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Scale 1:240 (5"=100') Imperial
Measured Depth Log

Well Name: E. Honomichl #1-19
Location: Rooks County
License Number: API #15-163-24391-00-00
Spud Date: 5/7/2019
Surface Coordinates: Section 19, Township 9 South, Range 19 West
330' FSL & 2310' FEL
Bottom Hole Coordinates: Vertical well w/ minimal deviation, same as above
Ground Elevation (ft): 2,143
Logged Interval (ft): 3,000 To: RTD
Formation: LKC, Arbuckle
Type of Drilling Fluid: Chemical (K.D.T)

Region: Kansas
Drilling Completed: 5/11/2019
K.B. Elevation (ft): 2,148
Total Depth (ft): 3,670

Printed by STRIP.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Patterson Energy, LLC
Address: P.O. Box 400
Hays, KS 67601

GEOLOGIST


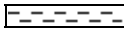

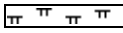
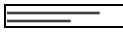
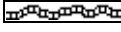




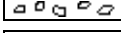


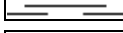

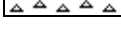


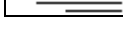
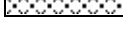
Name: Austin Klaus
Company: John O. Farmer, Inc.
Address: 370 W. Wichita Ave.
Russell, KS 67665

Comments

The E. Honomichl #1-19 well was drilled by Murfin Drilling Rig #8 (Tool Pusher: Randy Farr).

The location for the E. Honomichl #1-19 was discovered via 3D seismic survey. Rock samples were gathered and evaluated from 3,000'-3,670'. Oil shows were encountered in the LKC C,F,J,K, and Arbuckle. Structurally, the Lansing top was picked 4' low to the comparison well, 660' to the east (E. Honomichl #1 - 1947). Structural thinning occurred through the LKC, which resulted in an Arbuckle top 3' high to the comparison well. Good oil shows were observed throughout the top 25-30' of the Arbuckle. All Lansing-Kansas City oil shows should also be evaluated prior to P&A. After complete evaluation of all oil shows and electric logs, it was decided that 5 1/2" production casing be set to further test the E. Honomichl #1-19 on 5/11/19.

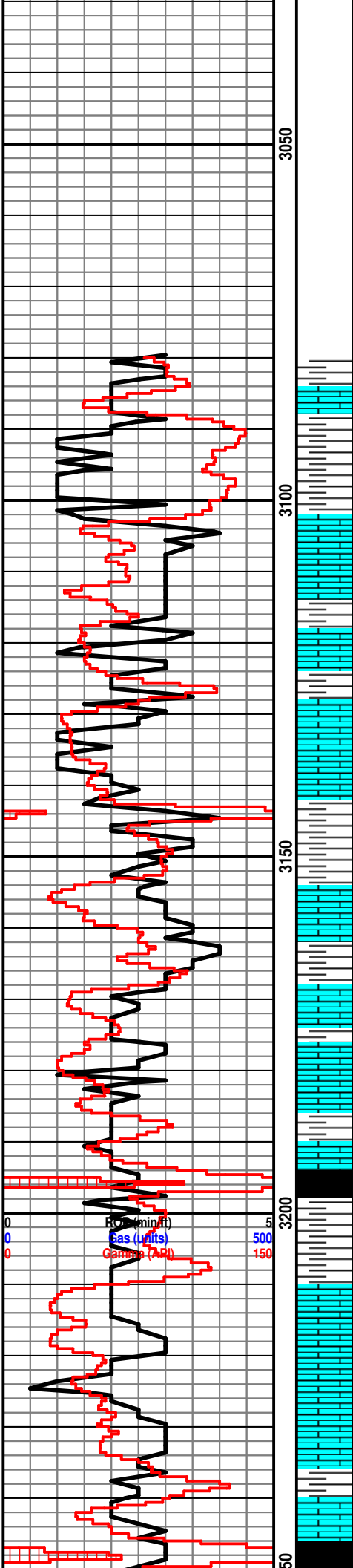
ROCK TYPES

 Anhy	 Clyst	 Gyp	 Mrlst	 Shgy
 Bent	 Coal	 Igne	 Salt	 Sltst
 Brec	 Congl	 Lmst	 Shale	 Ss
 Cht	 Dol	 Meta	 Shcol	 Till

OTHER SYMBOLS

POROSITY	<input checked="" type="checkbox"/> Vuggy	ROUNDING	<input type="checkbox"/> Spotted	EVENT
<input type="checkbox"/> Earthy	SORTING	<input type="checkbox"/> Rounded	<input type="checkbox"/> Ques	<input type="checkbox"/> Rft
<input type="checkbox"/> Fenest		<input type="checkbox"/> Subrnd	<input type="checkbox"/> Dead	<input type="checkbox"/> Sidewall
<input type="checkbox"/> Fracture		<input type="checkbox"/> Subang	INTERVAL	<input type="checkbox"/> Core
<input type="checkbox"/> Inter		<input type="checkbox"/> Angular		<input type="checkbox"/> Dst
<input type="checkbox"/> Moldic	<input type="checkbox"/> Well	OIL SHOW		
<input type="checkbox"/> Organic	<input type="checkbox"/> Moderate	<input type="checkbox"/> Even		
<input type="checkbox"/> Pinpoint	<input type="checkbox"/> Poor			

Curve Track 1	Depth	Lithology	Geological Descriptions	DST/Mud/Survey																											
ROP (min/ft) ————— Gas (units) - - - - - Gamma (API) —————	0																														
	500																														
	150																														
5/6/2019 MIRT																															
5/7/2019 236', Drilling																															
5/8/2019 1,885', Drilling																															
5/9/2019 3,020', Drilling																															
5/10/2019 3,525', Drilling																															
5/11/2019 3,670', Run 5-1/2" Csg																															
ROP (min/ft) —————	0																														
Gas (units) - - - - -	500																														
Gamma (API) —————	150																														
	3000																														
			The open-hole logging was performed by Mr. Casey Patterson with Gemini Wireline, LLC (Hays, KS). Logs included: Compensated Density Neutron, Dual Induction, & Microresistivity. Formation tops and datums from the open-hole logs include the following:	Mud Engineer: Chris Keas Ken Rupp Tester: No Drill Stem Tests																											
			<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Formation</th> <th>E-Log</th> <th>Datum</th> </tr> </thead> <tbody> <tr><td>Anhydrite</td><td>1555</td><td>593</td></tr> <tr><td>Topeka</td><td>3103</td><td>-955</td></tr> <tr><td>Heebner</td><td>3307</td><td>-1159</td></tr> <tr><td>Toronto</td><td>3329</td><td>-1181</td></tr> <tr><td>Lansing</td><td>3345</td><td>-1197</td></tr> <tr><td>B/KC</td><td>3565</td><td>-1417</td></tr> <tr><td>Arbuckle</td><td>3590</td><td>-1442</td></tr> <tr><td>LTD</td><td>3670</td><td>-1522</td></tr> </tbody> </table>	Formation	E-Log	Datum	Anhydrite	1555	593	Topeka	3103	-955	Heebner	3307	-1159	Toronto	3329	-1181	Lansing	3345	-1197	B/KC	3565	-1417	Arbuckle	3590	-1442	LTD	3670	-1522	
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Sh: lt gry

Topeka 3103' (-955)

Ls: off wh-tan, fn xln, scat vuggy porosity, NSFO, no odor

Ls: ala

Ls: off wh-tan, vry fn-fn xln, poor-fair int xln & scat pp vuggy porosity, scat oil stn, VSSFO, sl odor, dull yel fluor

Sh: lt gr-drk gry

Ls: tan-gry, fn-sub xln, mostly DNS, NSFO, scat chalk

Sh: drk gry, scat blk

Ls: tan-gry, fn xln, poor int xln porosity, NSFO

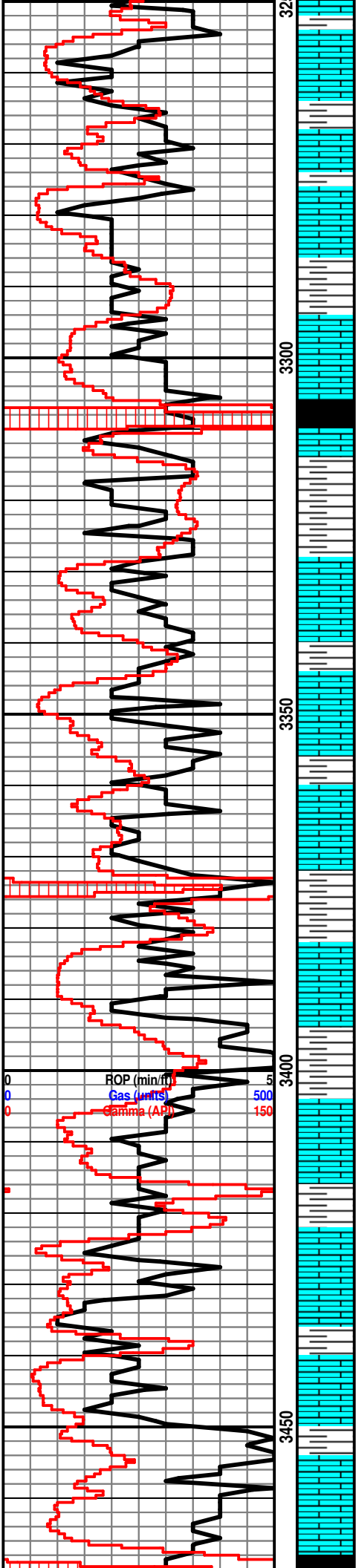
Sh: drk gry-blk

Ls: tan-gry, fn-sub xln, mostly DNS, NSFO

Ls: tan-gry, fn-vry fn xln, scat int xln porosity, scat oil stn, vry lt odor

Sh: gry

Sh: lt-drk gry



Ls: off wh-tan, fn xln, scat int xln & pp vuggy porosity, scat oil stn, sl odor

Ls: tan-gry, fn-sub xln, DNS

Ls: tan-lt gry, fn-sub xln, mostly DNS

Sh: lt-drk gry-brn

Ls: off wh-tan, fn xln

Heebner 3309' (-1161)

Sh: blk, carb, fissile

Sh: lt-drk gry

Ls: off wh-tan, fn xln, scat int xln porosity, scat oil stn, VSSFO, sl-fair odor

Sh: lt gry

Lansing 3347' (-1199)

Ls: off wh-tan, fn xln, scat int xln porosity, scat dead oil stn, NSFO, no odor

Ls: off wh-tan, scat foss, fn xln, poor int xln porosity, barren

Sh: lt-drk gry

Ls: off wh-tan, fn xln, scat ool, poor-fair ool porosity, scat-fair oil stn in porosity, SSFO, sl odor

Sh: lt-drk gry

Ls: off wh-tan, fn xln, scat foss, poor int foss porosity, scat oil stn, NSFO

Sh: drk gry

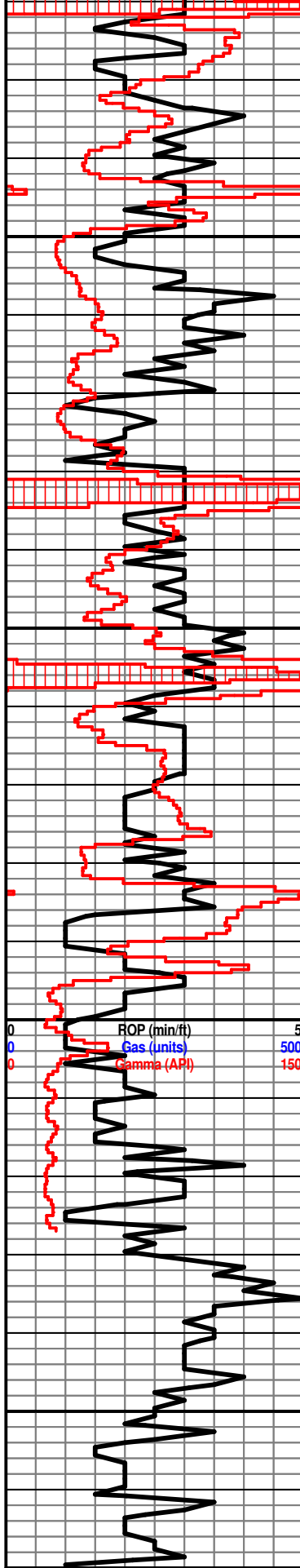
Ls: off wh-tan, fn xln, scat-fair int xln porosity, fair oil stn in porosity, VSSFO, sl odor

Sh: gry

Ls: off wh-tan, fn xln, ool, fair-good ool porosity, mostly barren

Ls: off wh-tan, fn-sub xln, vry DNS, scat chert-off wh, NSFO

Sh: blk, carb, fissile



Sh: drk gry-blk

Ls: off-tan, fn xln, poor int xln porosity, NSFO, hvy chert-off wh

Sh: lt-drk gry-brn

Ls: off wh-tan, fn xln, poor int xln porosity, NSFO

Ls: off wh-tan, fn xln, ool, poor-fair int oom porosity, fair oil stn, VSSFO, sl-fair odor, scat chert-off wh

Sh: drk gry-blk

Ls: off wh-tan, fn xln, poor int xln porosity, scat oil stn, VSSFO, sl odor

Sh: drk gry-blk

Ls: off wh-tan, fn xln, mostly DNS

B/KC 3568' (-1420)

Sh: lt gry-drk gry-brn

Ls: tan-gry, fn xln, poor int xln porosity, NSFO, hvy chert-off wh

Arbuckle 3592' (-1444)

Dolo/Ls: off wh-tan, fn xln, poor int xln porosity

Dolo: off wh-tan-brn, fn-md xln, fair-good sucrosic xln porosity, fair-good oil sat, FSFO, good odor, fair yel fluor

Dolo: off wh-tan-brn, fn-md xln, fair sucrosic xln porosity, fair-good oil sat, S-FSFO, good odor, fair yel fluor

Dolo: off wh-tan-brn, fn-md xln, fair-good int xln porosity, fair oil sat, S-FSFO, fair-good odor, dul yel fluor

Dolo: off wh-tan, fn-md xln, poor int xln porosity, poor resid oil stn, sl odor

Dolo: off wh-tan-brn, fn-md xln, poor-fair int xln porosity, hvy chert-off wh

Dolo: off wh-tan, fn xln, scat int xln porosity, barren, scat chert-off wh

Wt: 8.8
Vis: 63