2BB2

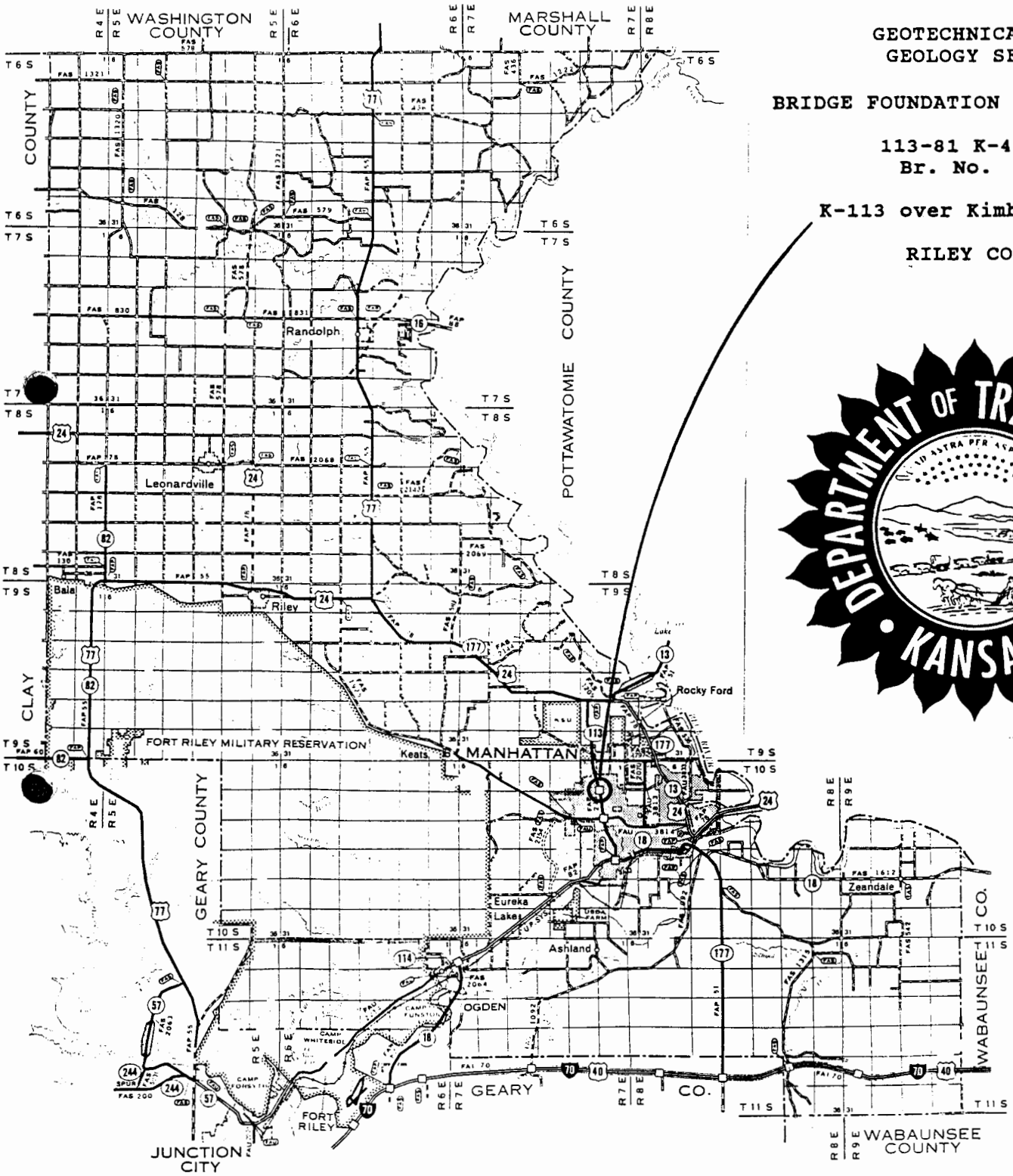
GEOTECHNICAL UNIT
GEOLOGY SECTION

# BRIDGE FOUNDATION GEOLOGY REPORT

113-81 K-4438-01
Br. No. 2.55

K-113 over Kimball Avenue

RILEY COUNTY




DEPARTMENT OF TRANSPORTATION
KANSAS

# KANSAS DEPARTMENT OF TRANSPORTATION

| | | |
|---|---|---|
| 1. ROUTE-COUNTY NO. 113-81 | 7. SOUNDING NO. CD#1 | 12. SHEET 1 OF 2 |
| 2. BRIDGE STA. 154+30.60 | 8. PROJECT NO. K-4438-01 | 13. BRIDGE NO. 2.55 |
| 3. DESCRIPTION K-113 over Kimball Ave. (Abut #1) | | 14. HOLE STA. 153+36, Lt 41' |
| 4. GEOLOGIST Art Peterson | 9. VERTICLE SCALE 1"=10' | 15. DATE 1-19-94 |
| 5. DRILLER Bob Bergman | 10. RIG B-61 | 16. ELEVATION TOP OF HOLE 1121.3 |
| 6. GROUND WATER ELEV. 1089.9 | 11. TOTAL DEPTH OF HOLE 66 ± | 17. ELEVATION TOP OF ROCK 1094.3 |

| BIT TYPE & NO. | GEOLOGIC NAME | STRATIGRAPHIC COLUMN | DEPTH | ELEVATION | CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS | UNCONFINED COMPRESSION | STANDARD PENETRATION OR CASING DRIVE BLOWS | STANDARD PENETRATION OR CASING DRIVE ELEV. |
|---|---|---|---|---|---|---|---|---|
| | | | | | Abut # 1<br>T.H. El. = 1121.3 | | | |
| 3½" Hawthorne Diamond core bit → Dia. | Mantle | | 11.3 | 1120 | Silty clay, brown to orange | | | 1120 |
| | | | 19.3 | 1111.0 | Silt, clay binder, olive to green | | | 1110 |
| | | | | 1102.0 | Silt, clay binder, gray-olive | | | 1100 |
| | | | 25.8 | 1095.5 | | | | 1095.5 |
| | | | 27.8 | 1094.3 | Gravel, limestone | Ref. 1018 P.P.T. | Pushed casing hydraulically | 1094.3 |
| | Neva Limestone Member | VOID | 32.8 | 1090 | Limestone, gray with orange staining (iron), containing voids (28.8-30.7) and solutioning lost circulation | | | 1090 |
| Diamond | | | 33.9 | 1088.5 | | Sa.#1 Qu=293.63 | | 1087.2 |
| 5½" wash bit | | | 39.5 | 1087.4 | Shale, green-gray | | | |
| | | | 41.2 | 1081.8 | Limestone, tan-gray, orange staining, solutioned, lost circulation | | | |
| | | | 42.7 | 1080.1 | Shale, dark gray-gray | | | 1080 |
| | Salem Point Sh. Mbr. | | 45.4 | 1078.6 | Limestone, gray, solutioned | Sa.#2 Qu=135.78 | | 1075.3 |
| | | | 46.6 | 1075.9 | Shale, dark gray-gray, calcareous | Sa.#4 Qu=8.40 | | 1072.3 |
| | | | 50.1 | 1074.7 | Limestone, shaly, gray | Sa.#5 Qu=89.42 | | 1069.9 |
| Bottom discharge carbide core bit | Burr Ls Mbr. | | 54.4 | 1071.2 | Shale, green-gray | | | |
| | | | 56.1 | 1070 | Limestone, lt gray-gray, dense | Sa.#6 Qu=163.67 | | 1064.9 |
| | | | 57.4 | 1066.9 | | | | |
| | Legion Sh. Mbr. | | 61.5 | 1065.2 | Shale, dk gray to black, fissile | | | |
| | Sallyards Ls. Mbr. | | 62.6 | 1063.9 | Limestone, gray, fossiliferous | | | 1060 |
| | Roca Shale Fm. | | 66.4 | 1060 | Shale, gray, calcareous | | | |
| | | | TD | 1059.8 | | | | |
| | | | | 1058.7 | Limestone, gray to lt gray | | | |
| | | | | 1054.9 | Shale, greenish-gray with some maroon | | | |

| DRILLING LOG (con't sheet) | 7. SOUNDING NO. CD# 1 | 8. PROJECT NO. K-4438-01 | 12. SHEET 2 OF 2 |
|---|---|---|---|
| 16. ELEVATION TOP OF HOLE 1121.3 | 6. GROUND WATER ELEV. 1089.9 | 11. TOTAL DEPTH OF HOLE $66\frac{4}{}$ | 17. ELEVATION TOP OF ROCK 1094.3 |

| BIT TYPE & NO. | GEOLOGIC NAME | STRATIGRAPHIC COLUMN | DEPTH | ELEVATION | CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS | UNCONFINED COMPRESSION | STANDARD PENETRATION OR CASING DRIVE BLOWS | STANDARD PENETRATION OR CASING DRIVE ELEV. |
|---|---|---|---|---|---|---|---|---|
| | | | | | Core*1: $27\frac{3}{}$ - $30\frac{7}{}$ (1094.1 - 1090.6)<br>Cut $3\frac{5}{}$ Rec $1\frac{4}{}$<br>Core Rec. 40%<br>RQD 0% | | | |
| | | | | | Core*2: $32\frac{7}{}$ - $37\frac{3}{}$ (1088.7 - 1084.0)<br>Cut $4\frac{7}{}$ Rec. $2\frac{0}{}$<br>Core Rec. 43%<br>RQD 20% | | | |
| | | | | | Core3: $37\frac{3}{}$ - $37\frac{6}{}$ (1084.0 - 1083.7)<br>Cut $0\frac{3}{}$ Rec. $0\frac{3}{}$<br>Core Rec. 100%<br>RQD 0% | | | |
| | | | | | Core4: $44\frac{0}{}$ - $47\frac{8}{}$ (1077.3 - 1073.5)<br>Cut $3\frac{8}{}$ Rec. $3\frac{8}{}$<br>Core Rec. 100%<br>RQD 64% | | | |
| | | | | | Core5: $47\frac{8}{}$ - $52\frac{8}{}$ (1073.5 - 1068.5)<br>Cut $5\frac{0}{}$ Rec. $5\frac{0}{}$<br>Core Rec. 100%<br>RQD 28% | | | |
| | | | | | Core6: $52\frac{8}{}$ - $57\frac{3}{}$ (1068.5 - 1064.0)<br>Cut $4\frac{5}{}$ Rec. $4\frac{5}{}$<br>Core Rec. 100%<br>RQD 27% | | | |
| | | | | | Core*7: $57\frac{3}{}$ - $61\frac{9}{}$ (1064.0 - 1059.4)<br>Cut $4\frac{6}{}$ Rec $4\frac{6}{}$<br>Core Rec. 100%<br>RQD 90% | | | |
| | | | | | Core*8: $61\frac{9}{}$ - $66\frac{4}{}$ (1059.4 - 1054.9)<br>Cut $4\frac{5}{}$ Rec. $4\frac{5}{}$<br>Core Rec. 100%<br>RQD 29% | | | |