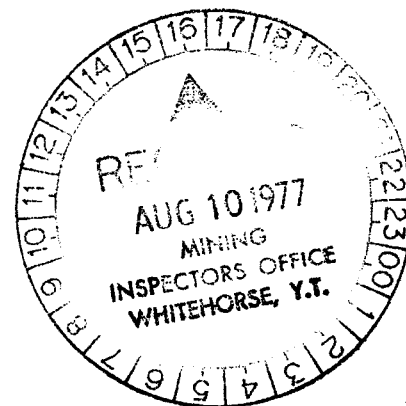


GEOLOGICAL, GEOCHEMICAL AND GEOPHYSICAL REPORT

ANISE CLAIM GROUP

Watson Lake Mining District

Yukon Territory



N.T.S. 105 F - 10

Latitude: $61^{\circ} 40' N$

Longitude: $132^{\circ} 45' W$

by

P. DEAN

CYPRUS ANVIL MINING CORPORATION

July 20, 1977.

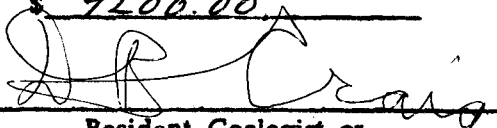
Field Work Done from June 8, 1977 - June 30, 1977.

690 200

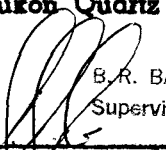


This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of

\$ 9200.00


Resident Geologist or
~~Resident Mining Engineer~~

Considered as representation work under
Section 53 (4) Yukon Quartz Mining Act.


B. R. BAXTER
Supervising Mining Recorder


for Commissioner of Yukon Territory

TABLE OF CONTENTS

	<u>Page</u>
LIST OF CLAIMS	
INTRODUCTION	1
SUMMARY AND CONCLUSIONS	1
GEOLOGY	2
TABLE OF FORMATIONS	3
DISCUSSION OF FORMATIONS	4
STRUCTURAL GEOLOGY	5
GEOCHEMISTRY	6
GEOPHYSICS	7
PROPOSED EXPLORATION	8

FIGURES

Figure 1 - in pocket	- Location Map	- 1" : 4 miles
Figure 2 - bound in report	- Claim Map	- 1" : ½ mile
Figure 3 - in pocket	- Geology	- 1" : 400'
Figure 4 - in pocket	- Geochem Values	- 1" : 400'
Figure 5 - in pocket	- Radem VLF Values	- 1" : 400'
Figure 6 - in pocket	- Radem VLF Profiles	- 1" : 400'
Figure 7a - in pocket	- C.E.M. Values	- 1" : 400'
Figure 7b - in pocket	- C.E.M. Contours	- 1" : 400'
Figure 8a - in pocket	- Horizontal Loop Values	- 1" : 400'
Figure 8b - in pocket	- Horizontal Loop Profiles	- 1" : 400'
Figure 9 - in pocket	- Magnetic Survey Values	- 1" : 400'
Figure 10 - in pocket	- Magnetic Survey Contours	- 1" : 400'

APPENDICES

~~Appendix I~~	~~List of Personnel and Dates Worked on the Claims~~
~~Appendix II~~	~~Summary of Costs~~
~~Appendix III~~	~~Affidavit Supporting Summary of Costs~~
~~Appendix IV~~	~~Vouchers Supporting Summary of Costs~~

LIST OF CLAIMS

<u>Claims</u>	<u>Grant Nos.</u>	<u>Recording Dates</u>
ANISE 1 - 48	YA 274 - YA 321	July 26, 1976
ANISE 49 - 64	YA 601 - YA 616	August 23, 1976
ANISE 65 - 72	Staked June 26, 1977	

GEOLOGICAL, GEOCHEMICAL AND GEOPHYSICAL REPORT

ANISE CLAIM GROUP

INTRODUCTION

The ANISE Claim Group was staked during 1976, as a result of a regional prospecting and geochemical program which discovered geochemical anomalies and mineralized float occurrences in Seagull Valley. During 1976 a picket grid was established on the property and soil sampling was carried out. More soil sampling, geologic mapping, and geochemical surveys have been carried out during June of 1977. Eight additional claims, ANISE 65 to 72, were added to the claim group on June 26th, making a total of 72 contiguous ANISE claims in good standing.

The claim group lies in the bottom of Seagull Valley, surrounding and south of the southern-most Seagull Lake, at approximately $61^{\circ}40'N$ x $132^{\circ}45'W$, on mapsheet 105 F-10. Access is normally accomplished by float plane or helicopter, but during dry weather the claims can be reached with difficulty by 4 wheel-drive truck via a tote road connecting with the South Canal Road at Groundhog Creek. This road was not passable during the course of the investigations here reported, and the work was supported by helicopter based at Ross River.

SUMMARY AND CONCLUSIONS

During June of this year geologic mapping, more detailed soil geochemistry, and geophysical surveys were completed on the ANISE Claim Group. The soil sampling has enhanced the anomalies discovered last year. Non-coincident magnetic and conductivity anomalies have been outlined by the geophysical work. These features can be explained by the known geology on the claim

group, but this does not rule out the possibility that a massive sulfide deposit is present on the claims.

Additional geophysical work in the form of I.P., gravity, or Turam E.M. will probably be needed before drill targets can be identified on the Claim Group.

GEOLOGY

Few outcrops occur on the ANISE claims, and those that do are poorly distributed, and the contacts between the various rock types which occur on the claims are invariably covered by overburden. The stratigraphic and structural relationships between units are therefore completely conjectural and the geologic map presented (Figure 3) is really little more than an outcrop map. The tentative affiliations and ages of rock units exposed on the Claim Group are based on correlations with similar-looking formations better exposed off the property. Keeping in mind these limitations, the following table of formations summarizes the stratigraphic column which outcrops on the ANISE.

TABLE OF FORMATIONS

MISSISSIPPIAN ? Relative stratigraphic position of various units within Mississippian is unknown.	<u>SYENITE</u> :	brownish white fine to medium-grained intrusive stock or large dyke.
	<u>ANDESITE</u> :	medium green massive flow breccia or agglomerate.
	<u>SHEARED VOLCANIC</u> :	nondescript, strongly sheared, grey green metavolcanic, acid to intermediate composition.
	<u>"QUARTZITE"</u> :	sheared, variably pyritic to sericitic siliceous rock, could be sheared argillaceous chert or silicified volcanic.
	<u>BLACK PYRITIC PHYLLITE</u> :	black graphitic shale to phyllite with up to 10% pyrite. Outcrops poorly and weathers very recessively.
ASKIN GROUP ? DEVONIAN	<u>DARK GREY PHYLLITE</u> :	medium to dark grey, lustrous phyllite, includes minor pale grey quartzite, grey banded argillite, and medium grey limestone with phyllitic partings.
	CONTACT RELATIONS UNKNOWN ---	
	<u>DOLOMITE</u> :	massive, buff weathering light grey dolomite
KECHIKA FORMATION CAMBRO-ORDOVICIAN	CONTACT RELATIONS UNKNOWN ---	
	<u>LIMY PHYLLITE</u> :	silvery grey, buff weathering, calcareous phyllite.
	<u>MARBLE</u> :	sugary white recrystallized limestone.

DISCUSSION OF FORMATIONS

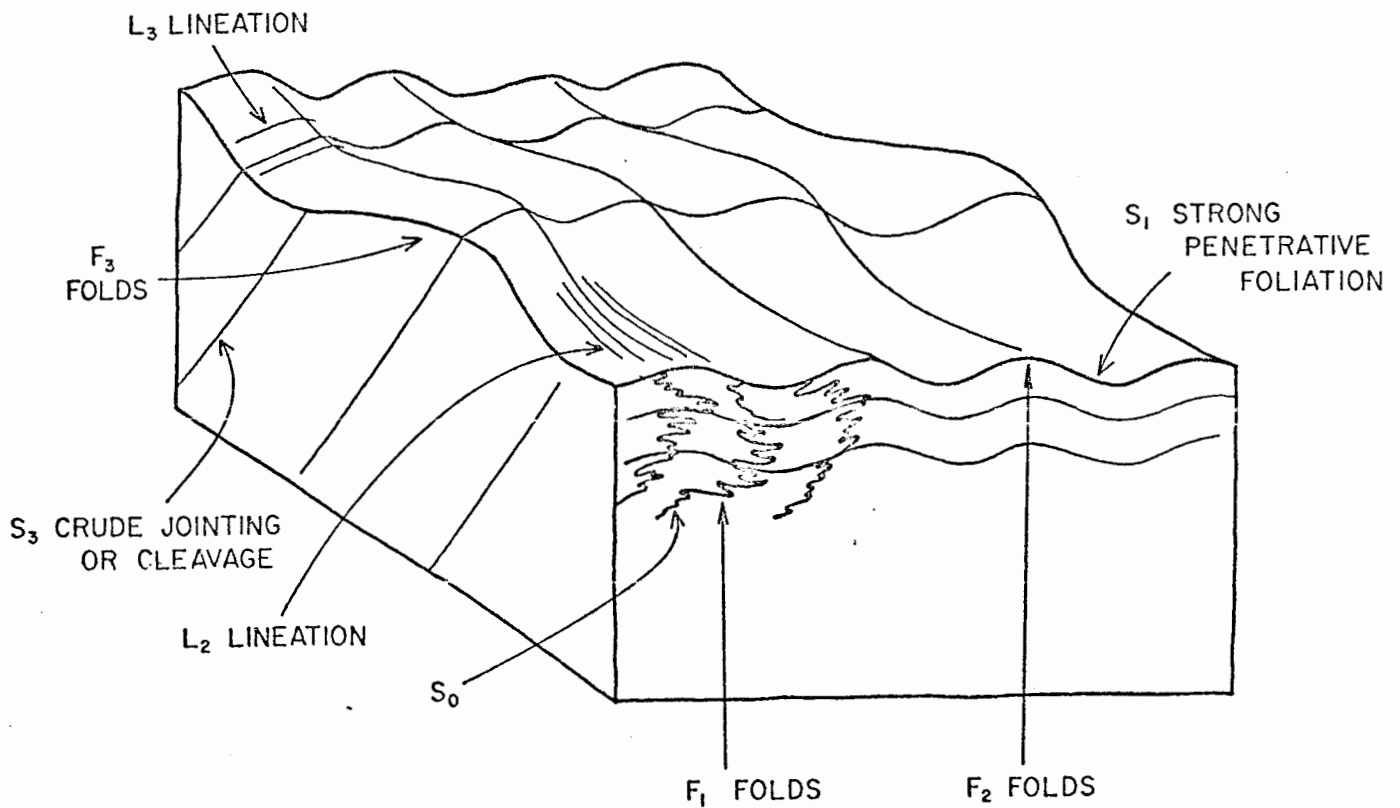
Limy phyllites typical of the Kechika Group occur west of Seagull Creek on the ANISE Claims, and underlie extensive areas both to the west and the east of the claim group. A single bed of sugary white marble, not normally typical of the Kechika, lies interbedded with these phyllites in a creek canyon.

Stratigraphically and topographically overlying these limy phyllites, massive buff weathering dolomites underlie the highest parts of the hills west of the Seagull Valley. These dolomites probably belong to the Askin Group of Devonian Age, but somewhat similar dolomites are known in the Kechika Formation as well, and these dolomites may be Cambro-Ordovician in age. The contact between these dolomites and the underlying limy phyllites is not exposed in outcrop.

A variety of rock types outcrop on the valley floor, and all of them resemble rock types mapped elsewhere as units within a volcanic-shale-chert association tentatively assigned to the Mississippian. The volcanic members of this assemblage host mineralization on the MM, Bnob, and Chzerpnough claims, and the shale members host stratiform barite occurrences in the Pelly Mountains, and stratiform barite and base metal occurrences in Selwyn Basin. The various lithologies which occur on the ANISE claims cannot be arranged in any stratigraphic sequence, since all occur as isolated small outcrops. The lithologies are described fairly completely in the Table of Formations, and little further information can be added here. The black pyritic phyllite unit is of interest since it contains abundant pyrite at the one point where it suboutcrops, and it may be the host unit for the scattered occurrences of mineralized float on the property. The "quartzite" unit is a siliceous rock which may have been derived from an argillaceous chert, or a siliceous volcanic, or perhaps it may even result from the metasomatic silicification of the "grey-green sheared volcanics" around fault zones in the valley bottom.

STRUCTURAL GEOLOGY

Outcrops of grey phyllite along the creek contain evidence of at least two, and probably three phases of deformation. These are illustrated in the following schematic sketch of structures in outcrop at 36S x 24W on the grid:



The strongest fabric in the rock appears to be an S_1 axial plane cleavage. The F_2 folds are quite irregular and may simply be small lineation features related to the intersection of the bedding planes with the S_1 cleavage, in which case the F_3 folds would become F_2 's and the rocks would only have been

subjected to two periods of deformation. The few phyllite outcrops provide only enough information to let us know that the rocks are structurally complex, without letting us know either the position or magnitude of any major folds which may occur on the property.

There is not direct evidence either for the presence of any faults on the property, although the interpretation of stratigraphy requires that some sort of fault be present between the Mississippian rock types and the Kechika Formation limy phyllites. Quartz vein float with pyrite and arsenopyrite occurs sporadically on the claims and may be derived from vein material deposited in faults.

In summary, both stratigraphically and structurally the geologic picture available on the ANISE claims is very sketchy and incomplete, and will remain so unless a substantial amount of subsurface information is obtained through drilling.

GEOCHEMISTRY

Almost the entire claim group was soil sampled in 1976 with samples spaced 200 feet apart taken on lines spaced 800 feet apart. This year we closed in the sample spacing to 100 feet on lines spaced 400 feet apart in some of the more important anomalous areas. The results have been added to the geochemical values map drafted in 1976 (Figure 4).

A total of 187 samples were taken on the grid during 1977, and these samples were analysed in the same manner as in the previous year: after sieving to yield a minus 80 mesh fraction, the samples were subjected to a nitric-perchloric extraction and were analysed by atomic absorption methods. The field methods also remained the same, with the sample being taken from the B or B+C soil horizons. The analytical work was carried out by Acme Analytical Laboratories Ltd., at their laboratory in Ross River.

All anomalous zones discovered on the grid last year have been confirmed

and enhanced by the more detailed sampling carried out this year. In some cases these soil anomalies can be related to sulphide float boulders, in other cases the geochemistry originates from an unknown source.

GEOPHYSICS

The entire ANISE grid was covered by magnetic surveys and VLF electromagnetic surveys, and the resulting anomalies were confirmed and detailed with shoot-back and horizontal loop E.M. methods. Line spacing was closed to 400 feet over anomalies.

The Radem VLF survey, (Figure 5 (Values) and Figure 6(Profiles), indicates the presence of a strong conductor in the northeast corner of the grid. This conductor begins at a suboutcrop of black pyritic phyllite on Line 8S, and is probably tracing this graphitic unit. The Crone C.E.M. shootback E.M. method over this same area (Figure 7) indicates a much broader anomaly which is probably detecting the phyllite unit as a whole, while the VLF is picking up only the most graphitic horizon within it. Because of the sloping terrain, horizontal loop E.M. (Figure 8) could only be used on a few of the lines over this anomaly. Where it could be done successfully the horizontal loop confirms that the Radem anomaly is a bedrock conductor, not conductive overburden, and suggests a narrow, steeply dipping structure. The orientation of this conductor conforms closely with the major foliation in the rocks.

Elsewhere on the grid only small, isolated conductive features were detected by the VLF survey. These can rarely be correlated from one line to the next. The C.E.M. shootback survey indicated broad diffuse anomalies wherever it was done over the phyllite units, and does not differentiate any sulphide conductors within the phyllites.

The magnetic survey (Figure 9 (Values), Figure 10 (Contours), indicates the presence of some major anomalies which are not coincident with the E.M. anomalies. These anomalies undoubtedly result from magnetite concentrations within the volcanics which underlie portions of the claim group, since they

are much too strong to have resulted from pyrrhotite. Magnetite bearing volcanic float has been found on the property. Some of the more subtle magnetic features detected by the survey could result from pyrrhotite mineralization within the phyllites, but even these features correlate poorly with the E.M.

PROPOSED EXPLORATION

The work completed on the claims up to now has proven the presence of sulphide float boulders, erratic but significant soil geochemical anomalies, and non-coincident magnetic and E.M. anomalies. Unfortunately, none of these various features fit well enough together up to now to provide a clearly defined drill target. More diagnostic geophysical work in the form of Turam E.M., I.P., or Gravity may help to refine the geophysical picture sufficiently that one or more drill sites can be selected.

Respectfully submitted,



PETER DEAN

July 20, 1977.

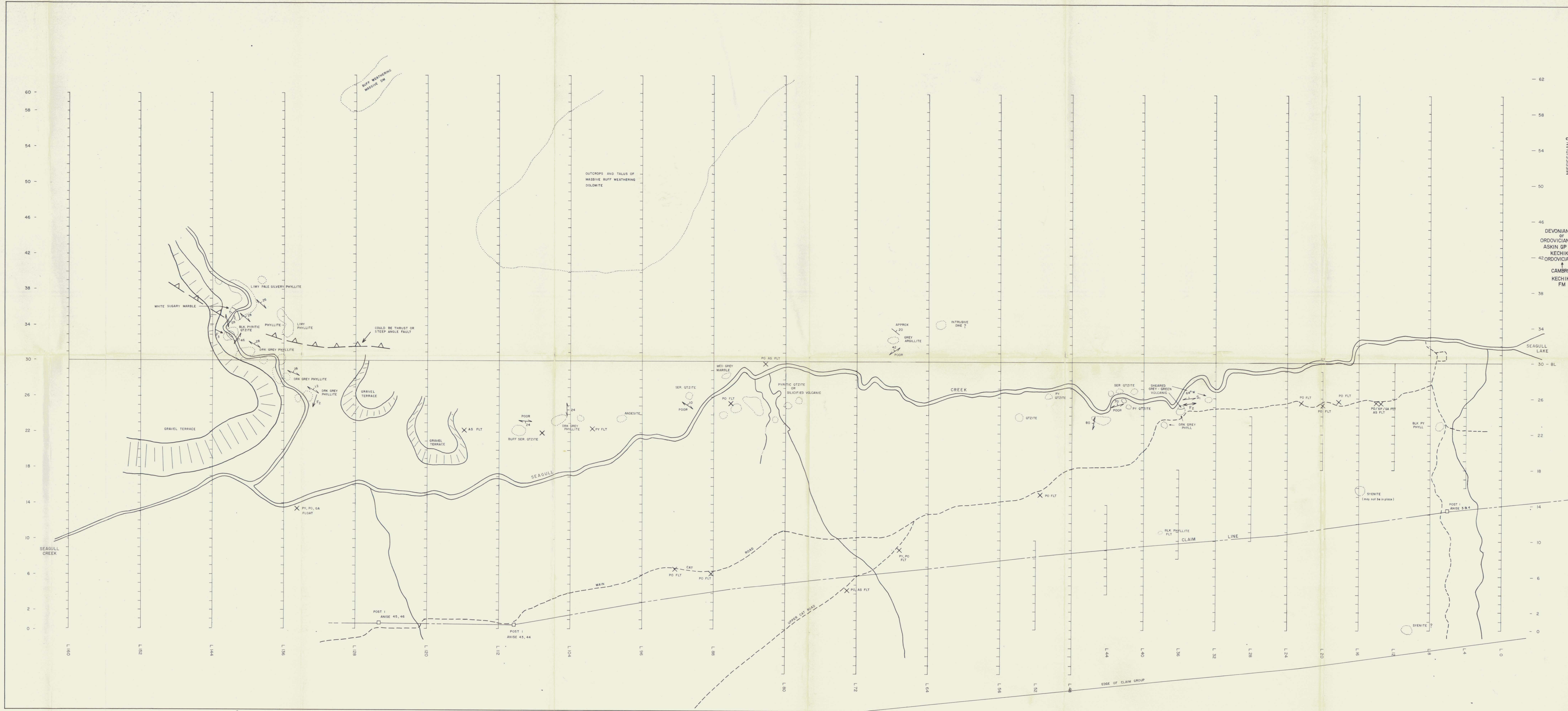


TABLE OF FORMATIONS

SYENITE:	Brownish white fine to medium grained.
ANDESITE:	Medium green massive agglomerate or pillowed flow.
SHEARED METAVOLCANIC:	Nondescript pale grey green, strongly sheared tuffs flows.
"QUARTZITE"	Variably pyritic and sericitic silica rock - could be silicified volcanic or sheared argillaceous chert.
BLACK PYRITIC PHYLLITE:	Black graphitic shale to phyllite with up to 10% synsed. pyrite.
DARK GREY PHYLLITE:	Medium to dark grey, lustrous phyllite. Includes minor pale grey quartzite, bonded argillite, and medium grey limestone.
DOLOMITE:	Massive buff weathering dolomite.
LIMY PHYLLITE:	Calcareous silvery grey phyllite, weathers buff.
MARBLE:	Sugary white crystalline limestone.

LEGEND

- ROAD
- CLAIM POSTS
- CLAIMLINE
- MINERALIZED FLOAT OCCURENCE
- OUTCROP
- BEDDING
- STRONGEST FOLIATION (May be S₂ or S₁)
- FOLD AXIS

SCALE

400 0 400 800 FEET

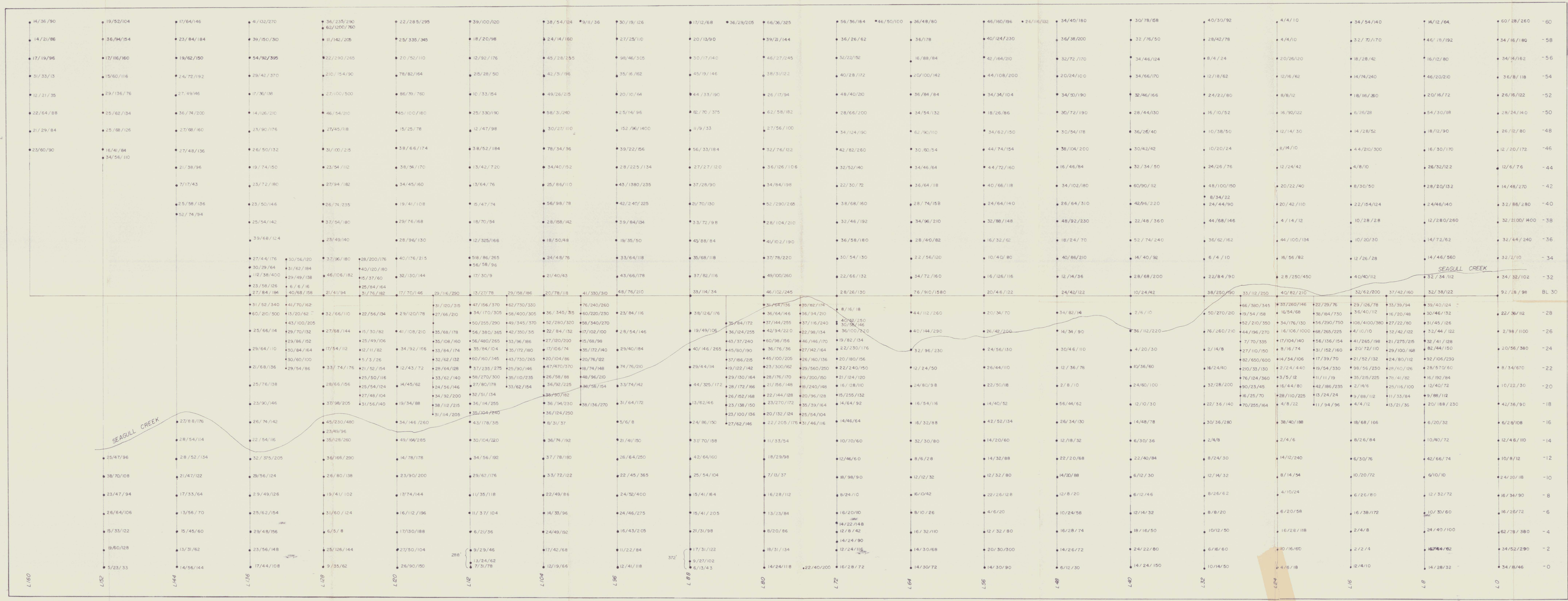
CYPRUS ANVIL MINING CORPORATION

ANISE CLAIMS

GEOLOGY

NTS 105 F10 SCALE 1"=400' DATE: JUNE 1977 DRAWN BY: C.L.C.

FIGURE 3



CYPRUS ANVIL
MINING CORPORATION

PELLY PROJECT

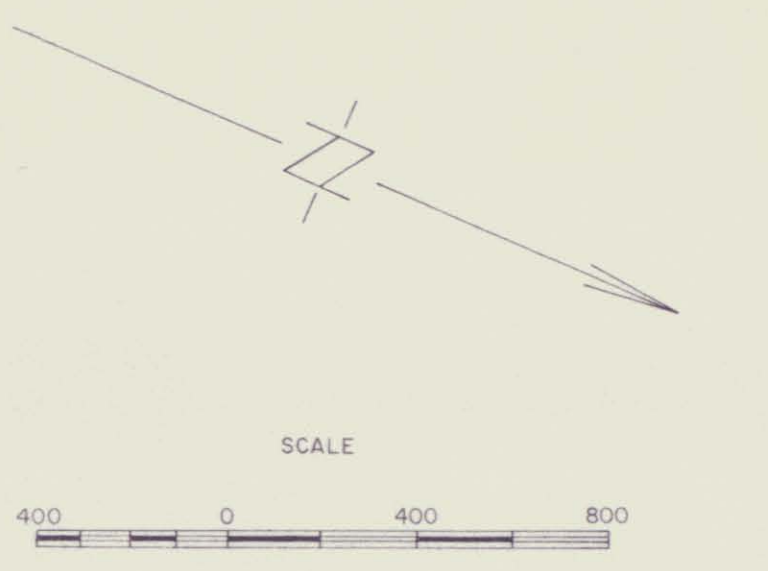
ANISE CLAIM GROUP

GEOCHEM GRID

● Cu, Pb, Zn

1" = 400 ft.

nts: 105-F-10



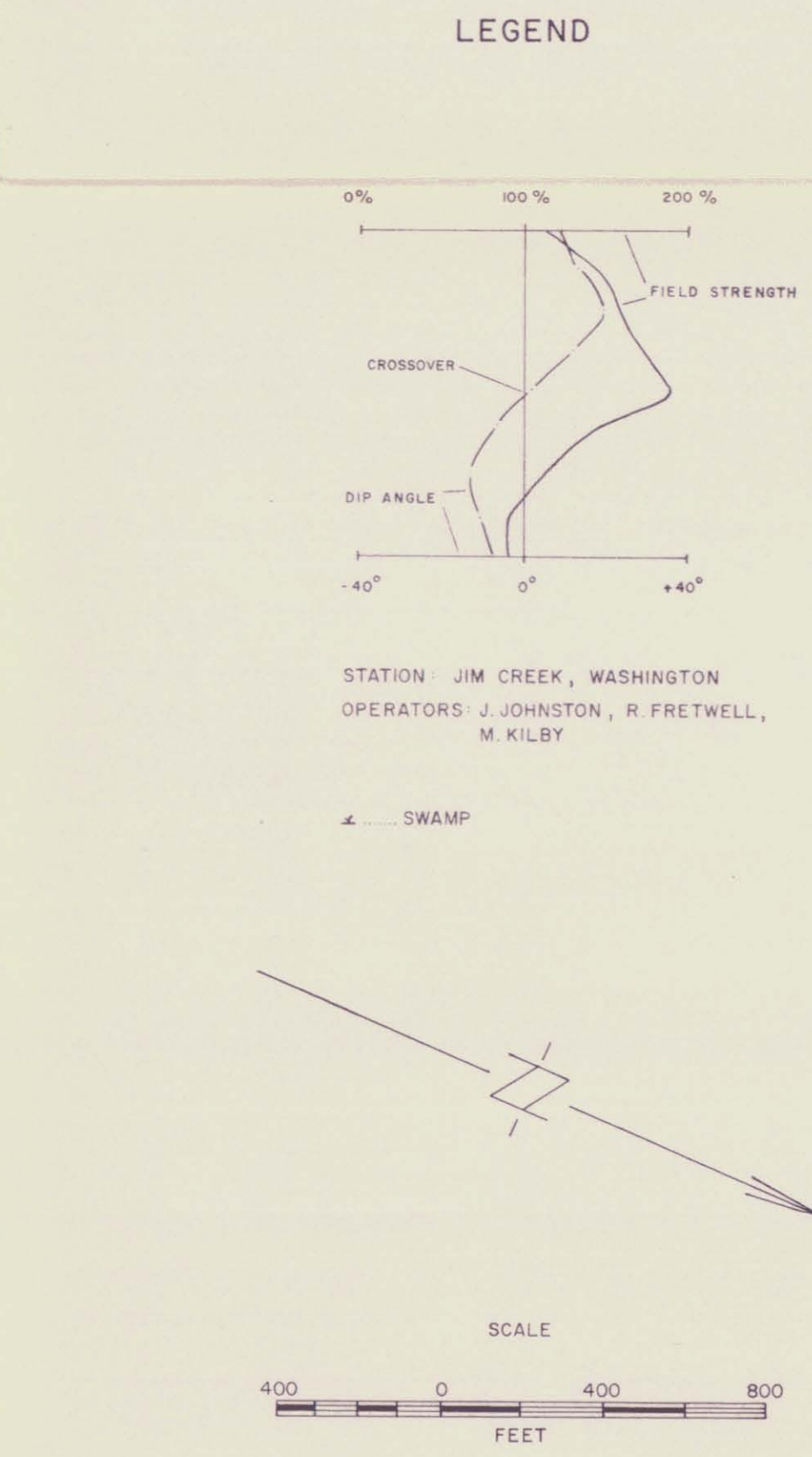
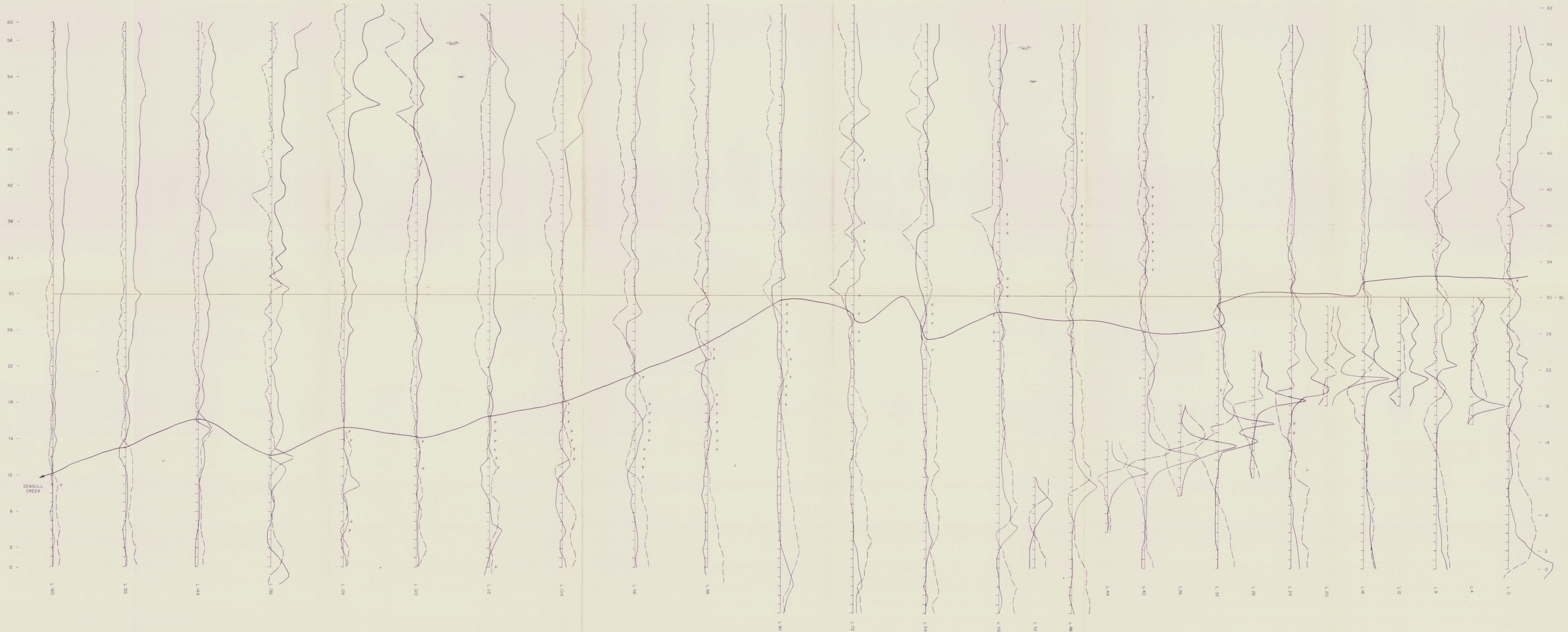
OCT. 1976
REVISED
JULY 1977

FIGURE 4

LEGEND



CYPRUS ANVIL MINING CORPORATION			
ANISE CLAIMS			
RADEM VLF E.M. SURVEY - VALUES			
NTS 105 FIO	SCALE 1" = 400'	DATE: JUNE 1977	DRAWN BY: R.D.H



CYPRUS ANVIL MINING CORPORATION
ANISE CLAIMS
RADEM VLF E.M. SURVEY - PROFILES
NTS 105 F.10 SCALE 1"=400' DATE JUNE 1977 DRAWN BY R.D.H.

FIGURE 6

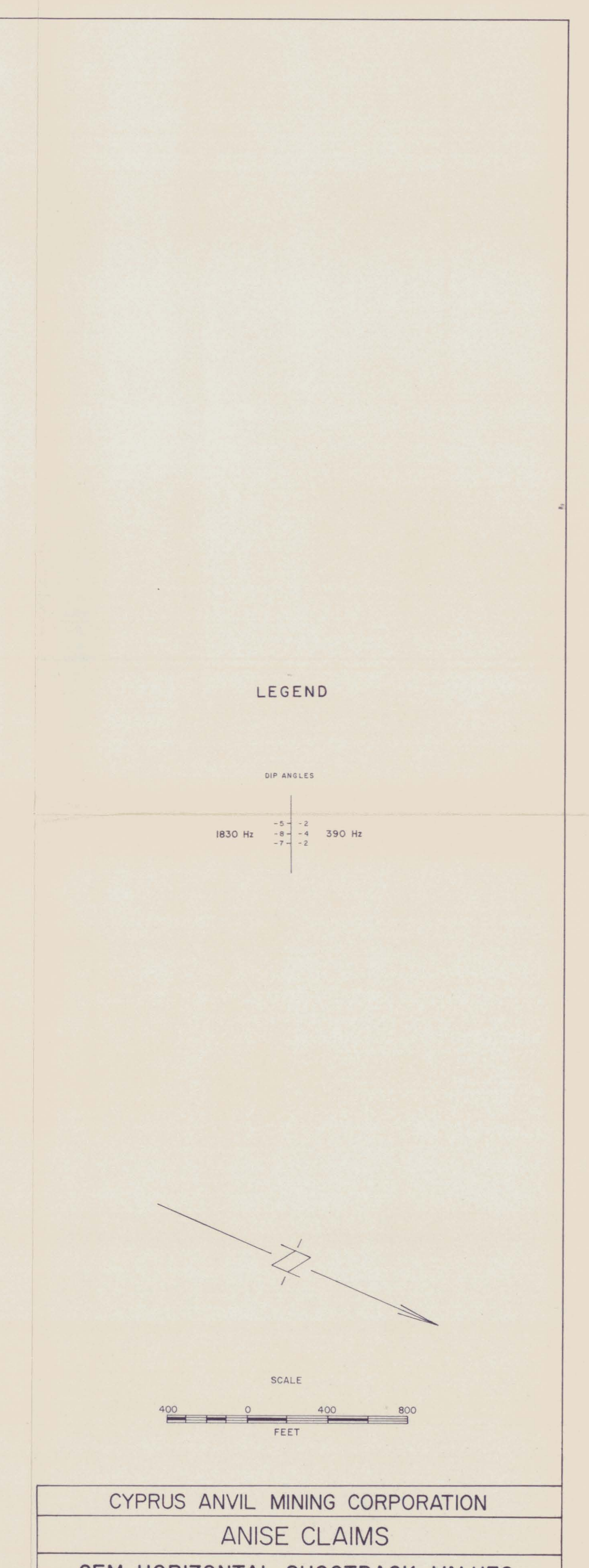
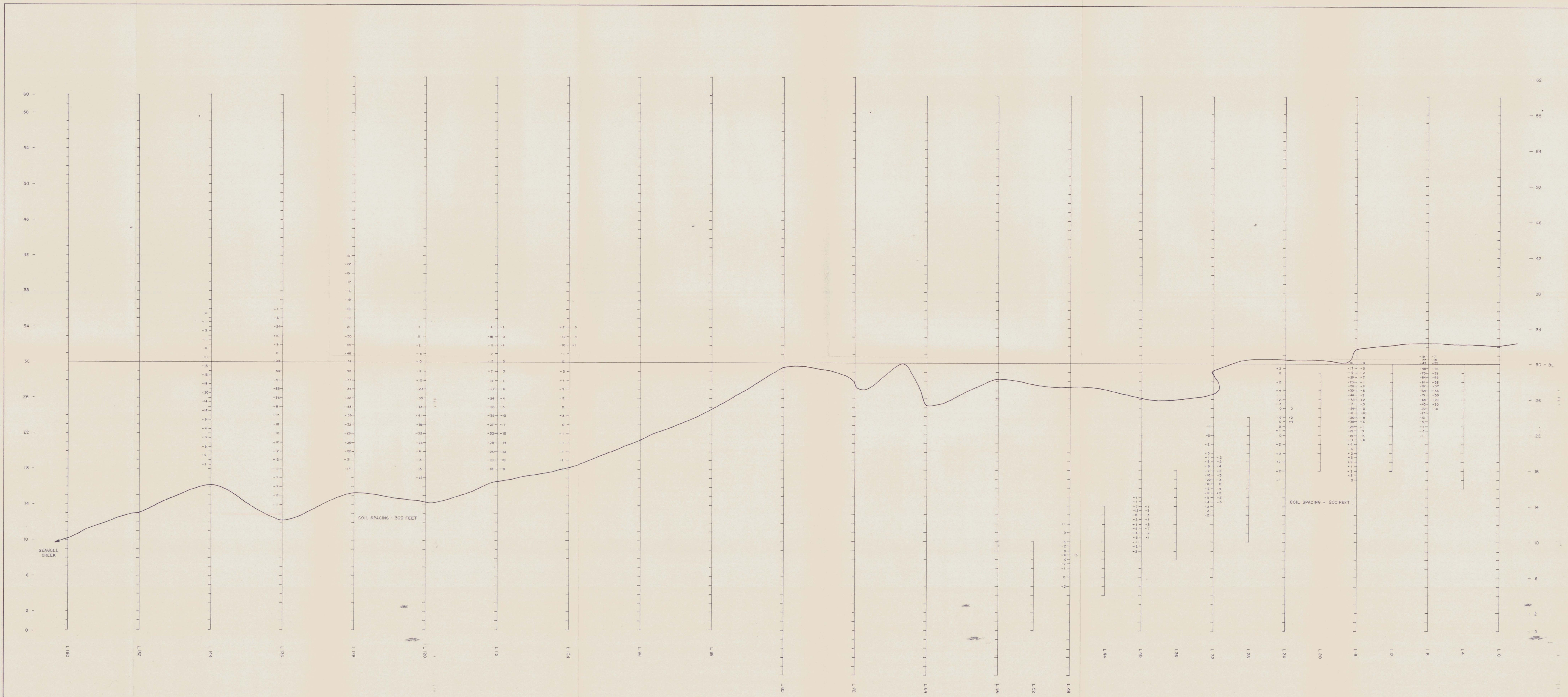
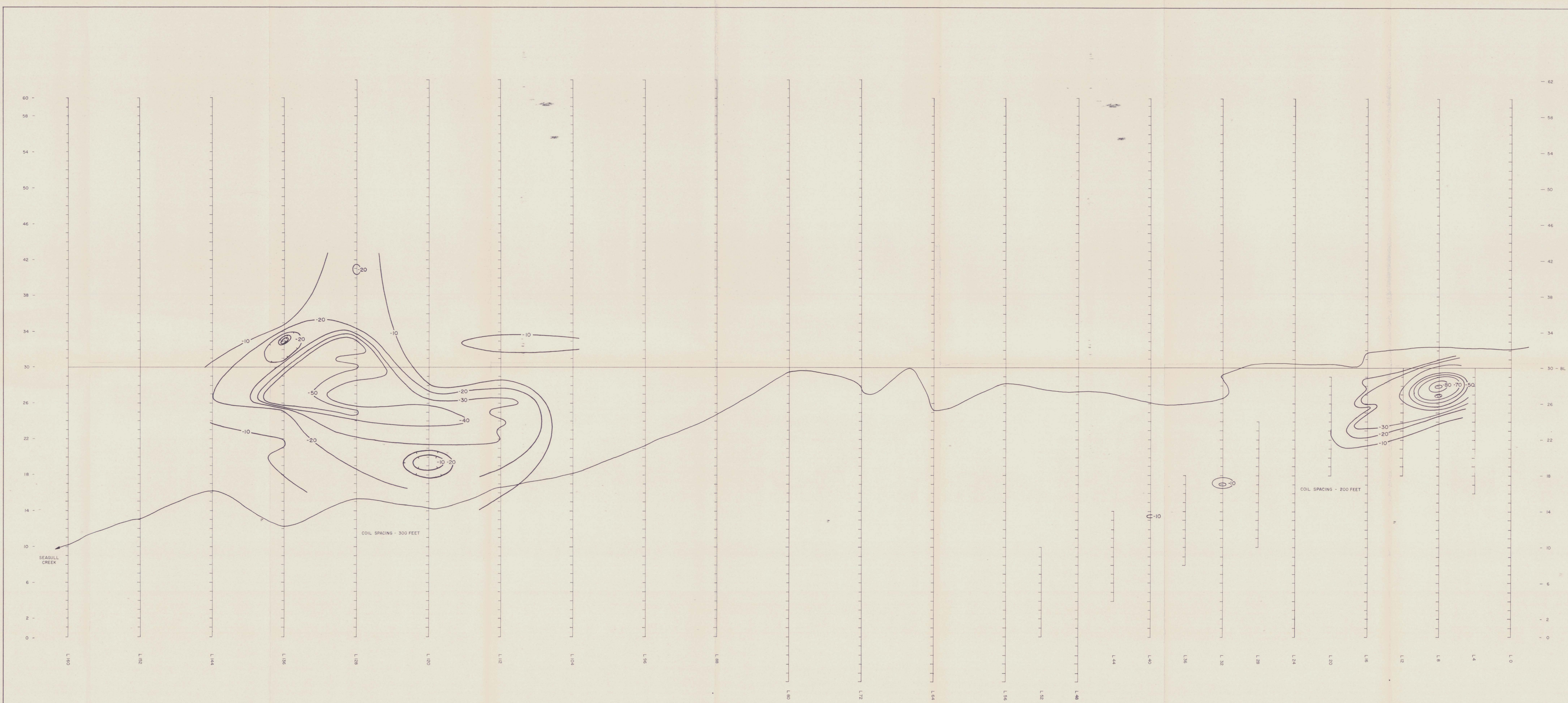


FIGURE 7a



DIP ANGLES
1830 Hz

SCALE
400 0 400 800
FEET

CYPRUS ANVIL MINING CORPORATION			
ANISE CLAIMS			
CEM HORIZONTAL SHOOTBACK - CONTOURS			
NTS 105 F 10	SCALE 1" = 400'	DATE: JUNE 1977	DRAWN BY: R.D.H.

FIGURE 7b



LEGEND

OUT OF PHASE	IN PHASE
IN PHASE	OUT OF PHASE
-6 -4	-2 -2
-8 -7	-6 -5
-4 -3	-5 -6

1777 Hz 444 Hz

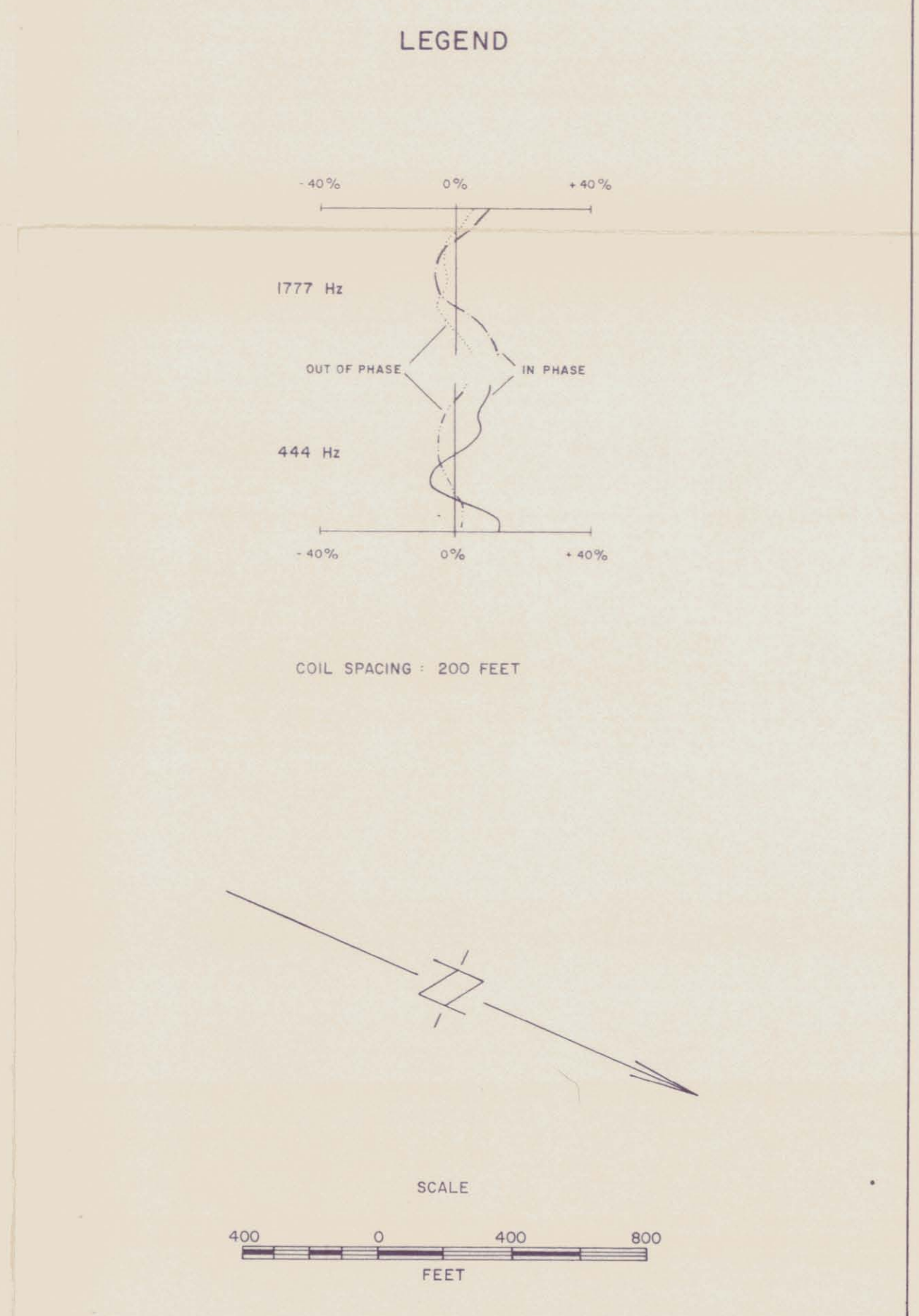
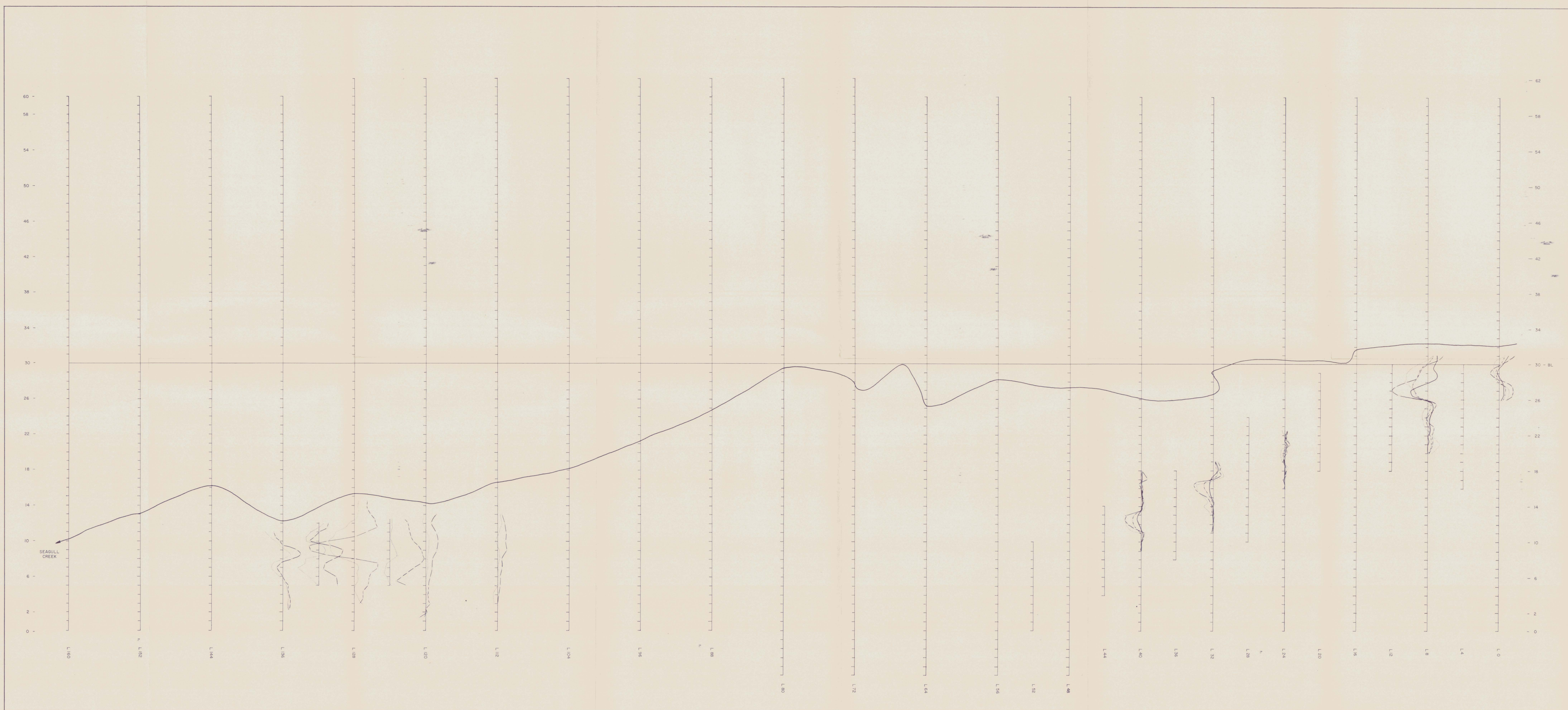
SCALE

400 0 400 800

FEET

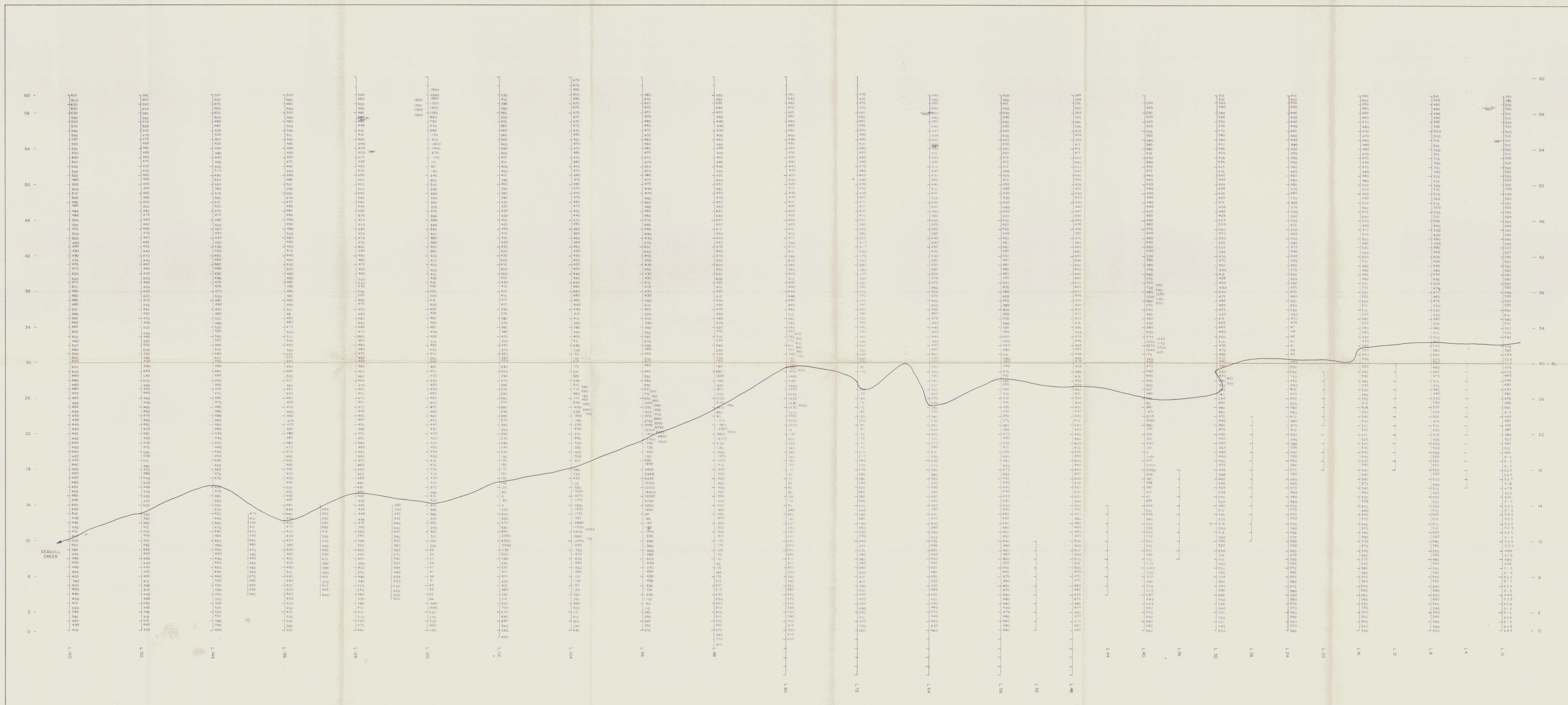
CYPRUS ANVIL MINING CORPORATION			
ANISE CLAIMS			
HEM HORIZONTAL LOOP SURVEY - VALUES			
NTS 105 F 10	SCALE 1" = 400'	DATE: JUNE 1977	DRAWN BY: R.D.H.

FIGURE 8a



CYPRUS ANVIL MINING CORPORATION			
ANISE CLAIMS			
HEM HORIZONTAL LOOP SURVEY-PROFILES			
NTS 105 F10	SCALE: 1" = 400'	DATE: JUNE 1977	DRAWN BY: R.D.H.

FIGURE 8b



62

58

54

50

46

42

38

34

30

26

22

18

14

10

6

2

0

SEAGULL CREEK

OPERATORS: J. JOHNSTON, M. KILBY,
R. PRETWELL

INSTRUMENT: SHARPES MF-2

VALUES IN GAMMAS

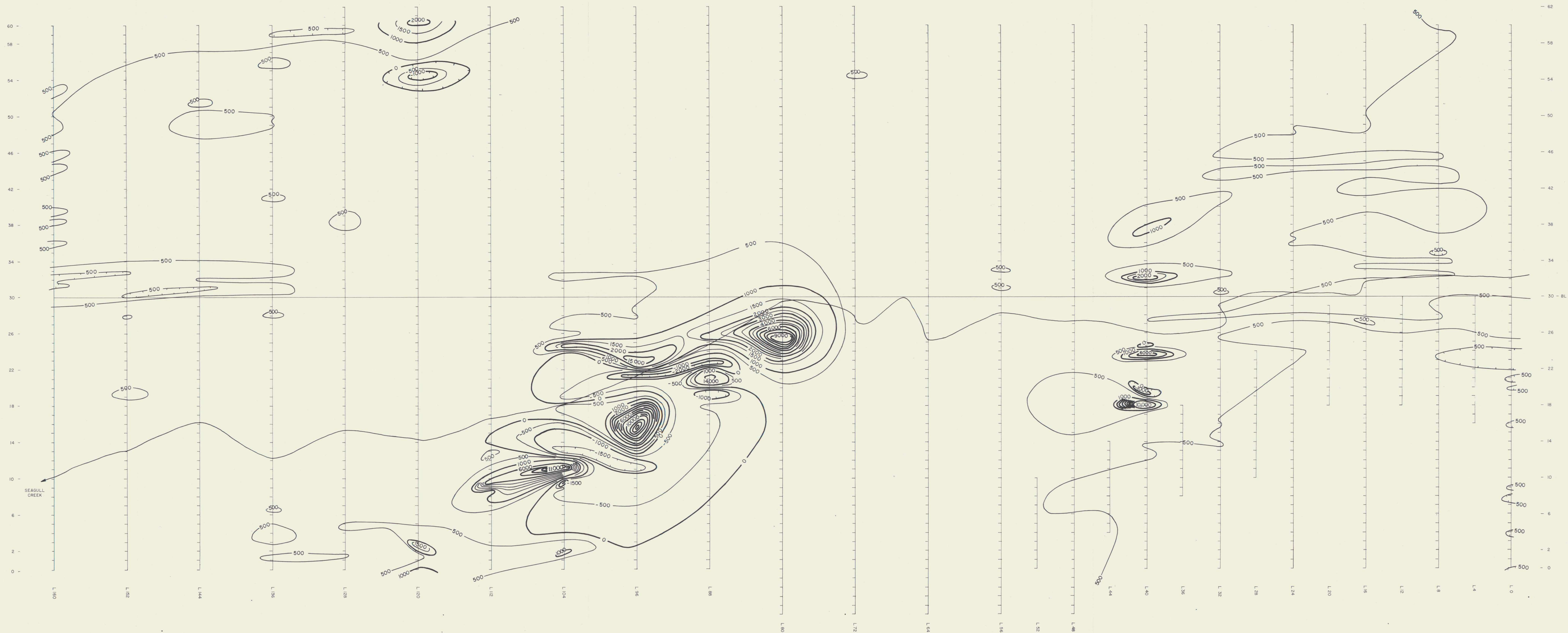
SCALE

400 0 400 800
FEET

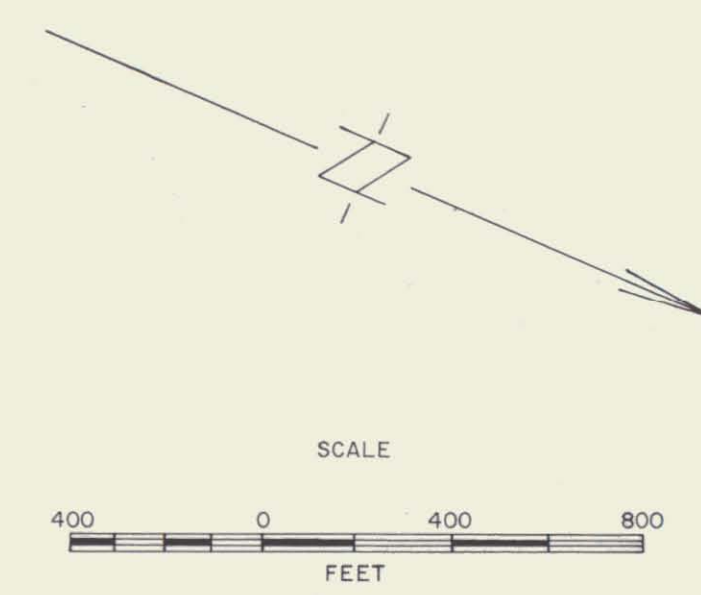
CYPRUS ANVIL MINING CORPORATION
ANISE CLAIMS
MAGNETIC SURVEY - VALUES

NTS 105 FIO SCALE 1"=400' DATE: JUNE 1977 DRAWN BY: C. L. C.

FIGURE 9



OPERATORS: J. JOHNSTON, M. KILBY,
R. FRETWELL
INSTRUMENT: SHARPES MF-2
CONTOUR INTERVAL: 500 GAMMAS



CYPRUS ANVIL MINING CORPORATION			
ANISE CLAIMS			
MAGNETIC SURVEY - CONTOURS			
NTS 105 F 10	SCALE: 1" = 400'	DATE: JUNE 1977	DRAWN BY: C.L.C.

FIGURE 10