



DRILL STEM TEST REPORT

Prepared For: **GL Allison Oil Operations Incorporated**

15 Southeast 30 Road
Great Bend, Kansas 67530

ATTN: Kevin Bailey

Younkin 21-Maycee

21/12S/32W/Logan

Start Date: 2013.09.27 @ 10:28:00

End Date: 2013.09.27 @ 16:10:30

Job Ticket #: 18159 DST #: 2

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

Printed: 2013.09.27 @ 16:27:10



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ATTN: Kevin Bailey

Test Start: 2013.09.27 @ 10:28:00

GENERAL INFORMATION:

Formation: **Lansing/Kansas City**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:13:30

Time Test Ended: 16:10:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 3325 Scott City/74

Interval: 4289.00 ft (KB) To 4315.00 ft (KB) (TVD)

Reference Elevations: 3064.00 ft (KB)

Total Depth: 4315.00 ft (KB) (TVD)

3057.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Poor

KB to GR/CF: 7.00 ft

Serial #: 6749

Inside

Press @ Run Depth: 97.04 psia @ 4311.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.09.27 End Date: 2013.09.27

Last Calib.: 2013.09.27

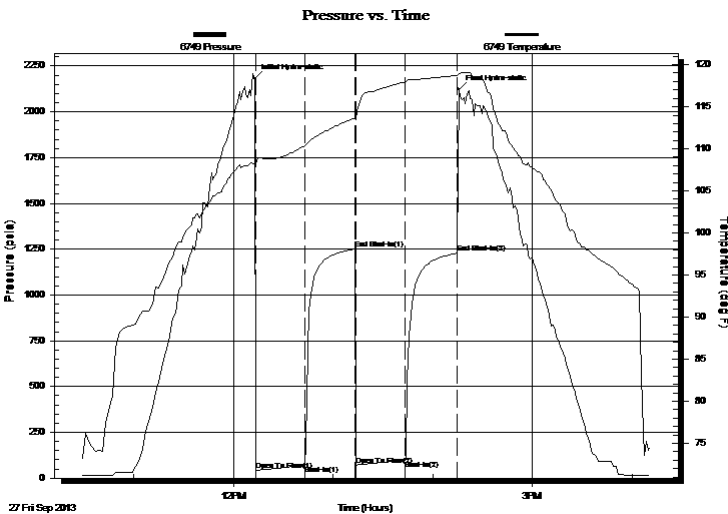
Start Time: 10:28:00 End Time: 16:10:30

Time On Btm: 2013.09.27 @ 12:12:30

Time Off Btm: 2013.09.27 @ 14:15:30

TEST COMMENT: 1ST Open 30 Minutes/Fair blow/Blow built to 5 3/4 inches
 1ST Shut In 30 Minutes/No blow back
 2ND Open 30 Minutes/Fair blow/Blow built to 4 1/4 inches
 2ND Shut In 30 Minutes/No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2182.58	108.20	Initial Hydro-static
1	43.28	108.23	Open To Flow (1)
31	69.46	110.36	Shut-In(1)
61	1249.57	113.64	End Shut-In(1)
61	71.27	113.44	Open To Flow (2)
91	97.04	117.94	Shut-In(2)
122	1227.81	118.70	End Shut-In(2)
123	2122.72	118.94	Final Hydro-static

Recovery

Gas Rates

Length (ft)	Description	Volume (bbl)
1.00	Clean Oil	0.01
124.00	Muddy Water	1.74
0.00	Mud Water	0.00
0.00	Recov. Chlorides 35,000 ppm	0.00
0.00	Recov. Resist .28 ohms @ 80 deg	0.00

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



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Time Test Ended: 16:10:30

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Tester: Ken Swinney

Unit No: 3325 Scott City/74

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Reference Elevations: 3064.00 ft (KB)

Total Depth: 4315.00 ft (KB) (TVD)

3057.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Poor

KB to GR/CF: 7.00 ft

Serial #: 6666 Outside

Press @ RunDepth: 1226.18 psia @ 4312.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.09.27 End Date: 2013.09.27

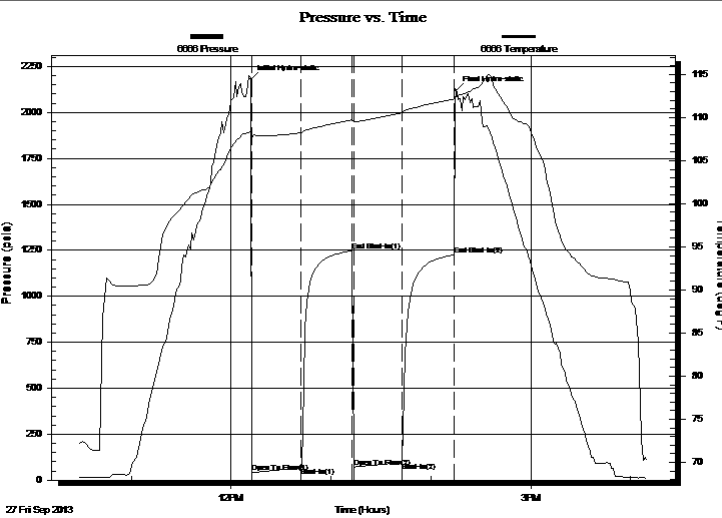
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TEST COMMENT: 1ST Open 30 Minutes/Fair blow/Blow built to 5 3/4 inches
 1ST Shut In 30 Minutes/No blow back
 2ND Open 30 Minutes/Fair blow/Blow built to 4 1/4 inches
 2ND Shut In 30 Minutes/No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2180.01	108.37	Initial Hydro-static
1	42.29	107.55	Open To Flow (1)
30	67.35	108.24	Shut-In(1)
61	1248.27	109.72	End Shut-In(1)
62	70.81	109.51	Open To Flow (2)
91	95.58	110.54	Shut-In(2)
122	1226.18	112.15	End Shut-In(2)
123	2120.98	112.42	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	Clean Oil	0.01
124.00	Muddy Water	1.74
0.00	Mud Water	0.00
0.00	Recov. Chlorides 35,000 ppm	0.00
0.00	Recov. Resist .28 ohms @ 80 deg	0.00

Gas Rates

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



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TOOL DIAGRAM

GL Allison Oil Operations Incorporated

21/12S/32W/Logan

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DST#: 2

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Test Start: 2013.09.27 @ 10:28:00

Tool Information

Drill Pipe:	Length: 4283.00 ft	Diameter: 3.80 inches	Volume: 60.08 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 60.08 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial 61000.00 lb
Depth to Top Packer:	4289.00 ft			Final 61000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	26.00 ft			
Tool Length:	53.00 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			4267.00	
Hydraulic Tool	5.00			4272.00	
Jars	5.00			4277.00	
Safety Joint	2.00			4279.00	
Packer	5.00			4284.00	27.00 Bottom Of Top Packer
Packer	5.00			4289.00	
Anchor	21.00			4310.00	
Recorder	1.00	6749	Inside	4311.00	
Recorder	1.00	6666	Outside	4312.00	
Bullnose	3.00			4315.00	26.00 Bottom Packers & Anchor
Total Tool Length:	53.00				



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FLUID SUMMARY

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DST#: 2

ATTN: Kevin Bailey

Test Start: 2013.09.27 @ 10:28:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 56.00 sec/qt
Water Loss: 8.80 in³
Resistivity: ohm.m
Salinity: 1500.00 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
1.00	Clean Oil	0.014
124.00	Muddy Water	1.739
0.00	Mud Water	0.000
0.00	Recov. Chlorides 35,000 ppm	0.000
0.00	Recov. Resist .28 ohms @ 80 deg	0.000

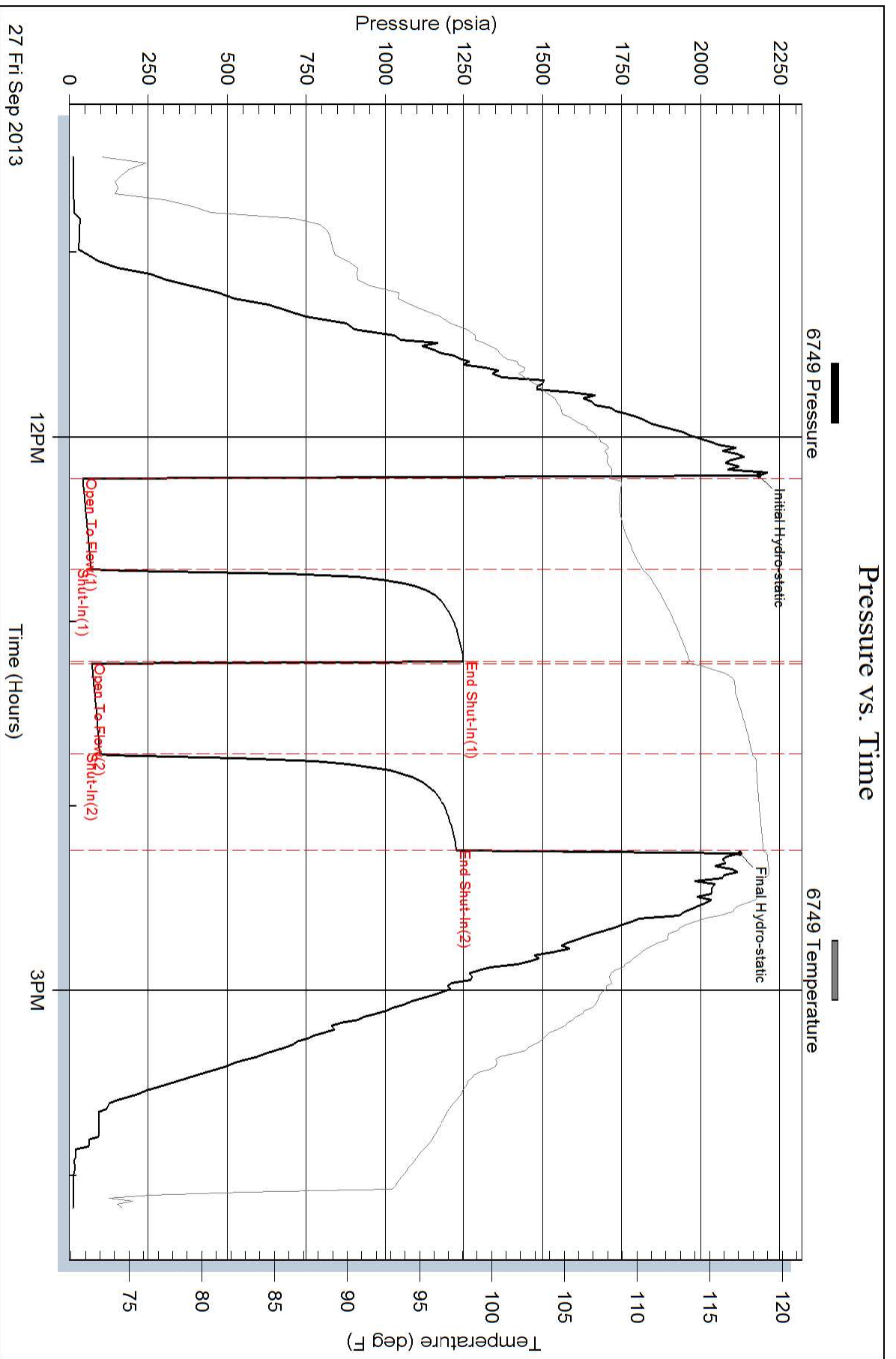
Total Length: 125.00 ft Total Volume: 1.753 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:

Pressure vs. Time



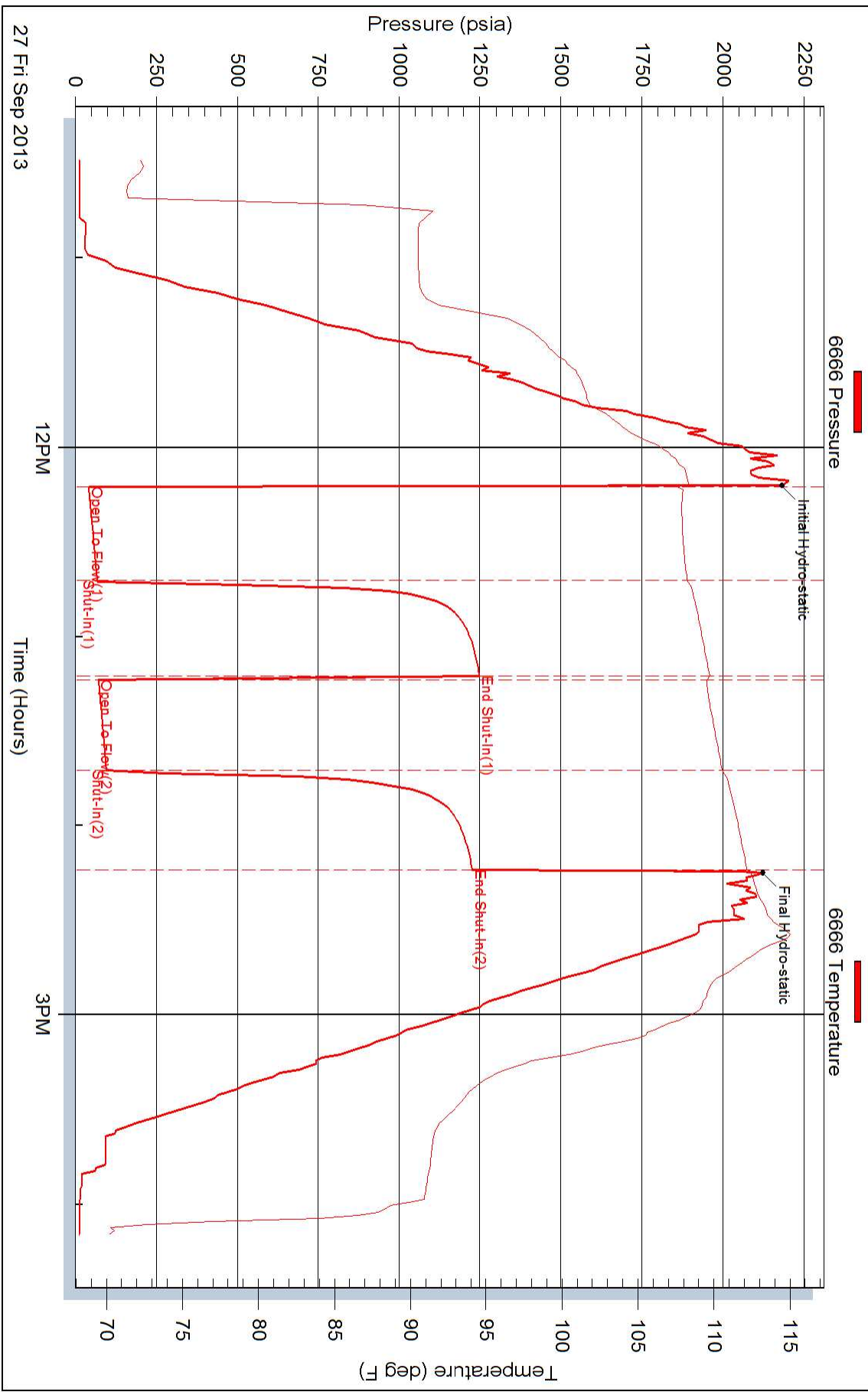
Serial #: 6666

Outside GL Allison Oil Operations Incorporated

Younkin 21-Maycee

DST Test Number: 2

Pressure vs. Time



Superior Testers Enterprises LLC

Ref. No: 18159

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