

**KANSAS GEOLOGICAL SURVEY  
OPEN-FILE REPORT 2001-15**

PRELIMINARY GEOLOGY FIELD MAPS FOR PORTIONS OF  
HODGEMAN COUNTY, KANSAS

By

W. C. Johnson

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Kansas Geological Survey  
1930 Constant Avenue  
University of Kansas  
Lawrence, KS 66047-3726

## HODGEMAN COUNTY QUADRANGLE MAPS

The following 20 quadrangle maps are photocopies of field maps that are submitted by the Kansas Geological Survey as part of the STATEMAP Agreement #01HQPA0003 for FY01 (May 1, 2001 to April 30, 2002). Six complete quadrangles and 14 partial quadrangles were mapped in Hodgeman County. These 20 quadrangles are filed with four quadrangles mapped during the FY00 contract year as the **Kansas Geological Survey Open-File Report 2001-15 "Preliminary Geology Field Maps for portions of Hodgeman County, Kansas."**

Quadrangles included in the FY01 Hodgeman County Geologic Mapping Project include--

### *Complete Quadrangles*

**Horse Thief Canyon NE**  
**Jetmore NW**  
**Jetmore NE**  
**Horse Thief Canyon**  
**Jetmore**  
**Jetmore SE**

### *Partial Quadrangles*

**Beeler SW**  
**Beeler SE**  
**Ness City SW**  
**Ness City SE**  
**Bazine SW**  
**Bazine SE**  
**Horse Thief Canyon NW**  
**Horse Theif Canyon SW**  
**Dodge City NW**  
**Dodge City NE**  
**Spearville NW**  
**Spearville NE**  
**Offerle NW**  
**Offerle**

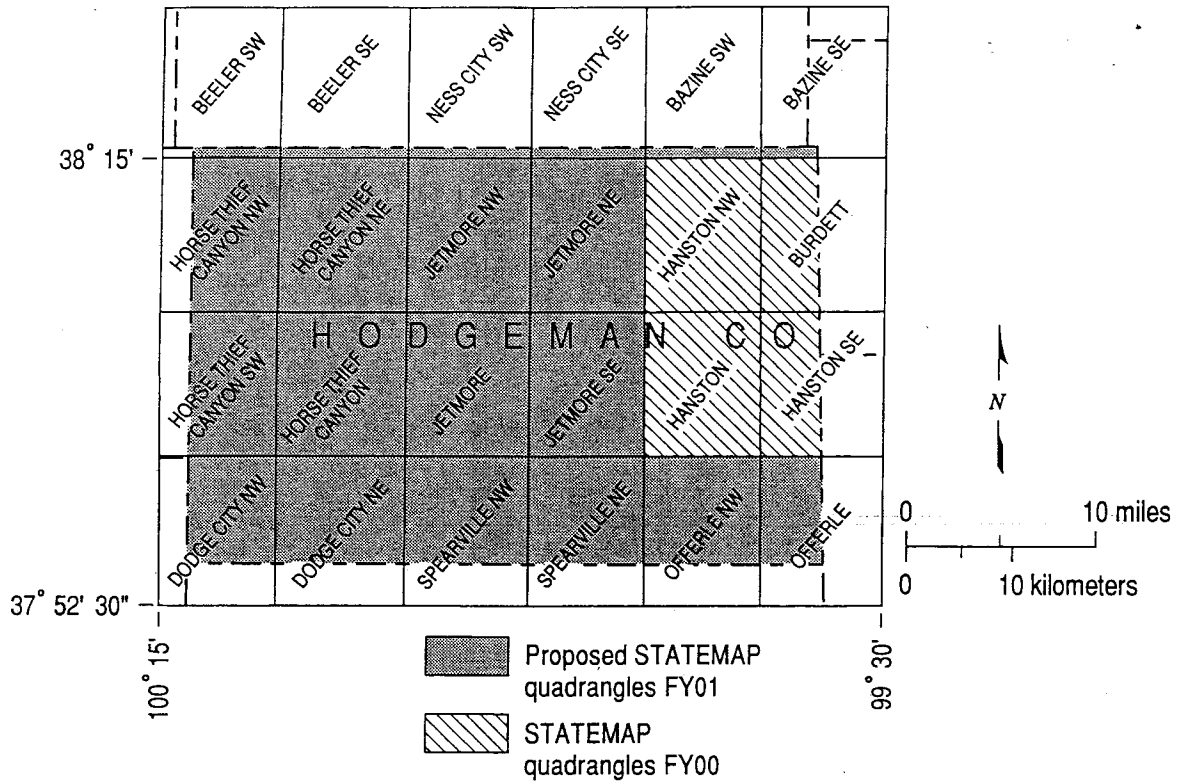


Figure 6--Quadrangle maps covering Hodgeman County, and quadrangle areas within the county proposed for the FY01 STATEMAP project.

# Stratigraphic Column

## Hodgeman County, Kansas

*William C. Johnson*  
University of Kansas

### Quaternary System

#### Alluvial deposits

- Qal*      *undifferentiated alluvium*  
coarse gravel to clay; Holocene age; 0-40ft
- Qt*      *alluvial terrace deposits*  
coarse gravel to clay; late Pleistocene to Holocene ages; 0-45ft
- Qp*      *upland intermittent lake (playa) deposits*  
silt to clay; late Pleistocene to Holocene ages; 0-30ft

#### Eolian deposits

- Qs*      *eolian sand*  
fine sand occurring in sheets and dunes; late Pleistocene to Holocene ages; 0-25ft
- Ql*      *loess*  
fine-grained sediments, dominantly silt-sized; Pleistocene to Holocene ages; 0-20ft

### Tertiary System

- To*      *Ogallala Formation*  
coarse gravel to clay; calcareous with lenses of volcanic ash; Miocene age; 0-100ft

### Cretaceous System

#### Upper Cretaceous Series

- Kfh*      *Fort Hays limestone*
- Kc*      *Carlile shale*
- Kgg*      *Greenhorn limestone*  
chalky shale with thin limestone beds and limestone concretions, and thin chalky limestone beds separated by chalky shale; 0-41ft
- Graneros shale*  
bluish-gray clay shale, sandy shale and sand lenses; 0-35 ft
- Kd*      *Dakota sandstone*  
white to brown lenticular sandstone with gray and variegated sandy s shale; 0-50 ft

## **GRAY COUNTY & HODGEMAN COUNTY QUADRANGLE MAPS**

The following 11 quadrangle maps are photocopies of field maps that are submitted by the Kansas Geological Survey as part of the STATEMAP Agreement #00HQAG0055 for FY00 (May 1, 2000 to April 30, 2001). Seven quadrangles are added to existing quadrangles from STATEMAP FY99 filed with the Kansas Geological Survey as **KGS Open-File Report 2000-22 "Preliminary Geologic Field Maps for portions of Gray County, Kansas."** This completes the field mapping of Gray County, but as part of this same project, new mapping was started in Hodgeman County, Kansas. Two complete quadrangles and two partial quadrangles were mapped in Hodgeman County. The four quadrangles have been filed at the Kansas Geological Survey as **KGS Open-File Report 2001-15 "Preliminary Geology Field Maps for portions of Hodgeman County, Kansas."**

Quadrangles included in the FY00 Gray--Hodgeman County Geologic Mapping Project include--

### ***GRAY COUNTY***

Complete Quadrangles

**Pierceville NE  
Cimarron NW  
Cimarron NE  
Cimarron**

### ***HODGEMAN COUNTY***

Complete Quadrangles

**Hanston  
Hanston NW**

### ***GRAY COUNTY***

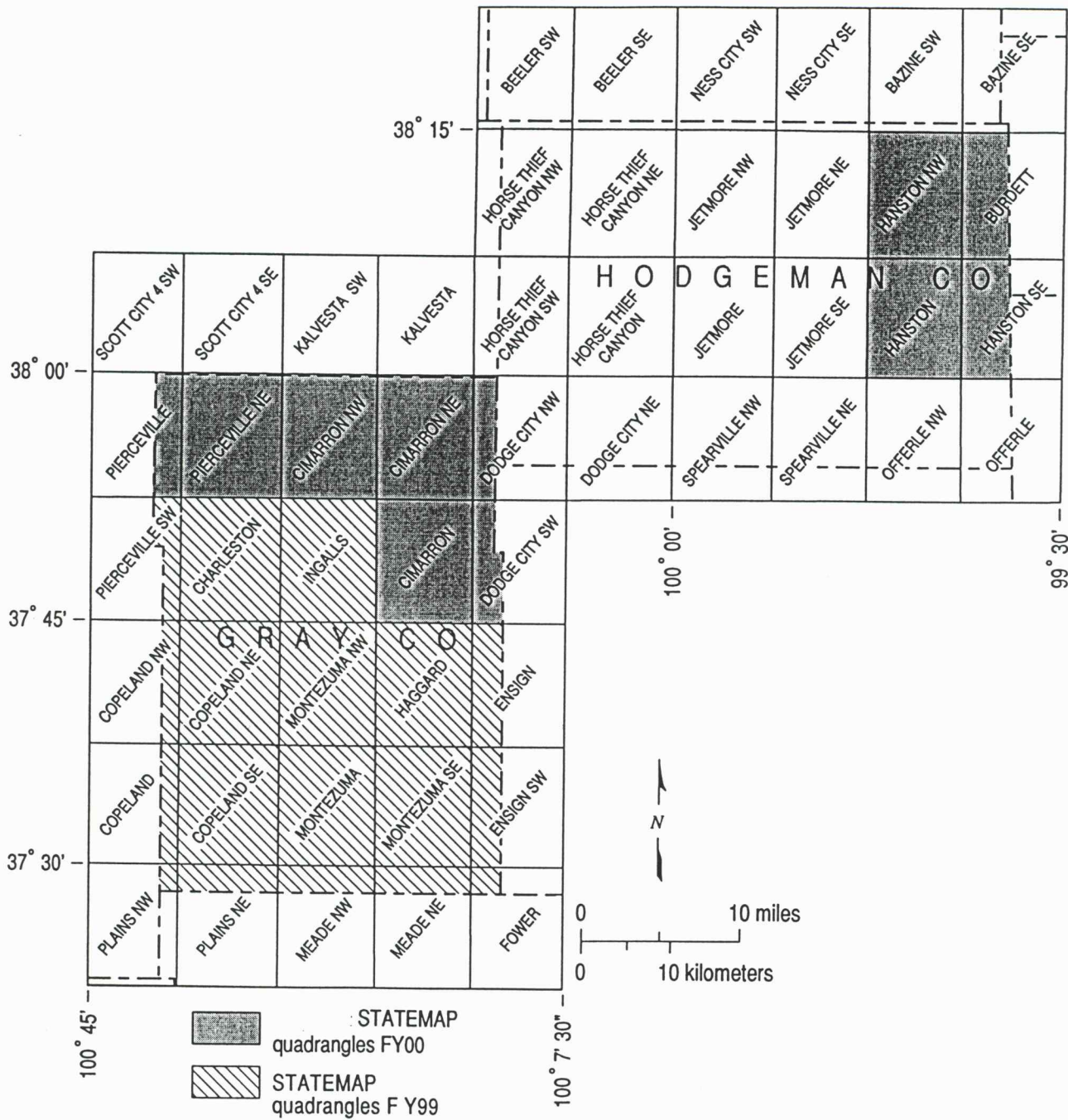
Partial Quadrangles

**Pierceville  
Dodge City NW  
Dodge City SW**

### ***HODGEMAN COUNTY***

Partial Quadrangles

**Burdett  
Hanston SE**



Quadrangle maps covering Gray County and Hodgeman County with area shown that was mapped during FY99, and deliverables of the new mapped areas in Gray and Hodgeman County for FY00.

# Stratigraphic Column

## Hodgeman County, Kansas

William C. Johnson  
University of Kansas

### Quaternary System

#### Alluvial deposits

- Qal***      ***undifferentiated flood plain alluvium***  
coarse gravel to clay; Holocene age; 0-40ft
- Qt***      ***alluvial terrace deposits***  
coarse gravel to clay; late Pleistocene to Holocene ages; 0-45ft
- Qp***      ***upland intermittent lake (playa) deposits***  
silt to clay; late Pleistocene to Holocene ages; 0-30ft

#### Eolian deposits

- Qs***      ***eolian sand***  
fine sand occurring in sheets and dunes; late Pleistocene to Holocene ages; 0-25ft
- Ql***      ***loess***  
fine-grained sediments, dominantly silt-sized; Pleistocene to Holocene ages; 0-20ft

### Tertiary System

- To***      ***Ogallala Formation***  
coarse gravel to clay; calcareous with lenses of volcanic ash; Miocene age; 0-100ft

### Cretaceous System

#### Upper Cretaceous Series

- Kgh***      ***Greenhorn limestone (Pfeifer shale and Jetmore chalk mbrs)***  
chalky shale with thin limestone beds and limestone concretions, and thin chalky limestone beds separated by chalky shale; 0-41ft
- Kgr***      ***Graneros shale***  
bluish-gray clay shale, sandy shale and sand lenses; 0-35 ft
- Kd***      ***Dakota sandstone***  
white to brown lenticular sandstone with gray and variegated sandy s shale; 0-50 ft