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### Field Trip Guide (for the Nebraska Well Drillers Association) Northeastern Nebraska Geology

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Olafsen Lackey, S.; Diffendal, R. F.; Burchett, R.R.; Eversoll, D. A.; and Tremblay, R.A., "Field Trip Guide (for the Nebraska Well Drillers Association) Northeastern Nebraska Geology" (1997). *Conservation and Survey Division*. 241.

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# **FIELD TRIP GUIDE**

(for the Nebraska Well Drillers Association)

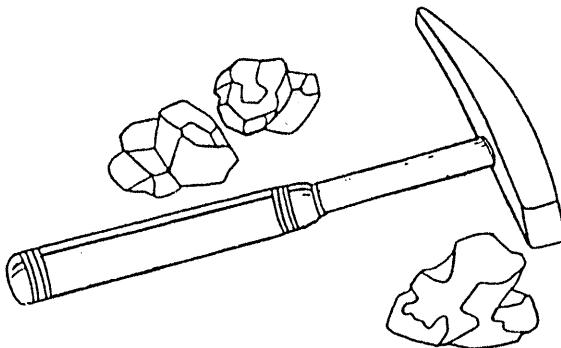
## ***NORTHEASTERN NEBRASKA GEOLOGY***

Sue Olafsen Lackey, Robert F. Diffendal, Jr.

Raymond R. Burchett and Duane A. Eversoll

(Nebraska Geological Survey)

Rodney J. Tremblay (Nebraska Department of Health)



## **NEBRASKA GEOLOGICAL SURVEY**

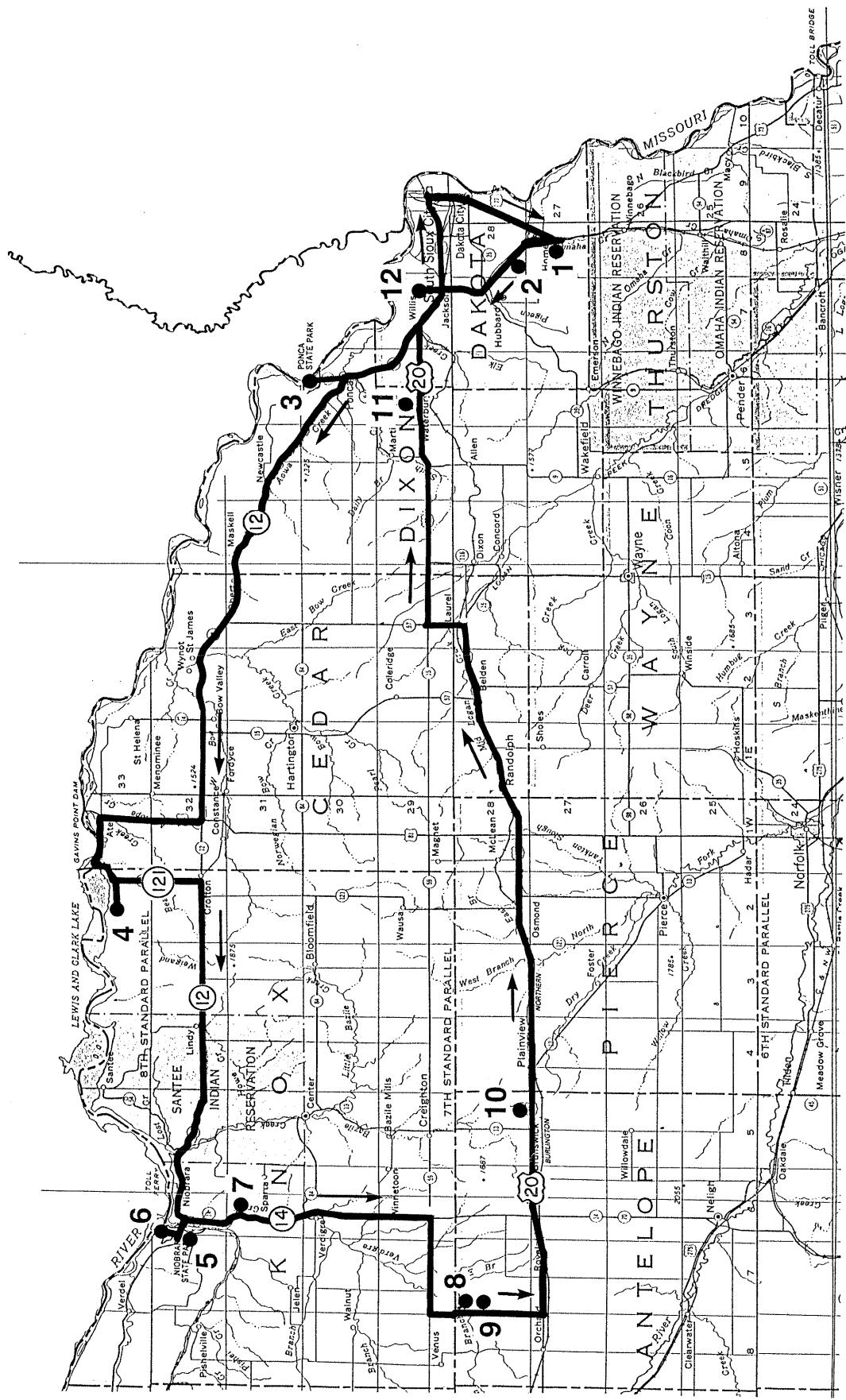
Conservation and Survey Division  
Institute of Agriculture and Natural Resources  
University of Nebraska-Lincoln



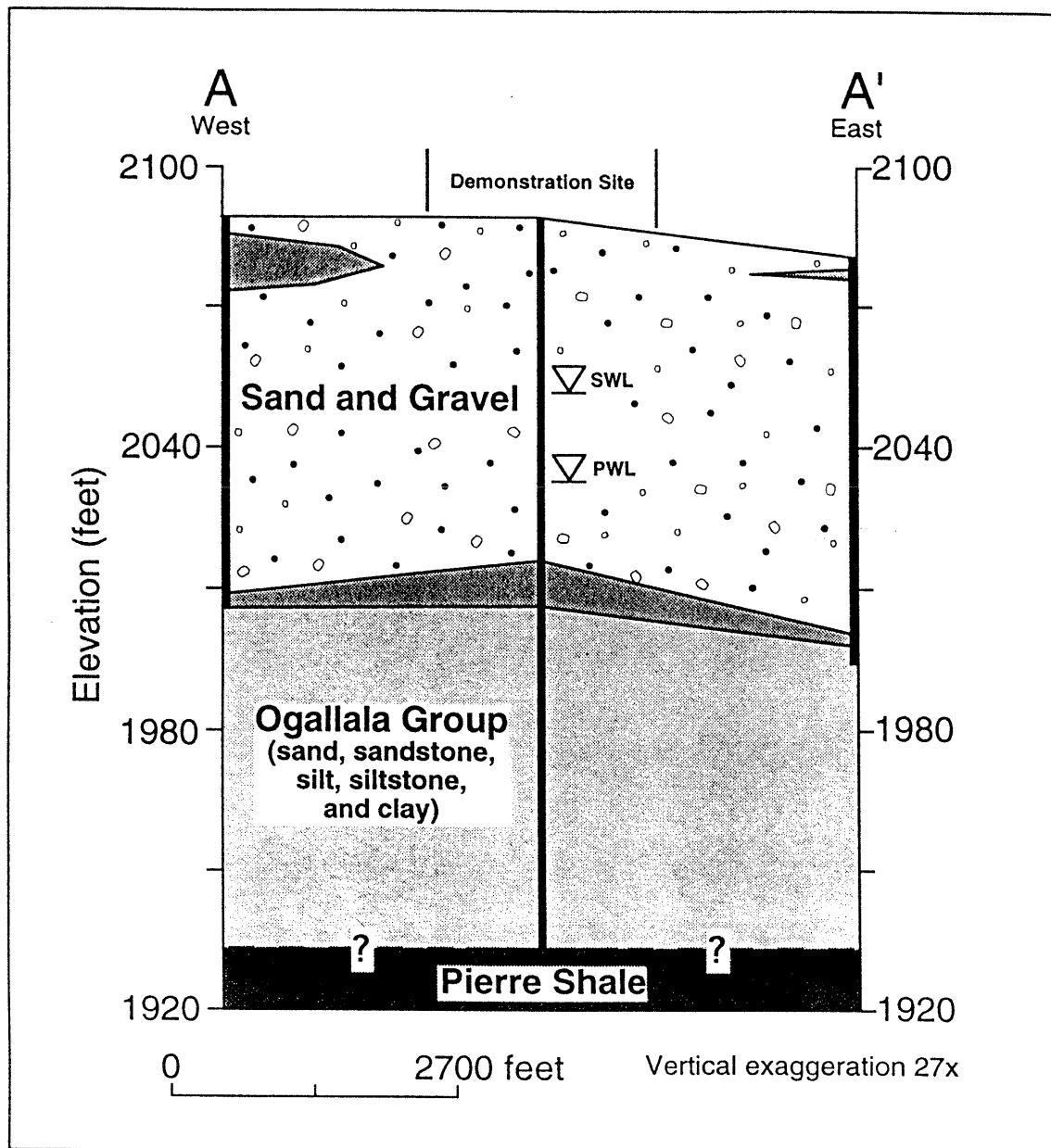
**September 19, 1997**



## Index map showing location of stops

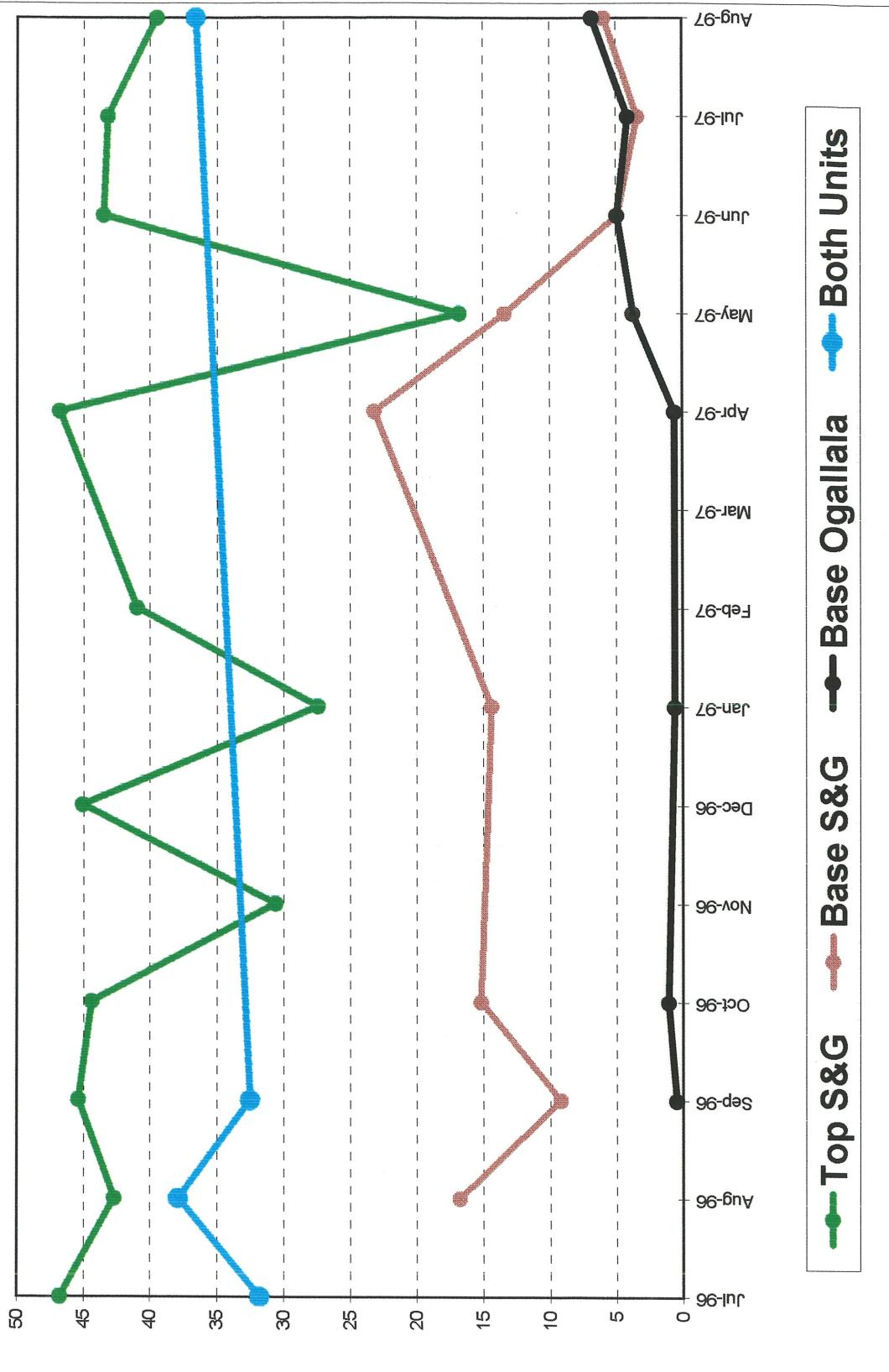


# Atkinson Site

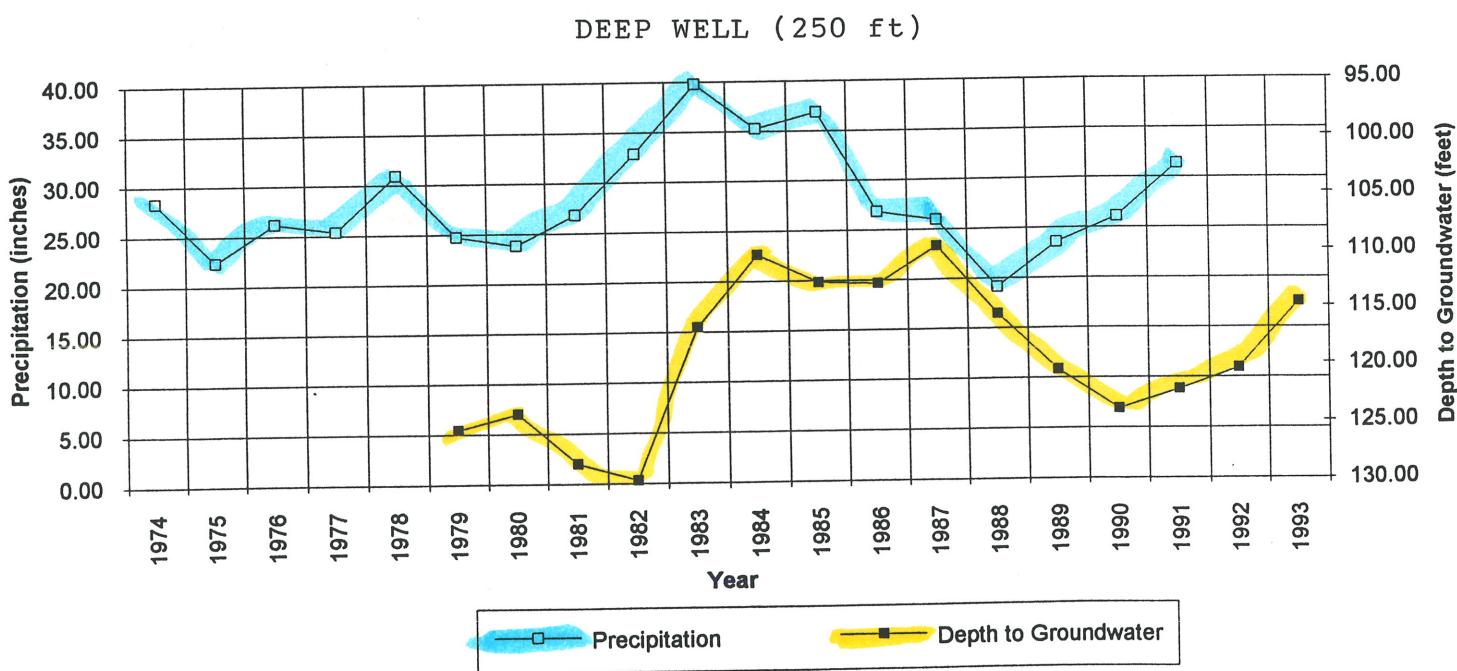
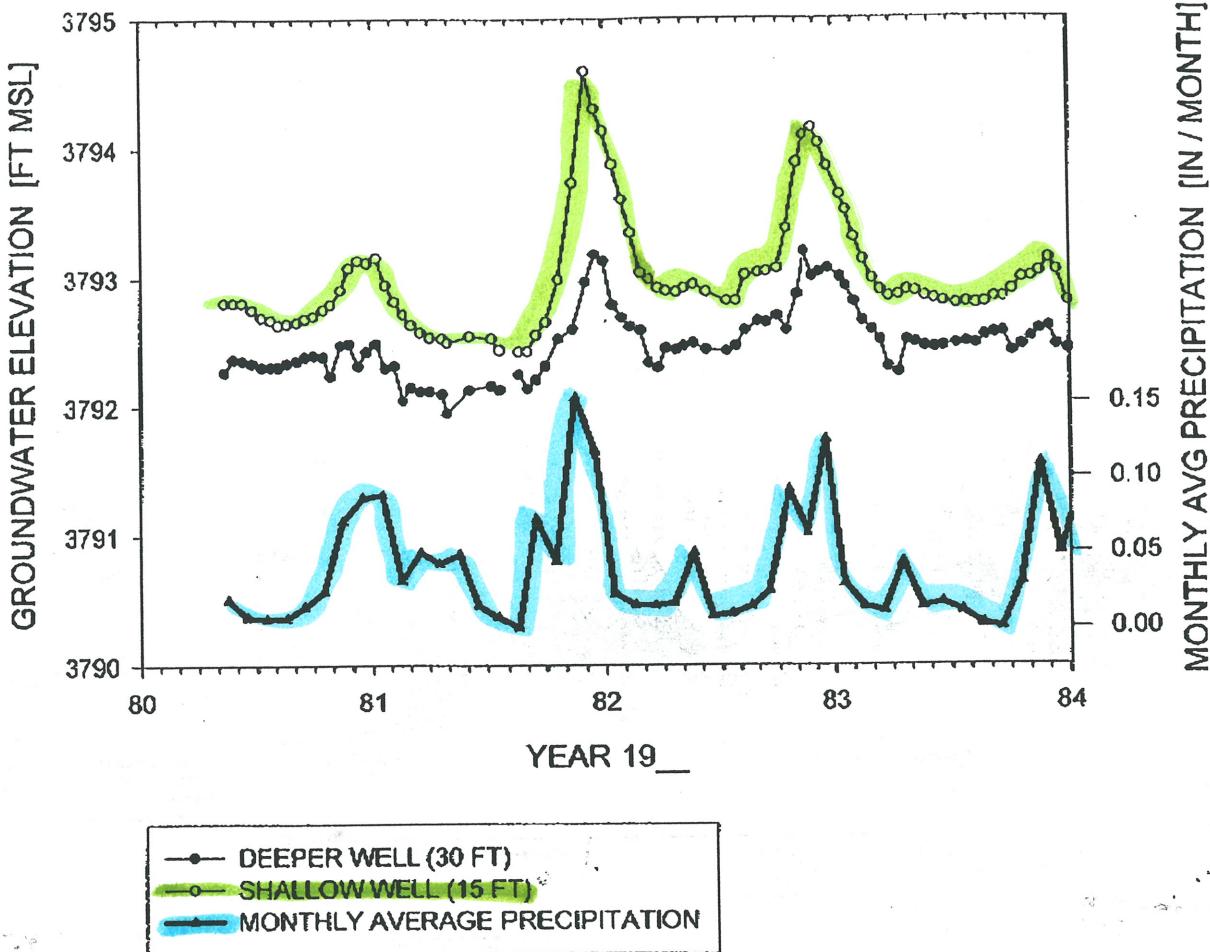


# HOLT COUNTY GROUNDWATER EDUCATION PROGRAM

## Atkinson Site Nitrate Concentrations



## GROUNDWATER WELL RESPONSE TO PRECIPITATION DEEPER WELL VS SHALLOW WELL



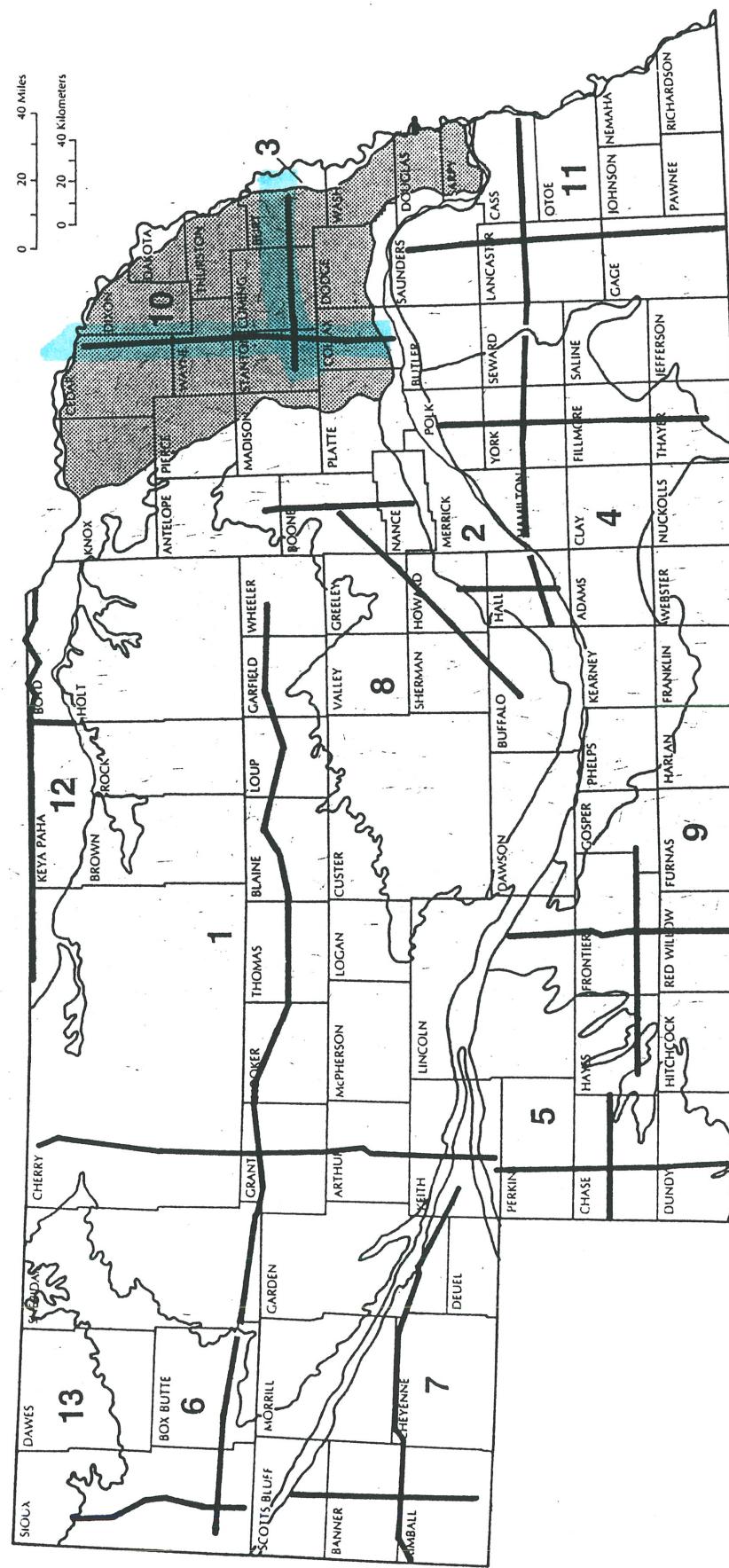
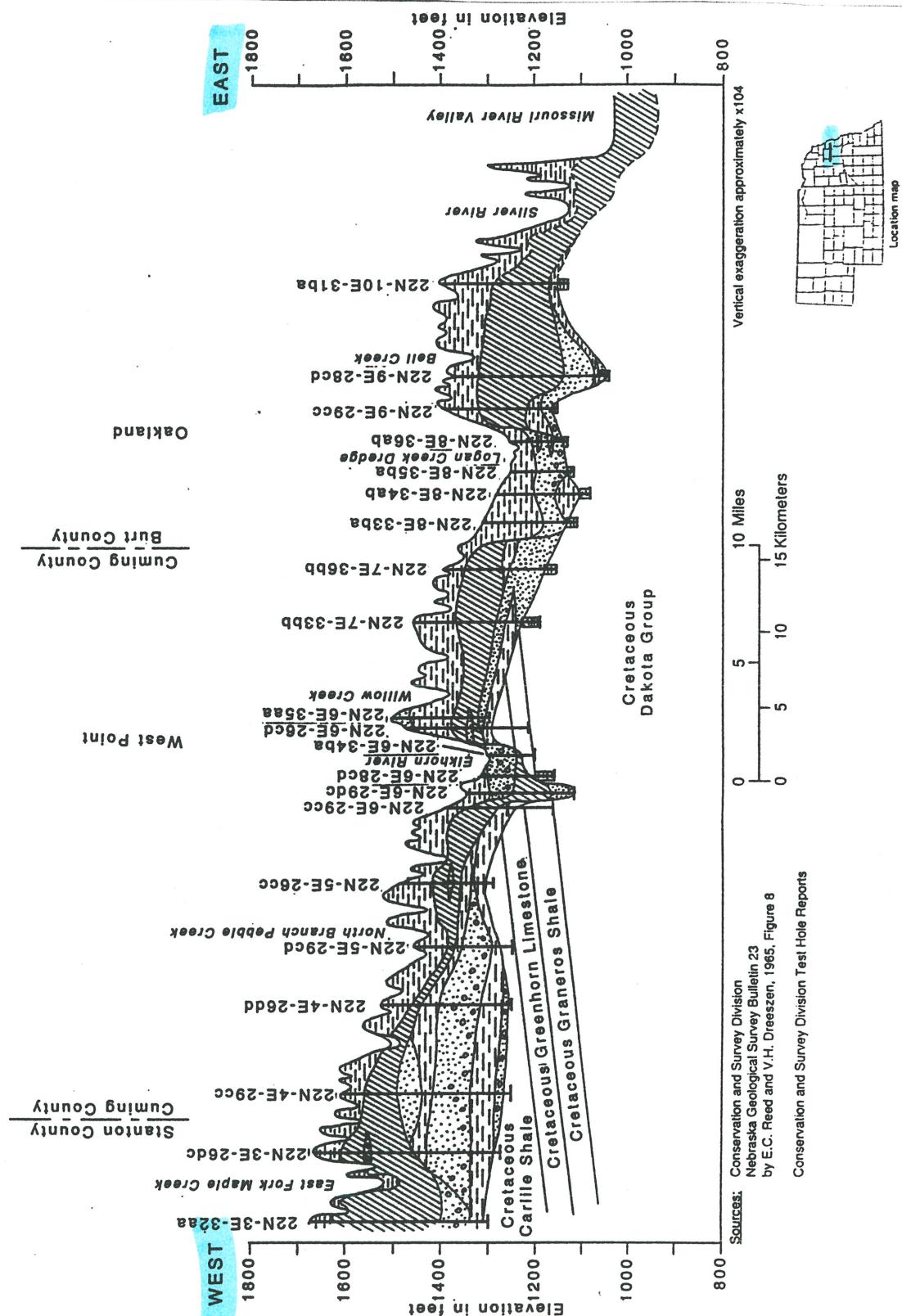
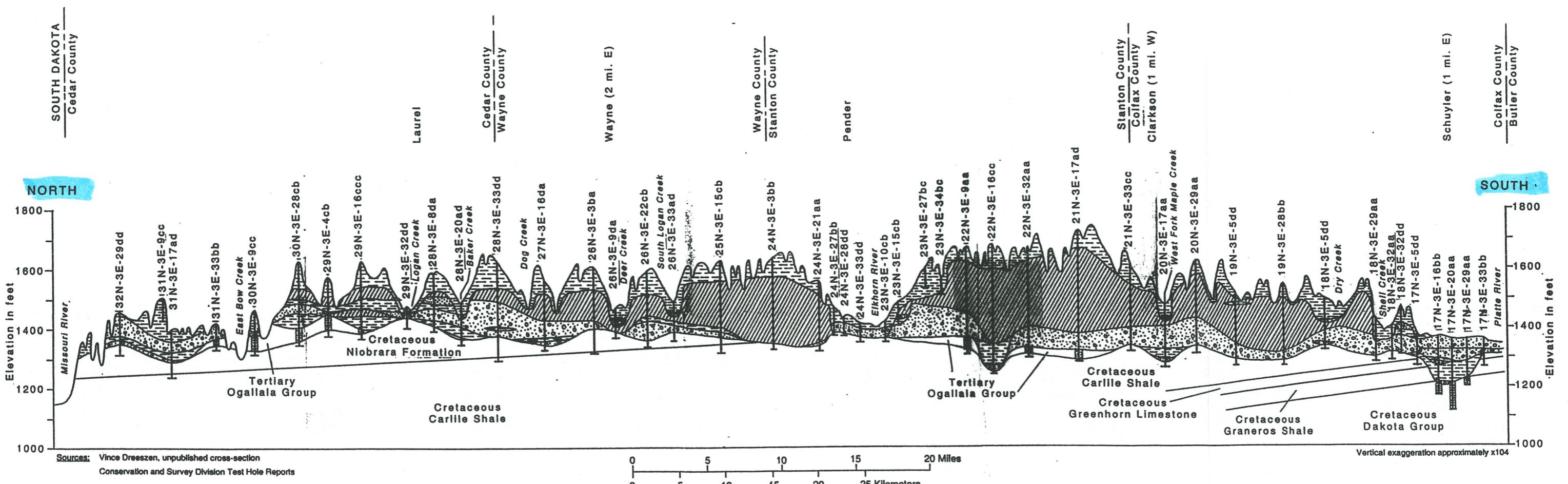


Fig. 1—*Locations of geologic cross sections (Region 10 in gray)*





**Geologic materials**

- Silt and clay
- Till
- Sand
- Sand and gravel

**Materials in Ogallala Group and Dakota Group**

- 21N-3E-29dd
- 31N-3E-9cc
- 31N-3E-17ad
- 30N-3E-9cc
- 30N-3E-4cb
- 30N-3E-16ccc
- 29N-3E-28cb
- 29N-3E-4da
- 28N-3E-20ad
- 28N-3E-8da
- 28N-3E-16da
- 28N-3E-33dd
- 26N-3E-3ba
- 26N-3E-9da
- 26N-3E-22cb
- 26N-3E-33ad
- Dog Creek
- Baker Creek
- Logan Creek
- Elkhorn River
- Deer Creek
- South Logan Creek
- 25N-3E-15cb
- 24N-3E-21aa
- 24N-3E-27bb
- 24N-3E-28dd
- 24N-3E-33dd
- 23N-3E-10cb
- 23N-3E-15cb
- 23N-3E-27bc
- 23N-3E-34bc
- 22N-3E-9aa
- 22N-3E-16cc
- 22N-3E-32aa
- 21N-3E-17ad
- 21N-3E-33cc
- 20N-3E-17aa
- West Fork Maple Creek
- 20N-3E-29aa
- 19N-3E-5dd
- 18N-3E-28bb
- Dry Creek
- Shell Creek
- 18N-3E-32dd
- 18N-3E-32aa
- 17N-3E-20aa
- 17N-3E-16bb
- 17N-3E-33bb
- Platte River

**Test hole**

Cross section illustrates general distribution of geologic materials.  
Where additional geologic and stratigraphic information was available from published reports or from technical reviews, it was included on the section.