

Jeff Christian

PETROLEUM GEOLOGIST
Wichita, Kansas

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

OPERATOR **MURFIN DRILLING COMPANY**
 LEASE **ERICKSON # 1-21**
 LOCATION **580' FSL & 680' FEL**

SEC. **21** TWPSP **5 S** RANG **31 W**
 COUNTY **RAWLINS** STATE **KANSAS**
 FIELD **WILDCAT**

API **15-153-20922**
 CONTRACTOR **MURFIN** RIG NO. **8**
 DRILLING STARTED **06/14/2012** COMPLETED **06/22/2012**
 WILD DISPLACED **3021'** MUD TYPE **CHL/CEM**
 DRILLING TIME KEPT FROM **3980'** TO **RTD**
 SAMPLES SAVED FROM **3980'** TO **RTD**
 SAMPLES EXAMINED FROM **3980'** TO **RTD**
 GEOLOGICAL SUPERVISION FROM **3605'** TO **RTD**

FORMATION NAME LOG TOP DATUM TOP SAMPLE DATE

ANHYDRITE	2589'	(+301)	2585'	(+305)
TOPEKA	3675'	(-785)	3674'	(-784)
HEEBNER	3848'	(-958)	3846'	(-956)
LANSING	3987'	(-1007)	3988'	(-1008)
STARK	4070'	(-1180)	4068'	(-1178)
BKC	4126'	(-1236)	4123'	(-1233)
PAWNEE	4242'	(-1352)	4234'	(-1344)
CHEROKEE	4323'	(-1433)	4321'	(-1431)
MISSISSIPPIAN	4443'	(-1553)	4438'	(-1548)
TOTAL DEPTH	4542'	(-1652)	4538'	(-1648)

MEASUREMENTS FROM 6
 CASING RECORD
 CONDUCTOR NONE
 SURFACE **8 5/8" @ 220'**
 W/ 1/8" SX
 PRODUCTION NONE

DATE	7:00 AM DEPTH	REMARKS
6/14/12	MIRT	SPUD 3:30 pm
6/15/12	450'	DRLG. dev. 1/2 deg. @ 220'
6/16/12	2325'	DRLG.
6/17/12	3350'	DRLG.
6/18/12	3880'	DRLG. dev. 1/2 deg. @ 3932'
6/19/12	3976'	TOH for DST # 2
6/20/12	4100'	TOH for DST # 3
6/21/12	4275'	DRLG.
6/22/12	4410'	DRLG. RTD 4538' @ 2:45 pm dev. 3/4 deg.

Remarks
 The Erickson # 1-21 was declared dry and abandoned.
 All sample shows of oil were condemned by drill stem tests.
 Electric log measurements correlate about 2' deep compared to rotary measurements.
 Sample tops corrected to the electric log.
 Samples deposited at the Kansas Geological Survey in Wichita.
 Respectfully Submitted,
Jeff Christian
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