



EXPLANATION

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| Contact | Breccia pipe or collapse structure in Spearfish Formation, Minnekahta Limestone, or Opeche Formation |
| Normal fault | |
| Possible thrust fault
<i>Sawteeth on upthrown side</i> | Breccia pipe or collapse structure in Minnelusa Formation |
| Fault from photographs | |
| Concealed fault
<i>Showing probable direction of movement. Located by airborne magnetometer survey and by gravity survey</i> | Syncline
<i>Possibly formed in part by solution subsidence</i> |
| Lineament | Area containing structures of possible solution origin |
| Anticline
<i>Showing crestline and direction of plunge</i> | Topographic depression in Inyan Kara Group or younger rocks |
| Syncline
<i>Showing troughline</i> | Topographic depression in Sundance Formation |
| Monocline
<i>Showing trace and direction of plunge. Dashed where indefinite</i> | Topographic depression in Spearfish Formation or Minnekahta Limestone |
| Breccia pipe or collapse structure in Inyan Kara Group or Morrison Formation | Paleostream of Tertiary and (or) Quaternary age
<i>Dashed where inferred</i> |
| Breccia pipe or collapse structure in Sundance Formation | Uranium deposit
<i>Some undeveloped prospects in pre-Inyan Kara rocks also shown</i> |
| | Spring
<i>Showing locality number in table 9</i> |
| | Water well
<i>Showing locality number in table 11</i> |

104°07'30"	103°22'30"										
43°52'30"	4	3									
	5	2									
	6	7	1								
	8		9	10	11	12					
			13	14	15	16					
43°15'											

INDEX TO SOURCES OF GEOLOGIC DATA
References are listed in text. Springs located from U.S. Geological Survey topographic maps. Solution collapse structures not mapped in some areas. Uranium deposits shown on geologic maps referenced below.

- Bowles and Braddock (1963)
- Redden (1963, pl. 21)
- Darton and Paige (1925)
- Brobst and Epstein (1963, pl. 25)
- Cuppels (1963, pl. 23)
- Brobst (1961, pl. 5)
- Braddock (1963, pl. 20)
- Schnabel (1963, pl. 17)
- Gott and Schnabel (1963, pl. 12)
- V. R. Wilmarth, U.S. Geol. Survey unpub. data
- Wolcott, Bowles, Brobst, and Post (1962)
- Wolcott (1967, pl. 28)
- Ryan (1964, pl. 27)
- Bell and Post (1971, pl. 32)
- Post (1967, pl. 29)
- Connor (1963, pl. 11)

MAP SHOWING MAJOR TECTONIC ELEMENTS, MINOR FAULT AND SOLUTION COLLAPSE STRUCTURES, SPRINGS, PALEOSTREAMS, AND URANIUM DEPOSITS IN THE SOUTHERN BLACK HILLS, SOUTH DAKOTA AND WYOMING