Jeff Christian

PETROLEUM GEOLOGIST

Wichita, Kansas

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

OPERATOR: MURFIN DRILLING COMPANY
LEASE: ANDERSON - RYAN # 1-19
LOCATION: 2310' FNL & 1400' FWL
SEC: 19 TWSP: 5 S RGE: 31 W
COUNTY: RAWLINS STATE: KANSAS
FIELD: WILDCAT
API: 15-153-20897

CONTRACTOR: MURFIN DRILLING RIG NO.: 8
DRILLING STARTED: 4/5/2012 COMPLETED: 4/20/2012
MUD DISPOSED: 3176 MUD TYPE: CHEMICAL
DRILLING TIME KEPT FROM: 3600' TO: RTD
SAMPLES SAVED FROM: 3600' TO: RTD
DRILLING TIME RECORDED FROM: 3600' TO: RTD
GEOLOGICAL SUPERVISION FROM: 3600' TO: RTD

FORMATION TOPS	LOG	SAMPLE
	TOP DATUM	TOP DATUM
HEEBNER	3947 (-1031)	3938 (-1024)
TORONTO	3966 (-1050)	3956 (-1042)
LANSING	3982 (-1066)	3972 (-1058)
STARK	4320 (-1404)	4314 (-1400)
BKC	4342 (-1426)	4337 (-1423)
PAWNEE	4276 (-1360)	4280 (-1366)
CHEROKEE SH.	4390 (-1474)	4384 (-1470)
MISS(LSD/PDH)	4472 (-1556)	4476 (-1562)
TOTAL DEPTH	4579 (-1663)	4579 (-1663)

ELEVATIONS

KB 2953'
GL 2946'

CASING RECORD

Conductor none

Surface 8 5/8" @ 220'
W/ 150 SX

Production 5 1/2"

ELECTRICAL SURVEYS

LOG TECH: ZINC

RUN 1: DIL/DSL
MEL
BHCS

REMARKS

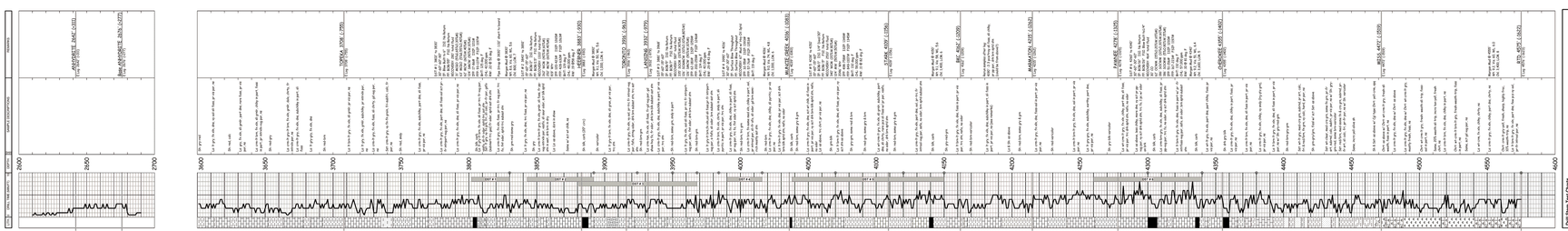
DATE	TIME AM/PM	
4/5/12	9:00	Spud @ 9:00 AM
4/5/12	9:45	262', 8hrs, 1/4 Deg @ 220'
4/6/12	7:00	1000'
4/7/12	7:00	2000'
4/8/12	7:00	2784', Drlg on start trip
4/9/12	7:00	3080'
4/10/12	7:00	3387', 1 Deg, 3 Hrs.
4/11/12	7:00	3600'
4/12/12	7:00	3775'
4/13/12	7:00	4100'
4/14/12	7:00	4300'
4/15/12	7:00	4500'
4/16/12	7:00	4579', R.T.D.; 3 Hrs.
4/17/12		
4/18/12		
4/19/12		
4/20/12		4579', R.T.D.; 8:00 AM; 3hrs. 1 Hrs.

Remarks

5 1/2" production casing set to further test the Topeka, Lansing-KC and Marmaton formations.

Electric log measurements, correction depth were compared to rotary measurements.

Samples were washed and dried.

Samples dispatched of the Kansas Geological Survey.

Respectfully Submitted,
Jeff Christian
Petroleum Geologist
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