Illinois Department of Transportation

# SOIL BORING LOG

Page 1 of 1

Date 9/29/2008

ROUTE FA 646 (IL-40) DESCRIPTION IL-40 over the Rock River LOGGED BY JH

SECTION 1B-2 LOCATION NE 1/4 SEC.28 TWP. 21N. RNG. 7E.P.M 3

COUNTY Whiteside STRUCTURE NO. 098-0014 (Exist.)

BORING NO. P7E DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic SPT Hammer

Station 733+71
Offset 38 Rt
Ground Surface Elev. _____ (ft)

Surface Water Elev. 628.28 (ft.)
Groundwater Elev.
First Encounter ____ (ft)
Upon Completion ____ (ft)
After ____ Hrs. ____ (ft)

| SOIL DESCRIPTION | ELEV. (ft) | DEPTH (ft) | SPT N (blows) | UCS Qu (tsf) | MOIST. (%) |
|---|---|---|---|---|---|
| Approx. 9.5 feet Water | | | | | |
| | | -5 | | | |
| Loose, Brown SILTY SAND AND GRAVEL | 618.78 | -10 | 13<br>11<br>4 | | 5 |
| Hard, White SILTY CLAY | 616.78<br>615.78 | | 13 | 3.5 | 15 |
| WEATHERED ROCK | 615.28 | | 50/3" | | |
| LIMESTONE<br>Run 1<br>13' – 18' : REC 60/60, 100%<br>RQD 21/60, 35%<br>Drill time: 5.5 minutes | | -15 | | | |
| Run 2<br>18' - 28': REC 52/120, 43%<br>RQD 48/120, 40%<br>Drill time: 18'-23': 3 minutes<br>23'-28': 1 minutes | | -20 | | | |

| SOIL DESCRIPTION | ELEV. (ft) | DEPTH (ft) | SPT N (blows) | UCS Qu (tsf) | MOIST. (%) |
|---|---|---|---|---|---|
| Void from 23.5' to 27.5' | | -25 | | 298 | |
| LIMESTONE<br>Run 3<br>28' – 38' : REC 120/120, 100%<br>RQD 83/120, 69%<br>Drill Time: 28'-33': 3.5 minutes<br>33'-38': 5 minutes | 600.28 | -30 | | 230 | |
| | | -35 | | | |
| Bottom of Boring @ 590.28' | 590.28 | -40 | | | |

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer).
The Standard Penetration Test (SPT) N Value is per (AASHTO T206)

BBS 137 (9/06)

Illinois Department of Transportation

# ROCK CORE LOG

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Date 9/29/2008

ROUTE FAP 646 (IL 40) DESCRIPTION ILLINOIS 40 OVER ROCK RIVER STERLING – ROCK FALLS LOGGED BY G. Jamison

SECTION 1B-2 LOCATION NE ¼ SEC. 28 TWP. 21N RNG. 7E, 3 PM

COUNTY Whiteside CORING METHOD Wireline

STRUCT. NO. 098-0014 CORING BARREL TYPE & SIZE NQ

Station 729+71.26 Core Diameter 1 7/8 in
Top of Rock Elev. 615.78 ft
Begin Core Elev. 615.28 ft

BORING NO. B-P7E
Station 733+71
Offset 38 Rt
River Water Surface Elev. 628.28 ft

| | DEPTH (ft) | CORE (#) | RECOVERY (%) | RQD (%) | CORE TIME (min/ft) | STRENGTH (tsf) |
|---|---|---|---|---|---|---|
| DOLOMITE: yellow brown to brown, hard, fine to medium, slightly to non-calcareous, occasional chert; slightly vesicular, horizontal joints, partially remineralized, generally hard and little to no soil filling. 21 pieces 1'-9" long; 4" vertical joint at about 15 feet | -15 | 1 | 100 | 35 | 1.1 | |
| Light gray below about 16.5 feet. | 610.28 -18 | | | | | |
| 10 pieces 1'-10" long<br>1" clay seam at 19 feet | -20 | 2 | 43 | 40 | | |
| 4" vertical joint at about 22.5 feet.<br>Depth 18-23 feet took 3 minutes to core. Yellow brown at about 23 feet.<br>Void – 23.5 to 27.5 feet (Driller noted as open, air filled.) | -25 | | | | 0.6 | 298 |
| Depth 23-28 feet took 1 minute to core | 600.28 -28 | | | | 0.2 | |
| 21 pieces 2'-12" long<br>Yellow brown to light yellow brown; significant presence of vugs (some with embedded chert), vesicular; weathered appearance in upper 2 feet.<br>Trace embedded fossils and shell fragments at 29 feet. | -30 | 3 | 100 | 89 | | 230 |
| Depth 28-33 feet took 3.5 minutes to core | | | | | 0.7 | |

Color pictures of the cores Yes
Cores will be stored for examination until _____
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS 138 (Rev. 3/01)

Illinois Department of Transportation

# ROCK CORE LOG

Page 2 of 2

Date 9/29/2008

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Top of Rock Elev. 615.78 ft
Begin Core Elev. 615.28 ft

BORING NO. B-P7E
Station 733+71
Offset 38 Rt
River Water Surface Elev. 628.28 ft

| | DEPTH (ft) | CORE (#) | RECOVERY (%) | RQD (%) | CORE TIME (min/ft) | STRENGTH (tsf) |
|---|---|---|---|---|---|---|
| More intact below 29 feet; grades from light yellow brown to light gray; Still moderately vesicular with vugs (generally open). | -35 | | | | | |
| Depth 33-38 feet took 5 minutes to core | 590.28 -38 | | | | 1.0 | |

Color pictures of the cores Yes
Cores will be stored for examination until _____
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS 138 (Rev. 3/01)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| FILE NAME = D254B80-sht-borings18.dgn | USER NAME = dwozniarski | DESIGNED - ACB | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | SOIL BORING AND ROCK CORE LOGS STRUCTURE NO. 098-0115 | F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | | CHECKED - JMB | REVISED - | | | 646 | 1B-2 | WHITESIDE | 257 | 203 |
| | PLOT SCALE = 1.0000 ' / IN. | DRAWN - RLK | REVISED - | | | | | CONTRACT NO. 64B80 | | |
| | PLOT DATE = 7/18/2011 | CHECKED - ACB | REVISED - | | SHEET NO. 100 OF 103 SHEETS | | | ILLINOIS FED. AID PROJECT | | |