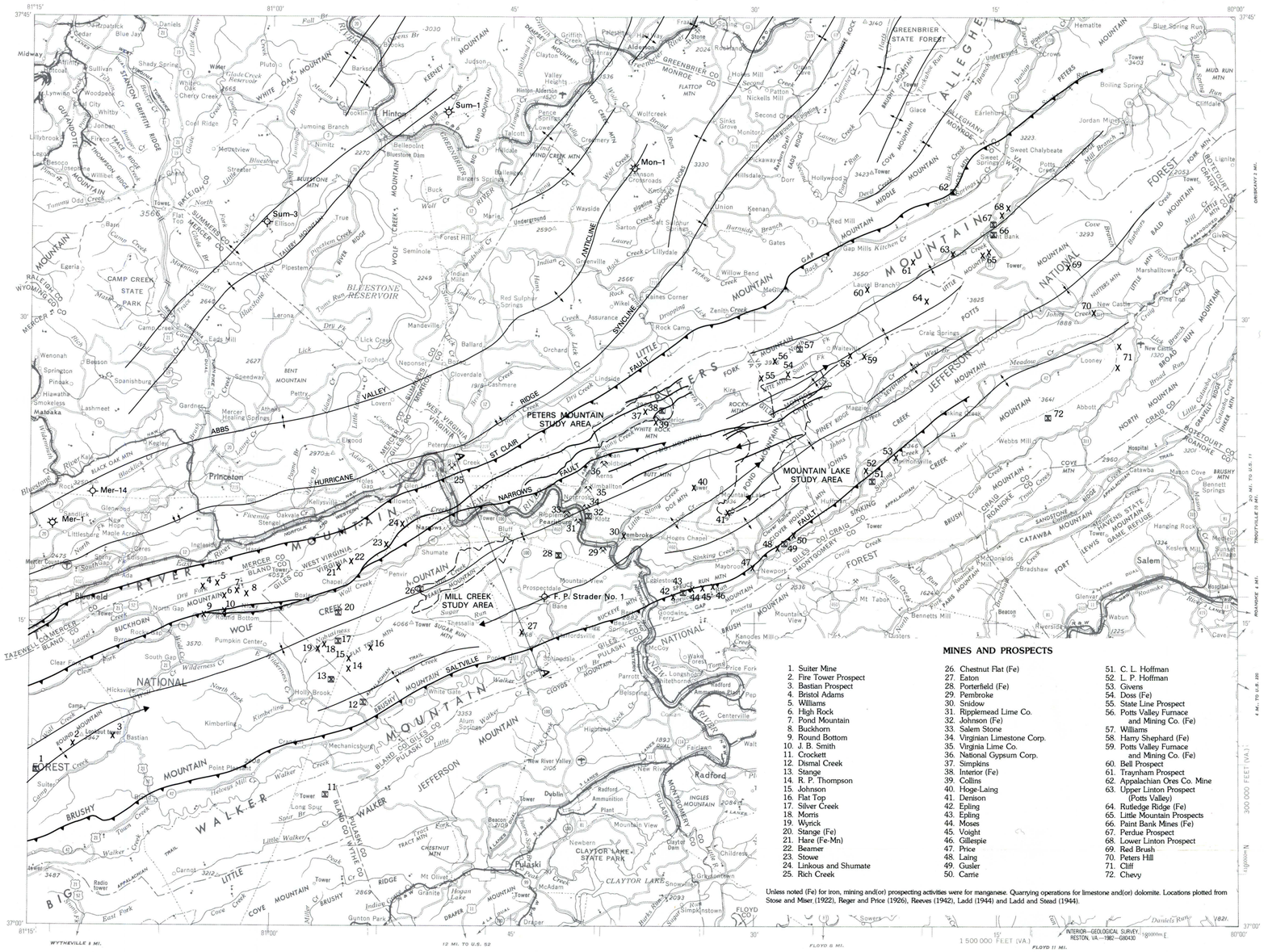


Base from U.S. Geological Survey, Bluefield, 1966

Structure modified from Butts (1933) and Cardwell and others (1968)

SCALE 1:250 000

5 0 5 10 15 20 25 MILES

5 0 5 10 15 20 25 30 35 KILOMETERS

NATIONAL GEODETIC VERTICAL DATUM OF 1929

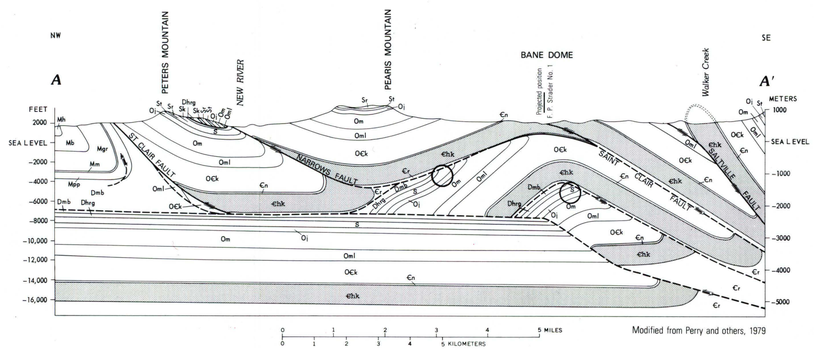
MINES AND PROSPECTS

1. Suiter Mine
2. Fire Tower Prospect
3. Bastian Prospect
4. Bristol Adams
5. Williams
6. High Rock
7. Pond Mountain
8. Buckhorn
9. Round Bottom
10. J. B. Smith
11. Crockett
12. Dismal Creek
13. Stange
14. R. P. Thompson
15. Johnson
16. Flat Top
17. Silver Creek
18. Morris
19. Wyrick
20. Stange (Fe)
21. Hare (Fe-Mn)
22. Beamer
23. Stowe
24. Linkous and Shumate
25. Rich Creek
26. Chestnut Flat (Fe)
27. Eaton
28. Porterfield (Fe)
29. Pembroke
30. Snidow
31. Ripplemead Lime Co.
32. Johnson (Fe)
33. Salem Stone
34. Virginian Limestone Corp.
35. Virginia Lime Co.
36. National Gypsum Corp.
37. Simpkins
38. Interior (Fe)
39. Collins
40. Hoge-Laing
41. Denison
42. Epling
43. Epling
44. Moses
45. Voight
46. Gillespie
47. Price
48. Laing
49. Gusler
50. Carrie
51. C. L. Hoffman
52. L. P. Hoffman
53. Givens
54. Doss (Fe)
55. State Line Prospect
56. Potts Valley Furnace and Mining Co. (Fe)
57. Williams
58. Harry Shephard (Fe)
59. Potts Valley Furnace and Mining Co. (Fe)
60. Bell Prospect
61. Traynham Prospect
62. Appalachian Ores Co. Mine
63. Upper Linton Prospect (Potts Valley)
64. Rutledge Ridge (Fe)
65. Little Mountain Prospects
66. Paint Bank Mines (Fe)
67. Perdue Prospect
68. Lower Linton Prospect
69. Red Brush
70. Peters Hill
71. Cliff
72. Chevy

Unless noted (Fe) for iron, mining and(or) prospecting activities were for manganese. Quarrying operations for limestone and(or) dolomite. Locations plotted from Stose and Miser (1922), Reger and Price (1926), Reeves (1942), Ladd (1944) and Ladd and Stead (1944).

EXPLANATION OF MAP SYMBOLS

- Anticline, showing trace of axial plane and direction of plunge
- Syncline, showing trace of axial plane and direction of plunge
- Overturned syncline, showing trace of axial plane and direction of dip of limbs
- Major thrust fault—Dashed where approximately located
- Minor thrust fault
- Abandoned mine
- Prospect
- Limestone quarry
- Abandoned limestone quarry
- Dry hole with show of gas
- Dry hole



Modified from Perry and others, 1979

EXPLANATION OF CROSS SECTION UNITS

MISSISSIPPIAN
- Mh Hinton Formation
- Mb Bluefield Formation
- Mgr Greenbrier Limestone
- Mm Maccrady Shale
- Mpp Price (Pocono, in part) Formation

DEVONIAN
- Dmb Millboro and Brailler Shales
- Dhrg Huntersville Chert of Price (1929) and Rocky Gap Sandstone of Swartz (1929)

SILURIAN
- Sk Keefer Sandstone
- Sr Rose Hill Formation
- St Tuscarora Quartzite
- S Silurian, undivided

ORDOVICIAN
- Oj Juniata Formation
- Om Martinsburg Shale
- Oml Middle Ordovician limestones, undivided

ORDOVICIAN AND CAMBRIAN
- OCk Knox Dolomite or Group

CAMBRIAN
- Єn Nolichucky Shale
- Єhk Honaker Dolomite
- Єr Rome Formation

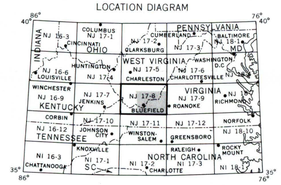
- Contact—Dotted where projected above land surface
- Thrust fault—Dashed where approximately located. Arrows show relative movement
- Circle indicates inferred prospective area

Cross-sectional model, Giles County, Virginia

Surface geology of cross-sectional model is based on unpublished geologic map of Giles County, Virginia, compiled by William A. Moon chiefly from master's theses in the files of the Department of Geological Sciences, Virginia Polytechnic Institute and State University, modified in the Pearls Mountain-Bane area by reconnaissance mapping by M. P. Foose, F. G. Lesure, W. J. Perry, Helmuth Wedow, and P. L. Weiss.

The model is based on the following assumptions: (1) a nearly flat basement, (2) constant thickess of most formations, except where beds are overturned resulting in tectonic thinning, and (3) material balance so that if various fault blocks are restored to a predeformational condition no serious gaps or overlaps occur. Drill holes northwest of the St. Clair fault provide control for stratigraphic thickness of Mississippian, Devonian, and Silurian rocks.

LOCATION DIAGRAM



STRUCTURAL MAP, CROSS-SECTIONAL MODEL, AND MINE AND PROSPECT LOCATIONS, GILES COUNTY, VIRGINIA, AND VICINITY