EXPLANATION

SEDIMENTARY ROCKS

Pleistocene

Moraine deposits

Undifferentiated sedimentary rocks
Copperas Mountain and Green Pond Mountain are underlain by the Green Pond conglomerate (Silurian). South of Picatinny Lake the pre-Cambrian rocks are overlain by the Hardyston quartzite (Cambrian)

CAMBRIAN, QUATERNARY AND SILURIAN

IGNEOUS ROCKS

TRIASSIC

Diabase
Fine-grained to aphanitic dikes

Granite pegmatite
Pink to white, coarse grained and massive. Composed principally of microcline microperthite, quartz, and sodic plagioclase

Alaskite
Medium- to coarse-grained predominantly gneissoid granite composed principally of microperthite, quartz, and oligoclase. Includes local bodies of microantiperthite granite and granite pegmatite. Amphibolite inclusions are common

Hornblende granite
Medium- to coarse-grained predominantly gneissoid granite composed principally of microperthite, quartz, oligoclase, and hornblende (ferrchastingsite). Includes local bodies of biotite granite (gb), hornblende granite gneiss (gmc), granodiorite, and granite pegmatite. Amphibolite inclusions are common

Hornblende granite and alaskite
Contains more than 20 percent metasedimentary rocks, principally amphibolite

Albite-oligoclase granite
Contains more than 20 percent metasedimentary rocks

Albite-oligoclase granite
Medium- to coarse-grained gneissoid granite and granite gneiss composed principally of albite-oligoclase and quartz. Includes some albite granosyenite pegmatite. Amphibolite inclusions are common

Quartz diorite and related facies
Medium- to coarse-grained gneissic quartz diorite and minor diorite. Composed principally of andesine, hypersthene, and quartz. Amphibolite layers are abundant

PRE-CAMBRIAN

METASEDIMENTARY ROCKS

The age relations of the following rocks are imperfectly known

Skarn and related rocks
Medium- to coarse-grained pyroxene skarn, hornblende skarn, and amphibole-spinel-mica skarn. Contains local bodies of marble, silicated marble, serpentine, and pyrozene gneiss

Amphibolite and related rocks
Medium-grained hornblende and pyrozene amphibolite; minor amphibolite migmatite and schist

Oligoclase-quartz-biotite gneiss
Medium-grained, well-layered gneiss. Locally magnetite is the predominant accessory mineral

Biotite-quartz-feldspar gneiss
Medium- to coarse-grained gneiss of widely different composition. The predominant facies is composed of biotite, quartz, and oligoclase; minor facies are characterized by abundant garnet and microperthite, and locally by sillimanite and graphite. Contains local small bodies of amphibolite and pyrozene skarn

Undifferentiated metasedimentary rocks
Medium- to fine-grained rocks. Includes plagioclase-quartz gneiss, pyrozene gneiss, pyrozene skarn, and amphibolite. Locally thin layers of albite-oligoclase granite are interleaved with these rocks

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Contact, showing dip
Long dashes where approximately located, short dashes where concealed

Approximate outline of rock exposures

High-angle fault showing dip, approximately located
U, *upthrown side*; D, *downthrown side*

Probable fault
Dotted where concealed

Syncline
Showing trace of axial plane, and bearing and plunge of axis

Overturned anticline
Showing trace of axial plane, direction of dip of limbs, and bearing and plunge of axis

Plunge of minor anticline

Plunge of minor syncline

Plunge of fold axis

Generalized strike and plunge of crenulated foliation

Strike and dip of beds

Strike of vertical beds

Strike and dip of foliation

Strike of vertical foliation

Strike of vertical foliation and plunge of lineation

Bearing and plunge of lineation

Strike and dip of foliation and plunge of lineation

Magnetite deposits, showing dip
Known ore, in part mined out

Line of strong to moderate magnetic attraction

Concealed magnetite deposits

Mine

Shaft

Prospect

Base from Army Map Service of the Boonton, Chester, Dover, Mendham, and Newfoundland quadrangles

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C.
MR-4556

Geology by P. K. Sims, E. S. Davidson, and G. S. Koch, Jr., 1947–49. Surveyed in cooperation with the New Jersey Bureau of Mineral Research

GEOLOGIC MAP AND SECTIONS OF THE DOVER MAGNETITE DISTRICT, MORRIS COUNTY, NEW JERSEY

Scale 1:31,680

1 0 3 Miles

Contour interval 20 feet
Datum is mean sea level

LIST OF MINES, PROSPECTS, AND SHAFTS

WHARTON ORE BELT

1. Prospect
2. Prospect
3. Cogill mine
4. Prospect
5. Denmark mine
6. Prospect
7. Prospect
8. Bush mine
9. Spencer shaft
10. Fowler shaft
11. Brown shaft
12. New Leonard shaft (Mount Hope mine)
13. Elizabeth shaft
14. Carlton shaft
15. Teabo No. 5 shaft
16. Teabo No. 3 shaft
17. Allen mine
18. Sweetser shaft (Richard mine)
19. Baker mine (Mine Hill)
20. Dolan mine
21. Mount Pleasant mine
22. Bull Frog mine
23. West Mount Pleasant mine
24. Washington Forge mine
25. Huff mine
26. Orchard mine
27. Hurd mine
28. Harvey mine
29. New Sterling shaft
30. Sterling shaft (Sterling mine)
31. Prospect
32. J. D. King mine
33. No. 1 shaft (Scrub Oaks mine)
34. Corwin mine
35. Jackson Hill mine
36. Randall Hill mine
37. Prospect
38. Baker mine (at the base of the hill)
39. Baker mine No. 1
40. Millen mine
41. Byram mine
42. Canfield mine
43. Brotherton mine
44. Evers mine
45. Dickerson shaft (Dickerson mine)
46. Singer shaft
47. Canfield phosphate shaft
48. Black Hills mine
49. McFarland mine
50. King mine
51. C. King mine
52. Bryant mine

DALRYMPLE ORE BELT

53. George mine
54. Dalrymple mine
55. Trowbridge mine
56. Lawrence mine
57. DeHart mine
58. David Horton mine
59. Henderson mine

BEACH GLEN ORE BELT

60. Swedes mine
61. Prospect
62. Beach Glen mine

HIBERNIA POND-HIBERNIA ORE BELT

63. Hibernia Pond anomaly
64. Hibernia mine
65. Beach mine
66. No. 12 shaft (Hibernia mine)
67. Fairview mine
68. Prospect
69. Birch mine
70. Prospect
71. Prospect

WHITE MEADOW-COBB ORE BELT

72. White Meadow mines
73. Prospect
74. Prospect
75. Righter mine
76. Cobb mine

SPLITROCK POND-CHARLOTTESBURG ORE BELT

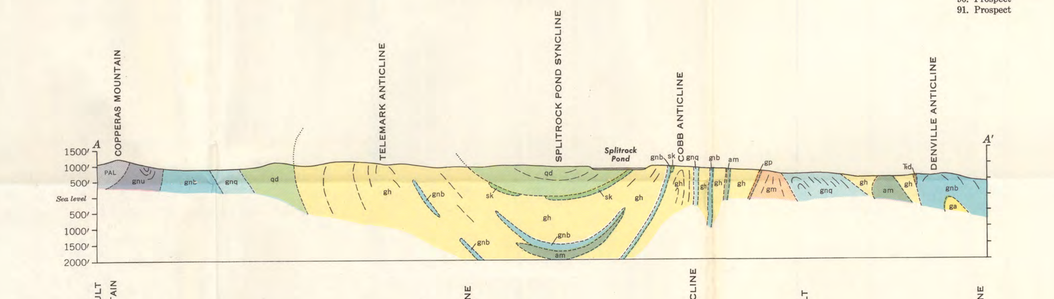
77. Splitrock Pond mine
78. Wood mine
79. Prospect
80. Charlottesburg mine

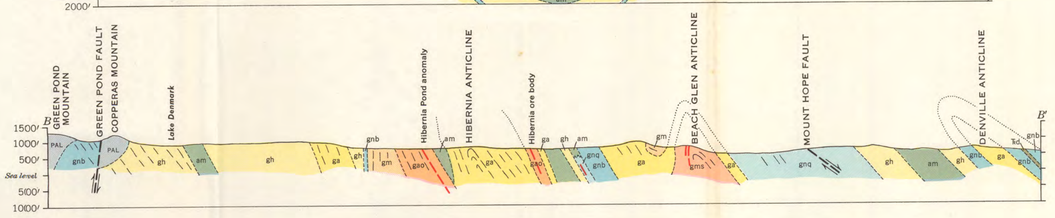
GREEN POND ORE BELT

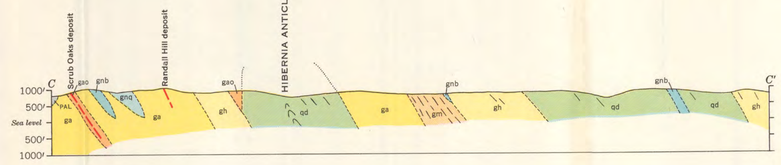
81. Prospect
82. Bancroft shaft
83. Copperas mine
84. Green Pond mines
85. Davenport mine
86. Winter mine

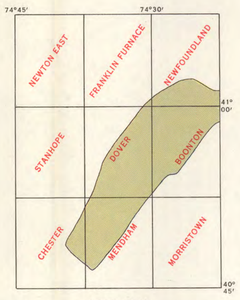
OTHERS

87. Pardee mine
88. Combs mine
89. Cooper prospect
90. Prospect
91. Prospect









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