GEOLOGICAL AND GEOCHEMICAL REPORT

ON THE

TANG CLAIM GROUP

Watson Lake Mining District
Pelly River Headwaters Area, Yukon Territory
NTS: 105-I-12
62°37'N; 129°46'W

WORK PERIOD: June 23-30, 1977

FOR

OGILVIE JOINT VENTURE

BRITISH NEWFOUNDLAND EXPLORATION LIMITED (IN TRUST)
704 - 602 West Hastings Street, Vancouver, B.C.

BY

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Geologist

Supervised by O. S. Hairsine, P.Eng.

CORDILLERAN ENGINEERING LIMITED
1418 - 355 Burrard Street
Vancouver, B.C. V6C 2G8

OCTOBER, 1977

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INTRODUCTION

The Tang claims are located near the headwaters of the Pelly River, approximately 185 miles north of Watson Lake, Y.T. The claims are separated by the Oro and Bet claim groups. To the east are Tang 3 and 4 (Y84533 and Y84534) and to the west, Tang 5 through 16 (Y84535 - Y84546).

Access to the Tang property is by helicopter.

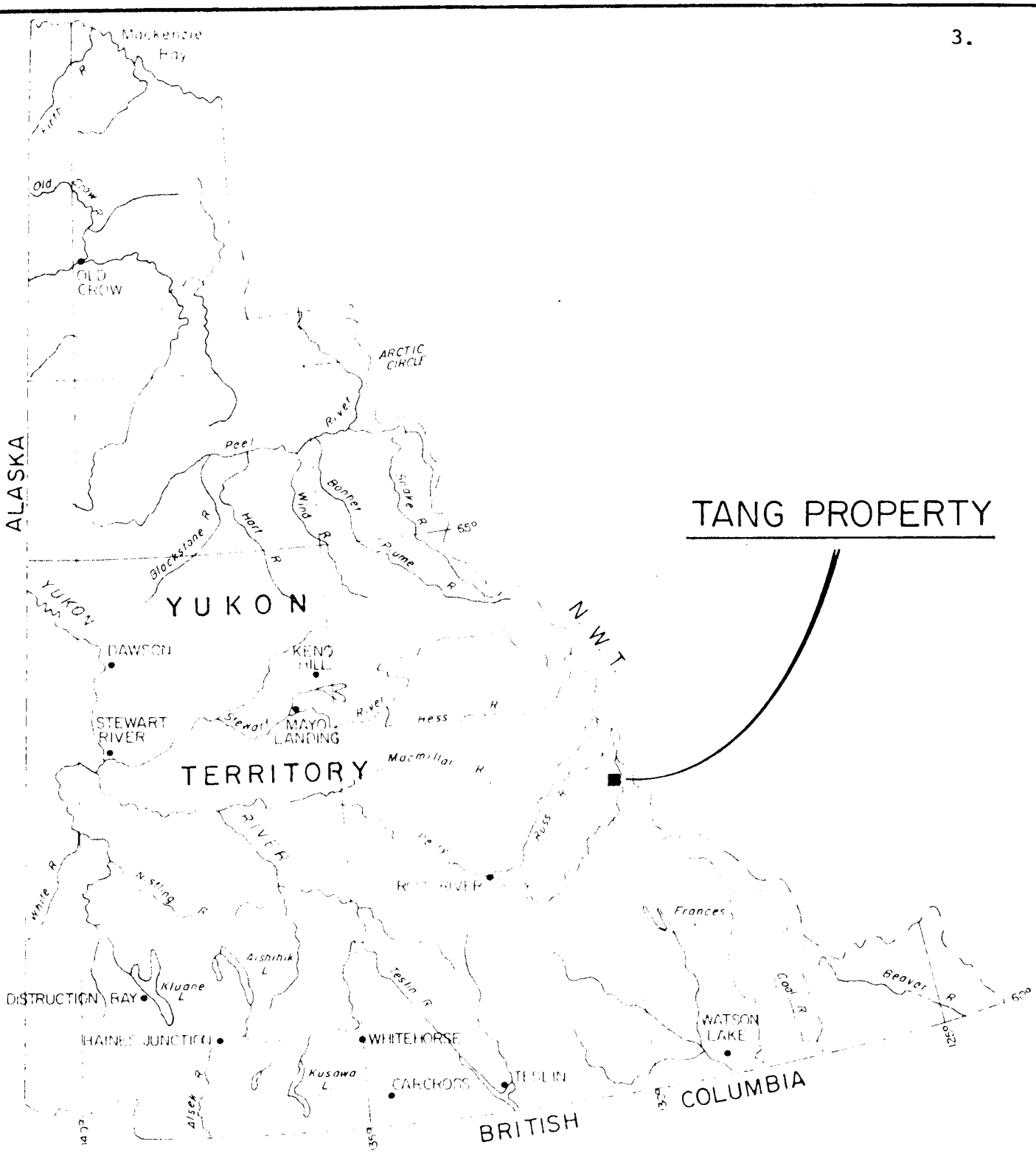
Geological and geochemical surveys were carried out by Cordilleran Engineering Limited during the period June 23 to 30, 1977. This work was performed for the Ogilvie Joint Venture whose claims are held in trust by British Newfoundland Exploration Limited.

A chain and compass survey and a flagged grid were used as control for the geological mapping and geochemical soil survey. All the data is presented at a scale of one inch equals 500 feet.

TOPOGRAPHY

The western claim group is located on a moderately steep mountain, where elevations range from 4,500 to 5,500 feet above sea level. Most of the ground is above tree level and vegetation consists of a thin layer of moss. Moderately steep-sided creek gulleys cut across the southern part of the claim group, running in a westerly direction. The gulleys are lined with trees and bushes.

The eastern claim group is located on an east slope above the Pelly River, where elevations range from 4,200 to 4,600 feet above sea level. The vegetation consists of trees and thickly intergrown bushes.



LOCATION MAP

TANG PROPERTY

SCALE 0 20 40 60 80 100 MILES

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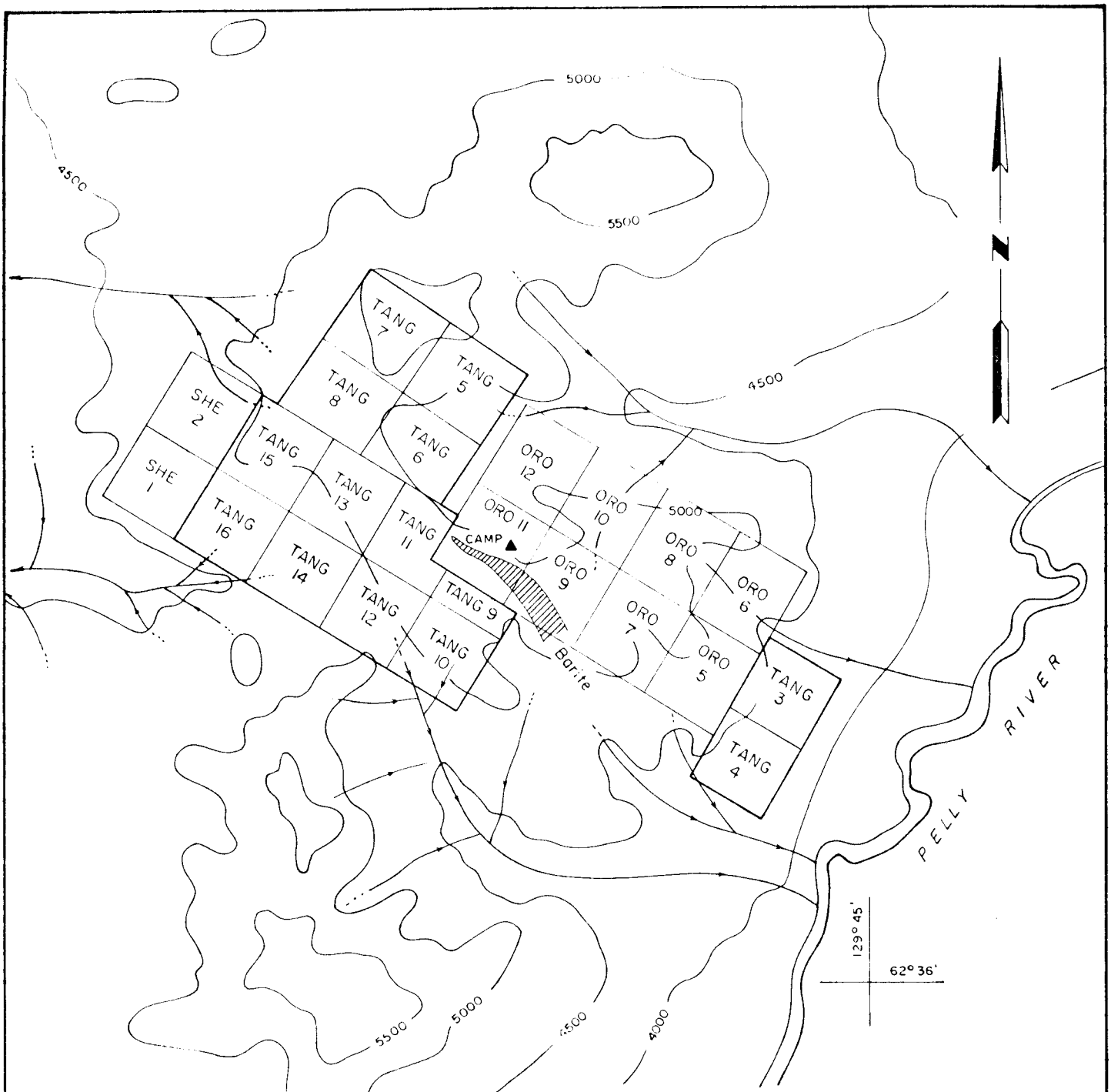
FIGURE 1



OGILVIE JOINT VENTURE

CLAIM MAP

TANG PROPERTY

PELLY RIVER HEADWATERS AREA, N.T.S. 105-1-12
WATSON LAKE MINING DISTRICT, YUKON TERR.

0 0.5 1.5
SCALE IN MILES

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FIGURE 2

GEOLOGY

GENERAL

The rocks exposed in this area were deposited in the Selwyn basin in Devonian to Mississippian times. A thick sequence of shale represents a moderate to deep water depositional environment. Bedded barite overlying the shale represents a barium-rich environment, perhaps a shallow water basin.

Much of the area covered by the Tang claims is overburden covered, however, abundant outcrop occurs on the adjoining Oro claims. Most of the mapping was done on the Oro property, and geology was interpreted along strike on to the Tang property.

GEOLOGY (cont'd)

STRATIGRAPHY

The oldest unit exposed is a homogeneous black shale of unknown thickness. It is thinly laminated, fissile, soft, and moderately carbonaceous. Overlying the shale is a black siliceous argillite unit (50 - 150 feet thick) which is a very siliceous, moderately carbonaceous, silty shale. Local interbeds of siliceous black sandstone and conglomerate of similar composition occur in the upper part of this unit. Locally, there is strong fracturing with white quartz infilling. Overlying this is a bedded barite unit from 100 to 150 feet thick. The barite is impure, medium-to dark-grey, thinly to thickly laminated, with thin laminations of rusty material (limonite).

On the western Tang group, local small outcroppings of the black shale and siliceous argillite units occur along strike from those exposed on the Oro property. In addition, there is a small outcrop of banded limestone in the southeast corner of this claim block. It is dark grey with thin, wavy, light brown laminations, and weathers a light orange-brown colour. It is believed to be Cambrian in age. If so, it is assumed that the banded limestone has been faulted to its

present position, being uplifted into the younger black clastic units. A very fine crystalline rhyolite intrusive is in contact with the limestone. It is cream coloured, with disseminated elongate quartz crystals and fine pyrite cubes, and weathers a light tan colour. The rhyolite may have intruded along the weakened zone of the assumed fault, in Cretaceous times.

STRATIGRAPHIC SECTION

Figure 3

Age	Formation	Thickness	Lithology
Cretaceous ?	Rhyolite Intrusive	?	Cream coloured, very fine crystalline, disseminated quartz crystals and fine pyrite cubes.
Devono-Mississippian	Bedded Barite	100-150'	Impure, medium-to dark-grey, thinly to thickly laminated.
	Black Siliceous Argillite	50-150'	Highly siliceous, carbonaceous, silty shale with interbedded sandstone and conglomerate.
	Black Shale	> 1000' ?	Homogeneous, low silica, moderately carbonaceous, fissile.
Cambrian ?	Banded Limestone	?	Dark grey with thin, wavy, light brown laminations.

GEOLOGY (cont'd)

STRUCTURE

The barite unit appears to be within the core of a tight synclinal fold, bearing northwest and overturned to the southwest, with both limbs dipping to the northeast. Abundant small scale folds, in the order of three to four feet, have similar styles to the major fold. They appear to be S and Z folds on the limbs of the major syncline. The minor folds generally plunge 5 to 10 degrees to the southeast, but some plunge 5 degrees to the northwest. There appears to be a secondary folding at right angles to the primary folding. The major synclinal fold appears to plunge to the southeast.

The black siliceous argillite unit is in contact with the barite unit on both sides of the exposure. This supports the idea of a large fold. The argillite unit is also tightly folded on a small scale. Bedding strikes are moderately consistent but dips flip back and forth, indicative of tight folding. To the north the bedding attitudes have dips consistent to the northeast. The black shale unit appears to be quite thick and is not tightly folded. This appears to be the upper limb of the syncline, and is further from the core of the fold. There is insufficient exposure in the southern part of

the claim block to determine any structure.

The bedded barite unit exposed on the Oro property narrows and pinches out to the northwest as it enters the western Tang group. There are two possible causes for the pinch out:

1. The barite is in the core of a syncline plunging to the southeast and the unit may be nosing out to the northwest.
2. It may be due to a facies change, the barite thinning and interfingering with siliceous black argillite to the northwest.

A lack of outcrop on the Tang property makes it impossible to see if the barite unit continues to the west. However, the geochemical soil survey shows a linear band of barium anomalies trending westward from the exposed barite unit. Values of 3 and 4 per cent barium in soil samples infer that the barite unit does continue across the Tang property, below the overburden cover. From this information it is assumed that the barite unit thins to the northwest due to a nosing out syncline, but the syncline is folded and plunges back to the northwest under a cover of overburden.

MINERALIZATION

No visible lead or zinc mineralization was encountered in any of the rock units exposed. The barite is impure, containing thin laminations of limonite and interbedded argillite.

GEOCHEMICAL SOIL SURVEY

GRIDS

Flagged grids were established to cover the areas enclosed by the claim groups. The base lines were run at 120 degrees to approximately follow the claim location lines. On the larger western claim block, cross lines were run at 30 degrees, spaced at 1,000 foot intervals. On the smaller eastern claim block, two cross lines were run 500 feet apart. Cross lines extend 1,400 feet in each direction from the base lines, with the exception of the two northward trending lines at the western end of the larger claim block. They extend to 4,400 feet to cover the northern extension of that claim group. All lines were flagged at 200 foot intervals, and grid co-ordinates marked on the flagging with felt pen. A total of 6.42 miles of grid were prepared.

GEOCHEMICAL SOIL SURVEY (cont'd)

Sampling Method

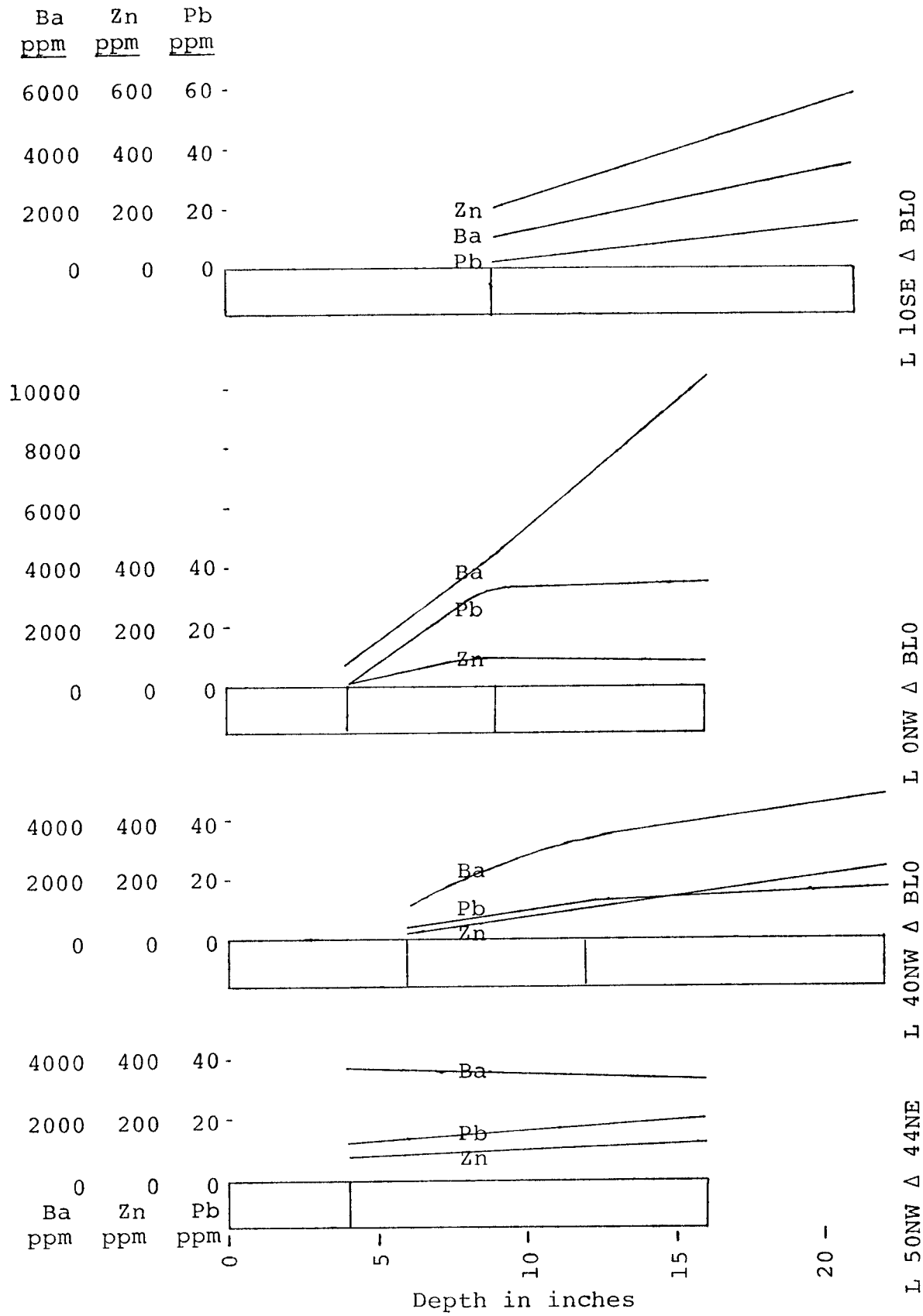
Pits were dug with a light mattock to depths ranging from six to sixteen inches. Samples were taken from the B_1 horizon wherever it occurred. The soil is immature, and the B_1 horizon is generally absent, so most of the samples were taken from the B_2 and C horizons. On the barren moss covered slopes A_0 and A_1 horizons are very thin or absent, and the B horizons are often missing.

Soil horizon pits were dug at three locations on the western grid, and at one location on the eastern grid. Samples were taken from each soil horizon, where possible. This was done to find the optimum sampling horizon by comparing the assay values (see Figure 4, page 13),

Geochemical soil samples were taken at 200 foot stations along the flagged cross lines. Samples were placed in kraft "Hi wet-strength, open end" envelopes, and grid stations were marked on the envelopes with indelible felt pen.

SOIL HORIZON PROFILES

FIGURE 4



GEOCHEMICAL SOIL SURVEY (cont'd)

Sample Analysis

All soils were analysed for lead, zinc, and total barium by Bondar-Clegg & Company Ltd., 1500 Pemberton Avenue, North Vancouver, B.C.

Samples were placed in drying cabinets for a period of 24 to 48 hours. The material was then screened and sifted to obtain the -80 mesh fraction. A small fraction of the -80 mesh material from each sample was digested in hot Lefort Aqua Regia solution for 2 1/2 hours. Following digestion each sample was bulked with de-ionized H_2O, and an Atomic Absorption Spectrophotometer was used to determine the parts per million of lead and zinc in each sample. A second small fraction of the -80 mesh material from each sample was taken and ground to a very fine powder. The powder was then placed in an X-ray fluorescence unit to determine the total barium content of each sample.

RESULTS

PRESENTATION

Results of the soil survey are plotted on Plates 2 and 3 of this report (Appendix "G"). Plate 2 shows the grid located on the larger western claim group, and Plate 3 shows the grid located on the eastern claim group. Results for lead, zinc, and barium are plotted, in that order, beside their locations on the grids.

Histograms were prepared from the results, and background and anomalous values determined for each element. Locations with probable and strongly anomalous results are marked on Plates 2 and 3 as follows: lead with a triangle, zinc with a circle and barium with a square.

RESULTS (cont'd)

DISCUSSION

The histogram plots of lead, zinc, and barium values are divided hypothetically into background, possibly anomalous, probably anomalous, and strongly anomalous as follows:

	Pb ppm	Zn ppm	Ba ppm
Background	< 30	< 300	< 4000
Possibly Anomalous	30 - 60	300 - 500	4000 - 6000
Probably Anomalous	60 - 100	500 - 700	6000 - 8000
Strongly Anomalous	> 100	> 700	> 8000

Values from samples taken from the soil horizon pits indicate that the optimum sampling horizon is from 12 to 20 inches. (See Figure 4, page 13). Values do not increase appreciably below 12 inches, although barium does increase in one location. The profile pit at L 50NW Δ 44 NE has very similar results from the 4 inch and 16 inch horizons. This sample location is above tree level on a mossy slope, and probably has very little or no A horizon. Other soil profiles have lower values from the shallow samples, indicating a leached A horizon.

A linear zone of anomalous barium values extends in a westward direction across the northern lines of the western grid. The anomalous values start within the exposed barite unit, and extend to the west of the exposure along strike. This appears to indicate that the barite unit continues to the west, under a cover of overburden. The anomalous locations are approximately the same elevations as the exposed barite unit, so the high barium values probably are not due to mechanically transported barite, but from barite in place. Anomalous barium values on the southern lines of this grid have no particular pattern. They are downslope of the exposed barite unit, and may be caused by mechanically transported barite fragments in the soil. It is possible that the barite unit, which is tightly folded in outcrop, may be folded in an anticlinal structure and dip below surface in the southern part of the property. A value of 4 per cent barium from the soil in the southwest corner of the grid seems very high for transported barite.

In only one location do anomalous values for lead and zinc occur together. There are only three anomalous lead locations, and two of them are widely separated from any anomalous zinc locations. Two of the lead anomalies are very near the contact of the black shale unit and the siliceous black argillite. Anomalous zinc and barium values occur together in only two lcoations. Generally the anomalous zinc locations occur 200 to

400 feet on either side of anomalous barium locations. This appears to indicate that the zinc mineralization is within the black siliceous argillite unit, underlying the barite unit. In the Combined Geological and Geochemical Report on the Bet Claim Group, submitted for assessment work in 1973 by Noranda Exploration Company Limited, it was noted that anomalous zinc values were obtained in silt samples from streams draining a black cherty shale unit. There was no visible evidence of zinc mineralization in that rock unit. The black cherty shale may be the same rock unit as that mapped as black siliceous argillite in this report. Zinc anomalous locations on the south lines of the larger western grid have no apparent distribution pattern. Some of the higher values are near streams, and they may be caused by mechanical transport, or a build up of zinc concentration in the surrounding soil contributed by ground and surface waters. Silt samples from streams draining this area gave values up to 2800 ppm zinc in 1975. In the smaller claim block to the east, zinc is the only element present in anomalous amounts. There is a total lack of outcrop, but it is assumed that the rock type is the same black siliceous argillite which gives anomalous zinc values in the larger claim block.

CONCLUSIONS AND RECOMMENDATIONS

The bedded barite unit exposed on the Oro claim group appears to extend across the Tang claim group to the west, under a cover of overburden. No lead or zinc mineralization was encountered in any of the rock units exposed. Lead values are all low. Some strongly anomalous zinc values do occur, and appear to be coming from the black siliceous argillite unit underlying the barite unit. There may be some mechanical and hydromorphic concentration of zinc and barium in the southern part of the western claim block. A lack of rock exposures limits the interpretation.

On the basis of present geological and geochemical evidence, no further work is recommended.

Respectfully submitted
CORDILLERAN ENGINEERING LIMITED

J. D. Rowe, B.Sc.
Geologist

JDR/z

APPENDIX "E"

APPENDIX "E"

BONDAR-CLEGG & COMPANY LTD.

1500 PEMBERTON AVE., NORTH VANCOUVER, B.C. PHONE: 985-0681 TELEX: 04-[illegible]554

Geochemical Lab Report

Extraction Pb,Zn; Hot Aqua Regia

Method Pb,Zn; Atomic Absorption

Fraction Used

Report No. 27 - 539 PROJECT: OJV TANG

From Cordilleran Engineering Ltd.

Date July 18, 1977

SAMPLE NO.	Pb ppm	Zn ppm	Ba ppm		SAMPLE NO.	Pb ppm	Zn ppm	Ba ppm	
T 42	6	230	640		10SE - 14NE	3	40	820	
110	17	130	24000		10NW - BL0	3	200	1110	
0NW - 2NE	23	240	5180		10SE - 2SW	15	240	3240	
4NE	24	236	2290		4SW	14	248	3130	
12NE	< 2	8	1020		6SW	10	368	1220	
4SW	17	132	96200		8SW	5	1300	430	
6SW	4	76	1120		10SW	12	7000	3590	
05SE - 2NE	26	124	1980		12SW	5	256	1970	
4NE	17	320	1990		14SW	9	290	3050	
6NE	34	56	4670		0NW - BL0 A	2	2	700	
8NE	26	292	2750		BL0 B	34	100	4420	
10NE	5	12	1030		BL0 C	35	94	10370	
12NE	11	400	4380		6NE	22	116	22170	
14NE	11	89	2110		8NE	9	64	4300	
BL0	2	4	620		10NE	14	40	120800	
2SW	17	240	2670		14NE	104	132	3870	
4SW	18	128	1390		2SW	13	108	40100	
6SW	2	1300	360		8SW	61	590	1840	
8SW	14	230	3040		10SW	22	420	1490	
10SW	2	380	1250		12SW	13	332	4070	
12SW	4	61	1070		14SW	13	373	17450	
14SW	11	187	2510		10NW - 2NE	15	218	3270	
10NE - BLA	2	205	1050		4NE	18	82	4820	
C BLA	16	580	3560		6NE	< 2	56	590	
10SE - 2NE	20	220	2750		8NE	24	116	1110	
4NE	14	800	3510		10NE	13	20	6940	
6NE	18	180	2380		12NE	< 2	4	910	
8NE	18	230	2980		14NE	16	232	50470	
10NE	40	700	1850		2SW	18	340	6230	
12NE	22	450	4210		4SW	2	32	1060	

Geochemical Lab Report

Report No. 27 - 539

SAMPLE NO.	Pb ppm	Zn ppm	Ba ppm		SAMPLE NO.	Pb ppm	Zn ppm	Ba ppm	
10NW - 6SW	20	312	3090		40NW - 2NE	8	350	18980	
8SW	14	450	15170		4NE	18	280	3200	
10SW	< 2	8	430		6NE	15	400	43920	
12SW	12	264	3290		8NE	14	560	2150	
14SW	8	224	2850		10NE	14	460	3260	
20NW - 2NE	16	1120	2490		12NE	26	440	2980	
4NE	18	270	6460		14NE	16	140	10120	
6NE	20	1140	8600		16NE	2	8	760	
8NE	21	256	33460		18NE	18	132	2970	
10NE	4	46	2460		20NE	< 2	2	590	
12NE	75	112	9280		22NE	23	124	2900	
14NE	28	140	4230		24NE	12	43	1750	
BLO	NS	NS	NS		26NE	< 2	< 2	590	
2SW	2	28	620		28NE	26	38	6420	
4SW	10	620	1890		30NE	6	24	1560	
6SW	18	288	2960		32NE	2	8	720	
8SW	15	560	1310		34NE	< 2	< 2	590	
10SW	17	520	5260		36NE	22	44	4050	
12SW	20	265	3010		38NE	16	118	1970	
14SW	14	198	2680		40NE	12	88	1080	
30NW - 2NE	24	150	4050		42NE	9	72	2670	
4NE	25	180	8600		44NE	14	36	1360	
6NE	10	380	2740		40NW-A Horizon SW	5	14	1120	
8NE	19	1020	3820		B Horizon SW	14	120	3470	
10NE	23	90	4600		C Horizon SW	17	248	4800	
12NE	9	40	2040		40NW - 2SW	17	480	3890	
14NE	10	48	1910		4SW	12	1640	1670	
BLO	17	104	2510		6SW	17	1360	4170	
2SW	15	168	29790		8SW	4	236	1820	
4SW	10	77	1880		10SW	12	236	7440	
6SW	9	50	8060		12SW	2	348	3090	
8SW	6	68	2640		14SW	14	200	39560	
10SW	21	376	5930		50NW - ONE	12	180	2680	
12SW	13	7500	9970		2NE	12	248	2020	
14SW	15	69	2430		4NE	19	210	2840	

BONDAR-CLEGG & COMPANY LTD.

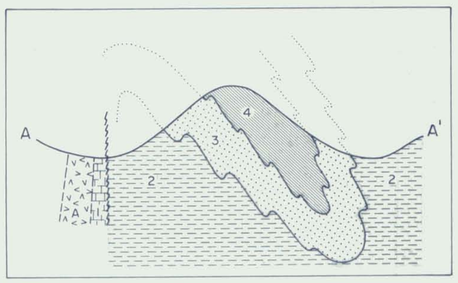
APPENDIX "E" iii.

Geochemical Lab Report

Report No: 27 - 539

SAMPLE NO.	Pb ppm	Zn ppm	Ba ppm		SAMPLE NO.				
50NW - 6NE	13	560	1520						
8NE	14	163	3960						
10NE	3	44	1420						
12NE	16	430	4440						
14NE	13	350	1800						
16NE	16	270	2400						
18NE	55	110	1590						
20NE	15	44	2050						
22NE	8	36	1770						
24NE	12	66	3200						
26NE	12	78	3390						
28NE	4	10	920						
30NE	16	92	3070						
32NE	6	46	1230						
34NE	6	60	1530						
36NE	22	89	2980						
38NE	5	63	1530						
40NE	14	122	2390						
42NE	10	68	2280						
44NE A	13	82	3770						
44NE C	21	136	3450						
2SW	23	460	2770						
4SW	12	204	2210						
6SW	10	364	3420						
8SW	6	120	2330						
10SW	12	212	4150						
12SW	18	430	4150						
14SW	13	430	6040						
cc Cordilleran - Ross River									

APPENDIX "G"



CROSS SECTION A–A'

LEGEND

CRETACEOUS ?	A	RHYOLITE INTRUSIVE – Cream coloured, very fine crystalline. Elongate quartz crystals. Disseminated fine pyrite cubes. Tan weathering.
DEVONIAN–MISSISSIPPIAN	4	BEDDED BARITE – Medium to dark grey, thinly laminated barite. Interbedded with light grey platy shale near contacts.
	3	BLACK SILICEOUS ARGILLITE – Very hard, strongly fractured locally, with white quartz veins. Interbedded siliceous sandstone and conglomerate.
	2	BLACK SHALE – Soft, platy shale. Fissile along bedding.
CAMBRIAN	1	BANDED LIMESTONE – Dark grey with thin, wavy, light brown laminations. Weathers light orange – brown.

CONTACT – approximate

FAULT

BEDDING ATTITUDE

FLAGGED GRID LINE

OLD DRILL HOLE

CLAIM BOUNDARY

OGILVIE JOINT VENTURE

GEOLOGY MAP

TANG PROPERTY – WEST

PELLY RIVER HEADWATERS AREA, N.T.S. 105-1-12
WATSON LAKE MINING DISTRICT, YUKON TERRITORY

500 0 500 1000 1500

SCALE IN FEET

BY
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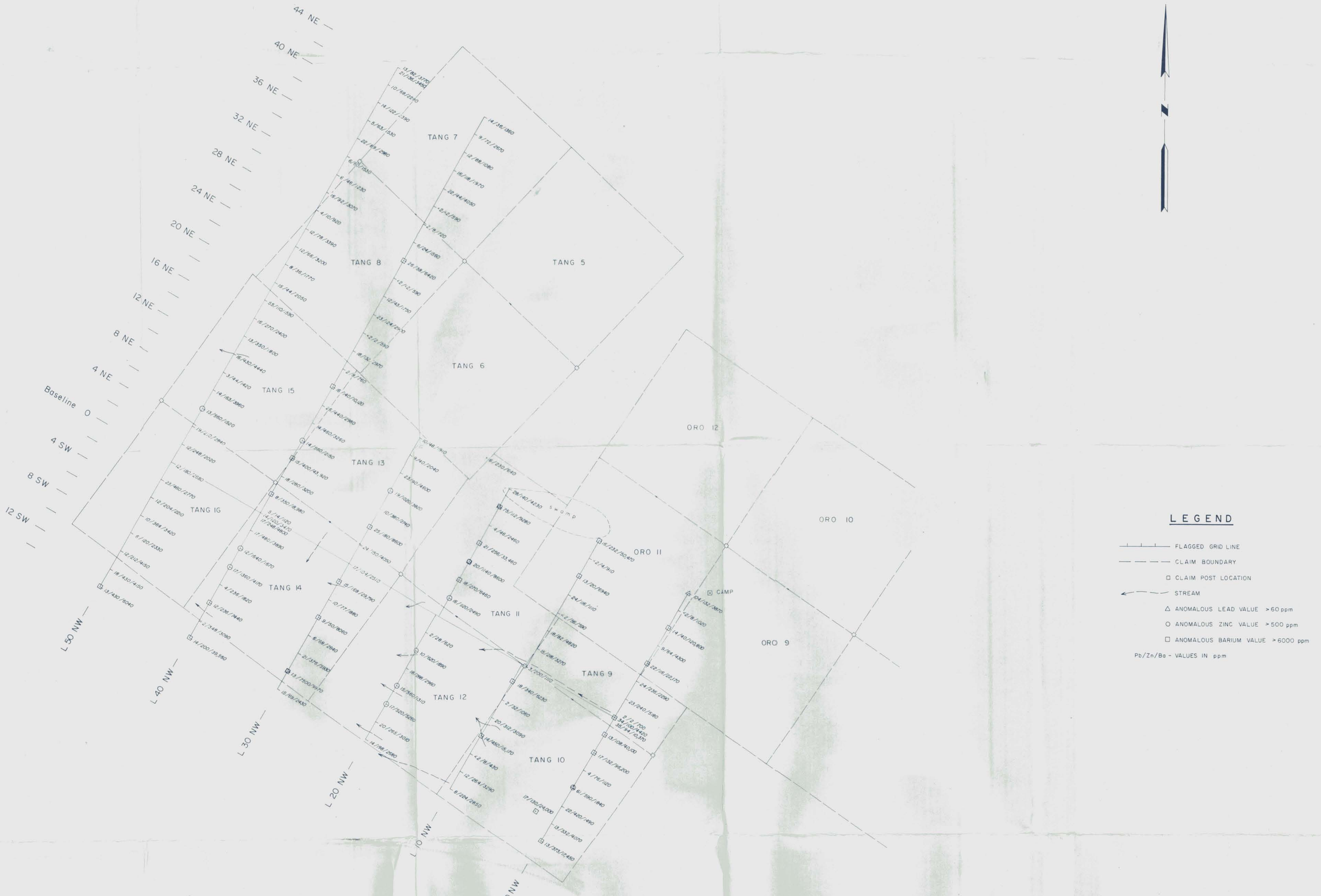
OCTOBER, 1977

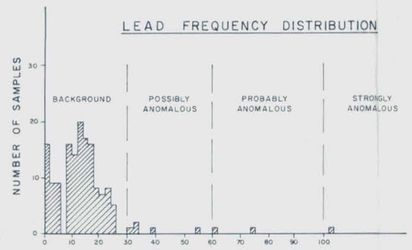
PLATE I

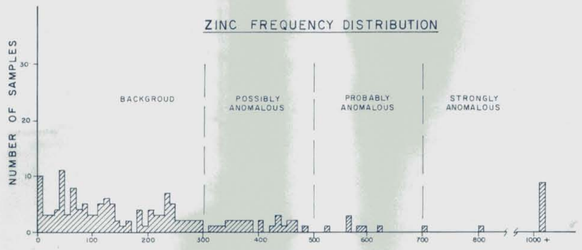


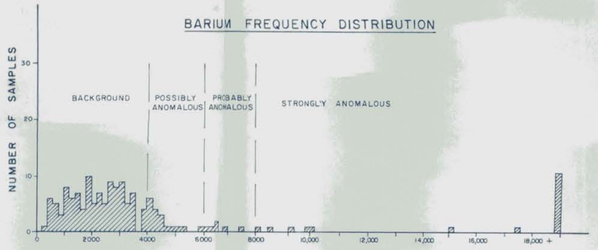
LEGEND

- FLAGGED GRID LINE
- CLAIM BOUNDARY
- CLAIM POST LOCATION
- STREAM
- △ ANOMALOUS LEAD VALUE > 60 ppm
- ○ ANOMALOUS ZINC VALUE > 500 ppm
- □ ANOMALOUS BARIUM VALUE > 6000 ppm

Pb/Zn/Ba - VALUES IN ppm







OGILVIE JOINT VENTURE

GEOCHEMICAL MAP

TANG PROPERTY - WEST

PELLY RIVER HEADWATERS AREA, N.T.S. 105-I-12
WATSON LAKE MINING DISTRICT, YUKON TERRITORY

500 0 500 1000 1500
SCALE IN FEET

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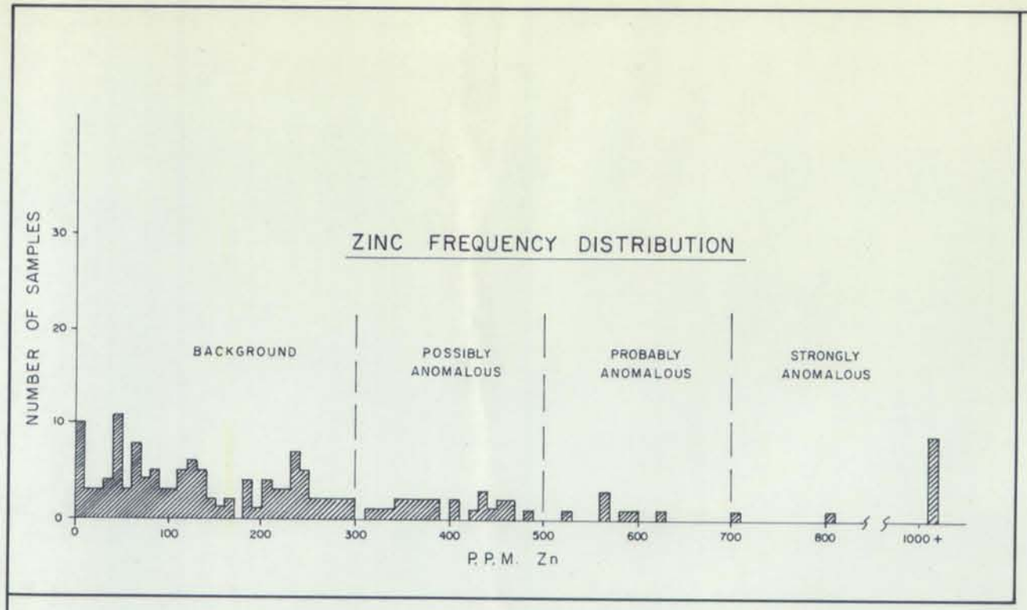
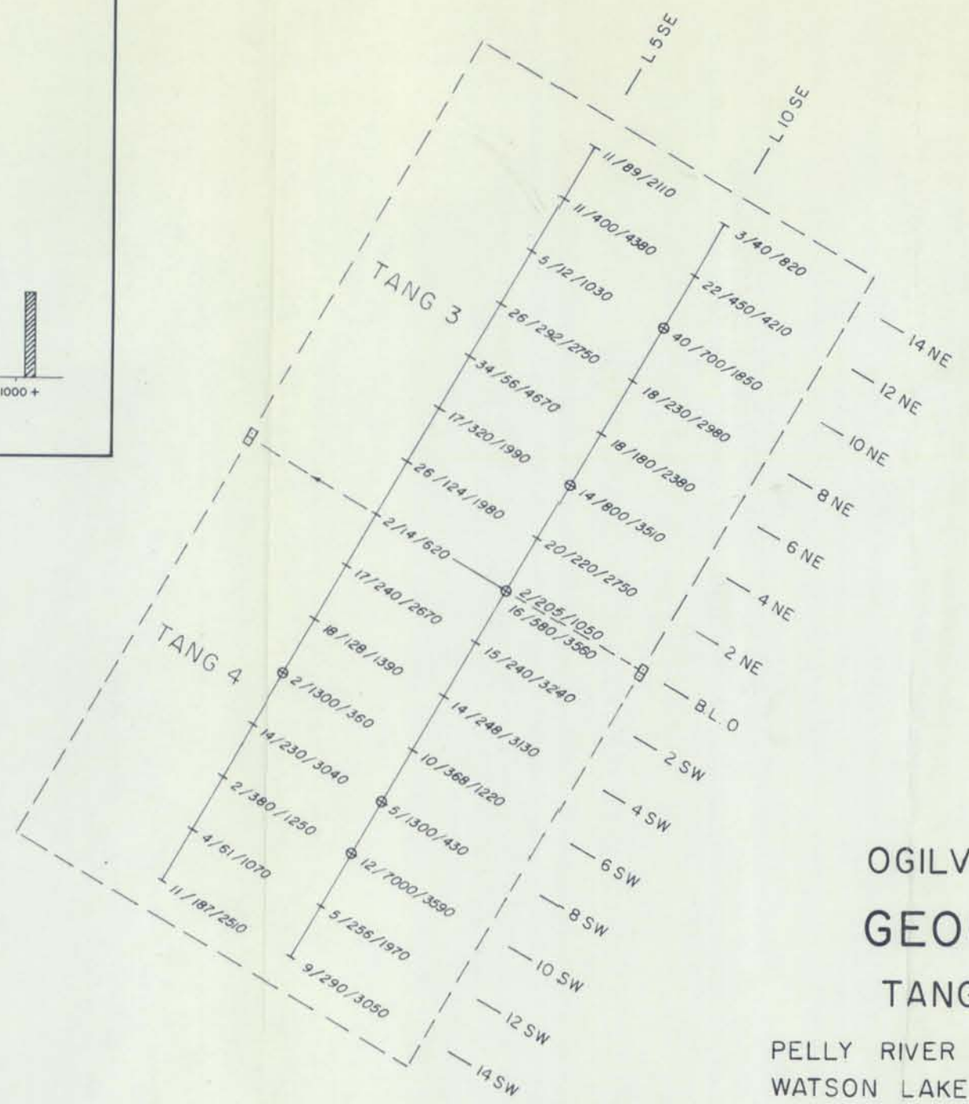
PLATE 2





LEGEND

- FLAGGED GRID LINE
- CLAIM BOUNDARY
- CLAIM POST LOCATION
- ANOMALOUS ZINC VALUE >500 ppm

Pb/Zn/Ba VALUES IN ppm

OGILVIE JOINT VENTURE

GEOCHEMICAL MAP

TANG PROPERTY - EAST

PELLY RIVER HEADWATERS AREA, N.T.S. 105-I-12
WATSON LAKE MINING DISTRICT, YUKON TERRITORY

500 0 500 1000 1500
SCALE IN FEET

BY

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VANCOUVER, B.C. V6C 2G8

OCTOBER, 1977

PLATE 3