



DRILL STEM TEST REPORT

Prepared For: **Dreiling Oil Inc**

1008 Cody Ave
Hays KS, 67601

ATTN: Terry Piesker

Kohl "A" 1-11

11-12s-21w Trego KS

Start Date: 2013.02.16 @ 04:20:00

End Date: 2013.02.16 @ 11:20:00

Job Ticket #: 51592 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.02.27 @ 10:08:10



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Dreiling Oil Inc

1008 Cody Ave
Hays KS, 67601

ATTN: Terry Piesker

11-12s-21w Trego KS

Kohl "A" 1-11

Job Ticket: 51592

DST#: 1

Test Start: 2013.02.16 @ 04:20:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:27:00

Time Test Ended: 11:20:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Cody Bloedorn

Unit No: 59

Interval: 3955.00 ft (KB) To 4050.00 ft (KB) (TVD)

Reference Elevations: 2352.00 ft (KB)

Total Depth: 4050.00 ft (KB) (TVD)

2346.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 6.00 ft

Serial #: 8319 Outside

Press @ Run Depth: 126.03 psig @ 4025.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.02.16

End Date: 2013.02.16

Last Calib.: 2013.02.16

Start Time: 04:20:05

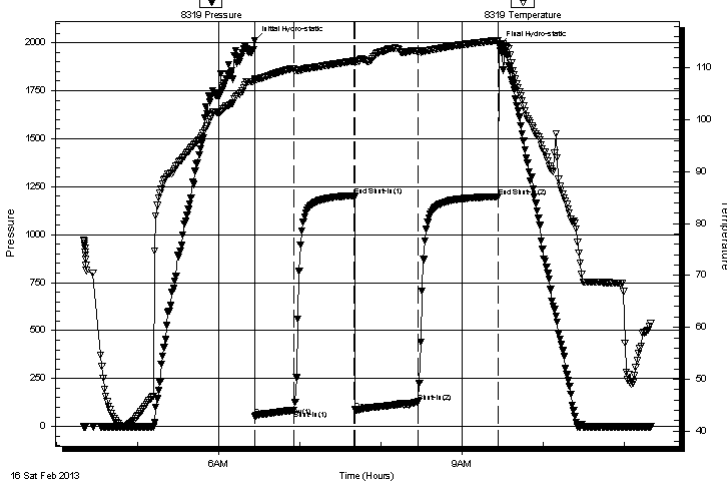
End Time: 11:19:59

Time On Btm: 2013.02.16 @ 06:26:30

Time Off Btm: 2013.02.16 @ 09:27:30

TEST COMMENT: 30 - IF- 7" blow .
45 - IS- No return.
45 - FF- 8" blow .
60 - FS- Surface return

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2012.03	107.84	Initial Hydro-static
1	52.90	107.51	Open To Flow (1)
29	85.83	109.79	Shut-In(1)
74	1203.58	111.31	End Shut-In(1)
75	86.46	111.09	Open To Flow (2)
121	126.03	113.13	Shut-In(2)
180	1197.07	115.28	End Shut-In(2)
181	1983.43	114.52	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	HOCM, 30%O, 70%M	1.46
62.00	GO, 50%G, 50%O	0.87
62.00	GO, 20%G, 80%O	0.87

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dreiling Oil Inc

11-12s-21w Trego KS

1008 Cody Ave
Hays KS, 67601

Kohl "A" 1-11

Job Ticket: 51592

DST#: 1

ATTN: Terry Piesker

Test Start: 2013.02.16 @ 04:20:00

Tool Information

Drill Pipe:	Length: 3925.00 ft	Diameter: 3.80 inches	Volume: 55.06 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 55.21 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 44000.00 lb
Depth to Top Packer:	3955.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	95.00 ft			
Tool Length:	116.00 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			3935.00	
Shut In Tool	5.00			3940.00	
Hydraulic tool	5.00			3945.00	
Packer	5.00			3950.00	21.00 Bottom Of Top Packer
Packer	5.00			3955.00	
Stubb	1.00			3956.00	
Perforations	5.00			3961.00	
Change Over Sub	1.00			3962.00	
Drill Pipe	62.00			4024.00	
Change Over Sub	1.00			4025.00	
Recorder	0.00	8166	Inside	4025.00	
Recorder	0.00	8319	Outside	4025.00	
Perforations	22.00			4047.00	
Bullnose	3.00			4050.00	95.00 Bottom Packers & Anchor

Total Tool Length: 116.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dreiling Oil Inc

11-12s-21w Trego KS

1008 Cody Ave
Hays KS, 67601

Kohl "A" 1-11

Job Ticket: 51592

DST#: 1

ATTN: Terry Piesker

Test Start: 2013.02.16 @ 04:20:00

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:

bbbl

Water Loss: 7.99 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
124.00	HOCM, 30%O, 70%M	1.457
62.00	GO, 50%G, 50%O	0.870
62.00	GO, 20%G, 80%O	0.870

Total Length: 248.00 ft Total Volume: 3.197 bbl

Num Fluid Samples: 0

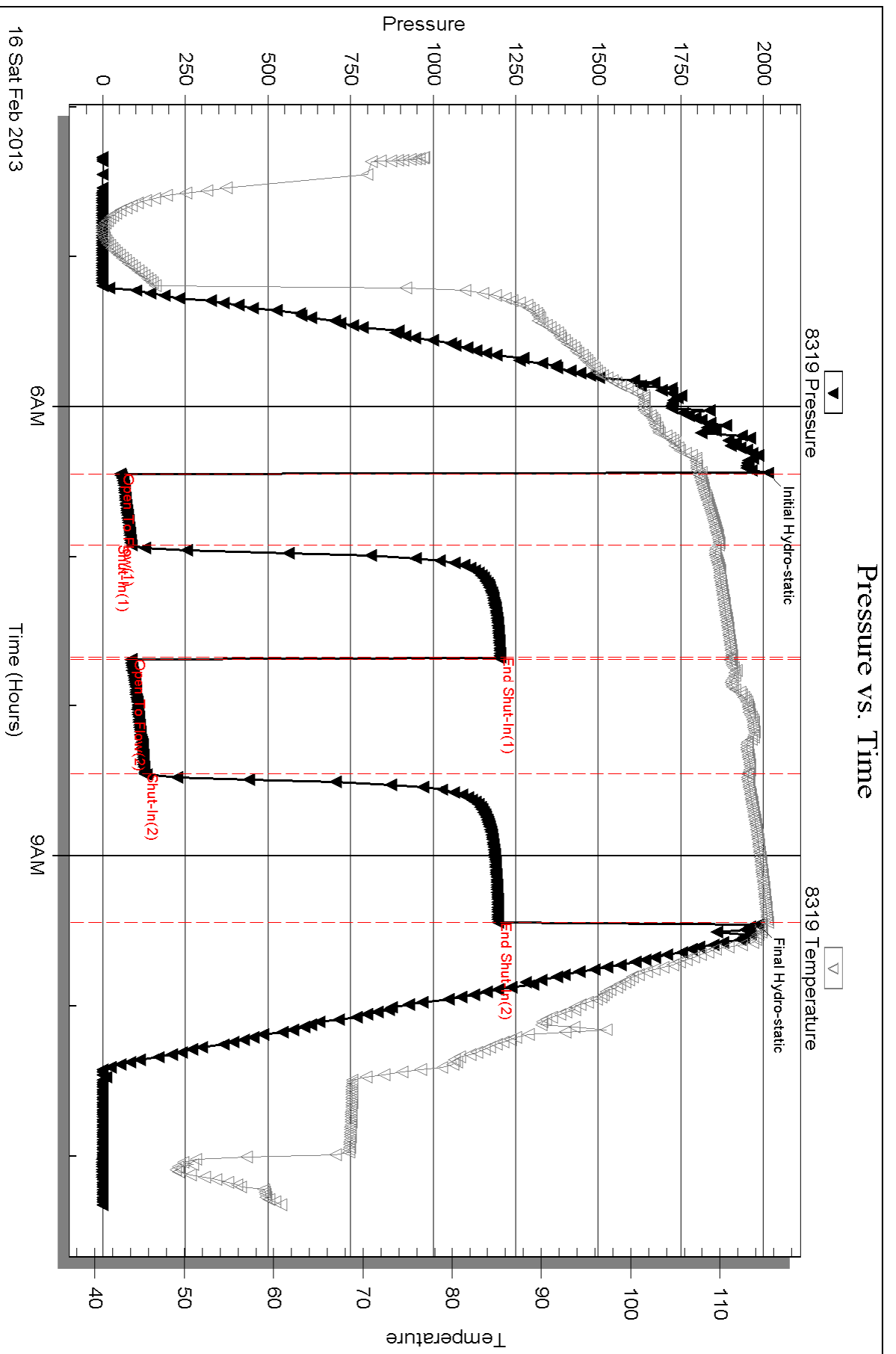
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



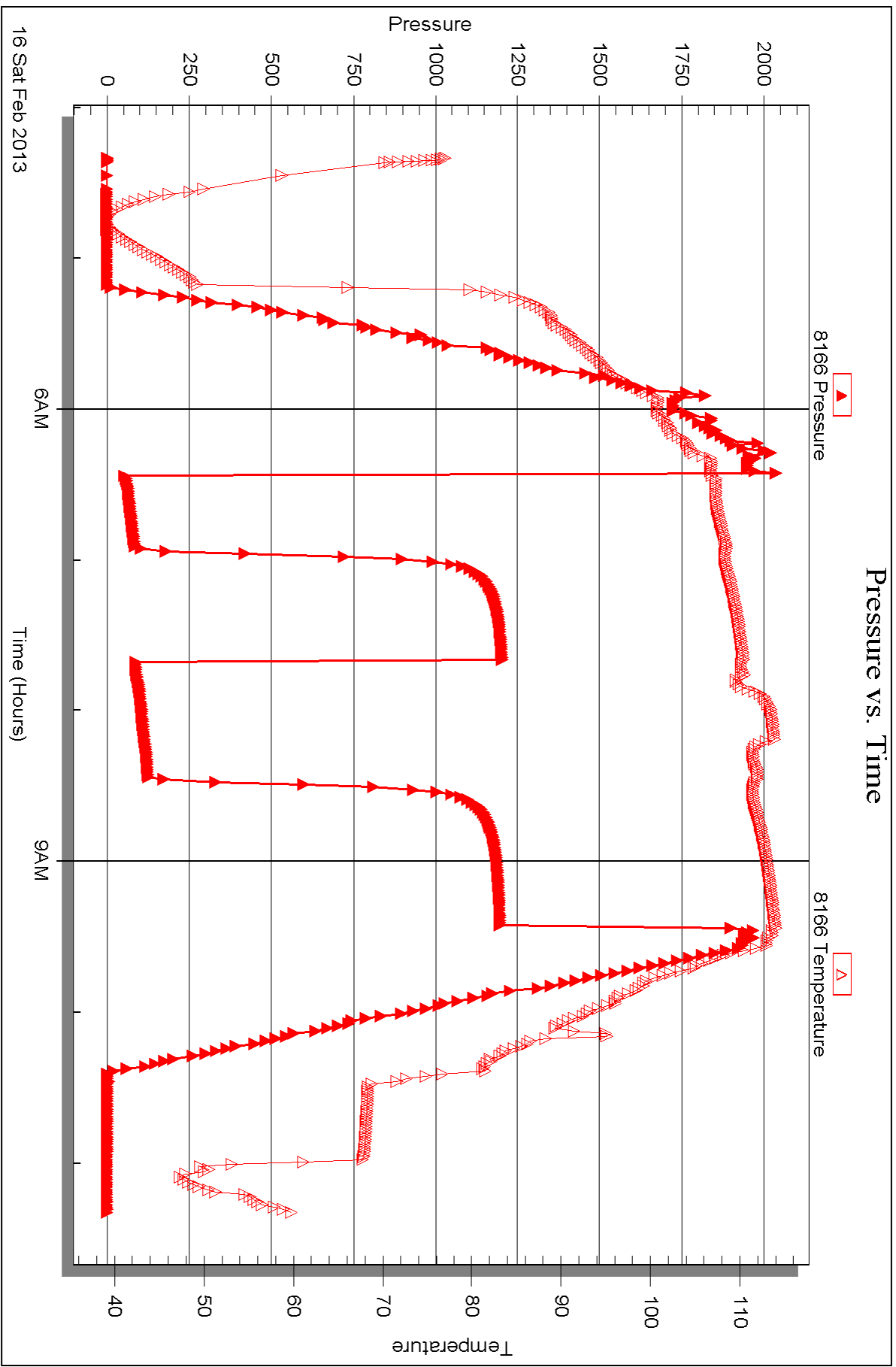
Serial #: 8166

Inside

Dreiling Oil Inc

Kohl "A" 1-11

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Dreiling Oil Inc**

1008 Cody Ave
Hays KS, 67601

ATTN: Terry Piesker

Kohl "A" 1-11

11-12s-21w Trego KS

Start Date: 2013.02.16 @ 18:50:00

End Date: 2013.02.17 @ 01:49:30

Job Ticket #: 51593 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.02.27 @ 10:07:31



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dreiling Oil Inc

1008 Cody Ave
Hays KS, 67601

ATTN: Terry Plesker

11-12s-21w Trego KS

Kohl "A" 1-11

Job Ticket: 51593

DST#: 2

Test Start: 2013.02.16 @ 18:50:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:01:30

Time Test Ended: 01:49:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Cody Bloedorn

Unit No: 59

Interval: 4056.00 ft (KB) To 4066.00 ft (KB) (TVD)

Reference Elevations: 2352.00 ft (KB)

Total Depth: 4066.00 ft (KB) (TVD)

2346.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 6.00 ft

Serial #: 8319 Outside

Press @ Run Depth: 264.33 psig @ 4057.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.02.16

End Date:

2013.02.17

Last Calib.:

2013.02.17

Start Time:

18:50:05

End Time:

01:49:29

Time On Btm:

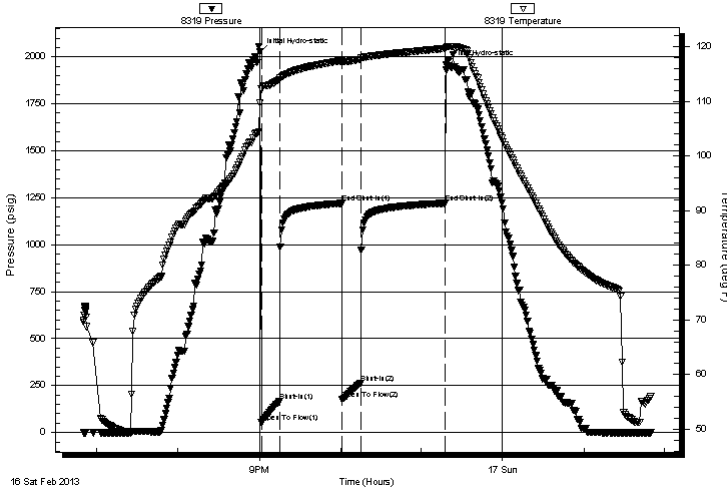
2013.02.16 @ 21:00:30

Time Off Btm:

2013.02.16 @ 23:18:00

TEST COMMENT: 15 - IF- B.O.B. in 2 Minutes
45 - IS- 6" return.
15 - FF- B.O.B. in 1 Minute
60 - FS- 2" return

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2025.17	109.65	Initial Hydro-static
1	52.79	112.24	Open To Flow (1)
15	168.04	114.02	Shut-In(1)
61	1220.25	117.44	End Shut-In(1)
61	175.54	117.10	Open To Flow (2)
75	264.33	117.69	Shut-In(2)
137	1221.04	119.66	End Shut-In(2)
138	1958.29	119.86	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
310.00	MW, 5%M, 95%W	4.07
124.00	GO, 30%G, 70%O	1.74
186.00	GO, 30%G, 80%O	2.61

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dreiling Oil Inc

11-12s-21w Trego KS

1008 Cody Ave
Hays KS, 67601

Kohl "A" 1-11

Job Ticket: 51593

DST#: 2

ATTN: Terry Piesker

Test Start: 2013.02.16 @ 18:50:00

Tool Information

Drill Pipe:	Length: 4018.00 ft	Diameter: 3.80 inches	Volume: 56.36 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	30000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	54000.00 lb
			<u>Total Volume: 56.51 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial	44000.00 lb
Depth to Top Packer:	4056.00 ft			Final	50000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	10.00 ft				
Tool Length:	31.00 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			4036.00	
Shut In Tool	5.00			4041.00	
Hydraulic tool	5.00			4046.00	
Packer	5.00			4051.00	21.00 Bottom Of Top Packer
Packer	5.00			4056.00	
Stubb	1.00			4057.00	
Recorder	0.00	8166	Inside	4057.00	
Recorder	0.00	8319	Outside	4057.00	
Perforations	6.00			4063.00	
Bullnose	3.00			4066.00	10.00 Bottom Packers & Anchor
Total Tool Length:	31.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dreiling Oil Inc

11-12s-21w Trego KS

1008 Cody Ave
Hays KS, 67601

Kohl "A" 1-11

Job Ticket: 51593

DST#: 2

ATTN: Terry Piesker

Test Start: 2013.02.16 @ 18:50:00

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:

bbbl

Water Loss: 7.98 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
310.00	MW, 5%M, 95%W	4.066
124.00	GO, 30%G, 70%O	1.739
186.00	GO, 30%G, 80%O	2.609

Total Length: 620.00 ft

Total Volume: 8.414 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

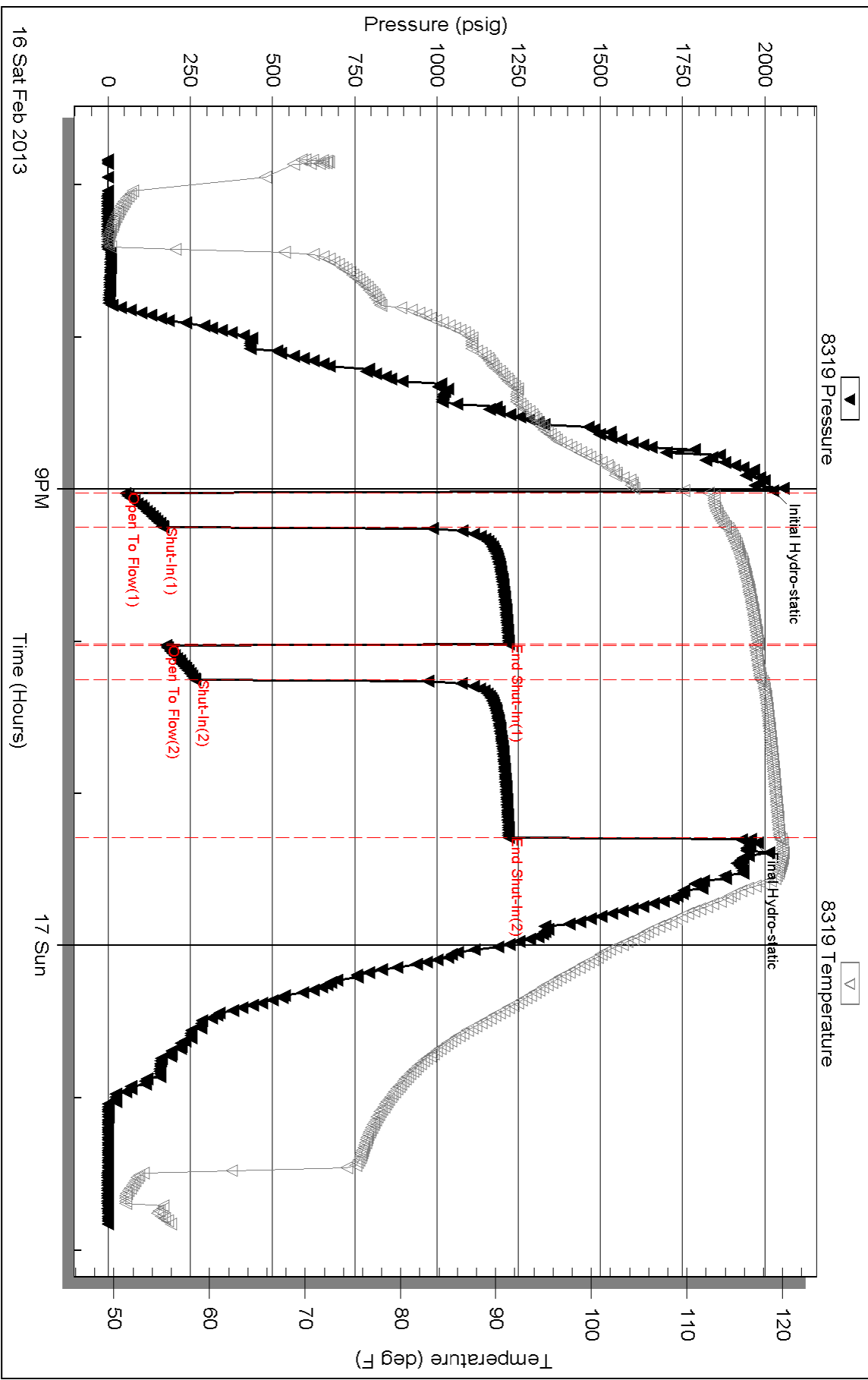
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



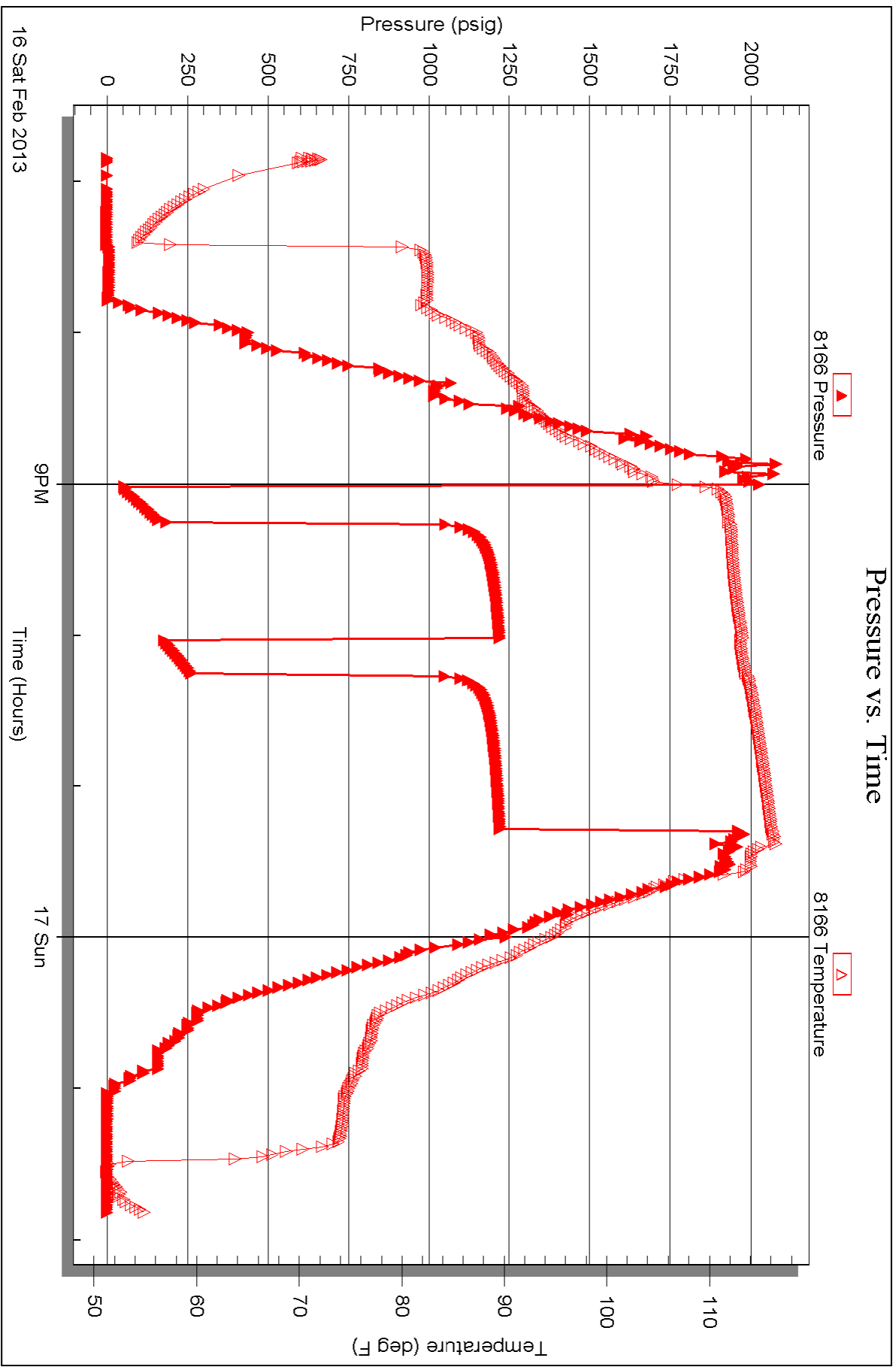
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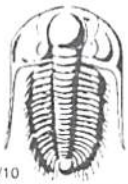
Inside

Drilling Oil Inc

Kohl "A" 1-11

DST Test Number: 2





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 51592

4/10

Well Name & No. Kohl "A" 1-11 Test No. 1 Date 2-16-13
 Company Dreiling oil Inc Elevation 2352 KB 2347 GL
 Address 1008 Cody Ave, Hays KS, 67601
 Co. Rep / Geo. Terry Piskera Rig Discovery 1
 Location: Sec. 11 Twp. 12S Rge. 21W Co. Trego State KS

Interval Tested 3955 - 4050 Zone Tested Arbuckle
 Anchor Length 95' Drill Pipe Run 3925' Mud Wt. 8.9
 Top Packer Depth 3950 Drill Collars Run 31' Vis 60
 Bottom Packer Depth 3955 Wt. Pipe Run — WL 8.0
 Total Depth 4050 Chlorides 5,000 ppm System LCM —
 Blow Description IF - 7" blow
ISI - No return
FF - 8" blow
FSI - Surface return

Rec	Feet of	%gas	%oil	%water	%mud
<u>124</u>	<u>HOCM</u>	<u>30</u>		<u>70</u>	
<u>62</u>	<u>60</u>	<u>50</u>	<u>50</u>		
<u>62</u>	<u>60</u>	<u>20</u>	<u>80</u>		
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 240' BHT 115° Gravity — API RW — @ — °F Chlorides — ppm

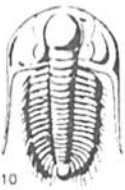
(A) Initial Hydrostatic 2012 Test 1250 T-On Location 12:50am
 (B) First Initial Flow 52 Jars — T-Started 4:20am
 (C) First Final Flow 85 Safety Joint — T-Open 6:27am
 (D) Initial Shut-In 1203 Circ Sub — T-Pulled 9:27am
 (E) Second Initial Flow 86 Hourly Standby .5h 50 T-Out 11:21am
 (F) Second Final Flow 126 Mileage 58 RT 89.90 Comments —
 (G) Final Shut-In 1197 Sampler —
 (H) Final Hydrostatic 1983 Straddle —
 Shale Packer — Ruined Shale Packer —
 Extra Packer — Ruined Packer —

Initial Open 30
 Initial Shut-In 45
 Final Flow 45
 Final Shut-In 60

Extra Recorder — Sub Total 0
 Day Standby — Total 1389.90
 Accessibility — MP/DST Disc't —
 Sub Total 1389.90

Approved By _____ Our Representative Cody Blum

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 51593

Well Name & No. Kohl "A" 1-11 Test No. 2 Date 2-16-13
 Company Dreiling oil Inc Elevation 2352 KB 2347 GL
 Address 1008 Cody AVE, Hays KS, 67601
 Co. Rep / Geo. Terry Pieskera Rig Discovery #1
 Location: Sec. 11 Twp. 12s Rge. 21W Co. Trego State KS

Interval Tested 4056 - 4066 Zone Tested Arbuckle
 Anchor Length 10' Drill Pipe Run 4018' Mud Wt. 8.9
 Top Packer Depth 4051 Drill Collars Run 31' Vis 60
 Bottom Packer Depth 4056 Wt. Pipe Run — WL 8.0
 Total Depth 4066 Chlorides 5,000 ppm System LCM —

Blow Description IF-B.O.B. in 2 Minutes.
ISI-6" blow back
FF-B.O.B. in 4 Minute.
FSI-2" return

Rec	Feet of	%gas	%oil	%water	%mud
<u>310</u>	<u>MW</u>		<u>95</u>	<u>5</u>	
<u>124</u>	<u>60</u>	<u>30</u>	<u>70</u>		
<u>186</u>	<u>60</u>	<u>20</u>	<u>80</u>		

Rec Total 620' BHT 1190 Gravity 33 API RW .25 @ 50° F Chlorides 40,000 ppm

(A) Initial Hydrostatic 2025 Test 1250 T-On Location 5:11 pm
 (B) First Initial Flow 52 Jars _____ T-Started 6:50 pm
 (C) First Final Flow 168 Safety Joint _____ T-Open 9:00 pm
 (D) Initial Shut-In 1220 Circ Sub _____ T-Pulled 11:15 pm
 (E) Second Initial Flow 17.5 Hourly Standby _____ T-Out 1:49 am
 (F) Second Final Flow 264 Mileage 58 RT 89.90 Comments _____
 (G) Final Shut-In 1221 Sampler _____
 (H) Final Hydrostatic 1958 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____

Initial Open 15 Extra Packer _____ Extra Copies _____
 Initial Shut-In 45 Extra Recorder _____ Sub Total 0
 Final Flow 15 Day Standby _____ Total 1339.90
 Final Shut-In 60 Accessibility _____ MP/DST Disc't _____
 Sub Total 1339.90

Approved By _____ Our Representative Cody [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.