



## DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Incorporated**

PO Box 783188  
8011 East 22ND Street North  
#700

ATTN: Mike Engelbrecht

**Simon 13CD #1**

**13/27S/24W/Ford**

Start Date: 2012.05.13 @ 13:45:00

End Date: 2012.05.13 @ 21:31:30

Job Ticket #: 17638                      DST #: 1

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

Printed: 2012.05.13 @ 22:02:53



# DRILL STEM TEST REPORT

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Job Ticket: 17638 **DST#: 1**

Test Start: 2012.05.13 @ 13:45:00

## GENERAL INFORMATION:

Formation: **Pawnee**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 16:08:30 Tester: Ken Swinney  
 Time Test Ended: 21:31:30 Unit No: 3325 Great Bend  
 Interval: **4778.00 ft (KB) To 4810.00 ft (KB) (TVD)** Reference Elevations: 2458.00 ft (KB)  
 Total Depth: 4810.00 ft (KB) (TVD) 2447.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 11.00 ft

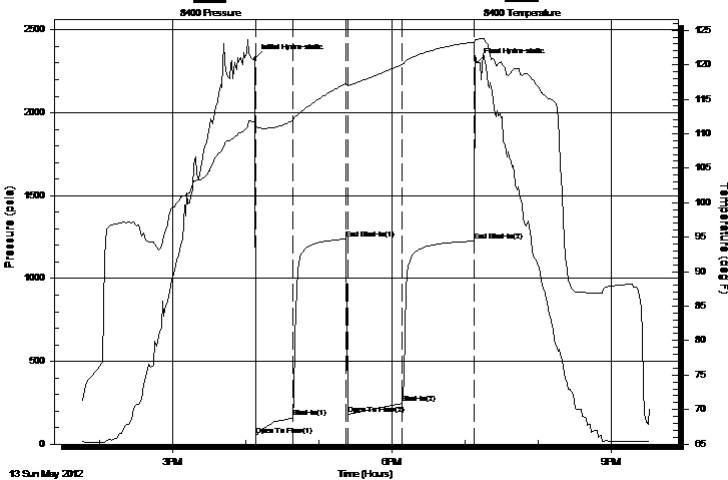
## Serial #: 8400

Inside

Press @ Run Depth: 246.03 psia @ 4806.00 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2012.05.13 End Date: 2012.05.13 Last Calib.: 2012.05.13  
 Start Time: 13:45:00 End Time: 21:31:30 Time On Btm: 2012.05.13 @ 16:07:30  
 Time Off Btm: 2012.05.13 @ 19:09:30

TEST COMMENT: 1ST Open 30 Minutes/Good blow /Blow to bottom of bucket in 13 1/2 minutes  
 1ST Shut In 45 Minutes/Blow back built to 5 inches  
 2ND Open 45 Minutes/Good blow /Blow to bottom of bucket in 14 1/2 minutes  
 2ND Shut In 60 Minutes/Blow back built to bottom of bucket in 23 minutes

## PRESSURE SUMMARY



Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2327.23	111.70	Initial Hydro-static
1	53.36	110.99	Open To Flow (1)
31	160.27	111.99	Shut-In(1)
75	1239.43	117.29	End Shut-In(1)
76	177.52	116.97	Open To Flow (2)
121	246.03	120.09	Shut-In(2)
180	1225.92	123.29	End Shut-In(2)
183	2304.29	123.65	Final Hydro-static

## Recovery

## Gas Rates

Length (ft)	Description	Volume (bbl)
0.00	Gas in pipe/ Gas 100%	0.00
75.00	Slightly Gassy Muddy Watery Oil	0.37
0.00	Gas 5% Mud 25% Water 25% Oil 45%	0.00
360.00	Slightly oil cut Muddy Water	3.66
0.00	Oil 2% Mud 10% Water 88%	0.00
0.00	Recovery Chlorides 105,000 ppm	0.00

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



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## GENERAL INFORMATION:

Formation: **Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:08:30

Time Test Ended: 21:31:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 3325 Great Bend

Interval: **4778.00 ft (KB) To 4810.00 ft (KB) (TVD)**

Reference Elevations: 2458.00 ft (KB)

Total Depth: 4810.00 ft (KB) (TVD)

2447.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: **8405** Outside

Press @ Run Depth: 1224.89 psia @ 4807.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2012.05.13

End Date: 2012.05.13

Last Calib.: 2012.05.13

Start Time: 13:45:00

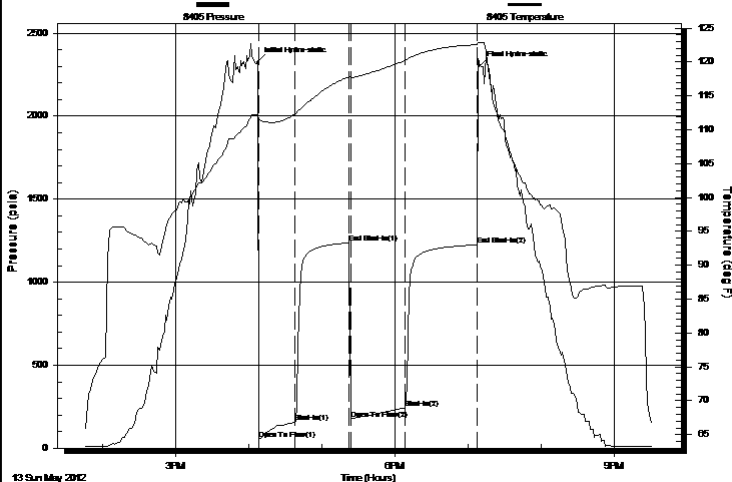
End Time: 21:31:30

Time On Btm: 2012.05.13 @ 16:07:30

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TEST COMMENT: 1ST Open 30 Minutes/Good blow /Blow to bottom of bucket in 13 1/2 minutes  
1ST Shut In 45 Minutes/Blow back built to 5 inches  
2ND Open 45 Minutes/Good blow /Blow to bottom of bucket in 14 1/2 minutes  
2ND Shut In 60 Minutes/Blow back built to bottom of bucket in 23 minutes

Pressure vs. Time



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2325.57	112.23	Initial Hydro-static
1	51.14	111.50	Open To Flow (1)
31	157.57	112.34	Shut-In(1)
75	1237.89	117.83	End Shut-In(1)
76	174.06	117.65	Open To Flow (2)
121	242.72	120.23	Shut-In(2)
180	1224.89	122.54	End Shut-In(2)
182	2302.66	122.84	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	Gas in pipe/ Gas 100%	0.00
75.00	Slightly Gassy Muddy Watery Oil	0.37
0.00	Gas 5% Mud 25% Water 25% Oil 45%	0.00
360.00	Slightly oil cut Muddy Water	3.66
0.00	Oil 2% Mud 10% Water 88%	0.00
0.00	Recovery Chlorides 105,000 ppm	0.00

## Gas Rates

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



# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Ritchie Exploration Incorporated

**13/27S/24W/Ford**

PO Box 783188  
 8011 East 22ND Street North  
 #700  
 ATTN: Mike Engelbrecht

**Simon 13CD #1**

Job Ticket: 17638

**DST#: 1**

Test Start: 2012.05.13 @ 13:45:00

## Tool Information

Drill Pipe:	Length: 4542.00 ft	Diameter: 3.88 inches	Volume: 66.42 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: 67.60 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 75000.00 lb
Depth to Top Packer:	4778.00 ft			Final 77000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	32.00 ft			
Tool Length:	59.00 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			4756.00	
Hydraulic Tool	5.00			4761.00	
Jars	5.00			4766.00	
Safety Joint	2.00			4768.00	
Packer	5.00			4773.00	27.00 Bottom Of Top Packer
Packer	5.00			4778.00	
Anchor	27.00			4805.00	
Recorder	1.00	8400	Inside	4806.00	
Recorder	1.00	8405	Outside	4807.00	
Bullnose	3.00			4810.00	32.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>59.00</b>				



# DRILL STEM TEST REPORT

## FLUID SUMMARY

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Test Start: 2012.05.13 @ 13:45:00

### Mud and Cushion Information

Mud Type: Gel Chem  
 Mud Weight: 9.00 lb/gal  
 Viscosity: 52.00 sec/qt  
 Water Loss: 9.59 in<sup>3</sup>  
 Resistivity: ohm.m  
 Salinity: 7700.00 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
0.00	Gas in pipe/ Gas 100%	0.000
75.00	Slightly Gassy Muddy Watery Oil	0.369
0.00	Gas 5% Mud 25% Water 25% Oil 45%	0.000
360.00	Slightly oil cut Muddy Water	3.663
0.00	Oil 2% Mud 10% Water 88%	0.000
0.00	Recovery Chlorides 105,000 ppm	0.000
0.00	Rec. Resist. .1 ohms @ 78 degrees	0.000

Total Length: 435.00 ft      Total Volume: 4.032 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments:

Serial #: 8400

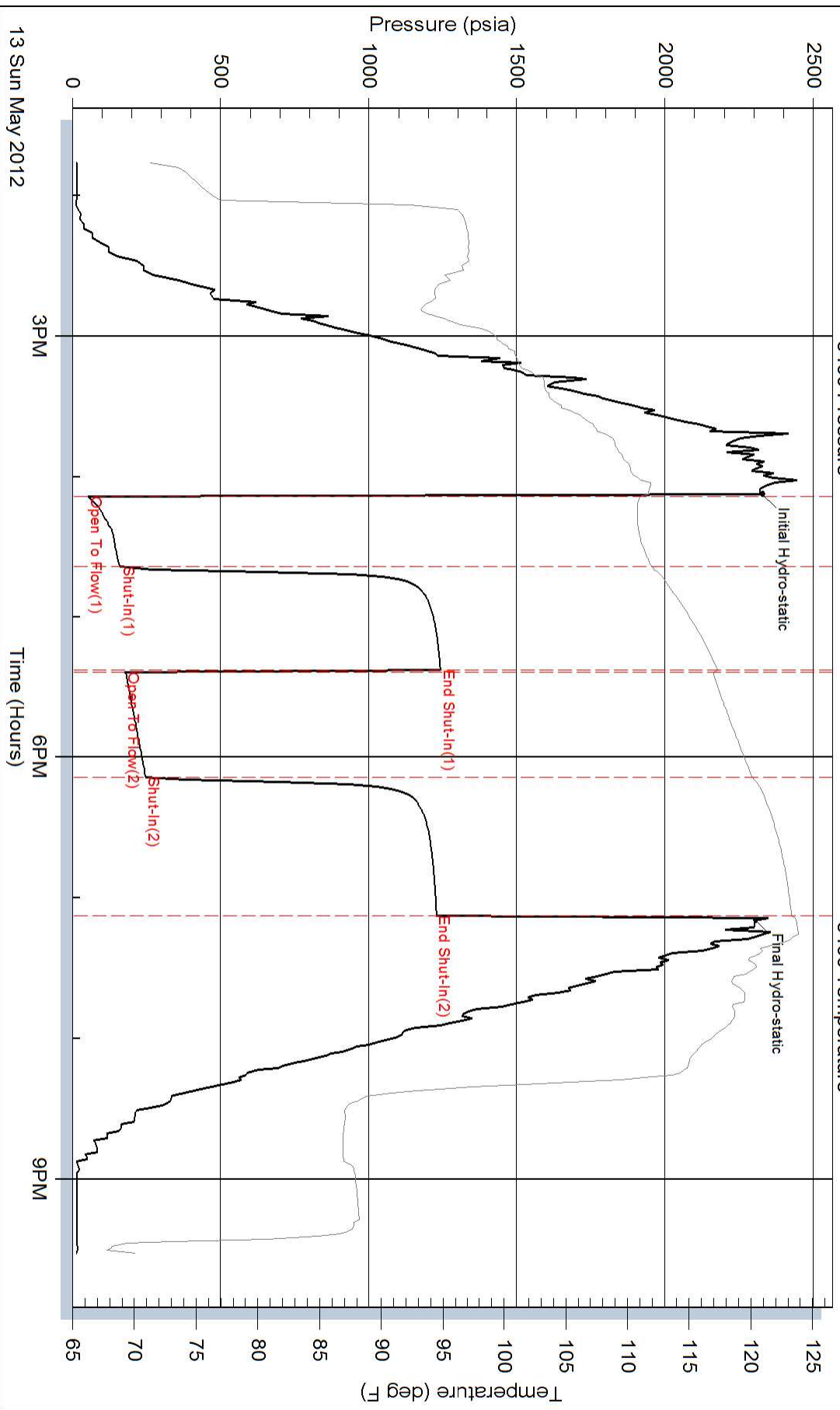
Inside

Richie Exploration Incorporated

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### Pressure vs. Time



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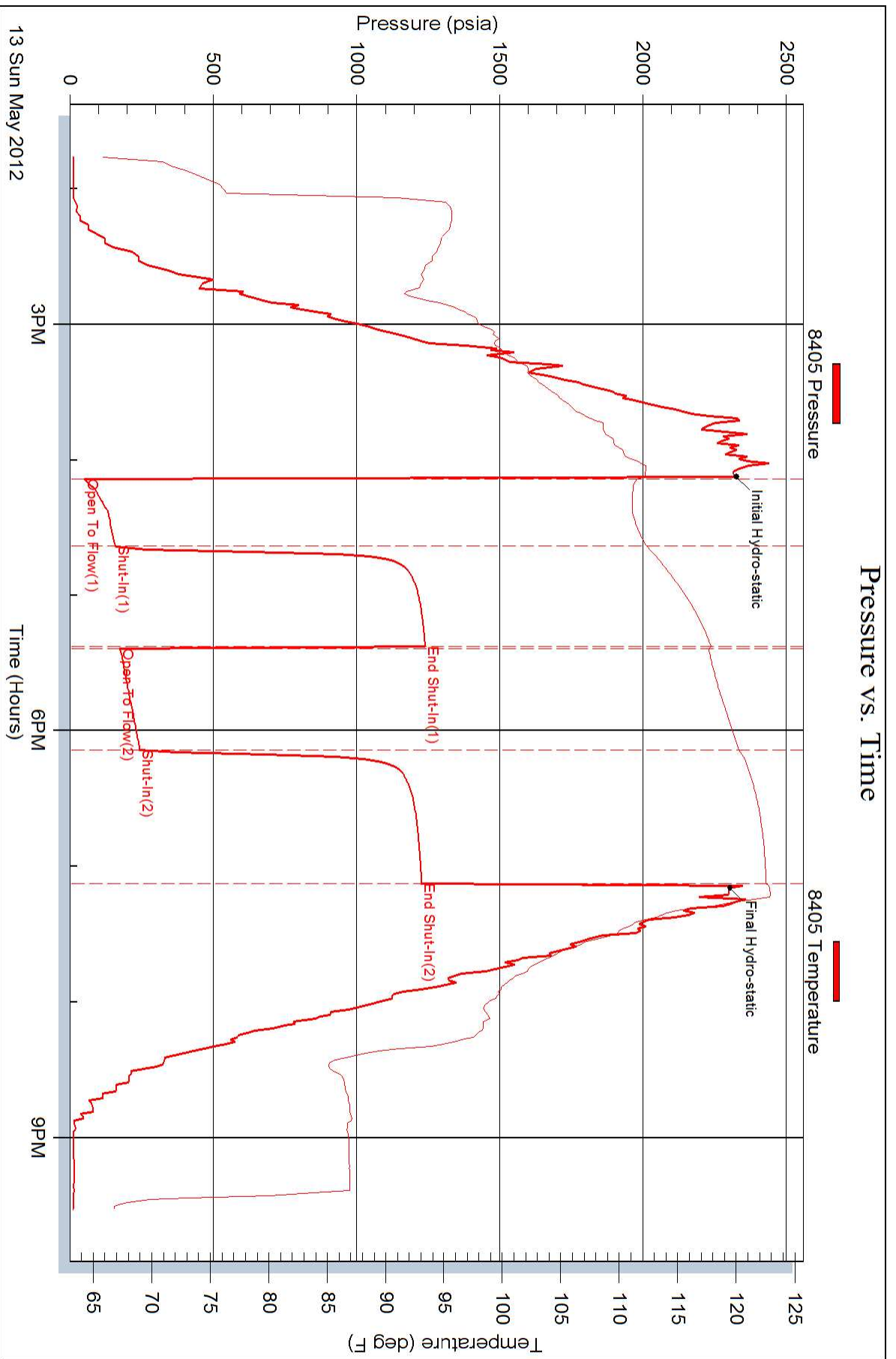
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Serial #: 8405

Outside Ritchie Exploration Incorporated

Simon 13CD #1

DST Test Number: 1



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