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- 0.0 8:30 A.M. Leave Wellsville Rod & Gun Club, proceed west on black top road, cross bridge over Genesee River and Railroad tracks.
- 0.15 Turn right (north) on County Route #44.
- 0.85 Sinclair Refinery on right.
- 1.45 Stop light, straight ahead.
- 1.65 Stop light, straight ahead.
- 2.05 Turn right (north) at end of street.
- 2.30 Turn right (north) on Highland Avenue.
- 2.65 Turn left (west) on Route 17 at Airport.
- 3.85 Leave the thick Pleistocene deposits of the Genesee River Valley and continue on the Wellsville geological unit.
- 6.05 Sta. 9. Slow down Whitesville (?) exposed in road cut, showing a storm roller zone, and a fine example of cyclic bedding.
- 7.95 On left (south), Sinclair Refining gathering tanks and pump station, entering the Allegany Oil field.
- 9.55 Allentown, N. Y., caution light near school. NOTE: Oil jacks in front yards and next to store.
- 10.60 Messer Oil Co. Lease, with water treatment plant on right and power house on left.
- 11.10 Oil tank battery on right (north) side of Route #17.
- 11.70 Sta. 10. Slow down Whitesville (?) exposed with fossils on road cut on right (north) side of road.
- 12.00 Electric jack and Whitesville (?) on left (south) side of Route #17.
- 16.10 Stop light at Bolivar, N. Y. turn right (north) on Route #275.
- 16.55 Turn left (west) on Salt Rising black top road (County road #5A).
- 17.00 Pressure plant on left.
- 19.20 Turn right (north) on County road #5.
- 19.55 Siltstone outcropping alongside of road.
- 21.50 Western edge of Allegany Oil field.
- 22.60 Turn left (south) onto State Route #305 black top. Village of Obi.
- 23.10 Water plant on right.
- 24.70 Turn right (west), dirt road.
- 24.85 Cross over Dodge Creek bridge. Glacial delta and river terraces in the valley.
- 25.35 Turn right (north) on Wolf Creek dirt road.
- 27.20 Entrance to Wolf Creek Scout Camp. NOTE: On left, stream or lake deposited dirty outwash material in the glacial deposits.
- 27.60 9:26 A.M. STOP NO. 1 (Sta. 11 on Map 2)

This is a 75 minute stop including loading and unloading.

Wolf Creek flat pebbly conglomerates in abandoned quarry on hill to right. The type locality of Wolf Creek conglomerate is at Sta. 12, $2\frac{1}{2}$ miles to the north and on left side of road. The Wolf Creek conglomerates are characterized by flat or discoidal quartz pebbles accompanied by occasional red jasper pebbles. This quarry was opened about 10 years ago for rip rap to be used for levee dikes along the Allegheny River at Portville, N. Y.

Description:

Top - 3' olive gray micaceous siltstone

4' massive sandstone with a little conglomerate, generally white with some limonitic stain; fossiliferous

3' white 2" to 6" sandstone; fossiliferous

12' massive sandstone and conglomerate containing "Orthoceras" sp., generally white with slight limonitic stain

base - 7' massive white sandstone with a little conglomerate, showing slight limonitic stain (loose slabs contain crinoid stems, arms and calyx plates, "Orthoceras" Palaenatina sp., Modiola sp., Ptychopteria (?) sp. and plant stems, all of which are usually replaced by limonite)

NOTE: From quarry you can see a glacial moraine dam and post glacial stream running from Scout Camp Lake through moraine on west side of valley.

- 27.80 10:41 A.M. Continue trip.
- 28.40 Entrance to Wolf Creek Scout Camp.
- 30.35 Turn left (east) on dirt road.
- 30.85 Narrow bridge over Dodge Creek.
- 31.00 Turn right (west) on Route #305.
- 32.65 Allegheny-Cattaraugus County line.
- 32.90 Bedford Corners straight ahead.
- 34.85 Pennsylvania Railroad crossing on Brooklyn Street, Portville, N. Y.
- 35.10 Brooklyn Street and Route #17 meet, turn right (northwest).
- 35.35 Stop light at Portville, N. Y., continue on Route #17 into Olean, N. Y. Flood control dike along Allegheny River on left (south) of Route #17.
- 36.95 To the right, pit in deltaic sands and silts. It might possibly be delta of Haskell Creek into Allegheny River valley during a glacial lake stage.
- 39.95 Olean Tile Co. to the left (south), just inside City of Olean.
- NOTE: Rest room facilities available in Olean; facilities at Rock City stop very crude.
- 40.50 Stop light at King Street and E. State Street - straight ahead.
- 41.05 Stop light, near Bradners Stadium, straight ahead.
- 41.30 Bridge over Olean Creek and old Barge Canal, straight ahead.
- 41.45 Turn left (south) on South Clinton St., leaving Route #17 (E. State St.).
- 41.80 Turn right (west) at dead end at Beverage Bldg. onto Green Street.
- 41.95 Turn left (south) at stop light onto Route 16A (So. Union St.).
- 42.15 Bridge over Allegheny River.
- 42.30 Stop light, continue straight ahead. On right (west) is cemetery on glacial hill.
- 43.05 New road construction work, continue uphill on Route 16A.
- 44.95 Bear right and follow Route 16A.
- 45.55 Temp. sta. for Cattaraugus and Oswayo.
- 45.90 Entering northern extension of Bradford Oil Field into New York State.
- NOTE: Boulders of Olean cgl. along both sides of road.
- 46.55 Rock City Park entrance.
- 48.75 Post Office at Village of Knapp Creek, N. Y.
- 50.05 New York-Pennsylvania State line.
- 50.80 Oswayo outcrop on left (east) side of road.
- 51.05 11:24 A.M. STOP NO. 2 Cattaraugus red beds with Oswayo above.
This is a 20 minute stop. (sta. 15 on Map 2)
Description: The Oswayo is composed of greenish-gray sandy shales with interbedded shaly, frequently fossiliferous, sandstone layers. The contact of the Cattaraugus and base of Oswayo is believed to be at the top of the highest red shale found in this section which is overlain by a fine-grained, greenish-gray, sandstone. Cattaraugus. A succession of red shales interbedded with greenish-gray shales and fine-grained, greenish-gray, thin-bedded micaceous and argillaceous sandstones. It contains several well defined flat pebble conglomerate horizons. The Cattaraugus contains excellent cross-bedding and shows shaling out of the sandstones.
- 51.05 11:44 A.M. Leave STOP NO. 2 and continue straight ahead.
- 52.25 Turn around place.
- 57.95 Rock City Park entrance, turn left (west) on dirt road.
Row of crude oil stock tanks on left of dirt road.

- 58.45 12:03 P.M. STOP NO. 3 Rock City Park - type locality of Olean conglomerate.
NOTE: We will be here 2 hours, have lunch, examine outcrop and leave at 2:00 P.M.
Mr. Melborne Cunningham, concessionaire at Rock City Park has made available to us picnic and parking areas. While here, the group will visit the type locality of the Olean conglomerate. (Sta. 16 on Map 2)
Description: The Olean conglomerate type locality is south of Olean, N. Y. at Rock City where it is 64' thick. There is an occasional layer of coarse quartz sandstone present in the conglomerate. Cross-bedding, joint cracks and large rounded or ellipsoidal pebbles are prominent features of the Olean conglomerate. The greater majority of the pebbles are vein quartz and milky in color but a few rose-colored ones are present. Pebbles 30 millimeters long are common but most range from 10 to 20 millimeters in length. There are a few pebbles of dark gray slate in the conglomerate. The Olean loses its conglomerate character as it is traced south into Pennsylvania. Fifteen to 20 miles south of the New York-Pennsylvania line it consists of a medium to coarse-grained quartz sandstone. The Olean conglomerate is found as far east as Alma Hill in Allegany County.
- 58.95 2:05 P.M. Leave entrance to Rock City Park. From hill is a good view of Olean and the former Socony-Vacuum Refining stock tank farm.
- 64.05 At corner of Clinton and E. State, heading east on Route #17.
- 70.15 At stop light in Portville, N. Y., head east on Route #17.
- 72.20 Bear left on Route #17 at intersection.
- 76.20 Village of Ceres.
- 81.70 Entering Allegany Oil field.
- 82.60 Old Bolivar Refinery to the left (west) of the road.
- 84.25 Stop light at Bolivar, turn right (east) and follow Route #17.
- 98.60 3:20 P.M. Arrive in Wellsville.

XI - ACKNOWLEDGMENTS

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Topographic maps traversed during the field trips include the following quadrangles: Wellsville, Belmont, Olean, Salamanca, N. Y. and Bradford, Genesee and Gaines, Pennsylvania.

Topographic maps mentioned in the glacial geology chapter are: Angelica, Arcade, Belmont, Canaseraga, Franklinville, Greenwood, Hornell, Nunda, Olean, Portage and Wellsville quadrangles.

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