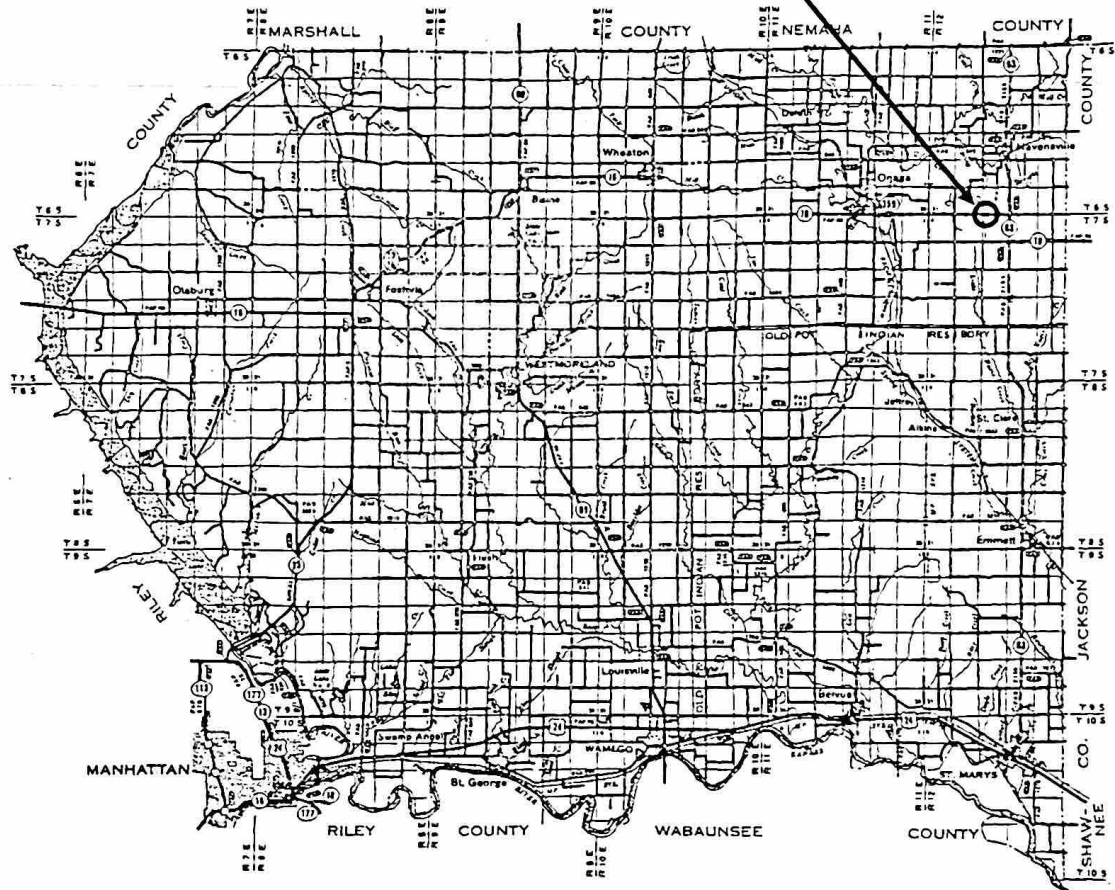


16-75 K-7428-01
K-16 over Spring Creek
Bridge No. 16-75-37.34(058)



Pottawatomie County



KANSAS DEPARTMENT OF TRANSPORTATION

gaw 5-3-06

RTE/CO. 16-75	SOUNDING NO. 1	SHEET OF 1 of 2
BRIDGE STA 10+606.381	PROJ. NO. K-7428-01	BRIDGE NO. 16-75-37.34 (W.S.)
SITE NAME K-16 over Spring Creek		HOLE STA 10+614.85, 2m L of 16
GEOLOGIST Thompson/Schm	SCALE: 1:100 (10mm = 1 Meter)	DATE 2/23/04
DRILLER Jim Burns	RIG TYPE	TOP HOLE ELEV. 373.554
GROUNDWATER ELEV	TOTAL DEPTH 20.45	M/B ELEV. 366.54

BIT TYPE	GEOLOGIC NAME	STRATIGRAPHIC COLUMN	DEPTH	ELEVATION	CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION	STANDARD PENETRATION OR CASING DRIVE	
							BLOWS	ELEV
				373.554				
				373	Mantle, silty clay, brown.			373
				372				372
				371				371
				370				370
				369				369
				368				368
				367				367
			7.01	366.54				
				366	Shale, olive grey.			366
				365				365
			9.20	364.35				
				364	Limestone, light grey, firm, few shale seams, plant debris.	12750 kPa		364
			10.42	363				363
				363.13				
			10.97	362.58	Shale, dark grey to almost black, slightly wavy bedded.	180 kPa		362
				362	Limestone, grey, argillaceous, fossil clasts.	31370 kPa		362
			11.80	361.75				
				361	Shale, dark grey at top grading to grey at base, swelling, argillaceous.	550 kPa		361
			12.80	360.75				
			13.20	360.35	Limestone, grey			
				360	Shale, blue-grey, swelling, argillaceous, limy.	22120 kPa 460 kPa 470 kPa		360
				359				359
			14.81	358.74				
				358	Shale, grey, limy, firm.			358

gaw 5-3-06

16-75		SOUNDING NO. 1		PROJECT NO. K-7428-01		SHEET OF 2 of 2		
DATE 2/23/04		RTE/CO. 16-75		TOTAL DEPTH 20.45		THE 373.554		
BIT TYPE	GEOLOGIC NAME	STRATIGRAPHIC COLUMN	DEPTH	ELEVATION	CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION	STANDARD PENETRATION OR CASING DRIVE	
							BLOWS	ELEV
Roca Shale Formation.			16.18	357.37	Shale, olive-grey and maroons, argillaceous.	6370 kPa		357
				357		700 kPa		
				356		1100 kPa		356
			17.83	355.72				355
				355	Shale, olive-grey to grey to dark grey. Two small limestone stringers. Both less than 0.30 m, limey	13420 kPa		355
			19.23	354.32				354
				354	Shale, olive-grey. Slightly wavy bedded, thinly bedded. Thin alternating dark & light olive grey layers.	720 kPa		354
			20.45	353.10	SIS			353
				352				352

FILE	NAME	DATE
PROJECT	NO.	DATE
REVISION	NO.	DATE
REVISION	NO.	DATE
REVISION	NO.	DATE
REVISION	NO.	DATE
REVISION	NO.	DATE
REVISION	NO.	DATE
REVISION	NO.	DATE
REVISION	NO.	DATE

Printed By: rocky
 Plot File: 2/19/2004
 Plot Date: 4/5/2004
 View: PLOT1

SYMBOL	MEMBER	FM.	DESCRIPTION	THICKNESS (m)
			1 Soil Mantle, silty-clay residual and alluvial	0-3.4
	2 Eliss Ls	Bader Ls	2 Limestone, shaly	0.5
	3		3 Shale, limy	
	4 Morrill Ls		4 Limestone	0.2
	5 Florana Shale	Beattie Limestone	5 Shale, olive, limy	
	6 Cottonwood Limestone		6 Limestone, massive, cherty	2.5
	7		7 Shale, varicolored with gray and gray-green and maroon colors. Numerous thin limestones occur throughout the unit. A persistent limestone bed 0.5-0.6 m thick is found near the base	1.8 4.5 7.5

SYMBOL	MEMBER	FM.	DESCRIPTION	THICKNESS (m)
	8		8 Two limestones separated by a limy shale containing thin, discontinuous limestone beds	4.1-5.0
	9 Salem Point Shale	Grenada Limestone	9 Shale, olive gray	2.56
	10 Burr Limestone		10 Two limestones separated by a shale layer	2.6
	11 Legion Shale		11 Shale, dark gray to gray	1.0
	12 Saliyars		12 Limestone, gray	0.4
	13		13 Shale, blue-gray to green-gray, limy	10.36-11.56
				7.0

PROJECT NO.	STATE	YEAR	SHEET TOTAL
16-75 A-7428-01	LA	19	19

--- Division between soil mantle & bedrock
 --- Change in type material within a unit
 --- Division between geologic members or formations
 --- Division between rock and common material
 -/- Elevation of groundwater
 Fm. Formation
 Mbr. Member

NOTE:
 Bedrock and soil mantle which occur on this project are shown with appropriate symbols on the plan profile and cross-sections for the project. A geology report is available which includes Geologic Section, Geology of the Project and additional information pertaining to the General Engineering Geology Recommendations.

ICES ROADS GEOLOGY ABBREVIATIONS

Soil Mantle	MANTLE
Common Excavation	C
Rock Excavation	R
Durable Rock Shale	D
Non-Durable Rock Shale	N
Eliss Limestone Member	EISS
Stearns Formation	SRNS
Morrill Limestone Member	MORR
Florana Shale Member	FLRN
Cottonwood Limestone Member	CTTN
Eskridge Shale Member	EKDG
New Limestone Member	NEVA
Salem Point Shale Member	SLMP
Burr Limestone Member	BURR
Legion Shale Member	LGON
Saliyars Limestone Member	SLRD
Roca Formation	ROCA

LIMESTONE	LS
SHALE	SH

SCALE 1:50

1 meter

STANDARD GEOLOGIC SYMBOLS															
	Clay		Caliche		Weathered Shale		Limestone		Sand		Black or fissile shale		Siltstone		Sandy Limestone
	Silty Clay		Silty Clayey Shale		Sandstone		Cherty Limestone		Gravel		Sandy Shale		Gypsum		Weathered or Broken Limestone
	Silt		Limy Shale		Shaly Sandstone		Shaly Limestone		Boulders		Gypsiferous Shale		Coal		

NO.	DATE	REVISIONS	BY	DATE
1				
2				
3				

LAHAR DEPARTMENT OF TRANSPORTATION
 GENERALIZED GEOLOGIC SECTION
 PROJ. NO. 16-75 A-7428-01 Portavon County
 DRAWN BY: rocky
 CHECKED BY: rocky
 DESIGNED BY: rocky