

COPY

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Prince George, B.C.  
July 15, 48

19

Preliminary Notes on Bowron River Coal Field

Location:

On Bowron River about 30 miles by newly built "cat" road from mouth of river. Reached also by 32 miles of trail east of Buckhorn Lake which is at the end of a road about 20 miles from Prince George. Wells is about to start building a new road from the camp on Bowron River more or less following the present pack trail west to Buckhorn Lake.

Exposures:

Coal formation of unknown age but probably cretaceous outcrop only along the banks of the Bowron River. The rocks largely sandstone and shale and some conglomerate appear to lie in a belt about a mile or so wide, bounded to east and west by volcanic tuffs and breccia and flow rocks lying unconformably below them. The extent of the coal formation to north-west and south-east is not known definitely but was seen in a canyon 3 miles north of Purden Creek, about 11 miles N.W. of the camp. To the south-east the coal formation outcrops about 1/2 mile from the camp - none seen for an additional 6 miles S.E. (upstream).

Coal Showings:

The main coal showing, old tunnel driven in 1911 and present drilling is in the south-west corner of Lot 9593 and on the west side of Bowron River. Additional coal float was seen along the river 3 miles to the north and also about 11 miles N. W. on the river.

Structure:

With one exception the coal formation which strikes about north 40 degrees west all dips to the north-east whether the one south-west dip indicated a fold is not definitely known. The coal formation lies unconformably above volcanic rocks of various sorts and near Purden Lake is intruded by several small felsite dykes and also by coarse granite rock that has metamorphosed it slightly, near the contact.

Several small faults of displacement of but a few feet were cutting the coal formation. No sign of folding was observed and it is thought that the contact against the adjoining volcanics, on the east is probably a fault contact. Not sufficient outcrops were seen to indicate the structure definitely.

Workings:

The main coal showing on the west side of Bowron River opposite the claim and in the S.W. corner of Lot 9593 are exposed in an open cut and in an adit driven in 1911 by Jo. Wendle of Barkerville. The adit driven 34 feet north-west has two short crosscuts to E and W lengths 9 and 11 feet that crosscut two coal seams. Additional coal is also exposed in the open cut and in continuous exposures extending upstream along the river from the adit.

00002 (01)

At this point there is a total thickness of about 50 feet of coal bearing beds. This section of coal bearing beds has been intersected in 3 drill holes lying to the north of the adit. No 1 hole, vertical, was drilled last November and No. 4 and 5, 45 degree holes at right angles to the beds were drilled this July. Coal was cut in all three drill holes but no core was recovered from Nos. 4 & 5 drilled with an X-ray drill. It is not possible to correlate the coal exposed in the crosscuts with the coal intersected in drill holes Nos. 1, 4 & 5.

Coal Seams:

Several coal seams have been exposed having thickness up to 7 feet. However, where seen there does not appear to be more than 2 feet of clean coal without a slate or sandstone parting of from 1 to 5 inches thick. In no instance is there a considerable thickness of clean coal.

Detailed section measured across the coal seams show variable thickness of shale partings and this together with inability to correlate coal seams from one drill hole to another suggest that the individual coal layers are lenticular and not necessarily individually continuous.

Present Work:

A new compressor has been shipped in to the property and the driller went in today. It is proposed to start drilling immediately using a layer drill, A size core, in order to extend the known extent of the coal bearing formation and also do learn more about the behaviour of the individual coal layers.

Conclusion:

Undoubtedly there is a considerable area underlain by coal formation more needs to be found out by drilling to prove the extent of the coal bearing beds. Although the coal appears to be of good quality the presence of numerous shale partings appear to be detrimental.

"Stuart S. Holland"

C  
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MEMORANDUM

Dr. H. Sargent,

Chief Mining Engineer,

Dept. of Mines, Bldgs.

October 30, 48

Notes on the Bowron River Coal  
Area

3030-D

The Bowron Coal Co. Ltd., of Prince George, D. Wells, president, holds a coal lease on Lot 9596 on the Bowron River. The main coal showing and work done to date has been in the south-west corner of Lot 9593, which lies south-east of Lot 9596.

Location:

A "cat" road was built in 1947 from Hanserd, on the C.N.R. about 40 miles east of Prince George, to a camp established on the east side of Bowron River, a distance of about 31 miles. It was found impracticable to use this road for freighting during the 1948 season. A road, therefore, was begun from the Willow River from the end of a Forestry road built east from the end of a truck road at Buckhorn Lake. The distance from Willow River to Buckhorn Lake is 13 miles and from the Willow River crossing to the coal showings on the west side of Bowron River, about 22 miles. Buckhorn Lake is about 20 miles south and east by road from Prince George.

Exposures:

Coal formation rocks, of Tertiary age, outcrop only along the banks of Bowron River. The rocks, mainly sandstone and shale and some conglomerate, lie in a belt about  $1\frac{1}{2}$  miles wide, bounded to east and west by tuffs, breccias, and flows, which underlie the valley slopes and which lie unconformably beneath the coal formation. The extent of the coal formation to north-west and south-east is not definitely known but has been seen outcropping at various points for a distance of about 8 miles along the Bowron River. The northern-most coal formation seen was at the head of Bear Canyon, north of Purden Creek, and about 7 miles north-west of the main coal showing at the camp.

Coal Showings:

The main coal showing was found about 1910, and is on the west side of Bowron River in the south-west corner of Lot 9593. It was explored by a short edit driven in 1911. Coal float at several other exposures of coal formation indicates that other coal seams are present in the area.

Structure:

The coal formation strikes north 40 degrees west and with but one exception, dips to the north-east. The one south-west dip might indicate a fold but no folding is definitely known. The coal formation lies unconformably above volcanic rocks of various sorts and near Purden Lake is intruded by several small felsite dykes that, near their contacts, have metamorphosed it slightly.

October 30, 1948.

Several faults of small displacement cut the coal formation and it is thought that the contact with the adjoining volcanics on the north-east side is probably a fault. Not sufficient outcrops were seen to indicate the general structure in the coal formation.

Exploratory work:

The main showing in the south-west corner of Lot 9593 was explored by an adit driven in 1911. The adit driven 34 feet north-west, along the strike of the formation, has short crosscuts to north-east and south-west with lengths of 9 and 11 feet. The 2 crosscuts exposed 2 coal seams. Additional coal was also exposed in an open cut extending south-east from the portal of the adit.

In the winter of 1947 and up to September, 1948, 5 diamond drill holes, totalling 982 feet, were put down to explore the coal seams along the strike and down the dip from the outcrop. The adit and all drill holes are included in a rectangular area 500 feet square.

During September, 1948, overburden was blasted and cleaned from the main coal outcrop for a length of about 100 feet along the river bank. At that time the old tunnel was partly blown out and caved and its face made inaccessible.

Coal seams:

The small amount of surface work and several drill holes indicate that a 60-foot thickness of coal measures contains several coal seams. Coal was cut in 4 drill holes. No core was recovered from two holes drilled with an X-ray drill but cuttings indicated the depth and thickness of the seams. It is not possible to correlate the coal exposed in the crosscut with that intersected at depth in the drill holes. Detailed sections measured across the coal seams in the crosscuts show variable thickness of shale partings and also that there is no individual layer of more than about 20 inches of coal free from partings.

The presence of partings in the seams and the inability to correlate coal from one drill hole to the next, suggests that the individual coal layers may be lenticular and not necessarily individually continuous.

Analysis of a selected specimen of clean coal gave 6% moisture, 4.7% ash, and 12.160 BTU's. Analyses of 3 channel samples taken across the coal exposed in the face of the crosscut gave 6% moisture and ranged from 9.7 to 18% ash and from 11.340 to 10.120 B.T.U.'s per ton.

"STUART S. HOLLAND"

Mining Engineer.

SSH/rp

DRILLING REPORT ON PROPERTY HELD BY  
BOWRON COAL COMPANY LIMITED (N.P.L.) - PRINCE GEORGE, B.C.

Record of Hole #1

6'6"	Surface Soil	6'6"
0'6"	Gravel	7'0"
3'1"	Coal with Gravel	10'1"
0'7"	Slate	10'8"
0'6"	Coal	11'2"
0'5"	Slate	11'7"
4'5"	Coal	16'0"
0'6"	Slate	16'6"
3'0"	Coal	19'6"
0'6"	Slate	20'0"
6'6"	Coal	26'6"
0'5"	Slate	26'11"
1'0"	Coal	27'11"
1'6"	Slate	29'5"
1'0"	Sand Stone	30'5"
1'1"	Slate	31'6"
9'5"	Coal	40'11"
1'3"	Slate	42'3"
0'3"	Coal	42'5"
0'3"	Slate	42'8"
1'8"	Slate with streaks of coal	44'4"
1'8"	Sandstone with streaks of coal	46'0"
3'0"	Coal and slate	49'0"
0'5"	Grey shale	49'5"
0'3"	Slate	49'8"
0'4"	Slate and coal	50'0"
1'0"	Grey shale	51'0"
2'6"	Slate with streaks of coal	53'6"
0'8"	Grey shale	54'2"
0'10"	Coal and slate	55'0"
3'0"	Slate	58'0"
2'0"	Sandstone	60'0"
2'0"	Coal	62'0"
3'0"	Slate and coal	65'0"
8'0"	Grey and dark shale-coal streaks	73'0"

Total Depth 73 feet

Location - 65' down river from old coal tunnel and on same side of river.

Signed by O.R. Christofferson.

November 23rd 1947

C O P Y

References.

Dawson J.M. Geol Surv. Can. Report of Progress  
1876-77 p. 145

W.A. Bell.

The fossil plants from the Brown River are collected by Dr S.S. Holland are indeed poor and consist only of the following:

Sequoites langsdorffii (Brongniart)

Thuites sp.

Pinus sp.

3 identifiable fragments of dicotyledonous leaves

I consider the age to be Tertiary, but would not hazard a guess as to what epoch of the Tertiary.

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7	6	323
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Barkerville, B. C. December 6th. 1948.

Mr Stuart Holland,  
 Department of Mines,  
 Victoria, B. C.

**OPEN FILE**

Dear Holland,-

I have your letter of the 2nd. and note what you want to know and may be able to help you some.

Early in 1898, while prospecting for gold, B. A. Laselle and I built a boat at Bowron Lake and spent about three months prospecting Bowron River and tributaries from here to the Fraser River - probably 110 miles.

While camping just across Bowron River from where the <sup>coal</sup> showing, close to the adit is, I noticed the iron stain and after supper made an examination, and the next morning we took a coal sample which we had analyzed and found this reasonably favorable.

When building of the C. T. R. R. came along, I again became interested in the coal. Starting close to where the adit now is, we cut a trench along water river edge and down stream - probably 350 feet and first found a 8 to 10 foot seam and a little further on 2 to three foot one.

These later seams have a very low ash content.

Unless there is a very dry season and low water, to again expose these seams, trenching across the low ground and strata bedding may be necessary.

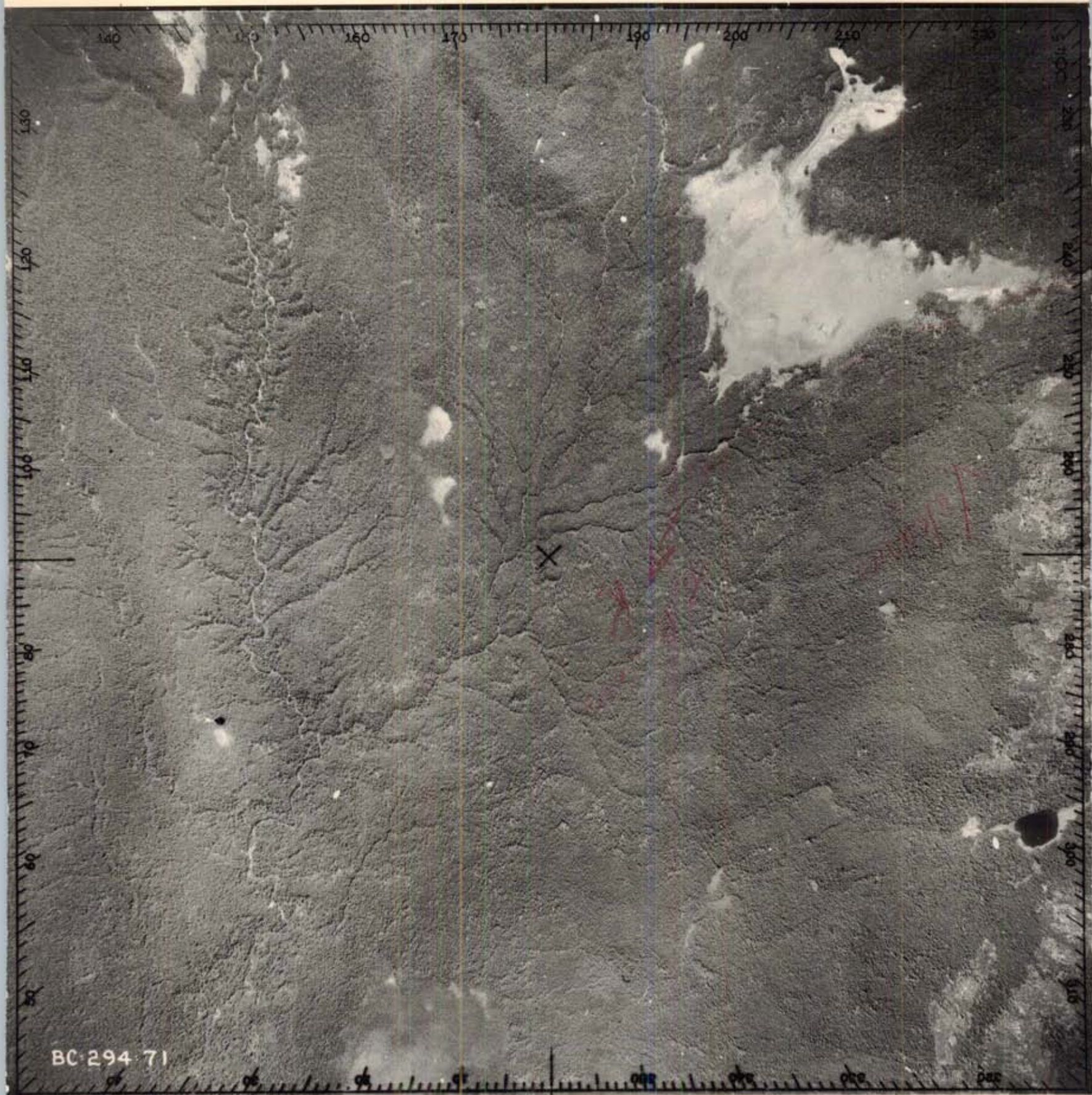
I believe most of my trenching was still open when Galloway was on the ground. My notes re the coal were destroyed in a fire several years ago. Sorry I cannot give you more information.

Very truly,

*[Handwritten signature]*  
 00002 (02)

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BC 294 71

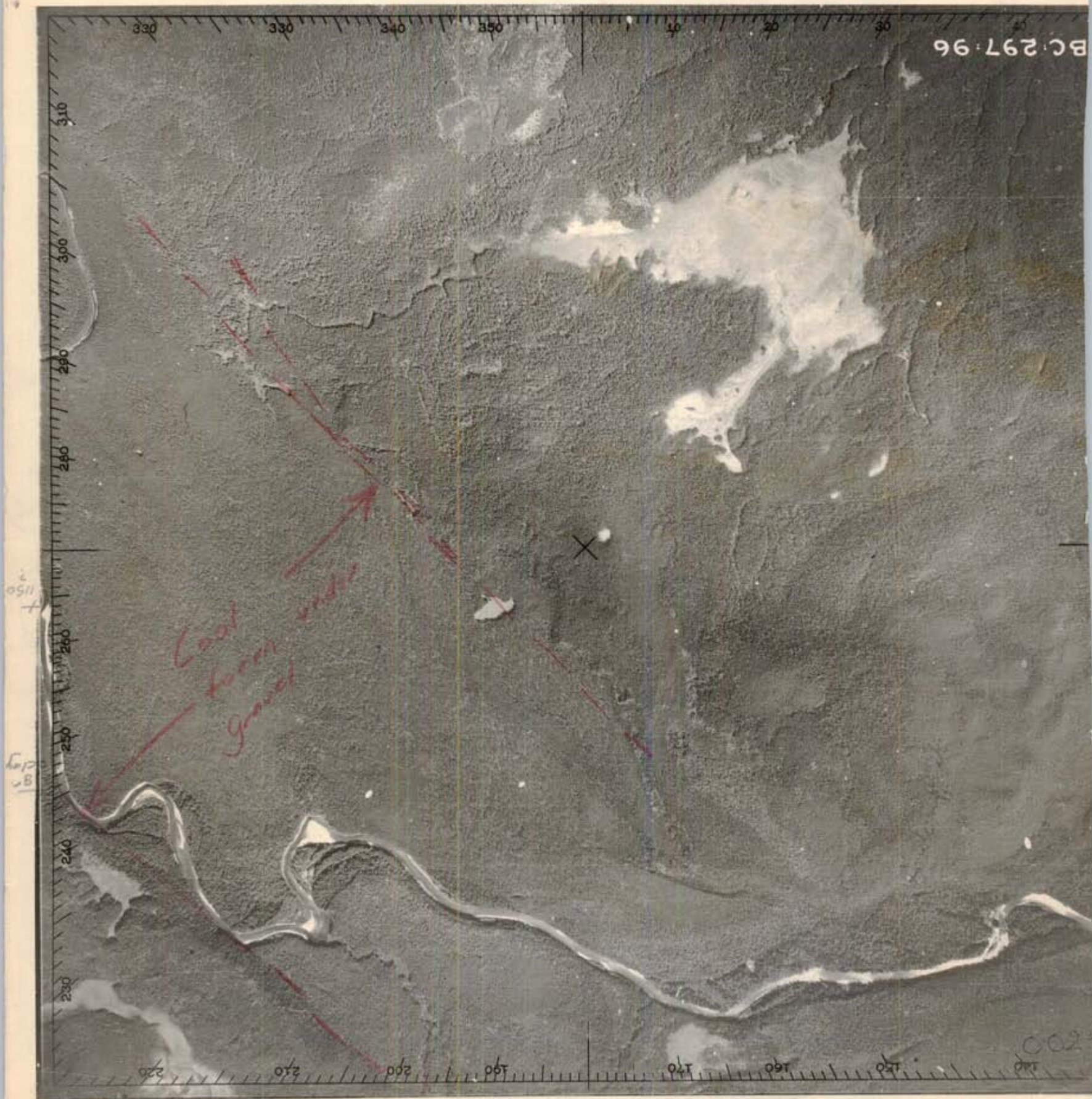




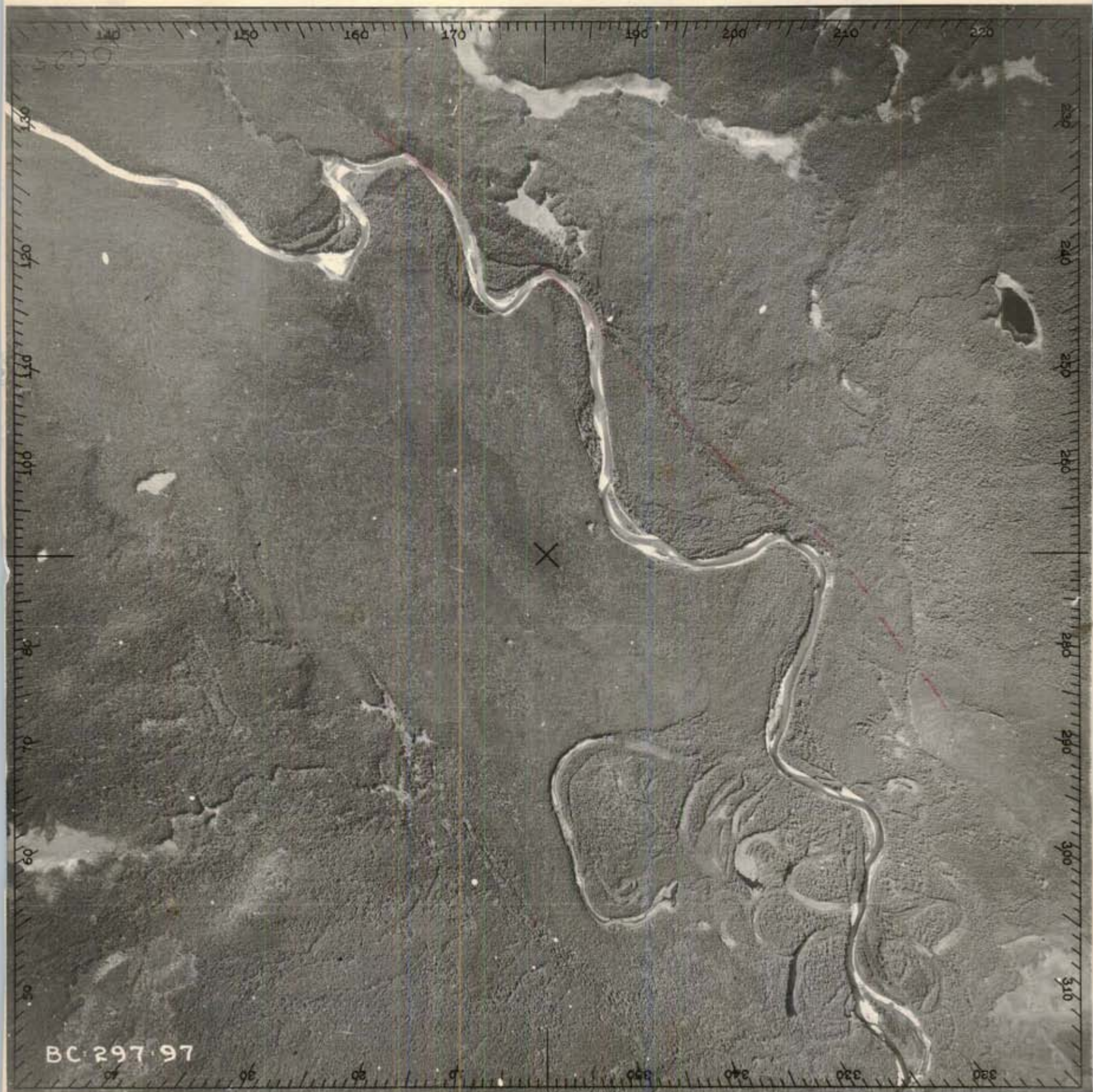
BC 281-26



BC 297-96









BC 294 74



1100C

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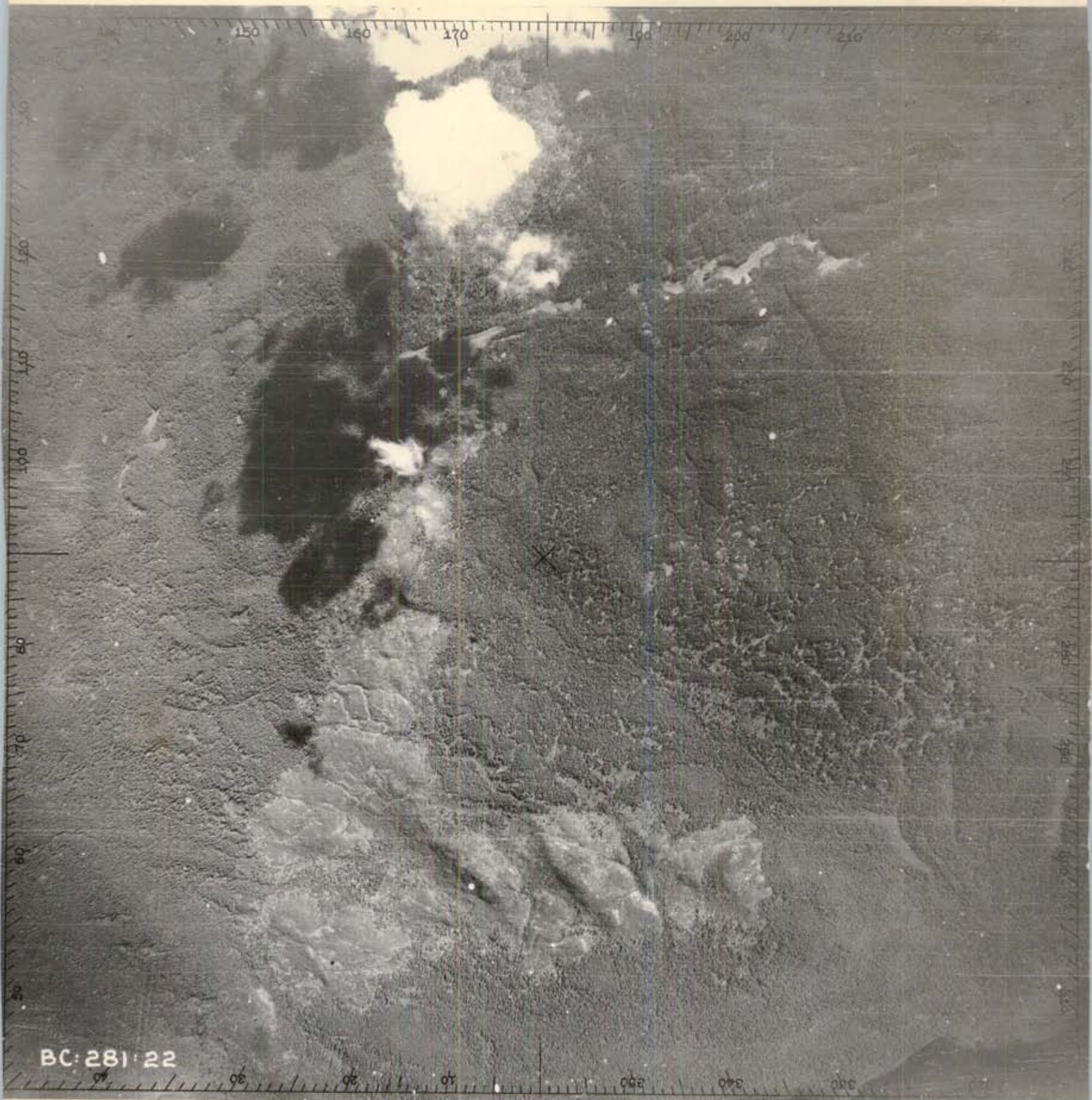
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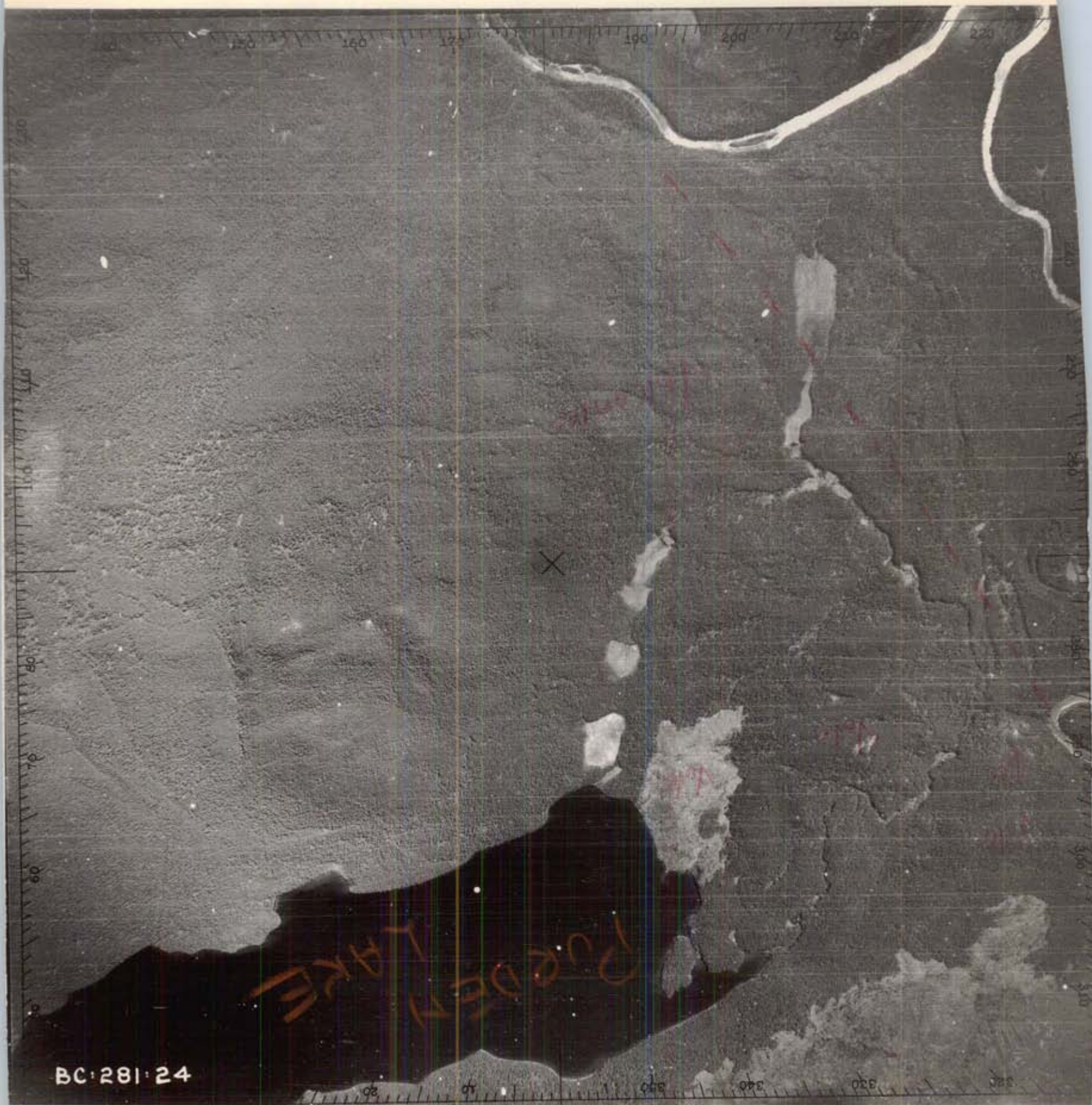
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BC 281.23



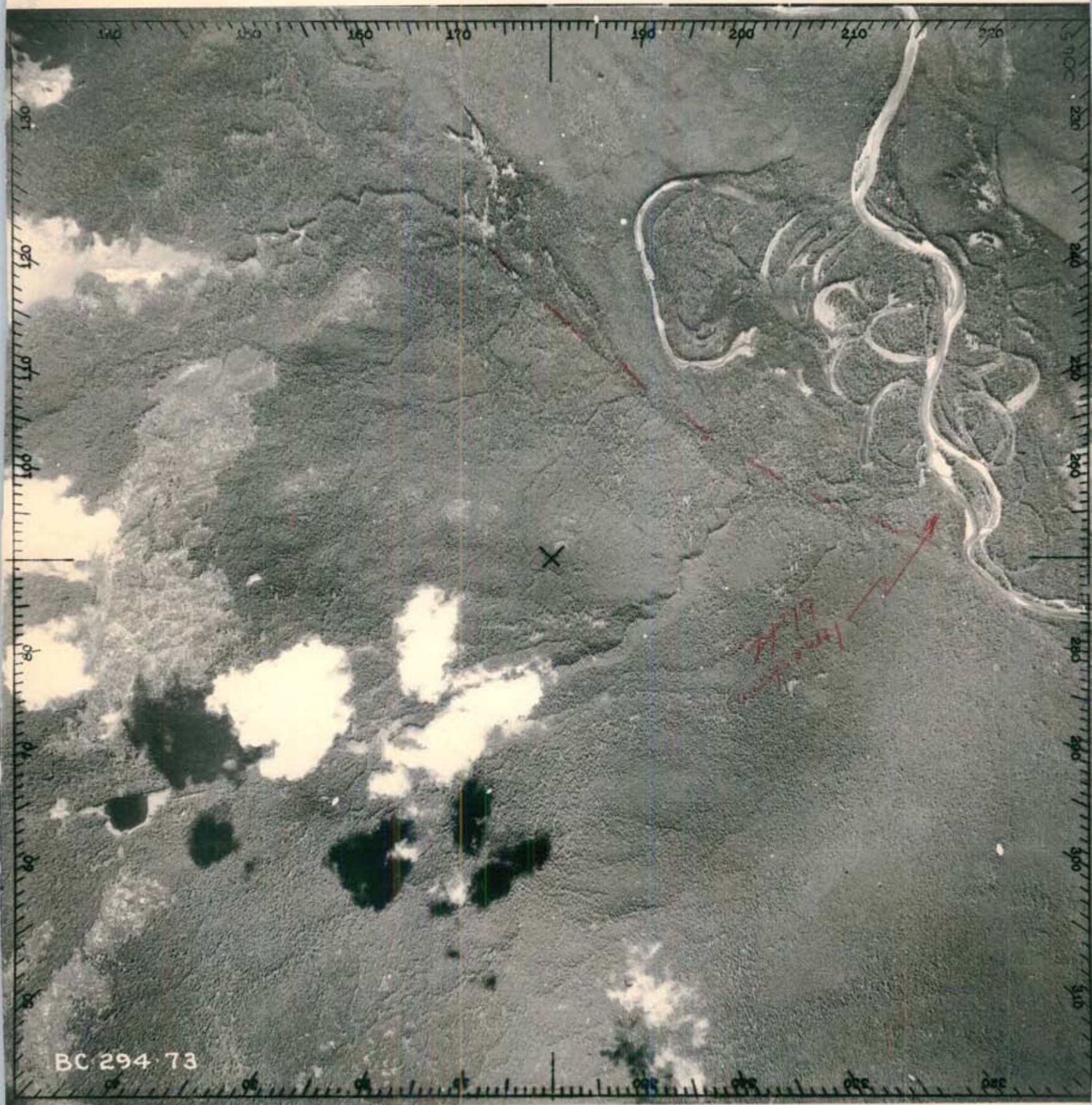


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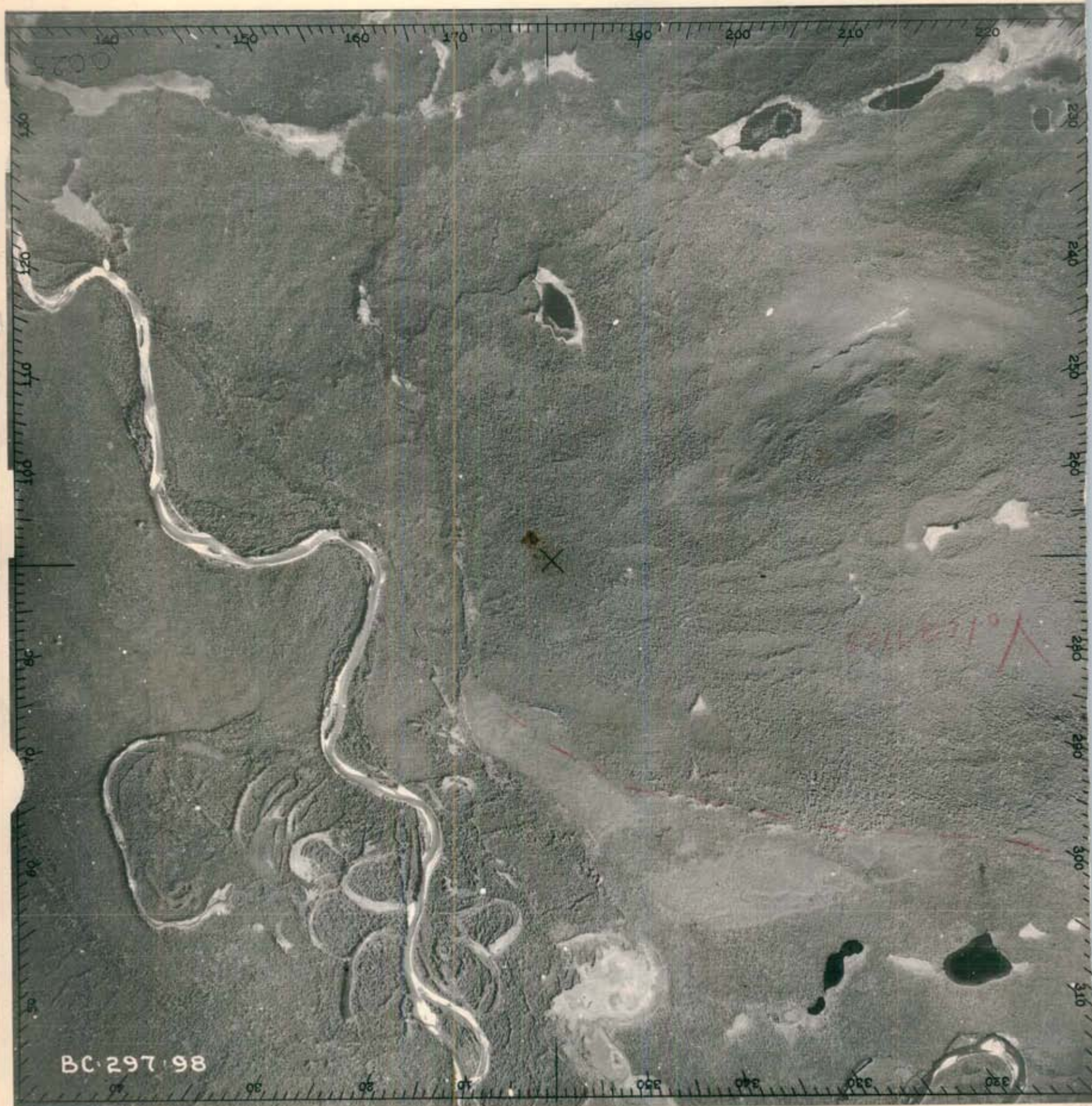






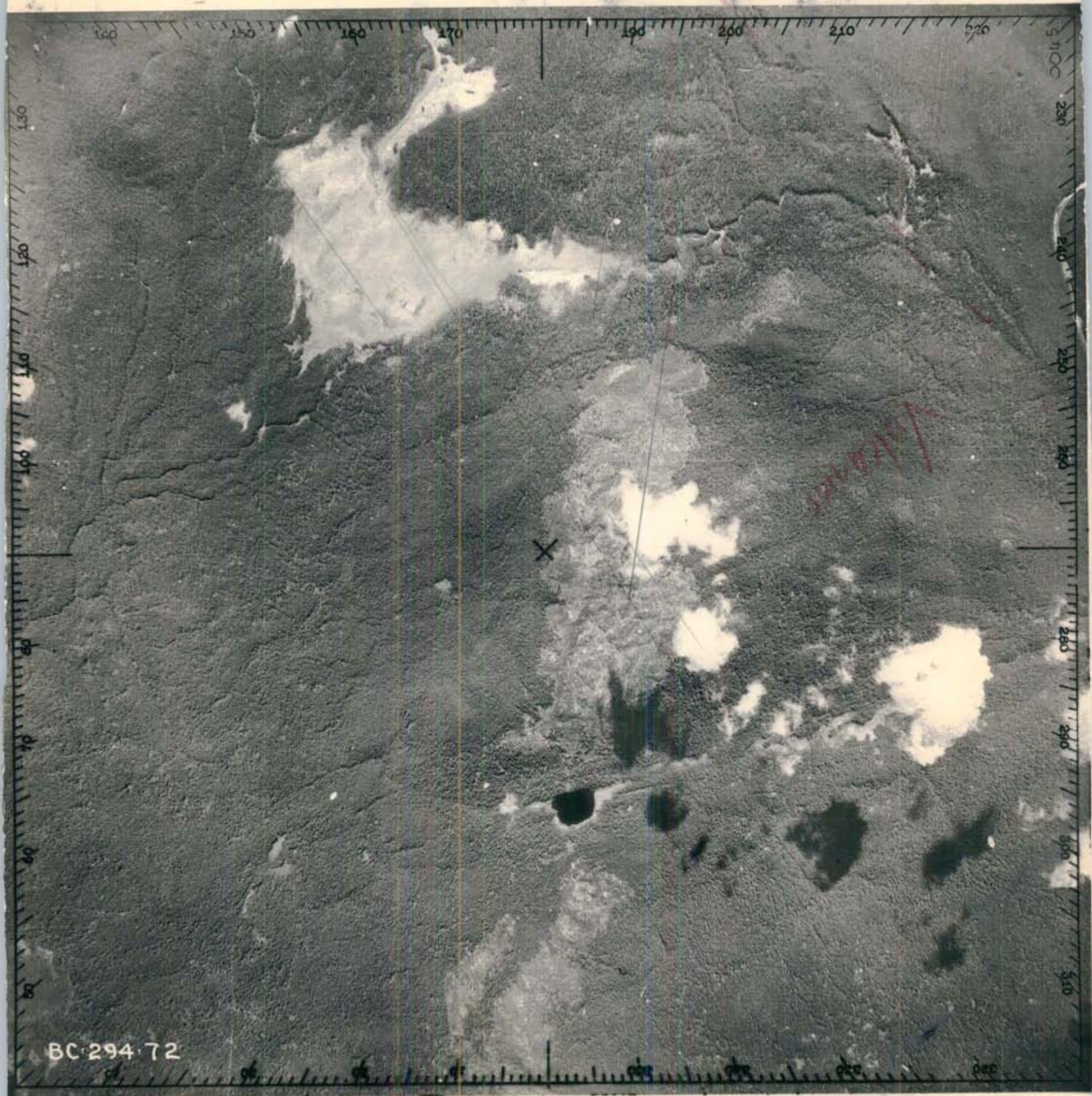






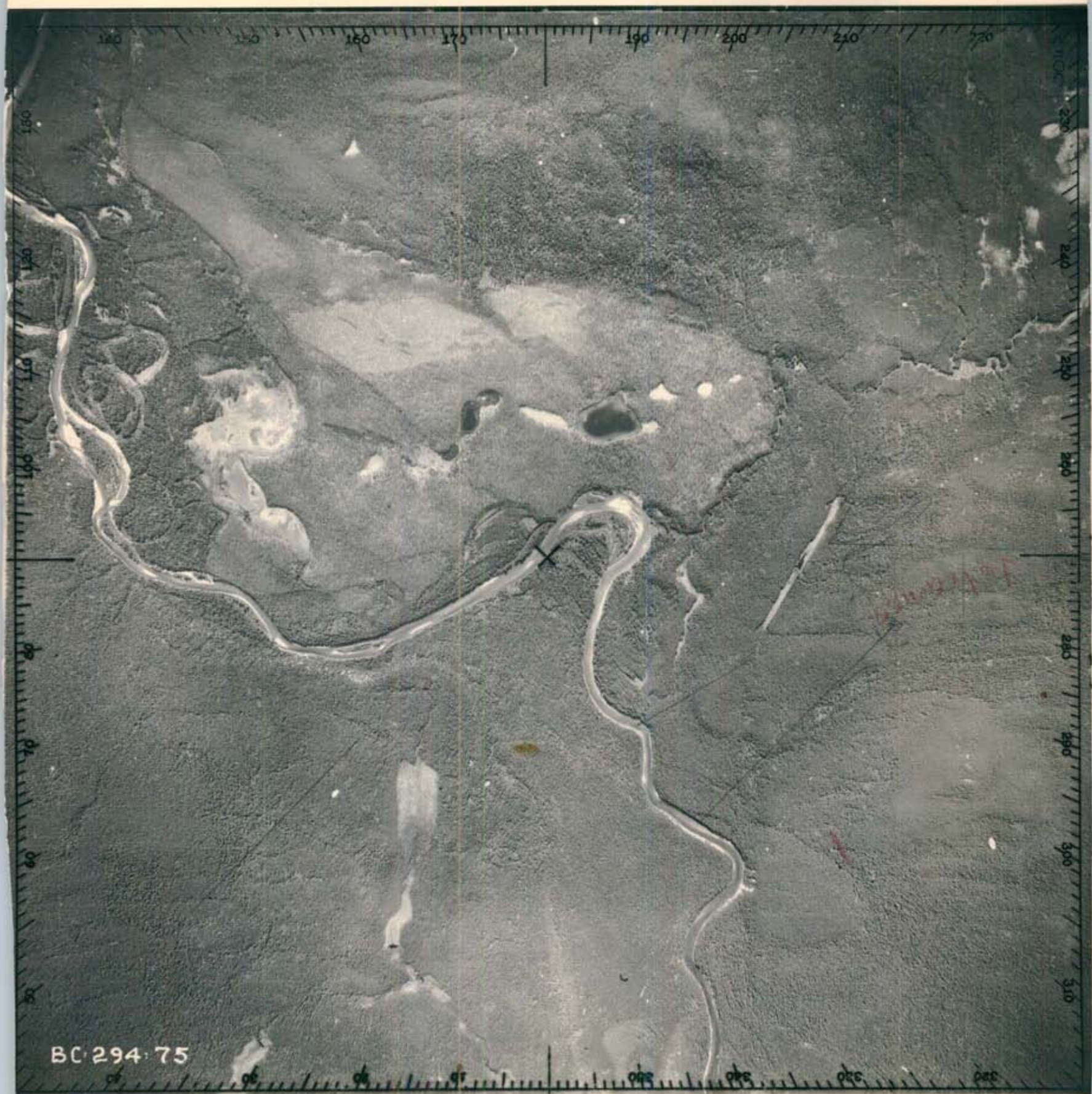
BC 297 98





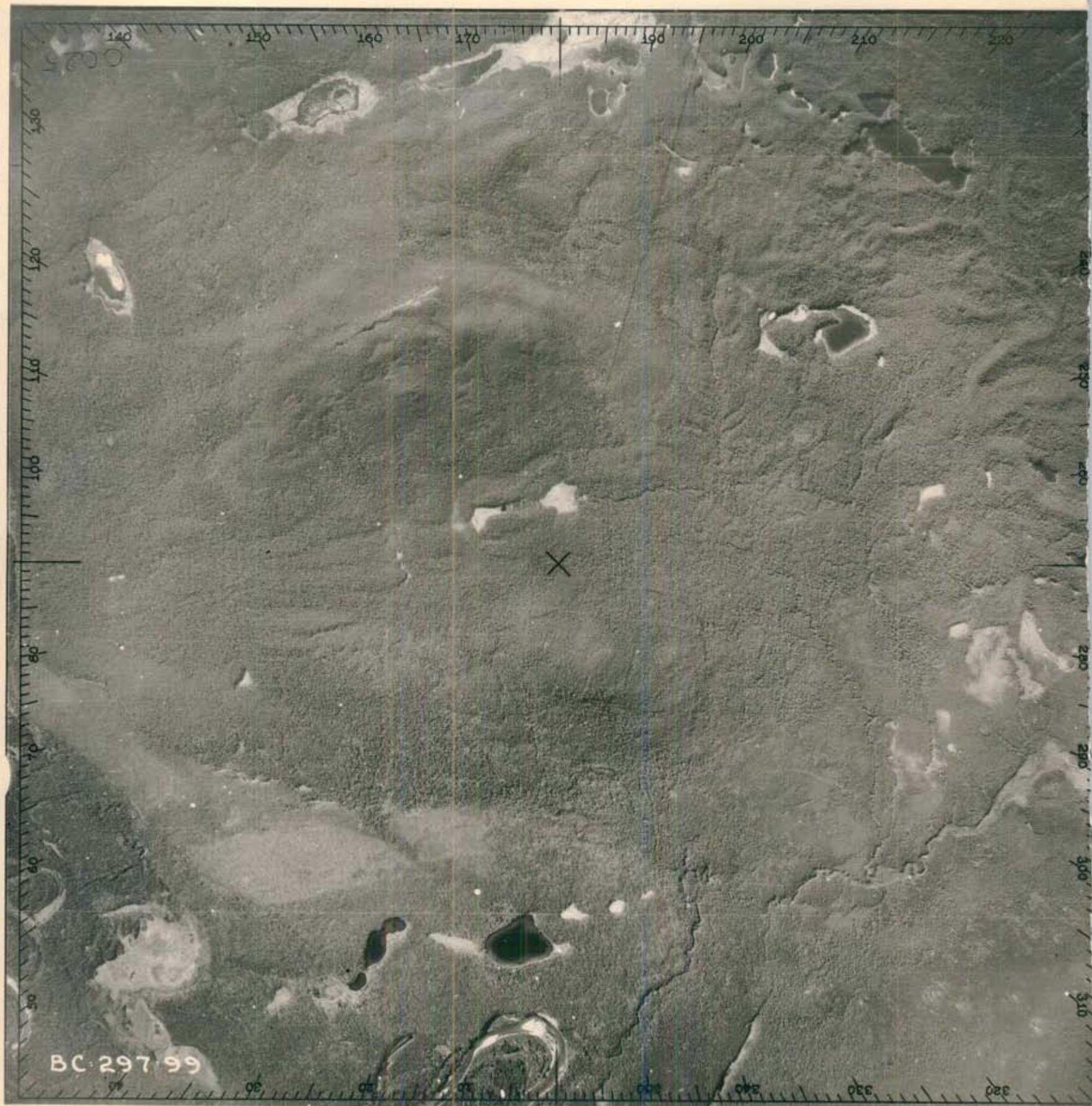
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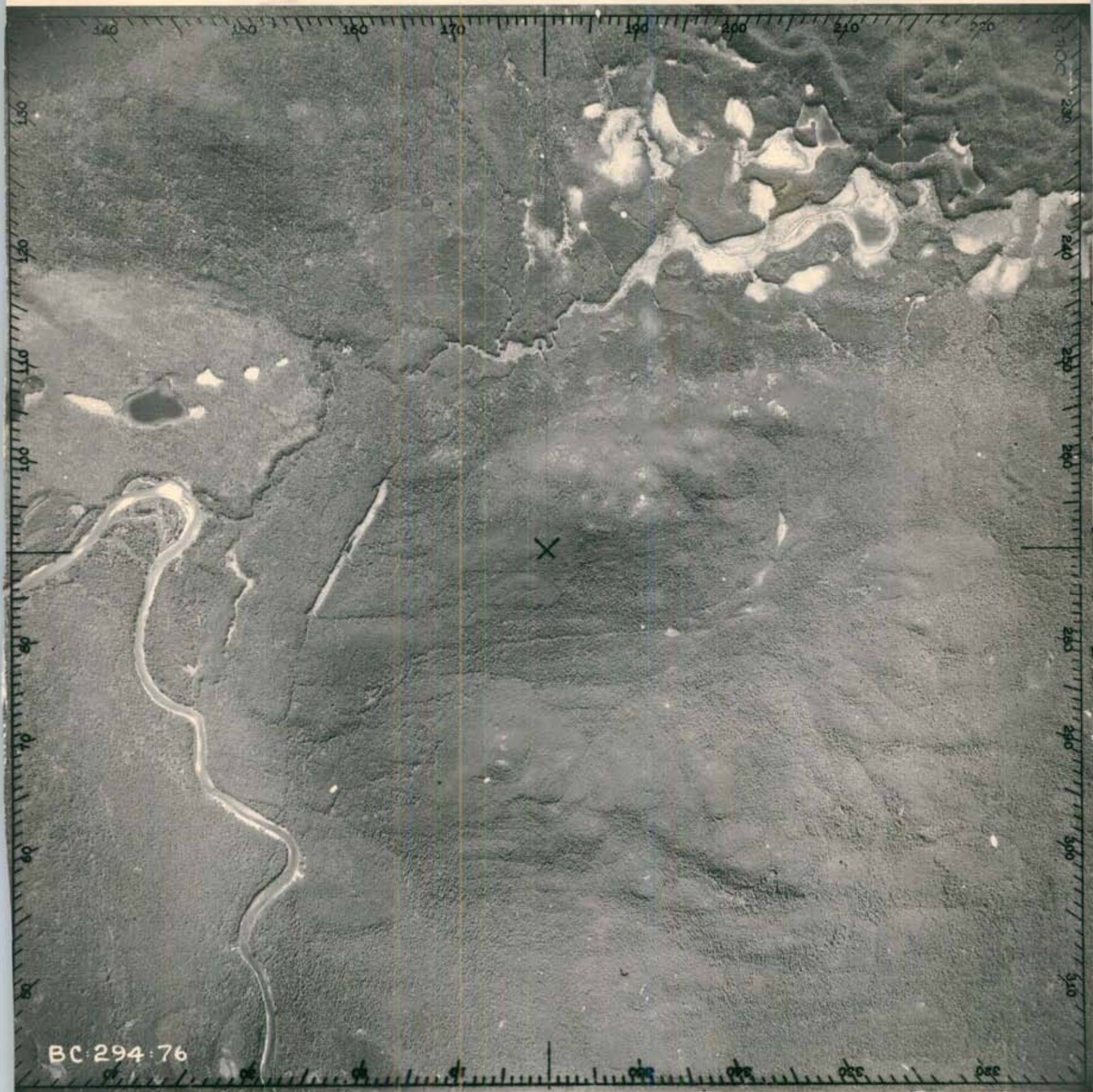
BC 294 75





BC 297 99

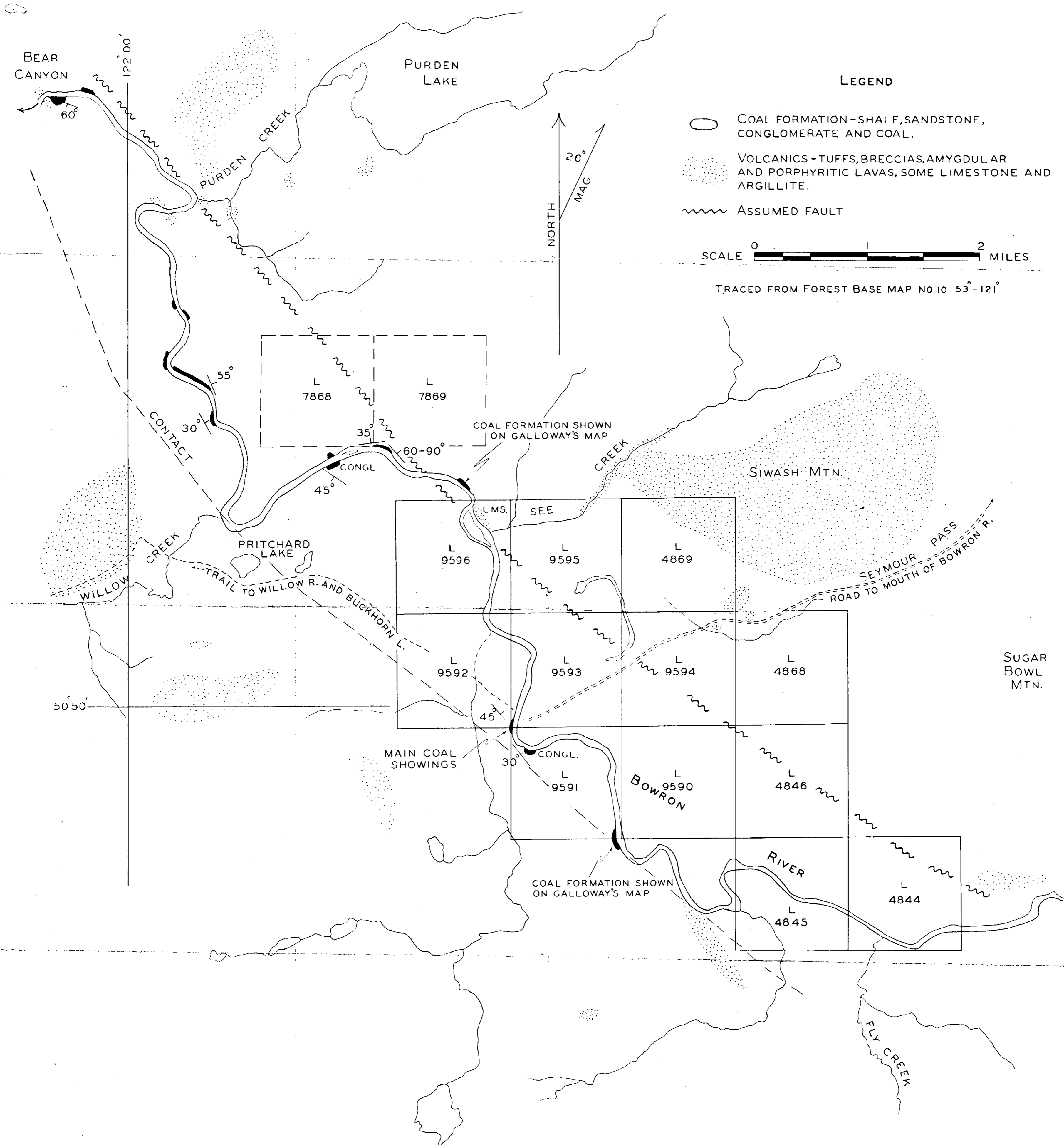




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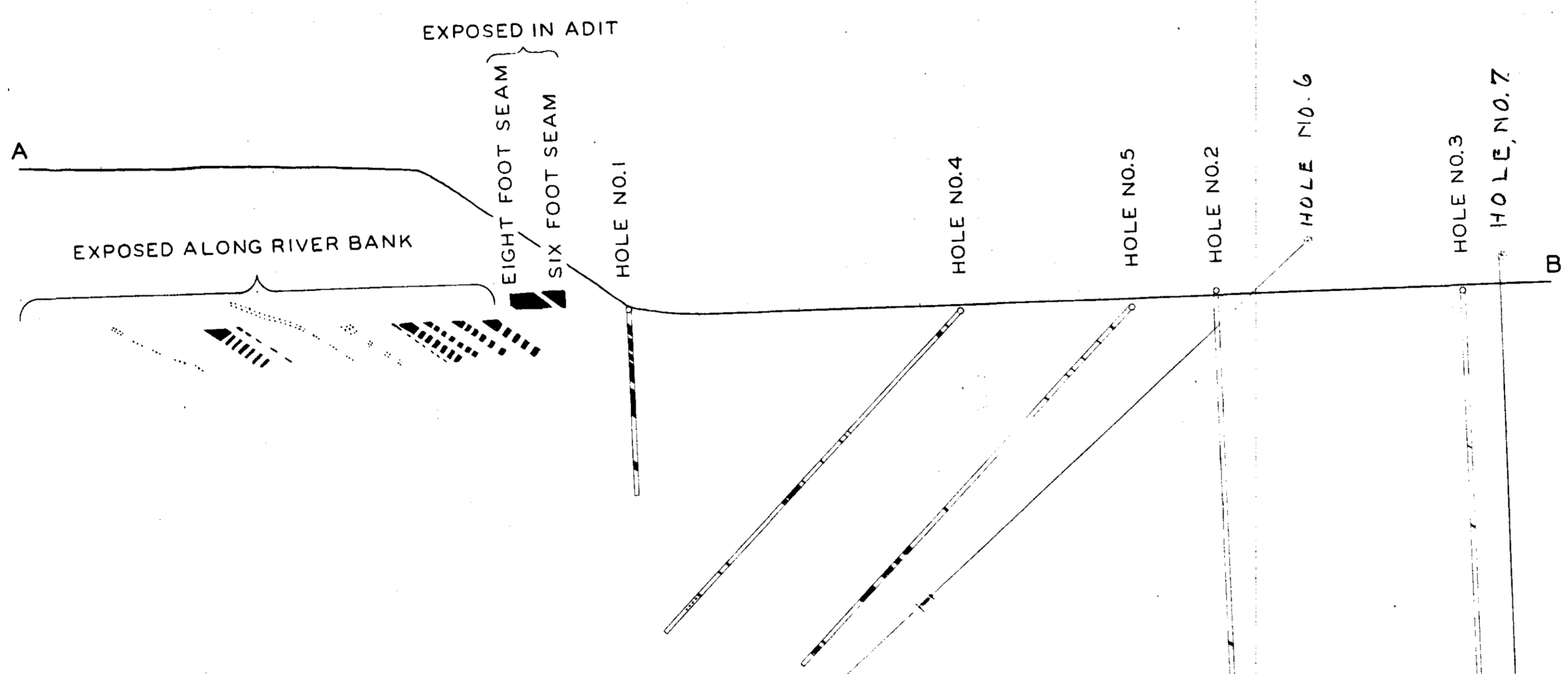
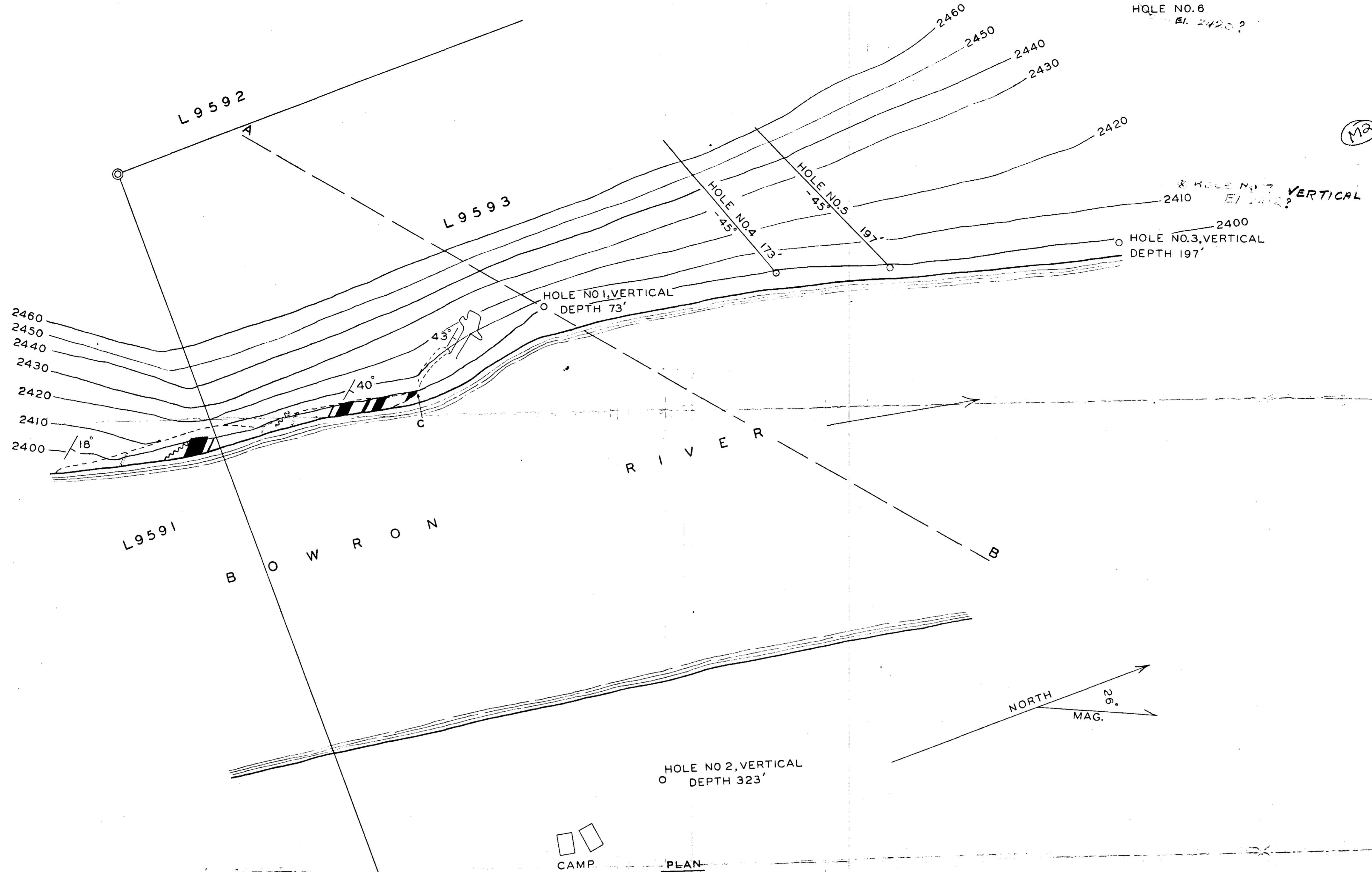
SKETCH MAP OF BOWRON RIVER SHOWING DISTRIBUTION OF COAL FORMATION AND OLDER ROCKS.

BN-BOWRON RIVER 48(2)A.



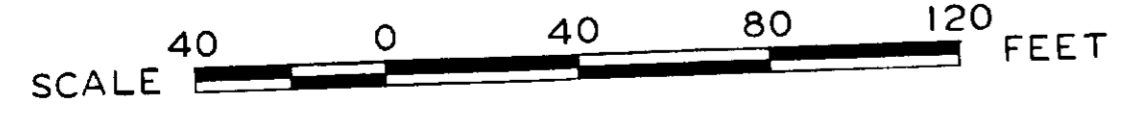
APPROXIMATE POSITION  
HOLE NO. 6  
E. 2420?

(M2)



LEGEND

- COAL
- PEBBLE CONGLOMERATE
- FAULT



ELEVATION ASSUMED TO BE 2400 FEET

SECTION ON A-B LOOKING NORTHWEST

FIG. 19. PLAN AND SECTION OF WORKINGS ON LOT 9593 BOWRON RIVER.  
BW-BOWRON RIVER 41(2)A.



143



TO WEST SEE MAP N° 12 53°-122'

TO EAST SEE MAP N° 11 53°-121'