

Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1348075  
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: \_\_\_\_\_

1348075

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  List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

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: <input type="checkbox"/> Yes <input type="checkbox"/> No
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Date of First, Resumed Production, SWD or ENHR.	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____
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Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	Grady Bolding Corporation
Well Name	MAULER 3
Doc ID	1348075

Tops

Name	Top	Datum
Heebner	Heebner	
Toronto	3132	
Douglas	3149	
Brown Lime	3207	
Lansing	3220	
Base Kansas City	3455	
Conglomerate	3465	
Conglomerate Sand	3521	



# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025  
Cell 785-324-1041

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

No. 3147

Date	2-21-17	Sec.	20	Twp.	19	Range	14	County	Barton	State	Ks	On Location		Finish	1:00 PM
								Location							
								Heizec - 35 1/4 W S4T10							

Lease	Mauler	Well No.	3	Owner	To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.
Contractor	Royal 1				
Type Job	Surface				
Hole Size	12 1/4"	T.D.	821'	Charge To	Grady Bolding Corporation
Csg.	8 5/8"	Depth	821'	Street	
Tbg. Size		Depth		City	State
Tool		Depth		The above was done to satisfaction and supervision of owner agent or contractor.	
Cement Left in Csg.	20'	Shoe Joint	20'	Cement Amount Ordered	<del>80</del> 80/20 3 1/2 CC 2 1/2 Gal
Meas Line		Displace	51 BLS	1/2# Flu-seal	400

**EQUIPMENT**

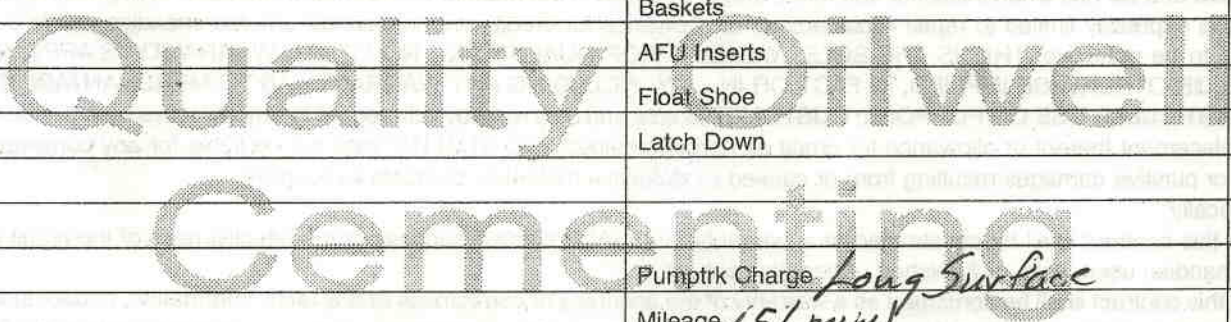
Pumptrk	20	No.	Cementer	Nick	Common	320
			Helper		Poz. Mix	80
Bulktrk	4	No.	Driver	Travis	Gel.	8
			Driver		Calcium	15
Bulktrk	pu	No.	Driver	Rick		
			Driver			

**JOB SERVICES & REMARKS**

Remarks:	Cement did Circulate	Hulls	
Rat Hole		Salt	
Mouse Hole		Flowseal	200#
Centralizers		Kol-Seal	
Baskets		Mud CLR 48	
D/V or Port Collar		CFL-117 or CD110 CAF 38	
		Sand	
		Handling	423
		Mileage	

**FLOAT EQUIPMENT**

Guide Shoe	Rubber plug
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	



Pumptrk Charge	Long Surface
Mileage	15 (min)

X Signature	Doug Budy	Tax	
		Discount	
		Total Charge	



# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025  
Cell 785-324-1041

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

No. **3150**  
2-27-17

Date	2-26-17	Sec.	20	Twp.	19	Range	14	County	Barton	State	KS	On Location		Finish	12:00 AM
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Location **Heizer - 35 to 20 Rd, 1/4 W, Skato**

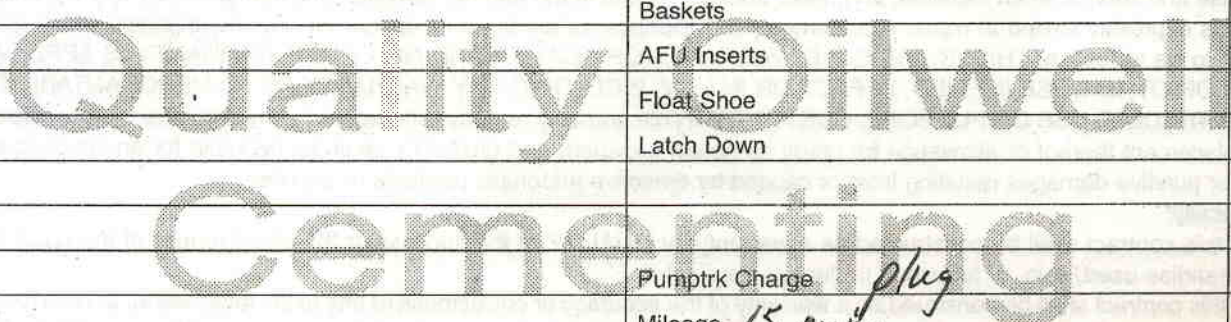
Lease	<b>Mawler</b>	Well No.	<b>3</b>	Owner	To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.
Contractor	<b>Royal 1</b>			Charge To	<b>Grady Bolding</b>
Type Job	<b>Plug</b>	T.D.	<b>3551'</b>	Street	
Hole Size	<b>7 7/8"</b>	Depth		City	State
Csg.		Depth	<b>833'</b>	The above was done to satisfaction and supervision of owner agent or contractor.	
Tbg. Size	<b>4 1/2" D.P.</b>	Shoe Joint		Cement Amount Ordered	<b>185 60/40 4% Gel 1/4#</b>
Tool					
Cement Left in Csg.					
Meas Line		Displace	<b>H2O</b>		

EQUIPMENT			
Pumptrk	<b>20</b>	No. Cementer Helper	<b>Nick</b>
Bulktrk	<b>3</b>	No. Driver	<b>Tim</b>
Bulktrk	<b>pu.</b>	No. Driver	<b>Rick</b>

JOB SERVICES & REMARKS	
Remarks:	<b>833' - 50 SX</b>
Rat Hole	<b>370' - 80 SX</b>
Mouse Hole	<b>40' - 10 SX w/ plug</b>
Centralizers	<b>Reathole w/ 30 SX</b>
Baskets	<b>Mousehole w/ 15 SX</b>
D/V or Port Collar	
	<b>Cement did Circulate</b>

FLOAT EQUIPMENT	
Guide Shoe	<b>Dry hole plug</b>
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	
Pumptrk Charge	<b>plug</b>
Mileage	<b>15 min</b>

Signature	<b>Greg Burt</b>	Tax	
		Discount	
		Total Charge	





## DRILL STEM TEST REPORT

Prepared For: **Grady Bolding Corp.**

PO Box 486  
Ellinwood, KS 67526+0486

ATTN: Jim C. Musgrove/ Lyl

### **Mauler #3**

### **S20-19S-14W Barton,KS**

Start Date: 2017.02.24 @ 18:57:00

End Date: 2017.02.25 @ 00:16:15

Job Ticket #: 63506                      DST #: 1

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

Printed: 2017.02.27 @ 13:15:51



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Grady Bolding Corp.

**S20-19S-14W Barton,KS**

PO Box 486  
Ellinwood, KS 67526+0486

**Mauler #3**

Job Ticket: 63506

**DST#: 1**

ATTN: Jim C. Musgrove/ Lyl

Test Start: 2017.02.24 @ 18:57:00

## GENERAL INFORMATION:

Formation: **LKC 'A'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:13:30

Time Test Ended: 00:16:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Spencer J. Staab

Unit No: 84

**Interval: 3210.00 ft (KB) To 3240.00 ft (KB) (TVD)**

Reference Elevations: 1891.00 ft (KB)

Total Depth: 3240.00 ft (KB) (TVD)

1883.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8934 Outside**

Press@RunDepth: 20.32 psig @ 3211.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.02.24 End Date: 2017.02.25

Last Calib.: 2017.02.25

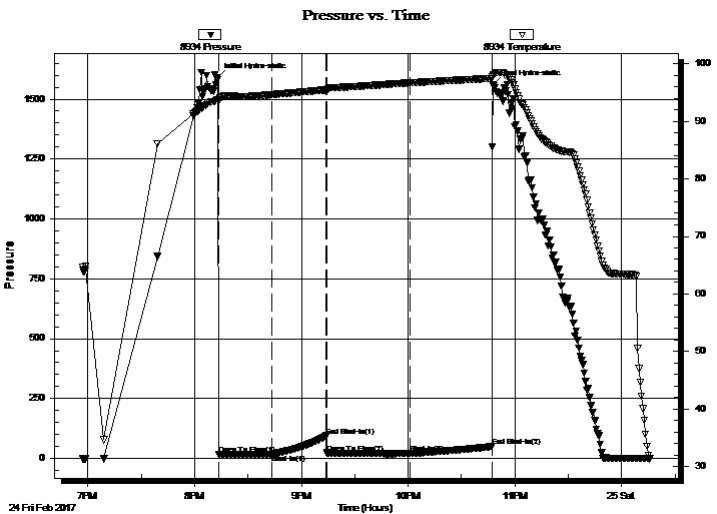
Start Time: 18:57:05 End Time: 00:16:14

Time On Btm: 2017.02.24 @ 20:13:00

Time Off Btm: 2017.02.24 @ 22:47:45

**TEST COMMENT:** 30-IF-Weak Blow ; Built from 1" to 2"  
30-ISI-No Blow Back  
45-FF-Very Weak Surface Blow  
45-FSI-No Blow Back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1591.50	93.74	Initial Hydro-static
1	15.45	93.51	Open To Flow (1)
31	17.94	94.60	Shut-In(1)
61	93.90	95.44	End Shut-In(1)
62	20.17	95.44	Open To Flow (2)
109	20.32	96.65	Shut-In(2)
154	49.15	97.41	End Shut-In(2)
155	1560.03	97.89	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
15.00	Mud w/oil specks 100% M	0.21

## Gas Rates

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







**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Grady Bolding Corp.

**S20-19S-14W Barton,KS**

PO Box 486  
Ellinwood, KS 67526+0486

**Mauler #3**

Job Ticket: 63506

**DST#: 1**

ATTN: Jim C. Musgrove/ Lyl

Test Start: 2017.02.24 @ 18:57:00

## Tool Information

Drill Pipe:	Length: 3200.00 ft	Diameter: 3.80 inches	Volume: 44.89 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	32000.00 lb
			<u>Total Volume: 44.89 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial	29000.00 lb
Depth to Top Packer:	3210.00 ft			Final	29000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	30.00 ft				
Tool Length:	50.00 ft				
Number of Packers:	1	Diameter: 6.75 inches			
Tool Comments:					

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3191.00	
Shut In Tool	5.00			3196.00	
Hydraulic tool	5.00			3201.00	
Packer	5.00			3206.00	20.00 Bottom Of Top Packer
Packer	4.00			3210.00	
Stubb	1.00			3211.00	
Recorder	0.00	9120	Inside	3211.00	
Recorder	0.00	8934	Outside	3211.00	
Perforations	25.00			3236.00	
Bullnose	4.00			3240.00	30.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>50.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Grady Bolding Corp.

**S20-19S-14W Barton,KS**

PO Box 486  
Ellinwood, KS 67526+0486

**Mauler #3**

Job Ticket: 63506

**DST#: 1**

ATTN: Jim C. Musgrove/ Lyl

Test Start: 2017.02.24 @ 18:57:00

## 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: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in<sup>3</sup>

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
15.00	Mud w /oil specks 100% M	0.210

Total Length: 15.00 ft      Total Volume: 0.210 bbl

Num Fluid Samples: 0

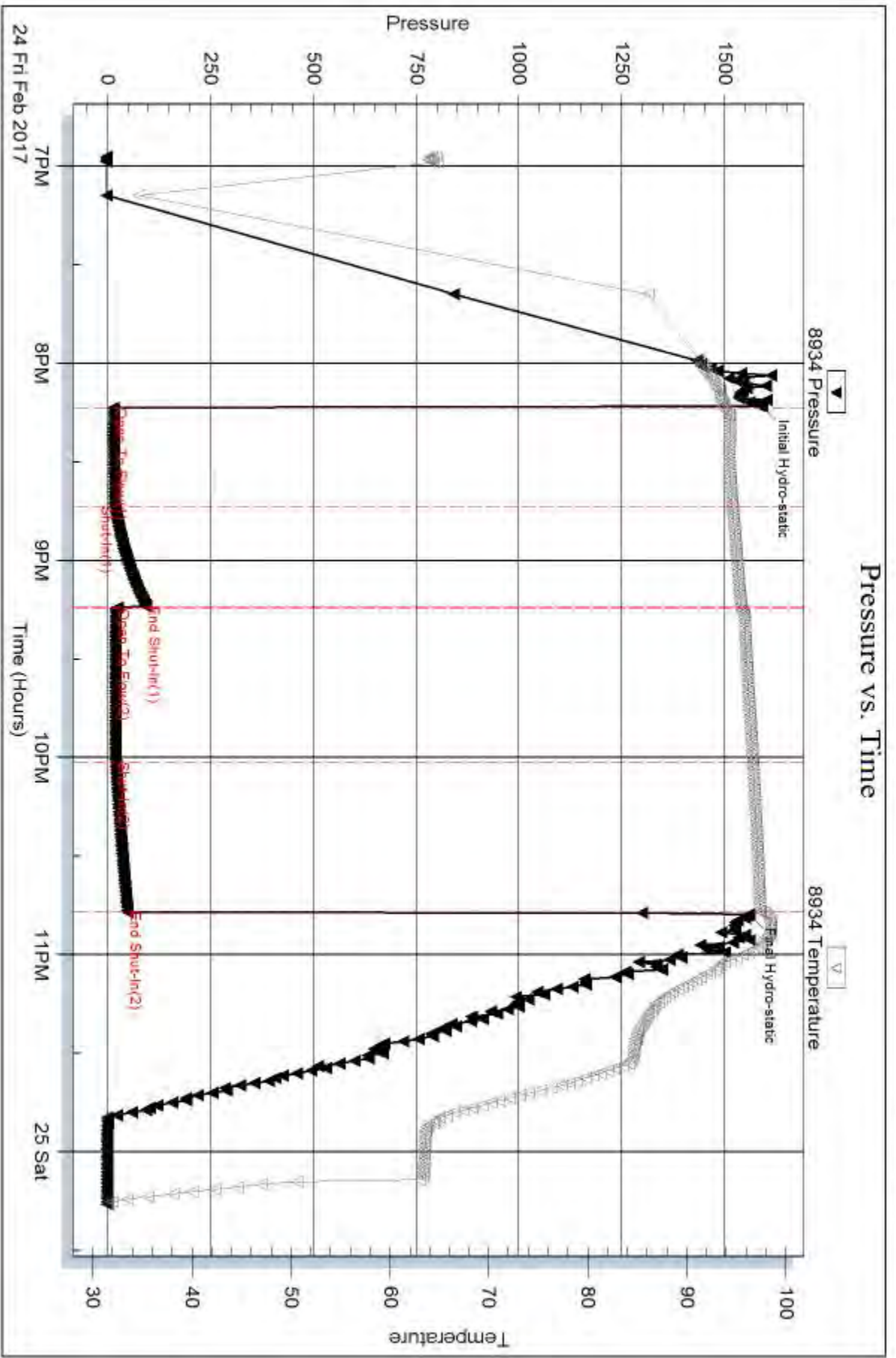
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



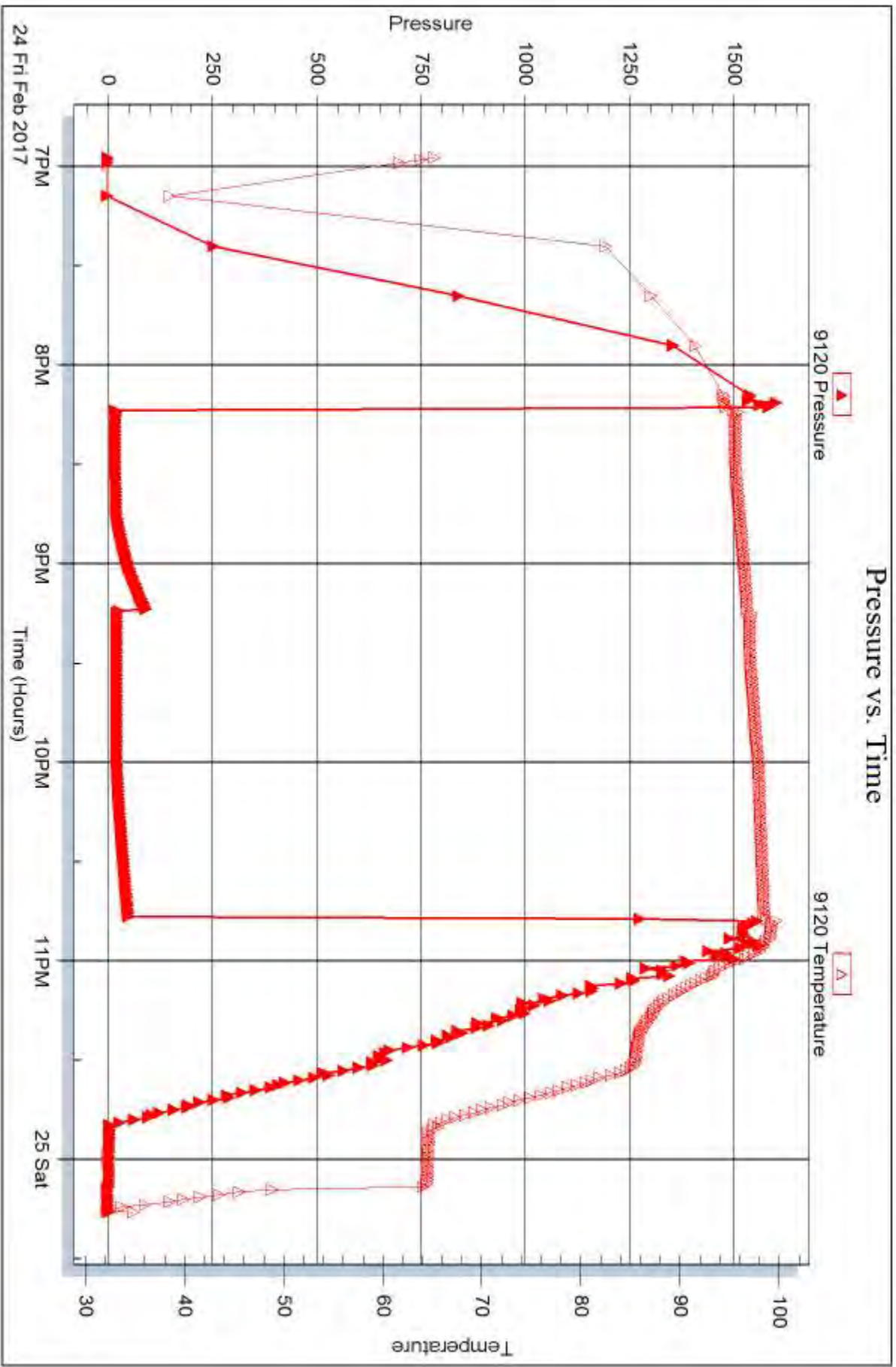
Serial #: 9120

Inside

Grady Bolding Corp.

Mauler #3

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 63506

Printed: 2017.02.27 @ 13:15:52





## DRILL STEM TEST REPORT

Prepared For: **Grady Bolding Corp.**

PO Box 486  
Ellinwood, KS 67526+0486

ATTN: Jim C. Musgrove/ Lyl

### **Mauler #3**

### **S20-19S-14W Barton,KS**

Start Date: 2017.02.25 @ 19:59:00

End Date: 2017.02.26 @ 01:04:30

Job Ticket #: 63507                      DST #: 2

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

Printed: 2017.02.27 @ 13:15:25



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Grady Bolding Corp.

**S20-19S-14W Barton,KS**

PO Box 486  
Ellinwood, KS 67526+0486

**Mauler #3**

Job Ticket: 63507

**DST#: 2**

ATTN: Jim C. Musgrove/ Lyl

Test Start: 2017.02.25 @ 19:59:00

## GENERAL INFORMATION:

Formation: **Lower LKC**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:21:15

Time Test Ended: 01:04:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J. Staab

Unit No: 84

**Interval: 3343.00 ft (KB) To 3452.00 ft (KB) (TVD)**

Reference Elevations: 1891.00 ft (KB)

Total Depth: 3452.00 ft (KB) (TVD)

1883.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8934**

**Inside**

Press@RunDepth: 20.14 psig @ 3352.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.02.25

End Date:

2017.02.26

Last Calib.:

2017.02.26

Start Time: 19:59:05

End Time:

01:04:29

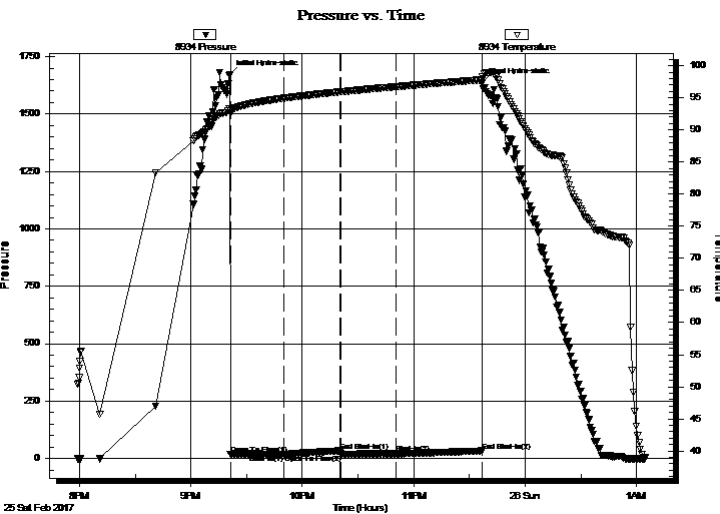
Time On Btm:

2017.02.25 @ 21:21:00

Time Off Btm:

2017.02.25 @ 23:36:45

**TEST COMMENT:** 30-IF-Weak Blow ; Built from a surface blow to 2"  
30-ISI-No Blow Back  
30-Very Weak Surface Blow  
45-No Blow Back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1671.59	93.36	Initial Hydro-static
1	18.59	92.54	Open To Flow (1)
30	18.05	94.96	Shut-In(1)
60	33.21	95.94	End Shut-In(1)
60	17.06	95.95	Open To Flow (2)
90	20.14	96.74	Shut-In(2)
136	32.51	97.81	End Shut-In(2)
136	1635.30	98.35	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud w/oil specks 100% M	0.07

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Grady Bolding Corp.

**S20-19S-14W Barton,KS**

PO Box 486  
Ellinwood, KS 67526+0486

**Mauler #3**

Job Ticket: 63507

**DST#: 2**

ATTN: Jim C. Musgrove/ Lyl

Test Start: 2017.02.25 @ 19:59:00

## Tool Information

Drill Pipe:	Length: 3327.00 ft	Diameter: 3.80 inches	Volume: 46.67 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 35000.00 lb
			<u>Total Volume: 46.67 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	4.00 ft			String Weight: Initial 34000.00 lb
Depth to Top Packer:	3343.00 ft			Final 34000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	109.00 ft			
Tool Length:	129.00 ft			
Number of Packers:	1	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3324.00	
Shut In Tool	5.00			3329.00	
Hydraulic tool	5.00			3334.00	
Packer	5.00			3339.00	20.00 Bottom Of Top Packer
Packer	4.00			3343.00	
Stubb	1.00			3344.00	
Perforations	7.00			3351.00	
Change Over Sub	1.00			3352.00	
Recorder	0.00	9120	Inside	3352.00	
Recorder	0.00	8934	Inside	3352.00	
Drill Pipe	95.00			3447.00	
Change Over Sub	1.00			3448.00	
Bullnose	4.00			3452.00	109.00 Bottom Packers & Anchor

**Total Tool Length: 129.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Grady Bolding Corp.

**S20-19S-14W Barton,KS**

PO Box 486  
Ellinwood, KS 67526+0486

**Mauler #3**

Job Ticket: 63507

**DST#: 2**

ATTN: Jim C. Musgrove/ Lyl

Test Start: 2017.02.25 @ 19:59:00

## 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:

bbbl

Water Loss: 9.19 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud w /oil specks 100% M	0.070

Total Length: 5.00 ft      Total Volume: 0.070 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

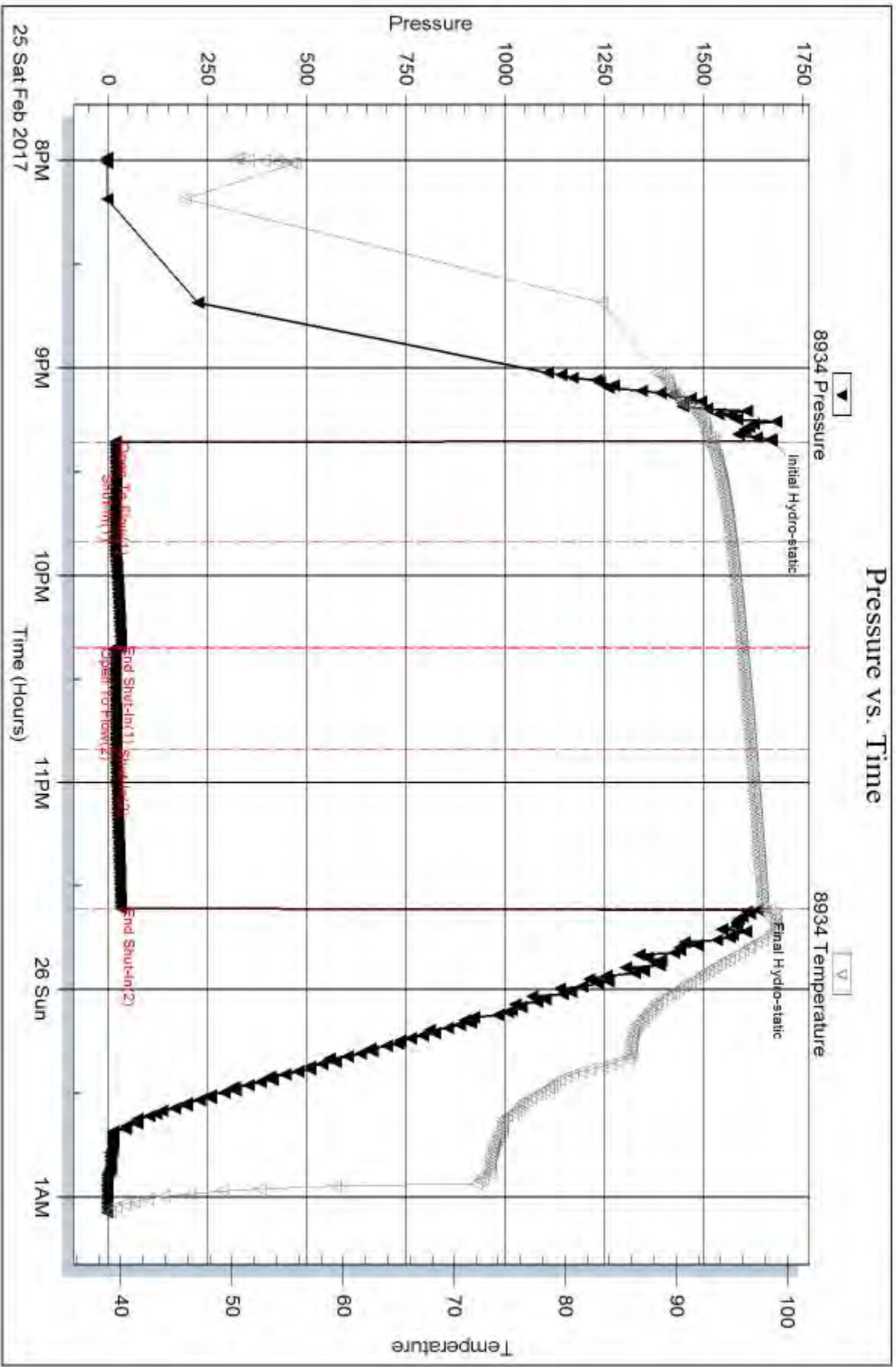
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





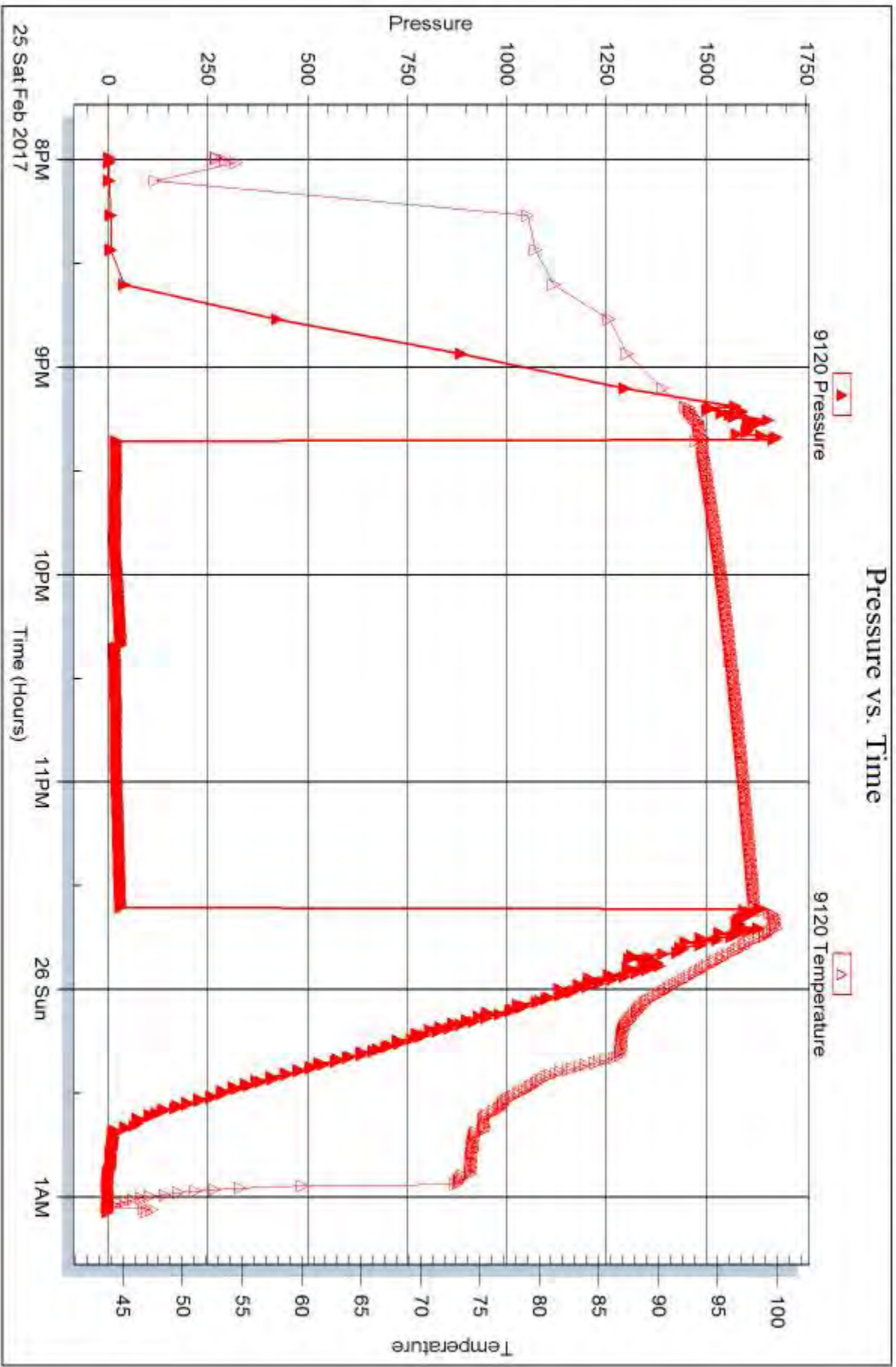
Serial #: 9120

Inside

Grady Bolding Corp.

Mauler #3

DST Test Number: 2





## DRILL STEM TEST REPORT

Prepared For: **Grady Bolding Corp.**

PO Box 486  
Ellinwood, KS 67526+0486

ATTN: Jim C. Musgrove/ Lyl

### **Mauler #3**

### **S20-19S-14W Barton,KS**

Start Date: 2017.02.24 @ 18:57:00

End Date: 2017.02.25 @ 00:16:15

Job Ticket #: 63506                      DST #: 1

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

Printed: 2017.02.27 @ 13:15:51



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Grady Bolding Corp.

**S20-19S-14W Barton,KS**

PO Box 486  
Ellinwood, KS 67526+0486

**Mauler #3**

Job Ticket: 63506

**DST#: 1**

ATTN: Jim C. Musgrove/ Lyl

Test Start: 2017.02.24 @ 18:57:00

## GENERAL INFORMATION:

Formation: **LKC 'A'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:13:30

Time Test Ended: 00:16:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Spencer J. Staab

Unit No: 84

**Interval: 3210.00 ft (KB) To 3240.00 ft (KB) (TVD)**

Reference Elevations: 1891.00 ft (KB)

Total Depth: 3240.00 ft (KB) (TVD)

1883.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8934 Outside**

Press@RunDepth: 20.32 psig @ 3211.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.02.24

End Date:

2017.02.25

Last Calib.:

2017.02.25

Start Time: 18:57:05

End Time:

00:16:14

Time On Btm:

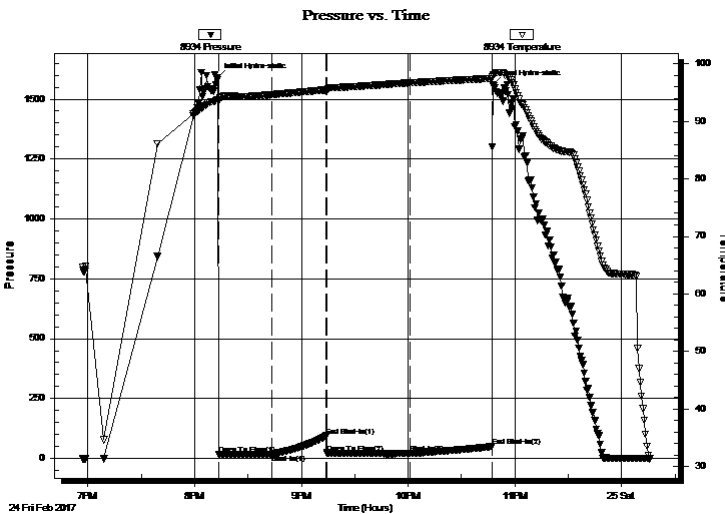
2017.02.24 @ 20:13:00

Time Off Btm:

2017.02.24 @ 22:47:45

**TEST COMMENT:** 30-IF-Weak Blow ; Built from 1" to 2"  
30-ISI-No Blow Back  
45-FF-Very Weak Surface Blow  
45-FSI-No Blow Back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1591.50	93.74	Initial Hydro-static
1	15.45	93.51	Open To Flow (1)
31	17.94	94.60	Shut-In(1)
61	93.90	95.44	End Shut-In(1)
62	20.17	95.44	Open To Flow (2)
109	20.32	96.65	Shut-In(2)
154	49.15	97.41	End Shut-In(2)
155	1560.03	97.89	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
15.00	Mud w/oil specks 100% M	0.21

## Gas Rates

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







**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Grady Bolding Corp.

**S20-19S-14W Barton,KS**

PO Box 486  
Ellinwood, KS 67526+0486

**Mauler #3**

Job Ticket: 63506

**DST#: 1**

ATTN: Jim C. Musgrove/ Lyl

Test Start: 2017.02.24 @ 18:57:00

## Tool Information

Drill Pipe:	Length: 3200.00 ft	Diameter: 3.80 inches	Volume: 44.89 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 32000.00 lb
			<u>Total Volume: 44.89 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 29000.00 lb
Depth to Top Packer:	3210.00 ft			Final 29000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 ft			
Tool Length:	50.00 ft			
Number of Packers:	1	Diameter: 6.75 inches		
Tool Comments:				

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3191.00	
Shut In Tool	5.00			3196.00	
Hydraulic tool	5.00			3201.00	
Packer	5.00			3206.00	20.00 Bottom Of Top Packer
Packer	4.00			3210.00	
Stubb	1.00			3211.00	
Recorder	0.00	9120	Inside	3211.00	
Recorder	0.00	8934	Outside	3211.00	
Perforations	25.00			3236.00	
Bullnose	4.00			3240.00	30.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>50.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Grady Bolding Corp.

**S20-19S-14W Barton,KS**

PO Box 486  
Ellinwood, KS 67526+0486

**Mauler #3**

Job Ticket: 63506

**DST#: 1**

ATTN: Jim C. Musgrove/ Lyl

Test Start: 2017.02.24 @ 18:57:00

## 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: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in<sup>3</sup>

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
15.00	Mud w /oil specks 100% M	0.210

Total Length: 15.00 ft      Total Volume: 0.210 bbl

Num Fluid Samples: 0

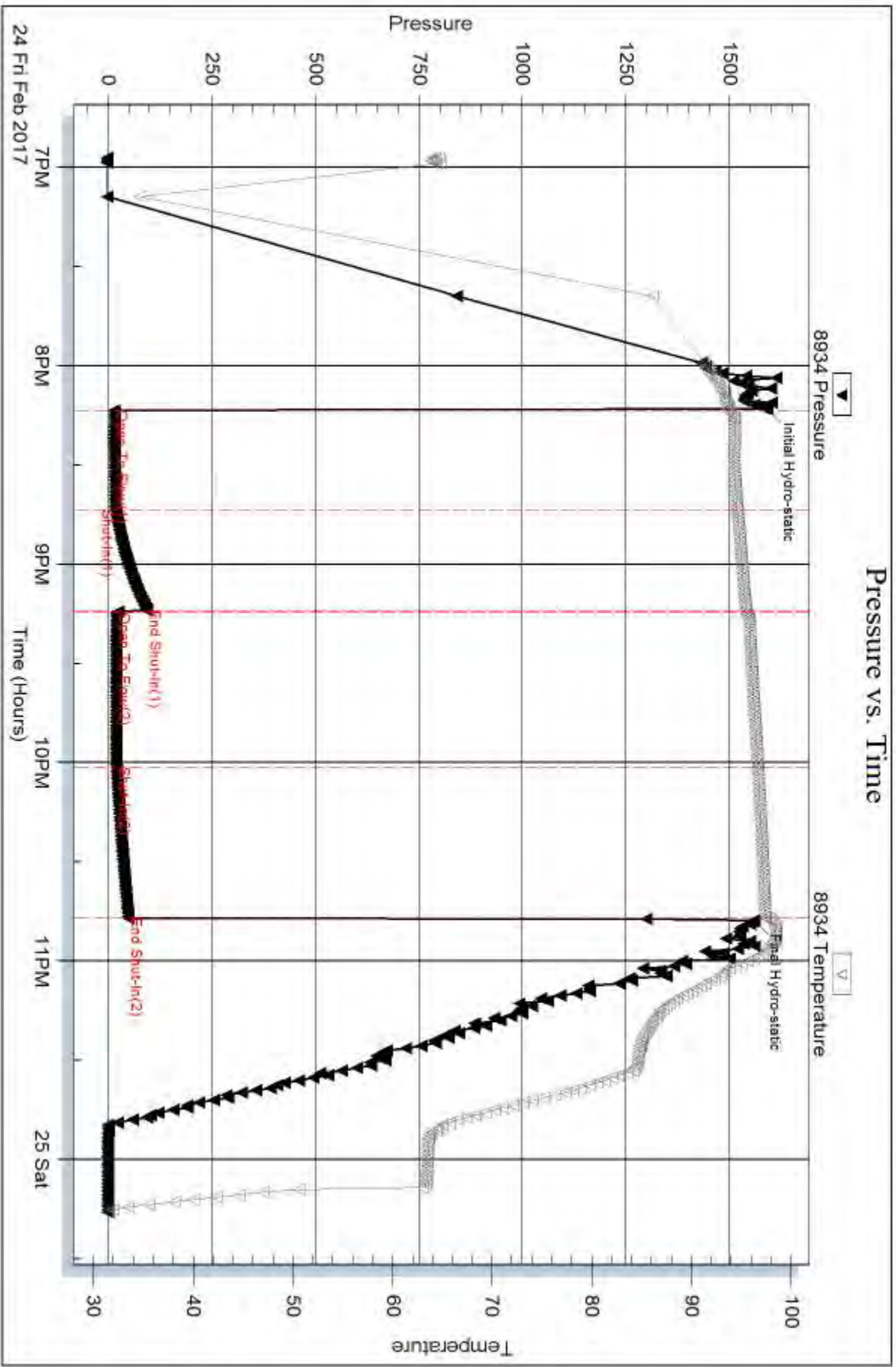
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



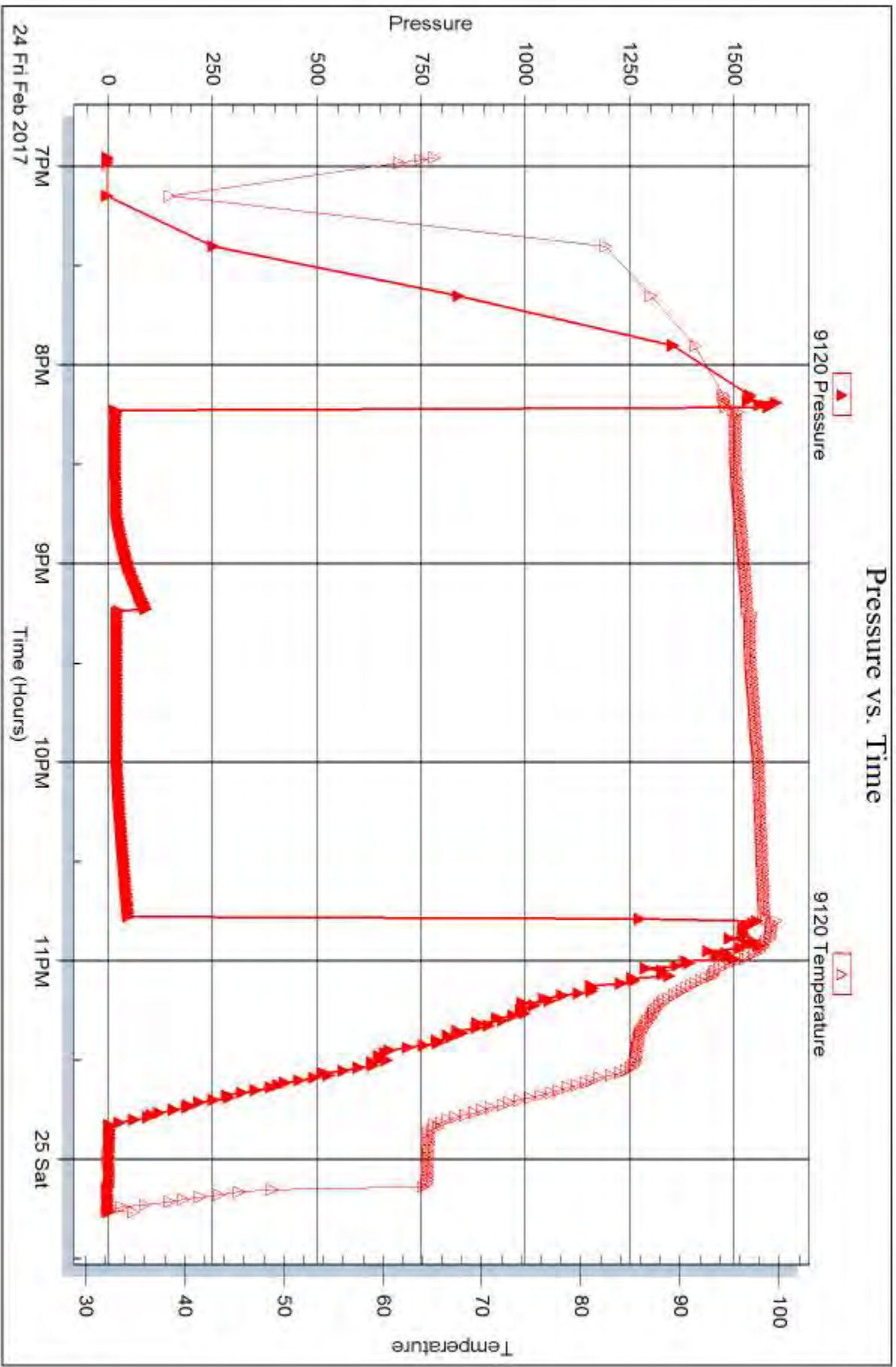
Serial #: 9120

Inside

Grady Bolding Corp.

Mauler #3

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 63506

Printed: 2017.02.27 @ 13:15:52



## DRILL STEM TEST REPORT

Prepared For: **Grady Bolding Corp.**

PO Box 486  
Ellinwood, KS 67526+0486

ATTN: Jim C. Musgrove/ Lyl

### **Mauler #3**

### **S20-19S-14W Barton,KS**

Start Date: 2017.02.25 @ 19:59:00

End Date: 2017.02.26 @ 01:04:30

Job Ticket #: 63507                      DST #: 2

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

Printed: 2017.02.27 @ 13:15:25



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Grady Bolding Corp.

**S20-19S-14W Barton,KS**

PO Box 486  
Ellinwood, KS 67526+0486

**Mauler #3**

Job Ticket: 63507

**DST#: 2**

ATTN: Jim C. Musgrove/ Lyl

Test Start: 2017.02.25 @ 19:59:00

## GENERAL INFORMATION:

Formation: **Lower LKC**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:21:15

Time Test Ended: 01:04:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J. Staab

Unit No: 84

**Interval: 3343.00 ft (KB) To 3452.00 ft (KB) (TVD)**

Reference Elevations: 1891.00 ft (KB)

Total Depth: 3452.00 ft (KB) (TVD)

1883.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8934**

**Inside**

Press@RunDepth: 20.14 psig @ 3352.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.02.25

End Date:

2017.02.26

Last Calib.:

2017.02.26

Start Time: 19:59:05

End Time:

01:04:29

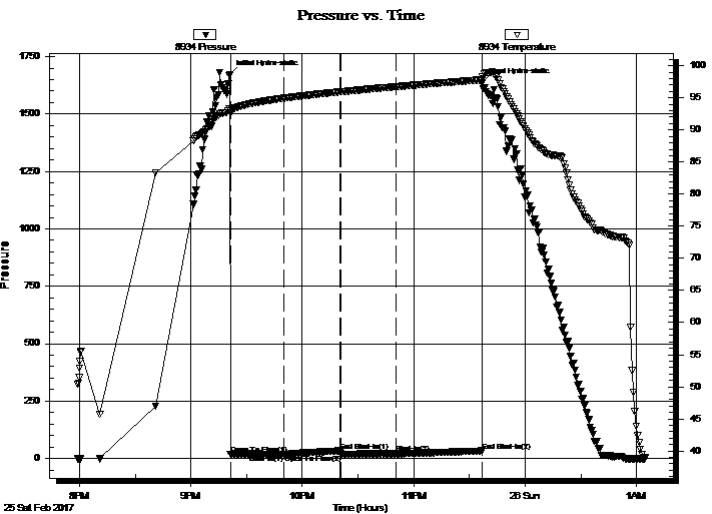
Time On Btm:

2017.02.25 @ 21:21:00

Time Off Btm:

2017.02.25 @ 23:36:45

**TEST COMMENT:** 30-IF-Weak Blow ; Built from a surface blow to 2"  
30-ISI-No Blow Back  
30-Very Weak Surface Blow  
45-No Blow Back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1671.59	93.36	Initial Hydro-static
1	18.59	92.54	Open To Flow (1)
30	18.05	94.96	Shut-In(1)
60	33.21	95.94	End Shut-In(1)
60	17.06	95.95	Open To Flow (2)
90	20.14	96.74	Shut-In(2)
136	32.51	97.81	End Shut-In(2)
136	1635.30	98.35	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud w/oil specks 100% M	0.07

\* Recovery from multiple tests

## Gas Rates

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







**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Grady Bolding Corp.

**S20-19S-14W Barton,KS**

PO Box 486  
Ellinwood, KS 67526+0486

**Mauler #3**

Job Ticket: 63507

**DST#: 2**

ATTN: Jim C. Musgrove/ Lyl

Test Start: 2017.02.25 @ 19:59:00

## Tool Information

Drill Pipe:	Length: 3327.00 ft	Diameter: 3.80 inches	Volume: 46.67 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	35000.00 lb
			<u>Total Volume: 46.67 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	4.00 ft			String Weight: Initial	34000.00 lb
Depth to Top Packer:	3343.00 ft			Final	34000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	109.00 ft				
Tool Length:	129.00 ft				
Number of Packers:	1	Diameter: 6.75 inches			

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3324.00	
Shut In Tool	5.00			3329.00	
Hydraulic tool	5.00			3334.00	
Packer	5.00			3339.00	20.00 Bottom Of Top Packer
Packer	4.00			3343.00	
Stubb	1.00			3344.00	
Perforations	7.00			3351.00	
Change Over Sub	1.00			3352.00	
Recorder	0.00	9120	Inside	3352.00	
Recorder	0.00	8934	Inside	3352.00	
Drill Pipe	95.00			3447.00	
Change Over Sub	1.00			3448.00	
Bullnose	4.00			3452.00	109.00 Bottom Packers & Anchor

**Total Tool Length: 129.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Grady Bolding Corp.

**S20-19S-14W Barton,KS**

PO Box 486  
Ellinwood, KS 67526+0486

**Mauler #3**

Job Ticket: 63507

**DST#: 2**

ATTN: Jim C. Musgrove/ Lyl

Test Start: 2017.02.25 @ 19:59:00

## 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:

bbbl

Water Loss: 9.19 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud w/oil specks 100% M	0.070

Total Length: 5.00 ft      Total Volume: 0.070 bbl

Num Fluid Samples: 0

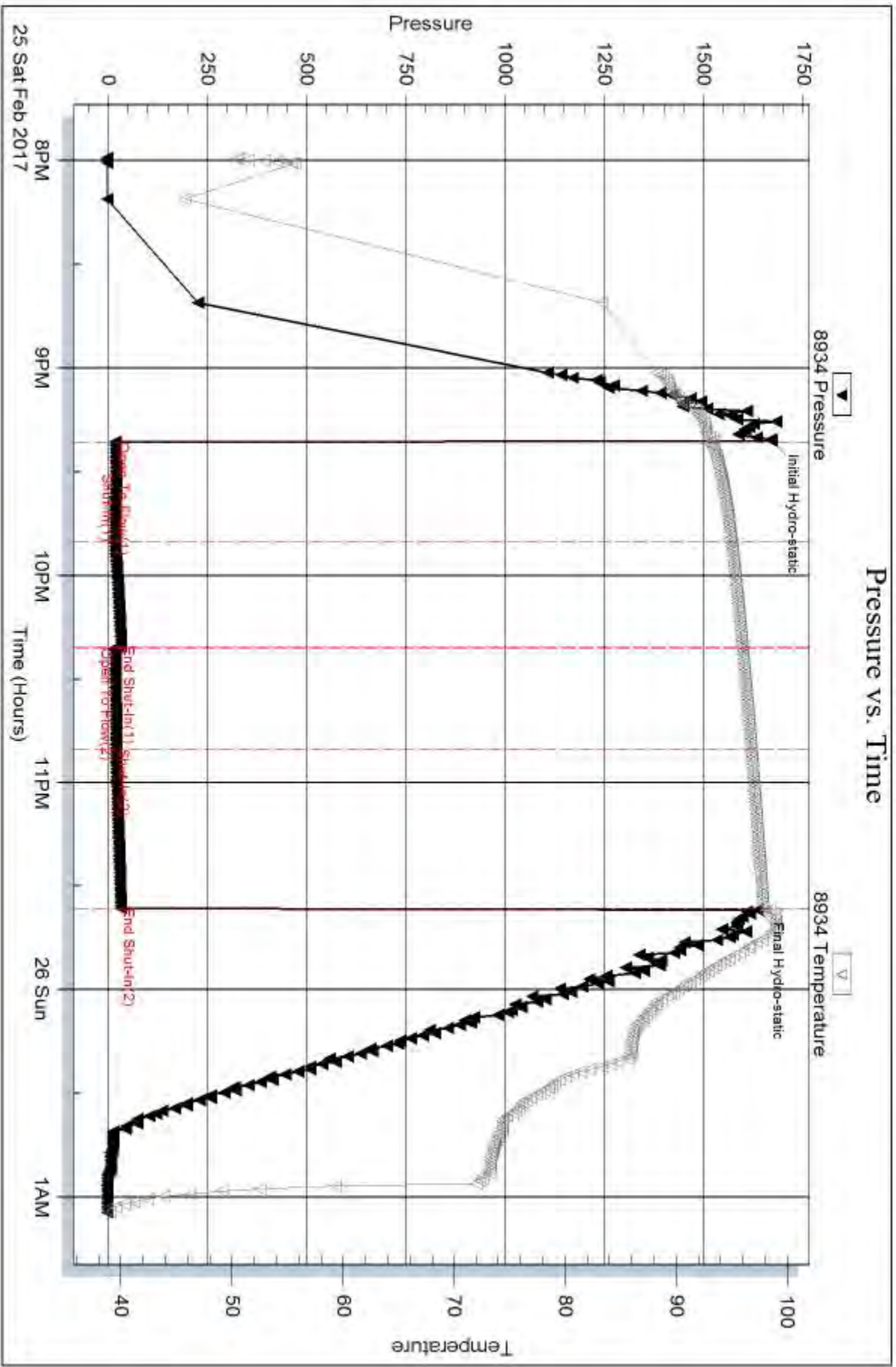
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



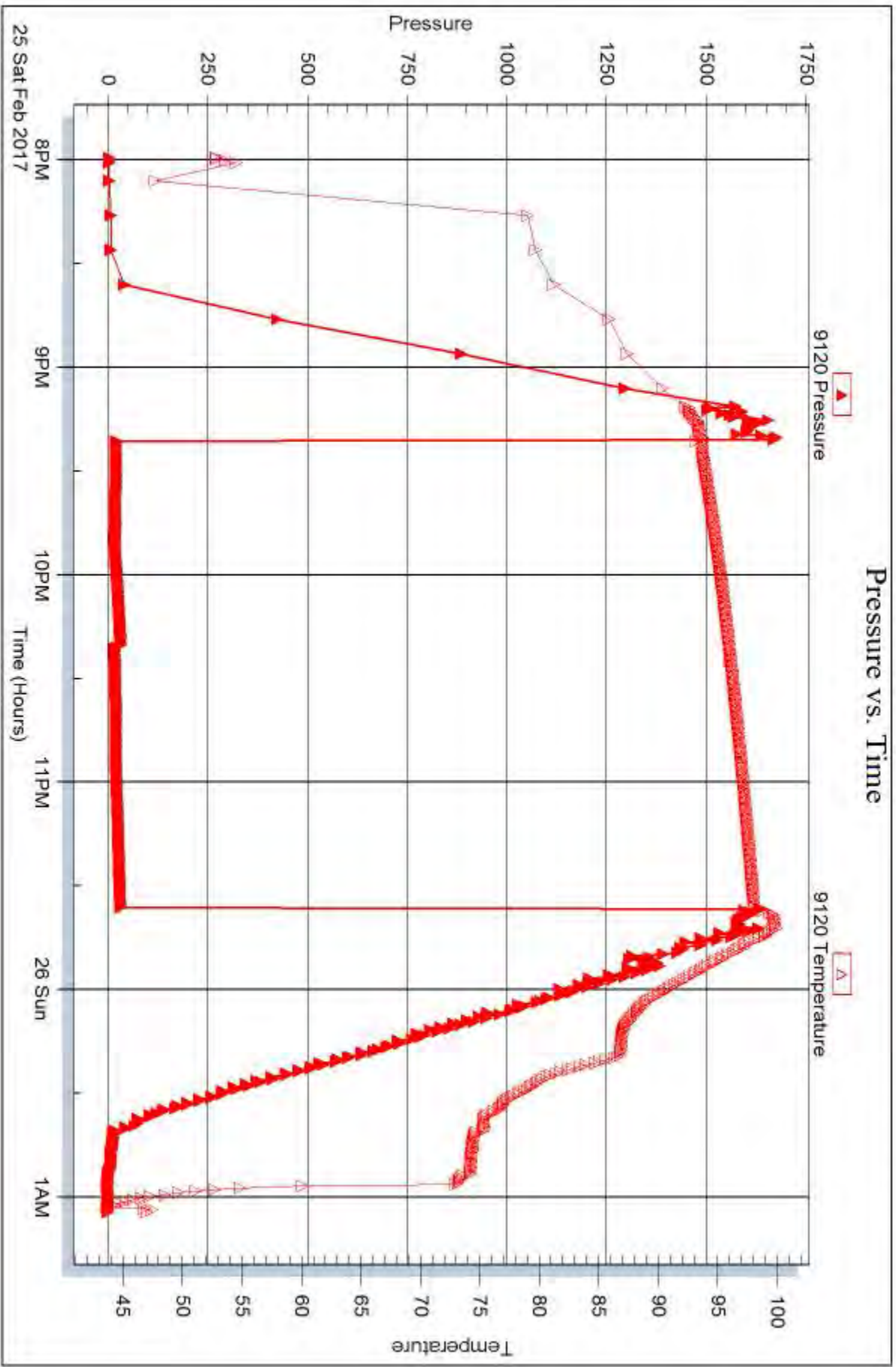
Serial #: 9120

Inside

Grady Bolding Corp.

Mauler #3

DST Test Number: 2



Tribble Testing, Inc

Ref. No: 63507

Printed: 2017.02.27 @ 13:15:26



## DRILL STEM TEST REPORT

Prepared For: **Grady Bolding Corp.**

PO Box 486  
Ellinwood, KS 67526+0486

ATTN: Jim C. Musgrove/ Lyl

### **Mauler #3**

### **S20-19S-14W Barton,KS**

Start Date: 2017.02.26 @ 12:08:00

End Date: 2017.02.26 @ 18:00:30

Job Ticket #: 63508                      DST #: 3

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

Printed: 2017.02.27 @ 13:14:36

Grady Bolding Corp. S20-19S-14W Barton,KS Mauler #3 DST # 3 Conglomerate 2017.02.26



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Grady Bolding Corp.

**S20-19S-14W Barton,KS**

PO Box 486  
Ellinwood, KS 67526+0486

**Mauler #3**

Job Ticket: 63508

**DST#: 3**

ATTN: Jim C. Musgrove/ Lyl

Test Start: 2017.02.26 @ 12:08:00

## GENERAL INFORMATION:

Formation: **Conglomerate**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:42:30

Time Test Ended: 18:00:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J. Staab

Unit No: 84

**Interval: 3440.00 ft (KB) To 3551.00 ft (KB) (TVD)**

Reference Elevations: 1891.00 ft (KB)

Total Depth: 3551.00 ft (KB) (TVD)

1883.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8934**

**Inside**

Press@RunDepth: 140.11 psig @ 3451.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.02.26

End Date:

2017.02.26

Last Calib.:

2017.02.26

Start Time: 12:08:05

End Time:

18:00:29

Time On Btm:

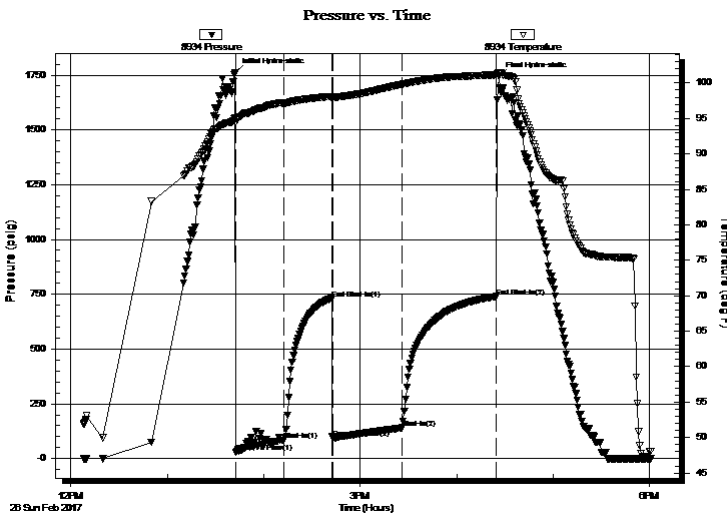
2017.02.26 @ 13:42:15

Time Off Btm:

2017.02.26 @ 16:26:00

**TEST COMMENT:** 30-IF-BOB in 23 minutes  
30-ISI-Very Weak Surface Blow Back; few bubbles  
45-FF-BOB in 31 minutes  
60-FSI-No Blow Back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1762.13	95.09	Initial Hydro-static
1	27.62	94.50	Open To Flow (1)
31	84.87	97.10	Shut-In(1)
60	727.26	98.11	End Shut-In(1)
61	94.15	97.97	Open To Flow (2)
104	140.11	99.81	Shut-In(2)
163	739.01	101.16	End Shut-In(2)
164	1745.22	101.46	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	SOCM 2%O 98%M	0.14
120.00	SWGCM 1% W 2% G 97%M	1.68
120.00	SGWCM 5%G 8%W 87%M	1.68

## Gas Rates

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

\* Recovery from multiple tests







**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Grady Bolding Corp.

**S20-19S-14W Barton,KS**

PO Box 486  
Ellinwood, KS 67526+0486

**Mauler #3**

Job Ticket: 63508

**DST#: 3**

ATTN: Jim C. Musgrove/ Lyl

Test Start: 2017.02.26 @ 12:08:00

## Tool Information

Drill Pipe:	Length: 3423.00 ft	Diameter: 3.80 inches	Volume: 48.02 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	36000.00 lb
			<u>Total Volume: 48.02 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	3.00 ft			String Weight: Initial	35000.00 lb
Depth to Top Packer:	3440.00 ft			Final	36000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	111.00 ft				
Tool Length:	131.00 ft				
Number of Packers:	1	Diameter: 6.75 inches			

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3421.00	
Shut In Tool	5.00			3426.00	
Hydraulic tool	5.00			3431.00	
Packer	5.00			3436.00	20.00 Bottom Of Top Packer
Packer	4.00			3440.00	
Stubb	1.00			3441.00	
Perforations	9.00			3450.00	
Change Over Sub	1.00			3451.00	
Recorder	0.00	9120	Inside	3451.00	
Recorder	0.00	8934	Inside	3451.00	
Drill Pipe	95.00			3546.00	
Change Over Sub	1.00			3547.00	
Bullnose	4.00			3551.00	111.00 Bottom Packers & Anchor

**Total Tool Length: 131.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Grady Bolding Corp.

**S20-19S-14W Barton,KS**

PO Box 486  
Ellinwood, KS 67526+0486

**Mauler #3**

Job Ticket: 63508

**DST#: 3**

ATTN: Jim C. Musgrove/ Lyl

Test Start: 2017.02.26 @ 12:08:00

## 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: 26000 ppm

Viscosity: 58.00 sec/qt

Cushion Volume: bbl

Water Loss: 9.59 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 7000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	SOCM 2%O 98%M	0.140
120.00	SWGCM 1% W 2% G 97%M	1.683
120.00	SGWCM 5%G 8%W 87%M	1.683

Total Length: 250.00 ft      Total Volume: 3.506 bbl

Num Fluid Samples: 0

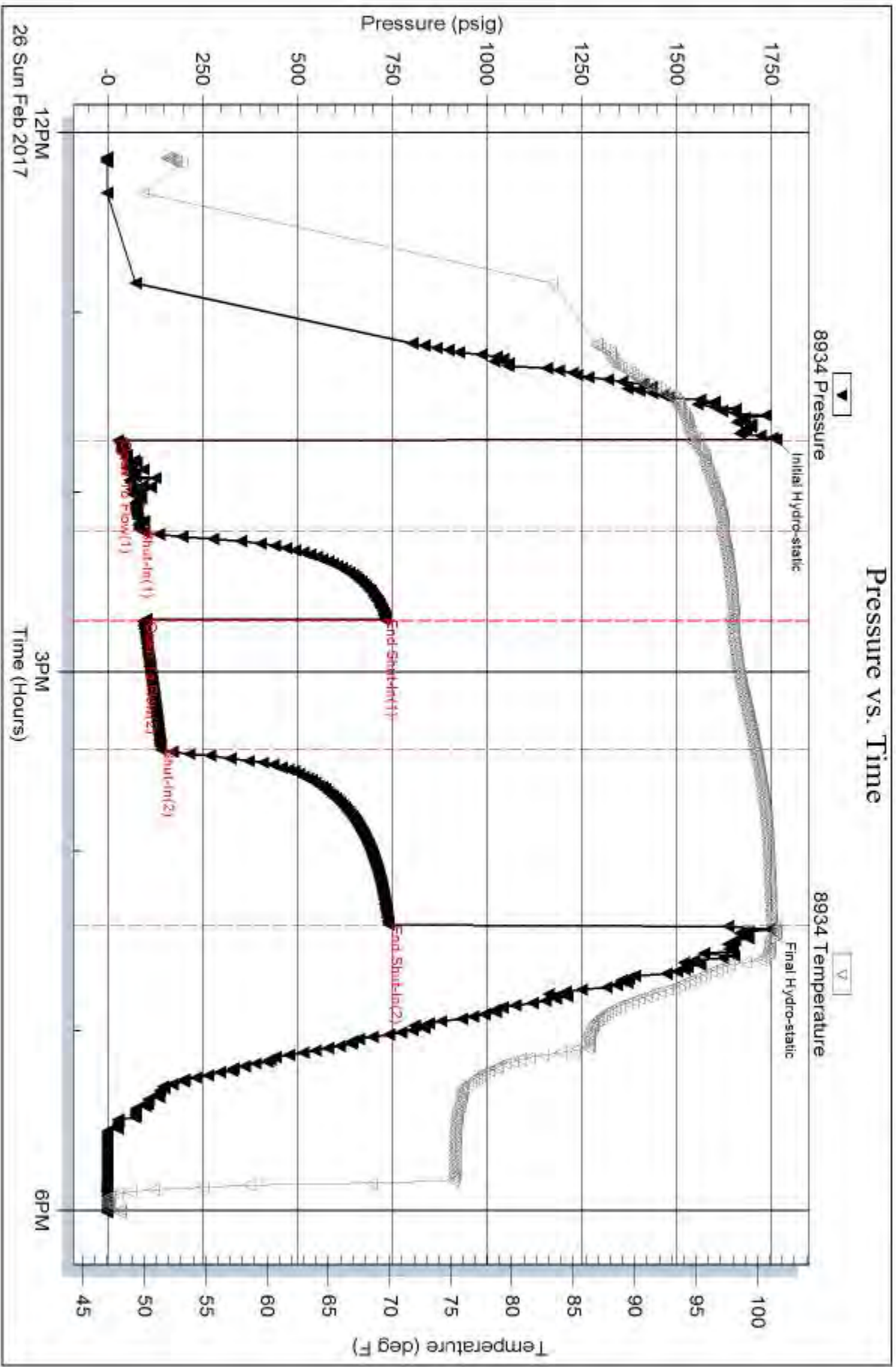
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



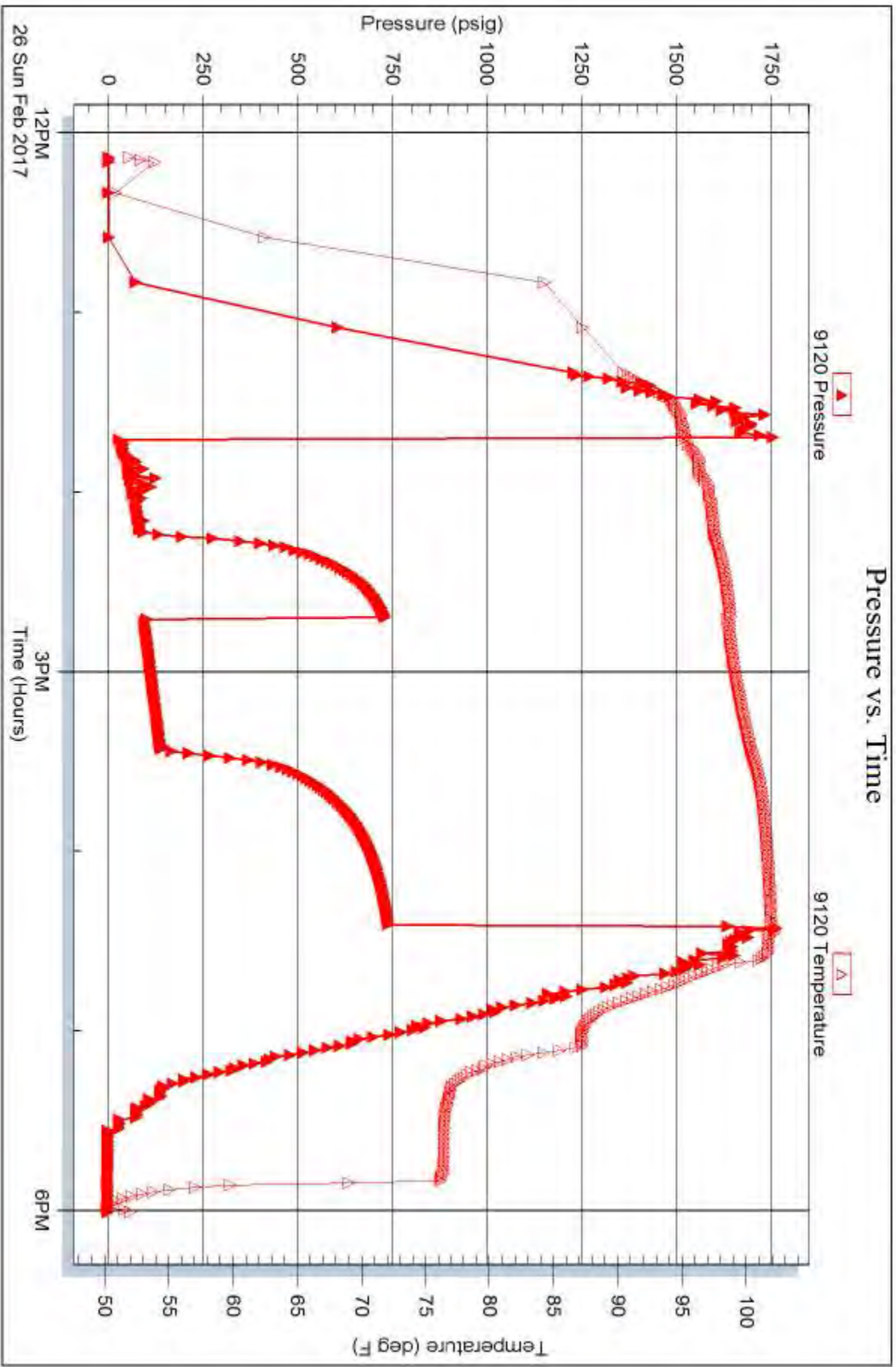
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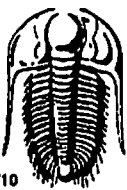
Inside

Grady Bolding Corp.

Mauler #3

DST Test Number: 3





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 63506

Well Name & No. Mauler # 3 Test No. 1 Date 2/24/2017  
 Company Grady Bolding Corporation Elevation 1898 KB 1898 GL  
 Address 114 North Main, P.O. BOX 486 Ellinwood Ks 67526+0486  
 Co. Rep / Geo. Jim C. Musgrave / Lyle L. Gunn Rig Royal Drilling Corp Rig #1  
 Location: Sec. 20 Twp. 19S Rge. 14W Co. Barton State KS

Interval Tested 3210' - 3240' Zone Tested LKC 'a' zone  
 Anchor Length 30' Drill Pipe Run 3200' Mud Wt. 8.95  
 Top Packer Depth 3205' Drill Collars Run - Vis 58  
 Bottom Packer Depth 3210' Wt. Pipe Run - WL 8.0  
 Total Depth 3240' Chlorides 5,500 ppm System LCM 1/2#

Blow Description 17- Very Weak Blow; Built from 1 inch to 2 inches  
1SD- No Blow Back  
77- Very Weak Surface Blow  
7SD- No Blow Back

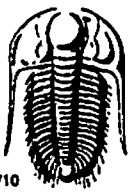
Rec	Feet of	%gas	%oil	%water	%mud
<u>15'</u>	<u>Mud w/oil specks</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 15' BHT 98° Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic <u>1591</u>	<input checked="" type="checkbox"/> Test <u>1050</u>	T-On Location <u>17:45</u>
(B) First Initial Flow <u>15</u>	<input type="checkbox"/> Jars	T-Started <u>18:57</u>
(C) First Final Flow <u>17</u>	<input type="checkbox"/> Safety Joint	T-Open <u>20:11</u>
(D) Initial Shut-In <u>93</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>23:45</u>
(E) Second Initial Flow <u>20</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>00:14 2/25/2017</u>
(F) Second Final Flow <u>20</u>	<input checked="" type="checkbox"/> Mileage <u>11627</u> 12	Comments
(G) Final Shut-In <u>49</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1560</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>45</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>45</u>	<input type="checkbox"/> Day Standby	Total <u>1062</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1062</u>	

Approved By \_\_\_\_\_ Our Representative Spencer J. Jacob Thank-you!  
 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.

785-259-0056



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 63507

Well Name & No. Mauler # 3 Test No. 2 Date 2/25/2017  
 Company Grady Bolding Corporation Elevation 1894 KB 1883 GL  
 Address 114 North Main P.O. BOX 486 Ellinwood Mo 67526+0486  
 Co. Rep / Geo. Jim C Musgrove / Lyle L. Gunn Rig Royal Drilling Corp. Rig # 1  
 Location: Sec. 20 Twp. 19s Rge. 14w Co. Barton State Mo

Interval Tested 3343' - 3452' Zone Tested Lower LHC zones  
 Anchor Length 109' Drill Pipe Run 3327' Mud Wt. 9.2  
 Top Packer Depth 3338' Drill Collars Run - Vis 50  
 Bottom Packer Depth 3343' Wt. Pipe Run - WL 9.2  
 Total Depth 3452' Chlorides 7,000 ppm System LCM Trace

Blow Description 17- Weak Blow; Built from a surface blow to 2 inches  
150- No Blow Back  
77- Very Weak Surface Blow  
750- No Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>5'</u>	<u>Mud w/ oil specks</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5' BHT 98° Gravity - API RW - @ - °F Chlorides - ppm

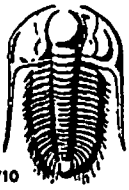
(A) Initial Hydrostatic <u>1671</u>	<input checked="" type="checkbox"/> Test <u>1050</u>	T-On Location <u>19:25</u>
(B) First Initial Flow <u>18</u>	<input type="checkbox"/> Jars	T-Started <u>19:59</u>
(C) First Final Flow <u>18</u>	<input type="checkbox"/> Safety Joint	T-Open <u>21:20</u>
(D) Initial Shut-In <u>33</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>23:35</u>
(E) Second Initial Flow <u>17</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>01:03 2/26/2017</u>
(F) Second Final Flow <u>20</u>	<input checked="" type="checkbox"/> Mileage <u>116 R7 12</u>	Comments
(G) Final Shut-In <u>32</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1635</u>	<input type="checkbox"/> Straddle	

Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<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>45</u>	<input type="checkbox"/> Day Standby	Sub Total <u>0</u>
	<input type="checkbox"/> Accessibility	Total <u>1062</u>
	Sub Total <u>1062</u>	MP/DST Disc't

Approved By \_\_\_\_\_ Our Representative Spencer J. Stahl Thanks

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 63508

Well Name & No. Mauler #3 Test No. 3 Date 2/26/2017  
 Company Grady Bolding Corporation Elevation 1891 KB 1883 GL  
 Address 114 North Main P.O. BOX 486 Ellinwood KS 67526-0486  
 Co. Rep / Geo. Jim C. Musgrove / Lyle L. Gunn Rig Royal Drilling Corp. Rig #1  
 Location: Sec. 20 Twp. 19s Rge. 14w Co. Barton State KS

Interval Tested 3440' - 3551' Zone Tested Conglomerate  
 Anchor Length 111' Drill Pipe Run 3423' Mud Wt. 9.4  
 Top Packer Depth 3435' Drill Collars Run — Vis 58  
 Bottom Packer Depth 3440' Wt. Pipe Run — WL 9.6  
 Total Depth 3551' Chlorides 7,000 ppm System LCM Trace

Blow Description 17- BOB in 23 minutes  
1SD- Very Weak surface blow back; few bubbles  
77- BOB in 31 minutes  
7SD- No Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>10'</u>	<u>SOCM</u>	<u>2</u>	<u>—</u>	<u>98</u>	<u>—</u>
<u>120'</u>	<u>SWGCM</u>	<u>2</u>	<u>1</u>	<u>97</u>	<u>—</u>
<u>120'</u>	<u>SGWCM</u>	<u>5</u>	<u>8</u>	<u>87</u>	<u>—</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 260' BHT 101° Gravity — API RW 365 @ 51° F Chlorides 26,000 ppm

(A) Initial Hydrostatic 1762  Test 1050 T-On Location 11:15  
 (B) First Initial Flow 27  Jars \_\_\_\_\_ T-Started 12:08  
 (C) First Final Flow 84  Safety Joint \_\_\_\_\_ T-Open 13:41  
 (D) Initial Shut-In 727  Circ Sub \_\_\_\_\_ T-Pulled 16:25  
 (E) Second Initial Flow 94  Hourly Standby \_\_\_\_\_ T-Out 17:58  
 (F) Second Final Flow 140  Mileage 416 RT 12 \_\_\_\_\_  
 (G) Final Shut-In 739  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1745  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_

Initial Open 30  
 Initial Shut-In 30  
 Final Flow 45  
 Final Shut-In 60

Sub Total 1062

Comments \_\_\_\_\_  
 Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Sub Total 0  
 Total 1062  
 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative James J. Swab Thank-you!!

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