



DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Co. Inc.**

PO Box 1019
Hays, KS 67601

ATTN: Al Downing

Dietz-Zwenger #1-30

30-14s-18w Ellis,KS

Start Date: 2016.10.02 @ 11:24:17

End Date: 2016.10.02 @ 16:18:47

Job Ticket #: 61282 DST #: 1

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

Printed: 2016.10.05 @ 15:43:24



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co. Inc.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

Job Ticket: 61282

DST#: 1

ATTN: Al Dow ning

Test Start: 2016.10.02 @ 11:24:17

GENERAL INFORMATION:

Formation: **LKC "C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:32:17

Time Test Ended: 16:18:47

Test Type: Conventional Bottom Hole (Initial)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3364.00 ft (KB) To 3394.00 ft (KB) (TVD)

Reference Elevations: 2055.00 ft (KB)

Total Depth: 3394.00 ft (KB) (TVD)

2047.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6651 Inside

Press@RunDepth: 10.42 psig @ 3365.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.10.02 End Date: 2016.10.02

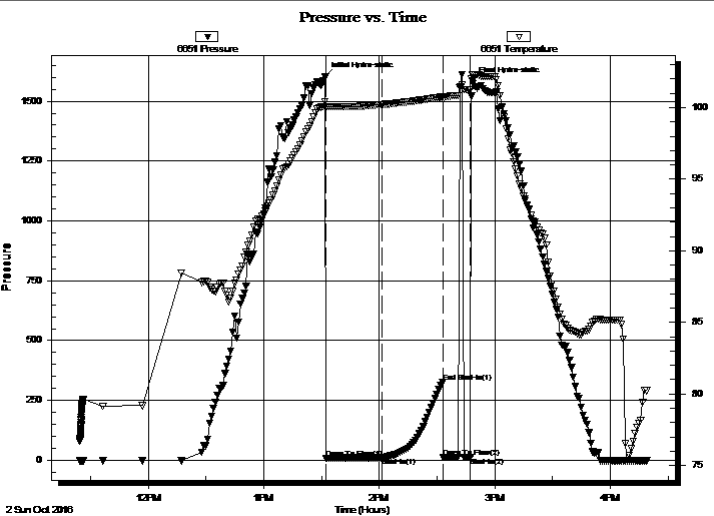
Last Calib.: 2016.10.02

Start Time: 11:24:18 End Time: 16:18:47

Time On Btm: 2016.10.02 @ 13:31:47

Time Off Btm: 2016.10.02 @ 14:48:17

TEST COMMENT: 30- IF- Surface blow died in 2 mins
30- IS- No blow
10- FF- No blow Flushed tool Surge died Pulled tool



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1603.59	100.42	Initial Hydro-static
1	7.74	99.96	Open To Flow (1)
30	10.42	100.22	Shut-In(1)
61	326.32	100.75	End Shut-In(1)
62	10.96	100.60	Open To Flow (2)
76	12.40	101.28	Shut-In(2)
77	1583.90	102.30	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	M	0.02

Gas Rates

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



**TRILOBITE
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Dow ning-Nelson Oil Co. Inc.

PO Box 1019
Hays, KS 67601

ATTN: Al Dow ning

30-14s-18w Ellis,KS

Dietz-Zwenger #1-30

Job Ticket: 61282

DST#: 1

Test Start: 2016.10.02 @ 11:24:17

GENERAL INFORMATION:

Formation: **LKC "C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:32:17

Time Test Ended: 16:18:47

Interval: 3364.00 ft (KB) To 3394.00 ft (KB) (TVD)

Total Depth: 3394.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Initial)

Tester: Brannan Lonsdale

Unit No: 73

Reference Elevations: 2055.00 ft (KB)

2047.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8959 **Outside**

Press@RunDepth: psig @ 3365.00 ft (KB)

Start Date: 2016.10.02 End Date: 2016.10.02

Start Time: 11:33:22 End Time: 16:17:51

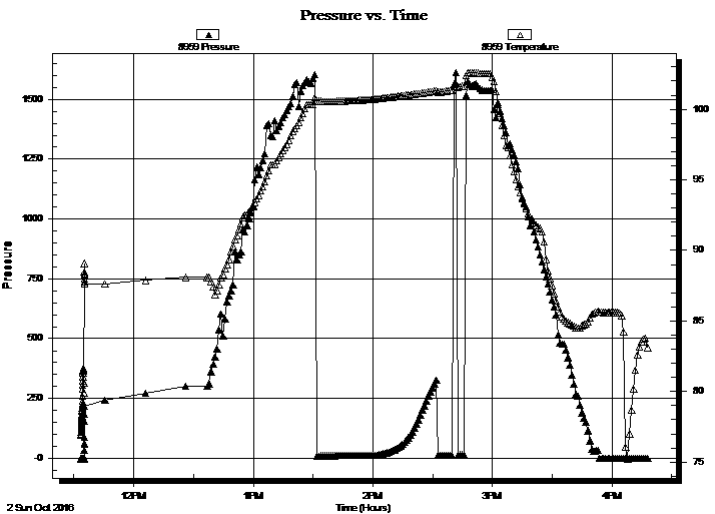
Capacity: 8000.00 psig

Last Calib.: 2016.10.02

Time On Btm:

Time Off Btm:

TEST COMMENT: 30- IF- Surface blow died in 2 mins
30- IS- No blow
10- FF- No blow Flushed tool Surge died Pulled tool



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	M	0.02

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co. Inc.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

Job Ticket: 61282

DST#: 1

ATTN: Al Dow ning

Test Start: 2016.10.02 @ 11:24:17

Tool Information

Drill Pipe:	Length: 3327.00 ft	Diameter: 3.82 inches	Volume: 47.16 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 66000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3364.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een Packers:	30.00 ft			
Tool Length:	50.00 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			3345.00	
Shut In Tool	5.00			3350.00	
Hydraulic tool	5.00			3355.00	
Packer	5.00			3360.00	20.00 Bottom Of Top Packer
Packer	4.00			3364.00	
Stubb	1.00			3365.00	
Recorder	0.00	6651	Inside	3365.00	
Recorder	0.00	8959	Outside	3365.00	
Perforations	26.00			3391.00	
Bullnose	3.00			3394.00	30.00 Bottom Packers & Anchor
Total Tool Length:	50.00				



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co. Inc.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

Job Ticket: 61282

DST#: 1

ATTN: Al Dow ning

Test Start: 2016.10.02 @ 11:24:17

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: 50.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
5.00	M	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6651

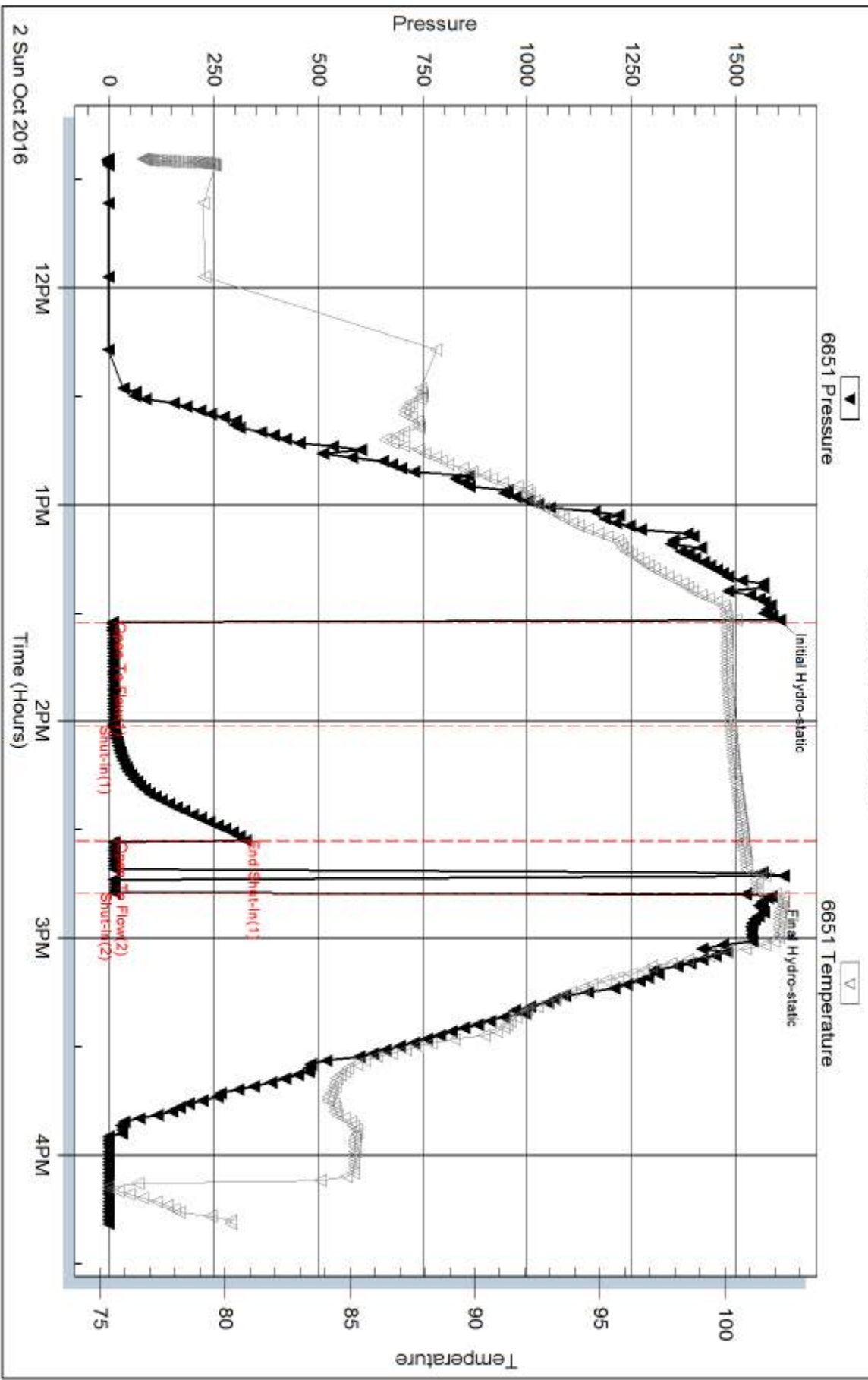
Inside

Dow n/g-Nelson Oil Co. Inc.

Diets-Zw enger #1-30

DST Test Number: 1

Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 61282

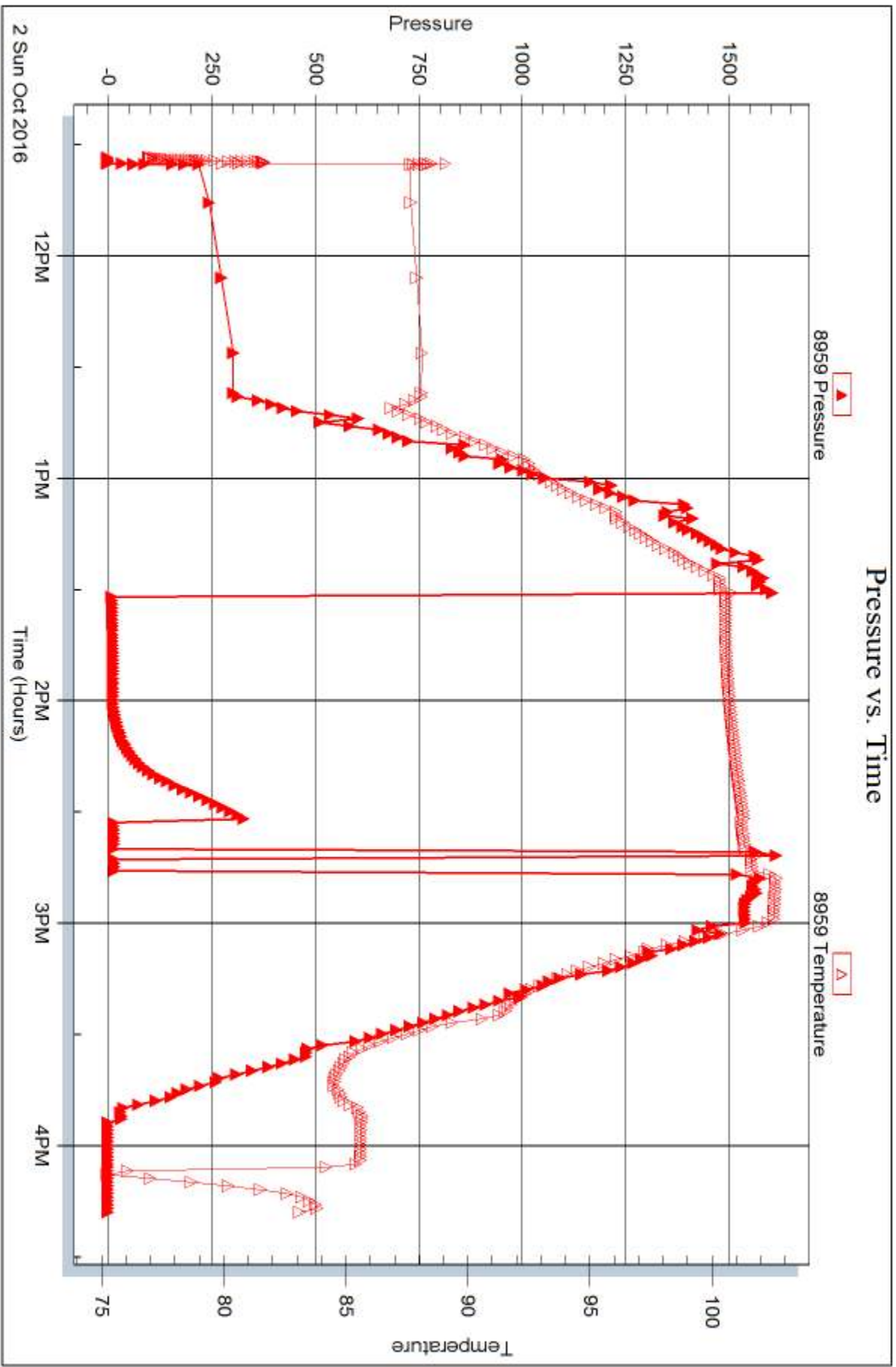
Printed: 2016.10.05 @ 15:43:26

Serial #: 8959

Outside Dow nting-Nelson Oil Co. Inc.

Dietz-Zw enger #1-30

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Co. Inc.**

PO Box 1019
Hays, KS 67601

ATTN: Al Downing

Dietz-Zwenger #1-30

30-14s-18w Ellis,KS

Start Date: 2016.10.03 @ 00:28:04

End Date: 2016.10.03 @ 07:37:34

Job Ticket #: 61283 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2016.10.05 @ 15:43:01

Downing-Nelson Oil Co. Inc.
30-14s-18w Ellis,KS
Dietz-Zwenger #1-30
DST # 2
LKC
2016.10.03



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co. Inc.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

ATTN: Al Dow ning

Job Ticket: 61283

DST#: 2

Test Start: 2016.10.03 @ 00:28:04

GENERAL INFORMATION:

Formation: **LKC**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 02:40:04
 Time Test Ended: 07:37:34
 Interval: **3411.00 ft (KB) To 3440.00 ft (KB) (TVD)**
 Total Depth: 3440.00 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: 2055.00 ft (KB)
 2047.00 ft (CF)
 KB to GR/CF: 8.00 ft

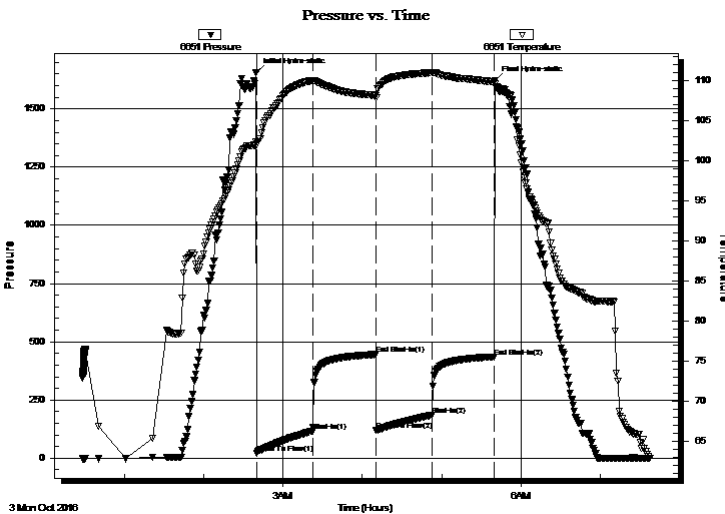
Serial #: 6651

Inside

Press@RunDepth: 185.15 psig @ 3412.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2016.10.03 End Date: 2016.10.03 Last Calib.: 2016.10.03
 Start Time: 00:28:05 End Time: 07:37:34 Time On Btm: 2016.10.03 @ 02:39:34
 Time Off Btm: 2016.10.03 @ 05:40:34

TEST COMMENT: 45- IF- BOB 22 mins
 45- IS- No blow
 45- FF- BOB 36 mins
 45- FS- No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1656.76	102.35	Initial Hydro-static
1	20.06	102.08	Open To Flow (1)
43	117.06	110.03	Shut-In(1)
91	445.58	108.16	End Shut-In(1)
91	120.18	107.89	Open To Flow (2)
133	185.15	110.99	Shut-In(2)
180	435.43	109.85	End Shut-In(2)
181	1621.85	109.59	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
370.00	MW, 20%M 80%W	4.96

* Recovery from multiple tests

Gas Rates

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



DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co. Inc.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

Job Ticket: 61283 **DST#: 2**

ATTN: Al Dow ning

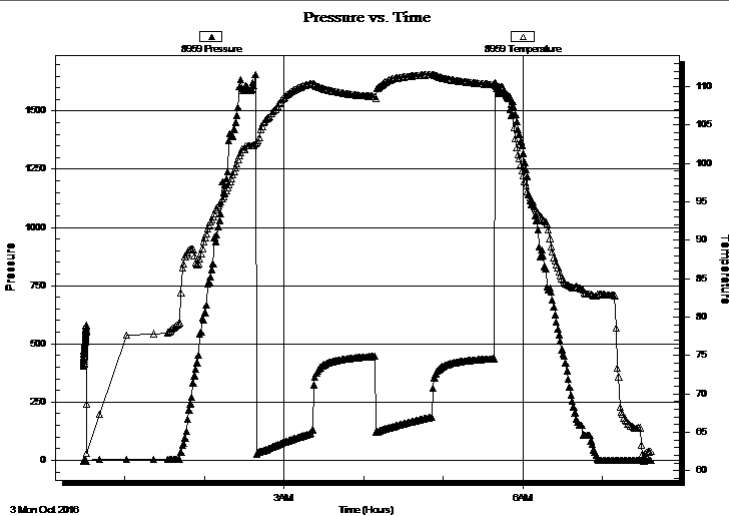
Test Start: 2016.10.03 @ 00:28:04

GENERAL INFORMATION:

Formation: **LKC**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 02:40:04
 Time Test Ended: 07:37:34
Interval: 3411.00 ft (KB) To 3440.00 ft (KB) (TVD)
 Total Depth: 3440.00 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: 2055.00 ft (KB)
 2047.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8959 Outside
 Press@RunDepth: psig @ 3412.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2016.10.03 End Date: 2016.10.03 Last Calib.: 2016.10.03
 Start Time: 00:28:58 End Time: 07:36:27 Time On Btm:
 Time Off Btm:

TEST COMMENT: 45- IF- BOB 22 mins
 45- IS- No blow
 45- FF- BOB 36 mins
 45- FS- No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
370.00	MW, 20%M 80%W	4.96

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co. Inc.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

Job Ticket: 61283

DST#: 2

ATTN: Al Dow ning

Test Start: 2016.10.03 @ 00:28:04

Tool Information

Drill Pipe:	Length: 3391.00 ft	Diameter: 3.82 inches	Volume: 48.07 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	76000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
				String Weight: Initial	51000.00 lb
Drill Pipe Above KB:	31.00 ft			Final	55000.00 lb
Depth to Top Packer:	3411.00 ft				
Depth to Bottom Packer:	ft				
Interval betw een Packers:	29.00 ft				
Tool Length:	49.00 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			3392.00	
Shut In Tool	5.00			3397.00	
Hydraulic tool	5.00			3402.00	
Packer	5.00			3407.00	20.00 Bottom Of Top Packer
Packer	4.00			3411.00	
Stubb	1.00			3412.00	
Recorder	0.00	6651	Inside	3412.00	
Recorder	0.00	8959	Outside	3412.00	
Perforations	25.00			3437.00	
Bullnose	3.00			3440.00	29.00 Bottom Packers & Anchor
Total Tool Length:	49.00				



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co. Inc.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

Job Ticket: 61283

DST#: 2

ATTN: Al Dow ning

Test Start: 2016.10.03 @ 00:28:04

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:

52000 ppm

Viscosity: 44.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.97 in³

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
370.00	MW, 20%M 80%W	4.958

Total Length: 370.00 ft Total Volume: 4.958 bbl

Num Fluid Samples: 0

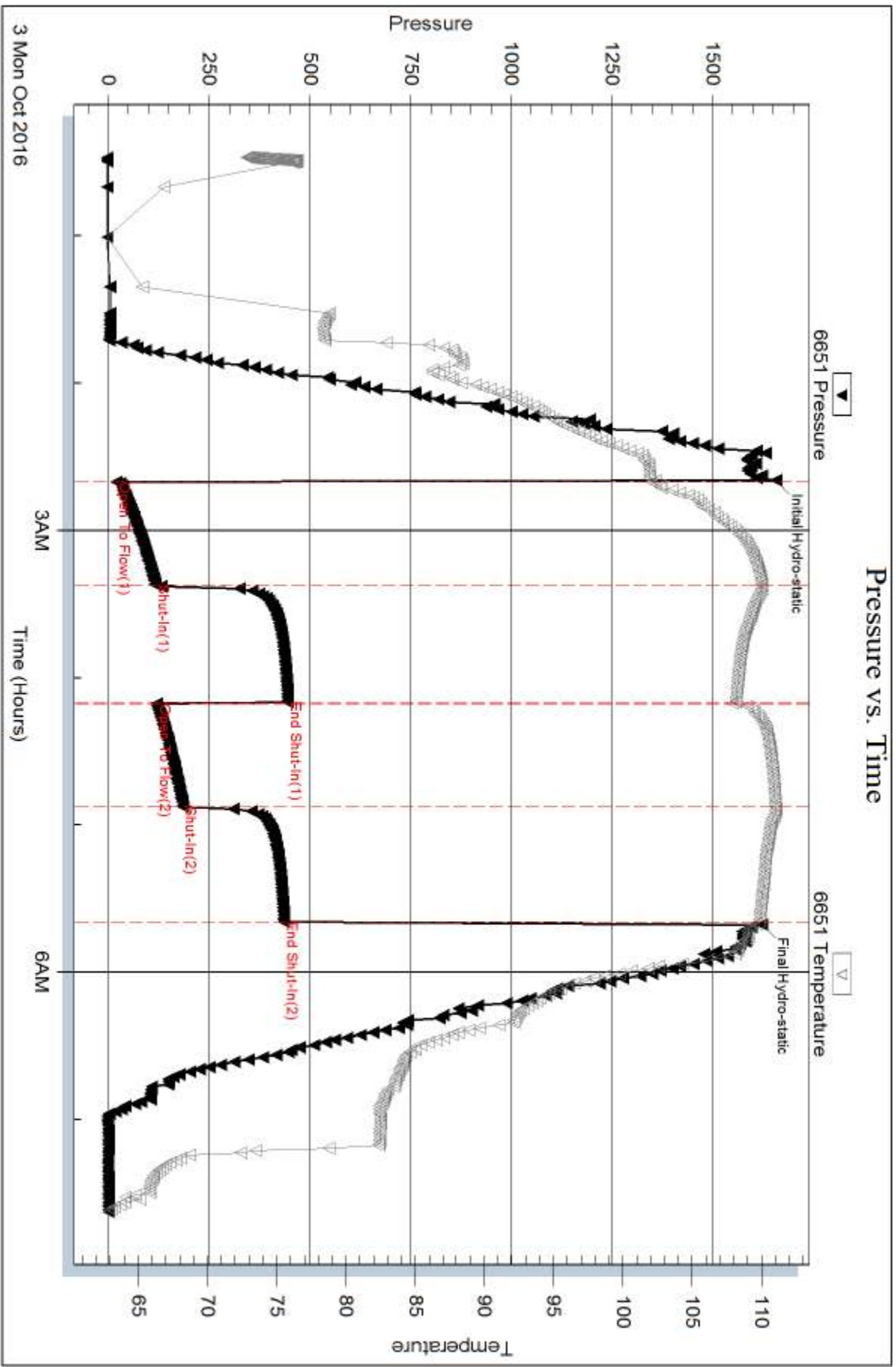
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW: .06@62deg

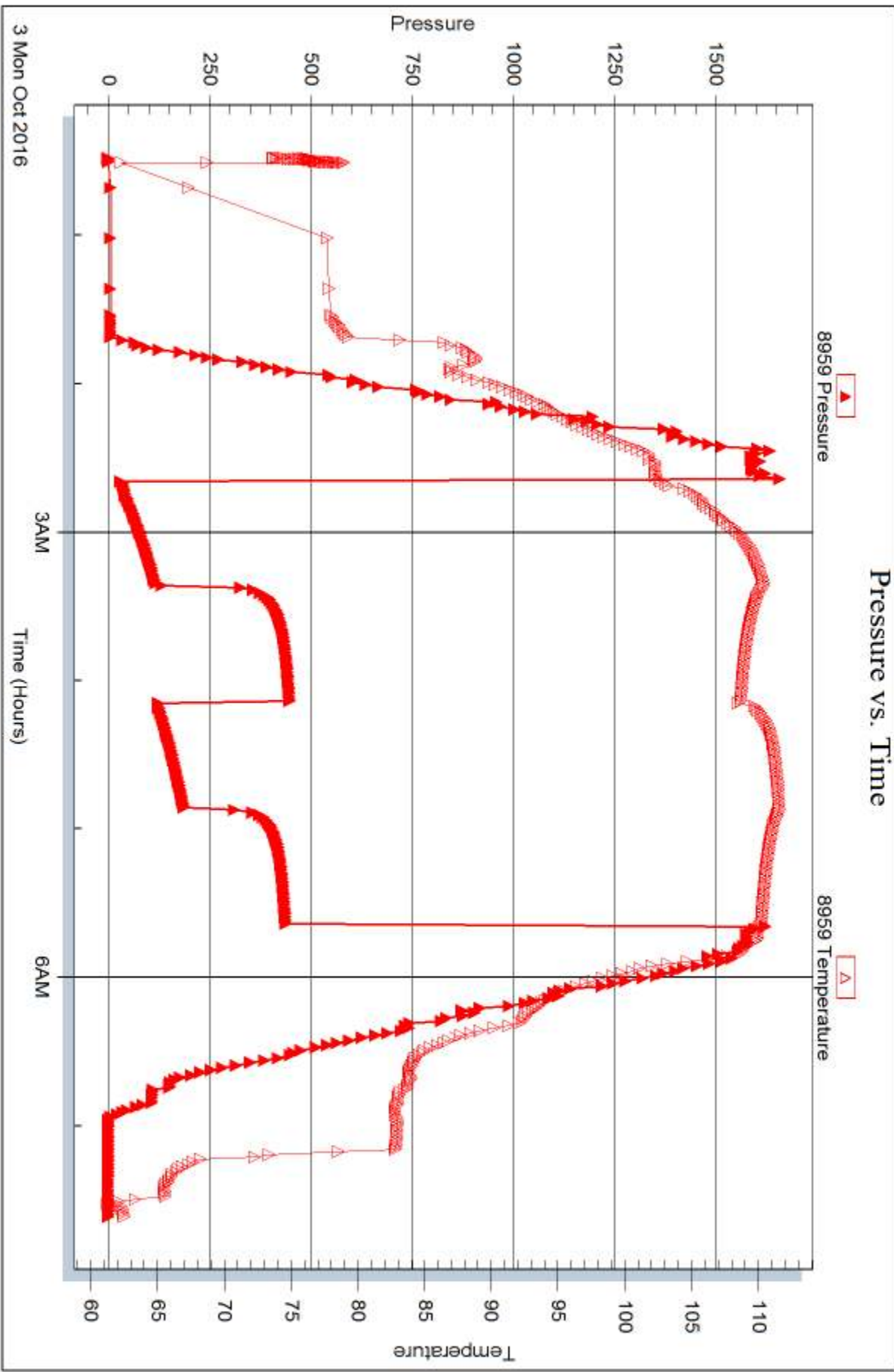


Serial #: 8959

Outside Dow nung-Nelson Oil Co. Inc.

Dietz-Zw enger #1-30

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Co. Inc.**

PO Box 1019
Hays, KS 67601

ATTN: Al Downing

Dietz-Zwenger #1-30

30-14s-18w Ellis,KS

Start Date: 2016.10.03 @ 17:38:07

End Date: 2016.10.04 @ 01:21:07

Job Ticket #: 61284 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2016.10.05 @ 15:42:37



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co. Inc.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

Job Ticket: 61284

DST#: 3

ATTN: Al Dow ning

Test Start: 2016.10.03 @ 17:38:07

GENERAL INFORMATION:

Formation: **LKC "H - I"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:50:07

Time Test Ended: 01:21:07

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3470.00 ft (KB) To 3522.00 ft (KB) (TVD)

Reference Elevations: 2055.00 ft (KB)

Total Depth: 3522.00 ft (KB) (TVD)

2047.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6651 Inside

Press@RunDepth: 29.78 psig @ 3471.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.10.03

End Date:

2016.10.04

Last Calib.:

2016.10.04

Start Time:

17:38:08

End Time:

01:21:07

Time On Btm:

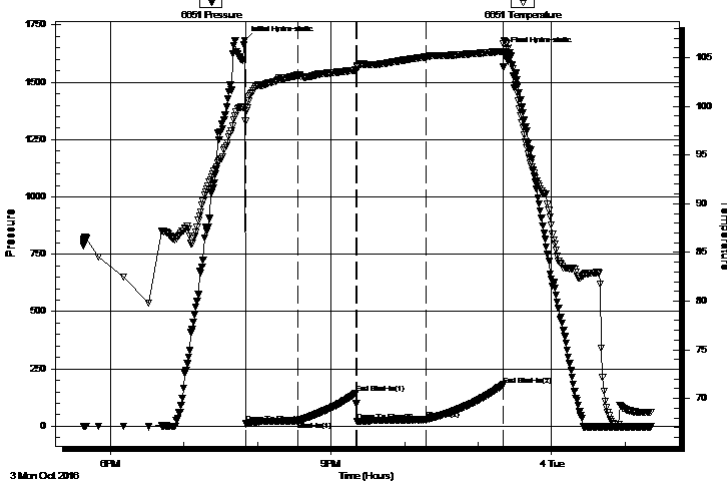
2016.10.03 @ 19:49:37

Time Off Btm:

2016.10.03 @ 23:21:07

TEST COMMENT: 45- IF- Weak blow built very slowly to 4"
45- IS- No blow
60- FF- Initial surge of 3" built slowly to 8 1/2"
60- FS- No blow

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1680.61	99.82	Initial Hydro-static
1	11.31	98.46	Open To Flow (1)
44	23.77	103.20	Shut-In(1)
91	144.62	103.72	End Shut-In(1)
92	20.31	104.06	Open To Flow (2)
148	29.78	105.08	Shut-In(2)
211	180.52	105.66	End Shut-In(2)
212	1633.34	106.78	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
47.00	OCM, 20%O 80%M	0.38
0.00	143' GIP	0.00

Gas Rates

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

* Recovery from multiple tests



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co. Inc.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

Job Ticket: 61284

DST#: 3

ATTN: Al Dow ning

Test Start: 2016.10.03 @ 17:38:07

GENERAL INFORMATION:

Formation: **LKC "H - I"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:50:07

Time Test Ended: 01:21:07

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3470.00 ft (KB) To 3522.00 ft (KB) (TVD)

Reference Elevations: 2055.00 ft (KB)

Total Depth: 3522.00 ft (KB) (TVD)

2047.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8959 Outside

Press@RunDepth: psig @ 3471.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.10.03

End Date:

2016.10.04

Last Calib.:

2016.10.04

Start Time: 17:39:00

End Time:

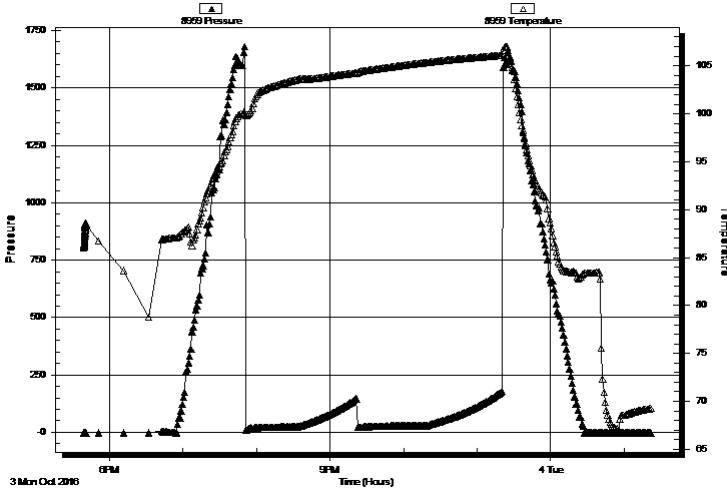
01:21:59

Time On Btm:

Time Off Btm:

TEST COMMENT: 45- IF- Weak blow built very slowly to 4"
45- IS- No blow
60- FF- Initial surge of 3" built slowly to 8 1/2"
60- FS- No blow

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
47.00	OCM, 20%O 80%M	0.38
0.00	143' GIP	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co. Inc.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

Job Ticket: 61284

DST#: 3

ATTN: Al Dow ning

Test Start: 2016.10.03 @ 17:38:07

Tool Information

Drill Pipe:	Length: 3423.00 ft	Diameter: 3.82 inches	Volume: 48.52 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 62000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	4.00 ft			String Weight: Initial 51000.00 lb
Depth to Top Packer:	3470.00 ft			Final 53000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een Packers:	52.00 ft			
Tool Length:	72.00 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			3451.00	
Shut In Tool	5.00			3456.00	
Hydraulic tool	5.00			3461.00	
Packer	5.00			3466.00	20.00 Bottom Of Top Packer
Packer	4.00			3470.00	
Stubb	1.00			3471.00	
Recorder	0.00	6651	Inside	3471.00	
Recorder	0.00	8959	Outside	3471.00	
Perforations	15.00			3486.00	
Change Over Sub	1.00			3487.00	
Drill Pipe	31.00			3518.00	
Change Over Sub	1.00			3519.00	
Bullnose	3.00			3522.00	52.00 Bottom Packers & Anchor

Total Tool Length: 72.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co. Inc.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

Job Ticket: 61284

DST#: 3

ATTN: Al Dow ning

Test Start: 2016.10.03 @ 17:38:07

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: 47.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.97 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
47.00	OCM, 20%O 80%M	0.379
0.00	143' GIP	0.000

Total Length: 47.00 ft Total Volume: 0.379 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

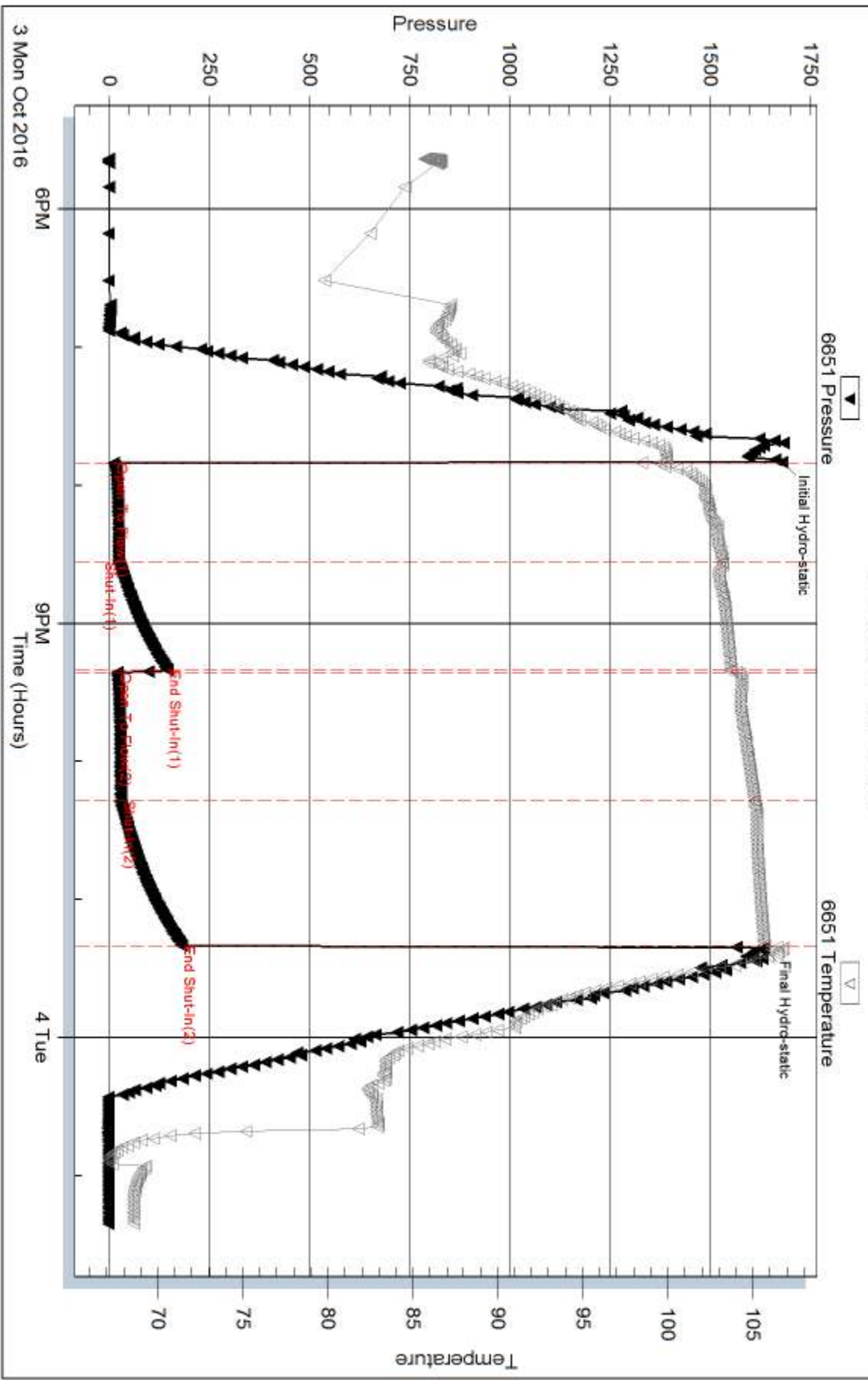
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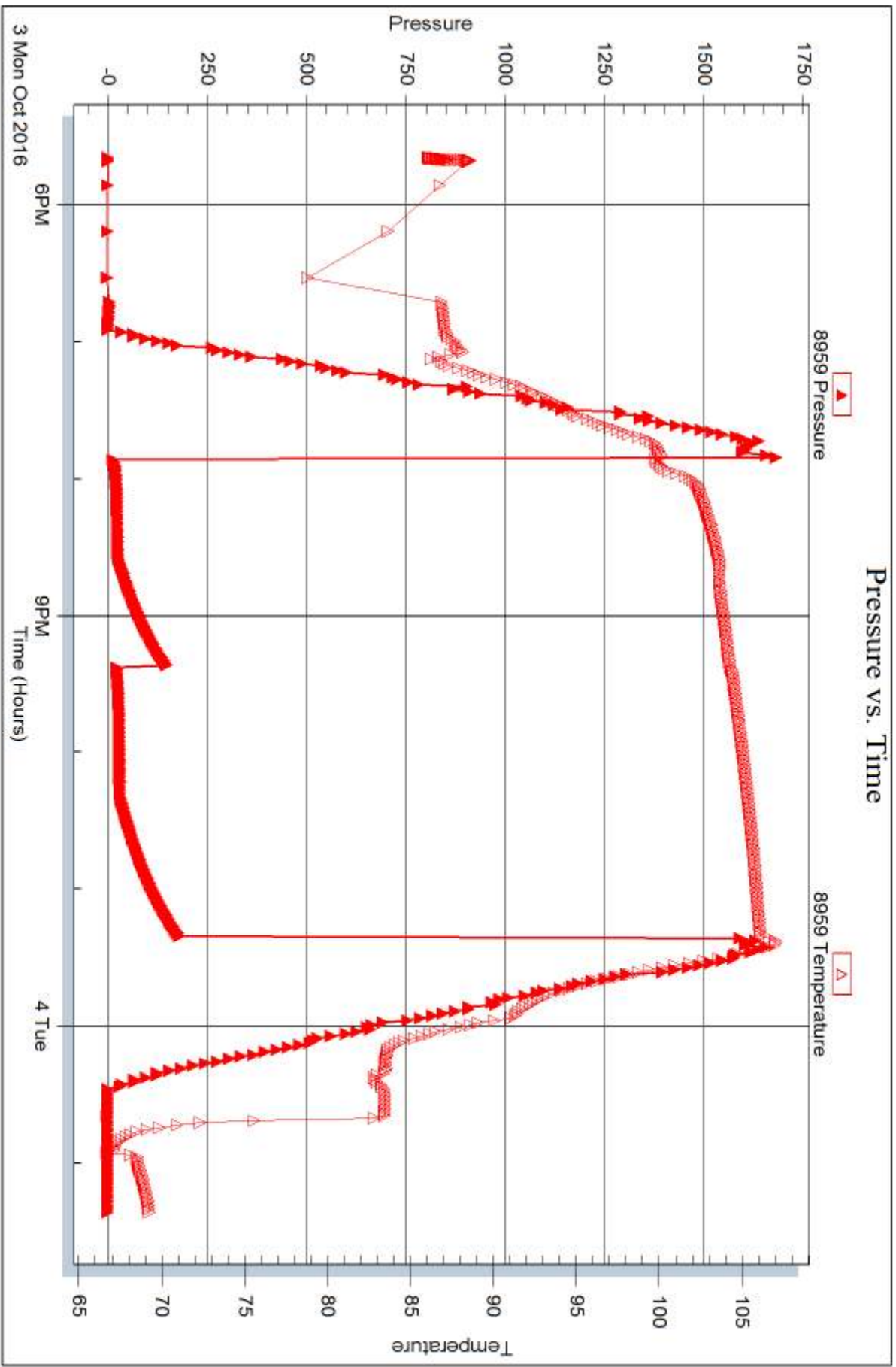
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Co. Inc.**

PO Box 1019
Hays, KS 67601

ATTN: Al Downing

Dietz-Zwenger #1-30

30-14s-18w Ellis,KS

Start Date: 2016.10.04 @ 07:37:26

End Date: 2016.10.04 @ 14:07:56

Job Ticket #: 61285 DST #: 4

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

Printed: 2016.10.05 @ 15:41:52



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co. Inc.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

Job Ticket: 61285

DST#: 4

ATTN: Al Dow ning

Test Start: 2016.10.04 @ 07:37:26

GENERAL INFORMATION:

Formation: **LKC "I"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:33:56

Time Test Ended: 14:07:56

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3517.00 ft (KB) To 3546.00 ft (KB) (TVD)

Reference Elevations: 2055.00 ft (KB)

Total Depth: 3546.00 ft (KB) (TVD)

2047.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6651

Inside

Press@RunDepth: 34.02 psig @ 3518.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.10.04

End Date:

2016.10.04

Last Calib.:

2016.10.04

Start Time:

07:37:27

End Time:

14:07:56

Time On Btm:

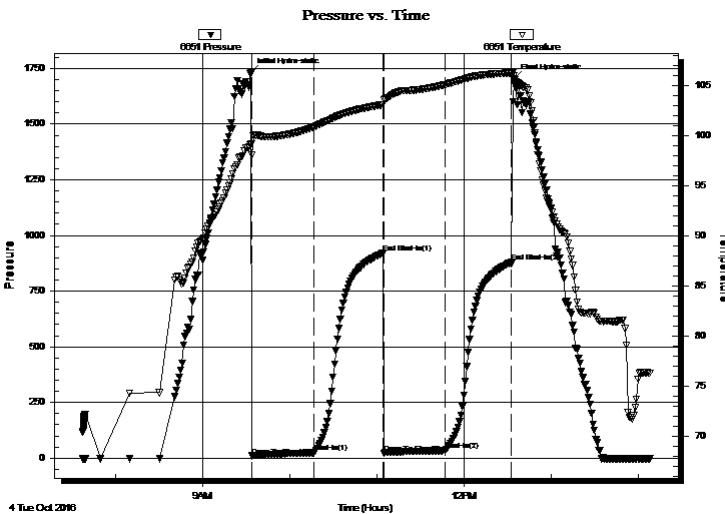
2016.10.04 @ 09:33:26

Time Off Btm:

2016.10.04 @ 12:34:26

TEST COMMENT: 45- IF- BOB 33 mins
45- IS- No blow
45- FF- Slow ly built to 10 1/2"
45- FS- No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1731.84	99.21	Initial Hydro-static
1	10.47	98.06	Open To Flow (1)
43	24.19	100.86	Shut-In(1)
91	919.69	103.08	End Shut-In(1)
92	20.49	103.54	Open To Flow (2)
134	34.02	105.08	Shut-In(2)
179	879.27	106.26	End Shut-In(2)
181	1703.48	106.01	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	MW, 30%M 70%W	0.15
20.00	SGSWOCM, 5%G 5%W 20%O 70%M	0.27
10.00	CO	0.14
0.00	320' GIP	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co. Inc.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

Job Ticket: 61285

DST#: 4

ATTN: Al Dow ning

Test Start: 2016.10.04 @ 07:37:26

GENERAL INFORMATION:

Formation: **LKC "I"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:33:56

Time Test Ended: 14:07:56

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3517.00 ft (KB) To 3546.00 ft (KB) (TVD)

Reference Elevations: 2055.00 ft (KB)

Total Depth: 3546.00 ft (KB) (TVD)

2047.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8959 Outside

Press@RunDepth: psig @ 3518.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.10.04

End Date:

2016.10.04

Last Calib.:

2016.10.04

Start Time: 07:40:21

End Time:

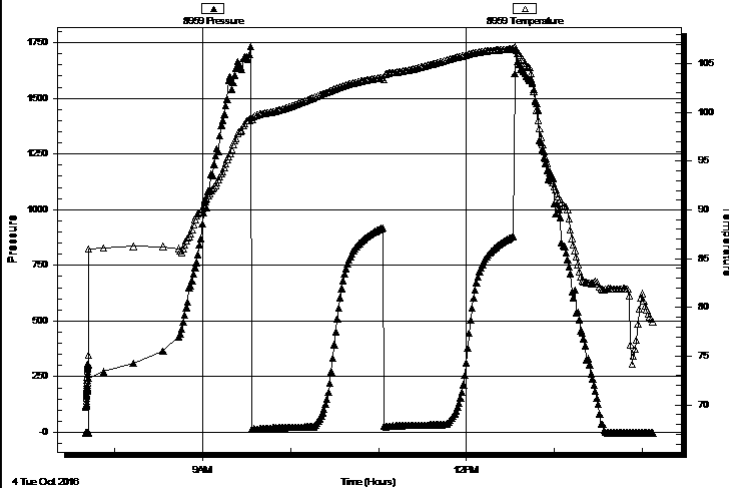
14:07:20

Time On Btm:

Time Off Btm:

TEST COMMENT: 45- IF- BOB 33 mins
45- IS- No blow
45- FF- Slow ly built to 10 1/2"
45- FS- No blow

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
30.00	MW, 30%M 70%W	0.15
20.00	SGSWOCM, 5%G 5%W 20%O 70%M	0.27
10.00	CO	0.14
0.00	320' GIP	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co. Inc.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

Job Ticket: 61285

DST#: 4

ATTN: Al Dow ning

Test Start: 2016.10.04 @ 07:37:26

Tool Information

Drill Pipe:	Length: 3486.00 ft	Diameter: 3.82 inches	Volume: 49.42 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 64000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3517.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een Packers:	29.00 ft			
Tool Length:	49.00 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			3498.00	
Shut In Tool	5.00			3503.00	
Hydraulic tool	5.00			3508.00	
Packer	5.00			3513.00	20.00 Bottom Of Top Packer
Packer	4.00			3517.00	
Stubb	1.00			3518.00	
Recorder	0.00	6651	Inside	3518.00	
Recorder	0.00	8959	Outside	3518.00	
Perforations	25.00			3543.00	
Bullnose	3.00			3546.00	29.00 Bottom Packers & Anchor
Total Tool Length:	49.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co. Inc.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

Job Ticket: 61285

DST#: 4

ATTN: Al Dow ning

Test Start: 2016.10.04 @ 07:37:26

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:

58000 ppm

Viscosity: 47.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.97 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
30.00	MW, 30%M 70%W	0.148
20.00	SGSWOCM, 5%G 5%W 20%O 70%M	0.274
10.00	CO	0.142
0.00	320' GIP	0.000

Total Length: 60.00 ft Total Volume: 0.564 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

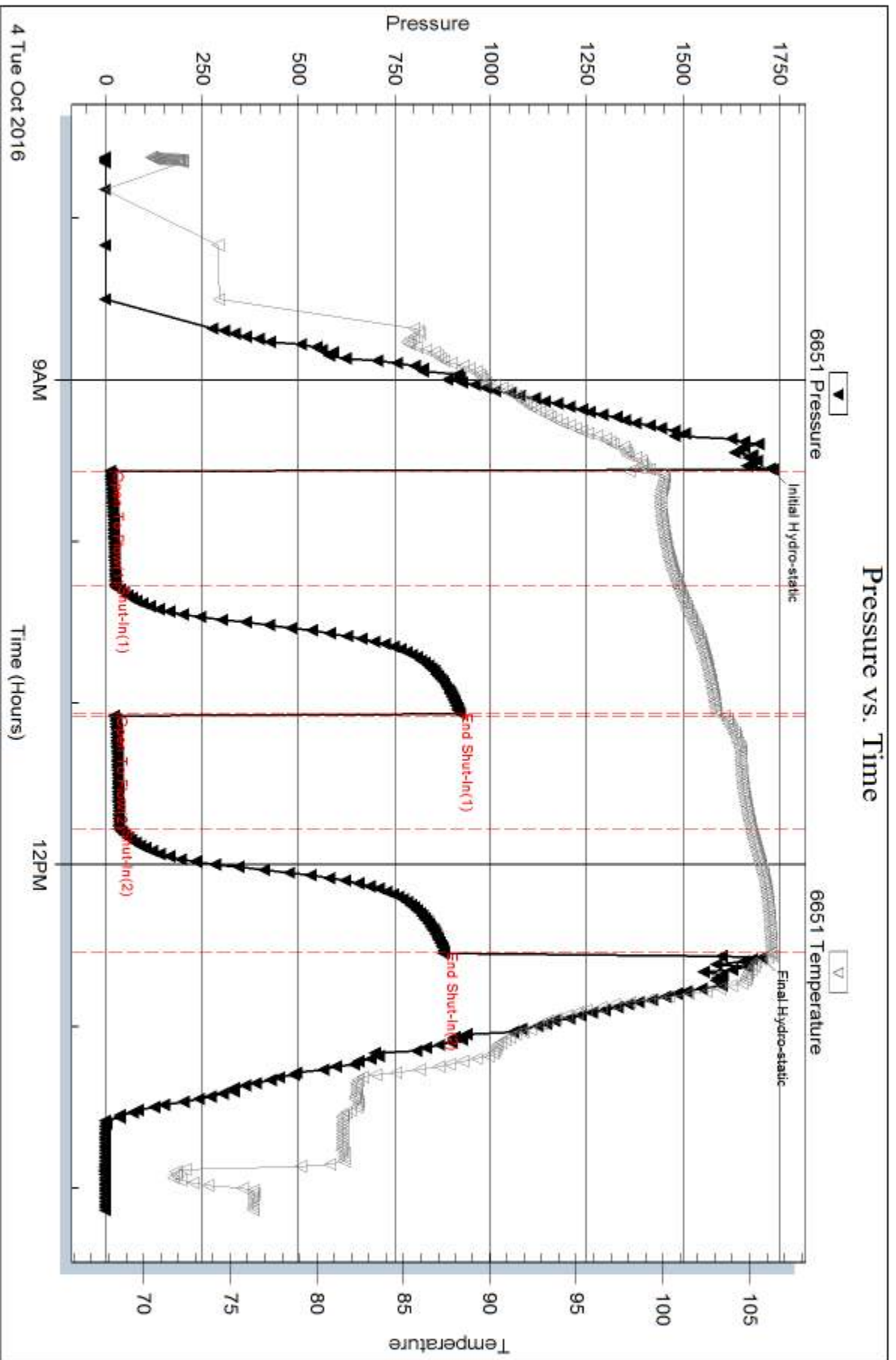
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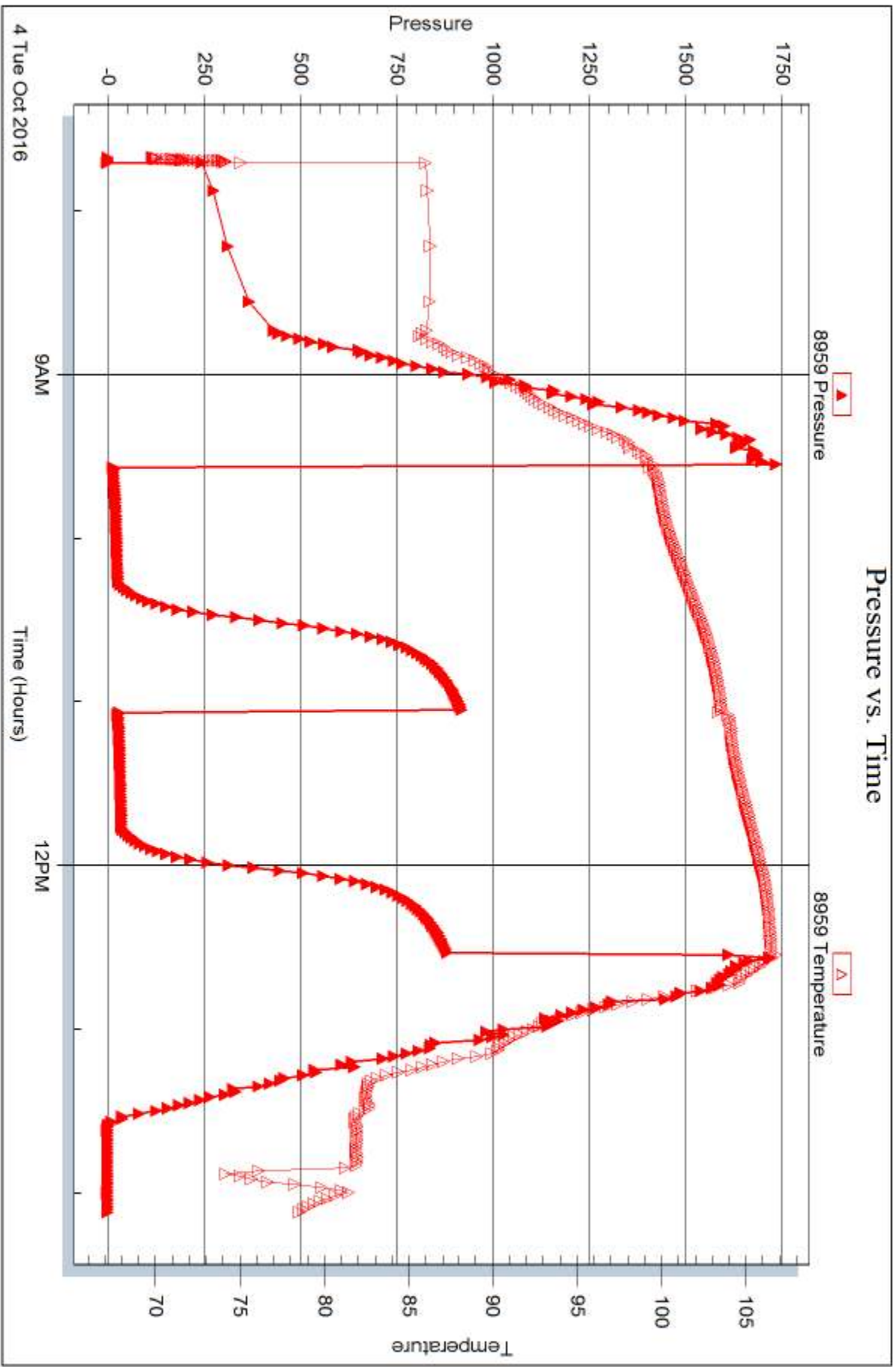
Laboratory Name:

Laboratory Location:

Recovery Comments: RW: .10@80deg

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Co. Inc.**

PO Box 1019
Hays, KS 67601

ATTN: Al Downing

Dietz-Zwenger #1-30

30-14s-18w Ellis,KS

Start Date: 2016.10.05 @ 01:34:21

End Date: 2016.10.05 @ 09:19:51

Job Ticket #: 61286 DST #: 5

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

Printed: 2016.10.05 @ 15:41:31



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co. Inc.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

Job Ticket: 61286

DST#: 5

ATTN: Al Dow ning

Test Start: 2016.10.05 @ 01:34:21

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:27:21

Time Test Ended: 09:19:51

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3634.00 ft (KB) To 3666.00 ft (KB) (TVD)

Reference Elevations: 2055.00 ft (KB)

Total Depth: 3666.00 ft (KB) (TVD)

2047.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6651 Inside

Press@RunDepth: 134.53 psig @ 3635.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.10.05 End Date: 2016.10.05

Last Calib.: 2016.10.05

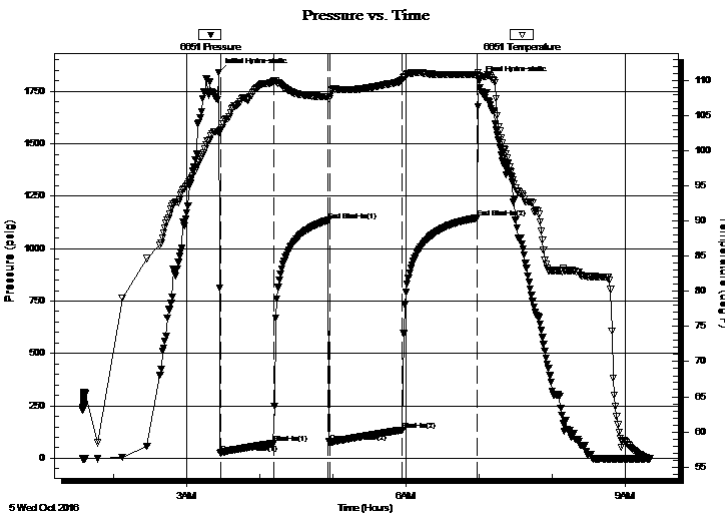
Start Time: 01:34:22 End Time: 09:19:51

Time On Btm: 2016.10.05 @ 03:25:51

Time Off Btm: 2016.10.05 @ 06:59:51

TEST COMMENT: 45- IF- Slow ly built to 5"
45- IS- Surface blow died in 7 mins
45- FF- BOB 43 mins
45- FS- No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1840.89	102.71	Initial Hydro-static
2	24.06	102.81	Open To Flow (1)
45	71.47	109.77	Shut-In(1)
90	1135.13	107.69	End Shut-In(1)
92	77.17	107.64	Open To Flow (2)
151	134.53	110.05	Shut-In(2)
212	1145.86	110.78	End Shut-In(2)
214	1799.64	110.59	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
126.00	OCM, 35%O 65%M	1.50
206.00	CGO,	2.92
0.00	174' GIP	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co. Inc.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

Job Ticket: 61286

DST#: 5

ATTN: Al Dow ning

Test Start: 2016.10.05 @ 01:34:21

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:27:21

Time Test Ended: 09:19:51

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3634.00 ft (KB) To 3666.00 ft (KB) (TVD)

Reference Elevations: 2055.00 ft (KB)

Total Depth: 3666.00 ft (KB) (TVD)

2047.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8959 Outside

Press@RunDepth: psig @ 3635.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.10.05 End Date: 2016.10.05

Last Calib.: 2016.10.05

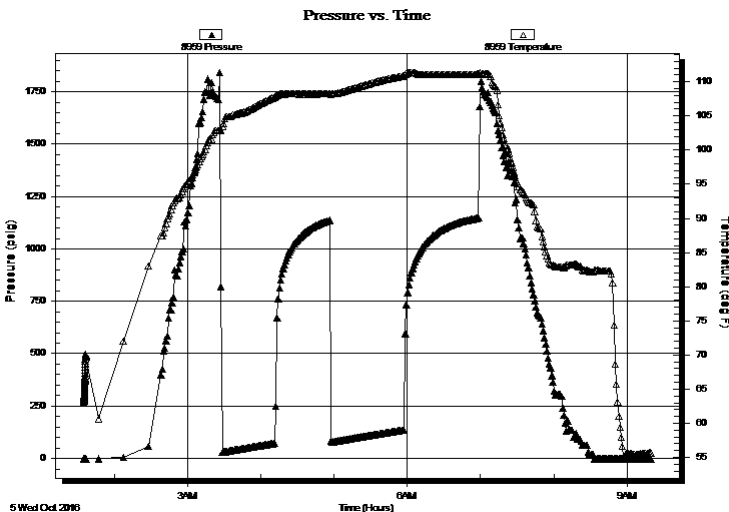
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Time On Btm:

Time Off Btm:

TEST COMMENT: 45- IF- Slow ly built to 5"
45- IS- Surface blow died in 7 mins
45- FF- BOB 43 mins
45- FS- No blow

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
126.00	OCM, 35%O 65%M	1.50
206.00	CGO,	2.92
0.00	174' GIP	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co. Inc.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

Job Ticket: 61286

DST#: 5

ATTN: Al Dow ning

Test Start: 2016.10.05 @ 01:34:21

Tool Information

Drill Pipe:	Length: 3613.00 ft	Diameter: 3.82 inches	Volume: 51.22 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 64000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 53000.00 lb
Depth to Top Packer:	3634.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een Packers:	32.00 ft			
Tool Length:	52.00 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			3615.00	
Shut In Tool	5.00			3620.00	
Hydraulic tool	5.00			3625.00	
Packer	5.00			3630.00	20.00 Bottom Of Top Packer
Packer	4.00			3634.00	
Stubb	1.00			3635.00	
Recorder	0.00	6651	Inside	3635.00	
Recorder	0.00	8959	Outside	3635.00	
Perforations	28.00			3663.00	
Bullnose	3.00			3666.00	32.00 Bottom Packers & Anchor
Total Tool Length:	52.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co. Inc.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

Job Ticket: 61286

DST#: 5

ATTN: Al Dow ning

Test Start: 2016.10.05 @ 01:34:21

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 51.00 sec/qt

Water Loss: 8.79 in³

Resistivity: ohm.m

Salinity: 13000.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API:

Water Salinity: deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
126.00	OCM, 35%O 65%M	1.499
206.00	CGO,	2.920
0.00	174' GIP	0.000

Total Length: 332.00 ft Total Volume: 4.419 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

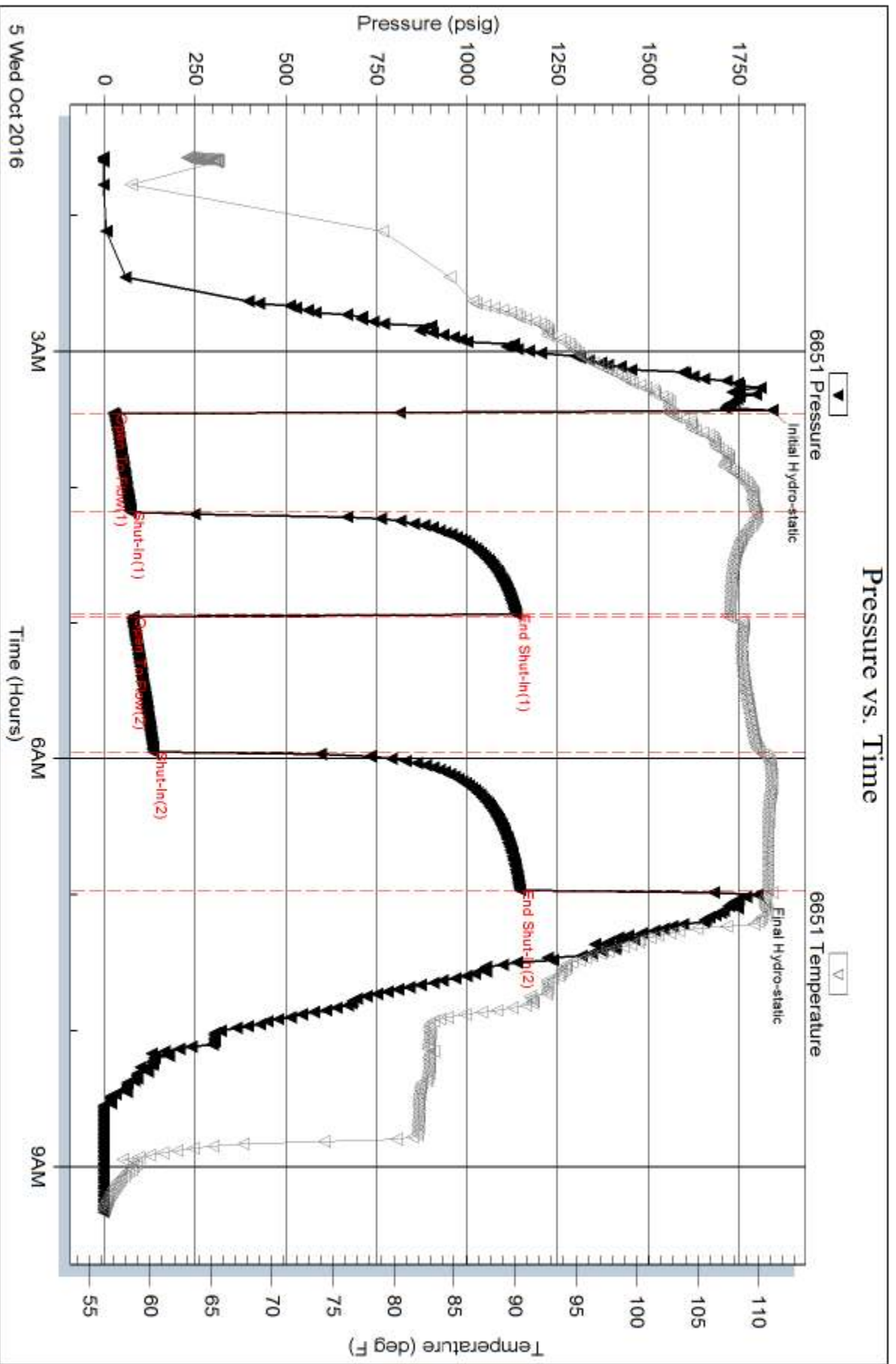
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

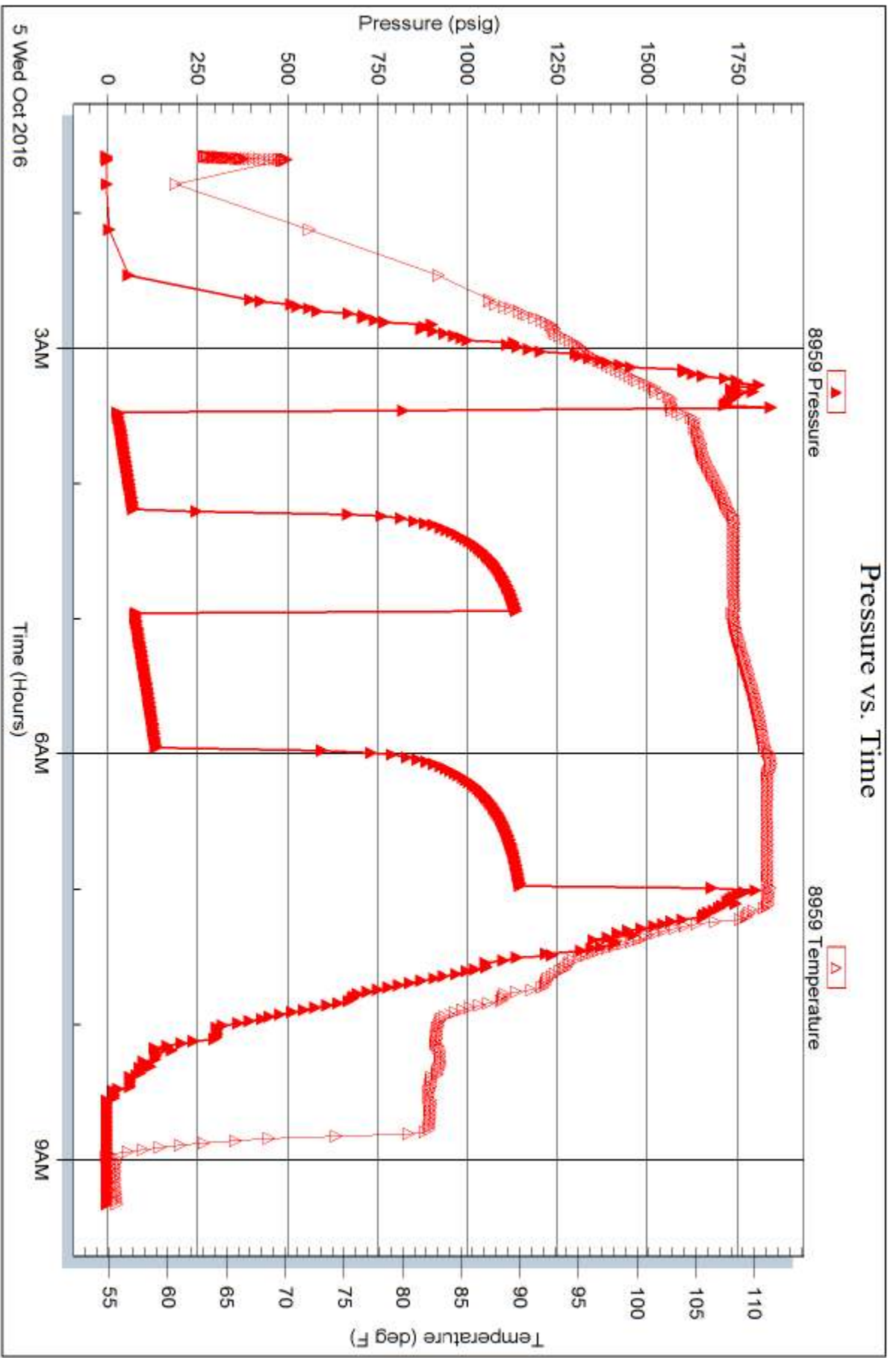


Serial #: 8959

Outside Dow nung-Nelson Oil Co. Inc.

Dietz-Zw enger #1-30

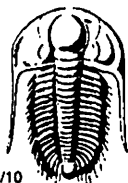
DST Test Number: 5



Triobite Testing, Inc

Ref. No: 61286

Printed: 2016.10.05 @ 15:41:33



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 61282

Well Name & No. Dietz-Zwenger Unit #1-30 Test No. 1 Date 10/2/16
 Company Downing-Nelson Oil Co. Inc. Elevation 2055 KB 2047 GL
 Address PO Box 109 Hays, KS 67601
 Co. Rep / Geo. Al Downing Rig Discovery #3
 Location: Sec. 30 Twp. 14 S Rge. 18 W Co. Ellis State KS

Interval Tested 3364-3394 Zone Tested LKC "C"
 Anchor Length 30' Drill Pipe Run 3327 Mud Wt. 8.6
 Top Packer Depth 3359 Drill Collars Run 31 Vis 50
 Bottom Packer Depth 3364 Wt. Pipe Run _____ WL 8.0
 Total Depth 3394 Chlorides 4520 ppm System LCM 3

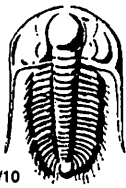
Blow Description IF - Surface blow died in 2 mins
ISI - No blow
FF - No blow Flushed tool surge died Pulled tool
FSD -

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>M</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 5' BHT 101° Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm
 (A) Initial Hydrostatic 1604 Test 1050 T-On Location 1027
 (B) First Initial Flow 8 Jars _____ T-Started 1124
 (C) First Final Flow 10 Safety Joint _____ T-Open 1332
 (D) Initial Shut-In 326 Circ Sub _____ T-Pulled 1345
 (E) Second Initial Flow 11 Hourly Standby _____ T-Out 1618
 (F) Second Final Flow 12 Mileage 20 RT 15 Comments _____
 (G) Final Shut-In _____ Sampler _____
 (H) Final Hydrostatic 1584 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Initial Open 30 Extra Packer _____ Extra Copies _____
 Initial Shut-In 30 Extra Recorder _____ Sub Total 0
 Final Flow _____ Day Standby _____ Total 1065
 Final Shut-In _____ Accessibility _____ MP/DST Disc't _____
 Sub Total 1065

Approved By _____ Our Representative Brannan Lonsdale

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. 61283

4/10

Well Name & No. Dietz-Zwenger Unit #1-30 Test No. 2 Date 10/3/16
 Company Downing-Nelson Oil Co. Inc. Elevation 2655 KB 2047 GL
 Address PO Box 1019 Hays, KS 67601
 Co. Rep / Geo. Al Downing Rig Discovery #3
 Location: Sec. 20 Twp. 14 S Rge. 18 W Co. Ellis State KS

Interval Tested 3411-3440 Zone Tested LKC
 Anchor Length 29' Drill Pipe Run 3391 Mud Wt. 8.9
 Top Packer Depth 3406 Drill Collars Run 31 Vis 44
 Bottom Packer Depth 3411 Wt. Pipe Run _____ WL 8.0
 Total Depth 3440 Chlorides 3,000 ppm System LCM 2nd

Blow Description IF - BOB 22 mins
ISF - No blow
FF - BOB 36 mins
FSF - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>370</u>	<u>NW</u>			<u>80</u>	<u>20</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 _____

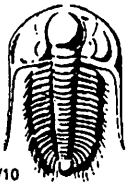
Rec Total 370' BHT 110° Gravity _____ API RW .06 @ 62 °F Chlorides 52,000 ppm

(A) Initial Hydrostatic 1657 Test 1050 T-On Location 0011
 (B) First Initial Flow 20 Jars _____ T-Started 0028
 (C) First Final Flow 117 Safety Joint _____ T-Open 0239
 (D) Initial Shut-In 446 Circ Sub _____ T-Pulled 0539
 (E) Second Initial Flow 120 Hourly Standby _____ T-Out 0737
 (F) Second Final Flow 185 Mileage 20 RT 15
 (G) Final Shut-In 435 Sampler _____
 (H) Final Hydrostatic 1622 Straddle _____

Initial Open 45 Ruined Shale Packer _____
 Initial Shut-In 45 Ruined Packer _____
 Final Flow 45 Extra Packer _____
 Final Shut-In 45 Extra Recorder _____
 Sub Total 0
 Total 1065
 MP/DST Disc't _____
 Sub Total 1065

Approved By _____ Our Representative Brannen Lonsdale

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. 61284

Well Name & No. Diets - Zwenger Unit #1-30 Test No. 3 Date 10/3/16
 Company Downing - Nelson Oil Co. Inc. Elevation 2055 KB 2047 GL
 Address PO Box 1019 Hays, KS 67601
 Co. Rep / Geo. Al Downing Rig Discovery #3
 Location: Sec. 30 Twp. 74 S Rge. 18 W Co. E/H/S State KS

Interval Tested 3470 - 3522 Zone Tested LKC "H+I"
 Anchor Length 52' Drill Pipe Run 3423 Mud Wt. 8.9
 Top Packer Depth 9465 Drill Collars Run 31 Vis 47
 Bottom Packer Depth 3470 Wt. Pipe Run — WL 8.0
 Total Depth 3522 Chlorides 8500 ppm System LCM 2#

Blow Description IF - Weak blow built very slowly to 4"
ISI - No blow
FF - Initial surge of 3" built slowly to 8 1/2"
FSI - No blow

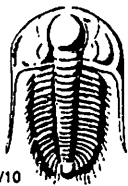
Rec	Feet of	%gas	%oil	%water	%mud
<u>47</u>	<u>OCM</u>		<u>20</u>		<u>80</u>
Rec	Feet of <u>143' GI?</u>	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 47' BHT 106° Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1681 Test 1050 T-On Location 1718
 (B) First Initial Flow 11 Jars _____ T-Started 1738
 (C) First Final Flow 24 Safety Joint _____ T-Open 1950
 (D) Initial Shut-In 145 Circ Sub _____ T-Pulled 2320 ~~2250~~
 (E) Second Initial Flow 20 Hourly Standby _____ T-Out 10/4 0121
 (F) Second Final Flow 30 Mileage 20 RT ¹⁵ Comments _____
 (G) Final Shut-In 181 Sampler _____
 (H) Final Hydrostatic 1633 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 45 Extra Recorder _____ Sub Total 0
 Initial Shut-In 45 Day Standby _____ Total 1065
 Final Flow 60 ~~45~~ Accessibility _____ MP/DST Disc't _____
 Final Shut-In 60 ~~45~~ Sub Total 1065

Approved By _____ Our Representative Brannon Lonsdale

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. 61285

Well Name & No. Dietz - Zwenger Unit #1-30 Test No. 4 Date 10/4/16
 Company Downing - Nelson Oil Co. Inc. Elevation 2055 KB 2047 GL
 Address PO Box 1019 Hays, KS 67601
 Co. Rep / Geo. Al Downing Rig Discovery #3
 Location: Sec. 30 Twp. 14 S Rge. 18 W Co. Ellis State KS

Interval Tested 3517-3546 Zone Tested LKC "I"
 Anchor Length 29' Drill Pipe Run 3486 Mud Wt. 8.9
 Top Packer Depth 3512 Drill Collars Run 31 Vis 47
 Bottom Packer Depth 3517 Wt. Pipe Run — WL 8.0
 Total Depth 3546 Chlorides 8,500 ppm System LCM 2"

Blow Description IF-BOB 33mins
ISI - No blow
FF - slowly built to 10 1/2"
FSI - No blow

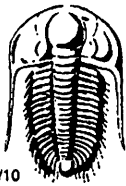
Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>MW</u>			<u>70%</u>	<u>30%</u>
<u>20</u>	<u>ASWOCM</u>	<u>5%</u>	<u>20%</u>	<u>5%</u>	<u>70%</u>
<u>10</u>	<u>CO</u>				
	<u>320' GIP</u>				

Rec Total 60' BHT 106~~25~~ Gravity 35 API RW .10 @ 80 ° F Chlorides 58,000 ppm

(A) Initial Hydrostatic 1732 Test 1050 T-On Location 0711
 (B) First Initial Flow 10 Jars — T-Started 0237
 (C) First Final Flow 24 Safety Joint — T-Open 0933
 (D) Initial Shut-In 920 Circ Sub — T-Pulled 1233
 (E) Second Initial Flow 20 Hourly Standby — T-Out 1407
 (F) Second Final Flow 34 Mileage 20 RT ¹⁵ Comments —
 (G) Final Shut-In 879 Sampler —
 (H) Final Hydrostatic 1703 Straddle — Ruined Shale Packer —
 Shale Packer — Ruined Packer —
 Extra Packer — Extra Copies —
 Initial Open 45 Extra Recorder — Sub Total 0
 Initial Shut-In 45 Day Standby — Total 1065
 Final Flow 45 Accessibility — MP/DST Disc't —
 Final Shut-In 45 Sub Total 1065

Approved By _____ Our Representative Brannan Lonsdale

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 61286

Well Name & No. Dietz-Zwenger Unit #1-30 Test No. 5 Date 10/5/16
 Company Downing-Nelson Oil Co. Inc. Elevation 2055 KB 2047 GL
 Address PO Box 7019 Hays, KS 67601
 Co. Rep / Geo. Al Downing Rig Discovery #3
 Location: Sec. 30 Twp. 14 S Rge. 18 W Co. Ellis State KS

Interval Tested 3634-3666 Zone Tested Arbuckle
 Anchor Length 32' Drill Pipe Run 3613 Mud Wt. 9.1
 Top Packer Depth 3629 Drill Collars Run 31 Vis 51
 Bottom Packer Depth 3634 Wt. Pipe Run — WL 8.8
 Total Depth 3666 Chlorides 13,000 ppm System LCM 2A
 Blow Description IF - Slowly built to 5"
ISI - Surface blow died in 7 mins
FF - BOB 43 mins
FST - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>126</u>	<u>OCM</u>		<u>35</u>	<u>65</u>	
<u>206</u>	<u>CGO</u>	<u>15</u>	<u>85</u>		
	<u>174' GIP</u>				

Rec Total 332' BHT 111° Gravity 31 API RW — @ — °F Chlorides — ppm
 (A) Initial Hydrostatic 1841 Test 1050 T-On Location 0120
 (B) First Initial Flow 24 Jars — T-Started 0134
 (C) First Final Flow 71 Safety Joint — T-Open 0327
 (D) Initial Shut-In 1135 Circ Sub — T-Pulled 0657 ~~0627~~
 (E) Second Initial Flow 77 Hourly Standby — T-Out 0919
 (F) Second Final Flow 135 Mileage 20 RT 15 Comments —
 (G) Final Shut-In 1146 Sampler —
 (H) Final Hydrostatic 1800 Straddle —
 Shale Packer — Ruined Shale Packer —
 Extra Packer — Ruined Packer —
 Extra Recorder — Extra Copies —
 Initial Open 45 Day Standby — Sub Total 0
 Initial Shut-In 45 Accessibility — Total 1065
 Final Flow 6045 MP/DST Disc't —
 Final Shut-In 6045 Sub Total 1065

Approved By _____ Our Representative Brannan Lonsdale
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