

|                           |      |                                          |      |                                     |       |
|---------------------------|------|------------------------------------------|------|-------------------------------------|-------|
| COUNTY <i>Butler</i>      |      | PROJECT NO. <i>54-8-K-0152-01</i>        |      | SOUNDING NO. <i>14.08</i>           |       |
| 2 STA. <i>246+36.25</i>   |      | Hwy Co. Rd. over US-54 STA. <i>49+14</i> |      | RT/LE <i>10</i> SOUND. NO. <i>2</i> |       |
| GROUNDWATER EL.           |      | VERTICAL SCALE <i>1 inch = 10 feet</i>   |      | DATE <i>July 1980</i>               |       |
| B.M. NO. <i>26</i>        |      | B.M. EL. <i>1363.53</i>                  |      | SUBMITTED BY <i>Koontz</i>          |       |
| POINT                     | B.S. | H.I.                                     | F.S. | ELEV.                               | POINT |
|                           |      |                                          |      |                                     |       |
| <i>See attached sheet</i> |      |                                          |      |                                     |       |

| FORM | BIT | EL.  | LOG | ACC.<br>DEP. | GEOLOGIC DESCRIPTION AND REMARKS                                                                                                                                                                                                                                                                                                                                                  | CASING DRIVE REC.<br>DEPTH | EL./FO |
|------|-----|------|-----|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|--------|
|      |     | 1370 |     |              |                                                                                                                                                                                                                                                                                                                                                                                   |                            |        |
|      |     |      |     |              | <i>T.H.E. 1364.3</i>                                                                                                                                                                                                                                                                                                                                                              |                            |        |
|      |     |      |     | 1.6          | <i>clay, brown silty</i>                                                                                                                                                                                                                                                                                                                                                          |                            | 1362.7 |
|      |     | 1360 |     | 5.5          | <i>Limestone, tan to gray-tan softer zone at 4'</i>                                                                                                                                                                                                                                                                                                                               |                            | 1358.8 |
|      |     |      |     |              | <i>Shale, limy, tan w/ thin limestone stringers harder zone at 8' limy w/ some black joints At 8' clayey, gray limy zones at 9' firmer more limy at 9' shale yellow-green softer limy and clayey, light gray at 10' with some dark gray streaks, firmer with thin limy zones at 11' shale some what softer gray-green to yellow-green contains a few thin limestone stringers</i> |                            | 1346.7 |
|      |     | 1350 |     | 17.6         | <i>Core 1 Cut 5' Rec 5'</i>                                                                                                                                                                                                                                                                                                                                                       |                            |        |
|      |     |      |     | 22.6         | <i>(See attached sheet)</i>                                                                                                                                                                                                                                                                                                                                                       |                            | 1341.7 |
|      |     | 1340 |     |              | <i>Core 2 Cut 4' Rec 4'</i>                                                                                                                                                                                                                                                                                                                                                       |                            |        |
|      |     |      |     | 27.4         |                                                                                                                                                                                                                                                                                                                                                                                   |                            | 1336.9 |
|      |     |      |     |              | <i>Core 3 Cut 5' Rec 4'</i>                                                                                                                                                                                                                                                                                                                                                       |                            |        |
|      |     |      |     | 32.4         |                                                                                                                                                                                                                                                                                                                                                                                   |                            | 1331.9 |
|      |     | 1330 |     |              |                                                                                                                                                                                                                                                                                                                                                                                   |                            |        |

Soil Mantle

Cresswell Limestone Member

Gage Shale Member

5 1/2" Hawthorne  
Dennison Barrel

## Core Description

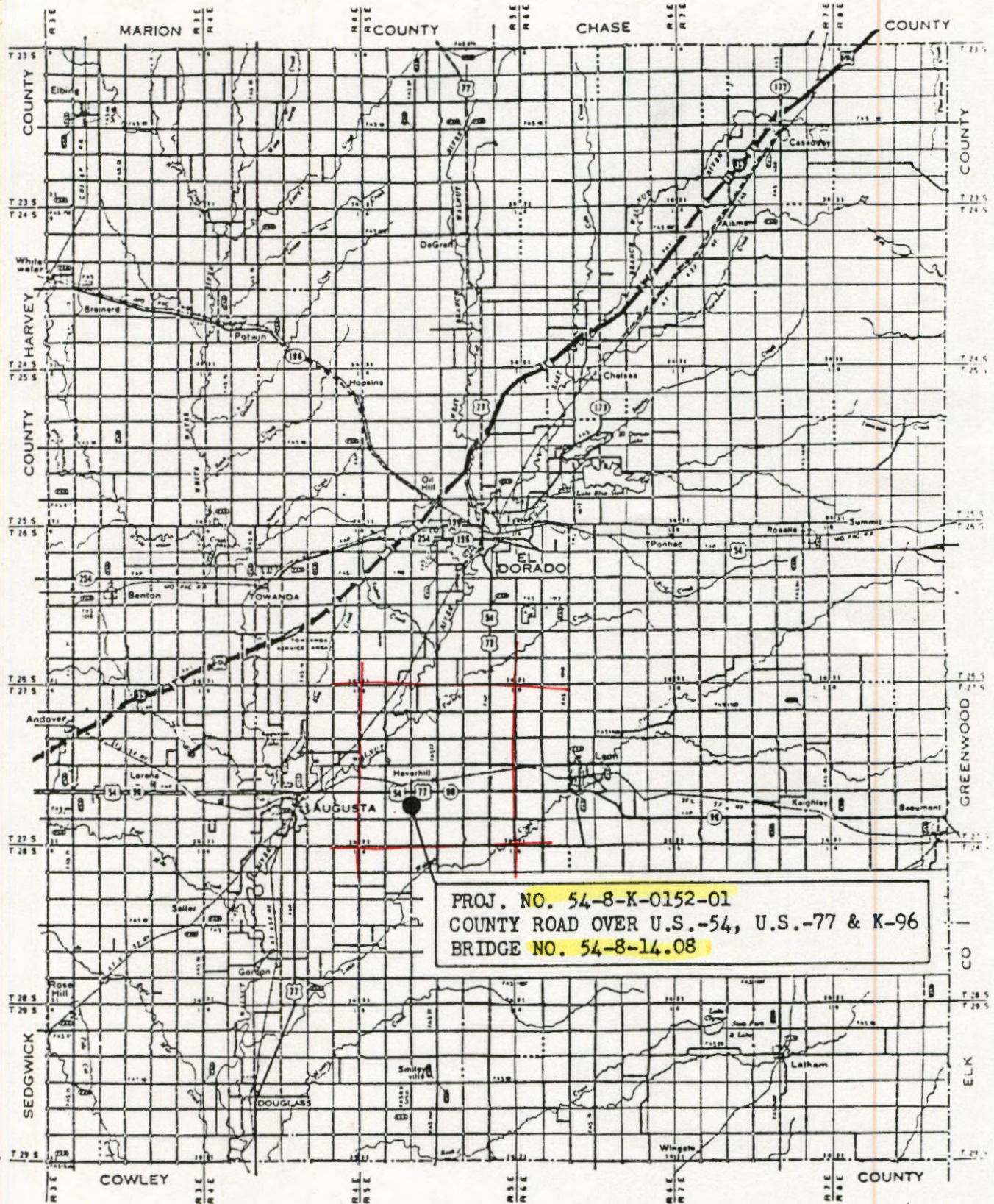
Proj. 54-8-K-0152-01

Br. No. 1408. Butler Co.

CD #2 Sta. 49+14 Rt. 10

|                |                                                                                               |                    |             |
|----------------|-----------------------------------------------------------------------------------------------|--------------------|-------------|
| Core 1         | Cut 5°                                                                                        | Rec 5°             |             |
| 5°             | Shale, gray-green with yellow-brown in thin layers limy, clayey to silty, blocky fairly firm. |                    |             |
| 5°             | Total Recovery                                                                                |                    |             |
|                | Elev.                                                                                         | Tons/S.F.          | description |
| Sample 1       | 1345.3-1345.0                                                                                 | 0.7                | shale       |
| Core 2         | Cut 4 <sup>8</sup>                                                                            | Rec 4 <sup>8</sup> |             |
| 3°             | Shale, gray, green, with yellow brown spots, blocky clayey to silty, limy                     |                    |             |
| 1 <sup>8</sup> | Shale, maroon to maroon-green mottled silty, limy                                             |                    |             |
| 4 <sup>8</sup> | Total Recovery                                                                                |                    |             |
|                | Elev.                                                                                         | Tons/S.F.          | description |
| Sample 2       | 1340.7-1339.9                                                                                 | 1.3                | shale       |
| 3              | 1339.8-1339.4                                                                                 | 1.2                | shale       |
| 4              | 1338.3-1337.9                                                                                 | 1.3                | shale       |
| Core 3         | Cut 5°                                                                                        | Rec 4'             |             |
| 1 <sup>9</sup> | Shale, maroon-green silty and clayey limy                                                     |                    |             |
| 1 <sup>5</sup> | Shale, more limy, porous gray-green possible maroon staining                                  |                    |             |
| 0 <sup>7</sup> | Shale-green, clayey, limy                                                                     |                    |             |
| 4'             | Total Recovery                                                                                |                    |             |
|                | Elev.                                                                                         | Tons/S.F.          | description |
| Sample 5       | 1335.2-1334.7                                                                                 | 1.9                | shale       |
| 6              | 1334.2-1333.9                                                                                 | No test made       | shale       |





NE-SE -29-27S-SE

0-60'  
chase

Gage state to Towanda ls



GENERAL HIGHWAY MAP  
BUTLER COUNTY  
KANSAS

ISSUED BY THE  
STATE HIGHWAY COMMISSION OF KANSAS  
DEPARTMENT OF PLANNING AND DEVELOPMENT  
IN COOPERATION WITH THE  
U. S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

SCALE  
1" = 10 MILES  
1970