

THE GEOLOGICAL SURVEY OF WYOMING

Gary B. Glass, State Geologist

OPEN FILE REPORT 87-1H

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

compiled by

Jon K. King, Phillip L. Greer, and Alan J. VerPloeg

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 Newcastle 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.

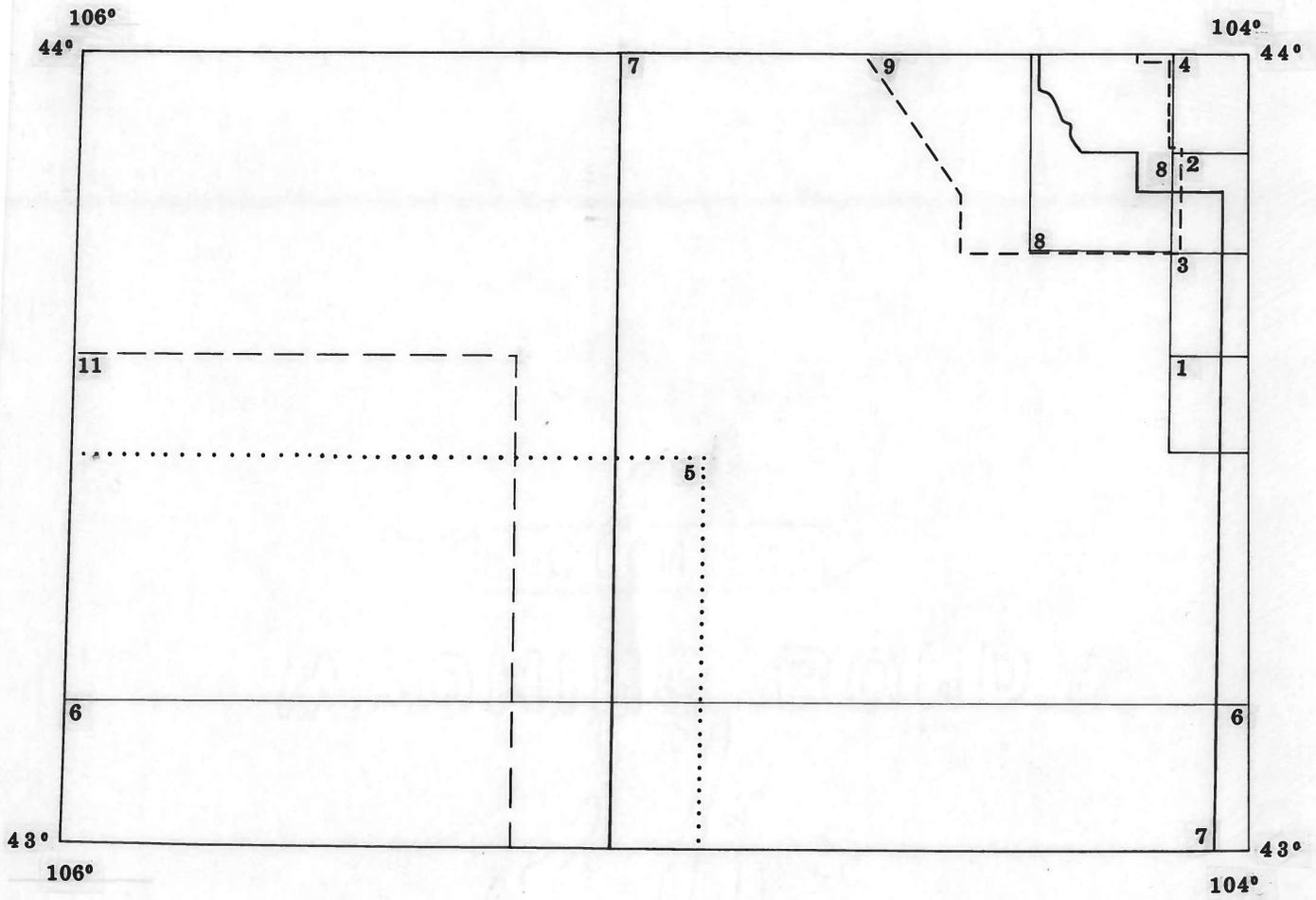
**Love, J.D.**, **Christiansen, A.C.**, and **McGrew, L.W.**, compilers, 1977, Geologic map of the Newcastle 1°x 2° Quadrangle, northeastern Wyoming and western South Dakota: U.S. Geological Survey Miscellaneous Field Studies Map MF-883, scale 1:250,000.

#### Specific

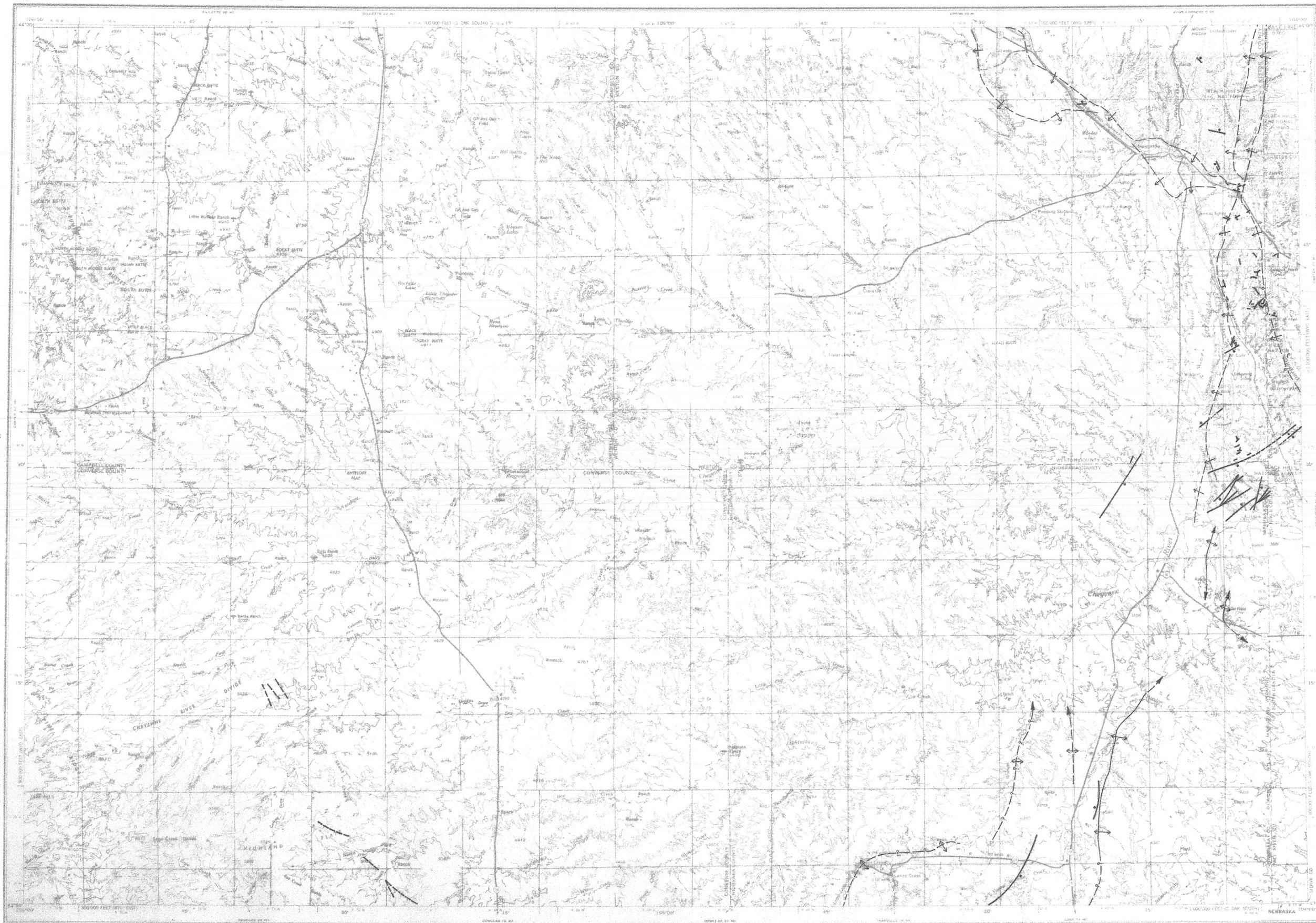
1. **Brobst, D.A.**, 1961 [1962], Geology of the Dewey Quadrangle, Wyoming-South Dakota: U.S. Geological Survey Bulletin 1063-B, p. 13-60, plate 5, scale 1:24,000.
2. **Brobst, D.A.**, and **Epstein, J.B.**, 1963 [1964], Geology of the Fanny Peak Quadrangle, Wyoming-South Dakota: U.S. Geological Survey Bulletin 1063-I, p. 323-377, plate 25, scale 1:24,000.
3. **Cuppels, N.P.**, 1963, Geology of the Clifton Quadrangle, Wyoming and South Dakota: U.S. Geological Survey Bulletin 1063-H, p. 271-321, plate 23, scale 1:24,000.
4. **Darton, N.H.**, 1904, Description of the Newcastle Quadrangle [Wyoming-South Dakota]: U.S. Geological Survey Geologic Atlas Folio 107, scale 1:125,000.
5. **\*Denson, N.M.**, and **Horn, G.H.**, 1972, Geologic map of Tertiary and uppermost Cretaceous rocks showing structure contours, oil and gas fields, dry holes, and mines in the southern part of the Powder River Basin, Converse, Niobrara, and Natrona Counties, Wyoming: U.S. Geological Survey Open File Report 72-88, map scale 1:126,720.
6. **Denson, N.M.**, and **Horn, G.H.**, 1975, Geologic and structure map of the southern part of the Powder River Basin, Converse, Niobrara, and Natrona Counties, Wyoming: U.S. Geological Survey Miscellaneous Investigations Series Map I-877, scale 1:125,000.
7. **Dobbin, C.E.**, **Kramer, W.B.**, and **Horn, G.H.**, 1957, Geologic and structure map of the southeastern part of the Powder River Basin, Wyoming: U.S. Geological Survey Oil and Gas Investigations Map OM-185, scale 1:125,000.

8. **Mapel, W.J., and Pillmore, C.L., 1963, Geology of the Newcastle area, Weston County, Wyoming: U.S. Geological Survey Bulletin 1141-N, 85 p., plate 1, scale 1:48,000.**
9. **Robinson, C.S., Mapel, W.J., and Bergendahl, M.H., 1964, Stratigraphy and structure of the northern and western flanks of the Black Hills uplift, Wyoming, Montana, and South Dakota: U.S. Geological Survey Professional Paper 404, 134 p., plate 1, scale 1:96,000.**
10. **Sharp, W.N., and Gibbons, A.B., 1964, Geology and uranium deposits of the southern part of the Powder River Basin, Wyoming: U.S. Geological Survey Bulletin 1147-D, 60 p., plate 1, scale 1:62,500.**

\*as shown on Love and others, 1977.



**Index To Sources of Geologic Data**



**EXPLANATION**

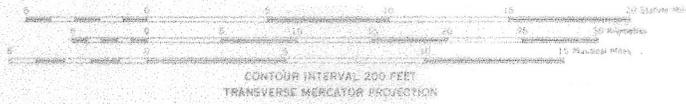
**Anticline**- arrows perpendicular to axis show symmetry, i.e., short arrow indicates flank with steeper dip. Axis is dashed where covered or approximately located. Arrow on axis indicates direction of plunge.

**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.

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.



BASE MAP FROM THE U.S. GEOLOGICAL SURVEY, 1976. THIS MAP HAS NOT BEEN REVIEWED FOR CONFORMITY WITH THE EDITORIAL STANDARDS OF THE GEOLOGICAL SURVEY OF WYOMING.

**PRELIMINARY MAP OF KNOWN SURFICIAL STRUCTURAL FEATURES FOR THE NEWCASTLE 1 x 2° QUADRANGLE**  
 COMPILED BY JON K. KING, PHILLIP L. GREER, AND ALAN J. VER PLOEG