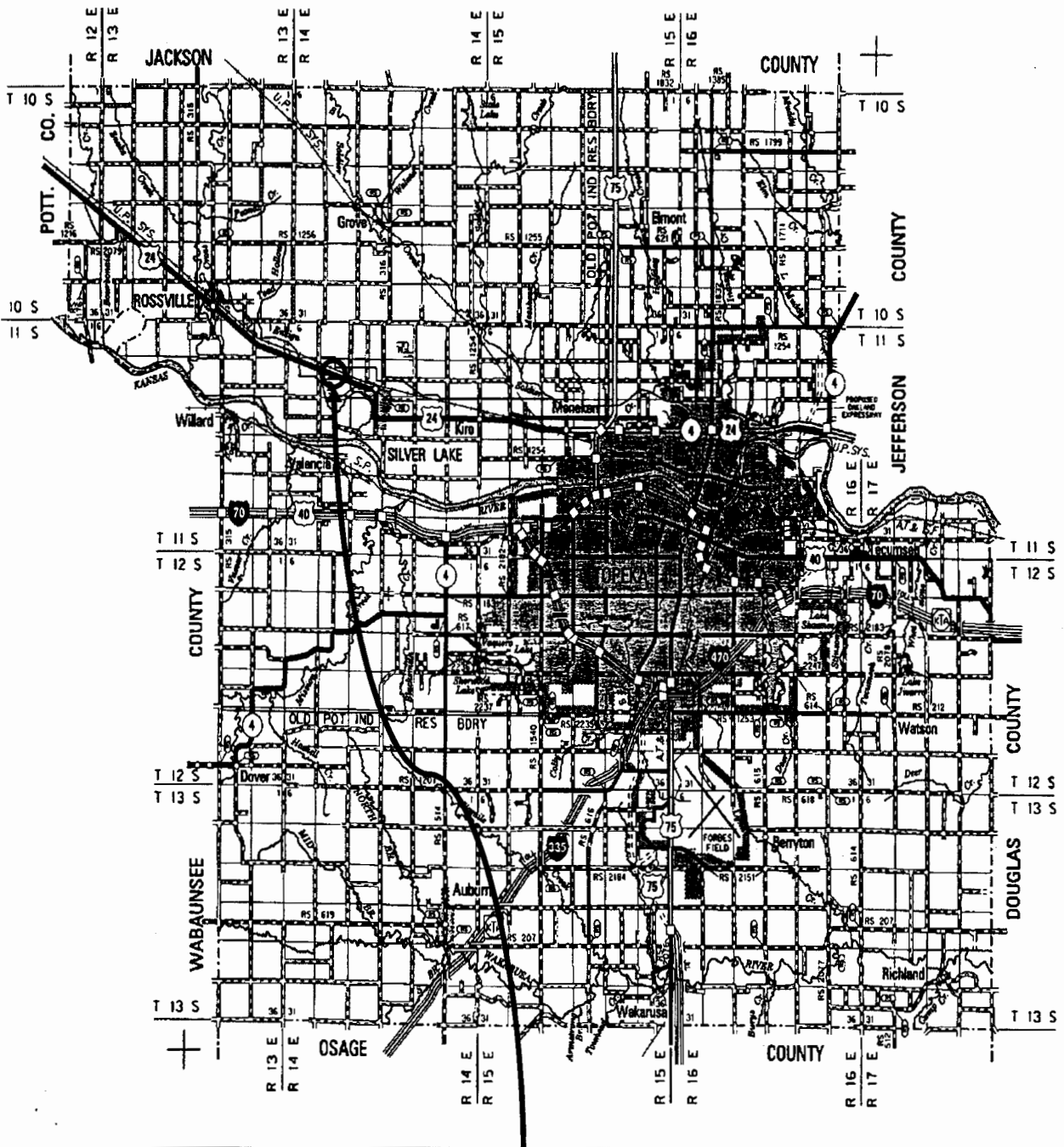




24-89 KA-0711-01US-24 over Ensign Creek

Bridge No. 24-89-8.42(299)

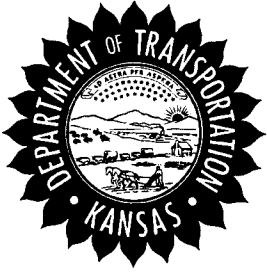
Shawnee County

CD 01

N: 39.116250 E: -95.903002

SW $\frac{1}{4}$, SE $\frac{1}{4}$, SW $\frac{1}{4}$, Section 06 T11S, R14E

KANSAS DEPARTMENT OF TRANSPORTATION



RTE./CO.	24-89	SOUNDING NO.	CD1	SHEET 1 of 4
BRIDGE STA.	523+61.75	PROJ. NO.	KA-0711-01	BRIDGE NO. 24-89-8.42 (299)
SITE NAME	US-24 over Ensign Ck			HOLE STA. 524+08, 30.5' Lt CL
GEOLOGIST	R. Crow	SCALE	1 inch = 5.0 feet	DATE April 28, 2010
DRILLER	R. Hinderliter	RIG TYPE	CME 75	TOP HOLE ELEV. 912.11
GW ELEV.	N/A	TOTAL DEPTH	92.8	M/B ELEV. 843.71

Bit Type	GEOLOGIC NAME	STRATIGRAPHIC COLUMN	DEPTH	ELEVATION	CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION (TSF)	ELASTIC MODULUS (PSF)	N60 COUNT (SPT)	ELEVATION
Flush Joint Casing	Alluvium			912.1	Silt, black, moist				
			5.3	906.8	Sand, tan, medium to coarse, wet				

BOREHOLE REPORT - KANSAS DOT, GDT - 7/16/10 15:41 - Q:\GEOLOGY\BRIDGE\24-89 KA-0711-01\ENSGN CREEK SOUNDINGS.GPJ



KANSAS DEPARTMENT OF TRANSPORTATION

RTE./CO.	24-89	SOUNDING NO.	CD1	SHEET 2 of 4
BRIDGE STA.	523+61.75	PROJ. NO.	KA-0711-01	BRIDGE NO. 24-89-8.42 (299)
SITE NAME	US-24 over Ensign Ck			HOLE STA. 524+08, 30.5' 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
Flush Joint Casing	Alluvium		880 875 870 865 860 855 850		Sand, tan, medium to coarse, wet				



KANSAS DEPARTMENT OF TRANSPORTATION

RTE./CO.	24-89	SOUNDING NO.	CD1	SHEET 3 of 4
BRIDGE STA.	523+61.75	PROJ. NO.	KA-0711-01	BRIDGE NO. 24-89-8.42 (299)
SITE NAME	US-24 over Ensign Ck			HOLE STA. 524+08, 30.5' 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
	Alluvium			845	Sand, tan, medium to coarse, wet				
	White Cloud Shale Member	Diamond	68.4 68.8 69.2	843.7 843.3 842.9	Shale, clayey, gray Shale, limy, gray Shale, highly calcareous, laminar, hard, occasional vertical fractures	111.5	7.92E+07		840.91
			74.8 75.3	837.3 836.8	Shale, gray Shale, limy, greenish-gray	59	1.42E+07		836.81
			77.8	834.3	Shale, clayey, gray w/green tint, shear planes	1.105	85600		831.81
			82.8	829.3	Shale, greenish-gray w/limestone nodules	4.225	604000		828.01
			85.5	826.6	Shale, greenish-gray, clayey, shear planes, Orbiculoidias				
			92.8	819.31	T.D. = 92.8	25.5	4450000		819.31

BOREHOLE REPORT - KANSAS DOT, GDT - 7/6/10 15:41 - Q:\GEOLOGY\BRIDGE\24-89 KA-0711-01\ENSGN CREEK SOUNDINGS.GPJ



KANSAS DEPARTMENT OF TRANSPORTATION

RTE./CO.	24-89	SOUNDING NO.	CD1	SHEET 4 of 4
BRIDGE STA.	523+61.75	PROJ. NO.	KA-0711-01	BRIDGE NO. 24-89-8.42 (299)
SITE NAME	US-24 over Ensign Ck			HOLE STA. 524+08, 30.5' 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><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>68.8</td><td>843.31</td><td>4.0</td><td>3.9</td><td>98</td><td>85%</td></tr><tr><td>2</td><td>72.8</td><td>839.31</td><td>5.0</td><td>4.8</td><td>96</td><td>72%</td></tr><tr><td>3</td><td>77.8</td><td>834.31</td><td>4.2</td><td>4.2</td><td>100</td><td>78%</td></tr><tr><td>4</td><td>82.0</td><td>830.11</td><td>0.8</td><td>1.1</td><td>138</td><td>100%</td></tr><tr><td>5</td><td>82.8</td><td>829.31</td><td>5.0</td><td>4.9</td><td>98</td><td>72%</td></tr><tr><td>6</td><td>87.8</td><td>824.31</td><td>5.0</td><td>5.2</td><td>104</td><td>88%</td></tr><tr><td>Total</td><td>92.8</td><td>819.31</td><td>24.0</td><td>24.1</td><td>100</td><td>79%</td></tr></tbody></table>	Core	Depth	Elev.	Cut	Rec	Rec %	RQD	1	68.8	843.31	4.0	3.9	98	85%	2	72.8	839.31	5.0	4.8	96	72%	3	77.8	834.31	4.2	4.2	100	78%	4	82.0	830.11	0.8	1.1	138	100%	5	82.8	829.31	5.0	4.9	98	72%	6	87.8	824.31	5.0	5.2	104	88%	Total	92.8	819.31	24.0	24.1	100	79%			
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