



CHALICE MINING INC.

86-778 - 15418

BIOGEOCHEMICAL REPORT
ON THE
GG GROUP OF CLAIMS

PENROSE CREEK, GUN LAKE AREA
LILLOOET MINING DIVISION
BRITISH COLUMBIA

PROPERTY: 5KM. DUE WEST OF THE TOWN OF GOLD
BRIDGE ON IMMEDIATE WEST SIDE OF
GUN LAKE ~~802122~~ NW 50° 50.8' 122° 46.2'
N.T.S 92J/15W

WRITTEN FOR: CHALICE MINING INC. (owner/operator)
470-475 WEST GEORGIA STREET
VANCOUVER, B.C. V6B 4M9

SURVEYED BY: BILL CHASE AND ASSOCIATES

WRITTEN BY: STEVEN HODGSON
CHALICE MINING INC.

DATED: OCTOBER 10, 1986

FILMED

GEOLOGICAL BRANCH
ASSESSMENT REPORT

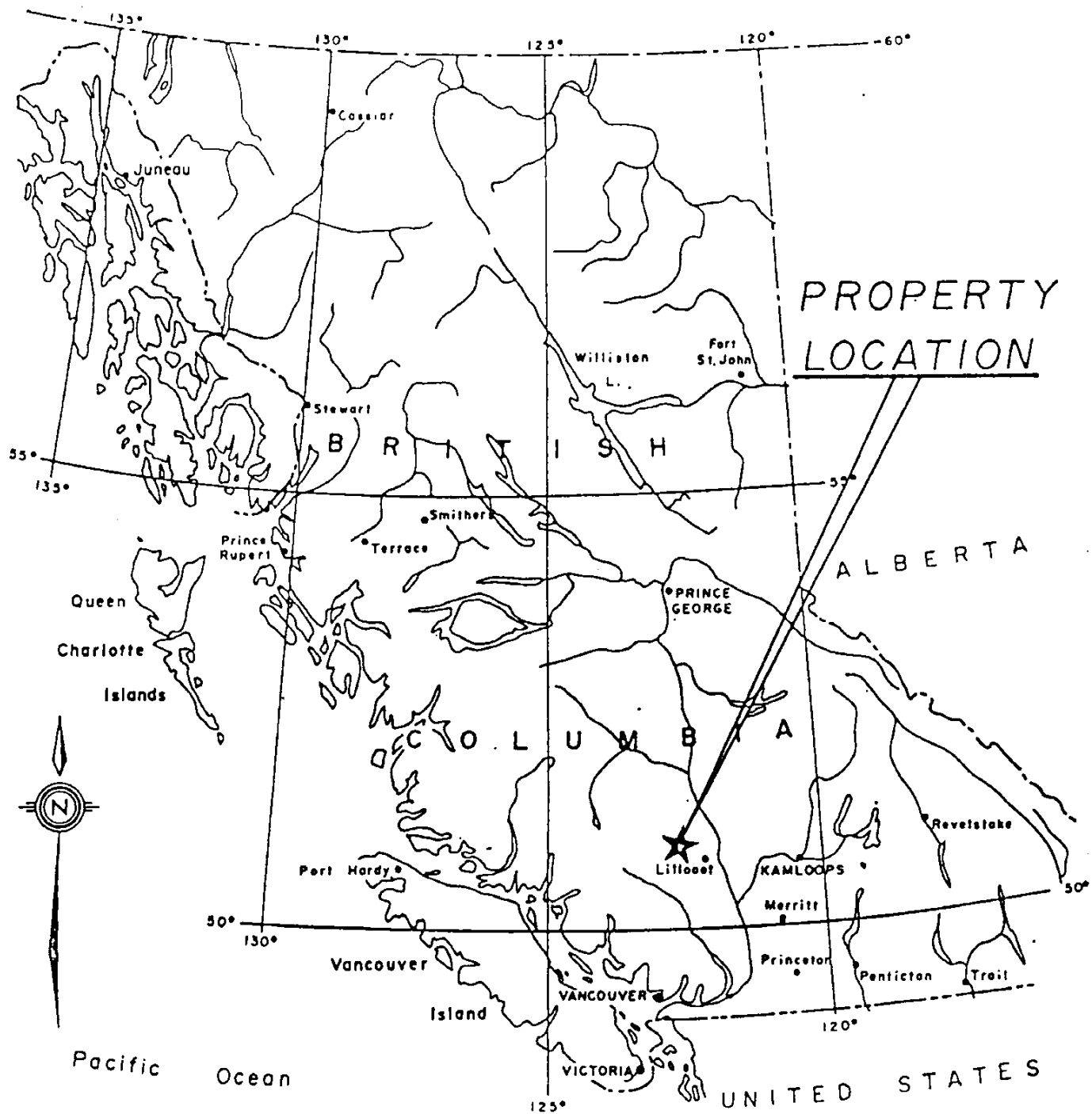
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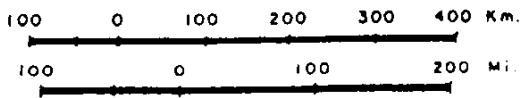
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PROPERTY
LOCATION

GOLD BRIDGE PROPERTY



BIOGEOCHEMICAL REPORT
ON THE
GG GROUP OF CLAIMS
OF
CHALICE MINING INC.

Introduction and General Remarks

This report discusses the survey procedure, collection of material, laboratory procedure, and interpretation of biogeochemical surveys as a tool for the location of precious metal occurrences in the area of the Chalice Claims in Gold Bridge, B.C.

The object of this orientation survey was to attempt to locate the extension of the Veritas vein. An extensive four to six foot layer of ash and tuffaceous material overlies much of the GG West claims and normal geochemical soil surveys are time consuming and costly. The surveys were performed by Bill Chase and Associates. The vegetation cover is typical sub-alpine coniferous forest dominated by Douglas Fir. All samples taken were from the first year growth of Douglas Fir. A total of six kilometers of surveying was done over the claims. Grid lines were spaced at 100 meters and sample stations were every 50 meters.

The biogeochemical technique in this instance was a cost effective method versus soils and has given us some anomalous results to follow up.

Property and Ownership

The property consists of five claims totalling fifty units as shown on Map 2 and as described below:

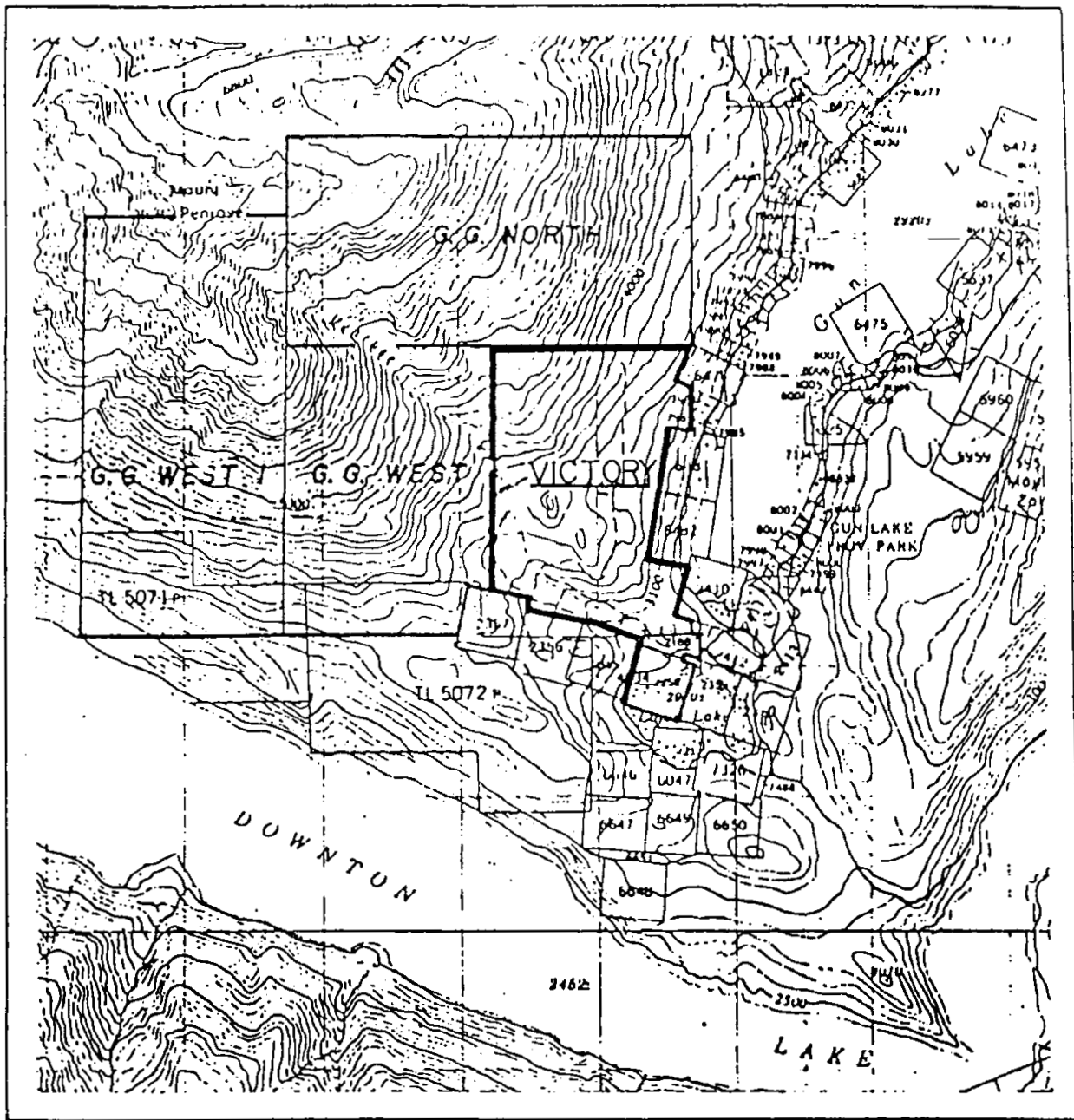
<u>Claim Name</u>	<u># of Units</u>	<u>Record #</u>
GG West	12	2245(10)
GG West #1	18	2184(10)
GG North	18	2185(10)
GG Fraction	1	2186(10)
Veritas #1 CG	1	2358(1)

The claims are owned by Chalice Mining Inc. of Vancouver, B.C.

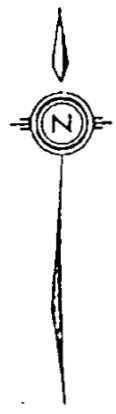
Location and Access

The property is located on the southeastern slope of Mount Penrose and abuts the western edges of Gun Lake and Lajoie Lake as well as the northern edge of Downton Lake.

The geographical coordinates are 50 52'N latitude and 122 56'W longitude. Access can be gained by a series of two-wheel drive roads from Gold Bridge which runs westerly towards and around Gun Lake. The distance from Gold Bridge to the property is about six kilometers.



50° 52'



CHALICE MINING INC.			
GOLD BRIDGE PROPERTY			
PENROSE CREEK, GUN LAKE AREA, B. C.			
LILLOOET M. D.			
CLAIM LOCATION MAP			
SCALE: 1:50,000	DATE: MARCH 26	MAP: 2	M.T.S. 92 J/15 W

Physiography

The property lies at the southeastern part of the Pacific Ranges which is a physiographic division of the Coast Mountains. The terrain is, in general, steep and mountainous with the general slope facing towards the south and southeast. The claims are dissected by the southeasterly-draining Penrose Creek.

Elevations vary from 762 meters a.s.l. at the southwestern corner of the property close to the edge of Downton Lake, to 2,627 meters a.s.l. at the northwestern edge of the property on Mount Penrose.

The main water source would be Penrose Creek as well as Downton Lake, Gun Lake, and Lajoie Lake.

The forest cover consists primarily of fir and spruce, moderate in density and with an undergrowth light to moderate.

History of Previous Work

The following is quoted from Sookochoff's September 1983 report on the property:

"The history of the area is centered around the Bralorne and the Pioneer Mines where lode gold production was carried on from the early 1900's.

The Bralorne and Pioneer situated on Cadwallader Creek within thirteen kilometers southwest of the Chalice property, in addition to other significant former properties such as the Ben d'Or and the Wayside are located within a mineralized belt on the western flank of the Ben d'Or Mountains.

During the early 1900's, production initially utilizing arrastras was carried out at these properties with the Bralorne producing to 1972 when it was shut down for economic reasons.

The history of the Chalice property stems from the Veritas crown grant where former exploration included a 'tunnel 225 feet long and several open cuts' on a vein cutting an augite-diorite and serpentine. A total of a 'thousand feet' of underground work in three tunnels is reported.

Preliminary geophysical and geochemical surveys were carried out by Chalice personnel in 1979 with a diamond drill hole put down on an anomalous zone.

In 1982 trenching by Chalice personnel was completed at the southwest corner of the Gwendolyn's Glory Claim." A biogeochemical orientation survey was completed in 1986.

Geology

The following is also quoted from Sookochoff's same report:

"In the area of the Chalice property, Triassic sedimentary and volcanic rocks including variable metamorphosed units are intruded by three or more intrusive episodes including an ultrabasic or intrusive. Generally, the Triassic formations include the middle Triassic Fergusson group of cherts to limestone in addition to biotite schists, the younger Noel Formation, Pioneer Formation and the youngest Hurly Formation which in addition to fine grained and sedimentary rocks, include conglomerate, agglomerates, and andesites.

The individual formations are exposed to a greater irregularity towards the central Cadwallader Creek extending northwesterly to Mount Penrose west of Gun Lake. The bank is generally enveloped by diorite to syenodiorite intrusives with localized ultrabasic and augite diorite. Bralorne intrusive plugs and northwesterly stretched stocks are associated with the central formations.

The major aerial structural feature is a broad northwesterly trending and plunging anticlinal arch centered east of Cadwallader Creek in the Ben d'Or range of mountains. The western limb in which the principal ore deposits of the area occur, extends into the Cadwallader Creek Valley, which reflects a major structure. The major structure results in secondary and minor folds which resulted in complex distortion of the formations in addition to providing a locus for the ultrabasic and gold associated Bralorne intrusives. The lenticular intrusives extend to the Chalice property area where topographical structural features are not as obvious as along the Cadwallader Creek Valley.

The gold bearing quartz fissure veins of the Bralorne intrusives and more specifically, the veins in the Bralorne and Pioneer Mines are conspicuous for the exhibited ribboning effect where quartz ribbons are separated by thin, dark-grey films of ground-up sulphides, sericite, white mica and gouge and occasional slickensided free gold.

The vein fissures extending from the augite diorite are persistent into the Pioneer greenstone with weaker indications in thinly bedded sediments and 'feathering out' in serpentine.

Associated indicator minerals that are found in the Bralorne Pioneer veins and reflect gold mineralization are mariposite, scheelite, arsenopyrite, sphalerite and galena. Other metallic minerals include pyrite, chalcopyrite, stibnite, tetrahedrite, marcasite and sylvanite(?) or calaverite(?).

On the Gun Lake road west to the southwest corner of the property, a reported sequence of mixed sandstone, siltstone and carbonate rich conglomerate with minor thin rhyolite/dacite volcanic members trending NW and dipping SW occur.

On the Chalice property the Veritas vein is described as a vein trending at 120° with a dip varying from 64° NE to vertical. The vein formed along a fracture system in altered volcanics (greenstone) which is locally intruded by a Bralorne-like-micro-diorite pluton.

The micro-diorite is serpentized near the contact. Quartz veins are irregular lenses in NW trending shears. The outcrop and workings reveal one thousand feet of vein zone with a vertical height of four hundred feet (old workings). Veins are of milky white quartz 'three inches to four feet' wide with erratic sulphide content. The vein appears to be cut off by micro-diorite pluton.

On Penrose Creek along the western boundary of the property the geology is reported as altered volcanics and serpentines occurring as large inclusions (pendants) within micro-diorite. Calcite, ankerite, quartz stockworks occur in the serpentine with pyrite, chalcopyrite, and arsenopyrite. Carbonate quartz veins also occur within becciated green volcanics of a serpentine lens."

Biogeochemical Sample Collection and Laboratory Procedures

A small sample (one hundred grams minimum) of the one year old growth of the branches of the Douglas Fir is collected and put into a plastic bag.

Samples were sent to Min-En Laboratories Ltd. in North Vancouver. The samples were carefully dried at 85 to 95 C and then were milled to 40 mesh. After mixing and quartering each sample, a 70 to 80 gram aliquote was ashed at 500 C and then weighed.

Some 0.5 gram of the ash material was weighted into beakers and digested in HNO_3 and HClO_4 for I.C.P. (Inductively Coupled Plasma) analysis, the rest of the ash material was used for gold analysis. The gold was determined by Aqua-Regia dissolution, then extracted with M.I.B.K. (Methyl-iso-butyl-ketone), and analyzed by the A.A.S. (Atomic Absorption Spectrophotometer) method.

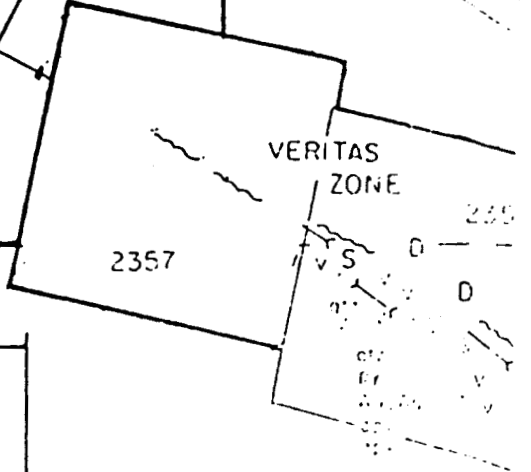
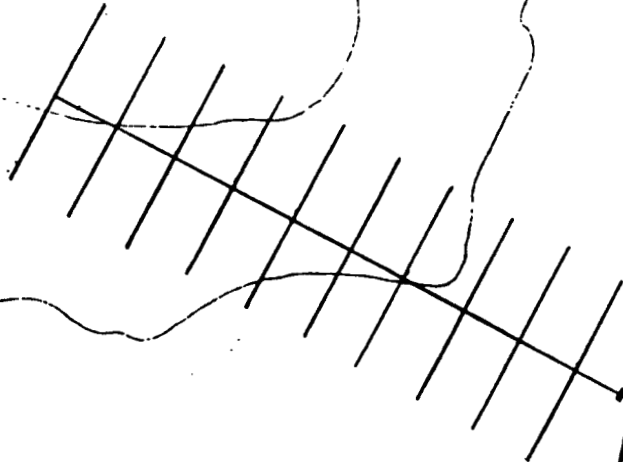
Discussion of Results

The biogeochemical survey was conducted as an alternative to the traditional soil program because of the excessive amounts of tuffaceous overburden encountered. The baseline was oriented along a fault contact evident on the airphotos and the probable structural controls of the Veritas vein which strikes at 295° . The only elements which show significant elevated numbers above background are Zinc and Gold, but several low values make definitive contouring difficult. However, several area highs in Zn and Au, 7 to 20 times background, have provided us with prospecting targets. Further evaluation of this seasons work will be necessary to evaluate any future biogeochemical work.



CREEK

G. G. WEST



**CHALICE MINING INC.
LOCATION OF WORK**

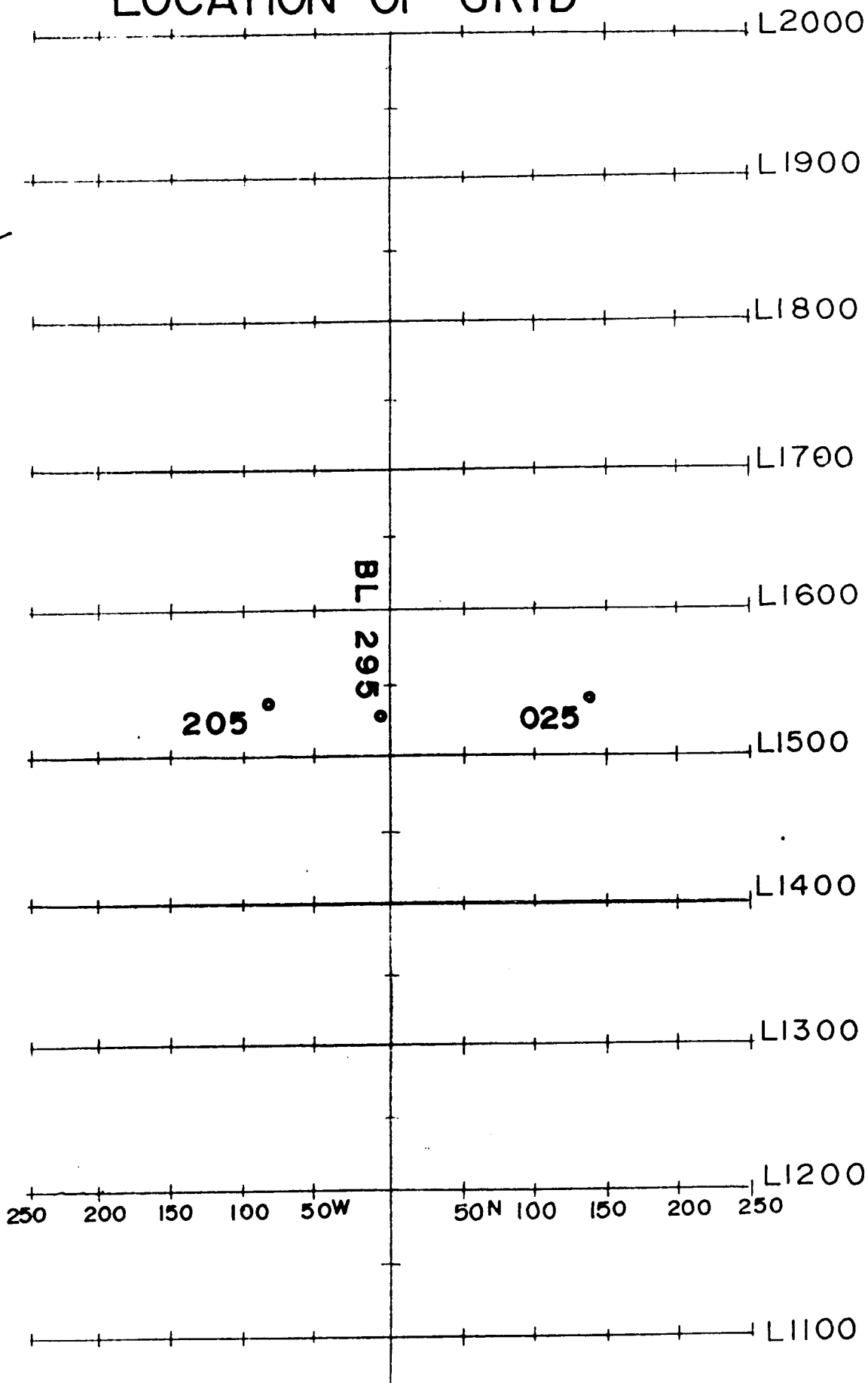
**GOLD BRIDGE PROPERTY
N.T.S. 92J-15W LILLOOET M.D., B.C.**

0 200 400 600 METRES

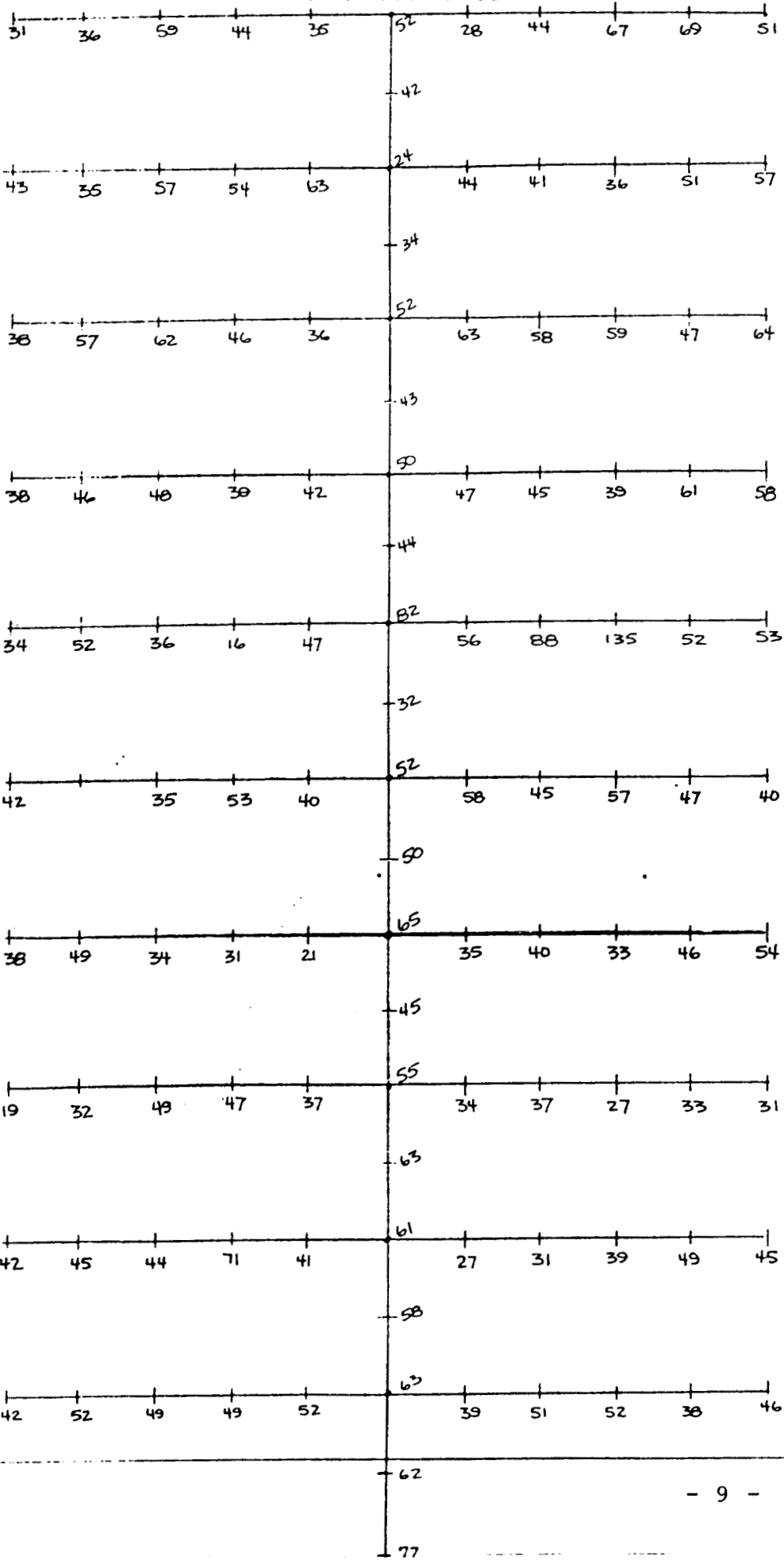
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1986

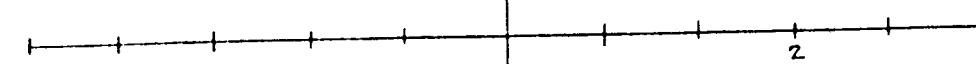
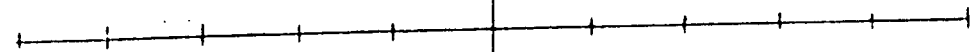
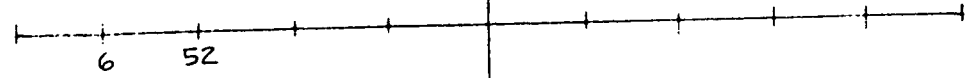
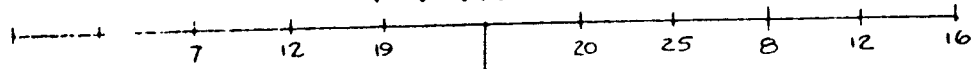
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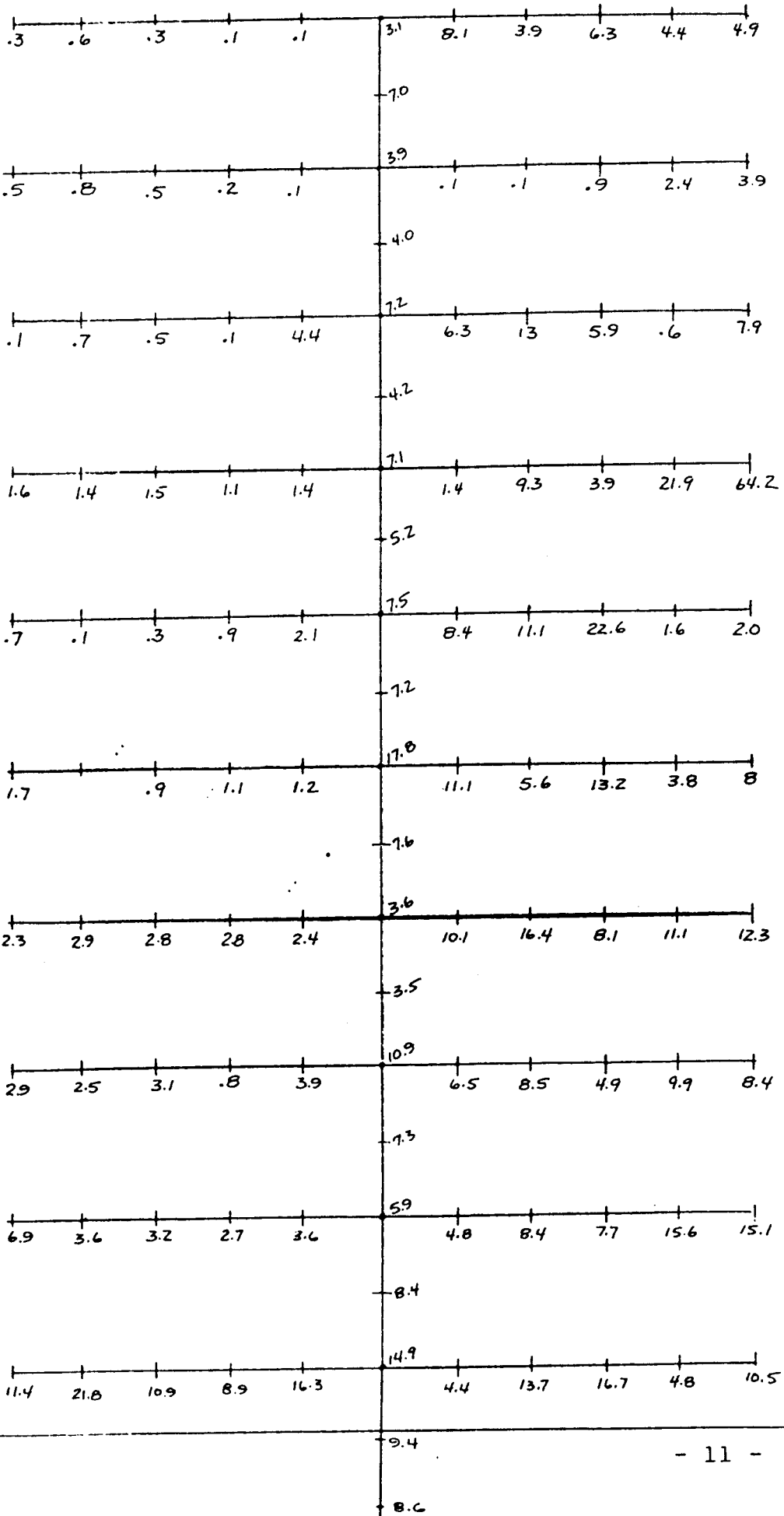
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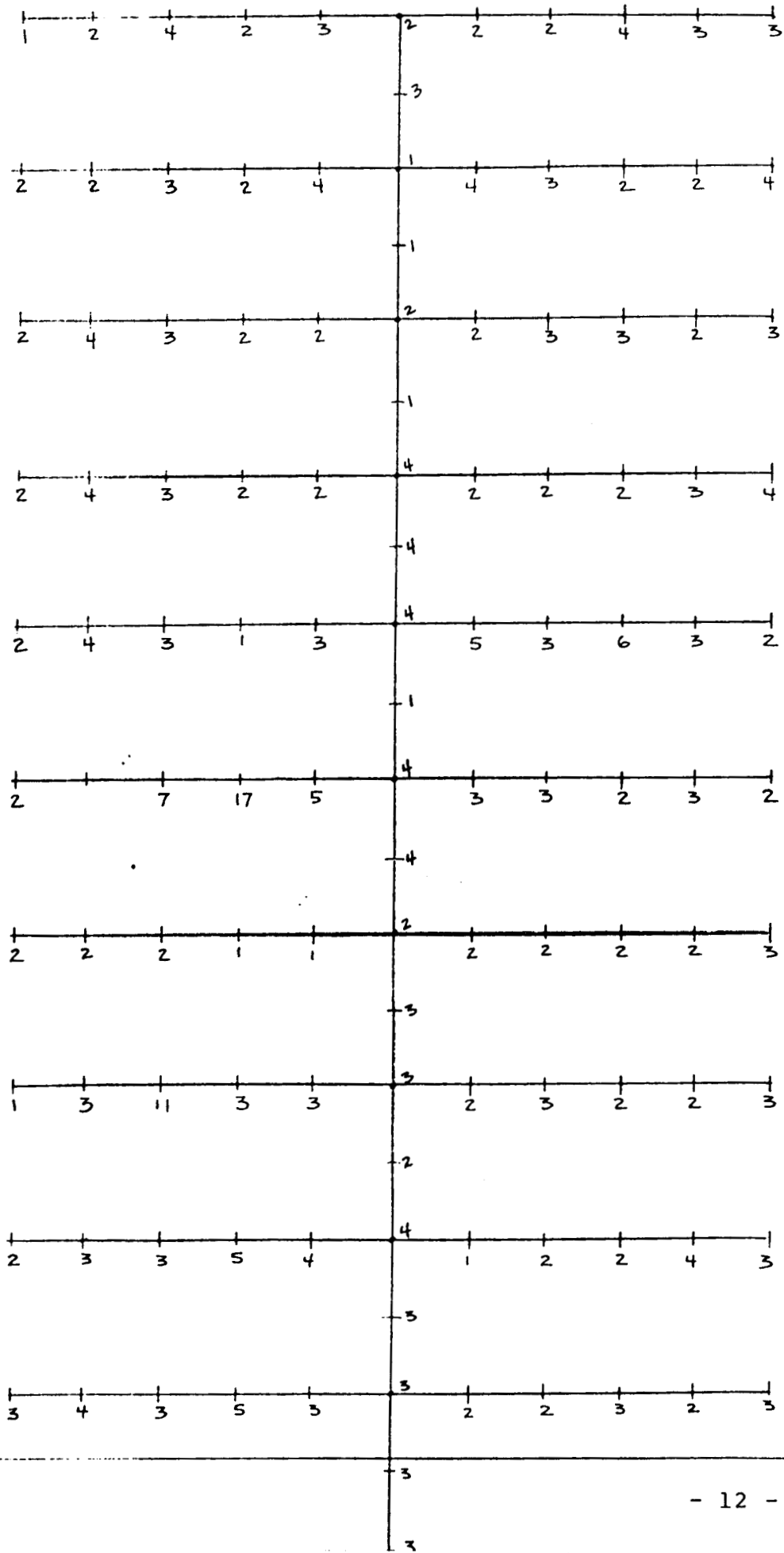
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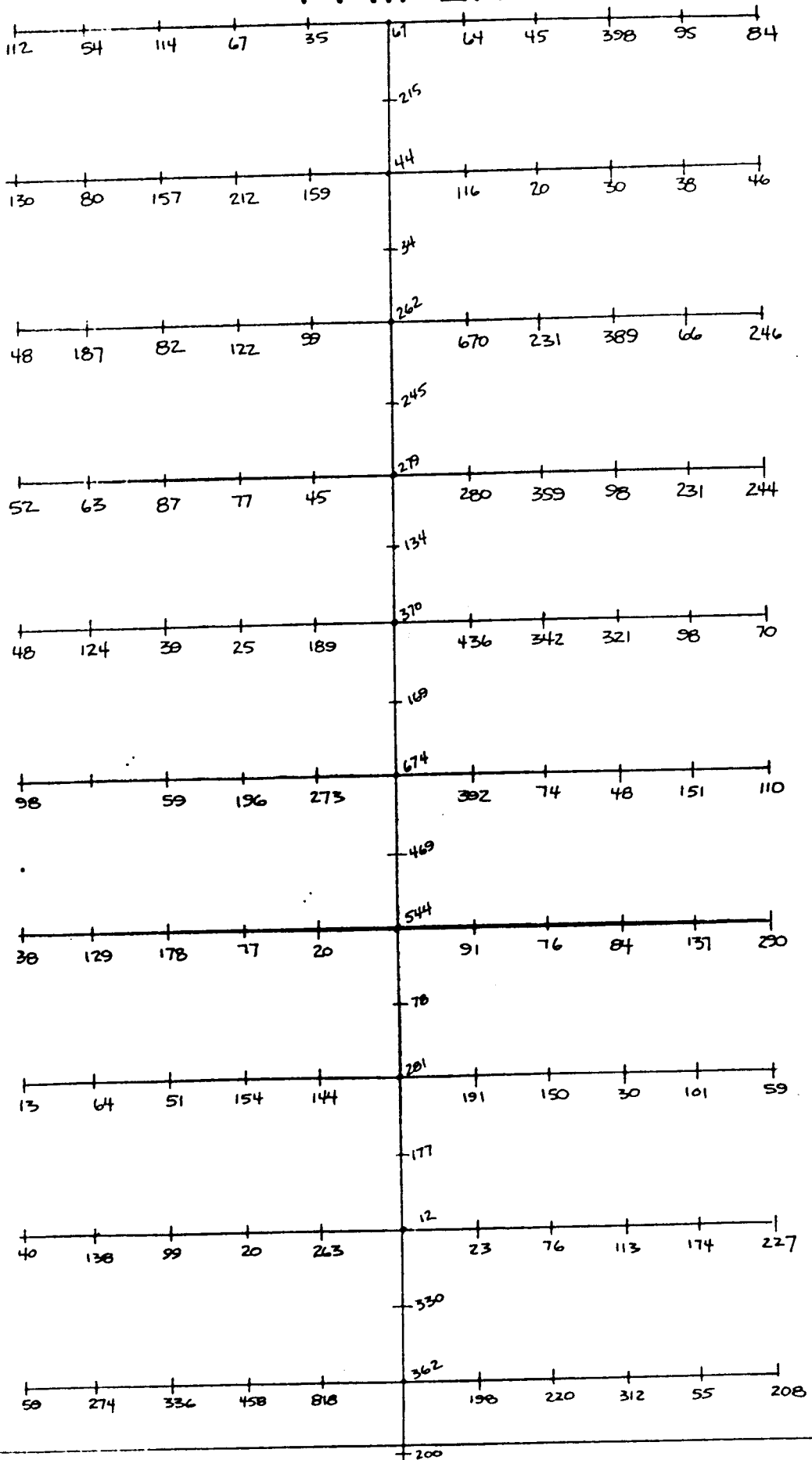
PPB AU



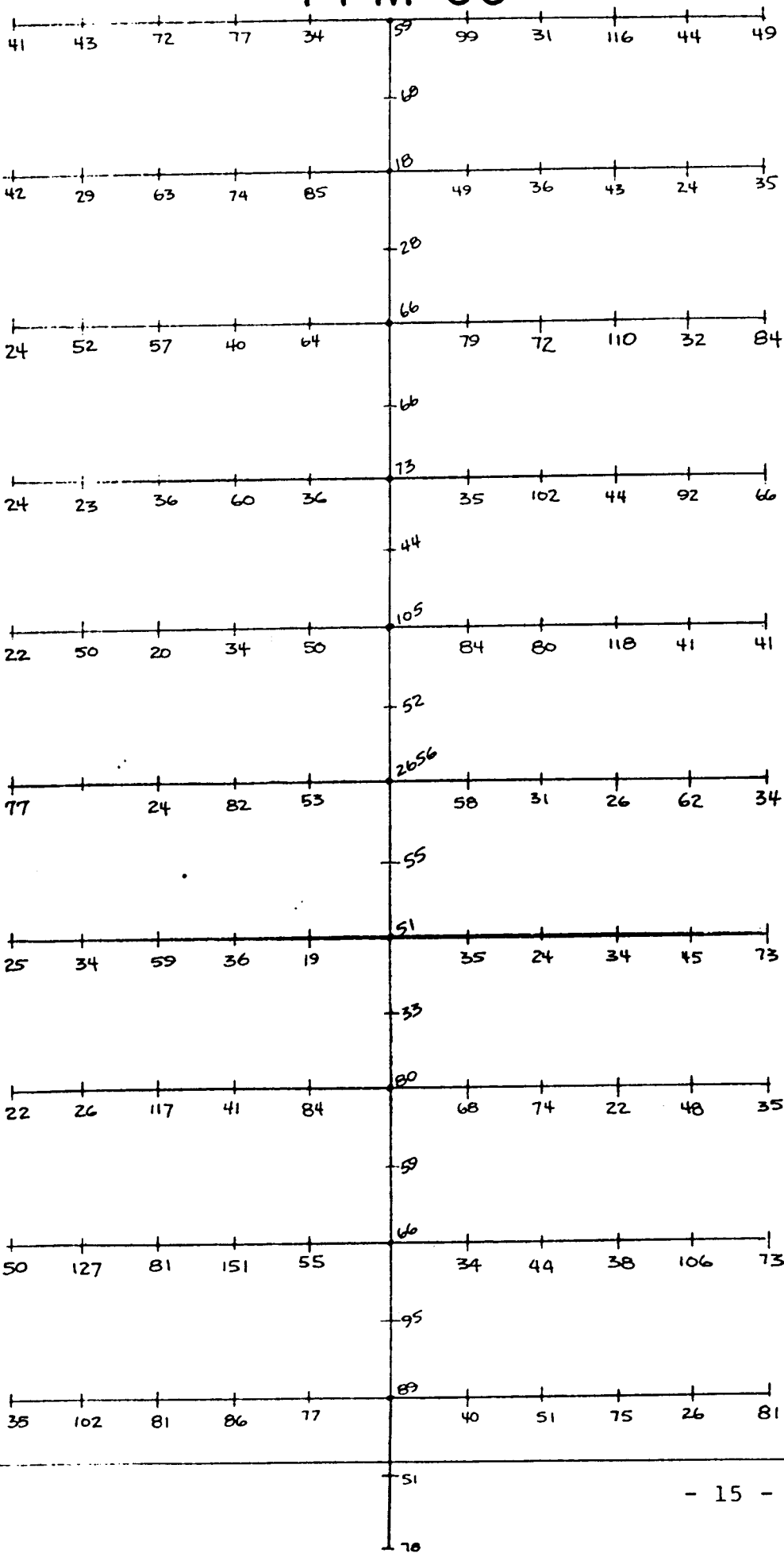
PPM SB



PPM ZN



PPM CU



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1947.

AUTHOR'S QUALIFICATIONS

I certify that:

- 1) I attended Pasedena City College and the University of Colorado as a major in Geology.
- 2) I attended the Mineral Exploration course at Nelson, B.C. in 1979.
- 3) I have been a prospector in B.C. for eleven (11) years.
- 4) The information for the accompanying report was based on work personally supervised by myself and from previous assessment reports and government publications.

A handwritten signature in black ink, appearing to read "James H. Hodge". The signature is written in a cursive style with a long horizontal stroke at the end.

ITEMIZED COST STATEMENT

Bill Chase and Associates - October 3rd to 8th, 1986	\$1,526.54
Room and Board	461.15
Mobilization and Demobilization	452.60
Truck rental 6 days @ \$40.00 and 968 km. @ \$0.20 plus ferry fare \$19.00	
Steven Hodgson - 6 days @ \$175.00 per day	1,050.00
Sample bags, Flagging and miscellaneous, reproduction and maps	62.00
Sample Preparation and delivery	122.50
Assay	1,760.00
Preparation report 3 days @ \$175.00 per day	525.00
Aero Smith Mapping - claims Topo map (60% of \$1,500.00)	1,050.00
Telephone	<u>18.00</u>
	\$7,027.79
PAC Withdrawal	<u>3,000.00</u>
	TOTAL <u>\$10,027.79</u>

ATTENTION: STEVE HODGSON

(604)980-5614 OR (604)988-4524

* TYPE PLANT * DATE: DEC 3, 1986

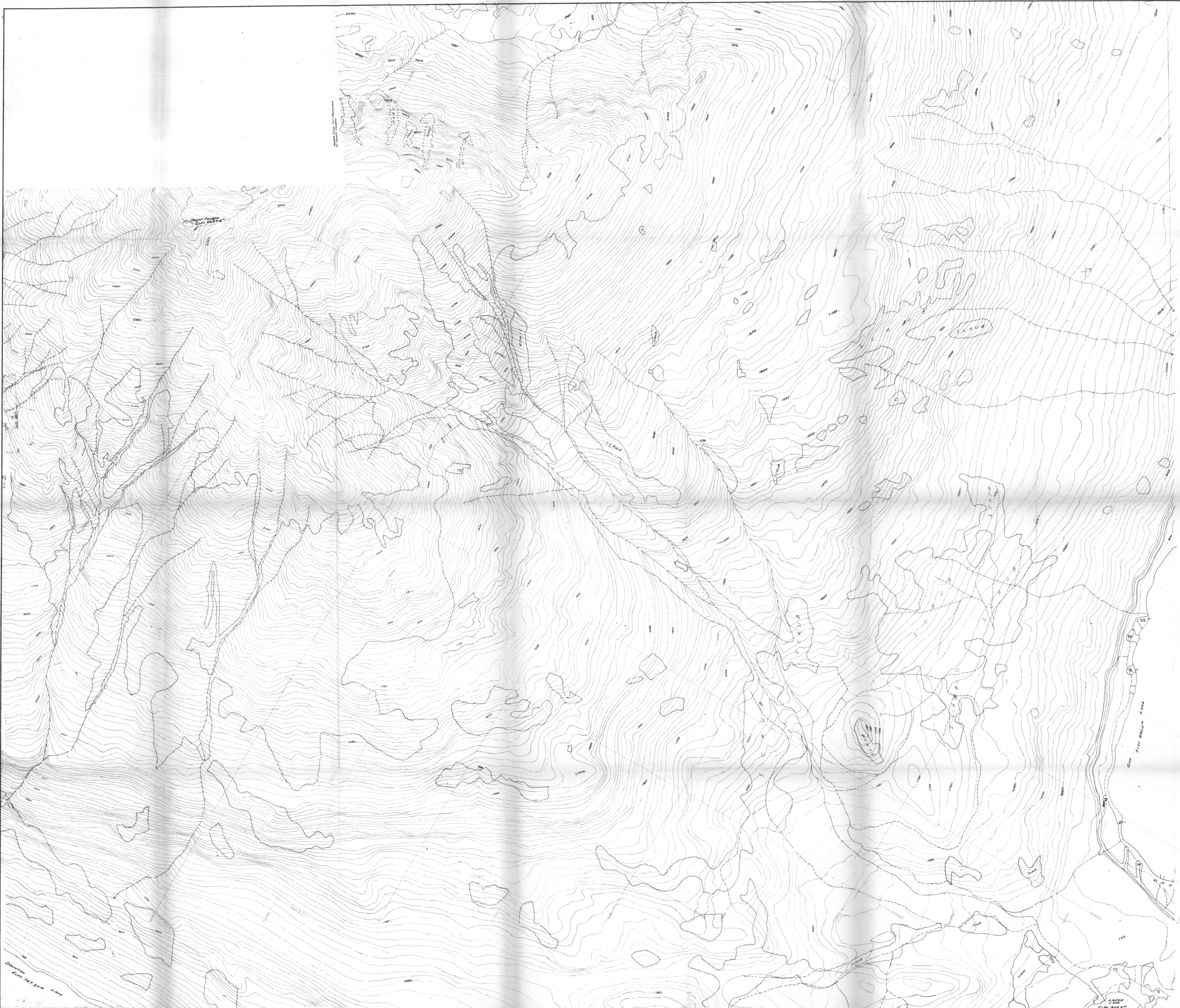
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L15+00W 1+00S	1.7	12	82	53	17	196	1.1
L15+00W 1+50S	1.4	1	24	35	7	59	.9
L15+00W 2+50S	1.6	1	77	42	2	98	1.7
L15+00W 0+50N	2.1	1	58	58	3	392	11.1
L15+00W 1+00N	1.8	1	31	45	3	74	5.6
L15+00W 1+50N	2.2	1	26	57	2	48	13.2
L15+00W 2+00N	1.9	1	62	47	3	151	3.8
L15+00W 2+50N	1.6	1	34	40	2	110	8.0
L16+00W 0+50S	2.2	1	50	47	3	189	2.1
L16+00W 1+00S	.7	1	34	16	1	25	.9
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L17+00W 2+00S	1.5	1	23	46	4	63	1.4
L17+00W 2+50S	1.5	1	24	38	2	52	1.6
L17+00W 0+50N	1.8	1	35	47	2	280	1.4
L17+00W 1+00N	2.0	1	102	45	2	359	9.3
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L17+00W 2+00N	2.7	1	92	61	3	231	21.9
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L18+00W 1+00S	1.8	1	40	46	2	122	.1
L18+00W 1+50S	1.7	52	57	62	3	82	.5
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L19+00W 2+00N	2.2	8	24	51	2	38	2.4
L19+00W 2+50N	2.7	16	35	57	4	46	3.9
L20+00W 0+50S	1.8	19	34	35	3	35	.1
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PROJECT NO: GOLDBRIDGE
 ATTENTION: STEVE HODGSON

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
 (604)980-5814 OR (604)988-4524

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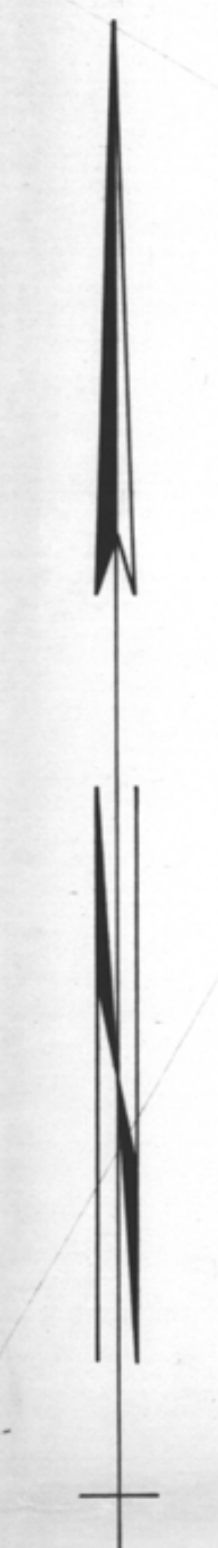
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BL 12+00W	2.2	1	66	61	4	112	5.9
BL 12+50W	2.0	1	59	63	2	177	7.3
BL 13+00W	2.5	1	80	55	3	281	10.9
BL 13+50W	1.7	1	33	45	3	78	3.5
BL 14+00W	1.9	1	51	65	2	544	3.6
BL 14+50W	2.3	1	55	50	4	469	7.6
BL 15+00W	3.4	1	2656	52	4	674	17.8
BL 15+50W	1.0	1	52	32	1	169	7.2
BL 16+00W	2.8	1	105	82	4	370	7.5
BL 16+50W	1.8	1	44	44	4	134	5.2
BL 17+00W	2.5	1	73	50	4	279	7.1
BL 17+50W	1.7	1	66	43	1	245	4.2
BL 18+00W	2.1	1	66	52	2	262	7.2
BL 18+50W	1.2	1	28	34	1	34	4.0
BL 19+00W	1.0	1	18	24	1	44	3.9
BL 19+50W	1.8	1	68	42	3	215	7.0
BL 20+00W	2.1	1	59	52	2	67	3.1
L11+00W 0+50S	2.2	1	77	52	3	818	16.3
L11+00W 1+00S	2.4	1	86	49	5	458	8.9
L11+00W 1+50S	2.4	1	81	49	3	336	10.9
L11+00W 2+00S	2.3	1	102	52	4	274	21.8
L11+00W 2+50S	1.5	1	35	42	3	59	11.4
L11+00W 0+50N	1.5	1	40	39	2	198	4.4
L11+00W 1+00N	1.8	1	51	51	2	220	13.7
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L12+00W 0+50N	1.2	1	34	27	1	23	4.8
L12+00W 1+00N	1.2	3	44	31	2	76	8.4
L12+00W 1+50N	1.6	1	38	39	2	113	7.7
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L13+00W 0+50S	1.8	1	84	37	3	144	3.9
L13+00W 1+50S	2.3	17	117	49	11	51	3.1
L13+00W 2+00S	1.4	1	26	32	3	64	2.5
L13+00W 2+50S	.9	1	22	19	1	13	2.9
L13+00W 0+50N	1.6	1	68	34	2	191	6.5
L13+00W 1+00N	1.6	1	74	37	3	150	8.5
L13+00W 1+50N	1.3	1	22	27	2	30	4.9
L13+00W 2+00N	1.4	1	48	33	2	101	9.9
L13+00W 2+50N	1.5	1	35	31	3	59	8.4
L14+00W 0+50S	.7	1	19	21	1	20	2.4
L14+00W 1+00S	1.4	1	36	31	1	77	2.8
L14+00W 1+50S	1.5	7	59	34	2	178	2.8
L14+00W 2+00S	1.9	1	34	49	2	129	2.9
L14+00W 2+50S	1.4	1	25	38	2	38	2.3
L14+00W 0+50N	1.4	1	35	35	2	91	10.1
L14+00W 1+00N	1.2	1	24	40	2	76	16.4
L14+00W 1+50N	1.2	1	34	33	2	64	8.1
L14+00W 2+00N	1.8	1	45	46	2	137	11.1
L14+00W 2+50N	2.1	1	73	54	3	290	12.3



TOPOGRAPHIC MAP OF THE
SOUTH EASTERLY SLOPES OF
MOUNT PENROSE, BRALORNE,
LILLOOET LAND DISTRICT, B.C.

SCALE 1:4000 APPROX.

ELEVATIONS AND CONTROLS ARE DERIVED FROM BRALORNE
MAP SHEET (SCALE 1:50000) SHEET 92/715
CONTOUR INTERVALS ARE 10 METRES



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GEOLOGICAL BRANCH
ASSESSMENT REPORT