Each individual is urged to bring sufficient warm and waterproof clothing to protect himself adequately in case of sudden weather changes.

President: Nelson C. Dale

# NEW YORK STATE GEOLOGICAL ASSOCIATION
## 20th ANNUAL FIELD MEETING--1948

Secretary: Robert H. Arndt

Date: April 30 and May 1, 1948 (Optional trip May 2, 1948)

Place: Hamilton College, Clinton, New York.

Program Outline:

Friday, April 30.

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| A.M. to 1:00 P.M. | Registration at Hamilton College, Science Hall, 101 |
| 11:30--12:30 | Lunch, Hall of Commons. |
| 12:30-- 1:00 | Assemble for afternoon trip in front of Science Hall, |
| 1:00-- 5:00 | Field trip: The Silurian section of the Oriskany Valley and adjacent territory. Includes: Basal conglomerate (Oneida),; Clinton series (typical shales, oolitic hematites, and dolomites); Niagaran limestones; Salina formations; and uppermost Silurian. |
| 7:00-- 8:00 | Dinner (optional), Alexander Hamilton Inn, Clinton. |
| 8:15 | Business and geological meeting, Hamilton College Chemistry Auditorium. Followed by social gathering. |

Saturday, May 1.

| | |
|---|---|
| 8:30 | Assemble for trip. |
| 8:45-- 4:00 P.M. | Trip through Mohawk Valley and adjacent territory: Little Falls, Dolgeville, Middleville, Newport. Pre-Cambrian, Cambrian, and Ordovician formations. Normal faulting in the Mohawk Valley. Pre and post-glacial drainage and glacial features of the Mohawk Valley. |

Sunday, May 2.

| | |
|---|---|
| A.M. | Optional trip, Oriskany Valley Lower Devonian strata. |

Accommodations: Hotel Hamilton, 225 Bleeker Street, Utica, New York.

Rates:

Single $3.00, $3.25, $3.50, $3.75, $4.75.
Double $5.00, $5.25, $5.50, $5.75, $6.50, $7.50.

All applications for accommodations should be handled by individual correspondence with the Hotel Hamilton. Applications should be in the hands of the reservations clerk not later than Tuesday, April 20, to insure full consideration; for several other association meetings are being held in Utica the same weekend. No deposit is required. Please mention affiliation with the New York State Geological Association.

Other hotels at which a limited number of rooms may be available include: Hotel Utica, 102 LaFayette; Hotel Pershing, 116 LaFayette. Because of previous commitments these hotels do not guarantee accommodations for any large groups. These hotels are also in Utica.

Meals:

Friday noon lunch, Hamilton College Hall of Commons. $.75.
Friday evening optional dinner, Alexander Hamilton Inn, Clinton. $1.75-$2.00.
Saturday noon box lunch en route.

Each group is to estimate the number desiring each of the above scheduled meals and return this estimate to the secretary of the association by April 24. All other meals will be obtained by the individuals as they please. Since Clinton is without adequate inexpensive restaurant facilities, other meals are most easily obtainable in New Hartford or Utica.

Suggested Equipment:

Hammer, knife, hand lens, collection sacks, note book, pencils, flashlights with fresh batteries for those interested in a Clinton mine trip, and thermos bottles for a Saturday lunch beverage.

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Topographic maps:

Oriskany, Little Falls, Utica Quadrangles for Friday and Saturday trips. Sangerfied Quadrangle for Sunday trip. A limited supply of these maps will be available at the registration desk at cost price.

Clothing:

Each individual is urged to bring sufficient warm and waterproof clothing to protect himself adequately in case of sudden weather changes. Arrangements have been made to take 25 really interested individuals underground in the Clinton hematite mine. Waterproof boots and garments of little value are suggested as appropriate protection against the red mine muck.

Money Payments:

Registration fee of $1:00 and group meal fees will be payed at the registration desk at the time of registration.

Glad to hear you are coming and looking forward to renewing friendship

Robert H. Arndt

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Contributed by R.Z. Lowe.

20th Annual Meeting

# FIELD TRIP - ORISKANY QUADRANGLE

Friday Afternoon, April 30, 1948

Leave from in front of Science Building, Hamilton College Campus at 1:00 P. M.
Speedometer setting: 0.0

| Miles | |
|---|---|
| 0.0 | Hamilton Campus<br>Vernon shale bedrock covered by successive layers of till, quicksand, and till. Vernon, Lockport, and Upper Clinton lie under the slope of the hill. |
| 0.8 | Left on highway N. Y. 233. Road on 600' terrace of Lake Oriskany. Floodplain of Oriskany to the east contains abandoned Chenango Canal. |
| 1.6 | On left above road, dumps of old Norton Mine of discovery date. Ore mined from Westmoreland oolitic hematite horizon. |
| 1.9 | Turn right on dirt road crossing Oriskany Creek Floodplain. Kame groups to the north. |
| 2.35 | Isolated Kame on north side of road. |
| 2.8 | Turn left at intersection of Norton and Kirkland. |
| 3.9 | Turn right. |
| 4.2 | Kame cluster and gravel pit situated on north side of road. Note stratification. |
| 4.6 | Stop and park cars. Walk north to Oneida - Frankfort contact, monoclinal structure, disconformable contact, Sauquoit in bottom of creek to south. Return to cars via north bank of creek and turn south onto N. Y. 12 B. |
| 5.05 | Turn left on Brimfield Street. |
| 5.3 | Turn left at old Borst Mine Entrance. |
| 5.5 | Park at north end of stripping, cars facing exit. Explanation of history, economics, and geology of Clinton iron ores and section. Collecting on dumps. Maximum time 30 minutes. Return to cars and turn left into Brimfield Street. |
| 5.8 | Dawes and Brimfield intersection. |
| 6 | Clinton Metallic Point Mine headframe. Clinton mined out up to this point on either side of road by advanced longwall method. Room and pillar mining now being introduced. |
| 10.9 | Kame terraces on west slope of pre-glacial valley. |
| 11.4 | Turn right ( north ) onto N. Y. 12 B. |
| 11.5 | Turn left off 12 B and up west hill. Note loose tufa derived from the Camillus, in bed of stream. |

Oriskany Quadrangle Trip ( cont'd )

12. Camillus in steep gorge north of road. Tufa covering outcrop derived from subsurface water percolating through Camillus waterline. Verves at contour 1100 on north bank of this eastward flowing stream.

13.2 Road intersection turn right ( north ) toward Prospect Hill. If time permits group may visit quarrys to the south.

13.7 Turn on right fork toward Prospect Hill.

14.6 Prospect Hill trail; park. Walk to quarrys in Bertie waterlime ( Eurypterus remipes, and ostracods - Eleperditia alta have been found here ) and Olney horizon of the Manlius limestone.

15.0 Camillus variegated shale in ditches on either side of road. Hopper shaped casts of salt crystals have been found in the Camillus in this vicinity.

15.3 Road intersection ( route 412 ) turn right to Hamilton College, Clinton and Utica. Hamilton College reservoir water supply conservation project on right.

## STRATIGRAPHIC SECTIONS FOR ORISKANY QUADRANGLE TRIP

### COLLEGE HILL CREEK SECTION
( Gillette and Dale )

Top of Section

VERNON SHALE — 87'
Red shale with some green shale near base.

LOCKPORT DOLOMITE — 63'
Dark carbonaceous shale with three dolomitic Stromatoporoid reefs, the lower reef associated with edgewise conglomerate. Underlying contact unconformable.

HERKIMER SANDSTONE
Green shales, sandy dolomites, red and brown sandstones, wave and ripple marks. Hematitic sand in center of heavy, massive, sandy dolomite beds. Fossiliferous. — 42' 3"

KIRKLAND IRON ORE ( Red Flux ) — 4'7"
Red, hematitic limestone. Some layers sandy and some argillaceous. Hematitic concentration greater near center. Some siderite. Fossiliferous - bryozoans.

WILLOWVALE ( covered )

WESTMORELAND ( oolitic hematite )
Exposed in old Norton Mine to north of brook.

## DAWES QUARRY CREEK
## ( T. Gillette, modified by N. C. Dale )

Top of Section ( Upper Clinton )

HERKIMER SANDSTONE — 30'9"
Grey thin and heavy bedded sandy dolomites with wave and ripple marks and mud cracks.
Green sandy shale partings. Fossils of marine plants and invertebrates common.

KIRKLAND IRON ORE ( Red Flux ) — 5'2"
Red, hematitic limestone with variable hematitic content - Bryozoans abundant. Contact abrupt.

DAWES SANDSTONE — 8'
Light grey, massive, cross-bedded, sandy, pyritic [illegible] dolomites. Unfossiliferous.
Contact unconformable

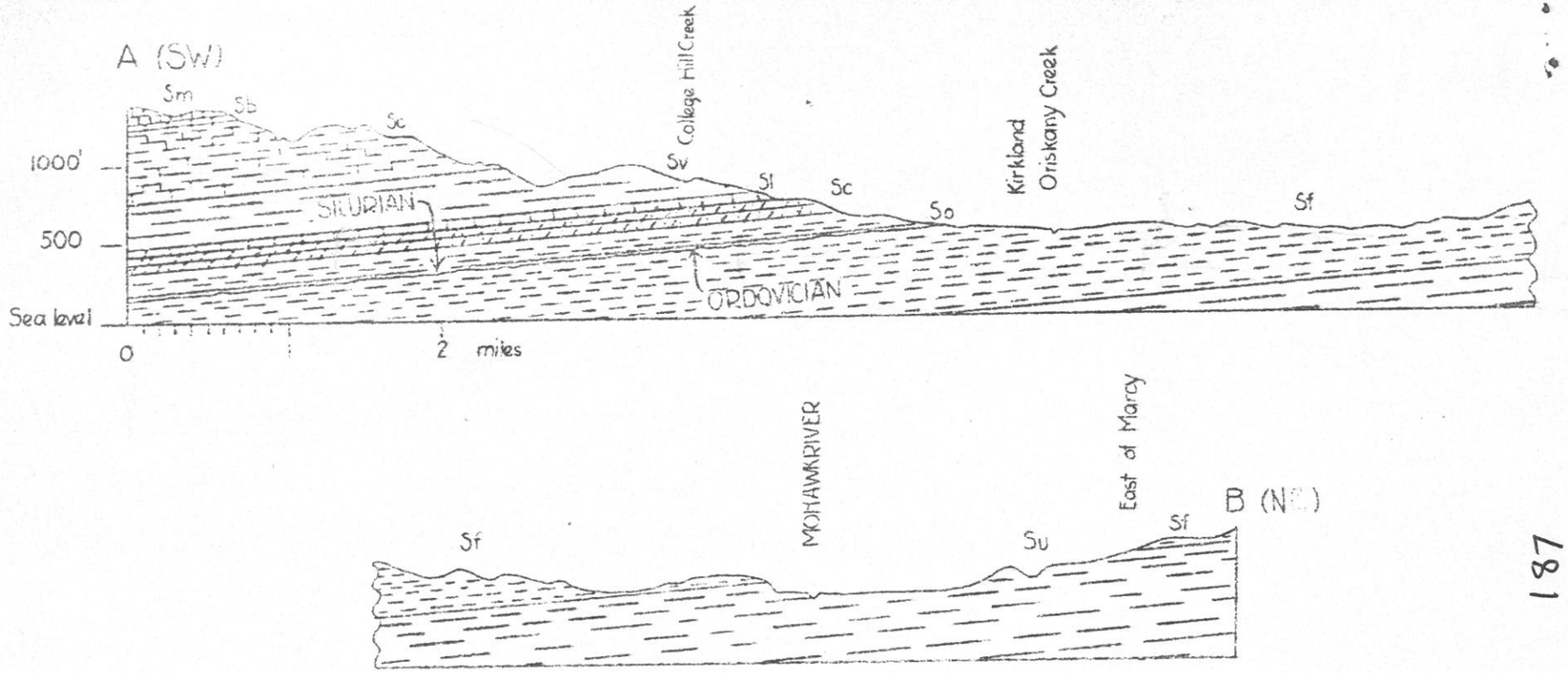
## BORST MINE SECTION

Top of Section

GLACIAL TILL

WILLOWVALE SHALE — 18'4"
Green, calcareous shale with thin dolomitic layers - Dolomitic layers near shale contacts are abundantly fossiliferous.

WESTMORELAND IRON ORE — 3"
Red, oolitic iron ore; chamosite in overlying dolomite.
Shale parting near center.




CROSS SECTION - ORISKANY QUADRANGLE.

See Areal Map For Location

Field Trip - Saturday, May 1, 1948
Professors Key, Dale, and Rolling in charge

Contributed by J. W. Wells

Unless an announcement is made to the contrary, the rendezvous for this trip will be made at 9:15 A. M. in Newport, on N. Y. highway 28, .2 of a mile southeast of the principal street intersection of the town. The 0 reference point for mileage is the Genesee Street bridge crossing the New York Central R. R. tracks at the north end of the Utica downtown district.

0.0 Bridge over N. Y. Central tracks on highway 8 ( Genesee Street ).

0.6 Bridge over Erie Barge Canal and Mohawk River, bottom of pre-glacial lakes Herkimer, Amsterdam, Socharie, and Ire-Mohawk River. Underlying bedrock is Utica Shale. Sand and gravel below 600' elevation along Mohawk River deposited in Lake Amsterdam.

7.2 Long slope into West Canada Creek underlain by Utica Shale covered by ground moraine of Ontarian glacial lobe.

13.0 West Canada Creek.

13.8 Center of Poland, 8 turns left, N. Y. 28 straight ahead. Follow N. Y. 28 to Newport. Underlying bedrock Little Falls dolomite.

14.6 Kames on east bank of West Canada Creek. Terrace topped between 980 and 1000 feet consists of Lake Socharie sand and gravel deposits.

15.7 Kames on southwest bank of West Canada Creek.

17.6 Intersection, center of Newport.

17.8 Rendezvous.

19.2 Note cut bank southwest side of valley, stratified drift.

22.0 Middleville. South of Middleville locality for Little Falls "Diamonds", turn east ( left ) onto N. Y. 29 at automatic ( ? ) stop sign.

22.5 Little Falls dolomite exposed on north side of road. Elevation about 560'.

23.1 Little Falls dolomite on both sides of road, elevation about 760'.

23.2 Trenton limestone on both sides of road, elevation about 840'.

24.9 Fairfield, site of early medical college.

29.9 Center of Salisbury, turn right off N. Y. 29 to go to Dolgeville. East of Salisbury, cross Pre-Cambrian terrain.

31.95 Pre-Cambrian rocks on north side of road.

32.0 Intersection with road to south, approximate location of the Little Falls fault. Pre-Cambrian in upthrown block to west; poorly exposed Little Falls dolomite in downthrown block to the east.

33.4 In Dolgeville turn right onto N. Y. 167.

33.7 Turn left along west bank of East Canada Creek. Note Dolgeville shale in creek bottom.

Utica and Little Falls Quadrangles Trip ( cont'd )

34.3 Turn left into hydro-electric plant drive. At end of drive turn around and park, following the leader. Note fault, Dolgeville shale against Little Falls dolomite in east bank of stream. Development of folds by differential drag along fault plane. Cephalopods, trilobites and graptolites relatively numerous in shales.

Return to cars and drive back to highway 167.

35.2 Back at N. Y. 167 - turn right.

35.3 Turn right again crossing East Canada Creek by factory bridge.

36.2 Road passes over fault plane. Utica shale exposed to west of road, ( downthrown block ) , Little Falls dolomite on east side of road ( upthrown block ). See geologic map.

38.7 Turn right to Ingham Mills at road intersection.

39.2 Bridge at Ingham Mill ( CROSS ONE CAR AT A TIME ) Stop. Lowville ( birdseye limestone ) overlain by Trenton ( Rockland and Shoreham ). Lowville containing worm borings found in bottom of the gorge. Trenton is exposed at about road level.

Return to cars and follow leader to highway N. Y. 167.

41.1 Turn left onto N. Y. 167 towards Little Falls.

42.2 Escarpment of Little Falls fault ( see topographic and geologic maps ). Downthrown block of Utica shale in valley to the east. Upthrown block forms the escarpment partially eroded.

44.4 Turn left on N. Y. 167 and follow highway through Little Falls.

45.1 N. Y. 167 turns left to cross bridge over N. Y. C. R. R. tracks.

45.3 Turn left first cross street beyond railroad bridge.

45.5 Turn right across Mohawk River to Moss Island and follow signs to lock 17.

45.6 Beginning of locks road ( WARNING -- space cars wide to allow turnabout at the locks ), follow the lead car.

46.0 Turn about at locks and follow lead car to parking spot. All out. Post - Gronville syenite, aplite intrusives. Iro - Mohawk pot holes. Lock 17, highest single lift lock in U. S. A.. Cross to West Shore R. R. cut -- diabase dike in syenite. Return to cars and N. Y. 167.

46.7 Left ( south ) onto N. Y. 167.

46.9 Left off N. Y. 167 onto Flint Street. Park on south side of street in "No parking" zone. All out to see contact of Little Falls dolomite and Pre-Cambrian rocks in West Shore RR. cut behind school house. Return to cars and to N. Y. 167 via Mohawk Street.

Utica and Little Falls Quadrangles Trip ( cont'd )

47.1 Left onto N. Y. 167 and cross lift bridge. Leave Little Falls via N. Y. 167 headed in a southwest direction.

47.5 Little Falls dolomite all along south wall of valley. Dolomite vuggy. Vugs drusy with dolomite and quartz crystals. Some vugs contain asphaltic material.

49.1 Intersection with N. Y. 5 S. Turn right ( west ) onto 5 S.

49.9 Kames along south flank of valley.

50.8 Quarry on south side of road in Jacksonburg. Contact of Lowville and Rockland.

51.8 Terraces along north flank of valley formed by Lake Amsterdam.

53.2 Fort Herkimer church on north side of road, used as a fort during French and Indian and Revolutionary Wars.

56.0 Mohawk - pass through.

57.5 Ilion - pass through.

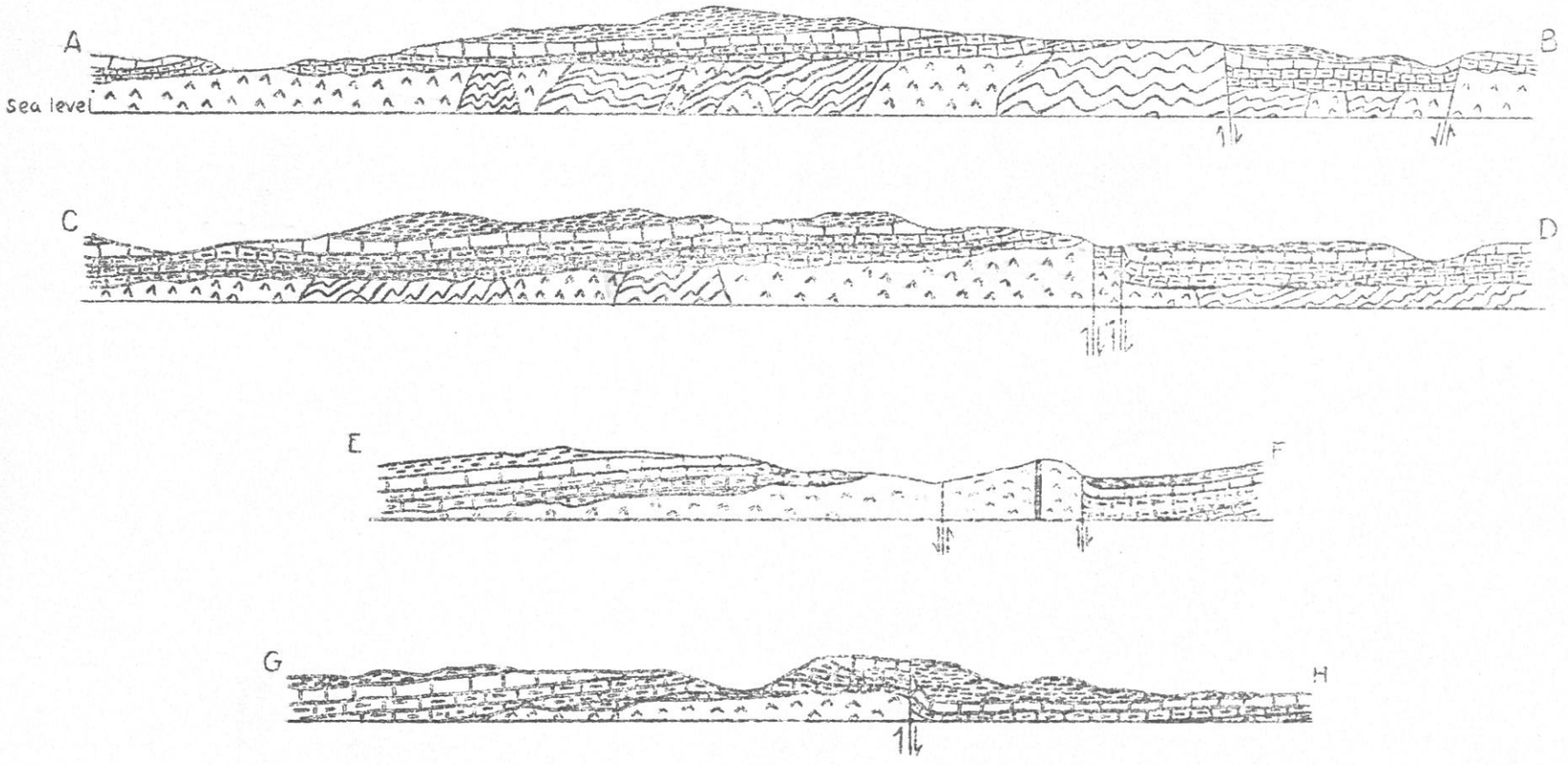
60.4 Second traffic light in Frankfort; turn left ( south ) onto N. Y. 171 and follow into Frankfort Gorge.

62.2 Ordovician black shales, Utica ( ? ).

64.4 Contact of Frankfort and Oneida. Overlying rocks in gorge include Sauquoit, Williamson - Herkimer, Lockport, Vernon, and Camillus.

66.3 Gulph.

66.8 Stratified drift - Stop at top of Hill - Plans for return to Utica or elsewhere.




CROSS SECTIONS - LITTLE FALLS QUADRANGLE

After Cushing

1 mile

See map for location

Lorraine shales

Little Falls dolomite

Pre-Cambrian dikes

Trenton limestone

Pre-Cambrian syenite

Archeozoic Grenville