

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 # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

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 #: \_\_\_\_\_

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE  NW  SE  SW

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum:  NAD27  NAD83  WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite:

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

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: \_\_\_\_\_

Confidential Release Date: \_\_\_\_\_

Wireline Log Received  Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**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](mailto: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 <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> 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

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> 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: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____				
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5) (Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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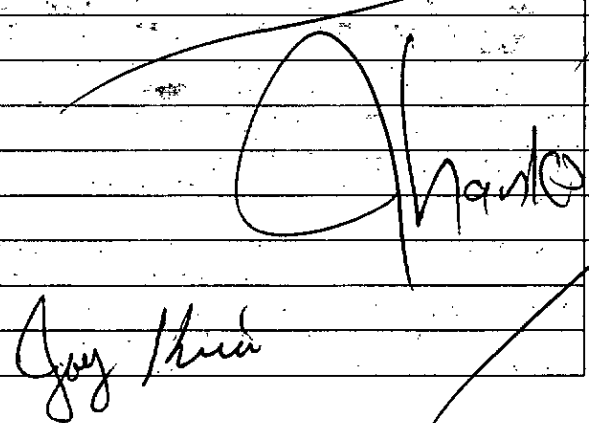
# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

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

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

No. 1759

Date	10-22-19	Sec.	4	Twp.	18	Range	14	County	Barton	State	Ks	On Location		Finish	1845				
Lease								Location				281 & Jct 4 Hwy 1 S 1 W 1 S W into							
Monroe A								Well No. #2				Owner							
Contractor								Southwind				To Quality Oilwell Cementing, Inc.							
Type Job								Surface				You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.							
Hole Size								T.D.				Charge To							
Csg.								8 5/8 #23				Larson Engineering							
Tbg. Size								Depth				Street							
								390'				City							
Tool								Depth				State							
												The above was done to satisfaction and supervision of owner agent or contractor.							
Cement Left in Csg.								Shoe Joint				Cement Amount Ordered							
								15'				190 Com 31. + 27. 1/4 Fls							
Meas Line								Displace											
								23 3/4 #20											
<b>EQUIPMENT</b>																			
Pumptrk #17		No.		Cementer				Tomp				Common							
				Helper								190							
Bulktrk		No.		Driver				Rick				Poz. Mix							
				Driver								Gel. 3							
Bulktrk #9		No.		Driver				Mike				Calcium 7							
				Driver								Hulls							
<b>JOB SERVICES &amp; REMARKS</b>																			
Remarks:								USED: 190 Com 31 + 2 1/4 Fls								Salt			
Rat Hole																Flowseal 50#			
Mouse Hole																Kol-Seal			
Centralizers																Mud CLR 48			
Baskets																CFL-117 or CD110 CAF 38			
D/V or Port Collar																Sand			
* Set 8 5/8 @ 390 Break								Circulation								Handling 200			
																Mileage			
<b>FLOAT EQUIPMENT</b>																			
* Guide of 190 Com 31. 27. 1/4 Fls.								Displace of Cement @ 23 3/4 #20								Guide Shoe			
																Centralizer			
* Cement to Surface																Baskets			
																AFU Inserts			
																Float Shoe			
																Latch Down			
																Pumptrk Charge			
																Surface			
																Mileage 18			
																			
X Signature																			
												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. 1734

Cell 785-324-1041

Date	10-31-19	Sec.	4	Twp.	18	Range	14	County	Barton	State	KS	On Location		Finish	1:30 PM
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Lease Monroe A Well No. #2 Location 281+4 Jet-1w, 1 3/4 S, w/Into

Contractor	<u>Wild West Well Service</u>	Owner	To Quality Oilwell Cementing, Inc.
Type Job	<u>Port Collar</u>	You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.	

Hole Size	T.D.	Charge To	<u>Larson Engineering</u>
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Csg.	<u>5 1/8"</u>	Depth		Street	
Tbg. Size	<u>2 7/8"</u>	Depth		City	State

Tool	<u>Port Collar</u>	Depth	<u>1798'</u>	The above was done to satisfaction and supervision of owner agent or contractor.	
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Cement Left in Csg.	Shoe Joint	Cement Amount Ordered	<u>275 80/20 QMDC 1/4 #Flowseal</u>
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Meas Line	Displace	<u>9 1/2 BLS</u>	<u>5 gel on side</u>
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**EQUIPMENT**

Pumptrk	<u>20</u>	No.	Cement	Common	<u>275 80/20 QMDC</u>
			Helper	Poz. Mix	
Bulktrk	<u>1</u>	No.	Driver	Gel.	<u>5</u>
			Driver	Calcium	
Bulktrk	<u>P.U.</u>	No.	Driver	Hulls	
			Driver	Salt	

test: tool JOB SERVICES & REMARKS to 700ft.

Remarks: pump 3 sx gel to tool

Rat Hole open tool pump 25 gel +

Mouse Hole 275 on Cement + Displace

Centralizers w/ 9 1/2 BLS. Shut down.

Baskets Closed tool + test to 700ft.

D/V or Port Collar Run 5 Jtz + wash clean

Cement did Circulate

USED 275 sk 5 gel

*Thanks*

**FLOAT EQUIPMENT**

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	

Pumptrk Charge Port Collar Job

Mileage 10

Signature	T.C. Janson	Tax	
		Discount	
		Total Charge	

# 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. 1732

Date	10-26-19	Sec.	4	Twp.	18	Range	14	County	Barton	State	Ks	On Location		Finish	5:30 PM
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Lease Monroe Well No. A-2 Location 281 + 4 Jct - 1W, 13/4S, w/into

Contractor	<u>Southwind</u>	#	<u>3</u>	Owner	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.
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Type Job	<u>Longstring</u>	Charge To	<u>Larson Engineering</u>
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Hole Size	<u>7 7/8"</u>	T.D.	<u>3495'</u>	Street	
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Csg.	<u>5 1/2" New 15.50</u>	Depth	<u>3495'</u>	City		State	
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Tbg. Size		Depth		The above was done to satisfaction and supervision of owner agent or contractor.		
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Tool	<u>Port Collar</u>	Depth	<u>1798'</u>	Cement Amount Ordered	<u>195 Q Pro C 10% Salt 5%</u>
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Cement Left in Csg.		Shoe Joint	<u>43.18'</u>	Cement Amount	<u>195 Q Pro C 10% Salt 5%</u>
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Meas Line		Displace	<u>82 BUS</u>	<u>Gilsonite 1/2 1000 gal mud clear 48</u>
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EQUIPMENT			
Pumptrk	<u>17</u>	No.	
		Driver	<u>Tony L.</u>
Bulktrk		No.	
		Driver	<u>Doug</u>
Bulktrk	<u>p.u.</u>	No.	
		Driver	<u>Rick</u>

JOB SERVICES & REMARKS				Common	<u>195 Pro-C</u>
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Remarks:		Salt	<u>16</u>
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Rat Hole	<u>30 sx</u>	Flowseal	
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Mouse Hole		Koi-Seal	<u>800#</u>
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Centralizers		Mud CLR 48	<u>1000 gal</u>
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Baskets		CFL-117 or CD110 CAF 68	
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D/V or	<u>Port Collar #41</u>		<u>1798'</u>	Sand	
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Pipe on bottom, break Circulation		Handling	
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pump 1000 gal mud clear 48, plug		Mileage	
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Rathole, Hook to Casing & Mix		FLOAT EQUIPMENT	
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160 sx Cement. Shut down wash		Guide Shoe	<u>Supplied by Customer</u>
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pump + lines Displaced plug w/ 82 BUS		Centralizer	
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Released + held.		Baskets	
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Lift pressure 750 #		AFU Inserts	
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Land plug to 1600 #		Float Shoe	
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		Latch Down	
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		Pumptrk Charge	<u>prod string</u>
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		Mileage	
--	--	---------	--

		Tax	
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		Discount	
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		Total Charge	
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X Signature Joy Kruis



## DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Inc**

562 W. State Rd 4  
Olmitz KS 67564+8561

ATTN: Vern Schrag

### **Monroe 'A' #2**

#### **4-18s-14w Barton,KS**

Start Date: 2019.10.25 @ 14:54:00

End Date: 2019.10.25 @ 20:19:00

Job Ticket #: 65707                      DST #: 1

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2019.10.29 @ 11:24:02



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Larson Engineering Inc  
 562 W. State Rd 4  
 Olmitz KS 67564+8561  
 ATTN: Vern Schrag

**4-18s-14w Barton,KS**

**Monroe 'A' #2**

Job Ticket: 65707

**DST#: 1**

Test Start: 2019.10.25 @ 14:54:00

## GENERAL INFORMATION:

Formation: **Arbuckle**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 16:47:20  
 Time Test Ended: 20:19:00  
 Interval: **3368.00 ft (KB) To 3420.00 ft (KB) (TVD)**  
 Total Depth: 3420.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Benny Mulligan  
 Unit No: 66  
 Reference Elevations: 1949.00 ft (KB)  
 1940.00 ft (CF)  
 KB to GR/CF: 9.00 ft

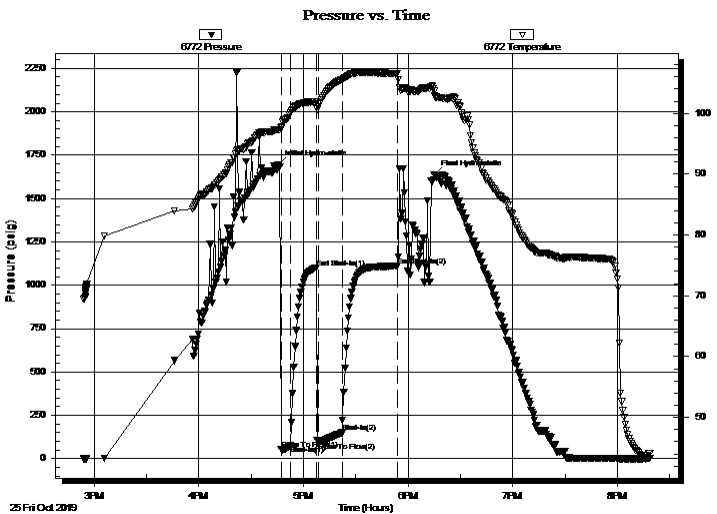
## Serial #: 6772

Inside

Press@RunDepth: 149.80 psig @ 3369.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2019.10.25 End Date: 2019.10.25 Last Calib.: 2019.10.25  
 Start Time: 14:54:01 End Time: 20:19:00 Time On Btm: 2019.10.25 @ 16:45:30  
 Time Off Btm: 2019.10.25 @ 18:14:50

TEST COMMENT: IF-5-BOB 3 mins 30 secs total build of 16 1/2 "  
 ISI-15- no blow back  
 FF-15-BOB 3 mins 30 secs total build of 41"  
 FSI-30- 4 1/2" of blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1696.37	97.29	Initial Hydro-static
2	51.66	97.78	Open To Flow (1)
7	75.98	100.08	Shut-In(1)
22	1098.49	101.88	End Shut-In(1)
23	96.99	101.12	Open To Flow (2)
37	149.80	105.57	Shut-In(2)
69	1109.82	106.53	End Shut-In(2)
90	1637.38	103.65	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
240.00	GHOCM 20%G 50%O 30%M	3.37
90.00	GMCO 10%G 60%O 30%M	1.26

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)







**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Larson Engineering Inc

**4-18s-14w Barton,KS**

562 W. State Rd 4  
Olmitz KS 67564+8561

**Monroe 'A' #2**

Job Ticket: 65707

**DST#: 1**

ATTN: Vern Schrag

Test Start: 2019.10.25 @ 14:54:00

## Tool Information

Drill Pipe:	Length: 3354.00 ft	Diameter: 3.80 inches	Volume: 47.05 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 47.05 bbl</u>	Tool Chased 6.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3368.00 ft			Final 41000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	52.00 ft			
Tool Length:	72.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3349.00	
Shut In Tool	5.00			3354.00	
Hydraulic tool	5.00			3359.00	
Packer	5.00			3364.00	20.00 Bottom Of Top Packer
Packer	4.00			3368.00	
Stubb	1.00			3369.00	
Recorder	0.00	6772	Inside	3369.00	
Recorder	0.00	6769	Outside	3369.00	
Perforations	14.00			3383.00	
Change Over Sub	1.00			3384.00	
Drill Pipe	32.00			3416.00	
Change Over Sub	1.00			3417.00	
Bullnose	3.00			3420.00	52.00 Bottom Packers & Anchor

**Total Tool Length: 72.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Larson Engineering Inc

**4-18s-14w Barton,KS**

562 W. State Rd 4  
Olmitz KS 67564+8561

**Monroe 'A' #2**

Job Ticket: 65707

**DST#: 1**

ATTN: Vern Schrag

Test Start: 2019.10.25 @ 14:54:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length: ft

Water Salinity: ppm

Viscosity: 48.00 sec/qt

Cushion Volume: bbl

Water Loss: 7.19 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 5300.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
240.00	GHOCM 20%G 50%O 30%M	3.367
90.00	GMCO 10%G 60%O 30%M	1.262

Total Length: 330.00 ft      Total Volume: 4.629 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

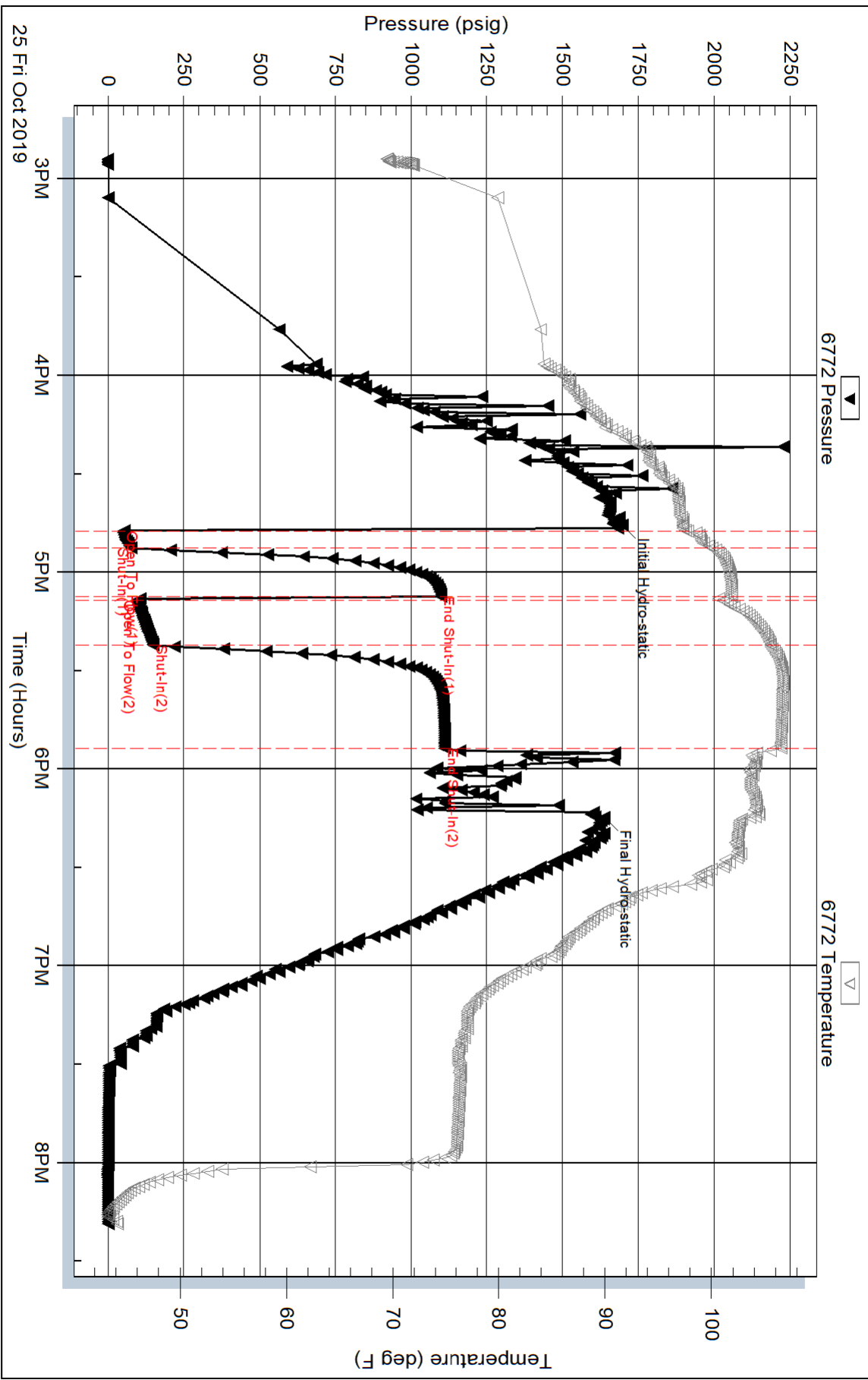
Serial #:

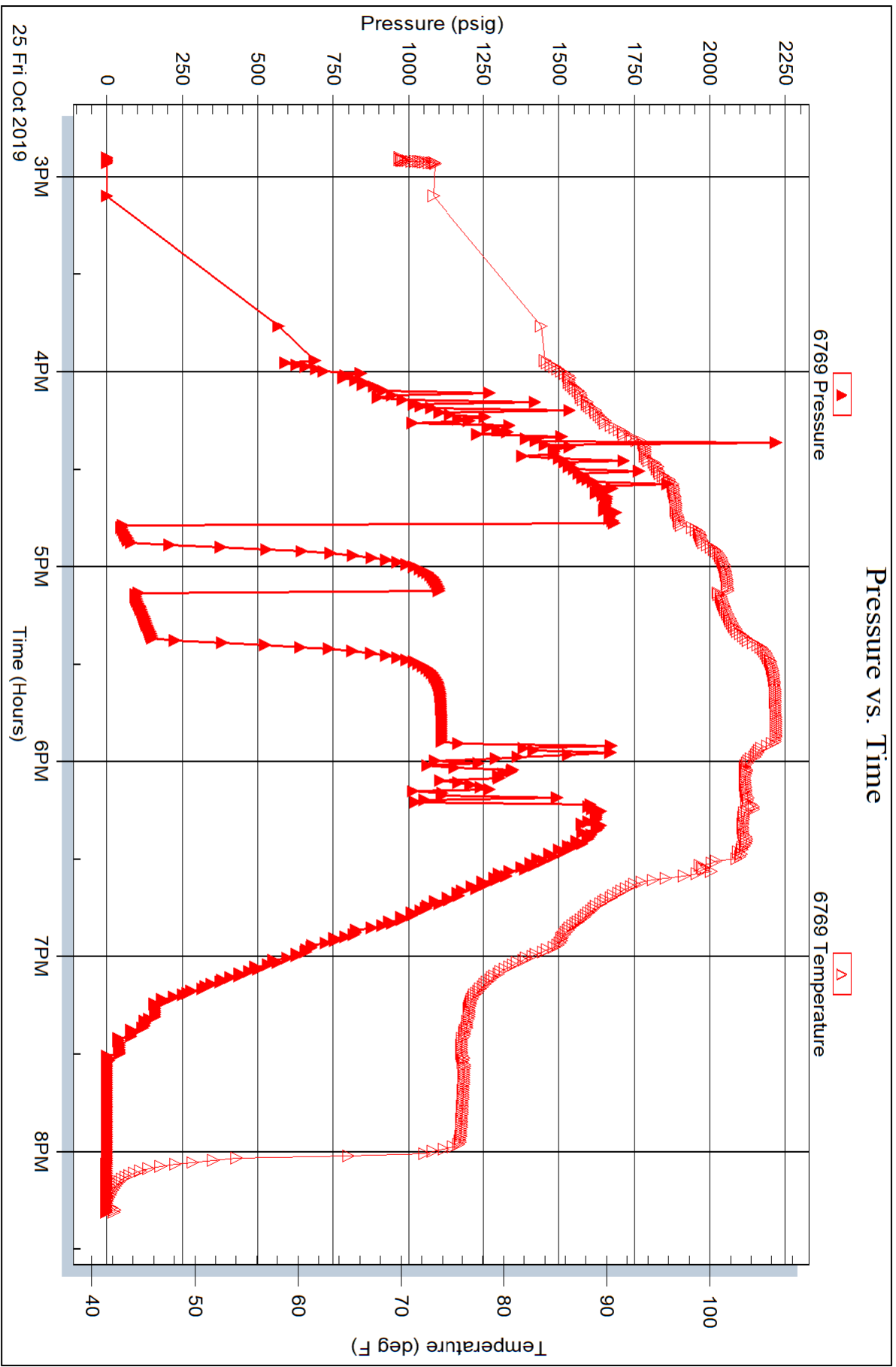
Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time







# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 65707

Well Name & No. Monroe 'A' #2 Test No. 1 Date 10/25/2019  
 Company Larson Engineering, Inc Elevation 1949 KB 1940 GL  
 Address 562 W. State RD 4 Omitz KS 67564+8561  
 Co. Rep / Geo. Vern Schrag Rig Southwind Rig 3  
 Location: Sec. 4 Twp 18s Rge. 14w Co. Barton State KS

Interval Tested 3368-3420 Zone Tested Arbuckle  
 Anchor Length 52' Drill Pipe Run 3354 Mud Wt. 9.2  
 Top Packer Depth 3363 Drill Collars Run --- Vis 48  
 Bottom Packer Depth 3368 Wt. Pipe Run --- WL 7.2  
 Total Depth 3420 Chlorides 5300 ppm System LCM 1#

Blow Description IF - BOB 3 1/2 mins total build of 16 1/2"  
EST - no blow back  
FF - BOB 3 1/2 mins total build of 41"  
PST - 4 1/2" of blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>90</u>	<u>G.M.C.O.</u>	<u>10</u>	<u>60</u>	<u>30</u>	<u>0</u>
<u>240</u>	<u>G.H.O.C.M.</u>	<u>20</u>	<u>50</u>	<u>30</u>	<u>0</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 330' BHT 103' Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1696  Test 1200 T-On Location 8:10 AM  
 (B) First Initial Flow 51  Jars \_\_\_\_\_ T-Started 2:54 PM  
 (C) First Final Flow 75  Safety Joint \_\_\_\_\_ T-Open 4:48  
 (D) Initial Shut-In 1098  Circ Sub \_\_\_\_\_ T-Pulled 5:52  
 (E) Second Initial Flow 96  Hourly Standby \_\_\_\_\_ T-Out 8:19  
 (F) Second Final Flow 149  Mileage 36 mi RT Comments Loaded tools after DST #1  
 (G) Final Shut-In 1109  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1637  Straddle \_\_\_\_\_

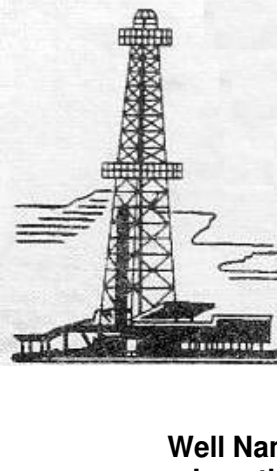
Initial Open 5  Shale Packer \_\_\_\_\_  EM Tool \_\_\_\_\_  
 Initial Shut-In 15  Extra Packer \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Final Flow 15  Extra Recorder \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Final Shut-In 30  Day Standby \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Sub Total 1236  Accessibility \_\_\_\_\_ Sub Total 0  
 Total 1236 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Benny Mulligan

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

# WELLSITE GEOLOGIST'S REPORT

VERNON C. SCHRAG  
CONSULTANT GEOLOGIST



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

Well Name: **MONROE 'A' #2**  
 Location: **SE NW NW SE SEC. 4-18S-14W**  
 Licence Number: **API: 15-009-26255**  
 Spud Date: **October 21, 2019**  
 Surface Coordinates: **1990' FSL & 2000' FEL**

Region: **Barton Co., KS**  
 Drilling Completed: **October 26, 2019**

Bottom Hole Coordinates: \_\_\_\_\_  
 Ground Elevation (ft): **1940'** K.B. Elevation (ft): **1949'**  
 Logged Interval (ft): **2700'** To: **RTD** Total Depth (ft): **3495'**  
 Formation: **Arbuckle**  
 Type of Drilling Fluid: **Chemical Premix (Displaced)**

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### OPERATOR:

Company: **Larson Engineering Inc.**  
 Address: **562 West State Road 4**  
**Olmitz, KS 67564-8561**

### DRILLING CONTRACTOR:

**Southwind Drilling Co., Rig #3**

DP 4.5" XH (16.6#); DC 402.86' x 6-1/4" x 2-3/8", Kelly 40.00', Tool Joint 5.5"; Bit: JZ RX23, 7-7/8", standard jets 14-14-14; rpm 80, WOB 35k; Kelly Bushing 9' above ground level; Jay Krier (tool pusher).

### CASING:

Ran 9 jts new 8-5/8" 20# R3 STC 8rd csg. Tallied 379.53', set @ 390' KB  
 Ran 83 jts new MPW 5-1/2" 15.5# M-55 R3 LTC 8rd csg. Tallied 3496.77', set @ 3494' KB.

### CIRCULATION SYSTEM:

Continental EMSCO D-375, duplex, 6 x 14. Chemical, premix, earth pits, MudCo/Service Mud, Inc., Jason Whiting, apparently there were considerable pump problems which may explain some of the slow lagging.

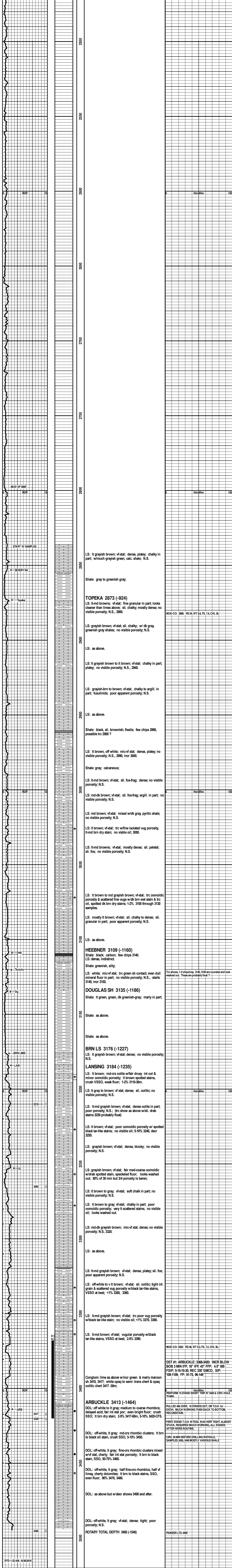
### OPEN HOLE LOGS:

DN, DI (SP), ML, No Sonic; 5" detail LTD-2700"; 2" DI to surface casing; LogTech-Pioneer Wireline, Hays, KS, Hendrixson, Log total depth (3496') was one foot long to rotary total depth (3495').

### DRILL STEM TESTS:

Trilobite Testing, Inc., Hays, Kansas, Benny Mulligan.

DST #1: Arbuckle, 3368-3420 (52'), very weak blow at initial open increased to BOB 3.5 min, 16.5" at initial close; no BB ISIP, 41" FFP, 4.5" BB FSIP; Time Intervals: 5-15-30; Total Recovery 330'; 90' GMO (10%G, 60%O, 30%M), 240' GMO (20%G, 50%O, 30%M); HP: 1696-1637, SIP: 1098-1109, FP: 51-75, 96-149; BHT: 103 deg. F.



RTD 1:22 AM, 10/26/2019