

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

1. Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____			
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	Tyluka Operations, LLC
Well Name	Axman Farms 1-18
Doc ID	1277889

All Electric Logs Run

Dual Induction
Compensated Neutron
Micro
Sonic
Radial Bond

Form	ACO1 - Well Completion
Operator	Tyluka Operations, LLC
Well Name	Axman Farms 1-18
Doc ID	1277889

Tops

Name	Top	Datum
Topeka	2854	-962
Heebner	3066	-1174
L-KC	3144	-1252
Muncie Creek	3269	-1377
Base KC	3356	-1464
Conglomerate	3376	-1484
Arbuckle	3448	-1556
LTD	3498	-1606



DRILL STEM TEST REPORT

Prepared For: **TALUKA OERATIONS LLC**

P.O. BOX 1213
HAYS, KANSAS 67601

ATTN: JERAMY SCHWARTZ

AXMAN FARMS 1-18

18-17S-14W

Start Date: 2015.12.12 @ 15:00:00

End Date: 2015.12.12 @ 21:02:00

Job Ticket #: 01207 DST #: 1

Eagle Testers
1309 Patton Road Great Bend, Kansas 67530
620-791-7394

Printed: 2015.12.12 @ 21:21:34



DRILL STEM TEST REPORT

TALUKA OPERATIONS LLC

18-17S-14W

P.O. BOX 1213
HAYS, KANSAS 67601

AXMAN FARMS 1-18

ATTN: JERAMY SCHWARTZ

Job Ticket: 01207

DST#: 1

Test Start: 2015.12.12 @ 15:00:00

GENERAL INFORMATION:

Formation: **TORONTO**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:39:00

Time Test Ended: 21:02:00

Test Type: Conventional Bottom Hole (Initial)

Tester: GENE BUDIG

Unit No: 1

Interval: **3060.00 ft (KB) To 3105.00 ft (KB) (TVD)**

Reference Elevations: 1892.00 ft (KB)

Total Depth: 3105.00 ft (KB) (TVD)

1884.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 9119

Inside

Press@RunDepth: 304.09 psia @ 3100.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2015.12.12

End Date: 2015.12.12

Last Calib.: 2015.12.12

Start Time: 15:00:00

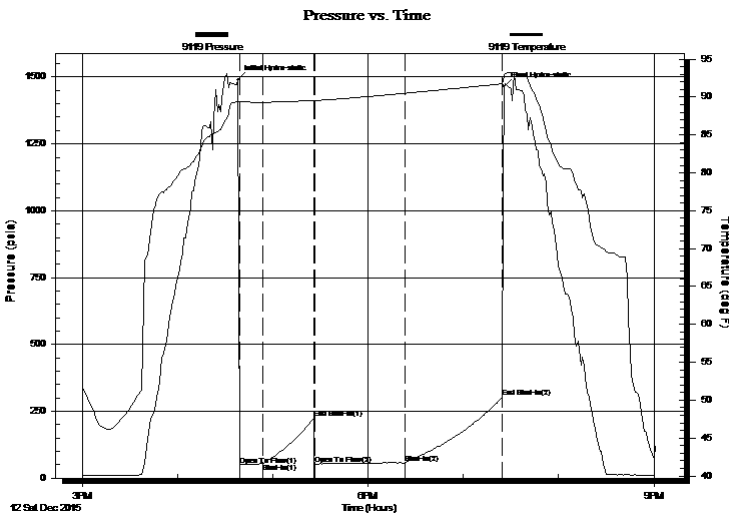
End Time: 21:01:30

Time On Btm: 2015.12.12 @ 16:38:00

Time Off Btm: 2015.12.12 @ 19:25:30

TEST COMMENT: 1ST OPENING 15 MINUTES WEAK SURFACE BLOW FOR 7 MINUTES AND DIED
1ST SHUT-IN 30 MINUTES NO BLOW BACK
2ND OPENING 60 MINUTES WEAK BUILDING BLOW BUILT TO 6 1/2 INCHES
2ND SHUT-IN 60 MINUTES NO BLOW BACK

PRESSURE SUMMARY



Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1490.36	89.38	Initial Hydro-static
1	47.98	89.25	Open To Flow (1)
16	54.75	89.32	Shut-In(1)
48	225.09	89.60	End Shut-In(1)
49	51.16	89.56	Open To Flow (2)
105	57.26	90.50	Shut-In(2)
167	304.09	91.75	End Shut-In(2)
168	1465.51	92.95	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	SLIGHTLUY OIL CUT MUD 4 OIL 96 MUD	0.00
0.00	THERE WAS A GOOD SHOW OF FREE G.O.OOY OIL	
0.00	BETWEEN THE TOOLS	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TALUKA OPERATIONS LLC

18-17S-14W

P.O. BOX 1213
HAYS, KANSAS 67601

AXMAN FARMS 1-18

ATTN: JERAMY SCHWARTZ

Job Ticket: 01207

DST#: 1

Test Start: 2015.12.12 @ 15:00:00

GENERAL INFORMATION:

Formation: **TORONTO**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:39:00

Time Test Ended: 21:02:00

Test Type: Conventional Bottom Hole (Initial)

Tester: GENE BUDIG

Unit No: 1

Interval: **3060.00 ft (KB) To 3105.00 ft (KB) (TVD)**

Reference Elevations: 1892.00 ft (KB)

Total Depth: 3105.00 ft (KB) (TVD)

1884.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: **3119** Outside

Press@RunDepth: 302.34 psia @ 3100.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2015.12.12

End Date: 2015.12.12

Last Calib.: 2015.12.12

Start Time: 15:00:00

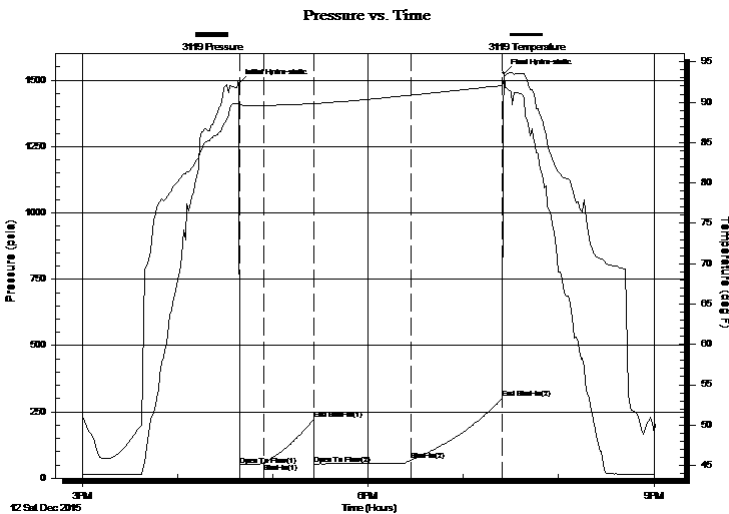
End Time: 21:01:30

Time On Btm: 2015.12.12 @ 16:38:30

Time Off Btm: 2015.12.12 @ 19:25:30

TEST COMMENT: 1ST OPENING 15 MINUTES WEAK SURFACE BLOW FOR 7 MINUTES AND DIED
1ST SHUT-IN 30 MINUTES NO BLOW BACK
2ND OPENING 60 MINUTES WEAK BUILDING BLOW BUILT TO 6 1/2 INCHES
2ND SHUT-IN 60 MINUTES NO BLOW BACK

PRESSURE SUMMARY



Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1487.86	89.93	Initial Hydro-static
1	49.80	89.60	Open To Flow (1)
16	55.81	89.61	Shut-In(1)
47	223.47	89.86	End Shut-In(1)
48	50.49	89.82	Open To Flow (2)
109	67.56	90.88	Shut-In(2)
166	302.34	92.07	End Shut-In(2)
167	1526.75	93.06	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	SLIGHTLUY OIL CUT MUD 4 OIL 96 MUD	0.00
0.00	THERE WAS A GOOD SHOW OF FREE G.O.OOY OIL	
0.00	BETWEEN THE TOOLS	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

TALUKA OPERATIONS LLC

18-17S-14W

P.O. BOX 1213
HAYS, KANSAS 67601

AXMAN FARMS 1-18

Job Ticket: 01207

DST#: 1

ATTN: JERAMY SCHWARTZ

Test Start: 2015.12.12 @ 15:00:00

Tool Information

Drill Pipe:	Length: 2750.00 ft	Diameter: 3.80 inches	Volume: 38.58 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 311.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 74000.00 lb
			<u>Total Volume: 38.58 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3060.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	45.00 ft			
Tool Length:	74.00 ft			
Number of Packers:	2	Diameter: inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3036.00	
Hydraulic tool	5.00			3041.00	
Jars	7.00			3048.00	
Safety Joint	2.00		Fluid	3050.00	
Top Packer	5.00			3055.00	
Packer	5.00			3060.00	29.00 Bottom Of Top Packer
Anchor	40.00			3100.00	
Recorder	0.00	9119	Inside	3100.00	
Recorder	0.00	3119	Outside	3100.00	
Bullnose	5.00			3105.00	45.00 Anchor Tool
Total Tool Length:	74.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

TALUKA OPERATIONS LLC

18-17S-14W

P.O. BOX 1213
HAYS, KANSAS 67601

AXMAN FARMS 1-18

Job Ticket: 01207

DST#: 1

ATTN: JERAMY SCHWARTZ

Test Start: 2015.12.12 @ 15:00:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 48.00 sec/qt
Water Loss: 9.20 in³
Resistivity: ohm.m
Salinity: 4700.00 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
15.00	SLIGHTLUY OIL CUT MUD 4 OIL 96 MUD	0.000
0.00	THERE WAS A GOOD SHOW OF FREE GASS	0.000
0.00	BETWEEN THE TOOLS	0.000

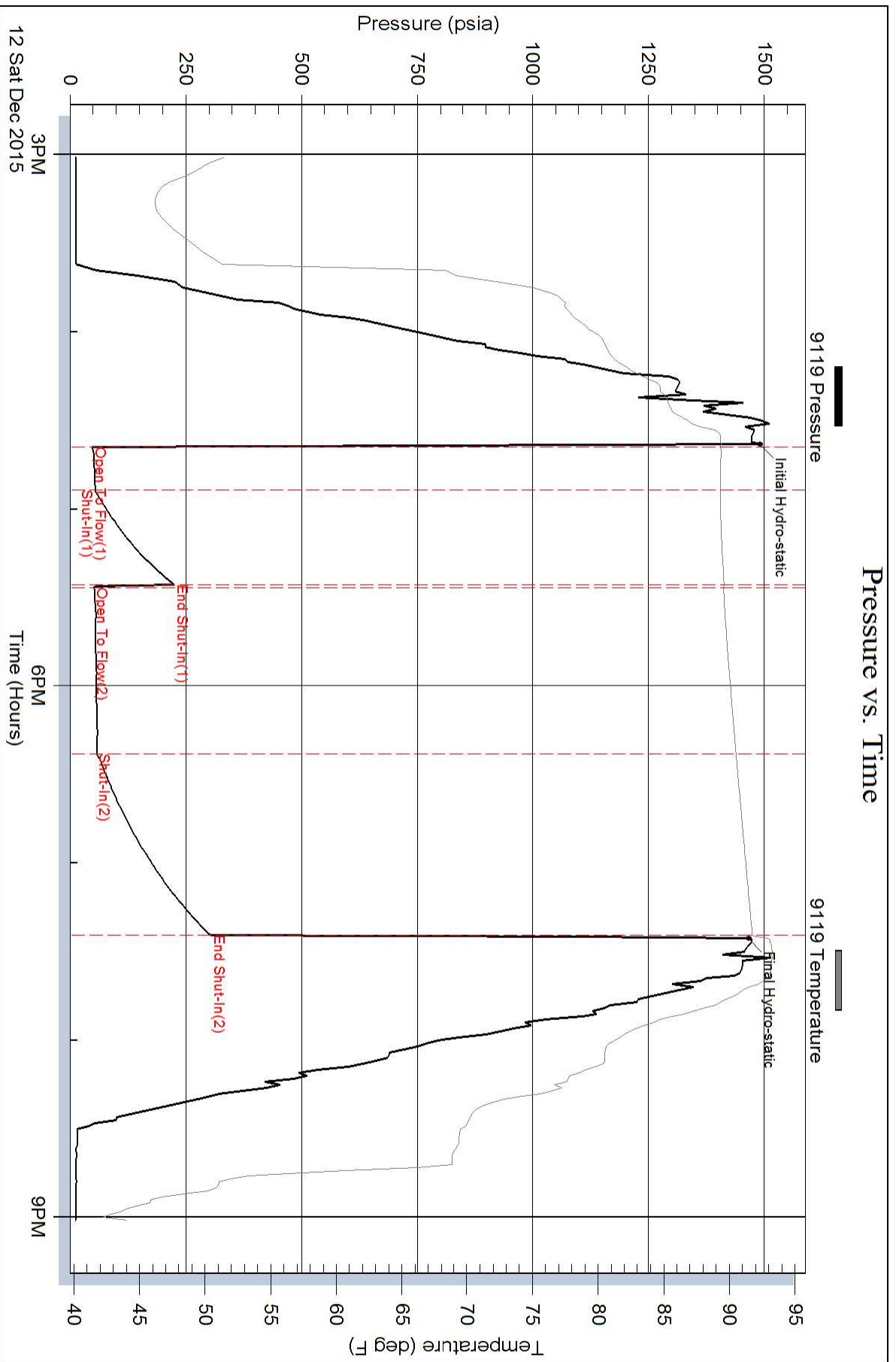
Total Length: 15.00 ft Total Volume: bbl

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

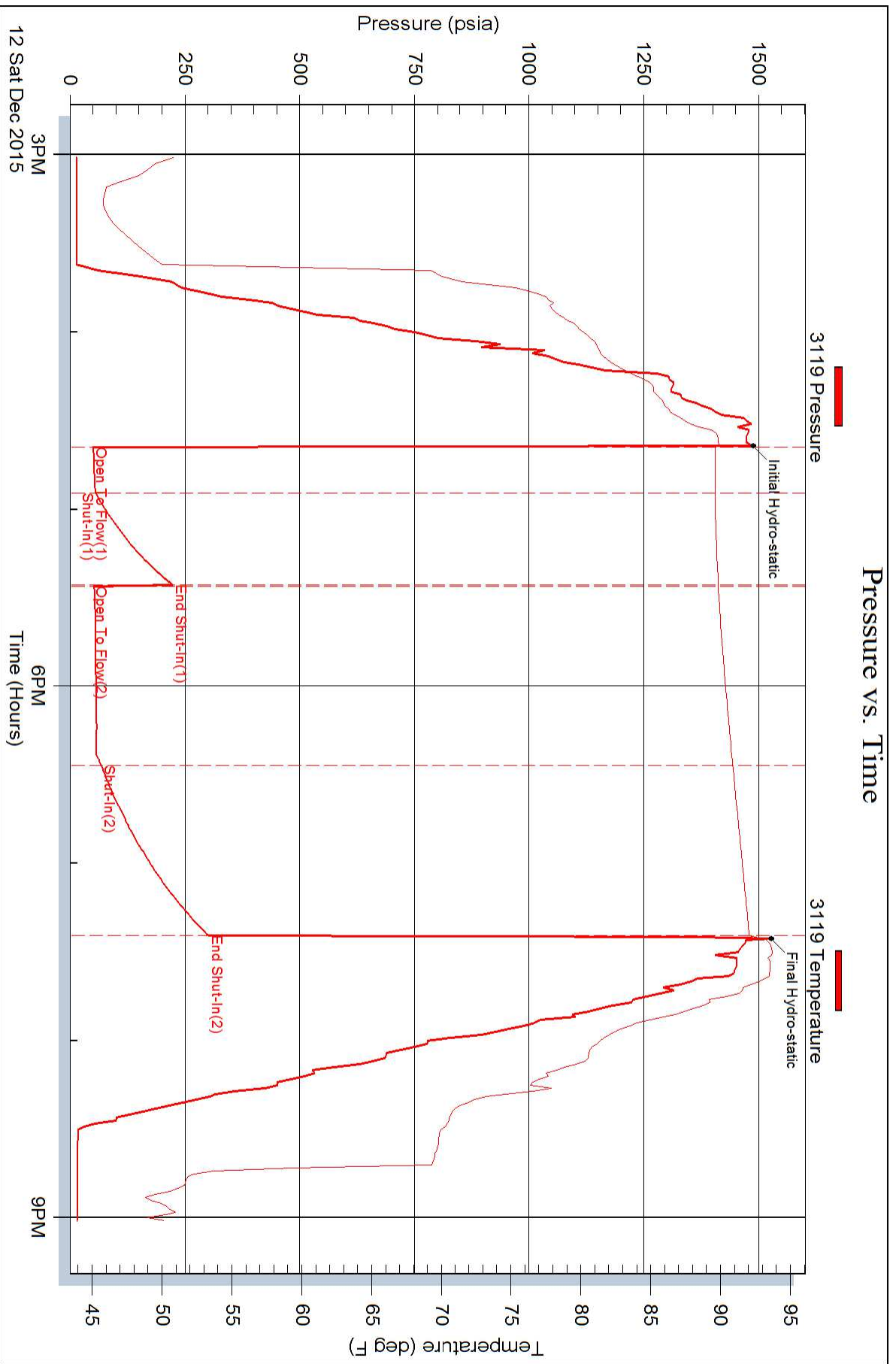
Laboratory Name: Laboratory Location:

Recovery Comments:

Pressure vs. Time



Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **TYLUKA OERATIONS LLC**

P.O. BOX 1213
HAYS, KANSAS 67601

ATTN: JERAMY SCHWARTZ

AXMAN FARMS 1-18

18-17S-14W

Start Date: 2015.12.13 @ 04:12:00

End Date: 2015.12.13 @ 11:27:00

Job Ticket #: 01208 DST #: 2

Eagle Testers
1309 Patton Road Great Bend, Kansas 67530
620-791-7394

Printed: 2015.12.13 @ 11:46:08

TYLUKA OERATIONS LLC

18-17S-14W

AXMAN FARMS 1-18

DST # 2

KANSAS CITY 'A 7 B'

2015.12.13



DRILL STEM TEST REPORT

TYLUKA OPERATIONS LLC

18-17S-14W

P.O. BOX 1213
HAYS, KANSAS 67601

AXMAN FARMS 1-18

ATTN: JERAMY SCHWARTZ

Job Ticket: 01208

DST#: 2

Test Start: 2015.12.13 @ 04:12:00

GENERAL INFORMATION:

Formation: **KANSAS CITY 'A 7 B'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:27:00

Time Test Ended: 11:27:00

Test Type: Conventional Bottom Hole (Initial)

Tester: GENE BUDIG

Unit No: 1 45

Interval: **3134.00 ft (KB) To 3180.00 ft (KB) (TVD)**

Reference Elevations: 1892.00 ft (KB)

Total Depth: 3180.00 ft (KB) (TVD)

1884.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 8.00 ft

Serial #: 9139

Outside

Press@RunDepth: 591.03 psia @ 3175.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2015.12.13

End Date: 2015.12.13

Last Calib.: 2015.12.13

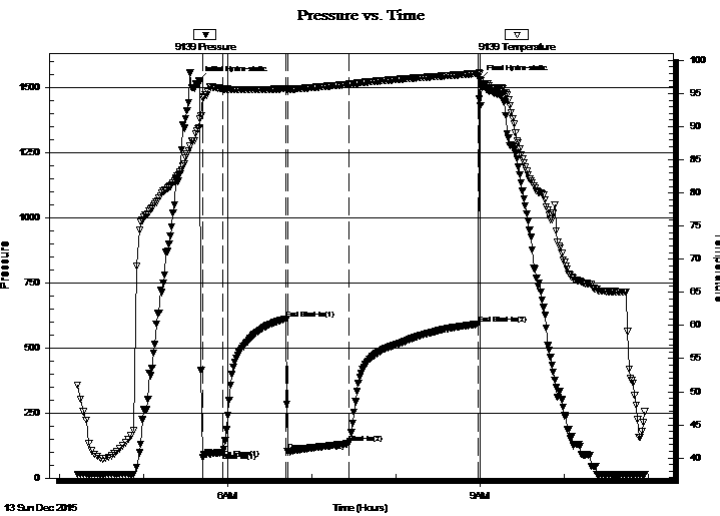
Start Time: 04:12:00

End Time: 10:57:00

Time On Btm: 2015.12.13 @ 05:39:30

Time Off Btm: 2015.12.13 @ 08:59:30

TEST COMMENT: 1ST OPENING 15 MINUTES FAIR BLOW BUILT TO THE BOTTOM OF A 5 GALLON BUCKET IN 5 MINUTES
1ST SHUT-IN 45 MINUTES FAIR BLOW BACK
2ND OPENING 45 MINUTES FAIR BLKOW BUILT TO THE BOTTOM OF A 5 GALLON BUCKET IN 6 MINUTES
2ND SHUT-IN 90 MINUTES FAIR BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1524.57	89.85	Initial Hydro-static
3	77.78	94.36	Open To Flow (1)
17	99.26	95.69	Shut-In(1)
62	611.40	95.74	End Shut-In(1)
63	102.18	95.63	Open To Flow (2)
107	133.22	96.41	Shut-In(2)
199	591.03	98.02	End Shut-In(2)
200	1531.18	98.01	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	MUDDY OIL 5 GAS 60 OIL 35 MUD	0.48
60.00	MUDDY OIL 10 GAS 45 OIL 45 MUD	0.48
0.00	1200 FEET OF GAS IN THE PIPE	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TYLUKA OPERATIONS LLC

18-17S-14W

P.O. BOX 1213
HAYS, KANSAS 67601

AXMAN FARMS 1-18

ATTN: JERAMY SCHWARTZ

Job Ticket: 01208

DST#: 2

Test Start: 2015.12.13 @ 04:12:00

GENERAL INFORMATION:

Formation: **KANSAS CITY 'A 7 B'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:27:00

Time Test Ended: 11:27:00

Test Type: Conventional Bottom Hole (Initial)

Tester: GENE BUDIG

Unit No: 1 45

Interval: **3134.00 ft (KB) To 3180.00 ft (KB) (TVD)**

Reference Elevations: 1892.00 ft (KB)

Total Depth: 3180.00 ft (KB) (TVD)

1884.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 8.00 ft

Serial #: 9119

Inside

Press@RunDepth: 592.10 psia @ 3175.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2015.12.13

End Date: 2015.12.13

Last Calib.: 2015.12.13

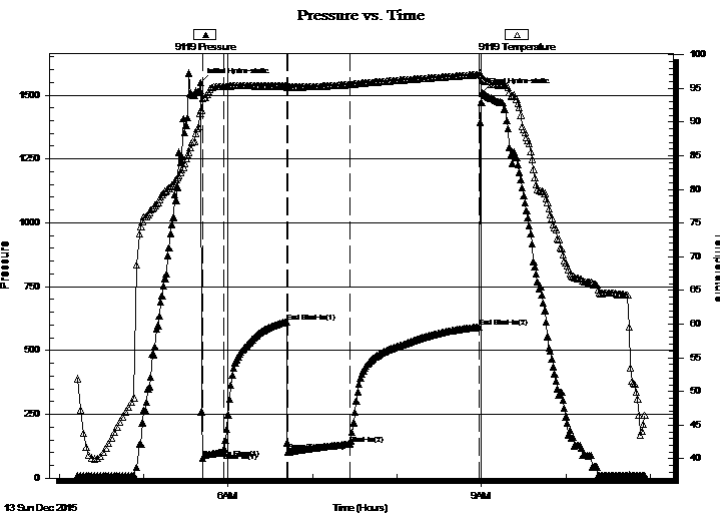
Start Time: 04:12:00

End Time: 10:56:30

Time On Btm: 2015.12.13 @ 05:40:30

Time Off Btm: 2015.12.13 @ 09:00:30

TEST COMMENT: 1ST OPENING 15 MINUTES FAIR BLOW BUILT TO THE BOTTOM OF A 5 GALLON BUCKET IN 5 MINUTES
1ST SHUT-IN 45 MINUTES FAIR BLOW BACK
2ND OPENING 45 MINUTES FAIR BLKOW BUILT TO THE BOTTOM OF A 5 GALLON BUCKET IN 6 MINUTES
2ND SHUT-IN 90 MINUTES FAIR BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1549.26	91.72	Initial Hydro-static
2	76.92	93.54	Open To Flow (1)
16	100.56	95.30	Shut-In(1)
61	612.68	95.35	End Shut-In(1)
62	103.57	95.22	Open To Flow (2)
106	134.41	95.58	Shut-In(2)
198	592.10	97.07	End Shut-In(2)
200	1508.07	96.41	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	MUDDY OIL 5 GAS 60 OIL 35 MUD	0.48
60.00	MUDDY OIL 10 GAS 45 OIL 45 MUD	0.48
0.00	1200 FEET OF GAS IN THE PIPE	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

TYLUKA OPERATIONS LLC

18-17S-14W

P.O. BOX 1213
HAYS, KANSAS 67601

AXMAN FARMS 1-18

ATTN: JERAMY SCHWARTZ

Job Ticket: 01208

DST#: 2

Test Start: 2015.12.13 @ 04:12:00

Tool Information

Drill Pipe:	Length: 2812.00 ft	Diameter: 3.80 inches	Volume: 39.44 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 311.00 ft	Diameter: 2.86 inches	Volume: 2.47 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 41.91 bbl</u>	Tool Chased 12.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 44000.00 lb
Depth to Top Packer:	3134.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	46.00 ft			
Tool Length:	75.00 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			3110.00	
Hydraulic tool	5.00			3115.00	
Jars	7.00			3122.00	
Safety Joint	2.00		Fluid	3124.00	
Top Packer	5.00			3129.00	
Packer	5.00			3134.00	29.00 Bottom Of Top Packer
Anchor	41.00			3175.00	
Recorder	0.00	9119	Inside	3175.00	
Recorder	0.00	9139	Outside	3175.00	
Bullnose	5.00			3180.00	46.00 Anchor Tool
Total Tool Length:	75.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

TYLUKA OPERATIONS LLC

18-17S-14W

P.O. BOX 1213
HAYS, KANSAS 67601

AXMAN FARMS 1-18

Job Ticket: 01208

DST#: 2

ATTN: JERAMY SCHWARTZ

Test Start: 2015.12.13 @ 04:12:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 48.00 sec/qt
Water Loss: 9.20 in³
Resistivity: ohm.m
Salinity: 4700.00 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
60.00	MUDDY OIL 5 GAS 60 OIL 35 MUD	0.477
60.00	MUDDY OIL 10 GAS 45 OIL 45 MUD	0.477
0.00	1200 FEET OF GAS IN THE PIPE	0.000

Total Length: 120.00 ft Total Volume: 0.954 bbl

Num Fluid Samples: 0

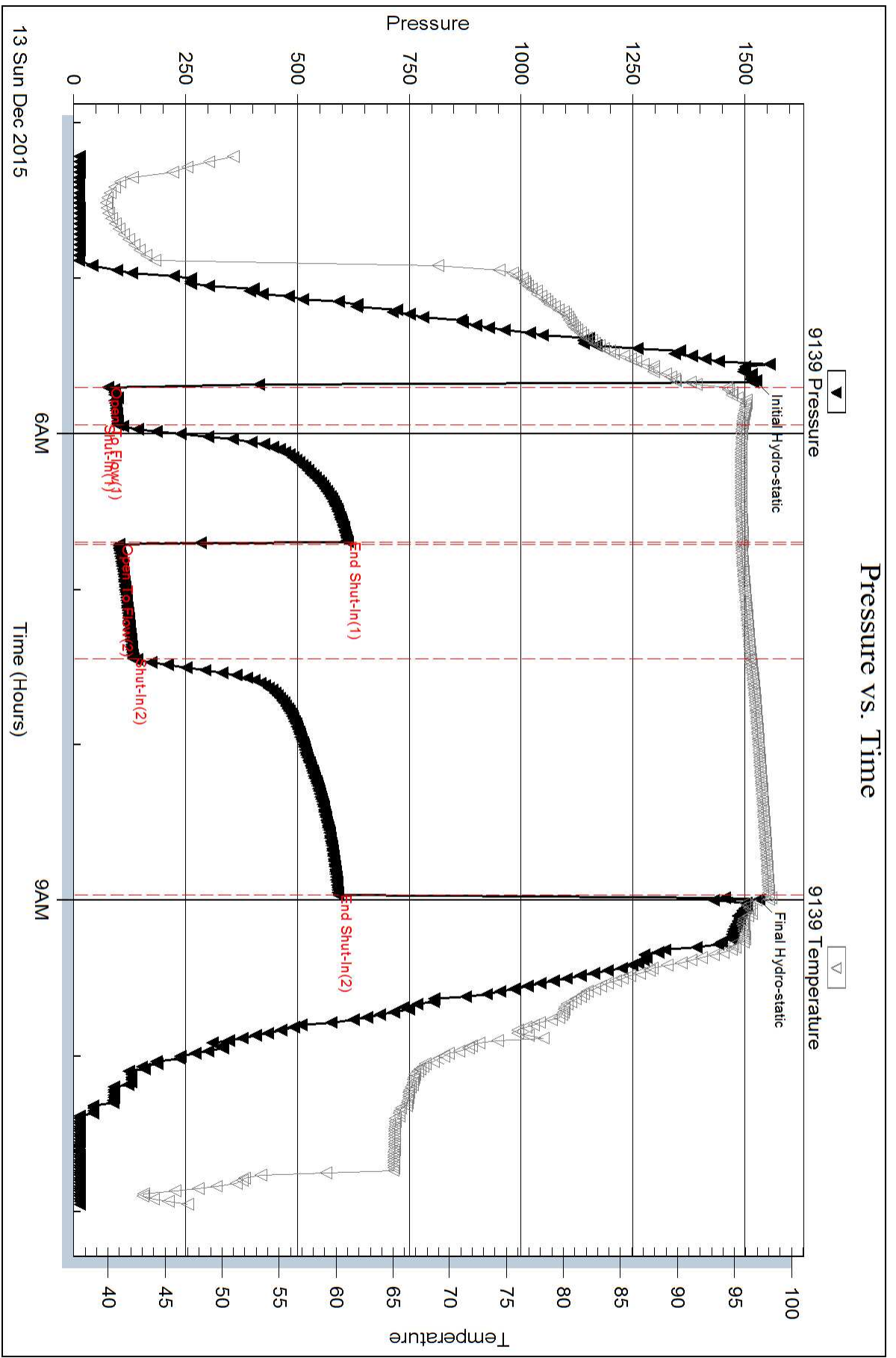
Num Gas Bombs: 0

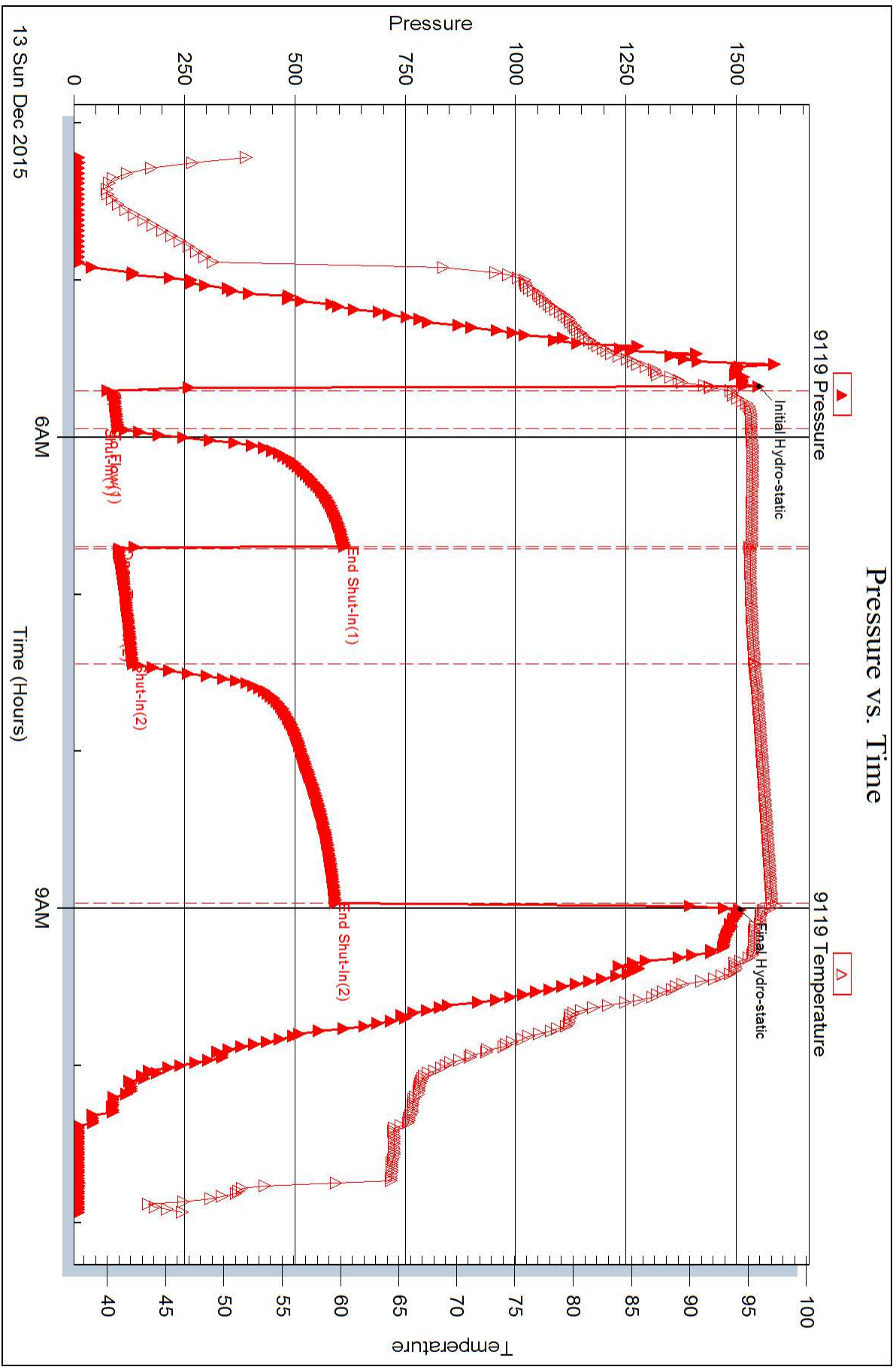
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **TYLUKA OERATIONS LLC**

P.O. BOX 1213
HAYS, KANSAS 67601

ATTN: JERAMY SCHWARTZ

AXMAN FARMS 1-18

18-17S-14W

Start Date: 2015.12.13 @ 08:50:00

End Date: 2015.12.14 @ 01:21:00

Job Ticket #: 01209 DST #: 3

Eagle Testers
1309 Patton Road Great Bend, Kansas 67530
620-791-7394

Printed: 2015.12.14 @ 01:34:01



DRILL STEM TEST REPORT

TYLUKA OPERATIONS LLC

18-17S-14W

P.O. BOX 1213
HAYS, KANSAS 67601

AXMAN FARMS 1-18

ATTN: JERAMY SCHWARTZ

Job Ticket: 01209

DST#: 3

Test Start: 2015.12.13 @ 08:50:00

GENERAL INFORMATION:

Formation: **LANSING D-F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:00:00

Time Test Ended: 01:21:00

Test Type: Conventional Bottom Hole (Initial)

Tester: GENE BUDIG

Unit No: 1

Interval: **3190.00 ft (KB) To 3220.00 ft (KB) (TVD)**

Reference Elevations: 1892.00 ft (KB)

Total Depth: 3220.00 ft (KB) (TVD)

1884.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition:

KB to GR/CF: 8.00 ft

Serial #: **9139** Outside

Press@RunDepth: 674.33 psia @ 3215.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2015.12.13

End Date: 2015.12.14

Last Calib.: 2015.12.14

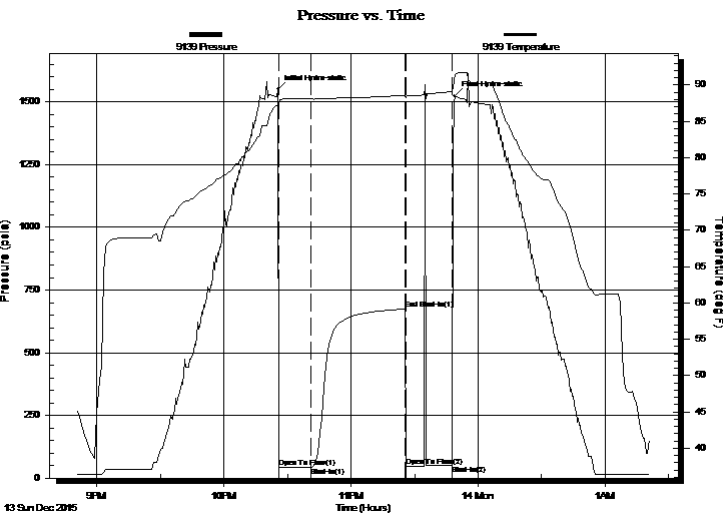
Start Time: 20:50:00

End Time: 01:21:00

Time On Btm: 2015.12.13 @ 22:25:30

Time Off Btm: 2015.12.13 @ 23:49:00

TEST COMMENT: 1ST OPENING 15 MINUTES WEAK BLOW FOR 12 MINUTES AND DIED
1ST SHUT-IN 45 MINUTES NO BLOW BACK
2ND OPENING 20 MINUTES NO BLOW FLUSHED TOOL GOOD SURGE NO HELP CAME OUT OF THE HOLE NO FINAL SHUT-IN TAKEN



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1549.42	87.22	Initial Hydro-static
1	42.74	87.58	Open To Flow (1)
16	45.07	88.06	Shut-In(1)
60	674.33	88.60	End Shut-In(1)
61	48.52	88.22	Open To Flow (2)
82	51.58	89.07	Shut-In(2)
84	1523.19	91.44	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	DRILLING MUD	0.08

Gas Rates

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



DRILL STEM TEST REPORT

TYLUKA OPERATIONS LLC

18-17S-14W

P.O. BOX 1213
HAYS, KANSAS 67601

AXMAN FARMS 1-18

ATTN: JERAMY SCHWARTZ

Job Ticket: 01209

DST#: 3

Test Start: 2015.12.13 @ 08:50:00

GENERAL INFORMATION:

Formation: **LANSING D-F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:00:00

Time Test Ended: 01:21:00

Test Type: Conventional Bottom Hole (Initial)

Tester: GENE BUDIG

Unit No: 1

Interval: **3190.00 ft (KB) To 3220.00 ft (KB) (TVD)**

Reference Elevations: 1892.00 ft (KB)

Total Depth: 3220.00 ft (KB) (TVD)

1884.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition:

KB to GR/CF: 8.00 ft

Serial #: 9119

Inside

Press@RunDepth: 675.71 psia @ 3215.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2015.12.13

End Date:

2015.12.14

Last Calib.: 2015.12.14

Start Time: 20:50:00

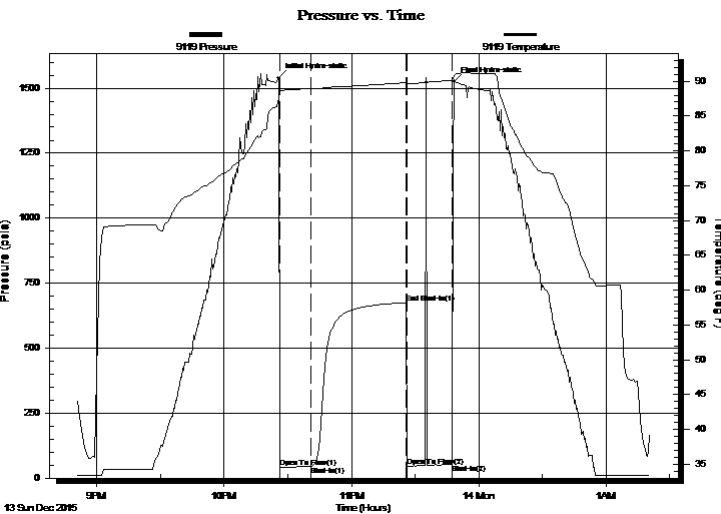
End Time:

01:20:30

Time On Btm: 2015.12.13 @ 22:25:30

Time Off Btm: 2015.12.13 @ 23:48:30

TEST COMMENT: 1ST OPENING 15 MINUTES WEAK BLOW FOR 12 MINUTES AND DIED
1ST SHUT-IN 45 MINUTES NO BLOW BACK
2ND OPENING 20 MINUTES NO BLOW FLUSHED TOOL GOOD SURGE NO HELP CAME OUT OF THE HOLE NO FINAL SHUT-IN TAKEN



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1539.57	87.62	Initial Hydro-static
1	41.10	88.36	Open To Flow (1)
16	45.17	88.90	Shut-In(1)
60	675.71	89.79	End Shut-In(1)
61	46.91	89.60	Open To Flow (2)
82	52.19	90.14	Shut-In(2)
83	1525.64	90.72	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	DRILLING MUD	0.08

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

TYLUKA OPERATIONS LLC

18-17S-14W

P.O. BOX 1213
HAYS, KANSAS 67601

AXMAN FARMS 1-18

ATTN: JERAMY SCHWARTZ

Job Ticket: 01209

DST#: 3

Test Start: 2015.12.13 @ 08:50:00

Tool Information

Drill Pipe:	Length: 2874.00 ft	Diameter: 3.80 inches	Volume: 40.31 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 311.00 ft	Diameter: 2.86 inches	Volume: 2.47 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 42.78 bbl</u>	Tool Chased 3.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 44000.00 lb
Depth to Top Packer:	3190.00 ft			Final 44000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 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			3166.00	
Hydraulic tool	5.00			3171.00	
Jars	7.00			3178.00	
Safety Joint	2.00		Fluid	3180.00	
Top Packer	5.00			3185.00	
Packer	5.00			3190.00	29.00 Bottom Of Top Packer
Anchor	25.00			3215.00	
Recorder	0.00	9119	Inside	3215.00	
Recorder	0.00	9139	Outside	3215.00	
Bullnose	5.00			3220.00	30.00 Anchor Tool
Total Tool Length:	59.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

TYLUKA OPERATIONS LLC

18-17S-14W

P.O. BOX 1213
HAYS, KANSAS 67601

AXMAN FARMS 1-18

Job Ticket: 01209

DST#: 3

ATTN: JERAMY SCHWARTZ

Test Start: 2015.12.13 @ 08:50:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 45.00 sec/qt
Water Loss: 8.80 in³
Resistivity: ohm.m
Salinity: 5800.00 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	DRILLING MUD	0.079

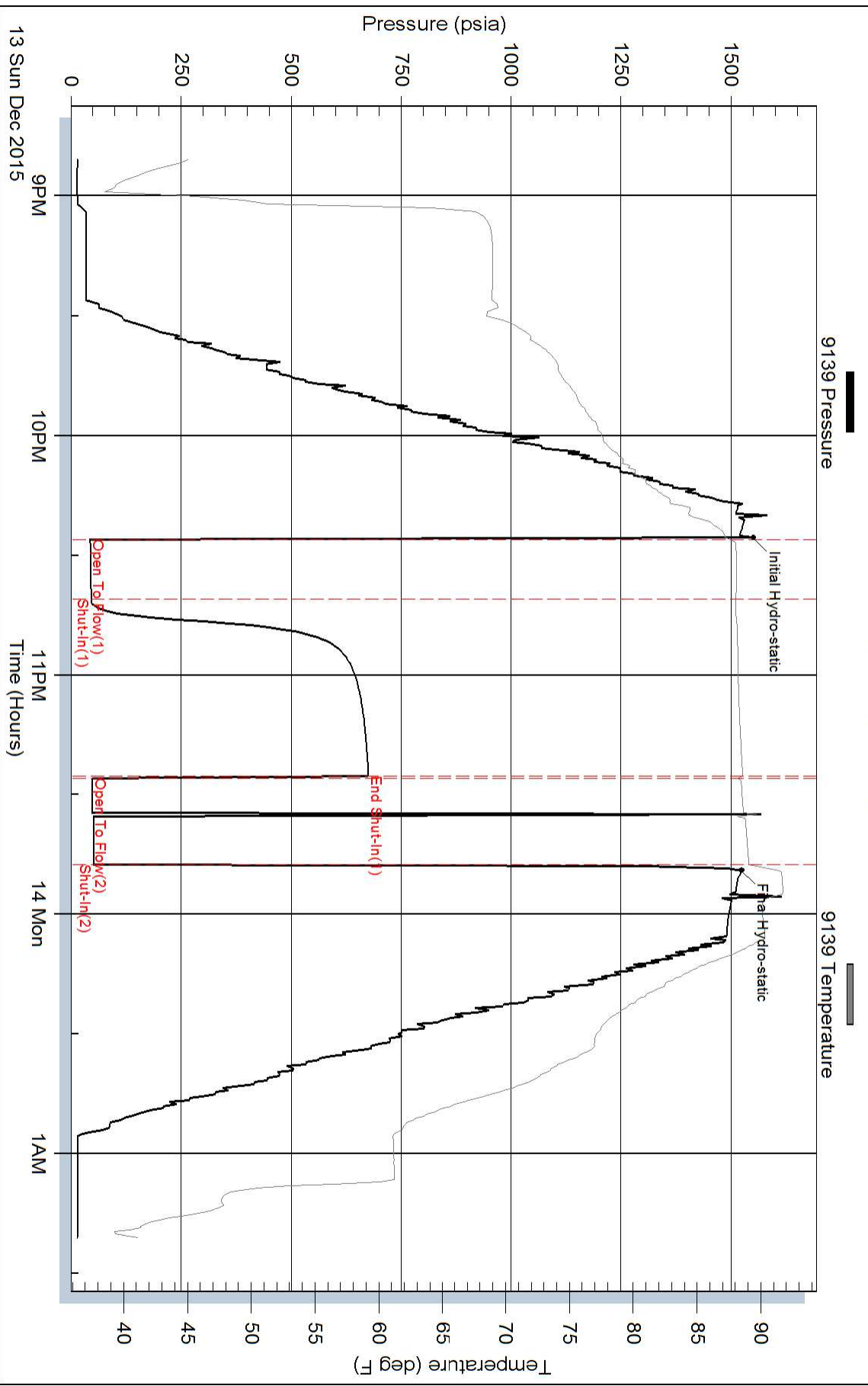
Total Length: 10.00 ft Total Volume: 0.079 bbl

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

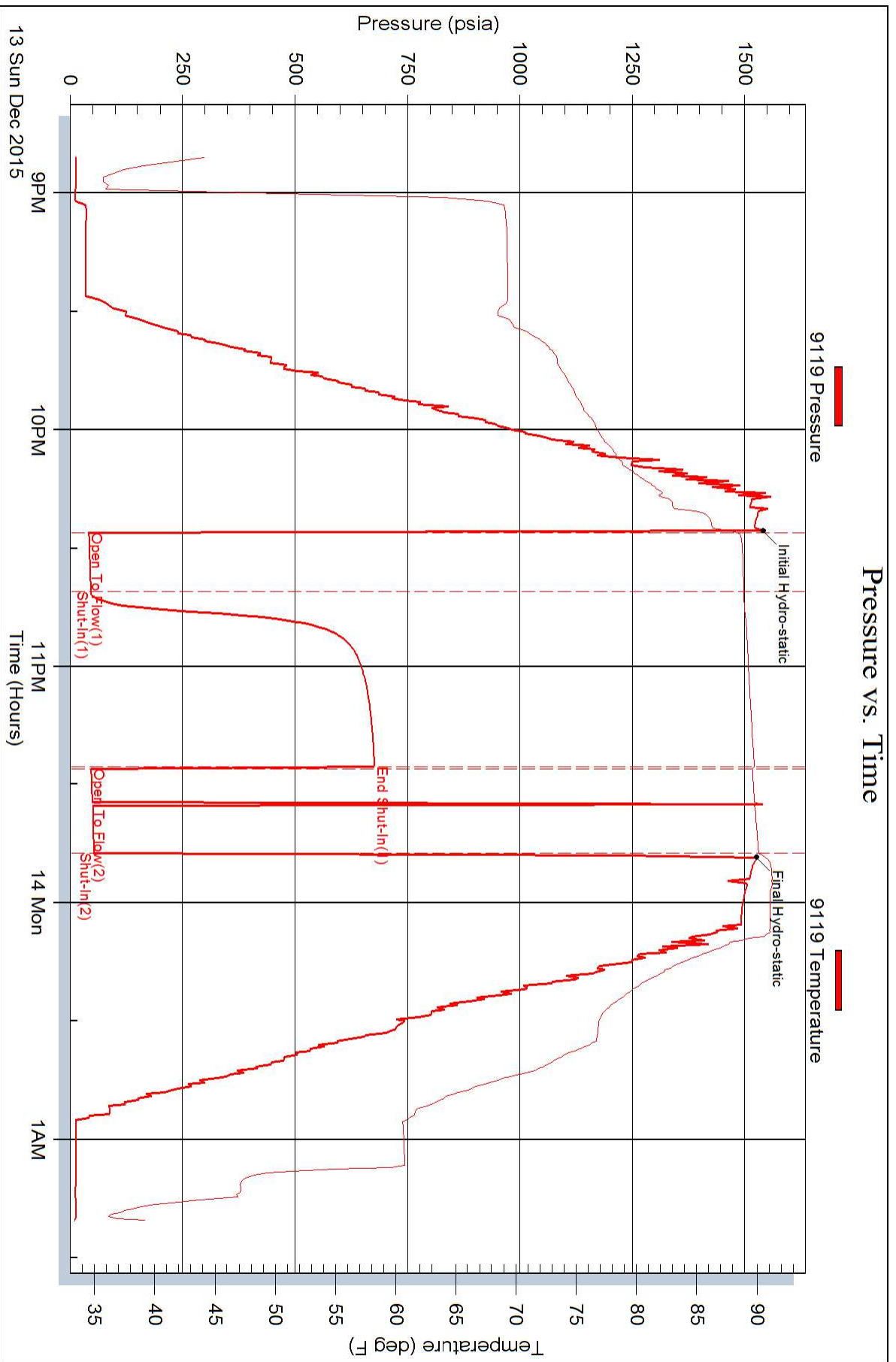
Laboratory Name: Laboratory Location:

Recovery Comments:

Pressure vs. Time



Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **TYLUKA OERATIONS LLC**

P.O. BOX 1213
HAYS, KANSAS 67601

ATTN: JERAMY SCHWARTZ

AXMAN FARMS 1-18

18-17S-14W

Start Date: 2015.12.14 @ 17:49:00

End Date: 2015.12.15 @ 00:33:00

Job Ticket #: 01210 DST #: 4

Eagle Testers
1309 Patton Road Great Bend, Kansas 67530
620-791-7394

Printed: 2015.12.15 @ 17:38:18



DRILL STEM TEST REPORT

TYLUKA OPERATIONS LLC

18-17S-14W

P.O. BOX 1213
HAYS, KANSAS 67601

AXMAN FARMS 1-18

ATTN: JERAMY SCHWARTZ

Job Ticket: 01210

DST#: 4

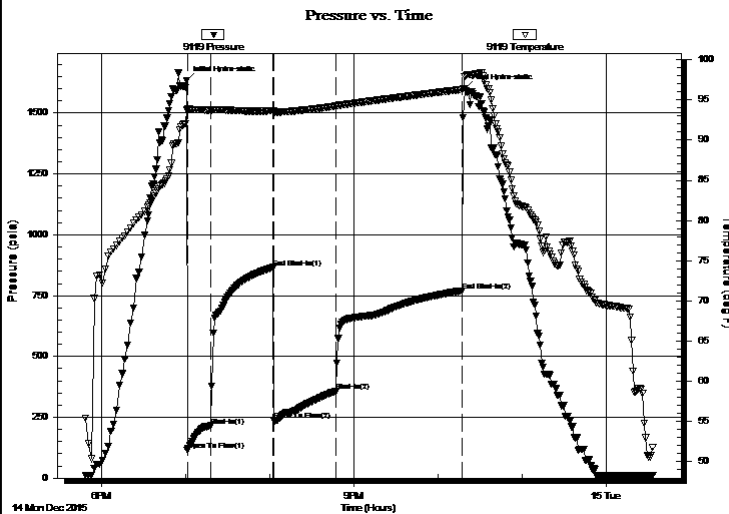
Test Start: 2015.12.14 @ 17:49:00

GENERAL INFORMATION:

Formation: **KANSAS CITY H-K**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 19:01:30
 Time Test Ended: 00:33:00
 Interval: **3255.00 ft (KB) To 3265.00 ft (KB) (TVD)**
 Total Depth: 3365.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: GENE BUDIG
 Unit No: 1
 Reference Elevations: 1892.00 ft (KB)
 1884.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 9119 Inside
 Press@RunDepth: 355.40 psia @ 3359.96 ft (KB) Capacity: 5000.00 psia
 Start Date: 2015.12.14 End Date: 2015.12.15 Last Calib.: 2015.12.15
 Start Time: 17:49:00 End Time: 00:33:00 Time On Btm: 2015.12.14 @ 19:01:00
 Time Off Btm: 2015.12.14 @ 22:19:00

TEST COMMENT: 1ST OPENING 15 MINUTES FAIR BLOW BUILT TO THE BOTTOM OF A 5 GALOON BUCKET IN 3 MINUTES
 1ST SHUT-IN 45 MINUTES GOOD BLOW BACK
 2ND FLOW 45 MINUTES FAIR BLOW BUILT TO THE BOTTOM OF A 5 GALLON BUCKET IN 4 MINUTES
 2ND SHUT-IN 90 MINUTES GOOD BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1633.77	93.81	Initial Hydro-static
1	114.12	93.80	Open To Flow (1)
17	214.92	93.67	Shut-In(1)
62	865.61	93.65	End Shut-In(1)
62	237.93	93.48	Open To Flow (2)
106	355.40	94.21	Shut-In(2)
196	770.33	96.29	End Shut-In(2)
198	1601.44	97.88	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
720.00	SLIGHTLY MUD CUT GASSY OIL	8.21
0.00	20 GAS 70 OIL 10 MUD	0.00
0.00	2100 GAS IN THE PIPE	0.00
0.00	GRAVITY 43 CORRECTED	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TYLUKA OPERATIONS LLC

18-17S-14W

P.O. BOX 1213
HAYS, KANSAS 67601

AXMAN FARMS 1-18

ATTN: JERAMY SCHWARTZ

Job Ticket: 01210

DST#: 4

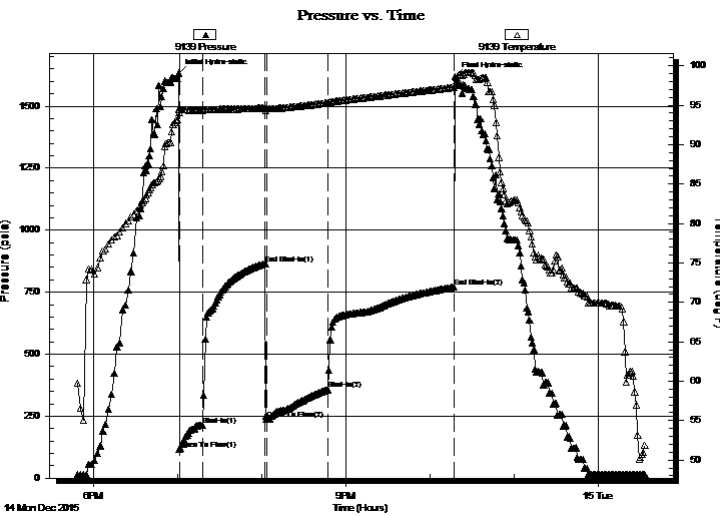
Test Start: 2015.12.14 @ 17:49:00

GENERAL INFORMATION:

Formation: **KANSAS CITY H-K**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 19:01:30
 Time Test Ended: 00:33:00
 Interval: **3255.00 ft (KB) To 3265.00 ft (KB) (TVD)**
 Total Depth: 3365.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: GENE BUDIG
 Unit No: 1
 Reference Elevations: 1892.00 ft (KB)
 1884.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 9139 Outside
 Press@RunDepth: 770.84 psia @ 3359.96 ft (KB) Capacity: 5000.00 psia
 Start Date: 2015.12.14 End Date: 2015.12.15 Last Calib.: 2015.12.15
 Start Time: 17:49:00 End Time: 00:33:00 Time On Btm: 2015.12.14 @ 19:01:00
 Time Off Btm: 2015.12.14 @ 22:18:00

TEST COMMENT: 1ST OPENING 15 MINUTES FAIR BLOW BUILT TO THE BOTTOM OF A 5 GALOON BUCKET IN 3 MINUTES
 1ST SHUT-IN 45 MINUTES GOOD BLOW BACK
 2ND FLOW 45 MINUTES FAIR BLOW BUILT TO THE BOTTOM OF A 5 GALLON BUCKET IN 4 MINUTES
 2ND SHUT-IN 90 MINUTES GOOD BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1633.08	94.48	Initial Hydro-static
1	115.53	94.05	Open To Flow (1)
17	214.16	94.37	Shut-In(1)
62	865.66	94.69	End Shut-In(1)
63	239.46	94.54	Open To Flow (2)
107	357.51	95.31	Shut-In(2)
196	770.84	97.26	End Shut-In(2)
197	1620.42	97.50	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
720.00	SLIGHTLY MUD CUT GASSY OIL	8.21
0.00	20 GAS 70 OIL 10 MUD	0.00
0.00	2100 GAS IN THE PIPE	0.00
0.00	GRAVITY 43 CORRECTED	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

TYLUKA OPERATIONS LLC

18-17S-14W

P.O. BOX 1213
HAYS, KANSAS 67601

AXMAN FARMS 1-18

ATTN: JERAMY SCHWARTZ

Job Ticket: 01210

DST#: 4

Test Start: 2015.12.14 @ 17:49:00

Tool Information

Drill Pipe:	Length: 2937.00 ft	Diameter: 3.80 inches	Volume: 41.20 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 311.00 ft	Diameter: 2.86 inches	Volume: 2.47 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 74000.00 lb
			Total Volume: 43.67 bbl	Tool Chased 3.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 44000.00 lb
Depth to Top Packer:	3255.00 ft			Final 47000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	109.96 ft			
Tool Length:	138.96 ft			
Number of Packers:	2	Diameter: inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3231.00	
Hydraulic tool	5.00			3236.00	
Jars	7.00			3243.00	
Safety Joint	2.00		Fluid	3245.00	
Top Packer	5.00			3250.00	
Packer	5.00			3255.00	29.00 Bottom Of Top Packer
Anchor	2.00			3257.00	
Change Over Sub	0.75			3257.75	
Drill Pipe	92.46			3350.21	
Change Over Sub	0.75			3350.96	
Anchor	9.00			3359.96	
Recorder	0.00	9119	Inside	3359.96	
Recorder	0.00	9139	Outside	3359.96	
Bullnose	5.00			3364.96	109.96 Anchor Tool

Total Tool Length: 138.96



DRILL STEM TEST REPORT

FLUID SUMMARY

TYLUKA OPERATIONS LLC

18-17S-14W

P.O. BOX 1213
HAYS, KANSAS 67601

AXMAN FARMS 1-18

Job Ticket: 01210

DST#: 4

ATTN: JERAMY SCHWARTZ

Test Start: 2015.12.14 @ 17:49:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 40.00 sec/qt
Water Loss: 8.19 in³
Resistivity: ohm.m
Salinity: 6500.00 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

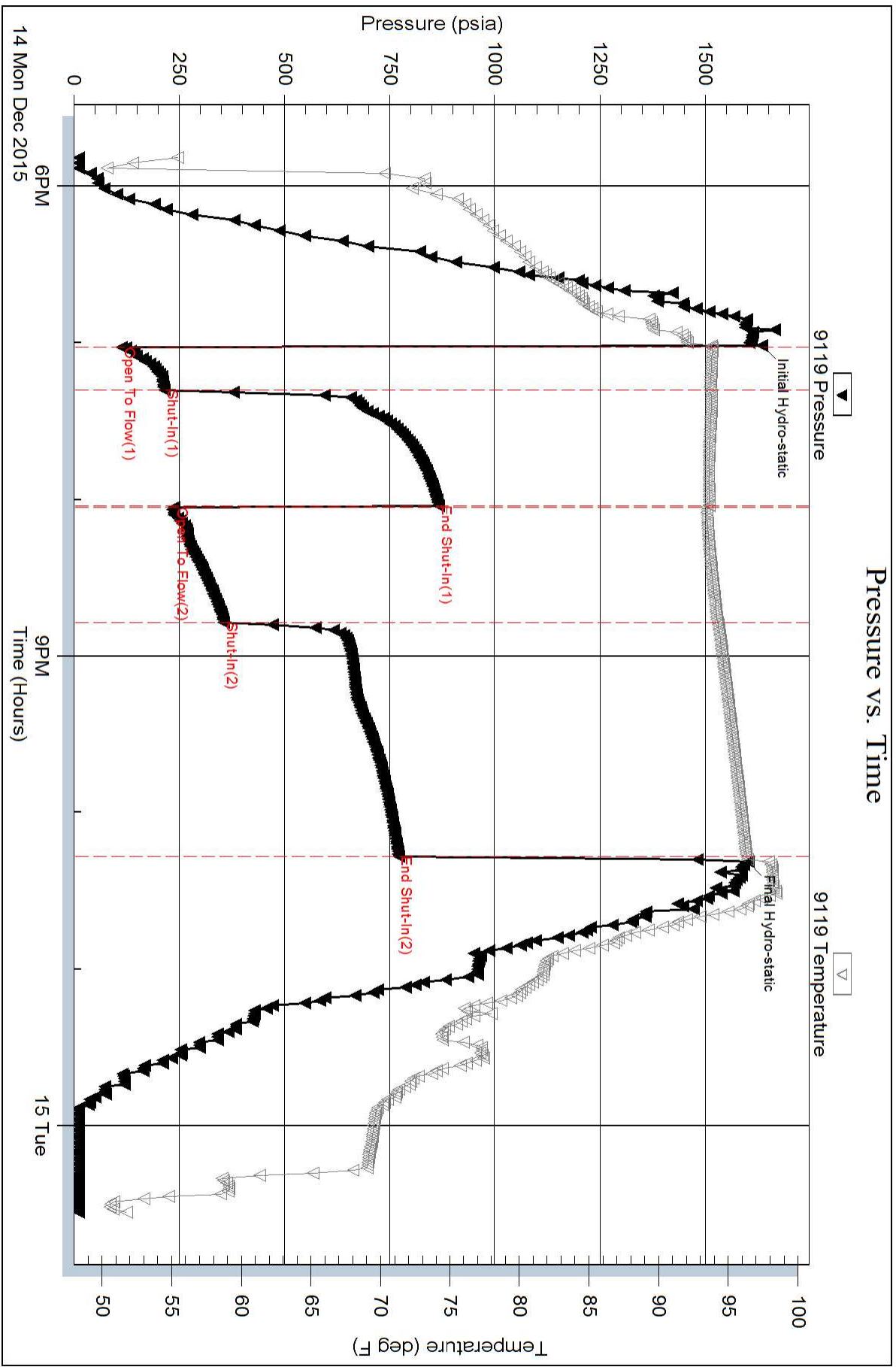
Length ft	Description	Volume bbl
720.00	SLIGHTLY MUD CUT GASSY OIL	8.208
0.00	20 GAS 70 OIL 10 MUD	0.000
0.00	2100 GAS IN THE PIPE	0.000
0.00	GRAVITY 43 CORRECTED	0.000

Total Length: 720.00 ft Total Volume: 8.208 bbl

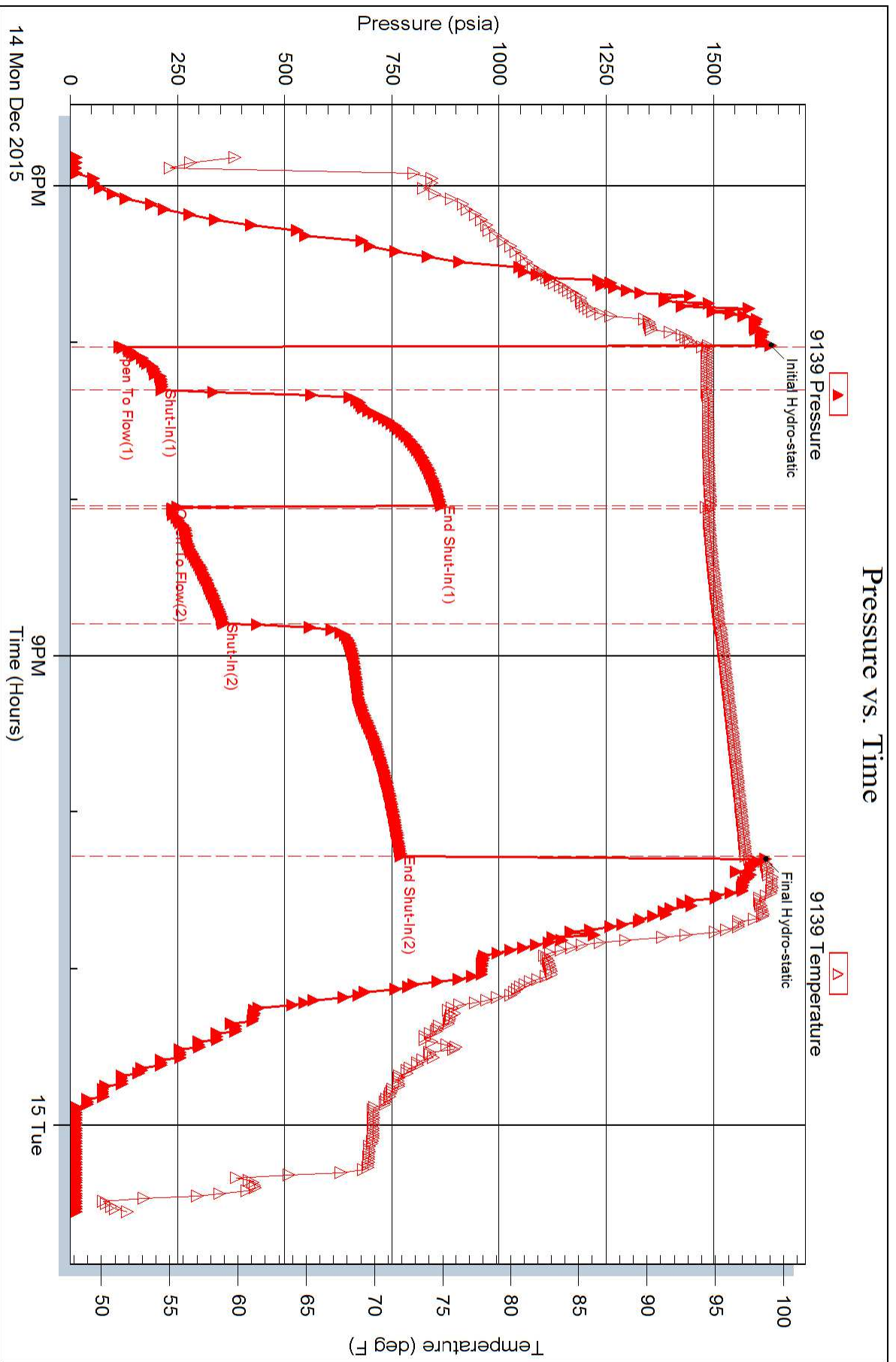
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

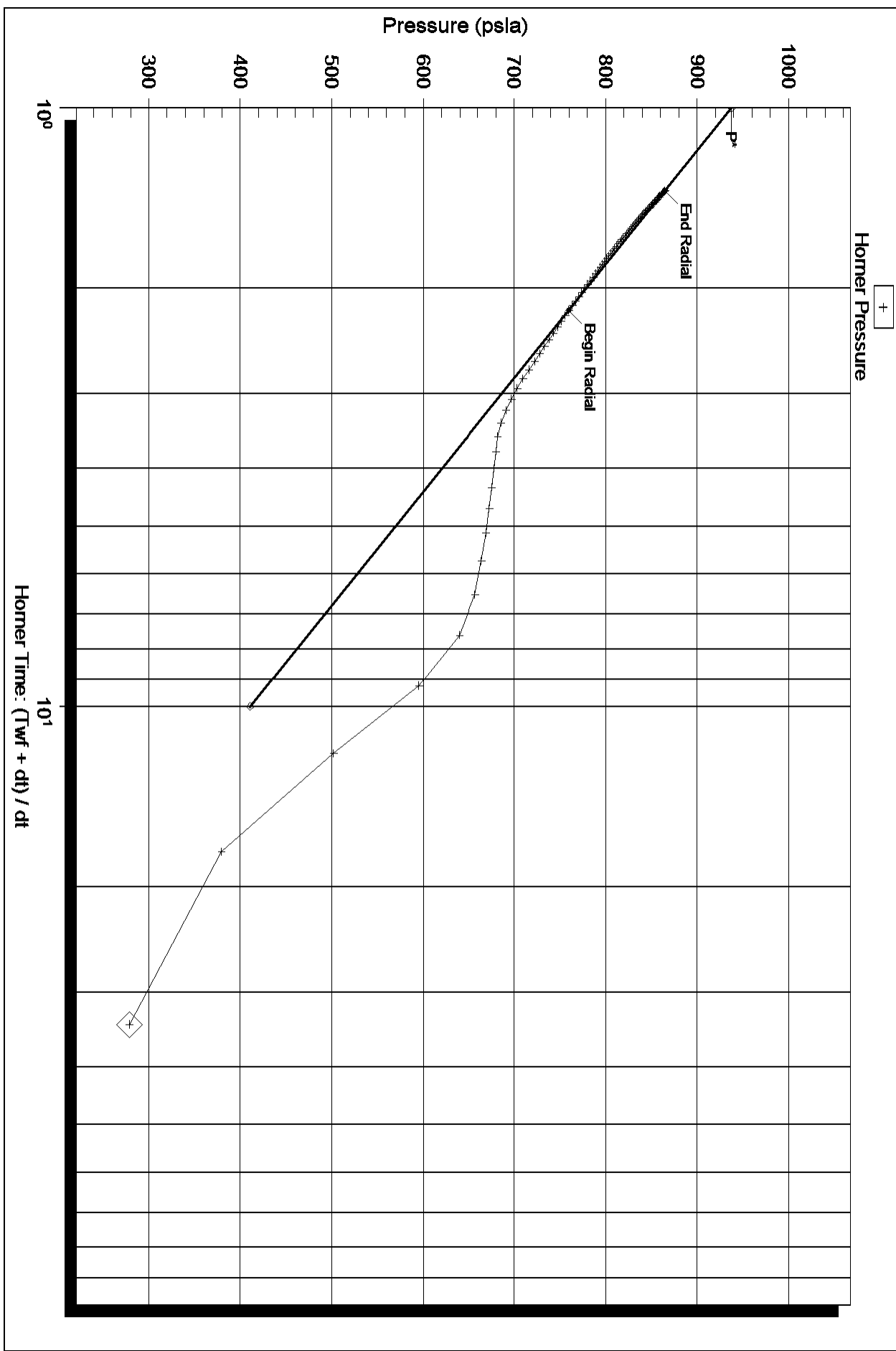
Recovery Comments:



Pressure vs. Time



Horner Plot



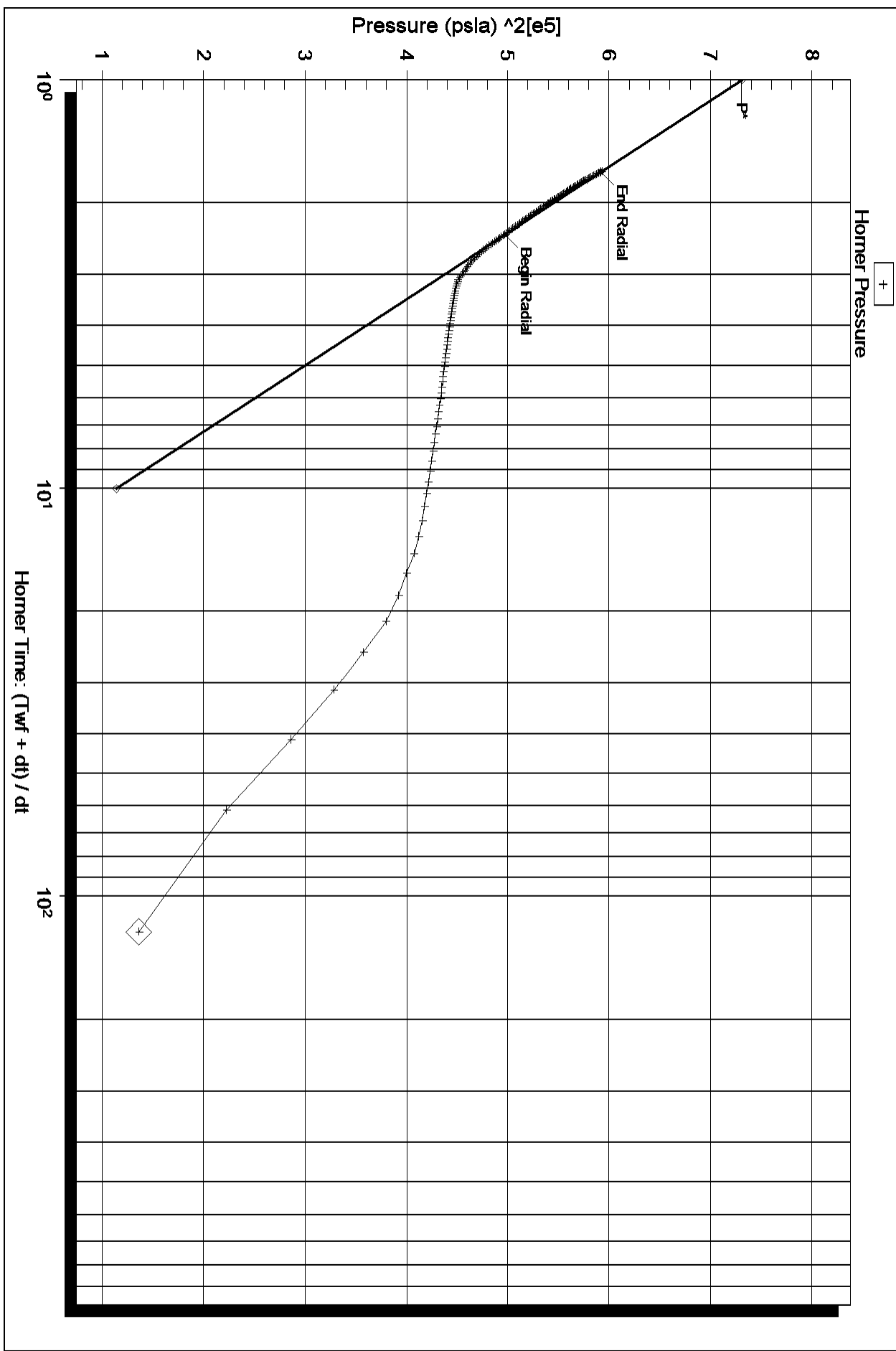
Serial Number: 9119 (Inside)

P* : 937.62

Slope (m) : 526.57 kpa/log cycle

Flow Cycle: 1

Horner Plot



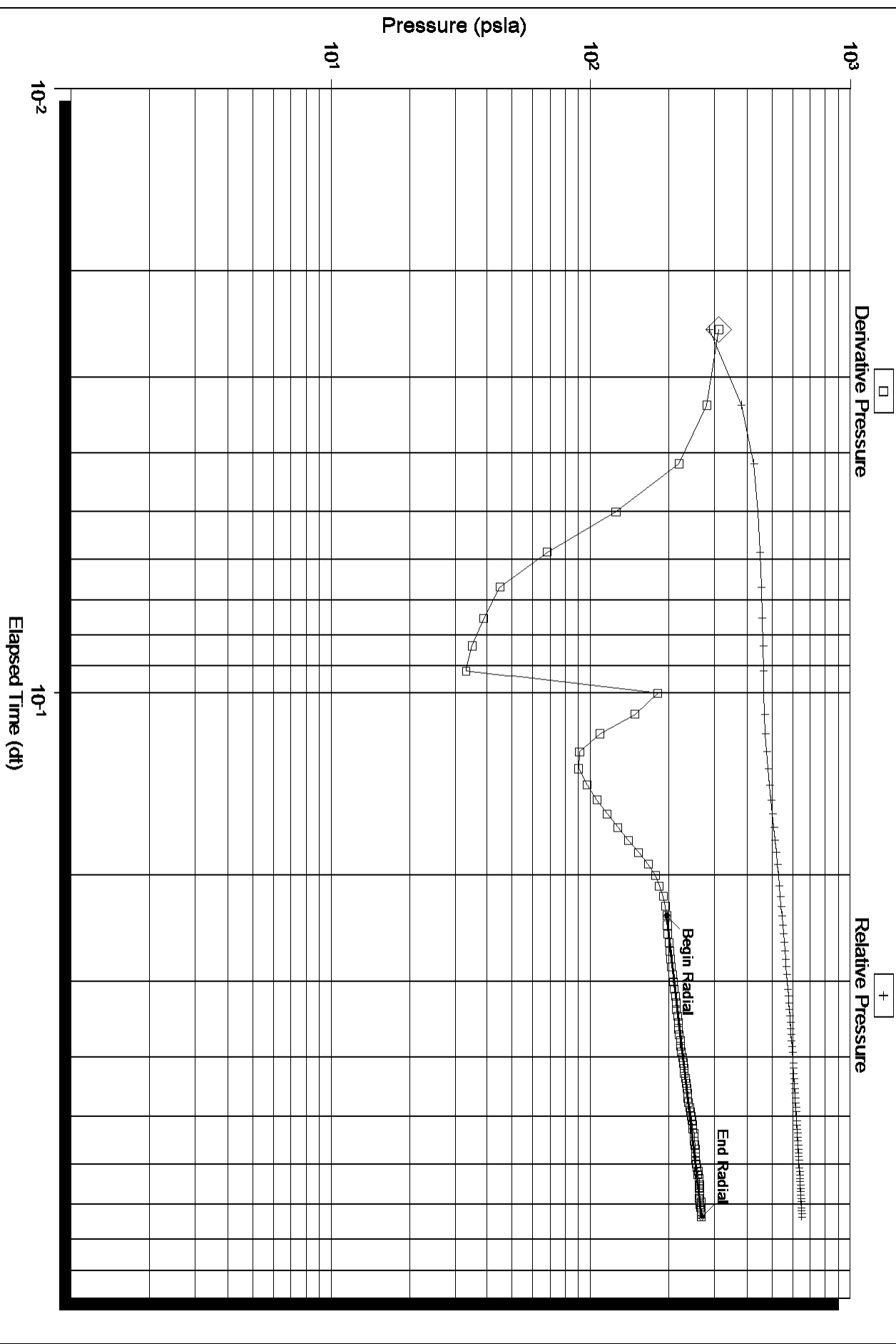
Serial Number: 9119 (Inside)

P* : 854.89

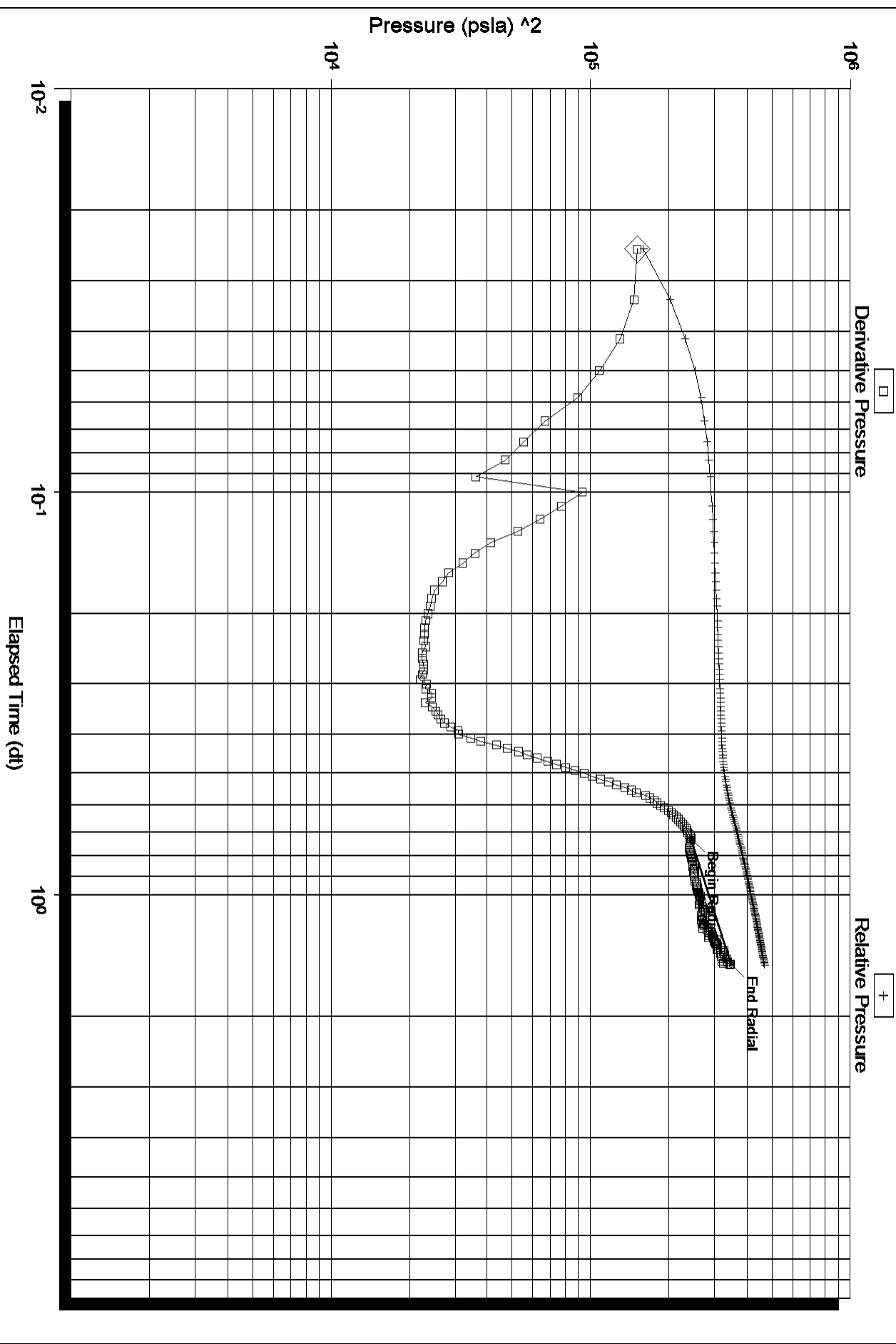
Slope (m) : 6.17 kpa^2[e5]/log cycle

Flow Cycle: 2

Log-Log and Pseudo-Derivative



Log-Log and Pseudo-Derivative





Scale 1:240 Imperial

Well Name: Axman Farms #1-18
 Surface Location: 1953' FSL_921' FWL
 Bottom Location:
 API: 15-009-26132-00-00
 License Number: 31548
 Spud Date: 12/8/2015 Time: 4:00 PM
 Region: Barton County
 Drilling Completed: 12/15/2015 Time: 10:00 AM
 Surface Coordinates:
 Bottom Hole Coordinates:
 Ground Elevation: 1884.00ft
 K.B. Elevation: 1892.00ft
 Logged Interval: 2800.00ft To: 3500.00ft
 Total Depth: 3500.00ft
 Formation: Lansing Kansas-City
 Drilling Fluid Type: Chemical/Fresh Water Gel

OPERATOR

Company: Tyluka Operations, LLC
 Address: P.O. Box 1213
 Hays, KS 67601
 Contact Geologist: Jeff Zoller
 Contact Phone Nbr: 620-786-0807
 Well Name: Axman Farms #1-18
 Location: 1953' FSL_921' FWL
 API: 15-009-26132-00-00
 Pool: KS
 State: KS
 Field: Axman
 Country: USA

LOGGED BY

Company:
 Address: 621 17th St., Suite 1155
 Denver, CO 80293
 Phone Nbr: 203-671-6034
 Logged By: Geologist
 Name: Jeremy Schwartz

NOTES

The Tyluka Operations, LLC Axman Farms #1-18 was drilled to a total depth of 3500', bottoming in the Arbuckle.
 Four DST's were conducted throughout the Toronto and Lansing Kansas City zones. The DST reports can be found at the bottom of this log.
 Due to the DST results, sample shows, gas kicks, and log analysis it was determined by all consenting parties to set 5 1/2" production casing and further test the well through perforations and stimulation. The dry samples were saved and will be available for further review at the Kansas Geological Society Well Sample Library, located in Wichita, KS.
****NOTE: The log tops were 5-6' high to the sample tops/drill time so the Gamma and Caliper were adjusted/moved 5' lower to match the drill time on the GeoLog and the DST intervals on the E-logs should also be adjusted accordingly****

Respectfully Submitted,
 Jeremy Schwartz
 Geologist

CONTRACTOR

Contractor: Discovery Drilling
 Rig #: 2
 Rig Type: mud rotary
 Spud Date: 12/8/2015
 Time: 4:00 PM

Spud Date: 12/8/2015
 TD Date: 12/15/2015
 Rig Release:

Time: 4:00 PM
 Time: 10:00 AM









ELEVATIONS

K.B. Elevation: 1892.00ft Ground Elevation: 1884.00ft
 K.B. to Ground: 8.00ft

DATE	DEPTH	ACTIVITY
Saturday, December 12, 2015	3050'	Geologist Jeremy Schwartz on location at 0830hrs, ~3060' Drlg ahead through Heebner, Toronto, CFS @ 3105', Short Trip, CTCH 1hr, Drop Survey, Strap Out for DST #1 in the
	3105'	Toronto, Successful Test, Resume Drlg ahead through Lansing, CFS @ 3180',
Sunday, December 13, 2015	3180'	Conduct DST #2 in the Lansing "A-B", Successful Test, Resume Drlg ahead through Lansing, CFS @ 3220', Location Very Wet and Muddy/Water Running into pits and bringing down Mud Vis., Run premix to get Vis. Up before DST,
	3220'	Conduct DST #3 in the Lansing "D-F",
Monday, December 14, 2015	3235'	Successful Test, Resume Drlg ahead through Lansing, CFS @ 3235', Resume Drlg,
	3289'	CFS @ 3289', Resume Drlg, CFS @ 3308', Resume Drlg, CFS @ 3365', CTCH 1hr,
	3365'	Conduct DST #4 in the Lansing "H-K", Successful Test,
Tuesday, December 15, 2015	3395'	Resume Drlg ahead, CFS @ 3395', Resume Drlg, CFS @ 3427', Resume Drlg ahead to
	3500'	TD @ 3500', TD reached @ 1000hrs, CTCH 1hr, OOH for logs, Conduct Logging Operations, Logging Operations Complete @ 1630hrs
		Geologist Jeremy Schwartz off Location @ 1645hrs

	OIL - P&A															
	MAI OIL OPERATIONS								THREE G OIL, CO				KOCH "A" 1			
	AXMAN-YARMER UNIT #1								M AXMAN #1				COLUMBIA DRILLING			
	AXMAN FARMS #1-18								NE SW SW NW 18-175-14W				N/2 SW SW SW 18-175-14W			
	1892		1892		1922		1922		1916		1916		1898		1898	
	KB	LOG TOPS	1892	SAMPLE TOPS	KB	COMP. CARD	LOG	SAMPL.	KB	COMP. CARD	LOG	SAMPL.	KB	COMP. CARD	LOG	SAMPL.
FORMATION	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.
ANHYDRITE TOP	884	1008	888	1004	916	1006	+ 2	- 2	920	996	+ 12	+ 8	900	998	+ 10	+ 6
BASE	914	978	918	974	948	974	+ 4	+ 0	950	966	+ 12	+ 8	930	968	+ 10	+ 6
TARKIO	2562	-670	2568	-676	2600	-678	+ 8	+ 2								
BERN	2625	-733	2631	-739	2662	-740	+ 7	+ 1								
ELOMONT	2764	-872	2769	-877	2799	-877	+ 5	+ 0								
HOWARD	2834	-942	2839	-947	2869	-947	+ 5	+ 0								
TOPEKA	2854	-962	2858	-966	2890	-968	+ 6	+ 2	2896	-980	+ 18	+ 14	2870	-972	+ 10	+ 6
HEEBNER SHALE	3066	-1174	3070	-1178	3100	-1178	+ 4	+ 0	3107	-1191	+ 17	+ 13	3082	-1184	+ 10	+ 6
TORONTO	3081	-1189	3085	-1193	3115	-1193	+ 4	+ 0	3122	-1206	+ 17	+ 13	3096	-1198	+ 9	+ 5
DOUGLAS SHALE	3095	-1203	3098	-1206	3128	-1206	+ 3	+ 0	3138	-1222	+ 19	+ 16	3113	-1215	+ 12	+ 9
BROWN LIME	3128	-1236	3132	-1240	3160	-1238	+ 2	- 2	3168	-1252	+ 16	+ 12	3140	-1242	+ 6	+ 2
LKC	3144	-1252	3151	-1259	3179	-1257	+ 5	- 2	3186	-1270	+ 18	+ 11	3158	-1260	+ 8	+ 1
LKC G	3222	-1330	3227	-1335	3254	-1332	+ 2	- 3	3264	-1348	+ 18	+ 13	3238	-1340	+ 10	+ 5
MUNCIE CREEK	3269	-1377	3273	-1381	3298	-1376	- 1	- 5	3312	-1396	+ 19	+ 15	3282	-1384	+ 7	+ 3
LKCH	3276	-1384	3280	-1388	3305	-1383	- 1	- 5	3319	-1403	+ 19	+ 15	3291	-1393	+ 9	+ 5
JSHALE	3302	-1410	3307	-1415	3333	-1411	+ 1	- 4	3347	-1431	+ 21	+ 16	3318	-1420	+ 10	+ 5
BKC	3356	-1464	3361	-1469	3386	-1464	+ 0	- 5	3398	-1482	+ 18	+ 13	3372	-1474	+ 10	+ 5
CONGLOMERATE	3376	-1484	3380	-1488					3408	-1492	+ 8	+ 4	3380	-1482	- 2	- 6
ARBUCKLE	3448	-1556	3452	-1560	3397	-1475	- 81	- 85					3398	-1500	- 56	- 60
RTD			3500	-1608	3474	-1552		- 56	3445	-1529		- 79	3413	-1515		- 93
LTD	3498	-1606														

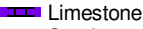

ROCK TYPES

 Congl	 Lmst fw<7	 Shgy	 Carbon Sh
 Dolprim	 shale, grn	 shale, gry	 shale, red

ACCESSORIES

MINERAL
 △ Chert White
 P Pyrite

FOSSIL
 ∩ Bioclastic or Fragmental
 F Fossils < 20%
 ○ Oolites
 ⚙ Oomoldic

STRINGER
 ~~~~ Chert  
 Limestone  
 Sandstone






**TEXTURE**  
 C Chalky

**OTHER SYMBOLS**

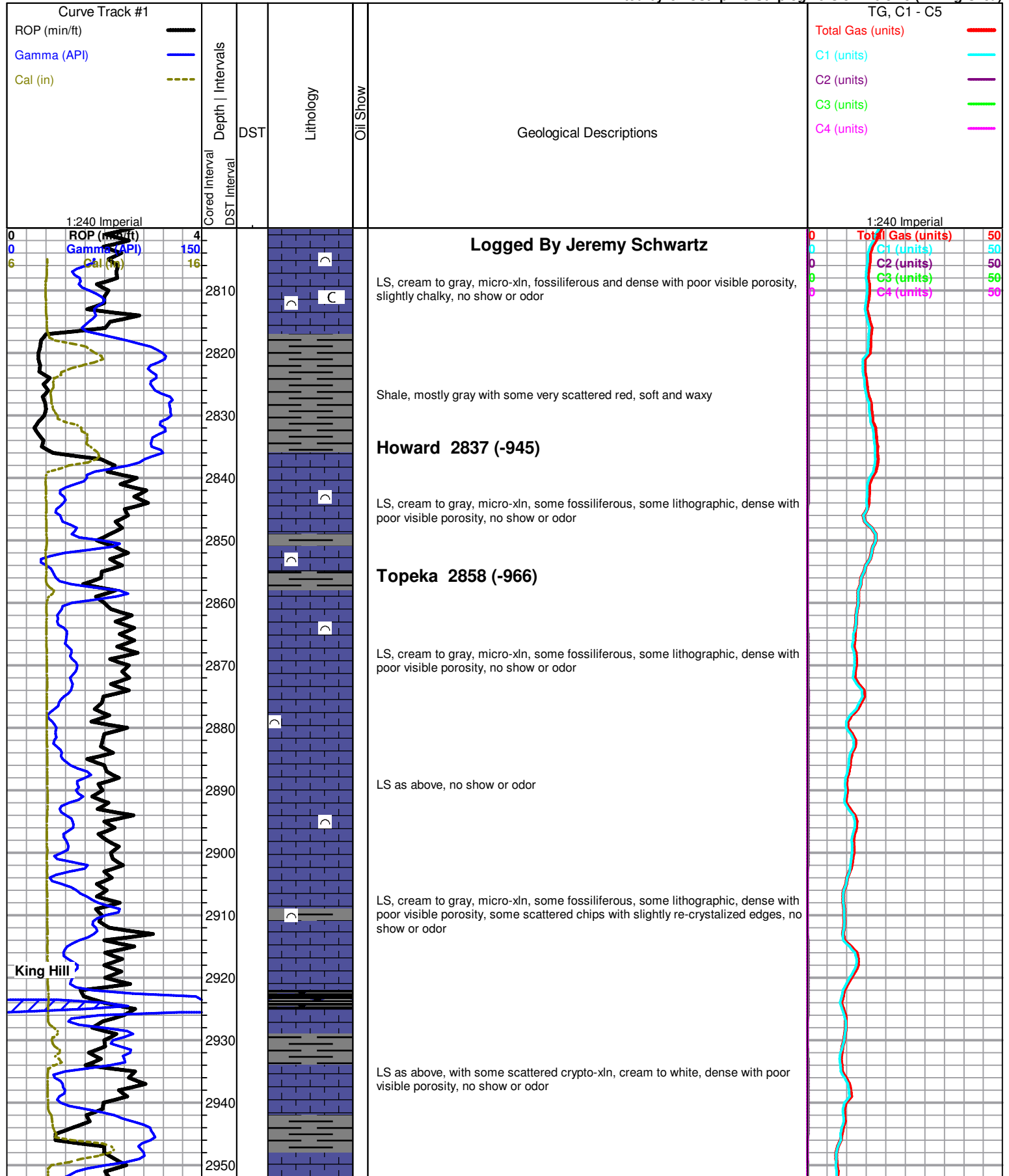
**MISC**  
 Daily Report  
 Digital Photo  
 Document

**Oil Show**  
 ● Good Show  
 ○ Fair Show  
 ○ Poor show  
 ○ Spotted or Trace  
 ○ Questionable Stn  
 D Dead Oil Stn

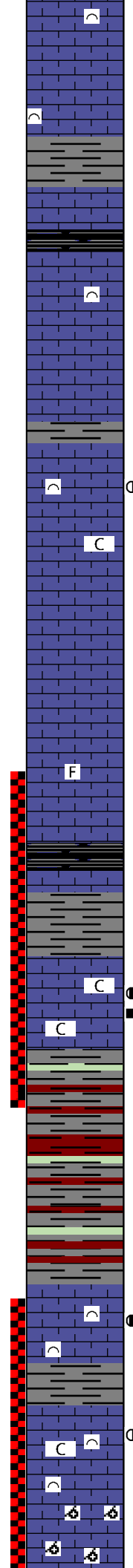
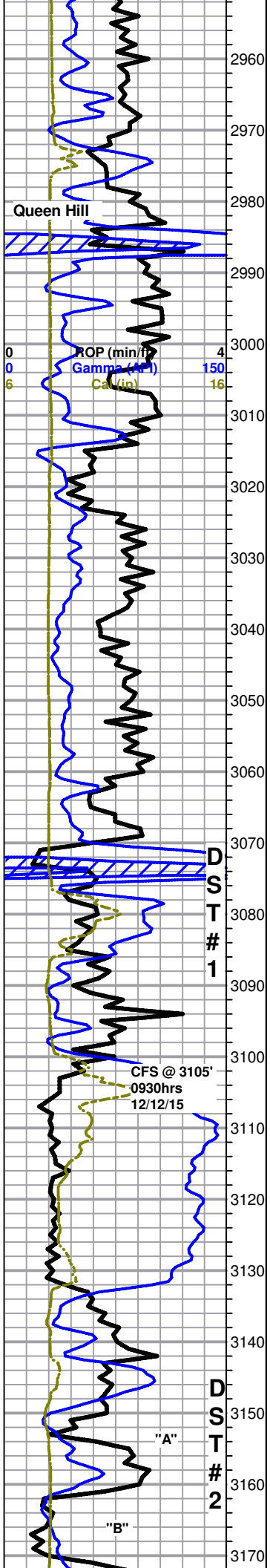
**DST**  
 DST Int  
 DST alt

-  Folder
-  Link
-  Vertical Log File
-  Horizontal Log File
-  Core Log File
-  Drill Cuttings Rpt

■ Fluorescence  
\* Gas







LS, cream to gray with some very scattered brown, micro-xln with some very scattered crypto-xln, some fossiliferous, some lithographic, overall dense with poor visible porosity, no show or odor

LS as above, slightly chalky, no show or odor

LS, cream with some scattered gray, micro-xln, some fossiliferous, some lithographic, dense with poor visible porosity, no show or odor

LS as above, no show or odor

LS, cream, micro-xln, mostly lithographic and dense with poor visible porosity, some scattered soft and chalky in part, also with some very scattered (<10% of tray) with some scattered poor to fair visible pinpoint porosity and brown to black stain in porosity only, upon break SSFO, chips are also slightly chalky in part, no fluor., poor fleeting odor

LS, cream, micro-xln, mostly lithographic and dense with poor visible porosity, no show or odor

LS as above, no show or odor

LS, cream with some very scattered gray, micro-xln, mostly lithographic, some scattered slightly fossiliferous, also with some soft and chalky in part, slightly chalky, no show or odor

**Heebner 3070 (-1178)**  
Shale, black carbonaceous  
AXMAN FARMS DST 1.jpg

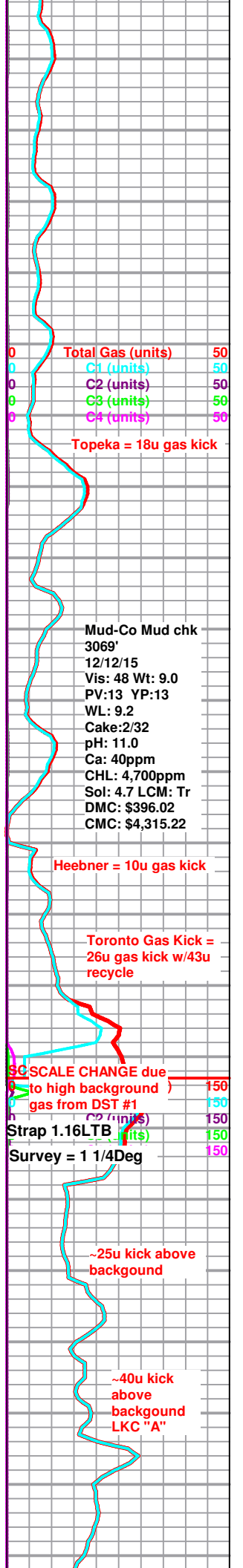
**Toronto 3085 (-1193)**  
LS, cream, micro-crypto xln, mostly lithographic and dense with poor visible porosity, some very scattered chips with some scattered poor to fair pinpoint porosity and light golden brown scattered stain, few small chips with fair pinpoint to slightly vuggy edges and mostly saturated brown to black stain, SSFO upon break, with some scattered dull yellow fluor., chalky, fair fleeting odor  
3105' 30" LS, cream, micro-xln, mostly lithographic and dense with poor visible porosity, with some scattered (~25%) with some scattered fair visible pinpoint porosity to slightly vuggy edges and scattered to mostly saturated light golden brown stain, even yellow fluor., instant cut with lighter fluid, chalky, fair odor  
3105' 60" Mostly same as above with shows appearing to be slightly droppong out, some scattered fluor., NSFO, fair odor

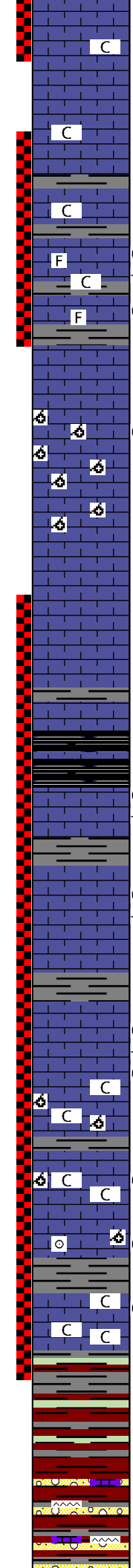
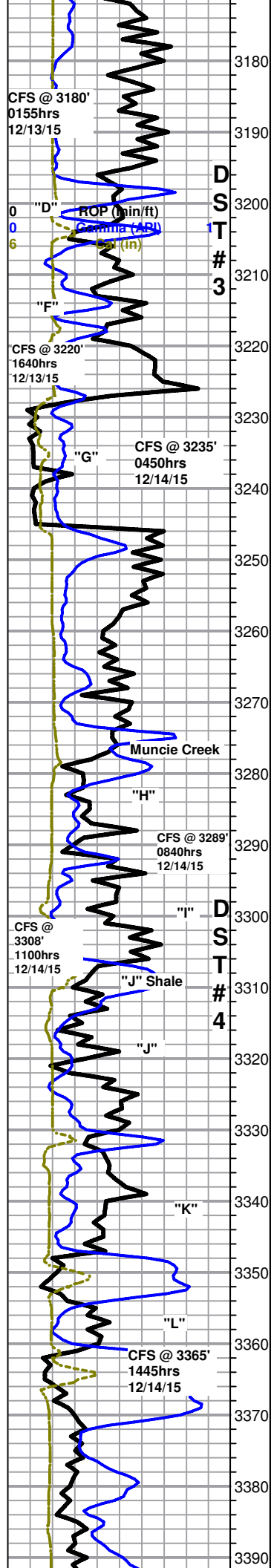
**Douglas Shale 3098 (-1206)**  
Shale, gray and red with trace green, mostly soft and waxy

**Brown Lime 3132 (-1240)**  
LS, cream, micro-crypto xln, some fossiliferous, some lithographic, mostly dense with poor visible porosity, some oolitic, some with scattered pinpoint to slightly vuggy porosity and brown to black stain mostly confined to porosity, few chips with SSFO pooling up near vugs under lamp, too dense to break, few chips also become mostly saturated when left under lamp, some very scattered, very dull fluor., poor odor  
AXMAN FARMS DST 2.jpg

**Lansing 3151 (-1259)**  
LS, cream with some scattered white, micro-xln, mostly fossiliferous and dense with poor visible porosity, some oolitic, some with scattered light brown inter-oolite stain, upon break some chips with FSFO (opaque droplets), some very scattered very dull fluor., slightly chalky, poor to fair fleeting odor

LS, mostly same as above, with influx sub-oomoldic to oomoldic, barren with poor visible oomold porosity, oolitic with shows very scattered (<10%), no fluor, NSFO, poor fleeting odor  
3180' 30" LS, cream, micro-xln, sub-oomoldic to oomoldic, most re-crystallized, dense with poor visible oomold porosity, NSFO, no fluor., no odor





3180' 60" LS as above, with influx cream, micro-crypto xln, lithographic and dense with poor visible porosity, slightly chalky, no show or odor

LS, cream, micro-xln, lithographic and dense with poor visible porosity, with some soft and chalky in part, no show or odor

LS as above, no show, fluor., or odor

**AXMAN FARMS DST 3.jpg**

3220' 30" Ls cream, micro-xln, lithographic and dense with poor visible porosity, some scattered (~25%) fossiliferous with poor to fair inter-fossil scattered brown stain, some lithographic with some scattered poor to fair visible pinpoint porosity and scattered brown stain that increases to mostly saturated to saturated when left under lamp, some slightly chalky in part and fairly friable, upon break some chips have fair show gas bubbles and slight to fair show free oil (opaque with few brown droplets), also found few small chips with slight to fair vuggy porosity and mostly saturated to saturated brown stain, instant streaming cut with bright white fluor., poor odor

3220' 60" Mostly same as above, fair odor

3235' 30" LS, cream to white, micro-xln, mostly lithographic and dense with poor visible porosity, with some sub-oomoldic to oomoldic with poor to fair visible oomold porosity, some barren, some with scattered to very scattered light golden brown stain in and around porosity, VSSFO upon break in few chips, fairly chalky, no fluor., poor fleeting odor

3235' 60" LS, cream, micro-xln, oomoldic and re-crystalized, mostly poor visible oomold porosity, some scattered fair porosity, some barren, some scattered (~20%) with scattered to very scattered light golden brown to brown stain, upon break some chips have slight to fair show free oil, SSFO in tray, fairly chalky, no fluor., fair to good odor

LS, cream, micro-xln, lithographic and dense with poor visible porosity, with some scattered sub-oomoldic to oomoldic, barren, NSFO, no odor

LS, cream with some very scattered light gray, micro-xln, lithographic and dense with poor visible porosity, with some very scattered sub-oolitic to sub-oomoldic, dense with poor visible porosity, no show or odor

LS as above, no show or odor

**AXMAN FARMS DST 4.jpg**

3289' 30" LS, cream to gray with some brown, micro-xln, mostly lithographic and dense with poor visible porosity, some scattered brown with very scattered pinpoint porosity mostly on edges and one to two small vugs with scattered brown stain around porosity and partly in matrix as well, few small chips mostly saturated, with VSSFO upon break in some chips and fair show gas bubbles in tray and upon break in most chips, no fluor., poor odor

3289' 60" Mostly same as above, with slight increase in shows, slight to fair show free oil upon break and when agitated in few chips, VSSFO in tray,

3308' 30" LS, cream, micro-xln, mostly lithographic and dense with poor visible porosity, with some very scattered (~10%) brown, lithographic and dense with poor visible porosity, some very scattered poor pinpoint porosity and light golden brown to brown stain mostly confined to porosity only, upon break some chips have SSFO and fair show gas bubbles with some poor to fair visible inter-xln pinpoint porosity and stain, no fluor., poor fleeting odor

3308' 60" LS, cream with some very scattered light gray, micro-xln, mostly lithographic and dense with poor visible porosity, some scattered soft and chalky in part, with some very scattered small chips cream, some with re-crystalized edges, some scattered poor pinpoint porosity with very scattered to scattered light golden brown stain mostly confined to porosity, VSSFO upon break only in a few chips, most chips with fair show gas bubbles upon break, no fluor., poor odor

~3320' LS, cream to white, some lithographic and dense with poor visible porosity, some soft and chalky in part, some with few small vugs to slightly vuggy porosity with light golden brown to brown stain in porosity and partly in matrix in some, few mostly saturated, dense, upon break some chips have slight to fair show free oil and some with slight show gas bubbles, some chips also show fair to good visible inter-xln pinpoint porosity with mostly saturated inter-xln stain, some very scattered dull fluor., fair to good show free oil in tray, fairly chalky, fair odor

~3330' LS, cream, micro-xln, some lithographic and dense with poor visible porosity, some sub-oomoldic to oomoldic with poor to fair visible oomold porosity and scattered brown stain, few too dense to break but bleed oil to surface when agitated, some chips also slightly vuggy, few scattered small chips with fair vuggy porosity and saturated brown stain, some scattered dull yellow fluor., SSFO in tray, fairly chalky, fair odor

~3340' LS, cream to white, micro-xln, lithographic and dense with poor visible porosity, with some small chips sub-oolitic to oolitic with fair light golden brown inter-oolite stain, some small chips also oomoldic with fair oomold porosity and scattered to mostly saturated light golden brown to brown stain, VSSFO in tray, some scattered dull yellow fluor., fair odor

3365' 30" LS, cream, micro-xln, some lithographic, some soft and chalky in part, with some very scattered small chips sub-oolitic to sub-oomoldic with scattered poor brown to black stain in oomolds only, VSSFO in tray, some very scattered very dull fluor., fairly chalky, poor odor

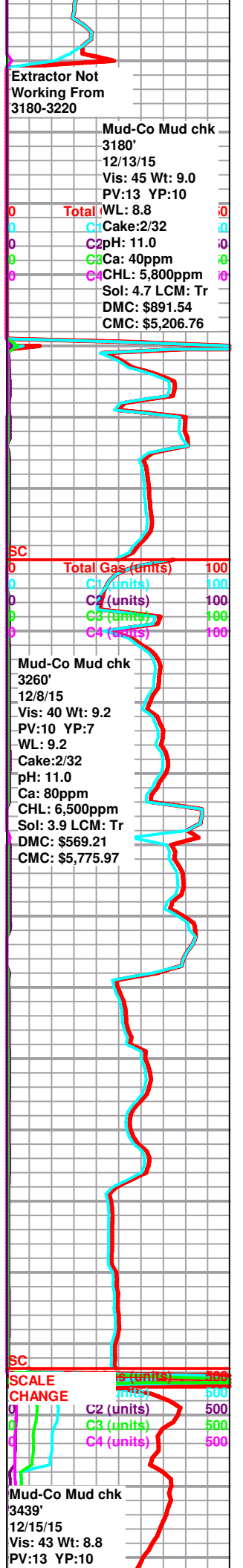
**BKC 3361 (-1469)**

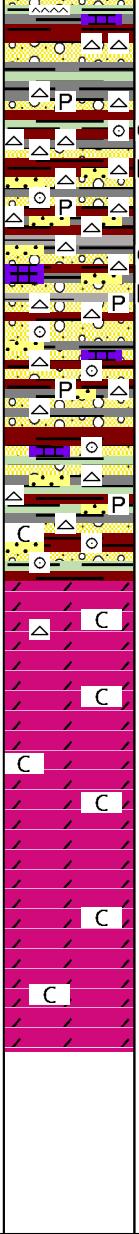
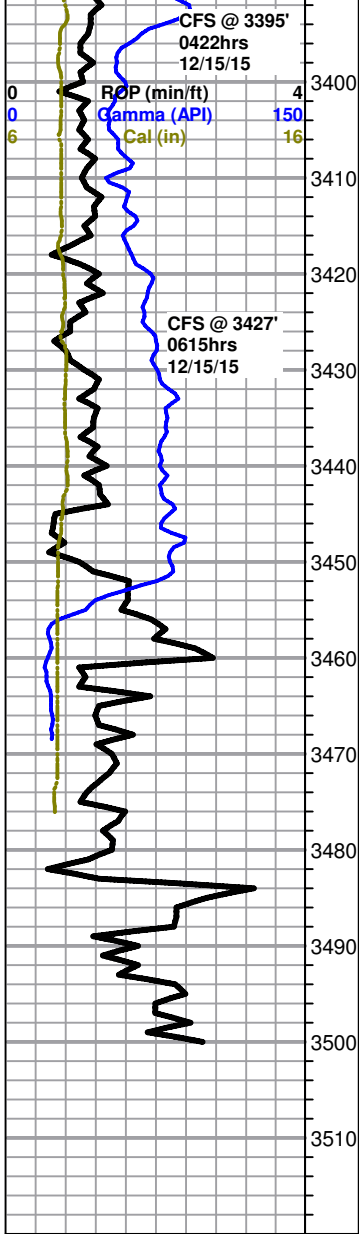
3365' 60" LS, cream to white, micro-xln, lithographic and dense with poor visible porosity, some soft and chalky in part, some very scattered sub-oomoldic with poor brown to black stain in oomolds, with some red and gray shale with trace green, NSFO, chalky, no odor

~3370' Shale, mostly red with some gray and trace green

Mostly red and gray shale with trace green, with some scattered cream to white with some salt and pepper LS, also with influx orange to red chert with some tan, red wash, no show or odor

3395' 30" Conglomerate as above, with sme scattered pyrite, no show or odor





3395' 60" Conglomerate as above, with influx white to tan chert with some opaque, few pieces oolitic, red wash, no show or odor

3410' 60" Conglomerate as above, with abundant white chert with some scattered tan mostly fresh and sharp, some with wet black to black gilsonitic stain, some very scattered oolitic, no show or odor

3427' 30" Conglomerate with abundant white chert as above, also with some scattered SS clusters. clear to black (micaceous?), with some scattered white chert inclusions, pyritic, vf-f, sub-rounded to rounded, very friable, fairly well sorted, upon break slight increase in odor, with abundant vf-f clear sub-rounded to rounded quartz grains in bottom of tray, with some scattered pyrite, NSFO, no fluor., poor odor

3427' 60" Mostly same as above, with abundant SS grains in bottom of tray, NSFO,

Conglomerate as above with abundant white chert, some scattered oolitic, SS clusters appear to be dropping out but still abundant loose sub-rounded to rounded f-med xln clear grains in bottom of tray, very chalky, no show or odor

Conglomerate as above, slightly chalky, no show or odor

**Arbuckle 3452 (-1560)**

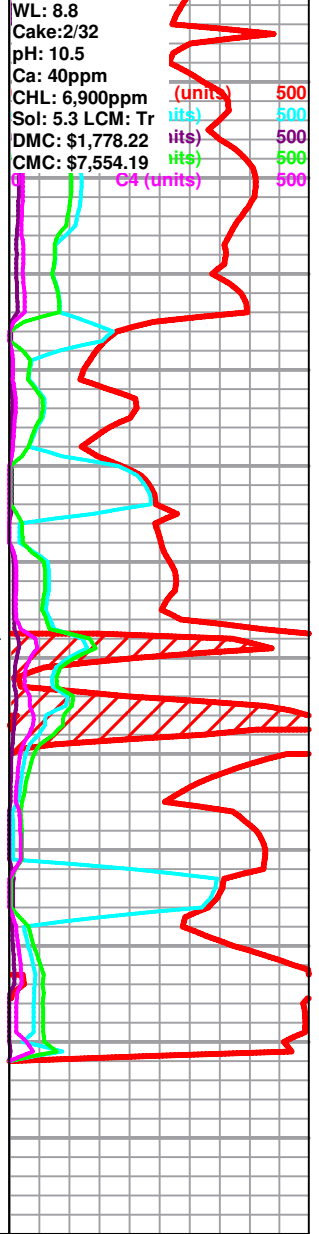
Conglomerate with some very scattered dolomite, white, micro-xln, sub-rhombic and dense with poor visible porosity, barren, some scattered chips fairly friable, slightly chalky, no odor

Influx dolomite, white, micro-xln, sub-rhombic and fairly dense with poor visible porosity, some chips fairly friable, few very scattered chips with some slight inter-xln porosity, barren, fairly chalky, no odor

Dolomite, white, micro-xln, mostly sub-rhombic with poor visible porosity, some dense, some fairly friable with some very scattered slight porosity, some sandy, few chips pyritic, no show or odor

Dolomite as above, with some very scattered oolitic, with few clusters dolomitic sand? clear, med-grained, sub-rounded to rounded, very well cemented and dense, slightly chalky, no show or odor,

Dolomite, sandy dolomite, and trace dolomitic sand as above, few very scattered chips with some scattered rhombic, poor visible porosity, slightly chalky, no show or odor



**Rotary TD 3500' @ 1000hrs 12/15/15**  
**Casedhole Solutions Logging TD @ 3498'**  
**Complete Logging Operations @ 1630hrs 12/15/15**  
**Geologist Jeremy Schwartz off location @ 1645hrs 12/15/15**



**DRILL STEM TEST REPORT**

TALUKA OERATIONS LLC

**18-17S-14W**

P.O. BOX 1213  
HAYS, KANSAS 67601

**AXMAN FARMS 1-18**

ATTN: JERAMY SCHWARTZ

Job Ticket: 01207

**DST#: 1**

Test Start: 2015.12.12 @ 15:00:00

**GENERAL INFORMATION:**

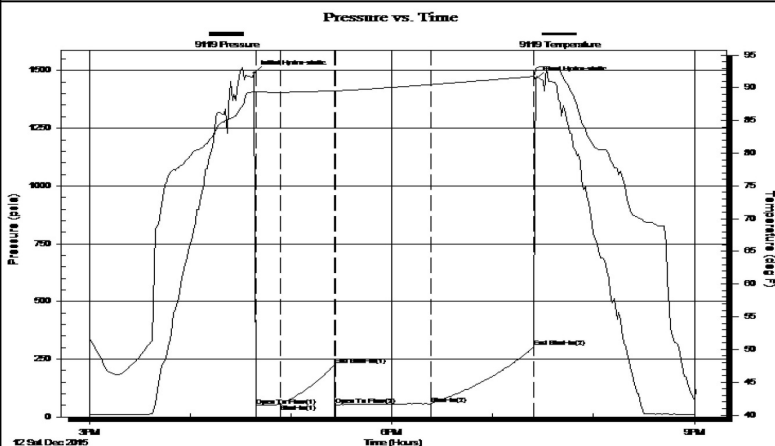
Formation: **TORONTO**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 16:39:00  
 Time Test Ended: 21:02:00  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: GENE BUDIG  
 Unit No: 1  
 Interval: **3060.00 ft (KB) To 3105.00 ft (KB) (TVD)**  
 Total Depth: 3105.00 ft (KB) (TVD)  
 Reference Elevations: 1892.00 ft (KB)  
 1884.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 KB to GR/CF: 8.00 ft

**Serial #: 9119**

**Inside**

Press@RunDepth: 304.09 psia @ 3100.00 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2015.12.12 End Date: 2015.12.12 Last Calib.: 2015.12.12  
 Start Time: 15:00:00 End Time: 21:01:30 Time On Btm: 2015.12.12 @ 16:38:00  
 Time Off Btm: 2015.12.12 @ 19:25:30

**TEST COMMENT:** 1ST OPENING 15 MINUTES WEAK SURFACE BLOW FOR 7 MINUTES AND DIED  
 1ST SHUT-IN 30 MINUTES NO BLOW BACK  
 2ND OPENING 60 MINUTES WEAK BUILDING BLOW BUILT TO 6 1/2 INCHES  
 2ND SHUT-IN 60 MINUTES NO BLOW BACK



**PRESSURE SUMMARY**

| Time (Min.) | Pressure (psia) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1490.36         | 89.38        | Initial Hydro-static |
| 1           | 47.98           | 89.25        | Open To Flow (1)     |
| 16          | 54.75           | 89.32        | Shut-In(1)           |
| 48          | 225.09          | 89.60        | End Shut-In(1)       |
| 49          | 51.16           | 89.56        | Open To Flow (2)     |
| 105         | 57.26           | 90.50        | Shut-In(2)           |
| 167         | 304.09          | 91.75        | End Shut-In(2)       |
| 168         | 1465.51         | 92.95        | Final Hydro-static   |

**Recovery**

| Length (ft) | Description                              | Volume (bbl) |
|-------------|------------------------------------------|--------------|
| 15.00       | SLIGHTLUY OIL CUT MUD 4 OIL 96 MUD       | 0.00         |
| 0.00        | THERE WAS A GOOD SHOW OF FREE G.O.OY OIL |              |
| 0.00        | BETWEEN THE TOOLS                        | 0.00         |
|             |                                          |              |
|             |                                          |              |

**Gas Rates**

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

# DRILL STEM TEST REPORT



TYLUKA OERATIONS LLC

18-17S-14W

P.O. BOX 1213  
HAYS, KANSAS 67601

AXMAN FARMS 1-18

Job Ticket: 01208      DST#: 2

ATTN: JERAMY SCHWARTZ

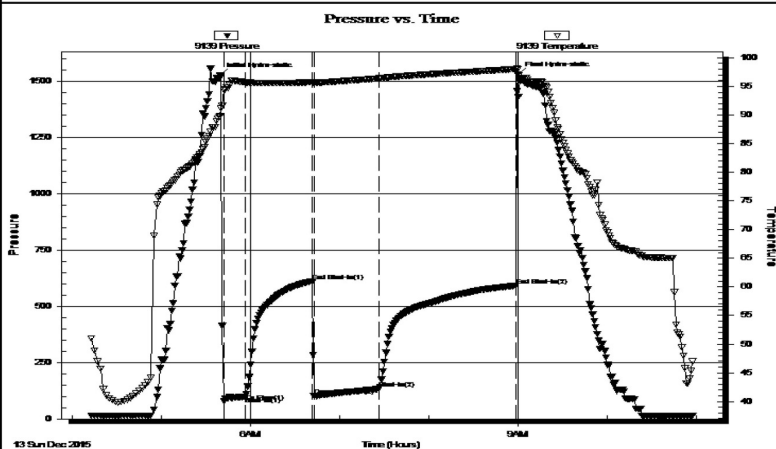
Test Start: 2015.12.13 @ 04:12:00

**GENERAL INFORMATION:**

Formation: **KANSAS CITY 'A 7 B'**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 06:27:00 Tester: GENE BUDIG  
 Time Test Ended: 11:27:00 Unit No: 1 45  
 Interval: **3134.00 ft (KB) To 3180.00 ft (KB) (TVD)** Reference Elevations: 1892.00 ft (KB)  
 Total Depth: 3180.00 ft (KB) (TVD) 1884.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Poor KB to GR/CF: 8.00 ft

**Serial #: 9139      Outside**  
 Press@RunDepth: 591.03 psia @ 3175.00 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2015.12.13 End Date: 2015.12.13 Last Calib.: 2015.12.13  
 Start Time: 04:12:00 End Time: 10:57:00 Time On Btm: 2015.12.13 @ 05:39:30  
 Time Off Btm: 2015.12.13 @ 08:59:30

**TEST COMMENT:** 1ST OPENING 15 MINUTES FAIR BLOW BUILT TO THE BOTTOM OF A 5 GALLON BUCKET IN 5 MINUTES  
 1ST SHUT-IN 45 MINUTES FAIR BLOW BACK  
 2ND OPENING 45 MINUTES FAIR BLKOW BUILT TO THE BOTTOM OF A 5 GALLON BUCKET IN 6 MINUTES  
 2ND SHUT-IN 90 MINUTES FAIR BLOW BACK



**PRESSURE SUMMARY**

| Time (Min.) | Pressure (psia) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1524.57         | 89.85        | Initial Hydro-static |
| 3           | 77.78           | 94.36        | Open To Flow (1)     |
| 17          | 99.26           | 95.69        | Shut-In(1)           |
| 62          | 611.40          | 95.74        | End Shut-In(1)       |
| 63          | 102.18          | 95.63        | Open To Flow (2)     |
| 107         | 133.22          | 96.41        | Shut-In(2)           |
| 199         | 591.03          | 98.02        | End Shut-In(2)       |
| 200         | 1531.18         | 98.01        | Final Hydro-static   |

**Recovery**

| Length (ft) | Description                    | Volume (bbl) |
|-------------|--------------------------------|--------------|
| 60.00       | MUDDY OIL 5 GAS 60 OIL 35 MUD  | 0.48         |
| 60.00       | MUDDY OIL 10 GAS 45 OIL 45 MUD | 0.48         |
| 0.00        | 1200 FEET OF GAS IN THE PIPE   | 0.00         |
|             |                                |              |
|             |                                |              |

**Gas Rates**

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

**DRILL STEM TEST REPORT**



TYLUKA OERATIONS LLC

**18-17S-14W**

P.O. BOX 1213  
HAYS, KANSAS 67601

**AXMAN FARMS 1-18**

Job Ticket: 01209 **DST#: 3**

ATTN: JERAMY SCHWARTZ

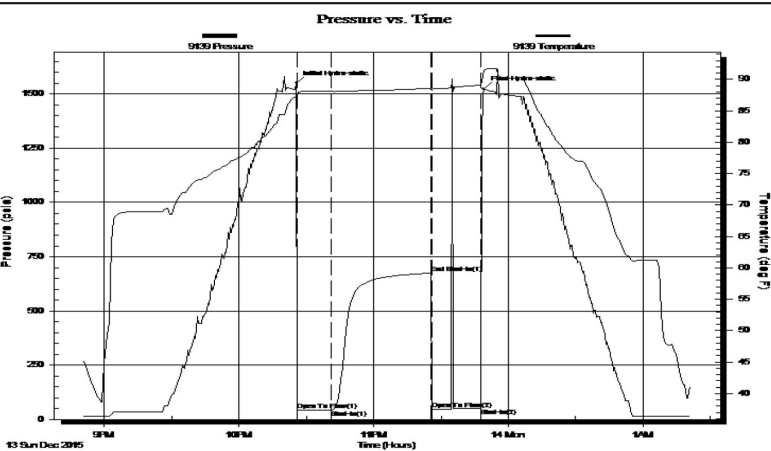
Test Start: 2015.12.13 @ 08:50:00

**GENERAL INFORMATION:**

Formation: **LANSING D-F**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 00:00:00  
 Time Test Ended: 01:21:00  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: GENE BUDIG  
 Unit No: 1  
 Interval: **3190.00 ft (KB) To 3220.00 ft (KB) (TVD)**  
 Total Depth: 3220.00 ft (KB) (TVD)  
 Reference Elevations: 1892.00 ft (KB)  
 1884.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: KB to GR/CF: 8.00 ft

**Serial #: 9139 Outside**  
 Press@RunDepth: 674.33 psia @ 3215.00 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2015.12.13 End Date: 2015.12.14 Last Calib.: 2015.12.14  
 Start Time: 20:50:00 End Time: 01:21:00 Time On Btm: 2015.12.13 @ 22:25:30  
 Time Off Btm: 2015.12.13 @ 23:49:00

**TEST COMMENT:** 1ST OPENING 15 MINUTES WEAK BLOW FOR 12 MINUTES AND DIED  
 1ST SHUT-IN 45 MINUTES NO BLOW BACK  
 2ND OPENING 20 MINUTES NO BLOW FLUSHED TOOL GOOD SURGE NO HELP CAME OUT OF THE  
 HOLE NO FINAL SHUT-IN TAKEN



**PRESSURE SUMMARY**

| Time (Min.) | Pressure (psia) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1549.42         | 87.22        | Initial Hydro-static |
| 1           | 42.74           | 87.58        | Open To Flow (1)     |
| 16          | 45.07           | 88.06        | Shut-In(1)           |
| 60          | 674.33          | 88.60        | End Shut-In(1)       |
| 61          | 48.52           | 88.22        | Open To Flow (2)     |
| 82          | 51.58           | 89.07        | Shut-In(2)           |
| 84          | 1523.19         | 91.44        | Final Hydro-static   |

**Recovery**

| Length (ft) | Description  | Volume (bbl) |
|-------------|--------------|--------------|
| 10.00       | DRILLING MUD | 0.08         |
|             |              |              |
|             |              |              |
|             |              |              |
|             |              |              |

**Gas Rates**

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

# DRILL STEM TEST REPORT



TYLUKA OERATIONS LLC

18-17S-14W

P.O. BOX 1213  
HAYS, KANSAS 67601

AXMAN FARMS 1-18

Job Ticket: 01210      DST#: 4

ATTN: JERAMY SCHWARTZ

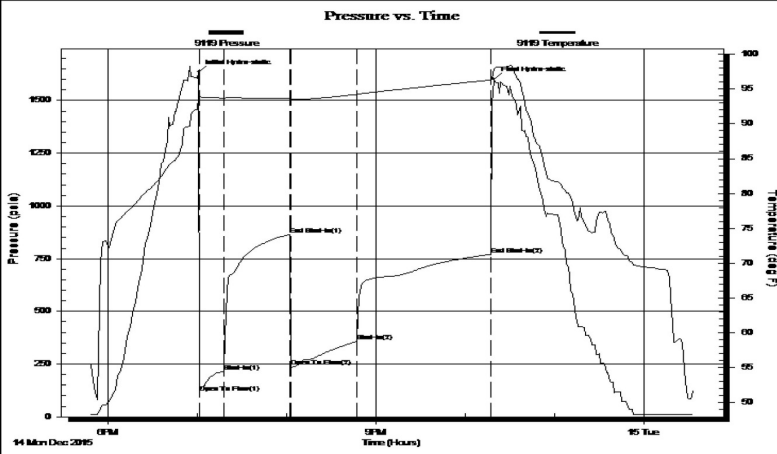
Test Start: 2015.12.14 @ 05:48:00

**GENERAL INFORMATION:**

Formation: **KANSAS CITY H-K**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 07:02:00  
 Tester: GENE BUDIG  
 Time Test Ended: 12:33:00  
 Unit No: 1  
 Interval: **3255.00 ft (KB) To 3265.00 ft (KB) (TVD)**  
 Reference Elevations: 1892.00 ft (KB)  
 Total Depth: 3365.00 ft (KB) (TVD)  
 1884.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 KB to GR/CF: 8.00 ft

**Serial #: 9119**      **Inside**  
 Press@RunDepth: 770.33 psia @ 3359.96 ft (KB)      Capacity: 5000.00 psia  
 Start Date: 2015.12.14      End Date: 2015.12.15      Last Calib.: 2015.12.15  
 Start Time: 17:48:00      End Time: 00:33:00      Time On Btm: 2015.12.14 @ 19:01:00  
 Time Off Btm: 2015.12.14 @ 22:19:00

**TEST COMMENT:** 1ST OPENING 15 MINUTES FAIR BLOW BUILT TO THE BOTTOM OF A 5 GALOON BUCKET IN 3 MINUTES  
 1ST SHUT-IN 45 MINUTES GOOD BLOW BACK  
 2ND FLOW 45 MINUTES FAIR BLOW BUILT TO THE BOTTOM OF A 5 GALLON BUCKET IN 4 MINUTES  
 2ND SHUT-IN 90 MINUTES GOOD BLOW BACK



**PRESSURE SUMMARY**

| Time (Min.) | Pressure (psia) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1633.77         | 93.81        | Initial Hydro-static |
| 1           | 114.12          | 93.80        | Open To Flow (1)     |
| 17          | 214.92          | 93.67        | Shut-In(1)           |
| 62          | 865.61          | 93.65        | End Shut-In(1)       |
| 62          | 237.93          | 93.48        | Open To Flow (2)     |
| 106         | 355.40          | 94.21        | Shut-In(2)           |
| 196         | 770.33          | 96.29        | End Shut-In(2)       |
| 198         | 1601.44         | 97.88        | Final Hydro-static   |

**Recovery**

| Length (ft) | Description                | Volume (bbl) |
|-------------|----------------------------|--------------|
| 720.00      | SLIGHTLY MUD CUT GASSY OIL | 8.21         |
| 0.00        | 20 GAS 70 OIL 10 MUD       | 0.00         |
| 0.00        | 2100 GAS IN THE PIPE       | 0.00         |
| 0.00        | GRAVITY 43 CORRECTED       | 0.00         |
|             |                            |              |
|             |                            |              |

**Gas Rates**

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

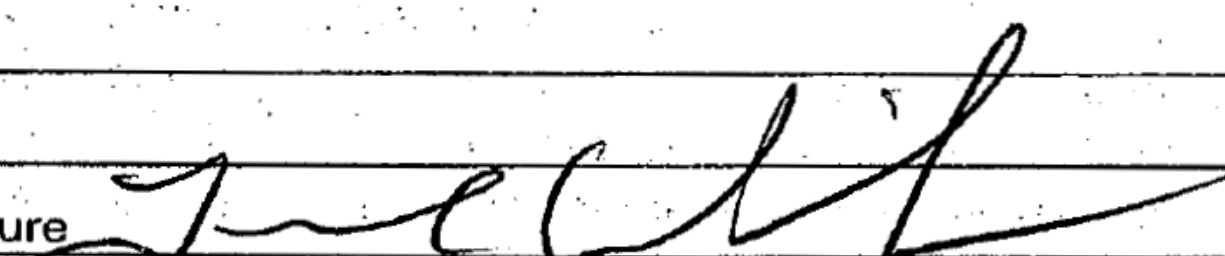
# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025  
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 1308

|                                                                                                 |                       |                                                                                  |          |                                                                                                                                                                                |                                                          |             |                 |
|-------------------------------------------------------------------------------------------------|-----------------------|----------------------------------------------------------------------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|-------------|-----------------|
| Date: 12-9-15                                                                                   | Sec. 18               | Twp. 17                                                                          | Range 14 | County Barton                                                                                                                                                                  | State KS                                                 | On Location | Finish 11:00 AM |
| Lease Axman Farms                                                                               |                       |                                                                                  |          | Well No. 1-18                                                                                                                                                                  | Location 281 + Eggs 4 Sale - 4W to N <sup>W</sup> 80 Ave |             |                 |
| Contractor Dispersary 2                                                                         |                       |                                                                                  |          | Owner 1/25 EAS to Ray                                                                                                                                                          |                                                          |             |                 |
| Type Job Surface                                                                                |                       |                                                                                  |          | To Quality Oilwell Cementing, Inc.<br>You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed. |                                                          |             |                 |
| Hole Size 12 1/4"                                                                               | T.D. 897'             | Charge To Tyluka operations LLC.                                                 |          | Street P.O. Box 1213                                                                                                                                                           |                                                          |             |                 |
| Csg. 8 5/8"                                                                                     | Depth 897'            | City Hay's                                                                       |          | State KS 67601                                                                                                                                                                 |                                                          |             |                 |
| Tbg. Size                                                                                       | Depth <del>897'</del> | The above was done to satisfaction and supervision of owner agent or contractor. |          |                                                                                                                                                                                |                                                          |             |                 |
| Tool                                                                                            | Depth                 | Cement Amount Ordered 350 60/40 3% CC 2% Gel                                     |          |                                                                                                                                                                                |                                                          |             |                 |
| Cement Left in Csg. 41.79'                                                                      | Shoe Joint 41.79'     | Meas Line Displace 54 1/2 BLS                                                    |          |                                                                                                                                                                                |                                                          |             |                 |
| <b>EQUIPMENT</b>                                                                                |                       |                                                                                  |          | Common 150                                                                                                                                                                     |                                                          |             |                 |
| Pumptrk 18 No.                                                                                  | Cementor              | Helper TRAVIS                                                                    |          | Poz. Mix 100                                                                                                                                                                   |                                                          |             |                 |
| Bulktrk 13 No.                                                                                  | Driver                | Driver Billy                                                                     |          | Gel. 7                                                                                                                                                                         |                                                          |             |                 |
| Bulktrk pu No.                                                                                  | Driver                | Driver Rick                                                                      |          | Calcium 14                                                                                                                                                                     |                                                          |             |                 |
| <b>JOB SERVICES &amp; REMARKS</b>                                                               |                       |                                                                                  |          | Hulls                                                                                                                                                                          |                                                          |             |                 |
| Remarks: Cement did Circulate                                                                   |                       |                                                                                  |          | Salt                                                                                                                                                                           |                                                          |             |                 |
| Rat Hole                                                                                        |                       |                                                                                  |          | Flowseal                                                                                                                                                                       |                                                          |             |                 |
| Mouse Hole                                                                                      |                       |                                                                                  |          | Kol-Seal                                                                                                                                                                       |                                                          |             |                 |
| Centralizers                                                                                    |                       |                                                                                  |          | Mud CLR 48                                                                                                                                                                     |                                                          |             |                 |
| Baskets                                                                                         |                       |                                                                                  |          | CFL-117 or CD110 CAF 38                                                                                                                                                        |                                                          |             |                 |
| D/V or Port Collar                                                                              |                       |                                                                                  |          | Sand                                                                                                                                                                           |                                                          |             |                 |
|                                                                                                 |                       |                                                                                  |          | Handling 371                                                                                                                                                                   |                                                          |             |                 |
|                                                                                                 |                       |                                                                                  |          | Mileage                                                                                                                                                                        |                                                          |             |                 |
|                                                                                                 |                       |                                                                                  |          | <b>FLOAT EQUIPMENT</b>                                                                                                                                                         |                                                          |             |                 |
|                                                                                                 |                       |                                                                                  |          | Guide Shoe Baffle plate                                                                                                                                                        |                                                          |             |                 |
|                                                                                                 |                       |                                                                                  |          | Centralizer Rubber plug                                                                                                                                                        |                                                          |             |                 |
|                                                                                                 |                       |                                                                                  |          | Baskets                                                                                                                                                                        |                                                          |             |                 |
|                                                                                                 |                       |                                                                                  |          | AFU Inserts                                                                                                                                                                    |                                                          |             |                 |
|                                                                                                 |                       |                                                                                  |          | Float Shoe                                                                                                                                                                     |                                                          |             |                 |
|                                                                                                 |                       |                                                                                  |          | Latch Down                                                                                                                                                                     |                                                          |             |                 |
|                                                                                                 |                       |                                                                                  |          | Pumptrk Charge Long Surface                                                                                                                                                    |                                                          |             |                 |
|                                                                                                 |                       |                                                                                  |          | Mileage 20                                                                                                                                                                     |                                                          |             |                 |
| X Signature  |                       |                                                                                  |          | Tax                                                                                                                                                                            |                                                          |             |                 |
|                                                                                                 |                       |                                                                                  |          | Discount                                                                                                                                                                       |                                                          |             |                 |
|                                                                                                 |                       |                                                                                  |          | Total Charge                                                                                                                                                                   |                                                          |             |                 |



JOB LOG

SWIFT Services, Inc.

DATE 10 DEC 15 PAGE NO.

CUSTOMER TYWKA OPERATIONS WELL NO. 1-18 LEASE Axman Farms JOB TYPE cement long string TICKET NO. 28957

| CHART NO. | TIME         | RATE (BPM) | VOLUME (BBL) (GAL) | PUMPS |   | PRESSURE (PSI) |        | DESCRIPTION OF OPERATION AND MATERIALS |
|-----------|--------------|------------|--------------------|-------|---|----------------|--------|----------------------------------------|
|           |              |            |                    | T     | C | TUBING         | CASING |                                        |
|           |              |            |                    |       |   |                |        | 100sk 60/40 pozmix (2%gel)             |
|           |              |            |                    |       |   |                |        | 100sk SA-2 cement w/ 1/4" Floccle      |
|           |              |            |                    |       |   |                |        | 5 1/2" x 14# 84 joints 3495'           |
|           |              |            |                    |       |   |                |        | TD = 3500' shoejt 21'                  |
|           |              |            |                    |       |   |                |        | Centralizer 4, 6, 7, 9, 12 Basket #1   |
|           | 2230         |            |                    |       |   |                |        | on loc TRK 114                         |
|           | 2300         |            |                    |       |   |                |        | start 5 1/2" x 14# casing in well      |
| 16 DEC    | 0030         |            |                    |       |   |                |        | Drop ball - circulate                  |
|           | 0120         | 4          | 10                 |       |   |                | 200    | Pump 100sk KCL flush                   |
|           | 0130         |            | 11                 |       |   |                |        | Plug RH - MH 30sk 20sk                 |
|           | 0137<br>0150 | 5          | 11                 |       |   |                | 200    | mix 60/40 pozmix (2%) 50sk @ 14ppg     |
|           |              | 5          | 24                 |       |   |                | 200    | MIX SA-2 cement 100sk @ 15.3 ppg       |
|           |              |            |                    |       |   |                |        | Drop latch down plug                   |
|           |              |            |                    |       |   |                |        | wash out pump & line                   |
|           | 0202         | 6          |                    |       |   |                | 200    | Displace plug                          |
|           |              | 6          | 80                 |       |   |                | 700    |                                        |
|           | 0215         | 6          | 85                 |       |   |                | 1500   | Land plug                              |
|           |              |            |                    |       |   |                |        | Release pressure to truck - dried up   |
|           | 0225         |            |                    |       |   |                |        | wash truck                             |
|           |              |            |                    |       |   |                |        | Rack up                                |
|           | 0235         |            |                    |       |   |                |        | job complete                           |
|           |              |            |                    |       |   |                |        | Thanks<br>Blaine, Phil & crew          |