

SW 1/4, SW 1/4, SE 1/4, Sec. 32, T17S, R4E

Osage County

KANSAS DEPARTMENT OF TRANSPORTATION



RTE./CO.	K-170-Osage	SOUNDING NO.	Bridge CD 2	SHEET 1 of 2	
		PROJ. NO.	170-70 KA-2076-01	BRIDGE NO.	170-70-3.52
SITE NAME	K-170 over Cherry Creek			HOLE STA.	185+13.1, 25.0' Lt CL
GEOLOGIST	K. Halverson, G.A.	SCALE	1 inch = 7.5 feet	DATE	January 26, 2012
DRILLER	J. Burns	RIG TYPE	CME 55	TOP HOLE ELEV.	1068.52
GW ELEV.	N/A	TOTAL DEPTH	42.4	M/B ELEV.	1058.82

N = 38.52101

E = -95.88530

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	Alluvium			1068.5	Clay, silty, trace ls gravel, brown, soft, slightly moist				
	Church LS Mbr		9.7	1058.8	Limestone, well-cemented, very hard	325	1.13E+08		1058.22
			12.1	1056.4	Shale, dark-gray, very closely fractured, well-compacted, hard to very hard	44.7	5720000		1055.42
			12.8	1055.7					
			13.5	1055.0	Shale, black, fissile, very hard, widely fractured				
			14.0	1054.5	Limestone, shaley, sandy, very hard, well-cemented				
	Aarde Shale Mbr				Shale, dark-gray, clayey, close to very closely fractured, high swell, occasional very thin ss stringers or varves, hard to very hard	3.525	209000		1050.02
			20.8	1047.7	Nodaway Coal black, very closely fractured				
			21.5	1047.0	Shale, clayey gray to dark-gray, closely fractured, sandy, hard to very hard, well-compacted	63	1.37E+07		1045.82
			22.2	1046.3	Shale, very sandy, abundant thin (< 1" ss stringers or varves), very closely fractured, hard to very hard				
	Bachelor CRK Ls		26.8	1041.7	Limestone, very shaley, sandy, very hard, fossiliferous, widely fractured	185	6.31E+07		1040.02
			30.4	1038.1	Shale, dark-gray, very limy, sandy, widely fractured, very hard,				
	Severy Shale Fm					154.5	3.05E+07		1034.22
						87	1.69E+07		1029.92
			42.4	1026.12	T.D. = 42.4				

BOREHOLE REPORT - KANSAS DOT.GDT - 3/9/12 12:54 - C:\PROGRAM FILES (X86)\BENTLEY\GINT\PROJECTS\170-70 KA-2076-01 CHERRY CRK.GPJ



KANSAS DEPARTMENT OF TRANSPORTATION

RTE./CO.	K-170-Osage	SOUNDING NO.	Bridge CD 2	SHEET 2 of 2
		PROJ. NO.	170-70 KA-2076-01	BRIDGE NO. 170-70-3.52
SITE NAME	K-170 over Cherry Creek			HOLE STA. 185+13.1, 25.0' Lt CL

BOREHOLE REPORT - KANSAS DOT.GDT - 3/9/12 12:54 - C:\PROGRAM FILES (X86)\BENTLEY\GINT\PROJECTS\170-70 KA-2076-01\CHERRY CRK.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																																																																					
					<table><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>9.7</td><td>1058.82</td><td>2.7</td><td>2.5</td><td>93</td><td>93□</td></tr><tr><td>2</td><td>12.4</td><td>1056.12</td><td>4.9</td><td>4.9</td><td>100</td><td>88□</td></tr><tr><td>3</td><td>17.3</td><td>1051.22</td><td>4.8</td><td>4.8</td><td>100</td><td>90□</td></tr><tr><td>4</td><td>22.1</td><td>1046.42</td><td>4.6</td><td>4.6</td><td>100</td><td>22□</td></tr><tr><td>5</td><td>26.7</td><td>1041.82</td><td>0.7</td><td>4.0</td><td>571</td><td>0□</td></tr><tr><td>6</td><td>27.4</td><td>1041.12</td><td>5.0</td><td>5.0</td><td>100</td><td>96□</td></tr><tr><td>7</td><td>32.4</td><td>1036.12</td><td>5.0</td><td>5.0</td><td>100</td><td>98□</td></tr><tr><td>8</td><td>37.4</td><td>1031.12</td><td>5.0</td><td>5.0</td><td>100</td><td>98□</td></tr><tr><td>Total</td><td>42.4</td><td>1026.12</td><td>32.7</td><td>35.8</td><td>10□</td><td>82%</td></tr></tbody></table>	Core	Depth	Elev.	Cut	Rec	Rec %	RQD	1	9.7	1058.82	2.7	2.5	93	93□	2	12.4	1056.12	4.9	4.9	100	88□	3	17.3	1051.22	4.8	4.8	100	90□	4	22.1	1046.42	4.6	4.6	100	22□	5	26.7	1041.82	0.7	4.0	571	0□	6	27.4	1041.12	5.0	5.0	100	96□	7	32.4	1036.12	5.0	5.0	100	98□	8	37.4	1031.12	5.0	5.0	100	98□	Total	42.4	1026.12	32.7	35.8	10□	82%			
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