

**Cross Sections Showing Geophysical Logs of Phanerozoic Rocks in South Dakota**  
**Plate 9. Structural Cross Section 1-1'**  
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 Prepared in cooperation with the Department of Geology and Geological Engineering, South Dakota School of Mines and Technology

**Explanation**

— Profile of the bedrock surface east of the Missouri River. Dashed where uncertain. The top of the rock of the cross section, bedrock surface, is an approximation. Modified from Miller and Blair (1980).

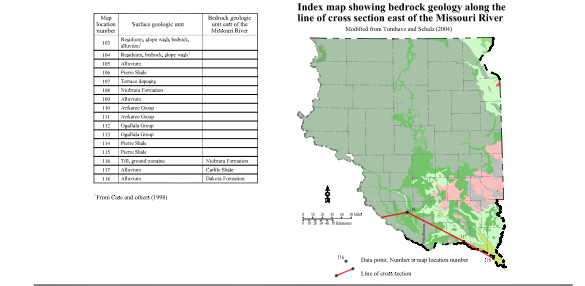
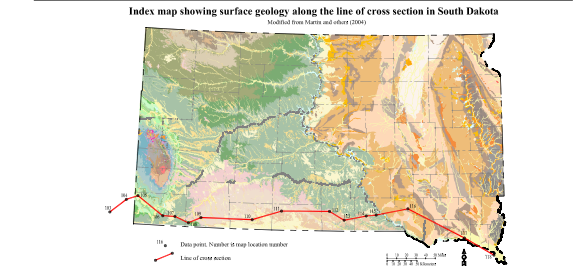
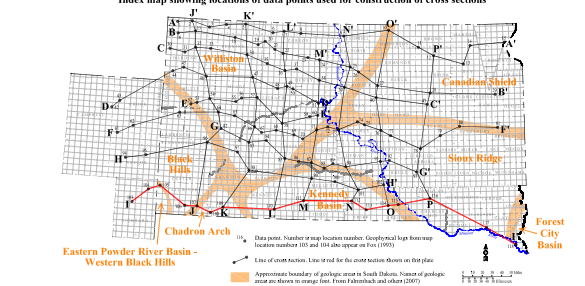
— Profile of the bedrock surface west of the Missouri River. Dashed where uncertain. The top of the rock of the cross section, bedrock surface, is an approximation. Modified from Miller and Blair (1980).

— Profile of the bedrock surface east of the Missouri River. Dashed where uncertain. The top of the rock of the cross section, bedrock surface, is an approximation. Modified from Miller and Blair (1980).

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**Geologic unit**

Map location number (D1-N) and depth, in feet, to top of geologic unit*	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118
Pierre Shale	0-100	0-100	0-100	0-100	0-100	0-100	0-100	0-100	0-100	0-100	0-100	0-100	0-100	0-100	0-100	0-100
Niobrara Formation	100-150	100-150	100-150	100-150	100-150	100-150	100-150	100-150	100-150	100-150	100-150	100-150	100-150	100-150	100-150	100-150
Fort Union Formation	150-200	150-200	150-200	150-200	150-200	150-200	150-200	150-200	150-200	150-200	150-200	150-200	150-200	150-200	150-200	150-200
Verona Formation	200-250	200-250	200-250	200-250	200-250	200-250	200-250	200-250	200-250	200-250	200-250	200-250	200-250	200-250	200-250	200-250
Carlisle Shale	250-300	250-300	250-300	250-300	250-300	250-300	250-300	250-300	250-300	250-300	250-300	250-300	250-300	250-300	250-300	250-300
Verona Formation	300-350	300-350	300-350	300-350	300-350	300-350	300-350	300-350	300-350	300-350	300-350	300-350	300-350	300-350	300-350	300-350
Verona Formation	350-400	350-400	350-400	350-400	350-400	350-400	350-400	350-400	350-400	350-400	350-400	350-400	350-400	350-400	350-400	350-400
Verona Formation	400-450	400-450	400-450	400-450	400-450	400-450	400-450	400-450	400-450	400-450	400-450	400-450	400-450	400-450	400-450	400-450
Verona Formation	450-500	450-500	450-500	450-500	450-500	450-500	450-500	450-500	450-500	450-500	450-500	450-500	450-500	450-500	450-500	450-500
Verona Formation	500-550	500-550	500-550	500-550	500-550	500-550	500-550	500-550	500-550	500-550	500-550	500-550	500-550	500-550	500-550	500-550
Verona Formation	550-600	550-600	550-600	550-600	550-600	550-600	550-600	550-600	550-600	550-600	550-600	550-600	550-600	550-600	550-600	550-600
Verona Formation	600-650	600-650	600-650	600-650	600-650	600-650	600-650	600-650	600-650	600-650	600-650	600-650	600-650	600-650	600-650	600-650
Verona Formation	650-700	650-700	650-700	650-700	650-700	650-700	650-700	650-700	650-700	650-700	650-700	650-700	650-700	650-700	650-700	650-700
Verona Formation	700-750	700-750	700-750	700-750	700-750	700-750	700-750	700-750	700-750	700-750	700-750	700-750	700-750	700-750	700-750	700-750
Verona Formation	750-800	750-800	750-800	750-800	750-800	750-800	750-800	750-800	750-800	750-800	750-800	750-800	750-800	750-800	750-800	750-800
Verona Formation	800-850	800-850	800-850	800-850	800-850	800-850	800-850	800-850	800-850	800-850	800-850	800-850	800-850	800-850	800-850	800-850
Verona Formation	850-900	850-900	850-900	850-900	850-900	850-900	850-900	850-900	850-900	850-900	850-900	850-900	850-900	850-900	850-900	850-900
Verona Formation	900-950	900-950	900-950	900-950	900-950	900-950	900-950	900-950	900-950	900-950	900-950	900-950	900-950	900-950	900-950	900-950
Verona Formation	950-1000	950-1000	950-1000	950-1000	950-1000	950-1000	950-1000	950-1000	950-1000	950-1000	950-1000	950-1000	950-1000	950-1000	950-1000	950-1000

**References**

Chap. 17. American Oil and Geophysical Co., Inc. *Geophysical and geologic maps of Wyoming*. Wyoming State Geologic Survey. Cheyenne, Wyoming. 1964. 1:250,000 scale. 10 maps.

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