

COMINCO LTD.

EXPLORATION
NTS: 82M/13E

WESTERN DISTRICT
22 NOVEMBER 1979

GEOCHEMICAL ASSESSMENT REPORT ON THE

CK GROUP OF MINERAL CLAIMS

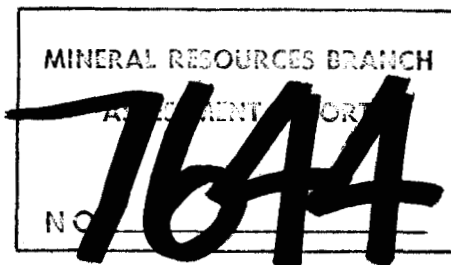
KAMLOOPS MINING DISTRICT, B.C.

LATITUDE: 51°56' LONGITUDE: 119°35'

DURING MAY 9 - SEPTEMBER 30, 1979

UNDER SUPERVISION OF F.D. GILL, SENIOR GEOLOGIST

OWNER AND OPERATOR : COMINCO LTD.



NOVEMBER 1979

M.R. MURRELL

PT. 283

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COMINCO LTD.

EXPLORATION
NTS: 82M/13E

WESTERN DISTRICT
21 NOVEMBER 1979

GEOCHEMICAL ASSESSMENT REPORT

CK GROUP OF CLAIMS

KAMLOOPS MINING DIVISION

I INTRODUCTION

Location

The CK group of mineral claims are located in the Kamloops Mining Division, forty-three kilometres northeast of Clearwater, B.C. The property is on either side of the Raft River, centred on the junction of the Raft River with Kowalski Creek. It is 24 km long by 7 km wide.

II ACCESS

The town of Clearwater is located on the Trans Canada Highway, 130 km north of Kamloops. Access from Clearwater to the CK property is by 65 km of excellent gravel logging roads along the Raft River. Several logging roads provide access to some of the showings areas, but much of the property is accessible only by foot or helicopter.

III TOPOGRAPHY

Much of the CK group of claims consist of fairly steep tree and brush covered side hills. The higher portion is flat to rolling, containing scattered swampy areas.

IV PROPERTY DEFINITION

(a) History

- 1973 - Discovery of mineralized boulders and in-place mineralization by Andy Horne, Chase, B.C.
- 1974,1975 - Optioned by Rio Tinto - Airborne EM; geochemistry, I.P., minor magnetometer work, and 7 diamond drill holes.
- 1976 - Sicintine Mines - backhoe trenching on one showing.
- 1977 - Optioned by Cominco.
- 1978 - I.P., magnetometer, VLF, minor geochemistry, Cat trenching, diamond drilling (20 holes).

(b) Current Owner and Operator

Cominco Ltd., 200 Granville Square, Vancouver, B.C.

(c) Economic Assessment

Work to date has shown the probable existence of a long mineralized Zn/Pb body. The usual width is not of mineable thickness, however local

folding may have produced significant thickening of the zone. Much more work is required to determine the economic significance of the mineralized zone.

(d) Extent of Claims Covered by This Report - See Appendix "A"

V SUMMARY OF WORK DONE

Eight thousand and three soil samples were collected on the property and analysed for lead and zinc. Topographic control was based on a 1:5,000 topographic map prepared by McElhanney Surveying. Grid control was by hip-chaining, compassing and altimeter reading.

VI GEOLOGY

The claims are underlain by metasediments and intrusives of the Shuswap Metamorphic Complex. Exposure is quite poor over much of the claim group, but mapping has suggested that limy and siliceous calc-silicates, biotite gneisses, marbles, and pegmatite underlie the extensive overburden. Several showings have been found, most have an associated geochemical expression.

VII GEOCHEMISTRY

A total of eight thousand and three soil samples were taken from the CK group of mineral claims.

A. Sample Location

Soil samples were taken from the B horizon, when it could be identified, otherwise the sample was taken usually at 10 to 30 cm deep. Samples were dug by shovel and retrieved by plastic spoon or by hand. They were placed in standard kraft soil sample bags and marked for identification. Each sample located was marked in the field by a grid numbered orange flagging. Ground control was by hip chain and compass. Only a minor amount of cut lines were utilized.

B. Sample Preparation

Samples were air-dried and shipped to Cominco's Lab in Vancouver for analyses. There they were oven dried, sieved and the minus 80 mesh fraction analysed by hot acid digestion and atomic absorption.

C. Presentation of Data

The results are plotted on topographic maps at scale of 1:5,000 and 1:10,000. Anomalous values for zinc are considered to be greater than 200 ppm; and anomalous lead values are considered to be greater than 40 ppm. These results are contoured on the accompanying maps.

VIII CONCLUSIONS

The purpose of the geochemical program was to help in the location of possible economic bodies of zinc and lead. Results are plotted on the enclosed geochemical maps.

Several zones containing values anomalous in zinc and lead were discovered during 1979. These values were sometimes associated with several of the known showings on the property. No follow-up work has yet been carried out to explain the source of the other anomalies.

IX ATTACHMENTS

- (a) Appendix "A" - List of Claims and Work per Claim
- (b) Appendix "B" - Statement of Expenditures
- (c) Appendix "C" - Affidavit
- (d) Appendix "D" - Statement of Qualifications
- (e) Location Map - Scale 1:250,000 with index to geochemical sheets;
and 1:1,900,000
- (f) Geochemical Maps- Sheet 1 - Scale 1:10,000
Sheet 2 - Scale 1: 5,000
Sheet 3 - Scale 1: 5,000
Sheet 4 - Scale 1: 5,000
Sheet 5 - Scale 1:10,000
Sheet 6 - Scale 1:10,000

Report by: *M.R. Murrell*
M.R. Murrell
Project Geologist

Endorsed by: *F.D. Gill*
F.D. Gill
Senior Geologist

Approved for
Release by: *G. Harden*
G. Harden, Manager
Exploration
Western District

COMINCO LTD.

EXPLORATION

WESTERN DISTRICT

CK OPTION

KAMLOOPS M.D., B.C.

CLAIMS	UNITS	RECORD NUMBERS	PRESENT GROUPING	GEOCHEM		GEOPHYSICS		DRILLING		TOTAL
				MAY 9 - SEPT 30/79 NO. SAMPLES	VALUE	JUNE 13 - OCT 2/79 LENGTH	VALUE	JUNE 1 - SEPT 1/79 LENGTH	VALUE	
CK 3	1	127074N	CK 79-5 Supp.	-	-	-	\$ 2,368.00	607.4 m	\$ 39,633.90	\$ 42,001.90
CK 4	1	127075N	CK 79-3 Supp.	-	-	-	-	311.6 m	20,332.44	20,332.44
CK 6	1	127077N	CK 79-3 Supp.	-	-	1,150 m	1,015.05	-	-	1,015.05
CK 7	1	127078N	CK 79-3 Supp.	-	-	1,250 m	1,103.32	-	-	1,103.32
CK 8	1	127079N	CK 79-3 Supp.	-	-	1,800 m	1,588.78	-	-	1,588.78
CK 11	1	127080N	-	-	-	-	-	130.6 m	8,521.88	8,521.88
CK 34	1	127225P	CK 79-3 Supp.	-	-	210 m	185.36	-	-	185.36
CK 39	1	127230P	CK 79-4 Supp.	-	-	440 m	388.37	-	-	388.37
CK 40	1	127231P	CK 79-3 Supp.	-	-	1,170 m	1,032.71	-	-	1,032.71
CK 42	1	127233P	CK 79-4 Supp.	-	-	360 m	317.76	-	-	317.76
CK 45	1	127236P	CK 79-5 Supp.	11	89.23	1,350 m	1,191.58	-	-	1,280.81
CK 46	1	127237P	CK 79-5 Supp.	-	-	1,590 m	1,403.42	-	-	1,403.42
CK 47	1	127238P	CK 79-4 Supp.	3	24.33	-	-	-	-	24.33
CK 48	1	127239P	CK 79-3 Supp.	-	-	-	-	272.1 m	17,754.99	17,754.99
CK 63	1	128600M	CK 79-4 Supp.	-	-	350 m	308.93	-	-	308.93
CK 69	1	128606M	-	-	-	370 m	326.58	-	-	326.58
CK 70	1	128607M	-	-	-	230 m	203.01	-	-	203.01
CK 71	1	128608M	-	-	-	20 m	17.65	-	-	17.65
CK 72	1	128609M	-	-	-	1,490 m	1,315.16	-	-	1,315.16
CK 73	1	128610M	CK 79-4 Supp.	-	-	600 m	529.59	-	-	529.59
CK 75	1	128612M	CK 79-4 Supp.	-	-	1,170 m	1,032.71	-	-	1,032.71
CK 76	1	128613M	-	-	-	110 m	97.09	-	-	97.09
CK 78	1	128671M	-	-	-	240 m	211.84	-	-	211.84
CK 83	8	1031	-	-	-	-	-	42.0 m	2,740.57	2,740.57
CK 84	6	1032	CK 79-4 Supp.	-	-	-	-	1,051.9 m	68,638.29	68,638.29
CK 87	20	1060	CK 79-3 Supp.	12	97.34	160 m	141.22	-	-	238.56
CK 88	15	1361	-	121	981.49	3,080 m	2,718.58	-	-	3,700.07
CK 89	8	1362	-	25	202.79	270 m	238.32	-	-	441.11

Appendix "A"

CK OPTION

CLAIMS	UNITS	RECORD NUMBERS	PRESENT GROUPING	GEOCHEM		GEOPHYSICS		DRILLING		TOTAL
				MAY 9 - SEPT 30/79 NO. SAMPLES	VALUE	JUNE 13 - OCT 2/79 LENGTH	VALUE	JUNE 1 - SEPT 1/79 LENGTH	VALUE	
CK 90	20	1363	CK 79-12	-	-	540 m	\$ 476.63	-	-	\$ 476.63
CK 95	16	1511	CK 79-14	298	2,417.22	-	-	-	-	2,417.22
NORTH 1	20	1512	CK 79-8	531	4,306.20	5,780 m	11,774.27	-	-	16,081.47
NORTH 46	1	128302H	CK 79-4 Supp.	-	-	-	-	136.3 m	8,893.81	8,893.81
RAFT 23	1	127286P	CK 79-5 Supp.	-	-	260 m	229.49	-	-	229.49
RAFT 24	1	127287P	CK 79-5 Supp.	14	113.56	1,100 m	970.92	-	-	1,084.48
RAFT 25	1	127288P	CK 79-5 Supp.	-	-	330 m	291.28	-	-	291.28
RAFT 26	1	127289P	CK 79-5 Supp.	-	-	1,550 m	1,368.12	-	-	1,368.12
RAFT 27	1	127290P	CK 79-3 Supp.	-	-	330 m	291.28	-	-	291.28
RAFT 28	1	127291P	CK 79-3 Supp.	-	-	1,510 m	1,332.81	-	-	1,332.81
RAFT 29	1	127292P	CK 79-5 Supp.	18	146.01	-	-	-	-	146.01
RAFT 30	1	127293P	CK 79-5 Supp.	5	40.56	-	-	-	-	40.56
RAFT 31	1	127294P	CK 79-4 Supp.	17	137.90	-	-	-	-	137.90
RAFT 32	1	127295P	CK 79-5 Supp.	5	40.56	-	-	-	-	40.56
RAFT 33	1	127296P	CK 79-4 Supp.	17	137.90	-	-	-	-	137.90
RAFT 34	1	127297P	CK 79-5 Supp.	5	40.56	-	-	-	-	40.56
ULO 1	1	128674M	-	-	-	1,120 m	988.57	-	-	988.57
ULO 2	1	128675M	-	-	-	1,150 m	1,015.05	-	-	1,015.05
ULO 3	1	128676M	-	-	-	1,160 m	1,023.88	-	-	1,023.88
ULO 4	1	128677M	-	-	-	1,800 m	1,588.78	216.5 m	14,127.00	15,715.78
STRAT 1	18	1542	CK 79-12	380	3,082.37	-	-	-	-	3,082.37
STRAT 2	18	1551	-	373	3,025.59	-	-	-	-	3,025.59
STRAT 4	9	1553	CK 79-13	230	1,865.64	-	-	-	-	1,865.64
STRAT 5	15	1554	CK 79-13	304	2,465.89	-	-	-	-	2,465.89
STRAT 7	20	1555	CK 79-11	375	3,041.81	-	-	-	-	3,041.81
STRAT 8	12	1543	CK 79-11	330	2,676.79	-	-	-	-	2,676.79
PARK 1	20	1557	CK 79-7	459	3,723.17	1,800 m	3,867.82	-	-	7,590.99
PARK 2	20	1558	CK 79-10	516	4,185.53	-	-	-	-	4,185.53
PARK 3	5	1559	CK 79-9	107	867.94	-	-	-	-	867.94
PARK 4	20	1560	CK 79-10	329	2,668.68	-	-	-	-	2,668.68
PARK 5	20	1561	CK 79-9	245	1,987.32	-	-	-	-	1,987.32
RAF 1	18	1549	CK 79-14	395	3,204.04	-	-	-	-	3,204.04
RAF 2	15	1550	-	200	1,622.30	-	-	-	-	1,622.30
HIGH 1	20	1702	CK 79-6	476	3,036.88	-	-	-	-	3,036.88
HIGH 2	20	1703	CK 79-6	478	3,877.29	-	-	-	-	3,877.29
HIGH 3	16	1704	CK 79-7	439	2,800.82	-	-	-	-	2,800.82
HIGH 4	16	1705	-	396	3,212.15	-	-	-	-	3,212.15

CLAIMS	UNITS	RECORD NUMBERS	PRESENT GROUPING	GEOCHEM MAY 9 - SEPT 30/79		GEOPHYSICS JUNE 13 - OCT 2/79		DRILLING JUNE 1 - SEPT 1/79		TOTAL
				NO. SAMPLES	VALUE	LENGTH	VALUE	LENGTH	VALUE	
HIGH 5	18	1706	-	354	\$ 2,258.52	-	-	-	-	\$ 2,258.52
HIGH 6	18	1707	-	287	1,999.01	-	-	-	-	1,999.01
HIGH 7	18	1708	-	228	1,849.43	-	-	-	-	1,849.43
HIGH 8	18	1709	CK 79-8	20	162.23	-	-	-	-	162.23
SUBTOTAL				5,634	\$ 43,173.91					
TOTAL				8,003	\$ 62,390.05	35,840 m	\$ 42,953.93	2,768.4 m	\$ 180,642.88	\$285,986.86

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29 October 1979

SSS:hmr

APPENDIX "B"

STATEMENT OF EXPENDITURES

INCURRED IN CONNECTION WITH A GEOCHEMICAL SURVEY

OF THE CK GROUP OF MINERAL CLAIMS

KAMLOOPS MINING DIVISION

A. All claims excluding High 1, 3, 5 and part of High 6.

I STAFF SALARIES

T. Rittberg - 1 day (July 23) @ 68.63
B. Kling - 1 day (May 13) @ 69.97
S. Olsen - 97 days during May 7 to August 22 @ 60.73
P. Levasseur - 83 days during May 7 to August 24 @ 63.37
I. Mitchell - 83 days during May 7 to August 24 @ 63.37
M. Murrell - 36 days (16 field, 20 office) @ 172.31
F. Gill - 8 days (4 field, 4 office) @ 200
S. Weller (drafting) - 30 days during May 9 - Sept. 30 @ 50 \$25,851.99

II FOOD AND ACCOMODATIONS

Tent trailer rent - 3 mo. @ 385 \$1,155.00
Food - 285 days @ \$12/day 3,420.00
Bunkhouse rent 3/6 x \$400 x 3.5 mo. 700.00
Domicile (kitchen, camp equipment, cook) 1,174.00 6,449.00

III TRANSPORTATION

Truck rent - 83 days @ 21.80 1,809.00
Gas & lubs - 83 days @ 12.00 996.00
Motorcycles (pro-rated) 119.60
Shipping Charges 300.00
Demobilization (air flights, etc) 150.00 3,374.60

ARM.

2.

IV ANALYSES CHARGES

6536 samples @ 2.40 15,686.40

V FIELD EQUIPMENT & SUPPLIES

Pack, compasses, clip boards, hip chains,
hammers, shovels, altimeters, maps, etc. 600
Hip Chain Cotton - 20 boxes @ 32 640
Flagging - 20 boxes @ 24 480 1,720.00

TOTAL: \$53,081.59

Cost per sample $\frac{53,081.59}{6536} = \underline{\$8.11}$

B. Claims High 1, 3, 5 and part of 6

I STAFF SALARIES

J. Haskins (Sept. 5-Sept. 26) 22 @ 89.77 1,974.94
G. McLennan (Sept. 5-Sept. 26) 22 @ 63.37 1,394.14
G. Benvenuto (Sept. 6, 7) 2 @ 100.33 200.66
M. Murrell (Sept. 14) 1 @ 172.31 172.31
S. Weller - drafting (1 day) @ 50.00 50.00 \$ 3,792.05

II FOOD AND ACCOMODATIONS

47 man days @ \$20 940.00

III TRANSPORTATION

Truck - 22 days @ 21.000 462.00
Gas and lubes - 22 days @ 12.00 264.00 726.00

IV ANALYSES CHARGES

1467 samples @ 2.40 3,520.80

V FIELD EQUIPMENT & SUPPLIES

Pro-rated - 381.42 381.42

TOTAL: \$9,360.27

MRM.

3.

$$\text{Cost per sample} - \frac{9360.27}{1467} = \underline{\$6.38}$$

for High 1, 3, 5 and part of 6.

ml Rml.

APPENDIX "C"

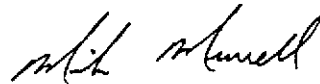
IN THE MATTER OF A GEOCHEMICAL SURVEY
CARRIED OUT ON THE CK 1 CLAIM
LOCATED NEAR THE RAFT RIVER AND STRATTON CREEK
IN THE KAMLOOPS MINING DIVISION OF BRITISH COLUMBIA
MORE PARTICULARLY NTS: 82M/13E

A F F I D A V I T

I, M.R. MURRELL, of the district of North Vancouver, in the Province of British Columbia, hereby declare:

1. THAT I am employed as a geologist by Cominco Ltd., and as such, a personal knowledge of the facts to which I hereinafter depose;
2. THAT annexed hereto and marked as Appendix "B" to this report is a true copy of expenditures incurred in connection with geochemical surveys on the CK group of mineral claims.
3. THAT the said expenditures were incurred between the 9th day of May and the 30th day of September 1979 for the purpose of conducting a geochemical survey.

Signed: _____



M.R. Murrell
Project Geologist

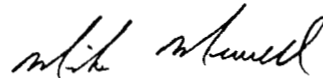
APPENDIX "D"

STATEMENT OF QUALIFICATIONS

I, MICHAEL RAY MURRELL, hereby declare that I am a graduate of the University of Alberta with an Honours B.Sc. in geology during May 1966. During my undergraduate summers I was employed on geological programs by B.A. Oil (now Gulf Oil), and by a small mining company. Upon graduation I joined Cominco Ltd. and have been engaged in many aspects of mining exploration since that time.

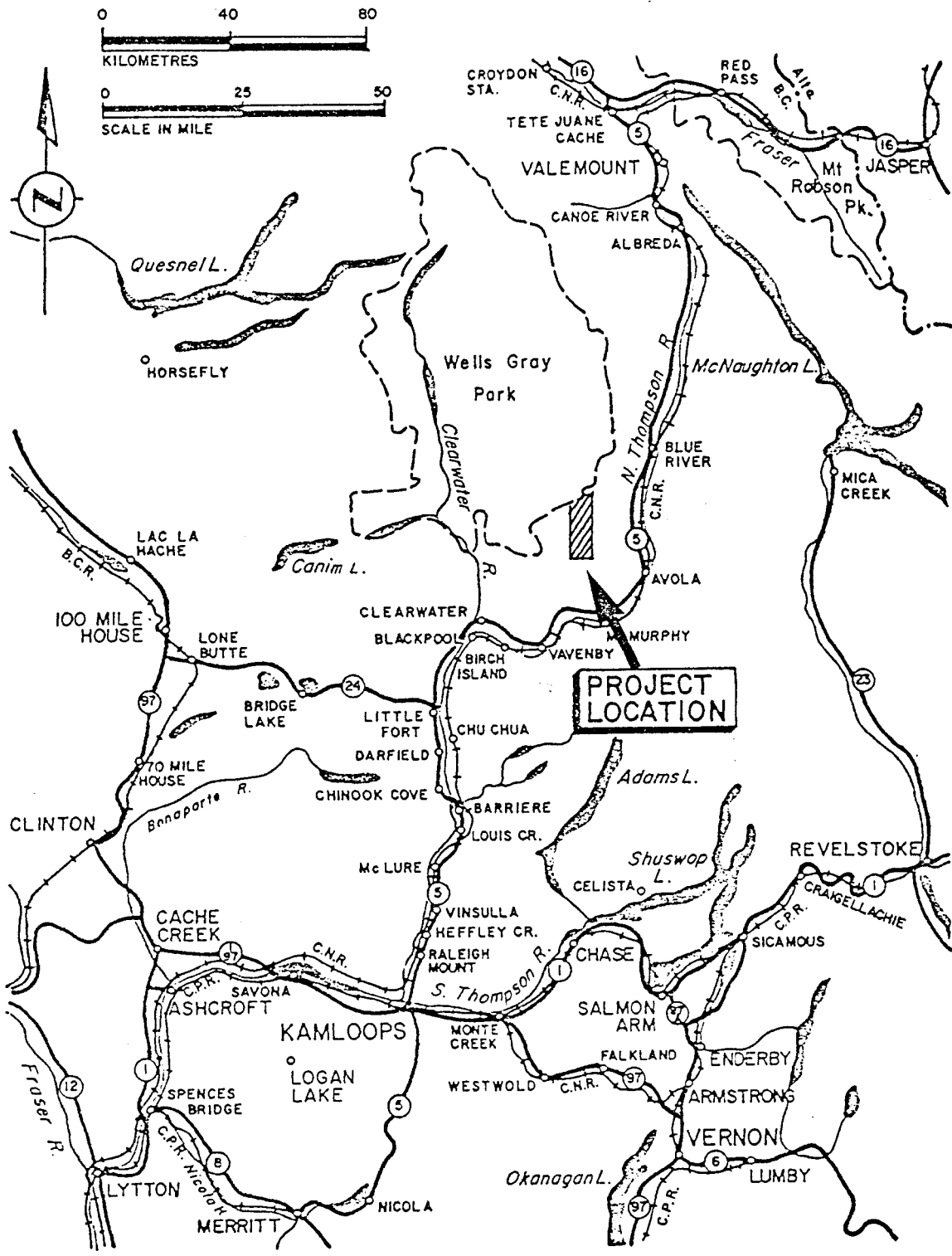
Dated this 29th day of November 1979
at Vancouver, British Columbia.

Signed: _____



M.R. Murrell
Project Geologist

MRM/gk

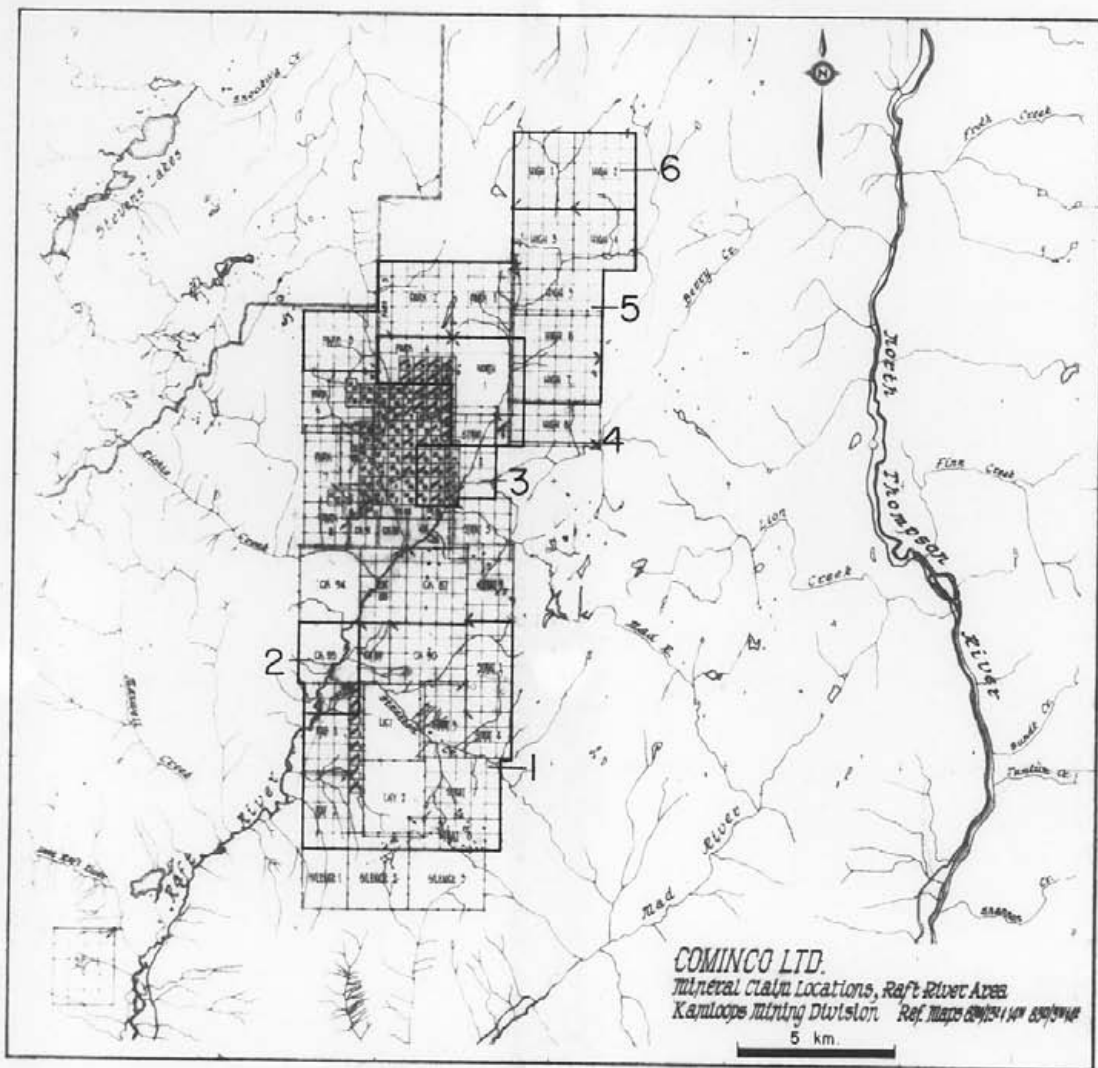


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Revised by	Date	Revised by	Date

CK PROPERTY LOCATION MAP

Whitehurst

Scale: 1" = 30 miles Date: November 29, 1979 Plate: 1



CK PROPERTY LOCATION MAP

Whitehurst

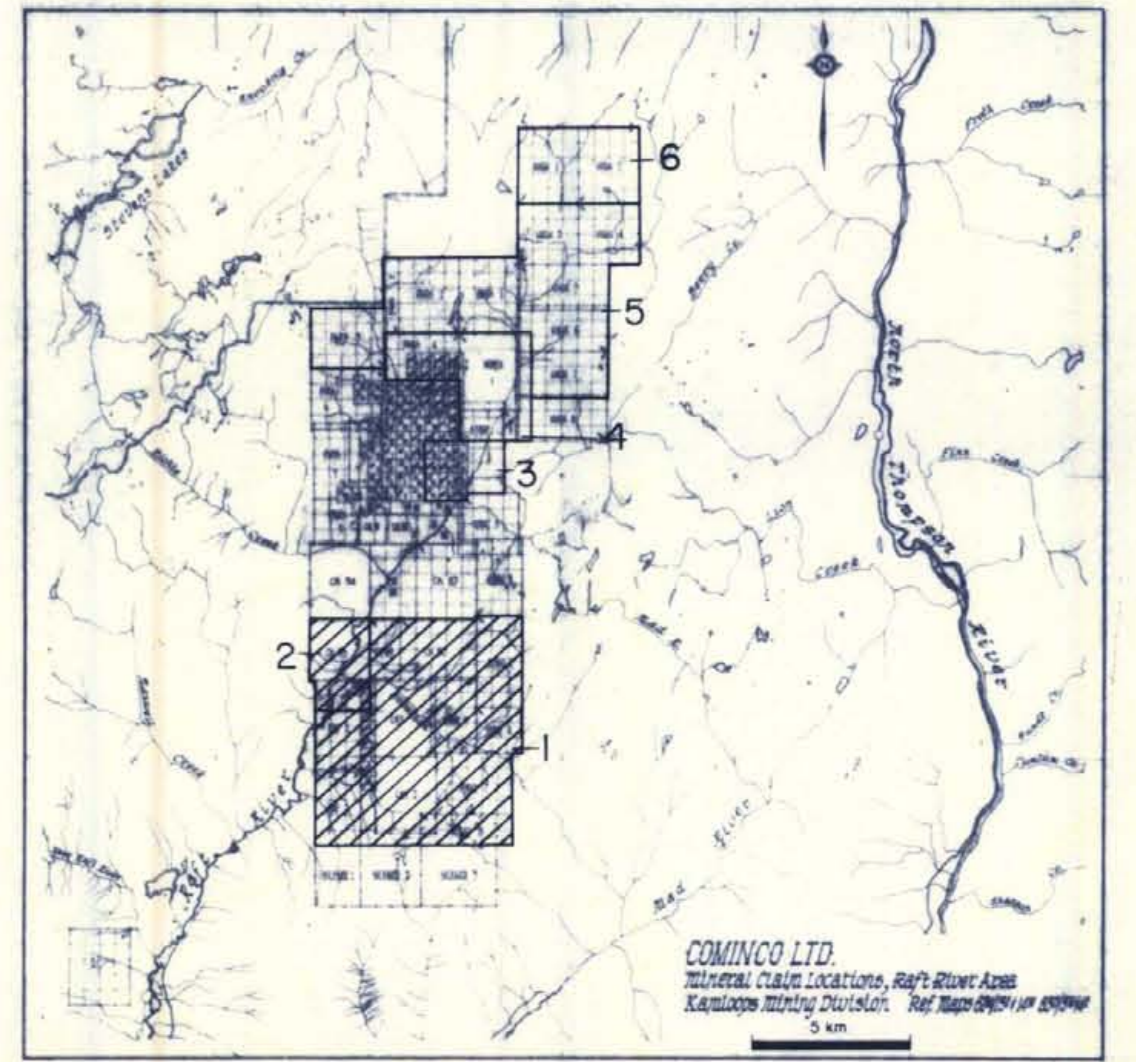
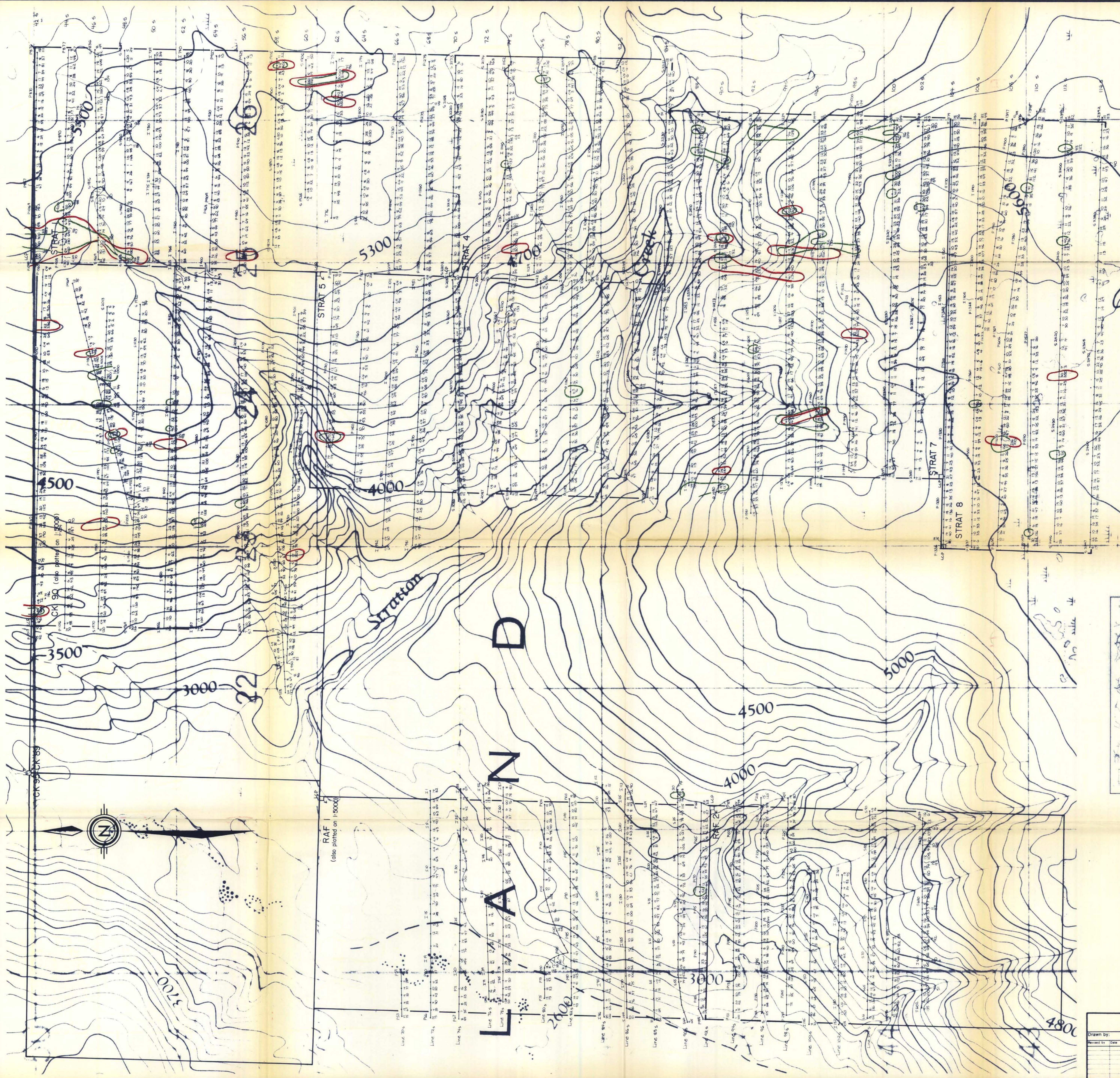
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NTS 82M/13

Scale: 1:250,000

Date: November 1979

Plate: 2



LEGEND

Sample number

200 ppm Zn, Pb

> 40 ppm Pb

Claim boundary

ANNUAL RESOURCES SURVEY

NO. 7644

PT. 283

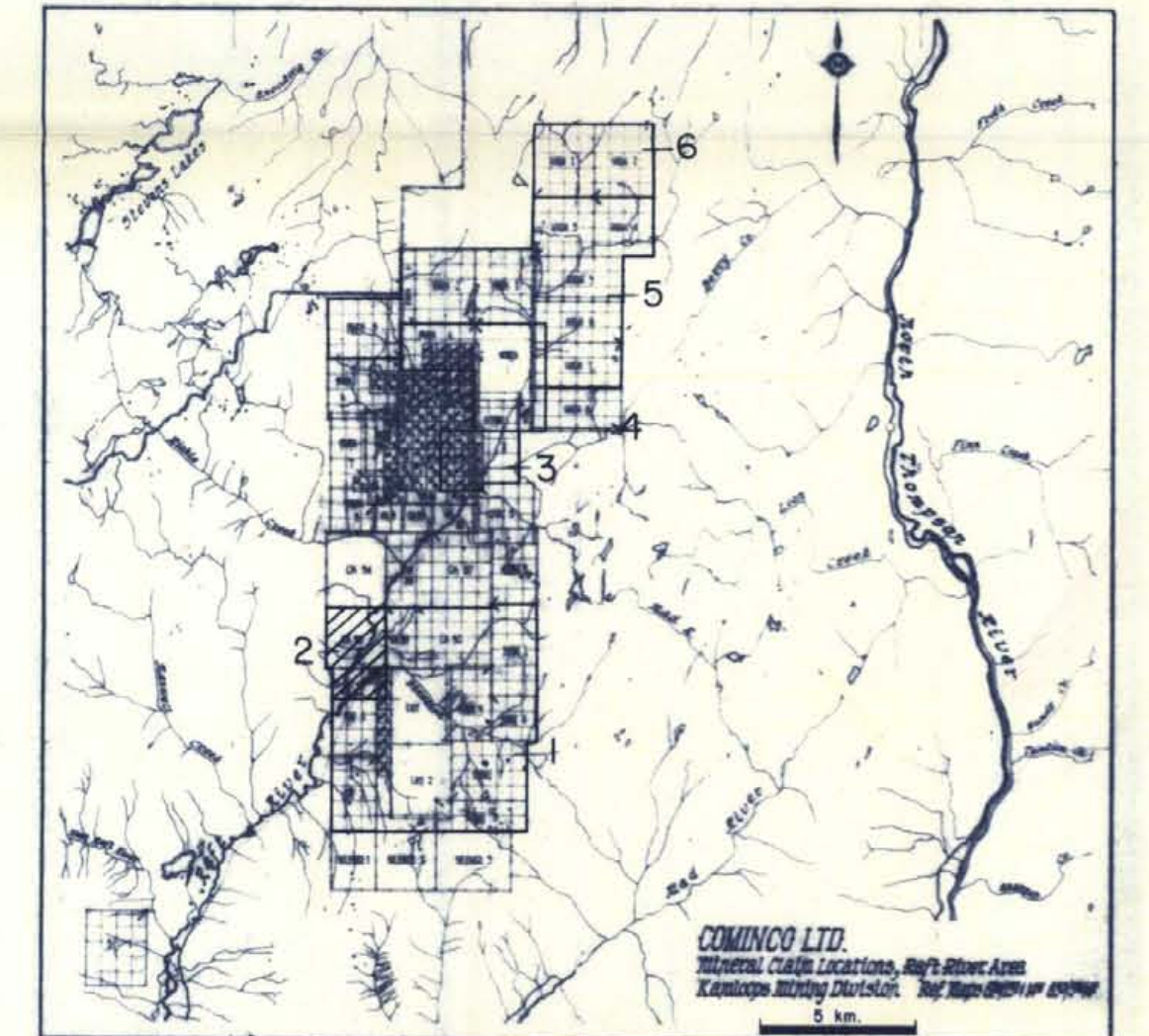
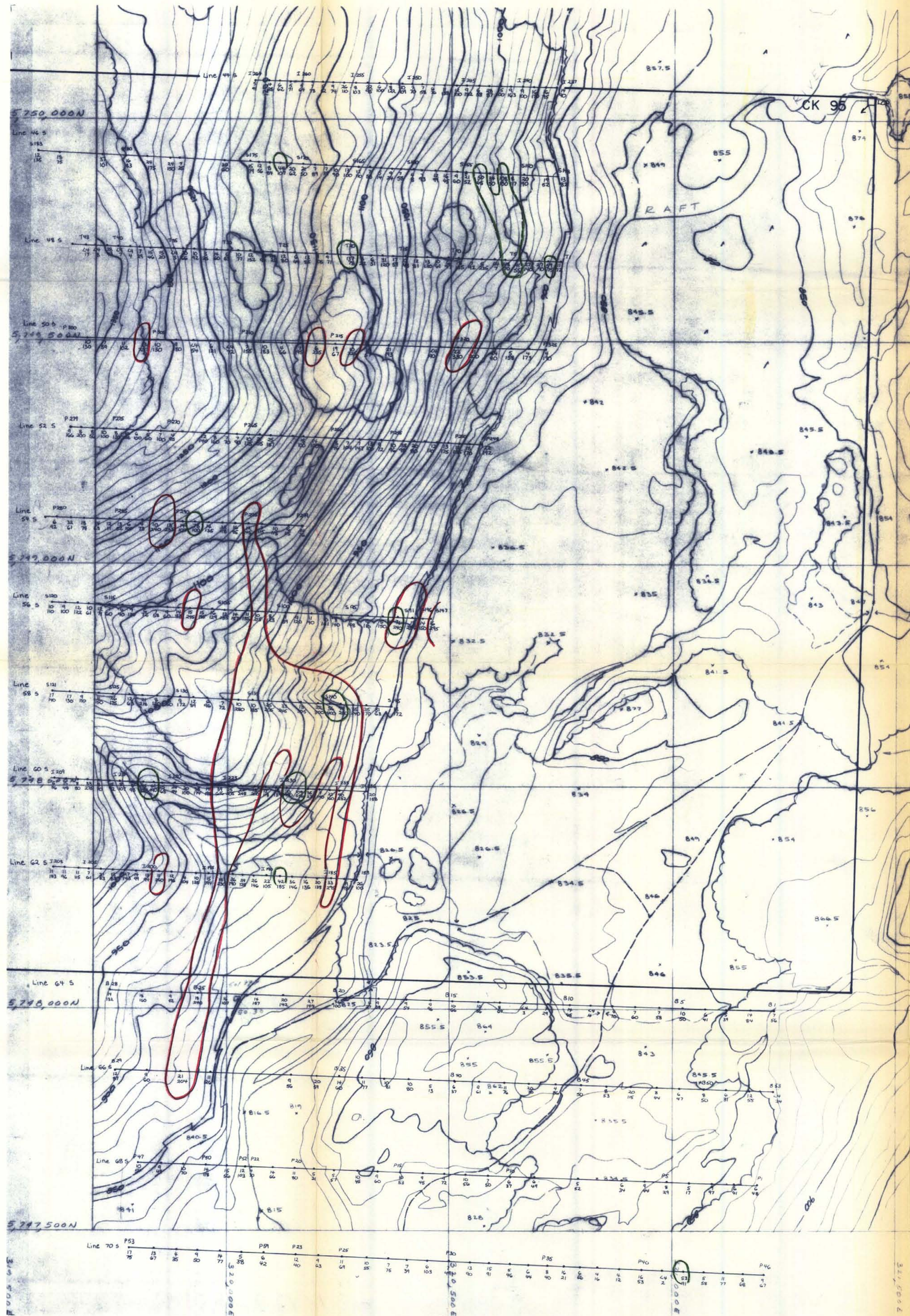
CK PROPERTY

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Revised by: Date: Revised by: Date:

GEOCHEMICAL MAP NO. 1

Scale: 1:10,000 Date: November 1979 Plate: 3

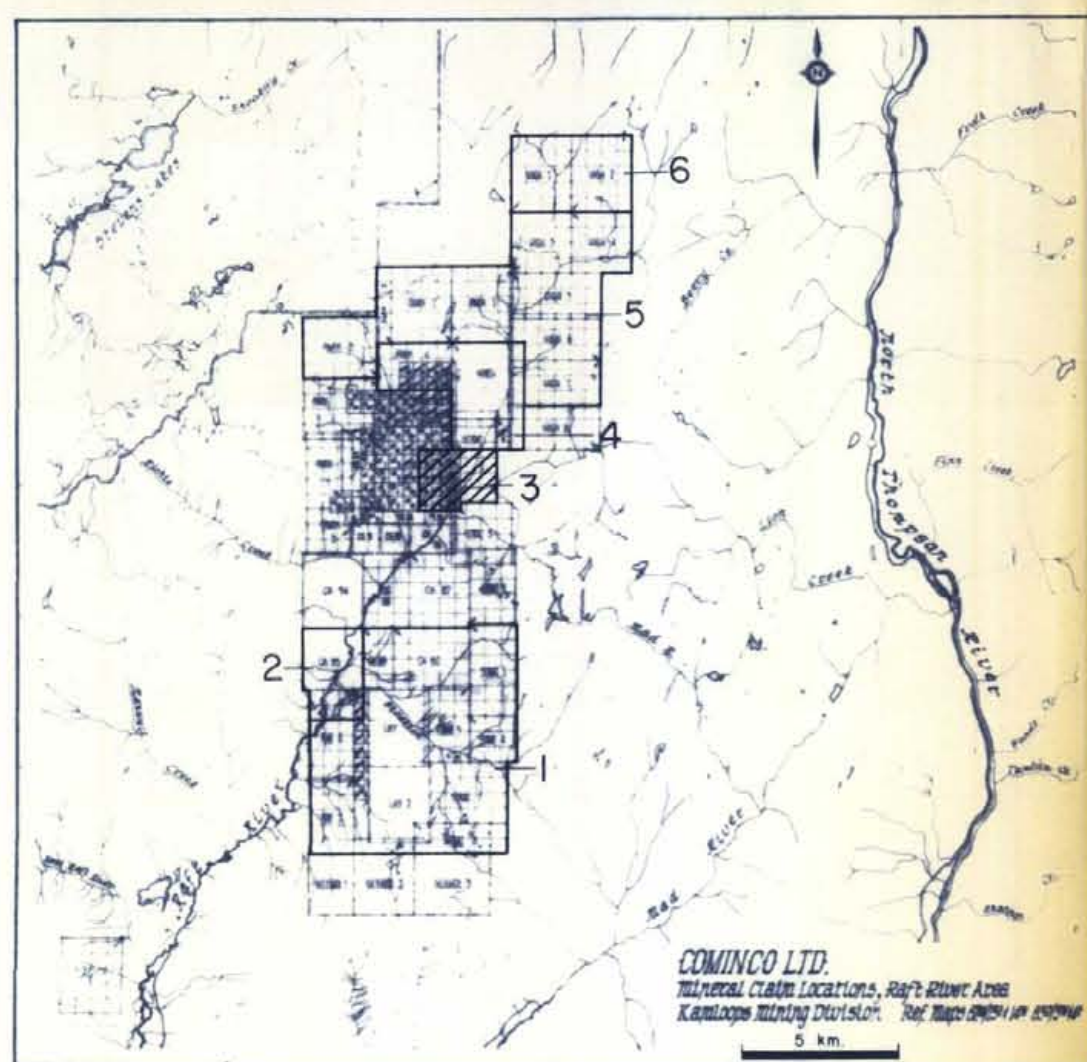
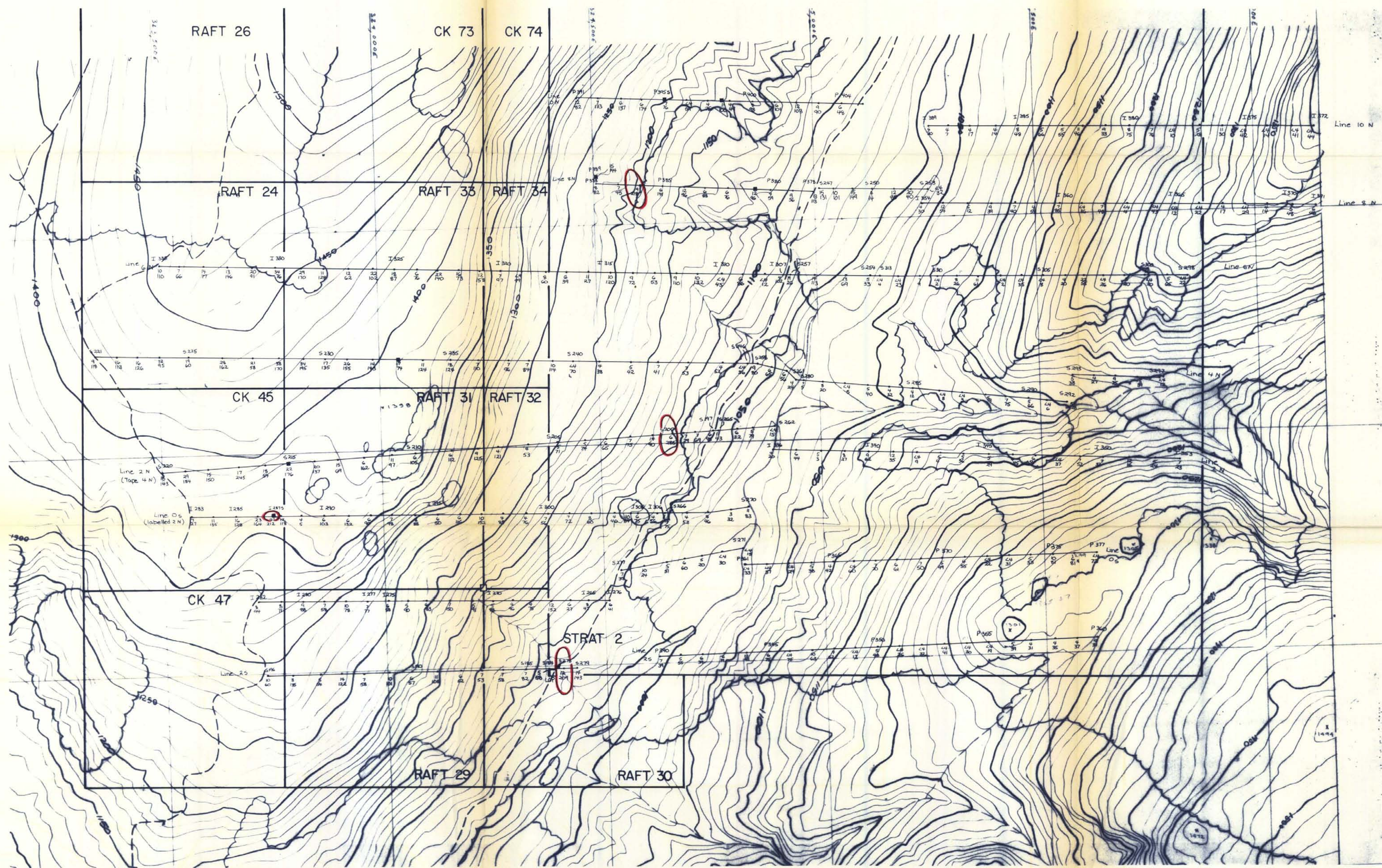


- LEGEND
- 85 — 82 Sample number
 - 100 ppm Pb, Zn
 - 200 ppm Zn
 - >40 ppm Pb
 - Claim boundary

MINERAL RESOURCE PLAN
7644
NO.
PT. 283

0 100 200 300 400 500
METRES

CK PROPERTY			
Drawn by:	Traced by: SAW	GEOCHEMICAL MAP NO. 2	
Revised by: []	Revised by: []		
Scale: 1:5000		Date: November 1979	Plate: 4



COMINCO LTD.
 MINERAL CLAIM LOCATIONS, RAFT'S BOUNDARY
 KAMLOOGE DISTRICT, BRITISH COLUMBIA

- LEGEND
- P 340 → P 345 Sample number
 - 7/34 ppm Pb, Zn
 - 200 ppm Zn
 - >40 ppm Pb
 - Claim boundary



MINERAL RESOURCES BRANCH
764A
 NO. 3

PT. 2073

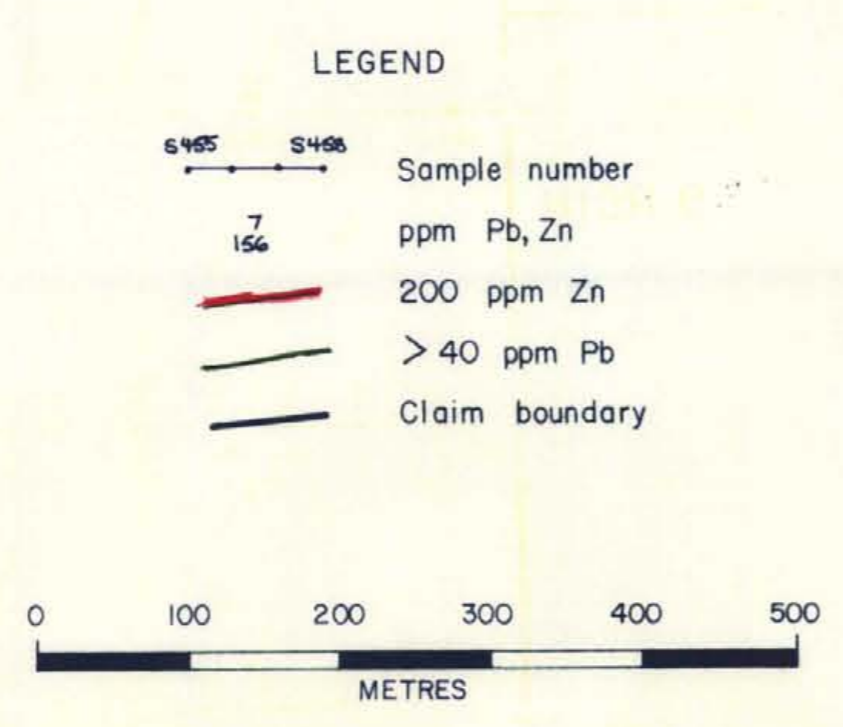
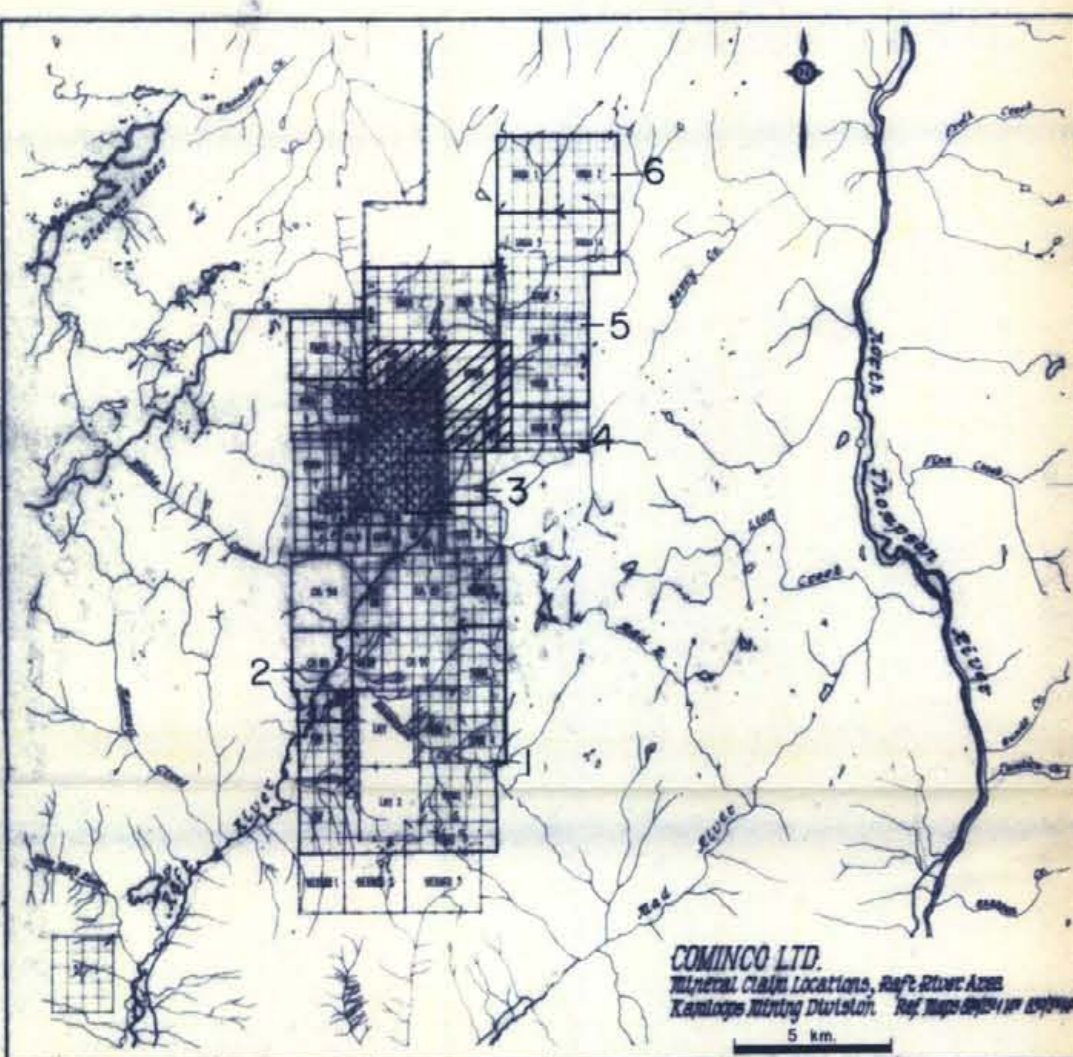
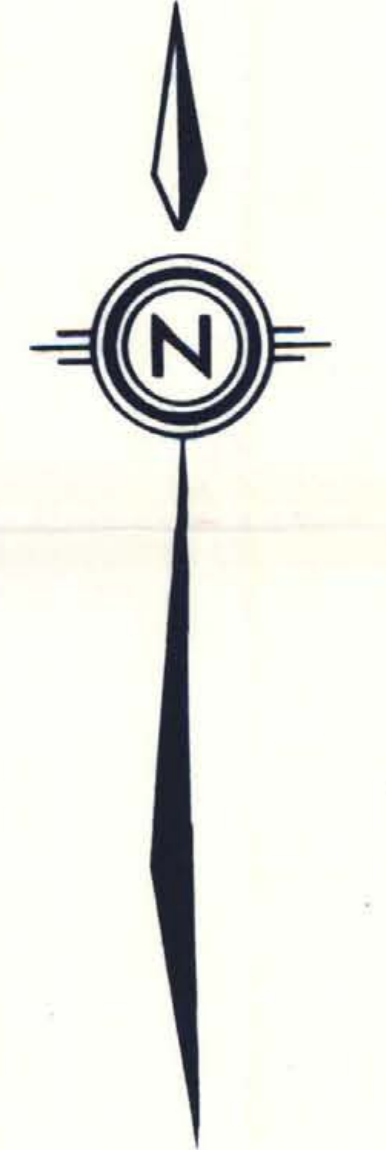
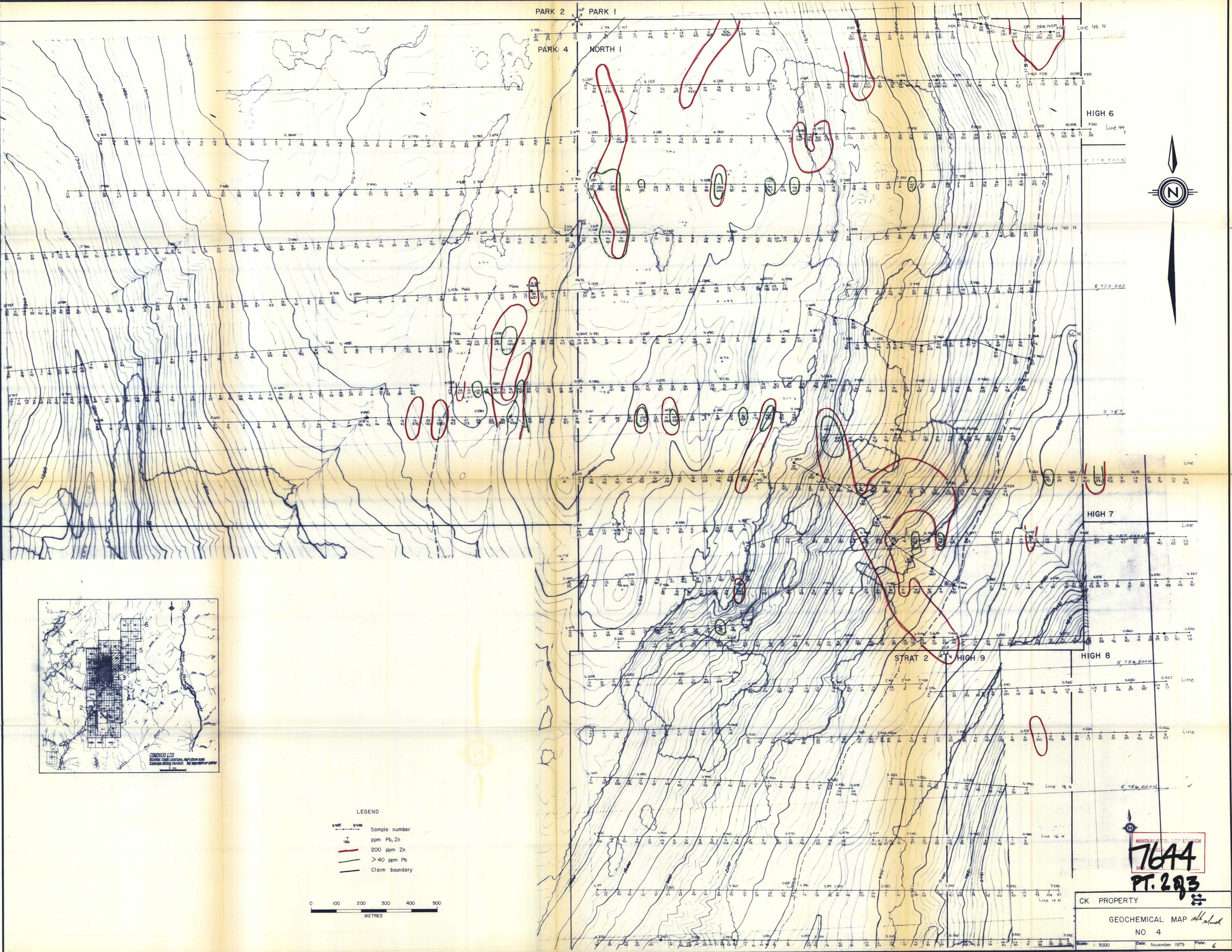
CK PROPERTY

Drawn by:	Traced by: SAW
Revised by: Date	Revised by: Date

GEOCHEMICAL MAP
 NO. 3

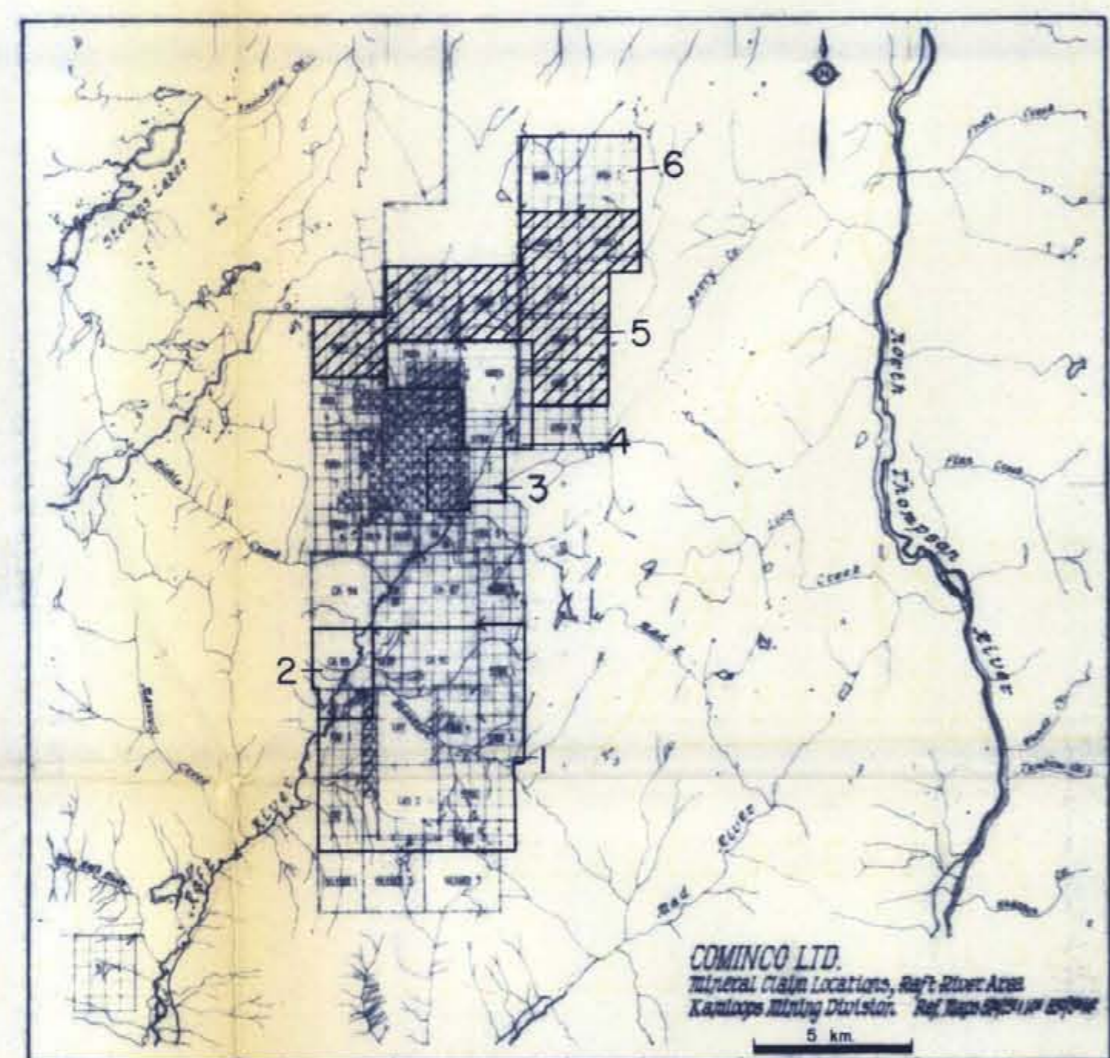
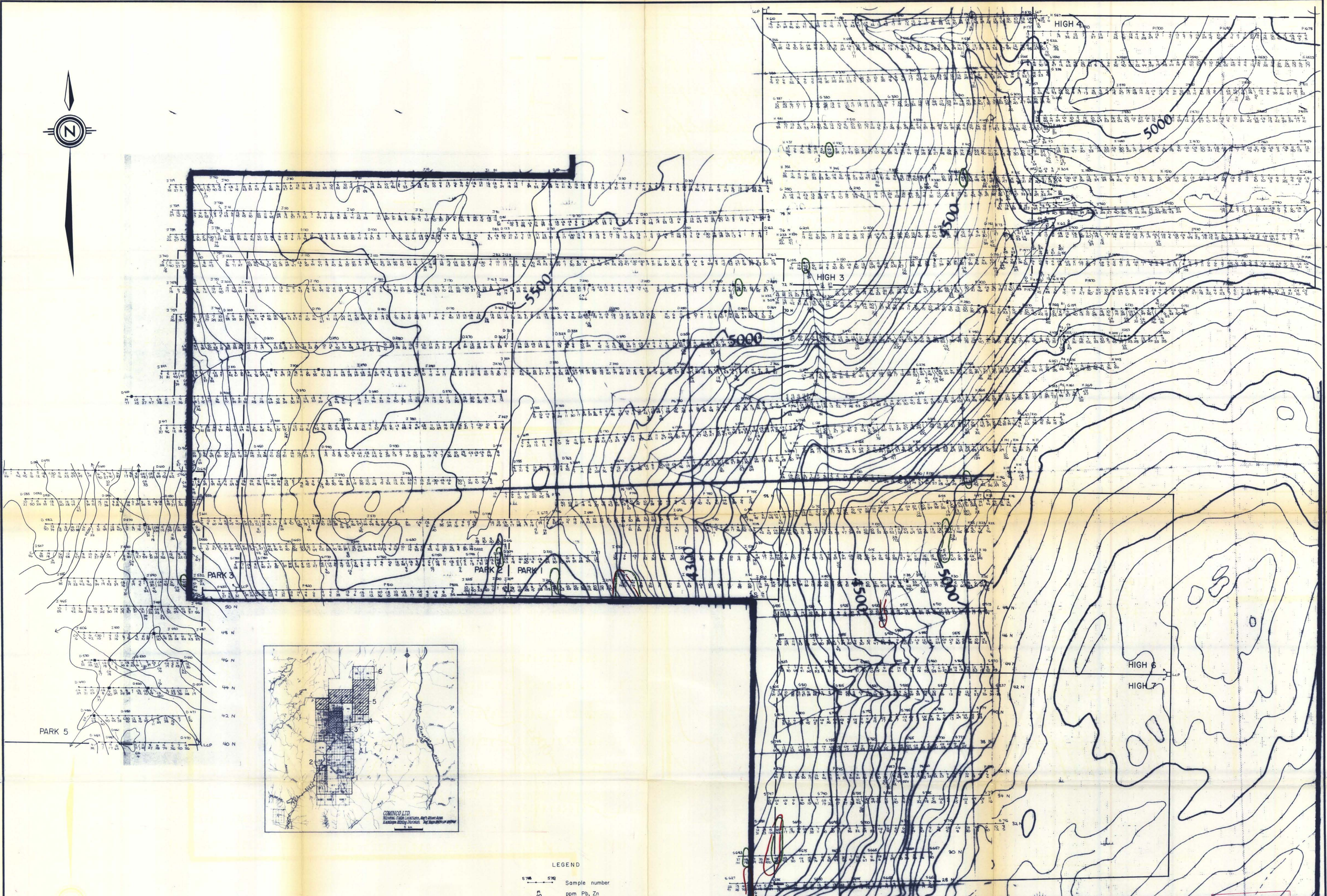
M.H. Munn

Scale: 1:5000 Date: November 1979 Plate: 5

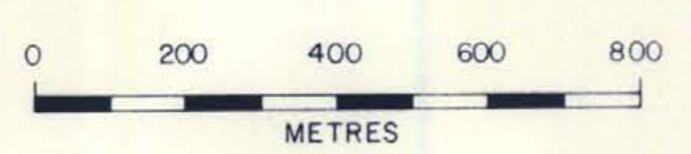


MINERAL DEVELOPMENT DIVISION
7644
PT. 283

CK PROPERTY
GEOCHEMICAL MAP
NO. 4
Scale: 1:5000 Date: November 1979 Plate: 6



- LEGEND
- Sample number
 - 200 ppm Zn
 - >40 ppm Pb
 - Claim boundary



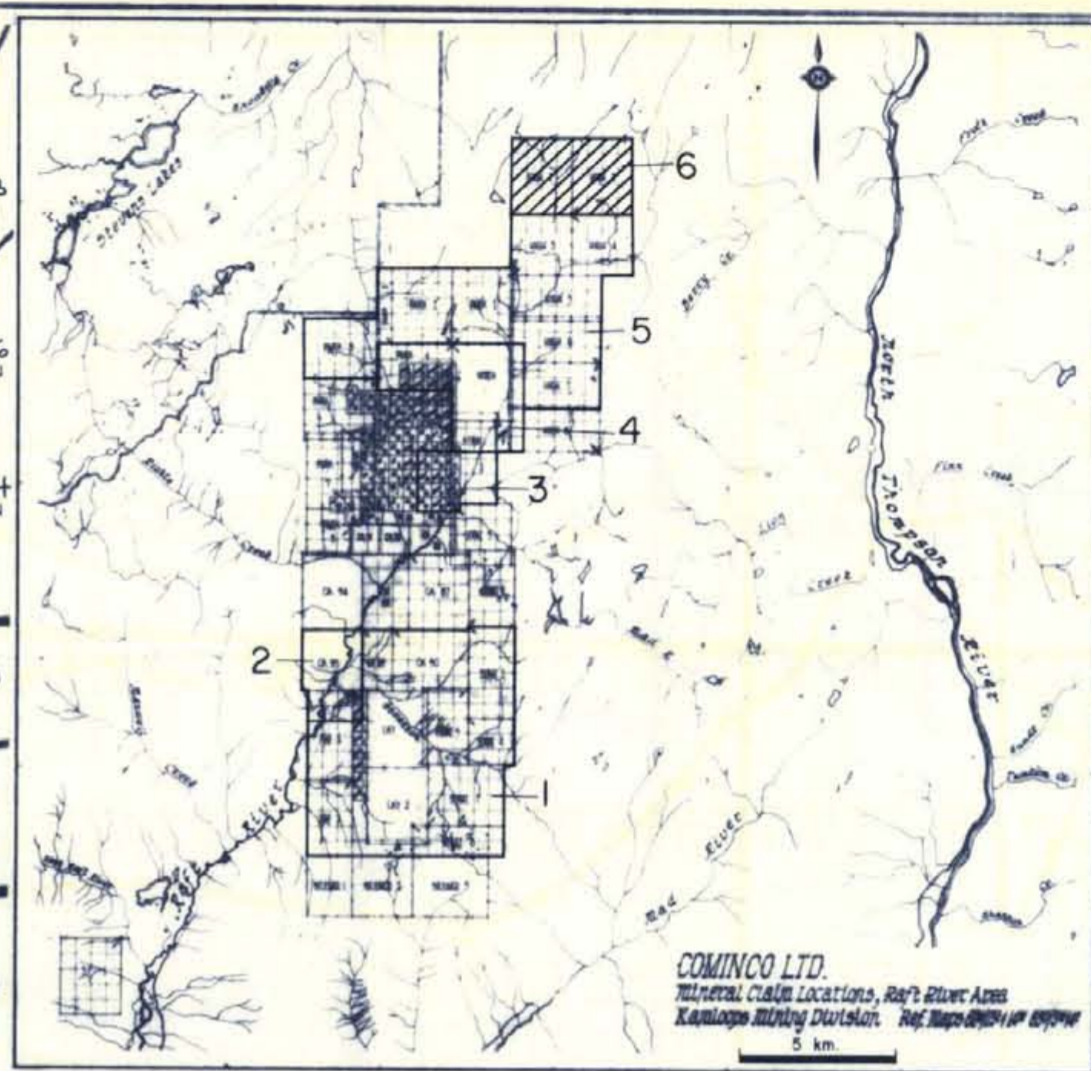
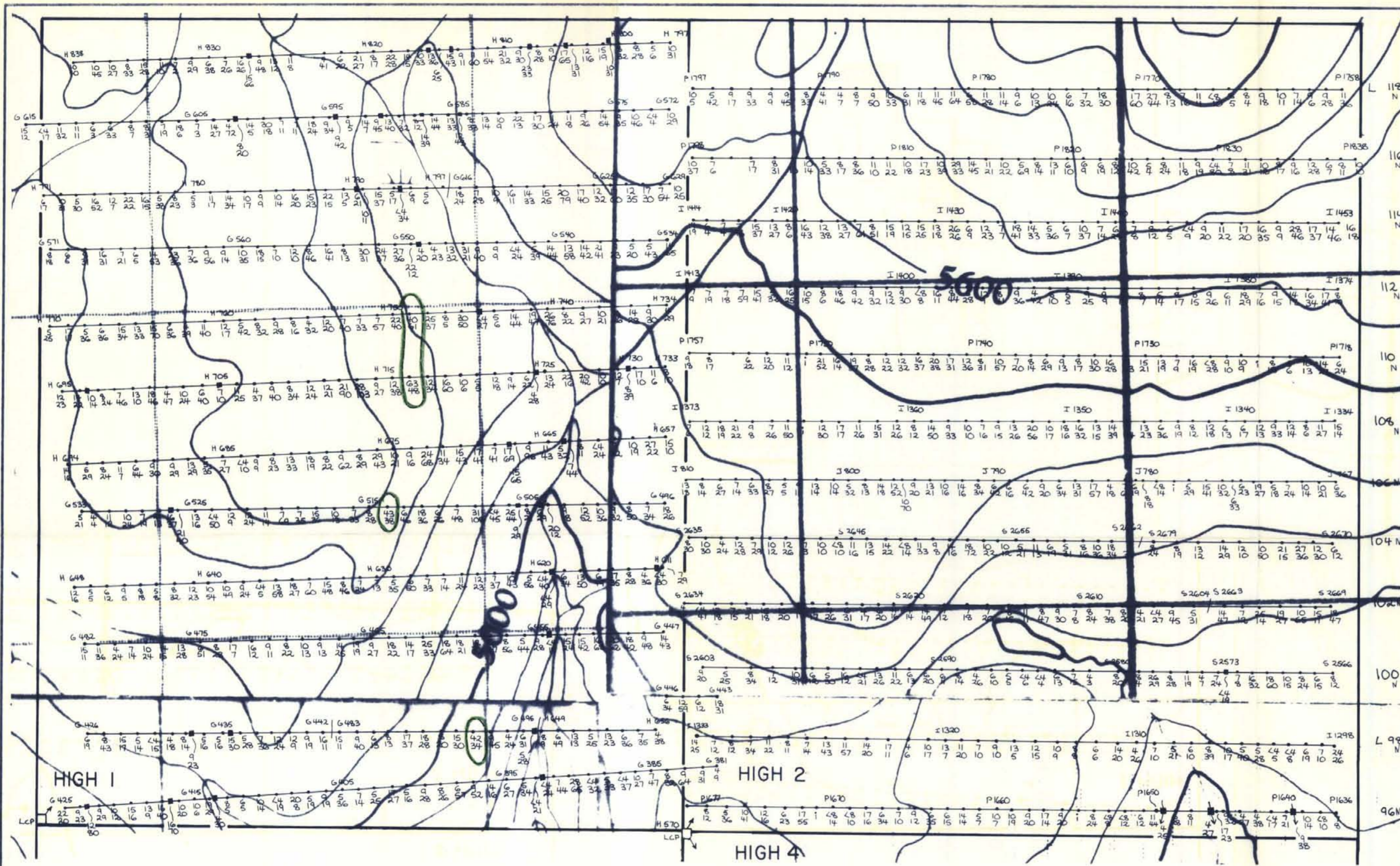
MINERAL RESOURCES BRANCH
7644
 NO. 5
PT. 293

CK PROPERTY

Drawn by:	Traced by: SAW
Revised by:	Revised by:

GEOCHEMICAL MAP *with*
 NO. 5

Scale: 1:10,000 Date: November 1979 Plate: 7



LEGEND

- Sample number
- ppm Pb, Zn
- 200 ppm Zn
- >40 ppm Pb
- Claim boundary

MINERAL RESOURCES BRANCH
 ASSESSMENT REPORT
7644
 NO. 6

PT. 283

CK PROPERTY



Drawn by	Traced by SAW
Revised by	Revised by
Date	Date

GEOCHEMICAL MAP
NO. 6

atkinson

Scale 1:10,000 Date November 1979 Plate 8