



DRILL STEM TEST REPORT

Prepared For: **Joe Gerstner Oil LLC**

PO Box 509
Ness City KS 67560

ATTN: Andrew Stenzel

Bradshaw #1-21

21-21s-23w Hodgeman,KS

Start Date: 2013.08.26 @ 16:25:15

End Date: 2013.08.26 @ 23:03:00

Job Ticket #: 52905 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.09.03 @ 14:30:33



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Joe Gerstner Oil LLC

21-21s-23w Hodgeman, KS

PO Box 509
Ness City KS 67560

Bradshaw #1-21

Job Ticket: 52905

DST#: 1

ATTN: Andrew Stenzel

Test Start: 2013.08.26 @ 16:25:15

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:55:00

Time Test Ended: 23:03:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Mike Roberts

Unit No: 65

Interval: 4294.00 ft (KB) To 4430.00 ft (KB) (TVD)

Reference Elevations: 2385.00 ft (KB)

Total Depth: 4430.00 ft (KB) (TVD)

2378.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 8846

Inside

Press @ Run Depth: 647.90 psig @ 4295.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.08.26

End Date:

2013.08.26

Last Calib.:

2013.08.26

Start Time: 16:25:15

End Time:

23:03:00

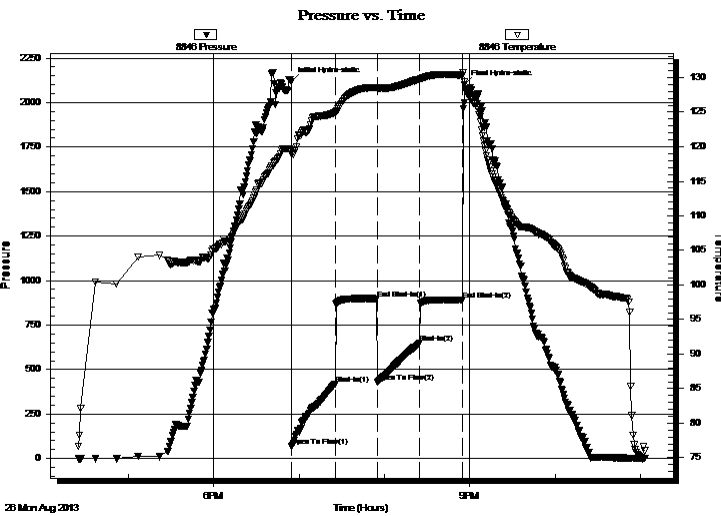
Time On Btm:

2013.08.26 @ 18:54:30

Time Off Btm:

2013.08.26 @ 20:56:15

TEST COMMENT: IF:BOB in 5 min.
IS:No return blow
FF:BOB in 5 min.
FS:No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2118.25	119.42	Initial Hydro-static
1	67.29	118.95	Open To Flow (1)
31	417.94	124.94	Shut-In(1)
61	897.15	128.59	End Shut-In(1)
61	430.08	128.51	Open To Flow (2)
91	647.90	129.75	Shut-In(2)
121	889.51	130.31	End Shut-In(2)
122	2100.97	128.97	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
310.00	mud 100% m	4.35
496.00	w cm 20%sw 80%m	6.96
620.00	sw 100%sw	8.70

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Joe Gerstner Oil LLC

21-21s-23w Hodgeman, KS

PO Box 509
Ness City KS 67560

Bradshaw #1-21

Job Ticket: 52905

DST#: 1

ATTN: Andrew Stenzel

Test Start: 2013.08.26 @ 16:25:15

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:55:00

Time Test Ended: 23:03:00

Interval: 4294.00 ft (KB) To 4430.00 ft (KB) (TVD)

Total Depth: 4430.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Initial)

Tester: Mike Roberts

Unit No: 65

Reference Elevations: 2385.00 ft (KB)

2378.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: 8737 Outside

Press @ Run Depth: psig @ 4295.00 ft (KB)

Start Date: 2013.08.26

End Date:

2013.08.26

Start Time: 16:25:15

End Time:

23:03:15

Capacity: 8000.00 psig

Last Calib.:

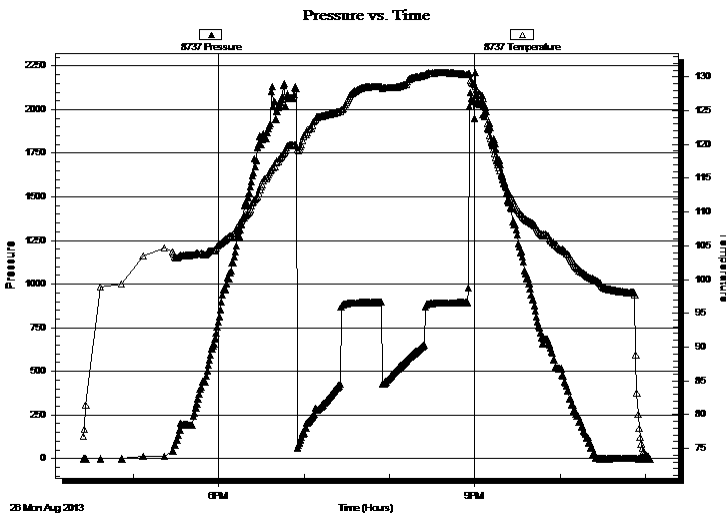
2013.08.26

Time On Btm:

Time Off Btm:

TEST COMMENT: IF:BOB in 5 min.
IS:No return blow
FF:BOB in 5 min.
FS:No return blow

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
310.00	mud 100% m	4.35
496.00	w cm 20%sw 80%m	6.96
620.00	sw 100%sw	8.70

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Joe Gerstner Oil LLC

21-21s-23w Hodgeman,KS

PO Box 509
Ness City KS 67560

Bradshaw #1-21

Job Ticket: 52905

DST#: 1

ATTN: Andrew Stenzel

Test Start: 2013.08.26 @ 16:25:15

Tool Information

Drill Pipe:	Length: 4282.00 ft	Diameter: 3.80 inches	Volume: 60.07 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 60.07 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4294.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	136.00 ft			
Tool Length:	160.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Change Over Sub	1.00			4271.00	
Shut In Tool	5.00			4276.00	
Hydraulic tool	5.00			4281.00	
Jars	5.00			4286.00	
Safety Joint	3.00			4289.00	
Packer	5.00			4294.00	24.00 Bottom Of Top Packer
Packer - Shale	0.00			4294.00	
Stubb	1.00			4295.00	
Recorder	0.00	8846	Inside	4295.00	
Recorder	0.00	8737	Outside	4295.00	
Perforations	3.00			4298.00	
Change Over Sub	1.00			4299.00	
Drill Pipe	125.00			4424.00	
Change Over Sub	1.00			4425.00	
Bullnose	5.00			4430.00	136.00 Anchor Tool

Total Tool Length: 160.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Joe Gerstner Oil LLC

21-21s-23w Hodgeman,KS

PO Box 509
Ness City KS 67560

Bradshaw #1-21

Job Ticket: 52905

DST#: 1

ATTN: Andrew Stenzel

Test Start: 2013.08.26 @ 16:25:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

24000 ppm

Viscosity: 62.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 10.72 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3800.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
310.00	mud 100% m	4.348
496.00	w cm 20%sw 80%m	6.958
620.00	sw 100%sw	8.697

Total Length: 1426.00 ft Total Volume: 20.003 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW= .256@ 80*=24,000 ppm

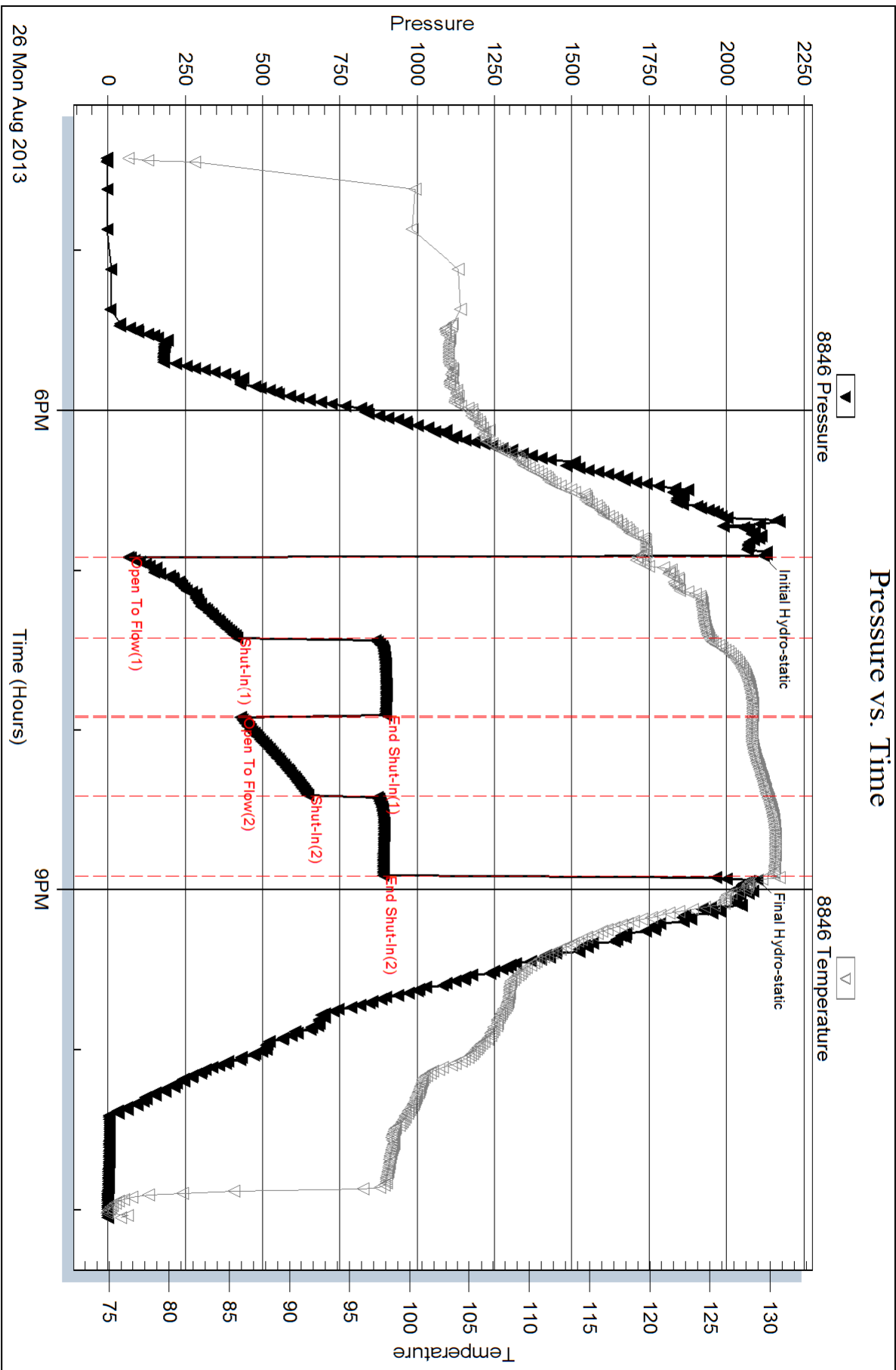
Serial #: 8846

Inside

Joe Gerstner Oil LLC

Bradshaw #1-21

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 52905

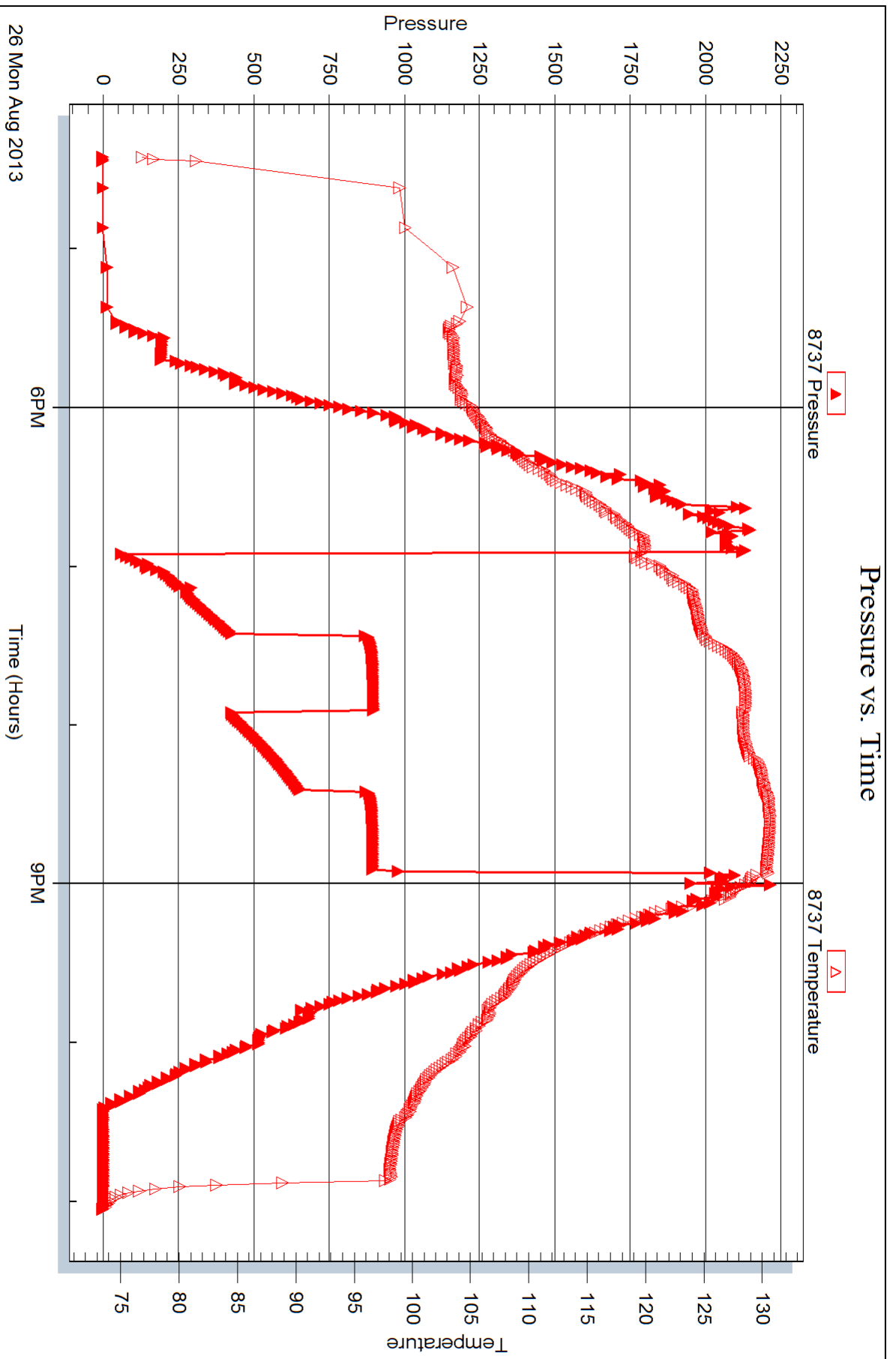
Printed: 2013.09.03 @ 14:30:36

Serial #: 8737

Outside Joe Gerstner Oil LLC

Bradshaw #1-21

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Joe Gerstner Oil LLC**

PO Box 509
Ness City KS 67560

ATTN: Andrew Stenzel

Bradshaw #1-21

21-21s-23w Hodgeman,KS

Start Date: 2013.08.27 @ 17:56:15

End Date: 2013.08.28 @ 01:05:00

Job Ticket #: 52906 DST #: 2

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

Printed: 2013.09.03 @ 14:28:43



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Joe Gerstner Oil LLC

21-21s-23w Hodgeman, KS

PO Box 509
Ness City KS 67560

Bradshaw #1-21

Job Ticket: 52906

DST#: 2

ATTN: Andrew Stenzel

Test Start: 2013.08.27 @ 17:56:15

GENERAL INFORMATION:

Formation: **Miss**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:56:30

Time Test Ended: 01:05:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 65

Interval: 4522.00 ft (KB) To 4600.00 ft (KB) (TVD)

Reference Elevations: 2385.00 ft (KB)

Total Depth: 4600.00 ft (KB) (TVD)

2378.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 8846 Inside

Press @ Run Depth: 79.78 psig @ 4523.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.08.27

End Date:

2013.08.28

Last Calib.:

2013.08.28

Start Time: 17:56:15

End Time:

01:05:00

Time On Btm:

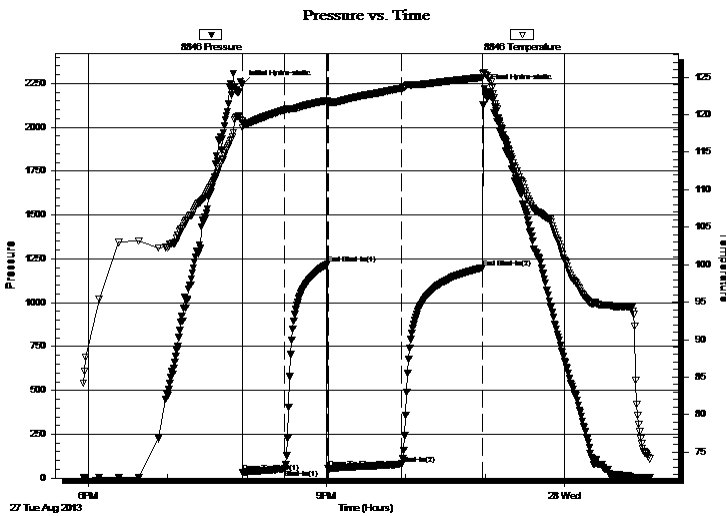
2013.08.27 @ 19:56:15

Time Off Btm:

2013.08.27 @ 22:59:15

TEST COMMENT: IF: Built to 4" blow
IS: No return blow
FF: BOB in 39 min.
FS: No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2242.49	119.12	Initial Hydro-static
1	33.93	118.29	Open To Flow (1)
32	50.86	120.62	Shut-In(1)
65	1219.83	121.87	End Shut-In(1)
65	54.16	121.65	Open To Flow (2)
121	79.78	123.51	Shut-In(2)
182	1198.98	124.96	End Shut-In(2)
183	2220.22	125.64	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	GIP= 124	0.00
30.00	free oil 100% o	0.42
62.00	gcmo 10%g 30%m 60%o	0.87
62.00	ocgm 5%o 10%g 85%m	0.87

Gas Rates

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

* Recovery from multiple tests



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Joe Gerstner Oil LLC
PO Box 509
Ness City KS 67560
ATTN: Andrew Stenzel

21-21s-23w Hodgeman,KS
Bradshaw #1-21
Job Ticket: 52906 **DST#: 2**
Test Start: 2013.08.27 @ 17:56:15

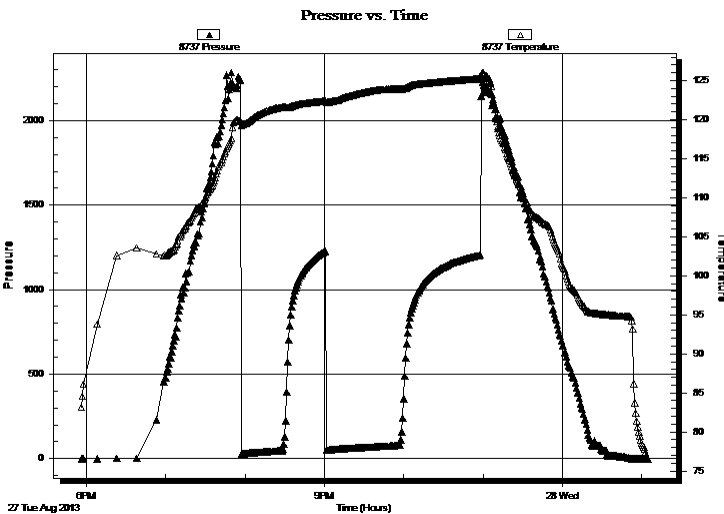
GENERAL INFORMATION:

Formation: **Miss**
Deviated: **No Whipstock:** ft (KB) Test Type: **Conventional Bottom Hole (Reset)**
Time Tool Opened: 19:56:30 Tester: **Mike Roberts**
Time Test Ended: 01:05:00 Unit No: **65**
Interval: 4522.00 ft (KB) To 4600.00 ft (KB) (TVD) Reference Elevations: 2385.00 ft (KB)
Total Depth: 4600.00 ft (KB) (TVD) 2378.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 7.00 ft

Serial #: 8737 Outside

Press @ RunDepth: psig @ 4523.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2013.08.27 End Date: 2013.08.28 Last Calib.: 2013.08.28
Start Time: 17:56:15 End Time: 01:05:00 Time On Btm:
Time Off Btm:

TEST COMMENT: IF:Built to 4" blow
IS:No return blow
FF:BOB in 39 min.
FS:No return blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
0.00	GIP= 124	0.00
30.00	free oil 100% o	0.42
62.00	gcmo 10%g 30%m 60%o	0.87
62.00	ocgm 5%o 10%g 85%m	0.87

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Joe Gerstner Oil LLC

21-21s-23w Hodgeman,KS

PO Box 509
Ness City KS 67560

Bradshaw #1-21

Job Ticket: 52906

DST#: 2

ATTN: Andrew Stenzel

Test Start: 2013.08.27 @ 17:56:15

Tool Information

Drill Pipe:	Length: 4507.00 ft	Diameter: 3.80 inches	Volume: 63.22 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 63.22 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4522.00 ft			Final 61000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	78.00 ft			
Tool Length:	102.00 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			4499.00	
Shut In Tool	5.00			4504.00	
Hydraulic tool	5.00			4509.00	
Jars	5.00			4514.00	
Safety Joint	3.00			4517.00	
Packer	5.00			4522.00	24.00 Bottom Of Top Packer
Packer - Shale	0.00			4522.00	
Stubb	1.00			4523.00	
Recorder	0.00	8846	Inside	4523.00	
Recorder	0.00	8737	Outside	4523.00	
Perforations	7.00			4530.00	
Change Over Sub	1.00			4531.00	
Drill Pipe	63.00			4594.00	
Change Over Sub	1.00			4595.00	
Bullnose	5.00			4600.00	78.00 Anchor Tool

Total Tool Length: 102.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Joe Gerstner Oil LLC

21-21s-23w Hodgeman,KS

PO Box 509
Ness City KS 67560

Bradshaw #1-21

Job Ticket: 52906

DST#: 2

ATTN: Andrew Stenzel

Test Start: 2013.08.27 @ 17:56:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

36 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 11.15 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
0.00	GIP= 124	0.000
30.00	free oil 100% o	0.421
62.00	gcmo 10%g 30%m 60%o	0.870
62.00	ocgm 5%o 10%g 85%m	0.870

Total Length: 154.00 ft Total Volume: 2.161 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: API 37 @70 corrected to 36

Serial #: 8846

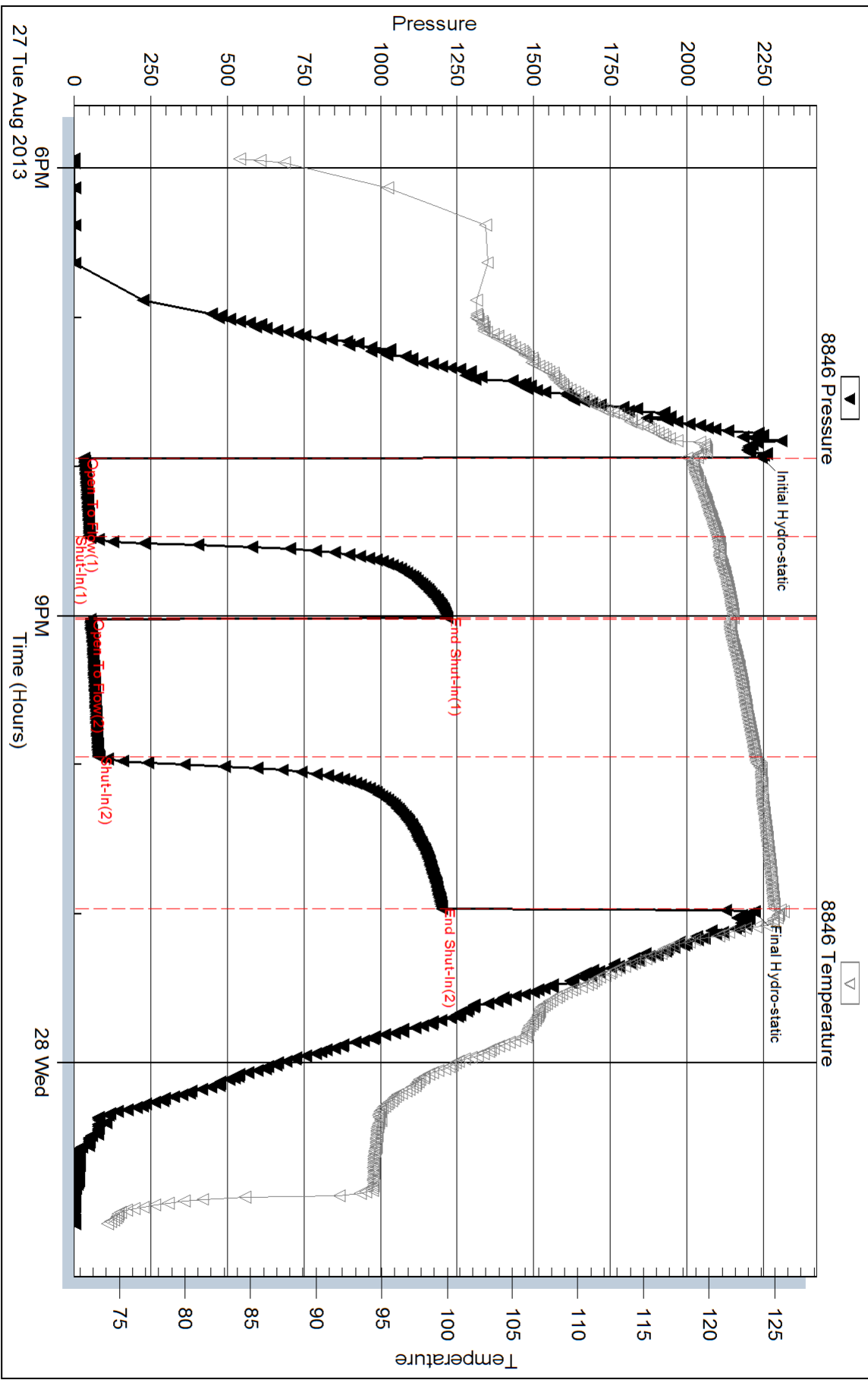
Inside

Joe Gerstner Oil LLC

Bradshaw #1-21

DST Test Number: 2

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 52906

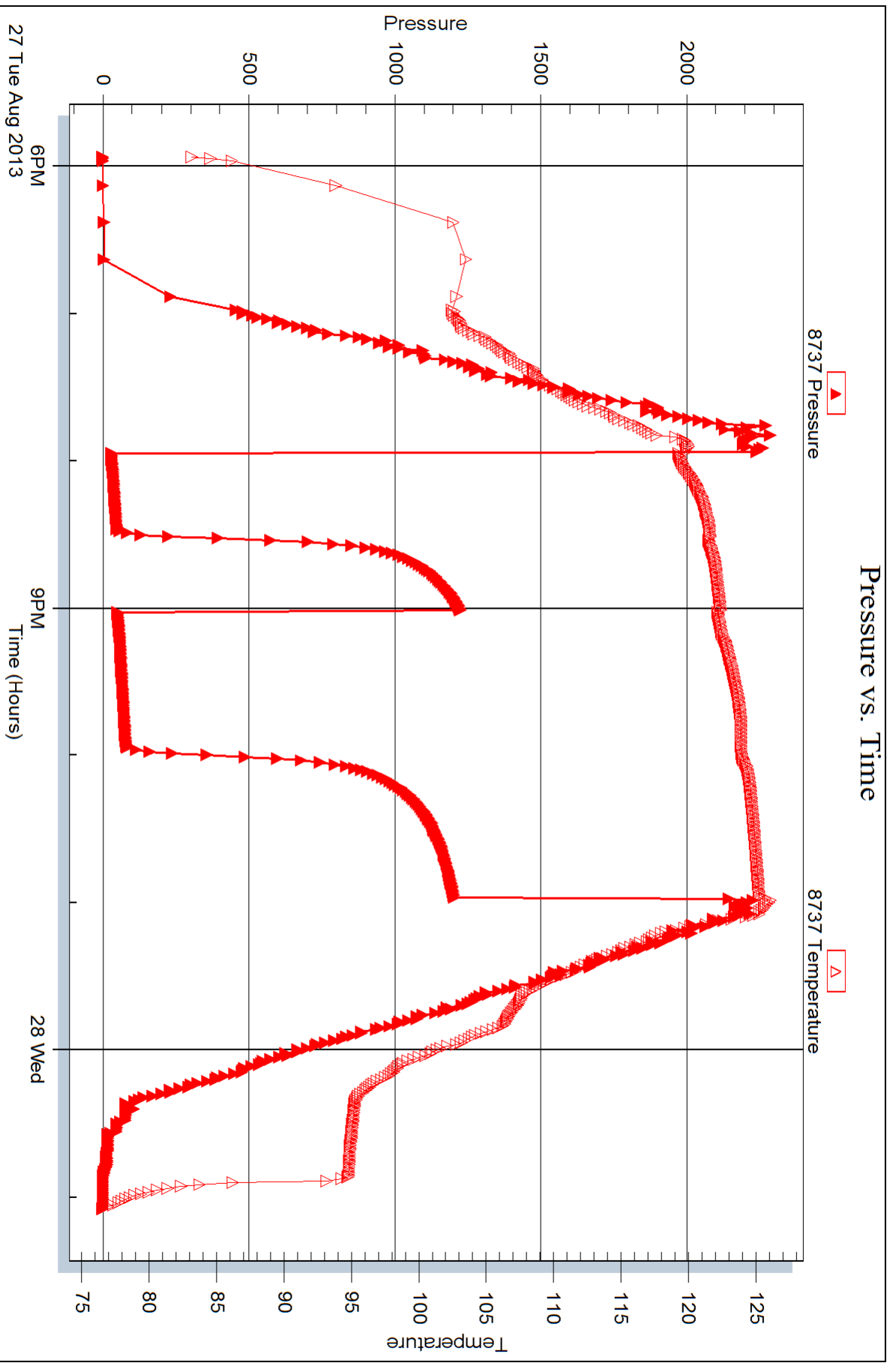
Printed: 2013.09.03 @ 14:28:45

Serial #: 8737

Outside Joe Gerstner Oil LLC

Bradshaw #1-21

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Joe Gerstner Oil LLC**

PO Box 509
Ness City KS 67560

ATTN: Andrew Stenzel

Bradshaw #1-21

21-21s-23w Hodgeman,KS

Start Date: 2013.08.28 @ 08:38:15

End Date: 2013.08.28 @ 13:58:15

Job Ticket #: 52907 DST #: 3

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

Printed: 2013.09.03 @ 14:28:03



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Joe Gerstner Oil LLC

21-21s-23w Hodgeman, KS

PO Box 509
Ness City KS 67560

Bradshaw #1-21

Job Ticket: 52907

DST#: 3

ATTN: Andrew Stenzel

Test Start: 2013.08.28 @ 08:38:15

GENERAL INFORMATION:

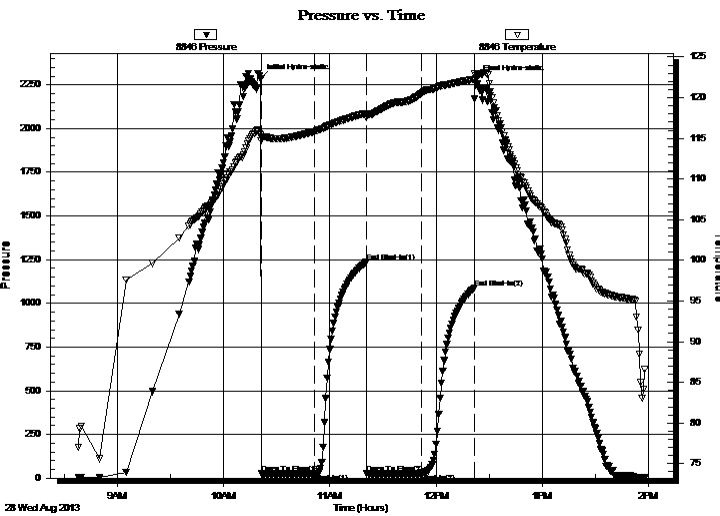
Formation: **Miss**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 10:21:15
 Time Test Ended: 13:58:15
 Interval: **4598.00 ft (KB) To 4606.00 ft (KB) (TVD)**
 Total Depth: 4606.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Mike Roberts
 Unit No: 65
 Reference Elevations: 2385.00 ft (KB)
 2378.00 ft (CF)
 KB to GR/CF: 7.00 ft

Serial #: 8846

Outside

Press @ Run Depth: 25.13 psig @ 4599.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.08.28 End Date: 2013.08.28 Last Calib.: 2013.08.28
 Start Time: 08:38:15 End Time: 13:58:15 Time On Btm: 2013.08.28 @ 10:21:00
 Time Off Btm: 2013.08.28 @ 12:22:30

TEST COMMENT: IF: Built to weak surface
 IS: No return blow
 FF: No blow
 FS: No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2286.92	115.39	Initial Hydro-static
1	25.59	114.72	Open To Flow (1)
31	24.90	115.85	Shut-In(1)
60	1235.49	118.09	End Shut-In(1)
60	24.58	117.54	Open To Flow (2)
91	25.13	120.46	Shut-In(2)
121	1088.42	122.26	End Shut-In(2)
122	2283.12	122.75	Final Hydro-static

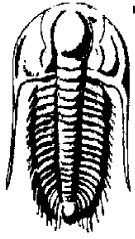
Recovery

Length (ft)	Description	Volume (bbl)
10.00	mud w ith trace of oil 100%m	0.14

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Joe Gerstner Oil LLC

21-21s-23w Hodgeman, KS

PO Box 509
Ness City KS 67560

Bradshaw #1-21

Job Ticket: 52907 **DST#: 3**

ATTN: Andrew Stenzel

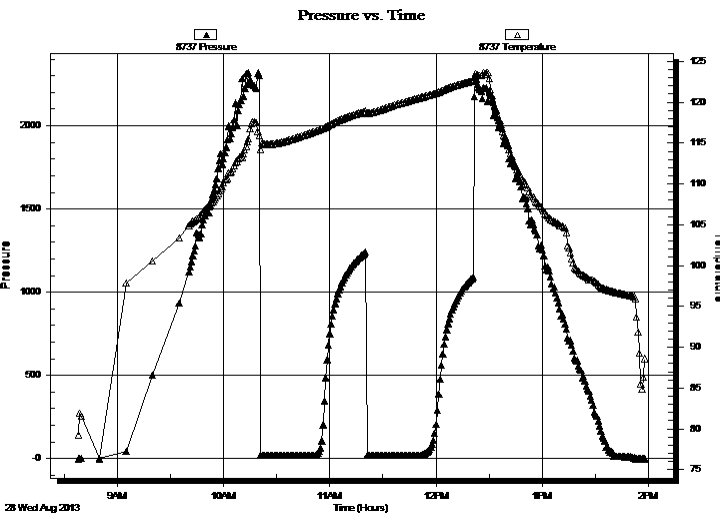
Test Start: 2013.08.28 @ 08:38:15

GENERAL INFORMATION:

Formation: **Miss**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 10:21:15 Tester: Mike Roberts
 Time Test Ended: 13:58:15 Unit No: 65
 Interval: **4598.00 ft (KB) To 4606.00 ft (KB) (TVD)** Reference Elevations: 2385.00 ft (KB)
 Total Depth: 4606.00 ft (KB) (TVD) 2378.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 7.00 ft

Serial #: 8737 Inside
 Press @ Run Depth: psig @ 4599.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.08.28 End Date: 2013.08.28 Last Calib.: 2013.08.28
 Start Time: 08:38:15 End Time: 13:58:00 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF: Built to weak surface
 IS: No return blow
 FF: No blow
 FS: No return blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
10.00	mud with trace of oil 100% m	0.14

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Joe Gerstner Oil LLC

21-21s-23w Hodgeman,KS

PO Box 509
Ness City KS 67560

Bradshaw #1-21

Job Ticket: 52907

DST#: 3

ATTN: Andrew Stenzel

Test Start: 2013.08.28 @ 08:38:15

Tool Information

Drill Pipe:	Length: 4602.00 ft	Diameter: 3.80 inches	Volume: 64.55 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 64.55 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4598.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	8.00 ft			
Tool Length:	32.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
-------------------------	--------------------	-------------------	-----------------	-------------------	-----------------------

Change Over Sub	1.00			4575.00	
Shut In Tool	5.00			4580.00	
Hydraulic tool	5.00			4585.00	
Jars	5.00			4590.00	
Safety Joint	3.00			4593.00	
Packer	5.00			4598.00	24.00 Bottom Of Top Packer
Packer - Shale	0.00			4598.00	
Stubb	1.00			4599.00	
Recorder	0.00	8737	Inside	4599.00	
Recorder	0.00	8846	Outside	4599.00	
Perforations	2.00			4601.00	
Bullnose	5.00			4606.00	8.00 Anchor Tool

Total Tool Length: 32.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Joe Gerstner Oil LLC

21-21s-23w Hodgeman,KS

PO Box 509
Ness City KS 67560

Bradshaw #1-21

Job Ticket: 52907

DST#: 3

ATTN: Andrew Stenzel

Test Start: 2013.08.28 @ 08:38:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 11.15 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	mud w ith trace of oil 100%m	0.140

Total Length: 10.00 ft Total Volume: 0.140 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

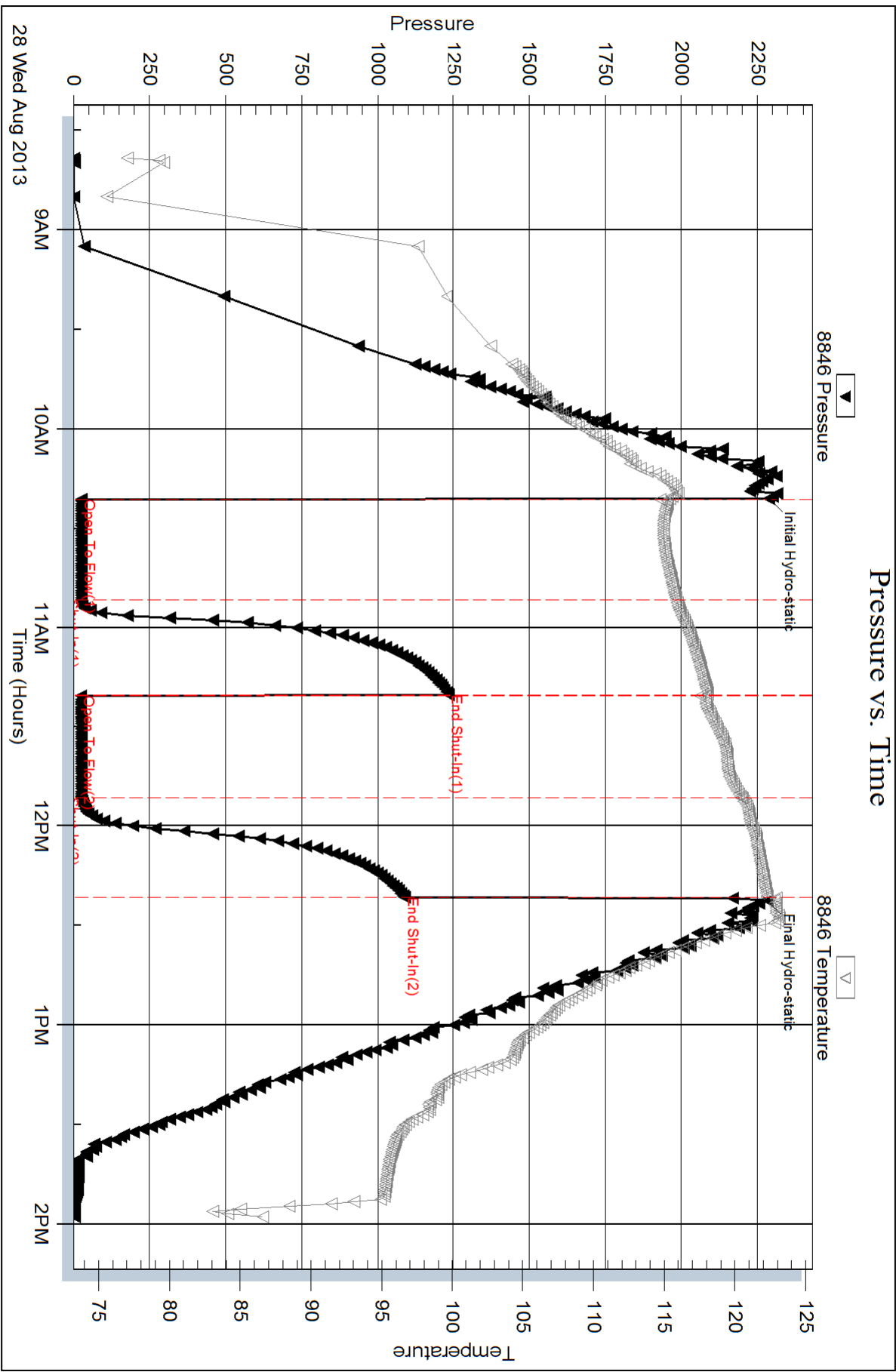
Recovery Comments:

Serial #: 8846

Outside Joe Gerstner Oil LLC

Bradshaw #1-21

DST Test Number: 3



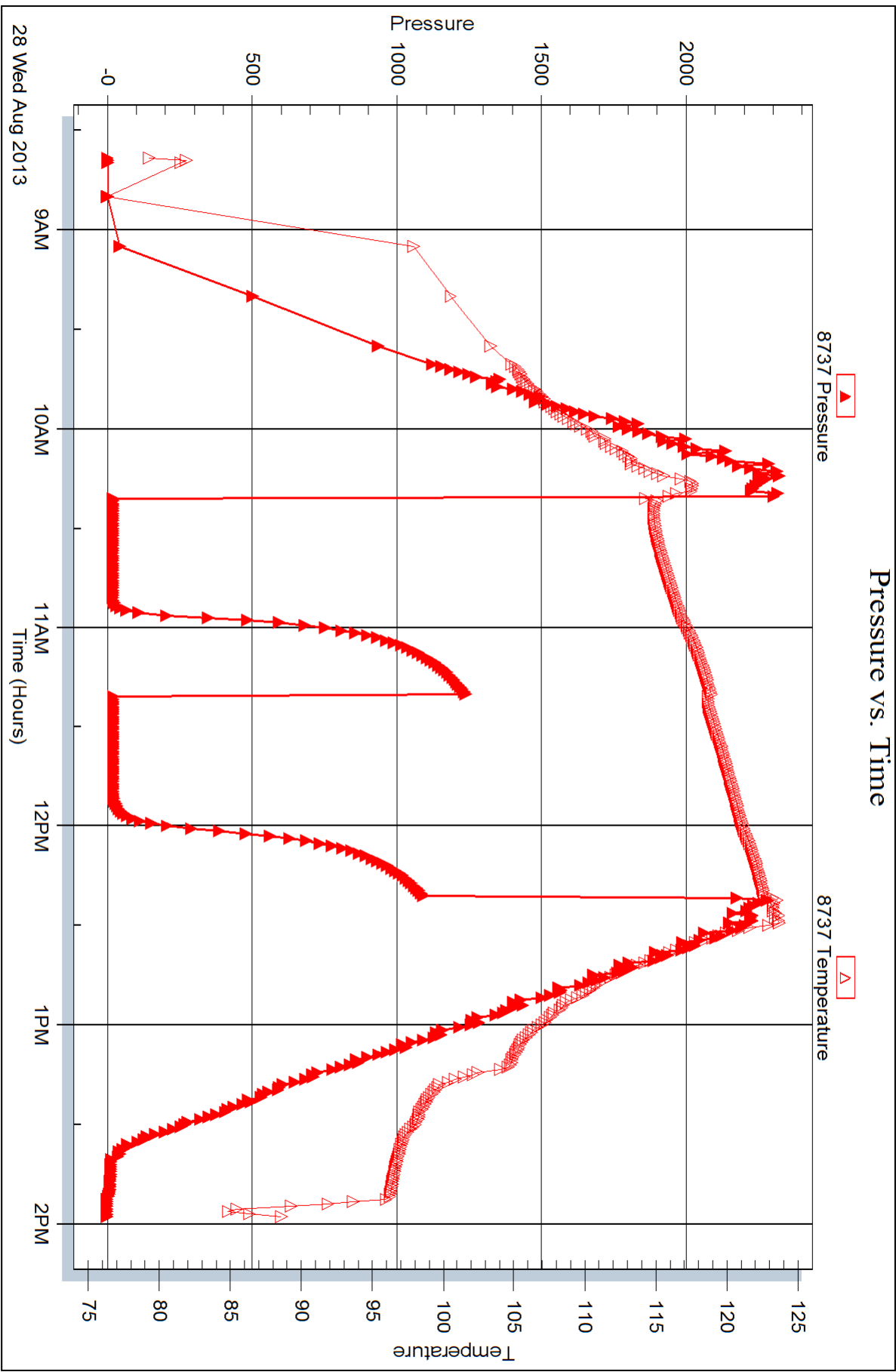
Serial #: 8737

Inside

Joe Gerstner Oil LLC

Bradshaw #1-21

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Joe Gerstner Oil LLC**

PO Box 509
Ness City KS 67560

ATTN: Andrew Stenzel

Bradshaw #1-21

21-21s-23w Hodgeman,KS

Start Date: 2013.08.28 @ 20:07:15

End Date: 2013.08.29 @ 01:57:30

Job Ticket #: 52908 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.09.03 @ 14:25:40

Joe Gerstner Oil LLC
21-21s-23w Hodgeman,KS
Bradshaw #1-21
DST # 4
Miss
2013.08.28



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Joe Gerstner Oil LLC

21-21s-23w Hodgeman, KS

PO Box 509
Ness City KS 67560

Bradshaw #1-21

Job Ticket: 52908

DST#: 4

ATTN: Andrew Stenzel

Test Start: 2013.08.28 @ 20:07:15

GENERAL INFORMATION:

Formation: **Miss**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 21:51:30
 Time Test Ended: 01:57:30
 Interval: **4603.00 ft (KB) To 4616.00 ft (KB) (TVD)**
 Total Depth: 4616.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Mike Roberts
 Unit No: 65
 Reference Elevations: 2385.00 ft (KB)
 2378.00 ft (CF)
 KB to GR/CF: 7.00 ft

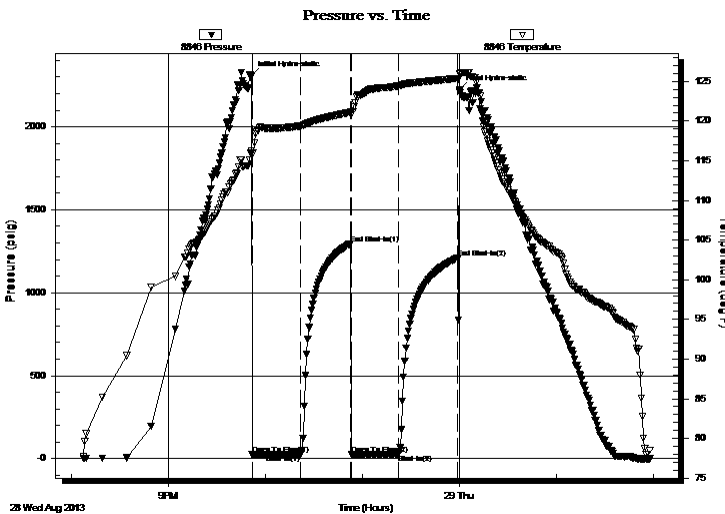
Serial #: 8846

Outside

Press @ Run Depth: 25.38 psig @ 4604.00 ft (KB)
 Start Date: 2013.08.28 End Date: 2013.08.29
 Start Time: 20:07:15 End Time: 01:57:30
 Capacity: 8000.00 psig
 Last Calib.: 2013.08.29
 Time On Btm: 2013.08.28 @ 21:51:15
 Time Off Btm: 2013.08.29 @ 00:00:00

TEST COMMENT: IF: Built to 1/4" blow
 IS: No return blow
 FF: No blow
 FS: No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2310.73	116.29	Initial Hydro-static
1	24.02	115.83	Open To Flow (1)
30	23.45	119.37	Shut-In(1)
61	1295.89	121.12	End Shut-In(1)
62	24.48	120.78	Open To Flow (2)
91	25.38	124.42	Shut-In(2)
128	1211.24	125.39	End Shut-In(2)
129	2226.41	126.00	Final Hydro-static

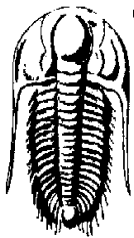
Recovery

Length (ft)	Description	Volume (bbl)
15.00	mud	0.21

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Joe Gerstner Oil LLC

21-21s-23w Hodgeman, KS

PO Box 509
Ness City KS 67560

Bradshaw #1-21

Job Ticket: 52908

DST#: 4

ATTN: Andrew Stenzel

Test Start: 2013.08.28 @ 20:07:15

GENERAL INFORMATION:

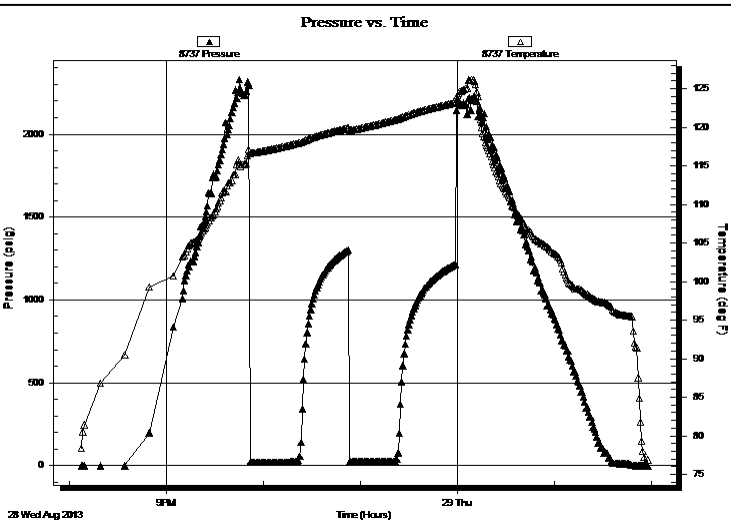
Formation: **Miss**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 21:51:30
 Tester: Mike Roberts
 Time Test Ended: 01:57:30
 Unit No: 65
 Interval: **4603.00 ft (KB) To 4616.00 ft (KB) (TVD)**
 Reference Elevations: 2385.00 ft (KB)
 Total Depth: 4616.00 ft (KB) (TVD)
 2378.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 KB to GR/CF: 7.00 ft

Serial #: 8737

Inside

Press @ Run Depth: psig @ 4604.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.08.28 End Date: 2013.08.29 Last Calib.: 2013.08.29
 Start Time: 20:07:15 End Time: 01:57:30 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF: Built to 1/4" blow
 IS: No return blow
 FF: No blow
 FS: No return blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
15.00	mud	0.21

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Joe Gerstner Oil LLC

21-21s-23w Hodgeman, KS

PO Box 509
Ness City KS 67560

Bradshaw #1-21

Job Ticket: 52908

DST#: 4

ATTN: Andrew Stenzel

Test Start: 2013.08.28 @ 20:07:15

Tool Information

Drill Pipe:	Length: 4600.00 ft	Diameter: 3.80 inches	Volume: 64.53 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 64.53 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial 61000.00 lb
Depth to Top Packer:	4603.00 ft			Final 61000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	13.00 ft			
Tool Length:	37.00 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			4580.00	
Shut In Tool	5.00			4585.00	
Hydraulic tool	5.00			4590.00	
Jars	5.00			4595.00	
Safety Joint	3.00			4598.00	
Packer	5.00			4603.00	24.00 Bottom Of Top Packer
Packer - Shale	0.00			4603.00	
Stubb	1.00			4604.00	
Recorder	0.00	8737	Inside	4604.00	
Recorder	0.00	8846	Outside	4604.00	
Perforations	7.00			4611.00	
Bullnose	5.00			4616.00	13.00 Anchor Tool

Total Tool Length: 37.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Joe Gerstner Oil LLC

21-21s-23w Hodgeman,KS

PO Box 509
Ness City KS 67560

Bradshaw #1-21

Job Ticket: 52908

DST#: 4

ATTN: Andrew Stenzel

Test Start: 2013.08.28 @ 20:07:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 46.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 10.37 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4800.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	mud	0.210

Total Length: 15.00 ft Total Volume: 0.210 bbl

Num Fluid Samples: 0

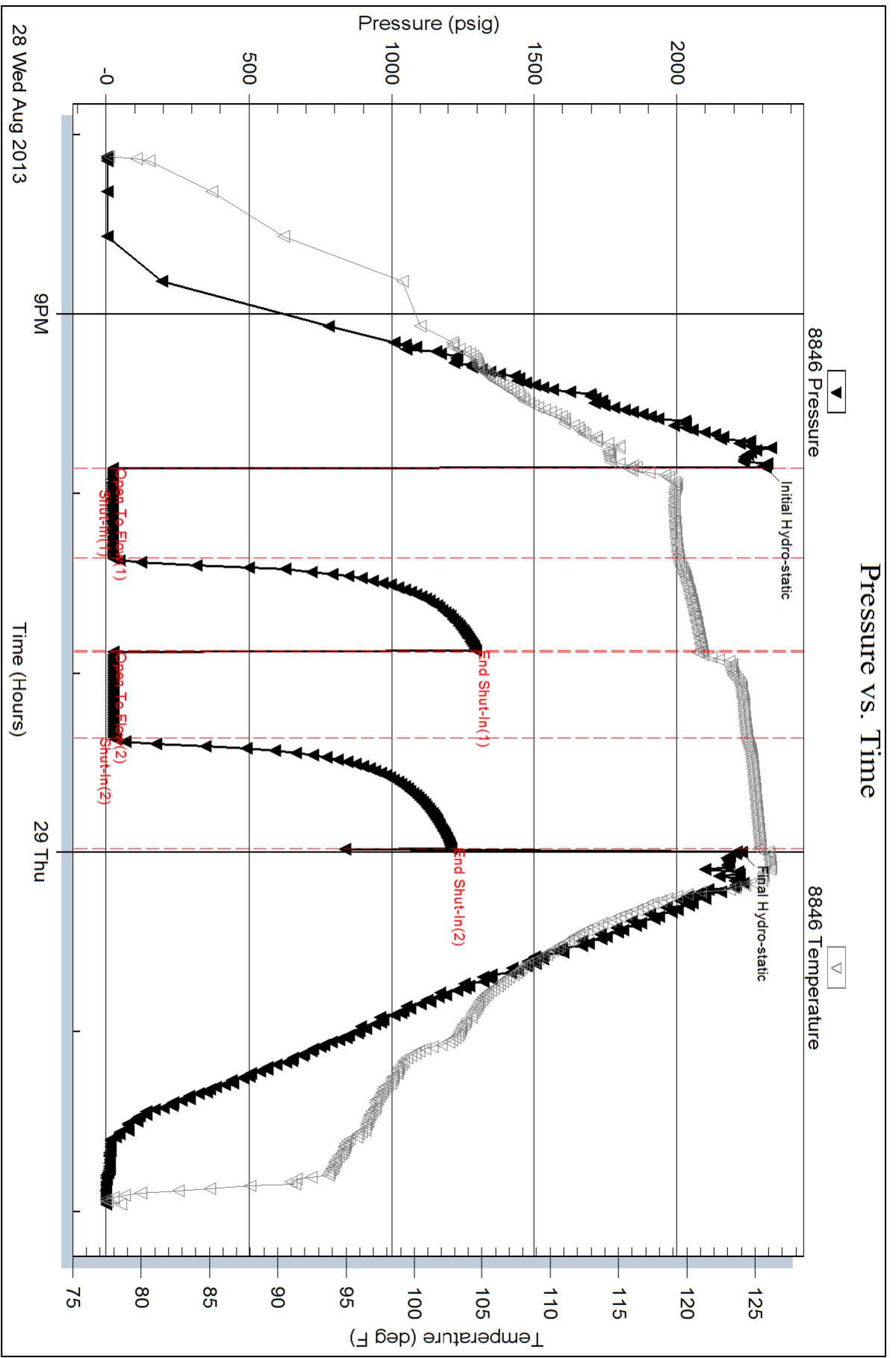
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



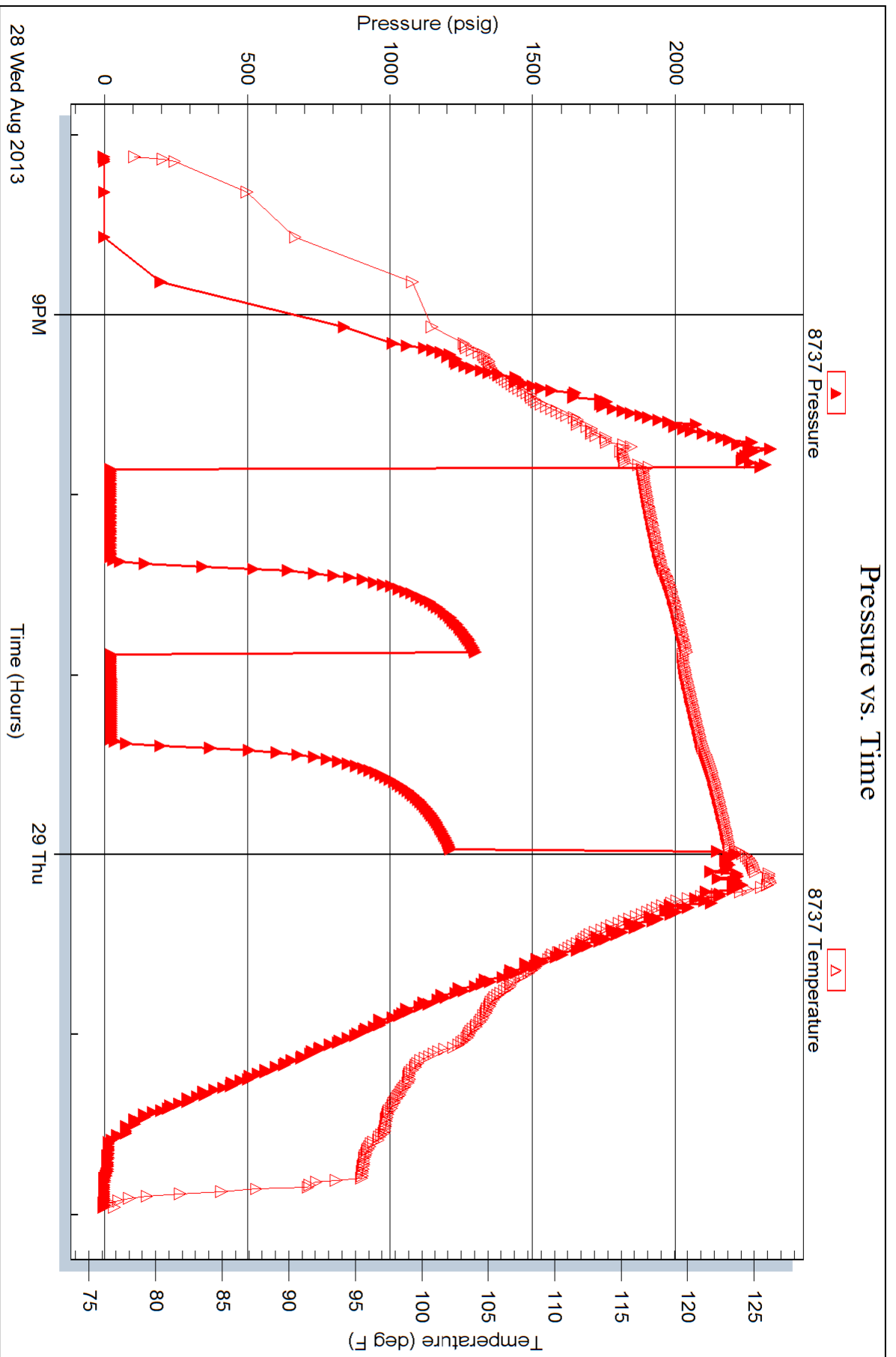
Serial #: 8737

Inside

Joe Gerstner Oil LLC

Bradshaw #1-21

DST Test Number: 4





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52905

Well Name & No. Bradshaw 1-21 Test No. 1 Date 8-26-13
 Company Joe Grestner Oil LLC Elevation 2385 KB 2378 GL
 Address P.O. Box 509 Ness City KS 67560
 Co. Rep / Geo. Andrew Stenzel Rig Pickrell 10
 Location: Sec. 21 Twp. 21 Rge. 23W Co. Hodgeman State KS

Interval Tested 4294-4430 Zone Tested Marmaton
 Anchor Length 136 Drill Pipe Run 4282 Mud Wt. 9.4
 Top Packer Depth 4290 Drill Collars Run Ø Vis 62
 Bottom Packer Depth 4286 Wt. Pipe Run Ø WL 10.8
 Total Depth 4430 Chlorides 3800 ppm System LCM 1

Blow Description IF: BOB in 5 min
FS: No Return Blow
FFB BOB in 5 min
FS: No Return Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>310</u>	<u>mud</u>				<u>100</u>
<u>496</u>	<u>wcm</u>		<u>20</u>		<u>80</u>
<u>620</u>	<u>SW</u>		<u>100</u>		

Rec Total 1426 BHT 130 Gravity ✓ API RW 256 @ 80° F Chlorides 24,000 ppm

(A) Initial Hydrostatic <u>2118</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>15:15</u>
(B) First Initial Flow <u>67</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>16:25</u>
(C) First Final Flow <u>417</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>18:55</u>
(D) Initial Shut-In <u>897</u>	<input checked="" type="checkbox"/> Circ Sub <u>NC</u>	T-Pulled <u>20:55</u>
(E) Second Initial Flow <u>430</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>23:03</u>
(F) Second Final Flow <u>647</u>	<input checked="" type="checkbox"/> Mileage <u>176 RT</u> 272.80	Comments _____
(G) Final Shut-In <u>889</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2100</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer

Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Extra Copies
Final Flow <u>30</u>	<input type="checkbox"/> Day Standby	Sub Total <u>0</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Accessibility	Total <u>2097.80</u>
	Sub Total <u>2097.80</u>	MP/DST Disc't _____

Approved By _____ Our Representative Mike Roberts

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



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52906

Well Name & No. Bradshaw 1-21 Test No. 2 Date 8-27-13
 Company Joe Gerstner Oil LLC Elevation 2385 KB 2378 GL
 Address P.O. Box 509 Ness City KS 67560
 Co. Rep / Geo. Andrew Stenzel Rig Pickfell 10
 Location: Sec. 21 Twp. 21 Rge. 23w Co. Hodgeman State KS

Interval Tested 4522-4600 Zone Tested Miss
 Anchor Length 78 Drill Pipe Run 4507 Mud Wt. 9.2
 Top Packer Depth 4518 Drill Collars Run Ø Vis 52
 Bottom Packer Depth 4522 Wt. Pipe Run Ø WL 11.2
 Total Depth 4600 Chlorides 6000 ppm System LCM 1

Blow Description IF: Built to 4" Blow
FS: No Return Blow
FF: BOB in 39 Min
FS: No Return Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>0</u>	<u>124' GIP</u>	<u>100</u>			
<u>30</u>	<u>Free Oil</u>		<u>100</u>		
<u>62</u>	<u>gcmo</u>	<u>10</u>	<u>60</u>		<u>30</u>
<u>62</u>	<u>ocgm</u>	<u>10</u>	<u>5</u>		<u>85</u>

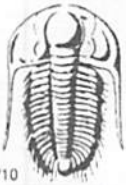
Rec Total _____ BHT 125 Gravity 36 API RW _____ @ _____ ° F Chlorides _____ ppm

(A) Initial Hydrostatic 2242 Test 1250 T-On Location 17:45
 (B) First Initial Flow 33 Jars 250 T-Started 17:56
 (C) First Final Flow 50 Safety Joint 75 T-Open 19:57
 (D) Initial Shut-In 1219 Circ Sub NC T-Pulled 22:57
 (E) Second Initial Flow 54 Hourly Standby _____ T-Out 01:05
 (F) Second Final Flow 79 Mileage 176 RT 272.80
 (G) Final Shut-In 1198 Sampler _____
 (H) Final Hydrostatic 2220 Straddle _____
 Shale Packer 250 Ruined Shale Packer _____
 Extra Packer _____ Ruined Packer _____
 Extra Recorder _____ Extra Copies _____

Initial Open 30
 Initial Shut-In 30
 Final Flow 60
 Final Shut-In 60
 Sub Total 2097.80
 Total 2097.80
 MP/DST Disc't _____

Approved By Andrew Stenzel Our Representative Mike Rohlf

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. 52907

4/10

Well Name & No. Bradshaw # 1-21 Test No. 3 Date 8-28-13
 Company Joe Gerstner Oil LLC Elevation 2385 KB 2378 GL
 Address P.O. Box 509 Ness City KS 67560
 Co. Rep / Geo. Andrew Stenzel Rig Pickrell 10
 Location: Sec. 21 Twp. 21 Rge. 23w Co. Hodgeman State KS

Interval Tested 4598 - 4606 Zone Tested MISS
 Anchor Length 8' Drill Pipe Run 4602 Mud Wt. 9.2
 Top Packer Depth 4594 Drill Collars Run 0 Vis 52
 Bottom Packer Depth 4598 Wt. Pipe Run 0 WL 11.2
 Total Depth 4606 Chlorides 6000 ppm System LCM 1

Blow Description IF: Built to Weak Surface Blow
IS: No Return Blow
FF: No Blow
FS: No Return Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>MUD with trace of oil</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 Total 10 BHT 127 Gravity — API RW — @ — ° F Chlorides — ppm

(A) Initial Hydrostatic 2286 Test 1250 T-On Location 07:55
 (B) First Initial Flow 25 Jars 250 T-Started 08:38
 (C) First Final Flow 24 Safety Joint 75 T-Open 10:21
 (D) Initial Shut-In 1235 Circ Sub NC T-Pulled 12:21
 (E) Second Initial Flow 24 Hourly Standby _____ T-Out 13:58
 (F) Second Final Flow 25 Mileage 176 RT 272.80
 (G) Final Shut-In 1088 Sampler _____
 (H) Final Hydrostatic 2283 Straddle _____

Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Initial Open 30 Extra Packer _____
 Initial Shut-In 30 Extra Recorder _____
 Final Flow 30 Day Standby _____
 Final Shut-In 30 Accessibility _____
 Sub Total 2097.80

Approved By [Signature] Our Representative Mike Roberts

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



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52908

Well Name & No. Bradshaw #1-21 Test No. 4 Date 8-28-13
 Company Joe Gurstner Oil LLC Elevation 2385 KB 2378 GL
 Address P.O. Box 509 Ness City KS 67560
 Co. Rep / Geo. Andrew Stenzel Rig Pickrell 10
 Location: Sec. 21 Twp. 21 Rge. 23w Co. Hodgeman State KS

Interval Tested 4603-4614 Zone Tested Miss
 Anchor Length 13 Drill Pipe Run 4600 Mud Wt. 9.3
 Top Packer Depth 4599 Drill Collars Run Ø Vis 46
 Bottom Packer Depth 4603 Wt. Pipe Run Ø WL 10.4
 Total Depth 4614 Chlorides 4800 ppm System LCM 1
 Blow Description IF: Blow to 1/4" Blow
IS: No Return Blow
FF: NO Blow
FS: No Return Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>15</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 Total 15 BHT 124 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>2310</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>19:50</u>
(B) First Initial Flow <u>24</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>20:07</u>
(C) First Final Flow <u>23</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>21:50</u>
(D) Initial Shut-In <u>1295</u>	<input checked="" type="checkbox"/> Circ Sub <u>NL</u>	T-Pulled <u>23:50</u>
(E) Second Initial Flow <u>24</u>	<input checked="" type="checkbox"/> Hourly Standby <u>4</u>	T-Out <u>01:57</u>
(F) Second Final Flow <u>25</u>	<input checked="" type="checkbox"/> Mileage <u>176 RT</u> x2 545.60	Comments <u>Geo Said done</u>
(G) Final Shut-In <u>1211</u>	<input type="checkbox"/> Sampler	<u>Logging - Waited 4</u>
(H) Final Hydrostatic <u>2226</u>	<input type="checkbox"/> Straddle	<u>HRS - To Load.</u>
Initial Open <u>30</u>	<input checked="" type="checkbox"/> Shale Packer <u>250</u>	<input type="checkbox"/> Ruined Shale Packer
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby	Total <u>2370.60</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>2370.60</u>	

Approved By _____

Our Representative M. Roberts