

VANCOUVER ISLAND PROJECT

Interim Report

Prospecting May - July 1963

673294

August 16/63.

J. C. Stephen

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INTRODUCTION:

Two, two man prospecting parties were employed for the greater part of the period from May into August mapping and prospecting the region west of Strathcona Park on Vancouver Island.

The coast line has received considerable attention and therefore work was confined to the interior areas accessible from logging roads and from various lakes. Early in the season the air photos available in Victoria were examined and the most promising areas selected. Work was therefore confined to these selected areas between Megin Lake to the south and Gold and Twaddle Lakes to the north.

No geological maps of the area were available although maps of adjacent areas and of the coast line were valuable.

Deposits of magnetite and chalcopyrite were expected close to areas occupied by Triassic limestones. A number of such areas have been discovered and prospecting is being carried out along the contacts.

During the same period a number of satellite projects were undertaken. Probably the most important of these was staking of the JAY and BEND claims near Quatsino Sound.

See Fig. VIII Key Map 1" = 4 miles at back of report.

SUMMARY AND CONCLUSIONS:

A number of previously unmapped limestone occurrences have been discovered. Mineralization occurs with each of these but in only one area has mineralization of possible economic value so far been located.

Further detailed exploration of the GAM claim group covering mineralization discovered by E. Wozniak is recommended.

More detailed prospecting of the limestone belt on Nootka Island is recommended. This work however to be delayed until the winter months as vegetation should be somewhat less dense and the low location on the extreme west coast should be relatively favourable.

Possible air reconnaissance of the extensions of the limestones found along the upper Oktwanch and Muchalet River valleys might point up prospecting targets. Access is relatively difficult in these areas.

An attempt should be made to examine the area south of Burman River and east of the upper Megin River where interesting rust zones were spotted from the air.

GAM CLAIM GROUP:

The following steps are proposed:-

- (1) The claim group to be enlarged to take in the logging road and provide protection along structure.
- (2) A grid system to be established to control subsequent work.
- (3) Geological mapping to be done on a scale of 100' to 1 inch.
- (4) Magnetometer surveying to be carried out over the geologically mapped area with relatively high precision.
- (5) EM work with the SE-300 or equivalent equipment on the 'fault' zone and possibly later with other equipment to check the magnetic anomalies.

JAY AND BEND GROUPS:

These claims should be carefully prospected and a series of soil samples and magnetometer readings taken along traverses across the properties. Some further staking may be in order.

NOOTKA ISLAND:

This area deserves more detailed prospecting together with some soil sampling and magnetometer surveying. It is proposed that this work can be done to advantage during the winter when vegetation is less dense. Further mapping will be required to follow the limestone belt.

GENERAL GEOLOGY:

The region is generally similar to the area between Zeballos and Nimpkish Lake is so far as the geology is concerned. Ages of the various formations prospected have not been definitely established, but it seems probable that most of the widespread basic volcanics are of the Karmutsen series while the limestones and some related tuffs and argillites are part of the Quatsino formation. Only in the Megin Lake area were large areas of volcanics encountered which are thought to be of the Bonanza series. In the Muchalat and Upana valleys a series of breccias, some apparently of sedimentary origin are thought to be younger than the limestones, but no definite relationship has been established.

The writer has used a very crude, basic, assumption in searching for areas of Quatsino limestone. This assumes that the cross sectional structure of western Vancouver Island, particularly in the Strathcona Park region, consists essentially of a broad anticline plunging

northwest with its axis passing through the area of the Western Mines showings. In the area of this anticline the formations of Permian age are exposed. This is followed to the west by a rather broad syncline and on the extreme west coast of the island Quatsino limestone is overlain by Bonanza volcanics. Hence, it is essential that the Quatsino horizon should appear somewhere between the west coast and the west side of Strathcona Park to represent the east limb of the synclinal structure.

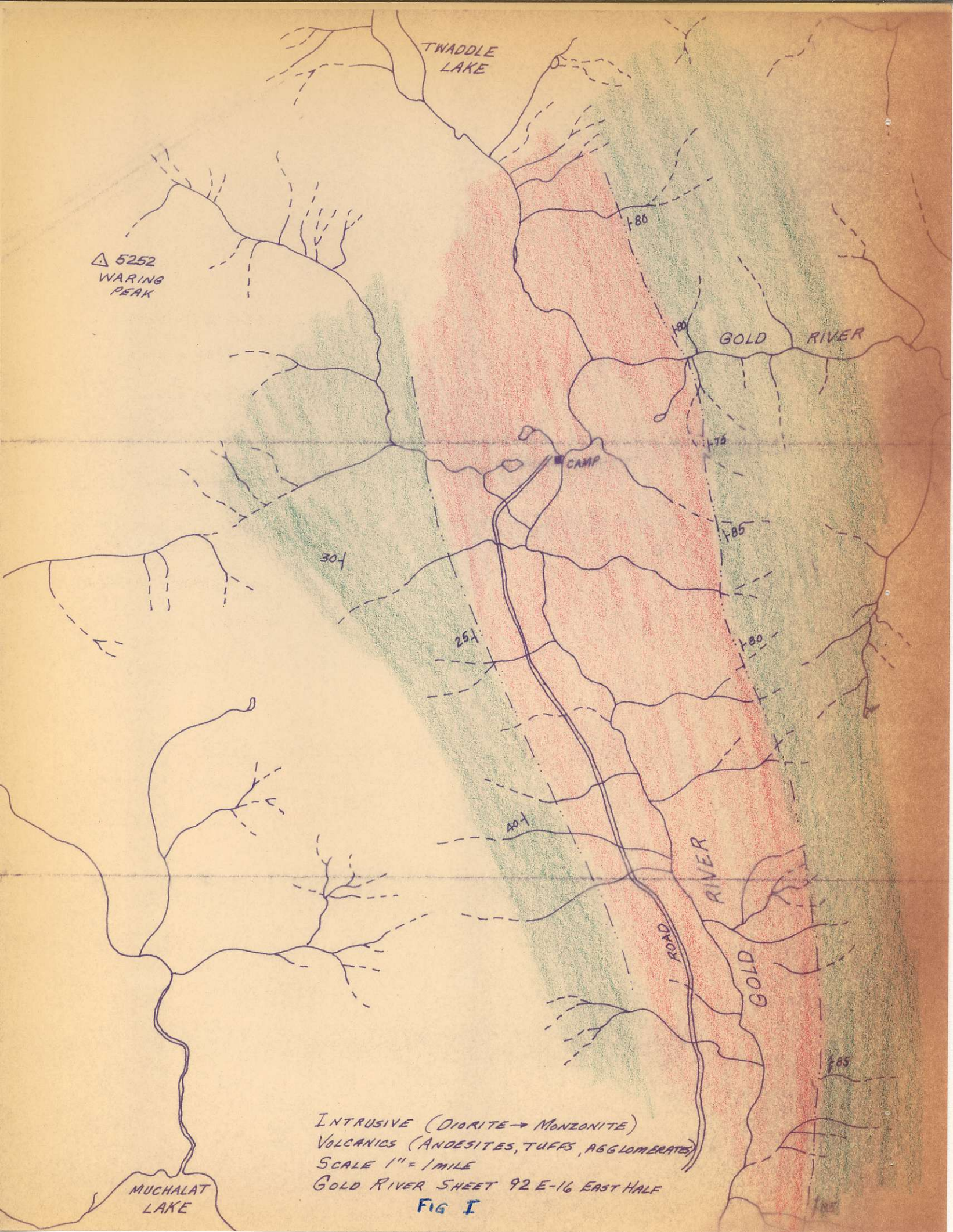
In general the above assumption appears to be correct, but the detailed structure is much more complicated than this would suggest.

No attempt is being made to map the whole area. Only those regions of possible economic interest are receiving close attention and even then prospecting methods often do not produce certain information that is important in mapping the various structures.

Numerous intrusive bodies cut the volcanics and sediments. Composition of these intrusives varies widely and appears to be strongly influenced by contamination along certain contacts. Basic coarse grained varieties of the grey diorite on Nootka Island contain considerable scattered magnetite and produce broad ground level anomalies in the order of 6,000 gammas.

PROSPECTING RESULTS:

The following is a summary of results for each area prospected together with a sketch of the geology. It might be noted that some of this may not be as detailed or as accurate as it should be due to the loss of the bulk of the writers field notes in a canoe mishap on the Magin River.



TWADDLE
LAKE

△ 5252
WARING
PEAK

GOLD RIVER

CAMP

300

250

200

80

80

75

85

80

RIVER

ROAD

GOLD

85

MUCHALAT
LAKE

INTRUSIVE (DIORITE → MONZONITE)
VOLCANICS (ANDESITES, TUFFS, AGGLOMERATES)
SCALE 1" = 1 MILE
GOLD RIVER SHEET 92 E-16 EAST HALF

FIG I

GOLD RIVER VALLEY:

E. Wozniak and R. McDaniel covered this valley in some detail. The valley is occupied by granitic intrusives with a steep easterly contact running along the ridge east of Gold River and a relatively flat contact along the ridges west of Gold River. The east contact is relatively sharp and showed small amounts of mineralization. The west contact is somewhat gradational with considerable contamination of the intrusive from the basic volcanics. This area is essentially barren. No limestone was encountered and the area seems to have received all the attention it merits.



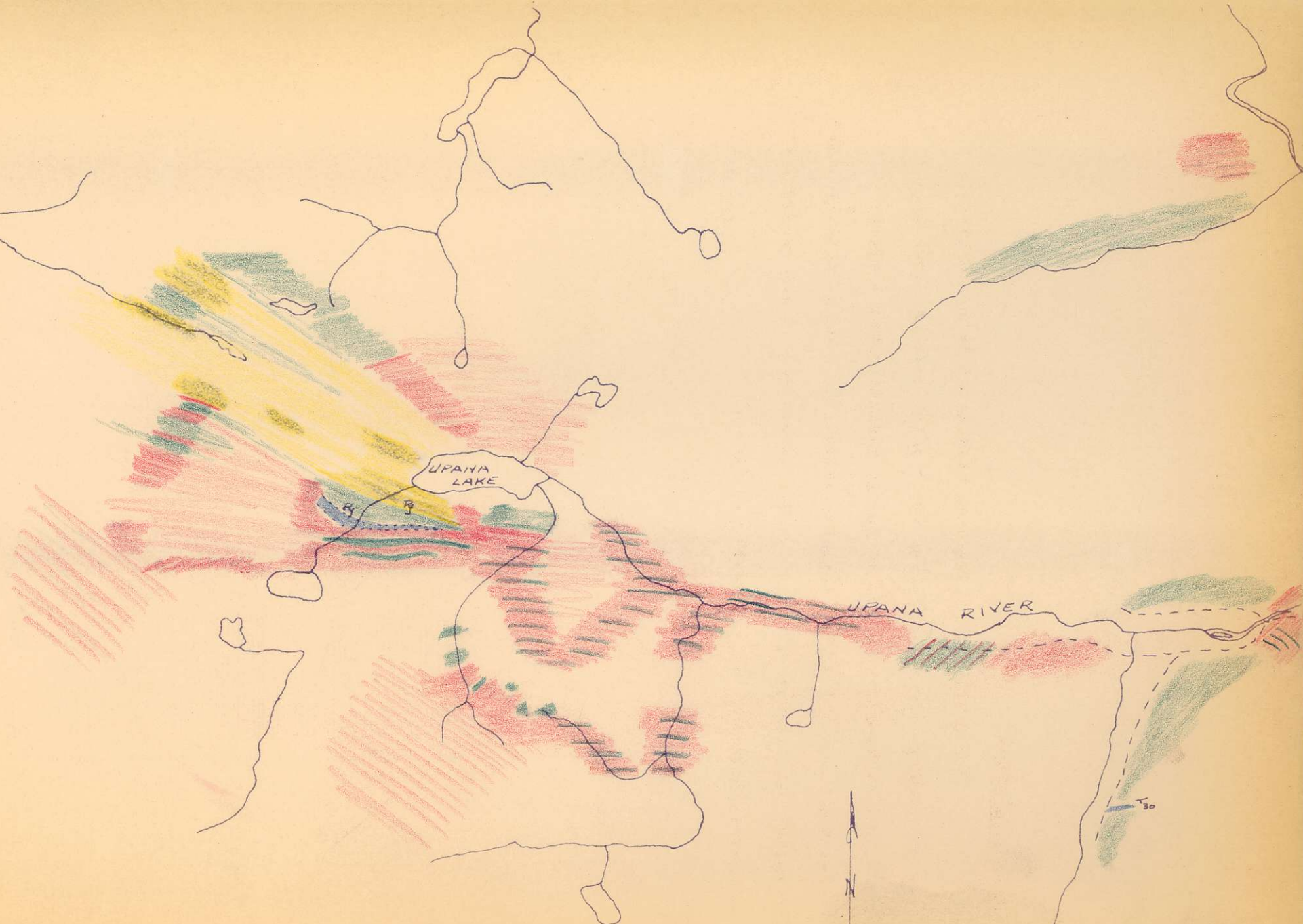
FIG. II
 MUCHALAT RIVER AREA
 JUNE 10 1963
 1:50,000

MUCHALAT RIVER VALLEY:

This area includes Muchalat Lake, the north and south branches of the Muchalat River and the upper few miles of the Oktwanch River. As indicated on figure II a series of sediments was encountered here which includes a rather persistent bed of limestone. Age of this structure is not known and may possibly be Triassic. Showings of pyrite, pyrrhotite, very minor chalcopyrite, and small ^{lenses} lines of magnetite were found. A rather sharp granite, volcanic, limestone contact follows the ridge west of the Upper Oktwanch River. This contact seems favourable and has not been completely explored. Occurrences of similar limestone were found both north and south of the north branch of the Muchalat River. These areas however are even less well prospected due to difficulties of access.

Many rusty outcrop areas were observed in this area, but none were found to carry mineralization of any importance. Aerial reconnaissance and probably air magnetometer work would probably assist in outlining the structure more fully and might indicate better prospecting targets.

FIG III



UPANA LAKE

1:50,000 1963

ge.

UPANA LAKE AREA:

The sedimentary structure here seems to be related to that in the Muchalat River Valley but has not actually been traced across the intervening height of land. Attention was centered on a limestone lens and on the contact between the granite and pyritized volcanics and sediments. Although the structures seemed favourable no mineralization of any interest was found.

FIG IV

EWART LAKE

LAKE

CRAWFISH

Rare Limestone floats.

M float

90
M 74

River
140
FLB

84

140

River

5
160



NOOTKA ISLAND

1:50,000

1963

NOOTKA ISLAND:

A number of zones of mineralization were encountered on Nootka Island including pyrrhotite, pyrite and magnetite. Those north and north east of Crawfish Lake appear to have attracted relatively too much attention to this area. The granite-limestone contact south of Crawfish Lake received little attention until the last day or two of our stay. Although no commercial mineralization was found, zones of massive pyrrhotite were encountered. It is felt that this contact should be further explored. However, due to heavy overburden and growth, emphasis might have to be mainly on soil sampling and magnetometer surveys. Work can be conveniently based on the two larger lakes.

MEGIN LAKE AREA

1:50,000

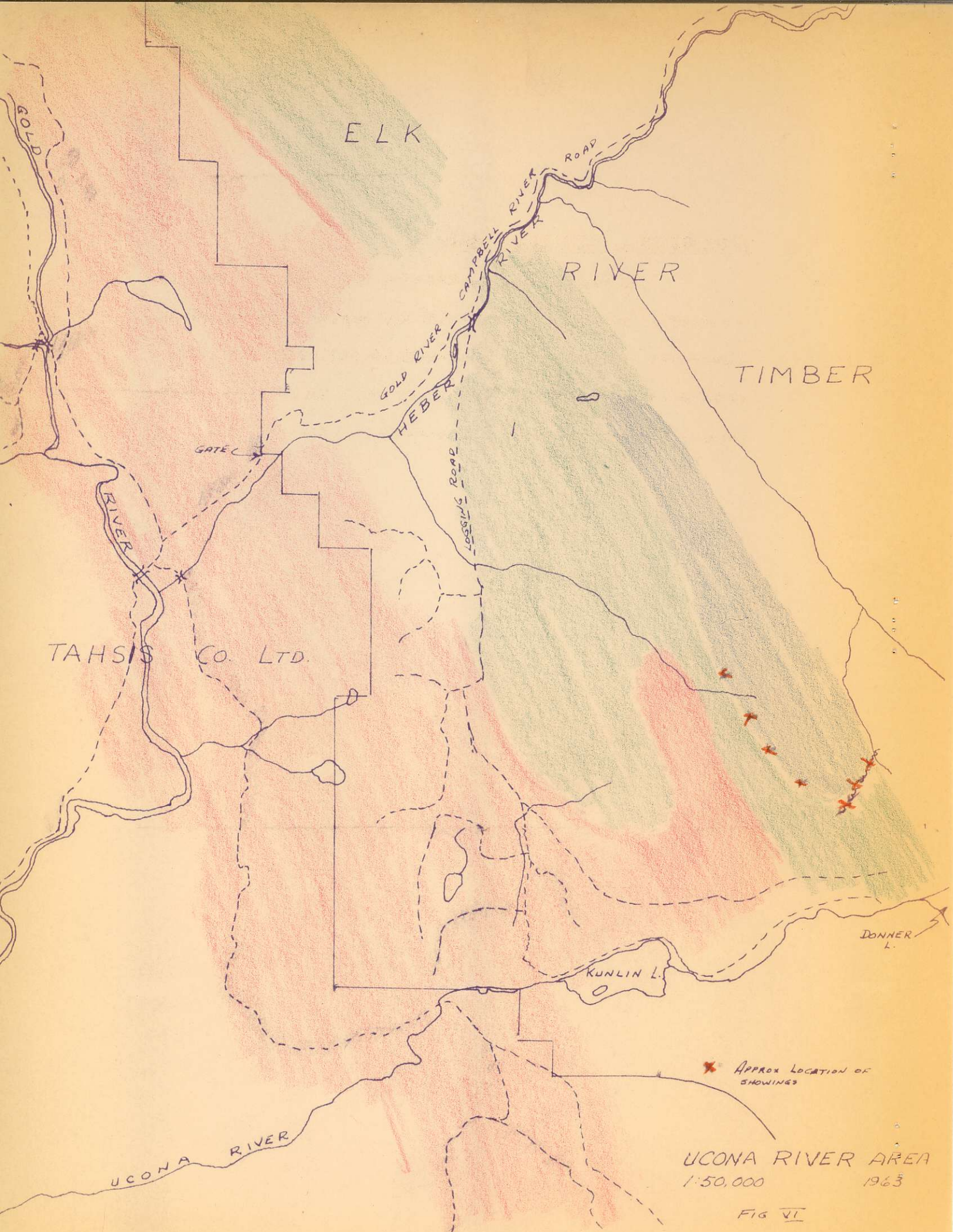
1963

FIG. V



MEGIN LAKE:

This area proved remarkable for its lack of mineralization. Only some very small occurrences of scattered pyrite were encountered. The area is occupied mainly by grey granite and by massive granitized volcanics. Although a number of fault and shear zones were found none showed mineralization. Air reconnaissance of the area was prevented by bad weather and penetration of the upper Megin River Valley was first delayed by a canoe accident and then prevented by rapidly falling water levels in the river. No float was found so far as work proceeded and no areas of rusty outcrop could be seen from the few heights or points of vantage attained. Access by packing is virtually impossible without trail cutting. Those trails shown on the 1:50,000 scale maps do not in fact exist.



ELK

RIVER

TIMBER

TAHSIS CO. LTD.

KUNLIN L.

DONNER L.

★ Approx Location of Showings

UCONA RIVER AREA
1:50,000 1963

FIG VI

UCONA RIVER - WHITE RIDGE AREA:

E. Wozniak and R. McDaniel are presently staking a number of showings of magnetite and chalcopyrite which they discovered in this area. A program as outlined above is presently planned on this GAM group and a transit is being sent in to the property for the start of line cutting.

FIG VII

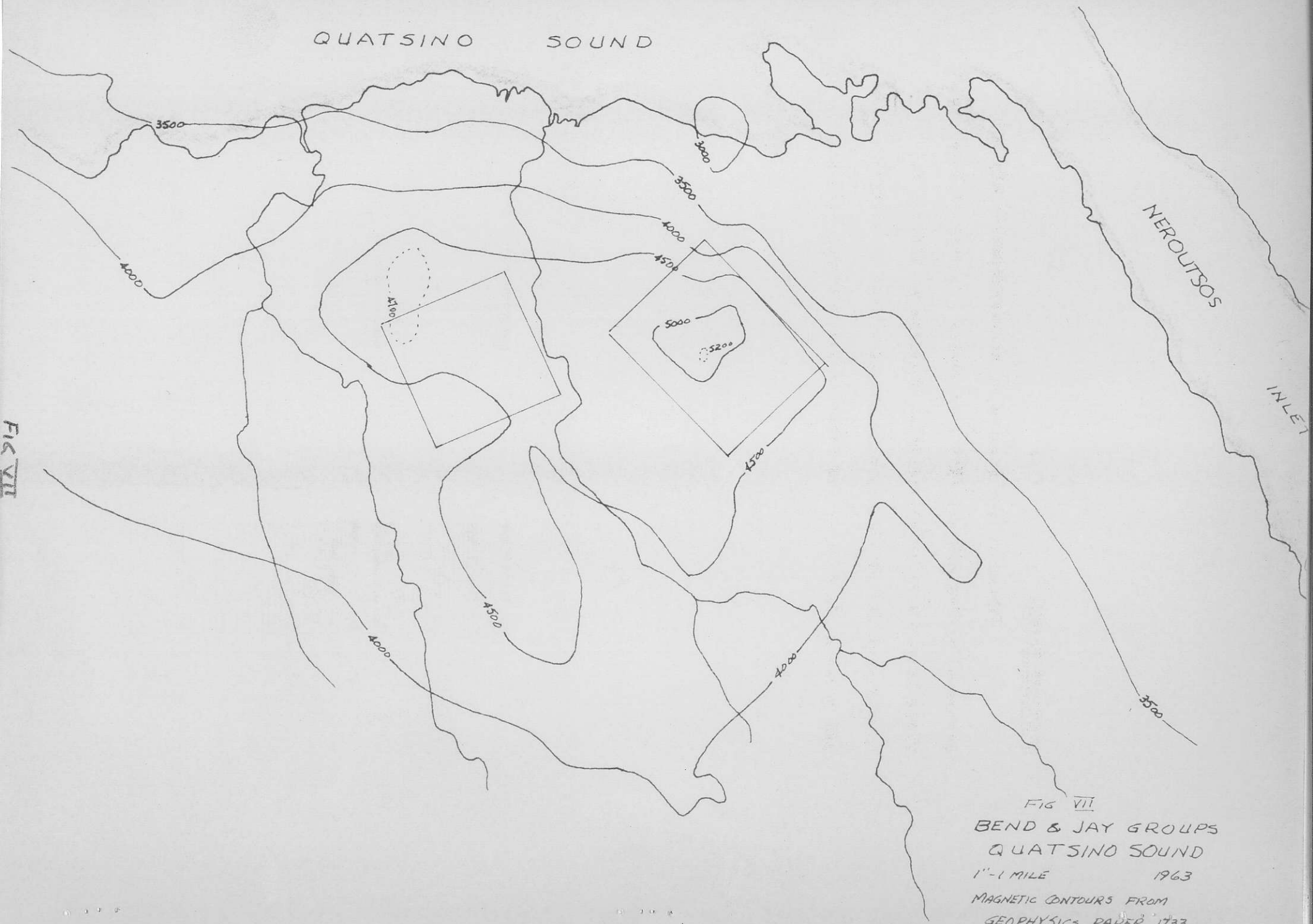
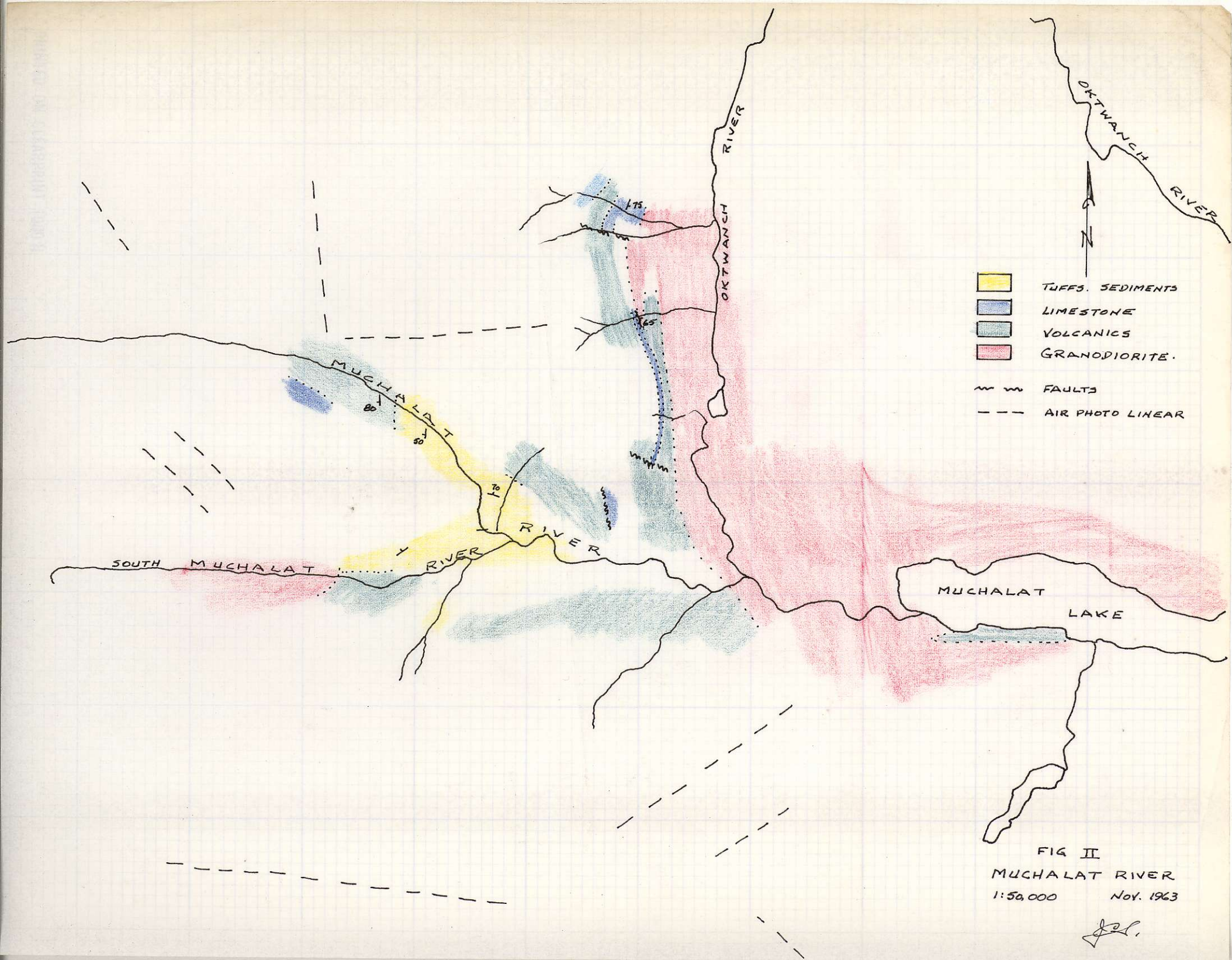


FIG VII
BEND & JAY GROUPS
QUATSINO SOUND
1" = 1 MILE 1963
MAGNETIC CONTOURS FROM
GEOPHYSICS PAPER 1733

QUATSINO SOUND:

Following publication of an aeromagnetic map two groups of claims JAY and BEND were staked as shown on Fig. vii. These have yet to be prospected. Outcrops of diorite were encountered during staking with an occurrence of magnetite and pyrite. No outcrop was found on the westerly group.

G. Stepten
Aug 16 1963



- TUFFS, SEDIMENTS
- LIMESTONE
- VOLCANICS
- GRANODIORITE.
- FAULTS
- AIR PHOTO LINEAR

FIG II
 MUCHALAT RIVER
 1:50,000 Nov. 1963

J.P.

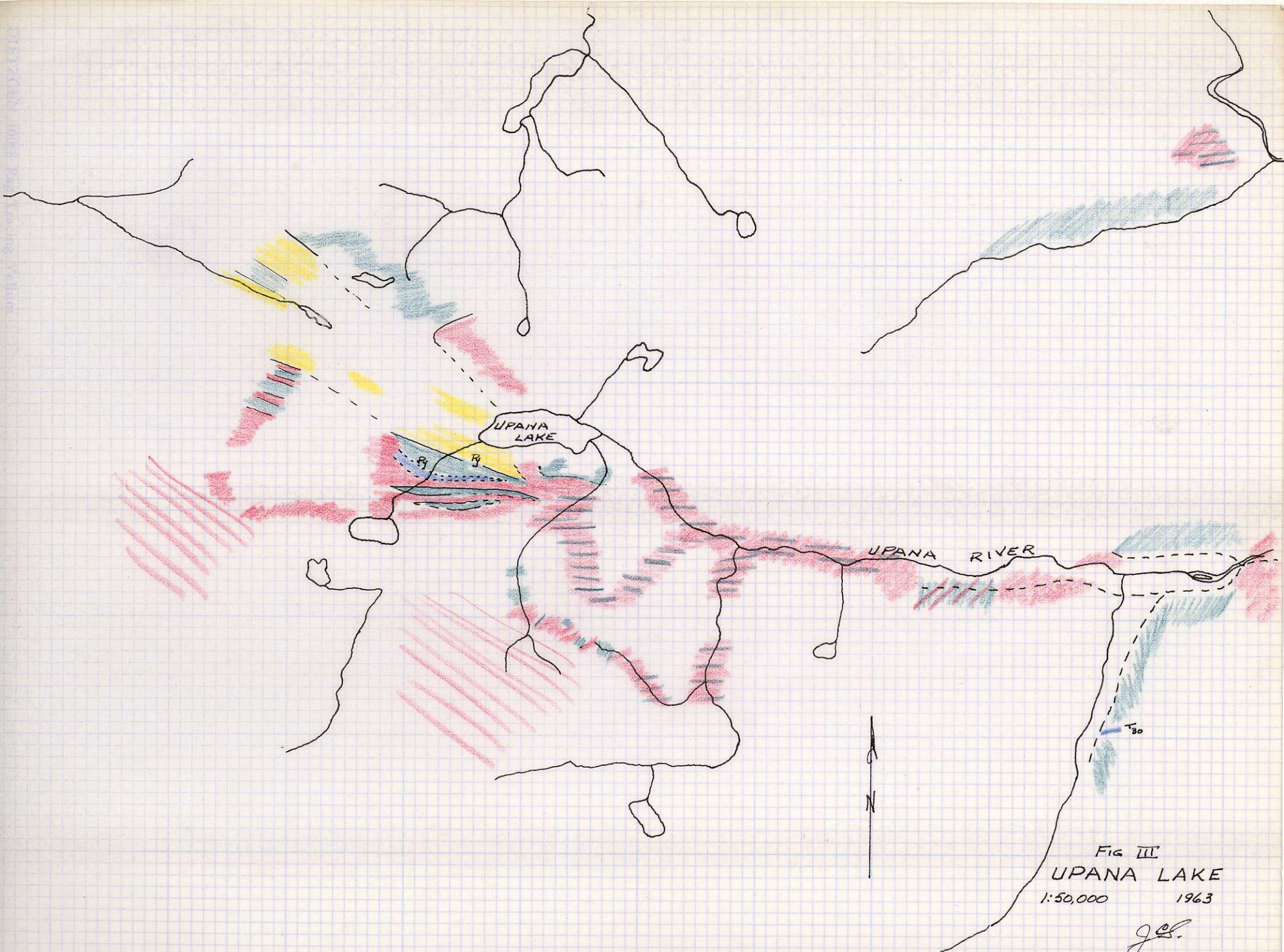


FIG III
UPANA LAKE
1:50,000 1963

J.C.

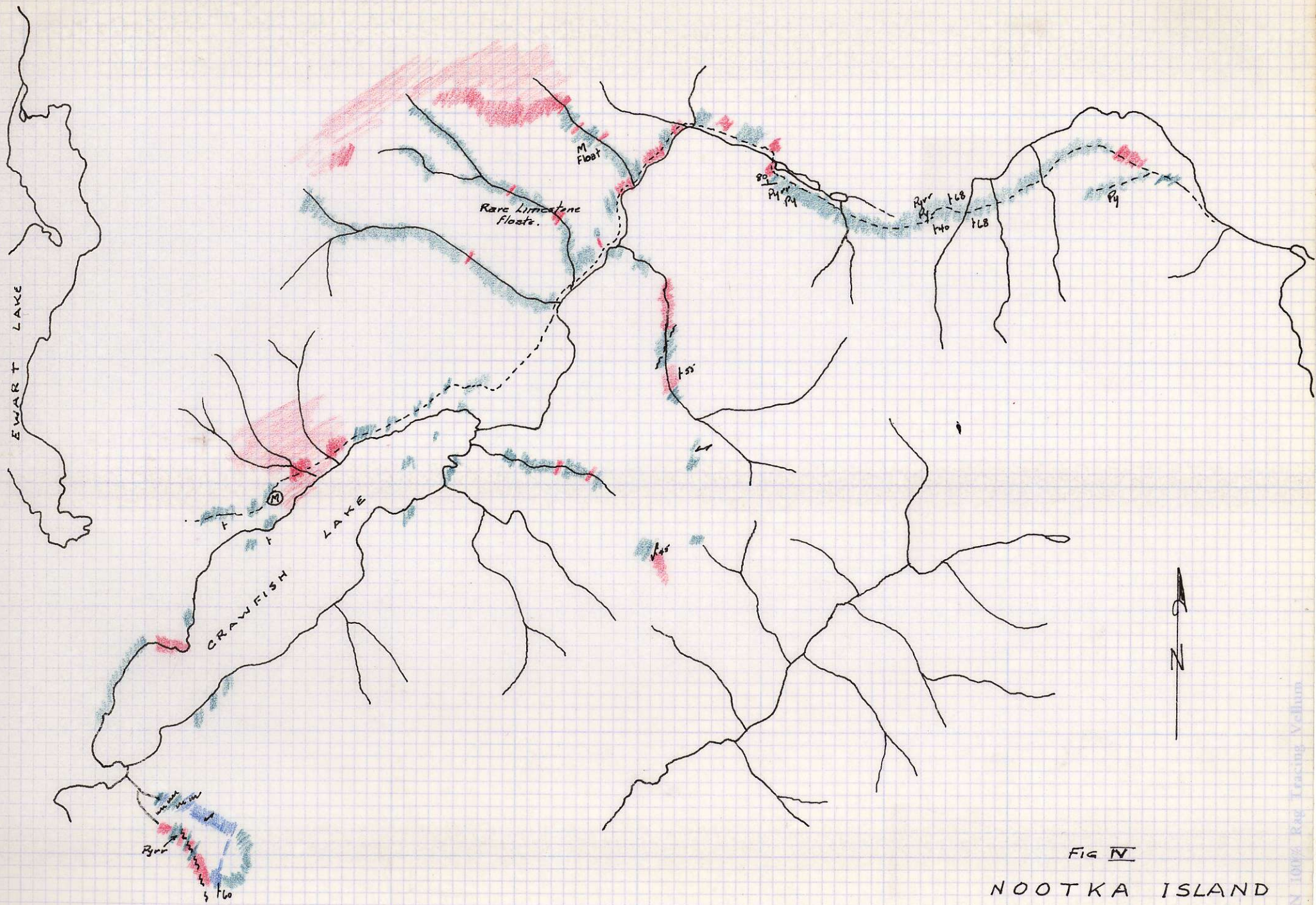
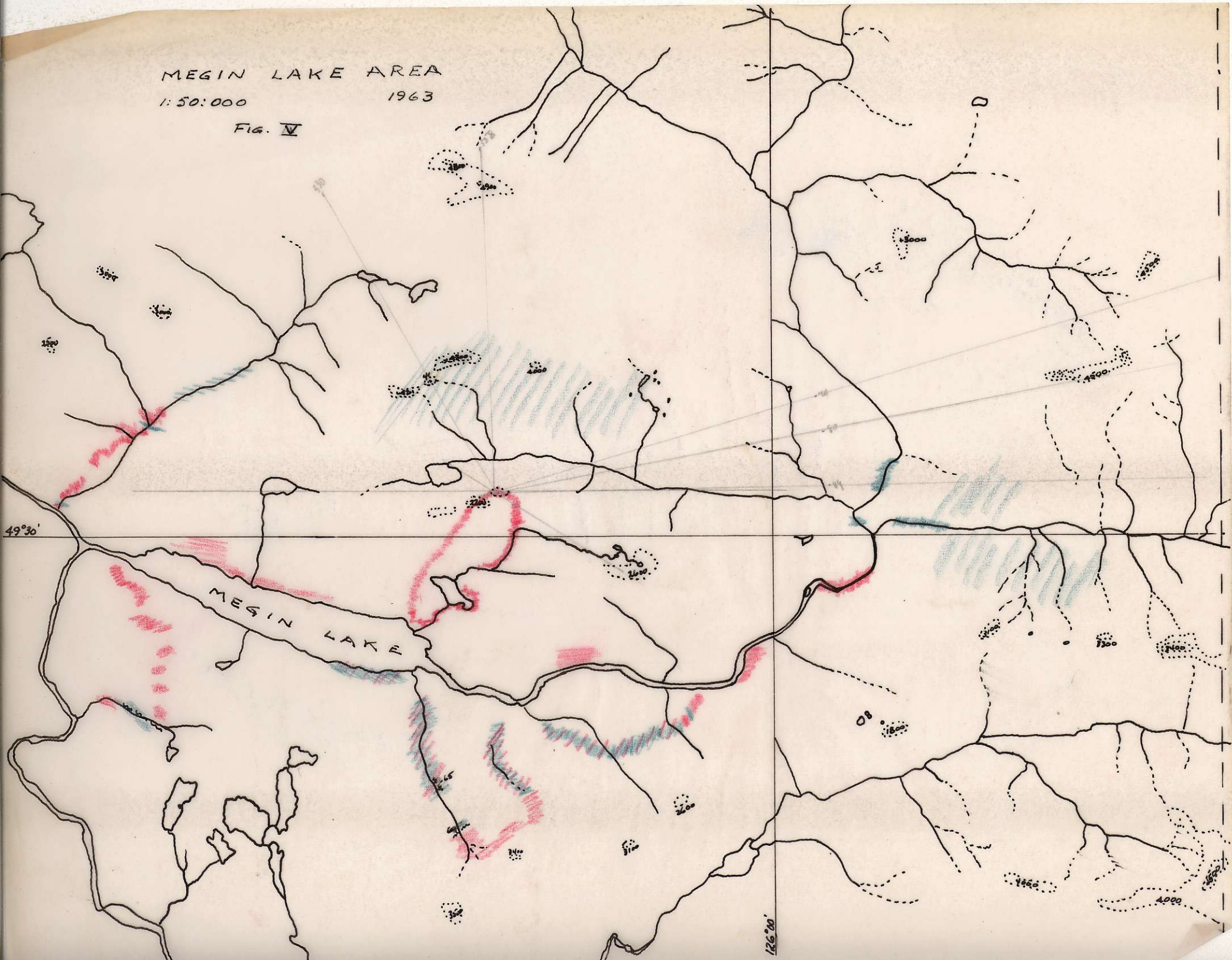


FIG IV
 NOOTKA ISLAND
 1:50,000 1963

J.L.

MEGIN LAKE AREA
1:50:000 1963

FIG. V



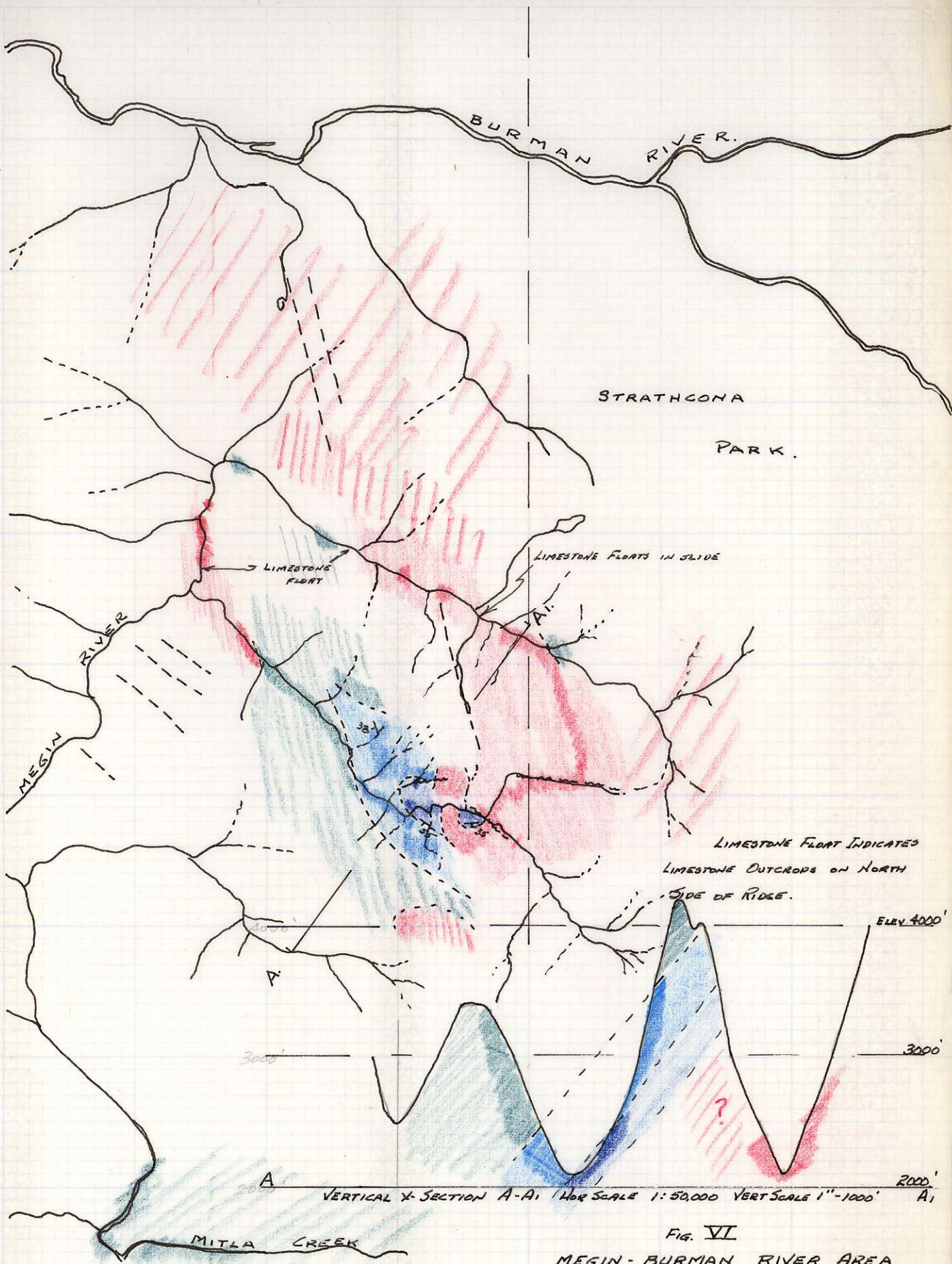
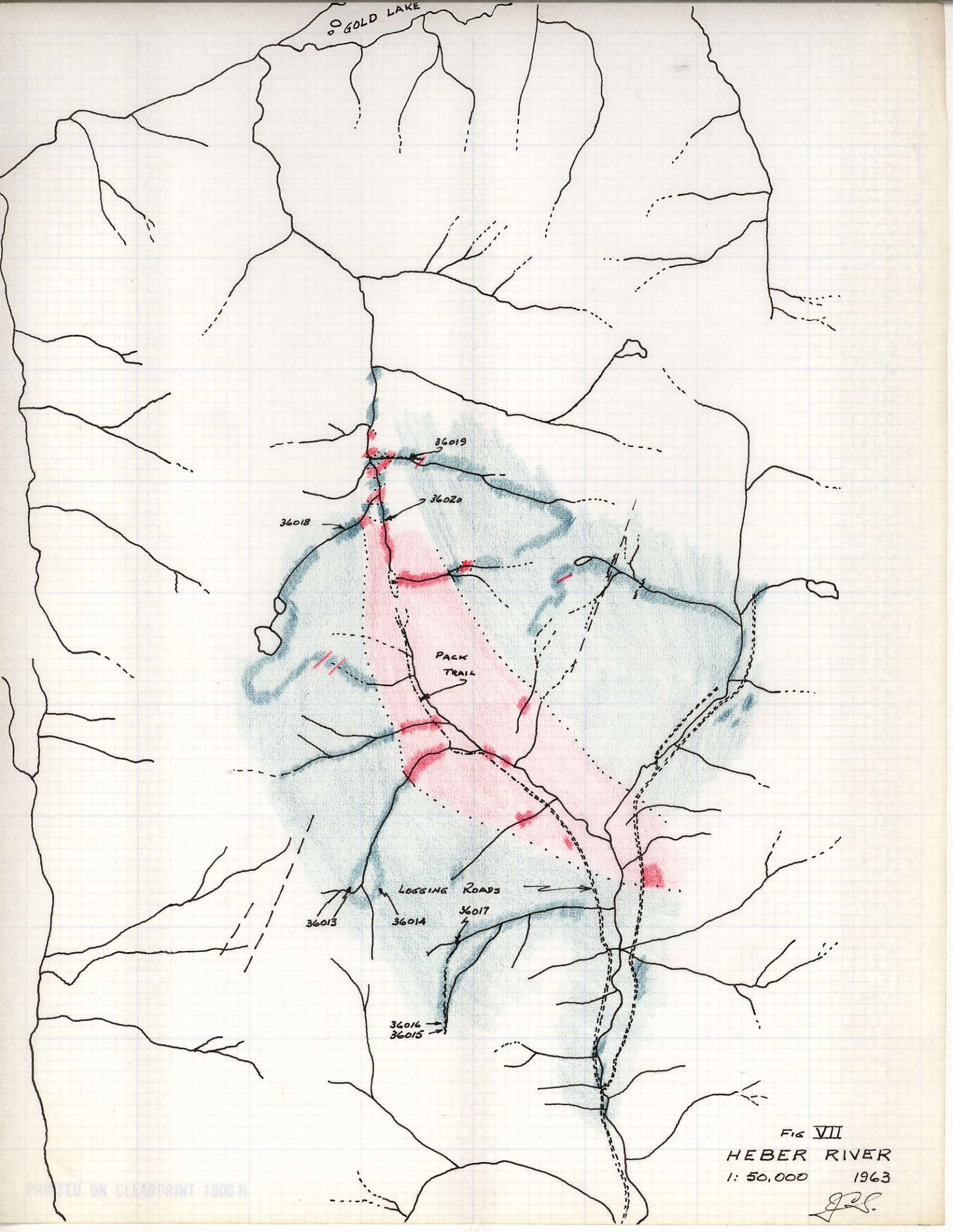


FIG. VI
MEGIN-BURMAN RIVER AREA

1:50,000

1963

JL



GOLD LAKE

36018
36019
36020

PACK TRAIL

LOSSING ROADS
36013
36014
36017
36016
36015

FIG VII
HEBER RIVER
1: 50,000 1963

J.S.

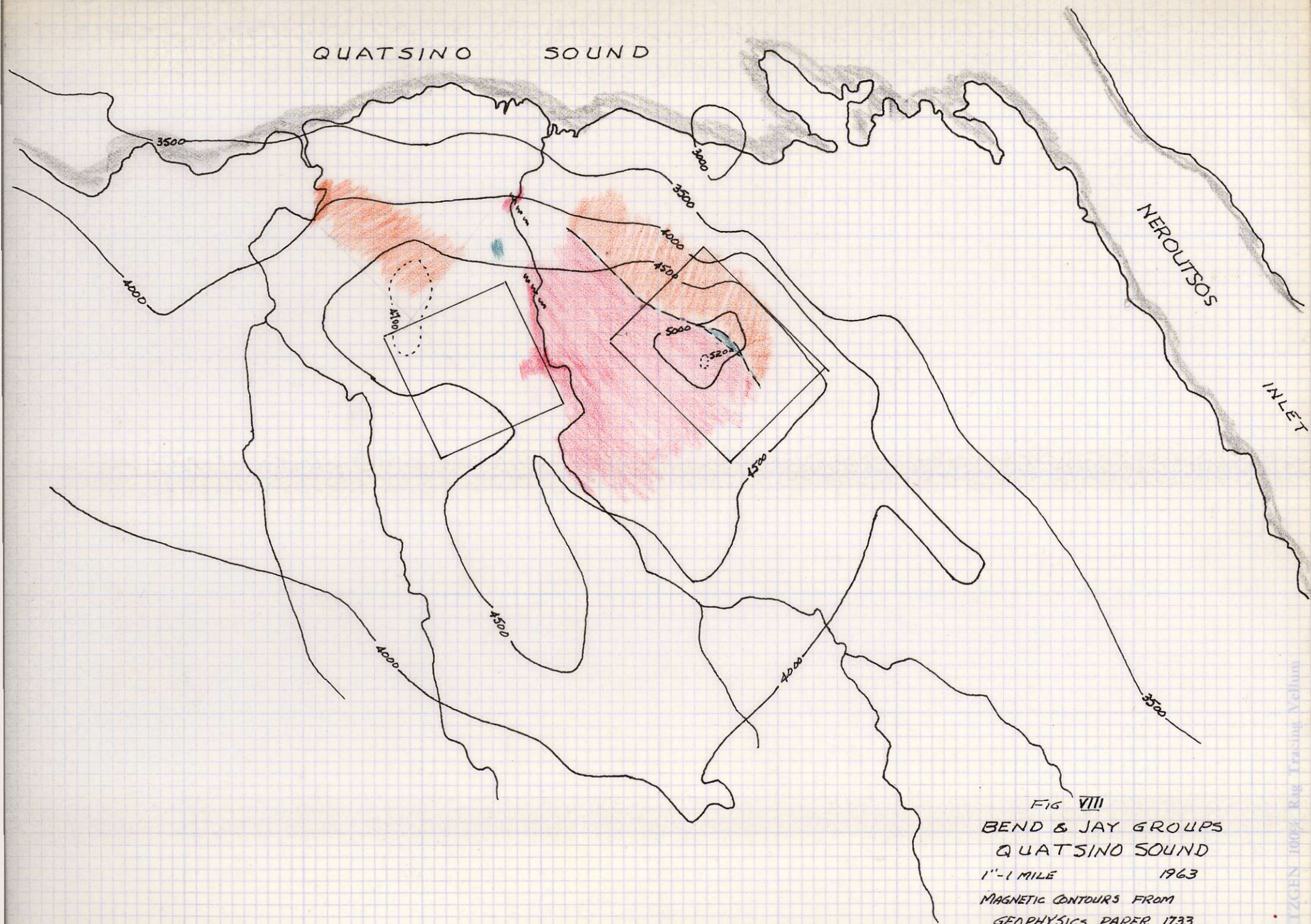


FIG VIII
BEND & JAY GROUPS
QUATSINO SOUND
1" = 1 MILE 1963
MAGNETIC CONTOURS FROM
GEOPHYSICS PAPER 1733

LEGEND

- █ GRANITE, DIORITE, MONZONITE
- █ BONANZA VOLCANICS
- █ QJATSINO LIMESTONE
- █ KARLUTSEN VOLCANICS

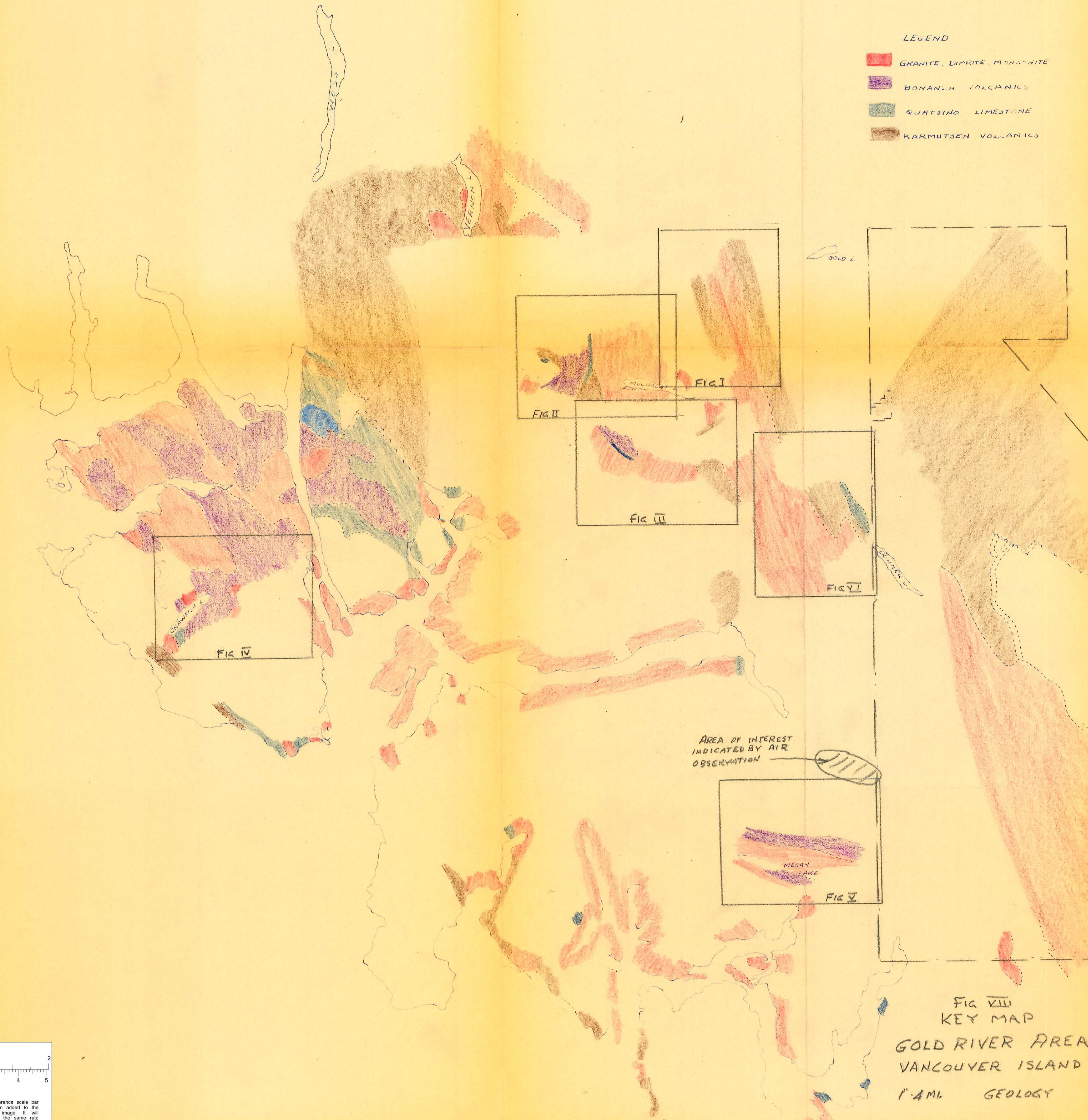


FIG VIII
KEY MAP
GOLD RIVER AREA
VANCOUVER ISLAND
1:4 MI. GEOLOGY

