









Form	ACO1 - Well Completion
Operator	Farmer, John O., Inc.
Well Name	SUTOR-ZIEGLER 12
Doc ID	1705425

All Electric Logs Run

Micro Resistivity
Compensated Density Neutron
Dual Induction
Cement Bond



Form	ACO1 - Well Completion
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#### Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.25	8.625	23	223	80/20 Pozmix	190	3% C.C., 2% gel
Production	7.875	5.50	15.50	4028	QMDC	175	1/4# floseal, 500 gal. M.F.





**Discovery  
Drilling**

P.O. Box 763 • Hays, KS 67601 • OFFICE (785) 623-2920 • CELLULAR (785) 635-1511

### DRILLER'S LOG

Operator: John O. Farmer, Inc. Lic# 5135 Contractor: Discovery Drilling Co., Inc. LIC#31548  
370 West Wichita Avenue - P.O. Box 352 PO Box 763  
Russell, KS 67665 + 0352 Hays, KS 67601

Lease: Sutor-Ziegler # 12 Location: 1950 FN - 1350 FEL  
SE/NE/SW/NE  
Section 30/ 8S/ 26W  
Sheridan County, KS

Loggers Total Depth: 4028' API#15- 179-21,493-00-00  
 Rotary Total Depth: 4030' Elevation: 2592 GL - 2600 KB  
 Commenced: 2/6/2023 Completed: 2/11/2023  
 Casing: 8 5/8" @ 223'W/190sks Status: Injection Well  
5.5" @ 4028'W/175sks  
DV Tool @ 2210' W/400sks  
(Cement Circuiated to Surface)

### DEPTHS & FORMATIONS (All from KB)

Surface, Sand & Shales	<u>0'</u>	Shale	<u>2253'</u>
Dakota Sand	<u>1321'</u>	Shale & Lime	<u>2458'</u>
Shale	<u>1384'</u>	Shale	<u>2825'</u>
Cader Hill Sand	<u>1819'</u>	Shale & Lime	<u>3138'</u>
Red Bed Shale	<u>2021'</u>	Lime & Shale	<u>3694'</u>
Anhydrite	<u>2220'</u>	RTD	<u>4030'</u>
Base Anhydrite	<u>2253'</u>		

STATE OF KANSAS) )  
 ) ss  
 COUNTY OF ELLIS )

Thomas H. Alm of Discovery Drilling states that to the best of his knowledge  
 the above and foregoing is a true and correct log of the above captioned well.

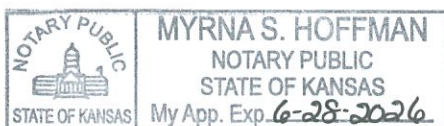
Thomas H. Alm

Subscribed and sworn to before me on 2-23-2023

My Commission expires: 6-28-2026

(Place stamp or seal below)

Myrna S. Hoffman  
 Notary Public





# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-1071  
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 3326

Date <u>7-6-23</u>	Sec. <u>30</u>	Twp. <u>8</u>	Range <u>26</u>	County <u>Sheridan</u>	State <u>Ks</u>	On Location	Finish <u>7:45 Pm</u>
				Location <u>Hill City 23 W 5 SE</u>			

Lease <u>SUTOR-ZIEGLER</u>	Well No. <u>12</u>	Owner
Contractor <u>DISCOVER</u>		To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.
Type Job <u>SURFACE</u>		
Hole Size <u>12 1/4</u>	T.D. <u>223</u>	Charge To <u>J.O. FARMER</u>
Csg. <u>8 5/8</u>	Depth	Street
Tbg. Size	Depth	City State
Tool	Depth	The above was done to satisfaction and supervision of owner agent or contractor.
Cement Left in Csg. <u>LS</u>	Shoe Joint	Cement Amount Ordered <u>1904 80/20-3-2</u>
Meas Line	Displace <u>13 1/4</u>	

EQUIPMENT			Common <u>152</u>
Pumptrk <u>16</u>	No.	Cementer <u>BILL</u>	Poz. Mix <u>38</u>
		Helper	
Bulktrk	No.	Driver <u>DICK</u>	Gel. <u>3</u>
		Driver	
Bulktrk	No.	Driver <u>TIM</u>	Calcium <u>7</u>
		Driver	

JOB SERVICES & REMARKS		Hulls
Remarks:		Salt
Rat Hole		Flowseal
Mouse Hole		Kol-Seal
Centralizers		Mud CLR 48
Baskets		CFL-117 or CD110 CAF 38
D/V or Port Collar		Sand
<u>Set e 223</u>		Handling <u>200</u>
<u>Cement 1904</u>		Mileage
<u>pump plug w/ 13 1/4 bbls</u>		FLOAT EQUIPMENT
<u>Cement DID CIRC.</u>		Guide Shoe
		Centralizer
		Baskets
		AFU Inserts
		Float Shoe
		Latch Down
		Pumptrk Charge
		Mileage

X Signature <u>[Signature]</u>	Tax
	Discount
	Total Charge



# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-1071

Home Office P.O. Box 32 Russell, KS 67665

No. 3332

Cell 785-324-1041

Date	2-11-23	Sec.	30	Twp.	8	Range	26	County	Sheridan	State	KS	On Location		Finish	6:15 Am
ZIEGLER								Location Hill City 2.3 W S SE							
Lease	SUTOR- <del>12</del>				Well No. 12				Owner						
Contractor	DISCOVERY								To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.						
Type Job	Long String								Charge To J.O. FARMER						
Hole Size	7 7/8				T.D. 4030				Csg. SE						
Csg.					Depth				Street						
Tbg. Size					Depth				City State						
Tool					Depth				The above was done to satisfaction and supervision of owner agent or contractor.						
Cement Left in Csg.	30.20				Shoe Joint 30.20				Cement Amount Ordered 175 gal Cem 1090 Salt S Gil.						
Meas Line					Displace 95				400M 8/20 QMDL 4 # Flo Seal 500 gal MF.						
EQUIPMENT								Common 175							
Pumptrk 17	No.	Cement	B:11						Poz. Mix						
	No.	Helper	NICK						Get. KCH 2 gal						
Bulktrk	No.	Driver	CORY						Calcium						
Bulktrk	No.	Driver	BRYANT												
JOB SERVICES & REMARKS								Hulls							
Remarks:								Salt 15							
Rat Hole 15								Flowseal 875H							
Mouse Hole 30								Kol-Seal							
Centralizers -7								Mud CLR 48							
Baskets - 2								CFL-117 or CD110 CAF 38							
D/V or Port Collar								Sand							
pipe joint 4028.54								Handling 192							
shoe jt 30.20								Mileage							
Insert 3998.34								FLOAT EQUIPMENT							
								Guide Shoe							
pump 500 gal Flo. sh								Centralizer - 3							
Cemt w/ 175H								Baskets - 2							
pump plug w/ 9.5 bbls								AFU Inserts							
								Float Shoe 1							
								Latch Down - 1							
Land plug c								D.U. 1							
Float DID hold															
								Pumptrk Charge Prod Spring Bottom Stage							
								Mileage 50							
								Tax							
								Discount							
Signature Ryan Jasch								Total Charge							

Thanks





# AUSTIN B. KLAUS



**Cell 785.650.3629**  
**Work 785.483.3145**  
**Ext 225**

**PO BOX 352**  
**Russell, KS 67665**  
**austin.klaus@johnofarmer.com**

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

**Well Name:** Sutor-Ziegler #12  
**API:** 15-179-21493-00-00  
**Location:** Sheridan County  
**License Number:**  
**Spud Date:** 2/6/2023  
**Surface Coordinates:** Section 30-Township 8 South-Range 26 West  
1,950' FNL & 1,350' FEL  
**Bottom Hole Coordinates:** Vertical well w/ minimal deviation, same as above  
**Ground Elevation (ft):** 2,592  
**Logged Interval (ft):** 3,300  
**Formation:** Topeka-Lansing-Kansas City  
**Type of Drilling Fluid:** Chemical (Andy's Mud & Chemical Co.)

**Region:** Kansas  
**Drilling Completed:** 2/11/2023  
**K.B. Elevation (ft):** 2,600  
**Total Depth (ft):** 4,030  
**To:** RTD

Printed by StripLog from WellSight Systems 1-800-447-1534 [www.WellSight.com](http://www.WellSight.com)

## OPERATOR

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

## Comments

The Sutor-Ziegler #12 well was drilled by Discovery Drilling Rig #4 (Ryan Gaschler).

The Sutor-Ziegler #12 was drilled to serve as a water-injection well for secondary oil recovery on the Sutor-Ziegler Unit WF (4 active producing wells). Structurally, this well ran slightly lower than expected, according to 3D seismic. The Lansing-Kansas City was picked 6' low to the comparison well (Ziegler #6, 3,845' FSL & 2,310' FEL). Geologic samples were collected and 1' drill time was recorded from 3,300'-4,030'. The geologist noted fair-good development with oil shows in the Toronto, Lansing A,B,C,F,H, & K zones. 5 1/2" production casing was set on February 11, 2023 to prepare this well for water injection.



# ROCK TYPES

Anhy  
Bent  
Brec  
Cht

Clyst  
Coal  
Congl  
Dol

Gyp  
Igne  
Lmst  
Meta

Mrlst  
Salt  
Shale  
Shcol

Shgy  
Sltst  
Ss  
Till

# OTHER SYMBOLS

**POROSITY**  
E Earthy  
F Fenest  
F Fracture  
X Inter  
M Moldic  
O Organic  
P Pinpoint

☒ Vuggy

**SORTING**  
W Well  
M Moderate  
P Poor

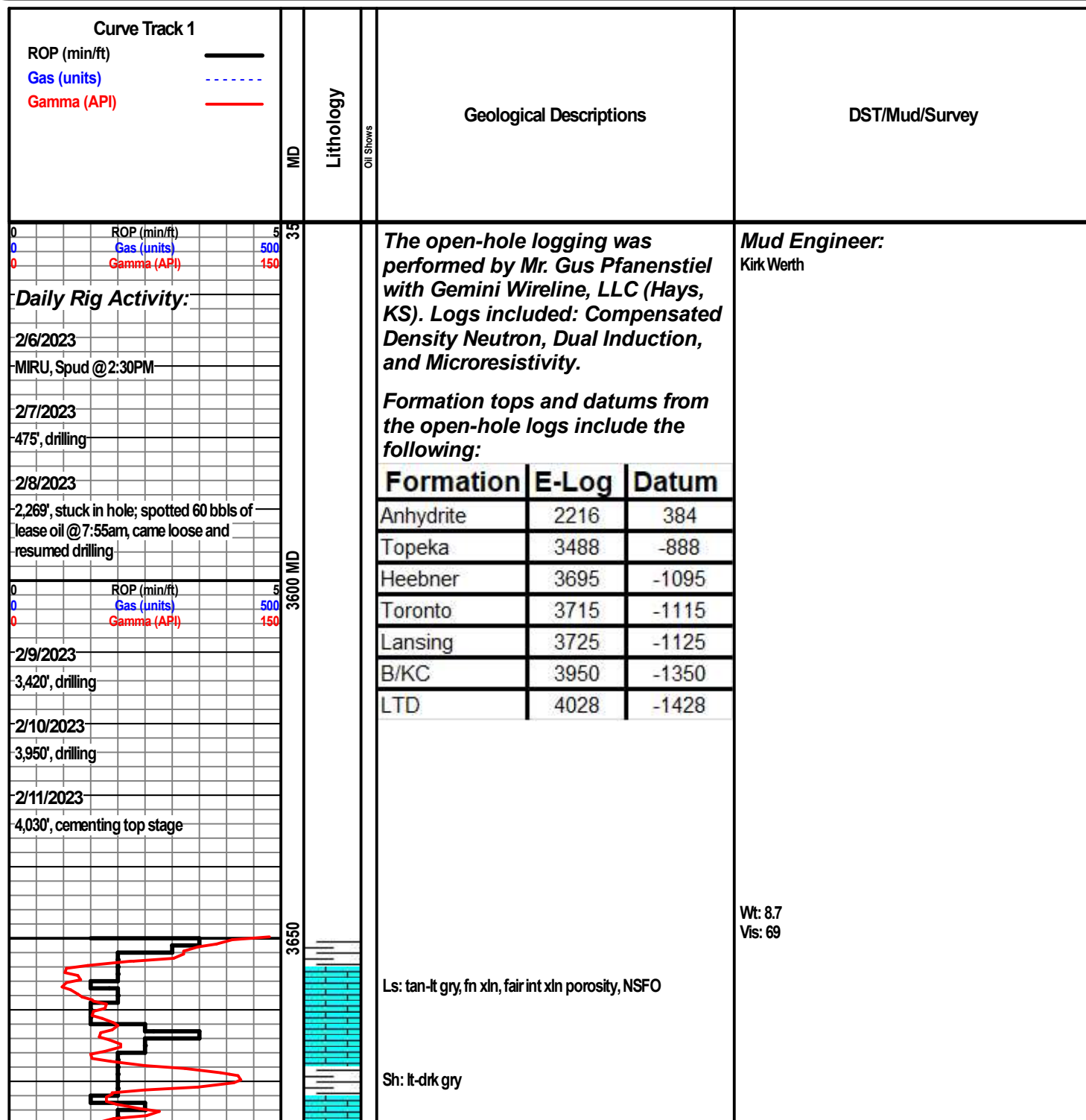
**ROUNDING**  
R Rounded  
r Subrnd  
a Subang  
A Angular

☒ Spotted  
☒ Ques  
☒ Dead

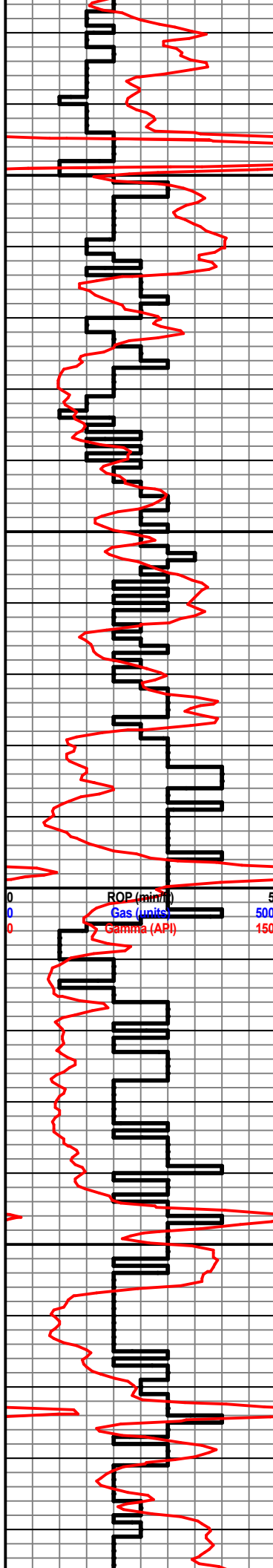
**EVENT**  
☒ Rft  
☒ Sidewall

**INTERVAL**  
☒ Core  
☒ Dst

**OIL SHOW**  
☒ Even







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

### Heebner 3695' (-1095)

Sh: blk, carb, fissile

Sh: lt-drk gry, scat bm

### Toronto 3715' (-1115)

Ls: off wh-tan, fn xln, scat fair int xln porosity, scat-fair drk bm oil stn, SSFO, fair odor

### Lansing 3725' (-1125)

Ls: off wh-tan, fn xln, ool, fair-good ool porosity, scat int xln porosity, fair-good oil sat, FSFO, good odor

Sh: lt-drk gry, scat bm

Sh: lt-drk gry

Ls: off wh-tan, fn xln, scat foss, fair-good int foss porosity, fair oil sat, FSFO, fair-good odor

Sh: lt-drk gry

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

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

Sh: lt gry-bm

Ls: off wh-tan, fn xln, scat foss, fair-good int xln & vuggy porosity, good oil sat, FSFO, good odor

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

Ls: off wh-tan, fn xln, no visible porosity, NSFO

Sh: drk gry-blk

Ls: off wh-tan, fn xln, scat foss, fair-few pcs good int xln & scat foss porosity, good oil sat, SSFO, fair-good odor

Sh: lt-drk gry

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

Sh: lt-drk gry-bm



