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## **Michigan land and Iron County's land, Northern Michigan: [specimens] 17050-17051. No. 89 1889**

Merriam, W. N.  
[s.l.]: [s.n.], 1889

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U. S. GEOLOGICAL SURVEY  
FIELD SECTION BOOK

No. 89.

1889

Michigan Land & Iron Co's. Land  
Northern Michigan

Ch. M. Merriam.

17050-17051

Aug 24

89

17880

E. R. Maurer

## SURVEY OF THE PRE-CAMBRIAN ROCKS OF THE N. W. STATES.

## INSTRUCTIONS.

1. Ordinarily at least two pages of this book will be devoted to one section. On the left hand page place a map of as much of the section as has *actually been seen*. Denote rivers, lakes, marshes, etc., by the usual topographical signs. Denote the ledges of rock, when no structure is made out, by cross-hatching, making the cross-hatching cover as nearly as possible the areas occupied by the exposures. If the rock is a massive one, but still more or less plainly bedded, use the same sign with a dip arrow and figure attached, showing the amount and inclination of the dip. Denote slaty or other very plainly bedded rocks by lines running in the direction of the strike, with figures and a dip arrow attached as before. In all cases where there is the least doubt about the true bedding directions, indicate it by a query. To each exposure on the face of the map attach the number of the specimen representing it. In mapping the section count each of the spaces between the blue lines as 100 paces, and twenty of these spaces as one mile, or 2,000 paces. Usually the southeast corner will be placed at the bottom of the page, or at the first black line above the bottom of the page, and at the right hand side. If, however, for any reason, it is desirable to show portions of an adjoining section, the southeast corner may be shifted up, or the map may be turned around and the north placed at the left hand side of the page.

2. On the right hand page place the notes descriptive of the exposures. Begin in each case with the number of the specimen, placing the number on the left hand side of the red line, after which give in order on the right of the same red line the position of the ledges as reckoned in paces from the southeast corner of the section, and the dip and strike when observable, for instance: 4025 250 N., 300 W., *Strike, N. 6° E., Dip, 50° E.* Then follow with as full a description of the ledge as possible.

3. The ruling of the left hand page is also arranged so that a smaller scale can be used. Each one of the black lines may represent a section line and the red lines quarter sections and "forties." The scale of the maps may thus be reduced, if desirable, to two inches to the mile (the ordinary town plat scale.)

4. Collect a specimen from each separate ledge of rock, or wherever there is a change of rock on any one ledge. In case of trips made on foot or in canoes, for long distances, neighboring ledges, unquestionably of one kind of rock, need not be sampled, the position and extent of the ledge being marked on the map, with a note that it is of a rock identical with specimen so-and-so. Under the same conditions small sized samples, trimmed to a uniform size of  $2 \times 2\frac{1}{2} \times \frac{3}{4}$  inches will be allowed, but in all other cases *large sized specimens*, trimmed to a size of  $3 \times 4 \times 1$  inches, must be selected, in accordance with § 3, chapter IV, p. 44, Regulations of the U. S. Geological Survey. In all cases collect chips for slicing. All specimens are to have numbers painted on them, in white on a black background, in the field.

5. On the last twenty-five pages of the book give, as may seem desirable, a general account of the examination of the region mapped in the previous pages, correlation of observations, sketches, cross sections, etc., etc.



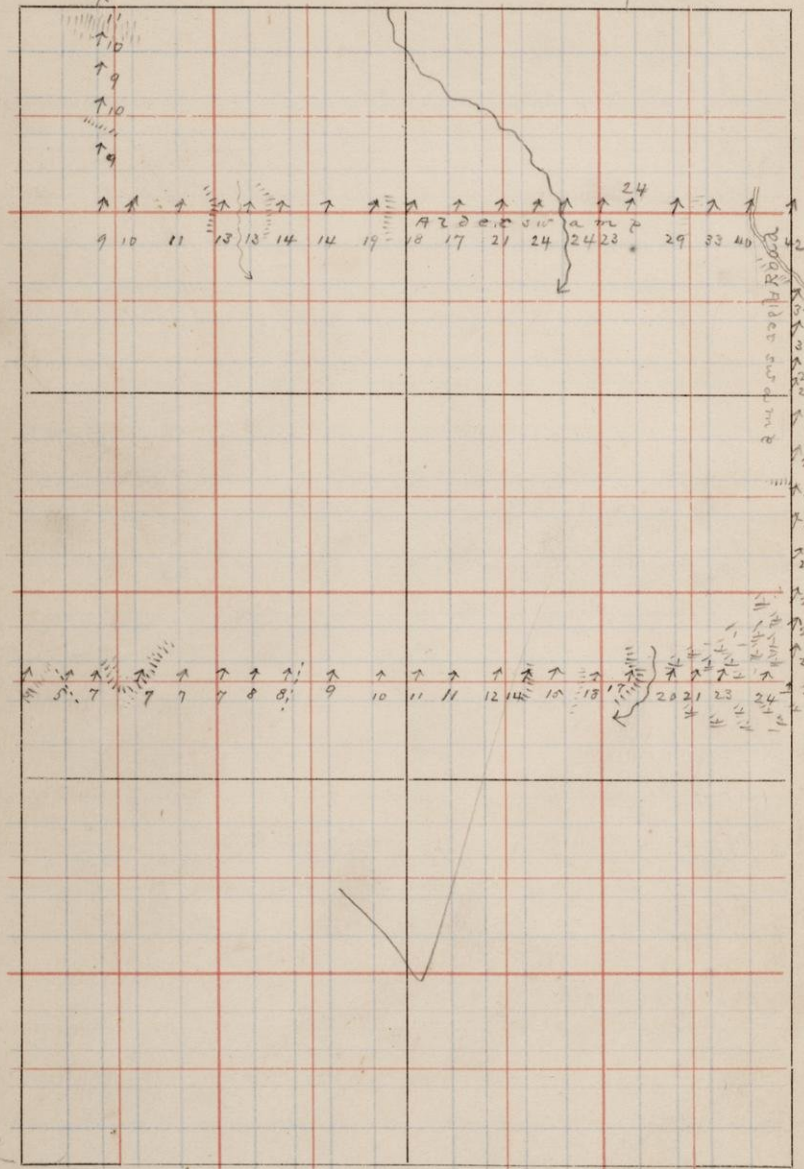
#89

SEC. 12

T. 46

R.

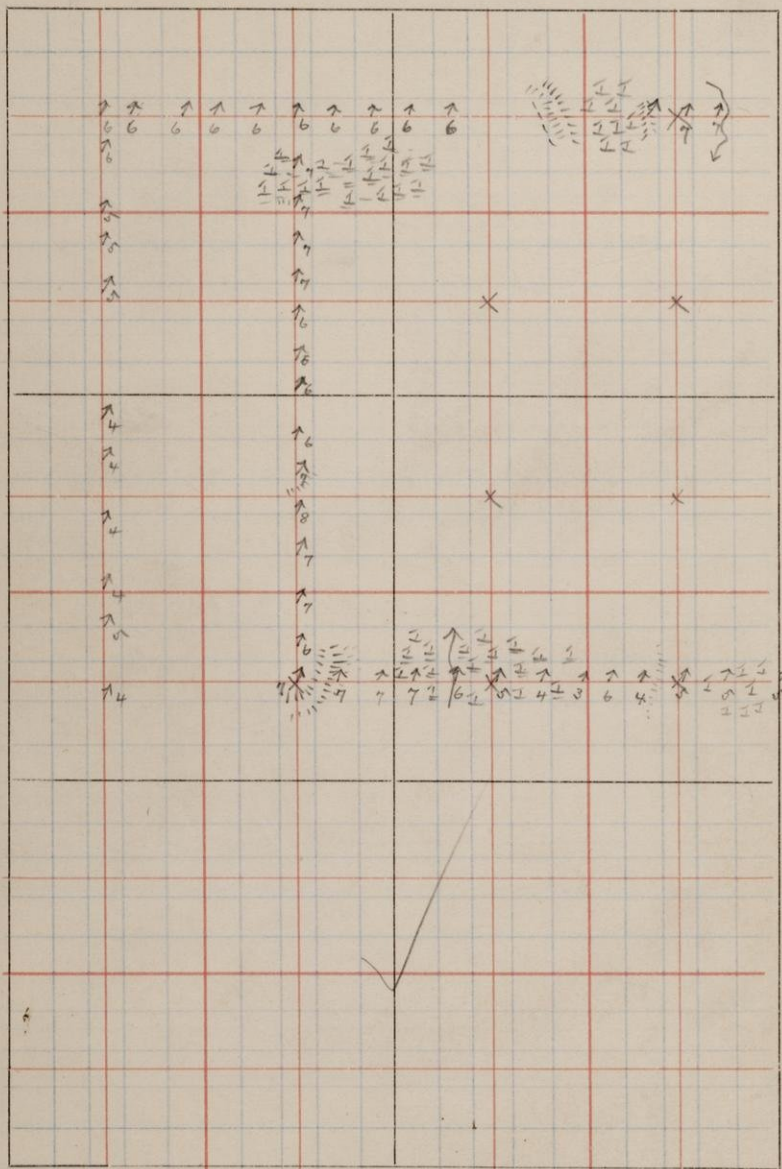
31



SEC. 11 T. 46

R.

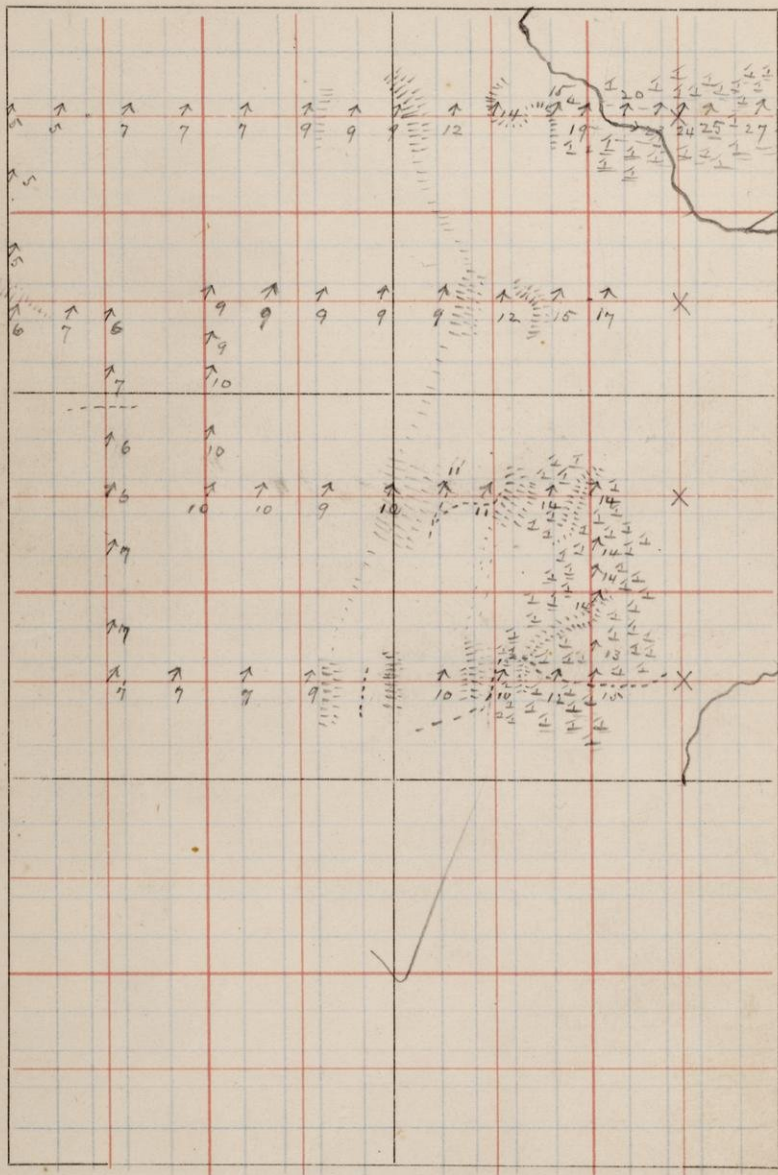
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SEC. 13 T. 46

R. 31



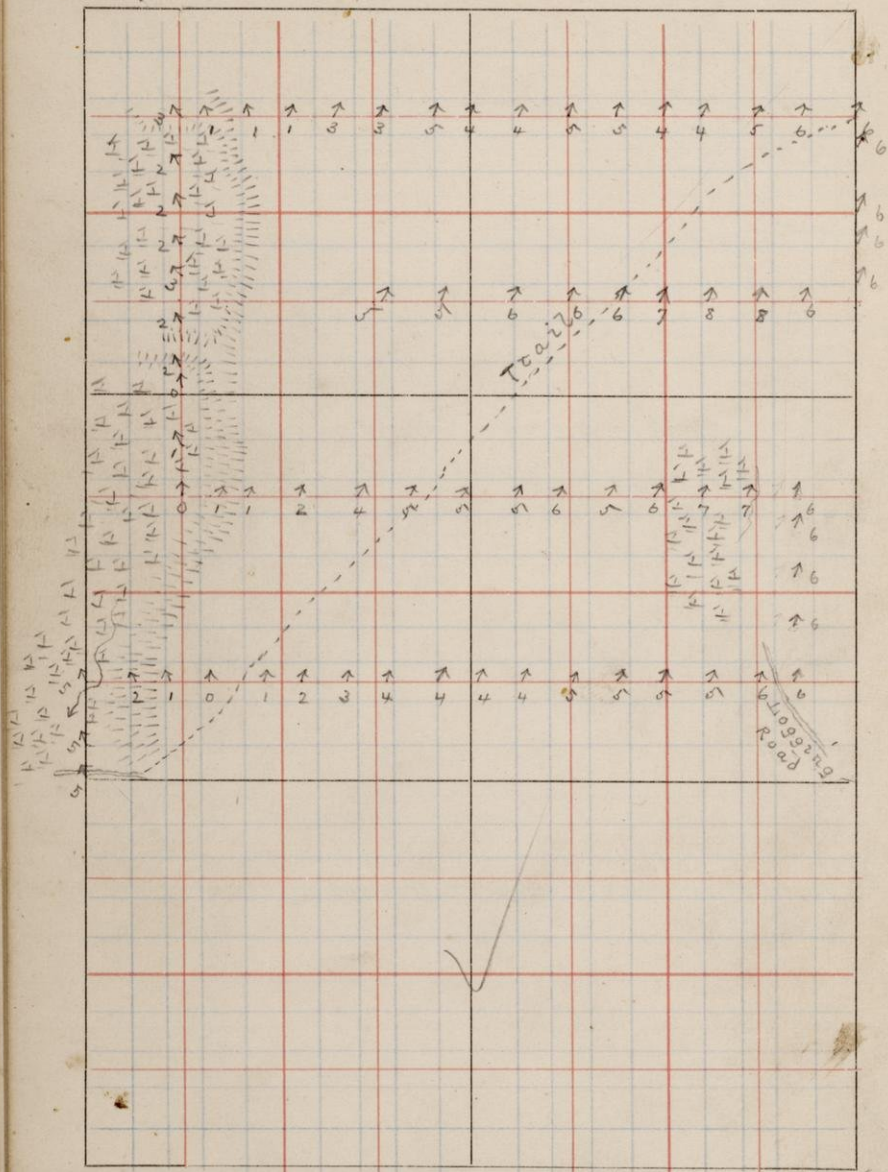
SEC. 23 T. 46

T.

46

R.

61



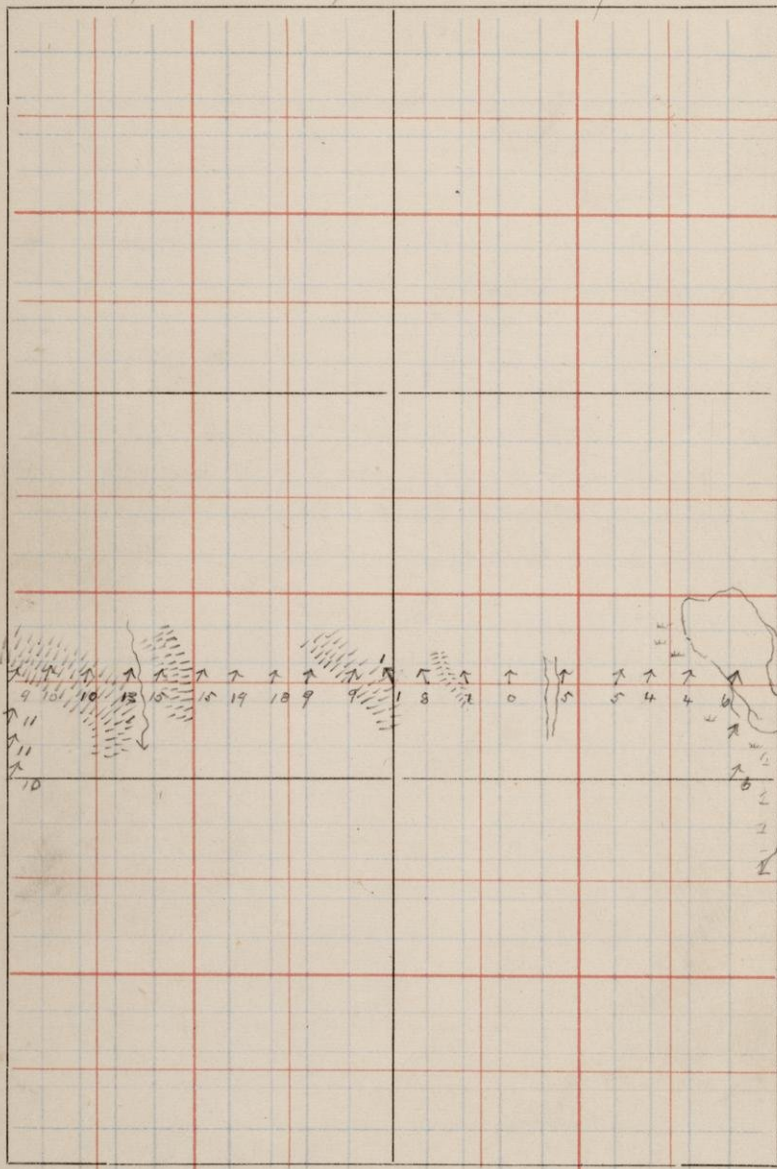


SEC. 29 T.

47

R.

31



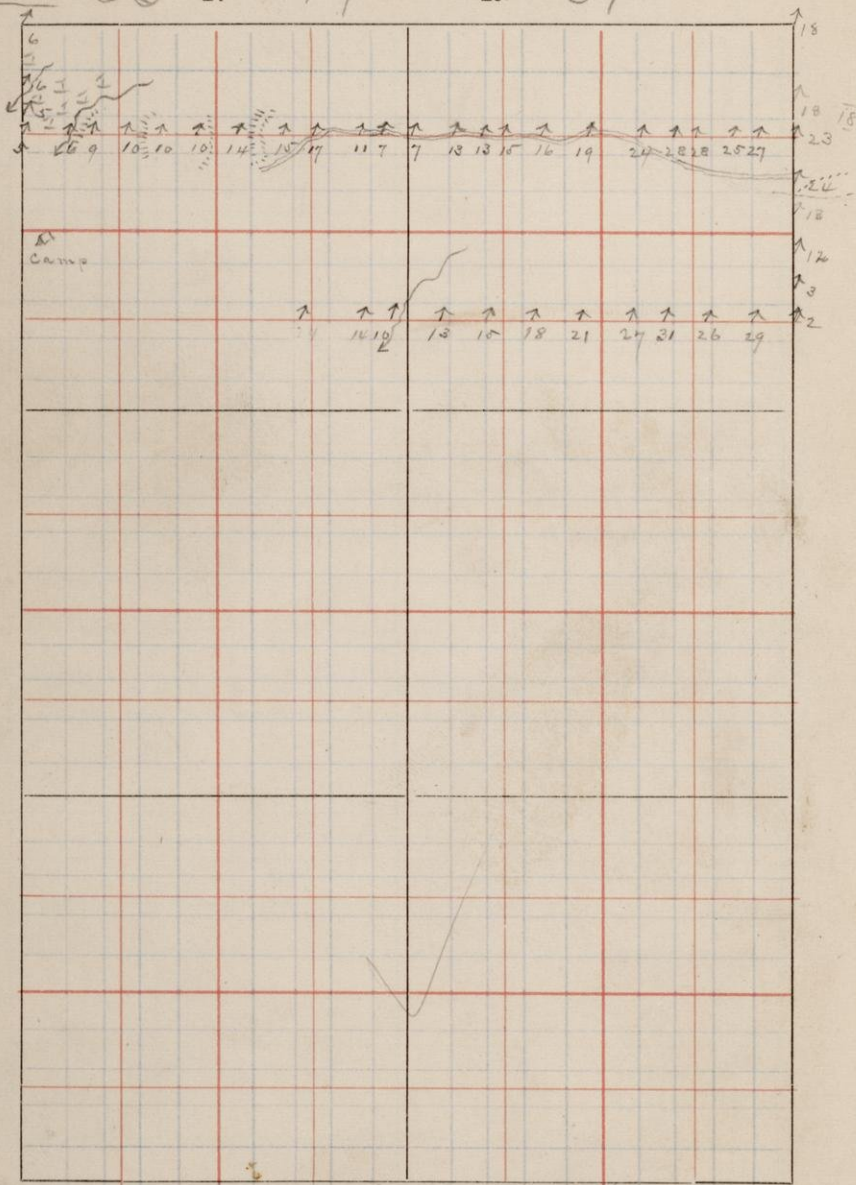
SEC 33

T.

47

R.

31

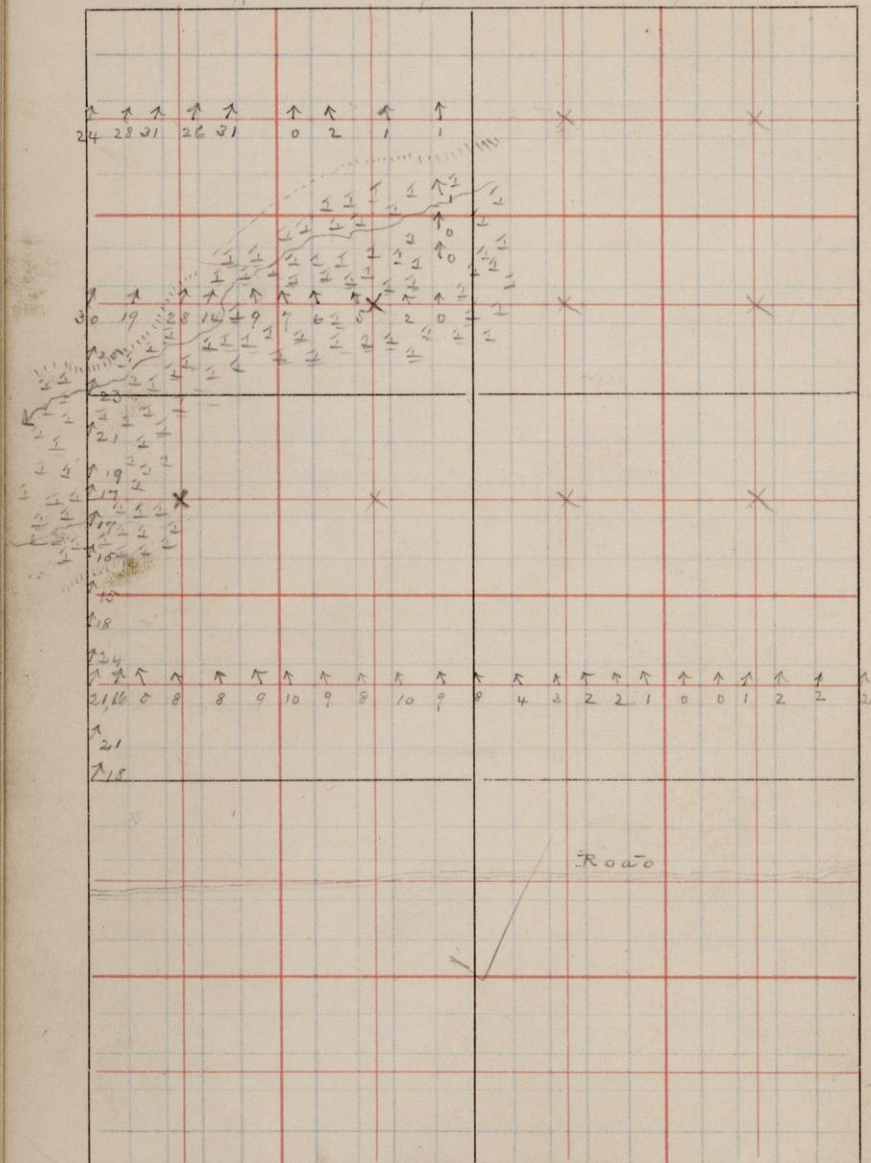


SEC. 27<sup>T</sup>.

47

R.

20

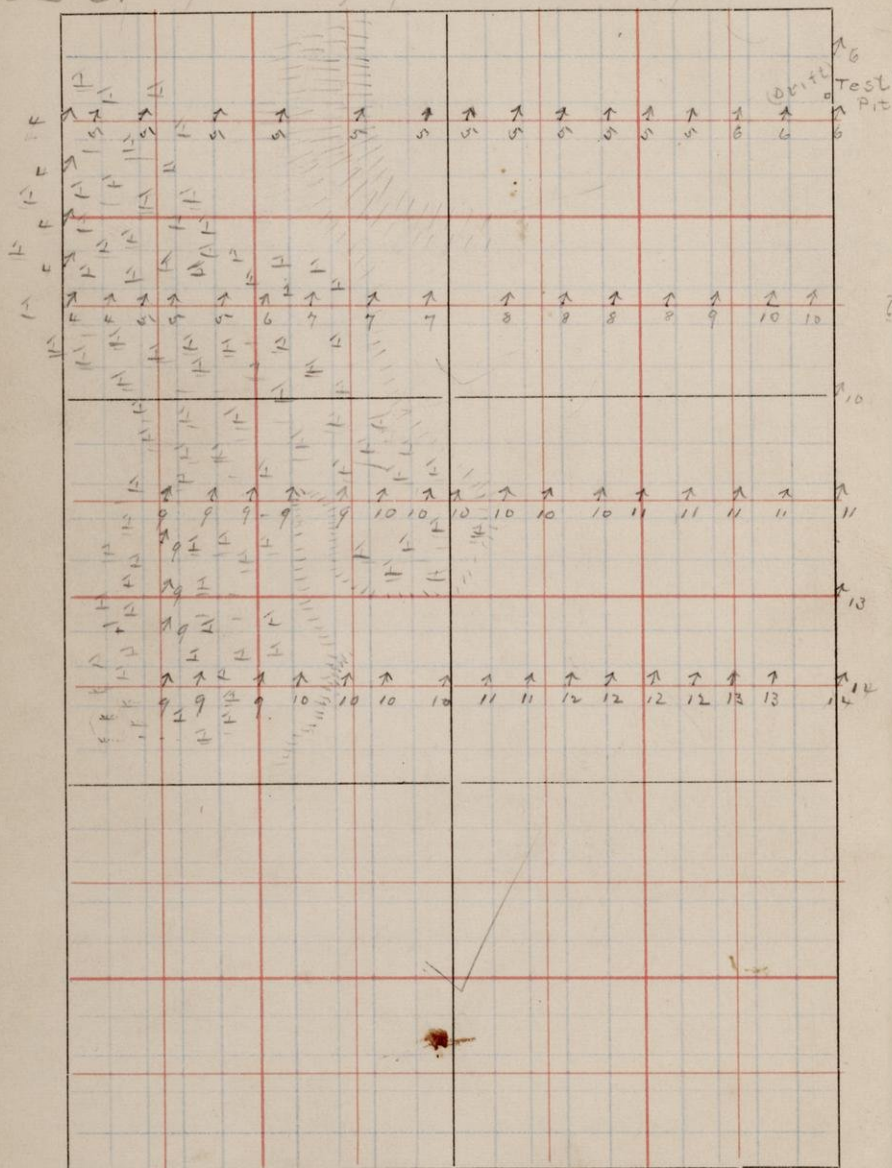




SEC. 3. T. 47

R.

6/



SEC 32

AN 1/2-5

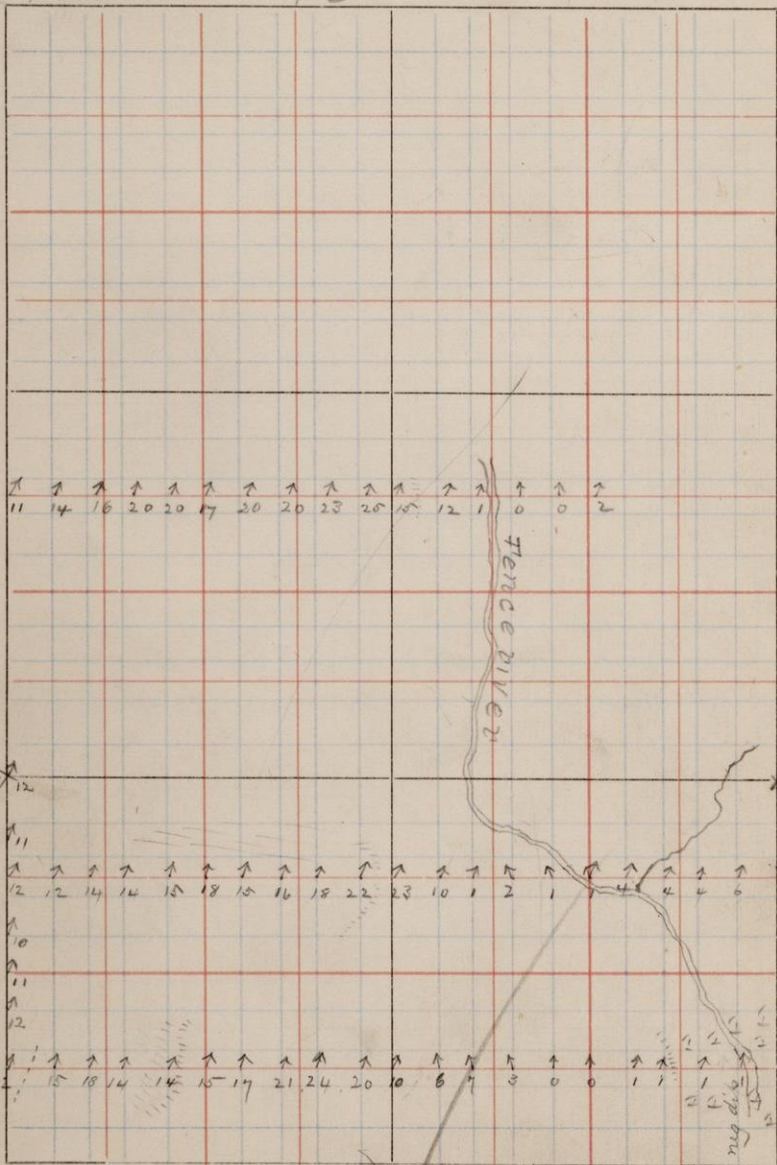
T.

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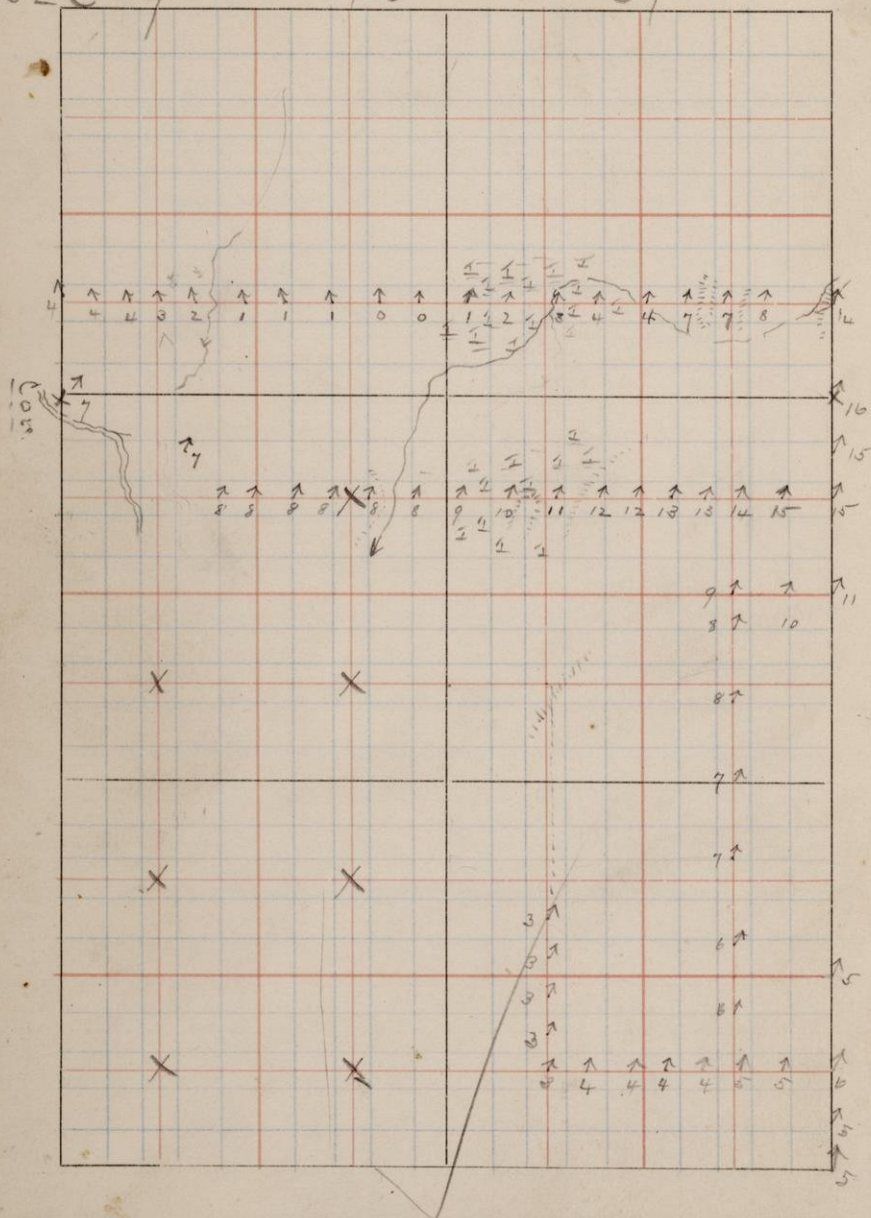


T.

SEC 9

46

R.



DEC 10

T.

46

R.

31

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

11 13 15 18 21 12 10 1 4 7 6 13 7 4 3 5

15

16

16

16

16

18

19

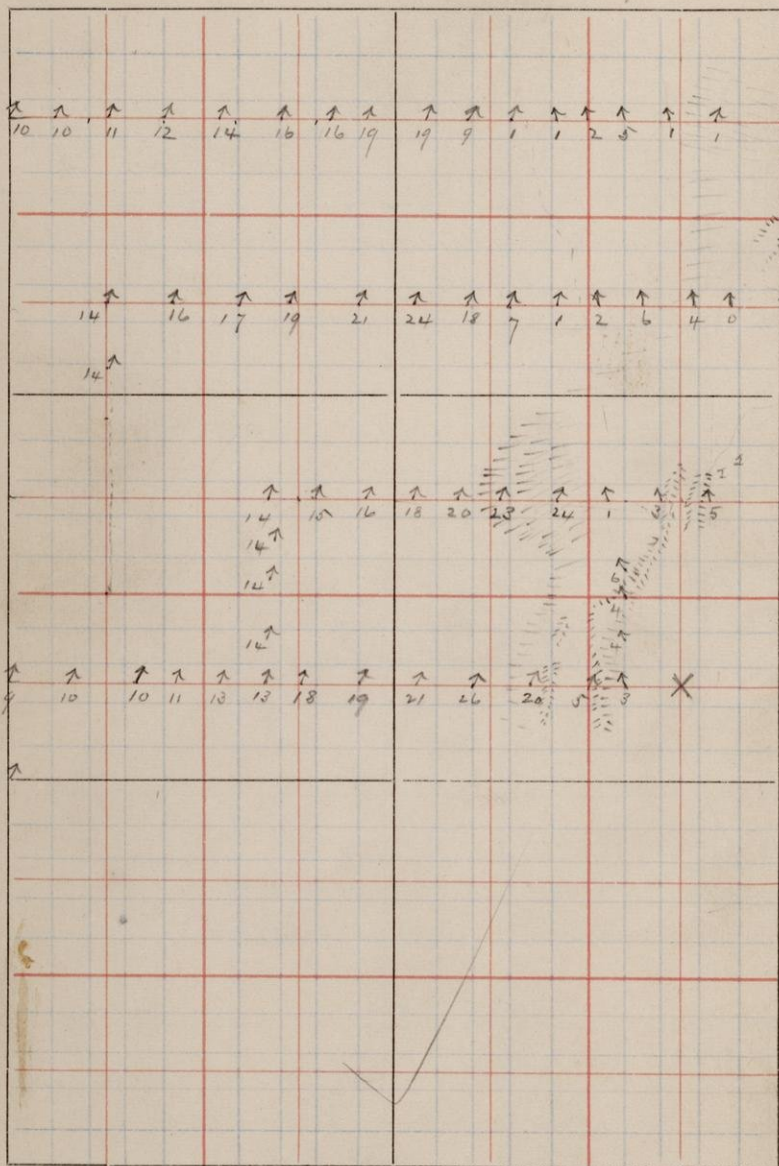
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1 6 7 7 8 10 12 14 10 10 6 10 9 9

SEC. 15 T. 46

R.

31

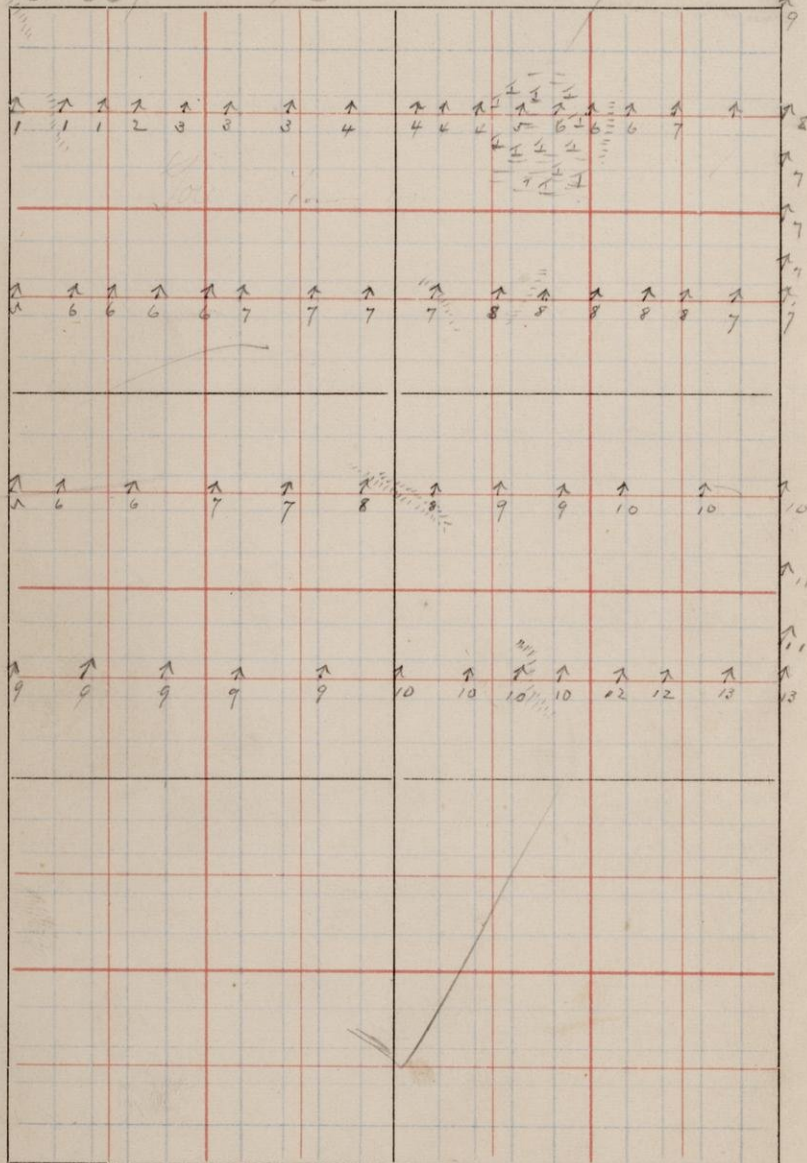




SEC. 2/ T. 46

R.

3/



SEC 29 T.

46

R.

21

con \*

This sec. was "looked" with compass at  $0^{\circ}$   
with good results.

17050 2000 N 55 N SE. 29-46-31

a mass of rock about  
10x10x8 (above ground) and  
may possibly not be in place



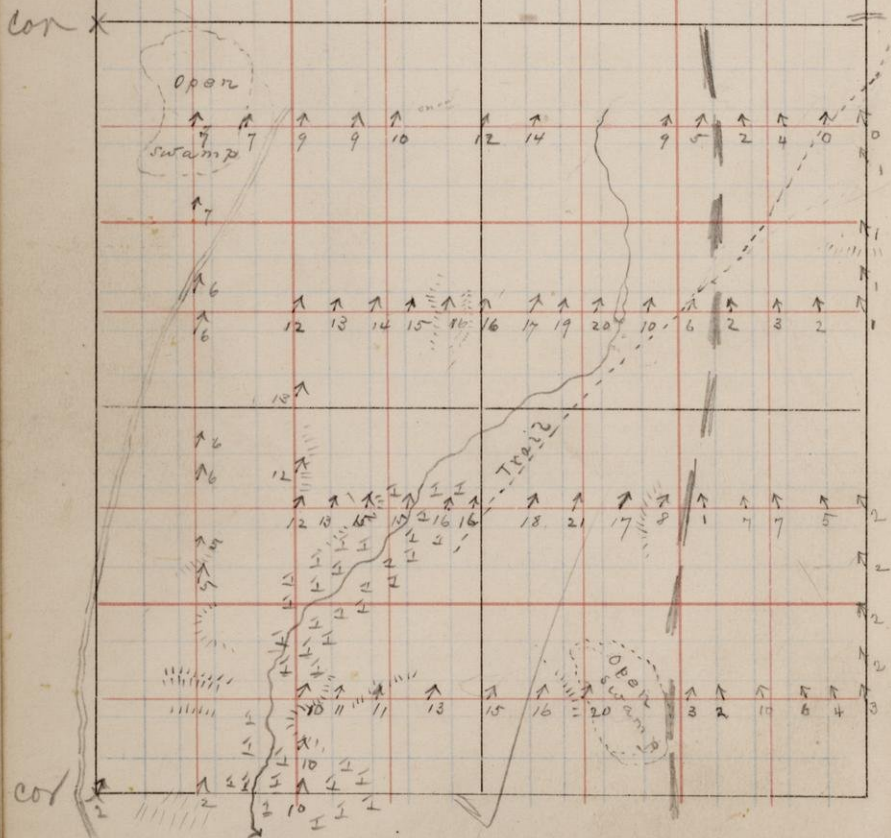
S<sup>1/2</sup> 22  
 x DEC 27 T.

46

R.

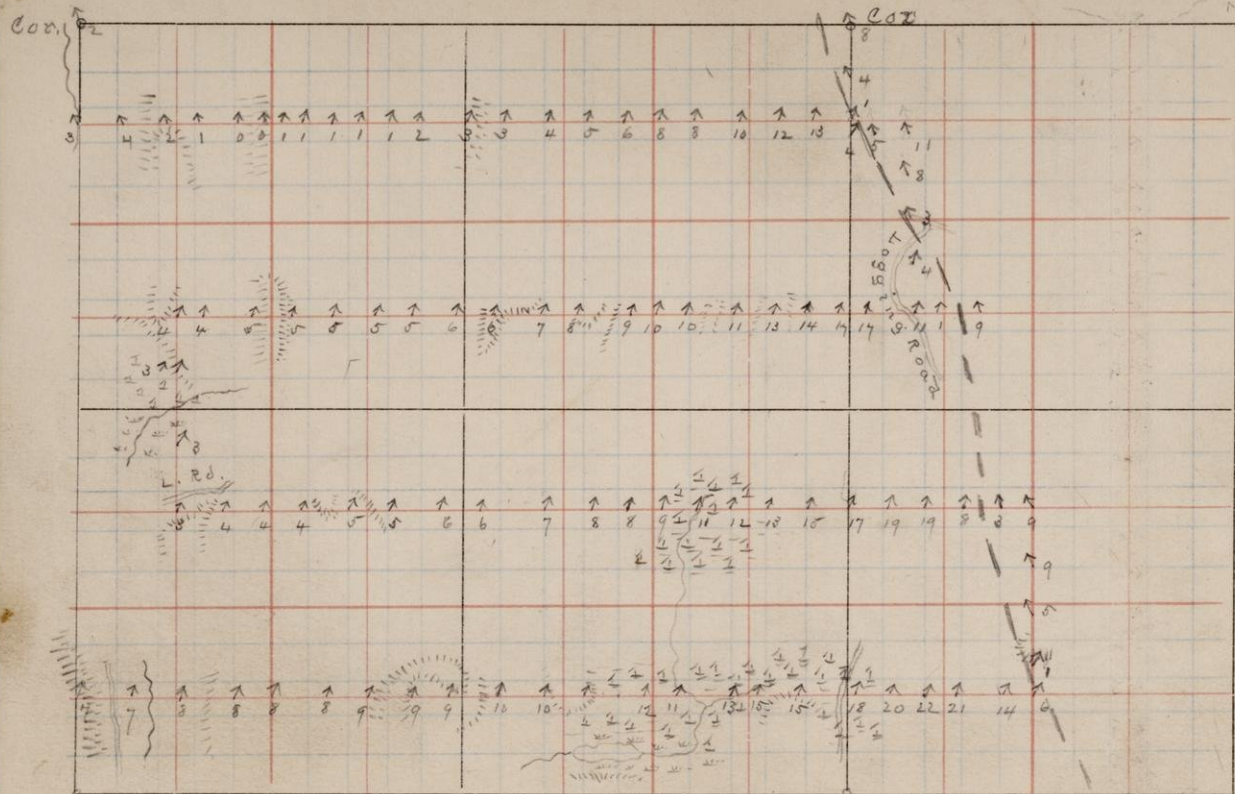
31

cor x



SEC 3. - 45- 31

W 1/2-2-45-31



T.

R.

Corner

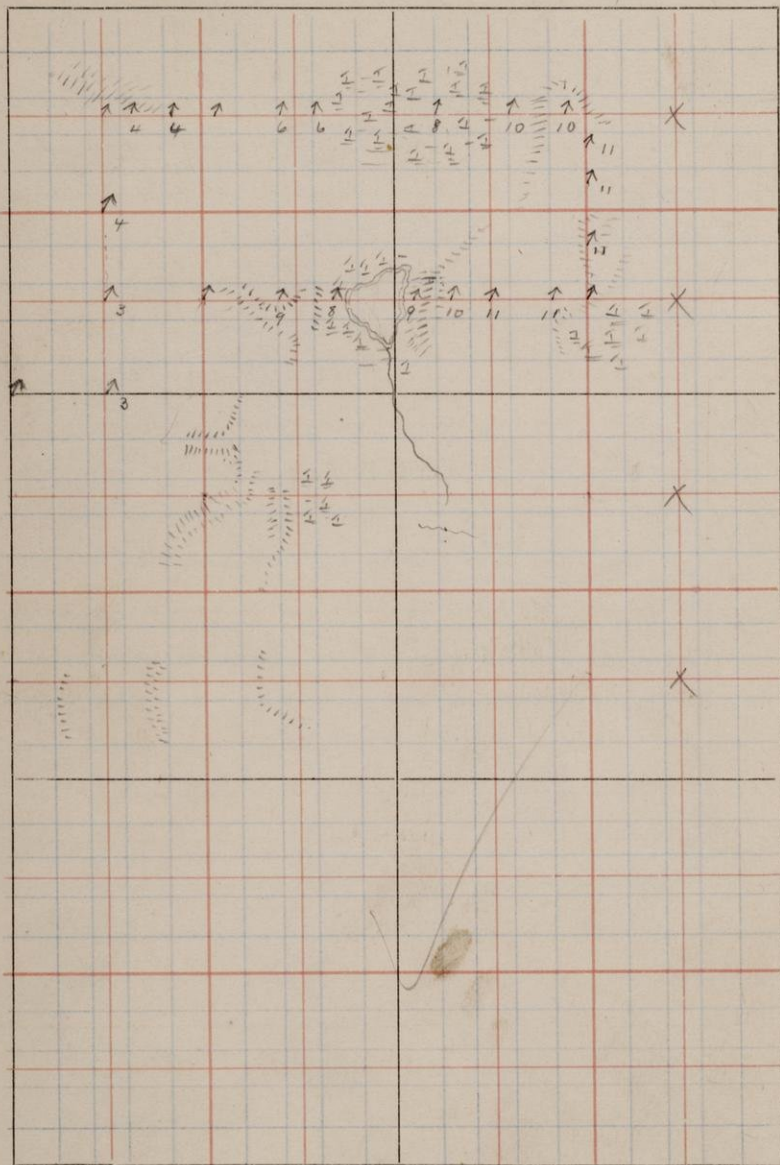
Cor.

SEC 25 T.

46

R.

31



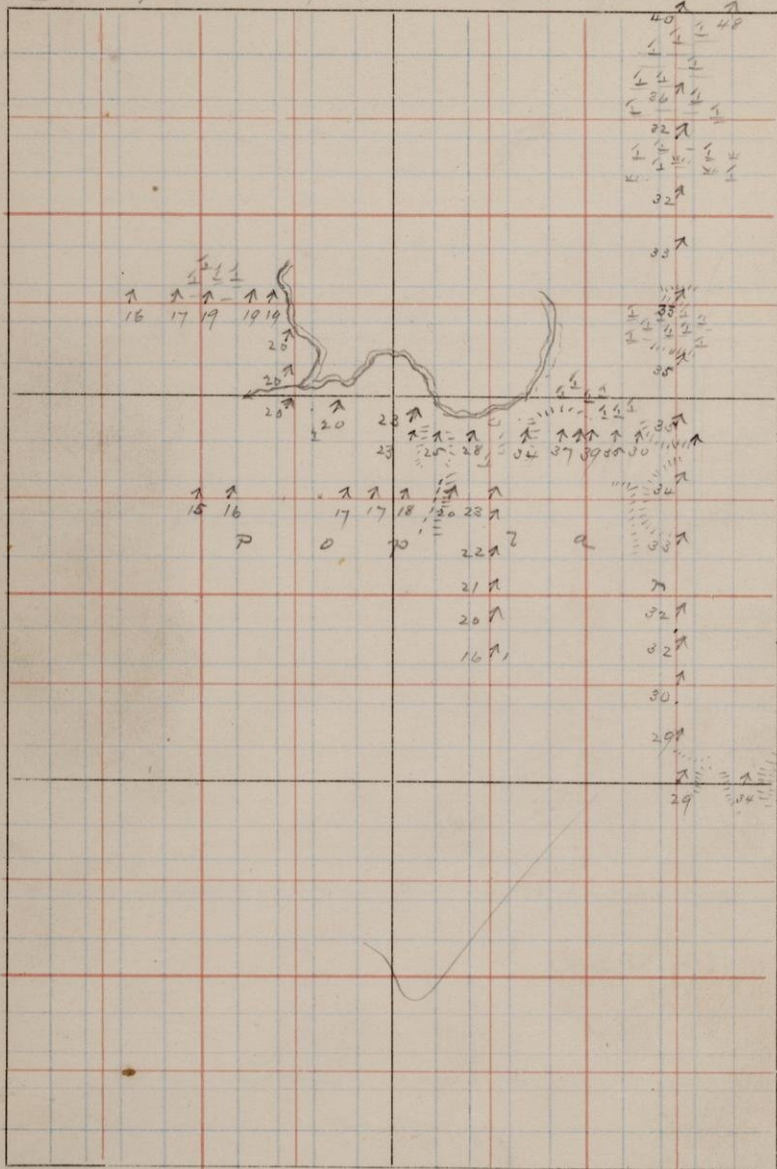


SEC 31 T.

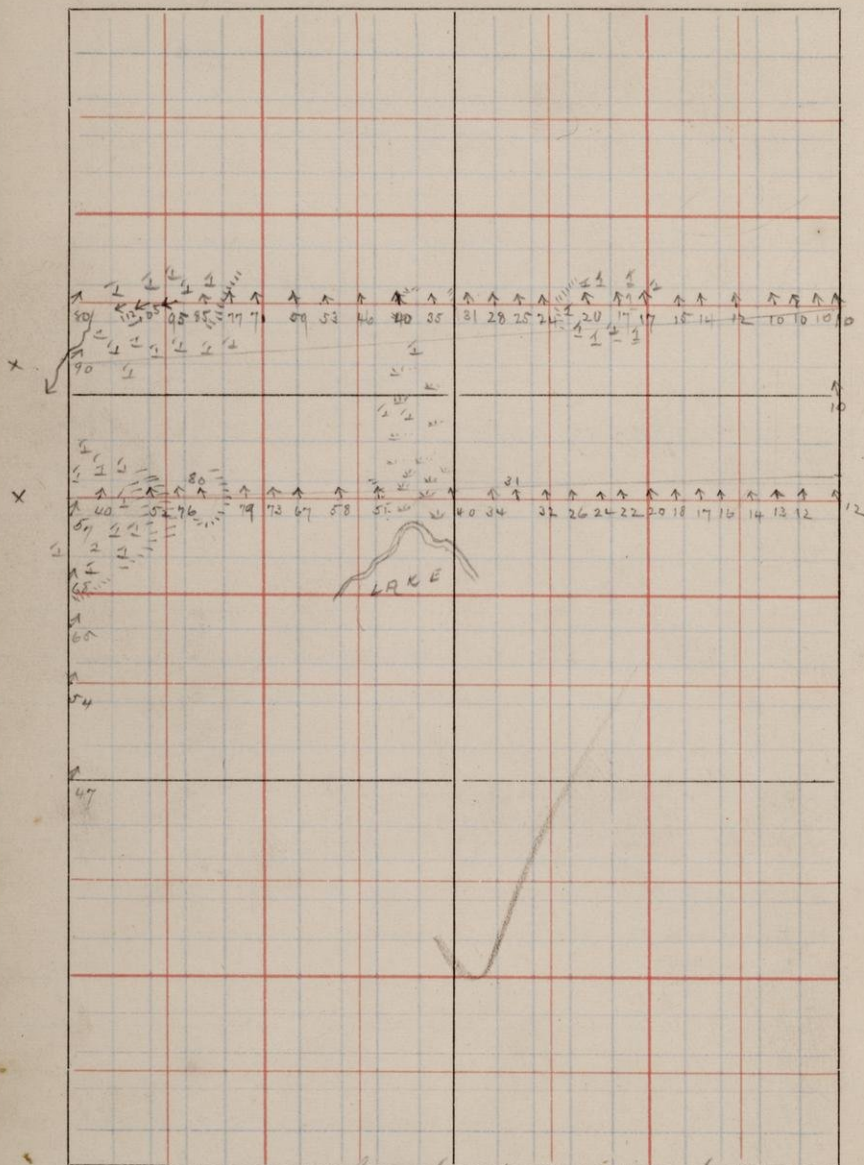
46

R.

30



SEC 29 T. 46 R. 30

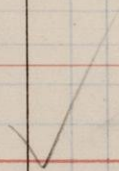


attractions should be marked on pencil lines above.

JEC, 32 T. 46

R. 30

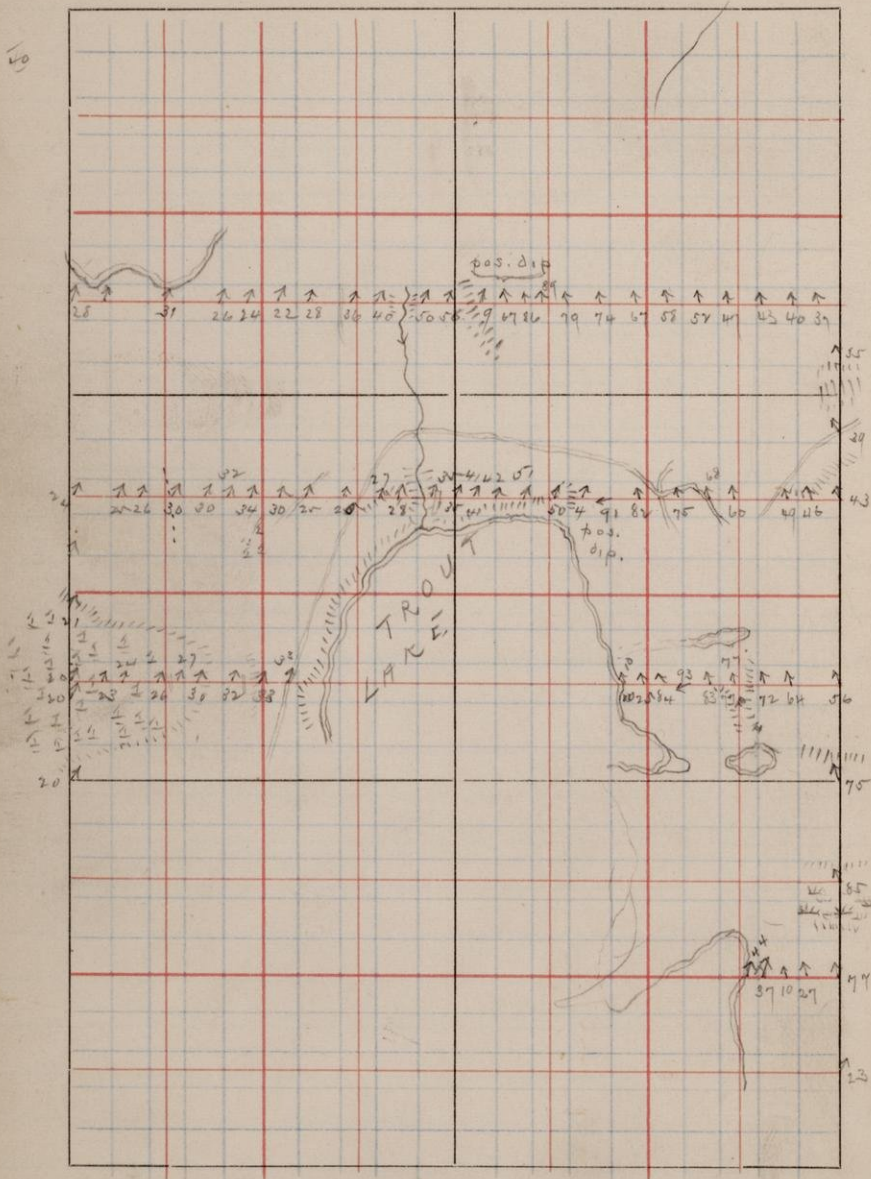
↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑  
40 47 48 49 50 51 52 53  
40 THICK poplar





SEC. 5 T. 45 R. 30

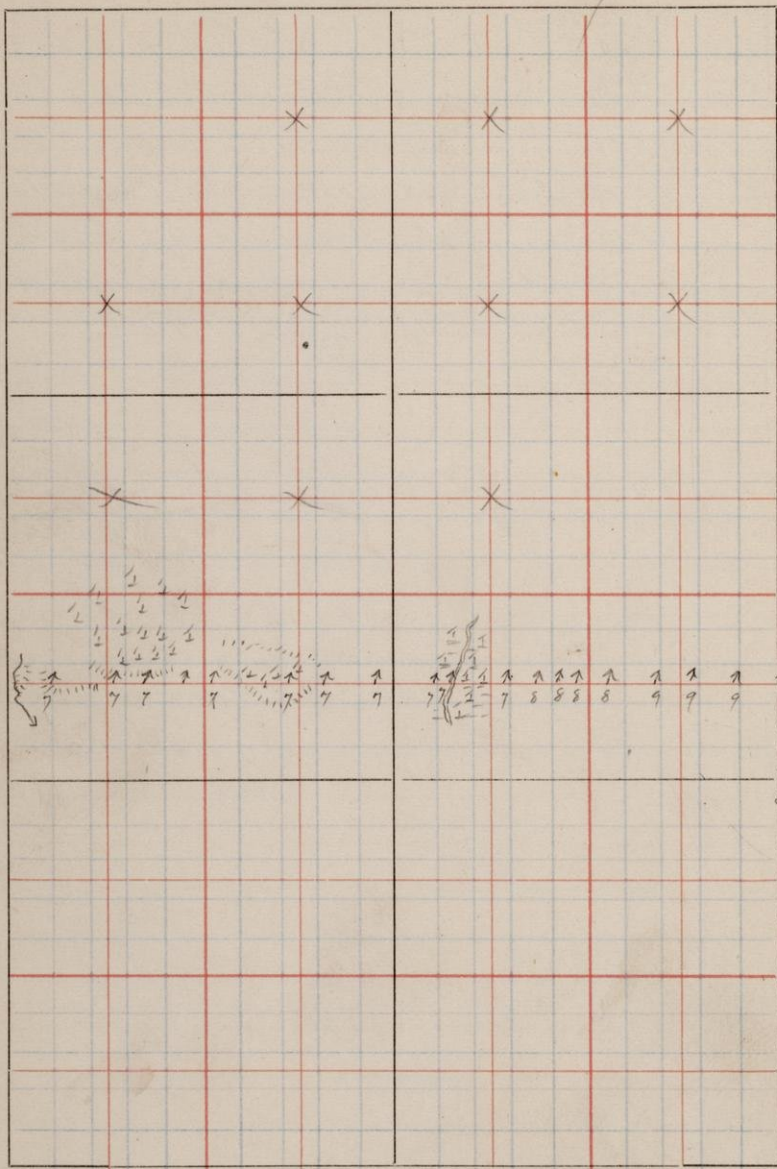
60



17051 200N 250W S.E. 5-45-30

In ravine between two steep  
ridges. Seems to be in place  
although prominently shown  
about the result of blasting  
I think for roadway. Same  
rock run 50 p.c. S.E.

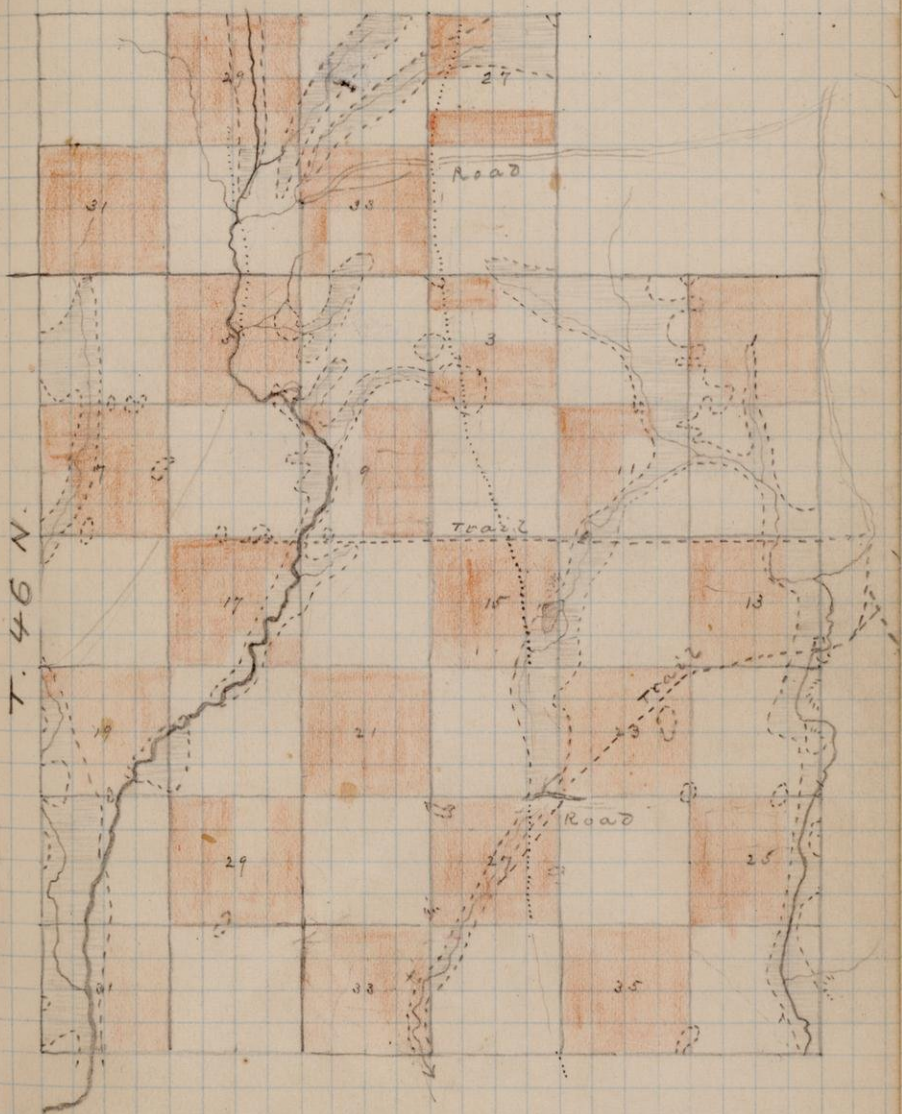
SEC 1 T. 45 R. 31





R 31 W

T. 46 N.



R 30 W.

T 46 N

