



75-66 KA-7048-01

Nemaha County

CD 03

N: 39.999697 E: -95.797402 (Approximate)

NW ¼. NW ¼. NE ¼, Sect 1, T01S, R14E

11/2/2010

KANSAS DEPARTMENT OF TRANSPORTATION



RTE./CO.	75-66	SOUNDING NO.	CD 3	SHEET 1 of 3
BRIDGE STA.	584+79.33	PROJ. NO.	KA-0748-01	BRIDGE NO. 75-66-1.00(042)
SITE NAME	US-75 over Rock Creek Bridge			HOLE STA. 584+51, 56.0' Lt CL
GEOLOGIST	R. Crow	SCALE	1 inch = 5.0 feet	DATE November 2, 2010
DRILLER	R. Vervynck	RIG TYPE	CME 55	TOP HOLE ELEV. 1063.94
GW ELEV.	1062.1	TOTAL DEPTH	47.0	M/B ELEV. 1056.14

BOREHOLE REPORT - KANSAS DOT.GDT - 11/18/10 14.23 - Q:\GEOLOGY\BRIDGE\75-66 KA-0748-01\CORES ROCK CREEK BRIDGE.GPJ

Bit Type	GEOLOGIC NAME	STRATIGRAPHIC COLUMN	DEPTH	ELEVATION	CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION (TSF)	ELASTIC MODULUS (PSF)	N60 COUNT (SPT)	ELEVATION
8" Hollow Augers	Mantle			1063.9	Silty clay, brown				
			4.0	1059.9	Silty clay and heavy gravel				
Diamond	Bennett Shale Member			1056.1	Shale, black				
			7.8	1055.0	Limestone, fossiliferous, hard, gray, pitted	300	1.4E+08		1054.54
			8.9	1054.2	Shale, gray, clayey, weak with few firmer zones				
			9.7	1050		1.32	37600		1048.24
			2	1045		3.52	228000		1042.74
			5	1035	Limestone, porous, shaly				
			28.8	1035.1					



KANSAS DEPARTMENT OF TRANSPORTATION

RTE./CO.	75-66	SOUNDING NO.	CD 3	SHEET 2 of 3
BRIDGE STA.	584+79.33	PROJ. NO.	KA-0748-01	BRIDGE NO. 75-66-1.00(042)
SITE NAME	US-75 over Rock Creek Bridge			HOLE STA. 584+51, 56.0' Lt CL

Bit Type	GEOLOGIC NAME	STRATIGRAPHIC COLUMN	DEPTH	ELEVATION	CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION (TSF)	ELASTIC MODULUS (PSF)	N60 COUNT (SPT)	ELEVATION
Diamond	Glenrock Limestone	5	30.3	1033.6	Shale, gray, laminar, limy	150.5	3.33E+07		1033.54
			30.6	1033.3	Limestone, shaly, porous				
			32.2	1031.7	Shale, clayey with small gravel	196.5	3.71E+07		1030.84
			32.5	1031.4	Limestone, shaly, porous				
			33.1	1030.8	Shale seam, dark gray				
	Johnson Shale Formation	6	33.4	1030.6	Limestone, hard, gray				
			34.2	1029.8	Shale, gray, firm				
			36.4	1027.5	Shale, gray, firm with gypsum veins and nodules	175	5.51E+07		1027.34
			38.4	1025.5	Shale, gray, laminar, very firm	118	2.55E+07		1023.44
			41.8	1022.1	Shale, limy, fossiliferous, crinoid fragments, gray becoming darker with depth	29.75	3990000		1021.14
		8	46.2	1017.7	Shale, black				
			47.0	1016.94	T.D. = 47				

BOREHOLE REPORT - KANSAS DOT, GDT - 11/8/10 14:23 - Q:\GEOLOGY\BRIDGE\75-66 KA-0748-01\CORES ROCK CREEK BRIDGE.GPJ



KANSAS DEPARTMENT OF TRANSPORTATION

RTE./CO.	75-66	SOUNDING NO.	CD 3	SHEET 3 of 3	
BRIDGE STA.	584+79.33	PROJ. NO.	KA-0748-01	BRIDGE NO.	75-66-1.00(042)
SITE NAME	US-75 over Rock Creek Bridge			HOLE STA.	584+51, 56.0' Lt CL

Bit Type	GEOLOGIC NAME	STRATIGRAPHIC COLUMN	DEPTH	ELEVATION	CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION (TSF)	ELASTIC MODULUS (PSF)	N60 COUNT (SPT)	ELEVATION																																																																						
					<table border="1" style="width: 100%; border-collapse: collapse; margin: 10px auto;"> <thead> <tr> <th>Core</th> <th>Depth</th> <th>Elev.</th> <th>Cut</th> <th>Rec</th> <th>Rec %</th> <th>RQD</th> </tr> </thead> <tbody> <tr><td>1</td><td>8.0</td><td>1055.94</td><td>4.5</td><td>4.0</td><td>89</td><td>27%</td></tr> <tr><td>2</td><td>12.5</td><td>1051.44</td><td>5.0</td><td>5.0</td><td>100</td><td>55%</td></tr> <tr><td>3</td><td>17.5</td><td>1046.44</td><td>5.0</td><td>5.0</td><td>100</td><td>70%</td></tr> <tr><td>4</td><td>22.5</td><td>1041.44</td><td>4.8</td><td>2.4</td><td>50</td><td>0%</td></tr> <tr><td>5</td><td>27.3</td><td>1036.64</td><td>5.2</td><td>5.2</td><td>100</td><td>25%</td></tr> <tr><td>6</td><td>32.5</td><td>1031.44</td><td>4.8</td><td>4.4</td><td>92</td><td>60%</td></tr> <tr><td>7</td><td>37.3</td><td>1026.64</td><td>4.7</td><td>4.5</td><td>96</td><td>92%</td></tr> <tr><td>8</td><td>42.0</td><td>1021.94</td><td>5.0</td><td>5.0</td><td>100</td><td>100%</td></tr> <tr> <td>Total</td> <td>47</td> <td>1016.94</td> <td>39.0</td> <td>35.5</td> <td>91</td> <td>54%</td> </tr> </tbody> </table>	Core	Depth	Elev.	Cut	Rec	Rec %	RQD	1	8.0	1055.94	4.5	4.0	89	27%	2	12.5	1051.44	5.0	5.0	100	55%	3	17.5	1046.44	5.0	5.0	100	70%	4	22.5	1041.44	4.8	2.4	50	0%	5	27.3	1036.64	5.2	5.2	100	25%	6	32.5	1031.44	4.8	4.4	92	60%	7	37.3	1026.64	4.7	4.5	96	92%	8	42.0	1021.94	5.0	5.0	100	100%	Total	47	1016.94	39.0	35.5	91	54%				
Core	Depth	Elev.	Cut	Rec	Rec %	RQD																																																																									
1	8.0	1055.94	4.5	4.0	89	27%																																																																									
2	12.5	1051.44	5.0	5.0	100	55%																																																																									
3	17.5	1046.44	5.0	5.0	100	70%																																																																									
4	22.5	1041.44	4.8	2.4	50	0%																																																																									
5	27.3	1036.64	5.2	5.2	100	25%																																																																									
6	32.5	1031.44	4.8	4.4	92	60%																																																																									
7	37.3	1026.64	4.7	4.5	96	92%																																																																									
8	42.0	1021.94	5.0	5.0	100	100%																																																																									
Total	47	1016.94	39.0	35.5	91	54%																																																																									

BOREHOLE REPORT - KANSAS DOT_GDT - 11/8/10, 14:23 - Q:\GEOLOGY\BRIDGE\75-66 KA-0748-01\CORES ROCK CREEK BRIDGE.GPJ