KOLAR Document ID: 1509859

Confidentiality Requested:
☑ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1
January 2018
Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 4706
Name: Messenger Petroleum, Inc.
Address 1: 525 S MAIN ST
Address 2:
City: KINGMAN State: KS Zip: 67068 + 1968
Contact Person: Jon F. Messenger
Phone: (620) 532-5400
CONTRACTOR: License # 5142
Name: Sterling Drilling Company
Wellsite Geologist: Frank Mize
Purchaser:

Designate Type of Completion:
☑ New Well ☐ Re-Entry ☐ Workover

☐ Oil ☐ WSW ☐ SWD
☐ Gas ☑ DH ☐ EOR
☐ OG ☐ GSW
☐ CM *(Coal Bed Methane)*
☐ Cathodic ☐ Other *(Core, Expl., etc.)*:

If Workover/Re-entry: Old Well Info as follows:
Operator:
Well Name:
Original Comp. Date: Original Total Depth:

☐ Deepening ☐ Re-perf. ☐ Conv. to EOR ☐ Conv. to SWD
☐ Plug Back ☐ Liner ☐ Conv. to GSW ☐ Conv. to Producer

☐ Commingled Permit #:
☐ Dual Completion Permit #:
☐ SWD Permit #:
☐ EOR Permit #:
☐ GSW Permit #:

12/15/2019	12/19/2019	12/20/2019
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No.: 15-139-20107-00-00
Spot Description: E/2 E/2 NW
__ - E2 - E2 - NW Sec. 8 Twp. 17 S. R. 17 ☑ East ☐ West
1320 Feet from ☑ North / ☐ South Line of Section
2310 Feet from ☐ East / ☑ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☐ NE ☑ NW ☐ SE ☐ SW
GPS Location: Lat: (e.g. xx.xxxxx) , Long: (e.g. -xxx.xxxxx)
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Osage
Lease Name: SPENCER Well #: 1
Field Name:
Producing Formation: dry hole
Elevation: Ground: 1024 Kelly Bushing: 1037
Total Vertical Depth: 2597 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 366 Feet
Multiple Stage Cementing Collar Used? ☐ Yes ☑ No
If yes, show depth set: Feet
If Alternate II completion, cement circulated from: 366
feet depth to: 0 w/ 255 sx cmt.

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)

Chloride content: 1200 ppm Fluid volume: 400 bbls
Dewatering method used: Hauled to Disposal
Location of fluid disposal if hauled offsite:
Operator Name: Stroke of Luck Energy & Exploratioin
Lease Name: Hladky License #: 35125
Quarter NW Sec. 22 Twp. 7 S. R. 13 ☑ East ☐ West
County: Jackson Permit #: D-32247

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

☐ **Confidentiality Requested**
Date: 03/17/2020
☐ **Confidential Release Date:** 03/17/2022
☐ **Wireline Log Received** ☐ **Drill Stem Tests Received**
☑ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** Rene Stucky **Date:** 04/07/2020

Operator Name: Messenger Petroleum, Inc. Lease Name: SPENCER Well #: 1

Sec. 8 Twp. 17 S. R. 17 ☑ East ☐ West County: Osage

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken *(Attach Additional Sheets)*	☑ Yes	☐ No
Samples Sent to Geological Survey	☑ Yes	☐ No
Cores Taken	☐ Yes	☑ No
Electric Log Run	☐ Yes	☑ No
Geologist Report / Mud Logs	☑ Yes	☐ No
List All E. Logs Run:		

☐ Log Formation (Top), Depth and Datum ☑ Sample

Name	Top	Datum
KC	559	+478
Altamont	918	+119
Mississippian	1553	-516
Kinderhook	1734	-697
Viola	1807	-770
Simpson	1874	-837
Arbuckle	1908	-871

CASING RECORD ☑ New ☐ Used

Report all strings set-conductor, surface, intermediate, production, etc.

Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12.25	8.625	24	366	Class A	255	2% gel, 3% CC

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
☐ Perforate ☐ Protect Casing ☐ Plug Back TD ☐ Plug Off Zone	-			
	-			

1. Did you perform a hydraulic fracturing treatment on this well? ☐ Yes ☑ No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? ☐ Yes ☐ No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? ☐ Yes ☐ No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/ Injection:	Producing Method: ☐ Flowing ☐ Pumping ☐ Gas Lift ☐ Other *(Explain)*

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS:	METHOD OF COMPLETION:	PRODUCTION INTERVAL: Top / Bottom
☐ Vented ☐ Sold ☐ Used on Lease *(If vented, Submit ACO-18.)*	☐ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*	

Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record *(Amount and Kind of Material Used)*

TUBING RECORD: Size: Set At: Packer At:

Mail to: KCC - Conservation Division, 266 N. Main, Suite 220, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	Messenger Petroleum, Inc.
Well Name	SPENCER 1
Doc ID	1509859

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	24	366	Class A	255	2% gel, 3% CC

810 E 7TH
PO Box 92
EUREKA, KS 67045
(620) 583-5561

ELITE CEMENTING & ACID SERVICE, LLC

Cement or Acid Field Report

Ticket No. **4915**
Foreman Kevin McCoy
Camp Eureka

API # 15-139-20107-00-00

Date	Cust. ID #	Lease & Well Number	Section	Township	Range	County	State
12-16-19	1367	Spencer # 1	8	17S	17E	Osage	Ks

Customer			Safety Meeting	Unit #	Driver	Unit #	Driver
Messenger Petroleum Inc			KM	104	Alan M.		
Mailing Address: 525 S. Main St.			AM	113	Kevin M.		
			SM	127 P.U.	Steve M.		
City: Kingman	State: Ks	Zip Code: 67048					

Job Type Surface
Casing Depth 370' K.B.
Casing Size & Wt. 8 5/8" 24#
Displacement 21.5 Bbl

Hole Depth 370' KB
Hole Size 12 1/4
Cement Left in Casing 30'
Displacement PSI

Slurry Vol. 60
Slurry Wt. 15#
Water Gal/SK 6.5
Bump Plug to

Tubing
Drill Pipe
Other
BPM

Remarks: Safety Meeting: Rig up to 8 5/8 Casing. Break Circulation w/ 12 Bbl Fresh water. Mixed 255 sks Class "A" Cement w/ 3% CaCl2, 2% Gel, 1/4# Floseal/sk @ 15#/gal = 60 Bbl Slurry. Displace w/ 21.5 Bbl fresh water. Shut Casing in. Good Cement Returns to Surface = 12 Bbl slurry to Pit. Job Complete. Rig down

Code	Qty or Units	Description of Product or Services	Unit Price	Total
C 101	1	**Pump Charge**	890.00	890.00
C 107	70	**Mileage**	4.20	294.00
C 200	255 sks	Class "A" Cement	15.75	4016.25
C 205	720#	CaCl2 3%	.63#	453.60
C 206	480#	Gel 2%	.21#	100.80
C 209	64#	Floseal 1/4#/sk	2.35#	150.40
C 108B	11.98 Tons	Ton Mileage	1.40	1174.04
			Sub Total	7079.09
		Thank You — M	Less 5%	371.66
		7.5%	**Sales Tax**	354.08
			Total	7,061.51

Authorization Alan Loftis **Title**

GLOBAL OIL FIELD SERVICES, LLC

13913

REMIT TO 24 S. Lincoln
Russell, KS 67665

SERVICE POINT: Russell KS

DATE 12-20-19	SEC. 8	TWP. 17S	RANGE 17E	CALLED OUT	ON LOCATION	JOB START	JOB FINISH 10:30 am
LEASE Sperrer	WELL #. 1		LOCATION [illegible]			COUNTY Osage	STATE Ks
OLD OR NEW (CIRCLE ONE)			5W [illegible]				

CONTRACTOR Sterling Drilling Rig #5
OWNER Messenger Petroleum INC
TYPE OF JOB Rotary Plug
HOLE SIZE 7⅞ T.D. 2597
CASING SIZE DEPTH
TUBING SIZE DEPTH
DRILL PIPE DEPTH
TOOL DEPTH
PRES. MAX MINIMUM
MEAS. LINE SHOE JOINT
CEMENT LEFT IN CSG.
PERFS
DISPLACEMENT

CEMENT
AMOUNT ORDERED 215 sx 60/40 Poz 4% gel

EQUIPMENT

PUMP TRUCK # 409 CEMENTER Cody
HELPER Tom
BULK TRUCK # 397 DRIVER Jack
BULK TRUCK # DRIVER

COMMON	@		
POZMIX	@		
GEL	@		
CHLORIDE	@		
ASC	@		
	@		
	@		
	@		
	@		
	@		
	@		
	@		
	@		
HANDLING	@		
MILEAGE			
		TOTAL	

REMARKS:

2597' 15 sx
1405' 15 sx
1452' 15 sx
900' 15 sx
415' 1[illegible] s 125 sx to Circulate to Surface
Rat 30 sx

SERVICE

DEPTH OF JOB			
PUMP TRUCK CHARGE			
EXTRA FOOTAGE	@		
MILEAGE	@		
MANIFOLD	@		
	@		
	@		
		TOTAL	

CHARGE TO: Messenger Petroleum INC
STREET
CITY STATE ZIP

PLUG & FLOAT EQUIPMENT

	@		
	@		
	@		
	@		
	@		
		TOTAL	

Global Oil Field Services, LLC
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME Alan Loftis

SIGNATURE Alan Loftis

SALES TAX (If Any)
TOTAL CHARGES
DISCOUNT IF PAID IN 30 DAYS

MESSENGER PETROLEUM, INC.

GEOLOGICAL REPORT

DRILLING TIME & SAMPLE LOG

REPORT PREPARED BY FRANK S. MIZE/GEOLOGIST

API #: 15-139-20,106

FRANK S. MIZE LICENSED KANSAS GEOLOGIST 365

COMPANY	Messenger Petroleum, Inc.
LEASE	Spencer #1
FIELD	Wildcat
LOCATION	1320' FNL & 2310' FWL
SEC 8	TWSP 17S RGE 17E
COUNTY Osage	STATE Kansas
CONTRACTOR	Sterling Drilling, Rig #5
SPUD 12-16-19	COMP 12-20-19
SAMPLES SAVED FROM 400'	TO RTD

ELEVATION
K.B. 1037
D.F.
G.L. 1024

DEPTH MEASURED FROM KB

Log ____ Drilling ✓

CASING
Surface 8 5/8" @ 370' w/255sx
Production NONE

Electric Logs
NONE

FORMATION	SAMPLE	E LOG	DATUM	A. log	B.	C.
Lane	468		+569	+561		
KC	559		+478	+491		
BKC	748		+289	+297		
Altamont	918		+119	+130		
Cherokee	1018		+19	+13		
Mississippian	1553		-516	-403		
Kinderhook	1734		-697	-680		
Hunton	1795		-758	-749		
Viola	1807		-770	-757		
Simpson	1874		-837	-825		
Arbuckle	1908		-871	-878		
Reagan	2505		-1468	-1467		
Granite	2555		-1518	UNDET		
RTD	2597		-1560	-1535		

REFERENCE WELLS
A. Emery Energy: Briggs Altex #1: C NE SE 5-17S-17E
B.
C.

Drilling operation and information provided by:

License #5142

SHALE
SANDSTONE
LIMESTONE
DOLOMITE
HALITE
ANHYDRITE/GYPSUM

NOTE:
Please note that Sterling Drilling's gas detection was working properly throughout the drilling of this well. The only point at which the gas readings went above background gas readings was just above the Mississippian. The highest reading noted was 35 units, while CFS for DST #1 in the Mississippian. After DST #1, we read nothing but background gas through the remainder of the well. Should anyone associated with the drilling of this well want the raw data file, I will be glad to provide it.

400

Limestone: off white, medium crystalline, poor intercrystalline porosity, no show

Shale: dirty dark gray

Limestone: off white to gray to medium brown, medium crystalline, poor intercrystalline porosity, no show, fossiliferous w/echinoid spines

450

Limestone: off white to light beige, medium to coarsely crystalline, poor intercrystalline porosity, some very dense, no show

Limestone: light gray, fine to coarsely crystalline, little visible porosity, no show

Lane 468 +569

Shale: gray to black

Shale: gray to black

500

Limestone: gray, coarsely crystalline, dense, no visible porosity, sample looks out of place

Shale: gray

550

Shale: gray

Kansas City 559 +478

Limestone: light gray, medium to coarsely crystalline, little visible porosity, some brown mineral staining (not oil), no show, some grayish green shale

Limestone: light gray, medium to coarsely crystalline, little visible porosity, some brown mineral staining, no show, some grayish green shale

600

Shale: gray to black

Limestone: light gray, medium to coarsely crystalline, little visible porosity, no show

Shale: gray to black

Limestone: light to dark gray, medium to coarsely crystalline, little visible porosity, no show

650

Limestone: beige to gray, fine to mediium crystalline, poor intercrystalline porosity, fossiliferous w/fusulinids

Sandstone: gray, fine rounded to subrounded grains, well sorted, very good cement, fair intergranular porosity, no show

Limestone: light beige, fine to medium crystalline, little visible porosity, no show, fossiliferous with fusulinids

Limestone: light gray, coarsely crystalline, dense, no visible porosity, no show

700

Shale: dark gray

Limestone: light gray, coarsely crystsalline, no visible porosity, no show

Limestone: beige to gray, medium to coarsely crystalline, no visibleporosity, no show, fossiliferous with crinoids

Limestone: dirty beige to gray, medium to coarsely crystalline, no visibleporosity, no show

Limestone: light gray, fine grained to coarsely crystalline, dense, no visible porosity, no show, trace black shale

BKC 748 +389

750

Shale: gray

Shale: gray

Shale: gray

Sandstone: gray, very fine rounded grains, well sorted, fair silica cement, good intergranular porosity, no show, trace mica

Bandara/Weiser Sandstone

Sandstone: gray, very fine rounded grains, well sorted, fair silica cement, good intergranular porosity, no show, trace mica, much gray shale

800

Sandstone: gray, very fine rounded grains, well sorted, fair silica cement, good intergranular porosity, no show, trace mica, much gray shale

Sandstone: gray, very fine rounded grains, well sorted, fair silica cement, good intergranular porosity, no show, trace mica, much gray shale

Sandstone: gray, very fine rounded grains, well sorted, fair silica cement, good intergranular porosity, no show, trace mica, much gray shale

Sandstone: gray, very fine rounded grains, well sorted, fair silica cement, good intergranular porosity, no show, trace mica, much gray shale

Siltstone: gray

850

Siltstone: gray

Siltstone: gray

Siltstone: gray

Lenopah 882 +155

Limestone: light brown to light gray, coarsely crystalline, dense, no visible porosity, no show

Shale: gray

900

Limestone: light brown to light gray, coarsely crystalline, dense, no visible porosity, no show

Shale: gray to brown to mustard yellow

Altamont 918 +119

Limestone: gray, coarsely crystalline, very dense, no porosity, no show

Shale: gray to greenish gray, much light gray limestone with no visible porosity

Shale: gray

950

Shale: gray

Pawnee 959 +78

Limestone: off white to light beige, fine to medium crystalline, good intercrystalline porosity, large calcite crystals, much gray shale

Shale: gray

Limestone: gray, coarsely crystalline, dense, no porosity

Shale: gray

Shale: gray to brown

Limestone: light gray to beige, coarsely crystalline, no visible porosity, fair amount pyrite

1000

Summit

Shale: gray to brown to black

Limestone: dirty reddish brown, highly argillaceous

Cherokee 1018 +19

Mulky

Shale: reddish brown to dark gray to black

Shale: reddish brown to dark gray to black, trace blue green siltstone

Squirrel Sandstone

Sandstone: light gray, very fine grained, well sorted, poorly cemented, very good intergranular porosity, no show

1050

Shale: gray, arrenaceous

Shale: gray, arrenaceous

Shale: gray, arrenaceous

Shale: gray, to reddish brown

Shale: gray

1100

Shale: gray to dark gray

Shale: gray to dark gray

Shale: gray to dark gray with much gray fine grained sandstone

Shale: gray to dark gray with much gray fine grained sandstone

Shale: gray to dark gray with much gray fine grained sandstone

1150

Shale: light gray with much gray fine grained sandstone

Shale: light gray with much gray fine grained well cemented sandstone

Shale: light gray with much gray fine grained

well cemented sandstone

Shale: light to dark gray to reddish brown with much gray fine grained well cemented sandstone

Shale: light to dark gray to reddish brown with much gray fine grained well cemented sandstone

1200

Shale: gray, arrenaceous, fair amout gray sandstone

Shale: gray to reddish brown, some arrenaceous, fair amout gray sandstone, pyritic

Shale: red to gray, fair amount gray sandstone, highly argillaceous

Shale: red to gray, fair amount gray sandstone, highly argillaceous

Shale: blue green to gray to black, fair amount gray sandstone

1250

Limestone: off white to beige, fine to medium crystalline, poor intercrystalline porosity, no show

Shale: red to green to dark gray, trace gray fine grained sandstone

Shale: gray to black

Shale: gray to black

Shale: gray to black

1300

Shale: gray to black

Shale: gray to black

Shale: gray to black

Shale: gray to black

Shale: gray to black

1350

Shale: gray to black

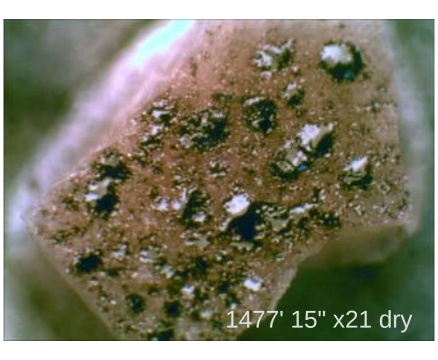
Shale: gray to black

Shale: gray to black

1400

Shale: gray to black

Shale: gray to black



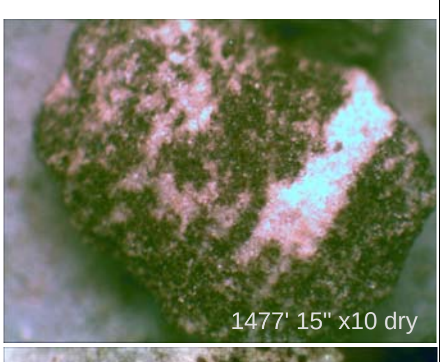
Shale: gray to black

1450

Mississippian 1553 -516

Chert: off white, fresh, poor to fair pin point and weathered porosity, very good show heavy black oil, will not flow/mix with water, fair to good odor, no even staining,
Chert: off white, fresh to tripolitic, fair pinpoint and tripolitic porosity, fair amount large dolomite crystals w/excellent intercrystalline porosity, excellent show heavy black oil, strong odor, oil does not mix w/water

Note: this oil has extremely pale fluorescence

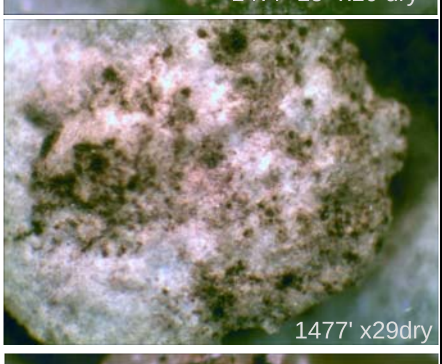


Dolomite: white to off white, fine to coarsely crystalline, poor intercrystalline and pin point porosity, scattered spotted show free oil, good odor

Dolomite: off white to gray, fine to coarsely crystalline, fair intercrystalline porosity, no show, fair amount pyrite, trace off white to opaque chert

1500

Dolomite: off white to beige, fine to medium crystalline, little visible porosity, trace blue green dolomite



Dolomite: off white to gray, fine crystalline, good intercrystalline porosity, no show, very large pyrite crystals

Dolomite: off white to gray, fine crystalline, good intercrystalline porosity, no show, very large pyrite crystals

Dolomite: light brown to beige, coarsely crystalline, little visible porosity, no show, fair amount gray chert

1550

Chert: pale gray opaque, fresh, trace light brown sucrosic dolomite w/excellent intercrystalline porosity

Chert: pale gray opaque, fresh, trace light brown sucrosic dolomite w/excellent intercrystalline porosity

Chert: pale gray opaque, fresh, fair amount light brown sucrosic dolomite w/excellent intercrystalline porosity

Chert: pale gray opaque, fresh, fair amount light brown sucrosic dolomite w/excellent intercrystalline porosity

Chert: pale gray opaque, fresh, fair amount light brown sucrosic dolomite fair intercrystalline porosity

Dolomite: beige to gray, fine to coarsely crystalline, fair to good intercrystalline porosity, fair amount white chert

1600

Dolomite: beige to gray, fine to coarsely crystalline, fair to good intercrystalline porosity, fair amount white chert

Limestone: off white, fine grained, dense, little visible porosity, fair amount off white chert and beige dolomite.

Limestone: off white to light gray, fine grained to coarsely crystlline, slightly dolomitic, little visible porosity, no show

Limestone: off white to light gray, fine grained to coarsely crystlline, slightly dolomitic, little visible porosity, no show

Limestone: medium to dark gray, fine to medium crystalline, very poor intercrystalline porosity, no show

1650

Limestone: medium to dark gray, fine to medium crystalline, very poor intercrystalline porosity, no show

Limestone: medium gray tp dirty brown, fine to medium crystalline, very poor intercrystalline porosity, no show trace gray chert

Limestone: medium gray tp dirty brown, fine to medium crystalline, very poor intercrystalline porosity, no show trace gray chert

Limestone: medium gray tp dirty brown, fine to medium crystalline, very poor intercrystalline porosity, no show trace gray chert

Limestone: medium gray, fine grained, micritic, little visible porosity, no show, trace gray chert

SHALE
SANDSTONE
LIMESTONE
DOLOMITE
HALITE
ANHYDRITE/GYPSUM

1700

Limestone: medium gray, fine grained, micritic, little visible porosity, no show, trace gray chert

Limestone: medium gray, fine grained, micritic, little visible porosity, no show, trace gray chert

Limestone: medium gray, fine grained, micritic, little visible porosity, no show, fair amount gray chert

Kinderhook 1734 -697

Shale: gray

Shale: gray to greenish gray

1750

Shale: gray to greenish gray

Shale: gray to greenish gray

Shale: gray to greenish gray

Shale: gray to greenish gray

Shale: gray to greenish gray

Hunton 1795 -758

Dolomite: light brown, medium crystalline, very good intercrystsalline porosity, no show

1800

Dolomite: light brown, medium crystalline, very good intercrystsalline porosity, no show

Viola 1807 -770

Limestone: off white, fine grained, no visible porosity

Limestone: off white, fine grained, no visible porosity

Limestone: off white, fine grained, slightly dolomitic, no visible porosity

Limestone: off white, medium to coarsely crystalline, little visible porosity, much pyrite, trace large dolomite crystals

1850

Limestone: off white, medium to coarsely crystalline, little visible porosity

Limestone: off white, medium to coarsely crystalline, little visible porosity, trace white to gray chert
Limestone: off white, medium to coarsely crystalline, little visible porosity, fair amount very fine grained sandstone w/dolomitic cement

Simpson 1874 -837

Sandstone: off white to gray to greenish gray, fine rounded grains, well sorted, poor silica cement, very good intergranular porosity, no show

Sandstone: frosted, fine to medium sub rounded grains, fairly sorted, poor silica cement, excellent intergranular porosity, no show

Sandstone: blue green, fine grained, well sorted, poor silica cement, very good intergranular porosity, no show, trace w/pyrite cement

1900

Arbuckle 1908 -871

Dolomite: off white to beige, coarsely crystalline, no visible porosity, fair amount off white chert

Dolomite: off white to beige, coarsely crystalline, no visible porosity, fair amount off white chert

Dolomite: off white to beige, coarsely crystalline, no visible porosity, fair amount off white chert

Dolomite: off white to beige, coarsely crystalline, no visible porosity, fair amount off white chert

1950

Dolomite: off white to beige, medium to coarsely crystalline, trace fair intercrystalline and vuggy porosity, fair amount off white chert

Dolomite: off white to light brown, coarsely crystalline, very poor intercrystalline porosity, fair amount off white chert

Dolomite: off white to light brown, coarsely crystalline, very poor intercrystalline porosity, fair amount off white chert

Dolomite: off white to light brown, coarsely crystalline, very poor intercrystalline porosity, fair amount off white chert

Dolomite: beige to gray, coarsely crystalline, little visible porosity, fair amount off white chert

2000

Dolomite: beige to gray, coarsely crystalline, little visible porosity, fair amount off white chert

Dolomite: beige to gray, coarsely crystalline, little visible porosity, fair amount off white chert

Dolomite: beige to gray, coarsely crystalline, little visible porosity, fair amount off white chert

Dolomite: beige to gray, coarsely crystalline, little visible porosity, fair amount off white chert

Dolomite: beige to gray, medium to coarsely crystalline, poor to fair intercrystalline porosity, fair amount off white chert

2050

Dolomite: beige to gray, medium to coarsely crystalline, poor to fair intercrystalline porosity, fair amount off white chert

Dolomite: beige to gray, medium to coarsely crystalline, poor to fair intercrystalline porosity, fair amount off white chert

Dolomite: beige to gray, medium to coarsely crystalline, poor to fair intercrystalline porosity, fair amount off white and trace oolitic chert

Dolomite: beige to gray, medium to coarsely crystalline, poor to fair intercrystalline porosity, fair amount off white chert, and trace large dolomite crytals

Dolomite: beige to gray, medium crystalline, excellent intercrystalline porosity, fair amount off white chert

2100

Dolomite: beige to gray, medium crystalline, excellent intercrystalline porosity, fair amount off white chert

Dolomite: beige to gray, medium to crystalline, fair to good intercrystalline porosity, fair amount off white chert

Dolomite: beige to gray, medium to crystalline, poor intercrystalline porosity, fair amount off white chert, trace large dolomite crystals

Dolomite: beige to gray, medium to crystalline, poor intercrystalline porosity, fair amount off white chert, trace quartz crystals

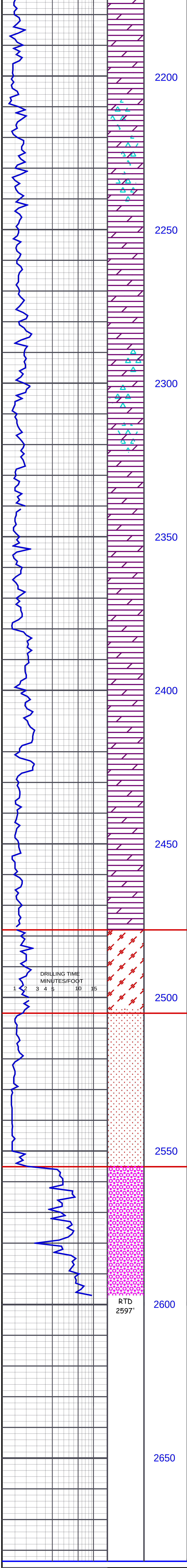
Dolomite: off white to light brown, medium to coarsely crystalline, very good intercrystalline porosity, no show, fair amount gray and trace white chert, 3 quartz crystals

2150

Dolomite: beige to gray, medium to coarsely crystalline, good intercrystalline porosity, fair amount chert and quartz crystals

Dolomite: beige to gray, medium to coarsely crystalline, good intercrystalline porosity, fair amount chert and quartz crystals

Dolomite: beige to gray, medium to coarsely crystalline,



Dolomite: off white to gray, fine to coarsely crystalline, fair intercrystalline porosity, trace chert

Dolomite: gray, coarsely crystalline, evidence of fracture porosity w/quartz crystal growth on dolomite

Dolomite: gray, coarsely crystalline, evidence of fracture porosity w/quartz crystal growth on dolomite

Dolomite: gray, coarsely crystalline, some arrenaceous, poor intercrystalline poroisty, much gray chert

Dolomite: gray, medium to coarsely crystalline, some arrenaceous, good intercrystalline poroisty, much gray chert, trace glauconite

Dolomite: gray, medium to coarsely crystalline, good intercrystalline poroisty, much gray chert, trace large quartz crystals

Dolomite: gray, medium to coarsely crystalline, good intercrystalline poroisty, trace gray chert

Dolomite: off white to gray, medium to coarsely crystalline, poor to good intercrystalline poroisty, trace gray chert

Dolomite: off white to gray, medium to coarsely crystalline, fair to good intercrystalline poroisty, trace gray chert

Dolomite: light gray to gray, medium to coarsely crystalline fair to good intercrystalline poroisty, trace gray chert and quartz crystals

Dolomite: light gray, medium to coarsely crystalline, fair intercrystalline poroisty, trace gray chert

Dolomite: light to medium gray, medium to coarsely crystalline, poor intercrystalline poroisty, much white chert and pyrite

Dolomite: light to medium gray, medium to coarsely crystalline, good intercrystalline poroisty, much white chert

Dolomite: light gray to beige, medium to coarsely crystalline, fair to good intercrystalline poroisty, much gray chert

Dolomite: light beige, medium to coarsely crystalline, good intercrystalline poroisty

Dolomite: off white to gray, medium to coarsely crystalline, good intercrystalline porosity, trace dolomite and quartz crystals

Dolomite: gray, medium to coarsely crystalline, fair to good intercrystalline porosity, trace white chert

Dolomite: off white to gray, medium to coarsely crystalline, fair to good intercrystalline porosity, fair amount quartz crystals, trace white chert

Dolomite: off white to gray, coarsely crystalline, poor intercrystalline porosity, trace white chert

Dolomite: off white to gray, coarsely crystalline, poor intercrystalline porosity, trace white chert, trace pyrite

Dolomite: off white to gray, trace medium to coarsely crystalline, poor to good intercrystalline porosity, trace white chert & quartz crystals

Dolomite: off white to gray, coarsely crystalline, little visible porosity

Dolomite: off white to gray, coarsely crystalline, little visible porosity

Dolomite: off white to gray, coarsely crystalline, little visible porosity

Dolomite: gray to beige to light brown, medium to coarsely crystalline, fair intercrystalline porosity

Dolomite: off white to gray, coarsely crystalline, little visible porosity

Dolomite: gray to beige, coarsely crystalline, little visible porosity

Dolomite: dull gray to light brown, medium crystalline, good intercrystalline porosity

Dolomite: dull gray to light brown, medium crystalline, good intercrystalline porosity

Dolomite: dull gray to light brown, medium crystalline, good intercrystalline porosity

Base Arbuckle 2478 -1441

Silica: clear to opaque, thin layers w/black flecs

Silica in thin layers w/black flecs, some glauconite, trace pyrite in thin flat threads

Sandstone: light blue gray, very fine grained, well sorted, well cemented, much silica w/black flecs and glauconite, trace pyrite

Reagan 2505 -1468

Sandstone: dirty gray, fine to very coarse grained, several very large frosted grains, poorly sorted, fair cement, many thin layers of silica

Sandstone: gray, fine grained, fine grains of mafic mineral, good sorting, well cemented, no show

Sandstone: gray, fine grained, fine grains of mafic mineral, good sorting, well cemented, no show, glauconitic

Sandstone: gray, fine grained, fine grains of mafic mineral, good sorting, well cemented, no show, glauconitic

Granite 2555 -1518

Silica: opaque, thicker layering than above

Granite

Granite

Granite

Granite

Messenger Petroleum, Inc.
Spencer #1
1320' FNL & 2310' FWL
8-17S-17E
Osage County, KS

1037 KB

Comments:

Company: Messenger Petroleum, Inc.
Lease: Spencer #1

Operation: Uploading recovery & pressures

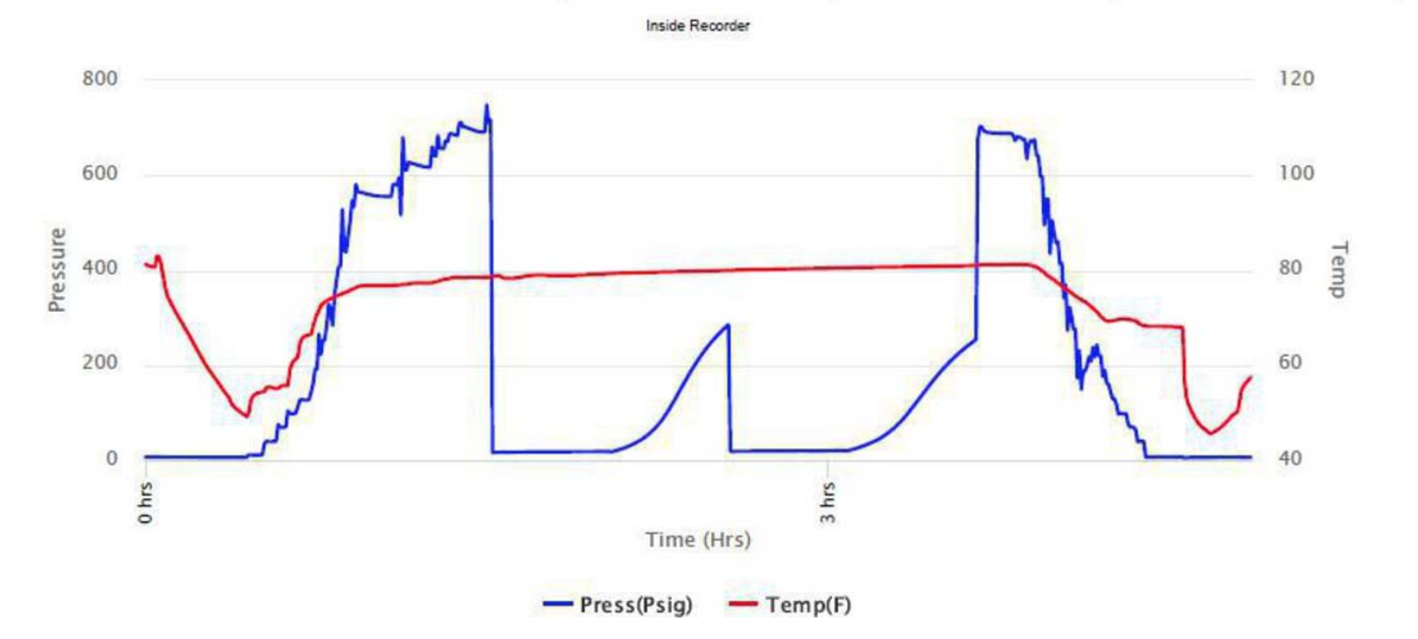
SEC: 8 TWN: 17S RNG: 17E
County: OSAGE
State: Kansas
Drilling Contractor: Sterling Drilling Company - Rig 4
Elevation: 1024 Sur
Field Name: Wildcat
Pool: Wildcat
Job Number: 429
API #: 15-139-20107-00-00

DATE
December
18
2019

DST #1 **Formation: Mississippian** **Test Interval: 1455 - 1477'** **Total Depth: 1477'**

Time On: 09:29 12/18 Time Off: 14:13 12/18
Time On Bottom: 10:59 12/18 Time Off Bottom: 12:59 12/18

Electronic Volume Estimate:	1st Open	1st Close	2nd Open	2nd Close
5'	Minutes: 30	Minutes: 30	Minutes: 30	Minutes: 30
	Current Reading:	Current Reading:	Current Reading:	Current Reading:
	.5" at 30 min	.1" at 30 min	.1" at 30 min	0" at 30 min
	Max Reading: .5"	Max Reading: .1"	Max Reading: .1"	Max Reading: 0"



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DST #1 **Formation: Mississippian** **Test Interval: 1455 - 1477'** **Total Depth: 1477'**

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Time On Bottom: 10:59 12/18 Time Off Bottom: 12:59 12/18

Recovered

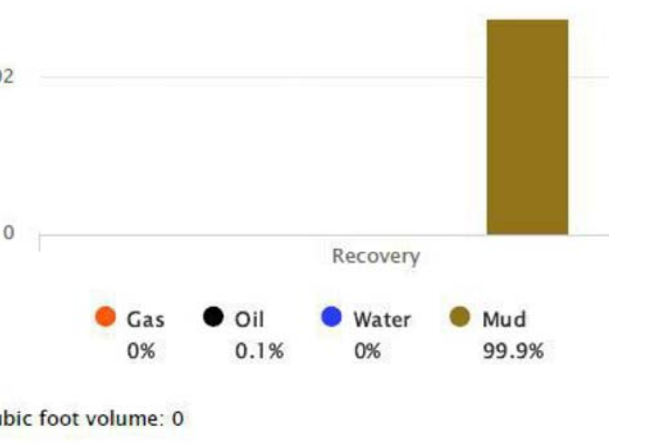
Foot	BBLS	Description of Fluid	Gas %	Oil %	Water %	Mud %
5	0.0274	M (trace O)	0	.1	0	99.9

Total Recovered: 5 ft
Total Barrels Recovered: 0.0274

Reversed Out
NO

Initial Hydrostatic Pressure	692	PSI
Initial Flow	16 to 18	PSI
Initial Closed in Pressure	**286**	**PSI**
Final Flow Pressure	19 to 20	PSI
Final Closed in Pressure	**242**	**PSI**
Final Hydrostatic Pressure	689	PSI
Temperature	81	°F
Pressure Change Initial Close / Final Close	15.3	%

Recovery at a glance



GIP cubic foot volume: 0

Day 1 Date: 12/14/19 Saturday Had long move in needing 2 CATS on Humphreys location. Good weather.
Moving remainder of loads onto location. Needed 2 CATS (Langfeld) on Humphreys. Truckers set base on Spencer at noon.
Rigged up, pump water, mix mud. Limestone rock on surface all over location. Location tight. Using old pond for reserve pit.

Day 2 Date: 12/15/19 Sunday Spud at 2:15 am on 12/15/19. 44' Pilot hole very tight pulled 50,000 lbs(Used PDC Bit)
Reaming out 12-1/4" pilot hole at 44' (KB) at 7:00 am. Drilled 44' wth 12-1/4" PDC bit in 24 hours. Drilled 44' then been reaming to open hole since
Ran 4.50 hours, down 19.50 hours (13.00 Move/Rig up, 1.75 Wait on water, 2.75 Mix mud, 1.75 Repairs(Water pump at pond, .25 Reaming).
Mud Properties: Wt. 8.8, Vis 41, LCM 2#-; Wt. on Bit 8,000, RPM 65, Pump Pressure 300, SPM 60. Had snowed 4" by 9am today (Sunday)
Surface Bit 1: New PDC Logic 12-1/4" PLT 616AG, SN#S09444, (6-16's), made 44' in 4.50 hours.
Hurricane failed to deliver 2 frac tanks that were to be used instead of an earthen freshwater pit. Wait on water.

Day 3 Date: 12/16/19 Monday Heavy snow again at rig. Got Maclaskey Oilfield to haul their Frac tanks on
Sunday Checking out mud pump at 44' (KB) at 7:00 am. Reamed out the 44' drilled and drilled rathole in 24 hours. on location at 10:15am.
Vac truck there also. Ran 0.00 hours, down 24.00 hours (1.50 Reaming the 44' drilled, 16.25 Drilling rathole, 2.50 Reaming out rathole, 1.50 Setting
Rathole, 2.25 Repairs to mud pump(Rocks)). Mud Properties: Wt. 8.8, Vis 41, LCM 2#-; Wt. on Bit 8,000, RPM 65, Pump Pressure 200, SPM 60.
Surface Bit 2: RR JZ 12-1/4" MD18MB, #14832, (4-16's), in at 44'.

Day 4 Date: 12/17/19 Tuesday Survey at 370'= 1 degree Tagged top of cement at 336'.
Drilling at 460' at 7:00 am. Drilled 416' in 24 hours.
Ran 7.50 hours, down 16.50 hours (1.50 Connections, 1.00 Pick up 8" drill collars, .25 Survey, .75 Short trip, .50 CTCH at 370', .50 Tripping, .50 Handle tools,
2.75 Run/Cement 8-5/8" casing, 8.00 WOC, .75 Drill plug).
Mud Properties: Vis. 28, Wt. 8.3, Chl 160, LCM 0#; Wt. on Bit 8,000, RPM 75, Pump Pressure 540, SPM 70. Surface Bit 2: RR JZ 12-1/4" MD18MB, #14832, (4-16's), in at 44', out at 370', made 326' in 5.50 hours = 59 ft/hr
Bit No. 3: PDC Logic PLT616, double row of cutters, (6-14's), #S11381, in at 370', drilled 90' in 2.00 hours.
Surface Casing:
Spud at 2:15 am on 12/15/19. Drilled 12-1/4" hole to 370'. Ran 9 joints of new 24#, 8-5/8" surface casing. Tallied
351.01', set at 365.51 KB. Cemented with 255 sacks Class A; 2% Gel, 3% CC and 1/4# FS. Cement did circulate
Plug down at 8:00 pm on 12/16/19.
Elite Cementing ticket #4915. W elded straps on bottom 4 joints. Tacked collars on remainder. Cut Texas shoe.

Day 5 Date: 12/18/19 Wednesday Mud up at 550'. Trip out at 1477' for DST #1 at 1477'.
Survey at 1477' = 1/4 degree Circulating to clean the hole at 1477' at 7:00 am. Drilled 1017' in 24 hours On bank
at 3:30 am. Tester no show. Trip back in hole at 5:45 am to circulate. Ran 12.25 hours, down 11.75 hours
(1.00 Rig check, 2.75 Connections, 1.00 CFS at 1477', 1.00 Short trip 15 stands, 1.00 CTCH at 1477', .25 Survey,
1.25 Trip out, 2.25 Wait on tester, 1.25 Trip back to bottom to circulate).
Mud Properties: Chemical/ Pac; Wt. 9.3, Vis 46, PV/YP 13/21, WL 6.8, pH 12.0, Chl. 300, LCM 2#; Wt. on
Bit 10/14,000, RPM 70, Pump Pressure 760, SPM 70.

Day 6 Date: 12/19/19 Thursday DST #1 (1455' - 1477'). Sterling Daq quit logging (1746' - 1761')
Drilling at 2055' at 7:00 am. Drilled 578' in 24 hours.
Ran 12.50 hours, down 11.50 hours (1.00 Rig chk, 1.75 Conn, .50 Pick up 10 joints DP for DST, 1.50 Handle tools,
2.00 DST #1, 3.50 Tripping, 1.25 CTCH at 1477'). Mud Properties: Chemical/ Pac; Wt. 9.3, Vis 50, PV/YP 15/15,
WL 7.2, pH 12.0, Chl. 550, LCM 8#; Wt. on Bit 16/18,000, RPM 65/70, Pump Pressure 800, SPM 70.

Day 7 Date: 12/20/19 Friday RTD= 2597'. No logs. Will LDDP and plug today.
Nippling down BOP at RTD 2597' at 7:00 am. Drilled 542' in 24 hours. Will move rig off hole Saturday.
Ran 17.00 hours, down 7.00 hours (1.00 Rig check, 1.50 Connections, .50 CTCH at 2597', 1.25 Trip out, 1.00 Lay down
Drill collars, 1.00 Pull BOP, .75 Break/LD Kelly). Mud Properties: Chemical/ Pac; Wt. 9.2 Vis 54, PV/YP 16/16, WL 6.4, pH 12.0,
Chl. 500, LCM 8#; Wt. on Bit 18,000, RPM 65, Pump Pressure 840, SPM 70.
Bit No. 3: PDC Logic PLT616, double row of cutters, (6-14's), #S11381, in at 370', drilled 2227' in 43.75 hour 32