

GEOPHYSICAL REPORT  
PL 1 - 48: SEVEN MILES WEST OF MERRITT,  
BRITISH COLUMBIA  
50° - 120° S. W. 921/2W  
By  
Alfred R. Allen, P. Eng.  
May 12 - July 16 1958.

0206

206

MAGNETOMETER SURVEY

PL 1 - 48 CLAIMS

NICOLA M. D.

MERRITT, B. C.

By

Alfred R. Allen

July 1958

CONTENTS

|  | Page |
|--|------|
| INTRODUCTION   | 1    |
| LOCATION AND ACCESSIBILITY   | 2    |
| PROPERTY   | 3    |
| TOPOGRAPHY   | 3    |
| GEOLOGY  | 4    |
| MAGNETOMETER SURVEY  | 5    |
| SURVEY RESULTS   | 7    |
| CONCLUSIONS AND RECOMMENDATIONS                                    | 9    |
| REFERENCES   |      |
| MAPS. #/1. PLAN, MAGNETOMETER SURVEY, PL 1 - 48<br>50° - 120° S.W. |      |
| #22. ANOMALY NO. 1   |      |
| #33. ANOMALY NO. 2   |      |
| #44. ANOMALY NO. 3   |      |
| #55. ANOMALY NO. 4   |      |
| #66. ANOMALY NO. 5   |      |

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## THE PL GROUP

### MAGNETOMETER SURVEY

NICOLA M.D.            MERRITT, B. C.

- - - -

### INTRODUCTION

From May 12 to July 16, 1958 a magnetometer survey was conducted over the PL group of mineral claims under the direction of the writer. The field party consisted of the writer, Shigeo Saimoto, P. Eng. (Engineering Physics), H. Shuttleworth, J. Tofin, W. Sommerville, J. Young, A. Bara, and P. Allen.

A camp was set up on Petit Creek and later moved to the Peters' farm at Lower Nicola.

Along with the necessary camp and field equipment a Wilde transit was used, a Sharpe D-1-M magnetometer, and a Radar magnetometer. The claims area is traversed by the highway and numerous logging roads, hence it is possible to travel by truck over the property, and a Land Rover and Jeep Station Wagon were used for this purpose.

The object of the survey was to investigate the property systematically with a magnetometer in order that any variance from the normal magnetic field could be detected and mapped. Such

anomalous zones indicate the presence of magnetic iron mineralisation, and in the Merritt area are known to contain copper and other valuable metals.

#### LOCATION AND ACCESSIBILITY

The PL group is located seven miles west of Merritt in south central British Columbia. The Spences Bridge - Merritt highway passes over the southern portion of the property. Canford is located near the southwest corner and Lower Nicola near the southeast corner of the claims group. The Kettle Valley branch of the C.P.R. traverses the Nicola Valley along the south boundary of the property. It is a six to seven hour drive from Vancouver to Merritt. Numerous secondary roads extend from the main highway over the property, many having been constructed by the Canford Sawmills Company who have logged the area.

### PROPERTY

The PL group is composed of the following mineral claims located in accordance with the Mineral Act of British Columbia, and are shown on B.C. Department of Mines Mineral Claims Map 6 AM 3:

|                     |          |                 |
|---------------------|----------|-----------------|
| PL 1 - 16 inclusive | Recorded | July 17, 1957   |
| PL 17 - 24          | "        | " July 28, 1957 |
| PL 25 - 32          | "        | " July 25, 1957 |
| PL 33 - 40          | "        | " July 26, 1957 |
| PL 41 - 48          | "        | " July 25, 1957 |

The PL 1 - 48 mineral claims are registered in the name of Georgia Leaseholds, Ltd. of 569 Howe Street, Vancouver, B. C.

### TOPOGRAPHY

The topography is typical of the Interior Plateau region of south-central British Columbia. The hills are rounded and covered with patchy stands of timber. Large areas are open rolling, grass - and sagebrush - covered hills. Numerous farms are located throughout the area.

The PL group extends from the broad valley of the Nicola River northerly up and onto the southeast flank of the Promontory Hills. The Nicola Valley is 2000 feet above sea level, and the highest point on the PL claims near the north boundary is 3000 feet above sea level.

Near the northeast corner of the property the south side of a prominent hill is composed of steep inaccessible rock bluffs. Similar nearly vertical rock bluffs are located near the southwest corner of the claims area along the north bank of the Nicola River. Elsewhere the property is park-like, and broken only in a few places by small gullies, one of which is occupied by a small creek. Exposures of bedrock are numerous, and overburden thin, over most of the area.

GEOLOGY

Granitic rocks of the Guichon Creek batholith predominate on the PL claims area. These lower Jurassic intrusions are overlain by andesitic, tuffaceous and agglomeratic rocks of the Upper Triassic Nicola group, which near the east boundary of the property are in turn overlain by basaltic and tuffaceous rocks of the Lower Cretaceous Kingsvale group.

The granitic rocks of the Guichon Creek batholith are chiefly quartz diorite and granodiorite on the map area. Altered and brecciated zones contain noticeably more pink feldspar and abundant epidote. Numerous aplitic dykes intrude the older rock.

The Nicola group rock in the area is wholly dark green andesite, in places amygdaloidal. The sheared and brecciated zones are characterized by abundance of micaceous minerals and brown

weathering. The western part of the property is underlain mostly by Nicola andesite. The Kingsvale volcanic rocks are characterized by the light colour and rough weathering. Near the southeast corner of the property, on the highway, cliffs of Kingsvale tuffaceous rock are conspicuously displayed.

Except for local sheared and brecciated zones there is little structure evident on the property. Anomaly number one appears to be located on a strong and continuous shear zone in Nicola andesite, however, and this zone appears to be the southwesterly extension of a similar one located on claims adjoining the PL group on the north.

One highly sheared zone near the southwest corner of the property weathers light brown. Iron stain and minor copper stain are evident, and one small open cut has been excavated thereon. Anomalous magnetic zones have been indicated by the magnetometer. It is known that these contain magnetic iron minerals, and it is possible that other valuable minerals may be found associated with the iron mineralisation.

#### MAGNETOMETER SURVEY

The magnetometer survey was carried out on a grid pattern tied to a base line which was tied to surveyed corner posts of Land Lots. The base line was accurately laid out by chain and transit in an east-west direction near the southerly location line, not far



distant north of the highway. As well as station hubs, stakes were placed at 200-foot intervals along the base line. Grid lines were surveyed by chain and Brunton compass true north-south from each 200-foot station on the base line to the boundaries of the property. All hubs and stations were marked by the placing of a stake, made from cedar lathing, upon which was scribed a designated letter and number as shown on the map accompanying this report. Magnetometer readings were observed and recorded at all hubs and stations.

The D-I-M Sharpe magnetometer was used for most of the survey. The Radar magnetometer was used for completion of intermediate lines and detailed work. Each instrument was checked over known magnetic anomalies in the Merritt and Kamloops areas, a constant for conversion from one to the other readings was established, and diurnal variation of each noted and corrected daily.

On the 200-foot grid survey, where high or low readings were recorded on the magnetometer, a smaller grid pattern was set up and the area checked. By this method five magnetic anomalies were outlined.

Using the Sharpe D-I-M instrument as a standard the normal magnetic force was found to be 2000 to 2500 gammas. Anomalous zones were indicated where readings ranged from 2500 to 3000 gammas. The cores of the anomalies were evidenced by readings between 4000 and

6000 gammas and in each, by accompanying abnormally low readings.

The survey is recorded on the accompanying master plan map on a scale of 400 feet per inch, and five plans of anomalies on a scale of 100 feet per inch.

### SURVEY RESULTS

The anomalies recorded are as follows:

#### Anomaly Number 1.

Location: on the PL 37, PL 38, and PL 39 claims.

Length: 2000 feet, 25 degrees east of north.

Width: 250 to 600 feet.

Maximum intensity: 6075 gammas.

Geology: Contorted and sheared Nicola andesite.

Some iron staining.

Note: Appears to be on the same sheared zone as anomalies of similar intensity reportedly occurring on adjoining properties to the north of PL group.

#### Anomaly Number 2.

Location: PL 49 Fr., PL 50 Fr., PL 3 and PL 4.

Dimensions: 1200 feet long and 500 feet wide.

Direction: North 60 degrees east.

Intensity: High 3400 gammas to a low of 620 gammas.

Note: This anomaly lies across the lower end of Forestry road and gravel pit.

Anomaly Number 3.

Location: PL 41, PL 42, PL 56 Fr.  
Dimensions: 1600 feet long and 200 to 500 feet wide.  
Direction: North 35° east.  
Intensity: High 5000 gammas.  
Note: This anomaly has three separate high zones.

Anomaly Number 4.

Location: PL 3, PL 62 Fr. Crossing highway.  
Dimensions: 500 feet long and 250 feet wide.  
Direction: North 60° east.  
Intensity: 3500 gammas.  
Note: This anomaly extends into the Nicola River Valley.

Anomaly Number 5.

Location: Extends into PL 18.  
Dimensions: 400 feet long and 150 feet wide.  
Direction: East-west.  
Intensity: High 6000 gammas and a low of 600 gammas.  
Note: This appears to be a small but strong anomaly.

## CONCLUSIONS AND RECOMMENDATIONS

Five distinct magnetic anomalies have been outlined by the magnetometer survey of the PL 1 - 48 mineral claims area. The number one anomaly occurs in a zone of highly sheared andesite not far from contact with underlying granitic rocks of the Guichon Creek batholith. This sheared zone appears to be the southwesterly extension of a similarly mineralized zone on adjoining properties to the north. It is concluded that, since some magnetic deposits are known in the immediate area to contain important copper mineralization, all anomalies on the PL group should be investigated by additional exploratory work.

It is herewith recommended that the following exploratory program be carried out on the PL group:

1. Anomaly number 1 diamond drilled to test the zone for copper and other valuable mineral content.
2. Anomalies 2, 3 and 4 be explored by whatever means are deemed suitable after completion of diamond drilling on anomaly number 1.

Respectfully submitted,



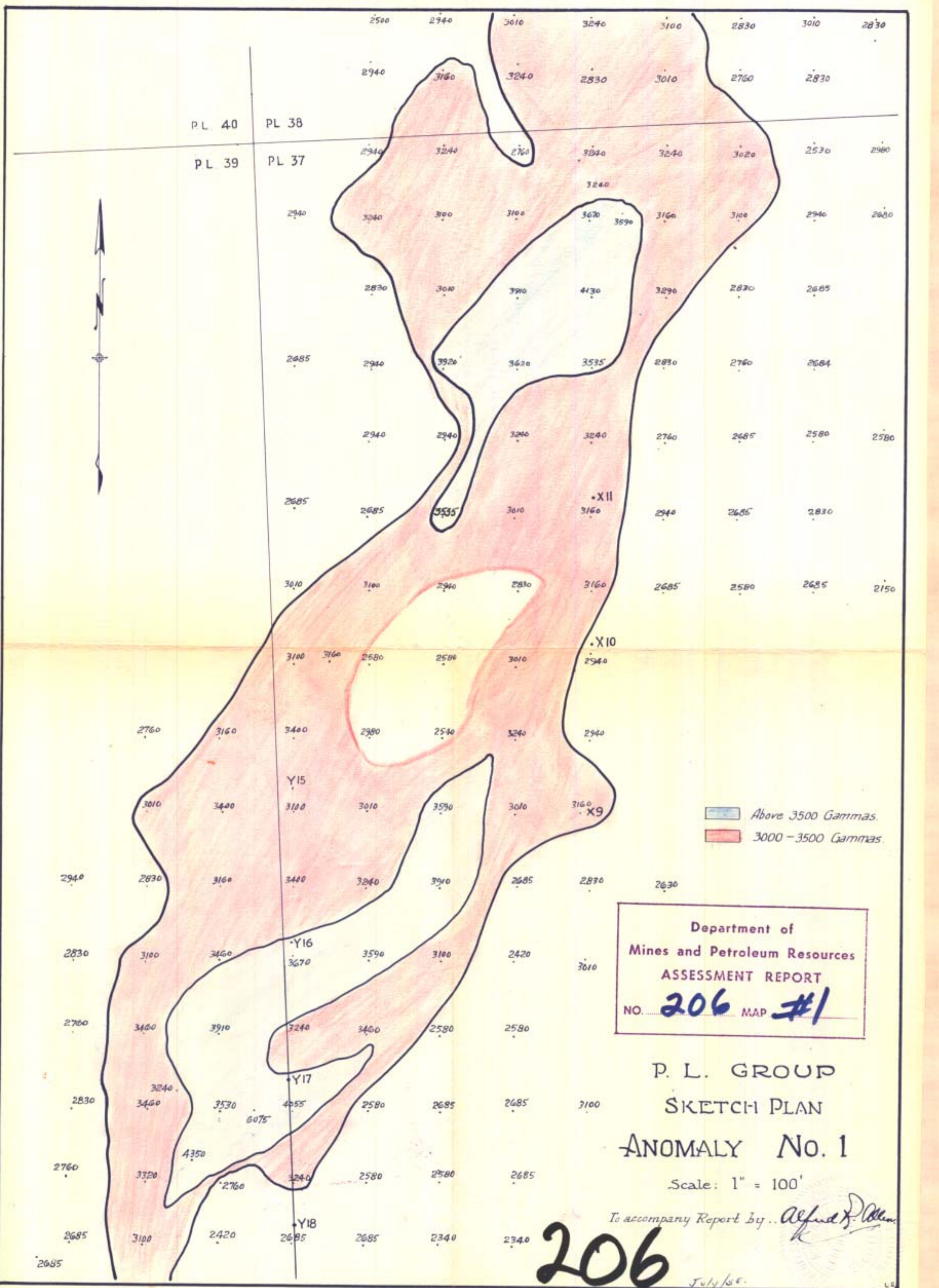
Alfred R. Allen, P. Eng.

Merritt, B. C.  
July 16, 1958.

## REFERENCES

1. Memoir 249, Geology and Mineral Deposits of Nicola Map-Area, British Columbia.  
W. E. Cockfield.
2. Memoir 262, Ashcroft Map-Area, British Columbia.  
S. Duffell and K. C. McTaggart.
3. Reports of Minister of Mines of British Columbia.

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PL 40 PL 38  
 PL 39 PL 37



Above 3500 Gammas.  
 3000 - 3500 Gammas.

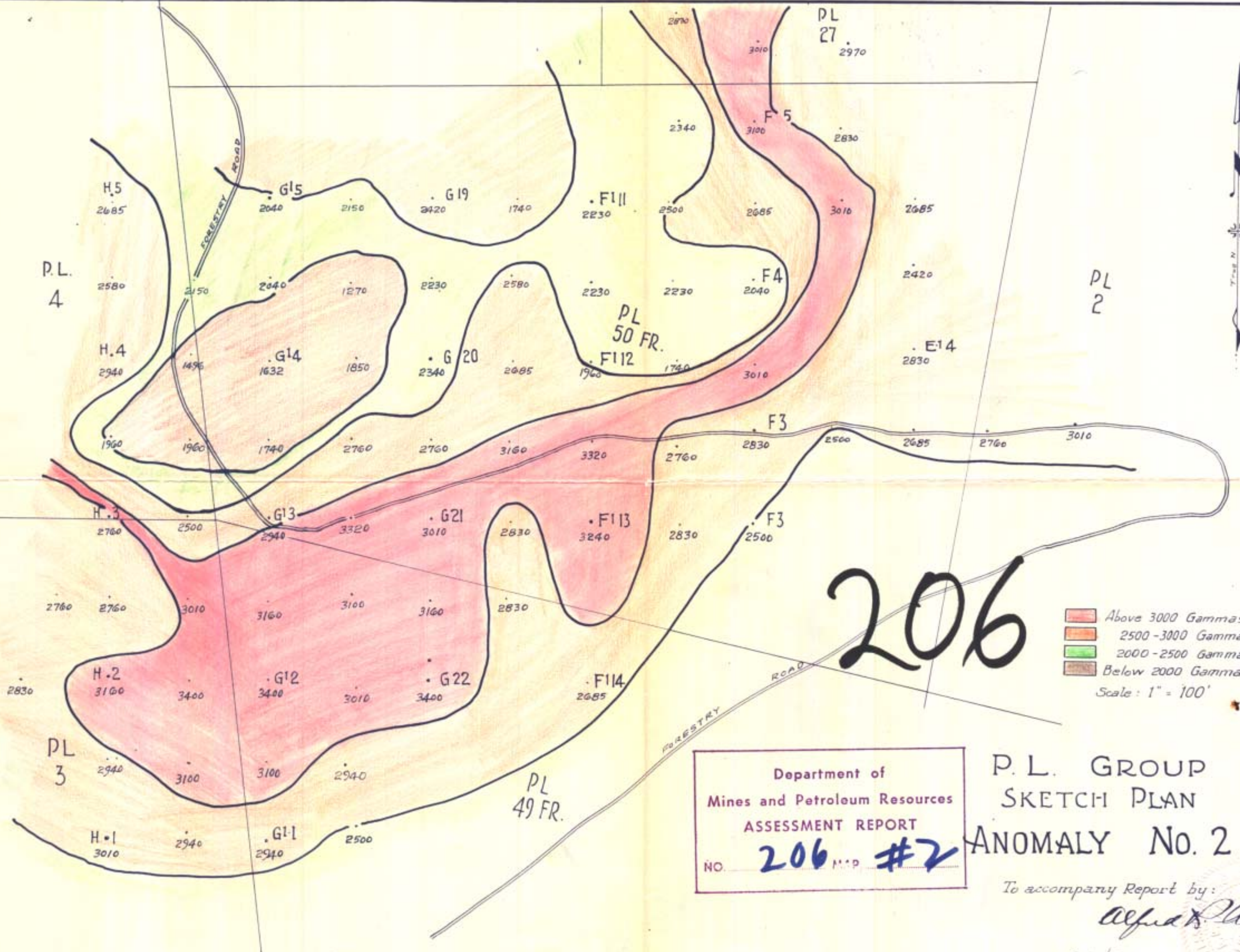
Department of  
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 NO. **206** MAP **#1**

P. L. GROUP  
 SKETCH PLAN  
 ANOMALY No. 1  
 Scale: 1" = 100'

To accompany Report by... *Alfred J. Allen*

206

July 1965



Above 3000 Gammas.  
 2500-3000 Gammas.  
 2000-2500 Gammas.  
 Below 2000 Gammas.  
 Scale: 1" = 100'

Department of  
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 ASSESSMENT REPORT  
 NO. **206** M.P. #2

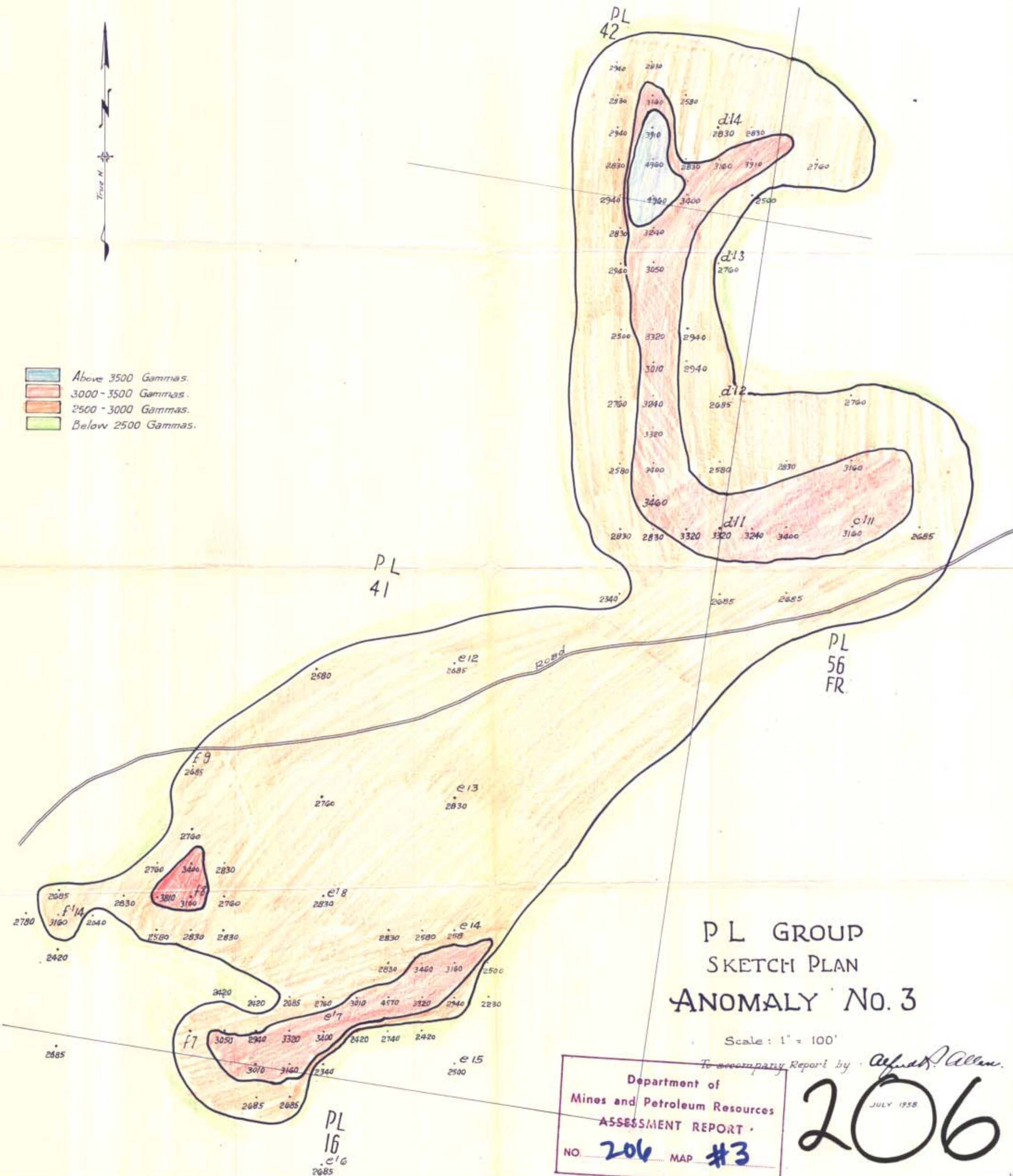
P. L. GROUP  
 SKETCH PLAN  
 ANOMALY No. 2

To accompany Report by:  
*Alfred A. Allen*

July/58



- Above 3500 Gammas.
- 3000 - 3500 Gammas.
- 2500 - 3000 Gammas.
- Below 2500 Gammas.



P L GROUP  
SKETCH PLAN  
ANOMALY No. 3

Scale: 1" = 100'




To accompany Report by *Alfred P. Allen.*

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. **206** MAP **#3**

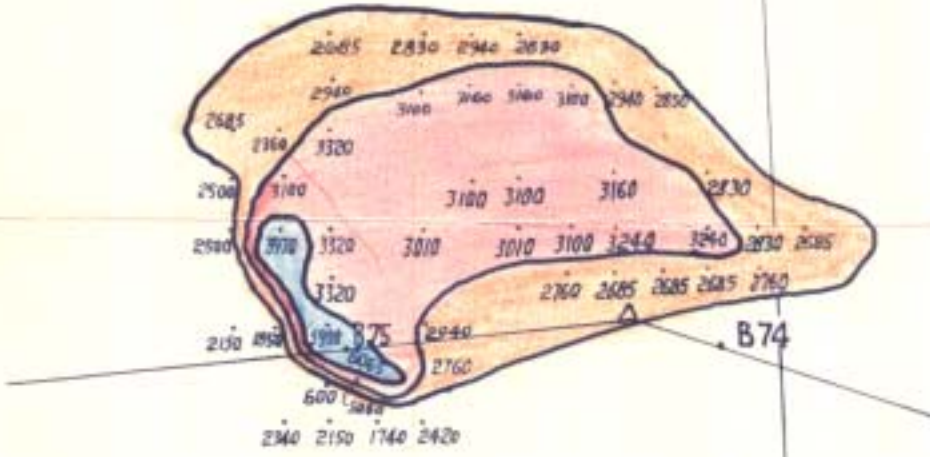
**206**  
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-  Above 3500 Gammas.
-  3000 - 3500 Gammas.
-  2500 - 3000 Gammas.

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NO. **206** MAP **#4**



PL  
18

**206**

PL GROUP  
SKETCH PLAN  
ANOMALY No. 5  
Scale: 1" = 100'

To accompany Report by:  
*W. J. Allen*  
JULY 1958.

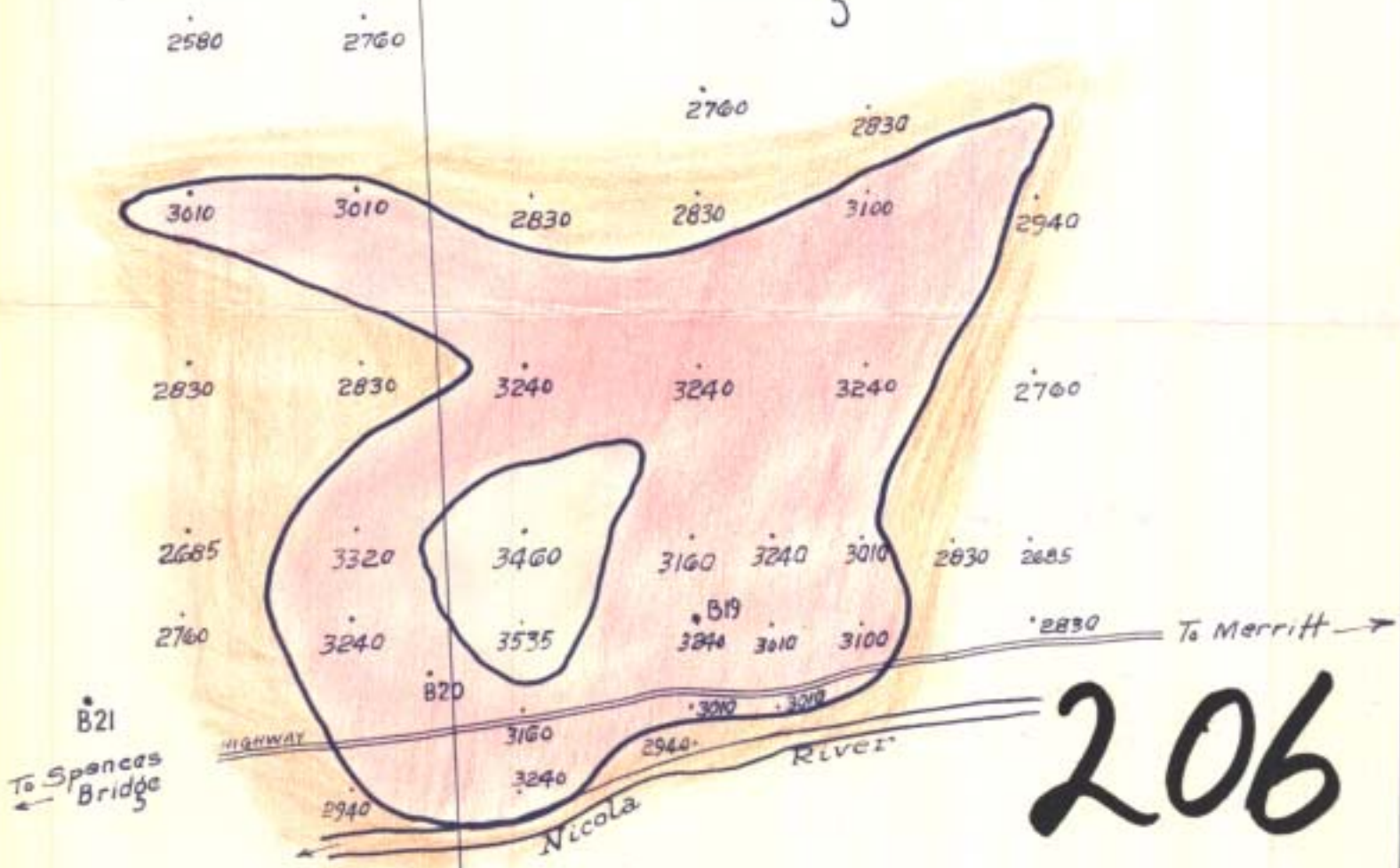
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ASSESSMENT REPORT

NO. **206** MAP **#5**



PL  
62  
FR.

PL  
3



**206**

PL GROUP  
SKETCH PLAN

ANOMALY No. 4

Scale: 1" = 100'

To accompany Report by:  
*Alfred R. Allen*

JULY 1958

- Above 3500 Gammas.
- 3000 - 3500 Gammas.
- 2500 - 3000 Gammas.

