

Jeff Christian

PETROLEUM GEOLOGIST

Wichita, Kansas

GEOLOGISTS REPORT

DRILLING TIME AND SAMPLE LOG

OPERATOR	MURFIN DRILLING COMPANY	ELEVATIONS	KB 2079'
LEASE	LITTLER LLC 'A' # 1-31	GL	2074'
LOCATION	2302' FNL & 990' FEL	MEASUREMENTS FROM KB	
SEC.	31	TWSP	16 S
COUNTY	RUSH	STATE	KANSAS
FIELD	HAMPTON NORTHEAST	CASING RECORD	CONDUCTOR NONE
API	15-165-22083	Surface	8.5/6" @ 1309'
CONTRACTOR	COMPANY TOOLS	W/ 400 SX	Production @ 1/2" @ 3909'
DRILLING STARTED	07/12/2014	COMPLETED	07/19/2014
MUD DISPLACED	2820'	MUD TYPE	CHEMICAL
DRILLING TIME FROM	3010'	TO RTD	
SAMPLES SAVED FROM	3010'	TO RTD	
SAMPLES EXAMINED FROM	3010'	TO RTD	
GEOLOGICAL SUPERVISION FROM	3124'	TO RTD	
FORMATION NAME	TOP	LOG DATUM	SAMPLE DATUM
ANHYDRITE	1302'	9(+777)	1302' (-777)
BASE ANHYDRITE	1338'	(+741)	1340' (-739)
TOPEKA	3116'	(-1037)	3115' (-1036)
HEEBNER	3396'	(-1317)	3400' (-1321)
LANSING	3442'	(-1363)	3446' (-1367)
STARK	3650'	(-1571)	3653' (-1574)
BKC	3700'	(-1618)	3700' (-1621)
PAWNEE	3737'	(-1648)	3741' (-1662)
ARBUCKLE	3813'	(-1734)	3816' (-1737)
TOTAL DEPTH	3919'	(-1840)	3920' (-1841)

DATE	7:00 AM DEPTH	REMARKS
7/12/14	MIRT	SPUD 1:15 pm
7/13/14	1230'	DRLG.
7/14/14	1460'	DRLG. dev. 1/2 deg. @ 1310'
7/15/14	2725'	DRLG.
7/16/14	3462'	CTCH after Short Trip dev 1 1/8 deg.
7/17/14	3484'	TIH after DST # 2
7/18/14	3833'	Short Trip prior to Dst # 3 RTD 3920' @ 11:00 pm
7/19/14	3920'	Logging dev. 1 1/8 deg.

Remarks

5 1/2" production casing set to further test the Littler LLC 'A' # 1-31.

Electric log measurements correlate about 4' high compared to rotary measurements.

Samples deposited at the Kansas Geological Survey.

Respectfully Submitted,

Jeff Christian

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LITH.	0	DRILL TIME (MIN/FT)	10	DEPTH	LOG	SAMPLE DESCRIPTIONS	REMARKS
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