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Marquette district: [specimens 23514-23621]. No. 161 1893

Phillips, H. F.

[s.l.]: [s.n.], 1893

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U. S. GEOLOGICAL SURVEY
FIELD SECTION BOOK

9-891

161

Marquette District

H. J. Phillips

1893.

LAKE SUPERIOR DIVISION.

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 number attached, showing the direction and amount of the dip. Denote a shaly or other very plainly bedded ledge by right parallel lines, and a ledge having a secondary structure by wavy parallel lines running in the direction of the strike, with dip arrow and number attached as before. The greatest care must be taken to avoid confusing slaty or schistose structure with bedding, and in all cases where there is the least doubt about the true bedding direction, 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 to 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. The ruling of the left-hand pages is also arranged so that, if desirable, a larger or a smaller scale can be used, eight inches, two inches, one inch, or one-half inch to the mile. With the two-inch scale, the squares outlined in black represent sections, and those in red, quarter sections and "forties," while the space between the blue lines is 200 paces.

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, the latter always being expressed from the north; for instance 4025, 250 N., 300 W., *Strike, N. 78° E., Dip 50° S.* Then follow with a full description of the ledge. When topographical maps are used for locations this paragraph applies only in part.

3. Collect a specimen from every ledge, or wherever there is a change of rock on any one ledge, taking care to get fresh material, unless for a special purpose the weathered surface is desired. In case of trips made on foot or in canoes, for long distances, neighboring ledges, unquestionably of one kind of rock, need not be specimened. The position and extent of the ledges not specimened should be marked on the map, with notes that each is of a rock identical with specimen so-and-so. Under the same conditions small-sized specimens, trimmed to a uniform size of $2 \times 2\frac{1}{2} \times \frac{1}{4}$ 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 section 3, chapter IV, p. 44, Regulations of the U. S. Geological Survey. Specimens should not be placed together without protection in the collecting bag, as the fresh surfaces, important in determining the character of rocks, are thus destroyed. They should be damaged by no temporary mark, but the numbers should be at once marked in at least two places upon the inclosing paper or cloth bags. Specimens may be permanently marked in camp by painting the numbers upon them in white upon a black background, using Silver White and Ivory Black oil tubes for color, with turpentine as a diluent.

4. 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.

5. Forward this note book as soon as filled as registered mail matter to C. R. Van Hise, U. S. Geologist, Madison, Wis.

Platted from Page 12 to end

161

Book 2

H. F. Phillips - 1893.

Chas Alley, Compassman.

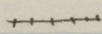
Southern Basement Complex of Marquette Co.

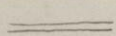
Contour interval approximately 10 ft.
Scale 4 in. = 1 mile unless otherwise noted on map.

 — Swamp.

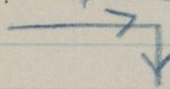
 — basic intrusives & schists.

 — granite & acid intrusives.

 = railroads

 = highways

 = streams and lakes.

 = location and direction of lines as run.

S.

5

T.

47

R.

29

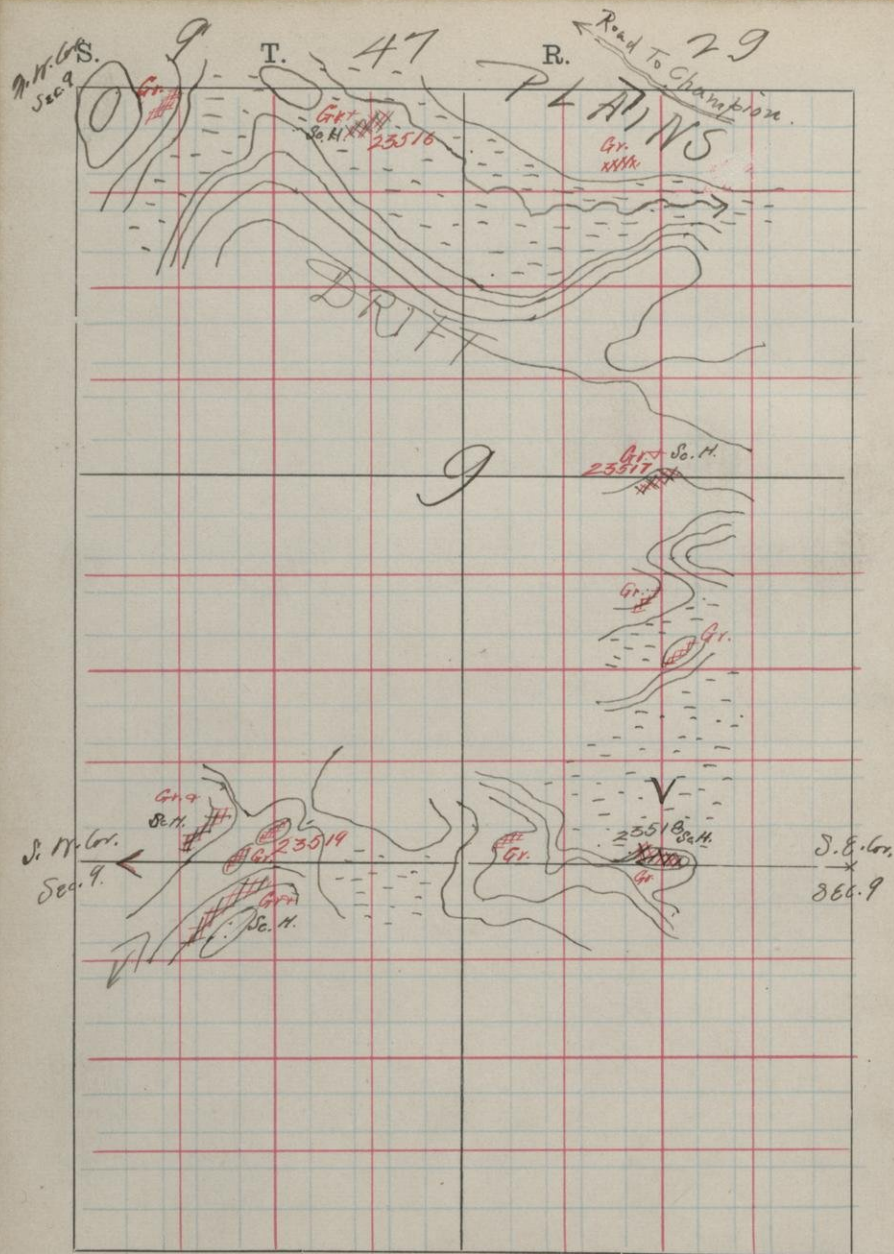
S 1/4 Sec. 5.
X

Line 500 paces west of east section
line Sec. 5-47-29

23514 370 N. 480 W. S.E. Cor. 4-47-29.

23515. Light colored granite with
hornblende schist.

Knob of granite at 1000 N 600 W,
north of which is a wide valley
with no outcrops until ordinam-
ary view is reached.



Run made from N.W. Cor. Sec. 9-47-29
as indicated by arrows.

23516 1925 N 1250 W. S.E. Cor. 9-47-29. Exposure of light colored, sheared acid granite cutting hornblende schist similar to 23515.

Northeast of Champion road there is a gradual, drift covered slope to valley with no exposures.

23517. 1000 N 510 W - S.E. Cor. 9-47-29. Exposure of granite cutting hornblende schist - giving appearance of a gradation between the two? 23517

At 0 N 500 W. S.E. Cor. Sec. 9-47-29 is small knob of granite cutting hornblende schist

23518 50 N 1525 W - S.E. Cor - 9-47-29. Small exposure of pink, feldspathic granite. West and south of this hornblende schist is seen with the granite.

S.

17

T.

47

R.

29

N. 4. W.
Sec. 17

17

S. 1/4 stake
Sec. 17

East and west hills Sec 17-47-29

23529 335 N 19 75 W - S.E. Cor. - 17-47-29.

Small exposure gneissoid
granite

23530 1560 N 20 W - S.E. Cor. - 18-47-29.

Pink weathering feldspathic
granite as seen in
numerous exposures.

S.

20

T.

47

R.

29

N.E. Cor.
Sec. 20Q.D.
23520
23521
Gr.23522
H.

N 23526

23525 Gr.

LAKE
ÄMICK
(Beaver)FROM
TOWN
PLAT

4

East, south and west line
Sec. 20-47-29.

23520 1535 N. 10 W. - S. E. Cor. - Sec. 20-47-29.

Small exposure. Dike of diabase
cutting a granite.

23522 920 N. 0 W. - S. E. Cor. - Sec. 20-47-29

Surface exposure of hornblende
rock

23523 1950 N. 1980 W. - S. E. Cor. Sec. 28-47-29.

23524 Specimens of coarsely crystal-
line granite from Py. Cut.

23525 0 N. 525 W. - S. E. Cor. Sec. 20-47-29

Granite associated with
23526 small amount of hornblende rock

23527 525 N. 2000 W. - S. E. Cor. Sec. 20-47-29.

Small exposure of granite

23528 1425 N. 1995 W. - S. E. Cor. - Sec. 20-47-29

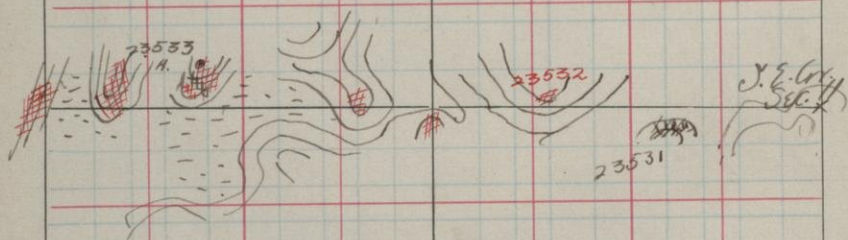
Exposure of basic rock.

S. 11514 T.

47

R.

30



14

South line section 11-47-30.

23531 1960 N 375 W - S.E. Cor - 14-47-30

Small exposure of basic intrusive
above large granite blocks or boulders.

23532 15 N 700 W - S.E. Cor. - 11-47-30

From exposure of granite

23533 25 N - 1600 W - S.E. Cor - 11-47-30

From large exposure associated
with & probably cut by the granite
though possibly it is intrusive
in the granite.

23539 + 40 Mapped on following page.

23539 1500 N 1585 W - S.E. Cor - Sec. 10 47-30.

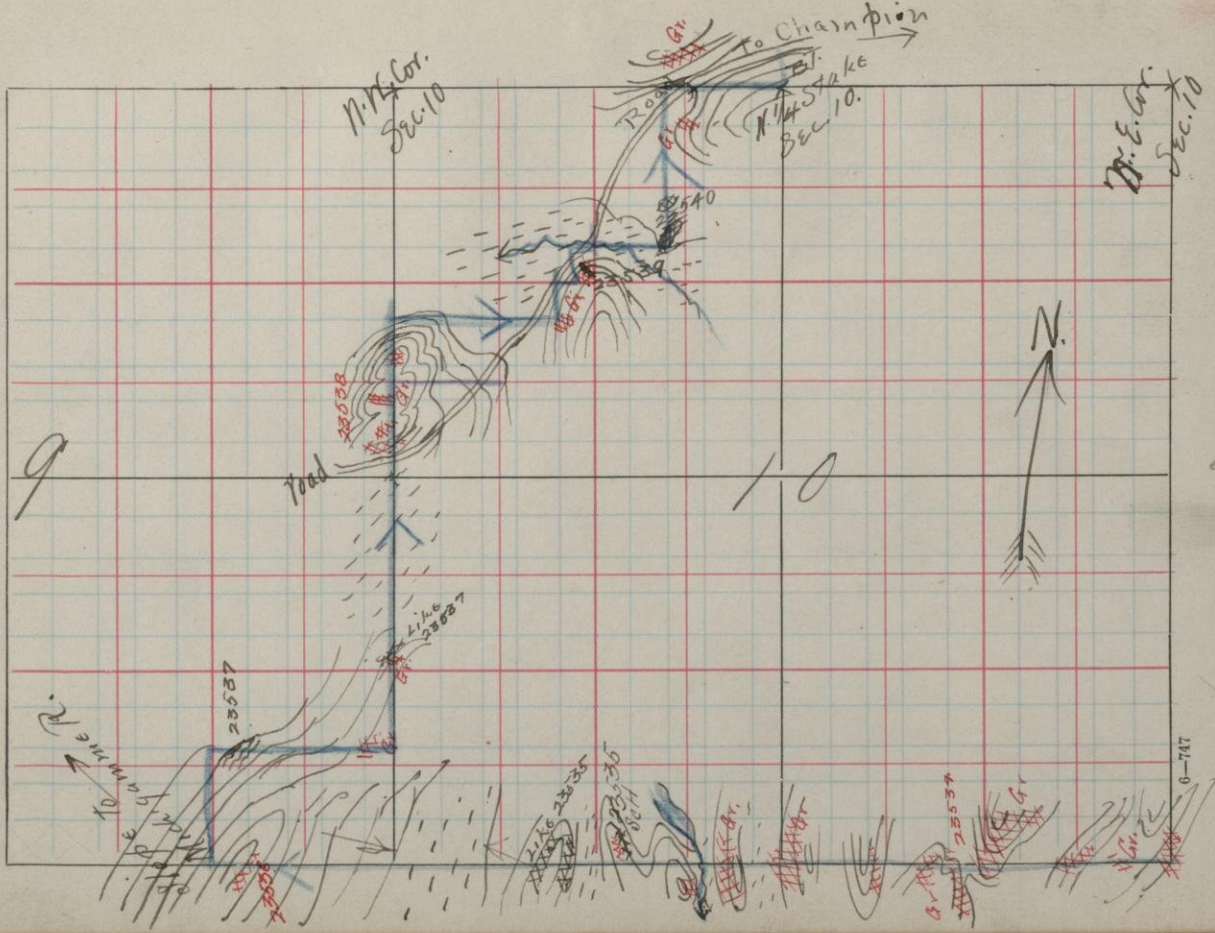
Rock associated with granite.

Undecided whether a schist or intrusive.

23540 1690 N 1300 W. S.E. Cor. Sec. 10-47-30

Takes appearance of forming a
dyke in 23535 + 37 which ac-
curs on either side. 23540 con-
forms with the schistosity.

S. 9410 T. 47 R. 30



Line run as indicated in blue.

23534 ON 580 W. - S.E. Cor. Sec. 10-47-30

From east face of granite ridge.

A dark weathering, feldspathic granite.

23535 ON 1425 W. - S.E. Cor. - Sec. 10-47-30

Hornblende-mica gneiss interlaminated with granite. Shows brecciated quartz veins as augen eyes.

23536 ON 400 W. - S.E. Cor. - Sec. 9-47-30

Outcrop on crest of ridge.

Fresh fracture shows somewhat fragmental appearance but weathered surface indicates it as a gneissic, micaceous rock.

23537 250 N 450 W. - S.E. Cor. Sec. 9-47-30

Small exposure of gneiss or schist with lamination having a strike $N 22^{\circ} E$ and dip $40^{\circ} W$.

23538 1100 N. 0 W. - S.E. Cor. - Sec. 9-47-30

Light colored rock, resembling 23536.

(For 23539-40 see page 5)

S. 13-24 T. 47

R. 30

74.61-5
23513w/4 stake
Gr. 24
Sec 24

Gr. 24

23542 J.H.
23545 G.

24

Gr.

S.M. Gr.
Sec 24

13

b/p
23591
Gr.S.M. Gr.
Sec 1323573
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24000

From Town Plat.

(San-Yish)

A-guä-däsh'she.

Lake.

23570
Gr.

24

Lines run as indicated in blue.

23541 475 N 0 W - S. E. Cor Sec. 13-47-30

Red feldspathic granite

23542 1675 N 610 W - S. E. Cor - Sec. 24-47-30

Coarsely crystalline granite.

23543 1975 N 1950 W - S. E. Cor. Sec. 24-47-30

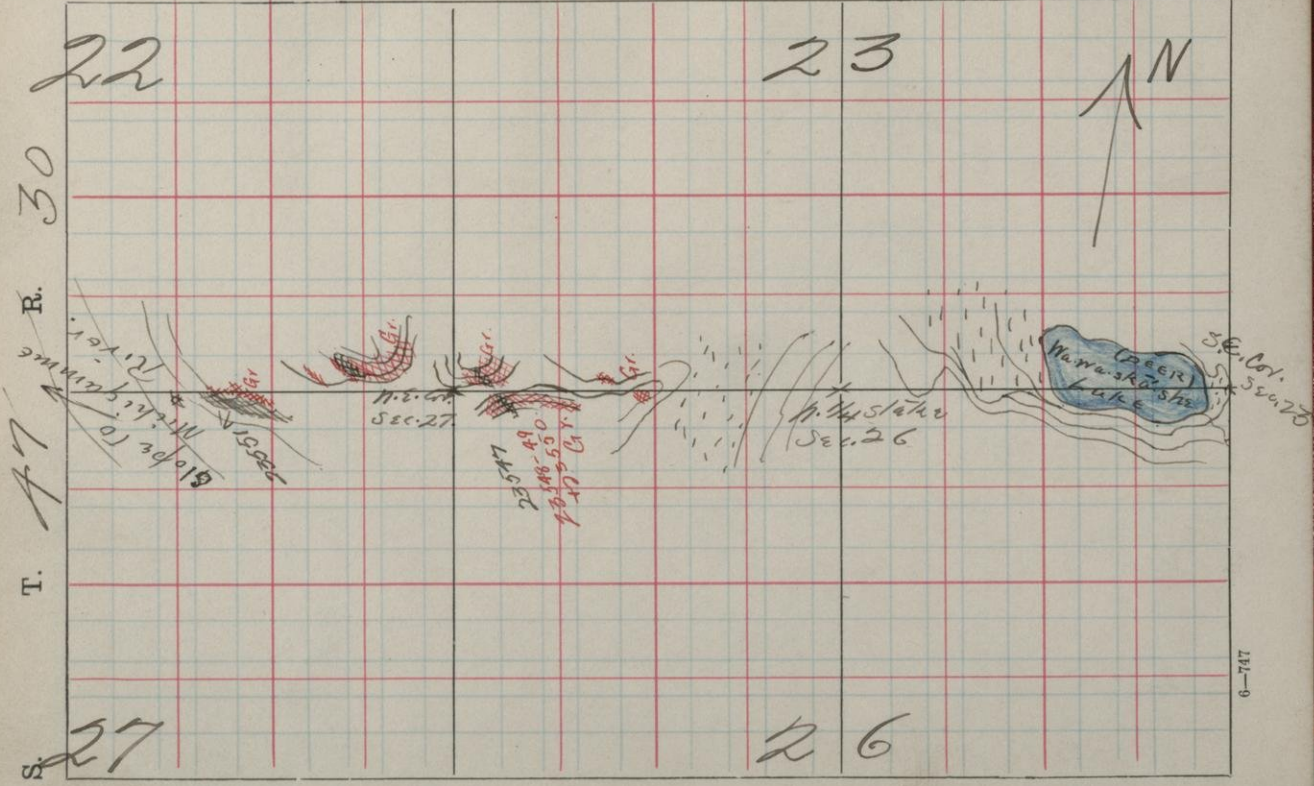
Light colored granite with large feldspar crystals.

23544 350 N. 2000 W. S. E. Cor - Sec. 24-47-30

Horn blende schist (?) from near contact with granite while six or eight feet from the granite.

23545, it is different in appearance.

Note. The core of the granite area is composed of a coarsely crystalline granite. Near the border of the area it becomes finely crystalline and is associated with the schists and basic intrusives.



Line runs west from S.E. Cor. S. 23-47-30

23546 ON 1520 W-S.E. Cor. Sec. 23-47-30

Small outcrop of gneiss.

23547 1960 N 1900 W-S.E. Cor. Sec. 26-47-30.

From dike of diabase cutting granite
+ in which are caught blocks of

23548 the granite much metamorphosed
and with an apparent grade-

23549 tion between the two - Spec 23549

This "catching in" of the granite blocks
in the dike is better shown in
the exposure across the ravine
to the north, the granite is
also less metamorphosed here.

23550 Specimen of granite taken near
the dike. In the outcrop to
the north the granite is more acid.

23551 1975 N 600 W-S.E. Cor. S. 27-47-30.

Forming ridge with strike
of lamination somewhat south
of east and dipping to south.

This rock would appear to fol-
low boundary of granite area.

Small amount granite exposed at north foot.

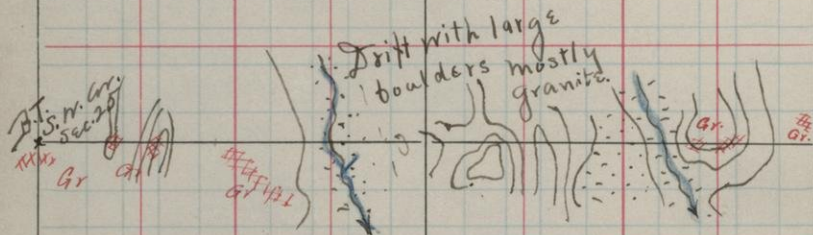
S 25+36 T.

47

R.

30

25



36

Line between Secs 25+36-47-30.

23552 ON 200 W. S.E. Cor. Sec 25-47-30.

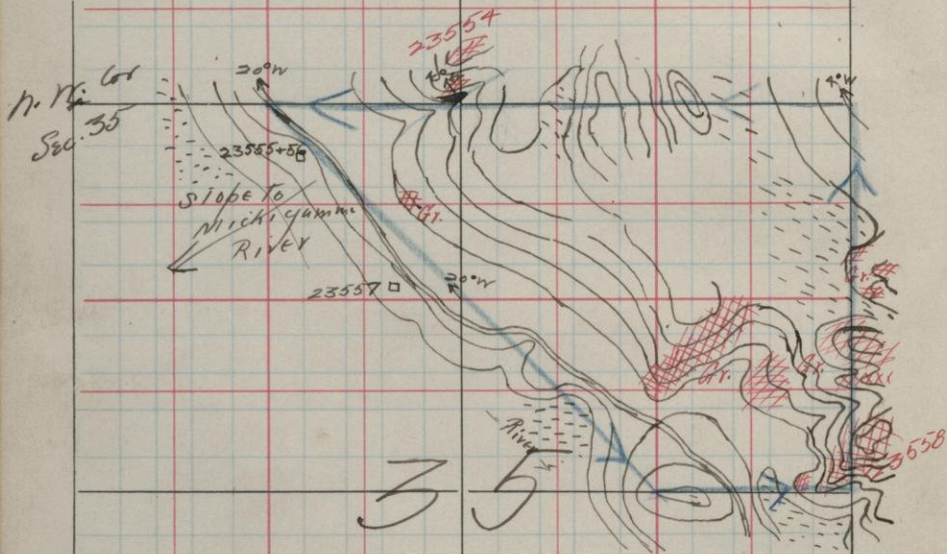
Coarsely crystalline granite.

23553 ON 1500 W. S.E. Cor. Sec-25-47-30.

From large outcrop of massive appearing granite. Specimen shows a schistose or gneissic phase rather than the massive.

S. 35 T. 47 R. 30

26



Line run as indicated in blue.

23554 1000 N 1000 W - S. E. Cor. Sec. 26-47-30
From large outcrop of granite.

23555 1425 N 1875 W - S. W. Cor. 35-47-30.
Banded ore and chert from dump
heap of large shaft with small
23556 amount of garnetiferous schist.

23557 1550 N 1150 W - S. E. Cor. Sec. 35-47-30.
From large shaft S. E. of the above
23555 + 56 also in dump heap.

58
The mass of rock taken from
these shafts as shown by the
dump heaps is 23555 with
some 23556 at both shafts and
a considerable amount of the
finer variety (23557) at the S. E.
shaft. Some shipping of ore ~~has~~
been done. No exposures in vicinity.

23558 1100 N 0 W - S. E. Cor. Sec. 35-47-30.
Granite from large knob being the
southernmost exposure N. of Middlemore R.
at this point.

S.

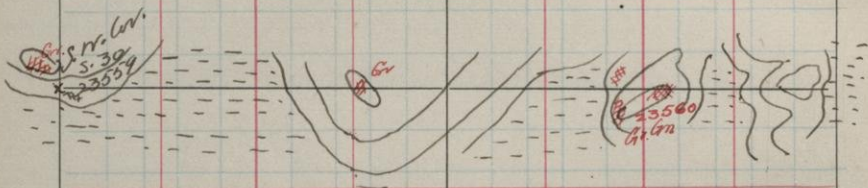
T.

47

R.

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31

11
Line between Sec's 30 + 31-47-29.

23559 1980 N 1980 W - S.E. Cor 31-47-29
From base dyke in front

23560 0 N 450 W - S.E. Cor - 30-47-29.
Schistose, micaceous granite.

S. 32 T. 47 R. 29

29

32

6—747

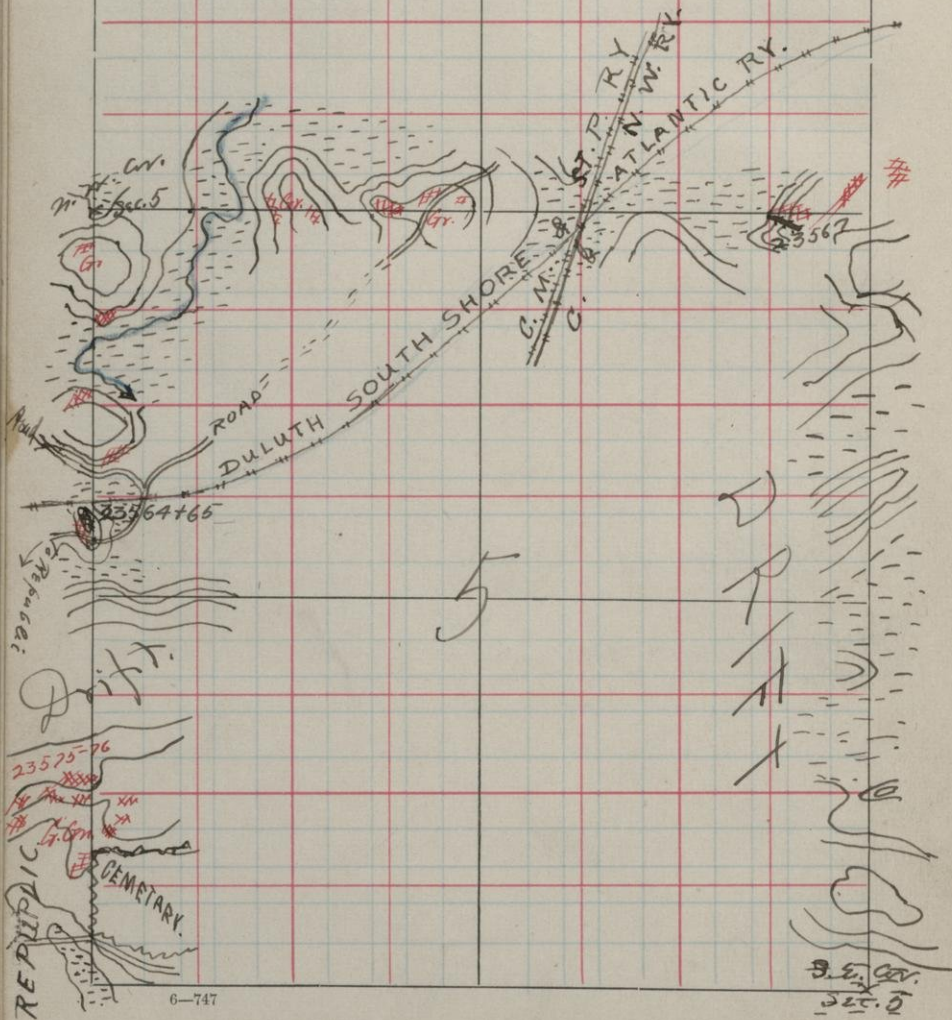


North, west and east lines Sec. 32-47-29

- 23561 0 N 1500 W - S. E. Cor. - Sec. 29-47-29.
Basic intrusive in granite
- 23562 60 N 1775 W - S. E. Cor. - Sec 29-47-29.
Granite similar to 23560
- 23563 1000 N 1990 W - S. E. Cor. Sec 32-47-29
Granite somewhat coarse.
- 23568 300 N 0 W. — S. E. Cor - Sec 32-47-29.
Coarse massive granite
- 23569 1740 N 0 W S. E. Cor 32-47-29.
Basic rock, taken to be intrusive in the granite though possibly it is a schist.

S. 5 T. 46 R. 29

32



North, west and east lines S-5-46-29

23564 1190 N 10 W - S.E. Cor. Sec. 6-46-29.

A schistose micaceous rock associated with the granite and

23565 cut by a basic diorite-23565.

23566 1350 N 1950 W - S.E. Cor. Sec. 5-46-29.

From an exposure of gneissoid granite having a coarse brecciated banding of light and dark phases.

23567 ON 220 W - S.E. Cor. Sec. 32-47-29.

Basic intrusive in granite.

23575 500 N 25 W - S.E. Cor. Sec. 6-46-29.

Granite gneiss apparently

23576 cut by a feldspar-quartz rock forming narrow stringers etc.

S.

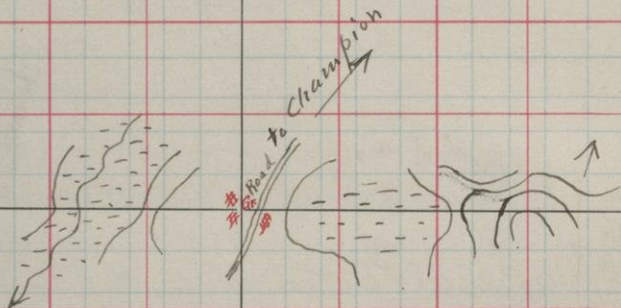
T.

47

R.

29

14

N. H. Co.
SEC 23

23

Line between Sec's 4 & 23-47-29.

Drift covered country with
only low surface exposures of
granite as indicated on map.

N. S. Gr. 13
S. E. 13

T.

47

R.

29

(DEER)

Hig Wä-wä-skā-she
LAKE

23571

DEER CREEK

13

S. E. Gr. 13
S. E. 13
B.T.

Line run as indicated in blue.

23570 ON 1425W-S.E. Cor- Sec 13-47-29.

Massive finely crystalline
granite.

23571/380N ON-S.E. Cor- Sec 14-47-29.

Coarsely crystalline feld-
spar and quartz.

Line between Sec's 11 & 14 - 47-29.

23572 100 N 1175 W - S.E. Cr - Sec 11 - 47-29

A finely crystalline somewhat sheared granite apparently

23573 cutting a gneissoid granite in which it occurs as stringers.

23574 50 N 1350 W - S.E. Cr - Sec 11 - 47-29

Dike of diabase cutting gneiss.

West, south and east lines S. 8-46-29.

No exposures between granite at 1005 and the rim formation first exposed at 855 S of N.W. Cor. S. 8.

23577 50N. 1970W. - S. E. Gr. Sec 8-46-29.

A medium grained granite. Contact between this and the rim formation to the north probably follows the topographic break forming narrow strip of swamp as indicated in the map.

23578 1900 1875W. - S. E. Gr. 17-46-29.

A light colored granite forming a low surface outcrop.

S. 33+4 T. 47+46 R. 29

3 3

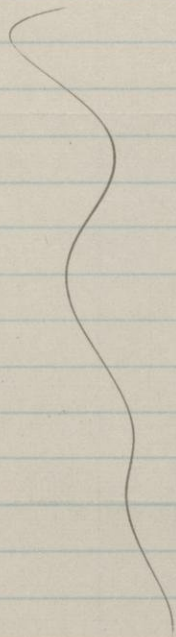
Written
Sec. 33



4

Price ~~Section~~ Sec. 33-47-29 + 4-46-29.

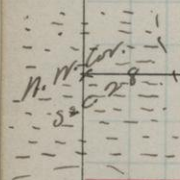
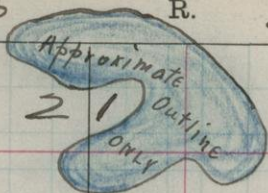
23579 ON 1070 W. - S.E. Cor. Sec. 33-47-29.
Coarsely crystalline granite.



S. 71+28 T. 46

R.

29



DRIFT

DRIFT

28

Sec. 28

Line run as indicated in blue

Low drift covered country
with no exposures of rock.

S. 29 T.

46

R.

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20



S.E. Gr. 29.

29

S.E. Gr.
29

North and west lines Sec 29-46-29

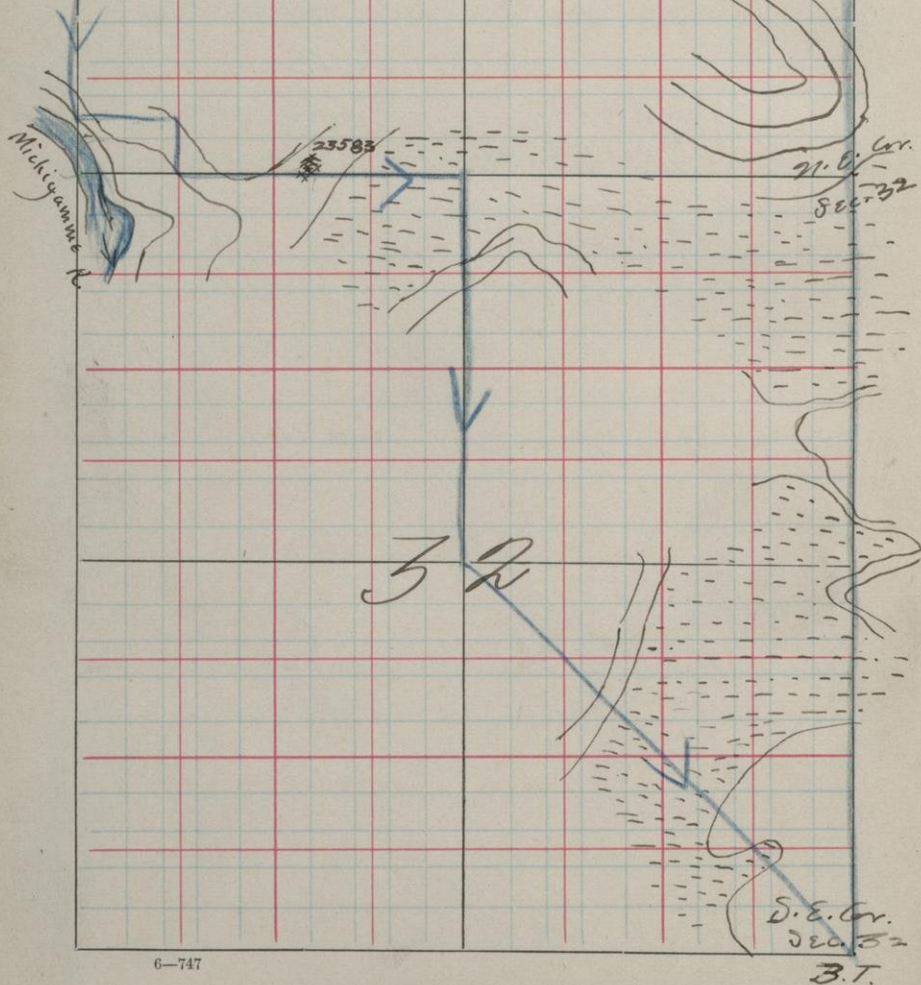
23580 ON 470 W - S. E. Cor - Sec. 20-46-29
Granite gneiss.

23581 ON 760 W - S. E. Cor - Sec 20-46-29.
Phase of gneiss.

23582 1190 N 2000 W - S. E. Cor - Sec 29-46-29.
Light colored granite

S. 32 T. 46 R. 29

29



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21 - 23**



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Line run as indicated in blue.

23583 ON 1390 W-S.E. Cor. Sec. 29-46-29.
Phase of hornblende gneiss.

No exposures on remainder of
map.

S.

T.

46

R.

28-29

N.E. 1/4
Sec. 19

Jack

Pine

19

Drift

Gr.

Gr.
23585Gr.
S.E. 1/4 Sec. 19
8+5
Gr.

30

24-46-29

6-747

25'

23586

S.E. 1/4
Sec. 29

Course runs west from S.E. Cor. 19
to S. 1/4 stake S. 24-46-29. Then
back to S.E. Cor. 19-46-28 and north.

23584 925 N 50 W. - S.E. Cor. 30-46-28

Coarsely crystalline granite.
This is most southerly exposure
observed (Not Mapped)

23585 300 N. 100 W. - S.E. Cor. - 19-46-28.

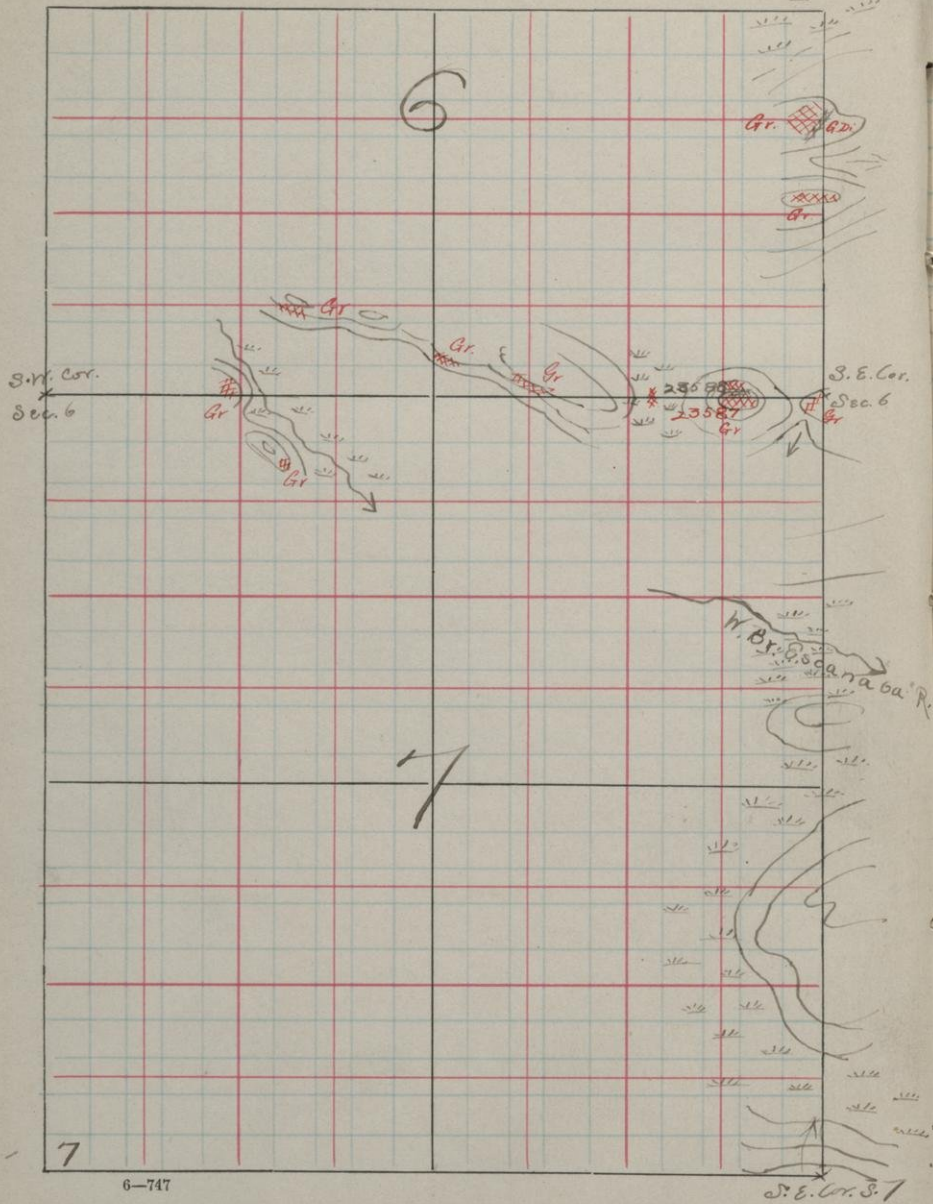
Dike of diabase in granite.

23586 0 N 250 W. - S.E. Cor. - 24-46-29.

Granite + mucilaginous quartz.

The typical granite in exposures
mapped is represented by
24845 - Cement number.

S. 647 T. 46 R. 28



East and north line Sec. 7-46-28
and portion of E. line Sec. 6-46-28.

23587 ON 230 W. S.E. Cor. Sec. 6-46-28.

23588 Pinkish, feldspathic granite
cut by a dyke of diabase

S.

T.

46-

R.

29

५६

M. W. Co. v.

Sec. 1

23589

Gr

Gr

Gr.

Rev G. D.:

Gr.

6.25

S F Gor

Dec. 1.

East and north line Sec. 1-46-29

23589 1960 N. 700 W. S. E. Cor. Sec. 1-46-29.

Finely crystalline, granular
- appearing granite.

Granite and dikes of diorite
on east line of Sec. 1.

S.

T.

R.

31

47

28

N. 1/2 Sec. 31
S. 1/2 Sec. 312
P
1
1

31

23591

Aleksis old road

6-46-28

28

South, east and west lines Sec 31-47-28

23590 15N. 1000W - S.E. Cor. - Sec. 31-47-28.

A medium grained, light colored, feldspathic granite.

23591 690N 1980W - S.E. Cor. - Sec. 31-47-28.

Coarse, feldspathic granite.

S. 30 T. 47

R. 28

19

DRIFT

30



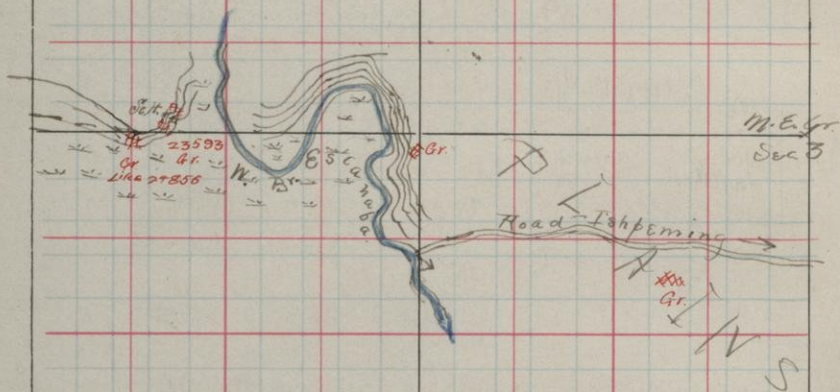
West, north and east lines Sec. 30-47-28

23592 0 N. 50 W. - S. E. Cor. - Sec. 19-47-28.

Low exposure of gneissoid
granite

S. 3-34 T. 46-47 R. 28

34



Line between Sec 3-45-28 & 34-47-28

23593 0 N 1650 W - S.E. Cor. - Sec. 3-46-28

Exposure of gneissoid granite.
To the north of this the granite
cuts hornblende schist.

S.

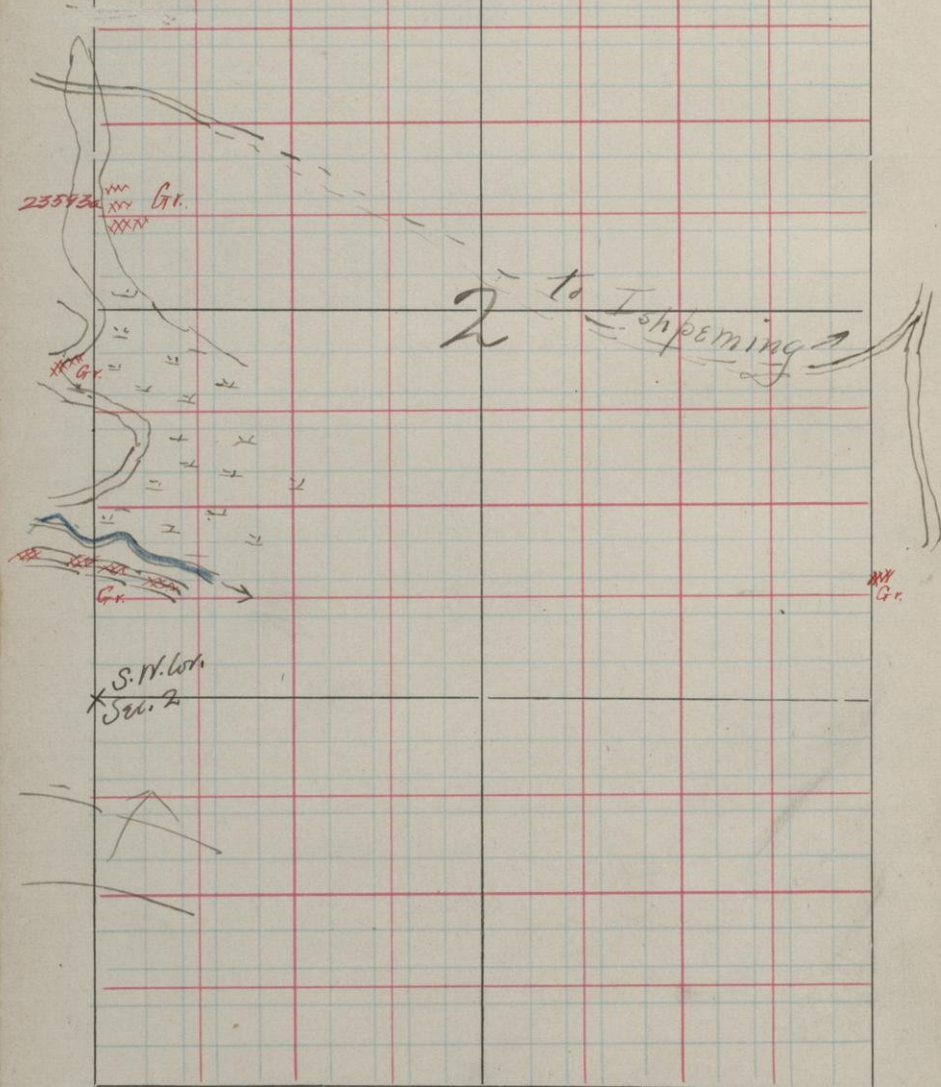
2

T.

46

R.

28



West and East lines Sec 2-46-28

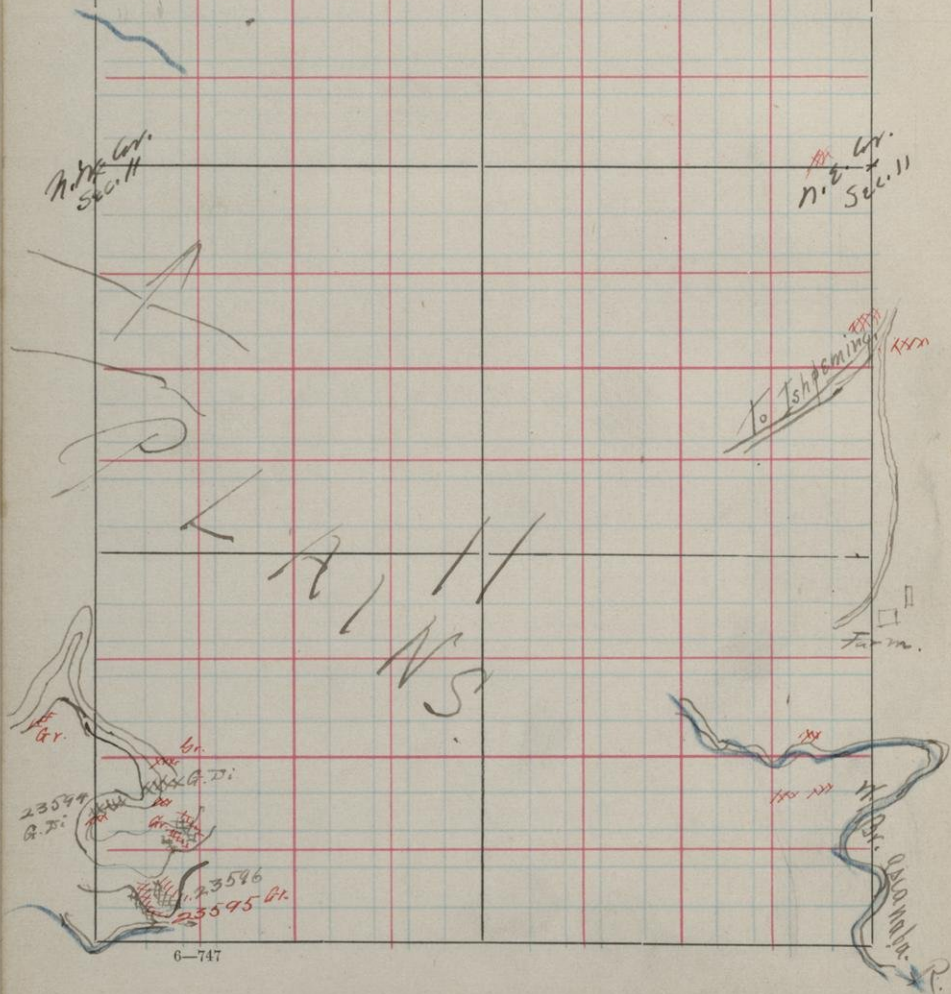
23593a 1300 N 1960 W - S.E. Cor - Sec. 2-46-28.

Coarsely crystalline pink
Granite.

11

46

25



West and east lines Sec. 11-46-28

23594 400 N. 1980 W S. E. Cor. 11-46-28.

Dike of diabase cutting granite
and containing blocks of granite

23595 in it. The granite is light colored and gneissoid in appearance and in turn cuts what is taken to be an amphibole schist.

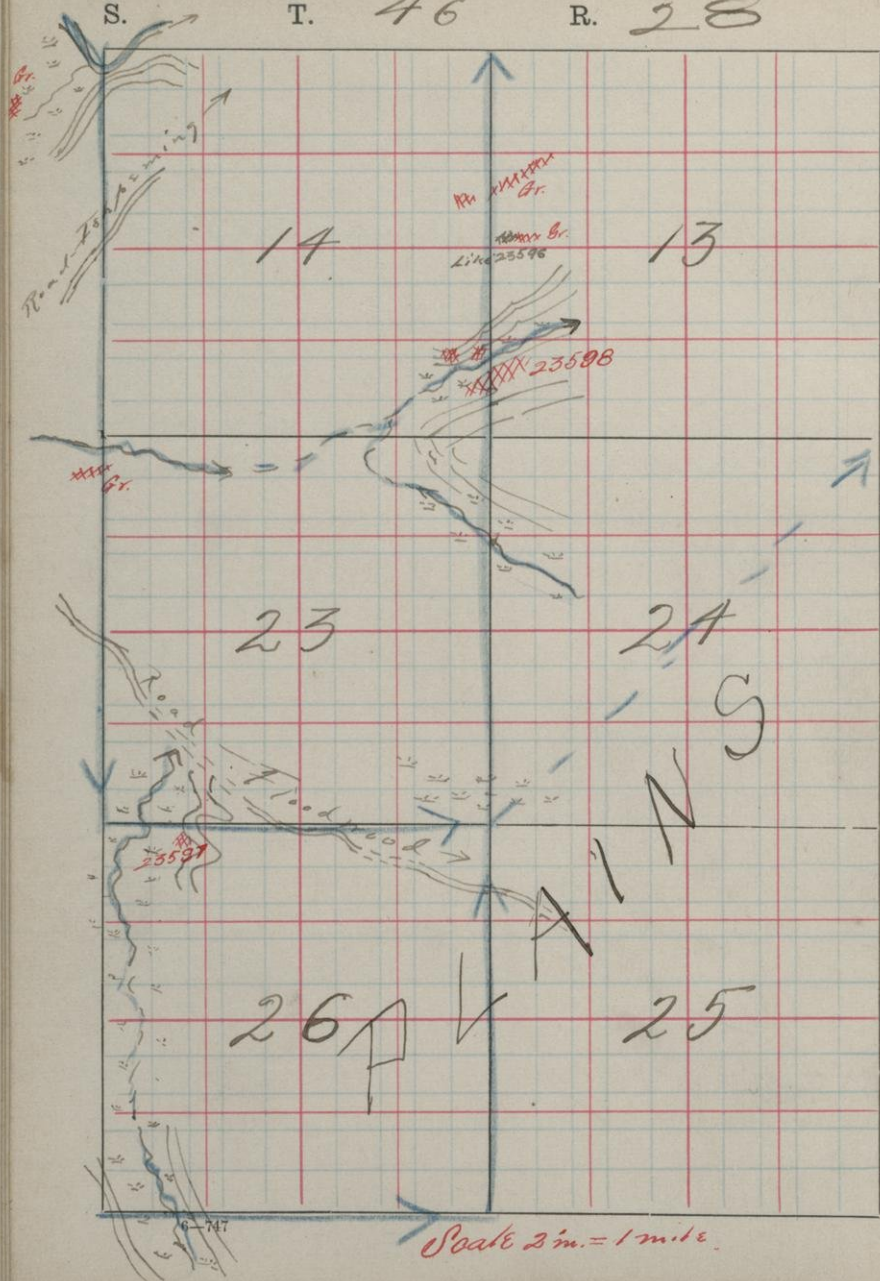
S.

T.

46

R.

28



Lines run as indicated

23597 ON 1500 W - S.E. Cor - SEC. 23-46-28

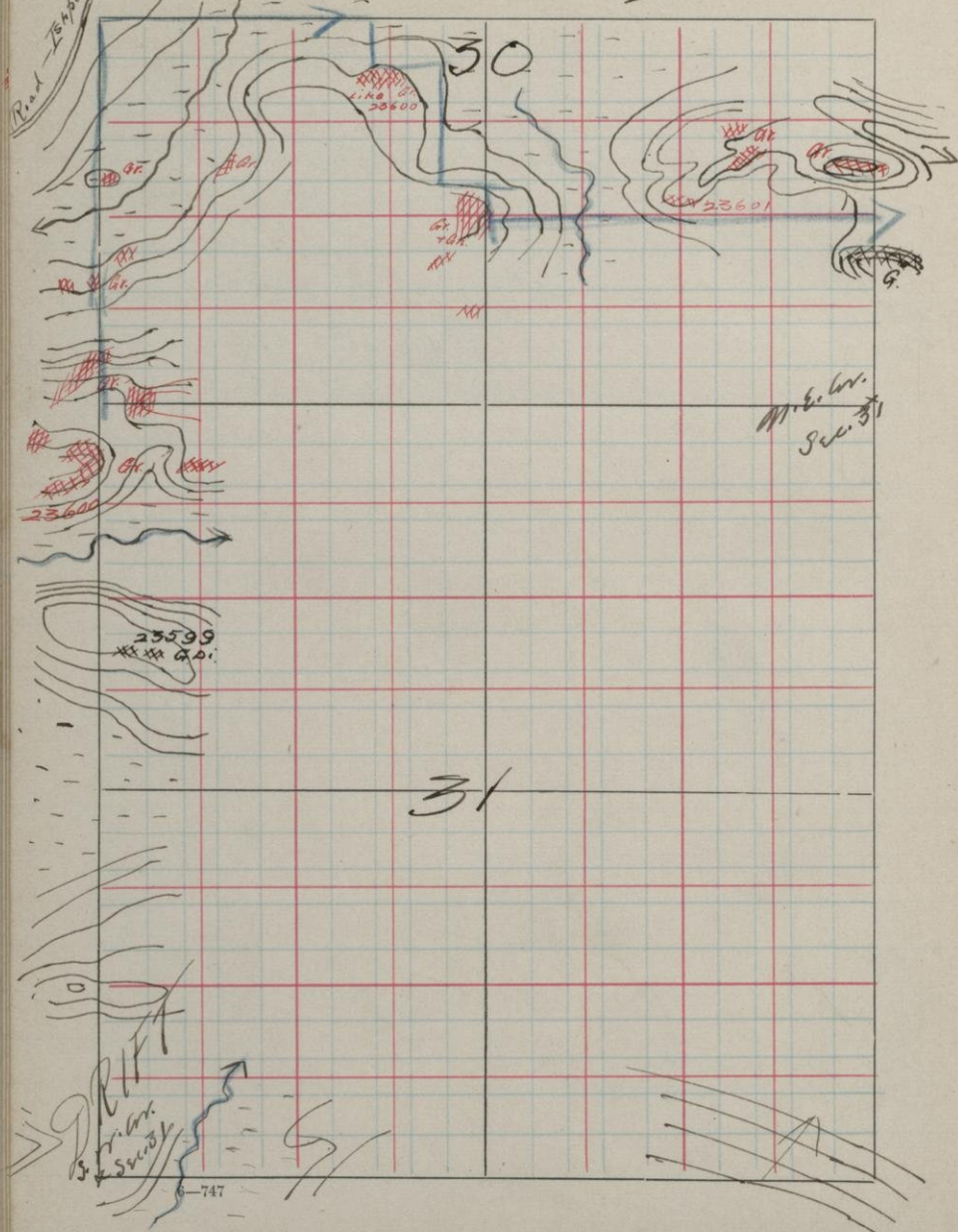
Small, surface exposure of
pinkish granite. Southernmost
exposure of granite observed.

23598 200 N 0 W - S.E. Cor. - SEC. 14-46-28.

Light colored, coarsely crys-
talline granite.

Rail - 1/2 mi. S.

S. 30-31 T. 47 R. 27



West line Sec. 31 and as indicated
in 30-47-27

- 23599 1350 N. 1900 W. S. E. Cor. 31-47-27
Exposure of diatase apparently
forming ridge center.
- 23600 1750 N. 25 W. S. E. Cor. 36-47-28
Exposure of granite which be-
cause coarser to the north.
- 23601 530 N. 500 W. S. E. Cor. 30-47-27
A rock associated with the
gneissoid granite.

Cor. 1/4 line Sec. 30 mostly in
valley which would appear to
be division line between base-
ment complex and Marquette
Series, though Roninger extends
basement complex somewhat
north of this.

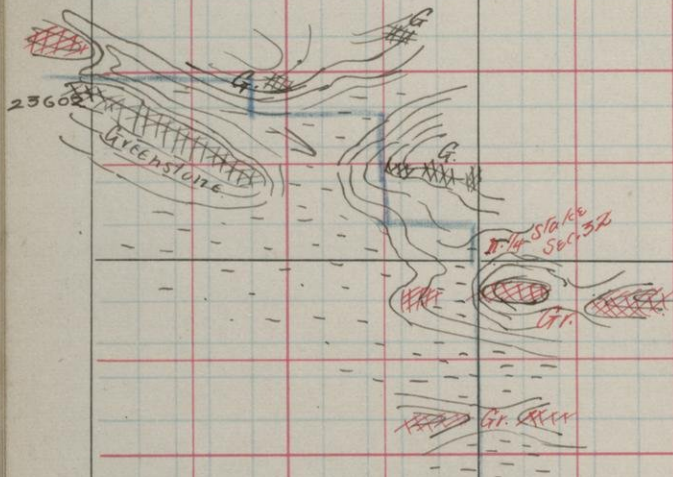
S. 29-32 T.

47

R.

27

29



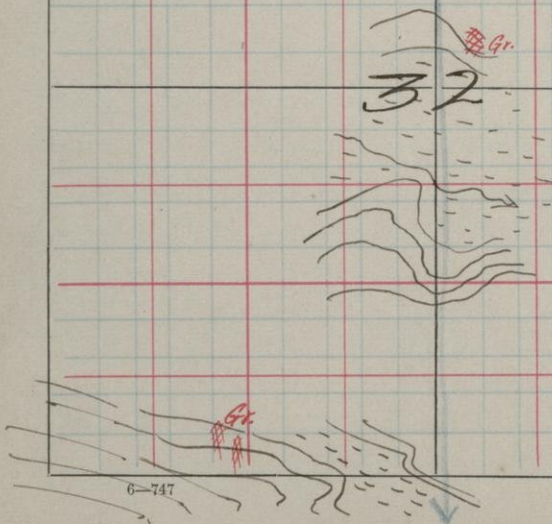
Greenstone

Stake
Sec. 32

71.

Gr. 1000

32



J. E. Carr

১৫.৬.২০

Run as indicated in Sec. 29 and
NW 1/4 line Sec. 32-47-27.

23602 400 N 1950 W S.E. Cor. 29-47-27.
Specimen of coarsely crys-
talline gneiss forming
Exposures as indicated on
map.

23603 1900 N 1150 W S.E. Cor. 32-47-27.
Exposure of finely crystalline
pink feldspathic granite.

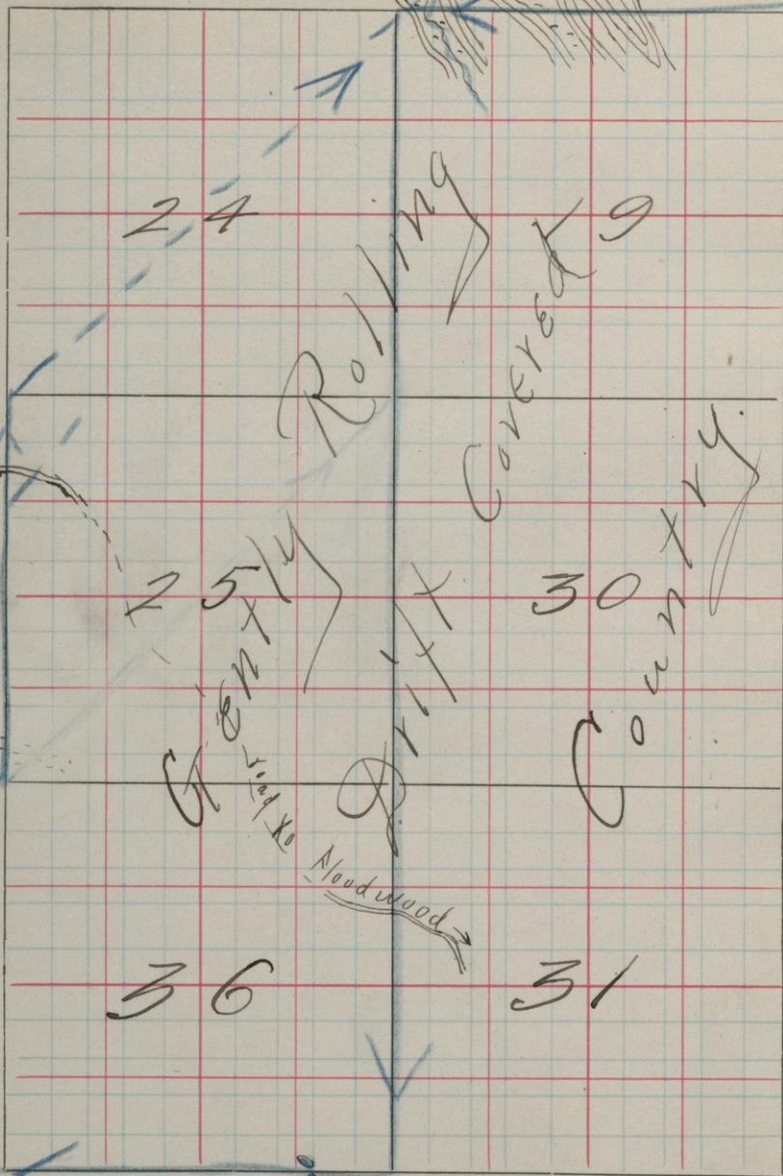
Other exposures of granite as
shown in red.

S.

T. 46

R.

27-28

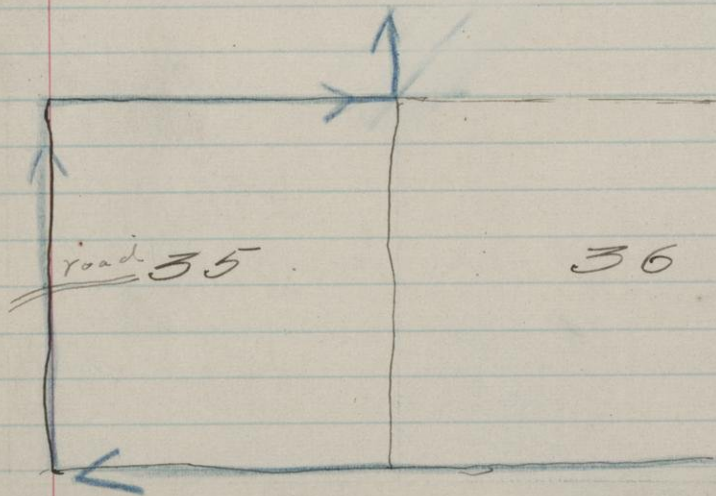


6-747

Scale 2" = 1 mile

Lines run as indicated in blue

Country covered with drift
mantle of fine sand with
young growth of jack pine.
No Exposure observed.



S. 27-27 T.

46

R.

27

Esca 2600 Ga.

Falls
2360

Gr

Gr

Gr

Gr

Gr

Gr

Gr

Gr

Gr

Gr

Gr

Gr

Gr

Gr

Gr

Gr

Gr

Gr

Gr

Gr

Gr

Gr

Gr

Gr

Gr

Gr

Gr

Gr

Gr

Gr

22

S. 1/4 stake
Sec. 22

Gr

27

Cam. 27
Sec. 27

West and East lines Secs 22-27

Country mostly drift covered
excepting along N. Br. Escanaba
River where the usual coarse-
ly crystalline granite is ex-
posed and also ~~shown~~ as
shown in specimen 23604

Exposure of granite ^{near} Dean
in N. W. 1/4 Sec. 27.

S. 27-34 T. 46

R. 27

27

W. 1/4 Stake.
Sec 34

34

West & East lines Secs 27-34-46-27

Rolling, drift covered
country with fine outcrop
and turnings and no
exposures of rock observed.

S. W. Br. G. 14
500 ft

T.

46

R.

27

Gr
N. Br. G. 14
300 ft

14

13

N. Br. G. 14
300 ft

Gr
N. Br. G. 14
300 ft

N. Br. G. 14
300 ft

24

Cumming East from N.W. Cor. Sec. 14-46-27

23604 1750 N 1750 W. S.E. Cor. Sec. 14-46-27

Granite at falls on E. Br. Escanaba.
The usual coarsely crystalline
granite is exposed along the
banks cut in one place by a
dyke of diabase. 23604 may
be intrusive. Most entirely quartz & feldspar.

1990 N. 1400 W. S.E. Cor. Sec. 24-46-27.

is an exposure of granite alter-
nating with a schist like 23596.

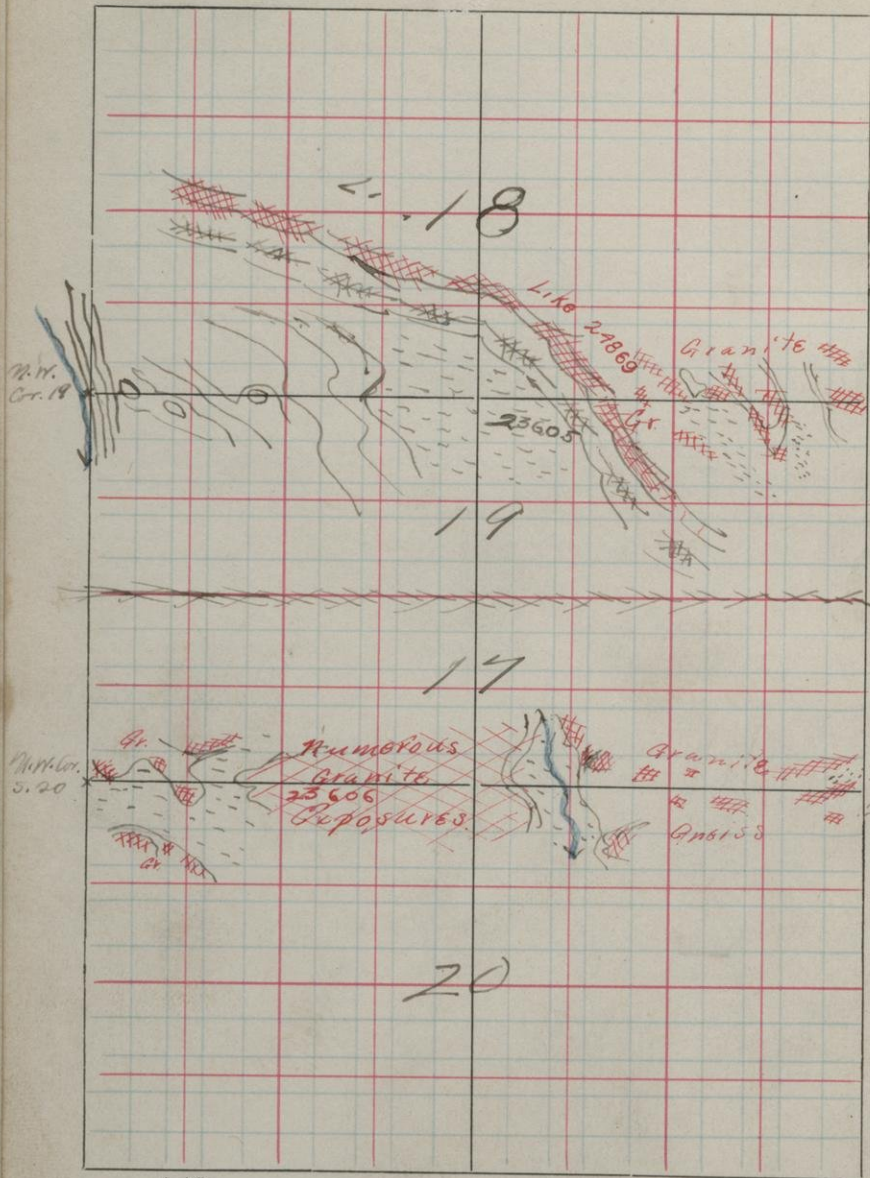
~~238688~~

S.

T. 46

R.

26



Running East from N.W. Cor. S. 19-46-26

23605 750W ON-S.E. Cor. Sec. 18-46-26.

Basic intrusive occurring persistently along south end of granite ridge. Weathered portions show an iron oxide in a form which might in rock be finely amygdaloidal in character. The granite is represented by spec. 24869 - Clements.

23606 1400W ON-S.E. Cor. - Sec. 17-46-26.

Finely crystalline granite

The granite east of the creek on line between 1420 contains blocks of schists. Mentioned as occurring to the north by Clements.

S. 24+27 T.

46

R. 27

2863

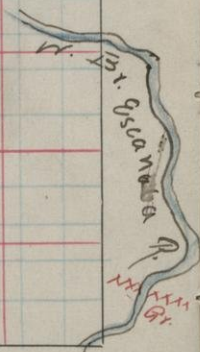
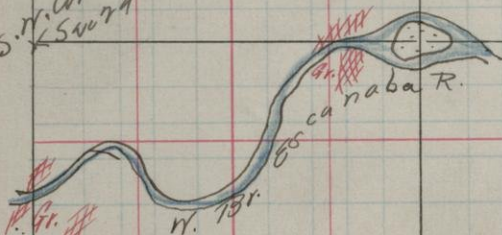


24

Gr. x
Gr. x
Gr. x
Gr. x

S. W. Gr.
S. W. 24

S. E. Gr.
S. E. 24



25

West and East lines Secs 24 & 27.

The granite in the N.W. portion of Sec. 24 is finely crystalline in character as shown by spec. 24863. (Q)
 Passing to the south, it becomes coarser with porphyritic appearing feldspar crystals.

S. 25-36 T.

46

R.

27

25

23607
M

M Gr.

S. B. Cr.
Sec. 25

36

Rolling
Drift.

6-747

S. B. Cr.
Sec. 36

42

West and East lines Secs 25+36 and
South line 36-46-27.

23607 600 N. W. - S. E. Cor. - Sec. 25-46-27.

Coarsely crystalline granite.

Country drift covered except-
ing in neighborhood of stream.

S. 20-29 T.

46

R.

26

Numerous Outcrops
of
Gneissoid Granite.

20

Granites
(like 23609
+ 23606)

Gr. Gn.

Gr. Gn.

23608

Gr.

Like 23605

Gr.

23610

Gr. Gn.

Gr.
S. 20-29S. 20-29
Gr.

Massive, Coarsely
Crystalline Granite.

Gr. Gn.

23609

29

West and East lines Sec 20-26-46-26

23608 1650 N. 100 W. S.E. Cor. Sec. 19-46-26
 Sheared acid rock in low
 outcropping along south side
 of creek. Somewhat resembles
 a recombined rock. Specimen
 shows most sheared phase.

23609 1250 N. 0 W. S.E. Cor. Sec. 30-46-26.
 Coarsely crystalline granite.

23610 550 N 10 W. - S.E. Cor. Sec. 20-46-26.
 Gneissoid granite from area
 of schist + gneissoid granite
 North of this the "schist" occurs
 as blocks in the granite
 as before noted.

S. 29-32 T.

46

R. 26

29

Gr

Rains

###

Mr. Gr.
S. 29-32

Quartzite Crystalline
Granite

S. 29-32

32

Gr.

WATER

6-7-77

S. 29-32
S. 29-32

44

West and East lines Secs 29+32 and
South line Sec 32-46-76.

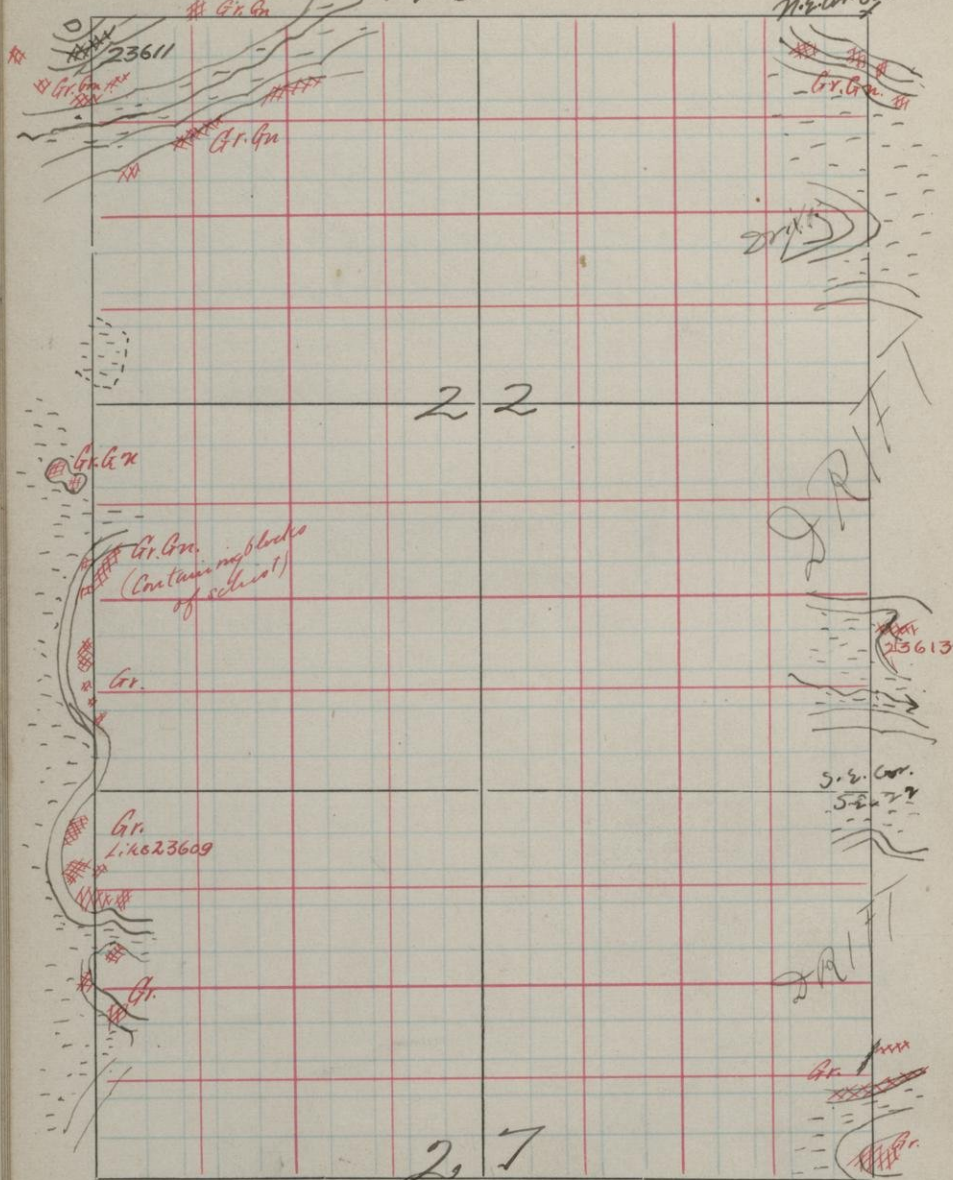
On the west side the granite
is coarsely crystalline but be-
comes finer as we pass to the
East.

S 22 + 27 T.

746

R. 26

N. & S. Sec 22



West and east lines Sec 22-27-46-26

23611 1950 NW 000 W. S. E. Cor. Sec. 22-46-26.

Basic rock forming knob in
area of gneissoid granite though
not observed in direct contact.

23613 400 N 0 W - S. E. Cor. - 22-46-26.

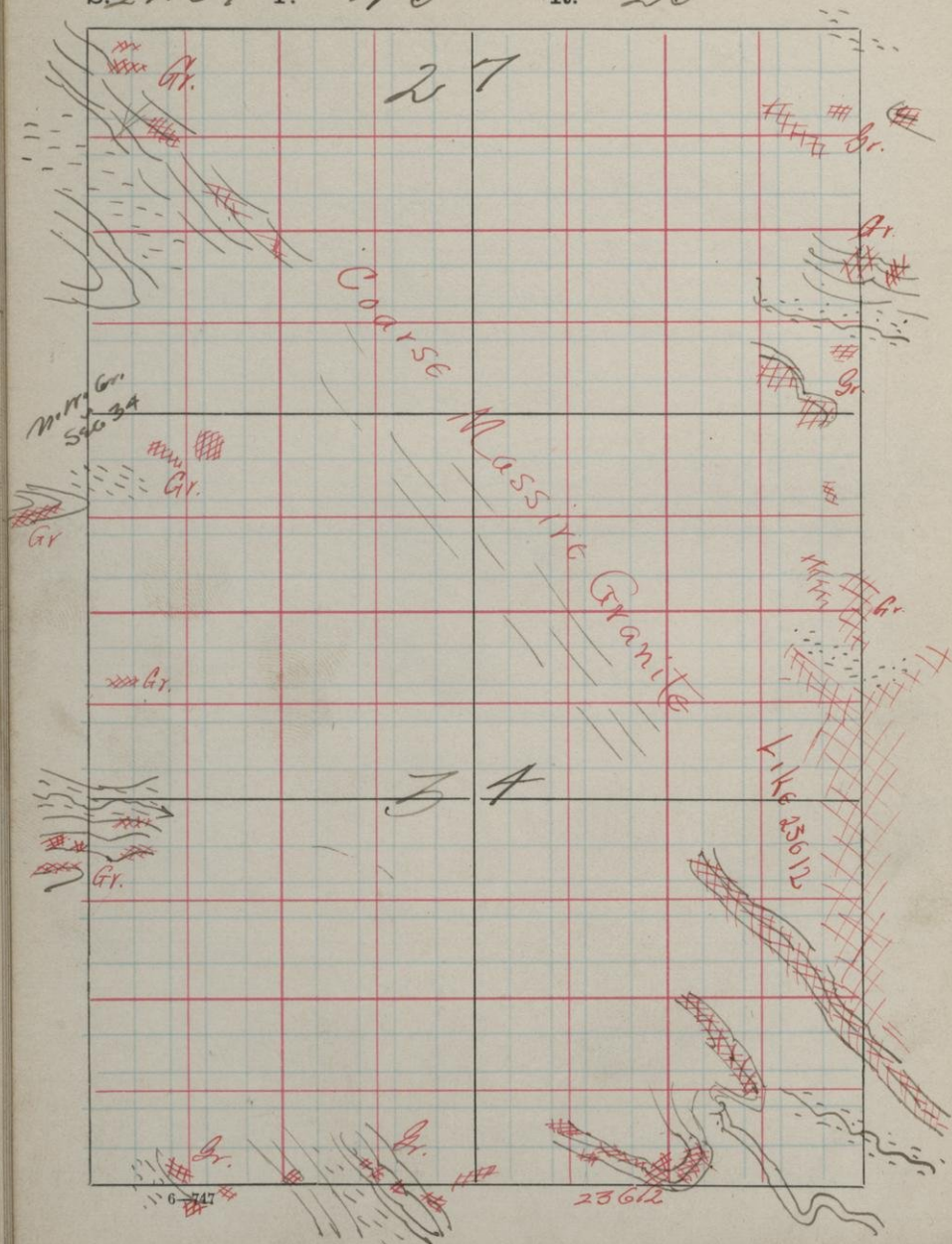
Finely crystalline granite.

S. 27434 T.

46

R.

26



West and East lines Secs 27+34 and
South line Sec. 34-46-26.

23612 ON 550 W. S. E. Cor. SEC. 34-46-26.

Coarsely crystalline, amy. thaps
fine granite - typical of coarse
granite in southern part of
mms.

West and East lines Secs 24-25-46-26.

23614 875 NW-S.E. Cor - Sec 24-46-26.

Schist cut by granite.

S.

T.

46

R.

26

25

36

West and east lines Secs 25+36
and south line sec 36

23615 245 N OW - S.E. Cor. - Sec. 26-46-26.

Light colored rock composed
most entirely of quartz & feldspar.

23616 75 N OW - S.E. Cor - Sec. 25-46-26.

Coarsely crystalline diabase.
Finer grained near contact with
granite.

23617 600 N OW - S.E. Cor. - Sec 25-46-26.

Finely crystalline granite. This
granite predominates through-
out run and is associated
with a coarsely crystalline,
gneissoid granite.

Snow - Oct-25-93

S. Gr.

T.

46

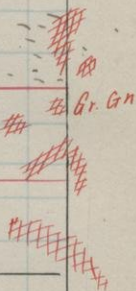
R.

25

N. M. Gr.
Sec. 20

20

Granite and schist.



Gr. & Se.

N. M. Gr.
Sec. 29

C. Br. Escalante

29

Gr. & Se.

West and east lines Secs 20 & 29.

23618 900 N 0 W - S.E. Cor. - Sec-19-46-25.

Phase of granite or possibly andesite intrusive in gneissoid granite.

East line of Sec. 20 is over
granite cutting schists

S.

T.

46

R.

25

29

Ch. M. Cr.
- 500 300

32

S. W. Cr.
- 500 300

PLAINS

West line Sec. 29 & West & South line S. 32,

Granite along streams and
in swamp. Granite expo-
sures in S.E. portion Sec. 32
are on west bank of E. Branch
Essex R.

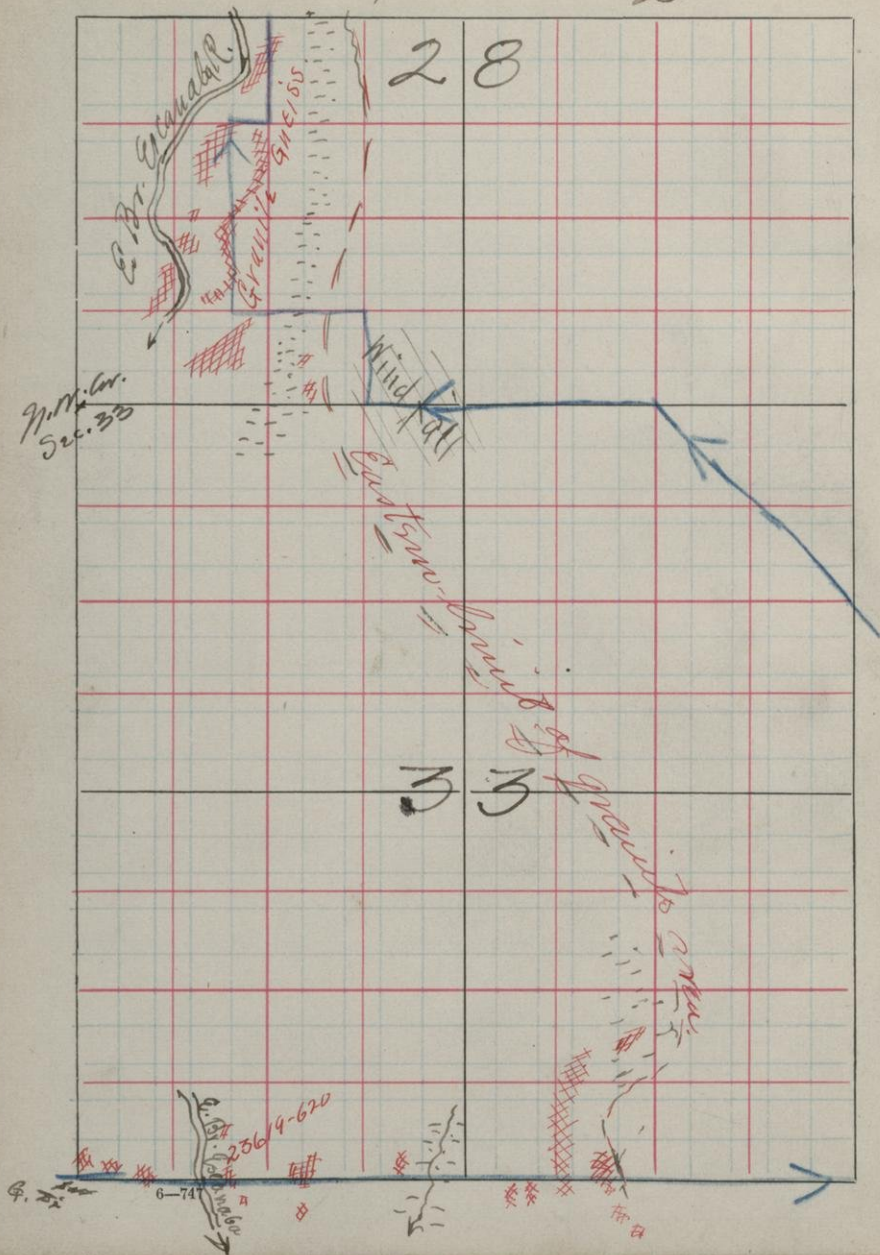
S.

T.

46.

R.

25

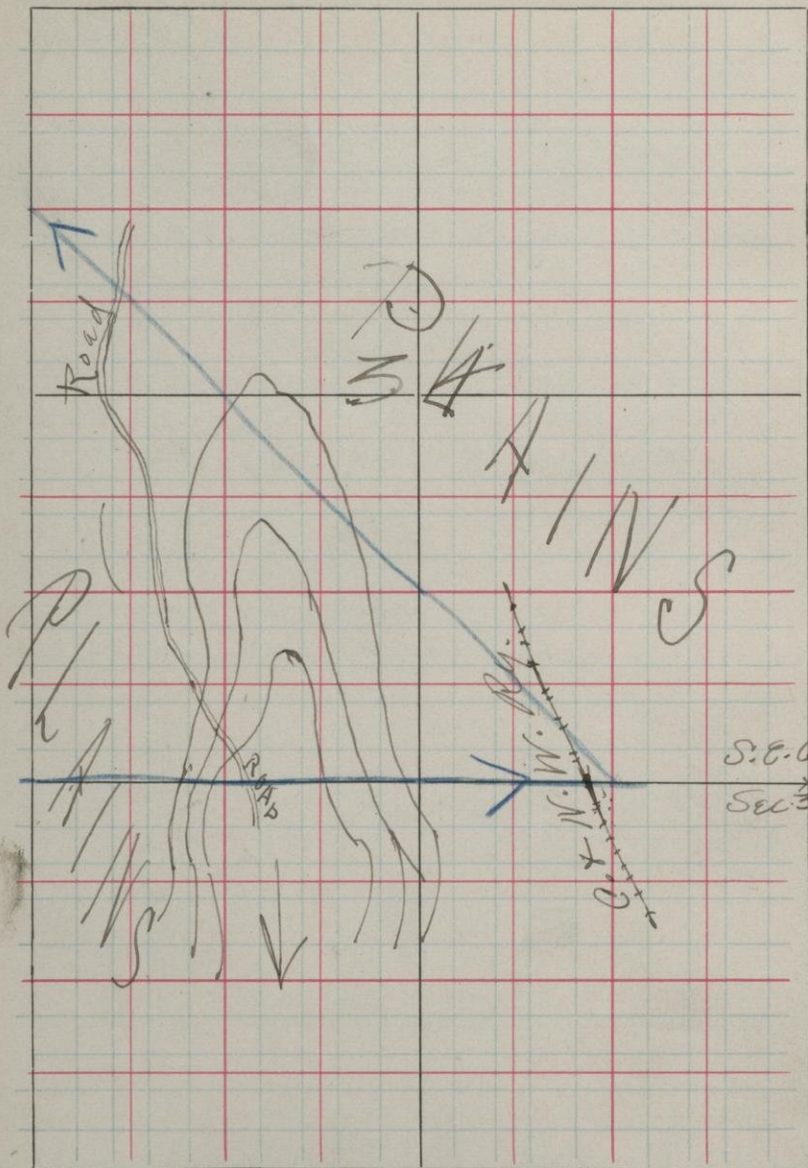


Lines run as indicated in blue.

23619 0 N 1600 W - S.E. Cor - Sec. 33-46-25

Finely crystalline, acid felt-
spathe granite associated
with, possibly including a
23620 gneiss, which may be but a phase.
Exposures west of the river
are similar with also a
large dyke of diabase.

S. 34 T. 46 R. 25

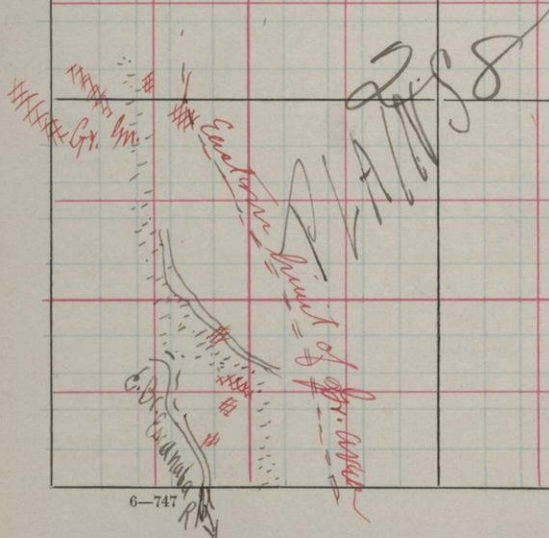


Line run as indicated in blue.

This run was made into
plains for a mile beyond
eastern limit of granite.
No exposures & small growth
of Jack pine.

S. 28 T. 46 R. 25

M. W. L. W.
Sec. 28



Run made along eastern limit
of granite.

Granite and granite gneiss
exposed as indicated
on the map.

S.

21

T.

46

R.

25

Gr. S. Cr.

Gr. S. Cr.

Gr. S. Cr.

23621

East from limit of Gravel Area

S. H. Cr.
S. H. Cr.

W. S. Cr. 21

21

Run made to determine
 eastern limit of granite in
 Sec. 21-46-25 as indi-
 cated by broken line.

23621 - 1400 N 1550 W - S.E. Cor. 21-46-25.

Finely crystalline granite
 which with the gneissoid
 granite and schists form
 the rocks along the eastern
 limit of the granite area.

56-223

