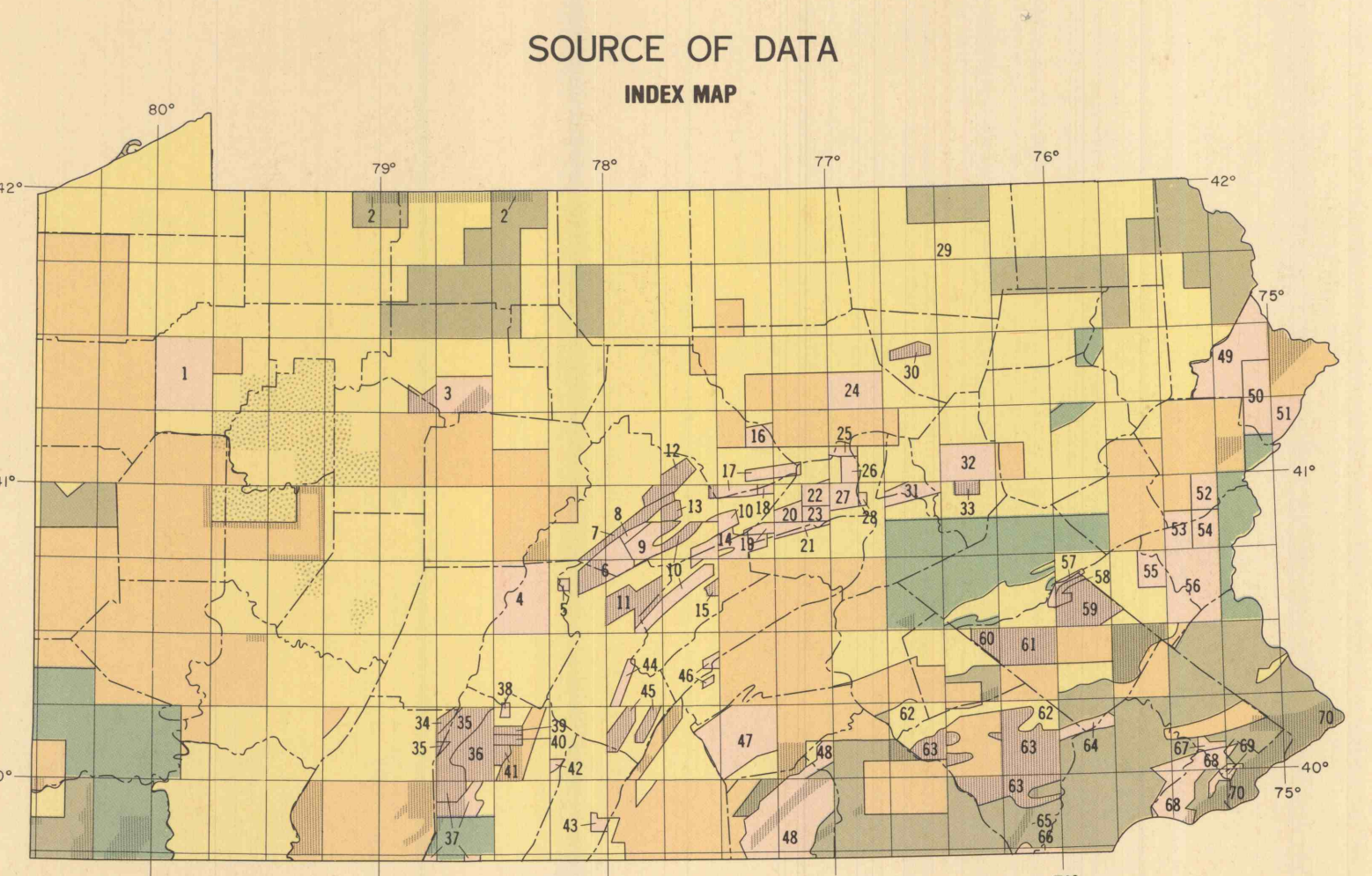
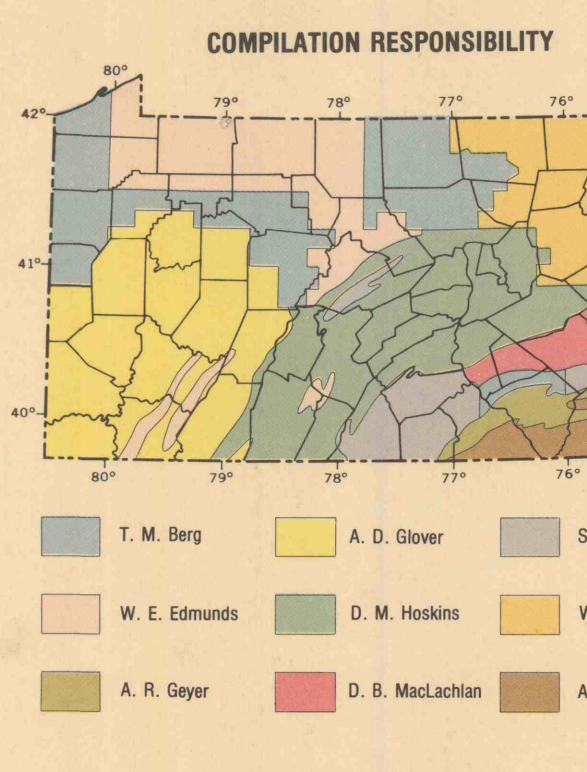


PENNSYLVANIA

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EXPLANATION

- U. S. Geological Survey Geologic Quadrangle Maps and Miscellaneous Publications from 1902 to 1962.
- Geologic maps compiled by the U. S. Geological Survey from 1902 to 1962.
- Geologic maps compiled for the 1962 date geologic map, not based on the base map, but on topographic contour lines shown on the base map.
- Geologic maps compiled since 1962, based on an update of the Pennsylvania Geologic Survey or U. S. Geological Survey, include 1962 to 1967.
- Geologic maps compiled by compiler for this date geologic map based on information from published reports, extensive and geologic maps, and other sources, including U. S. Geological Survey, Pennsylvania Geologic Survey, and Pennsylvania State University.
- Minor modifications by compiler.
- Division contour and some road outcrop lines from W. A. Seaton, Fletcher & Phipps Co. Co.

NUMBERED SOURCES

The list of sources below refers to numbered areas on the index map above.

Area	Source	Author	Date
1	1	W. C. Edwards	1902
2	2	A. D. Oliver	1902
3	3	G. I. Hart	1902
4	4	W. C. Edwards	1902
5	5	A. D. Oliver	1902
6	6	G. I. Hart	1902
7	7	W. C. Edwards	1902
8	8	A. D. Oliver	1902
9	9	G. I. Hart	1902
10	10	W. C. Edwards	1902
11	11	A. D. Oliver	1902
12	12	G. I. Hart	1902
13	13	W. C. Edwards	1902
14	14	A. D. Oliver	1902
15	15	G. I. Hart	1902
16	16	W. C. Edwards	1902
17	17	A. D. Oliver	1902
18	18	G. I. Hart	1902
19	19	W. C. Edwards	1902
20	20	A. D. Oliver	1902
21	21	G. I. Hart	1902
22	22	W. C. Edwards	1902
23	23	A. D. Oliver	1902
24	24	G. I. Hart	1902
25	25	W. C. Edwards	1902
26	26	A. D. Oliver	1902
27	27	G. I. Hart	1902
28	28	W. C. Edwards	1902
29	29	A. D. Oliver	1902
30	30	G. I. Hart	1902
31	31	W. C. Edwards	1902
32	32	A. D. Oliver	1902
33	33	G. I. Hart	1902
34	34	W. C. Edwards	1902
35	35	A. D. Oliver	1902
36	36	G. I. Hart	1902
37	37	W. C. Edwards	1902
38	38	A. D. Oliver	1902
39	39	G. I. Hart	1902
40	40	W. C. Edwards	1902
41	41	A. D. Oliver	1902
42	42	G. I. Hart	1902
43	43	W. C. Edwards	1902
44	44	A. D. Oliver	1902
45	45	G. I. Hart	1902
46	46	W. C. Edwards	1902
47	47	A. D. Oliver	1902
48	48	G. I. Hart	1902
49	49	W. C. Edwards	1902
50	50	A. D. Oliver	1902
51	51	G. I. Hart	1902
52	52	W. C. Edwards	1902
53	53	A. D. Oliver	1902
54	54	G. I. Hart	1902
55	55	W. C. Edwards	1902
56	56	A. D. Oliver	1902
57	57	G. I. Hart	1902
58	58	W. C. Edwards	1902
59	59	A. D. Oliver	1902
60	60	G. I. Hart	1902
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63	63	G. I. Hart	1902
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66	66	G. I. Hart	1902
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85	85	W. C. Edwards	1902
86	86	A. D. Oliver	1902
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88	88	W. C. Edwards	1902
89	89	A. D. Oliver	1902
90	90	G. I. Hart	1902
91	91	W. C. Edwards	1902
92	92	A. D. Oliver	1902
93	93	G. I. Hart	1902
94	94	W. C. Edwards	1902
95	95	A. D. Oliver	1902
96	96	G. I. Hart	1902
97	97	W. C. Edwards	1902
98	98	A. D. Oliver	1902
99	99	G. I. Hart	1902
100	100	W. C. Edwards	1902

KEY TO TYPE OF DATA

- Geologic map compiled by compiler
- Geologic map compiled by U. S. Geological Survey
- Geologic map compiled by Pennsylvania Geologic Survey
- Geologic map compiled by Pennsylvania State University
- Geologic map compiled by other sources

GLACIAL BORDERS

North-south and north-south-southwest-trending glacial borders in Pennsylvania and Maryland. The borders are shown as dashed lines on the map. The borders are defined by the following criteria:

- 1. The border is a straight line.
- 2. The border is a curve.
- 3. The border is a series of small curves.
- 4. The border is a series of larger curves.
- 5. The border is a series of irregular curves.

NUMERICAL SOURCES

The list of sources below refers to numbered areas on the index map above.

KEY TO TYPE OF DATA

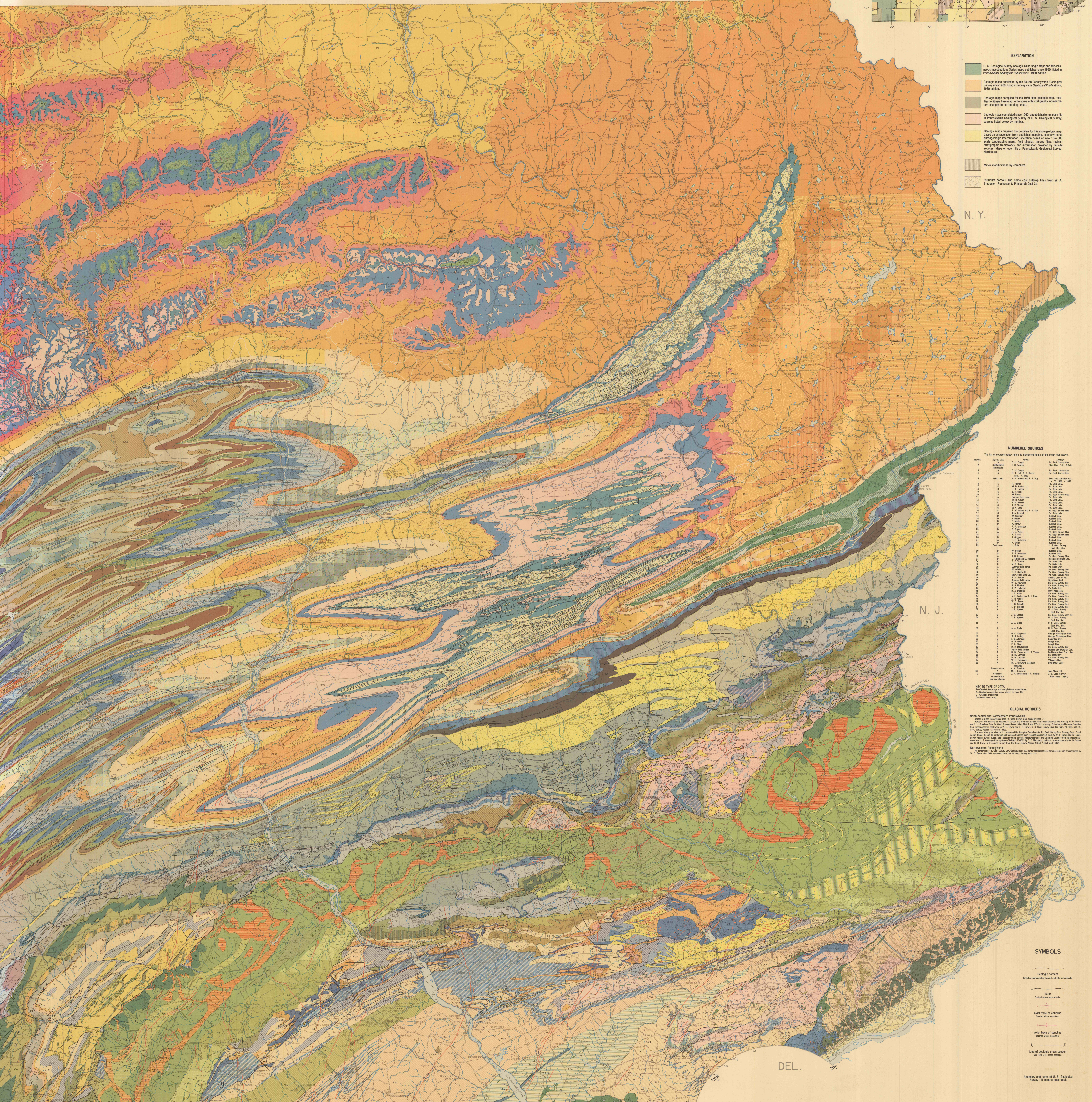
GLACIAL BORDERS

NUMERICAL SOURCES

KEY TO TYPE OF DATA

GLACIAL BORDERS

NUMERICAL SOURCES



SILURIAN	ORDOVICIAN	CAMBRIAN	PROBABLY LOWER PALEOZOIC	PRECAMBRIAN
<p>WILLIAMSBURG FORMATION</p> <p>Thinly bedded, gray to blue-gray, shaly, micaceous sandstone and shale, with thin layers of limestone and cherty limestone. Contains abundant graptolites and other fossils.</p>	<p>LEHIGH VALLEY SEQUENCE</p> <p>LEHIGH VALLEY SEQUENCE</p> <p>LEHIGH VALLEY SEQUENCE</p>	<p>LEHIGH VALLEY SEQUENCE</p> <p>LEHIGH VALLEY SEQUENCE</p> <p>LEHIGH VALLEY SEQUENCE</p>	<p>LEHIGH VALLEY SEQUENCE</p> <p>LEHIGH VALLEY SEQUENCE</p> <p>LEHIGH VALLEY SEQUENCE</p>	<p>LEHIGH VALLEY SEQUENCE</p> <p>LEHIGH VALLEY SEQUENCE</p> <p>LEHIGH VALLEY SEQUENCE</p>
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