

Confidential

OCT 2 8 2002
KCC WICHITA



**TRILOBITE
TESTING, INC.**

ORIGINAL

DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water
Suite 300
Wichita Ks 67601

CONFIDENTIAL

KCC

OCT 2 5 2002

ATTN: David Doyel

10-19s-28w Lane Ks

CONFIDENTIAL

Bosley #1-10

Start Date: 2002.09.21 @ 13:21:29
End Date: 2002.09.21 @ 21:51:28
Job Ticket #: 16500 DST #: 1

Computer Inventories

Murfin Drilling Co Inc
Bosley #1-10
10-19s-28w Lane Ks
DST # 1
KC "J"
2002.09.21

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co Inc

Bosley #1-10

250 N Water Suite 300 Wichita Ks 67601 ATTN: David Doyel

10-19s-28w Lane Ks

Job Ticket: 16500 DST#: 1

Test Start: 2002.09.21 @ 13:21:29

GENERAL INFORMATION:

KCC

OCT 25 2002

CONFIDENTIAL

Formation: KC "J"
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 15:35:28
Time Test Ended: 21:51:28

Test Type: Conventional Bottom Hole
Tester: Ray Schwager
Unit No: 16

Interval: 4265.00 ft (KB) To 4285.00 ft (KB) (TVD)
Total Depth: 4285.00 ft (KB) (TVD)
Hole Diameter: 7.85 inches Hole Condition: Fair

Reference Elevations: 2765.00 ft (KB) 2760.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 3017

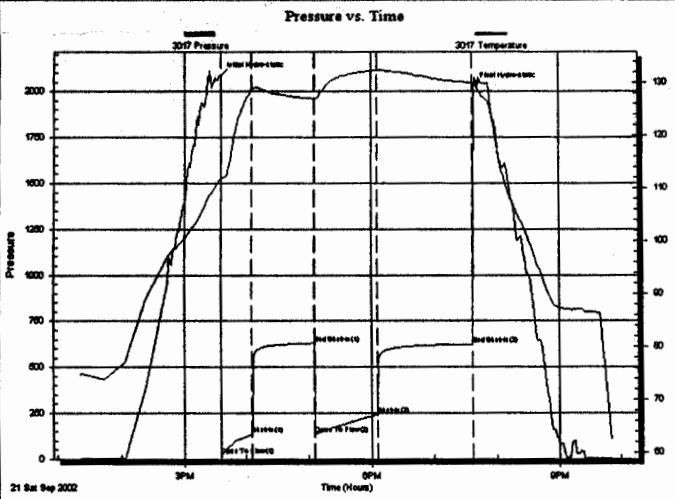
Inside

Press@RunDepth: 241.81 psig @ 4266.01 ft (KB)
Start Date: 2002.09.21 End Date: 2002.09.21
Start Time: 13:21:29 End Time: 21:51:28

Capacity: 7000.00 psig
Last Calib.: 2002.09.21
Time On Btm: 2002.09.21 @ 15:34:58
Time Off Btm: 2002.09.21 @ 19:37:58

TEST COMMENT: FFP-w eak to good 1/4" to 7" blow
FFP-w eak to good 1/4" to 7" blow
Times 30-60-60-90
no blow on shut-in

CONFIDENTIAL



PRESSURE SUMMARY

Table with 4 columns: Time (Min.), Pressure (psig), Temp (deg F), Annotation. Rows include Initial Hydro-static, Open To Flow (1), Shut-In(1), End Shut-In(1), Open To Flow (2), Shut-In(2), End Shut-In(2), and Final Hydro-static.

Recovery

Table with 3 columns: Length (ft), Description, Volume (bbl). Rows include Water w/show of oil, SOCMW 1%oil 10%mud 89%w ater, CO, and GP.

Gas Rates

Table with 4 columns: Choke (inches), Pressure (psig), Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co Inc

KCC

Bosley #1-10

250 N Water
Suite 300
Wichita Ks 67601
ATTN: David Doyel

OCT 25 2002

10-19s-28w Lane Ks

Job Ticket: 16500

DST#: 1

Test Start: 2002.09.21 @ 13:21:29

CONFIDENTIAL

Tool Information

Drill Pipe:	Length: 4083.00 ft	Diameter: 3.80 inches	Volume: 57.27 bbl	Tool Weight: 2200.00 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: 180.00 ft	Diameter: 2.25 inches	Volume: 0.89 bbl	Weight to Pull Loose: 65000.00 lb
			Total Volume: 58.16 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	4265.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	20.02 ft			
Tool Length:	43.02 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

RECEIVED

OCT 28 2002

KCC WICHITA

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

C.O. Sub	1.00			4243.00	
S.I. Tool	5.00			4248.00	
HMV	5.00			4253.00	
Safety Joint	2.00			4255.00	
Packer	5.00			4260.00	23.00 Bottom Of Top Packer
Packer	5.00			4265.00	
Stubb	1.00			4266.00	
Recorder	0.01	3017	Inside	4266.01	
Perforations	16.00			4282.01	
Recorder	0.01	13308	Outside	4282.02	
Bullnose	3.00			4285.02	20.02 Bottom Packers & Anchor

Total Tool Length: 43.02



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc

Bosley #1-10

250 N Water
Suite 300
Wichita Ks 67601
ATTN: David Doyel

10-19s-28w Lane Ks

Job Ticket: 16500

DST#: 1

Test Start: 2002.09.21 @ 13:21:29

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

34 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

74000 ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.17 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1400.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
340.00	Water w/show of oil	3.130
145.00	SOCMW 1%oil 10%mud 89%w ater	2.034
20.00	CO	0.281
90.00	GIP	1.262

Total Length: 595.00 ft

Total Volume: 6.707 bbf

Num Fluid Samples: 0

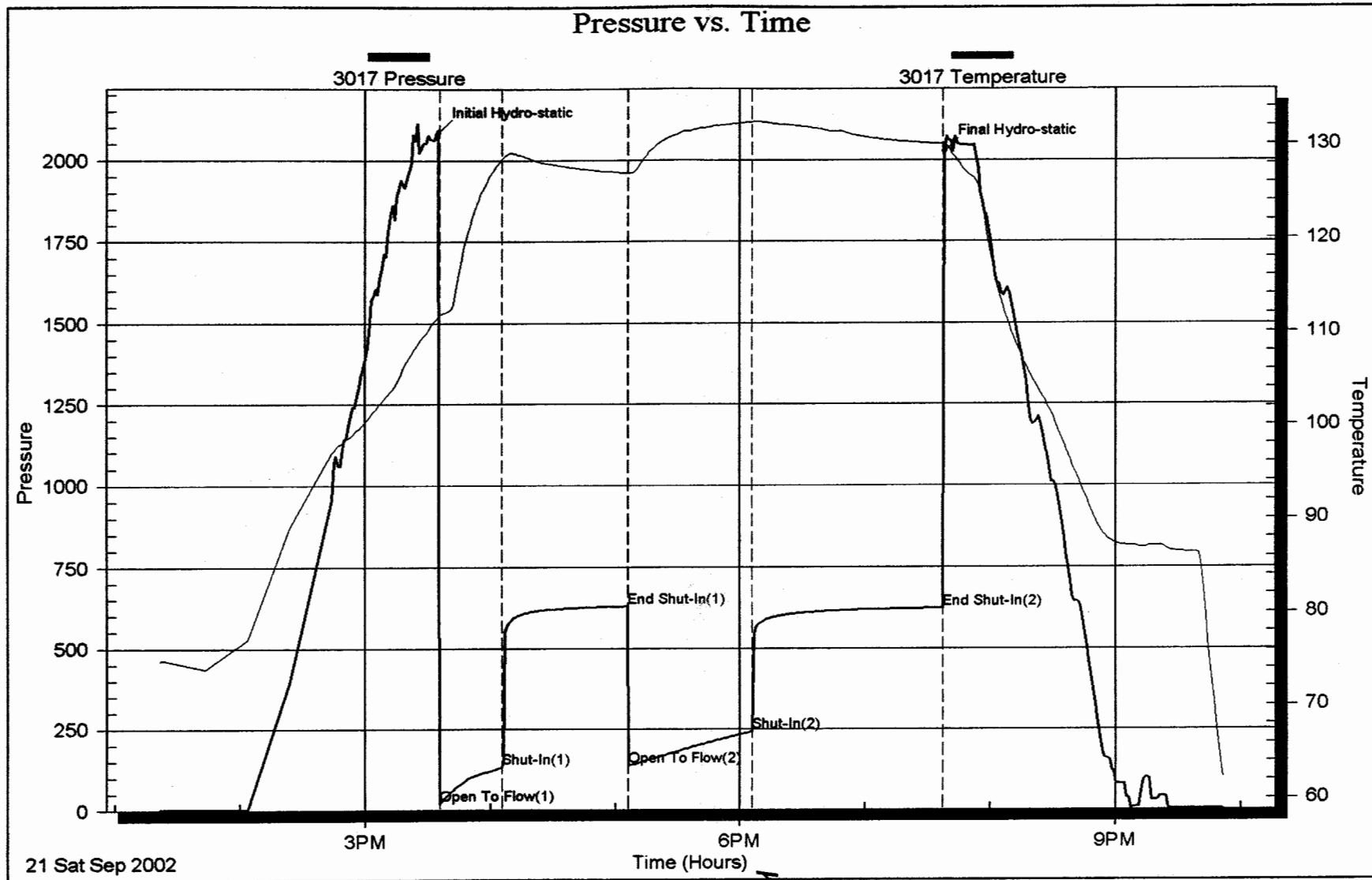
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .12@63



RECEIVED
OCT 28
KCC WIC



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water
Suite 300
Wichita Ks 67601

ATTN: David Doyel

10-19s-28w Lane Ks

Bosley #1-10

Start Date: 2002.09.22 @ 05:48:04

End Date: 2002.09.22 @ 14:45:33

Job Ticket #: 16651 DST #: 2

RECEIVED
OCT 28 2002
KCC WICHITA

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Murfin Drilling Co Inc

Bosley #1-10

10-19s-28w Lane Ks

DST # 2

KC "K"

2002.09.22



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co Inc
 250 N Water
 Suite 300
 Wichita Ks 67601
 ATTN: David Doyel

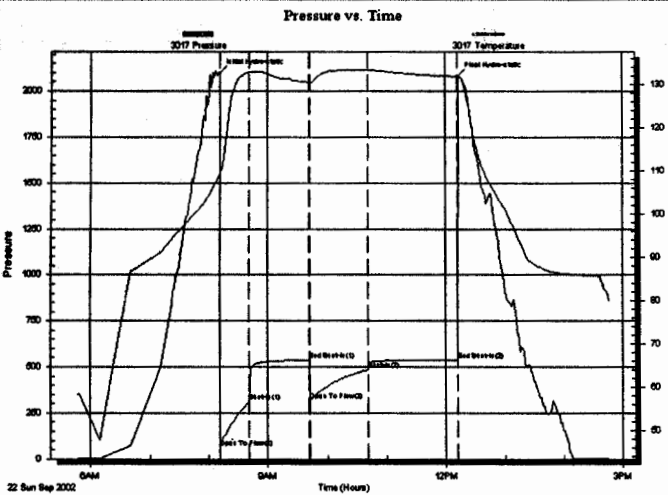
Bosley #1-10
10-19s-28w Lane Ks
 Job Ticket: 16651 DST#: 2
 Test Start: 2002.09.22 @ 05:48:04

GENERAL INFORMATION:

Formation: **KC "K"**
 Deviated: **No** Whipstock: **ft (KB)**
 Time Tool Opened: 08:11:33
 Time Test Ended: 14:45:33
 Test Type: **Conventional Bottom Hole**
 Tester: **Ray Schwager**
 Unit No: **16**
 Interval: **4289.00 ft (KB) To 4322.00 ft (KB) (TVD)**
 Reference Elevations: **2765.00 ft (KB)**
4322.00 ft (KB) (TVD)
2760.00 ft (CF)
 Hole Diameter: **7.85 inches** Hole Condition: **Fair**
 KB to GR/CF: **5.00 ft**

Serial #: 3017 **Inside**
 Press@RunDepth: **482.76 psig @ 4290.01 ft (KB)** Capacity: **7000.00 psig**
 Start Date: **2002.09.22** End Date: **2002.09.22** Last Calib.: **2002.09.22**
 Start Time: **05:48:04** End Time: **14:45:33** Time On Btm: **2002.09.22 @ 08:11:03**
 Time Off Btm: **2002.09.22 @ 12:13:03**

TEST COMMENT: FFP-weak to strong in 4 min
 FFP-weak to strong in 10 min
 Times 30-60-60-90
 weak blow on shut-in 1/2" bl



PRESSURE SUMMARY

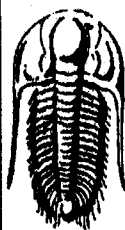
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2098.37	109.32	Initial Hydro-static
1	60.78	109.56	Open To Flow (1)
30	311.50	132.85	Shut-In(1)
91	537.71	130.54	End Shut-In(1)
91	318.33	130.53	Open To Flow (2)
150	482.76	133.36	Shut-In(2)
242	539.09	131.90	End Shut-In(2)
242	2082.85	131.88	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
560.00	water w/show of oil	6.22
185.00	SO&GCMW 20%gas 4%oil 66%water	102.60d
125.00	GM&WCO 30%gas 26%oil 24%water	201.75d
90.00	MGO 24%gas 66%oil 10 oil	1.26
140.00	CO	1.96
570.00	GP	8.00

Gas Rates

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



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co Inc

Bosley #1-10

250 N Water
Suite 300
Wichita Ks 67601
ATTN: David Doyel

10-19s-28w Lane Ks
Job Ticket: 16651 **DST#: 2**
Test Start: 2002.09.22 @ 05:48:04

Tool Information

Drill Pipe:	Length: 4111.00 ft	Diameter: 3.80 inches	Volume: 57.67 bbl	Tool Weight:	2200.00 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: 180.00 ft	Diameter: 2.25 inches	Volume: 0.89 bbl	Weight to Pull Loose:	75000.00 lb
			Total Volume: 58.56 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial	54000.00 lb
Depth to Top Packer:	4289.00 ft			Final	59000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	33.02 ft				
Tool Length:	56.02 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			4267.00	
S.I. Tool	5.00			4272.00	
HMV	5.00			4277.00	
Safety Joint	2.00			4279.00	
Packer	5.00			4284.00	23.00 Bottom Of Top Packer
Packer	5.00			4289.00	
Stubb	1.00			4290.00	
Recorder	0.01	3017	Inside	4290.01	
Perforations	29.00			4319.01	
Recorder	0.01	13308	Outside	4319.02	
Bullnose	3.00			4322.02	33.02 Bottom Packers & Anchor

Total Tool Length: 56.02



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc

Bosley #1-10

250 N Water
Suite 300
Wichita Ks 67601
ATTN: David Doyel

10-19s-28w Lane Ks

Job Ticket: 16651 DST#: 2
Test Start: 2002.09.22 @ 05:48:04

Mud and Cushion Information

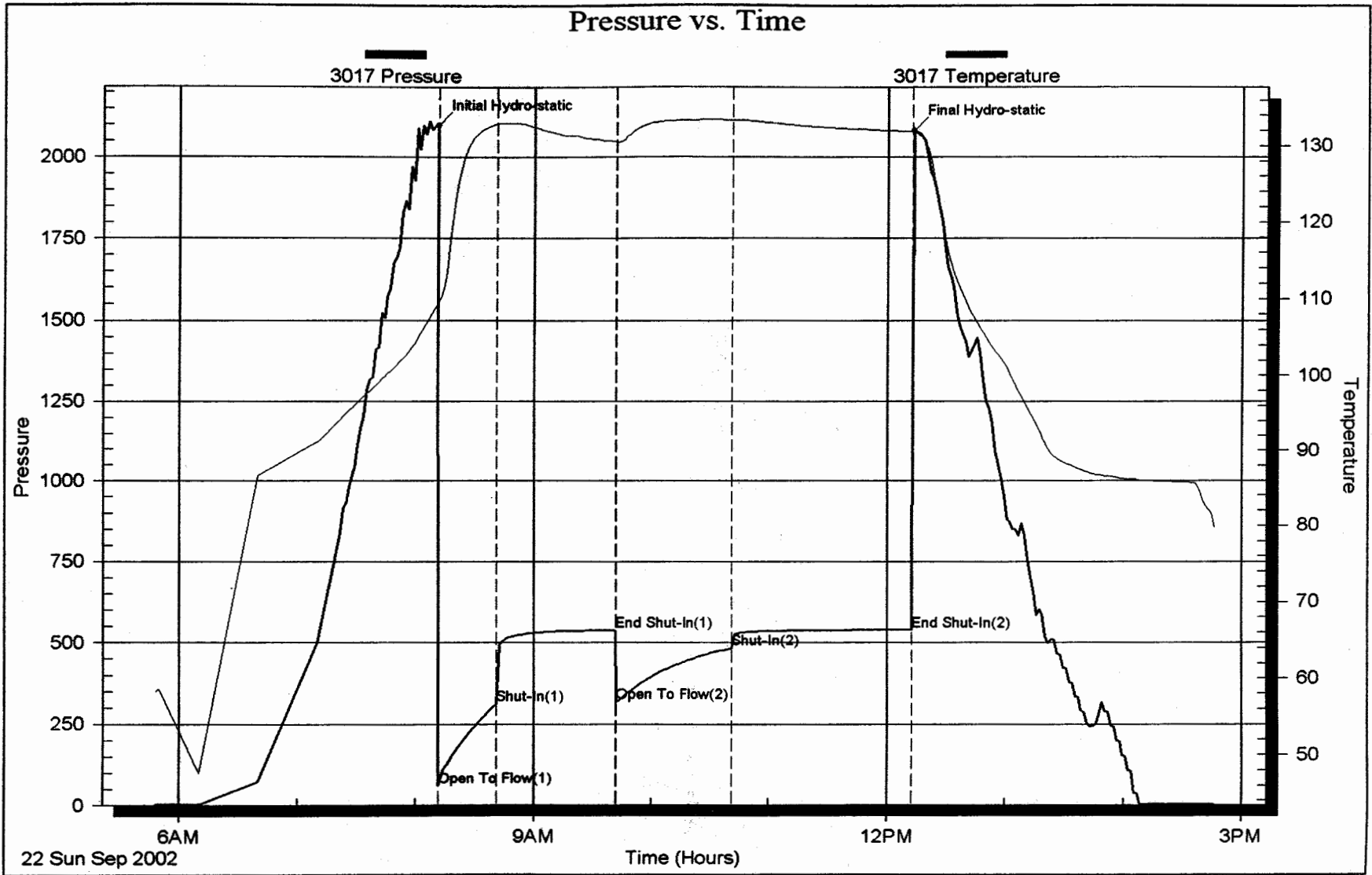
Mud Type: Gel Chem	Cushion Type:	Oil API: 37 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 70000 ppm
Viscosity: 49.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.18 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 1400.00 ppm		
Filter Cake: 2.00 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
560.00	water w/show of oil	6.216
185.00	SO&GCMW 20%gas 4%oil 66%w ater 10%mu	2.595
125.00	GM&WCO 30%gas 26%oil 24%w ater 20%mu	1.753
90.00	MGO 24%gas 66%oil 10 oil	1.262
140.00	CO	1.964
570.00	GIP	7.996

Total Length: 1670.00 ft Total Volume: 21.786 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: RW.o9@85F



KCC W
OCT
REC