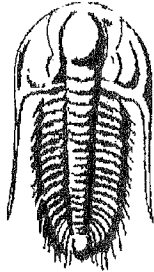


15-033-21527

20-32s-20w

IND



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: John O Farmer, Inc.

PO Box 352
Russell KS 67665

ATTN: Steve Murphy

20-32S-20W Comanche

Herd A-1

Start Date: 2008.07.20 @ 20:26:42

End Date: 2008.07.21 @ 07:13:30

Job Ticket #: 31009 DST #: 1

John O Farmer, Inc.

Herd A-1

20-32S-20W Comanche

DST # 1

Morrow Snd

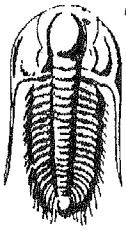
2008.07.20

KCC
NOV 05 2008
CONFIDENTIAL

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

John O Farmer, Inc.

Herd A-1

PO Box 352
Russell KS 67665

20-32S-20W Comanche

Job Ticket: 31009

DST#: 1

ATTN: Steve Murphy

Test Start: 2008.07.20 @ 20:26:42

GENERAL INFORMATION:

Formation: **Morrow Snd**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:01:51

Time Test Ended: 07:13:30

Test Type: Conventional Bottom Hole

Tester: Chris Hagman

Unit No: 34

Interval: 5096.00 ft (KB) To 5165.00 ft (KB) (TVD)

Reference Elevations: 1888.00 ft (KB)

Total Depth: 5165.00 ft (KB) (TVD)

1878.00 ft (CF)

Hole Diameter: 7.78 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 6753

Inside

Press@RunDepth: 1203.19 psig @ 5098.00 ft (KB)

Capacity: 7000.00 psig

Start Date: 2008.07.20

End Date:

2008.07.21

Last Calib.:

2008.07.21

Start Time: 20:26:42

End Time:

07:13:30

Time On Btm:

2008.07.21 @ 00:01:21

Time Off Btm:

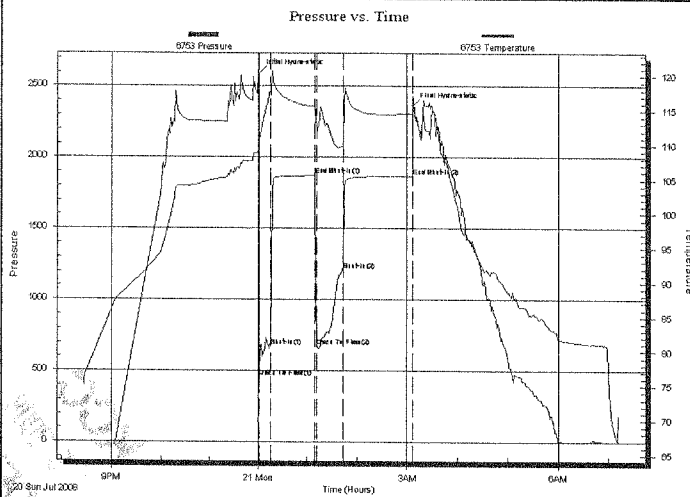
2008.07.21 @ 03:06:41

TEST COMMENT: IF: BOB 10 sec., GTS 10 min., strong building blow.

IS: Blow back 2 min.

FF: BOB GTS ASAO, strong building blow (blow line blew 20 min., shut tool in 30 min).

FSI: Blow back 1 min., 2 inches in 90



PRESSURE SUMMARY

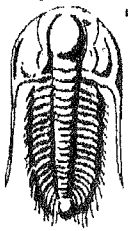
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2590.09	109.74	Initial Hydro-static
1	457.29	110.56	Open To Flow (1)
14	668.60	117.41	Shut-In(1)
68	1871.13	115.62	End Shut-In(1)
70	670.78	111.49	Open To Flow (2)
102	1203.19	110.01	Shut-In(2)
185	1868.68	114.66	End Shut-In(2)
186	2363.22	117.16	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
682.00	GMW w/ skim O 5%G 90%W 5%M	7.38
124.00	GMW w/ skim O 15%G 55%W 30%M	1.74
124.00	gassy watery mud 10%G,skimO,10%W,1.74/l	

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	1.00	36.00	1448.94
Last Gas Rate	1.00	50.00	1851.42
Max. Gas Rate	1.00	50.00	1851.42



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O Farmer, Inc.

Herd A-1

PO Box 352
Russell KS 67665

20-32S-20W Comanche

Job Ticket: 31009

DST#: 1

ATTN: Steve Murphy

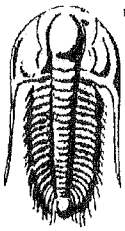
Test Start: 2008.07.20 @ 20:26:42

Tool Information

Drill Pipe:	Length: 4844.00 ft	Diameter: 3.80 inches	Volume: 67.95 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: 240.00 ft	Diameter: 2.25 inches	Volume: 1.18 bbl	Weight to Pull Loose: 100000.0 lb
		Total Volume:	69.13 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	5096.00 ft			Final 80000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	69.00 ft			
Tool Length:	97.00 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			5069.00	
Shut In Tool	5.00			5074.00	
Hydraulic tool	5.00			5079.00	
Jars	5.00			5084.00	
Safety Joint	3.00			5087.00	
Packer	5.00			5092.00	28.00 Bottom Of Top Packer
Packer	4.00			5096.00	
Stubb	1.00			5097.00	
Perforations	1.00			5098.00	
Recorder	0.00	8322	Inside	5098.00	
Recorder	0.00	6753	Inside	5098.00	
Change Over Sub	1.00			5099.00	
Drill Pipe	62.00			5161.00	
Change Over Sub	1.00			5162.00	
Bullnose	3.00			5165.00	69.00 Bottom Packers & Anchor
Total Tool Length:	97.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O Farmer, Inc.

Herd A-1

PO Box 352
Russell KS 67665

20-32S-20W Comanche

Job Ticket: 31009

DST#: 1

ATTN: Steve Murphy

Test Start: 2008.07.20 @ 20:26:42

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 44.00 sec/qt
Water Loss: 12.76 in³
Resistivity: ohm.m
Salinity: 8000.00 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: 34000 ppm

Recovery Information

Recovery Table

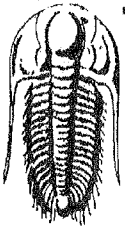
Length ft	Description	Volume bbl
682.00	GMW w/ skim O 5%G 90%W 5%M	7.380
124.00	GMW w/ skim O 15%G 55%W 30%M	1.739
124.00	gassy watery mud 10%G,skimO,10%W,80%l	1.739

Total Length: 930.00 ft Total Volume: 10.858 bbl

Num Fluid Samples: 0 Num Gas Bombs: 1 Serial #:

Laboratory Name: Caraway Laboratory Location: Liberal, KS

Recovery Comments: RW=.187@77F=34,000ppm



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

GAS RATES

John O Farmer, Inc.

Herd A-1

PO Box 352
Russell KS 67665

20-32S-20W Comanche

Job Ticket: 31009

DST#: 1

ATTN: Steve Murphy

Test Start: 2008.07.20 @ 20:26:42

Gas Rates Information

Temperature: 59 deg C
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m ³ /d)
1	10	1.00	36.00	1448.94
2	10	1.00	46.00	1736.43
2	20	1.00	50.00	1851.42

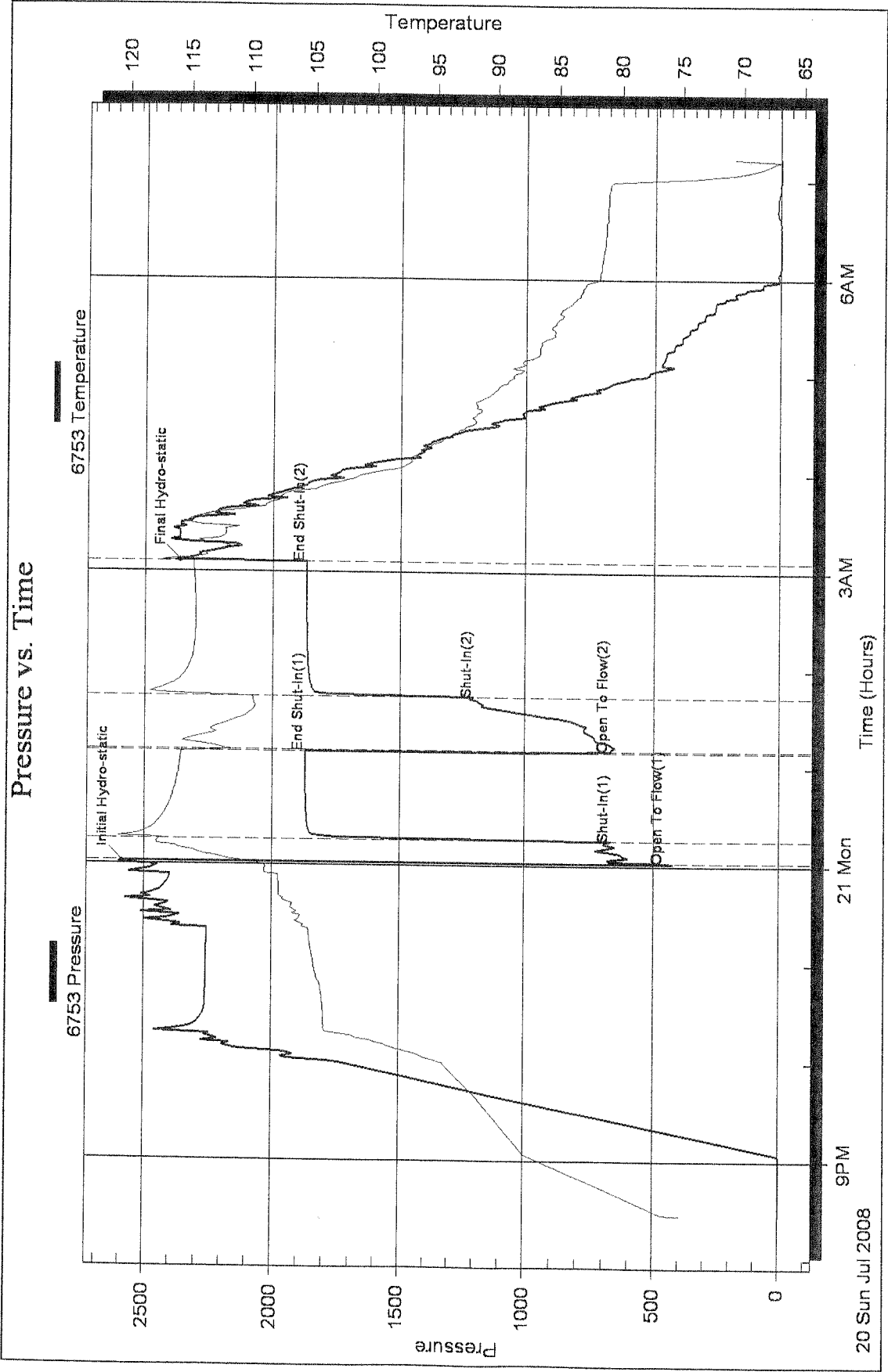
Serial #: 6753

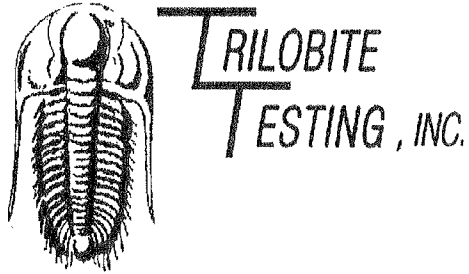
Inside

John O Farmer, Inc.

20-32S-20W Comanche

DST Test Number: 1





DRILL STEM TEST REPORT

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

PO Box 352
Russell KS 67665

ATTN: Steve Murphy

20-32S-20W Comanche

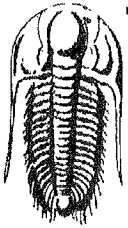
Herd A-1

Start Date: 2008.07.22 @ 08:44:41

End Date: 2008.07.22 @ 18:21:10

Job Ticket #: 31010 DST #: 2

Trilobite Testing, Inc
PO Box 1733 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

John O Farmer, Inc.

Herd A-1

PO Box 352
Russell KS 67665

20-32S-20W Comanche

Job Ticket: 31010

DST#: 2

ATTN: Steve Murphy

Test Start: 2008.07.22 @ 08:44:41

GENERAL INFORMATION:

Formation: **Lower Morrow**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:52:00

Time Test Ended: 18:21:10

Test Type: Conventional Straddle

Tester: Chris Hagman

Unit No: 34

Interval: 5180.00 ft (KB) To 5192.00 ft (KB) (TVD)

Total Depth: 5250.00 ft (KB) (TVD)

Hole Diameter: 7.78 inches Hole Condition: Good

Reference Elevations: 1888.00 ft (KB)

1878.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 6753

Inside

Press@RunDepth: 98.12 psig @ 5182.00 ft (KB)

Start Date: 2008.07.22

End Date:

2008.07.22

Capacity: 7000.00 psig

Last Calib.: 2008.07.22

Start Time: 08:44:41

End Time:

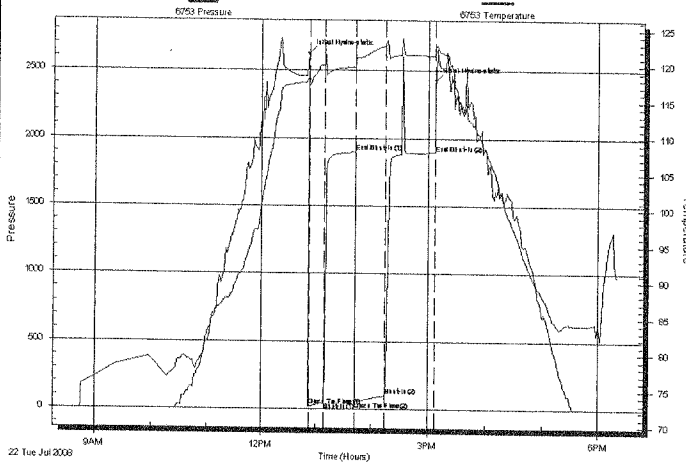
18:21:10

Time On Btm: 2008.07.22 @ 12:51:30

Time Off Btm: 2008.07.22 @ 15:07:10

TEST COMMENT: IF: 1.5" in 15 min., weak building blow.
IS: No blow back.
FF: 1.5" in 30 min., weak steady blow.
FSI: No blow back.

Pressure vs. Time



PRESSURE SUMMARY

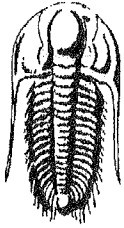
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2622.66	118.37	Initial Hydro-static
1	23.99	117.13	Open To Flow (1)
18	49.42	120.06	Shut-In (1)
51	1894.78	119.74	End Shut-In (1)
52	56.23	120.64	Open To Flow (2)
83	98.12	122.75	Shut-In (2)
136	1894.02	121.38	End Shut-In (2)
136	2423.27	122.95	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	MW 60%W 40%M	0.61

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O Farmer, Inc.

Herd A-1

PO Box 352
Russell KS 67665

20-32S-20W Comanche

Job Ticket: 31010

DST#: 2

ATTN: Steve Murphy

Test Start: 2008.07.22 @ 08:44:41

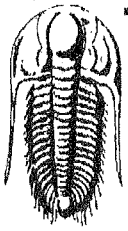
Tool Information

Drill Pipe:	Length: 4942.00 ft	Diameter: 3.80 inches	Volume: 69.32 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: 240.00 ft	Diameter: 2.25 inches	Volume: 1.18 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 70.50 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 74000.00 lb
Depth to Top Packer:	5180.00 ft			Final 74000.00 lb
Depth to Bottom Packer:	5188.00 ft			
Interval between Packers:	8.00 ft			
Tool Length:	99.00 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments:
Graphs did not match, good straddle

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			5153.00	
Shut In Tool	5.00			5158.00	
Hydraulic tool	5.00			5163.00	
Jars	5.00			5168.00	
Safety Joint	3.00			5171.00	
Packer	5.00			5176.00	28.00 Bottom Of Top Packer
Packer	4.00			5180.00	
Stubb	1.00			5181.00	
Perforations	1.00			5182.00	
Recorder	0.00	6753	Inside	5182.00	
Perforations	5.00			5187.00	
Blank Off Sub	1.00			5188.00	8.00 Tool Interval
Packer	4.00			5192.00	
Stubb	1.00			5193.00	
Perforations	22.00			5215.00	
Recorder	0.00	8322	Outside	5215.00	
Change Over Sub	1.00			5216.00	
Drill Pipe	31.00			5247.00	
Change Over Sub	1.00			5248.00	
Bullnose	3.00			5251.00	63.00 Bottom Packers & Anchor

Total Tool Length: 99.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O Farmer, Inc.

Herd A-1

PO Box 352
Russell KS 67665

20-32S-20W Comanche

Job Ticket: 31010

DST#: 2

ATTN: Steve Murphy

Test Start: 2008.07.22 @ 08:44:41

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: 15.77 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 15000.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
124.00	MW 60%W 40%M	0.610

Total Length: 124.00 ft Total Volume: 0.610 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: RW=.153@98F=32,000ppm

Serial #: 6753

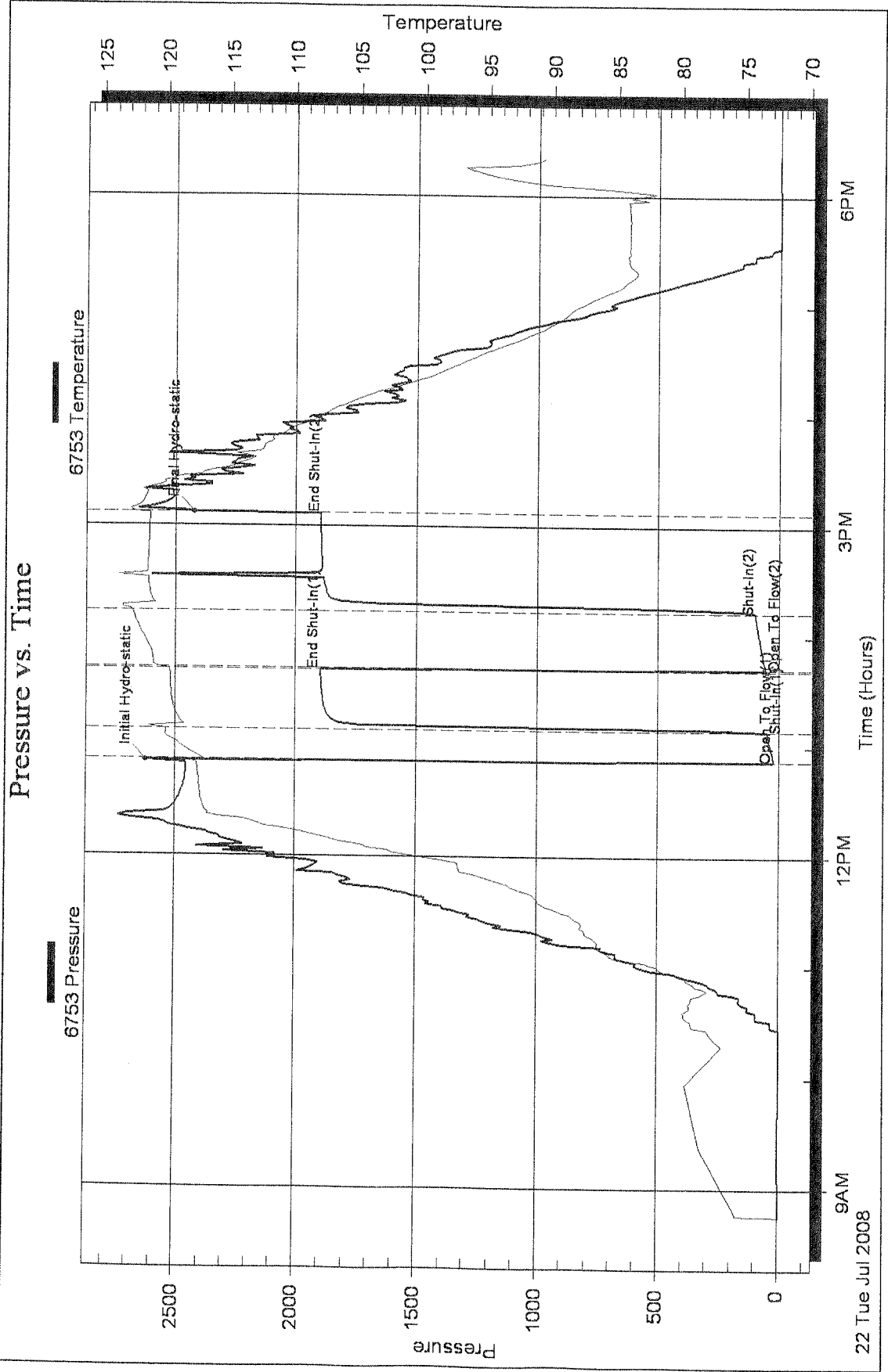
Inside

John O Farmer, Inc.

20-32S-20W Comanche

DST Test Number: 2

Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 31010

Serial #: 8322

Outside John O Farmer, Inc.

20-32S-20W Comanche

DST Test Number: 2

