



DRILL STEM TEST REPORT

Prepared For: **Black Diamond**

PO Box 641
Hays KS 67601

ATTN: Herb Deines / Kennet

Fin #1

28-4s-22w Norton,KS

Start Date: 2014.02.24 @ 17:11:00

End Date: 2014.02.25 @ 00:18:00

Job Ticket #: 56154 DST #: 1

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

Printed: 2014.02.27 @ 14:35:23



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Black Diamond

28-4s-22w Norton, KS

PO Box 641
Hays KS 67601

Fin #1

Job Ticket: 56154

DST#: 1

ATTN: Herb Deines / Kennet

Test Start: 2014.02.24 @ 17:11:00

GENERAL INFORMATION:

Formation: **Toronto**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:37:00

Time Test Ended: 00:18:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Bob Hamel

Unit No: 67

Interval: 3410.00 ft (KB) To 3450.00 ft (KB) (TVD)

Reference Elevations: 2282.00 ft (KB)

Total Depth: 3450.00 ft (KB) (TVD)

2277.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6625 Outside

Press@RunDepth: 221.22 psig @ 3445.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.02.24

End Date:

2014.02.25

Last Calib.: 2014.02.24

Start Time: 17:11:01

End Time:

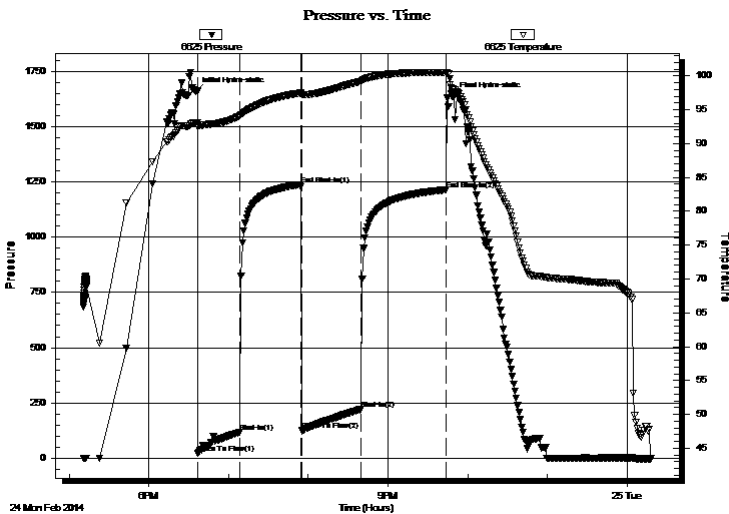
00:18:00

Time On Btm: 2014.02.24 @ 18:35:30

Time Off Btm: 2014.02.24 @ 21:49:00

TEST COMMENT: I.F. - 30 - BOB in 18 min
I.S.I - 45 - No blow back
F.F. - 45 - BOB in 19 min
F.S.I. - 60 - No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1658.35	93.03	Initial Hydro-static
2	23.00	92.52	Open To Flow (1)
33	119.10	94.07	Shut-In(1)
79	1236.79	97.44	End Shut-In(1)
80	125.10	97.26	Open To Flow (2)
124	221.22	99.19	Shut-In(2)
188	1213.57	100.42	End Shut-In(2)
194	1634.59	97.98	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	H,W,C,M, WTR. 40% MUD 60%	0.59
258.00	W,C,M, WTR.20% MUD 80%	3.56

Gas Rates

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



DRILL STEM TEST REPORT

Black Diamond

28-4s-22w Norton, KS

PO Box 641
Hays KS 67601

Fin #1

Job Ticket: 56154

DST#: 1

ATTN: Herb Deines / Kennet

Test Start: 2014.02.24 @ 17:11:00

GENERAL INFORMATION:

Formation: **Toronto**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:37:00

Time Test Ended: 00:18:00

Interval: **3410.00 ft (KB) To 3450.00 ft (KB) (TVD)**

Total Depth: 3450.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Initial)

Tester: Bob Hamel

Unit No: 67

Reference Elevations: 2282.00 ft (KB)

2277.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8166 Inside

Press@RunDepth: psig @ 3445.00 ft (KB)

Start Date: 2014.02.24

End Date:

2014.02.25

Start Time: 17:11:02

End Time:

00:18:30

Capacity: 8000.00 psig

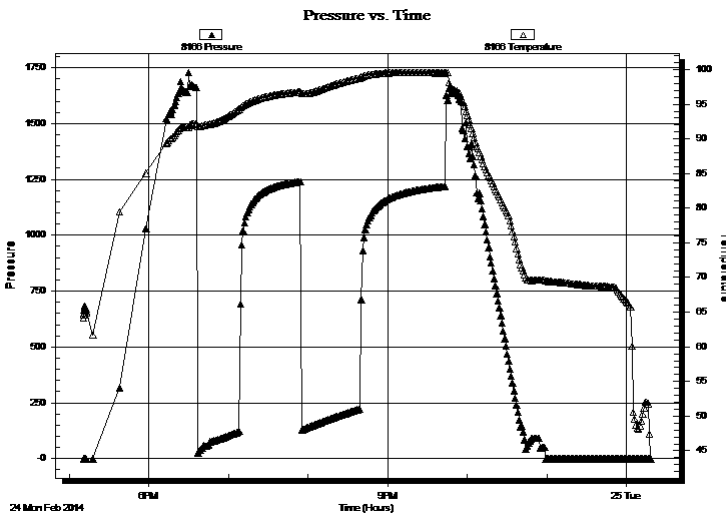
Last Calib.: 2014.02.25

Time On Btm:

Time Off Btm:

TEST COMMENT: I.F. - 30 - BOB in 18 min
I.S.I - 45 - No blow back
F.F. - 45 - BOB in 19 min
F.S.I. - 60 - No blow back

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
120.00	H,W,C,M, WTR. 40% MUD 60%	0.59
258.00	W,C,M, WTR.20% MUD 80%	3.56

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Black Diamond

28-4s-22w Norton,KS

PO Box 641
Hays KS 67601

Fin #1

Job Ticket: 56154

DST#: 1

ATTN: Herb Deines / Kennet

Test Start: 2014.02.24 @ 17:11:00

Tool Information

Drill Pipe:	Length: 3274.00 ft	Diameter: 3.80 inches	Volume: 45.93 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.70 inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 126.00 ft	Diameter: 2.25 inches	Volume: 0.62 bbl	Weight to Pull Loose:	40000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial	35000.00 lb
Depth to Top Packer:	3410.00 ft			Final	37000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	40.00 ft				
Tool Length:	60.00 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			3391.00	
Shut In Tool	5.00			3396.00	
Hydraulic tool	5.00			3401.00	
Packer	4.00			3405.00	20.00 Bottom Of Top Packer
Packer	5.00			3410.00	
Stubb	1.00			3411.00	
Perforations	2.00			3413.00	
Change Over Sub	1.00			3414.00	
Drill Pipe	31.00			3445.00	
Recorder	0.00	6625	Outside	3445.00	
Recorder	0.00	8166	Inside	3445.00	
Change Over Sub	1.00			3446.00	
Bullnose	4.00			3450.00	40.00 Bottom Packers & Anchor

Total Tool Length: 60.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Black Diamond

28-4s-22w Norton,KS

PO Box 641
Hays KS 67601

Fin #1

Job Ticket: 56154

DST#: 1

ATTN: Herb Deines / Kennet

Test Start: 2014.02.24 @ 17:11:00

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:

46000 ppm

Viscosity: 62.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.80 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
120.00	H,W,C,M, WTR. 40% MUD 60%	0.590
258.00	W,C,M, WTR.20% MUD 80%	3.564

Total Length: 378.00 ft Total Volume: 4.154 bbl

Num Fluid Samples: 0

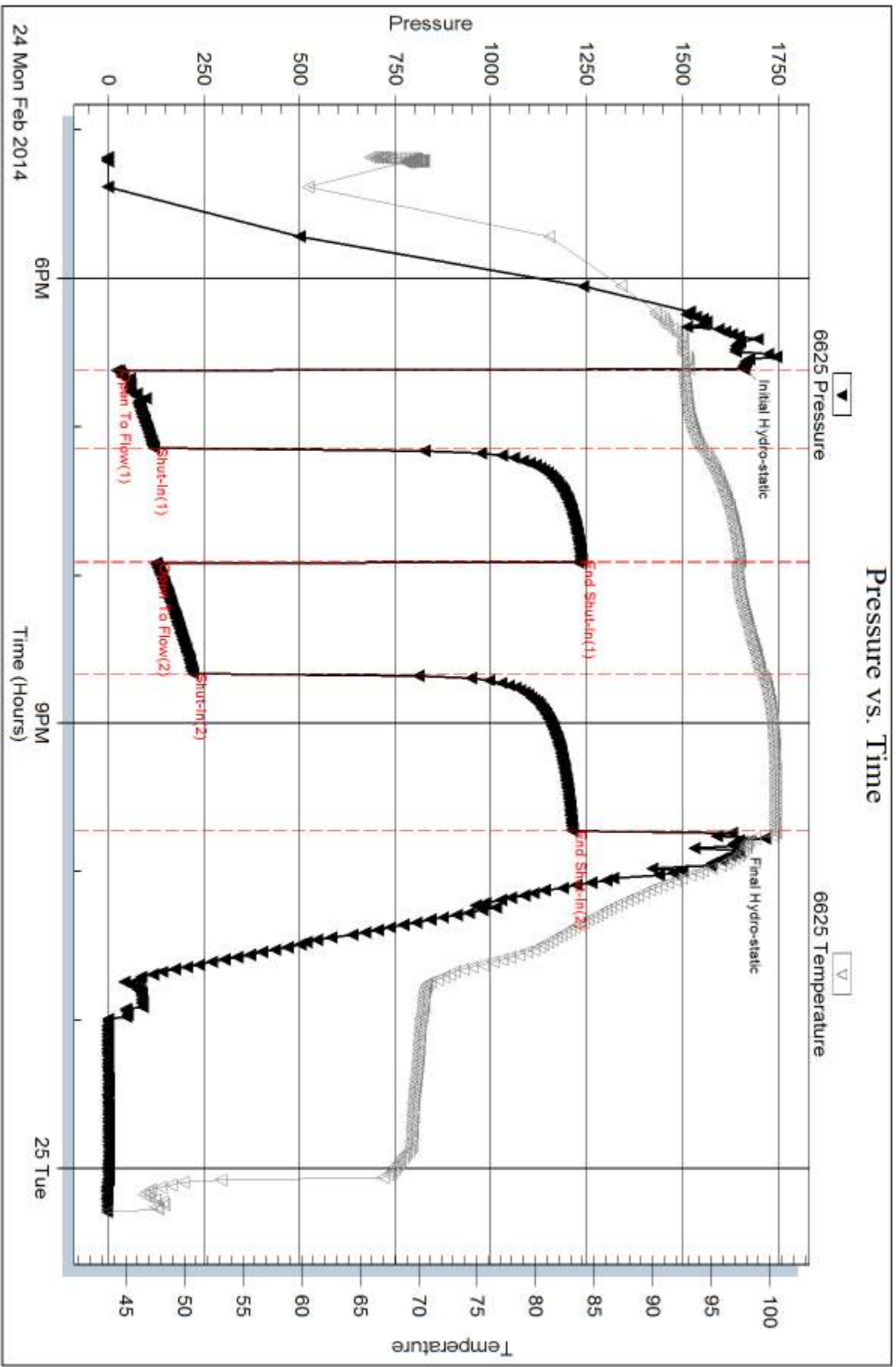
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Rw = .416 OHMS @ 14.5 DEG.



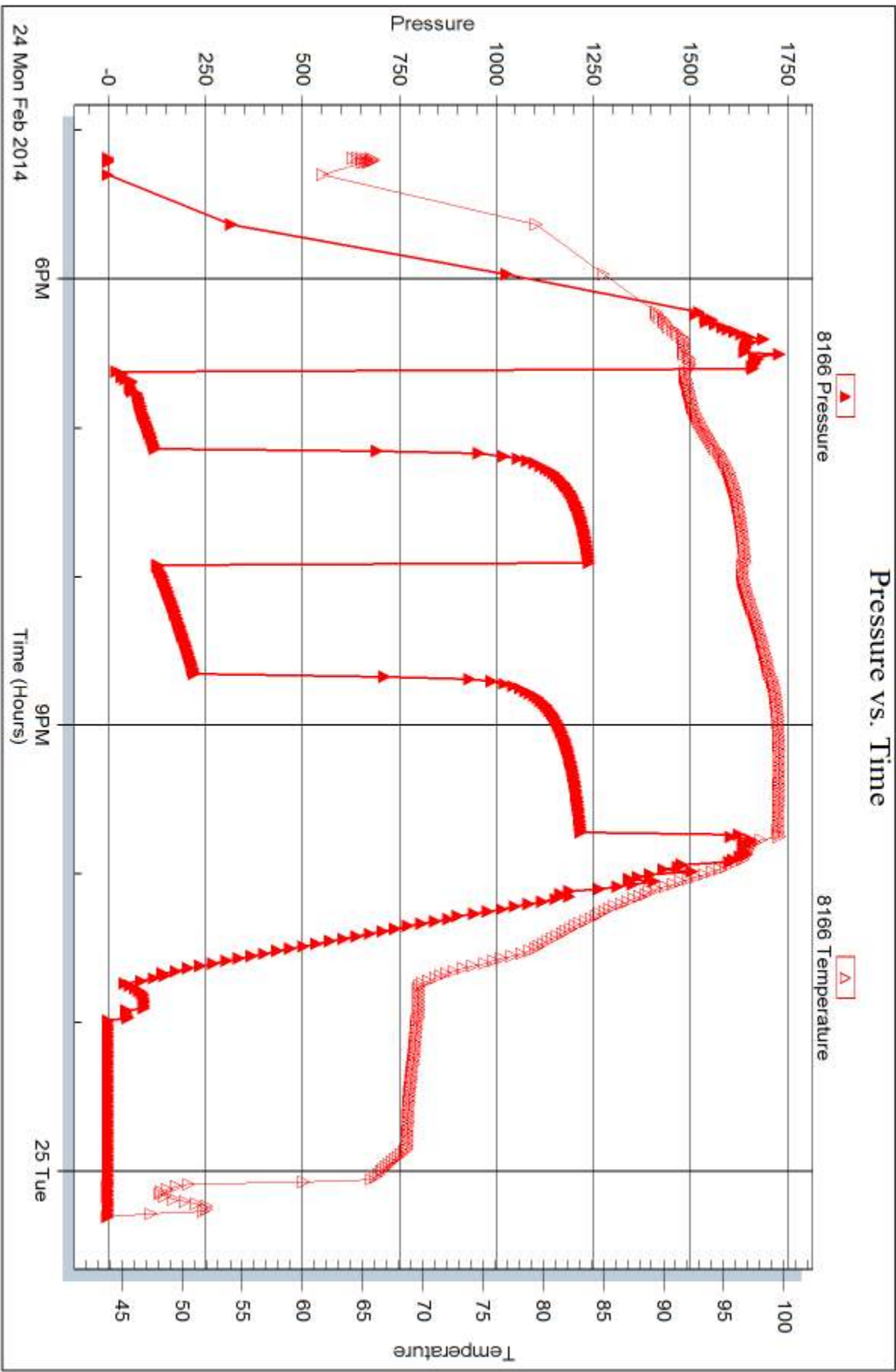
Serial #: 8166

Inside

Black Diamond

Fin #1

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Black Diamond**

PO Box 641
Hays KS 67601

ATTN: Herb Deines / Kennet

Fin #1

28-4s-22w Norton,KS

Start Date: 2014.02.25 @ 21:40:00

End Date: 2014.02.26 @ 05:30:00

Job Ticket #: 56155 DST #: 2

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

Printed: 2014.02.27 @ 14:34:11

Black Diamond 28-4s-22w Norton,KS Fin #1 DST # 2 LKC "1 - L" 2014.02.25



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Black Diamond

28-4s-22w Norton, KS

PO Box 641
Hays KS 67601

Fin #1

Job Ticket: 56155

DST#: 2

ATTN: Herb Deines / Kennet

Test Start: 2014.02.25 @ 21:40:00

GENERAL INFORMATION:

Formation: **LKC "I - L"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:38:30

Time Test Ended: 05:30:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Bob Hamel

Unit No: 67

Interval: 3583.00 ft (KB) To 3644.00 ft (KB) (TVD)

Reference Elevations: 2282.00 ft (KB)

Total Depth: 3644.00 ft (KB) (TVD)

2277.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6625 Outside

Press@RunDepth: 256.71 psig @ 3618.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.02.25

End Date:

2014.02.26

Last Calib.:

2014.02.26

Start Time: 20:40:01

End Time:

04:30:00

Time On Btm:

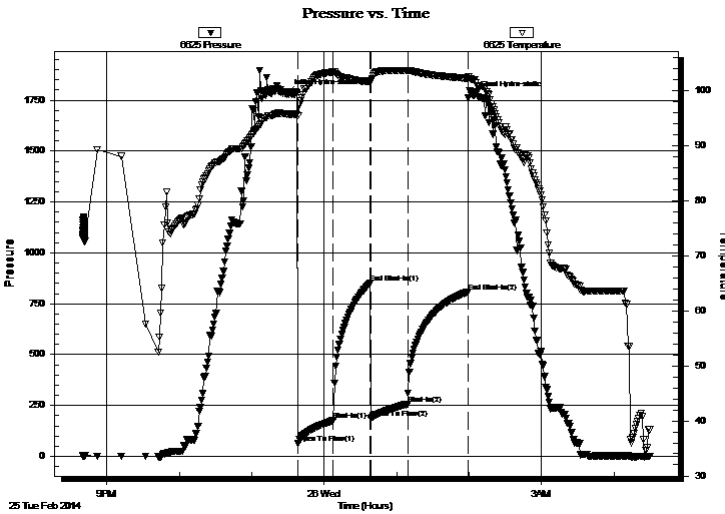
2014.02.25 @ 23:29:30

Time Off Btm:

2014.02.26 @ 02:04:00

TEST COMMENT: I.F. - 30 - BOB in 4 min
I.S.I. - 30 - No blow back
F.F. - 30 - BOB in 8 min
F.S.I. - 45 - No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1780.78	95.75	Initial Hydro-static
9	64.02	95.45	Open To Flow (1)
38	176.80	103.37	Shut-In(1)
69	849.37	101.61	End Shut-In(1)
69	188.04	101.75	Open To Flow (2)
100	256.71	103.67	Shut-In(2)
150	808.29	102.25	End Shut-In(2)
155	1773.12	102.03	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
126.00	S,W,C,M WTR 5% MUD 95%	0.62
378.00	W,C,M, WTR 30% MUD 70%	5.30

Gas Rates

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

* Recovery from multiple tests



DRILL STEM TEST REPORT

Black Diamond

28-4s-22w Norton, KS

PO Box 641
Hays KS 67601

Fin #1

Job Ticket: 56155 **DST#: 2**

ATTN: Herb Deines / Kennet

Test Start: 2014.02.25 @ 21:40:00

GENERAL INFORMATION:

Formation: **LKC "I - L"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:38:30

Time Test Ended: 05:30:00

Interval: 3583.00 ft (KB) To 3644.00 ft (KB) (TVD)

Total Depth: 3644.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Reset)

Tester: Bob Hamel

Unit No: 67

Reference Elevations: 2282.00 ft (KB)

2277.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8166

Inside

Press@RunDepth: psig @ 3618.00 ft (KB)

Start Date: 2014.02.25

End Date: 2014.02.26

Capacity: 8000.00 psig

Last Calib.: 2014.02.26

Start Time: 20:40:02

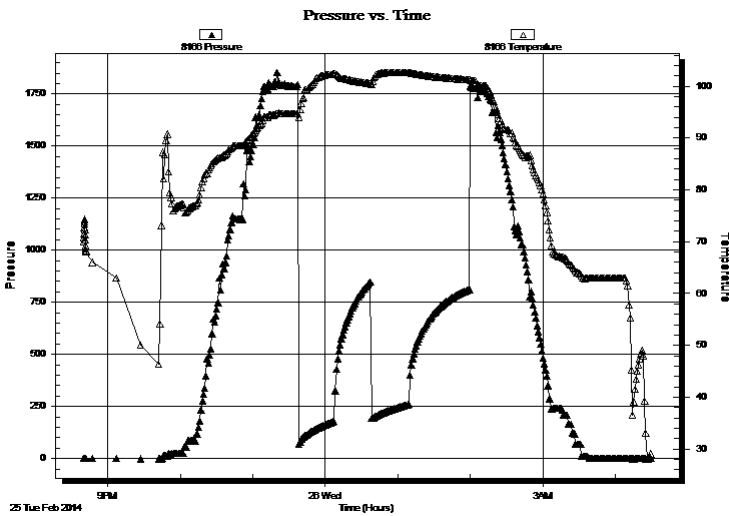
End Time: 04:30:00

Time On Btm:

Time Off Btm:

TEST COMMENT: I.F. - 30 - BOB in 4 min
 I.S.I. - 30 - No blow back
 F.F. - 30 - BOB in 8 min
 F.S.I. - 45 - No blow back

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
126.00	S,W,C,M WTR 5% MUD 95%	0.62
378.00	W,C,M, WTR 30% MUD 70%	5.30

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Black Diamond

28-4s-22w Norton,KS

PO Box 641
Hays KS 67601

Fin #1

Job Ticket: 56155

DST#: 2

ATTN: Herb Deines / Kennet

Test Start: 2014.02.25 @ 21:40:00

Tool Information

Drill Pipe:	Length: 3460.00 ft	Diameter: 3.80 inches	Volume: 48.53 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.70 inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 126.00 ft	Diameter: 2.25 inches	Volume: 0.62 bbl	Weight to Pull Loose:	45000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial	38000.00 lb
Depth to Top Packer:	3583.00 ft			Final	40000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	61.00 ft				
Tool Length:	81.00 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			3564.00	
Shut In Tool	5.00			3569.00	
Hydraulic tool	5.00			3574.00	
Packer	4.00			3578.00	20.00 Bottom Of Top Packer
Packer	5.00			3583.00	
Stubb	1.00			3584.00	
Perforations	2.00			3586.00	
Change Over Sub	1.00			3587.00	
Drill Pipe	31.00			3618.00	
Recorder	0.00	6625	Outside	3618.00	
Recorder	0.00	8166	Inside	3618.00	
Change Over Sub	1.00			3619.00	
Perforations	21.00			3640.00	
Bullnose	4.00			3644.00	61.00 Bottom Packers & Anchor

Total Tool Length: 81.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Black Diamond

28-4s-22w Norton,KS

PO Box 641
Hays KS 67601

Fin #1

Job Ticket: 56155

DST#: 2

ATTN: Herb Deines / Kennet

Test Start: 2014.02.25 @ 21:40:00

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:

6000 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.79 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 750.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
126.00	S,W,C,M WTR. 5% MUD 95%	0.620
378.00	W,C,M, WTR 30% MUD 70%	5.302

Total Length: 504.00 ft Total Volume: 5.922 bbl

Num Fluid Samples: 0

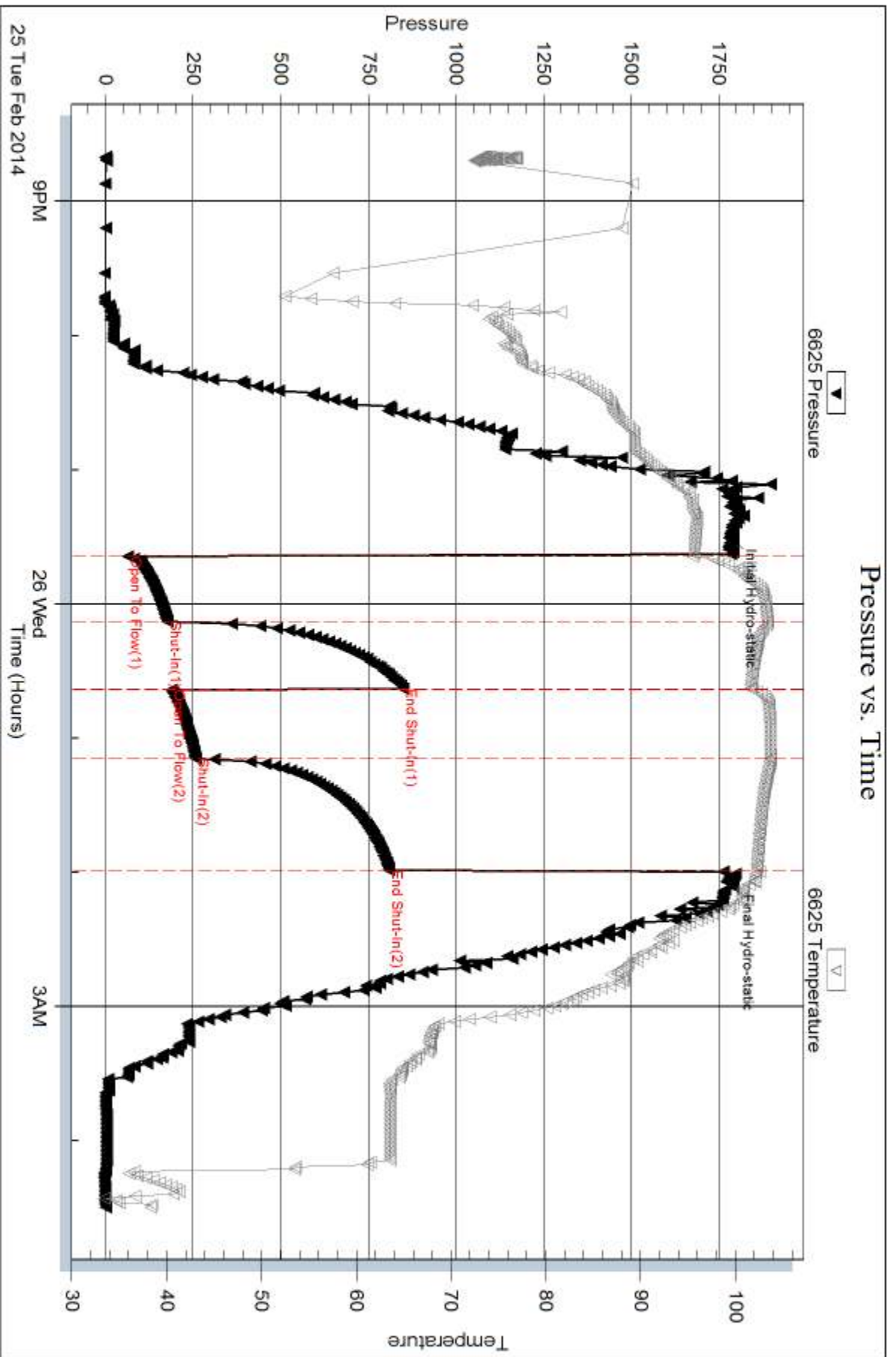
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Rw = 1.715 OHMS @ 48.8 DEG.



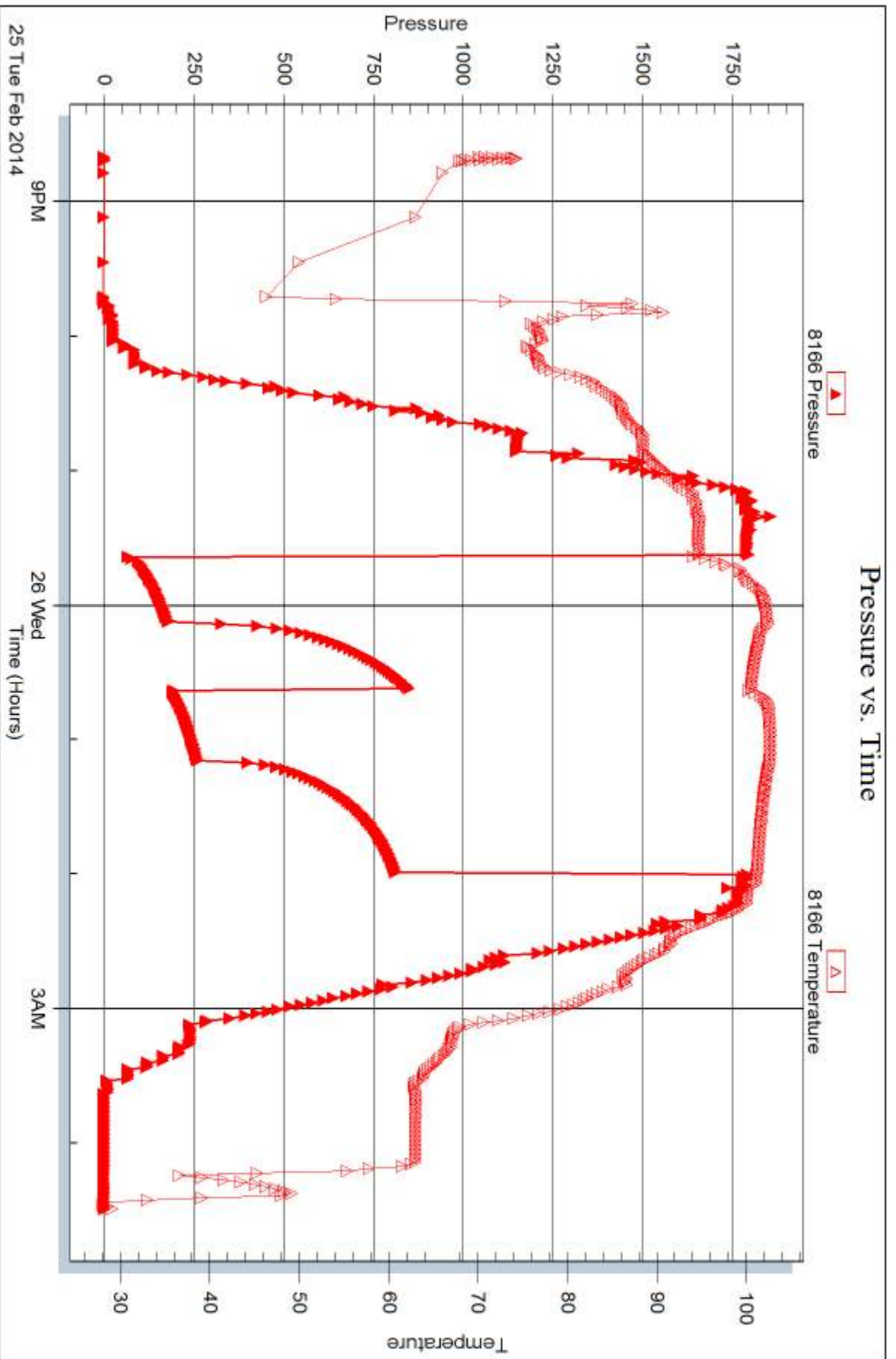
Serial #: 8166

Inside

Black Diamond

Fin #1

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 56155

Printed: 2014.02.27 @ 14:34:14



DRILL STEM TEST REPORT

Prepared For: **Black Diamond**

PO Box 641
Hays KS 67601

ATTN: Herb Deines / Kennet

Fin #1

28-4s-22w Norton,KS

Start Date: 2014.02.26 @ 17:07:00

End Date: 2014.02.27 @ 02:41:30

Job Ticket #: 56156 DST #: 3

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

Printed: 2014.02.27 @ 14:33:18

Black Diamond
28-4s-22w Norton,KS
Fin #1
DST # 3
Arbuckle
2014.02.26



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Black Diamond

28-4s-22w Norton, KS

PO Box 641
Hays KS 67601

Fin #1

Job Ticket: 56156

DST#: 3

ATTN: Herb Deines / Kennet

Test Start: 2014.02.26 @ 17:07:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:57:30

Time Test Ended: 02:41:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Bob Hamel

Unit No: 67

Interval: 3700.00 ft (KB) To 3737.00 ft (KB) (TVD)

Reference Elevations: 2282.00 ft (KB)

Total Depth: 3450.00 ft (KB) (TVD)

2277.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6625 Outside

Press@RunDepth: 98.25 psig @ 3704.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.02.26

End Date:

2014.02.27

Last Calib.:

2014.02.26

Start Time: 17:07:01

End Time:

02:41:30

Time On Btm:

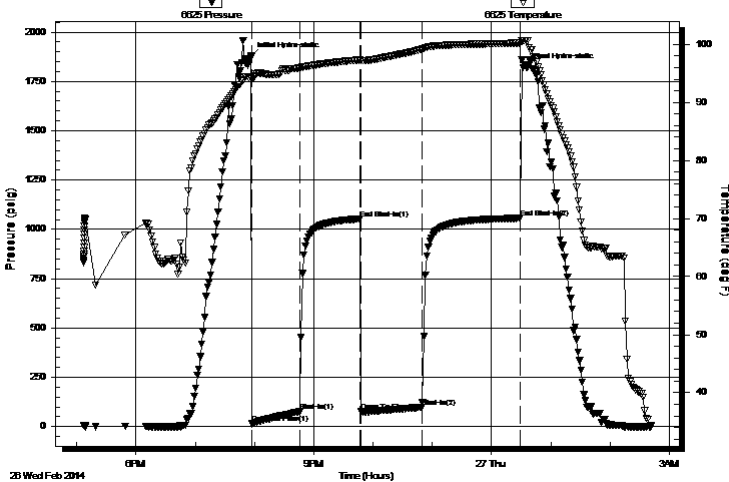
2014.02.26 @ 19:56:30

Time Off Btm:

2014.02.27 @ 00:35:00

TEST COMMENT: I.F. - 45 - Weak surface blow built to 6"
I.S.I. - 60 - No blow back
F.F. - 60 - Weak surface blow built to 4 1/2"
F.S.I. - 90 - No blow back

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1873.94	94.32	Initial Hydro-static
1	14.47	94.09	Open To Flow (1)
49	75.62	95.90	Shut-In(1)
111	1052.93	97.32	End Shut-In(1)
112	74.74	97.16	Open To Flow (2)
173	98.25	99.16	Shut-In(2)
273	1056.57	100.22	End Shut-In(2)
279	1822.29	100.66	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
63.00	M,C,W, MUD 20% WTR 80%	0.31
189.00	W,C,M, WTR. 40% MUD 60%	2.08
0.00	" SCUM OF OIL "	0.00

Gas Rates

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

* Recovery from multiple tests



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Black Diamond
 PO Box 641
 Hays KS 67601
 ATTN: Herb Deines / Kennet

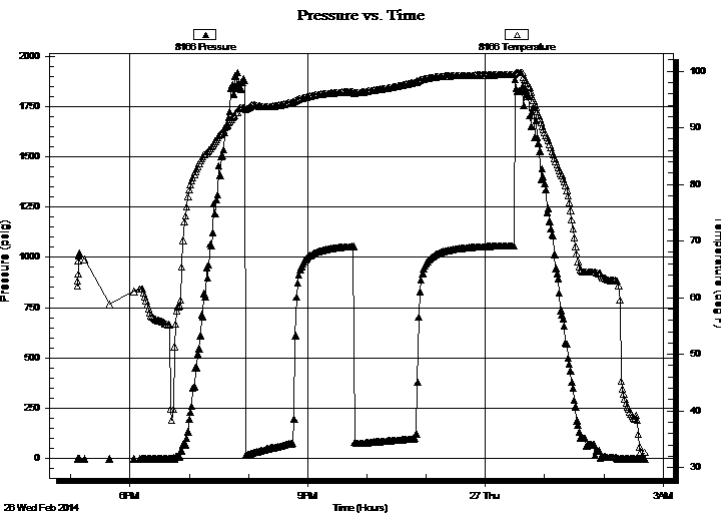
28-4s-22w Norton, KS
Fin #1
 Job Ticket: 56156 **DST#: 3**
 Test Start: 2014.02.26 @ 17:07:00

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 19:57:30 Tester: Bob Hamel
 Time Test Ended: 02:41:30 Unit No: 67
 Interval: **3700.00 ft (KB) To 3737.00 ft (KB) (TVD)** Reference Elevations: 2282.00 ft (KB)
 Total Depth: 3450.00 ft (KB) (TVD) 2277.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 5.00 ft

Serial #: 8166 Inside
 Press@RunDepth: psig @ 3704.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.02.26 End Date: 2014.02.27 Last Calib.: 1899.12.30
 Start Time: 17:07:02 End Time: 02:41:45 Time On Btm:
 Time Off Btm:

TEST COMMENT: I.F. - 45 - Weak surface blow built to 6"
 I.S.I. - 60 - No blow back
 F.F. - 60 - Weak surface blow built to 4 1/2"
 F.S.I. - 90 - No blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
63.00	M,C,W, MUD 20% WTR 80%	0.31
189.00	W,C,M, WTR. 40% MUD 60%	2.08
0.00	" SCUM OF OIL "	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

Black Diamond

28-4s-22w Norton,KS

PO Box 641
Hays KS 67601

Fin #1

Job Ticket: 56156

DST#: 3

ATTN: Herb Deines / Kennet

Test Start: 2014.02.26 @ 17:07:00

Tool Information

Drill Pipe:	Length: 3589.00 ft	Diameter: 3.80 inches	Volume: 50.34 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.70 inches	Volume: - bbl	Weight set on Packer:	30000.00 lb
Drill Collar:	Length: 126.00 ft	Diameter: 2.25 inches	Volume: 0.62 bbl	Weight to Pull Loose:	45000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
			- bbl	String Weight: Initial	40000.00 lb
Drill Pipe Above KB:	35.00 ft			Final	40000.00 lb
Depth to Top Packer:	3700.00 ft				
Depth to Bottom Packer:	ft				
Interval between Packers:	37.00 ft				
Tool Length:	57.00 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			3681.00	
Shut In Tool	5.00			3686.00	
Hydraulic tool	5.00			3691.00	
Packer	4.00			3695.00	20.00 Bottom Of Top Packer
Packer	5.00			3700.00	
Stubb	1.00			3701.00	
Perforations	3.00			3704.00	
Recorder	0.00	6625	Outside	3704.00	
Recorder	0.00	8166	Inside	3704.00	
Perforations	29.00			3733.00	
Bullnose	4.00			3737.00	37.00 Bottom Packers & Anchor

Total Tool Length: 57.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Black Diamond

28-4s-22w Norton,KS

PO Box 641
Hays KS 67601

Fin #1

Job Ticket: 56156

DST#: 3

ATTN: Herb Deines / Kennet

Test Start: 2014.02.26 @ 17:07:00

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:

12500 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.80 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
63.00	M,C,W, MUD 20% WTR 80%	0.310
189.00	W,C,M, WTR. 40% MUD 60%	2.077
0.00	" SCUM OF OIL "	0.000

Total Length: 252.00 ft Total Volume: 2.387 bbl

Num Fluid Samples: 0

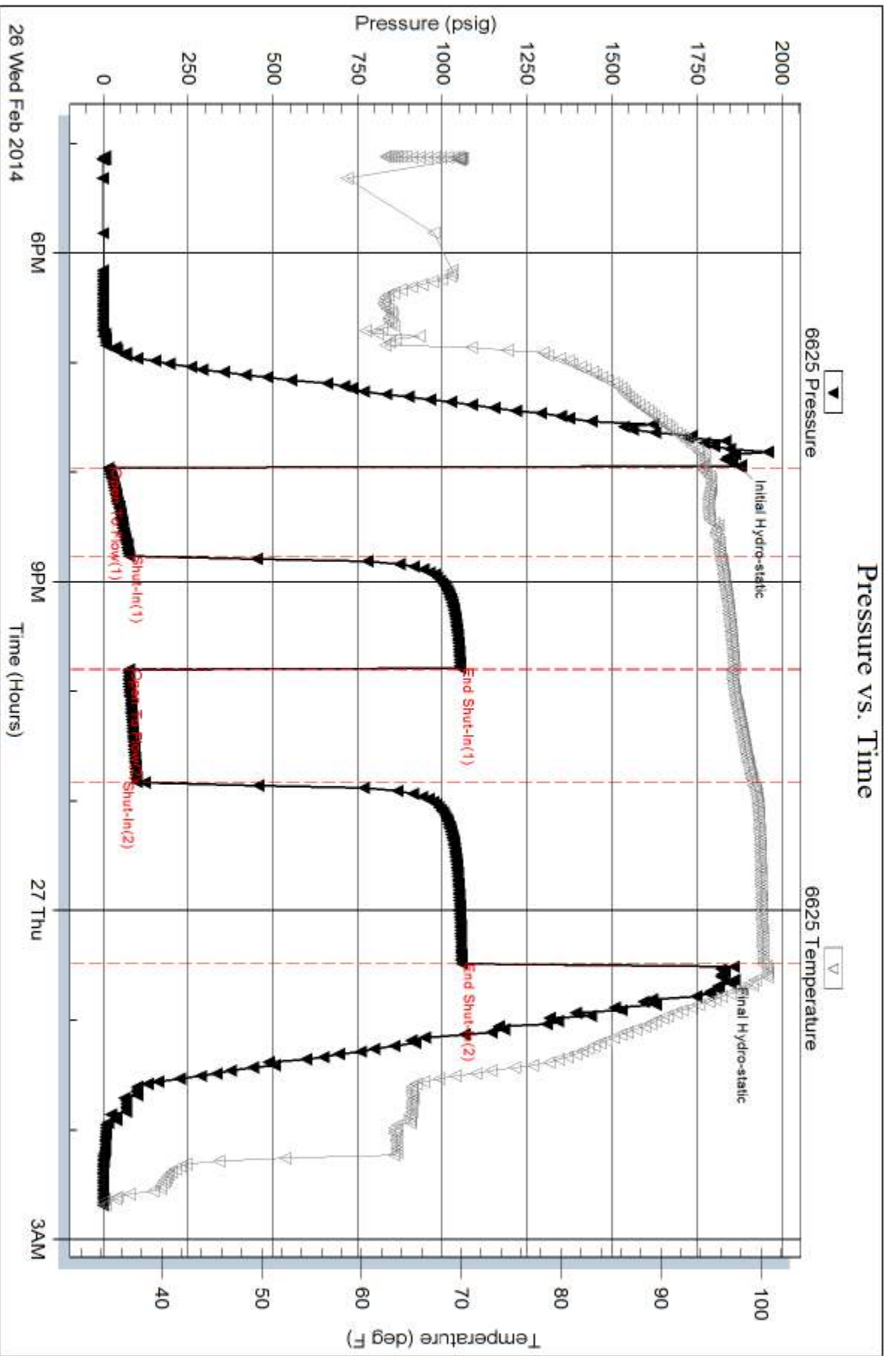
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: R.W. = .611 OHMS @ 62.8 DEG



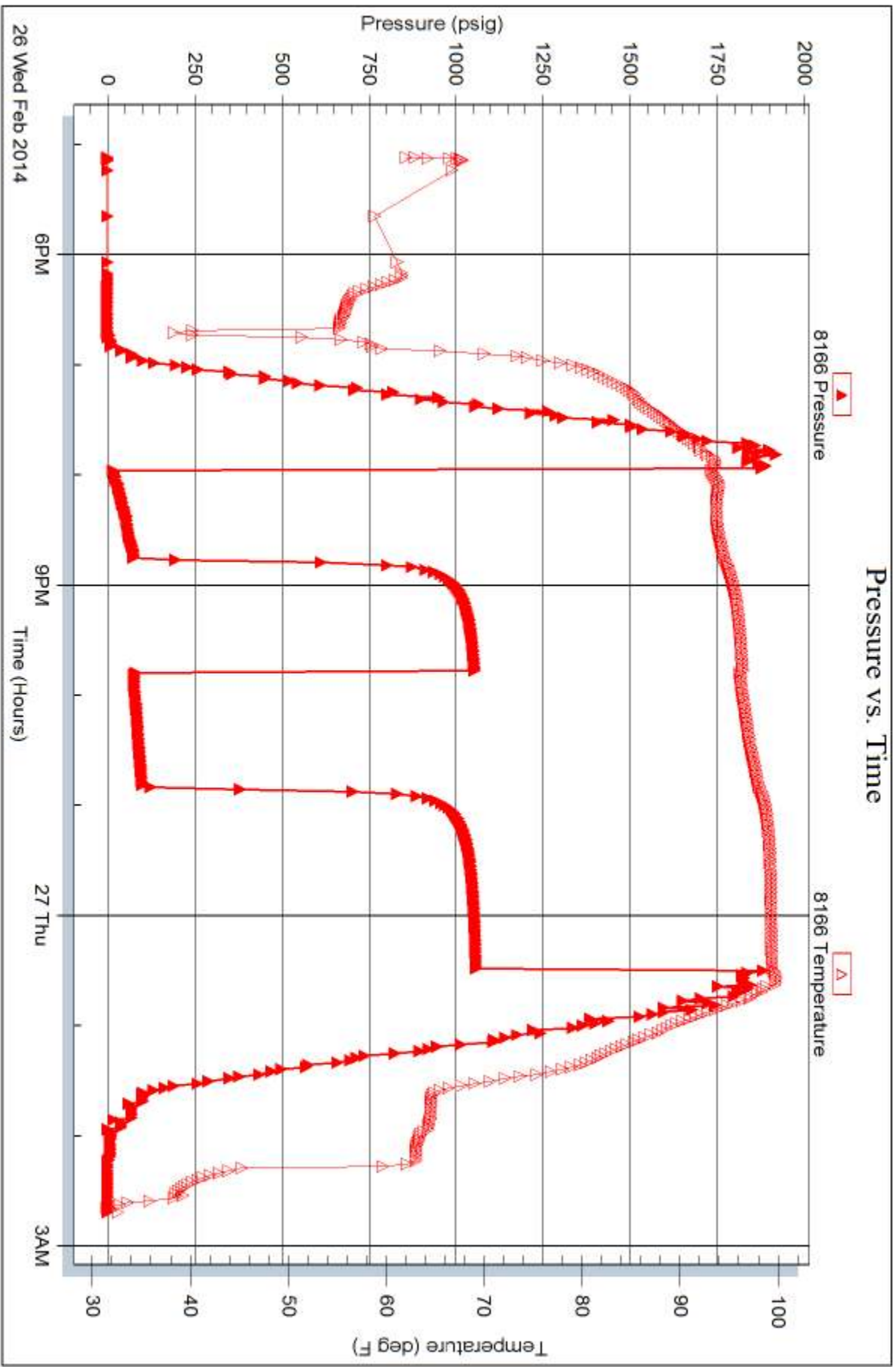
Serial #: 8166

Inside

Black Diamond

Fin #1

DST Test Number: 3





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 56154

Well Name & No. Fin #1 Test No. 1 Date 2-29-14
 Company Black Diamond oil co. Elevation 2282 KB 2277 GL
 Address Po. Box. 641 Hays KS. 67601
 Co. Rep / Geo. Herb Deines Rig W.W Rig #6
 Location: Sec. 28 Twp. 4 Rge. 22 Co. Norton State KS

Interval Tested 3410 - 3450 Zone Tested toronto
 Anchor Length 40 Drill Pipe Run 3274 Mud Wt. 9.2
 Top Packer Depth 3405 Drill Collars Run 126 Vis 02
 Bottom Packer Depth 3410 Wt. Pipe Run --- WL 6.8
 Total Depth 3450 Chlorides 500 ppm System LCM 1.5

Blow Description F.F. - 1/2" INT. Blow Built to (B.O.B. in 18 Min.)
I.S.I. - No B.B.
F.F. - W.S.B. Started @ 1 Min. Built to (B.O.B. in 19 Min.)
F.S.I. - No B.B.

Rec	Feet of	%gas	%oil	%water	%mud
<u>258</u>	<u>W.C.M.</u>		<u>20</u>	<u>80</u>	
<u>120</u>	<u>H.W.C.M.</u>		<u>40</u>	<u>60</u>	

Rec Total 378 BHT 98 Gravity --- API RW .416 @ 14.5° F Chlorides 46,000 ppm
 (A) Initial Hydrostatic 1,658 Test 1150 T-On Location 16:25:00
 (B) First Initial Flow 23 Jars --- T-Started 17:11:00
 (C) First Final Flow 119 Safety Joint --- T-Open 18:40:00
 (D) Initial Shut-In 1,237 Circ Sub --- T-Pulled 21:40:00
 (E) Second Initial Flow 125 Hourly Standby --- T-Out 00:15:00
 (F) Second Final Flow 221 Mileage 174/RT 102rt 158.10 Comments ---
 (G) Final Shut-In 1,214 Sampler --- "Thank you"
 (H) Final Hydrostatic 1,635 Straddle --- Ruined Shale Packer ---
 Shale Packer --- Ruined Packer ---

Initial Open 30 Extra Packer --- Extra Copies ---
 Initial Shut-In 45 Extra Recorder --- Sub Total 0
 Final Flow 45 Day Standby --- Total 1308.10
 Final Shut-In 60 Accessibility --- MP/DST Disc't ---
 Sub Total 1308.10

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. 56155

Well Name & No. Fin # 1 Test No. 2 Date 2-25-14
 Company Black Diamond oil co. Elevation 2282 KB 2277 GL
 Address P.O. Box 641 Hays KS. 67601
 Co. Rep / Geo. Herb Deines Rig W.W. Rig #6
 Location: Sec. 28 Twp. 4 Rge. 22 Co. Norton State KS.

Interval Tested 3583-3644 Zone Tested L.H.C. "I, J, K, L"
 Anchor Length 61 Drill Pipe Run 3460 Mud Wt. 9.3
 Top Packer Depth 3579 Drill Collars Run 126 Vis 52
 Bottom Packer Depth 3583 Wt. Pipe Run --- WL 6.8
 Total Depth 3644 Chlorides 750 ppm System LCM 1.5

Blow Description I.F-30-1/2" INT Blow Built to (B.O.B. in 4 min.)
I.S.I-30-No B.B.
F.F-30-1/2" INT. Blow Built to (B.O.B. in 8 min.)
F.S.I-45-No B.B.

Rec	Feet of	%gas	%oil	%water	%mud
<u>378</u>	<u>W, C, M</u>		<u>30</u>	<u>70</u>	
<u>126</u>	<u>S, W, C, M,</u>		<u>5</u>	<u>95</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 509 BHT 101 Gravity --- API RW 1.715 @ 48.8 F Chlorides 6,000 ppm
 (A) Initial Hydrostatic 1781 Test 1150 T-On Location 19:45:00
 (B) First Initial Flow 64 Jars _____ T-Started 20:40:00
 (C) First Final Flow 177 Safety Joint _____ T-Open 23:46:00
 (D) Initial Shut-In 849 Circ Sub _____ T-Pulled 02:01:00
 (E) Second Initial Flow 188 Hourly Standby _____ T-Out 04:35:00
 (F) Second Final Flow 257 Mileage 174 R.T., 158.10 Comments _____
 (G) Final Shut-In 808 Sampler _____ "Thank-you"
 (H) Final Hydrostatic 1773 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1308.10
 Accessibility _____ MP/DST Disc't _____

Initial Open 30
 Initial Shut-In 30
 Final Flow 30
 Final Shut-In 45
 Sub Total 1308.10

Approved By _____ Our Representative Bud Hume

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 56156

Well Name & No. Fin #1 Test No. 3 Date 2-26-14
 Company Black Diamond Oil Co. Elevation 2282 KB 2277 GL
 Address P.O. Box 641 Hays, KS. 67601
 Co. Rep / Geo. Herb Deines Rig W.W. Rig #6
 Location: Sec. 28 Twp. 4 Rge. 22 Co. Norton State KS.

Interval Tested 3700-3737 Zone Tested Arbuckle
 Anchor Length 37' Drill Pipe Run 3589.00 Mud Wt. 9.3
 Top Packer Depth 3695 Drill Collars Run 126 Vis 52
 Bottom Packer Depth 3700 Wt. Pipe Run — WL 6.8
 Total Depth 3737 Chlorides 2,000 ppm System LCM 1 1/2

Blow Description I.F.-45-1/2" INT. Blow Built to (6" in 45 min.)
I.S.I.-60-NO B.B.
FF-60-W.S.B. started @ 4 min. Built to (4 1/2" in 60 min.)
E.S.I.-90-NO B.B.

Rec	Feet of	%gas	%oil	%water	%mud
	<u>"Scum of oil"</u>				
Rec <u>189</u>	Feet of <u>W,C,M</u>		<u>40</u>	<u>60</u>	
Rec <u>63</u>	Feet of <u>M,C,W</u>		<u>80</u>	<u>20</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 252 BHT 101 Gravity 17.60 API RW 611 @ 62.8° F Chlorides 12500 ppm

(A) Initial Hydrostatic 1874 Test 1150 T-On Location 16:05:00
 (B) First Initial Flow 14 Jars T-Started 17:07:00
 (C) First Final Flow 76 Safety Joint T-Open 19:58:00
 (D) Initial Shut-In 1053 Circ Sub T-Pulled 00:35:00
 (E) Second Initial Flow 75 Hourly Standby T-Out 02:41:00
 (F) Second Final Flow 98 Mileage 174/R+ 158.10 Comments
 (G) Final Shut-In 1057 Sampler "Thank-you"
 (H) Final Hydrostatic 1822 Straddle Ruined Shale Packer
 Shale Packer Ruined Packer
 Extra Packer Extra Copies
 Initial Open 45 Extra Recorder Sub Total 0
 Initial Shut-In 60 Day Standby Total 1308.10
 Final Flow 60 Accessibility MP/DST Disc't
 Final Shut-In 90 Sub Total 1308.10

Approved By _____ Our Representative [Signature]

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