



## DRILL STEM TEST REPORT

Prepared For: **Bear Petroleum, LLC**

PO Box 438  
Haysville, KS 67060-0438

ATTN: Dick Schremmer/Terry

### **Higgins B #1**

#### **10-30S-8W Kingman,KS**

Start Date: 2017.12.14 @ 03:53:00

End Date: 2017.12.14 @ 11:11:30

Job Ticket #: 62016                      DST #: 1

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

Printed: 2017.12.18 @ 10:36:25



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Bear Petroleum, LLC  
 PO Box 438  
 Haysville, KS 67060-0438  
 ATTN: Dick Schremmer/Terry

**10-30S-8W Kingman, KS**  
**Higgins B #1**  
 Job Ticket: 62016 **DST#: 1**  
 Test Start: 2017.12.14 @ 03:53:00

## GENERAL INFORMATION:

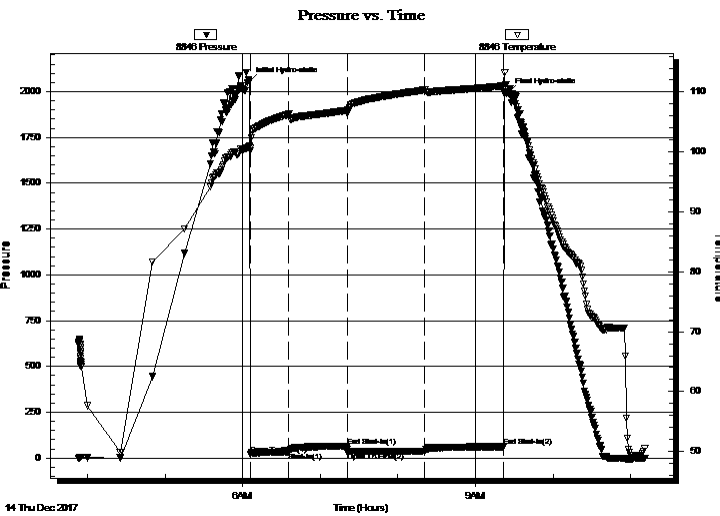
Formation: **Mississippian**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 06:05:50  
 Time Test Ended: 11:11:30  
 Interval: **4083.00 ft (KB) To 4163.00 ft (KB) (TVD)**  
 Total Depth: 4163.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Jimmy Ricketts  
 Unit No: 80  
 Reference Elevations: 1521.00 ft (KB)  
 1514.00 ft (CF)  
 KB to GR/CF: 7.00 ft

## Serial #: 8846

Inside

Press@RunDepth: 38.49 psig @ 4084.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2017.12.14 End Date: 2017.12.14 Last Calib.: 1899.12.30  
 Start Time: 03:53:01 End Time: 11:11:30 Time On Btm: 2017.12.14 @ 06:05:10  
 Time Off Btm: 2017.12.14 @ 09:25:39

TEST COMMENT: IF - Weak blow building to strong blow in 4 minutes  
 FF - Weak blow building to strong blow in 2 minutes



## PRESSURE SUMMARY

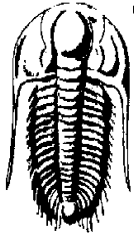
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2053.17	100.95	Initial Hydro-static
1	22.20	100.20	Open To Flow (1)
31	33.23	106.31	Shut-In(1)
76	64.15	106.96	End Shut-In(1)
76	30.47	106.34	Open To Flow (2)
136	38.49	110.36	Shut-In(2)
197	61.76	111.03	End Shut-In(2)
201	1994.02	109.68	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
65.00	Drilling mud 100% M	0.32
1255.00	Weak gas in pipe 100% G	17.12

## Gas Rates

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Bear Petroleum, LLC

**10-30S-8W Kingman, KS**

PO Box 438  
Haysville, KS 67060-0438

**Higgins B #1**

Job Ticket: 62016

**DST#: 1**

ATTN: Dick Schremmer/Terry

Test Start: 2017.12.14 @ 03:53:00

## GENERAL INFORMATION:

Formation: **Mississippian**

Deviated: No Whipstock: ft (KB)

Test Type: Conventional Bottom Hole (Initial)

Time Tool Opened: 06:05:50

Tester: Jimmy Ricketts

Time Test Ended: 11:11:30

Unit No: 80

**Interval: 4083.00 ft (KB) To 4163.00 ft (KB) (TVD)**

Reference Elevations: 1521.00 ft (KB)

Total Depth: 4163.00 ft (KB) (TVD)

1514.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

**Serial #: 8679 Outside**

Press@RunDepth: psig @ 4084.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.12.14

End Date: 2017.12.14

Last Calib.: 1899.12.30

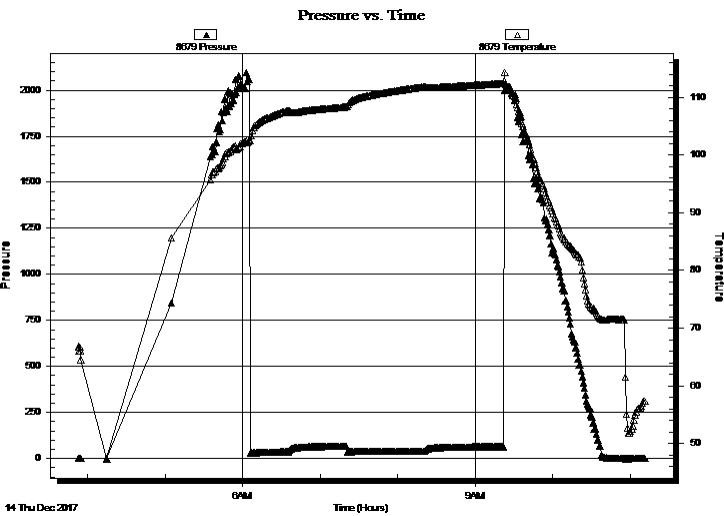
Start Time: 03:53:05

End Time: 11:11:29

Time On Btm:

Time Off Btm:

TEST COMMENT: IF - Weak blow building to strong blow in 4 minutes  
FF - Weak blow building to strong blow in 2 minutes



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
65.00	Drilling mud 100% M	0.32
1255.00	Weak gas in pipe 100% G	17.12

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Bear Petroleum, LLC  
 PO Box 438  
 Haysville, KS 67060-0438  
 ATTN: Dick Schremmer/Terry

**10-30S-8W Kingman, KS**  
**Higgins B #1**  
 Job Ticket: 62016 **DST#: 1**  
 Test Start: 2017.12.14 @ 03:53:00

**Tool Information**

Drill Pipe:	Length: 3950.00 ft	Diameter: 3.80 inches	Volume: 55.41 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer: 21000.00 lb
Drill Collar:	Length: 118.00 ft	Diameter: 2.25 inches	Volume: 0.58 bbl	Weight to Pull Loose: 62000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	4083.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	80.00 ft			
Tool Length:	101.00 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			4063.00	
Shut In Tool	5.00			4068.00	
Hydraulic tool	5.00			4073.00	
Packer	5.00			4078.00	21.00 Bottom Of Top Packer
Packer	5.00			4083.00	
Stubb	1.00			4084.00	
Recorder	0.00	8679	Outside	4084.00	
Recorder	0.00	8846	Inside	4084.00	
Perforations	9.00			4093.00	
Change Over Sub	0.50			4093.50	
Blank Spacing	62.00			4155.50	
Change Over Sub	0.50			4156.00	
Perforations	2.00			4158.00	
Bullnose	5.00			4163.00	80.00 Bottom Packers & Anchor

**Total Tool Length: 101.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Bear Petroleum, LLC

**10-30S-8W Kingman,KS**

PO Box 438  
Haysville, KS 67060-0438

**Higgins B #1**

Job Ticket: 62016

**DST#: 1**

ATTN: Dick Schremmer/Terry

Test Start: 2017.12.14 @ 03:53:00

## 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: 8.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
65.00	Drilling mud 100% M	0.320
1255.00	Weak gas in pipe 100% G	17.122

Total Length: 1320.00 ft      Total Volume: 17.442 bbl

Num Fluid Samples: 0

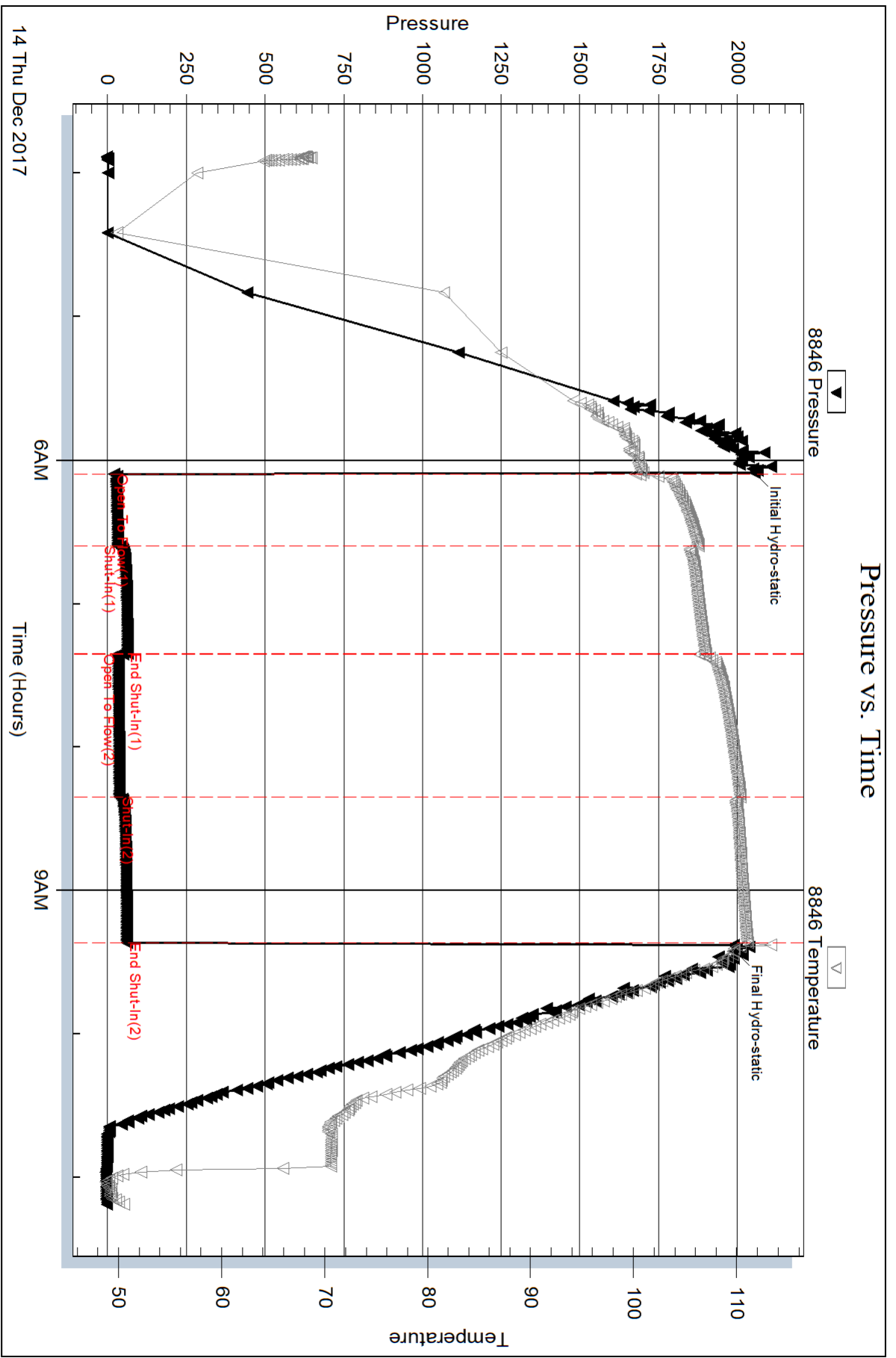
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

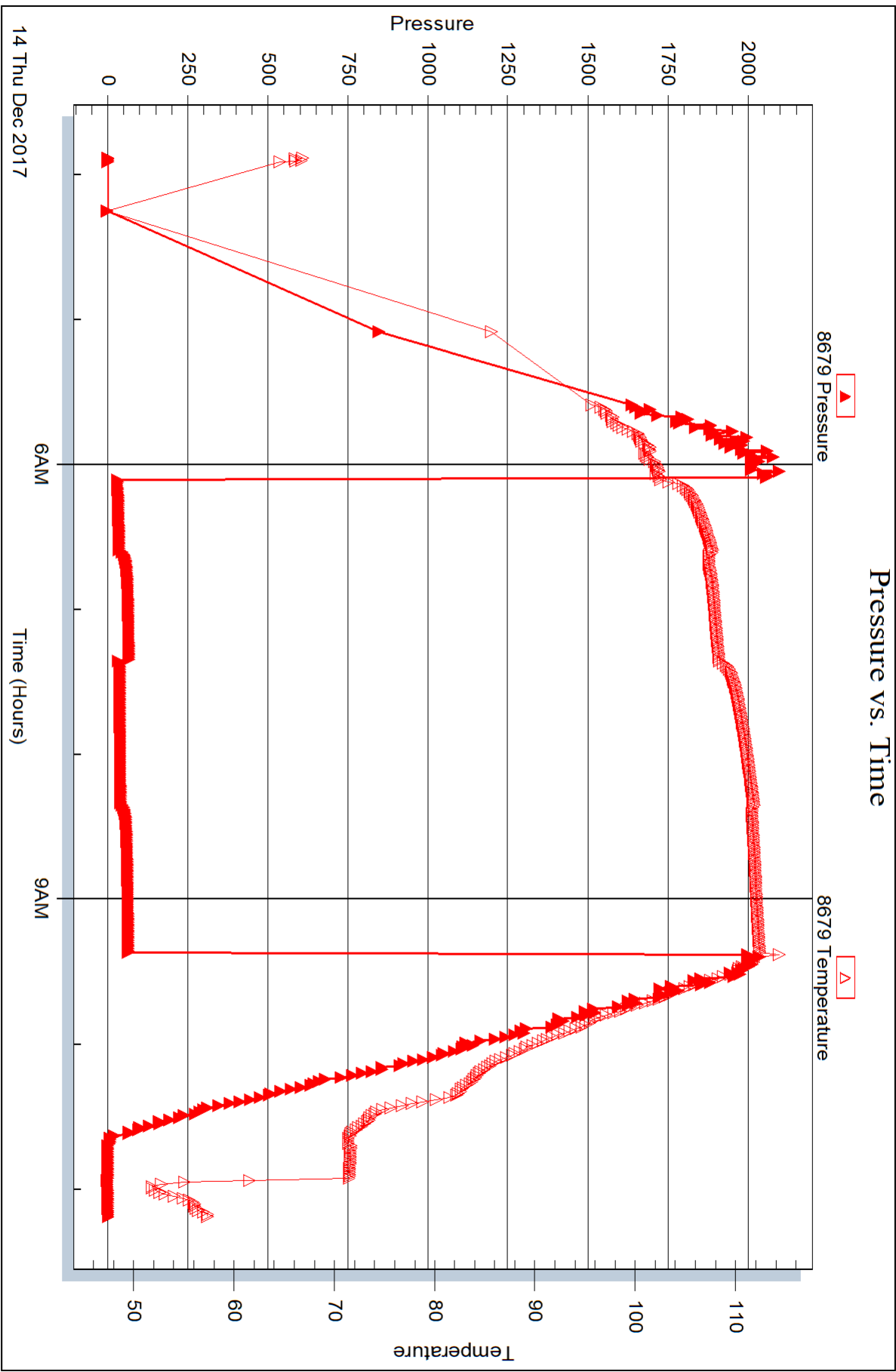


Serial #: 8679

Outside Bear Petroleum, LLC

Higgins B #1

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 62016

Printed: 2017.12.18 @ 10:36:26



## DRILL STEM TEST REPORT

Prepared For: **Bear Petroleum, LLC**

PO Box 438  
Haysville, KS 67060-0438

ATTN: Dick Schremmer/Terry

### **Higgins B #1**

#### **10-30S-8W Kingman,KS**

Start Date: 2017.12.14 @ 17:25:00

End Date: 2017.12.15 @ 00:33:39

Job Ticket #: 62017                      DST #: 2

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

Printed: 2017.12.18 @ 10:35:47





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Bear Petroleum, LLC  
 PO Box 438  
 Haysville, KS 67060-0438  
 ATTN: Dick Schremmer/Terry

**10-30S-8W Kingman, KS**  
**Higgins B #1**  
 Job Ticket: 62017 **DST#: 2**  
 Test Start: 2017.12.14 @ 17:25:00

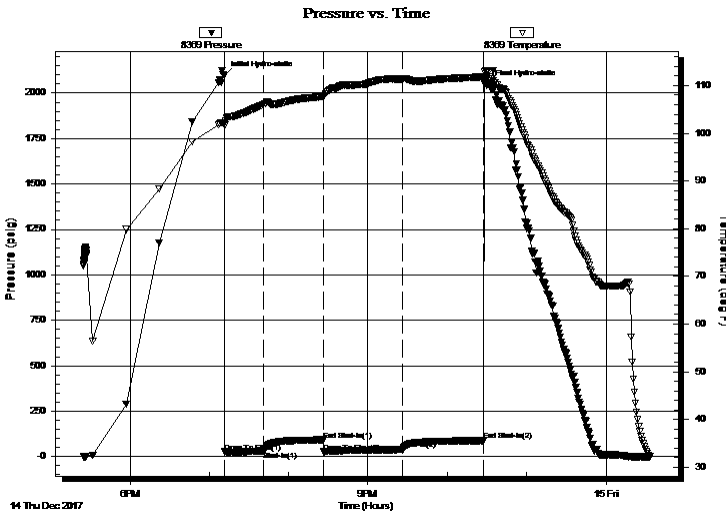
## GENERAL INFORMATION:

Formation: **Mississippian**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 19:11:50  
 Time Test Ended: 00:33:39  
 Interval: **4158.00 ft (KB) To 4210.00 ft (KB) (TVD)**  
 Total Depth: 4210.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Poor  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Jimmy Ricketts  
 Unit No: 80  
 Reference Elevations: 1521.00 ft (KB)  
 1514.00 ft (CF)  
 KB to GR/CF: 7.00 ft

**Serial #: 8369 Outside**  
 Press@RunDepth: 38.16 psig @ 4159.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2017.12.14 End Date: 2017.12.15 Last Calib.: 1899.12.30  
 Start Time: 17:25:01 End Time: 00:33:40 Time On Btm: 2017.12.14 @ 19:11:20  
 Time Off Btm: 2017.12.14 @ 22:30:50

**TEST COMMENT:** IF - Weak blow building to strong blow in 18 minutes  
 IS - Surface blow back  
 FF - Weak blow building to strong blow in 7 minutes  
 FS - Surface blow back

## PRESSURE SUMMARY



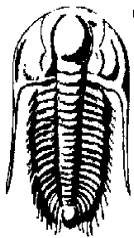
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2095.32	102.11	Initial Hydro-static
1	26.03	101.68	Open To Flow (1)
30	29.93	106.01	Shut-In(1)
76	92.06	107.69	End Shut-In(1)
76	26.34	107.66	Open To Flow (2)
135	38.16	111.41	Shut-In(2)
197	88.06	111.82	End Shut-In(2)
200	2045.54	112.92	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	Drilling mud trace oil TR O 100% M	0.30
0.00	630' GIP	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Bear Petroleum, LLC

**10-30S-8W Kingman, KS**

PO Box 438  
Haysville, KS 67060-0438

**Higgins B #1**

Job Ticket: 62017

**DST#: 2**

ATTN: Dick Schremmer/Terry

Test Start: 2017.12.14 @ 17:25:00

### GENERAL INFORMATION:

Formation: **Mississippian**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:11:50

Time Test Ended: 00:33:39

**Interval: 4158.00 ft (KB) To 4210.00 ft (KB) (TVD)**

Total Depth: 4210.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Poor

Test Type: Conventional Bottom Hole (Initial)

Tester: Jimmy Ricketts

Unit No: 80

Reference Elevations: 1521.00 ft (KB)

1514.00 ft (CF)

KB to GR/CF: 7.00 ft

**Serial #: 8846**

**Inside**

Press@RunDepth: psig @ 4159.00 ft (KB)

Start Date: 2017.12.14 End Date: 2017.12.15

Start Time: 17:25:01 End Time: 00:33:50

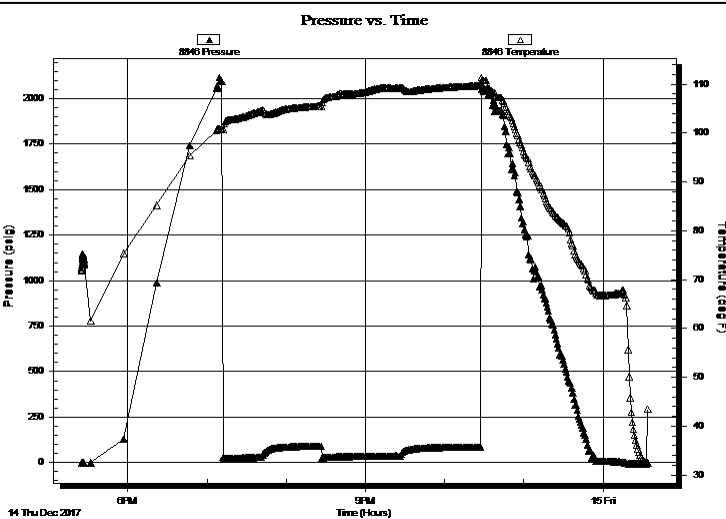
Capacity: 8000.00 psig

Last Calib.: 1899.12.30

Time On Btm:

Time Off Btm:

**TEST COMMENT:** IF - Weak blow building to strong blow in 18 minutes  
IS - Surface blow back  
FF - Weak blow building to strong blow in 7 minutes  
FS - Surface blow back



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
60.00	Drilling mud trace oil TR O 100% M	0.30
0.00	630' GIP	0.00

### Gas Rates

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



**TRILOBITE  
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# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Bear Petroleum, LLC  
 PO Box 438  
 Haysville, KS 67060-0438  
 ATTN: Dick Schremmer/Terry

**10-30S-8W Kingman,KS**  
**Higgins B #1**  
 Job Ticket: 62017 **DST#: 2**  
 Test Start: 2017.12.14 @ 17:25:00

**Tool Information**

Drill Pipe:	Length: 4045.00 ft	Diameter: 3.80 inches	Volume: 56.74 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 23000.00 lb
Drill Collar:	Length: 118.00 ft	Diameter: 2.25 inches	Volume: 0.58 bbl	Weight to Pull Loose: 62000.00 lb
			<u>Total Volume: 57.32 bbl</u>	Tool Chased 1.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	4158.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	52.00 ft			
Tool Length:	72.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
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Change Over Sub	1.00			4139.00	
Shut In Tool	5.00			4144.00	
Hydraulic tool	5.00			4149.00	
Packer	4.00			4153.00	20.00 Bottom Of Top Packer
Packer	5.00			4158.00	
Stubb	1.00			4159.00	
Recorder	0.00	8369	Outside	4159.00	
Recorder	0.00	8846	Inside	4159.00	
Perforations	10.00			4169.00	
Change Over Sub	0.50			4169.50	
Blank Spacing	32.00			4201.50	
Change Over Sub	0.50			4202.00	
Perforations	3.00			4205.00	
Bullnose	5.00			4210.00	52.00 Bottom Packers & Anchor

**Total Tool Length: 72.00**



**TRILOBITE  
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# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Bear Petroleum, LLC

**10-30S-8W Kingman,KS**

PO Box 438  
Haysville, KS 67060-0438

**Higgins B #1**

Job Ticket: 62017

**DST#: 2**

ATTN: Dick Schremmer/Terry

Test Start: 2017.12.14 @ 17:25:00

## 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: 7.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	Drilling mud trace oil TR O 100% M	0.295
0.00	630' GIP	0.000

Total Length: 60.00 ft      Total Volume: 0.295 bbl

Num Fluid Samples: 0

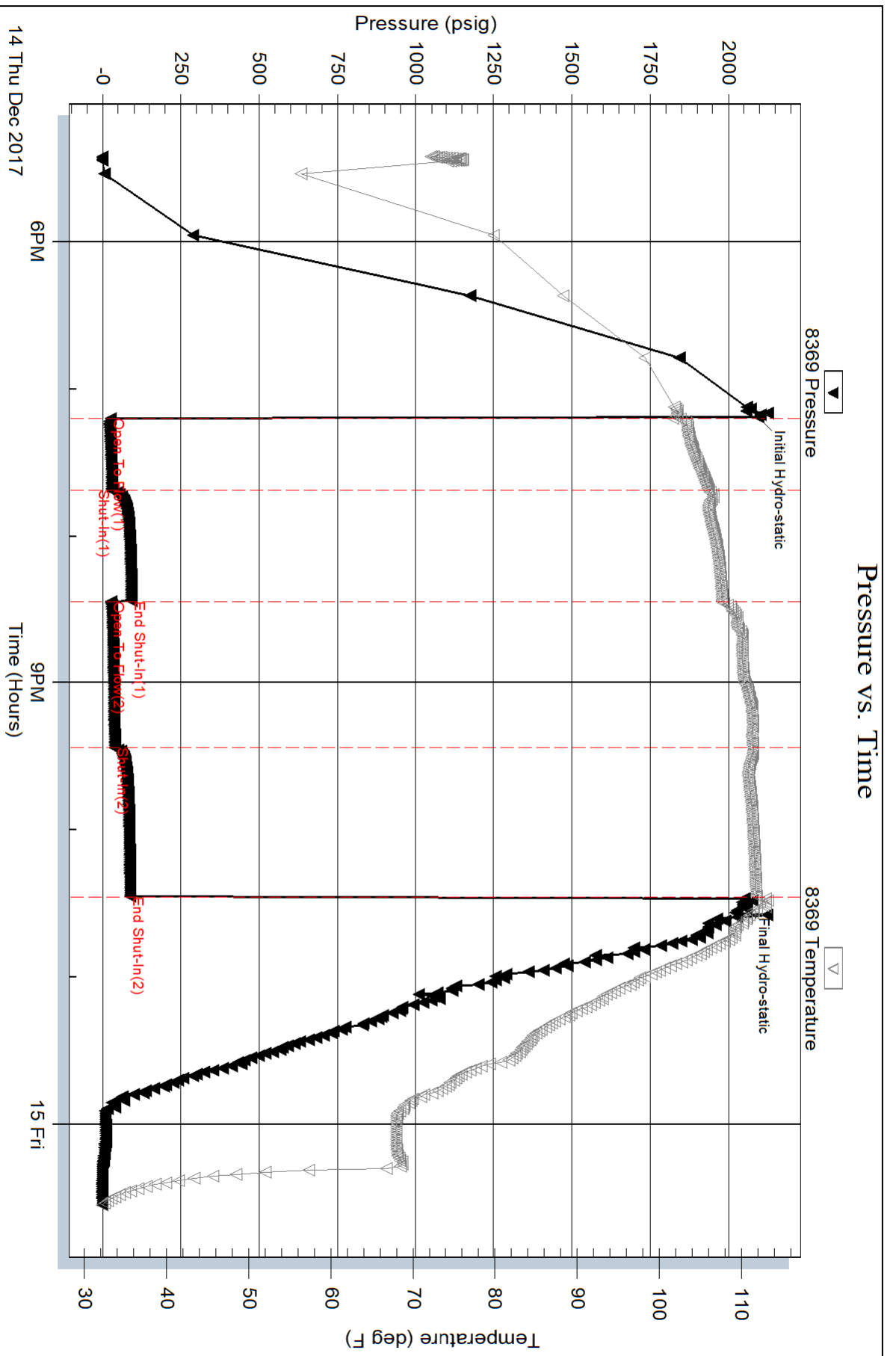
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



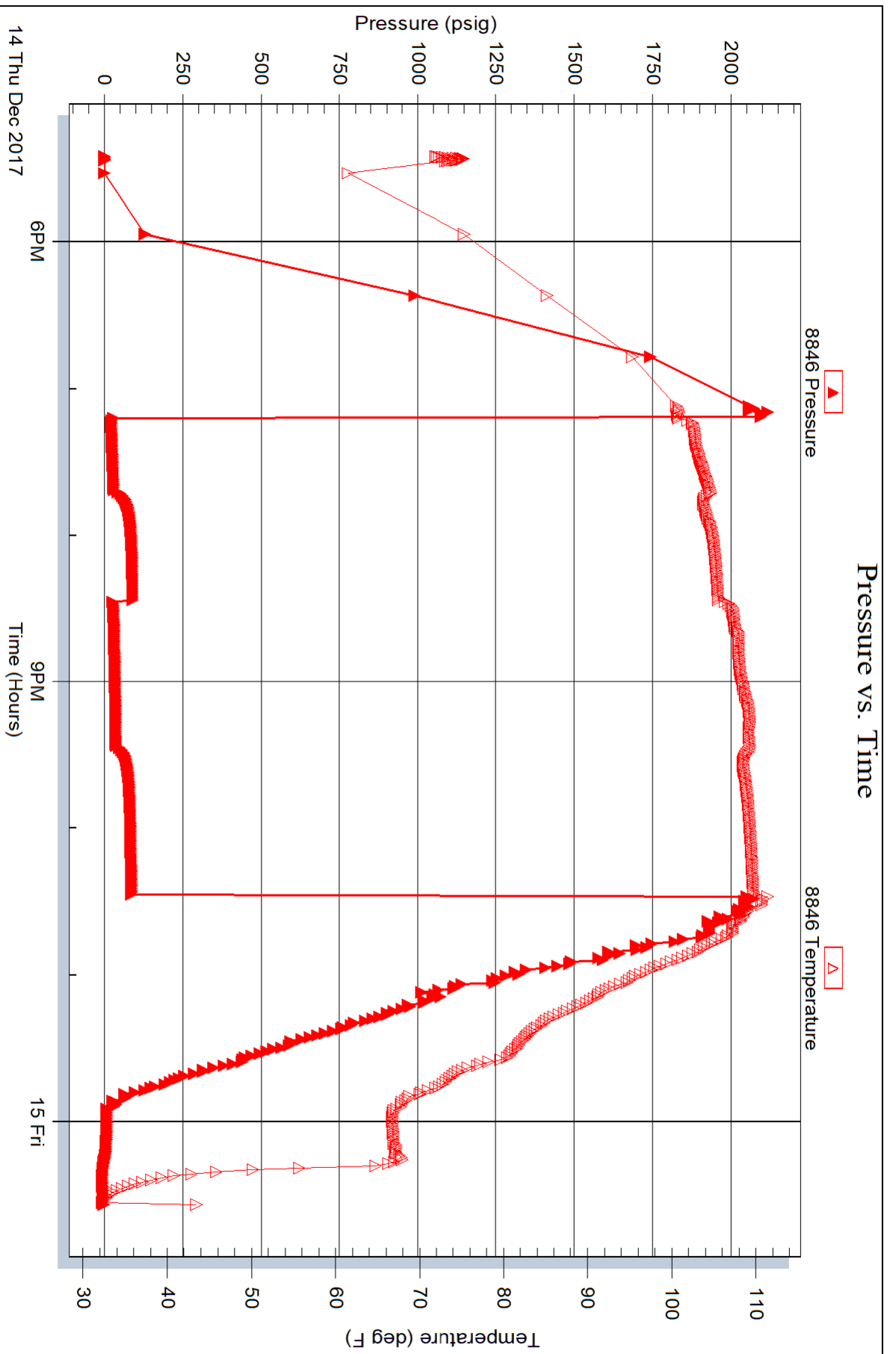
Serial #: 8846

Inside

Bear Petroleum, LLC

Higgins B #1

DST Test Number: 2





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 62016

Well Name & No. Higgins B #1 Test No. 1 Date 12-14-17  
 Company Bear Petroleum, LLC Elevation 1521 KB 1514 GL  
 Address P.O. Box 438 Haysville, KS. 67060-0438  
 Co. Rep / Geo. Dick Schremmer / Terry McLeod Rig ww drilling #2  
 Location: Sec. 10 Twp. 30 S Rge. 8 W Co. Kingman State KS

Interval Tested 4083-4163 Zone Tested Mississippian  
 Anchor Length 80' Drill Pipe Run 3950 Mud Wt. 9.0  
 Top Packer Depth 4078 Drill Collars Run 118 Vis 52  
 Bottom Packer Depth 4083 Wt. Pipe Run 0 WL 8.8  
 Total Depth 4163 Chlorides 5000 ppm System LCM  
 Blow Description IF- weak blow building to strong blow 4 mins into FFP  
FF- weak blow building to strong blow 2 mins into FFP

Rec	Feet of	%gas	%oil	%water	%mud
<u>1255</u>	<u>Weak gas in pipe</u>	<u>100</u>			
<u>65</u>	<u>Drilling Mud</u>				<u>100</u>

Rec Total 65 BHT 111 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2053  Test 1150 T-On Location 0200  
 (B) First Initial Flow 22  Jars \_\_\_\_\_ T-Started 0353  
 (C) First Final Flow 33  Safety Joint \_\_\_\_\_ T-Open 0606  
 (D) Initial Shut-In 64  Circ Sub \_\_\_\_\_ T-Pulled 0921  
 (E) Second Initial Flow 30  Hourly Standby \_\_\_\_\_ T-Out 1100  
 (F) Second Final Flow 38  Mileage 76.50 RT 102 Comments \_\_\_\_\_  
 (G) Final Shut-In 62  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1994  Straddle \_\_\_\_\_  
 Shale Packer 250  Ruined Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Day Standby \_\_\_\_\_ Sub Total 0  
 Accessibility \_\_\_\_\_ Total 1476.50  
 Sub Total 1476.50 MP/DST Disc't \_\_\_\_\_

Approved By Ty L. McLeod Our Representative Jimmy D. Keith

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. 62017

Well Name & No. Higgins B #1 Test No. 2 Date 12-14-17  
 Company Bear Petroleum, LLC Elevation 1521 KB 1514 GL  
 Address P.O. Box 438 Haysville, KS. 67060-0438  
 Co. Rep / Geo. Dick Schremmer / Terry McLeod Rig WW Drilling #2  
 Location: Sec. 10 Twp. 30 S Rge. 8W Co. Kingman State KS

Interval Tested 4158-4210 Zone Tested Mississippian  
 Anchor Length 52 Drill Pipe Run \_\_\_\_\_ Mud Wt. 9.1  
 Top Packer Depth 4153 Drill Collars Run 118 Vis 52  
 Bottom Packer Depth 4158 Wt. Pipe Run 0 WL 8.0  
 Total Depth 4210 Chlorides 5000 ppm System LCM \_\_\_\_\_

Blow Description IF - weak blow building strong blow 18 mins into FFP  
IS - Surface blow back during FSP  
FF - weak blow building to strong blow 7 mins into FFP  
FS - Surface blow back during FSP

Rec	Feet of	%gas	%oil	%water	%mud
<u>630</u>	<u>Gas in pipe</u>	<u>100%</u>			
<u>60</u>	<u>Drilling mud with trace oil</u>		<u>TR</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 60 BHT 113 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2095  Test 1150 T-On Location 1700  
 (B) First Initial Flow 26  Jars \_\_\_\_\_ T-Started 1725  
 (C) First Final Flow 30  Safety Joint \_\_\_\_\_ T-Open 1912  
 (D) Initial Shut-In 92  Circ Sub \_\_\_\_\_ T-Pulled 2227  
 (E) Second Initial Flow 26  Hourly Standby \_\_\_\_\_ T-Out 0030  
 (F) Second Final Flow 38  Mileage 76.50 RT 102 Comments \_\_\_\_\_  
 (G) Final Shut-In 88  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2046  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_

Initial Open 30  Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Initial Shut-In 45  Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Final Flow 60  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Final Shut-In 60  Day Standby \_\_\_\_\_ Total 1226.50  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1226.50

Approved By Luc L. McLeod Our Representative Jeremy 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.