Log for West Virginia (1939 Trip)

FIELD CONFERENCE OF PENNSYLVANIA GEOLOGISTS

It. I.
D.C.
W. Va.
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Compiled by E. T. Heck,
W. Va. Geological Survey
SUNDAY MORNING, MAY 28, 1939

0.0 Leave MORGAN HOTEL, Morgantown, W.Va.
7 A.M., E.S.T. Set odometers here.
0.8-1.1 Traveling on lake terrace (Pleistocene).
1.4 Note same terrace across river.
2.3 Keep left on U.S.119. Horizon of AMES limestone.
2.3-2.7 Note incompetent material of Conemaugh. Many of the road slips in W.Va. occur at this horizon.
2.7 Note entire hillsides is slipping, involving entire Conemaugh above Buffalo sandstone. Sandstone capping Dorscy Knob (on left) is U.PITTSBURG.
6.6 MORGANTOWN sandstone.
7.3 GRAFTON sandstone. Ridgedale.
7.8 BUFFALO sandstone in road cut.
8.1 MAHONGING sandstone, base of Conemaugh.
8.5 UPPER FREEPORT sandstone. Top of Alleghany.
3.8 Same, caps knob to right.
9.1 Lower FREEPORT sandstone. Note cross-beding.
9.3 Same.
10.3 FREEPORT coal in road cut.
10.3-14.3 Now traveling (approximately) along axis of CHESTNUT RIDGE ANTECLINE. Structure plunging to S.W. at about 50 feet to the mile.
10.6 Note local unconformity involving sandstone and shale. KITTANNING horizon.
11.0 Bright's Chapel.
13.0 LOWER KITTANNING coal.
13.8 LOWER FREEPORT coal.
14.0 MAHONGING sandstone. Base of Conemaugh.
14.3 Monongahela-Taylor county-line. Taylor County was formed in 1844 from Marion, Harrison and Barbour counties. Named for John Taylor of Virginia. County was home of Bailey Brown, first Union soldier killed in war between States. Shot May 22, 1861 at Grafton.
14.6 KITTANNING coal. ALLEGHENY.
17.4 Base of CONEMAUGH.
17.8 BUFFALO sandstone.
18.1 SALTSBURG sandstone. Note cross-beding.
19.7-20.7 Traveling in CONEMAUGH at horizon of SALTSBURG sandstone.
21.3 Note quarry in SALTSBURG sandstone on right.
21.5 AMES limestone.
21.6 MORGANTOWN sandstone.
21.7 LOWER CONNELSVILLE sandstone makes divide.
24.6 Blueville, straight ahead.
24.8 BUFFALO sandstone. Note cliffs of this sandstone across creek.
24.9 UPPER MAHONGING sandstone.
25.7 Turn left at stop light.
25.8 Turn right at end of bridge.
26.8 BRUSH CREEK coal at top of road cut on left.
27.9 Turn left.
28.6 STOP (25 minutes). Parking lot of Tygart Dam. Capt. John M. Mather of War Dept., U.S. Engrs., in charge of discussion. Items of interest: Cost $18,000,000; length at top 1,900 feet; height of spillway 209 feet; elevation of top of spillway 1167 ft; thickness at base 207 feet; drainage area 1,220 sq. mi.; storage capacity 327,500 acre feet; shore line when full, 68 miles; concrete used, 1,247,060 yards. The base of the dam is "keyed" into the BUFFALO and MAHONGING sandstones. Toilet facilities are in stone bldg. at south end of parking lot.
28.6 Leave Tygart Dam. Check odometer.
30.0 BUFFALO sandstone.
30.6 Keep left.
31.1 Turn L to X across bridge.
33.2 Traveling in CONEMAUGH. Now cuts an old mark R.R. relocated due to Tygart Dam.
36.0 ELK LICK coal in R.R. cut to left.
Cut for R.R. tunnel at horizon of harlem coal.

Taylor-Barbour County-line.

Morgantown and Buffalo sandstones in R.R. cut at over-pass.

Connellsville sandstone on left.

Knobs to right and left hold Pittsburg coal.

Clarksburg Red.

Buffalo sandstone on right.

Bakerstown coal on left.

Marker on left reads: "First land battle between North and South here, June 3, 1861. Confederates under Colonel Porterfield were dislodged by Federal troops from General McCollum's army under Colonel Kelley. The old covered bridge (at foot of hill) was used by both sides."

Broadus College (denominational school) on left, is located on Saltsburg sandstone.

47.0 Philipps turn right. River is Tygart.

5.0 Buffalo Sandstone, old quarry on left.

0.0 Bakerstown Coal on right.

Harlem Coal in road cut to right.

Elk Lick Coal prospect on left.

Century No. 2. Redstone Coal. Abandoned. In this area, Redstone is better than Pittsburg seam.

Keep left, traveling in Monongahela.

0.3 Uniontown Coal in cut on right.

Barbour-Upshur County-line. Uniontown Sandstone exposed.

Turn left.

56.5 Coal developments in area are in Redstone.

Redstone Coal mine with overpass.

Note abandoned mine in Redstone. Pittsburgh bed exposed at road level.

69.0 Note Clarksburg Red.

69.7 Buckhannon. Home of W.Va.-Wesleyan College.

Note brick and tile plant on left.

75.00 Traveling on Connemaugh.

0.0 Upper Freeport Coal on left. Top of Allegheny.

75.7 Adrian.

77.0 Traveling in basal Connemaugh and upper Allegheny. Coal mined is Upper Freeport.

French Creek. Asa Brooks started religious services here, 1816, from which grew the Presbyterian Church.

State Game Farm.

82.6 Rock Cave. Straight ahead on W. Va. 35.

82.6-86.3 Traveling in Connemaugh. Coal exposures are Bakerstown.

86.3 Lewis-Upshur County-line.

89.1 Buffalo Sandstone on right.

89.5 Turn left on U.S. 19.

92.9 Lewis-Fraxton County-line.

94.0 Upper Freeport Coal on right.

94.0-101.0 Traveling in Allegheny. Note the many coal seams. A shallow salt well was drilled here prior to the Civil War.

99.0 Upper Kittanning Coal with "Rider" coal in cut at Falls Mill. A shallow salt well was drilled here in 1795. Producing horizon probably Upper Freeport SS.

101.0 Little Kanawha River. Buffalo Sandstone in quarry on right.

101.5 Bulltown, formerly known as Saline. Indians manufactured salt here prior to 1772. A shallow salt well was drilled and cased with 3-inch lead pipe about 1795. Producing horizon probably Upper Freeport SS.

105.0 Saylor. Turn left.

105.0-110.0 Traveling on or near Pittsburg Red.

110.3-111.3 Flatwoods.

111.7 Rafter Sandstone in old R.R. cut.

113.4 Buffalo Sandstone.

114.2 Upper Mahoning Sandstone quarry on left.

116.4 Sutton city limits. Arrive 10:20 A.M.

116.6 Keep left, Elk River on right.

117.0 Turn right. Rest stop. (15 min.) Gulf Service Station on corner, Standard Station and Hotel on left. 65 miles to lunch stop. Those that must, may get gas here.

117.1 Cross Elk River. Chock odometer.

117.1-122.3 Traveling in Connemaugh.

Starting at Elk River, we cross nearly entire thickness of Connemaugh in ascending order.

120.0-121.0 Surrounding ridge tops apparently represent Allegheny Palaeplain. Note surface has almost been destroyed, and deep V-shaped valleys.

122.3-124.0 Traveling in Allegheny.

124.0 Homewood Sandstone in quarry on left. Top of Pottsville.

124.0-137.0 Traveling on Upper Pottsville with Allegheny in mountains on either side.

124.7 Little Birch.

124.7 Lower Kittanning Coal mine on left.

126.3 Stockton Coal mine on right.
126.4-128.3 Ascending Birch Mtn. We cross several coals in ALLEGHENY.
127.5-127.7 Note 3 coal beds in ALLEGHENY on right.
128.3 Birch Mtn., elevation 1977'. MAHOMING Sandstone on left.
128.4 BRAXTON-NICHOLAS County-line.
128.6-137.3 Traveling in KANAWHA group of POTTsville. ALLEGHENY and basal CONE-MAUGH capping surrounding mountains.
132.4-132.9 Birch River (town).
134.5 Water For Fountain at right comes from POTTsville.
136.6 STOCKTON (Lower Mercer of Pa.) coal, (abandoned tipple on right).
137.1 LOWER KITANNING Coal (abandoned tipple on right).
137.6 MIDDLE KITANNING truck coal mine on right. (42°).
137.7 UPPER EAST LYNCH Sandstone quarry on right.
138.2 Top of Powell Mtn. Elev. 2232'.
139.0 Traveling on POTTsville (Kanawha group), or lower for remainder of trip.
139.5 Sherriff Meek Compression Station of Hope Natural Gas Co. This gas field is farther southeast than any other in W. Va. Producing sand, Big Injun. Gas accumulation due to terrace effect in structure and to an apparent loss of permeability updip. Carbon Ratio of surface coal about 62.
143.1-143.9 Bucksville and Maddley.
144.0-145.0 Lumber railroad.
145.0-146.6 Small coal mines are mainly in EAGLE Coal.
150.3-151.2 Summersville. (Stay on U. S. 19)
152.2 LOWER GILBERT Sandstone quarry on R.
154.6-154.8 LOWER GILBERT SS quarry on R.
160.8 DOUGLAS Coal (zone) on right.
162.3-162.6 Drennen.
164.1-164.2 Note several coal beds at DOUGLAS horizon.
164.7-165.3 Lockwood.
168.2 Little EUREKA. Axis of Mann Mtn. Ant.
168.2-169.6 Road grade almost same as dip. Coal exposed mainly EAGLE.
169.6 Note old gas well on left. Producing from Greenbrier Ls. and underlaying Big Injun Sand.
171.3-173.1 Swiss. Coal mined, No. 2 Gas and Poor Ls. Gauley River on left.
178.7-181.9 Coals mines are COALBURG and No. 2 Gas. Former near top of Mtns.; latter about half-way up.
178.7 Nichols-Fayette County-line end town 28.4 Axis of Raveneye Anticline.
177.4 Drilling well on left, Diets #4 of Northeastern Gas Co. Will probably test Big Injun and Borea.
181.1-181.7 UPPER NUTTALL Sandstone on R.
181.9-182.5 GAULEY BRIDGE. (Arrive 12:10 P.M.) LUNCH STOP, 1 hour. Lunch has been prepared at Gauley Tourist Lunch and Grill. Rest room facilities available in adjoining Gauley Hotel and service stations. Drivers service cars here. Arrangements can be made to have cars serviced while you are eating. After lunch, cars will assemble on bridge across Gauley, on east side of town.

The area along Kanawha River between Gauley Bridge and Charleston is the gyp locality of the Kanawha group of the Pottsville.

SUNDAY AFTERNOON, MAY 28, 1939

0.0 Bridge across Gauley River. Leave 1:10 P.M., E.S.T. Set Odometer here.
0.3-0.8 Note NUTTALL Sandstone rising to east from road level (on left).
1.5 Note apparent local angular unconformity due to primary dips on lenticular beds (on left).
1.5 Note GUYANDOT Sandstone under R.R. bridge in New River to right.
1.6-1.7 Hydro-electric plant of Electro-Metallurgical Co. (Carbide and Carbon). This plant marks outlet end of the power tunnel.
2.0 NUTTALL Sandstone on left.
3.7-4.1 SLOW for scenic view to right. Power tunnel diverts much of water from this part of the stream.
4.9 Turn left. Chimney Corner.
7.5 STOP. Arrive 1:25 P.M. 30 minutes stop. Hawks Nest State Park (41 Ac). E. M. Fridley in charge of discussion. From here east is the type locality of the NEW RIVER group of the POTTsville.
15.0-35.0 Traveling on NEW RIVER GROUP of POTTsville. Note typical topography.
20.6-31.6 Lookout. Coal mined SEWELL. This is Northwest corner of famous New River Coal Field.
25.3 Axis of Clifftop Syncline.

of Belva.
29.4 Axis of Lawton Syncline
34.2 Sewell Mountain. Type locality of Sewell Coal. Highest point on Midland Trail (U.S.60). Near here, Gen. Robert E. Lee had headquarters during his campaign in W. Va. in 1861. His famous horse, "Traveler", was brought to him here from the Andrew Johnson farm in Greenbrier County.

35.0 UPPER RALEIGH Sandstone.
35.0-36.8 Cross lower half of NEW RIVER & POCOHONTAS groups of POTTSVILLE. Pottsville does not go below road level again for rest of trip.

36.2 No. 6 POCOHONTAS Coal zone.
36.6 No. 3 POCOHONTAS COAL prospect.
36.8 Fayette-Greenbrier County-line. Top of MAUCH CHUNK (Mississippian).

36.9-38.7 Rainelle and East Rainelle. Sawmill of Meadow River Lumber Co. located here, said to be largest hardwood plant in the world. All coal mined in Greenbrier County (1,500,000 plus tons a year) passes through here. Note local base-level on Mauch Chunk.

38.9 Red shales on right are in BLUESTONE group of MAUCH CHUNK.
39.2 No. 7 POCOHONTAS Coal mine on mountain to right.
41.4 Over-pass for No. 6 POCOHONTAS Coal mine.
41.6-41.8 Charmoe. Note alluvial material.
44.4 Typical PRINCETON conglomerate Ss. boulders (approximately in place).
45.6-46.4 Rupert. Note local base-level developed on Mauch Chunk by Meadow River. Pottsville sandstones down stream are main cause. Area reduced totals over 20 sq.mi.

47.7-48.9 Note extent of base-level on right (same).
48.4 AVIS limestone in old road quarry at left. Good fossil collecting locality. Hinton group of Mauch Chunk.
50.9-52.4 Part of same local base-leveled area.

52.4 Sam Black Church.
54.0-54.2 STONY GAP Sandstone. Basal member of Hinton group of Mauch Chunk.
54.2-54.5 Clintonville.
54.5 STONY GAP Sandstone, lower part. This is last time we cross this formation on the trip. This erosion scarp is taken as dividing line between Appalachian Plateau and Valley and Ridge Provinces.

54.55 Note view ahead, and cone-shaped Weaver Knob in distance. Mauch Chunk outlier.)

57.1-57.3 DROOP Sandstone on right. (Bluefield group of Mauch Chunk)
58.3 STOP. (45 minutes - arrive 3:10 PM.) E.T. Hook in charge of discussion.
58.3-58.6 MACCRADY. (About 75 foot thick)
58.6-60.0 CHOCONO.
59.3-59.4 Alta. (Possible rest stop)
59.5 Axis of Williamsburg Anticline.
59.6 Note abrupt change from mild S.E. dip to slightly overturned, suggestive of fault (on left).
59.6 Note same from below, revealing absence of fault plane.
59.9 Note same on left.
60.0-60.4 MACCRADY.
60.4-70.1 GREENBRIER Limestone.
61.5 Axis of Muddy Creek Mountain Syncline. Traveling on Greenbrier Ls. Mauch Chunk caps mts. on either side. Richlands. Note "Karst" topography from here to Lewisburg.
63.4 Weaver Knob on left capped by Mauch Chunk.
65.5 Muddy Creek Mt. on Right is synclinal and capped by Droop sandstone.

66.7 STOP (20 minutes - arrive 4:25 PM) Paul H. Price in charge of discussion.
69.0-70.1 Lewisburg. Note town located in large sink-hole. Site of Fort Savannah, built 1755. Here at Camp Union, Gen. Andrew Lewis mustered troops which took part in Battle of Point Pleasant in 1774. Presbyterian "Old Stone Church" built in 1796 & still used as place of worship. During Lewisburg Battle in 1862, Old Stone Church used as a hospital.

70.1 Base of GREENBRIER Ls. Possible Stop.
70.1-70.4 MACCRADY.
70.5 CHOCONO & axis Sinks Grove Anticline.
70.7-71.0 MACCRADY.
71.0-72.5 CHOCONO.
72.5 Greenbrier River. Old bridge here burned during Civil War in 1862.
72.6 MACCRADY on left, knob capped by GREENBRIER Ls. Axis Caldwell Syncl.
72.6-73.2 Caldwell.
73.9 STOP. (20 minutes - arrive 5:05 PM). Conglomerate at base of Pocono.
73.2 Note local base-leveled area from here to White Sulphur Spgs. Developed on Portage, Genesee, Hamilton & Marcellus by Howard Creek. Due to resistance of Pococono and Chemung Sandstones.
77.1 Golf course of famous Greenbrier (White Sulphur Springs) Hotel.
78.1 Greenbrier Hotel on left.
78.1-79.5 White Sulphur Springs. Arr. 5:40PM
80.7 Tourist Camp. Over-night stop.
0.0 Leave Tourist Camp, 7:00 A.M. (E.S.T.)
1.2 White Sulphur Springs city limits.
1.7 Turn right.
2.2 Huntersville chart on left. Note ornamental walls built of fragments of this chart.
2.2-5.0 MARCELLUS, HAMILTON & Genesee.
5.3 Elkale School. This is a scheduled stop, but before leaving your car, turn it around and line up ready to return in direction we arrived.
(Arrive 7:20; 30 minutes stop.) J.H. C.Martins in charge of discussion.
5.66 STOP for a sample of limonite. This iron ore came from horizon of Ridgeley Ss., some 10 mi. N.E. The pile is part of shipment treated as a pigment. Chemical analysis is:
SiO₂ 3.13
Fe₂O₃ 77.67
Al₂O₃ 0.11
Mn 0.05
Ca Tr.
Moisture loss on ignition and undetermined 19.04
5.9 Turn left.
6.8 STOP. (Arrive 8:00 A.M., 15 Minutes.) Bobs Ridge, Paul H. Price in charge of discussion.
7.0 HEALING SPRINGS Sandstone.
7.2 HUNTERSVILLE Chart.
7.25 Turn left.
8.9 La Bar Rhododendron Nursery. Traveling on Marcellus. Mtn. on left is anticlinal, covered by Oriskany.
10.5 For those that may return to this area, the thin sandstone above Hunterville is well exposed under the bridge on side road to right.
10.5-15.8 Traveling more or less along strike and on Portage, Genesee, Hamilton and Marcellus. Anticlinal Coles Mtn. on left, is largely covered by Oriskany. Mtns. to right are Portage and Chenung.
11.8 Enter Monongahela National Forest (purchase area).
15.8 Turn left.
16.2 Note groom and white pump and springhouse of Alvon Springs on south side of Anthony Creek to left. Water supply of Greenbrier Hotel and town of White Sulphur Springs came from here.
16.6 STOP (Arrive 8:50, 55 minutes). Park on left. See Alvon cross-section in log. B.T. Hook in charge of discussion.
16.9 Turn left, across Anthony Creek. The C.C.C. Camp located here has been taken over by W.V.U. School of Forestry as their Summer Camp.
19.6-22.3 Crossing entire Middle and Upper Devonian approx. at right angles to strike.
19.5 Turn left. REST STOP. (Arrive 10:00 A.M., 15 Minutes.) Blue Bend (National) Forest Park. Swimming pool, camping grounds, etc.
21.9 Base of CATSKILL, fine-grained gray sandstone.
22.0 Note conglomerate on right.
22.2 Note another conglomerate on right.
22.4-23.5 POCONO; note view to right & L. Greenbrier River right.
23.6-23.9 Note conglomerate on left. Note also red beds not prominent.
24.1 Anthony.
24.4-24.6 Note terrace apparently due to migration of meanders.
25.1 Axis of Caldwell Syncline.
25.1 Axis of Sinks Grove Anticline.
28.2-27.0 MACCRADY.
28.8 Note view. This may represent an intermediate peneplain (Allegheny?) developed mainly on Greenbrier Ls.
28.2 Turn right. Junction with U.S. 219 (Serpent Trail). Traveling on Greenbrier Limestone.
28.4-28.8 Frankford.
30.6-30.7 Note PICKAWAY JOINTS on right.
34.1-34.7 Renick.
36.0-37.2 BAUCH CHUNK.
36.6 WEBSTER SPRINGS Ss., note cross-bedding.
41.6 Pocahontas-Greenbrier County line. Formed in 1821 and named for Pocahontas, Indian princess. Residents boast no water flows into Pocahontas; it all flows out. This is almost literally true; several rivers have their headwaters in this area. (Gorges, Tygart, Elk, Gauley, and Greenbrier Rivers).
41.9-45.1 Droop Mtn. Slightly synclinal, it is capped by DROOP Sandstone. Type locality.
45.1 Droop Mountain Battlefield State Park on left. Historical marker reads: DROOP MOUNTAIN. Here, Nov. 6, 1863, Union troops commanded by General W. W. Averell defeated Confederate forces under General John Echols. This has been considered
the most extensive engagement in
this State".

45.5 Note view of Hillsboro, on Greenbrier
Limestone. Mountains along Browns
Mtn. Anti-collorium maybe seen on right,
and erosion scarp on left is capped by
Pottsville.

46.3-50.3 Traveling on "Greenbrier" Ls.
47.6-48.5 Hillsboro, birthplace of Pearl
Buck.

51.3 Base of Greenbrier Ls. Macrady is
about 50 feet thick here.

50.5-50.6 Mill Point, hero J.B.A. Gibbs
invented the chain-stitch sewing
machine.

50.6-55.6 Traveling on MACRACY, with
basal GREENBRIER Ls. just above and
to left of road. Excellent area for
collecting silicified fossils
(especially Lithostrotion) that have
weathered from overlying limestone.

53.6-60.9 Traveling on MACRACY and
POCONO.

60.4 Marlinton. LUNCH STOP. Arrive
11:30; 1 hour stop.

MONDAY AFTERNOON, MAY 29, 1939

0.0 Leave Marlinton. Set odometer at
road sign marking city limits.

0.1 Top of "CATSKILL".

0.6 Conglomerate in "Catskill" with
coaly streak (on left).

1.3 Conglomerate on right, base of
"Catskill".

4.8 Base of Chemung.

5.5 Quarry for road material in HUNTERSVILLE Chert on left.

5.8-6.0 Huntersville. Type locality of
HUNTERSVILLE Chert.

5.9 Turn left.

5.9-5.5 Knapp Creek has cut thru Browns
Mountain Anti-collorium here. Entire
thickness of Lower Devonian and Silurian
is crossed first in downward order, then in ascending order.

6.7 STOP. (30 minutes, arrive 12:45).
Paul H. Price in charge of discussion.
See Knapp Creek cross-section in lag.

7.7 Note erumpung in CLINTON on left.

8.2 Rod MEDINA on left.

8.5 White MEDINA.

8.6 Mimbaha Springs on right. Spring
emerges from basal Holdborg.

8.7-18.5 Note local base-leveling along
Knapp Creek. Traveling approx. along
strike on Middle and Lower Devonian.

18.5-18.9 Frost.

18.9-22.7 Traveling along strike near
Genesee horizon.

22.9 HEIDERBERG on left.

24.2-25.7 Here Sitlington Creek cuts thru
Browns Mtn. Anti-collorium, exposing
formations as low as Medina.

24.4 Note arch in White MEDINA on right.

25.5 Large springs on right emerge from
near base of Holdborg, typical of
horizon.

26.0-26.5 Dummore.

26.1 Turn right.

26.4 Keep right.

30.9 Test well drilled to reported
depth of 800 feet here. Top of
pipe can be seen on right.

31.4-32.0 Greenbank.

31.4-34.0 Note terraces and local-base
level.

32.7 Low hill on right is northern limit
of outcrop of Oriskany on Brown
Mountain anti-cline; total length of
Oriskany outcrop on structure, 51
miles.

33.0-35.4 Arbovale.

37.3-37.4 Boyer. Rough road for four
miles; drive with care.

37.5 Base of CHEMUNG.

41.5 Junction with U.S. 250. Turn right.

43.8 Straight ahead. Traveling on
Chemung.

44.7 Approximate axis of Job syncline.

49.7 Approximate axis of Horton anti
cline.

50.0-52.0 Traveling on Chemung, along
Horton anticline. Approx. elev. 3860'; surrounding summits reach
4000'.

52.5 Pendleton-Pocahontas County-line.
Termed the birthplace of rivers.
Go from Ohio drainage basin to
Potomac.

54.7 Base of "CATSKILL".

56.0 Approximate axis of Stony River
syncline.

59.4 Note White MEDINA "wall rock"
straight ahead.

59.6-59.9 Cherry Grove.

59.9-65.6 Road parallels White MEDINA
"Wall rock" (on right). Total N.E-
S.W. length (airline) of "wall rock"
36 miles. The road follows strike
of Middle and Lower Devonian.
62.3-62.7 Circleville. REST STOP (15 min.)
Arrive 2:55 P.M.
63.0 Note overturned BOSSARDVILLE on R.
65.6 Judy Gap. Quarry on right RONDOUT.
Turn right.
65.9 Note erosion form of White MEDINA to left.
66.0 Red MEDINA.
66.1 Gray MEDINA.
67.1 Axis of Wills Mountain anticline.
This Mountain road is dangerous; drive with extreme care. Traveling on MARTINSBURG Shale.
71.0 Top of North Fork Mountain. Turn Cars around. Elev. 3592. Peaks to south are over 4000'. Red MEDINA. Shannondale Mountain in far distance to east. Spruce Mountain to west.
71.6 Gray MEDINA on left. Fossiliferous zone at base, good collecting horizon. W. Va. Survey places Ordovician-Silurian contact just above fossil zone.
71.6-71.8 Traveling on MARTINSBURG shale.
71.8 STOP. Arrive 3:35 (25 minutes).
Paul H. Price in charge of discussion.
74.7 Axis of Wills Mountain anticline.
75.7 Gray MEDINA. Note lower side of White MEDINA ahead.
75.8 Red MEDINA on left.
75.9 White MEDINA on right.
76.0 CLINTON on left.
76.3 Turn right.
76.5-90.0 Traveling on Middle and Lower Devonian. White MEDINA forms ridges to right.
76.9 HAMILTON on left.
77.8-77.9 HELDERBERG on left.
77.9-78.3 RIDGELEY Sandstone (Crisskan) on left.
79.0-79.1 Samo
79.1-79.4 MARCELLUS on left.
79.4-80.0 Riverton, RIDGELEY Sandstone on left.
87.0 RIDGELEY on right. Shenango Rocks ahead.
87.5 Mouth of Shenango.
87.8 STOP. Arrive 4:25 (10 minutes).
Photographic opportunity.
90.8-90.9 RIDGELEY in quarry (for road material). Very calcareous.
93.4 White MEDINA on right. Champo Rocks.
94.0-94.2 RONDOUT.
94.5-94.7 Note solution holes in BOSSARDVILLE on left.
96.0 STOP. Arrive 4:50 (30 minutes).
Cross-section view of Hopewell anticline and Hopewville syncline, can be seen across North Fork. Crisskan and Helderberg rocks exposed. E. T. Rock in charge of discussion.
96.3 Pendleton-Grant County-line.
99.0 STOP (15 minutes) on top of RIDGELEY. Note short nodules.
99.7 Arch of RIDGELEY.
100.0 White MEDINA capping mountain at right and ahead.
100.2 Note typical spring at base of Helderberg.
101.5-102.9 STOP. Arrive 5:45 (10 minutes).
Photographic opportunity. North Fork Gap. White MEDINA makes arch. Lowest formation exposed is MARTINSBURG shale.
103.4-103.7 Note terrace material.
103.9 Typical spring emerging from base of Helderberg on left.
104.0-110.0 Note the terraces in this area. Those interested may "collar" Dr. Fridley in Petersburg.
110.0 Petersburg.
110.9 Turn left.
111.0 Over night STOP at Hornitago Hotel. Arrive 6:30 P.M.
Petersburg was settled about 1745. Near by was Fort George, Indian fort. Federal trenches overlooked the town in 1863 and 1864.
TUESDAY, MAY 30, 1939

0.0 Leave the Hermitage Hotel, Petersburg, W. Va., 7:00 A.M. (E.S.T.)

0.9-1.0 RIDGELEY on left.

1.2-1.3 RIDGELEY on left. Note small arch.

1.5 RIDGELEY. Here the South Branch of Potomac River has cut through the Welton anticline. Known as Petersburg Gap.

1.7 Limestone quarry on left is in New Scotland, Coeysmans and Keyser.

1.9 Road marker describes "Pictured Rocks" to be seen on south side of Gap. Due to weathering and jointing.

2.4 STOP. Arrive 7:05 (25 minutes). Note the entire Lower Devonian is well exposed.

6.0-9.0 Traveling on MARCELLUS. Elkhorn Mtn. on right is ORISKANY.

(Anticlinal)

10.7-11.8 MOOREFIELD.

16.6 Note terrace material.

18.1-18.4 Note large concretions (sceptra) in Marcellus on left.

19.5-19.8 SLOW. (Arrive 8:00) Note that S.E. side of this arch in the RIDGELEY is the steeper.

23.7 Hampshire-Hardy County-lino.

24.0 Sign calls attention to view from "High Knob" on right. Elev. 2610'. capped by Oriskany.

32.4 Turn right. Junction with U.S. 50.

35.5-36.0 Traveling on RIDGELEY.

36.0-36.9 Oriskany arch. Broad Top anticline.

36.4 Limestone quarry in Holderbog.

39.0-40.0 Romney, incorporated in 1762. Owed and laid out as a town by Lord Fairfax. Town changed military control 56 times, 1861-1865.

39.1 Note terrace material.

39.7 W. Va. School for Deaf and Blind on left.

40.0-42.8 Crossing Middle and Upper Devonian in ascending order.

42.8 South Branch Mtn. axis of Town Hill syncline.

42.8-43.3 Traveling on "CATSKILL".

43.3-50.1 Traveling on CHEMUNG.

45.6 Note typical close folding on left.

48.0-49.0 Augusta.

50.3 Turn left on W. Va. 45. Note ripple marks in "CATSKILL" on left.

57.4 Straight ahead. Ice Mountain, 3 miles east from road forks. Ice can generally be found here in all seasons. This is mainly due to structural conditions and the talus boulders from Ridgeley Sandstone. Snow and ice accumulate among the boulders. A Canadian type of vegetation is to be found there.

59.4 Slanesville. Axis of Sideling Hill syncline.

66.1 REST STOP at Pin Oak Fountain. Arrive 9:10.

70.1 Turn right on W. Va. 9.


71.0-74.0 Road under construction; drive with care.

71.0-78.9 Cross Upper and Middle Devonian in descending order.

78.9 Cross Capon River.

79.0 RIDGELEY Sandstone on right.

79.0-86.2 Traveling on Middle Devonian. Mountain on right formed by RIDGELEY Sandstone.

84.8-85.8 Note glass-sand quarries high on right. (RIDGELEY).

86.2-86.8 Great Capon. Crossing the Lower Devonian and Silurian in descending order. Note terrace material.

87.7-88.2 CLINTON.

88.2-88.6 White MEDINA.

88.6 STOP. Scenic view. Arrive 10:25. (10 minutes).

88.6-91.3 Cross Silurian and Lower Devonian in ascending order.

90.6 Note close folding in NIAGARA.

91.3 RIDGELEY Sandstone.

91.8-93.1 BERKLEY Springs.

91.9 Turn left.

93.1-95.4 Note old quarries on left.

95.4 Turn right to plant of Pennsylvania Glass Sand Corporation. Mr. F. D. Sachs is Superintendent. The trip will disband after inspecting quarry and plant.
<table>
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<tr>
<th>PERIOD</th>
<th>SERIES</th>
<th>MEMBERS</th>
<th>APPROXIMATE EQUIVALENT NAMES</th>
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|         | Bluofield Group |                                      | ?} St. Louis  
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