DEVIL'S ELBOW PROJECT

Report on
Geological and Geochemical Programs
on the
Dev 1-4 Claims

Liard Mining Division
NTS 104 G/12

57° 32′ North Latitude
132° 40′ West Longitude

Owner:

Continental Gold Corporation
1020 - 800 West Pender Street
Vancouver, B.C.
V6C 2V6

Operator:

Northair Group
860 - 625 Howe Street
Vancouver, B.C.
V6C 2T6

Author:

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Hi-Tec Resource Management Ltd.
1500 - 609 Granville Street
Vancouver, B.C.
V7Y 1G5

October 20, 1990

1.0 SUMMARY

A program of stream sediment sampling, prospecting, and geological mapping was carried out on the Dev 1-4 mineral claims by a four person crew from the 17th of June, 1990 to the 15th of August, 1990. The targets of this program were skarn, structure related, disseminated, and vein gold mineralization.

The Dev 1-4 claims overly a geologically complex area containing a number of strong gossans, largely related to contact metamorphic events. A Permian and pre-Permian sequence of meta-argillite, meta-siltstone, silicic ash-tuff, and limestone of the Stikine Assemblage is unconformably overlain by meta-andesites of the Upper Triassic Stuhini Group. These bedded rocks strike northerly and dip moderately easterly. They have been intruded by three major intrusive bodies. Two plugs related to the Middle Jurassic quartz monzonite Strata Mountain Pluton are present in the southern part of the claim block. Two plugs related to the Middle Jurassic granodiorite Strata Glacier Pluton are present in the northern part of the claim block. The majority of the western third of the claims is underlain by Eocene granite of the Sawback Pluton. All of these intrusions have skarn mineralization associated with them, where they are in contact with more limey members of the Stuhini Group and Stikine Assemblage.

Considerable past work, including a 300 foot adit, two shorter adits, and at least 18 open cuts, was completed on 20 zinc, silver, lead skarn showings located approximately 1 km north of the northern boundary of the Dev claim block. These showings are described in detail by F.A. Kerr (Kerr, 1928, See Appendix F). The

showings do not contain appreciable gold values and are similar in mineralogy and grade to two of the Continental showings. In general, these showings are discontinuous sulphide pods in limestone near or on an intrusive contact. The largest recorded surface dimensions are a few meters width by a few tens of meters strike length. The sulphide pods on the intrusive contact are magnetite-pyrrhotite with sphalerite-galena-chalcopyrite pods more distal from the contact. This style of mineralization, as described by Kerr and where observed in the Continental showings, is too low grade and discontinuous to be of economic interest.

This observation led to a decision to test the property using a more regional approach, specifically, paired pan concentrate and silt samples. The object of this approach was to re-evaluate the whole of the property, with an emphasis on the eastern slope facing Dokdaon and Brydon Creek. This area has seen relatively little exploration due to more difficult access and the past emphasis on the known skarn showing. The initial pan concentrate-silt sampling was very successful in that gold was observed in pans taken from two creeks draining the north-eastern quarter of the property. A program of contour soil sampling and prospecting was immediately undertaken to cover the area between the two gold bearing creeks. The contour soil sampling returned anomalous values in gold (>30 ppb) in two areas with five spot highs outside of these areas.

Reconnaissance prospecting and more detailed contour soil sampling were carried out at a later date to better define soil anomalies and locate bedrock sources of these anomalies. At this time, prospecting of a drainage on the southern edge of the property was also carried out. This drainage returned a value of 825 ppb Au in the initial pan concentrate sampling. During the course of this phase of work a 1.0 metre diameter angular float boulder containing pyrite, chalcopyrite, actinolite, and magnetite was sampled in the north-eastern area. This boulder was located approximately 2.0 metres up slope from the site of a soil sample which ran 405 ppb Au. The sample of the float boulder assayed 104.2 g/t Au. An in-situ rock sample taken 150 metres away ran 120 ppb Au. In addition to these samples, detailed contour soil sampling 1.0 km to the north-west outlined two gold bearing linear features.

2.0 CONCLUSIONS

The sphalerite-galena-chalcopyrite and magnetite-pyrrhotite skarn mineralization hosted in the calcareous units of the Stikine Assemblage are not of high enough grade or continuous enough to be of economic interest.

The area underlain by Stuhini volcanics in the north eastern quadrant of the property does have considerable potential to host gold mineralization with economic potential. The nature, size, and location of the float boulder which assayed 104.2 g/t Au indicates it could not have travelled more than a few hundred metres from its source.

3.0 RECOMMENDATIONS

A program consisting of detailed prospecting, further contour soil sampling, and VLF-EM / total magnetic field geophysical surveying should be carried out in the area of the two anomalous drainages in the north-eastern quadrant of the claim block. Trenching should be carried out on any in-situ showings outlined. Prospecting should concentrate on locating the source of the 104.2 g/t Au float boulder and defining and sampling the linear features outlined by detailed soil sampling in the northern part of the area of interest. Contour soil sampling should expand on the work to date, particularily with at least two lines run north-west and south of the area sampled to date. Mag-VLF surveying should be concentrated on the area up-slope from the 104.2 g/t Au float boulder.

In general, the area of interest is largely below tree line and is covered by a thick undergrowth of stunted spruce. This vegetation greatly impedes work by hindering access and obscuring outcrop. Because of this, the recommended work will take substantially longer to complete than in areas of more benign vegetation.

The recommended program should take a two person crew one month to complete and is best carried out in two stages. This would allow the second stage of work to be directed by assay results from the first stage.

The recommended program should cost approximately $45,000.00.

Respectfully submitted,

David St. Clair Dunn, F.G.A.C.

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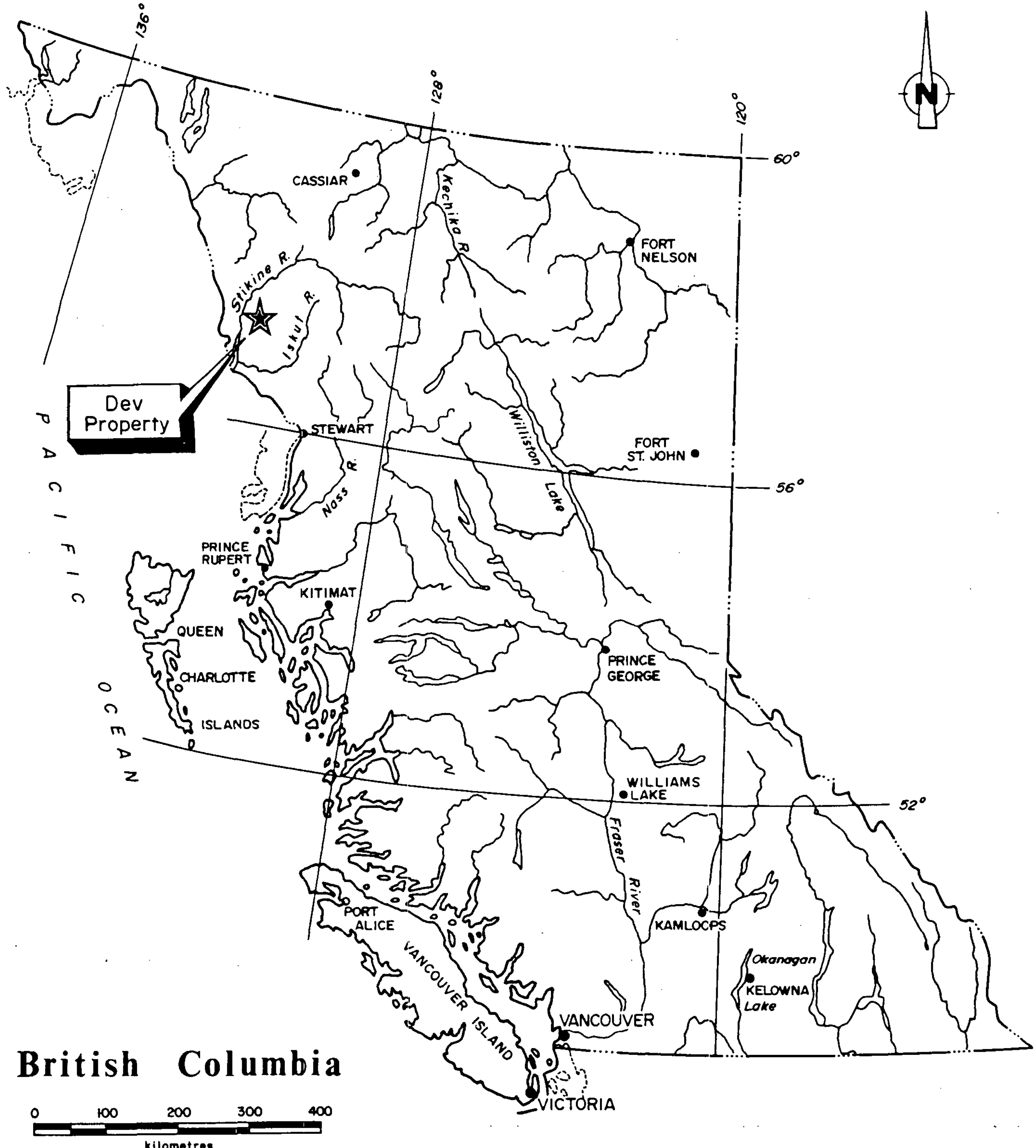
4.0 INTRODUCTION

The Devil's Elbow Project (NTS 104 G/12) encompasses the Dev 1-4 claims totalling 80 units. The claims were staked by Continental Gold Corp. in July, 1988 and are presently under option to the Northair Group. The claims cover large gossanous zones that exist within Permian sediments and Triassic volcanics near intrusive contacts. The initial phase of the project consisted of pan concentrate and silt sampling the major drainages on the property. This localized an area between the two northeast flowing creeks on the Dev 2 claim where further prospecting, rock, and contour scree / soil sampling took place. Thirteen pan concentrate samples, 21 silt samples, 265 soil samples, 108 rock samples were taken. Nine square kilometers were geologically mapped at a scale of 1:5,000. The emphasis was to concentrate on the areas distal to the sediment intrusive contact where gold mineralization is more likely to be present and less work has been done in the past.

The work program was carried out by a four person crew from the 17th of June, 1990 to the 15th of August, 1990.

4.1 Location and Access

The Dev 1 - 4 claims are located approximately 50 km southwest of Telegraph Creek in northwestern British Columbia (See Figure 1). The claims are situated within the drainage basin of the Stikine River near the eastern margin of the Coast Range Mountains.



NORTHAIR MINES LTD

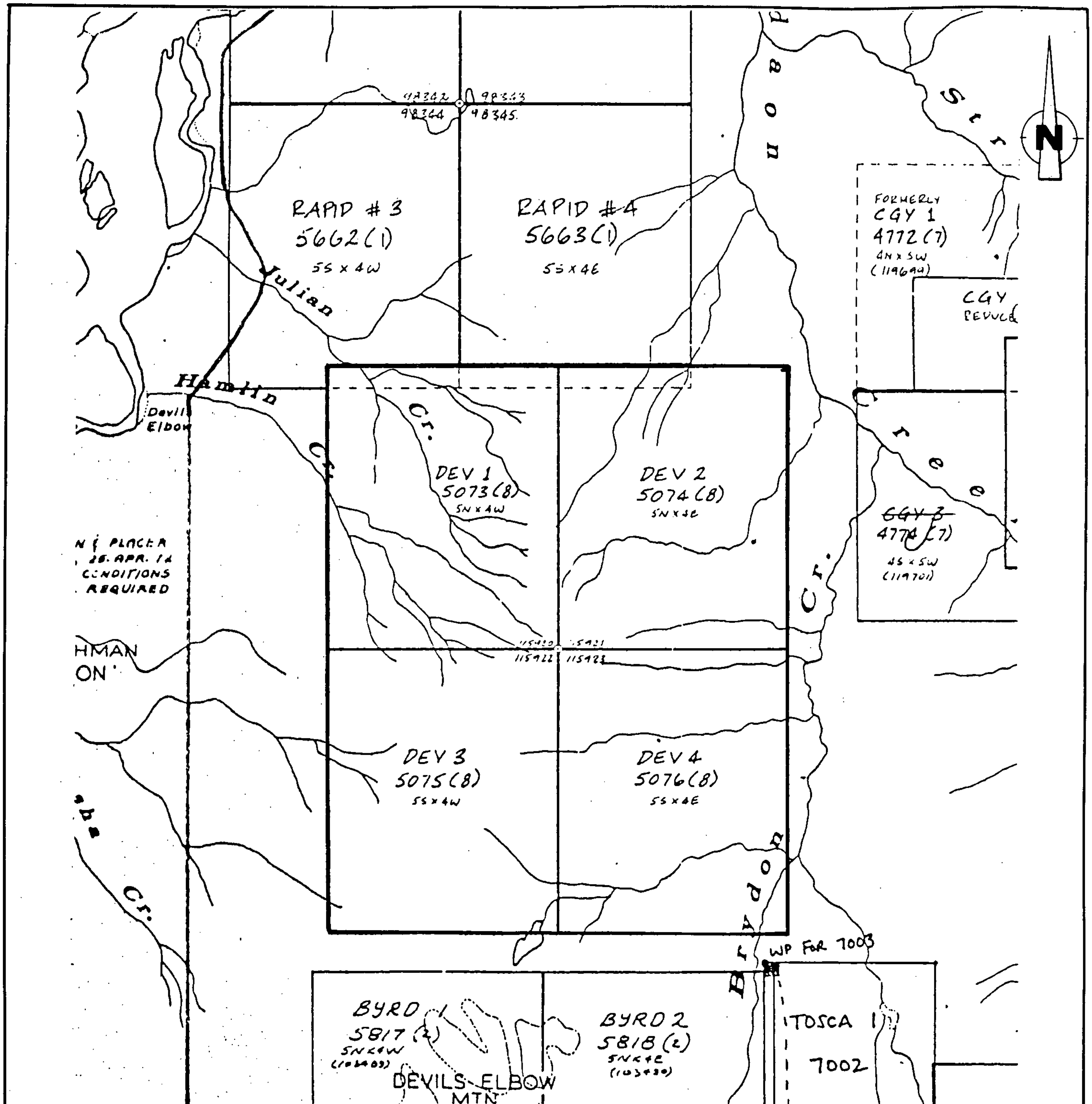
DEV CLAIMS

LIARD M.D., B.C.

General Location Map

HI-TEC RESOURCE MANAGEMENT LTD.

SCALE: as shown	N.T.S.: 104 G/12 E	FIGURE No: 1
DWN. BY:	DATE: OCT. 1990	
CHKD. BY:	PROJECT No:	FILE No:



0 0.5 1 2 3 Kilometres

NORTHAIR MINES LTD.

DEV CLAIMS

LIARD M.D., B.C.

Claim Location Map

HI-TEC RESOURCE MANAGEMENT LTD.

SCALE: 1:50,000	N.T.S.: 104G/12E	FIGURE No: 2
DWN. BY:	DATE: OCT. 1990	
CHKD. BY:	PROJECT No:	FILE No:

The Dev 1 - 4 claims are centered near latitude 57° 32'N and longitude 131° 40'W on NTS map sheet 104 G/12. Access to the property was gained by helicopter from Telegraph Creek.

4.2 Topography, Vegetation and Climate

The Dev 1 - 4 claims are situated in moderate alpine terrane with elevations ranging from 300 to 1900 meters. The tree line is at 1200 meters. Minor grass and alpine shrubs cover portions of the higher elevations. The remainder of the claims are covered by spruce and pine with dense undergrowth. Outcrop exposure on the property is approximately 35%.

The climate is generally unpredictable. Snow is on many north facing slopes until late July. Exploration can be carried out from mid - May to mid - October.

4.3 Claim Status

The property consists of four contiguous claims, Dev 1 - 4, totaling 80 units (2000 ha). The mineral claims are owned by Continental Gold Corp. They were originally registered in the name of D.B. Forster, Vice President and Director of Continental Gold Corp. The claim record date for Dev 1 (Record No. 5073) - Dec 4 (Record No. 5076) is August 18, 1988. On acceptance of this report the expiry date will be August 18, 1992. The property is presently under option to the Northair Group, the operator.

4.4 Exploration History

The area of base metal showings to the north of the Dev claims was first staked in 1914 as the Stikine No.'s 1,2,3, and 4 by Mr.'s Dixon and Bodd. These claims were optioned to the Stikine Mining Company in 1915. This company completed at least 20 trenches and drove three adits of 10 metres , 20 meters, and 90 metres length. This work did not develop any mineralization of economic importance and work was suspended. At this time, part of the Dev claim block was staked by Pete Hamlin as the Tonapah and Vesuvius claims. No work was recorded in the area of the Dev claims, but there is evidence some trenching was carried out.

Activity was renewed in 1950-51 when tungsten mineralization was recognized associated with the base metal skarn mineralization. At this time, Pete Hamlin owned all of the old showings. The property was optioned to Tungsten of British Columbia Ltd. which rehabilitated the adits, conducted further trenching, and re-sampled all old workings. The best results were obtained from a trench on the Bodell No. 1 Mineral Claim at an elevation of 701 meters. Chip samples returned contiguous values of 2.39% WO_3 over 1.22 meters and 1.05% WO_3 over 6.10 metres (Legg, R.E. 1952). No further work was carried out at this time.

The area was restaked in 1970 by John Oliver who carried out extensive prospecting, trenching and sampling in 1971-72.

No further work was carried out until 1977, when Chutine Mining and Development Co. Ltd., a private Alberta company, extended the trenches and carried out further sampling and assaying.

Chutine Resources Ltd. acquired the claims in 1981 and extended old trenches and completed one new trench. (Keep, G. 1983 Ass. Report 11, 262).

The claims were allowed to lapse and Continental Gold Corp. re-staked them in 1988. A brief prospecting program was carried out by Continental that year.

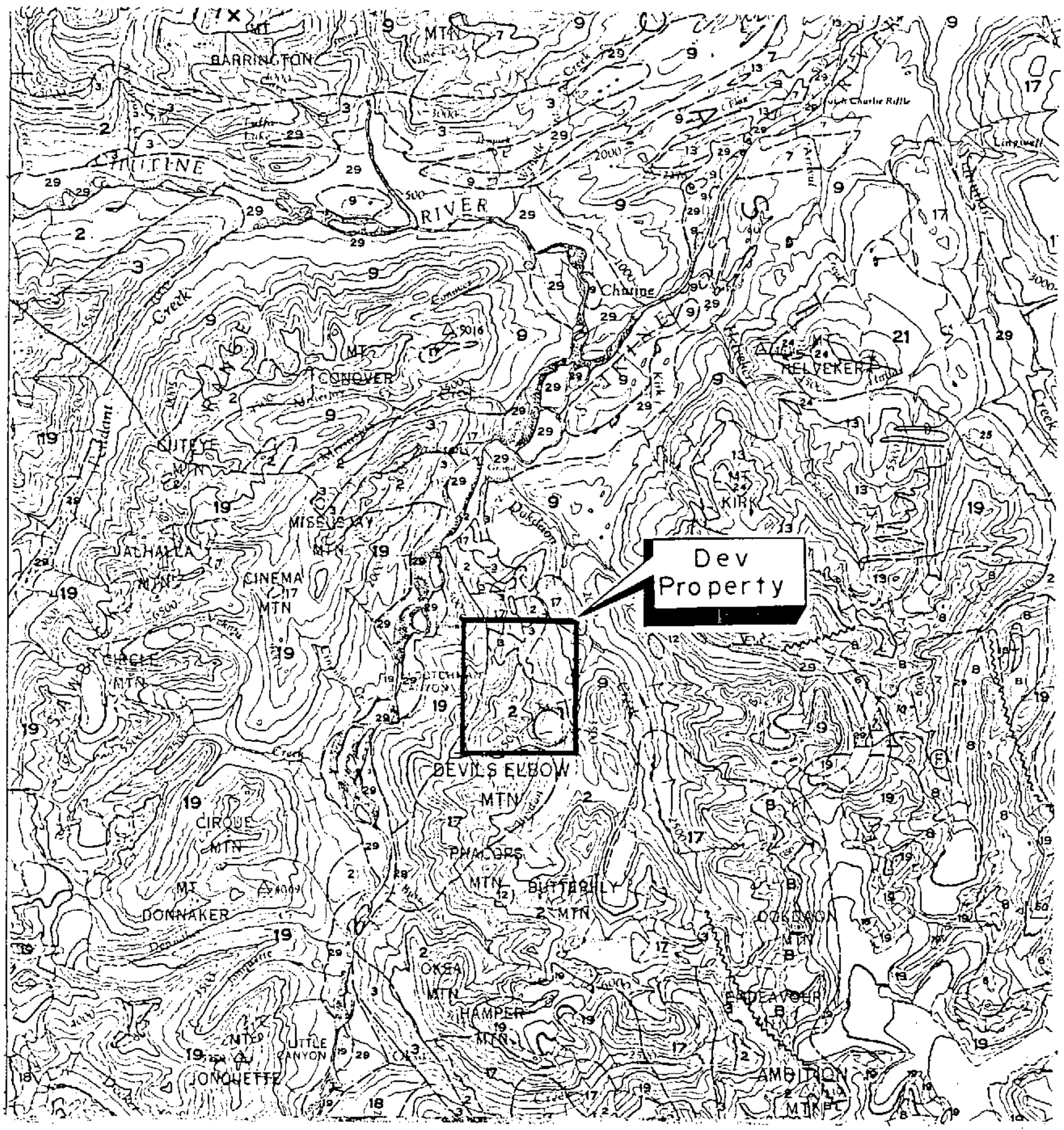
5.0 GEOLOGY

5.1 Regional Geology

The Dev Project area is located on the eastern flank of the main belt of the Coast Plutonic Complex and on the western margin of the Intermontane Belt within the Stikine Arch. The Stikine Arch consists of Permian to Middle Triassic ocean sediments unconformably overlain by rocks of the Upper Triassic Stuhini Group island arc volcanics and sediments. These volcanics and sediments have been intruded by syenitic stocks and by quartz diorite and granodiorite plutons of the Coast Plutonic complex (Brown et al. 1990). Brown's mapping of map sheet 104 G/12E, where the Dev claims are located, show the Coast Range Intrusions as being post Middle Jurassic to Eocene age.

5.2 Property Geology

The regional geology of the Telegraph Creek map area has been recently discussed in detail by Brown (1990) and in the past by Souther (1972) and by Kerr (1948). The Devil's Elbow Project area is predominantly underlain by Stikine assemblage Permian or older



NOTE:
See Figure 3a for Legend

0 5 10 15 20 Kilometres

NORTHAIR MINES LTD.

DEV CLAIMS
LIARD M.D., B.C.

Regional Geology

HI-TEC RESOURCE MANAGEMENT LTD.	SCALE: 1:250,000	N.T.S.: 104G/12 E	FIGURE No: 3
	DWN. BY:	DATE: Oct. 1990	
	CHKD. BY:	PROJECT No:	FILE No:

LEGEND

CENOZOIC

QUATERNARY
PLEISTOCENE AND RECENT

29 Fluviatile gravel; sand, silt; glacial outwash, till, alpine moraine and colluvium

28 Hot-spring deposit, tufa, aragonite

27 Olivine basalt, related pyroclastic rocks and loose tephra; younger than some of 29

TERTIARY AND QUATERNARY
UPPER TERTIARY AND PLEISTOCENE

26 Rhyolite and dacite flows, lava domes, pyroclastic rocks and related subvolcanic intrusions; minor basalt

25 Basalt, olivine basalt, dacite, related pyroclastic rocks and subvolcanic intrusions; minor rhyolite; in part younger than some 26

CRETACEOUS AND TERTIARY
UPPER CRETACEOUS AND LOWER TERTIARY
SLOKO GROUP

24 Light green, purple and white rhyolite, trachyte and dacite flows, pyroclastic rocks and derived sediments

22 | 23 22. Biotite leucogranite, subvolcanic stocks, dykes and sills
23. Porphyritic biotite andesite, lava domes, flows and (?) sills

SUSTUT GROUP

21 Chert-pebble conglomerate, granite-boulder conglomerate, quartzose sandstone, arkose, siltstone, carbonaceous shale and minor coal

20 Felsite, quartz-feldspar porphyry, pyritiferous felsite, orbicular rhyolite; in part equivalent to 22

19 Medium-to coarse-grained, pink biotite-hornblende quartz monzonite

JURASSIC AND/OR CRETACEOUS
POST-UPPER TRIASSIC PRE-TERTIARY

18 Hornblende diorite

17 Granodiorite, quartz diorite; minor diorite, leucogranite and migmatite

JURASSIC
MIDDLE (?) AND UPPER JURASSIC
BOWSER GROUP

16 Chert-pebble conglomerate, grit, greywacke, subgreywacke, siltstone and shale; may include some 13

MIDDLE JURASSIC

15 Basalt, pillow lava, tuff-breccia, derived volcaniclastic rocks and related subvolcanic intrusions

LOWER AND MIDDLE JURASSIC

14 Shale, minor siltstone, siliceous and calcareous siltstone, greywacke and ironstone

LOWER JURASSIC

13 Conglomerate, polymictic conglomerate; granite-boulder conglomerate, grit, greywacke, siltstone; basaltic and andesitic volcanic rocks, peperites, pillow-breccia and derived volcaniclastic rocks

MESOZOIC

TRIASSIC AND JURASSIC
POST-UPPER TRIASSIC PRE-LOWER JURASSIC

12 Syenite, orthoclase porphyry, monzonite, pyroxenite

HICKMAN BATHOLITH

10 | 11 10. Hornblende granodiorite, minor hornblende-quartz diorite 11. Hornblende, quartz diorite, hornblende-pyroxene diorite, amphibolite and pyroxene-bearing amphibolite

TRIASSIC
UPPER TRIASSIC

9 Undifferentiated volcanic and sedimentary rocks (units 5 to 8 inclusive)

8 Augite-andesite flows, pyroclastic rocks, derived volcaniclastic rocks and related subvolcanic intrusions; minor greywacke, siltstone and polymictic conglomerate

7 Siltstone, thin-bedded siliceous siltstone, ribbon chert, calcareous and dolomictic siltstone, greywacke, volcanic conglomerate, and minor limestone

6 Limestone, fetid argillaceous limestone, calcareous shale and reefoid limestone; may be in part younger than some 7 and 8

5 Greywacke, siltstone, shale; minor conglomerate, tuff and volcanic sandstone

MIDDLE TRIASSIC

4 Shale, concretionary black shale; minor calcareous shale and siltstone

PALEOZOIC

PERMIAN
MIDDLE AND UPPER PERMIAN

3 Limestone, thick-bedded mainly bioclastic limestone; minor siltstone, chert and tuff

PERMIAN AND OLDER

2 Phyllite, argillaceous quartzite, quartz-sericite schist, chlorite schist, greenstone, minor chert, schistose tuff and limestone

MISSISSIPPIAN

1 Limestone, crinoidal limestone, ferruginous limestone; maroon tuff, chert and phyllite

B Amphibolite, amphibolite gneiss; age unknown probably pre-Upper Jurassic

A Ultramafic rocks; peridotite, dunite, serpentinite; age unknown, probably pre-Lower Jurassic

Geological boundary (defined and approximate, assumed)

Bedding (horizontal, inclined, vertical, overturned)

Anticline

Syncline

Fault (defined and approximate, assumed)

Thrust fault, teeth on hanging-wall side (defined and approximate, assumed)

Fossil locality ... Ⓕ

Mineral property ... 15 ×

Glacier

Figure 3a

sediments. This assemblage is unconformably overlain by Upper Triassic Stuhini Group volcanics near the eastern boundary of the claims. The Stikine rock types are meta-argillite, meta-siltstone, recrystallized limestone, calcareous siltstone and chert. The Stuhini rocks consist of augite andesite flows and lapilli tuffs with minor limestone and argillaceous limestone. The general attitude strikes north-south and dips moderately to the east. Minor folds and foliation were observed in all the bedded units. The sediments and volcanics are intruded by Middle Jurassic quartz monzonite in the southern portion of the project area, Middle Jurassic granodiorite in the northern portion, and by Eocene granite in the west. It has not been determined if mineralization is dominantly associated with one of the intrusive events. Shear zones, faults, and fault breccias have been recognized throughout the claim group and generally trend north-south to northeast (See Map 1).

5.3 Mineralization

Mineralization observed on the property falls into two broad categories which are skarn or structure related. The structure related mineralization was strictly pyrite, where observed. No values of economic interest have been returned from samples taken of structurally controlled mineralization on the Dev property, to date. Skarn mineralization can be subdivided into two categories based on host rock. Skarn mineralization in Stikine Assemblage rocks consist of pyrrhotite - magnetite pods on or within a few metres of the intrusive contacts with sphalerite, galena, and chalcopyrite pods more distal to the intrusive contact, but still within a few tens of metres. Chip samples from the sphalerite, galena, chalcopyrite pods returned values up to 10% lead, 10% zinc, and 15 oz/t silver (See Appendix F). The largest of these pods average one to two metres in width and have strike lengths of a few tens of metres. Skarn mineralization hosted in Stuhini Group rocks, of which there is only one example to date, differs from the Stikine Assemblage skarns by its lack of sphalerite and galena and it high gold content (104.2 g/t Au). This mineralization consists of pyrrhotite, magnetite, actinolite, pyrite, and chalcopyrite.

6.0 GEOCHEMISTRY

A geochemical program of paired pan concentrate and silt samples was carried out on all flowing secondary drainages on the Dev claims (See Appendix B for Sampling Methodology). Samples sites were chosen to be on or close to the first major break in slope of the creeks. Moss samples were washed in pans and the residue panned to a black sand concentrate. As only 20 pan concentrate and ten silt samples were taken, not enough data was available to carry out a meaningful statistical treatment. Anomalous values for silts were for the National Geochemical Reconnaissance program carried out in this area. Anomalous levels for pan concentrates were set based on considerable past experience using this method in similar terrains. Anomalous levels are listed below:

SILT SAMPLES		PAN CONCENTRATES
Cu	207 ppm	200 ppm
Pb	59 ppm	100 ppm
Zn	345 ppm	400 ppm
Au	318 ppm	250 ppb
Ag	1.17 ppm	1.5 ppm

Five pan concentrate samples were anomalous in Au, four in the north-east quadrant of the property and one in the southern border. No source was found in prospecting above the southern anomaly. Work was concentrated above the two initial anomalies in the north-east quadrant, 104151 and 104158, as gold colours were observed in the pans when the samples were collected. One silt sample was anomalous in Cu, Ag, and Zn. This sample reflects known skarn showings above the sample site (See Kerr, F.A. Appendix F)

The area above the two samples in the north-east quadrant of the claims was prospected and soil sampled along contour lines. Samples were collected as described in Appendix B. More detailed descriptions of soil condition, topography, and vegetation are included in Appendix G.

261 soil samples were taken and analyzed for Au, Ag, Cu, Pb, and Zn. Anomalous levels were set at the levels listed below. As gold was the target of the program, anomalous levels were based, in part, on correlations between gold and the other elements.

Au - 25 ppb
Ag - 1.1 ppm
Cu - 100 ppm
Pb - 50 ppm
Zn - 200 ppm

Copper is associated with the higher gold values in rock. Fort this reason, only gold and copper values are noted at sample sites on the sample map.

Sampling was carried out on three contour lines, 3500 ft., 4000 ft. and 4600 ft. Some short infill lines were sample in the latter stage of the program. Sampling is too widely spaced to contour. It is recommended that the upslope areas of all soil samples anomalous in Au, and/or Cu be prospected in detail.

7.0 BIBLIOGRAPHY

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APPENDIX A
Certificates of Analysis

ECO-TECH LABORATORIES LTD.
ASSAYING - ENVIRONMENTAL TESTING
10041 East Trans Canada Hwy., Kamloops, B.C. V2C 2J3 (604) 573-5700 Fax 573-4557

JUNE 27, 1990

CERTIFICATE OF ANALYSIS ETK 90-192

90BC016
Devils Elbow

HI-TEC RESOURCE MANAGEMENT
1500-609 GRANVILLE STREET
P.O. BOX 10362
VANCOUVER, B.C.
V7X 1G5

SAMPLE IDENTIFICATION: 4 ROCK samples received June 25, 1990
PROJECT: 90 - BC - 016
SHIPMENT NO.: 1

ET#	Description	Au (g/t)	Au (oz/t)	Ag (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	W (ppm)
192 - 1	104003	.05	.001	.4	71	8	44	14
192 - 2	104109	<.03	<.001	.2	82	5	61	35
192 - 3	104110	<.03	<.001	.6	64	19	81	26
192 - 4	104160	<.03	<.001	.9	50	23	54	15

NOTE: < = less than

Jutta Jealouse
ECO-TECH LABORATORIES LTD.
JUTTA JEALOUSE
B.C. Certified Assayer

FAX: D. DUNN
c/o TRANS NORTH AIR

SC90/HIGH TEC

90BC016
Silts

ECO-TECH LABORATORIES LTD.   HI-TEC RESOURCE MANAGEMENT - ETK90-193

10041 EAST TRANS CANADA HWY.
KAMLOOPS, B.C. V2C 2J3
PHONE - 604-573-5700
FAX - 604-573-4557

1500-609 GRANVILLE STREET
P.O. BOX 10362
VANCOUVER, B.C.
V7X 1S5

JUNE 29, 1990

VALUES IN PPM UNLESS OTHERWISE REPORTED

PROJECT: 90 - BC - 016
SHIPMENT NO.: 1
13 SILT SAMPLES RECEIVED JUNE 25, 1990

ET#	DESCRIPTIONS	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
193 - 1	104002	20	.6	1.20	15	176	65	(5	.97	1	13	21	44	2.91	.08	30	.50	795	7	.04	41	750	40	(5	(20	103	.04	30	42	10	5	189
193 - 2	104004	5	.8	2.39	60	190	130	(5	1.24	2	21	46	73	4.21	.27	10	1.29	741	8	.08	51	980	76	(5	(20	101	.14	10	101	10	5	227
193 - 3	104054	(5	.2	1.53	20	132	115	(5	.66	(1	14	21	24	3.41	.05	10	1.03	474	4	.04	19	840	16	5	(20	54	.06	(10	84	(10	4	78
193 - 4	104102	5	.6	3.66	205	226	70	(5	2.02	(1	25	67	52	5.34	.08	10	1.34	796	4	.18	84	1010	24	15	(20	267	.08	(10	101	(10	9	287
193 - 5	104104	5	1.2	2.65	145	208	180	(5	1.48	1	26	32	74	4.68	.12	10	1.39	970	4	.09	55	1090	72	5	(20	142	.07	10	81	10	8	273
193 - 6	104106	20	1.2	3.58	85	232	125	(5	1.43	(1	37	61	68	4.56	.05	20	.87	1951	1	.05	68	1400	48	10	(20	67	.09	(10	89	(10	16	299
193 - 7	104108	10	.2	.87	60	266	10	(5	10.18	1	12	9	21	2.40	.03	(10	.46	967	3	.05	30	370	40	(5	(20	388	.01	(10	20	10	5	220
193 - 8	104152	20	.2	1.49	20	170	70	(5	1.20	(1	21	61	57	3.67	.06	10	1.40	659	1	.06	81	960	24	5	(20	71	.07	(10	98	(10	4	114
193 - 9	104154	60	.8	1.78	90	210	45	(5	5.52	(1	18	34	34	4.69	.05	(10	.78	537	1	.10	66	790	38	5	(20	317	.05	(10	71	10	4	265
193 -10	104157	15	1.0	2.76	70	256	145	(5	1.71	(1	29	53	87	4.82	.27	10	1.66	1158	5	.07	57	1230	84	5	(20	81	.16	(10	123	(10	7	253
193 -11	104159	15	.6	3.46	125	234	50	(5	2.14	2	27	50	68	5.38	.06	10	1.02	1316	3	.14	79	910	36	5	(20	283	.07	(10	69	10	10	295
193 -12	104162	40	7.2	.62	10	334	40	(5	3.40	9	63	33	847	1.33	.04	(10	.37	1513	4	.04	272	970	24	(5	(20	95	.02	(10	39	20	17	396
193 -13	104052	45	1.0	3.75	105	230	120	(5	2.50	(1	24	60	43	5.38	.08	10	1.40	793	6	.21	70	1420	54	10	(20	363	.08	(10	89	10	9	257

NOTE: (= LESS THAN

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B.C. CERTIFIED ASSAYER

FAX: D. DUNN
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SC90/HIGH TEC

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JUNE 28, 1990

CERTIFICATE OF ANALYSIS ETK 90-194

90BC016
Devils Elbow
Pan Concentrates

HI-TEC RESOURCE MANAGEMENT
1500-609 GRANVILLE STREET
P.O. BOX 10362
VANCOUVER, B.C.
V7X 1G5

SAMPLE IDENTIFICATION: 13 PAN CON samples received June 25, 1990
PROJECT: 90 - BC - 016
SHIPMENT NO.: 1

ET#	Description	Au (ppb)	Ag (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	W (ppm)
194 - 1	104001	10	1.2	44	78	81	50
194 - 2	104005	10	1.4	197	57	131	31
194 - 3	104051	35	.3	29	18	99	36
194 - 4	104053	825	.5	27	16	72	24
194 - 5	104101	5	.5	32	17	113	9
194 - 6	104103	10	.5	48	20	140	25
194 - 7	104105	5	.3	37	48	210	33
194 - 8	104107	20	.4	22	44	117	45
194 - 9	104151	2390	.2	42	12	65	36
194 - 10	104153	10	.7	35	13	169	30
194 - 11	104156	15	1.3	58	30	94	20
194 - 12	104158	315	1.5	42	42	288	55
194 - 13	104161	25	.6	68	17	190	41

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B.C. Certified Assayer

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JULY 5, 1990

CERTIFICATE OF ANALYSIS ETK 90-206

HI-TEC RESOURCE MANAGEMENT
1500-609 GRANVILLE STREET
P.O. BOX 10362
VANCOUVER, B.C.
V7X 1G5
ATTENTION: VICTORIA KURAN

SAMPLE IDENTIFICATION: 155 SOIL samples received June 26, 1990
PROJECT: 90-BC-016 DEVIL'S ELBOW
SHIPMENT NO.: 2

ET#	Description	AU (ppb)	AG (ppm)	CU (ppm)	PB (ppm)	ZN (ppm)	AS (ppm)
206 - 1	3500 0 + 00 N	10	.7	22	16	57	14
206 - 2	3500 0 + 25 N	10	.1	17	15	48	24
206 - 3	3500 0 + 50 N	405	.8	439	34	129	29
206 - 4	3500 0 + 75 N	20	1.0	51	42	178	20
206 - 5	3500 1 + 00 N	10	.3	36	16	78	24
206 - 6	3500 1 + 25 N	30	.3	29	31	62	25
206 - 7	3500 1 + 50 N	10	.2	22	19	58	22
206 - 8	3500 1 + 75 N	10	.2	34	20	59	31
206 - 9	3500 2 + 00 N	5	.6	37	39	166	45
206 - 10	3500 2 + 25 N	10	.3	28	24	115	31
206 - 11	3500 2 + 50 N	10	.1	15	19	51	30
206 - 12	3500 2 + 75 N	5	.4	46	26	91	49
206 - 13	3500 3 + 00 N	10	.6	25	22	68	32
206 - 14	3500 3 + 25 N	15	.1	13	19	41	14
206 - 15	3500 3 + 50 N	10	.5	27	17	69	33
206 - 16	3500 3 + 75 N	10	.3	19	22	54	40
206 - 17	3500 4 + 00 N	10	.4	19	20	67	31
206 - 18	3500 4 + 25 N	5	.4	31	15	60	38
206 - 19	3500 4 + 50 N	10	.3	28	19	73	36
206 - 20	3500 4 + 75 N	5	.2	9	14	64	28
206 - 21	3500 5 + 00 N	<5	1.0	78	17	201	100
206 - 22	3500 5 + 25 N	5	<.1	16	11	77	33
206 - 23	3500 5 + 50 N	45	.3	19	23	62	30
206 - 24	3500 5 + 75 N	5	.3	17	16	58	27
206 - 25	3500 6 + 00 N	5	.3	28	15	57	40
206 - 26	3500 6 + 25 N	5	.2	29	14	66	31
206 - 27	3500 6 + 50 N	5	.2	23	21	122	41
206 - 28	3500 6 + 75 N	10	.4	70	10	66	20
206 - 29	3500 7 + 00 N	5	.2	45	14	59	25
206 - 30	3500 7 + 25 N	10	<.1	39	14	84	84

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HI-TEC RESOURCE MANAGEMENT

ET#	Description	AU (ppb)	AG (ppm)	CU (ppm)	PB (ppm)	ZN (ppm)	AS (ppm)
206 - 31	3500 7 + 50 N	15	.7	55	9	37	81
206 - 32	3500 7 + 75 N	10	1.1	105	12	84	92
206 - 33	3500 8 + 00 N	25	.8	78	11	92	74
206 - 34	3500 8 + 25 N	50	.9	101	9	67	31
206 - 35	3500 8 + 50 N	15	.6	171	10	42	29
206 - 36	3500 8 + 75 N	10	.1	41	12	39	24
206 - 37	3500 9 + 00 N	15	.8	79	13	101	695
206 - 38	3500 9 + 25 N	10	.2	31	10	88	78
206 - 39	3500 9 + 50 N	10	.3	29	17	41	6
206 - 40	3500 9 + 75 N	15	.5	34	20	60	13
206 - 41	3500 10 + 00 N	10	.4	49	18	53	5
206 - 42	3500 10 + 25 N	15	<.1	47	12	50	10
206 - 43	3500 10 + 50 N	5	.5	26	21	69	88
206 - 44	3500 10 + 75 N	10	.3	22	14	55	26
206 - 45	3500 11 + 00 N	10	.2	27	18	90	14
206 - 46	3500 11 + 25 N	10	.1	21	18	56	20
206 - 47	3500 11 + 50 N	5	1.4	87	13	72	20
206 - 48	3500 11 + 75 N	10	.7	46	22	54	4
206 - 49	3500 12 + 00 N	10	.3	24	20	51	26
206 - 50	3500 12 + 25 N	5	.6	52	17	45	21
206 - 51	3500 12 + 50 N	10	.5	38	16	118	13
206 - 52	3500 12 + 75 N	15	.5	52	17	65	9
206 - 53	3500 13 + 00 N	15	.2	34	19	66	8
206 - 54	3500 13 + 25 N	20	.4	39	14	62	10
206 - 55	3500 13 + 50 N	10	.1	26	16	49	9
206 - 56	3500 13 + 75 N	15	.2	20	20	141	14
206 - 57	3500 14 + 00 N	5	.2	16	23	132	37
206 - 58	3500 14 + 25 N	10	.2	32	22	56	9
206 - 59	3500 14 + 50 N	10	.4	48	21	51	7
206 - 60	3500 14 + 75 N	10	.2	37	18	63	11
206 - 61	3500 15 + 00 N	10	.1	18	22	47	7
206 - 62	3500 15 + 25 N	15	.4	46	18	60	7
206 - 63	3500 15 + 50 N	15	.3	17	21	48	6
206 - 64	3500 15 + 75 N	10	.1	22	19	40	18
206 - 65	3500 16 + 00 N	15	.1	21	18	56	10
206 - 66	3500 16 + 25 N	10	<.1	52	21	93	10
206 - 67	3500 16 + 50 N	15	<.1	14	20	30	8
206 - 68	3500 16 + 75 N	20	<.1	10	15	25	3
206 - 69	3500 17 + 00 N	15	1.2	33	25	118	141
206 - 70	4000 0 + 00 N	10	.8	23	26	55	122
206 - 71	4000 0 + 25 N	15	.2	8	37	34	6
206 - 72	4000 0 + 50 N	10	.8	19	56	155	91
206 - 73	4000 0 + 75 N	10	1.6	37	228	95	36
206 - 74	4000 1 + 00 N	5	2.3	54	54	71	28
206 - 75	4000 1 + 25 N	10	1.2	33	28	78	126

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HI-TEC RESOURCE MANAGEMENT

ET#	Description	AU (ppb)	AG (ppm)	CU (ppm)	PB (ppm)	ZN (ppm)	AS (ppm)
206 - 76	4000 1 + 50 N	35	.5	12	27	44	24
206 - 77	4000 1 + 75 N	15	1.2	38	57	90	77
206 - 78	4000 2 + 00 N	25	1.1	93	41	79	50
206 - 79	4000 2 + 25 N	10	1.6	171	22	57	17
206 - 80	4000 2 + 50 N	5	.6	89	19	59	26
206 - 81	4000 2 + 75 N	5	1.2	104	18	73	14
206 - 82	4000 3 + 00 N	10	.5	31	16	61	30
206 - 83	4000 3 + 25 N	15	.4	13	21	55	52
206 - 84	4000 3 + 50 N	10	1.5	21	28	69	22
206 - 85	4000 3 + 75 N	5	.7	28	25	70	27
206 - 86	4000 4 + 00 N	10	.8	22	24	73	48
206 - 87	4000 4 + 25 N	10	1.8	27	25	61	12
206 - 88	4000 4 + 50 N	5	1.1	21	68	52	8
206 - 89	4000 4 + 75 N	5	.9	35	19	91	52
206 - 90	4000 5 + 00 N	30	.7	32	20	65	17
206 - 91	4000 5 + 25 N	20	.5	40	24	58	10
206 - 92	4000 5 + 50 N	5	.6	14	33	53	14
206 - 93	4000 5 + 75 N	10	1.4	44	62	211	31
206 - 94	4000 6 + 00 N	20	.6	35	20	68	22
206 - 95	4000 6 + 25 N	5	.9	81	19	201	40
206 - 96	4000 6 + 50 N	20	.7	43	35	88	31
206 - 97	4000 6 + 75 N	<5	.3	21	22	94	32
206 - 98	4000 7 + 00 N	20	.7	19	20	69	37
206 - 99	4000 7 + 25 N	15	.4	24	35	68	22
206 - 100	4000 7 + 50 N	25	1.5	82	38	177	47
206 - 101	4000 7 + 75 N	<5	.8	69	37	81	12
206 - 102	4000 8 + 00 N	5	.3	28	23	104	21
206 - 103	4000 8 + 25 N	10	.5	21	19	70	22
206 - 104	4000 8 + 50 N	10	.3	23	18	84	22
206 - 105	4000 8 + 75 N	15	.3	39	23	100	14
206 - 106	4000 9 + 00 N	10	.4	29	21	69	14
206 - 107	4000 9 + 25 N	15	.4	20	13	53	12
206 - 108	4000 9 + 50 N	65	.5	61	14	69	13
206 - 109	4000 9 + 75 N	25	.5	46	34	274	97
206 - 110	4000 10 + 00 N	5	.5	45	56	504	78
206 - 111	4000 10 + 25 N	35	.1	16	18	68	41
206 - 112	4000 10 + 50 N	25	.4	29	26	52	9
206 - 113	4000 10 + 75 N	5	.3	21	24	129	85
206 - 114	4000 11 + 00 N	30	<.1	12	18	37	7
206 - 115	4000 11 + 25 N	<5	.2	24	17	73	15
206 - 116	4000 11 + 50 N	60	.8	44	20	64	24
206 - 117	4600 0 + 25 N	5	.5	158	21	107	55
206 - 118	4600 0 + 50 N	<5	.6	81	31	103	39
206 - 119	4600 0 + 75 N	5	.9	57	25	86	64
206 - 120	4600 1 + 00 N	55	1.0	206	38	235	124

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HI-TEC RESOURCE MANAGEMENT

ET#	Description	AU (ppb)	AG (ppm)	CU (ppm)	PB (ppm)	ZN (ppm)	AS (ppm)
206 - 121	4600 1 + 25 N	30	1.2	61	67	391	110
206 - 122	4600 1 + 50 N	15	1.6	40	71	404	179
206 - 123	4600 1 + 75 N	15	.4	41	25	94	70
206 - 124	4600 2 + 00 N	10	.2	48	19	131	41
206 - 125	4600 2 + 25 N		NO SAMPLE				
206 - 126	4600 2 + 50 N	30	.3	47	25	211	76
206 - 127	4600 2 + 75 N	10	.5	34	27	376	59
206 - 128	4600 3 + 00 N	25	.2	31	21	137	44
206 - 129	4600 3 + 25 N	15	.5	28	19	162	65
206 - 130	4600 3 + 50 N	15	.2	30	14	189	46
206 - 131	4600 3 + 75 N	10	.4	41	32	224	55
206 - 132	4600 4 + 00 N	20	.4	44	31	252	36
206 - 133	4600 4 + 25 N	10	1.0	81	109	274	28
206 - 134	4600 4 + 50 N	10	.1	35	84	314	30
206 - 135	4600 0 + 00 N	5	.8	129	35	127	48
206 - 136	4600 0 + 25 N	<5	.1	105	22	125	63
206 - 137	4600 0 + 50 S	10	.2	234	22	93	146
206 - 138	4600 0 + 75 S	<5	.3	117	21	124	111
206 - 139	4600 1 + 00 S	<5	.2	254	19	130	89
206 - 140	4600 1 + 25 S	5	.2	135	20	132	124
206 - 141	4600 1 + 50 S	<5	.1	141	27	201	127
206 - 142	4600 1 + 75 S	5	.3	247	24	226	143
206 - 143	4600 2 + 00 S	5	.9	122	44	358	110
206 - 144	4600 2 + 25 S	20	.4	36	33	226	83
206 - 145	4600 2 + 50 S	<5	.7	39	45	187	144
206 - 146	4600 2 + 75 S	10	.3	13	23	86	40
206 - 147	4600 3 + 00 S	5	.4	11	58	100	188
206 - 148	4600 3 + 25 S	10	.2	13	18	79	20
206 - 149	4600 3 + 50 S	5	.3	22	29	161	42
206 - 150	4600 3 + 75 S	5	.3	21	31	168	47
206 - 151	4600 4 + 00 S	5	.8	27	45	232	97
206 - 152	4600 4 + 25 S	<5	.6	36	23	119	54
206 - 153	4600 4 + 50 S	<5	2.1	32	122	589	280
206 - 154	4600 4 + 75 S	<5	.5	60	42	152	136
206 - 155	4600 5 + 00 S	<5	.7	43	32	172	107

NOTE: < = less than

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JULY 6, 1990

CERTIFICATE OF ANALYSIS ETK 90-218

HI-TEC RESOURCE MANAGEMENT
1500-609 GRANVILLE STREET
P.O. BOX 10362
VANCOUVER, B.C.
V7X 1G5

SAMPLE IDENTIFICATION: 16 ROCK samples received June 26, 1990
PROJECT: 90-BC-016 DEVIL'S ELBOW
SHIPMENT NO.: 2

ET#	Description	AG (ppm)	CU (ppm)	PB (ppm)	ZN (ppm)	W (ppm)
218 - 1	104111	.4	41	10	45	36
218 - 2	104112	.3	31	11	91	21
218 - 3	104113	<.1	16	4	31	<1
218 - 4	104114	.5	12	33	83	61
218 - 5	104115	.3	22	8	18	17
218 - 6	104116	.2	24	8	22	78
218 - 7	104117	.4	25	10	23	24
218 - 8	104118	<.1	5	4	6	5
218 - 9	104119	.2	79	9	56	79
218 - 10	104122	.4	42	20	116	29
218 - 11	104123	.7	77	17	61	35
218 - 12	104128	5.9	114	381	225	20
218 - 13	104130	.2	11	5	28	6
218 - 14	104132	.4	37	9	47	26
218 - 15	104133	1.8	175	31	204	47
218 - 16	104134	.5	19	16	45	73

NOTE: < = less than

Jutta Jealouse

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JUTTA JEALOUSE
B.C. Certified Assayer

FAX: D. DUNN @ 235-3290
cc: DAVID DUNN
C/O TRANS NORTH AIR
TELEGRAPH CREEK, B.C.
SC90/HI-TEC-016

ECO-TECH LABORATORIES LTD.

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JULY 6, 1990

CERTIFICATE OF ANALYSIS ETK 90-218 A

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HI-TEC RESOURCE MANAGEMENT
1500-609 GRANVILLE STREET
P.O. BOX 10362
VANCOUVER, B.C.
V7X 1G5

SAMPLE IDENTIFICATION: 16 ROCK samples received June 26, 1990
PROJECT: 90-BC-016 DEVIL'S ELBOW
SHIPMENT NO.: 2

ET#		Description	AU (g/t)	AU (oz/t)
218 -	1	104111	<.03	<.001
218 -	2	104112	<.03	<.001
218 -	3	104113	<.03	<.001
218 -	4	104114	<.03	<.001
218 -	5	104115	<.03	<.001
218 -	6	104116	<.03	<.001
218 -	7	104117	<.03	<.001
218 -	8	104118	<.03	<.001
218 -	9	104119	.05	.001
218 -	10	104122	<.03	<.001
218 -	11	104123	<.03	<.001
218 -	12	104128	<.03	<.001
218 -	13	104130	<.03	<.001
218 -	14	104132	.11	.003
218 -	15	104133	<.03	<.001
218 -	16	104134	<.03	<.001

NOTE: < = less than

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B.C. Certified Assayer

FAX: D. DUNN @ 235-3290
cc: DAVID DUNN
C/O TRANS NORTH AIR
TELEGRAPH CREEK, B.C.
SC90/HI-TEC-016

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JULY 6, 1990

CERTIFICATE OF ANALYSIS ETK 90-221A

ASSAYS

HI-TEC RESOURCE MANAGEMENT
1500-609 GRANVILLE STREET
P.O. BOX 10362
VANCOUVER, B.C.
V7X 1G5

SAMPLE IDENTIFICATION: 1 ROCK sample received June 26, 1990
PROJECT: 90-BC-016 DEVIL'S ELBOW
SHIPMENT NO.: 2

ET#	Description	AU (g/t)	AU (oz/t)
221 - 1	104155	<.03	<.001

NOTE: < = less than

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B.C. Certified Assayer

FAX: D. DUNN @ 235-3290
cc: DAVID DUNN
C/O TRANS NORTH AIR
TELEGRAPH CREEK, B.C.

SC90/HI-TEC-016

ECO-TECH LABORATORIES LTD.
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JULY 6, 1990

CERTIFICATE OF ANALYSIS ETK 90-221

HI-TEC RESOURCE MANAGEMENT
1500-609 GRANVILLE STREET
P.O. BOX 10362
VANCOUVER, B.C.
V7X 1G5

SAMPLE IDENTIFICATION: 1 ROCK sample received June 26, 1990
PROJECT: 90-BC-016 DEVIL'S ELBOW
SHIPMENT NO.: 2

ET#	Description	AG (ppm)	CU (ppm)	PB (ppm)	ZN (ppm)	MO (ppm)
221 - 1	104155	<.1	32	5	47	11

NOTE: < = less than

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B.C. Certified Assayer

FAX: D. DUNN @ 235-3290
CC: DAVID DUNN
C/O TRANS NORTH AIR
TELEGRAPH CREEK, B.C.

SC90/HI-TEC-016

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ASSAYING - ENVIRONMENTAL TESTING
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AUGUST 31, 1990

CERTIFICATE OF ANALYSIS ETK 90-482

HI-TEC RESOURCE MANAGEMENT
1500-609 GRANVILLE STREET
P.O. BOX 10362
VANCOUVER, B.C.
V7X 1G5

SAMPLE IDENTIFICATION: 87 ROCK samples received AUGUST 23, 1990
PROJECT: 90-BC-016 DEVIL'S ELBOW

ET#		Description	AU (g/t)	AU (o/t)	CU (%)	ZN (%)
482 -	1	93190	104.2	3.039	.74	
482 -	24	93225				.92
482 -	30	93231			.17	
482 -	32	93233				.46
482 -	77	93701				.18
482 -	81	93705			.15	
482 -	82	93706			.22	

Jutta Jealouse
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JUTTA JEALOUSE
B.C. Certified Assayer

FAX: HI-TEC VAN.

SC90/HI-TEC-016

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AUGUST 31, 1990

CERTIFICATE OF ANALYSIS ETK 90-482

HI-TEC RESOURCE MANAGEMENT
1500-609 GRANVILLE STREET
P.O. BOX 10362
VANCOUVER, B.C.
V7X 1G5

SAMPLE IDENTIFICATION: 87 ROCK samples received AUGUST 23, 1990
PROJECT: 90-BC-016 DEVIL'S ELBOW

ET#	Description	AU (ppb)	AG (ppm)	CU (ppm)	PB (ppm)	ZN (ppm)
482 - 1	93190	>1000	25.5	>1000	21	87
482 - 2	93191	120	2.8	112	103	118
482 - 3	93192	10	<.1	9	2	9
482 - 4	93193	10	.6	32	13	93
482 - 5	93194	<5	.3	25	14	73
482 - 6	93195	15	.5	8	52	66
482 - 7	93196	<5	4.3	163	38	68
482 - 8	93197	<5	<.1	4	20	37
482 - 9	93198	<5	<.1	25	30	60
482 - 10	93199	<5	<.1	42	11	20
482 - 11	93200	<5	.5	115	32	35
482 - 12	93213	<5	<.1	113	24	26
482 - 13	93214	<5	<.1	25	37	65
482 - 14	93215	5	<.1	29	11	39
482 - 15	93216	5	.2	51	14	87
482 - 16	93217	<5	1.0	35	15	87
482 - 17	93218	90	.8	22	18	28
482 - 18	93219	5	<.1	28	15	33
482 - 19	93220	10	<.1	33	20	147
482 - 20	93221	10	<.1	56	15	33
482 - 21	93222	5	<.1	36	17	38
482 - 22	93223	5	.7	30	70	154
482 - 23	93224	10	<.1	35	21	115
482 - 24	93225	40	<.7	31	14	>1000
482 - 25	93226	<5	.4	24	15	187
482 - 26	93227	<5	.2	27	20	62
482 - 27	93228	5	4.1	137	78	45
482 - 28	93229	5	1.0	21	13	125
482 - 29	93230	40	1.1	26	12	871
482 - 30	93231	20	2.0	>1000	17	33

JUTTA JEALOUSE, Certified Assayer

ECO-TECH LABORATORIES LTD.

ASSAYING - ENVIRONMENTAL TESTING
10041 East Trans Canada Hwy., Kamloops, B.C. V2C 2J3 (604) 573-5700 Fax 573-4557

HI-TEC RESOURCE MANAGEMENT AUGUST 31, 1990

ET#	Description	AU (ppb)	AG (ppm)	CU (ppm)	PB (ppm)	ZN (ppm)
482 - 31	93232	<5	.7	27	19	55
482 - 32	93233	20	5.7	36	160	983
482 - 33	93234	5	<.1	52	8	39
482 - 34	93235	5	<.1	12	6	35
482 - 35	93236	5	<.1	92	8	27
482 - 36	93237	5	<.1	35	10	22
482 - 37	93238	20	.1	17	28	29
482 - 38	93612	10	.4	170	8	31
482 - 39	93613	<5	<.1	9	8	36
482 - 40	93614	<5	<.1	88	7	72
482 - 41	93615	<5	<.1	14	11	80
482 - 42	93616	<5	<.1	125	12	158
482 - 43	93617	<5	<.1	17	3	37
482 - 44	93618	<5	3.2	24	10	213
482 - 45	93619	<5	<.1	12	27	211
482 - 46	93620	<5	<.1	25	9	65
482 - 47	93621	<5	<.1	19	16	33
482 - 48	93622	<5	<.1	12	2	118
482 - 49	93623	<5	<.1	14	7	381
482 - 50	93624	15	<.1	14	8	70
482 - 51	93625	<5	<.1	24	11	112
482 - 52	93626	15	<.1	55	4	68
482 - 53	93627	5	<.1	4	112	45
482 - 54	93628	<5	<.1	30	9	33
482 - 55	93629	<5	<.1	5	5	14
482 - 56	93630	<5	<.1	72	7	28
482 - 57	93631	<5	<.1	80	11	55
482 - 58	93632	<5	<.1	4	5	35
482 - 59	93633	<5	<.1	27	4	40
482 - 60	93634	10	<.1	204	6	66
482 - 61	93635	<5	<.1	36	5	48
482 - 62	93636	<5	<.1	110	10	83
482 - 63	93637	<5	<.1	210	11	47
482 - 64	93638	<5	<.1	29	4	48
482 - 65	93639	<5	<.1	59	7	81
482 - 66	93640	<5	<.1	7	5	49
482 - 67	93641	<5	<.1	10	11	29
482 - 68	93642	<5	<.1	34	13	108
482 - 69	93643	<5	<.1	56	12	58
482 - 70	93644	<5	<.1	106	5	49
482 - 71	93645	<5	<.1	8	12	20
482 - 72	93646	<5	.1	30	11	33
482 - 73	93647	<5	.7	67	12	55
482 - 74	93648	<5	<.1	8	4	32
482 - 75	93649	10	1.6	5	25	109

JUTTA JEALOUSE, Certified Assayer

ECO-TECH LABORATORIES LTD.
ASSAYING - ENVIRONMENTAL TESTING
10041 East Trans Canada Hwy., Kamloops, B.C. V2C 2J3 (604) 573-5700 Fax 573-4557

HI-TEC RESOURCE MANAGEMENT AUGUST 31, 1990

ET#	Description	AU (ppb)	AG (ppm)	CU (ppm)	PB (ppm)	ZN (ppm)
482 - 76	93650	<5	<.1	23	3	41
482 - 77	93701	<5	<.2	25	11	<1000
482 - 78	93702	<5	<.1	25	13	85
482 - 79	93703	<5	<.1	47	1	33
482 - 80	93704	<5	<.1	18	4	14
482 - 81	93705	220	1.4	948	18	73
482 - 82	93706	55	2.9	>1000	12	54
482 - 83	104267	<5	.1	26	32	35
482 - 84	104268	20	<.1	94	4	62
482 - 85	104269	<5	<.1	6	25	56
482 - 86	104270	<5	<.1	93	7	49
482 - 87	104271	<5	<.1	59	9	75

NOTE: < = less than

Jutta Jealouse
ECO-TECH LABORATORIES LTD.
JUTTA JEALOUSE
B.C. Certified Assayer

FAX: HI-TEC VAN.

SC90/HI-TEC-016

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

HI-TEC RESOURCE MANAGEMENT ETK 90-483
1500-609 GRANVILLE ST.
P.O. BOX 10362
VANCOUVER, B.C.
V7Y 1G5

AUGUST 31, 1990

VALUES IN PPM UNLESS OTHERWISE REPORTED

PAGE 1

PROJECT: 016
110 SOIL SAMPLES RECEIVED AUGUST 23 , 1990

ET#	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
483 - 1	D36 0+ 10 N	5	.9	1.90	31	5	69	10	.53	<1	12	48	41	3.76	.03	<10	.76	477	1	.02	28	717	9	<5	<20	26	.13	<10	116	<10	5	48
483 - 2	D36 0+ 20 N	15	.6	2.40	38	7	38	11	.38	<1	10	49	42	4.33	.04	<10	.87	449	2	.02	28	904	10	<5	<20	24	.14	<10	117	<10	3	50
483 - 3	D36 0+ 30 N	5	.7	5.59	47	5	25	11	.24	<1	8	57	31	4.58	<.01	<10	.62	213	<1	.02	18	773	7	<5	<20	14	.14	12	87	<10	5	31
483 - 4	D36 0+ 40 N	<5	1.5	2.89	35	<2	39	13	1.06	<1	11	51	38	3.89	.03	23	.79	368	6	.01	30	781	50	<5	<20	44	.15	<10	94	<10	16	104
483 - 5	D36 0+ 50 N	<5	1.3	3.38	42	6	27	19	.24	<1	10	71	30	7.16	.03	<10	.59	265	2	.02	20	640	13	<5	<20	14	.42	<10	168	<10	10	41
483 - 6	D36 0+ 60 N	<5	1.2	2.51	43	6	16	13	.24	<1	6	58	25	7.06	.01	<10	.55	235	1	.01	15	689	13	<5	<20	15	.26	11	164	<10	4	30
483 - 7	D36 0+ 70 N	<5	2.2	3.42	36	<2	34	14	.94	1	24	46	64	4.49	.06	52	.62	478	5	.03	62	1078	53	<5	<20	49	.08	<10	76	<10	33	136
483 - 8	D36 0+ 80 N	<5	.7	4.84	45	5	36	5	.28	<1	7	48	26	4.37	<.01	<10	.53	213	1	.01	18	661	9	<5	<20	19	.15	14	85	<10	5	31
483 - 9	D36 0+ 90 N	5	.8	3.90	53	6	37	15	.28	<1	7	60	22	6.42	<.01	<10	.57	221	2	.01	18	665	11	<5	<20	19	.23	12	138	<10	5	31
483 - 10	D36 1+ 00 N	10	1.4	3.77	53	<2	39	13	1.01	2	26	57	71	5.41	.02	47	.82	1339	4	.01	49	997	98	<5	<20	44	.15	<10	99	<10	40	325
483 - 11	D37 0+ 20 N	10	1.2	1.83	44	5	17	20	.24	<1	5	63	21	8.12	.02	<10	.47	212	3	.01	13	1378	14	<5	<20	15	.27	11	182	<10	4	31
483 - 12	D37 0+ 40 N	10	1.7	4.03	35	7	16	12	.21	<1	9	78	35	7.68	.02	<10	.62	264	1	.02	23	421	11	<5	<20	14	.34	12	155	<10	10	34
483 - 13	D37 0+ 50 N	5	3.0	1.54	26	2	33	61	.29	<1	7	34	34	5.22	.03	<10	.38	197	2	.01	15	497	115	<5	<20	21	.29	<10	141	<10	8	71
483 - 14	D37 0+ 60 N	5	1.3	3.65	38	5	62	12	.37	<1	12	62	55	4.78	.02	45	.70	332	16	.01	66	637	85	<5	<20	26	.19	<10	94	<10	34	276
483 - 15	D37 0+ 70 N	5	2.9	5.21	59	3	45	18	.91	<1	29	61	84	4.82	<.01	89	.59	696	7	.01	140	990	57	<5	<20	52	.13	<10	69	<10	67	172
483 - 16	D37 0+ 80 N	<5	1.0	2.11	<5	5	20	24	.34	<1	12	45	27	5.28	.04	<10	.70	362	3	.02	30	448	8	<5	<20	20	.21	<10	113	<10	9	61
483 - 17	D37 0+ 90 N	<5	.8	1.58	6	4	<5	29	.21	<1	5	45	16	6.86	.03	<10	.41	204	1	.01	12	391	6	<5	<20	14	.27	<10	166	<10	6	24
483 - 18	D37 1+ 00 N	<5	1.3	2.19	<5	6	12	34	.19	1	8	55	46	7.35	.02	<10	.43	214	7	.01	14	623	8	<5	<20	13	.28	<10	133	<10	11	40
483 - 19	D40 11+ 60 N	<5	.9	4.14	<5	9	11	27	.16	<1	9	58	29	6.82	.03	<10	.60	415	3	<.01	22	623	6	<5	<20	14	.15	<10	86	<10	6	63
483 - 20	D40 11+ 70 N	40	.8	4.49	25	<2	26	19	1.42	1	12	51	25	5.36	.03	<10	.87	937	3	.06	32	1110	9	<5	<20	214	.08	<10	61	<10	17	198
483 - 21	D40 11+ 80 N	5	.5	2.39	17	<2	40	20	1.18	<1	10	50	20	4.95	.03	<10	.76	601	1	<.01	28	651	8	<5	<20	57	.12	<10	75	<10	8	112
483 - 22	D40 11+ 90 N	10	.7	2.43	<5	5	31	17	.28	<1	5	50	19	4.68	.02	<10	.44	200	1	<.01	19	464	5	<5	<20	20	.10	<10	93	<10	2	45
483 - 23	D40 12+ 00 N	5	.6	3.03	24	3	32	23	.56	<1	8	54	26	5.73	.03	<10	.72	393	2	.01	24	833	7	<5	<20	25	.11	<10	104	<10	4	46
483 - 24	D40 12+ 10 N	10	.9	3.66	<5	4	25	25	.34	<1	10	70	26	6.82	.03	<10	.79	459	1	<.01	31	827	6	<5	<20	15	.15	<10	86	<10	5	41
483 - 25	D40 12+ 20 N	<5	.8	2.44	<5	5	40	19	.16	<1	4	40	24	4.60	.03	<10	.27	187	2	<.01	12	443	13	<5	<20	17	.15	<10	91	<10	8	46
483 - 26	D40 12+ 30 N	10	.8	3.80	178	<2	21	19	1.10	<1	18	33	62	5.34	<.01	71	.25	964	2	<.01	19	1572	3	<5	<20	44	.08	<10	58	<10	74	73

ET#	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
483 - 27	D40 12+ 40 N	5	.6	2.41	9	6	20	23	.22	<1	8	61	17	5.52	.04	<10	.88	264	2	.02	35	384	5	<5	<20	14	.14	<10	106	<10	4	57
483 - 28	D40 12+ 50 N	<5	.6	2.52	<5	6	24	23	.20	<1	7	49	18	5.18	.03	<10	.65	224	<1	<.01	26	321	25	<5	<20	13	.15	<10	94	<10	4	67
483 - 29	D43 9+ 50 N	15	.7	1.15	62	5	24	18	.15	<1	1	14	18	4.47	.02	<10	.09	61	2	<.01	6	1965	7	<5	<20	22	.01	<10	48	<10	<1	27
483 - 30	D43 9+ 60 N	5	.9	3.36	203	6	24	40	.25	<1	16	38	38	10.51	<.01	<10	.67	681	5	.01	25	1192	9	<5	<20	19	.20	<10	87	<10	7	130
483 - 31	D43 9+ 70 N	105	.9	2.04	13	<2	49	20	.45	<1	4	27	12	5.20	.07	<10	.73	312	1	.02	7	1883	9	<5	<20	29	.21	<10	119	<10	10	39
483 - 32	D43 9+ 80 N	5	.9	3.34	34	4	38	27	.51	<1	15	36	37	7.14	.02	<10	.44	929	3	<.01	18	1703	6	<5	<20	33	.06	<10	82	<10	9	62
483 - 33	D43 9+ 90 N	10	.6	2.50	7	4	19	26	.36	<1	10	70	28	6.18	.05	<10	1.09	364	1	.01	38	646	13	<5	<20	18	.14	<10	117	<10	4	50
483 - 34	D43 10+ 00 N	15	.9	4.37	45	6	29	36	.27	<1	14	36	41	8.68	.07	<10	.71	1324	2	.02	15	1691	<2	<5	<20	24	.07	<10	82	<10	4	80
483 - 35	D43 10+ 10 N	30	.6	4.87	92	6	7	37	.15	<1	5	19	68	9.60	.04	<10	.39	278	1	.01	8	2139	<2	<5	<20	17	.06	<10	45	<10	21	27
483 - 36	D43 10+ 20 N	5	.6	4.14	16	6	10	30	.28	<1	10	42	49	8.13	.06	<10	.78	320	1	.01	29	1484	<2	<5	<20	20	.10	<10	73	<10	10	63
483 - 37	D43 10+ 30 N	10	.7	3.03	23	5	24	27	.27	<1	8	38	26	7.21	.07	<10	.75	353	1	<.01	25	1223	2	<5	<20	19	.10	<10	70	<10	4	76
483 - 38	D43 10+ 40 N	5	.7	4.52	<5	5	15	35	.22	<1	7	25	28	9.80	.08	<10	.40	460	1	<.01	11	1628	<2	<5	<20	17	.07	<10	46	<10	6	59
483 - 39	D43 10+ 50 N	<5	1.2	3.28	<5	6	17	22	.22	<1	6	47	27	4.96	.03	<10	.59	178	2	.01	22	593	11	<5	<20	20	.15	<10	72	<10	6	54
483 - 40	D43 10+ 60 N	5	.6	3.93	<5	6	55	29	.20	<1	13	61	62	6.62	.06	<10	1.11	392	2	<.01	64	674	8	<5	<20	18	.09	<10	82	<10	4	87
483 - 41	D43 10+ 70 N	<5	.8	3.94	21	5	16	29	.38	<1	20	53	51	7.09	.03	<10	.97	395	2	.02	45	1040	10	<5	<20	37	.11	<10	85	<10	7	122
483 - 42	D43 10+ 80 N	10	.8	1.83	42	4	6	18	.42	2	24	23	28	5.21	.04	<10	.36	1383	2	.02	17	1217	15	<5	<20	34	.04	12	54	<10	2	88
483 - 43	D43 10+ 90 N	<5	.7	3.34	<5	2	23	21	.47	<1	12	43	32	5.45	.02	<10	.63	445	2	<.01	27	1115	10	<5	<20	23	.08	<10	71	<10	5	64
483 - 44	D43 11+ 00 N	<5	.5	3.42	<5	4	42	26	.60	<1	12	46	22	5.95	.03	<10	.59	633	3	<.01	27	1054	4	<5	<20	23	.13	<10	70	<10	9	80
483 - 45	D43 11+ 10 N	<5	.6	4.05	49	<2	56	25	.95	<1	9	25	32	6.60	.05	<10	.46	566	2	<.01	14	1994	<2	<5	<20	41	.04	<10	49	<10	12	76
483 - 46	D43 11+ 20 N	<5	.4	3.56	<5	<2	41	25	.99	<1	21	34	30	5.99	.03	<10	.54	1720	3	<.01	21	1942	7	<5	<20	36	.04	<10	61	<10	8	102
483 - 47	D43 11+ 30 N	<5	.4	4.00	<5	<2	20	20	1.08	1	14	55	41	4.99	.04	<10	.81	650	<1	<.01	30	1092	<2	<5	<20	38	.08	<10	77	<10	6	67
483 - 48	D43 11+ 40 N	<5	.5	4.40	<5	4	20	22	.52	1	12	51	32	5.79	.04	<10	.63	676	1	.01	24	987	4	<5	<20	46	.07	<10	80	<10	6	85
483 - 49	D43 11+ 50 N	5	.7	3.96	6	<2	12	21	1.13	2	14	52	29	5.76	.04	<10	1.08	966	3	.05	33	1570	16	<5	<20	153	.05	<10	54	<10	9	239
483 - 50	D43 11+ 60 N	10	.7	4.05	<5	<2	13	20	4.34	2	13	50	29	5.34	.06	<10	1.18	772	2	.08	35	1194	10	5	<20	409	.07	<10	55	<10	13	216
483 - 51	D43 11+ 70 N	<5	4.2	4.34	72	<2	52	29	1.09	<1	23	35	31	7.63	.05	<10	.98	869	2	.03	28	2023	310	<5	<20	62	.08	<10	72	<10	10	264
483 - 52	D43 11+ 80 N	5	.6	3.48	<5	2	88	13	1.47	<1	20	29	22	6.69	.12	<10	.95	707	4	.02	17	2062	3	12	<20	58	.09	<10	82	13	12	114
483 - 53	D43 11+ 90 N	<5	.4	3.80	9	<2	64	24	1.14	<1	16	29	25	6.48	.07	<10	.79	891	2	.02	18	1845	2	<5	<20	51	.07	<10	70	<10	11	117
483 - 54	D43 12+ 00 N	30	.5	4.13	31	<2	51	25	.90	<1	22	27	30	5.30	.04	<10	.62	1002	1	<.01	25	1598	2	<5	<20	43	.06	<10	49	<10	9	103
483 - 55	D43 12+ 10 N	5	.6	3.12	9	<2	38	21	.61	<1	15	40	65	6.46	.04	<10	.57	801	<1	<.01	24	1169	6	<5	<20	32	.09	<10	79	<10	6	80
483 - 56	D43 12+ 20 N	5	.6	4.04	44	5	30	30	.53	<1	21	92	42	6.55	.04	<10	1.61	599	3	<.01	57	818	3	<5	<20	26	.13	<10	131	<10	6	92
483 - 57	D43 12+ 30 N	10	.8	5.70	238	6	51	47	.48	<1	50	76	218	11.81	.21	<10	2.20	1719	3	.03	49	1472	<2	<5	<20	32	.14	<10	208	<10	4	145
483 - 58	D43 12+ 40 N	<5	.7	5.77	69	4	42	34	.83	<1	45	85	76	9.10	.15	<10	2.41	2047	<1	.06	33	1569	<2	<5	<20	59	.12	<10	192	<10	6	134
483 - 59	D46 9+ 50 N	5	.9	2.88	21	2	34	18	.45	<1	10	51	24	5.45	.02	<10	.63	567	1	<.01	26	678	6	<5	<20	28	.13	<10	79	<10	8	101
483 - 60	D46 9+ 60 N	10	.6	2.76	42	5	<5	30	.26	<1	7	60	23	7.04	.02	<10	.64	280	2	<.01	21	984	10	<5	<20	14	.12	<10	122	<10	3	49
483 - 61	D46 9+ 70 N	10	.7	2.96	33	5	20	28	.29	<1	9	67	30	5.92	.03	<10	1.07	270	<1	.01	36	566	10	<5	<20	13	.15	<10	115	<10	5	59
483 - 62	D46 9+ 80 N	5	1.2	1.25	50	4	23	34	.19	<1	6	23	14	5.98	<.01	<10	.19	676	4	<.01	10	445	22	<5	<20	24	.18	11	115	<10	6	46
483 - 63	D46 9+ 90 N	5	.8	1.81	71	6	21	26	.14	<1	4	46	20	5.15	<.01	<10	.40	165	3	<.01	17	462	15	<5	<20	16	.15	<10	104	<10	6	53

ECO-TECH LABORATORIES LTD. HI-TEC RESOURCE MANAGEMENT ETK 90-483

ET#	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
483 - 64	D46 10+ 00 N	5	.9	3.05	34	5	5	43	.20	<1	7	63	22	8.86	.02	<10	.61	378	2	.01	25	723	13	<5	<20	15	.19	<10	146	<10	6	43
483 - 65	D46 10+ 10 N	5	.5	1.01	16	3	6	16	.17	<1	3	27	10	2.59	.02	<10	.23	122	1	<.01	8	305	15	<5	<20	17	.15	<10	79	<10	6	24
483 - 66	D46 10+ 20 N	10	1.0	2.63	24	6	31	33	.22	<1	10	55	19	7.16	.03	<10	.58	646	2	<.01	24	667	13	<5	<20	24	.19	<10	97	<10	9	70
483 - 67	D46 10+ 30 N	5	.9	2.58	33	6	23	29	.21	<1	14	60	28	7.10	.03	<10	.74	1310	3	.01	25	628	15	<5	<20	23	.15	12	123	<10	6	67
483 - 68	D46 10+ 40 N	5	.8	4.45	24	7	21	23	.32	<1	15	53	47	4.95	.02	<10	.77	647	1	.01	35	1106	3	<5	<20	17	.08	11	66	<10	7	51
483 - 69	D46 10+ 50 N	<5	.7	2.56	22	6	21	33	.22	<1	13	48	21	6.95	.03	<10	.47	617	1	<.01	22	658	10	<5	<20	18	.15	<10	80	<10	8	66
483 - 70	D46 10+ 60 N	<5	1.0	1.60	365	<2	34	27	.37	<1	3	32	26	5.68	<.01	<10	.23	233	2	<.01	15	679	14	<5	<20	24	.06	<10	82	<10	5	36
483 - 71	D46 10+ 70 N	10	1.3	1.71	46	4	11	27	.24	<1	3	33	30	5.28	.01	<10	.23	119	2	<.01	14	1231	13	<5	<20	13	.02	<10	57	<10	<1	37
483 - 72	D46 10+ 90 N	5	1.3	1.12	28	6	17	28	.13	<1	4	36	20	6.04	.02	<10	.20	135	3	<.01	12	516	20	<5	<20	18	.27	<10	130	<10	8	34
483 - 73	D46 11+ 10 N	10	.9	2.54	26	6	12	29	.17	<1	5	54	23	6.41	.02	<10	.45	163	2	.01	19	504	12	<5	<20	14	.15	<10	96	<10	5	37
483 - 74	D46 11+ 20 N	15	1.1	2.84	22	5	34	25	.29	<1	7	49	44	4.81	.03	<10	.65	223	<1	.01	30	918	12	<5	<20	21	.06	<10	71	<10	5	54
483 - 75	D46 11+ 30 N	<5	.9	1.72	20	6	21	33	.26	<1	21	28	29	7.28	.04	<10	.25	1908	4	<.01	14	1174	22	<5	<20	32	.06	12	74	<10	2	55
483 - 76	D46 11+ 40 N	<5	.7	4.13	32	5	25	37	.75	<1	17	48	27	7.58	.02	<10	.59	617	2	<.01	27	1375	74	<5	<20	36	.07	<10	73	<10	11	116
483 - 77	D46 11+ 50 N	55	.9	3.64	25	6	14	35	.20	<1	7	47	37	6.23	.02	<10	.46	404	2	<.01	22	818	10	<5	<20	21	.09	<10	80	<10	5	61
483 - 78	D46 11+ 60 N	5	.7	3.58	35	3	25	34	.89	<1	26	52	27	7.84	.03	<10	.98	3368	4	.02	34	1355	31	<5	<20	89	.06	12	67	<10	16	253
483 - 79	D46 12+ 10 N	<5	.6	2.44	25	4	43	32	.42	<1	7	53	35	6.39	.03	<10	.62	400	1	.01	25	1035	14	<5	<20	24	.08	<10	98	<10	5	62
483 - 80	D46 12+ 20 N	10	.7	3.70	30	<2	36	32	.96	<1	13	49	24	6.69	.04	<10	.76	737	2	<.01	31	992	8	<5	<20	43	.10	<10	81	<10	9	96
483 - 81	D46 12+ 30 N	5	.9	3.83	93	<2	33	31	1.03	<1	19	57	63	6.67	.01	<10	.95	428	2	.03	44	1146	11	<5	<20	64	.10	<10	103	<10	15	86
483 - 82	D46 12+ 40 N	5	.9	2.04	35	3	43	30	.25	<1	6	56	24	6.63	.02	<10	.56	268	1	.02	20	588	14	<5	<20	21	.14	14	151	<10	6	55
483 - 83	D46 12+ 50 N	5	1.0	3.93	87	5	74	54	.43	<1	7	27	47	11.63	.11	<10	.73	375	1	.02	14	2974	5	<5	<20	37	.21	<10	82	<10	10	56
483 - 84	D46 12+ 80 N	5	.9	2.63	10	6	23	28	.14	<1	3	44	19	6.08	.02	<10	.28	123	2	<.01	13	435	11	<5	<20	15	.14	<10	83	<10	6	35
483 - 85	D46 12+ 90 N	5	.7	3.93	37	7	20	35	.22	<1	9	60	29	6.69	.02	<10	.62	542	3	<.01	25	797	8	<5	<20	15	.12	<10	87	<10	7	69
483 - 86	D47 0+ 30 N	5	1.0	4.04	31	4	17	39	.42	<1	42	60	379	8.35	.07	<10	1.26	368	<1	.02	87	865	18	<5	<20	23	.14	<10	119	<10	11	83
483 - 87	D47 0+ 40 N	5	1.5	3.76	47	4	26	38	.50	<1	72	69	306	8.20	.04	<10	1.19	1226	1	.04	67	1254	434	<5	<20	42	.12	10	110	<10	8	351
483 - 88	D47 0+ 50 N	<5	1.2	3.57	39	3	33	27	.67	<1	43	46	126	7.14	.06	<10	.84	1216	1	.02	52	1416	22	<5	<20	38	.08	12	91	<10	6	122
483 - 89	D47 0+ 70 N	<5	.9	3.04	24	5	45	28	.54	1	21	68	66	6.40	.07	<10	1.18	486	2	.04	42	661	11	<5	<20	23	.17	10	113	<10	8	149
483 - 90	D47 0+ 80 N	<5	.7	3.55	32	7	78	28	.48	<1	25	79	80	6.67	.06	<10	1.60	652	2	.02	80	726	8	<5	<20	27	.11	<10	111	<10	8	146
483 - 91	D47 0+ 90 N	10	1.1	4.14	38	7	13	38	.36	<1	19	50	145	7.44	.06	<10	1.04	307	1	.03	48	1047	6	<5	<20	23	.12	<10	90	<10	8	225
483 - 92	D47 1+ 00 N	<5	.9	3.34	30	5	24	42	.45	<1	21	44	71	9.16	.07	<10	.88	525	2	.04	37	1172	10	<5	<20	32	.12	<10	115	<10	8	108
483 - 93	D47 1+ 20 N	<5	1.8	4.43	38	7	38	71	.34	<1	38	50	223	18.66	.30	<10	1.32	465	<1	.07	36	2059	9	<5	<20	30	.11	<10	151	<10	3	60
483 - 94	D47 1+ 30 N	<5	1.1	3.16	81	3	58	44	.74	<1	29	49	64	8.61	.05	<10	1.13	1395	<1	.04	68	688	44	<5	<20	48	.08	<10	73	<10	11	171
483 - 95	D47 1+ 40 N	10	1.5	1.75	34	<2	<5	16	3.61	2	7	22	15	3.82	.02	<10	.49	563	3	<.01	26	356	97	13	<20	315	.03	<10	18	<10	7	243
483 - 96	D47 1+ 60 N	5	.7	2.56	26	3	34	22	.77	5	16	91	50	5.59	.04	<10	1.54	504	<1	.03	94	612	12	<5	<20	59	.13	<10	89	<10	11	1250
483 - 97	D47 1+ 70 N	40	1.2	3.16	44	<2	19	10	1.30	13	14	59	34	7.07	.10	<10	1.50	626	1	.06	34	434	12	<5	<20	154	.11	<10	59	<10	8	1150
483 - 98	D47 1+ 80 N	15	1.8	3.86	86	<2	38	33	1.24	<1	20	71	51	6.80	.03	<10	1.53	890	2	.07	67	1090	71	<5	<20	127	.09	<10	77	<10	13	302
483 - 99	D47 1+ 90 N	10	1.4	4.17	45	<2	6	30	1.38	<1	14	72	33	6.61	.03	<10	1.43	1219	2	.16	52	904	30	<5	<20	363	.09	<10	65	<10	15	230
483 - 100	D47 2+ 00 N	5	.7	3.80	47	<2	13	40	1.95	3	22	46	44	10.06	.02	<10	.98	1445	<1	.13	60	624	7	<5	<20	150	.09	<10	56	<10	18	326

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ECO-TECH LABORATORIES LTD.　　　　HI-TEC RESOURCE MANAGEMENT ETK 90-483

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ET#	DESCRIPTION	AU(ppb)	AG	AL(%)	AS	B	BA	BI	CA(%)	CD	CO	CR	CU	FE(%)	K(%)
483 - 101	D47 2+ 10 N	<5	.6	3.45	65	<2	38	35	1.74	<1	23	50	44	8.50	.02
483 - 102	D47 2+ 20 N	<5	.7	3.67	55	<2	24	37	1.66	<1	27	29	47	8.43	<.01
483 - 103	D47 2+ 30 N	<5	.5	3.83	28	<2	16	30	3.43	<1	22	37	39	6.77	.03
483 - 104	D47 2+ 40 N	5	.9	4.07	84	<2	9	34	1.67	<1	18	40	43	7.46	.01
483 - 105	D47 2+ 50 N	5	1.1	4.12	63	<2	<5	42	2.04	<1	21	39	41	8.87	.05
483 - 106	D47 2+ 60 N	10	.7	4.25	92	<2	<5	28	3.68	<1	13	41	25	6.27	.01
483 - 107	D47 2+ 70 N	5	.6	3.22	36	<2	13	25	3.80	<1	10	29	19	5.08	.02
483 - 108	D47 2+ 80 N	5	.5	3.89	61	<2	7	<5	5.26	<1	11	58	21	3.37	.02
483 - 109	D47 2+ 90 N	5	.5	3.42	54	<2	52	<5	3.30	1	13	37	19	3.07	<.01
483 - 110	D47 3+ 00 N	<5	.5	6.02	82	<2	23	<5	1.52	<1	11	59	25	3.56	.04

ET#	LA	MG(%)	MN	MO	NA(%)	NI	P	PB	SB	SN	SR	TI(%)	U	V	W	Y	ZN
483 - 101	<10	1.04	1237	<1	.09	65	621	4	<5	<20	118	.08	<10	61	<10	16	113
483 - 102	<10	.60	1671	2	.06	50	939	9	<5	<20	121	.06	<10	33	<10	19	162
483 - 103	<10	.79	1127	1	.02	75	867	5	<5	<20	114	.06	<10	41	<10	12	105
483 - 104	<10	1.11	997	2	.13	58	926	13	<5	<20	173	.09	<10	52	<10	16	246
483 - 105	<10	1.00	985	<1	.14	75	783	14	<5	<20	148	.07	<10	42	<10	11	156
483 - 106	<10	1.07	926	1	.17	52	428	6	<5	<20	144	.07	<10	42	<10	11	167
483 - 107	<10	.60	922	2	.08	32	643	4	<5	<20	110	.06	<10	26	<10	9	116
483 - 108	<10	1.71	593	<1	.20	60	793	15	6	<20	155	.03	<10	73	<10	9	51
483 - 109	<10	1.20	2275	2	.07	35	1114	24	22	<20	143	.05	<10	39	11	16	128
483 - 110	<10	1.72	946	<1	.25	30	581	26	<5	<20	144	.13	<10	79	<10	13	60

NOTE: < = LESS THAN

FAX: D. DUNN @ 235-3230
cc: DAVID DUNN
C/O TRANS NORTH AIR
TELEGRAPH CREEK, B.C.

Jutta Jealouse
ECO-TECH LABORATORIES LTD.
JUTTA JEALOUSE
B.C. CERTIFIED ASSAYER

SC90/HI-TEC-016

APPENDIX B

Sampling Metholology

SAMPLING METHODOLOGY

A. STREAM SEDIMENTS

Silt Samples

Approximately 0.5 kg of silt was collected from the active stream channel, placed in a standard gusseted kraft bag and shipped to Eco-Tech Laboratories in Kamloops. These samples were then dried and sieved to -80 mesh. A ten gram split of the sample was analyzed for gold by fire assay with atomic absorption finish. A one gram split of the remainder of the sample was analyzed for 30 elements using Aqua Regia extraction and ICP.

Heavy Mineral Samples

A sample of between 5 gm and 30 gm was panned in the field from two pans of -1.4 cm gravel and one pan of moss. The panned material was placed in 6 mil plastic bags and shipped to Eco-Tech Laboratories Ltd. in Kamloops. A one gram split of this material was analyzed for silver, lead, copper and zinc using wet extraction and atomic absorption. The remainder of the sample was analyzed for gold using fire assay and atomic absorption finish.

B. LITHOGEOCHEMICAL SAMPLING

Approximately 2 kg of rock was collected and placed in 6 mil plastic bags and shipped to Eco-Tech Laboratories in Kamloops. This material was crushed and pulverized to -140 mesh and a 1 assay ton split taken. The split was analyzed for gold using fire assay and atomic absorption finish. Another 10 gm split was analyzed for copper, lead, zinc and silver using wet extraction and atomic absorption finish.

C. SOIL SAMPLES

Approximately 0.5 kg of "B" horizon soil, where available, or talus fines where not, was placed in standard gusseted kraft bag and shipped to Eco-Tech Laboratories in Kamloops. This material was dried and sieved to -80 mesh. A 14 gram sample was analyzed for gold using fire assay and atomic absorption finished. Another one gram split was analyzed for 30 elements using Aqua Regia extraction and ICP.

APPENDIX C

Analytical Methods

ECO-TECH LABORATORIES LTD.
ASSAYING - ENVIRONMENTAL TESTING
10041 East Trans Canada Hwy., Kamloops, B.C. V2C 2J3 (604) 573-5700 Fax 573-4557

GEOCHEMICAL LABORATORY METHODS

SAMPLE PREPARATION (STANDARD)

1. Soil or Sediment: Samples are dried and then sieved through 80 mesh nylon sieves.

2. Rock, Core: Samples dried (if necessary), crushed, riffled to pulp size and pulverized to approximately -140 mesh.

3. Heavy Mineral Separation: Samples are screened to -20 mesh, washed and separated in Tetrabromothane. (SG 2.96)

METHODS OF ANALYSIS

All methods have either certified or in-house standards carried through entire procedure to ensure validity of results.

1. Multi-Element Cd, Cr, Co, Cu, Fe (acid soluble), Pb, Mn, Ni, Ag, Zn, Mo

Digestion	Finish
Hot aqua-regia	Atomic Absorption, background correction applied where appropriate

A) Multi-Element ICP

Digestion	Finish
Hot aqua-regia	ICP

2. Antimony

Digestion	Finish
Hot aqua regia	Hydride generation - A.A.S.

3. Arsenic

Digestion	Finish
Hot aqua regia	Hydride generation - A.A.S.

4. Barium

Digestion	Finish
Lithium Metaborate Fusion	I.C.P.

5. Beryllium

Digestion	Finish
Hot aqua regia	Atomic Absorption

6. Bismuth

Digestion	Finish
Hot aqua regia	Atomic Absorption

7. Chromium

Digestion	Finish
Sodium Peroxide Fusion	Atomic Absorption

8. Fluorine

Digestion	Finish
Lithium Metaborate Fusion	Ion Selective Electrode

9. Mercury

Digestion	Finish
Hot aqua regia	Cold vapor generation - A.A.S.

10. Phosphorus

Digestion	Finish
Lithium Metaborate Fusion	I.C.P. finish

11. Selenium

Digestion	Finish
Hot aqua regia	Hydride generation - A.A.S.

12. Tellurium

Digestion	Finish
Hot aqua regia	Hydride generation - A.A.S.
Potassium Bisulphate Fusion	Colorimetric or I.C.P.

ECO-TECH LABORATORIES LTD.
ASSAYING - ENVIRONMENTAL TESTING
10041 East Trans Canada Hwy., Kamloops, B.C. V2C 2J3 (604) 573-5700 Fax 573-4557

13. Tin

Digestion	Finish
Ammonium Iodide Fusion	Hydride generation - A.A.S.

14. Tungsten

Digestion	Finish
Potassium Bisulphate Fusion	Colorimetric or I.C.P.

15. Gold

Digestion	Finish
Fire Assay Preconcentration followed by Aqua Regia	Atomic Absorption

16. Platinum, Palladium, Rhodium

Digestion	Finish
Fire Assay Preconcentration followed by Aqua Regia	Graphite Furnace - A.A.S.

APPENDIX D

Statement of Costs

STATEMENT OF COSTS

NORTHAIR MINES LTD.
JOB 90BC016
DEVIL'S ELBOW PROJECT

Salaries		
Dave Dunn, Geologist, 8.00 days @ $400/day	$ 3,200.00	
D.Bahrey, Assistant Geologist, 17.00 days @ $300/day	5,100.00	
G.Mowatt, Technician I, 15.00 days @ $300/day	4,500.00	
A.Kriberg, Technician II, 11.00 days @ $250/day	2,750.00	$ 15,550.00
Project Expense		
Project Preparation		3,830.56
Base Map preparation 1:5000 digital manuscript		3,600.00
Mobilization/Demobilization		3,888.85
Domicile 51.00 man days @ $75/day		3,825.00
Geochemistry and Laboratory Service		
Soils		
265 Samples @$1.00/sample preparation	$ 265.00	
265 Samples @$6.75/sample Au Geochem	1,788.75	
155 Samples @$5.50/sample Ag, Cu, Pb, Zn Geochem	852.50	
155 Samples @$4.50/sample As Geochem	697.50	
110 Samples @$7.00/30 element ICP	770.00	
Bulk Stream		
13 Samples @$2.25/sample preparation	29.25	
13 Samples @$5.50/sample Au (A.A.)	71.50	
13 Samples @$5.50/sample Ag, Cu, Pb, Zn Geochem	71.50	
13 Samples @$4.50/sample W. Geochem	58.50	
Rocks		
108 Samples @$3.75/sample preparation	405.00	
107 Samples @$5.50/sample Ag, Cu, Pb, Zn Geochem	588.50	
1 Sample @$6.50/sample Ag, Cu, Pb, Zn, Mo Geochem	6.50	
20 Samples @$4.50/sample W. Geochem	90.00	
23 Samples @$9.41/sample Au Assay	216.50	
87 Samples @$7.25/sample Au Geochem	630.75	
4 Samples @$6.50/sample Cu Assay	26.00	
4 Samples @$6.50/sample Zn Assay	26.00	
Silts		
21 Samples @$1.00/sample preparation	21.00	
21 Samples @$6.75/sample Au Geochem	141.75	
21 Samples @$7.00/sample 30 ICP	147.00	
Fax services 10 pages @$.50/page	0.00	
Freight charges Bus from Smithers	70.46	6,973.96
Helicopter Support		
Helicopter 9.30 hours @$677.16/hour		6,297.56

Field Supplies	1,166.47
Radio Rental .71 month @ $250/month	177.50
Walkie Talkie 4 units @ $5/day/unit 51 man/days	255.07
Expediting	434.98
Government filing (Not including filing fees)	224.00
Accounting, Communications, and Freight	1,074.02
Report Preparation, drafting and compilation	4,000.00
15% Management Fees(Not on Salaries)	5,362.20
TOTAL COSTS	$ 56,660.17

APPENDIX E

Statement of Qualifications

STATEMENT OF QUALIFICATIONS

I, David St. Clair Dunn, with a business address of #1500 - 609 Granville Street, Vancouver, B.C. to hereby certify that:

1. I am a consulting geologist registered with the Geological Association of Canada (Fellow #4943).

2. I am an Affiliate member of the Association of Exploration Geochemists.

3. I hold a B.Sc. degree (1980) in geology from the University of British Columbia.

4. I have been practising my profession as a prospector and geologist for over 20 years.

5. I personally supervised the work on Continental Gold Corp.'s Dev 1 - 4 claims.

6. I do not hold any equity interest in the Dev claims, Continental Gold Corp.; or the Northair Group.

Dave Dunn

APPENDIX F

Kerr, F.A. Second Preliminary

Report on the Stikine River

Area, B.C. G.S.C. 1928, Pt. A
pg 21 - 34

ECONOMIC GEOLOGY

The map-area presents the same general geological relationships as exist in some of the important mining districts at or near the coast—notably Portland Canal, Alice Arm, and Atlin. It lies diagonally across the eastern contact of the Coast Range batholith, the zone to the east of which has long been known to be favourable for the occurrence of mineral deposits. Sufficient discoveries have been made in Stikine area to show that it, also, is well mineralized. Free milling gold has been found on the west bank of the Stikine just north of the contact. In a corresponding position on the opposite side silver-lead-zinc and copper deposits have been worked. Higher up the river on the east side copper prospects (said to be bornite) have also been somewhat developed, and at a few other localities small mineral deposits, mainly of copper, have been discovered.

DEVILS ELBOW DEPOSITS

Situated on a mountain, locally called Devils Elbow mountain, are a number of deposits that have, probably, attracted more attention and been worked more extensively than any others in the area. Devils Elbow mountain is on the east side of Stikine river between Grand rapids and Devils Elbow. The properties are reached by trail from the Jackson ranch on Stikine river, at the mouth of Green (Tsuhini) river. The deposits are distributed over a considerable area. The highest observed occur at an elevation of 3,600 feet, whereas the lowest, about a mile nearer the river, are at 1,800 feet (Figure 1). Similar deposits, which belong probably to the same period of mineralization, are said, on good authority, to occur even higher, and farther from the river, and also at the river itself, giving a distribution of 2 to 3 miles horizontally and about 4,000 feet vertically.

Considerable work has been done on one claim between 2,000 and 2,200 feet elevation. A good trail has been cut and graded to this point. Unfortunately, a fire swept this area in the summer of 1926 and by destroying the vegetation on the steep slopes, left the ground so bare that rain and snow will, probably, obliterate much of the trail. Development at the property consists of numerous open-cuts and three adits in the face of a cliff at 1,980, 2,128, and 2,205 feet elevation. All three are driven approximately north; the lowest (No. 3) is 300 feet long, the middle (No. 2) 60 feet, and the upper (No. 1) 20 feet. Two cabins, one near the adits and the other higher up on the hill, are located on the property. The claims are owned by Peter Hamlin, Dan McShane, and John Bodel of Telegraph Creek, C. A. Ferro of Victoria, and others.

The most important geological feature of the area is the contact of the Coast Range batholith, a granitic intrusion. The strata making up the series into which the igneous rock is intruded are mainly sediments; but the small mass between localities 19 and 20 (Figure 1) appears to be volcanic. On the map the strata are divided according to lithology into two groups; one mainly calcareous and the other mainly non-calcareous. The stratigraphic sequence, from top to bottom of the series, in general conforms with the vertical disposition on the hill-side, the highest beds occur-

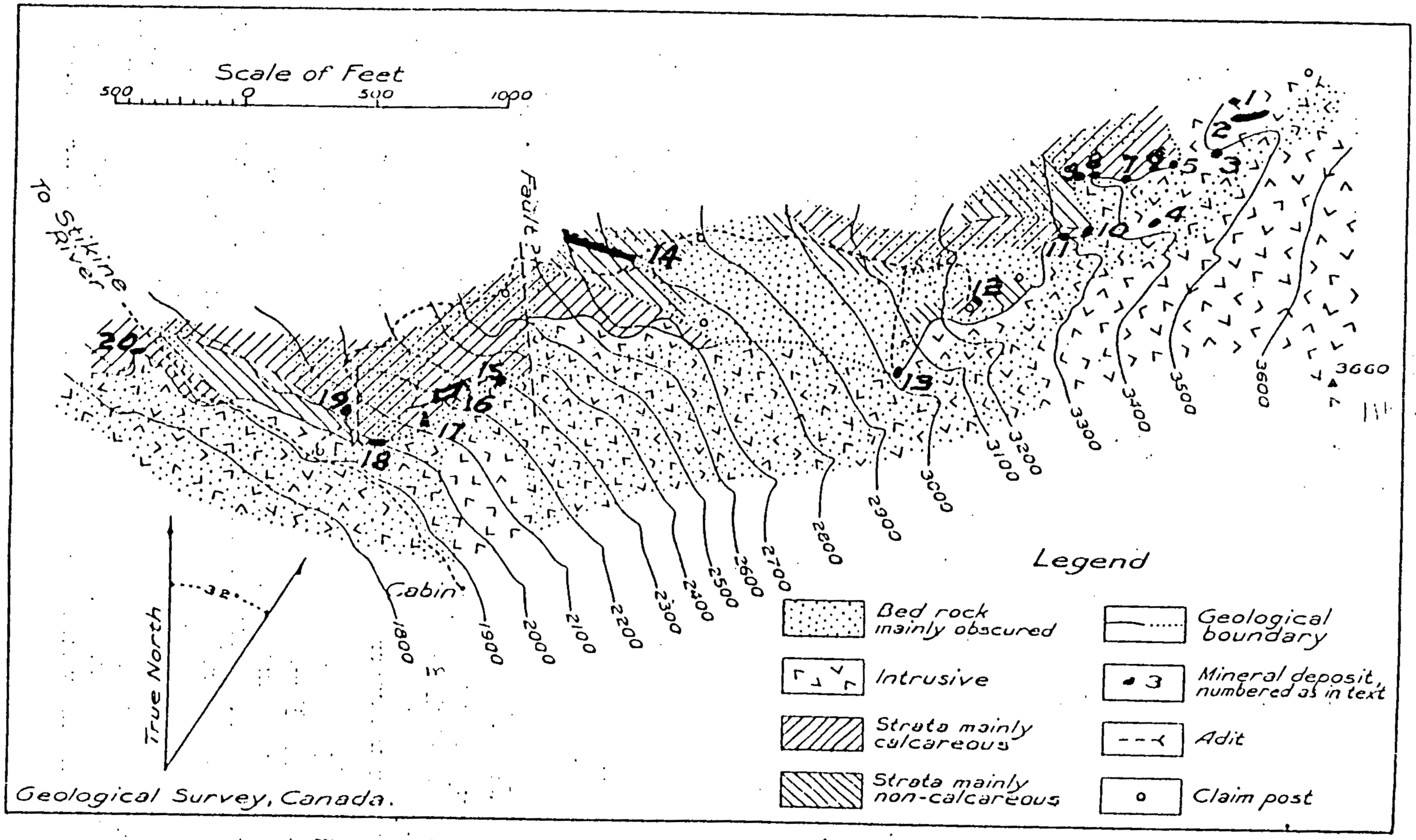


Figure 1. Mineralized area, Devils Elbow mountain, Cassiar district, B.C.

ring on the top to the east and the lowest at the bottom to the west. This, however, is not necessarily a fixed rule, for in some places there may be repetition of parts of the series due to minor folds. The top group, localities 5 to 9, is mainly grey limestone, some of which is massive and some bedded. The purer limestones are crystalline; some which are arenaceous are granular, and others which are argillaceous are compact. The second group is of non-calcareous strata, mainly hard, light and dark grey argillites and quartzites. West of this is a band of calcareous beds similar to the first group; then a wide band, mainly argillites and quartzites, with some calcareous beds. Lower down, in the section that includes the adits, is a great thickness of bedded and massive limestone similar to that higher on the hill. Below this there is exposed a small area of hard, dense, dark green material which closely resembles some of the volcanics of the area. This is thought to lie below all the limestone, being exposed here on the crest of a small anticline, or it has been cut off at its lower contact by a fault. On the opposite side of the river, where the limestone series is well exposed, no very dark band occurs within it, but one does occur at its base. These rocks are all considerably altered. They are much distorted by minor folds and cut by many small faults.

The intrusive is granitic in character, made up largely of feldspar. It is variable in composition and texture. In some places it shows an abundance of hornblende, where elsewhere this mineral seems to be absent. The quartz content does not seem to be constant; in some places it is fairly large. The rock was not examined microscopically. It is not likely that the phases along the contact would be representative of the whole mass. The composition is probably that of a granodiorite. The rock is in the main fine-grained with, in places at the contact, a dark grey aphanitic phase. It is considerably altered, sheared, and faulted. On the upper part of the hill there are numerous small inclusions of sediments in the intrusive.

Both the intrusive and the sediments are cut by dykes, probably acid in composition, which though less deformed than the rock containing them, are also somewhat sheared, faulted, and sinuous.

The batholithic material and the sediments are both considerably altered by dynamic metamorphism. Near the contact and in certain other zones the rocks have been subjected to considerable metasomatism, which will be discussed later. The dykes, though sheared, were not affected in this way.

On the west side of the river, from the top of the hill to the river several miles away, the contact of the granite and of the limestone series, which seems to conform with it, dips about 45 degrees north. The general dip of the contact on the east side of the river is probably about the same. In the area mapped (Figure 1) the dip is northward, but the angle may be greater than 45 degrees. The strike of the limestone formation is slightly inclined to the contact and the dip is somewhat less steep to the north; in other words the beds are truncated obliquely to the strike and dip by the batholith. It is not thought that the present dip of the contact represents the original attitude. The whole appears to have been considerably deformed: the dip in general was probably steepened, and what was originally a fairly uniform and sharp contact has been greatly distorted. Many small faults cut the contact, so that in places sediments and igneous rock are considerably intermixed.

The later dykes filled fractures about at right angles to the strike of the contact. Along these fractures there may have been some movement. Indeed it seems that one dyke occupied a fault along which there was considerable displacement. This has been indicated on the map. A rather pronounced depression cuts the cliff and parallels the westerly sloping hill-side. It is filled with loose material except where exposures of a dyke stand up prominently in the bottom. The absence of altered limestone along the cliff where exposed above locality 15 suggests that the igneous rock is some distance away. If this is correct there must be two abrupt swings in the contact, a feature which might well be the result of faulting. The dykes are themselves sinuous and are displaced by faults.

For 50 feet or more along the contact with the volcanics west of locality 18 there is a breccia zone—angular fragments of volcanics cemented with intrusive material which here, in places, even in the interstices between the fragments, is medium grained.

As previously described the contact is irregular. Also in certain sections mineralizing fluids have considerably altered both the sediments and the igneous rocks, so that the contact is now not very clearly defined. All the deposits observed in the area occur near the contact: most of them are at the contact, but some seemingly lie within the granite and others within the sediments. One deposit (locality 14) appears to be well within the sediments, but at the base of the cut in this deposit, a hard, grey, aphanitic rock is found which is probably a contact phase of the granite. The presence of igneous rock near the surface but away from the main contact may be the result of an original protuberance of the batholith. The deposits at locality 12 and those southwest of the upper cabin which are not indicated on the map are probably of the same nature. The only deposits which clearly occur away from the contact are those in the limestone above the adits (localities 15 to 19).

All the deposits except those of localities 1 to 4 and 13 are in highly altered limestone, or between it and the igneous rock. Those which appear to be wholly within the batholith are of the same type—the sedimentary roof, abundant remnants of which are found in the adjacent igneous rock, having been removed from above the mineral masses by erosion. All are essentially contact deposits.

The shape of the deposits as exposed is more or less indicated on the map, but their size is somewhat exaggerated. They are not continuous. Though overburden may obscure their continuity in some places, in many there are sufficient outcrops to make the relationship clear. Deposits 5, 6, and 7 may possibly be linked together; at locality 14 there is a continuous exposure for 285 feet, and at locality 15 there are two long exposures. Elsewhere the mineral masses seem to be more or less isolated.

There are four different kinds of deposits found in the area: magnetite-pyrrhotite, zinc, lead, and copper. In some places the various kinds are completely isolated, whereas in others two or more kinds may be present intermingled or grading into one another. Deposits 1 to 4, 13, and the base of 10 are of the magnetite-pyrrhotite class; 5 to 12, 14 to 18, and 20 are of the zinc, lead, or zinc-lead class; 19 is of the copper class.

Magnetite-pyrrhotite occurs in solid mineralized masses (lenses) at the contact. On casual inspection these would seem to be made up of only the two minerals. However, there is some pyrite apparent and analyses show small percentages of copper and lead which are probably present as chalcopyrite and galena. Also there is some gangue: quartz, garnet, epidote, and other silicates. The percentage of each of the metallic minerals is variable, not only in different deposits but within the same deposit. In places there are fairly large, irregular masses, as much as a few feet across on the exposed surface, which appear to be almost entirely coarsely crystalline pyrrhotite; elsewhere there are similar masses of coarsely crystalline magnetite. In some places there is an intermingling of smaller masses and again of fine grains of the two minerals. Pyrrhotite is found in places as distinct veins cutting the magnetite. Pyrite occurs in relatively small, irregular masses with both of the other minerals. Gangue is present in varying amounts, probably not exceeding 50 per cent anywhere. It occurs either in small, irregular masses, rarely exceeding a few inches in diameter, or as fine grains. Altered sediments which are closely associated with the mineral masses resemble the gangue and are probably made up of about the same minerals and have the same origin.

Deposits of the magnetite-pyrrhotite type appear to lie directly on the igneous rock or in it, rather than in the sediments. Altered sediments are generally found associated with these, though in some places the mineralized masses seem to occur as lenses in the granite itself. All the deposits are covered with an iron cap—a few inches of rusty brown material, largely limonite and gangue minerals. Their size is not very great; the largest exposed is probably not much more than 50 feet long and only a few feet thick. None of them would seem to have any economic value at present.

Deposit 1 has not been opened up. There is a small exposure of iron capping such as occurs over the other deposits, and broken pieces show similar mineralization.

Deposit 2 has an iron cap, the shape and size of which is shown roughly on the map (Figure 1). This deposit has been opened by a small cut a few feet wide and just deep enough to show the character of the mineralization which has no noteworthy features.

Deposit 3 is similar to 2. Deposit 4 is somewhat larger than the first three described and is opened up by a cut about 4 feet wide and of the same depth. The deposit has an iron cap similar to that at 2. In the base of the cut there is exposed what appears to be mainly magnetite. An analysis of this by the Department of Mines, Ottawa, showed no zinc or lead, 0·09 per cent copper, and 0·07 ounce of silver per ton. Another sample, of which the owners had an analysis made, carried no values, but one taken from above the magnetite, of altered sediment or gangue-like material, is said to have carried about $5 in zinc. The depth to which this and the other small deposits extend is not known, but it is unlikely that it is greater than the length and probably it does not exceed 20 feet in any of these deposits. Each deposit can be seen to be fairly well surrounded by igneous rock, with some small masses of sediments. Other small deposits of the same nature probably occur in the vicinity of the known deposits; their presence in some cases may be already indicated by exposures of iron cappings.

At the base of deposit 10 there is exposed about 1 foot of magnetite-pyrrhotite. Deposit 13 is exposed by an open-cut about 50 feet long and 2 to 3 feet deep. Near the centre of the cut and just beyond either end there are exposures of the batholith. Just above the cut and even at several places in the cut there are sediments and altered sediments. The total length of the deposit along the direction exposed is not much over 50 feet and its thickness though variable probably does not average more than a few feet. The width of the body is probably not very great. In the deposit there are large exposures of both magnetite and pyrrhotite in irregular masses. Some of the latter has a peacock tarnish which gives it somewhat the aspect of chalcopyrite. Two samples from this deposit, which the owners had analysed, showed no values.

Galena and sphalerite usually occur intermingled or closely associated, though in a few places one alone is present. They show little intermingling with the magnetite-pyrrhotite deposits, though in places they are very closely associated. In such places they always occur on the side away from the igneous rock. The mineralization is generally in the sediments, at or near the contact. Some deposits are clearly replacements of the sediments by gangue and sulphides—either selectively along the bedding or in masses regardless of bedding, or by dissemination. Others which appear to be lenticular bodies of gangue and sulphides lying between the igneous rocks and the sediments are probably of the same type, but in them replacement has proceeded so far as to destroy any evidence of the previous existence of any other kind of material. The sulphides occur irregularly in the gangue. In some places they are disseminated through it in small crystals. Galena is more commonly found in this form than sphalerite. In many instances the crystals are more abundant along definite lines, creating an effect somewhat similar to veins. More often, however, the concentration of the sulphides is in irregular masses. These are generally small—of only a few inches in thickness and of somewhat greater length. No large masses of solid sulphides were noted. As a consequence of the irregularity of distribution, values are greatly variable. Sampling on a small scale is, therefore, not very reliable as an indication of what a mineralized mass may average.

The gangue associated with the galena and sphalerite is similar to that with the magnetite and pyrrhotite. It is mainly green; though in the adits it is brown. Whether or not this difference in colour is due to weathering was not determined. The gangue is made up mainly of quartz, garnet, and other silicates.

Deposits 7, 8, 9, 10, 11, and 20, and that in the cut southwest of deposit 10, are clearly at the contact. Deposits 5, 6, 12, and 14 also are probably at the contact. Deposits 15, 16, 17, and 18 are all probably within 100 feet of it.

The rock at deposits 5 and 6 is largely obscured. In both cases there are only a few square feet of iron capping exposed. Material broken from this though badly weathered shows some galena. These deposits are probably similar to 7, 8, 9, or 10.

Deposit 7 is similar in extent of exposure to 5 and 6, but is opened up by a small cut about 3 feet wide and 1 foot deep. Rock of the batholith is exposed a few feet away from the cut. The material taken from the cut is badly weathered, but shows some scattered galena. No accurate knowledge of the size or value of the deposit was obtained, except that toward the batholith it does not extend farther than the few feet between the cut and the igneous rock exposed. It is probably comparable in size and nature to 8, 9, or 10.

Though deposits 5, 6, and 7 may be continuous so far as it is possible to judge from the exposures, it is not likely that they are—in fact it seems probable that they are similar in this respect to 8 and 9, and 10 and 11.

At deposit 8 there is a fairly large cut about 5 feet wide and deep. In it there is mineralized altered strata over a width of about 5 feet, from the contact in the southeast corner where igneous rock is exposed to the top at the face of the cut where unaltered or slightly altered sediments occur. The rock in the face, except at the top, as well as that on both sides of the cut, is mineralized. That beyond the cut on either side is partly obscured, but although the relationships along the contact are not entirely clear it seems that the mineralized mass does not continue for more than a few feet on either side. Between deposits 8 and 7 where the contact is exposed in places there is no distinct iron cap, which would seem to indicate a lack of continuity of these deposits. Deposit 8 is made up of a massive body of gangue and sulphides, irregularly shaped and as much as 4 feet thick, and selectively replaced beds. It would appear that the former is a more highly developed stage of the latter. Above the mineralized section the bedded limestone is apparently not greatly altered. The distribution of the sulphides, both galena and sphalerite, is irregular. The massive body of gangue and sulphides which lies adjacent to the contact is not always richer than the selectively replaced beds which are farther from the contact, although in the outer part of this zone there seems to be a tendency toward impoverishment with increase of distance from the igneous rock. Two analyses from this deposit gave:

—	Silver (ozs. Troy per ton of 2,000 lbs.)	Lead %	Zinc %	Copper %
Centre of deposit	6·08	6·03	9·51	none
Top of deposit	5·23	7·24	7·63	trace

Deposit 9 is somewhat similar to 8, but is not as highly mineralized. The rock is fairly well exposed for a few square yards, but owing to distortion and shattering of the beds the relationships are not clear. Practically no development work has been done on it. There are a few small, rusty spots and some mineralized material has been broken out, but the rock appears to be mainly unaltered or slightly altered. It seems that there may be a slight general mineralization with some small masses which may be similar in content to the samples from deposit 8. No definite mass like that at 8 or 10 could be outlined. The deposit does not appear to be continuous with 8, though there may be patchy mineralization in between. In the direction away from 8 there is nothing that would seem to indicate that it is continuous for any distance.

Deposit 10 and that of the cut southwest of it are similar to 8, but the mineralization seems to be confined more to a narrow, lens-like mass or masses. The openings at these two deposits are about 2 to 3 feet wide and 3 to 4 feet deep. In the unnumbered deposit the contact can be seen, whereas in the other no igneous rock is exposed. In both, the mineralized masses occur in bedded limestone which in places is partly altered and may contain some sulphides. On one side of the southern of the two cuts the lens peters out in 1½ feet from a thickness of 8 inches, whereas on the other side 3 feet away it is about 2 feet thick. It is also exposed in the face of the cut and probably has a dip in the direction in which the cut has been driven. The other cut exposes a similar mass. In the side the mineralized body can be seen cutting across the bedding. It clearly comes to a blunt point toward the outer edge of the cut and dipping in the direction in which the cut is driven thickens fairly rapidly. The mineralized bodies in both cuts are similar to the more massive material in 8, except that some magnetite-pyrrhotite is exposed at the base of 10. Between these cuts and north of deposit 10 the limestone in places is altered and there are small exposures of iron capping suggestive of underlying mineral bodies which might be continuations of those exposed, or separate masses. The sulphides seem to be confined to very small lenses, with possibly some scattered mineralization beyond.

—	Silver (ozs. Troy per ton of 2,000 lbs.)	Lead %	Zinc %	Copper %
Analysis of sample from 10	5·94	2·29	3·99	trace
Sample from cut southwest of 10	14·88	18·85	10·11	trace

Deposit 11 is similar to 9, and its relationship to the two just described is akin to that of 9 to 8. The contact is shattered; there is no definite sulphide-bearing body, but there is some scattered mineralization that appears to be mainly galena. It is probably comparable to the mineralization which occurs beyond the definite lens-like masses previously described. Beyond deposit 11 toward 10 the contact is exposed, but there is no definite mineralization, which shows that the masses found to the north are not continuous southward for any great distance.

At locality 12 galena occurs in a few small, stringer-like masses. These are not over 1 inch thick. Only a little of this material is exposed in loose blocks taken from a cut in which the rock is in part at least altered limestone.

Southwest of locality 12 there is mineralization over a small area which is not indicated on the map. The rock, which is badly weathered, appears to be an altered limestone. Some galena can be seen even in the much rusted surface material. This deposit is probably somewhat similar to 12, also to 11 and 9, with the igneous rock lying close below the surface.

Deposit 14 is similar to 8 and 10. Both sphalerite and galena are present, but they are not so closely intermingled as in some other deposits. The sphalerite occurs at the base of the deposit, which is thought to be in contact with igneous rock, and the galena above. There is a lens-like body with some scattered mineralization as at 8 and 10. The scattered mineralization, which appears to be mainly galena, can be traced on the surface for some distance. The band appears to be about 2 feet wide.

Silver (ounces Troy per ton of 2,000 lbs.)	Lead	Zinc	Copper
	%	%	%
1·07	none	21·04	trace
8·10	7·6	16·2	

Deposits 15, 16, 17, and 18 can best be described as a group. The limestone cliff into which the two upper adits are driven shows in the main a light grey surface. Across the face of it, however, are some irregular, dark patches. Owing to its precipitousness these could not be examined in detail. The upper patch as shown on the map was examined at locality 15, where it is about 4 feet thick. At this point it was found to be made up of highly altered and mineralized material which is similar to that found in the deposits higher on the hill. Analysis showed the surface portion, which is somewhat weathered, to carry:

Silver (ounces Troy per ton of 2,000 lbs.)	Lead	Zinc
	%	%
1·15	1·04	1·19

On the western part of the lower large patch there is a small cut. This shows mineralization which appears to be considerably richer than the specimen from 15 and is said to carry values similar to those of other deposits tested. The thickness here appears to be less than 2 feet. The patches apparently represent exposures of irregular, mineralized bodies. The maximum thickness of any body exposed is less than 6 feet. The length and shape are shown on the map. The dip is not known. If it follows that of the bedding, of which there is some slight suggestion, it would be steep north. The strike of the deposits across the face of the cliff seems to follow roughly the bedding. The character of the material in these masses resembles, probably, that found in the lenses already described, but since they occur at some distance from the contact there may be some differences. The downward extension of the mineralized bodies exposed on the surface may be cut in the adits, but as little is known of their dip and they are extremely variable in shape and extent, it is, therefore, hazardous to draw any definite conclusions from the available data.

Of the three adits driven in this limestone that at locality 16 is located on the original discovery; the others were driven to cut the "vein" at depth. At locality 16 masses of quartz and other gangue minerals, with chalcopyrite, sphalerite, and galena, have been developed irregularly as if along fractures, leaving boulder-like masses of unaltered, or slightly altered, crystalline limestone. The distribution of sulphides is irregular. They occur as very small masses scattered through the gangue or altered limestone, which here is light brown rather than the green that characterizes most of the other deposits. Drifts of a few feet east and west and a winze (which was full of water) apparently failed to show more consistent mineralization. A picked sample from here was analysed.

Silver (ounces Troy per ton of 2,000 lbs.)	Lead	Zinc
	%	%
47·46	4·99	21·73

The copper, lead, and zinc contents probably differ greatly in the various small masses. The deposit differs from those elsewhere, although it may be the downward extension of one of the bodies exposed on the surface of the cliff just above the adit. The mineralization seems to be comparable to the selective replacement along bedding planes, but here replacement has occurred along other lines, possibly so induced by fractures.

The walls of the adits at localities 17 and 18 were covered with dirt and no accurate data could be obtained from them. In the adit at locality 17 there are fairly broad zones which are entirely altered. Quartz-chalcopyrite and quartz-galena-sphalerite mineralization were noted in zones several feet thick. It is said that zinc, lead, and copper occur in bands, in the above order. A number of specimens were taken from a mineralized zone about 10 feet wide, and analysed.

Silver (ounces Troy per ton of 2,000 lbs.)	Lead	Zinc
	%	%
0·34	0·36	0·66

By picking a number of small pieces from across the zone it was hoped to get some idea of its value. The result, however, may be too low. The mineralized zones appear to be mainly altered limestone with sulphides confined more or less in bands. This is suggestive of selective replacement along the bedding. These zones may be continuous with the mineralized bodies exposed on the face of the cliff above the adits.

In the adit at locality 18 there is said to be no mineralized zone similar to that in the other two, but there are some narrow zones, one of which occurs at the face. These narrow bands may correspond to the thicker bands noted in the other adits and exposed on the surface. The surface showings, also, narrow toward the west. A short distance from the portal there is some black, slate-like material mineralized with galena and chalcopyrite. This is of an appearance somewhat different from the other bodies, but whether the sulphides occur in the slate or in adjacent calcareous beds is doubtful. The sulphide-bearing rock in the dump is similar to that found in other adits. Both galena and chalcopyrite were noted. The rock in the adit is in part slate or argillite and quartzite. It is cut by several faults which, though striking at various angles, mainly parallel the adit. Their dip varies, but is, in general, steep.

The whole section represented on the surface by the area between localities 15, 16, 19, and the cut above this last point, and penetrated below the surface by the adits, is more or less mineralized. The zone of which it is a part seems to parallel the contact of the batholith and to extend not much more than 100 feet from it. In this zone an irregular distribution of altered limestone carries sulphides confined to somewhat definite, but irregularly shaped, bodies, some of which are exposed on the surface and follow the bedding. Besides these definite bodies there are scattered sulphides, such as occur in the adit of 16. Although there are fairly good sulphide concentrations in the mineralized parts, as shown by analysis of the sample from the adit at 17, it is probable that the average for the whole zone would be low.

Deposit 20 is similar in size and character to 10.

Deposit 19, which is the only one designated as of the copper class, is a mineralized lens in bedded limestone. It is the only deposit that shows a relative abundance of copper. In an irregular mass of altered limestone similar to those at 8, 10, and other localities, there is a lens-like body which appears to be largely chalcopyrite. This is small and does not seem to exceed a few feet in any direction. Associated with it in the altered limestone mass, which has a maximum thickness of about 6 feet, are galena and sphalerite. Except for the chalcopyrite the deposit resembles those at 8, 10, 14, and other localities higher on the hill.

All the deposits of the copper, lead, and zinc classes occur apparently at the contact with limestone or in limestone, though in many places the gangue or altered rock in no way resembles the original. No definite evidence of mineralization was noted in the argillites, quartzites, or volcanics, and they do not seem to have been altered as was the limestone. The rock of the batholith near the contact in mineralized areas is rusty. It contains in places considerable pyrite, and appears to have been somewhat altered by the mineralizing solutions. No deposits seem to have been formed wholly within the igneous rock.

The sulphides are accompanied in most places by a green rock which is used by the prospector as a criterion for the location of the deposits. This material is probably largely the result of alteration by the mineralizing fluids, though in some places it has the appearance of having been introduced into cavities as a dyke or vein, which has led the miners to refer to the masses as dykes. It occurs both as a gangue for the sulphides and beyond them, and in places where there are practically no sulphides at all.

Mineralization is undoubtedly associated with the batholith. The mineralizing fluids were, probably, a final differentiate from the intrusive. They seem to have migrated to some slight extent along the contact before precipitation took place. The presence of magnetite and pyrrhotite indicates that while these were being deposited, the temperature (and pressure) was probably high. The sphalerite lies beyond these minerals and the galena beyond the sphalerite—that is, farther away from the igneous rock. The method of deposition is mainly by replacement of the limestone, which was more susceptible to alteration than the other rocks; hence the deposits are confined to this material. The mineral-bearing fluids were highly siliceous. Silicification of the limestone with the development of quartz, garnet, epidote, wollastonite, and other minerals, accompanied the mineralization. However, in some places these changes took place without the deposition of sulphides, either because in certain sections the solutions failed to deposit their sulphides, or they carried none. If the former was the case the altered barren zones might be traceable to mineralized masses; at any rate they can be considered as probably indicating deposits nearby.

Silver is found with both zinc and lead, but bears no very definite relationship to either. Pyrite is not abundant, but occurs with some of the magnetite-pyrrhotite deposits.

The mineralization is patchy. Although there are deposits at many points along the contact, the greater part of them show no mineralization. The face of the hill-side must be considered as affording as good a cross-section of the zone likely to be mineralized as any that may be developed by underground exploration. The lack of continuity of mineralization at the surface seems to indicate that the exposed individual deposits are probably not continuous for any great distance below the surface. It might be possible, however, to outline and trace to some depth a zone such as that between localities 15 and 18 or between localities 5 and 9, in which there are numerous mineralized sections, and, therefore, in which mineralization may be expected to continue. To assume that deposits reoccur at depth in such a zone would, of course, be extremely hazardous; definite knowledge of the extent or richness of the zone can be ascertained only by thorough exploration. There is no reason to suppose that the deposits will be richer or more extensive at depth. If the structure is such that at depth, along the contact, the limestone is replaced by other rocks, then it seems probable that the deposits, too, would end.

Considering the visible extensive mineralization it is not unreasonable to expect that, somewhere, large deposits exist, but whether they do exist, and where, can be ascertained only by further exploration. Nothing as yet observed points very definitely to their location. The two zones described above (15 to 18 and 5 to 9) seem to offer the best location for any underground exploration. The old workings, including the three adits and the several small cuts, can hardly be considered as testing fairly the deposits at depth. As the mineralized zone tends to parallel the contact and, therefore, in general has a steep dip north, the horizontal drifts diverge from it at a considerable angle and hence prove nothing very conclusive. However, the fact that some mineralization occurs at the end of the long adit may indicate that below this point, nearer the contact, more extensive mineralization exists. Later explorations, on claims higher on the hill, have been well planned. An attempt has been made to follow the mineralization on the surface and open it up by small cuts. Unfortunately, much time was spent on the small deposits isolated in the igneous rock, which, probably, have little or no value.

In future exploration an effort should first be made to fix the location of the contact and to work from that into the sediments, more particularly the limestone. But the other sediments should not be overlooked as they may contain veins. It is reported that on the Apex, higher up the hill, a vein was discovered. Snow prevented a visit to this property. The deposit there is said to be some distance from the contact, distinctly vein-like in character, and of considerable size. Analysis of a picked sample from this gave:

Silver (ounces Troy per ton of 2,000 lbs.)	Lead
	%
138·60	58·0

If the information in regard to this discovery is correct it would seem to have greater possibilities than the others. Any underground exploration of the two most favourable zones should follow the contact as far as possible, either by means of adits driven about northeast or by slopes with a dip corresponding, as far as possible, to that of the contact. In either case the workings would thus be confined to the zone likely to be mineralized, and the small individual deposits discovered could be stoped out to such a distance as their size and value warranted.

OTHER PROPERTIES

Within the map-area there are several other prospects that have been worked, but none of these was visited in 1926.

Considerable placer mining was done on the bars of the Stikine in the early days. Some yielded very good returns. The Clearwater (Chutatine) also has yielded some gold and continues to do so. Reports indicate that last summer about 15 ounces were taken out. Two separate outfits plan to test sections along this river during the summer of 1927.

CONCLUSION

There are undoubtedly certain sections within the map-area that warrant the consideration of the prospector. There is a broad zone bordering the Coast Range batholith in which there are numerous small satellites either exposed on, or indicated to be close to, the surface. This whole zone is worth careful prospecting. The known deposits occur in various kinds of rock: Devils Elbow prospects mainly in limestone; the Fourmile (Cataline) Creek copper deposit in volcanics; Stikine River gold in volcanics or non-calcareous sediments; and bornite in the Bear (Tsikhini) Creek intrusive. Any of the various types of sediments and volcanics may carry mineral deposits and even parts of the plutonic masses which have been re-intruded have possibilities. Except for the testing of stream gravels for placer gold the area does not seem to have been very thoroughly prospected. Fairly good transportation facilities are available. Stikine river forms a means of entering the area and could be used for export of ores. Though the country on either side is very rugged, there are long, wide valleys that penetrate it and may afford suitable locations for roads or railways. The area is not one that can be easily prospected. Trails are scarce; travel very difficult; the climate is rigorous, and precipitation is heavy. The obstacles are great, but the possibility of reward appears to warrant the effort to overcome them.

APPENDIX G

Soil Sample Lines - Devils Elbow

Soil Sample Lines - Devil's Elbow

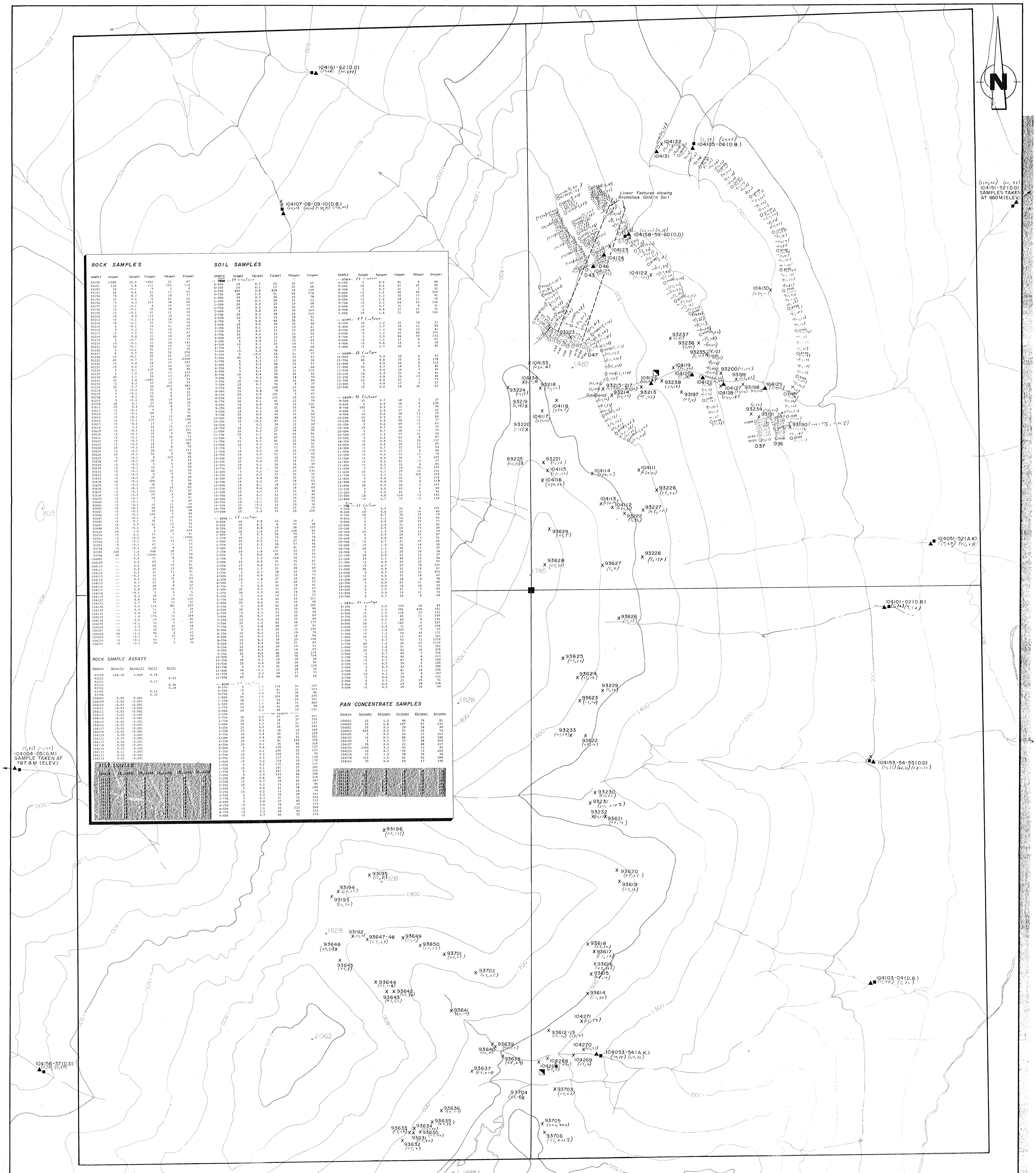
Three soil lines were contour sampled on the Devil's Elbow property at 1) 4,600′ 2) 4,000′; and 3) 3500′ between two creeks with promising initial gold results.

Soil line 1) at 4,600′ feet is above tree line except for some small sections of scrubby spruce trees. The terrain from 0+00N to 4 + 50 N is relatively flat and easy to traverse. The section from 0+00N to 2+50 S is cliffy & awkward to traverse. The ground itself is covered with moss & low scrubby bush. The soil is not well developed. The samples were a brown to brown - red in colour; coarse grained with 15% small rock chips present, and were taken at 15 - 30 cm below the surface.

Soil line 2) at 4,000′ is below tree line. The topography is not terribly steep and the trees are generally spaced enough to allow fairly easy walking. The line extends from 0+00N to 11+50 N. The soil tended to be brown & gravelly, but was also a grey-gravel where it appeared to be less well developed. Average sample depth would be approximately 20 - 25 cm below the surface. The graduation between a B & C horizon was not clear and mostly the samples appeared to be taken just above or at bedrock.

Soil Line 3) at 3500′ extended from 0+00N to 17+00N. The terrain was steep with a profusion of tight small spruce trees and deciduous trees with a decided prediction for helping one down the hill quickly and most appropriately named: slide alder. At the northern end of the line (15+50N to 17+00N) there is a large patch of blown down trees which could relatively easily be cleared to allow helicopter access; besides this area there is now here at present to land a helicopter. The soil was best developed on this line. A humous - like A horizon generally existed with a Brown dirt sample lying beneath it with some gravel (5%) present. Kids, this line should not be attempted at home. It has taken years of experience to be able to attempt such a traverse; so don't try this in your back yard or up on the roof. It's not as easy as we make it look.

G. Mowatt
Chief Soil Technician



LEGEND

- open water
- creek
- 1835 elevation in metres above mean sea level
- 1400 contour (interval: 100 m)
- L.C.P. (located)
- ▲ Pan concentrate
- ■ silt
- ○ soil
- x rock
- claim boundary
- fly camp

93646 Sample Number
(45, 30) (Au ppb, Cu ppm)

A.R. 20465

0 50 100 200 300 400 500 metres

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DEV PROJECT

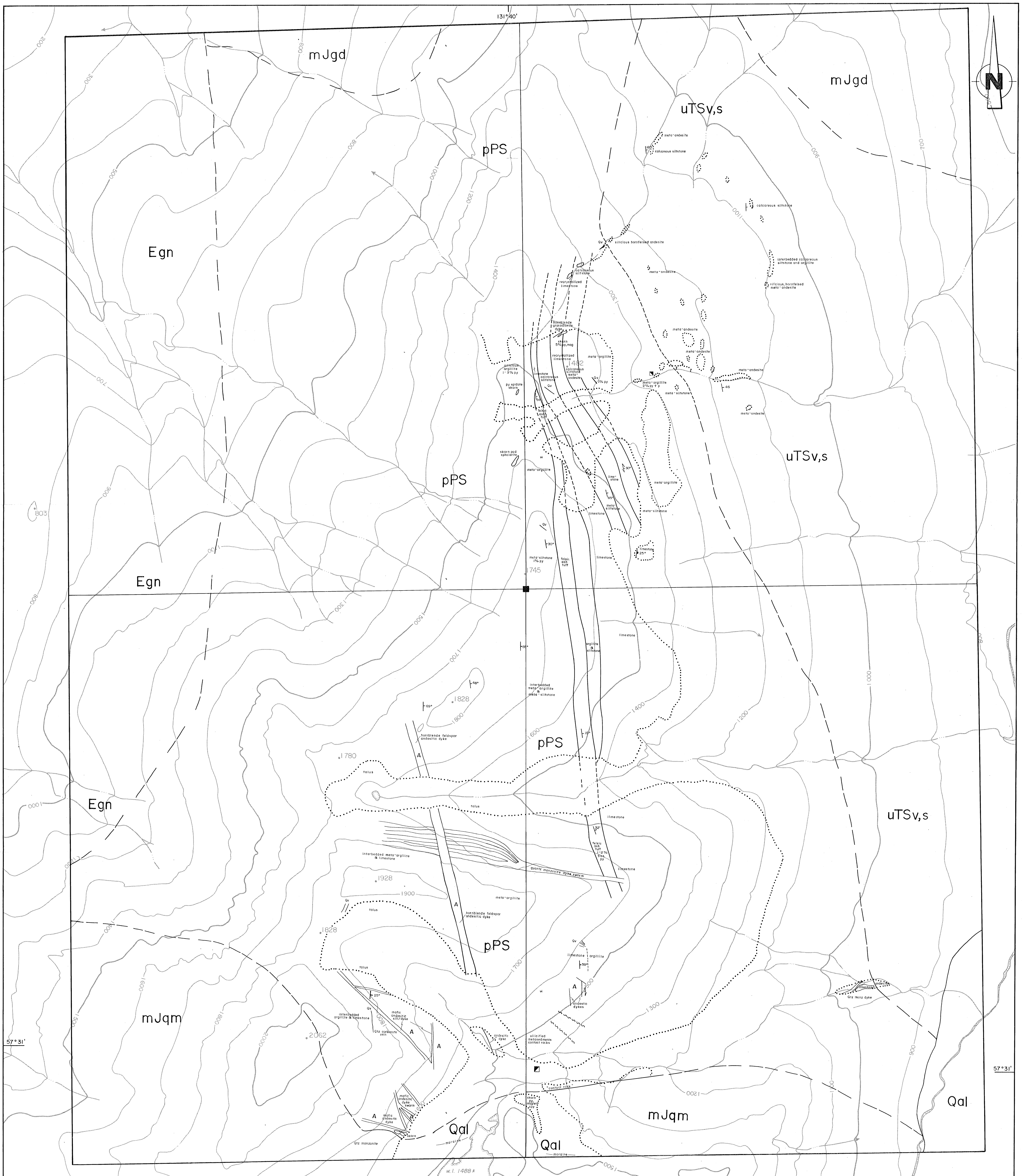
LIARD M.D., B.C.

SAMPLE LOCATION

SCALE: 1:5,000 | N.T.S.: 104 G/12 | MAP No.: 2

DATE: Oct. 1990

HI-TEC RESOURCE MANAGEMENT LTD.



LEGEND

	open water
	creek
.1835	elevation in metres above mean sea level
1400	contour (interval: 100 m)
	L.C.P. (located)

QUATERNARY

Qal	Glacial till and unconsolidated alluvium

EOCENE

Egn	Granite
A	Andesite dyke

JURASSIC

mJgd	Granodiorite
mJqm	Quartzmonzonite

UPPER TRIASSIC

uTSv,s	Stuhini Group: Meta-andesite, minor interbedded calcareous siltstone and argillite

PERMIAN OR OLDER

pPs	Meta-argillite, metasiltstone, recrystallized limestone

SYMBOLS

- Faults (defined, approx.)
- 45 Joints
- 85 Strike / dip
- Contact (defined, approx.)
- Outcrop
- 80 Foliation
- Fly camp

GEOLOGICAL BRANCH
ASSESSMENT REPORT

20,465

A.R. 20465

0 50 100 200 300 400 500 metres

NORTHAIR MINES LTD.

DEV PROJECT
LIARD M.D., B.C.

GEOLOGY

HI-TEC RESOURCE MANAGEMENT LTD.

SCALE: 1:5,000	N.T.S.: 104 G/12	MAP No. 1
DWN. BY:	DATE: Oct. 1990	
CHKD. BY:	PROJECT No:	FILE No: