

THE GEOLOGICAL SURVEY OF WYOMING

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PRELIMINARY MAP OF KNOWN SURFICIAL STRUCTURAL  
FEATURES FOR THE CODY 1° x 2° QUADRANGLE

compiled by

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1987

This report has not been reviewed for conformity with the editorial standards of the Geological Survey of Wyoming.

This listing of sources of information and index map were prepared to accompany the preliminary map of known surficial structural features for the Cody 1°x 2° Quadrangle.

### Sources of geologic data

#### General

(These references are the sources of geologic data where more detailed, specific maps were not available).

**Antweiler, J.C., Rankin, D.W., Fisher, F.S., Long, C.L., Love, J.D., Bieniewski, C.L., and Smith, R.C., 1985 [1986],** Mineral resource potential map of the northern part of the Washakie Wilderness and nearby roadless areas, Park County, Wyoming: U.S. Geological Survey Miscellaneous Field Studies Map MF-1597-A, 25 p., 1 sheet, scale 1:125,000.

**Case, J.C., 1986,** Earthquakes and related geologic hazards in Wyoming: Geological Survey of Wyoming Public Information Circular 26, 22 p., sheet 1, scale 1:1,000,000.

**Love, J.D., and Christiansen, A.C., 1985,** Geologic map of Wyoming: U.S. Geological Survey, scale 1:500,000.

**Pierce, W.G., compiler, 1978,** Geologic map of the Cody 1°x 2° Quadrangle, northwestern Wyoming: U.S. Geological Survey Miscellaneous Field Studies Map MF-963, scale 1:250,000.

**Pierce, W.G., 1985,** Map showing present configuration of Heart Mountain fault and related features, Wyoming and Montana: Geological Survey of Wyoming Map Series MS-15, scale 1:125,000.

**Pierce, W.G., 1986,** The South Fork detachment fault, Park County Wyoming - discussion and reply: University of Wyoming Contributions to Geology, v. 24, no. 1, p. 77-90.

**Spencer, S.A., 1986,** Ground water movement in the Paleozoic rocks and impact of petroleum production on water levels in the southwestern Bighorn Basin, Wyoming: M.S. thesis, University of Wyoming, Laramie, Wyoming, 165 p., map scale 1:250,000.

**Wilson, W.H., 1975,** Detachment faulting in volcanic rocks, Wood River area, Park County, Wyoming: Wyoming Geological Association 27th Annual Field Conference Guidebook, p. 167-171.

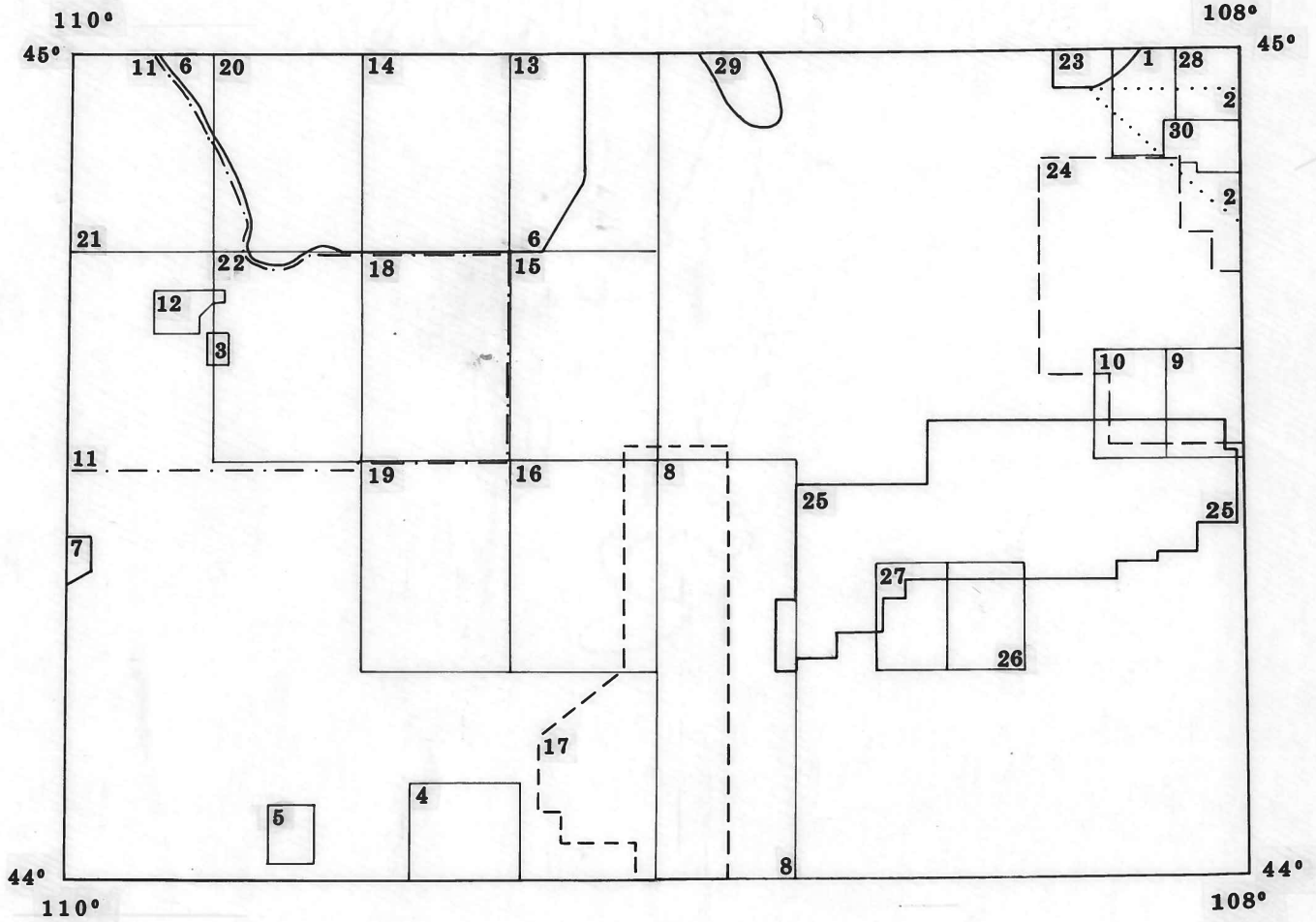
#### Specific

1. **Darton, N.H., 1906,** Geology of the Bighorn Mountains: U.S. Geological Survey Professional Paper 51, 129 p., plate 47, scale 1:250,000.
2. **Doremus, D.M., 1986,** Ground water circulation and water quality associated with the Madison aquifer in the northeastern Bighorn Basin, Wyoming: M.S.

- thesis, University of Wyoming, Laramie, Wyoming, 81 p., Figure 6, scale approximately 1:50,000.
3. **Dreier, J.E.**, 1967, Economic geology of the Sunlight mineralized region, Park County, Wyoming: M.S. thesis, University of Wyoming, Laramie, Wyoming, 81 p., map scale 1:9,000.
  4. **Dunrud, C.R.**, 1962, Volcanic rocks of the Jack Creek area, southeastern Absaroka Range, Park County, Wyoming: M.S. thesis, University of Wyoming, Laramie, Wyoming, 92 p., plate 1, scale 1:24,000.
  5. **Fisher, F.S.**, 1972, Tertiary mineralization and hydrothermal alteration in the Stinkingwater mining region, Park County, Wyoming: U.S. Geological Survey Bulletin 1332-C, 33 p., Figure 3, scale 1:48,000.
  6. **Foose, R.M.**, Wise, D.U., and Garbarini, G.S., 1961, Structural geology of the Beartooth Mountains, Montana and Wyoming: Geological Society of American Bulletin, v. 72, p. 1143-1172, plate 1, scale 1:126,720.
  7. **Galey, J.T.**, 1971, Mineralization in the Eagle Creek area, Park County, Wyoming: M.S. thesis, University of Wyoming, Laramie, Wyoming, map scale approximately 1:12,000.
  8. **Hewett, D.F.**, 1926, Geology and oil and coal resources of the Oregon Basin, Meeteetse, and Grass Creek Basin Quadrangles, Wyoming: U.S. Geological Survey Professional Paper 145, 107 p., plates 1 and 2, scale 1:62,500.
  9. **Kozimko, L.M.**, 1985, Geologic map of the Greybull North Quadrangle, Wyoming: Geological Survey of Wyoming Map Series MS-19, scale 1:24,000.
  10. **Ladd, R.E.**, 1985, Geologic map of the Sheep Canyon Quadrangle, Wyoming: Geological Survey of Wyoming Map Series MS-20, scale 1:24,000.
  11. **Nelson, W.H.**, Prostka, H.J., and Williams, F.E., 1980, Geology and mineral resources of the North Absaroka Wilderness and vicinity, Park County, Wyoming, with a section on Aeromagnetic survey by D.L. Peterson: U.S. Geological Survey Bulletin 1447, 101 p., plate 1, scale 1:125,000.
  12. **Pederson, K.**, 1968, Sulfide mineralization of the northeastern part - Sunlight mining region, Park County, Wyoming: M.S. thesis, University of Wyoming, Laramie, Wyoming, 50 p., map scale approximately 1:12,000.
  13. **Pierce, W.G.**, 1965, Geologic map of the Clark Quadrangle, Park County, Wyoming: U.S. Geological Survey Geologic Quadrangle Map GQ-477, scale 1:62,500.
  14. **Pierce, W.G.**, 1965, Geologic map of the Deep Lake Quadrangle, Park County, Wyoming: U.S. Geological Survey Geologic Quadrangle Map GQ-478, scale 1:62,500.
  15. **Pierce, W.G.**, 1966, Geologic map of the Cody Quadrangle, Park County, Wyoming: U.S. Geological Survey Geologic Quadrangle Map GQ-542, scale 1:62,500.


16. **Pierce, W.G.**, 1970, Geologic map of the Devils Tooth Quadrangle, Park County, Wyoming: U.S. Geological Survey Geologic Quadrangle Map GQ-817, scale 1:62,500.
17. **Pierce, W.G.**, and **Andrews, D.A.**, 1941, Geology and oil and coal resources of the region south of Cody, Park County, Wyoming: U.S. Geological Survey Bulletin 921-B, p. 99-180, plate 11, scale 1:63,360.
18. **Pierce, W.G.**, and **Nelson, W.H.**, 1968, Geologic map of the Pat O'Hara Mountain Quadrangle, Park County, Wyoming: U.S. Geological Survey Geologic Quadrangle Map GQ-755, scale 1:62,500.
19. **Pierce, W.G.**, and **Nelson, W.H.**, 1969, Geologic map of the Wapiti Quadrangle, Park County, Wyoming: U.S. Geological Survey Geologic Quadrangle Map GQ-778, scale 1:62,500.
20. **Pierce, W.G.**, and **Nelson, W.H.**, 1971, Geologic map of the Beartooth Butte Quadrangle, Park County, Wyoming: U.S. Geological Survey Geologic Quadrangle Map GQ-935, scale 1:62,500.
21. **Pierce, W.G.**, **Nelson, W.H.**, and **Prostka, H.J.**, 1973, Geologic map of the Pilot Peak Quadrangle, Park County, Wyoming: U.S. Geological Survey Miscellaneous Geologic Investigations Map I-816, scale 1:62,500.
22. **Pierce, W.G.**, **Nelson, W.H.**, and **Prostka, H.J.**, 1982, Geologic map of the Dead Indian Peak Quadrangle, Park County, Wyoming: U.S. Geological Survey Geologic Quadrangle Map GQ-1564, scale 1:62,500.
23. **Richards, P.W.**, 1955, Geology of the Bighorn Canyon-Hardin area, Montana and Wyoming: U.S. Geological Survey Bulletin 1026, 93 p., plate 1 (south half), scale 1:62,500.
24. **Rioux, R.L.**, 1958, Geology of the Spence-Kane area, Big Horn County, Wyoming: U.S. Geological Survey Open File Report 58-84, map scale 1:31,680.
25. **Robinove, C.J.**, and **Langford, R.H.**, 1963, Geology and ground-water resources of the Greybull River - Dry Creek area, Wyoming: U.S. Geological Survey Water Supply Paper 1596, 88 p., plate 1, scale 1:63,360.
26. **Rohrer, W.L.**, 1964, Geology of the Sheep Mountain Quadrangle, Wyoming: U.S. Geological Survey Geologic Quadrangle Map GQ-310, scale 1:24,000.
27. **Rohrer, W.L.**, 1964, Geology of the Tatman Mountain Quadrangle, Wyoming: U.S. Geological Survey Geologic Quadrangle Map GQ-311, scale 1:24,000.
28. **Taucher, L.M.**, 1953, Geology of the Cookstove Basin area, Big Horn County, Wyoming: M.A. thesis, University of Wyoming, Laramie, Wyoming, 88 p., plate 2, 1:31,680.
29. **Wetzel, J.H.**, 1954, Elk Basin Field - Carbon County, Montana, and Park County, Wyoming: Billings Geological Society Fifth Annual Field Conference Guidebook, p. 113, figure scale 1:70,000.


30. Willis, R.P., 1953, Geology of the Porcupine Creek area, Big Horn County, Wyoming: M.A. thesis, University of Wyoming, Laramie, Wyoming, 64 p., map scale 1:28,000.





Index To Sources Of Geologic Data


**EXPLANATION**


 **Anticline**- arrows perpendicular to axis show symmetry, i.e., short arrow indicates flank with steeper dip. Axis is dashed where covered or approximately located. Arrow on axis indicates direction of plunge.

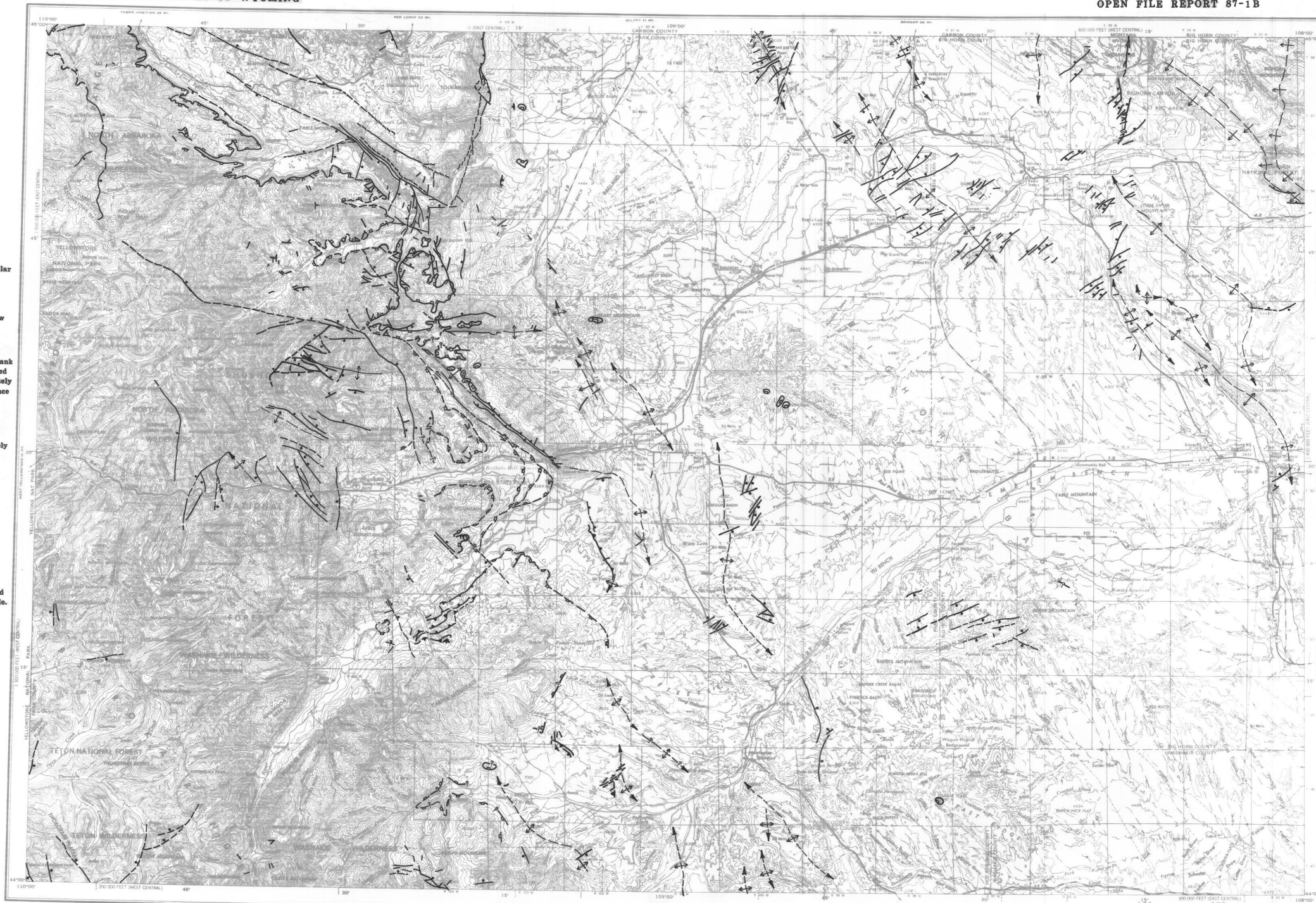
 **Monocline**- arrow indicates flank with steeper dip. Axis is dashed where covered or approximately located. Queried where existence is questionable.

 **Normal Faults**- ball on downthrown block (dashed where covered or approximately located). Queried where existence is questionable.

 **Thrust/Reverse Faults**- teeth on upthrown block (dashed where covered or approximately located). Queried where existence is questionable.

 **Detachment Faults**- open squares on detachment block (dashed where covered or approximately located). Queried where existence is questionable.

 **Shear Zones**



THIS MAP WAS COMPILED FROM THE MOST RECENT AVAILABLE INFORMATION AND IS ONLY AS RELIABLE AND COMPLETE AS THE SOURCES CONSULTED. SOME SMALLER FEATURES WERE OMITTED SINCE THEY COULD NOT BE PLOTTED AT THIS SCALE. SOURCES CONSULTED ARE LISTED IN ACCOMPANYING REFERENCE LIST.



**PRELIMINARY MAP OF KNOWN SURFICIAL STRUCTURAL FEATURES FOR THE CODY 1° x 2° QUADRANGLE**

COMPILED BY JON K. KING, PHILLIP L. GREER, AND ALAN J. VER PLOGG

BASE MAP FROM THE U.S. GEOLOGICAL SURVEY, 1980.  
THIS MAP HAS NOT BEEN REVIEWED FOR CONFORMITY WITH THE EDITORIAL STANDARDS OF THE GEOLOGICAL SURVEY OF WYOMING.