

KITT NOAH

PETROLEUM GEOLOGIST
Kansas License #229



GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

#15-109-21.474

ELEVATION: KB 3025
GL: 3020
MEASURED FROM: KB

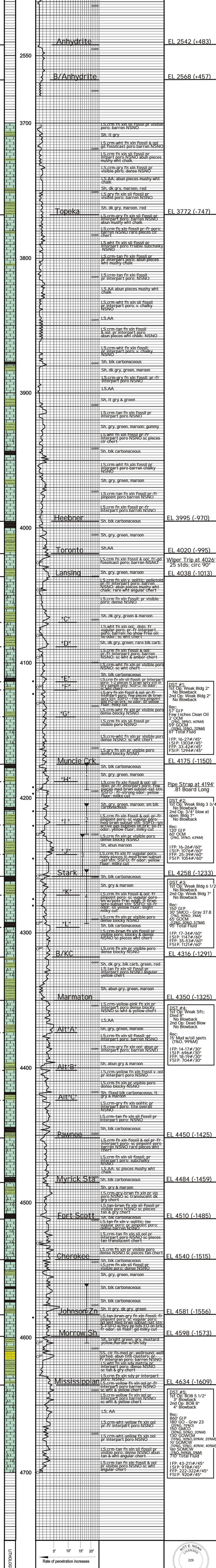
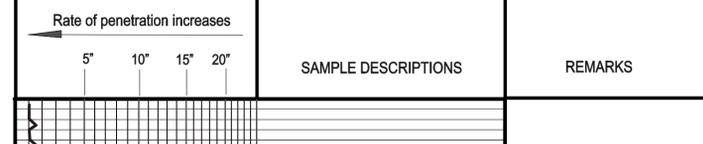
OPERATOR: Russell Oil, Inc.
LEASE: Rumback "A" WELL NO: #16-1
LOCATION: 909FS & 2188FE
SEC: 16 TWP: 11S RNG: 32W
COUNTY: Logan STATE: Kansas

CASING RECORD:
SURFACE: 8.5/8" set at
316 W/200 S&T
PRODUCTION: 5 1/2" set
at 4679' w/115 SX.

CONTRACTOR: WW Drilling Rig #2
COM: 9-14-2016 COM: 9-23-2016
RTD: 4700 LTD: 4700
SAMPLER SAVED FROM: 3700 TO TD
DRILLING TIME SAVED FROM: 3700 TO TD
SAMPLER EXAMINED FROM: 3700 TO TD
GEOLOGICAL SUPERVISION FROM: 3900 TO TD
MUD P: 3420 MUD TYPE: Chemical
Mudlog - Reid Atkins
DRILL STEEL TESTS TAKEN: 5
Tribolite - J. Winder/B. Walters

SURVEY: Pioneer Energy Services
Dual Compensated Porosity
Microlog

LEGEND



DST #1:
1st Op: Weak Bldg 2"
No Blowback
2nd Op: Weak Bldg 2"
No Blowback

Rec:
57' GIP
Few 1 inches Clean Oil
2' OCM
(2%G, 38%O, 60%M)
59' GOCM
(15%G, 15%O, 70%M)
61' Total Fluid

IFP: 16-27#/45"
ISIP: 1303#/45"
FFP: 33-42#/45"
FSIP: 1294#/45"

DST #2:
1st Op: Weak Bldg 3 3/4"
No Blowback
2nd Op: 3/4" blow at open; Bldg 7"
No Blowback

Rec:
120' GIP
60' OCM
(2%G, 35%O, 63%M)

IFP: 16-26#/60"
ISIP: 1076#/60"
FFP: 25-39#/60"
FSIP: 1054#/60"

DST #3:
1st Op: Weak Bldg 6 1/2"
No Blowback
2nd Op: Weak Bldg 7"
No Blowback

Rec:
150' GIP
30' SMCO - Grav 37.8
(7%G, 90%O, 3%M)
65' GOCM
(13%G, 30%O, 57%M)
95' Total Fluid

IFP: 17-34#/60"
ISIP: 1147#/60"
FFP: 35-53#/60"
FSIP: 1121#/60"

DST #4:
1st Op: Weak Sfc;
Died 8"
No Blowback
2nd Op: Weak Blow
No Blowback

Rec:
15' Mud w/oil spots
(1%O, 99%M)

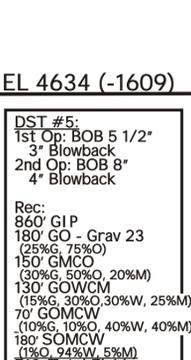
IFP: 14-17#/30"
ISIP: 696#/30"
FFP: 18-19#/30"
FSIP: 704#/30"

DST #5:
1st Op: BOB 5 1/2"
3" Blowback
2nd Op: BOB 8"
4" Blowback

Rec:
860' GIP
180' GO - Grav 23
(25%G, 75%O)
150' GOCM
(30%G, 50%O, 20%M)
130' GOWCM
(15%G, 30%O, 30%W, 25%M)
70' GOMCW
(10%G, 10%O, 40%W, 40%M)
180' SOMCW
(1%O, 94%W, 5%M)
710' Total Fluid

IFP: 43-211#/45"
ISIP: 978#/45"
FFP: 222-322#/45"
FSIP: 920#/45"

ELEVATION: KB 3025



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API: 15-109-21.474 FIELD: Rumback COUNTY: Logan STATE: Kansas