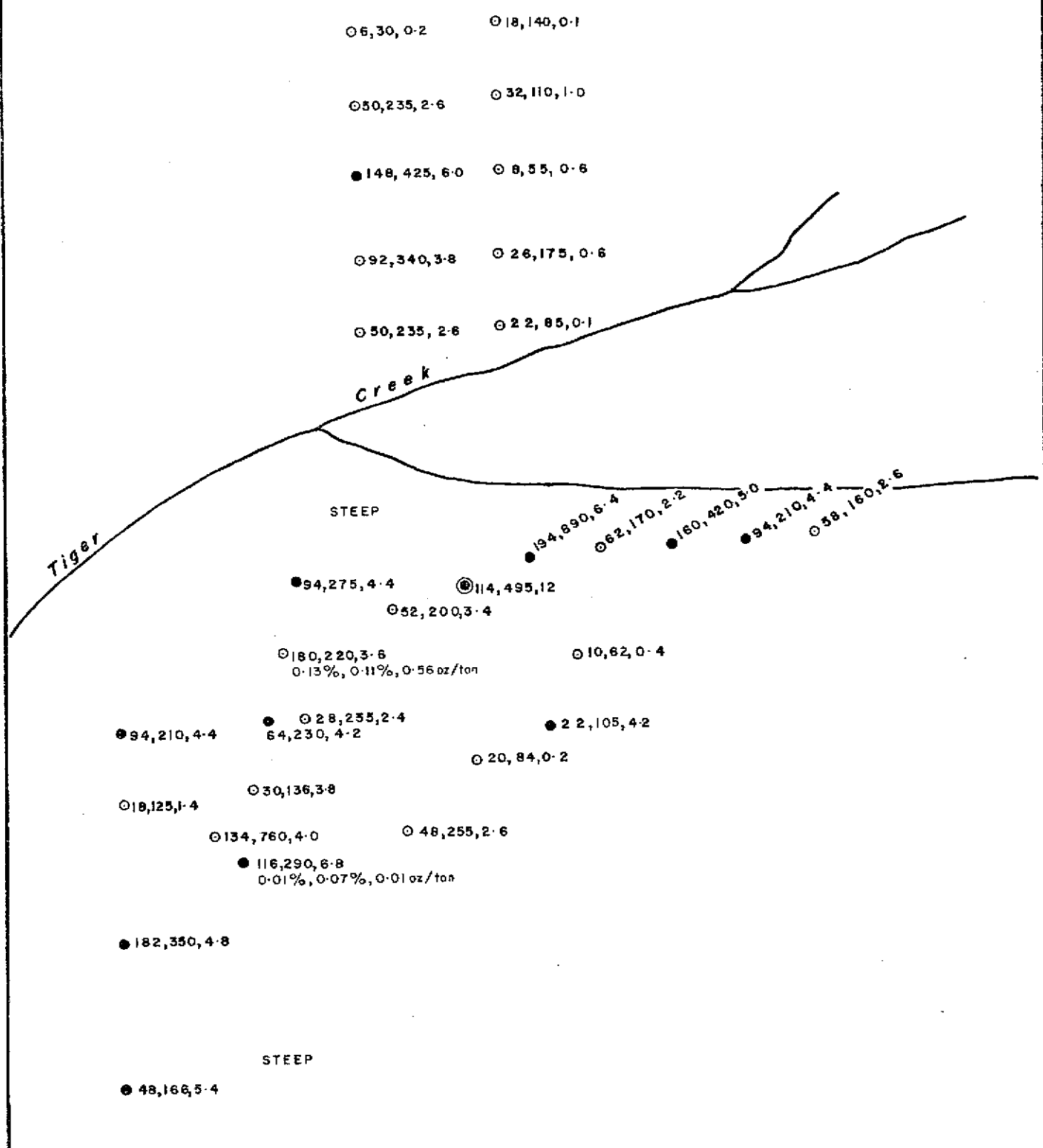


DERRY MICHENER & BOOTH		
DOLLY VARDEN /78		
DOLLY VARDEN #3 CLAIM 33523		
DETAIL GEOCHEMICAL RESULTS		
Date: Nov. '78	By: P.D.M.	Dwg. No. 1A



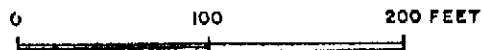
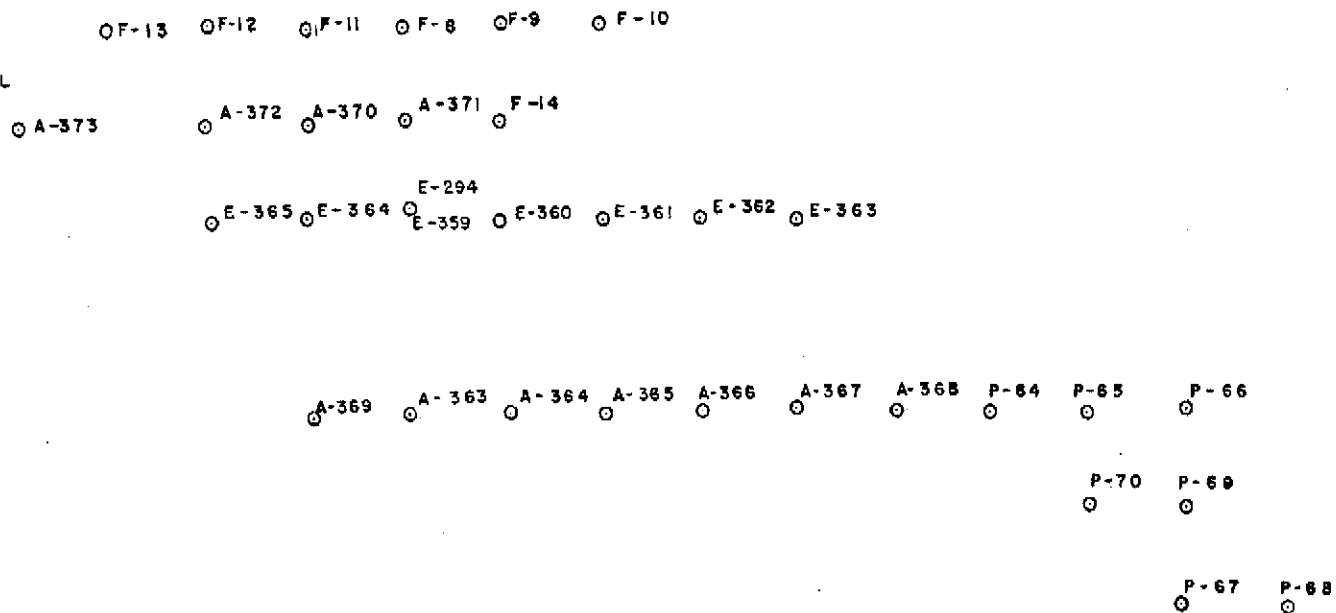
DERRY MICHENER & BOOTH		
DOLLY VARDEN / 78		
TIGER C.G.		
DETAIL GEOCHEMICAL SAMPLE LOCATIONS		

Date: Nov. '78	By: P.D.M.	Dwg. No. 2
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DERRY MICHENER & BOOTH		
DOLLY VARDEN / 78		
TIGER C.G.		
DETAIL GEOCHEMICAL RESULTS		
Date: Nov. '78	By: P.D.M.	Dwg. No. 2A

300' TO MITCHELL
VEIN



DERRY MICHENER & BOOTH		
DOLLY VARDEN / 78		
D'ARTAGNAN #1 / WOLVERINE C.G. 4069-3797 MITCHELL VEIN EXTENSION		
DETAIL GEOCHEMICAL SAMPLE LOCATIONS		
Date: Nov. '78	By: P.D.M.	Dwg. No. 3

Rusty float

Vein segment

300' TO MITCHELL VEIN

Galena in float

Has been poorly trenched.



Rusty float

○ 160, 480, 0.6

● 126, 230, 5.6

○ 500, 410, 0.2

○ 545, 1850, 1.6

○ 186, 265, 1.0 (11.0%, 4.40%, 2.32 oz/ton)

● 3850, 265, 5.8 (0.21%, 1.35%, 1.84 oz/ton)

○ 2100, 460, 1.6

● 920, 170, 1.3

○ 190, 55, 2.2

○ 80, 165, 3.0

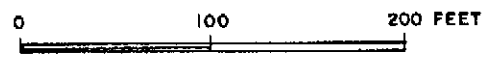
○ 235, 200, 1.0

○ 200, 130, 0.8

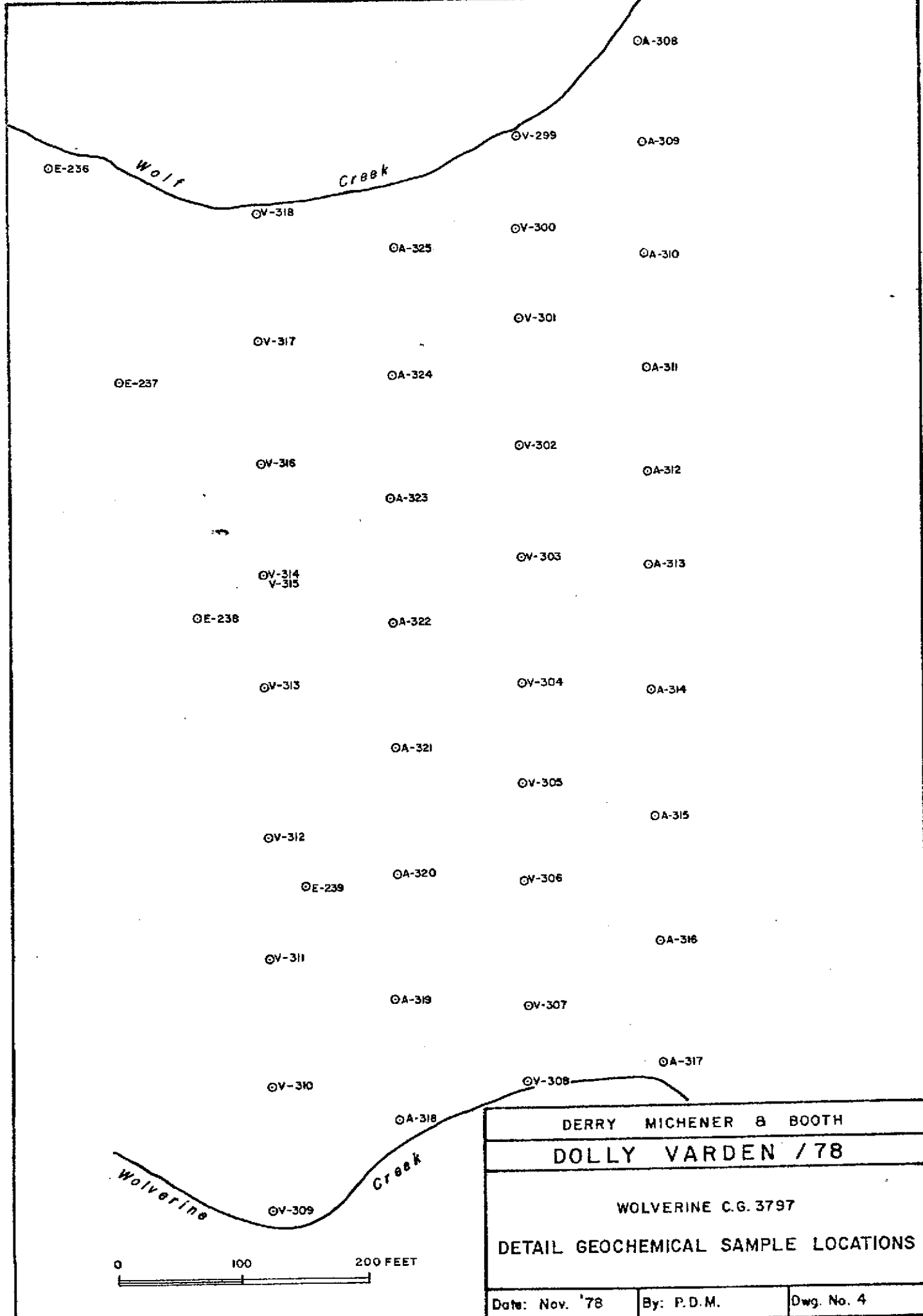
○ 75, 110, 0.4

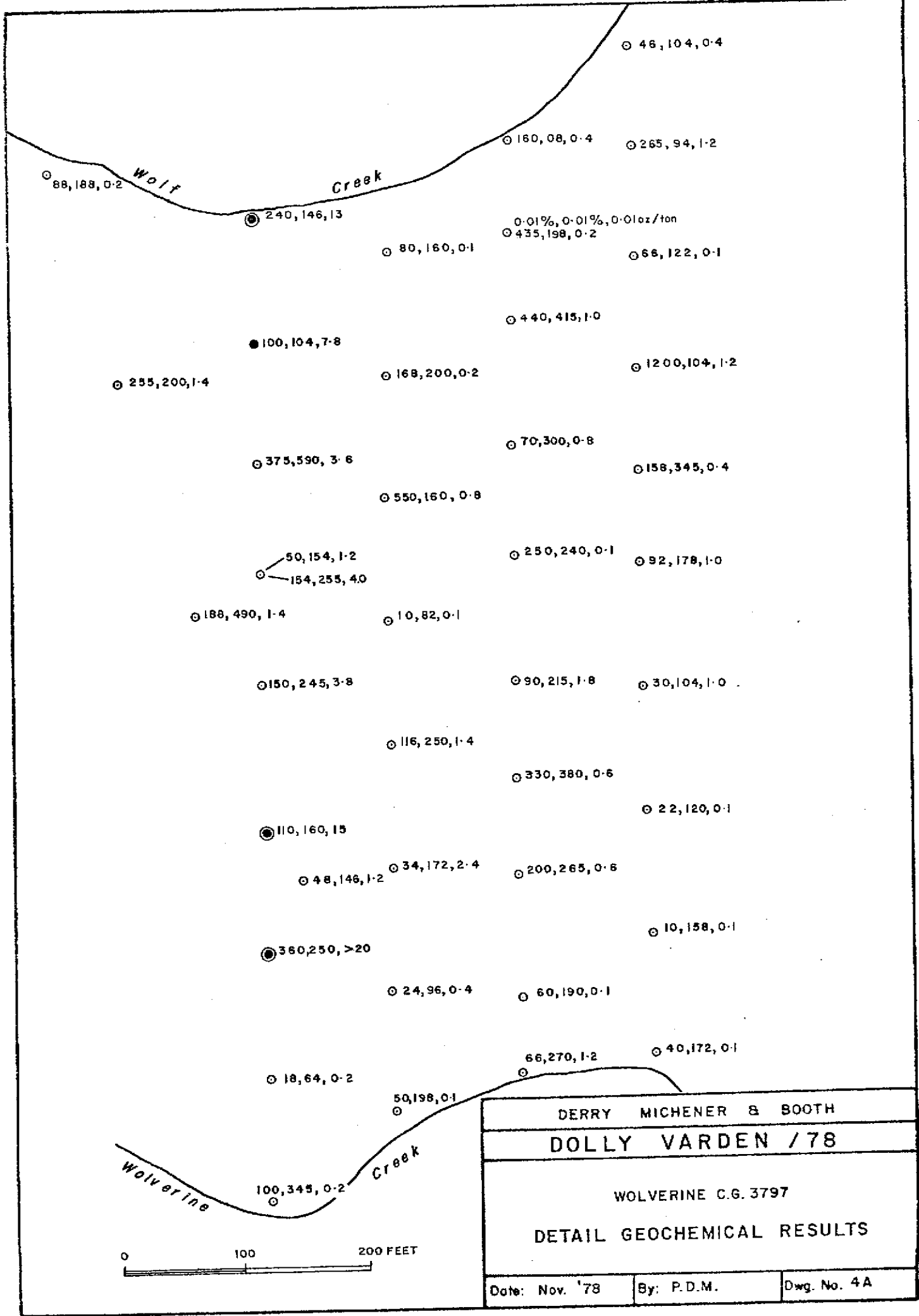
○ 340, 130, 0.8

Highly siliceous "Plug"



DERRY MICHERNER & BOOTH		
DOLLY VARDEN / 78		
D'ARTAGNAN #1 / WOLVERINE C.G. 4069-3797		
MITCHELL VEIN EXTENSION		
DETAIL GEOCHEMICAL RESULTS		
Date: Nov. '78	By: P.D.M.	Dwg. No. 3A





<u>Sample Number</u>	<u>% Pb</u>	<u>% Zn</u>	<u>Oz./Ton Ag</u>
M-107A	0.29	2.06	21.62
M-108A	0.22	0.11	1.76
M-109A	4.84	1.08	3.52
P-43	0.02	0.03	1.42

A follow-up programme of 41 soil samples was taken in the area to further delineate the geochemical highs. It was found that a closer grid spacing would be necessary to define the orientation and extent of the anomalous values. Evidence of extensive prospecting activity, including an old horse trail, trenches and sample sites is present. A variety of volcanics occur in the area some of which appear to have aligned mafic minerals, a feature unseen elsewhere. A siliceous volcanic ridge occurs topographically above the showings at 115⁰/50N.

(8) Single Point Anomalies

A number of single point anomalies were re-sampled during the follow-up stage. Most of these sites could be accounted for by contamination, small pockets of non-economic mineralization and mineralized float. A few sample sites north of Trout Creek and just east of the road occur just on the edge of the flood plain in the valley and yielded positive follow-up soil values. Should extensive additional work be performed in the valley some investigation may be advisable.



I. S. Thompson, P.Eng.



P. D. Michna

Toronto, Ontario
November 30, 1978

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- Campbell, F. A., 1959, The geology of the Torbrit Silver Mine, Economic Geology, Vol 54, pp. 1461-1495.
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- Mitchell, M. A., 1973, Various reports and letters, Geology, Dolly Varden Mines, 1969-1973.
- Tipper & Richards, 1977, Volcanic regimes in Canada, in Souther, J. G., Volcanism and tectonic environments in the Canadian cordillera - a second look, Geological Assn. of Canada, Special Paper No. 16, pp. 10-12.

ITEMIZED COST STATEMENT

		<u>No. of Days</u>	<u>Rate</u>	<u>Total</u>	
<u>Wages</u>					
J. Ackert	July 10 - Sept. 2	55	46.72	2,570	
J. Essery	July 18 - Sept. 12	57	127.36	7,260	
J. van der Laan	July 10 - Aug. 23	45	54.40	2,448	
P. Martin	Sept. 9 - Sept. 30	22	100.00	2,200	
P. Michna	July 4 - Sept. 30	89	126.74	11,280	
K. Christensen		27	20.00	<u>440</u>	\$26,198
 <u>Management and Supervision</u>					
	19 hours @ 62.50			1,188	
	103¼ hours @ 50.00			<u>5,162</u>	6,350
 <u>Food and Accommodation</u>					
					5,174
 <u>Transportation</u>					
	Air fares - Vancouver/Stewart return				
	7 (6 above + I. S. Thompson) x \$226.			1,582	
	Helicopter supply flights - 21.4 hrs. x \$316.32			<u>6,769</u>	8,351
 <u>Analyses (including freight)</u>					
	1,283 soil samples for Pb, Zn, Ag @ \$3.34			4,285	
	48 rock assays for Pb, Zn, Ag @ \$17.35			833	
	1 rock assay for Au @ \$5.00			5	
	1 silt sample for Pb, Zn, Ag @ \$3.34			<u>3</u>	5,126
 <u>Report Preparation</u>					
	Pre-field season			3,322	
	Post-field season			<u>8,700</u>	<u>12,022</u>
 <u>Total</u>					
					<u>\$63,221</u>

B. & C. LTD.

CERTIFICATE OF QUALIFICATION

I, Ian Stuart Thompson, residing at 16 Edenbrook Hill, Islington, Ontario, do hereby certify that:-

- (1) I am a consulting geologist and partner of the firm of Derry, Michener & Booth.
- (2) I am a graduate of the University of Toronto in Honours Geological Sciences with the degree of B.A. in 1959 and have been practicing my profession since graduation.
- (3) I am a registered Professional Engineer in the Province of Ontario and in the Province of British Columbia and am a Fellow of the Geological Association of Canada and of the Society of Economic Geologists.
- (4) My knowledge of the property was obtained by field examination and from examination of the records kept by Dolly Varden Resources Ltd.
- (5) I have received no interest either directly or indirectly, nor do I expect to receive any interest either directly or indirectly in the property or securities of Dolly Varden Resources Ltd.

I. S. Thompson
Ian S. Thompson



Toronto, Ontario
November 30, 1978

CERTIFICATE OF QUALIFICATION

I, Paul D. Michna of the City of Toronto, do hereby certify that:-

- (1) I am a geologist and have practised my profession for more than five years.
- (2) I live at 123 Woodbine Avenue, Toronto, Ontario.
- (3) I am a graduate of Laurentian University with the degree of B.Sc. in Geology, 1973.
- (4) My knowledge of the property was obtained by field examination and from examination of the records kept by Dolly Varden Resources Ltd.
- (5) I have received no interest either directly or indirectly, nor do I expect to receive any interest either directly or indirectly in the property or securities of Dolly Varden Resources Ltd.

Paul D. Michna
Paul D. Michna, Geologist

Toronto, Ontario
November 30, 1978

B. N. C. LTD.

APPENDIX I

SOIL SAMPLE GEOCHEMICAL RESULTS



CHEMEX LABS LTD.

112 BROOKSBANK AVE.
 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE: 985-0648
 AREA CODE: 604
 TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO: Derry Michener & Booth
 Suite 4302
 401 Bay St.,
 Toronto, Ontario

ATTN: c.c. Mr. Paul Michna

CERTIFICATE NO. 44426

INVOICE NO. 26779

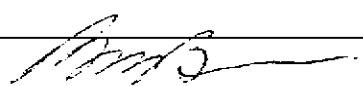
RECEIVED July 21, 1978

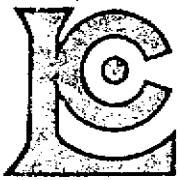
ANALYSED July 28, 1978

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver	
A1	28	120	4.2	NOTE: Silver values below the detection limit of 0.2 ppm are reported as 0.1 ppm.
2	18	40	0.8	
3	32	255	3.0	
4	26	44	0.6	
5	32	134	4.4	
6	32	34	3.0	
7	18	62	3.6	
8	38	58	2.2	
9	18	42	0.8	
10	380	160	2.2	
11	285	86	6.0	
12	106	120	2.4	
13	62	46	5.0	
14	38	1720	7.0	
15	6	94	0.4	
16	18	96	1.2	
17	160	645	1.8	
18	6	40	0.4	
19	48	245	2.4	
20	14	102	0.6	
21	142	112	3.4	
22	126	186	1.2	
23	14	32	1.0	
24	16	42	0.8	
25	14	60	0.2	
26	6	40	0.1	
27	4	22	0.1	
28	16	124	0.1	
29	158	1880	5.0	
30	200	550	3.8	
31	230	560	4.8	
32	20	50	1.4	
33	335	670	2.6	
34	24	98	1.8	
35	3150	640	520	
A36	24	1260	3.4	
V1	44	425	0.8	
2	46	144	0.6	
3	8	48	0.1	
V4	1750	1000	>20	
STD.	18	164	0.1	



MEMBER
 CANADIAN TESTING
 ASSOCIATION

CERTIFIED BY: 



CHEMEX LABS LTD.

12 BROOKSBANK AVE.
 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE: 985-0648
 AREA CODE: 604
 TELEX: 043-52597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 44427

TO: Derry, Michener & Booth
 Suite 4302
 401 Bay St.,
 Toronto, Ontario

INVOICE NO. 26779

RECEIVED July 21, 1978

ATTN: c.c. Mr. Paul Michna

ANALYSED July 28, 1978

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver	
V5	1000	500	7.2	NOTE: Silver values below the detection limit of 0.2 ppm are reported as 0.1 ppm.
6	395	820	6.4	
7	565	745	>20	
8	90	186	8.0	
9	48	166	5.4	
10	182	350	4.8	
11	134	760	4.0	
12	28	255	2.4	
13	52	200	3.4	
14	194	890	6.4	
15	160	420	5.0	
16	58	160	2.6	
17	12	64	1.4	
18	18	186	2.8	
19	38	106	1.4	
20	40	86	2.4	
21	38	98	2.2	
22	6	250	0.6	
23	24	134	0.8	
24	68	580	0.8	
25	108	290	9.1	
26	76	235	1.8	
27	138	360	2.2	
28	44	255	1.6	
29	34	260	1.4	
30	18	56	1.0	
31	28	114	1.8	
32	8	360	1.8	
33	116	380	2.4	
34	98	160	3.2	
35	8	70	1.8	
36	72	390	1.8	
37	30	275	0.8	
38	48	400	6.8	
39	60	220	0.2	
40	116	340	3.0	
41	40	165	3.2	
42	106	1480	4.6	
43	18	170	3.8	
V44	66	725	5.2	
STD.	18	160	0.1	



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CERTIFIED BY: 



CHEMEX LABS LTD.

112 BROOKSBANK AVE.
 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE: 985-0648
 AREA CODE: 604
 TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO: Derry, Michener & Booth
 Suite 4302
 401 Bay St.,
 Toronto, Ontario

ATTN: c.c. Mr. Paul Michna

CERTIFICATE NO. 44428

INVOICE NO. 26779

RECEIVED July 21, 1978

ANALYSED July 28, 1978

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver	
V44A	150	810	4.8	NOTE: Silver values below the detection limit of 0.2 ppm are reported as 0.1 ppm.
45	28	360	2.2	
46	88	610	3.0	
47	84	900	3.8	
48	82	440	4.2	
49	8	60	0.6	
V50	86	545	3.6	
S-1	88	320	0.6	
STD.	16	150	0.1	



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CERTIFICATE OF ANALYSIS

TO: Derry, Michener & Booth
 2302 - 401 Bay St.,
 Toronto, Ont.
 M5H 2Z5

CERTIFICATE NO. 44756
 INVOICE NO. 26959
 RECEIVED Aug. 2/78
 ANALYSED Aug. 8/78

ATTN: cc: Stewart

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver
A 37	16	42	0.1
38	14	24	0.1
39	16	38	0.1
40	2	16	0.1
41	1	14	0.1
42	8	38	0.1
43	12	56	0.1
44	2	20	0.4
45	6	46	0.4
46	32	52	0.1
47	2	8	0.6
48	4	26	0.1
49	10	44	2.0
50	26	62	0.1
51	18	34	0.1
52	20	22	0.1
53	26	340	0.1
54	12	18	0.1
55	30	42	2.4
56	6	24	1.0
57	44	34	0.8
58	34	32	0.6
59	18	46	0.2
60	270	114	7.2
61	8	16	0.1
62	34	36	0.1
63	12	18	0.1
64	8	20	0.1
65	20	24	0.4
66	100	76	3.2
67	1	425	0.2
68	18	32	1.4
69	34	84	0.6
70	38	136	0.4
71	8	32	0.1
72	10	48	0.1
73	8	54	0.1
74	8	30	0.2
75	16	74	0.1
76	10	32	0.1
Std.	16	160	0.1



MEMBER
 CANADIAN TESTING
 ASSOCIATION

CERTIFIED BY: *Harold*



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE: 985-0648
 AREA CODE: 604
 TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO: Derry, Michener & Booth
 2302 401 Bay St.,
 Toronto, Ont.

CERTIFICATE NO. 44757
 INVOICE NO: 26959
 RECEIVED Aug. 2/78
 ANALYSED Aug. 8/78

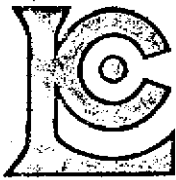
ATTN: cc: Stewart

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver
A 77	10	36	0.1
78	18	94	1.0
79	14	44	0.1
80	6	38	4.0
81	12	42	0.1
82	22	44	0.1
83	12	62	0.6
84	14	40	0.2
85	6	62	1.4
86	22	42	0.1
87	12	80	0.6
88	10	52	0.1
89	2	14	0.6
90	68	78	2.0
91	104	92	6.2
92	10	38	0.1
93	10	60	0.4
94	24	34	0.1
95	74	44	0.4
96	76	122	0.1
97	10	32	0.1
98	10	64	0.1
99	10	94	0.1
100	2	68	0.1
101	14	210	0.1
102	24	370	0.1
103	8	32	0.2
104	24	82	0.1
105	12	28	0.1
106	2	32	0.1
107	2	10	0.1
108	2	42	0.1
109	20	54	0.1
110	1	16	0.1
A 111	1	10	0.4
E 1	12	40	0.1
2	6	18	0.1
3	4	60	0.1
4	12	42	0.1
5	12	90	0.1
Std.	16	160	0.1



MEMBER
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CERTIFIED BY: *Walt Biele*



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
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 TELEPHONE: 985-0648
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CERTIFICATE OF ANALYSIS

TO: Derry, Michener & Booth
 2302 - 401 Bay St.,
 Toronto, Ont.

CERTIFICATE NO. 44758
 INVOICE NO. 26959
 RECEIVED Aug. 2/78
 ANALYSED Aug. 8/78

ATTN: cc: Stewart

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver
E 6	2	48	0.1
7	10	66	0.1
8	6	50	0.1
9	8	42	0.1
10	12	36	0.4
11	12	40	0.4
12	12	50	0.6
13	14	30	1.0
14	14	215	0.1
15	4	68	0.1
16	12	44	0.1
17	4	16	0.1
18	6	122	0.1
19	8	120	0.1
20	6	98	0.1
21	6	104	0.1
22	6	118	0.1
23	18	52	1.2
24	54	96	2.2
25	42	26	1.0
26	22	32	1.6
27	8	28	0.4
28	38	28	1.0
29	18	92	0.1
30	4	16	0.1
31	12	30	0.8
32	190	625	0.1
33	3950	2500	3.6
34	34	54	0.6
35	18	32	1.0
36	104	350	5.8
37	12	48	1.0
38	70	310	4.6
39	62	360	2.0
40	18	186	0.4
41	10	66	0.1
42	8	70	0.1
43	14	26	0.1
44	8	26	0.1
45	26	68	0.1
Std.	18	160	0.1



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CERTIFIED BY: *Hart Bill*



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
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 CANADA V7J 2C1
 TELEPHONE: 985-0648
 AREA CODE: 604
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CERTIFICATE OF ANALYSIS

TO: Derry, Michener & Booth
 2302 401 Bay St.,
 Toronto, Ont.

CERTIFICATE NO. 44759
 INVOICE NO. 26959
 RECEIVED Aug. 2/78
 ANALYSED Aug. 8/78

ATTN: cc: Stewart

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver
E 46	2	32	0.1
47	70	122	0.1
48	102	146	0.4
49	14	36	0.6
50	14	30	0.2
51	6	56	0.1
52	14	94	0.1
53	112	178	1.0
54	8	62	0.1
55	52	36	1.2
56	28	114	0.2
57	60	78	0.2
58	4	22	0.4
59	32	12	0.1
60	22	138	0.1
61	20	68	0.4
62	6	18	4.2
63	4	20	2.6
64	12	68	0.1
65	4	28	0.1
66	14	100	0.4
67	28	120	0.2
68	26	108	0.1
69	62	96	0.1
70	6	44	0.1
71	12	32	0.4
72	1	22	0.1
73	10	28	0.1
74	184	150	0.2
75	12	40	0.1
76	8	124	0.1
77	10	34	0.1
78	12	194	0.1
79	6	36	0.4
80	4	52	0.1
81	14	182	1.4
82	16	205	0.2
83	4	36	0.8
84	4	66	0.1
85	18	184	0.1
Std.	18	160	0.1



MEMBER
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CERTIFIED BY: *Hart Biele*



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
 NORTH VANCOUVER, B.C.
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 TELEPHONE: 985-0648
 AREA CODE: 604
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CERTIFICATE OF ANALYSIS

TO: Derry, Michener & Booth
 2302 401 Bay St.,
 Toronto, Ont.

CERTIFICATE NO. 44760
 INVOICE NO. 26959
 RECEIVED Aug. 2/78
 ANALYSED Aug. 8/78

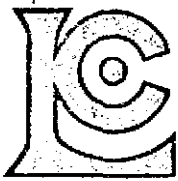
ATTN: cc: Stewart

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver
E 86	4	34	0.6
87	8	144	0.1
E 88	8	128	0.1
M 1	2	38	0.2
2	6	14	0.1
3	2	10	0.1
4	2	12	0.1
5	12	176	0.1
6	6	28	0.1
7	4	54	0.1
8	10	56	0.1
9	2	20	0.1
10	8	52	0.1
11	1	34	0.1
12	1	18	0.1
13	1	18	0.1
14	6	106	0.1
15	6	26	0.1
16	4	22	0.6
17	1	16	0.1
18	16	40	0.1
19	6	8	0.1
20	10	72	0.1
21	2	22	0.1
22	4	36	0.1
23	74	110	0.6
24	22	36	0.4
25	8	24	1.0
26	14	104	1.4
27	10	108	0.1
28	6	84	0.4
29	28	245	1.8
30	8	32	0.1
31	4	50	0.1
32	485	1320	16
33	162	385	2.2
34	92	168	1.6
35	140	90	9.8
36	38	152	1.0
M 37	22	44	0.8
Std.	18	160	0.1



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CERTIFIED BY: *Hart Biddle*



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212 BROOKSBANK AVE.
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 CANADA V7J 2C1
 TELEPHONE: 985-0648
 AREA CODE: 604
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CERTIFICATE OF ANALYSIS

TO: Derry, Michener & Booth
 2302 - 401 Bay St.,
 Toronto, Ont.

CERTIFICATE NO. 44761
 INVOICE NO. 26959
 RECEIVED Aug. 2/78
 ANALYSED Aug. 8/78

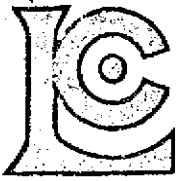
ATTN: cc: Stewart

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver
M 38	42	172	0.1
39	30	166	0.1
40	40	445	4.6
41	126	290	0.1
42	62	54	1.4
43	42	32	0.1
44	18	80	0.1
45	12	90	3.6
46	14	78	0.1
47	154	86	4.4
48	54	265	0.4
49	16	42	0.6
50	8	46	0.1
51	34	78	0.2
52	14	76	1.0
53	380	106	3.0
54	12	40	1.4
55	36	82	3.0
56	18	120	3.0
57	22	94	1.4
58	20	74	1.0
59	40	350	14
M 60	42	320	9.0
V 51	8	24	0.6
52	2	24	0.1
53	8	36	0.1
54	6	42	0.1
55	4	24	0.2
56	4	16	0.1
57	16	62	0.2
58	24	60	2.6
59	4	24	0.1
60	14	44	0.1
61	12	32	0.8
62	22	210	0.1
63	30	68	0.1
64	12	56	1.4
65	12	26	0.2
66	22	30	1.4
V 67	15	58	1.8
Std.	16	158	0.1



MEMBER
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CERTIFIED BY: *John Bide*



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE: 985-0648
 AREA CODE: 604
 TELEX: 043-52597

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CERTIFICATE OF ANALYSIS

TO: Derry, Michener & Booth
 2302 401 Bay St.,
 Toronto, Ont.

CERTIFICATE NO. 44762
 INVOICE NO. 26959
 RECEIVED Aug. 2/78
 ANALYSED Aug. 8/78

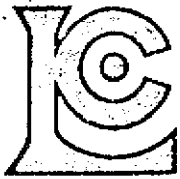
ATTN: cc: Stewart

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver
V 68	1	14	0.1
69	12	28	0.4
70	16	40	0.6
71	6	26	0.4
72	16	42	0.1
73	48	66	2.8
74	2	18	0.6
75	12	63	0.1
76	20	54	0.6
77	24	156	0.1
78	16	88	0.1
79	10	62	0.1
80	18	60	0.1
81	18	56	0.1
82	4	50	0.2
83	4	32	0.1
84	6	12	0.1
85	4	34	0.2
86	10	22	0.2
87	64	22	0.1
88	2	16	0.1
89	8	24	0.1
90	18	36	0.4
91	32	84	0.1
92	72	104	0.8
93	62	86	0.1
94	14	40	0.1
95	10	38	0.1
96	10	62	0.1
97	14	74	0.1
98	32	68	0.2
99	28	36	9.8
100	60	235	0.4
101	18	44	0.1
102	12	76	0.1
103	8	54	0.1
104	10	60	0.1
105	18	164	0.1
106	14	98	0.1
107	12	30	0.1
Std.	18	158	0.1



MEMBER
 CANADIAN TESTING
 ASSOCIATION

CERTIFIED BY: *Hart Biele*



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604
TELEX: 043-52597

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CERTIFICATE OF ANALYSIS

TO: Derry, Michener & oBooth
2302 - 401 Bay St.,
Toronto, Ont.

CERTIFICATE NO. 44763

INVOICE NO. 26959

RECEIVED Aug. 2/78

ANALYSED Aug. 8/78

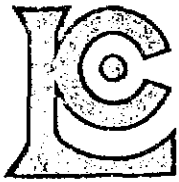
ATTN: cc: Stewart

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver
V 108	10	52	0.1
109	70	550	0.1
110	14	108	0.1
111	8	88	0.1
112	14	82	0.4
113	16	66	0.1
114	12	78	0.1
115	24	50	0.1
116	24	100	0.1
V 117	16	68	0.1



MEMBER
CANADIAN TESTING
ASSOCIATION

CERTIFIED BY: *Hart Bille*



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE: 985-0648
 AREA CODE: 604
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• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO: Derry Michener & Booth
 2302 401 Bay Street
 Toronto, Ontario
 M5H 2Z5

CERTIFICATE NO. 44991
 INVOICE NO. 27444
 RECEIVED Aug. 9/78
 ANALYSED Aug. 14/78

ATTN: c/o Van. Island HELICOPTERS

SAMPLE NO. :	PPM	PPM	PPM
	Pb	Zn	Ag
A 112	20	30	0.1
113	1	38	0.8
114	4	32	0.8
115	6	38	1.2
116	12	325	0.6
117	8	66	0.2
118	4	90	1.0
119	10	146	0.4
120	10	118	0.4
121	10	128	0.4
122	10	64	0.2
123	10	44	1.4
124	10	104	0.6
125	6	32	0.1
126	10	38	0.2
127	12	186	1.4
128	12	106	0.2
129	24	186	0.4
130	12	92	0.8
131	14	104	1.0
132	10	106	1.4
133	12	74	0.2
134	2	30	3.8
135	6	58	0.4
136	1	20	0.4
137	2	28	0.6
138	16	154	9.2
139	16	128	1.0
140	20	200	0.6
141	20	198	1.8
142	8	84	0.6
143	1	14	0.1
144	96	280	3.4
145	142	94	2.2
146	300	215	2.8
147	500	490	3.0
148	1350	615	3.4
149	66	154	3.9
150	20	34	0.4
A 151	34	270	2.6
STD.	18	164	0.1

Note: Silver values below detection limit of 0.2 ppm reported as 0.1 ppm.



MEMBER
 CANADIAN TESTING
 ASSOCIATION

CERTIFIED BY: *Hart Bala*



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE: 985-0648
 AREA CODE: 604
 TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO: Derry, Michener & Booth
 2302 401 Bay Street
 Toronto, Ontario

CERTIFICATE NO. 44992
 INVOICE NO. 27444
 RECEIVED Aug. 9/78
 ANALYSED Aug. 12/78

ATTN: cc: Vanc. Island Helicopters

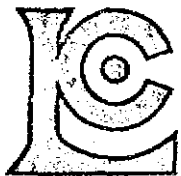
SAMPLE NO. :	PPM	PPM	PPM
	Pb	Zn	Ag
A 152	905	210	2.6
153	26	58	0.6
154	6	30	0.1
155	2	12	0.4
156	6	10	0.2
157	28	124	0.2
158	6	26	0.6
159	6	68	0.2
160	4	8	0.1
161	18	44	0.6
162	12	56	0.6
163	4	42	0.2
164	1	8	0.1
165	8	16	0.1
166	1	6	0.1
167	2	4	0.2
168	8	90	0.2
169	8	96	0.4
170	1	20	0.1
171	18	200	1.2
172	12	172	1.0
173	16	270	0.2
174	8	28	0.4
175	2	4	0.1
176	2	1	0.6
177	1	38	0.2
178	6	12	0.2
179	30	54	0.4
180	14	78	0.2
181	2	24	0.1
182	20	36	2.0
183	10	18	0.2
184	6	26	0.2
185	6	2	0.1
186	4	34	0.2
187	2	6	0.4
188	30	186	0.4
189	2	2	0.1
190	14	90	0.8
A 191	12	245	0.8
STD.	18	160	0.1

Note: Silver values below detection limit of 0.2 ppm reported as 0.1 ppm.



MEMBER
 CANADIAN TESTING
 ASSOCIATION

CERTIFIED BY: *Harry Beck*



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE: 985-0648
 AREA CODE: 604
 TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO: Derry Michener & Booth
 2302 401 Bay Street
 Toronto, Ontario

CERTIFICATE NO. 44993
 INVOICE NO. 27444
 RECEIVED Aug. 9/78
 ANALYSED Aug. 12/78

cc: Van. Island Helicopters

ATTN:

SAMPLE NO. :	PPM	PPM	PPM
	Pb	Zn	Ag
A 192	10	74	1.0
A 193	6	32	0.6
C 1	2650	280	>20
2	52	94	3.4
C 3	24	96	1.0
V 163	22	1040	1.0
164	12	54	0.6
165	6	46	2.4
166	8	84	0.8
167	6	40	0.2
168	1	8	0.2
169	20	34	0.6
170	10	34	0.8
171	8	92	0.2
172	12	52	1.0
173	2	26	0.6
174	2	20	0.2
175	14	124	0.4
176	6	44	0.4
177	8	16	0.2
178	2	12	0.1
179	18	4	0.2
180	2	10	0.6
181	1	12	0.1
182	1	8	0.2
183	2	12	0.2
184	4	235	1.8
185	12	74	0.8
186	14	118	1.2
V 187	36	58	0.8

Note: Silver values below detection limit of 0.2 ppm reported as 0.1 ppm.



MEMBER
 CANADIAN TESTING
 ASSOCIATION

CERTIFIED BY:

Handwritten signature: Hart Bide



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE: 985-0648
 AREA CODE: 604
 TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 45056
 INVOICE NO. 27587
 RECEIVED Aug. 11/78
 ANALYSED Aug. 18/78

TO: Derry Michener & Booth
 2302 401 Bay Street
 Toronto, Ontario

ATTN: Mr. I. Thompson cc: Mr. P. Michna, Stewart

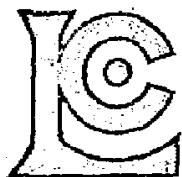
SAMPLE NO. :	PPM	PPM	PPM
	Pb	Zn	Ag
E - 89	4	70	0.1
90	8	20	0.1
91	4	78	0.1
92	10	194	0.6
93	6	168	0.1
94	6	82	0.2
95	1	34	0.2
96	16	8	1.8
97	2	20	0.1
98	1	12	0.1
99	1	12	0.1
100	6	64	0.1
101	6	132	0.6
102	10	120	0.6
103	1	22	0.1
104	1	20	0.1
105	12	114	0.1
106	12	66	0.2
107	1	10	0.2
108	1	30	0.1
109	1	6	0.1
110	1	6	0.1
111	1	8	0.2
112	1	8	0.2
113	8	10	0.1
114	8	8	0.1
115	8	66	0.2
116	10	42	0.1
117	24	225	0.1
118	4	30	0.2
119	1	6	0.1
120	1	28	0.1
121	1	30	0.1
122	10	66	0.2
123	4	74	0.2
124	1	34	0.2
125	1	26	0.2
126	6	86	0.2
127	1	108	0.1
E - 128	1	6	0.4
STD.	18	158	0.1

Note: Silver values below detection limit of 0.2 ppm reported as 0.1 ppm.



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 TELEPHONE: 985-0648
 AREA CODE: 604
 TELEX: 043-52597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 45057
 INVOICE NO. 27587
 RECEIVED Aug. 11/78
 ANALYSED Aug. 18/78

TO: Derry Michener & Booth
 2302 401 Bay Street
 Toronto, Ontario
 Mr. I. Thompson

ATTN: cc: Mr. P. Michna, Stewart

SAMPLE NO. :	PPM	PPM	PPM
	Pb	Zn	Ag
E - 129	18	40	0.2
130	1	6	0.2
131	30	82	0.1
132	10	92	0.2
133	32	56	0.2
134	2	18	0.1
135	1	26	0.1
136	1	10	0.1
137	4	38	0.2
138	10	96	0.2
139	6	138	1.0
E - 140	1	34	0.1
M - 61	4450	198	> 20
62	38	130	3.2
63	18	80	0.2
64	26	122	0.6
65	8	68	0.1
66	138	56	9.6
67	12	164	0.4
68	325	116	0.1
69	8	22	0.4
70	20	325	1.0
71	8	46	0.4
72	30	108	2.2
73	28	60	1.8
74	30	160	7.2
75	20	102	0.8
76	14	635	2.2
77	20	124	1.6
78	10	52	1.6
79	1	36	0.2
80	6	18	2.0
81	6	4	1.0
82	18	88	0.1
83	12	38	0.1
84	4	42	0.4
85	1	26	0.6
86	8	20	3.8
87	1	28	0.1
M - 88	12	48	0.2
STD.	18	162	0.1

Note: Silver values below detection limit of 0.2 ppm reported as 0.1 ppm.



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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 45058

TO: Derry Michener & Booth
 2302 401 Bay Street
 Toronto, Ontario

INVOICE NO. 27587

RECEIVED Aug. 11/78

ATTN: Mr. I. Thompson

ANALYSED Aug. 18/78

cc: Mr. P. Michna, Stewart

SAMPLE NO. :	PPM Pb	PPM Zn	PPM Ag
M - 89	1	16	0.1
90	4	24	0.1
91	14	144	0.1
92	1	16	0.1
93	30	152	0.1
94	2	10	0.1
95	164	94	1.4
96	4	14	0.6
97	44	106	0.6
98	2	34	0.1
99	4	22	0.1
100	2	24	0.1
101	12	56	0.1
102	1	22	0.1
103	96	470	2.2
M - 104	90	365	0.6
V - 118	8	70	0.1
119	14	92	0.1
120	10	82	0.1
121	8	94	0.1
122	12	88	0.1
123	8	84	0.1
124	8	94	0.1
125	12	42	0.1
126	12	160	0.1
127	24	124	0.1
128	18	150	0.2
129	18	72	0.1
130	10	162	0.1
131	10	96	0.1
132	20	166	0.1
133	6	52	0.1
134	8	68	0.2
135	10	30	0.6
136	6	50	0.1
137	10	460	0.8
138	4	76	0.2
139	2	44	0.1
140	8	88	0.1
V - 141	1	46	0.1
STD.	16	152	0.1

Note: Silver values below detection limit of 0.2ppm reported as 0.1 ppm.



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TELEPHONE: 985-0648
AREA CODE: 604
TELEX: 043-52597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 45059
INVOICE NO. 27587
RECEIVED Aug. 11/78
ANALYSED Aug. 18/78

TO: Derry Michener & Booth
2302 401 Bay Street
Toronto, Ontario

ATTN: Mr. I. Thompson cc: Mr. P. Michna, Stewart

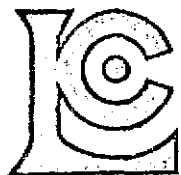
SAMPLE NO. :	PPM	PPM	PPM
	Pb	Zn	Ag
V - 142	6	86	0.1
143	1	60	0.1
144	28	10	0.6
145	1	10	0.1
146	8	74	0.1
147	10	38	1.2
148	8	32	0.1
149	12	56	0.1
150	1	22	0.1
151	6	40	0.1
152	14	32	0.1
153	34	110	1.0
154	8	28	0.1
155	2	44	0.1
156	8	58	0.1
157	2	38	0.1
158	6	6	0.1
159	12	116	0.1
160	10	78	0.2
161	18	170	0.1
V - 162	6	54	0.6

Note: Silver values below detection limit of 0.2 ppm reported as 0.1 ppm.



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 AREA CODE: 604
 TELEX: 043-52597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 45182

TO: Derry Mitchener & Booth
 c/o Vancouver Island Helicopters
 Stewart, B. C.

INVOICE NO. 27648

RECEIVED August 16, 1978

ATTN:

ANALYSED August 21, 1978

SAMPLE NO. :	PPM Pb	PPM Zn	PPM Ag
A 194	8	14	0.1
195	8	12	0.1
196	2	2	0.1
197	8	200	0.1
198	22	180	0.1
199	14	56	0.1
200	2	26	0.2
201	24	68	0.1
202	12	22	0.1
203	2	2	0.1
204	2	2	0.1
205	6	34	0.4
206	8	36	0.1
207	6	52	0.4
208	10	58	0.1
209	18	126	2.2
210	22	215	1.8
211	20	265	2.8
212	42	72	0.8
213	86	220	1.0
214	40	132	0.2
215	80	235	5.4
216	36	255	0.8
217	490	700	7.8
218	575	300	18
219	38	138	1.4
220	104	325	6.8
221	30	58	0.2
222	46	160	0.1
223	300	420	3.6
224	32	196	0.1
225	22	150	0.1
226	80	142	0.2
227	8	110	1.0
228	8	48	1.8
229	4	72	1.4
230	200	335	6.8
231	6	100	0.6
232	355	510	4.2
A 233	300	345	7.6
STD	20	164	0.1



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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 45183

TO: Derry Michener & Booth
 c/o Vancouver Island Helicopters
 Stewart, B.C.

INVOICE NO. 27648

RECEIVED August 16, 1978

ANALYSED August 21, 1978

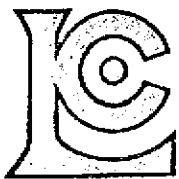
ATTN:

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver
A 234	38	196	0.2
235	52	92	1.8
236	52	188	6.4
237	6	76	1.4
238	6	32	0.4
239	6	64	0.1
240	6	60	0.1
241	8	40	0.1
242	6	48	0.1
243	12	80	0.1
244	10	88	0.1
245	6	52	0.1
246	8	52	0.1
247	8	52	0.4
248	6	78	0.8
249	16	86	0.1
250	18	270	0.1
251	8	54	0.1
252	14	60	0.1
253	8	76	0.2
A 254	18	84	0.2
E 141	8	32	0.1
142	16	194	0.1
143	18	315	0.2
144	24	295	0.4
145	6	92	0.1
146	8	38	0.8
147	6	8	0.2
148	12	60	0.2
149	8	34	0.4
150	8	54	0.1
151	14	106	0.1
152	8	18	0.1
153	8	32	0.1
154	12	78	0.1
155	2	42	0.4
156	14	200	2.2
157	32	30	5.8
158	74	52	0.8
E 159	6	46	0.4
STD.	18	158	0.1



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 AREA CODE: 604
 TELEEX: 043-52597

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TO: Derry, Michener & Booth
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 Stewart, B.C.

CERTIFICATE NO. 45184

INVOICE NO. 27648

RECEIVED August 16, 1978

ATTN:

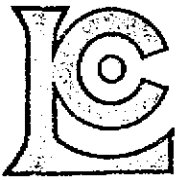
ANALYSED August 21, 1978

SAMPLE NO. :	PPM Pb	PPM Zn	PPM Ag
E 160	16	52	0.8
161	28	78	1.0
162	14	365	2.2
163	44	255	0.4
164	46	235	1.4
165	10	92	0.4
166	8	52	0.1
167	1900	470	8.8
168	126	495	4.2
169	60	158	0.4
170	86	340	0.4
171	36	255	0.2
172	62	270	3.4
172	116	400	0.8
174	152	355	4.6
175	20	88	0.2
176	84	186	0.2
177	215	735	3.4
178	4	22	0.1
179	24	114	1.8
180	126	178	7.4
181	50	285	3.4
182	52	430	2.6
183	82	395	3.0
184	40	164	0.8
185	6	44	0.6
186	8	26	0.2
187	6800	1616	> 20
188	156	152	3.4
189	340	465	4.6
190	68	230	8.0
191	144	435	2.6
192	14	66	0.1
193	20	132	1.8
194	198	225	3.4
195	32	164	0.8
196	28	196	0.1
197	30	200	0.2
198	62	215	0.2
E 199	92	295	1.2
	16	158	0.1



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TO: Derry Michener & Booth
c/o Vancouver Island Helicopters
Stewart, B.C.

CERTIFICATE NO. 45185
INVOICE NO. 27648
RECEIVED August 16, 1978
ANALYSED August 21, 1978

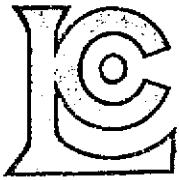
ATTN:

SAMPLE NO. :	PPM Pb	PPM Zn	PPM Ag
E 200	300	330	0.4
201	150	92	0.6
202	118	200	1.8
203	172	250	0.2
204	2	8	0.1
205	380	295	11
206	84	355	5.0
207	2550	100	13
208	630	405	6.8
209	140	240	2.0
210	265	445	5.4
211	250	380	5.8
212	76	190	2.0
213	88	184	6.6
214	14	118	0.6
215	10	92	0.1
216	4	10	0.1
217	8	52	0.1
218	2	46	0.2
219	10	48	0.1
220	14	58	0.1
221	2	76	0.1
222	4	54	0.1
223	4	52	0.1
224	4	42	0.2
225	2	76	0.1
226	4	38	0.6
E 227	10	64	0.1
M 105	2	12	0.4
106	280	255	10
107	46	98	1.0
108	40	58	1.0
109	20	215	4.4
110	16	46	1.0
111	16	52	0.8
112	130	205	0.1
113	320	430	3.0
114	76	168	1.2
115	36	210	0.6
M 116	8	84	0.8
STD	16	160	0.1



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TELEX: 043-52597

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CERTIFICATE OF ANALYSIS

TO: Derry Michener & Booth
c/o Vancouver Island Helicopters
Stewart, B.C.

CERTIFICATE NO. 45186

INVOICE NO. 27648

RECEIVED August 16, 1978

ATTN:

ANALYSED August 21, 1978

SAMPLE NO. :	PPM Pb	PPM Zn	PPM Ag
M 117	30	255	2.0
118	365	86	3.4
119	12	54	4.0
120	1	14	0.2
121	2	38	0.1
122	24	74	0.8
123	16	340	0.8
124	250	555	2.4
125	400	285	0.6
126	38	178	1.2
127	6	34	0.1
128	30	64	0.4
129	500	164	3.6
130	96	315	2.0
131	106	205	1.8
132	6	70	0.4
133	890	510	7.8
134	360	240	3.2
135	2350	145	19
M 136	700	870	10
V 188	14	26	0.4
189	8	28	1.0
190	8	38	0.1
191	4	40	0.1
192	6	54	0.1
193	6	18	1.6
194	4	34	0.1
195	6	42	0.1
196	10	62	0.1
197	8	44	0.1
198	6	24	2.2
199	10	44	0.1
200	8	86	0.1
201	4	24	0.2
202	10	56	0.2
203	4	46	0.1
204	14	168	0.1
205	14	54	0.1
206	10	60	0.2
V 207	54	118	6.0
STD	16	160	0.1



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CERTIFIED BY: *Stan Biddle*



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
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 TELEPHONE: 985-0648
 AREA CODE: 604
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TO: Derry Michener & Booth
 c/o Vancouver Island Helicopters
 Stewart, B.C.

CERTIFICATE NO. 45187

INVOICE NO. 27648

RECEIVED August 16, 1978

ATTN:

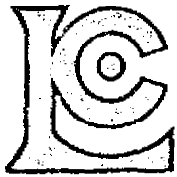
ANALYSED August 21, 1978

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver
V 208	4	24	0.4
209	24	100	1.0
210	570	1000	4.6
211	14	78	0.1
212	168	52	1.0
213	18	84	0.6
214	14	168	0.1
215	22	54	0.2
216	38	96	2.6
217	30	166	1.0
218	8	132	2.0
219	28	68	0.6
220	170	620	4.0
221	80	350	1.8
222	86	1000	4.4
223	38	315	1.8
224	6	74	0.1
225	42	26	0.1
226	8	82	0.6
227	42	172	0.1
228	26	188	0.1
229	14	116	0.1
230	80	188	1.8
231	280	194	1.6
232	12	102	0.2
233	8	66	1.0
234	26	76	0.2
235	24	34	0.2
236	20	108	0.4
237	12	48	0.4
238	4	38	0.1
239	10	58	0.4
240	1	34	0.1
241	12	320	0.1
242	18	235	0.1
243	10	84	9.4
244	12	134	0.2
245	2	34	0.1
246	10	120	0.1
V 247	1	22	0.2
STD.	18	160	0.1



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CERTIFIED BY: *Harry Biddle*



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE: 985-0648
 AREA CODE: 604
 TELEX: 043-52597

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CERTIFICATE OF ANALYSIS

TO: Derry Michener & Booth
 c/o Vancouver Island Helicopters
 Stewart, B.C.

CERTIFICATE NO. 45188
 INVOICE NO. 27648
 RECEIVED August 16, 1978
 ANALYSED August 21, 1978

ATTN:

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver
V 248		50	0.2
249	12	150	0.2
250	14	80	0.2
251	12	60	0.2
252	8	58	0.1
V 253	8	78	0.2
STD.	18	160	0.1



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CERTIFIED BY: *Harold Bille*



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE: 985-0648
 AREA CODE: 604
 TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO: Derry Michener & Booth
 2302 - 401 Bay St.,
 Toronto, Ont.,
 M5H 2V4

c.c. Paul Michna

CERTIFICATE NO. 45371

INVOICE NO. 27752

RECEIVED August 23, 1978

ANALYSED August 28, 1978

ATTN:

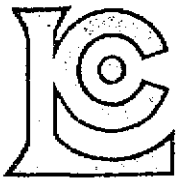
SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver	
A-255	14	86	1.0	NOTE: Silver values below the detection limit of 0.2 ppm are re- ported as 0.1 ppm.
256	8	28	0.2	
257	8	6	0.1	
258	8	20	0.1	
259	8	64	0.1	
260	10	60	1.4	
261	10	14	0.2	
262	6	8	0.1	
263	4	30	0.1	
264	8	42	0.1	
265	12	82	0.1	
266	18	90	0.1	
267	22	38	0.4	
268	12	46	0.1	
269	16	34	0.1	
270	6	36	0.1	
271	24	98	1.2	
272	8	76	0.6	
273	20	142	0.1	
274	24	340	1.0	
275	22	260	0.2	
276	16	86	0.2	
277	22	38	0.1	
278	16	48	0.2	
279	28	22	0.1	
280	34	42	0.1	
281	20	46	0.1	
282	30	28	1.0	
283	28	76	0.4	
284	12	235	0.2	
285	70	44	0.2	
286	22	50	0.1	
287	26	136	0.1	
288	28	430	0.6	
289	26	255	0.2	
A-290	18	144	0.1	
C-4	48	152	0.1	
E-228	34	88	0.1	
E-229	114	122	0.6	
E-230	126	225	0.2	
STD.	20	158	0.1	



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CERTIFIED BY:

Hart Biddle



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212 BROOKSBANK AVE.
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 CANADA V7J 2C1
 TELEPHONE: 985-0648
 AREA CODE: 604
 TELEX: 043-52597

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CERTIFICATE OF ANALYSIS

TO: Derry Michener & Booth
 2302 - 401 Bay St.,
 Toronto, Ont.
 M5H 2Y4

ATTN: c.c. Paul Michna

CERTIFICATE NO. 45379
 INVOICE NO. 27753
 RECEIVED August 23, 1978
 ANALYSED August 29, 1978

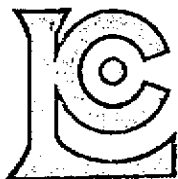
SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver	
A-291	8	40	0.1	NOTE: Silver values below detection limit of 0.2 ppm are reported as 0.1 ppm.
292	14	86	0.1	
293	90	168	0.8	
294	24	88	0.2	
295	50	166	1.2	
296	4	62	0.1	
297	10	18	0.1	
298	4	8	0.1	
299	8	20	0.1	
300	1	16	1.2	
301	1	12	0.4	
302	2	34	0.2	
303	16	148	0.1	
304	12	54	0.1	
305	20	56	0.8	
306	395	102	2.2	
307	14	32	1.0	
308	46	104	0.4	
309	265	94	1.2	
310	66	122	0.1	
311	1200	104	1.2	
312	158	345	0.4	
313	92	178	1.0	
314	30	104	1.0	
315	22	120	0.1	
316	10	158	0.1	
317	40	172	0.1	
318	50	198	0.1	
319	24	96	0.4	
320	34	172	2.4	
321	116	250	1.4	
322	10	82	0.1	
323	550	160	0.8	
324	168	200	0.2	
325	80	160	0.1	
326	10	114	0.1	
327	18	46	0.1	
328	50	8	0.1	
329	22	80	0.1	
A-330	10	16	0.1	
STD.	18	158	0.1	



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 TELEPHONE: 985-0648
 AREA CODE: 604
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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 45380

TO: Derry Michener & Booth
 2302 - 401 Bay St.,
 Toronto, Ont.,
 M5H 2Y4

INVOICE NO. 27753

RECEIVED August 23, 1978

ANALYSED August 29, 1978

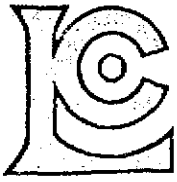
ATTN: c.c. Paul Michna

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver	
A-331	10	30	0.2	NOTE: Silver values below detection limit of 0.2 ppm are reported as 0.1 ppm.
332	10	1	0.1	
333	36	104	0.1	
334	10	64	0.1	
335	10	50	0.1	
336	10	30	0.2	
337	6	30	0.1	
338	10	24	0.1	
A-339	16	18	0.2	
E-274	38	20	0.1	
275	4	50	0.1	
276	8	86	0.1	
277	2	56	0.1	
278	1	62	0.1	
279	2	16	0.2	
280	4	112	0.1	
281	6	54	3.8	
282	22	186	0.1	
283	48	42	0.1	
284	16	130	7.8	
285	380	565	1.0	
286	148	625	0.8	
287	118	265	1.4	
288	10	82	0.8	
289	12	32	0.1	
290	16	144	0.8	
291	200	545	1.0	
292	76	128	0.4	
293	76	270	0.4	
294	106	220	1.4	
295	220	305	0.6	
296	50	86	0.4	
297	8	10	0.2	
298	421	325	0.1	
299	8	124	0.1	
300	8	26	0.1	
301	6	28	0.1	
302	10	32	0.2	
303	12	26	0.1	
E-304	8	52	0.1	
STD.	18	160	0.1	



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 TELEPHONE: 985-0848
 AREA CODE: 604
 TELEX: 043-52597

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CERTIFICATE OF ANALYSIS

TO: Derry Michener & Booth
 2302 - 401 Bay St.,
 Toronto, Ontario

ATTN: M5H 2Y4

c.c. Paul Michna

CERTIFICATE NO. 45372

INVOICE NO. 27752

RECEIVED August 23, 1978

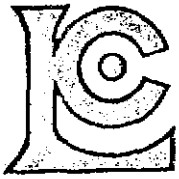
ANALYSED August 28, 1978

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver	
E-231	32	158	0.2	NOTE: Silver values below the detection limit of 0.2 ppm are reported as 0.1 ppm.
232	88	198	0.6	
233	148	230	0.2	
234	36	132	0.6	
235	4	10	0.1	
236	88	188	0.2	
237	225	200	1.4	
238	188	490	1.4	
239	48	146	1.2	
240	8	210	0.4	
241	8	14	0.1	
242	4	36	0.1	
243	4	46	0.1	
244	14	58	0.1	
245	10	100	0.1	
246	10	82	0.1	
247	10	28	0.2	
248	12	48	0.1	
249	6	70	0.1	
250	24	88	0.1	
251	12	60	0.2	
252	8	14	0.1	
253	2	2	0.1	
254	2	44	0.6	
255	1	42	0.1	
256	6	38	0.4	
257	4	32	0.1	
258	10	30	0.1	
259	20	68	0.2	
260	38	150	0.1	
261	8	36	0.1	
262	4	28	0.1	
263	4	38	0.1	
264	8	56	0.1	
265	16	146	0.1	
266	12	50	0.6	
267	14	22	0.2	
268	24	22	0.2	
269	34	245	0.1	
E-270	18	78	0.1	
STD.	18	160	0.1	



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 TELEPHONE: 985-0648
 AREA CODE: 604
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TO: Derry Michener & Booth
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 Toronto, Ont.

ATTN: M5H 2V4

c.c. Paul Michna

CERTIFICATE NO. 45373

INVOICE NO. 27752

RECEIVED August 23, 1978

ANALYSED August 29, 1978

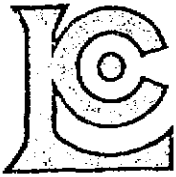
SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver	
E-271	2	40	0.8	NOTE: Silver values below the detection limit of 0.2 ppm are reported as 0.1 ppm.
272	20	168	0.1	
E-273	10	26	0.1	
M-137	8	58	0.1	
138	26	58	0.8	
139	34	152	0.2	
140	40	545	0.1	
141	40	315	0.1	
142	8	38	0.1	
143	2	86	0.1	
144	4	54	0.1	
145	2	98	0.1	
146	8	152	0.1	
147	10	54	1.2	
148	2	104	0.1	
149	4	64	0.2	
150	28	580	0.1	
151	6	72	0.2	
152	64	305	0.1	
153	6	122	0.1	
154	8	90	0.6	
155	2	52	0.2	
156	6	38	0.8	
157	18	42	0.4	
158	16	26	0.4	
159	58	34	0.6	
160	20	38	0.8	
161	32	18	0.1	
162	8	94	0.2	
163	24	60	0.2	
164	1	46	1.0	
165	1	12	0.4	
166	10	30	0.1	
167	8	42	0.4	
M-168	1	68	0.1	
V-254	4	20	0.2	
255	4	46	0.1	
256	8	22	0.1	
257	8	24	0.1	
V-258	1	40	0.1	
STD.	18	158	0.1	



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TO: Derry Michener & Booth
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c.c. Paul Michna

CERTIFICATE NO. 45374
 INVOICE NO. 27752
 RECEIVED August 23, 1978
 ANALYSED August 28, 1978

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver	
V-259	18	78	0.4	NOTE: Silver values below the detection limit of 0.2 ppm are reported as 0.1 ppm.
260	34	36	0.2	
261	18	60	0.1	
262	16	28	0.1	
263	14	36	0.2	
264	20	36	0.1	
265	20	98	1.6	
266	8	54	0.1	
267	1	28	0.1	
268	22	74	0.8	
269	10	26	0.1	
270	14	58	0.1	
271	8	42	0.1	
272	14	78	0.1	
273	4	30	0.1	
274	18	26	0.1	
275	12	126	0.1	
276	12	38	0.1	
277	10	56	0.1	
278	4	72	0.4	
279	12	102	0.1	
280	6	72	0.1	
281	10	78	0.1	
282	34	180	0.2	
283	32	58	0.1	
V-284	16	114	0.1	
STD.	16	160	0.1	



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CERTIFICATE OF ANALYSIS

TO: Derry, Michener & Booth
 2302 - 401 Bay St.,
 Toronto, Ont.
 M5H 2Z5

ATTN:

cc: Stewart, B.C.

CERTIFICATE NO. 45381

INVOICE NO. 27824

RECEIVED August 23, 1978

ANALYSED August 29, 1978

SAMPLE NO. :	PPM Pb	PPM Zn	PPM Ag
E - 305	36	400	0.1
306	10	34	0.1
307	12	86	0.1
308	12	36	0.1
309	18	34	0.1
310	14	40	0.1
311	14	82	0.2
312	10	66	0.1
313	24	134	0.1
E - 314	16	42	0.1
V - 285	16	64	0.1
286	8	38	0.1
287	6	88	0.4
288	16	94	1.6
289	4	68	0.1
290	4	30	0.4
291	6	110	0.1
292	4	26	0.1
293	8	48	0.1
294	16	58	0.4
295	16	20	0.4
296	4	30	0.2
297	6	46	0.2
298	84	58	0.2
299	160	108	0.4
300	435	198	0.2
301	440	415	1.0
302	70	300	0.8
303	250	245	0.1
304	90	215	1.8
305	230	380	0.6
306	200	265	0.6
307	60	190	0.1
308	66	270	1.2
309	100	345	0.2
310	18	64	0.2
311	260	250	>20
312	110	160	15
313	150	245	3.8
V - 314	154	255	4.0
STD	16	160	0.1

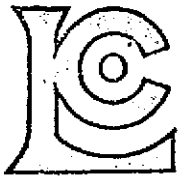
Note: Silver values below detection limit of 0.2 ppm are reported as 0.1 ppm.



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CERTIFIED BY:

Harry Biddle



CHEMEX LABS LTD.

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 CANADA V7J 2C1
 TELEPHONE: 985-0648
 AREA CODE: 604
 TELEX: 043-52597

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CERTIFICATE OF ANALYSIS

TO: Derry, Michener & Booth
 2302 401 Bay St.,
 Toronto, Ont.
 M5H 2Z5

ATTN: cc: Stewart, B.C.

CERTIFICATE NO. 45382
 INVOICE NO. 27824
 RECEIVED August 23, 1978
 ANALYSED August 29, 1978

SAMPLE NO. :	PPM Pb	PPM Zn	PPM Ag
V - 315	50	154	1.2
316	375	590	3.6
317	1000	104	7.8
318	240	146	13
319	14	52	0.4
320	6	66	0.1
321	8	42	0.6
322	12	34	0.4
323	16	104	0.1
324	32	34	0.2
325	4	48	0.2
326	8	52	0.6
327	4	42	0.1
328	14	50	0.6
329	40	48	0.2
330	12	38	0.6
331	10	32	0.2
332	10	22	0.1
333	14	24	0.2
334	26	46	0.1
V - 335	12	24	0.1

Note: Silver values below detection limit of 0.2 ppm are reported as 0.1 ppm.

STD 16 160 0.1



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 AREA CODE: 604
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CERTIFICATE OF ANALYSIS

TO: Derry Michener & Booth
 2302 - 401 Bay St.,
 Toronto, Ont.,
 M5H 2Z5

cc: Stewart, B.C.

CERTIFICATE NO. 45481

INVOICE NO. 27886

RECEIVED August 28, 1978

ANALYSED September 4, 1978

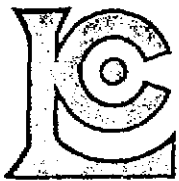
SAMPLE NO. :	PPM Pb	PPM Zn	PPM Ag
E - 315	6	4	0.1
316	8	48	0.1
317	2	12	1.6
318	10	10	0.4
319	2	18	0.2
320	2	50	1.6
321	1	82	0.6
322	18	78	0.4
323	2	40	0.2
324	8	42	0.2
325	14	30	0.1
326	20	182	0.1
327	8	30	0.1
328	18	98	0.1
329	10	82	0.6
330	14	74	0.2
331	18	26	0.2
332	8	46	0.2
333	30	190	0.2
334	6	42	0.1
335	12	26	0.4
336	8	245	0.2
E - 337	16	118	0.2
A - 340	34	18	0.2
341	48	54	0.2
342	4	54	1.0
343	18	42	0.2
344	10	160	0.8
345	8	72	0.2
346	8	16	0.2
347	1	400	0.6
A - 348	10	52	0.4
STD	16	160	0.1

Note: Silver values below detection limit of 0.2 ppm are reported as 0.1 ppm.



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CERTIFICATE OF ANALYSIS

TO: Derry Michener & Booth
 2302 401 Bay St.,
 Toronto, Ontario
 ATTN: M5H 2Z5

CERTIFICATE NO. 34322

INVOICE NO. 28121

RECEIVED Sept. 7/78

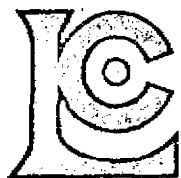
ANALYSED Sept. 15/78

SAMPLE NO. :	% Pb	% Zn	oz/ton Ag
A 355	0.01	0.07	0.01
370	0.24	0.08	0.82
374	0.28	0.14	23.08
345	3.90	12.7	1.16
358	0.13	0.11	0.56
366	11.0	4.40	2.32
A 367	0.21	1.35	1.84



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CERTIFIED BY: *[Signature]*
 Registered Assayer, Province of B.C.



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
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 TELEPHONE: 985-0648
 AREA CODE: 604
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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 45702

TO: Derry Michener & Booth,
 #2302 - 401 Bay Street,
 TORONTO, Ontario. M5H 2Z5.

INVOICE NO. 28079

RECEIVED September 7th, 1978

ATTN: cc: Mr. Paul Michna, Stewart, B.C.

ANALYSED September 14, 1978

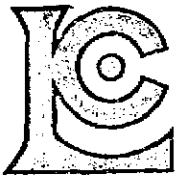
SAMPLE NO. :	PPM Pb	PPM Zn	PPM Ag	
A349	66	60	2.0	
350	8	40	0.1	
351	24	108	0.1	
352	12	40	0.1	
353	32	120	0.2	
354	130	225	2.8	
355	116	690	2.8	
356	30	136	3.8	
357	64	230	4.2	
358	180	220	3.6	
359	94	275	4.4	
360	114	495	12	
361	10	62	0.4	
362	20	84	0.2	
363	126	230	5.6	
364	300	410	0.2	
365	545	1850	1.6	
366	186	265	1.0	
367	3850	265	6.8	
368	2100	460	1.6	
369	168	480	0.6	
370	265	340	4.6	
371	2150	325	4.8	
372	1500	400	7.0	
A373	3650	570	3.2	
E338	210	165	0.8	
339	132	70	3.4	
340	136	135	2.2	
341	104	90	2.4	
342	290	185	3.0	
343	22	85	1.0	Note: Silver values below detection limit of 0.2 ppm reported as 0.1 ppm.
344	20	65	1.2	
345	255	200	1.0	
346	32	80	3.8	
347	32	70	1.6	
348	40	285	2.8	
349	148	425	6.0	
350	92	340	3.8	
351	50	235	2.6	
E352	6	30	0.2	
STD. NO.	18	160	0.1	



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CERTIFIED BY:

Hart Biddle



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 TELEPHONE: 985-0648
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TO: Derry, Michener & Booth,
 #2302 - 401 Bay Street,
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CERTIFICATE NO. 45703

INVOICE NO. 28079

RECEIVED September 7, 1978

ATTN: cc: Mr. Paul Michna, Stewart, B.C.

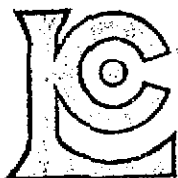
ANALYSED September 14, 1978

SAMPLE NO. :	PPM	PPM	PPM	
	Pb	Zn	Ag	
E353	18	140	0.1	
354	32	110	1.0	
355	8	55	0.6	
356	26	175	0.6	
357	22	85	0.1	
359	3200	1150	4.0	
360	4450	620	7.0	
361	895	380	0.8	
362	38	260	0.1	
E363	70	310	1.4	
A	320	210	2.6	
E365	1350	750	5.6	
B	154	820	2.4	
F2	18	125	1.4	
3	94	270	1.0	
4	62	170	2.2	
5	94	210	4.4	
6	22	105	4.2	
7	48	255	2.6	
8	40	190	0.2	
9	28	340	0.1	Note: Silver values below de- tection limit of 0.2 ppm reported as 0.1 ppm.
10	86	165	0.2	
11	48	205	3.0	
12	1250	560	5.8	
13	150	190	1.2	
F14	2250	365	5.2	
STD. NO.	18	160	0.1	



MEMBER
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 ASSOCIATION

CERTIFIED BY: Hart Biddle



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE: 985-0648
 AREA CODE: 604
 TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO: Derry Michner & Booth
 2302 - 401 Bay Street,
 Toronto, Ontario
 M5H 2Z5

CERTIFICATE NO. 45811
 INVOICE NO. 28127
 RECEIVED Sept. 13, 1978
 ANALYSED Sept. 22, 1978

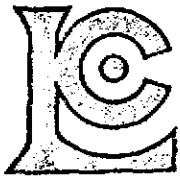
ATTN: CC. Michna, Stewart

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver
F - 15	10	84	0.6
17	50	88	4.8
18	70	270	7.4
19	175	148	2.6
20	310	345	5.2
21	1350	715	6.8
22	430	225	1.8
23	235	215	2.0
F -24	935	475	6.4



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 TELEPHONE: 985-0648
 AREA CODE: 604
 TELEX: 043 52597

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CERTIFICATE OF ANALYSIS

TO: Derry Michener & Booth
 2302 - 401 Bay Street,
 Toronto, Ontario
 M5H 2Z5

ATTN:

CERTIFICATE NO. 45902
 INVOICE NO. 28269
 RECEIVED Sept. 20, 1978
 ANALYSED Sept. 27, 1978

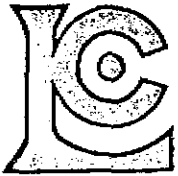
SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver
F 25	570	820	17
26	375	355	> 20
27	56	275	9.0
28	128	132	4.6
29	84	96	3.6
30	62	174	3.0
31	700	230	> 20
32	52	166	2.8
33	142	290	12
34	20	116	1.4
35	66	235	0.4
36	164	196	2.2
37	30	174	1.2
38	265	188	5.2
39	138	170	3.6
40	28	240	0.2
41	36	124	1.6
42	230	162	7.0
43	36	142	1.2
44	25	245	0.6
F 45	90	196	1.0
P 1	420	335	5.8
2	36	145	3.8
3	1000	1250	> 20
4	775	465	16
5	160	160	3.8
6	340	395	1.6
7	48	170	0.8
8	50	170	0.6
9	198	165	2.4
10	330	160	4.0
11	100	180	3.8
12	4	45	1.2
13	235	180	1.4
14	16	420	2.0
15	38	205	2.0
16	2	45	1.8
17	96	320	5.2
18	8	65	1.8
P 19	22	30	2.8
STD.	8	120	0.2



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CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604
TELEX: 043-52597

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CERTIFICATE OF ANALYSIS

TO: Derry Michener & Booth
2302 - 401 Bay Street,
Toronto, Ontario
M5H 2Z5

ATTN:

CERTIFICATE NO. 45903
INVOICE NO. 28269
RECEIVED Sept. 20, 1978
ANALYSED Sept. 27, 1978

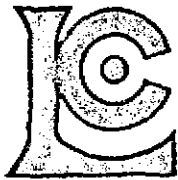
SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver
P 20	48	120	2.0
21	6	40	1.4
22	62	240	3.8
23	4	75	0.6
24	12	70	1.0
P 25	10	140	0.8
STD.	10	130	0.1



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212 BROOKSBANK AVE.
 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE: 985-0648
 AREA CODE: 604
 TELEX: 043-52597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 46092

TO: Derry Michener & Booth
 2302 - 401 Bay St.,
 Toronto, Ont.,
 M5H 2Z5

INVOICE NO. 28471

RECEIVED September 30, 1978

ATTN:

ANALYSED October 6, 1978

SAMPLE NO. :	PPM Lead	PPM Zinc	PPM Silver
P-44	80	198	3.2
45	32	270	0.8
46	28	275	1.4
47	170	445	7.4
48	210	375	1.8
49	1600	1100	5.2
50	82	230	1.4
51	14	134	1.8
52	92	390	1.4
53	84	275	9.4
54	144	158	6.0
55	30	50	2.4
56	82	150	3.0
57	44	172	4.2
58	14	54	1.0
59	20	180	2.0
60	154	315	5.0
61	470	310	3.6
62	14	115	2.4
63	8	50	0.4
64	920	170	13
65	190	65	2.2
66	80	165	3.0
67	76	110	0.4
68	340	150	2.0
69	200	130	0.8
P-70	235	200	1.0
STD.	10	120	0.2



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CERTIFIED BY:

Harv Bickle

B. A. C. LTD.

APPENDIX II

ROCK SAMPLE GEOCHEMICAL RESULTS



CHEMEX LABS LTD.

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NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604
TELEX: 043-52597

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CERTIFICATE OF ASSAY

TO: Derry, Michner & Booth,
2302 - 401 Bay Street,
The Simpson Tower
Toronto, Ontario
ATTN: Paul Michna

CC. Stewart, B. C.

CERTIFICATE NO. 34063
INVOICE NO. 27612
RECEIVED August 2, 1978
ANALYSED August 21, 1978

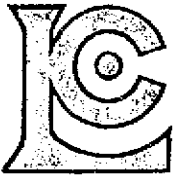
SAMPLE NO. :	% Lead	% Zinc	oz/ton Silver
ER-13	0.08	0.22	2.04
ER-33*	0.08	0.08	7.90

* HIGH COPPER OBSERVED.



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CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604
TELEX: 043-52597

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CERTIFICATE OF ANALYSIS

to: Derry Michener & Booth
#2302 - 401 Bay Street,
Toronto, Ontario,
M5H 2Z5
ATTN:

cc: Stewart, B.C.

CERTIFICATE NO. 34122

INVOICE NO. 27558

RECEIVED August 9th, 1978

ANALYSED August 17th, 1978

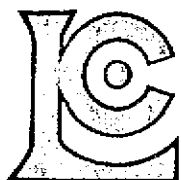
SAMPLE NO. :	% Lead	% Zinc	oz/T Silver	oz/T Gold
E-131K	<0.001	<0.01	0.01	<0.003



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ASSOCIATION

CERTIFIED BY:

B. L. Swaites



CHEMEX LABS LTD.

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 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE: 985-0648
 AREA CODE: 604
 TELEX: 043-52597

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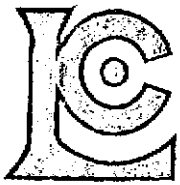
CERTIFICATE OF ASSAY

TO: Derry Michner & Booth
 2302 - 401 Bay Street,
 Toronto, Ontario

ATTN: M5H 2Z5
 Ian Thompson CC, Paul Michna, Stewart

CERTIFICATE NO. 34145
 INVOICE NO. 27642
 RECEIVED August 11, 1978
 ANALYSED August 22, 1978

SAMPLE NO. :	%	%	oz/ton
	Lead	Zinc	Silver
M-61 R	0.03	0.22	2.12



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604
TELEX: 043-52597

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CERTIFICATE OF ASSAY

TO: Derry Michener & Booth
2302 - 401 Bay St.,
Toronto, Ont.
MSH 2Z5

c.c. Stewart, B.C.

CERTIFICATE NO. 34179
INVOICE NO. 27702
RECEIVED August 16, 1978
ANALYSED August 24, 1978

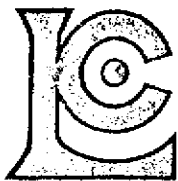
SAMPLE NO. :	% Lead	% Zinc	oz/ton Silver
E 143 RF	0.01	0.02	0.24
E 203 R	0.12	0.13	0.76
M 108 R	0.04	0.08	0.38
M 109 R	0.01	0.03	0.06
M 110 R	0.01	0.04	0.06
M 117 R	0.21	0.02	0.92
M 124 R	0.01	0.05	0.01
M 135 R	6.87	2.36	9.98 <
V 7 R	0.09	0.02	0.92
V 204 RF	0.02	0.01	0.02
V 209 RF	0.01	0.02	0.01



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 TELEPHONE: 985-0648
 AREA CODE 604
 TELEX: 043-52597

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CERTIFICATE OF ASSAY

CERTIFICATE NO. 34222

TO: Derry Michener & Booth
 2302 - 410 Bay St.,
 Toronto, Ont.,

INVOICE NO. 27829

RECEIVED August 23, 1978

ATTN: MSH 2Y4
 Ian Thompson

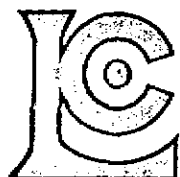
ANALYSED August 31, 1978

c.c. Paul Michna

SAMPLE NO. :	%	%	oz/ton
	Lead	Zinc	Silver
A-339-R	<0.01	<0.01	<0.01
E-294-R	0.79	1.08	1.16
M-169	0.01	<0.01	<0.01
M-170	<0.01	<0.01	<0.01
M-171	<0.01	<0.01	<0.01
V-300-R	<0.01	0.01	<0.01
V-335-R	0.03	0.55	0.01



[Signature]
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CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604
TELEX: 043-52597

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CERTIFICATE OF ASSAY

CERTIFICATE NO. 34221

TO: Derry Michener & Booth
2302 - 401 Bay St.,
Toronto, Ont.,

INVOICE NO. 27829

RECEIVED August 23, 1978

ATTN: M5H 2Y4
Ian Thompson

c.c. Paul Michna

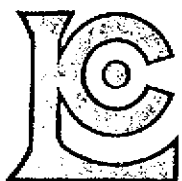
ANALYSED August 31, 1978

SAMPLE NO. :	%	%	oz/ton
	Lead	Zinc	Silver
A-272-R	0.01	0.02	0.01
A-278-R	<0.01	0.04	0.01
A-283-R	0.01	0.55	0.01
A-266-R	<0.01	0.01	<0.01
E-271-R	<0.01	0.01	<0.01
M-140-R	0.01	1.18	0.01
M-148-R	<0.01	0.01	<0.01
V-227-R	<0.01	0.01	<0.01
V-275-R	<0.01	0.01	<0.01
V-276-R	<0.01	<0.01	<0.01
V-282-R	<0.01	0.01	<0.01



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REGISTERED ASSAYER, PROVINCE OF BRITISH COLUMBIA



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 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE: 985-0648
 AREA CODE: 604
 TELEX: 043-52597

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CERTIFICATE OF ASSAY

CERTIFICATE NO. 34269

TO: Derry Michener & Booth
 2302 - 401 Bay St.,
 Toronto, Ont.,

INVOICE NO. 27901

RECEIVED August 31, 1978

ATTN: M5H 2Z5
 Ian Thompson

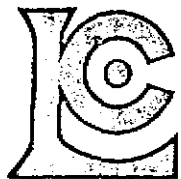
ANALYSED September 5, 1978

SAMPLE NO. :	%
	Copper
ER-13	<0.01
ER-33	14.8



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 AREA CODE: 604
 TELEX 043 52597

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CERTIFICATE OF ASSAY

CERTIFICATE NO. 34378

TO: Derry Michener & Booth,
 2302 - 401 Bay St.,
 Toronto, Ontario
 M5H 2Z5

INVOICE NO. 28171

RECEIVED Sept.13/78

ANALYSED Sept.21/78

ATTN:

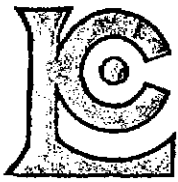
cc:Stewart

SAMPLE NO. :	%	%
	Lead	Zinc
E-368R	0.63	0.04



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[Signature]
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 CANADA V7J 2C1
 TELEPHONE: 985-0648
 AREA CODE: 604
 TELEX: 043-52597

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CERTIFICATE OF ASSAY

TO: Derry, Michener & Booth,
 #2302 - 401 Bay Street,
 TORONTO, Ontario M5H 2Z5.

CERTIFICATE NO. 34427

INVOICE NO. 28318

RECEIVED Sept. 20, 1978

ANALYSED Sept. 29, 1978

ATTN: cc: Mr. Paul Michener, Stewart

SAMPLE NO. :	% Pb	% Zn	oz/Ton Ag
P-17-R	0.03	0.03	0.12



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San Amador
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NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604
TELEX: 043-52597

- ANALYTICAL CHEMISTS
- GEOCHEMISTS
- REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

TO: Derry, Michener & Booth,
#2302 - 401 Bay Street,
TORONTO, Ontario M5H 2Y4.

CERTIFICATE NO. 34455

INVOICE NO. 28432

RECEIVED September 25, 1978

ANALYSED October 5th, 1978

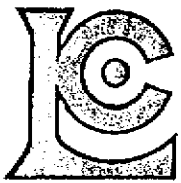
ATTN: Mr. Ian Thompson

SAMPLE NO. :	% Pb	% Zn	oz/Ton Ag
P - 32R	0.04	0.08	0.08
P - 43R	0.02	0.03	1.42
M - 108R	0.22	0.11	1.76
M - 107RA	0.29	2.06	21.62
M - 109RA	4.84	1.08	3.52



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R. Swaiter
REGISTERED ASSAYER, PROVINCE OF BRITISH COLUMBIA



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 TELEPHONE: 985-0648
 AREA CODE: 604
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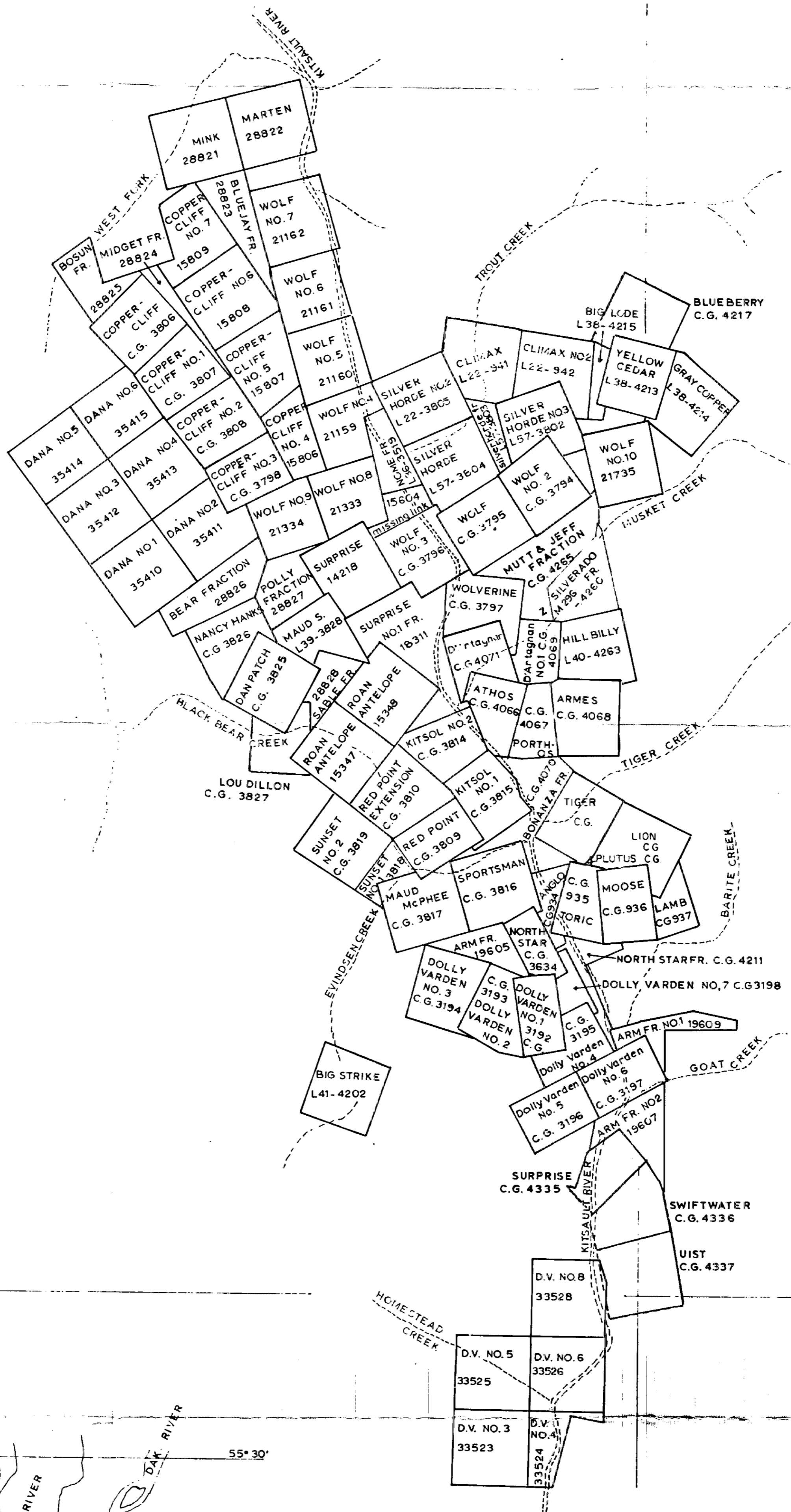
CERTIFICATE OF ASSAY

TO: Darry Michener & Booth
 2302 - 401 Bay St.,
 Toronto, Ont.
 ATTN: MSH 2Y4

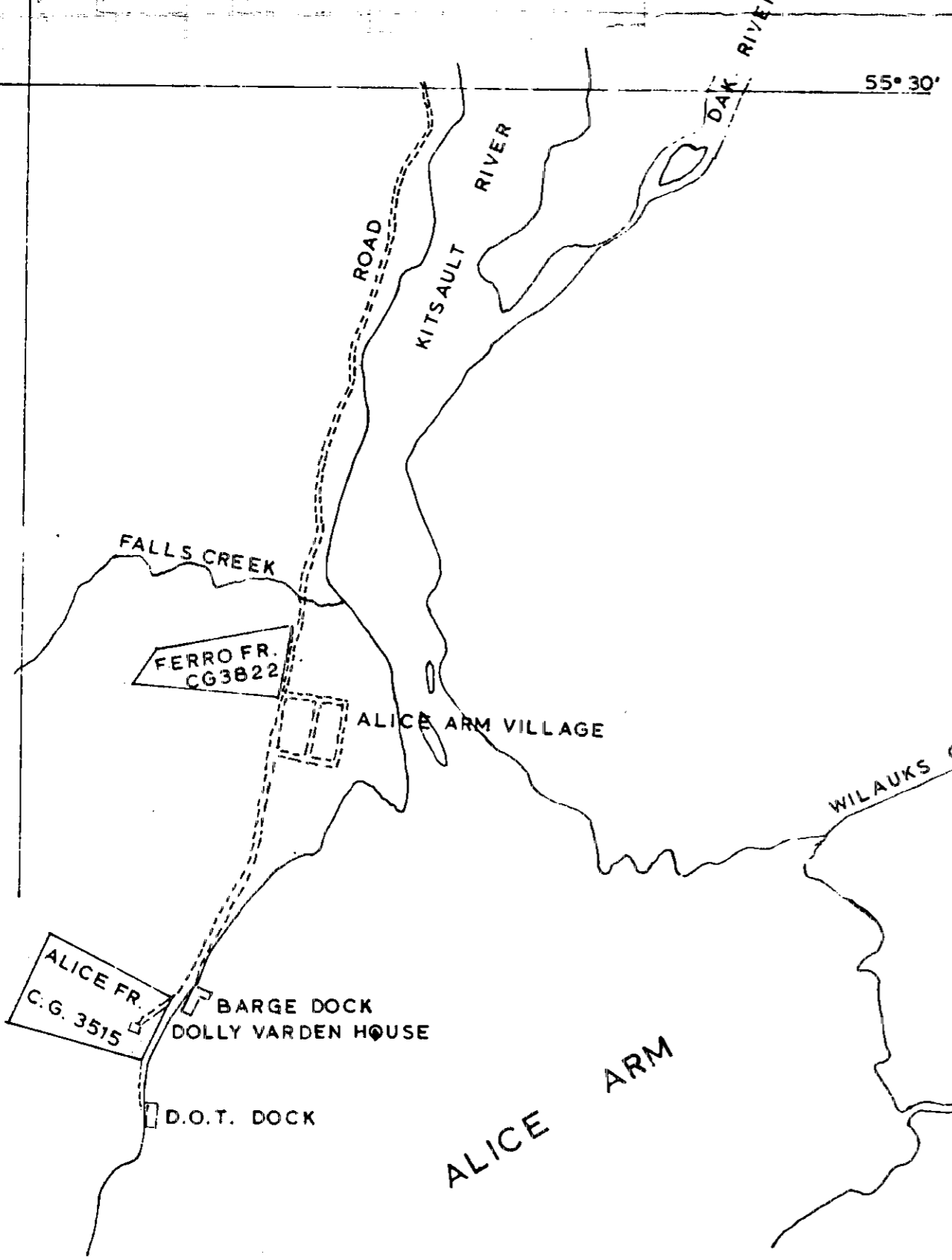
CERTIFICATE NO. 34720
 INVOICE NO. 28962
 RECEIVED Nov. 9/78
 ANALYSED Nov. 14/78

SAMPLE NO. :	Oz/Ton Silver	
E 368R	6.06	Prev. Cert. 34378

129° 30'



129° 30'



PART 1 OF 2

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
7098
NO.

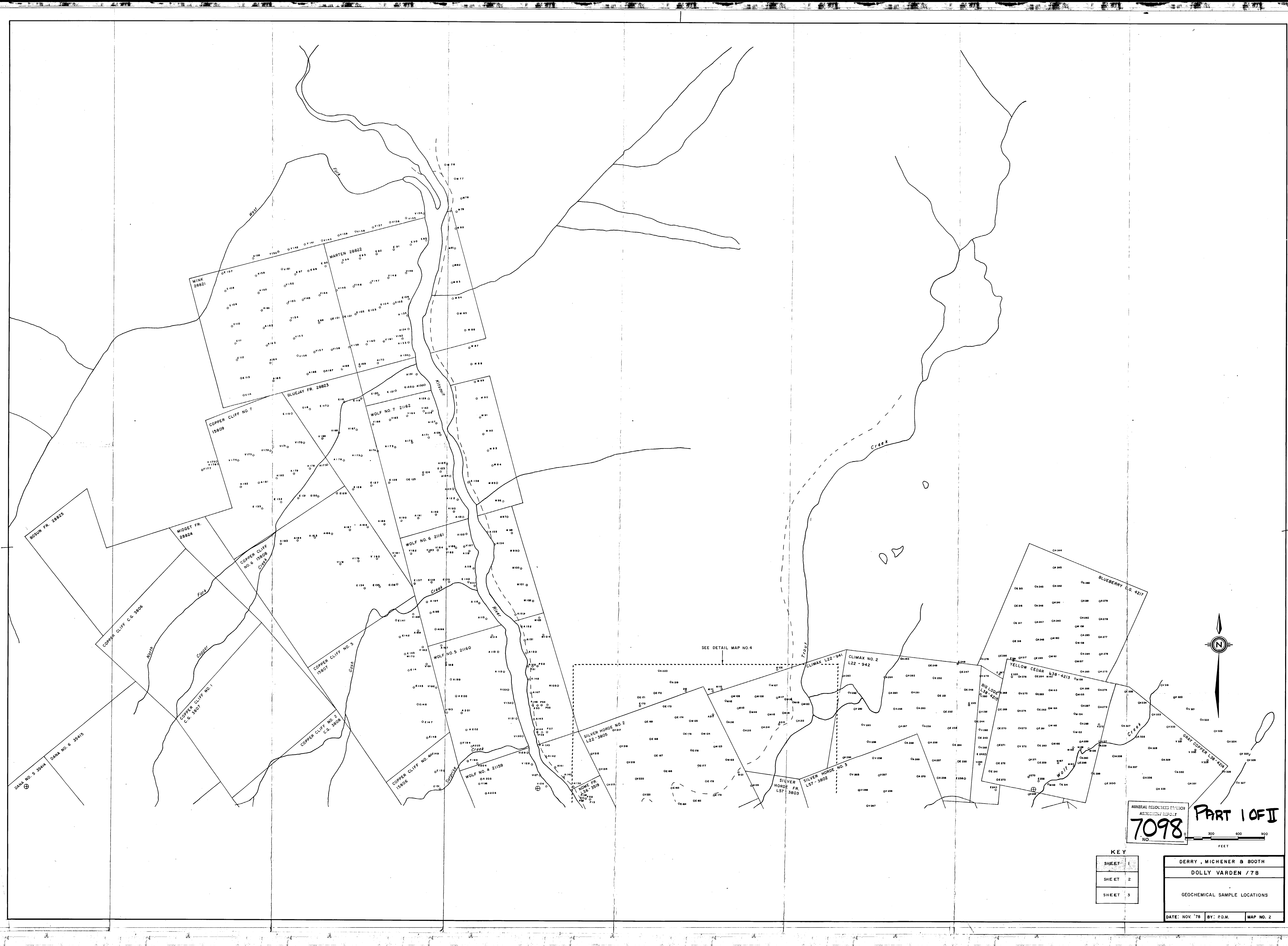
DERRY, MICHENER & BOOTH
DOLLY VARDEN RESOURCES LIMITED

CLAIM MAP



N.T.S. SHEET 103 P
SCALE: 1 Inch = 1500 Feet DATE: November 1977

Map 2



DANA NO. 5 35044
 DANA NO. 6 35A15

COPPER CLIFF NO. 1
 C.G. 3807

COPPER CLIFF NO. 2
 C.G. 3808

COPPER CLIFF NO. 5
 15807

COPPER CLIFF NO. 7
 15809

WOLF NO. 4 21159

WOLF NO. 5 21160

WOLF NO. 6 21161

WOLF NO. 7 21162

SILVER HORDE NO. 2
 L22-3805

SILVER HORDE FR.
 L57-3803

SILVER HORDE NO. 3

CLIMAX L22-941

CLIMAX NO. 2
 L22-942

YELLOW CEDAR
 L38-4213

BLUEBERRY C.G. 4217

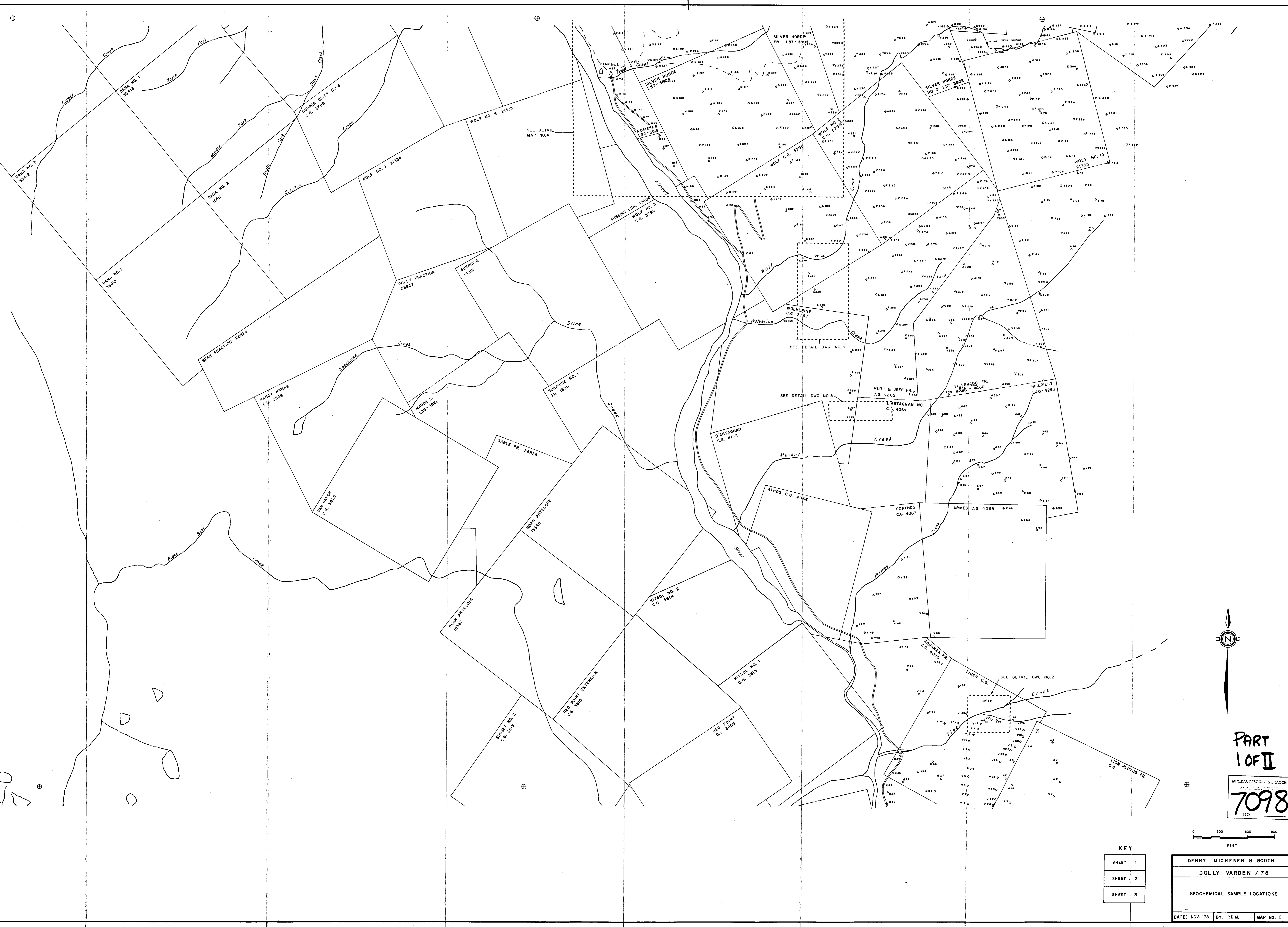
MINERAL RESOURCES DIVISION
 ASSESSMENT REPORT
7098
 NO.

PART I OF II

KEY
 SHEET 1
 SHEET 2
 SHEET 3

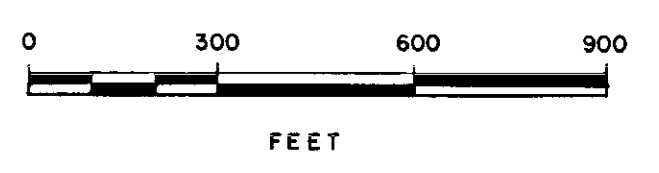
DERRY, MICHENER & BOOTH
 DOLLY VARDEN / 78
 GEOCHEMICAL SAMPLE LOCATIONS

DATE: NOV. '78 BY: P.D.M. MAP NO. 2



PART
1 OF 2

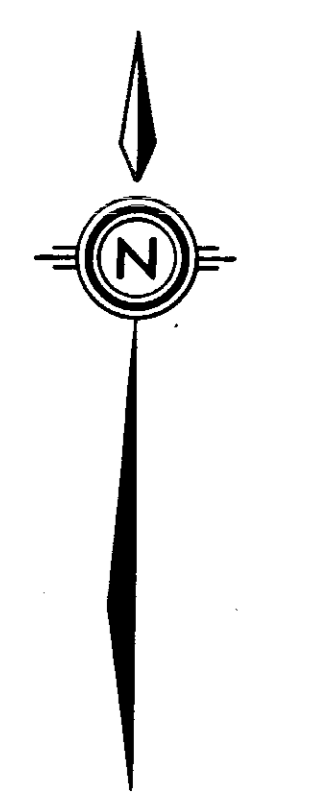
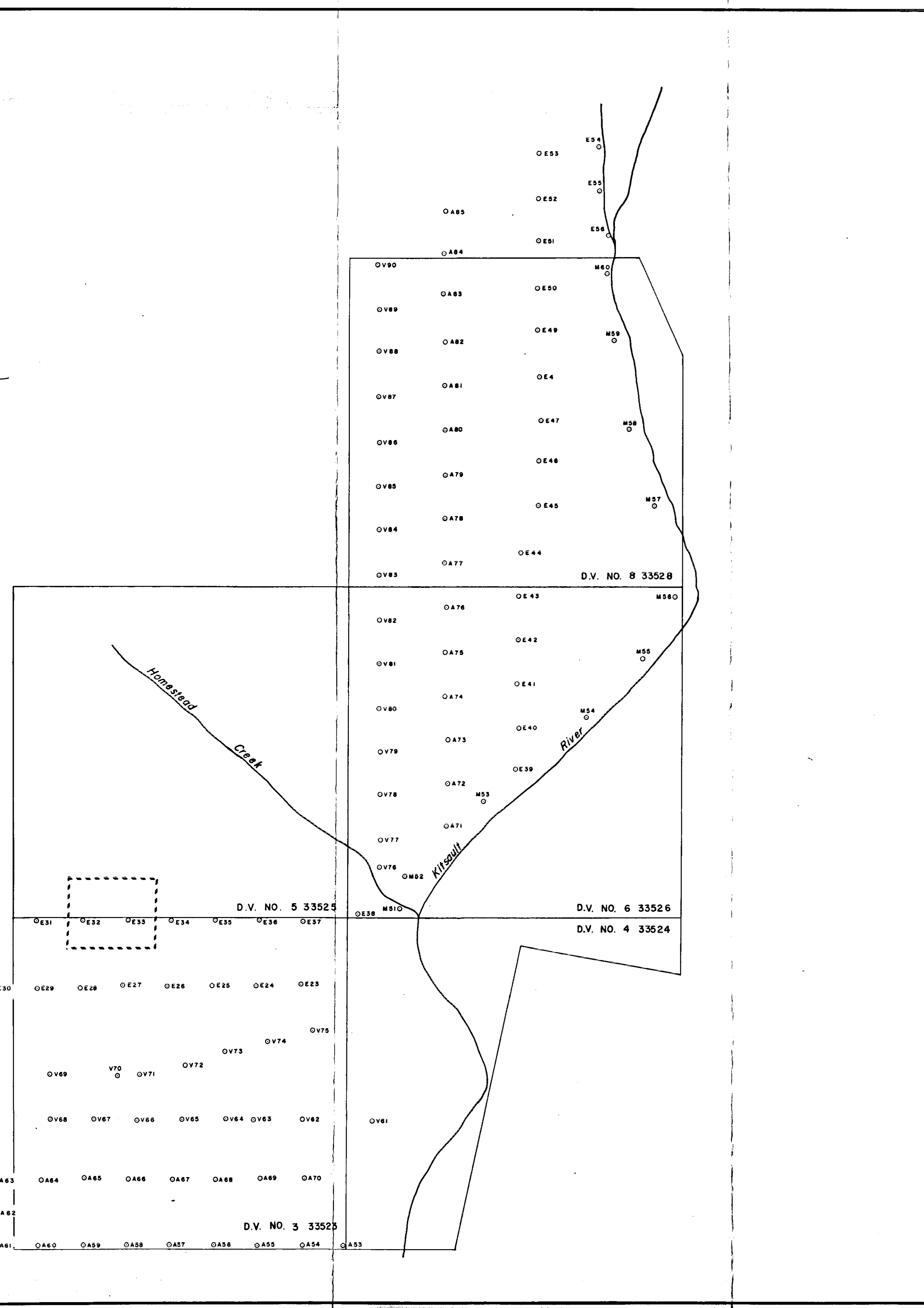
MINERAL RESOURCES BRANCH
7098
110



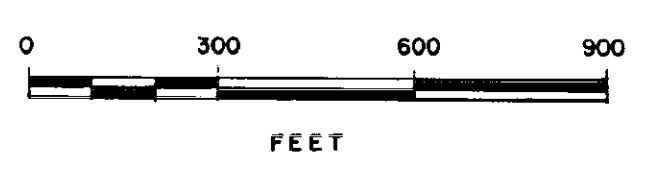
KEY

SHEET 1
SHEET 2
SHEET 3

DERRY, MICHENER & BOOTH
DOLLY VARDEN / 78
GEOCHEMICAL SAMPLE LOCATIONS
DATE: NOV. '78 BY: P.D.M. MAP NO. 2



PART 1 OF II
 MINING AND GEOSCIENCE BRANCH
 7098
 NO.



KEY

SHEET 1
SHEET 2
SHEET 3

DERRY, MICHENER & BOOTH
DOLLY VARDEN / 78
 GEOCHEMICAL SAMPLE LOCATIONS
 DATE: NOV. '78 BY: P.D.M. MAP NO. 2