

**GEOLOGIST'S REPORT**  
**DRILLING TIME AND SAMPLE LOG**

COMPANY: **SHAKESPEARE OIL CO.**  
 LEASE: **JANZEN L-35**  
 FIELD: **Witchell**  
 LOCATION: **2298' FUL, 2482' FEL**  
 SEC: **35 T1MSP 16S R0E 34W**  
 COUNTY: **Scott STATE Kansas**

CONTRACTOR: **HD Rig #2**  
 SPUD: **3-31-17 COMP 4-10-17**  
 RTD: **4850' LTD 4847'**  
 MUD UP: **3700'** TYPE MUD: **Chemical**

SAMPLES SAVED FROM: **3800'** to RTD  
 DRILLING TIME KEPT FROM: **3800'** to RTD  
 SAMPLES EXAMINED FROM: **3800'** to RTD  
 GEOLOGICAL SUPERVISION FROM: **3900'** to RTD

GEOLOGIST ON WELL: **Tim Priest**  
 By: **Habitburton**

FORMATION TOPS: **ELECTRIC LOG** SAMPLE  
 Anhydrite: **2440 (-679)** **2442 (-677)**  
 Heebner Shale: **3988 (-869)** **3991 (-872)**  
 Lansing: **4034 (-912)** **4034 (-915)**  
 Stark: **4316 (-1197)** **4317 (-1198)**  
 BKC: **4410 (-1291)** **4414 (-1295)**  
 Fort Scott: **4589 (-1470)** **4593 (-1474)**  
 Cherokee Shale: **4616 (-1497)** **4619 (-1500)**  
 Mississippian: **4796 (-1677)** **4798 (-1679)**

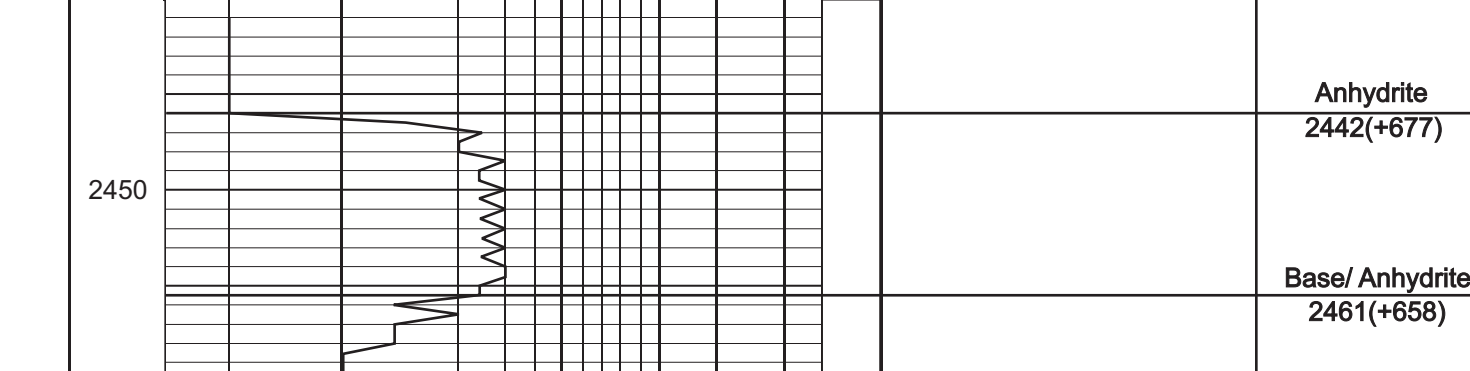
ELEVATIONS: **KG 3119'**  
 DF: \_\_\_\_\_  
 GL 3111'

Measurements Are All From: **KB**  
 CASING CONDUCTION: **N/A**  
 SURFACE: **8-5/8" @ 264'**  
 PRODUCTION: **4 1/2" @ 4850'**

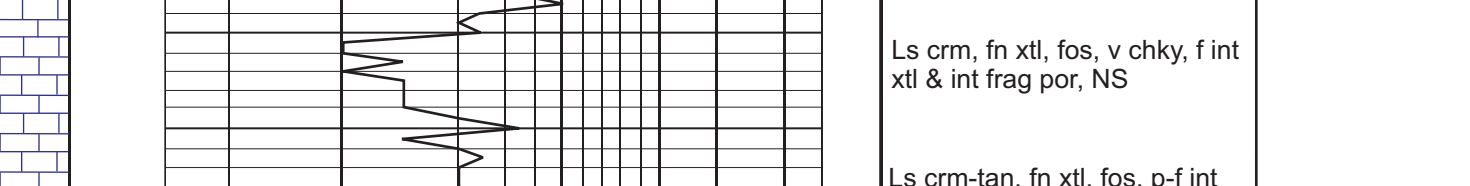
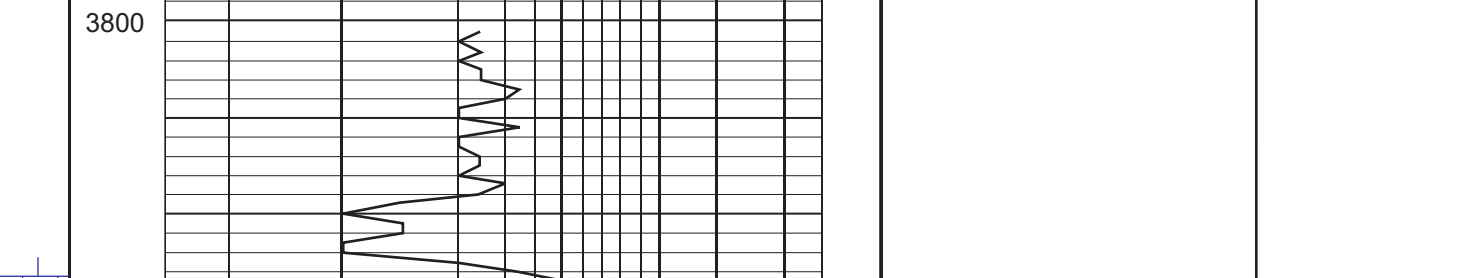
REMARKS: Due to the positive drill stem test #2, it was decided to set production casing to further test the well.

Respectfully Submitted,  
 Tim Priest  
 Petroleum Geologist

API #15-171-21197-00-00



**LEGEND**



DEPTH	SAMPLE DESCRIPTION	REMARKS
2450		Anhydrite 2442(+677)
2450		Base/ Anhydrite 2461(+658)
3800	50	Ls crm, fn xtl, fos, v chky, f int xtl & int frag por, NS Ls crm-tan, fn xtl, fos, p-f int xtl-pp por, NS Ls crm-tan, vfn xtl, dnse Sh gry-blk Ls crm-tan, fn xtl, arg in prt Sh gry, silty Ls gry, vfn xtl, dnse Sh gry-dk gry Ls crm, fn xtl, fos, chky, p-f int xtl-pp por, NS Sh blk Ls crm, fn xtl, fos, chky, p-f int xtl-pp por, NS Sh gry-blk Ls crm-gry, fn xtl, arg in prt Ls crm-tan, fn xtl, chky, p-f int xtl-pp por, NS Ls crm-tan, fn xtl, fos, chky, p-f int xtl-pp por, NS
4000	50	Sh blk, carb Sh gry-dk gry, calc Ls crm-lt gry, fn xtl, fos, chky, f int xtl-pp por, NS Sh gry-dk gry, calc Ls crm-lt gry, fn xtl, ool, chky, p-f int ool por, NS Ls crm-lt gry, fn xtl, fos, sli chly, p-f int xtl-pp por, NS Ls crm-lt gry, fn xtl, fos-ool, chky, p-f int frag por, NS Ls lt gry, vfn xtl, dnse Sh gry Ls crm-lt gry, fn xtl, fos, chky, p-f int xtl-pp por, NS Ls crm-lt gry, fn xtl, fos, chky, p-f int xtl-pp por, NS Ls crm, mic xtl, dnse Ls crm-lt gry, fn xtl, fos, chky, p-f int xtl-pp por, NS Sh gm-gry Ls lt gry-tan, fn xtl, fos, p-f int xtl-pp por, sptd-sli sat stn, SSFO, sli-f odor, dull fluor Sh gm-gry Ls crm, vfn xtl, chty, dnse Ls crm, fn xtl, fos-fn ool, chky, chly prt, p-f int xtl & int frag por, NS Sh gry-dk gry Ls crm, fn xtl, fos-fn ool, chky, f int xtl & int frag por, NS Ls crm-tan, vfn xtl, chty, dnse Ls crm-lt gry, fn xtl, fos, chky,
4000	50	Sh blk, carb Ls tan, fn xtl, fos, sli chky, p-f int xtl-pp por, sptd-sli sat stn, SSFO, sli odor, dull fluor Ls tan, vfn xtl, arg in prt, dnse Ls crm-lt gry, vfn xtl, dnse Ls lt gry, mic xtl, dnse Sh gm-gry Ls tan, vfn xtl, arg in prt Ls crm-lt gry-tan, fn xtl, fos, chky, p-f int xtl-pp por, NS Sh gm-gry Ls crm-lt gry, fn xtl, ool, sli chky, f-gd int ool & ooc por, NS Ls crm-tan, vfn xtl, dnse Sh blk, carb Ls crm-tan, vfn xtl, sli chty, dnse Ls crm-lt gry, fn xtl, fos, p-f int xtl-pp por, NS Ls lt gry-tan mottld, fn xtl, fos, p int xtl-pp por, NS Ls crm-lt gry, vfn xtl, dnse Ls crm-lt gry, fn xtl, ool, chky, p-f int xtl & int ool por, NS Sh blk, carb Ls crm-lt gry, vfn xtl, sli chty, dnse Ls crm-lt gry, fn xtl, fos, p int xtl por, NS Ls lt gry-tan, fn xtl, ool, f int xtl & int ool por, sptd-sat stn, SFO f odor, dull fluor Sh gry, vfn xtl, dnse Sh red-gry Ls lt gry, vfn xtl, dnse Ls lt gry-tan, fn xtl, fos, chky, p-f int xtl-pp por, NS Sh var col, silty, calc in prt Sh var col, silty, sandy Sh gry-blk Ls crm-lt gry, vfn xtl, dnse Sh red-gry Ls crm-tan, fn xtl, fos-sli ool, p int frag por, 2 pcs w/sptd stn, VSSFO, no odor, dull fluor Ls crm-lt gry, fn xtl, fos-sli ool, p-f int xtl-pp por, sptd-sli sat stn, SSFO, sli odor, dull fluor Ls crm-lt gry, vfn xtl, dnse Sh red-gry Sh red-gry Ls crm-lt gry, vfn xtl, dnse Sh blk, carb Ls tan, vfn xtl, arg in prt Ls crm-lt gry, fn xtl, fos-sub ool, chky, p-f int xtl & int frag por, sptd-sat stn, VSSFO, no odor, dull fluor Ls crm-lt gry, vfn xtl, chty Sh blk, carb Ls crm-lt gry, fn xtl, fos-ool, sli chky, p-f int frag por, sptd-sat stn, SSFO, no odor, no fluor Sh blk, carb Ls crm-tan, vfn xtl, fos, dnse Ls gry-brn, mic xtl, sli chty, dnse Ls tan, vfn xtl, sli fos, p pp por, sptd stn on few pcs, VSSFO, no odor, no fluor
4200	50	Sh blk, carb Ls crm-lan-gry mottld, fn xtl, ool, chky, f int ool por, NS Sh gm-gry Ls crm-lt gry, vfn xtl, dnse Sh blk Ls tan-gry, w/int bed blk Sh Sh blk Ls crm-lt gry, vfn xtl, dnse Sh gry-dk gry Ls tan-gry, vfn xtl, fos, dnse Sh gry-dk gry Ls tan-gry, vfn xtl, fos, dnse Ls tan-gry, vfn xtl, fos, dnse Ls tan, mic xtl, dnse Ls crm-tan-gry, fn xtl, sli fos, sli chky, p int xtl-pp por, sptd-sli sat stn, VSSFO, v sli odor, dull fluor Ls gry, mic xtl, dnse Sh red-gry-gry SS clear-wh, fn grn, well sort, well cement, tite, NS Sh var col, silty, sandy, calc in prt, dnse SS clear-wh milky, fn grn, Ls crm, vfn xtl, sandy, w/var col Sh Sh var col, sandy
4300	50	Ls crm-lt gry, vfn xtl, dnse Ls crm-lt gry, vfn xtl, sandy, dnse Ls lt gry, fn xtl, chky, dnse
4400	50	Total Depth 4850' (-1731)

**Muncie Creek 4216 (-1097)**

**Toronto 4008 (-889)**

**Lansing 4034 (-915)**

**B/K.C. 4414 (-1295)**

**Marmaton 4454 (-1335)**

**Pawnee 4542 (-1423)**

**Myric Station 4573 (-1454)**

**Fort Scott 4593 (-1474)**

**Cherokee Shale 4616 (-1500)**

**Johnson Zone 4660 (-1541)**

**Mississippian 4798 (-1679)**