

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
--	---

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
---	--	------------------------------------

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:	
----------------	-------	---------	------------	--

Form	ACO1 - Well Completion
Operator	Jolen Operating Company
Well Name	CARTER 1-6
Doc ID	1487671

All Electric Logs Run

Dual Induction
Compensated Neutron-Density
Sonic
Micro



PAGE 1 of 1	CUST NO 1002098	YARD # 1718	INVOICE DATE 09/20/2019
INVOICE NUMBER 93052406			

SEP 26 2019

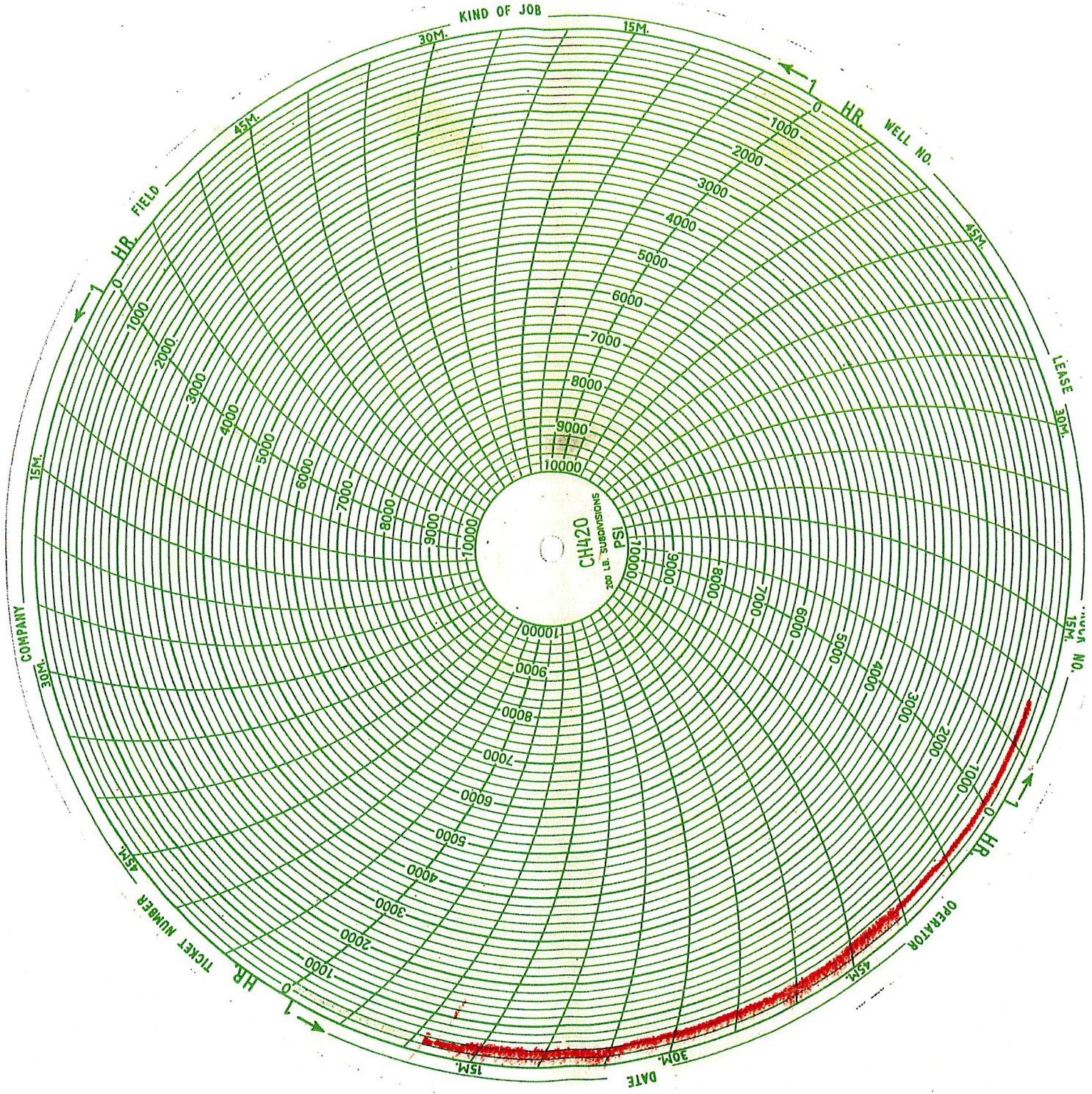
Pratt (620) 672-1201
 B JOLEN OPERATING COMPANY
 I 100 N BROADWAY AVE STE 2460
 L OKLAHOMA CITY
 L OK US 73102
 T
 O ATTN: ACCOUNTS PAYABLE

J LEASE NAME CARTER #1-6
 O LOCATION
 B COUNTY CLARK
 S STATE KS
 I JOB DESCRIPTION Cement-New Well Casing/Pi
 T JOB CONTACT
 E

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
41190642			Net - 30 days	10/20/2019

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
<i>For Service Dates: 09/19/2019 to 09/19/2019</i>				
0041190642				
171819667L Cement-New Well Casing/Pi 09/19/2019 CEMENT SURFACE CASING				
Class A Cement	300.00	SK	16.12	4,836.00 T
Celloflake	76.00	LB	2.08	158.08 T
Calcium Chloride	564.00	LB	0.52	293.28 T
Light Vehicle Mileage	80.00	MI	2.60	208.00
Heavy Equipment Mileage	160.00	MI	4.16	665.60
Depth Charge, 0'-1000'	1.00	HR	624.00	624.00
300 SK-Blending & Mixing Service Charge	1.00	SK	219.00	219.00
Service Supervisor Charge	1.00	EA	75.00	75.00
Driver Charge	1.00	EA	35.00	35.00

PLEASE REMIT TO:	SEND OTHER CORRESPONDENCE TO:		
BASIC ENERGY SERVICES, LP	BASIC ENERGY SERVICES, LP	SUB TOTAL	7,113.96
PO BOX 841903	801 CHERRY ST, STE 2100	TAX	343.68
DALLAS, TX 75284-1903	FORT WORTH, TX 76102	INVOICE TOTAL	7,457.64



09-19-19
 Tolon Operating
 Carter 1-6
 Clark, KS
 Cement Surface



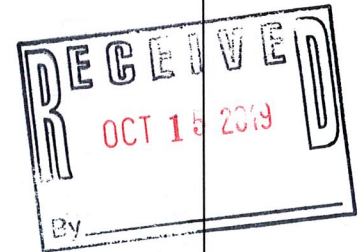
PAGE	CUST NO	YARD #	INVOICE DATE
1 of 1	1002098	1718	10/07/2019
INVOICE NUMBER			
93062215			

Pratt (620) 672-1201
 B JOLEN OPERATING COMPANY
 I 100 N BROADWAY AVE STE 2460
 L OKLAHOMA CITY
 L OK US 73102
 T
 O ATTN: ACCOUNTS PAYABLE

J LEASE NAME CARTER #1-6
 O LOCATION
 B COUNTY CLARK
 S STATE KS
 I JOB DESCRIPTION Cement-New Well Casing/Pi
 T JOB CONTACT
 E

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
41192107			Net - 30 days	11/06/2019

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
<i>For Service Dates: 10/05/2019 to 10/05/2019</i>				
0041192107				
171818150A Cement-New Well Casing/Pi 10/05/2019 PLUG TO ABANDON				
60/40 Poz	190.00	SK	14.04	2,667.60 T
Cement Gel	328.00	LB	0.26	85.28 T
Light Vehicle Mileage	80.00	MI	2.60	208.00
Heavy Equipment Mileage	160.00	MI	4.16	665.60
Depth Charge, 0'-1000'	1.00	HR	624.00	624.00
Blending & Mixing Service Charge	1.00	SK	138.32	138.32
Service Supervisor Charge	1.00	EA	75.00	75.00
Driver Charge	3.00	EA	35.00	105.00



PLEASE REMIT TO:	SEND OTHER CORRESPONDENCE TO:	SUB TOTAL	4,568.80
BASIC ENERGY SERVICES, LP	BASIC ENERGY SERVICES, LP	TAX	178.94
PO BOX 841903	801 CHERRY ST, STE 2100	INVOICE TOTAL	4,747.74
DALLAS, TX 75284-1903	FORT WORTH, TX 76102		

JOLEN OPERATING COMPANY

Christopher D. Althoff

100 N. Broadway Ave. Suite 2460 OKC, OK
Office: 405-235-8444 Ext. 24/Cell: 405-637-7824
Email: ACEalthoff@outlook.com

GEOLOGICAL REPORT

Carter 1-6

S/2 SW NE NE, SECTION 6-33S-23W

CLARK COUNTY, KS

Summary

The Carter #1-6 was drilled to a total depth of 5,600' on October 4, 2019. A one-man logging unit and geologist were on location from 3,500' to TD. ELI electric logs were run that consisted of Dual Induction, Compensated Neutron-Density, Sonic Log, and Micro-log. Hydrocarbon shows were encountered in the Lansing A&B Oolitic Limestones, the Pawnee Oolitic Limestone, and the Chester Oolite.

Lansing A & B Oolitic Limestone

The Lansing A Oolite was cut at 4,546' (-2,371'). The sample descriptions were tan, medium and coarsely oolitic and oomoldic limestone with grainy texture. Green mineral fluorescence when wet with spotted green fluorescence when dry showing gas on break. The samples cut fast with a bright blue gold milky cut and residual ring and a 250 unit rooster gas kick which recycled at 50 units; no stain or odor. The zone was drill stem tested, recovering 20' of mud. The Lansing B Oolite, the primary target, was cut at 4,580' (-2405). It was described as a brown medium and coarsely oolitic and oomoldic limestone with some rare shows of clear live oil which fluoresced under U.V. light. The Lansing B zone was 18' high to the Shupe #1-6 show well in NE SW SW of Section 6. This drill stem test recovered gas to surface in 7 minutes with flowing pressures increasing from 65 to 287 psi. During second shut-in there was good blow back, with second open recovering 6 MCF on a 1/8" choke increasing to 37 MCF on 1/4" choke and flowing pressures beginning at 282 psi increasing to 594 psi. Recorded shut-in pressures were 1,581 psi, with recoveries of 3,372' of gas in pipe, 504' of gassy watery mud and 693' of gassy salt water (chlorides 170,000 ppm).

Pawnee Oolitic Limestone

The Pawnee Oolite was cut at 5,171' (-2,996'). The sample descriptions were cream to white very fine to finely oolitic limestone with bright yellow-gold spotted fluorescence with fair to good shows of clear live oil on break and scattered gas bleeding from inter-particle porosity. The oolite samples had light spotted oil stain with a fair to fast milky cut. The Pawnee had a 130 unit gas show with a 20 unit recycle. The shows and trap noted on the 3D seismic survey merited a drill stem test that recovered 2,334' of gas in pipe and 140' of gassy oil cut mud. Log calculations over the zone averaged 50% water saturation. The nearest offset production comes from the Mount Casino well in the NE Ashland field in 30-32S-22W. Completed in 2014, the Mount Casino has cumulative production to-date of 11.5 MBO, and is currently making 3-5 bopd.

Chester Oolitic Limestone

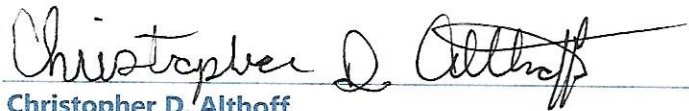
The Chester Oolite was cut at 5,483' (-3,308'). The sample descriptions were white and cream to light gray, fine to medium oolitic chalky limestone. Dull spotted fluorescence when wet and none when dry with rare trace of fine beads of live oil on a couple of pieces that had fast cut. The zone had a 140 unit gas show that did not recycle. Due to the presence of chalk, the lack of recycle and, lack of an economic analogue this zone was not drill stem tested.

Conclusion

The Carter #1-6 was drilled on a 3D identified four way closure within a larger structural feature on the Northeastern portion of the Jolen Red Cliff Survey to test the Lansing B and porosity build up in the Pawnee Lime. Significant stratigraphic thinning throughout drilling, with oil and gas shows confirm the existence of the structural feature. However, the Carter #1-6 was not high enough on the feature to trap economic hydrocarbons in the Lansing B. The Carter #1-6 had a better drill stem test than the Shupe #1-6, recovering gas to surface and gas cut salt water (the Shupe 1-6 recovered only 3,650' of salt water). Similar improvements in drill stem tests were seen in the Ashland Field (wells tested salt water, followed by gas cut salt water, and then oil toward the top of the structure). Although there are believed to be Pawnee reserves in the Carter #1-6, they are uneconomic given current prices.

It is my recommendation to plug the Carter #1-6 and further evaluate both structural features using the well logs and data collected.

Respectfully Submitted,



Christopher D. Althoff

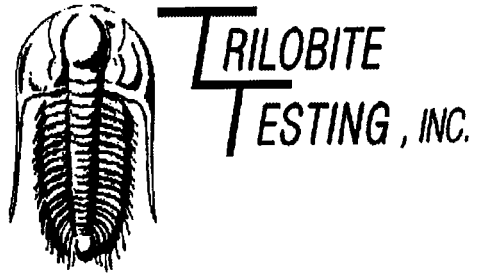
Petroleum Geologist

Jolen Operating Company

10/6/2019

ELECTRIC LOG TOPS

	JOLEN OPERATING CO. CARTER 1-6 S/2 SW NE NE 06-33S-23W		HAWKINS OIL AND GAS SHUPE 1-6 C NE SW SW 06-33S-23W	
BS. HEEBNER (Subsea)	4339 (-2164)	+18	4272 (-2182)	
LANSING (Subsea)	4517 (-2342)	+22	4554 (-2364)	
LANSING B (Subsea)	4580 (-2405)	+17	4512 (-2422)	
BS. STARK SH. (Subsea)	4977 (-2802)	+37	4929 (-2839)	
PAWNEE (Subsea)	5171 (-2996)	+40	5126 (-3036)	
CHEROKEE SH. (Subsea)	5226 (-3051)	+39	5180 (-3090)	
CHESTER (Subsea)	5415 (-3261)	+18	5369 (-3279)	
CHESTER SD/LM (Subsea)	5484 (-3309)	+66	5465 (-3375)	
ST GEN (Subsea)	5540 (-3365)		NDE	



DRILL STEM TEST REPORT

Prepared For: **Jolen Operating Company**

100 N. Braodway Ave
Ste 2460
OKC, OK 73102+8868

ATTN: Ken Leblanc

Carter #1-6

6-33s-23w Clark,KS

Start Date: 2019.09.28 @ 06:19:00

End Date: 2019.09.28 @ 15:05:19

Job Ticket #: 65701 DST #: 1

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

Printed: 2019.10.07 @ 10:11:27

Jolen Operating Company

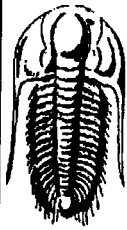
6-33s-23w Clark,KS

Carter #1-6

DST # 1

LKC "A"

2019.09.28



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Jolen Operating Company

6-33s-23w Clark, KS

100 N. Braodw ay Ave
Ste 2460
OKC, OK 73102+8868
ATTN: Ken Leblanc

Carter #1-6

Job Ticket: 65701

DST#: 1

Test Start: 2019.09.28 @ 06:19:00

GENERAL INFORMATION:

Formation: **LKC "A"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:56:40

Time Test Ended: 15:05:19

Test Type: Conventional Bottom Hole (Initial)

Tester: Benny Mulligan

Unit No: 66

Interval: **4528.00 ft (KB) To 4556.00 ft (KB) (TVD)**

Total Depth: 4556.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2176.00 ft (KB)

2167.00 ft (CF)

KB to GR/CF: 9.00 ft

Serial #: 6772

Inside

Press@RunDepth: 22.45 psig @ 4529.00 ft (KB)

Start Date: 2019.09.28

End Date: 2019.09.28

Capacity: 8000.00 psig

Last Calib.: 2019.09.28

Start Time: 06:19:01

End Time: 15:05:19

Time On Btm: 2019.09.28 @ 09:43:30

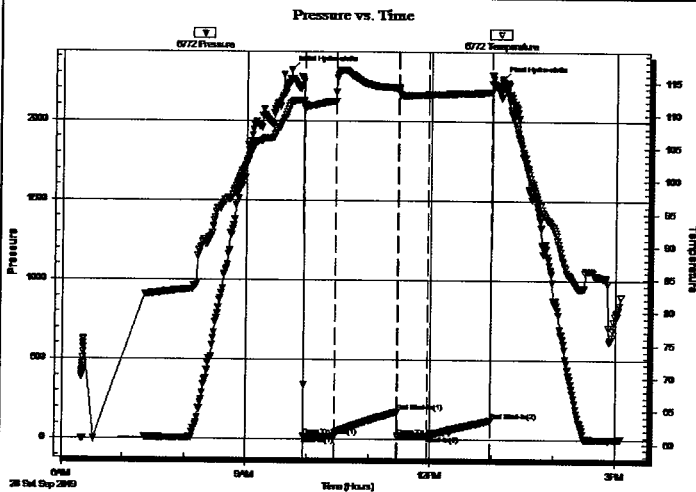
Time Off Btm: 2019.09.28 @ 13:08:30

TEST COMMENT: IF-30-BOB 25 secs total build of 30"

ISI-60- no blow back

FF-30- built to 11"

FSI-60- no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2317.92	111.87	Initial Hydro-static
14	18.73	111.54	Open To Flow (1)
44	17.95	112.05	Shut-In(1)
105	173.01	114.13	End Shut-In(1)
105	18.62	113.49	Open To Flow (2)
134	22.45	113.10	Shut-In(2)
195	119.06	113.48	End Shut-In(2)
205	2259.22	114.30	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	Mud 100%M	0.28
0.00	GIP 100'	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Jolen Operating Company

6-33s-23w Clark,KS

100 N. Braodway Ave
Ste 2460
OKC, OK 73102+8868
ATTN: Ken Leblanc

Carter #1-6

Job Ticket: 65701

DST#: 1

Test Start: 2019.09.28 @ 06:19:00

Tool Information

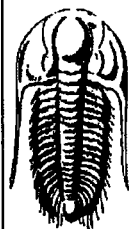
Drill Pipe:	Length: 4538.00 ft	Diameter: 3.80 inches	Volume: 63.66 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 61000.00 lb
		<u>Total Volume:</u>	<u>63.66 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 59000.00 lb
Depth to Top Packer:	4528.00 ft			Final 59000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	28.00 ft			
Tool Length:	50.00 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			4507.00	
Shut In Tool	5.00			4512.00	
Hydraulic tool	5.00			4517.00	
Safety Joint	2.00			4519.00	
Packer	5.00			4524.00	22.00 Bottom Of Top Packer
Packer	4.00			4528.00	
Stubb	1.00			4529.00	
Recorder	0.00	6772	Inside	4529.00	
Recorder	0.00	6769	Outside	4529.00	
Perforations	24.00			4553.00	
Bullnose	3.00			4556.00	28.00 Bottom Packers & Anchor

Total Tool Length: 50.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Jolen Operating Company

6-33s-23w Clark, KS

100 N. Braodw ay Ave
Ste 2460
OKC, OK 73102+8868
ATTN: Ken Leblanc

Carter #1-6

Job Ticket: 65701

DST#: 1

Test Start: 2019.09.28 @ 06:19:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 55.00 sec/qt

Water Loss: 13.37 in³

Resistivity: ohm.m

Salinity: 8000.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API: deg API

Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	Mud 100%M	0.281
0.00	GIP 100'	0.000

Total Length: 20.00 ft Total Volume: 0.281 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

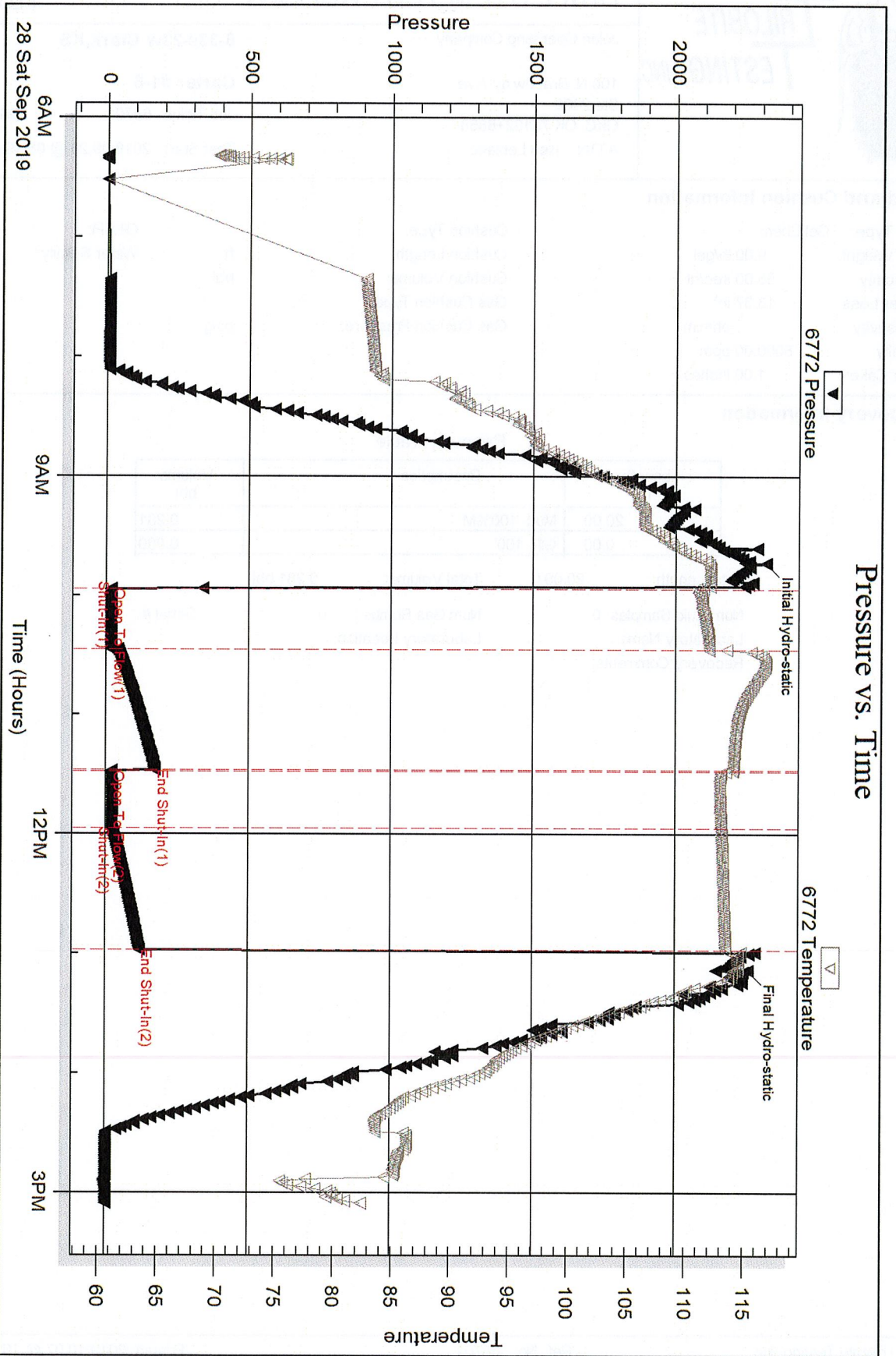
Recovery Comments:

Serial #: 6772

Inside Jden Operating Company

Carter #1-6

DST Test Number: 1

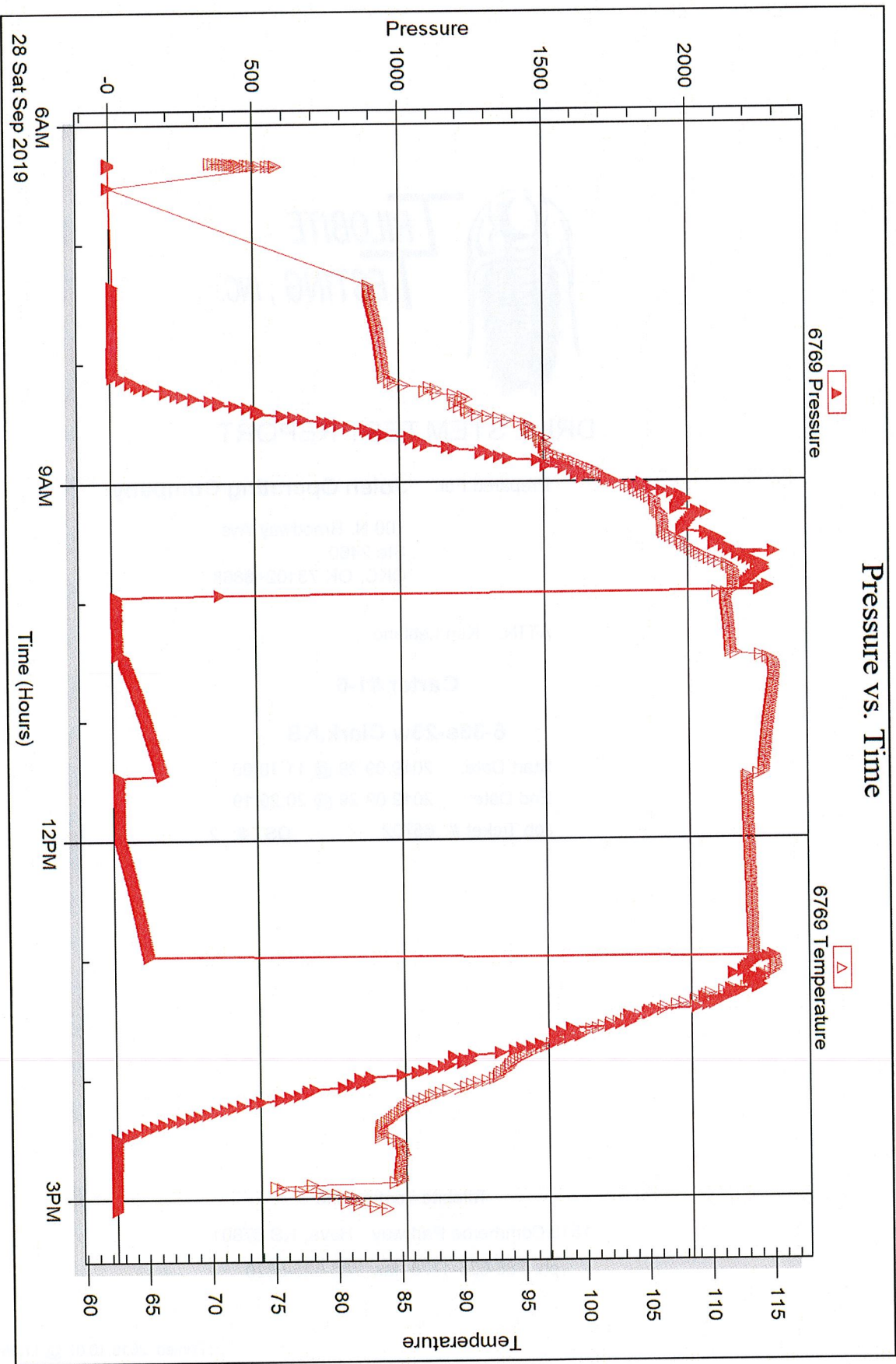


Serial #: 6769

Outside Jolen Operating Company

Carter #1-6

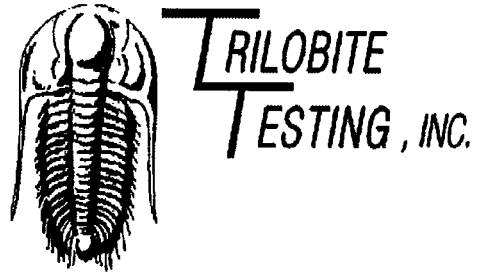
DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 65701

Printed: 2019:10:07 @ 10:11:28



DRILL STEM TEST REPORT

Prepared For: **Jolen Operating Company**

100 N. Braodway Ave
Ste 2460
OKC, OK 73102+8868

ATTN: Ken Leblanc

Carter #1-6

6-33s-23w Clark,KS

Start Date: 2019.09.29 @ 11:10:00

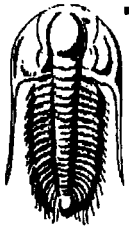
End Date: 2019.09.29 @ 20:29:19

Job Ticket #: 65702 DST #: 2

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

Printed: 2019.10.07 @ 11:35:53

Jolen Operating Company
6-33s-23w Clark,KS
Carter #1-6
DST # 2
LKC "B"
2019.09.29



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Jolen Operating Company

6-33s-23w Clark, KS

100 N. Braodway Ave
Ste 2460
OKC, OK 73102+8868
ATTN: Ken Leblanc

Carter #1-6

Job Ticket: 65702

DST#: 2

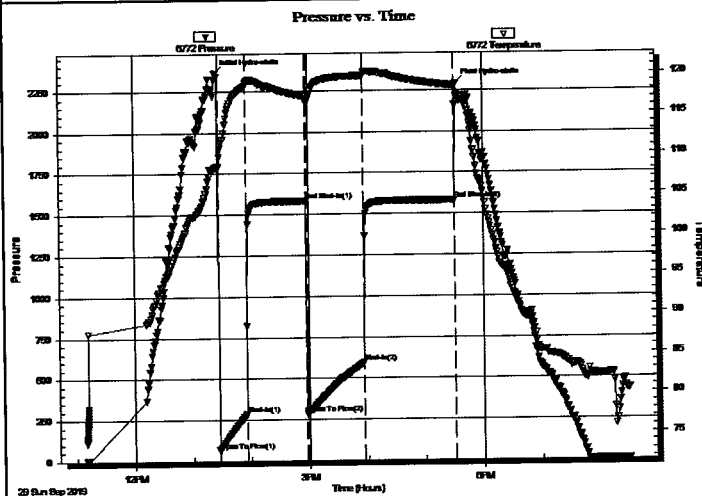
Test Start: 2019.09.29 @ 11:10:00

GENERAL INFORMATION:

Formation: **LKC "B"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 13:26:40
 Tester: Benny Mulligan
 Time Test Ended: 20:29:19
 Unit No: 66
 Interval: **4566.00 ft (KB) To 4590.00 ft (KB) (TVD)**
 Reference Elevations: 2176.00 ft (KB)
 Total Depth: 4590.00 ft (KB) (TVD)
 2167.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Fair
 KB to GR/CF: 9.00 ft

Serial #: 6772 Inside
 Press@RunDepth: 594.90 psig @ 4567.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2019.09.29 End Date: 2019.09.29 Last Calib.: 2019.09.29
 Start Time: 11:10:01 End Time: 20:29:19 Time On Btm: 2019.09.29 @ 13:24:30
 Time Off Btm: 2019.09.29 @ 17:31:50

TEST COMMENT: IF-30-BOB 1 min 5 sec total build of 409"
 ISI-60- GTS 7 mins into shut in 111" blow back
 FF-60- BOB 1 min built to 8.6 psi at 1/4 choke
 FSI-90- 28 psi blow back



PRESSURE SUMMARY

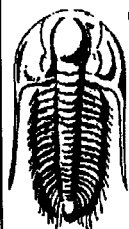
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2362.54	108.25	Initial Hydro-static
3	65.88	108.26	Open To Flow (1)
31	287.14	118.48	Shut-In(1)
93	1581.81	117.15	End Shut-In(1)
94	282.81	116.31	Open To Flow (2)
152	594.90	119.66	Shut-In(2)
246	1581.03	118.36	End Shut-In(2)
248	2288.67	117.09	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
252.00	GWM 10%G 20%W 70%M	3.53
252.00	GMW 10%G 10%M 80%W	3.53
693.00	GW 10% 90%W	9.72
0.00	GIP 3372'	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	1.80	6.06
Last Gas Rate	0.25	8.60	36.49
Max. Gas Rate	0.13	10.00	9.13



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Jolen Operating Company

6-33s-23w Clark,KS

100 N. Braodway Ave
Ste 2460
OKC, OK 73102+8868
ATTN: Ken Leblanc

Carter #1-6

Job Ticket: 65702

DST#: 2

Test Start: 2019.09.29 @ 11:10:00

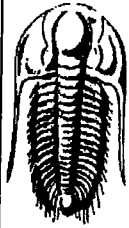
Tool Information

Drill Pipe:	Length: 4569.00 ft	Diameter: 3.80 inches	Volume: 64.09 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: 64.09 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4566.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	24.00 ft			
Tool Length:	46.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4545.00	
Shut In Tool	5.00			4550.00	
Hydraulic tool	5.00			4555.00	
Safety Joint	2.00			4557.00	
Packer	5.00			4562.00	22.00 Bottom Of Top Packer
Packer	4.00			4566.00	
Stubb	1.00			4567.00	
Recorder	0.00	6772	Inside	4567.00	
Recorder	0.00	6769	Outside	4567.00	
Perforations	20.00			4587.00	
Bullnose	3.00			4590.00	24.00 Bottom Packers & Anchor

Total Tool Length: 46.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Jolen Operating Company

6-33s-23w Clark,KS

100 N. Braodw ay Ave
Ste 2460
OKC, OK 73102+8868
ATTN: Ken Leblanc

Carter #1-6

Job Ticket: 65702

DST#: 2

Test Start: 2019.09.29 @ 11:10:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 43.00 sec/qt

Water Loss: 14.58 in³

Resistivity: ohm.m

Salinity: 11000.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API:

deg API

Water Salinity: 13000 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
252.00	GWM 10%G 20%W 70%M	3.535
252.00	GMW 10%G 10%M 80%W	3.535
693.00	GW 10% 90%W	9.721
0.00	GIP 3372'	0.000

Total Length: 1197.00 ft Total Volume: 16.791 bbl

Num Fluid Samples: 0

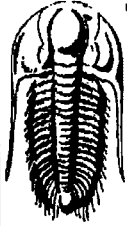
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 0.428@81.9



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

GAS RATES

Jolen Operating Company

6-33s-23w Clark,KS

100 N. Braodway Ave
Ste 2460
OKC, OK 73102+8868
ATTN: Ken Leblanc

Carter #1-6

Job Ticket: 65702

DST#: 2

Test Start: 2019.09.29 @ 11:10:00

Gas Rates Information

Temperature: 59 (deg F)
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

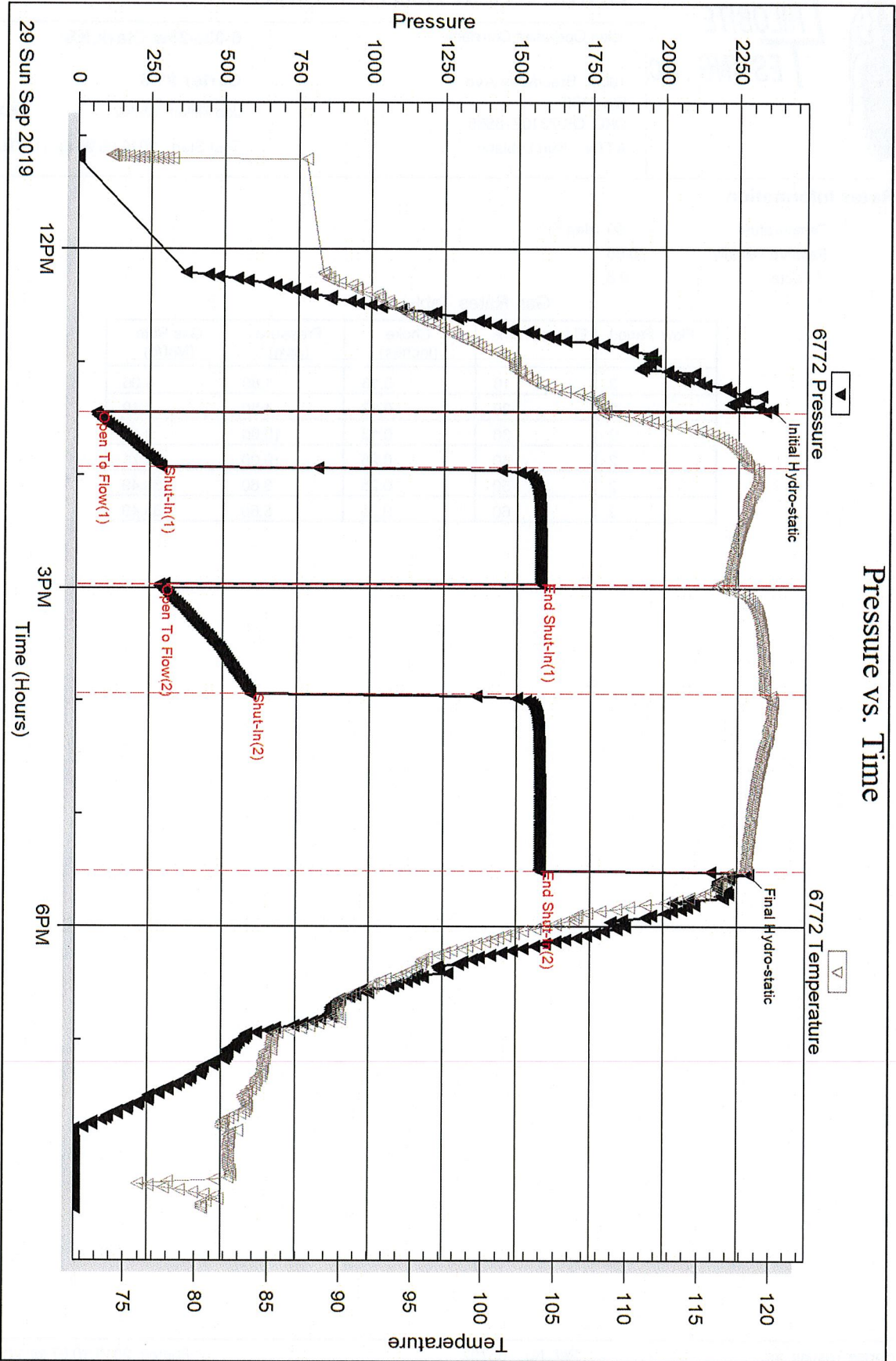
Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
2	10	0.13	1.80	6.06
2	20	0.13	4.80	7.19
2	30	0.13	10.00	9.13
2	40	0.25	10.00	38.71
2	50	0.25	8.60	36.49
2	60	0.25	8.60	36.49

Serial #: 6772

Inside Jolen Operating Company

Carter #1-6

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 65702

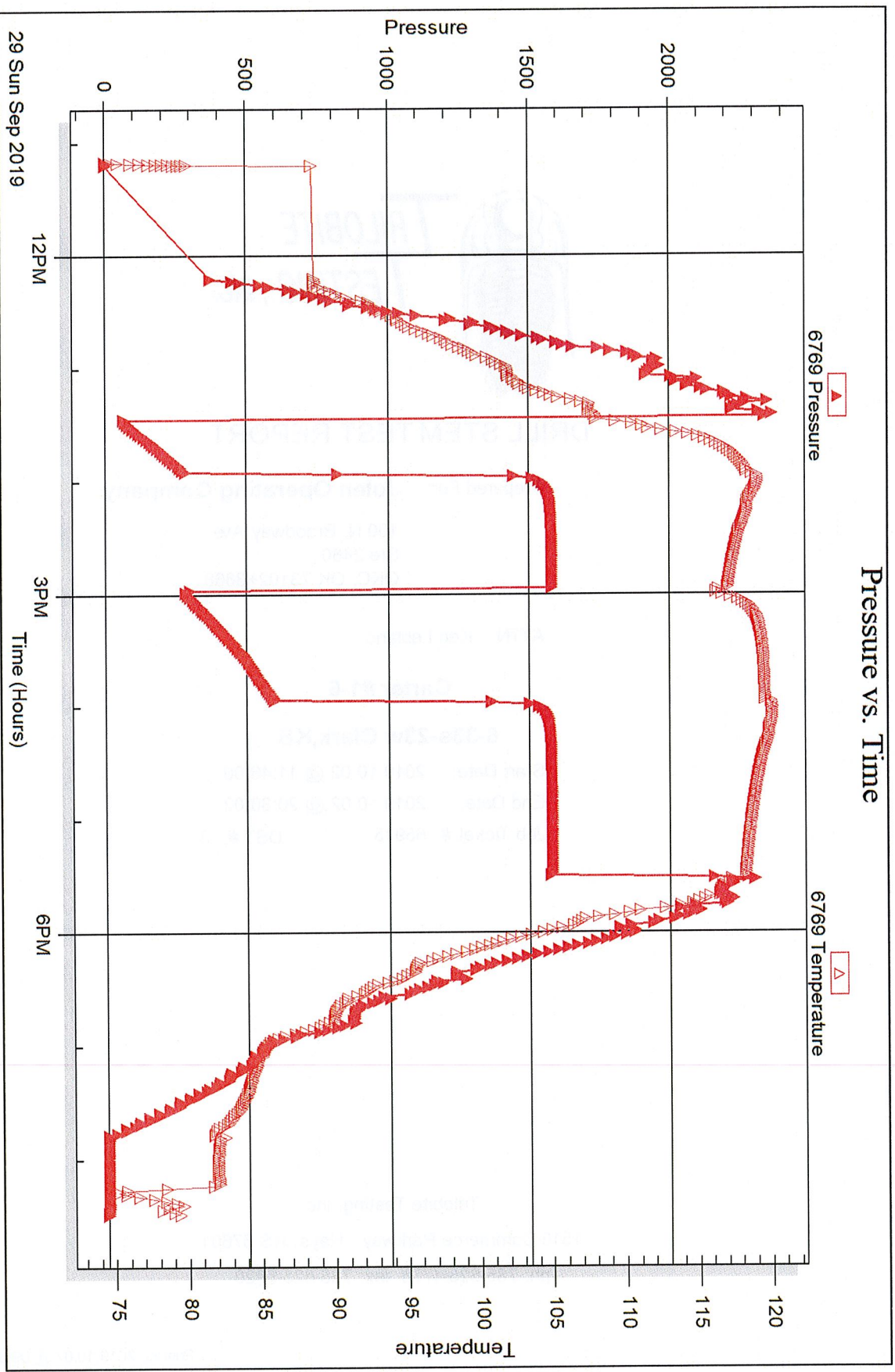
Printed: 2019.10.07 @ 11:35:55

Serial #: 6769

Outside Jolen Operating Company

Carter #1-6

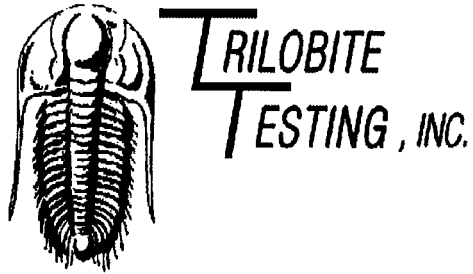
DST Test Number: 2



Tribbitt Testing, Inc

Ref. No: 65702

Printed: 2019.10.07 @ 11:35:55



DRILL STEM TEST REPORT

Prepared For: **Jolen Operating Company**

100 N. Braodway Ave
Ste 2460
OKC, OK 73102+8868

ATTN: Ken Leblanc

Carter #1-6

6-33s-23w Clark,KS

Start Date: 2019.10.02 @ 11:46:00

End Date: 2019.10.02 @ 20:30:02

Job Ticket #: 65915 DST #: 3

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

Printed: 2019.10.07 @ 09:33:55

Jolen Operating Company

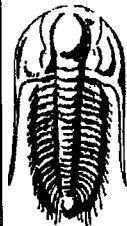
6-33s-23w Clark,KS

Carter #1-6

DST # 3

Pawnee

2019.10.02



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Jolen Operating Company

6-33s-23w Clark, KS

100 N. Braodw ay Ave
Ste 2460
OKC, OK 73102+8868
ATTN: Ken Leblanc

Carter #1-6

Job Ticket: 65915

DST#: 3

Test Start: 2019.10.02 @ 11:46:00

GENERAL INFORMATION:

Formation: **Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:11:47

Time Test Ended: 20:30:02

Test Type: Conventional Bottom Hole (Reset)

Tester: Leal Cason

Unit No: 74

Interval: **5086.00 ft (KB) To 5200.00 ft (KB) (TVD)**

Total Depth: 5200.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2176.00 ft (KB)

2167.00 ft (CF)

KB to GR/CF: 9.00 ft

Serial #: 8672

Inside

Press@RunDepth: 81.68 psig @ 5087.00 ft (KB)

Start Date: 2019.10.02

End Date:

2019.10.02

Start Time: 11:46:01

End Time:

20:30:02

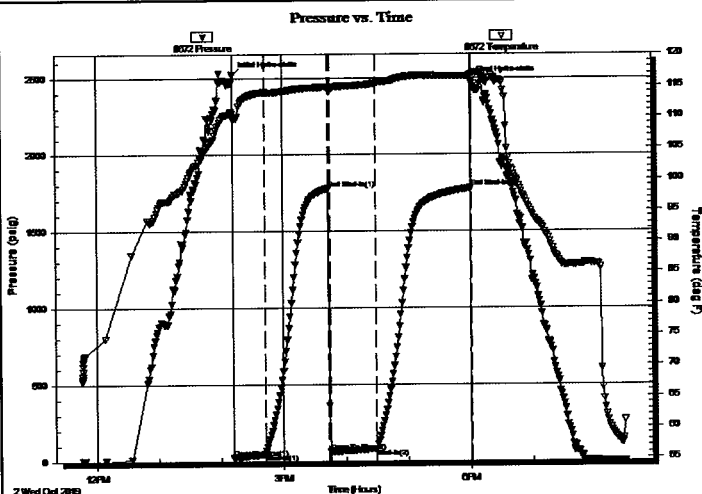
Capacity: psig

Last Calib.: 2019.10.02

Time On Btm: 2019.10.02 @ 14:11:32

Time Off Btm: 2019.10.02 @ 18:01:17

TEST COMMENT: IF: Fair Blow , BOB in 11 minutes, Built to 62"
IS: No Blow Back
FF: Strong Blow , BOB Immediate, Built to 220"
FS: No Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2519.55	110.50	Initial Hydro-static
1	23.18	109.70	Open To Flow (1)
31	47.18	113.92	Shut-In(1)
93	1780.58	114.75	End Shut-In(1)
94	62.73	114.36	Open To Flow (2)
138	81.68	115.43	Shut-In(2)
229	1781.44	116.60	End Shut-In(2)
230	2475.89	116.81	Final Hydro-static

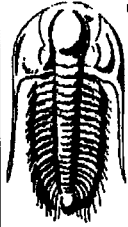
Recovery

Length (ft)	Description	Volume (bbl)
0.00	2334 GIP	0.00
120.00	GOCM 12%G 6%O 82%M	1.68
20.00	GCM 20%G 80%M	0.28

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Jolen Operating Company
100 N. Braodway Ave
Ste 2460
OKC, OK 73102+8868
ATTN: Ken Leblanc

6-33s-23w Clark,KS

Carter #1-6

Job Ticket: 65915

DST#: 3

Test Start: 2019.10.02 @ 11:46:00

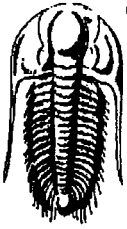
Tool Information

Drill Pipe:	Length: 5088.00 ft	Diameter: 3.80 inches	Volume: 71.37 bbl	Tool Weight: 2100.00 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: 80000.00 lb
			<u>Total Volume: 71.37 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	5086.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	114.00 ft			
Tool Length:	140.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			5065.00	
Hydraulic tool	5.00			5070.00	
Jars	5.00			5075.00	
Safety Joint	2.00			5077.00	
Packer	5.00			5082.00	26.00 Bottom Of Top Packer
Packer	4.00			5086.00	
Stubb	1.00			5087.00	
Recorder	0.00	8672	Inside	5087.00	
Recorder	0.00	6751	Outside	5087.00	
Perforations	4.00			5091.00	
Change Over Sub	1.00			5092.00	
Drill Pipe	93.00			5185.00	
Change Over Sub	2.00			5187.00	
Perforations	10.00			5197.00	
Bullnose	3.00			5200.00	114.00 Bottom Packers & Anchor

Total Tool Length: 140.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Jolen Operating Company

6-33s-23w Clark,KS

100 N. Braodway Ave
Ste 2460
OKC, OK 73102+8868
ATTN: Ken Leblanc

Carter #1-6

Job Ticket: 65915

DST#: 3

Test Start: 2019.10.02 @ 11:46:00

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: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7500.00 ppm

Filter Cake: 0.02 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	2334 GIP	0.000
120.00	GOCM 12%G 6%O 82%M	1.683
20.00	GCM 20%G 80%M	0.281

Total Length: 140.00 ft Total Volume: 1.964 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

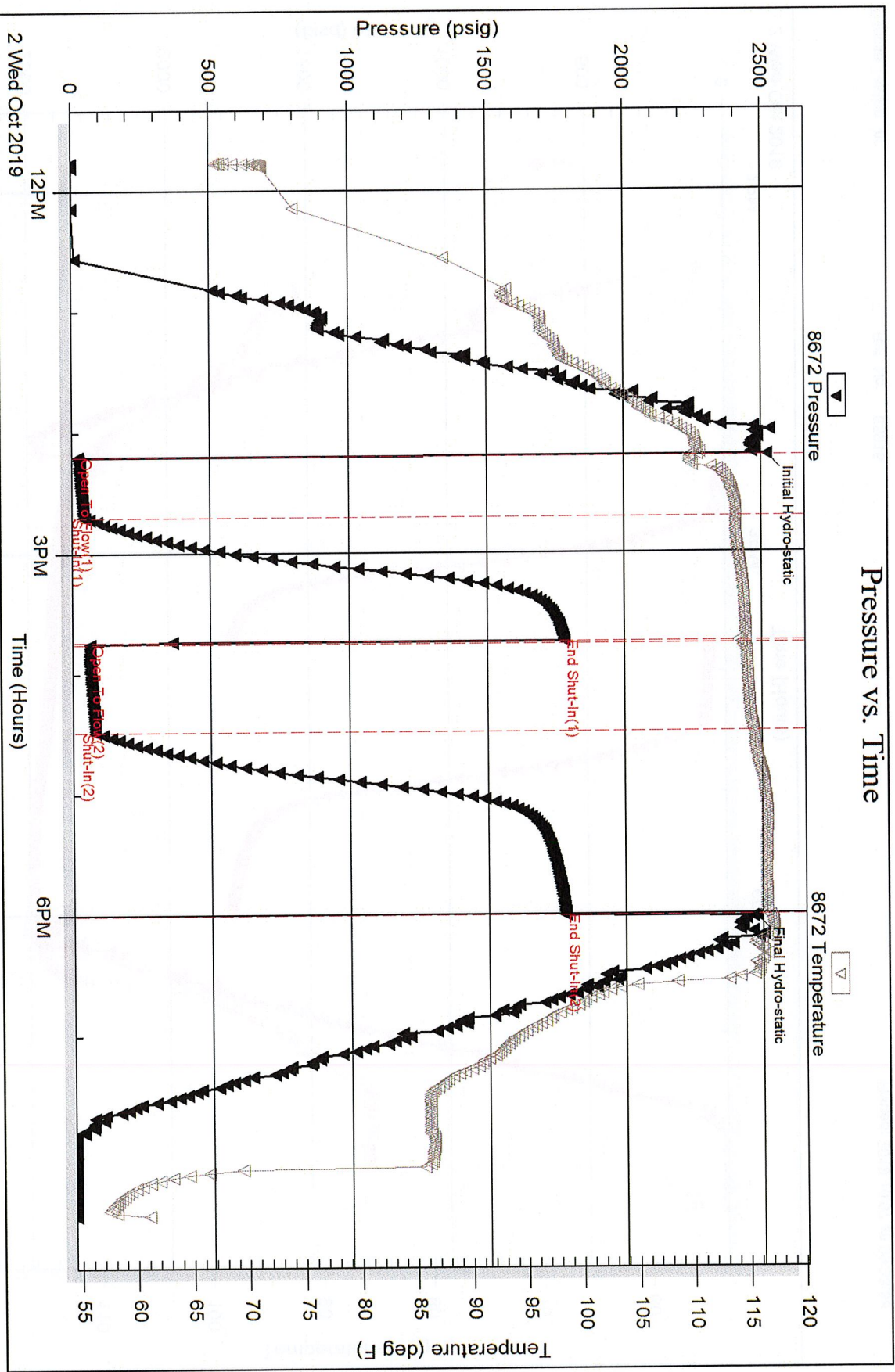
Serial #: 8672

Inside

Jolen Operating Company

Carter #1-6

DST Test Number: 3

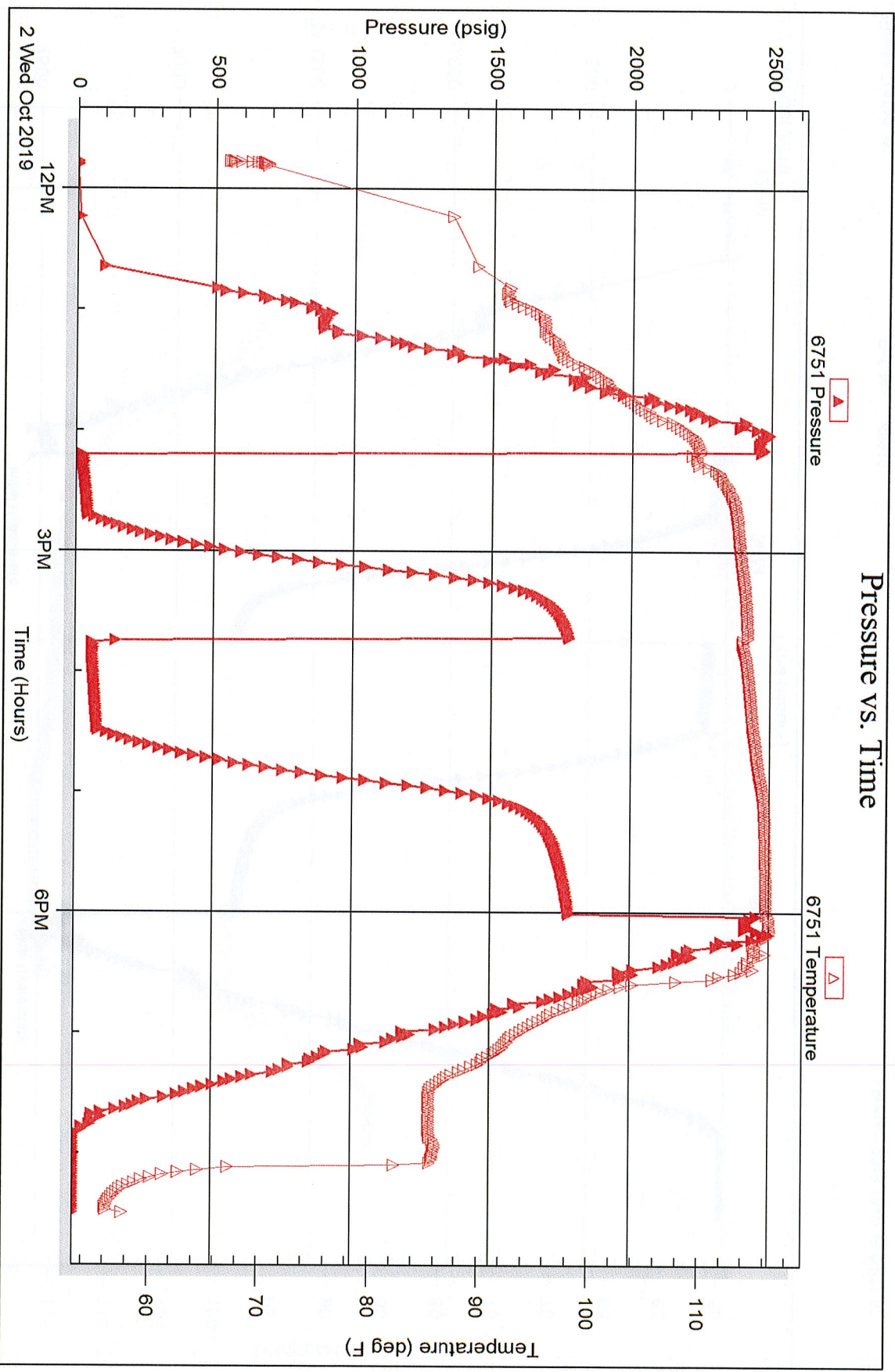


Serial #: 6751

Outside Jolen Operating Company

Carter #1-6

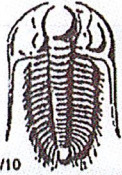
DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 65915

Printed: 2019.10.07 @ 09:33:58



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 65701

Well Name & No. Carter 1-6 Test No. 1 Date 9-28-2014
 Company Jalen Operating Company Elevation 2176 KB 2167 GL
 Address 100 N. Broadway Ave Ste 2460 Oklahoma City, OK 73102 +8868
 Co. Rep / Geo. Ken Leblanc Rig Duke Rig 4
 Location: Sec. 6 Twp 33s Rge. 23w Co. Clarke State KS

Interval Tested 4528-4556 Zone Tested Lansing "A"
 Anchor Length 28' Drill Pipe Run 4538' Mud Wt. 9.4
 Top Packer Depth 4523 Drill Collars Run _____ Vis 55
 Bottom Packer Depth 4528 Wt. Pipe Run _____ WL 13.4
 Total Depth 4556 Chlorides 8,000 ppm System LCM 3#
 Blow Description IF - BOB 25 secs total build of 30"
FSI - no blow back
FF - built to 11"
FSI - no blow back

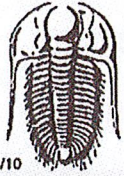
Rec	Feet of	%gas	%oil	%water	%mud
<u>20'</u>	<u>Mud</u>			<u>100</u>	
	<u>100' GIP</u>				

Rec Total 20' BHT _____ Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2317 Test 1300 T-On Location 12:00 AM
 (B) First Initial Flow 18 Jars _____ T-Started 6:19
 (C) First Final Flow 17 Safety Joint 75 T-Open 9:57
 (D) Initial Shut-In 173 Circ Sub _____ T-Pulled 1:00 PM
 (E) Second Initial Flow 18 Hourly Standby _____ T-Out 3:05
 (F) Second Final Flow 22 Mileage 164 RT 180rt
 (G) Final Shut-In 119 Sampler _____
 (H) Final Hydrostatic 2259 Straddle _____ EM Tool _____
 Shale Packer _____ Ruined Shale Packer _____
 Extra Packer _____ Ruined Packer _____
 Extra Recorder _____ Extra Copies _____
 Day Standby _____ Sub Total 0
 Accessibility _____ Total 1555
 Sub Total 1555 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.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 65702

Well Name & No. Carter #1-6 Test No. 2 Date 9-29-2019
 Company Jalen Operating Company Elevation 2176 KB 2167 GL
 Address 100 N. Broadway Ave STE 2460 Oklahoma City, OK 73102+8868
 Co. Rep / Geo. Ken Leblanc Rig Duke Rig 4
 Location: Sec. 6 Twp 33S Rge. 23W Co. Clark State KS

Interval Tested 4566-4590 Zone Tested Lansing "B"
 Anchor Length 24' Drill Pipe Run 4569 Mud Wt. 9.3
 Top Packer Depth 4561 Drill Collars Run _____ Vis 43
 Bottom Packer Depth 4566 Wt. Pipe Run _____ WL 14.6
 Total Depth 4590 Chlorides 11,000 ppm System LCM 2#
 Blow Description IE - BOB 1min 5sec total build of 409"
EST - gas to surface 7mins into shut in 111" Blow back
FF - BOB 1min built to 8.6 PSI at 1/4 choke
FST - 28 psi blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>252</u>	<u>G.W.M.</u>	<u>10</u>	<u>20</u>	<u>70</u>	
<u>252</u>	<u>G.M.W.</u>	<u>10</u>	<u>80</u>	<u>10</u>	
<u>693</u>	<u>GW</u>	<u>10</u>	<u>90</u>		
	<u>G.I.P 3372'</u>				

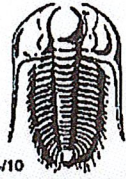
Rec Total 1197 BHT 117 Gravity _____ API RW ~~128~~ @ ~~128~~ °F Chlorides ~~11,000~~ ppm

(A) Initial Hydrostatic 2362 Test 1300 T-On Location 10:00 AM
 (B) First Initial Flow 65 Jars _____ T-Started 11:10
 (C) First Final Flow 287 Safety Joint 75 T-Open 1:26 PM
 (D) Initial Shut-In 1581 Circ Sub _____ T-Pulled 5:26
 (E) Second Initial Flow 282 Hourly Standby _____ T-Out 8:29
 (F) Second Final Flow 594 Mileage 164 mi RT 180 Comments Loaded tools
 (G) Final Shut-In 1581 Sampler _____ after the test
 (H) Final Hydrostatic 2288 Straddle _____ for days off

Initial Open 30 Shale Packer _____
 Initial Shut-In 60 Extra Packer _____
 Final Flow 60 Extra Recorder _____
 Final Shut-In 90 Day Standby _____
 Accessibility _____
 Sub Total 1555 MP/DST Disc't _____

Approved By Ken Leblanc 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.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket 65915

NO.

Well Name & No. Carter 1-6 Test No. 3 Date 10/02/19
 Company Jolen Operating CO Elevation 2176 KB 2167 GL
 Address 100 N. Broadway Ave Ste 2460 Oklahoma City, OK 73102
 Co. Rep / Geo. Ken LeBlanc Rig Duke 4
 Location: Sec. 6 Twp 33S Rge. 23W Co. Clark State KS

Interval Tested 5086 - 5200 Zone Tested Pawnee
 Anchor Length 114 Drill Pipe Run 5088 Mud Wt. 9.9
 Top Packer Depth 5081 Drill Collars Run 0 Vls 54
 Bottom Packer Depth 5086 Wt. Pipe Run 0 WL 8.8
 Total Depth 5200 Chlorides 7500 ppm System LCM 4

Blow Description IF: Fair Blow, BOB in 11 minutes, Built to 62 inches

TSI: NO Blow Back

FF: Strong Blow, BOB immediate, Built to 220 inches

FSI: NO Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>2334</u>	<u>GIP</u>				
<u>20</u>	<u>GCM</u>	<u>20%</u>			<u>80%</u>
<u>120</u>	<u>GOCM</u>	<u>12%</u>	<u>6%</u>		<u>82%</u>

Rec Total 140 BHT 117 Gravity N/C API RW N/C @ N/C F Chlorides _____ ppm

(A) Initial Hydrostatic 2519 Test 1400 T-On Location 10:45
 (B) First Initial Flow 23 Jars 250 T-Started 11:46
 (C) First Final Flow 47 Safety Joint 75 T-Open 14:11
 (D) Initial Shut-In 1780 Circ Sub _____ T-Pulled 18:00
 (E) Second Initial Flow 63 Hourly Standby _____ T-Out 20:30
 (F) Second Final Flow 82 Mileage 1902 180 Comments _____
 (G) Final Shut-In 1781 Sampler _____
 (H) Final Hydrostatic 2476 Straddle _____

Initial Open 30 Shale Packer _____ EM Tool _____
 Initial Shut-In 60 Extra Packer _____ Ruined Shale Packer _____
 Final Flow 45 Extra Recorder _____ Ruined Packer _____
 Final Shut-In 90 Day Standby _____ Extra Copies _____
 Sub Total 1905 Accessibility _____ Sub Total 0
 Total 1905 MP/DST Disc't _____

Approved By Ken LeBlanc 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.



Conductor and Rat Hole Drilling, Landfill Gas Drilling and Well Construction Nationwide

Date	Invoice #
9/18/2019	13173

Bill To
Jolen Operating Company 100 N. Broadway, Suite 2460 Oklahoma City, OK 73102

RECEIVED
AUG 19 2019
20

Legal Description	Ordered By	Terms	Field Ticket	Lease Name	Drill Rig
NW of Ashland, KS	David Hickman	Net 30	9569	Carter #1-6	Duke 4

Item	Quantity	Description	Rate	Amount
Conductor	62	Drilled 62' of 30" hole for conductor	35.00	2,170.00
20" Pipe	62	Furnished 62' of 20" conductor pipe	35.00	2,170.00T
60" X 5'	1	Furnished 5' X 5' tinhorn	412.50	412.50T
Dirt Removal	3	Provided Labor and Equipment for dirt removal and cleanup	70.00	210.00
Placement	1	Place Conductor Pipe	275.00	275.00
Grout	6.5	Furnished grout	192.50	1,251.25T
Deliver Grout	1	Deliver grout to location	350.00	350.00

Thank you for your business.	Subtotal	\$6,838.75
	Sales Tax (6.5%)	\$249.19
	Total	\$7,087.94