



DRILL STEM TEST REPORT

Prepared For: **Double D's LLC**

122 E. 12th
Hays KS 67601

ATTN: Alan Downing

Reichert #3

23-15s-19w Ellis,KS

Start Date: 2013.06.29 @ 22:52:00

End Date: 2013.06.30 @ 04:43:45

Job Ticket #: 53920 DST #: 1

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

Printed: 2013.07.02 @ 14:49:56

Double D's LLC
23-15s-19w Ellis,KS
Reichert #3
DST # 1
Lansing H-I-J
2013.06.29



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Double D's LLC

23-15s-19w Ellis,KS

122 E. 12th
Hays KS 67601

Reichert #3

Job Ticket: 53920

DST#: 1

ATTN: Alan Downing

Test Start: 2013.06.29 @ 22:52:00

GENERAL INFORMATION:

Formation: **Lansing H-I-J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:37:00

Time Test Ended: 04:43:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Cody Bloedorn

Unit No: 43

Interval: 3406.00 ft (KB) To 3480.00 ft (KB) (TVD)

Reference Elevations: 1984.00 ft (KB)

Total Depth: 3480.00 ft (KB) (TVD)

1979.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6799

Inside

Press @ Run Depth: 253.91 psig @ 3472.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.06.29

End Date:

2013.06.30

Last Calib.:

2013.06.30

Start Time: 22:52:05

End Time:

04:43:44

Time On Btm:

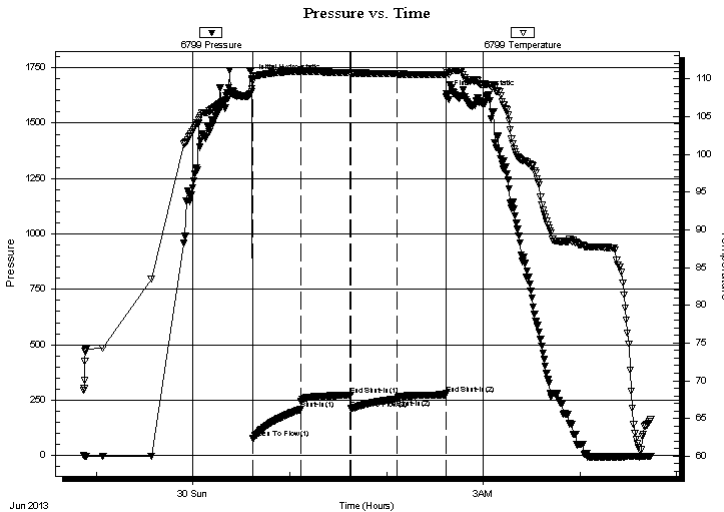
2013.06.30 @ 00:36:30

Time Off Btm:

2013.06.30 @ 02:37:15

TEST COMMENT: 30 - IF- B.O.B. in 8 minutes
30 - IS- No return
30 - FF- B.O.B. in 10 minutes
30 - FS- No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1699.37	108.70	Initial Hydro-static
1	76.42	109.64	Open To Flow (1)
31	207.81	110.91	Shut-In(1)
61	272.34	110.77	End Shut-In(1)
62	211.28	110.73	Open To Flow (2)
90	253.91	110.63	Shut-In(2)
121	278.39	110.54	End Shut-In(2)
121	1630.89	111.01	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
310.00	MW, 20%M, 80%W	4.35
139.00	WM, 10%W, 90%M	1.95

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Double D's LLC

23-15s-19w Ellis,KS

122 E. 12th
Hays KS 67601

Reichert #3

Job Ticket: 53920

DST#: 1

ATTN: Alan Downing

Test Start: 2013.06.29 @ 22:52:00

Tool Information

Drill Pipe:	Length: 3397.00 ft	Diameter: 3.80 inches	Volume: 47.65 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 95000.00 lb
			<u>Total Volume: 47.65 bbl</u>	Tool Chased 15.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 61000.00 lb
Depth to Top Packer:	3406.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	74.00 ft			
Tool Length:	95.00 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			3386.00	
Shut In Tool	5.00			3391.00	
Hydraulic tool	5.00			3396.00	
Packer	5.00			3401.00	21.00 Bottom Of Top Packer
Packer	5.00			3406.00	
Stubb	1.00			3407.00	
Perforations	1.00			3408.00	
Change Over Sub	1.00			3409.00	
Drill Pipe	62.00			3471.00	
Change Over Sub	1.00			3472.00	
Recorder	0.00	6799	Inside	3472.00	
Recorder	0.00	8648	Outside	3472.00	
Perforations	5.00			3477.00	
Bullnose	3.00			3480.00	74.00 Bottom Packers & Anchor

Total Tool Length: 95.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Double D's LLC

23-15s-19w Ellis,KS

122 E. 12th
Hays KS 67601

Reichert #3

Job Ticket: 53920

DST#: 1

ATTN: Alan Downing

Test Start: 2013.06.29 @ 22:52:00

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:

33000 ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1800.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
310.00	MW, 20%M, 80%W	4.348
139.00	WM, 10%W, 90%M	1.950

Total Length: 449.00 ft

Total Volume: 6.298 bbl

Num Fluid Samples: 0

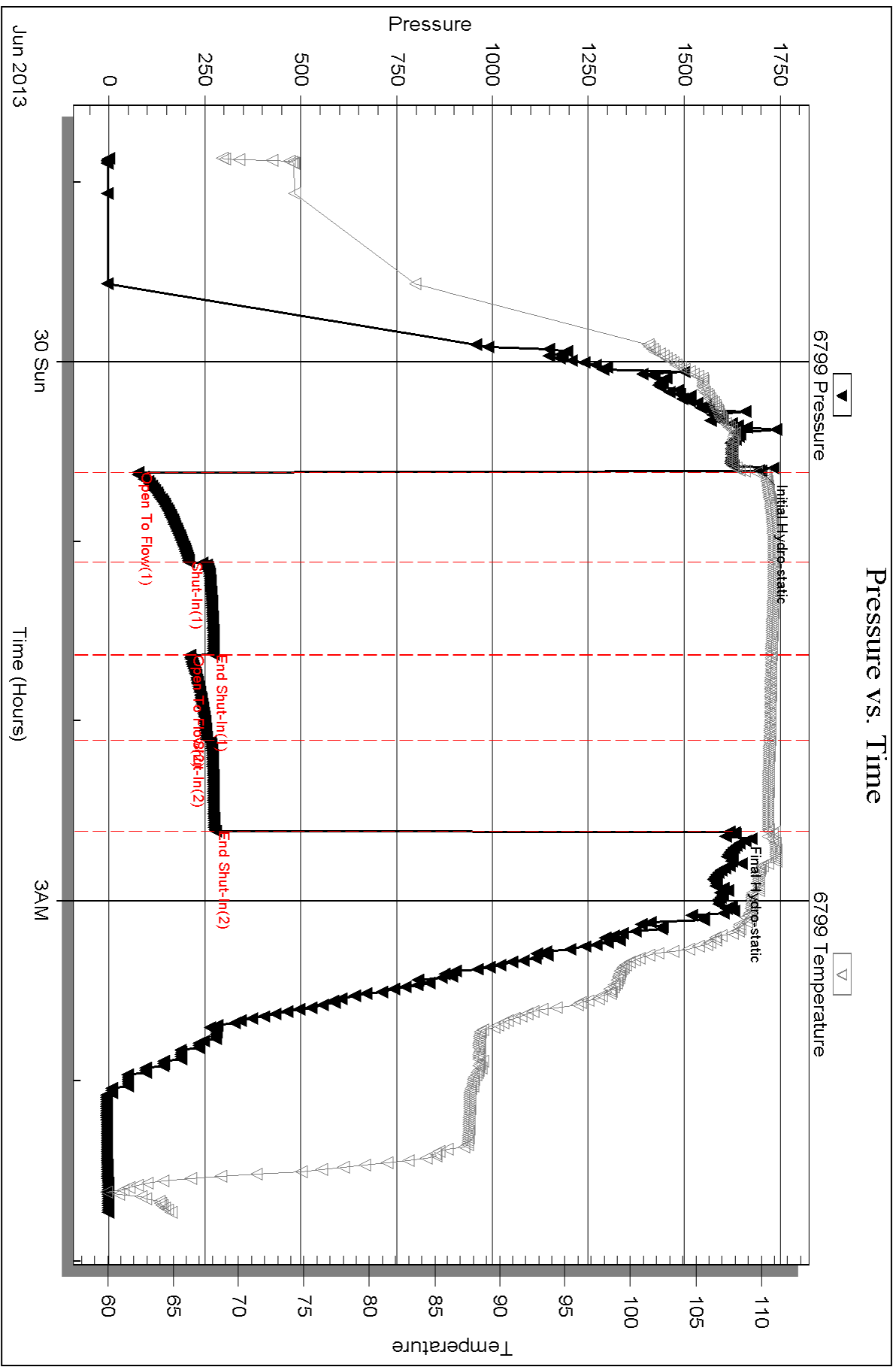
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

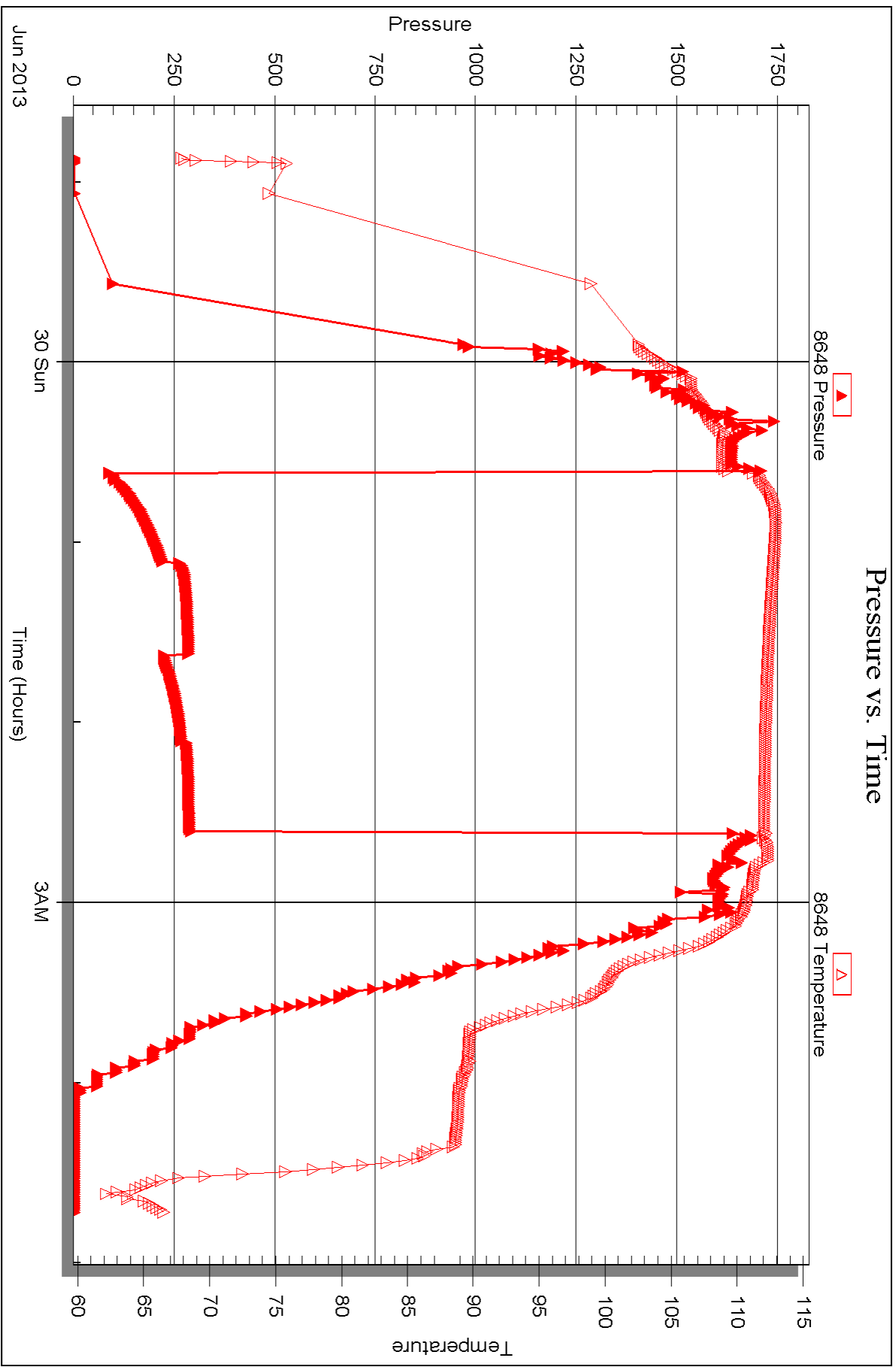


Serial #: 8648

Outside Double Ds LLC

Reichert #3

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Double D's LLC**

122 E. 12th
Hays KS 67601

ATTN: Alan Downing

Reichert #3

23-15s-19w Ellis,KS

Start Date: 2013.07.01 @ 11:22:00

End Date: 2013.07.01 @ 17:29:45

Job Ticket #: 53921 DST #: 2

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

Printed: 2013.07.02 @ 14:49:10

Double D's LLC
23-15s-19w Ellis,KS
Reichert #3
DST # 2
Cong. Sand
2013.07.01



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Double D's LLC

23-15s-19w Ellis,KS

122 E. 12th
Hays KS 67601

Reichert #3

Job Ticket: 53921

DST#: 2

ATTN: Alan Downing

Test Start: 2013.07.01 @ 11:22:00

GENERAL INFORMATION:

Formation: **Cong. Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:40:15

Time Test Ended: 17:29:45

Test Type: Conventional Straddle (Reset)

Tester: Cody Bloedorn

Unit No: 43

Interval: 3595.00 ft (KB) To 3650.00 ft (KB) (TVD)

Reference Elevations: 1984.00 ft (KB)

Total Depth: 3750.00 ft (KB) (TVD)

1979.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6799

Inside

Press @ Run Depth: 463.56 psig @ 3630.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.07.01

End Date:

2013.07.01

Last Calib.:

2013.07.01

Start Time: 11:22:05

End Time:

17:29:44

Time On Btm:

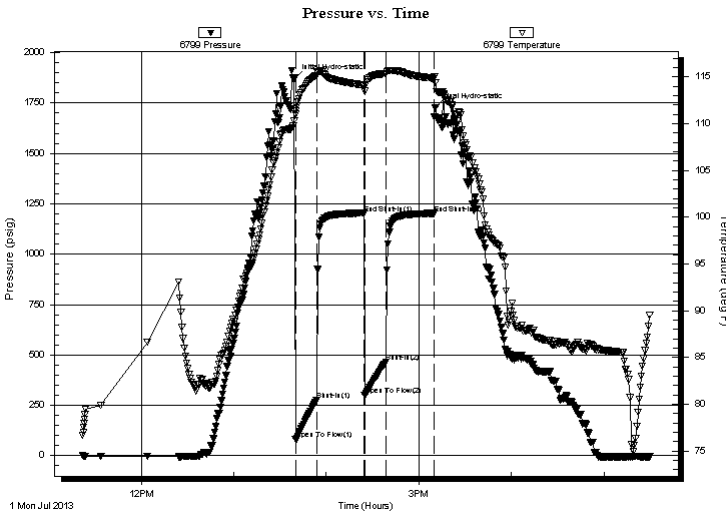
2013.07.01 @ 13:39:15

Time Off Btm:

2013.07.01 @ 15:10:45

TEST COMMENT: 15 - IF- B.O.B. in 1 minute
30 - IS- No return
15 - FF- B.O.B. in 1 minute
30 - FS- No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1872.32	110.31	Initial Hydro-static
1	79.13	111.34	Open To Flow (1)
15	274.79	115.15	Shut-In(1)
45	1201.98	114.11	End Shut-In(1)
46	301.22	113.49	Open To Flow (2)
60	463.56	115.35	Shut-In(2)
91	1202.85	114.85	End Shut-In(2)
92	1727.25	114.43	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
682.00	MW, 10%M, 90%W	9.57
186.00	MW, 50%M, 50%W	2.61
124.00	WM, 20%W, 80%M	1.74

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Double D's LLC

23-15s-19w Ellis,KS

122 E. 12th
Hays KS 67601

Reichert #3

Job Ticket: 53921

DST#: 2

ATTN: Alan Downing

Test Start: 2013.07.01 @ 11:22:00

Tool Information

Drill Pipe:	Length: 3586.00 ft	Diameter: 3.80 inches	Volume: 50.30 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 74000.00 lb
			<u>Total Volume: 50.30 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	3595.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	3650.00 ft			
Interval between Packers:	55.00 ft			
Tool Length:	180.00 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			3575.00	
Shut In Tool	5.00			3580.00	
Hydraulic tool	5.00			3585.00	
Packer	5.00			3590.00	21.00 Bottom Of Top Packer
Packer	5.00			3595.00	
Stubb	1.00			3596.00	
Perforations	1.00			3597.00	
Change Over Sub	1.00			3598.00	
Drill Pipe	31.00			3629.00	
Change Over Sub	1.00			3630.00	
Recorder	0.00	6799	Inside	3630.00	
Recorder	0.00	8648	Outside	3630.00	
Perforations	19.00			3649.00	
Blank Off Sub	1.00			3650.00	55.00 Tool Interval
Packer	4.00			3654.00	
Change Over Sub	1.00			3655.00	
Recorder	0.00	8655	Below	3655.00	
Drill Pipe	93.00			3748.00	
Change Over Sub	1.00			3749.00	
Perforations	2.00			3751.00	
Bullnose	3.00			3754.00	104.00 Bottom Packers & Anchor

Total Tool Length: 180.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Double D's LLC

23-15s-19w Ellis,KS

122 E. 12th
Hays KS 67601

Reichert #3

Job Ticket: 53921

DST#: 2

ATTN: Alan Downing

Test Start: 2013.07.01 @ 11:22:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: lb/gal

Cushion Length:

ft

Water Salinity:

30000 ppm

Viscosity: sec/qt

Cushion Volume:

bbbl

Water Loss: in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
682.00	MW, 10%M, 90%W	9.567
186.00	MW, 50%M, 50%W	2.609
124.00	WM, 20%W, 80%M	1.739

Total Length: 992.00 ft Total Volume: 13.915 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: .25 @ 70 Degrees = 30, 000

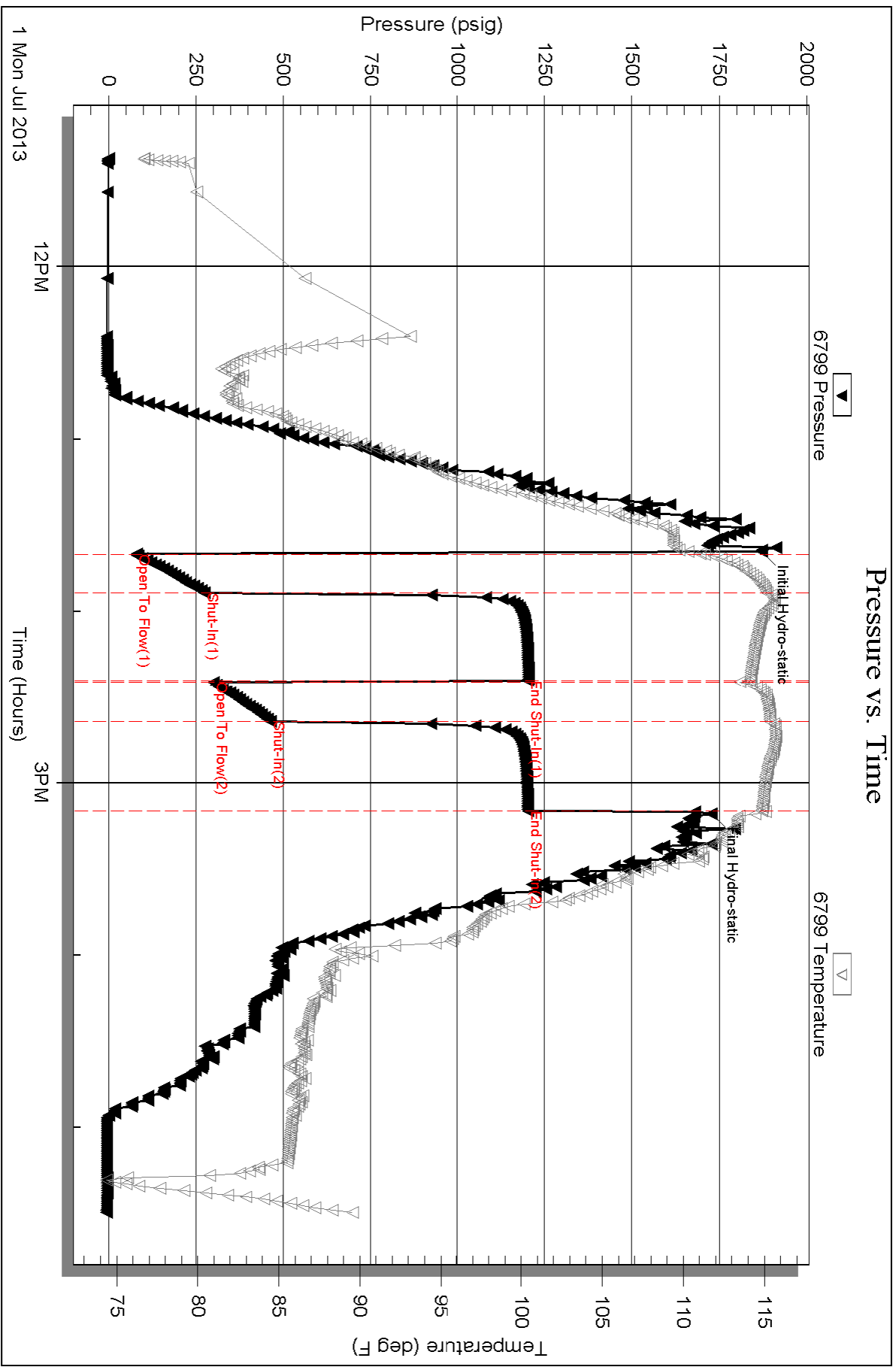
Serial #: 6799

Inside

Double Ds LLC

Reichert #3

DST Test Number: 2



Pressure vs. Time

6799 Pressure

6799 Temperature

1 Mon Jul 2013

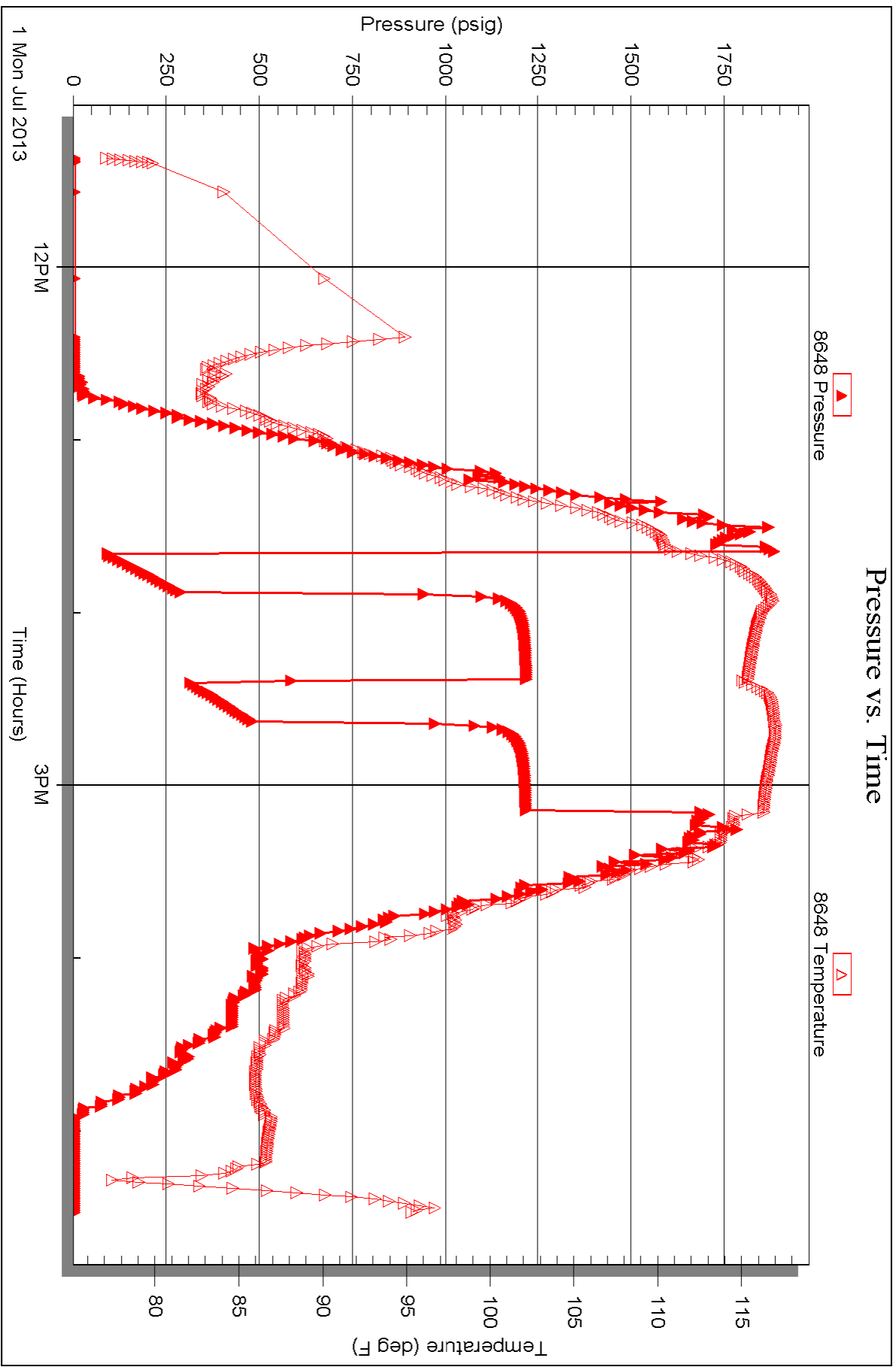
Time (Hours)

Serial #: 8648

Outside Double Ds LLC

Reichert #3

DST Test Number: 2

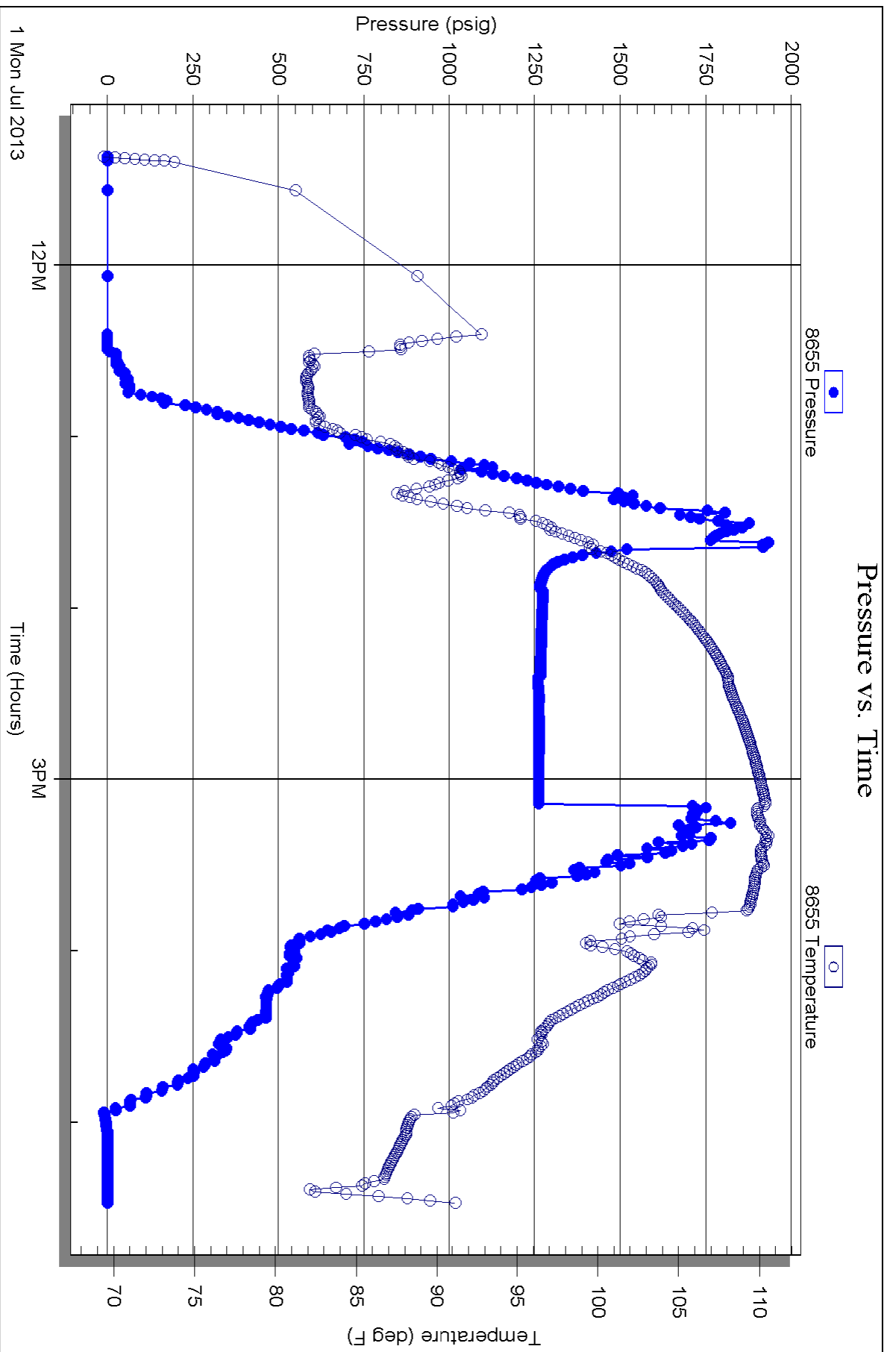


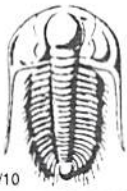
Serial #: 8655

Below (Stratified) Ds LLC

Reichert #3

DST Test Number: 2





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 53920

Well Name & No. Reichert #3 Test No. 1 Date 6-29-13
 Company Double D's LLC Elevation 1984 KB 1979 GL
 Address 133 E. 12th, Hays KS, 67601
 Co. Rep / Geo. Allen Downing Rig Royal
 Location: Sec. 23 Twp. 15S Rge. 19W Co. Ellis State KS

Interval Tested 3406 - 3480 Zone Tested H-I-J
 Anchor Length 74' Drill Pipe Run 3397' Mud Wt. 8.9
 Top Packer Depth 3401 Drill Collars Run - Vis 60+
 Bottom Packer Depth 3406 Wt. Pipe Run - WL 7.2
 Total Depth 3480 Chlorides 1800 ppm System LCM 2#
 Blow Description IF- B.O.B. in 8 minutes
ISI- No return
FF- B.O.B. in 10 minutes
FSI- No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>310</u>	<u>MW</u>			<u>80</u>	<u>20</u>
<u>139</u>	<u>WM</u>			<u>10</u>	<u>90</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

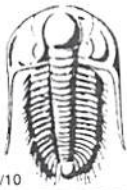
Rec Total 449' BHT 110° Gravity - API RW .25 @ 60° F Chlorides 33,000 ppm
 (A) Initial Hydrostatic 1699 Test 1150 T-On Location 9:40pm
 (B) First Initial Flow 76 Jars _____ T-Started 10:52pm
 (C) First Final Flow 207 Safety Joint _____ T-Open 12:37am
 (D) Initial Shut-In 272 Circ Sub _____ T-Pulled 2:37am
 (E) Second Initial Flow 211 Hourly Standby _____ T-Out 4:44am
 (F) Second Final Flow 253 Mileage 33 RT ^{51.15} Comments _____
 (G) Final Shut-In 278 Sampler _____
 (H) Final Hydrostatic 1630 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1201.15

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

Sub Total 0
 Total 1201.15
 MP/DST Disc't _____

Approved By _____ Our Representative Cody Blush

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. 53921

Well Name & No. Reichert #3 Test No. 2 Date 7-1-13
 Company Double D's LLC Elevation 1984 KB 1979 GL
 Address 133 E. 12th, Hays KS, 67601
 Co. Rep / Geo. Allen Downing Rig Royal #1
 Location: Sec. 23 Twp. 15s Rge. 19w Co. Ellis State KS

Interval Tested 3595 - 3650 TD 3750 Zone Tested Cong. Sand
 Anchor Length 55' 100' tail Drill Pipe Run 3586 Mud Wt. _____
 Top Packer Depth 3590 Drill Collars Run _____ Vis _____
 Bottom Packer Depth 3595 Wt. Pipe Run _____ WL _____
 Total Depth 3650 Chlorides _____ ppm System LCM _____
 Blow Description IF - B.O.B. in 1 minute
ISI - No return
FF - B.O.B. in 1 minute
FSI - No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>682</u>	<u>MW</u>		<u>90</u>	<u>10</u>	
<u>186</u>	<u>MW</u>		<u>50</u>	<u>50</u>	
<u>124</u>	<u>WM</u>		<u>20</u>	<u>80</u>	
_____	Feet of _____	%gas	%oil	%water	%mud
_____	Feet of _____	%gas	%oil	%water	%mud

Rec Total 992' BHT 1140 Gravity _____ API RW 1.25 @ 70 °F Chlorides 30,000 ppm

(A) Initial Hydrostatic <u>1872</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>10:30am</u>
(B) First Initial Flow <u>79</u>	<input type="checkbox"/> Jars _____	T-Started <u>11:22am</u>
(C) First Final Flow <u>274</u>	<input type="checkbox"/> Safety Joint _____	T-Open <u>1:40pm</u>
(D) Initial Shut-In <u>1201</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>3:10pm</u>
(E) Second Initial Flow <u>301</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>5:30pm</u>
(F) Second Final Flow <u>463</u>	<input checked="" type="checkbox"/> Mileage <u>33RT</u> 51.15	Comments _____
(G) Final Shut-In <u>1202</u>	<input type="checkbox"/> Sampler _____	_____
(H) Final Hydrostatic <u>1727</u>	<input checked="" type="checkbox"/> Straddle <u>600</u>	<input type="checkbox"/> Ruined Shale Packer _____
Initial Open <u>15</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>15</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>191.67</u>
Final Shut-In <u>30</u>	<input checked="" type="checkbox"/> Day Standby <u>over 24hrs</u> 1d 5.75h	Total <u>1992.82</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1801.15</u>	

Approved By _____ Our Representative Cody Blum

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.