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KANSAS DEPARTMENT OF TRANSPORTATION

Kansas Department of Transportation

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RTE./CO. K-15 / Washington	SOUNDING NO. CH 3	SHEET 1 of 4
BRIDGE STA. 77+68: ℄	PROJ. NO. KA-3959-01	BRIDGE NO. 16.94 (055)
SITE NAME K-15 over Ash Creek		HOLE STA. 77+37, 51.7' Rt CL
GEOLOGIST N. Croxton, P.G.	SCALE 1 inch = 5.0 feet	DATE October 25, 2016
DRILLER R. Hinderliter	RIG TYPE CME 75	TOP HOLE ELEV. 1310.4
GW ELEV. 1298.3	TOTAL DEPTH 78.3	M/B ELEV. 1278.8
GPS COORDINATES 39.781012, -97.049233		

Bit Type	GEOLOGIC NAME	DEPTH	ELEVATION	CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION (TSF)	ELASTIC MODULUS (PSF)	SPT BLOW COUNT	N60	ELEVATION
8" Hollow Augers	Alluvium		1310.4	SILTY CLAY, brown, soft					
		1.2	1309.2	SANDY CLAY, brown, stiff, gravelly, some pea-size limestone gravel					
		3.1	1307.3	SANDY CLAY, dark brown, soft					
		14.9	1295.5	SANDY CLAY, dark gray, fine-grained, moist, stiff, gravel 16.3 to 17.5					
		26.4	1284.0	CLAYEY SAND, stiff					

Elevation scale: 1310, 1305, 1300, 1295, 1290, 1285

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RTE./CO.	K-15 / Washington	SOUNDING NO.	CH 3	SHEET 2 of 4	
BRIDGE STA.	77+68: ℄	PROJ. NO.	KA-3959-01	BRIDGE NO.	16.94 (055)
SITE NAME	K-15 over Ash Creek			HOLE STA.	77+37, 51.7' Rt CL

Bit Type	GEOLOGIC NAME	STRATIGRAPHIC COLUMN	DEPTH	ELEVATION	CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION (TSF)	ELASTIC MODULUS (PSF)	SPT BLOW COUNT	N60	ELEVATION
				1280	CLAYEY SAND, stiff					
			31.6	1278.8	SHALE, moderately weathered, reddish- brown					
			33.5	1276.9	SHALE, gray and light gray					
			34.6	1275.8	LIMY SHALE, gray to red- brown, with limestone nodules	3.7	180000			1275.4
		1		1275		5.4	407000			1273.6
			36.7	1273.7	CLAYEY SHALE, gray, soft, swelling					
NQ2 Carbide			38.5	1271.9	SILTY SHALE, light greenish- gray					
			38.8	1271.6	SHALE, pale reddish- brown					
				1270						
		2	40.7	1269.7	GYPSUM, shale is weathered					
			40.9	1269.5	SHALE, moderately weathered, gray, gypsum band at 41.5 and 41.9					
			42.7	1267.7	GYPSUM, dark grayish- brown, .04' pure layer at top					
			43.5	1266.9	GYPSUM, dark gray and grayish- brown, clear bands					
	Wellington Fm		44.8	1265.6	SILTY SHALE, laminated, wavy, gray					
			45.0	1265.4	SHALE, slightly weathered, gray					
			45.7	1264.7	GYPSIFEROUS SHALE, gray, irregular lamina					
		3	45.9	1264.5	GYPSUM, light brown, pure					
			46.1	1264.3	GYPSUM, gray					
			47.0	1263.4	SHALE, greenish- gray, with gypsum					
			47.9	1262.5	SHALE, greenish- gray	23.0	4090000			1262.1
			48.3	1262.1	GYPSUM, light brown, pure					
			48.5	1261.9	GYPSUM, green- gray, with green shale, some pure bands					
			50.1	1260.3	SILTY SHALE, greenish- gray and reddish- gray, hard					
		4		1260		36.0	8500000			1258.5
			52.3	1258.1	GYPSUM, light brown, pure					
			52.5	1257.9	SHALE, laminated, gray and grayish- brown	86.0	2.78E+07			1257.1
			53.5	1256.9	SILTY SHALE, laminated, gray and olive- gray, hard					
NQ2 Diamond				1255						
		5	56.1	1254.3	SILTY SHALE, greenish- gray, hard	41.0	5930000			1253.5
			56.9	1253.5	SHALE, laminated, wavy, gray, hard					
			57.1	1253.3	GYPSUM, dark gray and amber					
			58.5	1251.9	GYPSUM, light brown					
			58.9	1251.5	SHALE, dark gray					
			59.0	1251.4	GYPSUM, light amber, pure					
			59.1	1251.3	SHALE, dark grayish- green with gray					
			59.3	1251.1	GYPSUM, dark greenish- gray	31.0	5680000			1249.8
		6	59.5	1250.9	SHALE, grayish- green, laminated lower half					
			60.0	1250.4	GYPSUM SHALE, greenish- gray					
			60.1	1250.3	SHALE, laminated, greenish- gray, hard	230.0	8.67E+07			1248.5
	Herington LS Mbr		60.9	1249.5	SHALY GYPSUM, dark gray					
			61.5	1248.9	DOLOMITE, light grayish- brown, stromatolitic, 0.04' gypsum clear					
			62.0	1248.4	GYPSUM, brown	155.0	1.08E+08			1247.0
			62.6	1247.8	DOLOMITE, gray and light grayish- brown, mottled					
			63.4	1247.0	GYPSUM, light brown					
		7	63.7	1246.7		322.0	1.06E+08			1245.0
			65.4	1245.0						

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SITE NAME	K-15 over Ash Creek			HOLE STA.	77+37, 51.7' Rt CL

Bit Type	GEOLOGIC NAME	STRATIGRAPHIC COLUMN	DEPTH	ELEVATION	CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION (TSF)	ELASTIC MODULUS (PSF)	SPT BLOW COUNT	N60	ELEVATION
NQ2 Diamond	Herington LS Mbr	7	65.8	1244.6	DOLOMITE, light gray, thin gypsum at 63.9 and 64.2 DOLOMITE, gypsum and dolomite DOLOMITE, gray, gypsum at 66.7, 67.9, and 68.4, pure crystals in nodules	263.0	1.49E+08			1242.3
			68.5	1241.9	DOLOMITE, light gray, with clear gypsum in thin seams and nodules	362.0	1.49E+08			1240.2
		8	70.2	1240 / 1240.2	GYPSUM, light brown					
			70.3	1240.1	SHALE, gray, dolomitic with abundant gypsum					
			70.5	1239.9	DOLOMITE, light gray, with gypsum nodules					
			71.3	1239.1	GYPSUM, dark gray					
			71.5	1238.9	DOLOMITE, light gray, large gypsum nodule at 4.2, thin seams at 3.3					
			73.2	1237.2	GYPSUM, gray					
			73.3	1237.1	DOLOMITE, light gray	344.0	1.2E+08			1236.0
			73.5	1236.9	DOLOMITE, light gray, hard, gypsum filled high angle fracture 73.5 to 73.7					
			74.4	1236.0	SHALY DOLOMITE, gray					
			74.7	1235.7	SHALE, dark gray, 2 thin angled gypsum seams					
			74.9	1235.5	SHALY DOLOMITE, gray					
	Paddock SH Mbr	9	75.8	1235 / 1234.6	SHALE, dark gray, white calcite seams	39.0	5870000			1233.5
			76.0	1234.4	LIMY SHALE, gray and dark gray, hard, scattered calcite below 77.9					
			78.3	1232.1	T.D. = 78.3					

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Core	Depth	Elev.	Cut	Rec	Rec %	RQD
1	33.5	1276.9	5.0	5.2	104	70%
2	38.5	1271.9	5.0	4.8	96	0%
3	43.5	1266.9	5.0	5.1	102	84%
4	48.5	1261.9	5.0	5.0	100	100%
5	53.5	1256.9	5.0	5.0	100	100%
6	58.5	1251.9	5.0	4.9	98	98%
7	63.5	1246.9	5.0	5.0	100	100%
8	68.5	1241.9	5.0	5.0	100	100%
9	73.5	1236.9	4.8	4.8	100	100%
Total	**78.3**	**1232.1**	**44.8**	**44.8**	**100**	**83%**

Box 1: 33.5' - 45.3'
Box 2: 45.3' - 56.1'
Box 3: 56.1' - 66.8'
Box 4: 66.8 - 78.3

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