

12th meeting (with Pa. Geol. Assoc.)

I T I N E R A R Y

GEOLOGICAL INSPECTION OF ANTHRACITE FIELD

MAY 22ND & 23RD, 1936

Inspection of Marvine Breaker and Grassy Island Mine involves the handling of a large party on elevators and shaft cages. The party will be divided into two sections immediately after leaving Marvine Breaker; one section will proceed direct to the Archbald Pot Hole, and the other section direct to Grassy Island Shaft for the underground visit.

After both sections have completed inspection of both points of interest, the party will be united at the D. & H. Station in Olyphant. This station is located near Grassy Island Shaft. Those who visit Grassy Island Shaft first will then go to the Pot Hole, and return to the D. & H. Station to await completion of the underground trip by the other half of the party, before proceeding to Wilkes-Barre.

SCHEDULE

	<u>Approximate Time</u>
Lunch	12:00 M.
Leave Chamber of Commerce	12:45 P.M.
Arrive Marvine	12:55 P.M.
Leave Marvine	2:15 P.M.
Arrive Pot Hole	2:45 P.M.
Leave Pot Hole	3:15 P.M.
Arrive Grassy Island	3:55 P.M.
Leave Grassy Island	4:30 P.M.
Arrive Baltimore "Fire Cut"	5:15 P.M.
Leave Baltimore "Fire Cut"	6:00 P.M.

Miles

- Leave the Chamber of Commerce building on Mulberry Street, with speedometer set at "zero".
- Turn left onto Washington Avenue at traffic light at first corner. Proceed out Washington Avenue.
- 0.1 On right - Elks Club - Masonic Temple and Public Library.
- 0.2 On right - Central High School.
- 0.6 One square to left are the International Correspondence School buildings.
- 0.8 On right - Scranton Electric Company's city plant.
- 1.0 On left - Lackawanna County prison.
- 1.2 Incline to left and go straight ahead on Washington Avenue.
- 1.3 Cross Green-Ridge Street (Lackawanna Trail). Watch "STOP" sign.

Miles

- 1.6 Traffic light at Electric Street. Go straight ahead.
1.7 On right - Pennsylvania Oral School for mute children.
1.9 Turn left to Woodlawn Street - grass plot in center.
2.2 Turn right to Boulevard Avenue.
2.4 Turn left and follow Boulevard Avenue along Lackawanna River.
2.7 On left - Richmond Shaft of The Scranton Coal Company.
Marvine Colliery straight ahead.
2.9 Turn left into Marvine Breaker. Be careful at railroad crossing ahead.
Park automobiles on left and proceed through breaker.
After inspecting breaker, return to automobiles and proceed back to
main highway. Be careful at railroad crossing.
3.1 Turn left.
3.2 Price-Pancoast Colliery ahead to right. On April 7, 1911, due to a
mine fire, 72 men were suffocated in this mine.
3.4 Throop Borough.
3.7 Cross Lackawanna River into Dickson City.
4.0 Turn left at traffic light.
4.2 Cross D. & H. Railroad and under N. Y. O. & W. Railroad tracks.
4.3 Turn right at traffic light. Follow trolley tracks on temporary
route #6.
4.7 Dickson City corners.
4.9 Johnson Colliery of The Penn Anthracite Mining Company.
5.3 Ahead to the right are the Olyphant and Eddy Creek Collieries of The
Hudson Coal Company.

Note:

- (a) Those autos going to the Pot Hole first, go straight through on
temporary Route #6.
(b) Those autos going to Grassy Island Mine of The Hudson Coal Company
first, turn right at traffic light at Blakely Corners 0.6 miles
ahead. See page 3.

TO POT HOLE: (Before going to Grassy Island)

- 5.9 Blakely Corner (Olyphant Borough to right), traffic light. Go
straight ahead.
6.4 End of trolley track.
6.9 On left - Mid-Valley Hospital.
Keep to right on asphalt pave. Follow temporary Route #6.
7.6 Peckville Borough.
8.5 On right - Scranton Electric Company sub-station.
8.9 Winton Borough.
9.4 Turn left to concrete highway at Esso gas station.
10.6 End of concrete highway - Eynon Borough.
Go straight ahead.
10.8 Turn right toward School #5.
10.9 Turn left at school. Keep straight ahead, leaving paved road.
11.0 Follow narrow gauge track, leaving paved road.
11.2 Turn right from narrow gauge track and follow road.
11.7 Park here and walk short distance to Pot Hole on right.
Return by same road.

Miles

- 12.6 Turn right at School #5.
- 12.7 Turn left.
- 12.8 Go straight ahead on concrete highway.
- 13.7 Gravity Slope Colliery of The Hudson Coal Company straight ahead in the distance.
- 14.0 Turn right at Esso gas station. Watch "STOP" sign.
- 15.2 Turn left (Be careful - railroad crossing) and cross O. & W. Railroad and bridge into Jessup Borough.
- 15.3 Keep to right on asphalt pave.
- 15.7 Go under D. & H. railroad.
- 16.7 Grassy Island Shaft to left.
- 16.8 Cross D. & H. Railroad tracks.
- 16.9 Go straight ahead along D. & H. Railroad tracks.
- 17.2 Turn left and go across D. & H. Railroad tracks.
Go straight ahead over narrow gauge track.
- 17.3 Turn left.
Drive around scale house on right side.
- 17.4 Park along road and walk up hill to Grassy Island Shaft.
Here you will descend on mine carriage to view fossils in roof and ribs of mine workings.
After ascending to the surface, return to autos and proceed back on the same road.
- 17.7 Cross D. & H. Railroad tracks, turn left and wait for the other group of cars to come from the Pot Hole. Then proceed along D. & H. tracks.

Note: From this point on start reading at 17.5 of the itinerary.

TO GRASSY ISLAND To synchronize, turn back your speedometer 0.2 mile.

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TO GRASSY ISLAND (Before going to the Pot Hole)

- 5.9 Turn right at traffic light Blakely Corners.
- 6.0 Cross O. & W. Railroad tracks and Lackawanna River into Olyphant Borough. Go straight ahead.
- 6.2 Incline to right.
Ahead turn left around flag pole, and go up along D. & H. Railroad tracks.
- 6.3 Turn right and cross D. & H. Railroad tracks.
Go straight ahead over narrow gauge track.
- 6.4 Turn left.
Drive around scale house on right side.
- 6.5 Park along road and walk up hill to Grassy Island Shaft.
Here you will descend on mine carriage to view fossils in roof and ribs of mine workings.
After ascending to the surface, return to autos and proceed back on the same road.
- 6.8 Cross D. & H. Railroad tracks, turn right, and proceed along D. & H. tracks.

Note:

On your return from the Pot Hole you will meet the other group of autos near this railroad crossing.

- 7.2 Cross D. & H. Railroad tracks.
- 8.3 Go under D. & H. Railroad tracks into Jessup Borough. Go straight ahead.
- 8.4 Keep to the left.
- 8.5 Cross Lackawanna River (Be Careful - railroad crossing) and O. & W. Railroad tracks and turn right on temporary Route #6.
- 8.8 On right - Scranton Electric Company Sub-Station.
- 9.2 Winton Borough.
- 9.7 Turn left to concrete highway at Esso gas station.
- 10.9 End of concrete highway - Eynon Borough.
Go straight ahead.
- 11.1 Turn right toward School #5.
- 11.2 Turn left at school.
- 11.3 Follow narrow gauge track.
- 11.5 Turn right from narrow gauge track and follow road.
- 12.0 Park here and walk short distance to Pot Hole on right.
Return by same road.
- 12.9 Turn right at School #5.
- 13.0 Turn left.
- 13.1 Go straight ahead on concrete highway.
- 14.0 Gravity Slope Colliery of The Hudson Coal Company straight ahead in the distance.
- 14.3 Turn right at Esso gas station. Watch "STOP" sign.
- 15.5 Turn left (Be careful - railroad crossing) and cross O. & W. Railroad and bridge into Jessup Borough.
- 15.6 Keep to right on asphalt pave.
- 16.0 Go under D. & H. Railroad.
- 17.0 Grassy Island Shaft to left.
- 17.1 Cross D. & H. Railroad tracks.
- 17.2 Go straight ahead along D. & H. Railroad tracks.
- 17.5 On left - Olyphant Station.
Meet other group of autos here. Then proceed along D. & H. tracks.

Note:

From this point the itinerary of the group going to the Pot Hole first will be 0.2 mile less.

- 17.6 Keep to the right around flag pole.
- 17.7 Then turn left and cross D. & H. railroad tracks.
Follow trolley track.
- 18.1 On right - Olyphant Shaft of The Hudson Coal Company.
- 18.2 Ahead in the distance is the Underwood Colliery of The Pittston Co.
- 18.4 Throop Borough.
- 19.0 Turn right at school.
- 19.1 Turn left and go straight ahead.
- 20.2 Pass under the transmission line of The Hudson Coal Company.
- 20.3 On left - No. 1 Colliery of The Pittston Company.

Miles

- 20.7 Dunmore Borough.
21.4 Dunmore Corners. Go straight ahead.
21.9 Turn left at overhead railroad tracks and follow route #11.
22.1 Turn right.
22.2 Cross Erie Railroad tracks.
22.7 Turn right and follow route #11.
22.8 Turn left onto Harrison Avenue and go straight through.
23.5 Cross Harrison Avenue bridge.
(D. L. & W. Railroad and Laurel Line (3rd rail) tracks beneath).
23.6 Turn right at traffic light.
Follow route #11 on Moosic Street.
24.1 Turn left at end of bridge and follow route #11 on Pittston Avenue.
25.0 Right in distance - Baker Colliery of The Glen Alden Coal Company.
25.8 Top of hill.
25.9 Watch houses and streets for mine settlement.
26.1 Turn right and go one block.
26.2 Turn left.
26.25 Scranton City Line - Entering Minooka.
26.5 On right in distance - Concrete Breaker of the Taylor Colliery of the
Glen Alden Coal Company.
27.4 On right in distance - Taylor Borough.
28.6 On right in distance - Old Forge Borough.
29.1 Railroad crossing.
29.3 Railroad crossing at foot of hill - Moosic Borough.
29.9 Duryea Borough.
30.0 Bridge over Erie Railroad tracks.
30.3 Avoca Borough.
31.5 Laurel Line (3rd rail) tracks overhead.
D. & H. and Lehigh Valley Railroad tracks to right.
Keep left on Route #315.
Dupont Borough.
31.8 Turn right on Route #315.
33.1 Note mine settlements.
34.6 Pass over Lehigh Valley Railroad tracks.
36.8 On right - The Hudson Coal Company strippings.
37.2 Ahead to the right - City of Wilkes-Barre.
38.1 Note Pottsville conglomerate on distant mountain.
39.5 Junction of highways.
Turn right. Watch "STOP" sign.
39.7 On left - finished stripping.
40.2 Bridge over railroad siding.
40.3 Turn left at foot of hill and follow trolley track.
40.5 East end of Wilkes-Barre.
40.7 Turn left on Mundy Street.
40.9 Go through culvert under railroad tracks.
41.0 Pass over narrow gauge track and park.
Walk ahead to strippings to view fossils.

After returning to autos, go through culvert again, up Mundy Street,
and turn left onto Scott Street. Follow trolley track into Wilkes-Barre.

SCHEDULE FOR SATURDAY, MAY 23RD

Miles

- Leave Hotel Sterling, Wilkes-Barre, Pa., with speedometer at "zero" and proceed South on River Street, one block.
- 0.2 Turn left into Northampton Street and proceed straight ahead.
- 0.7 Cross Pennsylvania and Central R. R. of N. J. tracks at grade.
- 1.1 Proceed straight ahead.
- 1.3 Note steam on mountain in distance ahead of you. This is the Red Ash Mine Fire which you are to visit.
- 1.4 On right - Empire Shops of the Glen Alden Coal Co.
- 2.2 Cross C. R. R. of N. J. tracks at grade.
- 2.7 Note steam on either side of road. This is the Red Ash Mine Fire. Proceed ahead 0.5 mile.
- 3.2 Turn left through stone pillars and continue ahead on lane. Get out of autos and view Red Ash Mine Fire from top of Pottsville conglomerate rocks. Note the glacial markings on the conglomerate rocks near the stone pillars.

The Red Ash Mine Fire originated in the Red Ash Bed about 2000 feet inside of the main slope, about 150 feet below the surface, and was discovered by a miner reporting for work on Monday morning, December 6, 1915.

The actual cause of the fire is unknown. At its peak the fire spread at the rate of 200 to 300 feet per month, which necessitated the drilling of 257 bore holes in order to establish a silt barrier in the mines and prevent the fire from spreading into adjoining properties. The fire is still slowly spreading in a Southerly and Westerly direction.

- 3.5 Turn autos and return by same road. Note the red shale on the left. Continue down the hill and return via Northampton Street.
- 4.3 Cross C. R. R. of N. J. tracks (same as at 2.2). Follow trolley tracks.
- 5.0 Cross D. & W. tracks.
- 5.2 Turn left on Empire Street - asphalt pave. Glen Alden Coal Company's shops on left.
- 5.8 On left Stanton Shaft, Glen Alden Coal Co.
- 6.3 Turn left into Hazle Street - traffic light - Ashley Borough.
- 6.6 Turn right onto brick pave - Blackman Street.
- 7.3 To the right and ahead are the Vulcan Iron Works' buildings.
- 7.35 Turn left into South Main Street. Proceed straight ahead.
- 8.4 Traffic light. On left St. Mary's Cemetery.
- 9.2 On right - Wyoming Valley Country Club.

Miles

- 10.9 Cross trolley track. Continue straight ahead.
This is Hanover Township, reputed to be one of the wealthiest townships in the United States, due to the vast deposits of anthracite coal, which is over 70 ft. thick.
- 11.3 To the left in the distance is Truesdale Colliery of the Glen Alden Coal Co.
Some years ago the company built concrete houses for its employes; the village was known as the Concrete City.
- 11.6 Cross D. L. & W. R. R. branch.
- 12.4 To the left in the distance is Bliss Colliery of the Glen Alden Coal Co.
- 13.2 Turn right to Nanticoke at sign directing to Nanticoke.
- 13.3 On left - Auchincloss Colliery of the Glen Alden Coal Co.
- 13.65 Turn left and follow trolley track.
- 13.7 Turn right onto S. Market Street.
- 14.1 Turn right and go one (1) block.
- 14.15 Turn left.
- 14.4 Traffic light - Go straight ahead.
- 14.6 Turn right.
- 14.65 Turn left.
- 14.9 Cross tracks of Pennsylvania Railroad - Wilkes-Barre to Sunbury Branch.
Enter bridge crossing North Branch of the Susquehanna River.
- 15.2 Turn left at other end of bridge onto Route #11. Watch "STOP" sign.
- 15.4 Short stop for photographing; otherwise do not leave autos.
- 15.5 To the left across the river on the Nanticoke side is the North side of the coal basin. Pottsville conglomerate forms the top of the ridge.
The river and highway continue westward in the valley of Mauch Chunk shales with Pottsville conglomerate capping ridge on opposite side of river. In places, the highway is on Pocono sandstone. Note the well developed high level river terrace. This terrace and others are observed all the way to Berwick, a distance of 20 miles.
- 16.6 On the left are the tracks of the D. L. & W. R. R., Bloomsburg Branch.
The highway here is built on fill in the old Pennsylvania Canal.
Hanlock Creek. Follow Route #11.
- 19.1 On left is generating plant of the Luzerne County Gas & Electric Co.
- 19.4 Across the river is Retreat, Luzerne County home for the aged and feeble minded.
- 20.2 On the left are barns and farm of the Luzerne County home.
- 21.5 Shickshinny.
- 24.5 River and highway turn Southward and cut across strike of strata.
Main area of coal measures ends here, although there are a few small synclines containing coal lying at higher levels to the West of the town. These constitute the most westerly coal measures rocks of the Northern Coal Field.
- 25.4 Across the concrete bridge on left is the West End Coal Company at Mocanaqua.
Stop. Do not get out of autos except to take photographs. Look eastward and observe North side and center of Western end of main coal basin.

Miles

- Pottsville strata can be seen dipping Southward with almost horizontal coal measures sandstones in center.
- 26.0 Stop by houses on right side of road. Do not get out of autos except to take photographs. Look across river and observe Northward dipping Pottsville conglomerate forming ridge with valley developed in underlying Mauch Chunk red shales. High ridge farther South is composed of Pocono and older sandstones and shales.
- 28.6 Stop 15 minutes. Road cut about 12 feet deep in stratified terrace gravels showing steeply dipping beds and syncline on left side of road. Terraces continue toward Berwick.
- 30.5 On left across river is Wapwallopen.
- 32.7 Beech Haven. Note small exposure of Hamilton shales.
- 34.7 Entering Berwick. One of the plants of the American Car & Foundry Company is located here. It was also the home of former Secy. of the Treasury, W. H. Woodin.
- 35.2 Turn right at sign (green & white) of Lucille Tea Room. (DO NOT TURN AT LARGE LUCILLE TEA ROOM SIGN LOCATED ALONG HIGHWAY - EAST OF HOUSES -- GO TO SECOND SIGN). Go past two schools.
- 35.45 Turn right and proceed to Keller's gravel pit straight ahead. Stop 20 minutes and return to main highway.
- 36.0 Turn right onto main highway again.
- 36.25 Passing from Luzerne County to Columbia County.
- 36.6 Turn left at first traffic light.
- 36.7 Enter bridge over D. L. & W. R. R. tracks and Susquehanna River.
- 37.0 Nescopeck. Go straight ahead on Route #93.
- 37.9 Cross Pennsylvania R. R. tracks, Wilkes-Barre to Sunbury Branch. From here to Briggsville (43.0) you cross 4 or 5 well-developed terraces, the upper one considerably dissected. The underlying formations form the South side of an anticline and are in succession, Hamilton, Marcellus, Genesee and Catskill, with few or no exposures.
- 43.0 Briggsville. Begin ascent of Nescopeck Mountain composed of Catskill sandstone on North flank with Pocono sandstone at crest and on South slope.
- 45.9 Entering Conyngham Valley cut in Mauch Chunk shales and confined between Nescopeck Mt. (Pocono sandstone) on North and Buck Mt. (Pottsville conglomerate) on South.
- 46.3 Cross Big Nescopeck Creek. Drive slowly and note limonite coating on stones caused by oxidation of ferrous sulphate-bearing mine waters. Water bitter to taste.
- 47.3 Sybertsville. Pass through to entrance to Conyngham (48.0). Stop, but do not leave autos except to take photographs. Observe Sugar Loaf Mountain to right, capped with detached block of Pottsville conglomerate. Thin coal bed in mountain. Leave Shickshinny Quadrangle and enter Mahoney Quadrangle.
- 49.3 Turn right and start up Buck Mountain which is held up by Pottsville conglomerate.
- 52.1 Enter Black Creek Basin, most northerly coal basin of Eastern Middle Coal Fields.

Miles

- 53.2 Leave Mahanoy Quadrangle and enter Hazleton Quadrangle.
53.5 Turn left at the Miners' Bank.
54.6 On left Altamont Hotel, Hazleton. Probably stop for a few minutes.
Proceed South on Route #29.
55.5 On right, Hazleton Brick Co., which makes high grade building brick
from red shale (Coal Measures).
57.7 Turn left at Reddy's Tydol service station.
Drive 0.5 mile to L. V. R. R. at old Beaver Brook office. Park
autos 20 minutes. See syncline of Mammoth Bed in stripping on
either side of Railroad. South limbs pinched to about $2\frac{1}{2}$ feet.
Return by same road to Route #29.
58.6 Turn left onto Route #29 and proceed one block.
58.7 Turn left at Church and proceed East to Audenried Station of L. V. R.R.
58.9 Keep left and pass old steam locomotives.
59.1 Park at station and observe small syncline of Mammoth Bed in stripping
below station.
Return same road to Route #29.
59.5 Turn left onto Route #29.
60.1 McAdoo Borough.
61.0 Cross bridge over L. V. R. R. - elevation 1836 feet.
63.4 Pass under L. V. R. R. tracks.
66.9 Hometown. Turn right on Route #45 passing over Mauch Chunk shale.
Leave Hazleton Quadrangle and enter Mahanoy Quadrangle.
69.1 Barnesville.
70.6 E. Mahanoy Jct. of Phila. & Reading R. R.
71.0 Turn left over P. & R. R. tracks.
73.9 Approaching Vulcan Summit, Broad Mountain.
Leave Mauch Chunk shale and pass on Pottsville conglomerate. Enter
Mahanoy coal basin.
74.2 Vulcan Summit. Elevation 1600 feet.
74.8 Note bootleg operations near highway.
75.4 Mahanoy City.
75.5 Turn right for one block.
75.6 Turn left and follow Route #45.
77.1 Pass under Railroad.
78.4 Turn right at far end of bridge into Route #45 and stop at St.
Nicholas Breaker. One-half hour to pass through breaker.
78.8 Return to Route #45, turn right and proceed to Shenandoah.
80.7 Enter Shenandoah. Go straight ahead.
81.1 Turn right at traffic light onto Route #142.
82.4 Turn right onto Route #924.
83.2 Turn left off highway. Stop a few minutes to view abandoned strippings
of small syncline of Buck Mt. coal bed, lowest workable bed in region,
on top of North Mahanoy Mountain.
Return to Shenandoah on routes #924 and #142.
84.0 Turn left onto Route #142.
85.4 Turn right onto Route #45. Ferguson Hotel on opposite corner.
Leave Mahanoy Quadrangle and enter Catawissa Quadrangle.
86.0 Cross bridge over railroad and follow Route #45.
86.5 Cross P. & R. R. tracks.

Miles

- 88.3 Turn right and go across small bridge.
89.6 On right - Hammond Colliery of P. & R. C. & I. Co.
90.3 Girardville. Follow Route #45.
92.7 Go under railroad.
93.3 Ashland. If time permits, a visit will be made to the large stripping operation of the Stevens Coal Co., where the Mammoth drag lines of Carey, Baxter & Kennedy are in operation. If Stevens Coal Company stripping is not visited, turn left into Route #122 as you enter Ashland and go to Necho-Allen Hotel, Pottsville, on Route #122. This turn is at 99.4 miles.
Proceed through Ashland. Watch for sign to Centralia at narrow street on right side.
94.2 Turn right onto Route #122.
94.7 Pass from Schuylkill County to Columbia County.
95.6 Centralia.
95.9 Proceed ahead on Route #42 and cross railroad.
96.1 Turn left.
96.2 Go straight ahead to stripping and park autos. This is Stevens Coal Company stripping. return on same road.
96.4 Turn right on Route #42.
96.5 Go straight ahead on Route #122.
98.6 Cross bridge over P. & R. R. tracks and turn left into Centre St., Ashland.
99.4 Turn right on Route #122.
99.7 Cross P. & R. R. tracks and follow Route #122.
100.5 On right - Fountain Springs State Hospital.
100.9 Turn left on Route #122.
105.3 On left - Sub-station of Pennsylvania Power & Light Co.
105.8 Frackville.
106.3 Turn right on Route #122. Leave Mahanoy Quadrangle and enter Pottsville Quadrangle.
111.1 St. Clair.
112.2 Turn right on Route #122.
113.6 Pottsville. Keep on Route #122.
114.3 Turn left on Route #122 into Centre St. and proceed South.
114.8 Necho-Allen Hotel on right - Destination.

Itinerary - Sunday, May 24

Leave Necho Allen Hotel, Pottsville, 8:00 A.M.
Go south on Route 120
Turn left at traffic light on Route 209 for Tamaqua.

Enter Tamaqua
Turn right (south), after crossing R.R. on Route 29.
Drive along Schuylkill River crossing outcrops of Pottsville
and Mauch Chunk formations.
Turn around at Shellhamer's Swimming Pool.

Retrace route. Stop and observe contact of Pottsville and
Mauch Chunk formations exposed along railroad track.
Return to Tamaqua.
Turn right for Coaldale, Route 209.
Proceed to Coaldale under direction of Lehigh Navigation Coal
Co. guides.

Party will split at Coaldale, one part going through mine,
the other going to Summit Hill Fire Stripping.
Parties will then be reversed.

Meet at east end of Lansford.
Proceed by Route 209 through Nesquehoning to outskirts of
Mauch Chunk.
Examine Carnotite in Pottsville Conglomerate.

Disband.