



DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Co**

PO Box 1019
Hays KS. 67601

ATTN: Al Downing

Remigia Quint #1-20

20-14s-18w Ellis,KS

Start Date: 2013.10.16 @ 14:25:01

End Date: 2013.10.16 @ 21:01:30

Job Ticket #: 53641 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.10.21 @ 09:24:34

Downing Nelson Oil Co

20-14s-18w Ellis,KS

Remigia Quint #1-20

DST # 1

Plattsmouth

2013.10.16



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning Nelson Oil Co

20-14s-18w Ellis,KS

PO Box 1019
Hays KS. 67601

Remigia Quint #1-20

Job Ticket: 53641

DST#: 1

ATTN: Al Dow ning

Test Start: 2013.10.16 @ 14:25:01

GENERAL INFORMATION:

Formation: **Plattsmouth**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:13:30

Time Test Ended: 21:01:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Andy Carreira

Unit No: 68

Interval: 3310.00 ft (KB) To 3340.00 ft (KB) (TVD)

Reference Elevations: 2102.00 ft (KB)

Total Depth: 3340.00 ft (KB) (TVD)

2094.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 8.00 ft

Serial #: 8372 Inside

Press @RunDepth: 36.52 psig @ 3311.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.16

End Date: 2013.10.16

Last Calib.: 2013.10.16

Start Time: 14:25:01

End Time: 21:01:30

Time On Btm: 2013.10.16 @ 16:13:00

Time Off Btm: 2013.10.16 @ 19:16:00

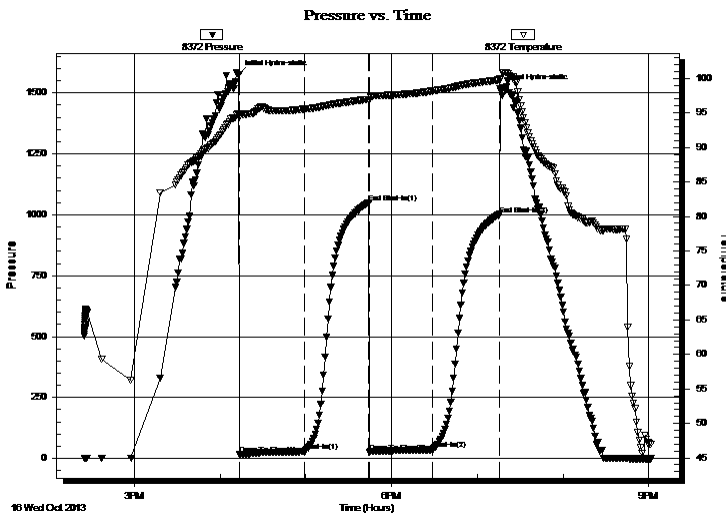
TEST COMMENT: IF:(45min) 1" blow in 5 min. 2" in 20 min. Built to 3"

IS:(45min) No Return

FF:(45min) 1" blow in 1 min. 2" in 7 min. 3" in 16 min. 4" in 25 min. Built to 5"

FS:(45min) No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1574.39	94.90	Initial Hydro-static
1	15.68	94.30	Open To Flow (1)
46	28.31	95.57	Shut-In(1)
91	1049.22	96.97	End Shut-In(1)
92	26.12	96.82	Open To Flow (2)
136	36.52	98.19	Shut-In(2)
183	1001.66	99.77	End Shut-In(2)
183	1517.61	99.90	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
55.00	SOCGM g=5% o=5% m=90%	0.50
0.00	GIP=5 ft	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning Nelson Oil Co

20-14s-18w Ellis,KS

PO Box 1019
Hays KS. 67601

Remigia Quint #1-20

Job Ticket: 53641

DST#: 1

ATTN: Al Dow ning

Test Start: 2013.10.16 @ 14:25:01

Tool Information

Drill Pipe:	Length: 3264.00 ft	Diameter: 3.80 inches	Volume: 45.79 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 45.94 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	4.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3310.00 ft			Final 51000.00 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			3291.00	
Shut In Tool	5.00			3296.00	
Hydraulic tool	5.00			3301.00	
Packer	5.00			3306.00	20.00 Bottom Of Top Packer
Packer	4.00			3310.00	
Stubb	1.00			3311.00	
Recorder	0.00	8372	Inside	3311.00	
Recorder	0.00	8321	Outside	3311.00	
Perforations	26.00			3337.00	
Bullnose	3.00			3340.00	30.00 Bottom Packers & Anchor
Total Tool Length:	50.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning Nelson Oil Co

20-14s-18w Ellis,KS

PO Box 1019
Hays KS. 67601

Remigia Quint #1-20

Job Ticket: 53641

DST#: 1

ATTN: Al Dow ning

Test Start: 2013.10.16 @ 14:25:01

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 8.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.93 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
55.00	SOCGM g=5% o=5% m=90%	0.498
0.00	GIP=5 ft	0.000

Total Length: 55.00 ft Total Volume: 0.498 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

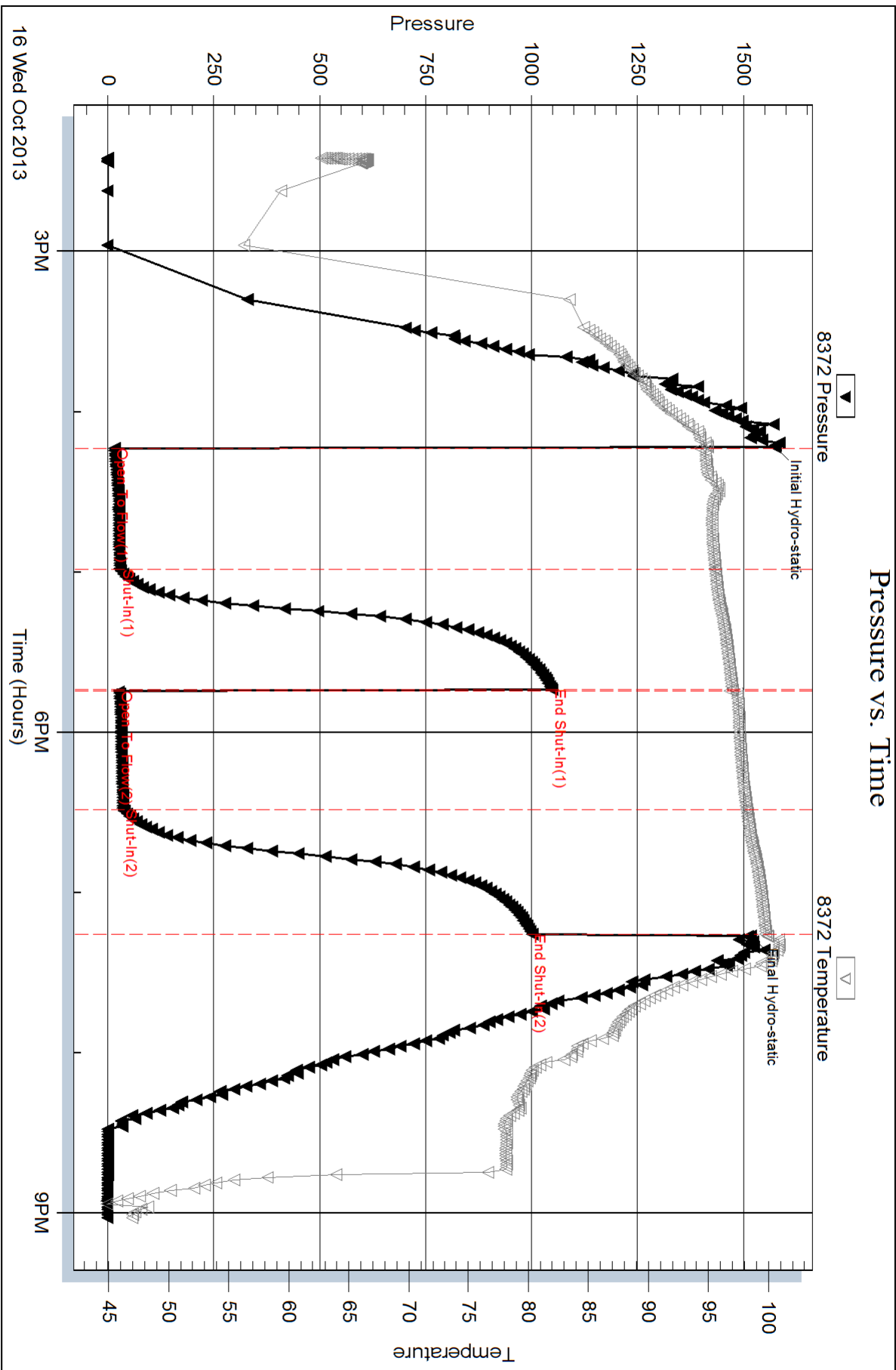
Serial #: 8372

Inside

Downing Nelson Oil Co

Rennigia Quint #1-20

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 53641

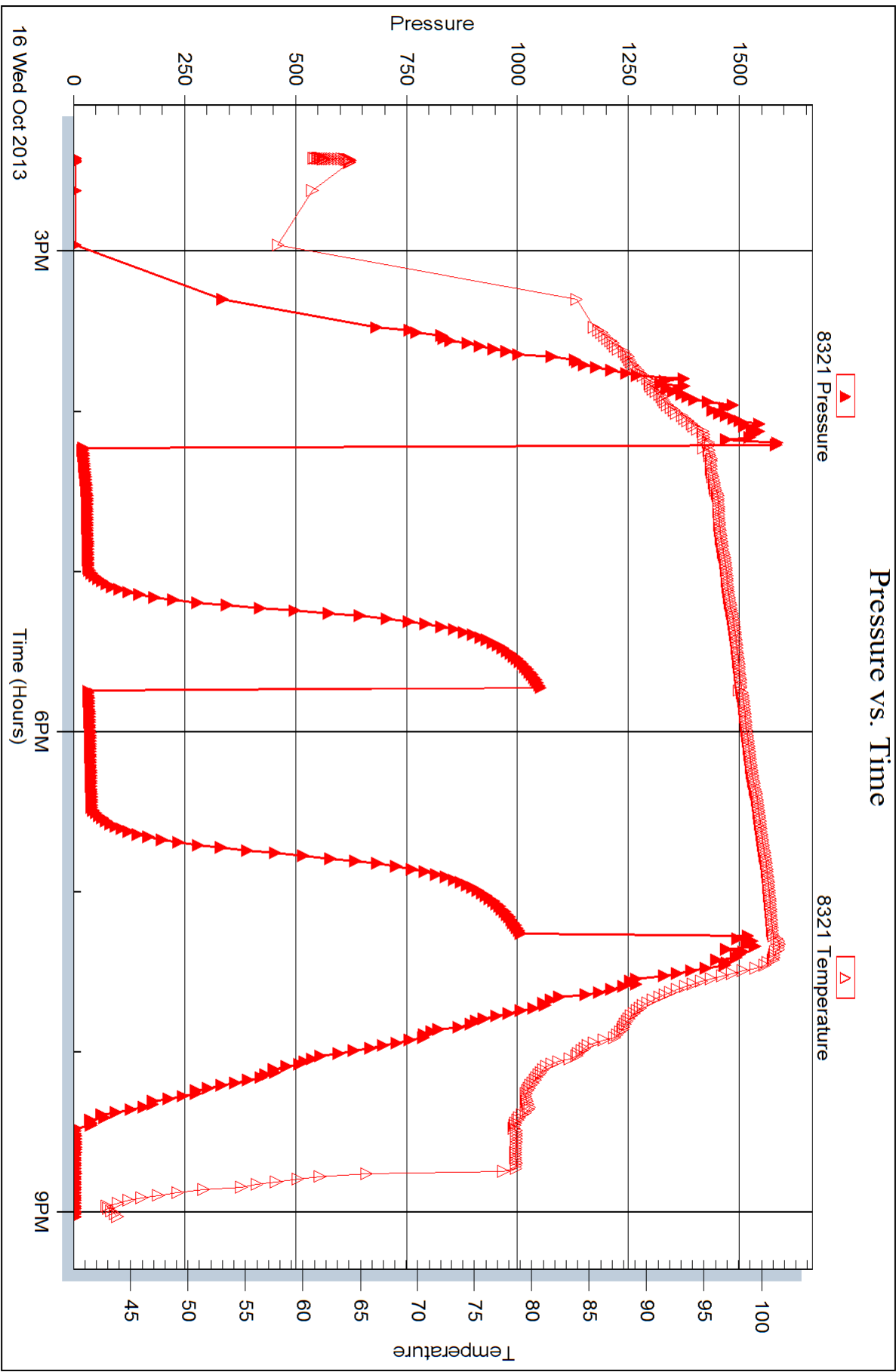
Printed: 2013.10.21 @ 09:24:35

Serial #: 8321

Outside Dow nting Nelson Oil Co

Rennigia Quint #1-20

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Co**

PO Box 1019
Hays KS. 67601

ATTN: Al Downing

Remigia Quint #1-20

20-14s-18w Ellis,KS

Start Date: 2013.10.17 @ 06:15:01

End Date: 2013.10.17 @ 13:00:00

Job Ticket #: 53642 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.10.21 @ 09:24:00

Downing Nelson Oil Co
20-14s-18w Ellis,KS
Remigia Quint #1-20
DST # 2
LKC"C"
2013.10.17



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning Nelson Oil Co

20-14s-18w Ellis,KS

PO Box 1019
Hays KS. 67601

Remigia Quint #1-20

Job Ticket: 53642

DST#: 2

ATTN: Al Dow ning

Test Start: 2013.10.17 @ 06:15:01

GENERAL INFORMATION:

Formation: **LKC"C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:43:00

Time Test Ended: 13:00:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Andy Carreira

Unit No: 68

Interval: 3412.00 ft (KB) To 3441.00 ft (KB) (TVD)

Reference Elevations: 2102.00 ft (KB)

Total Depth: 3441.00 ft (KB) (TVD)

2094.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 8.00 ft

Serial #: 8372

Inside

Press @RunDepth: 105.88 psig @ 3413.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.17

End Date: 2013.10.17

Last Calib.: 2013.10.17

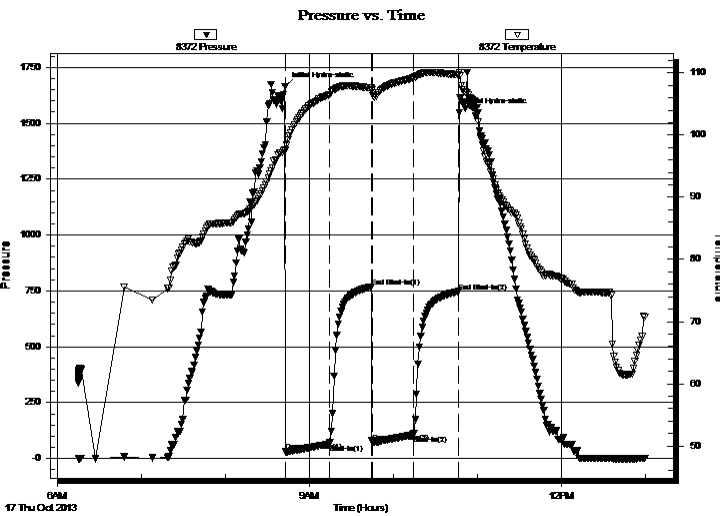
Start Time: 06:15:01

End Time: 13:00:00

Time On Btm: 2013.10.17 @ 08:42:30

Time Off Btm: 2013.10.17 @ 10:47:00

TEST COMMENT: IF:(30min) 6" blow in 2 min. BOB in 7 min.
IS:(30min) No Return
FF:(30min) 6" blow in 5 min. BOB in 12 min.
FS:(30min) Intermittent return surface blow . 1 min. after bled off.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1663.04	97.64	Initial Hydro-static
1	31.18	97.54	Open To Flow (1)
32	64.71	106.47	Shut-In(1)
62	768.54	107.55	End Shut-In(1)
63	72.87	106.74	Open To Flow (2)
92	105.88	109.18	Shut-In(2)
124	747.13	109.72	End Shut-In(2)
125	1548.35	110.00	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	HOCGM g=40% o=20% m=40%	1.41
140.00	GO g=10% o=90%	1.96
0.00	GIP= 2800 ft	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning Nelson Oil Co

20-14s-18w Ellis,KS

PO Box 1019
Hays KS. 67601

Remigia Quint #1-20

Job Ticket: 53642

DST#: 2

ATTN: Al Dow ning

Test Start: 2013.10.17 @ 06:15:01

Tool Information

Drill Pipe:	Length: 3390.00 ft	Diameter: 3.80 inches	Volume: 47.55 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 47.70 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 51000.00 lb
Depth to Top Packer:	3412.00 ft			Final 53000.00 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			3393.00	
Shut In Tool	5.00			3398.00	
Hydraulic tool	5.00			3403.00	
Packer	5.00			3408.00	20.00 Bottom Of Top Packer
Packer	4.00			3412.00	
Stubb	1.00			3413.00	
Recorder	0.00	8372	Inside	3413.00	
Recorder	0.00	8321	Outside	3413.00	
Perforations	25.00			3438.00	
Bullnose	3.00			3441.00	29.00 Bottom Packers & Anchor
Total Tool Length:	49.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning Nelson Oil Co

20-14s-18w Ellis,KS

PO Box 1019
Hays KS. 67601

Remigia Quint #1-20

Job Ticket: 53642

DST#: 2

ATTN: Al Dow ning

Test Start: 2013.10.17 @ 06:15:01

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.74 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
120.00	HOCGM g=40% o=20% m=40%	1.410
140.00	GO g=10% o=90%	1.964
0.00	GIP= 2800 ft	0.000

Total Length: 260.00 ft Total Volume: 3.374 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

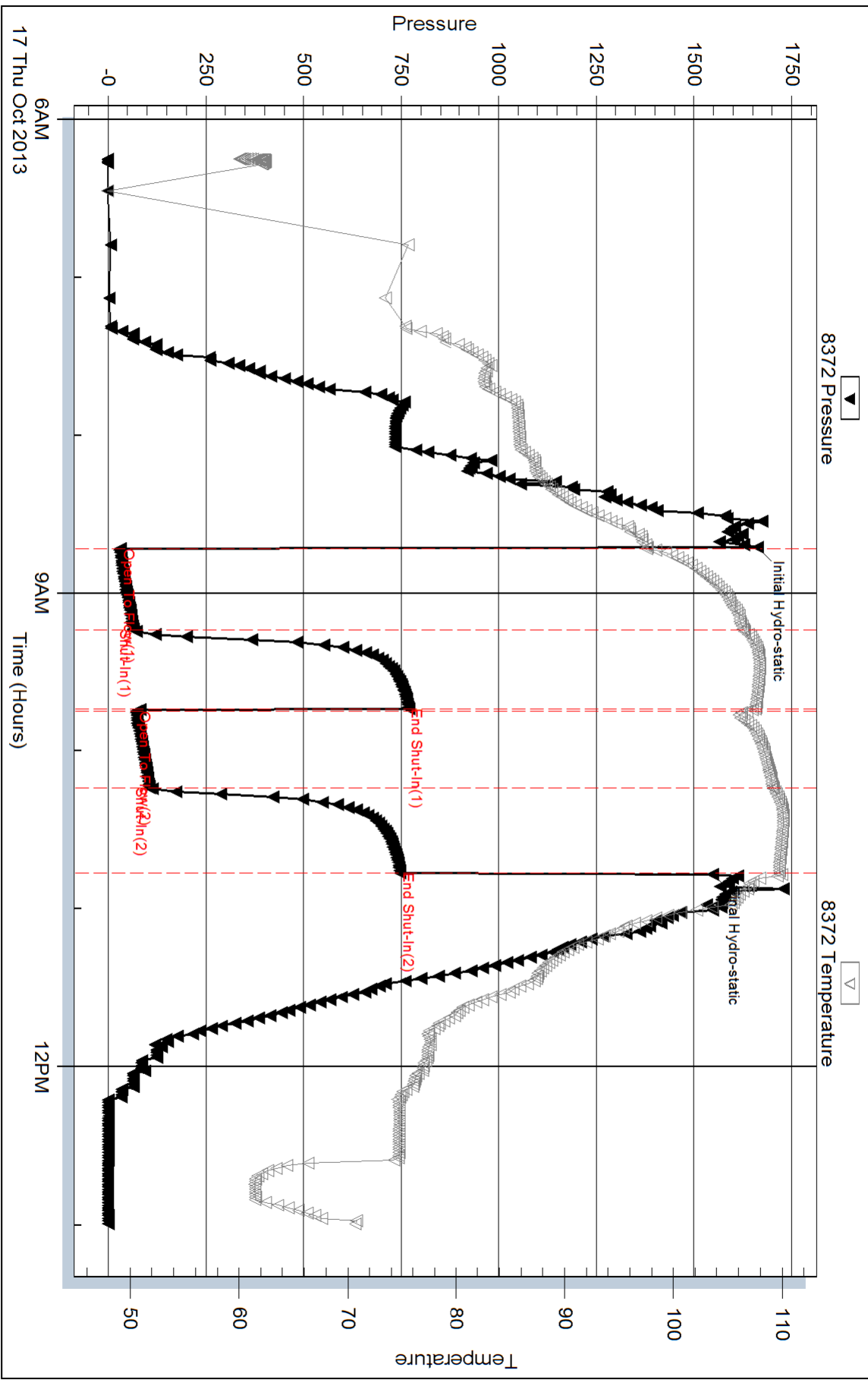
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Found loose hose connection. Explains Return blow .

Pressure vs. Time

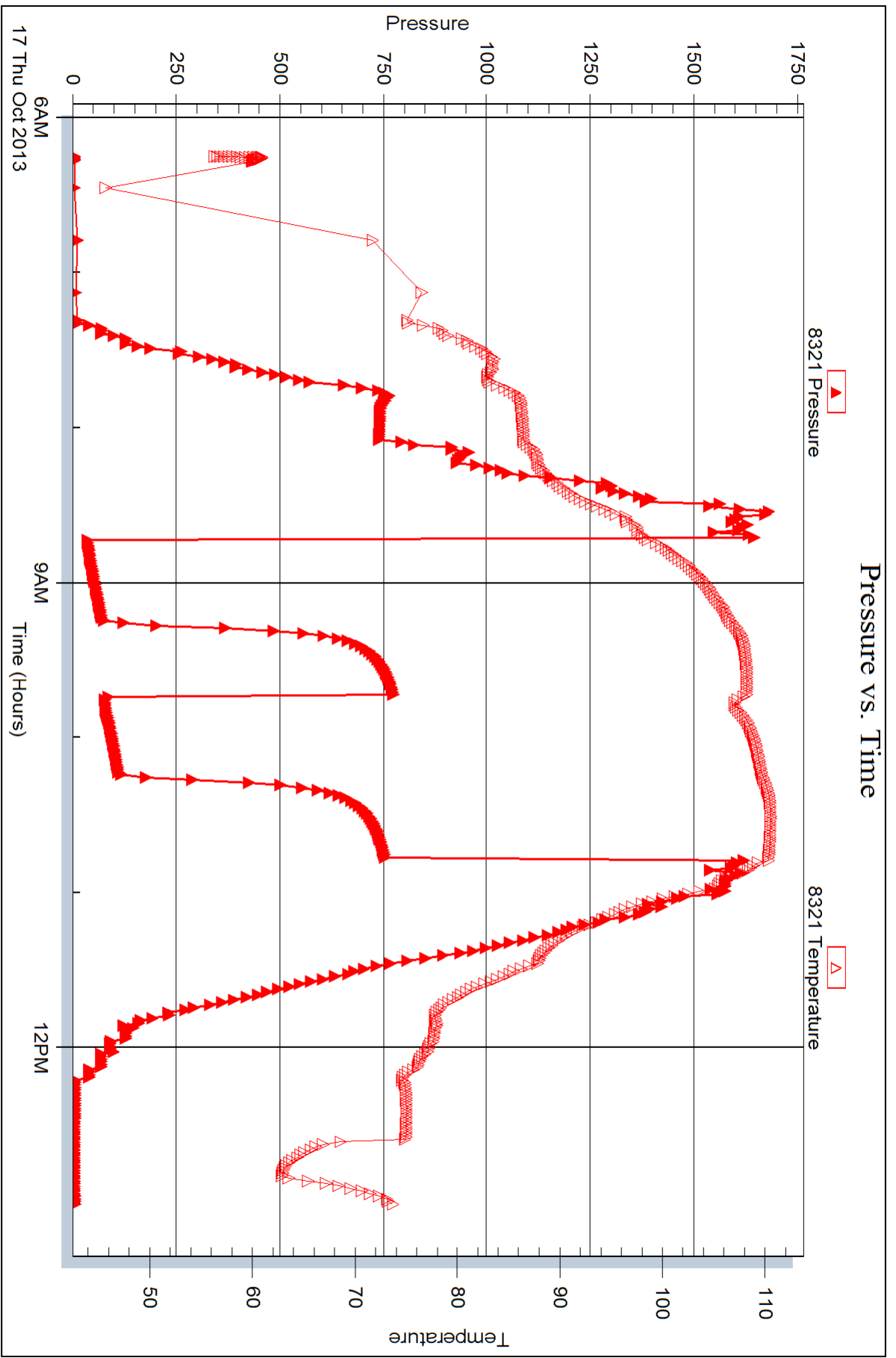


Serial #: 8321

Outside Dow ning Nelson Oil Co

Rennigia Quint #1-20

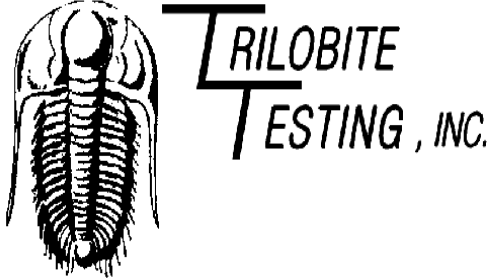
DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 53642

Printed: 2013.10.21 @ 09:24:02



DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Co**

PO Box 1019
Hays KS. 67601

ATTN: Al Downing

Remigia Quint #1-20

20-14s-18w Ellis,KS

Start Date: 2013.10.17 @ 18:52:01

End Date: 2013.10.18 @ 01:21:00

Job Ticket #: 53643 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.10.21 @ 09:23:35



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning Nelson Oil Co

20-14s-18w Ellis,KS

PO Box 1019
Hays KS. 67601

Remigia Quint #1-20

Job Ticket: 53643

DST#: 3

ATTN: Al Dow ning

Test Start: 2013.10.17 @ 18:52:01

GENERAL INFORMATION:

Formation: **LKC"D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:50:30

Time Test Ended: 01:21:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Andy Carreira

Unit No: 68

Interval: 3439.00 ft (KB) To 3464.00 ft (KB) (TVD)

Reference Elevations: 2102.00 ft (KB)

Total Depth: 3464.00 ft (KB) (TVD)

2094.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 8.00 ft

Serial #: 8372

Inside

Press @RunDepth: 254.18 psig @ 3440.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.17

End Date:

2013.10.18

Last Calib.: 2013.10.18

Start Time: 18:52:01

End Time:

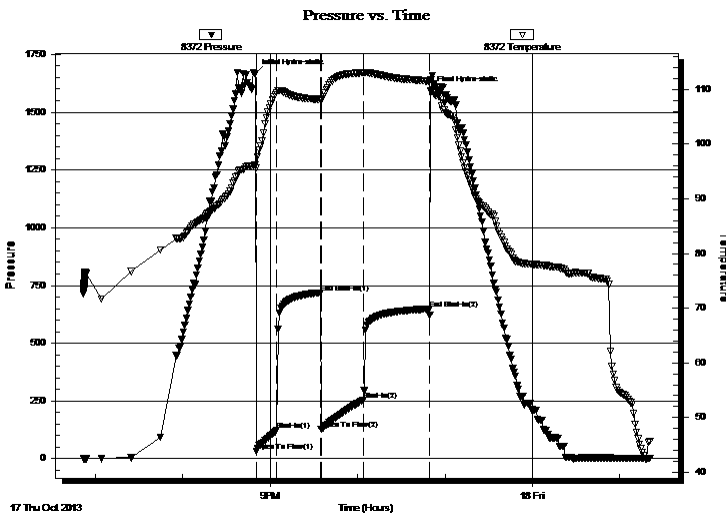
01:21:00

Time On Btm: 2013.10.17 @ 20:50:00

Time Off Btm: 2013.10.17 @ 22:50:00

TEST COMMENT: IF:(15min) BOB in 4 min.
IS:(30min) Return surface blow 12 min after bled off.
FF:(30min) BOB in 4 min.
FS:(45min) Return blow immediately after bled off. BOB in 10 min.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1665.85	96.19	Initial Hydro-static
1	31.50	95.64	Open To Flow (1)
15	122.32	109.41	Shut-In(1)
45	718.51	108.17	End Shut-In(1)
45	127.87	108.00	Open To Flow (2)
74	254.18	113.03	Shut-In(2)
119	648.64	111.51	End Shut-In(2)
120	1591.44	111.79	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
375.00	MW m=tr w=100%	4.99
60.00	GSOCMW g=5% o=5% m=25% w=65%	0.84
60.00	GHOCMW g=10% o=20% m=30% w=40%	0.84
15.00	GO g=10% o=90%	0.21
0.00	485' 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

20-14s-18w Ellis,KS

PO Box 1019
Hays KS. 67601

Remigia Quint #1-20

Job Ticket: 53643

DST#: 3

ATTN: Al Dow ning

Test Start: 2013.10.17 @ 18:52:01

Tool Information

Drill Pipe:	Length: 3419.00 ft	Diameter: 3.80 inches	Volume: 47.96 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 64000.00 lb
			<u>Total Volume: 48.11 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 51000.00 lb
Depth to Top Packer:	3439.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een Packers:	25.00 ft			
Tool Length:	45.00 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			3420.00	
Shut In Tool	5.00			3425.00	
Hydraulic tool	5.00			3430.00	
Packer	5.00			3435.00	20.00 Bottom Of Top Packer
Packer	4.00			3439.00	
Stubb	1.00			3440.00	
Recorder	0.00	8372	Inside	3440.00	
Recorder	0.00	8321	Outside	3440.00	
Perforations	21.00			3461.00	
Bullnose	3.00			3464.00	25.00 Bottom Packers & Anchor
Total Tool Length:	45.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Co

20-14s-18w Ellis,KS

PO Box 1019
Hays KS. 67601

Remigia Quint #1-20

Job Ticket: 53643

DST#: 3

ATTN: Al Downing

Test Start: 2013.10.17 @ 18:52:01

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: 110000 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.74 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
375.00	MW m=tr w=100%	4.987
60.00	GSOCMW g=5% o=5% m=25% w=65%	0.842
60.00	GHOCMW g=10% o=20% m=30% w=40%	0.842
15.00	GO g=10% o=90%	0.210
0.00	485' GIP	0.000

Total Length: 510.00 ft Total Volume: 6.881 bbl

Num Fluid Samples: 0

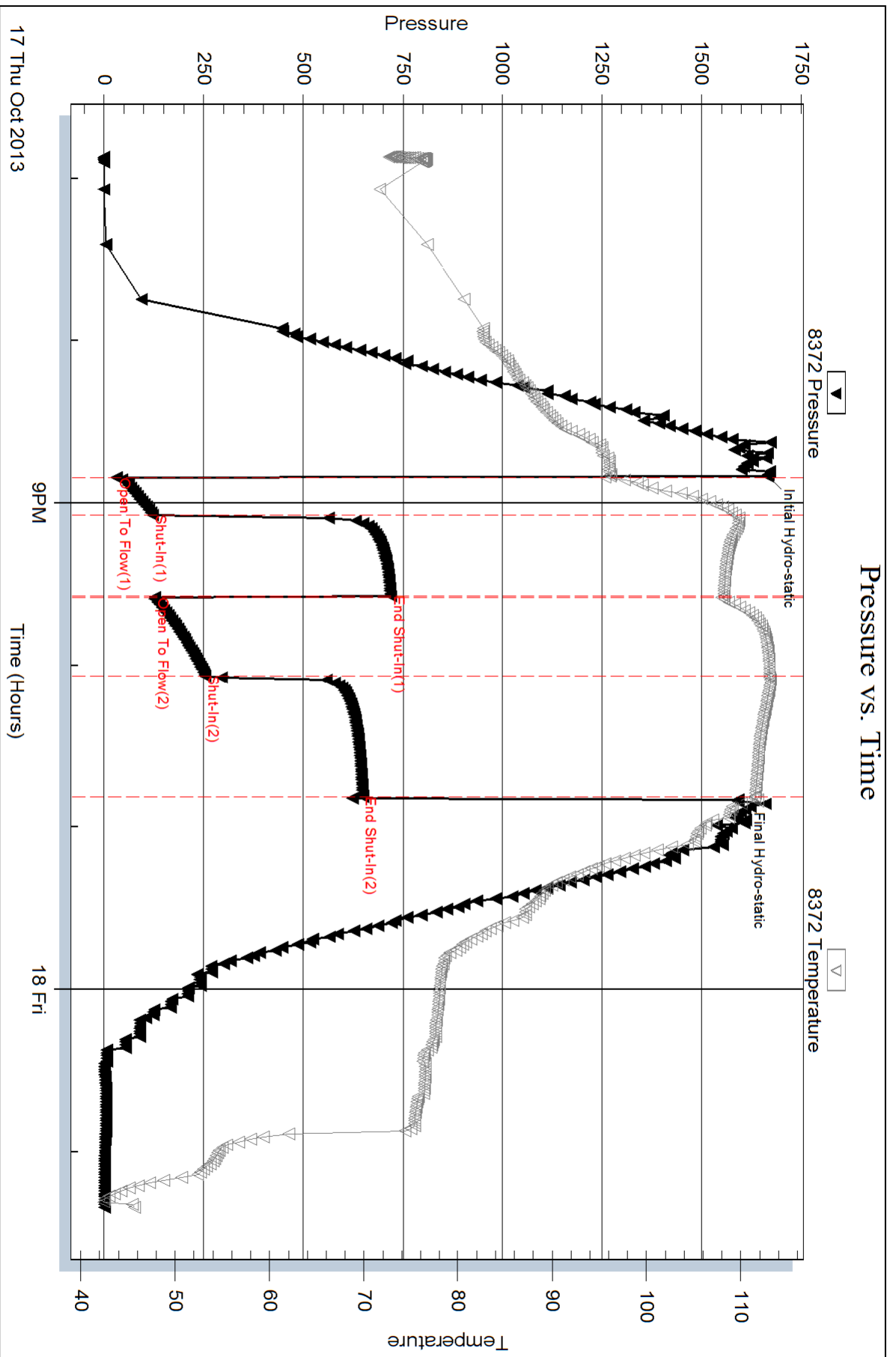
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Resistivity- .119 @ 44 deg = 110000

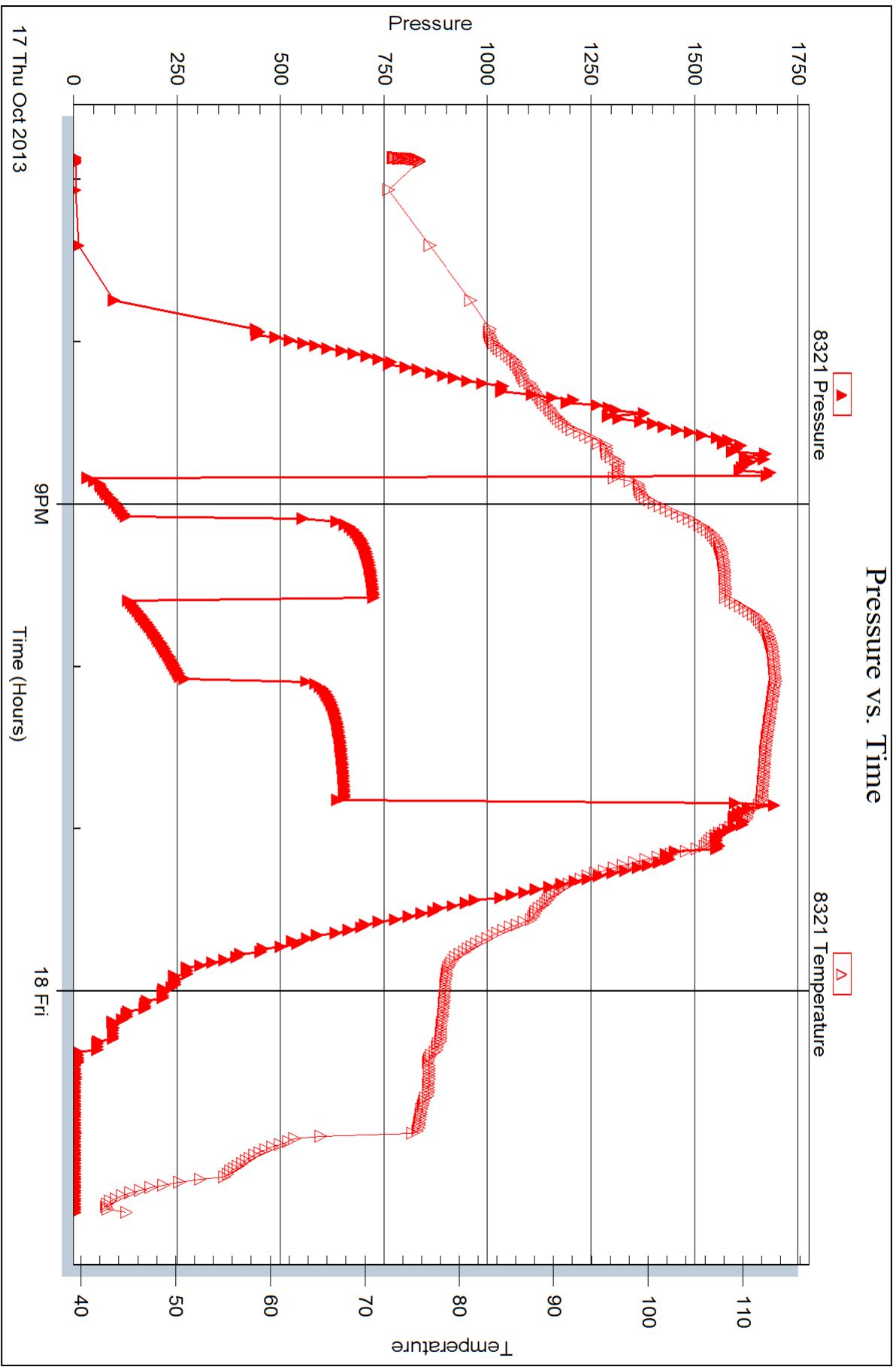


Serial #: 8321

Outside Dow nting Nelson Oil Co

Rennigia Quint #1-20

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Co**

PO Box 1019
Hays KS. 67601

ATTN: Al Downing

Remigia Quint #1-20

20-14s-18w Ellis,KS

Start Date: 2013.10.18 @ 07:45:01

End Date: 2013.10.18 @ 14:24:00

Job Ticket #: 53644 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.10.21 @ 09:23:10

Downing Nelson Oil Co
20-14s-18w Ellis,KS
Remigia Quint #1-20
DST # 4
LKC"E"
2013.10.18



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning Nelson Oil Co

20-14s-18w Ellis,KS

PO Box 1019
Hays KS. 67601

Remigia Quint #1-20

Job Ticket: 53644

DST#: 4

ATTN: Al Dow ning

Test Start: 2013.10.18 @ 07:45:01

GENERAL INFORMATION:

Formation: **LKC"E"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:51:00

Time Test Ended: 14:24:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Andy Carreira

Unit No: 68

Interval: 3459.00 ft (KB) To 3482.00 ft (KB) (TVD)

Total Depth: 3482.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Poor

Reference Elevations: 2102.00 ft (KB)

2094.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8372

Inside

Press @RunDepth: 221.73 psig @ 3460.00 ft (KB)

Start Date: 2013.10.18

End Date: 2013.10.18

Start Time: 07:45:01

End Time: 14:24:00

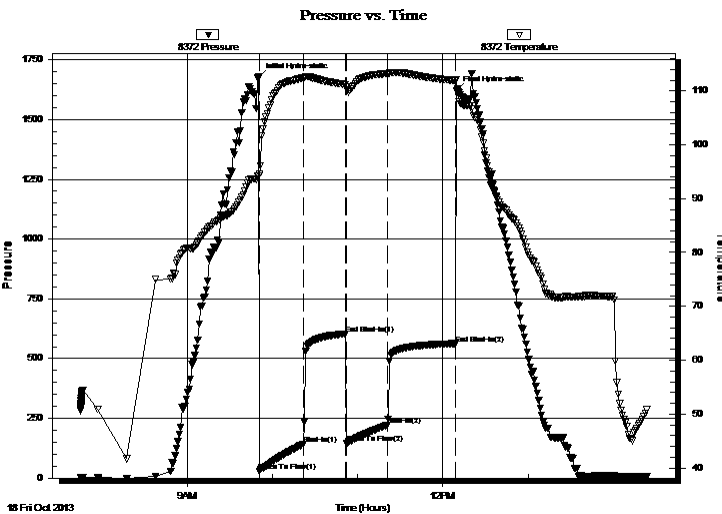
Capacity: 8000.00 psig

Last Calib.: 2013.10.18

Time On Btm: 2013.10.18 @ 09:50:30

Time Off Btm: 2013.10.18 @ 12:09:30

TEST COMMENT: IF:(30min) BOB in 9 min.
IS:(30min) Return surface blow
FF:(30min) BOB in 13 min.
FS:(45min) Return blow built to 2.5"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1677.93	94.30	Initial Hydro-static
1	28.48	94.50	Open To Flow (1)
32	142.41	112.47	Shut-In(1)
61	603.44	111.20	End Shut-In(1)
62	145.22	110.77	Open To Flow (2)
91	221.73	113.20	Shut-In(2)
139	562.93	111.89	End Shut-In(2)
139	1620.13	112.04	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
430.00	MW	5.76
5.00	OIL	0.07
0.00	GIP= 65 ft	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

20-14s-18w Ellis,KS

PO Box 1019
Hays KS. 67601

Remigia Quint #1-20

Job Ticket: 53644

DST#: 4

ATTN: Al Dow ning

Test Start: 2013.10.18 @ 07:45:01

Tool Information

Drill Pipe:	Length: 3422.00 ft	Diameter: 3.80 inches	Volume: 48.00 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 48.15 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3459.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een Packers:	23.00 ft			
Tool Length:	43.00 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			3440.00	
Shut In Tool	5.00			3445.00	
Hydraulic tool	5.00			3450.00	
Packer	5.00			3455.00	20.00 Bottom Of Top Packer
Packer	4.00			3459.00	
Stubb	1.00			3460.00	
Recorder	0.00	8372	Inside	3460.00	
Recorder	0.00	8321	Outside	3460.00	
Perforations	19.00			3479.00	
Bullnose	3.00			3482.00	23.00 Bottom Packers & Anchor
Total Tool Length:	43.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Co

20-14s-18w Ellis,KS

PO Box 1019
Hays KS. 67601

Remigia Quint #1-20

Job Ticket: 53644

DST#: 4

ATTN: Al Downing

Test Start: 2013.10.18 @ 07:45:01

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:

125000 ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.77 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
430.00	MW	5.758
5.00	OIL	0.070
0.00	GIP= 65 ft	0.000

Total Length: 435.00 ft Total Volume: 5.828 bbl

Num Fluid Samples: 0

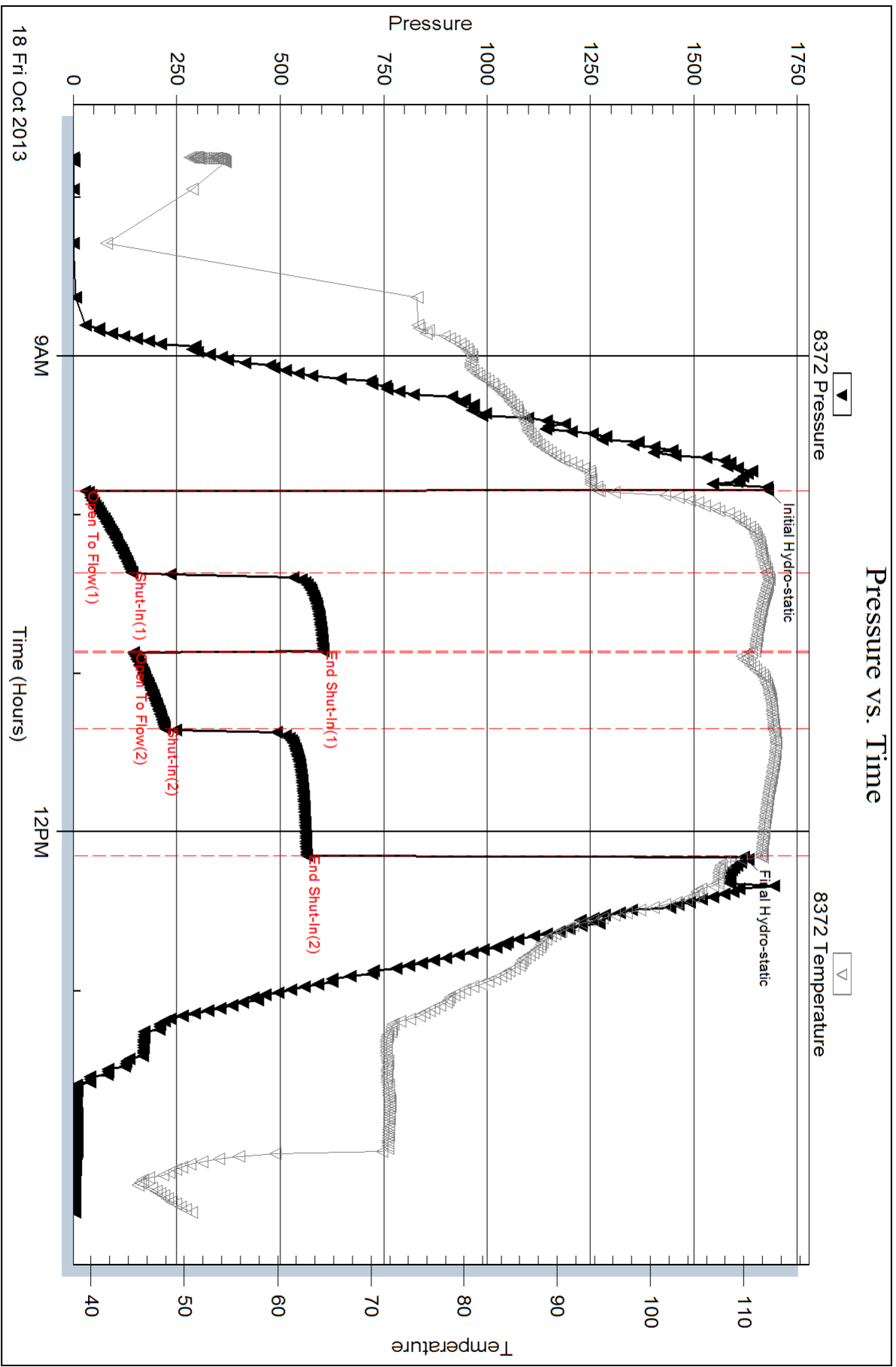
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Resistivity- .124 @ 40 deg = 125000



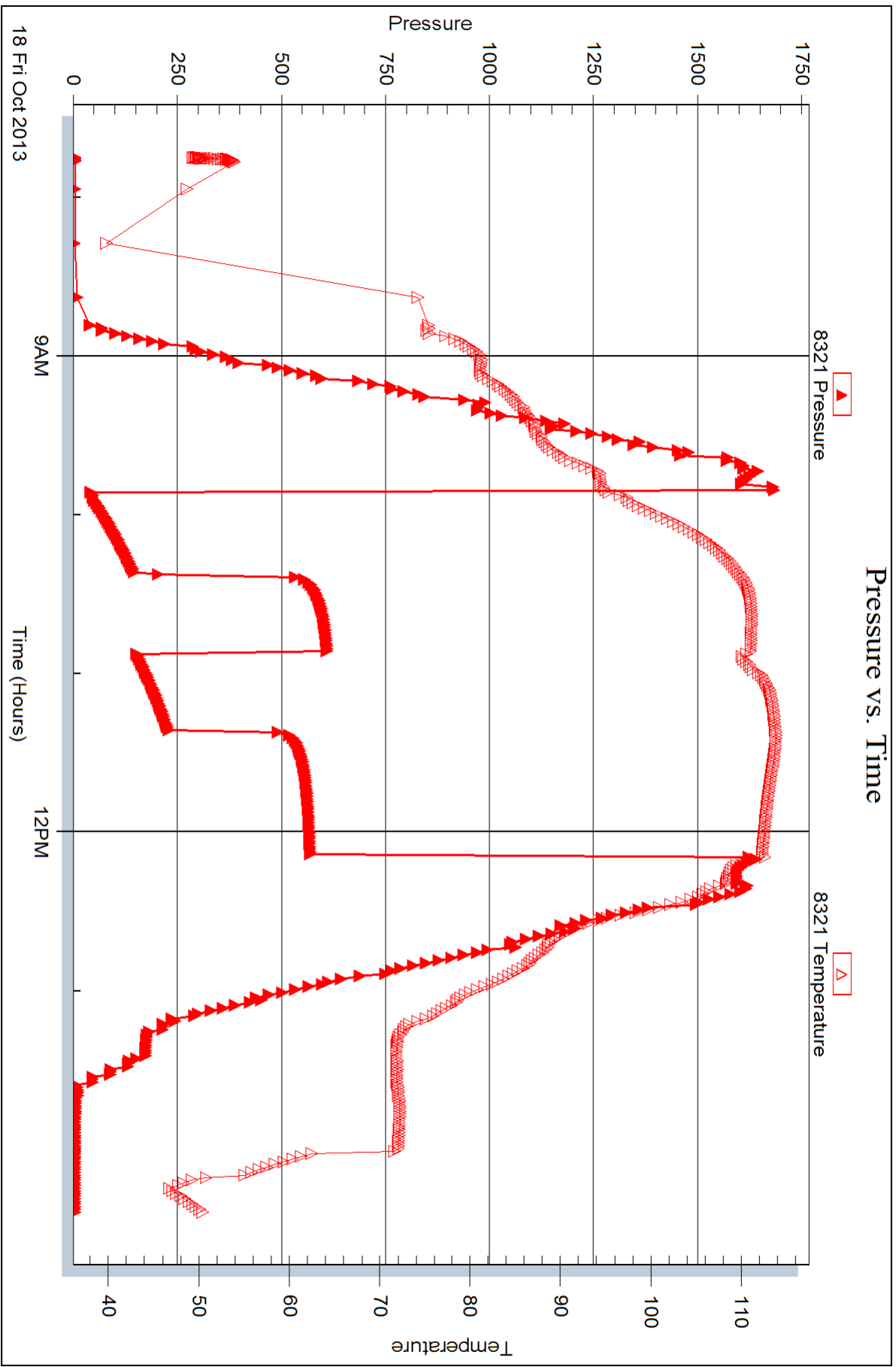
Serial #: 8321

Outside

Dow nung Nelson Oil Co

Rennigja Quint #1-20

DST Test Number: 4





DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Co**

PO Box 1019
Hays KS. 67601

ATTN: Al Downing

Remigia Quint #1-20

20-14s-18w Ellis,KS

Start Date: 2013.10.18 @ 23:10:01

End Date: 2013.10.19 @ 07:28:00

Job Ticket #: 53645 DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.10.21 @ 09:21:19

Downing Nelson Oil Co

20-14s-18w Ellis,KS

Remigia Quint #1-20

DST # 5

LKC"H,I,J"

2013.10.18



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning Nelson Oil Co

20-14s-18w Ellis,KS

PO Box 1019
Hays KS. 67601

Remigia Quint #1-20

ATTN: Al Dow ning

Job Ticket: 53645

DST#: 5

Test Start: 2013.10.18 @ 23:10:01

GENERAL INFORMATION:

Formation: **LKC"H,I,J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:58:30

Time Test Ended: 07:28:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Andy Carreira

Unit No: 68

Interval: 3515.00 ft (KB) To 3573.00 ft (KB) (TVD)

Reference Elevations: 2102.00 ft (KB)

Total Depth: 3573.00 ft (KB) (TVD)

2094.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 8.00 ft

Serial #: 8372 Inside

Press @RunDepth: 545.57 psig @ 3518.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.18

End Date:

2013.10.19

Last Calib.:

2013.10.19

Start Time: 23:10:01

End Time:

07:28:00

Time On Btm:

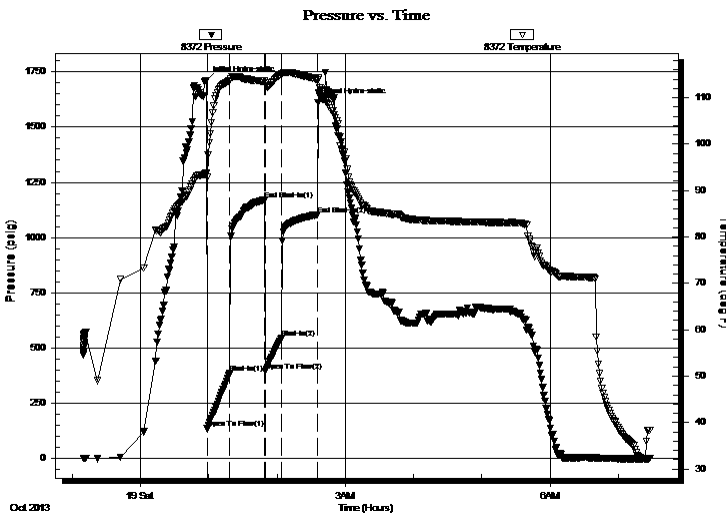
2013.10.19 @ 00:58:00

Time Off Btm:

2013.10.19 @ 02:36:00

TEST COMMENT: IF:(15min) BOB in 15 sec.
IS:(30min) Return Blow . BOB in 4 min after bled off.
FF:(15min) GTS 8 min into open.
FS:(30min) Return Blow , BOB 1 min after bled off.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1710.09	93.72	Initial Hydro-static
1	135.02	92.85	Open To Flow (1)
21	387.07	113.69	Shut-In(1)
51	1169.63	113.55	End Shut-In(1)
52	396.09	113.16	Open To Flow (2)
66	545.57	114.94	Shut-In(2)
98	1104.15	113.78	End Shut-In(2)
98	1609.65	113.94	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	HOCGM g=30% o=30% m=40%	1.41
1475.00	CGO g=15% o=85%	20.69

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

20-14s-18w Ellis,KS

PO Box 1019
Hays KS. 67601

Remigia Quint #1-20

Job Ticket: 53645

DST#: 5

ATTN: Al Dow ning

Test Start: 2013.10.18 @ 23:10:01

Tool Information

Drill Pipe:	Length: 3485.00 ft	Diameter: 3.80 inches	Volume: 48.89 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	24000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	64000.00 lb
			<u>Total Volume: 49.04 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial	52000.00 lb
Depth to Top Packer:	3515.00 ft			Final	59000.00 lb
Depth to Bottom Packer:	ft				
Interval betw een Packers:	58.00 ft				
Tool Length:	78.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments: 19 min IF due to safety chain malfunction. Gas burned w / orange flame

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Change Over Sub	1.00			3496.00	
Shut In Tool	5.00			3501.00	
Hydraulic tool	5.00			3506.00	
Packer	5.00			3511.00	20.00 Bottom Of Top Packer
Packer	4.00			3515.00	
Stubb	1.00			3516.00	
Perforations	1.00			3517.00	
Change Over Sub	1.00			3518.00	
Recorder	0.00	8372	Inside	3518.00	
Recorder	0.00	8321	Outside	3518.00	
Drill Pipe	32.00			3550.00	
Change Over Sub	1.00			3551.00	
Perforations	19.00			3570.00	
Bullnose	3.00			3573.00	58.00 Bottom Packers & Anchor

Total Tool Length: 78.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Co

20-14s-18w Ellis,KS

PO Box 1019
Hays KS. 67601

Remigia Quint #1-20

Job Ticket: 53645

DST#: 5

ATTN: Al Downing

Test Start: 2013.10.18 @ 23:10:01

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.77 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 bbbl
120.00	HOCGM g=30% o=30% m=40%	1.410
1475.00	CGO g=15% o=85%	20.690

Total Length: 1595.00 ft Total Volume: 22.100 bbl

Num Fluid Samples: 0

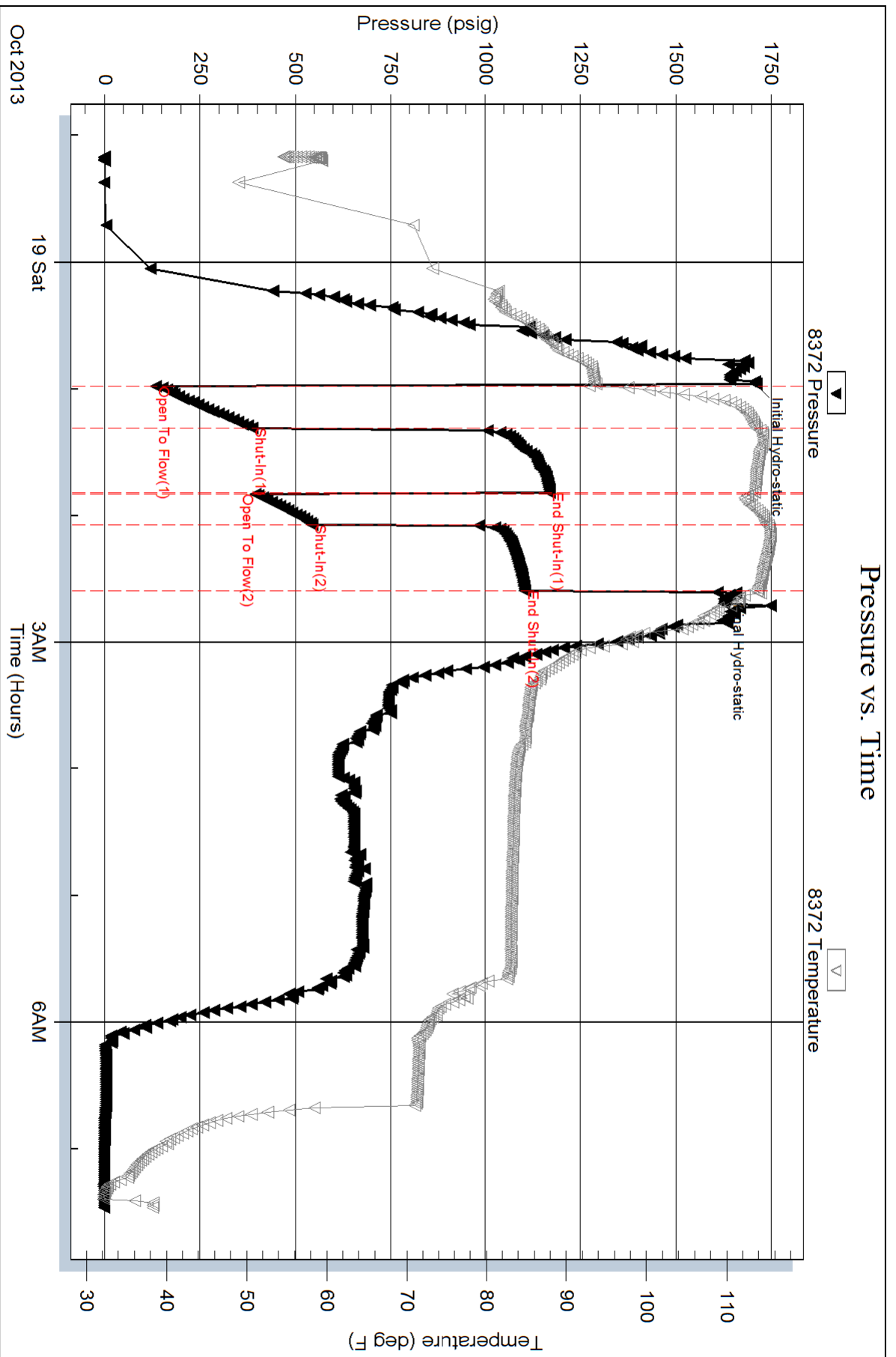
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



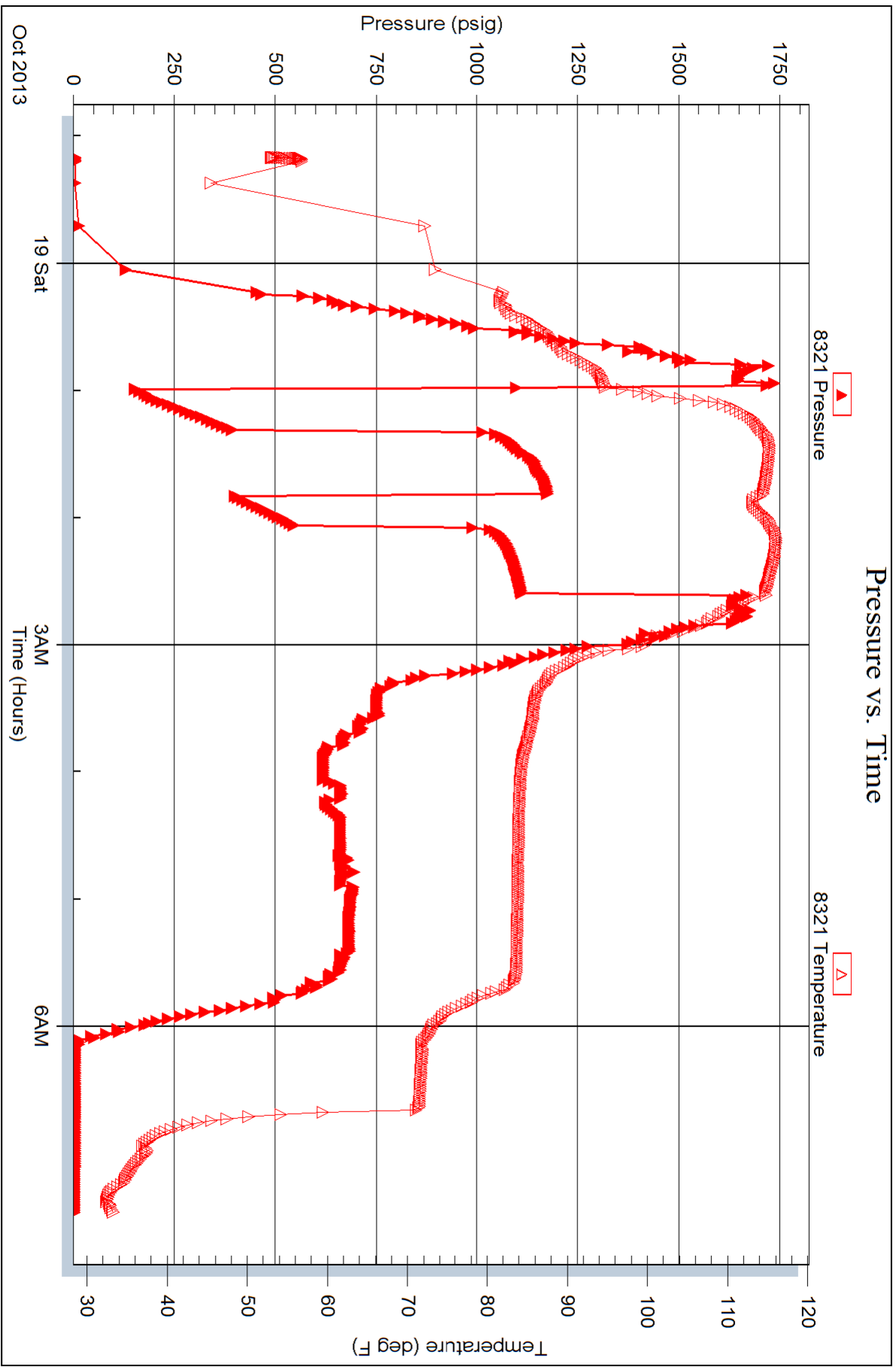
Serial #: 8321

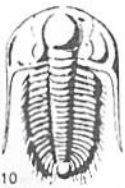
Outside

Dow n ing Nelson Oil Co

Rennigia Quint #1-20

DST Test Number: 5





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 53641

Well Name & No. R. Quint #1-20 Test No. 1 Date 10-16-13
 Company DNOc Elevation 2102 KB 2094 GL
 Address PO Box 1019 Hays Ks. 67601
 Co. Rep / Geo. AL Downing Rig Discovery #3
 Location: Sec. 20 Twp. 14S Rge. 18W Co. Ellis State Ks

Interval Tested 3310-3340 Zone Tested Plattsmouth
 Anchor Length 30' Drill Pipe Run 3267 Mud Wt. 8.5
 Top Packer Depth 3305 Drill Collars Run 30' Vis 50
 Bottom Packer Depth ~~3340~~ 3310 Wt. Pipe Run 0 WL 8.0
 Total Depth 3340 Chlorides 1000 ppm System LCM 1 1/2#

Blow Description IF: 1" blow in 5 min. 2" in 20 min. Built to 3"
ISI: No Return
FF: 1" blow in ~~5~~ 1 min. 2" in 7 min. 3" in 16 min. 4" in 25 min. built to 5"
FST: No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>55</u>	Feet of <u>50 CBM</u>	<u>5</u>	<u>5</u>	<u>90</u>	
<u>5</u>	Feet of <u>GIP</u>				

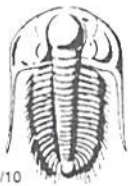
Rec Total 55 BHT 99° Gravity _____ API RW _____ @ _____ ° F Chlorides _____ ppm

(A) Initial Hydrostatic 1574 Test 1150 T-On Location 12:50
 (B) First Initial Flow 15 Jars _____ T-Started 14:25
 (C) First Final Flow 28 Safety Joint _____ T-Open 16:14
 (D) Initial Shut-In 1049 Circ Sub _____ T-Pulled 19:14
 (E) Second Initial Flow 26 Hourly Standby _____ T-Out 21:02
 (F) Second Final Flow 36 Mileage 16RT 24.80 Comments _____
 (G) Final Shut-In 1001 Sampler _____
 (H) Final Hydrostatic 1517 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1174.80
 Accessibility _____ MP/DST Disc't _____

Sub Total 1174.80

Approved By _____ Our Representative [Signature]

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. 53642

Well Name & No. R. Quint #1-20 Test No. 2 Date 10-17-13
 Company DNOC Elevation 2102 KB 2094 GL
 Address PO Box 1019 Hays, Ks 67601
 Co. Rep / Geo. AL DOWNING Rig Discovery #3
 Location: Sec. 20 Twp. 14S Rge. 18W Co. Ellis State Ks

Interval Tested 3412-3441 Zone Tested LKC "C"
 Anchor Length 29 Drill Pipe Run 3390 Mud Wt. ~~8.5~~ 8.7
 Top Packer Depth 3407 Drill Collars Run 30 Vis ~~5.0~~ 5.2
 Bottom Packer Depth 3412 Wt. Pipe Run 0 WL ~~8.0~~ 8.8
 Total Depth 3441 Chlorides 4000 ppm System LCM 1 1/2 #5

Blow Description IF: 6" blow in 2min. BOB in 7min
ISI: NO RETURN
FF: 6" blow in 5min. BOB in 12min.
FSI: INTERMITTENT SURFACE RETURN BLOW

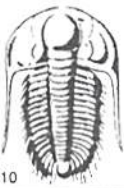
Rec	Feet of	%gas	%oil	%water	%mud
<u>140</u>	<u>GO</u>	<u>10</u>	<u>90</u>		
<u>120</u>	<u>HOCBM</u>	<u>40</u>	<u>20</u>		<u>40</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 260 BHT 109° Gravity 38 API RW @ ° F Chlorides ppm

(A) Initial Hydrostatic 1683 Test 1150 T-On Location 05:45
 (B) First Initial Flow 31 Jars T-Started 06:15
 (C) First Final Flow 64 Safety Joint T-Open 08:45
 (D) Initial Shut-In 768 Circ Sub T-Pulled 10:45
 (E) Second Initial Flow 72 Hourly Standby T-Out 13:00
 (F) Second Final Flow 105 Mileage 16RT 24.80 Comments FOUND LOOSE HOSE CONNECTION. Explains Return blow.
 (G) Final Shut-In 747 Sampler Ruined Shale Packer
 (H) Final Hydrostatic 1548 Straddle Ruined Packer

Initial Open 30 Extra Packer Extra Copies
 Initial Shut-In 30 Extra Recorder Sub Total 0
 Final Flow 30 Day Standby Total 1174.80
 Final Shut-In 30 Accessibility MP/DST Disc't
 Sub Total 1174.80

Approved By _____ Our Representative [Signature]
 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. 53643

4/10

Well Name & No. R. Quint #1-20 Test No. 3 Date 10-17-13
 Company DNOC Elevation 2102 KB 2094 GL
 Address PO BOX 1019 HAYS KS 67601
 Co. Rep / Geo. AI DOWNING Rig Discovery #3
 Location: Sec. 20 Twp. 14s Rge. 18W Co. Ellis State Ks

Interval Tested 3439-3464 Zone Tested LKC "D"
 Anchor Length 25' Drill Pipe Run 3419 Mud Wt. 8.7
 Top Packer Depth 3434 Drill Collars Run 30 Vis 5.2
 Bottom Packer Depth 3439 Wt. Pipe Run 0 WL 8.8
 Total Depth 3464 Chlorides 4000 ppm System LCM 1 1/2 #

Blow Description FF: BOB in 4min
FSD: Return surface blow 12min. after bleedoff
FF: BOB in 4min
FSD: Return blow immediately after bleedoff, BOB in 10min.

Rec	Feet of	%gas	%oil	%water	%mud
15	60	10	90		
60	GHOCMW	10	20	40	30
60	650CMW	5	5	65	25
375	MW			100	TR
	BIP=485				

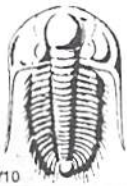
Rec Total 510 BHT _____ Gravity 39 API RW .119 @ 44 °F Chlorides 110000 ppm

(A) Initial Hydrostatic 1665 Test 1150 T-On Location 18:30
 (B) First Initial Flow 31 Jars _____ T-Started 18:52
 (C) First Final Flow 122 Safety Joint _____ T-Open 20:50
 (D) Initial Shut-In 718 Circ Sub _____ T-Pulled 22:50
 (E) Second Initial Flow 127 Hourly Standby _____ T-Out 01:22
 (F) Second Final Flow 254 Mileage 16RT 24.80 Comments _____
 (G) Final Shut-In 648 Sampler _____
 (H) Final Hydrostatic 1591 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____

Initial Open 15 Extra Packer _____ Extra Copies _____
 Initial Shut-In 30 Extra Recorder _____ Sub Total 0
 Final Flow 30 Day Standby _____ Total 1174.80
 Final Shut-In 45 Accessibility _____ MP/DST Disc't _____
 Sub Total 1174.80

Approved By _____ Our Representative [Signature]

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. 53644

Well Name & No. R. Quint #1-20 Test No. 4 Date 10-18-13
 Company DNOC Elevation 2102 KB 2094 GL
 Address PO Box 1019 Hays, Ks 67601
 Co. Rep / Geo. Al Downing Rig DISCOVERY #3
 Location: Sec. 20 Twp. 14S Rge. 18W Co. Ellis State Ks

Interval Tested 3459-3482 Zone Tested LKC "E"
 Anchor Length 23 Drill Pipe Run 3422 Mud Wt. 8.6
 Top Packer Depth 3454 Drill Collars Run 30 Vis 48
 Bottom Packer Depth 3459 Wt. Pipe Run 0 WL 8.8
 Total Depth 3482 Chlorides 5000 ppm System LCM 1 1/2"

Blow Description IF: BOB in 9min.
ISI: Return surface blow
FF: BOB in 13min.
FST: Return Blow built to 2 1/2"

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Oil</u>				
<u>430</u>	<u>MW</u>				

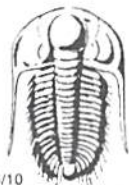
Rec Total 435 BHT 111° Gravity 38 API RW .124 @ 40 ° F Chlorides 125,000 ppm

(A) Initial Hydrostatic 1677 Test 1150 T-On Location 07:08
 (B) First Initial Flow 28 Jars _____ T-Started 07:45
 (C) First Final Flow 142 Safety Joint _____ T-Open 09:37
 (D) Initial Shut-In 603 Circ Sub _____ T-Pulled 11:52
 (E) Second Initial Flow 145 Hourly Standby _____ T-Out 14:10
 (F) Second Final Flow 221 Mileage 16RT 24.80 Comments _____
 (G) Final Shut-In 562 Sampler _____
 (H) Final Hydrostatic 1620 Straddle _____
 Shale Packer _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Packer _____
 Extra Copies _____

Initial Open 30
 Initial Shut-In 30
 Final Flow 30
 Final Shut-In 45
 Sub Total 0
 Total 1174.80
 Sub Total 1174.80

Approved By _____ Our Representative Andy Cox

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. 53645

Well Name & No. R. Quint #1-20 Test No. 5 Date 10-18-13
 Company DNOC Elevation 2102 KB 2094 GL
 Address PO Box 1019 Hays, Ks. 67601
 Co. Rep / Geo. Al Downing Rig DISCOVERY #3
 Location: Sec. 20 Twp. 14s Rge. 18w Co. Ellis State Ks

Interval Tested 3515-3573 Zone Tested LKC "H, I, J"
 Anchor Length 58' Drill Pipe Run 3485' Mud Wt. ~~8.4~~ 9.4
 Top Packer Depth 3510 Drill Collars Run 30 Vis ~~48~~ 52
 Bottom Packer Depth 3515 Wt. Pipe Run 0 WL 8.8
 Total Depth 3573 Chlorides 5000 ppm System LCM 1 1/2 #

Blow Description IF: BOB in 15 sec.
ISI: Return Blow. BOB 4 min after bleed off
FF: BTS 8 min into open
FSL: Return Blow, BOB 4 min after bleed off

Rec	Feet of	%gas	%oil	%water	%mud
<u>1475</u>	<u>CGO</u>	<u>15%</u>	<u>85%</u>		
<u>120</u>	<u>HOCGM</u>	<u>30%</u>	<u>30%</u>		<u>40%</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 1595 BHT 113° Gravity 40 API RW @ ° F Chlorides ppm
 Test 1150 T-On Location 22:35
 Jars T-Started 23:10
 Safety Joint T-Open 01:00
 Circ Sub T-Pulled 02:34
 Hourly Standby T-Out 07:28
 Mileage 16RT 49.60 Comments 19 min IF due to safety chain malfunction
 Sampler loaded tools 10/20 4:45 GAS BURNES w/ORANGE FLAME
 Straddle Ruined Shale Packer
 Shale Packer Ruined Packer
 Extra Packer Extra Copies
 Extra Recorder Sub Total 0
 Day Standby Total 1199.60
 Accessibility MP/DST Disc't
 Sub Total 1199.60

Initial Open 19
 Initial Shut-In 30
 Final Flow 15'
 Final Shut-In 30

Approved By _____ Our Representative [Signature]

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.