

Datum: WGS84 Lat: 38.944082°
 Long: -94.7667378°

SW NE SW SE
 5-13-24E

HNTB

LOG OF BORING

BORING NO. **B-17**
 PAGE **1** OF **3**

PROJECT Gateway STATION / NORTHING / 238856.908
 LOCATION Johnson County, Kansas OFFSET / EASTING / 2231749.218
 DATE STARTED 03/28/2012 DATE COMPLETED 03/28/2012 SURFACE ELEVATION 987.3 ft
 EXPLORATION CONTRACTOR Terracon DATUM NAVD 88
 DRILLER J. Johnson DRILL RIG CME-75 GROUND WATER LEVELS:
 HAMMER TYPE Auto HAMMER EFFICIENCY ▽ AT TIME OF DRILLING NATD
 LOGGED BY L. Derr REVIEWED BY J. Martens ▽ AFTER N/A

DRILLING METHOD	DEPTH (ft)	SAMPLE TYPE NUMBER	SAMPLE RECOVERY (in)	CORE REC % (RQD %)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	GRAPHIC LOG	MATERIAL DESCRIPTION Unified (Visual) Classification System	GEOLOGIC NAME	ELEVATION (ft)
	0									987.3
								Red Brown, LEAN to FAT CLAY, with Gravel (FILL)		
		SPT S1	13		7-3-4 (7)	3.0		Red Brown, Firm to Stiff, LEAN to FAT CLAY, Trace Organics (Wood) and Limestone Gravel and Dust (FILL)		985
	5									
		SPT S2	15		4-7-9 (16)	4.0		Dark Brown, Very Stiff, LEAN to FAT CLAY, Moist (CL/CH) (FILL)		980
	10									
		SPT S3	18		3-4-7 (11)	2.75		Brown to Orange Brown, Very Stiff, LEAN to FAT CLAY, Moist (CL/CH)		975
	15									
		SPT S4	18		2-2-10 (12)	1.5		Mottled Brown to Orange Brown, Stiff, LEAN to FAT CLAY, Moist (CL/CH) Mottled Gray to Orange, Firm, Silty LEAN CLAY, Trace Sand, Moist (CL)		970
	20									
		SPT S5	3		50/3"			SANDSTONE, Orange Brown, Fine Grained, Thin Bedded, Poorly Cemented, Highly Weathered		965.3
	23.5							SANDSTONE, Gray, Fine Grained, Thin Bedded, Weathered at 23'	Bonner Springs SH	965
	25	NQ C1		92% (50%)						

(Continued Next Page)

BORING LOG 2 W/O LAB DATA - GATEWAY TEMPLATE.GDT - 4/6/12 11:40 - O:\55921\GEO\TECH\GINT\GEOLOGY BORINGS.GPJ



LOG OF BORING

BORING NO.

B-17

PAGE

OF

2

3

PROJECT Gateway

STATION / NORTHING / 238856.908

LOCATION Johnson County, Kansas

OFFSET / EASTING / 2231749.218

DRILLING METHOD	DEPTH (ft)	SAMPLE TYPE NUMBER	SAMPLE RECOVERY (in)	CORE REC % (RQD %)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	GRAPHIC LOG	MATERIAL DESCRIPTION Unified (Visual) Classification System	GEOLOGIC NAME	ELEVATION (ft)
CORE BARREL NQ2	25									
	25.5	NQ C2		100% (27%)				SANDSTONE, Gray, Fine Grained, Thin Bedded, Weathered at 23' (continued)		
								Becoming Silty		960
	30							Becoming Silty Sandy Limestone		
	30.5									
		NQ C3		100% (72%)				Silty SHALE, Gray, Thin Bedded, Slightly Weathered, Moderately Hard		955
	35									
	35.5									
		NQ C4		100% (80%)				Limestone, Gray, Fine to Medium Grained, Medium Bedded, Weathered, Hard		
	40									
	40.5									
		NQ C5		97% (83%)				Shale, Gray, Very Thin Bedded, Weathered, Moderately Hard		
	45							Becoming Sandy		
	45.5									
		NQ C6		100% (100%)				Limestone, Gray, Medium Bedded, Slightly Weathered, Hard		940
	50									
	50.5									
		NQ C7		100% (72%)				Shale Seam Becoming Thin to Medium Bedded, with Numerous Shale Seams and Partings, Fossiliferous		935

(Continued Next Page)

BORING LOG 2 W/O LAB DATA - GATEWAY TEMPLATE.GDT - 4/6/12 11:40 - 01655921\GEO\TECH\GINT\GEOLOGY BORINGS.GPJ



LOG OF BORING

BORING NO.

B-17

PAGE

3

OF

3

PROJECT Gateway

STATION / NORTHING / 238856.908

LOCATION Johnson County, Kansas

OFFSET / EASTING / 2231749.218

DRILLING METHOD	DEPTH (ft)	SAMPLE TYPE NUMBER	SAMPLE RECOVERY (in)	CORE REC % (RQD %)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	GRAPHIC LOG	MATERIAL DESCRIPTION Unified (Visual) Classification System	GEOLOGIC NAME	ELEVATION (ft)
	55	NQ						LIMESTONE, Gray, Thin to Medium Bedded, Slightly Weathered, Hard, with Numerous Shale Seams and Partings, Fossiliferous (continued)		
	55.5									
		NQ		97% (73%)						930
	60	C8								
										60.5

Boring backfilled with Holeplug upon completion.
Auger Refusal at 23.5 feet.
Bottom of borehole at 60.5 feet.