

KANSAS DEPARTMENT OF TRANSPORTATION



RTE./CO.	160-Montgomery	SOUNDING NO.	CD-2	SHEET 1 of 3
BRIDGE STA.	433+54.08: 7.0' Lt	PROJ. NO.	KA-2073-01	BRIDGE NO. 160-63-7.09(102)
SITE NAME			US-160 over Elk River	HOLE STA. 437+26.94, 20.5' Rt of CL
GEOLOGIST	D. Martin, P.G.	SCALE	1 inch = 5.0 feet	DATE July 14, 2011
DRILLER	J. Burns	RIG TYPE	CME 55	TOP HOLE ELEV. 832.62
GW ELEV.	N/A	TOTAL DEPTH	43.1	M/B ELEV. 828.12

N = 37.26257
E = -95.90154

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		2.0	832.6	SILTY CLAY, brown				
			2.3	830.6 830.3	RUBBLE, hard, cuts easily, float SILTY CLAY, dark brown, dry				
NQ2 Diamond	South Bend Limestone Member		1 4.5	828.1	LIMESTONE, light gray to gray, very hard, South Bend Limestone, dense, micritic, coralline				
			2	825		242	1.54E+08	825.02	
			8.1	824.5	LIMESTONE, light gray to gray, very hard, oolitic				
			11.2	821.4	LIMESTONE, light gray	595	2.34E+08	820.72	
	Rock Lake Shale Member		12.5 12.6	820.1 820.0	BLACK SHALE LIMESTONE, light gray, micritic, coralline, fossiliferous				
			14.5 14.7 15.0	818.1 817.9 817.6	SHALE, medium gray SHALEY SANDSTONE, medium gray, coarse to fine CLAYEY SHALE, medium gray to light gray, clayey zone @ 16.1' - 16.5'	10.9	1090000	817.02	
			18.1	815	814.5	SHALEY LIMESTONE, light gray to medium gray, shalier with depth, fossiliferous	88	3.03E+07	814.82
			19.0	813.6	SILTY TO CLAYEY SHALE, dark gray to gray	12.3	829000	812.82	
Stoner Limestone Member		20.0	812.6	LIMESTONE, blueish gray, very hard, coralline, fossiliferous, crinoids					
			810		560	2.19E+08	809.62		
					281	1.23E+08	806.82		
			805						

BOREHOLE REPORT - KANSAS DOT GDT - 8/3/12 14:25 - C:\DENNY\SURFACE\160-63 KA-2073-01\160-63 KA-2073-01\16063KA207301.GPJ



KANSAS DEPARTMENT OF TRANSPORTATION

RTE./CO.	160-Montgomery	SOUNDING NO.	CD-2	SHEET 2 of 3
BRIDGE STA.	433+54.08: 7.0' Lt	PROJ. NO.	KA-2073-01	BRIDGE NO. 160-63-7.09(102)
SITE NAME	US-160 over Elk River			HOLE STA. 437+26.94, 20.5' Rt of 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
NQ2 Diamond	Eudora Shale Member	8			LIMESTONE, blueish gray, very hard, coralline, fossiliferous, crinoids	421	2.42E+08		801.92
		9	33.1	799.5	SHALEY LIMESTONE, gray to light gray, lensey w/ gray shale	24.1	8630000		798.82
		10	34.1	798.5	LIMY SHALE, medium gray, fossiliferous, crinoids, sparse limestone lenses				
		10	34.8	797.8	SHALE, dark gray to very dark gray, firm, fossiliferous, bivalves, forams.	50	7920000		796.22
		11	38.1	794.5	BLACK SHALE, fossiliferous, bivalves, brachiopods, crinoids	43.3	6870000		791.82
			43.1	789.52	T.D. = 43.1				

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KANSAS DEPARTMENT OF TRANSPORTATION

RTE./CO.	160-Montgomery	SOUNDING NO.	CD-2	SHEET 3 of 3
BRIDGE STA.	433+54.08: 7.0' Lt	PROJ. NO.	KA-2073-01	BRIDGE NO. 160-63-7.09(102)
SITE NAME	US-160 over Elk River			HOLE STA. 437+26.94, 20.5' Rt of CL

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					<table border="1" style="width: 100%; border-collapse: collapse; margin: 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>4.5</td><td>828.12</td><td>0.5</td><td>0.5</td><td>100</td><td>0□</td></tr> <tr><td>2</td><td>5.0</td><td>827.62</td><td>3.1</td><td>3.1</td><td>100</td><td>26□</td></tr> <tr><td>3</td><td>8.1</td><td>824.52</td><td>5.0</td><td>5.0</td><td>100</td><td>98□</td></tr> <tr><td>4</td><td>13.1</td><td>819.52</td><td>5.0</td><td>5.0</td><td>100</td><td>86□</td></tr> <tr><td>5</td><td>18.1</td><td>814.52</td><td>5.0</td><td>5.0</td><td>100</td><td>72□</td></tr> <tr><td>6</td><td>23.1</td><td>809.52</td><td>3.4</td><td>3.4</td><td>100</td><td>91□</td></tr> <tr><td>7</td><td>26.5</td><td>806.12</td><td>1.6</td><td>1.6</td><td>100</td><td>100□</td></tr> <tr><td>8</td><td>28.1</td><td>804.52</td><td>5.0</td><td>5.0</td><td>100</td><td>96□</td></tr> <tr><td>9</td><td>33.1</td><td>799.52</td><td>1.7</td><td>1.7</td><td>100</td><td>76□</td></tr> <tr><td>10</td><td>34.8</td><td>797.82</td><td>3.3</td><td>3.3</td><td>100</td><td>100□</td></tr> <tr><td>11</td><td>38.1</td><td>794.52</td><td>5.0</td><td>5.0</td><td>100</td><td>100□</td></tr> <tr> <td>Total</td> <td>43.1</td> <td>789.52</td> <td>38.6</td> <td>38.6</td> <td>1□□</td> <td>85%</td> </tr> </tbody> </table>	Core	Depth	Elev.	Cut	Rec	Rec %	RQD	1	4.5	828.12	0.5	0.5	100	0□	2	5.0	827.62	3.1	3.1	100	26□	3	8.1	824.52	5.0	5.0	100	98□	4	13.1	819.52	5.0	5.0	100	86□	5	18.1	814.52	5.0	5.0	100	72□	6	23.1	809.52	3.4	3.4	100	91□	7	26.5	806.12	1.6	1.6	100	100□	8	28.1	804.52	5.0	5.0	100	96□	9	33.1	799.52	1.7	1.7	100	76□	10	34.8	797.82	3.3	3.3	100	100□	11	38.1	794.52	5.0	5.0	100	100□	Total	43.1	789.52	38.6	38.6	1□□	85%				
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