

MAGNETOMETER SURVEY

Sea Claim Group

Location: 132^o 55' W. long.
62^o 11' N. lat.

Reference: Claim Sheet 105 K2

WHITEHORSE MINING DIVISION

SWIM LAKES Y.T.

BY: John S. Brock
June 1965

DYNASTY EXPLORATIONS LIMITED

(N. P. L.)

328 MARINE BUILDING
355 BURRARD STREET
VANCOUVER 1, B. C.

June 17th, 1965

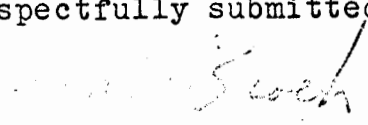
Mr. Frank McColl,
Mining Recorder's Office,
Whitehorse, Y.T.

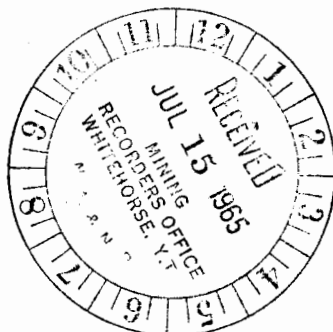
Dear Sir:

Submitted to you for the purposes of assessment work is the following report, Magnetometer Survey, Sea Mineral Claim Group. The total costs incurred for this geophysical survey are to be applied as a portion of the assessment work to hold previously stated mineral claims under section 53-2 of the Yukon Quartz Mining Act.

At this time we were unable to supply maps with the actual claim locations noted on all copies, you will be supplied with such maps as soon as possible.

Respectfully submitted,


John S. Brock



Magnetometer Survey
Sea Claim Group

TABLE OF CONTENTS

INTRODUCTION	1
General	1
Location and access	1
GEOLOGY	2
METHOD OF SURVEY	2
Grid System	2
Magnetometer Survey	3
TREATMENT OF DATA	3
INTERPRETATION OF RESULTS	4
General Observations	4
Quantitative Interpretation	4
CONCLUSIONS AND RECOMMENDATIONS	5
APPENDIX	
Appendix 1	Summary of Costs and Expenditures
Appendix 2	Affidavit Supporting Statement of Costs and Expenditures
Appendix 3	Personnel
Appendix 4	References Used
Appendix 5	Maps

INTRODUCTION

General

The magnetometer was employed as a method of geophysical survey on the Sea Claim Group from June to September 1964 by Dynasty Explorations Limited. It was hoped that magnetic surveys would prove useful in outlining anomalous zones indicative of subsurface mineralization as well as geological conditions masked by overburden. A Sharpe A3 magnetometer was used in order to measure the vertical component of the earth's magnetic field. The instrument is a portable, hand held magnetometer with a sensitivity of approximately 25 gammas per scale division, designed primarily for reconnaissance and mining surveys. The actual survey was conducted by Andrew Harman and William Barcaly, preparation of results was carried out by R.E.G. Davis and the subsequent report was written by John S. Brock, all were employees of Dynasty Explorations Ltd, who at this date hold the Sea claim group.

Location and Access

The claims lie in rolling glaciated terrain on the northeast side of the Pelly River Valley which occupies the Tintina Trench. The claim group is situated generally south of Swim Lakes (see key map), in the Whitehorse Mining Division. The area is heavily forested except for burned over areas such as on the southeast part of the Sea group. Spruce is the dominant species with birch occurring on the south-facing slopes and occasional pine on well drained ridge tops. Willow and dwarf Birch are widespread particularly in poorly drained or swampy areas. Slide alder is common on north facing slopes.

During the period which the area was surveyed access was by means of float equipped aircraft which are able to land on Swim Lake. Flight time from Whitehorse by Beaver Aircraft is approximately one

and one-half hours. At this time access to the property may be made by road from the junction of Moose Creek and the Pelly River.

GEOLOGY

Outcrops are very scarce, making up only a fraction of one percent of the claim group area which is generally covered by a mantle of glacial till varying in depth from a few feet to one hundred feet or more. The glacial trend is from east to west. Most outcrops are sericite to chlorite schist, isoclinally folded, with the foliation dipping gently to the north. Several outcrops of subporphyritic quartz diorite occur on the southeastern part of the Sea group. Outcrops of skarn containing pyrite, pyrrhotite, chalcopyrite, galena and sphalerite are found at three localities near the north boundary of Sea 69, on Sea 1 Fraction and in the southwestern corner of Sea 40 mineral claims. Lenses of flat-lying sulphide mineralization, primarily pyrrhotite, lie on or near the bedrock surface for at least 2,000 feet to the east of these mineralized skarn outcrops.

METHOD OF SURVEY

Grid System

Base and tie lines were cut over the Sea (Southeast) claim group by contracted line cutters from Ross River, Y.T. Survey control was maintained by picket and chain methods with systematic and periodic checks by Brunton Compass. Much of the grid was later surveyed by stadia. A total of 114,000 feet of line was cut.

Base stations were established on each of the base lines at intervals of 200 feet. The magnetometer survey was conducted on cross lines laid out by pace and compass with terminal points of each cross line corresponding to the 200 foot stations on each base line.

The survey was carried out over lines of 200 foot spacing with readings taken at intervals of 100 feet on each line. In areas of no magnetic interest the line spacing was increased to 400 feet and the station interval on each line to 200 feet.

The same grid system was used over the northeast section of the Sea (North) claims, only a 400 foot line spacing with 200 foot station interval was maintained throughout the survey. The majority of the magnetometer readings on the Sea (North) claims were taken over Swim Lake on the ice before breakup.

Magnetometer Survey

Diurnal variation and instrument drift were eliminated as much as possible by the following method: Prior to actual survey the base lines were run with the magnetometer with control on diurnal variation made by 'loopin' methods. After reading of the base stations was completed each value was corrected for diurnal. During the course of actual survey base stations were checked before and after each cross line was completed, intermediate check stations were set up at 1,000 foot intervals on each cross line and in all cases the time at which readings were taken was recorded. The diurnal variation for each cross line with respect to time was graphed and the corresponding total correction for each station was noted and subsequently each station adjusted to its apparent true value.

TREATMENT OF DATA

All field readings were recorded directly as read from the vernier of the magnetometer. Conversion to gammas was carried out by means of a "vernier division-gamma value conversion curve", supplied by the instrument's manufacturer for the particular magnetometer used during the survey. Values were then corrected for diurnal by the method mentioned above. An absolute background of 50,000 gammas was adopted.

After conversions and corrections were carried out, all gamma values were plotted on a base map in accordance with the location of the station at which each was obtained. The results were then contoured with iso-magnetic contours using an interval of 100 gammas.

INTERPRETATION OF RESULTS

General Observations

The area of magnetic interest is comprised of irregular magnetic 'highs' which forms an anomaly approximately 8,000 feet long and 200 to 1,100 feet wide. The anomaly has a general strike of 290° . The magnetic 'highs' within the anomaly vary from 1,000 to 2,200 gammas above an assumed background of 1,400 gammas. Parts of the anomaly are broken by magnetic 'lows', which appear to trend in a north to northeast direction. To the west the magnetics are of a lower intensity and assume a broader form. In general the magnetic 'highs' trend east-west, and four north-east linears strike north-easterly across the general anomalous zone at different intervals throughout its strike length.

Quantitative Interpretation

The causative bodies leading to magnetic 'highs' strike east-west and appear to be faulted by a series of northeast, right-hand faults. The resulting structure as shown magnetically has a general trend of approximately 290° . The location of the faults has been interpreted from magnetic linears and magnetic 'lows'.

The individual 'highs' on the central and eastern parts of the anomaly are of a localized and definite nature and appear to be caused by lenses of sulphide mineralization, as verified by drilling. DDH 2 and DDH 3 (see Sea Diamond Drill Results) were drilled on magnetic highs and intersected massive sulphides, six to eight feet thick at 20 and 38 feet from surface respectively.

The sulphide mineralization consisted largely of pyrrhotite. Susceptibility calculations based on the total pyrrhotite content verify the anomaly relief obtained over these two drill sites.

The best sulphide intersections were obtained on magnetic 'highs' east of the magnetic 'lows' which have been interpreted as fault trends. The most easterly fault trend is in close proximity to known mineralized outcrops which dip northerly under a capping of rusty altered schist; the schist is non-magnetic. As of yet this eastern section of the magnetic anomaly has not been drilled.

CONCLUSIONS AND RECOMMENDATIONS

Magnetic surveys in this area suffice as a general guide to structure and mineralization. It is important to note the location of the northeast-trending faults and the proximity of magnetic anomalies on their eastern limits. Results obtained from some of the drill holes give fairly conclusive evidence that the majority of the magnetic anomalies are due to near-surface lenses of sulphide mineralization.

It is recommended that further drilling be carried out on the eastern end of the claim group since there is surface mineralization in conjunction with a magnetic anomaly bordering an area of magnetic 'lows' which has been interpreted as a major fault structure. The magnetic anomalies are similar in character to those of Vangorda Mines.

As the sulphide mineralization known to date is relatively close to surface, further information could be gained by use of electromagnetic surveys.

Appendix

Appendix 1

Summary of Costs and Expenditure, Magnetometer Survey, Sea Claims

<u>Linecutting</u>	a) Grid	i) footage	114,000	
		ii) contract	\$7/1000	
		cost		798.00
	b) Travel time			
		i) 4 men @ \$12/day		
		1 day to Ross River		48.00
		ii) local mobilization		
		12 man days at \$18/day		216.00

Magnetometer Survey

	a) operator	\$14.50/day	
	b) assistant	12.00/day	
	c) time		
		i) operator 61 days	
		ii) assistant 17 days	
		cost	1,088.50
	d) camp cost \$6/day,	78 days	468.00
	e) supervision		200.00
	f) report		<u>200.00</u>
	Total		3,018.50

Appendix 2


AFFIDAVIT Supporting Statement of Costs and
Expenditure, Magnetometer Survey,
Sea Mineral Claim Group

I, John S. Brock, of West Vancouver, British Columbia,
have compiled the statement of costs (Magnetometer Survey,
Sea Mineral Claim Group).

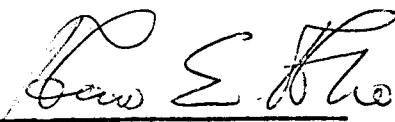
I make oath and say that to the best of my knowledge
and belief, the statement of costs as presented in this
report, is both true and an accurate representation of cost
to be applied for as a portion of the assessment work to
hold the Sea Mineral Claims for a previously specified
period of time.



John S. Brock



A commissioner for taking
affidavits, in and for the
Yukon Territory



Witness (signed in the
presence of commissioner
of oaths)

Appendix 3

Personnel

- | | |
|-------------------------|--|
| 1) Geophysical Operator | Andrew Harman,
Salmo, B.C. |
| 2) Assistants | Scott Cameron,
Whitehorse, Y.T.

Bill Barclay,
Haney, B.C. |
| 3) Linecutters | Jack Ladue,
Charlie Olie,
Alex Shorty,
Robert Etzel,
all of Ross River, Y.T. |
| 4) Supervision | R.E.G. Davis,
Vancouver, B.C. |
| 5) Final Report | John S. Brock,
West Vancouver, B.C. |

Appendix 4

References Used

Geology and Mineral Deposits of the Vangorda District,
Central Yukon,

a private report to Dynasty Explorations Limited
by John F. Fairley, 1965

Preliminary Report on the Geological Interpretation,
Rotary Drilling Results,

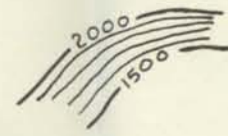
a private report to Dynasty Explorations Limited,
by John F. Fairley, 1965

Consultants Report to Dynasty Explorations,

by Dr. D.D. Campbell, 1964

SEA CLAIM GROUP SOUTHEAST MAGNETOMETER SURVEY

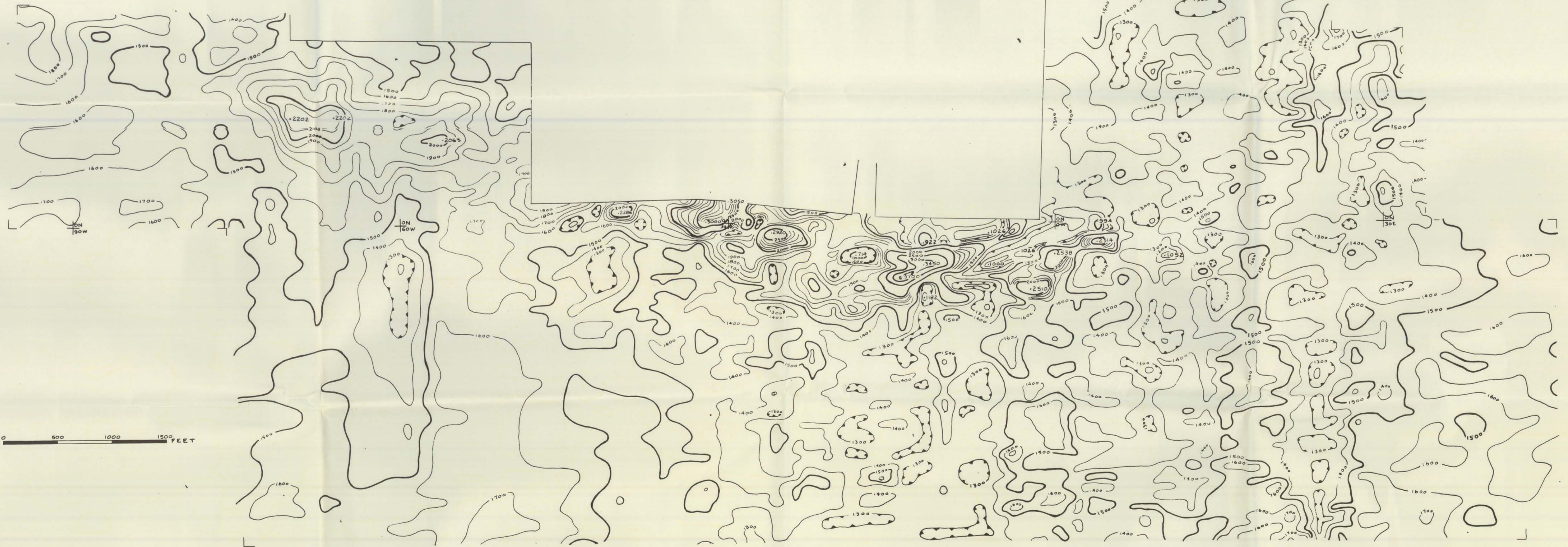
CONTOUR INTERVAL - 100 GAMMAS



CONTOURED BY - R.E.G. DAVIS

ABSOLUTE BACKGROUND - 50,000 GAMMAS

DATE - JAN. 28, 1964



SCALE 0 500 1000 1500 FEET

SEA CLAIM GROUP SOUTHEAST

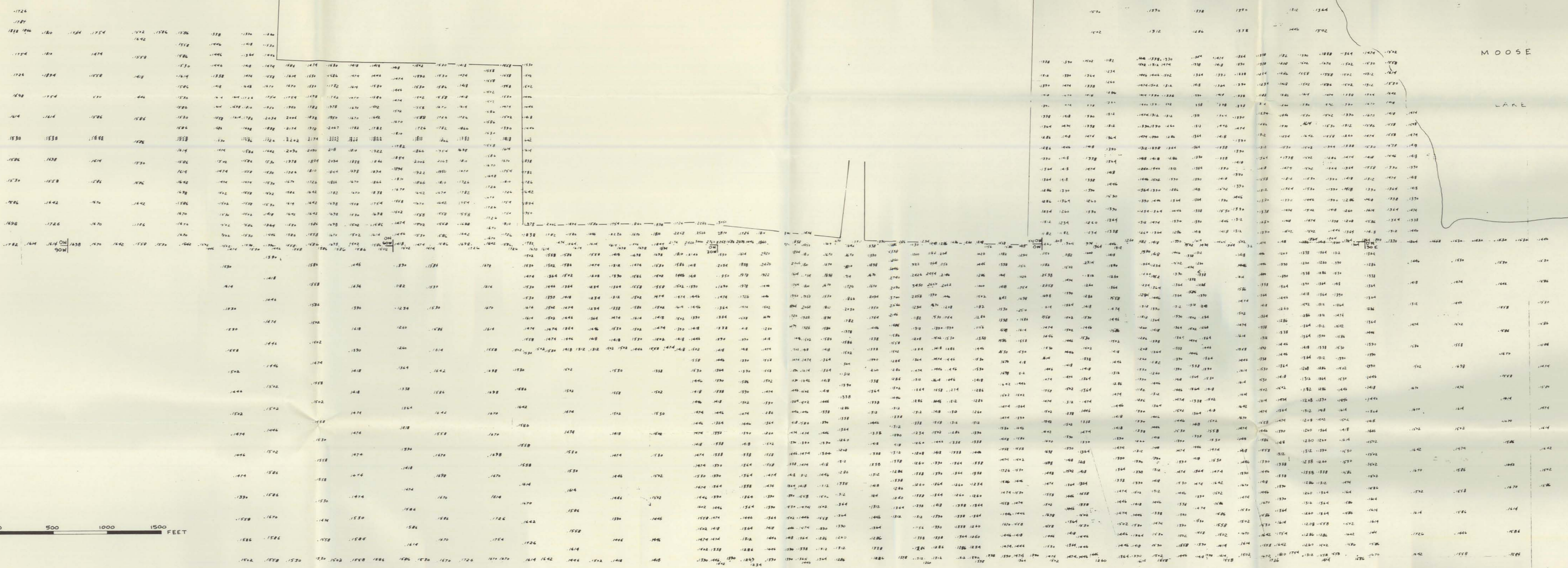
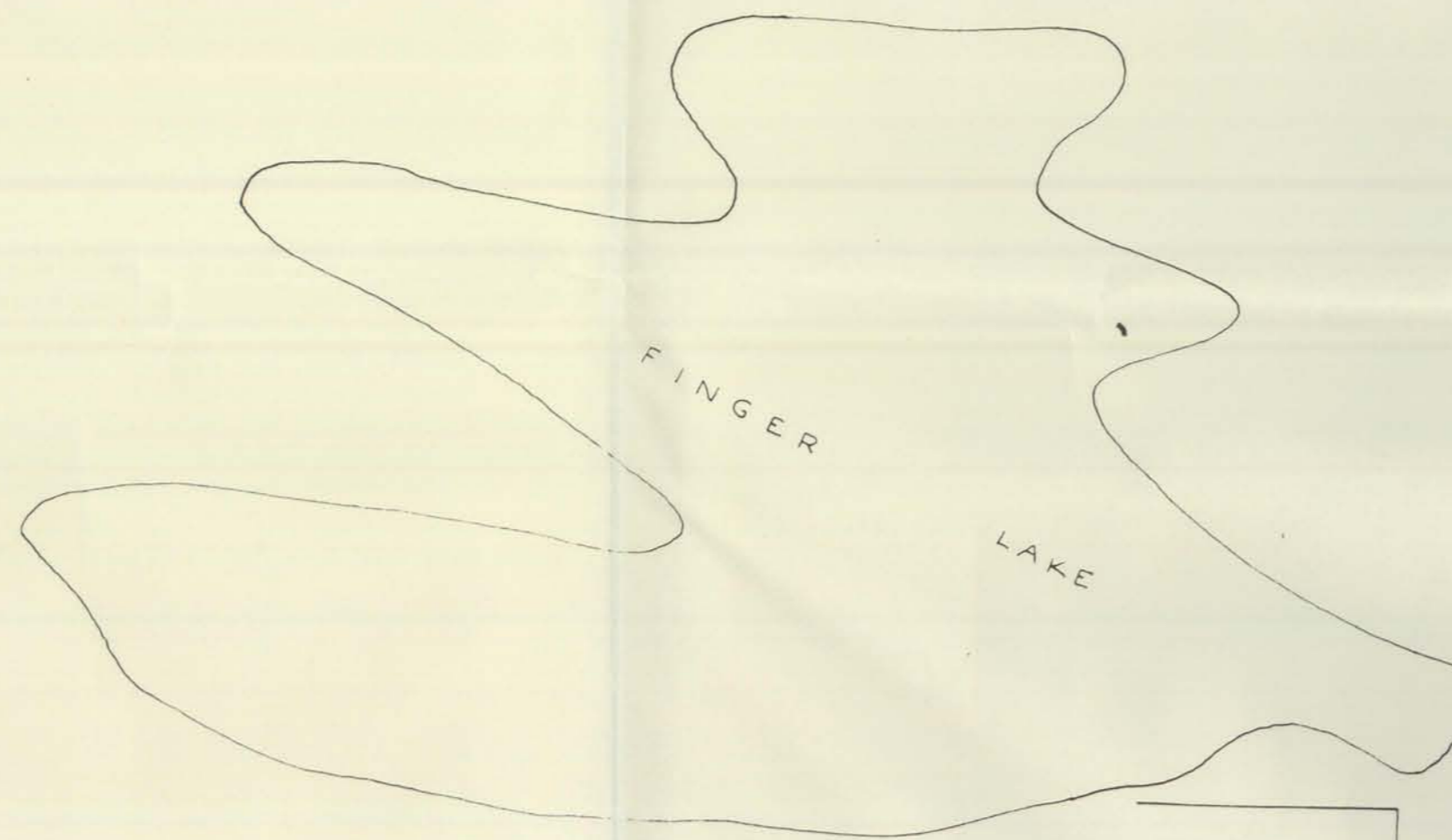
MAGNETOMETER SURVEY

GAMMA VALUES

ABSOLUTE BACKGROUND 50,000 GAMMAS

SURVEY BY: A. HARMAN
W. BARCLAY
S. CAMERON

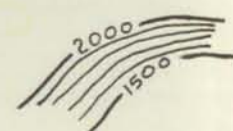
JUNE, JULY, AUG. 1964



SCALE 0 500 1000 1500 FEET

SEA CLAIM GROUP SOUTHEAST MAGNETOMETER SURVEY

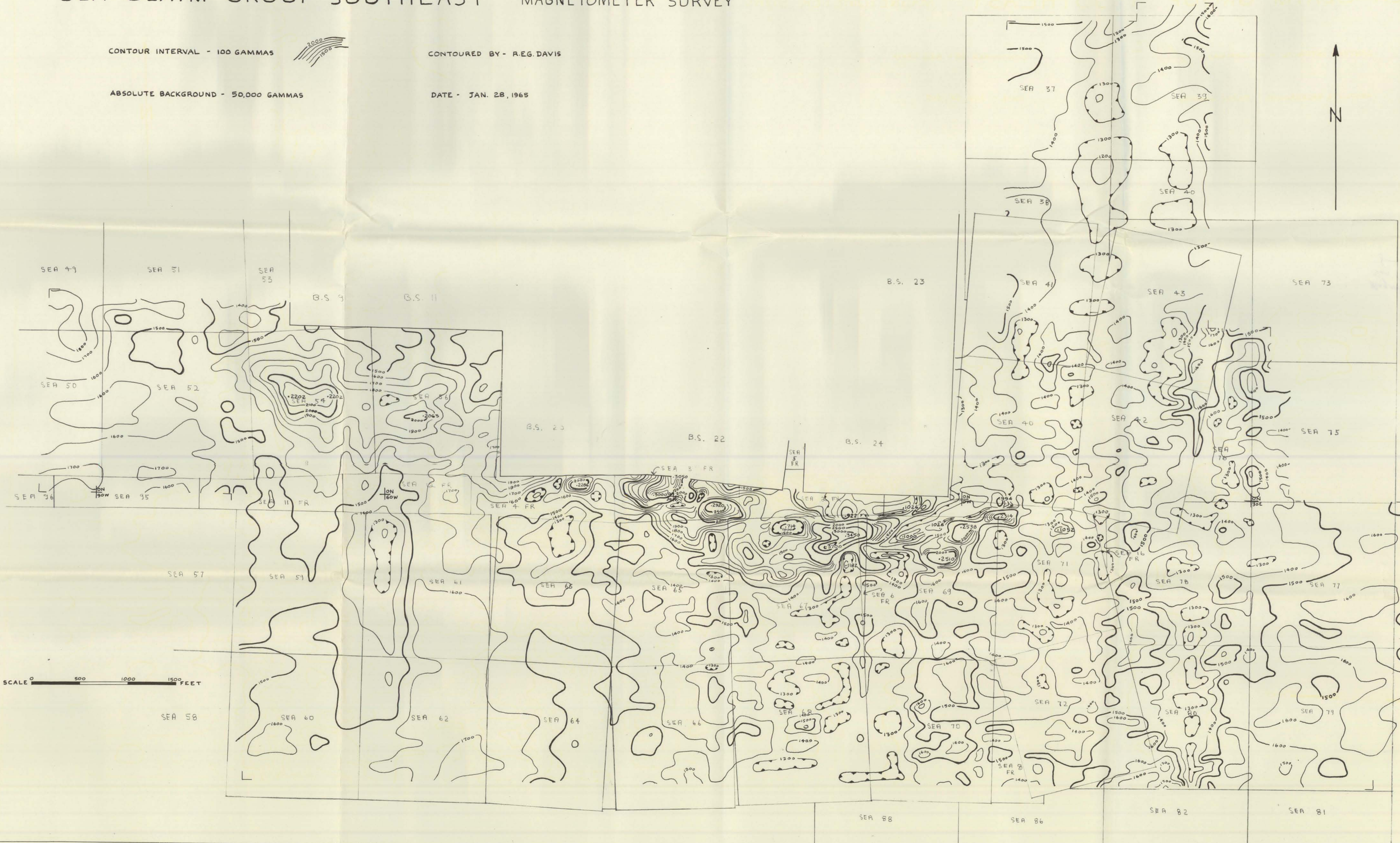
CONTOUR INTERVAL - 100 GAMMAS



CONTOURED BY - R.E.G. DAVIS

ABSOLUTE BACKGROUND - 50,000 GAMMAS

DATE - JAN. 28, 1965



SCALE 0 500 1000 1500 FEET

