

**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Ainsworth Operating Company**

4676 Commercial Street SE
Salem, OR 97302

ATTN: Randy Kilian

Hammeke #C-3

7-22s-11w Stafford,KS

Start Date: 2011.12.18 @ 20:37:21

End Date: 2011.12.19 @ 01:41:21

Job Ticket #: 44707 DST #: 1

CONFIDENTIAL

APR 12 2013

KCC

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

RECEIVED

APR 16 2012

KCC WICHITA

Printed: 2011.12.22 @ 07:39:59

Ainsworth Operating Company
7-22s-11w Stafford,KS
Hammeke #C-3
DST # 1
K-L
2011.12.18



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ainsworth Operating Company

7-22s-11w Stafford,KS

4676 Commercial Street SE
Salem, OR 97302

Hammeke #C-3

Job Ticket: 44707

DST#: 1

ATTN: Randy Kilian

Test Start: 2011.12.18 @ 20:37:21

GENERAL INFORMATION:

Formation: K-L

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:57:51

Time Test Ended: 01:41:21

Test Type: Conventional Bottom Hole (Initial)

Tester: Jason McLemore

Unit No: 54

Interval: 3396.00 ft (KB) To 3460.00 ft (KB) (TVD)

Reference Elevations: 1782.00 ft (KB)

Total Depth: 3460.00 ft (KB) (TVD)

1774.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8673

Inside

Press@RunDepth: 33.50 psig @ 3432.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.12.18

End Date:

2011.12.19

Last Calib.:

2011.12.19

Start Time: 20:37:23

End Time:

01:41:21

Time On Btm

2011.12.18 @ 22:57:36

Time Off Btm

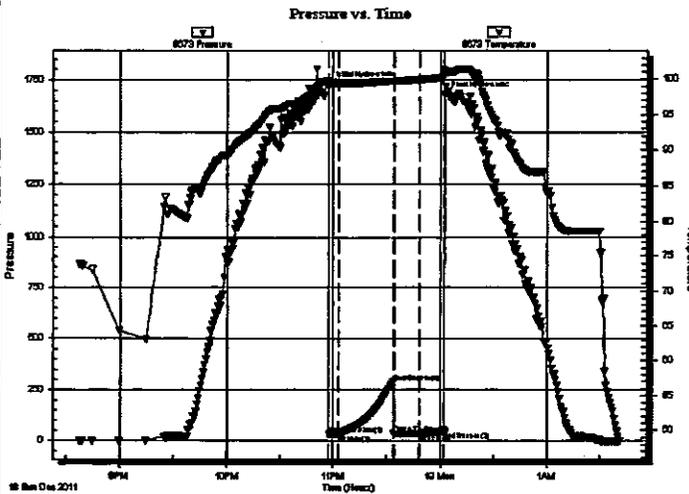
2011.12.19 @ 00:02:06

TEST COMMENT: IFF-Dead in 3 min.

ISI-Dead

FFP-Dead

FSI-Dead



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1725.29	99.78	Initial Hydro-static
1	31.24	98.99	Open To Flow (1)
6	32.33	99.35	Shut-In(1)
36	289.01	99.78	End Shut-In(1)
37	33.00	99.70	Open To Flow (2)
51	33.50	99.95	Shut-In(2)
65	44.30	100.22	End Shut-In(2)
65	1678.32	101.33	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
6.00	Drilling Mud	0.08

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ainsworth Operating Company

7-22s-11w Stafford,KS

4676 Commercial Street SE
Salem, OR 97302

Hammeke #C-3

Job Ticket: 44707

DST#: 1

ATTN: Randy Kilian

Test Start: 2011.12.18 @ 20:37:21

Tool Information

Drill Pipe:	Length: 3390.00 ft	Diameter: 3.80 inches	Volume: 47.55 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.50 inches	Volume: 0.00 bbl	Weight to Pull Loose: 42000.00 lb
			Total Volume: 47.55 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3396.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	64.00 ft			
Tool Length:	85.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3376.00	
Shut In Tool	5.00			3381.00	
Hydraulic tool	5.00			3386.00	
Packer	5.00			3391.00	21.00 Bottom Of Top Packer
Packer	5.00			3396.00	
Stubb	1.00			3397.00	
Perforations	2.00			3399.00	
Change Over Sub	1.00			3400.00	
Blank Spacing	31.00			3431.00	
Change Over Sub	1.00			3432.00	
Recorder	0.00	8673	Inside	3432.00	
Recorder	0.00	8736	Outside	3432.00	
Perforations	25.00			3457.00	
Bullnose	3.00			3460.00	64.00 Bottom Packers & Anchor

Total Tool Length: 85.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

Ainsworth Operating Company
4676 Commercial Street SE
Salem, OR 97302
ATTN: Randy Kilian

7-22s-11w Stafford,KS
Hammeke #C-3
Job Ticket: 44707 DST#: 1
Test Start: 2011.12.18 @ 20:37:21

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 51.00 sec/qt
Water Loss: 8.77 in³
Resistivity: ohm.m
Salinity: 7400.00 ppm
Filter Cake: inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: deg API
Water Salinity: ppm

Recovery Information

Recovery Table

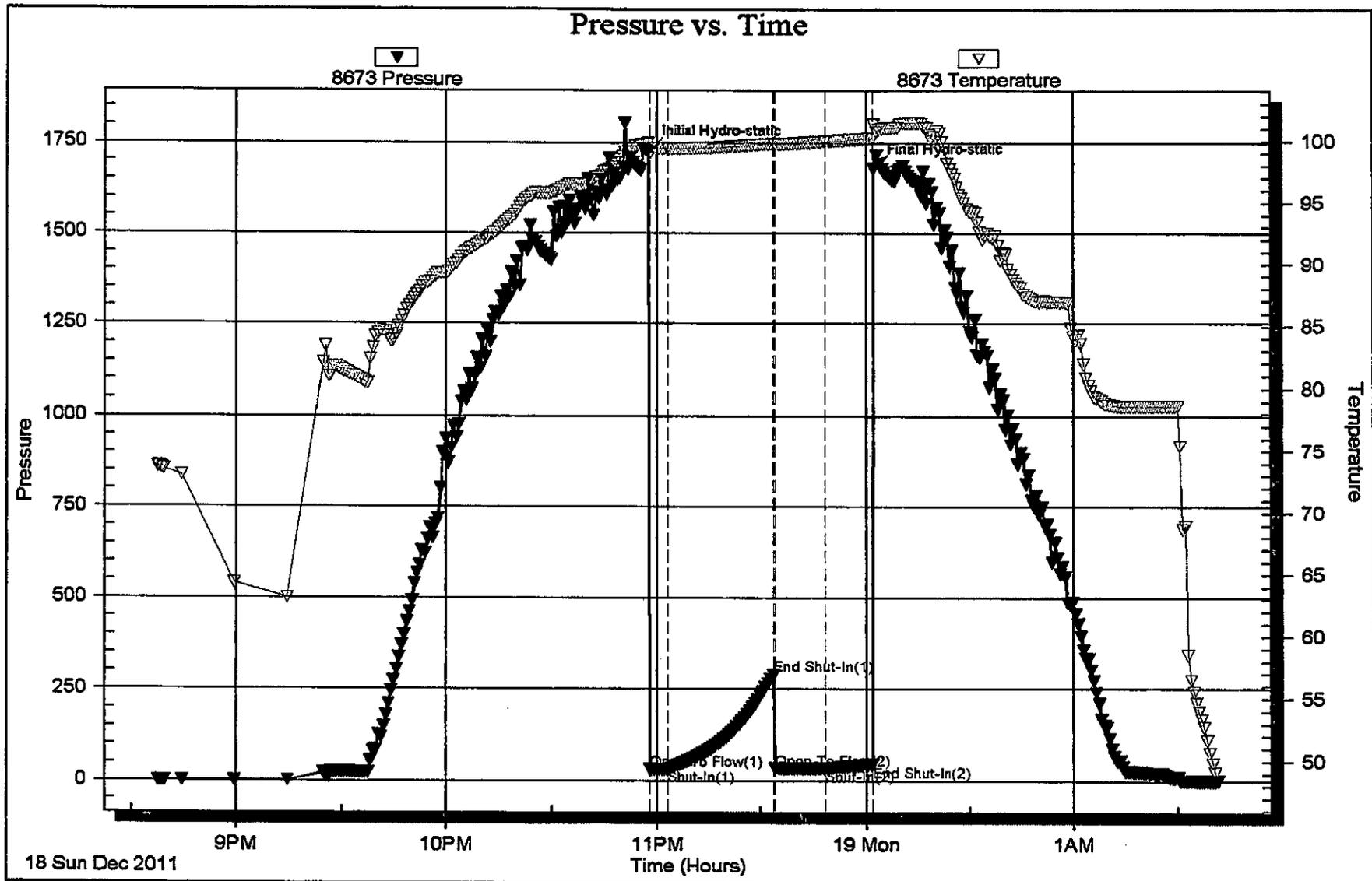
Length ft	Description	Volume bbl
6.00	Drilling Mud	0.084

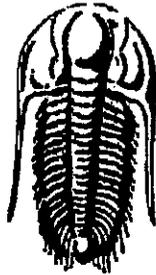
Total Length: 6.00 ft Total Volume: 0.084 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Ainsworth Operating Company**

4676 Commercial Street SE
Salem, OR 97302

ATTN: Randy Kilian

Hammeke #C-3

7-22s-11w Stafford,KS

Start Date: 2011.12.19 @ 22:59:39

End Date: 2011.12.20 @ 07:17:09

Job Ticket #: 44749 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2011.12.22 @ 07:39:40

Ainsworth Operating Company
7-22s-11w Stafford,KS
Hammeke #C-3
DST # 2
Arbuckle
2011.12.19



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Ainsworth Operating Company

7-22s-11w Stafford, KS

4676 Commercial Street SE
Salem, OR 97302

Hammeke #C-3

Job Ticket: 44749

DST#: 2

ATTN: Randy Kilian

Test Start: 2011.12.19 @ 22:59:39

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:40:09

Time Test Ended: 07:17:09

Test Type: Conventional Straddle (Initial)

Tester: Brian Fairbank

Unit No: 41

Interval: **3570.00 ft (KB) To 3596.00 ft (KB) (TVD)**

Total Depth: 3651.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1782.00 ft (KB)

1774.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8734 Outside

Press@RunDepth: 95.40 psig @ 3586.00 ft (KB)

Start Date: 2011.12.19

End Date: 2011.12.20

Start Time: 22:59:40

End Time: 07:17:09

Capacity: 8000.00 psig

Last Calib.: 2011.12.20

Time On Btm: 2011.12.20 @ 00:38:09

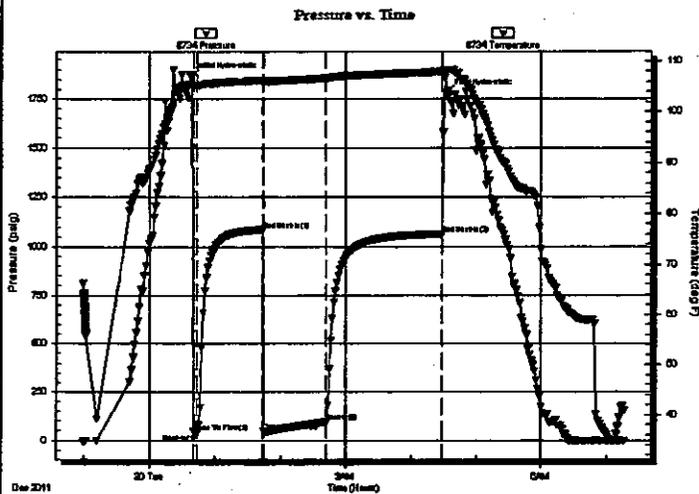
Time Off Btm: 2011.12.20 @ 04:33:09

TEST COMMENT: IFF - weak to good blow 1/2" - 7"

ISI - sur blow back - died 4 min

FFP - BOB 1 1/2 min

FSI - BOB 12 min - died 68 min



PRESSURE SUMMARY

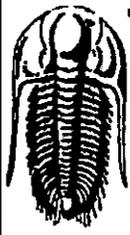
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1864.46	105.40	Initial Hydro-static
2	44.37	105.09	Open To Flow (1)
5	34.93	105.21	Shut-In(1)
65	1086.14	106.18	End Shut-In(1)
67	45.44	105.96	Open To Flow (2)
123	95.40	106.57	Shut-In(2)
230	1065.46	107.83	End Shut-In(2)
235	1781.27	108.22	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
100.00	GMCO 40%G, 40%O, 20%M	1.40
110.00	FREE OIL 95%O, 5%M	1.54
0.00	1340' GIP	0.00

Gas Rates

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



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TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ainsworth Operating Company

7-22s-11w Stafford,KS

4676 Commercial Street SE
Salem, OR 97302

Hammeke #C-3

Job Ticket: 44749

DST#: 2

ATTN: Randy Kilian

Test Start: 2011.12.19 @ 22:59:39

Tool Information

Drill Pipe:	Length: 3552.00 ft	Diameter: 3.80 inches	Volume: 49.83 bbl	Tool Weight: 3000.00 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 72000.00 lb
			<u>Total Volume: 49.83 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	4.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3570.00 ft			Final 43000.00 lb
Depth to Bottom Packer:	3596.00 ft			
Interval between Packers:	26.00 ft			
Tool Length:	108.00 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3553.00	
Hydraulic tool	5.00			3558.00	
Safety Joint	2.00			3560.00	
Packer	5.00			3565.00	22.00 Bottom Of Top Packer
Packer	5.00			3570.00	
Stubb	1.00			3571.00	
Perforations	15.00			3586.00	
Recorder	0.00	8372	Inside	3586.00	
Recorder	0.00	8734	Outside	3586.00	
Perforations	5.00			3591.00	
Blank Off Sub	1.00			3592.00	
Blank Spacing	4.00			3596.00	26.00 Tool Interval
Packer	5.00			3601.00	
Stubb	1.00			3602.00	
Perforations	18.00			3620.00	
Recorder	0.00	8365	Below	3620.00	
Change Over Sub	1.00			3621.00	
Blank Spacing	31.00			3652.00	
Change Over Sub	1.00			3653.00	
Bullnose	3.00			3656.00	60.00 Bottom Packers & Anchor
Total Tool Length:	108.00				



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DRILL STEM TEST REPORT

FLUID SUMMARY

Ainsworth Operating Company

7-22s-11w Stafford,KS

4676 Commercial Street SE
Salem, OR 97302

Hammeke #C-3

Job Ticket: 44749

DST#: 2

ATTN: Randy Kilian

Test Start: 2011.12.19 @ 22:59:39

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

41 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 61.00 sec/qt

Cushion Volume:

bbf

Water Loss: 11.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 9800.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
100.00	GMDO 40%G, 40%O, 20%M	1.403
110.00	FREE OIL 95%O, 5%M	1.543
0.00	1340' GIP	0.000

Total Length: 210.00ft

Total Volume: 2.946 bbf

Num Fluid Samples: 0

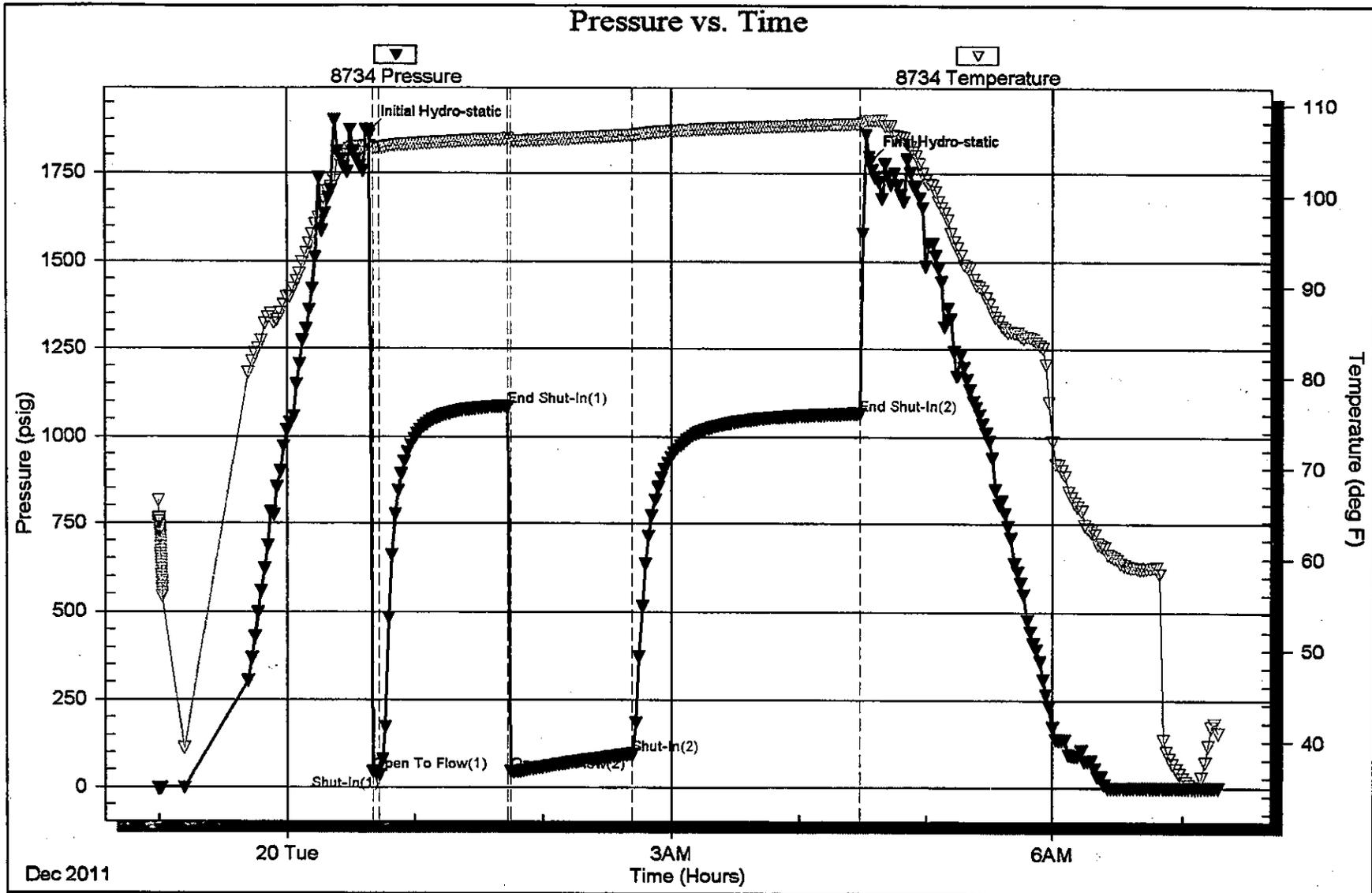
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



Serial #: 8365

Below (Stratton) North Operating Company

Hammeke #C-3

DST Test Number: 2

