Compan Addres	y: Charles N. (s: PO Box 347 Pratt, KS 67	OPERATO Griffin 7124	R				
Contact Geologis Contact Phone Na Well Nam Locatio Poo Stat	st: or: e: Sharron #4 n: Section 34-3 ol: e: Kansas	32S-12W	API: Field: Country:	15-007-24311 Toni-Mike USA			
Well Nam Surface Locatio Bottom Locatio AF License Numbe Spud Dat Regio Drilling Complete Surface Coordinate Bottom Hole Coordinate Ground Elevatio K.B. Elevatio Logged Interva Total Dept	E: Sharron #4 n: Section 34-3 n: Pl: 15-007-243 e: 2/27/2017 n: Barber Courd d: 3/3/2017 s: 660' FSL & s: n: 1523.00ft n: 1528.00ft al: 3300.00ft h: 4880.00ft n:	Scale 1:240 lm 32S-12W 11 nty 890' FWL	iperial Time: Time: To:	11:30 AM 10:45 AM 4882.00ft			
Drilling Fluid Typ	e: Chemical (N SUR	/ludCo) F ACE CO-OR	DINATES				
Well Typ Longitud N/S Co-or E/W Co-or	e: Vertical e: d: 660' FSL d: 890' FWL		Latitude:				
	TER	RA	TECH				
Compan Addres	y: TerraTech E s: 1632 S. We	inergy Service st St. Suite 12	VICE, LLC 9 LLC. 2				
Phone Nb Logged B	wichita, KS pr: 316-617-39 y: Geologist	59	Name:	Bruce Reed			
Contracto Rig Rig Typ Spud Dat TD Dat Rig Releas	or: WW Drilling #: 8 e: mud rotary e: 2/27/2017 e: 3/3/2017 e: 3/4/2017	CONTRACT	Time: Time: Time: Time:	11:30 AM 10:45 AM 11:30 AM			
K.B. Elevatio K.B. to Groun	n: 1528.00ft d: 5.00ft	ELEVATIO	NS Ground Elevation:	1523.00ft			
Surface Casing: Production Casing:	8-5/8" at 246' 4-1/2" at 4877	NOTES					
Daily Penetration:	02/27/17 02/28/17 03/01/17 03/02/17 03/03/17 03/04/17	SPUD @ 11 900' 2420' 3848' 4786' RTE 4880' Rig	1:30 AM D @ 10:45 AM released @ 11:30 A	۸M			
		FORMATI	ON TOPS				
FormationSampHeebner3612'Lansing3819'Stark4198'Hush4228'B/KC4285'Mississippian4372'Kinderhook4571'Viola4675'Simpson Sand4775'	le Top Datum -2084 -2291 -2670 -2700 -2757 -2844 -3043 -3147 -3246	<u>Log</u> 3614 3820 4200 4230 4280 4372 4574 4677 4775	Top Datum 4' -2086 0' -2292 0' -2672 0' -2702 6' -2758 2' -2844 4' -3046 7' -3149 5' -3247	Comparison* +7 +2 +3 +7 +5 +5 +5 +3 +4 -1			
Reference well: Patrick Petr Barber County, Kansas	roleum, #1 Moo	ts, C SW SW	7, Section 34-32S-1	2W			
LOG ANALYSIS Lower Douglas Sand: 3775' (22%), 3777' (22%), 3779' (22%), 3781' (25%), 3783' (35%), 3785' (35%), 3787' (32%), 3789' (28%), 3791' (28%) and 3793' (25%). Mississippian: 4386' (32%), 4388' (37%), 4390' (24%), 4392' (22%), 4394' (20%), 4396' (26%), 4398' (30%), 4400' (32%), 4402' (27%) and 4404' (25%).							
ROCK TYPES Cht shale, gry Lmst fw7> Carbon Sh							
ACCESSORIES MINERAL ⊥ Calcareous ∠ Dolomitic · Sandy △ Chert White ■ Argillaceous/Shale							
OTHER SYMBOLS INTERVALS Oil Show DST							
 Core Good Show DST Int Fair Show DST alt Poor Show Core Spotted or Trace Lail pipe Questionable Stn D Dead Oil Stn 							



4560		Limestone: more cream-light tan, fine crystalline, dense, cherty	
		<u>Kinderhook 4571' (-3043)</u>	
4580		Shale: light-medium gray	
0 (ROP (min/ft) 10 0 Gamma (API) 150		Shale: light-medium gray, soft	fotal Gas (units) 1000 0 C1 (units) 1000 0 C2 (units) 1000 0 C2 (units) 1000
		Shalo: as above	C4 (unit) 1000
4640		Shale: gray	E
4660		Flood dark grav-black shale, soft	
		· · · · · · · · · · · · · · · · · · ·	
4680		Viola 4675' (-3147) Dolomitic limestone: light tan-gray, fine crystalline sub sucrossic, vey	Prove - 1
		slight medium crystalline, trace chalky material, questionable odor, no show free oil	
4700		Dolomitic limestone: as above, no odor	
4720		Dolomitic limestone: cream-light tan-gray, mostly fine crystalline, sub sucrosic, looks tite, scattered gray chert	
4740		Dolomitic limestone: as above, no shows Note: reduced weight on bit at 4740'	
4760		Limestone: cream-tan, fine crystalline, dense	
		Simpson Sand 1775' (2017)	
4780	0	Mostly shale: pale green-turquoise-blue. Circulated at 4786' Sandstone Clusters: cream-pale green, fine to medium grained, micaceous in part, no odor in fresh, no show free oil	
0 ppP (min/ft) 10 4800 0 camma (API) 150		Sanostone: clear to trosted white, medium grained, good friability, odor in fresh, slight show free oil when crushed	0 Total Car (units) 1000 0 22 (units) 1000 0 22 (units) 1000 1 C3 (units) 1000 1 C3 (units) 1000 1 C4 (units) 1000
4820	0	Sandstone: as above, fresh sample carries good odor, show pin head drop, medium brown free oil	
		Shale. Dive-green	
4840		Shale: as above	
		Chales blue excession	
		Snale: blue-green-gray	Depth 4864' Mud Weight 9.2+ Funnel Viscosity 52
4880		Shale: multi-colored, soft	API Filltrate 9.2 Chloride 4,000