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105-K-3.  
DICKSON-YUKON SYNDICATE  
PELLY RIVER AREA, Y.T.  
July 4, 1964 Dr. A. C. Skerl  
**LAKE, JOE** 105K-3,105K-6

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4th July 1964

1758 WESTERN PARKWAY  
VANCOUVER 8, B.C.

DICKSON - YUKON SYNDICATE  
PELLY RIVER AREA, Y. T.

## I N T R O D U C T I O N

I inspected the geology of the various geophysical anomalies and studied the Vangorda deposit from 23rd to 27th June inclusive in the company of Mr. C. J. Brown, geologist for the Whitepass and Yukon Railway, whose assistance is gratefully acknowledged.

Permission to use the cabin of Vangorda Mines was granted by Mr. W. Sirola of Kerr Addison which greatly facilitated the work.

The loan of a Jalander magnetometer by Utah Construction and Mining proved invaluable.

## G E N E R A L

The three groups of claims are located in the vicinity of the Vangorda property that belongs to Kerr Addison where it is stated that 73 diamond drill holes have indicated a deposit containing 9,400,000 tons of sulphides averaging 3.18% Pb, 4.96% Zn, 1.76 oz Ag and 0.02 oz Au in a length of 3000 feet, width of up to 490 feet and a maximum depth of 300 feet.

## V A N G O R D A

Since the principal finds that were to be checked consisted of magnetic anomalies that were claimed to be very similar to the one at Vangorda a rapid survey was made of the main portion of the Vangorda deposit using a base map that was available in the cabin. A 'stick' model of the diamond drilling enabled us to analyse the possible geology of the deposit.

The only mineralized exposures are very limited and are found on the right bank

of Vangorda Creek at intervals over a distance of 100 feet. They consist mostly of massive pyrite and are not part of the main ore-body.

The core is available for inspection but the sections considered as ore have been completely removed presumably for mill test purposes.

I conclude that the 'ore' consists of a fine-grained mixture of pyrite, pyrrhotite magnetite, galena, sphalerite and chalcopyrite in several lenses that represent overturned synclinal remnants associated with larger lenses of essentially barren pyrite. The sediments have been logged in two main categories - dark graphitic argillite and sericite schist.

The deposit appears to bottom on an inclined surface striking northwest and dipping  $15^{\circ}$  southwest. It could well be an old thrust plane with the mineralization in the imbricate folds on top. No direct evidence for such a fault could be seen in the core.

A well-marked magnetic anomaly with a relief of 1000 gammas was found that corresponded to the main part of the 'ore'-body as indicated in the model. The drilling shows that the overburden is 100 feet deep here. Nevertheless a geochemical anomaly was claimed over the deposit. It is probable that the reaction was obtained from material dragged by the ice from the mineralization further along the strike.

I understand that the Mitsui company made a thorough study of this property last year and conducted mill tests in the hope of producing a bulk concentrate suitable for shipping to Japan to be treated in an Imperial smelter. Apparently a suitable concentrate was not obtained because the extremely fine grained nature of the ore prevented the elimination of sufficient of the pyrite and pyrrhotite.

## WEDGE LAKE ANOMALY

This magnetic anomaly was discovered by the Potluck Exploration company in 1954.

It is immediately northwest of Wedge Lake which is half a mile east of the south end of Jackfish Lake. It is also  $2\frac{1}{2}$  miles southeast of the Vangorda deposit.

Only one possible rock outcrop was found in the vicinity and it consists of siliceous argillite. In a parallel gully about 500 feet to the northeast there are outcrops of black argillite with some quartz veining.

The anomaly has a range of 1400 gammas as compared with 1000 gammas at Vangorda. It is similar in the length of 800 feet and breadth of 300 feet to the main anomaly at Vangorda. If the latter had 70 feet instead of 100 feet of overburden it would also give a range of 1400 gammas.

I searched the small creek that flows from Wedge lake into Jackfish lake for seepages and found two that were 800 feet apart and in each case just below abrupt steepening of the valley gradient. In both places a considerable amount of iron oxide is being precipitated in the creek. Near the lower one some ferruginous soil was found under an uprooted tree.

A heavy cover of peat and volcanic ash together with a tangle of roots would necessitate augering for soil samples on the valley floor.

Rubeanic acid tests gave a definite positive reaction in the glacial material from an old shallow trench indicated in the sketch plan. Only the lower seepage in the creek gave a copper reaction, although weak. The upper seepage and the red soil gave brown spots instead of the typical grey-green of copper.

For comparison samples were taken from the seepage deposit on Vangorda creek and also from the ferruginous gel being deposited by the water flowing out of hole #118. The test papers are included in this report and the original samples are available if it is desired to test for zinc as well.

The positive copper reaction and the iron seepages are strong evidence that the magnetic anomaly is associated with a sulphide deposit.

It may be significant that the postulated thrust plane forming the base of the

Vangorda deposit projects close to the anomaly at Wedge Lake.

In the other direction the fault would pass through the prospect that Vangorda Mines has in the northwest corner of the claims and where several holes were drilled in ore.

#### JACKFISH LAKE ANOMALY

Here there is a pronounced gully about two hundred feet wide, striking northwest into Jackfish Lake. It has a high cliff of limey argillite on the northeast side and folded limestone on the southwest near its southeast or upper end. Closer to the lake some outcrops were found of coarse basic dyke rock. Readings of up to 3200 gammas or about 1000 gammas above background were obtained in the gully and assumed to be due to the basic rock although the actual outcrops gave up to 2760 g.

A sample of the creek sediment at the lower end of the gully gave a vague copper reaction with rubenic acid.

There is little or no soil in the gully which is filled with moss-covered boulders so that it is probably not practical to investigate it by systematic soil sampling on a grid pattern.

#### ROSE CREEK ANOMALIES

Because of an accident to a helicopter in the Mayo area the machine that I was arranging for was sent north as a replacement. We therefore made the journey on foot for  $7\frac{1}{2}$  miles from the Vangorda camp to the Irish and Hew anomalies and then back again the same day.

There are cut lines on the ground with sufficient stakes and legible numbers but no maps showing these lines are available.

The Irish anomaly was located and found to be due to magnetic streaks in the numerous argillite outcrops and is therefore completely discounted.

In the area of the Hew anomaly nothing definite was found but it now appears likely that my survey passed within 150 feet of the centre of the anomaly.

Lines labeled W 25 and W 30 with stakes numbered 8 to 14 were found but the relationship of the anomaly to them is not known.

No outcrops were seen but it is suspected that argillite with magnetic streaks was probably responsible for the reported anomaly.

#### D I S C U S S I O N

The most favourable magnetic anomaly at present known in the Dickson-Yukon ground is that at Wedge Lake. It has similar dimensions to the main ore-body at Vangorda, has given a positive geochemical reaction for copper in the glacial overburden and is possibly on the same major structure as the Vangorda deposit.

It probably has a cover of 50 to 100 feet of glacial overburden.

The magnetic data suggests that the mineralized body has a dip to the southwest.

The only positive way of testing the anomaly is by diamond drilling. A vertical hole is proposed from a position 50 feet southwest of the magnetic high point midway along its length. This hole should enter the mineralization from the hangingwall side.

The best procedure for placing a drill on the property will be to establish a helicopter landing and campsite at Wedge Lake using Jackfish Lake initially. Equipment would then be trucked from Whitehorse to the nearest point on the highway west of Ross River and airlifted from there by helicopter. The drillsite should be cleared ahead of time so that the drill etc. can be set down on it.

The drilling would be on a cost plus basis and it is difficult to estimate the expenditures very closely in advance.

As large a machine as possible should be used because of the unknown amount of overburden to be penetrated. This will in turn depend on the capacity of the helicopter available.

By the time that a machine is on the job and ready to drill it will probably have cost \$2000 in transportation. All supplies for one month could total \$2000 and two drillers on overtime \$1500. An engineer would require at least \$750. Thus in one month between \$6000 and \$7000 would be spent on two holes totalling 600 ft.

Owing to various other items and possible misadventures it will be advisable to budget for \$10,000. The results will determine whether further drilling is justified.

Whilst the drilling is proceeding the engineer could collect soil samples on a grid system wherever possible. He could test them in the field using the rubeanic acid method for copper and save the samples for further laboratory testing.

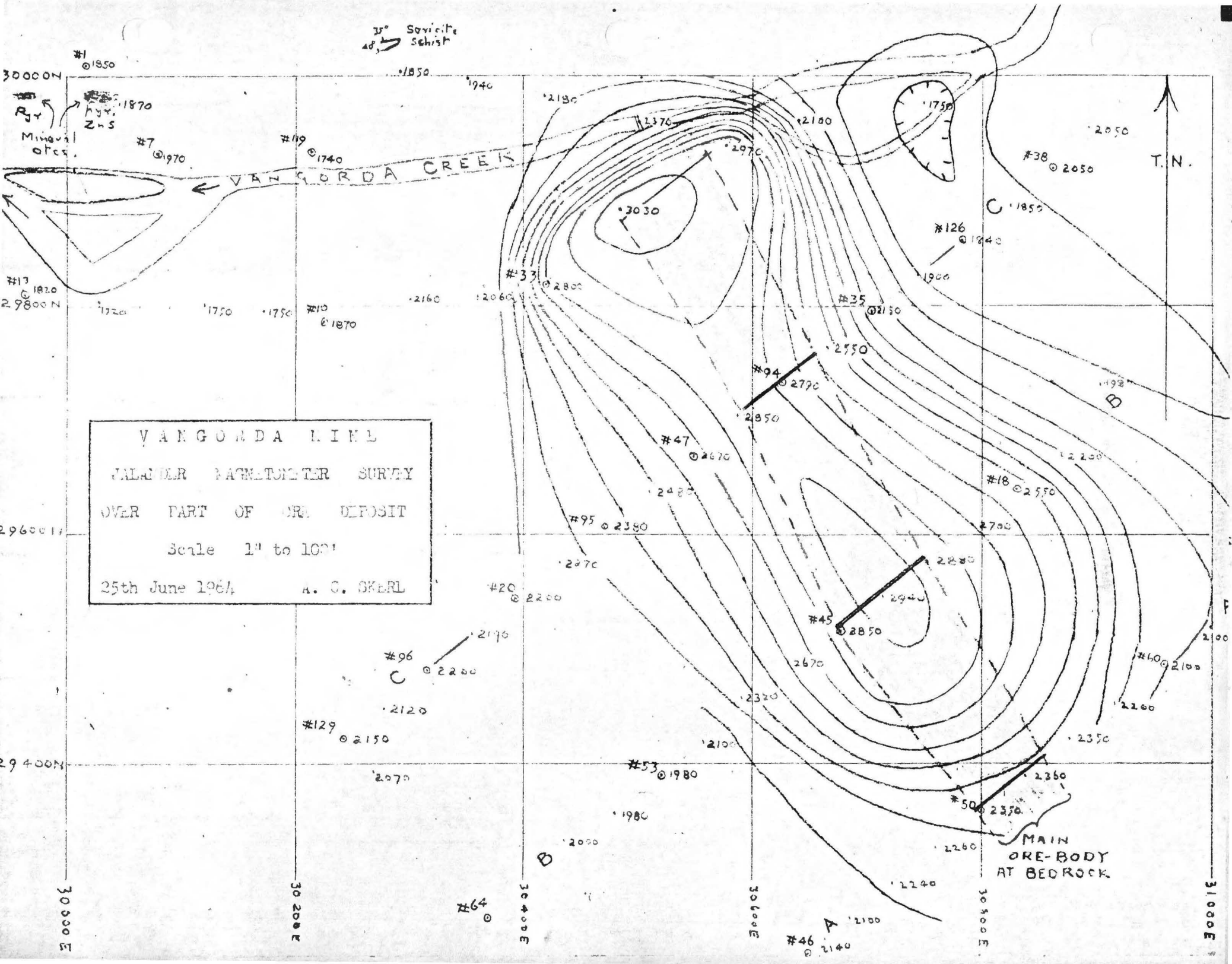
The area of first interest would be southeast of Wedge Lake and next northwest to the boundary with Vangorda Mines. The samples should be taken along existing lines at 100 ft intervals and then along intermediate lines where positive results are obtained.

#### RECOMMENDATIONS

Drill the Wedge Lake Anomaly at the position indicated in the above report.

*A. C. Skerl*

15° Soviete  
Schist




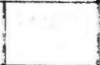

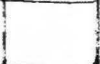
VANGORDA HILL  
JALANER BAROMETRIC SURVEY  
OVER PART OF ORE DEPOSIT  
Scale 1" to 100'  
25th June 1964 A. C. SKERL

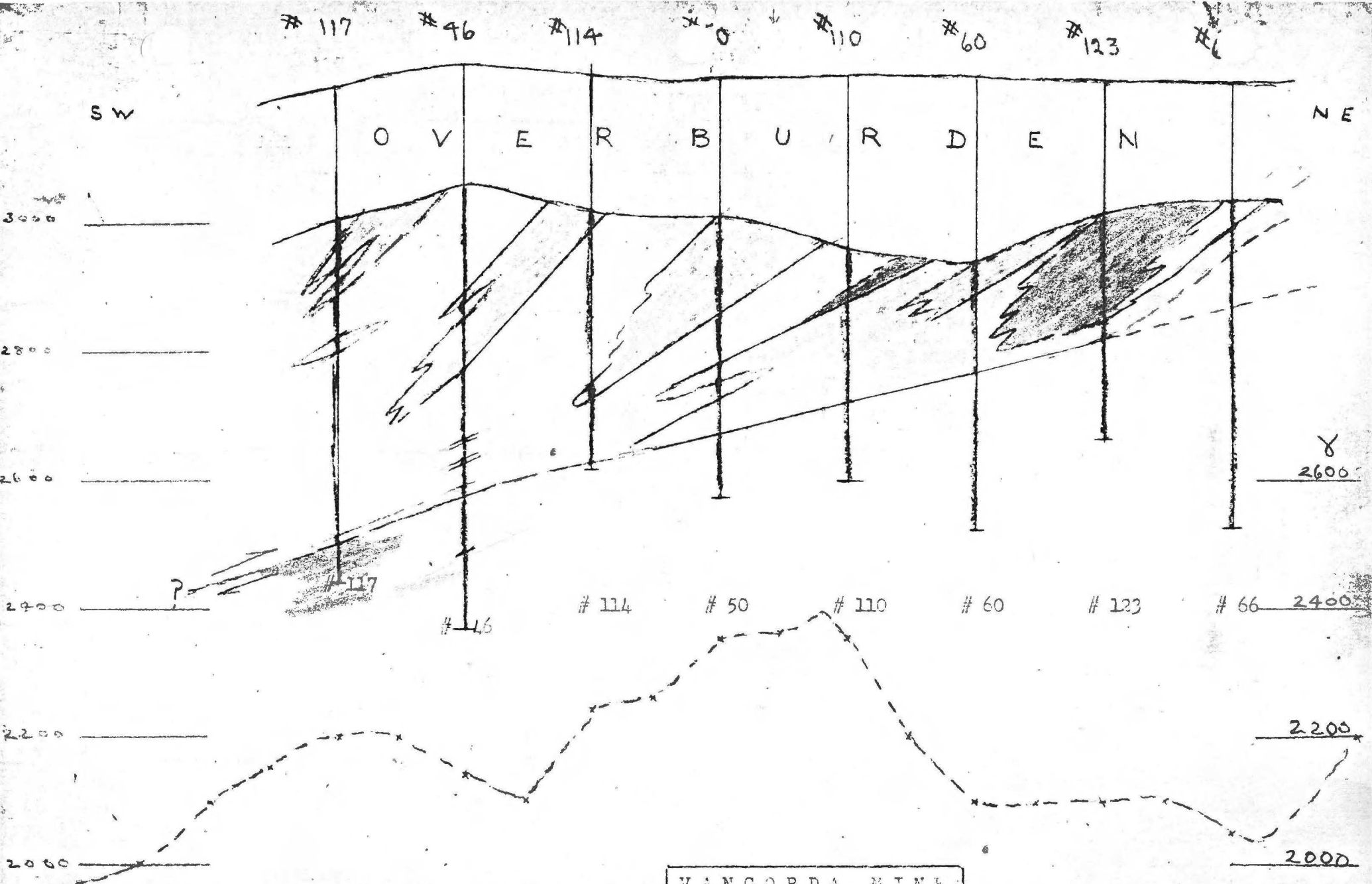
MAIN  
ORE-BODY  
AT BEDROCK

Mineral  
area

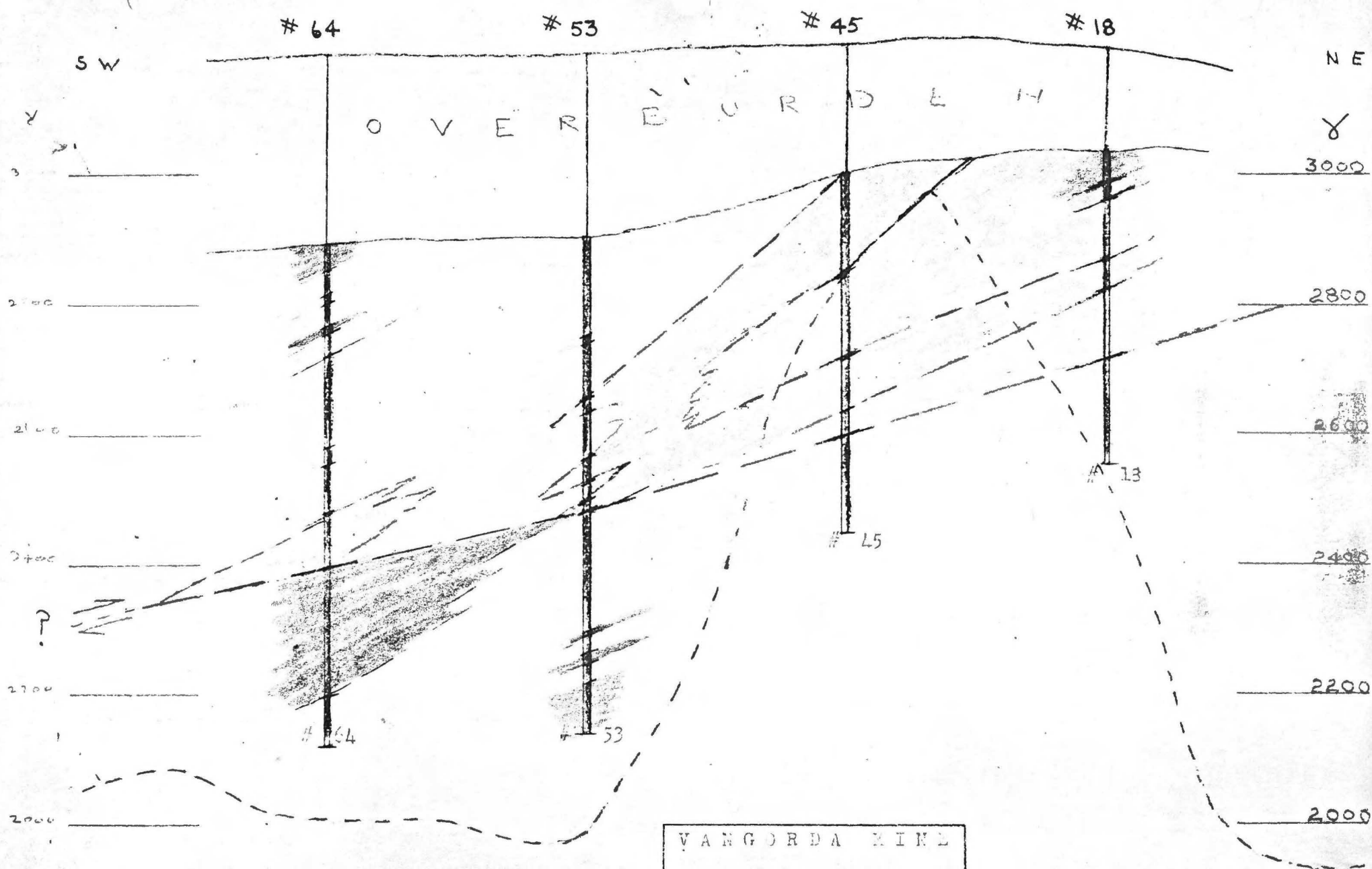
T.N.

KEY TO SECTIONS

	ORE MINERALIZATION
	MASSIVE PYRITE
	BLACK ARGILLITE
	SERICITE SCHIST



VANGORDA MINE  
 SECTION 'A'  
 Scale 1" to 100'  
 2nd July 1964 . A. C. SKORL



VANGORDA MINE  
 SECTION 'B'  
 Scale 1" to 100'  
 2nd July 1964 A. C. SKENL





WEDGE LAKE

COMPARISON BETWEEN  
MAGNETIC ANOMALIES AT  
VANQORDA & WEDGE LAKE  
June 1964 R.P.S.

1" = 100'

N.E

γ

3200

VANQORDA

NE Edge of  
Wedge Lake

3000

2800

2600

2400

2200

2000

S.W.

3200

3000

2800

2600

2400

2200

2000

CENTRE

NORTHWEST END

SOUTHEAST END

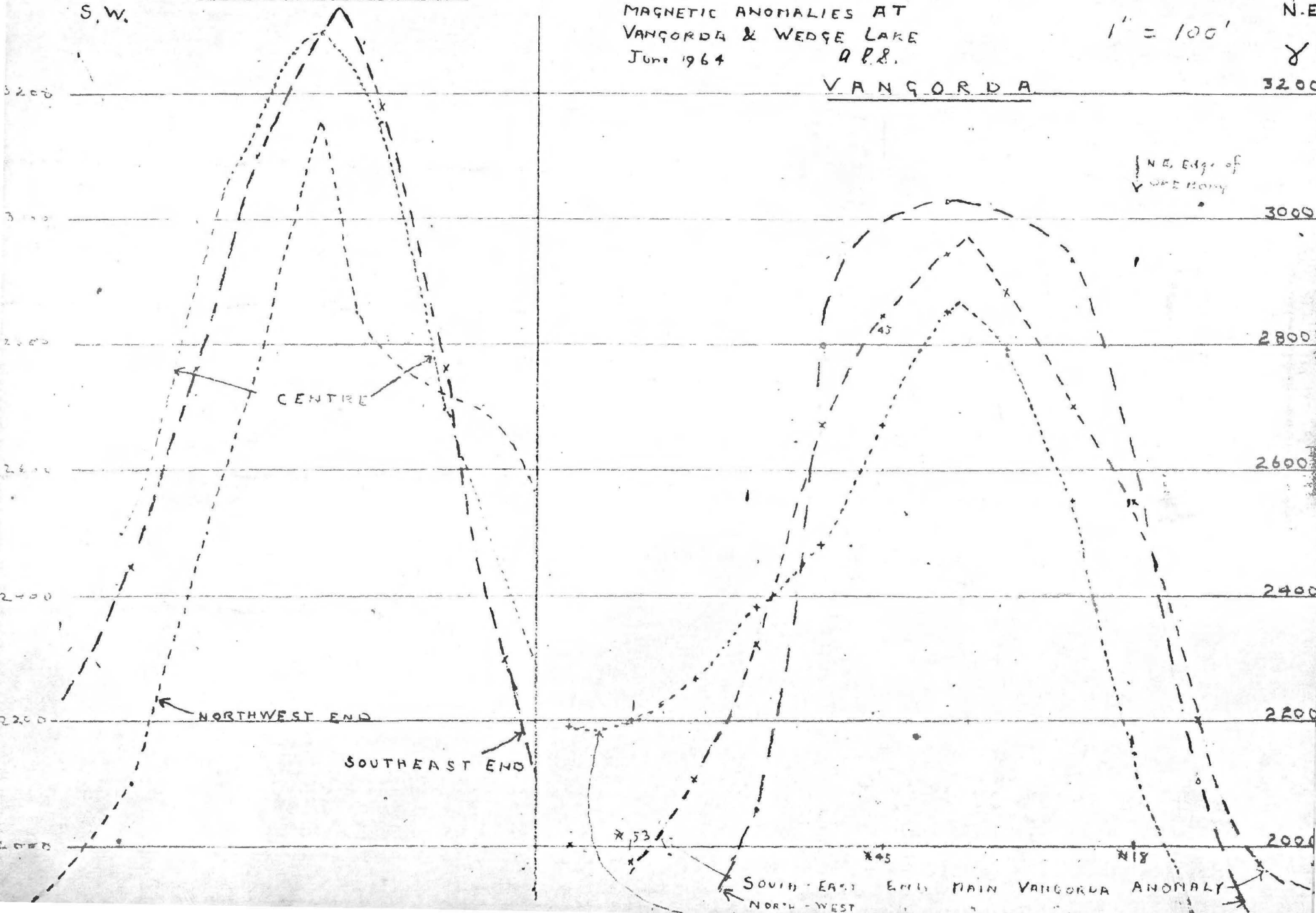
45

53

45

118

SOUTH-EAST END MAIN VANQORDA ANOMALY  
NORTH-WEST



VANGORP  
50' SE 1944

20' from site

VANGORP  
50' SE 1933

VANGORP  
50' NW 1944

VANGORP  
50' SE 1944

DN 74

VANGORP  
50' SE 1944

VANGORP  
50' SE 1944

WEDGE LAKE  
LACIAL DEPOSIT

Wedge Creek  
N 20° E

Red Soil  
Wedge Creek

Wedge Cr  
Red Soil



Wedge Creek  
Lacustrine

Wedge Lake Anom  
Creek Soil  
200' from Lake

N.B.

1. Grey Green  
shot due to  
Copper

2. Brown shot  
due to ?

### Rubeanic Acid Tests

1<sup>ST</sup> July 1964

R.L.S.

JOE 24 | JOE 23

1995

JOE 22 | JOE 21

2000

2000

2100

2250

2500

2250

2300

2200

2200

2100

25' 2150

2030

2150

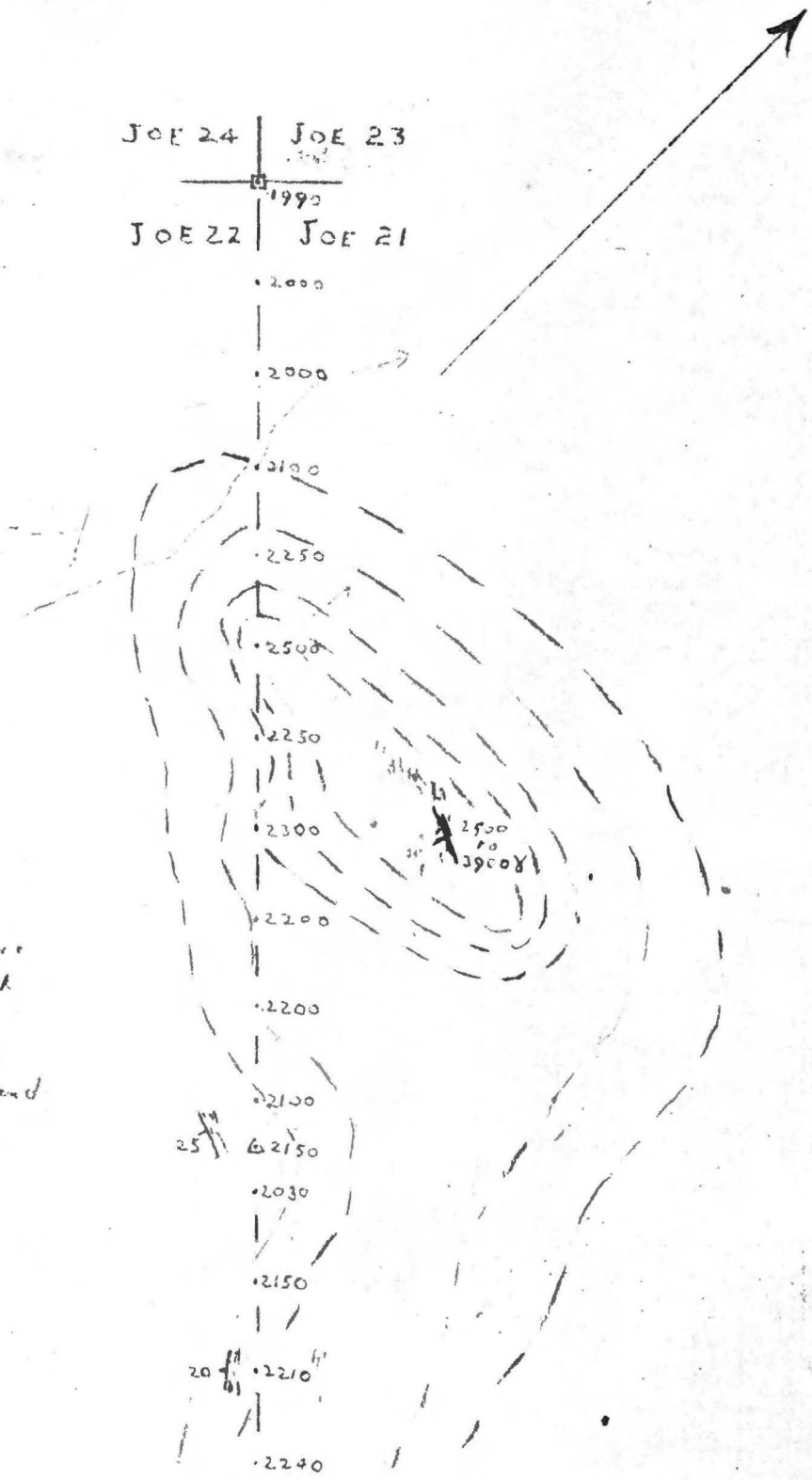
20' 2210

2240

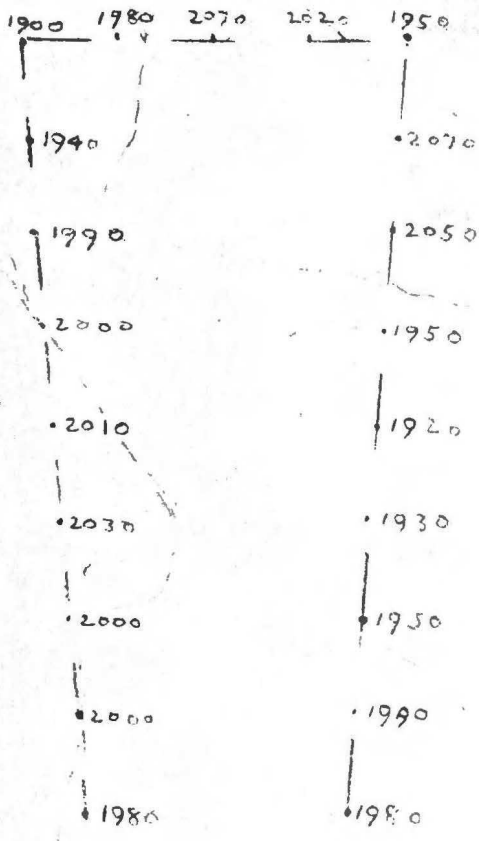
2150

2150

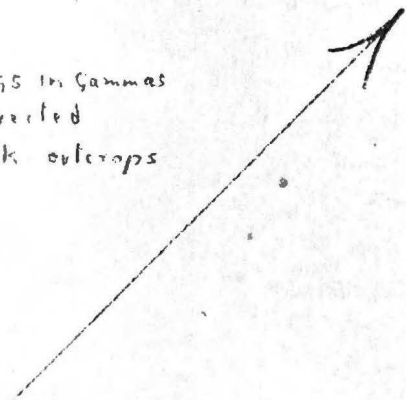
- N.B.
- 1/ All outcrops are thin-bedded, dark Argillite.
  - 2/ Anomaly due to magnetic band in Argillite.



JALANDER SURVEY  
 IRISH ANOMALY AREA  
 1" = 100'  
 26<sup>th</sup> June 1964 A.L.S.



NE.  
 1/ READINGS in Gammas  
 uncovered  
 2/ No rock outcrops  
 seen.

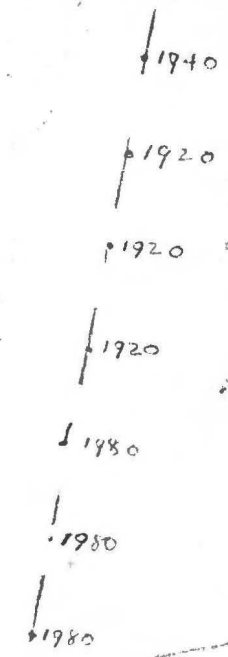
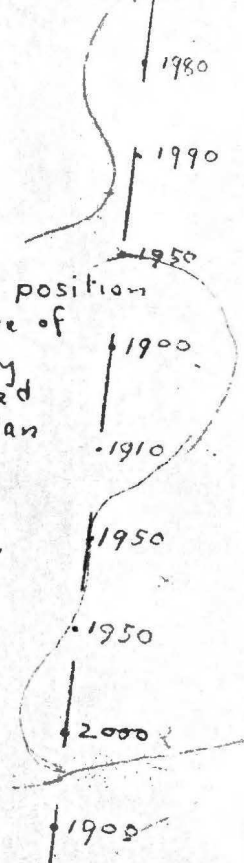


JALANDER SURVEY  
 NEW ANOMALY AREA  
 1" = 100'  
 26 June 1964 JFS

1915  
 W 30



⊗  
 Probable position  
 of centre of  
 Anomaly  
 reported  
 by A. Allan



W 25 1900 14



→ 200'  
 to Rose  
 Creek