

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 _____
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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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Schippers Oilfield Services LLC

1255 E HWY 24
Hoxie, KS 67740

Invoice

Date 3/30/2019

Invoice # 654

Phone # 785-675-8974

sosllc@rurattel.net

Fax # 785-675-9938

Bill To
ARCADIAN RESOURCE, LLC 1302 OLIVE STREET CONCORDIA, KS 66901

Ship To

P.O. # ROSS
Terms Net 30

Ship Date 3/30/2019
Due Date 4/29/2019
Other

Item	Description	Qty	Price	Amount
Cement	Common	170	18.00	3,060.00T
Gel		3	22.00	66.00T
chloride	calcium chloride	8	52.00	416.00T
Handling of mater...	per sack	170	2.10	357.00
MILEAGE		68	14.48	984.64
PUMP TRUCK CHA...	TRI-PLEX PUMP CHARGE		1,050.00	1,050.00
Bulk truck		68	6.00	408.00T
Light vehicle mile...	One way to Location	68	2.00	136.00

DRIVER: [unclear] JOB: [unclear]
 [unclear] [unclear]
 [unclear] [unclear]

Schippers Oilfield Services LLC

Subtotal	\$6,477.64
Sales Tax (8.0%)	\$316.00
Total	\$6,793.64
Payments/Credits	\$0.00
Balance Due	\$6,793.64

REMIT TO
 RR 1 BOX 90 D
 HOXIE, KS 67740

SCHIPPERS OIL FIELD SERVICE L.L.C.

NO 000654

DATE <u>3/27</u>	SEC. <u>27</u>	RANGE/TWP. <u>14 33</u>	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
LEASE # <u>1088</u>				WELL # <u>1027</u>		
				COUNTY	STATE	

CONTRACTOR <u>Duke 4</u>	OWNER <u>Archer</u>			
TYPE OF JOB				
HOLE SIZE <u>13 1/8</u>	T.D. <u>221</u>	CEMENT		
CASING SIZE <u>8 5/8</u>	DEPTH <u>20</u>	AMOUNT ORDERED		
TUBING SIZE	DEPTH			
DRILL PIPE <u>4 1/2</u>	DEPTH			
TOOL	DEPTH			
PRES. MAX	MINIMUM	COMMON	<u>170</u>	@ <u>11 1/2</u> <u>370</u>
DISPLACEMENT	SHOE JOINT	POZMIX		@
CEMENT LEFT IN CSG.		GEL	<u>3</u>	@ <u>22 1/2</u> <u>10</u>
PERFS		CHLORIDE	<u>8</u>	@ <u>50</u> <u>400</u>
		ASC		@
EQUIPMENT				@
				@
PUMP TRUCK				@
# <u>Jack T-11</u>				@
BULK TRUCK				@
# <u>Nick's Park</u>				@
BULK TRUCK				@
#				@
		HANDLING	<u>170</u>	@ <u>2 1/2</u> <u>350</u>
		MILEAGE	<u>65</u>	@ <u>14 1/2</u> <u>940</u>
		TOTAL		

REMARKS <u>Plug Down @ 5:15 PM</u>	SERVICE <u>Surface</u>		
	DEPT OF JOB	@	
	PUMP TRUCK CHARGE	@	<u>1000</u>
	EXTRA FOOTAGE	@	
<u>Circuit A Cement to 1'</u>	MILEAGE	<u>64</u>	@ <u>6 1/2</u> <u>400</u>
	MANIFOLD	@	
		@	
	TOTAL		

CHARGES TO: <u>Archer</u>	
STREET	STATE
CITY	ZIP

To: Schippers Oil Field Services L.L.C.

You are hereby requested to rent cementing equipment and furnish staff to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "TERMS AND CONDITIONS" listed on the reverse side.

PLUG & FLOAT EQUIPMENT	
	@
	@
	@
	@
	@
TOTAL	
TAX	
TOTAL CHARGE	
DISCOUNT (IF PAID IN 20 DAYS)	



Schippers Oilfield Services LLC

1255 E HWY 24
Hoxie, KS 67740

Invoice

Date 4/8/2019

Invoice # 656

Phone # 785-675-8974

sosllc@ruraltel.net

Fax # 785-675-9938

Bill To
ARCADIAN RESOURCE, LLC 1302 OLIVE STREET CONCORDIA, KS 66901

Ship To

P.O. # ROSS
Terms Net 30

Ship Date 4/8/2019
Due Date 5/8/2019
Other

Item	Description	Qty	Price	Amount
Cement	Common	144	18.00	2,592.00T
Pozmix		96	10.00	960.00T
Gel		8	22.00	176.00T
Flo Seal		60	2.25	135.00T
Handling of mater...	per sack	248	2.10	520.80
Bulk truck	MILEAGE	68	19.20	1,305.60
PUMP TRUCK CHA...	TRI-PLEX PUMP CHARGE		1,850.00	1,850.00
PUMPTRUCK MILE...	ONE WAY TO LOCATION	68	6.00	408.00
Light vehicle mile...	One way to Location	68	2.00	136.00
WIPER PLUG		1	59.00	59.00T

Subtotal	\$8,142.40
Sales Tax (8.0%)	\$313.76
Total	\$8,456.16
Payments/Credits	\$0.00
Balance Due	\$8,456.16

Schippers Oilfield Services LLC

REMIT TO
 RR 1 BOX 90 D
 HOXIE, KS 67740

SCHIPPERS OIL FIELD SERVICE L.L.C.

NO 000656

DATE <u>4/1/19</u>	SEC. <u>27</u>	RANGE/TWP. <u>14-33</u>	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
LEASE <u>huss</u>			WELL # <u>1-27</u>			
					COUNTY <u>...</u>	STATE <u>...</u>

CONTRACTOR <u>Duke 4</u>	OWNER <u>Arcahn</u>				
TYPE OF JOB					
HOLE SIZE <u>7/8</u>	T.D. <u>4600</u>	CEMENT			
CASING SIZE	DEPTH	AMONT ORDERED	<u>240</u>		
TUBING SIZE	DEPTH				
DRILL PIPE <u>4 1/2</u>	DEPTH				
TOOL	DEPTH				
PRES. MAX	MINIMUM	COMMON	<u>144</u>	@ <u>18"</u>	<u>2552"</u>
DISPLACEMENT	SHOE JOINT	POZMIX	<u>96</u>	@ <u>10"</u>	<u>960</u>
CEMENT LEFT IN CSG.		GEL	<u>8</u>	@ <u>22"</u>	<u>176"</u>
PERFS		CHLORIDE		@	
		ASC		@	
EQUIPMENT				@	
				@	
PUMP TRUCK				@	
# <u>Jack T</u>		<u>Flo-vent</u>	<u>604</u>	@ <u>2"</u>	<u>135"</u>
BULK TRUCK				@	
# <u>Nick A</u>				@	
BULK TRUCK				@	
#				@	
		HANDLING	<u>240</u>	@ <u>2"</u>	<u>520"</u>
		MILEAGE	<u>68</u>	@ <u>19²⁰"</u>	<u>1326"</u>
		TOTAL			

REMARKS	SERVICE <u>Rotary Plus</u>		
<u>50 SK @ 2300</u>	DEPT OF JOB	@	
<u>100 SK @ 1700</u>	PUMP TRUCK CHARGE	@	<u>1820"</u>
<u>30 SK @ 280</u>	EXTRA FOOTAGE	@	
<u>10 SK @ 40</u>	MILEAGE	<u>68</u>	@ <u>6⁰⁰"</u> <u>408"</u>
	MANIFOLD	@	
<u>Rat Hole 30 SK</u>	<u>Light work</u>	<u>68</u>	@ <u>2"</u> <u>136"</u>
		TOTAL	

CHARGES TO: <u>Arcahn</u>	
STREET	STATE
CITY	ZIP

To: Schippers Oil Field Services L.L.C.

You are hereby requested to rent cementing equipment and furnish staff to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "TERMS AND CONDITIONS" listed on the reverse side.

PLUG & FLOAT EQUIPMENT	
<u>Wiper Plug</u>	@ <u>55"</u>
	@
	@
	@
	@
	TOTAL
TAX	
TOTAL CHARGE	
DISCOUNT (IF PAID IN 20 DAYS)	

SIGNATURE

Nector Toledo

PRINTED NAME



DRILL STEM TEST REPORT

Prepared For: **Arcadian Rresources LLC**

1302 Olive St.
Concordia KS 66901

ATTN: Sean Deenihan

Ross #1-27

27-14-33 Logan,KS

Start Date: 2019.04.04 @ 14:25:15

End Date: 2019.04.04 @ 21:50:45

Job Ticket #: 65130 DST #: 1

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

Printed: 2019.04.10 @ 08:50:41



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Arcadian Resources LLC

27-14-33 Logan, KS

1302 Olive St.
Concordia KS 66901

Ross #1-27

ATTN: Sean Deenihan

Job Ticket: 65130

DST#: 1

Test Start: 2019.04.04 @ 14:25:15

GENERAL INFORMATION:

Formation: **LKC H - J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:14:00

Time Test Ended: 21:50:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Mike Roberts

Unit No: 81

Interval: 4015.00 ft (KB) To 4104.00 ft (KB) (TVD)

Reference Elevations: 2860.00 ft (KB)

Total Depth: 4104.00 ft (KB) (TVD)

2850.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 10.00 ft

Serial #: 8968

Outside

Press@RunDepth: 558.36 psig @ 4084.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.04.04

End Date:

2019.04.04

Last Calib.: 2019.04.04

Start Time:

14:25:15

End Time:

21:50:45

Time On Btm: 2019.04.04 @ 17:13:45

Time Off Btm: 2019.04.04 @ 19:16:45

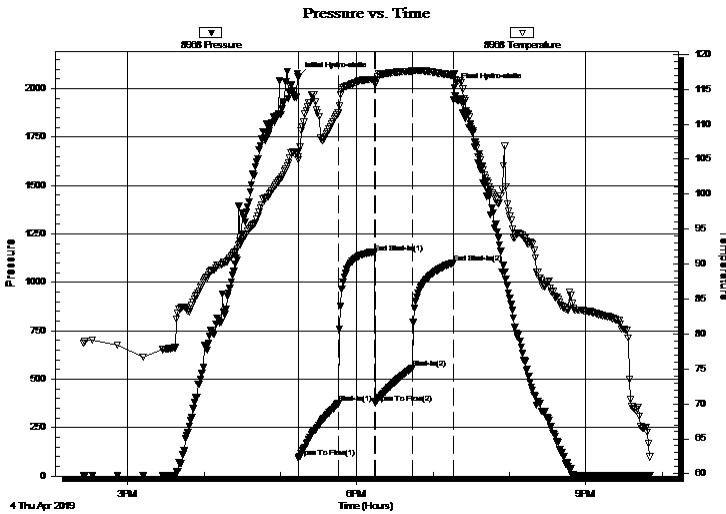
TEST COMMENT: IF: Built to 59" blow BOB in 3 min.

IS: No return blow

FF: Built to 45" blow

FS: No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2059.13	106.07	Initial Hydro-static
1	95.73	104.93	Open To Flow (1)
32	375.20	111.63	Shut-In(1)
61	1152.63	116.38	End Shut-In(1)
61	378.62	115.75	Open To Flow (2)
90	558.36	117.60	Shut-In(2)
122	1098.46	117.01	End Shut-In(2)
123	2005.39	117.12	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
682.00	mud/ 1st stand had oil spots 100%m	9.57
558.00	mcw 30%m 70%w	7.83
124.00	mcw 4%m 96%w	1.74

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Arcadian Resources LLC

27-14-33 Logan, KS

1302 Olive St.
Concordia KS 66901

Ross #1-27

ATTN: Sean Deenihan

Job Ticket: 65130

DST#: 1

Test Start: 2019.04.04 @ 14:25:15

GENERAL INFORMATION:

Formation: **LKC H - J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:14:00

Time Test Ended: 21:50:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Mike Roberts

Unit No: 81

Interval: **4015.00 ft (KB) To 4104.00 ft (KB) (TVD)**

Reference Elevations: 2860.00 ft (KB)

Total Depth: 4104.00 ft (KB) (TVD)

2850.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 10.00 ft

Serial #: 8521

Inside

Press@RunDepth: psig @ 4084.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.04.04

End Date:

2019.04.04

Last Calib.:

2019.04.04

Start Time: 14:25:15

End Time:

21:51:00

Time On Btm:

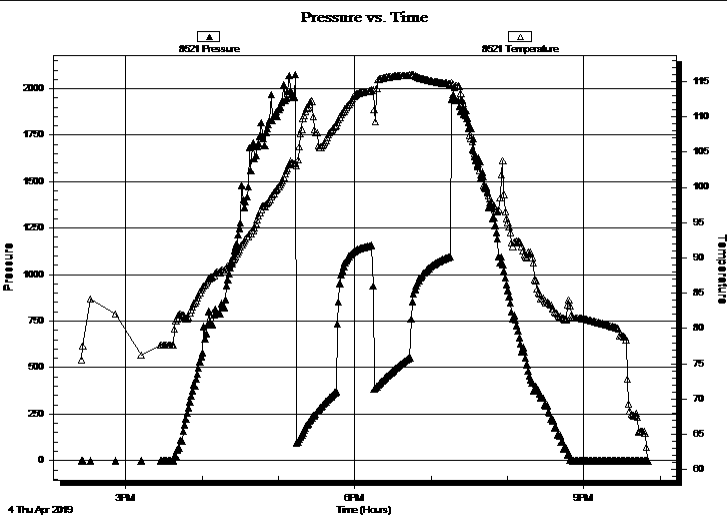
Time Off Btm:

TEST COMMENT: IF: Built to 59" blow BOB in 3 min.

IS: No return blow

FF: Built to 45" blow

FS: No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
682.00	mud/ 1st stand had oil spots 100%m	9.57
558.00	mcw 30%m 70%w	7.83
124.00	mcw 4%m 96%w	1.74

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Arcadian Resources LLC

27-14-33 Logan, KS

1302 Olive St.
Concordia KS 66901

Ross #1-27

Job Ticket: 65130

DST#: 1

ATTN: Sean Deenihan

Test Start: 2019.04.04 @ 14:25:15

Tool Information

Drill Pipe:	Length: 4012.00 ft	Diameter: 3.80 inches	Volume: 56.28 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 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: 56.28 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	4015.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	89.00 ft			
Tool Length:	120.00 ft			
Number of Packers:	2	Diameter: 7.88 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3985.00	
Shut In Tool	5.00			3990.00	
Hydraulic tool	5.00			3995.00	
Jars	5.00			4000.00	
EM Tool	3.00			4003.00	
Safety Joint	3.00			4006.00	
Packer	5.00			4011.00	31.00 Bottom Of Top Packer
Packer	4.00			4015.00	
Stubb	1.00			4016.00	
Perforations	4.00			4020.00	
Change Over Sub	1.00			4021.00	
Drill Pipe	62.00			4083.00	
Change Over Sub	1.00			4084.00	
Recorder	0.00	8968	Outside	4084.00	
Recorder	0.00	8521	Inside	4084.00	
Perforations	15.00			4099.00	
Bullnose	5.00			4104.00	89.00 Bottom Packers & Anchor
Total Tool Length:	120.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Arcadian Resources LLC

27-14-33 Logan, KS

1302 Olive St.
Concordia KS 66901

Ross #1-27

Job Ticket: 65130

DST#: 1

ATTN: Sean Deenihan

Test Start: 2019.04.04 @ 14:25:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 8.00 lb/gal

Cushion Length:

ft

Water Salinity:

25000 ppm

Viscosity: 40.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.57 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 5500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
682.00	mud/ 1st stand had oil spots 100%m	9.567
558.00	mcw 30%m 70%w	7.827
124.00	mcw 4%m 96%w	1.739

Total Length: 1364.00 ft Total Volume: 19.133 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

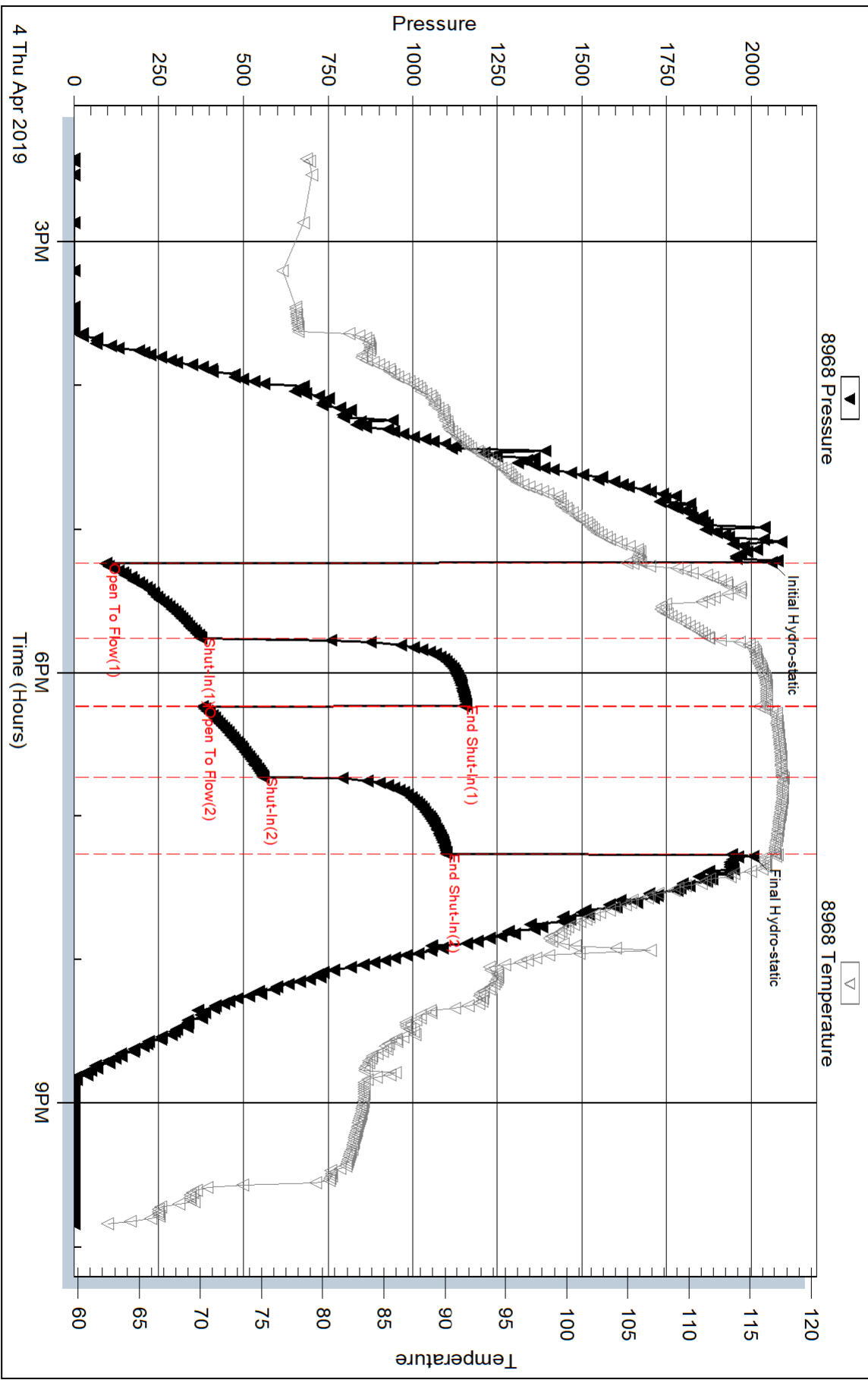
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW= .444@ 54.6= 25,000 ppm

Pressure vs. Time



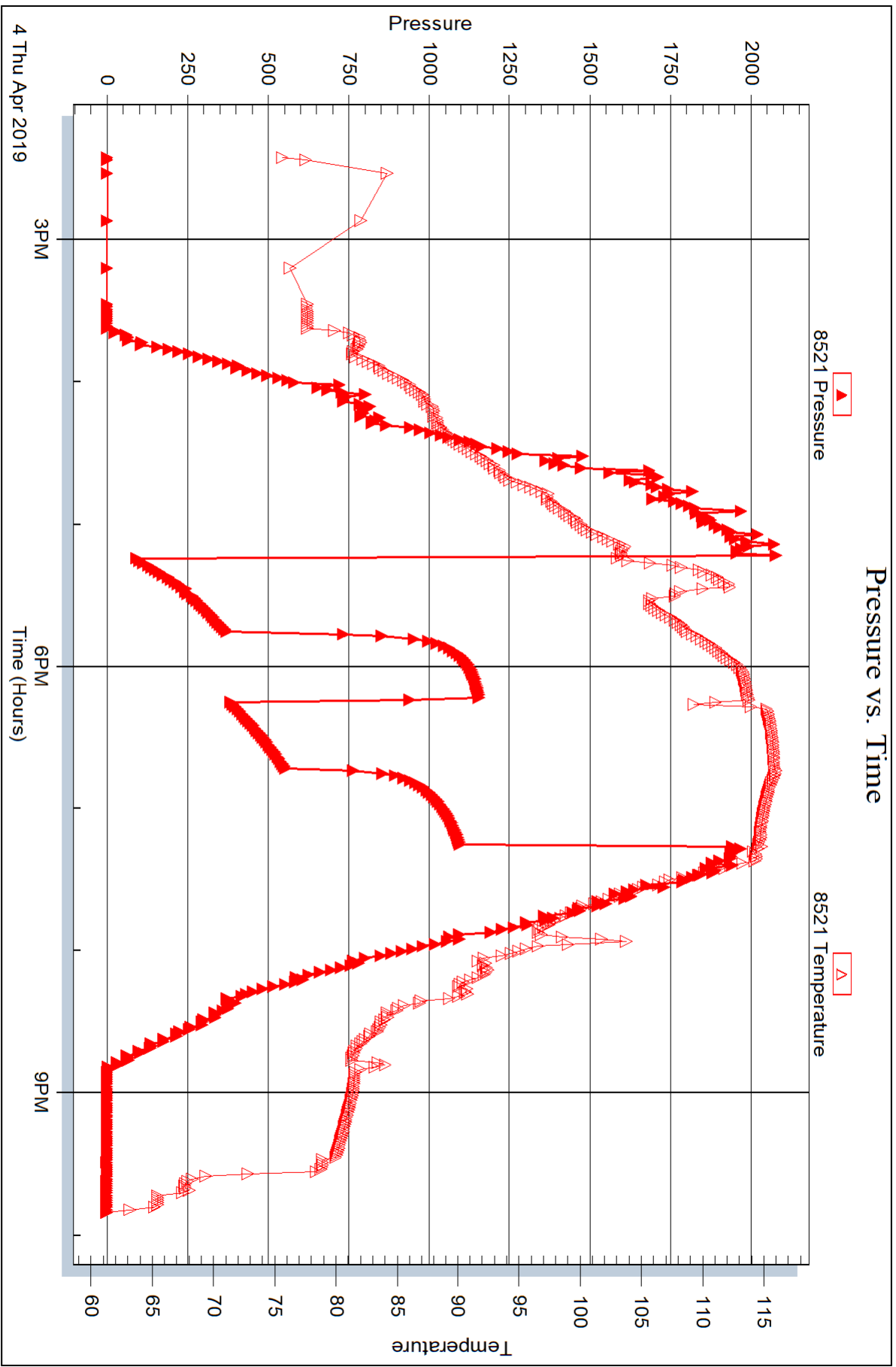
Serial #: 8521

Inside

Arcadian Resources LLC

Ross #1-27

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Arcadian Rresources LLC**

1302 Olive St.
Concordia KS 66901

ATTN: Sean Deenihan

Ross #1-27

27-14-33 Logan,KS

Start Date: 2019.04.06 @ 22:21:15

End Date: 2019.04.07 @ 06:33:00

Job Ticket #: 65131 DST #: 2

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

Printed: 2019.04.10 @ 08:49:29



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Arcadian Resources LLC

27-14-33 Logan, KS

1302 Olive St.
Concordia KS 66901

Ross #1-27

ATTN: Sean Deenihan

Job Ticket: 65131

DST#: 2

Test Start: 2019.04.06 @ 22:21:15

GENERAL INFORMATION:

Formation: **LKC I - K**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:23:15

Time Test Ended: 06:33:00

Test Type: Conventional Straddle (Reset)

Tester: Mike Roberts

Unit No: 81

Interval: 4030.00 ft (KB) To 4155.00 ft (KB) (TVD)

Reference Elevations: 2860.00 ft (KB)

Total Depth: 4600.00 ft (KB) (TVD)

2850.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 10.00 ft

Serial #: 8521

Inside

Press@RunDepth: 627.25 psig @ 4130.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.04.06

End Date:

2019.04.07

Last Calib.:

2019.04.07

Start Time:

22:21:15

End Time:

06:33:00

Time On Btm:

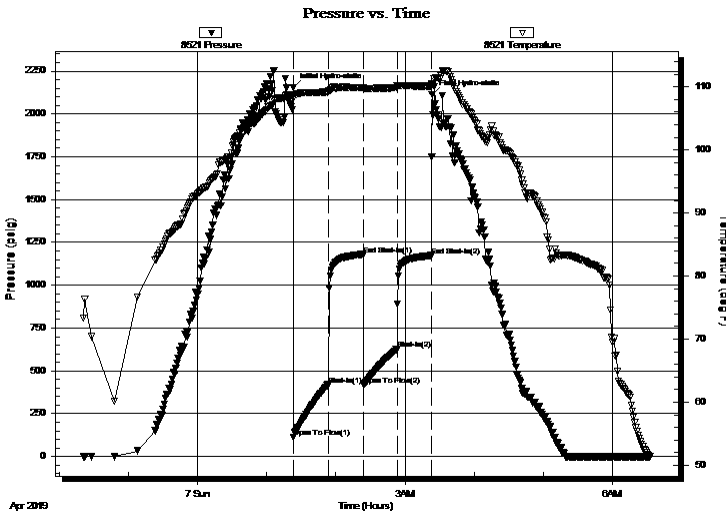
2019.04.07 @ 01:23:00

Time Off Btm:

2019.04.07 @ 03:23:30

TEST COMMENT: IF: Built to 75" blow
IS: No return blow
FF: Built to 49" blow
FS: No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2153.09	108.75	Initial Hydro-static
1	111.54	108.11	Open To Flow (1)
31	418.77	109.18	Shut-In(1)
61	1177.76	109.87	End Shut-In(1)
62	419.02	109.64	Open To Flow (2)
90	627.25	110.09	Shut-In(2)
120	1173.20	110.13	End Shut-In(2)
121	2111.86	110.43	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
310.00	mud 100%m	4.35
620.00	w cm 40%w 60%m	8.70
124.00	w cm 50%w 50%m	1.74
372.00	mcw 30%m 70%w	5.22

Gas Rates

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

* Recovery from multiple tests



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Arcadian Resources LLC

27-14-33 Logan, KS

1302 Olive St.
Concordia KS 66901

Ross #1-27

ATTN: Sean Deenihan

Job Ticket: 65131

DST#: 2

Test Start: 2019.04.06 @ 22:21:15

GENERAL INFORMATION:

Formation: **LKC I - K**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:23:15

Time Test Ended: 06:33:00

Test Type: Conventional Straddle (Reset)

Tester: Mike Roberts

Unit No: 81

Interval: 4030.00 ft (KB) To 4155.00 ft (KB) (TVD)

Reference Elevations: 2860.00 ft (KB)

Total Depth: 4600.00 ft (KB) (TVD)

2850.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 10.00 ft

Serial #: 8968

Outside

Press@RunDepth: psig @ 4130.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.04.06

End Date:

2019.04.07

Last Calib.:

2019.04.07

Start Time: 22:21:15

End Time:

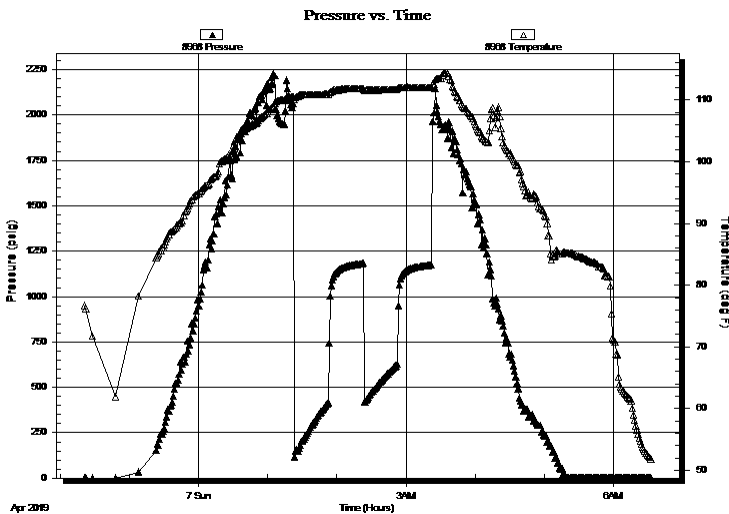
06:32:45

Time On Btm:

Time Off Btm:

TEST COMMENT: IF:Built to 75" blow
IS:No return blow
FF:Built to 49" blow
FS:No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
310.00	mud 100%m	4.35
620.00	w cm 40%w 60%m	8.70
124.00	w cm 50%w 50%m	1.74
372.00	mcw 30%m 70%w	5.22

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Arcadian Resources LLC

27-14-33 Logan, KS

1302 Olive St.
Concordia KS 66901

Ross #1-27

Job Ticket: 65131

DST#: 2

ATTN: Sean Deenihan

Test Start: 2019.04.06 @ 22:21:15

GENERAL INFORMATION:

Formation: **LKC I - K**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:23:15

Time Test Ended: 06:33:00

Test Type: Conventional Straddle (Reset)

Tester: Mike Roberts

Unit No: 81

Interval: 4030.00 ft (KB) To 4155.00 ft (KB) (TVD)

Reference Elevations: 2860.00 ft (KB)

Total Depth: 4600.00 ft (KB) (TVD)

2850.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 10.00 ft

Serial #: 8288 Below (Straddle)

Press@RunDepth: psig @ 4592.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.04.06 End Date: 2019.04.07

Last Calib.: 2019.04.07

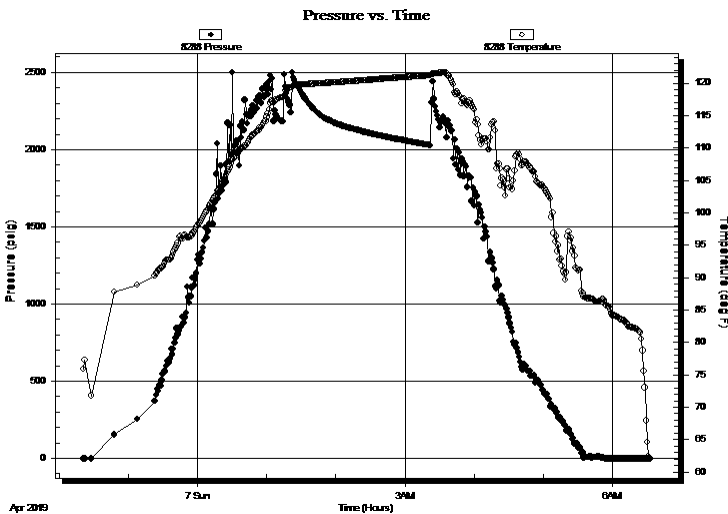
Start Time: 22:21:15 End Time: 06:32:30

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: Built to 75" blow
IS: No return blow
FF: Built to 49" blow
FS: No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
310.00	mud 100%m	4.35
620.00	w cm 40%w 60%m	8.70
124.00	w cm 50%w 50%m	1.74
372.00	mcw 30%m 70%w	5.22

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Arcadian Resources LLC

27-14-33 Logan, KS

1302 Olive St.
Concordia KS 66901

Ross #1-27

Job Ticket: 65131

DST#: 2

ATTN: Sean Deenihan

Test Start: 2019.04.06 @ 22:21:15

Tool Information

Drill Pipe:	Length: 4020.00 ft	Diameter: 3.80 inches	Volume: 56.39 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 56.39 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4030.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	4598.00 ft			
Interval between Packers:	568.00 ft			
Tool Length:	599.00 ft			
Number of Packers:	2	Diameter: 7.88 inches		

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Change Over Sub	1.00			4000.00	
Shut In Tool	5.00			4005.00	
Hydraulic tool	5.00			4010.00	
Jars	5.00			4015.00	
EM Tool	3.00			4018.00	
Safety Joint	3.00			4021.00	
Packer	5.00			4026.00	31.00 Bottom Of Top Packer
Packer	4.00			4030.00	
Stubb	1.00			4031.00	
Perforations	4.00			4035.00	
Change Over Sub	1.00			4036.00	
Drill Pipe	93.00			4129.00	
Change Over Sub	1.00			4130.00	
Recorder	0.00	8968	Outside	4130.00	
Recorder	0.00	8521	Inside	4130.00	
Perforations	21.00			4151.00	
Blank Off Sub	1.00			4152.00	
Packer - Shale	3.00			4155.00	
Stubb	1.00			4156.00	
Perforations	2.00			4158.00	
Change Over Sub	1.00			4159.00	
Drill Pipe	433.00			4592.00	
Recorder	0.00	8288	Below	4592.00	
Change Over Sub	1.00			4593.00	
Bullnose	5.00			4598.00	568.00 Bottom Packers & Anchor

Total Tool Length: 599.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Arcadian Resources LLC

27-14-33 Logan,KS

1302 Olive St.
Concordia KS 66901

Ross #1-27

Job Ticket: 65131

DST#: 2

ATTN: Sean Deenihan

Test Start: 2019.04.06 @ 22:21:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

24000 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 9500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
310.00	mud 100%m	4.348
620.00	w cm 40%w 60%m	8.697
124.00	w cm 50%w 50%m	1.739
372.00	mcw 30%m 70%w	5.218

Total Length: 1426.00 ft Total Volume: 20.002 bbl

Num Fluid Samples: 0

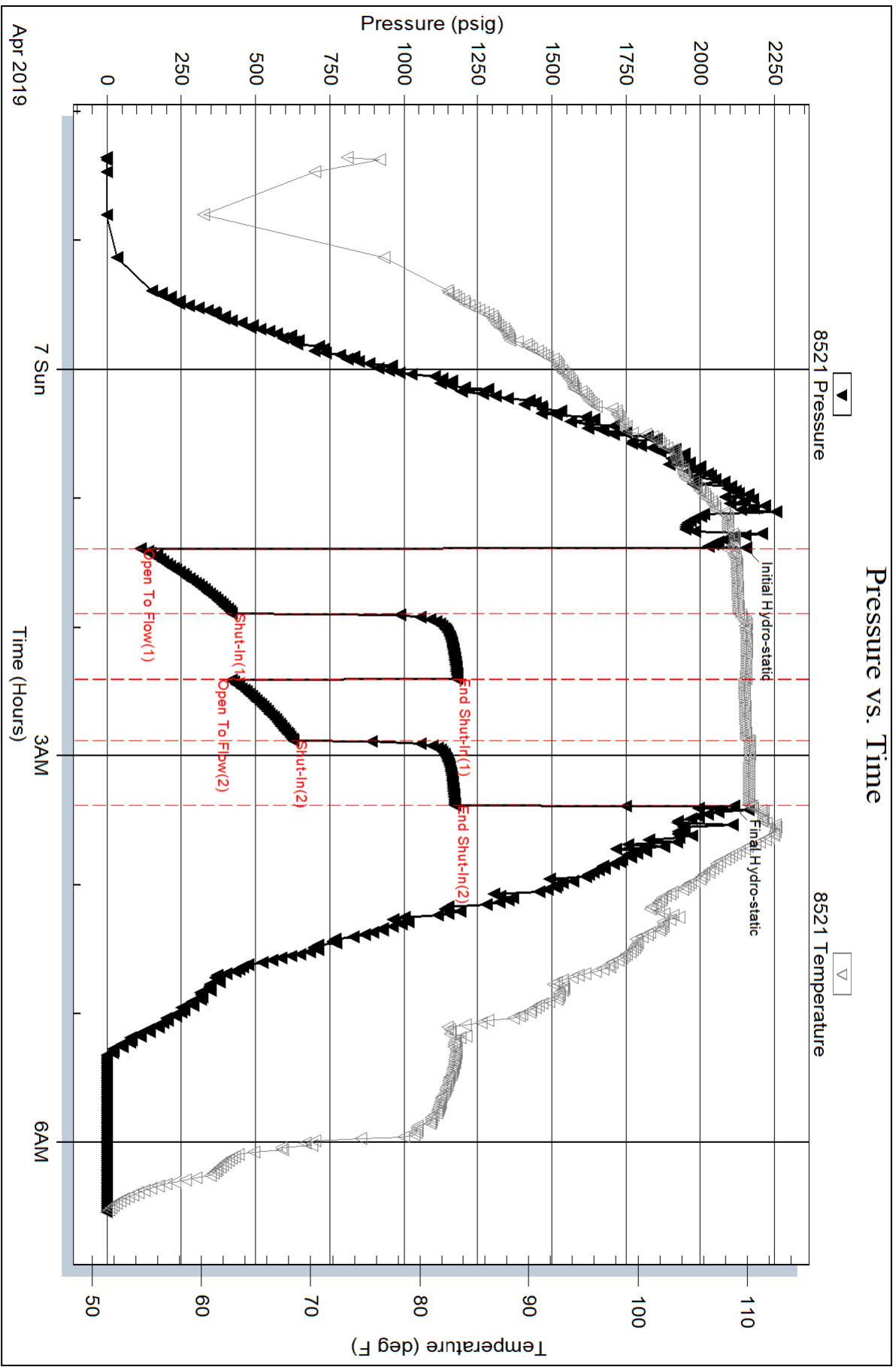
Num Gas Bombs: 0

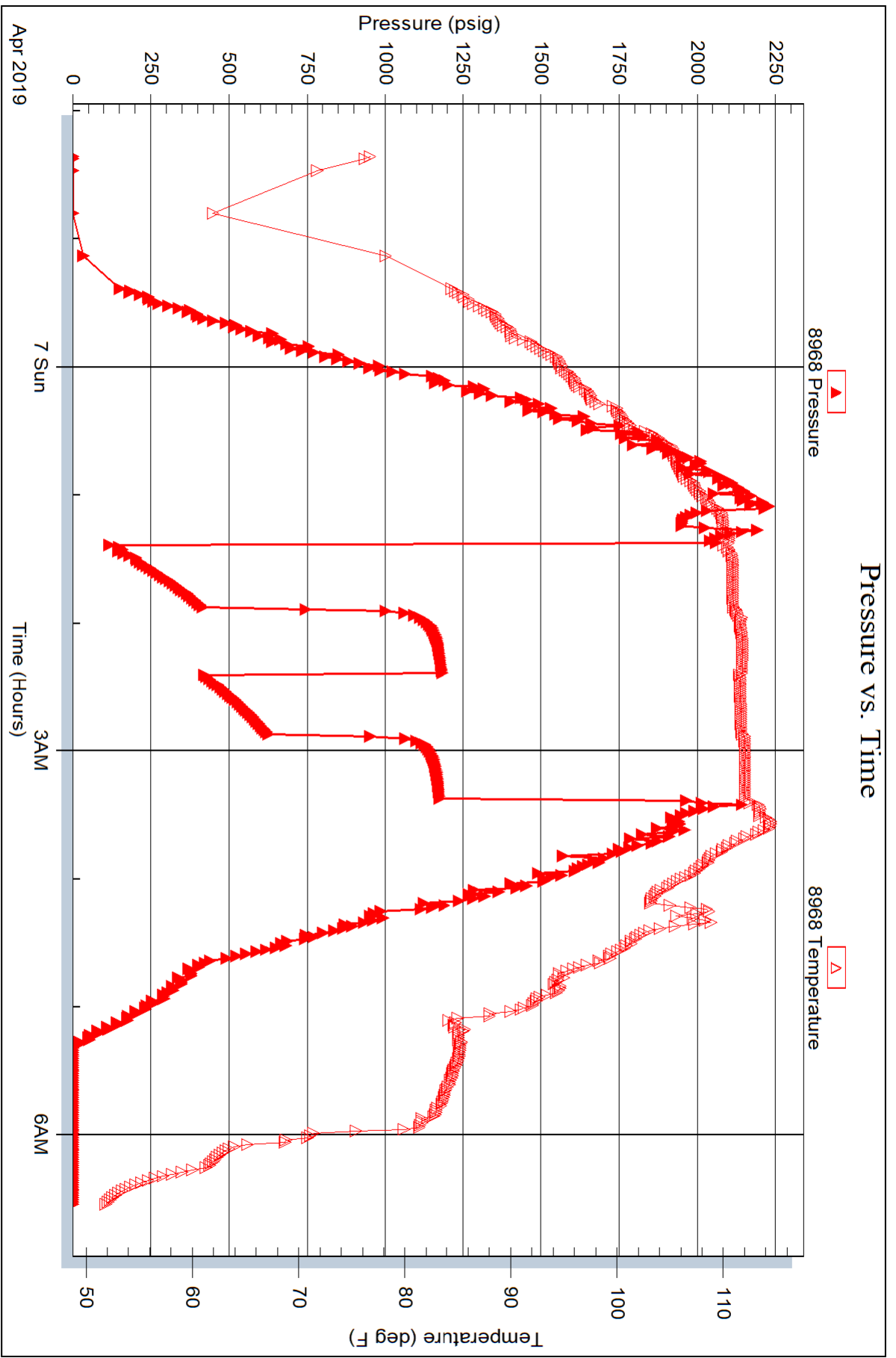
Serial #:

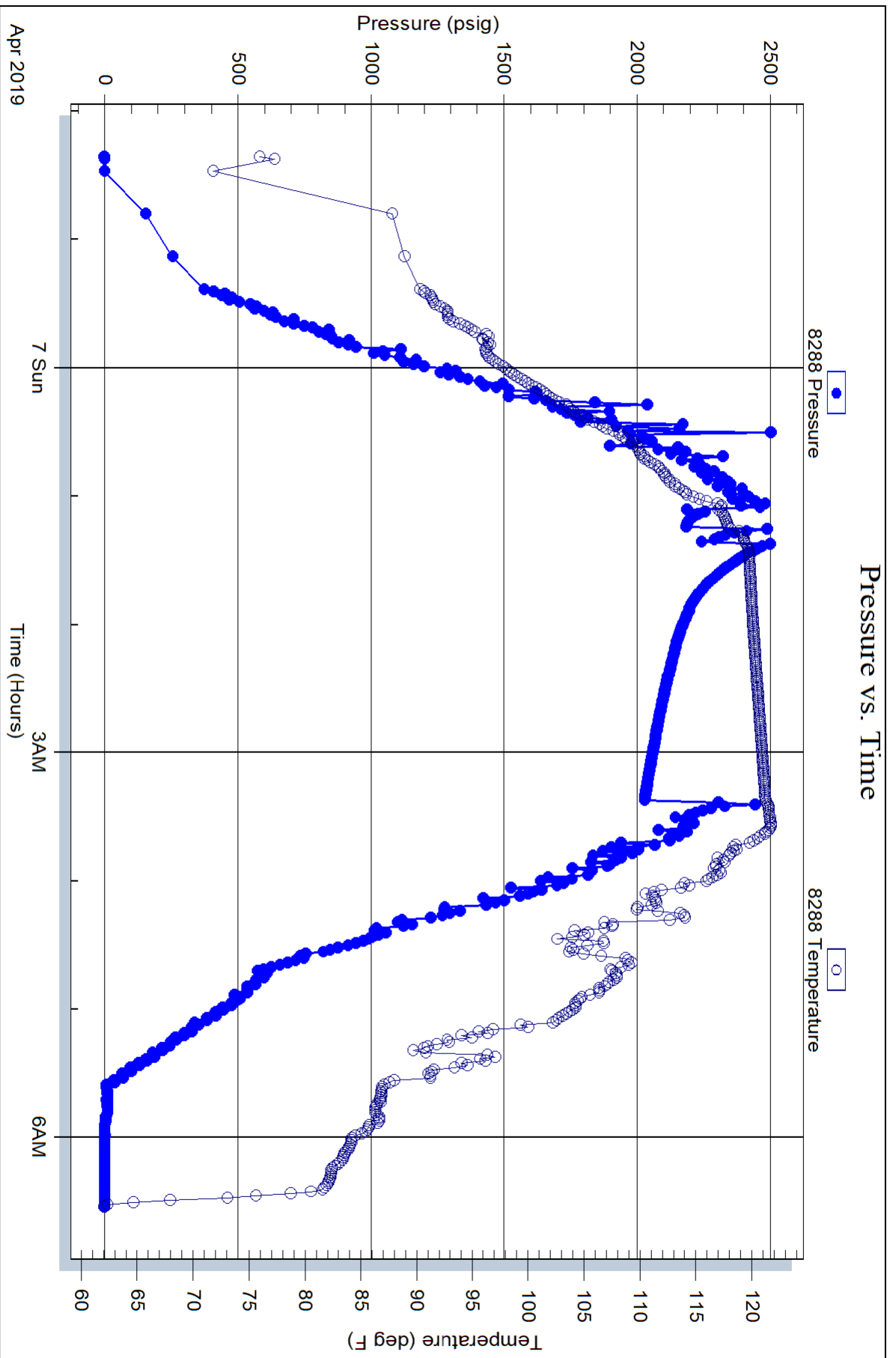
Laboratory Name:

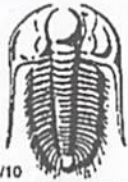
Laboratory Location:

Recovery Comments: RW= .497 @ 57.6= 24000 ppm









TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 65130

Well Name & No. Ross 1-27 Test No. 1 Date 4-4-19
 Company Arcadian Resources LLC Elevation 2860 KB 2850 GL
 Address 1302 Olive St. Concordia KS 66901
 Co. Rep / Geo. Sean Deenihan Rig Duke 4
 Location: Sec. 27 Twp 14 Rge. 33 Co. Logan State KS

Interval Tested 4015-4104 Zone Tested ~~4015-4104~~ H-I-J
 Anchor Length 89 Drill Pipe Run 4012 Mud Wt. 8.5
 Top Packer Depth 4010 Drill Collars Run Ø Vis 40
 Bottom Packer Depth 4015 Wt. Pipe Run Ø WL 7.6
 Total Depth 4104 Chlorides 5500 ppm System LCM 4
 Blow Description IF: Built to 59" BOB in 3 Min
IS: NO Return Blow
FF: Built to 45" BOB in 4 Min
FS: NO Return Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>682</u>	<u>MUD - oil spots on 1st stand</u>			<u>100</u>	
<u>558</u>	<u>mcw</u>		<u>70</u>	<u>30</u>	
<u>124</u>	<u>mcw</u>		<u>96</u>	<u>4</u>	

Rec Total 1364 BHT 117 Gravity - API RW 1444 @ 54.4°F Chlorides 25000 ppm
 (A) Initial Hydrostatic 2059 Test 1300 T-On Location 06:35 13:20
 (B) First Initial Flow 95 Jars 250 T-Started 14:25
 (C) First Final Flow 375 Safety Joint 75 T-Open 17:14
 (D) Initial Shut-In 1152 Circ Sub NC T-Pulled 19:14
 (E) Second Initial Flow 378 Hourly Standby _____ T-Out 21:50
 (F) Second Final Flow 558 Mileage 76 RT x 2 Comments Short Trip
 (G) Final Shut-In 1098 Sampler 76+76 Tight-
 (H) Final Hydrostatic 2005 Straddle _____ EM Tool 350
 Shale Packer _____ Ruined Shale Packer _____
 Extra Packer _____ Ruined Packer _____
 Extra Recorder _____ Extra Copies _____
 Day Standby _____ Sub Total 350
 Accessibility _____ Total 2127.00
 Sub Total 1777 MP/DST Disc't _____

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

Approved By [Signature] Our Representative Mike Roberts

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

ARCADIAN ROSS 1-27 DST #2
Test Ticket

NO. **65131**

Well Name & No. Ross 1-27 Test No. 2 Date 4-6-19
 Company Arcadian Resources LLC Elevation 2860 KB 2850 GL
 Address 1302 Olive St. Concordia, KS 66901
 Co. Rep / Geo. Sean Deenihan Rig Duke 4
 Location: Sec. 27 Twp 14 Rge. 33 Co. Logan State KS

Interval Tested 4030-4155 ^{TID} 4600 Zone Tested ~~K-Attainment~~ I-K
 Anchor Length 125 Drill Pipe Run 4020 Mud Wt. 9.4
 Top Packer Depth 4025 Drill Collars Run Ø Vis 56
 Bottom Packer Depth 4030 Wt. Pipe Run Ø WL 8.8
 Total Depth 4600 Chlorides 9500 ppm System LCM 4
 Blow Description IF: Boiled to 75"
IS: No Return Blow
FF: Boiled to 49"
FS: No Return Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>310</u>	<u>mud</u>			<u>100</u>	
<u>620</u>	<u>WCM</u>		<u>40</u>	<u>60</u>	
<u>124</u>	<u>WCM</u>		<u>50</u>	<u>50</u>	
<u>372</u>	<u>MCLW</u>		<u>70</u>	<u>30</u>	
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 1426 BHT 110 Gravity — API RW 497 @ 57.4° F Chlorides 24000 ppm

(A) Initial Hydrostatic <u>2153</u>	<input checked="" type="checkbox"/> Test <u>1300</u>	T-On Location <u>21:10</u>
(B) First Initial Flow <u>111</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>22:21</u>
(C) First Final Flow <u>418</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>01:23</u>
(D) Initial Shut-In <u>1177</u>	<input checked="" type="checkbox"/> Circ Sub <u>NC</u>	T-Pulled <u>03:23</u>
(E) Second Initial Flow <u>419</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>06:33</u>
(F) Second Final Flow <u>627</u>	<input checked="" type="checkbox"/> Mileage <u>76 RT</u> ⁷⁶	Comments
(G) Final Shut-In <u>1173</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2111</u>	<input checked="" type="checkbox"/> Straddle <u>600</u>	<input checked="" type="checkbox"/> EM Tool <u>350</u>
Initial Open <u>30</u>	<input checked="" type="checkbox"/> Shale Packer <u>250</u>	<input type="checkbox"/> Ruined Shale Packer
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Extra Copies
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby <u>1.5d 11.5h</u>	Sub Total <u>350 + 383.33</u>
	<input type="checkbox"/> Accessibility	Total <u>3284.33</u>
	Sub Total <u>2551</u>	MP/DST Disc't

Approved By _____ Our Representative Mike Roberts
 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.

Sean Deenihan

Petroleum Geologist

GEOLOGIST'S REPORT DRILLING TIME AND SAMPLE LOG

COMPANY **Arcadian Resources, LLC**

LEASE **Ross #1-27**

FIELD **Spica**

LOCATION **2400' ENL & 1500' FWL**

SEC **27** TWP **14 S** RGE **33 W**

COUNTY **Logan** STATE **Kansas**

CONTRACTOR **Duke Drilling Rig #4**

SPUD **COMP**

RTD **4500'** LTD **4498'**

MUD UP **LTD** TYPE MUD **Chemical**

SAMPLES SAVED FROM **3700'** TO **RTD**

DRILLING TIME KEPT FROM **3700'** TO **RTD**

SAMPLES EXAMINED FROM **3700'** TO **RTD**

GEOLOGICAL SUPERVISION FROM **3550'**

REFERENCE WELL **CND/DIL, MIC**

ELEVATIONS
KB 2869'

DF _____

GL 2859'

Measurements Are All From Kelly Bushing

CASING

CONDUCTOR _____

SURFACE 8-5/8" at 221'

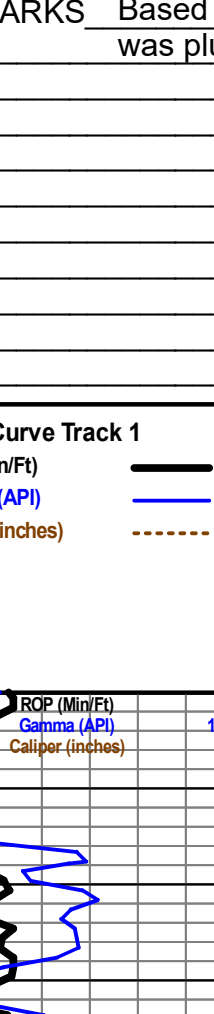
PRODUCTION none

ELECTRICAL SURVEYS

Producer _____

CND/DIL, MIC

Formation	Sample Tops	E-log Tops	Struct Pos.
B/Anhydrite	2307 (-1562)		
Heebner Sh.	3792 (-923)		
Lansing	3848 (-979)		
Stark Sh.	4098 (-1229)		
Et Scott	4334 (-1485)		
Cherokee Sh.	4384 (-1515)		
Morrow SS.	4530 (-1661)		



REMARKS Based on sample analysis, log evaluation, and DST results, the Ross #1-27 was plugged and abandoned.

Respectfully Submitted,

Sean P. Deenihan

