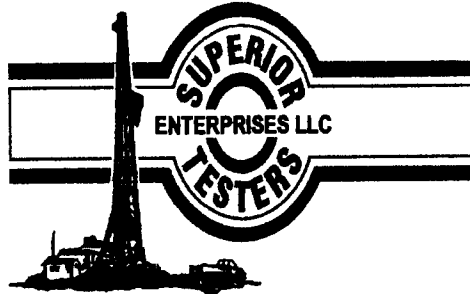


15-063-21783

20-13s-31w



## DRILL STEM TEST REPORT

Prepared For: **RITCHIE EXPLORATION INC**

PO 783188  
WICHITA KS 67278

ATTN: STEVE CARL

**20-13-31W GOVE**

**HESS 20D #1**

Start Date: 2009.06.29 @ 18:55:00

End Date: 2009.06.30 @ 01:54:25

Job Ticket #: 16854                      DST #: 1

Superior Testers Enterprises LLC  
PO Box 138 Great Bend KS 67530  
1-800-792-6902

Printed: 2009.06.30 @ 02:11:08

RITCHIE EXPLORATION INC  
HESS 20D #1  
20-13-31W GOVE  
DST # 1  
LANSING "C"  
2009.06.29





# DRILL STEM TEST REPORT

RITCHE EXPLORATION INC

HESS 20D #1

PO 783188  
WICHITA KS 67278

20-13-31W GOVE

Job Ticket: 16854      DST#: 1

ATTN: STEVE CARL

Test Start: 2009.06.29 @ 18:55:00

## GENERAL INFORMATION:

Formation: **LANSING "C"**

Deviated: No      Whipstock:      ft (KB)

Time Tool Opened: 20:30:55

Time Test Ended: 01:54:25

Test Type: Conventional Bottom Hole (Initial)

Tester: JARED SCHECK

Unit No: 3320-50-SCOTT CITY

Interval: **3938.00 ft (KB) To 3967.00 ft (KB) (TVD)**

Total Depth: 3967.00 ft (KB) (TVD)

Hole Diameter: 6.88 inches      Hole Condition: Fair

Reference Elevations: 2888.00 ft (KB)

2878.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 8524

Outside

Press@RunDepth: 1243.42 psia @ 3962.00 ft (KB)

Start Date: 2009.06.29

End Date:

2009.06.30

Capacity: 5000.00 psia

Last Calib.: 2009.06.30

Start Time: 18:56:00

End Time:

01:54:30

Time On Btm: 2009.06.29 @ 20:29:30

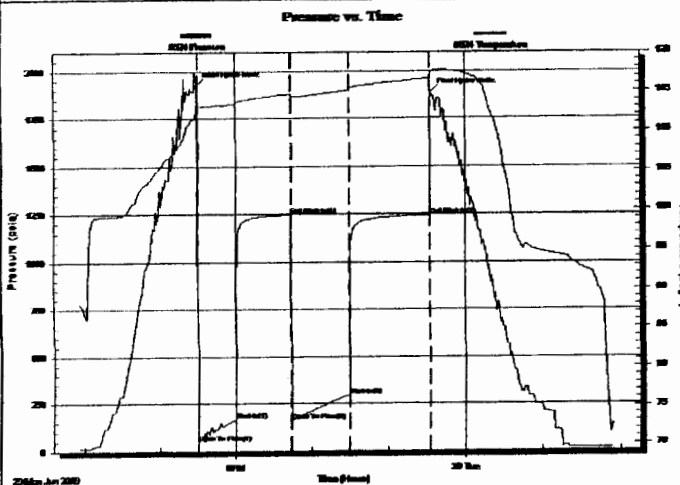
Time Off Btm: 2009.06.29 @ 23:33:30

TEST COMMENT: 30/INITIAL OPEN:FAIR BLOW BUILT 2 INCHES FROM THE BOTTOM OF BUCKET IN 30 MINUTES

45/INITIAL SHUT IN:NO BLOW BACK

45/FINAL OPEN:WEAK BUT BUILDING BLOW BUILT 2 INCHES FROM THE BOTTOM OF BUCKET IN 45 MINUTES

60/FINAL SHUT IN :NO BLOW BACK



## PRESSURE SUMMARY

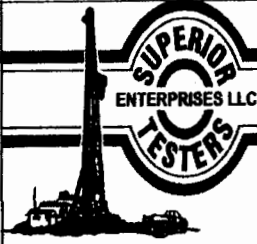
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1923.41	113.36	Initial Hydro-static
1	43.75	113.06	Open To Flow (1)
31	162.77	113.38	Shut-In(1)
75	1246.40	114.68	End Shut-In(1)
75	159.70	114.22	Open To Flow (2)
120	292.97	115.13	Shut-In(2)
183	1243.42	116.60	End Shut-In(2)
184	1888.00	117.38	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
90.00	WM 40%W 60%M	0.44
180.00	MW 40%M 60%W	0.89
270.00	MW 20%M 80%W	1.33

## Gas Rates

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



# DRILL STEM TEST REPORT

TOOL DIAGRAM

RITCHE EXPLORATION INC

HESS 20D #1

PO 783188  
WICHITA KS 67278

20-13-31W GOVE

Job Ticket: 16854      DST#: 1

ATTN: STEVE CARL

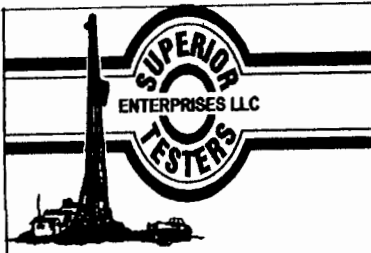
Test Start: 2009.06.29 @ 18:55:00

**Tool Information**

Drill Pipe:	Length: 3351.00 ft	Diameter: 3.80 inches	Volume: 47.01 bbl	Tool Weight: 10000.00 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: 585.00 ft	Diameter: 2.25 inches	Volume: 2.88 bbl	Weight to Pull Loose: 100000.0 lb
			<u>Total Volume: 49.89 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	3938.00 ft			Final 72000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	29.00 ft			
Tool Length:	52.00 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			3916.00	
Shut-In Tool	5.00			3921.00	
Hydraulic Tool	5.00			3926.00	
Safety Joint	2.00			3928.00	
Packer	5.00			3933.00	23.00      Bottom Of Top Packer
Packer	5.00			3938.00	
Perforations	24.00			3962.00	
Recorder	0.00	27799	Inside	3962.00	
Recorder	0.00	8524	Outside	3962.00	
Bullnose	5.00			3967.00	29.00      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>52.00</b>				



# DRILL STEM TEST REPORT

FLUID SUMMARY

RITCHE EXPLORATION INC

HESS 20D #1

PO 783188  
WICHITA KS 67278

20-13-31W GOVE

Job Ticket: 16854      DST#: 1

ATTN: STEVE CARL

Test Start: 2009.06.29 @ 18:55:00

## 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:	ppm
Viscosity: 45.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.39 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.15 ohm.m	Gas Cushion Pressure: psia		
Salinity: 1600.00 ppm			
Filter Cake: 1.00 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
90.00	WM 40%W 60%M	0.443
180.00	MW 40%M 60%W	0.885
270.00	MW 20%M 80%W	1.328

Total Length: 540.00 ft      Total Volume: 2.656 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments: CHLORIDES 50,000

DST Test Number: 1

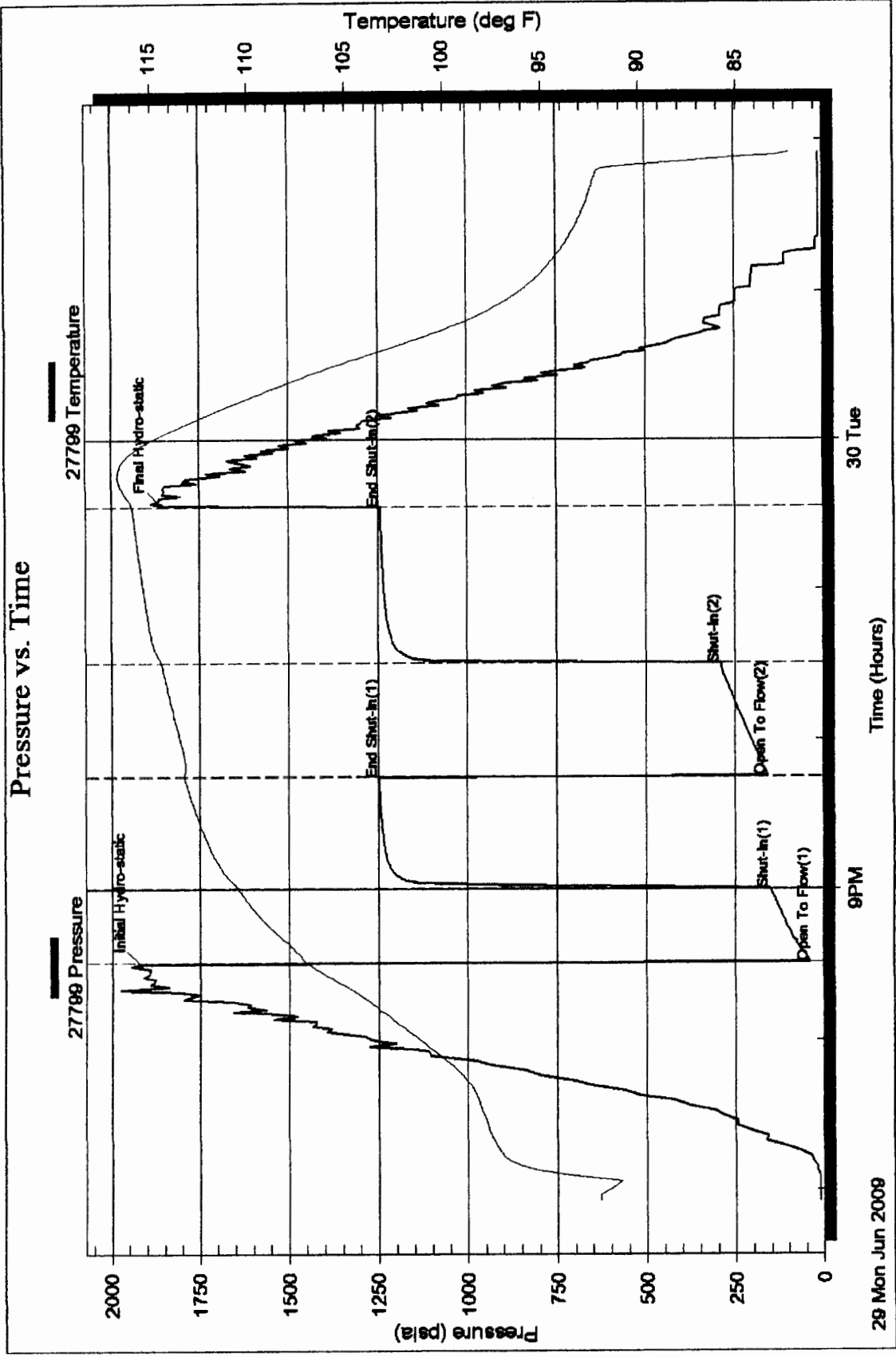
20-13-31W GOVE

RITCHE EXPLORATION INC

Inside

Serial #: 27799

### Pressure vs. Time



Printed: 2009.06.30 @ 02:11:16

Ref. No: 16854

Superior Testers Enterprises LLC

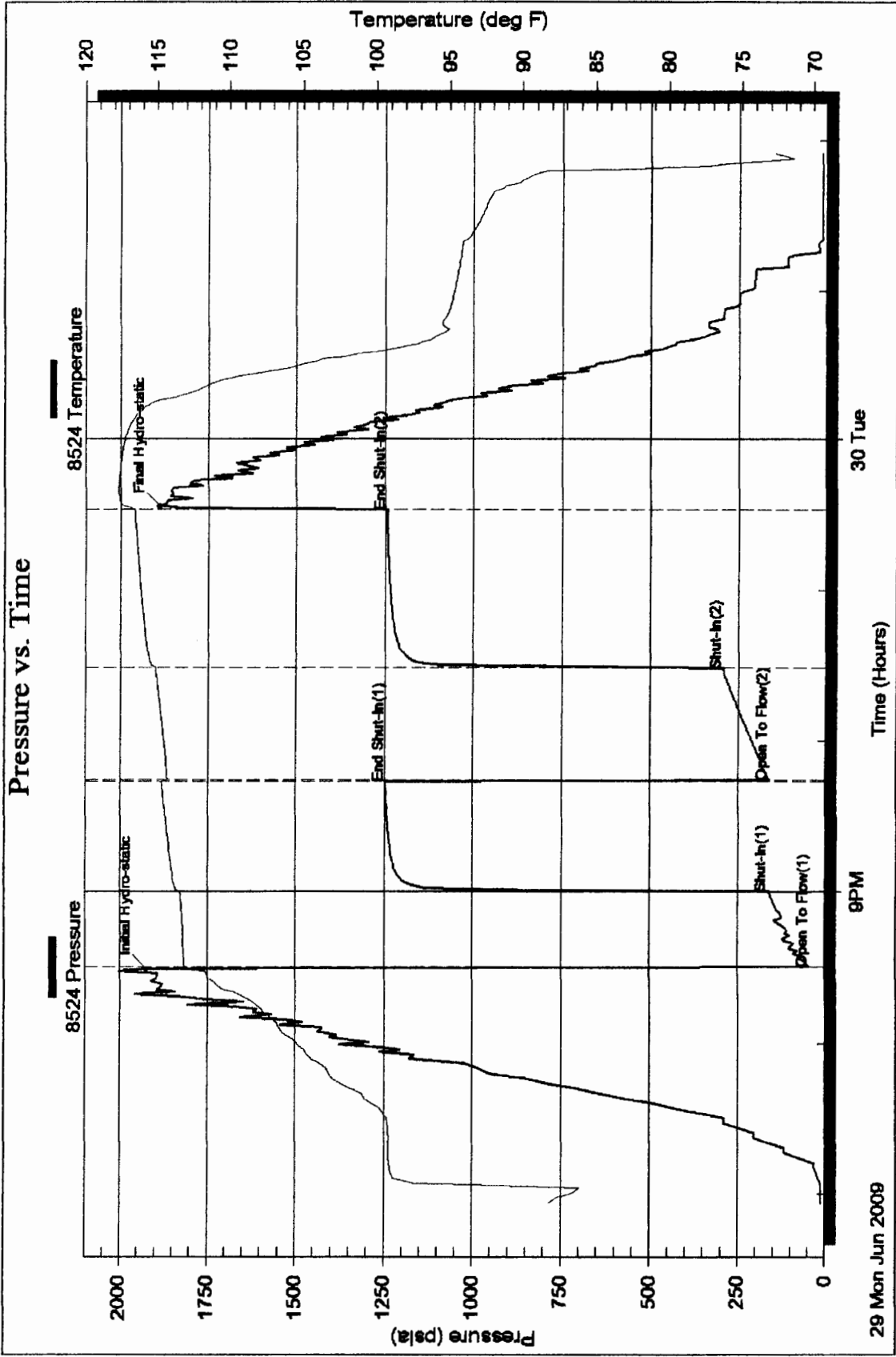
Serial #: 8524

Outside RTCHIE EXPLORATION INC

20-13-31W GOVE

DST Test Number: 1

### Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **RITCHIE EXPLORATION INC**

PO 783188  
WICHITA KS 67278

ATTN: STEVE CARL

**20-13-31W GOVE**

**HESS 20D #1**

Start Date: 2009.06.30 @ 09:05:00

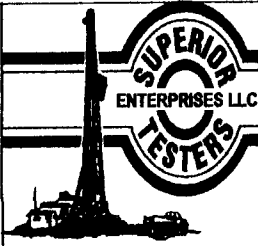
End Date: 2009.06.30 @ 14:30:54

Job Ticket #: 16855                      DST #: 2

Superior Testers Enterprises LLC  
PO Box 138 Great Bend KS 67530  
1-800-792-6902

Printed: 2009.06.30 @ 14:43:09

RITCHIE EXPLORATION INC  
HESS 20D #1  
20-13-31W GOVE  
DST # 2  
LANSING "D"  
2009.06.30



# DRILL STEM TEST REPORT

RITCHE EXPLORATION INC

HESS 20D #1

PO 783188  
WICHITA KS 67278

20-13-31W GOVE

Job Ticket: 16855

DST#: 2

ATTN: STEVE CARL

Test Start: 2009.06.30 @ 09:05:00

## GENERAL INFORMATION:

Formation: **LANSING "D"**

Deviated: **No Whipstock** ft (KB)

Time Tool Opened: 11:02:25

Time Test Ended: 14:30:54

Test Type: **Conventional Bottom Hole (Initial)**

Tester: **JARED SCHECK**

Unit No: **3320-50-SCOTT CITY**

Interval: **3967.00 ft (KB) To 3985.00 ft (KB) (TVD)**

Total Depth: **3985.00 ft (KB) (TVD)**

Hole Diameter: **6.88 inches** Hole Condition: **Fair**

Reference Elevations: **2888.00 ft (KB)**

**2878.00 ft (CF)**

KB to GR/CF: **10.00 ft**

## Serial #: 27799

Inside

Press@RunDepth: **49.86 psia @ 3980.00 ft (KB)**

Start Date: **2009.06.30**

End Date:

**2009.06.30**

Capacity: **5000.00 psia**

Last Calib.: **2009.06.30**

Start Time: **09:05:00**

End Time:

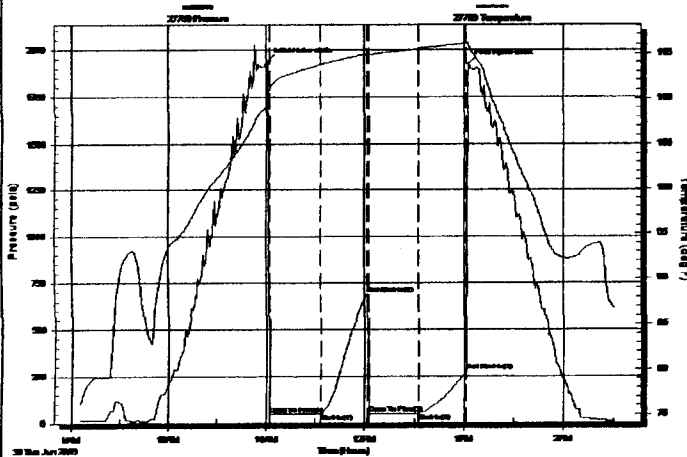
**14:30:54**

Time On Btm: **2009.06.30 @ 11:01:25**

Time Off Btm: **2009.06.30 @ 13:02:55**

TEST COMMENT: 30/INITIAL OPEN:WEAK BLOW BUILT 1/2 INCH INTO BCKET STAYED STEADY THROUGH OUT OPEN  
30/INITIAL SHUT IN :NO BLOW BACK  
30/FINAL OPEN:WEAK SRGE DID NOT BUILD  
30/FINAL SHUT IN :NO BLOW BACK

Pressure vs. Time



## PRESSURE SUMMARY

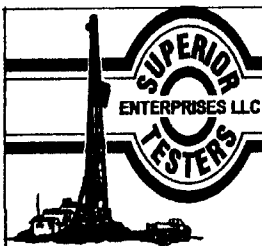
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1939.72	110.45	Initial Hydro-static
1	45.08	111.03	Open To Flow (1)
32	47.98	113.73	Shut-In(1)
60	688.04	114.90	End Shut-In(1)
61	47.97	114.93	Open To Flow (2)
91	49.86	115.49	Shut-In(2)
120	275.63	116.09	End Shut-In(2)
122	1923.80	115.93	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	MUD	0.05

## Gas Rates

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



# DRILL STEM TEST REPORT

RITCHE EXPLORATION INC

HESS 20D #1

PO 783188  
WICHITA KS 67278

20-13-31W GOVE

Job Ticket: 16855      DST#: 2

ATTN: STEVE CARL

Test Start: 2009.06.30 @ 09:05:00

## GENERAL INFORMATION:

Formation: **LANSING "D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:02:25

Time Test Ended: 14:30:54

Test Type: Conventional Bottom Hole (Initial)

Tester: JARED SCHECK

Unit No: 3320-50-SCOTT CITY

Interval: **3967.00 ft (KB) To 3985.00 ft (KB) (TVD)**

Reference Elevations: 2888.00 ft (KB)

Total Depth: 3985.00 ft (KB) (TVD)

2878.00 ft (CF)

Hole Diameter: 6.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8524

Outside

Press@RunDepth: 281.83 psia @ 3980.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2009.06.30

End Date: 2009.06.30

Last Calib.: 2009.06.30

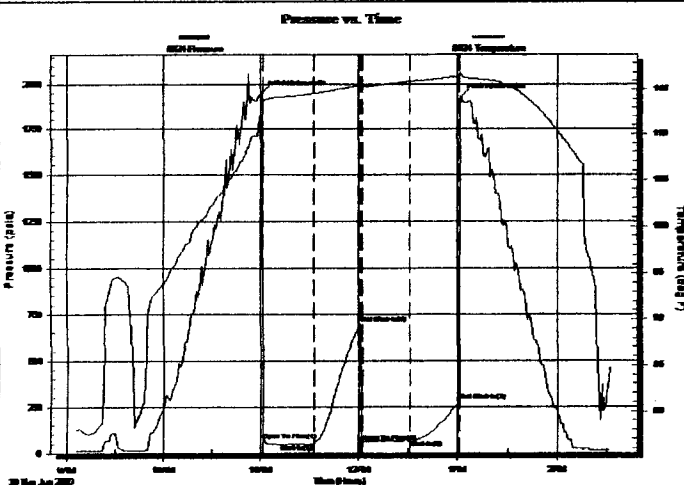
Start Time: 09:05:00

End Time: 14:32:00

Time On Btm: 2009.06.30 @ 11:01:00

Time Off Btm: 2009.06.30 @ 13:02:00

TEST COMMENT: 30/INITIAL OPEN:WEAK BLOW BUILT 1/2 INCH INTO BCKET STAYED STEADY THROUGH OUT OPEN  
30/INITIAL SHUT IN :NO BLOW BACK  
30/FINAL OPEN:WEAK SRGE DID NOT BUILD  
30/FINAL SHUT IN :NO BLOW BACK



## PRESSURE SUMMARY

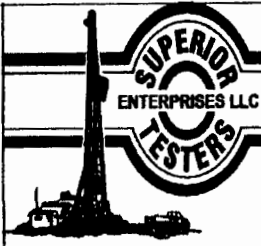
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1951.62	113.31	Initial Hydro-static
1	67.12	113.44	Open To Flow (1)
32	48.48	114.58	Shut-In(1)
60	696.55	115.49	End Shut-In(1)
61	54.91	115.38	Open To Flow (2)
90	69.97	115.92	Shut-In(2)
120	281.83	116.51	End Shut-In(2)
121	1928.02	116.75	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	MUD	0.05

## Gas Rates

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



# DRILL STEM TEST REPORT

TOOL DIAGRAM

RITCHE EXPLORATION INC

HESS 20D #1

PO 783188  
WICHITA KS 67278

20-13-31W GOVE

Job Ticket: 16855

DST#: 2

ATTN: STEVE CARL

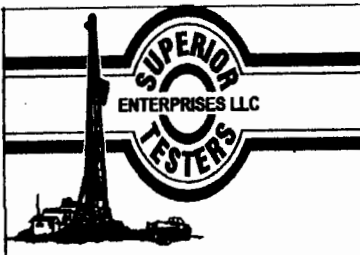
Test Start: 2009.06.30 @ 09:05:00

## Tool Information

Drill Pipe:	Length: 3383.00 ft	Diameter: 3.80 inches	Volume: 47.45 bbl	Tool Weight: 10000.00 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: 585.00 ft	Diameter: 2.25 inches	Volume: 2.88 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 50.33 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	3967.00 ft			Final 72000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	18.00 ft			
Tool Length:	41.00 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			3945.00	
Shut-In Tool	5.00			3950.00	
Hydraulic Tool	5.00			3955.00	
Safety Joint	2.00			3957.00	
Packer	5.00			3962.00	23.00 Bottom Of Top Packer
Packer	5.00			3967.00	
Perforations	13.00			3980.00	
Recorder	0.00	27799	Inside	3980.00	
Recorder	0.00	8524	Outside	3980.00	
Bullnose	5.00			3985.00	18.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>41.00</b>				



# DRILL STEM TEST REPORT

FLUID SUMMARY

RITCHIE EXPLORATION INC

HESS 20D #1

PO 783188  
WICHITA KS 67278

20-13-31W GOVE

Job Ticket: 16855      DST#: 2

ATTN: STEVE CARL

Test Start: 2009.06.30 @ 09:05:00

## Mud and Cushion Information

Mud Type: Gel Chem  
 Mud Weight: 9.00 lb/gal  
 Viscosity: 47.00 sec/qt  
 Water Loss: 8.00 in<sup>3</sup>  
 Resistivity: ohm.m  
 Salinity: 2600.00 ppm  
 Filter Cake: 1.00 inches

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

Oil API:      deg API  
 Water Salinity: ppm

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	MUD	0.049

Total Length: 10.00 ft      Total Volume: 0.049 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments:

Serial #: 27799

Inside

RITCHEE EXPLORATION INC

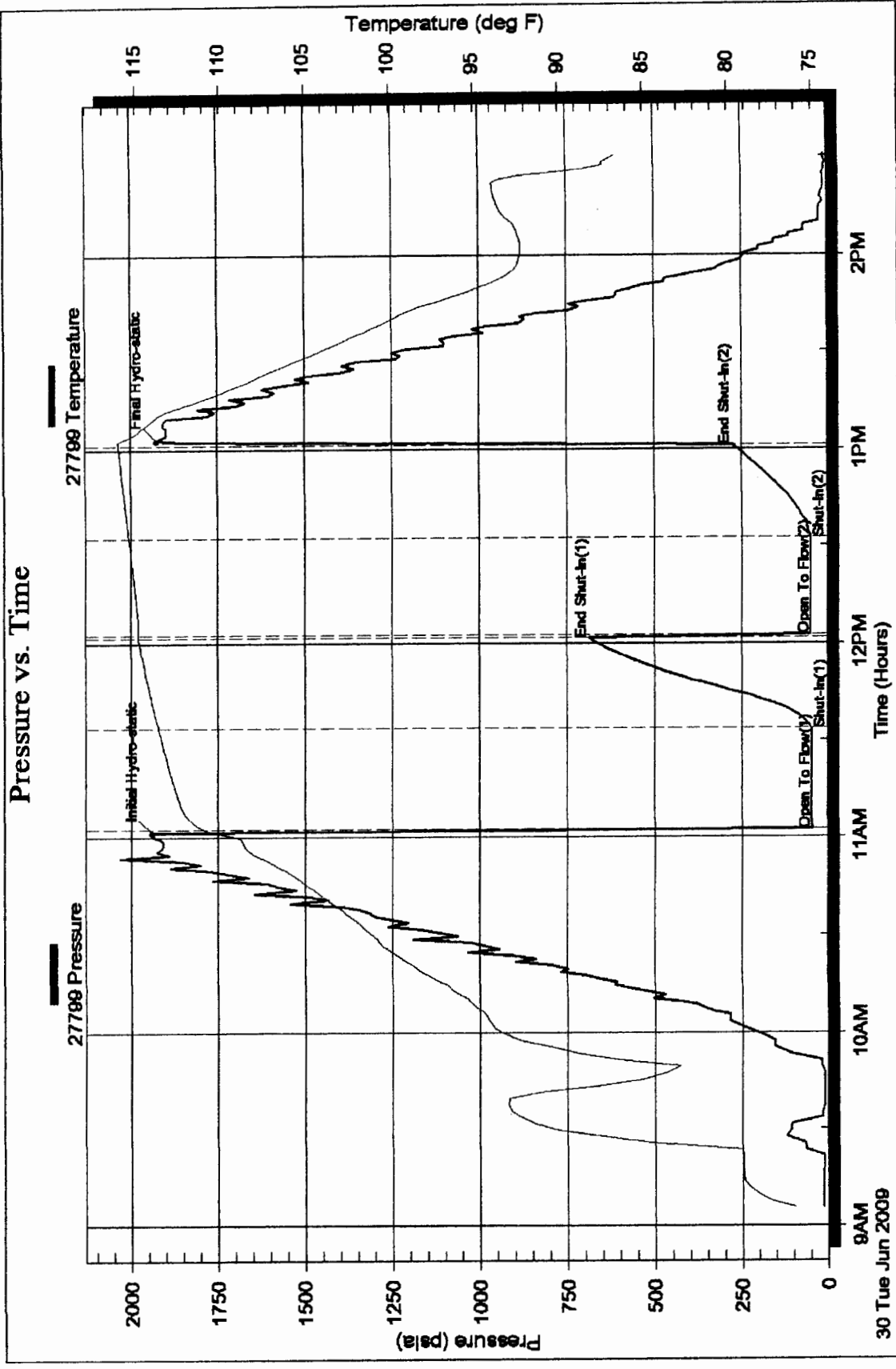
20-13-31W GOVE

DST Test Number: 2

30 Tue Jun 2009

9AM 10AM 11AM 12PM 1PM 2PM

### Pressure vs. Time



Printed: 2009.06.30 @ 14:43:11

Ref. No: 16855

Superior Testers Enterprises LLC

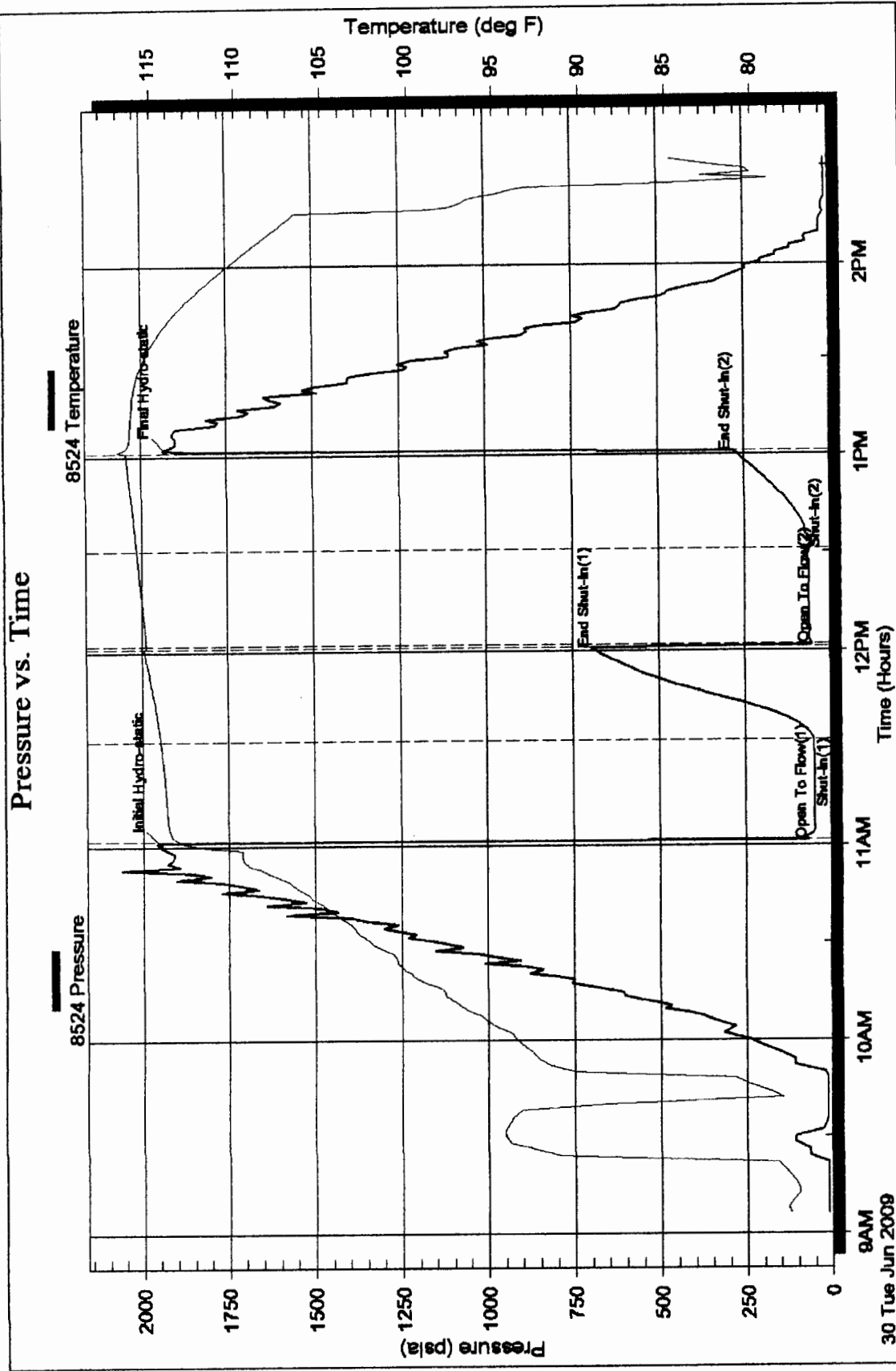
DST Test Number: 2

20-13-31W GOVE

Outside RITCHIE EXPLORATION INC

Serial #: 8524

### Pressure vs. Time



Printed: 2009.06.30 @ 14:43:11

Ref. No: 16855

Superior Testers Enterprises LLC



## DRILL STEM TEST REPORT

Prepared For: **RITCHIE EXPLORATION INC**

PO 783188  
WICHITA KS 67278

ATTN: STEVE CARL

**20-13-31W GOVE**

**HESS 20D #1**

Start Date: 2009.07.01 @ 01:00:00

End Date: 2009.07.01 @ 10:21:24

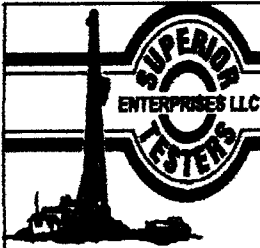
Job Ticket #: 16856                      DST #: 3

Superior Testers Enterprises LLC  
PO Box 138 Great Bend KS 67530  
1-800-792-6902

Printed: 2009.07.03 @ 11:14:27

RITCHIE EXPLORATION INC  
HESS 20D #1  
20-13-31W GOVE  
DST # 3  
LANSING " H "  
2009.07.01





# DRILL STEM TEST REPORT

RITCHE EXPLORATION INC

HESS 20D #1

PO 783188  
WICHITA KS 67278

20-13-31W GOVE

Job Ticket: 16856 DST#: 3

ATTN: STEVE CARL

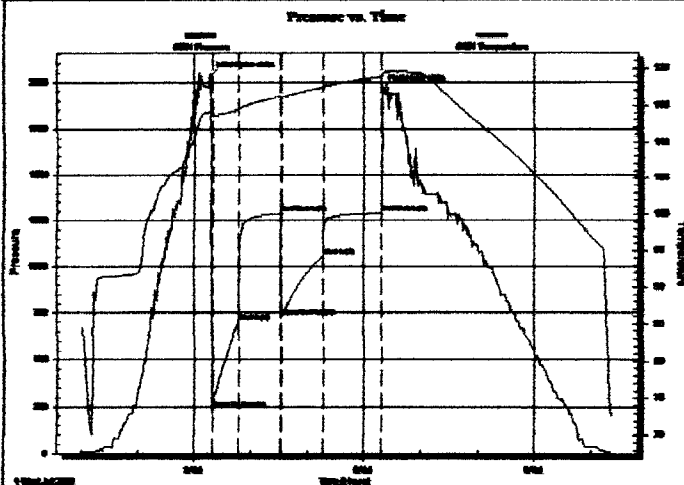
Test Start: 2009.07.01 @ 01:00:00

## GENERAL INFORMATION:

Formation: **LANSING "H"**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 03:18:25 Tester: JARED SCHECK  
 Time Test Ended: 10:21:24 Unit No: 3320-50-SCOTT CITY  
 Interval: **4060.00 ft (KB) To 4105.00 ft (KB) (TVD)** Reference Elevations: 2888.00 ft (KB)  
 Total Depth: 4105.00 ft (KB) (TVD) 2878.00 ft (CF)  
 Hole Diameter: 6.88 inches Hole Condition: Fair KB to GR/CF: 10.00 ft

Serial #: **8524** Outside  
 Press@RunDepth: 1290.72 psia @ 4100.00 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2009.07.01 End Date: 2009.07.01 Last Calib.: 2009.07.01  
 Start Time: 01:01:00 End Time: 10:21:00 Time On Btm: 2009.07.01 @ 03:17:30  
 Time Off Btm: 2009.07.01 @ 06:19:30

TEST COMMENT: 30/INITIAL OPEN:STRONG BLOW BUILT BOTTOM OF BCKET IN 1 MINUTE  
 45/INITIAL SHUT IN:4 INCHES FROM BOTTOM OF BUCKET  
 45/FINAL OPEN:STRONG LOW BUILT BOTTOM OF BUCKET IN 1 MINUTE  
 60/FINAL SHUT IN:BOTTOM OF BUCKET GAS TO SURFACE THROUGHOUT SHUT IN



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2035.31	114.23	Initial Hydro-static
2	241.60	113.72	Open To Flow (1)
30	699.32	114.45	Shut-In(1)
75	1288.52	116.30	End Shut-In(1)
76	730.70	116.12	Open To Flow (2)
120	1057.92	117.43	Shut-In(2)
181	1290.72	118.84	End Shut-In(2)
182	1980.49	119.04	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
540.00	SGOCUTM 15%M 15%G 70%O	2.66
2424.00	SGO 20%G 80%O	33.59
1141.00	GP	

## Gas Rates

Choke (Inches)	Pressure (psia)	Gas Rate (Mcf/D)



# DRILL STEM TEST REPORT

TOOL DIAGRAM

RITCHE EXPLORATION INC  
 PO 783188  
 WICHITA KS 67278  
 ATTN: STEVE CARL

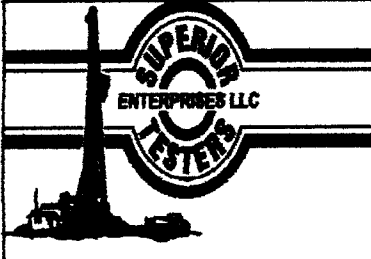
HESS 20D #1  
 20-13-31W GOVE  
 Job Ticket: 16856 DST#: 3  
 Test Start: 2009.07.01 @ 01:00:00

**Tool Information**

Drill Pipe:	Length: 3478.00 ft	Diameter: 3.80 inches	Volume: 48.79 bbl	Tool Weight: 10000.00 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: 585.00 ft	Diameter: 2.25 inches	Volume: 2.88 bbl	Weight to Pull Loose: 100000.0 lb
			<u>Total Volume: 51.67 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	4060.00 ft			Final 82000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	45.00 ft			
Tool Length:	68.00 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			4038.00	
Shut-In Tool	5.00			4043.00	
Hydrolic Tool	5.00			4048.00	
Safety Joint	2.00			4050.00	
Packer	5.00			4055.00	23.00 Bottom Of Top Packer
Packer	5.00			4060.00	
Perforations	40.00			4100.00	
Recorder	0.00	27799	Inside	4100.00	
Recorder	0.00	8524	Outside	4100.00	
Bullnose	5.00			4105.00	45.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>68.00</b>				



# DRILL STEM TEST REPORT

FLUID SUMMARY

RITCHE EXPLORATION INC  
 PO 783188  
 WICHITA KS 67278  
 ATTN: STEVE CARL

HESS 20D #1  
 20-13-31W GOVE  
 Job Ticket: 16856      DST#: 3  
 Test Start: 2009.07.01 @ 01:00:00

## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	46 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 47.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.99 in <sup>2</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 2600.00 ppm			
Filter Cake: 1.00 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
540.00	SGOCUTM 15%M 15%G 70%O	2.858
2424.00	SGO 20%G 80%O	33.592
1141.00	GP	

Total Length: 4105.00 ft      Total Volume: 36.248 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments: GAS TO SURFACE THROUGH OUT SHUT IN

Serial #: 27799

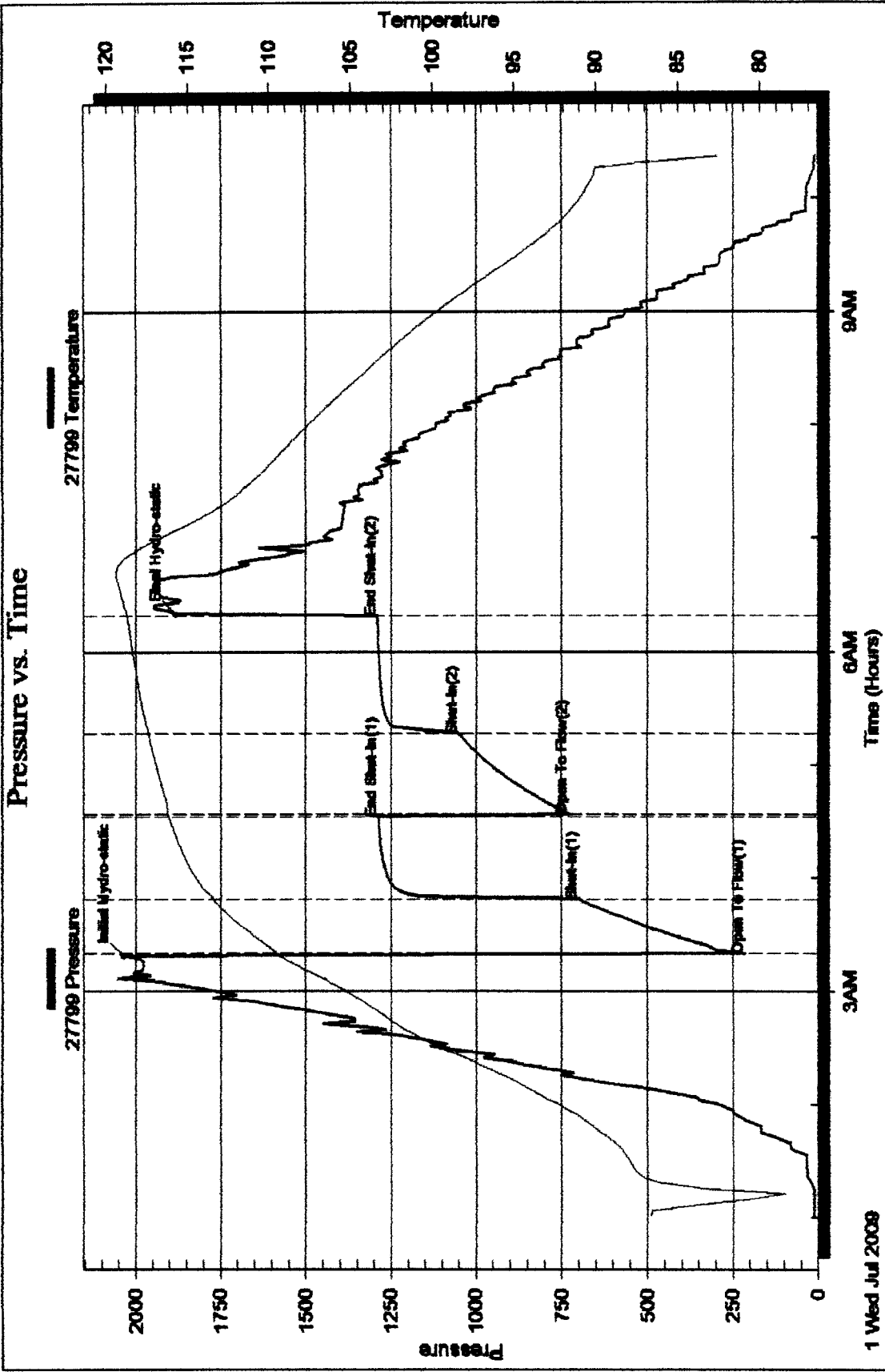
Inside

RITCHE EXPLORATION INC

20-13-31W GOVE

DST Test Number: 3

### Pressure vs. Time



1 Wed Jul 2008

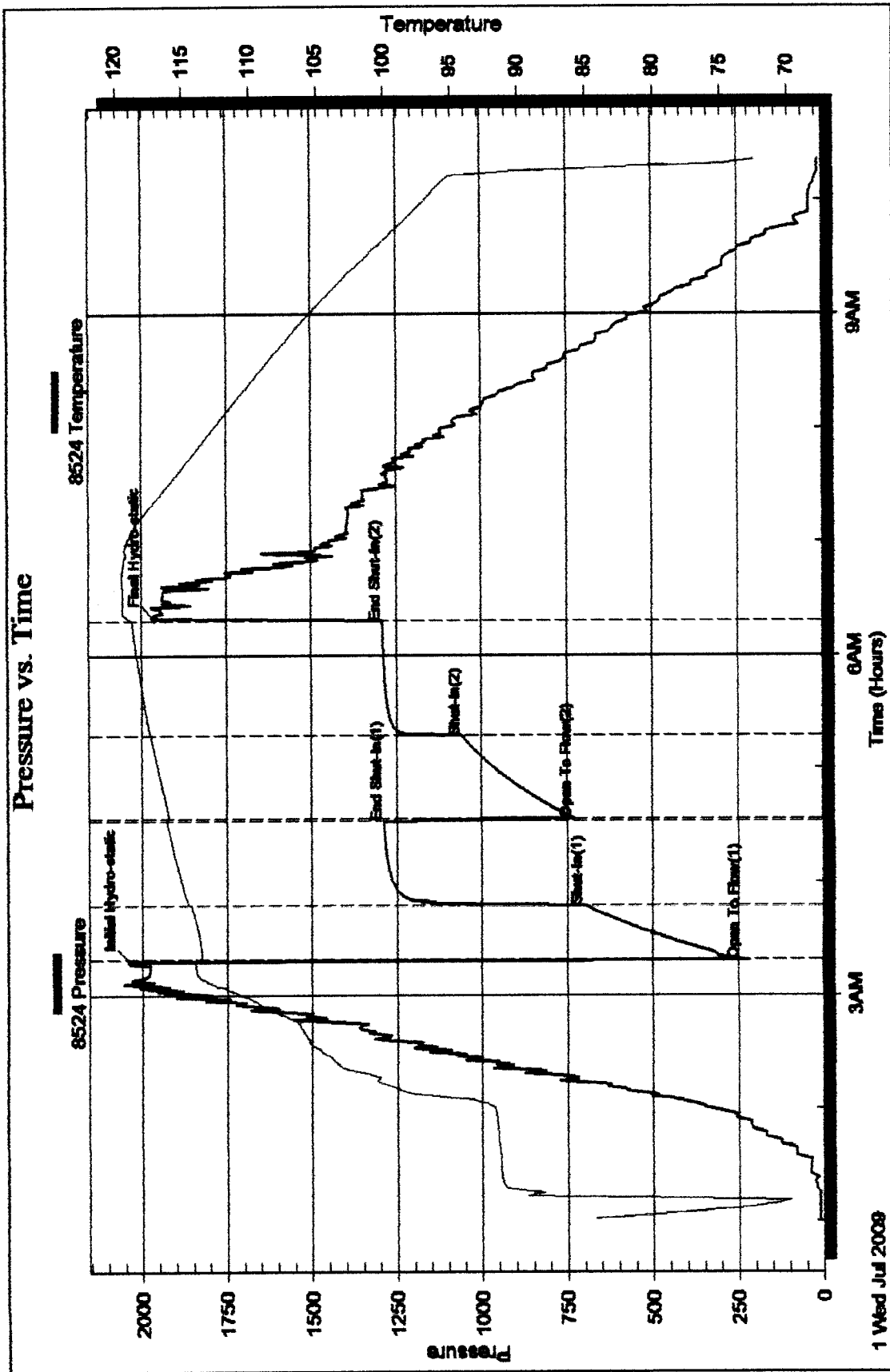
Serial #: 8524

Outside

RITCHE EXPLORATION INC

20-13-31W GOVE

DST Test Number: 3



1 Wed Jul 2008

Printed: 2009.07.03 @ 11:14:28

Ref. No: 16856

Superior Testers Enterprises LLC



## DRILL STEM TEST REPORT

Prepared For: **RITCHIE EXPLORATION INC**

PO 783188  
WICHITA KS 67278

ATTN: STEVE CARL

**20-13-31W GOVE**

**HESS 20D #1**

Start Date: 2009.07.01 @ 16:15:00

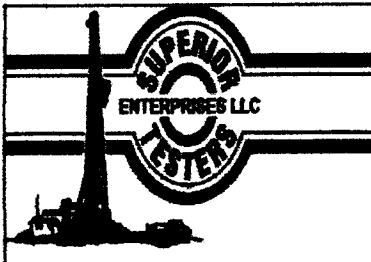
End Date: 2009.07.01 @ 23:01:24

Job Ticket #: 16857                      DST #: 4

Superior Testers Enterprises LLC  
PO Box 138 Great Bend KS 67530  
1-800-792-6902

Printed: 2009.07.03 @ 11:14:08

RITCHIE EXPLORATION INC  
HESS 20D #1  
20-13-31W GOVE  
DST # 4  
LANSING " 1 "                      2009.07.01



# DRILL STEM TEST REPORT

RITCHE EXPLORATION INC

HESS 20D #1

PO 783188  
WICHITA KS 67278

20-13-31W GOVE

Job Ticket: 16857 DST#: 4

ATTN: STEVE CARL

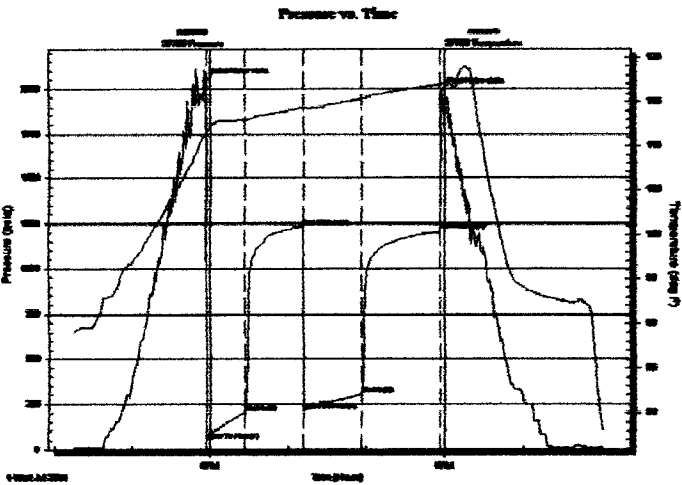
Test Start: 2009.07.01 @ 18:15:00

## GENERAL INFORMATION:

Formation: **LANSING " I "**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 17:57:25 Tester: JARED SCHECK  
 Time Test Ended: 23:01:24 Unit No: 3320-50-SCOTT CITY  
 Interval: 4108.00 ft (KB) To 4132.00 ft (KB) (TVD) Reference Elevations: 2888.00 ft (KB)  
 Total Depth: 4132.00 ft (KB) (TVD) 2878.00 ft (CF)  
 Hole Diameter: 6.88 inches Hole Condition: Fair KB to GR/CF: 10.00 ft

Serial #: 27799 inside  
 Press@RunDepth: 303.54 psia @ 4127.00 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2009.07.01 End Date: 2009.07.01 Last Callb.: 2009.07.01  
 Start Time: 18:15:25 End Time: 23:01:25 Time On Btmr: 2009.07.01 @ 17:56:25  
 Time Off Btmr: 2009.07.01 @ 20:57:25

TEST COMMENT: 30/INITIAL OPEN:STRONG BLOW BUILT BOTTOM OF BUCKET IN 13 MINUTES  
 45/INITIAL SHUT IN:5 1/2 INCH BLOW BACK  
 45/FINAL OPEN:STRONG BLOW BUILT BOTTOM OF BUCKET IN 13 MINUTES  
 60/FINAL SHUT IN :7 INCH BLOW BACK



## PRESSURE SUMMARY

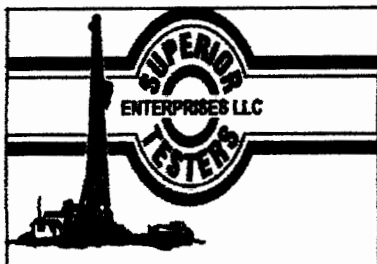
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2038.47	111.81	Initial Hydro-static
1	48.93	111.84	Open To Flow (1)
30	205.20	112.98	Shut-In(1)
75	1229.84	114.39	End Shut-In(1)
76	215.78	114.39	Open To Flow (2)
120	303.54	115.38	Shut-In(2)
180	1206.17	116.95	End Shut-In(2)
181	1981.38	117.01	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
180.00	SO CUT MW 10%O 30%M 60%W	0.89
550.00	CGO 10%G 90%O	4.03
901.00	GAS IN PIPE	12.64

## Gas Rates

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



# DRILL STEM TEST REPORT

RITCHE EXPLORATION INC

HESS 20D #1

PO 783188  
WICHITA KS 67278

20-13-31W GOVE

Job Ticket: 16857 DST#: 4

ATTN: STEVE CARL

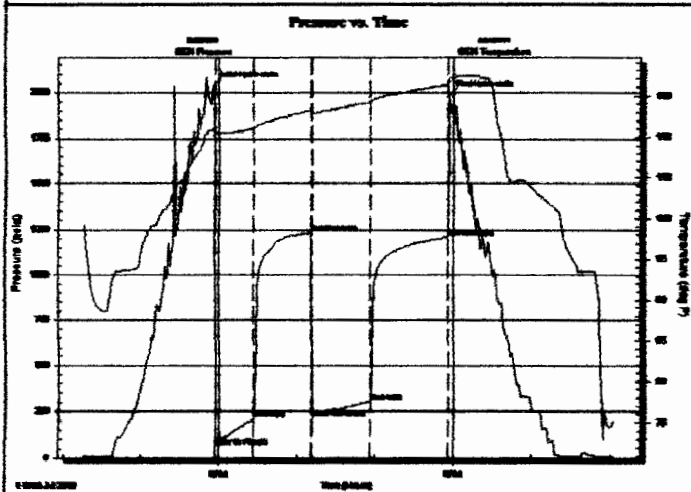
Test Start: 2009.07.01 @ 16:15:00

## GENERAL INFORMATION:

Formation: LANSING " I "  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 17:57:25  
 Time Test Ended: 23:01:24  
 Interval: 4106.00 ft (KB) To 4132.00 ft (KB) (TVD)  
 Total Depth: 4132.00 ft (KB) (TVD)  
 Hole Diameter: 6.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: JARED SCHECK  
 Unit No: 3320-50-SCOTT CITY  
 Reference Elevations: 2888.00 ft (KB)  
 2878.00 ft (CF)  
 KB to GR/CF: 10.00 ft

Serial #: 8524 Outside  
 Press@RunDepth: 1207.86 psia @ 4127.00 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2009.07.01 End Date: 2009.07.01 Last Calib.: 2009.07.01  
 Start Time: 16:16:00 End Time: 23:03:00 Time On Btm: 2009.07.01 @ 17:56:30  
 Time Off Btm: 2009.07.01 @ 20:57:00

TEST COMMENT: 30/INITIAL OPEN:STRONG BLOW BUILT BOTTOM OF BUCKET IN 13 MINUTES  
 45/INITIAL SHUT IN:5 1/2 INCH BLOW BACK  
 45/FINAL OPEN:STRONG BLOW BUILT BOTTOM OF BUCKET IN 13 MINUTES  
 60/FINAL SHUT IN :7 INCH BLOW BACK



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2036.31	111.05	Initial Hydro-static
1	60.05	110.56	Open To Flow (1)
30	208.99	111.03	Shut-in(1)
75	1231.99	113.22	End Shut-in(1)
75	217.98	112.90	Open To Flow (2)
120	306.30	114.25	Shut-in(2)
180	1207.86	116.28	End Shut-in(2)
181	1987.42	116.89	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
180.00	SO CUT MW 10%O 30%M 60%W	0.89
550.00	CGO 10%G 90%O	4.03
901.00	GAS IN PIPE	12.64

## Gas Rates

	Choke (Inches)	Pressure (psia)	Gas Rate (Mcft/d)



# DRILL STEM TEST REPORT

TOOL DIAGRAM

RITCHE EXPLORATION INC

HESS 20D #1

PO 783188  
WICHITA KS 67278

20-13-31W GOVE

Job Ticket: 16857      DST#: 4

ATTN: STEVE CARL

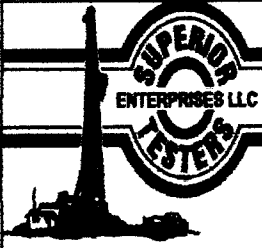
Test Start: 2009.07.01 @ 16:15:00

### Tool Information

Drill Pipe:	Length: 3510.00 ft	Diameter: 3.80 inches	Volume: 49.24 bbl	Tool Weight: 10000.00 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: 585.00 ft	Diameter: 2.25 inches	Volume: 2.88 bbl	Weight to Pull Loose: 82000.00 lb
			<u>Total Volume: 52.12 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	4106.00 ft			Final 74000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	26.00 ft			
Tool Length:	49.00 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			4084.00	
Shut-in Tool	5.00			4089.00	
Hydraulic Tool	5.00			4094.00	
Safety Joint	2.00			4096.00	
Packer	5.00			4101.00	23.00      Bottom Of Top Packer
Packer	5.00			4106.00	
Perforations	21.00			4127.00	
Recorder	0.00	27799	Inside	4127.00	
Recorder	0.00	8524	Outside	4127.00	
Bullhose	5.00			4132.00	26.00      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>49.00</b>				



# DRILL STEM TEST REPORT

FLUID SUMMARY

RITCHE EXPLORATION INC

HESS 200 #1

PO 783188  
WICHITA KS 67278

20-13-31W GOVE

Job Ticket: 16857      DST#: 4

ATTN: STEVE CARL

Test Start: 2009.07.01 @ 16:15:00

## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	46 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 50.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.20 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.15 ohm.m	Gas Cushion Pressure: psia		
Salinity: 3500.00 ppm			
Filter Cake: 1.00 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
180.00	SO CUT MW 10%O 30%M 60%W	0.885
550.00	CGO 10%G 90%O	4.026
901.00	GAS IN PIPE	12.639

Total Length: 1631.00 ft      Total Volume: 17.550 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments: CHLORIDES 43,000

DST Test Number: 4

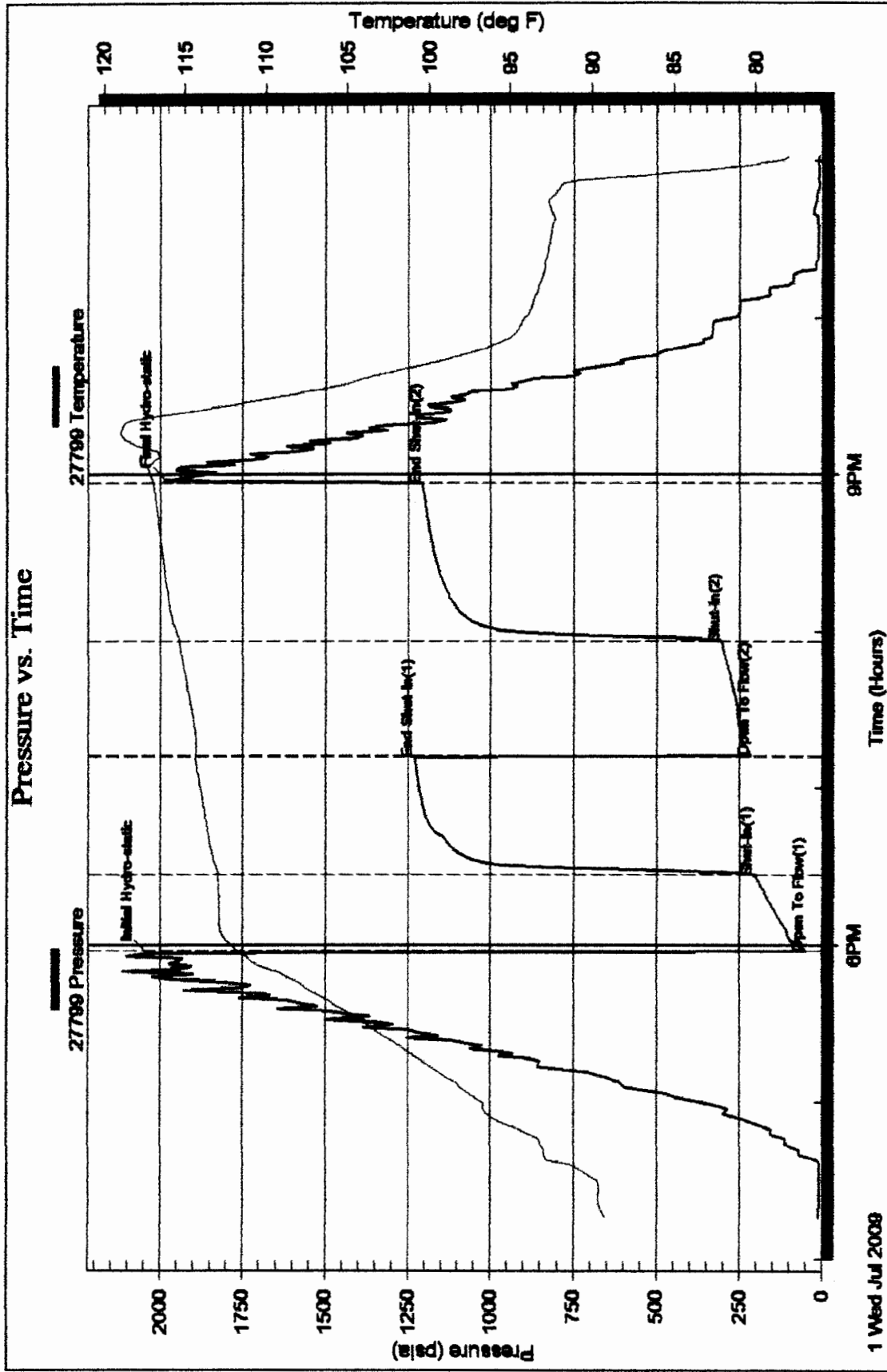
20-13-31W GOVE

RITCHE EXPLORATION INC

Inside

Serial #: 27799

### Pressure vs. Time



1 Wed Jul 2008

Printed: 2009.07.03 @ 11:14:09

Ref. No: 16857

Superior Testers Enterprises LLC





## DRILL STEM TEST REPORT

Prepared For: **RITCHIE EXPLORATION INC**

PO 783188  
WICHITA KS 67278

ATTN: STEVE CARL

**20-13-31W GOVE**

**HESS 20D #1**

Start Date: 2009.07.03 @ 03:15:00

End Date: 2009.07.03 @ 09:02:25

Job Ticket #: 16858                      DST #: 5

Superior Testers Enterprises LLC  
PO Box 138 Great Bend KS 67530  
1-800-792-6902

Printed: 2009.07.03 @ 11:52:22

RITCHIE EXPLORATION INC

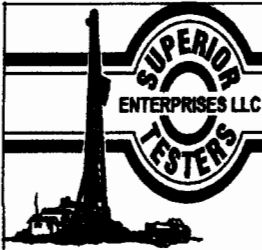
HESS 20D #1

20-13-31W GOVE

DST # 5

JOHNSON

2009.07.03



# DRILL STEM TEST REPORT

RITCHE EXPLORATION INC

HESS 20D #1

PO 783188  
WICHITA KS 67278

20-13-31W GOVE

Job Ticket: 16858

DST#: 5

ATTN: STEVE CARL

Test Start: 2009.07.03 @ 03:15:00

## GENERAL INFORMATION:

Formation: **JOHNSON**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:16:25

Time Test Ended: 09:02:25

Test Type: Conventional Bottom Hole (Initial)

Tester: JARED SCHECK

Unit No: 3320-50-SCOTT CITY

Interval: 4478.00 ft (KB) To 4496.00 ft (KB) (TVD)

Total Depth: 4496.00 ft (KB) (TVD)

Hole Diameter: 6.88 inches Hole Condition: Fair

Reference Elevations: 2888.00 ft (KB)

2878.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 27799 Inside

Press@RunDepth: 68.02 psia @ 4491.00 ft (KB)

Start Date: 2009.07.03

End Date: 2009.07.03

Start Time: 03:15:25

End Time: 09:02:25

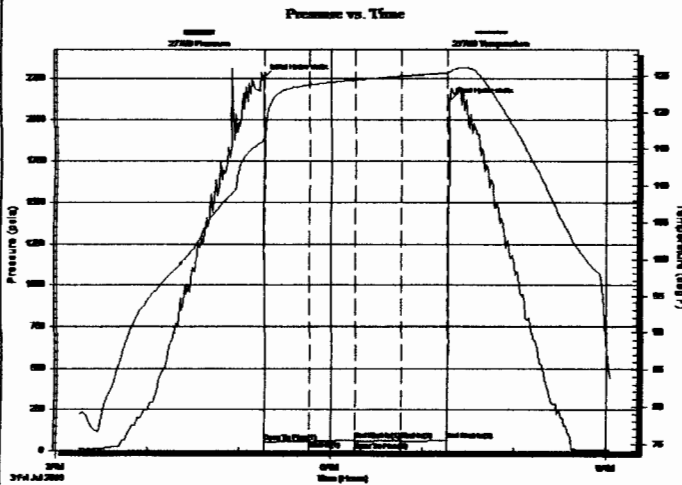
Capacity: 5000.00 psia

Last Calib.: 2009.07.03

Time On Btrr: 2009.07.03 @ 05:15:55

Time Off Btrr: 2009.07.03 @ 07:17:25

TEST COMMENT: 30/INITIAL OPEN:WEAK BLOW BUILT 1 INCH INTO BUCKET DIED OFF  
30/INITIAL SHUT IN:NO BLOW BACK  
30/FINAL OPEN:WEAK SUGE DID NOT BUILD  
30/FINAL SHUT IN:NO BLOW BACK



## PRESSURE SUMMARY

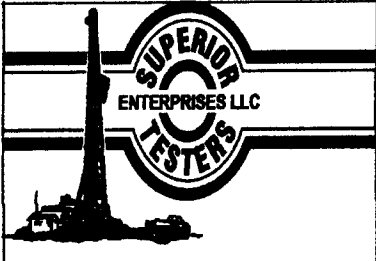
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2257.83	116.26	Initial Hydro-static
1	55.72	116.47	Open To Flow (1)
31	64.43	123.77	Shut-In(1)
60	68.17	124.41	End Shut-In(1)
61	58.92	124.42	Open To Flow (2)
91	68.02	124.95	Shut-In(2)
121	66.35	125.42	End Shut-In(2)
122	2110.87	125.46	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	MUD	0.05

## Gas Rates

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



# DRILL STEM TEST REPORT

RITCHE EXPLORATION INC  
 PO 783188  
 WICHITA KS 67278  
 ATTN: STEVE CARL

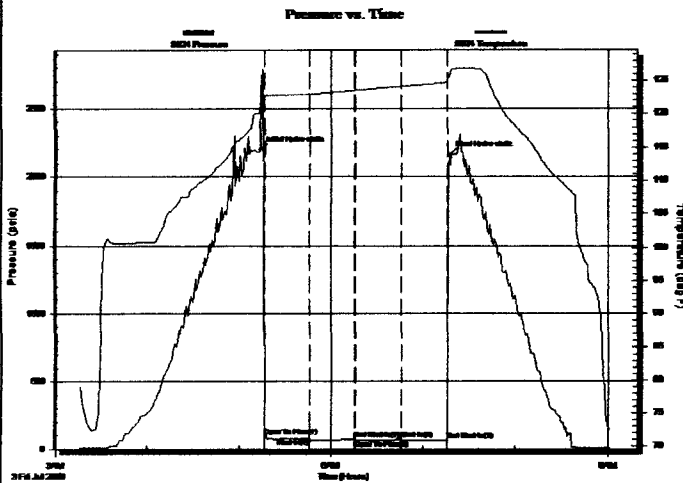
**HESS 20D #1**  
**20-13-31W GOVE**  
 Job Ticket: 16858      **DST#: 5**  
 Test Start: 2009.07.03 @ 03:15:00

## GENERAL INFORMATION:

Formation: **JOHNSON**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 05:16:25 Tester: JARED SCHECK  
 Time Test Ended: 09:02:25 Unit No: 3320-50-SCOTT CITY  
 Interval: **4478.00 ft (KB) To 4496.00 ft (KB) (TVD)** Reference Elevations: 2888.00 ft (KB)  
 Total Depth: 4496.00 ft (KB) (TVD) 2878.00 ft (CF)  
 Hole Diameter: 6.88 inches Hole Condition: Fair KB to GRVCF: 10.00 ft

**Serial #: 8524**      **Outside**  
 Press@RunDepth: 69.09 psia @ 4491.00 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2009.07.03 End Date: 2009.07.03 Last Calib.: 2009.07.03  
 Start Time: 03:16:00 End Time: 09:02:00 Time On Btm: 2009.07.03 @ 05:13:30  
 Time Off Btm: 2009.07.03 @ 07:17:00

**TEST COMMENT:** 30/INITIAL OPEN:WEAK BLOW BUILT 1 INCH INTO BUCKET DIED OFF  
 30/INITIAL SHUT IN:NO BLOW BACK  
 30/FINAL OPEN:WEAK SUGE DID NOT BUILD  
 30/FINAL SHUT IN:NO BLOW BACK



## PRESSURE SUMMARY

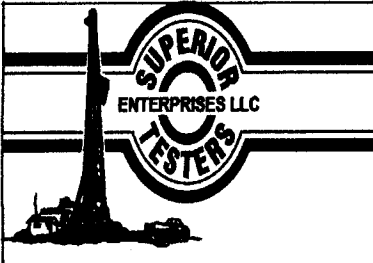
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2195.56	120.13	Initial Hydro-static
3	93.30	122.56	Open To Flow (1)
33	78.81	122.97	Shut-in(1)
62	73.25	123.51	End Shut-in(1)
63	68.03	123.52	Open To Flow (2)
93	71.44	124.11	Shut-in(2)
123	69.09	124.67	End Shut-in(2)
124	2160.60	125.41	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	MUD	0.05

## Gas Rates

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



# DRILL STEM TEST REPORT

TOOL DIAGRAM

RITCHE EXPLORATION INC  
 PO 783188  
 WICHITA KS 67278  
 ATTN: STEVE CARL

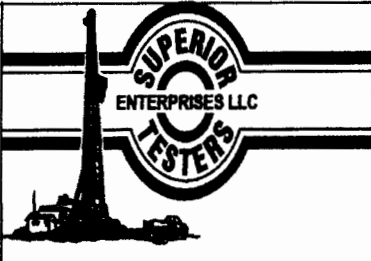
**HESS 20D #1**  
**20-13-31W GOVE**  
 Job Ticket: 16858      **DST#: 5**  
 Test Start: 2009.07.03 @ 03:15:00

**Tool Information**

Drill Pipe:	Length: 3890.00 ft	Diameter: 3.80 inches	Volume: 54.57 bbl	Tool Weight: 10000.00 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: 585.00 ft	Diameter: 2.25 inches	Volume: 2.88 bbl	Weight to Pull Loose: 86000.00 lb
			<u>Total Volume: 57.45 bbl</u>	Tool Chased: 5.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 78000.00 lb
Depth to Top Packer:	4478.00 ft			Final 78000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	18.00 ft			
Tool Length:	41.00 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			4456.00	
Shut-In Tool	5.00			4461.00	
Hydraulic Tool	5.00			4466.00	
Safety Joint	2.00			4468.00	
Packer	5.00			4473.00	23.00      Bottom Of Top Packer
Packer	5.00			4478.00	
Perforations	13.00			4491.00	
Recorder	0.00	27799	Inside	4491.00	
Recorder	0.00	8524	Outside	4491.00	
Bullnose	5.00			4496.00	18.00      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>41.00</b>				



# DRILL STEM TEST REPORT

FLUID SUMMARY

RITCHE EXPLORATION INC

HESS 20D #1

PO 783188  
WICHITA KS 67278

20-13-31W GOVE

Job Ticket: 16858      DST#: 5

ATTN: STEVE CARL

Test Start: 2009.07.03 @ 03:15:00

## 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:	ppm
Viscosity: 65.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.00 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 4300.00 ppm			
Filter Cake: 1.00 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	MUD	0.049

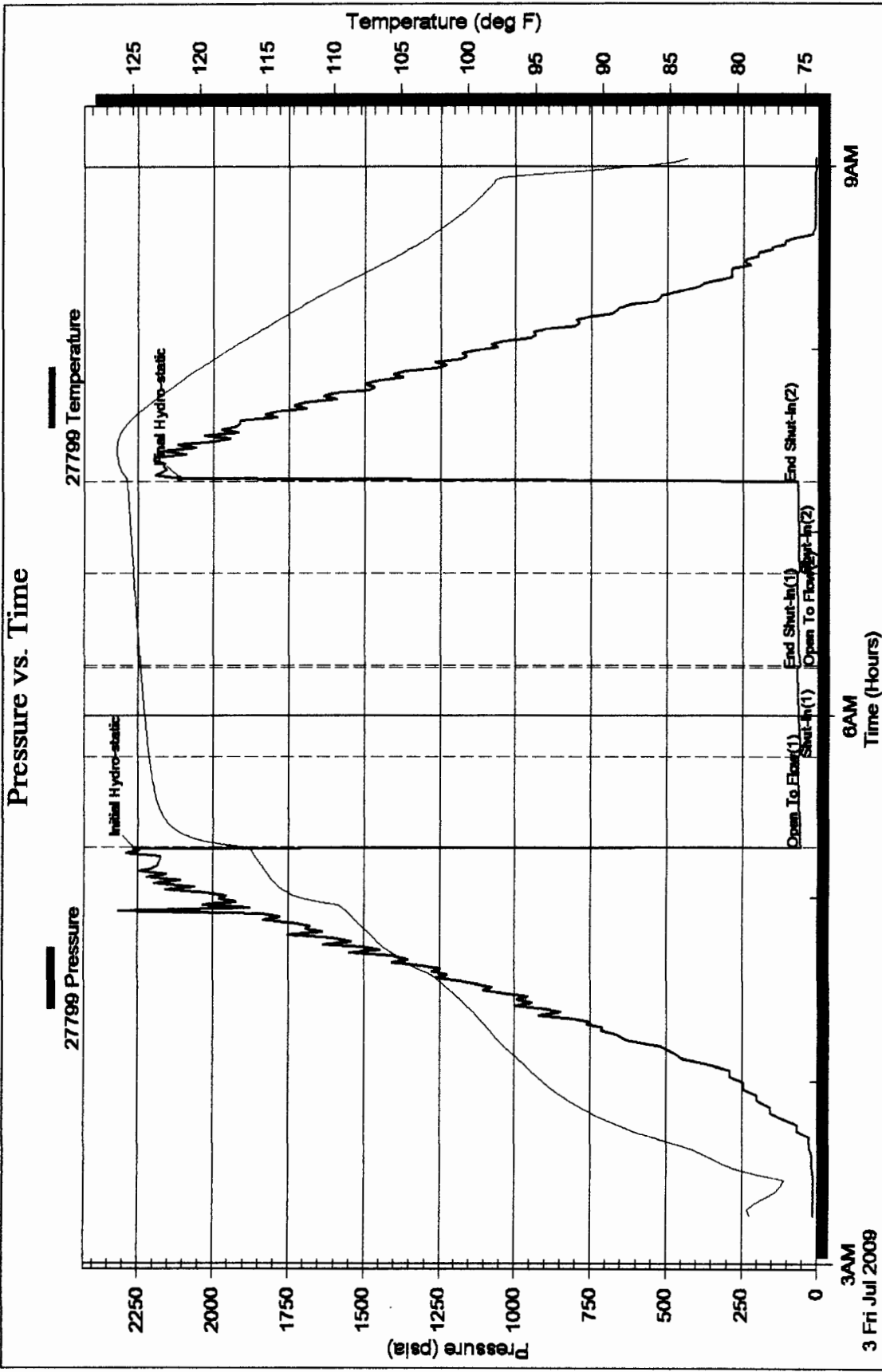
Total Length: 10.00 ft      Total Volume: 0.049 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments: TOOL SLIDE 5 FEET AFTER OPEN TOOL

### Pressure vs. Time



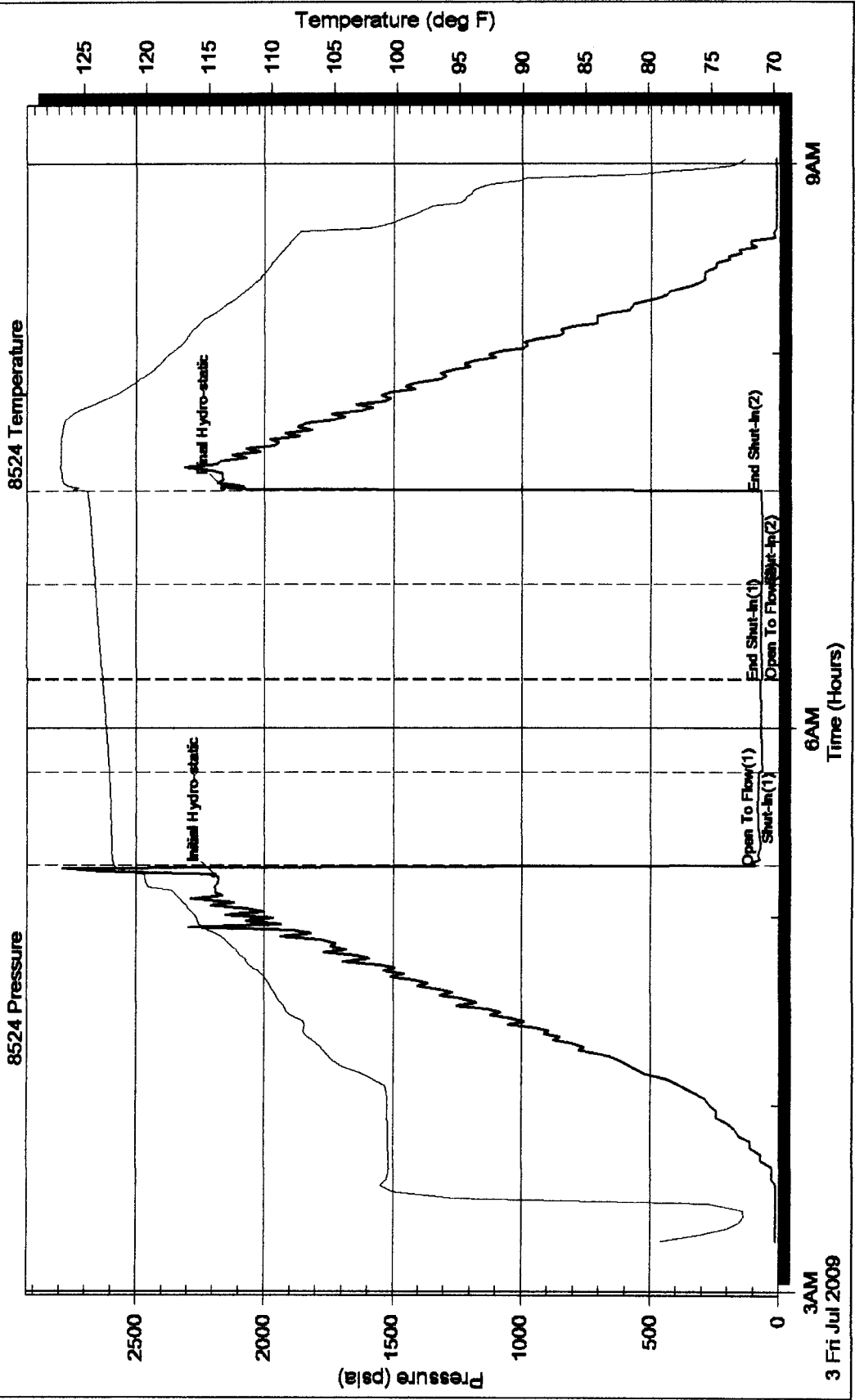
DST Test Number: 5

20-13-31W GOVE

Serial #: 8524 Outside RITCHE EXPLORATION INC

3AM

### Pressure vs. Time



3AM  
3 Fri Jul 2009

6AM  
Time (Hours)

9AM

Printed: 2009.07.03 @ 11:52:23

Ref. No: 16858

Superior Testers Enterprises LLC