

ARIS SUMMARY SHEET

District Geologist, Nelson

Off Confidential: 94.12.06

ASSESSMENT REPORT 23239

MINING DIVISION: Greenwood

PROPERTY: Bear-Cub
LOCATION: LAT 49 10 00 LONG 118 33 00
UTM 11 5446921 387006
NTS 082E02E

CAMP: 008 Greenwood Camp

CLAIM(S): Bear, Cub 1-4
OPERATOR(S): Teck Corp.
AUTHOR(S): Thomson, G.R.
REPORT YEAR: 1994, 38 Pages
COMMODITIES
SEARCHED FOR: Copper, Silver, Gold
KEYWORDS: Tertiary, Knob Hill Group, Greenstones, Pillow lavas, Syenites, Pyrite
Pyrrhotite

WORK
DONE: Geological, Drilling, Geochemical
DIAD 607.2 m 6 hole(s); NQ
GEOL 400.0 ha
Map(s) - 1; Scale(s) - 1:5000
SAMP 19 sample(s); ME

RELATED
REPORTS: 21509, 22348

LOG NO:	JAN 31 1994 RD.
ACTION:	
FILE NO:	

DIAMOND DRILLING ASSESSMENT REPORT

ON THE

BEAR, CUB PROPERTY

SUB-RECORDER RECEIVED
JAN 19 1994
M.R. # \$
VANCOUVER, B.C.

Greenwood Mining Division, British Columbia

NTS 82 E / 2E

Latitude 49° 10' Longitude 118° 33'

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

23,239



Owner: Teck Corporation

G.R. Thomson, P.Geo.

January 15, 1994

FILMED

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INTRODUCTION

Teck Corporation optioned the Bear - Cub property, a potential copper - gold skarn prospect in the northern periphery of the Greenwood mining camp, which hosts the historically important Phoenix mine.

The claim area was geologically mapped with examination of all known mineralized showings and sampling of three showings.

A diamond drill program was carried out under the premise of locating favourable host stratigraphy, in particular, limy beds as part of the Triassic Age Brooklyn Formation, which is known to occur adjacent and south of the property.

LOCATION, ACCESS

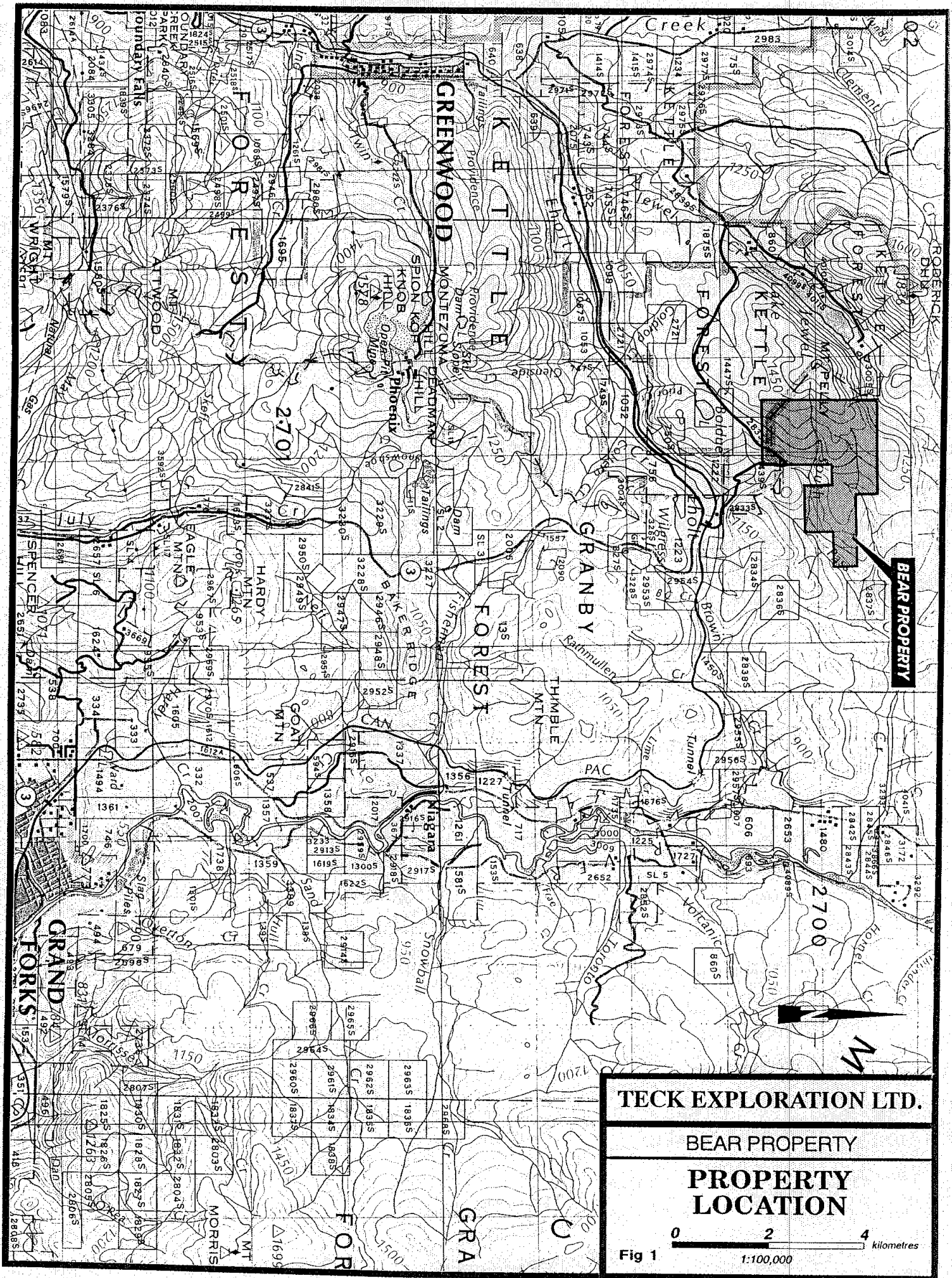
The property is accessed from Highway #3, which connects the towns of Greenwood and Grand Forks. A secondary logging road leaves Highway #3 at the small settlement of Eholt and runs approximately 3 km. north to reach the South Pass Creek area of the property. The main access throughout the property is provided by roads that follow the north bank of South Pass Creek.

CLAIMS

The Bear - Cub property consists of the following claims as staked under the Modified grid system as well as 2 - post claim system.

All claims are currently owned by Teck Corporation. Assessment work as described in this report will be used to apply maximum credit for the claims listed above.

Please note that the Bear claim has been reduced in size as a result of a ruling that gave the pre-existing Eholt (215004) claim precedence over the Bear claim.



TECK EXPLORATION LTD.

BEAR PROPERTY

**PROPERTY
LOCATION**

Fig 1

0 2 4 kilometres
1:100,000

<u>Name</u>	<u>Record No.</u>	<u>No. of Units</u>	<u>Record Date</u>	<u>Expiry Date</u>
Bear	215844	16		July 8/94
Cub 1	318096	1		June 11/94
Cub 2	318097	1		June 11/94
Cub 3	318098	1		June 11/94
Cub 4	317691	1		May 20/94
Cub 5	317692	1		May 20/94
Cub 6	317693	1		May 20/94
Cub 7	317694	1		May 20/94
Cub 8	317695	1		May 20/94
Cub 9	318105	1		June 8/94
Cub 10	318106	1		"
Cub 11	318107	1		"
Cub 12	318108	1		"
Cub 13	318109	1		"
Cub 14	318110	1		"
Cub 15	318099	1		June 11/94
Cub 16	318101	1		June 11/94
Paul 1	320531	1		Aug.23/94
Paul 2	320532	1		"
Paul 3	320533	<u>1</u>		"

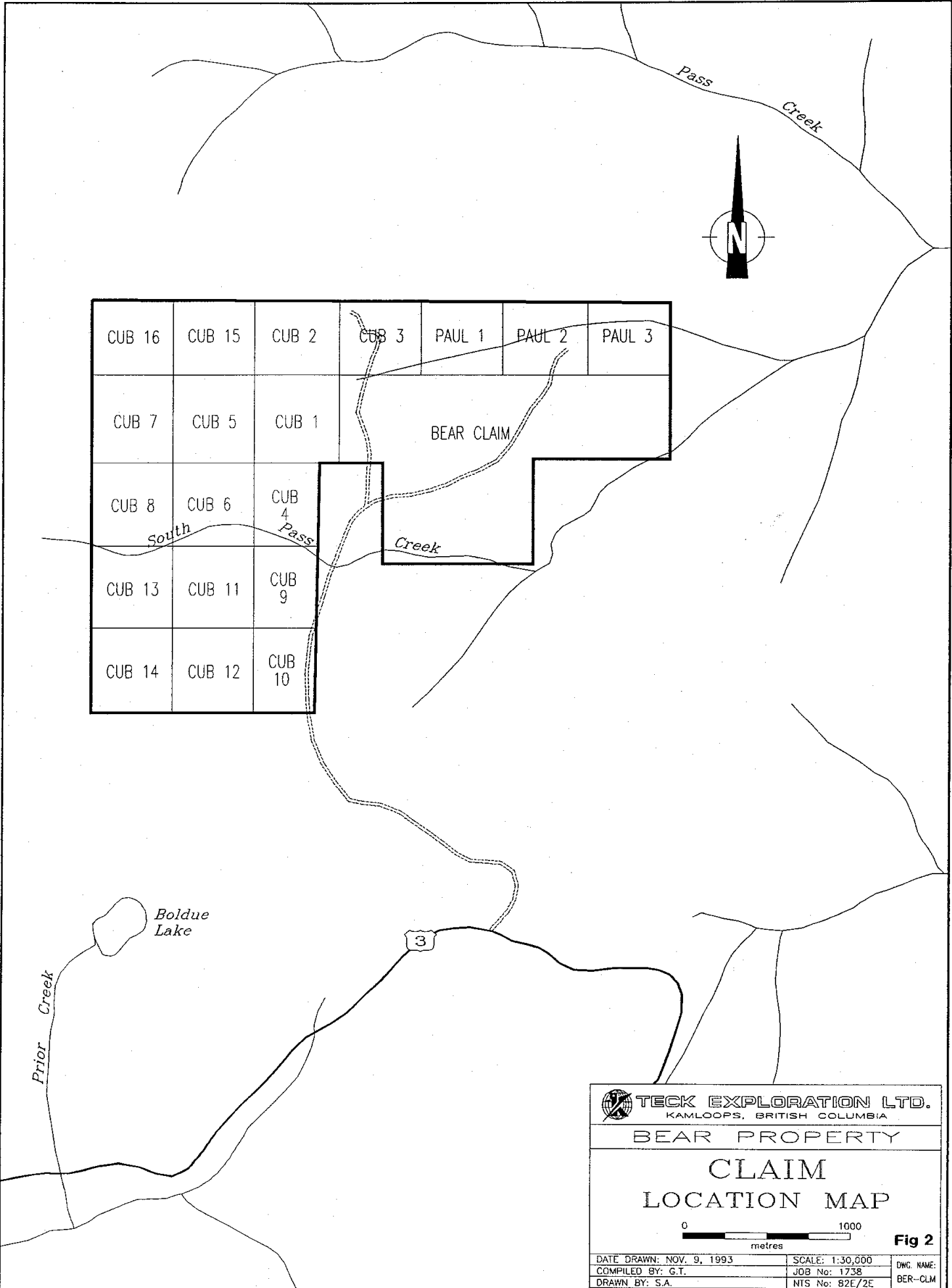
35 units

HISTORY

Lode mineralization was first recorded in the Greenwood area near Boundary Falls in 1884 and by 1900 most of the important deposits had been found. Development was stimulated by the completion of a railway and construction of a major smelter at Grand Forks in 1900. Production from the mines at Phoenix reached a peak delivery in 1913 of more than a million tons of ore. Labour disputes indirectly caused closure of the Grand Forks smelter and many of the mines in 1919.

Large scale open-pit production from the Motherlode and Phoenix orebodies was carried out from the late 1950,s until the exhaustion of the Phoenix orebody in 1976.

Published information relative to the immediate claim area is generally lacking. There are a number of old shallow pits, shafts and small trenches with most occurring in hornfelsed to weakly skarned greenstones (metavolcanics). No recent assessment work has been carried out over the immediate claim area.



TECK EXPLORATION LTD.
 KAMLOOPS, BRITISH COLUMBIA

BEAR PROPERTY

CLAIM LOCATION MAP

0 1000
metres

Fig 2

DATE DRAWN: NOV. 9, 1993	SCALE: 1:30,000	DWG. NAME:
COMPILED BY: G.T.	JOB No: 1738	BER-CLM
DRAWN BY: S.A.	NTS No: 82E/2E	

GEOLOGY AND MINERALIZATION

There is generally poor outcrop exposure over the claim area, except as exposed along roadcuts or previous mineral exploration activity (shafts, trenches).

Geologic mapping by Fyles (BCMEMPR: O.F. 1990-25) shows the claims to be underlain by a central area of Knob Hill Group, consisting of greenstone, pillow lava and breccia, amphibolite and minor limestone. The Knob Hill Group is dated at Carboniferous or Permian Age. All non intrusive rocks examined on the claim area fall mainly in the greenstone category. The west side of the claim area is underlain by Jurassic and Cretaceous Nelson Plutonic rocks, primarily quartz diorite and granodiorite. The eastern portion of the claims is underlain by Eocene Age Penticton Group, consisting of dikes, sills and intrusions of syenite, pulaskite, monzonite and diorite. (Coryell Intrusions)

All sulphide mineralization seen on the claim was found to occur in hornfelsed to weakly skarned greenstones. Sulphides consist of disseminations and pods of pyrrhotite, pyrite and chalcopyrite. Concentrations of sulphides appear greatest in narrow shear zones near contacts with Nelson Intrusive rocks.

Geologic mapping, rock sampling and diamond drill sites are represented on Figure #3 at the back of this report.

DIAMOND DRILL PROGRAM

Diamond drilling was carried out over the Bear and Cub claims from August 30 to September 4, 1993. All drilling was of NQ size and totalled 607.2 m in six holes from five separate set-ups. The drilling was carried out by L.D.S. Diamond Drilling Ltd. of Kamloops, B.C. Drill core is stored with one of the original claim owners in Grand Forks, B.C.

Particulars of the drill program are given as follows:

<u>HOLE NO.</u>	<u>DIP</u>	<u>AZIMUTH</u>	<u>LENGTH</u>
93-BC-01	90°	----	142.3m
93-BC-02	-70°	0°	41.8
93-BC-03	-45°	66°	111.2
93-BC-04	90°	----	66.1
93-BC-05	90°	----	140.5
93-BC-06	-60°	320°	105.2

Drill collars were located using a hip chain, in conjunction with known road locations. Elevations were interpreted from existing topographic base maps.

DRILL PROGRAM RESULTS

The drilling program at the Bear property was carried out primarily as an attempt to locate possible large-scale skarn style mineralization at depth. Such a prospective zone does not appear likely to occur on the Bear property.

The majority of drill holes intersected an extensive series of fresh to altered quartz diorites, intrusive feldspar porphyries and pink porphyritic syenite dykes/sills.

Drill holes #1, 5 and 6 contained narrow zones of fresh to skarned (epidote-garnet) andesitic greenstone.

The only drill hole that intersected mineralization of economic significance was hole #6. In hole #6, a zone of 10-20% semi-massive pyrite + chalcopyrite occurs from 16.5 to 19.3 m as irregular masses and fracture fillings within a chloritic, sheared greenstone. Significant assay values for this interval are as follows:

<u>Sample No.</u>	Interval (m)	Au (g/t)	Ag (g/t)	Cu (%)
121810	16.52-17.82(1.3)	2.4	48.0	2.26
121811	17.82-19.28(1.5)	2.0	33.6	2.10

A similar but less strongly mineralized pyrite zone occurs from 32.4 to 34.9 m. This zone appears to be closely associated with the first mineralized zone (16.5-19.3 m) and has a similar geochemical signature. Geochemical values for the second zone are as follows:

<u>Sample No.</u>	Interval	Au (ppb)	Ag (ppm)	Cu(ppm)
121814	32.45-33.93(1.5)	890	3.5	1223
121815	33.93-34.87(0.9)	280	0.5	538

Possibly of greater importance than the actual assay value of these samples is their geochemical signature and their similarity to other skarn deposits in the Greenwood camp. All four samples listed above are anomalous in such elements as Mo, Cu, Zn, Co, As, Sb, Bi, Ag and Au.

Drill holes #3 and #6 were drilled to intersect known surface mineralization in greenstones. Hole #3 did not intersect mineralization as occurs in a small surface pit containing sulphides in hornfelsed greenstones. Hole #6 was drilled to intersect shear related pyrite-chalcopyrite mineralization as exposed in a small pit and adjacent trench.

Drill holes #1, 2, 4 and 5 were drilled primarily to test for the presence of calcareous skarn hosting sediments as could be trending northward from the southerly Eholt showings currently being explored by Placer Dome Inc. under an option agreement with Orvana Minerals Corp.

Drill hole data is summarized on drill sections and drill logs at the end of this report.

SUMMARY AND RECOMMENDATIONS

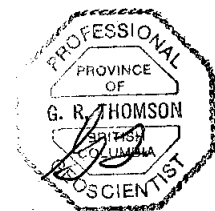
There may yet be potential for skarn hosted mineralization on the Bear property, but this was not substantiated by the Teck 1993 drill program.

A more feasible approach may be to combine exploration efforts with Orvana Minerals Corp. to try and locate common mineral potential on both the Bear and Eholt properties.

As for specific mineral targets, the copper-gold-silver zone as located in drill hole 93-BC-06 should be followed out by short drill holes, both along strike and down dip to determine its extent and mineralization style. There is a reasonable possibility that the mineralized zone as found in hole #6 may connect with the mineral showing that drill hole #3 attempted to intersect. This would give the zone a strike length of at least 750 m.

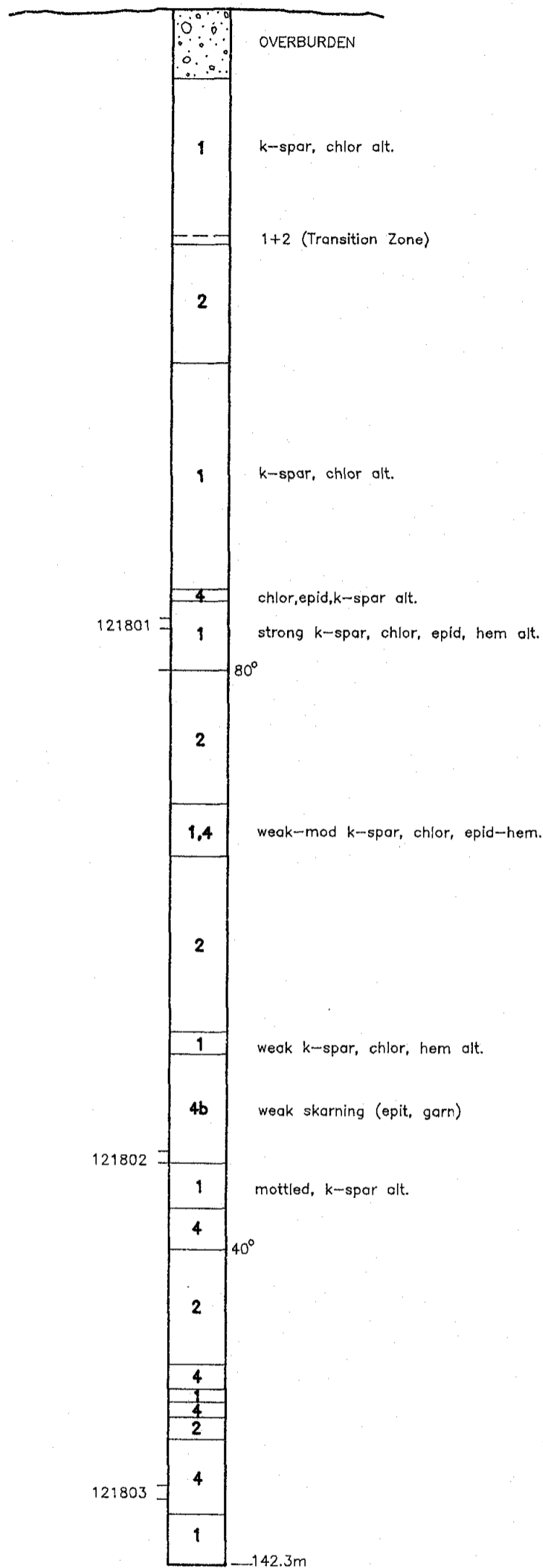
The "Rambler" showing area should receive future consideration. It contains disseminated to massive concentrations of pyrite, pyrrhotite and chalcopyrite as shear hosted mineralization within hornfelsed greenstones. A previous grab sample from the dump gave assays of 1.9 % Cu, 65.3 ppm Ag and 3.68 g/t Au. Note that these are very similar values to the higher assay values returned in drill hole 93-BC-06.

Specific areas of the property may be considered for geochemical or geophysical surveys to better define mineralized structures.



93-BC-01

ELEV: 1161.3m



LEGEND

TERTIARY

CORYELL INTRUSIONS

- 1** FELDSPAR PORPHYRY (DYKES/SILLS)
 - crowded euhedral plag. phenocrysts (2-5mm)
 - chloritic±k-spar altered groundmass
- 2** SYENITE PORPHYRY PULASKITE (DYKES/SILLS)
 - 5-10% euhedral plag. phenocrysts (2-5mm)
 - fresh to variably replaced by chlorite/calcite
 - 1-2% biotite phenocrysts (1-2mm), pink potassic groundmass

CRETACEOUS

NELSON INTRUSIVES (may in part include CORYELL INTRUSIONS)

- 3** QUARTZ DIORITE/GRANODIORITE
 - grey
 - med. grain equigranular to porphyritic
 - 20-30% pyroxene±biotite

CARBONIFEROUS or PERMIAN

NOB HILL GROUP

- 4** GREENSTONE
 - 4a** dark green, aphanitic
 - occasionally weakly porphyritic with fine grain grain plag./chlor. phenocrysts (1-2mm)
 - 4b** as in 4a with variable weak to mod. skarning
 - brown garnet±epidote patches, bands
 - locally silicified with minor assoc. Py and rare magnetite
 - 4c** greenstone with >5% sulphides (Py, Po, Cpy)

Fig 4

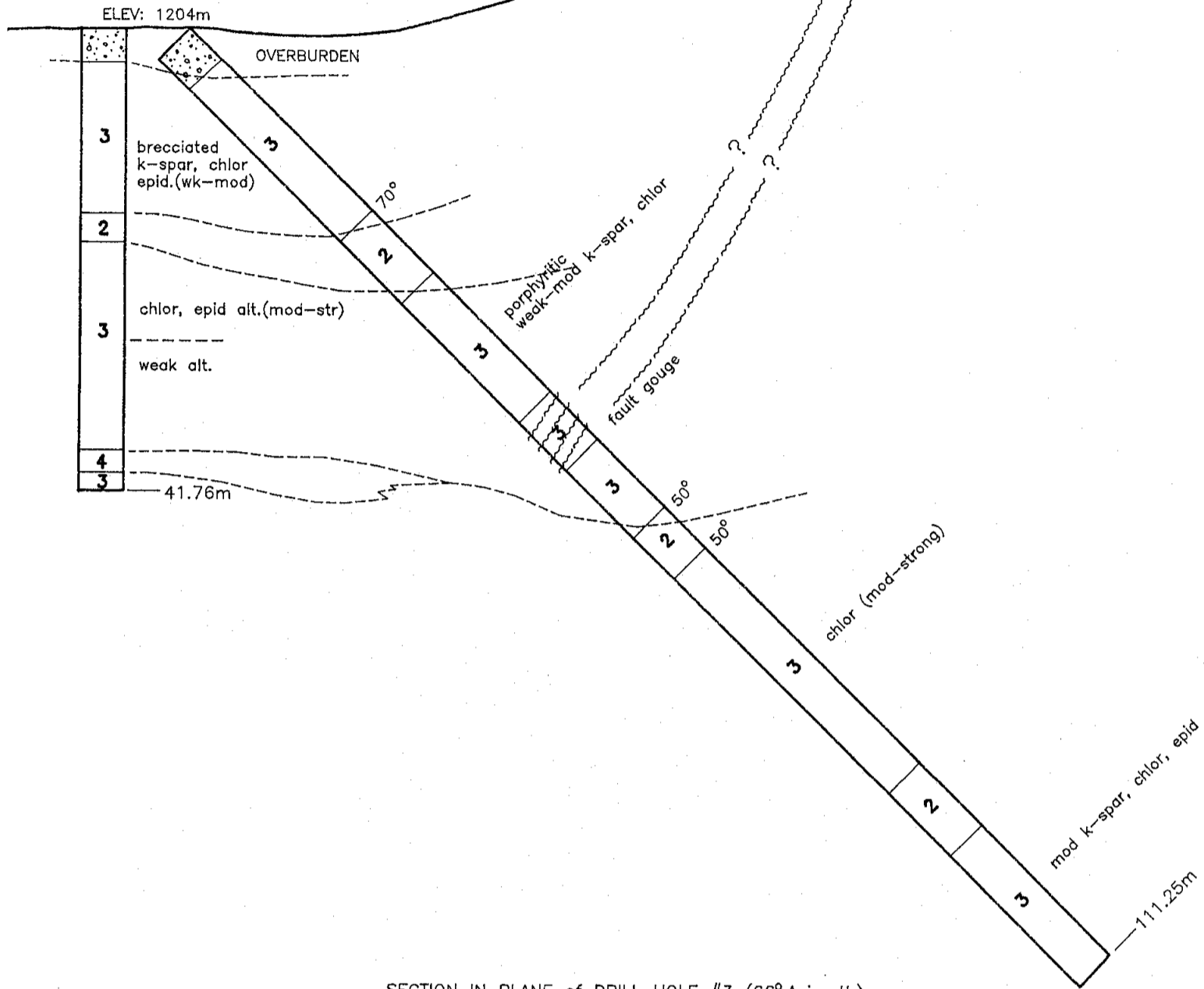
TECK EXPLORATION LTD. KAMLOOPS, BRITISH COLUMBIA		
BEAR PROPERTY		
DRILL HOLE SECTION 93-BC-01 DIP: -90 LENGTH: 142.3		
DATE DRAWN: NOV. 16, 1993	SCALE: 1:500	DWG. NAME:
COMPILED BY: G.T.	JOB No: 1738	BER-DDH1
DRAWN BY: S.A.	NTS No: 82E/2E	

SW

NE

93-BC-02
DIP: -90° AZIM: 0°

93-BC-03
DIP: -45° AZIM: -66°



SECTION IN PLANE of DRILL HOLE #3 (66° Azimuth)

LEGEND

TERTIARY

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 - brown garnet±epidote patches, bands
 - locally silicified with minor assoc. Py and rare magnetite
 - 4c greenstone with >5% sulphides (Py, Po, Cpy)

Fig 5

KAMLOOPS, BRITISH COLUMBIA		
BEAR PROPERTY		
DRILL HOLE SECTION		
93-BC-02		
93-BC-03		
DATE DRAWN: NOV. 16, 1993	SCALE: 1:500	DWG. NAME:
COMPILED BY: G.T.	JOB No: 1738	BER-DH23
DRAWN BY: S.A.	NTS No: 82E/2E	

W

E

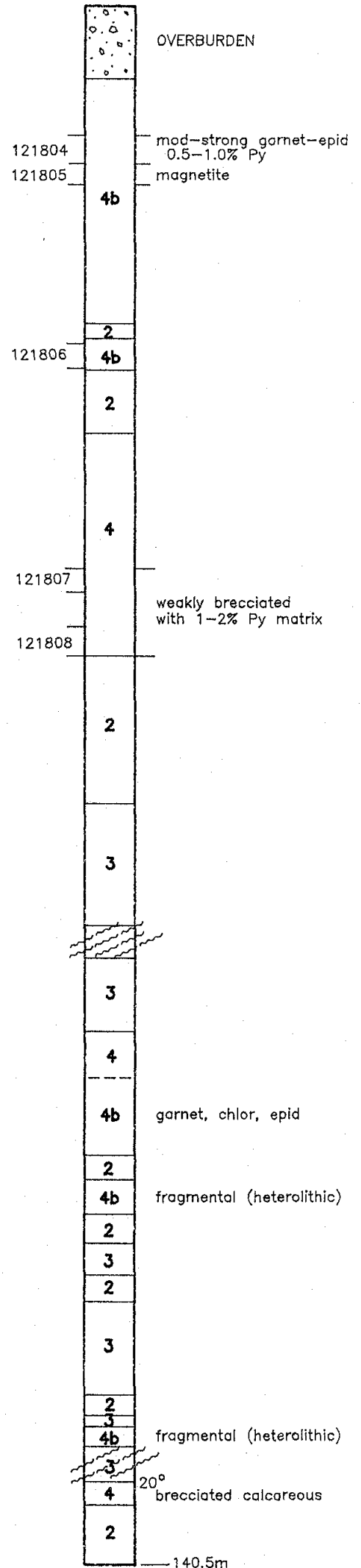
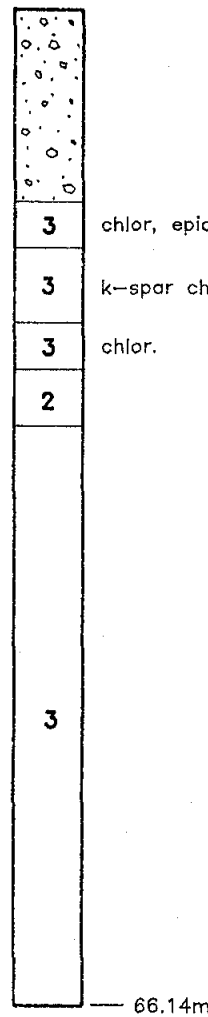
93-BC-04

DIP:-90°

215m
ELEV:1112.5m

93-BC-05

DIP:-90°



LEGEND

TERTIARY

CORYELL INTRUSIONS

- 1** FELDSPAR PORPHYRY (DYKES/SILLS)
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Fig 6

<p>TECK EXPLORATION LTD. KAMLOOPS, BRITISH COLUMBIA</p>		
<p>BEAR PROPERTY</p>		
<p>DRILL HOLE SECTION</p>		
<p>93-BC-04 93-BC-05</p>		
DATE DRAWN: NOV. 16, 1993	SCALE: 1:500	DWG. NAME:
COMPILED BY: G.T.	JOB No: 1738	BER-DH45
DRAWN BY: S.A.	NTS No: B2E/2E	

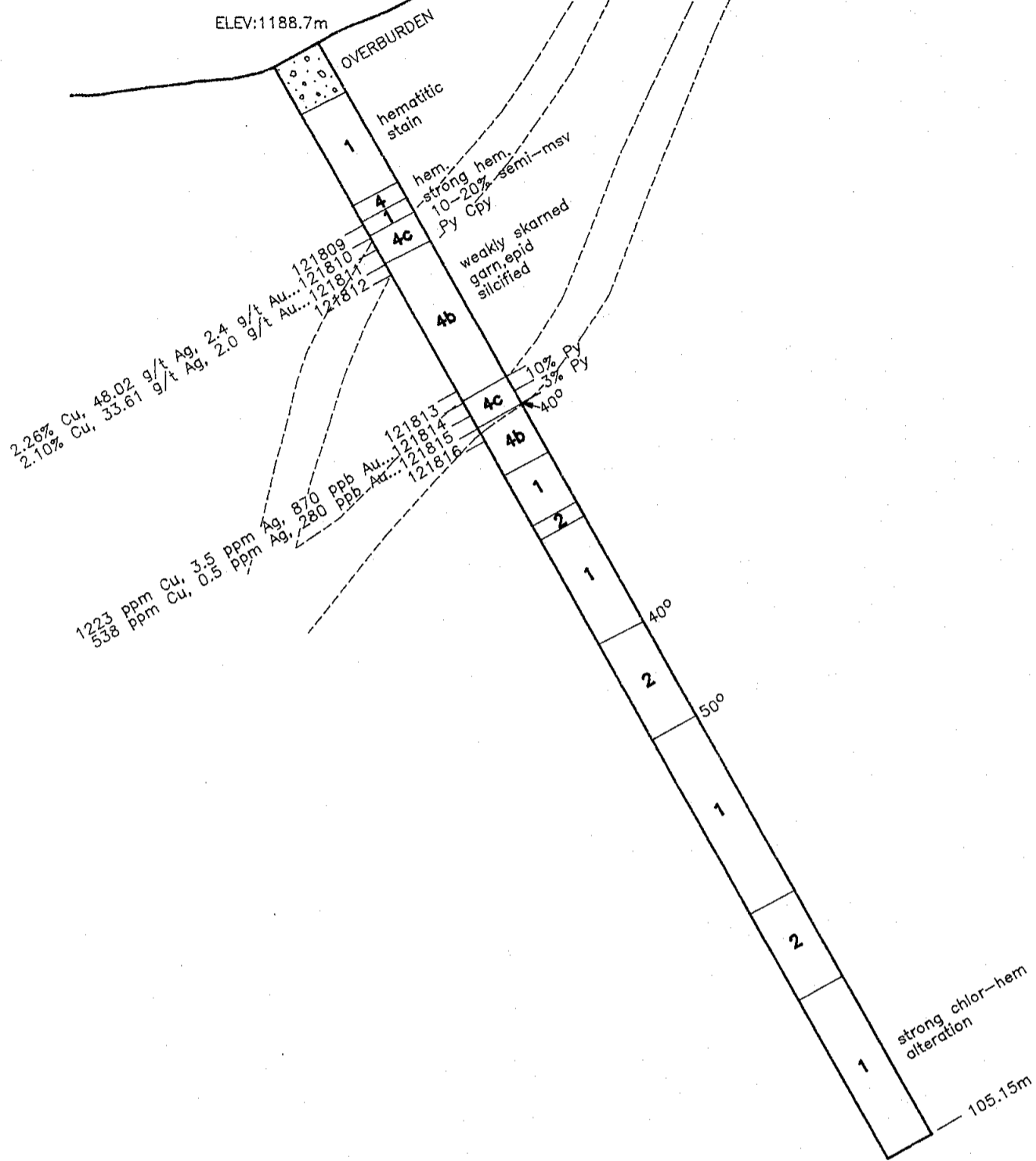
SW

NE

93-BC-06
DIP: -60° AZIM: 66°

Py, Po, Cpy... 0.13% Cu, 8.4 ppm Ag, 2.90 g/t Au / 2m

ELEV: 1188.7m



LEGEND

TERTIARY

CORYELL INTRUSIONS

- 1** FELDSPAR PORPHYRY (DYKES/SILLS)
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CRETACEOUS

NELSON INTRUSIVES (may in part include CORYELL INTRUSIONS)


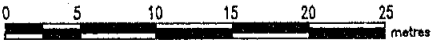
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Fig 7

 TECK EXPLORATION LTD. KAMLOOPS, BRITISH COLUMBIA		
BEAR PROPERTY		
DRILL HOLE SECTION		
93-BC-06		
		
DATE DRAWN: NOV. 16, 1993	SCALE: 1:500	DWG. NAME:
COMPILED BY: G.T.	JOB No: 1738	BER-DH6
DRAWN BY: S.A.	NTS No: 82E/2E	

APPENDIX 1

COST STATEMENT

A. SALARIES:

G. Thomson (Geologist)	10 days @ \$271.87/day	\$2718.70
P. Donkersloot (Geologist)	13 days @ \$251.18/day	<u>3265.40</u>

5984.10

B. LIVING COSTS: (Motel, Meals)

1122.70

C. TRANSPORTATION: (Truck Rental, gas)

1898.65

**D. DRILLING: (L.D.S. Diamond Drilling Ltd.)
1992' NQ core @ \$10.00/foot**

23055.20

**E. ASSAYING: - 16 core and 3 rock samples for Au
geochem. and 30 element ICP analysis;
2 Au assay, 2 Ag assay, 2 Cu assay**

295.85

F. REPORT PREPARATION: 7 days @ \$271.87/day

1903.09

G. DRAFTING: 3 days @ \$217.50/day

652.50

H. TELEPHONE:

143.16

Total:

\$35055.25

APPENDIX 2

REFERENCES

Church, B.N. (1986) : Geology and Mineralization in the Mount Atwood - Phoenix Area, Greenwood B.C.; B.C. Ministry of Energy, Mines and Petroleum Resources, Paper 1986-2

Fyles, J.T. (1990) : Geology of the Greenwood - Grand Forks Area, British Columbia, NTS 82E/1,2 ; B.C. Ministry of Energy, Mines and Petroleum Resources, Open File 1990-25

Kemp, J., Hairsine D. (1992): Statement of Work (Magnetometer Survey) for Bear Mineral Claim Group

LeRoy, O.E. (1912): The Geology and Ore Deposits of Phoenix, Boundary District, Boundary District, British Columbia; Geological Survey of Canada, Memoir 21

Little, H.W. (1983) : Geology of the Greenwood Map area, British Columbia; Geological Survey of Canada, Paper 79-29

Monger, J.W.H. (1968) : Early Tertiary Stratified Rocks, Greenwood Map Area, (82E/2) British Columbia Geological Survey of Canada, Paper 67-42

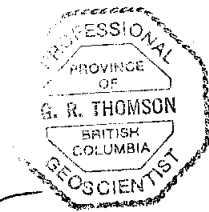
APPENDIX 3

CERTIFICATE OF QUALIFICATIONS

Gregory R. Thomson, P. Geo.

I hereby certify that:

1. I graduated from the University of British Columbia in 1970 with a B.Sc. degree in geology.
2. I am a member in good standing of the Association of Professional Engineers and Geoscientists of the Province of British Columbia.
3. I have worked since graduation as an exploration geologist, mostly in the province of British Columbia.
4. The work described herein was carried out under my direct supervision.



G. R. Thomson, P. Geo.

ECO-TECH LABORATORIES LTD.
 10041 EAST TRANS CANADA HWY.
 KAMLOOPS, B.C. V2C 2J3
 PHONE - 604-573-5700
 PAX - 604-573-4557

TECK EXPLORATION ETK 93-206
 # 350, 272 Victoria Street
 KAMLOOPS, B.C.
 V2C 2A2

ATTENTION: GREG THOMPSON

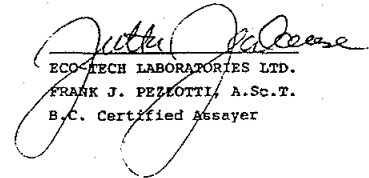
LY 30, 1993

3 ROCK SAMPLES RECEIVED JULY 20, 1993
 PROJECT #: 41

VALUES IN PPM UNLESS OTHERWISE REPORTED

#	DESCRIPTION	AU(ppb)	AG	AL(%)	AS	B	BA	BI	CA(%)	CD	CO	CR	CU	FE(%)	K(%)	LA	MG(%)	MN	MO	NA(%)	NI	P	PB	SB	SN	SR	TI(%)	U	V	W	Y	ZN
-	120955	175	1.2	1.50	105	6	35	5	3.03	1	66	47	1302	9.48	.01	10	.73	871	2	.01	27	450	16	10	20	58	.02	10	53	10	1	61
-	120956	35	.2	1.23	70	4	30	5	9.49	1	19	46	131	7.37	.01	10	.48	1197	3	.01	24	380	6	5	20	85	.06	10	91	10	9	29
-	120957	190	2.6	1.47	150	6	40	5	5.38	1	374	24	1081	8.40	.01	10	.58	1512	1	.01	209	510	12	5	20	57	.03	20	90	10	5	92

TE: < = LESS THAN
 > = GREATER THAN


 ECO-TECH LABORATORIES LTD.
 FRANK J. PEZZOTTI, A.Sc.T.
 B.C. Certified Assayer

93/TECK

ROSSBACHER LABORATORY LTD.

CERTIFICATE OF ANALYSIS

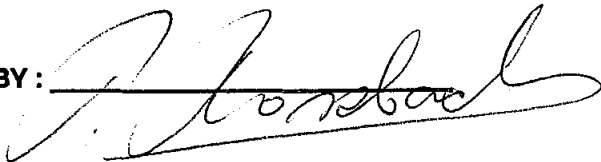
2225 Springer Ave., Burnaby,
British Columbia, Can. V5B 3N1
Ph:(604)299-6910 Fax:299-6252

To: TECK EXPLORATIONS LTD.
350 272 VICTORIA STREET
KAMLOOPS, B.C.

Project: 1738
Type of Analysis: ICP

Certificate: 93168
Invoice: 40218
Date Entered: 93-09-11
File Name: TEK93168.I
Page No.: 1

PRE FIX	SAMPLE NAME	PPM MO	PPM CU	PPM PB	PPM ZN	PPM AC	PPM NI	PPM CO	PPM MN	% FE	PPM AS	PPM U	PPM AU	PPM HG	PPM SR	PPM CD	PPM SB	PPM BI	PPM V	% CA	% P	PPM LA	PPM CR	% MG	PPM BA	% TI	% AL	% NA	% K	% SI	PPM W	PPM BE	PPB AU	PPB AA
A	121801	10	43	133	82	0.7	5	1	778	3.23	28	5	ND	ND	195	1	3	4	41	1.56	0.09	15	53	0.73	158	0.03	1.20	0.14	0.17	0.07	10	1	5	
A	121802	18	25	45	106	0.3	6	13	1057	4.81	28	5	ND	ND	121	1	8	2	111	2.30	0.12	8	43	1.08	132	0.12	1.94	0.16	0.40	0.05	13	1	5	
A	121803	6	253	28	83	0.2	55	10	594	3.16	39	5	ND	ND	302	1	1	3	128	3.52	0.16	8	74	1.33	98	0.12	1.60	0.27	0.14	0.13	9	1	60	
A	121804	3	750	21	134	0.7	29	24	1834	6.22	133	5	ND	ND	125	1	1	2	84	7.13	0.26	10	66	1.17	79	0.08	3.74	0.14	0.15	0.18	1	1	10	
A	121805	2	266	20	107	0.6	23	27	1380	3.69	106	5	ND	ND	136	1	4	2	91	6.04	0.21	9	62	1.20	78	0.10	3.27	0.14	0.14	0.14	2	1	5	
A	121806	5	193	13	93	0.6	17	7	1169	4.30	72	5	ND	ND	195	1	1	2	111	4.96	0.08	10	59	1.17	91	0.10	2.93	0.23	0.19	0.07	1	1	5	
A	121807	2	234	29	194	1.2	18	16	658	3.99	70	5	ND	ND	200	1	6	2	114	2.56	0.10	4	37	1.68	219	0.23	2.86	0.51	0.39	0.15	12	1	5	
A	121808	3	318	27	145	1.2	18	27	881	5.15	58	5	ND	ND	255	1	8	2	158	2.37	0.11	3	47	2.15	252	0.22	3.25	0.50	0.38	0.13	14	1	5	
A	121809	4	184	15	64	0.9	7	7	400	3.61	22	5	ND	ND	106	1	5	3	44	0.98	0.09	25	42	0.63	175	0.03	1.52	0.07	0.38	0.04	13	1	50	
A	121810	27	10971	42	245	48.0	34	111	1297	9.72	286	5	ND	ND	99	1	40	49	91	2.39	0.06	6	79	0.78	92	0.04	1.83	0.08	0.21	0.09	25	1	2100	
A	121811	17	10490	53	176	31.9	36	107	2055	10.98	299	5	ND	ND	63	1	42	52	58	2.47	0.02	5	81	0.50	53	0.01	0.93	0.03	0.10	0.11	31	1	1650	
A	121812	3	1078	14	90	3.5	24	8	1030	4.62	87	5	ND	ND	243	1	4	4	108	3.91	0.15	6	67	1.08	112	0.11	2.72	0.56	0.10	0.23	12	1	110	
A	121813	6	626	31	95	0.9	26	28	1111	6.18	85	5	ND	ND	204	1	18	3	149	2.23	0.15	6	76	1.66	133	0.23	3.47	0.46	0.13	0.16	20	1	150	
A	121814	25	1223	80	134	3.5	47	206	1464	11.61	220	5	ND	ND	124	1	54	75	122	1.12	0.09	3	81	1.16	144	0.13	3.11	0.24	0.52	0.07	39	1	890	
A	121815	8	538	37	155	0.5	23	46	1112	7.06	98	5	ND	ND	193	1	15	32	183	2.46	0.13	5	61	1.68	180	0.28	5.30	0.73	0.90	0.10	17	1	280	
A	121816	5	432	17	88	0.9	19	20	702	4.21	47	5	ND	ND	134	1	9	6	133	1.41	0.12	5	52	1.23	75	0.29	1.99	0.29	0.19	0.11	15	1	70	

CERTIFIED BY: 

APPENDIX 4

GEOCHEMICAL ANALYSES

APPENDIX 5

DRILL LOGS

TECK EXPLORATION LTD.

BEAR PROPERTY

PROJECT #1738

HOLE NO. 93-BC-06

PAGE: 1 of 2

NTS: 82E/2E
 CLAIM: BEAR
 ELEVATION: 3900'
 GRID COORD:

DATE COLLARED: 03/09/93
 DATE COMPLETED: 04/09/93
 DATE LOGGED:

DEPTH DEPTH AZ
 -60° 140°

LENGTH: 105.16 m
 DEPTH OF OVB: 4.57 m
 CASING REMAINING:
 WATERLINE LENGTH:
 PROBLEMS:

LOGGED BY: G.T.
 CORE SIZE: NQ

DEPTH (meters)	DESCRIPTION	STRUCTURE		ALTERATION	METALLIC MINERALS (%)	SAMPLE DATA				RESULTS					
		ANGLES	VEINS			SAMPLE NO.	FROM	TO	LENGTH (meters)	Au (ppb)	Cu (ppm)	Ag (ppm)	Fe (%)	Other	
0-4.57	Overburden														
4.57-13.75	Feldspar porphyry: pale green w. red hem. stain on fract's, pervasive mod-strong hem. stain, > 50% plag. phenos are mod. chloritized, 60% plag phenos, 2-7 mm, subhedral-euhedral, partially hem. stained, broken to ~ 10.0 m, 18 cm volc. frag @ 13.29 m, L. cont.-->	50°		chlor, hem (mod-strong)											
13.75-15.32	Andesitic greenstone: fine grain, green to red, irreg. red hem. bands, patches, wk epid. skarn bands @ 14.85-15.12 m, minor py. in drk f.g. volc. @ 14.6-14.88 m.			chlor, hem, epid	py tro										
15.32-16.52	Feldspar porphyry: as above @ 4.57-13.75 m, strong hem. alt. @ 15.76-16.37 m.			chlor (mod) hem (mod-strg)		121809	15.32	16.52	1.2	50	184	0.9			
16.52-19.28	Greenstone (Mineralized Zone): grey to greenish grey, aphanitic greenstone, pervasive wk. mod silicification, 10-20% semimav py, po, opy as irreg. masses, fract. fills, grad. lower contact.			chlor, silic	10-20% py, po, cpy	121810 121811	16.52 17.82	17.82 19.28	1.3 1.48	2.4 g/t 2.02 g/t	2.26% 2.10%	48.02 g/t 33.61 g/t			
19.28-32.45	Andesitic greenstone: pale green, aphanitic, mottled, pervasive silicification w. conspicuous skarning of irreg. patches of pinkish garnet often w. epidote rims, epidote also as segregations, py. as f.g. disseminations, also as minor localized clusters to 10 cm.			skarn-garn, epidote, silicification	f.g. dis py 0.5%	121812	19.28	20.42	1.14	110	1078	3.5			
						121813	31.1	32.45	1.35	150	626	0.8			
32.45-34.87	Greenstone (Mineralized Zone): similar to mineralized zone at 16.52-19.28 m, dark, f.g. alt. greenstone, w. dis to semimav py as fracture fills and irregular masses or disseminations.		20-30° to C.A.	chlor (mod)	10-20% py 3-5% py	121814 121815	32.45 33.93	33.93 34.87	1.48 0.94	890 280	1223 538	3.5 0.6			

APPENDIX 6

GEOCHEMICAL METHODS

Jan. 1990.

GEOCHEMICAL ANALYTICAL METHODS CURRENTLY IN USE AT
ROSSBACHER LABORATORY LTD.

A. SAMPLE PREPARATION

1. Geochem. Soil and Silt:

Samples are dried and sifted to minus 80 Mesh, through stainless steel or nylon screens.

2. Geochem. Rock:

Samples are dried, crushed to minus 1/4 inch, split, and pulverized to minus 100 mesh.

B. METHODS OF ANALYSIS

1. Multi element: (Mo, Cu, Ni, Co, Mn, Fe, Ag, Zn, Pb, Cd, As):

0.50 Gram sample is digested for four hours with a 15:85 mixture of Nitric-Perchloric acid. The resulting extract is analyzed by Atomic Absorbtion spectroscopy, using Background Correction where appropriate.

2. Antimony:

0.50 Gram sample is fused with Ammonium Iodide and dissolved. The resulting solution is extracted into TOPO/MIBK and analyzed by Atomic Absorbtion spectroscopy.

3. Arsenic: (Generation Method)

0.25 Gram sample is digested with Nitric-Perchloric acid. Arsenic from the solution is converted to arsine, which in turn reacts with silver D.D.C. The resulting solution is analyzed by colorimetry.

4. Barium:

0.20 Gram sample is repeatedly digested with HClO_4 - HNO_3 and HF. The solution is analyzed by atomic absorption spectroscopy.

5. Biogeochemical:

Samples are dried and ashed at 550°C. The resulting ash analyzed as in #1, Multi-element Analysis.

6. Bismuth:

0.50 Gram sample is digested with Nitric acid. The solution is analysed by Atomic absorption spectroscopy.

METHODS OF ANALYSIS (CONT'D)

7. **Chromium:**

0.25 Gram sample is fused with Sodium Peroxide. The solution is analyzed by atomic absorption spectroscopy.

8. **Fluorine:**

0.50 Gram sample is fused with Carbonate Flux, and dissolved. The solution is analysed for Fluorine by use of an Ion Selective Electrode.

9. **Gold AR/AAS:**

10.0 Gram sample is roasted at 550°C and dissolved in Aqua Regia. The resulting solution is subjected to a MIBK extraction, and the extract is analyzed for Gold using Atomic Absorption spectroscopy.

9A **Gold FA:**

10.0 Gram sample is fused with appropriate fluxes, and the resulting lead button is cupelled to produce a gold/silver bead. The bead is dissolved in Aqua Regia and analyzed for gold by AAS.

10. **Mercury:**

1.00 Gram sample is digested with Nitric and Sulfuric acids. The solution is analyzed by Atomic Absorption spectroscopy, using a cold vapor generation technique.

11. **Partial Extraction and Fe/Mn oxides:**

0.50 Gram sample is extracted using one of the following: hot or cold 0.5 N. HCl, 2.5% E.D.T.A., Ammonium citrate, or other selected organic acids. The solution is analyzed by use of Atomic Absorption spectroscopy.

12. **pH:**

An aqueous suspension of soil, or silt is prepared, and its pH is measured by use of a pH meter.

13. **Rapid Silicate Analysis:**

0.10 Gram sample is fused with Lithium Metaborate, and dissolved in HNO_3 . The solution is analyzed by Atomic Absorption for SiO_2 , Al_2O_3 , Fe_2O_3 , MgO , CaO , Na_2O , K_2O , TiO_2 , P_2O_5 , and MnO .

14. **Tin:**

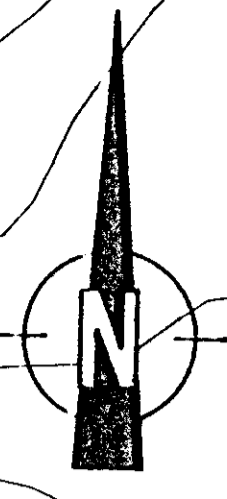
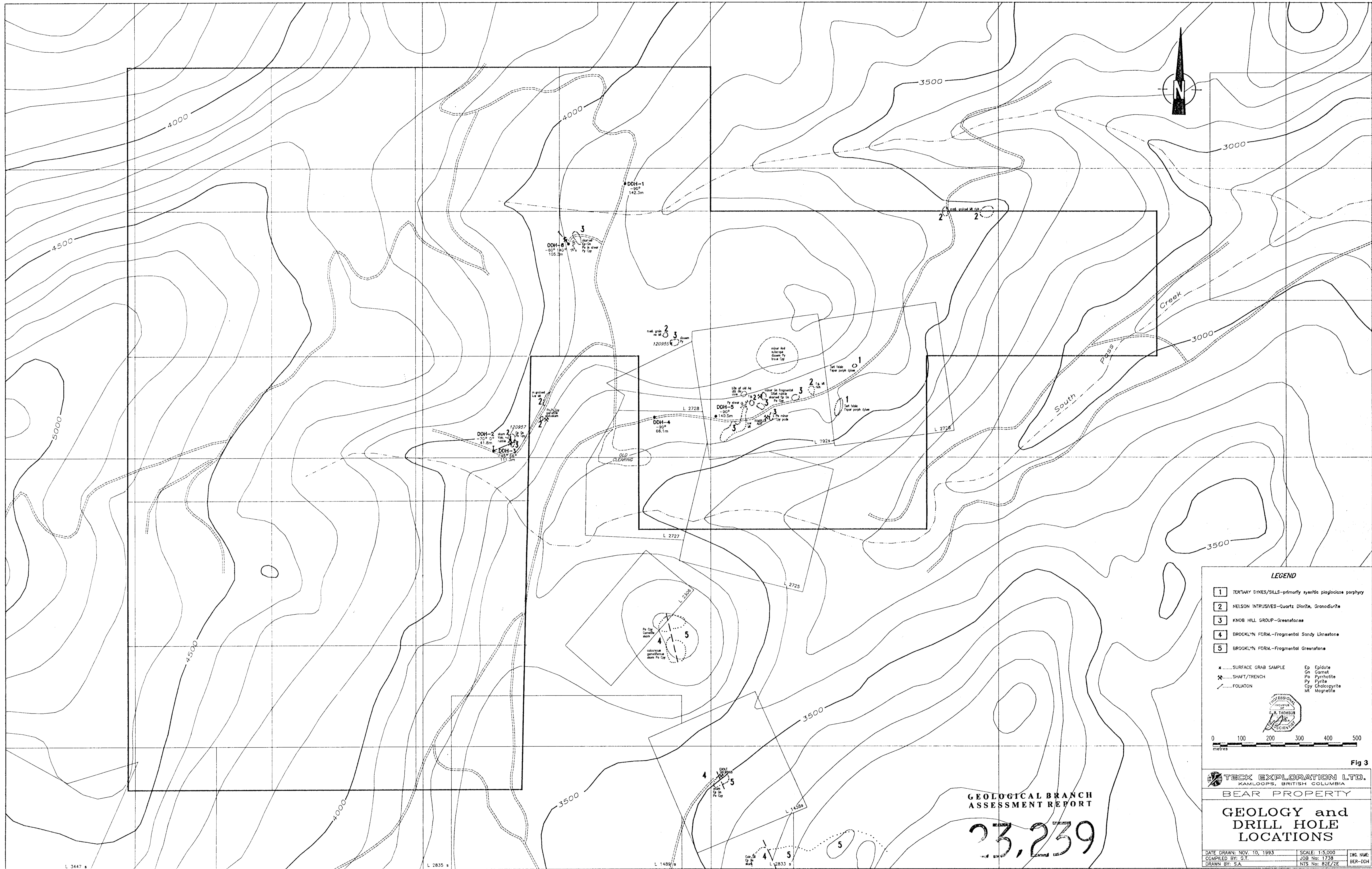
0.50 Gram sample is sublimated by fusion with Ammonium Iodide, and dissolved. The resulting solution is extracted into TOPO/MIBK and analysed by atomic absorption spectroscopy.

15. Tungsten:

1.00 Gram sample is sintered with a carbonate flux, and dissolved. The resulting extract is analyzed colorimetrically, after reduction with Stannous Chloride, by use of Potassium Thiocyanate.

16. ICP :

0.5 Gram sample is digested with Aqua Regia, and analyzed using a JOBIN YVON MODEL JY 32 1987 ICP Emission Spectrophotometer for Ag, Al, As, Au, B, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, Hg, La, Mg, Mo, Mn, Ni, P, Pb, Sb, Si, Sr, Ti, U, V, W, Zn.



LEGEND

- 1 TERTIARY DYKES/SILLS—primarily aegirite plagioclase porphyry
- 2 NELSON INTRUSIVES—Quartz Diorite, Granodiorite
- 3 KNOB HILL GROUP—Greenschists
- 4 BROOKLYN FORM.—Fragmental Sandy Limestone
- 5 BROOKLYN FORM.—Fragmental Greenstone

- SURFACE GRAB SAMPLE
- ⊗ SHAFT/TRENCH
- FOLIATION

- Ep Epidote
- Gn Garnet
- Py Pyrrhotite
- Py Pyrite
- Cpy Chalcocopyrite
- Mt Magnetite

0 100 200 300 400 500
metres

TECK EXPLORATION LTD.
KAMLOOPS, BRITISH COLUMBIA

BEAR PROPERTY

GEOLOGY and DRILL HOLE LOCATIONS

DATE DRAWN: NOV. 10, 1993 SCALE: 1:5,000 EWS. WVE.
 COMPILED BY: G.T. JOB No: 1738
 DRAWN BY: SA. NTS No: 82E/2E BER-DDH

GEOLOGICAL BRANCH
ASSESSMENT REPORT

23,239