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EXPLORATION REPORT

1971

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LUC SYNDICATE

EXPLORATION REPORT 1971

by

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Plate	Title
I	Burn Claim Group - Soil Sample Results
II	" " " - Magnetometer Survey
III	" " " - Geology
IV	Col Claim Group - Soil Sample Results
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Maps

The following maps on a scale of 1" = ½ mile indicate silt sampling and geological results of the 1971 prospecting program:

NTS Block	
93G	2E, 6W, 12E, 12W.
93M	8E, 8W, 9E, 9W, 16E.
93N	6E, 7W, 10W, 11E, 11W, 13E, 13W, 14E, 14W
94C	3W, 4E, 5W.

INTRODUCTION

Figure 1 is an index map showing the location of areas which received attention during 1971. The greater part of the exploration effort was directed to the Hogem batholith where numerous copper occurrences were examined; within this environment the Burn claim group was staked to cover molybdenum-copper mineralization.

A G3B-1 helicopter was used on contract from May 28th till August 28th. LUC Syndicate flew 210 helicopter hours on this contract; some 95 hours were sold to other operators in the district.

In addition to the Burn group, six other groups of claims were staked and recorded. Results of work in all areas are summarized below.

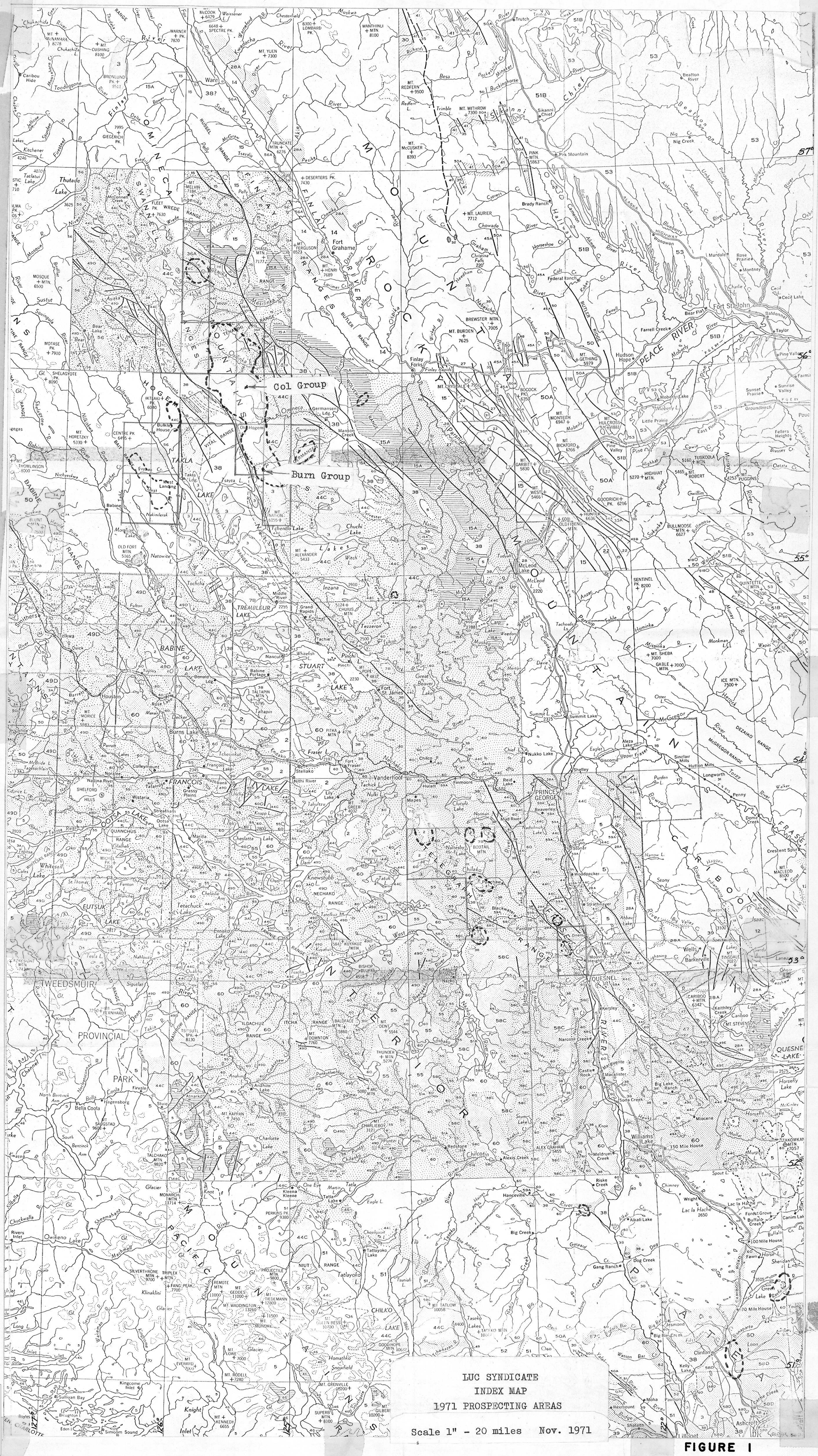

Col Group
Burn Group
LUC SYNDICATE
INDEX MAP
1971 PROSPECTING AREAS
Scale 1" - 20 miles Nov. 1971
inches
centimetres

FIGURE 1

BURN CLAIM GROUP
(Kwanika Creek South Area)

The Burn claim group consists of 80 located claims five miles south of the Kwanika Creek Mine Access road and about five miles east of the Hogan Mines copper molybdenum prospect which is on Kwanika Creek near the Pinchi fault.

Initial discovery was made by David Douglas and Bob McMechan who found a zone of pyrite mineralization with minor molybdenite and chalcopyrite on what are now Burn claims 1-6. A program of silt and soil sampling was carried out which outlined a strongly anomalous (molybdenum and copper) area extending 8500 feet north-south and up to 5000 feet east-west. The strongest geochemical results have a 270° to 300° trend.

Geological mapping was done by Louis Tsang, much of it without benefit of adequate base maps or picket line control. His work has been incorporated on the present geological map.

Prospecting has been carried out in a large area, more or less surrounding the Burn group. Minor mineralization has been found in a number of places. Fracturing, alteration and scattered, anomalous geochemical results indicate that the Kwanika Creek valley deserves a program of very detailed investigation. Outcrop exposure varies from extensive along some ridges to about 1% in the relatively flat valley areas.

Geochemical and geological results to date are shown on maps 93N/6E, 11E, 11W.

SPECIFIC PROJECT BURN

(See plans of Geochemical, Magnetometer and Geological Results - Plates I, II, III)

Specific Project Burn was designated in mid-September in order to continue exploration on the Burn claim group. A linecutting camp was established and supported by helicopter. Eleven miles of line were cut. A magnetometer survey was done covering some thirteen miles. Additional geological mapping was completed.

A D-7 cat was used to construct a tractor road from the Kwanika Creek Mine Access road to the Burn claim group, a distance of about 6½ miles. Approximately one mile of tractor road and 2300 feet of trenching were done on the claim group.

Outcrop is sparse. A north-trending alaskite dyke occurs at the north extremity of a major quartz-rich, porphyritic phase of the Hogem batholith. This quartz feldspar porphyry intrudes monzonite and quartz monzonite which in turn have intruded earlier diorites. The area is cut by a strong set of fractures trending about N60°W. This pattern is evident on airphotos as a series of lineaments. The fractures have been exposed in the trenches; they show a strong development of gouge and/or quartz-veining with molybdenite, pyrite and chalcopyrite mineralization.

Several other sets of fractures are evident in the trenches; they are generally rusty. It is assumed pyrite and possibly chalcopyrite originally occurred in these fractures.

Molybdenite and minor pyrite occur sporadically as disseminations and fracture coatings within the alaskite dyke. The dyke outcrops in three areas and is present in the No. 1 trench. These exposures comprise a strike length of 4500 feet with widths up to 400 feet. Magnetometer results indicate this dyke has a length of 6500 feet or more.

Several large float fragments of alaskite, well mineralized with molybdenite, occur 2000 feet east of the south end of the dyke. These and other floats scattered along the west side of the valley suggest the presence of additional mineralized dykes.

OMINECA RIVER - HAHA CREEK AREA

This division of the Hogem batholith cuts across strong geological structures on the north but it is a convenient unit because it encompasses most of the better copper prospects in the region.

Maps 93N/13E, 14W, 14E indicate the geological and geochemical results obtained.

B.C. Department of Mines geologist J. Garnett mapped the Duckling Creek area during the summer. Partly on this account and partly because of extensive prior claim staking, much of the area has not been mapped by LUC Syndicate in sufficient detail to adequately outline the complex geology.

The more important copper prospects are:

(1) Lorraine - held by Kennco - under option to Granby.

(2) Misty - held by El Paso - former Kennco 'Kay' showing.

(3) Tam - held by Union Miniere - former Kennco 'Fore' showing.

(4) Lorrex - held by Tyee - optioned to Cominco - former Kennco showing.

(5) Tyee - held by Tyee - optioned to Cominco.

(6) Dorothy, Elizabeth - held by Kennco.

(7) Donna - Donna Mines.

Of these copper showings, the Lorraine, Misty, Tam, Lorrex (?), Dorothy and Elizabeth occur in pink feldspathized gneissic rocks along the flanks of a massive pink syenite core. The gneissic rocks strike about N60°W, generally dip southerly and may be remnants of folded sediments intruded by the Hogem batholith.

Northeast of the Omineca River, near the west margin of the batholith, somewhat similar gneissic, highly magnetic rocks are barren of copper.

At the head of Steele Creek, lesser syenite intrusions occur and minor amounts of copper are present in pink feldspathized rocks on the Noranda Kip group.

The Col claim group was staked by LUC Syndicate to the north of the Lorraine showing. This claim group covers:

(1) A large wedge of apparently open ground between the old Kennco claims covering the Lorraine showing and the more recent Granby GK claims.

(2) Strike and possible dip extensions of a feldspar porphyry dyke on GK 17 which has been fractured and mineralized with pyrite and chalcopyrite.

A soil program was conducted in the valley in the central and northeastern part of the Col group as shown on Plate IV. No significant anomalies were revealed.

The Col group geology was mapped and is shown on Plate V.

The Ha Ha claim group was staked northwest of the Misty group to cover an occurrence of chalcocite in veins within the gneisses. Subsequent examination, prospecting and soil sampling indicate the showing is not significant and the claims will be allowed to lapse.

The Tyee showing appears to be a system of fractures in a monzonite dyke intruding volcanics. Pyrite and chalcopyrite

mineralization is present but examination of drill core and present information indicate the showing to be too small and erratic to be important.

The Donna showing appears to be an east-west striking, veinlike zone in Takla volcanics with narrow widths of heavy sulphide mineralization. It is not considered important in itself. The geology is complex.

HAHA CREEK - OSILINKA RIVER AREA

The geology in this region is a continuation of the Duckling Creek structure but there is an apparent change in the mode of copper mineralization. The topography is more rugged than that south of Haha Creek.

The syenite core is surrounded by similar gneiss and schist but copper occurs in only very limited amounts and then generally along

(a) fault zones, north-trending, with syenite or pink feldspathization,

(b) quartz veins up to 12" wide with bornite and malachite,

(c) very minor disseminations in coarse biotite schist.

Northeast of the main syenite, widespread northwest-trending fracturing occurs in relatively fresh grey monzonite. The better part of this zone was staked as the Dot claim group. Subsequent examination showed that the fractures were too widely spaced and erratic to indicate ore grade. Although outcrop is much more restricted in the lower parts of the cirques, it is remarkable for the very few indications of mineralization found in comparison with the cliff faces and ridge tops.

Immediately southwest of Osilinka River, an area of complex geology with syenitic intrusions was disappointing because of the very meagre indications of copper mineralization.

The Gaha claim group was staked near the mouth of Haha Creek at the site of an old gold showing. Pyrite and minor copper mineralization occur in well altered and fraetured monzonites. Mapping and soil sampling were not encouraging and the claims will be allowed to lapse.

OSILINKA RIVER - MATETLO CREEK AREA
(Maps 94C/3W, 4E)

This is a rugged, relatively well exposed region. The major rock type is a grey, coarse-grained hornblende diorite which is fairly fresh in appearance. It is cut by younger monzonites and pink granite.

Mineralized fractures and veins are common throughout much of the area but in no case were zones of mineralization found which would indicate ore potential. Several types were noted:

(1) Chalcopyrite and/or epidote along fractures with pink feldspar alteration of the wall rocks.

(2) Quartz veins up to 10' wide with chalcopyrite, bornite, chalcocite (?) and tetrahedrite. Veins were interrupted by faults and could be traced only very short distances.

(3) Calcite-chalcopyrite filled fractures up to 2" thick.

(4) Pyrite-chalcopyrite filled fractures in relatively unaltered rock.

The Cosmat claim group was staked near Matetlo Creek where silt sampling returned anomalous results in what was thought to be a structurally interesting location. Subsequent soil sampling and geological mapping gave no encouragement and the claims will be allowed to lapse. Results are shown on Figure II.

LAY CREEK AREA
(Map 94C/5W)

The B.C. Department of Mines Access road was being extended north from Aiken Lake and, during August, a two-man party, using a Land Rover, camped along this extension to carry out prospecting, mainly within the volcanics northeast of the Hogem batholith.

A very extensive pyrite zone occurs west of Lay Creek which had been staked a year previously by Union Miniere. Examination of some of the higher outcrop areas showed only intense pyrite mineralization as fracture filling and disseminations. Prospecting found only rare occurrences of chalcopyrite toward the south extremity of the pyrite zone. Silt sampling, however, has returned strongly anomalous results and the area will receive further attention.

TAKLA LAKE - NORTHEAST
(Maps 93M/9E, 16E, 93N/13W)

The area prospected is underlain by west dipping beds of sediments, tuffs and minor volcanic flows, many of which are dramatically red in colour due to hematite.

Several narrow fracture zones occur, usually with considerable epidote and some of these contain bornite, chalcopyrite and, possibly, chalcocite. None of the zones encountered was of any possible economic significance.

One dioritic intrusive was located but no mineralization was evident.

TAKLA LAKE - SOUTHWEST
(Maps 93M/8E & W, 9W)

Prospecting was initiated in this area in a search for relatively small intrusive bodies similar to those hosting the Granisle and Bell Copper orebodies near Babine Lake.

The region is underlain by dark green to rusty red volcanics varying from basic flows to tuffs. These are apparently overlain by beds of argillic sediments. Five small granitic intrusives were located. The most southerly of these is quartz-rich, somewhat fractured and contains minor copper and molybdenite mineralization.

Nothing of economic significance was found but the region appears promising.

WOLVERINE COMPLEX

A very brief reconnaissance was made in the Wolverine complex northeast of Germansen Landing. Sulphide mineralization, consisting of pyrrhotite and very minor chalcopyrite, was found in a thin persistent bed of paragneiss.

Nothing of economic significance was found.

VANDERHOOF - QUESNEL REGION
(Maps 93G/2E, 6W, 12E & W)

A Land Rover supported, 2-man prospecting party spent six weeks in this region late in the season.

Aeromagnetic maps were examined in conjunction with published geological information. Granitic intrusives were then prospected.

Some copper-bearing float was found in one area and silt samples indicate anomalous levels of molybdenum in a second area. Both these areas merit re-examination as early as possible in the spring.

CHILCOTIN RIVER

The Chil claim group was staked to cover a pyritic gossan in the Chilcotin River valley. Prospecting failed to locate any indications of copper mineralization and the claims will be allowed to lapse.

The gossan consists of pyrite in altered volcanics intruded by rhyolitic and quartz feldspar dykes. Some of the rock appears to be dioritic and may be intrusive.

CLINTON - RAYFIELD RIVER

Prospecting was carried out for a brief period north of Cache Creek to investigate aeromagnetic anomalies. Attention was attracted to this area because of published results on Bethlehem Copper Corporation's Maggie property.

Nothing new was found although prospectors report interesting bornite mineralization and float on existing claims in the Rayfield River area.

APPENDIX 'A'

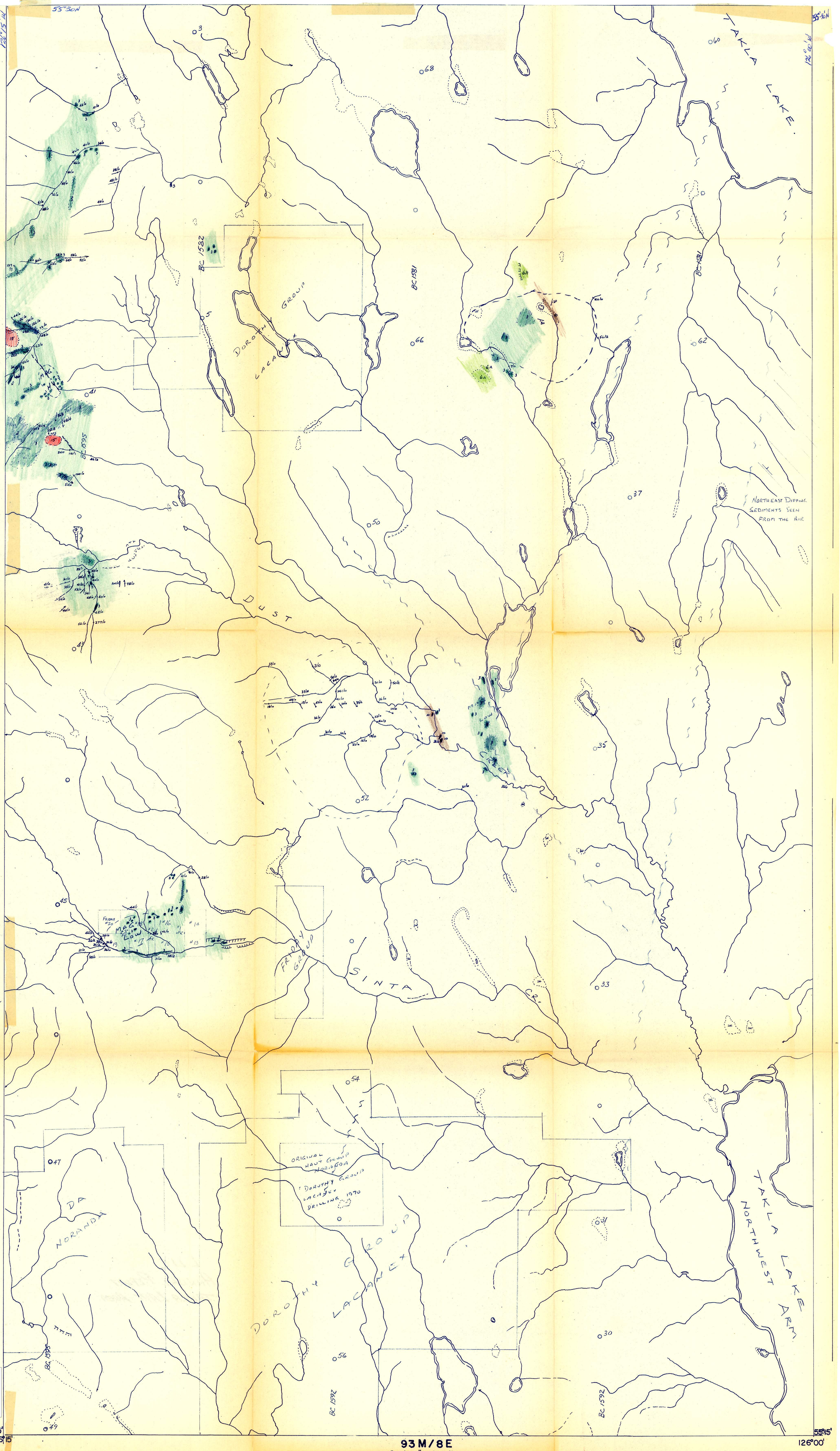
LUC SYNDICATE
REGISTER OF CLAIMS

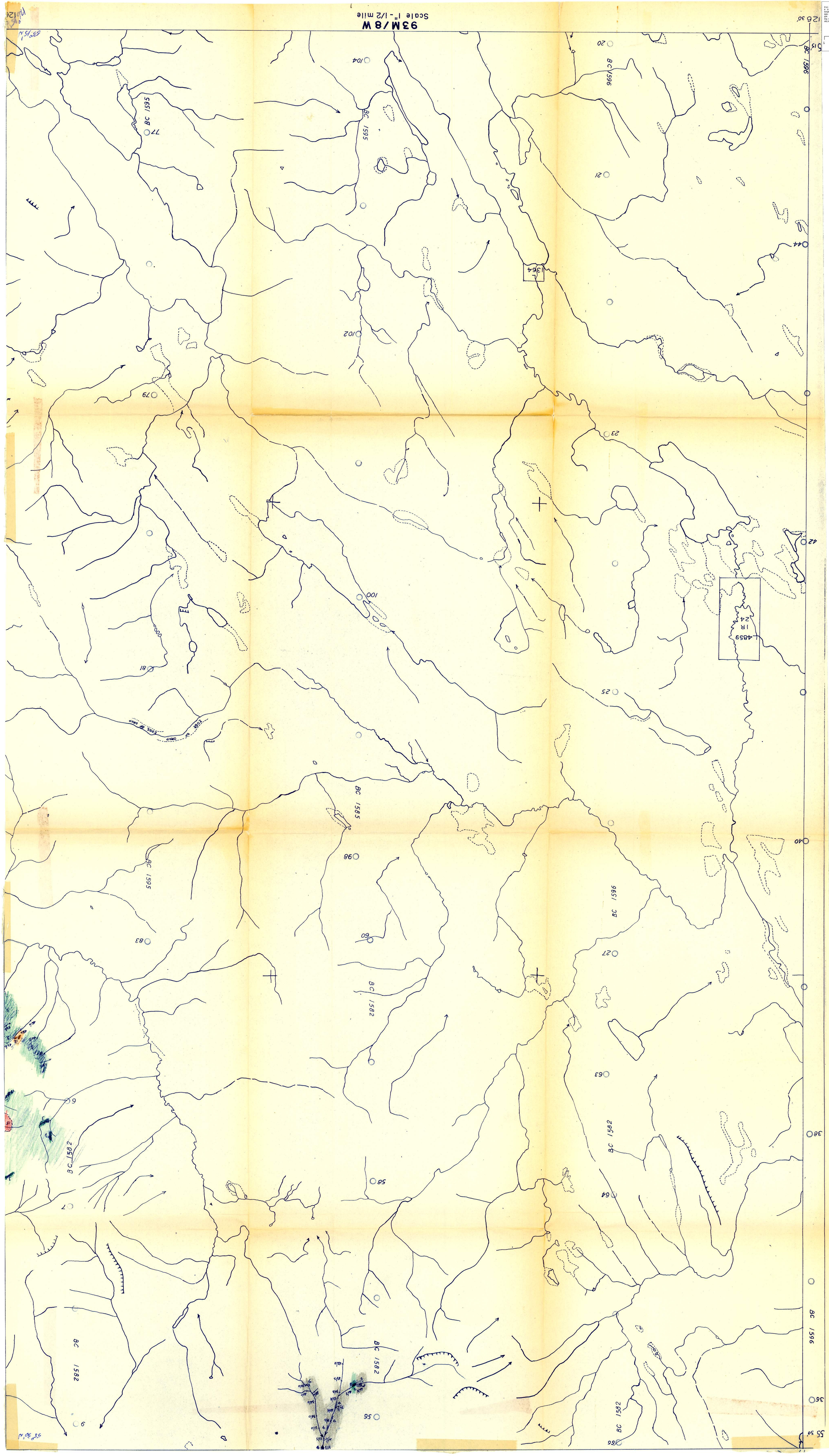
Group	Claim Names	Record Number	Record Date	Disposition
Chil	Chil 1-8	62583-590	May 27/71	To be dropped.
Ha Ha	Ha Ha 1-8	100750-757	July 8/71	" " "
Gaha	Gaha 21-28	102840-847	July 12/71	" " "
Col	Col 1-32 51-58	101240-271 101272-279	July 12/71 July 12/71	Geological & Geochemical Report to be filed.
Dot	Dot 1-24	102817-837; 837A 102838, 839	 July 12/71	 To be dropped.
Burn	Burn 1-42 43-70 71-80	102002-043 102976-103003 104725-734	Aug. 11/71 Sept. 2/71 Sept. 30/71	Assessment work to be filed.
Cosmat	Cosmat 1-12	102737-748	Sept. 1/71	To be dropped.

APPENDIX 'B'

LUC SYNDICATE
GEOLOGICAL LEGEND
for 1" = ½ mile maps

Number	Colour	Rock Type
18	740	Andesite, basalt dykes.
17	743	Feldspar porphyry dykes.
17A	"	Quartz feldspar porphyry dykes.
17B	"	Aplite dykes.
16	743½	Alaskite.
15	744	Granite, quartz feldspar porphyry.
14	736	Monzonite, quartz monzonite, porphyritic monzonite.
13	750	Syenite.
13A	745	Gneissic syenite, pink feldspathized intrusive rocks.
12	737	Diorite, undifferentiated intrusives.
11	742½	Gabbro, hornblendite.
11A	"	Ultrabasics
10	746	Conglomerate, arkose (hematite rich).
10A	"	Amygdaloidal flows, tuffs.
9	747	Argillite.
9A	"	Sandstone.
8	740½	Limestone.
7	756	Greywacke, chert, sandstone.
6	738½	Tuff.
6A	"	Felsite.
5	739½	Pyroclastics.
4	738	Basic flows.
3	739	Andesite, undifferentiated volcanics.
2	734½	Hornblende-biotite gneiss and schist, paragneiss.
1	757	Coarse grained feldspar porphyry gneiss.


55°30'N
126°15'W
126°00'W
TAKLA LAKE
BC 1581
BC 1582
BC 1595
BC 1592
DOROTHY GROUP
LACANEX
DUST
SINTA CR.
FRIDAY GROUP
MAGMA FLOW
NORTHEAST DIPPING SEDIMENTS SEEN FROM THE AIR
ORIGINAL HAUT GROUP NORANDA
DOROTHY GROUP LACANEX DRILLING 1970
DA NORANDA
TAKLA LAKE NORTHWEST ARM
55°15'
126°15'
55°15'
126°00'
93M/8E
Scale 1" - 1/2 mile



55 30'
55°30'N
36
38
40
42
44
5 15'
55°15'N
126 30'
BC 1596
BC 1582
BC 1585
BC 1595
66
56
9
7
6
64
58
63
27
60
83
98
25
81
100
23
79
102
21
77
104
20
4859
IR
24
1364
EDGE OF DROP
EDGE OF DROP

93M/8W
Scale 1" - 1/2 mile

inches
0 1
0 1 2
centimetres
BRITISH COLUMBIA GEOLOGICAL SURVEY
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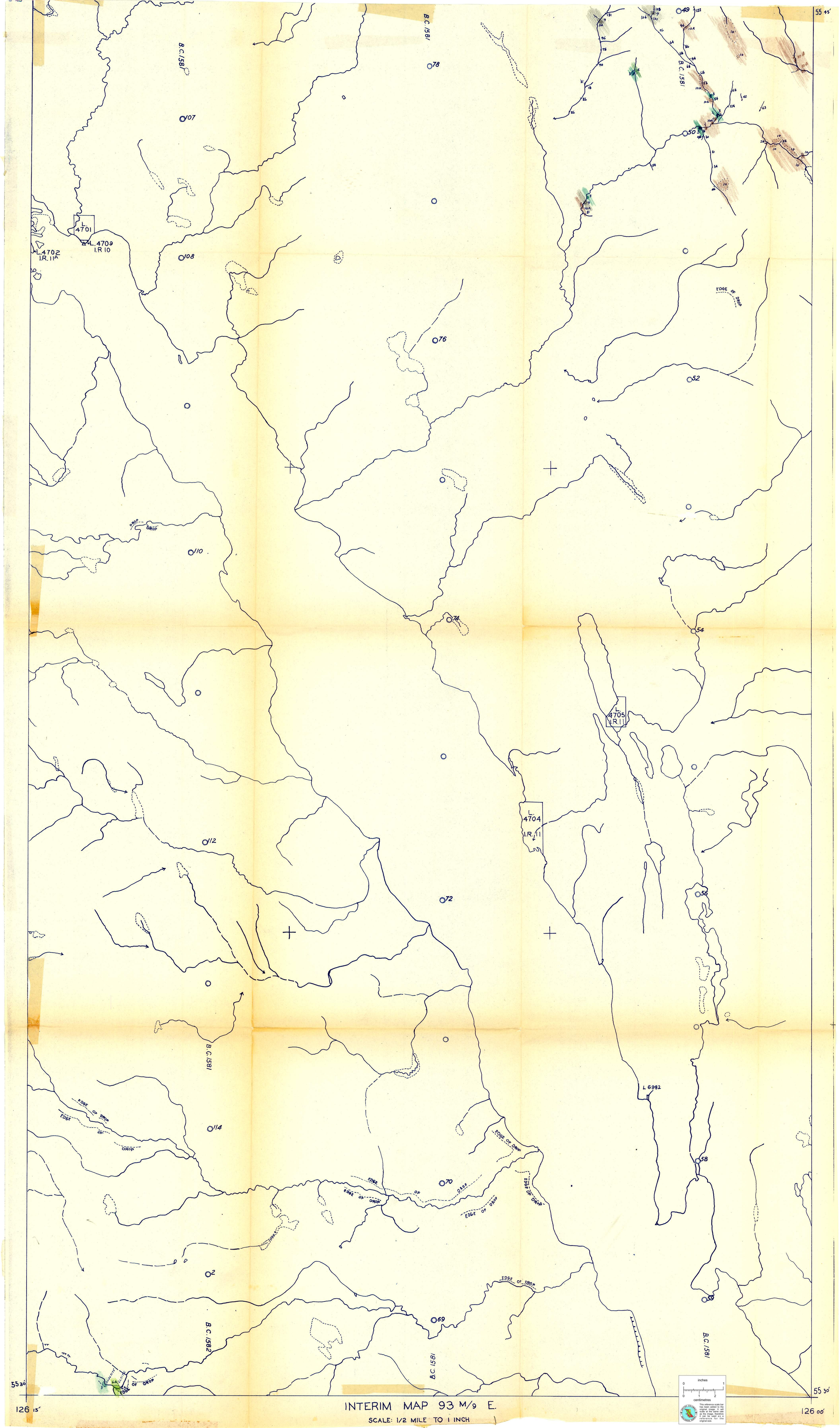
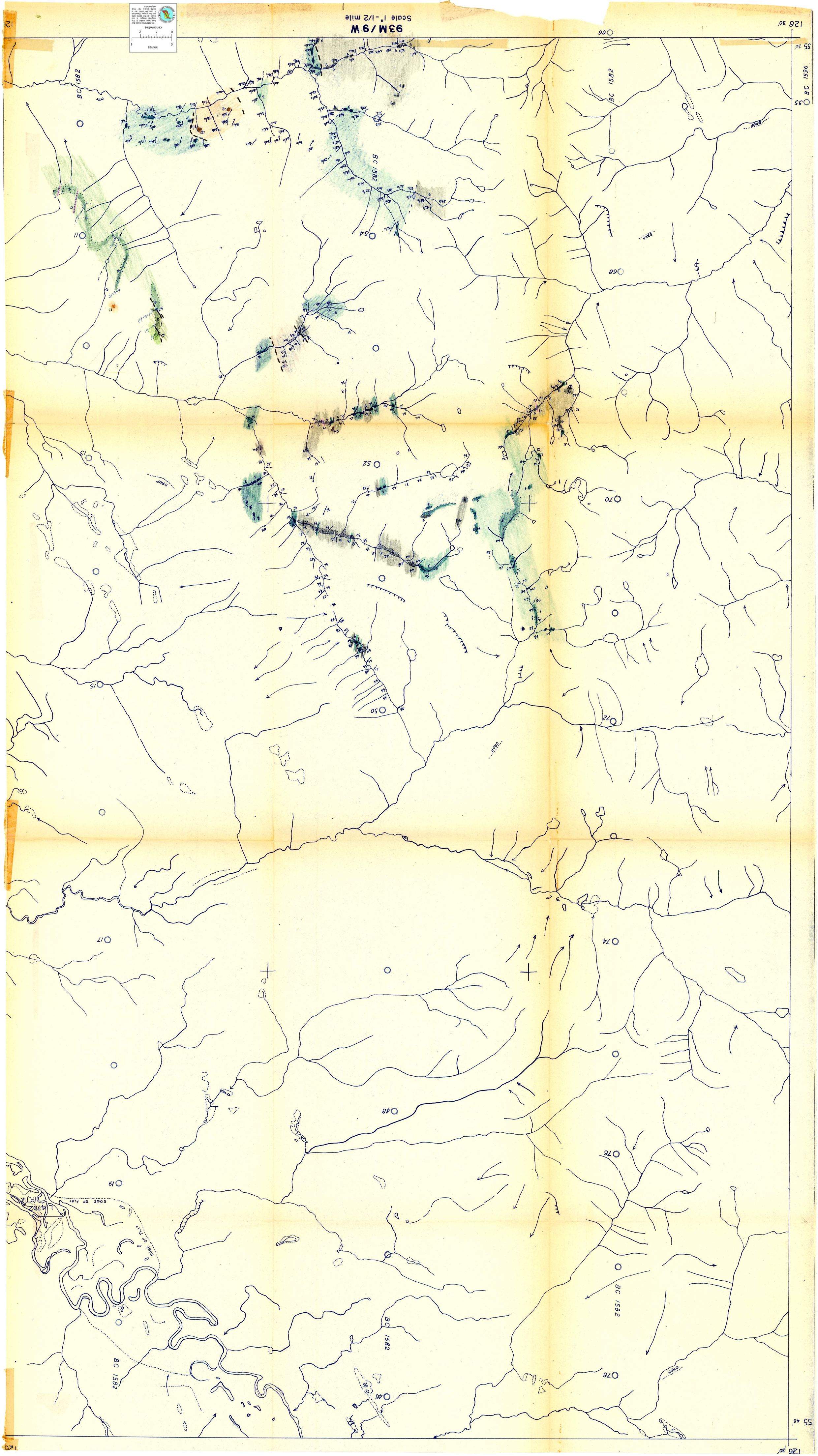


INTERIM MAP 93 M/9 E.

SCALE: 1/2 MILE TO 1 INCH



126 30'

55 45'

120

78

46

BC 1582

DROP

BC 1582

BC 1582

EDGE OF FLAT

EDGE OF FLAT

L 4702
IRTIA

19

76

48

74

17

DROP

72

50

15

70

52

13

68

DROP

54

11

BC 1582

35

BC 1596

55 30'

66

BC 1582

126 30'

93M/9W

Scale 1" - 1/2 mile

120

inches

0 1

0 1 2

centimetres

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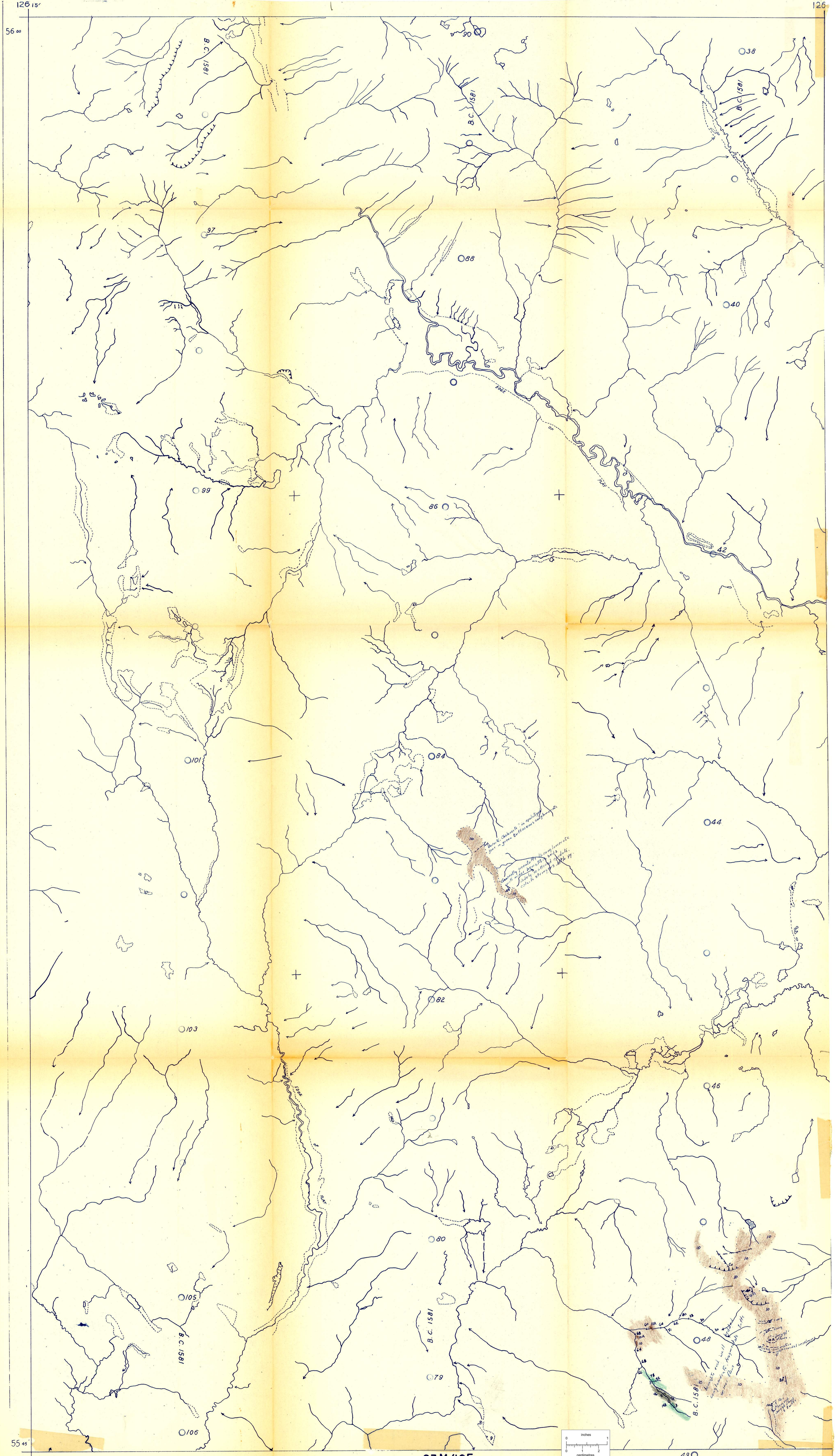
126 15'
126
56 00
55 45'
126 15'
B.C. 1581
EDGE OF FLAT
Cu
93M/16E
Scale 1" - 1/2 mile
inches
centimetres
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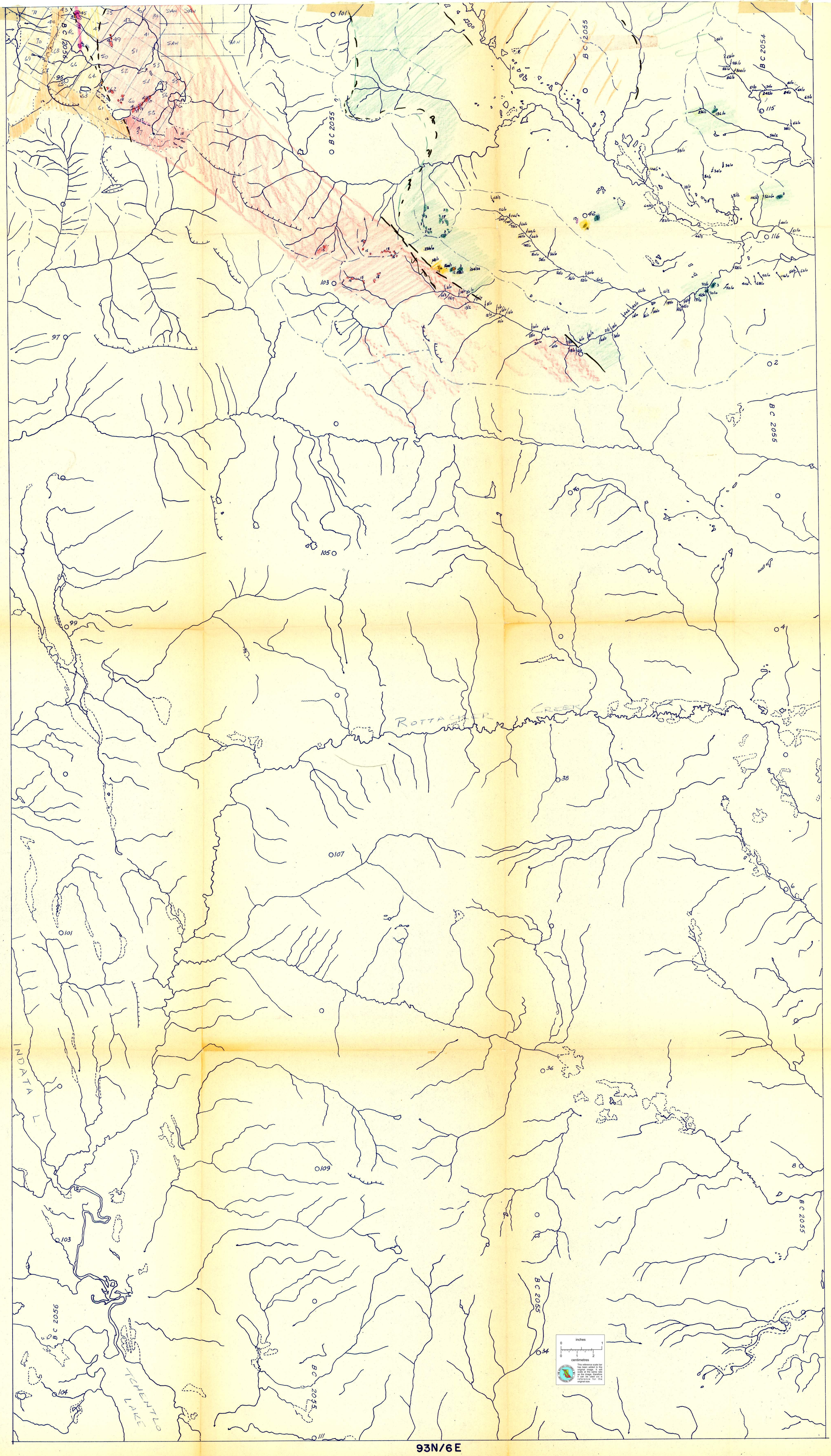
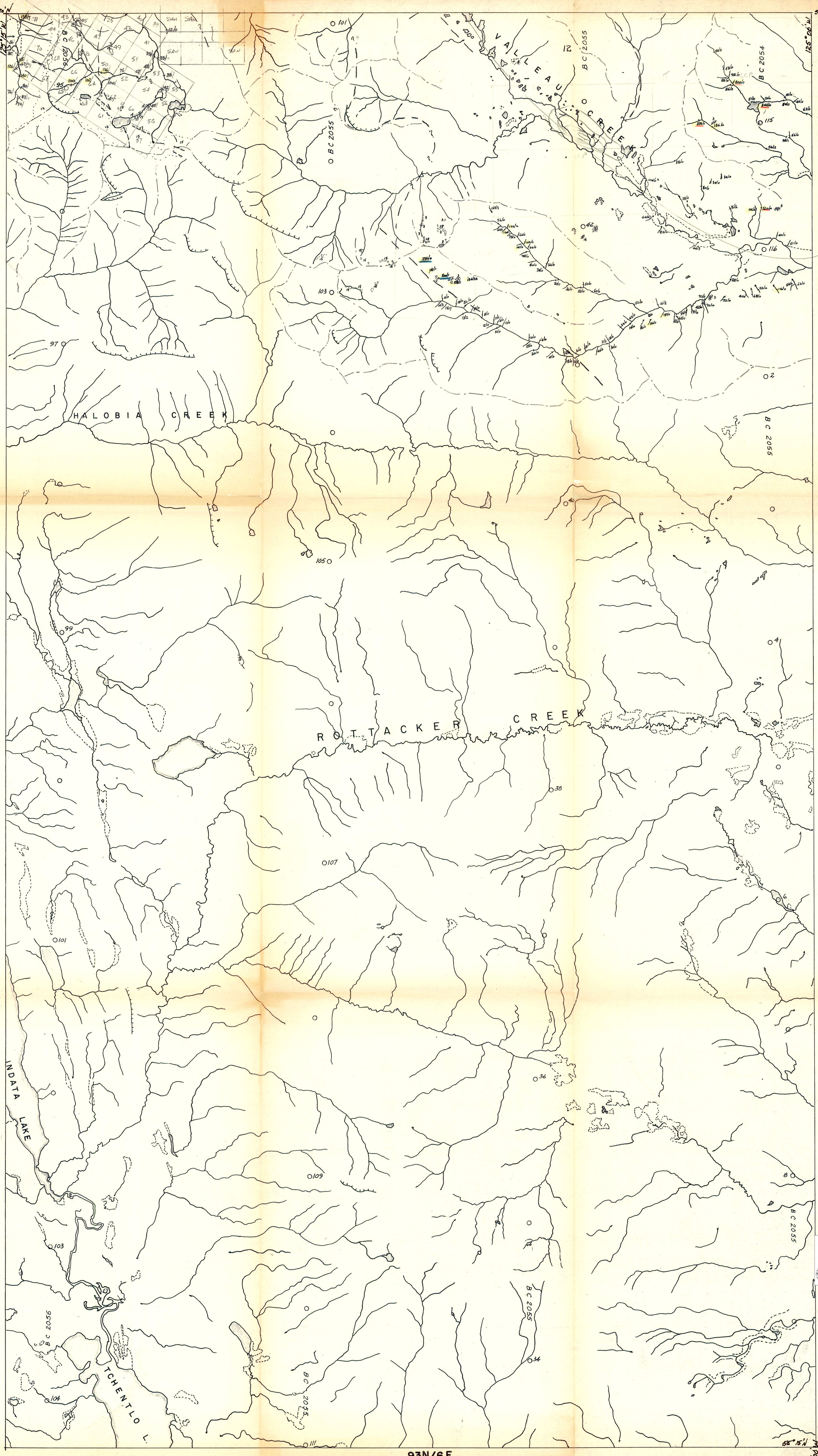


93N/6E

Scale 1"-1/2 mile

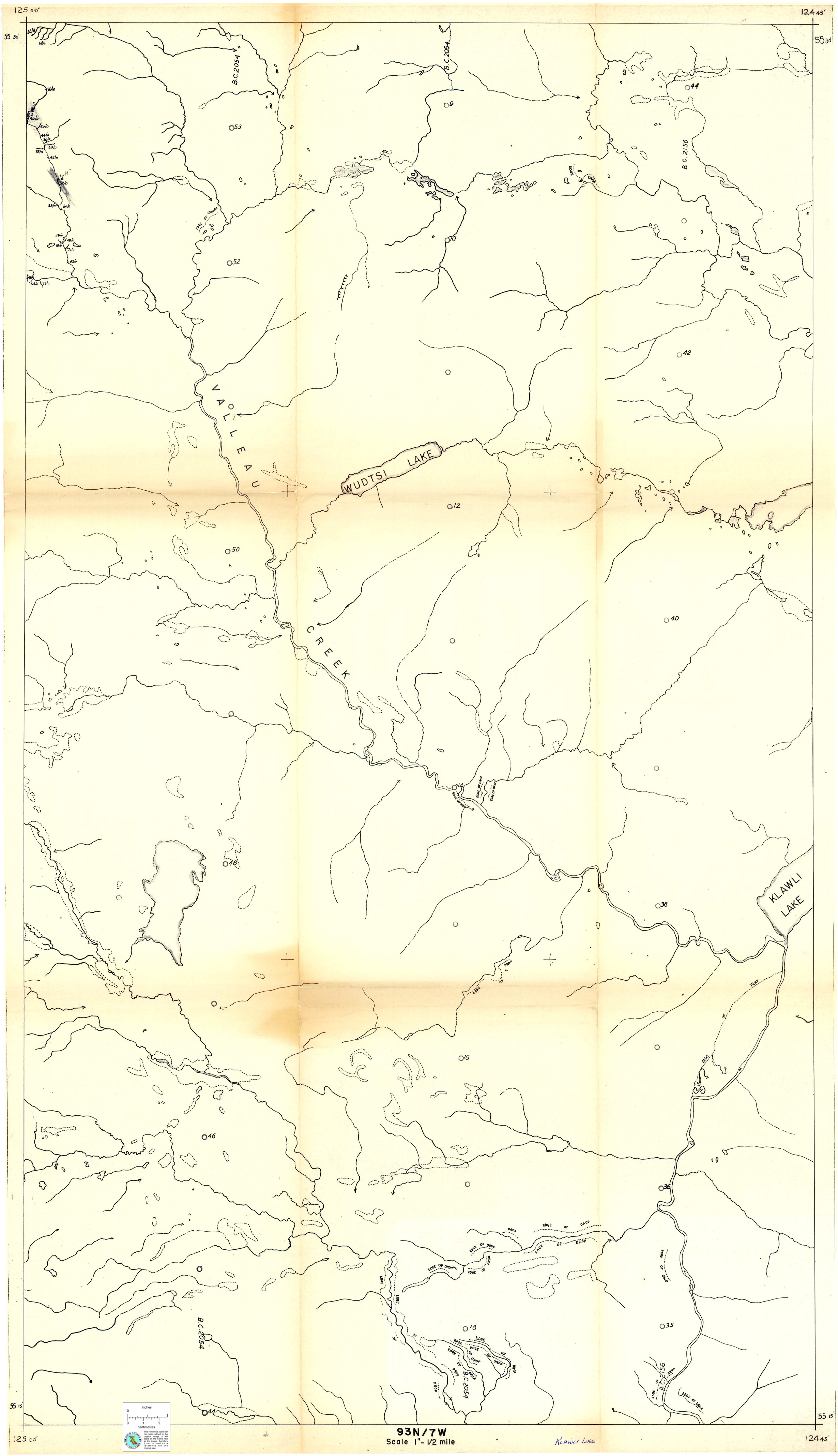


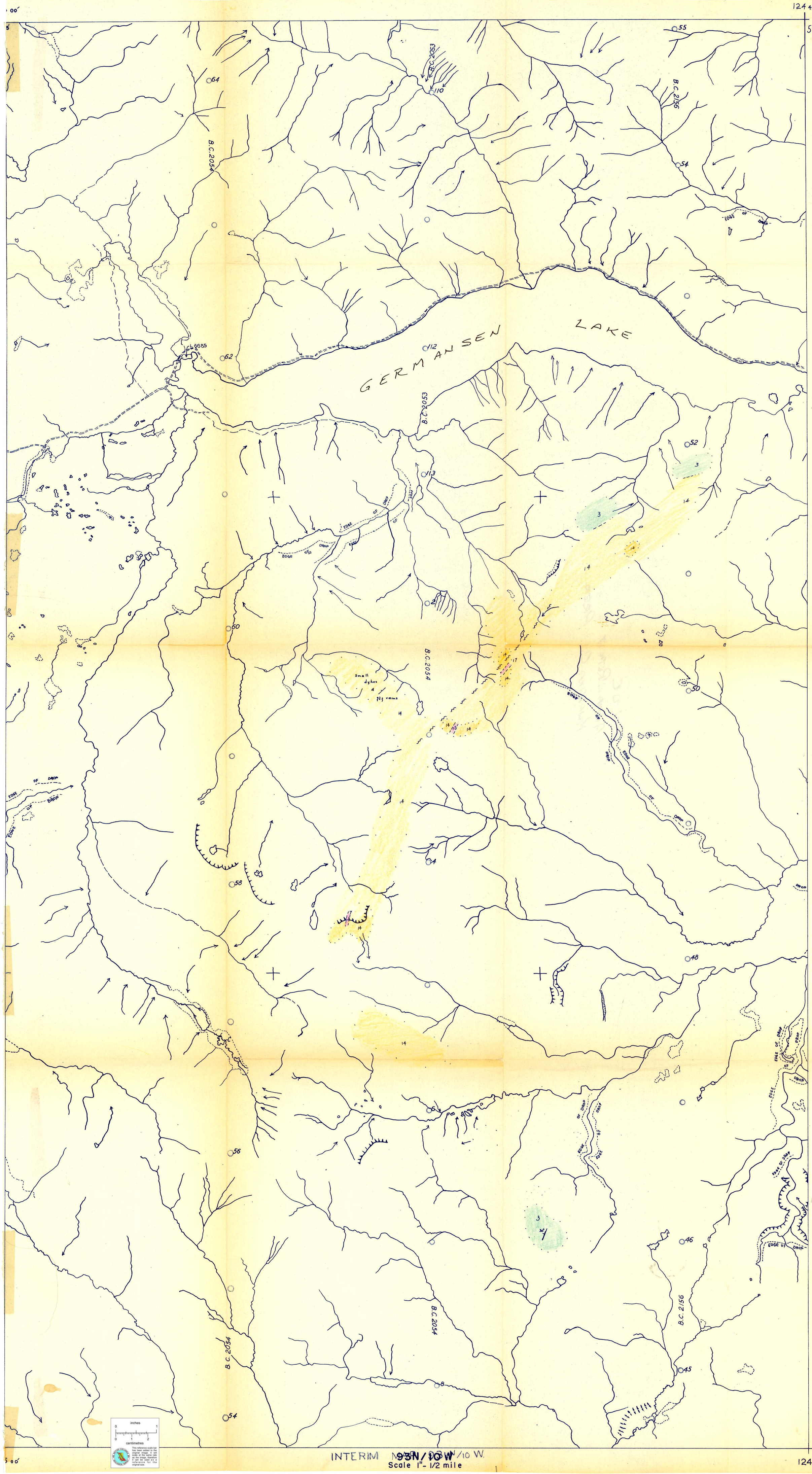
93N/6E

Scale 1"-1/2 mile

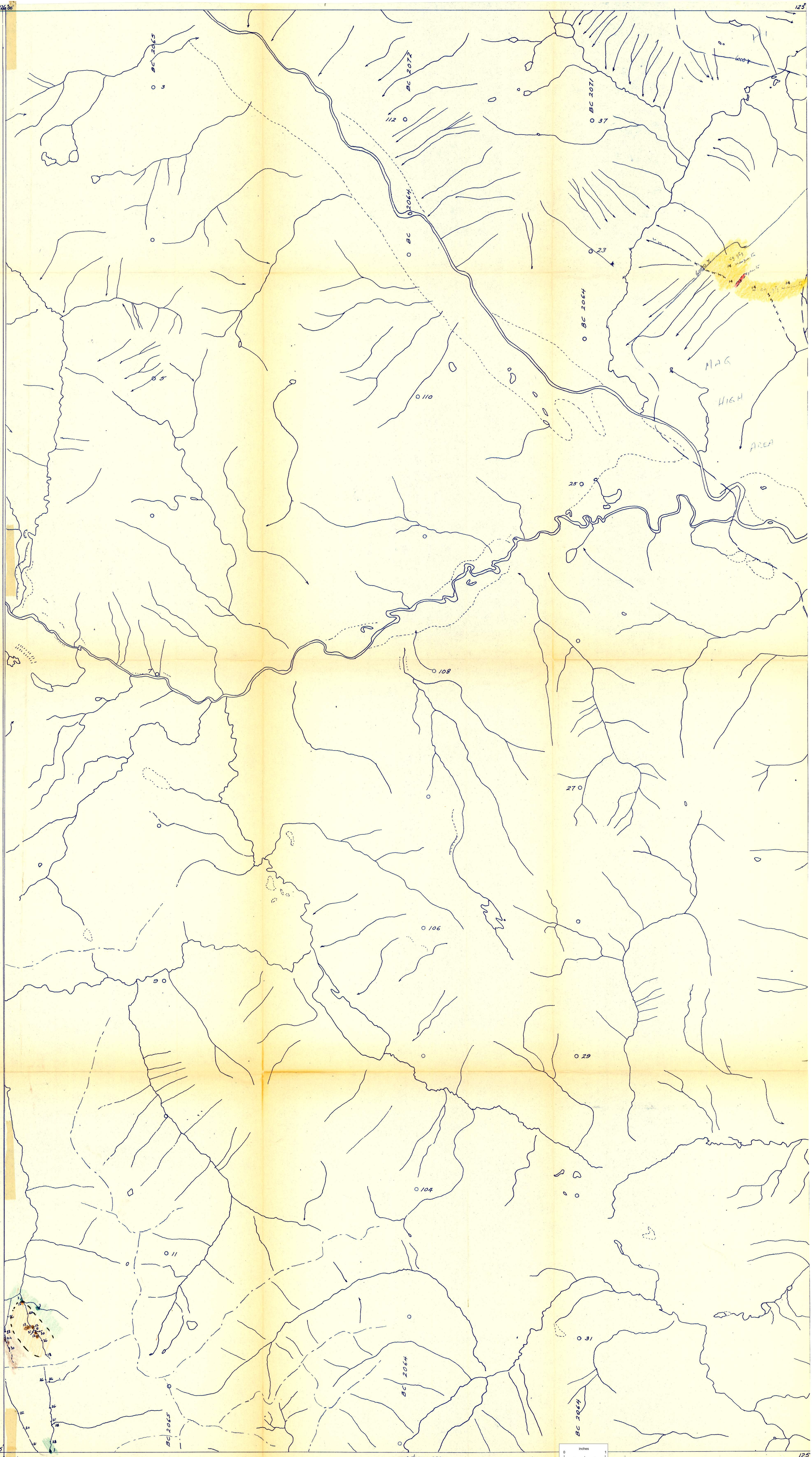
Cu/Mo

123 samples


125 00'
124 45'
55 30'
55 15'
B.C.2054
B.C. 2/56
LALLEAU
CREEK
WUDTSI LAKE
KLAWLI LAKE
EDGE OF DROP
EDGE OF FLAT
93N/7W
Scale 1"- 1/2 mile
KLAWLI LAKE



INTERIM MAP 93N/10 W.
Scale 1" - 1/2 mile


126°00'
125°
55°45'
BC 2065
BC 2072
BC 2071
BC 2064
MAG
HIGH
AREA
93N/13W
Scale 1" - 1/2 mile
inches
centimetres
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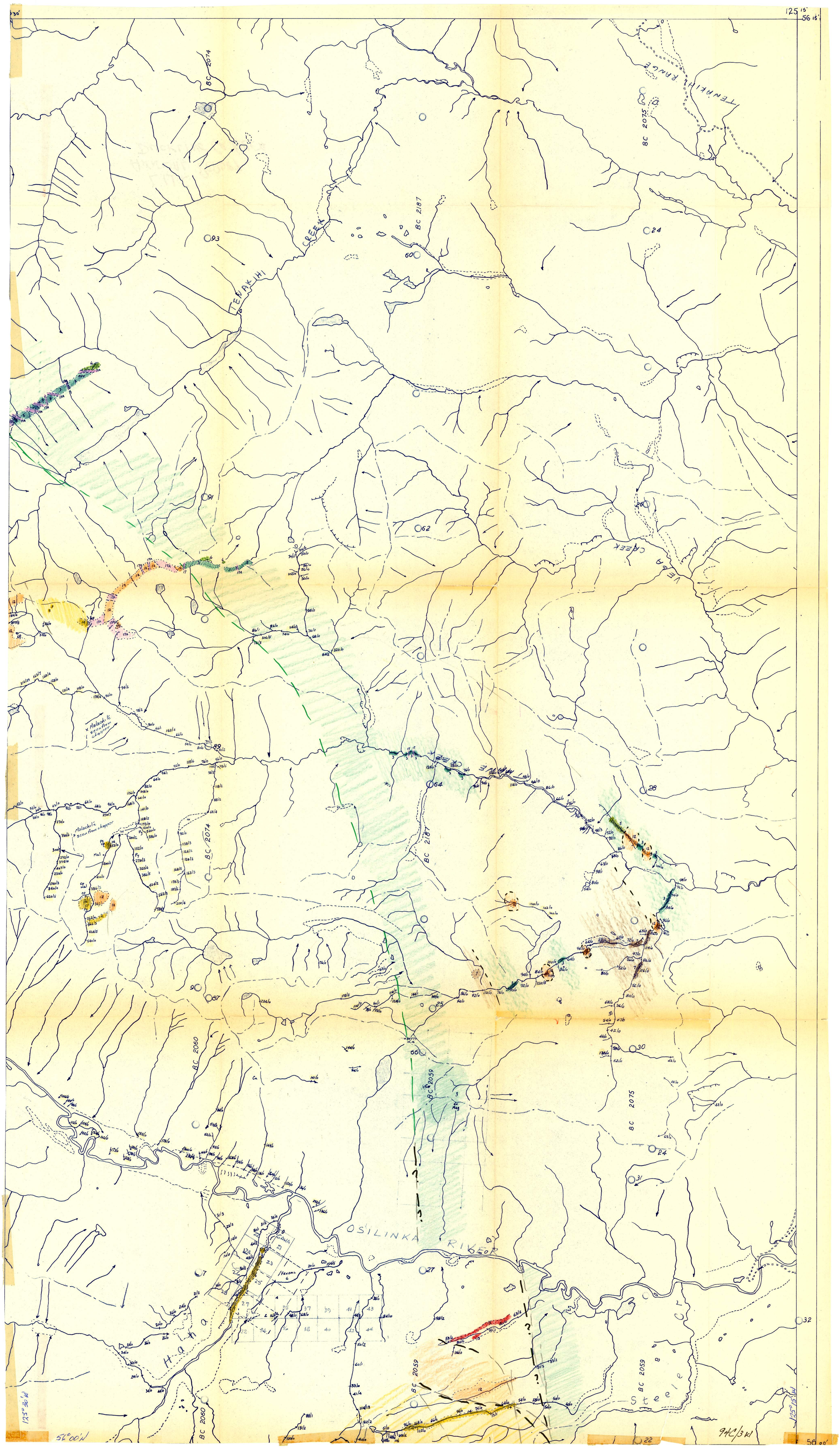
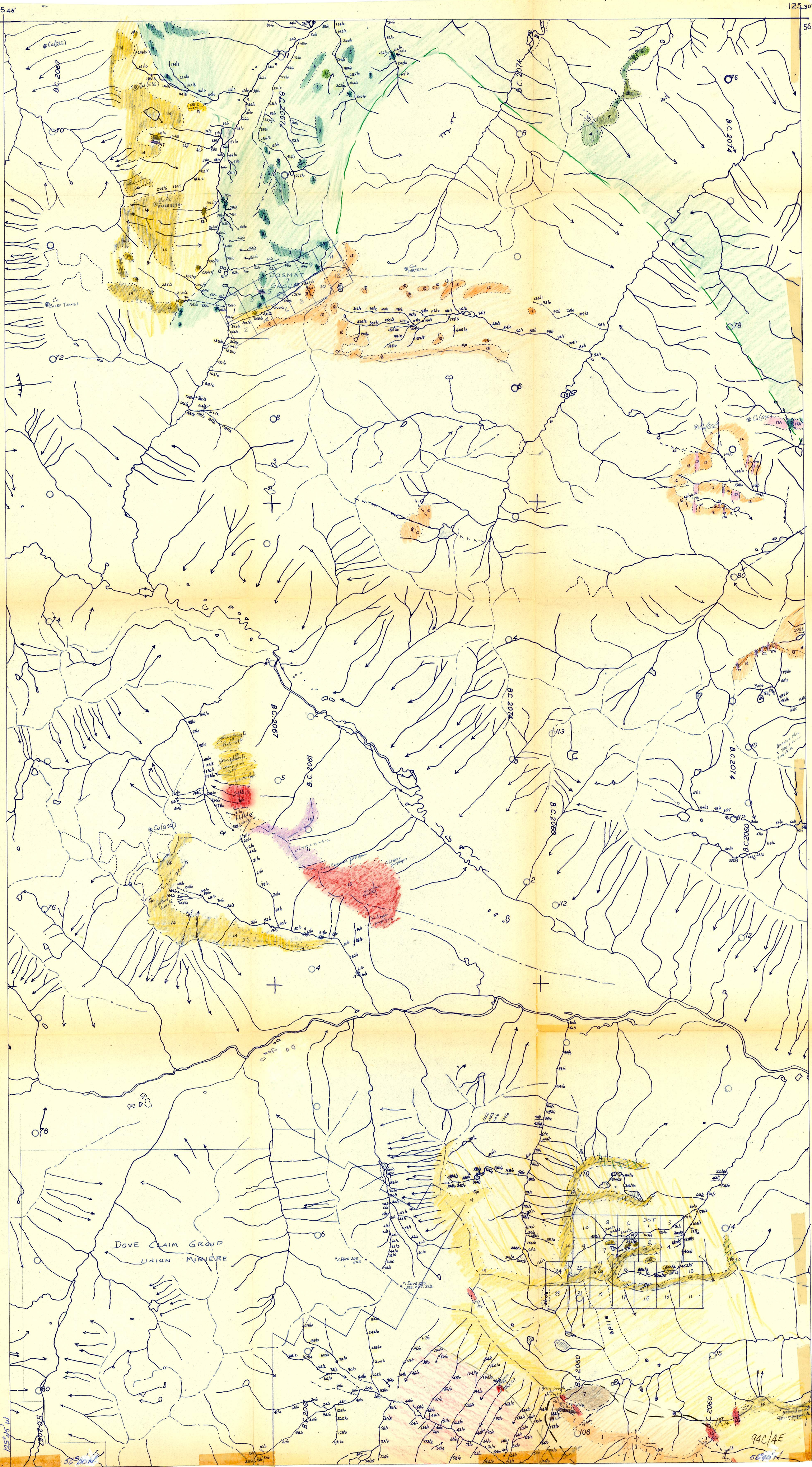

125°30'
125°15'
56°15'
56°00'
BC 2074
BC 2075
TEMPAHI RANGE
BC 2187
CREEK
TEDAKIHI
VEGA CREEK
BC 2074
BC 2187
BC 2060
BC 2059
BC 2075
OSILINKA RIVER
Hanna
Steele
Malachite
x seen from chopper
94C/3 W



inches 0 1
0 1 2 centimetres

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