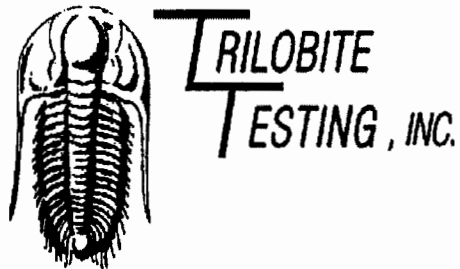


CONFIDENTIAL

15-051-25200



DRILL STEM TEST REPORT

Prepared For: John O Farmer, Inc

ORIGINAL

Box 332
Russell, Ks 67665

CONFIDENTIAL

ATTN: John O Farmer

KCC

5-13-17-Ellis-KS MAY 01 2003

Brungardt **CONFIDENTIAL**

Start Date: 2003.03.13 @ 00:22:27

End Date: 2003.03.13 @ 06:22:57

Job Ticket #: 17462

DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

John O Farmer, Inc

Brungardt #2

5-13-17-Ellis-Ks

DST # 1

Oread

2003.03.13

CONFIDENTIAL

ORIGINAL


**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

John O Farmer, Inc

Brungardt #2

Box 352
Russell, Ks 67665

5-13-17-Ellis-Ks

Job Ticket: 17462

DST#: 1

ATTN: John O Farmer

Test Start: 2003.03.13 @ 00:22:27

GENERAL INFORMATION:

Formation: **Oread**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:27:27

Time Test Ended: 06:22:57

Interval: 3224.00 ft (KB) To 3285.00 ft (KB) (TVD)

Total Depth: 3285.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

KCC

MAY 01 2003

CONFIDENTIAL

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 21

Reference Elevations: 2035.00 ft (KB)

2027.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 2357

Inside

Press@RunDepth: 30.56 psig @ 3230.00 ft (KB)

Start Date: 2003.03.13

End Date:

2003.03.13

Start Time: 00:22:32

End Time:

06:22:56

Capacity: 7000.00 psig

Last Calib.: 2003.03.13

Time On Btm: 2003.03.13 @ 02:26:57

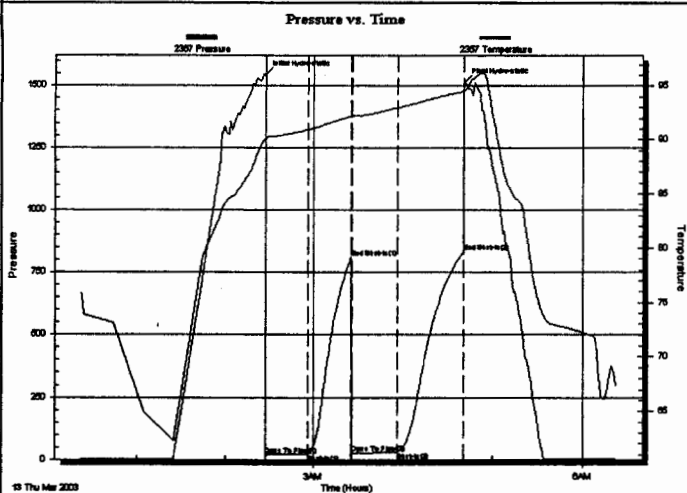
Time Off Btm: 2003.03.13 @ 04:40:57

TEST COMMENT: IF-Weak died in 17 min

FF-No blow

Times-30-30-30-45

CONFIDENTIAL



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1545.84	90.13	Initial Hydro-static
1	19.51	90.17	Open To Flow (1)
29	23.53	90.93	Shut-In(1)
59	809.80	92.19	End Shut-In(1)
59	25.55	92.20	Open To Flow (2)
89	30.56	92.97	Shut-In(2)
133	829.25	94.50	End Shut-In(2)
134	1517.94	94.58	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud w/ oil spots	0.05

Gas Rates

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

ORIGINAL

CONFIDENTIAL
TRILOBITE
TESTING, INC.



DRILL STEM TEST REPORT

TOOL DIAGRAM

John O Farmer, Inc

Brungardt #2

Box 352
Russell, Ks 67665

5-13-17-Ellis-Ks

Job Ticket: 17462

DST#: 1

ATTN: John O Farmer

Test Start: 2003.03.13 @ 00:22:27

Tool Information

Drill Pipe:	Length: 3192.00 ft	Diameter: 3.80 inches	Volume: 44.78 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: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 50000.00 lb
		Total Volume: 44.93 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3224.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	61.00 ft			
Tool Length:	82.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

KCC

MAY 01 2003

CONFIDENTIAL

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			3204.00	
S.I. Tool	5.00			3209.00	
HMV	5.00			3214.00	
Packer	5.00			3219.00	21.00 Bottom Of Top Packer
Packer	5.00			3224.00	
Stubb	1.00			3225.00	
Perforations	4.00			3229.00	
C.O. Sub	1.00			3230.00	
Recorder	0.00	2357	Inside	3230.00	
Blank Spacing	31.00			3261.00	
C.O. Sub	1.00			3262.00	
Recorder	0.00	13254	Outside	3262.00	
Perforations	20.00			3282.00	
Bullnose	3.00			3285.00	61.00 Bottom Packers & Anchor

Total Tool Length: 82.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

CONFIDENTIAL

FLUID SUMMARY

John O Farmer, Inc

Brungardt #2

Box 352
Russell, Ks 67665

5-13-17-Ellys-Ks

Job Ticket: 17462

DST#: 1

ATTN: John O Farmer

Test Start: 2003.03.13 @ 00:22:27

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 45.00 sec/qt

Water Loss: 12.75 in³

Resistivity: ohm.m

Salinity: 11000.00 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
10.00	Mud w/ oil spots	0.049

Total Length: 10.00 ft

Total Volume: 0.049 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

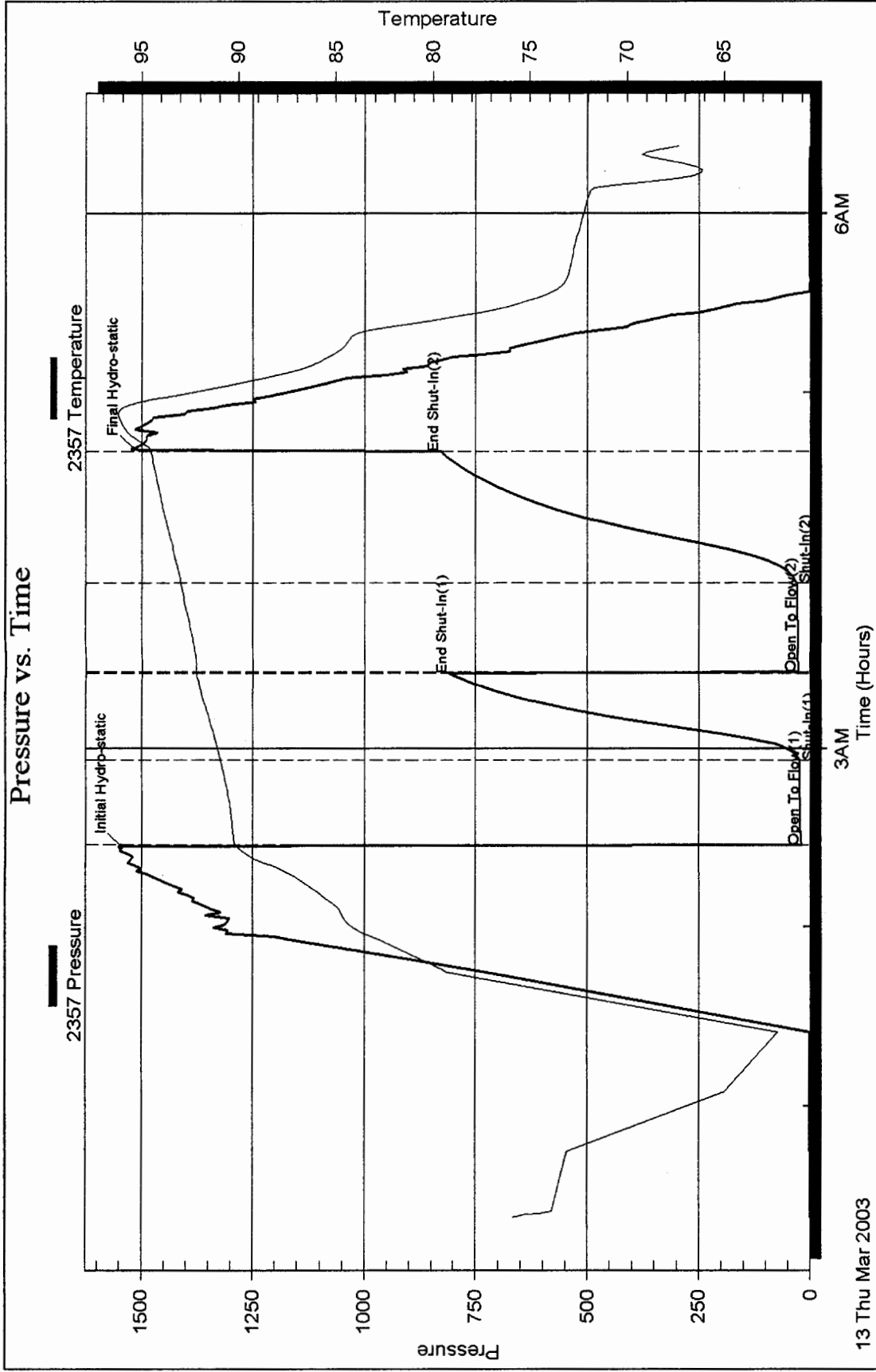
Serial #: 2357

Inside

John O Farmer, Inc

5-13-17-Ellis-Ks

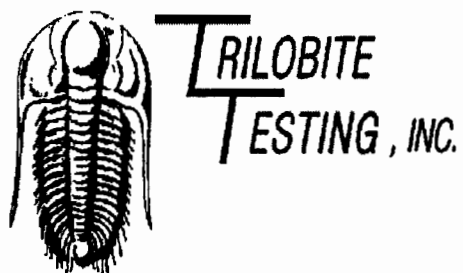
DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 17462

Printed: 2003.03.17 @ 15:42:21 Page 5



DRILL STEM TEST REPORT

Prepared For: **John O Farmer, Inc**

Box 352
Russell, Ks 67665

ATTN: John O Farmer

5-13-17-Ellis-Ks

Brungardt #2

Start Date: 2003.03.13 @ 13:52:10

End Date: 2003.03.13 @ 20:04:40

Job Ticket #: 17463 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

John O Farmer, Inc

Box 352
Russell, Ks 67665

ATTN: John O Farmer

Brungardt #2

5-13-17-Ellis-Ks

Job Ticket: 17463

DST#: 2

Test Start: 2003.03.13 @ 13:52:10

GENERAL INFORMATION:

Formation: **Toronto/C LKC**

Deviated: **No Whipstock:** ft (KB)

Time Tool Opened: 15:19:10

Time Test Ended: 20:04:40

Interval: **3259.00 ft (KB) To 3365.00 ft (KB) (TVD)**

Total Depth: **3365.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Good**

Test Type: **Conventional Bottom Hole**

Tester: **Dan Bangle**

Unit No: **21**

Reference Elevations: **2035.00 ft (KB)**

2027.00 ft (CF)

KB to GR/CF: **8.00 ft**

Serial #: 2357

Inside

Press@RunDepth: **231.83 psig @ 3265.00 ft (KB)**

Start Date: **2003.03.13**

End Date:

2003.03.13

Capacity: **7000.00 psig**

Last Calib.:

2003.03.13

Start Time: **13:52:15**

End Time:

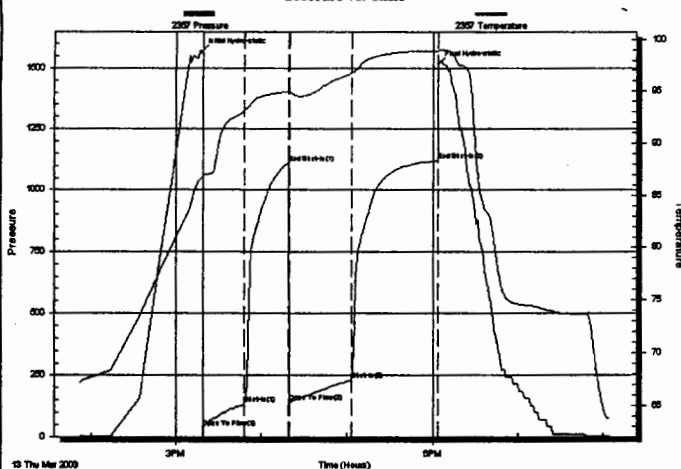
20:04:39

Time On Btm: **2003.03.13 @ 15:17:40**

Time Off Btm: **2003.03.13 @ 18:03:40**

TEST COMMENT: IF-Strong BOB in 5 min
ISI-Strong BOB in 10 min
FF-Strong BOB in 6 min
FSI-Strong BOB in 15 min

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1564.91	86.64	Initial Hydro-static
2	36.59	86.87	Open To Flow (1)
31	134.14	93.15	Shut-In (1)
61	1111.35	94.97	End Shut-In (1)
62	142.69	94.97	Open To Flow (2)
106	231.83	96.79	Shut-In (2)
166	1121.36	98.87	End Shut-In (2)
166	1516.48	98.87	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
186.00	HMOGSy O 20%g 20%m 60%o	2.34
355.00	CGSyO 20%g 80%o	4.98
0.00	1255 GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O Farmer, Inc

Brungardt #2

Box 352
Russell, Ks 67665

5-13-17-Ellis-Ks

Job Ticket: 17463

DST#: 2

ATTN: John O Farmer

Test Start: 2003.03.13 @ 13:52:10

Tool Information

Drill Pipe:	Length: 3224.00 ft	Diameter: 3.80 inches	Volume: 45.22 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	50000.00 lb
		Total Volume:	45.37 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial	42000.00 lb
Depth to Top Packer:	3259.00 ft			Final	44000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	106.00 ft				
Tool Length:	127.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		
Tool Comments:					

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			3239.00	
S.I. Tool	5.00			3244.00	
HMV	5.00			3249.00	
Packer	5.00			3254.00	21.00 Bottom Of Top Packer
Packer	5.00			3259.00	
Stubb	1.00			3260.00	
Perforations	4.00			3264.00	
C.O. Sub	1.00			3265.00	
Recorder	0.00	2357	Inside	3265.00	
Blank Spacing	62.00			3327.00	
C.O. Sub	1.00			3328.00	
Recorder	0.00	13254	Outside	3328.00	
Perforations	34.00			3362.00	
Bullnose	3.00			3365.00	106.00 Bottom Packers & Anchor

Total Tool Length: 127.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O Farmer, Inc

Brungardt #2

Box 352
Russell, Ks 67665

5-13-17-Ellis-Ks

Job Ticket: 17463

DST#: 2

ATTN: John O Farmer

Test Start: 2003.03.13 @ 13:52:10

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

26 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 45.00 sec/qt

Cushion Volume:

bbl

Water Loss: 11.96 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 20000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
186.00	HMCgsy O 20%g 20%m 60%o	2.336
355.00	CGsyO 20%g 80%o	4.980
0.00	1255 GIP	0.000

Total Length: 541.00 ft

Total Volume: 7.316 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 2357

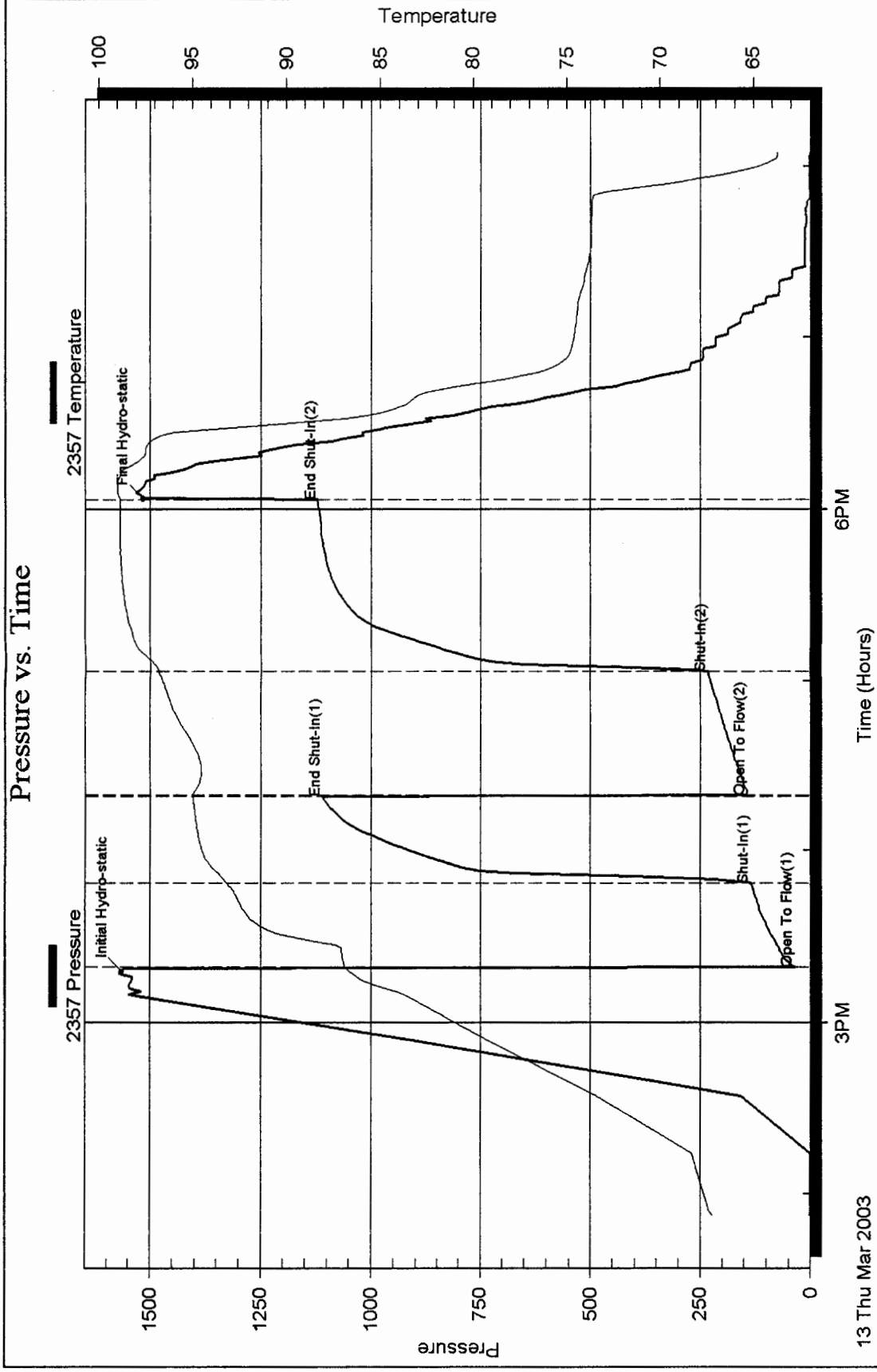
Inside

John O Farmer, Inc

5-13-17-Ellis-Ks

DST Test Number: 2

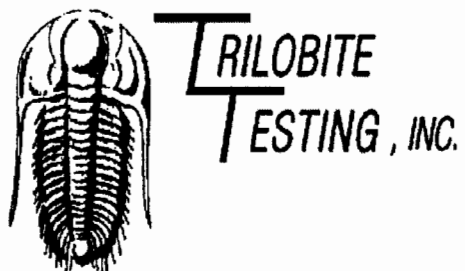
Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 17463

Printed: 2003.03.17 @ 15:43:33 Page 5



DRILL STEM TEST REPORT

Prepared For: **John O Farmer, Inc**

Box 352
Russell, Ks 67665

ATTN: John O Farmer

5-13-17-Ellis-Ks

Brungardt #2

Start Date: 2003.03.14 @ 03:45:25

End Date: 2003.03.14 @ 10:00:55

Job Ticket #: 17464 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

John O Farmer, Inc

Box 352
Russell, Ks 67665

ATTN: John O Farmer

Brungardt #2

5-13-17-Ellis-Ks

Job Ticket: 17464

DST#: 3

Test Start: 2003.03.14 @ 03:45:25

GENERAL INFORMATION:

Formation: **E-F-G LKC**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:28:55

Time Test Ended: 10:00:55

Interval: **3378.00 ft (KB) To 3420.00 ft (KB) (TVD)**

Total Depth: 3420.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 21

Reference Elevations: 2035.00 ft (KB)

2027.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 2357

Inside

Press@RunDepth: 149.24 psig @ 3383.00 ft (KB)

Start Date: 2003.03.14

End Date:

2003.03.14

Start Time: 03:45:30

End Time:

10:00:54

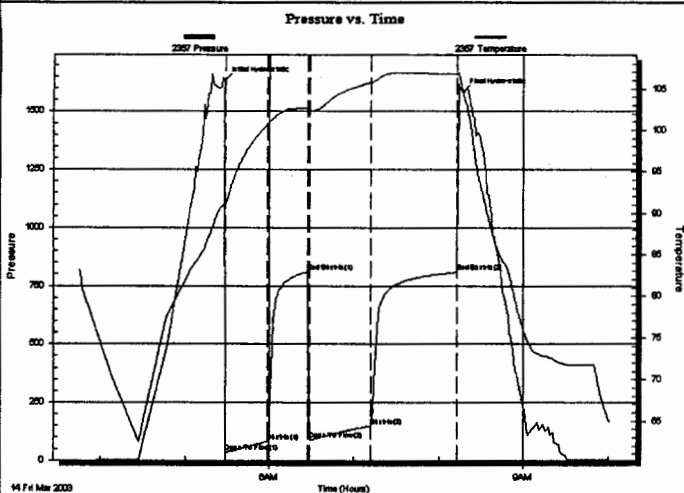
Capacity: 7000.00 psig

Last Calib.: 2003.03.14

Time On Btm: 2003.03.14 @ 05:28:25

Time Off Btm: 2003.03.14 @ 08:16:55

TEST COMMENT: IF-Strong BOB in 5 min
IS-Weak building to 5"
FF-Strong-BOB in 5 min
FSI-Weak building to 7"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1633.14	91.06	Initial Hydro-static
1	35.83	91.11	Open To Flow (1)
30	81.31	100.64	Shut-In(1)
59	810.16	102.59	End Shut-In(1)
60	90.08	102.52	Open To Flow (2)
104	149.24	105.76	Shut-In(2)
165	808.64	106.84	End Shut-In(2)
169	1584.73	104.59	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	MCGsyO 10% m 90% o 10% g	1.47
372.00	CGsyO 20% g 80% o	5.22
0.00	1612 GIP	0.00

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O Farmer, Inc

Brungardt #2

Box 352
Russell, Ks 67665

5-13-17-Ellis-Ks

Job Ticket: 17464

DST#: 3

ATTN: John O Farmer

Test Start: 2003.03.14 @ 03:45:25

Tool Information

Drill Pipe:	Length: 3347.00 ft	Diameter: 3.80 inches	Volume: 46.95 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 50000.00 lb
			Total Volume: 47.10 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 43000.00 lb
Depth to Top Packer:	3378.00 ft			Final 44000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	42.00 ft			
Tool Length:	63.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			3358.00	
S.I. Tool	5.00			3363.00	
HMV	5.00			3368.00	
Packer	5.00			3373.00	21.00 Bottom Of Top Packer
Packer	5.00			3378.00	
Stubb	1.00			3379.00	
Perforations	4.00			3383.00	
Recorder	0.00	2357	Inside	3383.00	
Perforations	34.00			3417.00	
Recorder	0.00	13254		3417.00	
Bullnose	3.00			3420.00	42.00 Bottom Packers & Anchor

Total Tool Length: 63.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O Farmer, Inc

Brungardt #2

Box 352
Russell, Ks 67665

5-13-17-Ellis-Ks

Job Ticket: 17464

DST#: 3

ATTN: John O Farmer

Test Start: 2003.03.14 @ 03:45:25

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

30 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 45.00 sec/qt

Cushion Volume:

bbl

Water Loss: 11.97 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 20000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
124.00	MCGsyO 10% m 90% o 10% g	1.466
372.00	CGsyO 20% g 80% o	5.218
0.00	1612 GIP	0.000

Total Length: 496.00 ft

Total Volume: 6.684 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

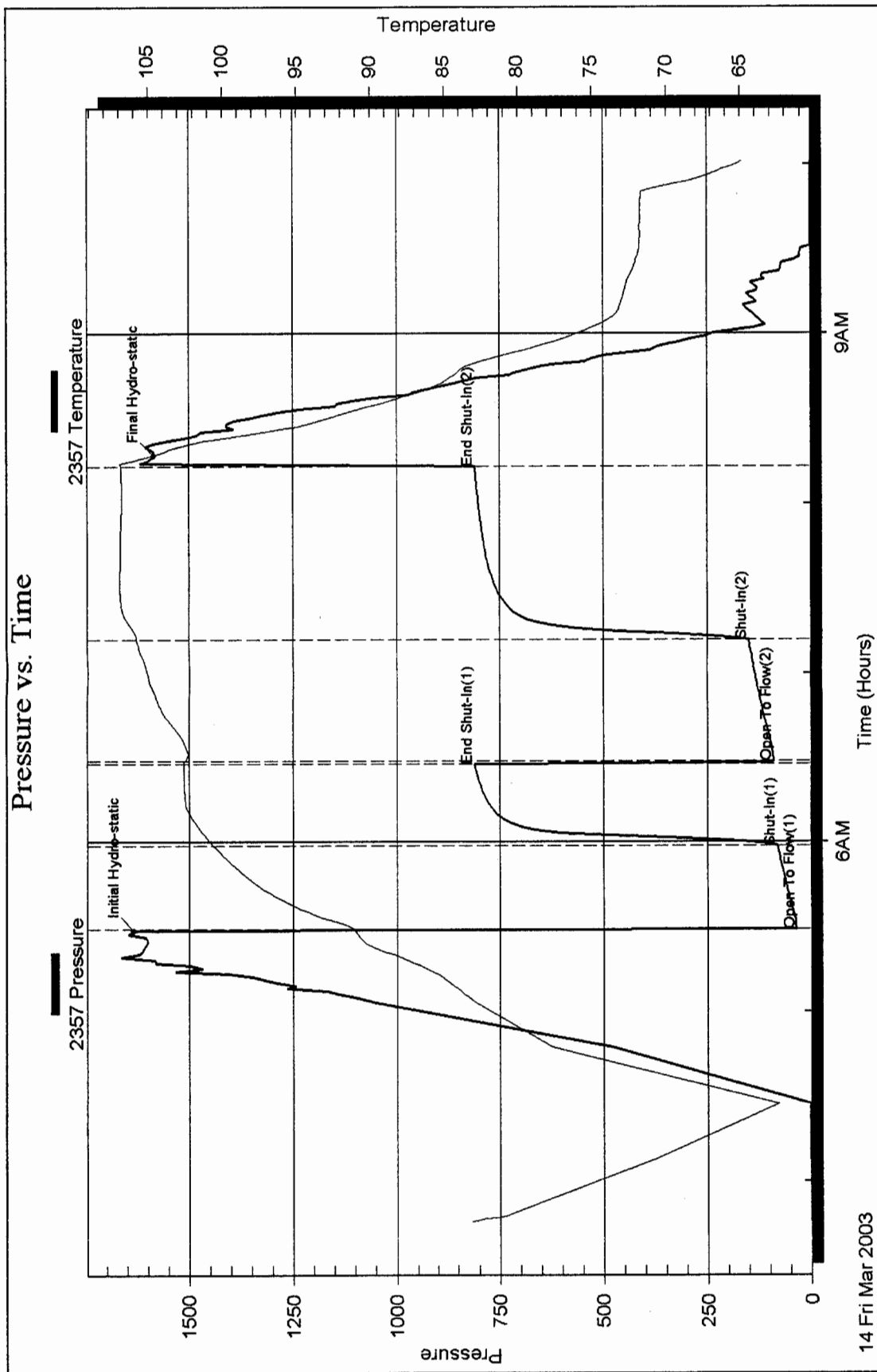
Serial #:

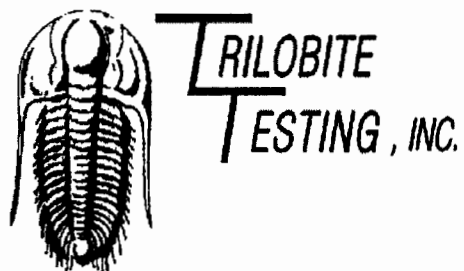
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **John O Farmer, Inc**

Box 352
Russell, Ks 67665

ATTN: John O Farmer

5-13-17-Ellis-Ks

Brungardt #2

Start Date: 2003.03.14 @ 20:20:01

End Date: 2003.03.15 @ 02:32:01

Job Ticket #: 17465 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

John O Farmer, Inc

Box 352
Russell, Ks 67665

ATTN: John O Farmer

Brungardt #2

5-13-17-Ellis-Ks

Job Ticket: 17465

DST#: 4

Test Start: 2003.03.14 @ 20:20:01

GENERAL INFORMATION:

Formation: **H-I-J**

Deviated: **No** Whipstock: **ft (KB)**

Time Tool Opened: 22:02:31

Time Test Ended: 02:32:01

Test Type: **Conventional Bottom Hole**

Tester: **Dan Bangle**

Unit No: **21**

Interval: **3440.00 ft (KB) To 3520.00 ft (KB) (TVD)**

Total Depth: **3520.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Good**

Reference Elevations: **2035.00 ft (KB)**

2027.00 ft (CF)

KB to GR/CF: **8.00 ft**

Serial #: 2357

Inside

Press@RunDepth: **83.29 psig @ 3446.00 ft (KB)**

Start Date: **2003.03.14**

End Date:

2003.03.15

Start Time: **20:20:06**

End Time:

02:32:00

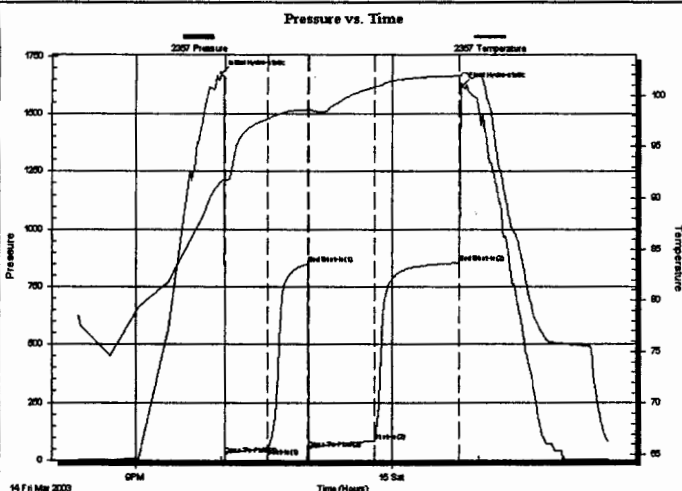
Capacity: **7000.00 psig**

Last Calib.: **2003.03.15**

Time On Btm: **2003.03.14 @ 21:59:31**

Time Off Btm: **2003.03.15 @ 00:48:31**

TEST COMMENT: F-Strong BOB in 13 min
ISI-Weak surface blow
FF-Strong BOB in 6 min
FSI-Weak surface blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1675.62	91.57	Initial Hydro-static
3	22.97	91.81	Open To Flow (1)
33	53.29	97.71	Shut-In(1)
62	848.33	98.64	End Shut-In(1)
62	47.10	98.64	Open To Flow (2)
108	83.29	100.81	Shut-In(2)
167	853.98	101.91	End Shut-In(2)
169	1622.63	102.09	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	OCM 30%o 70% m	1.47
40.00	MCGsyO 5%g 25% m 70% o	0.56
0.00	680 GIP	0.00

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O Farmer, Inc

Brungardt #2

Box 352
Russell, Ks 67665

5-13-17-Ellis-Ks

Job Ticket: 17465

DST#: 4

ATTN: John O Farmer

Test Start: 2003.03.14 @ 20:20:01

Tool Information

Drill Pipe:	Length: 3410.00 ft	Diameter: 3.80 inches	Volume: 47.83 bbl	Tool Weight:	1200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	50000.00 lb
			Total Volume: 47.98 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial	43000.00 lb
Depth to Top Packer:	3440.00 ft			Final	43000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	80.00 ft				
Tool Length:	101.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		
Tool Comments:					

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			3420.00	
S.I. Tool	5.00			3425.00	
HMV	5.00			3430.00	
Packer	5.00			3435.00	21.00 Bottom Of Top Packer
Packer	5.00			3440.00	
Stubb	1.00			3441.00	
Perforations	4.00			3445.00	
C.O. Sub	1.00			3446.00	
Recorder	0.00	2357	Inside	3446.00	
Blank Spacing	62.00			3508.00	
C.O. Sub	1.00			3509.00	
Recorder	0.00	13254	Outside	3509.00	
Perforations	8.00			3517.00	
Bullnose	3.00			3520.00	80.00 Bottom Packers & Anchor

Total Tool Length: 101.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O Farmer, Inc

Brungardt #2

Box 352
Russell, Ks 67665

5-13-17-Ellis-Ks

Job Ticket: 17465

DST#: 4

ATTN: John O Farmer

Test Start: 2003.03.14 @ 20:20:01

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 44.00 sec/qt

Water Loss: 11.17 in³

Resistivity: ohm.m

Salinity: 20000.00 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
124.00	OCM 30%o 70%m	1.466
40.00	MCGsyO 5%g 25%m 70%o	0.561
0.00	680 GP	0.000

Total Length: 164.00 ft Total Volume: 2.027 bbl

Num Fluid Samples: 0

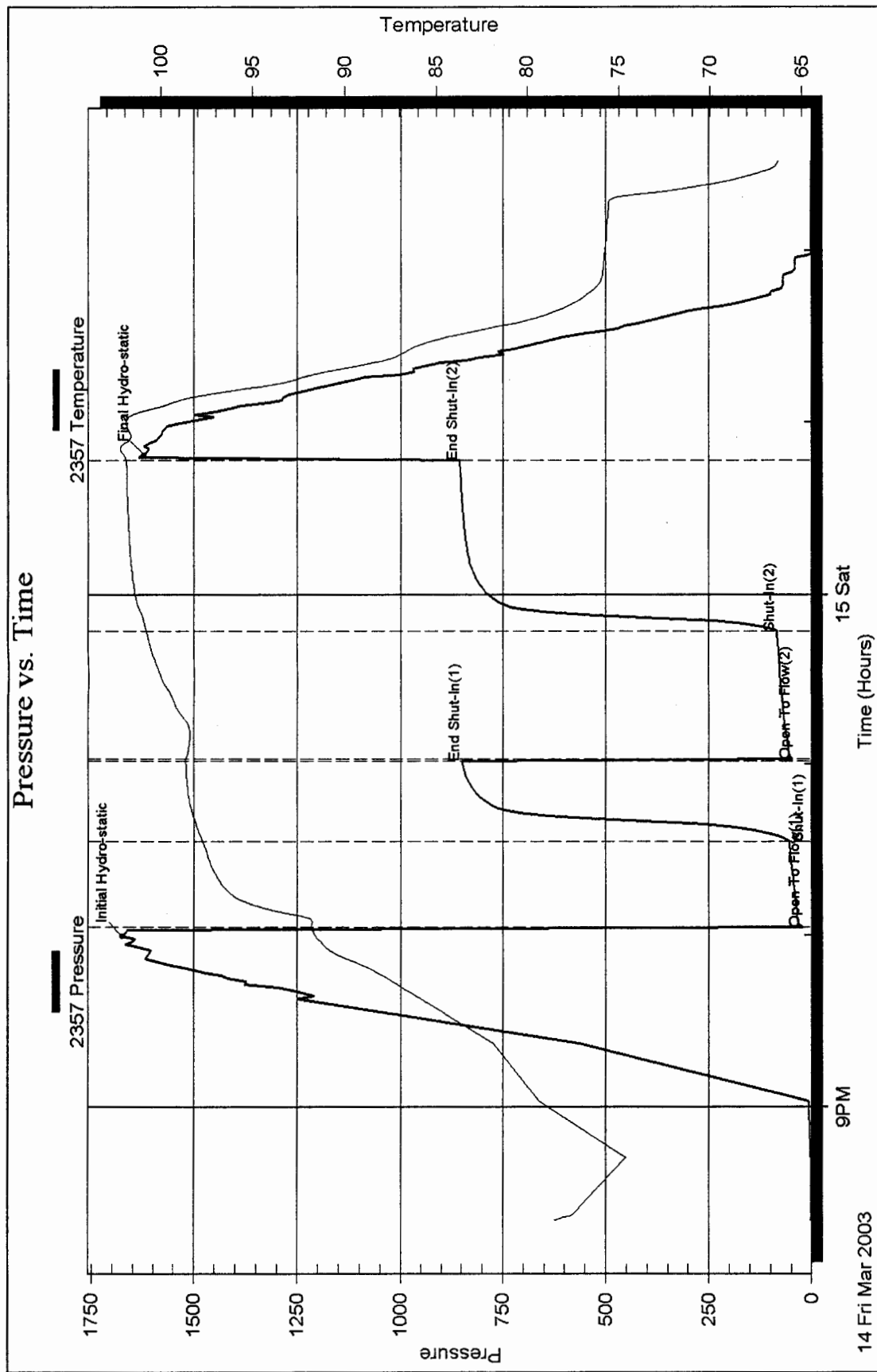
Num Gas Bombs: 0

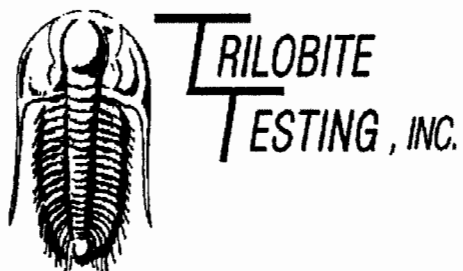
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





DRILL STEM TEST REPORT

Prepared For: **John O Farmer, Inc**

Box 352
Russell, Ks 67665

ATTN: John O Farmer

5-13-17-Ellis-Ks

Brungardt #2

Start Date: 2003.03.15 @ 13:40:00

End Date: 2003.03.15 @ 16:26:30

Job Ticket #: 17466 DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

John O Farmer, Inc

Box 352
Russell, Ks 67665

ATTN: John O Farmer

Brungardt #2

5-13-17-Ellis-Ks

Job Ticket: 17466

DST#: 5

Test Start: 2003.03.15 @ 13:40:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:00:00

Time Test Ended: 16:26:30

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 21

Interval: **3549.00 ft (KB) To 3597.00 ft (KB) (TVD)**

Total Depth: 3597.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition:

Reference Elevations: 2035.00 ft (KB)

2027.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 2357

Inside

Press@RunDepth: psig @ 3552.00 ft (KB)

Start Date: 2003.03.15

End Date:

2003.03.15

Capacity: 7000.00 psig

Last Calib.: 2003.03.15

Start Time: 13:40:05

End Time:

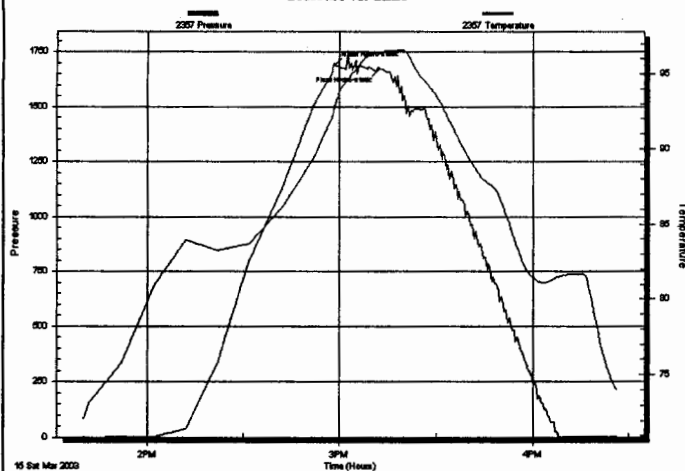
16:26:30

Time On Btm: 2003.03.15 @ 14:58:30

Time Off Btm: 2003.03.15 @ 15:12:00

TEST COMMENT: Hit bridge 160' off bottom-went thru
Hit bridge 30' off bottom would not go thru

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1691.38	92.85	Initial Hydro-static
14	1675.40	96.44	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O Farmer, Inc

Brungardt #2

Box 352
Russell, Ks 67665

5-13-17-Ellis-Ks

Job Ticket: 17466

DST#: 5

ATTN: John O Farmer

Test Start: 2003.03.15 @ 13:40:00

Tool Information

Drill Pipe:	Length: 3505.00 ft	Diameter: 3.80 inches	Volume: 49.17 bbl	Tool Weight: 1800.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 43000.00 lb
		Total Volume: 49.32 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 43000.00 lb
Depth to Top Packer:	3549.00 ft			Final 43000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	48.00 ft			
Tool Length:	69.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				
Misrun				

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			3529.00	
S.I. Tool	5.00			3534.00	
HMV	5.00			3539.00	
Packer	5.00			3544.00	21.00 Bottom Of Top Packer
Packer	5.00			3549.00	
Stubb	1.00			3550.00	
Perforations	1.00			3551.00	
C.O. Sub	1.00			3552.00	
Recorder	0.00	2357	Inside	3552.00	
Blank Spacing	31.00			3583.00	
C.O. Sub	1.00			3584.00	
Recorder	0.00	13254	Outside	3584.00	
Perforations	10.00			3594.00	
Bullnose	3.00			3597.00	48.00 Bottom Packers & Anchor

Total Tool Length: 69.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O Farmer, Inc

Brungardt #2

Box 352
Russell, Ks 67665

5-13-17-Ellys-Ks

Job Ticket: 17466

DST#: 5

ATTN: John O Farmer

Test Start: 2003.03.15 @ 13:40:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 48.00 sec/qt

Water Loss: 7.19 in³

Resistivity: ohm.m

Salinity: 17000.00 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

Total Length:

ft

Total Volume:

bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

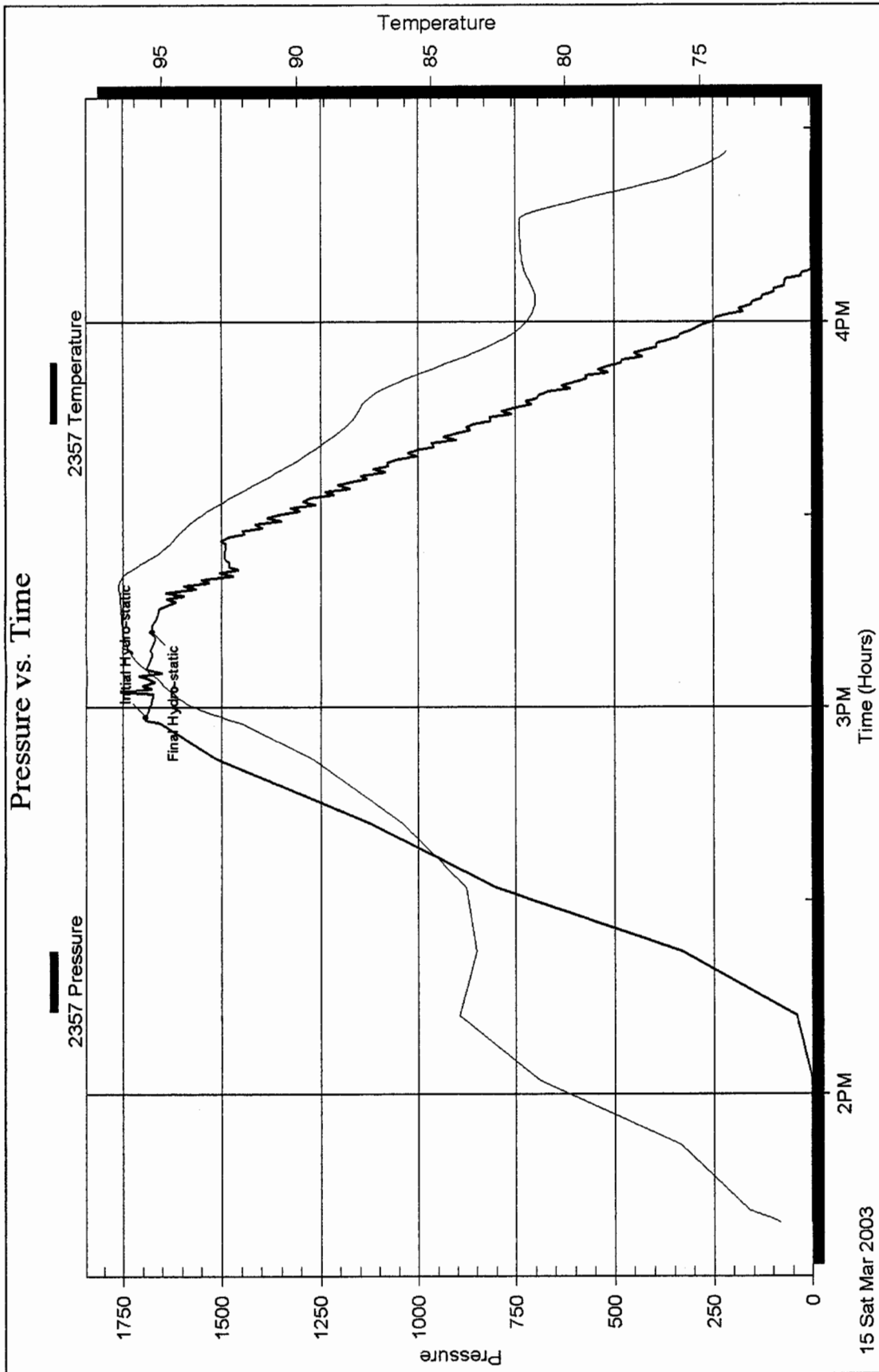
Serial #: 2357

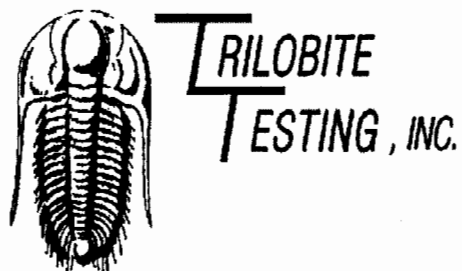
Inside

John O Farmer, Inc

5-13-17-Ellis-Ks

DST Test Number: 5





DRILL STEM TEST REPORT

Prepared For: **John O Farmer, Inc**

Box 352
Russell, Ks 67665

ATTN: John O Farmer

5-13-17-Ellis-Ks

Brungardt #2

Start Date: 2003.03.15 @ 21:54:53

End Date: 2003.03.16 @ 03:12:23

Job Ticket #: 17467 DST #: 6

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

John O Farmer, Inc

Box 352
Russell, Ks 67665

ATTN: John O Farmer

Brungardt #2

5-13-17-Ellis-Ks

Job Ticket: 17467

DST#: 6

Test Start: 2003.03.15 @ 21:54:53

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:31:23

Time Test Ended: 03:12:23

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 21

Interval: **3549.00 ft (KB) To 3597.00 ft (KB) (TVD)**

Total Depth: 3597.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2035.00 ft (KB)

2027.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 2357

Inside

Press@RunDepth: 36.85 psig @ 3552.00 ft (KB)

Start Date: 2003.03.15

End Date:

2003.03.16

Start Time: 21:54:58

End Time:

03:12:22

Capacity: 7000.00 psig

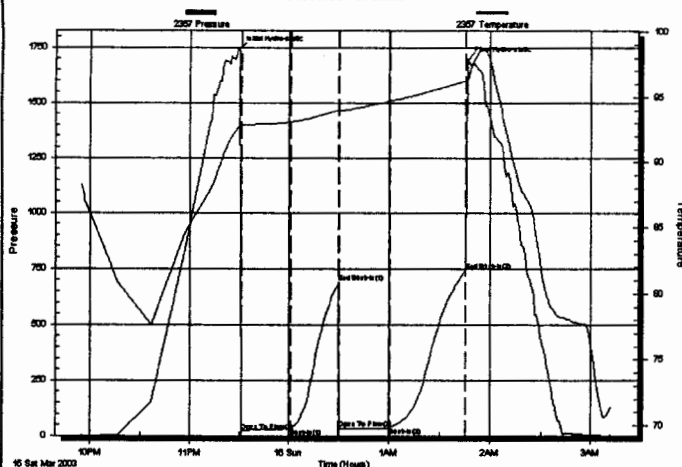
Last Calib.: 2003.03.16

Time On Btm: 2003.03.15 @ 23:29:23

Time Off Btm: 2003.03.16 @ 01:46:23

TEST COMMENT: F-Weak steady 1/2" blow
FF-Weak steady surface blow
Times-30-30-30-45

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1740.49	92.64	Initial Hydro-static
2	22.45	92.85	Open To Flow (1)
32	31.48	93.10	Shut-In (1)
61	687.45	93.98	End Shut-In (1)
61	33.55	93.99	Open To Flow (2)
91	36.85	94.70	Shut-In (2)
136	740.73	96.23	End Shut-In (2)
137	1694.20	96.33	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	CO	0.05
35.00	OCM 20%o 80% m	0.31

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O Farmer, Inc

Brungardt #2

Box 352
Russell, Ks 67665

5-13-17-Ellis-Ks

Job Ticket: 17467

DST#: 6

ATTN: John O Farmer

Test Start: 2003.03.15 @ 21:54:53

Tool Information

Drill Pipe:	Length: 3505.00 ft	Diameter: 3.80 inches	Volume: 49.17 bbl	Tool Weight:	1800.00 lb	
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb	
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	55000.00 lb	
			Total Volume:	49.32 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	7.00 ft	String Weight: Initial 43000.00 lb				
Depth to Top Packer:	3549.00 ft	Final 43000.00 lb				
Depth to Bottom Packer:	ft					
Interval between Packers:	48.00 ft					
Tool Length:	69.00 ft					
Number of Packers:	2	Diameter:	6.75 inches			
Tool Comments:						

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			3529.00	
S.I. Tool	5.00			3534.00	
HMV	5.00			3539.00	
Packer	5.00			3544.00	21.00 Bottom Of Top Packer
Packer	5.00			3549.00	
Stubb	1.00			3550.00	
Perforations	1.00			3551.00	
C.O. Sub	1.00			3552.00	
Recorder	0.00	2357	Inside	3552.00	
Blank Spacing	31.00			3583.00	
C.O. Sub	1.00			3584.00	
Recorder	0.00	13254	Outside	3584.00	
Perforations	10.00			3594.00	
Bullnose	3.00			3597.00	48.00 Bottom Packers & Anchor

Total Tool Length: 69.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O Farmer, Inc

Brungardt #2

Box 352
Russell, Ks 67665

5-13-17-Ellis-Ks

Job Ticket: 17467

DST#: 6

ATTN: John O Farmer

Test Start: 2003.03.15 @ 21:54:53

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:

ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 17000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	CO	0.049
35.00	OCM 20%o 80%m	0.309

Total Length: 45.00 ft

Total Volume: 0.358 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

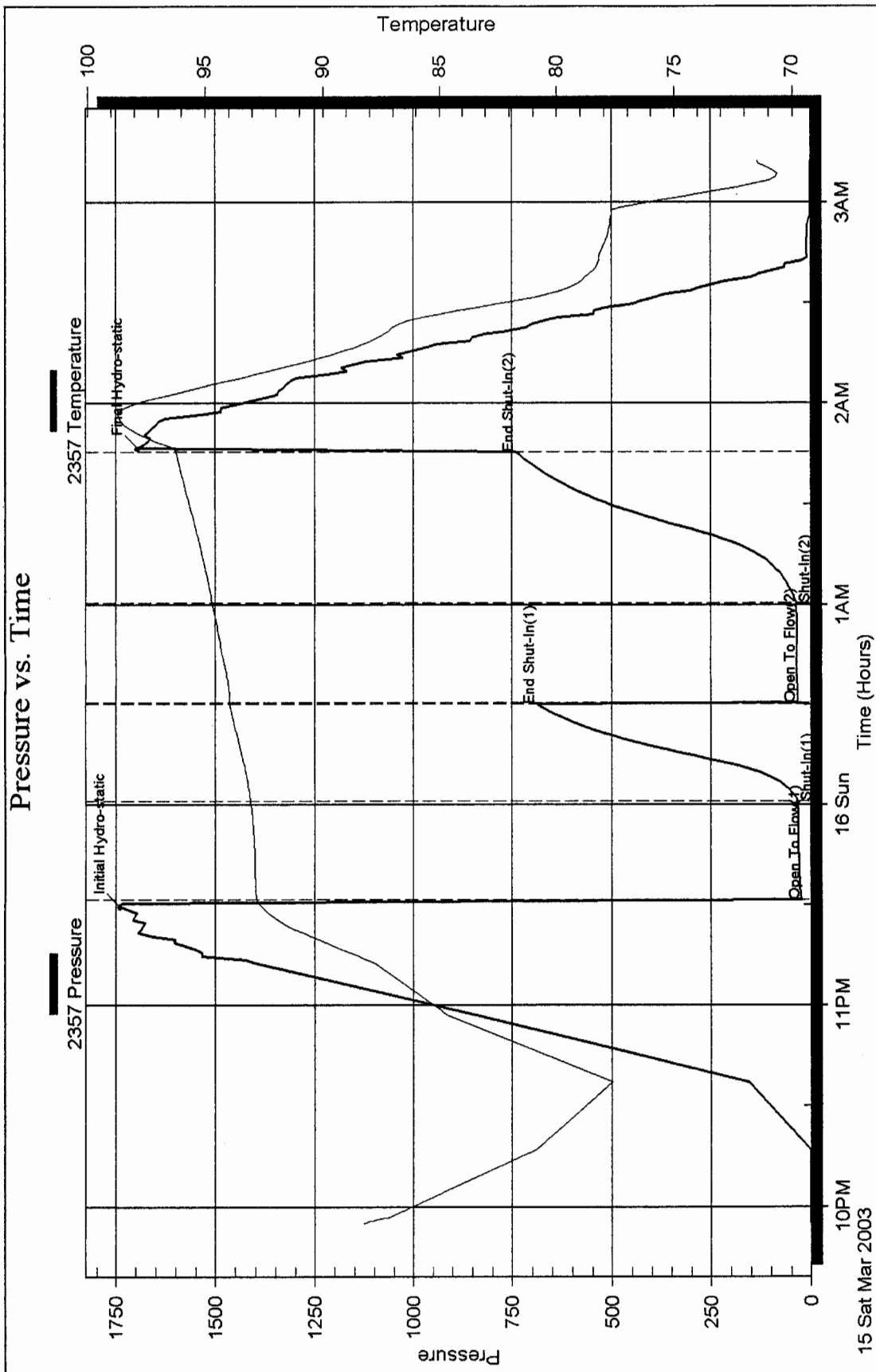
Serial #: 2357

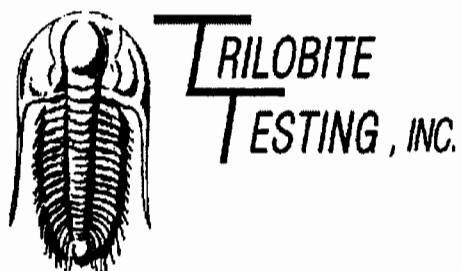
Inside

John O Farmer, Inc

5-13-17-Ellis-Ks

DST Test Number: 6





DRILL STEM TEST REPORT

Prepared For: **John O Farmer, Inc**

Box 352
Russell, Ks 67665

ATTN: John O Farmer

5-13-17-Ellis-Ks

Brungardt #2

Start Date: 2003.03.16 @ 08:58:42

End Date: 2003.03.16 @ 15:56:42

Job Ticket #: 17468 DST #: 7

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

John O Farmer, Inc

Box 352
Russell, Ks 67665

ATTN: John O Farmer

Brungardt #2

5-13-17-Ellis-Ks

Job Ticket: 17468

DST#: 7

Test Start: 2003.03.16 @ 08:58:42

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:32:12

Time Test Ended: 15:56:42

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 21

Interval: **3594.00 ft (KB) To 3609.00 ft (KB) (TVD)**

Total Depth: 3609.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2035.00 ft (KB)

2027.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 2357

Inside

Press@RunDepth: 52.73 psig @ 3595.00 ft (KB)

Start Date: 2003.03.16

End Date:

2003.03.16

Start Time: 08:58:47

End Time:

15:56:41

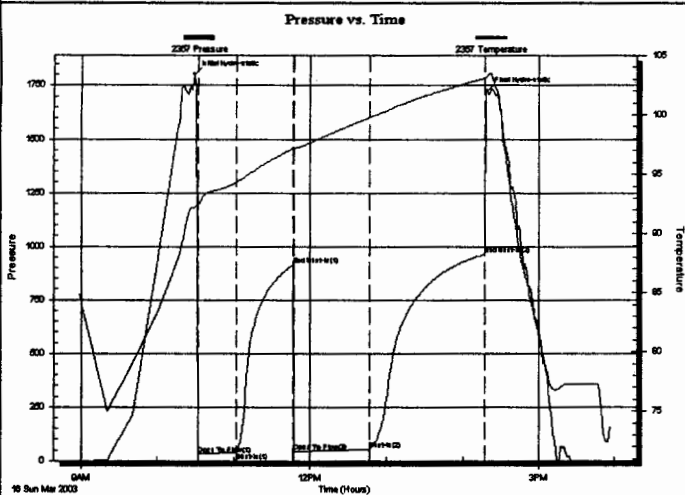
Capacity: 7000.00 psig

Last Calib.: 2003.03.16

Time On Btmr: 2003.03.16 @ 10:29:12

Time Off Btmr: 2003.03.16 @ 14:19:12

TEST COMMENT: IF-Weak building to 2"
FF-Weak steady surface blow
Times-30-45-60-90



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1802.13	92.20	Initial Hydro-static
3	31.66	92.40	Open To Flow (1)
33	40.33	94.31	Shut-In(1)
78	912.96	97.17	End Shut-In(1)
78	42.60	97.18	Open To Flow (2)
137	52.73	99.76	Shut-In(2)
228	962.67	103.08	End Shut-In(2)
230	1725.61	103.30	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	OCM 40%o 60% m	0.99

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O Farmer, Inc

Brungardt #2

Box 352
Russell, Ks 67665

5-13-17-Ellis-Ks

Job Ticket: 17468

DST#: 7

ATTN: John O Farmer

Test Start: 2003.03.16 @ 08:58:42

Tool Information

Drill Pipe:	Length: 3567.00 ft	Diameter: 3.80 inches	Volume: 50.04 bbl	Tool Weight:	1200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	50000.00 lb
			<u>Total Volume: 50.19 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial	44000.00 lb
Depth to Top Packer:	3594.00 ft			Final	44000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	15.00 ft				
Tool Length:	36.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		
Tool Comments:					

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			3574.00	
S.I. Tool	5.00			3579.00	
HMV	5.00			3584.00	
Packer	5.00			3589.00	21.00 Bottom Of Top Packer
Packer	5.00			3594.00	
Stubb	1.00			3595.00	
Recorder	0.00	2357	Inside	3595.00	
Perforations	11.00			3606.00	
Recorder	0.00	13254	Outside	3606.00	
Bullnose	3.00			3609.00	15.00 Bottom Packers & Anchor
Total Tool Length:	36.00				



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

John O Farmer, Inc

Brungardt #2

Box 352
Russell, Ks 67665

5-13-17-Ellis-Ks

Job Ticket: 17468

DST#: 7

ATTN: John O Farmer

Test Start: 2003.03.16 @ 08:58:42

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: 45.00 sec/qt

Cushion Volume:

bbl

Water Loss: 12.75 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 11000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
90.00	OCM 40%o 60%m	0.989

Total Length: 90.00 ft

Total Volume: 0.989 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 2357

Inside

John O Farmer, Inc

5-13-17-Ellis-Ks

DST Test Number: 7

