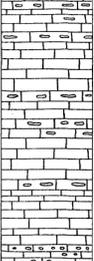
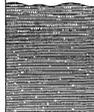
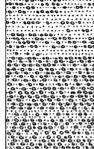
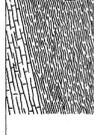


COLUMNAR SECTIONS

GENERALIZED SECTION OF THE ROCKS EXPOSED IN THE RARITAN QUADRANGLE.							
SCALE: 1 INCH = 1000 FEET.							
SYSTEM	FORMATION	SYMBOL	SECTION	THICKNESS IN FEET	CHARACTER OF ROCKS	CHARACTER OF TOPOGRAPHY AND SOIL	
T R I A S S I C (NEWARK GROUP)	Brunswick shale. (Interbedded Watchung basalt.)	Tb (Tw)		5000± (2850)	Soft red shale with local beds of red sandstone. Conglomerates along the western margin of the outcrop. Three basaltic lava flows, having an aggregate thickness of 2550 feet, are interbedded in the shale.	Wide rolling lowland and red sandy clay-loam soil. Basaltic lava flows form low linear hills.	
				(0-600±)	Diabase sheet intrusive in the shale.	Low linear hills and round knobs.	
	Lockatong formation.	Tl		1800-2000	Dark-colored argillite and fine-grained slabby sandstone. Conglomerates along the western margin of the outcrop.	Ridges and plateaus rising steeply above adjacent plains. Sandy clay-loam soil.	
	Stockton formation.	Ts		2300-3100	Gray, yellowish, and reddish-brown sandstone, mostly massive and moderately hard. Basal beds arkosic and locally conglomeratic. Red shale intercalations at various horizons, and conglomerates along the western margin of the outcrop.	Low ridges and valleys. Sandy clay-loam soil.	
	UNCONFORMITY						
	O R D O V I C I A N	Martinsburg shale.	Om		3000±	Fine black shale, slate, and sandstone. Sandstones dark to bluish gray, in part calcareous, and most numerous in upper portion of formation.	High rolling hills, upland floor of Kittatinny Valley. Stony clay and loamy soils, generally thin.
		Jacksonburg limestone.	Oj		125-150	Dark fossiliferous limestone and shale; limestone conglomerate at the base.	Hill slopes. Clayey soil.
		C A M B R I A N	Kittatinny limestone.	Cok		2500-3000±	Massive-bedded bluish-gray magnesian limestone containing layers of black chert and oolite. Shales and interbedded thin limestones at top and base.
	Hardyston quartzite.		Ch		5-200	Arkosic quartzite, in places conglomeratic.	Hill slopes.
	P R E- C A M B R I A N	Byram, Losen, and Pochuck gneisses and Franklin limestone.	bgn lgn pgn fl			Gneisses of both sedimentary and igneous origin and crystalline limestone, composing the basement upon which the Paleozoic sediments were deposited.	High ridges with plateau-like summits, dissected near their margins, and steep slopes. Thick stony soils in areas not covered by glacial drift.

GENERALIZED SECTION OF THE ROCKS EXPOSED IN THE NORTHEAST CORNER OF THE RARITAN QUADRANGLE.						
SCALE: 1 INCH = 1000 FEET.						
SYSTEM	FORMATION	SYMBOL	SECTION	THICKNESS IN FEET	CHARACTER OF ROCKS, TOPOGRAPHY, AND SOIL	
D E V O N I A N	Cornwall ("Pequanac") shale.	De		1000±	Dark thick-bedded shale, somewhat sandy toward the top. Low rolling hills. Sandy clay soil.	
	Kanouse sandstone.	Dk		215	Fine-grained white quartz conglomerate, with greenish sandstone above. Valley bottoms and low ridges. Sandy soil.	
	Decker limestone.	Sd		50	Dark-gray impure siliceous and shaly limestone. Valley bottoms.	
S I L U R I A N	Longwood shale.	Sl		200±	Soft red shale. Valley bottoms. Clay soil, largely covered.	
	Green Pond conglomerate.	Sgp		1500±	Coarse quartz conglomerate, interbedded with and grading upward into quartzite and sandstone. High, steep-sided, even-crested ridges. Sandy soil with numerous rock outcrops.	
UNCONFORMITY						
P R E- C A M B R I A N	Byram, Losen, and Pochuck gneisses and Franklin limestone.	bgn lgn pgn fl			Gneisses of both sedimentary and igneous origin and crystalline limestone, composing the basement upon which the Paleozoic sediments were deposited. High ridges with plateau-like tops and steep slopes. Thick stony soils in areas not covered by glacial drift.	

LIST OF MINES.

Location indicated on the map by numbers.

- | | |
|---------------------------|-----------------------------|
| 1. Cogill. | 89. High Bridge. |
| 2. Denmark. | 90. Kean or Silverthorn. |
| 3. White Meadow. | 91. Van Syckle. |
| 4. Hickory Hill. | 92. Rodenbaugh. |
| 5. Mount Hope (active). | 93. Asbury. |
| 6. Mount Hope (active). | 94. Miller. |
| 7. Teabo. | 95. Maberry. |
| 8. Allen. | 96. Eveland. |
| 9. Richard (active). | 97. Banghart. |
| 10. Baker. | 98. Alvan Gray. |
| 11. Dolan. | 99. Apgar. |
| 12. Mount Pleasant. | 100. Pidcock. |
| 13. Huff. | 101. Sharp. |
| 14. Washington Forge. | 102. Hann. |
| 15. Johnson Hill. | 103. Young. |
| 16. Orchard. | 104. Marsh. |
| 17. Hurd (active). | 105. Derenberger. |
| 18. J. D. King. | 106. Stoutenburg. |
| 19. Stirling. | 107. Lake. |
| 20. Scrub Oak. | 108. Naughtright. |
| 21. Corwin. | 109. Wm. Sharp. |
| 22. Jackson Hill. | 110. Hopler. |
| 23. Randall Hill. | 111. Creamer. |
| 24. Baker. | 112. Mount Olive. |
| 25. Baker. | 113. Drake. |
| 26. Baker. | 114. Osborne. |
| 27. Millen. | 115. Stephens. |
| 28. Canfield. | 116. Church. |
| 29. Canfield's Phosphate. | 117. Hilt. |
| 30. Byram. | 118. Wolf. |
| 31. Brotherton. | 119. Willetts. |
| 32. Dickerson (active). | 120. Wilkinson. |
| 33. Evers. | 121. High Ledge. |
| 34. McFarland. | 122. Lowrance. |
| 35. King. | 123. Stanhope (active). |
| 36. C. King. | 124. Budd. |
| 37. Bryant. | 125. Haggerty. |
| 38. Van Doren. | 126. Gove. |
| 39. Sigler. | 127. Burt. |
| 40. Swedes. | 128. Silver Spring. |
| 41. Munson. | 129. Lurk. |
| 42. Frenchman. | 130. Davenport. |
| 43. Dalrymple. | 131. Hurdton Apatite. |
| 44. Lawrence. | 132. Hurd. |
| 45. De Hart. | 133. Lower Weldon. |
| 46. David Horton. | 134. Upper Weldon. |
| 47. Combs. | 135. Gaffney. |
| 48. Lewis. | 136. Bedell. |
| 49. Connet. | 137. Roseville. |
| 50. Janes. | 138. McKean. |
| 51. Auble. | 139. Silver. |
| 52. Thorp. | 140. Cascade. |
| 53. Barnes. | 141. Glendon. |
| 54. Daniel Horton. | 142. French. |
| 55. Skellenger. | 143. Waterloo. |
| 56. Beemer. | 144. Haggerty. |
| 57. Leake. | 145. Wintermuth. |
| 58. Squier. | 146. Young. |
| 59. Kean. | 147. Frace. |
| 60. Cooper. | 148. Pyle. |
| 61. Swayze. | 149. Hibler. |
| 62. Budd. | 150. Haggerty. |
| 63. Sampson. | 151. Hibler. |
| 64. Creamer. | 152. Schaeffer. |
| 65. Topping. | 153. Ayers. |
| 66. Dickerson Farm. | 154. Cummins. |
| 67. Hedges. | 155. Green Farm. |
| 68. Peach Orchard. | 156. Searle. |
| 69. Quimby. | 157. Tunison. |
| 70. Harden. | 158. Egbert Church. |
| 71. Child. | 159. Bald Pate. |
| 72. Hacklebarney. | 160. Mitchell. |
| 73. Gulick. | 161. Creager. |
| 74. Hacklebarney. | 162. Lanning. |
| 75. Pitney. | 163. McKinley and Carwheel. |
| 76. Langdon. | 164. New and Welch. |
| 77. Rarick. | 165. Pequest. |
| 78. Wortman. | 166. Henry Tunnel. |
| 79. Bartle. | 167. Hoyt. |
| 80. Welch. | 168. Hoagland. |
| 81. Fox Hill. | 169. Cook. |
| 82. Burrill. | 170. Kishpaugh. |
| 83. Cokesbury. | 171. Inshow. |
| 84. Old Furnace. | 172. Stinson. |
| 85. Emery. | 173. Albertson. |
| 86. Sharp. | 174. Davis. |
| 87. Annandale. | 175. Shaw. |
| 88. Large. | 176. Howell. |