SE¼, SE¼, Sec. 34, T24S, R11E

Greenwood County

KANSAS DEPARTMENT OF TRANSPORTATION

RTE./CO.	99-37	SOUNDING NO.	CD-1	SHEET 1 of 3	
BRIDGE STA.	882+47.65: ℄	PROJ. NO.	KA-0702-01	BRIDGE NO.	99-37-24.37(075)
SITE NAME	K-99 over Homer Creek			HOLE STA.	882+79, 25.5' ~~Rt~~ lt. of CL
GEOLOGIST	R. Ryan	SCALE 1 inch = 5.0 feet		DATE	November 3, 2008
DRILLER	S. Hudson	RIG TYPE	CME 55	TOP HOLE ELEV.	1044.7
GW ELEV.	1041.2	TOTAL DEPTH	46.9	M/B ELEV.	1039.9

N = ~~37.911596~~ 37.9087
E = ~~-96.178098~~ -96.1781

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			1044.7	SILTY CLAY, brown, moist, soft, minor gravel	1.4	120000		1042.5
			4.0	1040.7	GRAVEL, wet, rubble, minor clay				
"NQ" Diamond Core	Undiff. Topeka Fm.	1	4.8	1039.9	SEAM LIMESTONE, weathered, soft				
			5.3	1039.4	CLAYEY SHALE, dark gray, very soft, crumbles				
			6.5	1038.2	LIMESTONE, gray, w/ vertical fractures				
			7.3	1037.4	SHALE, firmer, w/ limestone stringers @ 8.3'	9.4	508000		1036.1
	Sheldon Ls. Mbr.	2	8.9	1035.8	LIMESTONE, gray, hard, will stop pile	220	1.42E+08		1035.0
			9.3	1035.4	SHALE, laminated, dark gray, firm				
			9.7	1035.0	LIMESTONE, gray, hard	190	1.25E+08		1033.5
			10.0	1034.7	LIMESTONE, unit bedded, gray				
	Jones Point Sh. Mbr.	3	12.0	1032.7	LIMESTONE, dense, dark gray, very fine crystalline				
			12.5	1032.2	SHALE, dark gray, firm	7.4	411000		1031.1
			14.2	1030.5	LIMESTONE, w/ fusilinids	262	1.46E+08		1029.5
			14.8	1029.9	SHALE				
			15.4	1029.3	SEAM LIMESTONE, w/ shale seam				
			15.7	1029.0	SHALE, dark gray				
			16.1	1028.6	SEAM LIMESTONE				
			16.3	1028.4	SHALE, dark gray, w/ limestone seam @ 16.6'	3.5	236000		1026.1
			17.0	1027.7	LIMESTONE, gray				
			17.3	1027.4	SHALE, dark gray to brownish gray, clayey in lower half				
	Curzon Ls. Mbr.	4	19.6	1025.1	SHALEY @ TOP LIMESTONE, bedded, massive, hard to harder, fusilinids, one finger-tip sized vug lined w/ calcite crystals	84	4.28E+07		1024.0
		5	22.0	1022.7	LIMESTONE, thickly bedded, brownish gray, w/ thin shale stringer @ 25.8'	540	2.08E+08		1020.0
	Iowa Pt. Sh. Mbr.	6	26.6	1018.1	CLAYEY SHALE, dark gray				
			27.0	1017.7	PLATEY TO CLAYEY SHALE, dark gray	11.4	522000		1015.2

Elevation scale: 1040, 1035, 1030, 1025, 1020, 1015

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KANSAS DEPARTMENT OF TRANSPORTATION

RTE./CO.	99-37	SOUNDING NO.	CD-1	SHEET 2 of 3	
BRIDGE STA.	882+47.65: ℄	PROJ. NO.	KA-0702-01	BRIDGE NO.	99-37-24.37(075)
SITE NAME	K-99 over Homer Creek			HOLE STA.	882+79, 25.5' Rt lt. 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
"NQ" Diamond Core		6			PLATEY TO CLAYEY SHALE, dark gray				
			32.0	1012.7	SHALE, black				
	Hartford Ls. Mbr.		32.1	1012.6	LIMESTONE, oolitic, dark gray, brachiopods, crinoids, fusilinids, w/ few shaley stringers	605	1.72E+08		1010.9
		7		1010					
	Calhoun Fm.		36.4	1008.3	VERY CLAYEY SHALE, gray				
			37.0	1007.7	SHALE, laminated, dark gray	43	5580000		1006.0
		8	39.4	1005 1005.3	SANDSTONE, gray				
			40.3	1004.4	SEAM LIMESTONE, w/ shaley fluted laminations	370	1.07E+08		1002.7
			42.0	1002.7	SHALE, laminated, platey, dark gray				
		9		1000		144	2.55E+07		998.2
			46.9	997.8	T.D. = 46.9				

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KANSAS DEPARTMENT OF TRANSPORTATION

RTE./CO.	99-37	SOUNDING NO.	CD-1	SHEET 3 of 3	
BRIDGE STA.	882+47.65: ℄	PROJ. NO.	KA-0702-01	BRIDGE NO.	99-37-24.37(075)
SITE NAME	K-99 over Homer Creek			HOLE STA.	882+79, 25.5' Rt lt. 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

Core	Depth	Elev.	Cut	Rec	Rec %	RQD
1	5.3	1039.4	4.7	4.3	91	66%
2	10.0	1034.7	2.0	1.9	95	95%
3	12.0	1032.7	5.0	5.0	100	92%
4	17.0	1027.7	5.0	5.0	100	100%
5	22.0	1022.7	5.0	5.0	100	98%
6	27.0	1017.7	5.0	5.2	104	100%
7	32.0	1012.7	5.0	5.0	100	100%
8	37.0	1007.7	5.0	4.7	94	58%
9	42.0	1002.7	4.9	4.8	98	73%
Total	**46.9**	**997.8**	**41.6**	**40.9**	**98**	