

E. O. Ulrich
Note book 28
Wisconsin - 1918 1916 1917 1918
1919

82

U. S. GEOLOGICAL SURVEY
TRAVERSE BOOK

9-904

Index.
Note book No. 218.

Page.

Ableman, Wis. - see note on section at Saddle Mound, near Pray, Wis., 18 miles east of Black River Falls 45

section in railroad cut near 92

note on reported discovery of *Franconia brachiopods* 92

Agnostus zone - in section at Heads Landing, Minn. 32

Alma, Wis.: 32

section along steep road climbing to top of bluff from south end of town 31

section in bluff $\frac{1}{2}$ mile north of see section at Bald Bluff, Wis. 49

Alma Center, Wis. - see section 2 or 3 miles north-west of Neillsville, Wis. 43

Apple River - at and west of Somerset, Wis. - section 39

Bald Bluff, Wis. - section at, on road between Pilot Knob and Westfield, Wis. 49

Bangor, Wis. - pre-Cambrian in well at Baraboo, Wis. - section in vicinity of Wood's quarry near 27

quarry near 27

Bean, E. F.: 27

With associates and E. O. Ulrich - section 5 miles north-northeast of Black River Falls 24

With Ulrich and others, section in vicinity of Wood's quarry, near Baraboo, Wis. 27

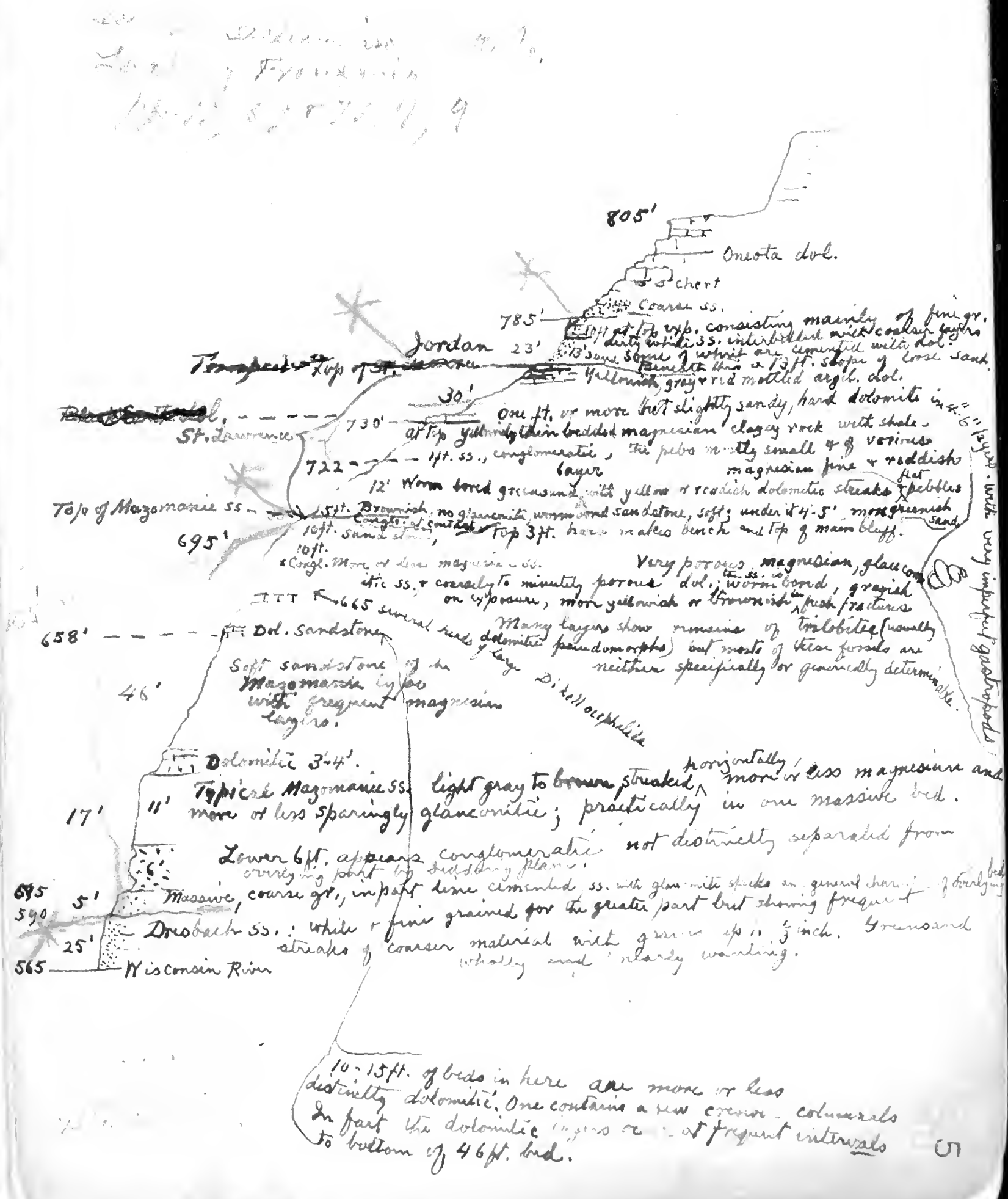
With Ulrich and others, section 6 miles east of Reedsburg, Wis. 61

With Ulrich and Hotchkiss, section $\frac{1}{2}$ mile northeast of Cazanova and section on north slope of hill 2-3 miles south of Cazanova, Wis. 63

With Ulrich and Hotchkiss, section on south slope of hill 3-4 miles south of Cazanova, Wis. 64

With Ulrich, Kuehling, and others, section about 1 $\frac{1}{2}$ miles northwest of West Salem, Wis. at mill dam on La Crosse River 69

Ferry Bluff, Wisconsin River, about 6 m. SW of Bank City, Wis., Aug. 1st 1916. With Mr. & Mrs. Hotchkiss.



Bean cont'd.:
 with Ulrich, Kuehling, and others, section
 2 1/2 miles northeast of Mindoro, Wis.,
 SE. cor. sec. 9, T. 18, R. 6 W.
 Berlin, Wis. - sandstone in section at Observatory
 Hill, 15 miles N. of Portage, suggests basal
 sandstone at
 Black Earth dol. - in section in Ferry Bluff,
 6 miles SW. of Sauk City
 bed in section 1 1/2 miles SW. of Hillside and
 S. of Spring Green, cf.
 Black River, Wis. - see section 2 or 3 miles north-
 west of Neillsville, Wis.
 Black River age:
 dolomitic beds of in section at Homer creamery
 about 8 miles southeast of Boscobel, Wis. 67
 Black River Falls, Wis.:
 section 5 miles north of
 see section at Saddle Mound, near Pray, Wis. 45
 Blair, Wis. - section at
 Blue Mound - mentioned in section at Elephants
 Back, 3 1/2 miles N. of Kilbourn
 Blue Mounds, Wis. - section just west of, at the
 cut in Highway 19
 Boscobel, Wis.:
 mentioned in connection with quarry exposure
 south of Loyd, about 1 mile north of
 Sextonville, Wis.
 section about 8 miles southeast of, at Homer
 creamery
 Callahan's Hill, 2 miles west of Mondovi, Wis. -
 section up
 Cambrian - mentioned in section at Alma, Wis. 31
 Castle Rock, 4 miles NW. Sparta - section
 Catawact, Wis. - Dresbach sandstone in section
 6 miles N. of Sparta at summit of ridge road 16

fine gr.
 in layers
 dol.
 sand.
 to in 4-6" layers
 also
 reddish
 flat
 pebbles
 brownish
 sand
 is con-
 sidered
 as
 usually
 is are
 determinable.
 impression and
 like bed.
 led from
 character of locally
 sand
 Greensand

25'
 565 Wisconsin River

10-15 ft. of beds in here are more or less
 distinctly dolomitic. One contains a few crown corals
 In part the dolomitic layers occur at frequent intervals
 to bottom of 46 ft. bed.

- 92 N. of Reedsburg and Franconia - contact in wall of quarry
- 90 Wilson
- 63 in section, east end of railroad cuts at Wis.
- 61 ? in section $\frac{1}{2}$ mile northeast of Cazenville, Wis.
- 55 in section 6 miles east of Reedsburg, Wis.
- 27 New London, Wis. may be represented in section in vicinity of Wood's quarry, near Baraboo, Wis.
- 25 beneath Mendota, in section in vicinity of Sauk Co., Wis.
- 15 in section on Pine Creek, at Wood's quarry, Back, N. of Kilbourn
- 59 Fossils suggesting - in section at Elephants Devils Lake ss.:
- 57 Denzer, Wis. - section 1 mile east of dam on Peshtigo River
- 55 section 3 miles northwest of, at uncompleted see section in vicinity of New London, Wis. Crivitz, Wis.:
- 67 southeast of Boscobel, Wis.
- 98 Creamery at Homer, Wis. - section at, about 8 miles Madison
- 41 Colladys Point - in section at Faunacks quarry, quarries at top of bluff along Cedar River
- 64 Colfax, Wis. - section 1 mile northwest of, at Cheese factory - Upper Big Willow, near Cazenville, Wis.
- 41 1 mile northwest of Colfax, Wis.
- 65 Cedar River - quarries at top of bluff along Sextonville, Wis.
- 64 south of Loyd, about 1 mile north of mentioned in connection with quarry exposure south of Cazenville, Wis.
- 63 section on south slope of hill 3-4 miles north slope of hill 2-3 miles south of section $\frac{1}{2}$ mile northeast of and section on Cazenville, Wis.:

fine gr. clay matrix
 det. coarse sand.
 its in 2-3" layers with very imperfect gastropods
 reddish
 flat pebbles
 greenish sand
 ss.
 basalt
 spiral
 tubes
 usually
 into are
 by detrital
 magnesian and
 sink bed.
 solid from
 not character of gravelly
 frequent
 ground

25' Wisconsin River

10-15 ft. of beds in here are more or less distinctly dolomitic. One contains a few crowded columnals. In part the dolomitic layers occur at frequent intervals to bottom of 46 ft. bed.

District School No. 7, Sauk City - section 7
 Dresbach ss.:
 in section in Ferry Bluff, Wisconsin River,
 6 miles SW. of Sauk City 5
 on Mazomanie beds - in section at District
 School 7, Sauk City 7
 in section 1 1/2 miles SW. of Hillside and S. of
 Spring Green 9
 in section in bluff N. of road to White
 Mound, 1 mile S. of Ireland 11
 in section at Elephants Back, 3 1/2 miles N. of
 Kilbourn 15
 in section 7 mts. N.W. of Warrens, Wis., N.
 part sec. 17, T. 20, R. 1 W. 16
 in section N. part sec. 23, T. 18, R. 4 W.,
 6 mts. N. of Sparta at Summit of ridge
 road to Cataract 18
 unexposed but indicated by residual 18
 in section at Friendship Mound 20
 in section 2 miles north of Lavelle, Wis. 21
 in section at Pilot Knob 22
 in section 5 miles north of Black River Falls
 in section on Pine Creek, at Wood's quarry,
 Sauk County, Wis. 25
 in section at Humbird, Wis., about 16 miles
 N. of Black River Falls 26
 in section between Fairchild and Osseo 26
 in Wild Cat Mound, about 4 miles east of
 Humbird, Wis. 26
 in Humbird Mound 26
 ? at base of Callahan's Hill, 2 miles west of
 Mondovi, Wis. 29
 in section near Modena, Wis. 30
 in section north of Alma, Wis. 31
 in section 1/2 mile north of Alma, Wis. 32
 in section by S. Weidman at Taylors Falls,
 Minn. 36
 see section by S. Weidman at Osceola, Wis.
 suggested explanation of which is given by
 Ulrich 36

This list is a list of localities where the
 fossils were found. It is not a list of
 the fossils themselves.

fine gr.
 calc. ss.
 coarse sand.
 its in 1/2" to 1" layers
 calc.
 reddish
 flat
 pebbles
 greenish
 sand
 all
 green
 usually
 do are
 of detrital
 magnesian and
 sink bed.
 slid from
 not change of bedding
 required
 Greensand

25 Wisconsin River

10-15 ft. of beds in here are more or less
 distinctly dolomitic. One contains a few crinoid columns
 In part the dolomitic layers occur at frequent intervals
 to bottom of 46 ft. bed.

- Dresbach ss. cont'd.:
- 37 evidently in section in bluff opposite Osceola, Wis.
 - 41 in section near Colfax, Wis.
 - 43 in section 2 or 3 miles northwest of Nellisville, Wis.
 - 45 in section at Saddle Mound, near Pray, Wis.
 - 46 18 miles east of Black River Falls.
 - 51 in section at Ironton, Wis.
 - 53 in section at Rattlesnake or Stafford (= "Spofford") Bluff, Wis.
 - 57 sandstone resembling, in section at uncompleted dam on Peshigo River, 3 miles northwest of Crivitz, Wis.
 - 61 in section 6 miles east of Reedsburg, Wis.
 - 63 in section $\frac{1}{2}$ mile northeast of Cazenville, Wis.
 - 63 in section on north slope of hill 2-3 miles south of Cazenville, Wis.
 - 64 in section on south slope of hill 3-4 miles south of Cazenville, Wis.
 - 65 top of, quarry exposure south of Loyd, about 1 mile north of Sextonville, Wis.
 - 69 suggested change in reference to this formation in 1914 notebook.
 - 69 in section $2\frac{1}{2}$ miles northeast of Mindora, Wis.
 - 69 SE. cor. sec. 9, T. 18, R. 6 W. 6 W.
 - 71 in section at White Mound, Wis.
 - 73 in section at Goodenough Hill, 6-6 $\frac{1}{2}$ miles west of Madison, Wis., on Trunk Road 71.
 - 73 in section 30-40 ft. beneath summit of Rattlesnake Mound, $5\frac{1}{2}$ miles south of Friendship, Wis.
 - 84 in section in railroad cut near Ableman, Wis.
 - 92 in section N. of Reedsburg.
 - 92 in section at Hudson, Wis.
 - 100 in Franconia formation in St. Croix Valley, Wis.
 - 101 in section at Blair, Trempealeau Co., Wis.
 - 106 Dumville ss. - in Franconia formation in St. Croix Valley, Wis.
 - 101

10-15 ft. of beds in here are more or less distinctly dolomitic. One contains a few corals. In fact the dolomitic layers occur at frequent intervals to bottom of 46 ft. bed.

- Eau Claire formation:
- 26 In section at Humbird, Wis., 16 miles N. of Black River Falls.
 - 26 at Wedges Creek, about 7 miles west of Neillsville, Wis.
 - 26 in section near Modena, Wis.
 - 30 ? in section north of Alma, Wis.
 - 31 see section at Osceola, Wis., by S. Weidman, Ulrich
 - 36 shale in section 1 mile northwest of Golfax, Wis., at quarries at top of bluff along Cedar River.
 - 41 in section 2 or 3 miles northwest of Neillsville, Wis.
 - 43 trilobites in, section about $1\frac{1}{2}$ miles north-west of West Salem, Wis., at mill dam on La Crosse River
 - 69 in section at Blair, Trempealeau Co., Wis.
 - 106 Eau Claire, Wis. - notes made in driving from to Neillsville, Wis., with Hotchkiss and Edwards Edwards, Ira:
 - 26 with Ulrich and Hotchkiss driving from Eau Claire to Neillsville, Wis.
 - 26 with Ulrich and others, section in vicinity of Wood's quarry, near Baraboo, Wis.
 - 27 with Ulrich and Hotchkiss, section at Frank Holmes quarry, 3 miles north of Mondovi, Wis.
 - 28 with Ulrich and Hotchkiss, section up Callahan's Hill, 2 miles west of Mondovi, Wis.
 - 29 with Ulrich and Hotchkiss, section southwest of Mondovi, Wis.
 - 30 with Ulrich and Hotchkiss, section at Alma, Wis.
 - 31 with Ulrich and Hotchkiss, section $\frac{1}{2}$ mile north of Alma, Wis.
 - 32 with Ulrich and Hotchkiss, section at Reads Landing, Minn.
 - 33

10-15 ft. of beds in here are more or less
 distinctly dolomitic. One contains a few crinoid columns
 In part the dolomitic layers occur at frequent intervals
 to bottom of 46 ft. bed.

10-15 ft. of beds in here are more or less
 distinctly dolomitic. One contains a few crinoid columns
 In part the dolomitic layers occur at frequent intervals
 to bottom of 46 ft. bed.

Edwards, Ira, cont'd.:

35 with Ulrich and Hotchkiss, section about 4 miles northwest of Menomonee, Wis.

37 with Ulrich and Hotchkiss, section in bluff opposite Osceola, Wis.

37 with Ulrich and Hotchkiss, section at Franconia, Minn.

37 with Ulrich and Hotchkiss in section $2\frac{1}{2}$ miles north-northwest of Somerset, Wis.

39 with Ulrich and Hotchkiss, section 1 mile northwest of Golfax, Wis.

41 with Ulrich and Hotchkiss, section 2 or 3 miles northwest of Neillsville, Wis.

43 with Ulrich and Hotchkiss, section at Saddle Mound, near Pray, Wis., 18 miles east of Black River Falls

45 with Ulrich, Hotchkiss, and Thwaites, section 1 mile south of Ironton, Wis.

47 with Ulrich, Hotchkiss, and Thwaites, section at Ironton, Wis.

51 with Ulrich, Hotchkiss, and Thwaites, section at old iron mine 1 mile south of Ironton, Wis.

52 with Ulrich, Hotchkiss, and Thwaites, section at Rattlesnake or Stafford (= "Sportford") Bluff, Wis.

53 Elephants Back, $3\frac{1}{2}$ miles N. of Kibbourn - section 15 Elk Mound, Wis. - see section near Golfax, Wis. 41 Fairchild, Wis. - mentioned in notes made in driving from Eau Claire to Neillsville, Wis. 26 Ferry Bluff, Wisconsin River, 6 miles SW. Sauk City - section 5

37 probably, in section at Elephants Back, $3\frac{1}{2}$ miles N. of Kibbourn 15 basal, at Taylor's Falls, Minn. - sandstone in section at Elephants Back suggests 15 quarry in lower, in section 7 miles N.W. of Warrens, Wis., N. part sec. 17, T. 20, R. 1 W. fossils 15-20 ft. above base of 16

10-15 ft. of beds in here are more or less distinctly dolomitic. One contains a few crinoid columns. In part the dolomitic layers occur at frequent intervals to bottom of 46 ft. bed.

Frankonia cont'd.:

greensand bed of - in section at Castle Rock, 4 miles NW. of Sparta 17
 in section, region of Sparta 18
 tentative division of formation into five members 19
 pre-Cambrian 455 ft. beneath middle of, in well at Tomah, Wis. 19
 in section at Friendship Mound, N. of Friendship near base of yellow sandstone member of 2 miles north of Lavalie, Wis. 21
 in section at Pilot Knob 22
 top of, in section at mound 1 mile SE. of Pilot Knob 23
 fossils from top of bluff 5 miles north of Black River Falls 24
 basal, 5 miles N.W. of Black River Falls 24
 in section on Pine Creek, at Wood's quarry, Sauk Co., Wis. 25
 in Wild Cat Mound, about 4 miles east of Humbird 26
 fossils in section in vicinity of Wood's quarry, near Baraboo, Wis. 27
 to top of Callahan's Hill, 2 miles west of Mondovi, Wis. 29
 in section $\frac{1}{2}$ mile north of Alma, Wis. 32
 in section by Weidman at Taylor's Falls, Minn. in section by Weidman at Osceola, Wis., suggested explanation of which is given by Ulrich 36
 absent in section in bluff opposite Osceola, Wis. 37
 in section near Golfax, Wis. 41
 no basal observed, apparently beneath its horizon in section 2 or 3 miles northwest of Neillsville, Wis. 43
 in section at Saddle Mound, near Pray, Wis., 18 miles east of Black River Falls - apparently all lower 45

This is a list of localities where the Frankonia has been found.

115' of member
 7' in section
 2-2' in section

10-15 ft. of beds in here are more or less distinctly dolomitic. One contains a few crinoid columnals. In part the dolomitic layers occur at frequent intervals to bottom of 46 ft. bed.

Franconia cont'd.:
 47 basal, in section 1 mile S. of Ironton, Wis.
 upper sandstone in section at Bald Bluff, on
 road between Pilot Knob and Westfield, Wis. 49
 basal sandstone of, in section at Ironton,
 Wis.
 51 lower greensand of, in village of Ironton,
 Wis.
 51 basal sandstone of, in section at old iron
 mine 1 mile south of Ironton, Wis.
 52 basal, in section at Rattlesnake or Stafford
 (= "Spofford") Bluff, Wis.
 53 may be represented in section 6 miles east of
 Reedsburg, Wis.
 61 in section $\frac{2}{3}$ mile northeast of Cazenovia, Wis.
 63 in section on north slope of hill 2-3 miles
 south of Cazenovia, Wis.
 63 in section on south slope of hill 3-4 miles
 south of Cazenovia, Wis.
 64 basal, quarry exposure south of Loyd, about
 1 mile north of Sextonville, Wis.
 65 in section at Goodenough Hill, 6-6 $\frac{1}{2}$ miles
 west of Mauston, Wis., on Trunk Road 71. 72, 73
 basal sandstone of, in section in railroad
 cut near Ableman, Wis.
 92 upper, in section N. of Reedsburg
 92 contact of Franconia and Devils Lake
 undoubted, in section at Hudson, Wis.
 100 Weidman's sequence of zones in - St. Croix
 Valley, Wis.
 101 in section at Blair, Trempealeau Co., Wis.
 106 Franconia, Minn., section at
 37 Franconia, Wis. - see note on section at Saddle
 Mound, near Pray, Wis., 18 miles east of Black
 River Falls
 45 Friendship, Wis.:
 Friendship Mound just N. of - section
 20 mound 10 miles east of - section
 23 section $\frac{5}{8}$ miles south of, 30-40 ft. beneath
 summit of Rattlesnake Mound
 84

and 2' thick. The
 15' of the
 10-15 ft. of beds in here are more or less
 distinctly dolomitic. One contains a few crinoid columns
 in part the dolomitic layers occur at frequent intervals
 to bottom of 46 ft. bed.

- 17 NW. of Sparta section at Castle Rock, 4 miles with Ulrich, section at
- 15 miles N. of Kilbourn section at Elephants Back, 3 1/2 miles with Ulrich, section at
- 11 Leland, north of road to White Mound section in bluff 1 mile SW. of with Ulrich, section at
- 5 Ferry Bluff, 6 miles SW. Sauk City section in with Ulrich and Mrs. Hotchkiss - section in
- Hotchkiss, W. O.:
- 56 3 miles south of New London section on road to, about Hortonville, Wis. - section
- 67 southeast of Bosobel section at creamery at, about 8 miles Homer, Wis. - section at
- 28 Mordovi, Wis. his quarry, 3 miles north of Holmes, Frank - his quarry, 3 miles north of
- 9 section Hillside, 1 1/2 miles SW. of and S. of Spring Green - formation in St. Croix Valley, Wis.
- 101 Orin Beck's bed, in section at Hudson, Wis. upper, middle, and lower beds in Franconia
- 100 Hudson, Wis. upper, middle, and lower beds, in section at
- 100 members upper and lower - see division of Franconia
- 19 Greensand: 3 1/2 miles N. of Kilbourn Grand View Hotel - in section at Elephants Back, 3 1/2 miles N. of Kilbourn
- 15 Pilot knob and Westfield, Wis. see section at Bald Bluff, on road between
- 49 see section 2 miles north of Lavalie, Wis. Grandmarsh, Wis.:
- 21 north of Sextonville exposure south of Loyd, Wis., about 1 mile
- 65 Gotham, Wis. - mentioned in connection with quarry
- 73 Mauson on Trunk Road 71 Goodenough Hill - section at, 6-6 1/2 miles west of
- 31 Gasconade formation - in section at Alma, Wis. Mounds, Wis.
- 67 Galena dolomite - in section just west of Blue
- 20 Friendship Mound, just N. of Friendship - section

10-15 ft. of beds in here are more or less distinctly dolomitic. One contains a few crinoid columns. In part the dolomitic layers occur at frequent intervals to bottom of 46 ft. bed.

- Hotchkiss, E. O., cont'd.:
- 43 northwest of Neillsville, Wis.
 - 41 with Ulrich and Edwards - section 2 or 3 miles northwest of Colfax, Wis.
 - 39 with Ulrich and Edwards - section 1 mile north-northwest of Somerset, Wis.
 - 37 with Ulrich and Edwards in section $2\frac{1}{2}$ miles W. Minn.
 - 37 with Ulrich and Edwards - section at Franconia, opposite Osceola, Wis.
 - 35 with Ulrich and Edwards - section in bluff northwest of Menomonee, Wis.
 - 33 with Ulrich and Edwards - section about 4 miles landing, Minn.
 - 32 with Ulrich and Edwards - section at Reads of Alma, Wis.
 - 31 with Ulrich and Edwards - section $\frac{1}{2}$ mile N. W. Wis.
 - 30 with Ulrich and Edwards - section at Alma, of Mondovi, Wis.
 - 29 with Ulrich and Hotchkiss - section southwest Hill, 2 miles west of Mondovi, Wis.
 - 28 with Ulrich and Edwards - section up Callahan's Holmes quarry, 3 miles N. of Mondovi, Wis.
 - 27 with Ulrich and Edwards - section at Frank of Wood's quarry, near Baraboo, Wis.
 - 26 with Ulrich and others - section in vicinity Claire to Neillsville, Wis.
 - 25 with Ulrich and Edwards driving from Eau Creek, Sauk Co., Wis.
 - 23 with Ulrich and Thwaites - section on Pine Pilot Knob
 - 22 with Ulrich and Thwaites - section 1 mile SE. Knob
 - 21 with Ulrich and Thwaites - section at Pilot of Lavalie
 - 20 with Ulrich and Thwaites, section 2 miles N. ship mound
 - with Ulrich and Thwaites - section at Friend-

15' of ...

10-15 ft. of beds in here are more or less distinctly dolomitic. One contains a few crinoid columns. In fact the dolomitic layers occur at frequent intervals to bottom of 46 ft. bed.

- Hotchkiss, W. O., cont'd.:
- 45 with Ulrich and Edwards - section at Saddle Mound, near Pray, Wis., 18 miles east of Black River Falls
- 47 with Ulrich, Edwards, and Thwaites - section 1 mile S. of Ironton, Wis. section at Bald Bluff, on road between Pilot Knob and Westfield, Wis. section
- 49 with Ulrich, Thwaites, and Edwards - section at Ironton, Wis. section
- 51 with Ulrich, Thwaites, and Edwards - section at old iron mine, 1 mile S. of Ironton, Wis. section
- 52 with Ulrich, Thwaites, and Edwards - section at Rattlesnake or Stafford (= "Sportard") Bluff, Wis. section
- 53 with Ulrich - section in vicinity of New London, Wis. section about 3 miles S. of New London, on road to Hortonville, Wis.
- 55 with Ulrich - section at uncompleted dam on Peshtigo River, 3 miles NW. of Crivitz, Wis. section 1 mile E. of Denzer, Wis. section 6 miles E. of Reedsburg, Wis. section
- 59 with Ulrich and others - section 6 miles E. of Reedsburg, Wis. section $\frac{3}{8}$ mile NE. of Gazenovia and Bean - section on N. slope of hill 2-3 miles S. of Gazenovia, Wis. section on S. slope of hill 3-4 miles S. of Gazenovia, Wis. section in rail-road cut near Ablesman, Wis. section
- 64 with Ulrich and Thwaites in section in rail-road cut near Ablesman, Wis. section at Mendota Station N. of Madison
- 69 with Ulrich and Thwaites in section in rail-road cut near Ablesman, Wis. section at Mendota Station N. of Madison
- 73 with Ulrich - contact of Jordan and Madison quarries, Madison section at Faunack's quarry, Madison section
- 92
- 92
- 94

Hudson, Wis.:
 see section at Franconia, Minn. 37
 section at 100
 mentioned in Weidman's sequence of zones in
 Franconia formation in St. Croix Valley,
 Wis. 101
 Humbird, Wis. - section at, about 16 miles N. of
 Black River Falls 26
 Humbird Mound - mentioned in notes made in driving
 from Eau Claire to Neillsville, Wis. 26
 Ironton, Wis.:
 section at 47
 section at old iron mine 1 mile S. of 51
 Irving, R. D.:
 comment on his view of stratigraphic sequence
 in mound SE. of Pilot Knob 22
 comment on his view of section at Rattlesnake
 or Stafford (= "Spottford") Bluff, Wis. 23
 Itasca, Wis. - mentioned in connection with quarry
 exposure S. of Loyd, Wis., about 1 mile N. of
 Sextonville, Wis. 32
 Jordan ss.:
 in section at Ferry Bluff, Wisconsin River,
 6 miles SW. Sauk City. 55
 in section 1 1/2 miles SW. of Hillside, S. of
 Spring Green 61
 in section at Shakopee - Minnesota River
 Valley 63
 in section at Castle Rock, 4 miles NW. of
 Sparta 64
 in section, region of Sparta. 17
 in section at Pilot Knob. 18
 or Madison - in section in mound 1 mile SE.
 of Pilot Knob - 10 miles E. of Friendship
 in section SW. of Mondovi, Wis. 92
 in section at Alma, Wis. 30
 in section 1/2 mile north of Alma, Wis. 31
 typical, in section at Reads Landing, Minn. 33
 94

Jordan ss. cont'd.

37 in section in bluff opposite Osceola, Wis.

47 suggestion of in section 1 mile S. of Ironton, Wis.

49 in section at Bald Bluff, on road between Pilot Knob and Westfield, Wis.

52 suggestion of in section at old iron mine 1 mile S. of Ironton, Wis.

55 may be represented in section in vicinity of New London, Wis.

57 in section 1 mile E. of Denzer, Wis.

59 in section $\frac{3}{4}$ mile NE. of Cazenovia, Wis.

63 in section on north slope of hill 2-3 miles S. of Cazenovia, Wis.

65 in section on south slope of hill 3-4 miles S. of Cazenovia, Wis.

67 in section at White Mound, Wis.

71 in section, E. end of railroad cuts at Wilson in section $\frac{1}{2}$ mile E. of Twaites's Mazomanie section - old quarry, top of hill, near St. Paul R.R. and wagon road

72 contact of Jordan and Madison - cut at Mendota Station N. of Madison.

74 sandstone in section at Paumack's quarry at Madison suggests

75 Kilibourn, Wis.:

79 section at Elephant's Back $3\frac{1}{2}$ miles N. of see section 2 or 3 miles NW. of Neillsville, Wis.

83 Knapp, Wis. - see section at Franconia, Minn.

84 Kuehling:

89 with Ulrich, Bean, and others, section about $1\frac{1}{2}$ miles NW. of West Salem, Wis., at mill dam on La Crosse River

73 with Ulrich, Bean, and others, section $2\frac{1}{2}$ miles NE. of Mindora, Wis., SE. cor. sec. 9, T. 18, R. 6 W.

92 La Crosse, Wis. - see note on section at Saddle Mound, near Pray, Wis., 18 miles E. of Black River Falls

94 45

- Lavalle, Wis.: section 2 miles N. of, near base of yellow sandstone member of the Franconia. 21
 suggested comparison of fauna in Mazomanie beds N. of with those in section at Goodenough Hill, 6-6½ miles W. of Neuston on Trunk Road 71 73
 Leland - section 1 mile SW. of, in bluff N. of road to White Mound 11
 Little Baraboo River, Wisconsin - see section ½ mile NE. of Cazanova, Wis. 63
 Little Roche-a-cris Creek - in section at Friendship Mound, N. of Friendship. 20
 Loyd, Wis. - quarry exposure S. of, about 1 mile N. of Sextonville 65
 Madison lithology, typical - in section at Castle Rock, 4 miles NW. of Sparta 17
 Madison ss.: in section in region of Sparta. 18
 or Jordan - in section in mound 1 mile SE. of Pilot Knob - 10 miles E. of Friendship 23
 in section at Alma, Wis. 31
 in section ½ mile N. of Alma, Wis. 32
 in section at Reads Landing, Minn. 33
 ? in section in bluff opposite Osceola, Wis. 37
 not in section on south slope of hill 3-4 miles S. of Cazanova, Wis. 64
 in section, E. end of railroad cuts at Wilson's remainder of in section ½ mile E. of Thwaites' Mazomanie, Wis., section, old quarry, top of hill, near St. Paul R.R. and wagon road in cut at Mendota Station north of Madison - contact with Jordan 96
 Madison, Wis.: contact of Jordan and Madison in cut at Mendota Station N. of. 96
 section at Paunack's quarry at. 98
 Martin, with Ulrich - section at Castle Rock, 4 miles NW. of Sparta 17

Mauston, Wis. - section 6-6 $\frac{1}{2}$ miles W. of, at
 Goodenough Hill, on Trunk Road 71 73
 Mayville dolomite - in section at Peebles - in
 quarry 14
 Mazomanie ss.:
 typical - in section in Ferry Bluff, Wisconsin
 River - 6 miles SW. Sauk City. 5
 beds on Dresbach - in section at District
 School No. 7, Sauk City ^{8 $\frac{1}{2}$ miles W.} 7
 sandstone reminding strongly of - in section
 1 $\frac{1}{2}$ miles SW. of Hillside and S. of Spring
 Green. 9
 typical - in section in bluff 1 mile S. of
 Leland, N. of road to White Mound. 11
 see section 2 miles N. of Lavalie, Wis. 21
 in section at Pilot Knob. 22
 typical - in section in mound 1 mile SE. of
 Pilot Knob - 10 miles E. of Friendship
 sandstone in Upper Beef Valley, 6 or 7 miles
 N. of Alma, Wis., may look like. 32
 in section at Bald Bluff, on road between
 Pilot Knob and Westfield, Wis. 49
 probably in section in vicinity of New London,
 Wis. 55
 in section 1 mile E. of Denzer, Wis. 59
 in section 6 miles E. of Reedsburg, Wis. 61
 in section $\frac{4}{5}$ mile NE. of Cazenovia, Wis. 63
 suggestion of in section on S. slope of hill
 3-4 miles S. of Cazenovia, Wis. 64
 suggested change from suggestion of St. Lawrence
 on Dresbach to, on page 63a of 1914 note-
 book. 69
 in section at Goodenough Hill, 6-6 $\frac{1}{2}$ miles W.
 of Mauston, Wis., on Trunk Road 71 72, 73
 beds - in section N. of Reedsburg 92
 in section $\frac{1}{2}$ mile E. of Twaites's Mazomanie,
 Wis., section, old quarry, top of hill,
 near St. Paul R.R. and wagon road. 94

Mazomanie ss. - p. 50.
 Mauston, Wis. - p. 50.

- 43 Neillsville Mound, 2 or 3 miles NW. of Neillsville, Wis. - section
- 43 Mound
- 26 section 2 or 3 miles NW. of, at Neillsville with W. O. Hotchkiss and Ira Edwards
- notes made in driving from Eau Claire to Neillsville, Wis.:
- 37 see section at Franconia, Minn.
- 30 Modena, Wis.
- section 4-5 miles SW. of and thence to section up Callahan's Hill 2 miles W. of
- 29 section at Frank Holmes quarry 3 miles N. of Mondovi, Wis.:
- 30 Modena, Wis. - section at
- 33 Minn.
- Mississippi River - see section at Reads Landing, Minnesota River Valley - section at Shakopee in sec. 9, T. 18, R. 6 W.
- 69 Windora, Wis. - section 2 1/2 miles NE. of, SE. cor. Rock, 4 miles NW. of Sparta
- 17 Mesler, with Ulrich and others - section at Castle Merriam Station - in section at Shakopee
- 13 sandstone in cut at - north of Madison
- 96 Mendota Station - contact of Jordan and Madison Wis.
- 27 vicinity of Wood's quarry, near Baraboo, above Devils Lake sandstone in section in Sauk Co., Wis.
- 25 in section on Pine Creek, at Wood's quarry, Mendota dolomite:
- 96 Madison
- sandstone - cut at Mendota Station N. of with Ulrich, Madison
- 98 quarry, Madison
- Mehl, Ulrich, and others - section at Paunack's near St. Paul R.R. and wagon road
- 94 mile E. of in old quarry near top of hill Mazomanie, Wis. - section of Thwaites - section 1

New London, Wis.:

section in vicinity of
section about 3 miles S. of, on road to
Hortonville.
Observatory Hill, 15 miles N. of Portage - section 15

Oneota:

in section at Ferry Bluff, Wisconsin River,
6 miles SW. of Sauk City
in section, 1 1/2 miles SW. of Hillside and S.
of Spring Green.
base of, in section at Castle Rock, 4 miles
NW. of Sparta.

in section at Sparta.

? basal, in section up Callahan's Hill,
2 miles W. of Mondovi, Wis.

dolomite in section SW. of Mondovi, Wis.
? basal, in section SW. of Mondovi, Wis.

in section 1/2 mile N. of Alma, Wis.
in section at Reads Landing, Minn.

not seen in situ in section in bluff
opposite Osceola, Wis.

in section at Bald Bluff, Wis., on road
between Pilot Knob and Westfield, Wis.

in section about 3 miles S. of New London,
on road to Hortonville, Wis.

in section NE. of Gazenovia, Wis.
in section on N. slope of hill 2-3 miles
S. of Gazenovia, Wis.

in section on S. slope of hill 3-4 miles
S. of Gazenovia, Wis.

exposed in form of more or less drusy chert
at Homer creamery, about 8 miles SE. of
Boscobel, Wis.

in sec. 36, T. 8, R. 2 E., 9 miles a little
S. of E. from Boscobel, Wis.

? basal, in section at White Mound, Wis.
lower - in section E. end of railroad cuts
at Wilson.

90

71

67

67

64

63

63

56

49

37

33

32

30

30

29

18

17

9

5

55

Oneota cont'd.:
 in section $\frac{1}{2}$ mile E. of Thwaites's
 Mazomanie section, old quarry, top of
 hill, near St. Paul R.R. and wagon road
 in cut at Mendota Station N. of Madison -
 in contact of Jordan and Madison. 96
 in section at Paumack's quarry, Madison. 98
 in section at Steven's old quarry NE. of
 Paumack's quarry, Madison. 98
 Ordovician - in 2 miles of road W. of Homer, Wis. 67
 Osceola, Wis.:
 section at by S. Weidman, with suggested
 explanation by Ulrich, $\frac{1}{2}$ mile N. of old
 quarry 36
 section in bluff opposite 37
 Osseo, Wis. - mentioned in notes made in driving
 from Eau Claire to Neillsville, Wis. 26
 Paumack's quarry, Madison - section at 98
 section at Steven's old quarry NE. of 98
 Peck, Orrin:
 quarry zone belonging to - see section about
 4 miles NW. of Menomarie, Wis. 35
 see greensand bed in section at Hudson, Wis. 100
 Peebles, Wis. - section in quarry at 14
 Peshtigo River, Wis. - section at uncompleted
 dam 3 miles NW. of Crivitz, Wis. 57
 Pheasant Branch and Black Earth dolomites - bed
 in section $1\frac{1}{2}$ miles SW. of Hillside and S.
 of Spring Green cr. 9
 Pilot Knob, Wis.:
 Ptychaspis zone - see section 2 miles N. of
 Lavalie, Wis. 21
 section at - with Hotchkiss and Thwaites. 22
 section in mound 1 mile SE. of - 10 miles
 E. of Friendship 23
 see section at Bald Bluff, on road between
 Pilot Knob and Westfield, Wis. 49
 suggested comparison of fauna of beds at
 with those in section at Goodenough Hill,
 6-6 $\frac{1}{2}$ miles W. of Mauston, Wis., on Trunk
 Road 71. 73

- 41 NW. of Colfax, Wis. - section.
- 36 at top of bluff along Cedar River, 1 mile near Osceola, Wis. - section.
- 35 Menomonic, Wis. - section.
- 31 Orrin Peck's, about 4 miles NW. of see section at Alma, Wis.
- 28 section.
- 27 Frank Holmes, 3 miles N. of Mondovi, Wis. - Wood's, near Baraboo, Wis. - section.
- 25 section.
- 16 Wood's, on Pine Creek, Sauk Co., Wis. - R. I W. - section.
- 14 Warrens, Wis., N. part sec. 17, T. 20, in lower Franconia, 7 miles N. NW. of at Pebles - section.
- Quarries:
- 21 2 miles N. of Lavalie, Wis.
- 33 Ptychaspis zone of Pilot Knob - see section Reads Landing, Minn.
- 19 Ptychaspis and Agnostus zone - in section at Tomah, Wis.
- 45 Pre-Cambrian - in wells at Bangor, Sparta, and Black River Falls - section
- 15 Pray, Wis. - near Saddle Mound, 18 miles E. of N. of
- 55 Portage - section at Observatory Hill 15 miles of New London, Wis.
- 37 sandstone resembling in section in vicinity of New London, Wis.
- 30 Osceola, Wis.
- 29 ? top of, in section in bluff opposite SW. of Mondovi, Wis.
- 29 included in St. Lawrence group, in section Hill, near Mondovi, Wis.
- 67 in section about 4 miles from Callahan's Pleasant Valley ss.:
- 25 Pine Creek, Sauk Co., Wis. - section on. of road W. of Homer, Wis.

Continued on next page

Quarries cont'd.:

S. of Loyd, about 1 mile N. of Sextonville, Wis. + section 65

near top of hill near St. Paul R.R. and wagon road, $\frac{1}{2}$ mile E. of Thwaites' Mazomanie section - section 94

Paumack's, at Madison - section 98

Steven's old - NE. of Paumack's - section 98

Rattlesnake or Stafford (= "Spofford") Bluff, Wis. - section at 53

Rattlesnake Mound, section 30-40 ft. beneath summit of, $\frac{5}{8}$ miles S. of Friendship, Wis. Reads Landing, Minn. - section at 84

Reedsburg, Wis.: section 6 miles E. of N. of - section 61

Richmond: in section in quarry at Peebles 14

float in section SW. of Mondovi, Wis. Saddle Mound, near Pray, Wis., 18 miles E. of Black River Falls - section 45

see note on section at, near Pray, Wis., 18 miles E. of Black River Falls, Minn. and Wis. - see section at St. Croix River, Minn. Franconia, Minn. 37

see section at Hudson, Wis. Weidman's sequence of zones in Franconia formation in valley of 101

St. Lawrence formation: in section in Berry Bluff, Wisconsin River - 6 miles SW. Sauk City. 5

in section $\frac{1}{2}$ miles SW. of Hillside and S. of Spring Green. 9

in section at Castle Rock, 4 miles NW. of Sparta 17

see section in region of Sparta 18

in section 2 miles N. of Lavalie, Wis. 21

in section at Pilot Knob - with Hotchkiss and Thwaites 22

St. Lawrence formation cont'd.:

- 23 10 miles E. of Friendship.
- 23 apparently no - section in vicinity of
- 27 Wood's quarry, near Baraboo, Wis.
- 27 probably basal in section at Frank Holmes
- 28 quarry, 3 miles N. of Mondovi, Wis.
- 28 typical, in section about 4 miles from
- 29 Callahan's Hill, near Mondovi, Wis.
- 29 dolomite - in section SW. of Mondovi, Wis.
- 30 in quarry at Alma, Wis.
- 31 may be base of in section $\frac{1}{2}$ mile N. of Alma
- 32 in section at Reads Landing, Minn.
- 33 in section about 4 miles NW. of Menominee,
- 35 Wis.
- 35 see section by Weidman at Osceola, Wis., sug-
- 36 gested explanation of which is given by
- 36 Ulrich
- 36 very fucoidal, in section 1 mile S. of Ironton,
- 47 Wis.
- 47 in section at Bald Bluff, on road between
- 49 Pilot knob and Westfield, Wis.
- 49 middle or upper in section at old iron mine
- 52 1 mile S. of Ironton, Wis.
- 52 suggestion of in section in vicinity of
- 55 New London, Wis.
- 55 no indication of on SE. slope of section
- 61 6 miles E. of Reedsburg, Wis.
- 61 may be on NW. slope of section 6 miles E. of
- 61 Reedsburg, Wis.
- 61 in section $\frac{1}{2}$ mile NE. of Cazanova, Wis.
- 63 in section on N. slope of hill 2-3 miles S.
- 63 of Cazanova, Wis.
- 63 in section on S. slope of hill 3-4 miles S.
- 64 of Cazanova, Wis.
- 64 suggested change in reference to in 1914
- 69 note-book.
- 71 in section at White Mound, Wis.
- 100 undoubted - in section at Hudson, Wis.

13 St. Lawrence township - in section at Shakopee -
 Minnesota River Valley.
 St. Paul R.R. and wagon road - section in old
 quarry at top of hill near, $\frac{1}{2}$ mile E. of
 Thwaites's Mazomanie section. 94
 St. Peter ss.:
 ? in section SW. of Mondovi, Wis. 30
 suggestion of in section 1 mile S. of Ironton,
 Wis. 47
 suggestion of in section at old iron mine
 1 mile S. of Ironton, Wis. 52
 in section $\frac{3}{4}$ mile NE. of Cazenovia, Wis. 63
 in section on N. slope of hill 2-3 miles S.
 of Cazenovia, Wis. 63
 in section on S. slope of hill 3-4 miles S.
 of Cazenovia, Wis. 64
 in section at Homer creamery, about 8 miles
 SE. of Boscobel, Wis. 67
 in 2 miles of road W. of Homer, Wis. 67
 Sauk City, 6 miles SW. of - section in Ferry Bluff,
 Wisconsin River 5
 section at District School No. 7. 7
 Sextonville, Wis. - quarry exposure about 1 mile
 N. of, S. of Loyd 65
 Shakopee formation:
 in section $\frac{1}{2}$ mile N. of Alma, Wis. 32
 absence of in section at Homer creamery,
 about 8 miles SE. from Boscobel, Wis. 67
 Shakopee, Wis. - section at. 13
 Skillet Falls, near Baraboo, Wis. 27
 Smith, G. H.:
 with Ulrich and others, section 6 miles E.
 of Reedsburg, Wis. 61
 Somerset, Wis. - section at falls $2\frac{1}{2}$ miles N.W.
 of. 39
 Sparta, Wis.:
 Dresbach sandstone in section 6 miles N. of,
 at summit of ridge road to Cataract. 16
 section at Castle Rock, 4 miles NW. of. 17

- 25 Creek, Sauk Co., Wis.
- 23 with Ulrich and Hotchkiss - section on Pine Friendship
- 22 with Ulrich and Hotchkiss - section at mound 1 mile SE. of Pilot Knob - 10 miles E. of Knob
- 21 with Ulrich and Hotchkiss - section at Pilot N. of Lavalie
- 20 with Ulrich and Hotchkiss - section 2 miles ship mound
- 18 with Ulrich and Hotchkiss - section at Friend- region of Sparta
- 17 see comparison with section made by Ulrich in NW. of Sparta
- 33 with Ulrich, section at Castle Rock, 4 miles Thwaites, F. W.:
- 31 zone - in section at Heads Landing, Minn. to base of zone of
- 30 zone in section N. of Alma, Wis., corresponding section at head of
- 36 Thompsons Valley, Wis.: section at by Weidman
- 15 Franconia of section at by Weidman
- 49 15 miles N. of Portage suggests basal sandstone in section at Observatory Hill, Taylors Falls, Minn.:
- 98 between Pilot Knob and Westfield, Wis. Table Bluff - see section at Bald Bluff, on road Madison - section
- 53 Steven's old quarry, NE. of Paunack's quarry, at Wis. - section at
- 9 Starford (= "Spoford") or Rattlesnake Bluff, Hillside
- 53 Spring Green - section S. of and 1 1/2 miles SW. of snake Bluff
- 19 "Spoford" - see section at Starford or Rattle- pre-Cambrian in well at
- 18 section in region of Sparta, Wis. cont'd.:

Thwaites, F. P. cont'd.:

with Ulrich and others - section in vicinity of Wood's quarry, near Baraboo, Wis. 27

with Ulrich, Hotchkiss, and Edwards - section 1 mile S. of Ironton, Wis. 47

with Ulrich and Hotchkiss - section at Bald Bluff, on road between Pilot Knob and Westfield, Wis. 49

with Ulrich, Hotchkiss, and Edwards - section at Ironton, Wis. 51

with Ulrich, Hotchkiss, and Edwards - section at old iron mine, 1 mile S. of Ironton, Wis. 52

at Rattlesnake or Stafford ("Spofford") Bluff, Wis. 53

with Ulrich and others - section 6 miles E. of Reedsburg, Wis. 61

with Ulrich and Hotchkiss - section in rail-road cut near Ableman, Wis. 92

section $\frac{1}{2}$ mile E. of Thwaites's Mazomanie section - quarry, top of hill, near St. Paul R.R. and wagon road 94

see section by - cut at Mendota Station N. of Madison. 96

Tomah, Wis. - pre-Cambrian in well at, 453 ft. beneath middle of Franconia and 527 ft. above sea level 19

Trempealeau formation - section SW. of Mondovi, Wis. 30

Trempealeau River, Wis. - see section at Blair, Trempealeau Co. 106

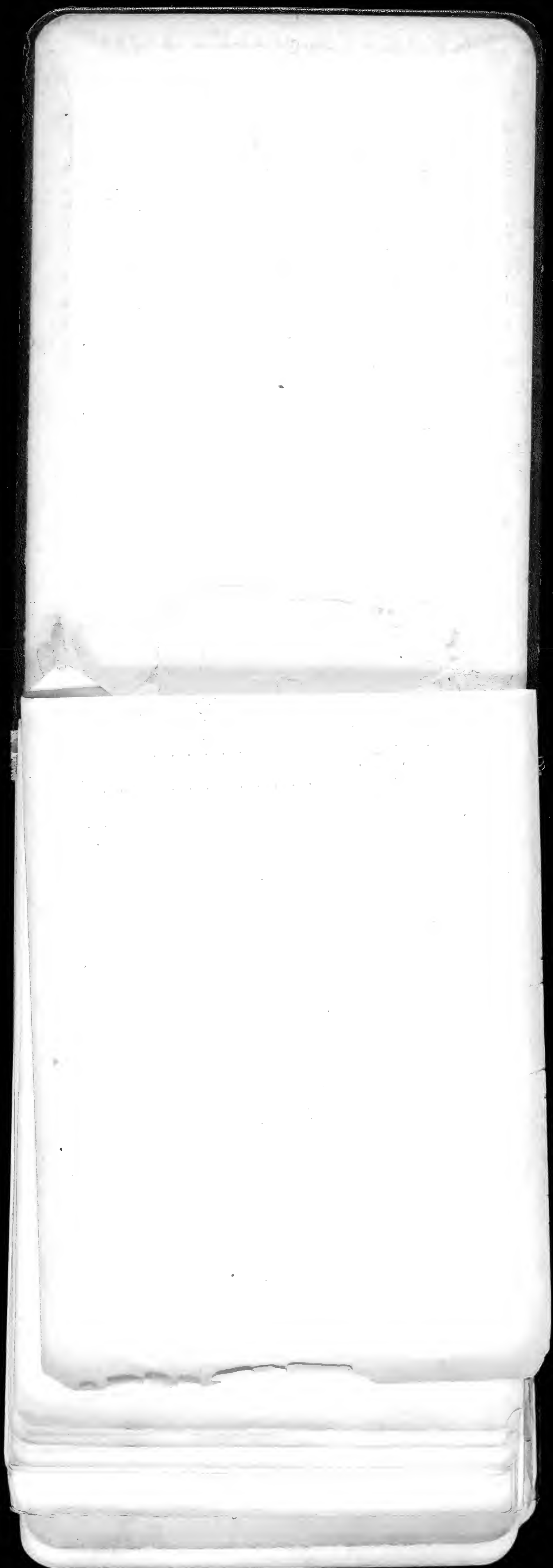
Trenton age - dolomitic age of, in section at Homer creamery, about 8 miles SE. from Boscobel, Wis. 67

Trunk Highway, Wis.:
 No. 58 - mentioned in connection with quarry exposure S. of Loyd, Wis., about 1 mile N. of Sextonville 65

No. 71 - section on, at Goodenough Hill, 6-6 $\frac{1}{2}$ miles W. of Mausonton, Wis. 73, 74

Trenchol: section at Castle Rock, 4 miles
 NW. of Sparta, Wis. 17
 see for locations in section at Sparta region
 Upper Beef Valley - see section $\frac{1}{2}$ mile N. of Alma,
 Wis. 52
 Upper Big Willow Cheese Factory, near Cazanova,
 Wis. - section. 64
 Warrens, Wis. - section in quarry in lower Franconia
 7 miles N.W. of 16
 Wedges Creek - mentioned in notes made in driving
 from Eau Claire to Neillsville, Wis. 26
 Weidman:
 see section at Taylor's Falls, Minn. 36
 see note on section $2\frac{1}{2}$ miles N.W. of
 Somerset, Wis. 39
 with Ulrich - section N. of Reedsburg, Wis. 92
 with Ulrich - cut at Mendota Station N. of
 Madison - contact of Jordan and Madison. 96
 sequence of zones by - in Franconia formation
 in St. Croix Valley, Wis. 101
 Westfield, Wis. - see section at Bald Bluff, on
 road between Pilot Knob and Westfield. 49
 West Salem, Wis. - section about $1\frac{1}{2}$ miles NW. of,
 at mill dam, on La Crosse River 69
 White Mound:
 bluff N. of road to, 1 mile S. of Leland -
 section. 11
 suggested change of formation names at this
 locality as referred to in 1914 note-book.
 section at. 71
 Wild Cat Mound - about 4 miles N. of Humbird, Wis. -
 see notes made in driving from Eau Claire to
 Neillsville, Wis. 26
 Willow Creek, Wis. - mentioned in connection with
 quarry exposure S. of Loyd, Wis., about 1 mile
 N. of Sextonville 65
 Wilson - section - E. end of railroad cuts at. 90

Wisconsin, central - section, Friendship Mound -
 with Hotchkiss and Twaites 20
 Wisconsin River - section in Ferry Bluff, 6 miles
 SW. Sauk City 5
 Wolf River, Wis. - see section in vicinity of
 New London, Wis. 55
 Wood's quarry:
 section at, on Pine Creek 25
 section in vicinity of, near Baraboo, Wis. . 27



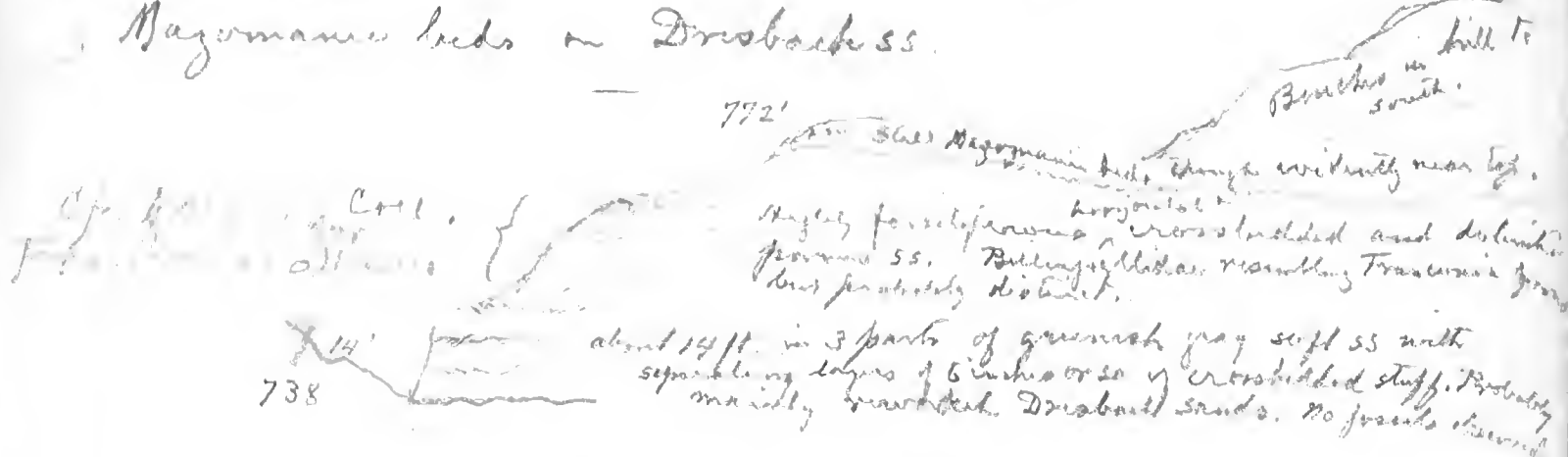
at mill dam on La Crosse River
about 12 miles northwest of West Salem, Wis.
and others, section 69

0

Bee
Ba
Ba
Ba
A
A

Di Aug 1, 1916.
5 3/4 post sect. 3, T9N, R5E. = 8 1/2 m. west of Sauk City, Wis.
Will Mr. M. H.

Magomani beds on Driobach ss.

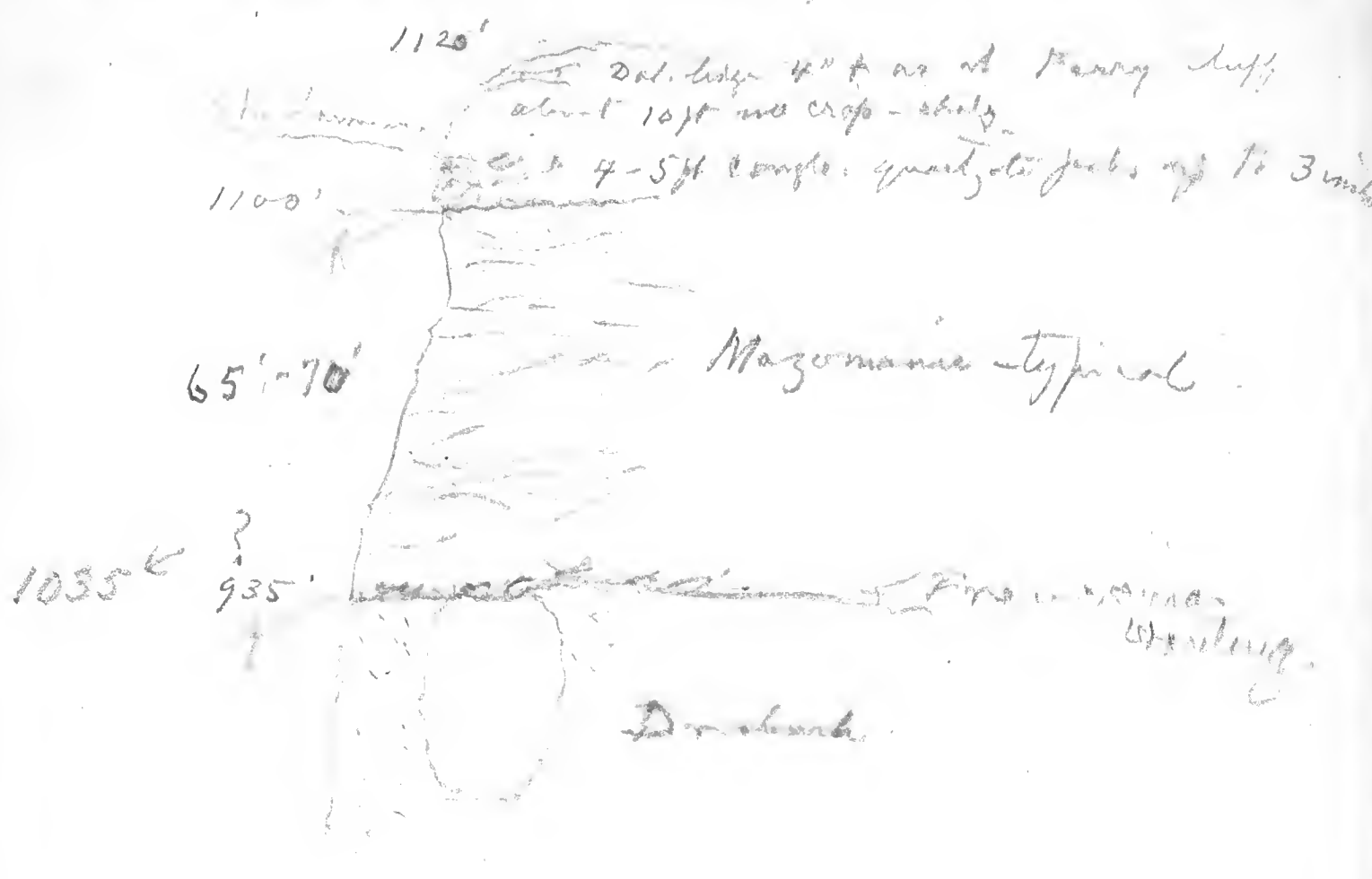


20ft. + typical Driobach ss. - as at Ferry Bluff. Its
top seems much higher than at " ".
However part of difference shown by amount
is due to filling of barometer.

695.

May not be good enough.

7



950

1 mi S.W. of Leland, Wis. Bluff north of road to Whitewater

NW 1/4 NE 1/4 Sec. 25, T10 R4E

Corresponds nearly stations
pp. 57 & 71 vol.

827

9-161.

UNITED STATES GEOLOGICAL SURVEY.

SURVEY OF THE

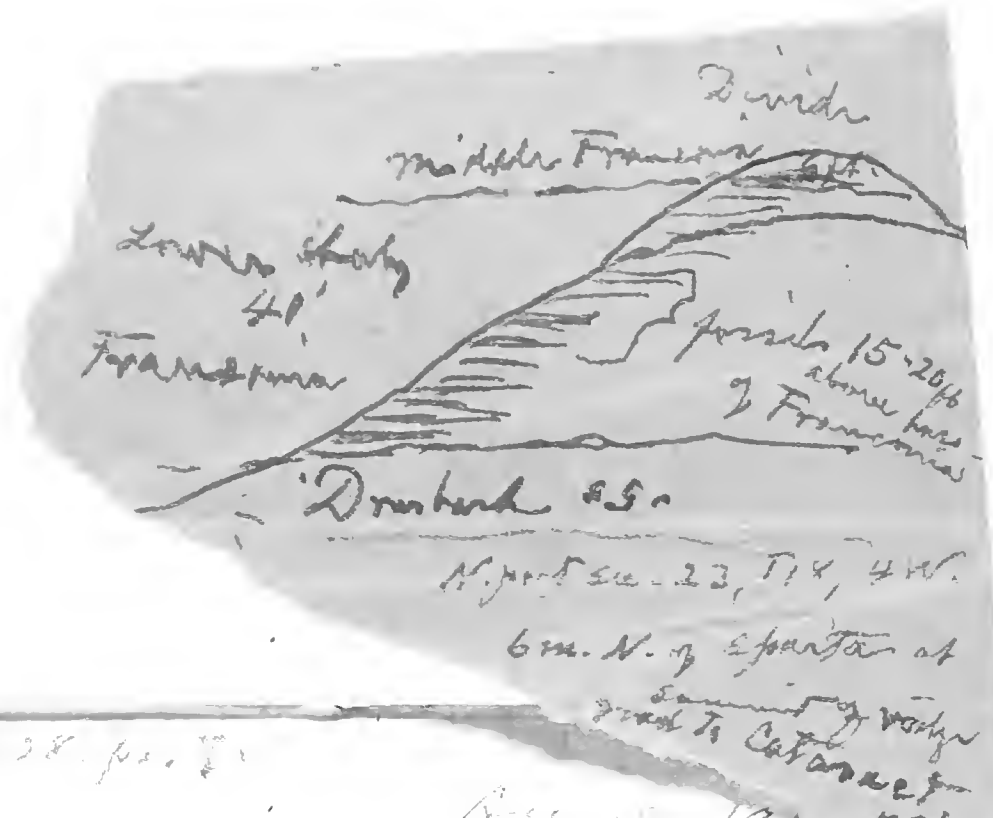
Coll. 3.

In charge.

No.	Name:	Field: Determined:
LOCALITY:		Quarry in France Franciscan fms. 7 m. N.W. of Waverly, Wis. N. part sec. 17, 10, 21.
Collector:	Date:	
Note Book:	Page:	

6-1907

6 mi. N. of Sparta



Aug 18, 1911
 4 mi. N. of Sparta, Wis.
 With H. S. Hildreth, Martin Turakofski, Thomas & W. W. ...

- 7' Similar bed. poorly exposed.
- 6' yellow gray dol.
- 56" Partly calcareous dolomite. Non-calcareous, yellowish gray dol.
- 32" ... mostly sand & ... det. ... in middle part ... sand granitic clayey ... pebbles.
- 12" ...
- 14" ...
- 14" ...
- 11 ft. ...
- 38' ...

Base of Ozarkian

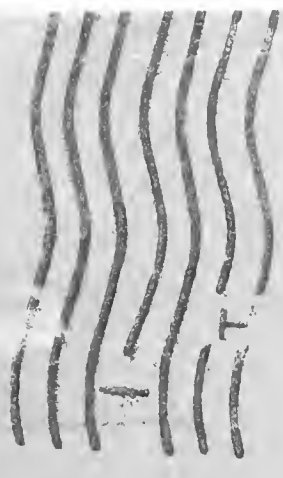
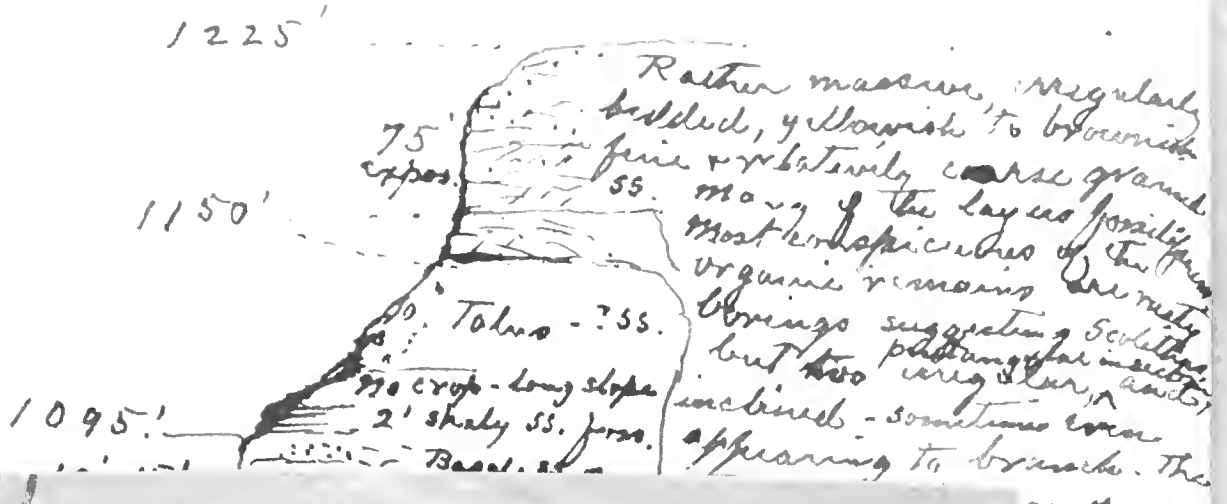
Rather soft, yellowish ... sandstone ... thin beds (Dumbuck ss.)

Light ... shaly, det. ss. ... platy ...

St. Lawrence ... lower ... Dolomite layers thicker than ...

105'

base of ... showing lower ground bed of Franciscan



THE BANK WITH THE MONTHLY

9-161.

827

UNITED STATES GEOLOGICAL SURVEY.

SURVEY OF THE

No. Name: { Field: }
P. diademata fauna (X) Determined

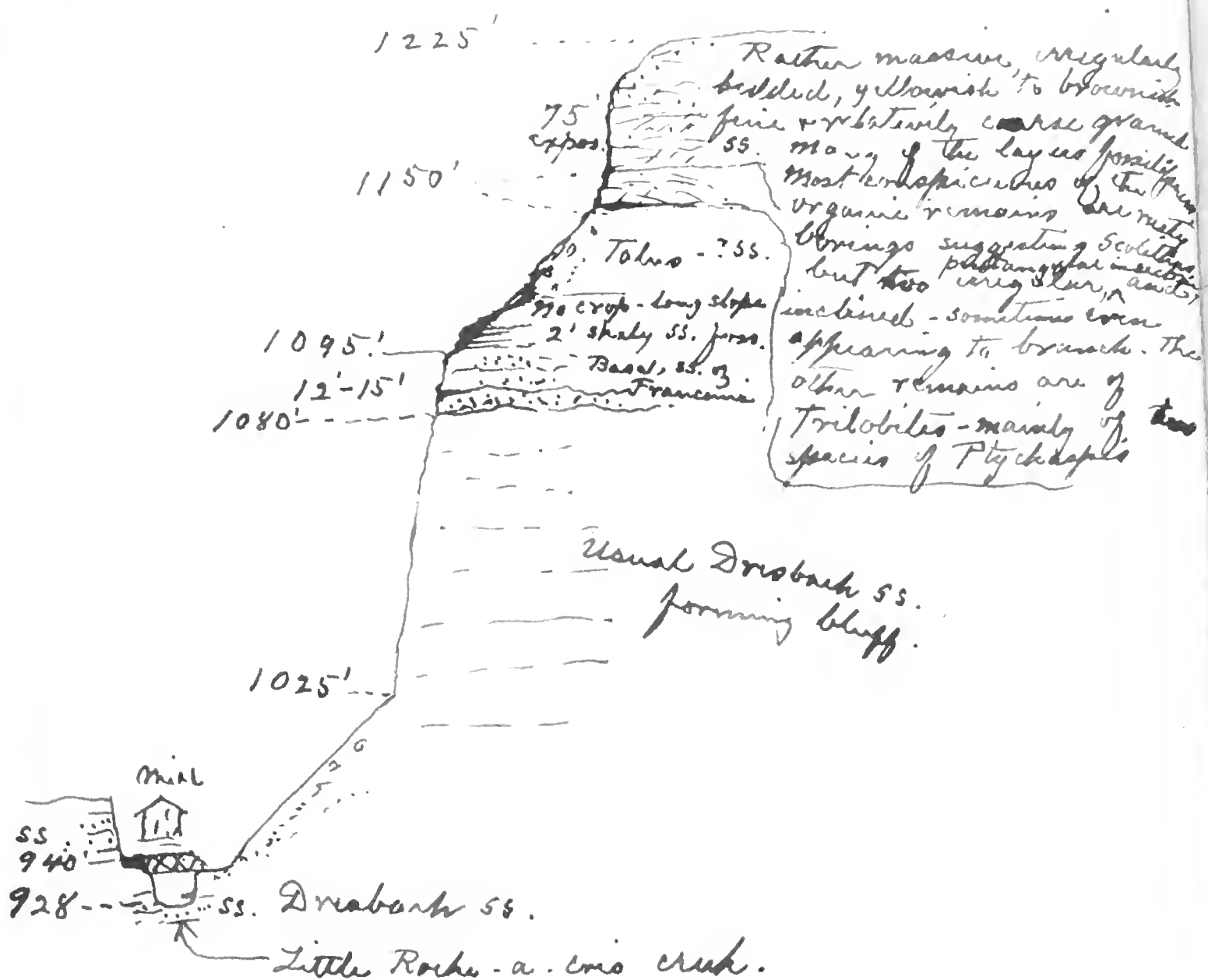
LOCALITY: A narrow band of yellow ss member
 the Pilot Knob north of the
 near Squawport
 T13N, R. 3E.

Collector: Date: Sept. 18, 1918
 Note Book: Memorandum
 Page: 6-1907

*also writing with pencil
 the Pilot Knob
 member*

*Magdalenic
 Ptychoaspis
 (4 species) taken
 on 11/1/18*

Collected at this point again Aug. 15, 1919 and found the Pilot Knob *Ptychoaspis* zone in the greensand beds above the yellow ss. and 30-35 ft. above the layer near base of the latter from which *Ptychoaspis* (4 species) and *Ptychoparia* sp. were procured in 1918.



Section of Friendship Mound, just north of Friendship, Wis. Sept. 19, 1918.
E.O.U., Notkiss and Thwaites.

Collector: E.O.U., W.O. Notkiss, F. Thwaites	Date: Sept. 18, 1918	Memorandum: Museum Ptychoparia (4 species) on 11/1/18
Note Book:	Page:	6-1907

Collected at this point again Aug. 15, 1909 and found the Pilot Knob Ptychoparia-zone in the greensand beds above the yellow ss. and 30-35 ft. above the layer near base of the latter from which Ptychoparia (4 species) and Ptychoparia sp. were procured in 1918.

A list of the material collected at this point is given on page 21. The fossils are all from the upper part of the upper greensand zone.

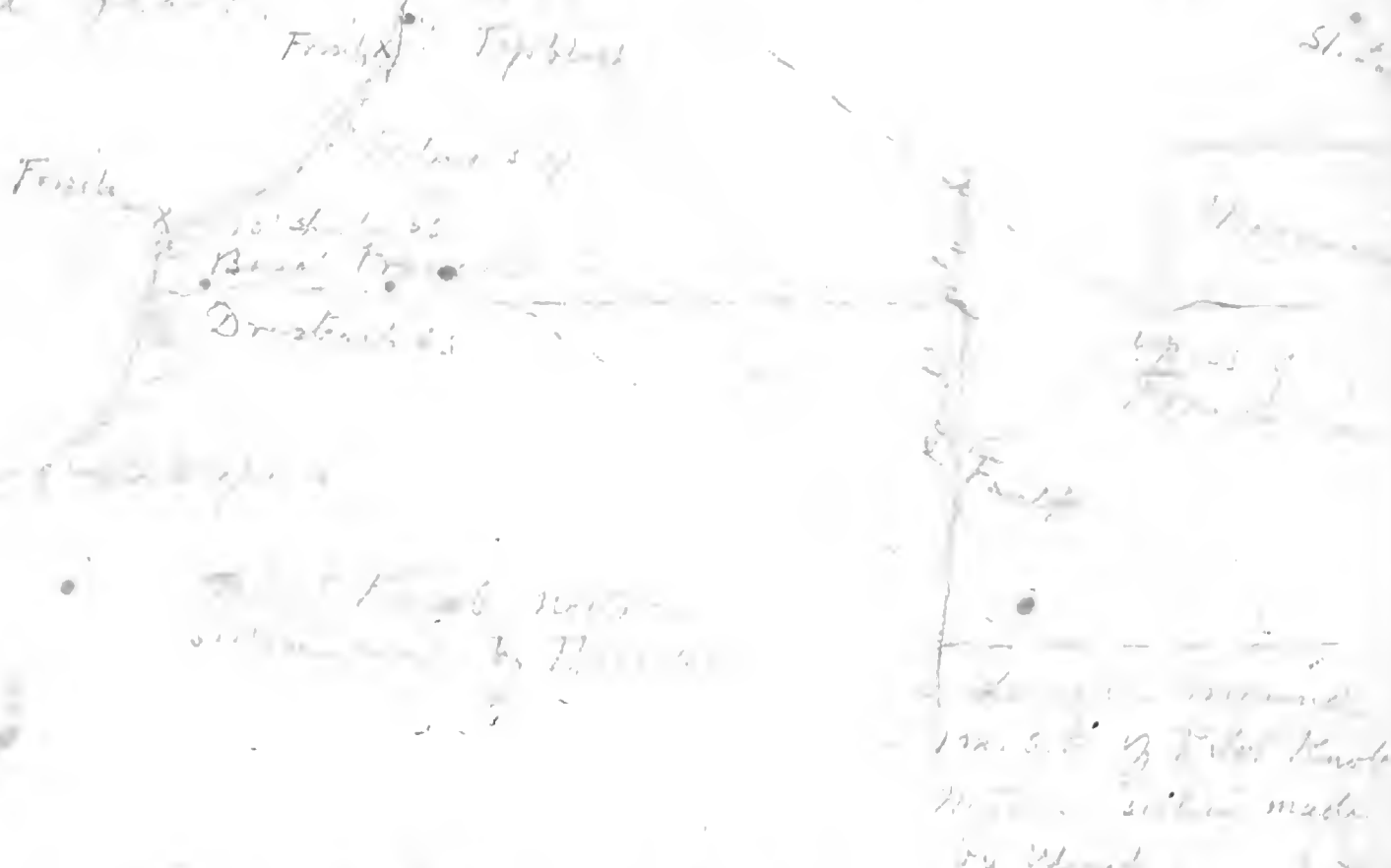
1225'

Rather massive irregularly

Sept 20 1918 with Hitchcock & Thwaites

22

Drove east from Friendship about 40 miles to Pilot Knob. This, like the Friendship mound, is capped with the Scythian sandstone of the Franciscan. Its base is formed by Drexel ss. in a low bluff, much less of the lower formation rising here above the level of the old Lake Glac.



The sandstone here is much redder than on the summit. It runs to the west and south of Friendship. Fossils, also especially species of *Polythaspis*, are more abundant than in the bed of the scythian of the ss. deposited in Wisconsin. The largest and best specimens were almost secured when they reached Washington.

The whole ss next above the massive basal sandstone of the Franciscan now and then affords a thin layer filled with fossils. So far as observed however there is almost total absence of a small species of *Irvingella*. The sandstone here is much redder than in the bed of the scythian of the ss. deposited in Wisconsin. The largest and best specimens were almost secured when they reached Washington.

One more section in another and larger mound. Irving says no fossils and published the fact that the stratigraphic sequence in this mound is quite distinct from that in Pilot Knob. With this limited data and examination of the fossils I am inclined to believe

1/2 mile S.E. of Pilot Knob - NW 1/4 sec. 12, T. 17, R. 7 E. = 10 miles east of Friendship Wis. Sept. 20th 1918. Edw. Hitchcock & Thwaites



Collector: *W. H. R. ...*
 Date: *July 27, 1918*
 Note Book: *...*
 Page: *185, 186*
 Memoranda: *...*

LOCALITY: *...*
 Name: *...*
 Field: *...*
 No.: *...*

SURVEY OF THE UNITED STATES GEOLOGICAL SURVEY

9-161

Collector: *...*
 Date: *July 24, 1918*
 Note Book: *...*
 Page: *185, 186*
 Memoranda: *...*

LOCALITY: *...*
 Name: *...*
 Field: *...*
 No.: *...*

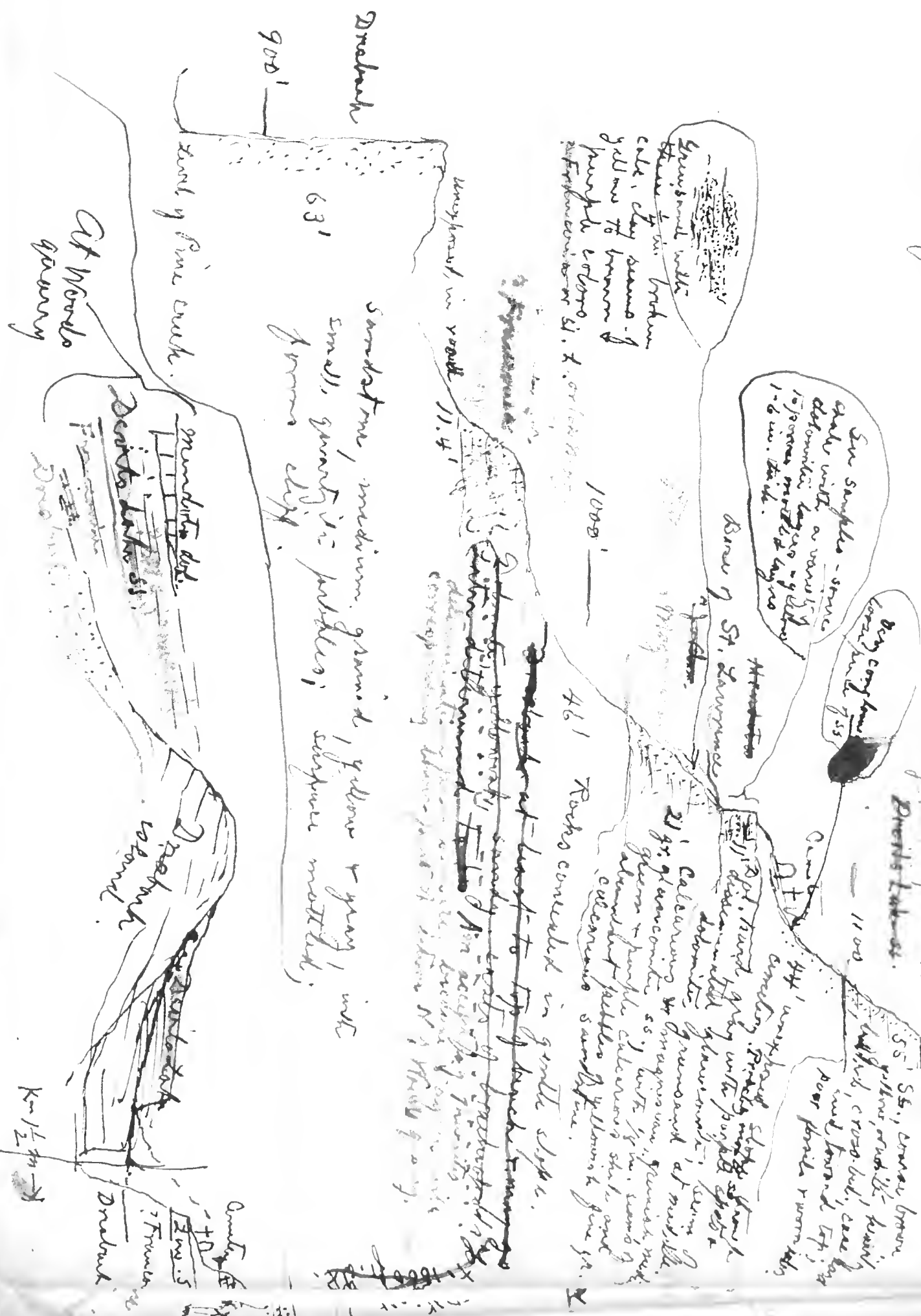
SURVEY OF THE UNITED STATES GEOLOGICAL SURVEY

9-161

Pine Creek, Carmelery Hill.
 NE 8 SW 5, T11, R. 6 E.
 Sauk Co. Wis.

Hotchkiss, Thurston &
 White, 1916 & 1918.

Revised Aug. 20, 1919.



Notes made in driving from Eau Claire to Neillsville, Wis. Aug. 13, 1919 - with W. D. Hodtkiss & Dr. Edwards -
Humbird, Wis. about 10 miles N. of Black River Falls on Route 12.



Dreabach bluff showing unusual characters of the formation. The upper 50 ft of formation at least is composed of very ferruginous & coarse grained strongly cross-bedded ss. much of it profusely perforated by 1/16 - 1/8 in. scolethra

x About 150 ft

borings - some of these borings are not entirely vertical, and others pass through the rock irregularly. This type of Dreabach forms a ridge 2 or 3 miles long running north from Humbird.

Other peculiarly stained (as though bored and borings filled with white sand, the matrix brown or dark yellow - see specimens -) phases of the Dreabach were observed going west from Fairchild to Osseo. Some excellent specimens were collected from a highway cutting 1 mile south of Fairchild.

Wild Cat
In ~~Bancroft~~ Mound, about 4 mi. east of Humbird, the top of the Dreabach is higher than top of Humbird Mound and in part covered with Franciscan. At its western end which is without Franc. cover, the upper 3rd of the perhaps 100 ft. Dreabach is still ferruginous though less so than at Humbird. At S.E. end however the iron staining is not evident from a distance.

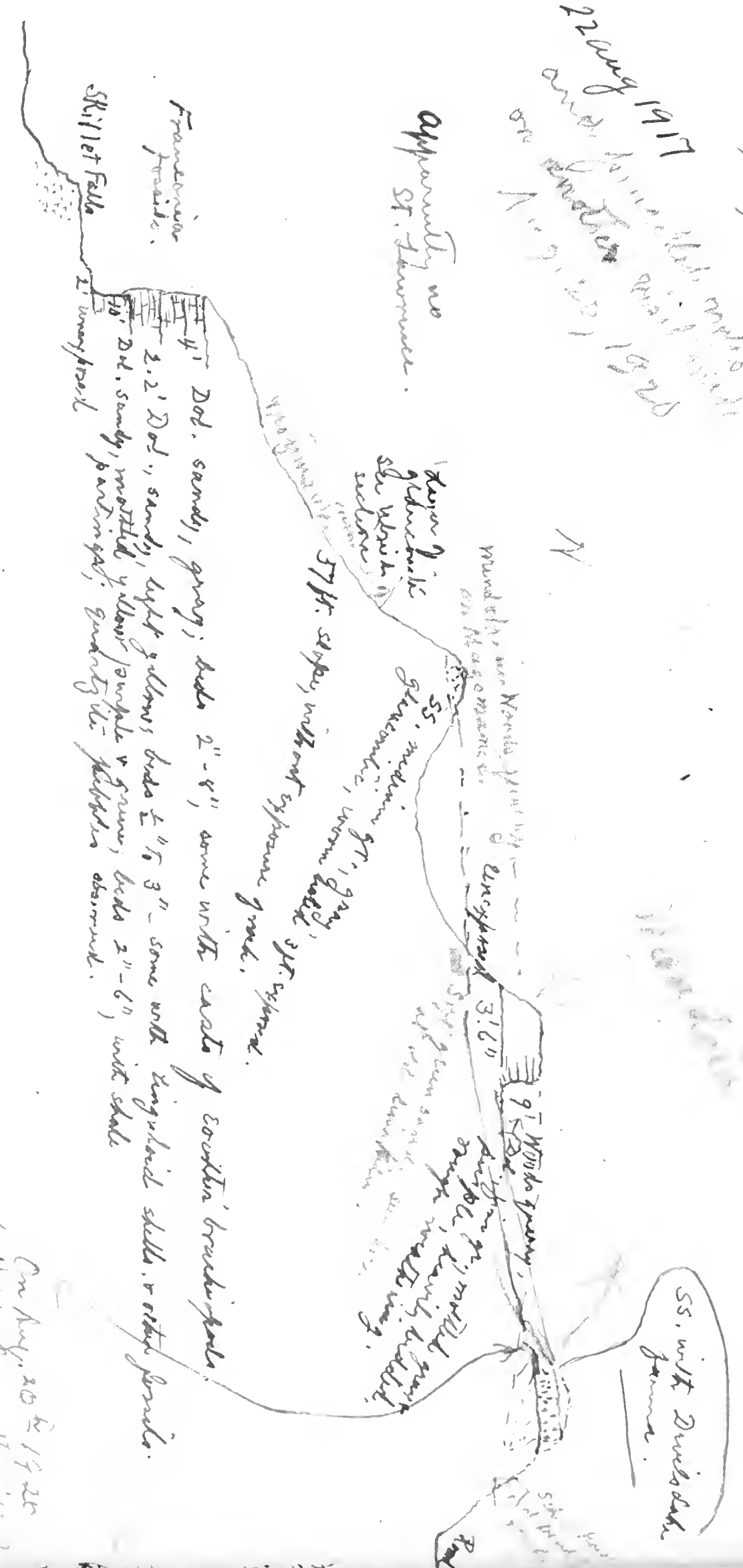
Staining of nearly whole of Dreabach in Humbird Mound & reduction of this condition to east & west in topographically higher mounds with some enrichment of the median part of trough which was first exposed by erosion and then subject to artesian flow & precipitation

formation may be connected with water circulation causing enrichment of the median part of trough which was first exposed by erosion and then subject to artesian flow & precipitation

At Widgeo Creek where it is crossed by the road to Neillsville (Route 12, about 7 mi. west of Neillv.) gneiss outcrops in such position as to indicate that the Eau Claire overlaps on to it. Same seems true

Section in vicinity of Widgeo quarry, near Parador, Wis. Sec. 10, T. 11, R. 6 E.

22 Aug 1917
and 1918
on N. 1/2 Sec. 10, T. 11, R. 6 E.



On Aug. 20 & 19 22
At the quarry, Humbird, Wis.
the red ss. is
found with
Limonite

1275'

Aug 27 1918 ...

Alma

Alma, Wisc. ...
Thickly ...
cloudy ...

Scout ...

1405 Top Over ...

1302 ...

1280 ...

1225 ...

90 ...

115 ...

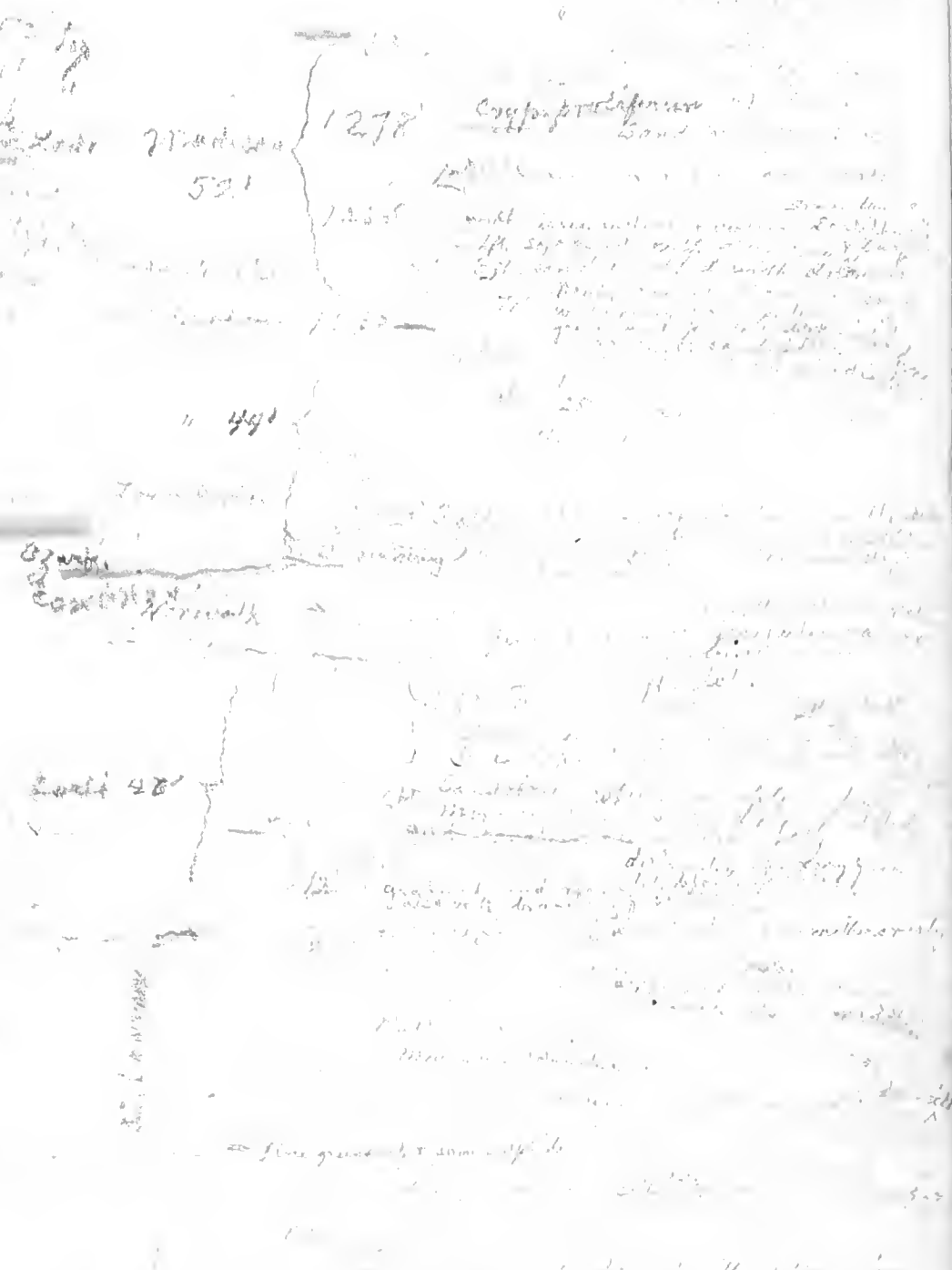
1061 ...

1025 ...

990 ...

970 ...

0-8
NE 1/4



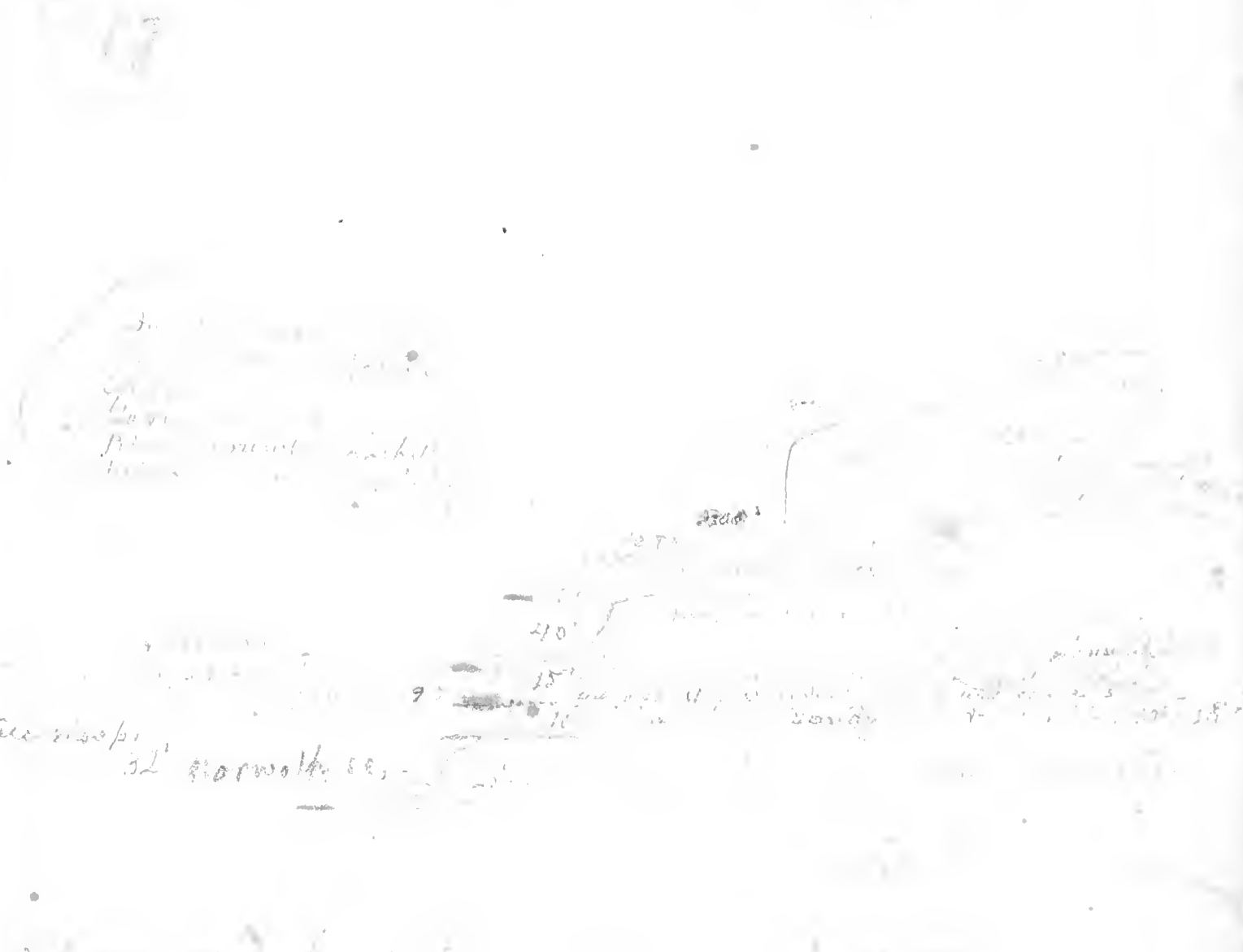
For beds beneath
quarry see lower half
p. 31.

Roads Landing, Minn.

...

Roads Landing, Minn.

Admission ... with ...



See map

52 ...

St. ...

(see p. 30)

1225'

Alma

O. p. Alma Accalca p. 1000
 N. 2 1/2 sec. 16, T. 21 N., R. 12 W.

For beds beneath
 quarry see lower half
 p. 31.

Beards Landing, Minn.

(sup. p. 30)

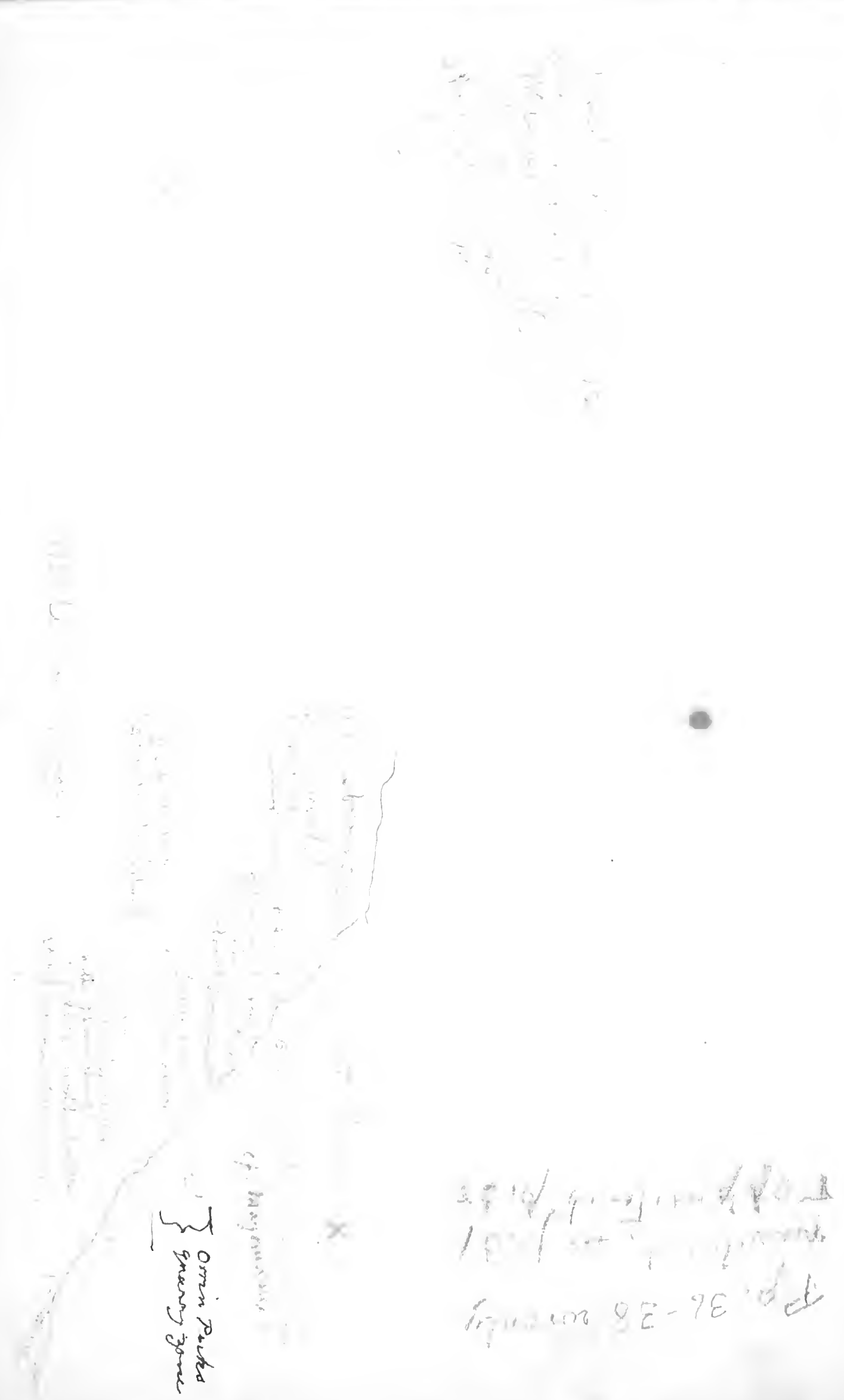
1918 - Wisconsin - Central.

20

1225'

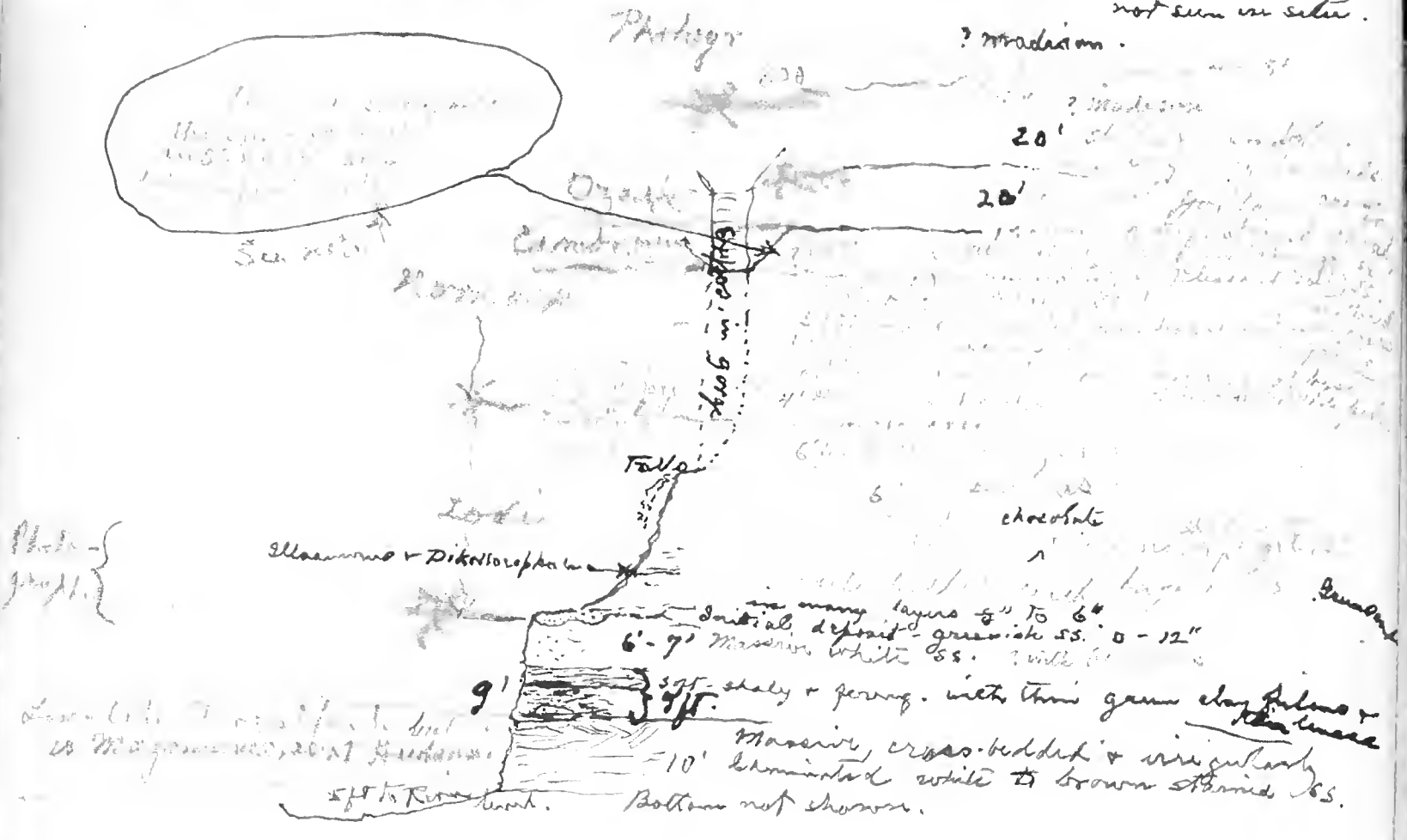
34

35



1225'

Bluff (along road) opposite Oscota, Wis. Aug. 9 & 10th 1919.
with N.O.H. & Ira Edwards.



At Franconia, Minn. Aug. 9th 1919.
with N.O.H. & Ira Edwards.

Massive, cross-bedded & irregularly laminated white to brown shaly ss. 10'

shaly & ferrug. with thin green clay films & thin lenses 9'

6-7' massive white ss. 0-12'

Lodi 6'

Falls 6'

Cambrian 20'

Ozark 20'

Photo

? Madison not seen in situ

Siderite

Dikelocephala

Photo

Initial deposit greenish ss.

Massive, cross-bedded & irregularly laminated white to brown shaly ss.

shaly & ferrug. with thin green clay films & thin lenses

5 ft to River bank. Bottom not shown.

Another place from that section in 1913
NTS 2.3, p. 13

1225'

38

Aug. 11, 1918. Hill 71. D. K. - On descent

W. side of hill 2 1/2 mi. N. of ...

250 ft

1, 4' ... 24' ... 25' ...

This beds one of ...

?

Hydro ...

13' ... 12' ... 11' ...

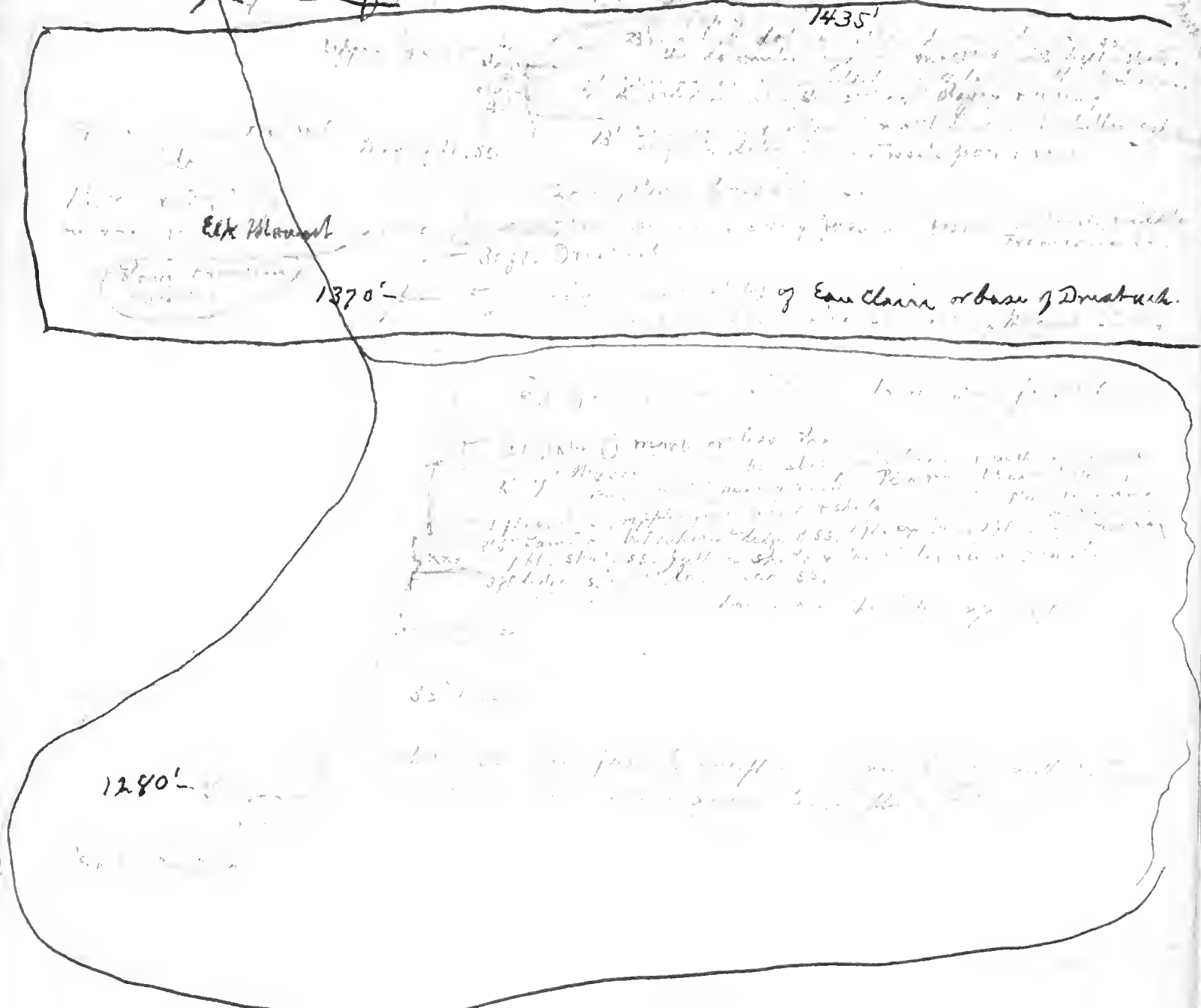
Large ...

and ...

Comparison of sections at Hudson

Eau Claire shale.

2501110 *
top of bluff above Eau Claire
1 mi. N. of Colfax, Wis. Aug. 3, 1918. with J. H. ...



* Quarries along this bluff for nearly two miles
Wonderfully fine collecting ground for ^{upper} Eau Claire
fossils.

1887 (1887) ...

200 - the basal Franciscan is observed apparently beneath
Dredge hole ...
1500 ...
1000 ...

1000 ...
500 ...
about 300 ...

na
h
i
o
t
A5

Apparently all Lower Franciscan.

F. 211.5
F. 211.4

F. 211.3
F. 211.2
F. 211.1

19

12' Dirty yellow, fine gr. micaceous ss. with con. fragments.

8' ss. yellow, massive ss. filled with *Belagites*.

12' red greenish ss. with *Belagites*. no fossils. *

at top where
... but full of *Belagites*
... *Belagites*
... *Belagites*

1250 Station of ...

* So far as observed the initial deposit of the Franciscan in this basin (including Saddle Mound on SE and Franciscan on NW) does not carry the round-headed trilobite fauna that is so generally found in these basal Franciscan in the basin to the south. This second basin is limited on the SE by the RR. cut north of Ablesman and on the NW by Lacrosse.

25-1-65H

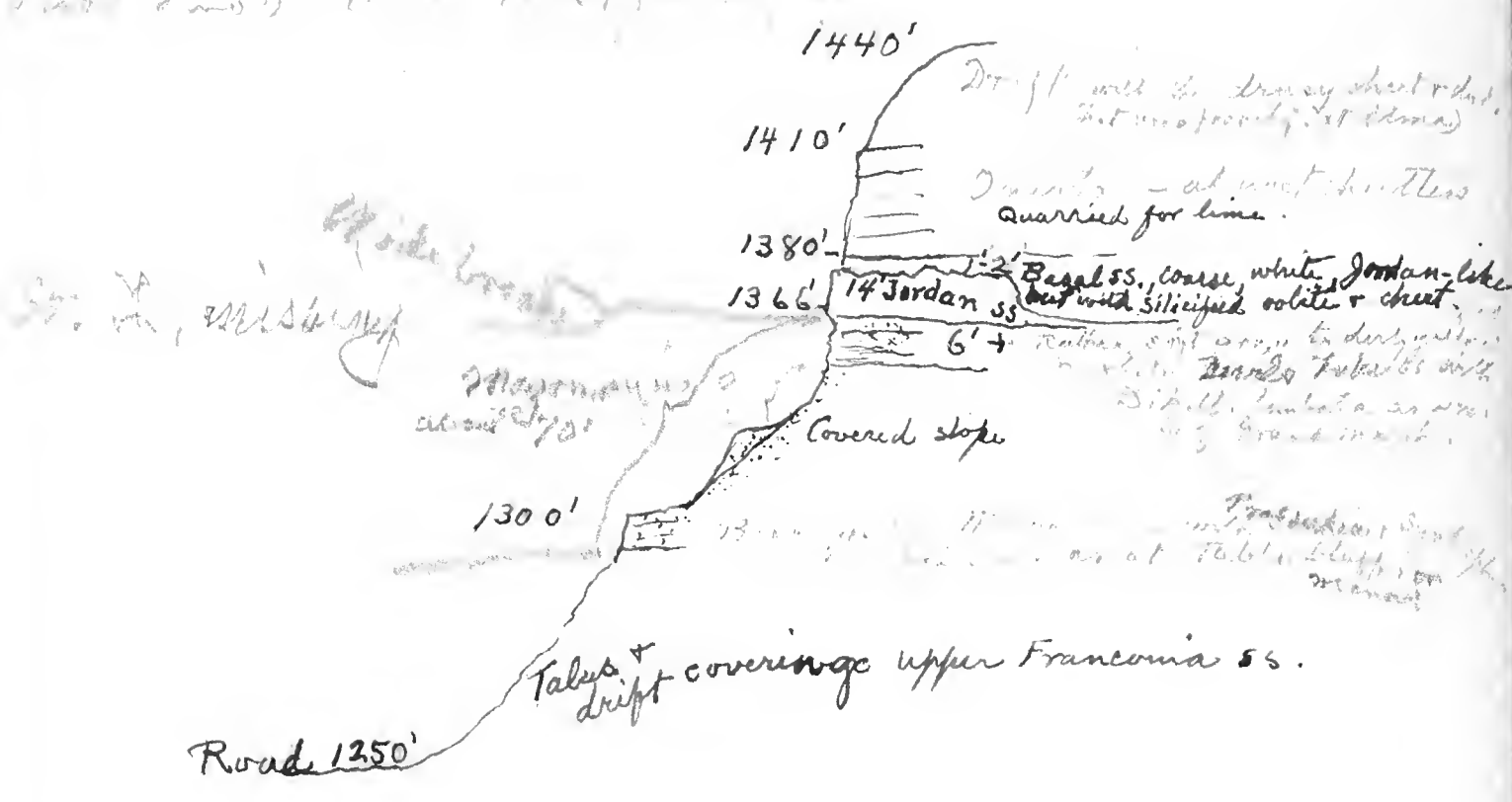
Trilobites

Section of chert & sandstone
suggests early part of Jackson
St. Louis
Very fine chert, St. Louis
35' Jan. 25-1-65H
This is a chert, mostly brown or
pinkish, with some perfect cut

32H
yellowish gray with brown brownish blue
...
...

See for greater detail
pp. 51 & 2

Aug. 25 - 1919. 8
(8.1.1, 8.1.1) ...
... ..



9-161.

UNITED STATES GEOLOGICAL SURVEY.

SURVEY OF THE **889-**

No. _____ Name: { Field: _____ In charge.
Determined: _____

LOCALITY: **2 m. N. of Pray - Wis.**
 Supposedly same equivalent of Earle's chert.
 4) cross-bedded ss. near Saddle Mountain.
 5) relatively shaly ss.
 3ft. made up of 3"-4" layers of closely cross-bedded ss.
 2ft. shaly & congl. ss.

Collector: **SOH. & W.O.H.** Date: **Aug. 14, 1919.** Memoranda: **The cross-bedded layers consist of 1/2 in. layers in blocks at 10 to 35° with alternating very coarse grains.**

Note Book: **28** Page: **1250**

E. Fort, Wash. River.

9-161.

UNITED STATES GEOLOGICAL SURVEY.

SURVEY OF THE **872**

No. _____ Name: { Field: _____ In charge.
Determined: _____

LOCALITY: **SE 1/4 Sect. 4, T11N, R3E**
 about 2 m. N.W. of Deary, Wis.
 Magomagan ss on Dreshbach

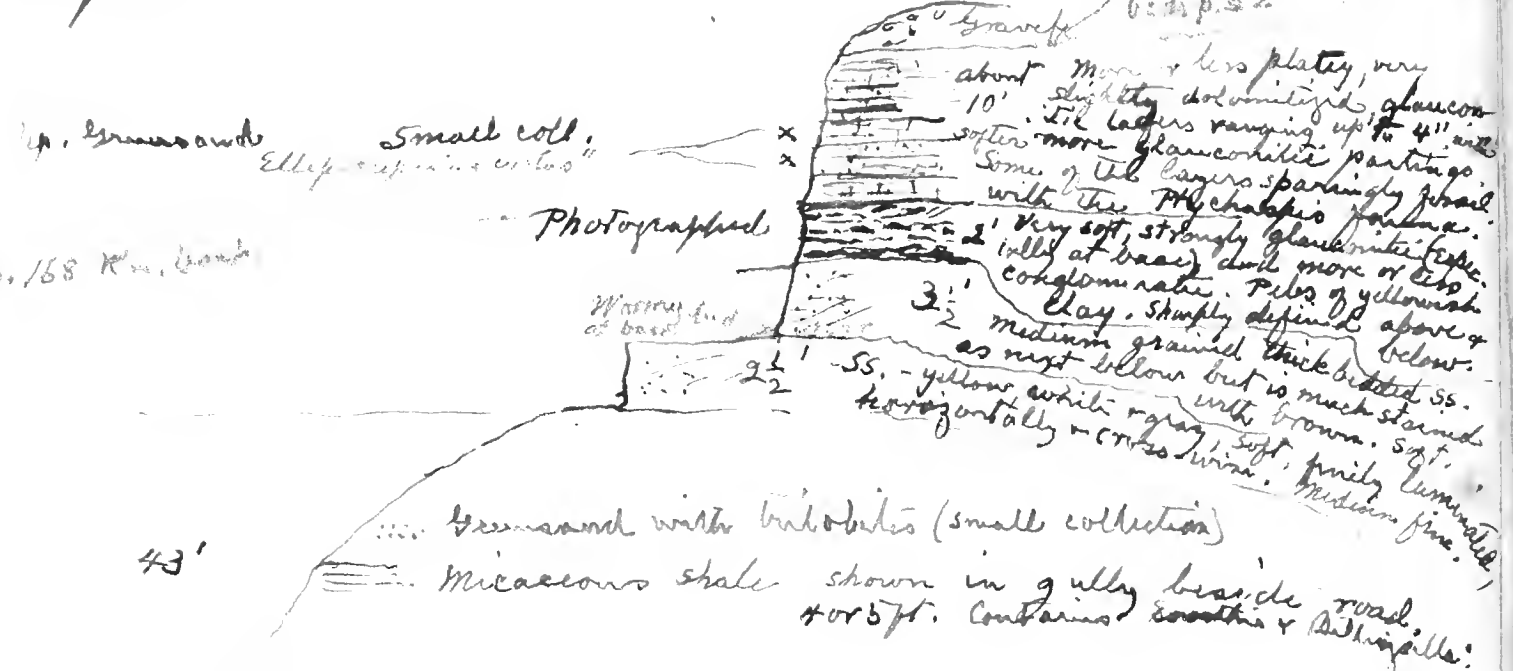
Collector: **SOH. & W.O.H.** Date: **July 20, 1919.** Memoranda: _____

Note Book: _____ Page: _____

Magomagan ss

Ironton, Wis. Aug. 21, 1919. with W.O.H. Fr. Theo. & J. Ed.

At cross-roads in village is large pit or quarry material in upper Franconia - covered by Pleistocene chert gravels at to 4m. dia. Going both west & north from it the following section was compiled:



3' very ferr. clay at base & green sand above with thin harder layers.

7-10ft. Basal ss. of Franconia with abundant round-headed & other *trilobites* in the friable white sandstone

Top of Dreshbach

(Section at old Iron mines see reverse.)

No. _____ Name: { Field: _____ Determined: _____

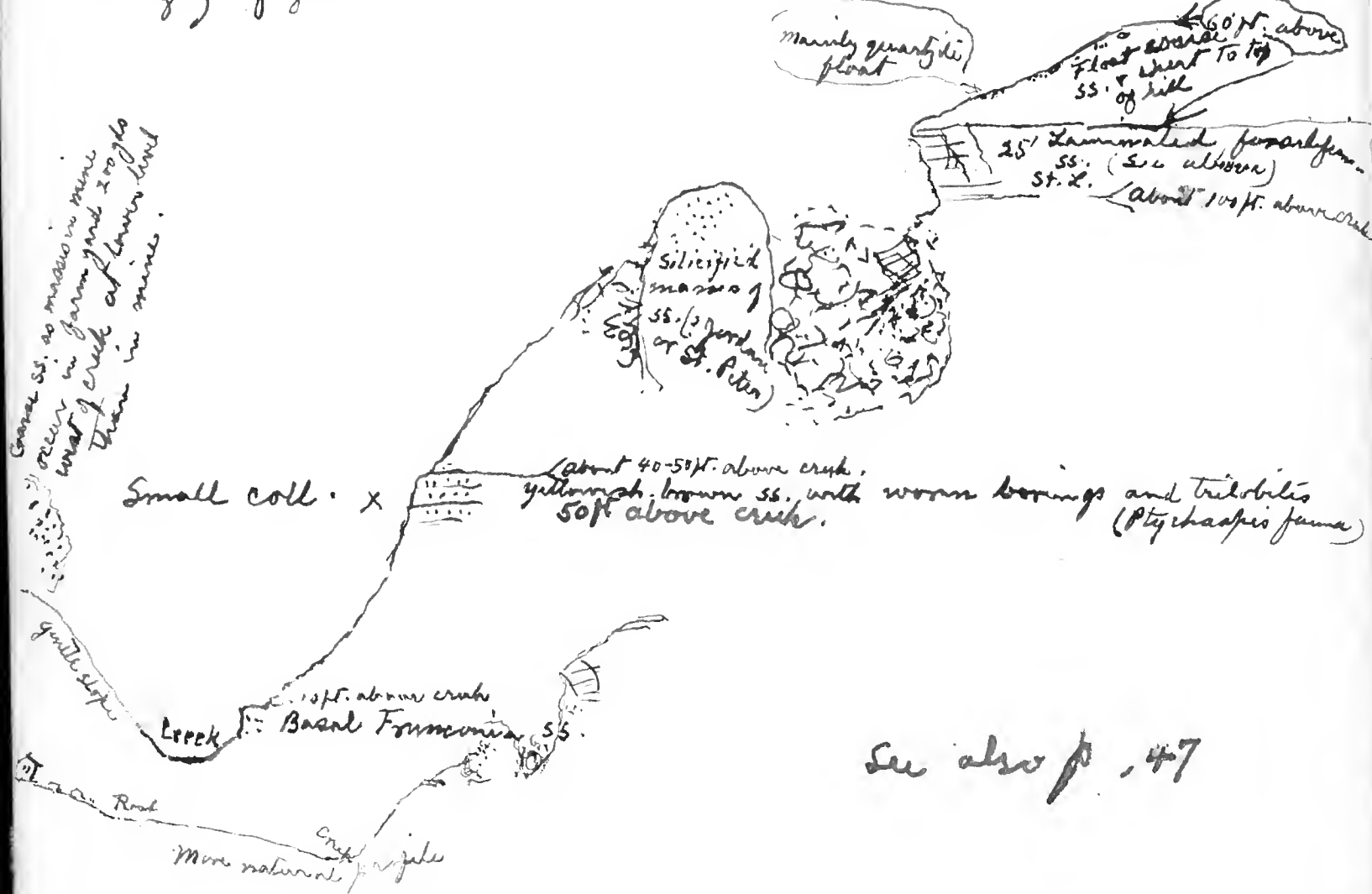
LOCALITY: **84 m**
Lower Green sand of Franconia
 in village of Ironton, Wis.

Collector: **EM. & W.O.H.** Date: **Aug. 21, 1919** Memoranda: **Dreshbach.**

Note Book: _____ Page: _____

Other collections from this loc. from basal ss. & from upper green sand which contained poor *Ptychospira*

Generalized sections and conditions at old iron mine (T12, R.3 east, Sec.10) one mile S. of town of Ironston on east side of valley. The east wall consists of fine grained micaceous white to light yellowish gray sandstone in beds of 2 ft. or less & finely laminated. These contain numerous "pencil" and filling worm burrows of various kinds and Dikellocephalid trilobid frags. indicating middle or upper St. L. (Collections made) These ss. are cut by N-S joints steeply inclined to E. which have caused heavy falls that ^{now} cover lower part of east wall of pit. The mine was a large open cut 75 x 25 yds with maximum depth of about 40 ft. In this worked space are great masses - "horses" of coarser siliceous ss., suggesting either Jordan or possibly St. Peter, that seem to have been dropped into an old channel. Barely possible that this channel was of pre-St. Peter age and the St. Peter deposited in it. These masses of quartzite are coated with limonite in part botryoidal and in other parts suggesting pseudomorphs after crystalline marcasite. Angular chert frags. abundantly included in the ore which in places consists largely of yellow & red ochre.

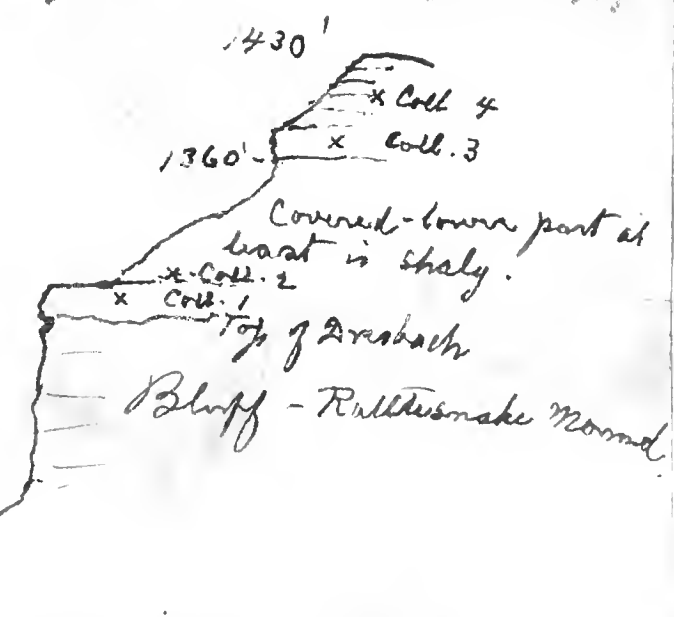


100 50
P. 53

Note book 28, p. 53

30-40 ft beneath summit of Rattlesnake Mound, 5 1/2 miles south of Friendship, Wis. Aug. 22, 1919

Coll. 4



See further description p. 53

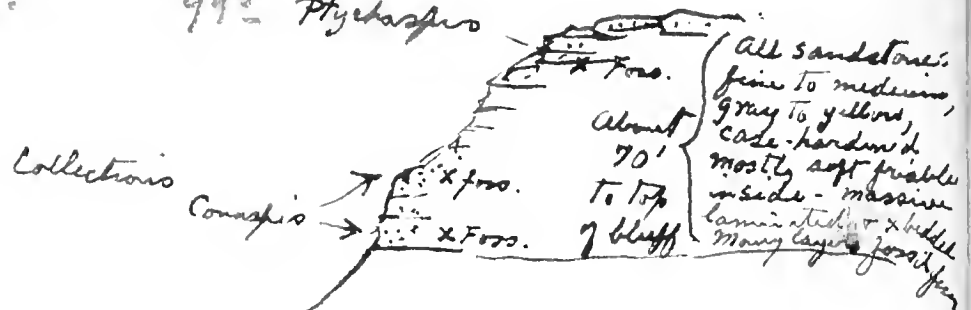
84 p.

X

Rattlesnake or Stafford (= "Spofford") Bluff, North side of northern gap - Sec. 7, T. 16, R. 6 E.

Aug 22, 1919.

995 Plectaspis



All sandstone, fine to medium, gray to yellow, calc. hardened, mostly soft friable inside - massive laminated or bedded. Many layers fossiliferous.

130 ft. according to Irving

Road

Talus slope

80 ft. bluff of Dousbach ss. - Heavy bedded, laminated & cross-bedded, ripple marked, with concretions, yellow, gray & white, medium grain, making lower and main part of vertical cliffs.

July 16th 1920.

On road to Hortonville from New London 50
and west 1/2 mile. Spot about 3 m. S. of " "

Cherton 24" above cycled.
Cycled plates
irregularly bedded, siliceous reworked basal ss.
Section essentially as east of New Lon. except
that 50 ft. more dol. is shown or present at top
and less ss. shown at bottom.
The reworked sand forming base of Ozarkian also
is thicker. The cycled plates occur about 15-18 ft.
above the basal ss. and the cherton layer 20 or 3 ft.
higher.

July 14, 1920

Peshigo River, at uncompleted dam 3 m. above
(NW) of Crivity, Wis.

Rapids
Rather massive, ill assorted, white & brown stained
massive in fresh cut but clearly thin bedded ss.
under weather. The ss. is soft, white with a
reddish tinge.
7' ss. Like above but greatly cross-bedded and
shows in thinner laminae. Forms bed of river
at rapids.

No evidence whatever of fossils
Looks like Dresbach.
The top 4 ft. beds may be basal Magnesian.

190, 28, 2, 7, 2

June 11, 1915

North of Reefsburg, Wisconsin

Further north of 11, 1915
by Orin

About 1180'

1160'

1230
1075
1355
1942
138

1075' *Tranconia* beds with fine *Dicelophanella*

not over

Pileoglypta, *Utrix* stems, *Leontio sandbergi* etc in thin shaly green sand beds. (*Tranconia* beds)

soft white ss. often stained by water with iron. Overback ss.

1992

1918 - Wisconsin - Central.

20

70

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

95

1918

1918

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

96

1918

1918

1918

1918

1918

1918

1918

1918

1918

1918

1918

1918

1918

1918

1918

1918

1918

1918

1918

1918

1918

1918

1918

1918

1918

1918

1918

1918

1918

1918

1918

1918

1918

1918

1918

1918

1918

1918

1918

1918

1918

1918

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

SW 1/4

105



Welfare and Recreational Association
of Public Buildings and Grounds, Inc.

Places to be investigated in 1919.

Spafford's bluff, 5 m. s. of Fremont ship-wharf camp
pinnacles seem to occur in broad Franconia.

Rock a-Cris - Adams Is. - Town Franconia pinnacles
Brenton, Wis. det. 1165 Acad. Franconia

Pilot Knobs - upper part of
Berkley - granite & strat. position

Alma (bluff) - for section & position pinnacles 25m. N. to St. J. & W. bluffs
97
State City, Minn. Road ddy to Wabasha
4 m. S.E. Franconia
2.5 m. R.R.

See especially pinnacles with ss. with pyroclastic
Franconia

Stanning, Iowa, if this water in Franconia for Franconia Pyroclastic
Taylors Falls for age of conglomerate - Hydrothermal pinnacles.

