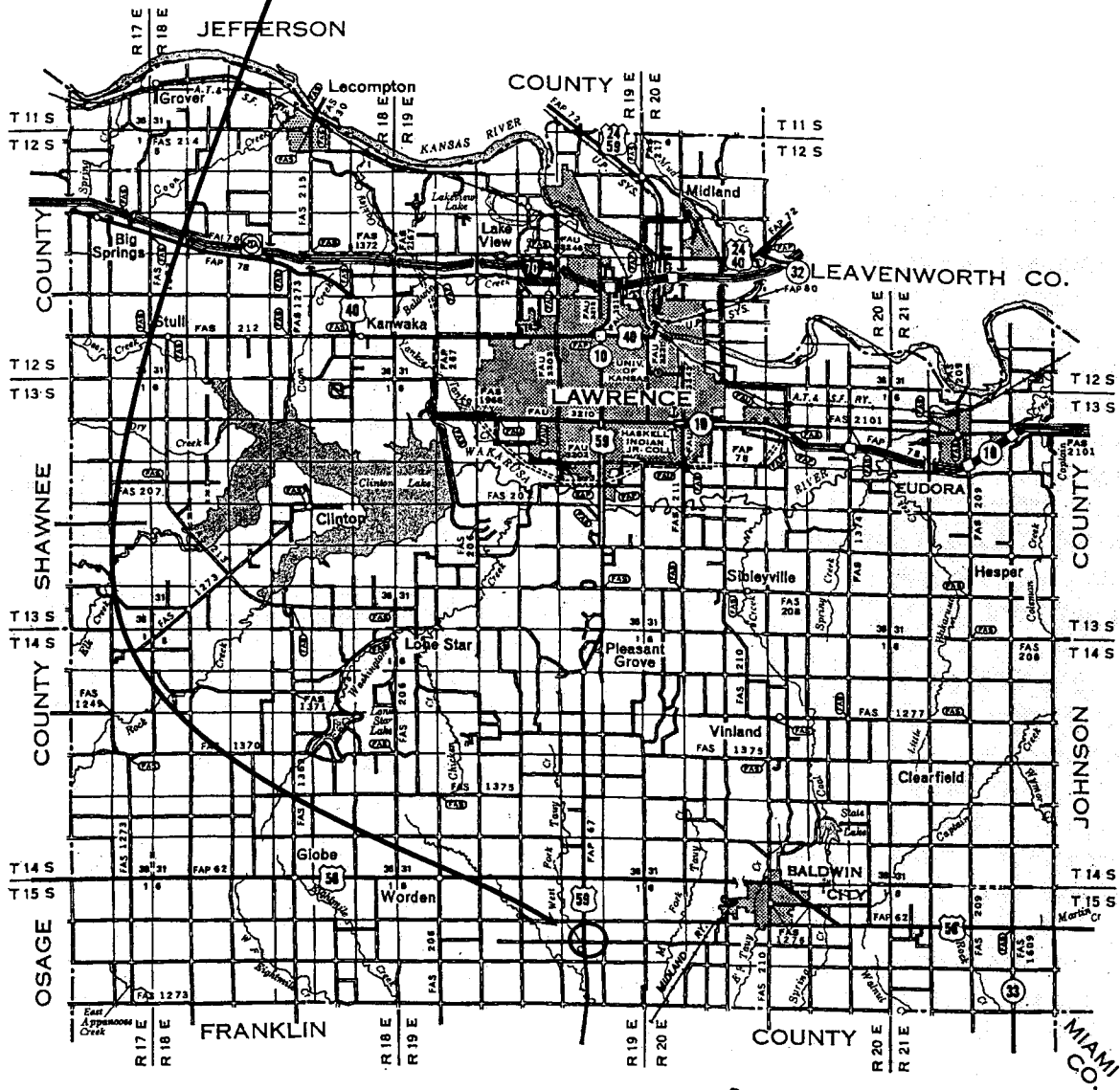


11-15-19E

Project 59-23 K-7888-01
US-59 over 150 N Road



11-15-19E

Douglas County

11-15-19E

KANSAS DEPARTMENT OF TRANSPORTATION



RTE./CO.	59-23	SOUNDING NO.	CD #1	SHEET 1 OF 2
BRIDGE STA.	179+33.00 S.B.&N.B.	PROJ. NO.	K-7888-01	BRIDGE NO. 59-23-1.50(III) 59-23-1.51(III)
SITE NAME	US-59 over 150 N. Road			HOLE STA. 179+47.11; 107.8' Rt
GEOLOGIST	C. Denesha	SCALE	1 unit = 2 feet	DATE June 21, 2004
DRILLER	B. Bergman	RIG TYPE	CME-75	TOP HOLE ELEV. 990.38
GW ELEV.	44 N/A	TOTAL DEPTH	47.0	M/B ELEV. 986.88

BIT TYPE	GEOLOGIC NAME	STRATIGRAPHIC COLUMN	DEPTH	ELEVATION	CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION (tsf)	ELASTIC MODULUS (tsf)	ELEVATION
			0.00	990	T.H.E. = 990.38			990
8" Hollow Stem Augers	Soil Mantle		3.50	988	Silty Clay, sandy, brown-orange.			988
			4.00	986.88		0.952	39.9	986.88
				986	Sandstone, weathered.			986
				984	Sandstone, top 3.0' weathered, soft, orange-brown, med. grained, quartz, irregular bedding, firmer at bottom 1.0'.			984
			8.00	982.38				982
			9.10	980	Conglomerate, large SS pebbles, sub-rounded, w/ iron coating, some hollowed out, gray-brown matrix, pebbles.			980
			10.90	978	Sandstone, soft, weathered, smaller pebbles, rounded.			978
			11.40	976	Conglomerate, sm. gravel, orange w/ iron oxide, pltted, fine iron-rich matrix.			976
			13.20	974	Sandstone, brown, fine grained, orange beds.	22.30	3010	974
				972	Sandstone, brown w/ orange intervals in upper portion, black specks, siderite (?), portions where orange rich in iron.			972
			18.20	970	Sandstone, brown, poor to good RQD, sparse iron beds, few beds are sub-horizontal, large scale x-beds (?).			970
				968		29.67	4375	968
			23.20	966	Sandstone, lt. orange-brown to tan, med. grained, iron stringers.			966
				964				964
			28.20	962		27.36	4280	962

11-15-19E



KANSAS DEPARTMENT OF TRANSPORTATION

RTE./CO.	59-23	SOUNDING NO.	CD #1	SHEET 2 OF 2
BRIDGE STA.	179+33.00 S.B.&N.B.	PROJ. NO.	K-7888-01	BRIDGE NO. 59-23-150(III) 59-23-151(III)
SITE NAME	US-59 over 150 N. Road			HOLE STA 179+47.11; 107.8' Rt.

BIT TYPE	GEOLOGIC NAME	STRATIGRAPHIC COLUMN	DEPTH	ELEVATION	CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION (tsf)	ELASTIC MODULUS (tsf)	ELEVATION
NQ2 Diamond	Ireland Sandstone Member		7	33.20	Sandstone, brown, med. grained, lg. scale x-beds w/ iron-rich beds, forms antiforms and synforms.			960
				958	957.18			958
			8	38.20	Sandstone, brown-orange to orange, x-beds.			956
				954		31.86	5200	954.68
			9	42.00	Sandstone, brown to orange-brown, thin iron stringers increasing with depth, med. grained, hard becoming softer at base.			952
				950				950
			10	47.00	Sandstone, orange-brown, med. grained, wavy, vertical oxidation, thinnly bedded, heavily oxidized, hard.			948
				946				946
				944	943.38	36.38	6600	944.68
							TD = 47.00'	
							940	
							938	
							936	
							934	
							932	
							930	
								928

11-15-19E

59-23 K-7888-01

59-23-1.50(110) & 59-23-1.51(111)

US-59 over 150 N. Road

Douglas County

CH #1

179+47.11; 107.8' Rt. Centerline

Date: June 21, 2004

T.H.E. = 990.38

Driller: R. Bergman

Geologist: C. Denesha

Elevation	Meters	Feet	Description
990.38	0.00	0.00	Silty Clay, sandy, brown-orange.
986.88	1.07	3.50	Sandstone, weathered.
986.38	1.22	4.00	BEGIN CORE

Core #1

4.00 - 8.00	986.38	1.22	4.00	Sandstone, weathered, soft, orange-brown, med. grained, quartz.
Cut: 4.0	983.38	2.13	7.00	Sandstone, firmer, orange-brown, irregular bedding.
Rec: 2.0	982.38	2.44	8.00	END CORE #1

RQD = 10%

Core #2

8.00 - 10.90	982.38	2.44	8.00	Conglomerate, large SS pebbles, sub-rounded, w/ iron coating, some hollowed out, gray-brown matrix, pebbles.
Cut: 2.9	981.28	2.77	9.10	Sandstone, soft, weathered, smaller pebbles, rounded.
Rec: 1.5	979.48	3.32	10.90	END CORE #2

RQD = 0%

Core #3

10.90 - 13.20	979.48	3.32	10.90	Conglomerate, small gravel, orange w/ iron oxide, pitted, fine iron-rich matrix.
Cut: 2.3	978.98	3.47	11.40	Sandstone, brown, fine grained, orange beds.
Rec: 2.3	977.18	4.02	13.20	END CORE #3

RQD = 0%

Core #4

13.20 - 18.20	977.18	4.02	13.20	Sandstone, brown w/ orange intervals in upper portion, black specks, siderite (?), portions where orange rich in iron.
Cut: 5.0	972.18	5.55	18.20	END CORE #4
Rec: 4.6				

RQD = 10%

Core #5

18.20 - 23.20	972.18	5.55	18.20	Sandstone, brown, poor RQD, sparse iron beds, few beds are sub-horizontal, large scale x-beds (?).
Cut: 5.0	969.18	6.46	21.20	Sandstone, dark band, color changes (abrupt) to orange, good RQD.
Rec: 5.0	967.18	7.07	23.20	END CORE #5

RQD = 36%

/ vl

Core #6

23.20 - 28.20	967.18	7.07	23.20	Sandstone, orange-brown, med. grained.
Cut: 5.0	964.38	7.92	26.00	Sandstone, iron stringers, orange-brown to tan, med. grained.
Rec: 5.0	963.68	8.14	26.70	Sandstone, tan to light orange-brown.
	962.18	8.60	28.20	END CORE #6

RQD = 36%

Core #7

28.20 - 33.20	962.18	8.60	28.20	Sandstone, brown, med. grained, lg. scale x-beds w/ iron rich beds, forms antiforms and synforms.
Cut: 5.0	957.18	10.12	33.20	END CORE #7
Rec: 4.3				

RQD = 0%

Core #8

33.20 - 38.20	957.18	10.12	33.20	Sandstone, brown-orange.
Cut: 5.0	952.78	11.46	37.60	Sandstone, orange, x-beds.
Rec: 5.0	952.18	11.64	38.20	END CORE #8

RQD = 36%

Core #9

38.20 - 42.00	952.18	11.64	38.20	Sandstone, brown, thin iron stringers.
Cut: 3.8	950.98	12.01	39.40	Sandstone, much more iron rich, orange-brown, med. grained, hard.
Rec: 3.3	950.08	12.28	40.30	Sandstone, softer, orange-brown.
	948.38	12.80	42.00	END CORE #9

RQD = 18%

Core #10

42.00 - 47.00	948.38	12.80	42.00	Sandstone, orange-brown, med. grained, wavy, vertical oxidation.
Cut: 5.0	945.58	13.66	44.80	Sandstone, thinly bedded, heavily oxidized, hard.
Rec: 4.3	943.38	14.33	47.00	END CORE #10

RQD = 8%

TD =	943.38	14.33	47.00
------	--------	-------	-------