



41P06SE8516 63.1100 HODGETTS

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REPORT ON THE  
MINADA CLAIM GROUP  
HODGETTS TOWNSHIP  
ONTARIO

Toronto, Ontario  
August 31, 1960

J.S. Vincent



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Introduction

From the middle of July to August 16, 1960, geological mapping accompanied by an electromagnetic and magnetic survey was carried out at the request of Dr. J.D. Bateman, President, Dominion Explorers Limited, on a group of ten claims in Hodgetts Township, Sudbury Mining Division, Ontario. The original group consisted of 32 claims in the southeast corner of the townships. When the ground came open five claims were re-staked to cover the area immediate to the showings. These were staked in April of 1960 and should be good for two years, with extensions. The property is owned by Minada Explorations Limited, and the work was carried out under a working option agreement drawn up in May of 1960. Five of the ten claim group are not staked, but were examined because it was felt that the existing five did not cover sufficient ground to provide a satisfactory picture of the geological setting.

The geophysical work was carried out by P. Stransky of Sulmac Explorations Limited, and J.S. Vincent and John Bateman of Dominion Explorers. The survey covered the ground showing the trenching and examined occurrences of sulphide.

Location & Access.-

The property lies approximately 1/4 of a mile south of Conglomerate Chutes on the Wanapitei River. This area is central to the south east quarter of Hodgetts Township.

The Howard Smith Pulp Co. road between Felix on the C.N.R. line and mile 14 on the Gogama road lies within a mile of the property. A good trail has been cut into the property.

Topography.-

The regional topography has a general relief of approximately 500 feet. Rock hills alternate with sand plains and gravel ridges to produce a ruggedly beautiful country. The land is well drained by rivers, creeks, and small lakes with the result that there are no large expanses of muskeg.

Previous Work.-

The property was previously examined in the fall of 1956 by Mr. A.V.W. Durnford, B. Sc., and L. Brennan. This work was carried out at the request of Mr. G. Chilian, President, Minada Exploration. At this time a base line was cut and chained along the line of strike of the showings and 10 claims mapped on a scale of 1 inch to 5 chains.

Previous to this examination Brennan blasted several trenches across the mineral occurrence. This job was well done and with the result that the veins are clearly exposed.

Geology

Rock Types.-

Around and within the map area the predominant rock types are slates and clastics. Conglomerate, arkose, sandstone and a fine grained grit constitute the clastic sediments. Diabase dikes striking approximately 50° to 60° east of north, cut the sedimentary formations and dip very steeply to vertical.

Within the map area several contacts between the various sedimentary beds are visible, and the relations are conformable. Their relationship will be elaborated on under the structural discussion. These rocks have a gentle dip to the southeast and strike in a northeasterly direction.

In the following paragraphs each rock type will be discussed in detail beginning with the lower formation.

Slate.-

Within the slate formation two distinct types may be recognized. The most prominent type is the aphanitic greenish black variety which exhibits a very fine lamellar bedding. The lamellae consist of alternating bands of black and reddish black material.

The second variety is a greenish grey slate which is a little softer than the former type. It too shows a finely laminated bedding which consists of fine alternating bands of grey and greenish grey material.

This second variety does not appear to be a continuous bed, but rather lenticular in occurrence. More exposure might possibly reveal a horizontal facies change between the two types.

Occurring throughout the slates of both varieties are bands and contorted stringers of fine grained red sand stone. These stringers follow the bedding and help to emphasize the intraformational deformation which has been very well preserved. In one exposure crossbedding due to current action is clearly preserved demonstrating that the slate formation is right side up.

Small lenses of conglomerate occur within the fine grained sedimentary rocks. It appears however, that these are confined to the top of the slate section. As the overlying formation is conglomerate their presence is easily accounted for. In the majority of the slate outcrops a few pebbles occur scattered throughout the rock.

Conglomerate.-

The conglomerate formation overlies the slates, and varies in thickness from 15 to 30 feet over the map area. Bands and stringers of fine to medium grained red sandstone occur within the bed. In the thicker bands the sandstone exhibits excellent graded bedding which supports the cross bedding as evidence demonstrating that the sedimentary sequence is right side up.

The conglomerate for the most part is very poorly sorted and composed of well rounded to sub-angular pebbles in a fine grained hard black matrix. Granite and granite pegmatite constitute the greatest proportion of pebbles. Toward the top of the bed there are more large boulders and the sorting becomes poorer.

To the north and west of the conglomerate outcrops several small exposures of arkose occur over an area of about 400 square feet. The rock weathers a pinkish brown and is a flesh colour on a fresh surface. It is fine to medium grained composed of quartz, feldspar, and ferromagnesian minerals. On the northern edge the contact between it and the underlying slate is conformable. From this it appears that the arkose is a lense or thin bed within the conglomerate. If there was more exposure it might be possible to demonstrate a facies change down dip between the pebble conglomerate and the arkose.

Grit.-

Grit is exposed along the southern edge of the property only. Here it may be clearly seen conformably overlying the conglomerate in the cliff face. The contact is quite distinct and marked by a heterogeneous thin layer of pea-size pebbles.

The grit is composed of fine grained splinters of rock or mineral cemented in an aphanitic black matrix. The rock is tough, but may be scratched with a knife. The term graywacke might be applied equally well to the rock.

Diabase.-

Within the map area diabase is confined to two dikes striking approximately N60°E and dipping vertically. The rock is fine to medium grained, equigranular, and holocrystalline. The contacts with the country rock are chilled and very fine grained. The diabase weathers a typical buff brown and

is greenish black on a fresh surface. The composite minerals are calcic feldspar, olivine, and other ferromagnesian minerals. Grains of magnetite and sulphide are disseminated in minor amounts.

The olivine diabase to is typical to the surrounding country.

#### Structure

The sedimentary sequence strikes in a northeast direction and dips flatly to the southeast at  $10^{\circ}$ . Good exposures of the contacts show the various formations to be conformable with each other. The contact between the slate and overlying conglomerate was previously described by Durnford\* as being unconformable. He described fragments of slate included in the lower extremity of the conglomerate. If this were the case such a relationship would be demonstrated. However, close examination of these "fragments" shows them to be stringer like inclusions. They bear small slumpage structures and evidence of deformation while still in a soft state. This points to a deposition of the conglomeritic sediment on top of the slate and the subsequent inclusion of the fine grained sediment. The inclusions are all similarly oriented with the bedding horizontal. If they were fragments there would be much more angularity and random orientation.

From geological and topographical evidence two faults have been interpreted which traverse the area in approximate north east and north west directions. Toward the northwest end of the latter there may be a split with a branch off to the north. However, this branch is speculated on topographical evidence alone.

Considering the effects of erosion on the conglomerate and the displacement of the diabase dike it would appear that the faults dip outward and the pie-shaped segment to the north has been thrust up.

A breccia and shear zone, striking  $N60^{\circ}E$  and dipping vertically, is

located in the slate to the south of the main diabase dike. The zone has been thoroughly brecciated and cemented with white quartz. Lenses and stringers of quartz appear in the shear zone. The structure may be traced the full length of the map area. It is here that the sulphide mineralization examined occurs.

#### Mineralization

Mineralization on the property is confined to the breccia zone described above and consists of pyrite and chalcopyrite in the quartz. A few minor stringers of hematite occur along the contact of the diabase dike 50 feet north of the quartz zone. A minor amount of chalcopyrite occurs with the hematite.

The mineralized zone may be divided into two distinct sections; the breccia zone showing the massive quartz, and the stringer zone in the shear. The two zones are adjacent with the massive quartz lying to the north of the stringer zone.

The fragments in the breccia zone are very angular and vary in size from 6 inches down to a fraction of an inch. Sulphide mineralization occurs in the quartz but predominantly adjacent to the boundaries of the fragments. Where expanses of quartz occur with no fragments there is very little mineralization. The sulphide does not occur regularly but rather in splashes.

The zone to the south consists of quartz stringers in the shear varying in width from 3 inches down to 1/8th of an inch. Barren rock between the stringers averages approximately 3 to 4 inches in thickness. Sulphide mineralization occurs in the veins along the walls. For the most part it is fairly constant.

The best looking mineralization for each of the zones was chosen and a continuous chip sample taken across it. The results, as shown below, are rather disappointing.



Across a 6 foot width the stringer zone averaged 0.88% Cu.

Across a 4 foot width of fragmented zone an assay of 1.02% Cu was obtained.

A 7 foot sample across a massive quartz zone averaged 0.57% Cu.

Although the quartz zone can be traced along strike over the length of the property, the mineralization is not constant. Pits at the extremities, and occasional exposures in between, show a distinct lack of mineralization.

#### Geophysical

A base line was cut and chained along the strike of the mineralized breccia zone. Cross lines were cut at 100 foot intervals at the east end and 200 foot intervals at the west end, totalling 8100 feet in all. The grid system is located over the area which contain the main showings and the heaviest sulphide mineralization. A vertical loop electromagnetic unit was employed first followed by a magnetometer survey using a Sharpe's vertical variometer.

#### Electromagnetic.

The equipment used for the survey consisted of a 1300 c.p.s. generator and a triangular transmitting coil, approximately 10 feet on a side and made up of 21 loops of wire. One receiver with earphones was used. Between each signal the transmitting coil was rotated to line up with the appropriate station. Throughout the survey a strong signal was received and it is felt that the results obtained are dependable.

General weak conductors were picked up which occur erratically. No continuity was observed. Three of the conductors: 75S, L550W, 508, L250W, and 508, L200E, fall on, or quite close to the mineralized breccia zone. Adjacent to the north of these conductors left hand dip angles were recorded which correspond with the diabase dikes.

The sporadic conductors lying north of the base line might possibly be

caused by features in the gravel or geological features in the bedrock. They are not looked on as being important because of the lack of continuity and lineation.

Magnetic.-

The Sharpe's vertical variometer magnetometer was used with cross lines being run at 200 foot intervals. The base line was first run for control and check readings taken at the end of each line. The instrument is simple to read and had a scale content at that time of 20.3 gammas per division. Only over the diabase dike was a compensating magnet used.

The results of the survey appear in the profiles in the appendix.

A back ground of 350 gammas was chosen. Several anomalous highs were picked up but the only ones with any continuity were those over the diabase dike to the north of the base line.

Conclusions & Recommendations

Although the area is structurally favourable for mineralization, a geological and geophysical examination has not revealed the presence of an economic concentration of copper sulphide. The sulphide occurring in the quartz, although quite spectacular in places, is not constant and does not have any apparent length within the breccia zone.

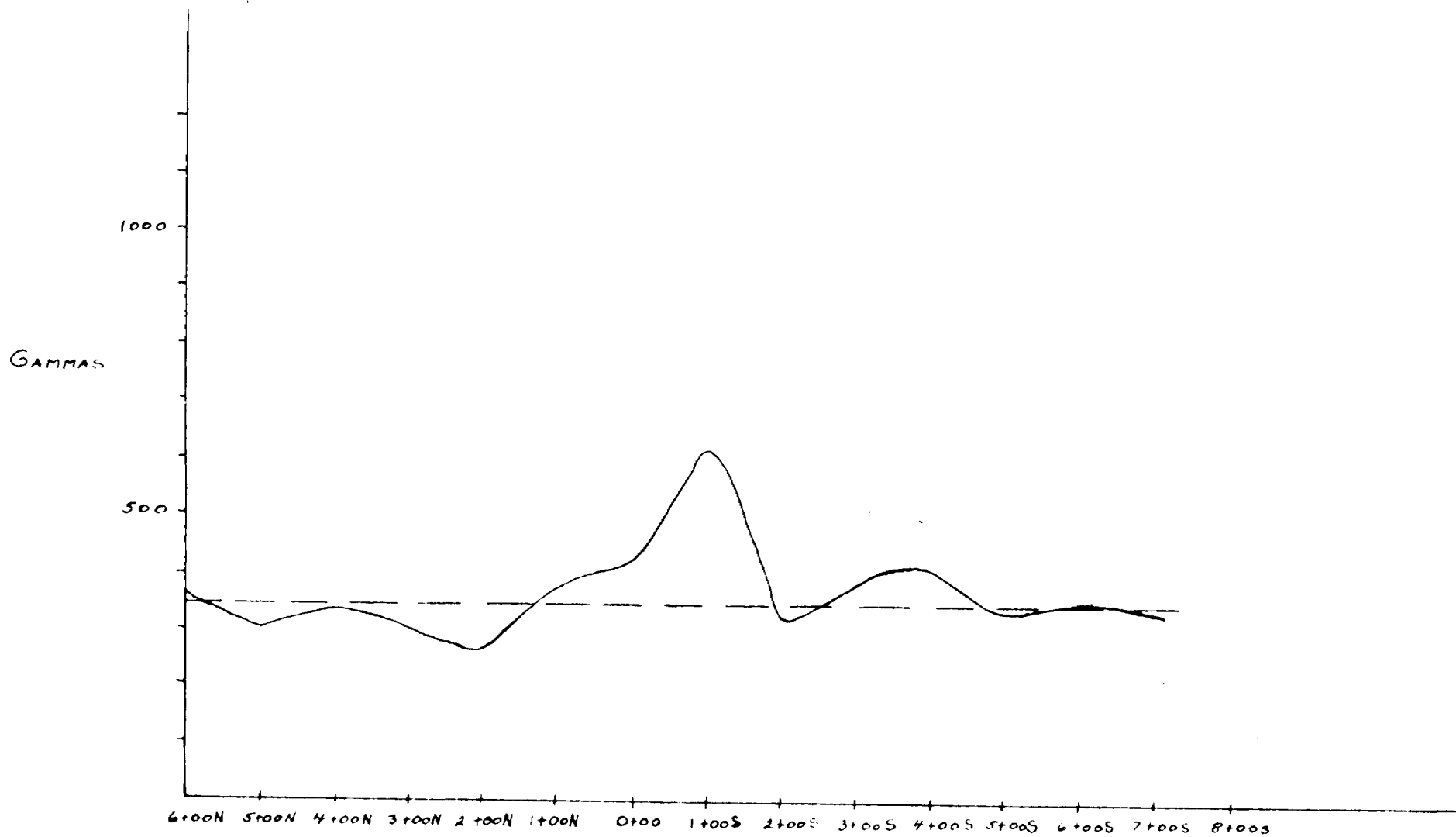
On the basis of the work carried out the writer feels that no further work is warranted.

Respectfully Submitted

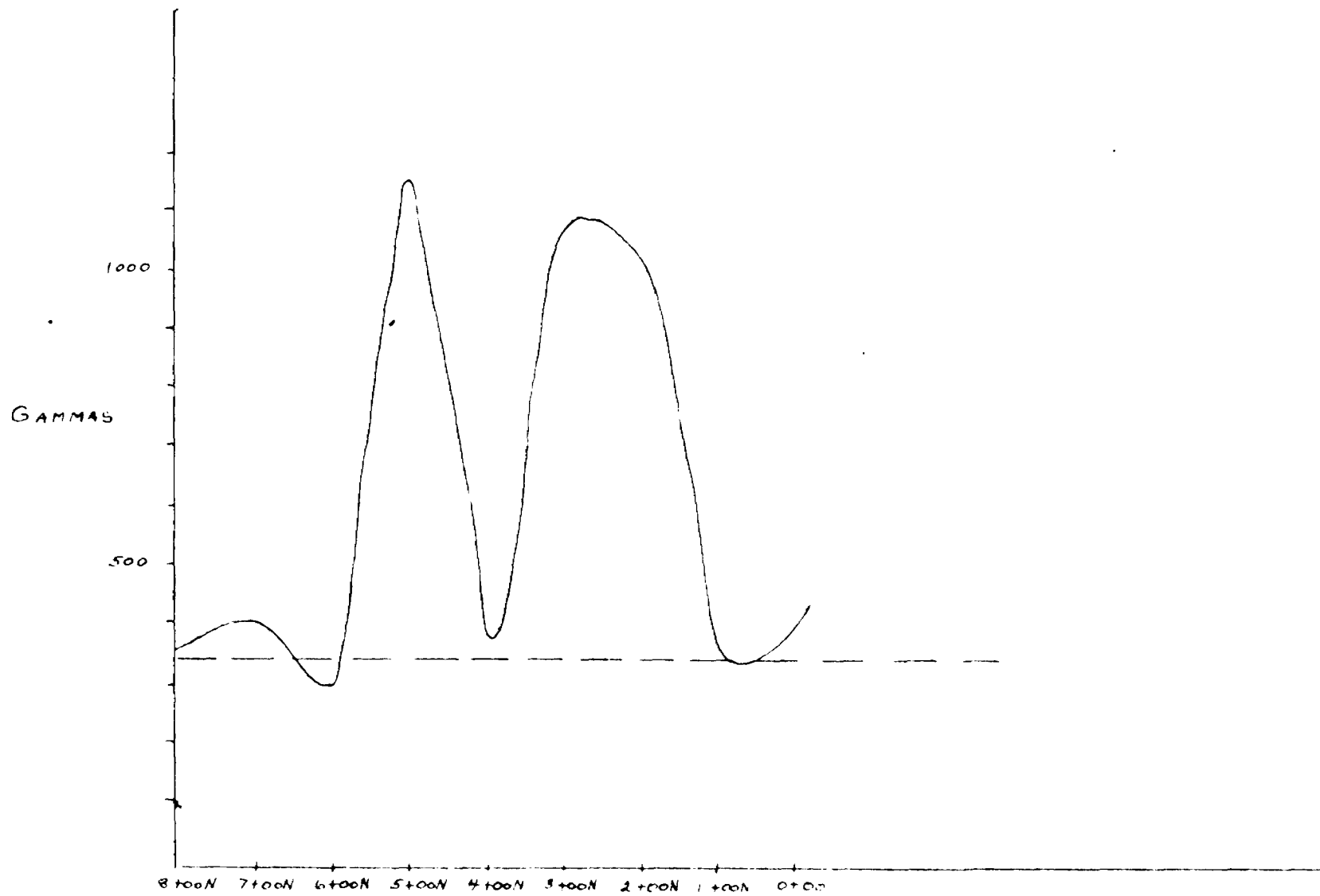
*J. S. Vincent*

J.S. Vincent.

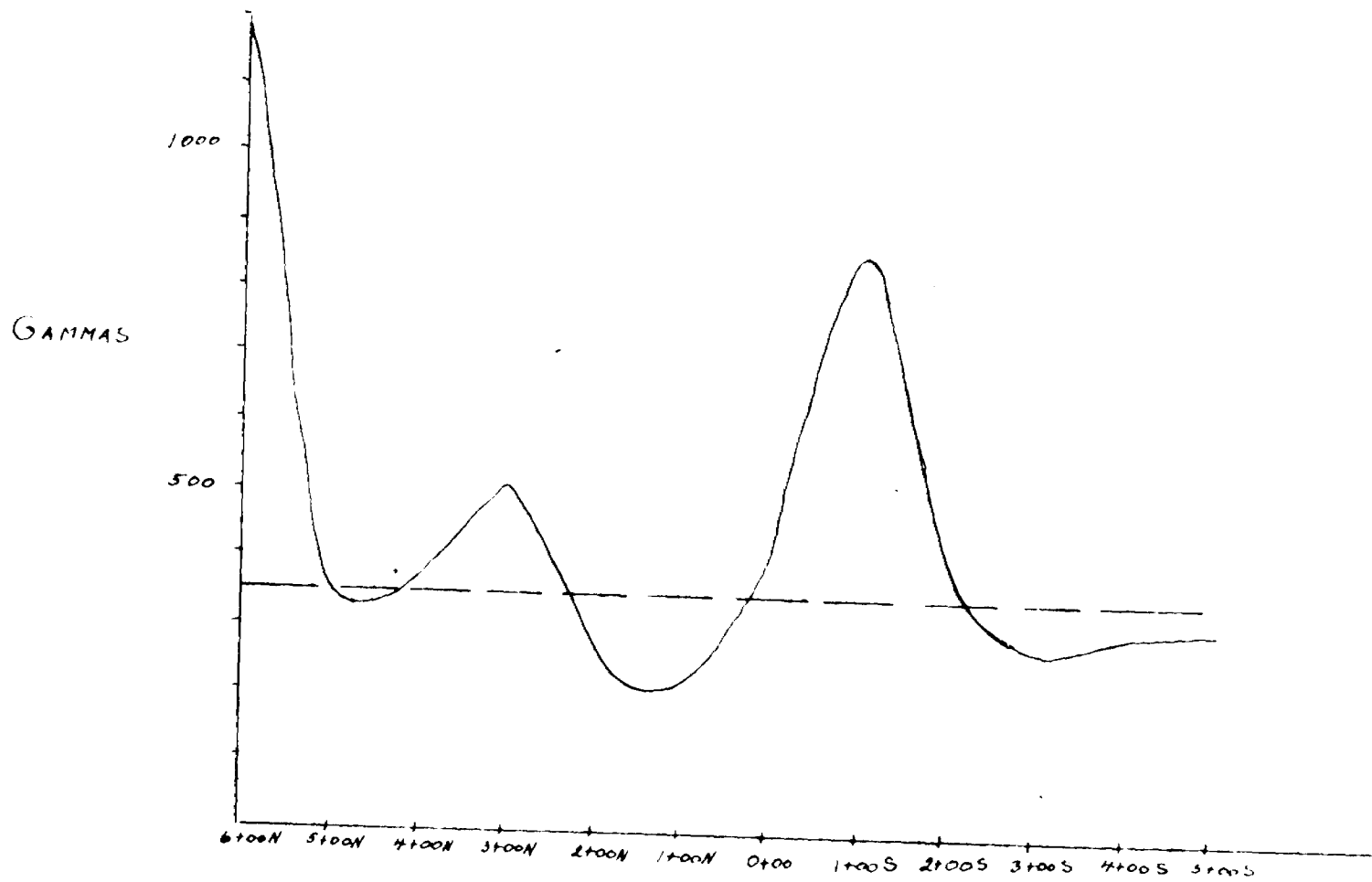
Aug 31, 1960



LINE 2+00 E

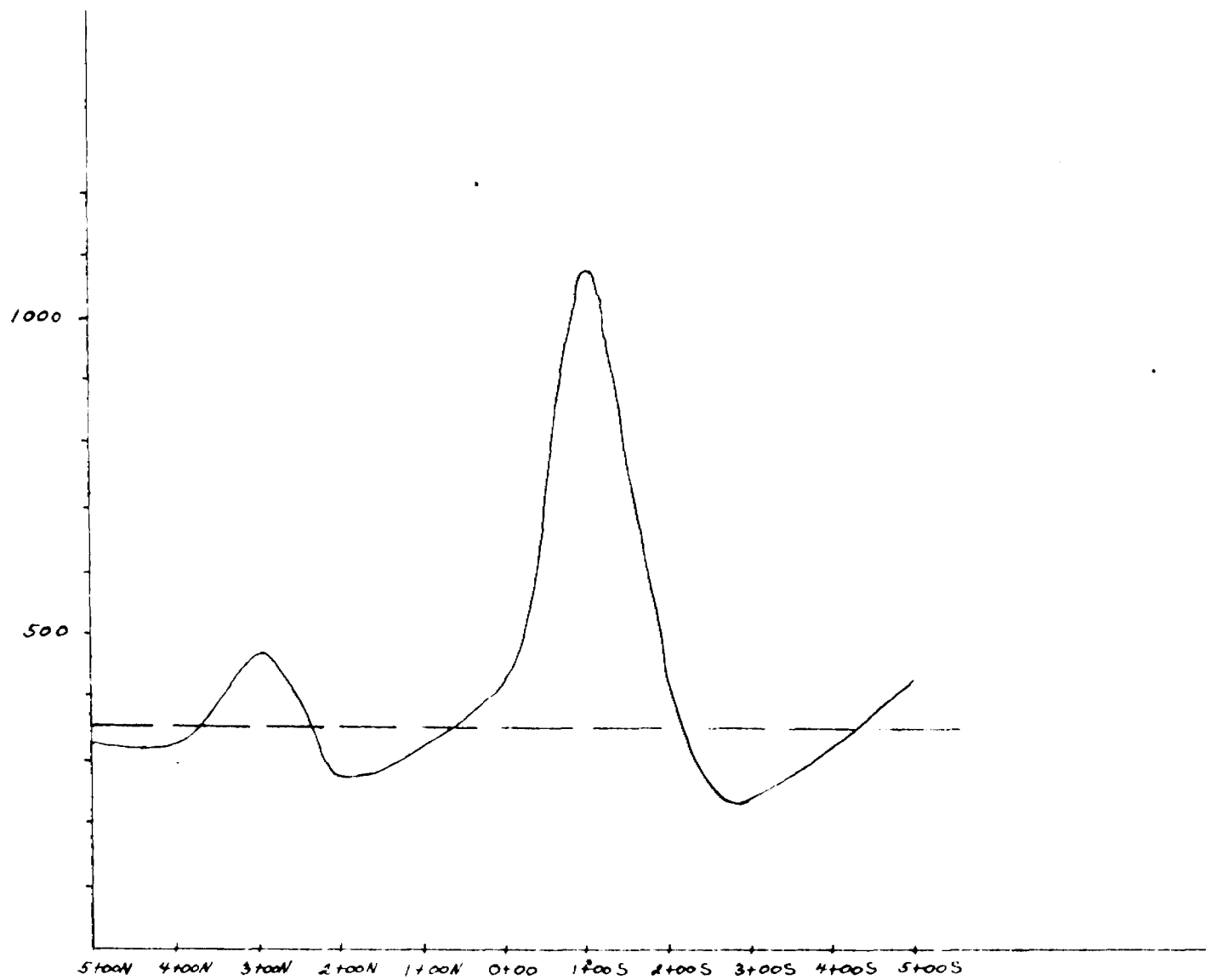


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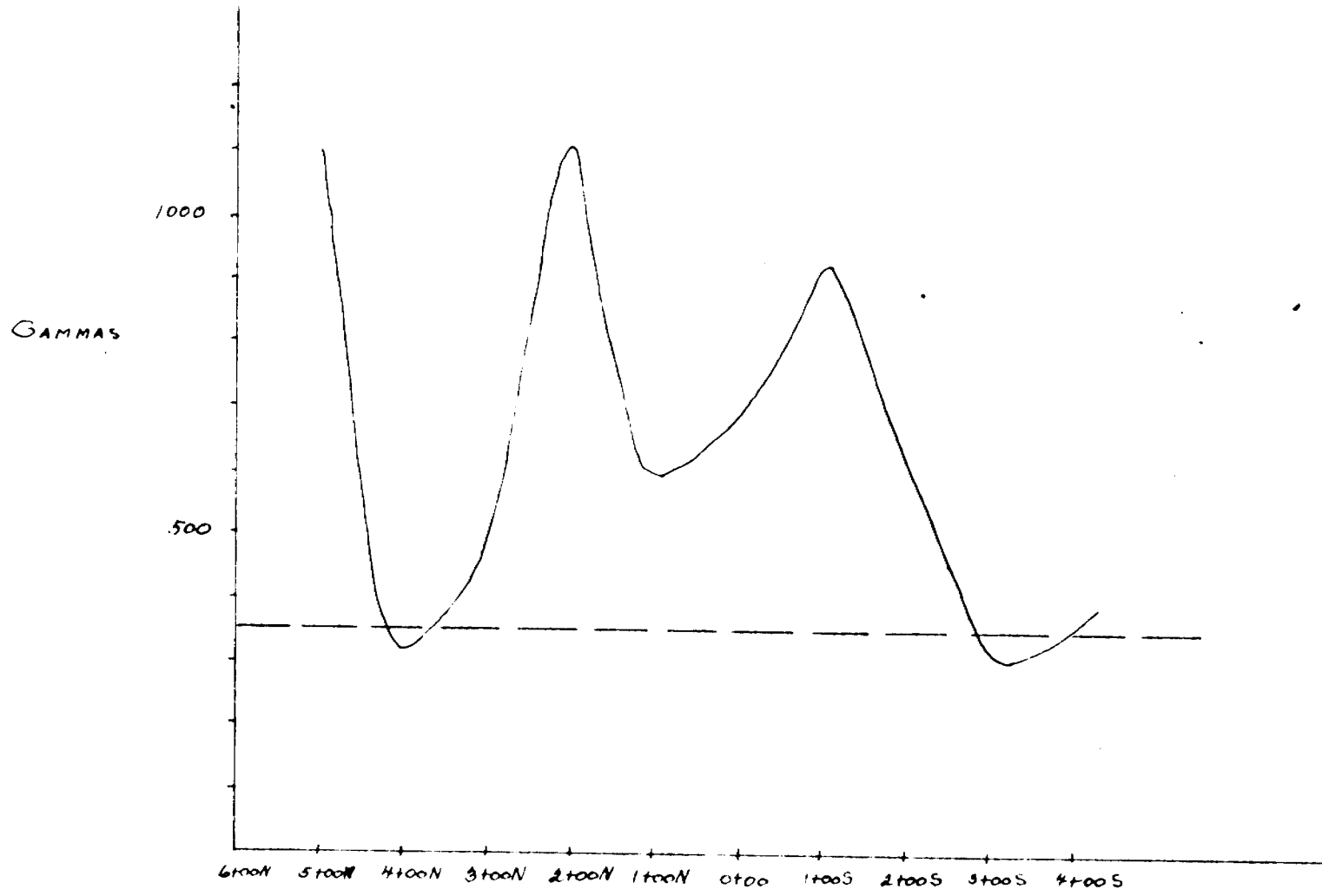


L 31.50W

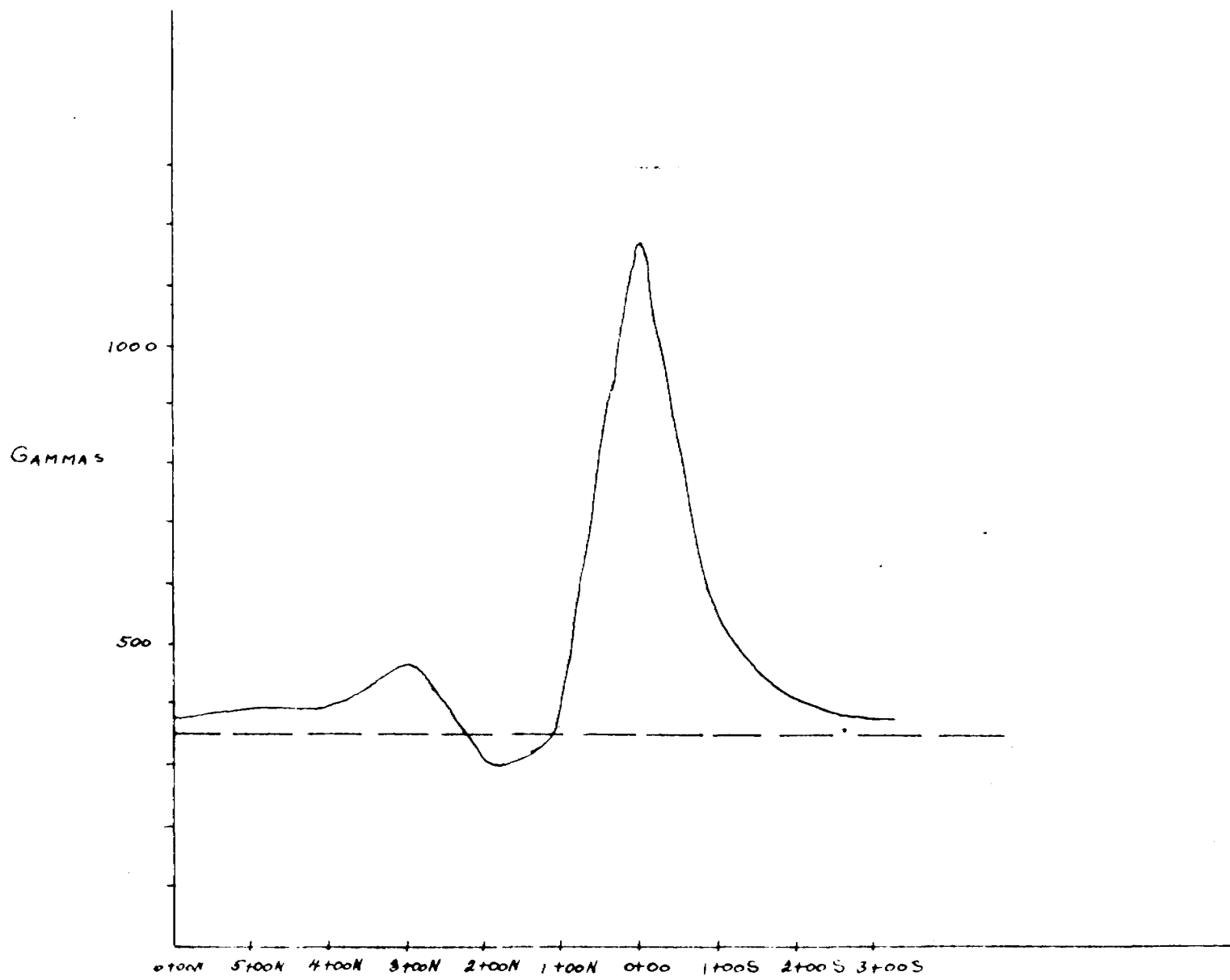
GAMMAS



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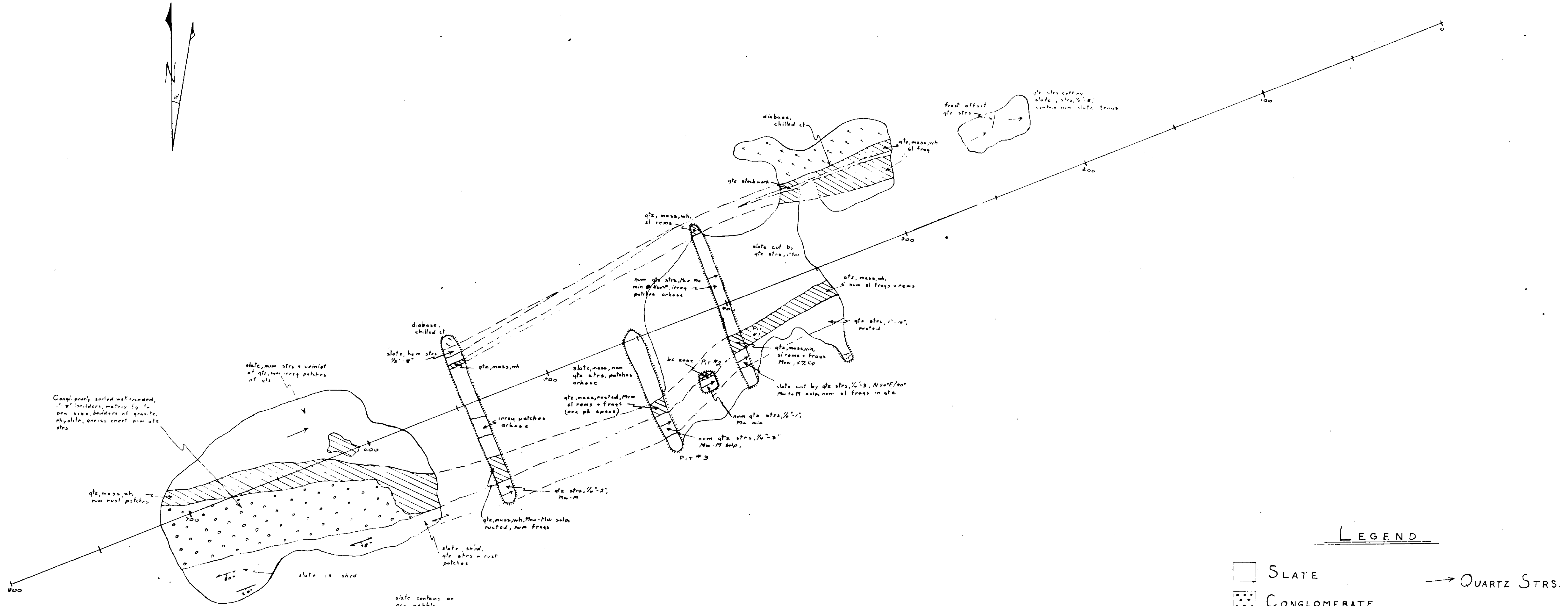


LINE 7+50 W



LINE 9+50 W





**LEGEND**

- SLATE
- CONGLOMERATE
- DIABASE
- QUARTZ
- MINERALIZATION
- QUARTZ STRS.
- SHEARING
- STRIKE + DIP
- PIT



