West Half - from Meridian Sta - restored

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

H. G. O'CONNOR

BULLETIN 1215-B
PLATE 3

West half

GENERALIZED STRATIGRAPHIC SECTION OF EXPOSED ROCKS

SYSTEM	SERIES	GROUP	FORMATION	MEMBER	THICKNESS IN FEET
PERMIAN	Lower Permian	Admire	Johnson Shale		20
			Foraker Limestone	Long Creek Limestone	5
				Hughes Creek Shale	25–40
				Americus Limestone	2.5–5.7
			Janesville Shale	Hamlin Shale	30–40
				Five Point Limestone	4–8
				West Branch Shale	26–47
			Falls City Limestone		3.2–17
			Onaga Shale	Hawxby Shale	12–26
				Aspinwall Limestone	1.5–11.5
				Towle Shale	6.5–140
		Wood Siding Formation		Brownville Limestone	1–2.9
				Pony Creek Shale	5–11
				Grayhorse Limestone	0.5–4
				Plumb Shale	7–105
				Nebraska City Limestone	0.3–2.5
		Root Shale		French Creek Shale	19–29
			Stotler Limestone	Jim Creek Limestone	0.4–2.4
				Friedrich Shale	12–30
				Grandhaven Limestone	1.2–6
				Dry Shale	0.1–16
				Dover Limestone	1–4.8
			Pillsbury Shale		33–60
			Zeandale Limestone	Maple Hill Limestone	1.2–2
				Wamego Shale	9–35
				Tarkio Limestone	2–13
			Willard Shale		14–56
			Emporia Limestone	Elmont Limestone	2.5–5.2
				Harveyville Shale	4.3–15
				Reading Limestone	1.3–4.6
			Auburn Shale		30–70
			Bern Limestone	Wakarusa Limestone	1.7–4
				Soldier Creek Shale	6.6–15
				Burlingame Limestone	1–7
			Scranton Shale	Silver Lake Shale	20–36
				Rulo Limestone	0.6–3.6
				Cedar Vale Shale	25–29+
				Happy Hollow Limestone	0.4–3.4
				White Cloud Shale	50–60+
			Howard Limestone	Utopia Limestone	2–12
				Winzeler Shale	0.6–6.2
				Church Limestone	0.3–2.2
				Aarde Shale	0.7–5.5
			Severy Shale		30

f12956 — 19463-PC — Coal bed — f12957 — Lorton coal bed — 19462-PC (f12959), f12958, f12960, f12961, 19461-PC — 19460-PC (f12964), f12963, f12962 — 19459-PC (f12965), f12966, f12969 — f12970 — 19458-PC (f12972) — f12974 — Elmo coal bed — Coal bed — Nodaway coal bed

FEET: 0, 10, 20, 30, 40, 50

STRATIGRAPHIC SECTION EXPLANATION

Sandstone
Siltstone
Sandy siltstone
Claystone
Silty claystone
Calcareous claystone
Limestone
Conglomeratic limestone
Argillaceous limestone

Presence and depth of channel uncertain

19459-PC (f12965) Fossil collection from mapped area

◎19463-PC Fossil collection from outside mapped area

MAP EXPLANATION

	Qal	Alluvium	
Recent	Qn	Newman terrace deposits	
Pleistocene — Wisconsin	Qb	Buck Creek terrace deposits *Queried where correlation uncertain*	QUATERNARY
Pleistocene — Illinoian	Qk	Terrace deposits of Kansan Glaciation *Mapped only along Mission Creek*	
Pleistocene — Kansan	Qg (Pp)	Glacial drift (Pp), *underlying formation identified where known*	
Lower Permian — Council Grove Group	Pj	Johnson Shale	PERMIAN
	Pf	Foraker Limestone	
Lower Permian — Admire Group	Pjf — Pjfp	Janesville Shale and Falls City Limestone *Pjfp, Five Point Limestone Member of Janesville Shale*	
	Po — Poa	Onaga Shale *Queried where correlation uncertain* *Poa, Aspinwall Limestone Member*	
Virgil Series — Wabaunsee Group	Pws	Wood Siding Formation *Queried where correlation uncertain*	PENNSYLVANIAN
	Pr — Pri	Root Shale *Algal limestone of the Grandhaven Limestone Member of the Stotler Limestone mapped with unit Pri, Jim Creek Limestone Member mapped locally*	
	Pst	Stotler Limestone	
	Pp	Pillsbury Shale	
	Pz	Zeandale Limestone	
	Pw	Willard Shale	
	Pe	Emporia Limestone	
	Pa	Auburn Shale	
	Pb	Bern Limestone	
	Psr — Ps — Psh	Scranton Shale *Psr, Rulo Limestone Member* *Psh, Happy Hollow Limestone Member mapped locally; queried where correlation uncertain*	
	Ph	Howard Limestone	
	Psv	Severy Shale	CARBONIFEROUS

Contact
Dashed where approximately located; short dashed where inferred; dotted where concealed; queried where continuity of bed is unknown

1200 Structure contours
Drawn on base of Zeandale Limestone. Dashed where approximately located; short dashed where datum is eroded. Contour interval 20 feet. Datum is mean sea level

◎19460-PC USGS Permian and Carboniferous fossil locality

◎f12970 USGS foraminiferal collection locality

Dry and abandoned well R, *reported location*

Dry hole; show of gas R, *reported location*

Dry hole; show of oil

Dry hole; show of oil and gas R, *reported location*

Gravel quarry a, *abandoned*

Coal mine shaft a, *abandoned*

Coal mine adit a, *abandoned*

Mine or quarry a, *abandoned*

NOTE: Minor deviations between the geologic contacts and the topographic contours are due to slumping, changes in soil thickness, and variations in thickness of the shale units

Base from U.S. Geological Survey 1:24 000 topographic quadrangles: Auburn, Burlingame, Dover, Grove, Harveyville, Rossville, Silver Lake, and Willard, 1952; Maple Hill and St. Marys, 1953
Roads revised, 1963; contours not modified

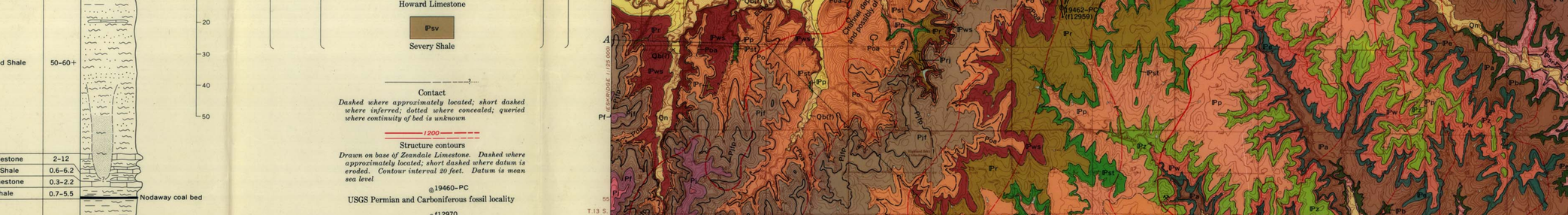
SCALE 1:48 000

1 ½ 0 1 2 3 4 5 MILES

1 5 0 1 2 3 4 5 KILOMETERS

CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL

Geology mapped by W. D. Johnson, Jr., and H. C. Wagner, 1954–57; assisted by H. J. Hyden, 1957



HORIZONTAL EXAGGERATION X 2
VERTICAL EXAGGERATION X 8

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D.C.—1966—G65274

GEOLOGIC MAP OF WESTERN SHAWNEE COUNTY AND PARTS OF ADJACENT COUNTIES, KANSAS