

# AUSTIN B. KLAUS

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

Well Name: Hendrich Unit #1-18  
Location: Rooks County  
License Number: API #15  
Spud Date: 10/19/2018  
Surface Coordinates: Section 18, Township 9 South, Range 20 West  
130' FSL & 2,310' FEL  
Bottom Hole Coordinates: Vertical well w/ minimal deviation, same as above  
Ground Elevation (ft): 2,258  
Logged Interval (ft): 3,200 To: RTD  
Formation: LKC-Arbuckle  
Type of Drilling Fluid: Chemical (K.D.T)

Region: Kansas  
Drilling Completed: 10/24/2018  
K.B. Elevation (ft): 2,263  
Total Depth (ft): 3,884

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

## OPERATOR

Company: American Oil, LLC  
Address: 1200 Main, Suite 410  
Hays, KS 67601

## GEOLOGIST

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

## Cores

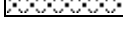
## DSTs

## Comments








































































The Hendrich Unit #1-18 well was drilled by Murfin Drilling Rig #24 (Tool Pusher: Jesus Vargas).

The Hendrich Unit #1-18 was discovered via 3D seismic survey. Rock samples were gathered and evaluated from 3,200' - 3,880'. Oil shows were encountered in the LKC C,D,F/G,I, and Arbuckle. Structurally, the Lansing top was picked 5' low to the comparison well, 330' to the north (John Towns #1 - 1951'). Structural thinning occurred in the lower LKC, which resulted in an Arbuckle picked 1' low to the comparison well. After evaluation of all oil shows, and electric logs, it was decided that 5 1/2" production casing be set to further evaluate the Hendrich Unit #1-18 on 10/25/2018.























## ROCK TYPES

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

## ACCESSORIES

<b>MINERAL</b>		<b>FOSSIL</b>	
 Anhy	 Gyp	 Algae	 Ostra
 Arggrn	 Hvymin	 Amph	 Pelec
 Arg	 Kaol	 Belm	 Pellet
 Bent	 Marl	 Bioclst	 Pisolite
 Bit	 Minxl	 Brach	 Plant
 Brecfrag	 Nodule	 Bryozoa	 Strom
 Calc	 Phos	 Cephal	<b>STRINGER</b>
 Carb	 Pyr	 Coral	 Anhy
 Chtdk	 Salt	 Crin	 Arg
 Chtlt	 Sandy	 Echin	 Bent
 Dol	 Silt	 Fish	 Coal
 Feldspar	 Sil	 Foram	 Dol
 Ferrpel	 Sulphur	 Fossil	 Gyp
 Ferr	 Tuff	 Gastro	 Ls
 Glau		 Oolite	 Mrst
			 Sltstrg
			 Ssstrg
			<b>TEXTURE</b>
			 Boundst
			 Chalky
			 Cryxln
			 Earthy
			 Finexln
			 Grainst
			 Lithogr
			 Microxln
			 Mudst
			 Packst
			 Wackest

## OTHER SYMBOLS

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

**Curve Track 1**

ROP (min/ft) ———  
 Gas (units) - - - - -  
 Gamma (API) ———

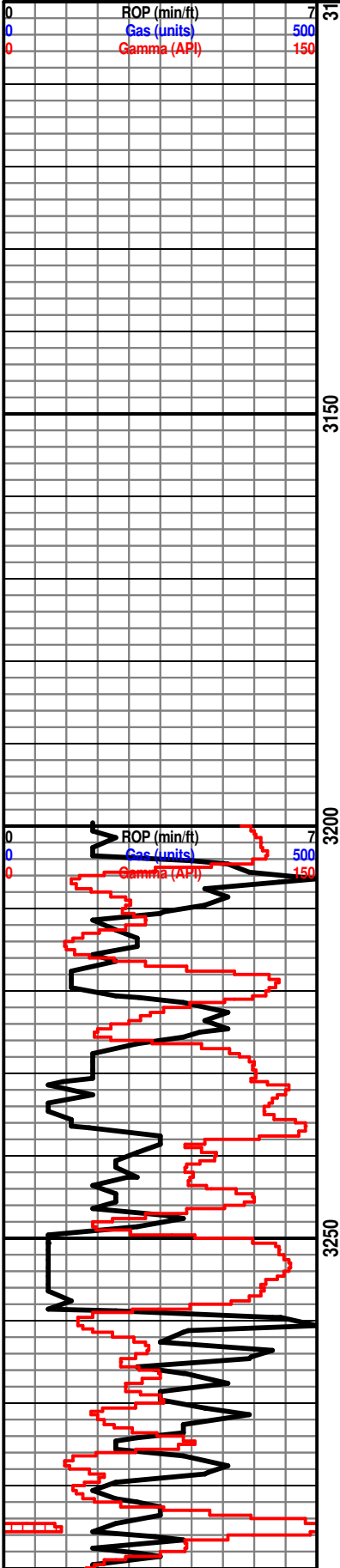
Depth

Lithology

Oil Shows

Geological Descriptions

DST/Mud/Survey



The open-hole logging was performed by Mr. Casey Patterson with Gemini Wireline, LLC (Hays, KS). Logs included: Compensated Density Neutron & Dual Induction. Formation tops and datums from the open-hole logs include the following:

Formation	E-Log	Datum
Anhydrite	1770	493
Topeka	3258	-995
Heebner	3465	-1202
Toronto	3488	-1225
Lansing	3504	-1241
B/KC	3724	-1461
Arbuckle	3784	-1521
LTD	3884	-1621

Mud Engineer:  
Chris Keas

Ls: tan, sub xln, DNS

Sh: brn-grn

Ls: tan, fn xln, sl foss, DNS

Sh: gry-drk gry, sl slty

Sh: ala

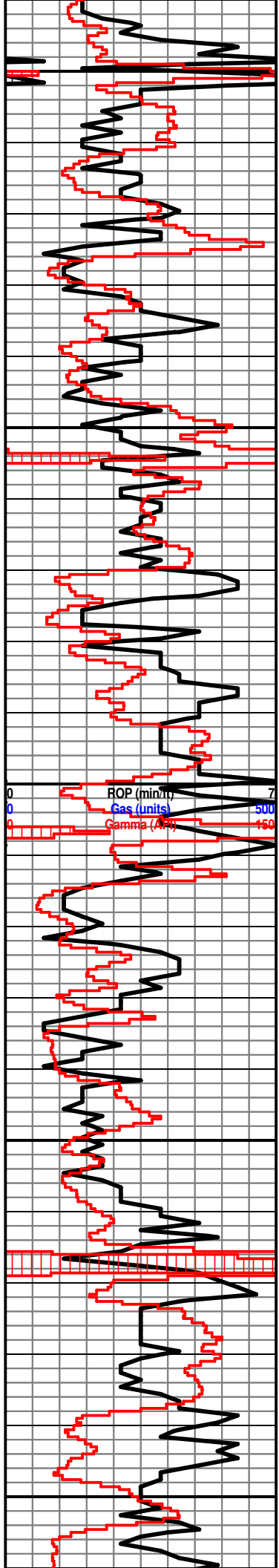
**Topeka 3259' (-996)**

Ls: lt gry, fn xln, sl mottled, scat sh: drk gry, mostly DNS

Ls: ala

Ls: tan-buff, fn xln, poor-fair int part porosity, vry

Wt: 8.5  
Vis: 87



It dead oil stn, NSFO, no odor

Sh: gry-brn

Ls: tan-buff, fn xln, foss, poor-fair int foss porosity, mostly barren, hvv chalk

Ls: ala

Ls: ala, mostly DNS

Sh: blk, carb

Sh: brn-rd-gry

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

Sh: gry-brn

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

Sh: blk, carb

Ls: off wh-tan, fn xln, ool in part, scat fair vuggy, scat micro oom porosity, fair tarry oil stn, NSFO, scat chert-off wh

Ls: off wh-tan, fn-sub xln, DNS, sl chert-off wh, chalky

Ls: ala

Ls: off wh-tan, fn xln, ool in part, poor mic oom porosity, It tarry oil stn in porosity, NSFO

**Heebner 3464' (-1201)**

Sh: blk, carb

Sh: gry-brn-grn

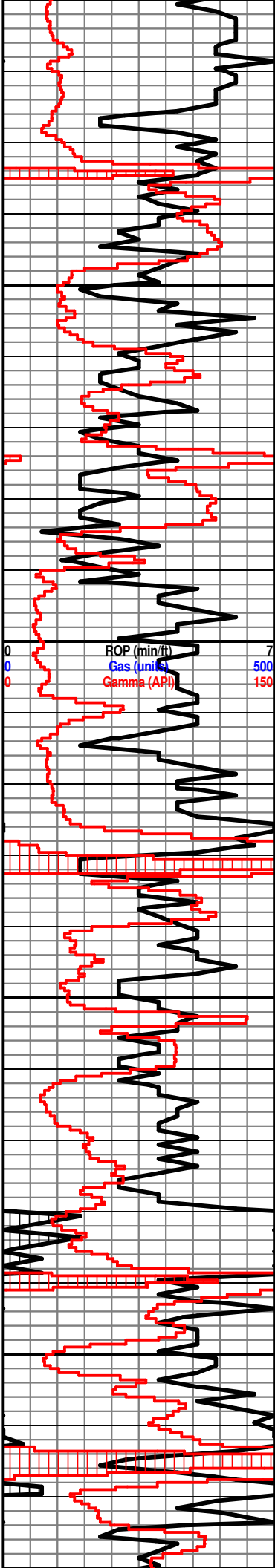
**Toronto 3485' (-1222)**

Ls: off wh-tan, fn xln, poor int xln porosit, mostly barren

Sh: drk gry-brn

**Lansing 3503' (-1240)**

Ls: off wh-tan, fn xln, poor int part porosity, barren, hvv chalk



Ls: ala

Ls: off wh-tan, fn xln, scat fair vuggy porosity, mostly barren, scat chert-off wh

Sh: drk gry-brn, soft

Ls: off wh-tan, fn-md xln, foss, fair int xln & fair-good int foss porosity, good oil stn in porosity, FSFO, good odor

Sh: lt gry

Ls: off wh-tan, fn-md xln, poor-fair int xln & scat int foss porosity, fair oil stn, SSFO, fair-good odor

Sh: lt-drk gry

Ls: off wh, fn-md xln, foss, fair-good int xln & scat int foss porosity, scat fair oil stn in porosity, FSFO in cup, good odor

Ls: off wh-tan, fn xln, ool, poor-fair oom porosity, mostly barren, NSFO

Ls: ala, hvy chert-off wh

Sh: drk gry-blk

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

Sh: lt-drk gry

Ls: off wh-tan, fn xln, poor-fair int xln porosity, fair oil stn in porosity, fair-good odor, SSFO when broken

Sh: gry-brn

Ls: off wh-tan, fn-sub xln, mostly DNS, scat chert-off wh, scat chalk

Sh: lt-drk gry-blk

Ls: tan-lt gry, fn xln, poor int xln porosity, scat dead oil stn, NSFO, no odor, scat chalk

Sh: drk gry-blk

**B/KC 3725' (-1460)**

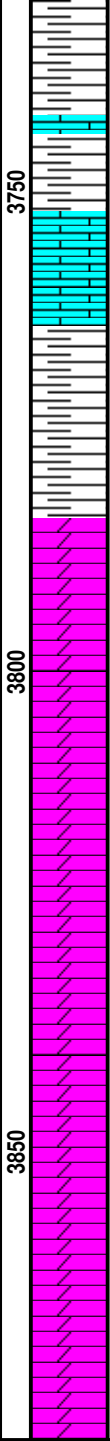
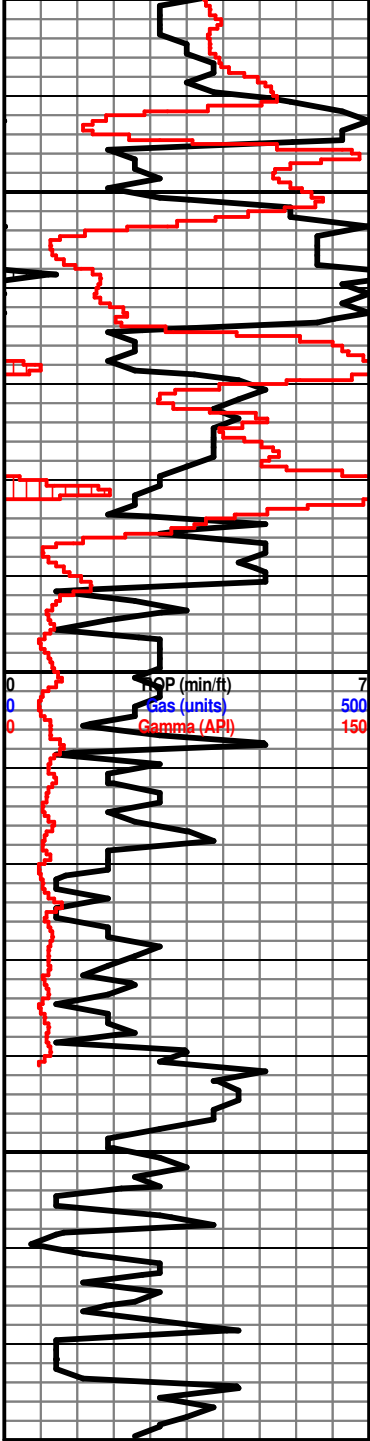
Wt: 8.6

Vis: 65

Lost All Fluid @ 3,674'; Stopped drilling for 4 hours

Wt: 8.5

Vis: 57



Sh: gry-brn-rd, soft

Ls: tan-gry, fn-sub xln, scat chert-off wh, barren

Ls: ala

Sh: lt gry-brn

Sh: lt-drk gry-grn, soft, scat cong: DNS

**Arbuckle 3783' (-1520)**  
Dolo: off wh-tan, fn xln, sucrosic xln in part, poor int xln porosity, scat sh: drk gry-grn

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

Dolo: off wh-tan, fn-md xln, scat crs xln, fair-good sucrosic xln porosity, good oil sat, FSFO, SO in cup, fair-good odor, fair yel fluor

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

Dolo: off wh-tan, md sucrosic xln, fair int xln porosity, fair oil sat, SSFO, fair-good odor, fair yel fluor

Dolo: off wh-tan, fn-md xln, poor-fair int xln porosity, mostly barren, hvy chert-off wh, scat sh: grn

Dolo: ala

Dolo: off wh-tan, fn-md xln, poor-fair int xln & scat vuggy porosity, mostly barren, scat sh: grn

Dolo: ala

Wt: 8.7  
Vis: 73

Survey: 1 1/2 degrees