

NE 1/4, SW 1/4, SE 1/4, Sec. 19, T34S, R17E

Montgomery County

U: 87.066803

E: -95.583987

## KANSAS DEPARTMENT OF TRANSPORTATION



|                                              |                                 |                                 |
|----------------------------------------------|---------------------------------|---------------------------------|
| 1. ROUTE-COUNTY NO. 169-63                   | 2. SOUNDING NO. CD No 2         | 3. SHEET 1 OF 1                 |
| 4. BRIDGE STA. 220+33.04(SB)                 | 5. PROJECT NO. K-8241-01        | 6. BRIDGE NO. 169-63-599(096)   |
| 7. DESCRIPTION S. B. 169 OVER CLAYMORE CREEK | 8. HOLE STA. 219+87.62 FT. LT 4 | 9. DATE 6/28/06                 |
| 10. GEOLOGIST RENEE BROWN                    | 11. VERTICLE SCALE 1' = 10'     | 12. ELEVATION TOP OF HOLE 706.3 |
| 13. DRILLER JIM BURNS                        | 14. RIG CME-55                  | 15. ELEVATION TOP OF ROCK 698.8 |
| 16. GROUND WATER ELEV.                       | 17. TOTAL DEPTH OF HOLE 43.3    | 18. ELEVATION TOP OF ROCK 698.8 |

| BIT TYPE & NO.        | GEOLOGIC NAME                     | STRATIGRAPHIC COLUMN | DEPTH | ELEVATION | CLASSIFICATION OF MATERIALS<br>DESCRIPTION<br>AND REMARKS                                   | UNCONFINED<br>COMPRESSION | STANDARD<br>PENETRATION<br>OR<br>CASING DRIVE |       |
|-----------------------|-----------------------------------|----------------------|-------|-----------|---------------------------------------------------------------------------------------------|---------------------------|-----------------------------------------------|-------|
|                       |                                   |                      |       |           |                                                                                             |                           | BLOWS                                         | ELEV. |
| HOLLOW STEM<br>AUGERS | NIANTLE                           |                      |       |           | TOP HOLE ELEV. = 706.3                                                                      |                           |                                               |       |
|                       |                                   |                      | 7.5   | 700       | CLAY, BROWN TO YELLOW BROWN<br>SILTY, STIFF                                                 |                           |                                               |       |
|                       | LENAPAH<br>LIMESTONE<br>FORMATION |                      |       |           | 698.8                                                                                       |                           |                                               |       |
|                       |                                   |                      |       |           | LIMESTONE, GRAY W/ GREEN SHALE<br>LAIN VARIATIONS: CRINULATED, ALGAL,<br>FIRM, THICK BEDDED | 147.5                     |                                               | 695.2 |
|                       |                                   |                      |       |           | 697.3                                                                                       | 148.0                     |                                               | 692.5 |
|                       |                                   |                      | 18.3  | 690       | 689.5 SHALE, GREEN, SOFT, BROKEN, w/LS<br>NODULES                                           | 82.5                      |                                               | 689.5 |
|                       |                                   |                      |       |           | 688.0 LIMESTONE, GRAY, BROKEN, PSEUDO-BRICK                                                 |                           |                                               |       |
|                       | NOWATA SHALE FORMATION            |                      | 23.3  |           | SANDSTONE, GRAY, SILTY, FINE-GRAINED,<br>LIMEY OIL & GAS ODOR                               | 213.5                     |                                               | 684.5 |
|                       |                                   |                      |       |           | 683.0                                                                                       | 245.0                     |                                               | 682.5 |
|                       |                                   |                      |       |           | SILTSTONE, GRAY, SANDY (TOP<br>LIMEY, HARD, THICK BEDDED                                    | 271.0                     |                                               | 678.4 |
|                       |                                   |                      |       |           |                                                                                             | 183.5                     |                                               | 675.1 |
|                       |                                   |                      | 36.1  | 670       | 670.2                                                                                       | 6.85                      |                                               | 669.7 |
|                       |                                   |                      |       |           | SHALE, GRAY, LIMEY, HARD, w/SILTY<br>STRINGERS, SOLID                                       | 241.5                     |                                               | 664.7 |
|                       |                                   |                      | 43.3  |           |                                                                                             |                           |                                               |       |
|                       |                                   |                      |       |           | TD. 663.0                                                                                   |                           |                                               |       |
|                       |                                   |                      |       |           |                                                                                             |                           |                                               |       |