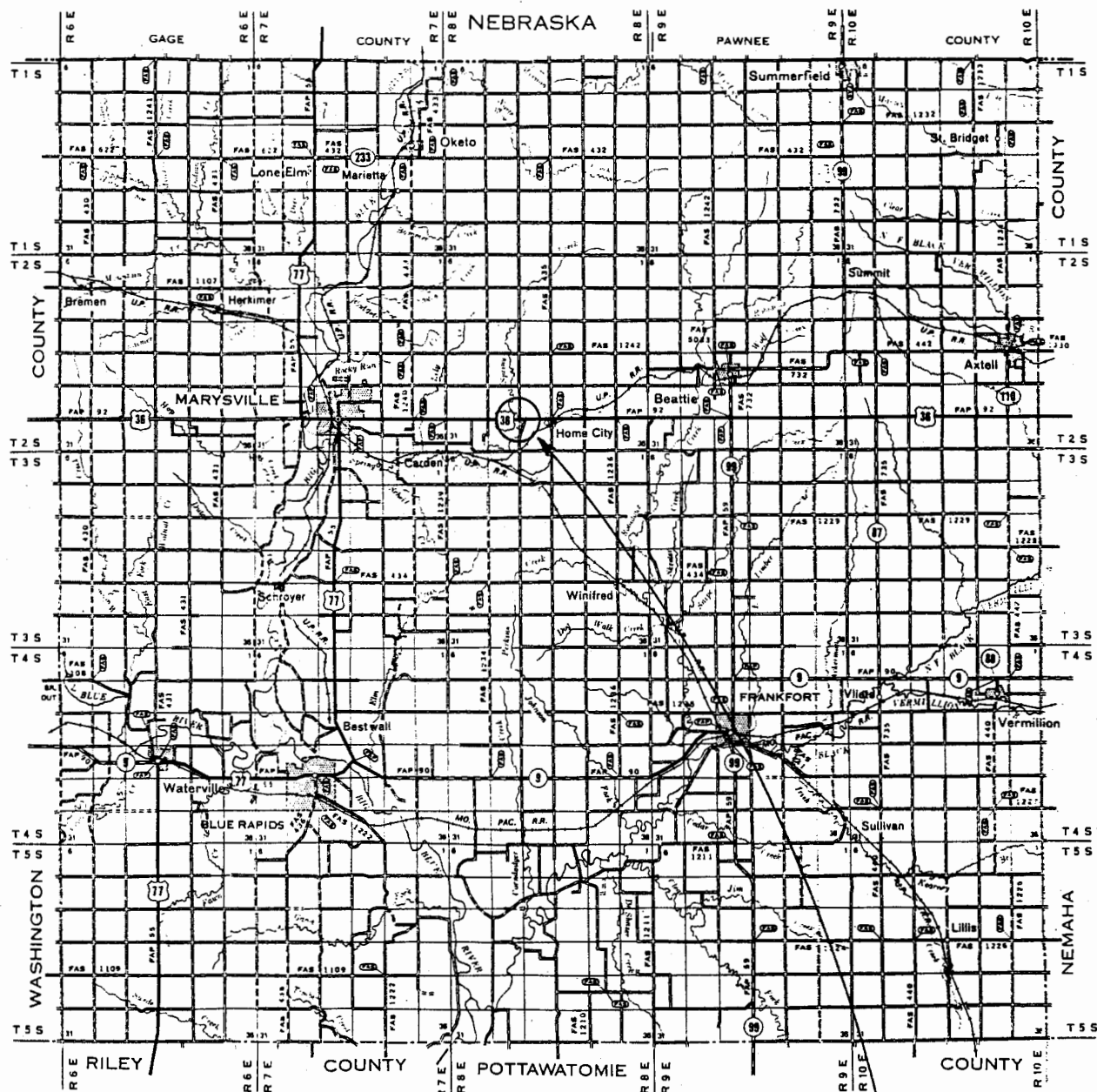




LEGEND

ROADS AND ROADWAY FEATURES	
PRIMITIVE ROAD	-----
UNIMPROVED ROAD	-----
GRAVEL AND GRAVEL ROAD	-----
SOIL SURFACED ROAD	-----
GRAVEL OR STONE ROAD	-----
NOT GRAVEL OR GRAVEL	-----
GRAVEL OR STONE ROAD	-----
GRAVELS AND GRAVELS	-----
GRAVEL OR STONE ROAD WITH	-----
STABILIZED SURFACE	-----
STABILIZED ROAD-LOW TYPE	-----
PAVED ROAD	-----
DRIVEN HIGHWAY	-----
HIGHWAY WITH FULL CONTROL OF	-----
ACCESS AND INTERCHANGE	-----

ROAD SYSTEM DESIGNATION	
FEDERAL-PAID INTERSTATE HIGHWAY SYSTEM	-----
FEDERAL-PAID PRIMARY HIGHWAY SYSTEM	-----
FEDERAL-PAID SECONDARY HIGHWAY SYSTEM	-----
INTERSTATE NUMBERED HIGHWAY	-----
U.S. NUMBERED HIGHWAY	-----
STATE HIGHWAY SYSTEM OR	-----
STATE NUMBERED HIGHWAY	-----
END OF DESIGNATED SYSTEM OR	-----
MARKED ROUTE	-----



P.A. SYSTEMS REVISED FEBRUARY 1, 1961

Proj. No. 36-58 K-2066-01
Br.No. 36-58-14.17
Spring Creek
Sta. 283+23
Marshall County

KANSAS DEPARTMENT OF TRANSPORTATION
PLANNING AND DEVELOPMENT DEPARTMENT
IN COOPERATION WITH THE
U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

NW NWNW 33-2-8E

2CEP V

KANSAS DEPARTMENT OF TRANSPORTATION

COUNTY Marshall

PROJECT NO. 36-52-K-2066-01 BRIDGE NO. 14.17

DESCRIPTION U.S. 36 over Spring Crk.

STA. 283+23

GEOLOGIST D. L. Thompson

VERTICAL SCALE 1" = 5'

DATE 6-7-91

BIT TYPE & NO.	GEOLOGIC NAME	GEOLOGIC COLUMN	GROUNDWATER ELEVATION	DEPTH	ELEVATION	GEOLOGIC DESCRIPTION AND REMARKS Cone Drill # 1 Sta. 283+97, 53 R+	UNCONFINED COMPRESSION	STANDARD PENETRATION OR CASING DRIVE	
								BLOWS	ELEV.
				0'	1262.5				
					1260	Clay, silty, dark brown			
					1255				
					1250				
				16.4	1246.1				
					1245				
					1240				
				27'	1235.5				
				27'	1234.7	Rubble, heavy			
						Clay, silty to sandy			
				31'	1231.1				
					1230	Gravel, heavy			
				36'	1226.4				
						Shale, maroon, very weathered			

Soil Mantle

Blue Springs Mbr.

KANSAS DEPARTMENT OF TRANSPORTATION

COUNTY Marshall

PROJECT NO. 36-58-K-2066-01

BRIDGE NO. 14.17

DESCRIPTION U.S. 36 over Spring Crk.

STA. 283+83

GEOLOGIST D. L. Thompson

VERTICAL SCALE 1" = 5'

DATE 6-7-91

BIT TYPE & NO.	GEOLOGIC NAME	GEOLOGIC COLUMN	GROUNDWATER ELEVATION	DEPTH	ELEVATION	GEOLOGIC DESCRIPTION AND REMARKS Cone Drill # 1 Sta. 283+97, 53 Rt	UNCONFINED COMPRESSION	STANDARD PENETRATION OR CASING DRIVE	
								BLOWS	ELEV.
	Soil Mantle			36'	✓ 1226.4				
					1225	Shale, mangan to olive, weathered, occasional thin limy zone.			
					1220				
				48°	1215				
					✓ 1214.5	Shale, gray, Firm			
				51°	1210				
				53°	✓ 1209.5	Limestone, light gray, impure			
						Shale, gray, very calcareous			
				58'	1205				
					✓ 1204.4				
						Limestone, very shaly, impure			
				60°	✓ 1202.2				
					1200	Shale, gray, very Firm, Calcareous			
				64°	✓ 1198.7	Limestone			
						1198.5			
					1195	Shale, olive to mangan calcareous, some gyp nodules and stringers			

KANSAS DEPARTMENT OF TRANSPORTATION

COUNTY *Marshall* PROJECT NO. *36-58-1K2066-01* BRIDGE NO. *14.17*DESCRIPTION *US. 36 over Spring Crk.* STA. *283+83*GEOLOGIST *D. L. Thompson* VERTICAL SCALE *1"=5'* DATE *6-7-9,*

BIT TYPE & NO.	GEOLOGIC NAME	GEOLOGIC COLUMN	GROUNDWATER ELEVATION	DEPTH	ELEVATION	GEOLOGIC DESCRIPTION AND REMARKS Core Drill #1 Sta. 283+97, 53Rn	UNCONFINED COMPRESSION	STANDARD PENETRATION OR CASING DRIVE	
								BLOWS	ELEV.
	Wymore Mb.				1190	Shale, olive to mangan, calcareous, some gyp nodules and stringers noted.			
				77 ²	1185.2	1185.2 TD			
						<u>Core Descriptions</u> Core #1 38 ² -43 ⁰ , Core 4 ⁸ , Recov. 4 ⁸ 38 ² -38 ⁷ Shale, brown, very weathered 38 ⁷ -42 ⁵ Shale, olive to brown, weathered 42 ⁵ -42 ⁸ Limestone, light gray Sample #1 41 ⁴ -42 ⁰ Shale, olive RQD = 54.2 % Core #2 43 ⁰ -48 ⁰ , Core 5 ⁰ , Recov. 3 ⁷ 43 ⁰ -44 ³ Lost Ground away 44 ³ -47 ² Shale, olive to gray, weathered 47 ² -48 ⁰ Shale, gray, clayey Sample #2 47 ⁰ -47 ² Shale, olive RQD = 54 % Core #3 48 ⁰ -53 ⁰ , Core 5 ⁰ , Recov. 5 ⁰ 48 ⁰ -51 ⁹ Shale, gray, Firm 51 ⁹ -53 ⁰ Limestone, light gray, impure Sample #3 50 ⁶ -51 ² Shale, gray, Firm RQD = 92 % (Cont'd)			

KANSAS DEPARTMENT OF TRANSPORTATION

COUNTY Marshall

PROJECT NO. 36-58-K-2066-01 BRIDGE NO. 14.17

DESCRIPTION U.S. 36 over Spring Crk.

STA. 283+83

GEOLOGIST D.L. Thompson

VERTICAL SCALE NA

DATE 6-7-91

BIT TYPE & NO.	GEOLOGIC NAME	GEOLOGIC COLUMN	GROUNDWATER ELEVATION	DEPTH	ELEVATION	GEOLOGIC DESCRIPTION AND REMARKS Cone Descriptions (Cont'd)	UNCONFINED COMPRESSION	STANDARD PENETRATION OR CASING DRIVE	
								BLOWS	ELEV.
						Core # 4 53'-57', Core 4', Recov. 4' 53'-57' Shale, very limy Sample # 4 53'-54' Shale, gray Sample # 5 56'-57' Shale, gray, limy RQD = 99%			
						Core # 5 57'-62', Core 5', Recov. 4' 57'-58' Shale, very limy, dark gray 58'-60', Limestone, shaly to impure 60'-62' Shale, gray Sample # 6 58'-58' Limestone Sample # 7 61'-62' Shale, gray RQD = 92%			
						Core # 6, 62'-67', Core 4', Recov. 4' 62'-63' Shale, gray 63'-64' Limestone 64'-67' Shale, olive, limy Sample # 8 - 64'-64' Shale, olive RQD = 77.6%			
						Core # 7, 67'-72', Core 5' Recov. 4' 67'-70' Shale, olive to marron, limy 70'-71' Shale, olive, limy, with gyp nodules Sample # 9 69'-69' Shale, olive RQD = 80%			
						Core # 8 - 72'-77', Core 5' Recov. 5' 72'-73' Shale, olive, limy, with gyp nodules 73'-77' Shale, marron - No Sample - Core too chewed up RQD = NA			