

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

COMPANY **SHAKESPEAR OIL CO.**  
 LEASE **Tractor #11**  
 FIELD **Wildcat**  
 LOCATION **2305' FEL, 630' FEL**  
 SEC **11 T15SP 13S R0E 32W**  
 COUNTY **Logan STATE Kansas**

ELEVATIONS  
 KB 3004'  
 DF \_\_\_\_\_  
 GL 2994'  
 Measurements Are All From **KB**

CONTRACTOR **HD Drilling Rig #2**  
 SPUD **6-14-13** COMP **6-26-13**  
 RTD **4700'** LTD **4700'**  
 MUD UP **3300'** TYPE MUD **Chemical**

SAMPLES SAVED FROM **3750'** to RTD  
 DRILLING TIME KEPT FROM **3750'** to RTD  
 SAMPLES EXAMINED FROM **3750'** to RTD  
 GEOLOGICAL SUPERVISION FROM **3800'** to RTD

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

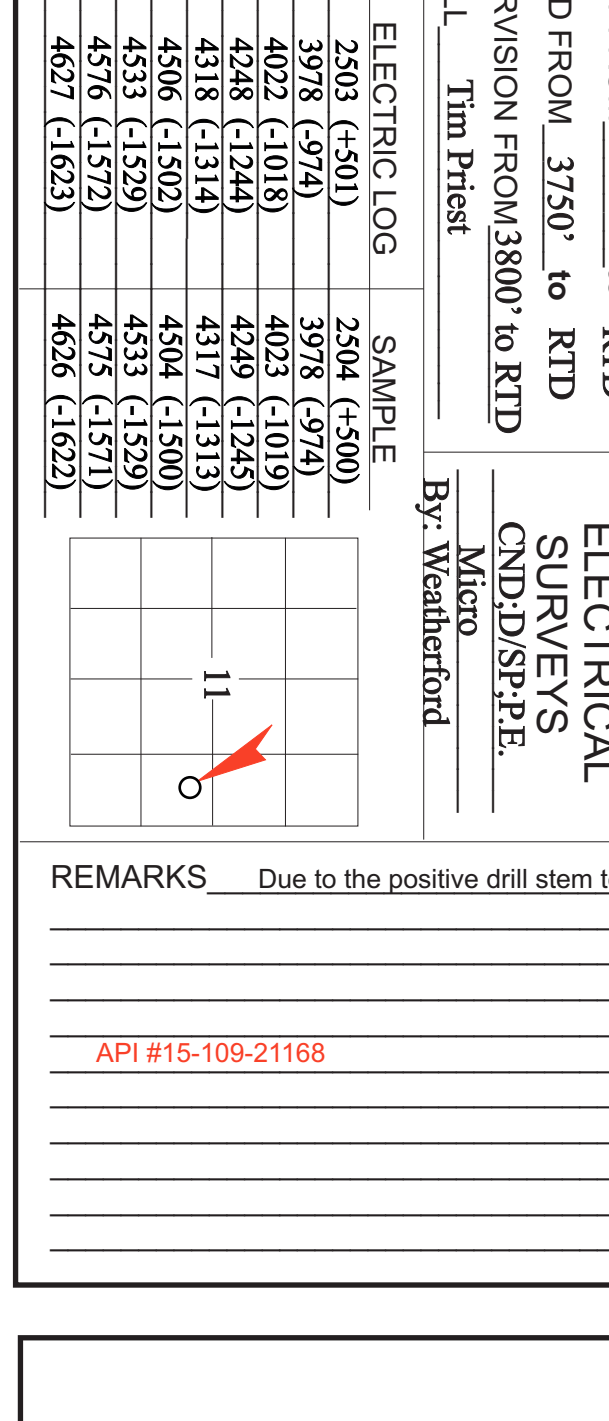
FORMATION TOPS  
 B/Anyvrite **2503 (+501)** **2504 (+500)**  
 Heebner Shale **3978 (-974)** **3978 (-974)**  
 Lansing **4022 (-1018)** **4023 (-1019)**  
 Stark **4248 (-1245)** **4249 (-1245)**  
 B/K.C. **4318 (-1314)** **4317 (-1313)**  
 Fort Scott **4536 (+1529)** **4534 (+1500)**  
 Cherokee Shale **4535 (+1529)** **4535 (+1529)**  
 Johnson Zone **4576 (+1571)** **4575 (+1571)**  
 Mississippian **4627 (+1623)** **4626 (+1622)**

PRODUCTION **5 1/2" @ 4700'**  
 SURFACE \_\_\_\_\_  
 CONDUCTION **N/A**  
 CASING \_\_\_\_\_  
 From **KB**

REMARKS  
 Due to the positive drill stem tests it was decided to set production casing to further test the well.

Respectfully Submitted,  
**Tim Priest**  
 Petroleum Geologist

API #15-109-21168



DEPTH	SAMPLE DESCRIPTION	REMARKS
2500		Anhydrite 2504(+500)
2500-2527		Base/ Anhydrite 2527(+477)
2527-3800	Ls crm-gry, fn xtl, fos, arg in prt Ls crm-gry, fn xtl, sil fos, chky, p int xtl-pp por, NS Sh gry, calc	
3800-3900	Ls crm, fn xtl, fos, v chky, f int xtl-pp por, NS Ls crm-lt gry, fn xtl, sil chky, dnse Sh blk SS red, vfn gm, w/silts Ls gry, vfn xtl, dnse	
3900-4000	Ls crm-lt gry, fn xtl, fos, arg in prt Ls crm-lt gry, vfn xtl, dnse Sh blk Ls crm-lt gry, fn xtl, fos-fn ool, chky, f int xtl-pp por, NS Ls crm, vfn xtl, sil fos, sil chty, dnse Ls crm, fn xtl, fos, sil chty	Heebner 3978 (-974)
4000-4077	Sh blk, carb Ls crm-tan, fn xtl, sil chty, dnse Sh lt gry-gry, silty, w/fn grn SS	Toronto 4007 (-1003)
4077-4103	Ls crm, fn xtl, fos, sil chky, p-f int xtl-pp por, NS Sh red-gry Ls crm-lt gry, fn xtl, ool, v chky, p-f int ool por, NS Ls crm, vfn xtl, dnse Ls crm, fn xtl, fos-sil ool, chky, p-f int xtl-pp por, NS	Lansing 4023 (-1019)
4103-4199	Ls crm-lt gry, calc Sh red-gry, fn xtl, fos, sil chky, p-f int xtl-pp por, sptd-sli sat stn, SF0, v sil odor, dull fluor Ls crm-lt gry, vfn xtl, sil chty, dnse Sh grn-gry Ls crm-lt gry, fn xtl, fos, chky, p-f int xtl-pp por, sme dnse, NS Sh gry-blk Ls crm, fn xtl, fos, chky, p-f int xtl-pp por, NS Ls crm, vfn xtl, chty, dnse Ls crm-lt gry, fn xtl, ool, p-f ooc por, NS Ls lt gry, vfn xtl, dnse	DST # 1 (4045' - 4070') FF: Built to 2', no return FF: Built to 4', no return Rec: 100 WCM w/ool spts (1 foot (40%W,60%M)) Fps: 23-48(6)21# SIPs: 111#W/150# HSPs: 236#W/197# BHT: 119 deg F
4199-4219	Sh blk, carb Ls crm-lt gry, fn xtl, sil fos, sil chky, dnse Sh gry-dk gry, calc Ls crm-lt gry, fn xtl, fos, sil chky, p-f int xtl-pp por, sptd-sli sat stn, SF0, f odor, dull fluor Ls crm-lt gry, vfn xtl, dnse Sh blk, carb Ls crm-tan, vfn xtl, dnse Sh grn-gry, calc in prt Ls crm-lt gry, fn xtl, fos-sil ool, chky, p-f int xtl & int frag por, sptd-sli sat stn, SSFO, v sil odor, dull fluor	Muncie Creek 4163 (-1159)
4219-4248	Ls tan-brn, vfn xtl, dnse Sh blk, carb Sh grn-gry, calc Ls crm-lt gry, fn xtl, fos-sil ool, chky, f int xtl-pp por w/scat vugs, sptd-most sat stn, SF0, strong odor, f-bri fluor Ls crm-lt gry, fn xtl, fos, chky, f int xtl-pp por w/few vugs, NS Ls crm-lt gry, vfn xtl, dnse Sh blk, carb Sh grn-gry	DST # 2 (4160' - 4200') FF: Built to 2', no return FF: BOB in 3', built to 4 in. Rec: 210 GIP, 90' GO (50%G,50%O), 90' GMO (40%G,57%O,35%M), 120' GMO (20%G,60%O,10%M), Total Fluid: 60'
4248-4288	Ls tan-brn, vfn xtl, dnse Sh blk, carb Sh grn-gry, calc in prt Ls crm-lt gry, fn xtl, fos-sil ool, chky, p-f int xtl & int frag por, few pcs ooc, sptd-sli sat stn, SSFO, sil odor, dull-f fluor Ls tan-brn, vfn xtl, dnse Sh blk, carb Sh grn-gry, calc Ls crm-lt gry, vfn xtl, sil fos, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse	DST # 3 (4197' - 4225') FF: Built to 1 1/2', no return FF: Built to 5 in, no return Rec: 4 CO, 18' WCM(20%O, 20%W,60%M), 60' CM (20%O,80%M), Total: 80' Fps: 20-43(6)2-56# SIPs: 111#W/127# HSPs: 206#W/201# BHT: 118 deg F Chlorides: 41.000ppm
4288-4317	Ls tan-brn, vfn xtl, dnse Sh blk, carb Sh grn-gry, calc Ls crm-lt gry, vfn xtl, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse	Stark 4249 (-1245)
4317-4331	Ls tan-brn, vfn xtl, dnse Sh blk, carb Sh grn-gry, calc Ls crm-lt gry, vfn xtl, sil fos, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse	DST # 4 (4225' - 4245') FF: Built to 10', no return FF: No blow, no return Rec: 3 Mud Fps: 19-18(1)19# SIPs: 23#W/21# HSPs: 206#W/201# BHT: 113 deg F
4331-4342	Ls tan-brn, vfn xtl, dnse Sh blk, carb Sh grn-gry, calc Ls crm-lt gry, vfn xtl, sil fos, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse	DST # 5 (4248' - 4280') FF: Built to 1 1/2', no return FF: BOB in 5', 5 in, no return Rec: 1200 GIP, 80' GO (50%G,50%O), 180' GMO (20%G,45%O,35%M), 60' CM (20%W,80%O), Total Fluid: 300' Fps: 25-58(6)1-27# SIPs: 115#W/127# HSPs: 211#W/197# BHT: 123 deg F Slav: 39
4342-4371	Ls tan-brn, vfn xtl, dnse Sh blk, carb Sh grn-gry, calc Ls crm-lt gry, vfn xtl, sil fos, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse	B/K.C. 4317 (-1313)
4371-4388	Ls tan-brn, vfn xtl, dnse Sh blk, carb Sh grn-gry, calc Ls crm-lt gry, vfn xtl, sil fos, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse	Marmaton 4342 (-1338)
4388-4400	Ls tan-brn, vfn xtl, dnse Sh blk, carb Sh grn-gry, calc Ls crm-lt gry, vfn xtl, sil fos, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse	Pawnee 4450 (-1446)
4400-4424	Ls tan-brn, vfn xtl, dnse Sh blk, carb Sh grn-gry, calc Ls crm-lt gry, vfn xtl, sil fos, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse	Myric Station 4489 (-1485)
4424-4450	Ls tan-brn, vfn xtl, dnse Sh blk, carb Sh grn-gry, calc Ls crm-lt gry, vfn xtl, sil fos, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse	Fort Scott 4504 (-1500)
4450-4535	Ls tan-brn, vfn xtl, dnse Sh blk, carb Sh grn-gry, calc Ls crm-lt gry, vfn xtl, sil fos, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse	Cherokee Shale 4533 (-1529)
4535-4576	Ls tan-brn, vfn xtl, dnse Sh blk, carb Sh grn-gry, calc Ls crm-lt gry, vfn xtl, sil fos, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse	Johnson Zone 4575 (-1571)
4576-4627	Ls tan-brn, vfn xtl, dnse Sh blk, carb Sh grn-gry, calc Ls crm-lt gry, vfn xtl, sil fos, sub ool, p-f int xtl & pp-vug por, sptd-sat dk stn, SF0, strong odor, no fluor Ls crm-lt gry, mic xtl, dnse Ls crm, fn xtl, chky, dnse Sh gry-dk gry Sh var col, silty, calc SS lt gm, fn gm, glauc, sil fria, NS Sh var col, silty, sil chty, w/int bed lt gry, fn-med gm SS, NS	DST # 6 (4565' - 4600') FF: Built to 45', no return FF: 30'-30'-45'-90' Rec: 135 WCM w/ool spts (40%W,60%M) Fps: 45-61(6)2-80# SIPs: 115#W/122# HSPs: 234#W/213# BHT: 124 deg F Chlorides: 19.000ppm
4627-4662	Ls tan-brn, vfn xtl, dnse Sh blk, carb Sh grn-gry, calc Ls crm-lt gry, vfn xtl, sil fos, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse	Mississippian 4626 (+1622)
4662-4700	Ls tan-brn, vfn xtl, dnse Sh blk, carb Sh grn-gry, calc Ls crm-lt gry, vfn xtl, sil fos, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse Sh blk, carb Sh grn-gry Ls crm-lt gry, vfn xtl, sil chky, sil chty, dnse	Total Depth 4700 (-1696)