

Geology mapped by
William C. Johnson

Computer compilation
and cartography by
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Amy B. Carter
David L. Mearns
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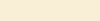
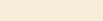
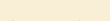
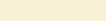
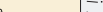
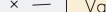
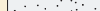
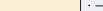
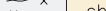
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	Member	Formation	Geologic Group	Series (LOCATION)
Qal		Alluvium Flood plain deposits		MIOCENE - LATE PLIOGENE
Qt		Terrace deposits		HIGH-TOPO PLIOGENE
200 Dd		Playa deposits		HIGH-TOPO PLIOGENE
150 Ds		Eolian sand dunes		HIGH-TOPO PLIOGENE
100 Dt		Eolian sand sheet		MIOCENE
75 Tc		Löss		MIOCENE
50 Tb	Jatmore Chalk Mbr. Hortland Sh Mbr. Lincoln Ls Mbr.	Dagblaka Fm. Greenhorn Ls		UPPER CRETACEOUS
25 Ta		Goshute Sh	COLUMBIAN	UPPER CRETACEOUS
0 Td		Dagblaka Fm.		UPPER CRETACEOUS

* (Qp) Parenthesis indicates the presence of a geologic formation below water.

Stollgaphy based on Zeller, D. E., ed. 1969. The stratigraphic succession in Kansas: Kansas Geological Survey, Bulletin 189, 81 p.

INDEX MATRICES

- | EXERCISE 1 | | | | | | | |
|---|-------------------|---|---|---|---------------------------|---|-----------------|
|  | Sandstone or sand |  | Undifferentiated sandstone or siltstone |  | Varicolored shale or clay |  | Coloraceous |
|  | Chalk |  | Chalky limestone |  | Cherty limestone |  | Shaly limestone |
|  | Limestone |  | Sand and gravel, consolidated |  | Gneiss |  | Unconsolidated |

Geologic unit boundary

-
- 1 = Observed geologic contact
 2 = Inferred geologic contact
 3 = Consolidated geologic contact
 • Does not appear on this map

- Bridge structure**

1 - Fault
 2 - Anticline*
 3 - Syncline
 4 - Dashed where inferred
 * Does not appear on this map

map reference features

1 - 1:24,000 map edge
 2 - Line of cross section
 A - Does not appear on this map

-
- 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
- 8 - Airport or landing strip
- * Does not appear on this map
- 1 - State line
- 2 - County line
- 3 - Township/Range line
- 4 - Section line
- 5 - County seat
- 6 - City
- 7 - Locality
- 8 - County boundary

- Resource Management**
- Diagram:**
-
- The diagram consists of two parts. On the left, there is a grid of numbers arranged in three rows and four columns:

6	5	4	3	2	1
7	8	9	10	11	12
13	14	15	16	17	18

Below the grid is a legend:
 - 1 - Quarry*
 - 2 - Pit
 - 3 - Shale pit
 - 4 - Oil wells
 - 5 - Gas wells*
 - 6 - Water wells*On the right, there is a diagram of a township showing numbering of sections. The township is represented by a large rectangle divided into 36 smaller squares (sections). The sections are numbered from 1 to 36 in a boustrophedon pattern, starting from the top-left corner (section 1), moving right across the first row (sections 1-6), then down one row and moving left across the second row (sections 7-12), and so on, alternating directions for each subsequent row.

-
- 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 |
- INDEX TO PUBLIC LAND SURVEY
Range
- 30W 37W 30W 35W
- 21N 22N 23N 24N 25N 26N
- Township

- | | |
|---------------------------------|--------------------------------|
| 1 Dekker SW - 1970 | 4 Kendall - 1948 |
| 2 Larkin SW - 1970 | 17 Larkin SW - 1960 |
| 3 Larkin - 1970 | 18 Larkin - 1946 (78 PR) |
| 4 Lewis - 1970 | 20 Deerfield - 1960 (78 PR) |
| 5 Madox SW - 1976 | 23 Deerfield NW - 1960 (78 PR) |
| 6 Madox SW - 1976 | 25 Deerfield NW - 1960 (78 PR) |
| 7 Mouth of Shingle Creek - 1960 | 27 Larkin SW - 1960 (78 PR) |
| 8 Mutton Draw SW - 1965 | 29 Larkin SW - 1960 (78 PR) |
| 9 Mutton Draw NW - 1965 | 30 Lakin SW - 1946 (78 PR) |
| 9 Wolf SW - 1965 | 32 Deerfield SW - 1960 (78 PR) |
| 10 Wolf NW - 1965 | 33 Deerfield SE - 1946 (78 PR) |
| 11 Elbert Creek - 1966 | 34 New Snow - 1960 |
| 12 Mutton Draw SW - 1968 | 37 Ulysses NW - 1960 |
| 13 Mutton Draw SW - 1968 | 38 Ulysses NW - 1958 |
| 14 Wolf SW - 1968 | 39 Hickok NW - 1958 |
| 15 Wolf SW - 1968 | 40 Hickok NW - 1958 (78 PR) |
- PH - Photoverized

- LOCATION DIAGRAM*
-

-
- f. 25 S.
f. 26 S.
- MN
GN
1°20'
- Convergence (GN) and 1897
magnetic declination (MN)
at center of map
Diagram is approximate

100

- Scale 1:50,000
- 0 1 2 3
Kilometers
- 0 1 2
Miles
- CONVERSION TABLE
- | Kilometers | Miles |
|------------|-------|
| 0 | 0 |
| 1 | 0.62 |
| 2 | 1.24 |
| 3 | 1.86 |

- | | | | |
|---|-------|-------|---|
| 5280 | 16084 | 16094 | 1 |
| To convert feet to meters multiply by 0.3048 | | | |
| To convert meters to kilometers by 0.0009 | | | |
| To convert kilometers to miles multiply by 0.6214 | | | |
| To convert miles to kilometers multiply by 1.6094 | | | |
- Elevation contours are presented for general reference. They are taken from USGS Dig. Graph (116) files compiled from base maps at a scale of 1:100,000. In some places the data from the DGM may be more generalized than the base maps used for compilation of the outcrop patterns. Outcrop patterns on the map will typically reflect topographic features accurately than the associated contour lines. Repeated fluctuations of an outcrop line across a contour line should be treated as indicating that the mapped rock unit is maintaining a relatively constant elevation along a generalized contour.

Bulletin 49, "Costo,
Melanobilia, 1942")

- of Hamilton County" (Buen, 1920). USGS map M-516, scale 1:125,000, "Water resources
 tion County, southwestern Kansas" (Lobensky and Sauer, 1974). Soil survey of Hamilton
 Kansas, USDA (Wilbur et al., 1974).
 This map was produced by computer-aided cartography using the GIMMAP (Geospatial
 Management Map Analysis and Production) system developed at the Kansas Geological Sur-
 The Kansas Geological Survey does not guarantee this map to be free from errors or
 and disclaims any responsibility or liability for interpretations made from the map or
 based thereon.
 Suggested reference to this map:
 Johnson, M. C., 2003. Geological map of Kearney County, Kansas. Kansas Geological Sur-
 vey, Map M-82, scale 1:50,000.
 Partially funded by the National Cooperative Geologic Mapping STATEMAP Program.