



GRAVITY REVIEW
JOE AND FAIR CLAIMS, YUKON TERRITORY
ON BEHALF OF
NEW FAR NORTH LIMITED

060716

by

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Toronto, Ontario.

November 15th, 1967.

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SUMMARY

In the present review of gravity results from the Joe and Fair claims one gravity anomaly has been singled out which, because of its anomalous characteristics and geological location, may be of interest. One drill hole has been recommended to test its potential.

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A REVIEW OF RESULTS FROM GRAVITY TRAVERSES OVER THE JOE AND FAIR CLAIMS, YUKON TERRITORY ON BEHALF OF NEW FAR NORTH LIMITED

INTRODUCTION

The present report is a review of a gravity survey carried out in the summer of 1967, under the supervision of Mr. S. Grimaldi on behalf of New Far North Limited, on the Joe and Fair claim groups in the Yukon Territory. These claims, optioned by New Far North Limited, are located some 120 miles northeast of Whitehorse and are accessible during the summer and winter via the Canal Road as far as the Pelly River.

In the present report, gravity data from the following traverses are discussed.

- a) Joe Claims; Lines 80E to 100E from station 0 to 25N - a total of 6 lines spaced at 400 ft. intervals.
- b) Claims 11 and 12 (adjacent to Joe claims); Lines 4E and 8E from station 10S to 10N.
- c) Fair Claims; Lines 60E from 0 to 40N, 72E from 0 to 70N and 76E from 40 N to 70N.

Geochemical data covered in a report by Barringer Research Limited and geological and magnetic maps prepared by Watts, Griffis and McOuat Limited were supplied to aid in the interpretation of the gravity data.

8

A World Wide quartz element gravity meter was employed on the survey and gravity stations were established at 100 ft. intervals.

The purpose of the present review of the gravity data is to interpret these results in light of the accompanying geochemical and geological results and to recommend further exploration, specifically diamond drilling.

GEOLOGY

For the most part, the properties are underlain by metamorphosed intrusives of Mississippian age. These include peridotites, actinolite schists, gabbros, chlorite schists and andesites. Some limestones and carbonated sericite schists occur as well.

The topography of the area is rugged and the overburden appears to be light.

DISCUSSION OF RESULTS

Gravity profiles and corresponding elevations for the Joe claim group are presented in Plate 1 on a horizontal scale of 1" = 200 ft., vertical scales 1" = 0.5 milligals (gravity) and 1" = 100 ft. (elevations). Plate 2 displays similar profiles, with the same scales, for the Fair claim traverses.

The particular gravity meter employed on this survey appears to have had a high and abnormal drift rate during the survey of the Joe claims. Base station 'tie-ins' indicate drift rates as much as 1.0 milligals per hour on some traverses, while normal drift rates appear to have prevailed during the traverses on the Fair claims. This would suggest that after working properly during a portion of the survey, the meter began to lose its vacuum.

This need not be critical, as far as the measurements are concerned, providing the meter drift is consistent.

Joe Claims and Claims 11 & 12

The raw data were originally corrected with a Bouguer density of 2.7 mg/cc. The resulting Bouguer gravity profiles have a marked relationship with the elevations, indicating that the Bouguer density is somewhat low. After re-correcting the data, using a Bouguer density of 2.9 gm/cc, the resulting Bouguer gravity profiles appear relatively independent of elevation.

What appears to be one continuous gravity high, characterized by gravity maxima of about 0.5 milligals above background, occurs from line 80E (13N to 16N) to line 88E (12N to 15N). From theoretical considerations it is estimated that a relatively steeply dipping dyke-like body of a mean width of 800 ft. and under 50 ft. of cover would give rise to an excess positive gravity anomaly of approximately 5 milligals for each unit of excess specific gravity over the surrounding rocks. Thus a 0.5 milligal anomaly might well be due to a rock mass with a specific gravity of 3.0 gm/cc, i. e. 0.1 gm/cc more than the mean specific gravity of the local area.

Although the magnetic relief is low in the immediate vicinity of this gravity high, the geologic map indicates a gabbro or diorite intrusive centred about 18N, with its south boundary at about 15N. Thus there is the possibility of some mineralization in the vicinity of 14N to 16N associated with the gabbro contact.

Another possible local gravity high is centred at 22N on line

92E and at 18N on line 96E. This 'high' is open to the north of the present traverses and thus it is difficult to ascertain whether it is a narrow anomaly due to a localized zone of high specific gravity, e. g. a mineralized contact, or just a regional high over another rock type. It appears to coincide with a zone of peridotite, a rock type which usually has somewhat higher specific gravity than other intrusives.

*only if
fresh, which
is doubtful
here.*

The gravity results on traverse lines 4E and 8E indicate no anomalies of specific interest. The deep low in the gravity profile over line 8E correlates closely with the elevation, suggesting the presence of a rock type with low density (2.4 gm/cc) in this portion of the grid.

Fair Claims

The Bouguer density of 2.7 gm/cc appears to be representative of the rocks over traverse lines 60E and 72E. On traverse line 76E, a somewhat higher density (i. e. 2.9 gm/cc) would appear to result in better data correction. In any event, no gravity anomalies seem to indicate local concentrations of heavy minerals. With the exception of what appears to be spurious readings, possibly due to sharp relief in the immediate vicinity of the station, the profiles are quite smooth.

CONCLUSIONS AND RECOMMENDATIONS

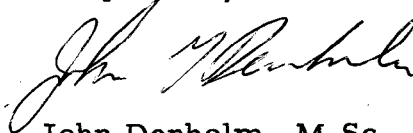
The mean specific gravities of most rock types on these properties appear to be between 2.7 gm/cc and 2.9 gm/cc, with a notable exception on line 8E of the 11 and 12 claims, where a rock type of lower density, possibly limestone, appears to occur. Severe terrain effects could also be the cause of this gravity low.

One zone of gravity highs (0.5 milligals) has been located on the Joe claims in the vicinity of an ultrabasic intrusive contact. Since the geochemical data in this area indicate the presence of copper and nickel, the following drill hole is recommended in order to test the economic potential of the material causing this gravity anomaly.

Collar at 13+50'N on line 88E, drill with a dip of 60° along the line (north) for a minimum length of 300 ft.

Pending the results of this hole, further drilling and ground electromagnetic prospecting (Turam) may be recommended.

Respectfully submitted,

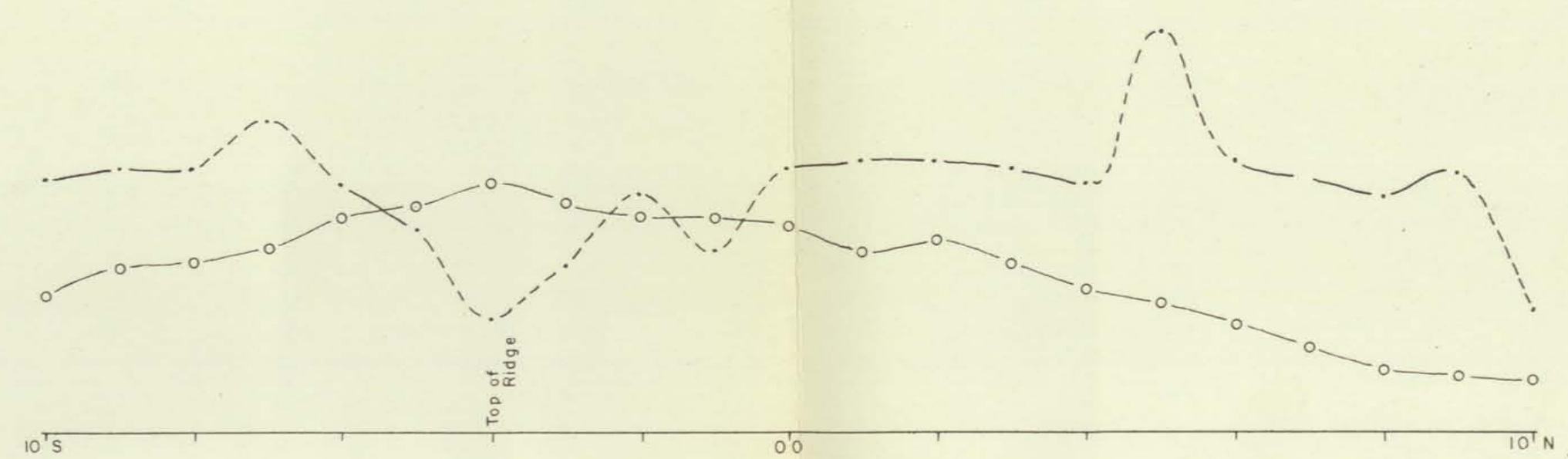


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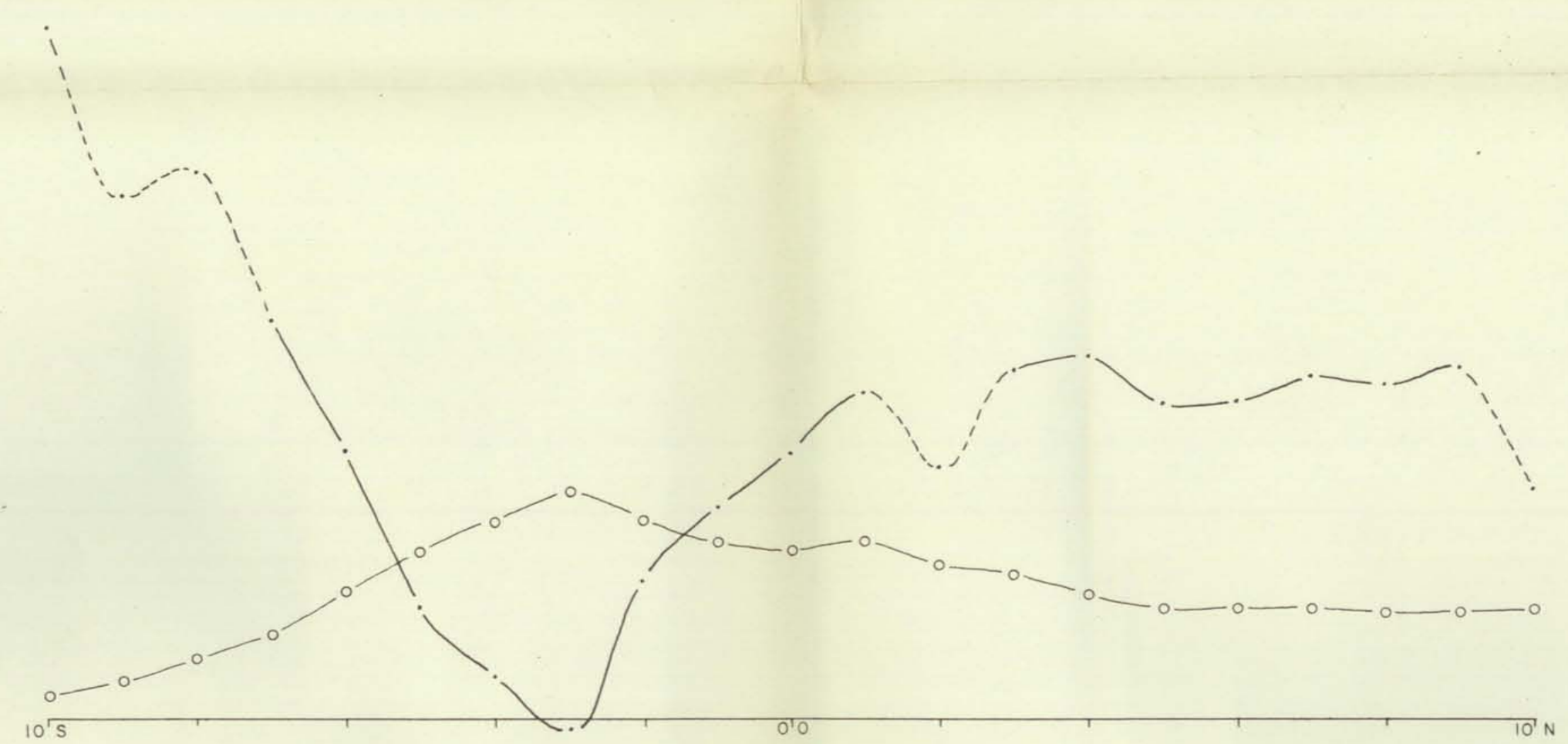


Robert A. Bosschart, Ph.D., P. Eng.

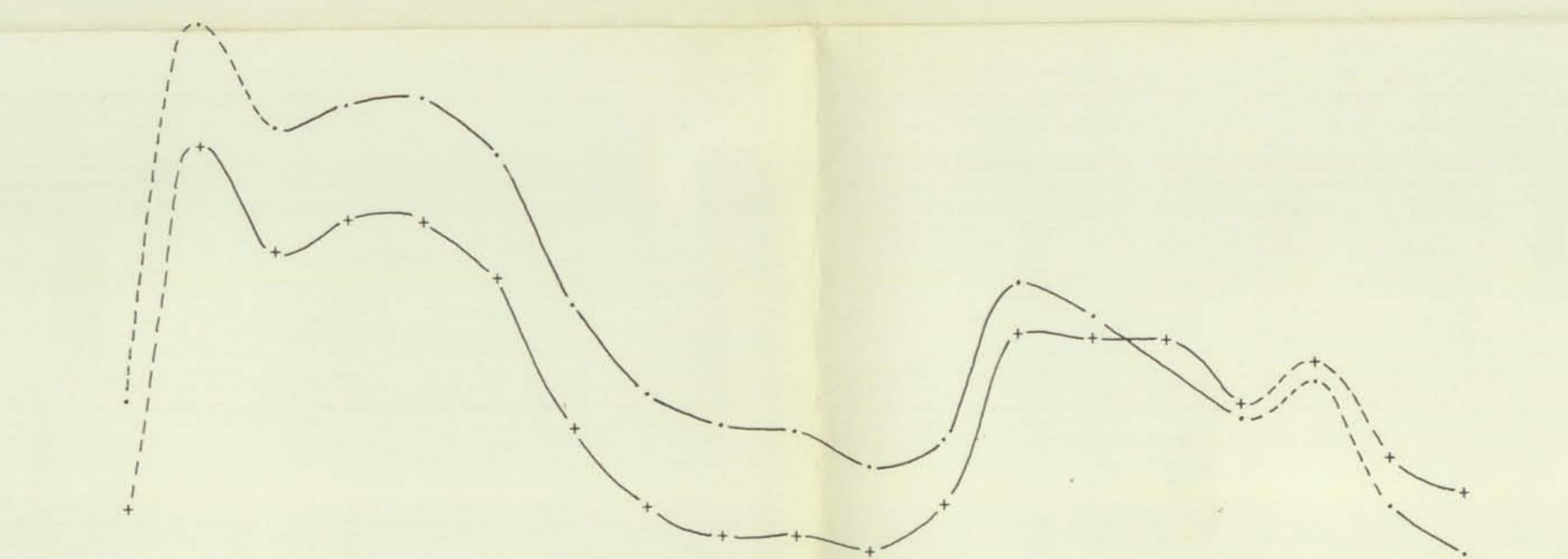
November 15th, 1967.
Toronto, Ontario.



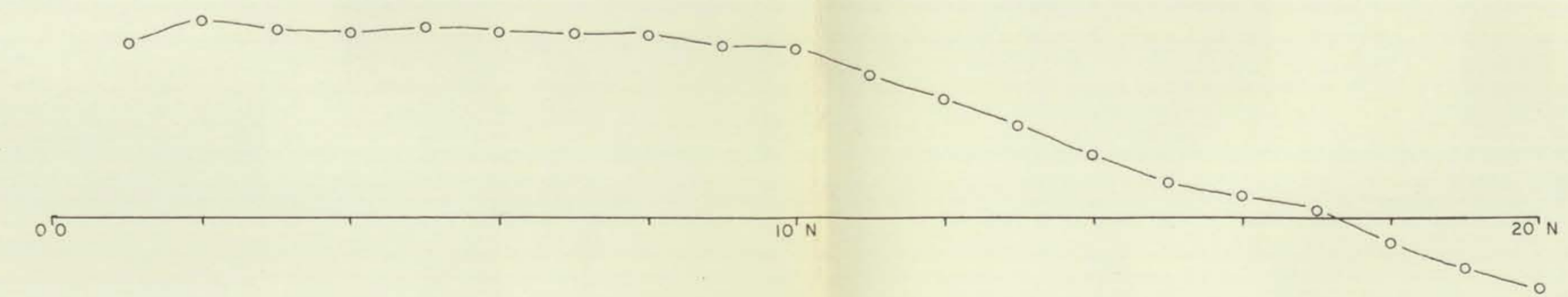
L 4 E
CLAIMS 11 & 12



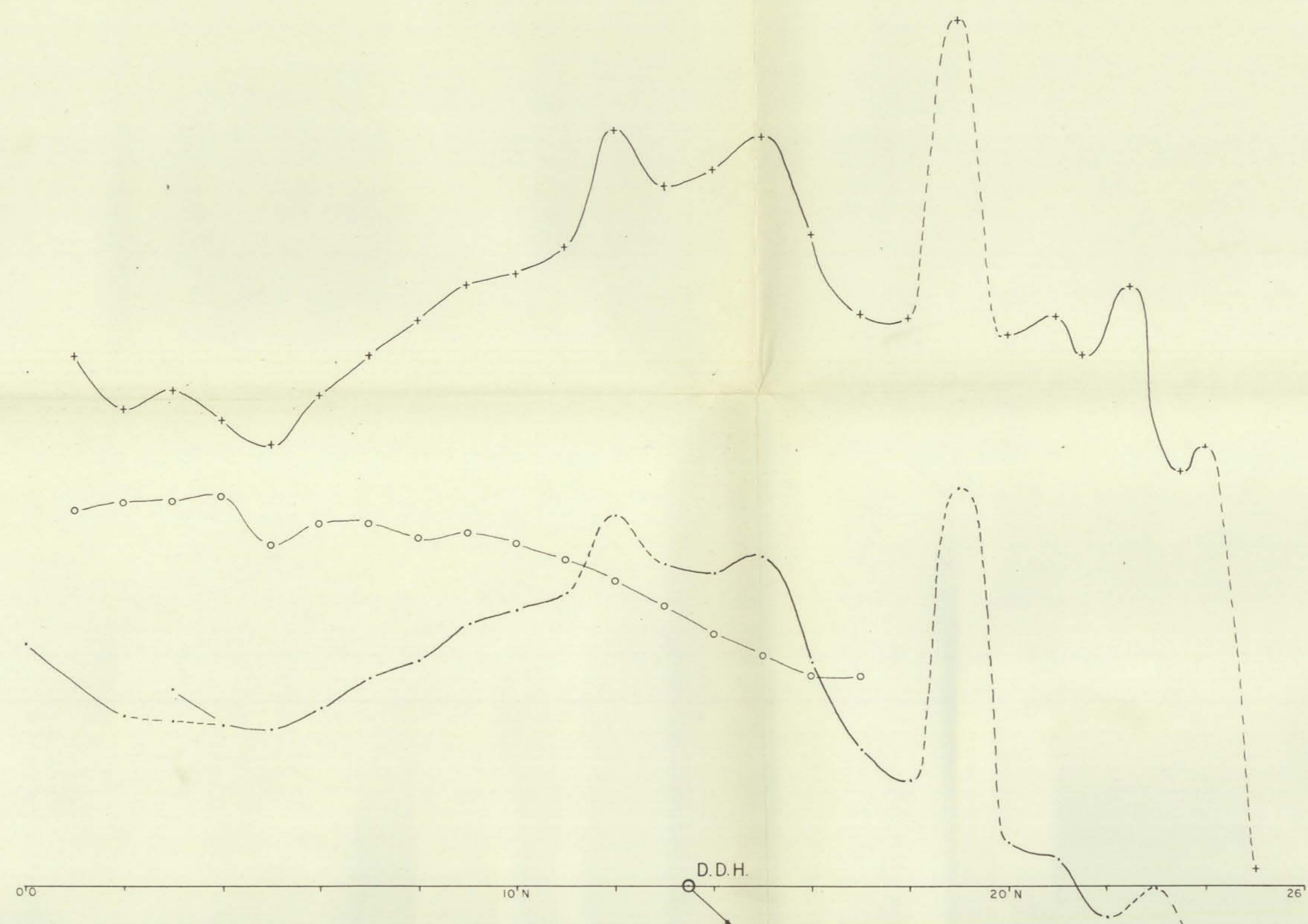
L 8 E
CLAIMS 11 & 12



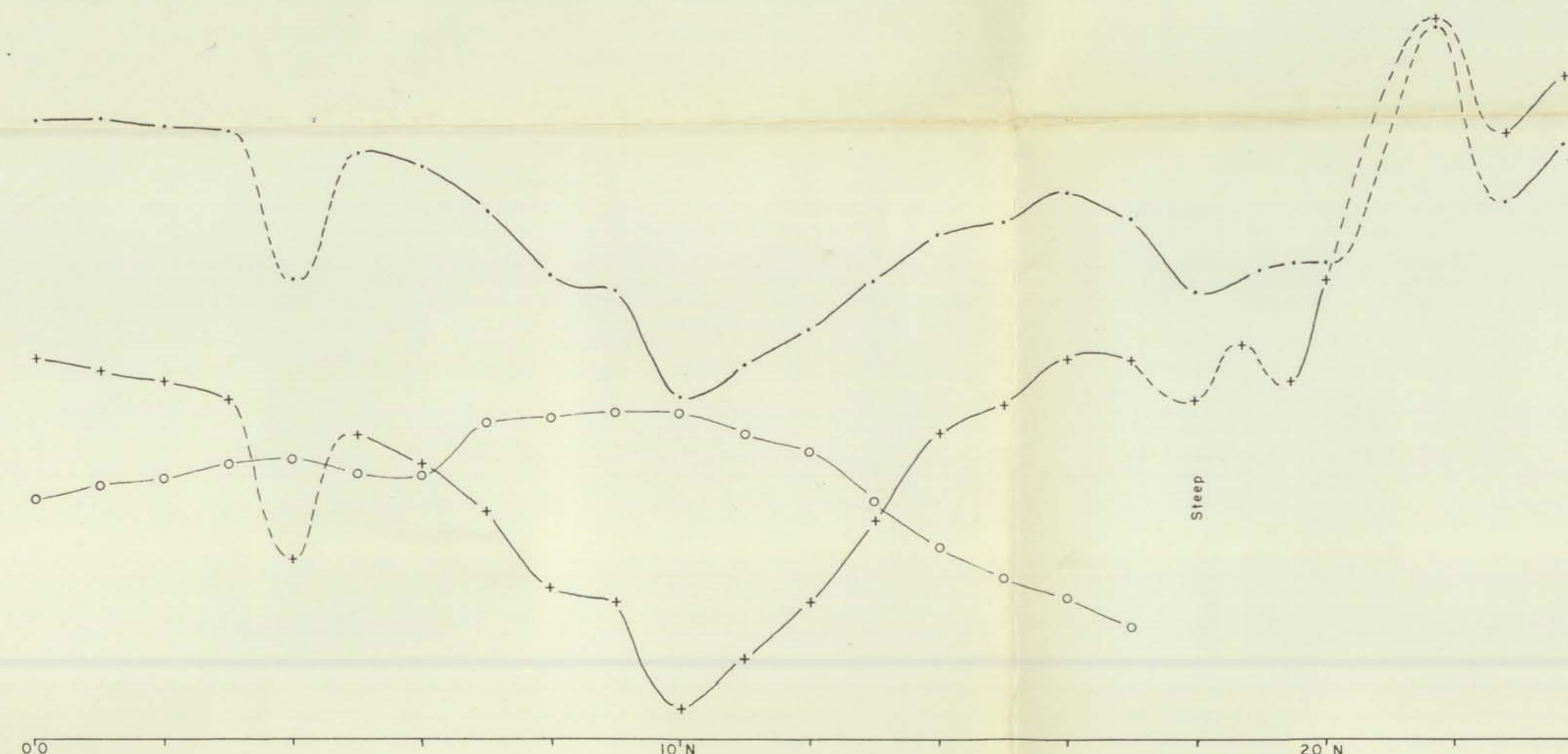
L 80 E



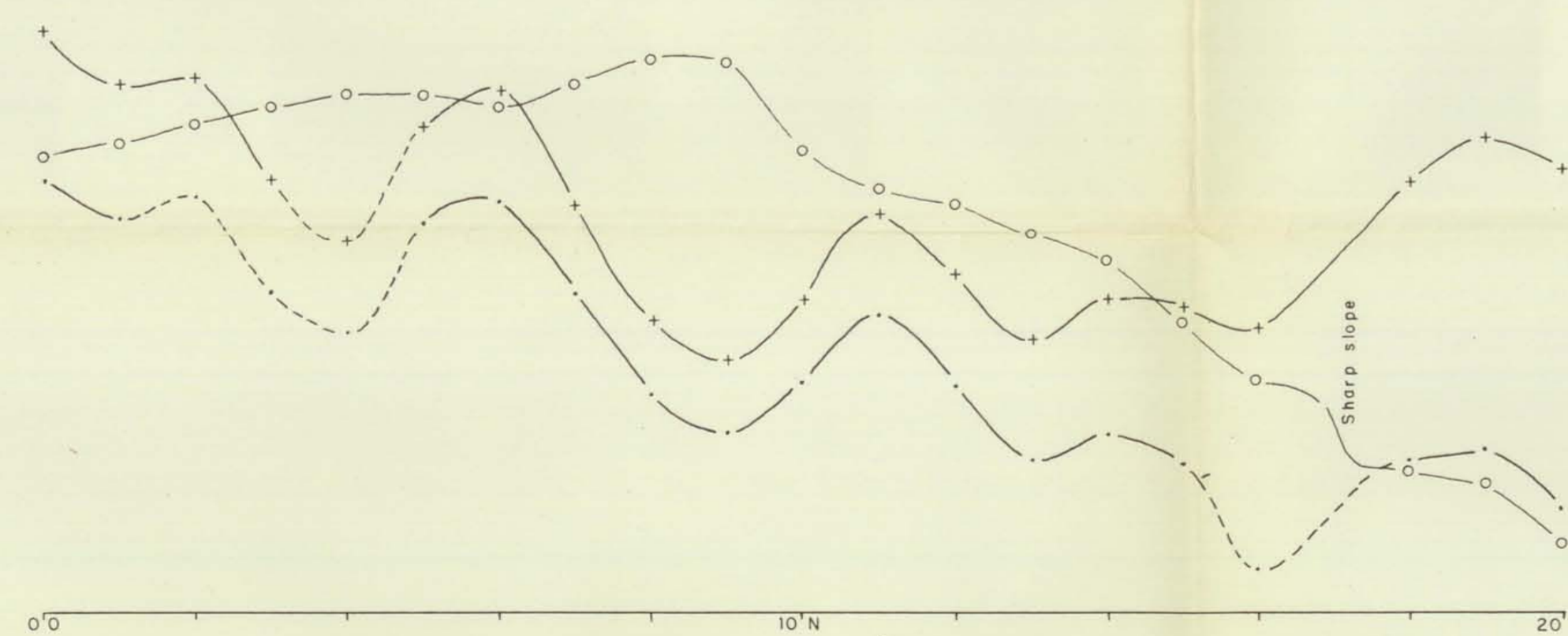
L 84 E



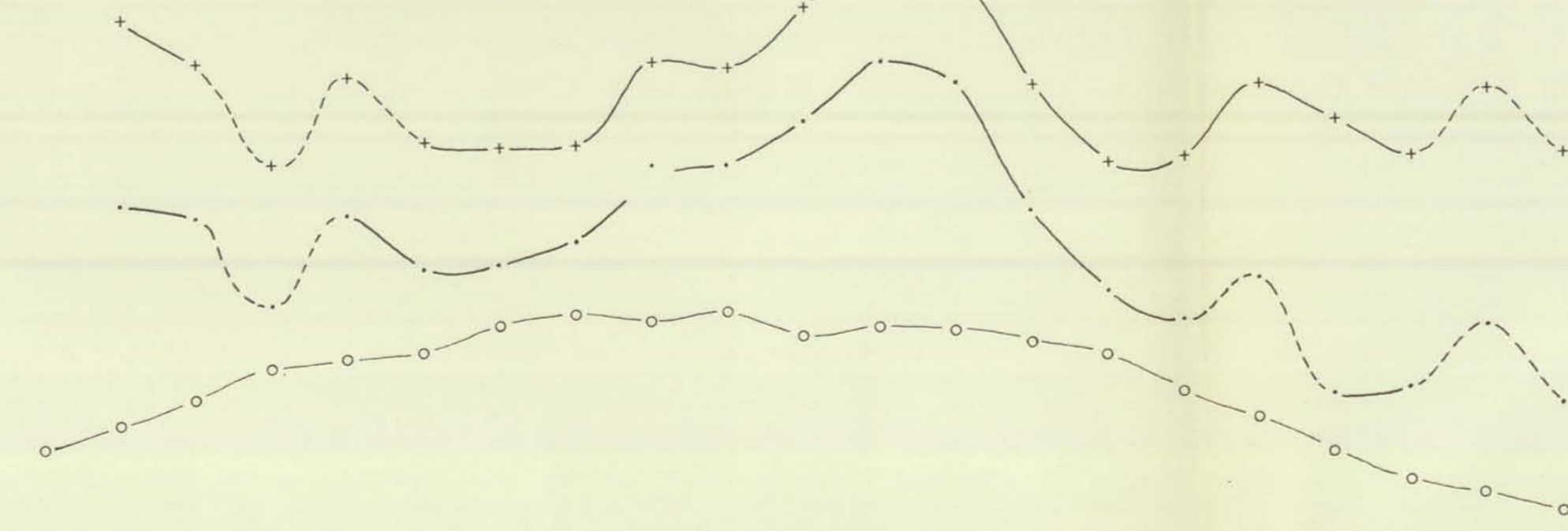
L 88 E



L 92 E



L 96 E



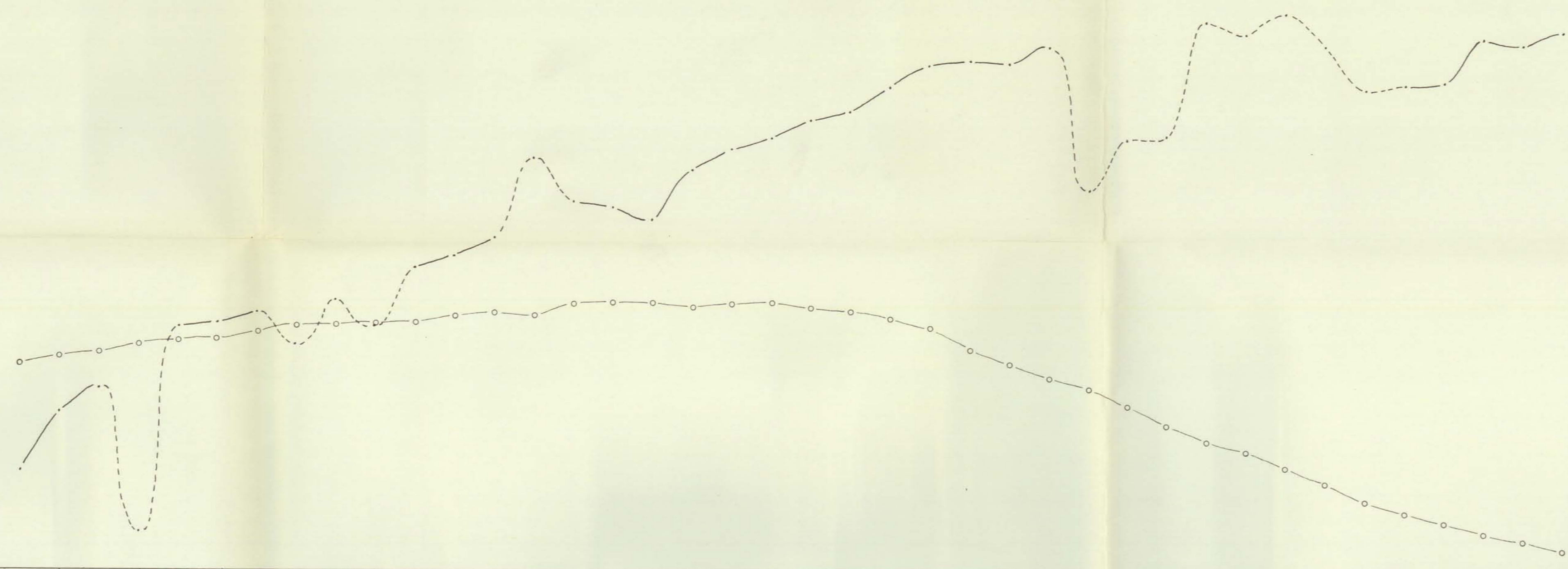
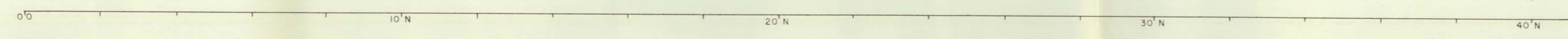
L 100 E

LEGEND:

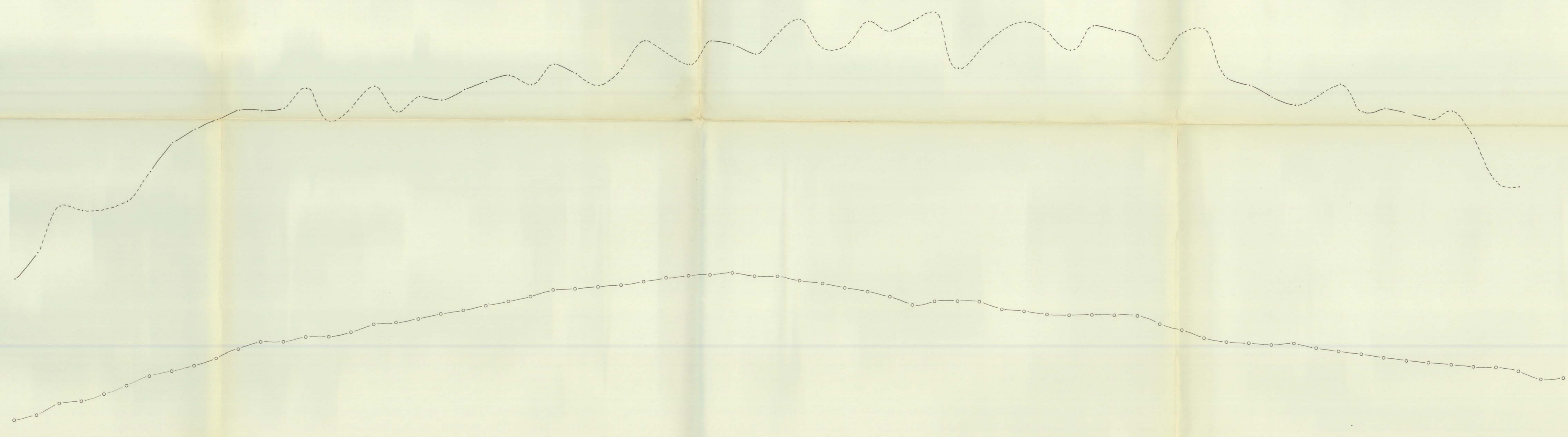
- +—+— BOUGUER GRAVITY - DENSITY 2.9 gm/cc, SCALE: 1" = 0.5 MILLIGALS
- — — BOUGUER GRAVITY - DENSITY 2.7 gm/cc SCALE: 1" = 0.5 MILLIGALS
- - - - - GRAVITY RESULTS AFFECTED BY SEVERE TERRAIN?
- — ○ ELEVATION PROFILES, SCALE: 1" = 100'

NOTE: INTERLINE SEPARATION NOT TO SCALE

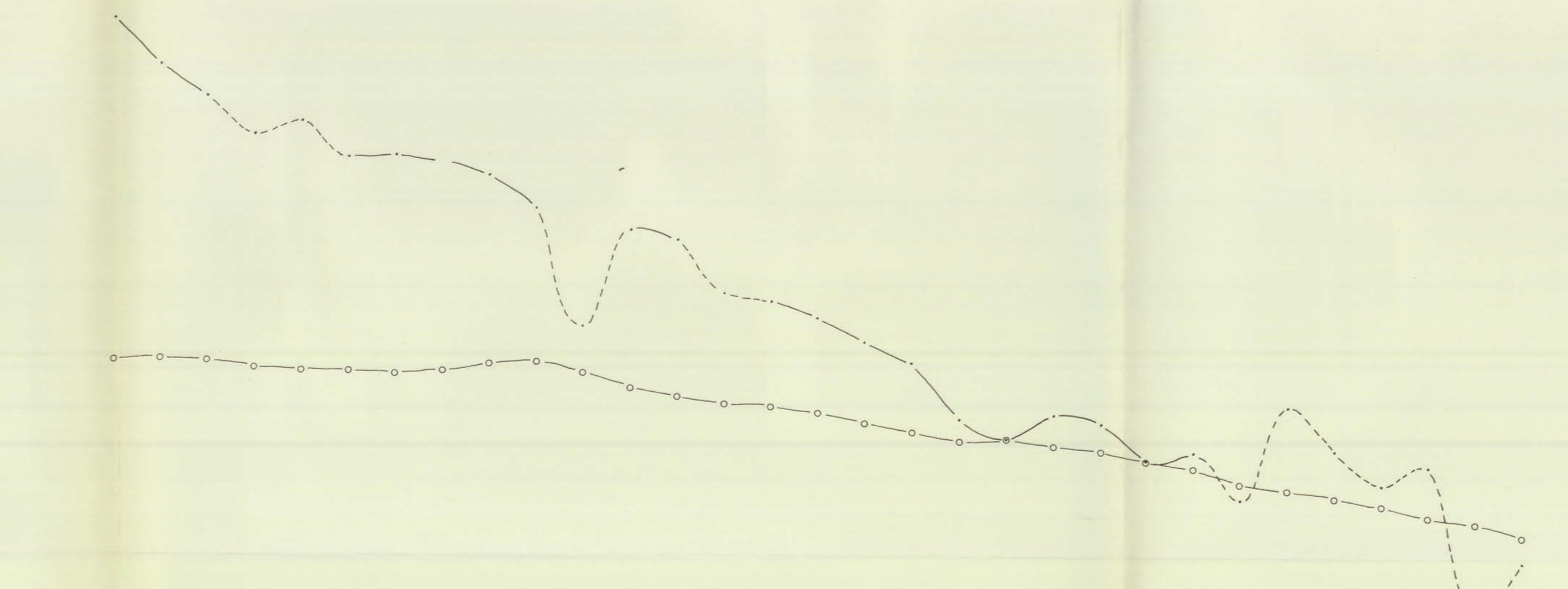
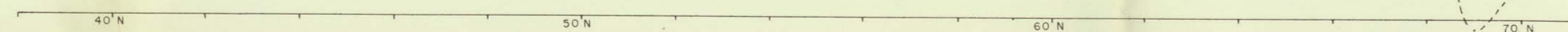
L 60 E



L 72 E



L 76 E



LEGEND:

- +—+—+ BOUGUER GRAVITY - DENSITY 2.9 gm/cc ; SCALE 1" = 0.5 MILLIGALS
- — — BOUGUER GRAVITY - DENSITY 2.7 gm/cc ; SCALE 1" = 0.5 MILLIGALS
- - - - - GRAVITY RESULTS AFFECTED BY SEVERE TERRAIN?
- — ○ ELEVATION PROFILES ; SCALE 1" = 100'

NOTE: INTERLINE SEPARATION NOT TO SCALE

PLATE 2
 NEW FAR NORTH LTD.
 FAIR CLAIMS, YUKON TERRITORY
 GRAVITY PROFILES
 SCALE: 1" = 200'
 REVIEW BY SEIGEL ASSOCIATES LIMITED
 NOVEMBER, 1967