



DRILL STEM TEST REPORT

Prepared For: **Dreiling Oil Inc**

PO Box 550
Hays KS 67601-2431

ATTN: Roger Fisher

Kohl D #1

2 12s 21w Trego,KS

Start Date: 2014.05.14 @ 21:51:00

End Date: 2014.05.15 @ 03:50:00

Job Ticket #: 58863 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.05.20 @ 15:41:58



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Dreiling Oil Inc
 PO Box 550
 Hays KS 67601-2431
 ATTN: Roger Fisher

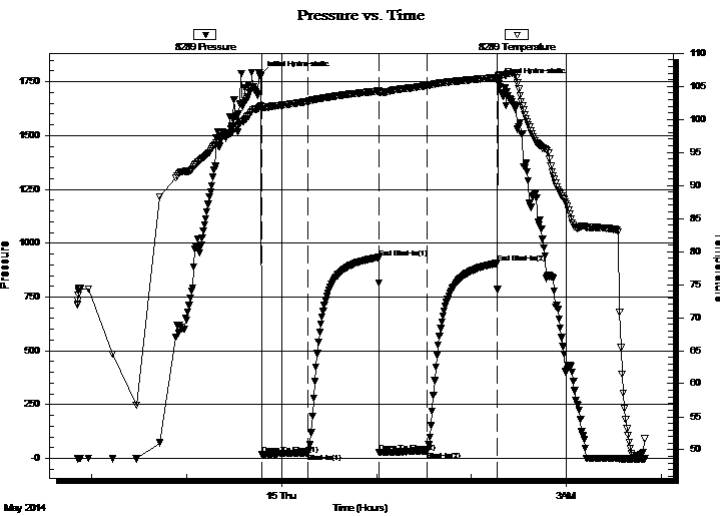
2 12s 21w Trego,KS
Kohl D #1
 Job Ticket: 58863 **DST#: 1**
 Test Start: 2014.05.14 @ 21:51:00

GENERAL INFORMATION:

Formation: **Toronto - LKC " A "**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 23:47:15
 Time Test Ended: 03:50:00
 Interval: **3573.00 ft (KB) To 3620.00 ft (KB) (TVD)**
 Total Depth: 3620.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Jim Svaty
 Unit No: 76
 Reference Elevations: 2320.00 ft (KB)
 2313.00 ft (CF)
 KB to GR/CF: 7.00 ft

Serial #: 8289 Outside
 Press@RunDepth: 34.41 psig @ 3585.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.05.14 End Date: 2014.05.15 Last Calib.: 2014.05.15
 Start Time: 21:51:02 End Time: 03:50:00 Time On Btm: 2014.05.14 @ 23:46:45
 Time Off Btm: 2014.05.15 @ 02:16:45

TEST COMMENT: 30-IFP- Surface Blow Building to 1"
 45-ISIP- No Blow
 30-FFP- No Blow
 45-FSIP- No Blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1780.50	102.01	Initial Hydro-static
1	19.85	101.64	Open To Flow (1)
30	25.51	102.72	Shut-In(1)
75	933.88	104.28	End Shut-In(1)
75	27.74	104.02	Open To Flow (2)
105	34.41	105.10	Shut-In(2)
150	907.13	106.34	End Shut-In(2)
150	1747.94	106.61	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
25.00	OSM 100%	0.12

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dreiling Oil Inc
PO Box 550
Hays KS 67601-2431
ATTN: Roger Fisher

2 12s 21w Trego,KS
Kohl D #1
Job Ticket: 58863 **DST#: 1**
Test Start: 2014.05.14 @ 21:51:00

Tool Information

Drill Pipe:	Length: 3531.00 ft	Diameter: 3.80 inches	Volume: 49.53 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 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: 52000.00 lb
			<u>Total Volume: 49.68 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3573.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	47.00 ft			
Tool Length:	68.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3553.00	
Shut In Tool	5.00			3558.00	
Hydraulic tool	5.00			3563.00	
Packer	5.00			3568.00	21.00 Bottom Of Top Packer
Packer	5.00			3573.00	
Stubb	1.00			3574.00	
Perforations	10.00			3584.00	
Change Over Sub	1.00			3585.00	
Recorder	0.00	8789	Inside	3585.00	
Recorder	0.00	8289	Outside	3585.00	
Blank Spacing	31.00			3616.00	
Change Over Sub	1.00			3617.00	
Bullnose	3.00			3620.00	47.00 Bottom Packers & Anchor

Total Tool Length: 68.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dreiling Oil Inc
PO Box 550
Hays KS 67601-2431
ATTN: Roger Fisher

2 12s 21w Trego,KS
Kohl D #1
Job Ticket: 58863 **DST#: 1**
Test Start: 2014.05.14 @ 21:51:00

Mud and Cushion Information

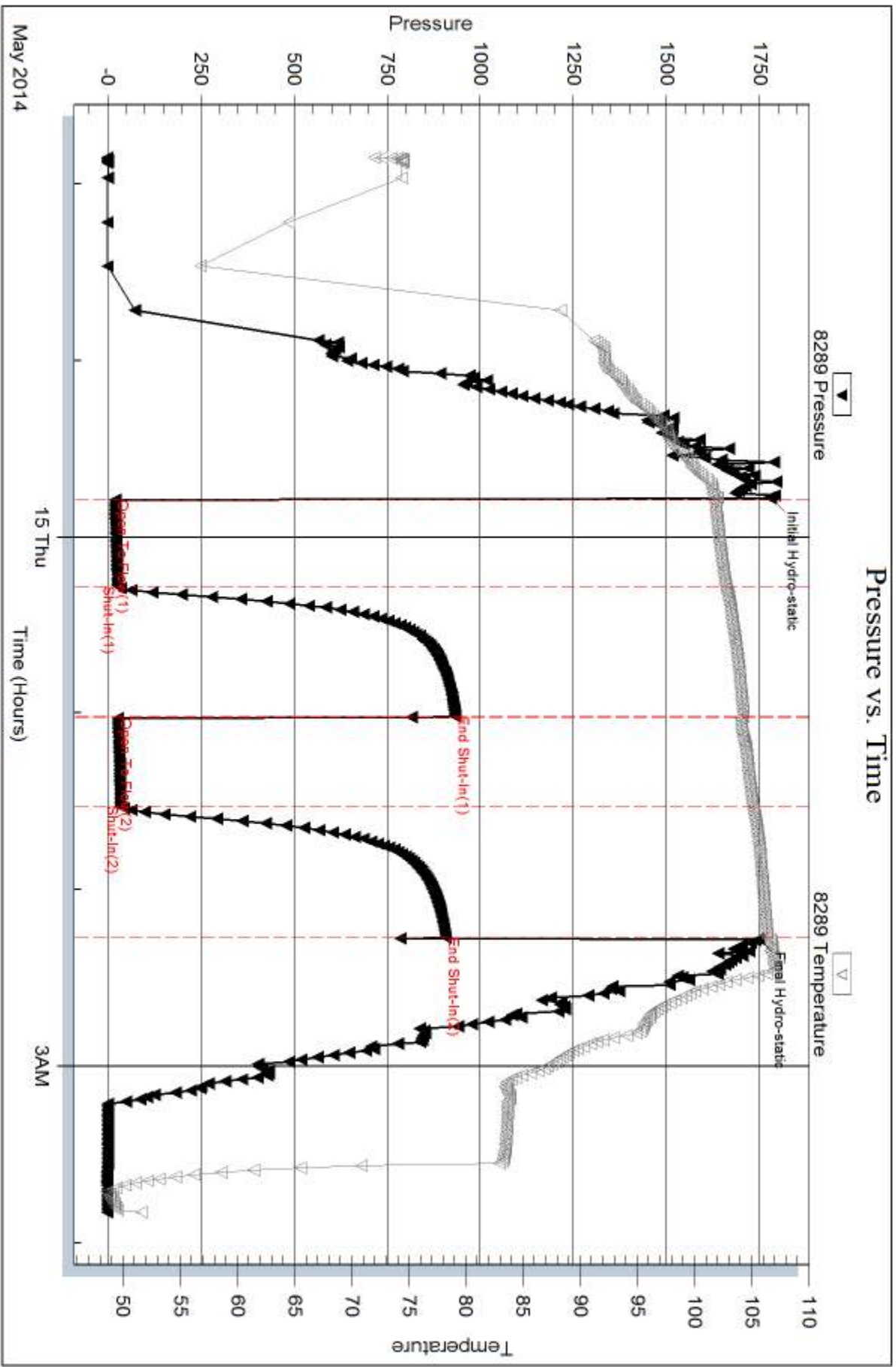
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 60.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.72 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 3500.00 ppm			
Filter Cake: 2.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
25.00	OSM 100%	0.123

Total Length: 25.00 ft Total Volume: 0.123 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:



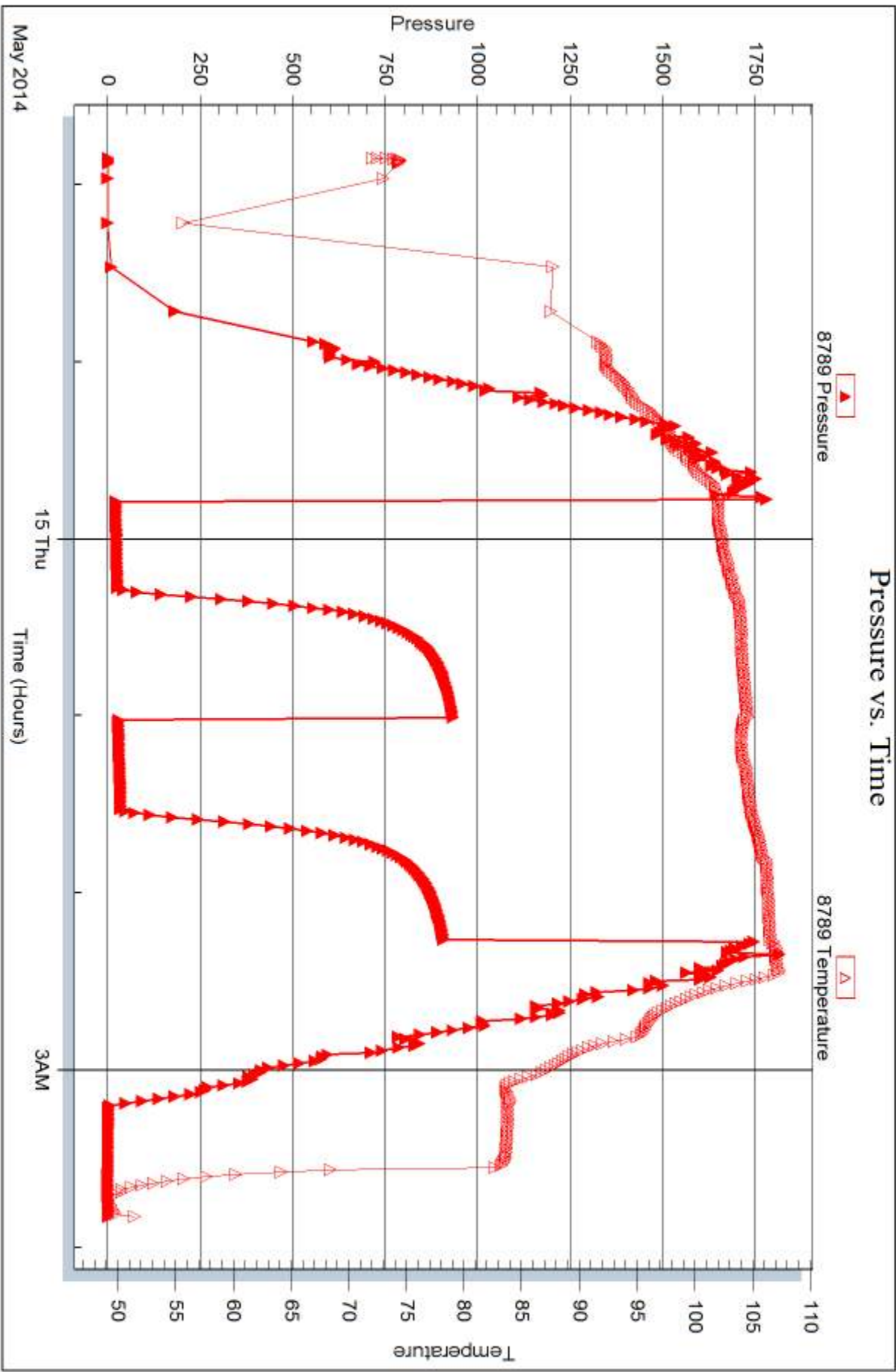
Serial #: 8789

Inside

Dreiling Oil Inc

Kohl D#1

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Dreiling Oil Inc**

PO Box 550
Hays KS 67601-2431

ATTN: Roger Fisher

Kohl D #1

2 12s 21w Trego,KS

Start Date: 2014.05.15 @ 14:00:00

End Date: 2014.05.15 @ 20:02:00

Job Ticket #: 58864 DST #: 2

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

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**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Dreiling Oil Inc
PO Box 550
Hays KS 67601-2431
ATTN: Roger Fisher

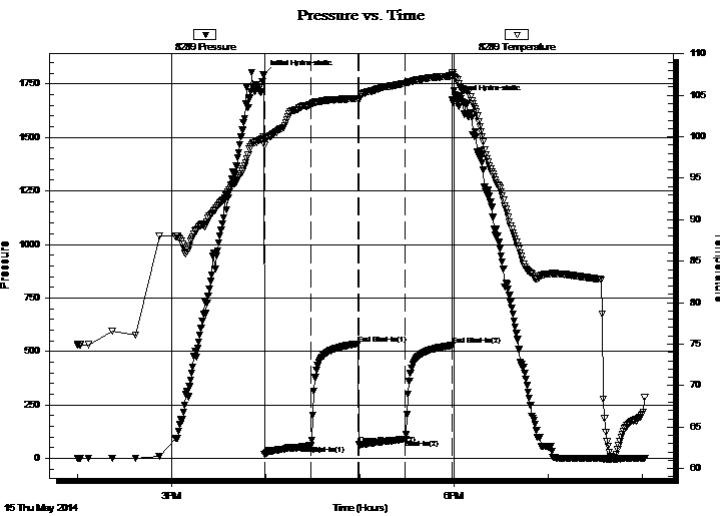
2 12s 21w Trego,KS
Kohl D #1
Job Ticket: 58864 **DST#: 2**
Test Start: 2014.05.15 @ 14:00:00

GENERAL INFORMATION:

Formation: **LKC " C - F "**
Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Reset)
Time Tool Opened: 15:59:00 Tester: Jim Svaty
Time Test Ended: 20:02:00 Unit No: 76
Interval: 3635.00 ft (KB) To 3700.00 ft (KB) (TVD) Reference Elevations: 2320.00 ft (KB)
Total Depth: 3700.00 ft (KB) (TVD) 2313.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 7.00 ft

Serial #: 8289 Outside
Press@RunDepth: 91.07 psig @ 3640.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2014.05.15 End Date: 2014.05.15 Last Calib.: 2014.05.15
Start Time: 14:00:02 End Time: 20:02:00 Time On Btm: 2014.05.15 @ 15:58:45
Time Off Btm: 2014.05.15 @ 17:59:00

TEST COMMENT: 30-IFP- Surface Blow Building to 8 3/4"
30-ISIP- No Blow
30-FFP- Surface Blow Building to 7"
30-FSIP- No Blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1794.57	100.05	Initial Hydro-static
1	18.02	99.00	Open To Flow (1)
30	59.62	103.91	Shut-In(1)
60	535.89	104.62	End Shut-In(1)
61	65.04	104.47	Open To Flow (2)
91	91.07	106.44	Shut-In(2)
120	527.86	107.32	End Shut-In(2)
121	1674.85	107.76	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
125.00	OSMCW 30% m 70% w	1.47
35.00	OSM 100%	0.49
1.00	CO 100%	0.01

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dreiling Oil Inc
PO Box 550
Hays KS 67601-2431
ATTN: Roger Fisher

2 12s 21w Trego,KS
Kohl D #1
Job Ticket: 58864 **DST#: 2**
Test Start: 2014.05.15 @ 14:00:00

Tool Information

Drill Pipe:	Length: 3594.00 ft	Diameter: 3.80 inches	Volume: 50.41 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 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:	55000.00 lb
			<u>Total Volume: 50.56 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial	52000.00 lb
Depth to Top Packer:	3635.00 ft			Final	53000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	65.00 ft				
Tool Length:	86.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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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	21.00 Bottom Of Top Packer
Packer	5.00			3635.00	
Stubb	1.00			3636.00	
Perforations	3.00			3639.00	
Change Over Sub	1.00			3640.00	
Recorder	0.00	8789	Inside	3640.00	
Recorder	0.00	8289	Outside	3640.00	
Blank Spacing	31.00			3671.00	
Change Over Sub	1.00			3672.00	
Perforations	25.00			3697.00	
Bullnose	3.00			3700.00	65.00 Bottom Packers & Anchor

Total Tool Length: 86.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dreiling Oil Inc
PO Box 550
Hays KS 67601-2431
ATTN: Roger Fisher

2 12s 21w Trego,KS
Kohl D #1
Job Ticket: 58864 **DST#: 2**
Test Start: 2014.05.15 @ 14:00:00

Mud and Cushion Information

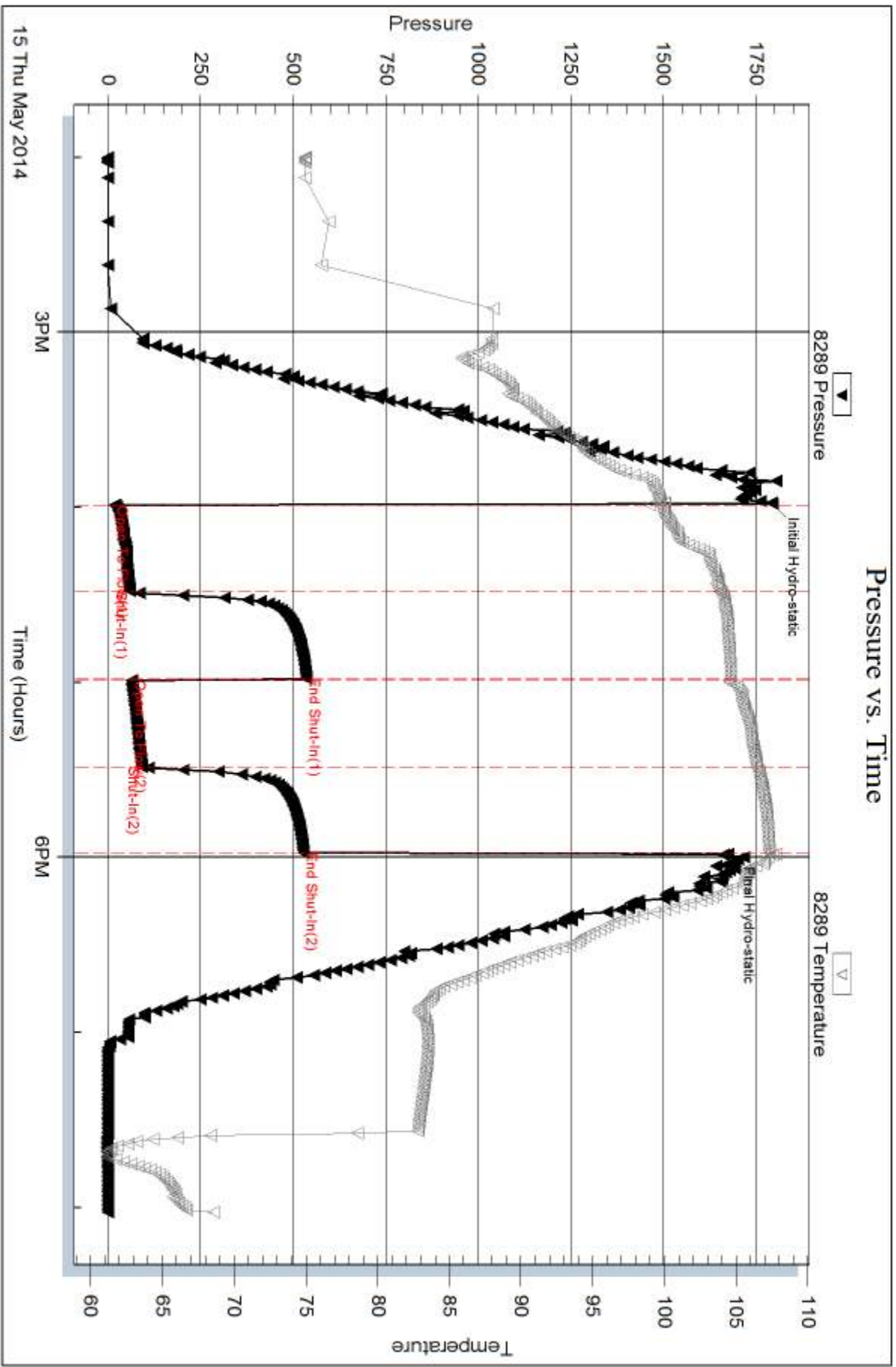
Mud Type: Gel Chem	Cushion Type:	Oil API: 28 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 27000 ppm
Viscosity: 66.00 sec/qt	Cushion Volume: bbl	
Water Loss: 9.12 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 45000.00 ppm		
Filter Cake: 1.00 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
125.00	OSMCW 30%m 70%w	1.471
35.00	OSM 100%	0.491
1.00	CO 100%	0.014

Total Length: 161.00 ft Total Volume: 1.976 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: 0.27 @ 67



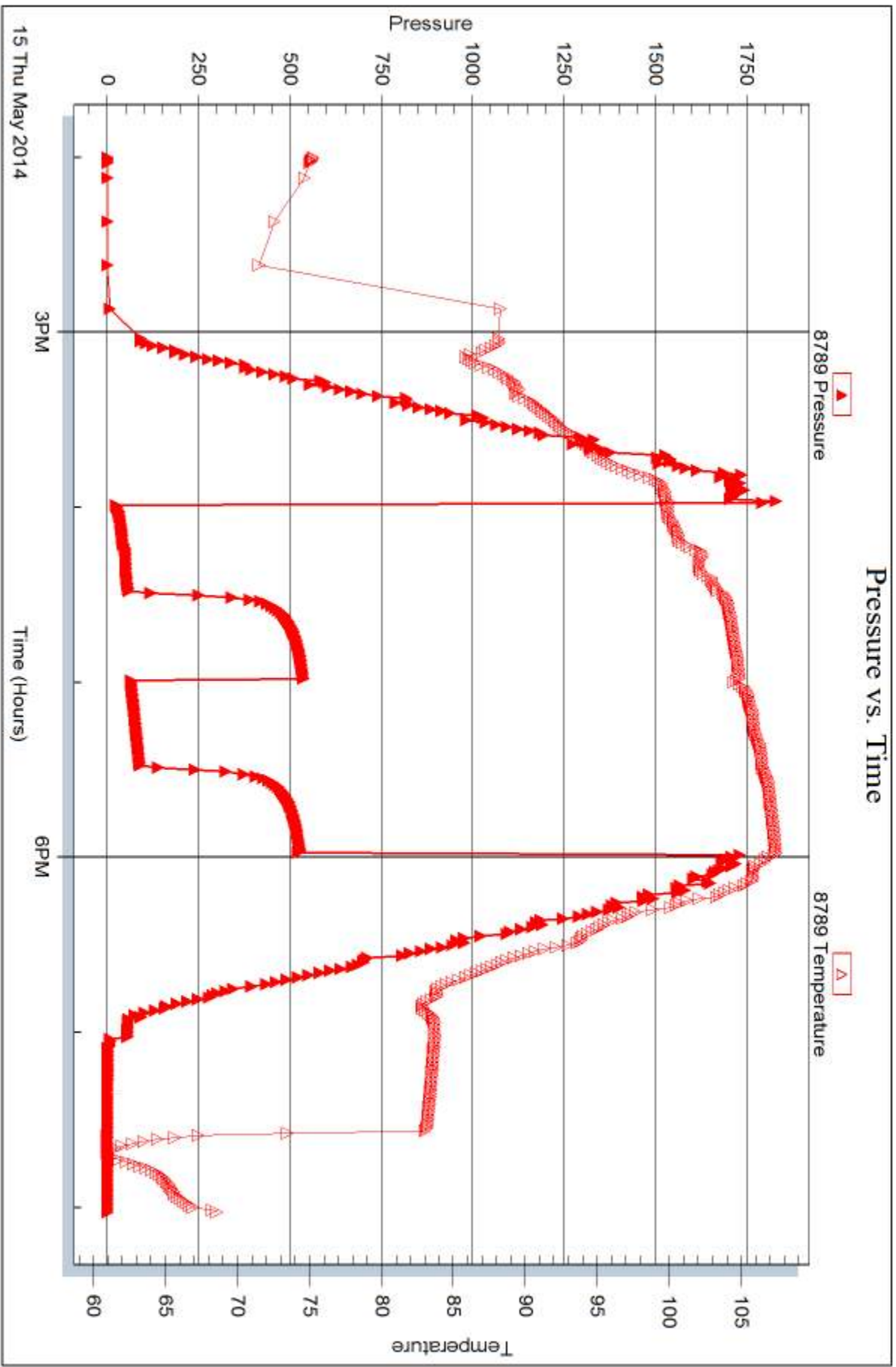
Serial #: 8789

Inside

Dreiling Oil Inc

Kohl D#1

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 58864

Printed: 2014.05.20 @ 15:41:34



DRILL STEM TEST REPORT

Prepared For: **Dreiling Oil Inc**

PO Box 550
Hays KS 67601-2431

ATTN: Roger Fisher

Kohl D #1

2 12s 21w Trego,KS

Start Date: 2014.05.16 @ 07:15:00

End Date: 2014.05.16 @ 14:00:00

Job Ticket #: 58865 DST #: 3

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

Printed: 2014.05.20 @ 15:41:10

Dreiling Oil Inc
2 12s 21w Trego,KS
Kohl D #1
DST # 3
LKC " I - J "
2014.05.16



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Dreiling Oil Inc
PO Box 550
Hays KS 67601-2431
ATTN: Roger Fisher

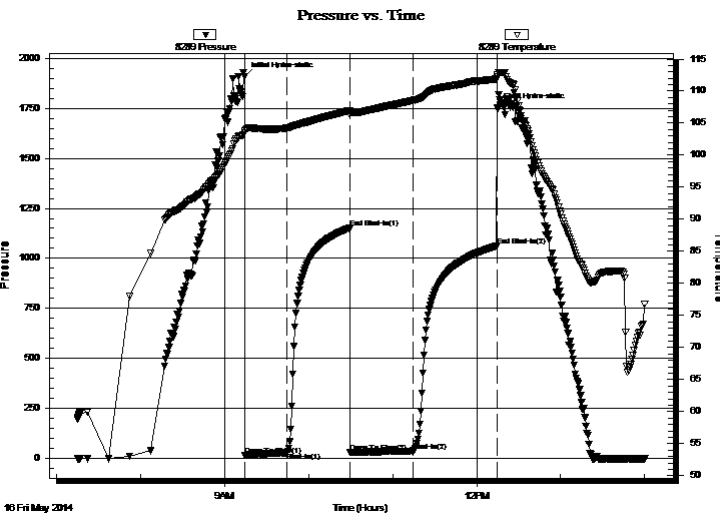
2 12s 21w Trego,KS
Kohl D #1
Job Ticket: 58865 **DST#: 3**
Test Start: 2014.05.16 @ 07:15:00

GENERAL INFORMATION:

Formation: **LKC "I - J"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 09:14:30
Time Test Ended: 14:00:00
Interval: **3760.00 ft (KB) To 3795.00 ft (KB) (TVD)**
Total Depth: 3795.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Reference Elevations: 2320.00 ft (KB)
2313.00 ft (CF)
KB to GR/CF: 7.00 ft
Test Type: Conventional Bottom Hole (Reset)
Tester: Jim Svaty
Unit No: 76

Serial #: 8289 Outside
Press@RunDepth: 38.51 psig @ 3767.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2014.05.16 End Date: 2014.05.16 Last Calib.: 2014.05.16
Start Time: 07:15:02 End Time: 14:00:00 Time On Btm: 2014.05.16 @ 09:14:15
Time Off Btm: 2014.05.16 @ 12:14:30

TEST COMMENT: 30-IFP- Surface Blow Building to 2 1/4"
45-ISIP- No Blow
45-FFP- Surface Blow Building to 1 1/4"
60-FSIP- No Blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1908.38	103.81	Initial Hydro-static
1	17.17	103.49	Open To Flow (1)
31	30.75	104.21	Shut-In(1)
75	1150.52	106.95	End Shut-In(1)
76	32.90	106.30	Open To Flow (2)
121	38.51	108.52	Shut-In(2)
180	1061.35	111.87	End Shut-In(2)
181	1752.89	112.17	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
45.00	MCW 30% m 70% w	0.35

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dreiling Oil Inc
PO Box 550
Hays KS 67601-2431
ATTN: Roger Fisher

2 12s 21w Trego,KS
Kohl D #1
Job Ticket: 58865 **DST#: 3**
Test Start: 2014.05.16 @ 07:15:00

Tool Information

Drill Pipe:	Length: 3719.00 ft	Diameter: 3.80 inches	Volume: 52.17 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 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:	55000.00 lb
			<u>Total Volume: 52.32 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial	52000.00 lb
Depth to Top Packer:	3760.00 ft			Final	52000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	35.00 ft				
Tool Length:	56.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3740.00	
Shut In Tool	5.00			3745.00	
Hydraulic tool	5.00			3750.00	
Packer	5.00			3755.00	21.00 Bottom Of Top Packer
Packer	5.00			3760.00	
Stubb	1.00			3761.00	
Perforations	6.00			3767.00	
Recorder	0.00	8789	Inside	3767.00	
Recorder	0.00	8289	Outside	3767.00	
Perforations	25.00			3792.00	
Bullnose	3.00			3795.00	35.00 Bottom Packers & Anchor

Total Tool Length: 56.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dreiling Oil Inc
PO Box 550
Hays KS 67601-2431
ATTN: Roger Fisher

2 12s 21w Trego,KS
Kohl D #1
Job Ticket: 58865 **DST#: 3**
Test Start: 2014.05.16 @ 07:15:00

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: 54.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.94 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4000.00 ppm			
Filter Cake: 1.50 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
45.00	MCW 30%m 70%w	0.349

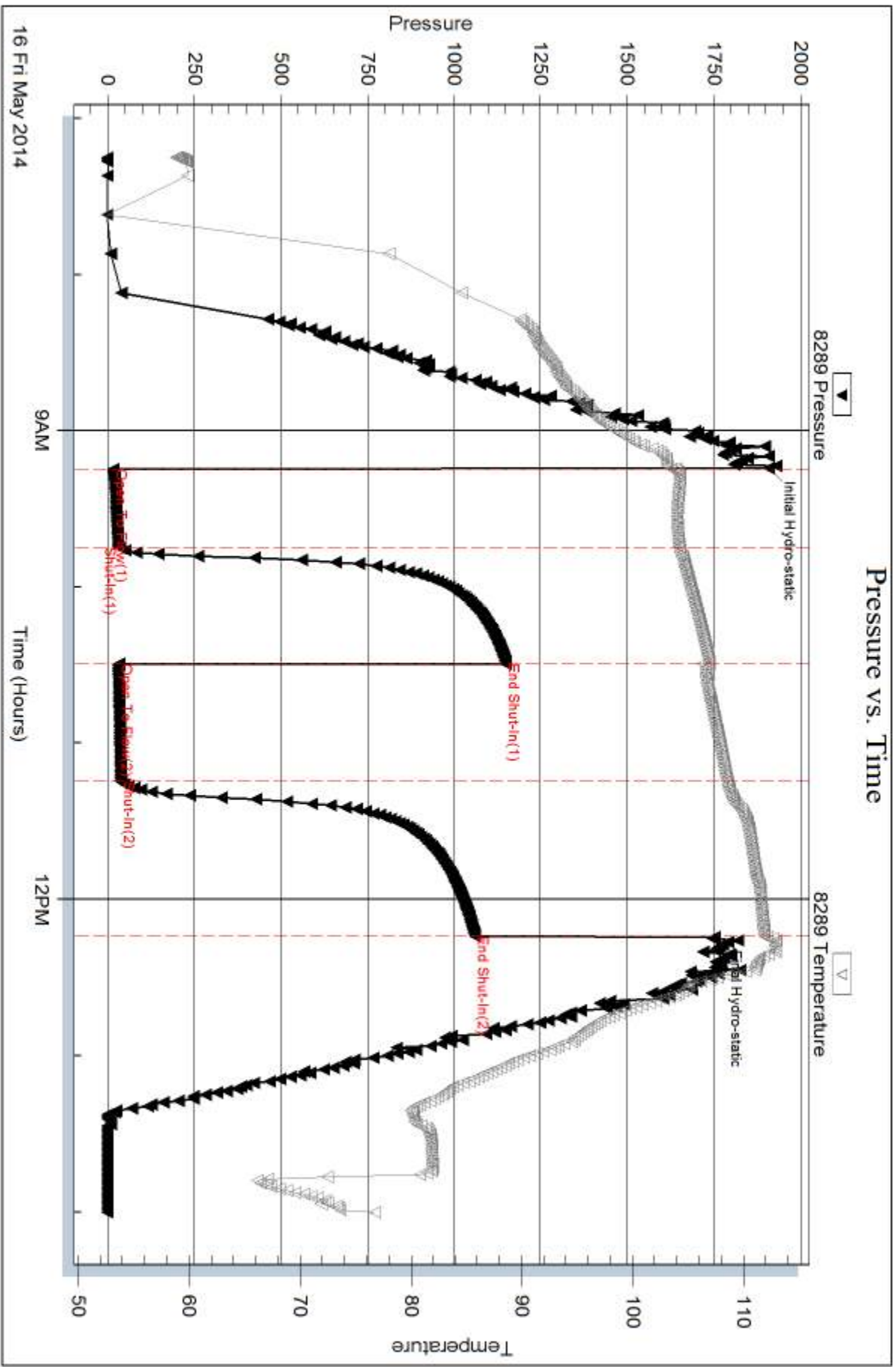
Total Length: 45.00 ft Total Volume: 0.349 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8289

Outside Drilling Oil Inc

Kohl D#1

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 58865

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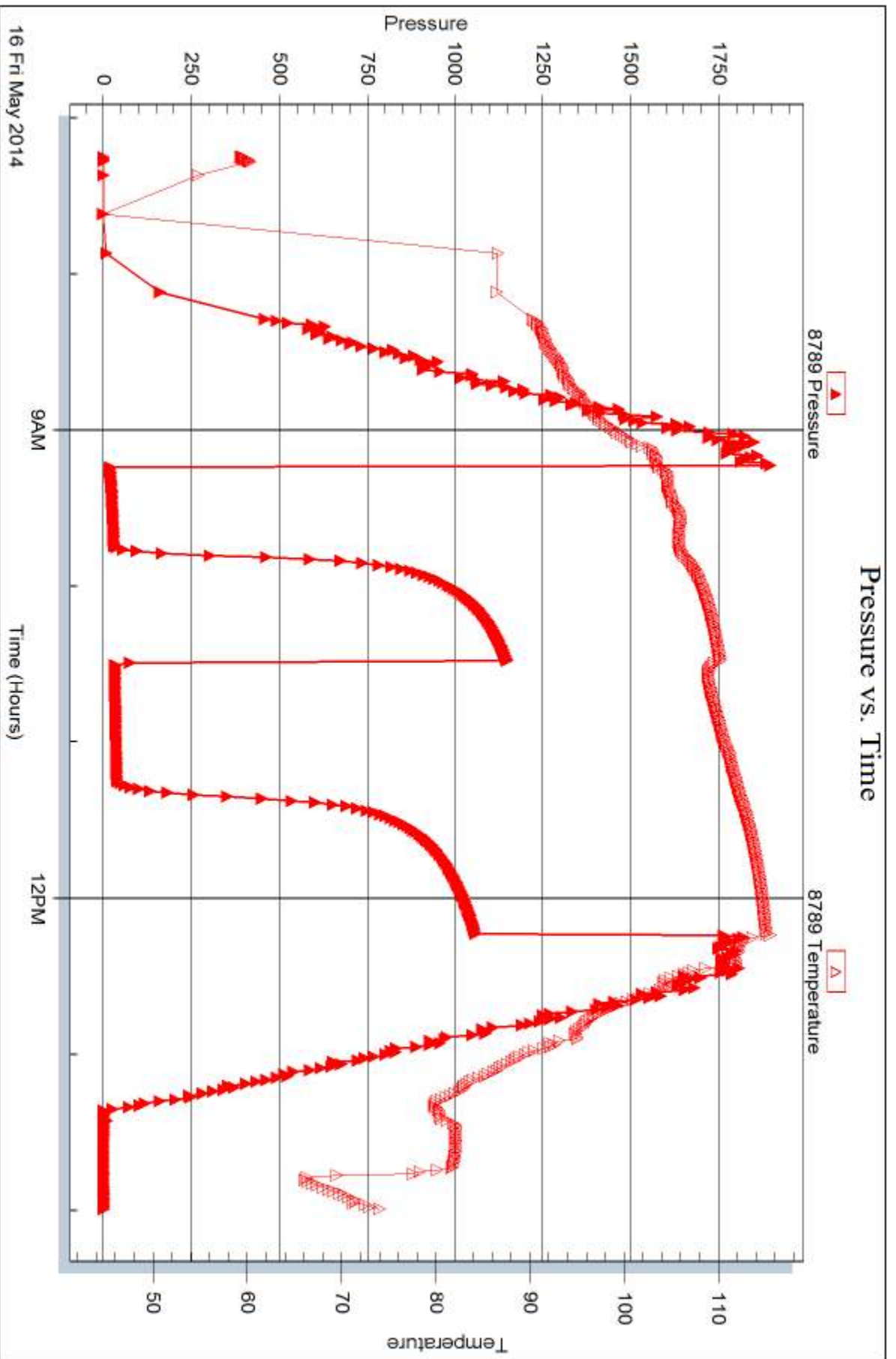
Serial #: 8789

Inside

Dreiling Oil Inc

Kohl D#1

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 58865

Printed: 2014.05.20 @ 15:41:11



DRILL STEM TEST REPORT

Prepared For: **Dreiling Oil Inc**

PO Box 550
Hays KS 67601-2431

ATTN: Roger Fisher

Kohl D #1

2 12s 21w Trego,KS

Start Date: 2014.05.17 @ 04:48:00

End Date: 2014.05.17 @ 11:35:00

Job Ticket #: 58866 DST #: 4

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

Printed: 2014.05.20 @ 15:40:34



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Dreiling Oil Inc
 PO Box 550
 Hays KS 67601-2431
 ATTN: Roger Fisher

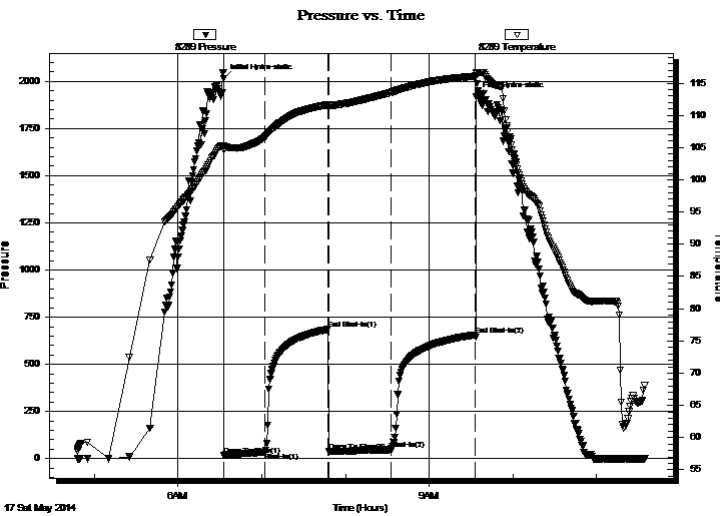
2 12s 21w Trego,KS
Kohl D #1
 Job Ticket: 58866 **DST#: 4**
 Test Start: 2014.05.17 @ 04:48:00

GENERAL INFORMATION:

Formation: **Marmaton**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 06:33:00
 Time Test Ended: 11:35:00
 Interval: **3908.00 ft (KB) To 3930.00 ft (KB) (TVD)**
 Total Depth: 3930.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Jim Svaty
 Unit No: 76
 Reference Elevations: 2320.00 ft (KB)
 2313.00 ft (CF)
 KB to GR/CF: 7.00 ft

Serial #: 8289 Outside
 Press@RunDepth: 47.39 psig @ 3912.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.05.17 End Date: 2014.05.17 Last Calib.: 2014.05.17
 Start Time: 04:48:02 End Time: 11:35:00 Time On Btm: 2014.05.17 @ 06:32:45
 Time Off Btm: 2014.05.17 @ 09:34:00

TEST COMMENT: 30-IFP- Surface Blow Building to 4 1/4"
 45-ISIP- No Blow
 45-FFP- Surface Blow Building to 3"
 60-FSIP- No Blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2013.33	105.30	Initial Hydro-static
1	16.51	104.68	Open To Flow (1)
30	34.18	106.66	Shut-In(1)
75	685.53	111.64	End Shut-In(1)
76	37.58	111.43	Open To Flow (2)
120	47.39	113.52	Shut-In(2)
181	656.72	116.08	End Shut-In(2)
182	1918.35	116.62	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
75.00	OMCW 10%o 20%m 70%w	0.77
8.00	CO 100%	0.11

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dreiling Oil Inc
 PO Box 550
 Hays KS 67601-2431
 ATTN: Roger Fisher

2 12s 21w Trego,KS
Kohl D #1
 Job Ticket: 58866 **DST#: 4**
 Test Start: 2014.05.17 @ 04:48:00

Tool Information

Drill Pipe:	Length: 3877.00 ft	Diameter: 3.80 inches	Volume: 54.38 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 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:	53000.00 lb
			<u>Total Volume: 54.53 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial	51000.00 lb
Depth to Top Packer:	3908.00 ft			Final	51000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	22.00 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
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Change Over Sub	1.00			3888.00	
Shut In Tool	5.00			3893.00	
Hydraulic tool	5.00			3898.00	
Packer	5.00			3903.00	21.00 Bottom Of Top Packer
Packer	5.00			3908.00	
Stubb	1.00			3909.00	
Perforations	3.00			3912.00	
Recorder	0.00	8789	Inside	3912.00	
Recorder	0.00	8289	Outside	3912.00	
Perforations	15.00			3927.00	
Bullnose	3.00			3930.00	22.00 Bottom Packers & Anchor

Total Tool Length: 43.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dreiling Oil Inc
PO Box 550
Hays KS 67601-2431
ATTN: Roger Fisher

2 12s 21w Trego,KS
Kohl D #1
Job Ticket: 58866 **DST#: 4**
Test Start: 2014.05.17 @ 04:48:00

Mud and Cushion Information

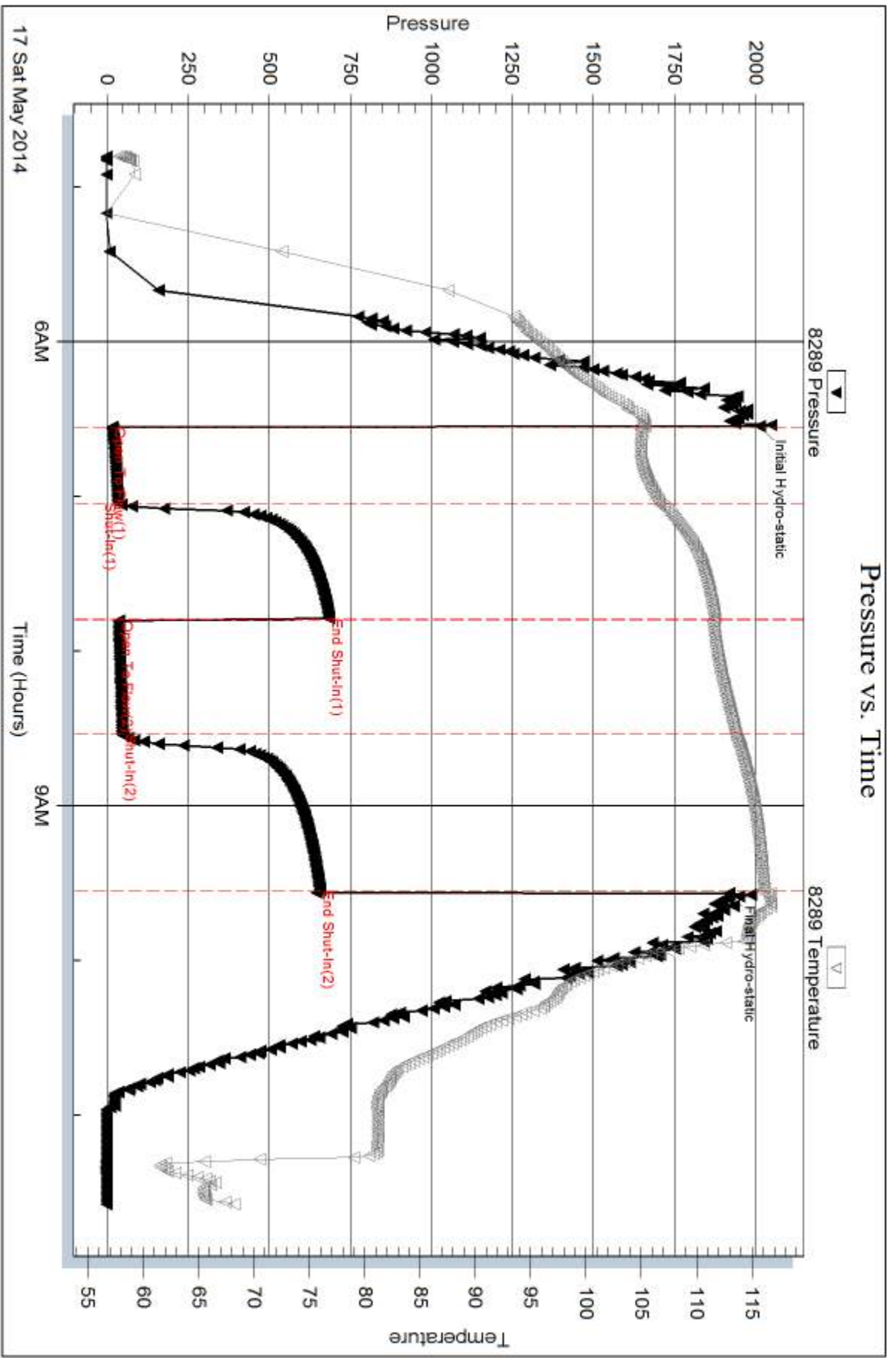
Mud Type: Gel Chem	Cushion Type:	Oil API: 34 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 20000 ppm
Viscosity: 54.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.95 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 4000.00 ppm		
Filter Cake: 1.50 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
75.00	OMCW 10%o 20%m 70%w	0.770
8.00	CO 100%	0.112

Total Length: 83.00 ft Total Volume: 0.882 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: .372 @ 64



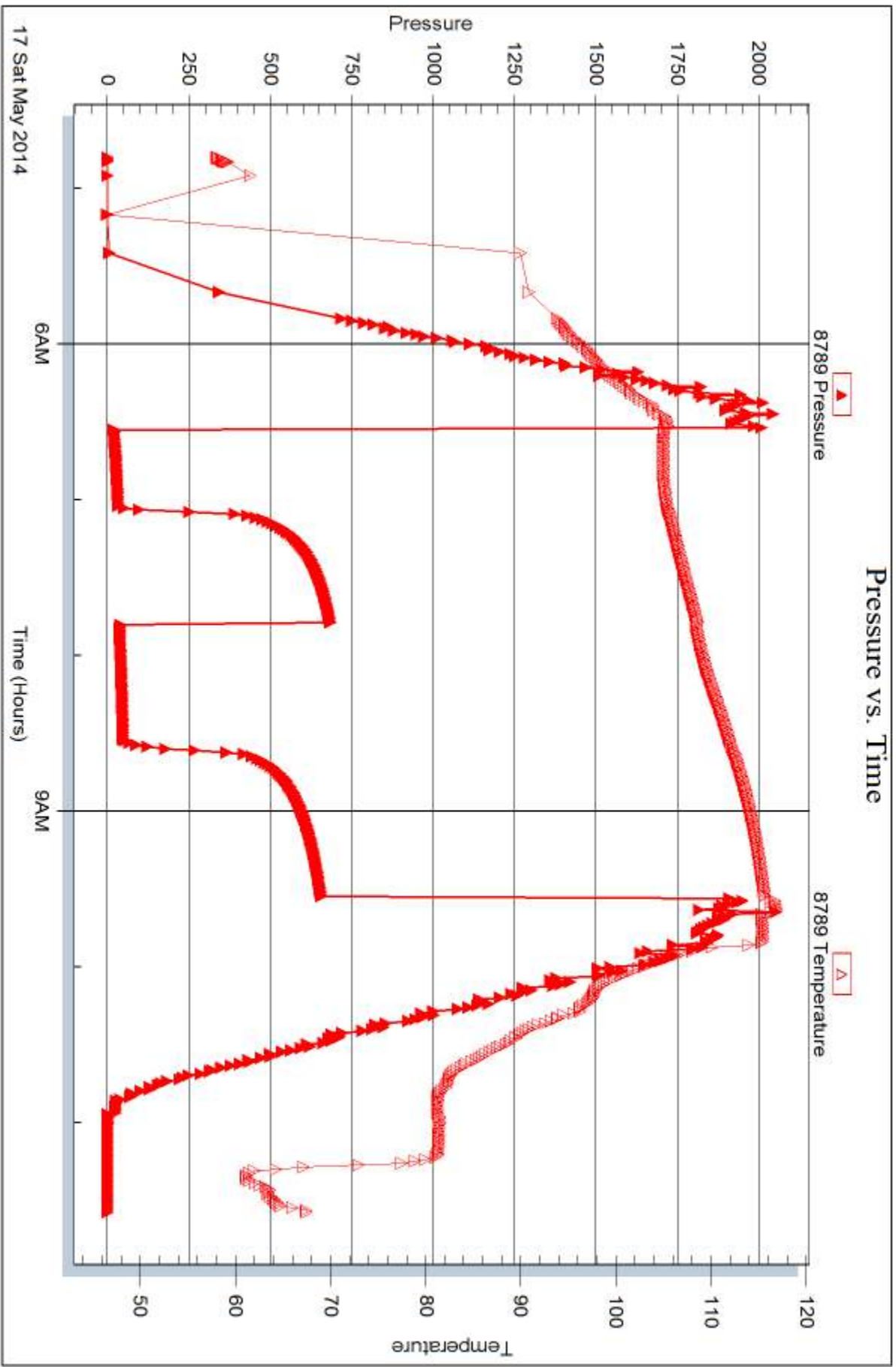
Serial #: 8789

Inside

Dreiling Oil Inc

Kohl D#1

DST Test Number: 4



Trilobite Testing, Inc

Ref. No: 58866

Printed: 2014.05.20 @ 15:40:35



DRILL STEM TEST REPORT

Prepared For: **Dreiling Oil Inc**

PO Box 550
Hays KS 67601-2431

ATTN: Roger Fisher

Kohl D #1

2 12s 21w Trego,KS

Start Date: 2014.05.17 @ 23:33:00

End Date: 2014.05.18 @ 06:26:00

Job Ticket #: 58867 DST #: 5

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

Printed: 2014.05.20 @ 15:40:03



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Dreiling Oil Inc
PO Box 550
Hays KS 67601-2431
ATTN: Roger Fisher

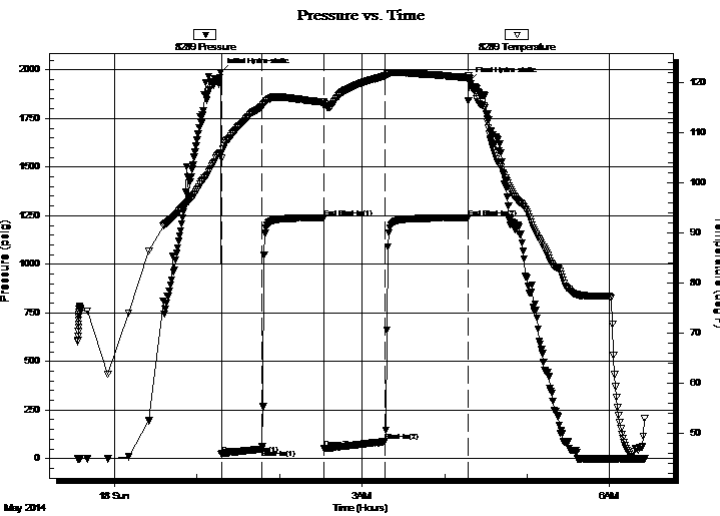
2 12s 21w Trego,KS
Kohl D #1
Job Ticket: 58867 **DST#: 5**
Test Start: 2014.05.17 @ 23:33:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 01:17:30
Time Test Ended: 06:26:00
Interval: **3996.00 ft (KB) To 4016.00 ft (KB) (TVD)**
Total Depth: 4016.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Reference Elevations: 2320.00 ft (KB)
2313.00 ft (CF)
KB to GR/CF: 7.00 ft
Test Type: Conventional Bottom Hole (Reset)
Tester: Jim Svaty
Unit No: 76

Serial #: 8289 Outside
Press@RunDepth: 88.70 psig @ 3998.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2014.05.17 End Date: 2014.05.18 Last Calib.: 2014.05.18
Start Time: 23:33:02 End Time: 06:26:00 Time On Btm: 2014.05.18 @ 01:17:15
Time Off Btm: 2014.05.18 @ 04:17:45

TEST COMMENT: 30-IFP- BOB in 30 min.
45-ISIP- Surface Blow in 3 min. Died in 15 min.
45-FFP- BOB in 26 min.
60-FSIP- Surface Blow in 2 min. Building to 1/2"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1987.59	105.97	Initial Hydro-static
1	23.34	104.83	Open To Flow (1)
30	49.47	115.06	Shut-In(1)
75	1239.64	116.00	End Shut-In(1)
75	53.54	115.32	Open To Flow (2)
120	88.70	121.26	Shut-In(2)
180	1239.43	120.93	End Shut-In(2)
181	1941.11	120.93	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
70.00	OCM 50%o 50%m	0.70
126.00	CO 100%	1.77
0.00	219 GIP	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

Dreiling Oil Inc
PO Box 550
Hays KS 67601-2431
ATTN: Roger Fisher

2 12s 21w Trego,KS
Kohl D #1
Job Ticket: 58867 **DST#: 5**
Test Start: 2014.05.17 @ 23:33:00

Tool Information

Drill Pipe:	Length: 3970.00 ft	Diameter: 3.80 inches	Volume: 55.69 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 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:	57000.00 lb
			<u>Total Volume: 55.84 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial	52000.00 lb
Depth to Top Packer:	3996.00 ft			Final	53000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	20.00 ft				
Tool Length:	41.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3976.00	
Shut In Tool	5.00			3981.00	
Hydraulic tool	5.00			3986.00	
Packer	5.00			3991.00	21.00 Bottom Of Top Packer
Packer	5.00			3996.00	
Stubb	1.00			3997.00	
Perforations	1.00			3998.00	
Recorder	0.00	8789	Inside	3998.00	
Recorder	0.00	8289	Outside	3998.00	
Perforations	15.00			4013.00	
Bullnose	3.00			4016.00	20.00 Bottom Packers & Anchor

Total Tool Length: 41.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dreiling Oil Inc
PO Box 550
Hays KS 67601-2431
ATTN: Roger Fisher

2 12s 21w Trego,KS
Kohl D #1
Job Ticket: 58867 **DST#: 5**
Test Start: 2014.05.17 @ 23:33:00

Mud and Cushion Information

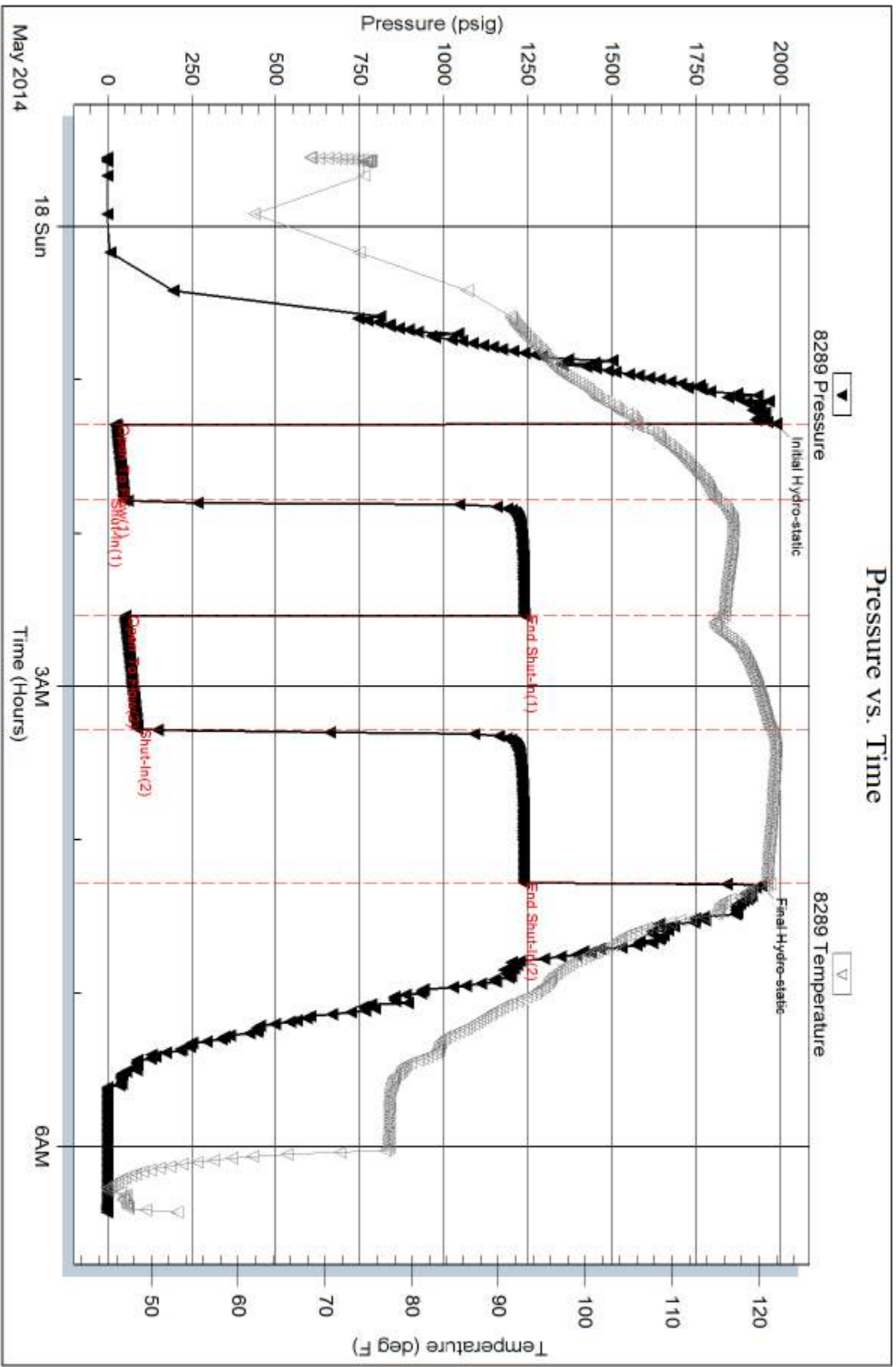
Mud Type: Gel Chem	Cushion Type:	Oil API: 34 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 50.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.98 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 6000.00 ppm		
Filter Cake: 0.50 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
70.00	OCM 50%o 50%m	0.700
126.00	CO 100%	1.767
0.00	219 GIP	0.000

Total Length: 196.00 ft Total Volume: 2.467 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:



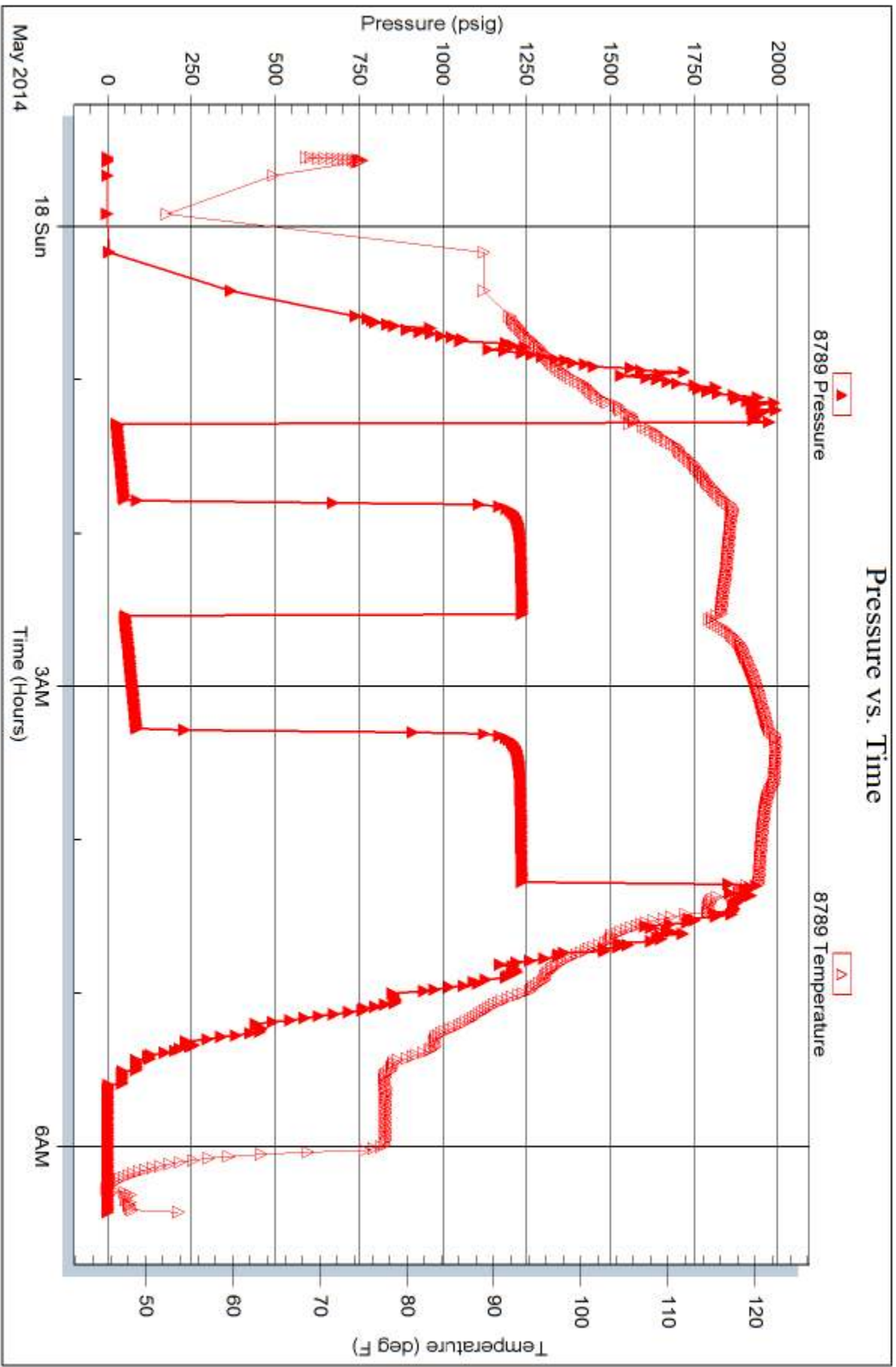
Serial #: 8789

Inside

Dreiling Oil Inc

Kohl D#1

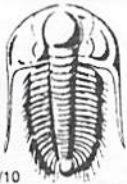
DST Test Number: 5



Trilobite Testing, Inc

Ref. No: 58867

Printed: 2014.05.20 @ 15:40:04



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 58863

Well Name & No. Kohl D #1 Test No. 1 Date 5-14-14
 Company Drilling Oil Inc. Elevation 2320 KB 2313 GL
 Address P.O. Box 550 Hays KS 67601-2431
 Co. Rep / Geo. Roger Fisher 316-214-2043 Rig Discovery #4
 Location: Sec. 02 Twp. 12^s Rge. 21^w Co. Trego State KS

Interval Tested 3573-3620 Zone Tested Toronto - LKC "A"
 Anchor Length 47 Drill Pipe Run 3531 Mud Wt. 8.6
 Top Packer Depth 3568 Drill Collars Run 31 Vis 60
 Bottom Packer Depth 3573 Wt. Pipe Run 0 WL 8.8
 Total Depth 3620 Chlorides 3500 ppm System LCM 2

Blow Description IFP - Surface Blow Building to lin.
ISIP - No Blow
FFP - No Blow
FSIP - No Blow

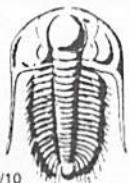
Rec	Feet of	%gas	%oil	%water	%mud
<u>25</u>	<u>05m</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 25 BHT 106 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic _____ Test 1150 T-On Location 19:55
 (B) First Initial Flow _____ Jars _____ T-Started 21:51
 (C) First Final Flow _____ Safety Joint _____ T-Open 23:47
 (D) Initial Shut-In _____ Circ Sub _____ T-Pulled 02:17
 (E) Second Initial Flow _____ Hourly Standby _____ T-Out 03:50
 (F) Second Final Flow _____ Mileage RT 55 85.25 Comments _____
 (G) Final Shut-In _____ Sampler _____
 (H) Final Hydrostatic _____ Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____

Initial Open 30
 Initial Shut-In 45
 Final Flow 30
 Final Shut-In 45
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1235.25
 Sub Total 1235.25
 Sub Total 0
 Total 1235.25
 MP/DST Disc't _____

Approved By _____ Our Representative [Signature]
 Trilobite Testing Inc. shall not be liable for damaged or lost 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.
7856395814



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 58864

Well Name & No. Kohl D #1 Test No. 2 Date 5-15-14
 Company Dreiling Oil Inc. Elevation 2320 KB 2313 GL
 Address P.O. Box 550 Hays KS 67601-2431
 Co. Rep / Geo. Roger Fisher Rig Discovery #4
 Location: Sec. 2 Twp. 12^s Rge. 21^w Co. Trego State KS

Interval Tested 3635-3700 Zone Tested LKC "C-F"
 Anchor Length 65 Drill Pipe Run 3594 Mud Wt. 9.1
 Top Packer Depth 3600 Drill Collars Run 31 Vis 66
 Bottom Packer Depth 3635 Wt. Pipe Run 0 WL 9.2
 Total Depth 3700 Chlorides 4500 ppm System LCM 1

Blow Description IFP - Surface Blow Building to 8 3/4 in.
ISIP - No Blow
FFP - Surface Blow Building to 7 in.
FSIP - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>125</u>	<u>OSMCW</u>			<u>70</u>	<u>30</u>
<u>35</u>	<u>OSM</u>			<u>100</u>	
<u>1</u>	<u>CO</u>	<u>100</u>			

Rec Total 161 BHT 107 Gravity 28 API RW 0.27 @ 67 °F Chlorides 27000 ppm

(A) Initial Hydrostatic 1794 Test 1150 T-On Location 12:59
 (B) First Initial Flow 18 Jars _____ T-Started 14:00
 (C) First Final Flow 59 Safety Joint _____ T-Open 15:59
 (D) Initial Shut-In 535 Circ Sub _____ T-Pulled 17:59
 (E) Second Initial Flow 65 Hourly Standby _____ T-Out 20:02
 (F) Second Final Flow 91 Mileage 85.25 Comments _____
 (G) Final Shut-In 527 Sampler _____
 (H) Final Hydrostatic 1674 Straddle _____ Ruined Shale Packer _____

Initial Open 30 Shale Packer _____ Ruined Packer _____
 Initial Shut-In 30 Extra Packer _____ Extra Copies _____
 Final Flow 30 Extra Recorder _____ Sub Total 0
 Final Shut-In 30 Day Standby _____ Total 1235.25
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1235.25

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. 58865

Well Name & No. Kohl D #1 Test No. 3 Date 5-16-14
 Company Dreiling Oil Inc. Elevation 2320 KB 2313 GL
 Address P.O. Box 550 HAYS KS 67601-2431
 Co. Rep / Geo. Roger Fisher Rig Discovery #4
 Location: Sec. 2 Twp. 12^s Rge. 21^w Co. Trego State KS

Interval Tested 3760-3795 Zone Tested LKC "I+J"
 Anchor Length 35 Drill Pipe Run 3719 Mud Wt. 9.0
 Top Packer Depth 3755 Drill Collars Run 31 Vis 54
 Bottom Packer Depth 3760 Wt. Pipe Run 0 WL 8
 Total Depth 3798 Chlorides 4000 ppm System LCM 1 1/2

Blow Description IFP - Surface Blow Building to 2 1/4 in
ISIP - No Blow
FFP - Surface Blow Building to 1 1/4 in.
FSIP No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>45</u>	<u>mcw</u>		<u>70</u>	<u>30</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 45 BHT 112 Gravity _____ API RW .360 @ 68 °F Chlorides 19000 ppm

(A) Initial Hydrostatic 1908 Test 1150 T-On Location 7:00
 (B) First Initial Flow 17 Jars _____ T-Started 7:15
 (C) First Final Flow 30 Safety Joint _____ T-Open 9:15
 (D) Initial Shut-In 1150 Circ Sub _____ T-Pulled 12:15
 (E) Second Initial Flow 32 Hourly Standby _____ T-Out 14:00
 (F) Second Final Flow 38 Mileage 85.25 Comments _____
 (G) Final Shut-In 1060 Sampler _____
 (H) Final Hydrostatic 1752 Straddle _____ Ruined Shale Packer _____

Initial Open 30 Shale Packer _____ Ruined Packer _____
 Initial Shut-In 45 Extra Packer _____ Extra Copies _____
 Final Flow 45 Extra Recorder _____ Sub Total 0
 Final Shut-In 60 Day Standby _____ Total 1235.25
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1235.25

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 58866

4/10

Well Name & No. Kohl D #1 Test No. 4 Date 5-17-14
 Company Dreiling Oil Inc. Elevation 2320 KB 2313 GL
 Address P.O. Box 550 Hays KS 67601-2431
 Co. Rep / Geo. Roger Fisher Rig Discovery #4
 Location: Sec. 2 Twp. 12^S Rge. 21^W Co. Trego State KS

Interval Tested 3908-3930 Zone Tested Marmaton
 Anchor Length 22 Drill Pipe Run 3877 Mud Wt. 9.0
 Top Packer Depth 3903 Drill Collars Run 31 Vis 54
 Bottom Packer Depth 3908 Wt. Pipe Run 0 WL 8.0
 Total Depth 3930 Chlorides 4000 ppm System LCM 1/2

Blow Description IFP - Surface Blow Building to 4 1/4 in.
ISIP - No Blow
FFP - Surface Blow Building to 3 in.
FSIP - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>75</u>	<u>0MCCW</u>	<u>10</u>	<u>70</u>	<u>20</u>	
<u>8</u>	<u>CO</u>	<u>100</u>			

Rec Total 83 BHT 116 Gravity 34 API RW .372 @ 64 °F Chlorides 20000 ppm

(A) Initial Hydrostatic 2013 Test 1150 T-On Location 4:02
 (B) First Initial Flow 16 Jars _____ T-Started 4:48
 (C) First Final Flow 34 Safety Joint _____ T-Open 6:33
 (D) Initial Shut-In 685 Circ Sub _____ T-Pulled 9:33
 (E) Second Initial Flow 37 Hourly Standby _____ T-Out 11:35
 (F) Second Final Flow 47 Mileage 85.25 Comments _____
 (G) Final Shut-In 656 Sampler _____
 (H) Final Hydrostatic 1918 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____

Initial Open 30
 Initial Shut-In 45
 Final Flow 45
 Final Shut-In 60
 Sub Total 1235.25
 Total 1235.25
 MP/DST Disc't _____

Approved By _____ Our Representative Jan Paby

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 58867

Well Name & No. Kohl D #1 Test No. 5 Date 5-17-14
 Company Dreiling Oil Inc. Elevation 2320 KB 2313 GL
 Address P.O. Box 550 Hays KS 67601
 Co. Rep / Geo. Roger Fisher Rig Discovery #4
 Location: Sec. 2 Twp. 12^s Rge. 21^w Co. Trego State KS

Interval Tested 3996-4016 Zone Tested Arbuckle
 Anchor Length 20 Drill Pipe Run 3970 Mud Wt. 9.4
 Top Packer Depth 3991 Drill Collars Run 31 Vis 50
 Bottom Packer Depth 3996 Wt. Pipe Run 0 WL 8.0
 Total Depth 4016 Chlorides 6000 ppm System LCM 1/2

Blow Description IIP- BOB in 30 min.
ISIP- Surface Blow in 3 min. Died in 15 min.
FFP- BOB in 26 min
FSIP- Surface Blow in 2 min. Building to 1/2 in.

Rec	Feet of	%gas	%oil	%water	%mud
<u>70</u>	<u>MCO</u>	<u>50</u>		<u>50</u>	
<u>126</u>	<u>CO</u>	<u>100</u>			
	<u>219</u>				

Rec Total 196 BHT 121 Gravity 34 API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1987 Test 1250 T-On Location 22:25
 (B) First Initial Flow 23 Jars _____ T-Started 23:33
 (C) First Final Flow 49 Safety Joint _____ T-Open 01:17
 (D) Initial Shut-In 1239 Circ Sub _____ T-Pulled 04:17
 (E) Second Initial Flow 53 Hourly Standby _____ T-Out 06:26
 (F) Second Final Flow 88 Mileage 85.25 Comments _____
 (G) Final Shut-In 1239 Sampler _____
 (H) Final Hydrostatic 1941 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1335.25
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1335.25

Approved By _____ Our Representative [Signature]
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