



DRILL STEM TEST REPORT

Prepared For: **Phillips Exploration Co LC**

1601 Sagebrush
Wichita Ks 67230

ATTN: Jim Phillips

30-8-22-Graham-Ks

A J Rice Trust # 1-30

Start Date: 2010.06.12 @ 14:07:15

End Date: 2010.06.12 @ 20:14:45

Job Ticket #: 38976 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.06.12 @ 09:44:25

Phillips Exploration Co LC

A J Rice Trust # 1-30

30-8-22-Graham-Ks

DST # 1

70'

LKC

2010.06.12



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Phillips Exploration Co LC

A J Rice Trust # 1-30

1601 Sagebrush
Wichita Ks 67230

30-8-22-Graham-Ks

ATTN: Jim Phillips

Job Ticket: 38976

DST#: 1

Test Start: 2010.06.12 @ 14:07:15

GENERAL INFORMATION:

Formation: **70' LKC**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 15:49:45
 Time Test Ended: 20:14:45
 Interval: **3500.00 ft (KB) To 3530.00 ft (KB) (TVD)**
 Total Depth: 3530.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Dan Bangle
 Unit No: 38
 Reference Elevations: 2202.00 ft (KB)
 2197.00 ft (CF)
 KB to GR/CF: 5.00 ft

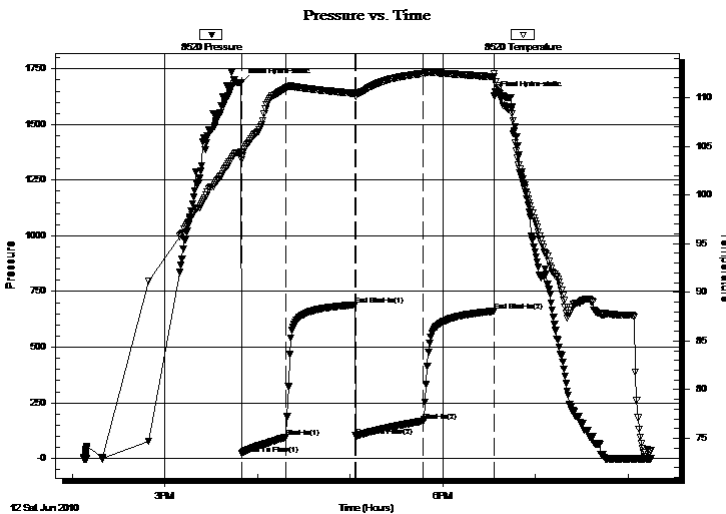
Serial #: 8520

Outside

Press@RunDepth: 168.43 psig @ 3501.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2010.06.12 End Date: 2010.06.12 Last Calib.: 2010.06.24
 Start Time: 14:07:16 End Time: 20:14:45 Time On Btm: 2010.06.12 @ 15:49:30
 Time Off Btm: 2010.06.12 @ 18:33:30

TEST COMMENT: IF-Strong B-B in 7 min
 IS-Weak building to 3/4"
 FF-Strong B-B in 18 min
 FS-Weak building to 3/4"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1688.78	104.38	Initial Hydro-static
1	20.59	103.64	Open To Flow (1)
29	95.89	110.97	Shut-In(1)
74	690.55	110.42	End Shut-In(1)
74	101.57	110.16	Open To Flow (2)
118	168.43	112.48	Shut-In(2)
164	660.97	112.13	End Shut-In(2)
164	1628.19	112.49	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
110.00	Mdy Wtr	1.27
70.00	OCgsyM 30%o 10%g 60%m	0.98
485.00	CGsyO 10%g 90%o	6.80
0.00	185 GIP	0.00

Gas Rates

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



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A J Rice Trust # 1-30

1601 Sagebrush
Wichita Ks 67230

30-8-22-Graham-Ks

Job Ticket: 38976

DST#: 1

ATTN: Jim Phillips

Test Start: 2010.06.12 @ 14:07:15

GENERAL INFORMATION:

Formation: **70' LKC**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:49:45

Time Test Ended: 20:14:45

Interval: 3500.00 ft (KB) To 3530.00 ft (KB) (TVD)

Total Depth: 3530.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Test Type: Conventional Bottom Hole (Initial)

Tester: Dan Bangle

Unit No: 38

Reference Elevations: 2202.00 ft (KB)

2197.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8354

Inside

Press@RunDepth: psig @ 3501.00 ft (KB)

Start Date: 2010.06.12

End Date:

2010.06.12

Start Time: 14:07:11

End Time:

20:14:25

Capacity: 8000.00 psig

Last Calib.:

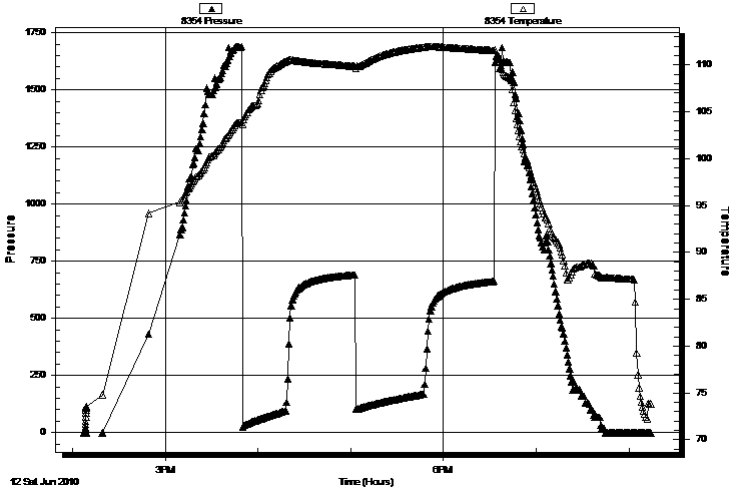
2010.06.24

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-Strong B-B in 7 min
IS-Weak building to 3/4"
FF-Strong B-B in 18 min
FSI-Weak building to 3/4"

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
110.00	Mdy Wtr	1.27
70.00	OCGsyM 30%o 10%g 60%m	0.98
485.00	CGsyO 10%g 90%o	6.80
0.00	185 GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Phillips Exploration Co LC

A J Rice Trust # 1-30

1601 Sagebrush
Wichita Ks 67230

30-8-22-Graham-Ks

Job Ticket: 38976

DST#: 1

ATTN: Jim Phillips

Test Start: 2010.06.12 @ 14:07:15

Tool Information

Drill Pipe:	Length: 3454.00 ft	Diameter: 3.80 inches	Volume: 48.45 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: 20000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 55000.00 lb
			<u>Total Volume: 48.60 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	4.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3500.00 ft			Final 51000.00 lb
Depth to Bottom Packer:	ft			
Interval between 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			3481.00	
Shut In Tool	5.00			3486.00	
Hydraulic tool	5.00			3491.00	
Packer	5.00			3496.00	20.00 Bottom Of Top Packer
Packer	4.00			3500.00	
Stubb	1.00			3501.00	
Recorder	0.00	8354	Inside	3501.00	
Recorder	0.00	8520	Outside	3501.00	
Perforations	26.00			3527.00	
Bullnose	3.00			3530.00	30.00 Bottom Packers & Anchor
Total Tool Length:	50.00				



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Phillips Exploration Co LC

A J Rice Trust # 1-30

1601 Sagebrush
Wichita Ks 67230

30-8-22-Graham-Ks

Job Ticket: 38976

DST#: 1

ATTN: Jim Phillips

Test Start: 2010.06.12 @ 14:07:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

32 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

43000 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.17 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1300.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
110.00	Mdy Wtr	1.270
70.00	OCGsyM 30%o 10%g 60%m	0.982
485.00	CGsyO 10%g 90%o	6.803
0.00	185 GIP	0.000

Total Length: 665.00 ft Total Volume: 9.055 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

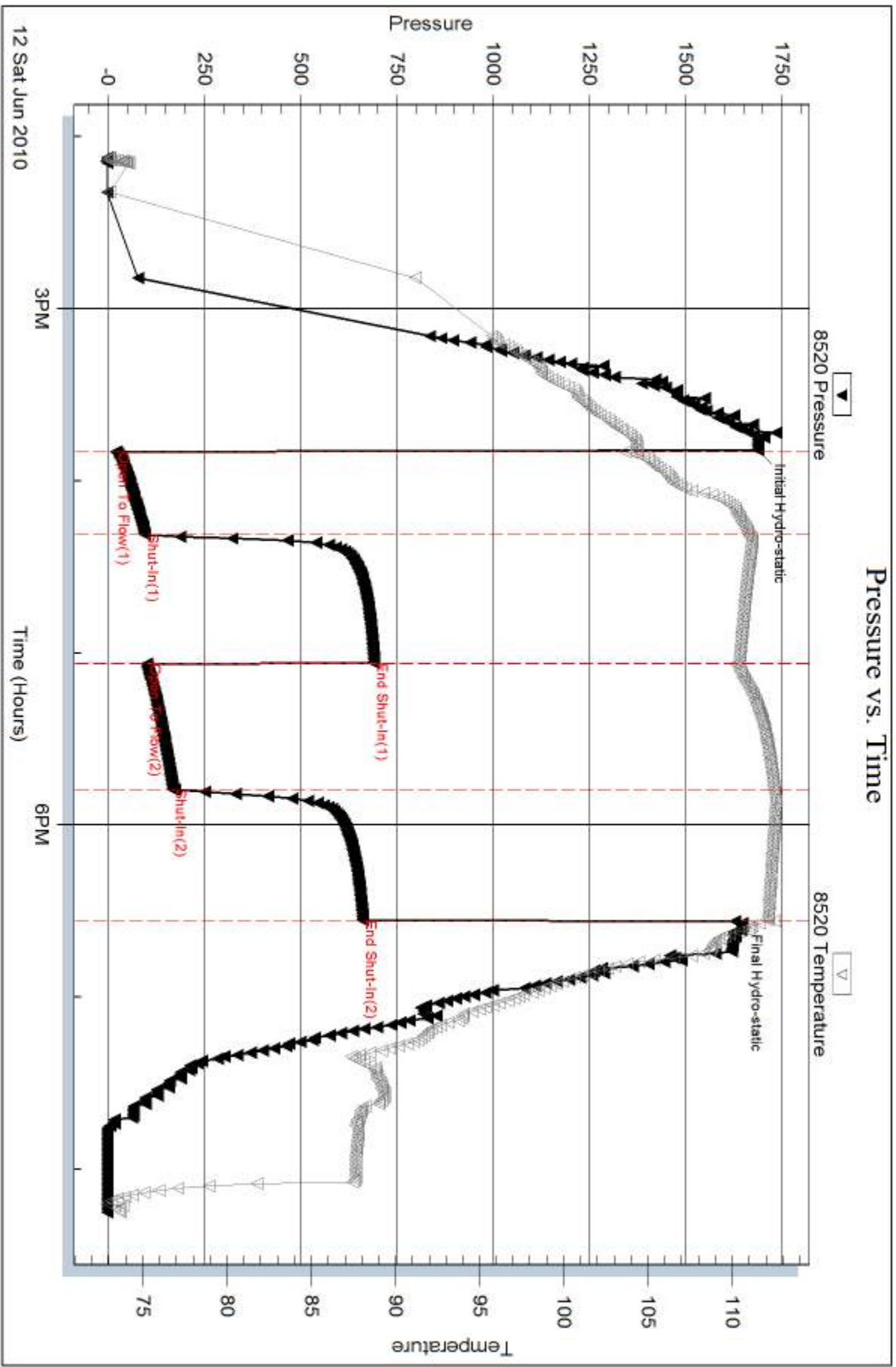
Recovery Comments: Rw .13 @ 78 =43000ppm

Serial #: 8520

Outside Phillips Exploration Co LC

30-8-22-Graham Ks

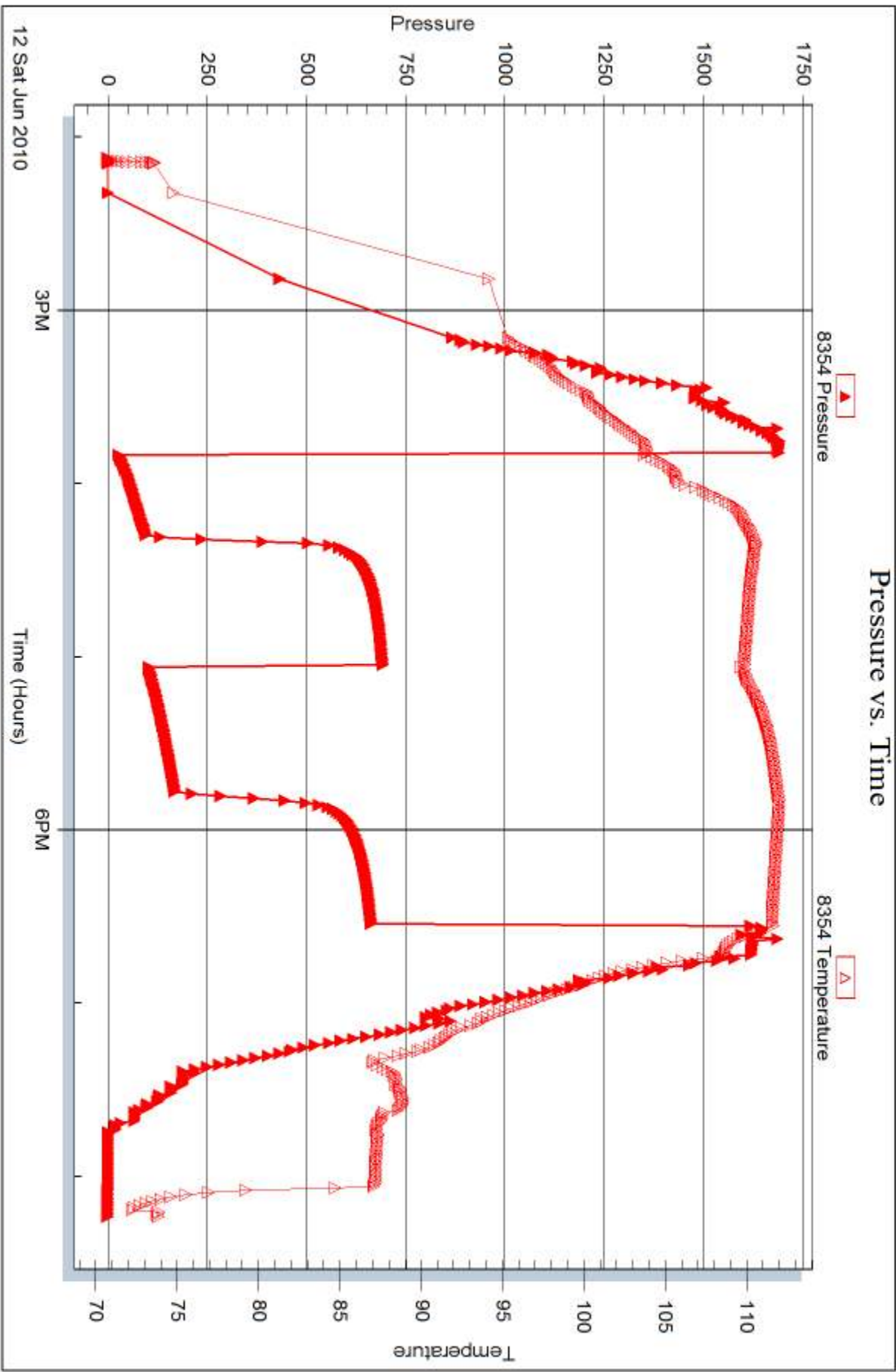
DST Test Number: 1



Triobite Testing, Inc

Ref. No: 39976

Printed: 2014.06.12 @ 09:44:26





DRILL STEM TEST REPORT

Prepared For: **Phillips Exploration Co LC**

1601 Sagebrush
Wichita Ks 67230

ATTN: Jim Phillips

30-8-22-Graham-Ks

A J Rice Trust # 1-30

Start Date: 2010.06.13 @ 07:50:49

End Date: 2010.06.13 @ 12:53:03

Job Ticket #: 38977 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.06.12 @ 08:48:38



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Phillips Exploration Co LC

A J Rice Trust # 1-30

1601 Sagebrush
Wichita Ks 67230

30-8-22-Graham-Ks

Job Ticket: 38977

DST#: 2

ATTN: Jim Phillips

Test Start: 2010.06.13 @ 07:50:49

GENERAL INFORMATION:

Formation: **H-I-J LK**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 09:39:18
 Time Test Ended: 12:53:03
 Interval: **3590.00 ft (KB) To 3630.00 ft (KB) (TVD)**
 Total Depth: 3630.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Dan Bangle
 Unit No: 38
 Reference Elevations: 2202.00 ft (KB)
 2197.00 ft (CF)
 KB to GR/CF: 5.00 ft

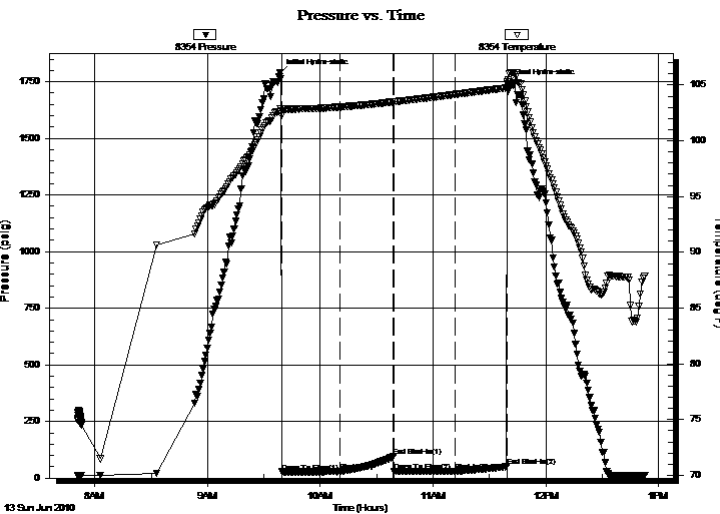
Serial #: 8354

Inside

Press@RunDepth: 29.99 psig @ 3591.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2010.06.13 End Date: 2010.06.13 Last Calib.: 2010.06.13
 Start Time: 07:50:49 End Time: 12:53:03 Time On Btm: 2010.06.13 @ 09:38:18
 Time Off Btm: 2010.06.13 @ 11:39:33

TEST COMMENT: IF-Weak died in 20 min

FF-No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1787.48	102.67	Initial Hydro-static
1	27.23	102.22	Open To Flow (1)
32	29.77	103.02	Shut-In(1)
61	95.15	103.49	End Shut-In(1)
61	28.67	103.49	Open To Flow (2)
94	29.99	104.15	Shut-In(2)
121	51.04	104.74	End Shut-In(2)
122	1739.50	105.33	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud w / oil spots	0.02

* Recovery from multiple tests

Gas Rates

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



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1601 Sagebrush
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ATTN: Jim Phillips

A J Rice Trust # 1-30

30-8-22-Graham-Ks

Job Ticket: 38977

DST#: 2

Test Start: 2010.06.13 @ 07:50:49

GENERAL INFORMATION:

Formation: **H-I-J LK**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 09:39:18
Time Test Ended: 12:53:03
Interval: **3590.00 ft (KB) To 3630.00 ft (KB) (TVD)**
Total Depth: 3630.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Test Type: Conventional Bottom Hole (Reset)
Tester: Dan Bangle
Unit No: 38
Reference Elevations: 2202.00 ft (KB)
2197.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8520

Outside

Press@RunDepth: psig @ 3591.00 ft (KB)

Start Date: 2010.06.13

End Date:

2010.06.13

Start Time: 07:50:49

End Time:

12:52:48

Capacity: 8000.00 psig

Last Calib.:

2010.06.13

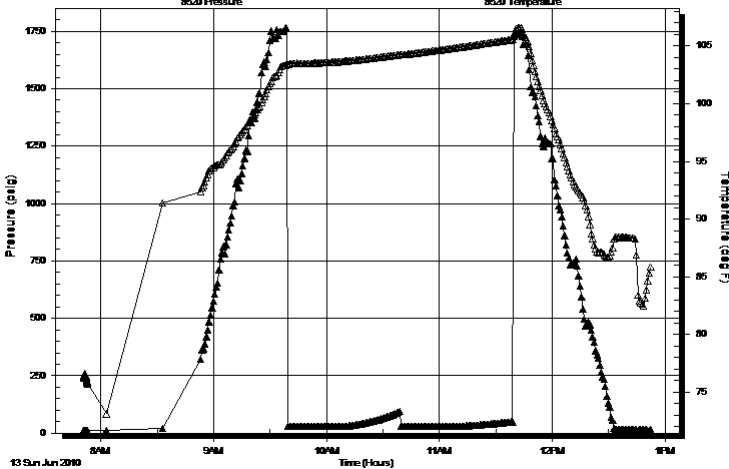
Time On Btm:

Time Off Btm:

TEST COMMENT: IF-Weak died in 20 min

FF-No blow

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud w / oil spots	0.02

Gas Rates

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

* Recovery from multiple tests



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DRILL STEM TEST REPORT

TOOL DIAGRAM

Phillips Exploration Co LC

A J Rice Trust # 1-30

1601 Sagebrush
Wichita Ks 67230

30-8-22-Graham-Ks

Job Ticket: 38977

DST#: 2

ATTN: Jim Phillips

Test Start: 2010.06.13 @ 07:50:49

Tool Information

Drill Pipe:	Length: 3549.00 ft	Diameter: 3.80 inches	Volume: 49.78 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: 20000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 55000.00 lb
			<u>Total Volume: 49.93 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3590.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between 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			3571.00	
Shut In Tool	5.00			3576.00	
Hydraulic tool	5.00			3581.00	
Packer	5.00			3586.00	20.00 Bottom Of Top Packer
Packer	4.00			3590.00	
Stubb	1.00			3591.00	
Recorder	0.00	8354	Inside	3591.00	
Recorder	0.00	8520	Outside	3591.00	
Perforations	26.00			3617.00	
Bullnose	3.00			3620.00	30.00 Bottom Packers & Anchor
Total Tool Length:	50.00				



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A J Rice Trust # 1-30

1601 Sagebrush
Wichita Ks 67230

30-8-22-Graham-Ks

Job Ticket: 38977

DST#: 2

ATTN: Jim Phillips

Test Start: 2010.06.13 @ 07:50:49

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: 49.00 sec/qt

Cushion Volume: bbl

Water Loss: 7.57 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 1500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud w / oil spots	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

