

**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Great Plains Energy, Inc.

30-9S-24W Graham, KS

6121 S. 58th St.
Suite B
Lincoln, NE 68516
ATTN: Rick Hall

Reynolds #1-30

Job Ticket: 55389

DST#: 1

Test Start: 2017.09.23 @ 22:37:14

GENERAL INFORMATION:

Formation: **LKC "C&D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:22:50

Time Test Ended: 08:11:04

Test Type: Conventional Bottom Hole (Initial)

Tester: Brannan Lonsdale

Unit No: 73

Interval: **3907.00 ft (KB) To 3935.00 ft (KB) (TVD)**

Reference Elevations: 2553.00 ft (KB)

Total Depth: 3935.00 ft (KB) (TVD)

2546.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 8524 Outside

Press@RunDepth: 32.17 psig @ 3932.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.09.23

End Date:

2017.09.24

Last Calib.: 2017.09.24

Start Time: 22:37:15

End Time:

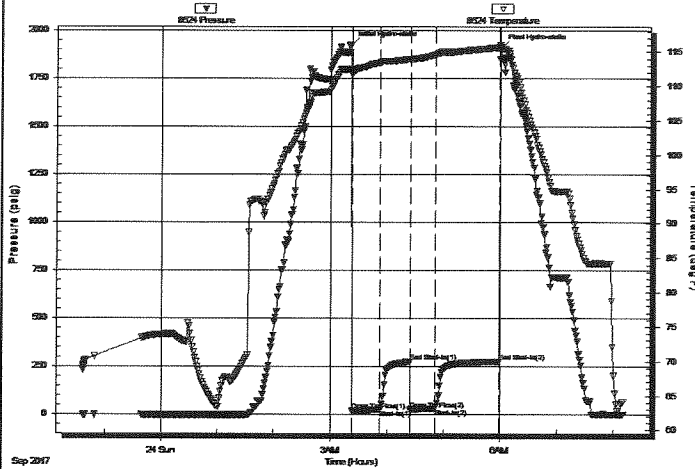
08:11:04

Time On Btm: 2017.09.24 @ 03:21:50

Time Off Btm: 2017.09.24 @ 06:00:20

TEST COMMENT: 30- IF- .25" blow
30- IS- No blow
30- FF- No blow
60- FS- No blow

Pressure vs. Time



PRESSURE SUMMARY

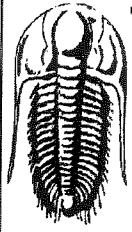
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1924.76	112.52	Initial Hydro-static
1	19.50	111.74	Open To Flow (1)
31	26.67	113.49	Shut-In(1)
63	275.78	113.98	End Shut-In(1)
63	27.68	113.93	Open To Flow (2)
89	32.17	114.60	Shut-In(2)
157	276.82	115.70	End Shut-In(2)
159	1910.69	115.72	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	M	0.05

Gas Rates

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



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Reynolds #1-30

Job Ticket: 55389

DST#: 1

Test Start: 2017.09.23 @ 22:37:14

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: 57.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.60 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2000.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	M	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

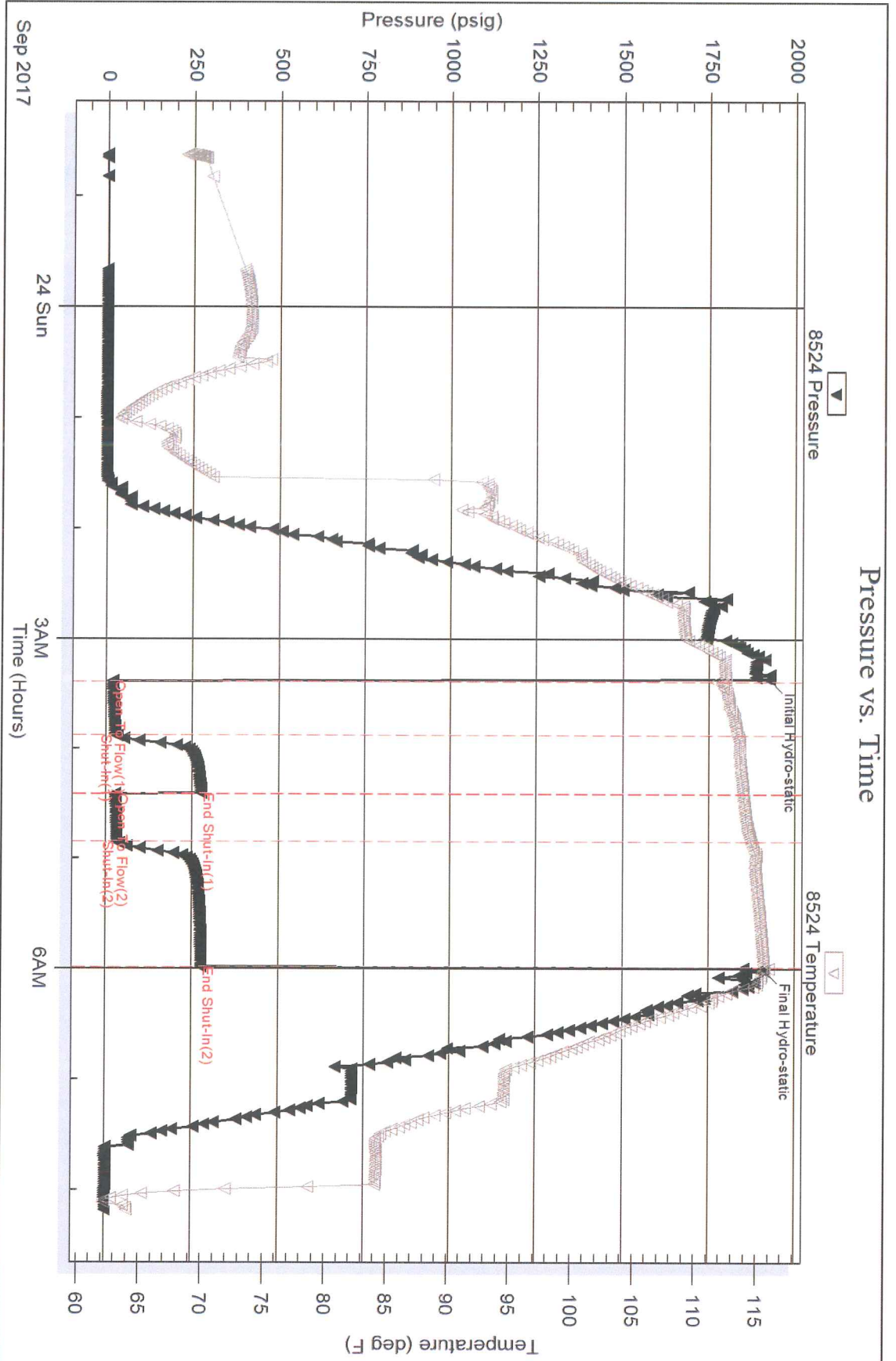
Serial #: 8524

Outside Great Plains Energy, Inc.

Reynolds #1-30

DST Test Number: 1

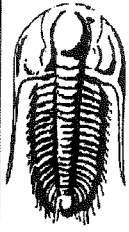
Pressure vs. Time



Triobite Testing, Inc

Ref. No: 55389

Printed: 2017.09.24 @ 10:10:33



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Great Plains Energy, Inc.

30-9S-24W Graham, KS

6121 S. 58th St.
Suite B
Lincoln, NE 68516
ATTN: Rick Hall

Reynolds #1-30

Job Ticket: 55391

DST#: 3

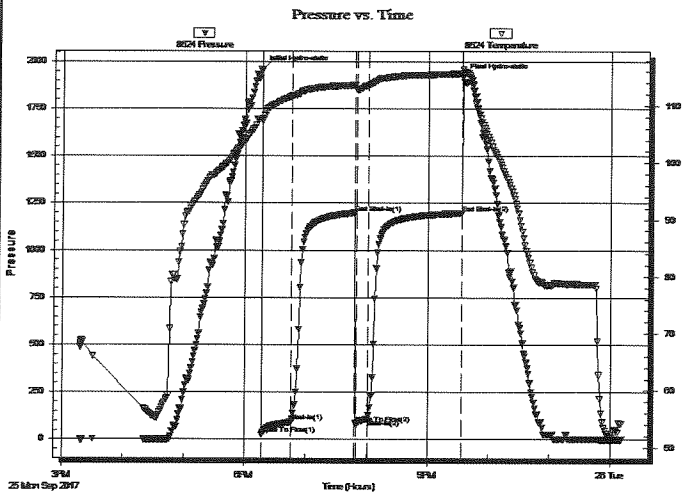
Test Start: 2017.09.25 @ 15:18:22

GENERAL INFORMATION:

Formation: **LKC "H-J"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 18:17:13
 Time Test Ended: 00:10:57
 Interval: **4012.00 ft (KB) To 4078.00 ft (KB) (TVD)**
 Total Depth: 4078.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Brannan Lonsdale
 Unit No: 73
 Reference Elevations: 2553.00 ft (KB)
 2546.00 ft (CF)
 KB to GR/CF: 7.00 ft

Serial #: 8524 Outside
 Press@RunDepth: 110.92 psig @ 4043.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.09.25 End Date: 2017.09.26 Last Calib.: 2017.09.26
 Start Time: 15:18:23 End Time: 00:10:57 Time On Btm: 2017.09.25 @ 18:16:58
 Time Off Btm: 2017.09.25 @ 21:34:13

TEST COMMENT: 30- IF- BOB 11mins
 60- IS- 1.75" blow
 15- FF- BOB 4mins
 90- FS- 3" blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1959.78	107.87	Initial Hydro-static
1	27.29	107.39	Open To Flow (1)
30	93.13	111.75	Shut-In(1)
91	1198.93	113.63	End Shut-In(1)
93	84.15	112.89	Open To Flow (2)
104	110.92	113.64	Shut-In(2)
196	1197.31	115.72	End Shut-In(2)
198	1919.43	116.44	Final Hydro-static

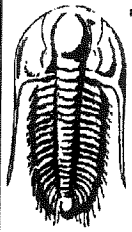
Recovery

Length (ft)	Description	Volume (bbl)
233.00	GOCM, 10%G 35%O 55%M	2.17
0.00	584' GIP	0.00

* Recovery from multiple tests

Gas Rates

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



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ATTN: Rick Hall

Reynolds #1-30

Job Ticket: 55391

DST#: 3

Test Start: 2017.09.25 @ 15:18:22

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	34 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 51.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.20 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2100.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
233.00	GOCM, 10%G 35%O 55%M	2.173
0.00	584' GIP	0.000

Total Length: 233.00 ft Total Volume: 2.173 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

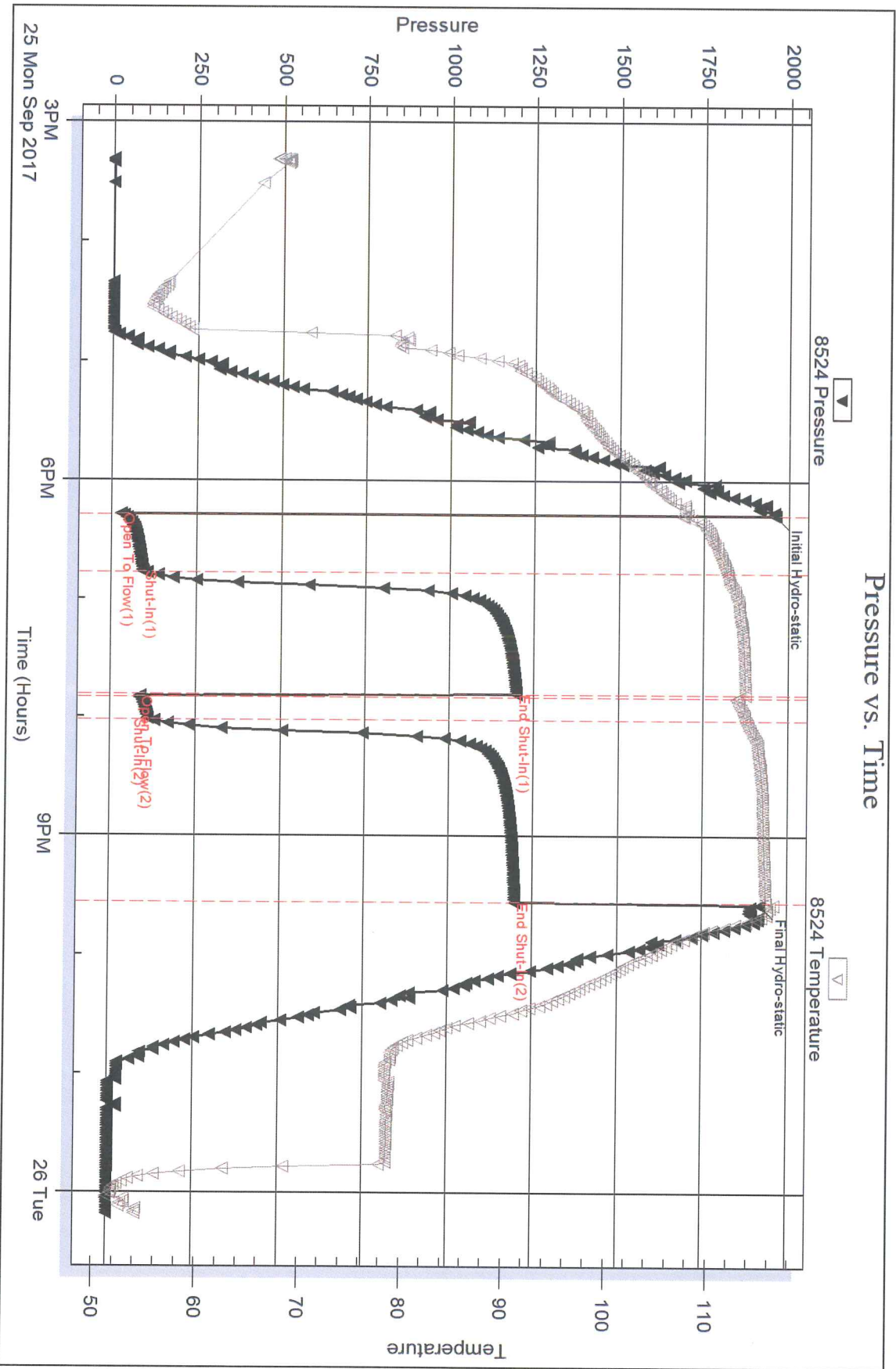
Recovery Comments:

Serial #: 8524

Outside Great Plains Energy, Inc.

Reynolds #1-30

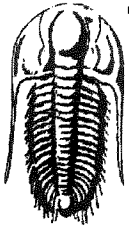
DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 55391

Printed: 2017.09.26 @ 01:57:50



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6121 S. 58th St.
Suite B
Lincoln, NE 68516
ATTN: Rick Hall

30-9S-24W Graham, KS

Reynolds #1-30

Job Ticket: 55390

DST#: 2

Test Start: 2017.09.24 @ 17:08:14

GENERAL INFORMATION:

Formation: **LKC "F"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:21:35

Time Test Ended: 01:28:35

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Interval: **3950.00 ft (KB) To 3980.00 ft (KB) (TVD)**

Total Depth: 3980.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2553.00 ft (KB)

2546.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: 8524 Outside

Press@RunDepth: 142.60 psig @ 3977.00 ft (KB)

Start Date: 2017.09.24

End Date:

2017.09.25

Start Time: 17:08:15

End Time:

01:28:35

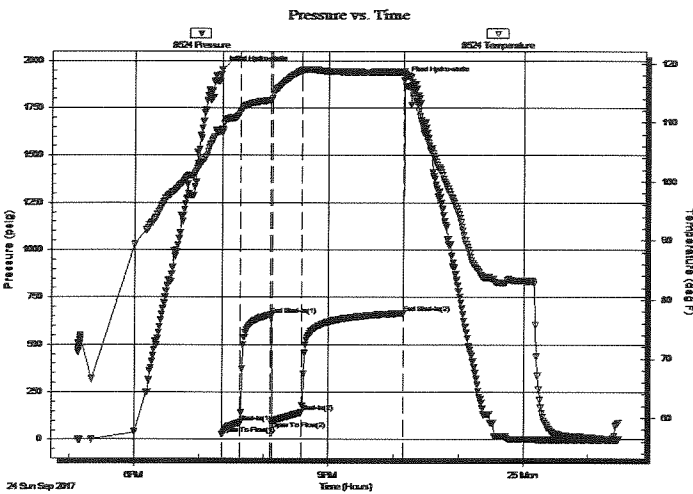
Capacity: 8000.00 psig

Last Calib.: 2017.09.25

Time On Btm: 2017.09.24 @ 19:21:20

Time Off Btm: 2017.09.24 @ 22:09:50

TEST COMMENT: 15- IF- BOB 14mins
30- IS- Surface blow died in 5mins
30- FF- BOB 11mins
90- FS- Surface blow throughout



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1953.36	108.93	Initial Hydro-static
1	26.83	108.44	Open To Flow (1)
18	90.04	111.84	Shut-In(1)
46	657.69	113.81	End Shut-In(1)
47	96.67	114.12	Open To Flow (2)
75	142.60	118.87	Shut-In(2)
168	666.25	118.60	End Shut-In(2)
169	1896.65	118.62	Final Hydro-static

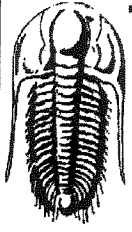
Recovery

Length (ft)	Description	Volume (bbl)
185.00	WOCM 35%W 5%O 60%M	1.49
126.00	CGO, 20%G 80%O	1.79
0.00	442' GIP	0.00

* Recovery from multiple tests

Gas Rates

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



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Reynolds #1-30

Job Ticket: 55390

DST#: 2

Test Start: 2017.09.24 @ 17:08:14

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

35 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

75000 ppm

Viscosity: 64.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2300.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
185.00	WOCM 35%W 5%O 60%M	1.493
126.00	CGO, 20%G 80%O	1.786
0.00	442' GIP	0.000

Total Length: 311.00 ft Total Volume: 3.279 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

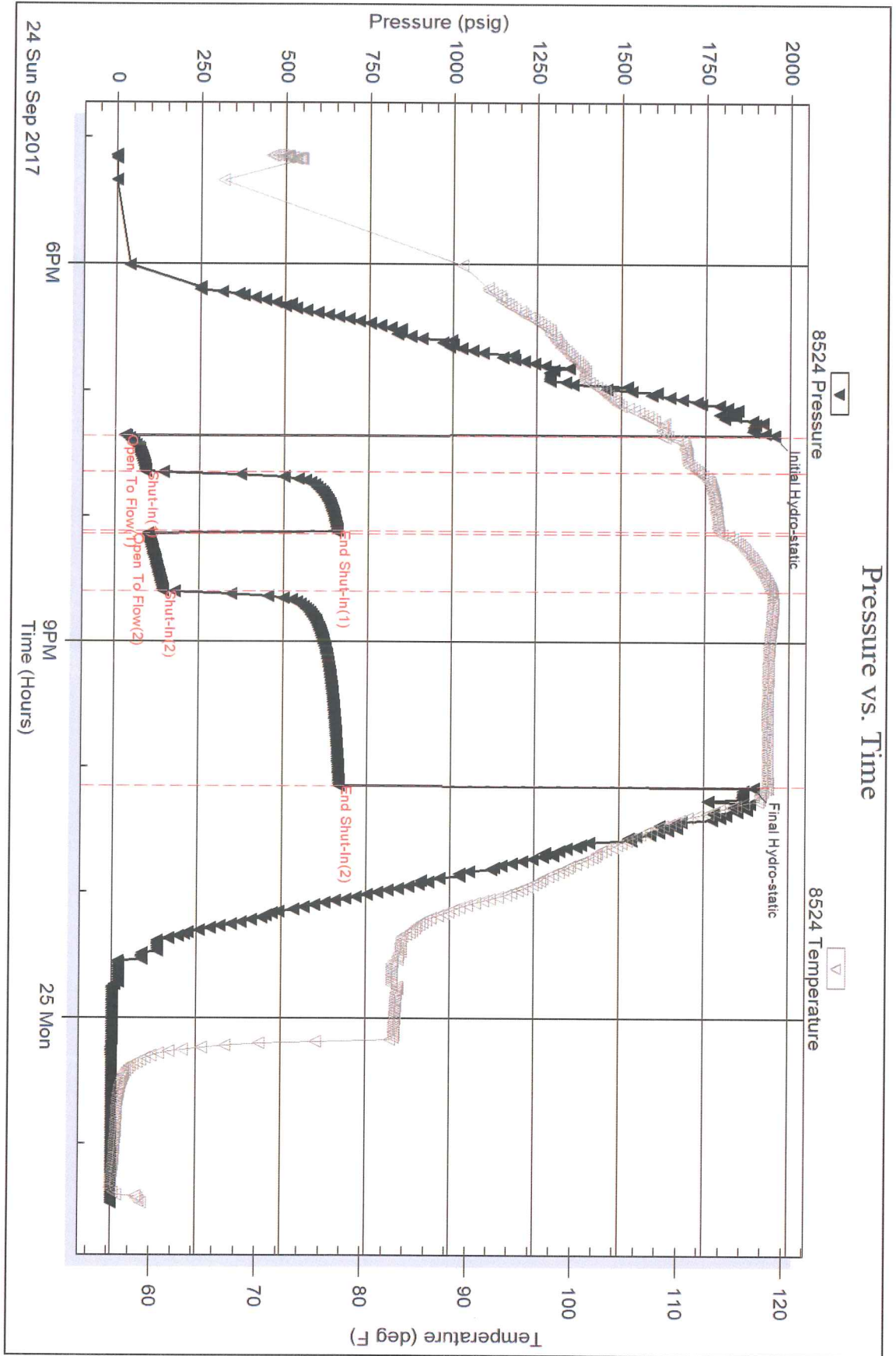
Recovery Comments: RW: .07@85deg

Serial #: 8524

Outside Great Plains Energy, Inc.

Reynolds #1-30

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 55390

Printed: 2017.09.25 @ 07:59:53