

84-1425-13311
12/85

ASSESSMENT REPORT ON

GEOLOGICAL and GEOCHEMICAL SURVEYS

ON THE

PUTNAM PROPERTY
(Putnam Mineral Claim)

VERNON MINING DIVISION, B.C.

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

13,311

NTS: 82L/7W
Latitude: 50° 23' North
Longitude: 118° 57.5' West
Owners: Brican Resources Ltd.
Consultant: K.L. Daughtry and Associates Ltd.
Author: B.W. Kyba
Date: February 26, 1985

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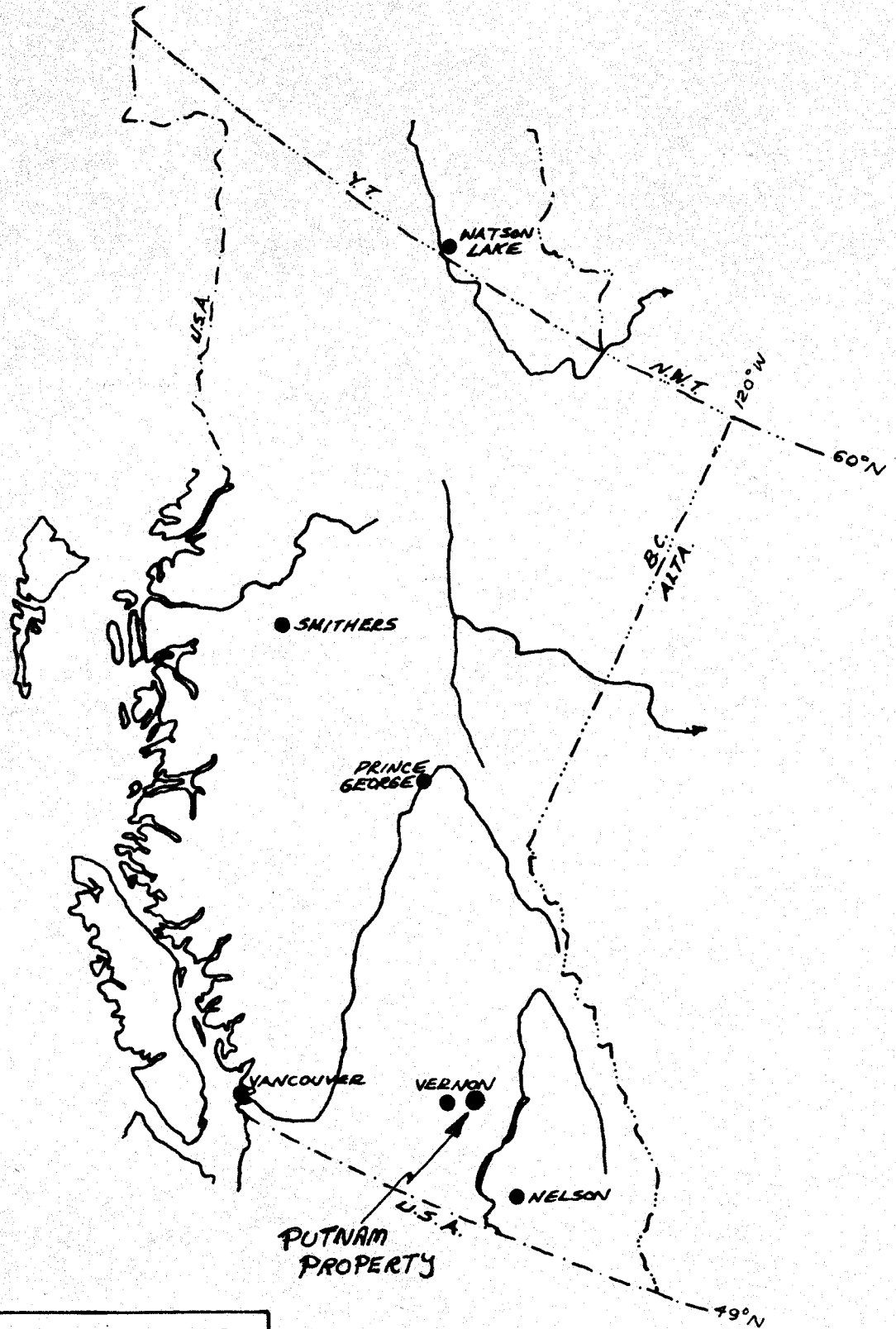
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INTRODUCTION

The PUTNAM property near Lumby, B.C. is a twenty-unit claim covering stream sediment anomalies generated by a regional reconnaissance geochemical program carried out by Brican Resources Ltd. in 1984. Detailed geological and geochemical evaluation of the property was carried out on the property and is the subject of this report.

The results were not encouraging and further exploration is not recommended.



BRICAN RESOURCES	
K. L. DAUGHTRY & ASSOC. LTD.	
LOCATION MAP PUTNAM PROPERTY	
FEBRUARY, 1985	FIG. NO. 1

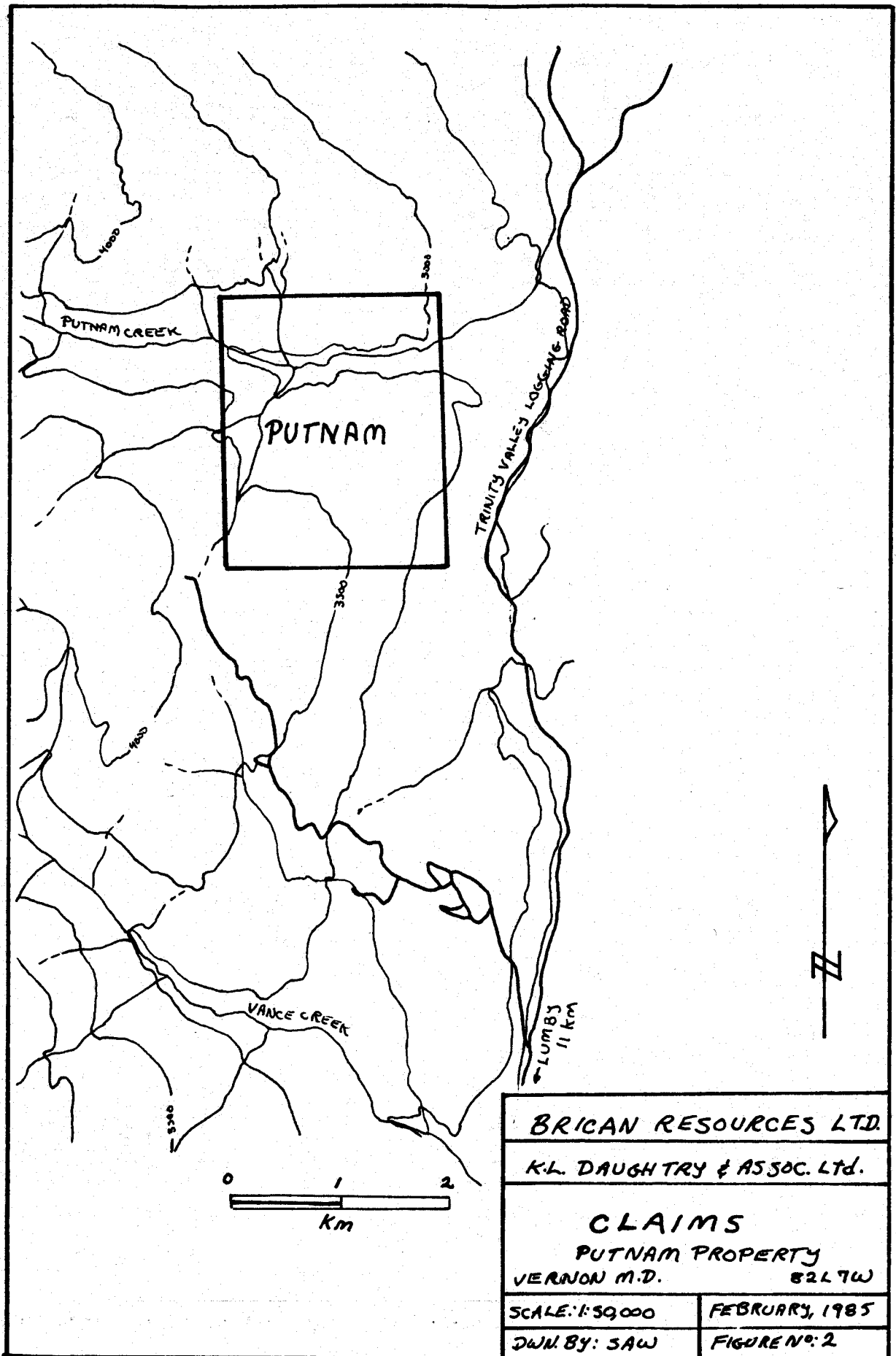
LOCATION, ACCESS, TOPOGRAPHY

The PUTNAM property is located astride Putnam Creek in the Vernon area of southern British Columbia. The village of Lumby is 14.5 km (9 miles) south of the property and the city of Vernon is 26 km (16 miles) southwest.

The National Topographic System reference is 82L/7W and the coordinates of the centre of the claim are $50^{\circ}23'$ north and $118^{\circ}57.5'$ west. The Universal Transverse Mercator grid references are from 5582000 to 5584500 north and from 359800 to 361850 east. The Legal Corner Post is 800 metres (2625 ft) west of Trinity Valley logging road on Vance Creek logging road at an elevation of 820 metres (2700 feet).

Good access to the centre of the property is provided by travelling northeast from Lumby on Mable Lake Road for 4 km (2.5 miles), north on Trinity Valley logging road for 13 km (8 miles) and thence northwest on Putnam Creek logging road for 2.25 km (1.4 miles). The nearest major centre is Vernon, 22 km (14 miles) west of Lumby on highway 6.

The property is located on the west slope of Trinity Valley. The claim is cut by Putnam Creek which flows in a narrow, steep-sided valley from Silver Star Mountain to the broad, terraced Trinity Valley. Elevations on the property vary from 890 metres (2900 feet) above sea level to 1070 metres (3500 feet) a.s.l.



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CLAIMS

PUTNAM PROPERTY

VERNON M.D.

82L7W

SCALE: 1:50,000

FEBRUARY, 1985

DWN BY: SAW

FIGURE NO: 2

PROPERTY

The PUTNAM 20 unit mineral claim, record number 1664, was located for Brican Resources Ltd. on December 15, 1983, and recorded December 16, 1983 in Vernon. The property is in the Vernon Mining Division (Figure 2).

HISTORY

Placer gold was discovered in the area in 1936 by Paul Johnson and Alf Brewer. Interesting values from several pits were reported but, according to GSC Memoir 296, only five ounces were recovered.

Apparently no other work has been done.

GEOLOGY

The PUTNAM property is on the eastern flank of the Intermontane Belt. The regional geology compiled by Okulitch (1979) shows the area to be underlain by Triassic sediments and volcanic rocks which are intruded by Jurassic granite.

The property is underlain by Triassic(?) sediments and volcanic rocks that have been subjected to low grade regional metamorphism and later faulting. The Jurassic granite of Okulitch has been identified as a gneiss on the property and is thought to be older than the sediments.

Gneiss (Map Unit 1)

Map Unit 1 occurs on the eastern edge of the property in an area of heavy forest cover.

In outcrop it was identified as banded quartzite and strongly foliated granodiorite. The deformation present in this unit is not present in the Triassic(?) sediments and volcanic rocks and therefore is considered to be older than them.

Argillite with interbedded Limy Argillite and Argillaceous Limestone (Map Unit 2)

Map Unit 2 is exposed in several outcrops along the B.C. Hydro line right-of-way on the northern edge of the property.

The argillite is most commonly black and thin bedded.

Limy argillite and argillaceous limestone beds within the argillite unit are light grey. Beds vary from several centimetres to up to one metre in thickness.

Limited structural data suggests the unit has been gently folded along northeast plunging fold axes.

Phyllite with interbedded Siltstone and Quartzite (Map Units 3,3a)

Map units 3 and 3a occur in the southern and central areas of the property.

The phyllite is black, thin bedded and commonly carbonaceous.

The quartzite is light brown to buff, fine to very fine grained. It occurs as beds within the phyllite that vary from one metre up to eight metres thick.

Bedding and foliation attitudes of Map Units 3 and 3a trend northwesterly and are near vertical to steeply dipping to the northeast.

Augite Andesite, Greenstone (Map Unit 4)

Map unit 4 occurs as an irregular shaped mass across the central portion of the property.

The augite andesite is a dark green-grey, fine to medium grained rock with 10 to 20% dark green-black augite phenocrysts. The phenocrysts range in length from several millimetres to up to one centimetre.

The greenstone is common along the margins of the augite andesite mass. It is dark green, fine to very fine grained with rare augite phenocrysts up to 3 millimetres in length.

A breccia is developed within the augite andesite unit on the eastern border of the property. It is composed of 5-15% rotated and angular fragments of augite andesite in greenstone matrix. The breccia occurs as a 30 metre wide zone that trends northeasterly and is near vertical.

In the northern half of the property contacts suggest the augite andesite is a sill- or dyke-like intrusion. In the southern and eastern portions of the property the augite andesite/greenstone unit is in fault contact with the sediments (Map units 3,3a) along a low angle thrust(?).

Aplite (Map Unit 5)

Aplite occurs as a dyke in the northern part of the mapped area. It is white, fine to medium grained and contains up to 5% disseminated fine grained euhedral pyrite. Contacts to the surrounding sediments are cold and sharp.

Faults, Alteration and Mineralization

Several different types and attitudes of faulting are present on the PUTNAM property. Alteration and mineralization are associated with the major fault zones.

The Main Fault Zone (Figure 3) trends northwesterly across the northeastern corner of the property. In outcrops along the powerline right-of-way the zone is 200 metres wide. Augite andesite within the fault zone has been sheared, bleached and pyritized. The zone is exposed again 1000 metres to the northwest in the cliffs north of Putnam Creek. Here the zone is 100 metres wide and contains sheared and pyritized augite andesite. Rock chip samples of altered and mineralized augite andesite (Figure 4) all contained less than 5 ppb gold and less than one ppm silver.

Quartz and quartz calcite veins are associated with other faults and fault zones on the property. One vein in the southwestern corner of the property contained minor amounts of galena.

GEOCHEMICAL SURVEYSHeavy Mineral SurveysOperations

Four heavy mineral samples were collected from stream sediments in Putnam Creek and its tributaries in and near the Putnam mineral claim. The locations of the samples are shown in Figure 4.

Between seven and eight kilograms of -20 mesh sand were collected in plastic bags from about 100 kilograms of gravel at each sample site. The bulk samples were transported to the C.F. Mineral Research Laboratory in Kelowna, B.C., where they were washed, wet-sieved, jigged and submitted to tetrabromoethane and dilute methylene iodide separations, followed by nine electromagnetic separations. The resultant -60 mesh heavy non-magnetic fractions were crushed, weighed, vialled and submitted to Nuclear Activation Services in Hamilton, Ontario for nuclear activation geochemical analysis for gold, arsenic, antimony, barium and tungsten. After completion of irradiation cooling, the concentrates were then forwarded to Barringer Magenta Laboratories in Calgary, Alberta for geochemical analysis by the atomic absorption technique for silver, copper, molybdenum, lead and zinc.

Gold results from the laboratory are presented in Figure 4.

These results were statistically treated to average the sample size and produce a weighted total. These weighted results are presented in parentheses on Figure 4.

Analytical results for the other elements are presented in Appendix A of this report.

Discussion of Results

All four samples contained highly anomalous amounts of gold. Sample number 224 from a tributary of Putnam Creek contained 2300 parts per billion gold.

All other elements were considered to be of background value.

Soil Geochemistry

Operations

A total of 137 soil samples was collected at 50 metre intervals along 13 km of logging road and flagged lines. Samples were collected from the B or C horizons at depths ranging from 75 to 350 mm. Average depth was 200 mm. Material collected varied from grey clay to brown silt and sand. The area is one of gentle to moderate slopes.

Samples were collected in numbered Kraft paper bags and shipped to Kamloops Research and Assay Laboratory, Kamloops, B.C. for geochemical analysis. All samples were analysed for gold, copper, and lead. Seven samples were analyzed for silver. Thirty gram samples of the -80 mesh fraction were analysed for gold by the fire assay/atomic absorption method using aqua regia solution. Copper, silver and lead analyses of the -80 mesh fraction were by the hot acid extraction/atomic absorption method.

In 137 samples one sample contained 90 ppb gold, all other samples were less than 5 ppb gold.

Silver values were less than 0.6 ppm silver.

Histograms for copper and lead defined the following values:

Copper

0 - 80 ppm	background
80 - 96 ppm	positive
96 ppm	anomalous

Lead

0 - 14 ppm	background
15 ppm	anomalous

Results of all analyses are presented in Figure 4.

Discussion of Results

One sample was anomalous in gold (90 ppb). It is located in an area of heavy forest and a few scattered outcrops of black phyllite.

A weak copper anomaly is associated with the Main Fault Zone and with the low angle fault contact area between the augite andesite and black phyllite.

Scattered weak lead anomalies occur in the area of quartz veins that contained small amounts of galena, in the area of the single gold anomaly and in the Main Fault Zone.

Rock Geochemistry

Operations

A total of 26 rock samples was collected from the project area. All were analysed for gold and silver and 10 were analysed for arsenic and antimony. Geochemical analyses were performed by Kamloops Research and Assay Laboratory, Kamloops, B.C.

Results are presented in Figure 4.

Discussion of Results

The highest gold value was 30 ppb and was contained in a sample of altered

and pyritized augite andesite. All other rock samples were less than 5 ppb.

Silver values were less than 3 ppm.

Arsenic and antimony were very low in all samples.

CONCLUSIONS and RECOMMENDATIONS

Very high gold values were contained in the heavy mineral fractions of samples collected from Putnam Creek and its tributaries. Detailed geological mapping and soil sampled failed to define a bedrock source of these anomalies. A low grade placer deposit in the gravel benches in Putnam Creek valley is the most likely source.

No further work is recommended.

Respectfully submitted



B.W. Kyba

Vernon, B.C.

February 26, 1985

REFERENCES

- Okulitch, A.V. 1979 Geology and Mineral Occurrences of the Thompson-Shuswap-Okanagan Region, south-central British Columbia, Geological Survey of Canada, Open File 637

STATEMENT OF COSTS

Professional Services		
K.L. Daughtry 1 day @ \$300/day	\$300.00	
April 26, July 9		
Cedar Hill Gold Corporation 10.5 days @ \$225/day	<u>2362.50</u>	
April 30, May 1,3,4,17,18,		
June 18,19,20, 21, 22		\$2662.50
Prospecting		
Jesmex Developments Ltd. 2 days @ \$175/day	350.00	
June 23,26, 1984		
Heavy Mineral Sampling		
J. Osterhagen 2 days @ \$150/day		
May 9, 11	300.00	
Jesmex Developments Ltd. 2 days @ \$175/day	350.00	
May 9, 11		
Geochem Sampling		
C. Lynes 2.5 days @ \$115/day	<u>287.50</u>	
June 20, 21,22		1287.50
Transport		
Vehicle Use 11 days @ \$40/day		440.00
Prints		
		104.48
Geochemical Analysis		
Sample Preparation		
137 soil samples @ \$.70	95.90	
26 rock samples @ \$6.00	<u>156.00</u>	251.90
Geochem Analysis		
163 Au @ \$6.00	978.00	
26 Ag @ \$1.90	49.40	
10 As @ \$3.25	32.50	
136 Cu @ \$1.90	258.40	
143 Pb @ \$.90	128.70	
10 Sb @ \$3.75	<u>37.50</u>	1484.50
Heavy Mineral Analysis		
Sample Processing		
C.F. Minerals 4 @ \$55.18		220.72
Geochemical Analysis		
Bondar-Clegg		
Sample Preparation		
6 @ \$1.75	10.50	
3 Ag @ \$1.95	5.85	

3 Cu @ \$1.00	3.00	
3 Mo @ \$1.00	3.00	
3 Pb @ \$1.00	3.00	
3 Zn @ \$1.00	3.00	
3 As @ \$3.50	10.50	
3 Ba @ \$4.25	12.75	
3 Sb @ \$3.25	9.75	
Fire Assay 6 Au @ \$6.50	<u>39.00</u>	100.35
Barringer Magenta		
4 samples for Cu,Pb,Zn,Mo,Ag @ \$6.10		24.40
Nuclear Activation		
4 samples for Au,As,Sb,W,Ba @ \$19.00		<u>76.00</u>
Total		\$6652.35

STATEMENT OF QUALIFICATIONS

I, B.W. KYBA of R.R.1, Falkland, B.C., DO HEREBY CERTIFY THAT:

1. I am a Consulting Geologist in the mineral exploration business and am employed by Cedar Hill Gold Corporation, Falkland, B.C.
2. I have been practising my profession in British Columbia, Alberta, Saskatchewan, the Yukon Territory, Colorado and Nevada for 13 years.
3. I am a graduate of the University of Alberta with a Bachelor of Science degree in geology.
4. I am a Fellow of the Geological Association of Canada, a Professional Geologist of Alberta, and a member of the Canadian Institute of Mining and Metallurgy.
5. This report is based upon knowledge of the PUTNAM property gained from exploration work on the property.



B.W. Kyba

Vernon, B.C.

February 26, 1985

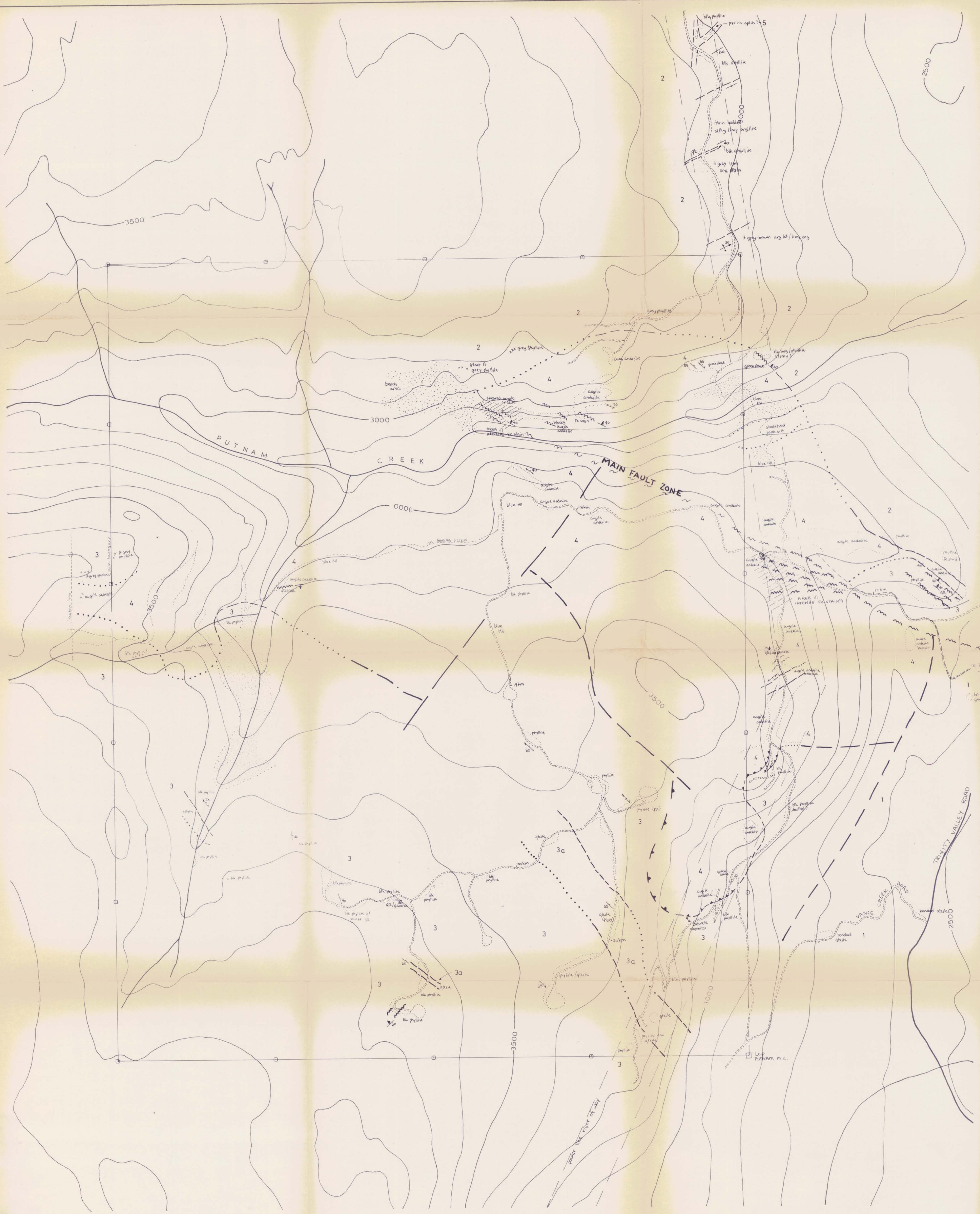
APPENDIX A

TABLE OF HEAVY MINERAL RESULTS

Sample

<u>No.</u>	<u>Au</u>	<u>Au Wt</u>	<u>Ag</u>	<u>As</u>	<u>Sb</u>	<u>Cu</u>	<u>Mo</u>	<u>Pb</u>	<u>Zn</u>	<u>W-G</u>	<u>W</u>	<u>Ba</u>
224	2300	8573	.7	10	1	35	2	11	52	0		.06
225	1680	7942	1.6	10	1	72	2	19	64	0		.03
226	1150	6377	.9	10	1	68	3	22	68	0		.07
227	1150	2614	.1	12	3	66	2	11	66	1	41	.10

NOTE: All values in ppm except gold in ppb,
tungsten (W-G) in grains and barium in per cent



LEGEND

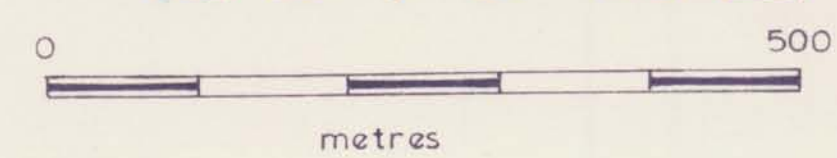
- 5 Aplite
- 4 Augite Andesite, Greenstone
- 3 Phyllite with interbedded siltstone
- 3a Quartzite
- 2 Argillite with interbedded limy argillite and argillaceous limestone
- 1 Gneiss

Fe-iron Py-pyrite Po-pyrrhotite Qtz-quartz

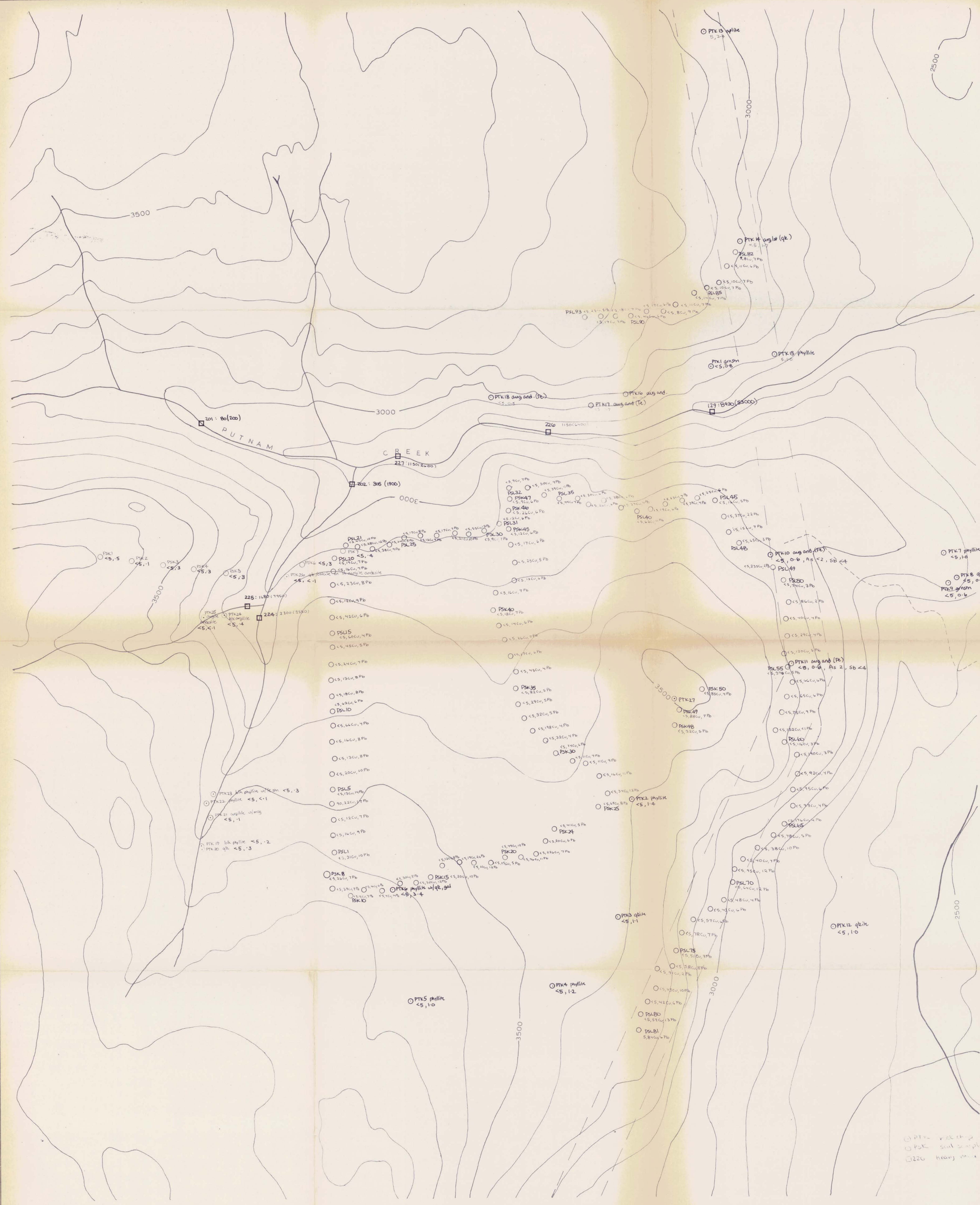
- ↘ attitude of fault
- ↘ attitude of bedding
- ↘ attitude of veins
- ↘ attitude of foliation
- ⚡ high angle fault
- ⚡ low angle fault

GEOLOGICAL BRANCH ASSESSMENT REPORT

13,311



K.L. Daughtry & Assoc. Ltd.		
BRICAN RESOURCES LTD.		
PROPERTY GEOLOGY		
PUTNAM PROPERTY		
Vernon M.D.	B.C.	82L/7W
SCALE: 1:5000	DATE: FEB. 1985	
DRAWN BY: BK	PROJ. NO: 164	FIGURE: 3



LEGEND

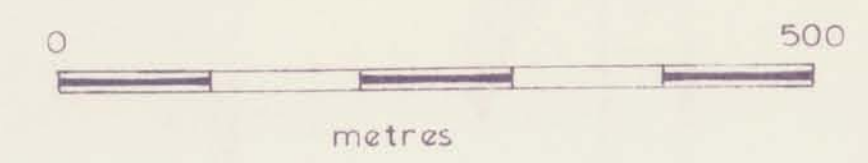
- ROCK CHIP - number, rock type, ppb Au, ppm Ag
- SOIL SAMPLE - number, ppb Au, ppm Cu, ppm Pb
- HEAVY MINERAL SAMPLE - number, ppb Au, ppm Au (weighted)

- Au - gold Cu - copper
- Ag - silver Pb - lead
- As - arsenic Sb - antimony
- Fe - iron

- qtzite - quartzite
- aug. and. - augite andesite
- grnstrn - greenstone
- arg. lst. - argillaceous limestone

GEOLOGICAL BRANCH
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K.L. Daughtry & Assoc. Ltd.	
BRICAN RESOURCES LTD.	
GEOCHEMISTRY	
PUTNAM PROPERTY	
Vernon M.D.	B.C. 82L/7W
SCALE: 1:5000	DATE: FEB. 1985
DRAWN BY: BK	PROJ. NO: 164 FIGURE: 4

○ PTK - rock chip
○ PS - soil sample
□ Z - heavy mineral