



DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc**

8100 E 22nd St N #700
Wichita, KS 67278-3188

ATTN: Max Lovely

Campus Trust #1

33 16s 37w Wichita,KS

Start Date: 2014.07.25 @ 23:18:00

End Date: 2014.07.26 @ 06:13:43

Job Ticket #: 59133 DST #: 1

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

Printed: 2014.08.02 @ 09:13:53



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ritchie Exploration, Inc
8100 E 22nd St N #700
Wichita, KS 67278-3188
ATTN: Max Lovely

33 16s 37w Wichita, KS

Campus Trust #1

Job Ticket: 59133

DST#: 1

Test Start: 2014.07.25 @ 23:18:00

GENERAL INFORMATION:

Formation: **LKC - A**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:28:45

Time Test Ended: 06:13:43

Test Type: Conventional Bottom Hole (Initial)

Tester: Bradley Walter

Unit No: 69

Interval: 4044.00 ft (KB) To 4080.00 ft (KB) (TVD)

Reference Elevations: 3366.00 ft (KB)

Total Depth: 4080.00 ft (KB) (TVD)

3361.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8365

Inside

Press@RunDepth: 899.99 psig @ 4045.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.07.25

End Date:

2014.07.26

Last Calib.: 2014.07.26

Start Time: 23:18:05

End Time:

06:13:43

Time On Btm: 2014.07.26 @ 01:28:30

Time Off Btm: 2014.07.26 @ 04:04:00

TEST COMMENT: IF: BOB @ 1 1/2 min.

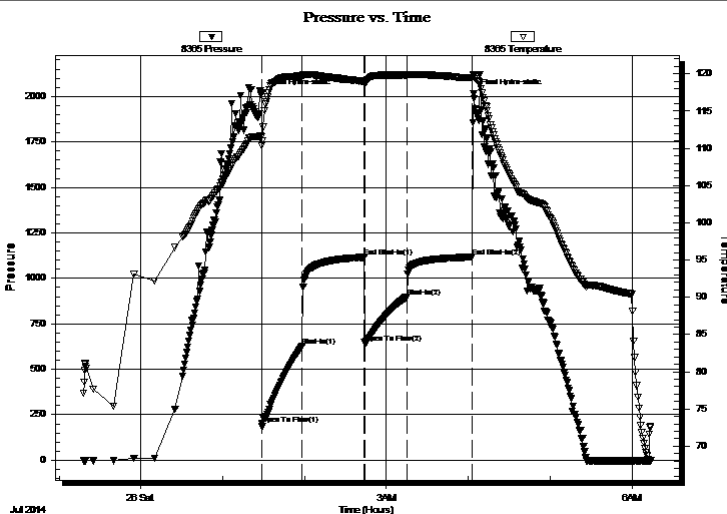
IS: No return.

FF: BOB @ 2 min.

FS: No return.

PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2017.90	111.57	Initial Hydro-static
1	199.52	110.38	Open To Flow (1)
30	627.24	119.73	Shut-In(1)
76	1116.10	118.99	End Shut-In(1)
76	645.82	118.70	Open To Flow (2)
107	899.99	119.85	Shut-In(2)
155	1117.55	119.45	End Shut-In(2)
156	2016.79	119.77	Final Hydro-static



Recovery

Length (ft)	Description	Volume (bbl)
1990.00	smcw 3m 97w	26.84

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration, Inc

33 16s 37w Wichita,KS

8100 E 22nd St N #700
Wichita, KS 67278-3188

Campus Trust #1

Job Ticket: 59133

DST#: 1

ATTN: Max Lovely

Test Start: 2014.07.25 @ 23:18:00

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:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length:	118.00 ft	Diameter:	2.25 inches	Volume:	0.58 bbl	Weight to Pull Loose:	82000.00 lb
					Total Volume:	55.54 bbl	Tool Chased	3.00 ft
Drill Pipe Above KB:		19.00 ft					String Weight: Initial	65000.00 lb
Depth to Top Packer:		4044.00 ft					Final	72000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		36.00 ft						
Tool Length:		63.00 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			4018.00	
Shut In Tool	5.00			4023.00	
Hydraulic tool	5.00			4028.00	
Jars	5.00			4033.00	
Safety Joint	2.00			4035.00	
Packer	5.00			4040.00	27.00 Bottom Of Top Packer
Packer	4.00			4044.00	
Stubb	1.00			4045.00	
Recorder	0.00	8365	Inside	4045.00	
Recorder	0.00	8522	Outside	4045.00	
Perforations	32.00			4077.00	
Bullnose	3.00			4080.00	36.00 Bottom Packers & Anchor

Total Tool Length: 63.00



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc

33 16s 37w Wichita, KS

8100 E 22nd St N #700
Wichita, KS 67278-3188

Campus Trust #1

Job Ticket: 59133

DST#: 1

ATTN: Max Lovely

Test Start: 2014.07.25 @ 23:18:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 50.00 sec/qt

Water Loss: 7.99 in³

Resistivity: 0.00 ohm.m

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

0 deg API

36000 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1990.00	smcw 3m 97w	26.840

Total Length: 1990.00 ft Total Volume: 26.840 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: rw is .220@ 63F = 36,000ppm

Serial #: 8365

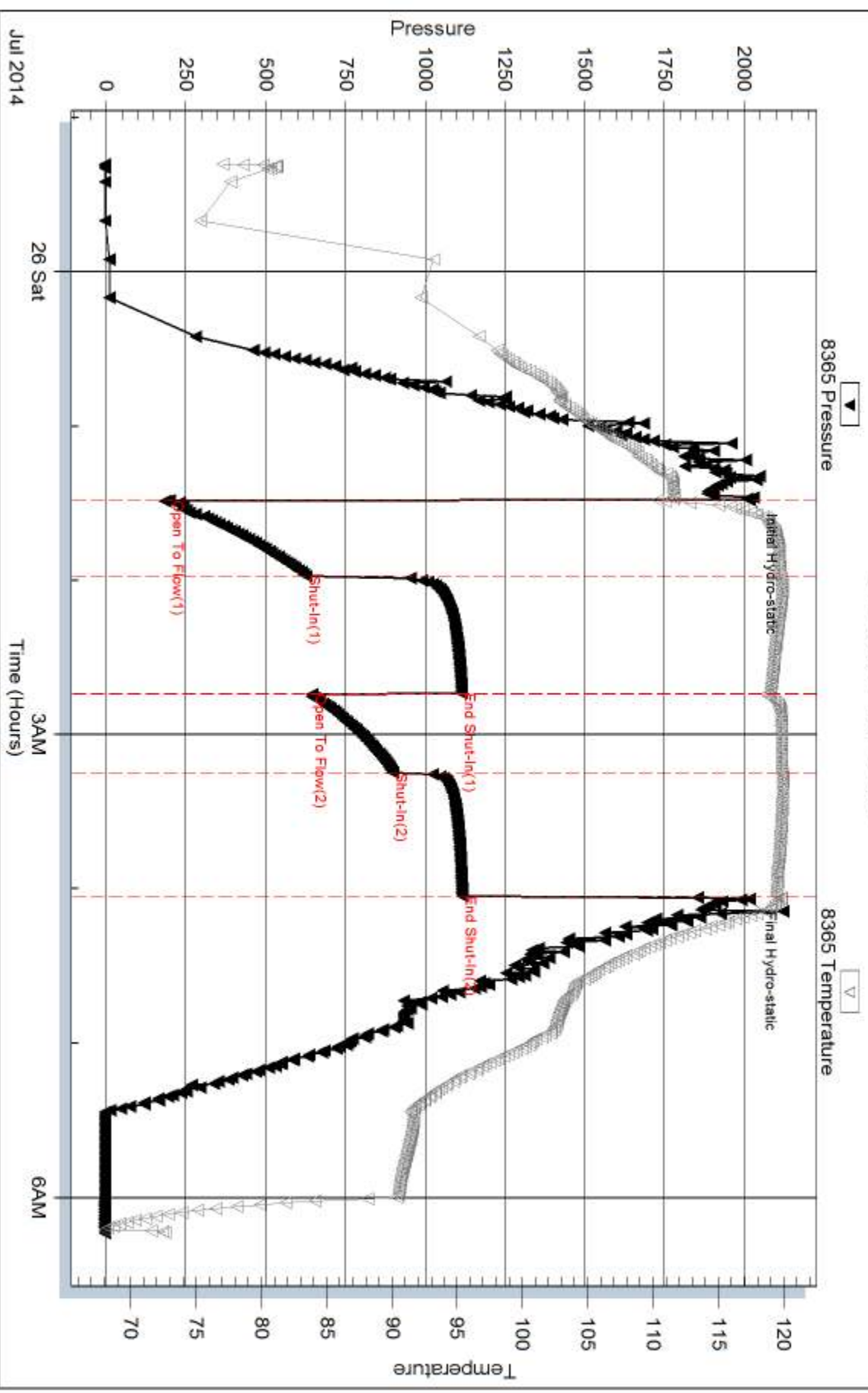
Inside

Ritchie Exploration, Inc

Campus Trust #1

DST Test Number: 1

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc**

8100 E 22nd St N #700
Wichita, KS 67278-3188

ATTN: Max Lovely

Campus Trust #1

33 16s 37w Wichita,KS

Start Date: 2014.07.27 @ 06:56:00

End Date: 2014.07.27 @ 14:33:30

Job Ticket #: 59134 DST #: 2

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

Printed: 2014.08.02 @ 09:13:07



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration, Inc

8100 E 22nd St N #700
Wichita, KS 67278-3188

ATTN: Max Lovely

33 16s 37w Wichita, KS

Campus Trust #1

Job Ticket: 59134

DST#: 2

Test Start: 2014.07.27 @ 06:56:00

GENERAL INFORMATION:

Formation: **LKC - I & J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:03:45

Time Test Ended: 14:33:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 69

Interval: 4277.00 ft (KB) To 4337.00 ft (KB) (TVD)

Total Depth: 4337.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3366.00 ft (KB)

3361.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8522 Outside

Press@RunDepth: 416.19 psig @ 4278.00 ft (KB)

Start Date: 2014.07.27

End Date:

2014.07.27

Start Time: 06:56:05

End Time:

14:33:29

Capacity: 8000.00 psig

Last Calib.: 2014.07.27

Time On Btm: 2014.07.27 @ 09:03:30

Time Off Btm: 2014.07.27 @ 12:12:00

TEST COMMENT: IF: BOB @ 10 min.

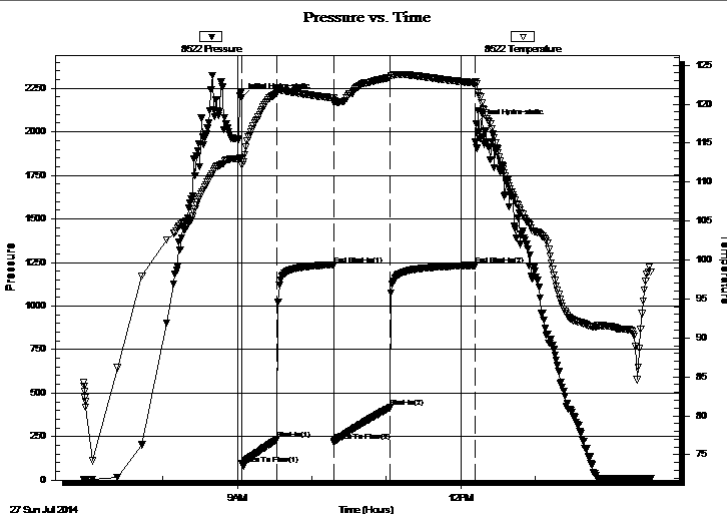
IS: No return.

FF: BOB @ 12 min.

FS: No return.

PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2194.98	113.12	Initial Hydro-static
1	93.89	112.26	Open To Flow (1)
29	234.58	121.54	Shut-In(1)
74	1236.67	120.78	End Shut-In(1)
75	222.34	120.41	Open To Flow (2)
120	416.19	123.43	Shut-In(2)
188	1233.49	122.70	End Shut-In(2)
189	2045.13	122.90	Final Hydro-static



Recovery

Length (ft)	Description	Volume (bbl)
815.00	mcw 10m 90w (oil spots throughout)	10.36

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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* Recovery from multiple tests



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Ritchie Exploration, Inc
8100 E 22nd St N #700
Wichita, KS 67278-3188
ATTN: Max Lovely

33 16s 37w Wichita, KS

Campus Trust #1

Job Ticket: 59134

DST#: 2

Test Start: 2014.07.27 @ 06:56:00

GENERAL INFORMATION:

Formation: **LKC - I & J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:03:45

Time Test Ended: 14:33:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 69

Interval: 4277.00 ft (KB) To 4337.00 ft (KB) (TVD)

Total Depth: 4337.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3366.00 ft (KB)

3361.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8365 Inside

Press@RunDepth: psig @ 4278.00 ft (KB)

Start Date: 2014.07.27

End Date:

2014.07.27

Start Time: 06:56:05

End Time:

14:33:29

Capacity: 8000.00 psig

Last Calib.:

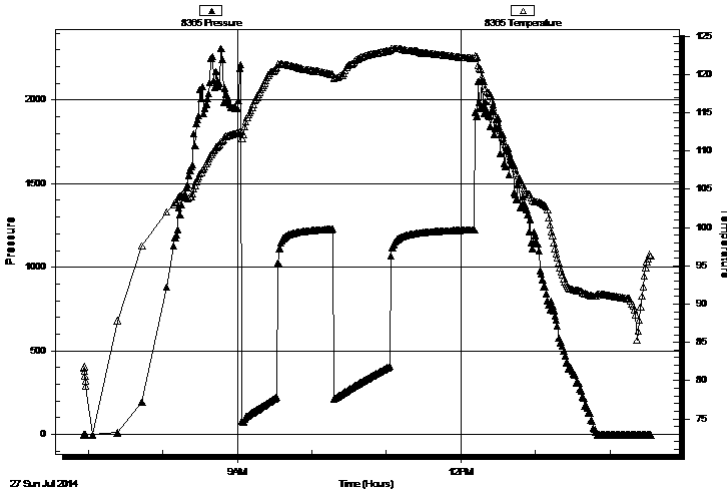
2014.07.27

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: BOB @ 10 min.
IS: No return.
FF: BOB @ 12 min.
FS: No return.

Pressure vs. Time



PRESSURE SUMMARY

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

Length (ft)	Description	Volume (bbl)
815.00	mcw 10m 90w (oil spots throughout)	10.36

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration, Inc

33 16s 37w Wichita, KS

8100 E 22nd St N #700
Wichita, KS 67278-3188

Campus Trust #1

Job Ticket: 59134

DST#: 2

ATTN: Max Lovely

Test Start: 2014.07.27 @ 06:56:00

Tool Information

Drill Pipe:	Length: 4166.00 ft	Diameter: 3.80 inches	Volume: 58.44 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 118.00 ft	Diameter: 2.25 inches	Volume: 0.58 bbl	Weight to Pull Loose: 85000.00 lb
		Total Volume:	59.02 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	34.00 ft			String Weight: Initial 65000.00 lb
Depth to Top Packer:	4277.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	60.00 ft			
Tool Length:	87.00 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			4251.00	
Shut In Tool	5.00			4256.00	
Hydraulic tool	5.00			4261.00	
Jars	5.00			4266.00	
Safety Joint	2.00			4268.00	
Packer	5.00			4273.00	27.00 Bottom Of Top Packer
Packer	4.00			4277.00	
Stubb	1.00			4278.00	
Recorder	0.00	8365	Inside	4278.00	
Recorder	0.00	8522	Outside	4278.00	
Perforations	23.00			4301.00	
Change Over Sub	1.00			4302.00	
Drill Pipe	31.00			4333.00	
Change Over Sub	1.00			4334.00	
Bullnose	3.00			4337.00	60.00 Bottom Packers & Anchor

Total Tool Length: 87.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc

33 16s 37w Wichita, KS

8100 E 22nd St N #700
Wichita, KS 67278-3188

Campus Trust #1

Job Ticket: 59134

DST#: 2

ATTN: Max Lovely

Test Start: 2014.07.27 @ 06:56:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

39000 ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbl

Water Loss: 9.59 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 8300.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
815.00	mcw 10m 90w (oil spots throughout)	10.357

Total Length: 815.00 ft

Total Volume: 10.357 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

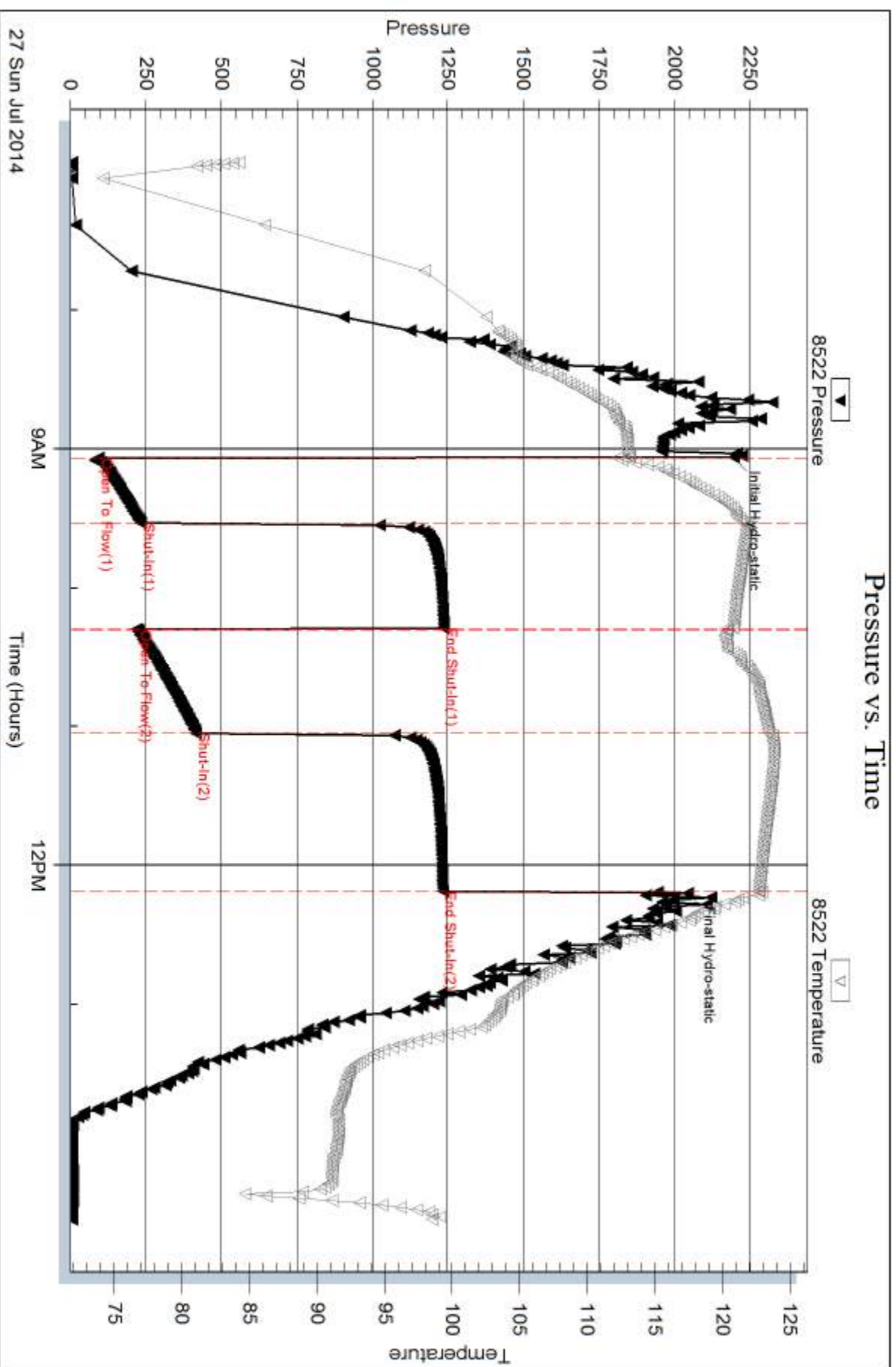
Recovery Comments: rw is .143 @ 90F = 39,000ppm

Serial #: 8522

Outside Ritchie Exploration, Inc

Campus Trust #1

DST Test Number: 2



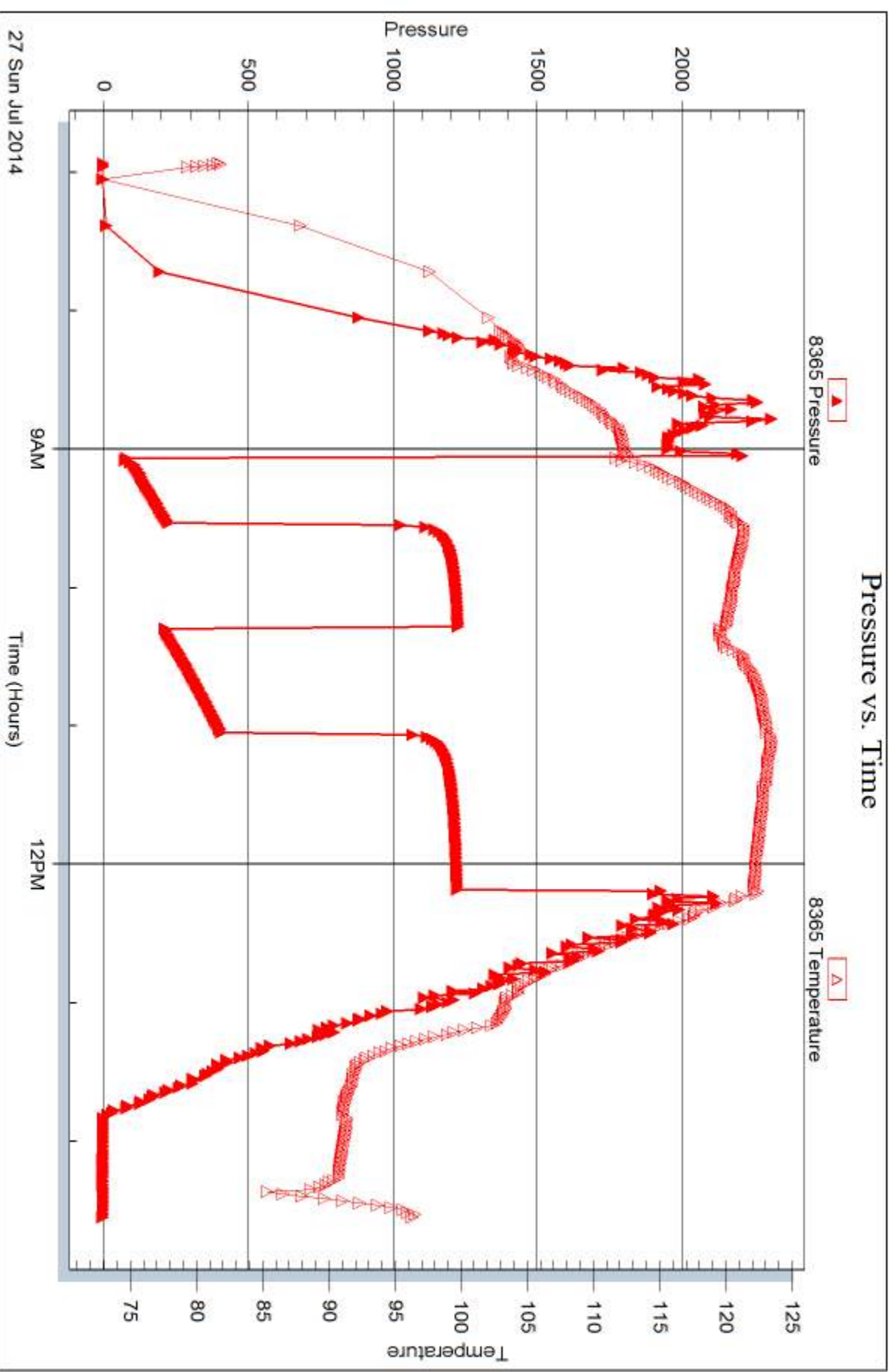
Serial #: 8365

Inside

Ritchie Exploration, Inc

Campus Trust #1

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc**

8100 E 22nd St N #700
Wichita, KS 67278-3188

ATTN: Max Lovely

Campus Trust #1

33 16s 37w Wichita,KS

Start Date: 2014.07.28 @ 08:08:00

End Date: 2014.07.28 @ 16:37:15

Job Ticket #: 59135 DST #: 3

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

Printed: 2014.08.02 @ 09:11:39



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration, Inc

8100 E 22nd St N #700
Wichita, KS 67278-3188

ATTN: Max Lovely

33 16s 37w Wichita, KS

Campus Trust #1

Job Ticket: 59135

DST#: 3

Test Start: 2014.07.28 @ 08:08:00

GENERAL INFORMATION:

Formation: **Altamont A**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:38:00

Time Test Ended: 16:37:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 69

Interval: 4498.00 ft (KB) To 4520.00 ft (KB) (TVD)

Total Depth: 4520.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3366.00 ft (KB)

3361.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8365 Inside

Press@RunDepth: 333.56 psig @ 4499.00 ft (KB)

Start Date: 2014.07.28

End Date:

2014.07.28

Start Time: 08:08:05

End Time:

16:37:14

Capacity: 8000.00 psig

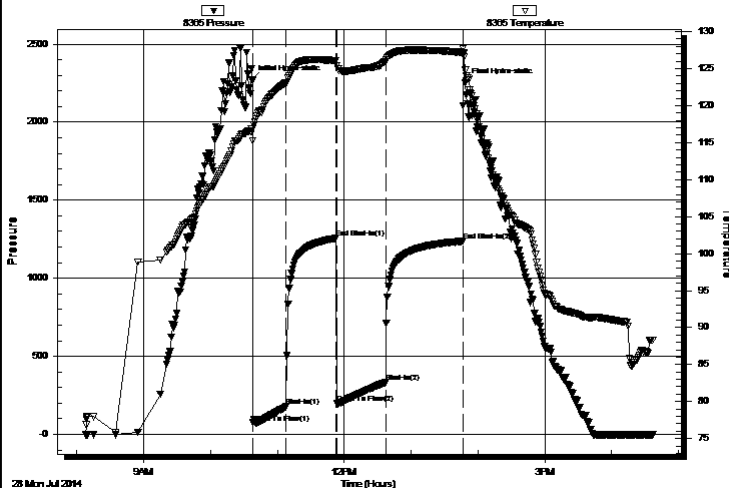
Last Calib.: 2014.07.28

Time On Btm: 2014.07.28 @ 10:37:30

Time Off Btm: 2014.07.28 @ 13:48:45

TEST COMMENT: IF: BOB @ 4 min.
IS: 5" return.
FF: BOB @ 3 min.
FS: 3" return, receded to 2".

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2274.74	116.82	Initial Hydro-static
1	73.81	115.28	Open To Flow (1)
31	177.17	123.16	Shut-In(1)
76	1256.47	126.06	End Shut-In(1)
77	197.31	125.43	Open To Flow (2)
120	333.56	125.97	Shut-In(2)
189	1238.27	127.17	End Shut-In(2)
192	2253.14	124.78	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
160.00	gmco 30g 25m 45o	1.17
525.00	go 35g 65o	7.36
180.00	go 30g 70o	2.52
0.00	1200' GIP	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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* Recovery from multiple tests



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration, Inc

8100 E 22nd St N #700
Wichita, KS 67278-3188

ATTN: Max Lovely

33 16s 37w Wichita, KS

Campus Trust #1

Job Ticket: 59135

DST#: 3

Test Start: 2014.07.28 @ 08:08:00

GENERAL INFORMATION:

Formation: **Altamont A**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:38:00

Time Test Ended: 16:37:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 69

Interval: 4498.00 ft (KB) To 4520.00 ft (KB) (TVD)

Total Depth: 4520.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3366.00 ft (KB)

3361.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8522 Outside

Press@RunDepth: psig @ 4499.00 ft (KB)

Start Date: 2014.07.28

End Date:

2014.07.28

Start Time: 08:08:05

End Time:

16:37:14

Capacity: 8000.00 psig

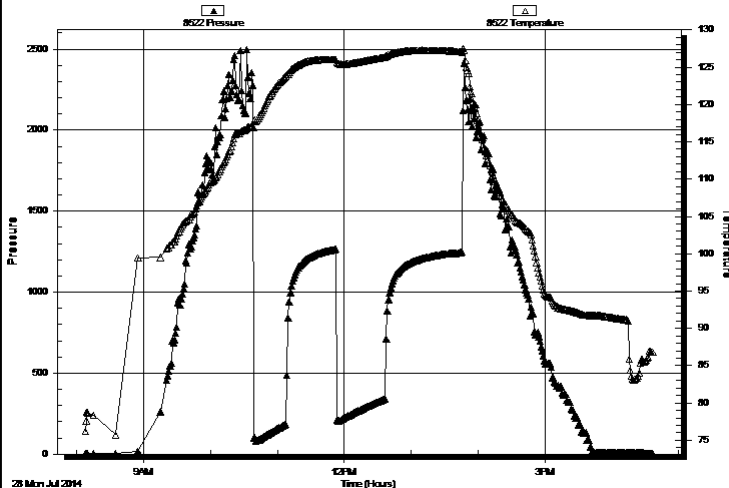
Last Calib.: 2014.07.28

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: BOB @ 4 min.
IS: 5" return.
FF: BOB @ 3 min.
FS: 3" return, receded to 2".

Pressure vs. Time



PRESSURE SUMMARY

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

Length (ft)	Description	Volume (bbl)
160.00	gmco 30g 25m 45o	1.17
525.00	go 35g 65o	7.36
180.00	go 30g 70o	2.52
0.00	1200' GIP	0.00

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

33 16s 37w Wichita,KS

8100 E 22nd St N #700
Wichita, KS 67278-3188

Campus Trust #1

Job Ticket: 59135

DST#: 3

ATTN: Max Lovely

Test Start: 2014.07.28 @ 08:08:00

Tool Information

Drill Pipe:	Length:	4385.00 ft	Diameter:	3.80 inches	Volume:	61.51 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length:	118.00 ft	Diameter:	2.25 inches	Volume:	0.58 bbl	Weight to Pull Loose:	90000.00 lb
					Total Volume:	62.09 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		32.00 ft					String Weight: Initial	68000.00 lb
Depth to Top Packer:		4498.00 ft					Final	70000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		22.00 ft						
Tool Length:		49.00 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			4472.00	
Shut In Tool	5.00			4477.00	
Hydraulic tool	5.00			4482.00	
Jars	5.00			4487.00	
Safety Joint	2.00			4489.00	
Packer	5.00			4494.00	27.00 Bottom Of Top Packer
Packer	4.00			4498.00	
Stubb	1.00			4499.00	
Recorder	0.00	8365	Inside	4499.00	
Recorder	0.00	8522	Outside	4499.00	
Perforations	18.00			4517.00	
Bullnose	3.00			4520.00	22.00 Bottom Packers & Anchor

Total Tool Length: 49.00



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc

33 16s 37w Wichita,KS

8100 E 22nd St N #700
Wichita, KS 67278-3188

Campus Trust #1

Job Ticket: 59135

DST#: 3

ATTN: Max Lovely

Test Start: 2014.07.28 @ 08:08:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 54.00 sec/qt

Water Loss: 10.39 in³

Resistivity: 0.00 ohm.m

Salinity: 9100.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

29 deg API

0 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
160.00	gmco 30g 25m 45o	1.169
525.00	go 35g 65o	7.364
180.00	go 30g 70o	2.525
0.00	1200' GIP	0.000

Total Length: 865.00 ft

Total Volume: 11.058 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

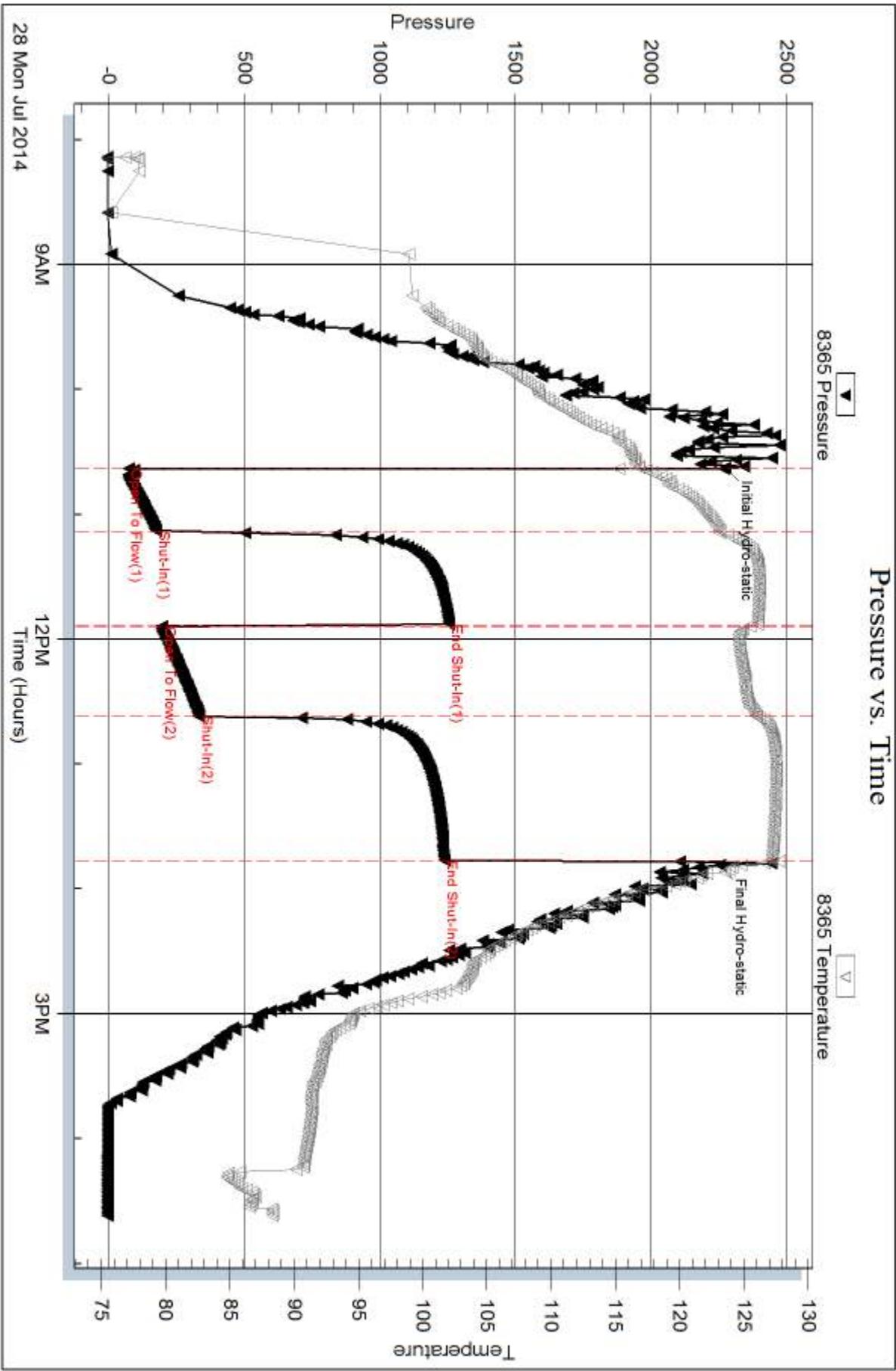
Serial #: 8365

Inside

Ritchie Exploration, Inc

Campus Trust #1

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 59135

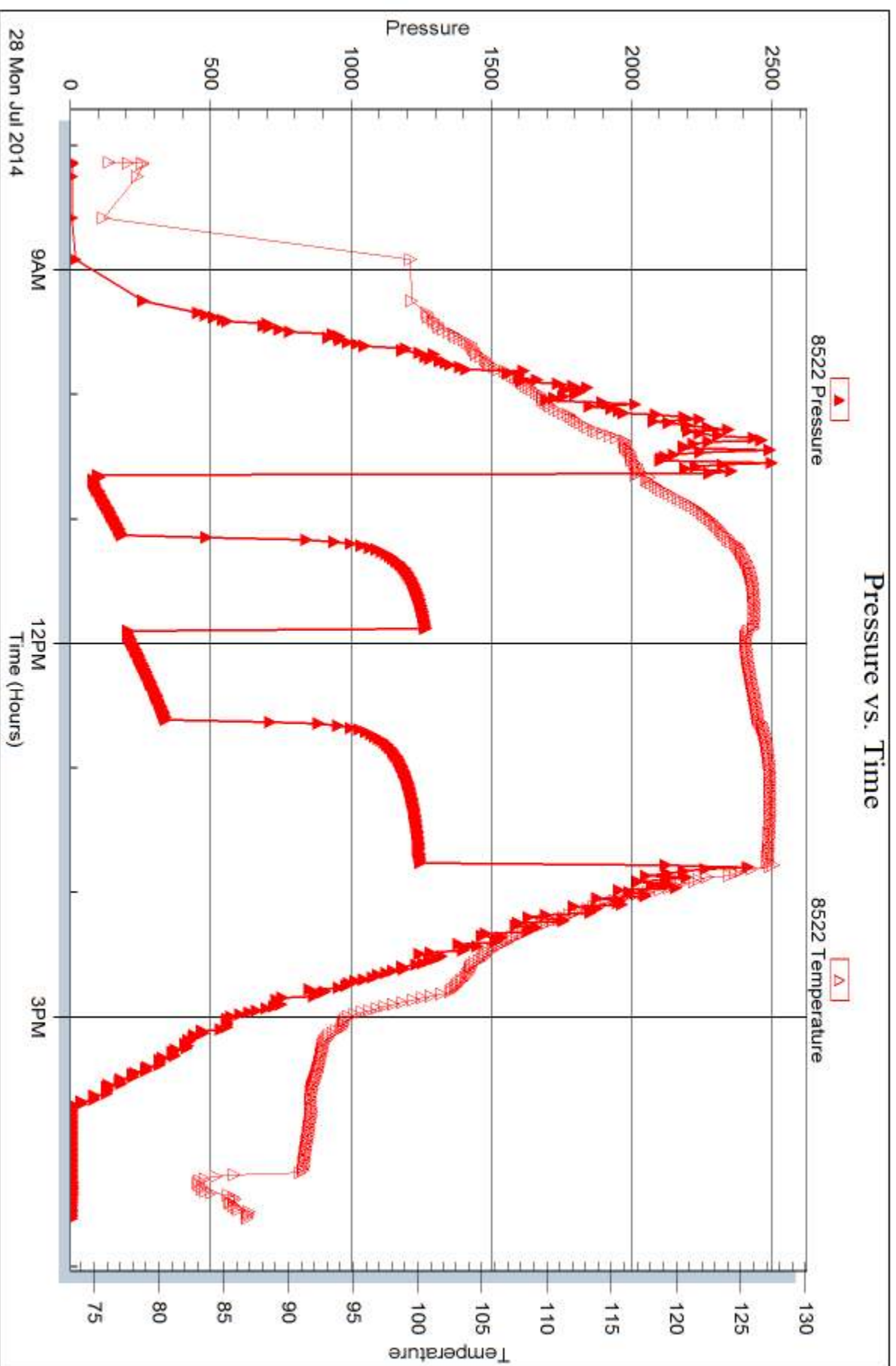
Printed: 2014.08.02 @ 09:11:40

Serial #: 8522

Outside Ritchie Exploration, Inc

Campus Trust #1

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc**

8100 E 22nd St N #700
Wichita, KS 67278-3188

ATTN: Max Lovely

Campus Trust #1

33 16s 37w Wichita,KS

Start Date: 2014.07.28 @ 23:57:00

End Date: 2014.07.29 @ 05:26:00

Job Ticket #: 59136 DST #: 4

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

Printed: 2014.08.02 @ 09:10:58



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration, Inc

8100 E 22nd St N #700
Wichita, KS 67278-3188

ATTN: Max Lovely

33 16s 37w Wichita, KS

Campus Trust #1

Job Ticket: 59136

DST#: 4

Test Start: 2014.07.28 @ 23:57:00

GENERAL INFORMATION:

Formation: **Altamont B**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:35:45

Time Test Ended: 05:26:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 69

Interval: 4522.00 ft (KB) To 4536.00 ft (KB) (TVD)

Total Depth: 4536.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3366.00 ft (KB)

3361.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8365 Inside

Press@RunDepth: 16.05 psig @ 4523.00 ft (KB)

Start Date: 2014.07.28

End Date:

2014.07.29

Start Time: 23:57:05

End Time:

05:25:59

Capacity: 8000.00 psig

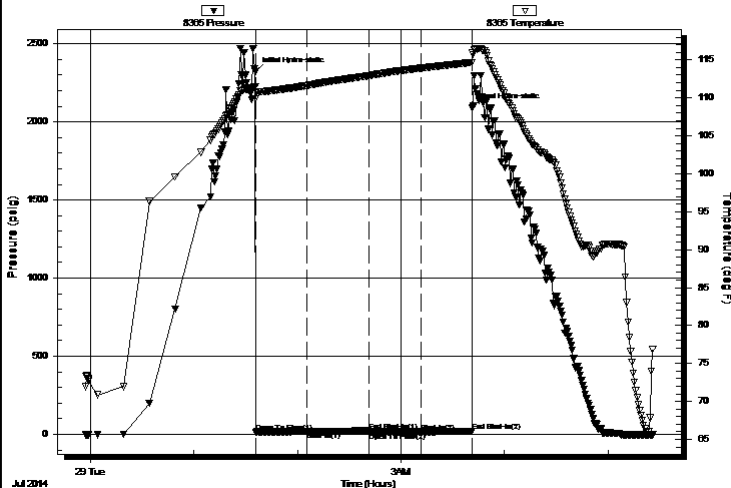
Last Calib.: 2014.07.29

Time On Btm: 2014.07.29 @ 01:35:30

Time Off Btm: 2014.07.29 @ 03:41:30

TEST COMMENT: IF: Surface blow, Died @ 5 min.
IS: No return.
FF: No blow, flushed tool, no help.
FS: No return.

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2321.00	111.44	Initial Hydro-static
1	13.97	109.86	Open To Flow (1)
30	17.22	111.62	Shut-In(1)
66	22.42	112.90	End Shut-In(1)
66	15.49	112.91	Open To Flow (2)
96	16.05	113.91	Shut-In(2)
126	17.27	114.69	End Shut-In(2)
126	2091.45	115.89	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
3.00	Mud 100m (oil spots)	0.01

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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* Recovery from multiple tests



Test Start: 2014.07.28 @ 23:57:00

KB to GR/CF: 5.00 ft

TEST COMMENT: IF: Surface blow , Died @ 5 min.
IS: No return.
FF: No blow , flushed tool, no help.
FS: No return.



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration, Inc

33 16s 37w Wichita, KS

8100 E 22nd St N #700
Wichita, KS 67278-3188

Campus Trust #1

Job Ticket: 59136

DST#: 4

ATTN: Max Lovely

Test Start: 2014.07.28 @ 23:57:00

Tool Information

Drill Pipe:	Length:	4387.00 ft	Diameter:	3.80 inches	Volume:	61.54 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length:	118.00 ft	Diameter:	2.25 inches	Volume:	0.58 bbl	Weight to Pull Loose:	85000.00 lb
					Total Volume:	62.12 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		10.00 ft					String Weight: Initial	66000.00 lb
Depth to Top Packer:		4522.00 ft					Final	66000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		14.00 ft						
Tool Length:		41.00 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			4496.00	
Shut In Tool	5.00			4501.00	
Hydraulic tool	5.00			4506.00	
Jars	5.00			4511.00	
Safety Joint	2.00			4513.00	
Packer	5.00			4518.00	27.00 Bottom Of Top Packer
Packer	4.00			4522.00	
Stubb	1.00			4523.00	
Recorder	0.00	8365	Inside	4523.00	
Recorder	0.00	8522	Outside	4523.00	
Perforations	10.00			4533.00	
Bullnose	3.00			4536.00	14.00 Bottom Packers & Anchor

Total Tool Length: 41.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc

33 16s 37w Wichita, KS

8100 E 22nd St N #700
Wichita, KS 67278-3188

Campus Trust #1

Job Ticket: 59136

DST#: 4

ATTN: Max Lovely

Test Start: 2014.07.28 @ 23:57:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbl

Water Loss: 10.39 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 9100.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
3.00	Mud 100m (oil spots)	0.015

Total Length: 3.00 ft

Total Volume: 0.015 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8365

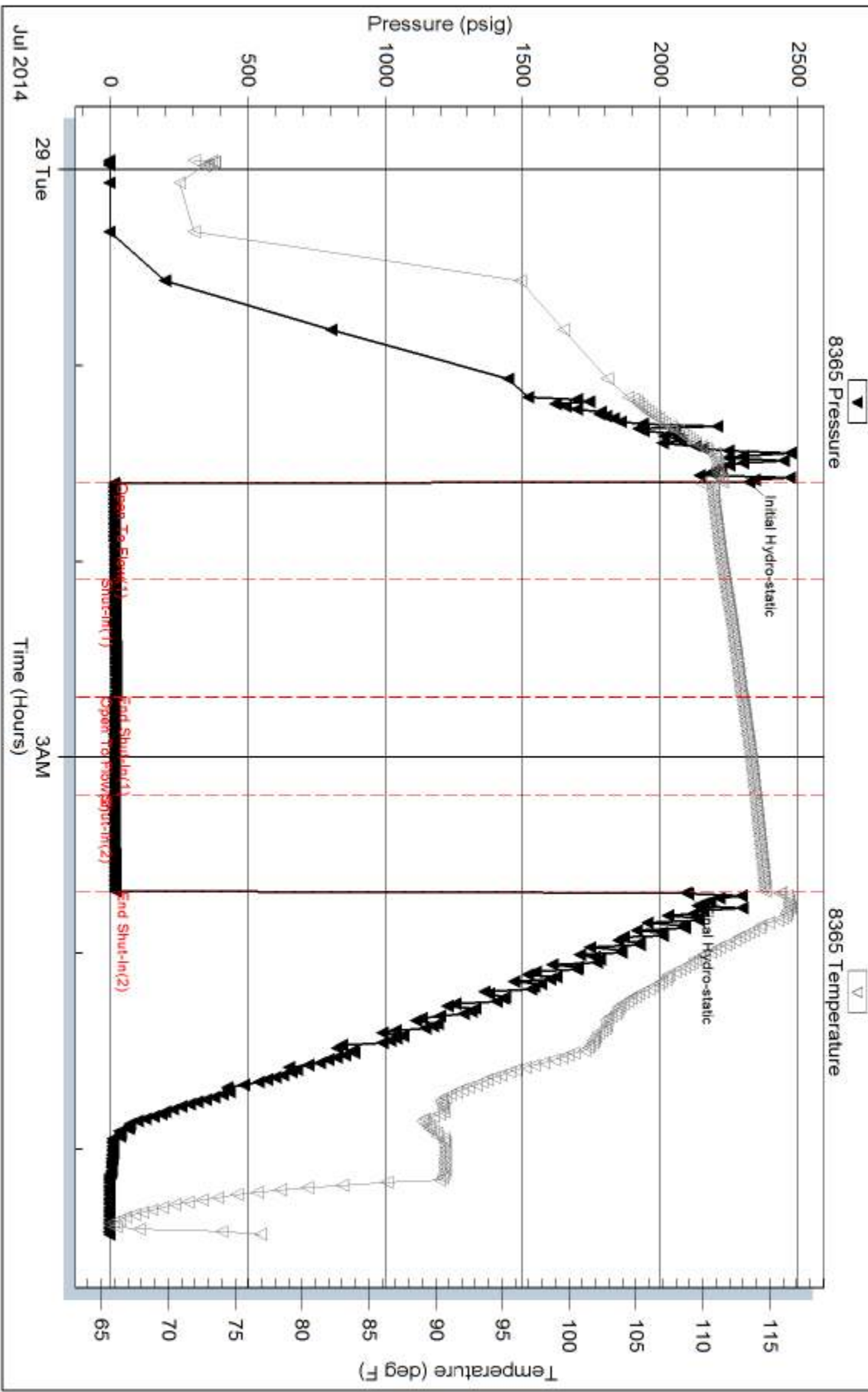
Inside

Ritchie Exploration, Inc

Campus Trust #1

DST Test Number: 4

Pressure vs. Time

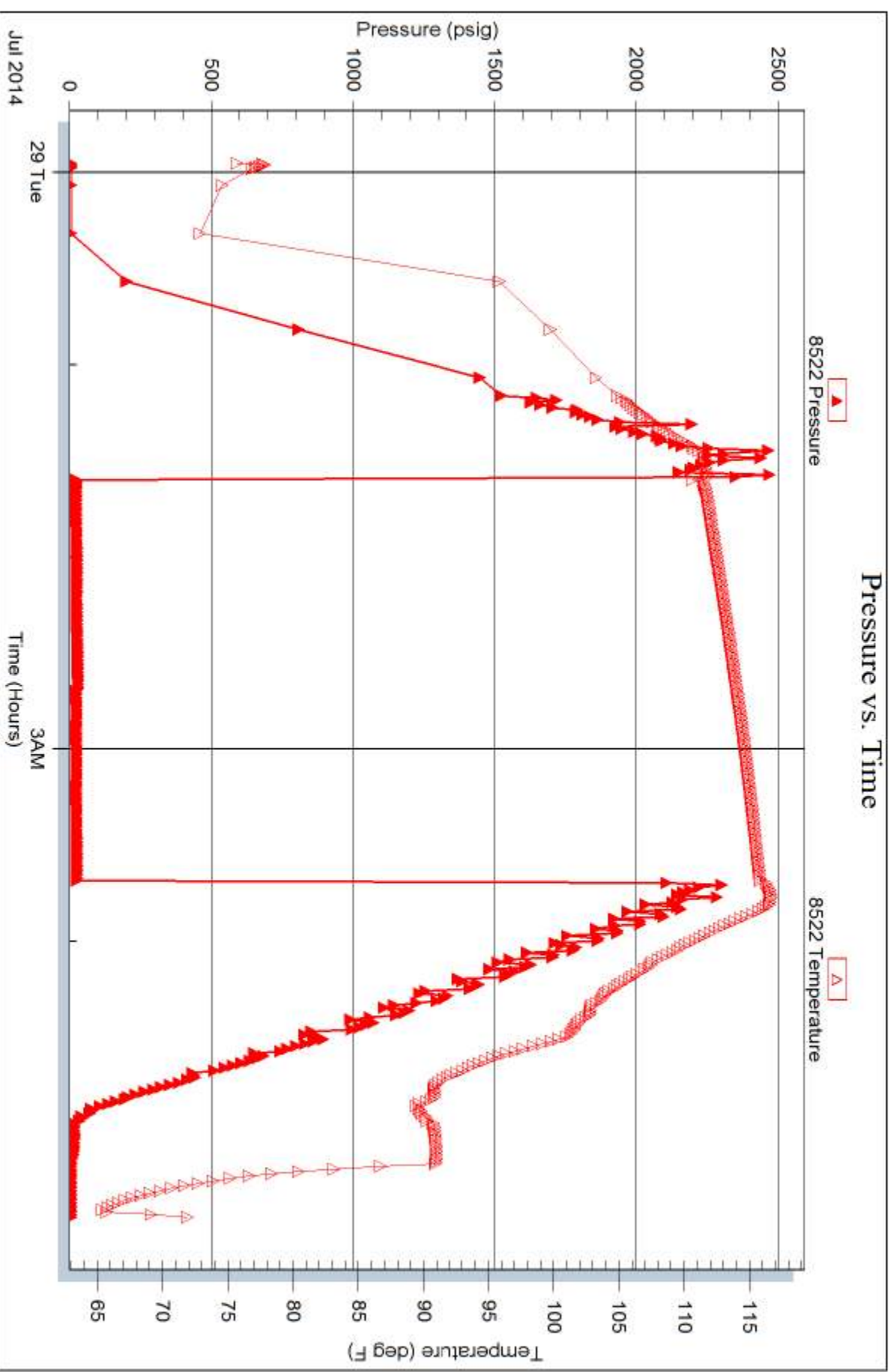


Serial #: 8522

Outside Ritchie Exploration, Inc

Campus Trust #1

DST Test Number: 4





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **59133**

4/10

Well Name & No. <u>#1 Campus Trust</u>	Test No. <u>1</u>	Date <u>7-25-14</u>
Company <u>Ritchie Exploration, Inc</u>	Elevation <u>3366</u>	KB <u>3361</u> GL
Address <u>8100 E 22nd St N #700</u>	<u>Wichita, KS</u>	<u>67278</u>
Co. Rep / Geo. <u>Max Lovely</u>	Rig <u>WW #2</u>	
Location: Sec. <u>33</u>	Twp. <u>16S</u>	Rge. <u>37W</u> Co. <u>Wichita</u> State <u>Ks</u>

Interval Tested <u>4044 - 4080</u>	Zone Tested <u>Lkc "A"</u>
Anchor Length <u>36</u>	Drill Pipe Run <u>3918</u>
Top Packer Depth <u>4039</u>	Drill Collars Run <u>118</u>
Bottom Packer Depth <u>4044</u>	Wt. Pipe Run <u>Ø</u>
Total Depth <u>4080</u>	Chlorides <u>4,000</u> ppm System
	Mud Wt. <u>9.0</u>
	Vis <u>50</u>
	WL <u>8.0</u>
	LCM <u>2 #</u>

Blow Description IF: BOB @ 1 1/2 min.
TSI: No return.
FF: BOB @ 2 min.
FSI: No return.

Rec <u>1990</u>	Feet of <u>snw</u>	%gas	%oil	<u>97</u> %water	<u>3</u> %mud
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>1990</u>	BHT <u>120</u>	Gravity <u>—</u>	API RW <u>220 @ 63° F</u>	Chlorides <u>36,000</u> ppm
(A) Initial Hydrostatic <u>2018</u>	☒ Test <u>1250</u>	T-On Location <u>2100</u> <u>7-25</u>		
(B) First Initial Flow <u>200</u>	☒ Jars <u>250</u>	T-Started <u>2318</u>		
(C) First Final Flow <u>627</u>	☒ Safety Joint <u>75</u>	T-Open <u>0130</u>		
(D) Initial Shut-In <u>1116</u>	☒ Circ Sub <u>N/C</u>	T-Pulled <u>0400</u>		
(E) Second Initial Flow <u>646</u>	☐ Hourly Standby	T-Out <u>0614</u> <u>7-26</u>		
(F) Second Final Flow <u>900</u>	☒ Mileage <u>27 RT</u> <u>119.35</u>	Comments		
(G) Final Shut-In <u>1118</u>	☐ Sampler			
(H) Final Hydrostatic <u>2017</u>	☐ Straddle			

Initial Open <u>30</u>	☐ Ruined Shale Packer
Initial Shut-In <u>45</u>	☐ Ruined Packer
Final Flow <u>30</u>	☐ Extra Copies
Final Shut-In <u>45</u>	Sub Total <u>0</u>
	Total <u>1694.35</u>
	MP/DST Disc't
	Sub Total <u>1694.35</u>

Approved By _____ Our Representative [Signature]

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



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 59134

Well Name & No. #1 Campus Trust Test No. 2 Date 7/27/14
 Company Ritchie Exploration, Inc Elevation 3366 KB 3361 GL
 Address 8100 E 22nd St N #700 Wichita, KS 67278
 Co. Rep / Geo. Max Lovely Rig WW #2
 Location: Sec. 33 Twp. 16S Rge. 37W Co. Wichita State KS

Interval Tested 4277-4337 Zone Tested LKC - I&J
 Anchor Length 60' Drill Pipe Run 4166 Mud Wt. 9.1
 Top Packer Depth 4272 Drill Collars Run 118 Vis 57
 Bottom Packer Depth 4277 Wt. Pipe Run 0 WL 9.6
 Total Depth 4337 Chlorides 8300 ppm System LCM 2#

Blow Description IF: BOB@ 10 min.
ISI: No return.
FF: BOB@ 12 min.
FSI: No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>815</u>	<u>MCW (oil spots throughout)</u>			<u>90</u>	<u>10</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 815 BHT 123 Gravity — API RW 143 @ 90 °F Chlorides 39,000 ppm
 (A) Initial Hydrostatic 2195 ☒ Test 1250 T-On Location 0630
 (B) First Initial Flow 94 ☒ Jars 250 T-Started 0656
 (C) First Final Flow 235 ☒ Safety Joint 75 T-Open 0903
 (D) Initial Shut-In 1237 ☒ Circ Sub 4/L T-Pulled 1203
 (E) Second Initial Flow 222 ☐ Hourly Standby T-Out 1433
 (F) Second Final Flow 416 ☒ Mileage 28 Rt 119.35 Comments
 (G) Final Shut-In 1233 ☐ Sampler
 (H) Final Hydrostatic 2045 ☐ Straddle
☐ Shale Packer
☐ Extra Packer
☐ Extra Recorder
☐ Day Standby
☐ Accessibility

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

Sub Total 1694.35

Approved By _____ Our Representative [Signature]

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**TRILOBITE
TESTING INC.**

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **59135**

Well Name & No. #1 Campus Trust Test No. 3 Date 7/28/14
 Company Ritchie Exploration, Inc Elevation 3366 KB 3361 GL
 Address 8100 E 22nd St N #700 Wichita, KS 67278
 Co. Rep / Geo. Max Lovely Rig WW#2
 Location: Sec. 33 Twp. 16S Rge. 37W Co. Wichita State KS

Interval Tested 4498 4520 Zone Tested Altamont A
 Anchor Length 22' Drill Pipe Run 4385 Mud Wt. 9.1
 Top Packer Depth 4493 Drill Collars Run 118 Vis 54
 Bottom Packer Depth 4498 Wt. Pipe Run 0 WL 10.4
 Total Depth 4520 Chlorides 9100 ppm System LCM 2#

Blow Description IF: BOB @ 4 min
ISI: 5" return.
FF: BOB @ 3 min.
FSI: 3" return. receded to 2"

Rec	Feet of	%gas	%oil	%water	%mud
<u>180</u>	<u>60 30g 700</u>	<u>30</u>	<u>70</u>		
<u>325</u>	<u>60 35g</u>	<u>35</u>	<u>65</u>		
<u>160</u>	<u>GMCO</u>	<u>30</u>	<u>45</u>		<u>25</u>
	<u>1200' GIP</u>				

Rec Total 865 BHT 127 Gravity 29 API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>2275</u>	☒ Test <u>1250</u>	T-On Location <u>0700</u>
(B) First Initial Flow <u>74</u>	☒ Jars <u>250</u>	T-Started <u>0808</u>
(C) First Final Flow <u>177</u>	☒ Safety Joint <u>75</u>	T-Open <u>1038</u>
(D) Initial Shut-In <u>1256</u>	☒ Circ Sub <u>N/C</u>	T-Pulled <u>1338</u>
(E) Second Initial Flow <u>197</u>	☐ Hourly Standby	T-Out <u>1637</u>
(F) Second Final Flow <u>334</u>	☒ Mileage <u>78 rr</u> <u>119.35</u>	Comments
(G) Final Shut-In <u>1238</u>	☐ Sampler	
(H) Final Hydrostatic <u>2253</u>	☐ Straddle	

Initial Open <u>30</u>	☐ Extra Packer	Sub Total <u>0</u>
Initial Shut-In <u>45</u>	☐ Extra Recorder	Total <u>1694.35</u>
Final Flow <u>45</u>	☐ Day Standby	MP/DST Disc't
Final Shut-In <u>60</u>	☐ Accessibility	
Sub Total <u>1694.35</u>		

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 59136

Well Name & No. #1 Campus Trust Test No. 4 Date 7/29/14
Company Ritchie Exploration, Inc Elevation 3366 KB 3361 GL
Address 8100 E 22nd St N #700 Wichita, KS 67278
Co. Rep / Geo. Max Lively Rig WW #2
Location: Sec. 33 Twp. 16S Rge. 37W Co. Wichita State KS

Interval Tested 4522-4536 Zone Tested Altamont B
Anchor Length 14' 4516 Drill Pipe Run 4387 Mud Wt. 9.1
Top Packer Depth 4516 4522 Drill Collars Run 118 Vis 56
Bottom Packer Depth 4522 4536 Wt. Pipe Run Ø WL 10.4
Total Depth 4536 Chlorides 9100 ppm System LCM 3[#]

Blow Description IFI: Surface blow died @ 3 min.
ISI: No return.
FF: No blow Flushed tool No help.
FSI: No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>3</u>	<u>Mod</u>			<u>100</u>	
	<u>OIL spots</u>				

Rec Total 3 BHT 117 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic	(B) First Initial Flow	(C) First Final Flow	(D) Initial Shut-In	(E) Second Initial Flow	(F) Second Final Flow	(G) Final Shut-In	(H) Final Hydrostatic
<u>2321</u>	<u>14</u>	<u>17</u>	<u>22</u>	<u>15</u>	<u>17</u>	<u>17</u>	<u>2091</u>

☒ Test 1250
☒ Safety Joint
☒ Circ Sub Nc
☐ Hourly Standby
☒ Mileage 78.4 238.70
☐ Sampler
☐ Straddle
☒ Shale Packer 250

T-On Location 2300 7/28
T-Started 2357
T-Open 0138 7/29
T-Pulled 0338
T-Out 0526 7/29
Comments Ø tool 2200 7/30

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

☐ Extra Packer
☐ Extra Recorder
☒ Day Standby 1d 16.5h
☐ Accessibility
Sub Total 1738.70

☐ Ruined Shale Packer
☐ Ruined Packer
☐ Extra Copies
Sub Total 800
Total 2538.70
MP/DST/Disc't —

Approved By _____ Our Representative [Signature]

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