



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1223179
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

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 SIOW
- Gas D&A ENHR SIGW
- OG GSW Temp. Abd.
- 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 ENHR Conv. to SWD
- Plug Back Conv. to GSW Conv. to Producer
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - _____

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
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____

1223179

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

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				

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 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)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD: Size: _____ Set At: _____ Packer At: _____ Liner Run: Yes No

Date of First, Resumed Production, SWD or ENHR. _____ Producing Method:
 Flowing Pumping Gas Lift Other *(Explain)* _____

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
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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. <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ <input type="checkbox"/> Commingled <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	IA Operating, Inc.
Well Name	Thompson Unit 19-1
Doc ID	1223179

All Electric Logs Run

Geologist's Well Report
Compensated Density/Neutron Log
Micro Log
Dual Induction Log

Form	ACO1 - Well Completion
Operator	IA Operating, Inc.
Well Name	Thompson Unit 19-1
Doc ID	1223179

Tops

Name	Top	Datum
Anhydrite	964	828
Base	1003	789
Howard	2713	-921
Topeka	2736	-944
Heebner Shale	2985	-1193
Toronto	3006	-1214
LKC	3032	-1240
Conglomerate	3383	-1591
Aruckle	3545	-1753
Total Depth	3610	-1818

ALLIED OIL & GAS SERVICES, LLC 055281

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

SERVICE POINT:

Russell

DATE <u>6.4.14</u>	SEC <u>19</u>	TWP <u>11</u>	RANGE <u>13</u>	CALLED OUT	ON LOCATION	JOB START <u>4:30pm</u>	JOB FINISH <u>10:30pm</u>
LEASE <u>Thomas List</u>	WELL # <u>19-1</u>	LOCATION <u>Fairport Ks</u>			COUNTY <u>Russell</u>	STATE <u>Ks</u>	
OLD OR NEW (Circle one) <u>NEW</u>				<u>West to T- 1/2 n e into</u>			

CONTRACTOR <u>Discovery #2</u>	OWNER
TYPE OF JOB <u>Long String</u>	CEMENT
HOLE SIZE <u>7 7/8</u> T.D.	AMOUNT ORDERED <u>200sk ASCA</u>
CASING SIZE <u>5 1/2</u> DEPTH <u>3600</u>	
TUBING SIZE DEPTH	
DRILL PIPE DEPTH	
TOOL DEPTH	
PRES. MAX MINIMUM	COMMON @
MEAS. LINE SHOE JOINT <u>42.40'</u>	POZMIX @
CEMENT LEFT IN CSG. <u>42.40'</u>	GEL @
PERFS.	CHLORIDE @
DISPLACEMENT <u>84.67 ^{cu} ft</u>	ASCA 200sk @ <u>23.50</u> \$ <u>4,700.00</u>

EQUIPMENT		
PUMP TRUCK # <u>417</u>	CEMENTER <u>Andy Kanner</u>	
	HELPER <u>Dandy S</u>	<u>500 gal Mudd Plant @ 1.40</u> \$ <u>700.00</u>
BULK TRUCK # <u>378</u>	DRIVER <u>Jesse C</u>	<u>Material @</u> \$ <u>5400.00</u>
BULK TRUCK #	DRIVER	<u>Line @ 1350 ^{cu}</u>
		HANDLING <u>200sk</u> @ <u>2.40</u> \$ <u>490.00</u>
		MILEAGE <u>235</u> @ <u>11m</u> \$ <u>2600.00</u>
		TOTAL <u>\$6,507.00</u>

REMARKS:

See Cementer Job Log

CHARGE TO: IA. Operating

STREET _____

CITY _____ STATE _____ ZIP _____

SERVICE	
DEPTH OF JOB	<u>3600</u>
PUMP TRUCK CHARGE	<u>\$2568.75</u>
EXTRA FOOTAGE	@
MILEAGE <u>Andy 50</u>	@ <u>7.7</u> \$ <u>385.00</u>
MANIFOLD <u>light 25</u>	@ <u>4.4</u> \$ <u>110.00</u>
<u>1x 5 1/2 Plug Container</u>	@ <u>—</u> \$ <u>275.00</u>
	<u>4435.75</u>
	TOTAL <u>\$3,328.75</u>

PLUG & FLOAT EQUIPMENT

<u>1x 5 1/2 Plug Stack</u>	@ <u>—</u>	\$ <u>545.00</u>
<u>1x 5 1/2 Lock Down Key</u>	@ <u>—</u>	\$ <u>660.00</u>
<u>5x 5 1/2 Turboline</u>	@ <u>95.0</u>	\$ <u>475.00</u>
	@	
	@	
<u>Line 420 ^{cu}</u>		TOTAL \$ <u>1680.00</u>

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

SALES TAX (If Any) _____

TOTAL CHARGES \$11,515.75

DISCOUNT \$2,878.93 (25%) IF PAID IN 30 DAYS

Net 8636.82

PRINTED NAME _____

SIGNATURE Tom Beer

ALLIED OIL & GAS SERVICES, LLC 055277

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

SERVICE POINT: Russell

DATE <u>5.28.14</u>	SEC. <u>19</u>	TWP. <u>11</u>	RANGE <u>15</u>	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
LEASE <u>Thomas Unit</u>	WELL # <u>19-1</u>	LOCATION <u>Fairport</u>	<u>Ks</u>	COUNTY <u>Russell</u>	STATE <u>Ks</u>		

OLD OR NEW (Circle one) NEW

CONTRACTOR Discovery

TYPE OF JOB Surface (Long)

HOLE SIZE 12 1/4 T.D.

CASING SIZE 8 5/8 DEPTH 974'

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT 357'

CEMENT LEFT IN CSG. 357'

PERFS.

DISPLACEMENT 59.68' @ 1100

OWNER

CEMENT AMOUNT ORDERED 400 SK

31.00 + 27.81

COMMON 400 SK @ 17.9 \$ 7,160.00

POZMIX @

GEL 75216 @ .24 \$ 180.48

CHLORIDE 1,12816 @ .80 \$ 902.40

ASC @

Material @ 8242.88

Line @ 2040.12

HANDLING 400 SK @ 2.48 \$ 992.00

MILEAGE 470 71m @ 2.60 \$ 1,222.00

TOTAL \$10,416.88

EQUIPMENT

PUMP TRUCK CEMENTER Andy Plummer

417 HELPER Andy S

BULK TRUCK DRIVER Jesse C

481 DRIVER

REMARKS:

See Comment Job Log

Cement to Surface

CHARGE TO: JA Operating

STREET

CITY STATE ZIP Shank

SERVICE

DEPTH OF JOB 974'

PUMP TRUCK CHARGE \$2,058.50

EXTRA FOOTAGE @

MILEAGE 470 @ 7.7 \$ 3,619.00

MANIFOLD 612 @ 4.4 \$ 2,692.80

TOTAL \$7,670.30

Line 1199.95 TOTAL \$8,870.25

PLUG & FLOAT EQUIPMENT

1X 8 5/8 Top Rubber Plug @ \$131.00

TOTAL \$131.00

Line 3242 TOTAL \$131.00

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

SALES TAX (If Any)

TOTAL CHARGES \$13,141.39

DISCOUNT \$3,252.49 @ 24.75% IF PAID IN 30 DAYS

Net 9888.79

PRINTED NAME

SIGNATURE [Signature]

9888.89



DRILL STEM TEST REPORT

Prepared For: **IA Operating Inc**

9915 W 21st ST STE B
Wichita KS, 67205

ATTN: Jeff Lawler

Thompson Unit # 1-19

19-11s-15w Russell KS

Start Date: 2014.05.31 @ 22:08:00

End Date: 2014.06.01 @ 06:09:45

Job Ticket #: 54049 DST #: 1

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.06.04 @ 13:17:54



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

IA Operating Inc
9915 W 21st ST STE B
Wichita KS, 67205
ATTN: Jeff Lawler

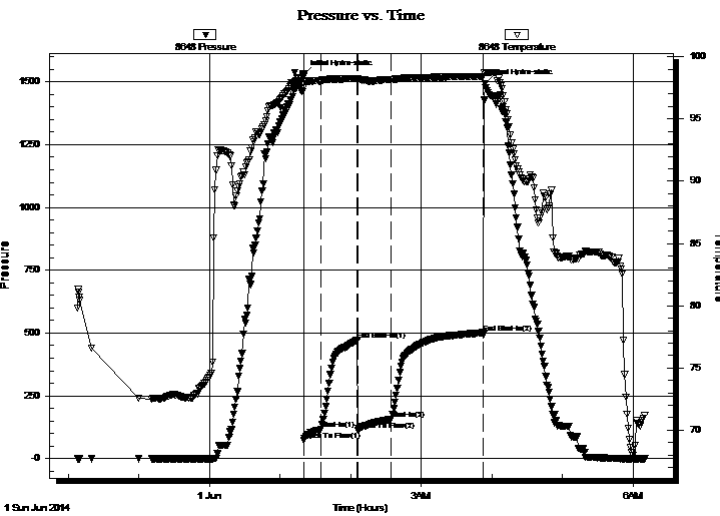
19-11s-15w Russell KS
Thompson Unit # 1-19
Job Ticket: 54049 **DST#: 1**
Test Start: 2014.05.31 @ 22:08:00

GENERAL INFORMATION:

Formation: **Toronto - LKC "D"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 01:20:15
 Tester: Cody Bloedorn
 Time Test Ended: 06:09:45
 Unit No: 73
 Interval: **2982.00 ft (KB) To 3100.00 ft (KB) (TVD)**
 Reference Elevations: 1792.00 ft (KB)
 Total Depth: 3100.00 ft (KB) (TVD)
 1784.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Fair
 KB to GR/CF: 8.00 ft

Serial #: 8648 **Inside**
 Press@RunDepth: 156.33 psig @ 3083.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.05.31 End Date: 2014.06.01 Last Calib.: 2014.06.01
 Start Time: 22:08:05 End Time: 06:09:44 Time On Btm: 2014.06.01 @ 01:20:00
 Time Off Btm: 2014.06.01 @ 03:54:00

TEST COMMENT: 15 - IF- B.O.B. in 8 minutes
 30 - IS- No return
 30 - FF- B.O.B. in 1 1/2 minutes
 60 - FS- 1 1/4" return @ 15 Minutes, died back to surface blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1527.97	98.43	Initial Hydro-static
1	72.99	97.52	Open To Flow (1)
15	117.96	98.10	Shut-In(1)
46	471.11	98.24	End Shut-In(1)
47	113.90	98.18	Open To Flow (2)
75	156.33	98.17	Shut-In(2)
153	501.75	98.43	End Shut-In(2)
154	1493.16	98.71	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
186.00	GOCM, 20%O, 20%M, 60%G	2.34
45.00	Mud - show of oil, 100%M	0.63
0.00	496' of G.I.P.	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

IA Operating Inc
9915 W 21st ST STE B
Wichita KS, 67205
ATTN: Jeff Lawler

19-11s-15w Russell KS
Thompson Unit # 1-19
Job Ticket: 54049 **DST#: 1**
Test Start: 2014.05.31 @ 22:08:00

Tool Information

Drill Pipe:	Length: 2944.00 ft	Diameter: 3.80 inches	Volume: 41.30 bbl	Tool Weight: 2000.00 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: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 54000.00 lb
			<u>Total Volume: 41.45 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	2982.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	118.00 ft			
Tool Length:	139.00 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			2962.00	
Shut In Tool	5.00			2967.00	
Hydraulic tool	5.00			2972.00	
Packer	5.00			2977.00	21.00 Bottom Of Top Packer
Packer	5.00			2982.00	
Stubb	1.00			2983.00	
Perforations	5.00			2988.00	
Change Over Sub	1.00			2989.00	
Drill Pipe	93.00			3082.00	
Change Over Sub	1.00			3083.00	
Recorder	0.00	8648	Inside	3083.00	
Recorder	0.00	8940	Outside	3083.00	
Perforations	14.00			3097.00	
Bullnose	3.00			3100.00	118.00 Bottom Packers & Anchor

Total Tool Length: 139.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

IA Operating Inc
9915 W 21st ST STE B
Wichita KS, 67205
ATTN: Jeff Lawler

19-11s-15w Russell KS
Thompson Unit # 1-19
Job Ticket: 54049 **DST#: 1**
Test Start: 2014.05.31 @ 22:08:00

Mud and Cushion Information

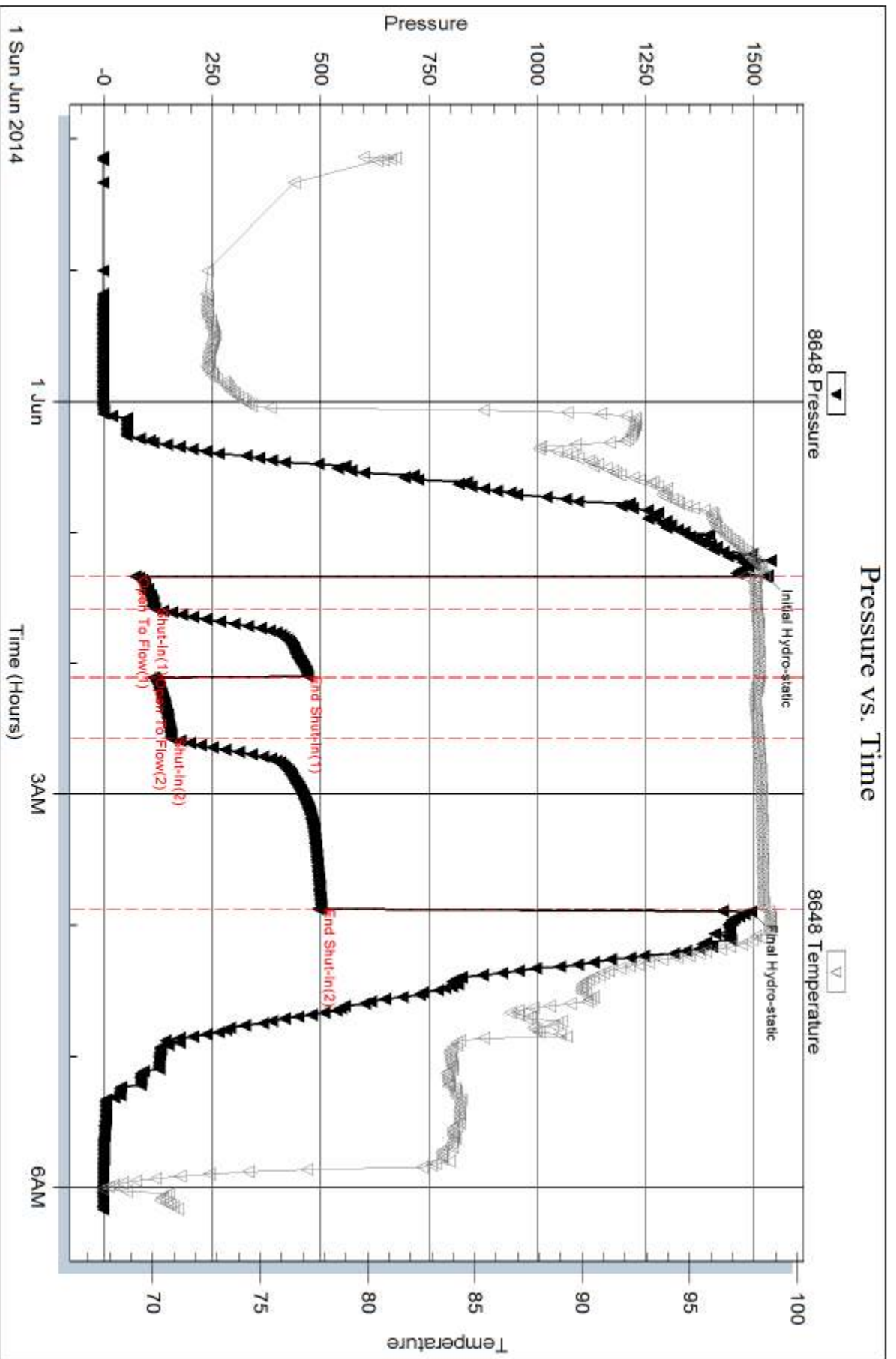
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 50.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.57 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 8000.00 ppm			
Filter Cake: inches			

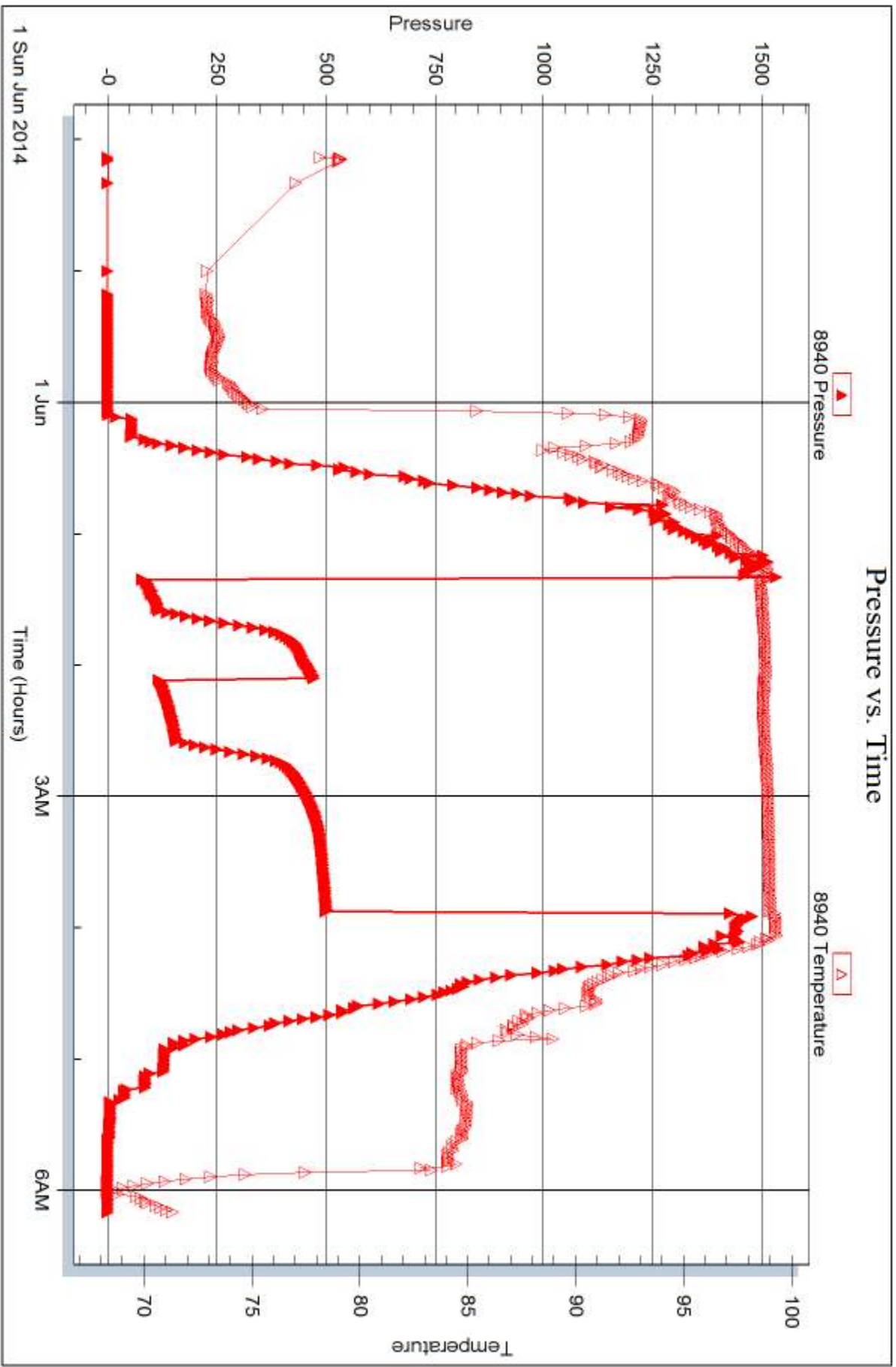
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
186.00	GOCM, 20%O, 20%M, 60%G	2.336
45.00	Mud - show of oil, 100%M	0.631
0.00	496' of G.I.P.	0.000

Total Length: 231.00 ft Total Volume: 2.967 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **IA Operating Inc**

9915 W 21st ST STE B
Wichita KS, 67205

ATTN: Jeff Lawler

Thompson Unit # 1-19

19-11s-15w Russell KS

Start Date: 2014.06.01 @ 13:52:00

End Date: 2014.06.01 @ 20:50:15

Job Ticket #: 54050 DST #: 2

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.06.04 @ 13:16:26

IA Operating Inc
19-11s-15w Russell KS
Thompson Unit # 1-19
DST # 2
LKC "E&F"
2014.06.01



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

IA Operating Inc
 9915 W 21st ST STE B
 Wichita KS, 67205
 ATTN: Jeff Lawler

19-11s-15w Russell KS
Thompson Unit # 1-19
 Job Ticket: 54050 **DST#: 2**
 Test Start: 2014.06.01 @ 13:52:00

GENERAL INFORMATION:

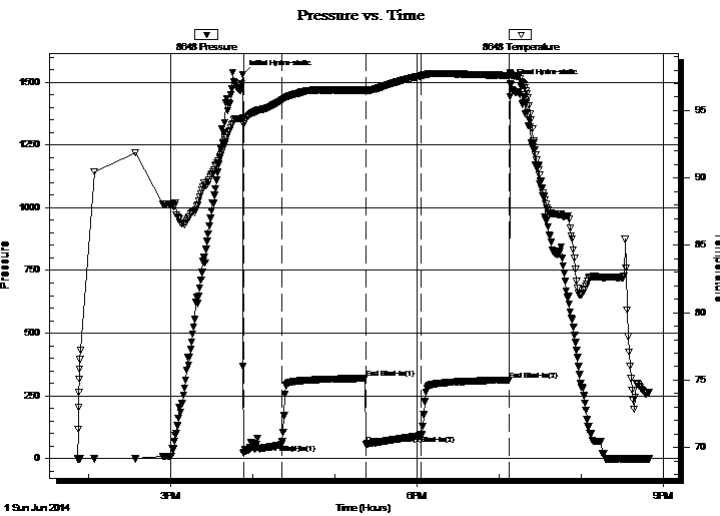
Formation: **LKC "E&F"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 15:53:00
 Time Test Ended: 20:50:15
 Interval: **3094.00 ft (KB) To 3127.00 ft (KB) (TVD)**
 Total Depth: 3127.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Cody Bloedorn
 Unit No: 73
 Reference Elevations: 1792.00 ft (KB)
 1784.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8648

Inside

Press@RunDepth: 91.21 psig @ 3100.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.06.01 End Date: 2014.06.01 Last Calib.: 2014.06.01
 Start Time: 13:52:05 End Time: 20:50:14 Time On Btm: 2014.06.01 @ 15:52:30
 Time Off Btm: 2014.06.01 @ 19:08:00

TEST COMMENT: 30 - IF- 9" blow
 60 - IS- Surface return
 45 - FF- 4" blow
 60 - FS- Surface return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1530.79	94.43	Initial Hydro-static
1	19.82	93.99	Open To Flow (1)
29	54.99	95.73	Shut-In(1)
90	319.43	96.51	End Shut-In(1)
91	58.22	96.42	Open To Flow (2)
131	91.21	97.56	Shut-In(2)
195	313.00	97.60	End Shut-In(2)
196	1494.52	97.70	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	MW - Show of oil, 20%M, 80%W	1.47
20.00	GO, 5%G, 95%O	0.28

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

IA Operating Inc
 9915 W 21st ST STE B
 Wichita KS, 67205
 ATTN: Jeff Lawler

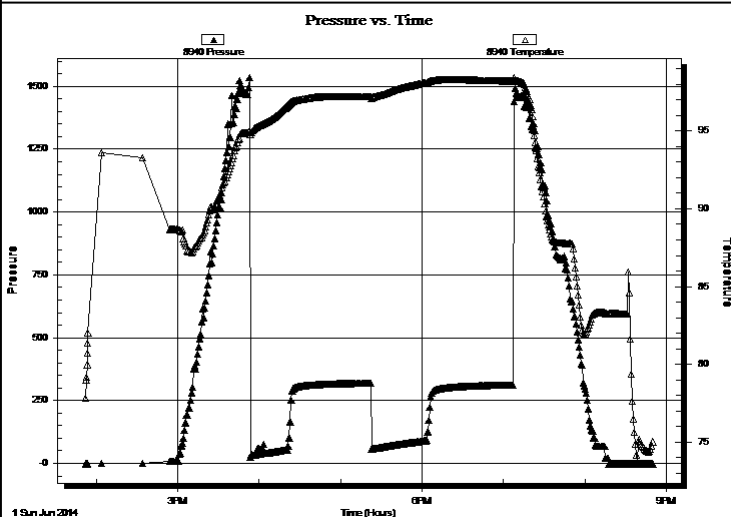
19-11s-15w Russell KS
Thompson Unit # 1-19
 Job Ticket: 54050 **DST#: 2**
 Test Start: 2014.06.01 @ 13:52:00

GENERAL INFORMATION:

Formation: **LKC "E&F"**
 Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 15:53:00 Tester: Cody Bloedorn
 Time Test Ended: 20:50:15 Unit No: 73
Interval: 3094.00 ft (KB) To 3127.00 ft (KB) (TVD) Reference Elevations: 1792.00 ft (KB)
 Total Depth: 3127.00 ft (KB) (TVD) 1784.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

Serial #: 8940 Outside
 Press@RunDepth: psig @ 3100.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.06.01 End Date: 2014.06.01 Last Calib.: 2014.06.01
 Start Time: 13:52:05 End Time: 20:50:14 Time On Btm:
 Time Off Btm:

TEST COMMENT: 30 - IF- 9" blow
 60 - IS- Surface return
 45 - FF- 4" blow
 60 - FS- Surface return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
124.00	MW - Show of oil, 20%M, 80%W	1.47
20.00	GO, 5%G, 95%O	0.28

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

IA Operating Inc
9915 W 21st ST STE B
Wichita KS, 67205
ATTN: Jeff Lawler

19-11s-15w Russell KS
Thompson Unit # 1-19
Job Ticket: 54050 **DST#: 2**
Test Start: 2014.06.01 @ 13:52:00

Tool Information

Drill Pipe:	Length: 3066.00 ft	Diameter: 3.80 inches	Volume: 43.01 bbl	Tool Weight: 2000.00 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: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 52000.00 lb
			<u>Total Volume: 43.16 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	3094.00 ft			Final 47000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	33.00 ft			
Tool Length:	54.00 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			3074.00	
Shut In Tool	5.00			3079.00	
Hydraulic tool	5.00			3084.00	
Packer	5.00			3089.00	21.00 Bottom Of Top Packer
Packer	5.00			3094.00	
Stubb	1.00			3095.00	
Perforations	5.00			3100.00	
Recorder	0.00	8648	Inside	3100.00	
Recorder	0.00	8940	Outside	3100.00	
Perforations	24.00			3124.00	
Bullnose	3.00			3127.00	33.00 Bottom Packers & Anchor

Total Tool Length: 54.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

IA Operating Inc

19-11s-15w Russell KS

9915 W 21st ST STE B
Wichita KS, 67205

Thompson Unit # 1-19

Job Ticket: 54050

DST#: 2

ATTN: Jeff Lawler

Test Start: 2014.06.01 @ 13:52:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

28 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

33000 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.58 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
124.00	MW - Show of oil, 20%M, 80%W	1.466
20.00	GO, 5%G, 95%O	0.281

Total Length: 144.00 ft Total Volume: 1.747 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

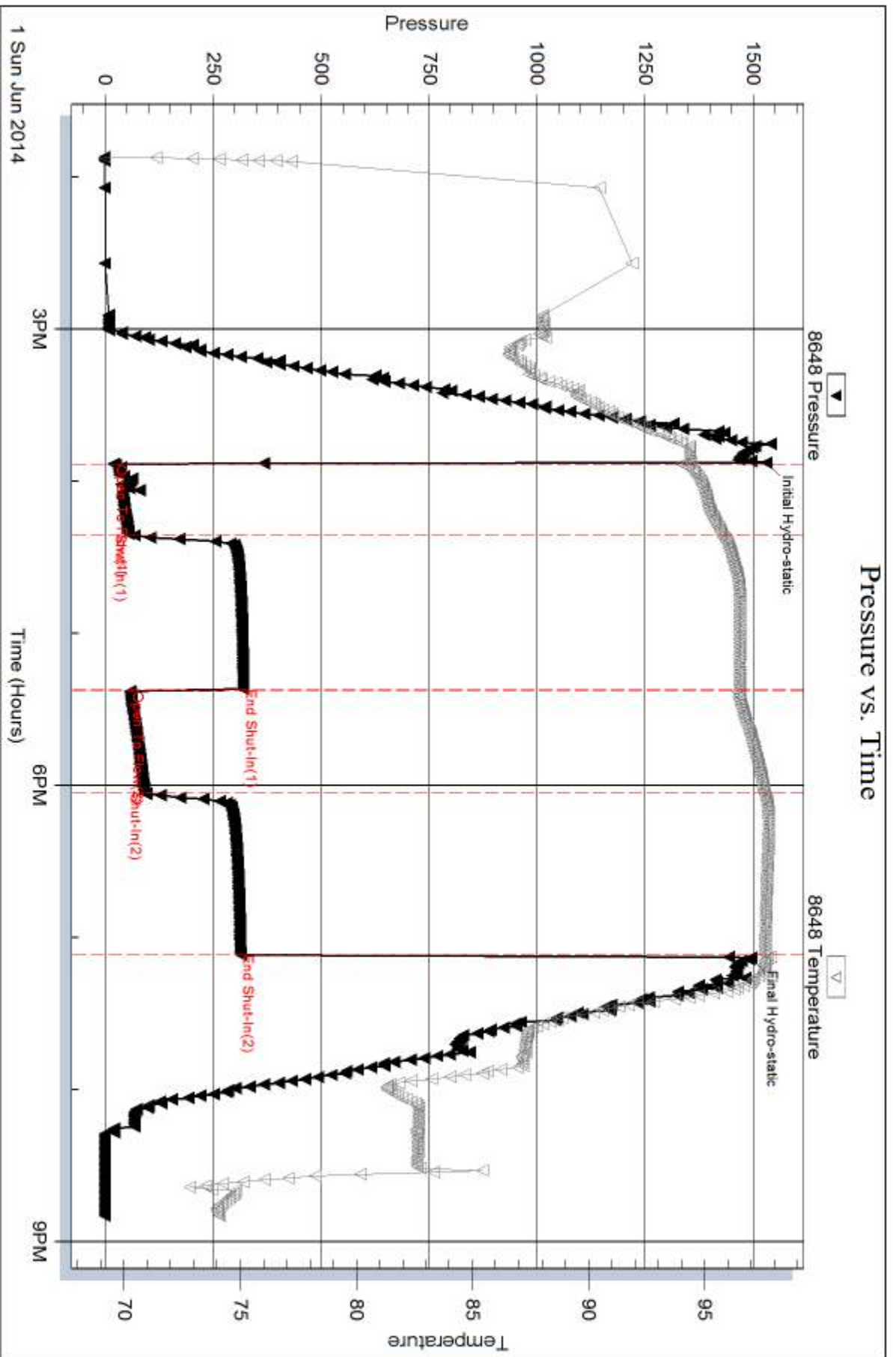
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity: 27 @ 70 Degrees = 28

Salinity: .25 @ 60 Degrees = 33,000

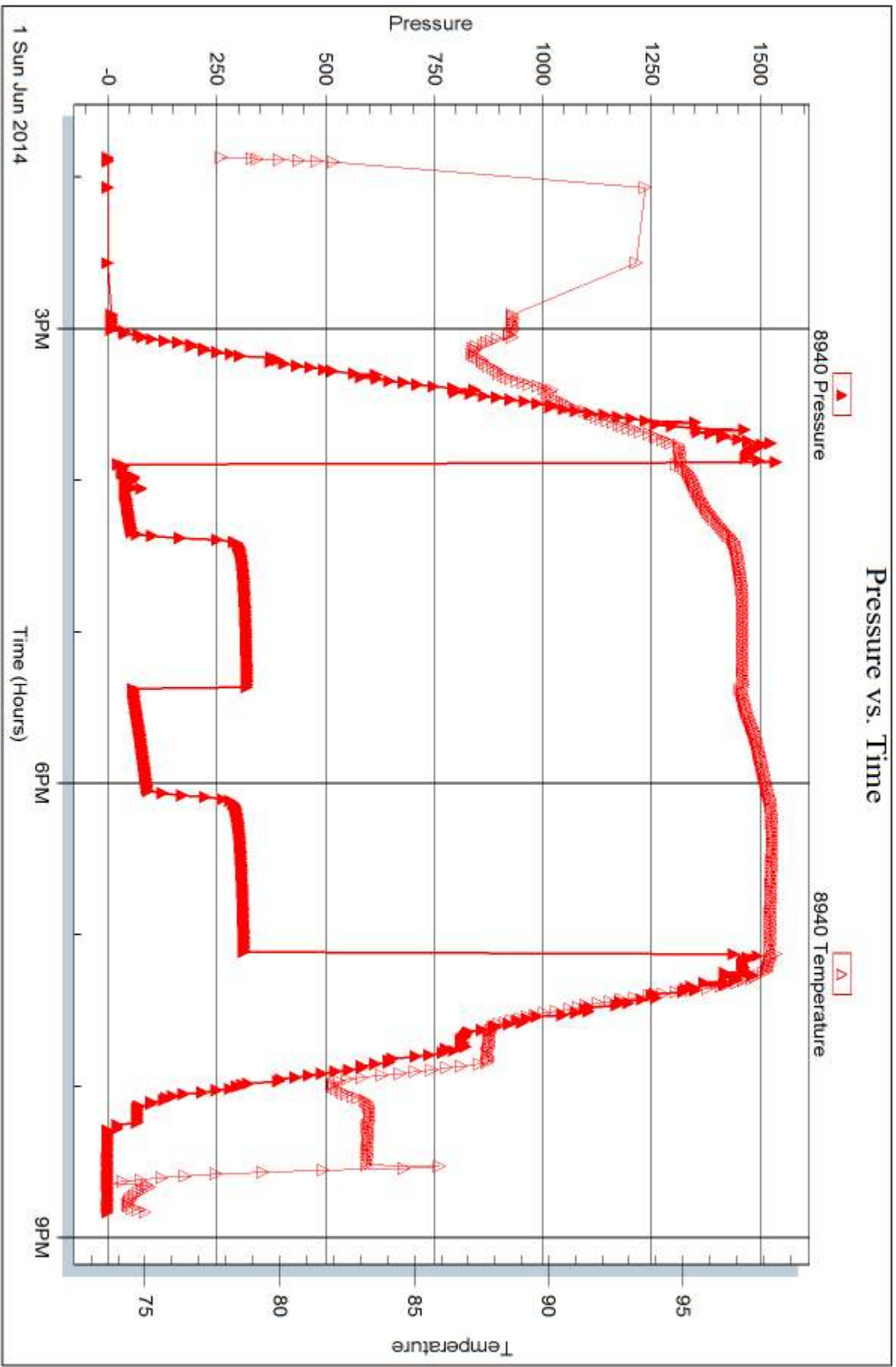


Serial #: 8940

Outside IA Operating Inc

Thompson Unit # 1-19

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 54050

Printed: 2014.06.04 @ 13:16:27



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

IA Operating Inc
 9915 W 21st ST STE B
 Wichita KS, 67205
 ATTN: Jeff Lawler

19-11s-15w Russell KS
Thomas Unit # 1-19
 Job Ticket: 54051 **DST#: 3**
 Test Start: 2014.06.02 @ 13:36:00

GENERAL INFORMATION:

Formation: **LKC "I,J,K"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 15:39:30 Tester: Cody Bloedorn
 Time Test Ended: 20:40:30 Unit No: 73
 Interval: **3182.00 ft (KB) To 3265.00 ft (KB) (TVD)** Reference Elevations: 1792.00 ft (KB)
 Total Depth: 3265.00 ft (KB) (TVD) 1784.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

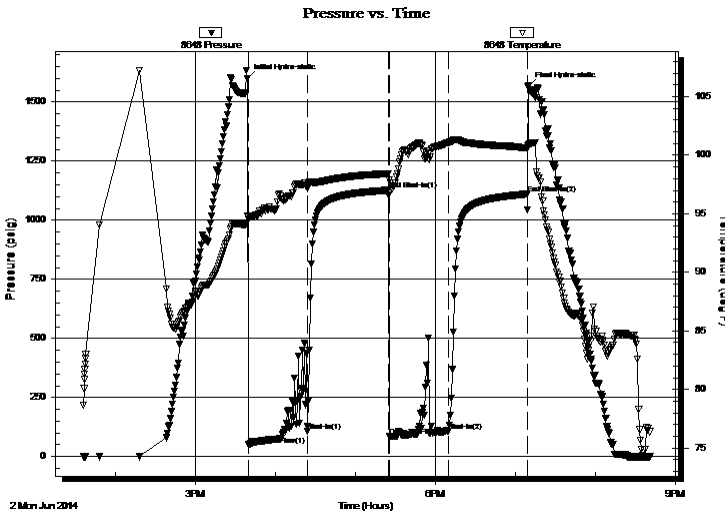
Serial #: 8648

Inside

Press @ Run Depth: 107.77 psig @ 3252.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.06.02 End Date: 2014.06.02 Last Calib.: 2014.06.02
 Start Time: 13:36:05 End Time: 20:40:29 Time On Btm: 2014.06.02 @ 15:39:00
 Time Off Btm: 2014.06.02 @ 19:09:15

TEST COMMENT: 45 - IF- 3" blow
 60 - IS- No return
 45 - FF- 3 1/2" blow
 60 - FS- No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1598.68	94.83	Initial Hydro-static
1	49.46	94.56	Open To Flow (1)
45	107.75	97.16	Shut-In(1)
106	1126.87	98.42	End Shut-In(1)
107	85.72	97.92	Open To Flow (2)
151	107.77	101.05	Shut-In(2)
210	1110.53	100.61	End Shut-In(2)
211	1565.47	100.82	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	Mud - oil spots, 100%M	1.47

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

IA Operating Inc

19-11s-15w Russell KS

9915 W 21st ST STE B
Wichita KS, 67205

Thomas Unit # 1-19

Job Ticket: 54051

DST#: 3

ATTN: Jeff Lawler

Test Start: 2014.06.02 @ 13:36:00

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: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
124.00	Mud - oil spots, 100%M	1.466

Total Length: 124.00 ft Total Volume: 1.466 bbl

Num Fluid Samples: 0

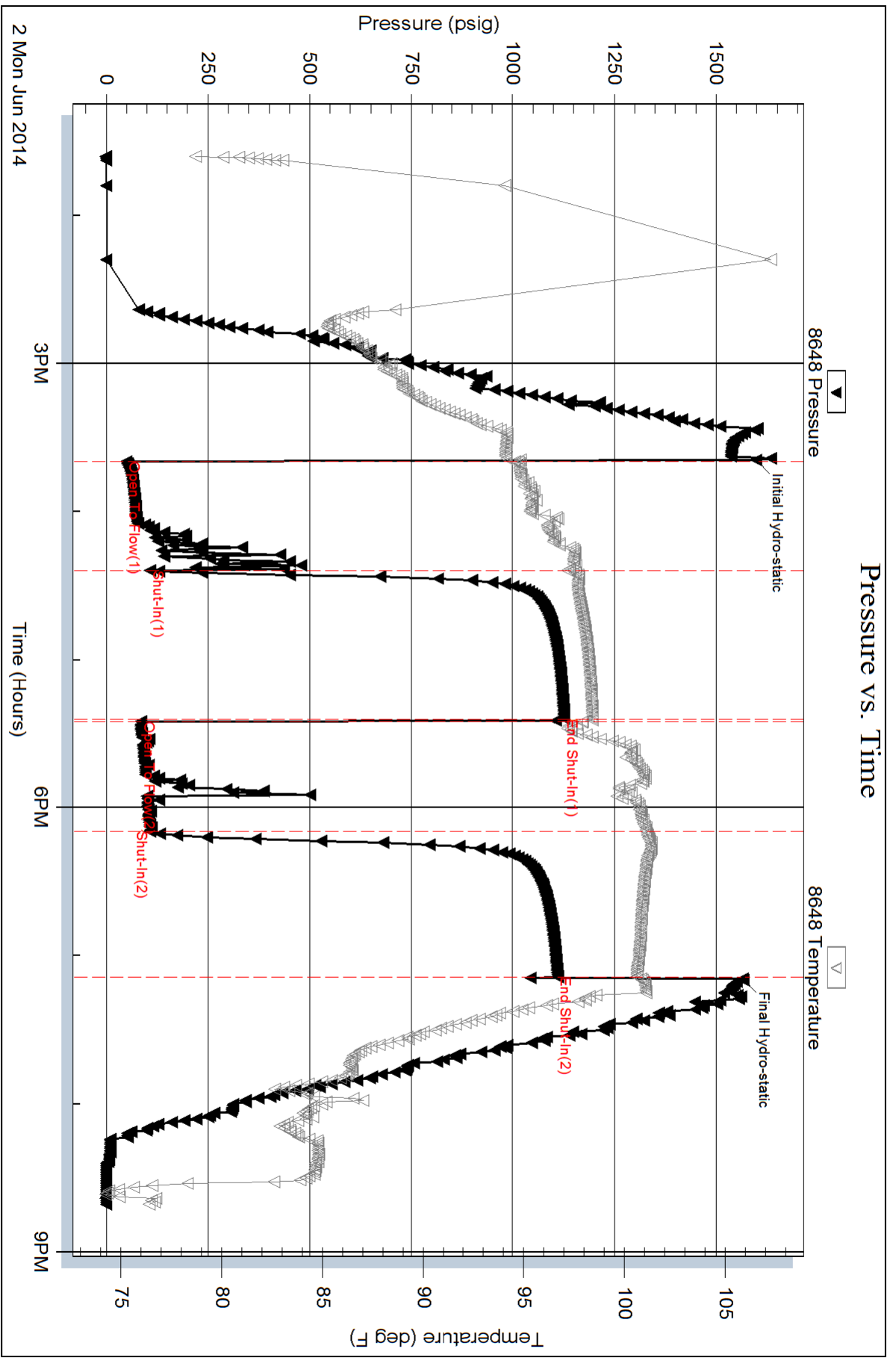
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

IA Operating Inc
 9915 W 21st ST STE B
 Wichita KS, 67205
 ATTN: Jeff Lawler

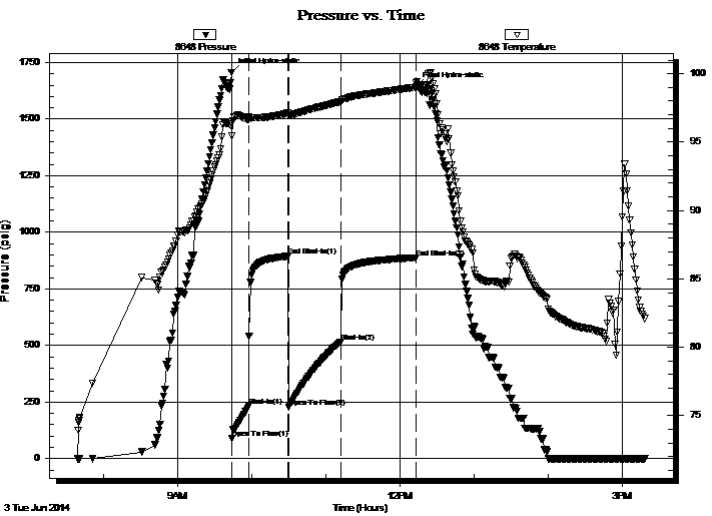
19-11s-15w Russell KS
Thomas Unit # 1-19
 Job Ticket: 54052 **DST#: 4**
 Test Start: 2014.06.03 @ 07:39:00

GENERAL INFORMATION:

Formation: **Cong. Sand**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 09:43:45
 Time Test Ended: 15:18:15
 Interval: **3354.00 ft (KB) To 3408.00 ft (KB) (TVD)**
 Total Depth: 3408.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Cody Bloedorn
 Unit No: 73
 Reference Elevations: 1792.00 ft (KB)
 1784.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8648 Inside
 Press@RunDepth: 516.43 psig @ 3393.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.06.03 End Date: 2014.06.03 Last Calib.: 2014.06.03
 Start Time: 07:39:05 End Time: 15:18:14 Time On Btm: 2014.06.03 @ 09:43:30
 Time Off Btm: 2014.06.03 @ 12:13:00

TEST COMMENT: 15 - IF- B.O.B. in 3 minutes
 30 - IS- 1/2" return
 45 - FF- B.O.B. in 2 Minutes
 60 - FS- 2" return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1706.12	96.37	Initial Hydro-static
1	88.17	95.43	Open To Flow (1)
14	230.64	96.64	Shut-In(1)
46	893.84	97.13	End Shut-In(1)
47	226.85	96.94	Open To Flow (2)
89	516.43	97.96	Shut-In(2)
150	887.59	99.03	End Shut-In(2)
150	1643.86	99.36	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
403.00	GW - show of oil on top, 5%G, 95%W	5.38
372.00	SOCWM, 10%O, 40%W, 50%M	5.22
310.00	GOCM, 20%G, 20%O, 60%M	4.35

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

IA Operating Inc

19-11s-15w Russell KS

9915 W 21st ST STE B
Wichita KS, 67205

Thomas Unit # 1-19

Job Ticket: 54052

DST#: 4

ATTN: Jeff Lawler

Test Start: 2014.06.03 @ 07:39:00

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:

53000 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
403.00	GW - show of oil on top, 5%G, 95%W	5.380
372.00	SOCWM, 10%O, 40%W, 50%M	5.218
310.00	GOCM, 20%G, 20%O, 60%M	4.348

Total Length: 1085.00 ft Total Volume: 14.946 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: .10 @ 97 Degrees = 53000

Pressure vs. Time

