81-A824-9614

REPORT ON ROCK CHIP SAMPLING OF

SPHAL 7-12, 19-33,

KIM 1-10, 38, 40 and 42

SPHAL FRACTION

LIARD MINING DIVISION

NTS 104 G/3W

131°20' Longitude
56°03' Latitude

Owner: Silver Standard Mines

Operator: Teck Explorations

Peter G. Folk, P. Eng.

October 13, 1981

TABLE OF CONTENTS

INTRODUCTION

i) Location and Access

The Sphaler Creek property is located in the Stikine River drainage astride Sphaler Creek within the Coast Mountains. The approximate centre of the property is 131°20' longitude and 56°03' latitude.

Access is by helicopter only, from Schaft Creek, 30km to the northeast, which is serviced by fixed wing aircraft from Terrace, about 300km to the southeast.

Topography is rugged with Sphaler Creek in a V-shaped valley being heavily wooded at the bottom with the tree line at 4,000'.

ii) Property Definition

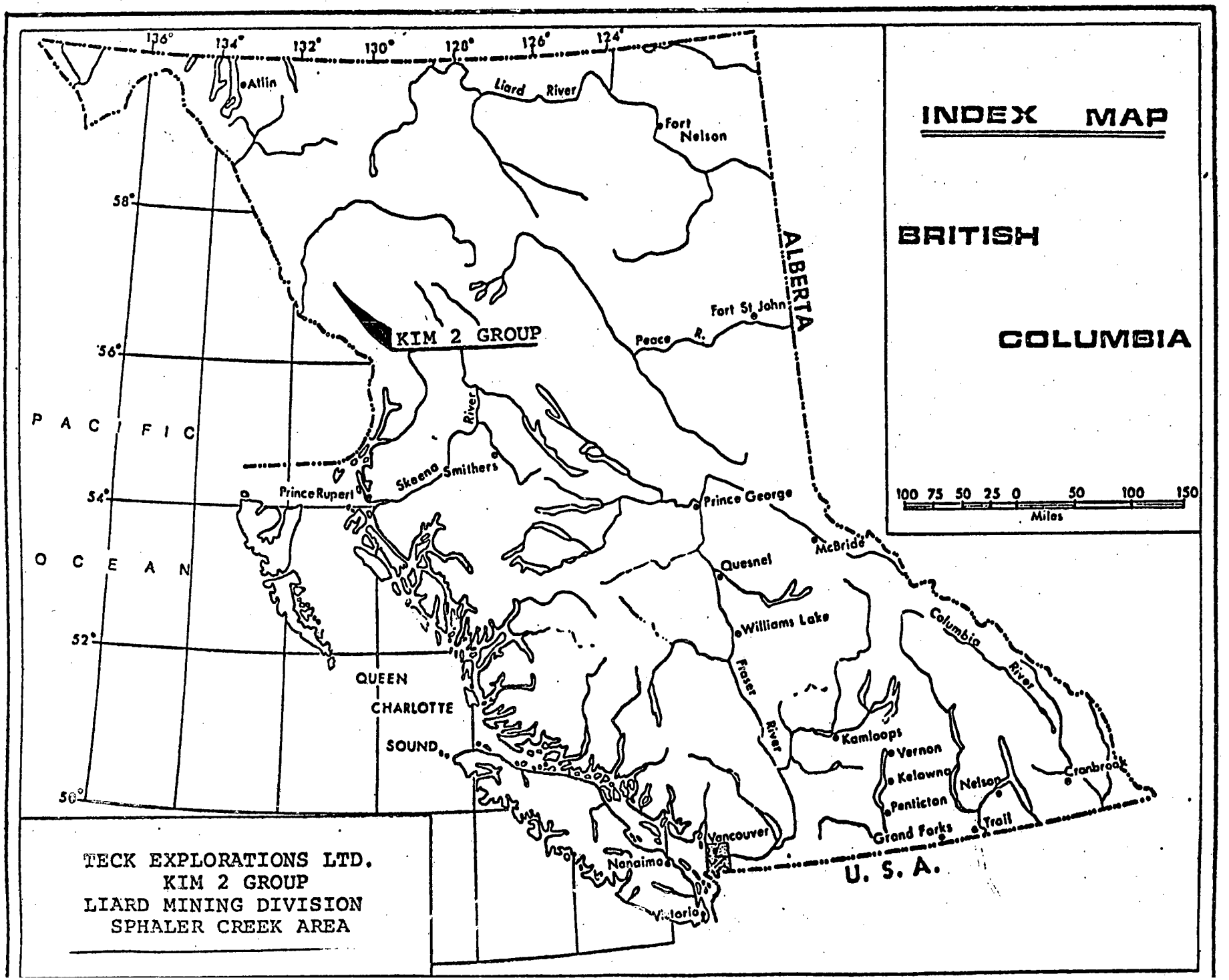
The Sphaler Creek property consists of the following claims owned by Silver Standard Mines and operated by Teck Explorations:

Claims	Record Numbers
Sphal 7, 8, 9, 10, 11, 12	32673, 74, 75, 76, 77, 78
Sphal 19-33	32681-95
Kim 1-10	11318-27
Sphal Fraction	32700
Kim 38, 40, 42	48662, 64, 66

The property has a number of chalcopyrite showings over an area of approximately 5km long and 1.5km wide. Locally these showings grade up to 2.45% Cu over 18m widths. Potential exists for "porphyry-copper" type ore deposits.

Some marketable timber exists on the valley floor but is presently far removed from active logging operations.

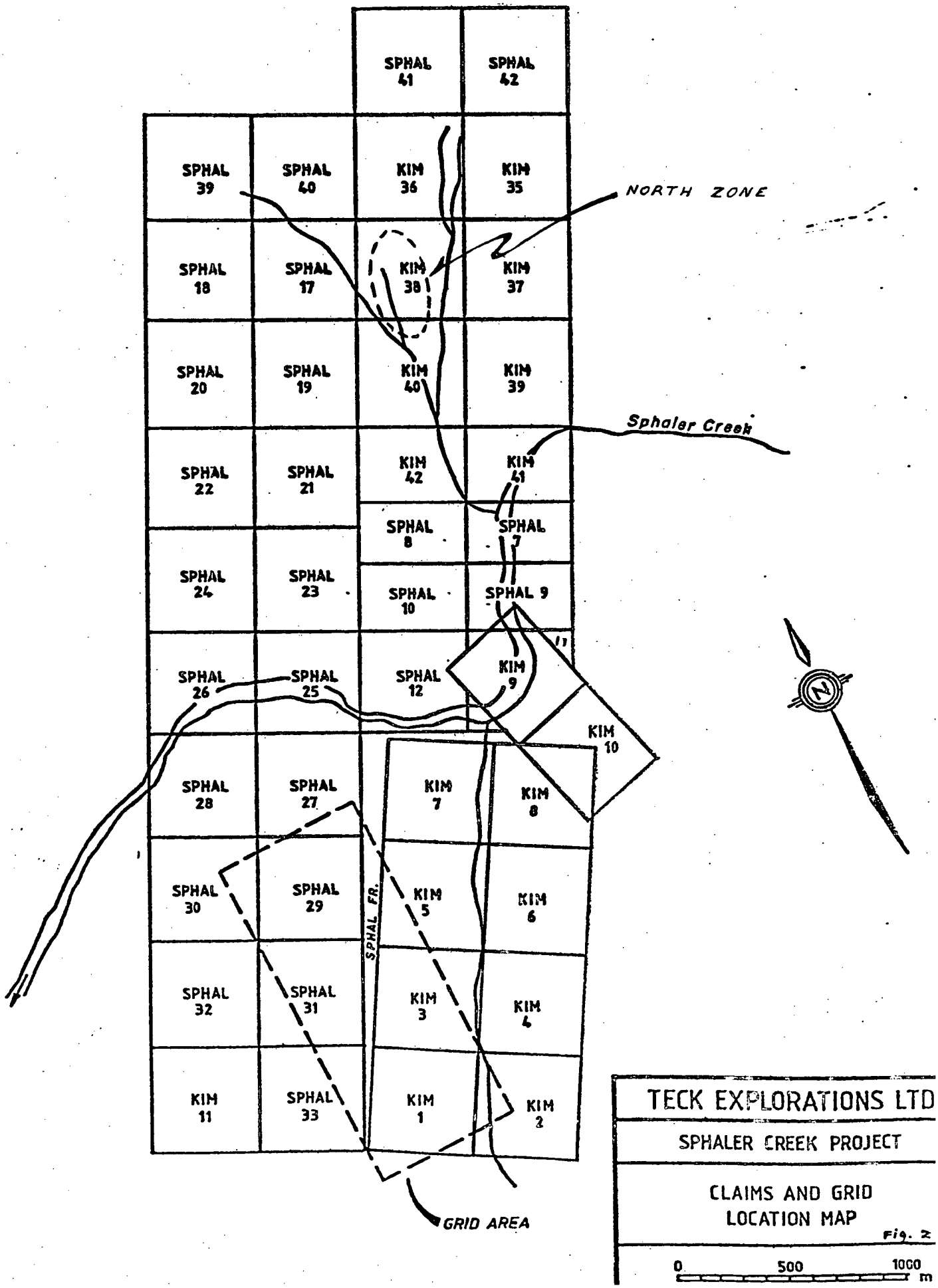
The property was staked by the Bik Syndicate and Kennco in 1962 and 1963. During 1963, a small crew spent a month prospecting, chip sampling and silt sampling the property.



TECK EXPLORATIONS LTD.
KIM 2 GROUP
LIARD MINING DIVISION
SPHALER CREEK AREA

Fig. 1

Fig. 2


SPHAL 41
SPHAL 42
SPHAL 39
SPHAL 40
KIM 36
KIM 35
NORTH ZONE
SPHAL 18
SPHAL 17
KIM 38
KIM 37
SPHAL 20
SPHAL 19
KIM 40
KIM 39
Sphaler Creek
SPHAL 22
SPHAL 21
KIM 42
KIM 41
SPHAL 8
SPHAL 7
SPHAL 24
SPHAL 23
SPHAL 10
SPHAL 9
SPHAL 26
SPHAL 25
SPHAL 12
KIM 9
KIM 10
SPHAL 28
SPHAL 27
KIM 7
KIM 8
SPHAL 30
SPHAL 29
SPHAL FR.
KIM 5
KIM 6
SPHAL 32
SPHAL 31
KIM 3
KIM 4
KIM 11
SPHAL 33
KIM 1
KIM 2
GRID AREA
N
TECK EXPLORATIONS LTD
SPHALER CREEK PROJECT
CLAIMS AND GRID LOCATION MAP
Fig. 2
0
500
1000
m

In 1964, seven men spent three months geological mapping, trail cutting, hand trenching and chip sampling.

In 1965, about 3km of ground magnetic and induced polarization surveys were carried out.

During 1970, detailed geological mapping and diamond drilling was carried out. Seven holes were drilled totalling about 1,600' using AX equipment.

During the 1980 field season, a flagged grid was run over the "camp" showings which occur at the tree-line on the south side of Sphaler Creek. Employees of Teck Explorations Limited then mapped the grid area and performed magnetometer and geochemical soil surveys.

iii) Summary of Assessment Work

From July 26, 1981 to July 29, a crew of four chip sampled the anomalous parts of the 1980 grid on the camp zone and chip sampled in the area of an intrusive breccia on the north side of Sphaler Creek (north zone).

Twenty-three samples were gathered from the north (breccia) zone and twenty-two from the camp zone. Work was done on the Sphal 29, 31, 33, Sphal Fraction, Kim 1, Kim 3, Kim 38, Kim 40 claims.

ROCK CHIP SAMPLING

On the camp zone sampling was confined to the contact zone between triassic volcanics and cretaceous monzonites as mapped by W. Spilsbury in 1980. The andesitic rocks have suffered a hornfelsic alteration with the formation of pyrite, pyrrhotite and chalcopyrite in a hardened, brown, fine-grained matrix.

On the north zone high grade samples were taken from an intrusive breccia dyke-like body and lower grade material was located at another andesitic-monzonite contact zone.

Analyses were performed at Acme Analytical Labs in Vancouver by standard rock assay techniques.

RESULTS

Sample locations, lengths and assay results are plotted on Figures 3 and 4 (enclosed). Results of chip samples from W. Spilsbury's sampling in 1980 are also plotted.

The breccia zone attains a width of about 18m and is mineralized over a length of approximately 50m. It has been broken by faults into several segments. The weighted average of the samples over the best exposed, accessible mineralization in the intrusive breccia is 0.0066 oz. Au/T, 0.31 oz. Ag/T, 2.45% Cu, not including sample #1911 which represents a small discontinuous quartz vein. An area about 18m by 20m is represented by this sampling. The rest of the results indicate that copper grading less than 1% is distributed in the less mineralized sections of breccia and in surrounding andesites and monzonite.

The camp zone contains widely scattered but erratically distributed copper-gold-silver mineralization usually in altered andesites near the monzonite contact. A weighted average of all the samples taken in 1980 and 1981 yields values of 0.0168 oz. Au/T, 0.10 oz. Ag/T, 0.37% Cu over an average sample length of 8.4m. The best results are from the zone west of the baseline and between Line 0 0 and 10 South. Unfortunately, these potentially economic values have more or less barren material intervening.

CONCLUSIONS

Widespread copper mineralization with significant values in gold and silver occur on both sides of Sphaler Creek in the "Camp" and "North Breccia" zones. It would appear that the most interesting zone of those so far examined would be the North Breccia zone which contains surface mineralization averaging 0.0066 oz. Au/T, 0.31 oz. Ag/T, 2.45% Cu. The association of this material with what appears to be an intrusive breccia dyke-like body indicates that good depth potential exists.

Unfortunately, the remote and precipitous location dictates that drilling of the showings, which is the next logical step, would be difficult and very costly. For these reasons only, drilling is not recommended at this time.

PETER G. FOLK, P. Eng.

APPENDIX I

Statement of Costs

		$
Wages		
P. Folk, P.Eng., 4 days @ $200/day	July 26-July 29	800.00
P. Smith, Senior Student 4 days @ $75/day	July 26-July 29	300.00
H. Smit, Student Helper 4 days @ $55/day	July 26-July 29	220.00
J. Bacon, Helper 4 days @ $60/day	July 26-July 29	240.00
Food and Accommodation		
4 men x 4 days x $20 day/man		320.00
Instrument Rental		
2 radios x 4 days x $15 day/radio		120.00
Assays		
45 rock assays x $13.50 each		607.50
Freight		400.00
Transportation		
Quasar helicopters, Bell 206B 6 hours @ $500/hour, including fuel		3,000.00
Mobilization and demobilization 4 men		400.00
Report Preparation, Drafting		800.00
	TOTAL	$7,207.50

CERTIFICATE OF QUALIFICATIONS

Peter G. Folk, P. ENG.

I hereby certify that:

1. I graduated from the University of British Columbia in 1971 with a B.A.S.C. degree in geological engineering.

2. I am a member in good standing of the Association of Professional Engineers of the Province of British Columbia.

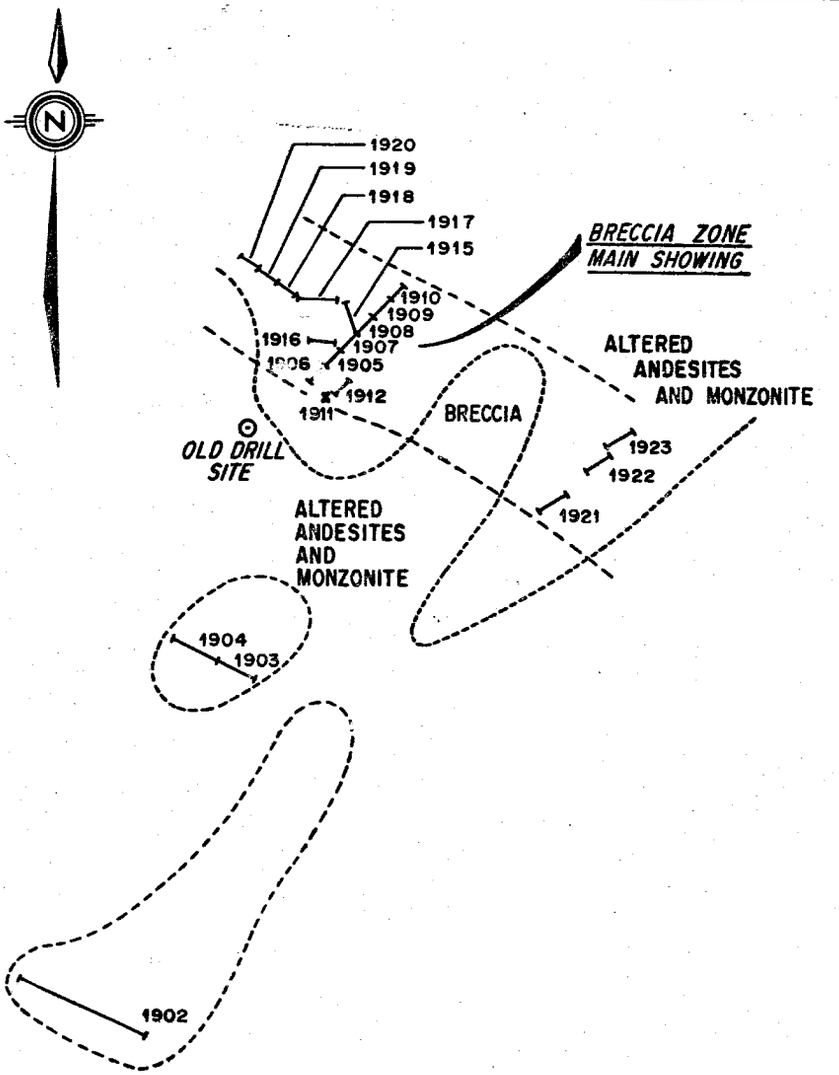
3. I have worked since graduation as an exploration geologist and mine geologist in Canada and the United States.

4. The work described herein was done under my direct supervision.

Sample Data

SAMPLE Nº	LENGTH (m)	Au oz./T	Ag oz. / T	Cu oz. / T
1901	7.2	.013	.14	.07
1902	18.6	.033	.41	.98
1903	5.0	.001	.03	.57
1904	7.0	.002	.01	.57
1905	3.0	.007	.20	1.56
1906	2.7	.005	.34	1.20
1907	3.0	.008	.43	2.07
1908	3.0	.005	.11	1.44
1909	3.0	.002	.15	1.90
1910	3.0	.004	.25	4.24
1911	0.1	.013	26.60	.41
1912	3.0	.005	.34	1.08
1913	7.0	.012	.13	.39
1914	5.0	.006	.04	.43
1915	5.0	.004	.21	2.02
1916	3.6	.009	.29	1.90
1917	6.0	.013	.48	4.02
1918	3.0	.006	.44	4.29
1919	3.0	.007	.29	2.20
1920	3.0	.005	.38	2.65
1921	4.0	.006	.07	1.06
1922	4.0	.006	.06	.79
1923	4.0	.005	.08	.81

NOTE: Samples " 1913, 1914 taken at lower north zone approx. 650 m south.



SCALE:

METERS 0 10 20 30 40 50 METERS

TECK EXPLORATIONS LTD.

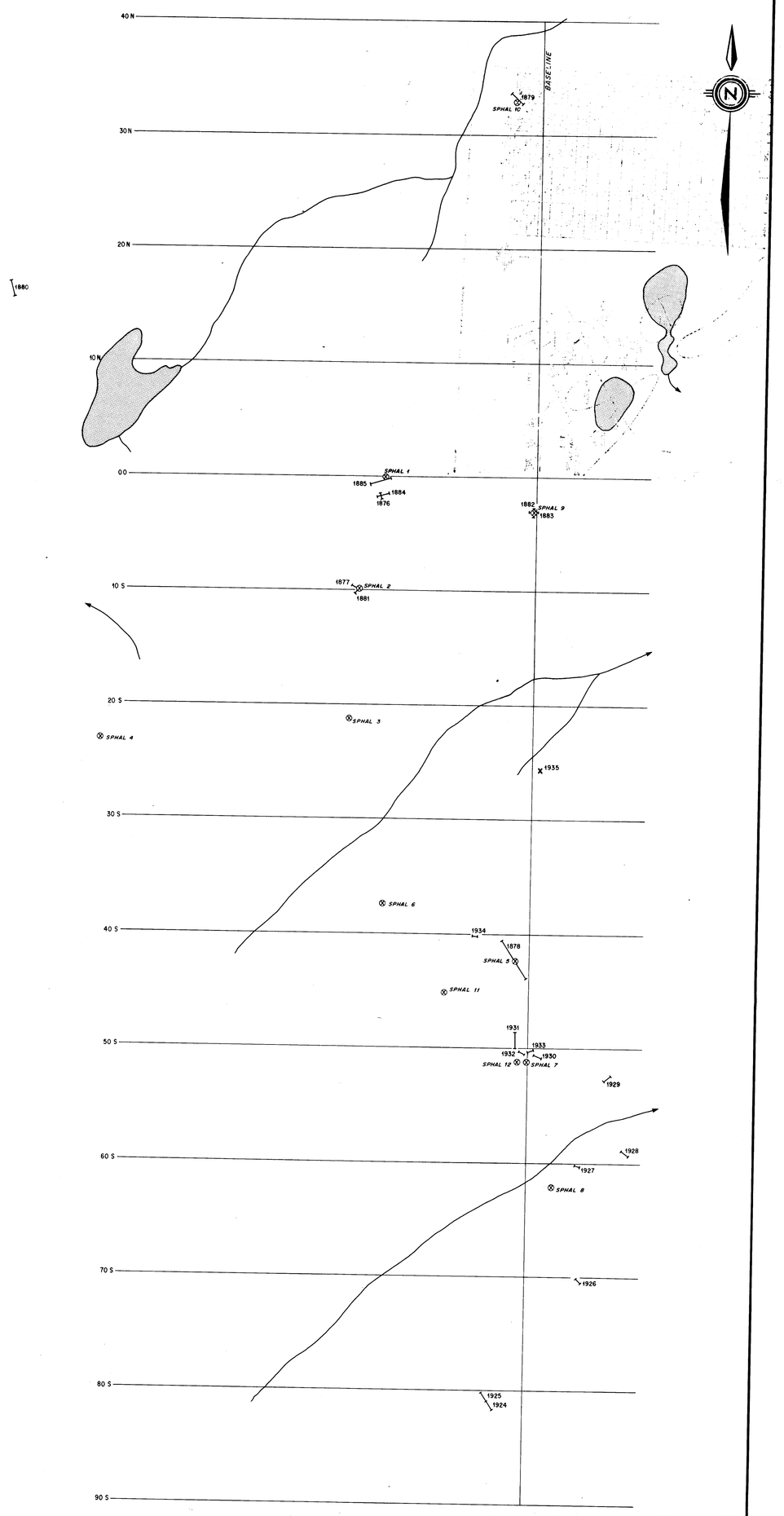
STIKINE REGION

SPHALER CREEK PROJECT

(NORTH SHOWING)

SAMPLE LOCATION MAP

DATE : OCT. 1981



SAMPLE DATA

⊗ SPHAL 3 .....1980 Sampling

⊢⊣ 1926 .....1981 Sampling

SAMPLE N°	LENGTH (meters)	Au (oz/T)	Ag (oz/T)	Cu (oz/T)
SPHAL 1	30	.053	.07	.67
2	1	.062	.11	1.22
3	15	.019	.09	.91
4	1	.017	.58	.05
5	1	.013	1.14	.96
6	2	.006	.10	.29
7	10	.011	.39	.74
8	8	.002	.12	.51
9	3	.015	.12	.62
10	10	.002	.16	.72
11	1	.020	.13	.63
12	0.5	.012	.33	.27
1876	11	.047	.14	.50
1877	19	.007	.03	.15
1878	21	.001	.01	.04
1879	18.5	.013	.12	.40
1880	17	.001	.01	.01
1881	8	.011	.02	.23
1882	7	.012	.06	.30
1883	4	.030	.21	.59
1884	8.5	.026	.05	.45
1885	2.5	.035	.06	.61
1924	10	.004	.05	.08
1925	10	.001	.01	.03
1926	6	.004	.03	.01
1927	5.2	.018	.36	.71
1928	8.4	.006	.04	.03
1929	8.1	.013	.17	.49
1930	9.6	.009	.15	.27
1931	14.3	.020	.13	.17
1932	2.5	.005	.14	.41
1933	3.3	.008	.12	.37
1934	1.3	.019	1.09	.55
1935	GRAB	.004	.05	.01

SCALE:

0 50 100 150 200
METERS

TECK EXPLORATIONS LTD.

STIKINE REGION

SPHALER CREEK' PROJECT

CAMP ZONE

SAMPLE LOCATION MAP

DATE: OCT. 1981