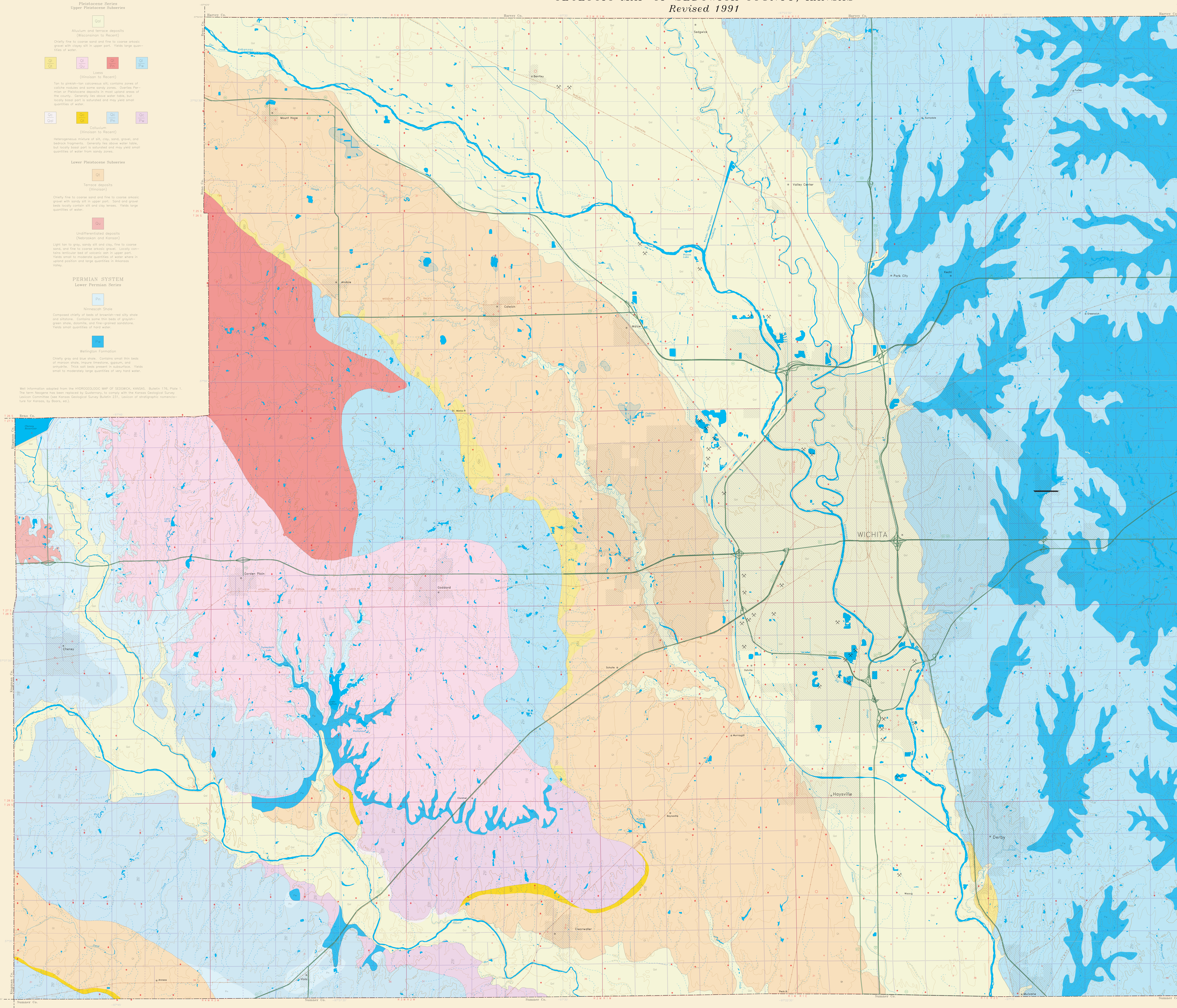
GEOLOGIC MAP OF SEDGWICK COUNTY, KANSAS

Revised 1991



QUATERNARY SYSTEM

Pleistocene Series

Upper Pleistocene Subseries

Qal

Alluvium and terrace deposits (Wisconsinan to Recent)

Chiefly fine to coarse sand and fine to coarse arkosic gravel with clayey silt in upper part. Yields large quantities of water.

Ql/Qt **Ql/Qu** **Ql/Pn** **Ql/Pw**

Loess (Illinoisan to Recent)

Tan to pinkish-tan calcareous silt; contains zones of caliche nodules and some sandy zones. Overlies Permian or Pleistocene deposits in most upland areas of the county. Generally lies above water table, but locally basal part is saturated and may yield small quantities of water.

Qc/Qal **Qc/Qt** **Qc/Pn** **Qc/Pw**

Colluvium (Illinoisan to Recent)

Heterogeneous mixture of silt, clay, sand, gravel, and bedrock fragments. Generally lies above water table, but locally basal part is saturated and may yield small quantities of water from sandy zones.

Lower Pleistocene Subseries

Qt

Terrace deposits (Illinoisan)

Chiefly fine to coarse sand and fine to coarse arkosic gravel with sandy silt in upper part. Sand and gravel beds locally contain silt and clay lenses. Yields large quantities of water.

Qu

Undifferentiated deposits (Nebraskan and Kansan)

Light tan to gray, sandy silt and clay, fine to coarse sand, and fine to coarse arkosic gravel. Locally contains lenticular bed of volcanic ash in upper part. Yields small to moderate quantities of water where in upland position and large quantities in Arkansas Valley.

PERMIAN SYSTEM

Lower Permian Series

Pn

Ninnescah Shale

Composed chiefly of beds of brownish-red silty shale and siltstone. Contains some thin beds of grayish-green shale, dolomite, and fine-grained sandstone. Yields small quantities of hard water.

Pw

Wellington Formation

Chiefly gray and blue shale. Contains small thin beds of maroon shale, impure limestone, gypsum, and anhydrite. Thick salt beds present in subsurface. Yields small to moderately large quantities of very hard water.

Well information adopted from the HYDROGEOLOGIC MAP OF SEDGWICK, KANSAS. Bulletin 176, Plate 1. The term Neogene has been replaced by Quaternary, to comply with the Kansas Geological Survey Lexicon Committee (see Kansas Geological Survey Bulletin 231, Lexicon of stratigraphic nomenclature for Kansas, by Baars, ed.).

KANSAS GEOLOGICAL SURVEY
THE UNIVERSITY OF KANSAS
MAP M–25

Geology mapped by
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Don E. Miller

Computer compilation and cartography by
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Deborah S. Kirshen

Geologic unit boundaries

1 – Observed geologic contact
2 – Inferred geologic contact
3 – Concealed geologic contact

Hydrology and topography

1 – Intermittent stream
2 – Perennial stream
3 – Areal hydrology
4 – Land subject to inundation
5 – Elevation contours (10-meter interval)
6 – Elevation contours (50-meter interval)

Transportation

1 – Interstate highway
2 – Federal highway
3 – State highway
4 – Medium-duty secondary road
5 – Light-duty secondary road
6 – Unimproved secondary road
7 – Railroad

Boundaries and locations

1 – State line
2 – County line
3 – Township/Range line
4 – Section line
5 – Locality
6 – Populated area population >500

Index reference features

1 – 1:24,000 map edge
2 – Line of cross section*

* *Does not appear on this map*

SYMBOL EXPLANATION

Municipal well	Number of wells at this location
Industrial well	Drilled test hole
Irrigation well	Augered test hole
Domestic or stock well	Indicates dry hole
Observation well	Gravel pit
Spring	Sinkhole

Where test hole and well are at same location, test hole was omitted from map.

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

Diagram of a township showing numbering of sections.

INDEX TO PUBLIC LAND SURVEY

Range: 3W 2W 1W 1E 2E; 4W
Township: 25S 26S 27S 28S 29S

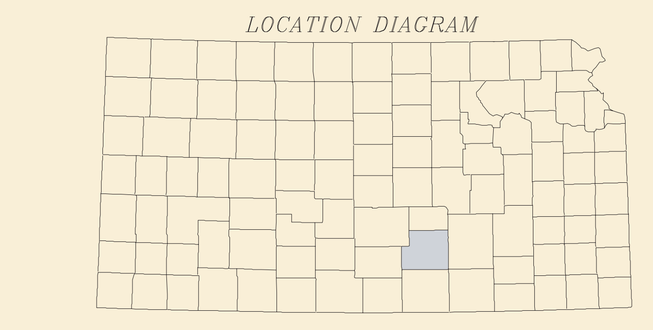
INDEX TO 1:24,000-SCALE MAPS

	1	2	3	4	5
	6	7	8	9	10
11	12	13	14	15	16
17	18	19	20	21	22
23	24	25	26	27	28

PR Photorevised

1 Patterson–1958 (78 PR)
2 Bentley–1958 (78 PR)
3 Sedgwick–1959 (78 PR)
4 Sedgwick NE–1959 (78 PR)
5 Whitewater–1962 (78 PR)
6 Mount Hope–1959
7 Colwich–1958 (75 PR)
8 Maize–1961 (75 PR)
9 Valley Center–1960 (70 PR)
10 Greenwich–1960 (70 PR)
11 Cheney–1964
12 Garden Plain–1965
13 Goddard–1965 (75 PR)
14 Wichita West–1961 (75 PR)
15 Wichita East–1961 (75 PR)
16 Andover–1961 (75 PR)
17 Cheney SE–1965
18 Lake Afton–1965
19 Clearwater–1965 (75 PR)
20 Bayneville–1961 (70 PR)
21 Derby–1960 (75 PR)
22 Rose Hill–1960 (70 PR)
23 Norwich–1971
24 Conway Springs–1971
25 Millerton–1971
26 Zyba–1955
27 Belle Plaine–1955
28 Mulvane–1955

LOCATION DIAGRAM



GN 0°57'
MN 7°30'

Convergence (GN) and 1981 magnetic declination (MN) at center of map
Diagram is approximate

CONVERSION TABLE

feet	meters	kilometers	miles
1	0.3048	0.0003	0.00019
3.2808	1	0.001	0.00062
3280.8	1000	1	0.6212
5280	1609.4	1.6094	1

To convert feet to meters multiply by 0.3048
To convert meters to feet multiply by 3.2808
To convert kilometers to miles multiply by 0.6212
To convert miles to kilometers multiply by 1.6094

Scale 1:50,000

Lambert Conformal Conic Projection with standard parallels at 33° and 45°

0 1 2 3 Kilometers

0 1 2 3 Miles

Elevation contours are presented for general reference. They are taken from USGS Digital Line Graph (DLG) files compiled from base maps at a scale of 1:100,000. In some places the contours from the DLG's may be more generalized than the base maps used for compilation of geologic outcrop patterns. Outcrop patterns on the map will typically reflect topographic variation more accurately than the associated contour lines. Repeated fluctuation of an outcrop line across a contour line should be interpreted as an indication that the mapped rock unit is maintaining a relatively constant elevation along a generalized contour.

This map was produced by computer-aided cartography using the GIMMAP (Geodata Interactive Management Map Analysis and Production) system developed at the Kansas Geological Survey.

Suggested reference to this map:
Lane, C. W., and Miller, D. E., revised 1991, Geologic Map, Sedgwick County, Kansas: Kansas Geological Survey, Map M–25, scale 1:50,000.