

KANSAS DEPARTMENT OF TRANSPORTATION

COUNTY *Pottawatomie* PROJECT NO. *24-75-K-0671-01* BRIDGE NO. *1.34*

DESCRIPTION *E. Bound 24 over Blue River* STA. *85+80, Rt. 25'*

GEOLOGIST *Kotogantz* VERTICAL SCALE *1"=10'* DATE *6-24-82*

BIT TYPE & NO.	GEOLOGIC NAME	GEOLOGIC COLUMN	GROUNDWATER ELEVATION	DEPTH	ELEVATION	GEOLOGIC DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION	STANDARD PENETRATION OR CASING DRIVE	
								BLOWS	ELEV.
						<i>East Bound Bridge # 1.34</i>			
						<i>T.H. Elev. - 1011.18</i>			
		<i>300</i>			<i>1010</i>	<i>1007² Backfill Material</i>			
		<i>1000</i>			<i>992²</i>	<i>silty clay</i>			
		<i>990</i>			<i>980</i>	<i>Sand, coarse to medium with gravel in its lower portion.</i>			
		<i>970</i>			<i>960</i>				
		<i>63²</i>			<i>950</i>	<i>947³ Shale, Lt.-tan, wthd.</i>			<i>60 945⁹⁸</i>

cont

KANSAS DEPARTMENT OF TRANSPORTATION

COUNTY Pottawatomie PROJECT NO. 24-75-K-0671-01 BRIDGE NO. 1.34

DESCRIPTION E. Bound R4 over Blue River STA. 85+80, Rt. 25'

GEOLOGIST Weto yantz VERTICAL SCALE 1" = 10' DATE 6-24-82

BIT TYPE & NO.	GEOLOGIC NAME	GEOLOGIC COLUMN	GROUNDWATER ELEVATION	DEPTH	ELEVATION	GEOLOGIC DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION	STANDARD PENETRATION OR CASING DRIVE		
								BLOWS	ELEV.	
B Christenson Core Barrel - Carbide Bit	Hamlin shale Mbr.	#2 Core 1		632	947 ²	Alluvium shale, Lt.-tan, w/hd				
				652	946 ²	shale, grey, clayey				
				661	945 ²					
					940					
					742	937 ²	Sandstone, micaceous, fine grained, Lt.-grey, upper & lower 0 ⁵ slightly cemented, contains shaly sandstone zones.			
					930					

Core #1 65² - 70² (945² - 940²)
 Cut 5² Rec'd 4²
 0⁵ shale, clayey, grey
 4⁴ sandstone, grey, micaceous, lower 1 foot somewhat shaly.

Core #2 70² - 74² (940² - 937²)
 Cut 3⁵ Rec'd 3²
 3⁵ sandstone, grey micaceous, fine grained, grey, upper 0⁵ shaly, lower 0⁵ slightly cemented and very hard.

60 945²⁰

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COUNTY *Pottawatomie* PROJECT NO. *24-75-K-0671-01* BRIDGE NO. *1.34*

DESCRIPTION *E. Bound 24 over Blue River* STA. *87+71, Rt. 17*

GEOLOGIST *Katoyantz* VERTICAL SCALE *1" = 10'* DATE *3-6-89*

BIT TYPE & NO.	GEOLOGIC NAME	GEOLOGIC COLUMN	GROUNDWATER ELEVATION	DEPTH	ELEVATION	GEOLOGIC DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION	STANDARD PENETRATION OR CASING DRIVE		
								BLOWS	ELEV.	
					1002 ^E	East Bound Bridge # 1.34 T. H. Elev. 1002 ^E				
					1000	Silty Clay			Per 0 ^t	
					990	988 ^B			988 ^E	
				18 ²		983 ^E				
					980	Sand, coarse to medium grading to medium at 30 ^o finer sand below 35 ^o		2-4	981 ³	
					970					
					960					
					950					
				55 ^E		947 ^o				
				58 ¹		944 ⁴	Shale, clayey with thin s.s. stringers, lt. tan		67	946 ³
						940	Sandstone micaceous, fine grained, lt. gray			
				63 ^E		938 ²	Shale, micaceous, grey			
				70 ^o		932 ^E				
				71 ^E		931 ³	Limestone, shaly		5.080u	932.6

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COUNTY *Pottawatomie* PROJECT NO. *24-75-K-0671-01* BRIDGE NO. *1.34*

DESCRIPTION *E. Bound 24 over Blue River* STA. *89+71*

GEOLOGIST *Kotolyantz* VERTICAL SCALE *1" = 10'* DATE *3-6-89*

BIT TYPE & NO.	GEOLOGIC NAME	GEOLOGIC COLUMN	GROUNDWATER ELEVATION	DEPTH	ELEVATION	GEOLOGIC DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION	STANDARD PENETRATION OR CASING DRIVE	
								BLOWS	ELEV.
	West Branch MBR. Core #7 Core #8 Core #9 Core #6			71 ²	930	931 ³ shale, clayey, gray		15.38 Qu.	929.0
				76 ²	926 ³	925 ² Coal seam		12.15 Qu.	926.7
				76 ²	920	shale, clayey, gray		21.3 Qu.	922.1
								27.3 Qu.	916.5
				93 ⁵	910	909 ⁰		28.3 Qu.	911.7

KANSAS DEPARTMENT OF TRANSPORTATION

COUNTY Pottawatomie PROJECT NO. 24-75-K-0671-01 BRIDGE NO. 1.34

DESCRIPTION E. Bound 24 over Blue River STA. 89+71, Rt. 17'

GEOLOGIST Kotoyantz

VERTICAL SCALE

DATE 3-6-89

BIT TYPE & NO.	GEOLOGIC NAME	GEOLOGIC COLUMN	GROUNDWATER ELEVATION	DEPTH	ELEVATION	GEOLOGIC DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION	STANDARD PENETRATION OR CASING DRIVE	
								BLOWS	ELEV.
						<p><u>Core #1</u> 56[±] - 58[±] (945.9 - 943.6) Cut 2[±] Rec. 0[±] R. Q. D. 0% Core Rec. 19.5%</p>			
						<p><u>Core #2</u> 58[±] - 60[±] (943.6 - 942.5) Cut 1[±] Rec. 0[±] R. Q. D. 0% Core Rec. 72.7%</p>			
						<p><u>Core #3</u> 60[±] - 63[±] (942.5 - 938.6) Cut 3[±] Rec. 1[±] R. Q. D. 0% Core Rec. 43.5%</p>			
						<p><u>Core #4</u> 63[±] - 67[±] (938.6 - 935.0) Cut 3[±] Rec. 3[±] R. Q. D. 0% Core Rec. 97.2%</p>			
						<p><u>Core #5</u> 67[±] - 68[±] (935.0 - 933.6) Cut 1[±] Rec. 1[±] R. Q. D. 0% Core Rec. 100%</p>			
						<p><u>Core #6</u> 68[±] - 73[±] (933.6 - 929.0) Cut 4[±] Rec. 4[±] R. Q. D. 69.5% Core Rec. 100%</p>			
						<p><u>Core #7</u> 73[±] - 78[±] (929.0 - 924.0) Cut 5[±] Rec. 5[±] R. Q. D. 70% Core Rec. 100%</p>			

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COUNTY *Pottawatomie* PROJECT NO. *24-75-K-0671-01* BRIDGE NO. *1.34*

DESCRIPTION STA. *89+71, Rt. 17'*

GEOLOGIST *Kotovantz* VERTICAL SCALE DATE *3-6-89*

BIT TYPE & NO.	GEOLOGIC NAME	GEOLOGIC COLUMN	GROUNDWATER ELEVATION	DEPTH	ELEVATION	GEOLOGIC DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION	STANDARD PENETRATION OR CASING DRIVE	
								BLOWS	ELEV.
						<p><i>Core #8</i></p> <p><i>78⁵ - 83⁵ (924.0 - 919.0)</i></p> <p><i>Cut 5° Rec. 5°</i></p> <p><i>R.Q.D. 94%</i></p> <p><i>Core Rec. 100%</i></p>			
						<p><i>Core #9</i></p> <p><i>83⁵ - 88⁵ (919.0 - 914.0)</i></p> <p><i>Cut 5° Rec. 5°</i></p> <p><i>R.Q.D. 98%</i></p> <p><i>Core Rec. 100%</i></p>			
						<p><i>Core #10</i></p> <p><i>88⁵ - 93⁵ (914.0 - 909.0)</i></p> <p><i>Cut 5° Rec. 3⁶</i></p> <p><i>R.Q.D. 56%</i></p> <p><i>Core Rec. 72%</i></p>			

KANSAS DEPARTMENT OF TRANSPORTATION

COUNTY *Pottawatomie* PROJECT NO. *24-75 K-0671-01* BRIDGE NO. *1.34*

DESCRIPTION *E. Bound 24 over Blue River* STA. *85+55, Rt. 57'*

GEOLOGIST *Kotoyantz* VERTICAL SCALE *1"=10'* DATE *5-11-89*

BIT TYPE & NO.	GEOLOGIC NAME	GEOLOGIC COLUMN	GROUNDWATER ELEVATION	DEPTH	ELEVATION	GEOLOGIC DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION	STANDARD PENETRATION OR CASING DRIVE	
								BLOWS	ELEV.
					1010	<i>East Bound Bridge # 1.34</i>			
		D D D			1008	<i>T. H. Elev. - 1008</i>			
		D D D			1004	<i>Backfill Material silty clay + limestone blocks</i>			
	<i>Alluvium</i>	/ / / / /			1000	<i>silty clay</i>			
				990	<i>Sand, coarse to medium with gravel in its lower portion</i>			
				980				
				970				
					960				
					950				
				61	947	<i>Shale, clayey, grey</i>		40	947

cont

KANSAS DEPARTMENT OF TRANSPORTATION

COUNTY Pottawatomie PROJECT NO. 24-75-M-0671-01 BRIDGE NO. 1.34

DESCRIPTION East Bound 24 over Blue River STA. 85+55, Rt. 57'

GEOLOGIST Kotzyantz VERTICAL SCALE 1"=10' DATE 5-11-89

BIT TYPE & NO.	GEOLOGIC NAME	GEOLOGIC COLUMN	GROUNDWATER ELEVATION	DEPTH	ELEVATION	GEOLOGIC DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION	STANDARD PENETRATION OR CASING DRIVE		
								BLOWS	ELEV.	
	Hamlin Mbr	Core #1		61 ⁴	947 ⁴	Alluvium				
			63 ²	945 ²	Shale, clayey, grey		40	947 ²		
			71 ²	940	Sandstone, micaceous fine grained, Lt.-grey, contains shaly sandstone zones, upper & lower 0.5 is tightly cemented.					
			75 ²	937 ⁶	Shale, micaceous, grey		1.53 Qu	935.65		
			76 ⁴	933 ¹	Limestone, shaly		7.35 Qu	933.1		
			80 ³	932 ⁴	Shale, clayey, dark grey		22.0 Qu	932.4		
			80 ⁸	928 ²	coal, black		23.0 Qu	931.8		
			82 ²	926 ²	Shale, silty, grey					
			West Branch Mbr	Core #2		920	Core #1 62 ⁰ -67 ⁰ (946 ⁸ -941 ⁸) Cut 5 ⁰ Recvd 3 ² RQD - 0% Core Rec. 78%			
							1 ¹ Shale, clayey, grey			
					3 ³ Sandstone, micaceous, fine grained, Lt.-grey, upper 0.5 tightly cemented.					
	West Branch Mbr	Core #3			Core #2 67 ⁰ -71 ⁵ (941 ⁸ -937 ³) Cut 4 ⁵ Recvd 3 ⁴ RQD - 0% Core Rec. - 75%					
					4 ⁵ Sandstone, micaceous, fine grained, Lt.-grey, lower 0.5 tightly cemented.					
					Core #3 71 ⁵ -72 ¹ (937 ³ -936 ²) Cut 0 ⁶ Recvd 0 ⁶ RQD - 0% Core Rec. - 100%					
						0 ⁶ Shale, micaceous, grey.				

KANSAS DEPARTMENT OF TRANSPORTATION

COUNTY *Pottawatomie* PROJECT NO. *24-75-K-0671-01* BRIDGE NO. *1.34*

DESCRIPTION *East Bound 24 over Blue River* STA. *85+55, Rt. 57'*

GEOLOGIST *Motoyantz* VERTICAL SCALE *1"=10'* DATE *5-11-89*

BIT TYPE & NO.	GEOLOGIC NAME	GEOLOGIC COLUMN	GROUNDWATER ELEVATION	DEPTH	ELEVATION	GEOLOGIC DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION	STANDARD PENETRATION OR CASING DRIVE	
								BLOWS	ELEV.
						<p><u>Core #4</u> 72¹-77⁰ (936³-931⁸)</p> <p>Cut 4², Rec'd. 5⁰</p> <p>R.Q.D. - 67.5%</p> <p>Core Rec'd - 100%</p> <p>3⁶ shale, micaceous grey</p> <p>0⁷ limestone, fossiliferous</p> <p>0⁶ shale, clayey, dark blue-grey.</p>			
						<p><u>Core #5</u> 77⁰-82⁰ (931⁸-926⁸)</p> <p>Cut 5⁰, Rec'd 4²</p> <p>R.Q.D. - 66.6%</p> <p>Core Rec'd - 100%</p> <p>2³ shale, clayey, dark blue-grey</p> <p>0⁵ coal - black</p> <p>2² shale, silty, grey</p> <p>82⁰ Bottom Hole</p>			

KANSAS DEPARTMENT OF TRANSPORTATION

COUNTY *Pottawatomie* PROJECT NO. *24-75-K-0671-01* BRIDGE NO. *1.35*

DESCRIPTION *W. bound 24 over Blue River* STA. *85+37, R# 15'*

GEOLOGIST *Ferguson* VERTICAL SCALE *1" = 10'* DATE *12-1957*

BIT TYPE & NO.	GEOLOGIC NAME	GEOLOGIC COLUMN	GROUNDWATER ELEVATION	DEPTH	ELEVATION	GEOLOGIC DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION	STANDARD PENETRATION OR CASING DRIVE	
								BLOWS	ELEV.
						<i>West Bound Bridge #1.35</i>			
					<i>1010</i>	<i>T.H. Elev. 1009.98</i>			
	<i>Alluvium</i>				<i>1000</i>				
					<i>990</i>				
					<i>980</i>	<i>Sand, silt, & Clay with gravel lenses</i>			
					<i>970</i>				
					<i>960</i>				
					<i>950</i>				
				<i>64³</i>	<i>945⁶</i>				
				<i>66⁴</i>	<i>943²</i>	<i>Shale, clayey, grey Sandstone, gray</i>			<i>85 945⁶</i>

KANSAS DEPARTMENT OF TRANSPORTATION

COUNTY *Pottawatomie* PROJECT NO. *24-75-K-0671-01* BRIDGE NO. *1.35*

DESCRIPTION *W. bound R4 over Blue River* STA. *85+37, R# 15'*

GEOLOGIST *Ferguson* VERTICAL SCALE *1" = 10'* DATE *12-1957*

BIT TYPE & NO.	GEOLOGIC NAME	GEOLOGIC COLUMN	GROUNDWATER ELEVATION	DEPTH	ELEVATION	GEOLOGIC DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION	STANDARD PENETRATION OR CASING DRIVE	
								BLOWS	ELEV.
				69 ³	945 ⁶	Alluvium			
	Hamilton Mbr.			66 ⁴	943 ⁵	Shale, clayey, gray			
				72 ¹	937 ³	Sandstone, gray, fine grained.			
				78 ²	931 ⁸	Shale, silty, gray			
				80 ²	930	929 ⁸ Limestone, shaly, gray			
	Five Point Mbr.			85 ²	924 ⁸	Shale, clayey, gray			
	West Branch Mbr.			85 ²	924 ⁸	Coal, black			
				93 ⁵	916 ⁸	Shale, clayey, gray			
					910				

KANSAS DEPARTMENT OF TRANSPORTATION

COUNTY *Pottawatomie* PROJECT NO. *24-75-H-0671-0*/BRIDGE NO. *1.35*

DESCRIPTION *W. bound 24 over Blue River* STA. *85+37, Lt. 15'*

GEOLOGIST *Ferguson* VERTICAL SCALE *1"=10'* DATE *12-1957*

BIT TYPE & NO.	GEOLOGIC NAME	GEOLOGIC COLUMN	GROUNDWATER ELEVATION	DEPTH	ELEVATION	GEOLOGIC DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION	STANDARD PENETRATION OR CASING DRIVE	
								BLOWS	ELEV.
					<i>1010</i>	<i>West Bound Bridge #1.35</i>			
					<i>1000</i>				
					<i>990</i>				
	<i>Alluvium</i>				<i>980</i>	<i>Sand, silt + clay with gravel lenses</i>			
					<i>970</i>				
					<i>960</i>				
					<i>950</i>	<i>Heavy gravel above shale contact</i>			
				<i>63⁵</i>	<i>945⁹</i>				
				<i>66⁴</i>	<i>943⁹</i>				

KANSAS DEPARTMENT OF TRANSPORTATION

COUNTY *Pottawatomie* PROJECT NO. *24-75-K-0671-01* BRIDGE NO. *1.35*

DESCRIPTION *W. bound 24 over Blue River* STA. *85+37, Lt. 15'*

GEOLOGIST *Ferguson* VERTICAL SCALE *1"=10'* DATE *12-1957*

BIT TYPE & NO.	GEOLOGIC NAME	GEOLOGIC COLUMN	GROUNDWATER ELEVATION	DEPTH	ELEVATION	GEOLOGIC DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION	STANDARD PENETRATION OR CASING DRIVE	
								BLOWS	ELEV.
	<i>Hammer Mbr.</i>			<i>635</i>	<i>945⁹</i>	<i>Alluvium</i>			
				<i>664</i>	<i>943⁹</i>	<i>Shale, clayey, gray</i>			
				<i>717</i>	<i>940</i>	<i>Sandstone, gray, fine grained</i>			
					<i>937^I</i>				
					<i>930</i>				

COUNTY <i>Pottawatomie</i>	PROJECT NO. <i>24-75-K-0671-01</i>	BRIDGE NO. <i>1.34</i>							
STA. <i>87+45</i>	NAME <i>Big Blue River</i>	STA. <i>89+85</i>							
RT. <i>15'</i>	SOUND. NO. <i>CD-6</i>								
GROUNDWATER EL.	VERTICAL SCALE <i>1"=10'</i>	DATE <i>Dec., 1957</i>							
B.M. NO. <i>11</i>	B.M. EL. <i>1017.785</i>	SUBMITTED BY <i>G. J. Ferguson</i>							
POINT	B.S.	H.I.	F.S.	ELEV.	POINT	B.S.	H.I.	F.S.	ELEV.
<i>BM#11</i>	<i>1.44</i>	<i>1019.22</i>		<i>1017.785</i>					
<i>Q1</i>	<i>3.04</i>	<i>1009.33</i>	<i>12.93</i>	<i>1006.30</i>					
<i>CD#2</i>			<i>6.02</i>	<i>1003.22</i>					
<i>Q2</i>	<i>12.905</i>	<i>1019.215</i>	<i>3.025</i>	<i>1006.310</i>					
<i>Q</i>			<i>1.44</i>	<i>1017.775</i>					

FORM	BIT	EL.	LOG	ACC. DEP.	GEOLOGIC DESCRIPTION AND REMARKS	CASING DRIVE REC. DEPTH	BT/10
					<i>West Bound Bridge # 1.35</i>		
					<i>CD#6 TH. 1003.3</i>		
		<i>1000</i>					
		<i>990</i>					
		<i>988.3</i>				<i>15°</i>	
		<i>980</i>			<i>Sand, silt, and clay lenses</i>		
		<i>970</i>					
		<i>960</i>					
		<i>950</i>					
		<i>58°</i>		<i>944.8</i>		<i>944.8</i>	<i>58°</i>
		<i>59°</i>		<i>943.5</i>	<i>sh, clayey, gray</i>		<i>60</i>
		<i>65°</i>		<i>938.2</i>	<i>ss., micaceous, fine grained, lt. gray</i>		
					<i>sh, silty, ss. lenses, gray.</i>		
		<i>72°</i>		<i>931.3</i>			
		<i>73.0</i>		<i>930.3</i>	<i>ls, shaly,</i>		
					<i>sh, (can't read sheet)</i>		

Packed casing

Alluvium

Hamilton Mbr.



Finger Point Mbr.

SOUNDING DATA

KANSAS DEPARTMENT OF TRANSPORTATION

Sheet 2 of 2

COUNTY	<i>Pottawatomie</i>			PROJECT NO.	<i>24-75-K-0671</i>			BRIDGE NO.	<i>1.34</i>	
Q. STA.	<i>87+64</i>		NAME	<i>Big Blue River</i>		STA.	<i>89+50</i>		<i>WT 65' SOUND. NO. CO#6</i>	
GROUNDWATER EL.			VERTICAL SCALE			DATE				
B.M. NO.		B.M. EL.		SUBMITTED BY			<i>Alex Kotolyantz</i>			
POINT	B.S.	H.I.	F.S.	ELEV.	POINT	B.S.	H.I.	F.S.	ELEV.	

FORM	BIT	EL.	LOG	ACC. DEP.	GEOLOGIC DESCRIPTION AND REMARKS	CASING DRIVE REC.	
						DEPTH	BL/10
<i>West Branch Mbr.</i>					<i>sh, clayey, with coal seam</i>		
				<i>81'</i>	<u><i>922.3</i></u>		
		<i>920</i>					

COUNTY <i>Pottawatomie</i>	PROJECT NO. <i>24-75-K-0671</i>	BRIDGE NO. <i>1.34</i>							
& STA. <i>87+45</i>	NAME <i>Big Blue River</i>	STA. <i>89+40</i>							
GROUNDWATER EL. —	VERTICAL SCALE <i>1"=10'</i>	DATE <i>Dec. 1957</i>							
B.M. NO. <i>11</i>	B.M. EL. <i>1017.785</i>	SUBMITTED BY <i>G.J. Ferguson</i>							
POINT	B.S.	H.I.	F.S.	ELEV.	POINT	B.S.	H.I.	F.S.	ELEV.
<i>BM #11</i>	<i>1.44</i>	<i>1019.22</i>		<i>1017.785</i>					
<i>Q</i>	<i>2.64</i>	<i>1008.90</i>	<i>12.93</i>	<i>1006.30</i>					
<i>C.D. #4</i>			<i>4.97</i>	<i>1003.93</i>					

FORM	BIT	EL.	LOG	ACC. DEP.	GEOLOGIC DESCRIPTION AND REMARKS	CASING DRIVE REC. DEPTH	BT/LO
					<i>West Bound Bridge #1.35</i>		
					<i>T.H. Elev. CD#7 1003.93</i>		
		<i>1000</i>			<i>Sand, silt, & clay</i>		
		<i>990</i>					
				<i>20°</i>	<i>983.9</i>		
		<i>980</i>		<i>23°</i>	<i>980.2</i>		
					<i>Clay, ls. gravel & sand</i>		
		<i>970</i>					
					<i>Sand, fine, contains some silt size particles</i>		
		<i>960</i>					
		<i>950</i>		<i>54°</i>	<i>949.3</i>		
				<i>57°</i>	<i>946.9</i>	<i>Gravel</i>	
				<i>58°</i>	<i>945.1</i>	<i>sh. wthd., clayey, lt. tan-gray.</i>	
				<i>59.2</i>	<i>944.7</i>	<i>ss., micaceous, fine grained, lt. gray.</i>	
		<i>940</i>					

A I I U V I U M

Hamlin Mbr.