104-M-398-4

ASSESSMENT REPORT

GEOCHEMICAL SURVEYS

KRANS CLAIMS 1 to 16

ATLIN MINING DIVISION - 104 N, 10 W, 15 W, 14 E

59° 47' N 133° 00' W

CCH RESOURCES LTD., CORTIN JOINT VENTURE

David R. Kennedy

July 14, 1980

C O N T E N T S

MAPS

INTRODUCTION

The following report describes the results of additional geochemical soil and stream sediment sampling on the southern portion of the Krans claim block located in the vicinity of Atlin, B.C. The work was carried out by CCH RESOURCES during July and early August 1979, and during early July 1980.

The Krans claim block consists of 16 mineral claims comprising 250 units. The ground was staked as a tin prospect based on regional reconnaissance stream sampling carried out in 1977. Reconnaissance soil sampling carried out early in the 1979 field season turned up several anomalous tin values on the southern portion of the claim block. This report describes the results of additional sampling carried out to further tie down the areas producing anomalous tin values. One area was selected for detailed soil sampling on a 50 x 100 meter grid.

The work outlined in this report was carried out by CCH RESOURCES LTD., of Toronto, Ontario on behalf of the Cortin Joint Venture.

A total of 716 soil and stream sediment samples were collected and analyzed for Sn, W, and Cu. In addition 604 of the above samples were analyzed for Pb and Zn, determinations for Li and F were also made on 236 of the samples.

A vertical section of glacial till exposed on Lincoln Creek was sampled and panned to determine if the till was the source of the high Sn values encountered on the north end of the property.

PROPERTY

CCH RESOURCES staked 250 units in June 1978, as 16 mineral claims, the claims were recorded on July 17, 1978.

CLAIM NAME	TAG No.	RECORD No.	ASSESSMENT ANNIVERSARY	No. OF UNITS	REGISTERED OWNER
KRANS 1	46133	442	July 17	20	CCH RESOURCES LTD.
KRANS 2	46134	443	July 17	20	CCH RESOURCES LTD.
KRANS 3	46135	444	July 17	20	CCH RESOURCES LTD.
KRANS 4	46136	445	July 17	20	CCH RESOURCES LTD.
KRANS 5	46137	446	July 17	5	CCH RESOURCES LTD.
KRANS 6	46138	447	July 17	5	CCH RESOURCES LTD.
KRANS 7	46139	448	July 17	12	CCH RESOURCES LTD.
KRANS 8	46140	449	July 17	12	CCH RESOURCES LTD.
KRANS 9	46141	450	July 17	12	CCH RESOURCES LTD.
KRANS 10	46142	451	July 17	12	CCH RESOURCES LTD.
KRANS 11	46143	452	July 17	16	CCH RESOURCES LTD.
KRANS 12	46144	453	July 17	16	CCH RESOURCES LTD.
KRANS 13	46145	454	July 17	20	CCH RESOURCES LTD.
KRANS 14	46146	455	July 17	20	CCH RESOURCES LTD.
KRANS 15	46147	456	July 17	20	CCH RESOURCES LTD.
KRANS 16	46148	457	July 17	20	CCH RESOURCES LTD.

The work outlined in this report was carried out on the mineral claims KRANS 1 and KRANS 11 through 16.

LOCATION, ACCESS AND TOPOGRAPHY

The centre of the Krans Group is located at about 59° 47' N latitude, 133° 00' W longitude. The area sampled is situated south of Marble Dome, between Surprise and Gladys Lakes. The area is drained by Zenazie Creek and its tributaries.

Access from the town of Atlin is by fixed wing aircraft to Lincoln Lake or to any part of the property by helicopter. Air distance from Atlin to the claim group is approximately 47 km.

The southern portion of the claim block is a highland area scarred by two steep sided, north east trending valleys; that of Zenazie Creek and a tributary creek cutting across Krans 11 and 12. The elevation varies between 1000 and 2000m. The region has been glaciated and some rounded glacial boulders are in evidence below 1400 m. Most of the area described in this report has very little glacial debris and the heavy glacial overburden problems of the northern claims do not apply here.

The area sampled is entirely above tree line, a few stunted and twisted spruce manage to attain a height of 3-4 meters in the valleys cut by Zenazie Creek and Lincoln Creek. The remainder of the area is covered by Alpine grasses and various "caribou mosses".

GEOCHEMICAL METHODS

The geochemical sampling program was carried out by Clarence Blacksmith and Harry Happyjack, regular exploration technicians employed by Cambell Chibougamau Mines Ltd., and by David Kennedy, project geologist with CCH RESOURCES LTD. Another examination of the property was carried out by project geologists Ron Robertson and David Kennedy in early July 1980.

Samples were taken at 50 m intervals along selected traverses, some generally followed the horizontal contour of the hillside, one followed the ridge line and two "scree" lines were run on either side of the tributary creek crossing Krans 11 and 12. Control was by topofil chain, compass and altimeter. Base maps were constructed from an air photo mossaic enlarged to 1:10 000 scale. Sample locations and results were plotted on the same plans as the original reconnaissance results to provide a more meaningful and complete presentation.

A detail grid having east-west lines spaced at 100 m was sampled at 50 m intervals along the lines. The grid was established in 1979 and additional samples were taken to the north and east in 1980. The results are plotted on maps 705 - 2, 4, 6 included in this report.

All of the samples were collected directly below the organic layer, though occasionally the humus layer was in excess of 0.3 m and at these locations humus samples were inevitable.

The -80 fraction was analyzed for Sn, W, Cu, Zn and Pb by Bondar-Clegg and Co. in their Whitehorse laboratory. The analyses for Li and F were carried out in Vancouver, Sn checks by XRF method were conducted in Ottawa.

Tin was analyzed by ammonium iodide fusion, 1 Normal HCL leach, followed by atomic absorption spectrophotometry, the technique developed by Stanton and further described by A. Smith of the G.S.C.

Tungsten was sintered with Na_2CO_3 followed by colourimetric analyses using zinc dithiol.

Copper, lead and zinc were treated in the standard way with HNO_3 HCL digestion and analyzed by atomic absorption spectrophotometry.

Lithium is digested using perchloric, nitric acid and hydrofluoric acid and is analyzed by atomic absorption method using a sodium buffer.

Fluorine was analyzed by potassium hydroxide fusion followed by water leaching. The analysis is by specific ion electrode.

The XRF used to check tin analyses in Ottawa is a discrete scan instrument.

A sample site was selected on Lincoln Creek on claim Krans 1 where a good vertical section of the glacial till could be sampled. The site is indicated on map 9 . The steep slope cut by the creek was sampled in 3 m intervals, each sample consisted of 2 to 3 pans of till which was panned to produce a heavy mineral concentrate. The concentrates were analyzed for Sn and W. The results are shown as sketch 705 - 9 .

CCH RESOURCES LTD. has been using a geochemical approach in searching for tin in several areas of the Canadian Cordillera. Cassiterite is chemically and physically resistant. Sn anomalies tend to be patchy and discontinuous. Better definition of structures or mineralized zones is often possible when using associated pathfinder elements. All samples from the early 1979 reconnaissance sampling were also analyzed for W, Cu, Pb, Zn, Ag, Mo, and As. None of these elements showed any particular correlation to the Sn values. In the present phase of sampling Ag, Mo, and As were dropped and some orientation studies were tried using Li and F.

RESULTS AND INTERPRETATION

The analytical results are plotted on the geochemical plans along with the previous early summer work, all values are expressed as ppm. Tin is the only element showing substantially anomalous values in this area. In soil values over 15 ppm are considered anomalous, those over 40 ppm highly anomalous. Several of the higher values have been checked using the XRF technique, these values are underlined.

The tin values seem to be aligned in 3 more or less north-south trending zones. These zones are outlined on the plan, labled A, B and C. Only a very few tungsten values exceed 15 ppm, there is no obvious trend to their distribution, most however, fall within the tin enriched zones.

Copper, lead and zinc do not show any direct correlation with the tin enriched zones. There are, however, 2 lead enriched zones on the lines just north of Right Fork of Zenazie Creek, Zn values are also somewhat above background in this area.

Results of the lithium and fluorine sampling do not suggest that there is any direct correlation to the tin enriched zones.

CONCLUSIONS

1. "Pathfinder" elements though very useful indicators in other parts of the Cordillera do not appear to help in the search for tin on this property.

2. Three areas having an apparent north-south alignment show enhanced tin values in soils.

3. The detail grid confirms the enhanced tin values on the reconnaissance line and again the alignment of values is in a north-south direction.

4. Values for W, Cu, Pb, Zn, Li and F on the detail grid do not show any correlation with the tin enriched zones.

5. Pan concentrate samples taken from the glacial overburden are not particularly high, the origin of the high values in stream sediments in the creek do not appear to be the glacial till sampled. The possibility of finding a bedrock source in this heavily glaciated area appears remote.

RECOMMENDATIONS

1. Serious hands and knees prospecting must be done in the high tin areas to try and determine what mineral is the source of the tin enrichment.

2. Detailed geology should be done in the high tin areas, any structure that might control the Sn distribution would be particularly important.

3. Consideration must be given to dropping some of the northern claims as any interesting Sn values are in areas of deep glacial overburden. If no structural control trending toward the areas of interest can be found the ground should be dropped.

D.R. Kennedy

Mayo, Yukon
July 14, 1980

David R. Kennedy
Project Geologist

STATEMENT OF QUALIFICATION

I, David R. Kennedy, of 465 West 26th Street, North Vancouver, B.C. do hereby certify that:

1. I am a geologist employed by CCH RESOURCES LTD., A 105-355 Burrard St., Vancouver, B.C. and have been continuously practising as a mineral exploration geologist for the past 10 years.

2. I graduated from Acadia University, Wolfville, Nova Scotia, in 1970 with a Bachelor of Science degree in Geology.

3. I am a member in good standing of the Geological Association of Canada and of the Canadian Institute of Mining and Metallurgy.

D.R. Kennedy

Mayo, Yukon
July 14, 1980

David R. Kennedy
Project Geologist

STATEMENT OF EXPENDITURES

716 determinations for Sn, W, Cu at $8.95	$ 6408.20
604 determinations for Pb, Zn, at $1.30	785.20
236 determinations for Li, F at $6.75	1593.00
20 pan concentrates at $7.75	155.00
Salary D. Kennedy July 17 - Aug.3/79 at $85.09 a day	1446.53
Salary C. Blacksmith July 17 - Aug. 3/79 at $63.60 a day	1079.50
Salary H. Happyjack July 17 - Aug. 3/79 at $63.60 a day	1079.50
Food, 51 man days at $12.50	637.50
Helicopter, (1979 and 1980)	2593.60
Fixed wing, 4 hours at $150.00/hr.	600.00
Boat and motor, 17 days at $8.00 per day	136.00
Radio, 17 days at $5.00 per day	85.00
Field consumables, 23 days at $5.00 per day	115.00
Camp equipment, 17 days at $10.00 per day	170.00
Truck rental and misc. transportation, (1979 and 1980)	995.92
Salary D. Kennedy July 1 - 5/80 at $100.80 a day	504.00
Salary R. Robertson July 1 - 5/80 at $100.80 a day	504.00
Meals and accomodation, Atlin Inn July 1980	428.35
Cost of preparing report	800.00
	$ 20116.30

D. R. Kennedy

David R. Kennedy

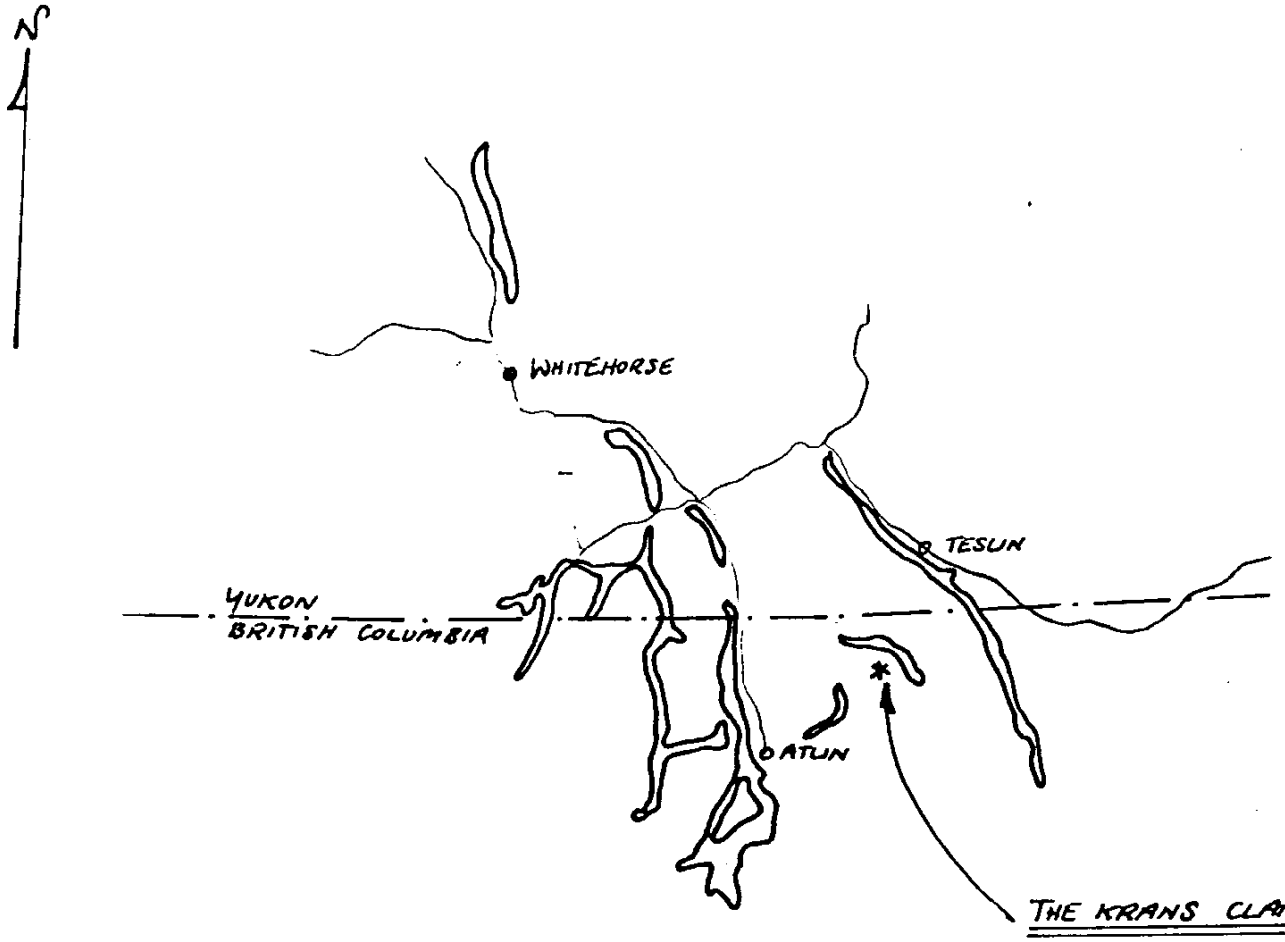
Project Geologist

Mayo, Yukon

July 14, 1980

KRANS GROUP

INDEX MAP.



D.R. Kennedy

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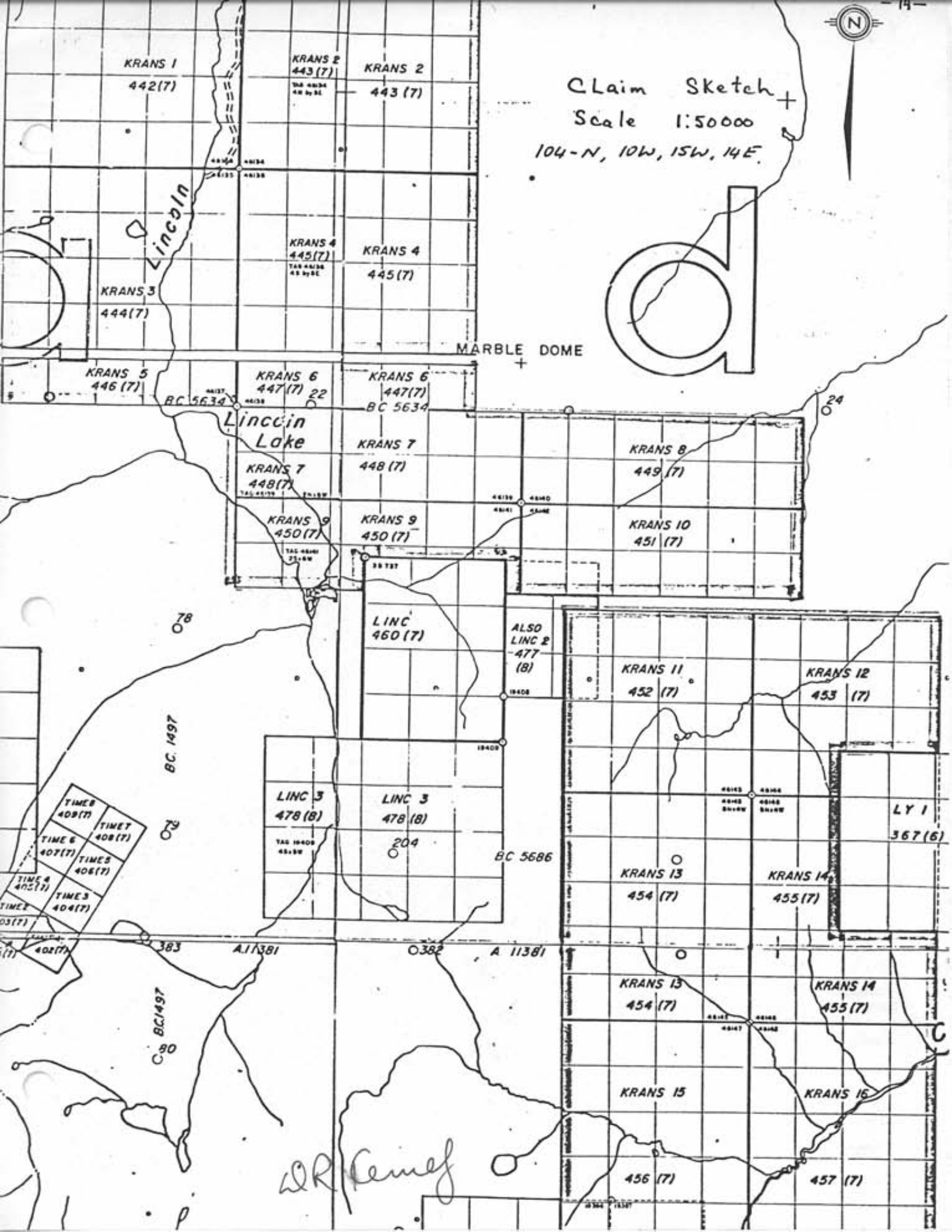
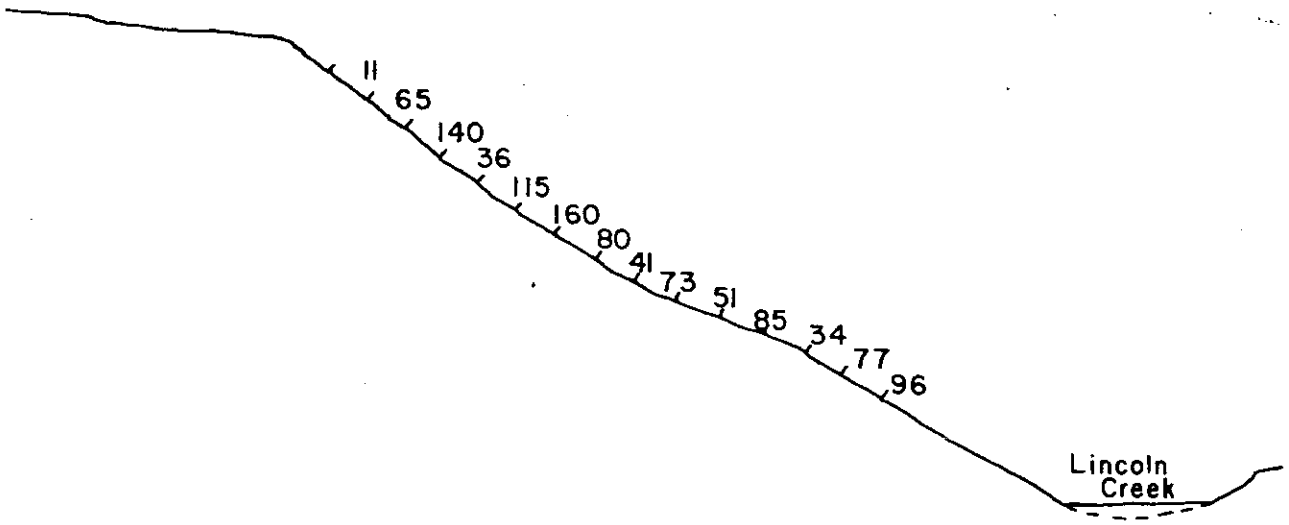
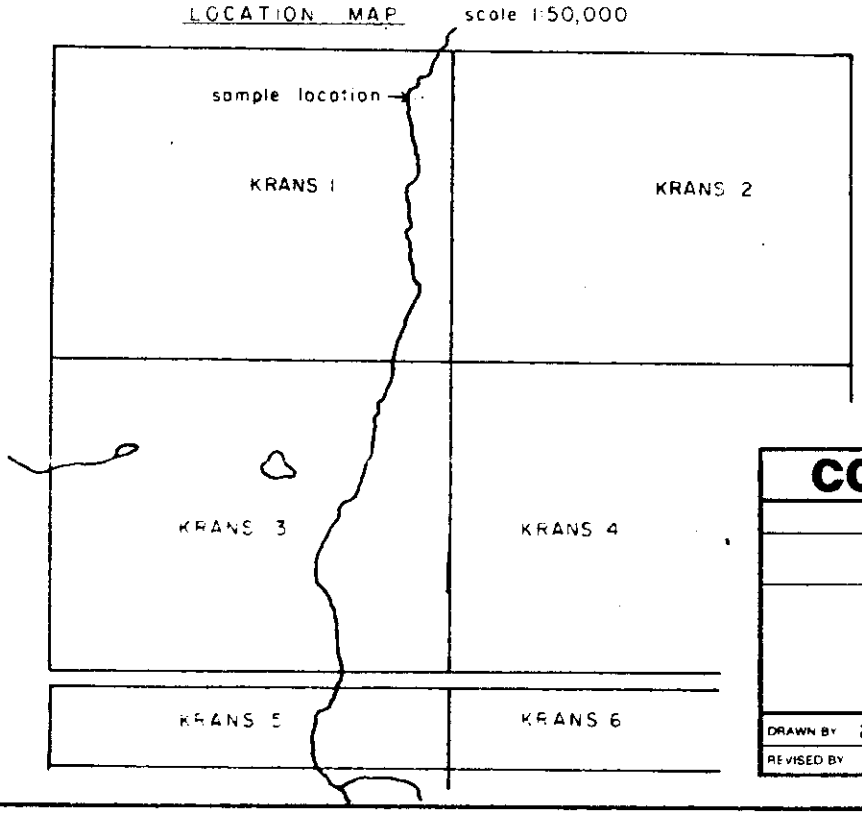

Claim Sketch
Scale 1:50000
104-N, 10W, 15W, 14E
N
KRANS 1
442(7)
KRANS 2
443(7)
KRANS 2
443 (7)
Lincoln
KRANS 4
445(7)
KRANS 4
445(7)
KRANS 3
444(7)
MARBLE DOME
KRANS 5
446 (7)
KRANS 6
447 (7)
KRANS 6
447(7)
BC 5634
Lincoln Lake
KRANS 7
448 (7)
KRANS 7
448(7)
KRANS 8
449 (7)
KRANS 9
450(7)
KRANS 9
450 (7)
KRANS 10
451 (7)
LINC
460 (7)
ALSO
LINC 2
477
(8)
KRANS 11
452 (7)
KRANS 12
453 (7)
BC. 1497
LINC 3
478 (8)
LINC 3
478 (8)
BC 5686
LY 1
367 (6)
KRANS 13
454 (7)
KRANS 14
455 (7)
A 11381
A 11381
KRANS 13
454 (7)
KRANS 14
455 (7)
KRANS 15
KRANS 16
456 (7)
457 (7)

Section Looking North



LOCATION MAP scale 1:50,000



CCH RESOURCES LTD.

104 N

KRANS GROUP

PANNED TILL SAMPLES

Sn Values in ppm

DRAWN BY D K	DATE July 80	PROJECT No 705	PLAN No 705-9
REVISED BY	DATE	SCALE 1 500	

KRANS 8

KRANS 10

KRANS 11

KRANS 12

KRANS 13

KRANS 14

KRANS 15

KRANS 16

A

B

C

DETAIL GRID AREA

ZENAZIE CREEK

N

LEGEND

- SOIL SAMPLE
- CREEK SAMPLE
- HEAVY MINERAL CONCENTRATE SAMPLE
- SAMPLES ADDED OCT. 1979

11, 5 VALUE IN PPM OF Sn, W

CLAIM BOUNDARY AND TRAVERSE LOCATIONS BY CHAIN, COMPASS, AIR PHOTO, TOPOGRAPHIC MAP, AND ALTIMETER.

0 .2 .4 .6 .8 1
KILOMETRES

CORTIN JOINT VENTURE

CCH RESOURCES LTD.

104 - N - 10 W, 14 E, 15 W

KRANS, SOUTH SHEET, CLAIMS 8 & 10 - 16

RECONNAISSANCE GEOCHEMICAL SURVEY

Sn, W

DRAWN BY D K	DATE JULY 1979	PROJECT No.	PLAN No. 704-2
REVISED BY D K	DATE OCT. 1979	SCALE 1:10,000	

KRANS 8

KRANS 10

KRANS 11

KRANS 12

KRANS 13

KRANS 14

KRANS 15

KRANS 16

DETAIL GRID AREA

ZENAZIE CREEK

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ASSESSMENT REPORT
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LEGEND

- SOIL SAMPLE
- CREEK SAMPLE
- ADDITIONAL LINES ADDED, OCT. 1979

23,60,84 VALUES IN PPM OF Cu, Pb, Zn

CLAIM BOUNDARY AND TRAVERSE LOCATIONS BY CHAIN, COMPASS, AIR PHOTO, TOPOGRAPHIC MAP, AND ALTIMETER.

0 .2 .4 .6 .8 1
KILOMETRES

CORTIN JOINT VENTURE

CCH RESOURCES LTD.

104 - N - 10 W, 14 E, 15 W

KRANS, SOUTH SHEET, CLAIMS 8 & 10-16

RECONNAISSANCE GEOCHEMICAL SURVEY
Cu, Pb, Zn

DRAWN BY DK	DATE JULY 1979	PROJECT No		PLAN No. 705-4
REVISED BY DK	DATE OCT. 1979	SCALE 1:10,000		

KRANS 8

KRANS 10

KRANS 11

KRANS 12

KRANS 13

KRANS 14

KRANS 15

KRANS 16

LI, F VALUES THIS LINE ONLY

LI, F VALUES THIS LINE ONLY

DETAIL GRID AREA

ZENAZIE CREEK

LEGEND

- . SOIL SAMPLE
- ⊙ CREEK SAMPLE
- * SAMPLES ADDED OCT. 1979
- 0.2, 3, 23 VALUES IN PPM OF Ag, Mo, As
- 21, 955 VALUES IN PPM OF Li, F (ON LINE INDICATED)

CLAIM BOUNDARY AND TRAVERSE LOCATIONS BY CHAIN, COMPASS, AIR PHOTO, TOPOGRAPHIC MAP, AND ALTIMETER.

0 2 4 6 8 1
KILOMETRES

CORTIN JOINT VENTURE
CCH RESOURCES LTD.

104 - N - 10 W, 14 E, 15 W

KRANS, SOUTH SHEET, CLAIMS 8 & 10 - 16

RECONNAISSANCE GEOCHEMICAL SURVEY
Ag, Mo, As (Li, F)

DRAWN BY D K	DATE JULY 1979	PROJECT No.		PLAN No. 705-6
REVISED BY D K	DATE OCT. 1979	SCALE 1 : 10,000		

8,<2 <5,<2 <5,<2 19,<2 7,4 8,<2 5,<2 13,<2 <5,<2 <5,3 15,2 15,<2 5,<2 <5,<2 8,<2 36,<2 <5,2 22,<2 11,<2 15,<2 8,3 9,<2 6,3 10,<2 7,<2 50,3 5,4 6,2 15,<2 <5,8 15,2 16,2 <5,<2 <5,2

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<5,<2 <5,<2 5,<2 5,<2 30,<2 70,<2 35,<2 43,<2 15,4 <5,<2 35,<2 10,<2 12,<2 5,<2 33,<2

10,<2 10,<2 38,2 10,8 30,<2 35,2 5,<2 42,<2 30,<2 20,2 10,2 20,2 5,2 10,2 10,<2

40,2 5,<2 10,2 <5,2 16,3 100,3 25,3 40,2 92,<2 48,2 65,<2 75,<2 30,<2 14,<2 <5,<2

KRANS 13 | KRANS 14

<5,<2 37,<2 30,<2 5,<2 15,<2 5,<2 <5,<2 25,<2 70,<2 53,3 101,3 <5,<2 <5,<2 14,<2 25,<2

KRANS 15 | KRANS 16

100 m

CCH RESOURCES LTD.

104N, 10W, 15W, 14E

KRANS Detail Grid

Sn,W Values in ppm

DRAWN BY: D.K.	DATE: July 13, 80	PROJECT: 705	PLAN NO. 705-10
REVISED:	DATE:	SCALE: 1:5000	

A R Kruse

KRANS 13 | KRANS 14

KRANS 15 | KRANS 16

100 m

CCH RESOURCES LTD.

104N, 10W, 15W, 14E

KRANS Detail Grid

Cu, Pb, Zn Values in ppm

DK	July 13, 80	705	705-11
		1:5000	

28,435 28,450 29,390 21,520 30,490 26,490 27,315 20,345 28,965 43,380 31,370 34,465 25,925 29,995 31,595

33,765 36,320 32,995 26,395 28,595 26,485 26,580 25,485 30,645 16,310 28,585 34,570 26,395 17,995 25,530

32,760 32,1100 29,1050 26,600 22,1700 24,765 19,565 30,1250 27,350 20,540 20,565 28,600 29,1280 27,1270 23,1030

18,370 29,490 29,415 22,340 26,370 21,520 29,570 22,555 30,580 28,405 16,520 34,1070 31,1220 25,645 28,1000

24,430 29,620 26,380 33,380 26,480 39,400 20,390 22,360 26,420 29,620 20,320 16,300 22,580 25,510 22,545

22,1150 29,860 28,900 26,435 25,440 30,710 33,650 34,850 30,720 36,720 30,460 25,1270 18,440 16,380 43,620

24,570 18,920 108,1080 18,360 28,900 45,650 25,750 26,585 29,595 22,585 24,510 23,665 26,475 20,525 20,750

KRANS 13 | KRANS 14

42,910 30,465 32,550 31,565 29,480 33,870 12,445 25,675 20,870 31,750 26,765 21,765 23,580 25,600 26,580

KRANS 15 | KRANS 16

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
8171
NO.

100 m

CCH RESOURCES LTD.

104N, 10W, 15W, 14E

KRANS Detail Grid

Li, F Values in ppm

DRAWN BY: DK	DATE: July 13, 80	PROJECTION: 705	PLAN NO: 705-12
REVISED BY:	DATE:	SCALE: 1:5000	

D. K. Lamb