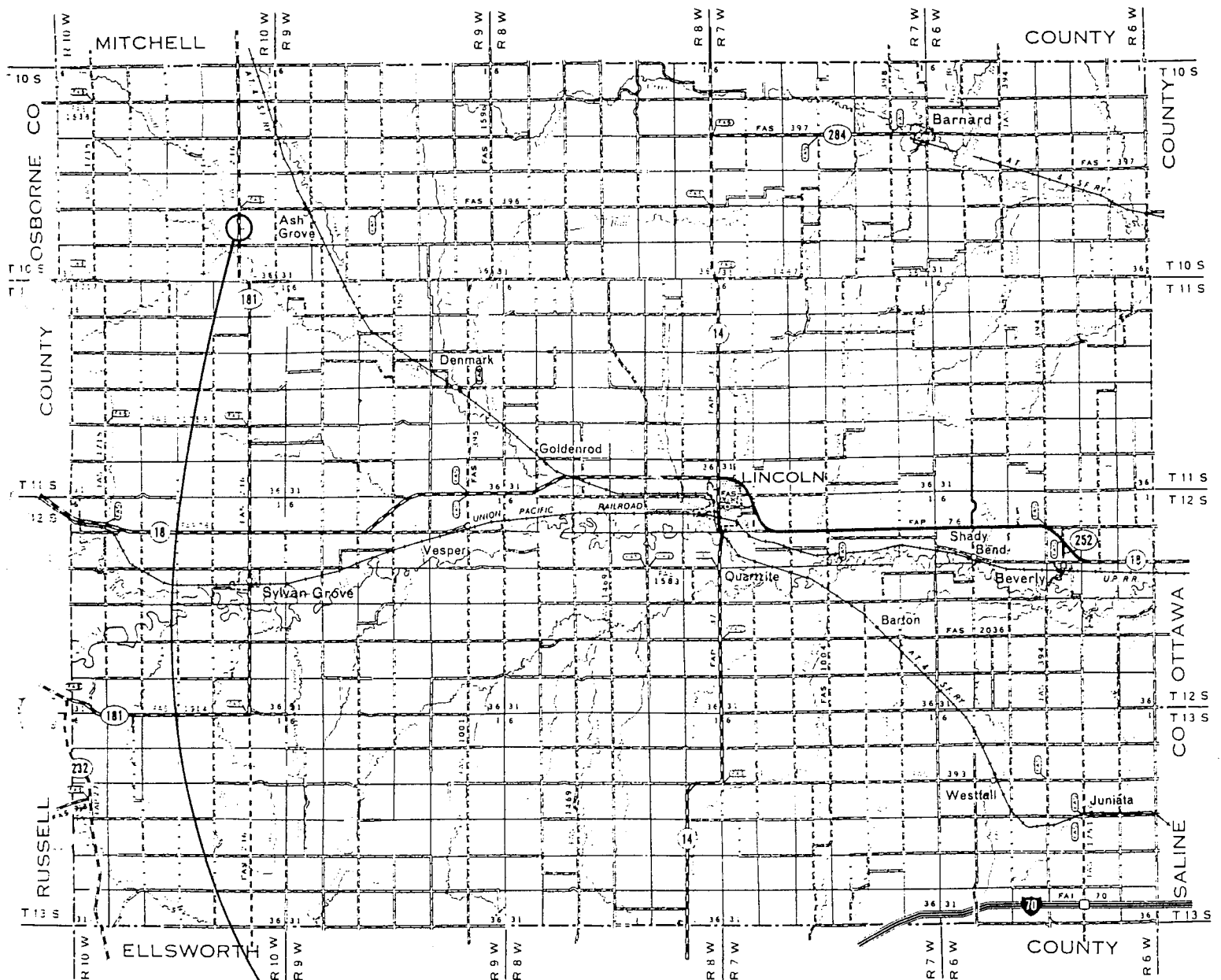


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Kansas Department of Transportation

BRIDGE FOUNDATION GEOLOGY REPORT



181-53 K-0519-01
Br. No. 18.73
Lincoln County

25-10 -10W

KANSAS DEPARTMENT OF TRANSPORTATION

COUNTY *Lincoln* PROJECT NO. 181-53-K-0519-01 BRIDGE NO. 17.86DESCRIPTION *K181 over S. Spillman Creek* STA. 260+66.5GEOLOGIST *Chitwood / Thompson* VERTICAL SCALE 1" = 5' DATE 7-17-91

BIT TYPE & NO.	GEOLOGIC NAME	GEOLOGIC COLUMN	GROUNDWATER ELEVATION	DEPTH	ELEVATION	GEOLOGIC DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION	STANDARD PENETRATION OR CASING DRIVE	
								BLOWS	ELEV.
					1484.6	<i>Silt to silty Clay, tan to brown.</i>			
					1480				
					1475		2.11		1478.1
					1470		2.6		1473.6
					1465			SPT 13 blows	1468.1
					1460			Push 4" Casing	
					1455			200 blows	1455.1
					1450			140 blows	
								400 blows	
								373 blows	
								345 blows	
								263 blows	
								387 blows	1448.9
					1448.9	<i>Refusal</i>			
						<i>Shale, gray-orange, occasional sandstone lens</i>			
						<i>RQD = 44%</i>	235		1447.4

KANSAS DEPARTMENT OF TRANSPORTATION

COUNTY Lincoln PROJECT NO. 181-53-K-0519-01 BRIDGE NO. 17.86DESCRIPTION K181 over S. Spillman Creek STA. 260+66.5GEOLOGIST Chitwood / Thompson VERTICAL SCALE 1" = 5' DATE 7-17-91

BIT TYPE & NO.	GEOLOGIC NAME	GEOLOGIC COLUMN	GROUNDWATER ELEVATION	DEPTH	ELEVATION	GEOLOGIC DESCRIPTION AND REMARKS CD # 1 Sta. 249+25, 15.5 R ₂	UNCONFINED COMPRESSION	STANDARD PENETRATION OR CASING DRIVE	
								BLOWS	ELEV.
		1 RQD 43%		35'		Silt to Silty Clay, tan to brown 1446.9			
		2 RQD 38%		40'	1445	Shale, gray-orange, occasional sandstone lenses, weathered	3.35		1447.4
		3 RQD 93%			1443.7	Shale, clayey, silty, gray	6.13		1443.2
		4 RQD NA		46'	1440	- Sandstone to Siltstone - most lost Cores 4-6	11.6		1439.0
		5 RQD NA			1435				
		6 RQD NA		54.7	1430	1429.8			
		7 RQD 0%			1425	Sandstone, Fine grained, silty			
				63'	1421.6				
					1420	Core Descriptions			
						Core # 1, 36'-38' ⁹⁵ , Cut 2 ⁹⁵ , Recov. 2 ⁵			
						36'-36' ³⁵ - Shale, gray, orange lenses, clayey, silty			
						36' ³⁵ -36' ⁵ - Sandstone lenses - diagonal			
						36' ⁵ -38' ⁵ - Shale, gray, orange lenses, clayey, silty, sandy			
						38' ⁵ -38' ⁹⁵ - Lost			
						RQD = 43% Core Recov. 83%			

KANSAS DEPARTMENT OF TRANSPORTATION

COUNTY Lincoln

PROJECT NO. 181-53-K-0519-01 BRIDGE NO. 77.86

DESCRIPTION K. 181 over S. Spillman Creek

STA. 260+66.5

GEOLOGIST Chitwood / Thompson

VERTICAL SCALE 1" = 5'

DATE 7-17-91

BIT TYPE & NO.	GEOLOGIC NAME	GEOLOGIC COLUMN	GROUNDWATER ELEVATION	DEPTH	ELEVATION	GEOLOGIC DESCRIPTION AND REMARKS Core Descriptions	UNCONFINED COMPRESSION	STANDARD PENETRATION OR CASING DRIVE	
								BLOWS	ELEV.
						Core #2, 38 ⁹⁵ -43°, Cut 4 ⁰⁵ , Recov. 4 ⁰⁵ 38 ⁹⁵ -39 ² - Shale, silty, gray with orange streaks. 39 ² -40 ⁷ - Shale, clayey with hard silty lenses, dark gray with black lenses 40 ⁷ -43° - Shale, clayey, silty, gray RQD = 38% Core Recov. = 100% Core #3, 43°-46°, Cut 3° Recov. 3° 43°-45° - Shale, clayey, gray 45°-46° - Shale, silt, gray, Firm RQD = 93% Core Recov. 100% Core #4, 46°-50°, Cut 4°, Recov. 0 ⁶⁵ 46°-46 ⁶⁵ - Shale, fine, silty, gray 46 ⁶⁵ -50° - Lost, siltstone to sandstone RQD = NA Core Recov. 16% Core #5, 50°-54 ⁵ , Cut 4 ⁵ , Recov. 0 ⁷ 50°-50 ⁷ - Siltstone, clayey, gray 50 ⁷ -54 ⁵ - Lost RQD = NA Core Recov. 15% Core #6 54 ⁵ -58°, Cut 3 ⁵ , Recov. 0 ⁸ 54 ⁵ -58° - Sandstone, Fine grained, silty approx. 0 ⁸ intermittently spacial wafer recovered. 2 ²⁵ lost RQD = NA Core Recov. 23% Core #7, 58°-63°, Cut 5°, Recov. 4' 58°-62' - Sandstone, Fine grained, gray 62'-63° - Lost RQD = 0% Core Recov. 82%			