

DRILL STEM TEST REPORT

Prepared For: **Comanche Res Co**

6520 N Western Ave STE 300
Oklahoma City, OK 73116

ATTN: Ryan Seid / Luther W

Novak #7-1

7-19s-34w Scott,KS

Start Date: 2011.10.05 @ 04:24:00

End Date: 2011.10.05 @ 11:56:45

Job Ticket #: 43899 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

ORIGINAL

Printed: 2011.10.14 @ 10:50:35

Comanche Res Co

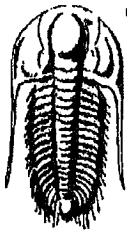
7-19s-34w Scott,KS

Novak #7-1

DST # 1

Lansing

2011.10.05



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TESTING, INC**

DRILL STEM TEST REPORT

Comanche Res Co
6520 N Western Ave STE 300
Oklahoma City, OK 73116
ATTN: Ryan Seid / Luther W

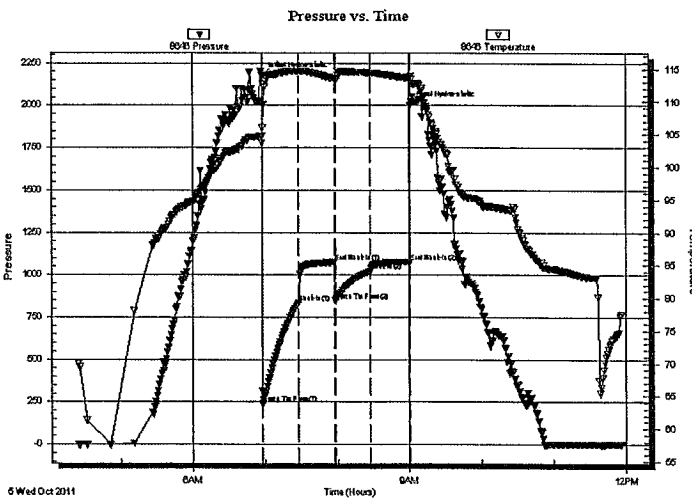
7-19s-34w Scott,KS
Novak #7-1
Job Ticket: 43899 **DST#: 1**
Test Start: 2011.10.05 @ 04:24:00

GENERAL INFORMATION:

Formation: **Lansing**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 06:57:30
Time Test Ended: 11:56:45
Test Type: Conventional Bottom Hole (Initial)
Tester: Will MacLean
Unit No: 48
Interval: **4128.00 ft (KB) To 4208.00 ft (KB) (TVD)**
Total Depth: 4208.00 ft (KB) (TVD)
Reference Elevations: 3156.00 ft (KB)
3145.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Good
KB to GR/CF: 11.00 ft

Serial #: 8646 Inside
Press@RunDepth: 1022.21 psig @ 4129.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2011.10.05 End Date: 2011.10.05 Last Calib.: 2011.10.05
Start Time: 04:24:00 End Time: 11:56:45 Time On Btm: 2011.10.05 @ 06:56:45
Time Off Btm: 2011.10.05 @ 09:01:15

TEST COMMENT: IF- BOB in 1 min
IS- No Blow
FF- BOB in 2 1/2 min
FS- No Blow



PRESSURE SUMMARY

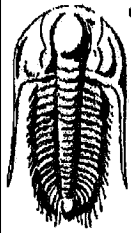
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2175.91	104.72	Initial Hydro-static
1	240.92	106.13	Open To Flow (1)
31	835.82	114.69	Shut-In(1)
61	1074.52	113.57	End Shut-In(1)
61	849.81	113.47	Open To Flow (2)
91	1022.21	114.39	Shut-In(2)
124	1076.86	113.62	End Shut-In(2)
125	2001.42	113.99	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
464.00	WCM 40%w 60%m	4.37
576.00	MCW 10%m 90%w	8.08
1178.00	MCW 35%m 65%w	16.52

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Comanche Res Co
6520 N Western Ave STE 300
Oklahoma City, OK 73116
ATTN: Ryan Seid / Luther W

7-19s-34w Scott,KS
Novak #7-1
Job Ticket: 43899 **DST#: 1**
Test Start: 2011.10.05 @ 04:24:00

Tool Information

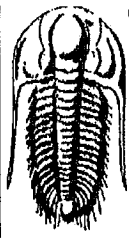
Drill Pipe:	Length: 3885.00 ft	Diameter: 3.80 inches	Volume: 54.50 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 28000.00 lb
Drill Collar:	Length: 235.00 ft	Diameter: 2.25 inches	Volume: 1.16 bbl	Weight to Pull Loose: 12000.00 lb
		Total Volume: 55.66 bbl		Tool Chased: ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	4128.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	80.00 ft			
Tool Length:	108.00 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			4101.00	
Shut In Tool	5.00			4106.00	
Hydraulic tool	5.00			4111.00	
Jars	5.00			4116.00	
Safety Joint	3.00			4119.00	
Packer	5.00			4124.00	28.00 Bottom Of Top Packer
Packer	4.00			4128.00	
Stubb	1.00			4129.00	
Recorder	0.00	8646	Inside	4129.00	
Recorder	0.00	8358	Outside	4129.00	
Perforations	10.00			4139.00	
Change Over Sub	1.00			4140.00	
Drill Pipe	62.00			4202.00	
Change Over Sub	1.00			4203.00	
Bullnose	5.00			4208.00	80.00 Bottom Packers & Anchor

Total Tool Length: 108.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

Comanche Res Co

7-19s-34w Scott,KS

6520 N Western Ave STE 300
Oklahoma City, OK 73116

Novak #7-1

Job Ticket: 43899

DST#: 1

ATTN: Ryan Seid / Luther W

Test Start: 2011.10.05 @ 04:24:00

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:	31000 ppm
Viscosity: 56.00 sec/qt	Cushion Volume: bbl		
Water Loss: 10.49 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 8100.00 ppm			
Filter Cake: 2.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
464.00	WCM 40%w 60%m	4.368
576.00	MCW 10%m 90%w	8.080
1178.00	MCW 35%m 65%w	16.524

Total Length: 2218.00 ft Total Volume: 28.972 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: RW is .218 @ 69f = 31000

Serial #: 8646

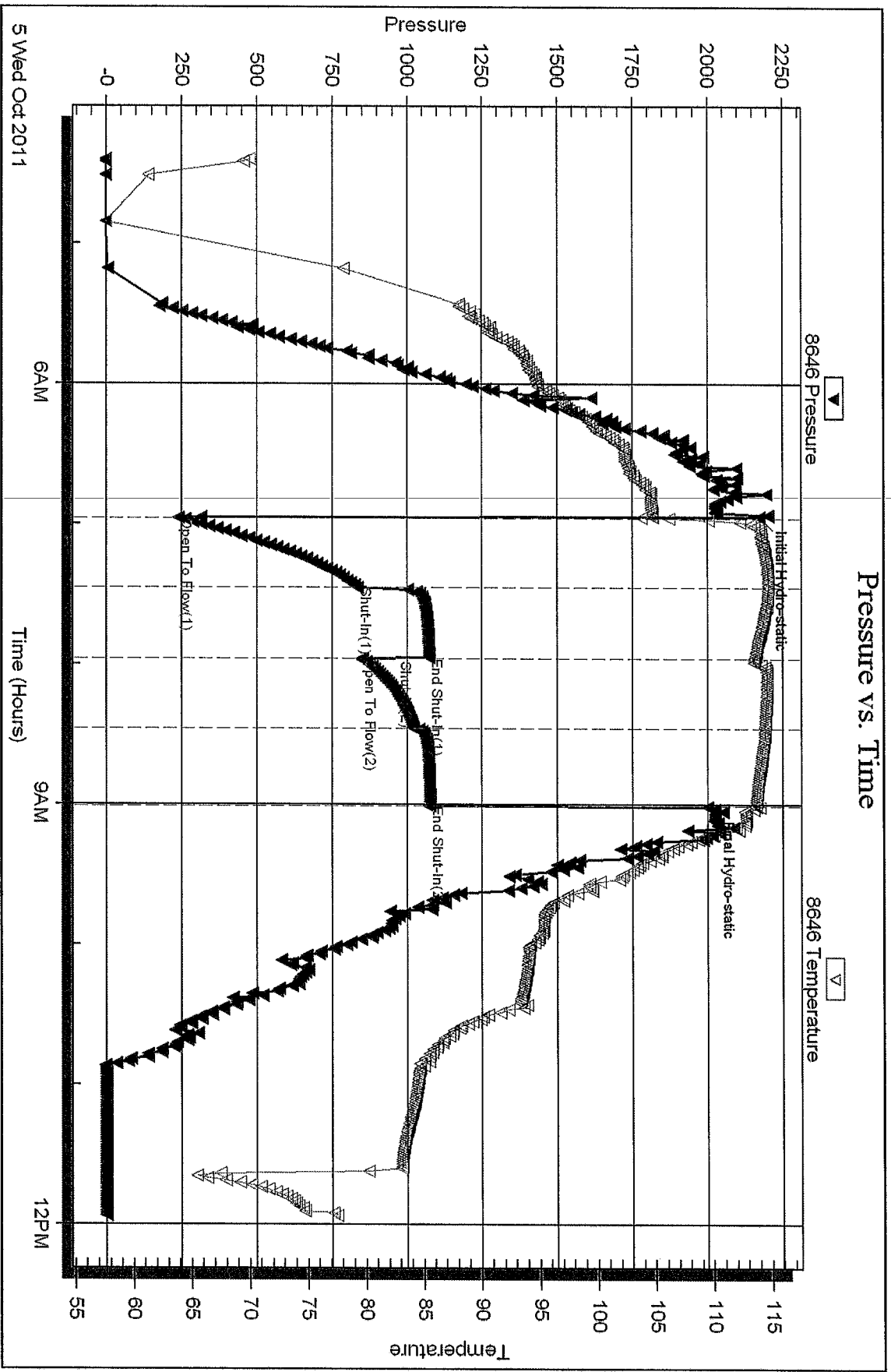
Inside

Comanche Res Co

Novak #7-1

DST Test Number: 1

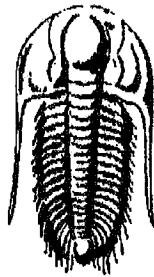
Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 43899

Printed: 2011.10.14 @ 10:50:38



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Prepared For: **Comanche Res Co**

6520 N Western Ave STE 300
Oklahoma City, OK 73116

ATTN: Ryan Seid / Luther W

Novak #7-1

7-19s-34w Scott,KS

Start Date: 2011.10.06 @ 01:07:15

End Date: 2011.10.06 @ 07:48:15

Job Ticket #: 43213 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

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Comanche Res Co

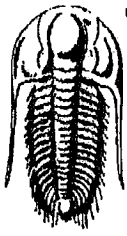
7-19s-34w Scott,KS

Novak #7-1

DST # 2

Pawnee

2011.10.06



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 6520 N Western Ave STE 300
 Oklahoma City, OK 73116
 ATTN: Ryan Seid / Luther W

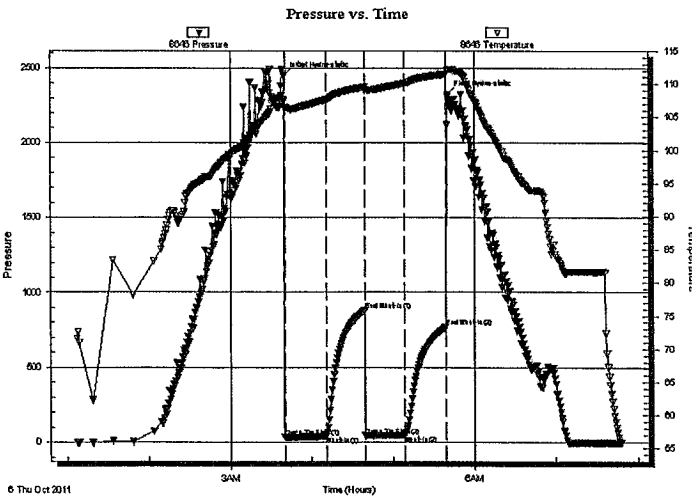
7-19s-34w Scott,KS
Novak #7-1
 Job Ticket: 43213 **DST#: 2**
 Test Start: 2011.10.06 @ 01:07:15

GENERAL INFORMATION:

Formation: **Pawnee**
 Deviated: **No** Whipstock: ft (KB)
 Time Tool Opened: 03:40:15
 Time Test Ended: 07:48:15
 Interval: **4572.00 ft (KB) To 4644.00 ft (KB) (TVD)**
 Total Depth: 4644.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: **Poor**
 Test Type: **Conventional Bottom Hole (Reset)**
 Tester: **Mike Roberts**
 Unit No: **48**
 Reference Elevations: 3156.00 ft (KB)
 3145.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 8646 **Inside**
 Press@RunDepth: 47.76 psig @ 4575.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2011.10.06 End Date: 2011.10.06 Last Calib.: 2011.10.07
 Start Time: 01:07:15 End Time: 07:48:15 Time On Btrnt 2011.10.06 @ 03:40:00
 Time Off Btrnt 2011.10.06 @ 05:40:00

TEST COMMENT: IF: Built to a weak surface blow
 IS: No return blow
 FF: No blow
 FS: No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2446.08	107.48	Initial Hydro-static
1	31.87	106.38	Open To Flow (1)
31	39.10	107.59	Shut-In(1)
60	882.27	109.55	End Shut-In(1)
60	42.69	109.04	Open To Flow (2)
89	47.76	110.10	Shut-In(2)
119	773.95	111.51	End Shut-In(2)
120	2322.26	112.22	Final Hydro-static

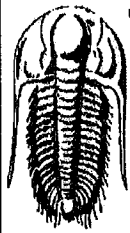
Recovery

Length (ft)	Description	Volume (bbl)
60.00	m 100% m	0.30

* Recovery from multiple tests

Gas Rates

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



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TOOL DIAGRAM

Comanche Res Co
6520 N Western Ave STE 300
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ATTN: Ryan Seid / Luther W

7-19s-34w Scott,KS
Novak #7-1
Job Ticket: 43213 **DST#: 2**
Test Start: 2011.10.06 @ 01:07:15

Tool Information

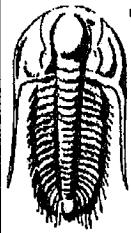
Drill Pipe:	Length: 4324.00 ft	Diameter: 3.80 inches	Volume: 60.65 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 235.00 ft	Diameter: 2.25 inches	Volume: 1.16 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 61.81 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	4572.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	72.00 ft			
Tool Length:	100.00 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			4545.00	
Shut In Tool	5.00			4550.00	
Hydraulic tool	5.00			4555.00	
Jars	5.00			4560.00	
Safety Joint	3.00			4563.00	
Packer	5.00			4568.00	28.00 Bottom Of Top Packer
Packer	4.00			4572.00	
Stubb	1.00			4573.00	
Perforations	2.00			4575.00	
Recorder	0.00	8646	Inside	4575.00	
Recorder	0.00	8358	Outside	4575.00	
Change Over Sub	1.00			4576.00	
Drill Pipe	62.00			4638.00	
Change Over Sub	1.00			4639.00	
Bullnose	5.00			4644.00	72.00 Bottom Packers & Anchor

Total Tool Length: 100.00



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Novak #7-1

Job Ticket: 43213

DST#: 2

ATTN: Ryan Seid / Luther W

Test Start: 2011.10.06 @ 01:07:15

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	0 ppm
Viscosity: 47.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.99 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 7000.00 ppm			
Filter Cake: 2.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	m 100% m	0.295

Total Length: 60.00 ft Total Volume: 0.295 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

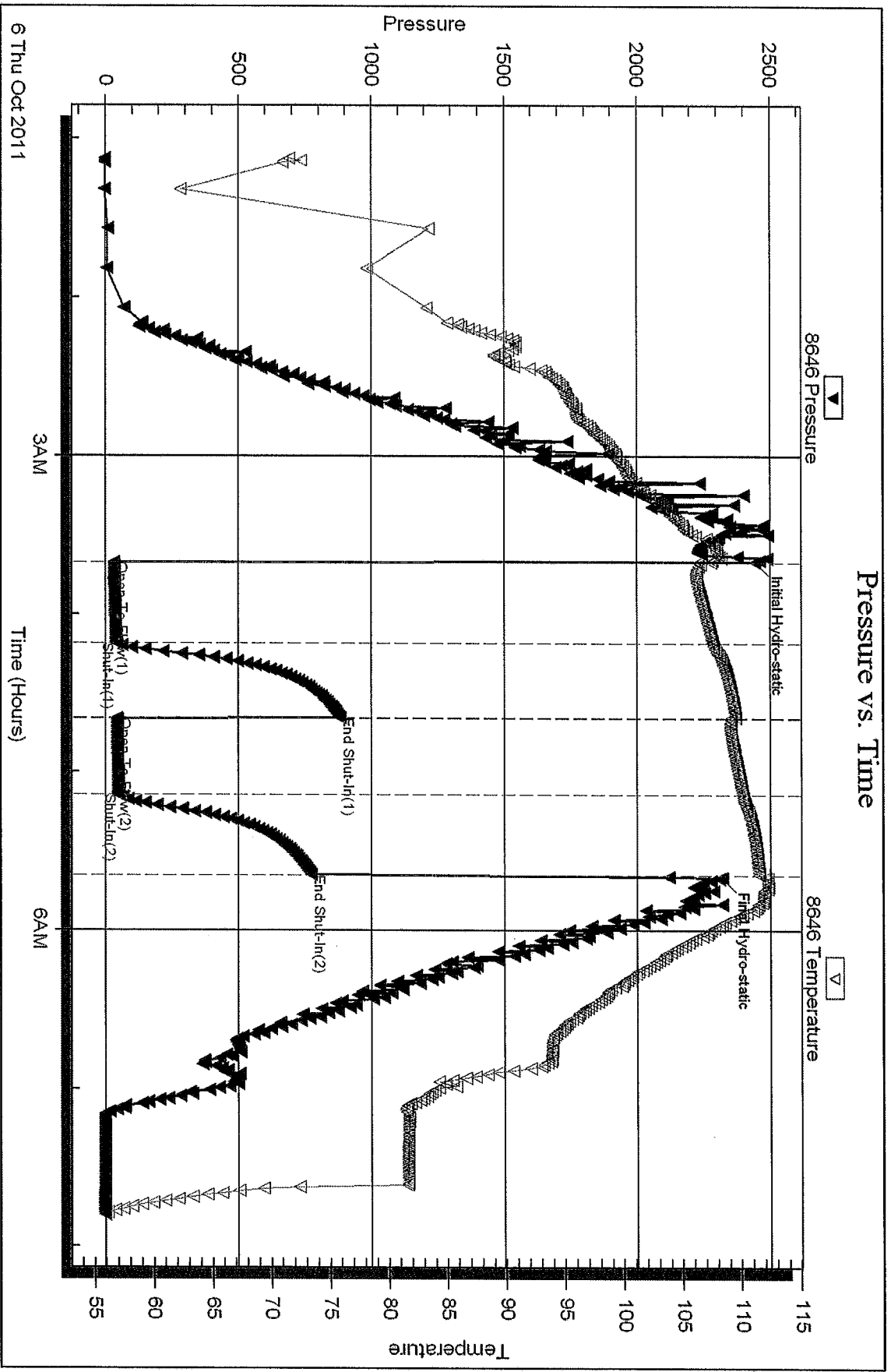
Serial #: 8646

Inside

Comanche Res Co

Novak #7-1

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 43213

Printed: 2011.10.14 @ 10:51:14