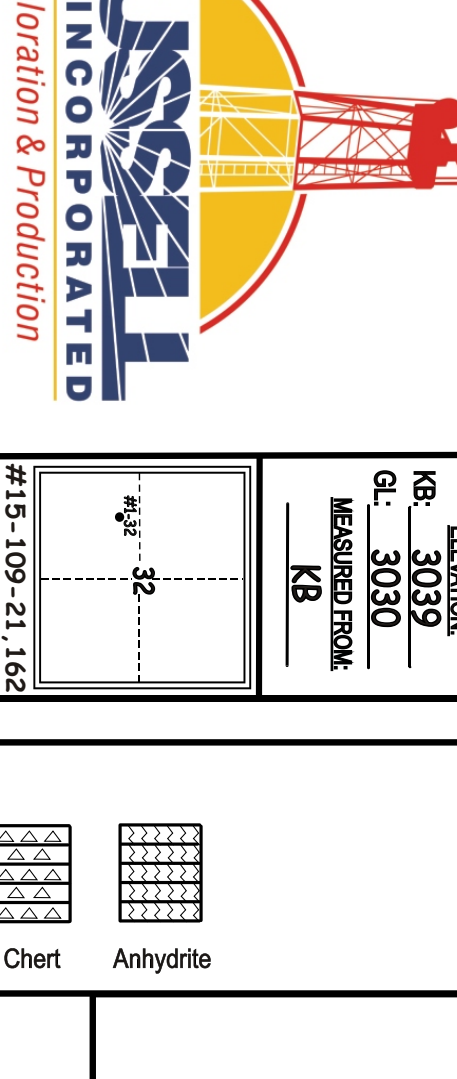


KITT NOAH

PETROLEUM GEOLOGIST
Kansas License #229



GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

OPERATOR: Russell Oil, Inc.
LEASE: Edwards Trust "B" WELL NO: #1-32
LOCATION: 2260FS & 1000FW
SEC: 32 TWP: 15S RNG: 34W
COUNTY: Logan STATE: Kansas

CONTRACTOR: H2 Drilling Rig #3
COM: 2-27-2018 COMP: 3-10-2018
RIG: 4725 LTD: 4720
SHAFTS SAVED FROM: 4600 TO TD
DRILLING TIME SAVED FROM: 3600 TO TD
SHAFTS EXAMINED FROM: 3600 TO TD
LANSING: 3877 (-838)
STARK: 4175 (-1136)
B/KC: 4239 (-1220)
MARMATON: 4311 (-1272)
PAWNEE: 4402 (-1363)
CHEROKEE: 4476 (-1437)
MISSISSIPPIAN: 4651 (-1612)
LTD: 4720 (-1681)

CSISNS RECORD:
SURFACE: 5/8" SET AT
307 W/225 SX
PRODUCTION: 5/12 SET
AT 4716 W/150 SX
BIT TOOL: 2380 W/475 SX

FORMATION TOP LOG DATE
A/Anhydrite 2364 (+675) 2/10/2013
B/Anhydrite 2381 (+658) 4/7/20
Heebner 3858 (-819) 4/6/20
Toronto 3877 (-838) 4/6/20
Lansing 3876 (-867) 4/6/20
Stark 4175 (-1136) 4/6/20
B/KC 4239 (-1220) 4/6/20
Marmaton 4311 (-1272) 4/6/20
Pawnee 4402 (-1363) 4/6/20
Cherokee 4476 (-1437) 4/6/20
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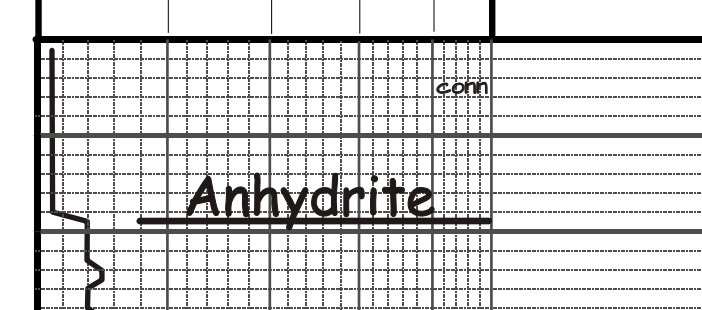
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LEGEND



DEPTH DRILLING TIME IN MINUTES PER FOOT
Rate of penetration increases
5" 10" 15" 20"

LITHOLOGY SAMPLE DESCRIPTIONS REMARKS

2400 Anhydrite EL 2364 (+675)

B/Anhydrite EL 2381 (+658)

Topeka EL 3623 (-584)

Lecompton EL 3858 (-819)

Oread EL 3877 (-838)

Heebner EL 3877 (-838)

Toronto EL 3877 (-838)

Lansing EL 3906 (-867)

"C" EL 3906 (-867)

"D" EL 3906 (-867)

"E" EL 3906 (-867)

"F" EL 3906 (-867)

"G" EL 3906 (-867)

Muncie Crk EL 4082 (-1043)

"H" EL 4082 (-1043)

"I" EL 4082 (-1043)

"J" EL 4082 (-1043)

Stark EL 4175 (-1136)

"K" EL 4175 (-1136)

"L" EL 4175 (-1136)

B/KC EL 4259 (-1220)

Pleasanton EL 4259 (-1220)

Marmaton EL 4311 (-1272)

Alt "A" EL 4311 (-1272)

Alt "B" EL 4311 (-1272)

Alt "C" EL 4311 (-1272)

Pawnee EL 4402 (-1363)

Myrick Station EL 4432 (-1393)

Fort Scott EL 4449 (-1410)

Cherokee EL 4476 (-1437)

Johnson Zn EL 4532 (-1493)

Morrow Sh EL 4604 (-1565)

Morrow Sd EL 4614 (-1575)

Mississippian EL 4651 (-1612)

5" 10" 15" 20"
Rate of penetration increases
DRILLING TIME IN MINUTES PER FOOT

LITHOLOGY SAMPLE DESCRIPTIONS

ELEVATION: KB 3039

GL: 3030

MEASURED ELEVATION: KB

#15-109-21-162

DST #1:
1st Op: BOB 30"
No Blowback
2nd Op: BOB 45"
No Blowback

Rec:
30" Free Oil - Grav 44
124" OCWM
(15%O, 60%W, 25%M)
310 OCWM
(10%O, 50%W, 40%M)
464" Total Fluid

IFP: 22-163#/45"
ISIP: 1078#/45"
FFP: 165-213#/45"
FSIP: 1041#/45"

Pipe Strap at 3960'
.45 Board Short

DST #2:
Packers would not hold
- attempted to set
packers three times
MISRUN

DST #3:
1st Op: Weak Bldg
1 3/4"
No Blowback
2nd Op: Weak Sfc
Blow Throughout
No Blowback

Rec:
10" Mud w/oil spots

IFP: 34-36#/45"
ISIP: 42#/45"
FFP: 35-36#/45"
FSIP: 40#/45"

DST #4:
1st Op: BOB 2"
No Blowback
2nd Op: BOB 10"
Blowback BOB 14"

Rec:
1890 GIPP
1394 Gassy Oil -
Grav 30
(35%G, 65%O)
124" VSGMCO
(2%G, 58%O, 40%M)
1518" Total Fluid

IFP: 137-358#/30"
ISIP: 1182#/45"
FFP: 383-590#/45"
FSIP: 1115#/45"

DST #5:
1st Op: Weak Bldg 1/4"
No Blowback
2nd Op: No Blow
No Blowback

Rec:
5" VSOCM (2%O, 98%M)

IFP: 18-21#/30"
ISIP: 23#/30"
FFP: 20-21#/30"
FSIP: 24#/30"

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

Rec:
186" GIP
5" Free Oil - Grav 30
5" OCWM (20%O, 80%M)
8" Total Fluid

IFP: 20-22#/45"
ISIP: 1385#/45"
FFP: 22-32#/60"
FSIP: 1381#/60"

ELEVATION: KB 3039

OPERATOR: Russell Oil, Inc.

LOCATION: 2260FS & 1000FW

LEASE: Edwards Trust "B" WELL NO: #1-32

SEC: 32 TWP: 15S RNG: 34W

API: 15-109-21.162 FIELD: Wildcat COUNTY: Logan STATE: Kansas

229

KITT NOAH
LICENSED
GEOLOGIST