



DRILL STEM TEST REPORT

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

133 E 12TH
Hays, KS 67601

ATTN: Marc Downing

Cecil #1

30-15s-18w Ellis,KS

Start Date: 2018.04.30 @ 22:50:00

End Date: 2018.05.01 @ 05:42:30

Job Ticket #: 63554 DST #: 1

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

Printed: 2018.05.03 @ 15:33:20

Double D's LLC 30-15s-18w Ellis,KS Cecil #1 DST # 1 LKC C 2018.04.30



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Double D's LLC

30-15s-18w Ellis,KS

133 E 12TH
Hays, KS 67601

Cecil #1

Job Ticket: 63554

DST#: 1

ATTN: Marc Downing

Test Start: 2018.04.30 @ 22:50:00

GENERAL INFORMATION:

Formation: **LKC C**

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 00:53:50

Time Test Ended: 05:42:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Chris Hagman

Unit No: 71

Interval: 3262.00 ft (KB) To 3288.00 ft (KB) (TVD)

Reference Elevations: 1975.00 ft (KB)

Total Depth: 3288.00 ft (KB) (TVD)

1964.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: 8353

Inside

Press@RunDepth: 123.50 psig @ 3263.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.04.30

End Date:

2018.05.01

Last Calib.: 1899.12.30

Start Time: 22:50:01

End Time:

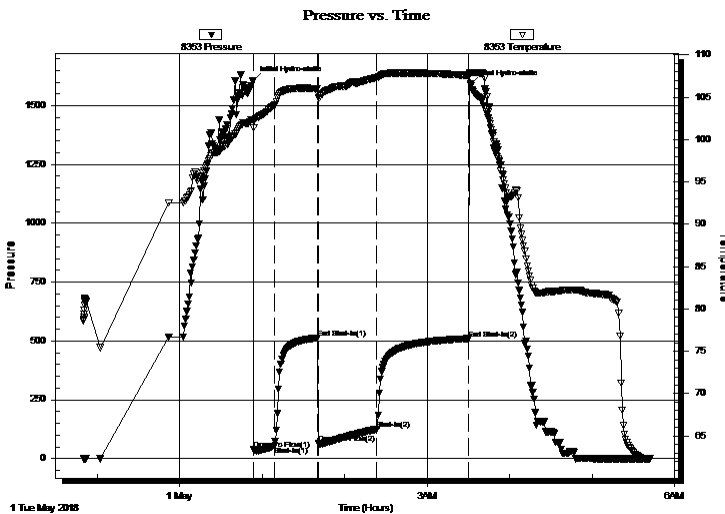
05:42:30

Time On Btm: 2018.05.01 @ 00:53:20

Time Off Btm: 2018.05.01 @ 03:31:20

TEST COMMENT: IF: BOB 1 min., strong building blow
IS: No blow back
FF: BOB 1 min., GTS 40 min. (TSTG), strong steady blow
FS: Blow back 1 min., 3 inches in 60 min.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1605.34	102.32	Initial Hydro-static
1	38.77	101.42	Open To Flow (1)
16	51.51	104.02	Shut-In(1)
47	512.64	105.99	End Shut-In(1)
48	66.18	105.25	Open To Flow (2)
90	123.50	107.28	Shut-In(2)
157	509.77	107.57	End Shut-In(2)
158	1591.21	107.84	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
315.00	gassy oil 10%G,90%O	4.42

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Double D's LLC

30-15s-18w Ellis,KS

133 E 12TH
Hays, KS 67601

Cecil #1

Job Ticket: 63554

DST#: 1

ATTN: Marc Downing

Test Start: 2018.04.30 @ 22:50:00

GENERAL INFORMATION:

Formation: **LKC C**

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 00:53:50

Time Test Ended: 05:42:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Chris Hagman

Unit No: 71

Interval: 3262.00 ft (KB) To 3288.00 ft (KB) (TVD)

Reference Elevations: 1975.00 ft (KB)

Total Depth: 3288.00 ft (KB) (TVD)

1964.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: 8676

Outside

Press@RunDepth: psig @ 3263.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.04.30

End Date:

2018.05.01

Last Calib.:

1899.12.30

Start Time: 22:50:01

End Time:

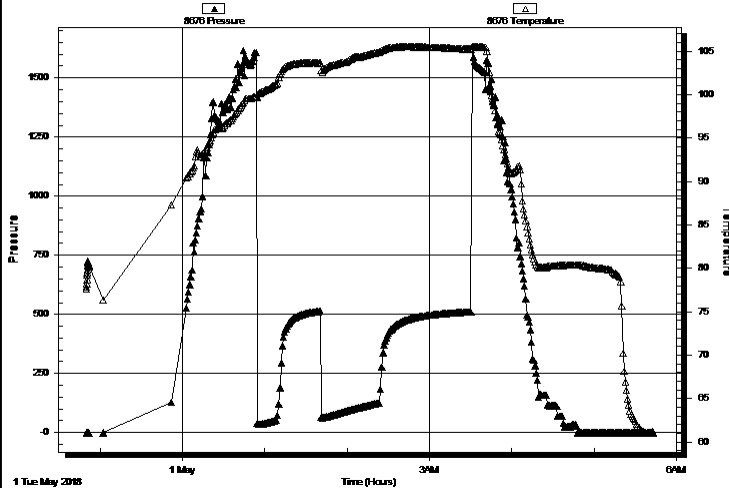
05:43:00

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: BOB 1 min., strong building blow
IS: No blow back
FF: BOB 1 min., GTS 40 min. (TSTG), strong steady blow
FS: Blow back 1 min., 3 inches in 60 min.

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
315.00	gassy oil 10%G,90%O	4.42

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Double D's LLC

30-15s-18w Ellis,KS

133 E 12TH
Hays, KS 67601

Cecil #1

Job Ticket: 63554

DST#: 1

ATTN: Marc Downing

Test Start: 2018.04.30 @ 22:50:00

Tool Information

Drill Pipe:	Length: 3259.00 ft	Diameter: 3.80 inches	Volume: 45.72 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: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 55000.00 lb
			<u>Total Volume: 45.72 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 39000.00 lb
Depth to Top Packer:	3262.00 ft			Final 41000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	26.00 ft			
Tool Length:	46.00 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			3243.00	
Shut In Tool	5.00			3248.00	
Hydraulic tool	5.00			3253.00	
Packer	5.00			3258.00	20.00 Bottom Of Top Packer
Packer	4.00			3262.00	
Stubb	1.00			3263.00	
Recorder	0.00	8676	Outside	3263.00	
Recorder	0.00	8353	Inside	3263.00	
Perforations	20.00			3283.00	
Bullnose	5.00			3288.00	26.00 Bottom Packers & Anchor
Total Tool Length:	46.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Double D's LLC

30-15s-18w Ellis,KS

133 E 12TH
Hays, KS 67601

Cecil #1

Job Ticket: 63554

DST#: 1

ATTN: Marc Downing

Test Start: 2018.04.30 @ 22:50:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

37 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 47.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.97 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 11500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
315.00	gassy oil 10%G,90%O	4.419

Total Length: 315.00 ft Total Volume: 4.419 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

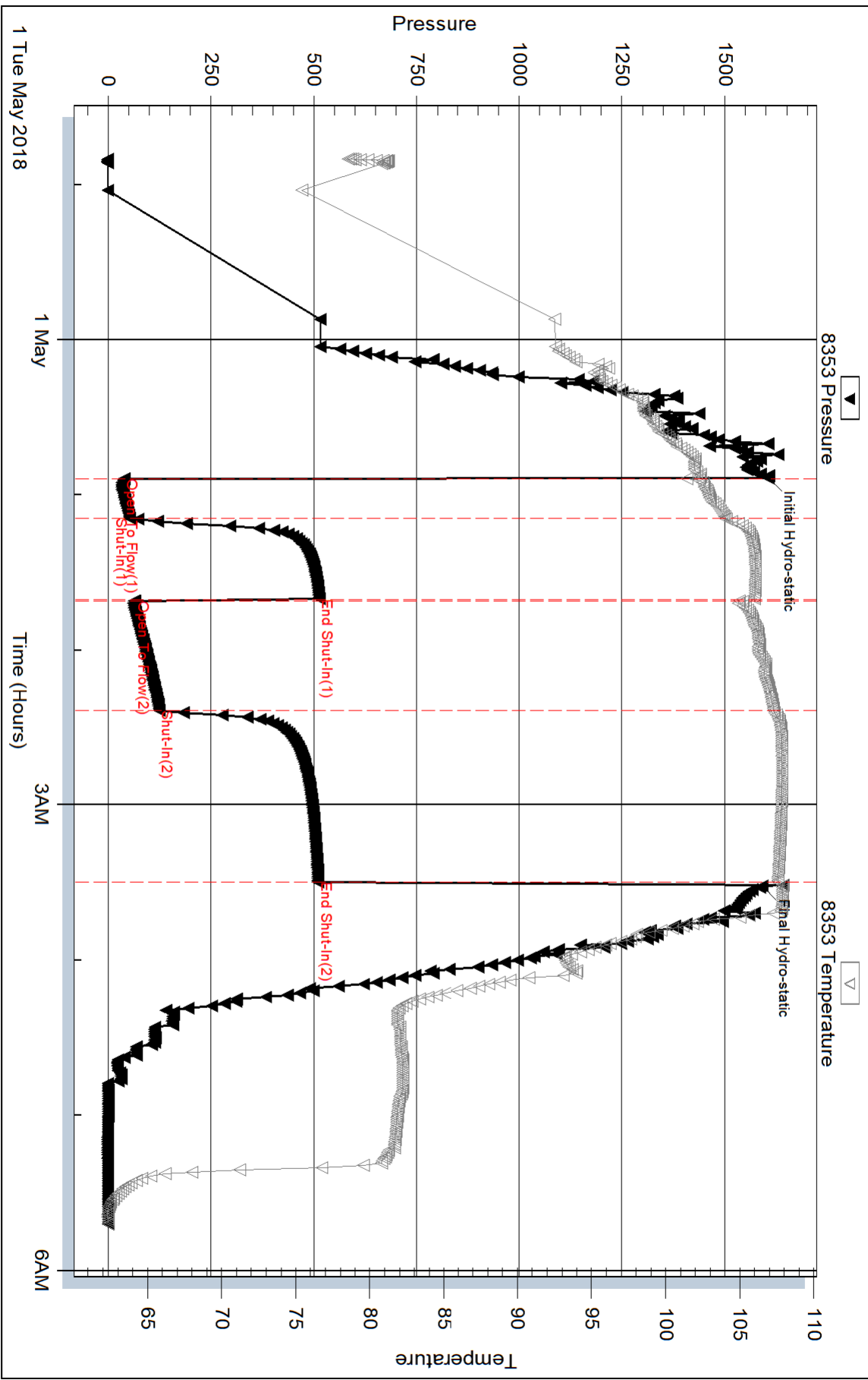
Laboratory Location:

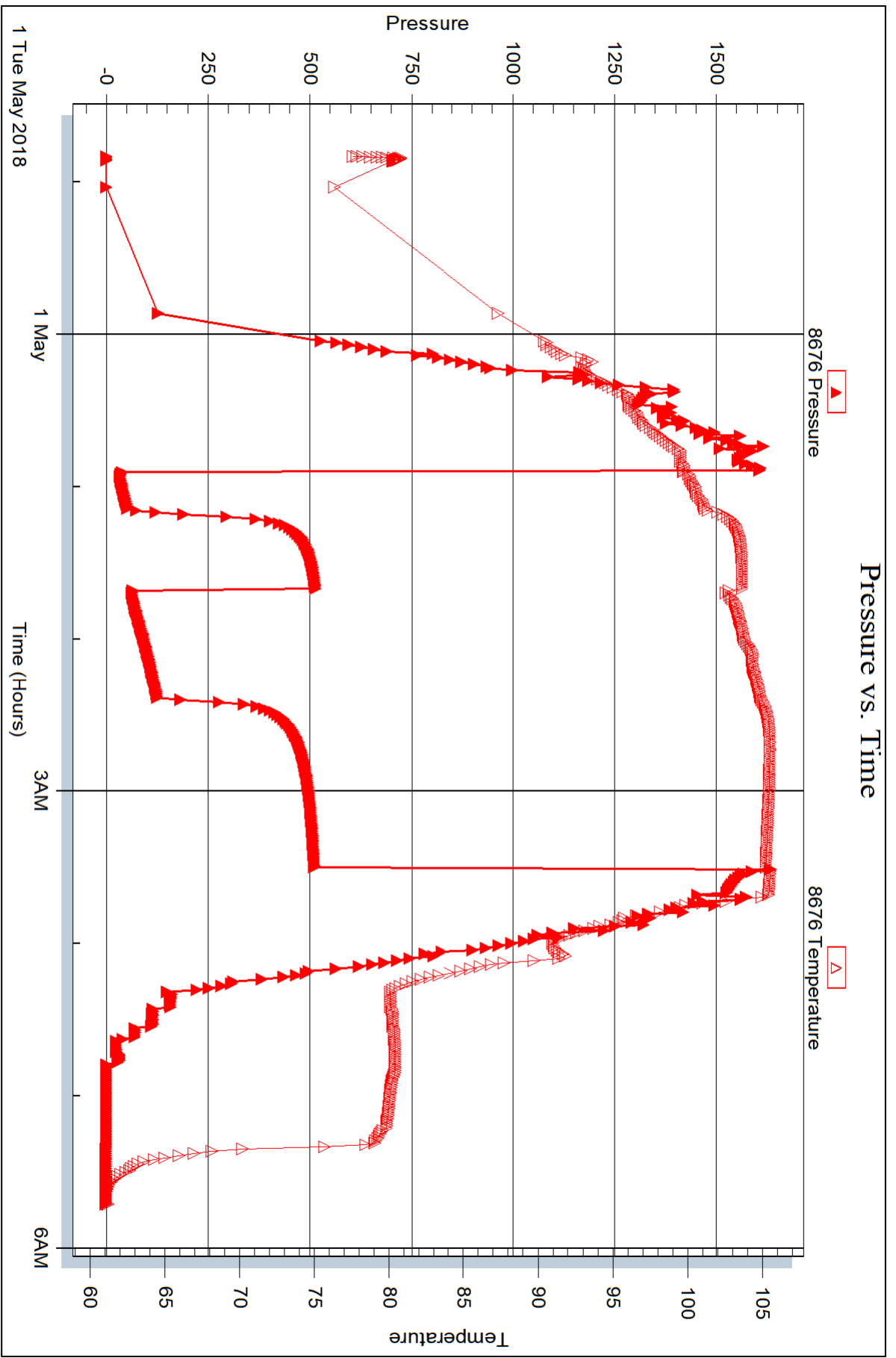
Recovery Comments: Gas TSTG

API=37@60F=37

2927' GIP

Pressure vs. Time







DRILL STEM TEST REPORT

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

133 E 12TH
Hays, KS 67601

ATTN: Marc Downing

Cecil #1

30-15s-18w Ellis,KS

Start Date: 2018.05.01 @ 12:23:00

End Date: 2018.05.01 @ 18:35:39

Job Ticket #: 63555 DST #: 2

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

Printed: 2018.05.03 @ 15:30:10

Double D's LLC 30-15s-18w Ellis,KS Cecil #1 DST # 2 LKC D 2018.05.01



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Double D's LLC

30-15s-18w Ellis,KS

133 E 12TH
Hays, KS 67601

Cecil #1

Job Ticket: 63555

DST#: 2

ATTN: Marc Downing

Test Start: 2018.05.01 @ 12:23:00

GENERAL INFORMATION:

Formation: **LKC D**

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 14:13:50

Time Test Ended: 18:35:39

Test Type: Conventional Bottom Hole (Initial)

Tester: Chris Hagman

Unit No: 71

Interval: 3290.00 ft (KB) To 3315.00 ft (KB) (TVD)

Reference Elevations: 1975.00 ft (KB)

Total Depth: 3315.00 ft (KB) (TVD)

1964.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: 8353

Inside

Press@RunDepth: 321.11 psig @ 3291.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.05.01

End Date: 2018.05.01

Last Calib.: 1899.12.30

Start Time: 12:23:01

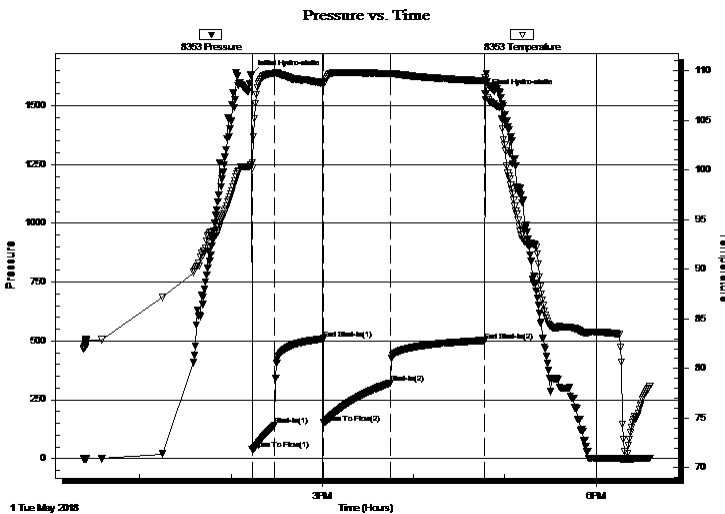
End Time: 18:35:40

Time On Btm: 2018.05.01 @ 14:13:30

Time Off Btm: 2018.05.01 @ 16:47:00

TEST COMMENT: IF: BOB 3 min., strong steady blow
 IS: Blow back 4 min., 1/2"
 FF: BOB 8 min., GTS ASAO (TSTG), strong steady blow
 FS: Blow back 6 min., weak surface, died 20 min.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1633.18	100.52	Initial Hydro-static
1	40.57	100.16	Open To Flow (1)
16	141.03	109.72	Shut-In(1)
48	509.40	108.82	End Shut-In(1)
48	152.20	108.66	Open To Flow (2)
92	321.11	109.68	Shut-In(2)
154	500.74	108.96	End Shut-In(2)
154	1550.20	109.24	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2.00	oil 100%	0.03
693.00	oily gassy water, spot oil, 5%G, 95%W	9.72

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Double D's LLC

30-15s-18w Ellis,KS

133 E 12TH
Hays, KS 67601

Cecil #1

Job Ticket: 63555

DST#: 2

ATTN: Marc Downing

Test Start: 2018.05.01 @ 12:23:00

GENERAL INFORMATION:

Formation: **LKC D**

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 14:13:50

Time Test Ended: 18:35:39

Test Type: Conventional Bottom Hole (Initial)

Tester: Chris Hagman

Unit No: 71

Interval: 3290.00 ft (KB) To 3315.00 ft (KB) (TVD)

Total Depth: 3315.00 ft (KB) (TVD)

Hole Diameter: 7.80 inches Hole Condition: Good

Reference Elevations: 1975.00 ft (KB)

1964.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: 8676 Outside

Press@RunDepth: psig @ 3291.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.05.01 End Date: 2018.05.01

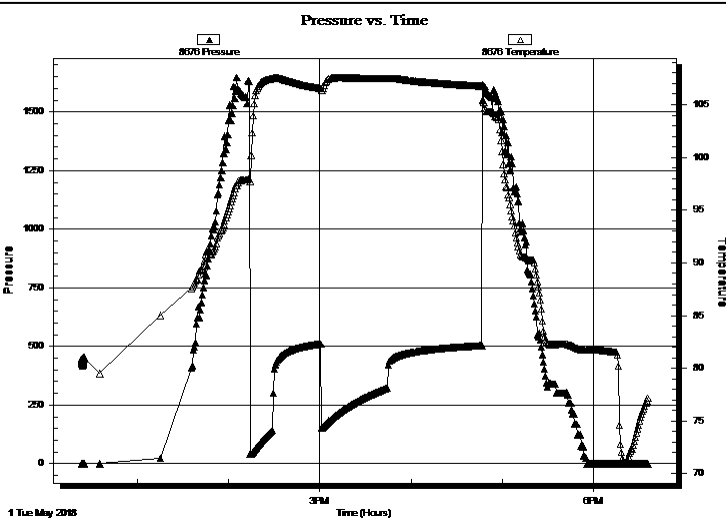
Last Calib.: 1899.12.30

Start Time: 12:23:01 End Time: 18:36:20

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: BOB 3 min., strong steady blow
 IS: Blow back 4 min., 1/2"
 FF: BOB 8 min., GTS ASAO (TSTG), strong steady blow
 FS: Blow back 6 min., weak surface, died 20 min.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
2.00	oil 100%	0.03
693.00	oily gassy water, spot oil, 5%G, 95%W	9.72

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Double D's LLC

30-15s-18w Ellis,KS

133 E 12TH
Hays, KS 67601

Cecil #1

Job Ticket: 63555

DST#: 2

ATTN: Marc Downing

Test Start: 2018.05.01 @ 12:23:00

Tool Information

Drill Pipe:	Length: 3293.00 ft	Diameter: 3.80 inches	Volume: 46.19 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: 20000.00 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: 46.19 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3290.00 ft			Final 44000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	25.00 ft			
Tool Length:	45.00 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			3271.00	
Shut In Tool	5.00			3276.00	
Hydraulic tool	5.00			3281.00	
Packer	5.00			3286.00	20.00 Bottom Of Top Packer
Packer	4.00			3290.00	
Stubb	1.00			3291.00	
Recorder	0.00	8676	Outside	3291.00	
Recorder	0.00	8353	Inside	3291.00	
Perforations	19.00			3310.00	
Bullnose	5.00			3315.00	25.00 Bottom Packers & Anchor
Total Tool Length:	45.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Double D's LLC

30-15s-18w Ellis,KS

133 E 12TH
Hays, KS 67601

Cecil #1

Job Ticket: 63555

DST#: 2

ATTN: Marc Downing

Test Start: 2018.05.01 @ 12:23:00

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:

67000 ppm

Viscosity: 47.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 11500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
2.00	oil 100%	0.028
693.00	oily gassy w ater, spot oil, 5%G, 95%W	9.721

Total Length: 695.00 ft Total Volume: 9.749 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

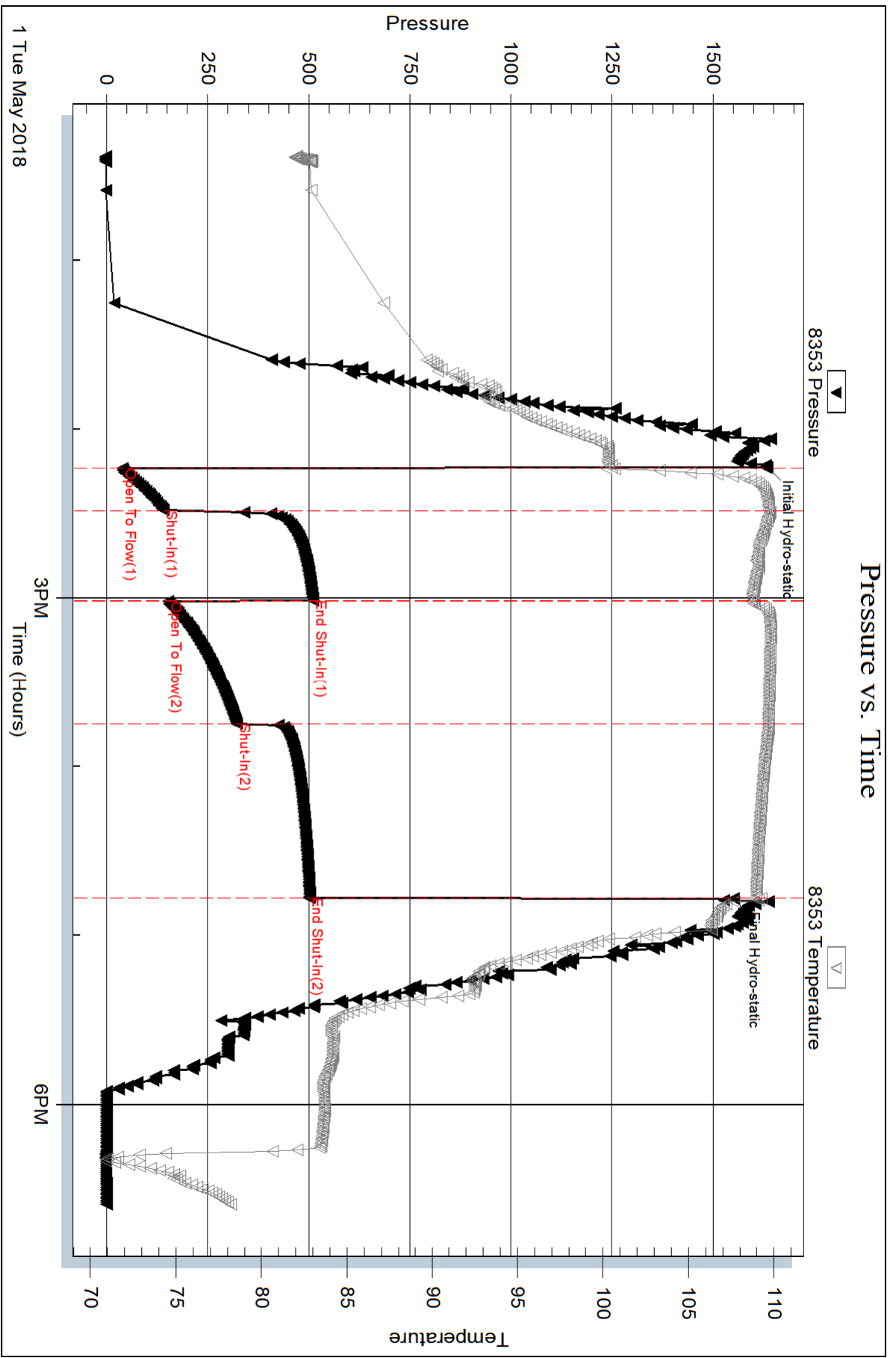
Laboratory Name:

Laboratory Location:

Recovery Comments: Gas TSTG

RW= .105@76F=67000ppm

2575'GIP

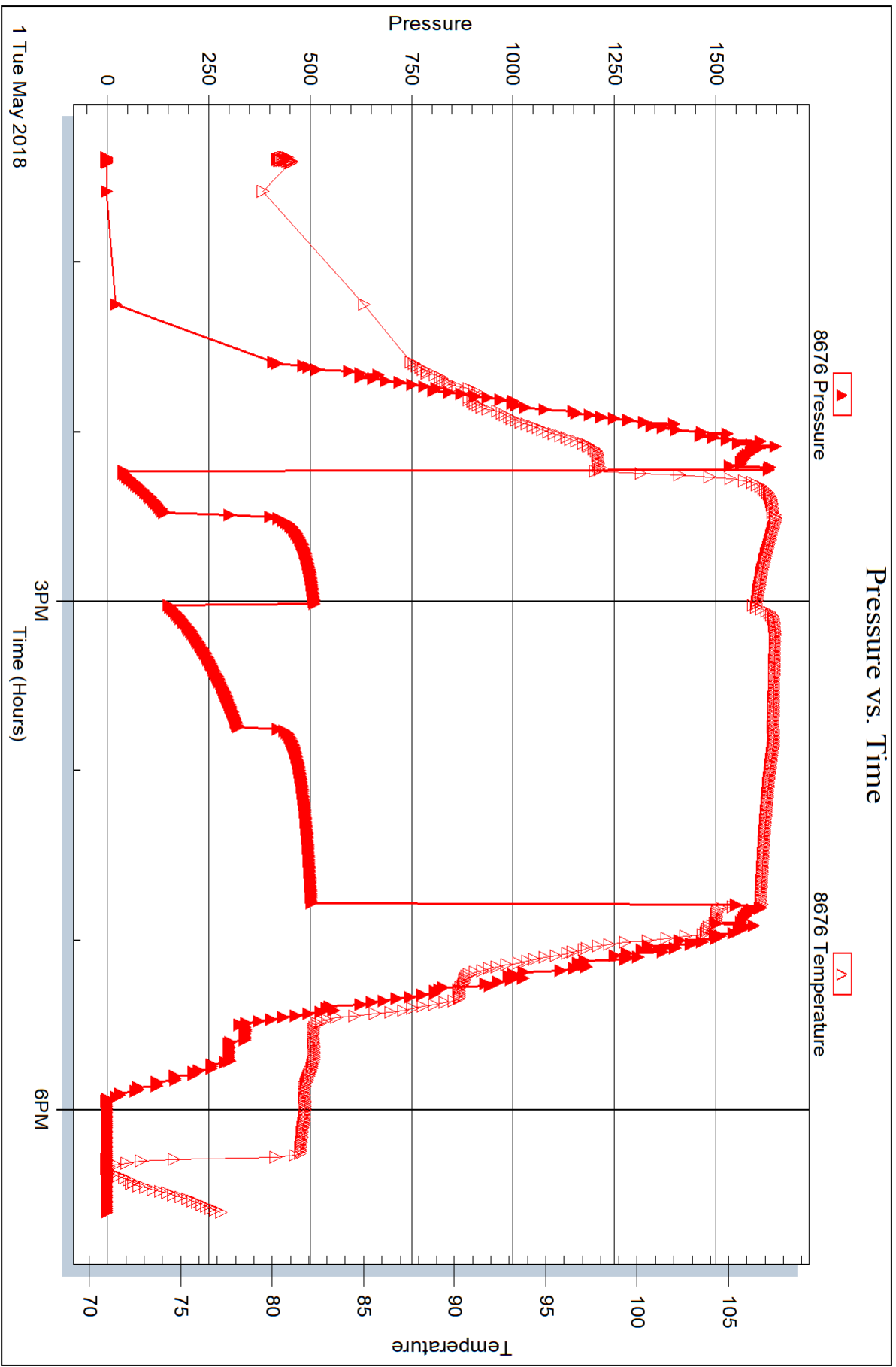


Serial #: 8676

Outside Double Ds LLC

Cell #1

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 63555

Printed: 2018.05.03 @ 15:30:11



DRILL STEM TEST REPORT

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

133 E 12TH
Hays, KS 67601

ATTN: Marc Downing

Cecil #1

30-15s-18w Ellis,KS

Start Date: 2018.05.02 @ 09:59:00

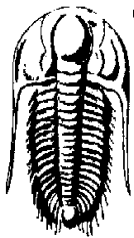
End Date: 2018.05.02 @ 16:52:20

Job Ticket #: 63556 DST #: 3

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

Printed: 2018.05.03 @ 15:29:29

Double D's LLC
30-15s-18w Ellis,KS
Cecil #1
DST # 3
LKC H-J
2018.05.02



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Double D's LLC

30-15s-18w Ellis,KS

133 E 12TH
Hays, KS 67601

Cecil #1

Job Ticket: 63556

DST#: 3

ATTN: Marc Downing

Test Start: 2018.05.02 @ 09:59:00

GENERAL INFORMATION:

Formation: **LKC H-J**

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 11:27:20

Time Test Ended: 16:52:20

Test Type: Conventional Bottom Hole (Initial)

Tester: Chris Hagman

Unit No: 71

Interval: 3377.00 ft (KB) To 3450.00 ft (KB) (TVD)

Total Depth: 3450.00 ft (KB) (TVD)

Hole Diameter: 7.80 inches Hole Condition: Good

Reference Elevations: 1975.00 ft (KB)

1964.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: 8353

Inside

Press@RunDepth: 127.73 psig @ 3444.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.05.02

End Date:

2018.05.02

Last Calib.:

2018.05.02

Start Time: 09:59:01

End Time:

16:52:20

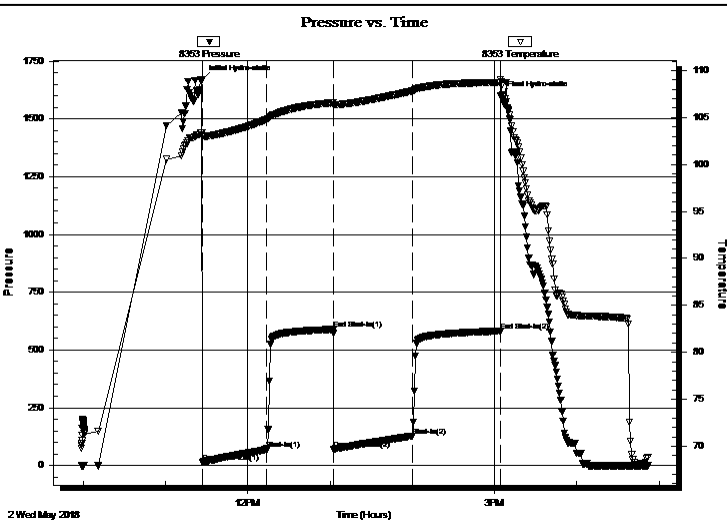
Time On Btm:

2018.05.02 @ 11:26:50

Time Off Btm:

2018.05.02 @ 15:04:20

TEST COMMENT: IF: 11" in 45 min., strong building blow
IS: No blow back
FF: 5 inches in 60 min., fair building blow
FS: No blow back



PRESSURE SUMMARY

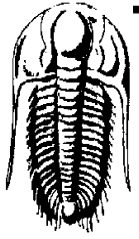
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1669.01	103.40	Initial Hydro-static
1	14.59	102.95	Open To Flow (1)
48	68.65	104.79	Shut-In(1)
96	589.03	106.57	End Shut-In(1)
96	70.83	106.39	Open To Flow (2)
154	127.73	107.81	Shut-In(2)
218	581.41	108.69	End Shut-In(2)
218	1600.45	109.05	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
221.00	MW w / oil spots 20%M, 80%M	3.10

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Double D's LLC

30-15s-18w Ellis, KS

133 E 12TH
Hays, KS 67601

Cecil #1

Job Ticket: 63556

DST#: 3

ATTN: Marc Downing

Test Start: 2018.05.02 @ 09:59:00

GENERAL INFORMATION:

Formation: **LKC H-J**

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 11:27:20

Time Test Ended: 16:52:20

Test Type: Conventional Bottom Hole (Initial)

Tester: Chris Hagman

Unit No: 71

Interval: **3377.00 ft (KB) To 3450.00 ft (KB) (TVD)**

Reference Elevations: 1975.00 ft (KB)

Total Depth: 3450.00 ft (KB) (TVD)

1964.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: **8676** Outside

Press@RunDepth: psig @ 3444.00 ft (KB)

Start Date: 2018.05.02 End Date: 2018.05.02

Start Time: 09:59:01 End Time: 16:53:20

Capacity: 8000.00 psig

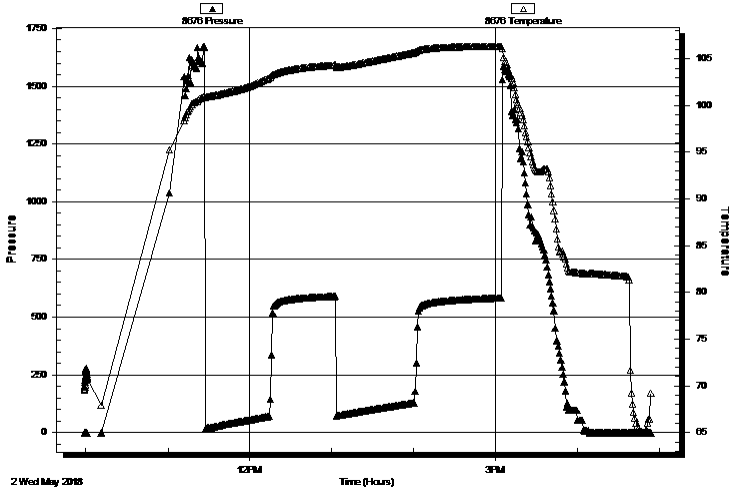
Last Calib.: 1899.12.30

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: 11" in 45 min., strong building blow
IS: No blow back
FF: 5 inches in 60 min., fair building blow
FS: No blow back

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
221.00	MW w / oil spots 20%M, 80%M	3.10

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Double D's LLC

30-15s-18w Ellis,KS

133 E 12TH
Hays, KS 67601

Cecil #1

Job Ticket: 63556

DST#: 3

ATTN: Marc Downing

Test Start: 2018.05.02 @ 09:59:00

Tool Information

Drill Pipe:	Length: 3362.00 ft	Diameter: 3.80 inches	Volume: 47.16 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: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 47.16 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 41000.00 lb
Depth to Top Packer:	3377.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	73.00 ft			
Tool Length:	93.00 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			3358.00	
Shut In Tool	5.00			3363.00	
Hydraulic tool	5.00			3368.00	
Packer	5.00			3373.00	20.00 Bottom Of Top Packer
Packer	4.00			3377.00	
Stubb	1.00			3378.00	
Perforations	3.00			3381.00	
Change Over Sub	1.00			3382.00	
Drill Pipe	62.00			3444.00	
Recorder	0.00	8676	Outside	3444.00	
Recorder	0.00	8353	Inside	3444.00	
Change Over Sub	1.00			3445.00	
Bullnose	5.00			3450.00	73.00 Bottom Packers & Anchor

Total Tool Length: 93.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Double D's LLC

30-15s-18w Ellis,KS

133 E 12TH
Hays, KS 67601

Cecil #1

Job Ticket: 63556

DST#: 3

ATTN: Marc Downing

Test Start: 2018.05.02 @ 09:59:00

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: 77000 ppm

Viscosity: 45.00 sec/qt

Cushion Volume: bbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 11900.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
221.00	MW w / oil spots 20%M, 80%M	3.100

Total Length: 221.00 ft Total Volume: 3.100 bbl

Num Fluid Samples: 0

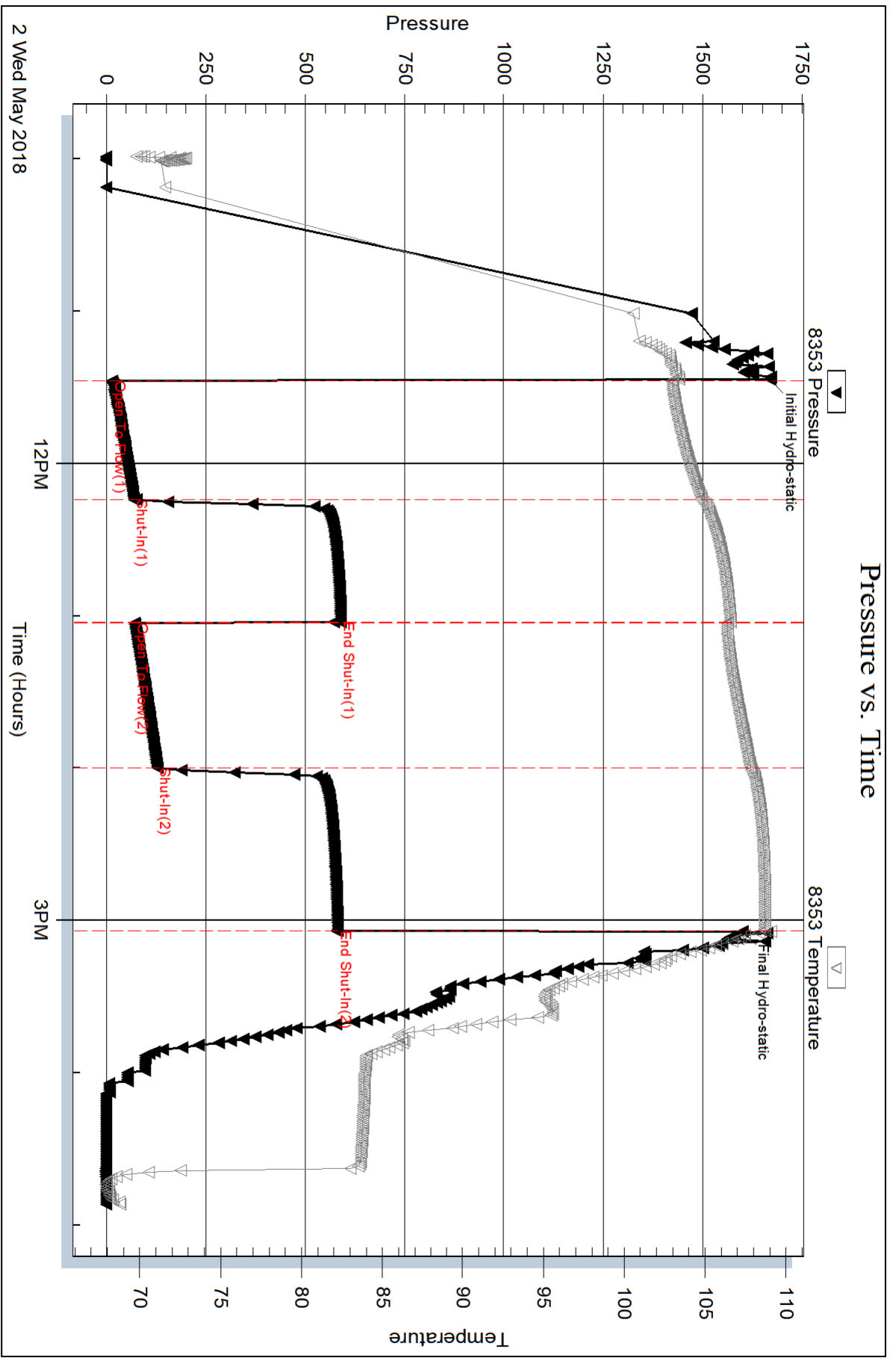
Num Gas Bombs: 0

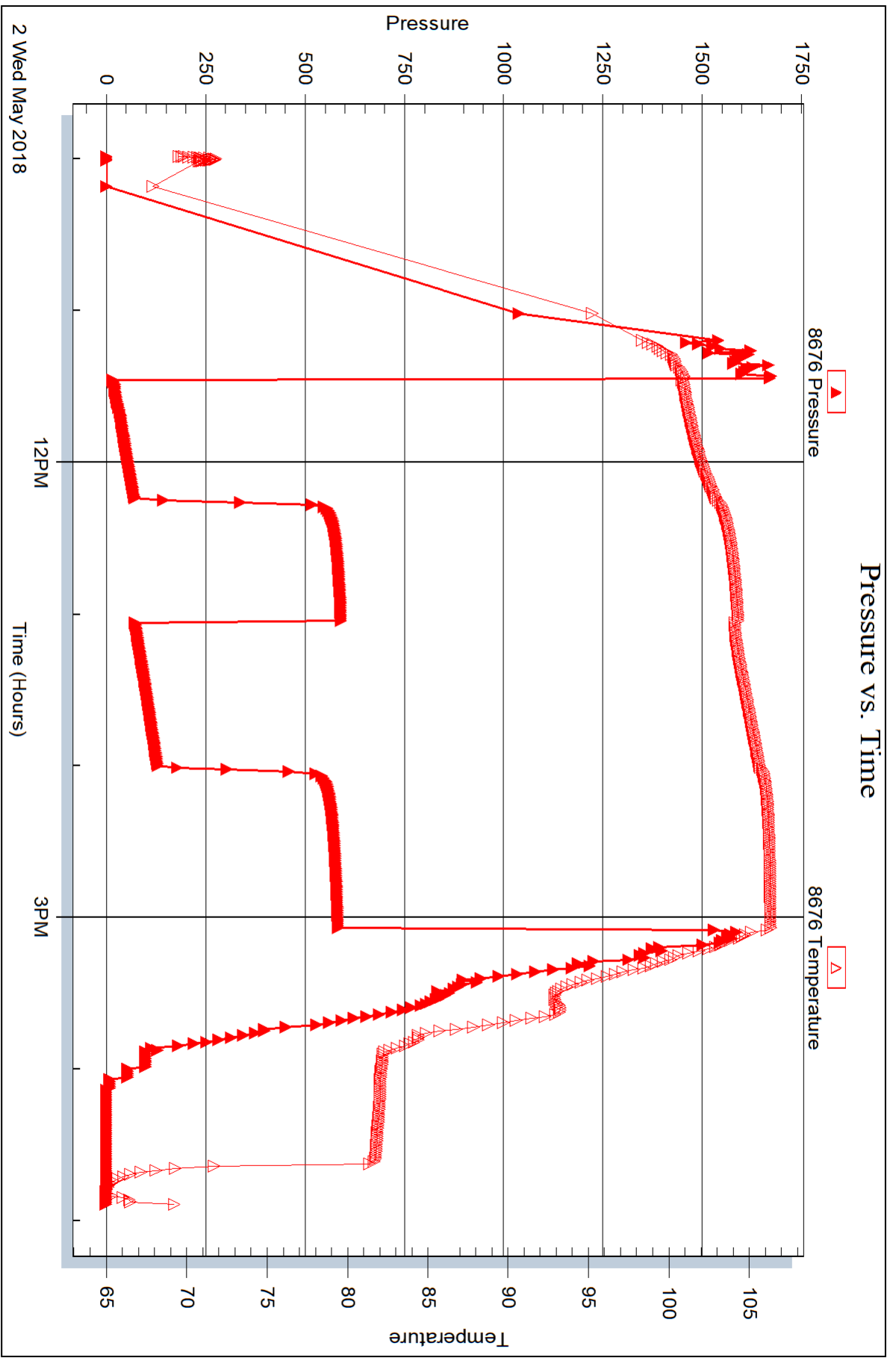
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW=.093@73F=77000ppm







DRILL STEM TEST REPORT

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

133 E 12TH
Hays, KS 67601

ATTN: Marc Downing

Cecil #1

30-15s-18w Ellis,KS

Start Date: 2018.05.03 @ 04:43:00

End Date: 2018.05.03 @ 09:56:00

Job Ticket #: 63557 DST #: 4

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

Printed: 2018.05.03 @ 15:29:06



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Double D's LLC

30-15s-18w Ellis,KS

133 E 12TH
Hays, KS 67601

Cecil #1

Job Ticket: 63557

DST#: 4

ATTN: Marc Downing

Test Start: 2018.05.03 @ 04:43:00

GENERAL INFORMATION:

Formation: **Conglomerate Sand**

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 06:19:40

Time Test Ended: 09:56:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Chris Hagman

Unit No: 71

Interval: 3477.00 ft (KB) To 3567.00 ft (KB) (TVD)

Reference Elevations: 1975.00 ft (KB)

Total Depth: 3567.00 ft (KB) (TVD)

1964.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: 8353

Inside

Press@RunDepth: 111.91 psig @ 3478.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.05.03

End Date: 2018.05.03

Last Calib.: 2018.05.03

Start Time: 04:43:01

End Time: 09:56:00

Time On Btm: 2018.05.03 @ 06:16:20

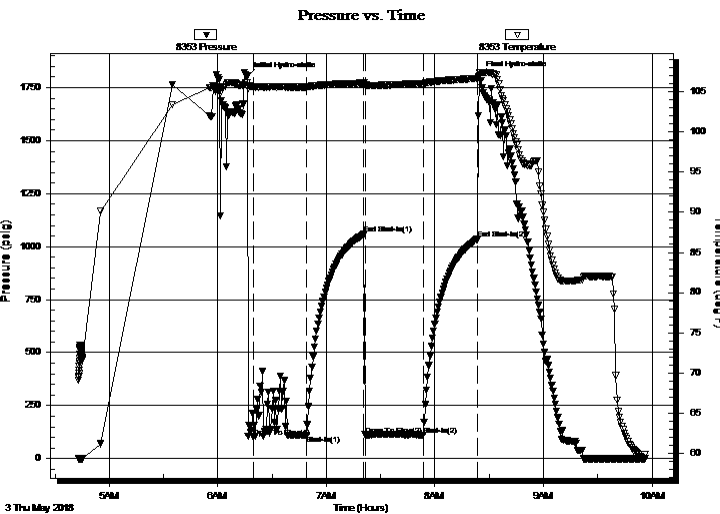
Time Off Btm: 2018.05.03 @ 08:24:50

TEST COMMENT: IF: Tool slid 7' - 1" in 5 min., died to weak surface blow 30 min.

IS: No Blow back

FF: No blow, flushed tool, weak surface blow 30 min.

FS: No blow back



PRESSURE SUMMARY

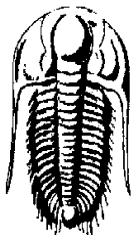
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1803.29	106.19	Initial Hydro-static
4	101.72	105.55	Open To Flow (1)
33	111.08	105.61	Shut-In(1)
65	1058.05	106.10	End Shut-In(1)
65	112.28	105.86	Open To Flow (2)
98	111.91	106.05	Shut-In(2)
127	1034.51	106.67	End Shut-In(2)
129	1806.78	107.39	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	oil 100%O	0.07
214.00	oily mud 5%O,95%M	3.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Double D's LLC

133 E 12TH
Hays, KS 67601

ATTN: Marc Downing

30-15s-18w Ellis, KS

Cecil #1

Job Ticket: 63557

DST#: 4

Test Start: 2018.05.03 @ 04:43:00

GENERAL INFORMATION:

Formation: **Conglomerate Sand**

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 06:19:40

Time Test Ended: 09:56:00

Interval: **3477.00 ft (KB) To 3567.00 ft (KB) (TVD)**

Total Depth: 3567.00 ft (KB) (TVD)

Hole Diameter: 7.80 inches Hole Condition: Good

Test Type: Conventional Bottom Hole (Initial)

Tester: Chris Hagman

Unit No: 71

Reference Elevations: 1975.00 ft (KB)

1964.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: **8676**

Outside

Press@RunDepth: psig @ 3478.00 ft (KB)

Start Date: 2018.05.03 End Date: 2018.05.03

Start Time: 04:43:01 End Time: 09:56:00

Capacity: 8000.00 psig

Last Calib.: 1899.12.30

Time On Btm:

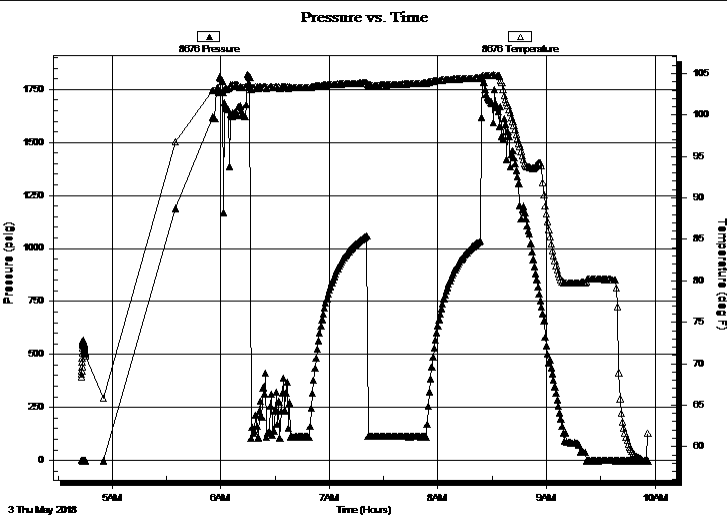
Time Off Btm:

TEST COMMENT: IF: Tool slid 7' - 1" in 5 min., died to weak surface blow 30 min.

IS: No Blow back

FF: No blow, flushed tool, weak surface blow 30 min.

FS: No blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	oil 100%O	0.07
214.00	oily mud 5%O,95%M	3.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Double D's LLC

30-15s-18w Ellis,KS

133 E 12TH
Hays, KS 67601

Cecil #1

Job Ticket: 63557

DST#: 4

ATTN: Marc Downing

Test Start: 2018.05.03 @ 04:43:00

Tool Information

Drill Pipe:	Length: 3488.00 ft	Diameter: 3.80 inches	Volume: 48.93 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: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 48.93 bbl</u>	Tool Chased 7.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3477.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	90.00 ft			
Tool Length:	110.00 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			3458.00	
Shut In Tool	5.00			3463.00	
Hydraulic tool	5.00			3468.00	
Packer	5.00			3473.00	20.00 Bottom Of Top Packer
Packer	4.00			3477.00	
Stubb	1.00			3478.00	
Recorder	0.00	8676	Outside	3478.00	
Recorder	0.00	8353	Inside	3478.00	
Perforations	19.00			3497.00	
Change Over Sub	1.00			3498.00	
Drill Pipe	63.00			3561.00	
Change Over Sub	1.00			3562.00	
Bullnose	5.00			3567.00	90.00 Bottom Packers & Anchor

Total Tool Length: 110.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Double D's LLC

30-15s-18w Ellis,KS

133 E 12TH
Hays, KS 67601

Cecil #1

Job Ticket: 63557

DST#: 4

ATTN: Marc Downing

Test Start: 2018.05.03 @ 04:43:00

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: 45.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 11900.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	oil 100%O	0.070
214.00	oily mud 5%O,95%M	3.002

Total Length: 219.00 ft Total Volume: 3.072 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

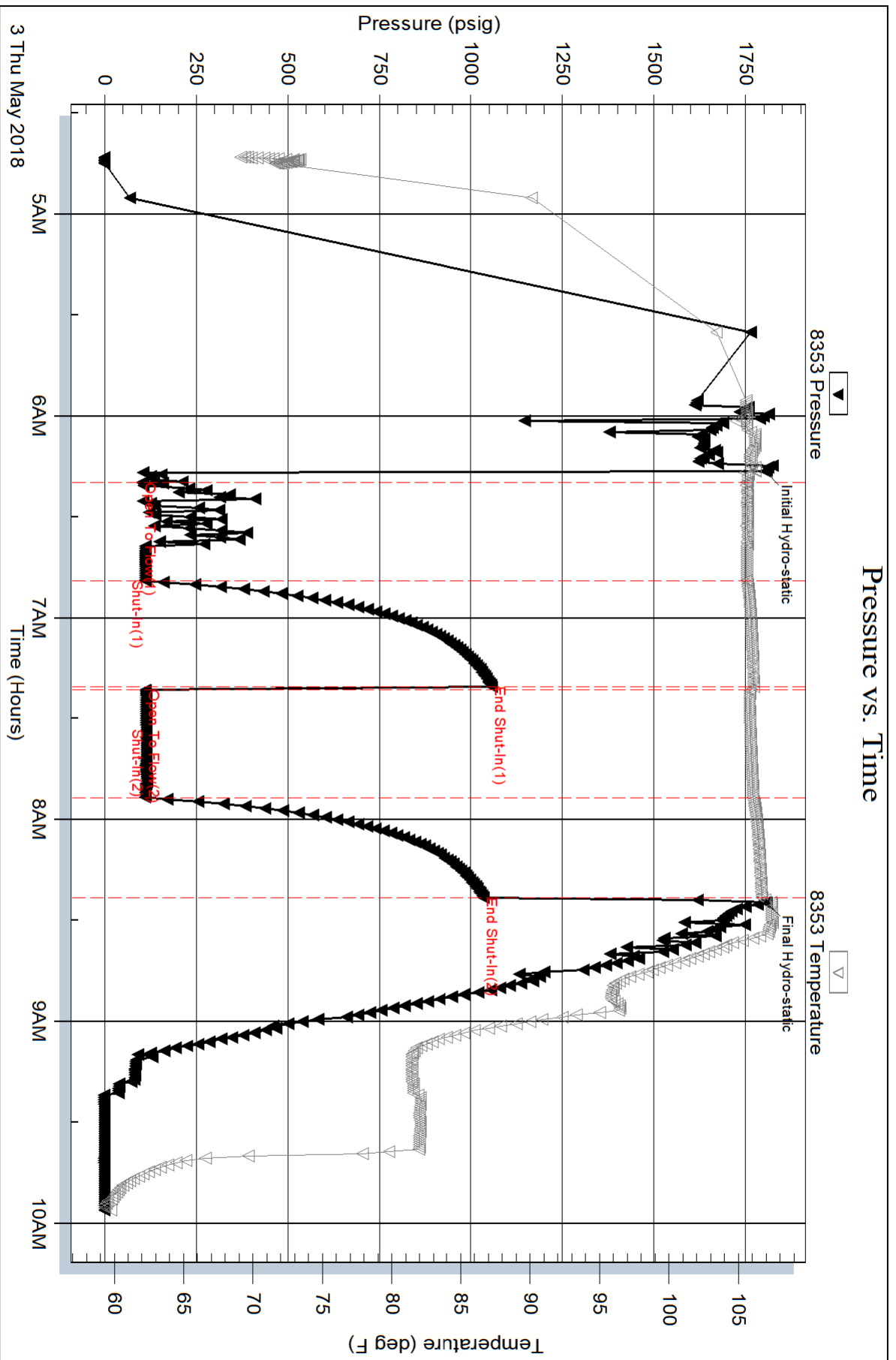
Serial #:

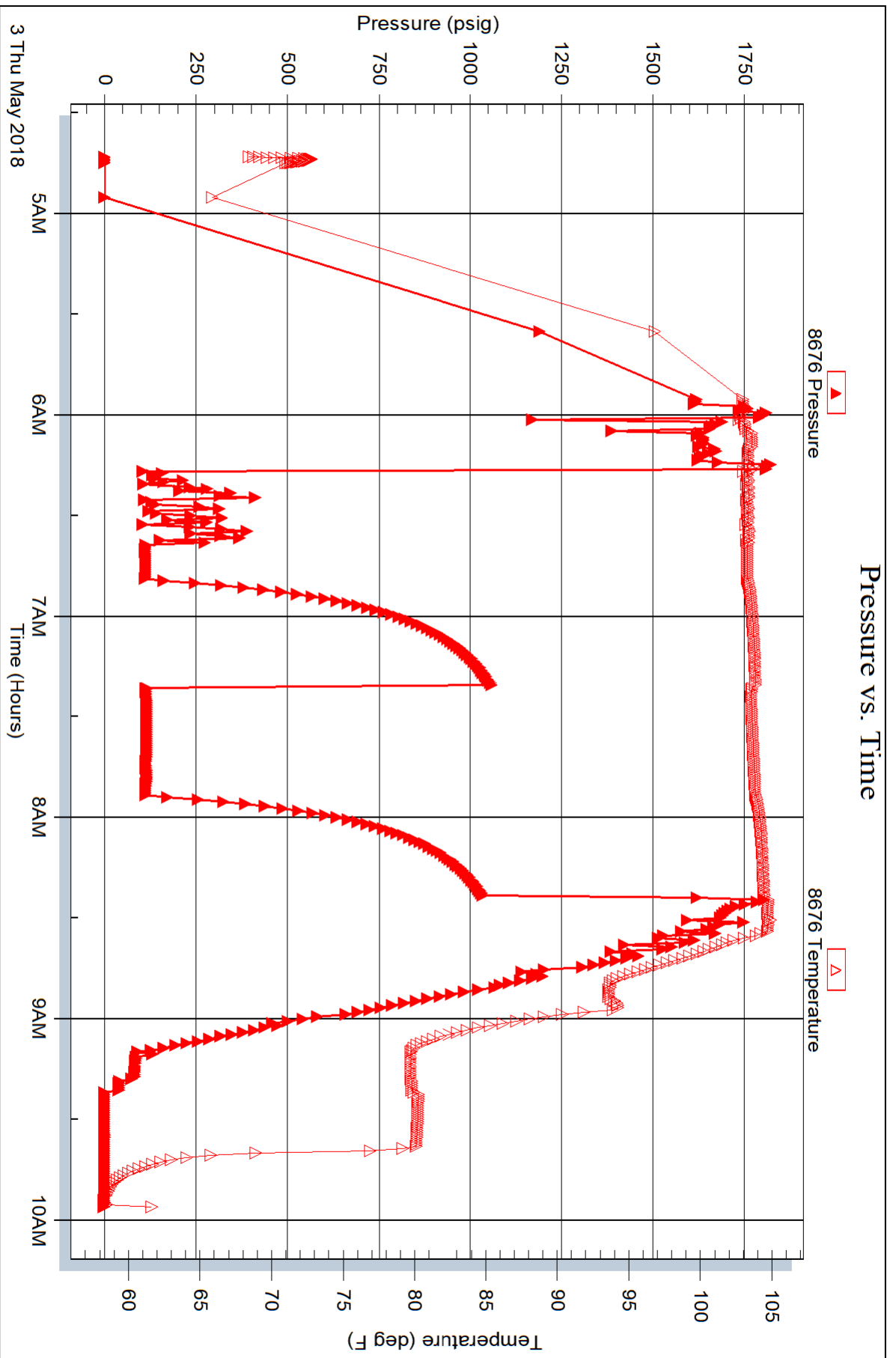
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







TRIOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63554

Well Name & No. Cecil #1 Test No. 1 Date 4-30-18
 Company Double D's LLC Elevation 1975 KB 1964 GL
 Address 133 E 12TH Hays, KS 67601
 Co. Rep / Geo. Marc Downing 620-428-1356 Rig Southwind #1
 Location: Sec. 30 Twp 15 Rge. 18 Co. Ellis State KS

Interval Tested 3262-3288 Zone Tested LKC "C"
 Anchor Length 26' Drill Pipe Run 3259 Mud Wt. 9.2
 Top Packer Depth 3257 Drill Collars Run 0 Vis 47
 Bottom Packer Depth 3262 Wt. Pipe Run N.A. WL 8.0
 Total Depth 3288 Chlorides 11500 ppm System LCM 2nd

Blow Description BF: BOB 1 min., strong building blow
TS: No blow back
FF: BOB 1 min., GTS 40 min., strong steady blow (gas TSTG)
FS: Blow back 1 min., 3 inches in 60 min.

Rec	Feet of	%gas	%oil	%water	%mud
<u>315</u>	<u>gassy oil</u>	<u>10</u>	<u>90</u>		
Rec	Feet of	%gas	%oil	%water	%mud
<u>2927</u>	<u>GIP</u>				
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 315 BHT 108 Gravity 37 API RW 1050 °F Chlorides 11500 ppm

(A) Initial Hydrostatic 1605 Test COAL 1050 T-On Location 2130
 (B) First Initial Flow 39 Jars _____ T-Started 2315
 (C) First Final Flow 52 Safety Joint _____ T-Open 0100
 (D) Initial Shut-In 513 Circ Sub _____ T-Pulled 0330
 (E) Second Initial Flow 66 Hourly Standby _____ T-Out 2250
 (F) Second Final Flow 124 Mileage x 40 40 Comments 8676, 8353
 (G) Final Shut-In 510 Sampler _____ BTS on @
 (H) Final Hydrostatic 1591 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 15 Extra Recorder _____ Sub Total: 0
 Initial Shut-In 30 Day Standby _____ Total: 1090
 Final Flow 45 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 60 Sub Total 1090

Approved By _____ Our Representative Chris Hays
 Triobite 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. 63555

Well Name & No. Cecil #1 Test No. 2 Date 5-1-18
 Company Double D's LLC Elevation 1975 KB 1964 GL
 Address 133 E 12TH Hays, KS 67601
 Co. Rep / Geo. Mark Downing Rig Southwind #1
 Location: Sec. 30 Twp 15 Rge. 18 Co. Ellis State KS

Interval Tested 3290-3315 Zone Tested LKC "D"
 Anchor Length 25' Drill Pipe Run 3293 Mud Wt. 9.2
 Top Packer Depth 3285 Drill Collars Run 0 Vis 47
 Bottom Packer Depth 3290 Wt. Pipe Run N.A. WL 8.0
 Total Depth 3315 Chlorides 11500 ppm System LCM 2#

Blow Description IF: BOB 3 min., strong steady blow
IST: Blow back 4 min.,
FF: BOB 8 min., GTS ASAO (TSTG), strong steady blow
FST: Blow back 6 min., weak surface, died 20 min.

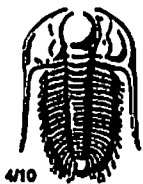
Rec	Feet of	%gas	%oil	%water	%mud
<u>2</u>	<u>oil</u>		<u>100</u>		
<u>693</u>	<u>oily gassy water</u>	<u>5</u>	<u>Spot</u>	<u>95</u>	<u>9</u>
<u>2575'</u>	<u>GTP</u>				
<u>695</u>	<u>BHT 110</u>	<u>Gravity</u>	<u>API RW 105 @ 76</u>	<u>F Chlorides 67,000</u>	<u>ppm</u>

(A) Initial Hydrostatic 1633 Test cow 1050 T-On Location 1215
 (B) First Initial Flow 41 Jars _____ T-Started 1230
 (C) First Final Flow 141 Safety Joint _____ T-Open 1415
 (D) Initial Shut-In 509 Circ Sub _____ T-Pulled 1645
 (E) Second Initial Flow 152 Hourly Standby _____ T-Out 1830
 (F) Second Final Flow 321 Mileage x 40 40 Comments sets on @ 1223
 (G) Final Shut-In 501 Sampler _____
 (H) Final Hydrostatic 1550 Straddle _____

Initial Open 15 Shale Packer _____
 Initial Shut-In 30 Shale Packer _____
 Final Flow 45 Extra Packer _____
 Final Shut-In 60 Extra Recorder _____
 Sub Total 1090 Day Standby _____
 Total 1090 Accessibility _____
 MP/DST Disc't _____
 Sub Total 1090

Approved By _____ Our Representative Chris Hagan

Triobite 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 all cost by the party for whom the test is made.



TRIOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63556

Well Name & No. Cecil #1 Test No. 3 Date 5-2-18
 Company Double D's LLC Elevation 1975 KB 1964 GL
 Address 133 E 12th Hays, KS 67601
 Co. Rep / Geo. Marc Downing Rig Southwind #1
 Location: Sec. 30 Twp 15 Rge. 18 Co. Ellis State KS

Interval Tested 3377-3450 Zone Tested LKC H-J
 Anchor Length 73' Drill Pipe Run 3362 Mud Wt. 9.3
 Top Packer Depth 3372 Drill Collars Run 0 Vls 45
 Bottom Packer Depth 3377 Wt. Pipe Run N.A. WL 8.0
 Total Depth 3450 Chlorides 11900 ppm System LCM 2nd

Blow Description IFL 11 inches in 45 min., strong building blow
TST: No blow back
FF: 5 inches in 60 min, fair building blow
FSD: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>221</u>	<u>oil spotted muddy water</u>	<u>spot</u>	<u>80</u>	<u>20</u>	<u></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

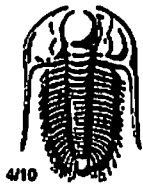
Rec Total 221' BHT 108 Gravity _____ API RW .093 @ 73 °F Chlorides 77,000 ppm

(A) Initial Hydrostatic 1669 Test CON 1050 T-On Location 0930
 (B) First Initial Flow 15 Jars _____ T-Started 1000
 (C) First Final Flow 69 Safety Joint _____ T-Open 1130
 (D) Initial Shut-In 589 Circ Sub _____ T-Pulled 1500
 (E) Second Initial Flow 71 Hourly Standby _____ T-Out 1700
 (F) Second Final Flow 128 Mileage x 40 40 Comments bats on @ 9:59
 (G) Final Shut-In 581 Sampler _____
 (H) Final Hydrostatic 1600 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____

Initial Open 45
 Initial Shut-In 45
 Final Flow 60
 Final Shut-In 60
 Sub Total 1090
 Total 1090
 MP/DST Disc't _____

Approved By _____ Our Representative Chris Hegman

Triobite 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.



TRIOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63557

Well Name & No. Cecil #1 Test No. 4 Date 5-3-18
 Company Double D's LLC Elevation 1975 KB 1964 GL
 Address 133 E. 12TH Hays, KS 67601
 Co. Rep / Geo. Mark Downing Rig Southwind #1
 Location: Sec. 30 Twp 15 Rge. 18 Co. Ellis State KS

Interval Tested 3477-3567 Zone Tested Carb. sand
 Anchor Length 90' Drill Pipe Run 3488 Mud Wt. 9.3
 Top Packer Depth 3472 Drill Collars Run 0 Vls 45
 Bottom Packer Depth 3477 Wt. Pipe Run N.A. WL 8.0
 Total Depth 3567 Chlorides 11,900 ppm System LCM 2nd

Blow Description IF: 1 inch in 5 min., died to work surface blow 30 min.
FSJ: No blow back
FF: No blow, flushed tool, work surface blow
FSJ: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>oil</u>		<u>100%</u>		
<u>214</u>	<u>oily mud</u>		<u>5%</u>		<u>95%</u>
Rec Total	<u>219</u>	BHT	<u>107</u>	Gravity	API RW @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1803 Test CONV. 1050 T-On Location 0415
 (B) First Initial Flow 102 Jars _____ T-Started 0445
 (C) First Final Flow 111 Safety Joint _____ T-Open 0620
 (D) Initial Shut-In 1058 Circ Sub _____ T-Pulled 0820
 (E) Second Initial Flow 112 Hourly Standby _____ T-Out 1000
 (F) Second Final Flow 112 Mileage 240 40 Comments bits on @ 0443
 (G) Final Shut-In 1035 Sampler _____ Tool slid 7' to bottom
 (H) Final Hydrostatic 1807 Straddle _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Initial Open 30 Shale Packer _____
 Initial Shut-In 30 Extra Packer _____
 Final Flow 30 Extra Recorder _____
 Final Shut-In 30 Day Standby _____
 Accessibility _____
 Sub Total 1090 Sub Total _____
 Sub Total _____

Approved By _____ Our Representative Chris Hyman
 Triobite 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.