EXPLANATION

The maps indexed are published areal geologic maps on scales larger than 1:2,500,000 (40 miles to the inch) and mine maps that show geologic boundaries. The areas covered by the maps are outlined by colored lines that indicate scale, except those that are less than 1 mile on any side, which are shown by the symbol x. Maps that show only a part of the geologic formations or contain blank areas are outlined by short dashed lines. The number inside the colored outline identifies each geologic map in the key printed below. Structure sections, block diagrams, and structure contour maps without geologic boundaries are omitted in this compilation.

SCALES INDICATED BY COLORED LINES

- Scale larger than 1:38,400, or 3,200 feet to the inch.
- Scale 1:38,400 to 1:76,800, or 3,200 to 6,400 feet to the inch.
- Scale 1:76,800 to 1:153,600, or 1.21 to 2.42 miles to the inch.
- Scale 1:153,600 to 1:307,200, or 2.42 to 4.85 miles to the inch.
- Scale 1:307,200 to 1:614,400, or 4.85 to 9.70 miles to the inch.
- Scale 1:614,400 to 1:1,228,800, or 9.70 to 19.39 miles to the inch.
- Scale smaller than 1:1,228,800, or 19.39 miles to the inch.

MAPS CONTAINING SOME BLANK AREAS

- Scale larger than 1:38,400, or 3,200 feet to the inch.
- Scale 1:38,400 to 1:153,600, or 3,200 to 12,800 feet (2.42 miles) to the inch.
- Scale 1:153,600 to 1:614,400, or 2.42 to 9.70 miles to the inch.
- Scale smaller than 1:614,400, or 9.70 miles to the inch.

STATE MAP

Geologic map of Montana (black and white), by D. A. Andrews, G. S. Lambert, and G. W. Stose, scale 1:500,000: U. S. Geological Survey Oil and Gas Investigations Preliminary Map 25, 1946.

KEY TO INDEX MAP

Many of the publication titles are abbreviated. The authors named are those responsible for the geologic mapping, if that information is given, and are not always the authors of the reports in which the maps appear.

1. Livingston quadrangle: U. S. G. S. Geol. Folio 1, 1894. 1:250,000, J. P. Iddings and W. H. Weed.
2. Three Forks quadrangle: U. S. G. S. Geol. Folio 24, 1896. 1:250,000, A. C. Peale.
3. Butte quadrangle: U. S. G. S. Geol. Folio 38, 1897. 1:15,000, S. F. Emmons, W. H. Weed, and G. W. Tower, Jr. (Same as No. 79, pl. 10.) Butte mining district: 16th Internat. Geol. Cong. Guidebook 23, 1932. Pl. 1, 1:20,000, E. S. Perry. World copper resources: 16th Internat. Geol. Cong., vol. 1, 1935. Pl. 16, 1:6,000, L. H. Hart.
4. Fort Benton quadrangle: U. S. G. S. Geol. Folio 55, 1899. 1:250,000, W. H. Weed.
5. Little Belt Mountains quadrangle: U. S. G. S. Geol. Folio 56, 1899. 1:250,000, W. H. Weed.
6. Aladdin quadrangle: U. S. G. S. Geol. Folio 128, 1905. 1:125,000, N. H. Darton and C. C. O'Harra.
7. Philipsburg quadrangle: U. S. G. S. Geol. Folio 196, 1915. 1:125,000, F. C. Calkins. (Same as No. 78, pl. 1.)
8. Eastern Stillwater complex, chromite: U. S. G. S. Bull. 922-N, 1941. (a) Pl. 63, 1:48,000, (b) pl. 64, 1:4,800, J. W. Peoples and A. L. Howland (same area as No. 160, fig. 5). Also other mine maps.
9. Philipsburg, manganese deposits: U. S. G. S. Bull. 922-G, 1940. Pl. 26, 1:12,000, E. N. Goddard. Also other mine maps. Montana, Utah, Oregon, and Washington, manganese deposits: U. S. G. S. Bull. 725, pp. 141-243, 1921. Pl. 7, 1:18,000, J. T. Pardee.
10. Mizpah coal field, Custer County: U. S. G. S. Bull. 906-C, 1940. Pl. 16, 1:62,500, F. S. Parker.
11. McCone County, coal resources: U. S. G. S. Bull. 905, 1939. Pl. 1, 1:125,000, M. M. Knechtel (from A. J. Collier, C. E. Dobbin, and W. T. Thom, Jr.).
12. Big Horn County and Crow Indian Reservation, geology: U. S. G. S. Bull. 856, 1935. Pl. 1, 1:187,500, and pl. 14, 1:160,000, (coal outcrop), W. T. Thom, Jr.
13. Rosebud coal field: U. S. G. S. Bull. 847-B, 1936. Pl. 11, 1:62,500, W. G. Pierce.
14. Richey-Lambert coal field: U. S. G. S. Bull. 847-C, 1936. Pl. 22, 1:62,500, A. J. Collier and F. S. Parker.
15. Maxville, Philipsburg, and Avon, phosphate rock: U. S. G. S. Bull. 847-D, 1936. (a) Pls. 28 and 29, 1:62,500, J. T. Pardee, F. C. Calkins, and W. H. Emmons; (b) pl. 33, 1:960, (c) pl. 32, 1:62,500, J. T. Pardee.
16. North-central Chouteau, western Hill, and eastern Liberty Counties, geology and mineral resources: U. S. G. S. Bull. 847-F, 1937. Pl. 43, 1:125,000, W. G. Pierce and C. B. Hunt.
17. Greater Helena region, metalliferous deposits: U. S. G. S. Bull. 842, 1933. (a) Pl. 1, 1:500,000, C. H. Clapp, J. T. Pardee, and others; (b) pl. 2, 1:250,000, J. T. Pardee, Russell Gibson, and others; (c) pl. 3, 1:62,500, W. H. Weed (includes area in No. 199, fig. 8); (d) pl. 4, 1:2,400, W. F. Jones, 1:48,000, Joseph Barrell; (e) fig. 6, (f) pl. 15, 1:62,500, J. T. Pardee and Russell Gibson; (g) fig. 4, 1:21,120, (h) fig. 6, 1:4,800, (i) pl. 7, 1:62,500, (j) pl. 10, 1:55,000, (k) fig. 16, 1:1,680, (l) fig. 2, 1:6,000, (m) pl. 18, 1:12,000, and mine maps, (n) pl. 28, 1:1,200, and pl. 21, 1:600, (o) pl. 45, 1:50,000 (similar to area in No. 199, fig. 3), (p) pl. 31, 1:4,800, (q) fig. 31, 1:21,120, (r) pl. 39, 1:5,400, (s) pl. 41, 1:18,000 (similar to area in No. 199, fig. 13), J. T. Pardee and F. C. Schrader; (t) fig. 28, 1:125,000, R. W. Stone.
18. Ashland coal field: U. S. G. S. Bull. 831, pp. 19-105, 1932. Pl. 3, 1:62,500, N. W. Bass.
19. Parts of Carbon, Big Horn, Yellowstone, and Stillwater Counties, geology and mineral resources: U. S. G. S. Bull. 822, pp. 1-70, 1931. Pl. 1, 1:125,000, E. S. Knappen and G. F. Moulton.
20. Forsyth coal field: U. S. G. S. Bull. 812, pp. 1-55, 1930. Pl. 7, 1:125,000, C. E. Dobbin.
21. New World or Cooke City mining district: U. S. G. S. Bull. 811, pp. 1-87, 1930. (a) Pl. 1, 1:31,680, (b) fig. 5, 1:600, (c) pl. 18, 1:6,000, (d) pl. 21, 1:1,800, T. S. Lovering.
22. Sheridan coal field, northward extension: U. S. G. S. Bull. 806, pp. 15-67, 1929. Pls. 28 and 29, 1:62,500, A. A. Baker.
23. Plains adjacent to Highwood Mountains, thrust faulting and oil possibilities: U. S. G. S. Bull. 806, pp. 155-195, 1929. Pl. 44, 1:250,000, Frank Reeves, W. H. Weed, and L. V. Pirsson.
24. Rainy Creek district, vermiculite and other mineral deposits: U. S. G. S. Bull. 805, pp. 17-29, 1929. Pl. 1, 1:58,000, J. T. Pardee and E. S. Larsen. Libby, alkaline rocks near: Jour. Geology, vol. 37, pp. 97-112, 1929. Fig. 1, 1:100,000, E. S. Larsen and J. T. Pardee.
25. Eastern Montana and adjacent areas, physiography and glacial geology: U. S. G. S. Prof. Paper 174, 1932. Pl. 1, 1:500,000, W. C. Alden. Central and eastern Montana, preliminary geologic map: Montana Bur. Mines and Metallurgy, 1921. 1:500,000, G. S. Lambert.
26. Big Snowy Mountains, geology: U. S. G. S. Prof. Paper 165, pp. 135-149, 1931. Pl. 38, 1:125,000, Frank Reeves.
27. Katka, Tunnel No. 8, and Kootenai Falls dam sites, upper tributaries of Columbia River: U. S. G. S. Water-Supply Paper 866, pp. 1-36, 1941. (a) Pl. 5, 1:3,600, (b) fig. 1, 1:5,000, C. E. Erdmann.
28. Central and southern Rosebud County, geology and ground-water resources: U. S. G. S. Water-Supply Paper 600, 1929. Pl. 1, 1:250,000, and fig. 15, 1:158,000, H. C. Renick.
29. Yellowstone and Treasure Counties, ground water: U. S. G. S. Water-Supply Paper 599, 1929. Pl. 7, 1:250,000, G. M. Hall.
30. Townsend Valley, geology and ground-water resources: U. S. G. S. Water-Supply Paper 539, 1925. Fig. 3, 1:500,000, J. T. Pardee.
31. Musselshell and Golden Valley Counties, ground water: U. S. G. S. Water-Supply Paper 518, 1924. Pl. 1, 1:250,000, A. J. Ellis.
32. Three Forks-Yellowstone Park region, phosphate rock: U. S. G. S. Bull. 795, pp. 147-209, 1928. Pl. 12, 1:250,000, D. D. Condit, E. H. Finch, and J. T. Pardee.
33. Ingomar anticline: U. S. G. S. Bull. 786, pp. 1-37, 1926. Pl. 1, 1:63,360, K. C. Heald and W. W. Rubey.
34. Cat Creek and Devils Basin oil fields: U. S. G. S. Bull. 786, pp. 39-98, 1927. (a) Pl. 3, 1:125,000 and 1:63,360, (b) fig. 7, 1:760,320, Frank Reeves.
35. Melrose phosphate field: U. S. G. S. Bull. 780, pp. 1-32, 1925. (a) Pl. 1, 1:62,500, R. W. Richards and J. T. Pardee; (b) pl. 2, 1:62,500, H. S. Gale.
36. Faulted area south of Bearpaw Mountains, geology and oil and gas possibilities: U. S. G. S. Bull. 751, pp. 71-114, 1924. (a) Pl. 12, 1:125,000, W. T. Thom, Jr.; (b) pl. 13, 1:250,000 (includes area in No. 36a), Frank Reeves (partly from E. R. Lloyd, Eugene Stebinger, M. N. Bramlette, and James Gilluly); (c) pl. 11, 1:250,000, Frank Reeves. Bearpaw Mountains, structure: Am. Jour. Sci., 5th ser., vol. 8, pp. 296-311, 1924. (b) Fig. 2, 1:1,734,000, Frank Reeves. Bearpaw Mountains, thrust faults adjacent to: Geol. Soc. America Bull., vol. 57, pp. 1033-1048, 1946. (b) Pl. 1, 1:1,200,000, Frank Reeves.
37. Scobey lignite field: U. S. G. S. Bull. 751, pp. 157-230, 1924. Pl. 29, 1:250,000, A. J. Collier.
38. Ekalaka lignite field: U. S. G. S. Bull. 751, pp. 231-267, 1924. (a) Pl. 30, 1:500,000, (b) pl. 33, 1:125,000, C. M. Bauer.
39. Tullock Creek coal field: U. S. G. S. Bull. 749, 1923. Pl. 10, 1:125,000, G. S. Rogers, Wallace Lee, and H. M. Robinson.
40. South of Little Rocky Mountains, oil possibilities in laccolithic domes: U. S. G. S. Bull. 736, pp. 171-178, 1922. Fig. 8, 1:125,000, A. J. Collier and S. H. Cathcart.
41. Shoshone County, Idaho, geology and ore deposits: U. S. G. S. Bull. 732, 1923. Pl. 2, 1:62,500, F. C. Calkins.
42. Stillwater and Sweet Grass Counties, chromite: U. S. G. S. Bull. 725, pp. 67-84, 1921. Fig. 20, 1:148,000, L. G. Westgate.
43. Beartooth Mountain region, dating sedimentation, vulcanism, and orogeny by heavy minerals: Geol. Soc. America Bull., vol. 57, pp. 675-685, 1946. Pl. 1, 1:270,000, M. H. Stow.
44. Stanford, iron-ore deposits near: U. S. G. S. Bull. 715, pp. 85-92, 1920. Fig. 9, 1:500,000, L. G. Westgate.
45. Maxville, phosphate rock near: U. S. G. S. Bull. 715, pp. 141-145, 1921. Pl. 13, 1:125,000, J. T. Pardee.
46. Huntley field, geology and oil and gas prospects: U. S. G. S. Bull. 711, pp. 105-148, 1920. Pl. 14, 1:125,000, E. T. Hancock.
47. Montana earthquake of June 27, 1925: U. S. G. S. Prof. Paper 147, pp. 7-23, 1926. Pl. 4, 1:174,000, J. T. Pardee.
48. Western Montana and adjacent areas, oil shale: U. S. G. S. Bull. 711, pp. 15-40, 1919. Pl. 3, 1:1,000,000 (Phosphoria formation), D. D. Condit.
49. Central Montana during Eagle and Judith River epochs: U. S. G. S. Prof. Paper 125, pp. 11-21, 1919. Pl. 4, 1:250,000, C. F. Bowen.
50. Northeastern Montana, geology: U. S. G. S. Prof. Paper 120, pp. 17-39, 1918. (a) Pl. 1, 1:1,000,000, A. J. Collier (partly from C. D. Smith, A. L. Beekly, C. A. Bauer, and A. J. Collier), (b) fig. 2, 1:114,000, A. J. Collier.
51. Southwestern Montana and adjacent areas, late Paleozoic and early Mesozoic formations: U. S. G. S. Prof. Paper 120, pp. 111-121, 1918. Pl. 9, 1:1,000,000, (Phosphoria formation), D. D. Condit.
52. Northern Great Plains, Flaxville gravel and its relation to other terrace gravels: U. S. G. S. Prof. Paper 108, pp. 179-184, 1918. Pl. 62, 1:1,000,000, A. J. Collier and W. T. Thom, Jr.
53. Little Bitterroot Valley, artesian water for irrigation: U. S. G. S. Water-Supply Paper 400, pp. 9-37, 1916. Pl. 1, 1:220,000, O. E. Meinzer, R. W. Stone, and Eugene Stebinger.
54. Lake Basin field, oil and gas possibilities: U. S. G. S. Bull. 691, pp. 101-147, 1918. Pl. 16, 1:125,000, E. T. Hancock.
55. Birch Creek-Sun River area, oil and gas geology: U. S. G. S. Bull. 691, pp. 149-184, 1919. Pl. 24, 1:125,000, Eugene Stebinger and M. I. Goldman.
56. Bowdoin dome: U. S. G. S. Bull. 661, pp. 193-209, 1917. Pl. 16, 1:375,000, A. J. Collier.
57. Northwestern Garnet Range, ore deposits: U. S. G. S. Bull. 660, pp. 159-239, 1918. (a) Pl. 6, 1:125,000, (b) pl. 7, 1:2,400, pl. 8, 1:1,200, and pl. 9, 1:5,400, (c) fig. 22, 1:18,000, (d) fig. 23, 1:48,000 (area similar to No. 199, fig. 7), (e) fig. 25, 1:18,800, J. T. Pardee.
58. Dunkleberg mining district: U. S. G. S. Bull. 660, pp. 241-247, 1917. Pl. 10, 1:63,360, J. T. Pardee.
59. Bull Mountain coal field: U. S. G. S. Bull. 647, 1917. (a) Pl. 1, 1:125,000, (b) pls. 12 to 36, 1:62,500, L. H. Woolsey, R. W. Richards, and C. T. Lupton.
60. North-central Montana, oil and gas possibilities: U. S. G. S. Bull. 641, pp. 49-91, 1916. (a) Pl. 4, 1:1,000,000, (b) pl. 5, 1:62,500, Eugene Stebinger and L. J. Pepperberg.
61. Upper Stillwater Basin, geology: U. S. G. S. Bull. 641, pp. 199-214, 1916. Pl. 21, 1:148,000, W. R. Calvert.
62. Hound Creek district of Great Falls coal field: U. S. G. S. Bull. 641, pp. 215-231, 1916. Pl. 22, 1:125,000, W. R. Calvert, V. H. Barnett, and J. R. Hoats.
63. Blackfeet Indian Reservation, anticlines: U. S. G. S. Bull. 641, pp. 281-305, 1917. Pl. 24, 1:500,000, Eugene Stebinger. (Same as No. 66, pl. 15.)
64. Garrison and Philipsburg phosphate fields: U. S. G. S. Bull. 640, pp. 195-228, 1917. Pl. 8, 1:125,000, J. T. Pardee.
65. Porcupine dome, oil possibilities: U. S. G. S. Bull. 621, pp. 61-70, 1915. Pl. 10, 1:250,000, C. F. Bowen.
66. Northern Teton County, geology and coal resources: U. S. G. S. Bull. 621, pp. 117-156, 1916. Pl. 15, 1:500,000, Eugene Stebinger. (Pl. 15 is same as No. 63.)
67. Overland Route, guidebook: U. S. G. S. Bull. 612, 1915. Sheet 15-D, R. W. Stone and others.
68. Northern Pacific Route, guidebook: U. S. G. S. Bull. 611, 1915. Sheets 10 to 20, 1:500,000, M. R. Campbell and others.
69. Elliston phosphate field: U. S. G. S. Bull. 580, pp. 373-383, 1914. Pl. 9, 1:62,500, R. W. Stone and C. A. Bonine.
70. Dillon quadrangle, mining districts: U. S. G. S. Bull. 574, 1914. (a) Fig. 3, 1:63,360, (b) fig. 4, (c) fig. 5, 1:48,000, (d) fig. 6, 1:102,000, (e) fig. 7, 1:31,680, (f) fig. 8, 1:126,720, (g) fig. 9, 1:100,000, and fig. 15, 1:126,720, (h) fig. 10, 1:63,360, (i) fig. 11, 1:80,000, (j) fig. 12, 1:126,720, (k) fig. 14, 1:105,000, (l) fig. 16, 1:102,000, A. N. Winchell. (No. 70-l includes area in No. 199, fig. 4.)
71. Plentywood and Scobey, lignite: U. S. G. S. Bull. 541, pp. 293-315, 1914. (a) Pl. 15, 1:125,000, (b) pl. 16, 1:125,000, C. M. Bauer.
72. Between Musselshell and Judith, coal discovery: U. S. G. S. Bull. 541, pp. 329-337, 1914. Pl. 19, 1:500,000, C. F. Bowen. North-central Montana, Judith River formation: U. S. G. S. Prof. Paper 90, pp. 96-153, 1915. Pl. 10, 1:500,000, C. F. Bowen.
73. Cleveland coal field: U. S. G. S. Bull. 541, pp. 338-355, 1914. Pl. 20, 1:125,000, C. F. Bowen.
74. Big Sandy coal field: U. S. G. S. Bull. 541, pp. 356-378, 1914. Pl. 21, 1:125,000, C. F. Bowen.
75. Region around Mullan, Idaho, and Saltese, Mont., economic geology: U. S. G. S. Bull. 540, pp. 167-211, 1914. Pl. 3, 1:142,000, F. C. Calkins and E. L. Jones.
76. Blackfeet Indian Reservation, titaniferous magnetite beds: U. S. G. S. Bull. 540, pp. 329-337, 1914. Pl. 7, 1:500,000, Eugene Stebinger.
77. Montana coal fields: U. S. 10th Census, vol. 15, pp. 739-757, 1886. (a) Pls. 55 to 59, 1:250,000, W. R. Calvert; (b) pl. 59, 1:625,000, Waldemar Lindgren.
78. Philipsburg quadrangle, geology and ore deposits: U. S. G. S. Prof. Paper 78, 1913. (a) Fig. 32, 1:900, (b) fig. 42, 1:1,200, F. C. Calkins. (Pl. 1, 1:125,000, F. C. Calkins, is same as No. 7.)
79. Butte district, geology and ore deposits: U. S. G. S. Prof. Paper 74, 1912. Pl. 1, 1:250,000, W. H. Weed. Also mine maps. (Pl. 10, 1:15,000, W. H. Weed, S. F. Emmons, and G. W. Tower, is same as No. 3.)
80. Marysville mining district: U. S. G. S. Prof. Paper 57, 1907. (a) Pl. 1, 1:31,250, (b) fig. 2, 1:3,600, and pl. 8, 1:1,440, Joseph Barrell.
81. Bighorn Mountains, geology: U. S. G. S. Prof. Paper 51, 1906. Pl. 47, 1:250,000, N. H. Darton.
82. Montana lobe of Keewatin ice sheet: U. S. G. S. Prof. Paper 50, 1906. Pl. 1, 1:1,250,000 (glacial geology), F. H. H. Calhoun.
83. Central Great Plains, geology and underground water resources: U. S. G. S. Prof. Paper 32, 1905. Pl. 35, 1:2,250,000, N. H. Darton.
84. Bitterroot Range and Clearwater Mountains, geological reconnaissance across: U. S. G. S. Prof. Paper 27, 1904. Pl. 1, 1:625,000, Waldemar Lindgren.
85. Little Sheep Mountain coal field: U. S. G. S. Bull. 531, pp. 159-227, 1913. Pl. 13, 1:750,000, G. S. Rogers.
86. Southwestern Montana, coal in Tertiary lake beds: U. S. G. S. Bull. 531, pp. 229-244, 1913. Pl. 14, 1:750,000, J. T. Pardee.
87. Helena mining region, ore deposits: U. S. G. S. Bull. 527, 1913. (a) Pl. 1, 1:250,000, Adolph Knopf and H. G. Ferguson; (b) pl. 7, 1:62,500, W. H. Weed.
88. Eastern Montana, lignite fields: U. S. G. S. Bull. 471, pp. 187-201, 1912. Fig. 7, 1:1,000,000, W. R. Calvert.
89. Baker lignite field, Custer County: U. S. G. S. Bull. 471, pp. 202-226, 1912. Pl. 15, 1:125,000, C. F. Bowen.
90. Terry lignite field, Custer County: U. S. G. S. Bull. 471, pp. 227-270, 1912. Pl. 18, 1:125,000, F. A. Herald.
91. Glendive lignite field, Dawson County: U. S. G. S. Bull. 471, pp. 271-283, 1912. Pl. 20, 1:125,000, J. H. Hance.
92. Sidney lignite field, Dawson County: U. S. G. S. Bull. 471, pp. 284-318, 1912. Pls. 23 and 24, 1:62,500, Eugene Stebinger.
93. Culbertson lignite field, Valley County: U. S. G. S. Bull. 471, pp. 319-358, 1912. (a) Pl. 26, 1:62,500, (b) pl. 27, 1:250,000, A. L. Beekly.
94. Milk River coal field, southern extension: U. S. G. S. Bull. 471, pp. 359-383, 1912. Pl. 28, 1:125,000, L. J. Pepperberg.
95. Livingston and Trail Creek coal fields: U. S. G. S. Bull. 471, pp. 384-405, 1912. Pl. 29, 1:125,000, W. R. Calvert.
96. Electric coal field, Park County: U. S. G. S. Bull. 471, pp. 406-422, 1912. Pl. 30, 1:62,500, W. R. Calvert.
97. Upper St. Joe River Basin, geology and mineralization: U. S. G. S. Bull. 470, pp. 39-61, 1911. Pl. 2, 1:250,000, J. T. Pardee.
98. Elkhorn Mountains, ore deposits: U. S. G. S. Bull. 470, pp. 75-98, 1911. Pl. 3, 1:125,000, R. W. Stone.
99. Fort Peck Indian Reservation lignite field: U. S. G. S. Bull. 381, pp. 40-59, 1910. Pl. 3, 1:312,500, C. D. Smith, J. A. Davis, E. B. Hopkins, and E. L. DeGolyer.
100. Bull Mountain coal field, central part: U. S. G. S. Bull. 381, pp. 60-81, 1910. Pls. 4 and 5, 1:63,360 (coal outcrops), R. W. Richards.
101. Milk River coal field: U. S. G. S. Bull. 381, pp. 82-107, 1910. Pl. 6, 1:380,160, L. J. Pepperberg.
102. Custer National Forest, coals: U. S. G. S. Bull. 381, pp. 108-114, 1910. Pl. 7, 1:250,000, C. H. Wegemann.
103. Northeast side Bighorn Basin, Wyo., and Bridger, Mont., coal fields: U. S. G. S. Bull. 341, pp. 165-199, 1909. Pl. 10, 1:250,000 (coal outcrops), C. W. Washburne and M. A. Pishel. Carbon County, coals: U. S. G. S. Bull. 316, pp. 174-193, 1907. Pl. 11, 1:250,000 (coal outcrops), N. H. Darton.
104. Sentinel Butte lignite field: U. S. G. S. Bull. 341, pp. 15-35, 1909. Pl. 2, 1:250,000, A. G. Leonard, C. D. Smith, and F. A. Kay.
105. Miles City coal field: U. S. G. S. Bull. 341, pp. 36-61, 1909. Pl. 3, 1:250,000, A. J. Collier, C. D. Smith, and C. H. Wegemann.
106. Bull Mountain coal field: U. S. G. S. Bull. 341, pp. 62-77, 1909. Pl. 4, 1:62,500, L. H. Woolsey and R. W. Richards.
107. Crazy Mountains, coal near: U. S. G. S. Bull. 341, pp. 78-91, 1909. Pl. 5, 1:250,000 (Eagle sandstone outcrop), R. W. Stone and M. J. Goldman.
108. Red Lodge coal field: U. S. G. S. Bull. 341, pp. 92-107, 1909. Pl. 6, 1:62,500 (coal outcrop), E. G. Woodruff, J. E. Carman, and C. H. Winchester.
109. Lewistown coal field: U. S. G. S. Bull. 341, pp. 108-122, 1909. Pl. 7, 1:250,000, W. R. Calvert and Eugene Stebinger.
110. Little Rocky Mountains, gold deposits: U. S. G. S. Bull. 340, pp. 96-116, 1908. Fig. 3, 1:8,400, W. H. Emmons. Ruby Gulch gold mining district, Little Rocky Mountains: Econ. Geology, vol. 34, pp. 201-213, 1939. Fig. 2, 1:1,200, A. J. Dyson.
111. Bighorn Basin, gas fields: U. S. G. S. Bull. 340, pp. 348-363, 1908. Pl. 3, 1:250,000, C. W. Washburne.
112. Yellowstone National Park: U. S. G. S. Mon. 32, pt. 2, 1904. (a) Sheets 10, 11, 12, and 14, 1:125,000, and Sheet 17, 1:250,000, (b) pl. 16, 1:31,680, Arnold Hague. Electric Peak and Sepulchre Mountain, Yellowstone National Park, eruptive rocks: U. S. G. S. Ann. Rept. 12, pt. 1, pp. 569-664, 1891. (b) Pl. 53, 1:31,680, Arnold Hague.
113. Northwest Wyoming, geological reconnaissance: U. S. G. S. Bull. 119, 1894. Pl. 1, 1:700,000, G. H. Eldridge.
114. Eastern Bull Mountain coal field: U. S. G. S. Bull. 431, pp. 163-189, 1911. Pls. 6 and 7, 1:62,360 (coal outcrop), C. T. Lupton and Henry Hinds.
115. Great Falls coal field: U. S. G. S. Bull. 356, 1909. Pl. 1, 1:125,000, C. A. Fisher.
116. Highwood Mountains, petrography and geology of igneous rocks: U. S. G. S. Bull. 237, 1905. Pl. 3, 1:250,000, W. H. Weed and L. V. Pirsson.
117. Castle Mountain mining district: U. S. G. S. Bull. 139, 1896. Pl. 3, 1:220,000, W. H. Weed.
118. Three Forks, Paleozoic section: U. S. G. S. Bull. 110, 1893. Pl. 1, 1:250,000, A. C. Peale.
119. Lewistown coal field: U. S. G. S. Bull. 390, 1909. Pl. 1, 1:125,000, W. R. Calvert.
120. Little Belt Mountains, geology: U. S. G. S. Ann. Rept. 20, pt. 3, pp. 257-461, 1900. Pl. 41, 1:250,000, W. H. Weed.
121. Elkhorn mining district, geology and ore deposits: U. S. G. S. Ann. Rept. 22, pt. 2, pp. 399-549, 1901. Pl. 45, 1:31,680, W. H. Weed.
122. Kicking Horse dome and Simmons Creek anticlinal nose, Toole County, areal and structural geology: U. S. G. S. Prelim. map, Press release 8178, 1942. 1:62,500, C. E. Erdmann.
123. Little Rocky Mountains, plains adjacent to: U. S. G. S. Oil and Gas Prelim. Map 4, 1944. (a) Pl. 1, 1:48,000, M. M. Knechtel, S. R. Brockunier, and S. W. Hobbs; (b) fig. 3, 1:187,680, M. M. Knechtel.
124. Cedar Creek anticline, Dawson, Prairie, Wibaux, and Fallon Counties: U. S. G. S. Geol. and structure map, 1934. 1:62,500, C. E. Erdmann and R. M. Larsen.
125. Laramie and overlying Livingston formation: U. S. G. S. Bull. 105, 1893. Pl. 1, 1:250,000, W. H. Weed.
126. Great Falls region, geology and water resources: U. S. G. S. Water-Supply Paper 221, 1909. Pl. 1, 1:250,000, C. A. Fisher and W. R. Calvert.
127. Elk Basin oil and gas field and vicinity: U. S. G. S. Geol. and structure map, 1944. 1:31,680, C. J. Hares and J. C. Miller. Wyoming, petroleum and natural-gas fields: U. S. Bur. Mines Bull. 418, 1941. Fig. 23, 1:16,000, H. T. Morley.
128. Northern Idaho and northwestern Montana, geological reconnaissance: U. S. G. S. Bull. 384, 1909. Pl. 1, 1:1,450,000, F. C. Calkins.
129. Montana plains: U. S. G. S. Structure contour map, 1932, 1935, 1940. 1:625,000 (igneous rock outcrops), C. E. Dobbin and C. E. Erdmann.
130. Yellowstone Valley north of the park, glaciation: U. S. G. S. Bull. 104, 1893. Pl. 1, 1:250,000, W. H. Weed.
131. Hungry Horse Dam and Reservoir site, upper tributaries of Columbia River: U. S. G. S. Water-Supply Paper 866-B, 1944. (a) Pl. 8, 1:4,800, (b) pl. 10, 1:16,000, C. E. Erdmann.
132. Montana, ornamental stone deposits: U. S. G. S. Circ. 4, 1933. Fig. 1, 1:500,000, G. R. Mansfield.
133. Judith Mountains, geology and mineral resources: U. S. G. S. Ann. Rept. 18, pt. 3, pp. 437-616, 1898. (a) Pl. 75, 1:125,000, (b) fig. 47, (c) fig. 48, 1:62,500, W. H. Weed and L. V. Pirsson.
134. Middle Cambrian fossils near Noxon, new locality: Am. Jour. Sci., 5th ser., vol. 34, pp. 411-427, 1937. Fig. 3, 1:74,000, Ian Campbell, R. P. Sharp, and H. R. Gale.
135. Silver Star chromite deposit, Madison County: U. S. G. S. Prelim. map, 1943. 1:600, H. L. James.
136. Red Lodge, chromite deposits near: U. S. G. S. Prof. Paper 945-F, 1947 (preliminary maps released in 1943). (a) Pl. 53, 1:24,000, (b) pl. 56, 1:1,200 (same area as No. 160, pl. 7), (c) pl. 57, 1:1,200 (same area as No. 160, fig. 8), (d) pl. 58, 1:1,200 (same area as No. 160, fig. 12), (e) pl. 59, 1:1,200 (same area as No. 160, fig. 13), (f) pl. 64, 1:600, H. L. James.
137. Montana corundum mine, Gallatin County: U. S. G. S. Open file report, 1944. 1:2,400, S. K. Neuschel and F. C. Armstrong.
138. Willishaw Flats anticlinal nose, Toole County: U. S. G. S. Reconnaissance map, 1939. 1:174,240, C. E. Erdmann.
139. Dunkirk-Chester region, Toole and Liberty Counties: U. S. G. S. Structure contour map, 1939. 1:125,000, C. E. Erdmann.
140. Great Falls-Conrad region: U. S. G. S. Press release, 1930. 1:250,000, C. E. Dobbin and C. E. Erdmann.
141. Cut Bank-West Kevin-Border districts: U. S. G. S. Structure contour map, 1939. 1:125,000, C. E. Erdmann and N. A. Davis. Revised edition, 1946, C. E. Erdmann, William Beer, and J. W. Nordquist.
142. Northern Big Belt Range, igneous rocks: Geol. Soc. America Bull., vol. 55, pp. 445-472, 1944. Pl. 1, 1:285,000, J. B. Lyons.
143. Three Forks, stratigraphy and structure: Geol. Soc. America Bull., vol. 54, pp. 1-30, 1943. Pl. 1, 1:125,000, C. W. Berry.
144. Glacial Lake Missoula, unusual currents: Geol. Soc. America Bull., vol. 53, pp. 1569-1600, 1942. (a) Fig. 2, 1:220,000, (b) figs. 4 to 6, 1:125,000, fig. 7, 1:12,500, fig. 8, 1:100,000, and pls. 3 and 4, 1:48,000, J. T. Pardee.
145. Livingston igneous rocks, origin and structure: Geol. Soc. America Bull., vol. 51, pp. 1175-1186, 1942. Fig. 2, 1:312,500, G. W. Stose.
146. Highwood Mountains, igneous rocks: Am. Jour. Sci., vol. 240, pp. 1043-1112, 1942. (a) Figs. 2 and 3, 1:24,000, (b) pl. 1, 1:10,800, (c) fig. 6, 1:12,000, (d) pl. 1, 1:12,000, H. R. Larsen; (e) pl. 1, 1:1,200, (f) pl. 4, 1:10,800, E. S. Larsen, and H. Hurlbut, Jr., B. F. Buie, R. A. Walker. Shonkin Sag laccolith: Am. Jour. Sci., 5th ser., No. 197, pp. 321-359, 1937. (a) 1:6,000, J. D. Barksdale.
147. Boxelder laccolith, Bearpaw Mountains, structure and petrology: Geol. Soc. America Bull., vol. 52, pp. 1763-1806, 1941. Fig. 2, 1:30,000, W. T. Pecora.
148. Libby and Trout Creek quadrangles, stratigraphy of Belt series: Geol. Soc. America Bull., vol. 52, pp. 363-380, 1941. Pl. 1, 1:187,680, W. F. Jenks.
149. Black Hills region, badland formations: South Dakota School of Mines, Dept. Geology Bull. 9, 1910. Pl. 1, 1:375,000, C. C. O'Harra.
150. Central and eastern Montana, geology and oil and gas prospects: Montana Univ., Bur. Mines and Metallurgy Bull. 4, 1921. 1:1,000,000, C. H. Clapp, Arthur Bevan, and G. S. Lambert.
151. Bannack and Argenta, geology and ore deposits: Montana Bur. Mines and Geology Bull. 6, 1931. (a) Pl. 1, 1:20,000, (b) pl. 2, 1:24,000, P. J. Shenon.
152. Jardine-Crevasse Mountain district, Park County, gold, arsenic, and tungsten deposits: Montana Bur. Mines and Geology Mem. 23, 1944. (a) Pl. 10, 1:7,200, (b) pl. 11, 1:29,800, G. F. Seager.
153. Winnett irrigation project, artesian wells as a source of water: Montana Bur. Mines and Geology Misc. Contr. 1, 1932. 1:125,000, E. S. Perry.
154. Fort Benton, artesian wells for municipal water supply: Montana Bur. Mines and Geology, Misc. Contr. 4, 1932. Pl. 1, 1:500,000, E. S. Perry.
155. Badger Pass mining district, Beaverhead County: Montana Bur. Mines and Geology Misc. Contr. 6, 1934. Pl. 1, 1:31,680, U. M. Sahinen.
156. Jardine-Crevasse Mountain area, structural geology: Montana Bur. Mines and Geology Misc. Contr. 7, 1936. 1:750,000, A. L. Howland, J. W. Peoples, and Edward Sampson. (Same area as No. 160, pl. 2.)
157. Rochester and adjacent mining districts, Madison County, geology and ore deposits: Montana Bur. Mines and Geology Mem. 19, 1939. (a) Pl. 5, 1:62,500, (b) fig. 11, 1:24,000, U. M. Sahinen.
158. Southeastern Montana, geology and ground-water resources: Montana Bur. Mines and Geology Mem. 14, 1935. (a) Fig. 20, 1:750,000, (b) fig. 23, 1:750,000, (c) pl. 3, 1:750,000, E. S. Perry. Montana, natural gas: Montana Bur. Mines and Geology Mem. 3, 1937. (a) Pl. 6-A, 1:750,000, E. S. Perry.
159. Hog Heaven mining district, Flathead County, geology and ore occurrences: Montana Bur. Mines and Geology Mem. 17, 1936. (a) Pl. 1, 1:62,500, P. J. Shenon and R. B. Mulchay; (b) pls. 3 and 4, 1:1,200, P. J. Shenon and A. V. Taylor, Jr. Flathead mine, genesis of ore: Econ. Geology, vol. 30, pp. 585-603, 1935. (b) Fig. 2, 1:1,320, P. J. Shenon.
160. Montana, chromite deposits: Montana Bur. Mines and Geology Mem. 18, 1937. Pls. 3 to 5, 1:62,500, F. A. Schafer, H. C. Clapp, and J. S. Vhay. (Pl. 2, 1:750,000, is same area as No. 156; fig. 5, 1:1,200, same area as No. 8-b; fig. 10, 1:4,800, same area as No. 136-c; fig. 11, 1:6,000, same area as No. 136-e; and fig. 12, 1:7,200, same area as No. 136-d.)
161. North Moccasin Mountains, geology and gold deposits: Montana Bur. Mines and Geology Mem. 8, 1933. Pl. 2, 1:24,000, J. E. Blixt.
162. Tobacco Root Mountains, geological reconnaissance: Montana Bur. Mines and Geology Mem. 9, 1933. (a) Pl. 1, 1:160,000, Wilfred Tansley, P. A. Schafer, and L. H. Hart; (b) fig. 5, 1:62,500, (c) fig. 15, E. S. Perry; (d) fig. 17, 1:2,400, L. H. Hart.
163. Broadwater, Beaverhead, Phillips, and Fergus Counties, gold deposits: Montana Bur. Mines and Geology Mem. 10, 1933. (a) Pl. 3, 1:340,000, (b) pl. 5, 1:437,500 (from unpublished map of western Montana), A. V. Corry; (c) pl. 9, 1:226,000, W. H. Weed and L. V. Pirsson.
164. Big Hole Basin, physiography and ground-water supply: Montana Bur. Mines and Geology Mem. 12, 1934. Pl. 3, 1:500,000, E. S. Perry (from unpublished map of western Montana).
165. Neihart mining district, Cascade County, geology and ore deposits: Montana Bur. Mines and Geology Mem. 13, 1935. Pl. 2, 1:18,000, P. A. Schafer. Also mine maps. Big Ben molybdenum deposit, Neihart mining district: U. S. G. S. Open file report, 1945. 1:600, S. C. Creasey and E. A. Scholz.
166. Kevin-Sunburst and other oil and gas fields of Sweetgrass arch: Montana Bur. Mines and Geology Mem. 1, 1928. Pl. 5, 1:562,500, E. S. Perry.
167. Eastern and central Montana, ground water: Montana Bur. Mines and Geology Mem. 2, 1931. Pl. 6, 1:1,500,000, E. S. Perry.
168. Flaws and tear faults: Am. Jour. Sci., 5th ser., vol. 29, pp. 112-124, 1935. Fig. 1, 1:96,000, E. S. Perry.
169. Rocky Mountains of northwestern Montana: Montana Bur. Mines and Geology Mem. 4, 1932. Pl. 1, 1:500,000, C. H. Clapp and others.
170. Judith Basin, ground-water resources: Montana Bur. Mines and Geology Mem. 7, 1932. Pl. 1, 1:270,000, E. S. Perry.
171. Yellowstone Valley, geomorphic problems and glacial geology: Jour. Geology, vol. 48, pp. 275-303, 1940. Fig. 3, 1:312,500, Leland Horberg.
172. Pryor Mountains, structure: Jour. Geology, vol. 48, pp. 590-618, 1940. (a) Figs. 2 to 5, 1:220,000, (b) fig. 6, 1:80,000, D. L. Blackstone, Jr.
173. Yellowstone National Park: U. S. Geol. and Geog. Survey of the Territories, F. V. Hayden, 12th Ann. Rept., pt. 2, pp. 1-62, 1883. Pl. 22, 1:125,000, W. H. Holmes.
174. Livingston Peak area, structural geology: Jour. Geology, vol. 45, pp. 268-295, 1937. Fig. 2, 1:68,800, E. C. H. Lammers, Donald MacNeil, Dorr Skeels, and Charles MacClintock.
175. Idaho batholith, northeastern part, and adjacent region in Montana: Jour. Geology, vol. 43, pp. 27-60, 1935. Fig. 3, 1:375,000, C. P. Langton.
176. Libby quadrangle, sills and dikes: Am. Mineralogist, vol. 23, pp. 302-313, 1938. Fig. 2, 1:345,000, Russell Gibson and W. F. Jenks. Libby quadrangle, quartz monzonite and related rocks: Am. Jour. Sci., 5th ser., vol. 35, pp. 345-369, 1938. Fig. 2, 1:375,000 (stocks), Russell Gibson, Ian Campbell, and W. F. Jenks.
177. Southwestern Montana, Eocene glaciation: Jour. Geology, vol. 46, pp. 628-636, 1938. Fig. 1, 1:42,000, H. W. Scott.
178. Livingston formation near Nye: Am. Geophys. Union Trans., vol. 20, pp. 433-437, 1939. Fig. 1, 1:220,000, J. S. Vhay.
179. Lewis overthrust in northern Montana, physiographic relations: Am. Jour. Sci., 5th ser., vol. 35, pp. 260-272, 1938. Fig. 1, 1:625,000, Marland Billings (partly after M. R. Campbell, C. H. Clapp, Eugene Stebinger, and W. H. Alden).
180. Dry Creek and Golden structures, Carbon County, revision of stratigraphy: Am. Assoc. Petroleum Geologists Bull., vol. 22, pt. 1, pp. 106-108, 1938. Fig. 1, 1:112,000, C. W. Wilson.
181. Highland mine, Butte ore body: Econ. Geology, vol. 36, pp. 185-198, 1941. Fig. 5, 1:1,000, R. C. Newcomb.
182. Stillwater complex, interpretation of structure: 16th Internat. Geol. Cong. 1933 Rept., vol. 1, pp. 353-360, 1936. Fig. 1, 1:437,500, J. W. Peoples.
183. Cat Creek oil field, Fergus and Garfield Counties: Am. Assoc. Petroleum Geologists Bull., vol. 5, pp. 252-275, 1921. Pl. 2, 1:1,875,000, Wallace Lee and C. T. Lupton.
184. Sweet Grass Hills: Geol. Soc. America Bull., vol. 47, pp. 437-478, 1921. Figs. 3 to 5, 1:137,500, J. P. Kemp and Paul Billingsley.
185. Lance formation, ground water and associated natural gas: Jour. Geology, vol. 32, pp. 668-684, 1924. Fig. 1, 1:457,500, H. C. Renick and others.
186. Glacier National Park, pre-Wisconsin glacial drift: Geol. Soc. America Bull., vol. 24, pp. 529-572, 1913. Pl. 13, 1:625,000, W. C. Alden and Eugene Stebinger. Glacier National Park, early Pleistocene glaciation: 12th Internat. Geol. Cong. 1913, Compte rendu, pp. 479-484, 1914. Pl. 1, 1:625,000, W. C. Alden and Eugene Stebinger.
187. Glacier National Park, pre-Wisconsin glacial drift: Geol. Soc. America Bull., vol. 24, pp. 687-708, 1912. Pl. 37, 1:500,000, W. C. Alden and J. E. Thomas.
188. Livingston formation, stratigraphic relations: Econ. Geology, vol. 6, pp. 551-557, 1910. Pl. 7, 1:687,500, R. W. Stone and W. R. Calvert.
189. Boulder batholith: Am. Inst. Min. Met. Eng. Bull. 97, pp. 31-47, 1915. Pl. 1, 1:500,000, Paul Billingsley; Trans., vol. 51, pp. 31-56, pl. 1, 1916.
190. Haystack stock, Cowles, Park County: Jour. Geology, vol. 16, pp. 193-229, 1908. Fig. 1, 1:137,500, W. H. Emmons (essentially from map in No. 1).
191. Big Horn Mountains, Wyo., fish remains in Ordovician rocks, with resume of Ordovician geology of the Northwest: Geol. Soc. America Bull., vol. 17, pp. 541-566, 1906. Pl. 73, 1:1,187,600, N. H. Darton.
192. Highwood Mountains: Geol. Soc. America Bull., vol. 6, pp. 389-422, 1895. (a) Fig. 1, 1:400,000, (b) fig. 4, 1:125,000, W. H. Weed and L. V. Pirsson.
193. Little Rocky Mountains: Jour. Geology, vol. 4, pp. 399-428, 1896. Fig. 2, 1:187,500, W. H. Weed and L. V. Pirsson.
194. Lombard overthrust and related geological features: Jour. Geology, vol. 24, pp. 269-290, 1916. Fig. 1, 1:125,000, W. P. Haynes.
195. Badlands of the Judith, with remarks on surrounding formations: Am. Philos. Soc. Trans., vol. 11, pp. 125-138, 1860. Pl. 8, 1:1,562,500, F. V. Hayden.
196. Bull Mountain coal field: Colliery Engineer, vol. 36, pp. 7-11, 1915. Fig. 2, 1:625,000, R. A. Wilson.
197. Crazy Mountains, igneous rocks: Geol. Soc. America Bull., vol. 49, pp. 1569-1626, 1938. Pl. 18, 1:250,000, J. E. Wolff.
198. North American Cordillera, 49th parallel: Canada Geol. Survey Mem. 38, pt. 3, 1912. Sheets 1 to 5, 1:62,500, R. A. Daly. Also in Canada Dept. Interior, Rept. Chief Astronomer 1909-1910, vols. 2 and 3, pp. 1-799, 1913.
199. Boulder batholith: Am. Inst. Min. Met. Eng. Bull. 124, pp. 641-717, 1917. (a) Fig. 6, 1:60,000, (b) fig. 8, 1:60,000, (c) fig. 5, 1:36,000, Paul Billingsley and J. A. Grimes. (Fig. 1, 1:1,500,000, area similar to No. 189; fig. 3, 1:42,000, similar to No. 17-o; fig. 4, 1:42,000, similar to No. 70-l; fig. 7, 1:40,000, area similar to No. 57-d; fig. 8, 1:42,000, similar to No. 17-c; fig. 13, 1:55,000, area similar to No. 17-s.) Also in Trans., vol. 58, pp. 285-361, 1918.
200. Beartooth Mountains, summary of geology: Jour. Geology, vol. 31, pp. 441-465, 1923. Fig. 1, 1:1,250,000, Arthur Bevan.
201. Gardiner, thrust fault near: Jour. Geology, vol. 42, pp. 649-663, 1934. Fig. 3, 1:87,500, C. W. Wilson, Willard Parsons, A. E. Whalley, and R. C. Doolittle.
202. Trail Creek-Canyon Mountain area, structural geology: Jour. Geology, vol. 47, pp. 816-840, 1939. Fig. 2, 1:137,500, D. C. Skeels.
203. Eastern Idaho, coal: U. S. G. S. Bull. 716, pp. 123-153, 1921. Pl. 14, 1:500,000, G. R. Mansfield.
204. Montana and Wyoming territories, geologic map: U. S. Geol. Survey of the Territories, 1872. 1:253,440, F. V. Hayden.
205. Silver City, De Lamar, and other mining districts in Idaho, gold and silver veins: U. S. G. S. 20th Ann. Rept., pt. 3, pp. 65-256, 1900. Pl. 8, 1:2,500,000, Waldemar Lindgren.
206. Moyie-Lenia overthrust fault: Jour. Geology, vol. 38, pp. 364-374, 1930. Fig. 1, 1:1,125,000, V. R. D. Kirkham.
207. Big Horn Basin, Cretaceous-Eocene tectonic movements: Geol. Soc. America Bull., vol. 49, pp. 731-762, 1938. Pl. 1, 1:250,000, M. H. Stow.
208. Lewis and Livingston Ranges, stratigraphy and structure: Geol. Soc. America Bull., vol. 13, pp. 305-352, 1902. Pl. 48, 1:250,000, Bailey Willis.
209. Moffet-Johnston property, Madison County, geology and ore deposits: U. S. G. S. Prelim. map, 1945. Pl. 1, 1:2,400, R. P. Fulf and F. C. Armstrong. Also mine maps.
210. East Boulder Plateau-iron Mountain area, chromite deposits: Open file report, 1945. (a) Pl. 1, 1:6,000, A. L. Howland; (b) pl. 2, 1:3,000, A. L. Howland and J. W. Peoples.
211. Jefferson City, copper deposit near: Econ. Geology, vol. 37, pp. 135-138, 1942. Fig. 1, 1:1,200, and fig. 2, 1:3,840, J. D. Forrester.
212. Dillon nickel prospect: Econ. Geology, vol. 37, pp. 136-152, 1942. Fig. 1, 1:31,680, Kirll Spiroff (after map in No. 4).
213. Block P mine, Hughesville: Econ. Geology, vol. 33, pp. 554-567, 1938. Fig. 2, 1:148,000, Helen Sinkler.
214. Clark Fork-Kootenai River development plan, Lincoln and Sanders Counties: U. S. G. S. Report on geologic reconnaissance, 1945. Fig. 2, 1:63,360, Russell Gibson and F. A. McMillin.
215. Rocky Boy stock, Bearpaw Mountains, pegmatites: Am. Mineralogist, vol. 27, pp. 397-424, 1942. Fig. 2, 1:30,000, W. T. Pecora.
216. Rocky Mountains near international boundary, oil seepages in Belt series: Am. Assoc. Petroleum Geologists Bull., vol. 16, pp. 786-796, 1932. Fig. 1, 1:500,000, T. A. Link (modified from R. A. Daly, J. D. MacKenzie, J. S. Stewart, D. B. Dowling, and others).
217. Montana, four preliminary reports on iron-ore deposits: U. S. G. S. Open file report, 1946. (a) Pl. 1, Running Wolf district, 1:1,200, (b) pl. 1, Sheep Creek district, 1:2,400, (c) pl. 1, Blue Dick mine near Yogo Peak, 1:1,200, G. E. Goodspeed and J. P. Fitzsimmons.
218. Part of eastern Montana, geology and economic geology: Montana Univ. Studies, ser. 1, 1916. Pl. 2, 1:1,000,000, J. P. Rowe and R. A. Wilson.
219. Beartooth Mountains, porphyry intrusions: Jour. Geology, vol. 45, pp. 717-740, 1937. (a) Fig. 2, 1:48,000, J. T. Rouse, H. H. Hess, Freeman Foote, J. S. Vhay, and K. P. Wilson (modified after map in No. 168); (b) fig. 4, 1:84,480, J. S. Vhay.
220. Nye-Bowler lineament, Stillwater and Carbon Counties: Am. Assoc. Petroleum Geologists Bull., vol. 20, pp. 1161-1188, 1936. Fig. 2, 1:200,000, C. W. Wilson, Jr.
221. Alice dome, central Montana, possible new oil field: U. S. G. S. Press release, 1921. 1:48,000, W. T. Thom, Jr., and C. H. Dobbin.
222. Bears Den-Flat Coulee-Whitlash districts, north-central Montana: U. S. G. S. Prelim. structure contour map, Press release 47816, 1930. Fig. 2, 1:63,360, C. E. Erdmann.
223. Kevin-Sunburst oil field, Toole County: U. S. G. S. Maps, 1946 and 1947. Maps 1, 2, and 3, 1:62,500, C. E. Erdmann, A. B. Cozzens, J. T. Gist, J. W. Nordquist, and G. W. Beer.
224. Area southwest of Custer, Yellowstone and Bighorn Counties: U. S. G. S. Bull. 541, pp. 316-328, 1914. Pl. 18, 1:125,000 (coal outcrop) G. S. Rogers.
225. Bighorn Basin, geologic map: U. S. G. S. Oil and Gas Prelim. Map 71, 1947. 1:125,000, D. A. Andrews, W. G. Pierce, and D. H. Eargle.

GEOLOGIC MAP INDEX OF MONTANA

Compiled by Leona Boardman
and Annabel Brown

Scale 1:750,000

10 0 10 20 30 MILES

1948

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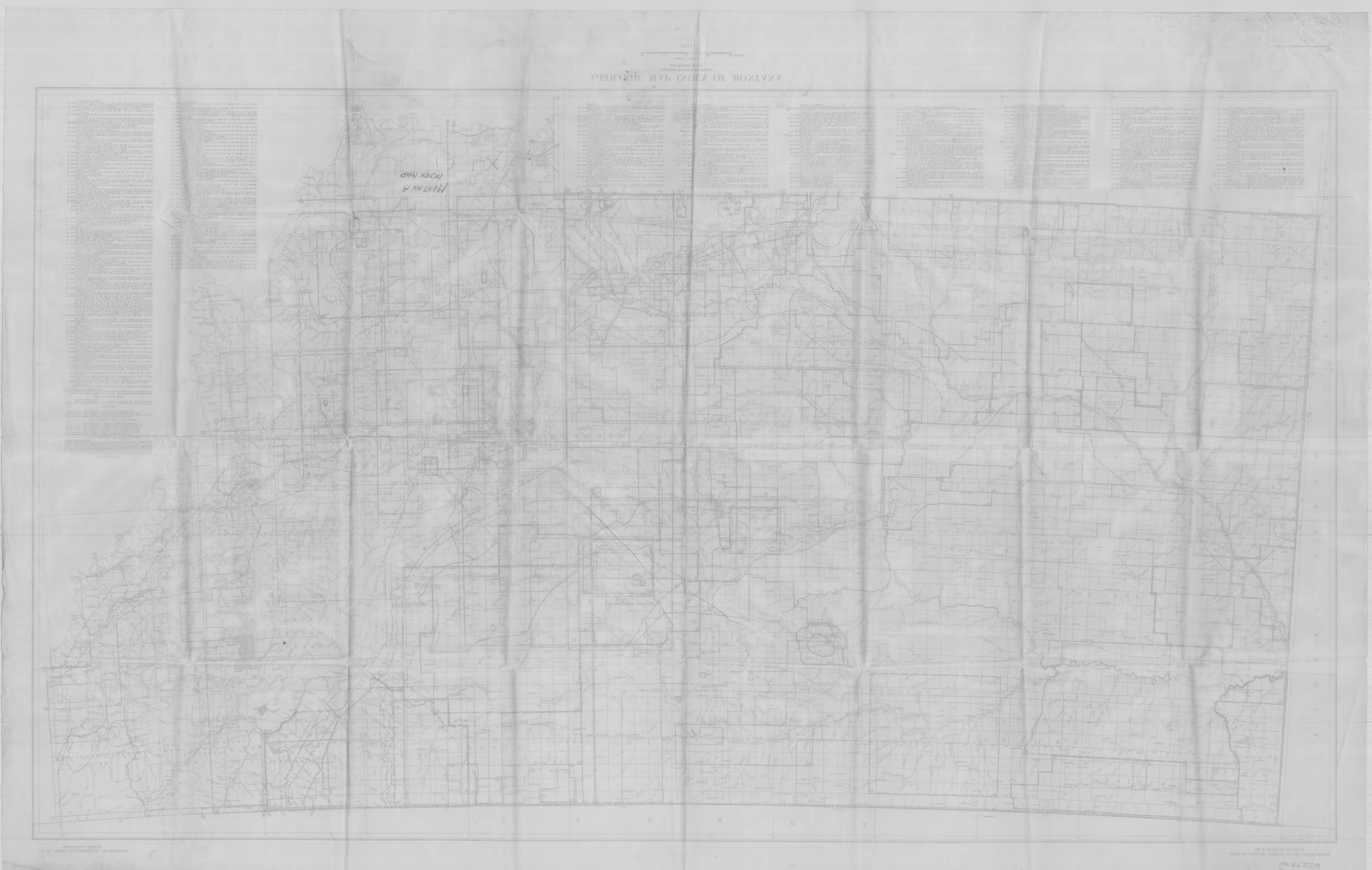
MONTANA
INDEX MAP
XLI-G1
CANADA
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