

Datum: WGS 84 Lat: 38.940907°

Long: -94.7970644°

SW NW NW NW

7-13-24E

HNTB**LOG OF BORING**

BORING NO.

B-4A

PAGE

OF

1**2**PROJECT Gateway

STATION / NORTHING / 237392.556

LOCATION Johnson County, Kansas

OFFSET / EASTING / 2223170.084

DATE STARTED 03/22/2012 DATE COMPLETED 03/22/2012SURFACE ELEVATION 1005.5 ftEXPLORATION CONTRACTOR TerraconDATUM NAVD 88DRILLER K. KemptonDRILL RIG CME-55 ATV

GROUND WATER LEVELS:

HAMMER TYPE AutoHAMMER EFFICIENCY 79%☒ AT TIME OF DRILLING NATDLOGGED BY L. WagnerREVIEWED 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									1005.5
HSA 3.25" ID	5							Brown to Gray, Stiff to Very Stiff, FAT CLAY, Moist (CH) Boring advanced without sampling the overburden. Refer to material descriptions at B-4.		1005
	10									1000
	15									995
	16.0									990
	19.2	SPT S1	0		50/2"			LIMESTONE Material type based on auger cuttings.	Captain Creek LS	989.5
CORE BARREL NQ	20	NQ C1		100% (100%)				LIMESTONE, Gray, Medium Bedded, Slightly Weathered, Moderately Hard, Fossiliferous		985
	20.5									
	22.2	NQ C2		100% (100%)				SHALE, Gray, Laminated, Moderately Weathered, Soft	Vilas SH	983.3
	23.7									
	24.4							LIMESTONE, Gray, Thin Bedded, Slightly Weathered, Moderately Hard, with Shale Partings		
	25									

(Continued Next Page)

BORING LOG 2 W/O LAB DATA - GATEWAY_TEMPLATE.GDT - 4/6/12 10:39 - 01655921\GEO\TECH\GINT\GEOLOGY BORINGS.GPJ



LOG OF BORING

BORING NO.

B-4A

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OF

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PROJECT Gateway

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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)
	25									
	25.5	NQ						SHALE, Gray, Sandy, Thin Bedded, Slightly Weathered, Hard (<i>continued</i>)		980
								Becoming Laminated, Moderately Weathered, Moderately Hard, without Sand at 26.7'		
		NQ C3		98% (57%)						
	30									
										30.5

975

Boring backfilled with Holeplug upon completion.
Auger Refusal at 19.0 feet.
Bottom of borehole at 30.5 feet.