BIOGEOCHEMICAL REPORT

94C/2W

Gordon & Davies Groups
25 miles north of Germansen Ldg.
Omineca M.D. 56°, 124° S.E.
July 1 - September 30, 1951

D.A. Barr H.V. Warren P.E.

COPY

77

The University of British Columbia

Vancouver, B.C.

Date: October 11, 1951

Invoice No.: 65-6000-000

IN ACCOUNT WITH

Kennco Explorations, (Canada) Limited,
Mr. J. Scott,
Room 815 - 402 West Pender Street,
Vancouver, B.C.

42 analyses for copper and zinc @ $1.25 (51 O.G. 1-42 inclusive)	$52.50

Cheque received 8/11/51

Date: November 3, 1951

Invoice No.: 65-6000-000

154 analyses for copper and zinc @ $1.25 (Osilinka Gordon: 51 OG 43 to 51 OG 196 inclusive)	$192.50

Cheque received 22/11/51

$245.00

THE UNIVERSITY OF BRITISH COLUMBIA

W. W. Rita

ACCOUNTANT

C O N T E N T S

MAPS AND ILLUSTRATIONS

KENNCO EXPLORATIONS, (CANADA) LIMITED

BIOGEOCHEMICAL SURVEY

DAVIES & GORDON GROUPS

OMINECA MINING DIVISION

BRITISH COLUMBIA

1951

INTRODUCTION

During 1951 a combined geological mapping and biogeochemical survey was carried out on the Davies and Gordon groups of claims situated in the Osilinka area of central British Columbia.

Tree samples were taken at intervals of approximately 200 feet over the greater portion of the mapped area, but in the vicinity of known mineral occurrences the interval between samples was reduced to 50-100 feet. The 100 foot grid system thus permitted the outlining of probably anomalous areas within reasonable limits. Sampling on the remaining portion of the area provided a means of tracing the probable continuity of the mineralized areas over ground lacking in outcrops.

At the conclusion of the survey biogeochemical results were correlated with known geology. At the Gordon group the extension of a lead-zinc zone was indicated over a wide area to the north of the main showing. At the Davies group anomalous areas were indicated in the vicinity of known mineralization, and several smaller anomalies were indicated in the intervening area.

GEOLOGY

DAVIES GROUP

Low to medium grade zinc-silver-lead mineralization occurs as a replacement of dolomitic limestone within two areas, 3000 feet apart, which lie on the limbs of an anticlinal nose. The mineralization appears to be localized by drag-folding and partially controlled by fracture cleavage. Sulphide mineralization consists predominantly of sphalerite, with minor galena. Minor amounts of secondary lead- zinc minerals are also in evidence. Gangue minerals are dolomite, barite and calcite, with a characteristic association of galena occurring with or near barite.

GORDON GROUP

Three miles easterly from the Davies showing , on the Gordon Claim group, zinc-silver-lead mineralization is associated as a replacement of dolomitized limestone which has been faulted and brecciated. Sulphide mineralization includes sphalerite, galena and pyrite. Minor amounts of secondary lead-zinc minerals are also present.

BIOGEOCHEMICAL INVESTIGATION

TOPOGRAPHY AND OVERBURDEN

The Davies group workings are situated on both sides of a creek valley. The terrain rises quite steeply from the creek, with elevations varying from 2900-4000 feet in the vicinity of the workings. Only a small portion of this area is precipitous.

The depth of overburden is quite variable, with few outcrops occurring within the creek valley and the streams which are tributary to it. Elswhere, but particularly on the upper valley slopes the overburden appears shallow, and outcrops are fairly plentiful.

The Gordon group showing occurs on a steep, northeast facing slope which maintains a uniform grade of 2:3 over 1200 feet. Drainage is provided by small streams which are probably seasonal in flow.

The variation in depth of overburden is similar to that of the Davies group, but outcrops are not as abundant.

DISTRIBUTION OF TIMBER

The area lies well below timber line and is wooded with Alpine fir (Abies lascoiarpa), Lodgepole pine (Pinus contorta), Western White spruce (Picea glauca), and trembling Aspen (Populus tremuloides), which occur generally in mixed stands. Timber is quite heavy on the valley slopes, but relatively open on summits.

SAMPLING AND ANALYSIS

Standard sampling procedure was followed in the collecting of all samples. Samples were bagged in paper, and shipped to the biogeochemical laboratory at the University of British Columbia for analysis. A complete description of sampling and analysis procedure appears in the paper "Further Studies in

Biogeochemistry", Bulletin of the Geological Society of America, Volume 60, pages 531 - 559, 1949, by H.V. Warren and R.E. Delavault.

FREQUENCY CURVES(Plates 1,2)

The probable limits of anomalous conditions for Abies lasiocarpa and Pinus contorta were estimated by the use of frequency curves. The accompanying histrograms show in consolidated form the results of analyses in parts per million of zinc in Ash, and in parts per million of zinc in dry plant.

Samples taken from Picea glauca and Populus tremuloides were insufficient in number to provide data for frequency curves. Accordingly, probably anomalous values for these species were obtained from results accumulated during the past by Dr. H.V. Warren.

The following values were used on all biogeochemical maps as being indicative of probably anomalous conditions on the Gordon and Davies groups.

Species	Zinc in dry plant
Pinus contorta	Greater than 55 p.p.m.
Abies lasiocarpa	Greater than 68 p.p.m.
Picea glauca	Greater than 75 p.p.m.
Populus tremuloides	Greater than 90 p.p.m.

BIOGEOCHEMICAL RESULTS (Plates 3,4,8)

On the Davies Group, biogeochemical results indicate anomalous areas in the vicinity ofknown mineralization. On the main showing on the Molly-Dolly claims, anomalous zinc content from tree sampling occurs over an area of 500 x 500 feet. Anomalous results are indicated elsewhere within the map area, particularly in the vicinity of the Elizabeth showing.

On the Gordon group results indicate an anomalous zinc area to the north of the main showing, which suggests a continuation of the brecciated zone in that direction. Anomalous zinc content from tree sampling occurs over an area of 600 x 200 feet.

To The south, an anomalous area of 250 x 150 feet occurs in the vicinity of the gossan.

CONCLUSIONS

The distribution of anomalous zinc values on the Davies group is most concentrated over the area covering the Molly-Dolly claim workings. These values indicate a probable continuity of the zinc mineralization 200 feet to the west of the principal workings, down the valley slope. Structurally this corresponds to the inferred geological trend.

To the southeast of the Elizabeth showing anomalous values are scattered over a wide area within the creek valley, and on its southeast slope. The absence of outcrops in this area prevents an explanation of the cause of these values.

The strong concentration of anomalous zinc values on the downslope side of the Gordon showing suggests a continuation of the brecciated zone in that direction, which coincides with the strike of faulting. Some of this anomalous content may be due to the migration of zinc along water courses but further work will be necessary to establish this condition.

Harry V. Warren

Dr. H.V. Warren.

D.A. Barr

D.A. Barr

Vancouver, B.C.

January 31, 1952

KENNCO EXPLORATIONS, (CANADA), LIMITED
402 WEST PENDER STREET
VANCOUVER 3, B. C.

May 12, 1952

The Gold Commissioner,
Smithers, B.C.

Dear Sir:

The following is a statement of the actual expenses incurred by Kennco Explorations, (Canada) Limited in behalf of Northwestern Explorations Limited in making a biogeochemical survey of the Davies claims, Omineca M.D. These claims are grouped for assessment purposes as follows:

Group 1 - Nellie, Millie, Lucille, Lois, Gwyn, Hazel Alice and Lili Marlene Mineral claims.

Group 2 - Betty, Mary, Dolly, Margaret, Sheila, Molly Mineral claims.

Grcup 3 - Elizabeth 1, Elizabeth 2, Elizabeth 3, Elizabeth 4, Elizabeth 5 Mineral claims.

Salaries and Wages:

Name	Dates of Employment From	To	Days on Biogeo-Chemical Survey	Wages
K.C. Campbell	June 22 -	Oct. 15/51	52	$424.00
P.C. Toker	May 25 -	Sept.14/51	52	463.50
J. Bendickson	May 15 -	Oct. 15/51	52	494.00
D.A. Barr	Permanent staff		7	64.00
			Total wages	1,445.50

Cost of Assaying:

326 samples at $1.25 per sample 407.50

Supervision:

Dr. H.V. Warren 2 days 70.00

Total $1,923.00

Yours very truly,

KENNCO EXPLORATIONS (CANADA) LIMITED

JSS/w

COPY

The University of British Columbia

Vancouver, B.C.

Date: November 26, 1951

Invoice No.: 65-6000-000

IN ACCOUNT WITH

Kennco Explorations, (Canada) Limited
Mr. J. Scott,
Room 815, 402 West Pender Street,
Vancouver, B.C.

150 analyses for Copper and zinc @ $1.25
(Osilinka Davies: 510C177-510C326 Incl.) $187.50

Cheque received 7/12/51

Date: October 11, 1951

Invoice No.: 65-6000-000

176 analyses for copper and zinc @ $1.25
(51 OC 1-176 inclusive $220.00

Cheque received 8/11/51

$407.50

THE UNIVERSITY OF BRITISH COLUMBIA
ACCOUNTANT

KENNCO EXPLORATIONS, (CANADA), LIMITED
402 WEST PENDER STREET
VANCOUVER 3, B. C.

May 12, 1952

The Gold Commissioner,
Smithers, B.C.

Dear Sir:

The following is a statement of the actual expenses incurred by Kennco Explorations, (Canada) Limited in behalf of Northwestern Explorations Limited, in making a biogeochemical survey of the Gordon Mineral claims 1 - 6, Omineca M.D.

Salaries and Wages:

Name	Date of Employment From	To	Days on Biogeochemical survey	Wages
K.C. Campbell	June 22 -	Oct. 15/51	19	$155.00
P.C. Toker	May 25 -	Sept. 14/51	19	169.50
			Total	324.50

Cost of Assaying:

196 Samples @ $1.25 per sample 245.00

Supervision:

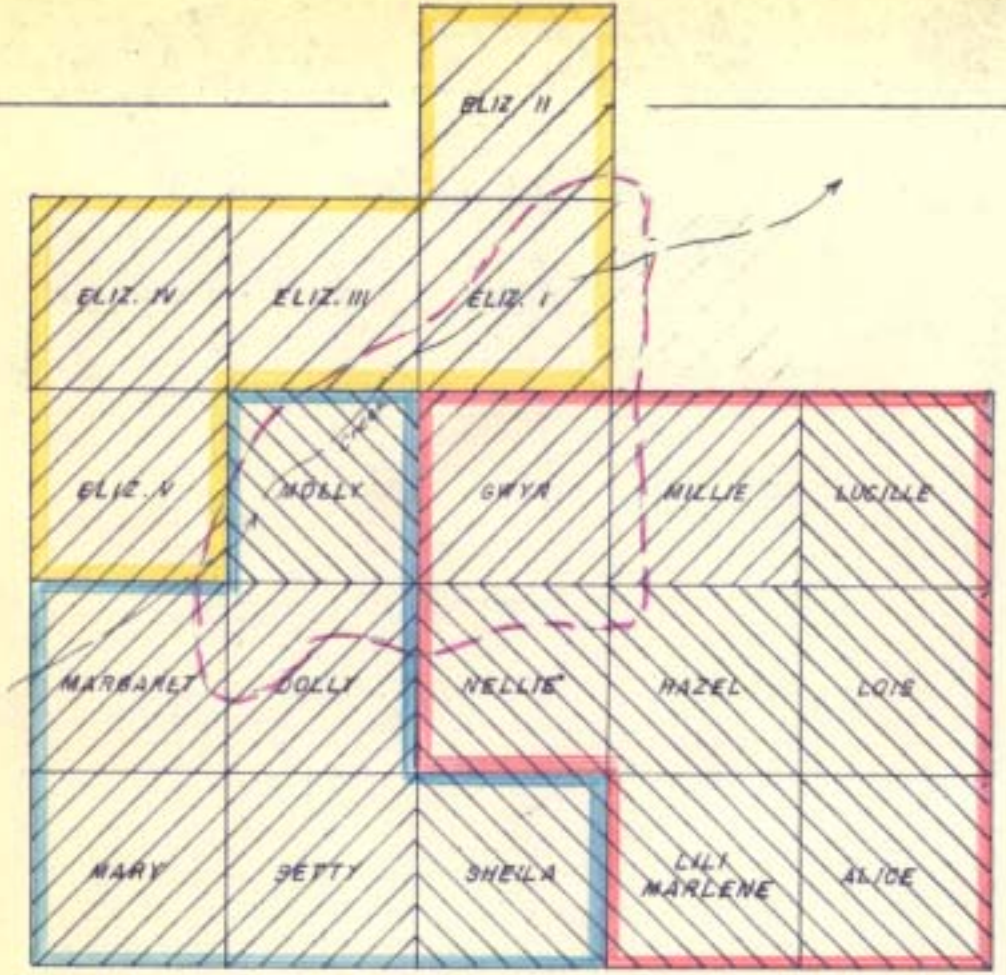
Dr. H.V. Warren 1 day 35.00

Total $604.50

Yours very truly,

KENNCO EXPLORATIONS (CANADA) LIMITED

JSS/w



DAVIES GROUP

GORDON GROUP

#71 Map 1

GROUP NO. 1
GROUP NO. 2
GROUP NO. 3

Harry V. Warren

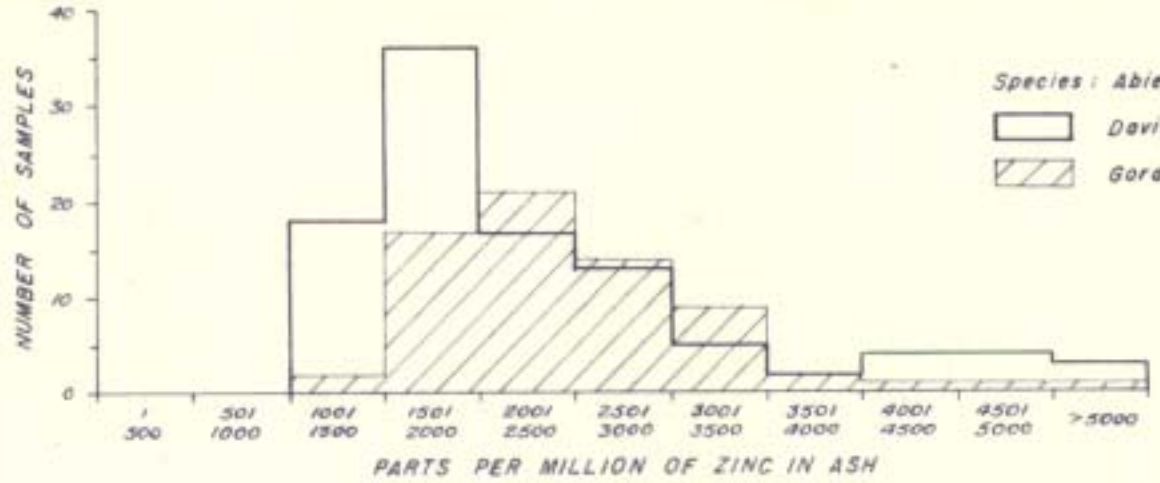
KENNCO EXPLORATIONS (CANADA) LIMITED
WESTERN DIVISION

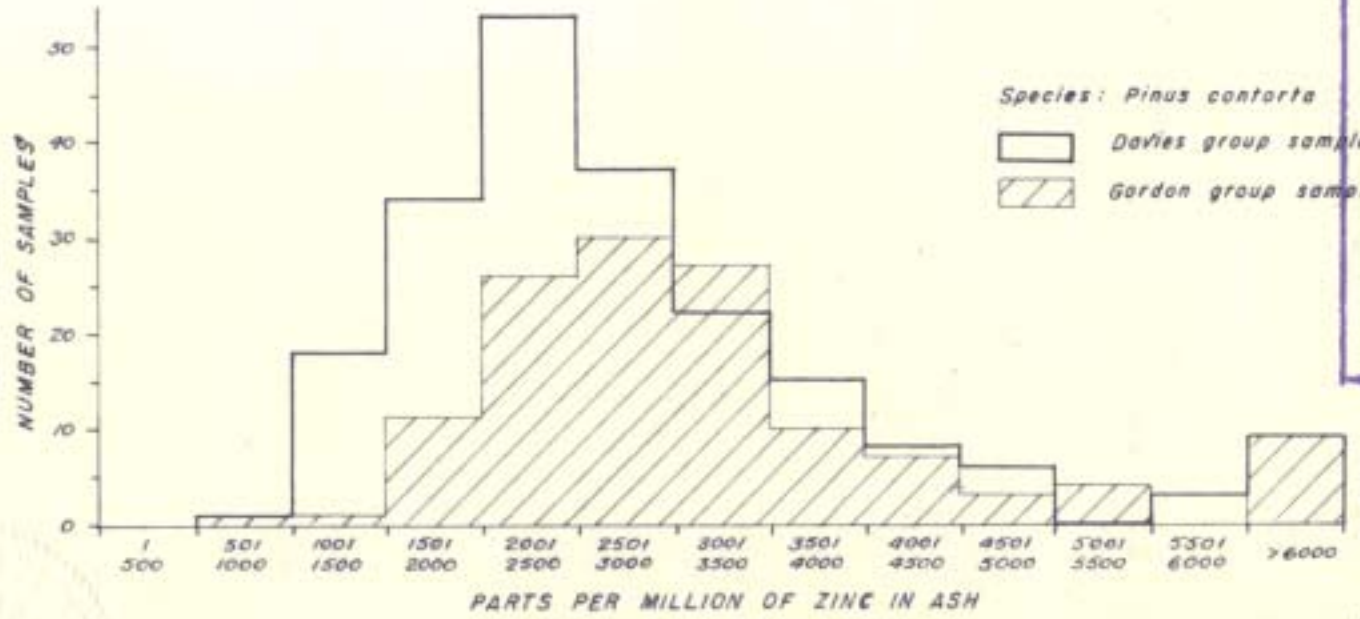
GORDON & DAVIES
CLAIM GROUPS

Omineca Mining Division
British Columbia

DATE: 28/1/52	DRAWN BY: RAB	PLATE NO: 4
REVISED BY	DATE	SCALE:

Area covered by Biogeochemical Survey --





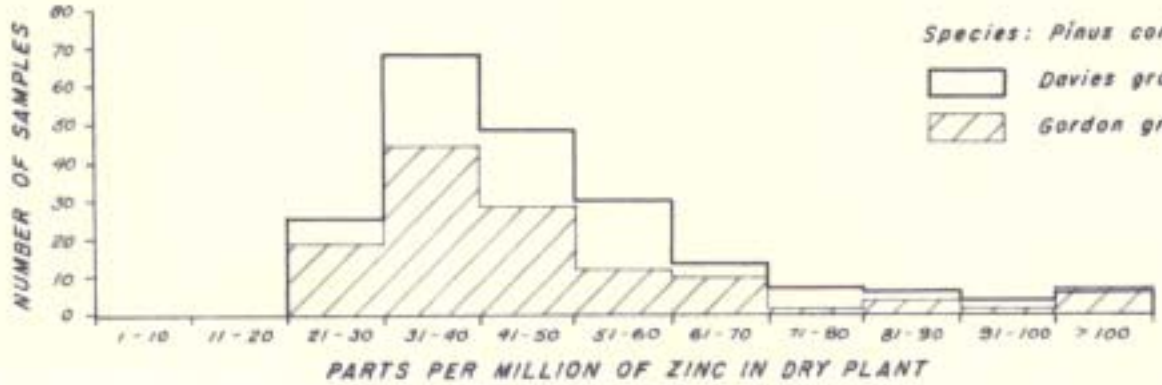
KENNCO EXPLORATIONS (CANADA) LIMITED

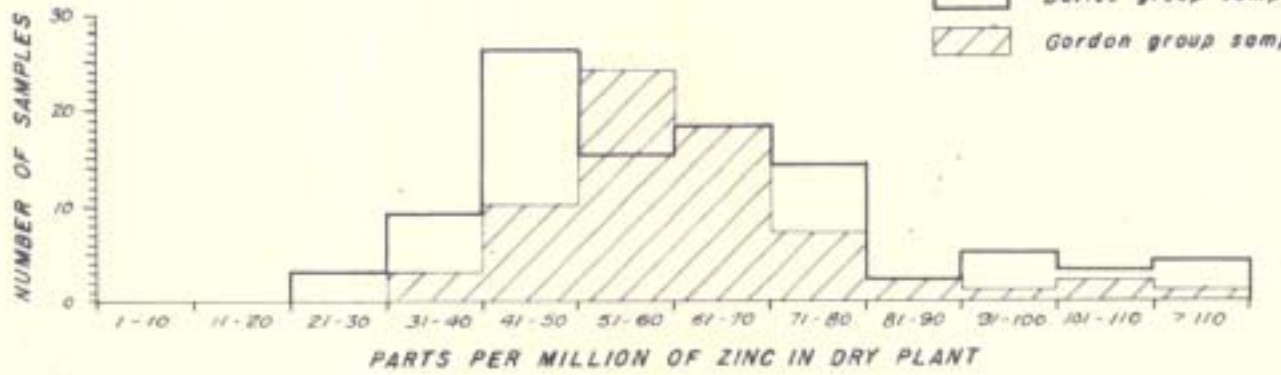
DAVIES AND GORDON GROUPS
HISTOGRAMS

O.K. Harry V. Warren

#71 Map #2

Plate No. 1





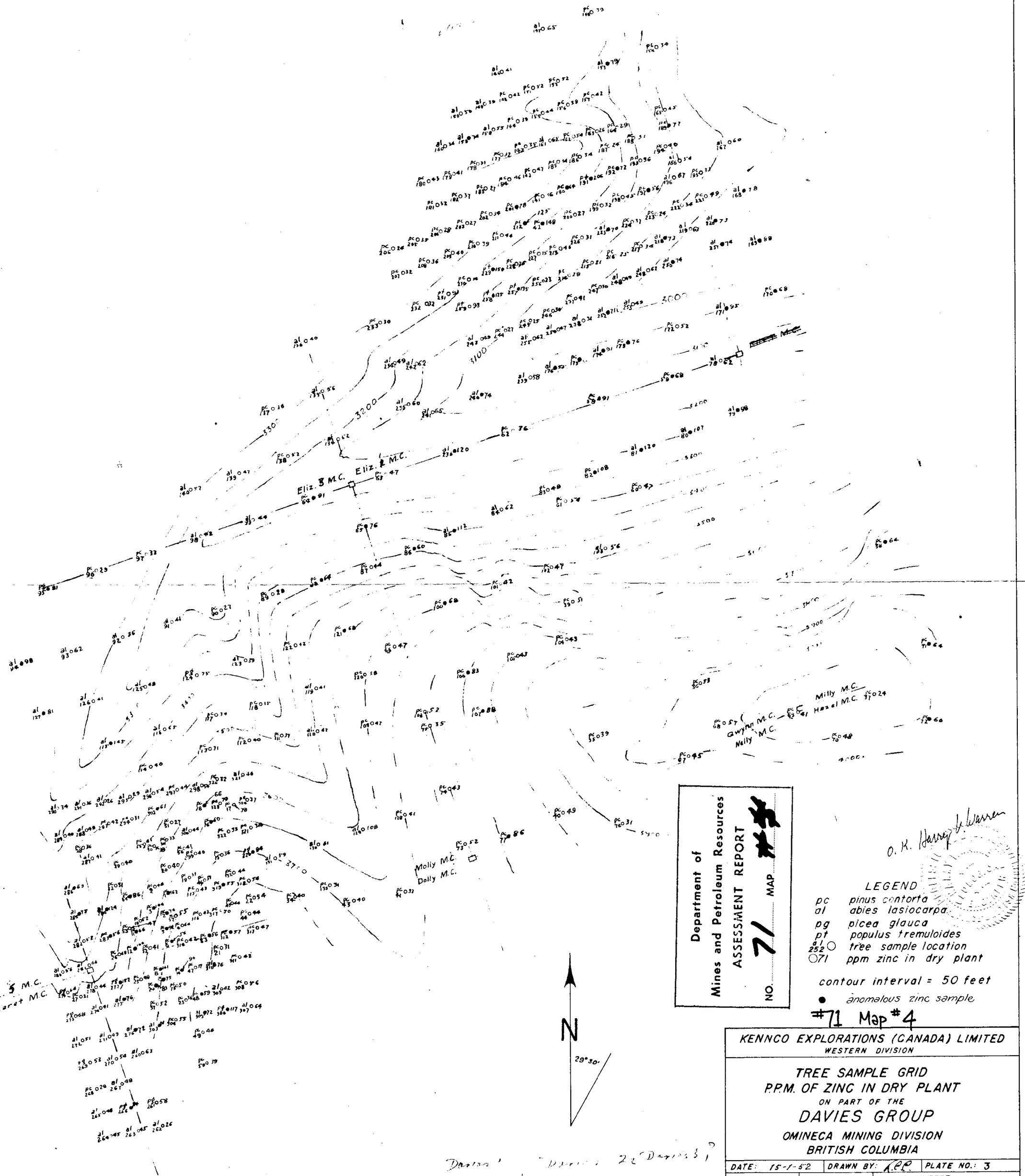
#71, Map #3

KENNCO EXPLORATIONS (CANADA) LIMITED

DAVIES AND GORDON GROUPS
HISTOGRAMS

O. K. Harry Warren

Plate No. 2



Department of Mines and Petroleum Resources
ASSESSMENT REPORT NO. 71 MAP

O. K. Harvey & Warren

LEGEND

pc pinus contorta
al abies lasiocarpa
pg picea glauca
pt populus tremuloides
al 252 ○ tree sample location
○ 71 ppm zinc in dry plant

contour interval = 50 feet

● anomalous zinc sample

#71 Map #4

KENNCO EXPLORATIONS (CANADA) LIMITED
WESTERN DIVISION

TREE SAMPLE GRID
P.P.M. OF ZINC IN DRY PLANT
ON PART OF THE
DAVIES GROUP
OMINECA MINING DIVISION
BRITISH COLUMBIA

DATE: 15-1-52	DRAWN BY: A.P.P.	PLATE NO.: 3
REVISED BY	DATE	SCALE: IN FEET 0 250 500

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 71 MAP #5

Elin M.C. Molly M.C.
Margaret M.C. Dolly M.C.

O. K. Harry Khaira

LEGEND

pc pinus contorta
al abies lasiocarpa
pg picea glauca
pc 42 O tree sample location
O 142 ppm zinc in dry plant
stripped mineralized area
contour interval = 20 feet
● anomalous zinc sample

N

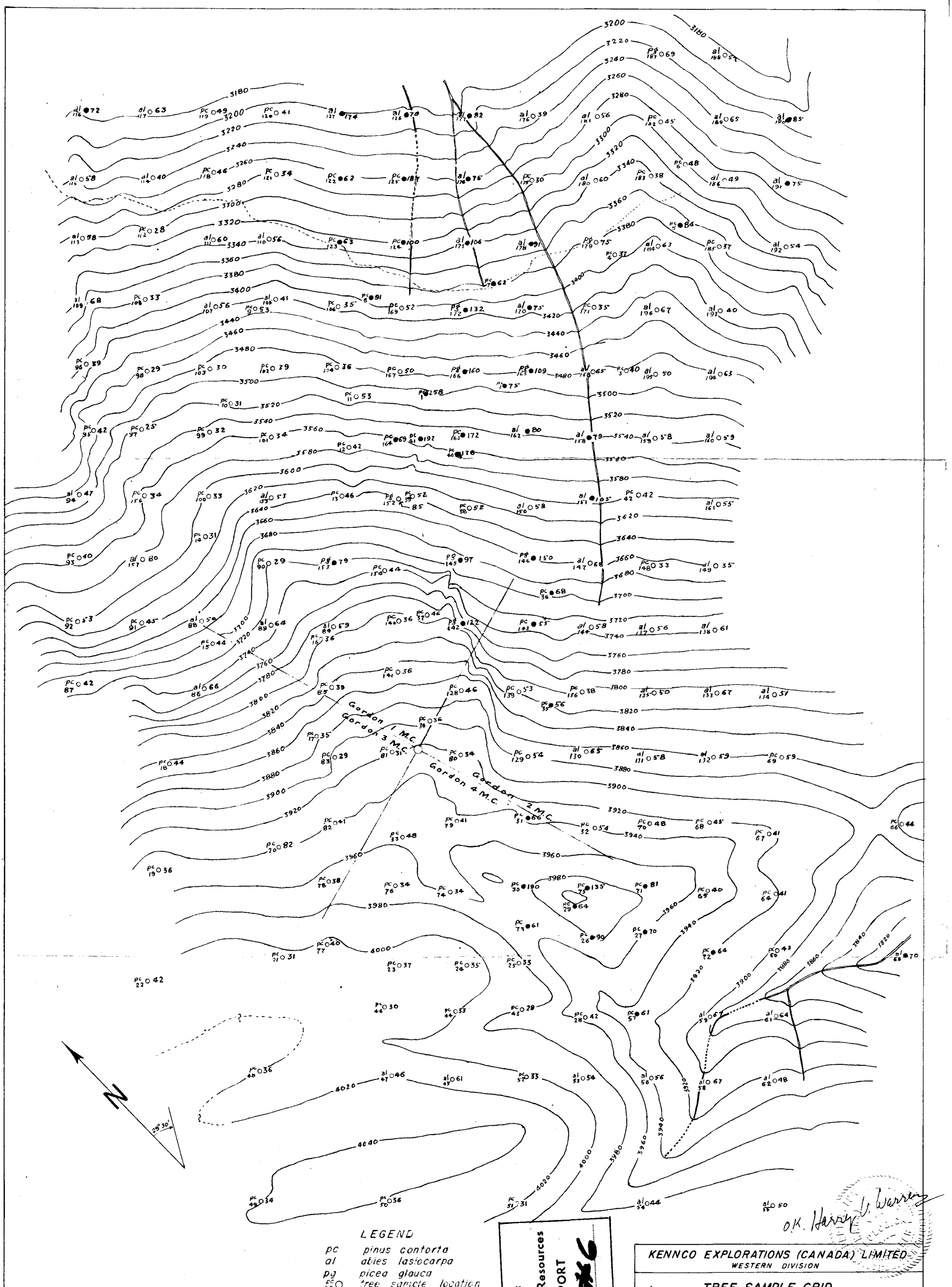
29°30'

Davies 2 Cp ?

KENNCO EXPLORATIONS (CANADA) LIMITED
WESTERN DIVISION

TREE SAMPLE GRID
P.P.M. OF ZINC IN DRY PLANT
ON PART OF THE
MOLLY-DOLLY CLAIMS
OMINECA MINING DIVISION
BRITISH COLUMBIA

DATE 15-1-52	DRAWN BY K.C.C.	PLATE NO. 4
REVISED BY	DATE	SCALE 0 100 200



LEGEND

pc pinus contorta
al abies lasiocarpa
pg picea glauca
pc 42 ○ tree sample location
○ 42 p.p.m. zinc in dry plant
contour interval = 20 feet
● anomalous zinc sample

Department of Mines and Petroleum Resources
ASSESSMENT REPORT
MAP #6
NO. 71

O.K. Harvey V. Warren

KENNCO EXPLORATIONS (CANADA) LIMITED
WESTERN DIVISION

TREE SAMPLE GRID
P.P.M. OF ZINC IN DRY PLANT
ON PART OF THE
GORDON GROUP
OMINECA MINING DIVISION
BRITISH COLUMBIA

DATE: 15-1-52.	DRAWN BY: K.C.P.	PLATE NO: 8
REVISED BY	DATE	SCALE: IN FEET 0 100 200