KOLAR Document ID: 1367665

Confidentiality Requested:
☑ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1
January 2018
Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 4058
Name: American Warrior, Inc.
Address 1: PO BOX 399
Address 2:
City: GARDEN CITY State: KS Zip: 67846 + __ __ __ __
Contact Person: Octavio D Morales
Phone: (620) 275-2963
CONTRACTOR: License # 31548
Name: Discovery Drilling
Wellsite Geologist: Luke Thompson
Purchaser:

Designate Type of Completion:
☑ New Well ☐ Re-Entry ☐ Workover
☐ Oil ☐ WSW ☐ SWD
☐ Gas ☑ DH ☐ EOR
☐ OG ☐ GSW
☐ CM *(Coal Bed Methane)*
☐ Cathodic ☐ Other *(Core, Expl., etc.)*:

If Workover/Re-entry: Old Well Info as follows:
Operator:
Well Name:
Original Comp. Date: Original Total Depth:
☐ Deepening ☐ Re-perf. ☐ Conv. to EOR ☐ Conv. to SWD
☐ Plug Back ☐ Liner ☐ Conv. to GSW ☐ Conv. to Producer

☐ Commingled Permit #:
☐ Dual Completion Permit #:
☐ SWD Permit #:
☐ EOR Permit #:
☐ GSW Permit #:

09/11/2017 Spud Date or Recompletion Date
09/20/2017 Date Reached TD
9/20/2017 Completion Date or Recompletion Date

API No.: 15-109-21512-00-00
Spot Description:
SE - SE - NW - NW Sec. 8 Twp. 14 S. R. 35 ☐ East ☑ West
1076 Feet from ☑ North / ☐ South Line of Section
1122 Feet from ☐ East / ☑ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☐ NE ☑ NW ☐ SE ☐ SW
GPS Location: Lat: (e.g. xx.xxxxx) , Long: (e.g. -xxx.xxxxx)
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Logan
Lease Name: WRAY Well #: 1-8
Field Name:
Producing Formation: DRY
Elevation: Ground: 3249 Kelly Bushing: 3253
Total Vertical Depth: 4900 Plug Back Total Depth: 4900
Amount of Surface Pipe Set and Cemented at: 210 Feet
Multiple Stage Cementing Collar Used? ☐ Yes ☑ No
If yes, show depth set: Feet
If Alternate II completion, cement circulated from:
feet depth to: w/ sx cmt.

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)
Chloride content: 15000 ppm Fluid volume: 80 bbls
Dewatering method used: Evaporated
Location of fluid disposal if hauled offsite:
Operator Name:
Lease Name: License #:
Quarter Sec. Twp. S. R. ☐ East ☐ West
County: Permit #:

AFFIDAVIT
I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY
☑ **Confidentiality Requested**
Date: 09/26/2017
☑ **Confidential Release Date:** 09/26/2019
☑ **Wireline Log Received** ☑ **Drill Stem Tests Received**
☑ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☐ I ☑ II ☐ III **Approved by:** Karen Ritter **Date:** 09/26/2017

Operator Name: American Warrior, Inc. Lease Name: WRAY Well #: 1-8

Sec. 8 Twp. 14 S. R. 35 ☐ East ☑ West County: Logan

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 *(Attach Additional Sheets)*	☑ Yes	☐ No	
Samples Sent to Geological Survey	☐ Yes	☑ No	
Cores Taken	☐ Yes	☑ No	
Electric Log Run	☑ Yes	☐ No	
Geologist Report / Mud Logs	☑ Yes	☐ No	

List All E. Logs Run:

Attached

☑ Log Formation (Top), Depth and Datum ☐ Sample

Name	Top	Datum
Attached	Attached	Attached

CASING RECORD ☑ New ☐ 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
Surface	12.250	8.625	23	210	Common	175	3%CC 2% gel

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
☐ Perforate ☐ Protect Casing ☐ Plug Back TD ☐ 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: ☐ Flowing ☐ Pumping ☐ Gas Lift ☐ Other *(Explain)*

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS:	METHOD OF COMPLETION:	PRODUCTION INTERVAL:
☐ Vented ☐ Sold ☐ Used on Lease *(If vented, Submit ACO-18.)*	☐ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*	Top / Bottom

Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record *(Amount and Kind of Material Used)*

TUBING RECORD: Size: Set At: Packer At:

Mail to: KCC - Conservation Division, 266 N. Main, Suite 220, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	American Warrior, Inc.
Well Name	WRAY 1-8
Doc ID	1367665

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.250	8.625	23	210	Common	175	3%CC 2% gel

DRILL STEM TEST REPORT

American Warrior Inc.

P.O.Box 399
Garden City KS
67846
ATTN: Luke Thompson

8-14s-35w Logan Co

Wray #1-8

Job Ticket: 64226 **DST#: 1**

Test Start: 2017.09.17 @ 07:11:15

GENERAL INFORMATION:

Formation: **Marmaton**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 09:37:00
Time Test Ended: 13:35:15

Test Type: Conventional Bottom Hole (Initial)
Tester: Mike Roberts
Unit No: 81

Interval: 4435.00 ft (KB) To 4510.00 ft (KB) (TVD)
Total Depth: 4510.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

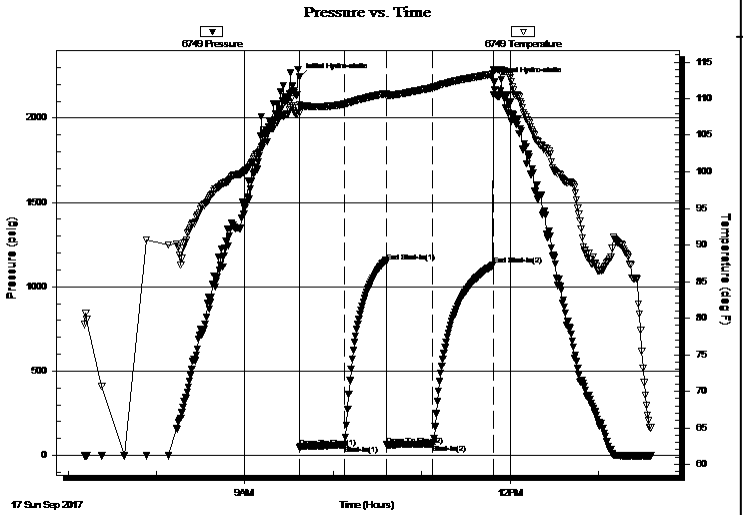
Reference Elevations: 3253.00 ft (KB)
3245.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6749 **Outside**

Press@RunDepth: 68.45 psig @ 4505.00 ft (KB)
Start Date: 2017.09.17 End Date: 2017.09.17
Start Time: 07:11:15 End Time: 13:35:15

Capacity: 8000.00 psig
Last Calib.: 2017.09.17
Time On Btm: 2017.09.17 @ 09:36:45
Time Off Btm: 2017.09.17 @ 11:49:00

TEST COMMENT: IF:Built to 2" blow
IS:No return blow
FF:Built to w eak surface blow
FS:No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2242.75	109.21	Initial Hydro-static
1	48.01	107.99	Open To Flow (1)
31	60.01	109.24	Shut-In(1)
60	1146.25	110.72	End Shut-In(1)
60	61.98	110.39	Open To Flow (2)
91	68.45	111.52	Shut-In(2)
132	1126.44	113.36	End Shut-In(2)
133	2213.55	114.00	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	mud 100%m	0.00

Gas Rates

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

DRILL STEM TEST REPORT

American Warrior Inc.

P.O.Box 399
Garden City KS
67846
ATTN: Luke Thompson

8-14s-35w Logan Co

Wray #1-8

Job Ticket: 64226 **DST#: 1**

Test Start: 2017.09.17 @ 07:11:15

GENERAL INFORMATION:

Formation: **Marmaton**
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Test Type: Conventional Bottom Hole (Initial)
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Unit No: 81

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Total Depth: 4510.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

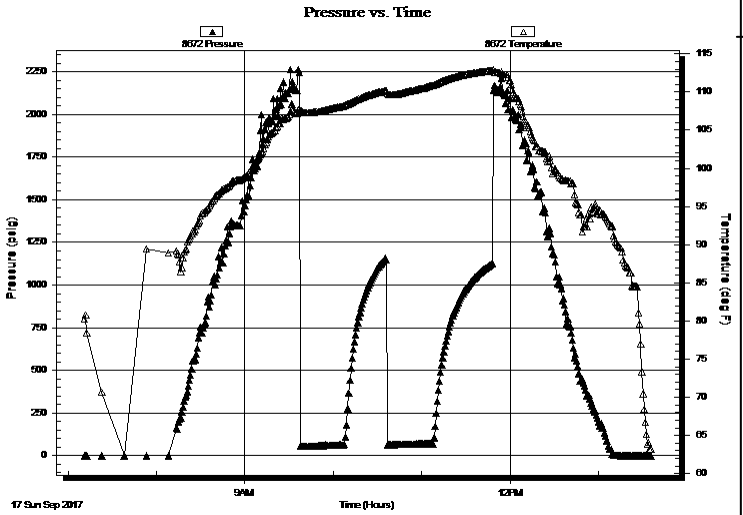
Reference Elevations: 3253.00 ft (KB)
3245.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8672 **Inside**

Press@RunDepth: psig @ 4505.00 ft (KB)
Start Date: 2017.09.17 End Date: 2017.09.17
Start Time: 07:11:15 End Time: 13:35:15

Capacity: 8000.00 psig
Last Calib.: 2017.09.17
Time On Btm:
Time Off Btm:

TEST COMMENT: IF:Built to 2" blow
IS:No return blow
FF:Built to w eak surface blow
FS:No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
20.00	mud 100%m	0.00

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

American Warrior Inc.

P.O.Box 399
Garden City KS
67846

ATTN: Luke Thompson

8-14s-35w Logan Co

Wray #1-8

Job Ticket: 64226 **DST#: 1**

Test Start: 2017.09.17 @ 07:11:15

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	0 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	0 ppm
Viscosity:	60.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	10.57 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	13000.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

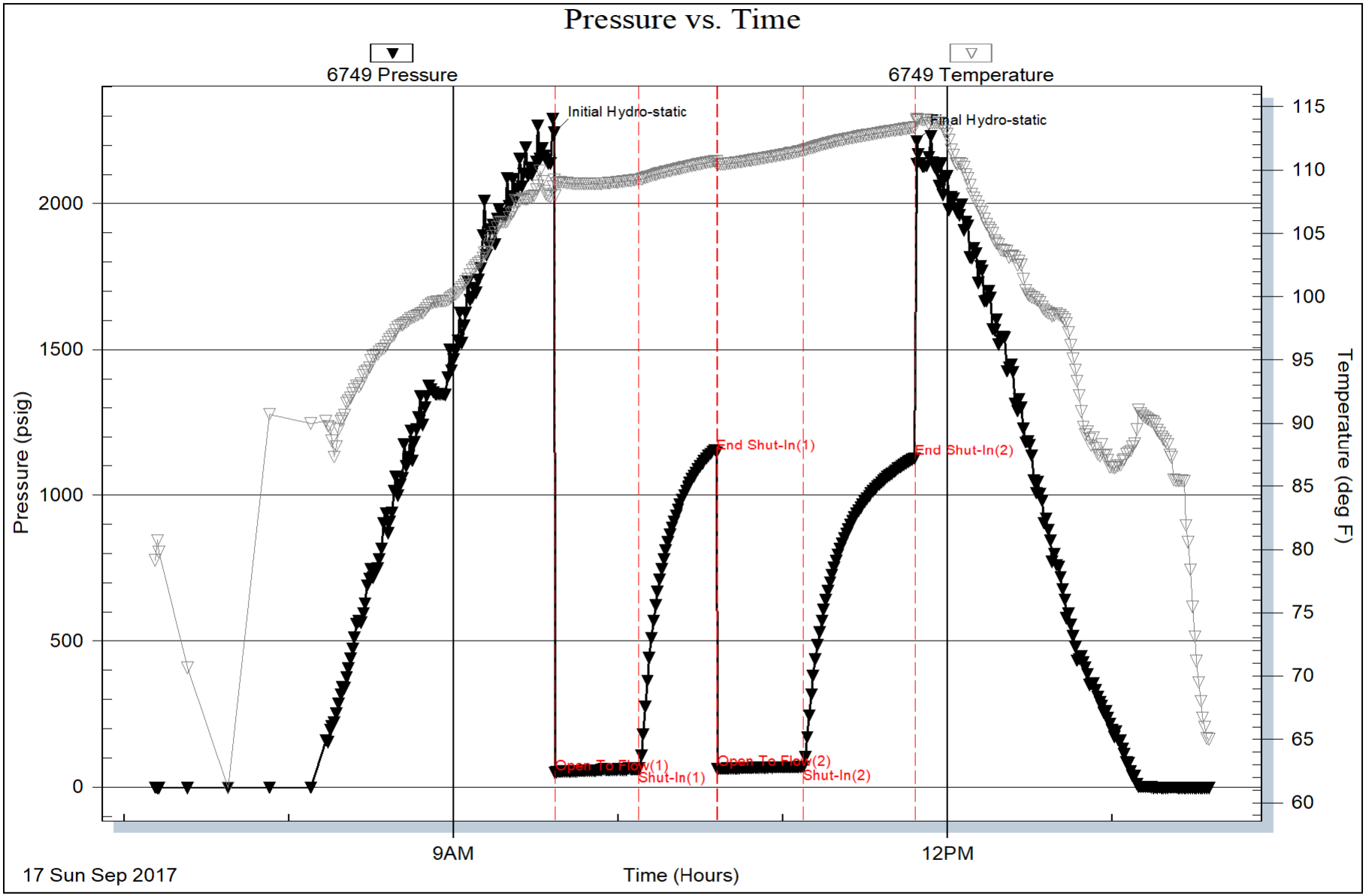
Recovery Table

Length ft	Description	Volume bbl
20.00	mud 100%m	0.000

Total Length: 20.00 ft Total Volume: bbl

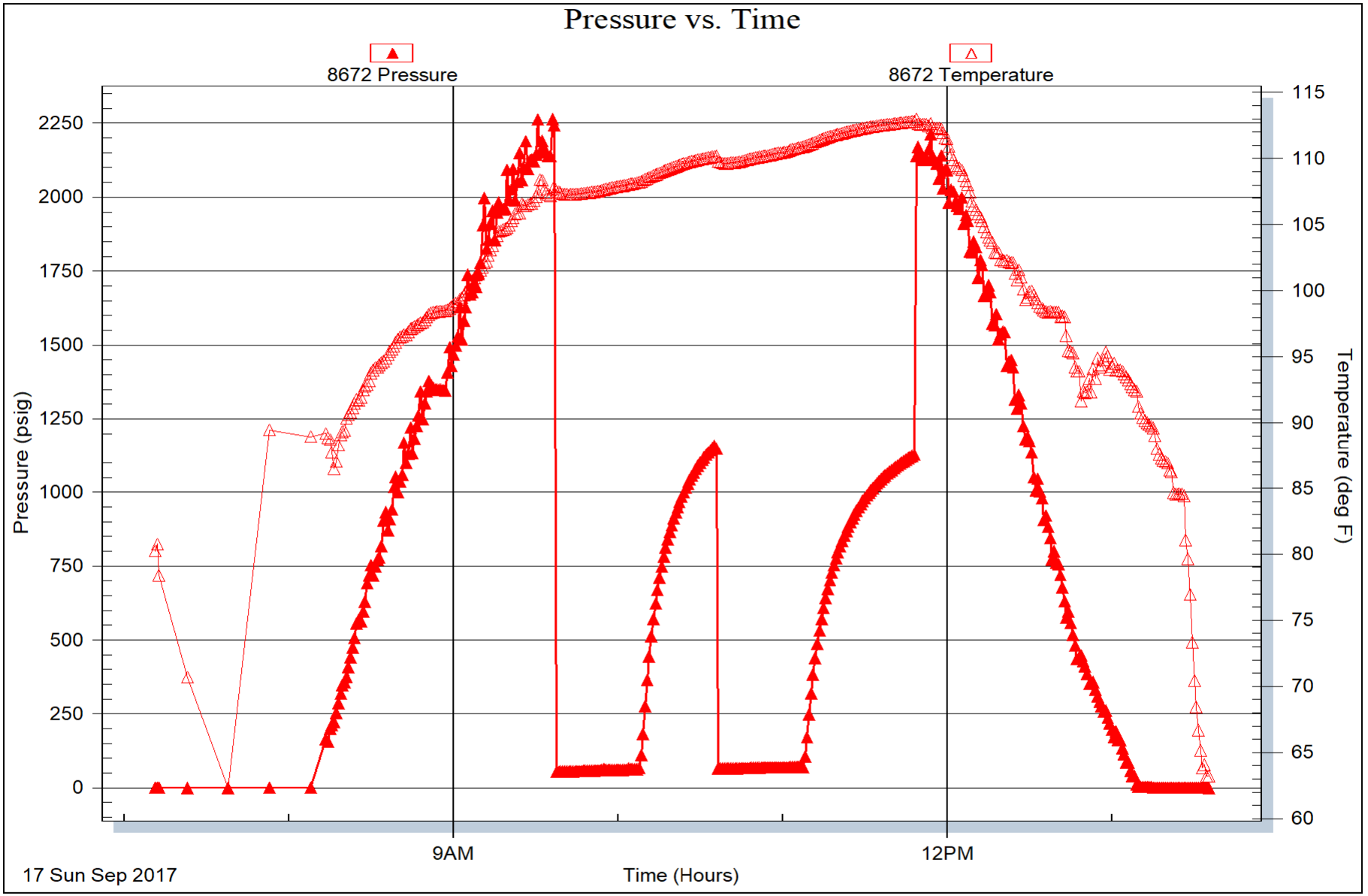
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 6749 **Outside** American Warrior Inc. Wray #1-8 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 64226 Printed: 2017.09.17 @ 18:54:47

Serial #: 8672 **Inside** American Warrior Inc. Wray #1-8 DST Test Number: 1



DRILL STEM TEST REPORT

American Warrior Inc.

P.O.Box 399
Garden City KS
67846
ATTN: Luke Thompson

8-14s-35w Logan Co

Wray #1-8

Job Ticket: 64227 **DST#: 2**

Test Start: 2017.09.17 @ 14:28:15

GENERAL INFORMATION:

Formation: **Lansing K**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 16:41:00
Time Test Ended: 21:00:15

Test Type: Conventional Bottom Hole (Reset)
Tester: Mike Roberts
Unit No: 81

Interval: 4374.00 ft (KB) To 4384.00 ft (KB) (TVD)
Total Depth: 4510.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

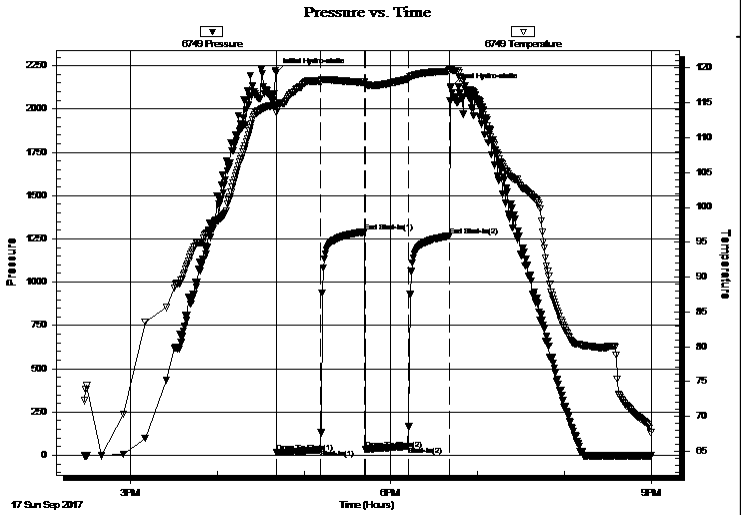
Reference Elevations: 3253.00 ft (KB)
3245.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6749 **Outside**

Press@RunDepth: 52.25 psig @ 4375.00 ft (KB)
Start Date: 2017.09.17 End Date: 2017.09.17
Start Time: 14:28:15 End Time: 21:00:15

Capacity: 8000.00 psig
Last Calib.: 2017.09.17
Time On Btm: 2017.09.17 @ 16:40:45
Time Off Btm: 2017.09.17 @ 18:41:15

TEST COMMENT: IF:Built to 1 1/2" blow
IS:No return blow
FF:Built to 1 1/2" blow
FS:No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2211.93	114.67	Initial Hydro-static
1	15.82	113.59	Open To Flow (1)
31	32.88	118.10	Shut-In(1)
62	1290.17	117.95	End Shut-In(1)
62	35.60	117.58	Open To Flow (2)
92	52.25	118.41	Shut-In(2)
120	1267.07	119.53	End Shut-In(2)
121	2123.80	119.79	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	w cm 3%w 97%w	0.00

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

American Warrior Inc.

P.O.Box 399
Garden City KS
67846
ATTN: Luke Thompson

8-14s-35w Logan Co

Wray #1-8

Job Ticket: 64227 **DST#: 2**

Test Start: 2017.09.17 @ 14:28:15

GENERAL INFORMATION:

Formation: **Lansing K**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 16:41:00
Time Test Ended: 21:00:15

Test Type: Conventional Bottom Hole (Reset)
Tester: Mike Roberts
Unit No: 81

Interval: 4374.00 ft (KB) To 4384.00 ft (KB) (TVD)
Total Depth: 4510.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

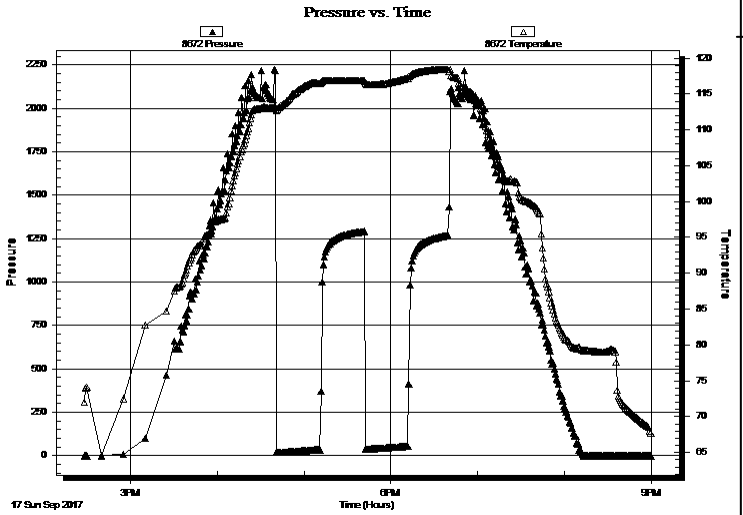
Reference Elevations: 3253.00 ft (KB)
3245.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8672 **Inside**

Press@RunDepth: psig @ 4375.00 ft (KB)
Start Date: 2017.09.17 End Date: 2017.09.17
Start Time: 14:28:15 End Time: 21:00:00

Capacity: 8000.00 psig
Last Calib.: 2017.09.17
Time On Btm:
Time Off Btm:

TEST COMMENT: IF:Built to 1 1/2" blow
IS:No return blow
FF:Built to 1 1/2" blow
FS:No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
90.00	w cm 3%w 97%w	0.00

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

American Warrior Inc.

P.O.Box 399
Garden City KS
67846
ATTN: Luke Thompson

8-14s-35w Logan Co

Wray #1-8

Job Ticket: 64227 **DST#: 2**

Test Start: 2017.09.17 @ 14:28:15

GENERAL INFORMATION:

Formation: **Lansing K**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 16:41:00
Time Test Ended: 21:00:15

Test Type: Conventional Bottom Hole (Reset)
Tester: Mike Roberts
Unit No: 81

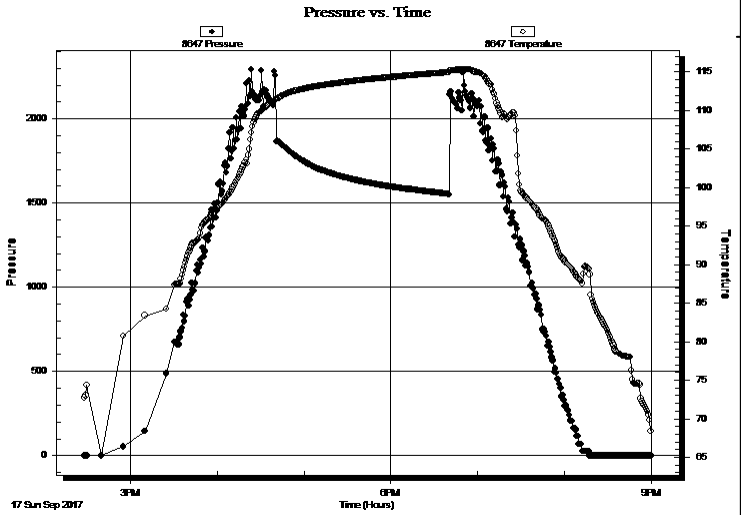
Interval: 4374.00 ft (KB) To 4384.00 ft (KB) (TVD)
Total Depth: 4510.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3253.00 ft (KB)
3245.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8647 **Outside**
Press@RunDepth: psig @ 4501.00 ft (KB)
Start Date: 2017.09.17 End Date: 2017.09.17
Start Time: 14:28:15 End Time: 20:59:45

Capacity: 8000.00 psig
Last Calib.: 2017.09.17
Time On Btm:
Time Off Btm:

TEST COMMENT: IF:Built to 1 1/2" blow
IS:No return blow
FF:Built to 1 1/2" blow
FS:No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
90.00	w cm 3%w 97%w	0.00

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

American Warrior Inc.

P.O.Box 399
Garden City KS
67846

ATTN: Luke Thompson

8-14s-35w Logan Co

Wray #1-8

Job Ticket: 64227 **DST#: 2**

Test Start: 2017.09.17 @ 14:28:15

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	0 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	9500 ppm
Viscosity:	60.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	10.58 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	13000.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
90.00	w cm 3%w 97%w	0.000

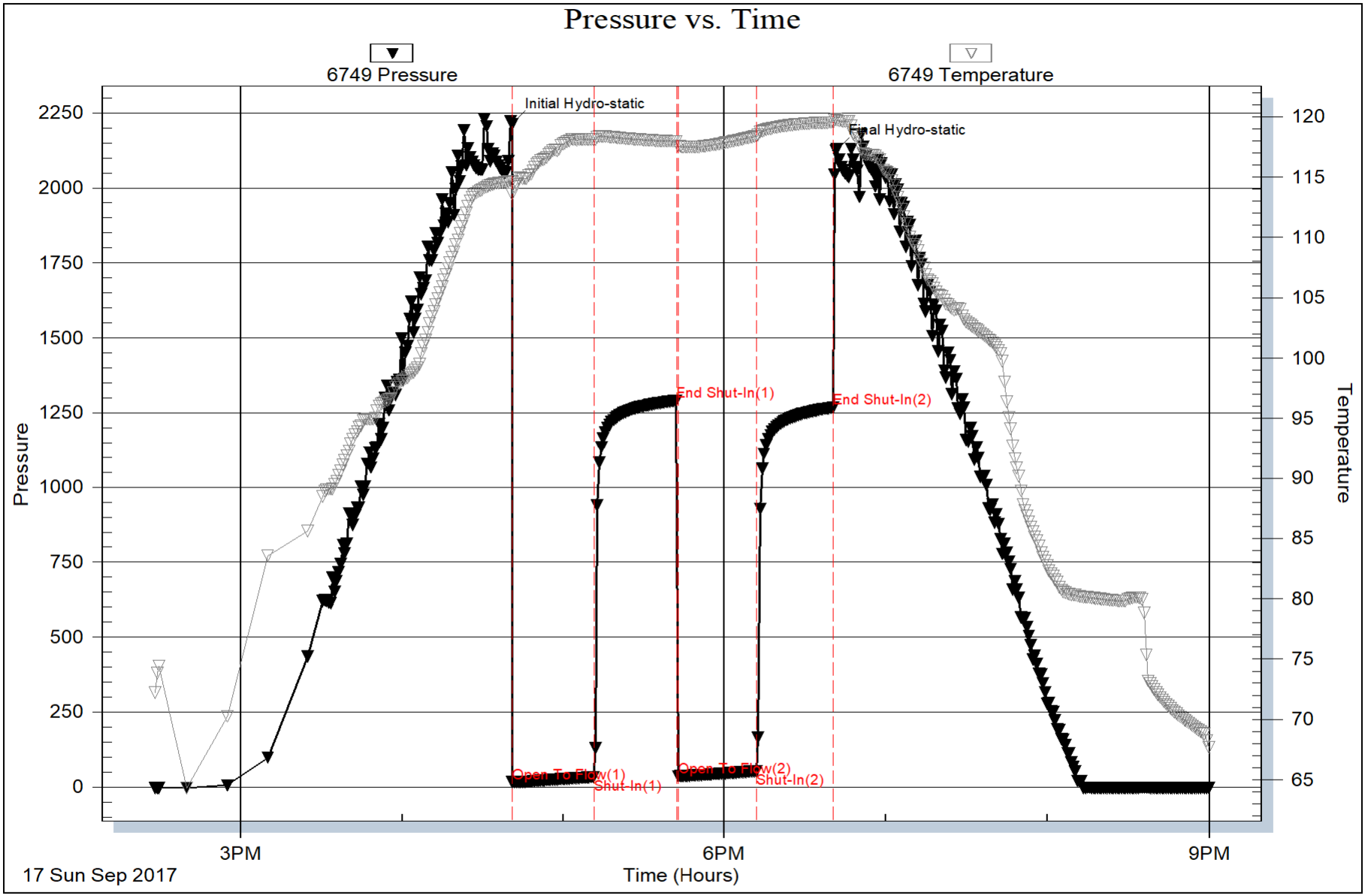
Total Length: 90.00 ft Total Volume: bbl

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

Laboratory Name: Laboratory Location:

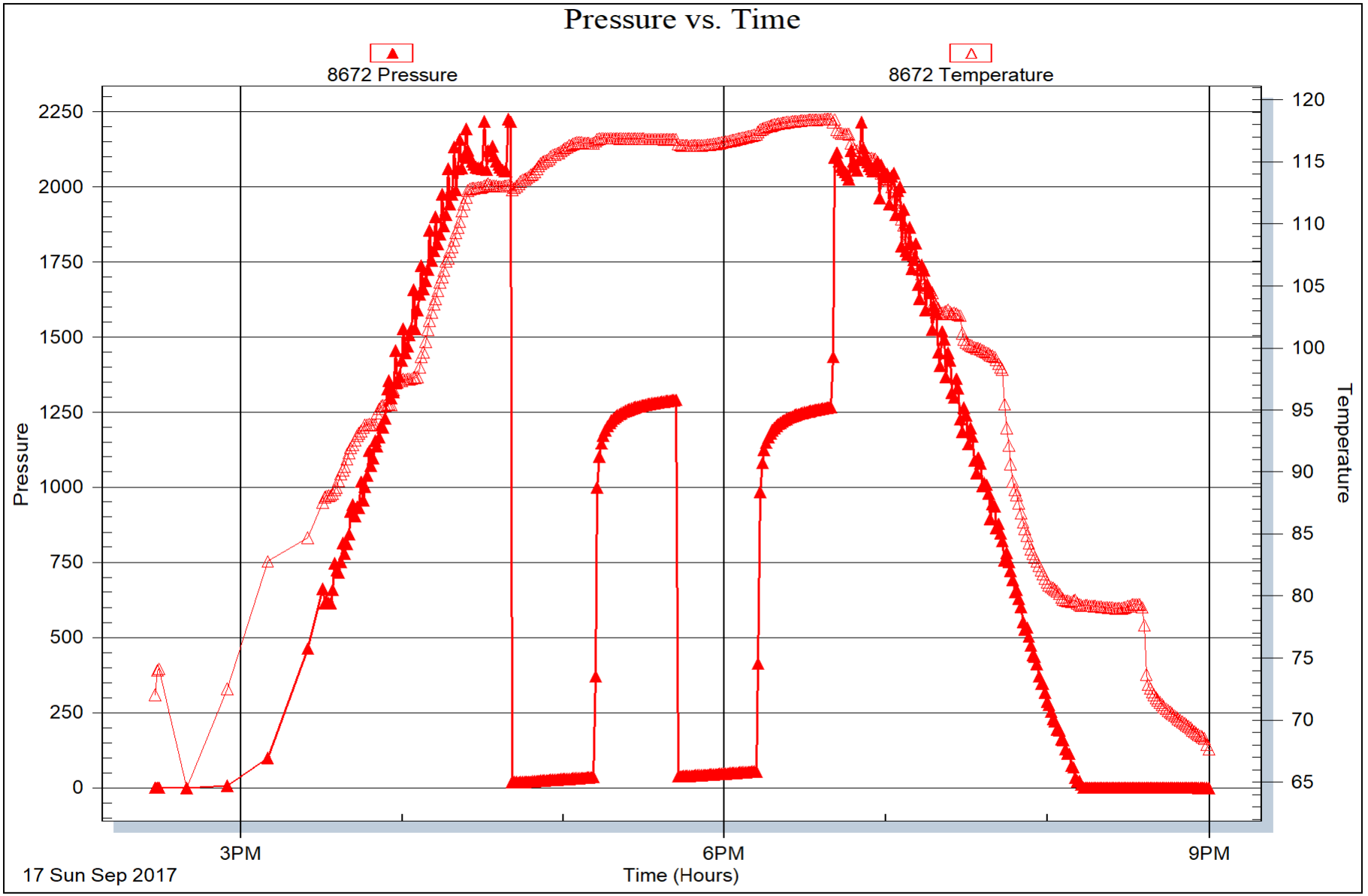
Recovery Comments: RW= .934@56.4 = 9,500 ppm

Serial #: 6749 **Outside** American Warrior Inc. Wray #1-8 DST Test Number: 2



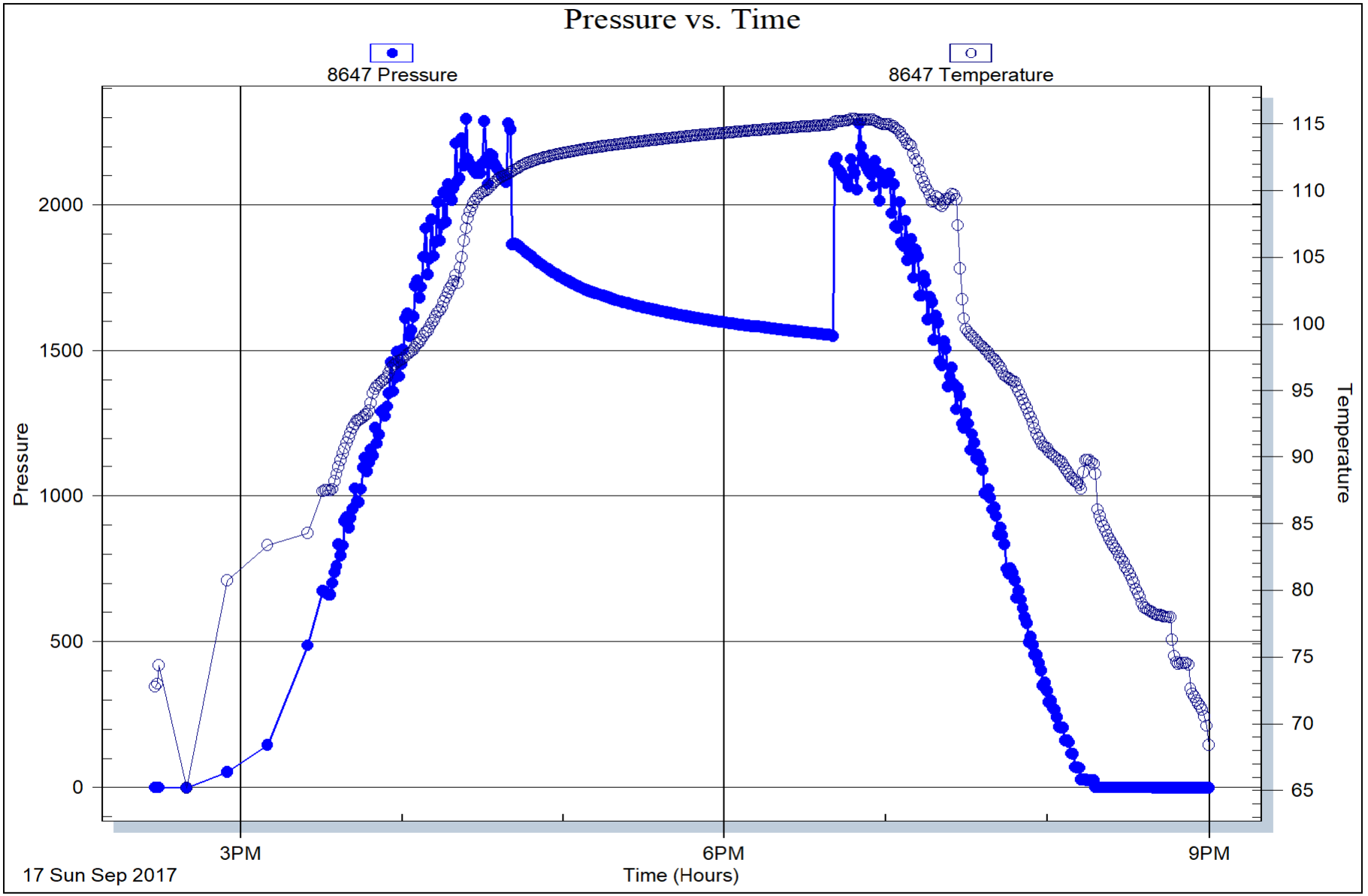
Trilobite Testing, Inc Ref. No: 64227 Printed: 2017.09.17 @ 22:05:05

Serial #: 8672 **Inside** American Warrior Inc. Wray #1-8 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 64227 Printed: 2017.09.17 @ 22:05:05

Serial #: 8647 **Outside** American Warrior Inc. Wray #1-8 DST Test Number: 2



Geological Report

American Warrior, Inc.

Wray #1-8

1076’ FNL & 1122’ FWL

Sec 8, T14s, R35w

Logan County, Kansas

American Warrior, Inc.

General Data

Well Data:	American Warrior, Inc. Wray #1-8 1076’ FNL & 1122’ FWL Sec. 8, T14s, R35w Logan County, Kansas API # 15-109-21512-00-00
Drilling Contractor:	Discovery Drilling Rig #1
Geologist:	Luke Thompson
Spud Date:	September 11, 2017
Completion Date:	September 20, 2017
Elevation	3245’ G.L. 3253’ K.B.
Directions:	From the West side of Russell Springs, KS at the intersection of Hwy 25 & Broadway Ave. – Now go 0.8 miles South on Hwy 25 Rd then 2 miles West on Hwy 25 - Now go about 4 miles South on 240 Rd to Kiowa Rd – Now go West 1 mile to 230 Rd – Now go North 0.5 miles – East into
Casing:	210’ 8 5/8” #23 Surface Casing
Samples:	3750’ to RTD 10’ Wet & Dry
Drilling Time:	3700’ to RTD
Electric Logs:	Pioneer Energy Services “D. Schmidt” Full Sweep
Drillstem Tests:	Two-Trilobite Testing “Mike Roberts”
Problems:	Pulled Tight on all trips

Formation Tops

Wray #1-8

Sec. 8, T14s, R35w

1076’ FNL & 1122’ FWL

Anhydrite	**2622’ +631**
Base	**2643’ +610**
Heebner	**4038’ -785**
Lansing	**4091’ -838**
Stark	**4345’ -1092**
BKC	**4417’ -1164**
Marmaton	**4461’ -1208**
Pawnee	**4554’ -1301**
Fort Scott	**4614’ -1361**
Cherokee	**4642’ -1389**
Johnson	**4689’ -1436**
Morrow	**4762’ -1509**
Miss	**4836’ -1583**
RTD	**4900’ -1647**
LTD	**4900’ -1647**

Sample Zone Descriptions

Marmaton (4490’ -1237): Covered in DST #1

Limestone, cream, sub-crystalline, slightly chalky, occasionally oolitic, scattered poor pinpoint vuggy and oolicastic porosity, very slight fleeting odor, poor stain and saturation in 1 piece, very poor show of free oil, no fluorescence slow string cut. No Gas Kick.

Lansing K (4380’ -1127): Covered in DST #2

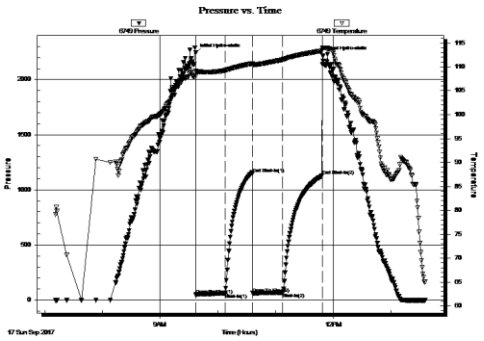
Limestone, cream, oolitic packstone, slightly chalky, poor to fair oolicastic porosity, very faint odor, fair stain, fair to good saturation, fair show of free oil, no fluorescence, fair to good stream cut. No Gas Kick.

Drill Stem Tests

Trilobite Testing
"Mike Roberts"

DST #1 **Marmaton**

Interval (4435' – 4510') Anchor Length 75'

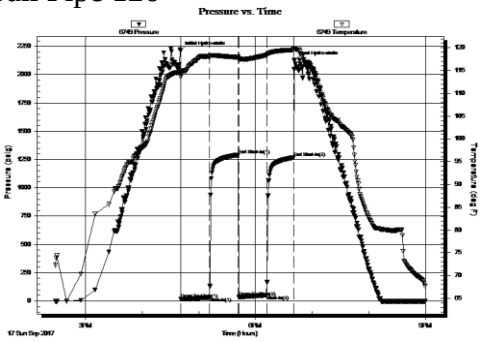


IHP	- 2243 #	
IFP	- 30" – built to 2"	48-60#
ISI	- 30" – No return	1146#
FFP	- 30" – WSB	62-68#
FSIP	- 30" – No return	1126#
FHP	- 2214 #	
BHT	- 114° F	

Recovery: 20' M

DST #2 **Lansing K (straddle test)**

Interval (4374' – 4384') Anchor Length 10'; Tail Pipe 126'



IHP	- 2212 #	
IFP	- 30" – Built to 1 ½"	16-33#
ISI	- 30" – No Return	1290#
FFP	- 30" – built to 1 ½"	36-52#
FSIP	- 30" – No Return	1267#
FHP	- 2124 #	
BHT	- 120° F	

Recovery: 90' WCM

Structural Comparison

Formation	American Warrior, Inc. Wray #1-8 Sec. 8, T14s, R35w 1076' FNL & 1122' FWL			American Warrior, Inc. Fairchild #1-17 Sec. 17, T14s, R35w 1506' FNL 1036' FEL			American Warrior, Inc. Ausmus Unit #1-7 Sec. 7, T14s, R35w 160' FSL & 792' FEL	
Heebner	**4038**	**-785**	**-8**	4004	-777	**-12**	3995	-773
Lansing	**4091**	**-838**	**-7**	4058	-831	**-10**	4050	-828
Stark	**4345**	**-1092**	**-5**	4314	-1087	**-6**	4308	-1086
BKC	**4417**	**-1164**	**-1**	4390	-1163	**4**	4390	-1168
Marmaton	**4461**	**-1208**	**-3**	4432	-1205	**5**	4435	-1213
Pawnee	**4554**	**-1301**	**-7**	4521	-1294	**1**	4524	-1302
Fort Scott	**4614**	**-1361**	**-6**	4582	-1355	**3**	4586	-1364
Cherokee	**4642**	**-1389**	**-6**	4610	-1383	**3**	4614	-1392
Johnson	**4689**	**-1436**	**-6**	4657	-1430	**4**	4662	-1440
Morrow	**4762**	**-1509**	**-8**	4728	-1501	**9**	4740	-1518
Miss	**4836**	**-1583**	**-18**	4792	-1565	**9**	4814	-1592

Summary

The location for the Wray #1-8 well was found via 3-D seismic survey. The new well ran structurally as expected. Two drill stem test were conducted, none of which recovered commercial quantities of oil. After all the gathered data had been examined, the decision was made to plug and abandon the Wray #1-8 well.

Respectfully Submitted,

Lukas Thompson

American Warrior, Inc.

American Warrior, Inc.

Luke Thompson - Geologist
3118 Cummings Rd
Garden City, KS 67846
(785) 493-1254 cell
(620) 275-5067 office

WELL	API #:	LOCATION:	Elevation
Wary #1-8	**15-109-21512-00-00**	Logan County, KS 1076' FNL & 1122' FWL 8-14s-35w	KB: 3253' GL: 3245' Measurements from KB

Lithology Key

- Limestone
- Silty Limestone
- Shaley Limestone
- Sandy Limestone
- Fossil Limestone
- Cherty Limestone
- Oolitic Limestone
- Shale Interbed
- Limestone Interbed
- Black Shale
- Shale
- Silty Shale
- Siltstone
- Sandstone
- Oolitic Dolomite
- Dolomite
- Cherty Dolomite
- CFS

Curve Data:

Left Column:
ROP (min/foot)
Gamma Ray

Right Column:
Gas (units)
Density Porosity
Neutron Porosity

Geologist: Luke Thompson (American Warrior, Inc.)

Drilling Contractor: Discovery Rig #1

Samples from: 3750' - RTD

Drilling time from: 3700' - TD

Geological Supervision from: 3750' - TD

Correlating Log: Fairchild #1-17 (17-14s-35w)

Surface Casing: 210' 8 5/8" 23#

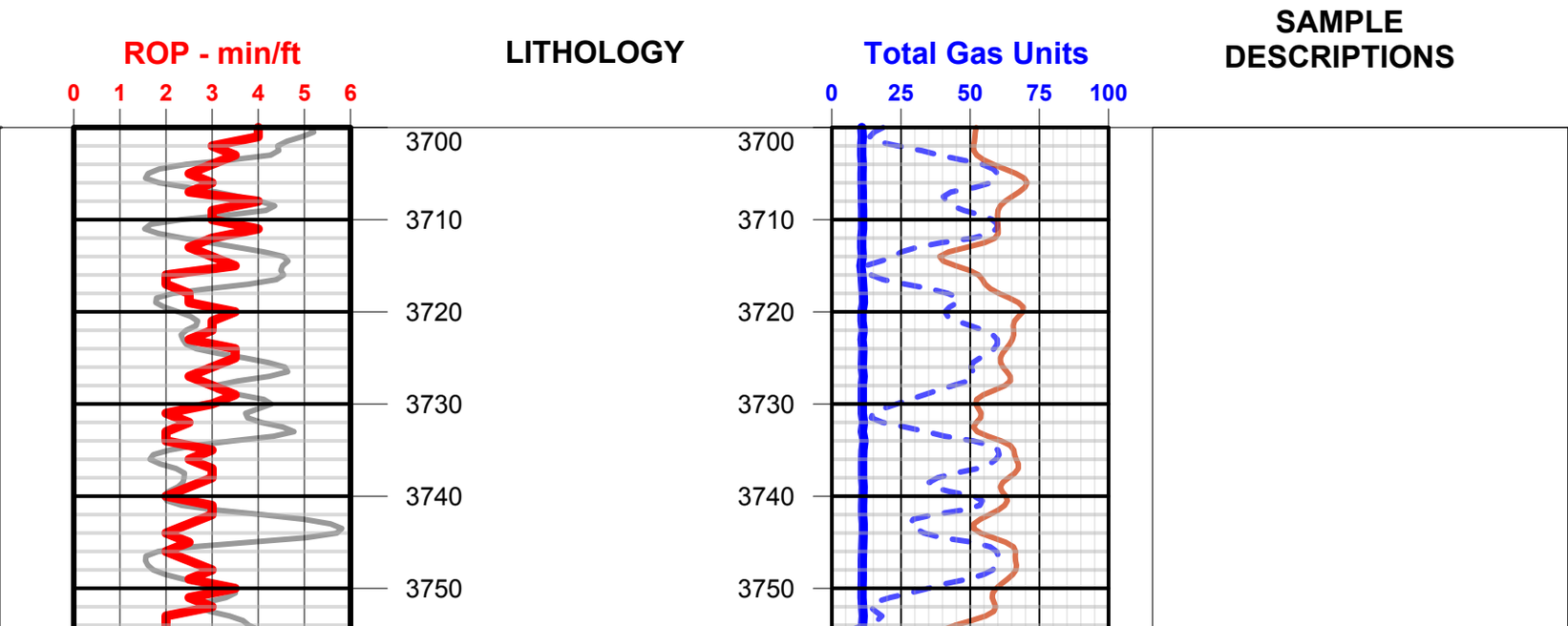
Production Casing:

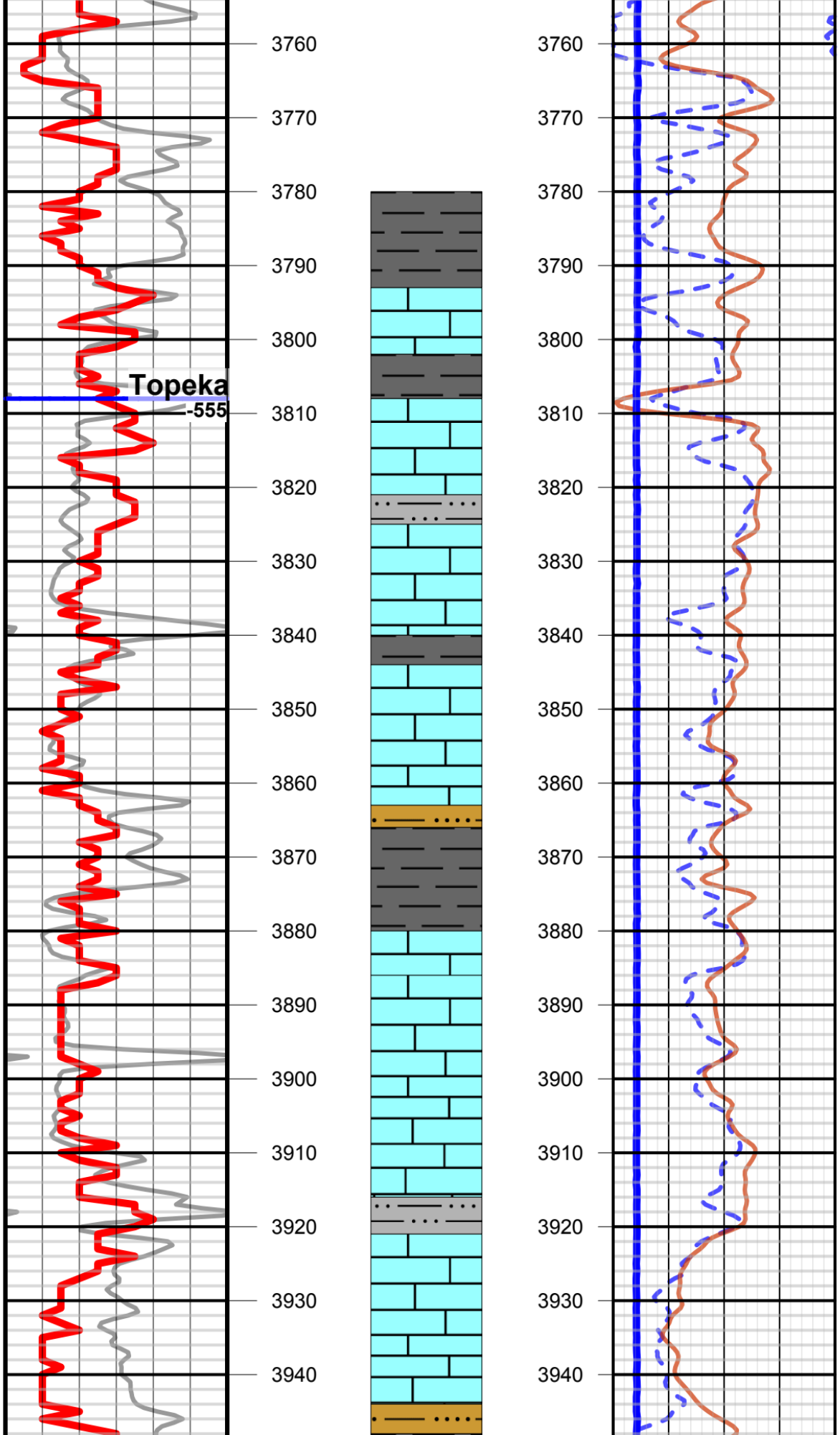
RTD: 4900'

LTD: 4900'

Formation	Log Top	Log Datum	Sample Top	Sample Datum	Correlating Well Structural Comparison
Topeka	3810	-557	3808	-555	-4
Heebner	4038	-785	4041	-788	-8
Toronto	4054	-801	4056	-803	-7
Lansing	4091	-838	4090	-837	-7
Stark	4345	-1092	4344	-1091	-5
Hush	4386	-1133	4386	-1133	-5
BKC	4417	-1164	4418	-1165	-1
Marmaton	4461	-1208	4461	-1208	-3
Pawnee	4554	-1301	4554	-1301	-7
Fort Scott	4614	-1361	4615	-1362	-6
Cherokee	4642	-1389	4644	-1391	-6
Johnson	4689	-1436	4689	-1436	-6
Morrow	4762	-1509	4764	-1511	-8
St. Gen	4836	-1583	4836	-1583	-18

Status: P&A





Sh, gry/rd/aqua, sl silty

Ls, tn, fn xln, dense, NSFO

Sh, gry/rd/brn, soft occ silt

Ls, crm, sub xln, scat fos frag, occ chlk, occ vug poro, NSFO

Sh, gry, silty

Ls, crm/tn, sub xln, scat ool packstone, NSFO

Sh, gry, smooth

Ls, crm, tn, sub-fn xln, occ sandy, sl fos, NSFO; Sh/Clay, brn, gummy

Siltstone, gry

Sh, gry/rd/aqua, scat silt

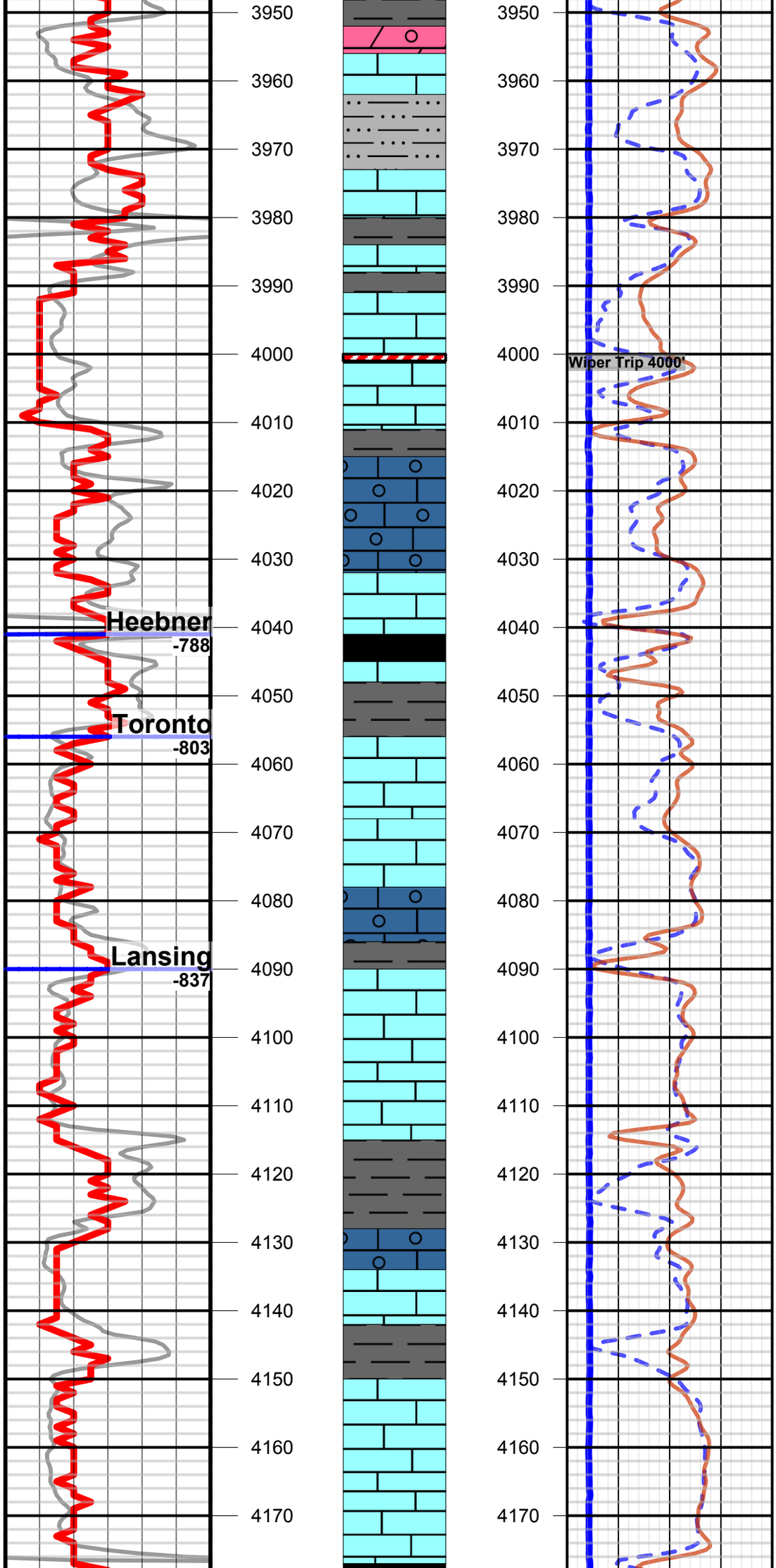
Ls, crm, sub xln, occ chlk, NSFO

Ls, crm, sub xln, chlky, occ fos, occ, Cht, wht, NSFO

Sh, gry/rd, silty

Ls, crm, fn-sub xln, sl chlk, occ fos frag, fr vug poro, NSFO

Siltstone, gry/brn, sl cly/sh



Sh, gry/rd/aqua, sl silt

Dolo, brn, ool grainstone, fr oolicast poro, NSFO

Ls, crm, sub-fn xln, sl chlky, occ fos, NSFO

Sh, gry/brn, silty

Ls, tn/crm, fn xln dense, NSFO

Sh, gry/blk, sl silt

Ls, tn, fn xln, dense, NSFO

Sh, gry/brn, gummy

Ls, crm, sub-fn xln, scat chlk, occ pp vug poro, scat, Cht, org/wht, NSFO

Sh, gry/brn/rd, smooth

Ls, crm, ool packstone, sl chlky, fr oomold poro, NSFO

Ls, tn/crm, fn xln, sl ool packstone, occ chlk, NSFO

Sh, blk, carb, pyrite

Ls, tn, fn xln, dense, NSFO

Sh, gry/brn, sl silt

Ls, crm, sub xln, scat fos frag, occ chlk, NSFO

Ls, tn/crm, fn-sub xln, sl chlk, NSFO

Ls, tn/gry, ool packstone, tight, pyrite, NSFO

Sh, gry/rd, sl silt

Ls, crm/wht, fn xln, dense, scat ool, sl chlk, NSFO

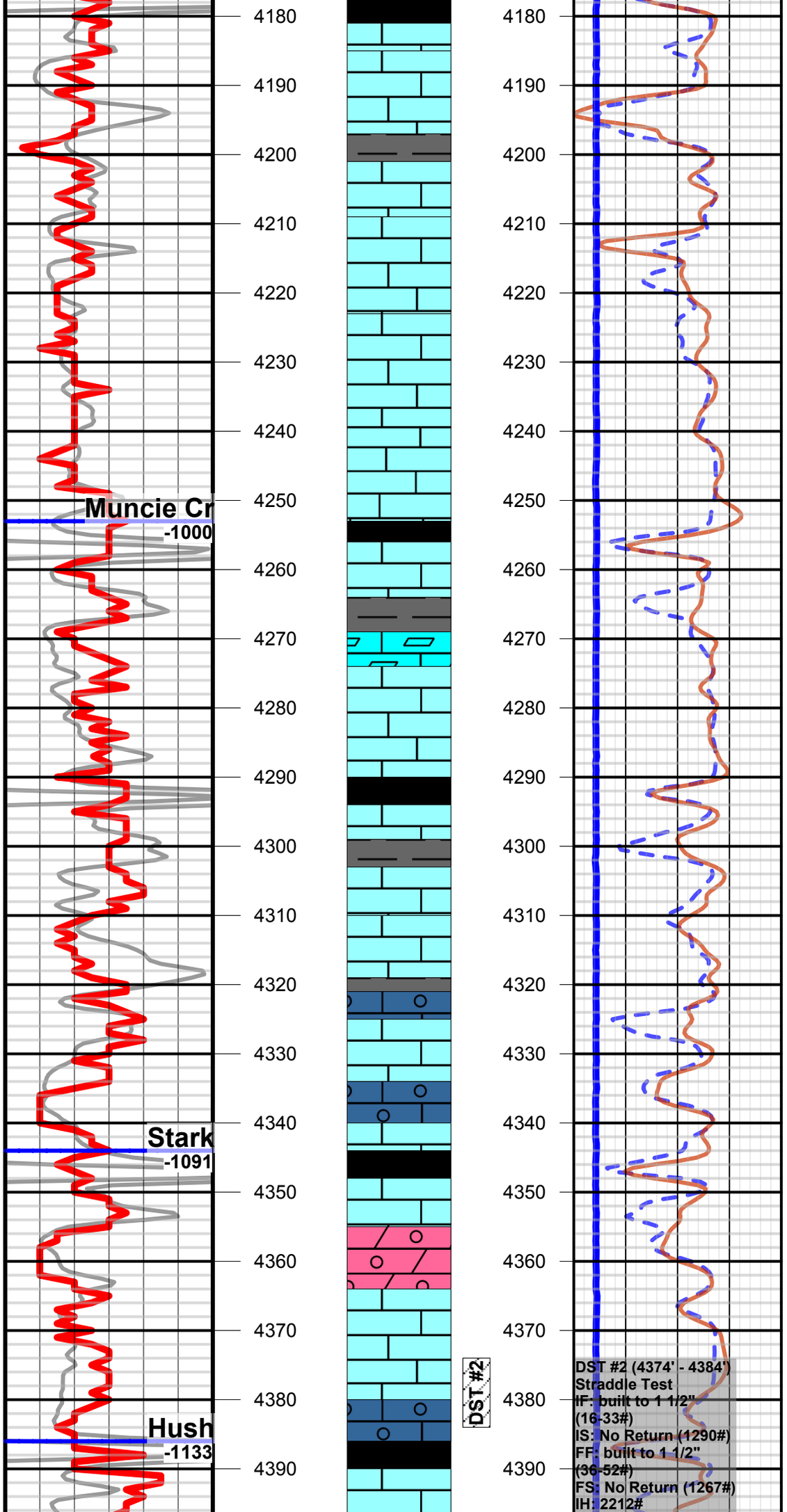
Sh, gry/rd/brn, sl silt

Ls, crm, sub xln, chlky, ool wack-packstone, occ pr oolicast poro, NSFO

Ls, crm, sub xln, chlky, NSFO

Sh, gry/brn, smooth

Ls, crm/tn, sub-fn xln, sl chlky, occ fos/ool frag, NSFO



Sh, blk, carb

Ls, tn, fn xln, dense, NSFO

Ls, crm, sub xln, sl chlky, NSFO

Sh, blk/gry/rd, sl silt

Ls, tn, fn xln, dense, scat, Cht, wht/gry, NSFO

Ls, crm/tn, sub-fn xln, occ ool, sl chlky, NSFO

Ls, crm/tn, fn-sub xln, sl chlky, occ scat ool frag, occ Cht, wht/gry, fos, NSFO

Sh, blk, carb

Ls, crm/lt gry, fn xln, dense, NSFO

Sh, gry/brn/aqua, sl silt

Ls, crm/tn, fn-sub xln, occ chlk, scat pp vug poro, Cht, wht, fos, NSFO

Ls, crm/wht, sub xln, scat chlk, occ Cht, wht, NSFO

Sh, blk, carb

Ls, crm/wht/tn, fn xln, frosted, NSFO

Sh, gry/lt gry, smooth

Ls, crm, fn xln, dense, scat recrys, NSFO

◑ Ls, crm, sub-fn xln, sl chlk, occ Cht, gry, scat pr pp vug poro, no odor, (few) vpr stn & sat, vpr SFO, gilsonite, no fluor, pr slow stream cut

Sh, lt gry/aqua, sl silt

◑ Ls, crm, ool packstone, sl chlk, vpr oolicast poro, no odor, vpr stn & sat, vpr-no SFO, gilsonite, no fluor, vpr string cut

Ls, tn/crm/lt gry, fn xln, dense, NSFO

Ls, crm, ool packstone, fr-gd oomold poro, sl gilsonite staining, NSFO

Ls, crm, fn xln, occ ool, NSFO

Sh, blk, carb

Ls, tn/crm, fn xln, occ Cht, wht, NSFO

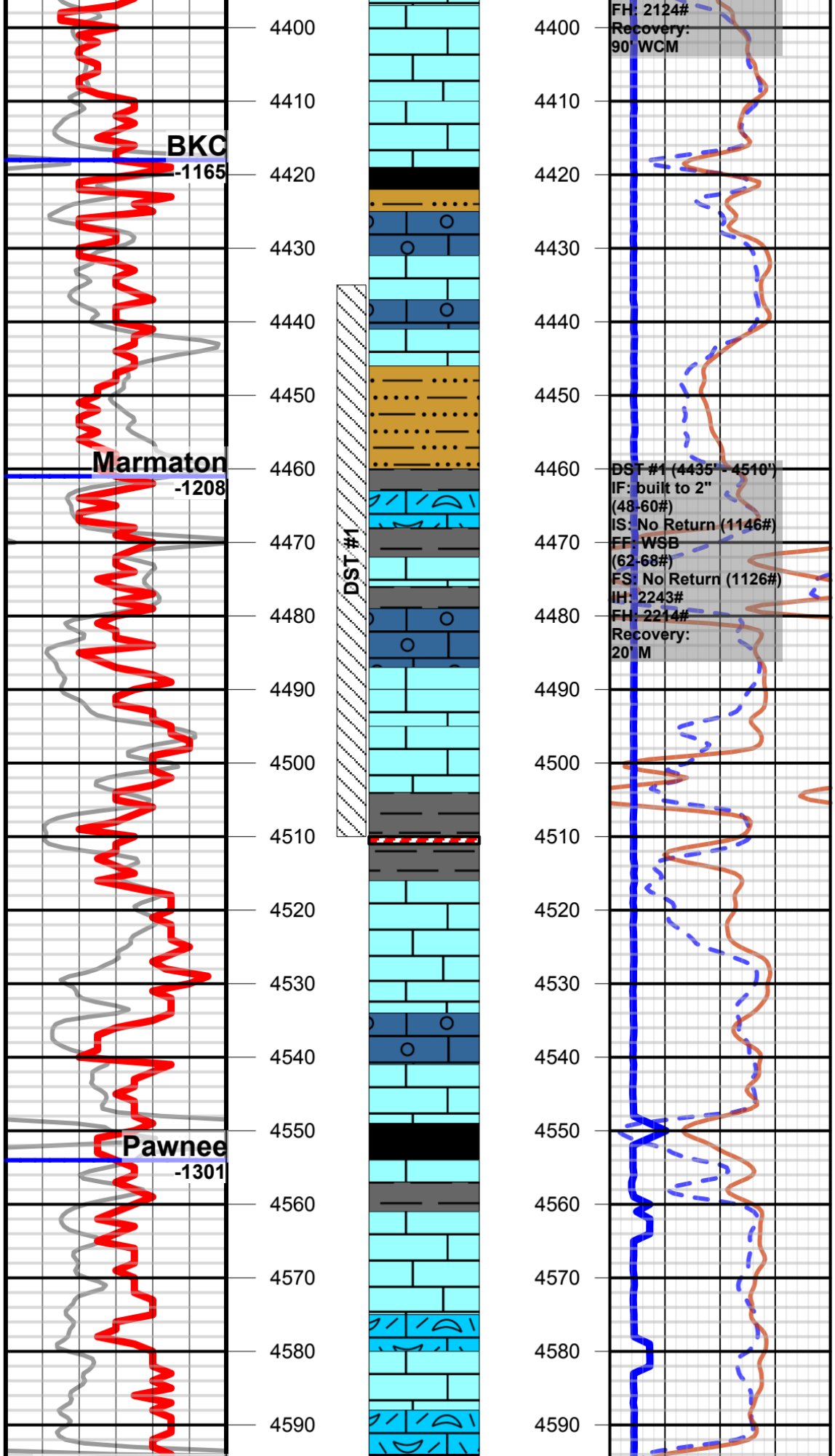
Dolo, brn, ool grainstone, pr oolicast poro, NSFO

Ls, crm/tn, fn-sub xln, sl chlk, occ fos frag, scat pr pp vug poro, light gilsonite staining, NSFO

◑ Ls, crm, ool packstone, sl chlky, pr-fr scat oolicast poro, vr faint odor, fr stn, fr-gd sat, fr SFO, no fluor, fr-gd stream cut

Sh, blk, carb

Ls, tn/brn, fn xln, dense, occ Cht, gry, NSFO



Ls, tn/crm, sub-fn xln, chlky, scat ool (small) packstone, grainy in spots, occ Cht, gry/wht, NSFO

Ls, crm/tn, fn xln, sl chlk, NSFO

Sh, gry/rd/purp, sl silt, carb

Siltstone, brn/gry, sl shaley, NSFO

Ls, crm, fn-sub xln, sl chlk, ool packstone, fr oomold poro, NSFO

Ls, tn/crm/gry, fn xln, dense, scat fos, NSFO

◑ Ls, crm, sub xln, ool wack-packstone, scat Cht, wht, pr oolicast poro (looks tight), no odor, pr stn, pr sat, pr-fr SFO, no fluor, fr slow stream cut

Ls, tn/crm/gry, fn xln, dense, scat fos, NSFO

Siltstone, gry/brn, chlky, shaley; Ls, crn/tn, fn-sub xln, fos hash, NSFO

Sh, gry/lt gry, smooth, fos

Ls, crm/tn, sub xln, ool fos hash, tight, NSFO

Sh, gry/rd, sl silt

Ls, crm/tn, fn xln, scat fos, scat chlk, NSFO

Sh, gry, sl silt

Ls, tn/brn, sub xln, ool packstone, chlky, pr-no oolicast poro, NSFO

Ls, tn/crm, fn xln, dense, NSFO

◑ Ls, crm, sub xln, sl chlky, occ ool, scat pr pp vug & oolicast poro, vsl flting odor, pr stn & sat 1 piece, pr SFO, pr slow string cut

Ls, crm, sub xln, sl chlk, NSFO

Sh, gry/blk/rd/purp/grn, smooth

Ls, tn, fn xln, dense, scat fos frag, NSFO

◑ Ls, crm, sub xln, chlky, ool packstone, scat pr oolicast & oomold poro, no odor, (1 piece) vpr stn & sat, vpr SFO, no fluor, pr slow stream cut (most barren)

Ls, tn, fn xln, dense, occ fos, NSFO

Sh, blk, carb

Ls, tn, fn xln, dense, NSFO

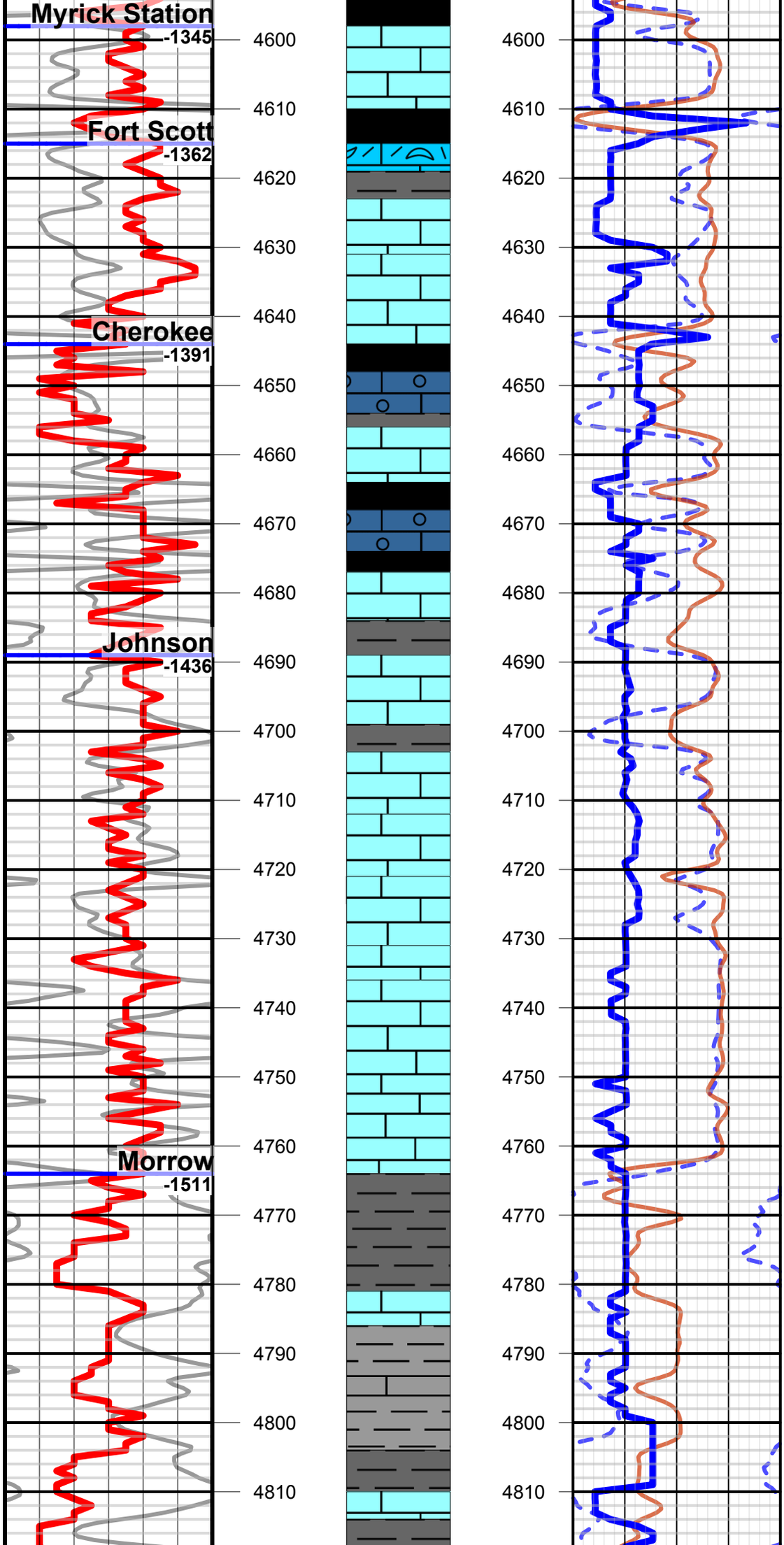
Sh, gry/rd, sl silt

Ls, crm-tn, fn-sub xln, sl chlky, occ fos, NSFO

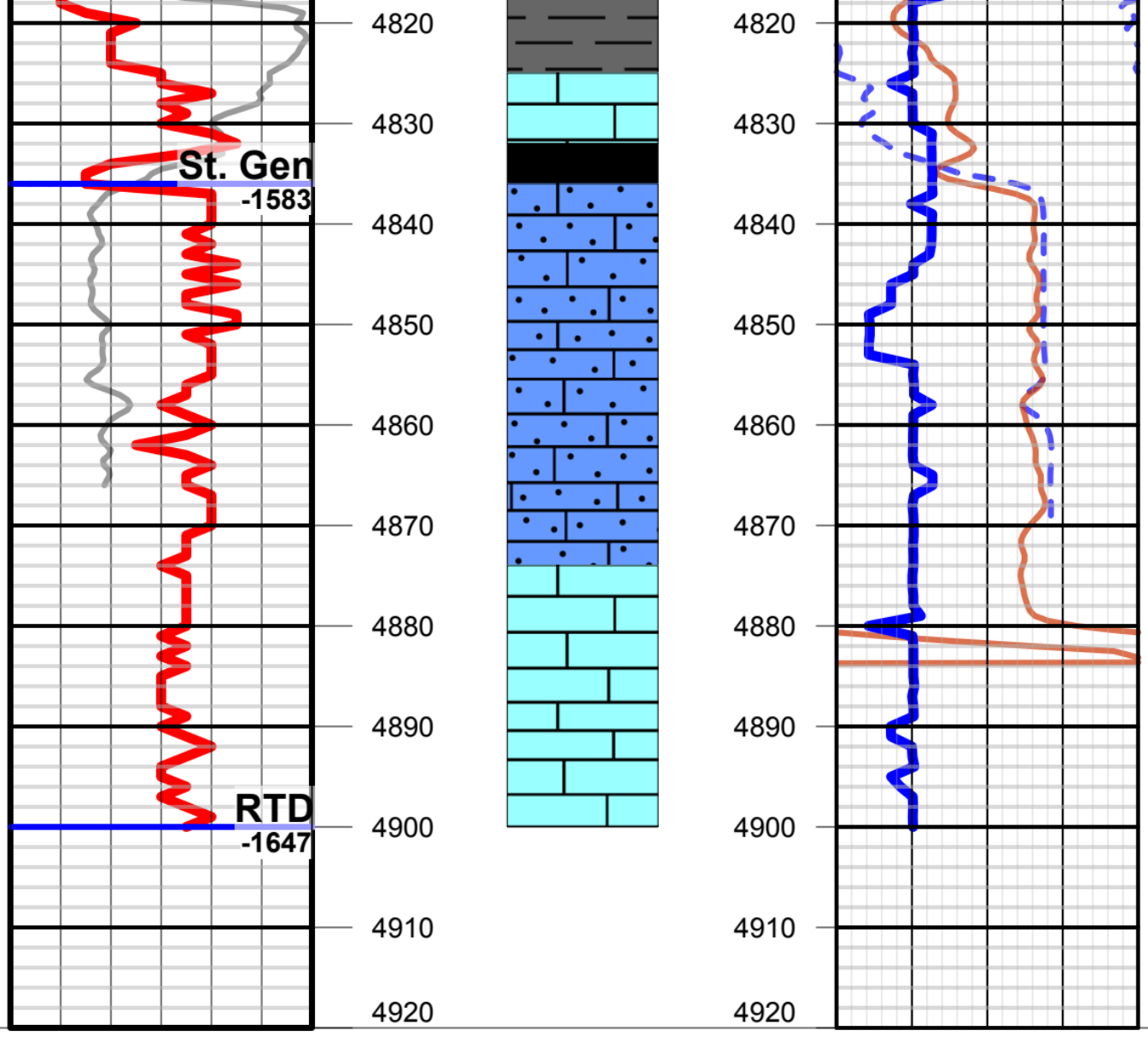
Ls, tn, sub-fn xln, sl chlky, fos hash, scat pr inter gran poro, NSFO

Ls, tn/lt gry, fn xln, dense, NSFO

Ls, tn/brn, fn xln, dense, fos hash, occ Cht, fos, NSFO



Sh, blk/rd, smooth, carb
Ls, crm, sub-fn xln, sl chlky, scat fos frag, Cht, wht, ool, NSFO
Sh, blk, carb
Ls, tn/brn, fn xln, ool fos hash, Cht, wht/gry, ool, NSFO
Sh, gry/aqua/rd, smooth
Ls, crm/tn, fn xln, sl chlk, NSFO
Ls, crm/tn, sub-fn xln, sl chlky, scat fos frags, NSFO
Sh, blk, carb
Ls, crm/tn, sub xln, ool wack-packstone, chlky, fr oolicast & oomold poro, NSFO
Sh, gry, smooth
Ls, tn/lt gry, fn xln, dense, NSFO
Sh, blk, carb
Ls, tn/brn, fn xln, dense, ool packstone, tight, NSFO
Sh, gry/blk, carb
Ls, tn/lt gry/brn, fn xln, dense, NSFO
Sh, gry, pyrite
Ls, tn/crm, fn xln, occ chlk, scat fos frag, occ ool, vpr scat pp vug poro, no odor, (1 piece) vpr stn & sat, tight, vpr SFO, no fluor, vpr slow string cut
Sh, gry, sl gummy
Ls, crm/tn, fn xln, dense, scat fos frag, NSFO
Ls, tn, fn xln, dense, scat Cht, brn, NSFO
Sh, blk/gry/rd, carb
Ls, tn fn xln, dense, scat chlk, NSFO
Ls, tn/crm, fn-sub xln, sl chlky, occ fos frag, NSFO
Ls, tn/crm/lt gry, fn xln, occ chlky, occ fos, scat occ Cht, wht/gry, fos, NSFO
Sh, gry/yllw/aqua/rd, sl silt
Ls, tn, fn xln, scat fos, NSFO
Sh, gry/rd/brn/aqua/purp, scat gry gummy; interbed Ls, tn/crm, fn xln, dense, oc ool, NSFO
Sh, gry, gummy
Ls, tn fn xln, dense, NSFO



Ls, gry/blk/rd, pyrite, NSFO

Ls, tn, fn xln, ool packstone, tight, NSFO

Sh, blk, pyrite, carb

Ls, crm, sub xln, sandy, chlky, NSFO

Ls, tn/crm, fn-sub xln, occ sandy, scat chlk, NSFO

SWIFT Services, Inc.

CHARGE TO: American Warrior, Inc
ADDRESS
CITY, STATE, ZIP CODE

TICKET 30494

PAGE 1 OF 1

SERVICE LOCATIONS	WELL/PROJECT NO.	LEASE	COUNTY/PARISH	STATE	CITY	DATE	OWNER
1. Hays, KS	1-8	Wray	Logan	KS		9/19/17	
2. Ness City, KS	TICKET TYPE ☑ SERVICE ☐ SALES	CONTRACTOR	RIG NAME/NO.	SHIPPED VIA	DELIVERED TO	ORDER NO.	
3.		Discovery Drilling	#1		Location		
4.	WELL TYPE	WELL CATEGORY	JOB PURPOSE		WELL PERMIT NO.	WELL LOCATION	
REFERRAL LOCATION	Oil	Developement	Plug to Abandon				
	INVOICE INSTRUCTIONS						

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING LOC	ACCT	DF	DESCRIPTION	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
575		1			MILEAGE #113	120	mi			5.00	600.00
576P		1			Pump Charge - PTA	1	EA			800.00	800.00
290		1			D-AIR	5	gal			42.00	210.00
410		1			Top Plug 8 5/8"	1	EA			120.00	120.00
328-4		2			60/40 Pozmix (4% gel)	255	SKS			10.25	2613.75
279		2			Bentonite Gel	800	lbs	8	SKS	25.00	200.00
581		2			Service Charge Cement	255	SKS	21378.5	lbs	1.50	382.50
583		2			Drayage	120	mi	1282.71	TM	0.75	962.03
										PAGE TOTAL	5888.28
										TAX Logan 8.0%	251.50
										TOTAL	6139.78

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, **PAYMENT, RELEASE, INDEMNITY,** and **LIMITED WARRANTY** provisions.

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS

X Cliff Maffet

DATE SIGNED | TIME SIGNED ☐ A.M. ☐ P.M.

REMIT PAYMENT TO:

SWIFT SERVICES, INC.
P.O. BOX 466
NESS CITY, KS 67560
785-798-2300

SURVEY	AGREE	UN-DECIDED	DIS-AGREE
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?			
WE UNDERSTOOD AND MET YOUR NEEDS?			
OUR SERVICE WAS PERFORMED WITHOUT DELAY?			
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?			

ARE YOU SATISFIED WITH OUR SERVICE? ☐ YES ☐ NO

☐ CUSTOMER DID NOT WISH TO RESPOND

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.

SWIFT OPERATOR Tom Knight | APPROVAL

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 9/19/17 | PAGE NO. 1

CUSTOMER AWI | WELL NO. 1-8 | LEASE Wray | JOB TYPE PTA | TICKET NO. 30494

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS T	PUMPS C	PRESSURE (PSI) TUBING	PRESSURE (PSI) CASING	DESCRIPTION OF OPERATION AND MATERIALS
	1850							On location
								Rig Running Drill Pipe
								Plugs @ 2636', 1444', 260', 40'
								255 sks, 60/40 Pozmix (4% gel
								On bottom, Hook up Kelly
								Get Circulation,
	1945	3				250		Start H_2O ahead
	1950	3	8			250		Fin H_2O, Start Cmt, 50 SKS
	1955	3	13			200		Fin Cmt, Start H_2O Behind
	2005	3	3			Vac		Fin H_2O
	2010		30					Hook up to Rig to pump Mud
								Pull up to 1444'
	2105	3				150		Start H_2O ahead
	2110	3	8			100		Fin H_2O, Start Cmt 100 SKS
	2115	3	26			Vac		Fin Cmt, Start H_2O
	2120	3	5			Vac		Fin H_2O
								Pull up to 260'
	2155	2	1			100		Pump H_2O ahead
		3	12			100		Pump Cmt, 50 SKS
	2200	3	½			100		Pump H_2O behind
	2205							Pull out to of hole
								Push Top plug down w/ Kelly
	2250	3	3			100		Pump Cmt, 10 SKs
								~~Pull Kelly~~
	2300	2	8					Plug Rat hole, 30 SKS
	2305	2	4					Plug Mousehole, 15 SKS
								Wash up truck
	1115							~~Job~~ Complete,
								Thanks,
								Jon, Austin

SWIFT Services, Inc.

CHARGE TO: American Warrior Inc
ADDRESS
CITY, STATE, ZIP CODE

TICKET 30491

PAGE 1 OF 1

SERVICE LOCATIONS	WELL/PROJECT NO.	LEASE	COUNTY/PARISH	STATE	CITY	DATE	OWNER
1. Hays, KS	1-8	Wray 127410	Logan	KS		9-11-17	
2. Ness City, KS	TICKET TYPE ☒ SERVICE ☐ SALES	CONTRACTOR	RIG NAME/NO.	SHIPPED VIA	DELIVERED TO	ORDER NO.	
3.		Discovery Drilling	#1		Location		
4.	WELL TYPE	WELL CATEGORY	JOB PURPOSE		WELL PERMIT NO.	WELL LOCATION	
REFERRAL LOCATION	0.1	Developmental	Cement Surface Casing				
	INVOICE INSTRUCTIONS						

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING LOC	ACCT	DF	DESCRIPTION	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
575		1			MILEAGE #113	120	mi			5 00	600 00
576S		1			Pump Charge - Shallow Surface	1	EA			800 00	800 00
290		1			D-AIR	2	gal			42 00	84 00
325		2			Standard Cement	175	SKs			12 25	2143 75
279		2			Bentonite Gel 2%	3	SKs	300	lbs	25 00	75 00
278		2			Calcium Chloride 3%	8	SKs	400	lbs	40 00	320 00
581		2			Service Charge Cement	175	SKs	16450	lbs	1 50	262 50
583		2			Drayage			1029	TM	0 75	771 75

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, **PAYMENT, RELEASE, INDEMNITY,** and **LIMITED WARRANTY** provisions.

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS.

X [signature]

DATE SIGNED | TIME SIGNED | ☐ A.M. ☐ P.M.

REMIT PAYMENT TO:

SWIFT SERVICES, INC.
P.O. BOX 466
NESS CITY, KS 67560
785-798-2300

SURVEY	AGREE	UN-DECIDED	DIS-AGREE
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?			
WE UNDERSTOOD AND MET YOUR NEEDS?			
OUR SERVICE WAS PERFORMED WITHOUT DELAY?			
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?			

ARE YOU SATISFIED WITH OUR SERVICE? ☐ YES ☐ NO

☐ CUSTOMER DID NOT WISH TO RESPOND

PAGE TOTAL	5057 00
Logan TAX 8.0%	209 82
TOTAL	5266 82

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.

SWIFT OPERATOR [signature] | APPROVAL

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 9-11-17 | PAGE NO. 1

CUSTOMER AWI | WELL NO. 1-8 | LEASE Wray | JOB TYPE Cmt Surface | TICKET NO. 30491

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS T	PUMPS C	PRESSURE (PSI) TUBING	PRESSURE (PSI) CASING	DESCRIPTION OF OPERATION AND MATERIALS
	1300							On location, Set up trucks
								175 sks standard, 2% gel, 3% CC
								Waiting Bulk truck,
	1315							Break Circulation @ 210'
	1330	3½	5				150	Start H_2O ahead.
		3½						Start Cement, 175 sks.
		3½	42				Vac	Fin Cement - Go to Displacement
			12½				100	Fin Displacement
								Cement Circulated to Surface
	1345							Close in.
								Release
								Washup
	1400							Job Complete
								Thanks,
								Jon, Austin, Isaac