

THE GEOLOGICAL SURVEY OF WYOMING

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

compiled by

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Laramie, Wyoming  
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 Lander 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).

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.

Frost, B.R., 1987, personal communication (configuration of Lake Helen structural zone).

Keefer, W.R., 1970, Structural geology of the Wind River Basin, Wyoming: U.S. Geological Survey Professional Paper 495-D, plate 1, scale 1:250,000 (used with Love and others, 1955, in areas lacking more detailed mapping).

Love, J.D., 1987, personal communication (mapping in southeast portion of the Lander 1° x 2° Quadrangle).

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

Love, J.D., Christiansen, A.C., and Jones, R.W., compilers, 1978, Preliminary geologic map of the Lander 1° x 2° Quadrangle, northern Wyoming: U.S. Geological Survey Open File Report 79-1301, scale 1:250,000.

Love, J.D., Weitz, J.L., and Hose, R.K., compilers, 1955, Geologic map of Wyoming: U.S. Geological Survey, scale 1:500,000.

Worl, R.G., Koesterer, M.E., Hulsebosch, T.P., and Benedict, J.F., as of 1987, Unpublished mapping in progress in the Bridger Wilderness (delineation of shear zones not shown on other maps).

#### Specific - published

1. Bayley, R.W., 1965, Geologic map of the South Pass City Quadrangle, Fremont County, Wyoming: U.S. Geological Survey Geologic Quadrangle Map GQ-458, scale 1:24,000.
2. Bayley, R.W., 1965, Geologic map of the Atlantic City Quadrangle, Fremont County, Wyoming: Geologic Quadrangle Map GQ-459, scale 1:24,000.
3. Bayley, R.W., 1965, Geologic map of the Miners Delight Quadrangle, Fremont County, Wyoming: U.S. Geological Survey Geologic Quadrangle Map GQ-460, scale 1:24,000.

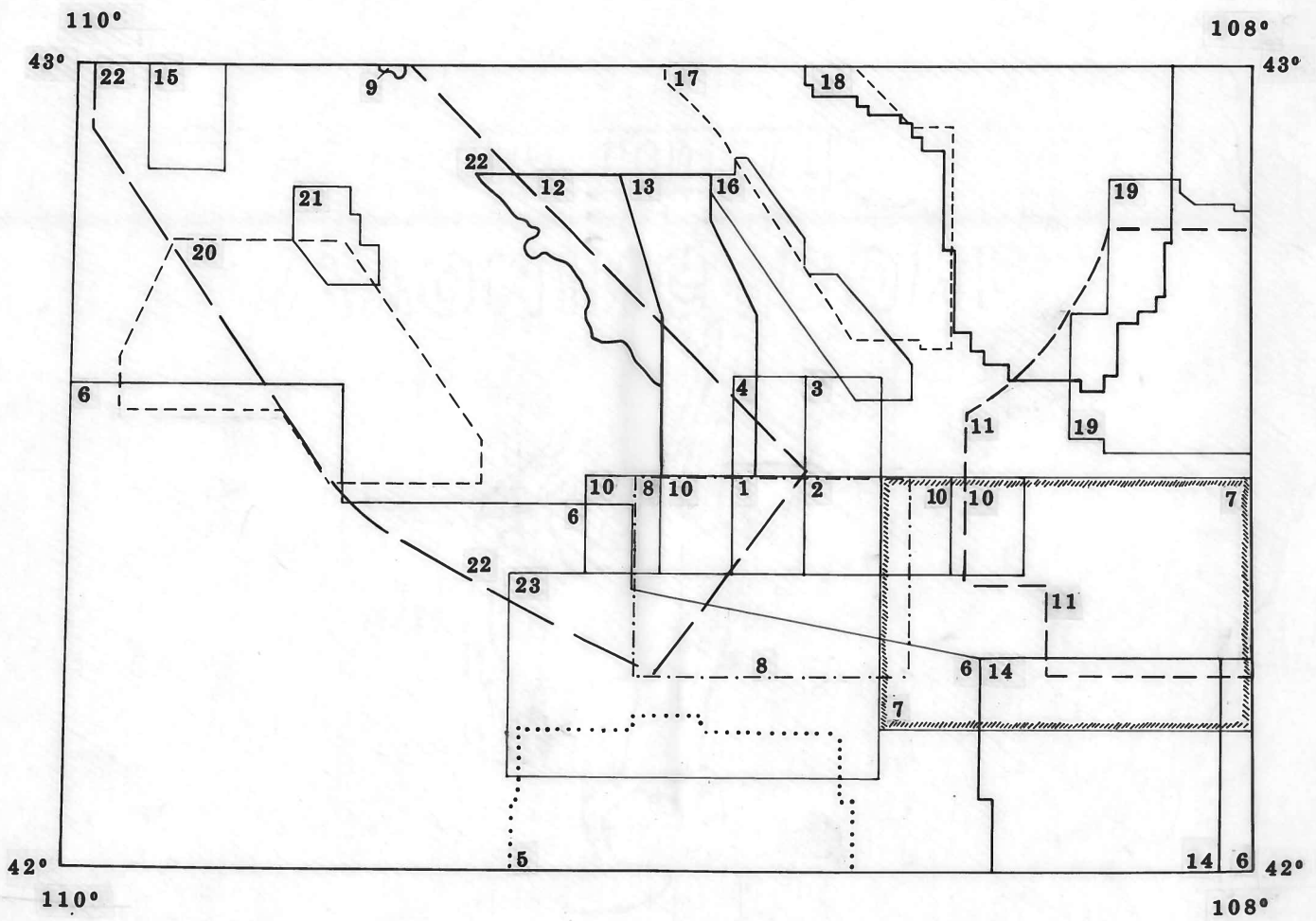
4. Bayley, R.W., 1965, Geologic map of the Louis Lake Quadrangle, Fremont County, Wyoming: U.S. Geological Survey Geologic Quadrangle Map GQ-461, scale 1:24,000.
5. Bradley, W.H., 1926, Shore phases of the Green River Formation in northern Sweetwater County, Wyoming: U.S. Geological Survey Professional Paper 140-D, p. 121-131, map scale 1:125,000.
6. Bradley, W.H., 1964, Geology of the Green River Formation and associated Eocene rocks in southeastern Wyoming and adjacent parts of Colorado and Utah: U.S. Geological Survey Professional Paper 496-A, 86 p., plate 1, scale 1:250,000.
7. Denson, N.M., and Pippingos, G.N., 1974, Geologic map and sections showing areal distribution of Tertiary rocks near the southeastern terminus of the Wind River Range, Fremont and Sweetwater Counties, Wyoming: U.S. Geological Survey Miscellaneous Investigations Map I-835, scale 1:48,000.
8. Denson, N.M., Zeller, H.D., and Stephens, E.V., 1965, South Pass Formation on the southwest flank of the Wind River Mountains, Wyoming in Cohee, C.V., and West, W.S., Changes in stratigraphic nomenclature by the U.S. Geological Survey, 1964: U.S. Geological Survey Bulletin 1224-A, p. A27-A29, figure 2, scale approximately 1:362,060.
9. Granger, H.C., McKay, E.J., Mattick, R.E., Pattern, L.L., and McIlroy, Paul, 1971, Mineral resources of the Glacier Primitive area, Wyoming: U.S. Geological Survey Bulletin 1319-F, 13 p., plate 1, scale 1:62,500.
10. Hausel, W.D., 1986-1987, Preliminary geologic maps of the Anderson Ridge and Radium Springs 7 $\frac{1}{2}$ -minute Quadrangles, and unpublished geologic mapping in the Halls Meadow Spring (Parting of the Ways Northeast), and Lewiston Lakes, 7 $\frac{1}{2}$ -minute Quadrangles: Geological Survey of Wyoming Open File Report 86-26, 86-25, and unpublished maps, scale 1:24,000.
11. Love, J.D., 1970, Cenozoic geology of the Granite Mountains area, central Wyoming: U.S. Geological Survey Professional Paper 495-C, 154 p., plate 1, scale 1:125,000.
12. Pearson, R.C., Kiilsgaard, T.H., and Patten, L.L., 1971 [1972], Mineral resources of the Popo Agie Primitive area, Fremont and Sublette Counties, Wyoming, with a section on Interpretation of aeromagnetic data by R.E. Mattick: U.S. Geological Survey Bulletin 1353-B, 55 p., plate 1, scale 1:62,500.
13. Pearson, R.C., Patten, L.L., and Gaskill, D.L., 1973, Mineral resources of an area near the Popo Agie Primitive area, Fremont County, Wyoming: U.S. Geological Survey Bulletin 1391-A, 18 p., plate 1, scale 1:63,360.
14. Pippingos, G.N., 1961 [1962], Uranium-bearing coal in the central part of the Great Divide Basin [Wyoming]: U.S. Geological Survey Bulletin 1099-A, 104 p., plate 1, scale 1:62,500.
15. Richmond, G.M., 1973 [1974], Geologic map of the Fremont Lake South Quadrangle, Sublette, County, Wyoming: U.S. Geological Survey Geologic Quadrangle Map GQ-1138, scale 1:24,000.

16. Rohrer, W.L., 1973, Geologic map of the phosphate reserve of the Lander area, Fremont County, Wyoming: U.S. Geological Survey Miscellaneous Field Studies Map MF-305, scale 1:24,000.
17. Thompson, R.M., Troyer, M.L., White, V.L., and Pippingos, G.N., 1950, Geology of the Lander area, central Wyoming: U.S. Geological Survey Oil and Gas Investigations Map OM-112, scale 1:63,360.
18. Thompson, R.M., and White, V.L., 1954, Geology of the Riverton area, central Wyoming: U.S. Geological Survey Oil and Gas Investigations Map OM-127, scale 1:63,360.
19. Van Houten, F.B., 1964, Tertiary geology of the Beaver Rim area, Fremont and Natrona Counties, Wyoming: U.S. Geological Survey Bulletin 1164, 99 p., plate 2, scale 1:62,500.
20. West, R.M., 1968, Geology and mammalian paleontology of the New Fork-Big Sandy area, Sublette County, Wyoming: Field Museum of Natural History Fieldiana - Geology, v. 29, 193 p., figure 2, scale 1:211,200.
21. Worl, R.G., Benedict, J.F., Lee, O., Richmond, G.M., and Bigsby, P.R., 1980, Preliminary report on the mineral resource potential of the Scab Creek Instant Study area, Sublette County, Wyoming: U.S. Geological Survey Open File Report 80-1058, 16 p., map scale 1:24,000.
22. Worl, R.G., Koesterer, M.E., and Hulsebosch, T.P., 1986, Geologic map of the Bridger Wilderness and the Green-Sweetwater Roadless area, Sublette and Fremont Counties, Wyoming: U.S. Geological Survey Miscellaneous Field Studies Map MF-1636-B, scale 1:250,000.
23. Zeller, H.D., and Stephens, E.V., 1969, Geology of the Oregon Buttes area, Sweetwater, Sublette, and Fremont Counties, Wyoming: U.S. Geological Survey Bulletin 1256, 60 p., plate 1, scale 1:48,000.

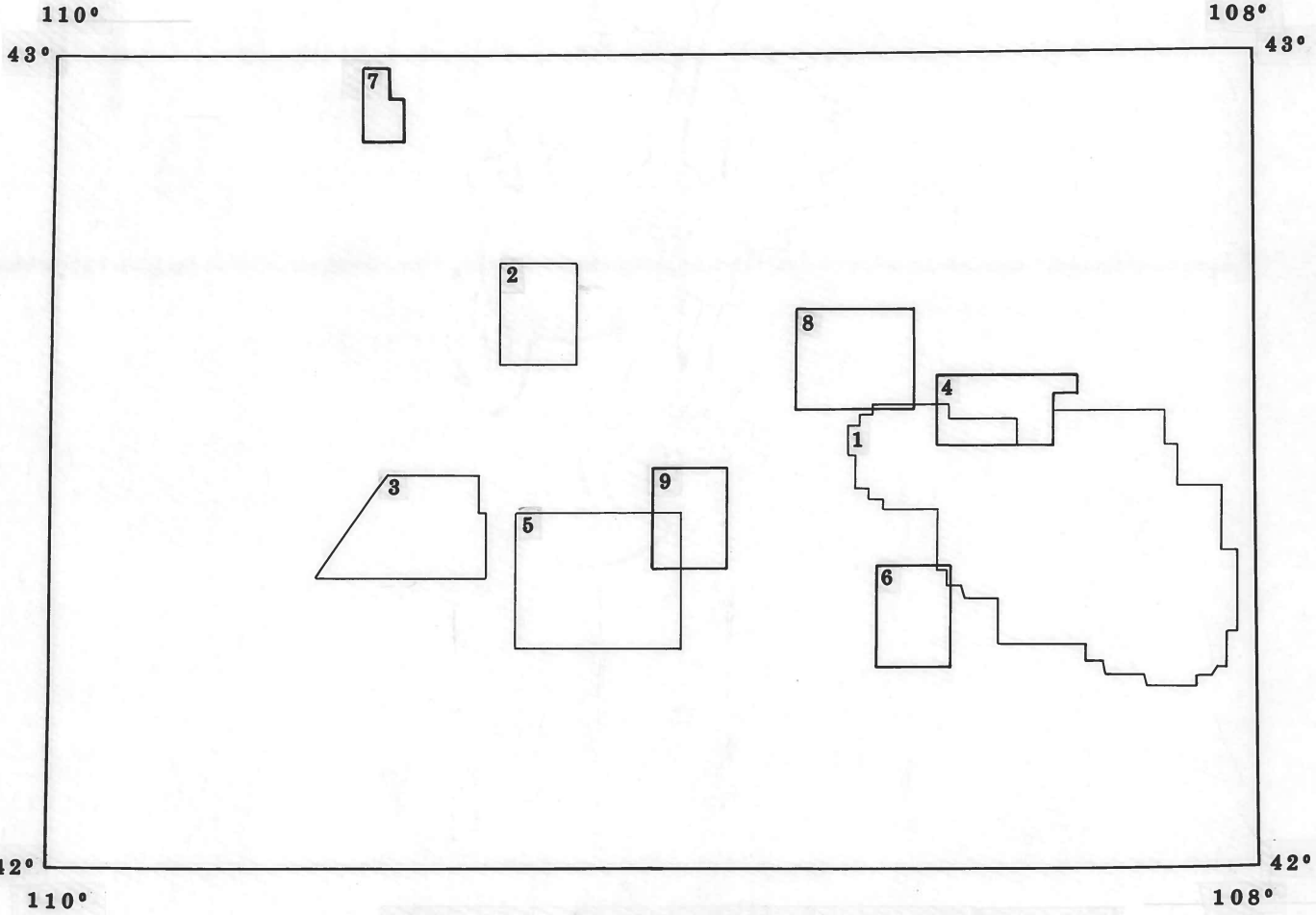
**Specific - thesis (see separate index map)**

1. Bell, W.G., 1955, The geology of the southeastern flank of the Wind River Mountains, Fremont County, Wyoming: Ph.D. dissertation, University of Wyoming, Laramie, Wyoming, 204 p.; plate 3, scale 1:48,000.
2. Benedict, J.F., 1982, The geology and mineral potential of the Schiestler Park area, Temple Peak Quadrangle, Wyoming: M.S. thesis, University of Wyoming, Laramie, Wyoming, map scale 1:24,000.
3. Berman, J.E., 1955, Geology of the Elk Mountain and Tabernacle Butte area, Sublette County, Wyoming: M.A. thesis, University of Wyoming, Laramie, Wyoming, 63 p., plate 1, scale approximately 1:35,600.
4. Gooldy, P.L., 1947, Geology of the Beaver Creek-south Sheep Mountain area, Fremont County, Wyoming: M.S. thesis, University of Wyoming, Laramie, Wyoming, map scale 1:24,000.






5. **Hummel, J.M.**, 1958, Geology of the Pacific Creek area, Sublette and Fremont Counties, Wyoming: M.A. thesis, University of Wyoming, Laramie, Wyoming, 76 p., plate 3, scale 1:31,680.
6. **Jackson, K.S.**, 1984, Geology of the Circle Bar Lake Quadrangle, Fremont and Sweetwater Counties, Wyoming: M.S. thesis, University of Wyoming, Laramie, Wyoming, map scale 1:24,000.
7. **Koesterer, M.E.**, 1986, Archean history of the Medina Mountain area, central Wind River Range, Wyoming: M.S. thesis, University of Wyoming, Laramie, Wyoming, 99 p., map scale 1:10,000.
8. **McKay, E.J.**, 1948, Geology of the Red Canyon Creek area, Fremont County, Wyoming: M.S. thesis, University of Wyoming, Laramie, Wyoming, map scale 1:31,680.
9. **Worl, R.G.**, 1963, Superimposed deformations in Precambrian rocks near South Pass, Wyoming: M.S. thesis, University of Wyoming, Laramie, Wyoming, plate 1, scale 1:24,000.

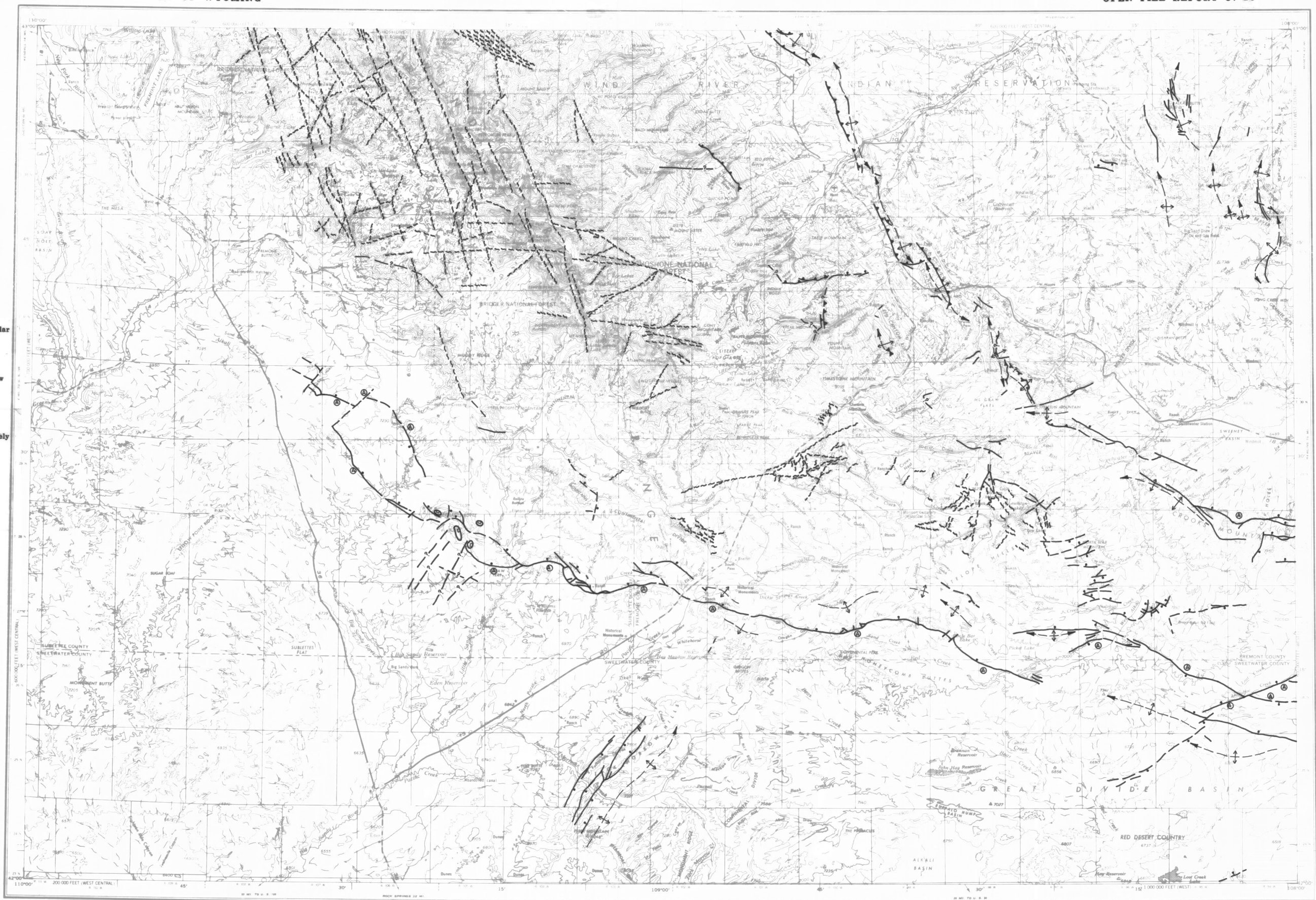


**Index To Sources Of Geologic Data -published**



**Index To Sources Of Geologic Data-theses**

- 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.
  -  **Normal Fault**- ball on downthrown block (dashed where covered or approximately located). Queried where existence is questionable.
  -  **Thrust/Reverse Fault**- teeth on upthrown block (dashed where covered or approximately located). Queried where existence is questionable.
  -  **Shear Zones**
  -  **Possible Active Fault** - as identified by Case (1986).



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.



CONTOUR INTERVAL 200 FEET  
WITH SUPPLEMENTARY CONTOURS AT 100 FOOT INTERVALS  
TRANSVERSE MERCATOR PROJECTION

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

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

BASE MAP FROM THE U.S. GEOLOGICAL SURVEY, 1965.  
THIS MAP HAS NOT BEEN REVIEWED FOR CONFORMITY WITH THE EDITORIAL STANDARDS OF THE GEOLOGICAL SURVEY OF WYOMING.

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