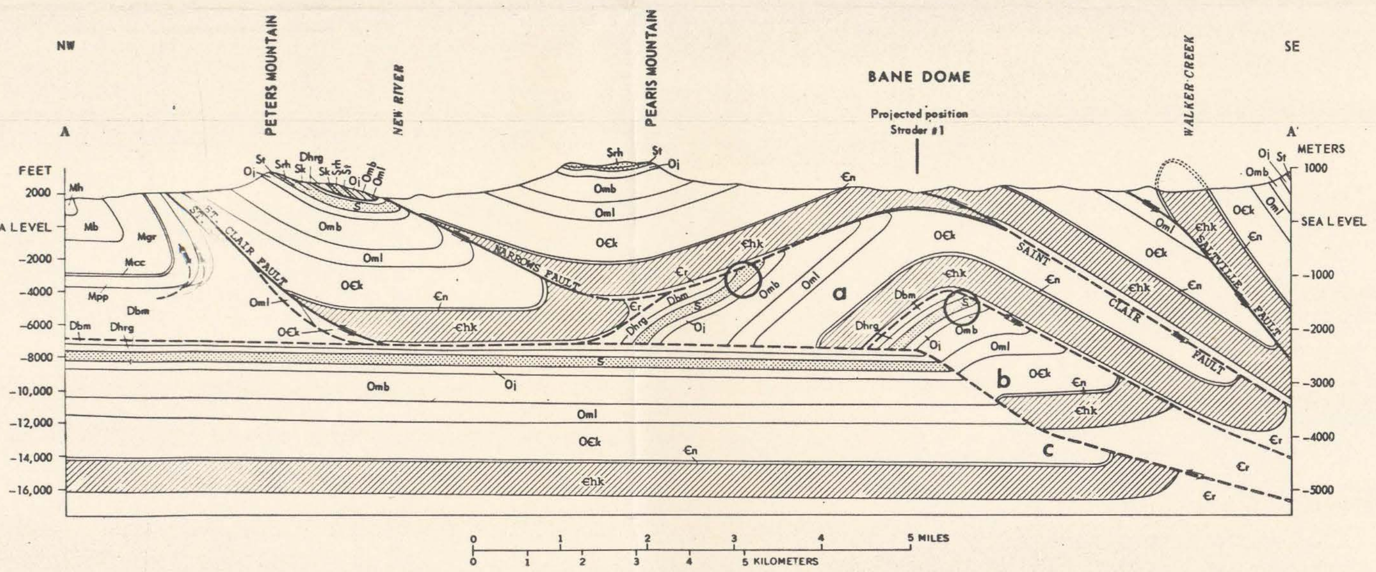
DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

OPEN FILE REPORT 78-1076
LESURE AND OTHERS—MINERAL RESOURCES, MILL CREEK, MOUNTAIN LAKE, AND PETERS MOUNTAIN WILDERNESS STUDY AREAS, VA.- W. VA.
PLATE 1 OF 6



Cross-sectional model, Giles County, Va. Modified after Perry and others, 1979

Surface geology of cross-sectional model is based on unpublished geologic map of Giles County, Virginia, compiled by William A. Moon chiefly from master's theses in the files of the Department of Geological Sciences,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 Pearis 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) constancy 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 pre-deformational 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.

EXPLANATION

Circle indicates inferred prospective area

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

DEVONIAN
Dbm-Brailler and Millboro Shales
Dhrg-Rocky Gap Sandstone and Huntersville Chert

SILURIAN
Sk -Keefer Sandstone
Srh-Rose Hill Shale
St -Tuscarora Sandstone
S - Silurian undivided

ORDOVICIAN
Oj -Juniata Formation
Omb-Martinsburg Shale
Oml-Middle Ordovician Limestones, undivided

ORDOVICIAN AND CAMBRIAN
OЄk-Knox Dolomite or Group

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

EXPLANATION

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

Thrust Faults

Major Fault

Minor Fault

Abandoned mine

X Prospect

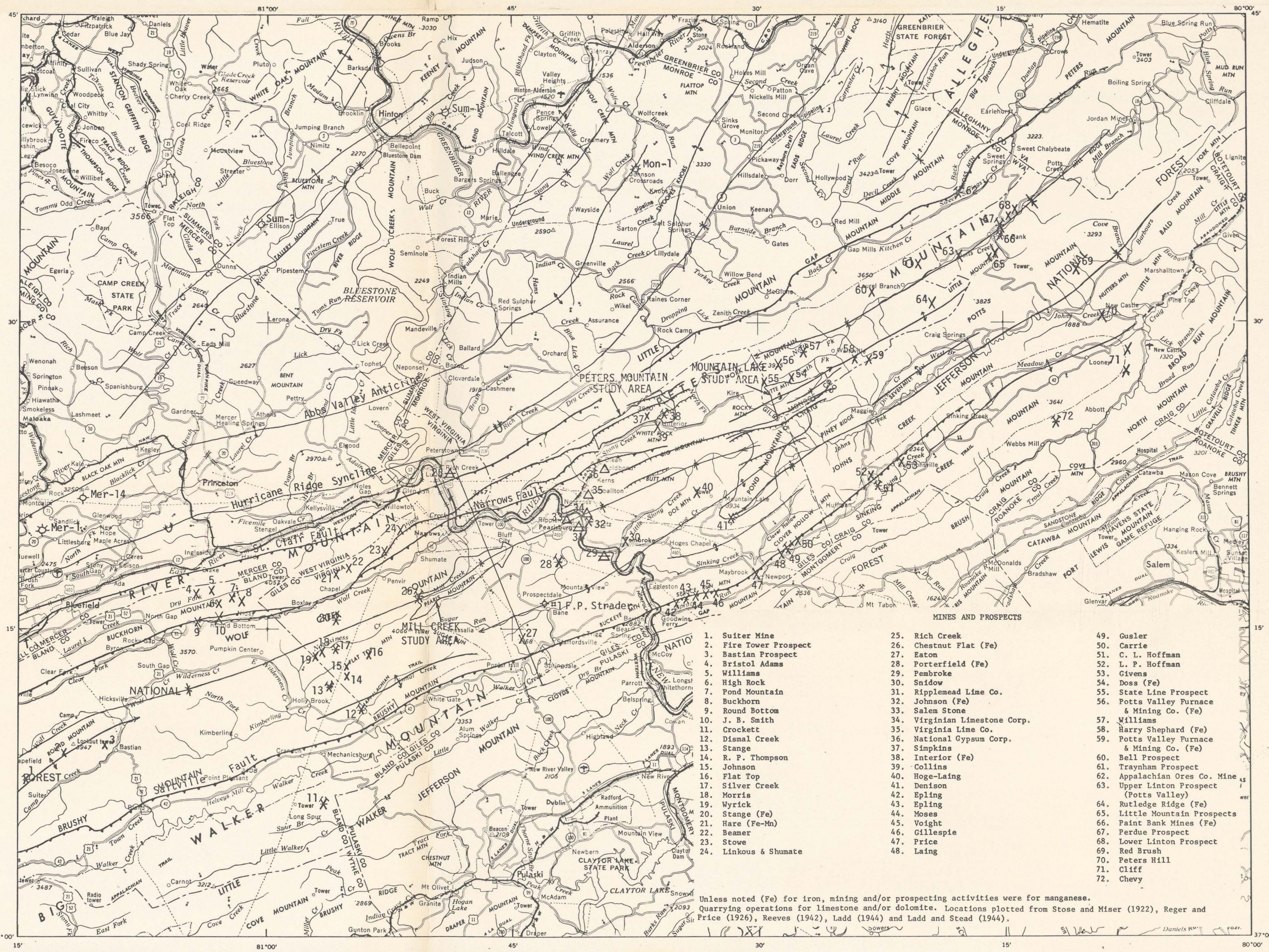
Limestone quarry

Limestone quarry (abandoned)

Oil and gas exploratory drill hole

Dry hole with show of gas

Dry hole



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 & 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 & Mining Co. (Fe)
57. Williams
58. Harry Shephard (Fe)
59. Potts Valley Furnace & 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).

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

SCALE [redacted]

5 0 5 10 15 20 25 MILES

5 0 5 10 15 20 25 30 35 KILOMETERS

Structure modified after Butts, 1933, and Cardwell and others, 1968.

STRUCTURAL MAP AND CROSS-SECTIONAL MODEL OF GILES COUNTY, VIRGINIA, AND VICINITY SHOWING FAULTS, FOLD AXES, AND LOCATION OF MINES AND PROSPECTS

By
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1978