



DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc**

8100 E 22nd St. N #700
Box 783188
Wichita, KS 67278

ATTN: John Goldsmith

Blau - Schroeder #1

16-15s-36w Logan,KS

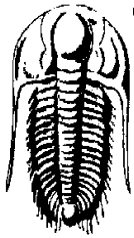
Start Date: 2017.08.29 @ 19:53:00

End Date: 2017.08.30 @ 01:59:30

Job Ticket #: 63348 DST #: 1

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

Printed: 2017.09.05 @ 08:57:20



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ritchie Exploration, Inc
8100 E 22nd St. N #700
Box 783188
Wichita, KS 67278
ATTN: John Goldsmith

16-15s-36w Logan, KS

Blau - Schroeder #1

Job Ticket: 63348 **DST#: 1**
Test Start: 2017.08.29 @ 19:53:00

GENERAL INFORMATION:

Formation: **Toronto**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 21:32:15
Time Test Ended: 01:59:30
Interval: **4054.00 ft (KB) To 4094.00 ft (KB) (TVD)**
Total Depth: 4094.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Reference Elevations: 3344.00 ft (KB)
3339.00 ft (CF)
KB to GR/CF: 5.00 ft
Test Type: Conventional Bottom Hole (Initial)
Tester: James Winder
Unit No: 83

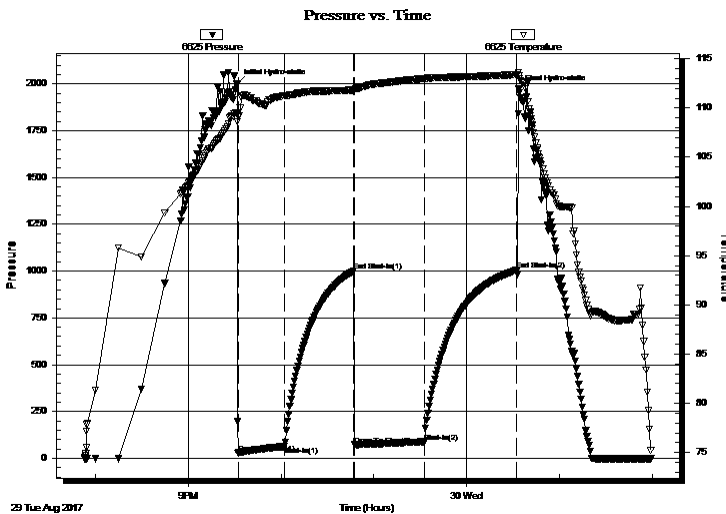
Serial #: 6625

Inside

Press@RunDepth: 88.22 psig @ 4055.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2017.08.29 End Date: 2017.08.30 Last Calib.: 2017.08.30
Start Time: 19:53:05 End Time: 01:59:29 Time On Btm: 2017.08.29 @ 21:31:45
Time Off Btm: 2017.08.30 @ 00:33:45

TEST COMMENT: 30 - IF: Blow built to 4"
45 - IS: No blow back
45 - FF: Blow built to 3"
60 - FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1998.84	109.51	Initial Hydro-static
1	27.58	109.14	Open To Flow (1)
31	64.17	111.26	Shut-In(1)
76	999.61	111.81	End Shut-In(1)
76	71.72	111.84	Open To Flow (2)
121	88.22	112.98	Shut-In(2)
181	1004.20	113.39	End Shut-In(2)
182	1970.76	113.30	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
119.00	MCW w/trace oil 66%w, 34%m	0.59
51.00	WM w/trace oil 56%m, 44%w	0.72

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration, Inc

16-15s-36w Logan,KS

8100 E 22nd St. N #700
Box 783188
Wichita, KS 67278
ATTN: John Goldsmith

Blau - Schroeder #1

Job Ticket: 63348

DST#: 1

Test Start: 2017.08.29 @ 19:53:00

Tool Information

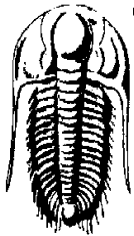
Drill Pipe:	Length: 3918.00 ft	Diameter: 3.80 inches	Volume: 54.96 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 119.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 55.55 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4054.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	40.00 ft			
Tool Length:	69.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			4026.00	
Shut In Tool	5.00			4031.00	
Hydraulic tool	5.00			4036.00	
Jars	5.00			4041.00	
Safety Joint	3.00			4044.00	
Packer	5.00			4049.00	29.00 Bottom Of Top Packer
Packer	5.00			4054.00	
Stubb	1.00			4055.00	
Recorder	0.00	6625	Inside	4055.00	
Recorder	0.00	8017	Outside	4055.00	
Perforations	36.00			4091.00	
Bullnose	3.00			4094.00	40.00 Bottom Packers & Anchor

Total Tool Length: 69.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc

16-15s-36w Logan,KS

8100 E 22nd St. N #700
Box 783188
Wichita, KS 67278
ATTN: John Goldsmith

Blau - Schroeder #1

Job Ticket: 63348 **DST#: 1**
Test Start: 2017.08.29 @ 19:53:00

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:	12500 ppm
Viscosity: 59.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.95 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4200.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

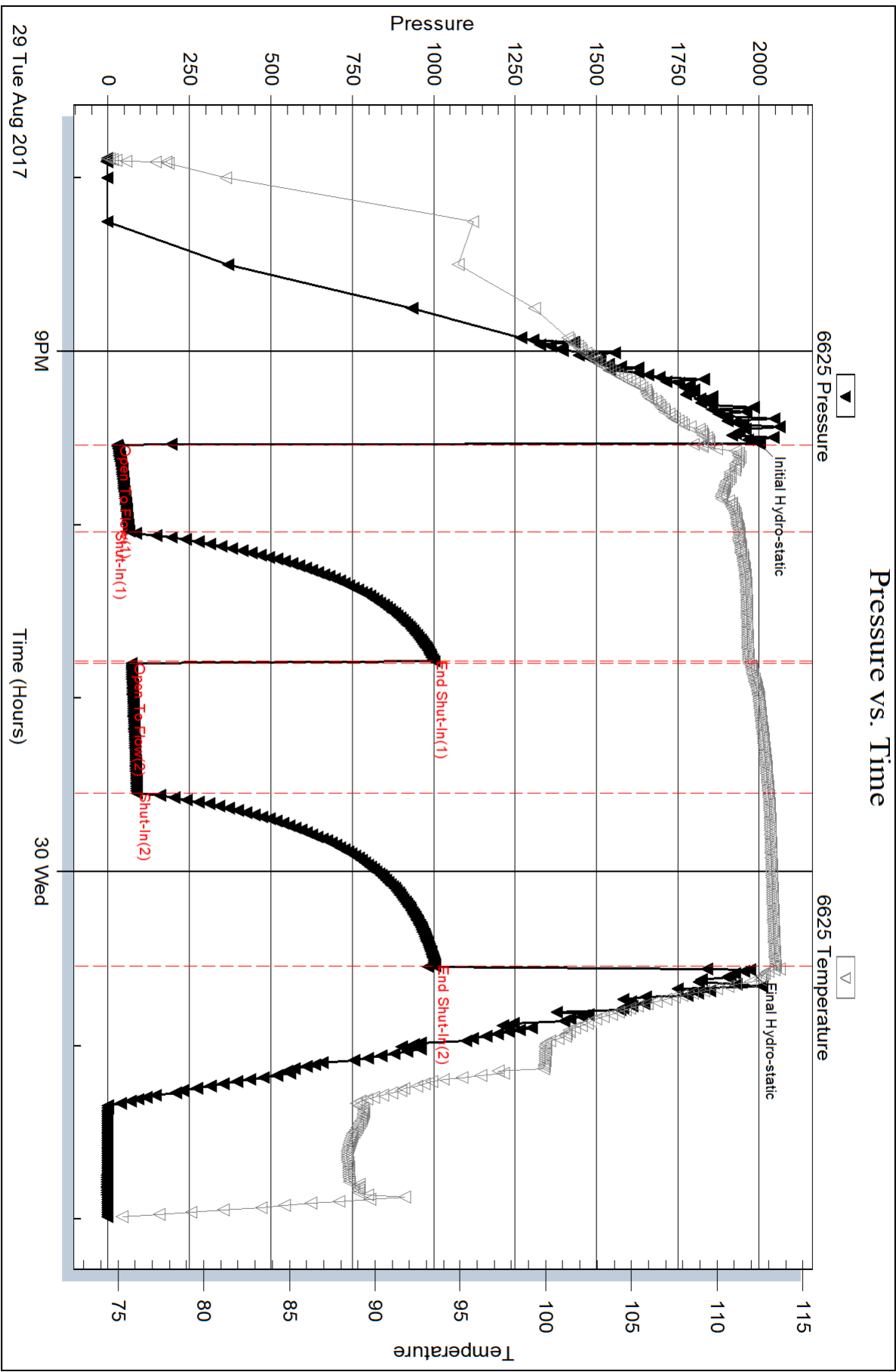
Length ft	Description	Volume bbl
119.00	MCW w/trace oil 66%w , 34%m	0.585
51.00	WM w/trace oil 56%m, 44%w	0.715

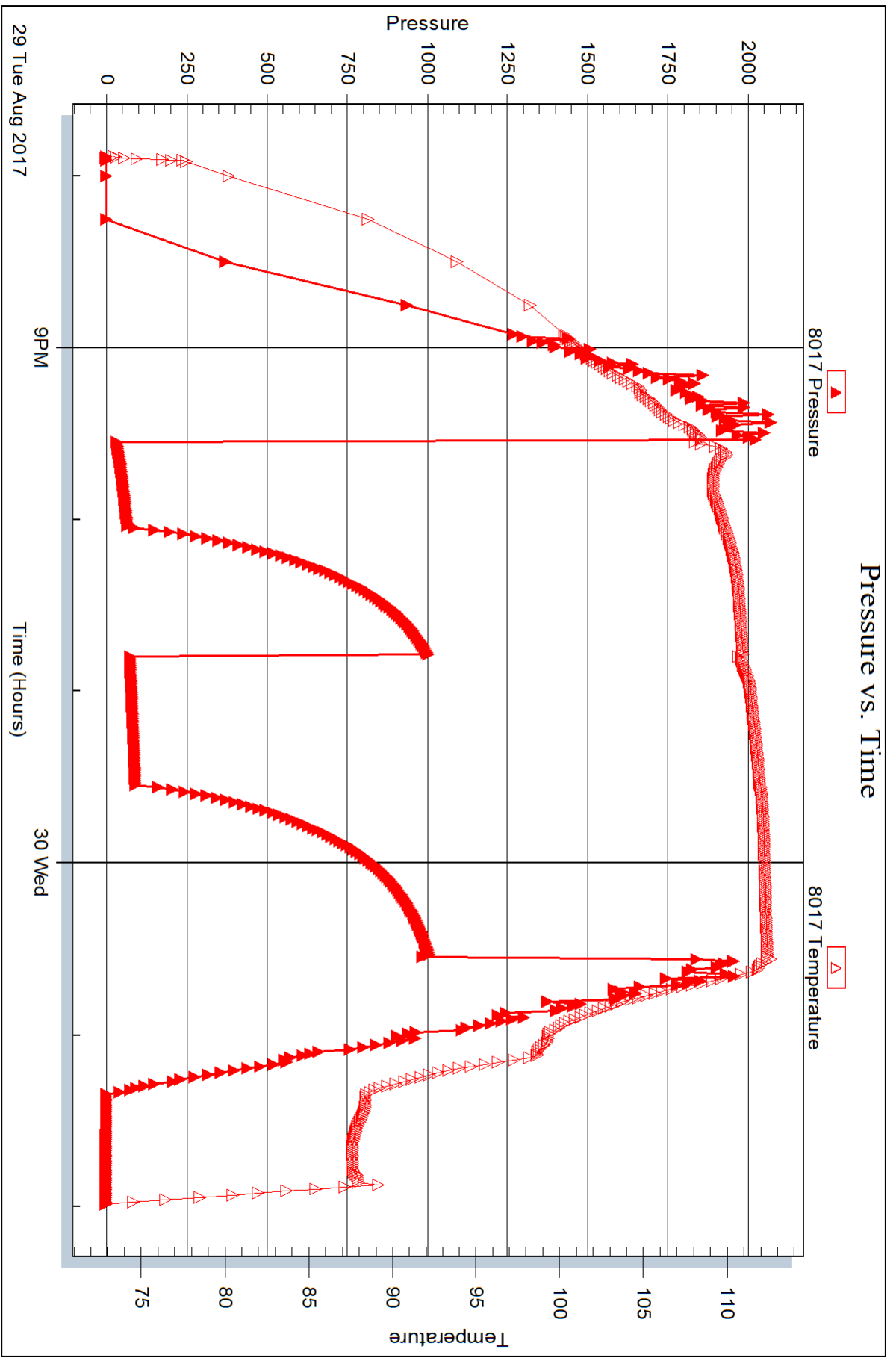
Total Length: 170.00 ft Total Volume: 1.300 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: RW = .586 ohms @ 62.5 deg F
Chlorides = 12,500 ppm







DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc**

8100 E 22nd St. N #700
Box 783188
Wichita, KS 67278

ATTN: John Goldsmith

Blau - Schroeder #1

16-15s-36w Logan,KS

Start Date: 2017.08.30 @ 13:48:00

End Date: 2017.08.30 @ 20:28:45

Job Ticket #: 63349 DST #: 2

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

Printed: 2017.09.05 @ 08:49:56



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ritchie Exploration, Inc
8100 E 22nd St. N #700
Box 783188
Wichita, KS 67278
ATTN: John Goldsmith

16-15s-36w Logan, KS

Blau - Schroeder #1

Job Ticket: 63349 **DST#: 2**

Test Start: 2017.08.30 @ 13:48:00

GENERAL INFORMATION:

Formation: **LKC "A - D"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 15:56:30
 Time Test Ended: 20:28:45
 Interval: **4096.00 ft (KB) To 4184.00 ft (KB) (TVD)**
 Total Depth: 4184.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Winder
 Unit No: 83
 Reference Elevations: 3344.00 ft (KB)
 3339.00 ft (CF)
 KB to GR/CF: 5.00 ft

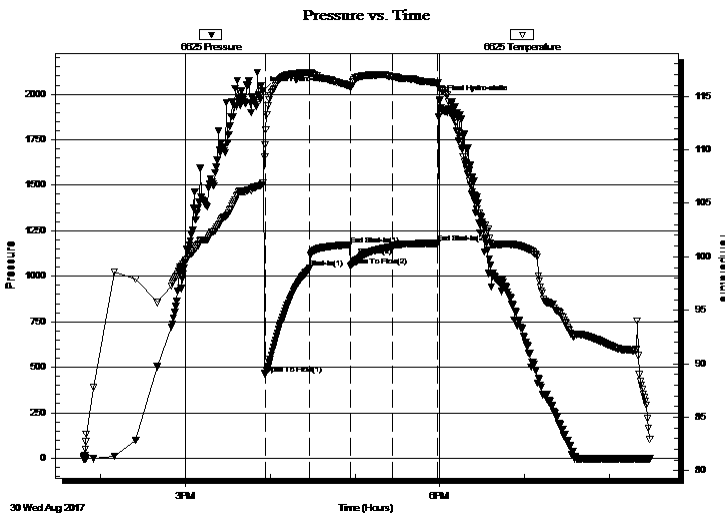
Serial #: 6625

Inside

Press@RunDepth: 1161.52 psig @ 4097.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.08.30 End Date: 2017.08.30 Last Calib.: 2017.08.30
 Start Time: 13:48:05 End Time: 20:28:44 Time On Btm: 2017.08.30 @ 15:55:30
 Time Off Btm: 2017.08.30 @ 18:00:15

TEST COMMENT: 30 - IF: Blow built to BOB (11") at 45 sec.
 30 - IS: No blow back
 30 - FF: Blow built to BOB at 2 min.
 30 - FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2020.18	106.92	Initial Hydro-static
1	461.76	110.46	Open To Flow (1)
33	1042.92	117.15	Shut-In(1)
61	1173.19	115.96	End Shut-In(1)
62	1057.18	115.90	Open To Flow (2)
91	1161.52	116.82	Shut-In(2)
123	1181.11	116.23	End Shut-In(2)
125	1970.45	115.68	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1250.00	Water 99%w, 1%m	16.45
250.00	SMCW 94%w, 6%m	3.51
500.00	MCW 79%w, 21%m	7.01
550.00	MCW 64%w, 36%m	7.72

* Recovery from multiple tests

Gas Rates

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



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Box 783188
Wichita, KS 67278
ATTN: John Goldsmith

16-15s-36w Logan,KS

Blau - Schroeder #1

Job Ticket: 63349 **DST#: 2**
Test Start: 2017.08.30 @ 13:48:00

GENERAL INFORMATION:

Formation: **LKC "A - D"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 15:56:30
Time Test Ended: 20:28:45
Interval: **4096.00 ft (KB) To 4184.00 ft (KB) (TVD)**
Total Depth: 4184.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: James Winder
Unit No: 83
Reference Elevations: 3344.00 ft (KB)
3339.00 ft (CF)
KB to GR/CF: 5.00 ft

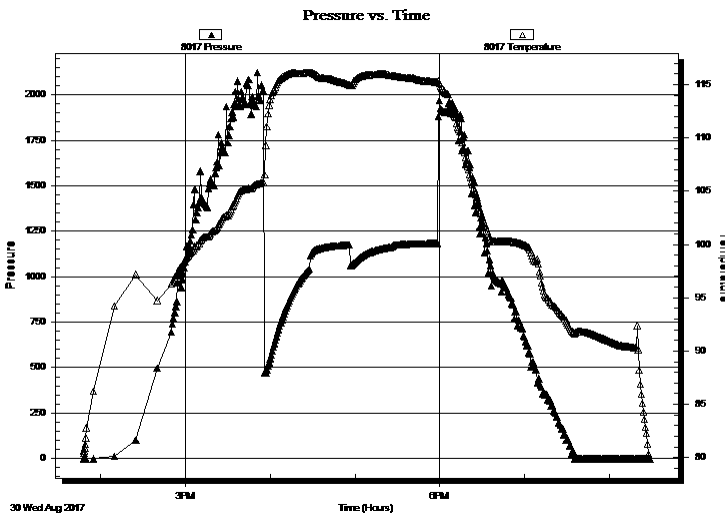
Serial #: 8017

Outside

Press@RunDepth: psig @ 4097.00 ft (KB)
Start Date: 2017.08.30 End Date: 2017.08.30
Start Time: 13:48:05 End Time: 20:28:29
Capacity: 8000.00 psig
Last Calib.: 2017.08.30
Time On Btm:
Time Off Btm:

TEST COMMENT: 30 - IF: Blow built to BOB (11") at 45 sec.
30 - IS: No blow back
30 - FF: Blow built to BOB at 2 min.
30 - FS: No blow back

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
1250.00	Water 99%w , 1%m	16.45
250.00	SMCW 94%w , 6%m	3.51
500.00	MCW 79%w , 21%m	7.01
550.00	MCW 64%w , 36%m	7.72

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration, Inc

16-15s-36w Logan,KS

8100 E 22nd St. N #700
Box 783188
Wichita, KS 67278
ATTN: John Goldsmith

Blau - Schroeder #1

Job Ticket: 63349

DST#: 2

Test Start: 2017.08.30 @ 13:48:00

Tool Information

Drill Pipe:	Length: 3981.00 ft	Diameter: 3.80 inches	Volume: 55.84 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 119.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 88000.00 lb
			<u>Total Volume: 56.43 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	33.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4096.00 ft			Final 76000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	88.00 ft			
Tool Length:	117.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

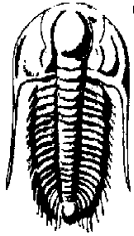
Tool Comments:

Tool Description

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

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4068.00	
Shut In Tool	5.00			4073.00	
Hydraulic tool	5.00			4078.00	
Jars	5.00			4083.00	
Safety Joint	3.00			4086.00	
Packer	5.00			4091.00	29.00 Bottom Of Top Packer
Packer	5.00			4096.00	
Stubb	1.00			4097.00	
Recorder	0.00	6625	Inside	4097.00	
Recorder	0.00	8017	Outside	4097.00	
Perforations	20.00			4117.00	
Blank Spacing	64.00			4181.00	
Bullnose	3.00			4184.00	88.00 Bottom Packers & Anchor

Total Tool Length: 117.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc

16-15s-36w Logan,KS

8100 E 22nd St. N #700
Box 783188
Wichita, KS 67278
ATTN: John Goldsmith

Blau - Schroeder #1

Job Ticket: 63349

DST#: 2

Test Start: 2017.08.30 @ 13:48:00

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:

12000 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.55 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1250.00	Water 99%w , 1%m	16.450
250.00	SMCW 94%w , 6%m	3.507
500.00	MCW 79%w , 21%m	7.014
550.00	MCW 64%w , 36%m	7.715

Total Length: 2550.00 ft Total Volume: 34.686 bbl

Num Fluid Samples: 0

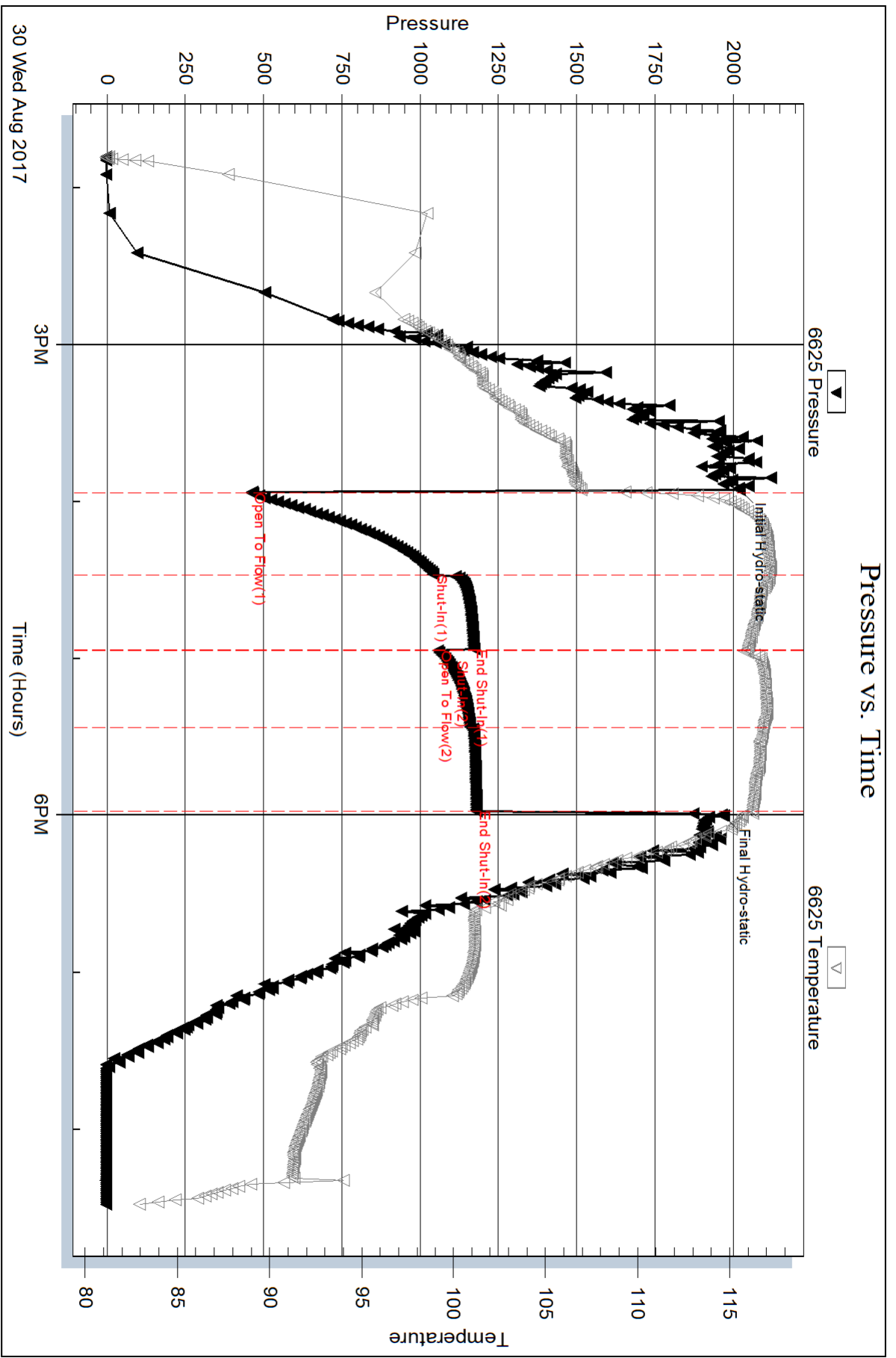
Num Gas Bombs: 0

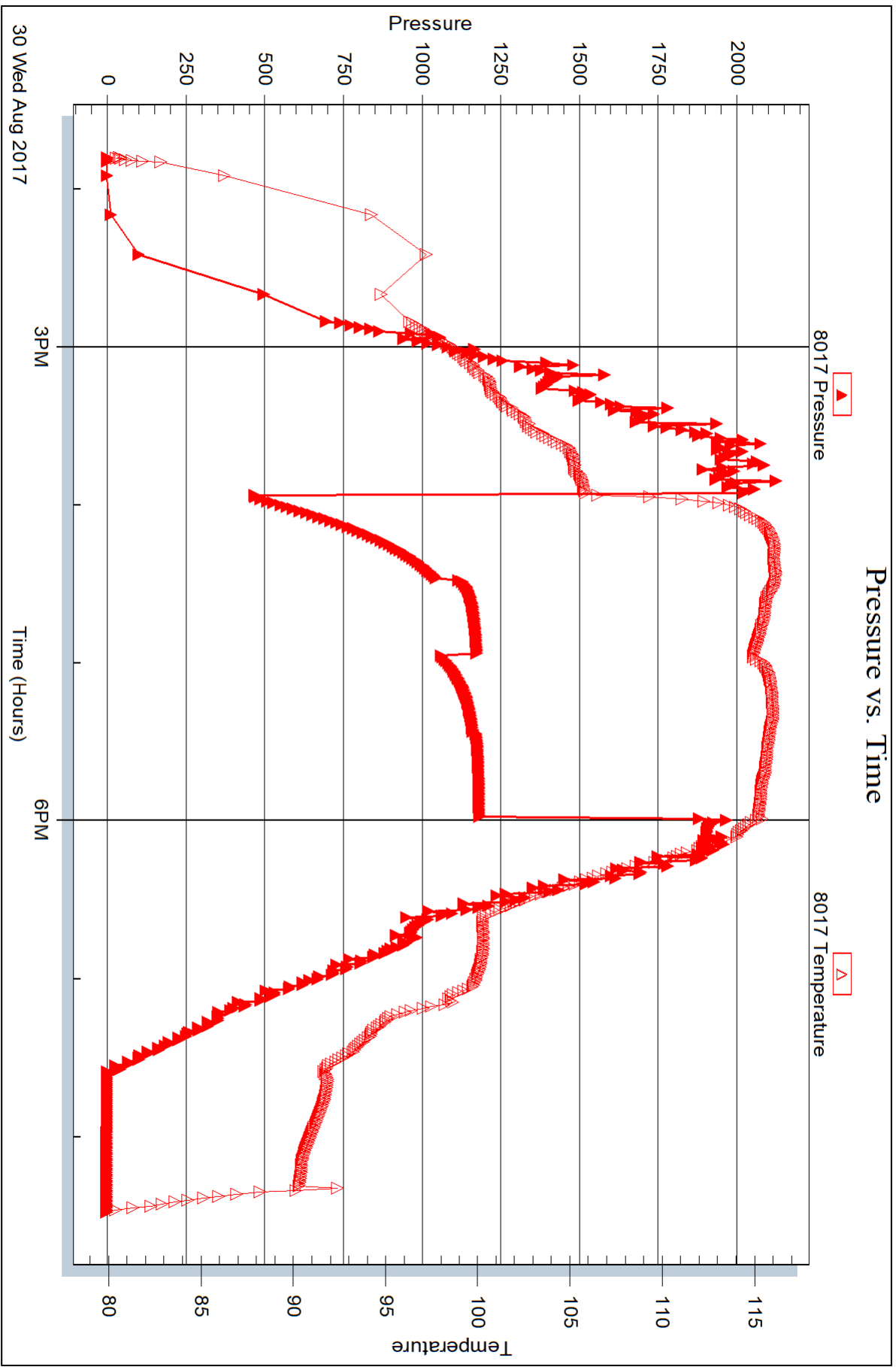
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW = .448 ohms @ 85.4 deg F
Chlorides = 12,000 ppm







DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc**

8100 E 22nd St. N #700
Box 783188
Wichita, KS 67278

ATTN: John Goldsmith

Blau - Schroeder #1

16-15s-36w Logan,KS

Start Date: 2017.08.31 @ 04:17:00

End Date: 2017.08.31 @ 10:30:45

Job Ticket #: 63350 DST #: 3

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

Printed: 2017.09.05 @ 08:42:38

Ritchie Exploration, Inc

16-15s-36w Logan,KS

Blau - Schroeder #1

DST # 3

LKC "E - F"

2017.08.31



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ritchie Exploration, Inc
8100 E 22nd St. N #700
Box 783188
Wichita, KS 67278
ATTN: John Goldsmith

16-15s-36w Logan, KS

Blau - Schroeder #1

Job Ticket: 63350 **DST#: 3**

Test Start: 2017.08.31 @ 04:17:00

GENERAL INFORMATION:

Formation: **LKC "E - F"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 06:04:45
 Time Test Ended: 10:30:45
 Interval: **4191.00 ft (KB) To 4234.00 ft (KB) (TVD)**
 Total Depth: 4234.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Winder
 Unit No: 83
 Reference Elevations: 3344.00 ft (KB)
 3339.00 ft (CF)
 KB to GR/CF: 5.00 ft

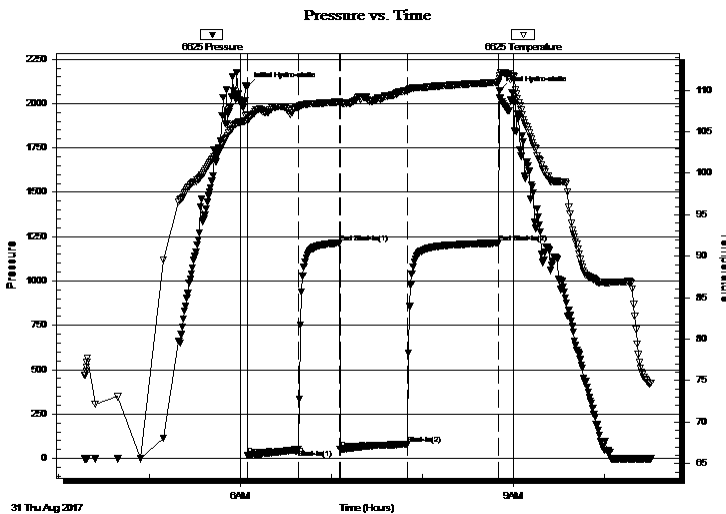
Serial #: 6625

Inside

Press@RunDepth: 79.55 psig @ 4192.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.08.31 End Date: 2017.08.31 Last Calib.: 2017.08.31
 Start Time: 04:17:05 End Time: 10:30:44 Time On Btm: 2017.08.31 @ 06:04:30
 Time Off Btm: 2017.08.31 @ 08:51:00

TEST COMMENT: 30 - IF: 1/4" Blow at open, built to 2 1/2"
 30 - IS: No blow back
 45 - FF; Blow started at 2 1/2 min., built to 2 3/4"
 60 - FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2095.20	106.97	Initial Hydro-static
1	16.97	106.36	Open To Flow (1)
34	49.70	108.08	Shut-In(1)
61	1214.97	108.62	End Shut-In(1)
61	51.48	108.36	Open To Flow (2)
106	79.55	109.99	Shut-In(2)
166	1213.51	110.98	End Shut-In(2)
167	2071.58	111.71	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
140.00	WCM w/trace oil 85%w, 15%w	0.88

Gas Rates

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

* Recovery from multiple tests



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DRILL STEM TEST REPORT

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8100 E 22nd St. N #700
Box 783188
Wichita, KS 67278
ATTN: John Goldsmith

16-15s-36w Logan,KS

Blau - Schroeder #1

Job Ticket: 63350

DST#: 3

Test Start: 2017.08.31 @ 04:17:00

GENERAL INFORMATION:

Formation: **LKC "E - F"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:04:45

Time Test Ended: 10:30:45

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 83

Interval: 4191.00 ft (KB) To 4234.00 ft (KB) (TVD)

Reference Elevations: 3344.00 ft (KB)

Total Depth: 4234.00 ft (KB) (TVD)

3339.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8017 Outside

Press@RunDepth: psig @ 4192.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.08.31

End Date: 2017.08.31

Last Calib.: 2017.08.31

Start Time: 04:17:05

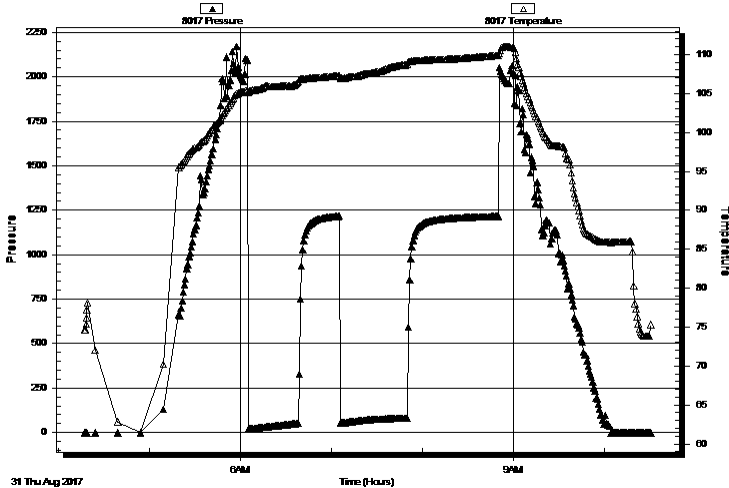
End Time: 10:30:29

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 - IF: 1/4" Blow at open, built to 2 1/2"
30 - IS: No blow back
45 - FF; Blow started at 2 1/2 min., built to 2 3/4"
60 - FS: No blow back

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
140.00	WCM w/trace oil 85%w, 15%w	0.88

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration, Inc

16-15s-36w Logan,KS

8100 E 22nd St. N #700

Blau - Schroeder #1

Box 783188

Job Ticket: 63350

DST#: 3

Wichita, KS 67278

Test Start: 2017.08.31 @ 04:17:00

ATTN: John Goldsmith

Tool Information

Drill Pipe:	Length: 4074.00 ft	Diameter: 3.80 inches	Volume: 57.15 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 119.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 74000.00 lb
			<u>Total Volume: 57.74 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 63000.00 lb
Depth to Top Packer:	4191.00 ft			Final 63000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	43.00 ft			
Tool Length:	72.00 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			4163.00	
Shut In Tool	5.00			4168.00	
Hydraulic tool	5.00			4173.00	
Jars	5.00			4178.00	
Safety Joint	3.00			4181.00	
Packer	5.00			4186.00	29.00 Bottom Of Top Packer
Packer	5.00			4191.00	
Stubb	1.00			4192.00	
Recorder	0.00	6625	Inside	4192.00	
Recorder	0.00	8017	Outside	4192.00	
Perforations	6.00			4198.00	
Blank Spacing	33.00			4231.00	
Bullnose	3.00			4234.00	43.00 Bottom Packers & Anchor

Total Tool Length: 72.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc
8100 E 22nd St. N #700
Box 783188
Wichita, KS 67278
ATTN: John Goldsmith

16-15s-36w Logan,KS

Blau - Schroeder #1

Job Ticket: 63350

DST#: 3

Test Start: 2017.08.31 @ 04:17:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 45.00 sec/qt
Water Loss: 9.57 in³
Resistivity: ohm.m
Salinity: 8000.00 ppm
Filter Cake: 1.00 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: deg API
Water Salinity: 9000 ppm

Recovery Information

Recovery Table

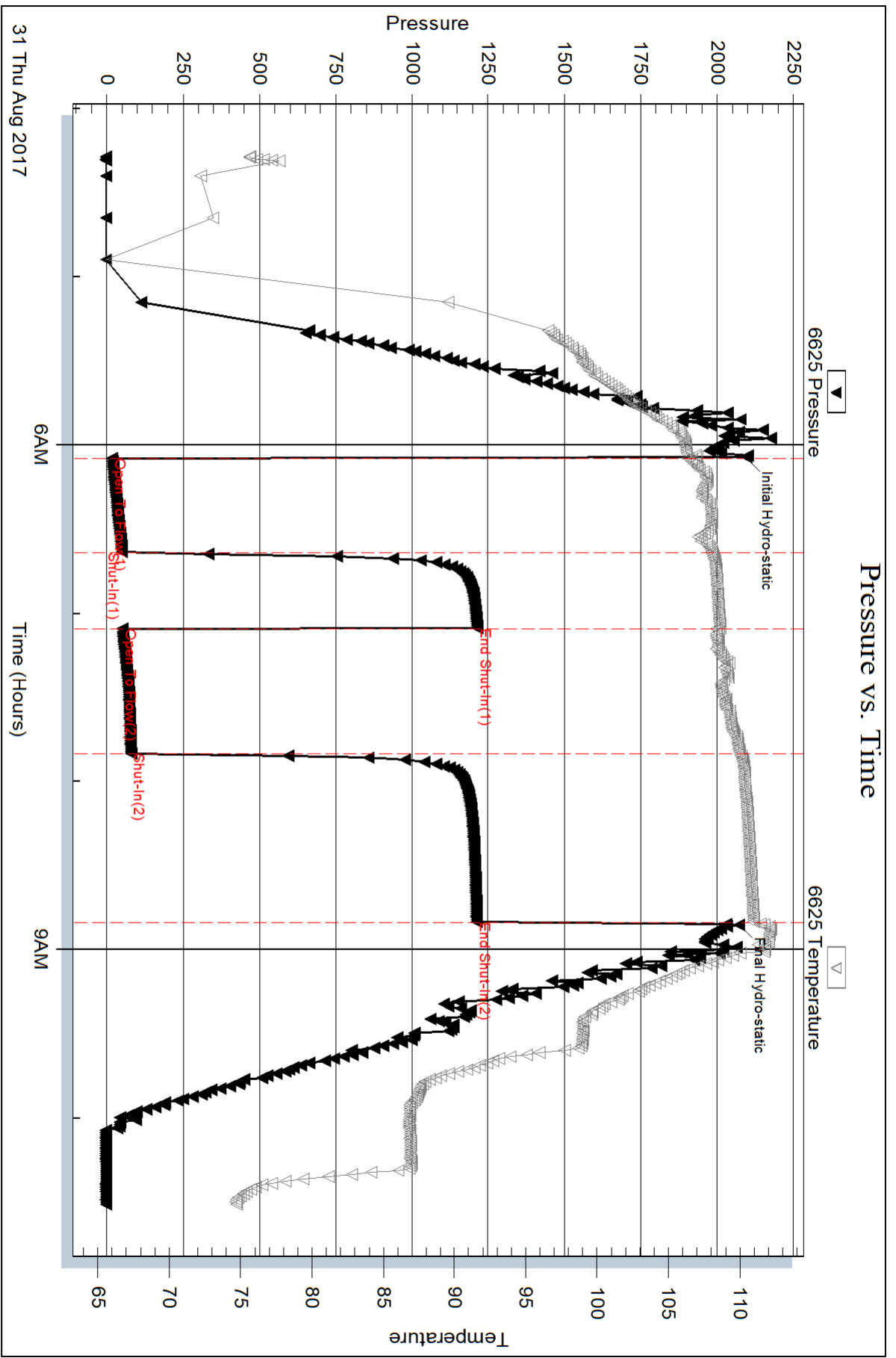
Length ft	Description	Volume bbl
140.00	WCM w/trace oil 85%w, 15%w	0.880

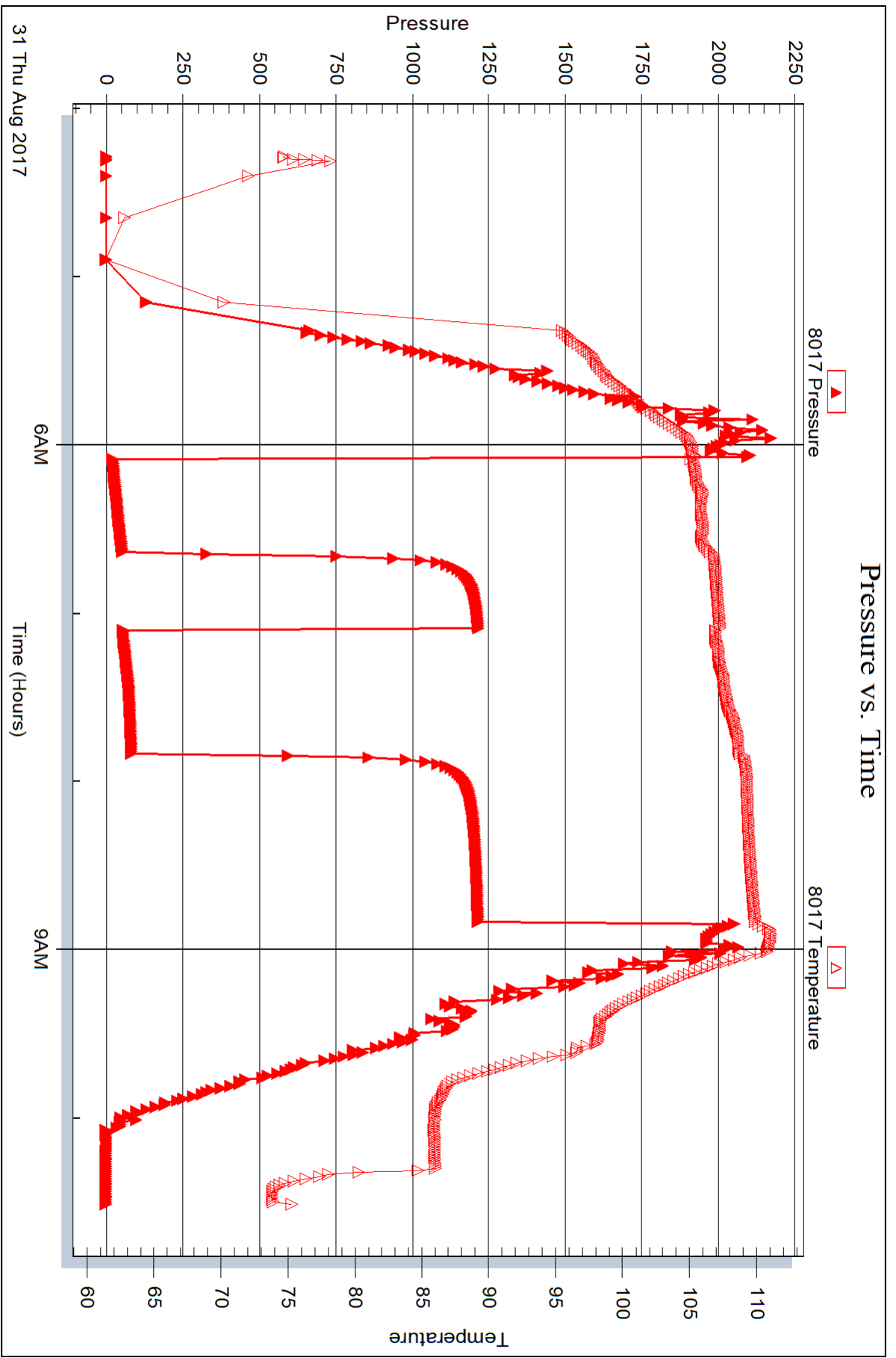
Total Length: 140.00 ft Total Volume: 0.880 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: RW = .672 ohms @ 73.1 deg F
Chlorides = 9000 ppm







DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc**

8100 E 22nd St. N #700
Box 783188
Wichita, KS 67278

ATTN: John Goldsmith

Blau - Schroeder #1

16-15s-36w Logan,KS

Start Date: 2017.09.01 @ 14:53:00

End Date: 2017.09.01 @ 20:26:30

Job Ticket #: 63301 DST #: 4

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

Printed: 2017.09.05 @ 08:42:03

Ritchie Exploration, Inc

16-15s-36w Logan,KS

Blau - Schroeder #1

DST # 4

Atamont A

2017.09.01



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ritchie Exploration, Inc
8100 E 22nd St. N #700
Box 783188
Wichita, KS 67278
ATTN: John Goldsmith

16-15s-36w Logan, KS

Blau - Schroeder #1

Job Ticket: 63301 **DST#: 4**
Test Start: 2017.09.01 @ 14:53:00

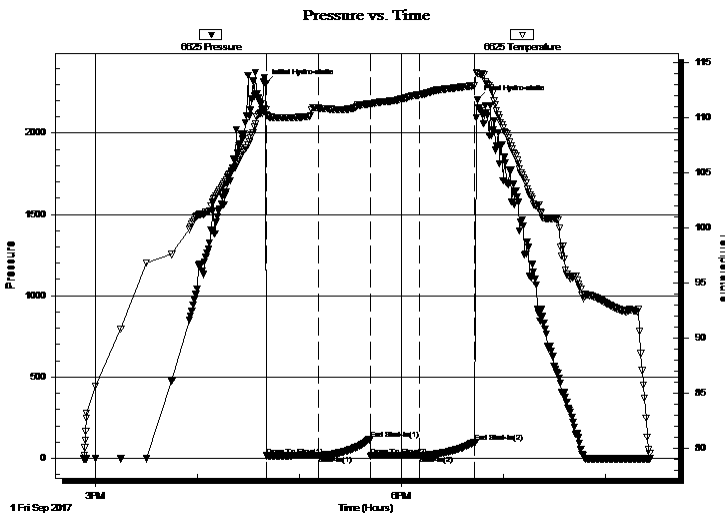
GENERAL INFORMATION:

Formation: **Altamont A**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 16:40:45
Time Test Ended: 20:26:30
Interval: **4501.00 ft (KB) To 4536.00 ft (KB) (TVD)**
Total Depth: 4536.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: James Winder
Unit No: 83
Reference Elevations: 3344.00 ft (KB)
3339.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 6625 Inside
Press@RunDepth: 17.40 psig @ 4502.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2017.09.01 End Date: 2017.09.01 Last Calib.: 2017.09.01
Start Time: 14:53:05 End Time: 20:26:29 Time On Btm: 2017.09.01 @ 16:40:15
Time Off Btm: 2017.09.01 @ 18:44:45

TEST COMMENT: 30 - IF: Weak surface blow , dead at 11 min.
30 - IS: No blow
30 - FF: No blow
30 - FS: No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2306.48	110.72	Initial Hydro-static
1	15.35	110.28	Open To Flow (1)
31	16.73	110.89	Shut-In(1)
62	118.34	111.27	End Shut-In(1)
62	14.69	111.26	Open To Flow (2)
91	17.40	112.09	Shut-In(2)
123	100.67	112.93	End Shut-In(2)
125	2202.90	114.03	Final Hydro-static

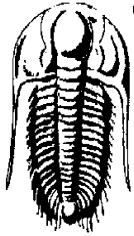
Recovery

Length (ft)	Description	Volume (bbl)
2.00	Mud 100%	0.01

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration, Inc
 8100 E 22nd St. N #700
 Box 783188
 Wichita, KS 67278
 ATTN: John Goldsmith

16-15s-36w Logan, KS

Blau - Schroeder #1

Job Ticket: 63301 **DST#: 4**
 Test Start: 2017.09.01 @ 14:53:00

GENERAL INFORMATION:

Formation: **Altamont A**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:40:45

Time Test Ended: 20:26:30

Interval: **4501.00 ft (KB) To 4536.00 ft (KB) (TVD)**

Total Depth: 4536.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 83

Reference Elevations: 3344.00 ft (KB)

3339.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8017

Outside

Press@RunDepth: psig @ 4502.00 ft (KB)

Start Date: 2017.09.01 End Date: 2017.09.01

Start Time: 14:53:05 End Time: 20:25:59

Capacity: 8000.00 psig

Last Calib.: 2017.09.01

Time On Btm:

Time Off Btm:

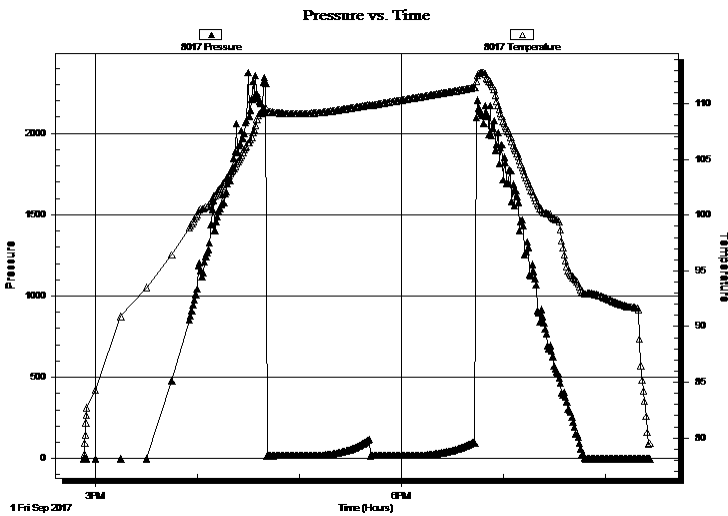
TEST COMMENT: 30 - IF: Weak surface blow , dead at 11 min.

30 - IS: No blow

30 - FF: No blow

30 - FS: No blow

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
2.00	Mud 100%	0.01

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration, Inc

16-15s-36w Logan,KS

8100 E 22nd St. N #700
Box 783188
Wichita, KS 67278
ATTN: John Goldsmith

Blau - Schroeder #1

Job Ticket: 63301

DST#: 4

Test Start: 2017.09.01 @ 14:53:00

Tool Information

Drill Pipe:	Length: 4359.00 ft	Diameter: 3.80 inches	Volume: 61.15 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 119.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 88000.00 lb
			<u>Total Volume: 61.74 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	4501.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	35.00 ft			
Tool Length:	64.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

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

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4473.00	
Shut In Tool	5.00			4478.00	
Hydraulic tool	5.00			4483.00	
Jars	5.00			4488.00	
Safety Joint	3.00			4491.00	
Packer	5.00			4496.00	29.00 Bottom Of Top Packer
Packer	5.00			4501.00	
Stubb	1.00			4502.00	
Recorder	0.00	6625	Inside	4502.00	
Recorder	0.00	8017	Outside	4502.00	
Perforations	31.00			4533.00	
Bullnose	3.00			4536.00	35.00 Bottom Packers & Anchor

Total Tool Length: 64.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc

16-15s-36w Logan,KS

8100 E 22nd St. N #700
Box 783188
Wichita, KS 67278
ATTN: John Goldsmith

Blau - Schroeder #1

Job Ticket: 63301

DST#: 4

Test Start: 2017.09.01 @ 14:53:00

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: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.56 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8200.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	Mud 100%	0.010

Total Length: 2.00 ft Total Volume: 0.010 bbl

Num Fluid Samples: 0

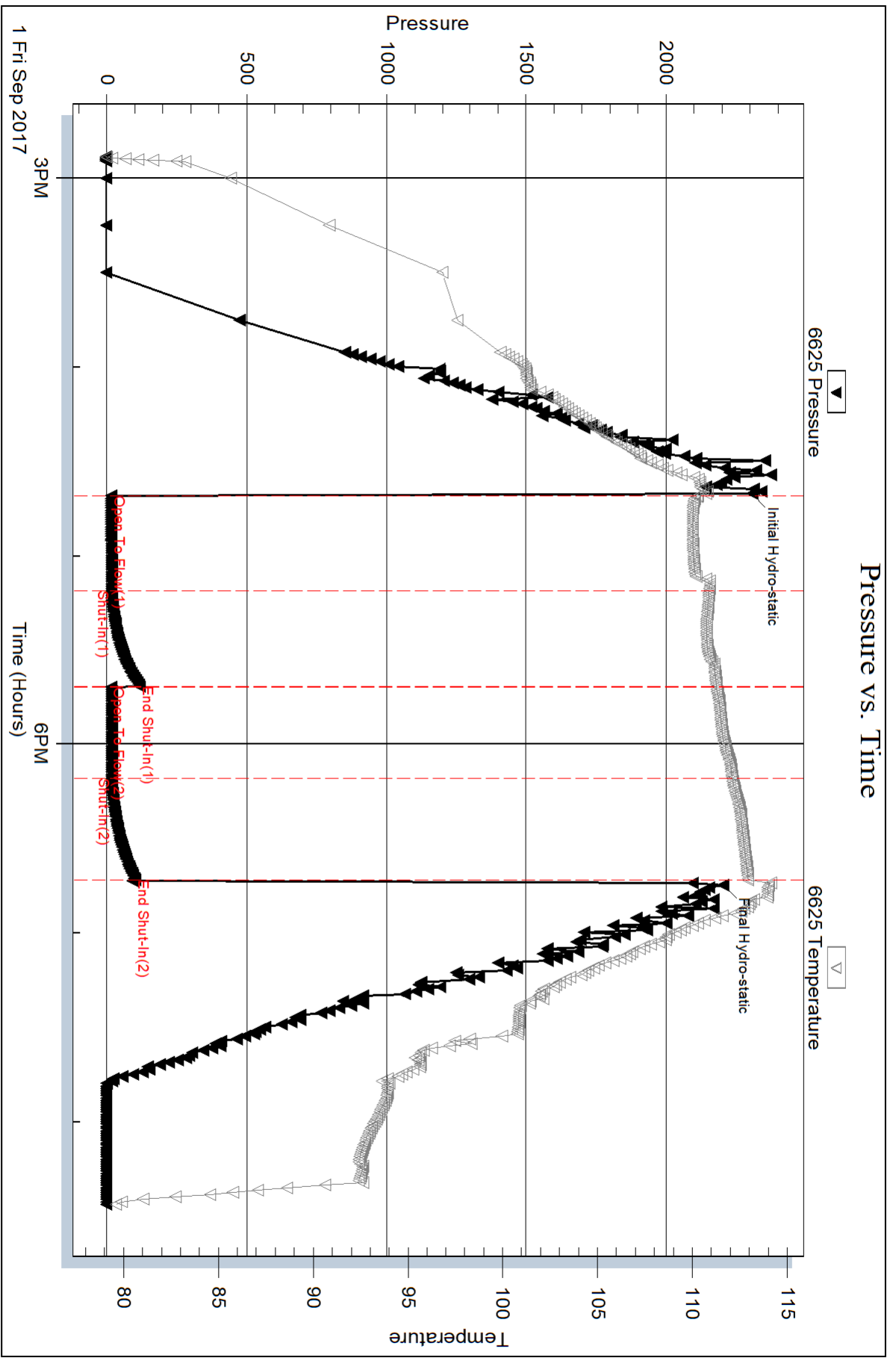
Num Gas Bombs: 0

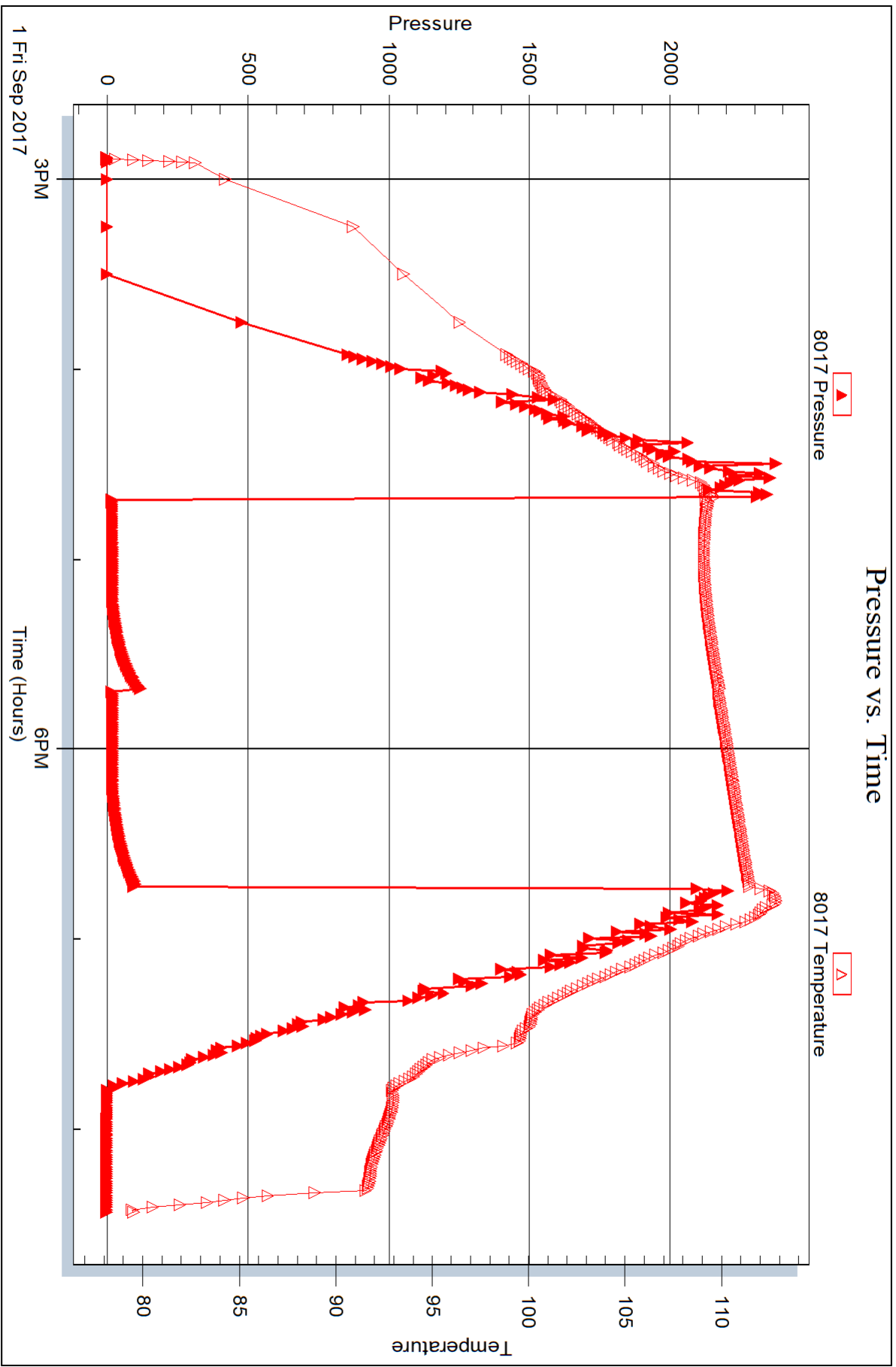
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc**

8100 E 22nd St. N #700
Box 783188
Wichita, KS 67278

ATTN: John Goldsmith

Blau - Schroeder #1

16-15s-36w Logan,KS

Start Date: 2017.09.02 @ 03:49:00

End Date: 2017.09.02 @ 10:38:00

Job Ticket #: 63302 DST #: 5

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

Printed: 2017.09.05 @ 08:41:40



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration, Inc
 8100 E 22nd St. N #700
 Box 783188
 Wichita, KS 67278
 ATTN: John Goldsmith

16-15s-36w Logan, KS

Blau - Schroeder #1

Job Ticket: 63302 **DST#: 5**
 Test Start: 2017.09.02 @ 03:49:00

GENERAL INFORMATION:

Formation: **Altamont 'B'**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 05:56:45
 Time Test Ended: 10:38:00
 Interval: **4536.00 ft (KB) To 4556.00 ft (KB) (TVD)**
 Total Depth: 4556.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Winder
 Unit No: 83
 Reference Elevations: 3344.00 ft (KB)
 3339.00 ft (CF)
 KB to GR/CF: 5.00 ft

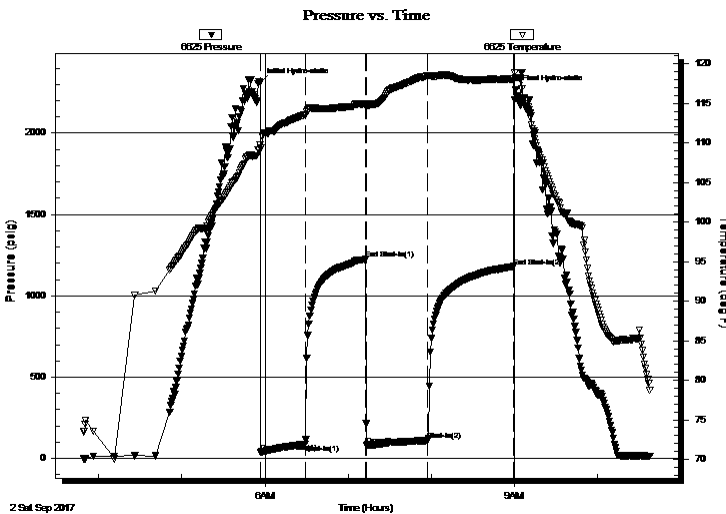
Serial #: 6625

Inside

Press@RunDepth: 109.93 psig @ 4537.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.09.02 End Date: 2017.09.02 Last Calib.: 2017.09.02
 Start Time: 03:49:05 End Time: 10:37:59 Time On Btm: 2017.09.02 @ 05:56:30
 Time Off Btm: 2017.09.02 @ 09:01:00

TEST COMMENT: 30 - IF: 1/4" Blow at open, built to 3 1/4"
 45 - IS: No blow back
 45 - FF: Blow started at 3 1/2 min., built to 3 1/4"
 60 - FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2308.84	109.79	Initial Hydro-static
1	38.19	109.34	Open To Flow (1)
33	86.32	113.55	Shut-In(1)
77	1223.62	114.89	End Shut-In(1)
77	82.51	114.69	Open To Flow (2)
121	109.93	118.52	Shut-In(2)
183	1179.95	118.08	End Shut-In(2)
185	2269.14	118.26	Final Hydro-static

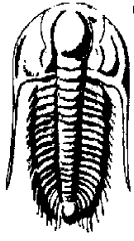
Recovery

Length (ft)	Description	Volume (bbl)
165.00	MCW 63%w, 37%m	1.23

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration, Inc
8100 E 22nd St. N #700
Box 783188
Wichita, KS 67278
ATTN: John Goldsmith

16-15s-36w Logan, KS

Blau - Schroeder #1

Job Ticket: 63302 **DST#: 5**
Test Start: 2017.09.02 @ 03:49:00

GENERAL INFORMATION:

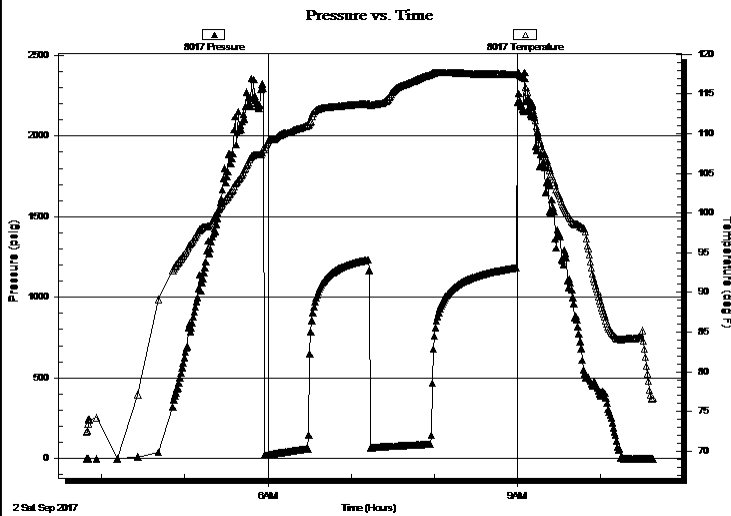
Formation: Altamont 'B'			
Deviated: No Whipstock:	ft (KB)	Test Type:	Conventional Bottom Hole (Reset)
Time Tool Opened: 05:56:45		Tester:	James Winder
Time Test Ended: 10:38:00		Unit No:	83
Interval: 4536.00 ft (KB) To 4556.00 ft (KB) (TVD)		Reference Elevations:	3344.00 ft (KB)
Total Depth: 4556.00 ft (KB) (TVD)			3339.00 ft (CF)
Hole Diameter: 7.88 inches	Hole Condition: Fair	KB to GR/CF:	5.00 ft

Serial #: 8017

Outside

Press@RunDepth:	psig @ 4537.00 ft (KB)	Capacity:	8000.00 psig
Start Date:	2017.09.02	End Date:	2017.09.02
Start Time:	03:49:05	End Time:	10:37:44
		Last Calib.:	2017.09.02
		Time On Btm:	
		Time Off Btm:	

TEST COMMENT: 30 - IF: 1/4" Blow at open, built to 3 1/4"
45 - IS: No blow back
45 - FF: Blow started at 3 1/2 min., built to 3 1/4"
60 - FS: No blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
165.00	MCW 63%w, 37%m	1.23

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration, Inc

16-15s-36w Logan,KS

8100 E 22nd St. N #700
Box 783188
Wichita, KS 67278
ATTN: John Goldsmith

Blau - Schroeder #1

Job Ticket: 63302

DST#: 5

Test Start: 2017.09.02 @ 03:49:00

Tool Information

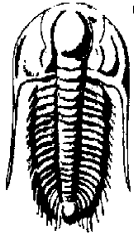
Drill Pipe:	Length: 4420.00 ft	Diameter: 3.80 inches	Volume: 62.00 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 119.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 62.59 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4536.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	20.00 ft			
Tool Length:	49.00 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			4508.00	
Shut In Tool	5.00			4513.00	
Hydraulic tool	5.00			4518.00	
Jars	5.00			4523.00	
Safety Joint	3.00			4526.00	
Packer	5.00			4531.00	29.00 Bottom Of Top Packer
Packer	5.00			4536.00	
Stubb	1.00			4537.00	
Recorder	0.00	6625	Inside	4537.00	
Recorder	0.00	8017	Outside	4537.00	
Perforations	16.00			4553.00	
Bullnose	3.00			4556.00	20.00 Bottom Packers & Anchor

Total Tool Length: 49.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc

16-15s-36w Logan,KS

8100 E 22nd St. N #700
Box 783188
Wichita, KS 67278
ATTN: John Goldsmith

Blau - Schroeder #1

Job Ticket: 63302

DST#: 5

Test Start: 2017.09.02 @ 03:49:00

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:

10000 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8200.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
165.00	MCW 63%w , 37%m	1.230

Total Length: 165.00 ft Total Volume: 1.230 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

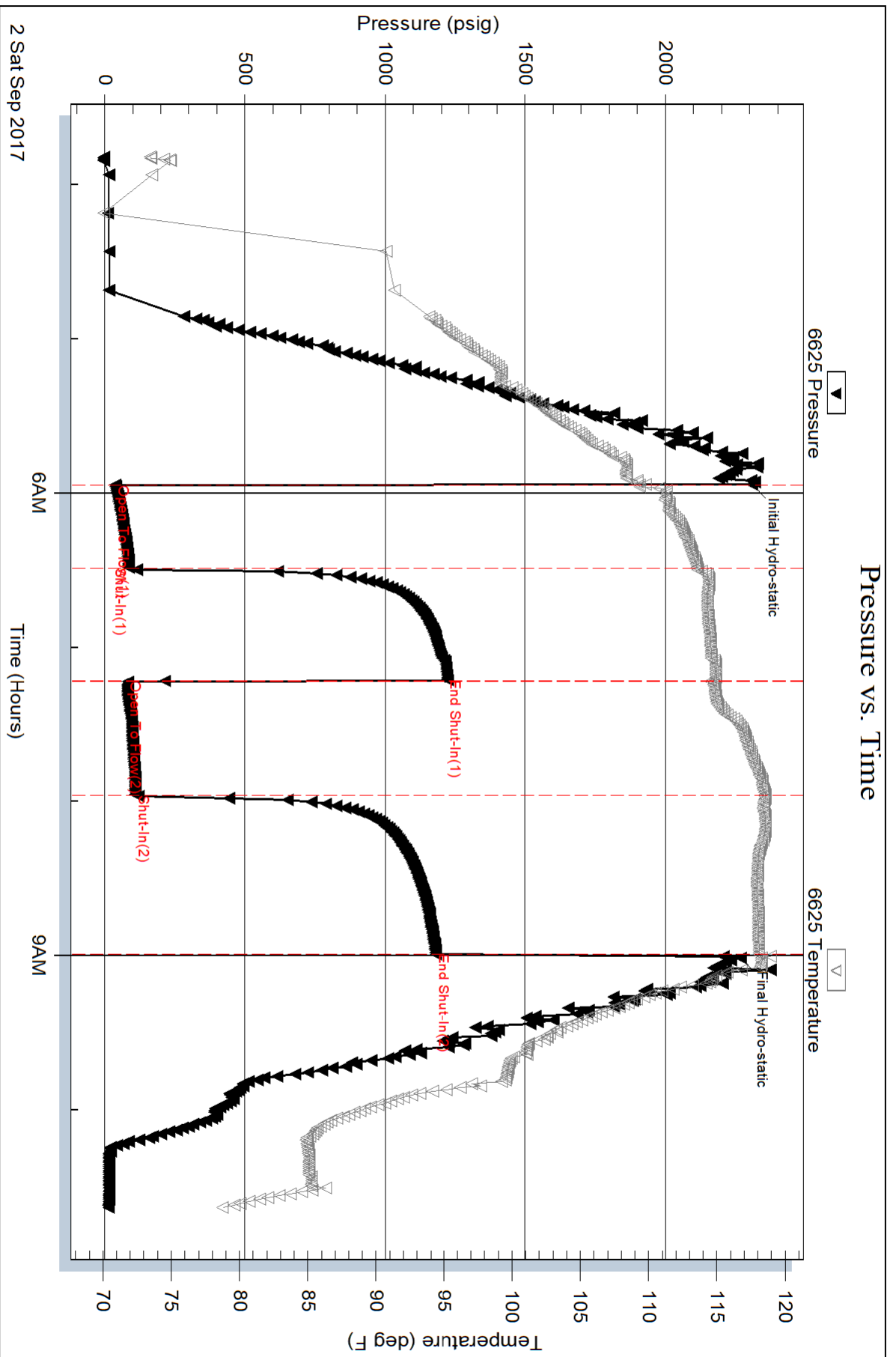
Serial #:

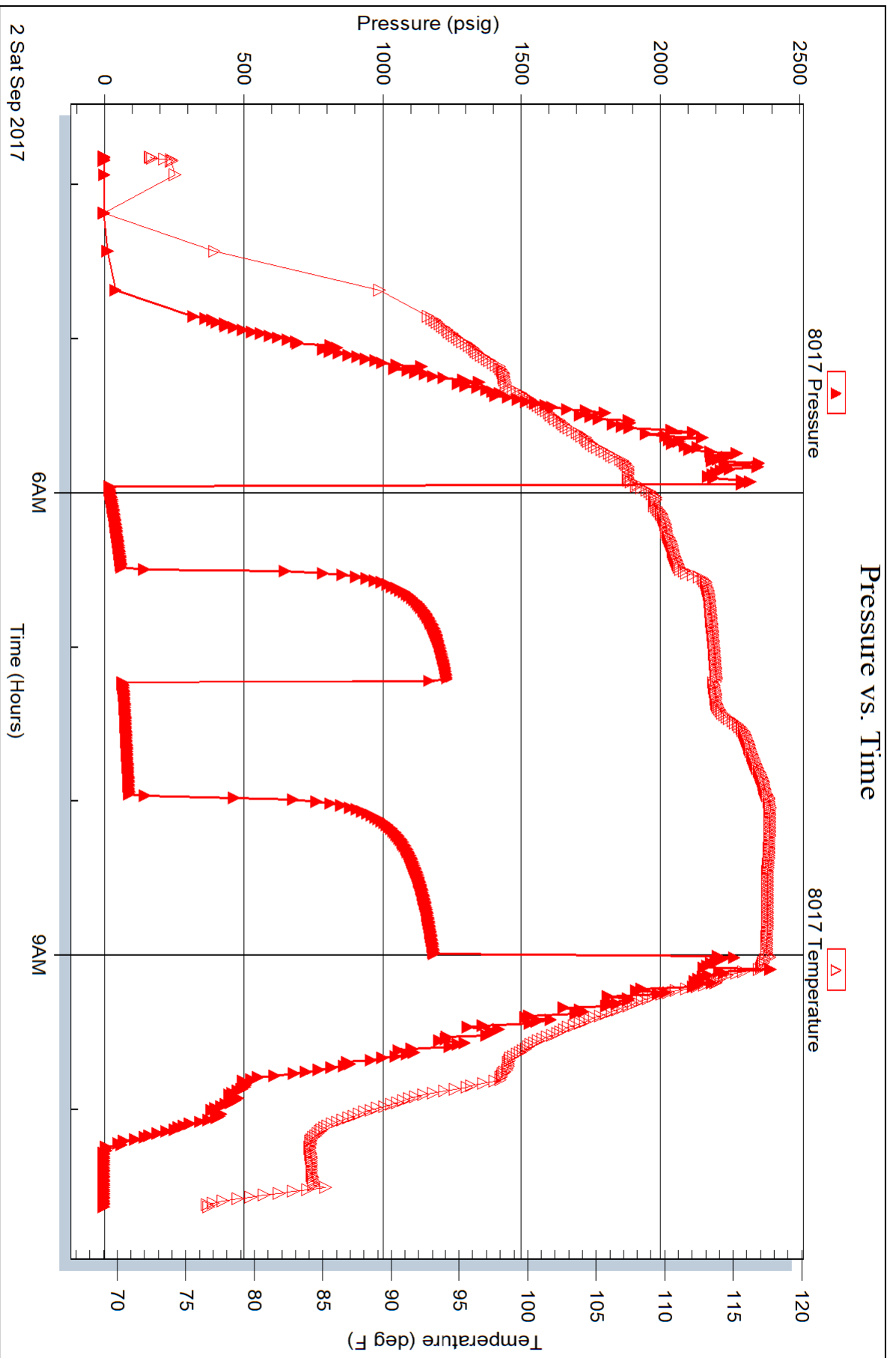
Laboratory Name:

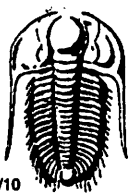
Laboratory Location:

Recovery Comments: RW = .560 ohms @ 77.6 deg F

Chlorides = 10,000 ppm







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63348

Well Name & No. Blau-Schroeder #1 Test No. 1 Date 8-29-17
 Company Ritchie Exploration Inc Elevation 3344 KB 3339 GL
 Address 8100 E 22nd St. N #700 Box 783188 Wichita, KS 67278
 Co. Rep / Geo. John Goldsmith Rig WW #10
 Location: Sec. 16 Twp. 15S Rge. 36w Co. Logan State KS

Interval Tested 4054 - 4094 Zone Tested Toronto
 Anchor Length 40 Drill Pipe Run 3918 Mud Wt. 9.0
 Top Packer Depth 4049 Drill Collars Run 119 Vis 59
 Bottom Packer Depth 4054 Wt. Pipe Run - WL 8.0
 Total Depth 4094 Chlorides 4200 ppm System LCM 1 1/2

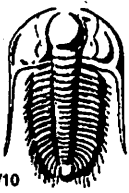
Blow Description IF: Blow built to 4"
ISI: No blowback
FF: Blow built to 3"
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>51</u>	<u>WM w/trace oil</u>	<u>trace</u>	<u>44</u>	<u>56</u>	<u></u>
<u>119</u>	<u>MCW w/trace oil</u>	<u>trace</u>	<u>66</u>	<u>34</u>	<u></u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 170 BHT 113 Gravity API RW .586 @ 62.5 °F Chlorides 12,500 ppm
 (A) Initial Hydrostatic 1999 Test 1150 T-On Location 19:20 8/29
 (B) First Initial Flow 28 Jars 250 T-Started 19:53
 (C) First Final Flow 64 Safety Joint 75 T-Open 21:32
 (D) Initial Shut-In 1000 Circ Sub _____ T-Pulled 00:32
 (E) Second Initial Flow 72 Hourly Standby _____ T-Out 1:55 8/30
 (F) Second Final Flow 88 Mileage 94 RT 70.50 Comments _____
 (G) Final Shut-In 1004 Sampler _____
 (H) Final Hydrostatic 1971 Straddle _____
 Initial Open 30 Shale Packer _____
 Initial Shut-In 45 Extra Packer _____
 Final Flow 45 Extra Recorder _____
 Final Shut-In 60 Day Standby _____
 Sub Total 1545.50 Accessibility _____
 Sub Total 1545.50 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 0
 Total 1545.50
 MP/DST Disc't _____

Approved By [Signature] Our Representative James Winkler

TriLOBITE TESTING Inc. shall not be liable for damages 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 of opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63349

Well Name & No. Blau-Schroeder #1 Test No. 2 Date 8-30-17
 Company Ritchie Exploration Inc Elevation 3344 KB 3339 GL
 Address 8100 E 22nd St. N #700 Box 783188 Wichita KS 67278
 Co. Rep / Geo. John Goldsmith Rig WW #10
 Location: Sec. 16 Twp. 15s Rge. 36w Co. Logan State KS

Interval Tested 4096-4184 Zone Tested LKC "A-D"
 Anchor Length 88 Drill Pipe Run 3981 Mud Wt. 9.1
 Top Packer Depth 4091 Drill Collars Run 119 Vis 56
 Bottom Packer Depth 4096 Wt. Pipe Run - WL 9.6
 Total Depth 4184 Chlorides 7000 ppm System LCM 2

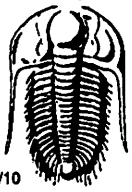
Blow Description IF: Blow built to BOB (11") at 45 sec.
ISI: No blowback
FF: Blow built to BOB at 2 min.
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>550</u>	<u>MCW</u>	-	-	<u>64</u>	<u>36</u>
<u>500</u>	<u>MCW</u>	-	-	<u>79</u>	<u>21</u>
<u>250</u>	<u>SMCW</u>	-	-	<u>94</u>	<u>6</u>
<u>1250</u>	<u>Water</u>	-	-	<u>99</u>	<u>1</u>
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 2550 BHT 116 Gravity API RW-448 @ 85.4 °F Chlorides 12,000 ppm

(A) Initial Hydrostatic 2020 Test 1150 T-On Location 13:25
 (B) First Initial Flow 462 Jars 250 T-Started 13:48
 (C) First Final Flow 1043 Safety Joint 75 T-Open 15:56
 (D) Initial Shut-In 1173 Circ Sub _____ T-Pulled 17:58
 (E) Second Initial Flow 1057 Hourly Standby _____ T-Out 20:25
 (F) Second Final Flow 1162 Mileage 94RT 70.50 Comments _____
 (G) Final Shut-In 1181 Sampler _____
 (H) Final Hydrostatic 1970 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 30 Extra Recorder _____ Sub Total 0
 Initial Shut-In 30 Day Standby _____ Total 1545.50
 Final Flow 30 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 30 Sub Total 1545.50

Approved By [Signature] Our Representative James Nish
 Trilobite Testing Inc. shall not be liable for damaged or any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63350

Well Name & No. Blau-Schroeder #1 Test No. 3 Date 8-31-17
 Company Ritchie Exploration Inc Elevation 3394 KB 3339 GL
 Address 8100 E 22nd St. N #700 Box 783188 Wichita, KS 67278
 Co. Rep / Geo. John Goldsmith Rig WW #10
 Location: Sec. 16 Twp. 15s Rge. 36w Co. Logan State KS

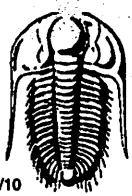
Interval Tested 4191-4234 Zone Tested LKC "E-F"
 Anchor Length 43 Drill Pipe Run 4074 Mud Wt. 9.3
 Top Packer Depth 4186 Drill Collars Run 119 Vis 45
 Bottom Packer Depth 4191 Wt. Pipe Run - WL 9.6
 Total Depth 4234 Chlorides 8000 ppm System LCM 2

Blow Description IF: 1/4" Blow at open, built to 2 1/2"
ISI: No blowback
FF: Blow started at 2 1/2 min, built to 2 3/4"
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>140</u>	<u>wcm w/trace oil</u>	<u>trace</u>	<u>15</u>	<u>85</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 <u>140</u>	BHT <u>111</u>	Gravity <u>API RW-672 @ 73.1 °F</u>	Chlorides <u>9000</u>	ppm	

(A) Initial Hydrostatic 2095 Test 1150 T-On Location 3:40
 (B) First Initial Flow 17 Jars 250 T-Started 4:17
 (C) First Final Flow 50 Safety Joint 75 T-Open 6:04
 (D) Initial Shut-In 1215 Circ Sub _____ T-Pulled 8:50
 (E) Second Initial Flow 51 Hourly Standby _____ T-Out 10:30
 (F) Second Final Flow 80 Mileage 94 RT 70.50 Comments _____
 (G) Final Shut-In 1214 Sampler _____
 (H) Final Hydrostatic 2072 Straddle _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Initial Open 30 Shale Packer _____
 Initial Shut-In 30 Extra Packer _____
 Final Flow 45 Extra Recorder _____
 Final Shut-In 60 Day Standby _____
 Accessibility _____
 Sub Total 1545.50 MP/DST Disc't _____

Approved By [Signature] Our Representative James Winder
 Trilobite Testing Inc. shall not be liable for damaged or any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63301

Well Name & No. Blau-Schroeder # 1 Test No. 4 Date 9-1-17
 Company Ritchie Exploration Inc Elevation 3344 KB 3339 GL
 Address 8100 E 22nd St. N #700 Box 783188 Wichita, KS 67278
 Co. Rep / Geo. John Goldsmith Rig WW #10
 Location: Sec. 16 Twp. 15s Rge. 36w Co. Logan State KS

Interval Tested 4501 - 4536 Zone Tested Altament A
 Anchor Length 35 Drill Pipe Run 4359 Mud Wt. 9.2
 Top Packer Depth 4496 Drill Collars Run 119 Vis 52
 Bottom Packer Depth 4501 Wt. Pipe Run - WL 9.6
 Total Depth 4536 Chlorides 8200 ppm System LCM 1

Blow Description IF: Weak surface blow, dead at 11 min.
ISI: No blow
FF: No blow
FSI: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>2</u>	<u>mud</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 2 BHT 113 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm
 (A) Initial Hydrostatic 2306 Test 1150 T-On Location 14:20
 (B) First Initial Flow 15 Jars 250 T-Started 14:53
 (C) First Final Flow 17 Safety Joint 75 T-Open 16:40
 (D) Initial Shut-In 118 Circ Sub _____ T-Pulled 18:43
 (E) Second Initial Flow 15 Hourly Standby _____ T-Out 20:25
 (F) Second Final Flow 17 Mileage 94 RT 70.50
 (G) Final Shut-In 101 Sampler _____
 (H) Final Hydrostatic 2203 Straddle _____
 Shale Packer _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

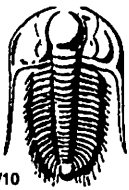
Initial Open 30
 Initial Shut-In 30
 Final Flow 30
 Final Shut-In 30

Comments _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 0
 Total 1545.50
 MP/DST Disc't _____

Approved By _____

Our Representative James Winder

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63302

Well Name & No. Blau - Schroeder #1 Test No. 5 Date 9-2-17
 Company Ritchie Exploration Inc Elevation 3344 KB 3339 GL
 Address 8100 E 22nd St N #700 Box 783188 Wichita, KS 67278
 Co. Rep / Geo. John Goldsmith Rig WW #10
 Location: Sec. 16 Twp. 15S Rge. 36W Co. Logan State KS

Interval Tested 4536 - 4556 Zone Tested Altamont "B"
 Anchor Length 20 Drill Pipe Run 4420 Mud Wt. 9.2
 Top Packer Depth 4531 Drill Collars Run 119 Vis 52
 Bottom Packer Depth 4536 Wt. Pipe Run - WL 9.6
 Total Depth 4556 Chlorides 8200 ppm System LCM 1
 Blow Description IF: 1/4" Blow at open, built to 3 1/4"
ISI: No blowback
FF: Blow started at 3 1/2 min., built to 3 1/4"
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>165</u>	<u>MCW</u>		<u>63</u>	<u>37</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 165 BHT 118 Gravity _____ API RW .560 @ 77.6 °F Chlorides 10,000 ppm

(A) Initial Hydrostatic 2309 Test 1150 T-On Location 3:25
 (B) First Initial Flow 38 Jars 250 T-Started 3:49
 (C) First Final Flow 86 Safety Joint 75 T-Open 5:56
 (D) Initial Shut-In 1224 Circ Sub _____ T-Pulled 8:59
 (E) Second Initial Flow 83 Hourly Standby _____ T-Out 10:35
 (F) Second Final Flow 110 Mileage 94 RTX2 70.50+70.50 Comments tools loaded 16:10 9/4
 (G) Final Shut-In 1180 Sampler _____
 (H) Final Hydrostatic 2269 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby 2.5d 3.5h
 Accessibility _____
 Sub Total 1616.00

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

Approved By [Signature] Our Representative James Winder
 Trilobite Testing Inc. shall not be liable for damaged or 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.