

15-065-23693

14-7s-24w

15-065-23693



DRILL STEM TEST REPORT

Prepared For: **A&A PRODUCTION**

PO BOX 100
HILL CITY KS 67642

ATTN: DARREL ANDERSON

14-7S-24W

ANDERSON 14-1

Start Date: 2010.11.02 @ 03:00:00

End Date: 2010.11.02 @ 10:44:00

Job Ticket #: 1044 DST #: 1

A&A PRODUCTION
ANDERSON 14-1
14-7S-24W
DST # 1
LKC -C-
2010.11.02

Eagle Testers LLC.

P.O.Box 1011, Great Bend, KS 67530

620-617-7548

Printed: 2010.11.03 @ 08:26:36



DRILL STEM TEST REPORT

A&A PRODUCTION

ANDERSON 14-1

PO BOX 100
HILL CITY KS 67642

14-7S-24W

Job Ticket: 1044

DST#: 1

ATTN: DARREL ANDERSON

Test Start: 2010.11.02 @ 03:00:00

GENERAL INFORMATION:

Formation: LKC -C-

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:01:00

Time Test Ended: 10:44:00

Test Type: Conventional Straddle (Initial)

Tester: DAVID NICHOLS

Unit No: 121 MILES RT HAYS KS

Interval: 3710.00 ft (KB) To 3750.00 ft (KB) (TVD)

Total Depth: 3920.00 ft (KB) (TVD)

Reference Elevations: 2386.00 ft (KB)

2382.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 4.00 ft

Serial #: 6651

Inside

Press@RunDepth: 189.61 psig @ 3894.00 ft (KB)

Start Date: 2010.11.02

End Date: 2010.11.02

Capacity: 5000.00 psig

Last Calib.: 2010.11.02

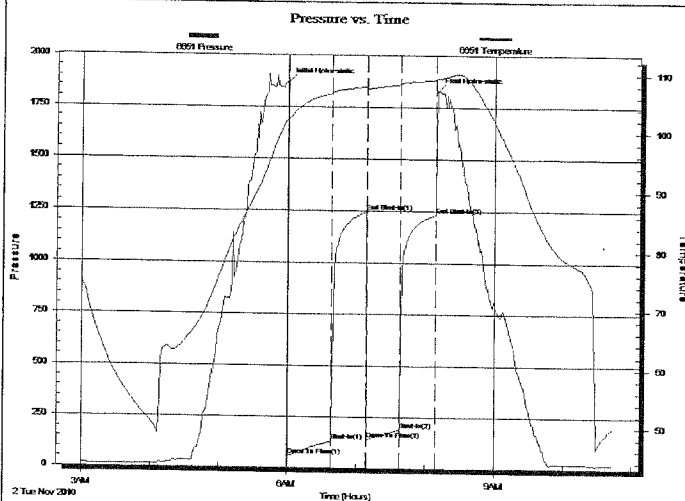
Start Time: 03:01:00

End Time: 10:44:00

Time On Btm: 2010.11.02 @ 06:00:30

Time Off Btm: 2010.11.02 @ 08:10:30

TEST COMMENT: 40-INITIAL OPENING SURFACE BLOW
30-INITIAL SHUT IN NO BLOW BACK
30-FINAL OPENING WEAK BUILDING BLOW BOTTOM BUCKET IN 30 MINS
30-FINAL SHUT IN NO BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1870.95	102.40	Initial Hydro-static
1	57.38	102.12	Open To Flow (1)
38	130.20	106.62	Shut-In(1)
68	1247.69	107.82	End Shut-In(1)
69	139.88	107.48	Open To Flow (2)
98	189.61	108.21	Shut-In(2)
129	1234.40	109.05	End Shut-In(2)
130	1828.49	109.24	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
70.00	MUD TRACE OF WATER 95%M 5%WATER	0.92
120.00	MUDDY WATER 20%MUD 80%WATER	1.75
60.00	WATER 100%WATER	0.88
60.00	WATERY MUD 20%WATER 80%MUD	0.88

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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DRILL STEM TEST REPORT

TOOL DIAGRAM

A&A PRODUCTION

ANDERSON 14-1

PO BOX 100
HILL CITY KS 67642

14-7S-24W

Job Ticket: 1044

DST#: 1

ATTN: DARREL ANDERSON

Test Start: 2010.11.02 @ 03:00:00

Tool Information

Drill Pipe:	Length: 3689.00 ft	Diameter: 3.88 inches	Volume: 53.95 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: 7.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 35000.00 lb
			Total Volume: 53.95 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	1.00 ft			String Weight: Initial 25000.00 lb
Depth to Top Packer:	3710.00 ft			Final 25000.00 lb
Depth to Bottom Packer:	3712.00 ft			
Interval between Packers:	2.00 ft			
Tool Length:	204.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
SHUT IN TOOL	5.00			3700.00	
HYD S.I. Tool	5.00			3705.00	
TRAVEL COLER	2.00			3707.00	
Packer	3.00			3710.00	15.00 Bottom Of Top Packer
TRAVEL COLER	2.00			3712.00	
Packer	3.00			3715.00	
Perforations	33.00			3748.00	
Blank Off Sub	1.00			3749.00	
T.C.	2.00			3751.00	2.00 Tool Interval
Packer	3.00			3754.00	
C.O. Sub	0.75			3754.75	
DRILL PIPE	124.50			3879.25	
CH OVER SUB	0.75			3880.00	
Anchor	14.00			3894.00	
Recorder	0.00	6651	Inside	3894.00	
Recorder	0.00		Outside	3894.00	
BULL PLUG	5.00			3899.00	187.00 Bottom Packers & Anchor
Total Tool Length:		204.00			



DRILL STEM TEST REPORT

FLUID SUMMARY

A&A PRODUCTION

ANDERSON 14-1

PO BOX 100
HILL CITY KS 67642

14-7S-24W

Job Ticket: 1044

DST#: 1

ATTN: DARREL ANDERSON

Test Start: 2010.11.02 @ 03:00:00

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: 49.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.99 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
70.00	MUD TRACE OF WATER 95%M 5%WATER	0.921
120.00	MUDDY WATER 20%MUD 80%WATER	1.755
60.00	WATER 100%WATER	0.877
60.00	WATERY MUD 20%WATER 80%MUD	0.877

Total Length: 310.00 ft

Total Volume: 4.430 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

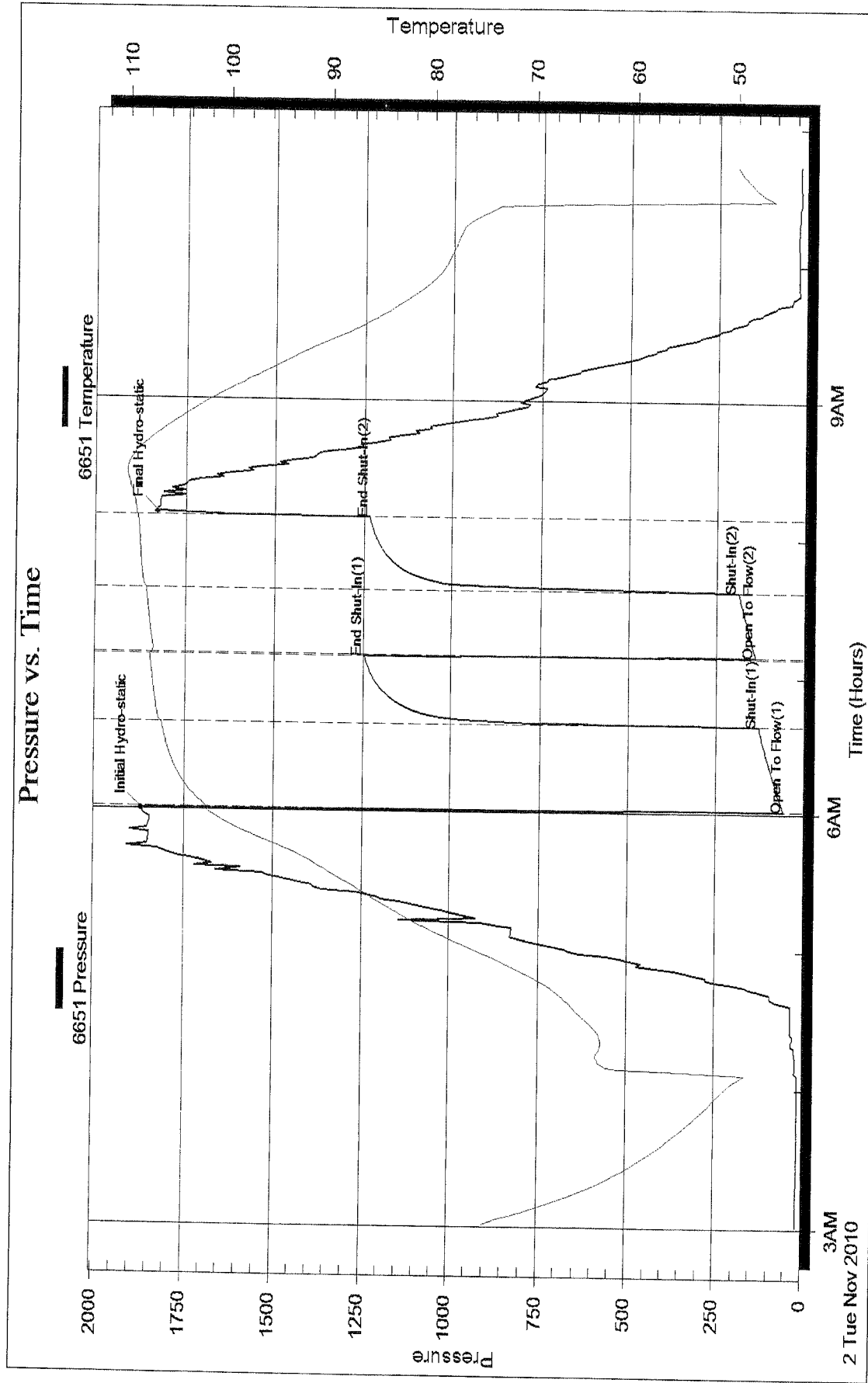
Serial #: 6651

Inside

A&A PRODUCTION

14-7S-24W

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **A&A PRODUCTION**

PO BOX 100
HILL CITY KS 67642

ATTN: DARREL ANDERSON

14-7S-24W

ANDERSON 14-1

Start Date: 2010.11.02 @ 09:00:00

End Date: 2010.11.02 @ 15:37:00

Job Ticket #: 1045 DST #: 2

Eagle Testers LLC.

P.O.Box 1011, Great Bend, KS 67530

620-617-7548

Printed: 2010.11.03 @ 08:27:19

A&A PRODUCTION ANDERSON 14-1 14-7S-24W DST # 2 TORONTO 2010.11.02



DRILL STEM TEST REPORT

A&A PRODUCTION

ANDERSON 14-1

PO BOX 100
HILL CITY KS 67642

14-7S-24W

Job Ticket: 1045

DST#: 2

ATTN: DARREL ANDERSON

Test Start: 2010.11.02 @ 09:00:00

GENERAL INFORMATION:

Formation: **TORONTO**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:18:00

Time Test Ended: 15:37:00

Test Type: Conventional Straddle (Initial)

Tester: DAVID NICHOLS

Unit No: 15

Interval: 3650.00 ft (KB) To 3688.00 ft (KB) (TVD)

Total Depth: 3920.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2386.00 ft (KB)

2382.00 ft (CF)

KB to GR/CF: 4.00 ft

Serial #: 6651

Inside

Press@RunDepth: 80.79 psig @ 3929.00 ft (KB)

Start Date: 2010.11.02 End Date: 2010.11.02

Start Time: 09:01:00 End Time: 15:37:00

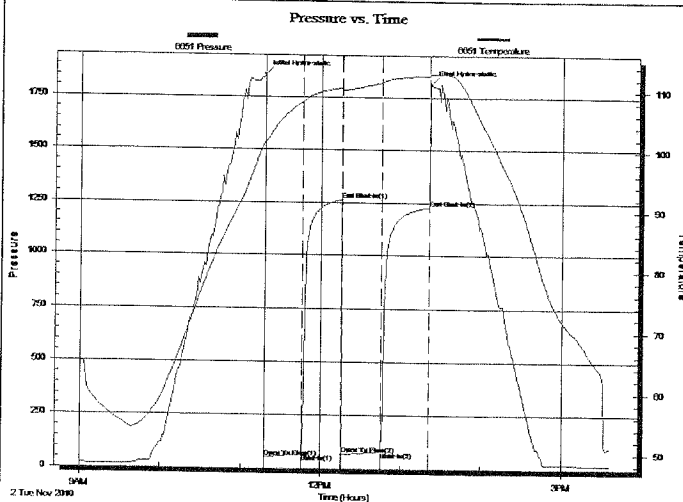
Capacity: 5000.00 psig

Last Calib.: 2010.11.02

Time On Btm: 2010.11.02 @ 11:17:30

Time Off Btm: 2010.11.02 @ 13:22:00

TEST COMMENT: 30-INITIAL OPENING WEAK BLOW QUILT TOD 3 1/2 INCHES INTO WATER
30-INITIAL SHUT IN NO BLOW BACK
30-FINAL OPENING WEAK BLOW BUILT TO 3 1/2 INCHES INTO WATER
30-FINAL SHUT IN NO BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1856.84	101.55	Initial Hydro-static
1	51.98	101.33	Open To Flow (1)
29	67.42	108.20	Shut-In(1)
58	1262.22	110.50	End Shut-In(1)
59	67.38	110.19	Open To Flow (2)
88	80.79	111.41	Shut-In(2)
124	1227.74	112.67	End Shut-In(2)
125	1812.49	112.85	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
70.00	MUD 100%MUD	1.02

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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DRILL STEM TEST REPORT

TOOL DIAGRAM

A&A PRODUCTION

ANDERSON 14-1

PO BOX 100
HILL CITY KS 67642

14-7S-24W

Job Ticket: 1045

DST#: 2

ATTN: DARREL ANDERSON

Test Start: 2010.11.02 @ 09:00:00

Tool Information

Drill Pipe:	Length: 3637.00 ft	Diameter: 3.88 inches	Volume: 53.19 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 35000.00 lb
			Total Volume: 53.19 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	2.00 ft			String Weight: Initial 25000.00 lb
Depth to Top Packer:	3650.00 ft			Final 25000.00 lb
Depth to Bottom Packer:	3652.00 ft			
Interval between Packers:	2.00 ft			
Tool Length:	299.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
SHUT IN TOOL	5.00			3640.00		
HYD S.I. Tool	5.00			3645.00		
TRAVEL COLER	2.00			3647.00		
Packer	3.00			3650.00	15.00	Bottom Of Top Packer
TRAVEL COLER	2.00			3652.00		
Packer	3.00			3655.00		
Perforations	33.00			3688.00		
Blank Off Sub	1.00			3689.00		
T.C.	2.00			3691.00	2.00	Tool Interval
Packer	3.00			3694.00		
CH OVER SUB	0.75			3694.75		
DRILL PIPE	218.50			3913.25		
CH OVER SUB	0.75			3914.00		
Anchor	15.00			3929.00		
Recorder	0.00	6651	Inside	3929.00		
Recorder	0.00		Outside	3929.00		
BULL PLUG	5.00			3934.00	282.00	Bottom Packers & Anchor
Total Tool Length:	299.00					



DRILL STEM TEST REPORT

FLUID SUMMARY

A&A PRODUCTION

ANDERSON 14-1

PO BOX 100
HILL CITY KS 67642

14-7S-24W

Job Ticket: 1045

DST#: 2

ATTN: DARREL ANDERSON

Test Start: 2010.11.02 @ 09:00:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 49.00 sec/qt

Water Loss: 7.99 in³

Resistivity: ohm.m

Salinity: 1500.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
70.00	MUD 100%MUD	1.024

Total Length: 70.00 ft

Total Volume: 1.024 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

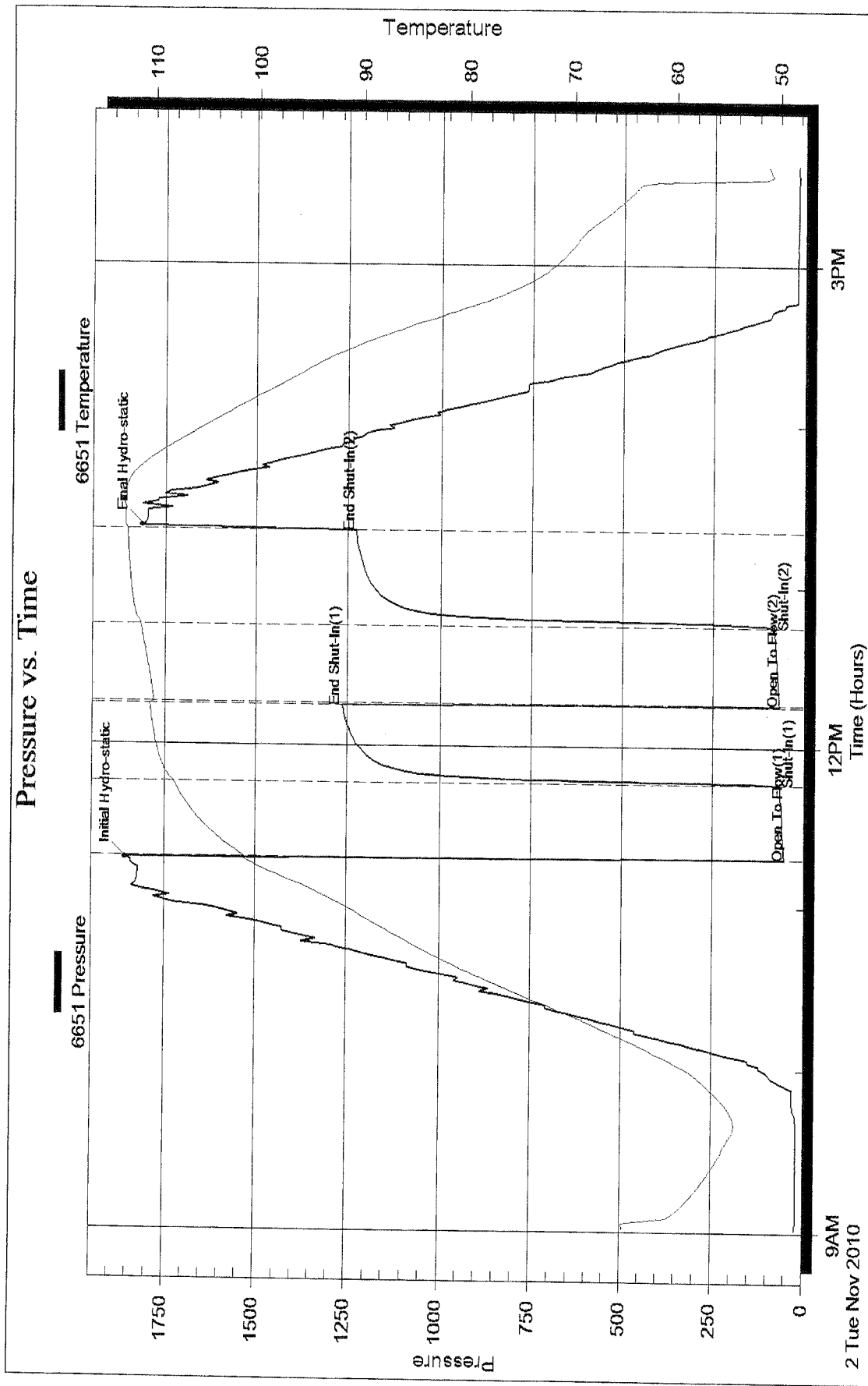
Serial #: 6651

Inside

A&A PRODUCTION

14-7S-24W

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **A&A PRODUCTION**

PO BOX 100
HILL CITY KS 67642

ATTN: DARREL ANDERSON

14-7S-24W

ANDERSON 14-1

Start Date: 2010.11.02 @ 16:00:00

End Date: 2010.11.02 @ 22:23:30

Job Ticket #: 1046 DST #: 3

Eagle Testers LLC.

P.O.Box 1011, Great Bend, KS 67530

620-617-7548

Printed: 2010.11.03 @ 08:27:38

A&A PRODUCTION

ANDERSON 14-1

14-7S-24W

DST # 3

BOTTOM LKC

2010.11.02



DRILL STEM TEST REPORT

A&A PRODUCTION

ANDERSON 14-1

PO BOX 100
HILL CITY KS 67642

14-7S-24W

Job Ticket: 1046

DST#: 3

ATTN: DARREL ANDERSON

Test Start: 2010.11.02 @ 16:00:00

GENERAL INFORMATION:

Formation: **BOTTOM LKC**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:46:00

Time Test Ended: 22:23:30

Test Type: Conventional Bottom Hole (Initial)

Tester: DAVID NICHOLS

Unit No: 15

Interval: **3815.00 ft (KB) To 3920.00 ft (KB) (TVD)**

Total Depth: 3920.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Poor

Reference Elevations: 2386.00 ft (KB)

2382.00 ft (CF)

KB to GR/CF: 4.00 ft

Serial #: **6651**

Inside

Press@RunDepth: 91.36 psig @ 3916.00 ft (KB)

Start Date: 2010.11.02

End Date:

2010.11.02

Capacity: 5000.00 psig

Last Calib.: 2010.11.02

Start Time: 16:01:00

End Time:

22:23:30

Time On Btm: 2010.11.02 @ 17:45:30

Time Off Btm: 2010.11.02 @ 19:50:00

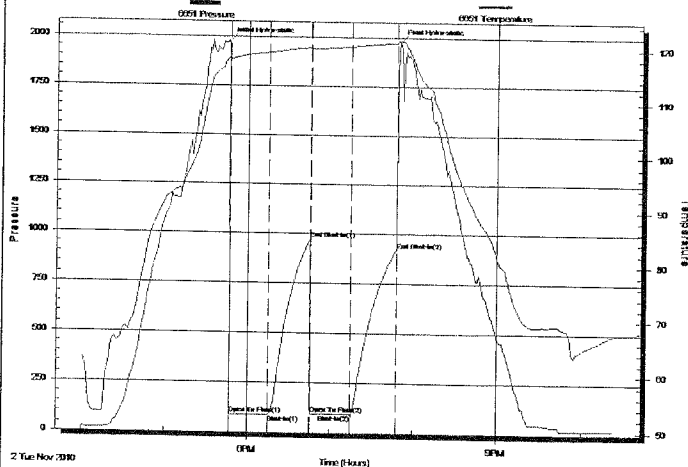
TEST COMMENT: 30-INITIAL OPENING WEAK BLOW BUILT TO 3 INCHES INTO WATER

30-INITIAL SHUT IN NO BLOW BACK

30-FINAL OPENING SURFACE BLOW

30-FINAL SHUT IN NO BLOW BACK

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1972.61	118.20	Initial Hydro-static
1	88.40	117.77	Open To Flow (1)
30	89.02	119.19	Shut-In(1)
60	970.93	120.10	End Shut-In(1)
60	91.62	119.81	Open To Flow (2)
90	91.36	120.33	Shut-In(2)
123	915.77	121.05	End Shut-In(2)
125	1973.97	121.41	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	MUD 100%	0.44

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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DRILL STEM TEST REPORT

TOOL DIAGRAM

A&A PRODUCTION

ANDERSON 14-1

PO BOX 100
HILL CITY KS 67642

14-7S-24W

Job Ticket: 1046

DST#: 3

ATTN: DARREL ANDERSON

Test Start: 2010.11.02 @ 16:00:00

Tool Information

Drill Pipe:	Length: 3800.00 ft	Diameter: 3.88 inches	Volume: 55.57 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 55000.00 lb
			Total Volume: 55.57 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	0.00 ft			String Weight: Initial 25000.00 lb
Depth to Top Packer:	3815.00 ft			Final 25000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	105.00 ft			
Tool Length:	120.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
SHUT IN TOOL	5.00			3805.00	
HYD S.I. Tool	5.00			3810.00	
TRAVEL COLER	2.00			3812.00	
Packer	3.00			3815.00	15.00 Bottom Of Top Packer
TRAVEL COLER	2.00			3817.00	
PACKER	3.00			3820.00	
CH OVER SUB	0.75			3820.75	
DRILL PIPE	62.50			3883.25	
CH OVER SUB	0.75			3884.00	
Anchor	31.00			3915.00	
Recorder	1.00	6651	Inside	3916.00	
Recorder	1.00		Outside	3917.00	
BULL PLUG	3.00			3920.00	105.00 Anchor Tool
Total Tool Length:	120.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

A&A PRODUCTION

ANDERSON 14-1

PO BOX 100
HILL CITY KS 67642

14-7S-24W

Job Ticket: 1046

DST#: 3

ATTN: DARREL ANDERSON

Test Start: 2010.11.02 @ 16:00:00

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: 49.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.99 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
30.00	MUD 100%	0.439

Total Length: 30.00 ft

Total Volume: 0.439 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6651

Inside

A&A PRODUCTION

14-7S-24W

DST Test Number: 3

