KANSAS DEPARTMENT OF TRANSPORTATION

Kansas Department of Transportation

RTE./CO.	K-15 / Washington	SOUNDING NO.	KGS 2	SHEET 1 of 3	
		PROJ. NO.	KA-3959-01	BRIDGE NO.	
SITE NAME	Cretaceous/Permian Boundary Investigation			HOLE STA.	66+60, 55.0' Lt CL
GEOLOGIST	J. Geist, P.G.	SCALE 1 inch = 2.5 feet		DATE	October 17, 2016
DRILLER	R. Hinderliter	RIG TYPE	CME 75	TOP HOLE ELEV.	1366.0
GW ELEV.	N/A	TOTAL DEPTH	22.6	M/B ELEV.	1363.7
GPS COORDINATES	39.7781136, -97.049663				

Bit Type	GEOLOGIC NAME	STRATIGRAPHIC COLUMN	DEPTH	ELEVATION	ELEVATION	CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION (TSF)	ELASTIC MODULUS (PSF)	N60 COUNT (SPT)	ELEVATION
8" Hollow Augers	Topsoil				1366.0	SANDY CLAY, brown, soft				
	Residual		0.8	1365	1365.2	CLAY, orangeish brown, stiff, some sand				
			2.3		1363.7	CLAY, maroon to varicolored, dry				
NQ2 Diamond	Dakota Fm	1	5.1	1360	1360.9	SANDSTONE, all wash, weak				
		2	8.0	1355	1358.0	CLAY, gray and yellowish brown, stiff to firm				
		3	11.6		1354.4	SANDSTONE, light gray to orange, ironstone seams, washed in lower part, weak				

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NQ2 Diamond	Dakota Fm	3	15.8	1350	SANDSTONE, light gray to orange, ironstone seams, washed in lower part, weak				
				1350.2	CLAY, varicolored				
			16.3	1349.7	CLAY, dark gray, firm to stiff				
			16.9	1349.1	SANDSTONE, dark orange, very fine, strong				
			17.1	1348.9	CLAY, yellowish orange and gray, soft				
			17.3	1348.7	IRONSTONE, dark maroon, very fine, hard [Cretaceous]				
			17.5	1348.5	CLAYEY SHALE, moderately weathered, yellowish gray, slightly limy, very soft [Permian]				
			17.6	1348.4	SILTSTONE, light tannish gray, slightly limy, medium hard to hard				
	Wellington Fm	4	18.0	1348.0	SHALE, dark gray and light brown, nodular siltstone				
			18.6	1347.4	SILTSTONE, light gray with dark gray, slightly limy, hard				
				1345					
			21.6	1344.4	SHALE, laminated, gray, medium hard, fine sand				
			22.6	1343.4	T.D. = 22.6				

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Core	Depth	Elev.	Cut	Rec	Rec %	RQD
1	4.3	1361.7	4.0	1.1	28	0%
2	8.3	1357.7	5.0	5.0	100	56%
3	13.3	1352.7	5.0	3.6	72	34%
4	18.3	1347.7	4.3	4.3	100	63%
Total	**22.6**	**1343.4**	**18.3**	**14.0**	**77**	**39%**