

This report has been examined by the Geological Evaluation Unit and is recommended for consideration to be considered at an approval of \$8,000.00

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Acting Mining Engineer

Considered as representation work under Section 12 (3) Yukon Quartz Mining Act.

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Commissioner of Yukon Territory

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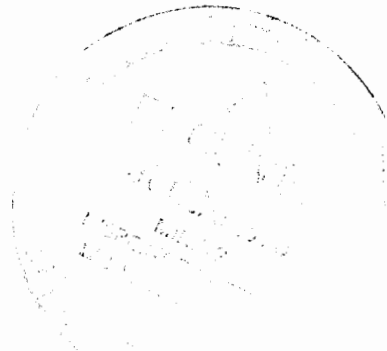
26935 - 100TH AVENUE  
WHONNOCK, B.C.

CANADA



SUMMARY

Magnetic and electromagnetic surveys over part of the Seatu Claims, Y.T., have outlined a zone of coincident mag em response, whose economic significance should be determined by drilling. A second conductor, on the edge of a strong mag anomaly, is also thought to be significant. Three other conductive zones were partially defined, and additional geophysical work is recommended before these can be properly evaluated. It is also thought that a gravity survey would be of great value in assessing the potential of the property.



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## 1. INTRODUCTION

During the period from January 23 to February 2, 1978, magnetometer and electromagnetic surveys were carried out over part of the Seatu Claims on behalf of Nevin, Sadlier-Brown, Goodbrand Ltd.

### Crew:

J. Ager - party chief, geologist, Vancouver, B.C.  
A. Dryver - operator, Vancouver, B.C.  
J. Hill - operator, Vancouver, B.C.  
J. MacDonald - cook, Ross River, Y.T.

Claims: Seatu 1-20 (YA11044-YA11063)

Watson Lake Mining Division, Y.T. (Figure 2)

The property is located about 35 miles south of Ross River (Figure 1) and is accessible via helicopter, or by a rugged summer road. The claims lie mostly within the Seagull Creek valley, at an elevation of about 4000' to 5000' above sea level. The terrain is in part flat and swampy, and in part hilly and forested.

## 2. GEOLOGY

Because of extensive overburden cover, very little is known about the geology. The western section of the property appears to be underlain by clastic sediments, carbonates and volcanics of Proterozoic, Lower Cambrian

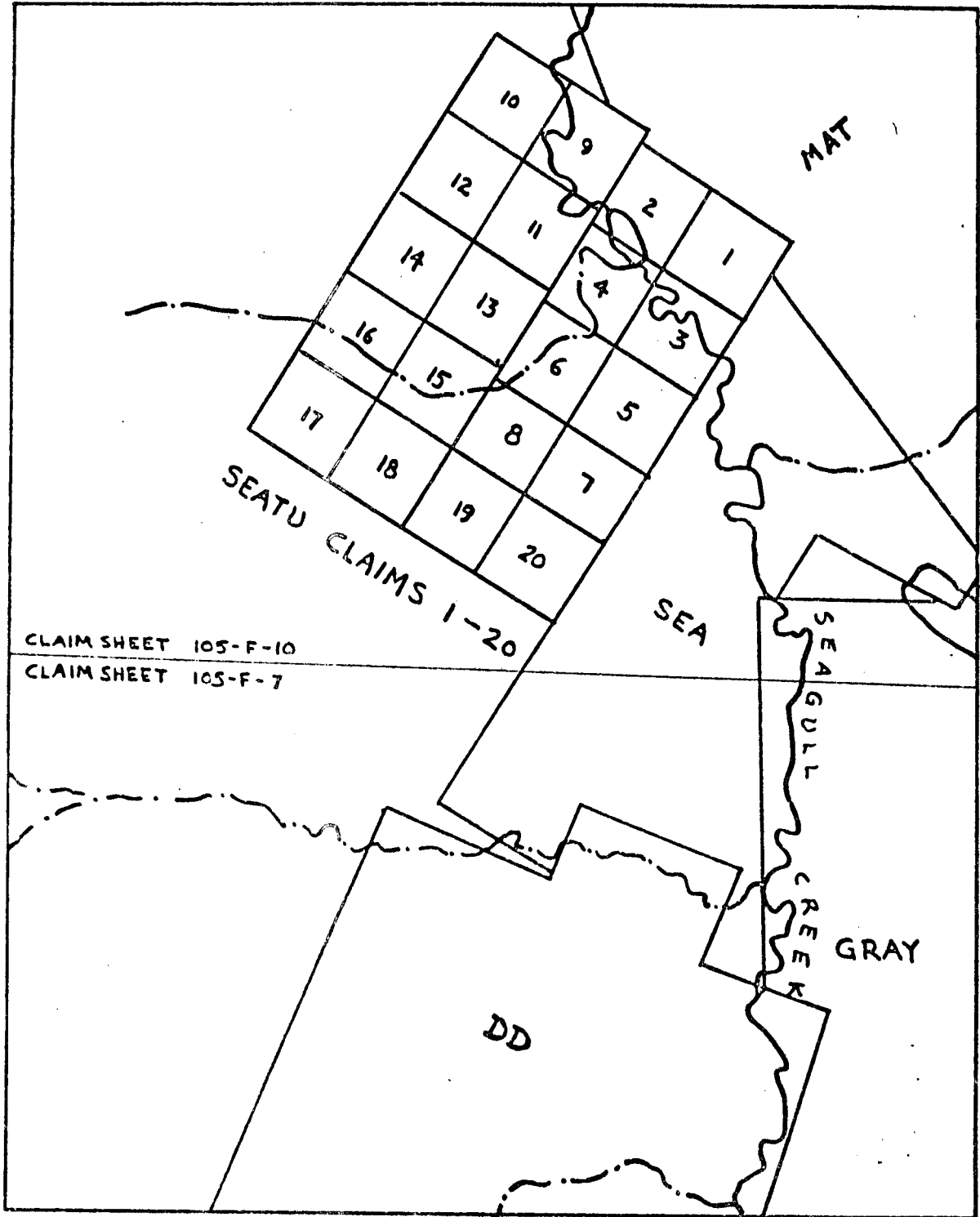
Suite 503 - 134 Abbott St., Vancouver, B.C. Canada V6B 2K4 (604) 683-8271



Claim Group Location Map : Seatu Claims

*Seatu*

Fig. 1



Claim Map: Seatu Group

*[Handwritten Signature]*

Fig. 2

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age. These are overlain in part by Siluro-Devonian dolomites. Mississippian felsic volcanics occur in the eastern part of the claims, and their extent to the west is not known. The intent of the geophysical survey was to detect the presence of massive Pb-Zn-Ag-Cu sulfides within Mississippian rocks which may underlie part of the survey area.

### 3. SURVEY

The instrumentation used in the survey consisted of a McPhar M700 vertical field fluxgate magnetometer, and a Crone CEM Shootback system. The magnetic data was drift corrected using values established by double running the baseline. Electromagnetic measurements were made using the horizontal shootback orientation, and a frequency of 1830 Hz. In order to obtain a good depth of penetration, a coil separation of 100 m. was used in the creek valley on lines 6N, 4N, 2N, 00, 2S. On lines 4S, 6S, 8S, 10S, 12S, weak signals necessitated the use of a 50 m. coil separation. This is reasonably acceptable in view of the fact that the latter lines are in a region of thin overburden cover.

The first part of the survey was carried out in fair winter weather. In the latter part however, severe cold (up to -50 degrees F) seriously hampered the use

of geophysical instruments. As a result, the mag survey covers only about half the grid, and although the whole grid was surveyed with em, only a minor amount of detail could be carried out.

#### 4. MAGNETIC RESULTS

The mag data is shown in Figure 3. Correlation to previous mag work, on lines that were repeated, is excellent. There are three anomalous zones present. The first, anomaly A, is located on line 2S at about 10W, and displays an amplitude of about 8000 gammas above background. The second, anomaly B, at about 17W on line 2N, has an amplitude of about 4000 gammas. Both of these anomalies have an areal extent of about 300m. by 300m., and are due to localized concentrations of magnetic mineralization at a depth of approximately 50-100m. The third anomalous zone, anomaly C, has an amplitude of 6000 gammas, and is located on line 6N at about 13W. Additional data is needed to the north in order to know the extent and nature of this response.

#### 5. EM RESULTS

The em tilt angle data is shown in Figure 4. There are several conductors.

### Conductor 1

This anomaly, on the eastern end of lines 0, 2N, 4N, trends northeasterly, is about 100m. wide and is open to the northeast. It occurs on the northeast flank of mag anomaly A, thus indicating that the source of the mag response is probably magnetite rather than massive pyrrhotite. The conductor is flat lying or gently dipping, and could be due to massive lead, copper sulfides, or to a carbonaceous horizon.

### Conductor 2

The second, also flat lying conductor, is located on lines 2N and 00, at 16W and 14W respectively. It seems to be part of, or connected to a larger zone of conductivity which is open to the west on lines 00, and 4N. On line 2N this conductor is exactly coincident with mag anomaly B. These results could be explained either by a massive pyrrhotite body, or by magnetite associated with massive lead, copper sulfides. The pervasiveness of conductivity in this region, as well as the large negative tilt angles, may be indicative of the presence of graphite, especially on lines 00 and 4N.

Detail over conductors 1 and 2, with 150m. coil separation, indicates good depth extent and also that the host rock

is somewhat conductive.

#### Conductor 3

A zone of conductivity is defined in part on line 10S, at about 21W. The source is probably flat lying, but the nature and extent of this anomaly cannot be ascertained without additional em and mag data. In view of the presence of a copper showing mapped in this area, this conductor is of definite interest.

#### Conductor 4

A minor, low amplitude conductor was detected on line 6N, at about 11W, on the eastern edge of mag anomaly C. Here also, additional data is required before a proper interpretation can be made.

#### Conductor 5

This anomaly is identified by a strong positive tilt angle, and is located at the west end of line 6N, in a region of background mag values. Normally this type of response is indicative of near surface, steeply dipping sources. But again, as was the case with conductors 3 and 4, more data is required.

## 6. RECOMMENDATIONS

It is recommended that conductor 2, which is coincident with mag anomaly B, be tested with a vertical drill hole at 2N, 16W to a depth of 500 ft., in order to determine the cause of em and mag responses.

Additional mag and em work is also recommended so that the extent and nature of conductors 1,3,4 and 5 be better defined.

Depending on the results of the above recommendations, a gravity survey is also recommended, in view of the fact that a massive sulfide deposit would definitely display a gravity signature.

Respectfully submitted,



February 27, 1978  
Whonnock, B.C.

Mauro G. Berretta, M.Sc.  
Geophysicist



FIG. 3

MAGNETIC MAP	
SEATU CLAIMS WATSON LAKE M.D., Y.T.	
RELATIVE VERTICAL FIELD CONTOUR INTERVAL 1000 GAMMAS SCALE - 1" = 100 M.	
TO ACCOMPANY REPORT BY: <i>J. Berretta</i>	
MAURO G. BERRETTA	FEB. 1978

22W | 20W | 18W | 16W | 14W | 12W | 10W | 8W  
 17 | 18 | 19 | 20

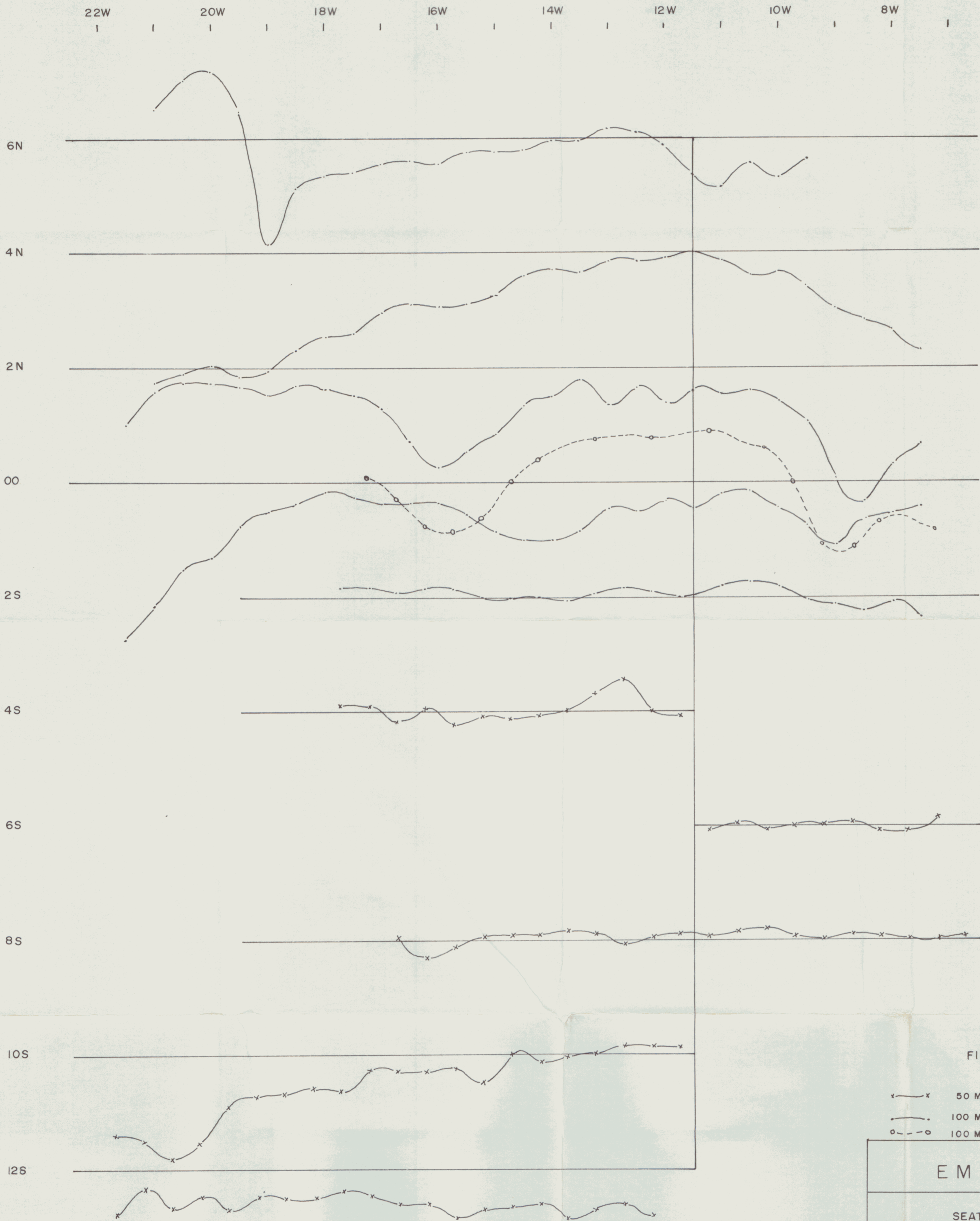


FIG. 4

x — x 50 M COIL SEPARATION  
 — 100 M " "  
 o - - o 100 M " "

E M PROFILES	
SEATU CLAIMS	
WATSON LAKE M.D. Y.T.	
GEM HORIZONTAL SHOOTBACK — 1830 HZ	
VERTICAL SCALE 1" = 20°	
HORIZONTAL SCALE 1" = 100 M	
TO ACCOMPANY REPORT BY: <i>Berretta</i>	
MAURO G. BERRETTA	FEB. 1978