

15-165-21777



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

Prepared For: **Hess Oil Company**

P.O. Box 1009  
McPherson, KS 67460

ATTN: Jamie Hess

**3-19s-20w Rush KS**

**Judy #1**

Start Date: 2005.07.09 @ 04:33:33

End Date: 2005.07.09 @ 09:19:48

Job Ticket #: 20762                      DST #: 1

Hess Oil Company

Judy #1

3-19s-20w Rush KS

DST # 1

Cherokee Sand

12005.07.09

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Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Hess Oil Company  
P.O. Box 1009  
McPherson, KS 67460  
  
ATTN: Jamie Hess

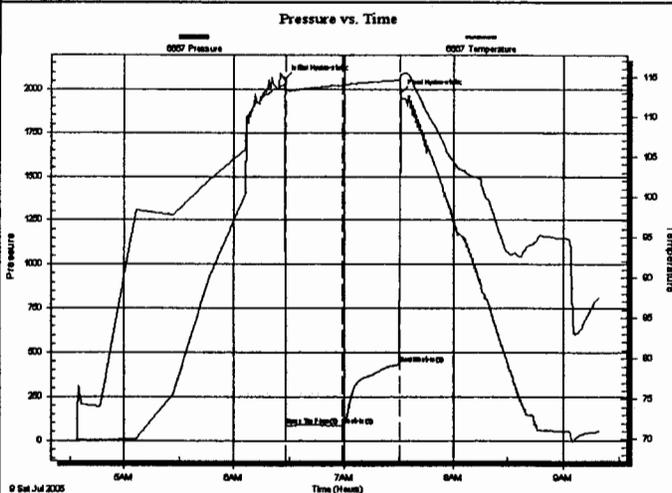
**Judy #1**  
**3-19s-20w Rush KS**  
Job Ticket: 20762      DST#: 1  
Test Start: 2005.07.09 @ 04:33:33

### GENERAL INFORMATION:

Formation: **Cherokee Sand**  
Deviated: **No Whipstock**      ft (KB)  
Time Tool Opened: 06:28:18  
Time Test Ended: 09:19:48  
Test Type: **Conventional Bottom Hole**  
Tester: **Jake Fahrenbruch**  
Unit No: **19**  
Interval: **4150.00 ft (KB) To 4182.00 ft (KB) (TVD)**  
Reference Elevations: **2175.00 ft (KB)**  
Total Depth: **4182.00 ft (KB) (TVD)**  
**2171.00 ft (CF) -**  
Hole Diameter: **7.88 inches** Hole Condition: **Fair**  
KB to GR/CF: **4.00 ft**

**Serial #: 6667      Inside**  
Press@RunDepth: **86.26 psig @ 4151.00 ft (KB)**      Capacity: **7000.00 psig**  
Start Date: **2005.07.09**      End Date: **2005.07.09**      Last Calib.: **2005.07.09**  
Start Time: **04:33:38**      End Time: **09:19:47**      Time On Btrm: **2005.07.09 @ 06:27:33**  
Time Off Btrm: **2005.07.09 @ 07:30:48**

TEST COMMENT: **IF: Weak blow @ .5", slowly dying.**  
**IS: Bled off, no blow back.**



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2060.61	113.84	Initial Hydro-static
1	83.00	113.40	Open To Flow (1)
32	86.26	113.96	Shut-In(1)
63	432.15	114.60	End Shut-In(1)
64	1976.06	115.32	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
20.00	Mud 100%	0.10
0.00	0	0.00

### Gas Rates

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



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TESTING, INC.**

# DRILL STEM TEST REPORT

TOOL DIAGRAM

Hess Oil Company  
P.O. Box 1009  
McPherson, KS 67460  
ATTN: Jamie Hess

**Judy #1**  
**3-19s-20w Rush KS**  
Job Ticket: 20762      DST#: 1  
Test Start: 2005.07.09 @ 04:33:33

**Tool Information**

Drill Pipe:	Length: 3912.00 ft	Diameter: 3.80 inches	Volume: 54.88 bbl	Tool Weight: 2100.00 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: 215.00 ft	Diameter: 2.25 inches	Volume: 1.06 bbl	Weight to Pull Loose: 54000.00 lb
			<u>Total Volume: 55.94 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 49000.00 lb
Depth to Top Packer:	4150.00 ft			Final 49000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	32.00 ft			
Tool Length:	60.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4127.00	
Hydraulic tool	5.00			4132.00	
Jars	5.00			4137.00	
Safety Joint	3.00			4140.00	
Packer	5.00			4145.00	28.00      Bottom Of Top Packer
Packer	5.00			4150.00	
Stubb	1.00			4151.00	
Recorder	0.00	6667	Inside	4151.00	
Perforations	28.00			4179.00	
Recorder	0.00	11019	Outside	4179.00	
Bullnose	3.00			4182.00	32.00      Bottom Packers & Anchor

**Total Tool Length: 60.00**

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## DRILL STEM TEST REPORT

**FLUID SUMMARY**

Hess Oil Company

Judy #1

P.O. Box 1009  
McPherson, KS 67460

3-19s-20w Rush KS

Job Ticket: 20762

DST#: 1

ATTN: Jamie Hess

Test Start: 2005.07.09 @ 04:33:33

### 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: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 12.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 0.04 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
20.00	Mud 100%	0.098
0.00	0	0.000

Total Length: 20.00 ft      Total Volume: 0.098 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Judy #1

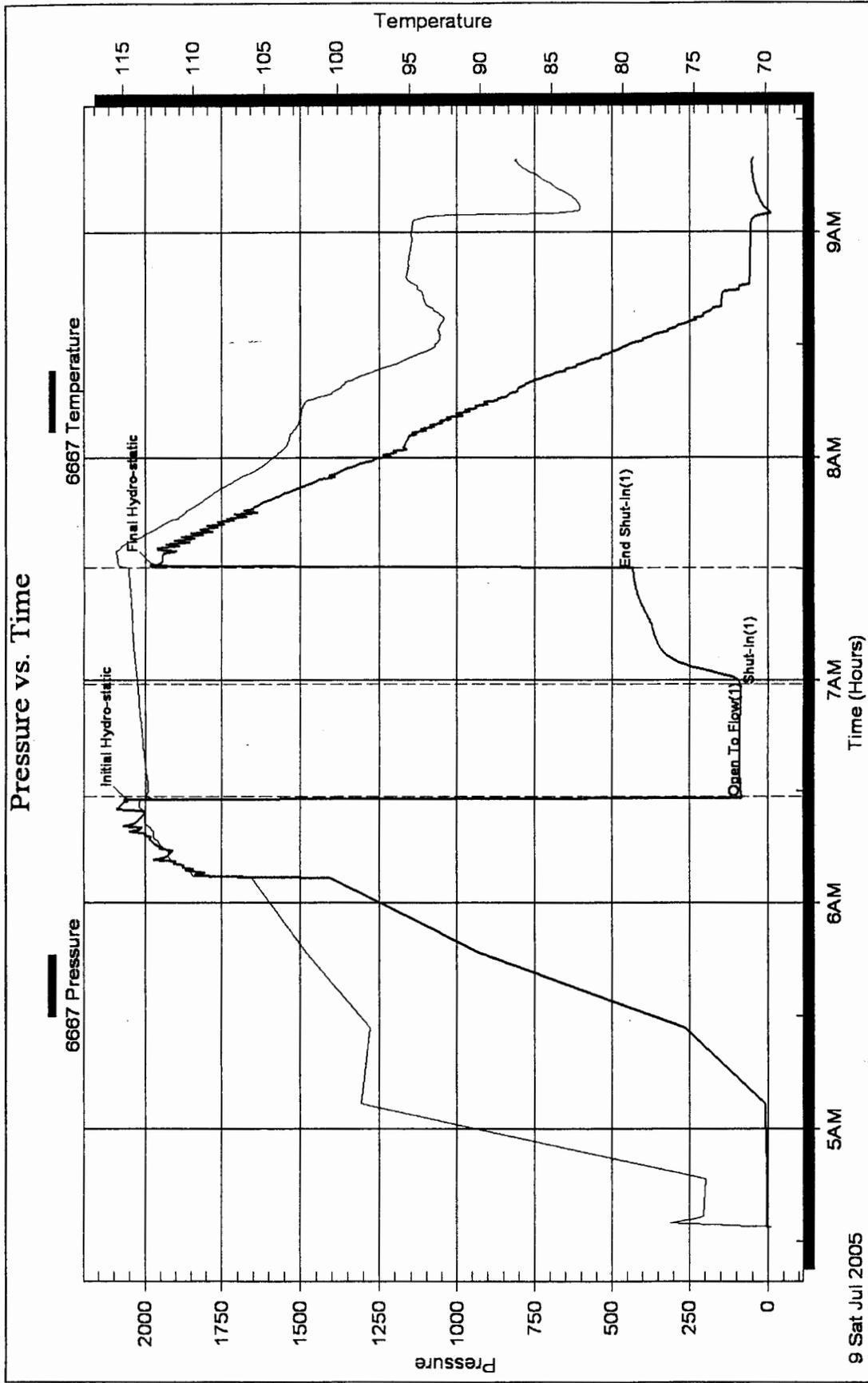
3-19s-20w Rush KS

Hess Oil Company

Inside

Serial #: 6667

DST Test Number: 1

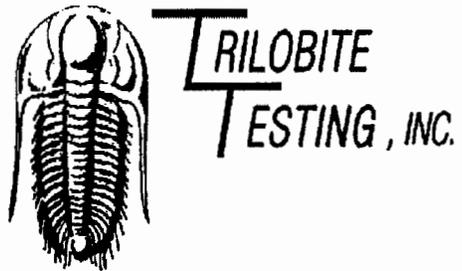


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## DRILL STEM TEST REPORT

Prepared For: **Hess Oil Company**

P.O. Box 1009  
McPherson, KS 67460

ATTN: Jamie Hess

**3-19s-20w Rush KS**

**Judy #1**

Start Date: 2005.07.09 @ 16:40:15

End Date: 2005.07.09 @ 23:56:45

Job Ticket #: 20763                      DST #: 2

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



**TRILOBITE  
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## DRILL STEM TEST REPORT

Hess Oil Company  
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ATTN: Jamie Hess

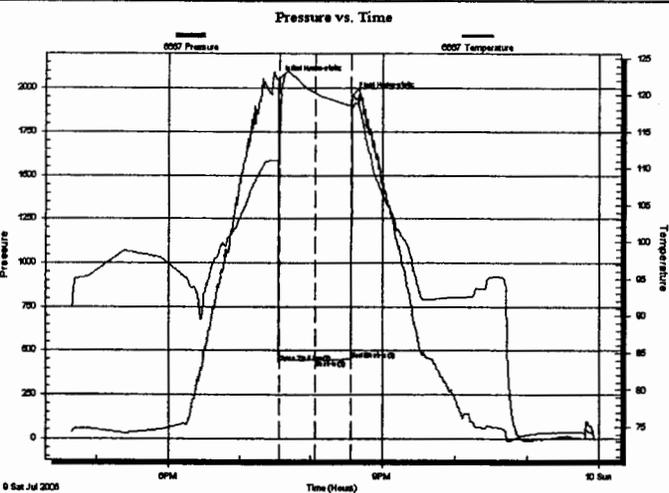
Judy #1  
3-19s-20w Rush KS  
Job Ticket: 20763      DST#: 2  
Test Start: 2005.07.09 @ 16:40:15

### GENERAL INFORMATION:

Formation: **Cherokee**  
Deviated: No    Whipstock:                      ft (KB)  
Time Tool Opened: 19:33:15  
Time Test Ended: 23:56:45  
Interval: **4150.00 ft (KB) To 4220.00 ft (KB) (TVD)**  
Total Depth: **4220.00 ft (KB) (TVD)**  
Hole Diameter: **7.88 inches** Hole Condition: Fair  
Reference Elevations: **2175.00 ft (KB)**  
**2171.00 ft (CF) -**  
KB to GR/CF: **4.00 ft**

Serial #: **6667**      Inside  
Press@RunDepth: **447.61 psig @ 4151.00 ft (KB)**  
Start Date: **2005.07.09**      End Date: **2005.07.09**  
Start Time: **16:40:20**      End Time: **23:56:44**  
Capacity: **7000.00 psig**  
Last Calib.: **2005.07.10**  
Time On Btrn: **2005.07.09 @ 19:32:45**  
Time Off Btrn: **2005.07.09 @ 20:34:30**

TEST COMMENT: F: Strong blow, BOB 1minute.  
IS: Bled off, no blow back.



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2050.79	111.04	Initial Hydro-static
1	430.91	110.70	Open To Flow (1)
31	447.61	120.35	Shut-In(1)
61	450.02	118.55	End Shut-In(1)
62	1956.21	118.62	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
640.00	Salt Water 100%w	7.02
250.00	MCW 45%w 55%w	3.51
0.00	RW= .15 ohm @ 75 deg F = 45000 ppm	0.00
0.00	0	0.00

### Gas Rates

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Hess Oil Company

Judy #1

P.O. Box 1009  
McPherson, KS 67460

3-19s-20w Rush KS

Job Ticket: 20763

DST#: 2

ATTN: Jamie Hess

Test Start: 2005.07.09 @ 16:40:15

### Tool Information

Drill Pipe:	Length: 3912.00 ft	Diameter: 3.80 inches	Volume: 54.88 bbl	Tool Weight: 2100.00 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: 215.00 ft	Diameter: 2.25 inches	Volume: 1.06 bbl	Weight to Pull Loose: 56000.00 lb
			<u>Total Volume: 55.94 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 49000.00 lb
Depth to Top Packer:	4150.00 ft			Final 51000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	70.00 ft			
Tool Length:	98.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4127.00	
Hydraulic tool	5.00			4132.00	
Jars	5.00			4137.00	
Safety Joint	3.00			4140.00	
Packer	5.00			4145.00	28.00 Bottom Of Top Packer
Packer	5.00			4150.00	
Stubb	1.00			4151.00	
Recorder	0.00	6667	Inside	4151.00	
Perforations	25.00			4176.00	
Change Over Sub	1.00			4177.00	
Blank Spacing	31.00			4208.00	
Change Over Sub	1.00			4209.00	
Perforations	8.00			4217.00	
Recorder	0.00	11019	Outside	4217.00	
Bullnose	3.00			4220.00	70.00 Bottom Packers & Anchor

**Total Tool Length: 98.00**

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**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Hess Oil Company

**Judy #1**

P.O. Box 1009  
McPherson, KS 67460

**3-19s-20w Rush KS**

Job Ticket: 20763

**DST#: 2**

ATTN: Jamie Hess

Test Start: 2005.07.09 @ 16:40:15

**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: 54.00 sec/qt

Cushion Volume:

bbf

Water Loss: 12.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 0.04 inches

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbf
640.00	Salt Water 100%w	7.019
250.00	MCW 45%w 55%w	3.507
0.00	RW= .15 ohm @ 75 deg F = 45000 ppm	0.000
0.00	0	0.000

Total Length: 890.00 ft      Total Volume: 10.526 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

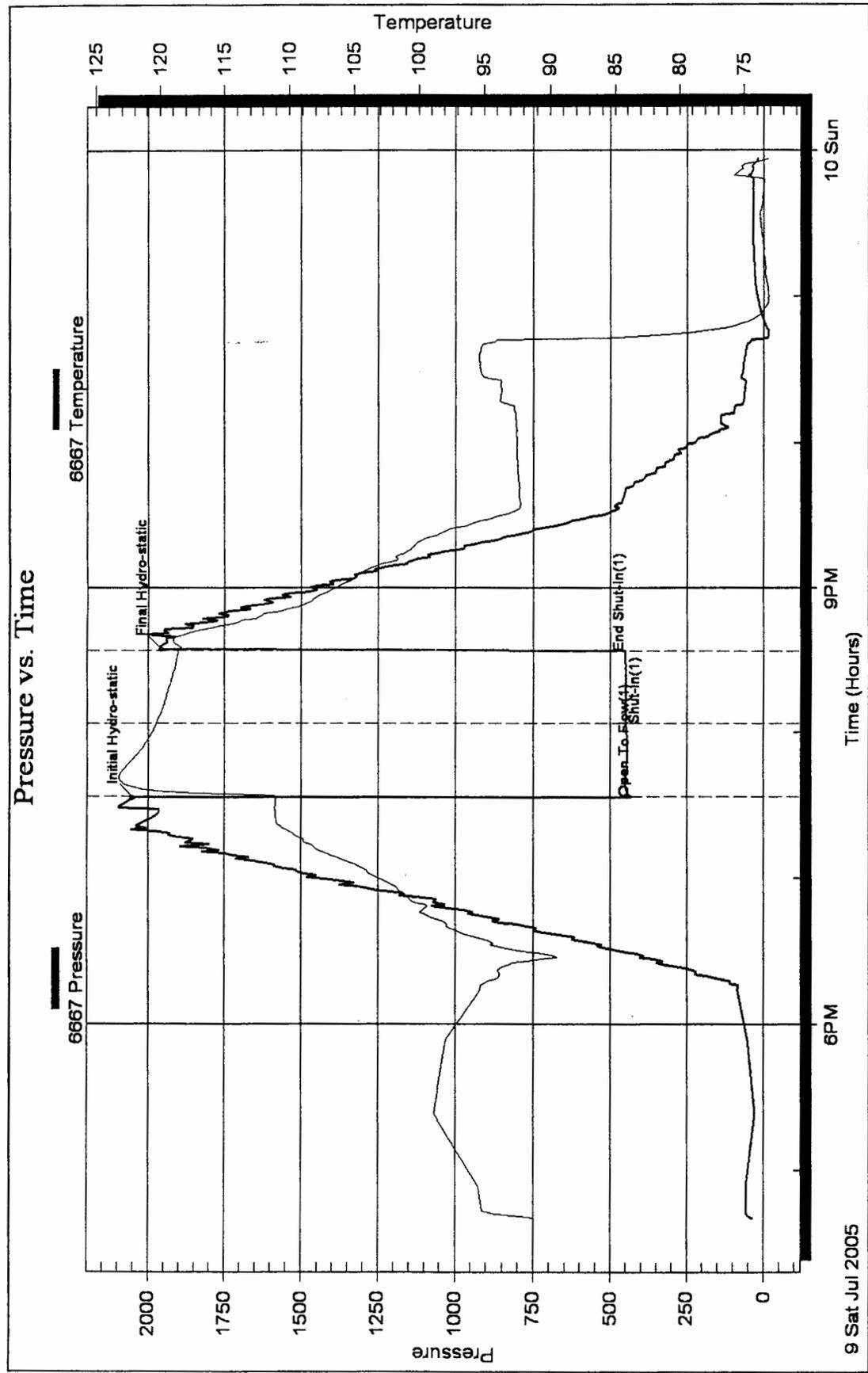
Laboratory Location:

Recovery Comments:

Judy #1  
3-19s-20w Rush KS

DST Test Number: 2

Serial #: 6667 Hess Oil Company



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