

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. 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)</i> <i>(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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Form	ACO1 - Well Completion
Operator	Lario Oil & Gas Company
Well Name	KNOBBE UNIT 1-4
Doc ID	1418362

Tops

Name	Top	Datum
Heebner	3868	-573
Lansing	3913	-618
Stark Shale	4201	-906
Hushpuckney	4251	-956
Base KC	4330	-1035
Marmaton	4371	-1076
Pawnee	4461	-1166
Ft Scott	4485	-1190
Johnson	4610	-1315
Morrow	4715	-1420
Mississippian	4839	-1544



REMIT TO
 QES Pressure Pumping LLC
 Dept:970
 P.O.Box 4346
 Houston, TX 77210-4346

MAIN OFFICE

P.O.Box884
 Chanute,KS 66720
 620/431-9210,1-800/467-8676
 Fax 620/431-0012

Invoice # 813432

Invoice Date: 06/20/18 Terms: C.O.D. Page 1

LARIO OIL & GAS
 P.O. BOX 1093
 GARDEN CITY KS 67846
 USA
 3162655611

KNOBBE UNIT 1-4

ICC 22 drilling
 APPROVED JUN 25 2018
AK

Part No	Description	Quantity	Unit Price	Discount(%)	Total
CE0453	Cement Pump Charge 4001' - 5000'	1.000	2,800.0000	30.000	1,960.00
CE0002	Equipment Mileage Charge - Heavy Equipment	45.000	7.1500	30.000	225.23
CE0710	Cement Delivery Charge	1,786.500	1.7500	30.000	2,188.46
CC5862	ThixoBlend III	250.000	26.0000	30.000	4,550.00
CC6077	Kolseal	1,250.000	0.5000	30.000	437.50
CC5831	Lite-Weight Blend VII (60:40:8)	650.000	17.5000	30.000	7,962.50
CC6075	Celloflake	163.000	3.0000	30.000	342.30
CC6125	Mud Flush, Viscous	500.000	0.6500	30.000	227.50
CP8485	5 1/2" Float Shoe, AFU	1.000	585.0000	30.000	409.50
CP8254	5 1/2" Latch Down Plug & Assembly	1.000	400.0000	30.000	280.00
CP8554	5 1/2" Centralizer	16.000	81.0000	30.000	907.20
CP8629	5 1/2" Basket	1.000	385.0000	30.000	269.50
CP8801	5 1/2" DV Tool	1.000	5,970.0000	30.000	4,179.00

JUN 29 2018
 OK TO PAY
 1.000

Subtotal 34,198.13
 Discounted Amount 10,259.44
 SubTotal After Discount 23,938.69

Amount Due 36,573.88 If paid after 06/20/18

Tax: 1,663.03
 Total: 25,601.72



Jun. 19. 2018 11:13AM

PRESSURE PUMPING LLC
PO Box 884, Chanute, KS 66720
620-431-9210 or 800-467-8676

SM-10927
PO-17048, 17049, 17050
FT-10817

No. 0585 P. 4

TICKET NUMBER **55209**
LOCATION Oakley Ks
FOREMAN Jerry Y

**FIELD TICKET & TREATMENT REPORT
CEMENT**

Invoice # **181343245**

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
6-16-18	4793	Knobbe Unit 1-4	4	19S	37W	Wichita
CUSTOMER <u>Land Oil & Gas</u>			MAILING ADDRESS <u>PO. Box 1093</u>			
CITY <u>Garden City</u>			STATE <u>KS</u>		ZIP CODE <u>67846</u>	
TRUCK #			DRIVER		TRUCK #	
772-7-118			Tom S W		703	
528-7-127			Miles S			
530-7-129			Neil W			
17			Jerry Y			

JOB TYPE 2-Stage HOLE SIZE 7 7/8 HOLE DEPTH 4999 CASING SIZE & WEIGHT 5 1/2" 15.5#
CASING DEPTH 4968 DRILL PIPE _____ TUBING _____ OTHER DV Tool/sect @ 2364
SLURRY WEIGHT 14.2/12.5 SLURRY VOL 1.42/1.87 WATER gal/sk _____ CEMENT LEFT in CASING 10'
DISPLACEMENT 118/56 DISPLACEMENT PSI _____ MIX PSI _____ RATE _____

REMARKS: Safety meeting on rig upon South wind 8 run float equip, centralizers on 119, 116, 113, 110, 107, 104, 101, 98, 95, 92, 89, 86, 83, 80, 58, 56 basket on 57 10' DV Tool on top 57 sect @ 2364 running to bottom pump ball thru entire 1 1/2 hrs pump 5 bbl water, 500 gal mud flush, 5 bbl water spacer mix 250 sks thick blind fill shut down release plug clean pump & lines displace with 60 bbl water and 60 bbl mud final lift 1300# plug landed @ 1400 released back float held open for 200# circa lat. 3 hrs pump 5 bbl H₂O, 600 sks 60/40 8 1/2 gal 1/4" fil seal, shut down release plug & clean pump & lines displace with 56 bbl fresh water plug landed & tool closed @ 1600# final lift 900#
Cement circulated to surface

30 Sks RH, 20 Sks MH Thank you
Jerry & crew

ACCOUNT CODE	QUANTITY of UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
CE0453	1	PUMP CHARGE	2800.00	2800.00
CE0002	45	MILEAGE	7.15	321.75
CE0710	39.7	ton mileage & delivery	1.75	3126.38
CC5862	250 sks	thick blind fill	26.00	6500.00
CC6077	1250 #	fil seal	.50	625.00
CC5831	650 sks	light blind fill	17.50	11375.00
CC6075	168 #	fil seal	3.00	489.00
CC6125	500 gal	mud flush	.65	325.00
CP5485	1	5 1/2 AFU float shoe	585.00	585.00
CP8254	1	5 1/2 latch down assy	400.00	400.00
CP8554	16	5 1/2 centralizers	81.00	1296.00
PP8629	1	5 1/2 basket	385.00	385.00
CP8801	1	5 1/2 DV Tool	5970.00	5970.00
			subtotal	34198.18
			-30% discount	10259.44
			subtotal	23938.74
			8.5 % SALES TAX	1663.03
			ESTIMATED TOTAL	25,601.72

AUTHORIZATION William J. ... TITLE _____ DATE _____

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.



DRILL STEM TEST REPORT

Prepared For: **Lario Oil & Gas Co.**

301 S Market St.
Wichita, KS 67202

ATTN: Steve Davis

Knobbe Unit #1-4

4-19s-37w Wichita,KS

Start Date: 2018.06.12 @ 02:40:00

End Date: 2018.06.12 @ 10:57:30

Job Ticket #: 63718 DST #: 1

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

Printed: 2018.06.15 @ 09:31:52



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Lario Oil & Gas Co.
 301 S Market St.
 Wichita, KS 67202
 ATTN: Steve Davis

4-19s-37w Wichita, KS

Knobbe Unit #1-4

Job Ticket: 63718

DST#: 1

Test Start: 2018.06.12 @ 02:40:00

GENERAL INFORMATION:

Formation: **Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:50:15

Time Test Ended: 10:57:30

Test Type: Conventional Bottom Hole (Initial)

Tester: James Winder

Unit No: 83

Interval: **4439.00 ft (KB) To 4470.00 ft (KB) (TVD)**

Reference Elevations: 3295.00 ft (KB)

Total Depth: 4470.00 ft (KB) (TVD)

3284.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8017 Outside

Press@RunDepth: 281.26 psig @ 4440.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.06.12 End Date: 2018.06.12

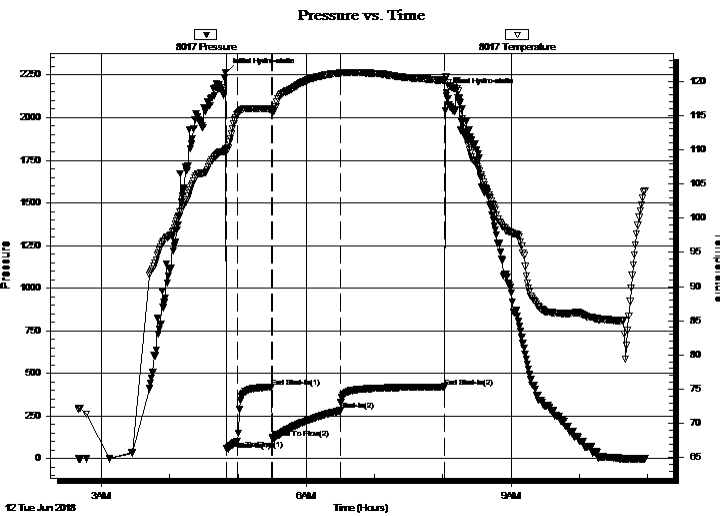
Last Calib.: 2018.06.12

Start Time: 02:40:05 End Time: 10:57:29

Time On Btm: 2018.06.12 @ 04:49:30

Time Off Btm: 2018.06.12 @ 08:03:00

TEST COMMENT: 10 - IF: Blow built to BOB (11") at 3 min.
 30 - IS: Blow back built to 1/4"
 60 - FF: Blow built to BOB at 4 1/4 min.
 90 - FS: Blow back built to BOB at 11 1/2 min.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2265.15	110.04	Initial Hydro-static
1	56.87	109.82	Open To Flow (1)
11	101.65	115.19	Shut-In(1)
40	419.90	115.92	End Shut-In(1)
42	118.44	115.74	Open To Flow (2)
101	281.26	121.17	Shut-In(2)
192	420.54	120.16	End Shut-In(2)
194	2144.95	120.72	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
65.00	GOWCM 48% <i>m</i> , 24% <i>w</i> , 20% <i>g</i> , 8% <i>o</i>	0.91
255.00	MCGO 53% <i>g</i> , 36% <i>o</i> , 11% <i>m</i>	3.58
360.00	CGO 62% <i>o</i> , 35% <i>g</i> , 3% <i>m</i>	5.05
0.00	GIP = 1575'	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Lario Oil & Gas Co.

4-19s-37w Wichita,KS

301 S Market St.
Wichita, KS 67202

Knobbe Unit #1-4

Job Ticket: 63718

DST#: 1

ATTN: Steve Davis

Test Start: 2018.06.12 @ 02:40:00

Tool Information

Drill Pipe:	Length: 4417.00 ft	Diameter: 3.80 inches	Volume: 61.96 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 61.96 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	4439.00 ft			Final 71000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	31.00 ft			
Tool Length:	60.00 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			4411.00	
Shut In Tool	5.00			4416.00	
Hydraulic tool	5.00			4421.00	
Jars	5.00			4426.00	
Safety Joint	3.00			4429.00	
Packer	5.00			4434.00	29.00 Bottom Of Top Packer
Packer	5.00			4439.00	
Stubb	1.00			4440.00	
Recorder	0.00	6625	Inside	4440.00	
Recorder	0.00	8017	Outside	4440.00	
Perforations	27.00			4467.00	
Bullnose	3.00			4470.00	31.00 Bottom Packers & Anchor

Total Tool Length: 60.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Lario Oil & Gas Co.

4-19s-37w Wichita,KS

301 S Market St.
Wichita, KS 67202

Knobbe Unit #1-4

Job Ticket: 63718

DST#: 1

ATTN: Steve Davis

Test Start: 2018.06.12 @ 02:40:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 29.2 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 48.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.97 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 7500.00 ppm		
Filter Cake: 1.00 inches		

Recovery Information

Recovery Table

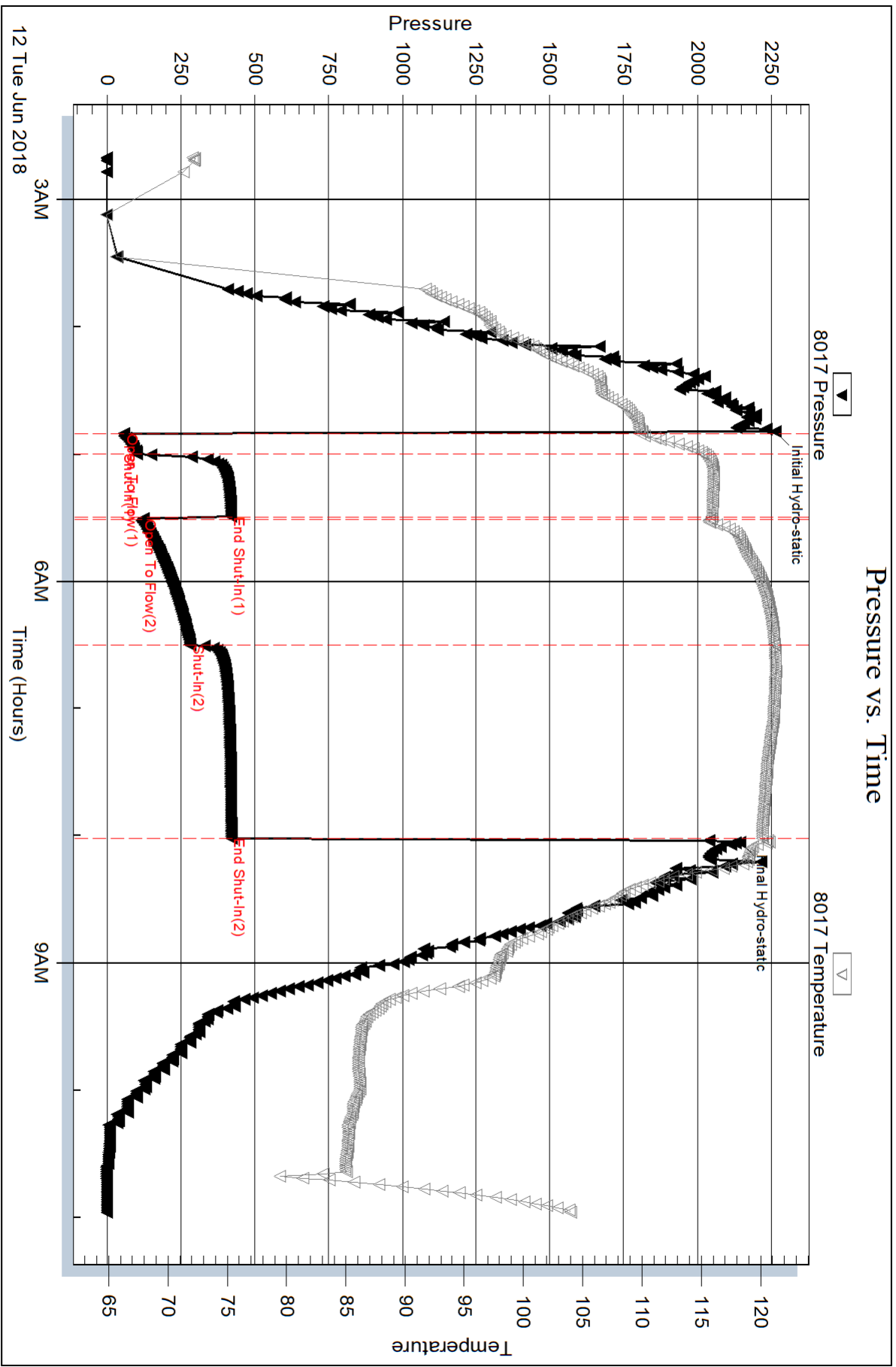
Length ft	Description	Volume bbl
65.00	GOWCM 48%m, 24%w, 20%g, 8%o	0.912
255.00	MCGO 53%g, 36%o, 11%m	3.577
360.00	CGO 62%o, 35%g, 3%m	5.050
0.00	GIP = 1575'	0.000

Total Length: 680.00 ft Total Volume: 9.539 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: Gravity = 32 api @ 88 deg F Corrected Gravity = 29.2 api



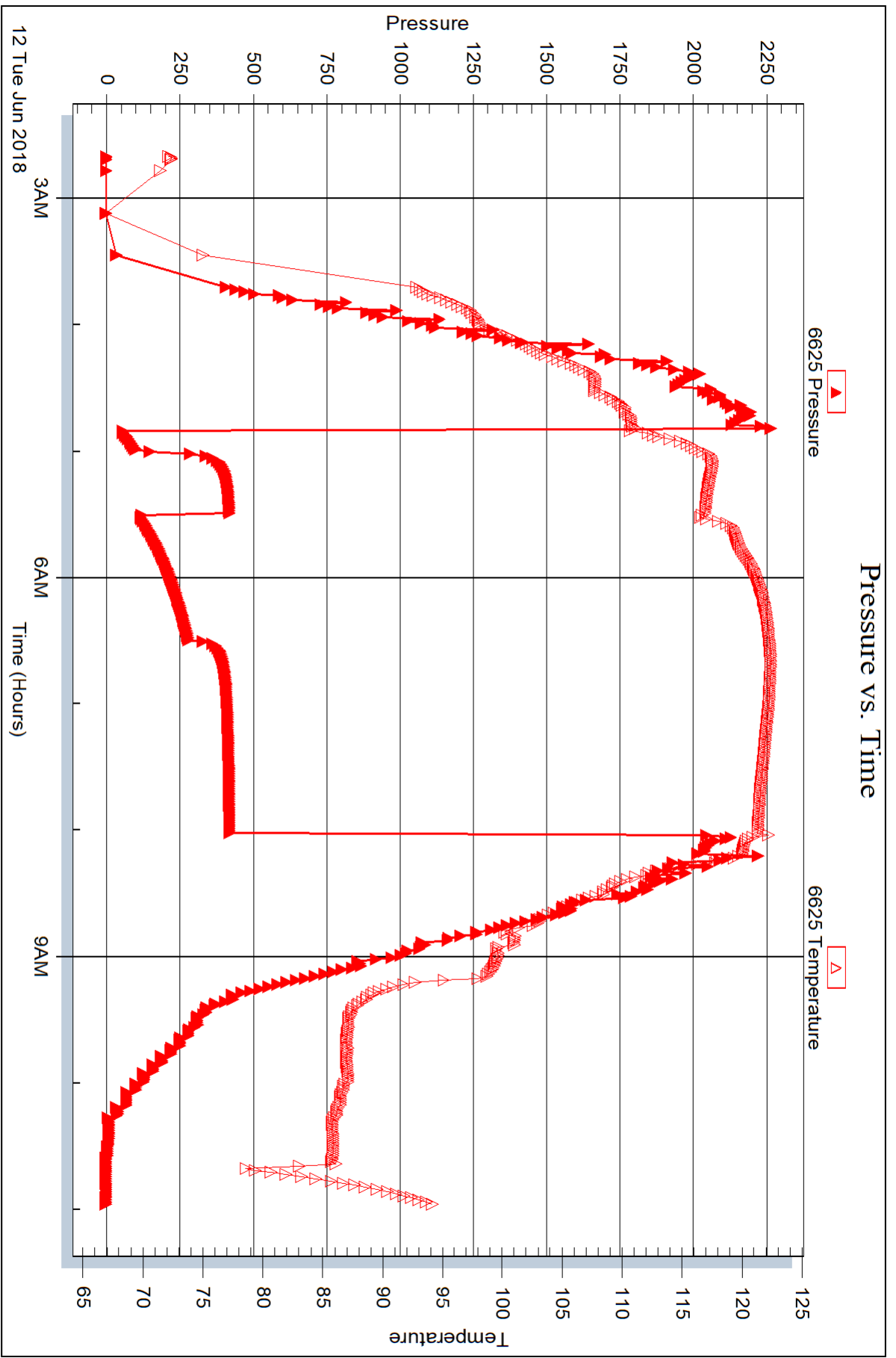
Serial #: 6625

Inside

Lario Oil & Gas Co.

Knobbe Unit #1-4

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Lario Oil & Gas Co.**

301 S Market St.
Wichita, KS 67202

ATTN: Steve Davis

Knobbe Unit #1-4

4-19s-37w Wichita,KS

Start Date: 2018.06.12 @ 21:10:00

End Date: 2018.06.13 @ 03:20:45

Job Ticket #: 63719 DST #: 2

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

Printed: 2018.06.15 @ 09:31:24



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Lario Oil & Gas Co.

4-19s-37w Wichita, KS

301 S Market St.
Wichita, KS 67202

Knobbe Unit #1-4

Job Ticket: 63719

DST#: 2

ATTN: Steve Davis

Test Start: 2018.06.12 @ 21:10:00

GENERAL INFORMATION:

Formation: **Ft. Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:24:45

Time Test Ended: 03:20:45

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 83

Interval: 4474.00 ft (KB) To 4498.00 ft (KB) (TVD)

Reference Elevations: 3295.00 ft (KB)

Total Depth: 4498.00 ft (KB) (TVD)

3284.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8017 Outside

Press@RunDepth: 18.30 psig @ 4475.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.06.12

End Date:

2018.06.13

Last Calib.:

2018.06.13

Start Time: 21:10:05

End Time:

03:20:44

Time On Btm:

2018.06.12 @ 23:24:30

Time Off Btm:

2018.06.13 @ 01:10:15

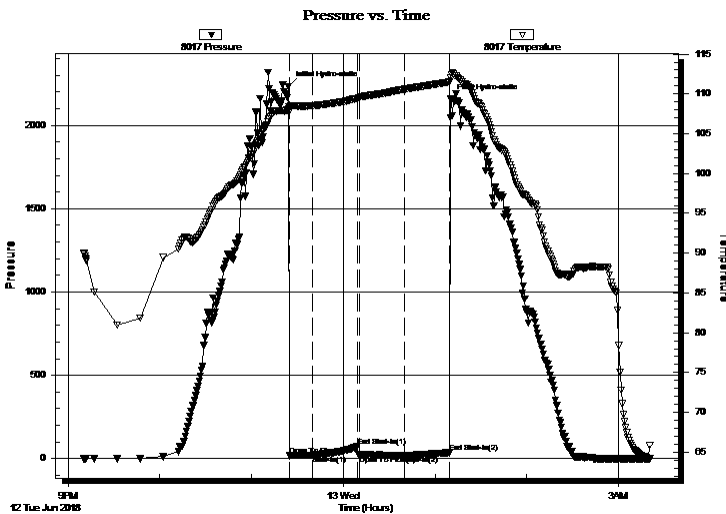
TEST COMMENT: 15 - IF: Blow built to 1/4"

30 - IS: No blow back

30 - FF: No blow

30 - FS: No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2235.68	108.35	Initial Hydro-static
1	16.88	107.86	Open To Flow (1)
16	21.05	108.53	Shut-In(1)
45	71.74	109.44	End Shut-In(1)
47	18.51	109.58	Open To Flow (2)
76	18.30	110.59	Shut-In(2)
105	35.74	111.50	End Shut-In(2)
106	2162.02	112.04	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	Mud w /Oil spots 97%m, 3%o	0.01

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Lario Oil & Gas Co.

4-19s-37w Wichita,KS

301 S Market St.
Wichita, KS 67202

Knobbe Unit #1-4

Job Ticket: 63719

DST#: 2

ATTN: Steve Davis

Test Start: 2018.06.12 @ 21:10:00

Tool Information

Drill Pipe:	Length: 4446.00 ft	Diameter: 3.80 inches	Volume: 62.37 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 84000.00 lb
			<u>Total Volume: 62.37 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4474.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	24.00 ft			
Tool Length:	57.00 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			4442.00	
Shut In Tool	5.00			4447.00	
Hydraulic tool	5.00			4452.00	
Jars	5.00			4457.00	
EM tool	4.00			4461.00	
Safety Joint	3.00			4464.00	
Packer	5.00			4469.00	33.00 Bottom Of Top Packer
Packer	5.00			4474.00	
Stubb	1.00			4475.00	
Recorder	0.00	6625	Inside	4475.00	
Recorder	0.00	8017	Outside	4475.00	
Perforations	20.00			4495.00	
Bullnose	3.00			4498.00	24.00 Bottom Packers & Anchor

Total Tool Length: 57.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Lario Oil & Gas Co.

4-19s-37w Wichita,KS

301 S Market St.
Wichita, KS 67202

Knobbe Unit #1-4

Job Ticket: 63719

DST#: 2

ATTN: Steve Davis

Test Start: 2018.06.12 @ 21:10:00

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: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.96 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	Mud w /Oil spots 97% _m , 3% _o	0.014

Total Length: 1.00 ft Total Volume: 0.014 bbl

Num Fluid Samples: 0

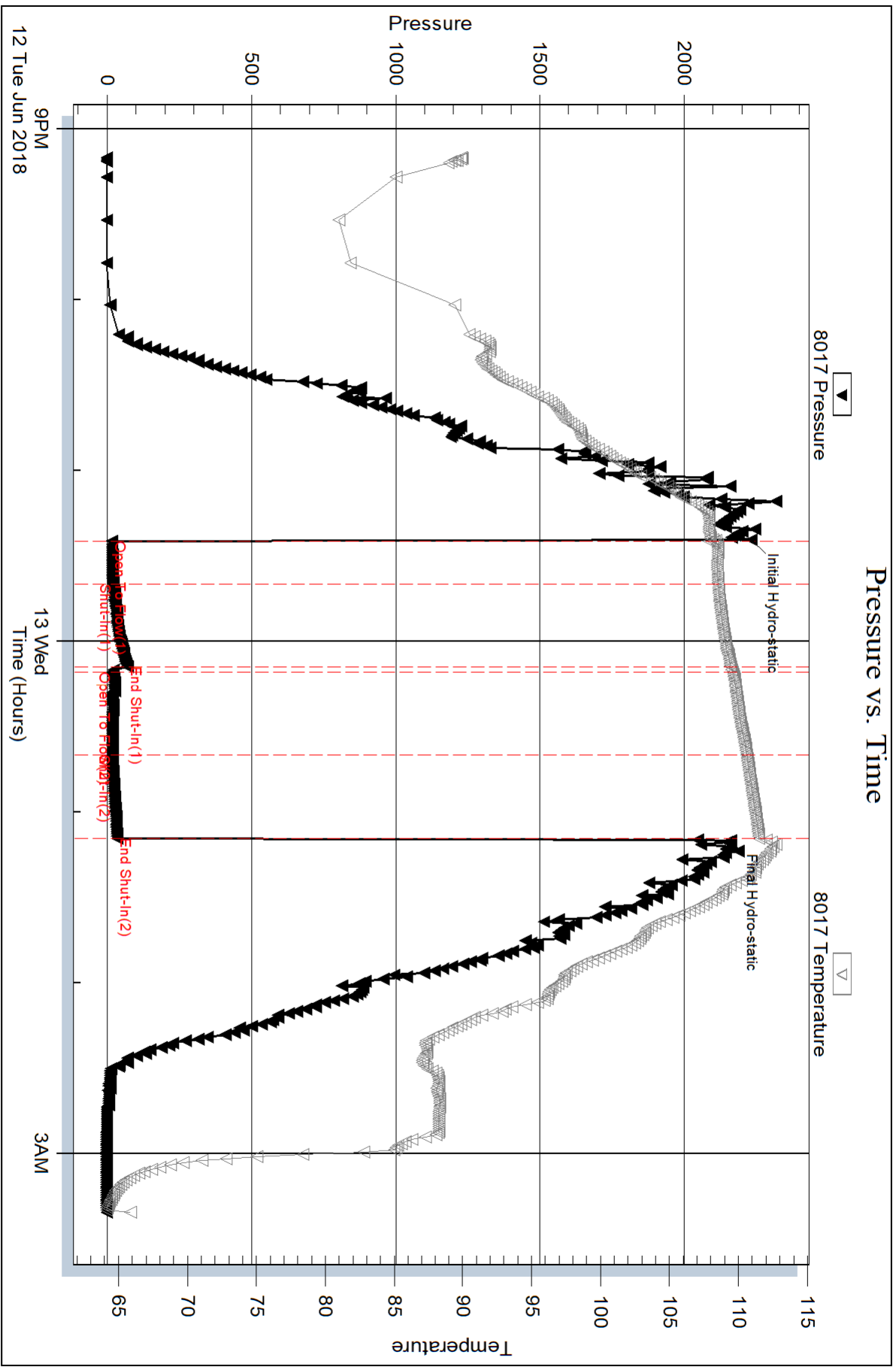
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



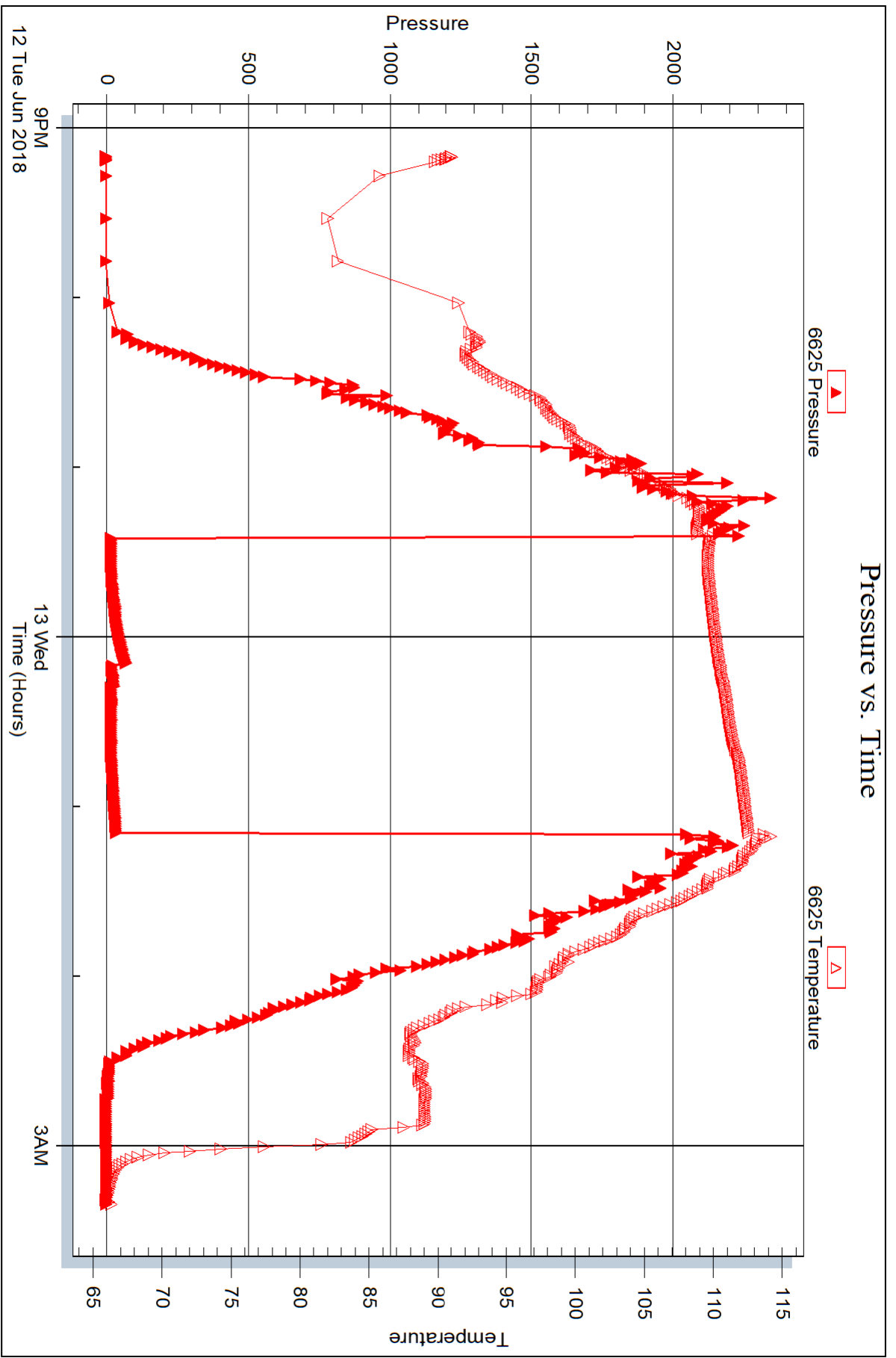
Serial #: 6625

Inside

Lario Oil & Gas Co.

Knobbe Unit #1-4

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 63719

Printed: 2018.06.15 @ 09:31:25



DRILL STEM TEST REPORT

Prepared For: **Lario Oil & Gas Co.**

301 S Market St.
Wichita, KS 67202

ATTN: Steve Davis

Knobbe Unit #1-4

4-19s-37w Wichita,KS

Start Date: 2018.06.13 @ 16:55:00

End Date: 2018.06.13 @ 23:36:15

Job Ticket #: 63720 DST #: 3

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

Printed: 2018.06.15 @ 09:28:25



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Lario Oil & Gas Co.

4-19s-37w Wichita, KS

301 S Market St.
Wichita, KS 67202

Knobbe Unit #1-4

Job Ticket: 63720

DST#: 3

ATTN: Steve Davis

Test Start: 2018.06.13 @ 16:55:00

GENERAL INFORMATION:

Formation: **Cherokee LS**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:41:30

Time Test Ended: 23:36:15

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 83

Interval: 4510.00 ft (KB) To 4540.00 ft (KB) (TVD)

Reference Elevations: 3295.00 ft (KB)

Total Depth: 4540.00 ft (KB) (TVD)

3284.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8017 Outside

Press@RunDepth: 17.75 psig @ 4511.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.06.13

End Date:

2018.06.13

Last Calib.: 2018.06.13

Start Time: 16:55:05

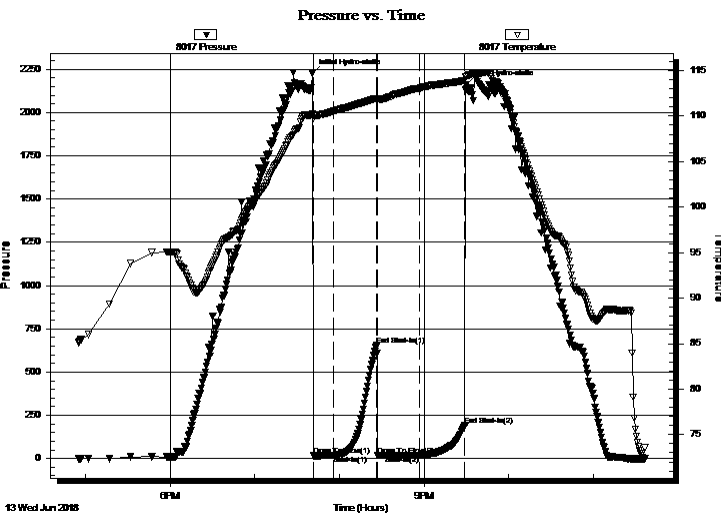
End Time:

23:36:14

Time On Btm: 2018.06.13 @ 19:41:00

Time Off Btm: 2018.06.13 @ 21:29:45

TEST COMMENT: 15 - IF: Weak surface blow
30 - IS: No blow back
30 - FF: No blow
30 - FS: No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2227.05	110.26	Initial Hydro-static
1	16.14	109.76	Open To Flow (1)
15	16.73	110.52	Shut-In(1)
45	653.53	111.90	End Shut-In(1)
46	17.29	111.79	Open To Flow (2)
76	17.75	113.05	Shut-In(2)
108	192.24	113.90	End Shut-In(2)
109	2160.13	114.29	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud w /Oil spots 99%m, 1%o	0.07

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Lario Oil & Gas Co.

4-19s-37w Wichita,KS

301 S Market St.
Wichita, KS 67202

Knobbe Unit #1-4

Job Ticket: 63720

DST#: 3

ATTN: Steve Davis

Test Start: 2018.06.13 @ 16:55:00

Tool Information

Drill Pipe:	Length: 4509.00 ft	Diameter: 3.80 inches	Volume: 63.25 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 100000.0 lb
			<u>Total Volume: 63.25 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4510.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 ft			
Tool Length:	59.00 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			4482.00	
Shut In Tool	5.00			4487.00	
Hydraulic tool	5.00			4492.00	
Jars	5.00			4497.00	
Safety Joint	3.00			4500.00	
Packer	5.00			4505.00	29.00 Bottom Of Top Packer
Packer	5.00			4510.00	
Stubb	1.00			4511.00	
Recorder	0.00	6625	Inside	4511.00	
Recorder	0.00	8017	Outside	4511.00	
Perforations	26.00			4537.00	
Bullnose	3.00			4540.00	30.00 Bottom Packers & Anchor

Total Tool Length: 59.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Lario Oil & Gas Co.

4-19s-37w Wichita,KS

301 S Market St.
Wichita, KS 67202

Knobbe Unit #1-4

Job Ticket: 63720

DST#: 3

ATTN: Steve Davis

Test Start: 2018.06.13 @ 16:55:00

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: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 10.38 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 9700.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud w /Oil spots 99% _m , 1% _o	0.070

Total Length: 5.00 ft Total Volume: 0.070 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

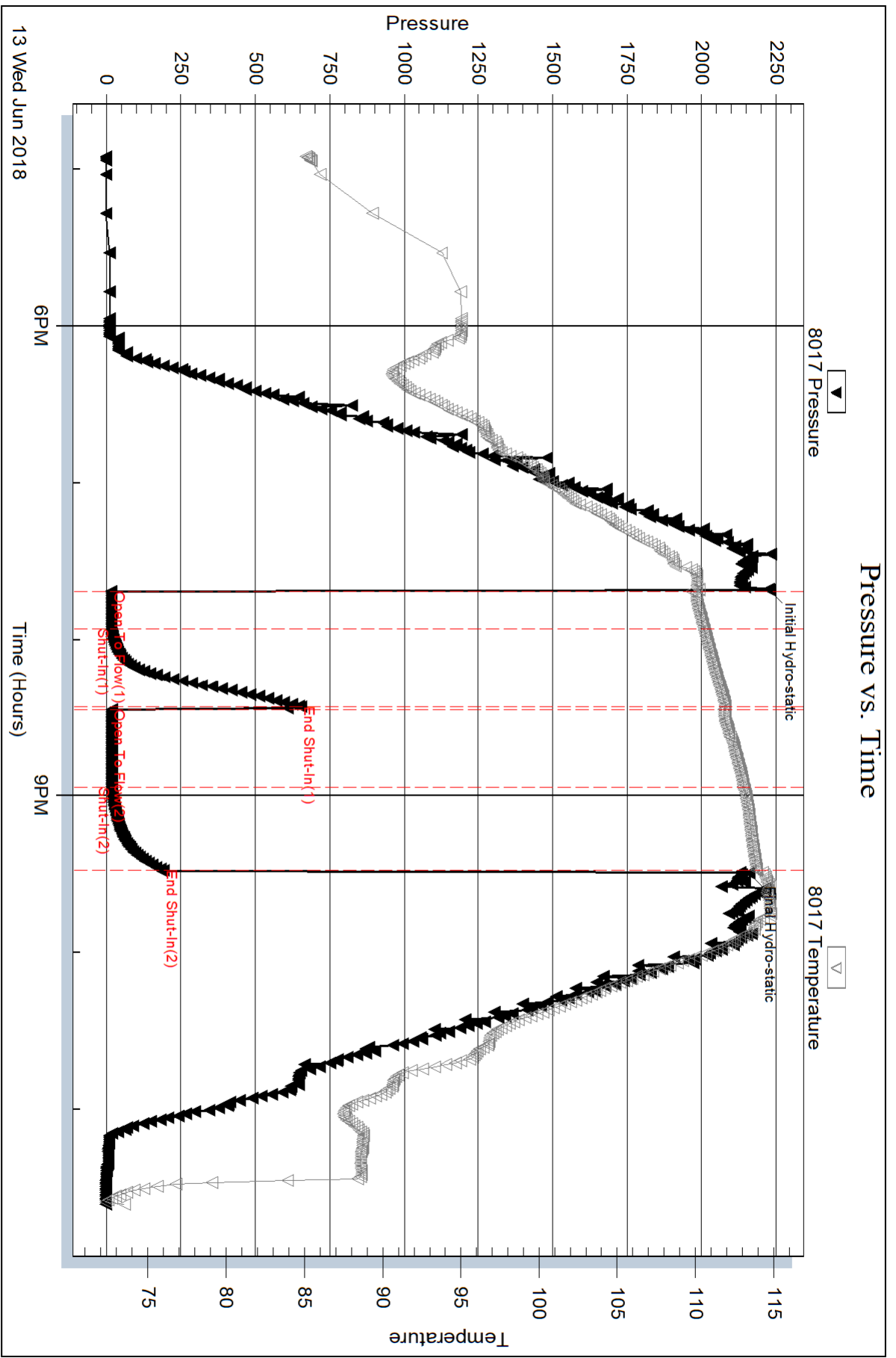
Recovery Comments:

Serial #: 8017

Outside Lario Oil & Gas Co.

Knobbe Unit #1-4

DST Test Number: 3



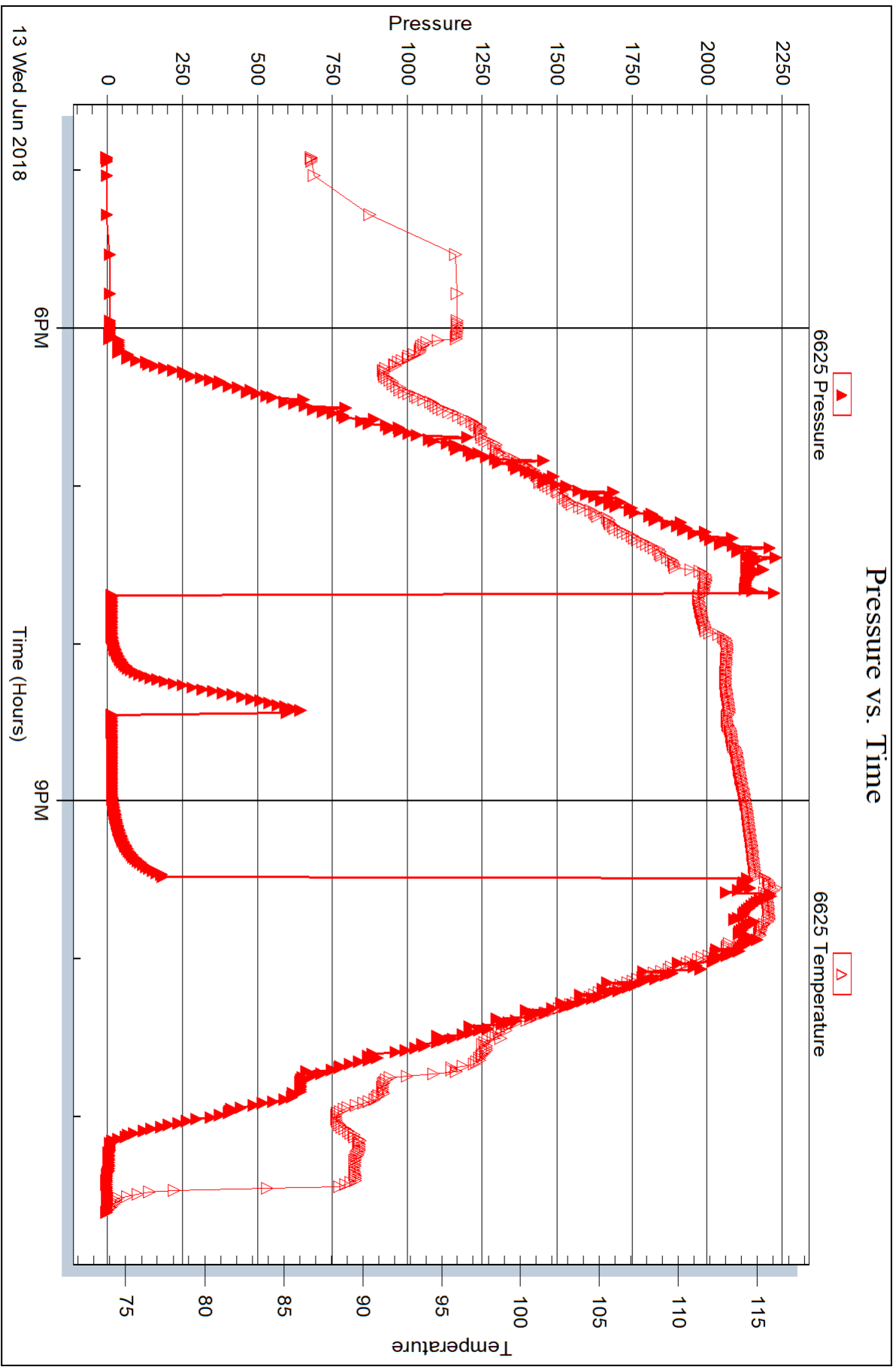
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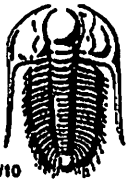
Inside

Lario Oil & Gas Co.

Knobbe Unit #1-4

DST Test Number: 3





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63718

Well Name & No. Knobbe Unit #1-4 Test No. 1 Date 6-11-18
 Company Lario Oil + Gas Co. Elevation 3295 KB 3284 GL
 Address 301 S Market St. Wichita, KS 67202
 Co. Rep / Geo. Steve Davis Rig Southwind #8
 Location: Sec. 4 Twp 19S Rge. 37W Co. Wichita State KS

Interval Tested 4439-4470 Zone Tested Pawnee
 Anchor Length 31 Drill Pipe Run 4417 Mud Wt. 9.0
 Top Packer Depth 4434 Drill Collars Run - Vis 48
 Bottom Packer Depth 4439 Wt. Pipe Run - WL 8.0
 Total Depth 4470 Chlorides 7500 ppm System LCM 1#

Blow Description IF: Blow built to BOB (11") at 3 min.
ISI: Blowback built to 1/4"
FF: Blow built to BOB at 4 1/4 min.
FSI: Blowback built to BOB at 11 1/2 min.

Rec	Feet of	%gas	%oil	%water	%mud
<u>360</u>	<u>CGO</u>	<u>35</u>	<u>62</u>	<u>-</u>	<u>3</u>
<u>255</u>	<u>MCGO</u>	<u>53</u>	<u>36</u>	<u>-</u>	<u>11</u>
<u>65</u>	<u>GOWCM</u>	<u>20</u>	<u>8</u>	<u>24</u>	<u>48</u>
<u>680</u>	<u>GIP = 1575'</u>				

Rec Total 680 BHT 120 Gravity 29.2 API RW @ °F Chlorides ppm

(A) Initial Hydrostatic 2265 Test 1150 T-On Location 21:00 ^{6/11}
 (B) First Initial Flow 57 Jars 250 T-Started 2:40 ^{6/12}
 (C) First Final Flow 102 Safety Joint 75 T-Open 4:50
 (D) Initial Shut-In 420 Circ Sub T-Pulled 8:01
 (E) Second Initial Flow 118 Hourly Standby 3.75 300 T-Out 10:45
 (F) Second Final Flow 281 Mileage 64 RT 64
 (G) Final Shut-In 421 Sampler
 (H) Final Hydrostatic 2145 Straddle
 Shale Packer
 Extra Packer
 Extra Recorder
 Day Standby
 Accessibility

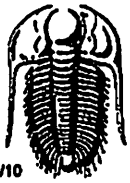
Initial Open 10
 Initial Shut-In 30
 Final Flow 60
 Final Shut-In 90

Sub Total 1839

MP/DST Disc't

Approved By [Signature] Our Representative [Signature]

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.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63719

Well Name & No. Knobbe Unit #1-4 Test No. 2 Date 6-12-18
 Company Lario Oil + Gas Co Elevation 3295 KB 3284 GL
 Address 301 S. Market St. Wichita, KS 67202
 Co. Rep / Geo. Steve Davis Rig Southwind #8
 Location: Sec. 4 Twp 19s Rge. 37w Co. Washington State KS

Interval Tested 4474 - 4498 Zone Tested Ft. Scott
 Anchor Length 24 Drill Pipe Run 4446 Mud Wt. 9.0
 Top Packer Depth 4469 Drill Collars Run - Vis 55
 Bottom Packer Depth 4474 Wt. Pipe Run - WL 8.0
 Total Depth 4498 Chlorides 7500 ppm System LCM 1

Blow Description IF: Blow built to 1/4"
ISI: No blowback
FF: No blow
FSI: No blow

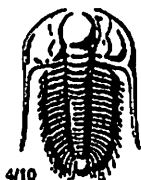
Rec	Feet of	%gas	%oil	%water	%mud
<u>1</u>	<u>Mud w/oil spots</u>	<u>3</u>	<u>-</u>	<u>97</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 1 BHT 112 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2236 Test 1150 T-On Location 20:25 6/12
 (B) First Initial Flow 17 Jars 250 T-Started 21:10
 (C) First Final Flow 21 Safety Joint 75 T-Open 23:24
 (D) Initial Shut-In 72 Circ Sub _____ T-Pulled 1:09
 (E) Second Initial Flow 19 Hourly Standby _____ T-Out 3:00 6/13
 (F) Second Final Flow 18 Mileage 64RT 64 Comments Ran EM Tool
 (G) Final Shut-In 36 Sampler _____
 (H) Final Hydrostatic 2162 Straddle _____
 Shale Packer _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Packer _____
 Extra Copies _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

Initial Open 15
 Initial Shut-In 30
 Final Flow 30
 Final Shut-In 30
 Sub Total 1539
 Total 1539
 MP/DST Disc't _____

Approved By [Signature] Our Representative James Winder
 Triobite 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.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63720

Well Name & No. Knobbe Unit #1-4 Test No. 3 Date 6-13-18
 Company Lario Oil & Gas Co. Elevation 3295 KB 3284 GL
 Address 301 S Market St Wichita, KS 67202
 Co. Rep / Geo. Steve Davis Flg. Southwind #8
 Location: Sec. 4 Twp 19s Rge. 37w Co. Wichita State KS

Interval Tested 4510 - 4540 Zone Tested Cherokee LS
 Anchor Length 30 Drill Pipe Run 4509 Mud Wt. 8.7
 Top Packer Depth 4505 Drill Collars Run - Vls 56
 Bottom Packer Depth 4510 Wt. Pipe Run - WL 10.4
 Total Depth 4540 Chlorides 9700 ppm System LCM 2

Blow Description IF: Weak surface blow
ISI: No blowback
FF: No blow
FSI: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Mud w/oil spots</u>	<u>1</u>		<u>99</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5 BHT 114 Gravity _____ API RW _____ @ _____ ° F Chlorides _____ ppm

(A) Initial Hydrostatic 2227
 (B) First Initial Flow 16
 (C) First Final Flow 17
 (D) Initial Shut-In 1654
 (E) Second Initial Flow 17
 (F) Second Final Flow 18
 (G) Final Shut-In 192
 (H) Final Hydrostatic 2160

Test 1150
 Jars 250
 Safety Joint 75
 Circ Sub _____
 Hourly Standby _____
 Mileage 64 RTx2 128
 Sampler _____
 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1603

T-On Location 16:10
 T-Started 16:55
 T-Open 19:41
 T-Pulled 21:28
 T-Out 23:30
 Comments tools loaded 7:55 6/15
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 0
 Total 1603
 MP/DST Disc't _____

Initial Open 15
 Initial Shut-In 30
 Final Flow 30
 Final Shut-In 30

Approved By J. P. [Signature] Our Representative James Winder

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.



**LARIO OIL & GAS COMPANY
KNOBBE UNIT 1-4**

**100' FNL & 2105' FEL of Section 4-T19S-R37W
WICHITA COUNTY, KANSAS
API#15-203-20337-00-00**

**Geologist's Report
WellSight Systems**

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

**Well Name: Lario Oil & Gas Company Knobbe Unit 1-4
API: #15-203-20337-00-00
Location: 100' FNL & 2105' FEL of Section 4-T19S-R37W
License Number: API#15-203-20337-00-00 Region: Wichita County, KS
Spud Date: 06/05/2018 Drilling Completed: 06/16/2018
Surface Coordinates: 100' FNL & 2105' FEL of Section 4-T19S-R37W**

**Bottom Hole Vertical Test
Coordinates: Field: Obi-Wan 5 1/2" @ 4979'
Ground Elevation (ft): 3285 K.B. Elevation (ft): 3295
Logged Interval (ft): RTD To: 3400 Total Depth (ft): RTD 5000 LTD 4999
Formation: Mississippian
Type of Drilling Fluid: Chemical (Displacement complete @ 3505)**

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

Operator

**Company: Lario Oil & Gas Company
Address: 301 S Market
Wichita, Kansas 67202
Division Geologist: John Hastings**

Geologist

**Name: Richard S.(Steve) Davis Jr.
Company: Consulting Petroleum Geologist
Address: 7329 E. Norfolk
Wichita, Kansas 67206
Cell 316-772-6479 Home 316-686-1193**

FORMATION TOPS

Formation	Sample	E-Log	Datum	Formation	Sample	E-Log	Datum
KB 3295							
Anhydrite	2322	2323	+972	Lansing L	4263	4254	-959
B/Anhydrite	2339	2339	+956	BKC	4331	4330	-1035
Stotler	3475	3474	-179	Marmaton	4367	4371	-1076
Topeka	3686	3686	-391	Pawnee	4459	4461	-1166
Heebner	3868	3868	-573	Fort Scott	4483	4485	-1190
Lansing	3910	3913	-618	Cherokee Sh	4495	4495	-1200
Lansing D	4029	4029	-734	Lwr Cherokee	4532	4531	-1236
Muncie Creek	4112	4112	-817	Johnson	4605	4610	-1315
Lansing H	4124	4123	-828	Morrow	4715	4715	-1420
Lansing I	4152	4152	-857	Basal Penn Sd		No sand	
Lansing J	4176	4175	-880	Mississippi	4840	4839	-1544
Stark	4204	4201	-906	Total Depth	5000	4999	-1704
Lansing K	4210	4204	-909				
Hushpuckney	4252	4251	-956				

DAILY PENETRATION: 7:00 AM

Date	Depth	Activity
06/05/18	0	MIRU & Spud
06/06	352'	WOC
06/07	2140'	Drlg
06/08	3200'	Drlg
06/09	3870'	Drlg
06/10	4365'	Drlg
06/11	4470'	Stuck
06/12	4470'	DST#1
06/13	4507'	WOR
06/14	4581'	Drlg
06/15	4848'	Drlg
06/16	5000'	Logging

CONTRACTOR:

Southwind Drilling Rig #8
Toolpusher: Bill Sanders

MUD:

Mud Co (displacement complete @ 3505')
Tony Maestas

DRILL STEM TESTING: Trilobite Testing Inc.

James Winder

ELECTRIC LOG:

Weatherford: Justin Hicks
(DIL, CDL/CNL, PE & MEL)

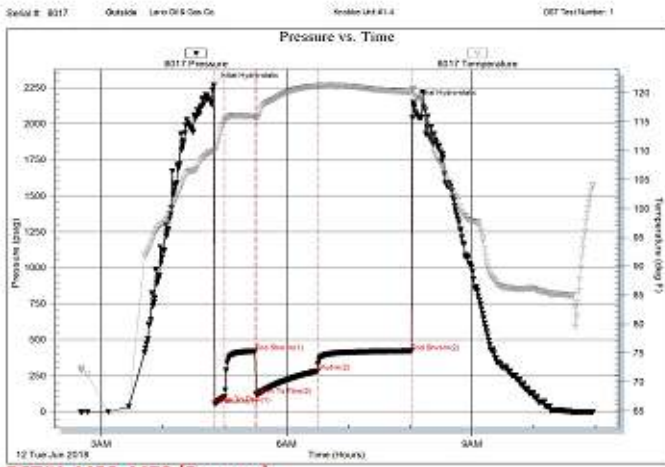
CASING RECORD:

Surface: 8 5/8" @ 352' w/ 225 sx

Production: 5 1/2" @ 4979'

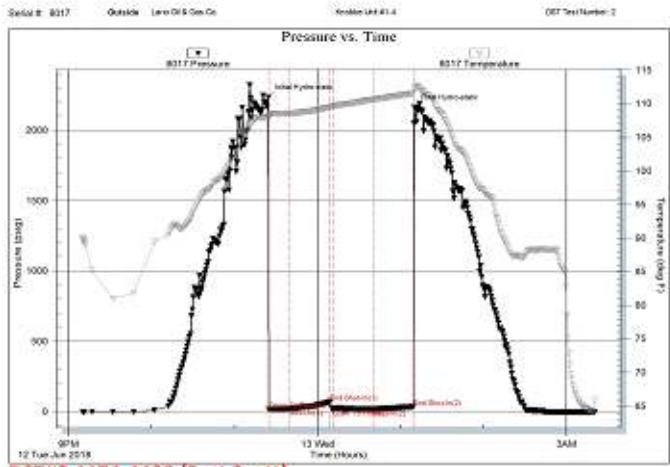
BIT RECORD:

Bit No./Size	Make/Type	Out	Ftg	Hrs
#1/ 12 1/4"	RR	352'	352'	2
#2/ 7 7/8"	VarHE29H	5000'	4748'	125



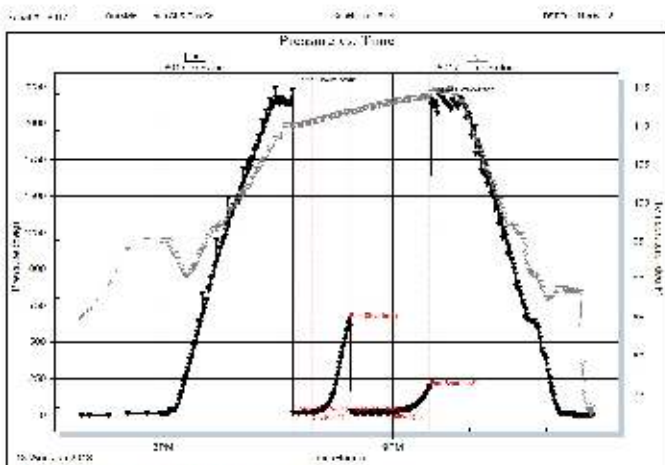
DST#1 4439-4470 (Pawnee)

FlowStop 1 FlowStop 2 FlowStop 3
 Probed 20180612 @ 11:32:48



DST#2 4474-4498 (Fort Scott)

FlowStop 1 FlowStop 2
 Probed 20180613 @ 02:34:02



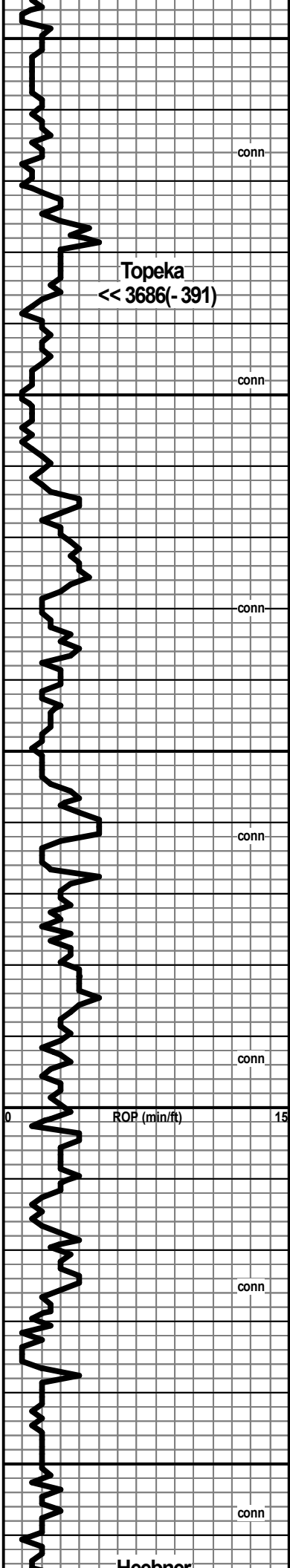
DST#3 4510-4540 (Cherokee LS)

FlowStop 1 FlowStop 2
 Probed 20180614 @ 11:32:48

Rock Types

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

ROP (min/ft)	Depth	Lithology	Geological Descriptions	Remarks
 ROP (min/ft)				
 ROP (min/ft)	3400			Start 20' Wet & Dry Samples @ 3400'



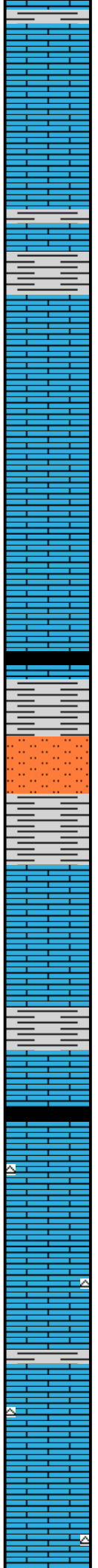
3650

3700

3750

3800

3850



LS, tan-wh, vf-micxn, chky IP, sub ool-foss, NV por, hd

Shale, dk gy-blk

LS, bm-gy, foss-ool, chky IP-arg, rP mold por, NS

LS, tan-off wh, f-vfxn, sltly foss, NV por, dns

Shale, blk, sub carb

Shale, gy-blk & gn + Stst, gy-gn

LS, wh-crm, f-vfxn, chky IP, sltly foss, NV por, hd + Shale, vcol

Shale, blk-dk gy

Shale, blk, sub carb

LS, bm-crm, f-vfxn, foss & ool, chky IP, P vgy por, NS + Cht, gy-wh, sltly foss, opq

LS, lt gy-tan, vfxn, NV por, sltly foss, hd + Cht & LSAA

LS, off wh, crm-lt gy, vf-micxn, ool & foss, chky, P ipart por & P pp por, NS + Cht, gy, sltly foss, opq

conn

conn

conn

conn

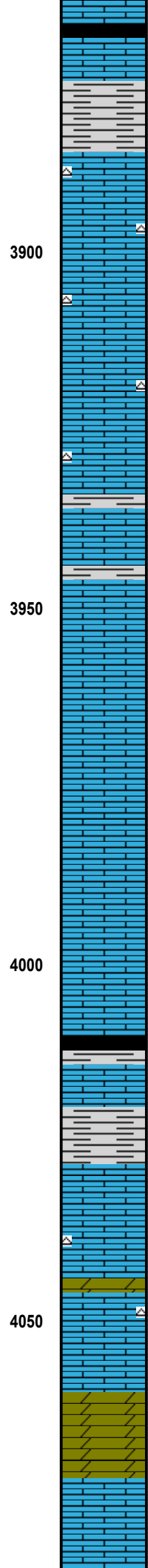
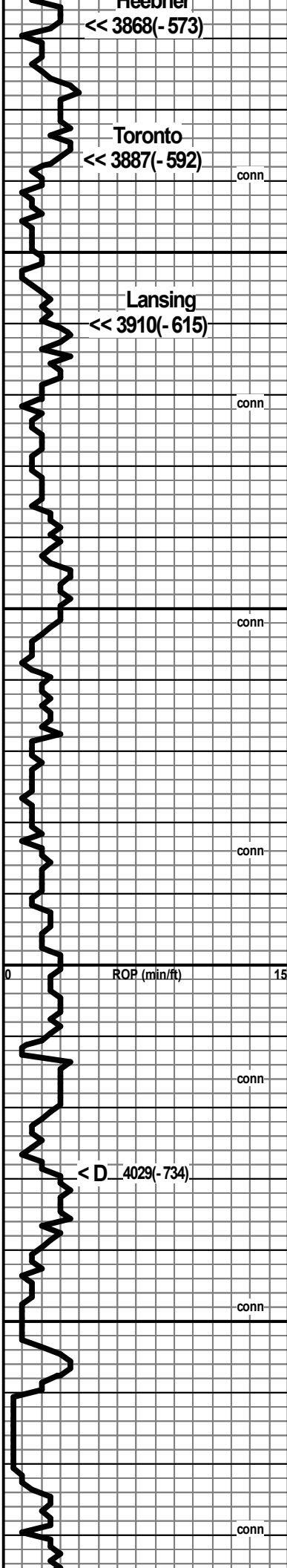
conn

conn

conn

Topeka
 << 3686(- 391)

Hechner



Shale, blk, carb

LS, bm-gy, vfxln, arg, sltly foss, NV por, sft

Shale, gy, mar, blk & gn

LS, cm-wh, f-vfxln, chky-dns, sub ool-foss, P ixln por + Cht, wh, opq

LS, cm-wh, f-vfxln, chky-cthy IP, sub ool-foss, NV por, hd + Cht, wh-lt gy, opq

LS, cm-wh, vfxln, ool, chky IP, P ixln por, NS, sft + Cht, wh-lt gy, sltly foss, opq

Shale, blk, gy & dk gn

LS, gy-bm, micxln, sub ool-foss, NV por, dns + Shale, dk gy, mar & gn

LS, wh-cm, f-vfxln, ool, r P iool por, NS, m hd

LS, lt gy-tan, vf-micxln, ool packed, NV por, hd

LS, cm-wh, vf-fxln, chky IP, NV por, sft, abnt mar shale

LS, cm-wh, fxln, sub ool, chky, sft, NV por

LS, lt gy-bm, vf-micxln, ool packed, NV por, dns

Shale, blk, carb

LS, gy-tan, vf-micxln, sltly foss, chty IP, sharp, NV por, hd

Shale, blk, gy, gn & mar

LS, bm-gy, vf-micxln, foss, NV por, dns

LS, bm-gy-cm, dolo, f-vfxln, sltly foss, r F-P vgy por & P ixln por, NS, m hd + few pc's Cht, gy, opq

LS, cm-gy, vf-micxln, chky-dns, NV por

Dolo, wh-cm, f-vfxln, sub ool, F ixln por, NS, sft

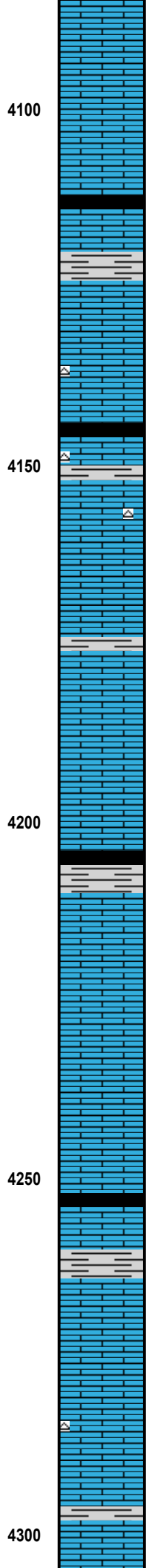
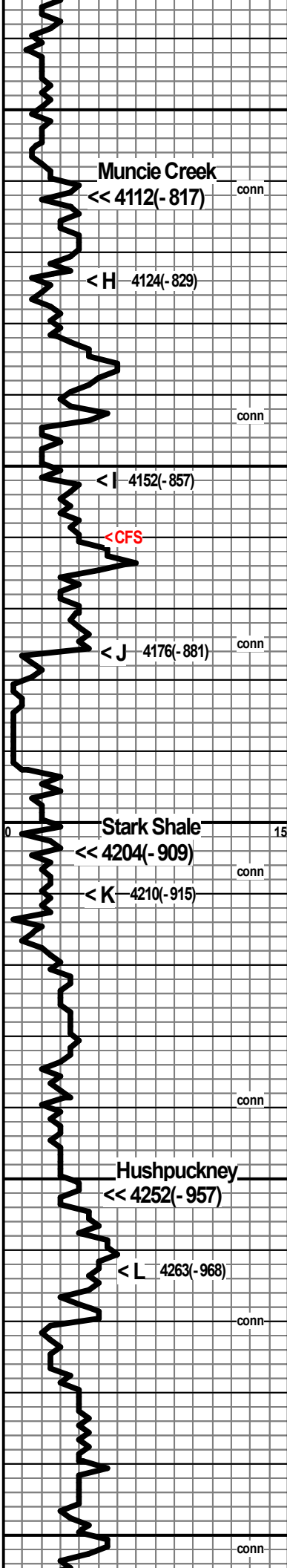
LS, bm-gy, f-vfxln, ool, P oom por, NS, hd + LS, gy-tan, vf-micxln, sharp, NV por, dns

Start 10' Wet & Dry Samples @ 3900'

Vis 58 Wt 8.9 Fil 6.4 PH 12.0
Chl 3,500 LCM 2#
6/09/2018 @ 3923'

Vis 65 Wt 9.0 LCM 2#

Vis 50 Wt 9.0 LCM 2#



LS, cm-wh, f-vfxln, F-G oom por, NS, sft + LS, cm-wh, f-vfxln, sub ool-foss, NV por, hd

4100

LS, tan-gy, vf-micln, sub ool, chty IP, sharp, NV por

Shale, blk, carb (4130 spl)

LS, tan-gy, vf-micln, chty IP, NV por + Shale, dk gy, gn & mar

LS, gy-bm, vf-fxn, foss & ool, r P ipart por, NS, m sft

LS, bm, micln, sltly foss, NV por, dns & few pc's Cht, gy-wh, opq

Shale, blk, carb

4150

LS, wh-cm-gy, f-vxln, chky IP, sub ool-foss, P ixln por, NS + Cht, wh-lt gy, opq

LS, cm-wh, fxln, chky, foss & ool (dk gy), NV por, m sft + Cht, wh, opq

LS, lt gy-wh, fxln, chky, foss-ool, NV por, dns

Shale, mar, gy & blk

LS, cm-bm-gy, ool, G oom por, NS, N fluor, N odor

4200

LS, gy-tan, vfxln, sub ool, NV por, dns

Shale, blk, carb

LS, tan-cm-gy, fxln, F-P oom por, NS

LS, lt gy-wh, vf-micln, chky IP, NV por, hd

LS, lt gy-tan, vf-micln, sltly foss, NV por, hd

4250

Shale, blk, carb

LS, bm-gy, vfxln, foss-ool, NV por, dns + Shale, blk & mar

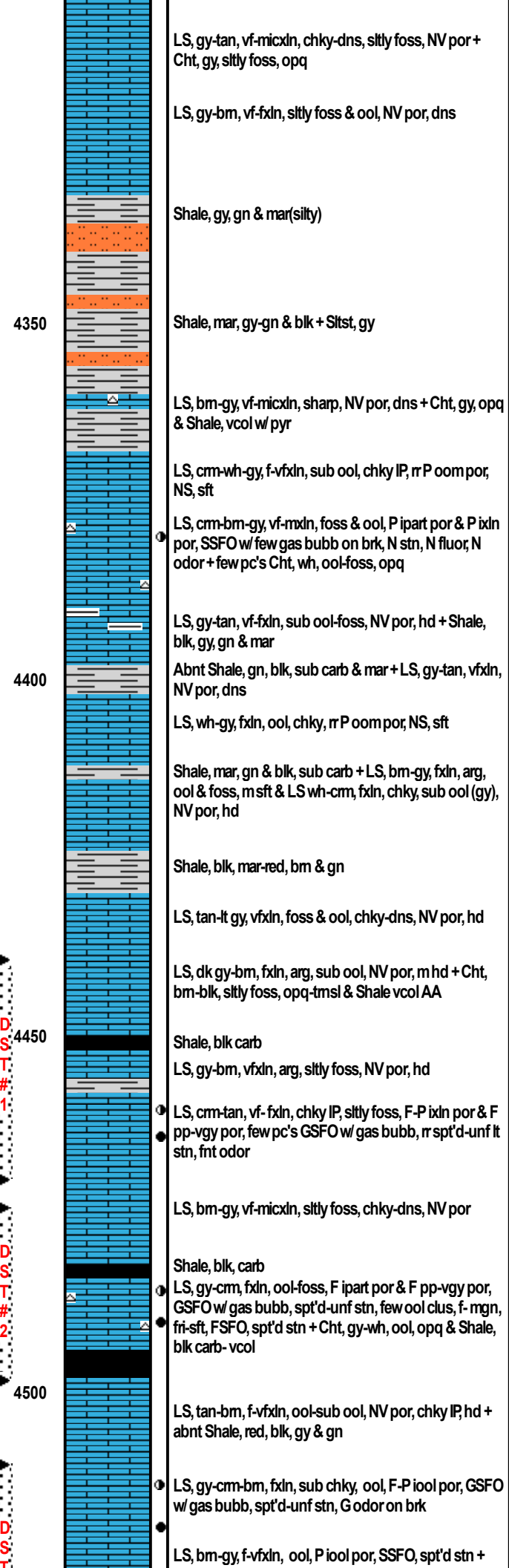
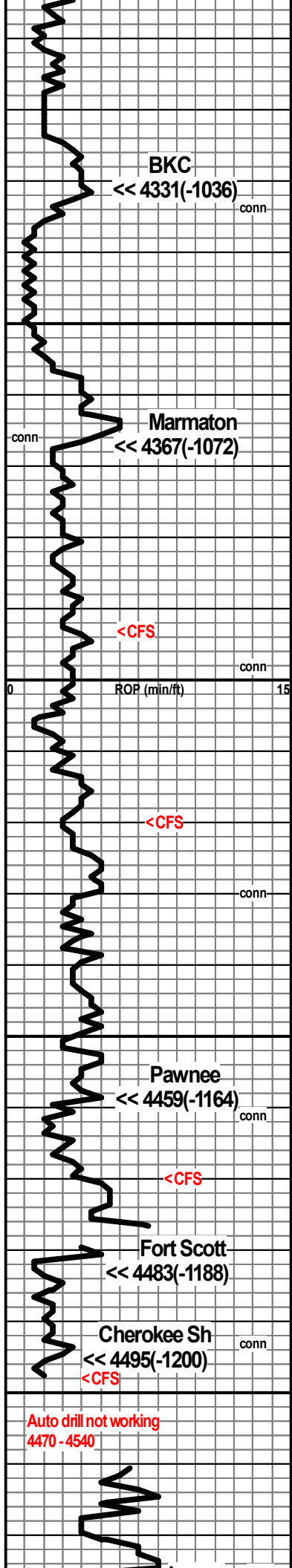
LS, tan-lt gy, fxln, gran, sltly foss, chky IP, P ixln por, NS, hd

LS, tan-lt gy, f-vfxln, chky IP, sltly foss, NV por, hd + few pc's Cht, gy, sltly foss, opq

4300

LS, lt gy-tan, vf-micln, sharp, sub ool-foss, NV por, dns + Cht, gy, opq & Shale, dk gy

Vis 53 Wt 9.0 LCM 2#



LS, gy-tan, vf-micxn, chky-dns, stily foss, NV por + Cht, gy, stily foss, opq

LS, gy-bm, vf-fxn, stily foss & ool, NV por, dns

Shale, gy, gn & mar(silty)

Shale, mar, gy-gn & blk + Sltst, gy

LS, bm-gy, vf-micxn, sharp, NV por, dns + Cht, gy, opq & Shale, vcol w/ pyr

LS, cm-wh-gy, f-vfxn, sub ool, chky IP, rP oom por, NS, sft

LS, cm-bm-gy, vf-mxn, foss & ool, P ipart por & P ixln por, SSFO w/ few gas bubb on brk, N stn, N fluor, N odor + few pc's Cht, wh, ool-foss, opq

LS, gy-tan, vf-fxn, sub ool-foss, NV por, hd + Shale, blk, gy, gn & mar

Abnt Shale, gn, blk, sub carb & mar + LS, gy-tan, vfxn, NV por, dns

LS, wh-gy, fxn, ool, chky, rP oom por, NS, sft

Shale, mar, gn & blk, sub carb + LS, bm-gy, fxn, arg, ool & foss, msft & LS wh-cm, fxn, chky, sub ool (gy), NV por, hd

Shale, blk, mar-red, bm & gn

LS, tan-lt gy, vfxn, foss & ool, chky-dns, NV por, hd

LS, dk gy-bm, fxn, arg, sub ool, NV por, m hd + Cht, bm-blk, stily foss, opq-trmsl & Shale vcol AA

Shale, blk carb

LS, gy-bm, vfxn, arg, stily foss, NV por, hd

LS, cm-tan, vf-fxn, chky IP, stily foss, F-P ixln por & F pp-vgy por, few pc's GSFO w/ gas bubb, r spt'd-unf ft stn, frt odor

LS, bm-gy, vf-micxn, stily foss, chky-dns, NV por

Shale, blk, carb

LS, gy-cm, fxn, ool-foss, F ipart por & F pp-vgy por, GSFO w/ gas bubb, spt'd-unf stn, few ool clus, f-mgn, fri-sft, FSFO, spt'd stn + Cht, gy-wh, ool, opq & Shale, blk carb- vcol

LS, tan-bm, f-vfxn, ool-sub ool, NV por, chky IP, hd + abnt Shale, red, blk, gy & gn

LS, gy-cm-bm, fxn, sub chky, ool, F-P iool por, GSFO w/ gas bubb, spt'd-unf stn, G odor on brk

LS, bm-gy, f-vfxn, ool, P iool por, SSFO, spt'd stn +

Vis 55 Wt 9.3 Fil 7.2 PH 10.0
Chl 4,200 LCM 1#
06/10/2018 @ 4393'

During short trip prior to DST# 1, drilling line came free and blocks dropped to floor. While repairs were made the drill pipe became stuck and 80 bbls of oil was spotted to free pipe.

Pipe Strap @ 4470', 29' long
Survey 1 deg

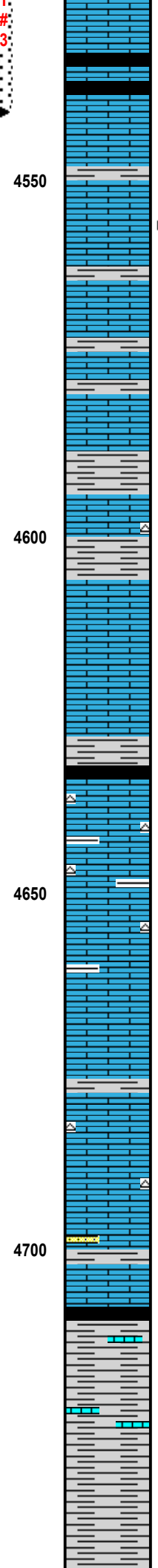
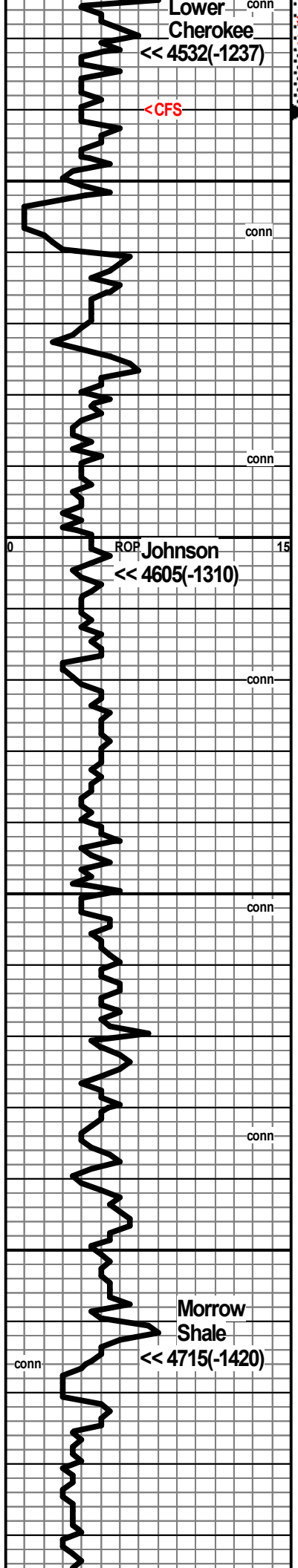
DST#1 4439 - 4470

(Pawnee)
10 30 60 90
BLOW:
IF BOB 3 min
ISI 1/4" return
FF BOB 4 1/2 min
FSI BOB 11 1/2 min
RECOVERY: 1575' GIP
360' CGO (35%g 62%o 3%am)
255' MCGO (53%g 36%o 11%am)
65' GOWCM (20%g 8%o 24%ow 48%am)
680' TOTAL FLUID (Gr 29.2)
IH 2265
IF 57 - 102
ISI 420
FF 118 - 281
FSI 421
FH 2145 BHT 120 deg F

Vis 48 Wt 9.0 Fil 8.0 PH 11.0
Chl 7,500 LCM 1#
06/12/2018 @ 4470'

DST#2 4474 - 4498

(Fort Scott)
15 30 30 30



LS, gy-tan, vf-micxn, sub ool, NV por, hd

Shale, blk, carb + vcol

LS, tan-gy, fxln, chky IP, sltly foss, NV por, hd + abnd
Shale, vcol

LS, gy-bm, fxln, ool, r P iool por & P pp por, spt'd res
strn, NSFO

LS, bm-gy, vf-micxn, sltly foss, NV por, hd + abnt
Shale, blk, dk gy, mar & gn

LS, gy-tan, vf-micxn, sltly foss, NV por, dns + Shale,
mar, blk, gy & gn

LS, bm-tan, micxn, sharp, chty IP, NV por, dns + Shale,
vcol

Shale, blk, sub carb,

LS, cm-tan, f-vfxln, chky IP, sub ool, NV por + Cht, dk
bm-gy, tmsl-opq, sltly foss & Shale, blk, sub carb, dk
gy, mar & gn

LS, gy-bm, vf-micxn, sharp, chty IP, NV por, dns

LS, tan-cm-gy, vf-micxn, sub ool-foss, NV por, dns

Shale, blk, sub carb, dk gy, gn & mar + pyr

LS, gy-bm, micxn, ool, dns NV por, + Cht, blk-gy, foss,
tmsl-opq

LS, gy-bm, vf-micxn, chky IP-dns, NV por + Cht, blk,
tmsl-opq + Shale, blk, gy & gn

LS, bm-gy, f-vfxln, ool-foss IP, chky-dns, NV por +
Abnt Shale, blk, gy, gn & mar

LS, tan-dk gy, micxn, dns, NV por w/ inc. Shale, mar,
gn & gy-blk

LS, dk bm-gy, vfxln, arg, NV por, dns + LS, bm, micxn,
NV por & Cht, blk, tmsl, Abnt, Shale, vcol

LS, cm-tan, vfxln, sltly foss, NV por, dns & Shale, gy,
blk & gn

Shale, blk carb-sub carb, mar, gn & gy + few clus, SS,
gy, f-vfgm, rd, mod sort, fri, F ig por, NS

Shale, blk, gy, gn & mar + LS, bm-cm, f-vfxln, sltly foss,
NV por, dns & LS, bm, vf-micxn, sharp, chty, dns

Abnd Shale, gy, gn, blk & mar-red

Shale, mar-red, gy, gn, blk & gy + LS, bm-gy, vf-micxn,
cht, IP, sltly foss, NV por, dns

BLOW:
IF Built to 1/4"
FF No blow
RECOVERY:
1' SOCM (3%o 97%am)
IH 2236
IF 17 - 21
ISI 72
FF 19 - 18
FSI 36
FH 2162 BHT 112 deg F
Vis 56 Wt 8.7 Fil 10.4 PH 11.0
Chl 9,700 LCM 2#
6/13/2018 @ 4510'

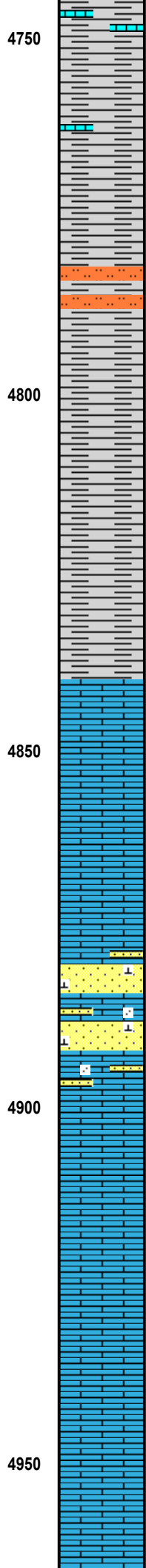
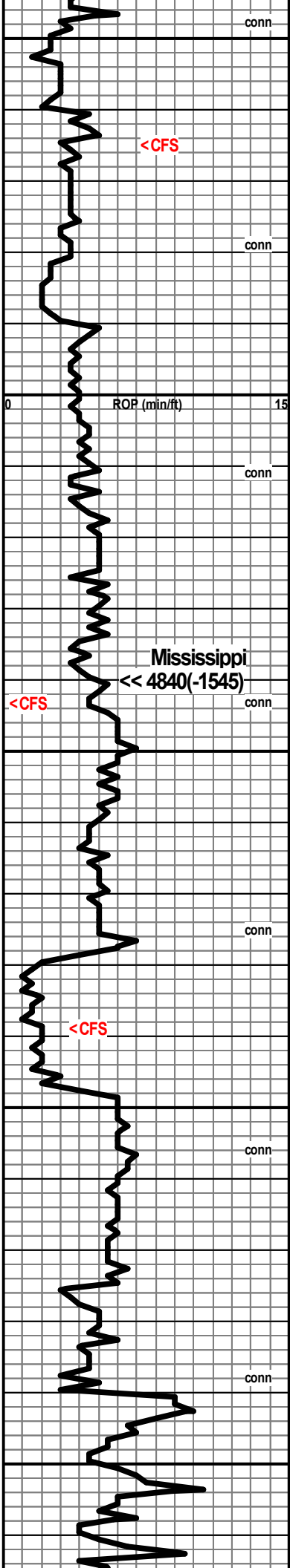
Vis 47 Wt 8.7 Fil 9.6 PH 11.0
Chl 9,000 LCM 2#
6/14/2018 @ 4571'

DST#3 4510 - 4540
(Cherokee LS)
15 30 30 30
BLOW:
IF Surface blow
FF No blow
RECOVERY:
5' SOCM (1%o 99%am)
IH 2227
IF 16 - 17
ISI 654
FF 17 - 18
FSI 192
FH 2160 BHT 114 deg F

Vis 50 Wt 9.0 LCM 1#

Jet & add mud @ 4690'

Vis 53 Wt 9.0 LCM 6#



chky IP, silty loss, NV por, dns

Shale, gy-gn, red-mar + LS, tan-gy, vf-fxn, NV por, dns (abt LCM)

Most Shale, gy, gn, blk & mar-red, some silty

Siltst gy + Shale, mar-red(silty), gy-gn & turq. (few cuttings)

Shale, gy, gn & blk (few cuttings)

Shale, gy, gn & blk (few cuttings)

Shale, gy, gn & blk (few cuttings)

First Miss LS in 4843' cfs 20 min spl

LS, lt gy-off wh, vfxln, sdy, sub chky, NV por, m sft (few cuttings)

LS, lt gy-wh-cm, fxl, chky IP, sdy-sub ool, NV por, m sft-hd

(abt shale slough)

LS, cm-wh, fxl, ool, chky, NV por, m hd + LS, wh-lt gy, vfxln, sdy, sub chky, NV por

SS, wh-clr qtz, calc, silty glauc, f-vfgm, rd, mod-well sort, fri, P ig por, NS

SS, gy-clr qtz, silty calc, f-mgm, sub rd, mod sort, fri, F ig por, NS + LS, wh, fxl, chky, NV por, sft

(abt shale slough)

LS, cm-gy, vf-micxl, sdy-sub ool, NV por, dns

LS, cm-lt gy, vf-fxl, sdy-ool, NV por, chky-dns, NV por

LS, cm-wh, fxl, chky IP, ool-sdy, NV por, m sft + LS, tan, vf-micxl, ool, NV por, dns

(abt shale slough)

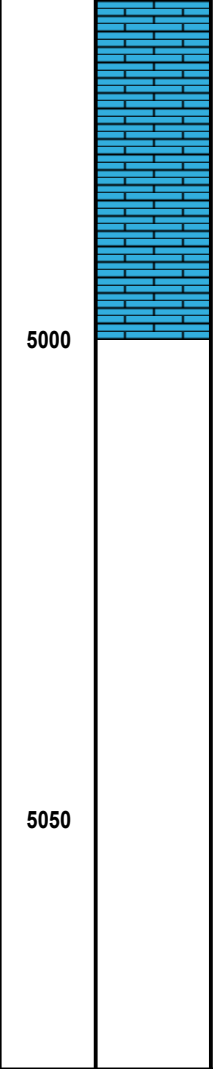
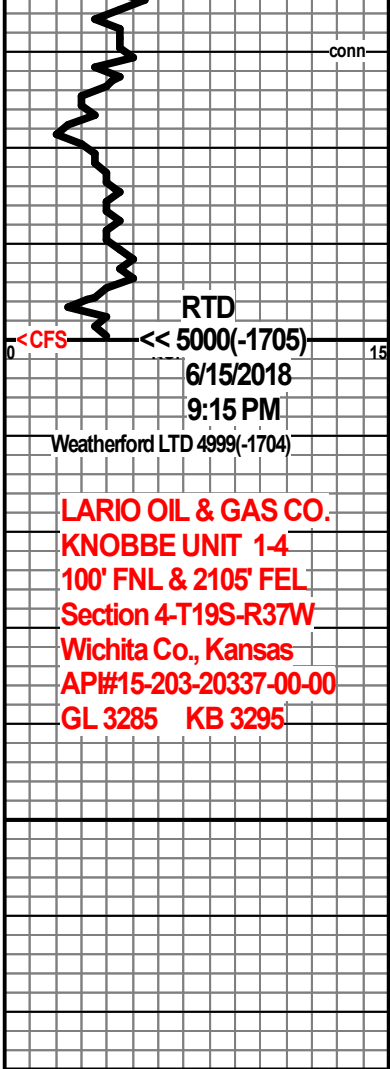
LS, cm-wh, fxl, chky IP, sdy & ool, NV por, sft + LS, tan-cm, vf-micxl, sub ool-sdy, NV por, hd

LS, cm-tan, vfxln, sub ool-sdy, NV por, dns + LS, wh, cm, fxl, ool, chky IP, NV por, sft

Very few cuttings in sample box.

Vis 88 Wt 9.0 LCM 6#

Vis 70 Wt 8.8 Fl 9.6 PH 10
Chl 9,500 LCM 2#
6/15/2018 @4832'



wr-cm, lxn, ool, chky IP, NV por, sit

LS, cm-wh, vf-micxn, sub ool-foss, NV por, chky IP, NV por, hd

LS, cm-wh, vfxn, chky IP, sub ool-foss, NV por hd + LS, cm-wh, vfxn, ool & foss, chky IP, NV por, msft & abnt Shale, gy & gn

Vis 57 Wt 9.0 LCM 6#

Survey @5000', 1 deg

GLOBAL OIL FIELD SERVICES, LLC

Invoice

24 S. Lincoln
RUSSELL, KS 67665

Date	Invoice #
6/11/2018	3350

Bill To
LARIO OIL & GAS LLC 301 S MARKET ST WICHITA, KS 67202

AFE 18-098

P.O. No.	Terms	Project
KNOBBE UNIT#1-4	Due on receipt	

Quantity	Description	Rate	Amount
225	60/40 POZMIX CEMENT	13.75	3,093.75
8	CALCIUM-CHLORIDE	80.00	640.00
4	BENTONITE GEL	30.00	120.00
237	HANDLING	1.90	450.30
	BULK MILEAGE	948.00	948.00
1	TRI-PLEX PUMP CHARGE FOR SURFACE	850.00	850.00
50	HEAVY EQUIPMENT. ONE WAY	3.50	175.00
50	LMV- ONE WAY	1.75	87.50
20% DISCOUNT IF PAID WITHIN 15 DAYS OF INVOICE new sales tax rate as of 7-1-2015		8.50%	0.00

JUN 13 2018

JUN 13 2018

Thank you for your business.

Phone #	Fax #
785-445-3525	785-445-3526

Total \$6,364.55

