

ORIENTATION GEOLOGICAL AND GEOCHEMICAL SURVEY

AERIAL PHOTOGRAPHY

KRANS GROUP

KRANS 11-16 CLAIMS

104N 10W 104N 15W

59°45'N 132°55'W

OWNER/OPERATOR: CCH MINERALS

Feb 27/81

R.C.R. Robertson

TEK

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KRANSIntroduction

This report describes the results of additional soil, rock and stream sediment sampling carried out on the Krans 11-16 claims located east of Atlin, B.C. The work was carried out by CCH Resources Ltd. during August, 1980.

The Krans 11-16 claim block consists of 6 claims totalling 112 units. The ground was staked as a tin prospecting following the evaluation of the results obtained from a regional reconnaissance stream sediment sampling program carried out in 1977. Reconnaissance sampling in 1979 returned several anomalous tin values, some of which were examined in further detail in early 1980.

This report describes the results of additional soil, rock and stream pan concentrate sampling carried out by CCH Resources Ltd. personnel (now Campbell Resources Inc.), on behalf of the Cortin Joint Venture.

In the course of this work, 143 soil samples, 21 rock samples and 9 pan concentrate samples were taken.

Airphotos were taken of the area to aid further exploration.

To date the results have not confirmed the presence of an economic tin deposit.

### Location, Access and Topography

The centre of the Krans 11-16 claims, record numbers 452(7) to 457(7), is at about 7 km south of Marble Dome. The majority of the area is drained by Zenazie Creek and its tributaries.

Access to the claim is via helicopter from Atlin, B.C., about 50 km to the west.

The area is mountain highland cut by steep sided valleys of Zenzie Creek and its tributaries. Elevations on the claims vary between 1000 and 2000m, with the area of interest being above tree line. Glacial overburden consists of a thin veneer of rounded boulders, primarily below 1400m.

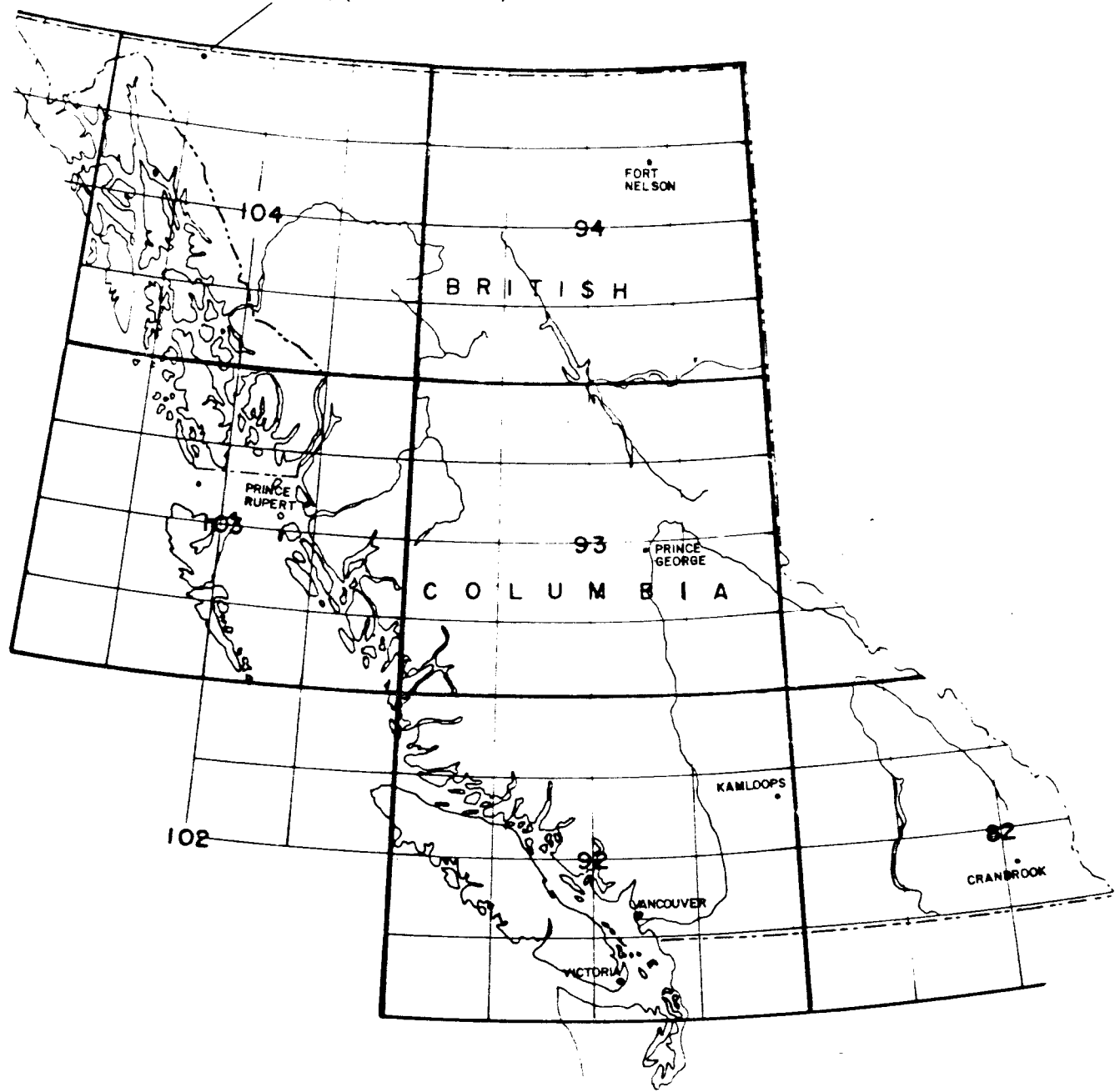
### Exploration History

The Krans claim block, totalling 16 mineral claims, 250 units, was staked in July, 1978, following a reconnaissance stream sampling program the previous year, which outlined an area containing anomalous Sn values.

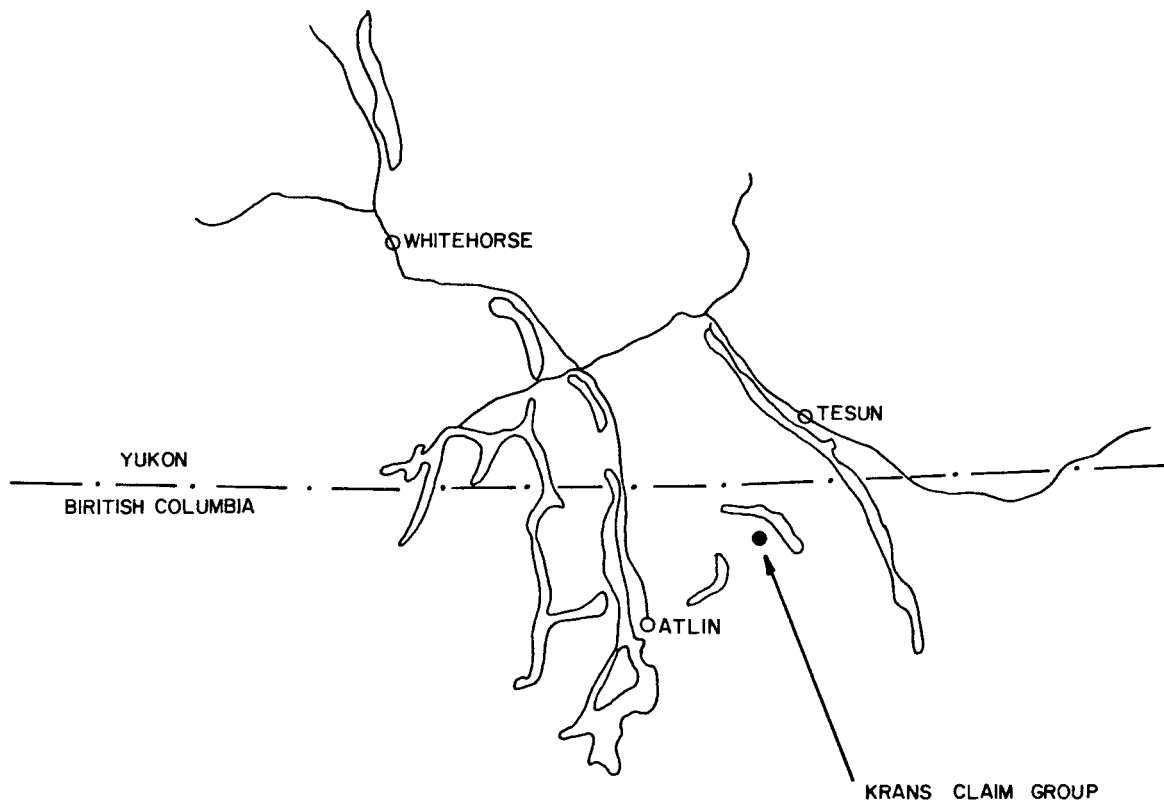
Reconnaissance, "contour line" soil sampling in early 1979 returned interesting results in the southern portion of the group (Krans 11 to 16).

In the latter part of the 1979 season and the early part of the 1980 season, further reconnaissance soil sampling on the Krans 11 and 12 claims, and detailed sampling on 100m x 50m spacing on the Krans 13 and 14 claims was carried out. The results of this work are found in an Assessment Report by David R. Kennedy, dated July 14, 1980.

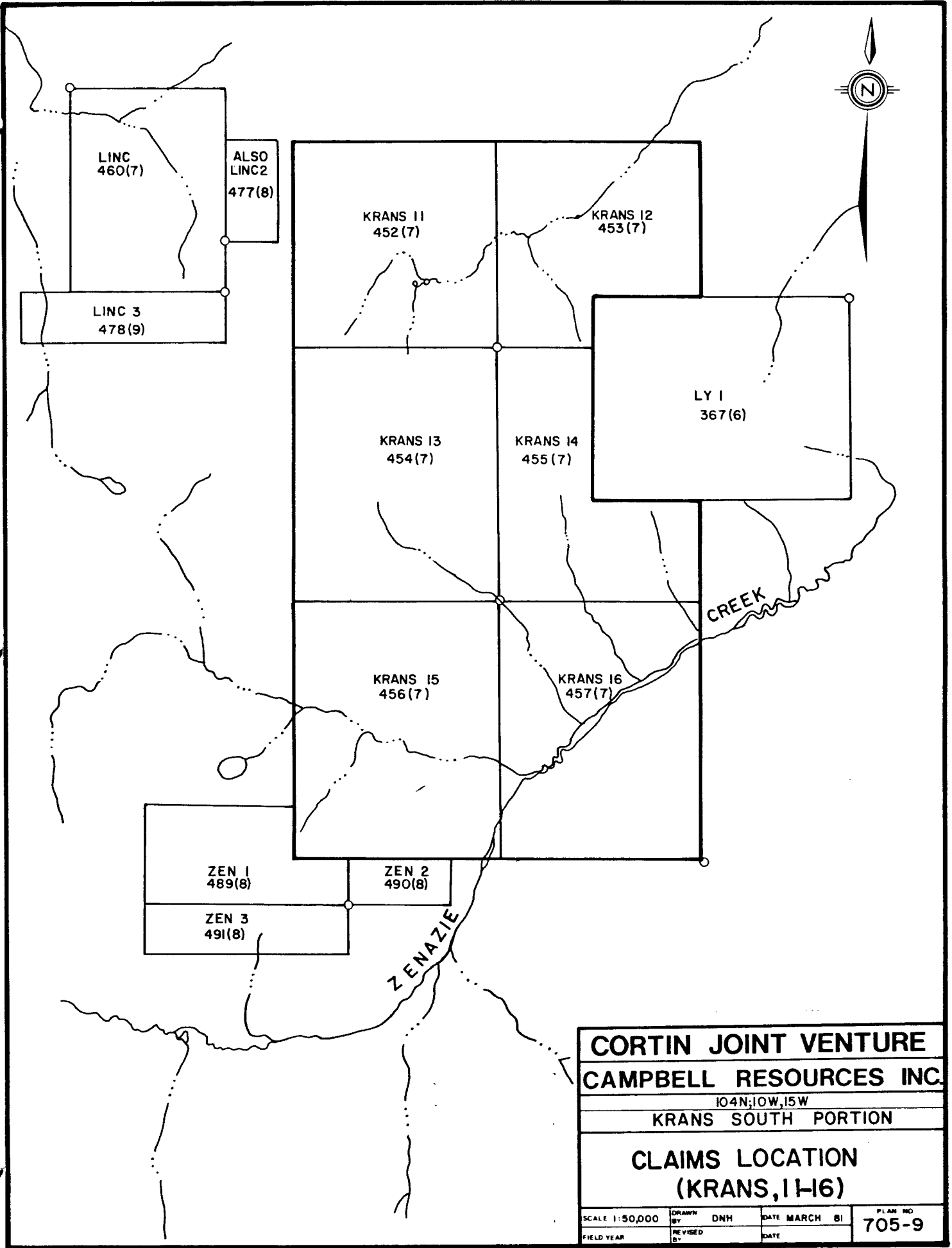
KRANS (SOUTH PORTION)



<b>CORTIN JOINT VENTURE</b>			
<b>CAMPBELL RESOURCES INC.</b>			
B.C.			
KRANS SOUTH PORTION			
<b>LOCATION MAP</b>			
SCALE	NTS	DRAWN BY	DNH
DATE	MARCH	1981	PLAN NO.
FIELD YEAR		REVISED BY	705-10
		DATE	



<b>CORTIN JOINT VENTURE</b>			
<b>CAMPBELL RESOURCES INC.</b>			
104N;10W,15W			
KRANS SOUTH PORTION			
<b>INDEX MAP</b>			
SCALE 1:2.5 x 10 <sup>6</sup>	DRAWN BY DNH	DATE MARCH 81	PLAN NO 705-11
FIELD YEAR	REVISED BY	DATE	



<b>CORTIN JOINT VENTURE</b>			
<b>CAMPBELL RESOURCES INC.</b>			
104N;10W,15W			
KRANS SOUTH PORTION			
<b>CLAIMS LOCATION</b> <b>(KRANS, 11-16)</b>			
SCALE 1:50,000	DRAWN BY DNH	DATE MARCH 81	PLAN NO 705-9
FIELD YEAR	REVISED BY	DATE	

### Ore Potential

To date, only preliminary exploration has been carried out on the property, thus, an ore potential has not been established. Favorable soil and rock geochemical results indicate the southern portion of the Krans property deserves further detailed work.

### Orientation Geology and Geochemical Survey Regional Geology-Geochemistry

The southern portion of the Krans group lies on the contact between the granitic rocks of the Surprise Lake Batholith and the intruded sediments. Within the claims the contact dips to the north east. The Surprise Lake granites are typically very coarse grained to strongly porphyritic.

Near the contact the capping sediments have been altered to a pyritic hornfels.

Geochemically, the Surprise Lake Batholith contains anomalous amounts of U, Mo, W, F and Sn. Reported cassiterite ( $\text{Sn O}_2$ ) with the granitic rocks occurred as minute crystals trapped within quartz grains.

### August, 1980 Field Work

Prior to the initiation of field work, hand specimens taken during the reconnaissance geochemical surveys were examined in detail. Incipient greisen style alteration was noted in a few samples taken near sites where the soil samples had returned above background values in Sn.



An orientation traverse in the vicinity of the "Detailed Grid" (Plan 705-2) located numerous fragments of dark, Chlorite-Magnetite altered granitic rock in float, one sample returned 0.25% Sn on assay.

The area south west of the "Detailed Grid" where greisen style alteration had been noted in hand specimens was examined, and fragments of altered granite were traced up slope to a 20 to 30m wide rusty alteration zone in a creek valley (Plan 705-3). This zone, striking  $060^{\circ}$  has as its core, a 0.5 to 0.6m dark quartz "vein" centered in a 5m wide zone of soft "kaolinized" granite. Samples of the "vein" returned Sn values to 450 ppm. A sample of strong Greisen style wall rock alteration returned only 23 ppm.

A short soil line in rusty talus north of the axis returned values to 110 ppm Sn, while PHMC(Partial Heavy Metal Concentrate) samples taken downstream from the showing returned values to 650 ppm.

Other "rusty" zones outcropping on the property were then examined briefly (see Plan 705-1) with two areas near the headwaters of "Whistler" Creek being examined in greater detail.

At the Lake area, where previous reconnaissance sampling had returned values to 45 ppm Sn, narrow rusty zones were found to occur in outcrop on a cliff face (Plan 705-7). Samples of rusty altered granite taken from outcrop returned values to 0.35% Sn. Greisen altered float was found in talus below the rusty zones, and visible cassiterite was found in a fragment of quartz vein.

Two detailed soil lines were run above the cliff across the presumed strike of the rusty zones. The samples were sieved to three fractions, +10 mesh, -10+40 mesh, and -40 mesh. The Sn values are shown on Plan 705-5. Maximum values to 32 ppm Sn occurred in the -40 fraction, with little support from the coarser fractions. These high values appear to correlate with the narrow rusty zone in the cliff face, below cairn 39096 (see Plan 705-7).

In the Upper Whistler Creek area, several rusty zones are prominent on steep easterly facing cliff faces. A detailed soil sample (talus fines) line was run at the base of one cliff containing rusty patches (Plan 705-6). The tin values in the 3 fractions analyzed (+10 mesh, -10+40 mesh and -40 mesh) were surprisingly high, with the maximum value, 1600 ppm Sn being in a -10+40 mesh sample fraction.

Two soil lines were run on the plateau west of the cliff edge. In these soils the fine fraction returned values to only 108 ppm Sn, with decreasing values in the coarser fractions (Plan 705-4).

All samples were analyzed by Bondar-Clegg in Whitehorse, Y.T.

### Aerial Photography

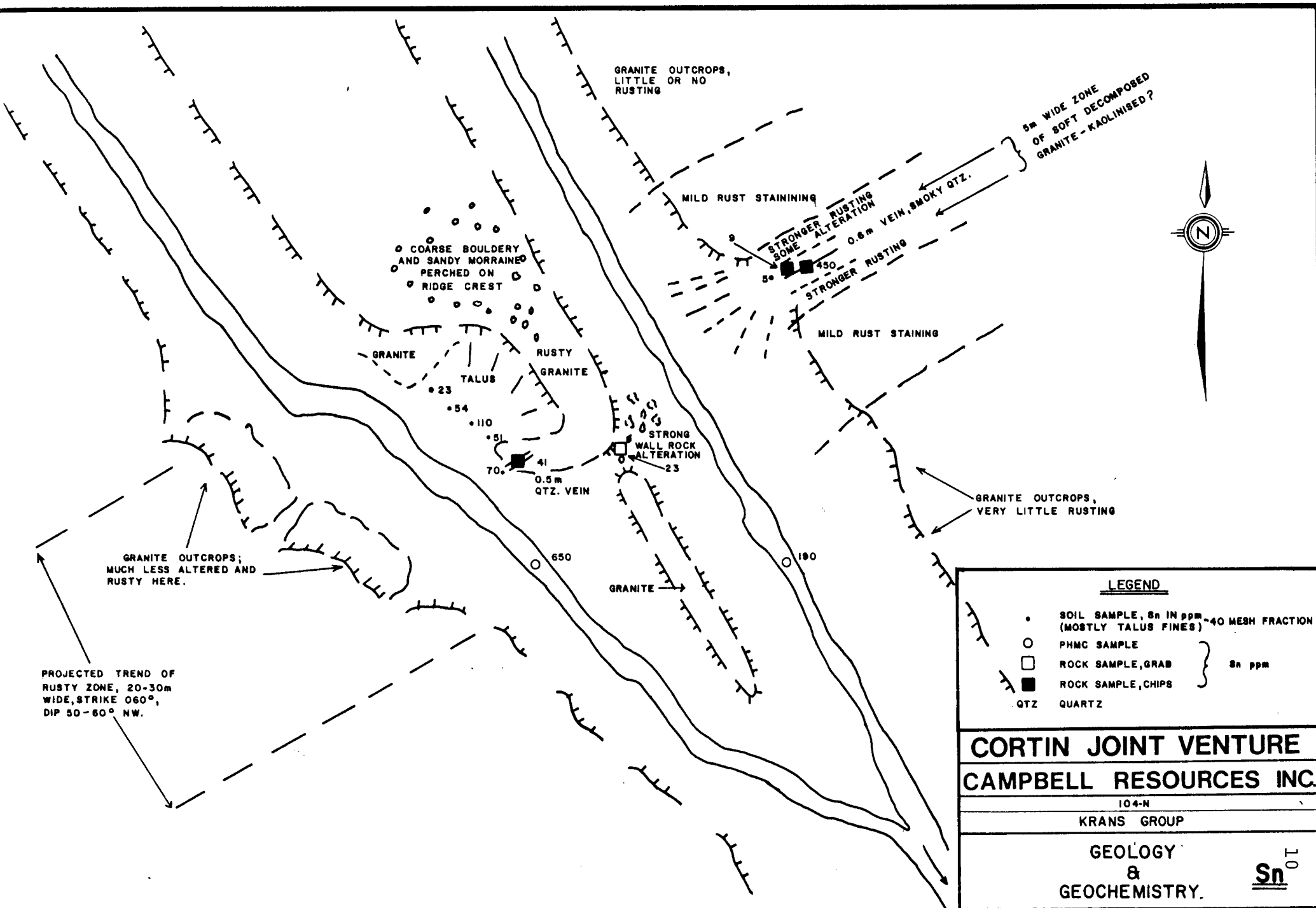
Northwest Survey Corporation International Ltd. of Whitehorse, Y.T. carried out an aerial photographic survey of the Krans area in September, 1980, producing photographs at a 1:20,000 scale.

These photos were to be used for the preparation of a 1:5000 contoured orthophoto map of the property, however, the camera malfunctioned. The resulting photographs, while adequate for mapping control, were not adequate for the preparation of an accurate photomosaic.

### Conclusions

On the Krans claims, tin occurs as cassiterite in rusty weathering alteration zones within the Surprise Lake Batholith. In addition to pervasive clay alteration, two styles of alteration have been tentatively related to tin mineralization. Most common is a Chlorite-Magnetite  $\pm$  tourmaline and pyrite alteration. Greisen style alteration, often with magnetite, is less common. Both have been observed in the same mineralized zone.

Normal soil geochemistry in till covered areas appears to be of marginal use in the detailed evaluation of tin bearing zones.



LEGEND	
•	SOIL SAMPLE, Sn IN ppm (MOSTLY TALUS FINES)
○	PHMC SAMPLE
□	ROCK SAMPLE, GRAB
■	ROCK SAMPLE, CHIPS
QTZ	QUARTZ

**CORTIN JOINT VENTURE**  
**CAMPBELL RESOURCES INC.**

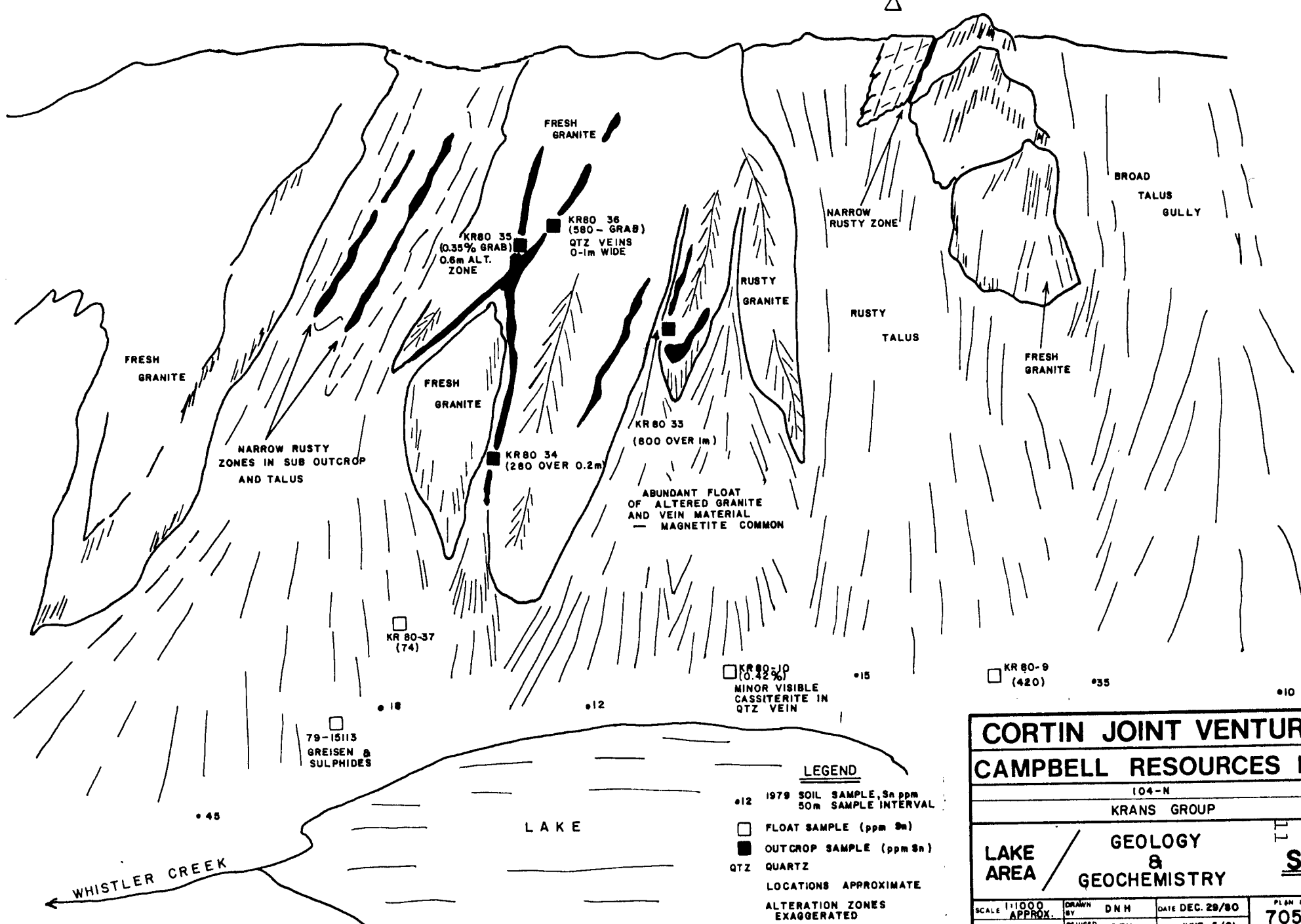
104-N  
 KRANS GROUP

**GEOLOGY & GEOCHEMISTRY.**

**Sn**<sup>10</sup>

SCALE 1:500	DRAWN BY DNH	DATE DEC.30/80	PLAN NO 705-3
FIELD YEAR 1980	REVISED BY	DATE	

CAIRN - 39096 (SEE PLAN 705-5)



**CORTIN JOINT VENTURE**  
**CAMPBELL RESOURCES INC**

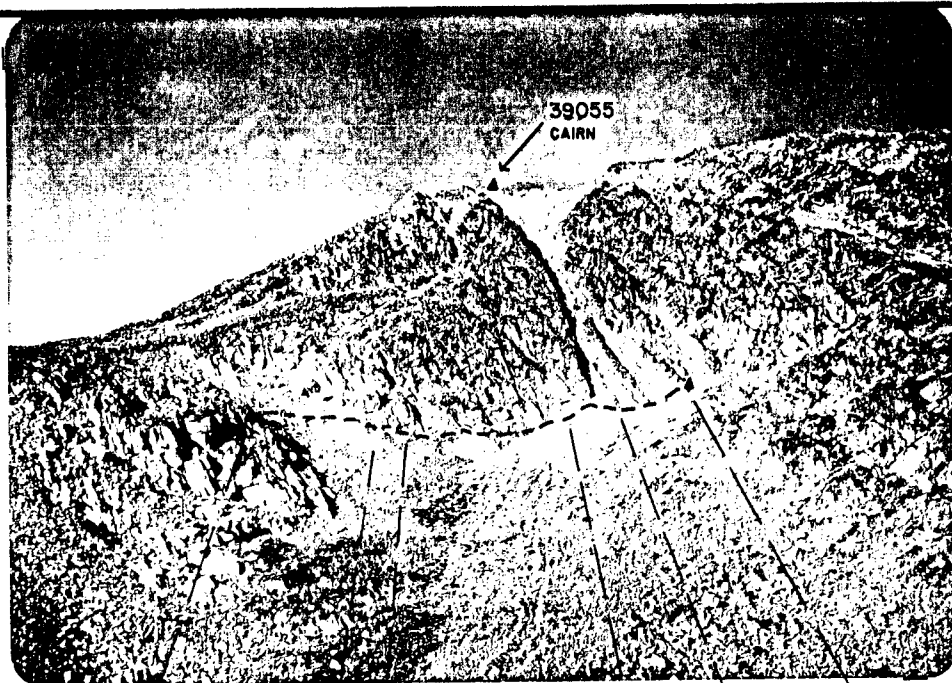
104-N  
 KRANS GROUP

**LAKE AREA / GEOLOGY & GEOCHEMISTRY** **Sn**

SCALE 1:1000 APPROX.	DRAWN BY DNH	DATE DEC. 29/80	PLAN NO 705-7
FIELD YEAR 1980	REVISD BY DFN	DATE JUNE 8/81	

- LEGEND**
- 12 1979 SOIL SAMPLE, Sn ppm 50m SAMPLE INTERVAL
  - FLOAT SAMPLE (ppm Sn)
  - OUTCROP SAMPLE (ppm Sn)
  - QTZ QUARTZ
  - LOCATIONS APPROXIMATE
  - ALTERATION ZONES EXAGGERATED





SAMPLES  
ACROSS MAIN  
TALUS SHOOT

ZONE OF QTZ. VEINS  
AS KR 80-32

SAMPLES AT BASE OF  
CLIFF AND ON  
CLIFF TERRACES

SAMPLES  
FROM  
"FUNNEL  
GULLY"  
MATERIAL

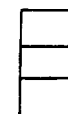
CAIRN  
ON  
ROCK  
OUTCROP

CAIRN ON  
GRASS LEDGE  
IN MINOR  
GULLY

Sn ppm	MESH FRACTION	39151																																			39123																																		
		5	14	L5	13	81	48	74	55	79	21	82	114	61	86	69	226	340	890	73	18	40	50	16	28	22	15	35	44	35	5	14	L5	13	81	48	74	55	79	21	82	114	61	86	69	226	340	890	73	18	40	50	16	28	22	15	35	44	35												
IN	-10+40	L5	6	L5	11	67	42	95	51	59	80	52	240	68	88	72	339	1600	380	111	28	67	22	34	19	28	46	90	75	199	L5	6	L5	11	67	42	95	51	59	80	52	240	68	88	72	339	1600	380	111	28	67	22	34	19	28	46	90	75	199												
TALUS FINES	-40	16	25	58	21	81	48	87	63	35	46	56	270	105	114	119	349	280	800	113	55	54	51	47	31	53	32	87	112	183	16	25	58	21	81	48	87	63	35	46	56	270	105	114	119	349	280	800	113	55	54	51	47	31	53	32	87	112	183												

LOOKING SOUTH-WEST

LEGEND



> 300 ppm Sn  
> 200 ppm Sn  
> 100 ppm Sn

L LESS THAN

SAMPLES COLLECTED AT  
APPROXIMATELY 5-10m INTERVALS  
(PLOTTED AT 5m SPACINGS)

**CORTIN JOINT VENTURE**  
**CAMPBELL RESOURCES INC.**

104N, 15 W

KRANS

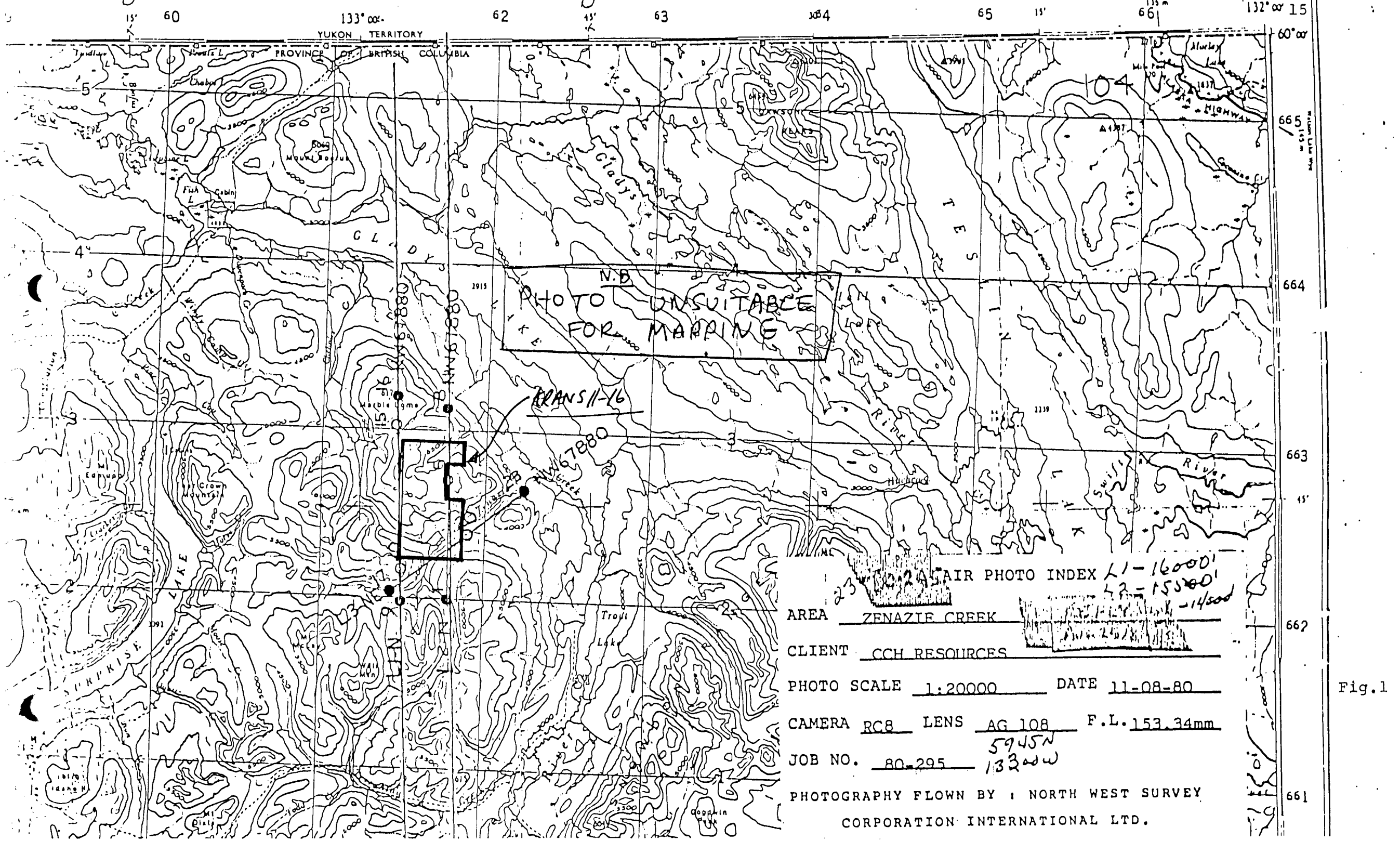
**GEOCHEMISTRY**  
**UPPER WHISTLER CR.**

13  
Sn

SCALE 1:1000	DRAWN BY DNH	DATE DEC. 80	PLAN NO 705-6
FIELD YEAR 80	REVISED BY	DATE	







N.B.  
PHOTO UNSUITABLE  
FOR MAPPING

TRANS 11-16

AIR PHOTO INDEX 41-16000'  
 42-15500'  
 -14500'  
 AREA ZENAZIE CREEK  
 CLIENT CCH RESOURCES  
 PHOTO SCALE 1:20000 DATE 11-08-80  
 CAMERA RC8 LENS AG 108 F.L. 153.34mm  
 JOB NO. 80-295 5945N  
13200W  
 PHOTOGRAPHY FLOWN BY NORTH WEST SURVEY  
CORPORATION INTERNATIONAL LTD.

Fig.1

### Recommendations

Orientation magnetic surveys should be run across the "Detailed Grid" and two or more of the known tin bearing zones to determine if the magnetite in the tin associated alteration is sufficient to yield a recognizable signature.

All known outcropping rusty alteration zones within the granites should be channel sampled in sufficient detail to better determine the grade of the tin mineralization present.



Statement of Qualification

I, Ronald C.R. Robertson, of 3851 East Georgia Street, Burnaby, B. C., do hereby certify that:

1. At the time when the work described in this report was carried out, I was employed by Campbell Resources Inc., A-105, 355 Burrard Street, Vancouver, B.C., as a Project Geologist and have practiced as a Mineral Exploration Geologist for the past ten years.

2. I graduated from the University of Aberdeen, Scotland in June, 1970, with a First Class Honours degree (Bachelor of Science) in Geology, and have carried out post-graduate studies at McMaster University and Queen's University.

3. I am a member in good standing of the Canadian Institute of Mining and Metallurgy and of the Society of Mining Engineers.

Vancouver, B. C.  
February 27, 1981.



Ronald C.R. Robertson  
Project Geologist

APPENDIX I

NOTES TO PLAN 705-7

## APPENDIX I

## KRANS

Notes to Plan 705-7In Situ Samples

KR 80-33 - Chip sample over 1m width (half-width  
(800 ppm Sn) of 2m wide alteration zone).

Zone pinches and swells over short distances, locally bifurcates. Zone trends are quite variable - generally strikes  $034^{\circ}$ - $045^{\circ}$ , dips  $45^{\circ}$ - $65^{\circ}$  NW.

NB. trends of these zones are sub-parallel to cliffs, so large amounts of altered, rusty float are produced relative to true zone widths.

KR 80-34 - 20 cm wide vein and alteration halo.  
(280 ppm Sn) (visible sphalerite)

Above, this narrow zone thickens where it is joined by a second alteration zone. Between this junction and Kr-80-36, the zone consists of several dykes (2-5m wide) of fine-grained granite cutting the coarse-grained host granite. Dyke cores (and locally the margins) are quite strongly altered - these are the "alteration zones" and contain any quartz veins present. This dyke-vein relationship is also seen at the KR 80-33 zone.

KR 80-35 - alteration zone to 0.60m wide - grab sample  
(0.35% Sn) only. (too steep and loose to chip sample here). Very varied vein and alteration lithologies.

KR 80-36 - grab sample of thin quartz veins (2-10cm)  
(580 ppm Sn) with dark selvages; from centre of zone.

Float Samples

15113 - Coarse-grained granite with strong greisen  
(no anal) development (very fine-grained grey-green  
sericite) and minor magnetite and chalcopyrite.

KR 80-9- strongly altered granite with very abundant  
(420 ppm Sn) magnetite and small pyrite cubes.

KR 80-10- similar to KR 80-9, but also some vein  
(0.42% Sn) material with quartz crystals and tiny  
cassiterite grains in selvages.

KR 80-37- quartz vein material.  
(74 ppm Sn)

APPENDIX II  
SAMPLE RESULTS









**CCH RESOURCES**  
BOX 37, MAYO, YUKON TERRITORIES

AREA 7-5

REPT. NO. 40-33

PAGE 1

TYPE soil

FRACTION -20

NAME Kanada

DATE July 3 1961

SAMPLE NO.	✓ Sn	✓ W	✓ Cu	<del>Pb</del>	<del>Zn</del>	<del>Ag</del>	<del>Mo</del>	✓ As	<del>U</del>
705-S-001	15	5	13					12	
02	65	L2	10					6	
03	L5	L2	6					8	
04	23	L2	6					7	
05	13	4	6					6	
06	L5	4	12					7	
07	L5	3	8					7	
08	L5	10	9					10	
09	14	3	5					2	
705-S-010	12	4	3					2	
11	5	L2	4					2	
12	L5	L2	7					6	
13	10	4	3					6	
14	21	10	2					6	
15	5	2	5					2*	
16	L5	3	4					8	
17	L5	2	2					6	
18	18	6	3					4	
19	L5	2	4					6	
705-S-020	19	2	4					5	
21	22	L2	4					6	
22	26	6	5					2	
23	L5	L2	6					2	
24	L5	L2	11					9	
25	L5	L2	10					8	
26	L5	L2	10					8	
27	L5	L2	9					8	
28	L5	L2	10					2	
29	20	2	4					6	
705-S-030	28	2	4					8	
TELEX DATE	1/7		1/7						

Copies and Invoice to Mayo.  
ppm unless otherwise stated.

INV. NO. \_\_\_\_\_

DATE \_\_\_\_\_

**CCH RESOURCES**  
BOX 37, MAYO, YUKON TERRITORIES

AREA 77 -

TYPE soil

REPT. NO. 40-33

FRACTION -80

PAGE 2

NAME Forest

DATE July 3/80

SAMPLE NO.	✓ Sn	✓ W	✓ Cu	<del>Pb</del>	<del>Zn</del>	<del>Ag</del>	<del>Mo</del>	✓ As	<del>D</del>
705-S-031	5	L2	6					7	
32	L5	9	8					10	
33	L5	3	4					9	
34	L5	3	3					6	
35	6	2	4					7	
36	5	2	5					2	
37	L5	2	4					11	
38	L5	L2	6						
39	L5	4	9						
705-S-040	L5	2	4					9	
41	L5	3	2					10	
42	L5	2	4					11	
43	9	2	4					12	
44	L5	2	4					10	
45	L5	L2	5					14	
46	10	L2	2					9	
47	L5	L2	4					10	
48	5	2	3					10	
49	L5	L2	3					10	
705-S-050	L5	L2	4					12	
51	L5	L2	3					10	
52	L5	L2	3					10	
53	L5	L2	4					15	
54	13	L2	4					9	
55	8	L2	4					12	
56	L5	L2	4					11	
57	5	L2	5					11	
58	L5	L2	14					12	
59	L5	2	4					11	
705-S-060	L5	L2	5					10	
TELEX DATE	10/7		10/7						

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ppm unless otherwise stated.

INV. NO. \_\_\_\_\_

DATE \_\_\_\_\_

**CCH RESOURCES**  
BOX 37, MAYO, YUKON TERRITORIES

AREA \_\_\_\_\_

TYPE soil

REPT. NO. 40-33

FRACTION -20

PAGE 3

NAME Kennedy

DATE July 3/8

SAMPLE NO.	✓ Sn	✓ W	✓ Cu	<del>Pb</del>	<del>Zn</del>	<del>Ag</del>	<del>Mo</del>	✓ As	<del>U</del>
705-S-061	15	L2	6					9	
62	5	L2	4					6	
63	15	L2	2					9	
64	15	L2	8					9	
65	15	4	5					10	
66	13	4	3					12	
67	17	4	2					6	
68	15	4	12					8	
69	26	L2	4					?	
705-S-070	15	L2	4					9	
71	5	2	4					2	
72	22	L2	2					7	
73	15	L2	5					6	
74	7	L2	4					7	
75	15	3	6					8	
76	18	4	3					6	
77	8	L2	2					17	
78	31	L2	6					8	
79	8	L2	4					7	
705-S-080	15	L2	4					15	
81	15	L2	5					14	
82	19	L2	2					10	
83	7	4	3					19	
84	8	L2	3					8	
85	5	L2	4					12	
86	13	L2	5					14	
87	15	L2	4					10	
88	15	3	4/					9	
89	15	2	3/					8	
705-S-090	15	L2	3/					11	
TELEX DATE	10/7		10/7						

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INV. NO. \_\_\_\_\_  
DATE \_\_\_\_\_



**CCH RESOURCES**  
BOX 37, MAYO, YUKON TERRITORIES

AREA 705

TYPE Soil

REPT. NO. 40-73

FRACTION +10

PAGE 15

NAME R. Robertson

DATE 23 Aug 1980

SAMPLE NO.	✓	W	Cu	Pb	Zn	Ag	Mo	As	U
	Sn								
39002	6								
3	12								
4	17								
5	12								
6	L5								
8	50								
9	19								
39016	21								
17	L5								
18	L5								
19	L5								
20	L5								
21	L5								
22	L5								
23	L5								
24	6								
25	L5								
26	8								
27	L5								
28	L5								
29	L5								
30	L5								
31	L5								
32	L5								
33	11								
34	18								
35	L5								
36	L5								
37	30								
38	17								
TELEX DATE									

low on slope E. of  
39001 - phmc.  
- placed 5-10 m  
apart on north-  
orange sandy slope

Copies and Invoice to Mayo.  
ppm unless otherwise stated.

INV. NO. \_\_\_\_\_  
DATE \_\_\_\_\_



**CCH RESOURCES**  
BOX 37, MAYO, YUKON TERRITORIES

AREA F05

TYPE Soil

REPT. NO. 40-73

FRACTION +10

PAGE 2 of 15

NAME R. Robertson

DATE 23 Aug. 1980

SAMPLE NO.	✓	W	Cu	Pb	Zn	Ag	Mo	As	U
	Sn								
39039	55								
40	47								
41	L5								
42	12								
43	7								
44	L5								
45	L5								
46	L5								
47	7								
48	L5								
49	L5								
50	L5								
51	28								
52	32								
53	L5								
54	45								
55	47								
56	L5								
57	12								
58	L5								
59	L5								
60	31								
61	L5								
62	L5								
63	12								
64	15								
65	14								
66	L5								
67	L5								
68	L5								
TELEX DATE									

Copies and Invoice to Mayo.  
ppm unless otherwise stated.

INV. NO. \_\_\_\_\_  
DATE \_\_\_\_\_

**CCH RESOURCES**  
BOX 37, MAYO, YUKON TERRITORIES

AREA 705

TYPE Soil

REPT. NO. 40-73

FRACTION +10

PAGE 3 of 15

NAME R. Robertson

DATE 23 Aug. 1980

SAMPLE NO.	✓	<del>W</del>	<del>Cu</del>	<del>Pb</del>	<del>Zn</del>	<del>Ag</del>	<del>Mo</del>	<del>As</del>	<del>U</del>
	Sn								
39069	LS								
70	5								
71	24								
72	LS								
73	LS								
74	LS								
75	LS								
76	20								
77	15								
78	8								
79	8								
80	6								
81	6								
82	LS								
83	LS								
84	8								
85	5								
86	LS								
87	5								
88	LS								
89	LS								
90	LS								
91	5								
92	LS								
93	LS								
94	LS								
95	5								
96	LS								
97	LS								
98	6								
TELEX DATE									

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ppm unless otherwise stated.

INV. NO. \_\_\_\_\_

DATE \_\_\_\_\_

**CCH RESOURCES**  
BOX 37, MAYO, YUKON TERRITORIES

AREA F-5

TYPE soil

REPT. NO. 80-73

FRACTION +10

PAGE 4 of 15

NAME R. Robertson

DATE 23 Aug, 1980

SAMPLE NO.	✓ Sn	<del>W</del>	<del>Cu</del>	<del>Pb</del>	<del>Zn</del>	<del>Ag</del>	<del>Mo</del>	<del>As</del>	<del>U</del>
39099	9								
100	65								
101	21								
102	7								
103	13								
104	6								
105	13								
106	8								
107	15								
108	15								
109	5								
110	65								
111	65								
112	65								
113	65								
114	65								
115	65								
116	65								
117	65								
118	65								
119	65								
120	15								
121	15								
122	65								
123	35								
124	44								
125	35								
126	15								
127	22								
128	28								
TELEX DATE									

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ppm unless otherwise stated.

INV. NO. \_\_\_\_\_  
DATE \_\_\_\_\_



**CCH RESOURCES**  
BOX 37, MAYO, YUKON TERRITORIES

AREA 705

TYPE Soil  
FRACTION -10 + 40  
NAME R. Robertson

REPT. NO. 40075

DATE 23 Aug. 1980

PAGE 6 of 15  
0

SAMPLE NO.	✓	W	Cu	Pb	Zn	Ag	Mo	As	U
	Sn								
39002	24								
3	23								
4	32								
5	11								
6	7								
8	77								
9	44								
16	55								
17	18								
18	65								
19	8								
20	65								
21	6								
22	15								
23	5								
24	22								
25	65								
26	10								
27	65								
28	11								
29	65								
30	10								
31	65								
32	65								
33	20								
34	31								
35	65								
36	65								
37	36								
38	27								
TELEX DATE									

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ppm unless otherwise stated.

INV. NO. \_\_\_\_\_  
DATE \_\_\_\_\_

**CCH RESOURCES**  
BOX 37, MAYO, YUKON TERRITORIES

AREA 7e5

TYPE soil  
FRACTION -10 +60  
NAME R. Robertson

REPT. NO. 1-93

PAGE 7 of 15

DATE 23 Aug 1980

SAMPLE NO.	✓	<del>W</del>	<del>Cu</del>	<del>Pb</del>	<del>Zn</del>	<del>Ag</del>	<del>Mo</del>	<del>As</del>	<del>U</del>
	Sn								
39039	80								
40	73								
41	12								
42	45								
43	19								
44	15								
45	65								
46	17								
47	38								
48	19								
49	12								
50	14								
51	41								
52	26								
53	8								
54	42								
55	18								
56	5								
57	49								
58	13								
59	65								
60	22								
61	65								
62	65								
63	12								
64	31								
65	27								
66	65								
67	65								
68	7								
TELEX DATE									

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ppm unless otherwise stated.

INV. NO. \_\_\_\_\_  
DATE \_\_\_\_\_

**CCH RESOURCES**  
BOX 37, MAYO, YUKON TERRITORY

AREA Zos

TYPE Soil  
FRACTION - 2-4  
NAME R. Robertson

REPT. NO. 16-73

DATE 23 Aug 1980

PAGE 8 of 15

SAMPLE NO.	✓	W	Cu	Pb	Zn	Ag	Mo	As	U
	Sn								
39069	12								
70	11								
71	53								
72	15								
73	15								
74	15								
75	5								
76	15								
77	15								
78	15								
79	15								
80	15								
81	15								
82	15								
83	15								
84	15								
85	15								
86	6								
87	15								
88	15								
89	15								
90	15								
91	7								
92	8								
93	6								
94	7								
95	6								
96	15								
97	15								
98	15								
TELEX DATE									

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ppm unless otherwise stated.

INV. NO. \_\_\_\_\_

DATE \_\_\_\_\_

**CCH RESOURCES**  
BOX 37, MAYO, YUKON TERRITORY

AREA 705

TYPE Soil

REPT. NO. 25-72

FRACTION (-10 + 4c)

PAGE 9 of 15

NAME R. Robertson

DATE 23 Aug 1980

SAMPLE NO.	✓	W	Cu	Pb	Zn	Ag	Mo	As	U
	39099	13							
100	15								
101	9								
102	11								
103	15								
104	15								
105	15								
106	15								
107	15								
108	15								
109	15								
110	6								
111	5								
112	15								
113	15								
114	15								
115	15								
116	15								
117	15								
118	15								
119	15								
120	15								
121	15								
122	15								
123	199								
124	75								
125	90								
126	46								
127	28								
128	19								
TELEX DATE									

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ppm unless otherwise stated.

INV. NO. \_\_\_\_\_

DATE \_\_\_\_\_





**CCH RESOURCES**  
BOX 37, MAYO, YUKON TERRITORY

AREA 705

TYPE Soil

REPT. NO. 40-73

FRACTION -40

PAGE 11 of 15

NAME R. Robertson

DATE 23 Aug. 1980

SAMPLE NO.	✓ Sn	<del>W</del>	✓ Cu	<del>Pb</del>	<del>Zn</del>	<del>Ag</del>	<del>Mo</del>	✓ As	<del>U</del>
39002	48		24					18	
3	43		18					8	
4	54		22					10	
5	35		21					10	
6	41		22					10	
8	127		52					40	
9	93		24					2	
16	70		75					5	
17	51		12					3	
18	110		12					3	
19	54		16					6	
20	23		22					11	
21	5		20					2	
22	7		16					7	
23	9		16					5	
24	21		10					7	147
25	18		11					5	
26	16		14					5	
27	5		14					5	
28	15		13					11	
29	7		14					5	
30	13		15					5	
31	17		13					3	
32	11		12					5	
33	13		16					13	
34	28		14					7	
35	7		10					5	
36	8		18					7	
37	24		174					10	
38	48		198					12	
TELEX DATE									

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ppm unless otherwise stated.

INV. NO. \_\_\_\_\_

DATE 23 Aug 1980

**CCH RESOURCES**  
BOX 37, MAYO, YUKON TERRITORY

AREA 7c5

TYPE Soil

REPT. NO. 4-12

FRACTION (-40)

PAGE 129

NAME R. Robertson

DATE 23 Aug 1980

SAMPLE NO.	✓ Sn	<del>W</del>	✓ Cu	<del>Pb</del>	Zn	Ag	Mo	✓ As	<del>U</del>
39039	50		84					11	
40	108		42					13	
41	28		85					12	
42	61		64					17	
43	47		72					27	
44	33		47					23	
45	24		40					15	
46	58		113					14	
47	38		40					18	
48	49		62					17	
49	34		22					12	
50	73		14					10	
51	72		18					8	
52	56		31					12	
53	29		22					8	
54	63		42					7	
55	69		36					11	
56	24		26					10	
57	98		28					10	
58	17		18					5	
59	65		21					5	
60	6		22					7	
61	65		20					7	
62	8		20					6	
63	35		35					14	
64	38		22					10	
65	35		21					10	
66	36		24					12	
67	65		19					7	
68	15		36					11	
TELEX DATE									

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ppm unless otherwise stated.

INV. NO. \_\_\_\_\_

DATE \_\_\_\_\_

**CCH RESOURCES**  
BOX 37, MAYO, YUKON TERRITORY

AREA 705

TYPE Soil

REPT. NO. 40-13

FRACTION -60

PAGE 13 of 15

NAME R. Robertson

DATE 23 Aug 1980

SAMPLE NO.	✓ Sn	<del>W</del>	✓ Cu	<del>Pb</del>	<del>Zn</del>	<del>Ag</del>	<del>Mo</del>	✓ As	<del>U</del>
39069	42		32					13	
70	33		65					13	
71	43		44					13	
72	65		26					10	
73	65		24					8	
74	11		16					4	
75	6		12					4	
76	15		13					4	
77	65		24					5	
78	65		20					6	
79	6		26					3	
80	65		13					7	
81	6		14					7	
82	15		14					6	
83	65		16					5	
84	65		20					7	
85	65		28					7	
86	7		20					8	
87	65		26					7	
88	65		22					6	
89	7		24					6	
90	7		24					6	
91	13		25					11	
92	6		23					13	
93	22		24					7	
94	13		28					7	
95	25		20					18	
96	17		18					12	
97	14		24					7	
98	32		14					3	
TELEX DATE									

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ppm unless otherwise stated.

INV. NO. \_\_\_\_\_  
DATE \_\_\_\_\_

# CCH RESOURCES

BOX 37, MAYO, YUKON TERRITORY

AREA 705

TYPE Soil  
 FRACTION                       
 NAME Paul Pliska

-40

Aug 21<sup>st</sup> / 80

REPT. NO.                       
 PAGE 15 of 15

SAMPLE NO.	✓	W	✓	Pb	Zn	Ag	Mo	✓	U
	Sn		Cu					As	
<del>39150</del>									
<del>39151</del>									
	<u>Sn</u>		<u>Cu</u>					<u>As</u>	
39129	47		38					10	
130	51		38					8	
131	54		35					7	
132	65		42					5	
133	113		44					12	
134	900		104					12	
135	280		80					11	
136	349		49					12	
137	119		38					10	
138	114		50					10	
139	105		49					12	
140	270		53					10	
141	56		60					11	
142	46		62					7	
143	35		63					7	
144	63		73					7	
145	87		76					6	
146	48		64					8	
147	61		52					22	
148	21		62					33	
149	58		84					50	
150	25		72					55	
151	16		24					20	
TELEX DATE									

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 ppm unless otherwise stated.

INV. NO. \_\_\_\_\_  
 DATE \_\_\_\_\_

**CCH RESOURCES**  
BOX 37, MAYO, YUKON TERRITORY

AREA 705

TYPE soil

REPT. NO. 6-73

FRACTION (-40)

PAGE 14 of 15

NAME R. Robertson

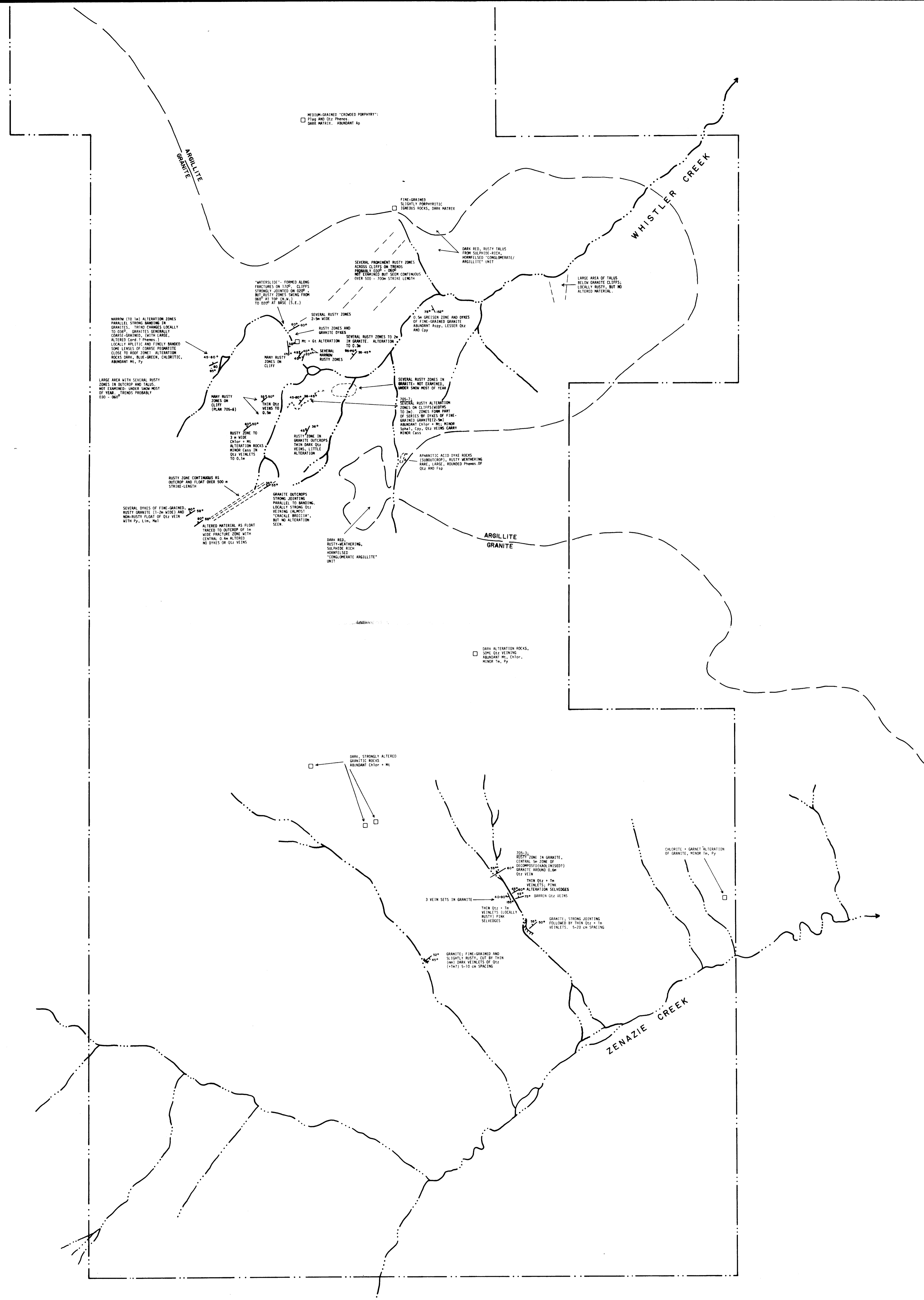
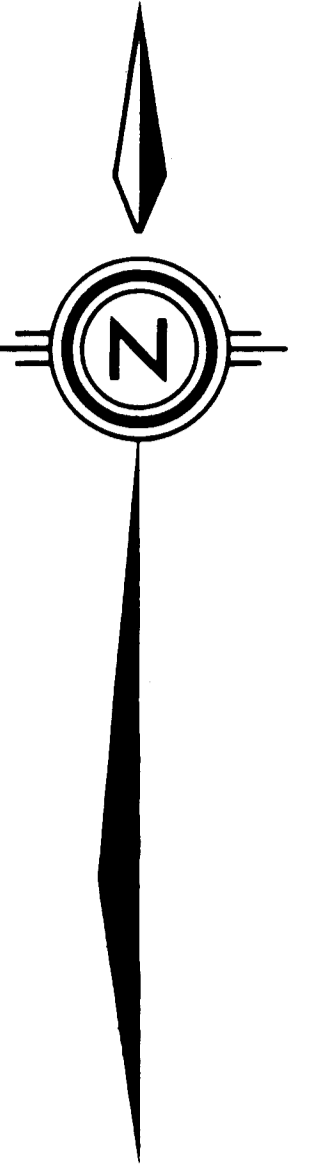
DATE 23 Aug 1980

SAMPLE NO.	✓ Sn	<del>W</del>	✓ Cu	<del>Pb</del>	<del>Zn</del>	<del>Ag</del>	<del>Mo</del>	✓ As	<del>U</del>
39099	29		16					6	
100	7		10					13	
101	15		20					5	
102	17		13					5	
103	9		13					6	
104	65		18					7	
105	65		18					6	
106	65		24					6	
107	65		26					3	
108	5		20					6	
109	65		22					22	
110	5		20					12	
111	7		16					25	
112	6		12					40	
113	5		18					10	
114	65		19					12	
115	65		10					2	
116	65		6					12	
117	5		6					12	
118	65		16					5	
119	5		11					7	
120	12		11					2	
121	65		16					3	
122	7		12					3	
123	183		19					2	
124	112		18					5	
125	87		22					7	
126	32		26					7	
127	53		23					2	
128	31		32					7	
TELEX DATE									

Copies and Invoice to Mayo.  
ppm unless otherwise stated.

INV. NO. \_\_\_\_\_

DATE \_\_\_\_\_



LEGEND

--- BOUNDARY OF KRANS CLAIM GROUP

- - - INFERRED GEOLOGICAL CONTACT  
NOTE: "ARGILLITE" IS UNIT 1 & 6 OF MAP TB-18  
"GRANITE" IS UNIT 5, (SURPRISE LAKE BATHOLITH) OF MAP TB-18

--- STRIKE AND DIP OF ALTERATION ZONE AND ASSOCIATED FRACTURES, DYKES OR VEINS

□ FLOAT SAMPLE

ABBREVIATIONS:

- Ap - APATITE
- Aspy - ARSENOPYRITE
- Cass - CASSITERITE
- Chlor - CHLORITE
- Cord - CORDIERITE
- Cpy - CHALCOPYRITE
- Fsp - FELDSPAR
- Gr - GARNET
- Lim - LIMONITE
- Mal - MALACHITE
- Mt - MAGNETITE
- Phenos - PHENOCRYSTS
- Plag - PLAGIOCLASE
- Py - PYRITE
- Qtz - QUARTZ
- Sphal - SPIHALERITE
- Tm - TOURMALINE

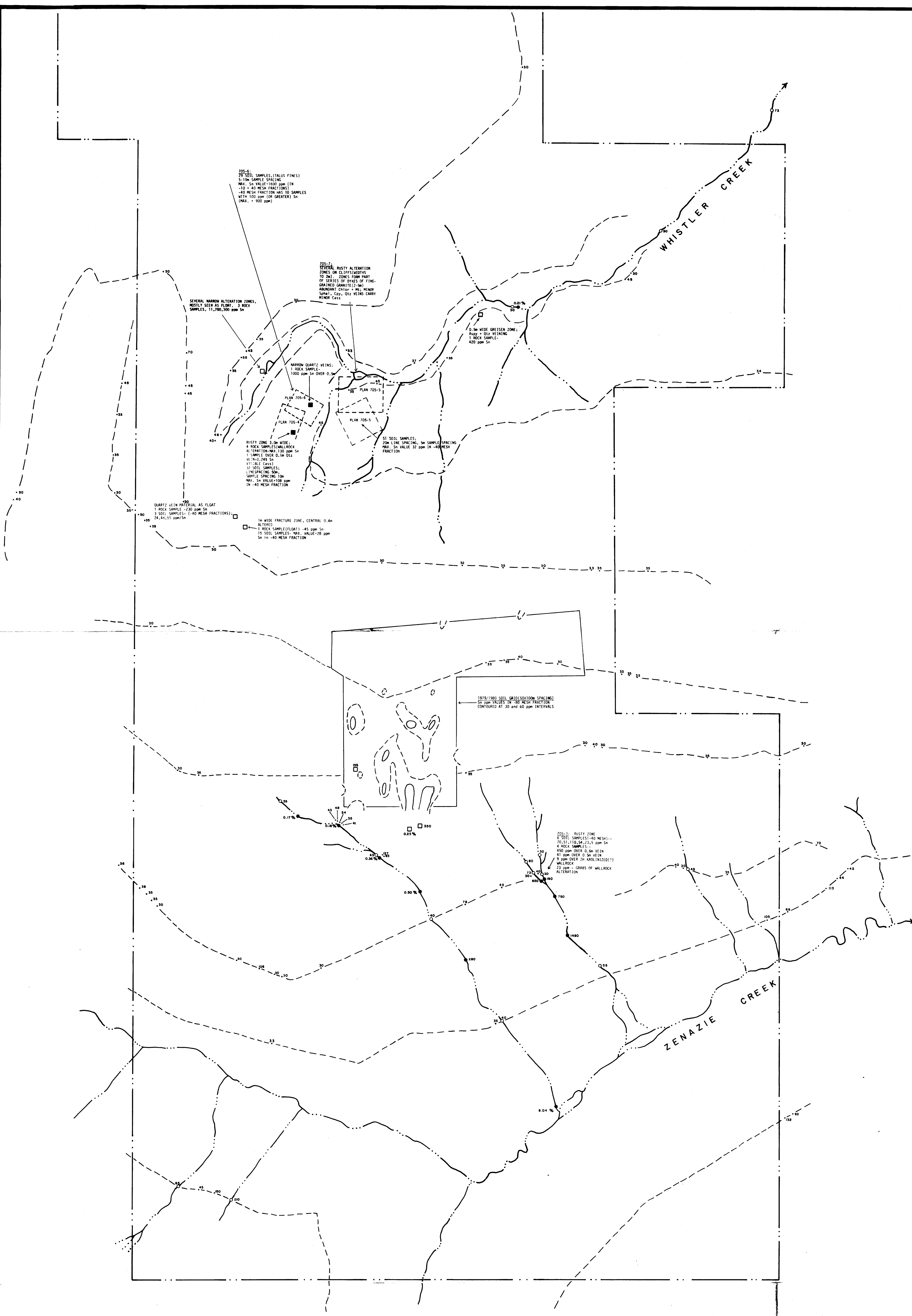
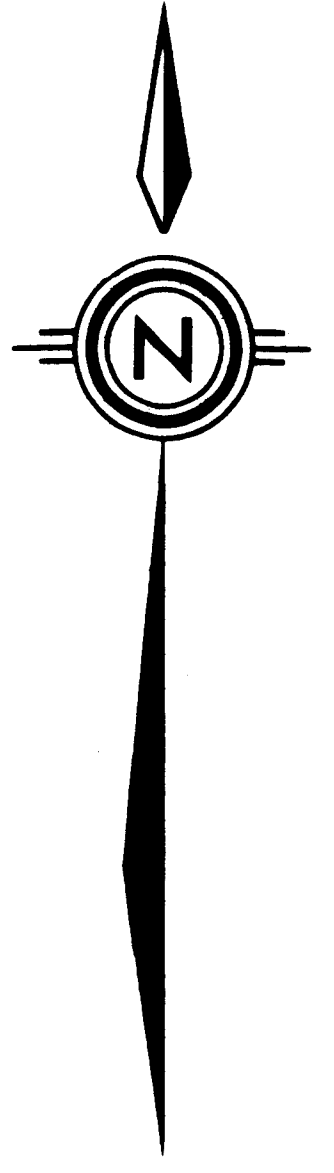
SOURCES BRANCH  
ANNUAL REPORT  
**9342**

**CORTIN JOINT VENTURE  
CAMPBELL RESOURCES INC.**

104N, 10W, 15W  
KRANS-SOUTH PORTION

**GEOLOGY COMPILATION**

SCALE 1:110,000	DRAWN BY DNH	DATE DEC 80	PLAN NO. 705-1
FIELD YEAR 1980	REVISED BY	DATE	



**LEGEND**

- 40 1980 SOIL SAMPLES; -40 MESH FRACTION, ALL Sn VALUES SHOWN
- 750 PARTIAL HEAVY MINERAL CONCENTRATE SAMPLES - ONLY SIGNIFICANT 1979 SAMPLES PLOTTED; ALL 1980 SAMPLES PLOTTED
- 80 1979 RECONNAISSANCE SOIL SAMPLING; 50m SAMPLE INTERVAL - 80 MESH FRACTION Sn VALUES OF 30 ppm AND GREATER ARE INDICATED
- 30 STREAM SEDIMENT SAMPLES (ALL FROM 1979); ONLY SAMPLES WITH 30 ppm OR MORE Sn ARE PLOTTED
- 0.25% ROCK SAMPLES - FLOAT
- 2000 ROCK SAMPLES - OUTCROP

--- CLAIM BOUNDARY

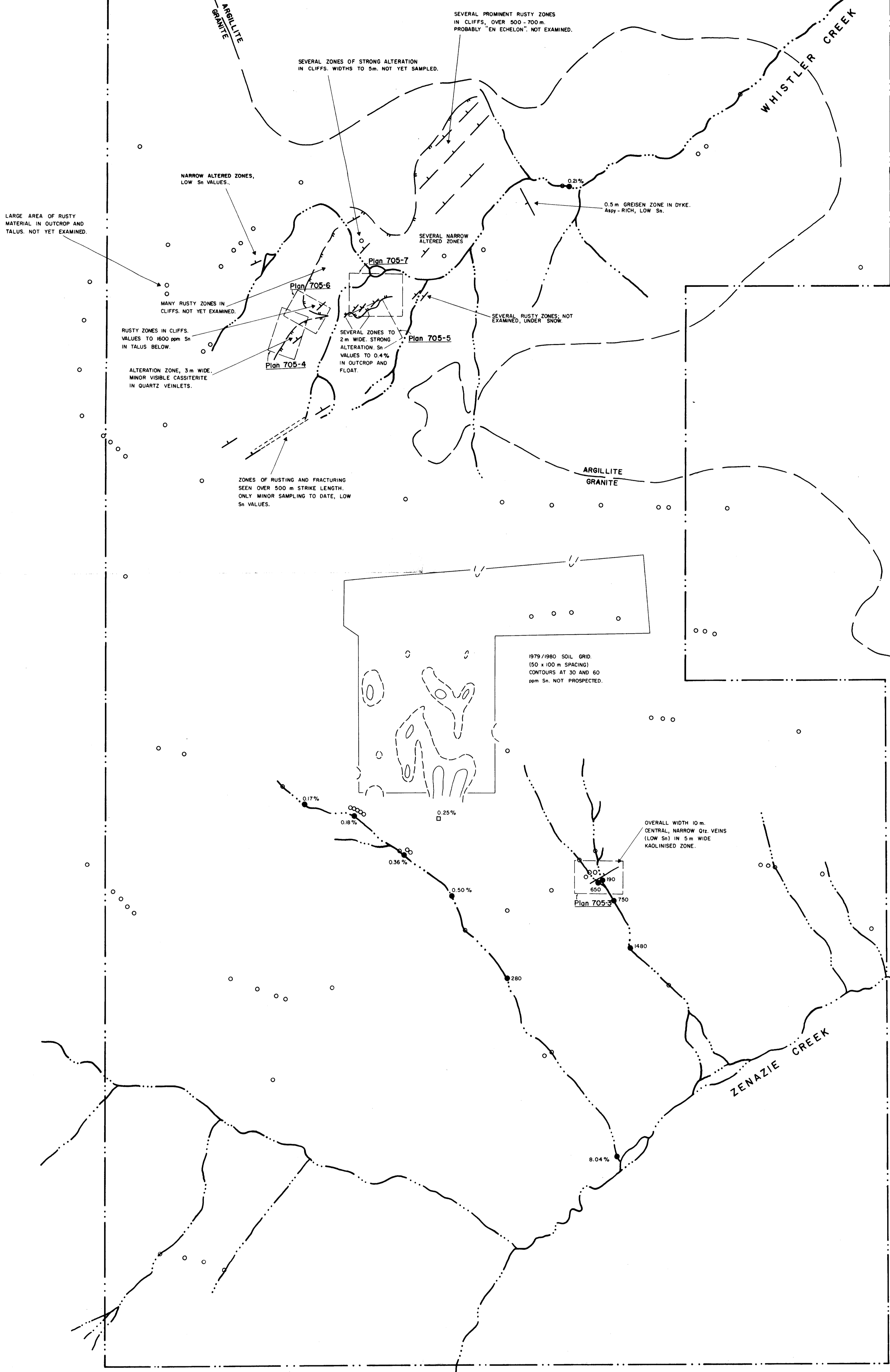
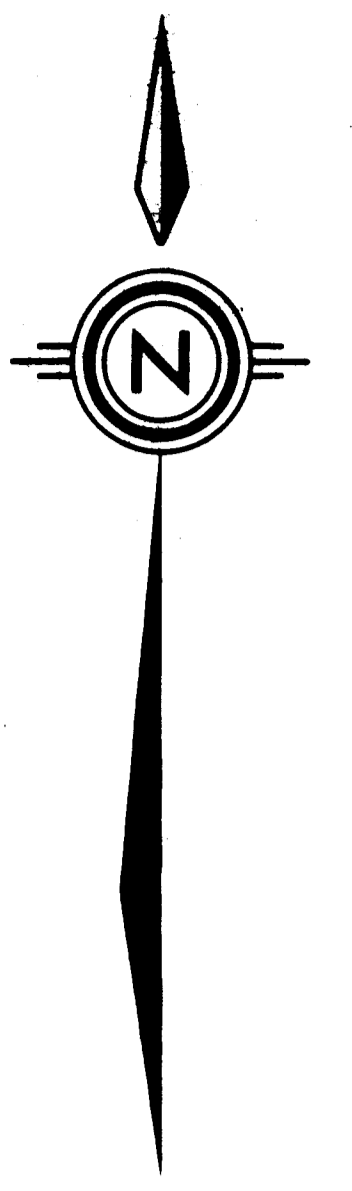
NB. Qtz - QUARTZ  
Aspy - ARSENOPIRYTE

**CORTIN JOINT VENTURE  
CAMPBELL RESOURCES INC.**  
104N, 10W, 15W  
KRANS - SOUTH PORTION  
**GEOCHEMISTRY COMPILATION**  
**Sn**

SCALE 1:10,000	DRAWN BY DNH	DATE DEC. 28/80	PLAN NO. 705-2
FIELD YEAR 1980	REVISOR BY	DATE	

MINERAL RECONNAISSANCE  
ASSURANCE REPORT  
**9342**  
10





**LEGEND**

- 0.50% PARTIAL HEAVY MINERAL CONCENTRATE (% or ppm)
- SOIL OR STREAM SEDIMENT SAMPLE (RECONNAISSANCE); ONLY ANOMALOUS SAMPLES SHOWN (Sn CONTENT FROM 30 ppm TO 200 ppm). MANY REQUIRE FOLLOWUP (PROSPECTING, GEOCHEMICAL SAMPLING).
- 0.25% ROCK SAMPLE - FLOAT. ONLY SAMPLES OF ALTERED ROCK OR VEIN MATERIAL WITH SIGNIFICANT Sn CONTENT ARE SHOWN.

Asp ARSENOPYRITE  
Qtz QUARTZ

— GEOLOGICAL CONTACT  
— ZONES OF ALTERATION AND VEINING - DIMENSIONS EXAGGERATED  
— CLIFFS  
--- KRANS CLAIM GROUP BOUNDARY

---

**CORTIN JOINT VENTURE  
CAMPBELL RESOURCES INC.**

104 - N - 10 W, 15 W  
KRANS - SOUTH PORTION

**GEOLOGY & GEOCHEMISTRY  
COMPILATION** **Sn**

SCALE 1:10,000	DRAWN BY GPN	DATE JAN 23, 1981	PLAN NO.
FIELD YEAR '79, '80	REVISED BY R.C.	DATE MAR 20, 1981	<b>705-8</b>

