

Project No. 63-66 K-6364-01
 K-63 over Tennessee Creek
 Nemaha County

NW SE 11-3-12E

KANSAS DEPARTMENT OF TRANSPORTATION



RTE./CO. 063-066	SOUNDING NO. CD # 1	SHEET 1 OF 5
BRIDGE STA. 10+614.990	PROJ. NO. K-6364-01	BRIDGE NO. 63-66-16.44 (037)
SITE NAME K-63 over Tennessee Creek	HOLE STA. 10+584.49 11m Rt.	
GEOLOGIST Randy Billinger	SCALE: 1:100 (10mm = 1 Meter)	DATE 12-6-99
DRILLER Rob Vervynck	RIG TYPE Mobile B-61	TOP HOLE ELEV. 343.56 m.
GROUNDWATER ELEV 340.30	TOTAL DEPTH 25.73 m.	M/B ELEV. 322.47

BIT TYPE	GEOLOGIC NAME	STRATIGRAPHIC COLUMN	DEPTH	ELEVATION	CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION	STANDARD PENETRATION OR CASING DRIVE	
							BLOWS <small>per 300mm</small>	ELEV
			0.00	343.56				
				342	Silty clay, Charcoal grey.			
				341				
				340.30	Ground Water Elevation			Shelby #1 340.90
				340				
				339				
			4.89	338.67				4 blows 338.22
				338				
				337				
				336	Silty Sand, grey.			3 blows 335.87
				335				
				334				4 blows 334.35
				333				
				332				4 blows 332.82
				331				11 blows 331.30
				330				
				329				
				328				

		SOUNDING NO. CD #1	PROJECT NO. K-6364-01	SHEET 2 OF 5			
E 12-6-99		RTE/CO. 063-066	TOTAL DEPTH 25.73 m.	THE 343.56 m.			
GEOLOGIC NAME	STRATIGRAPHIC COLUMN	DEPTH	ELEVATION	CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION	STANDARD PENETRATION OR CASING DRIVE	
						BLOWS	ELEV
MANTLE		17.09	327 326.47	Silty Sand, grey.			
			326	GRAVEL zone. Abundant sand.			
			325				
			324				
			323				
	21.09	322.47					
Auburn Sh. Formation		23.28	322 321 320.28	Shale, dark grey, limy, containing some pyrite.			
			320	Limestone, light to medium grey, massive bedded, fossiliferous.			Sample #1 319.88
			319				Sample #2 319.10
Soldier Creek WAKARUSA Shale Mbr. LS Mbr.		24.91	318.65	Shale break @ 319.54 to 319.41.			Sample #3 318.49
			318	Shale, top 0.18m. is olive-grey, very limy, and fossiliferous. lower 0.64 is Black Fissile.			
			317				



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12-6-99
CD #1
STA. 10 + 584.49
11m. Right

340.30 m.

ELEV.	Depth.		
343.56	0.00	1.00	Silty clay, charcoal grey, moist.
342.56	1.00	1.75	Silty clay, olive-brown, moist.
341.81	1.75	2.06	more clay, drilling tighter.
341.50	2.06	2.66	<u>Shelby #1</u> Push'd: 0.60 Rec'd: 0.45
340.90	2.66	3.46	Silty clay, brown, moist.
340.10	3.46	4.06	Silty clay, brown, moist.
339.50	4.06	4.19	Very soft. no return
339.37	4.19	4.79	firmer again no return
338.97	4.59	4.89	Attempted <u>Shelby</u> but no recovery. Very Wet.
338.67	4.89	5.34	Very soft.
			<u>Split Spoon #1</u>
		4.89 - 5.04	2
		5.04 - 5.19	2
		5.19 - 5.34	2
			} <u>Sample Lost</u>
338.22	5.34	7.24	Silty sand, grey.
336.32	7.24	7.69	<u>Split Spoon #2</u>
		7.24 - 7.39	2
		7.39 - 7.54	1
		7.54 - 7.69	2
			} Silty Sand, grey.
335.87	7.69	8.76	Silty sand, grey.
334.80	8.76	9.21	<u>Split Spoon #3</u>
		8.76 - 8.91	1
		8.91 - 9.06	2
		9.06 - 9.21	2
			} Silty sand, grey, very wet.
334.35	9.21	10.29	Silty sand, grey.
333.27	10.29	10.74	<u>Split Spoon #4</u>
		10.29 - 10.44	1
		10.44 - 10.59	2
		10.59 - 10.74	2
			} Silty sand, grey, wet.
332.82	10.74	11.81	Silty sand, grey.
331.75	11.81	12.26	<u>Split Spoon #5</u>
		11.81 - 11.96	3
			} Silty sand, grey, wet.

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331.30 12.26 12.80
 330.76 12.80 14.59
 330.22 13.34

328.97 14.59 15.36
 328.20 15.36 15.86
 327.70 15.86 17.09
 326.47 17.09 17.39
 326.17 17.39 17.89
 325.67 17.89 19.44
 324.12 19.44 21.09

322.47 21.09 21.36

Core #1 322.01 21.55 21.65
 21.55-22.95 321.91 21.65 21.70
 Cut: 1.40 321.86 21.70 21.90
 Rec'd: 0.35 321.66 21.90 22.95
 RQD = 0%

Core #2 320.61 22.95 23.15
 22.95-23.68 320.41 23.15 23.17
 Cut: 0.73 320.39 23.17 23.28
 Rec'd: 0.68 320.28 23.28 23.68
 RQD = 93%

320.14 23.42 23.68
 Core #3 319.88 23.68 24.03
 23.68-25.20 319.53 24.03 24.15
 Cut: 1.52 319.41 24.15 24.91
 Rec'd: 1.52 318.65 24.91 25.09
 RQD 100% 318.47 25.09 25.20

11.96 - 12.11 5 Silty sand, grey, wet.
 12.11 - 12.26 6

Silty sand, dark grey.
 Sand, clean, fine, grey.

Split Spoon #6

Auger was back-filled with clean, fine-grained sand when we went back in with Split Spoon. A little more "gravelly".

Very Firm.

Smooth again, drilled easy. feels like gravel.

HEAVY gravel, strong vibrations.

lesser vibration; sand or light gravel.

Heavy gravel but seems to be small in size. for the most part. Hard to auger thru.

Shale, firm, grey. Set casing in Shale @ 21.36. Went in with Hawthorne bit and cleaned casing. Lots of sand and small gravel. Some gravel pieces quarter sized. Cut down to 21.55 and got back grey shale. Start coring at 21.55.

Shale, dark grey, limey.

Limestone stringer.

Shale, dark grey, limey.

Shale, dark grey, limey. *

* lost bottom 1.05 m. of core.

Shale, dark grey, some pyrite crystals.

Limestone stringer, light grey.

Shale, dark grey, firm.

Limestone, grey, massive or unit-bedded, fossiliferous, and containing pyrite.

SAMPLE #1 Limestone, grey, massive bedded fossiliferous, containing some pyrite.

Limestone, light grey, unit-bedded, some fossils.

Shale, dark grey, firm.

Limestone, grey, massive bedded, fossils (Crinoids).

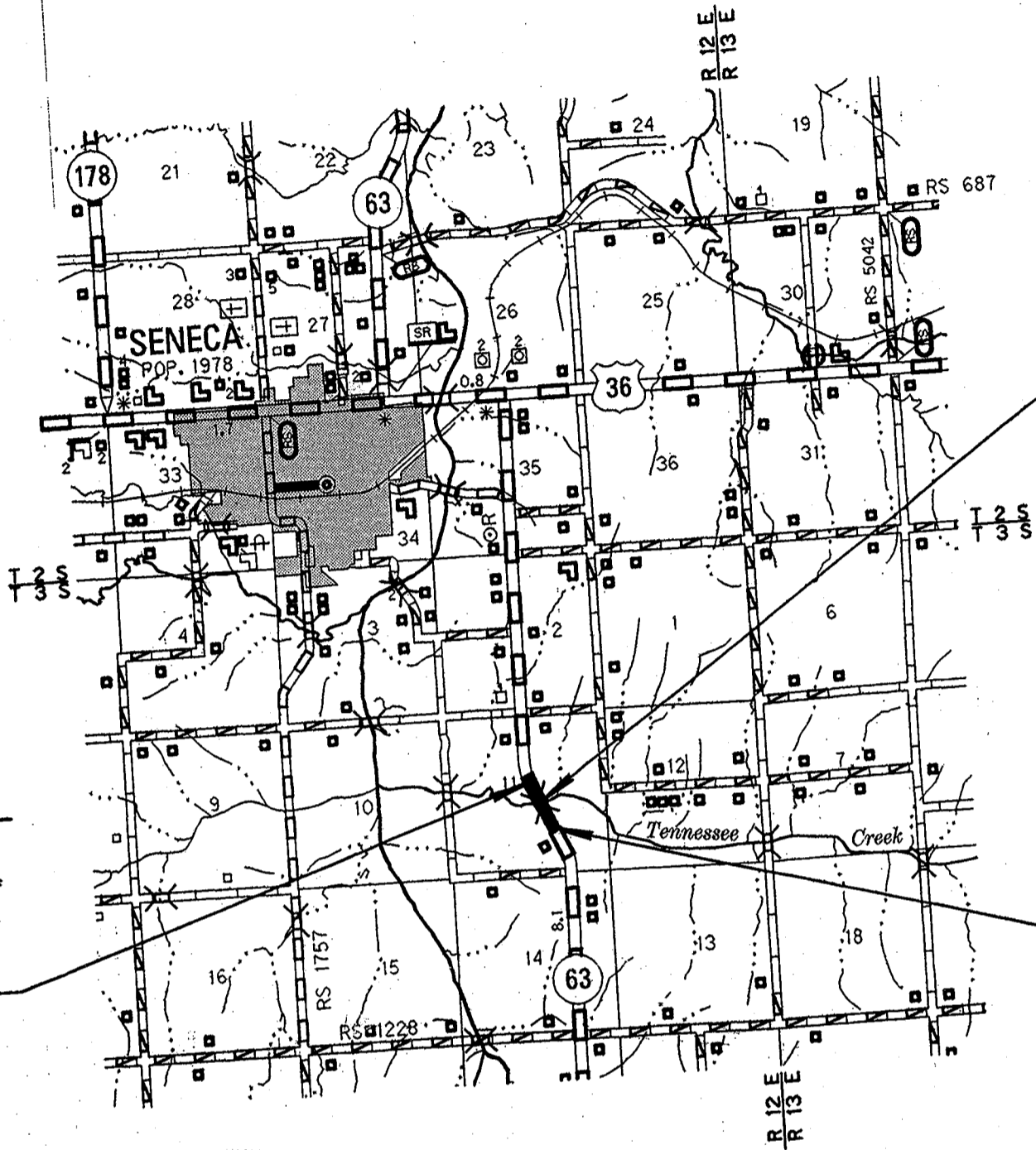
Shale, olive-grey, calcareous, fossiliferous.

Shale, black, fissile.

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	319.26	24.30	24.46	Sample #2 Limestone, massive, grey.
	318.64	24.92	25.07	Sample #3 Shale, very limey.
Core # 4	318.36	25.20	25.73	Did not recover core. Went back in to get it and still not recovered. Lots of dark grey to black cuttings coming up. We think this core was Shale, black, Fissile.
25.20-25.73	317.83			
Cut: 0.53 Rec'd: 0.0				

FEDERAL AID PROJECT
NEMAHA COUNTY
K - 63



K-63 over Tennessee Creek
63-66 K-6364-01

T3S R12E
11 SE

GROSS LENGTH OF PROJECT 508.000 m
EXCEPTIONS 0.000

NET LENGTH OF PROJECT 508.000 m
NET LENGTH OF BRIDGES 55.750 m
NET LENGTH OF ROAD 452.250 m