

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 List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
--	---

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				

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
 Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 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)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD: Size: _____ Set At: _____ Packer At: _____ Liner Run: Yes No

Date of First, Resumed Production, SWD or ENHR: _____ 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: <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> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
--	---	---

Form	ACO1 - Well Completion
Operator	F. G. Holl Company L.L.C.
Well Name	CALCARA UNIT 1-19
Doc ID	1222815

All Electric Logs Run

CDL/CNL
BHCS
DIL
CPI
Microresistivity
Sonic Cement Bond log

Form	ACO1 - Well Completion
Operator	F. G. Holl Company L.L.C.
Well Name	CALCARA UNIT 1-19
Doc ID	1222815

Tops

Name	Top	Datum
Herrington	1748	+156
Winfield	1800	+104
Towanda	1866	+38
Fort Riley	1895	+9
B/Florence	2002	-98
Kinney LS	2017	-113
Wrefold	2049	-145
Council Grove	2073	-169
Crouse	2108	-204
Neva	2246	-342
Red Eagle	2304	-400
Onaga Shale	2450	-546
Wabaunsee	2472	-568
Root Shale	2532	-628
Stotler	2587	-683
Willard Shale	2612	-708
Tarkio	2650	-746
Howard	2789	-885
Severy Shale	2840	-936
Topeka	2866	-962
Heebner	3118	-1214
Toronto	3136	-1232
Douglas Sh.	3149	-1245
Brown Shale	3204	-1300

Form	ACO1 - Well Completion
Operator	F. G. Holl Company L.L.C.
Well Name	CALCARA UNIT 1-19
Doc ID	1222815

Tops

Name	Top	Datum
LKC	3221	-1317
Drum	3355	-1451
BKC	3448	-1544
Arbuckle	3526	-1622
RTD	3729	-1825

Summary of Changes

Lease Name and Number: CALCARA UNIT 1-19

API/Permit #: 15-009-25987-00-00

Doc ID: 1222815

Correction Number: 1

Approved By: NAOMI JAMES

Field Name	Previous Value	New Value
Approved Date	08/05/2014	09/12/2014
Formation Top Source - Log	Yes	No
Quarter Call 3	E2	SE
Save Link	../..kcc/detail/operatorEditDetail.cfm?docID=1216580	../..kcc/detail/operatorEditDetail.cfm?docID=1222815



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1216580
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

Form must be Typed

Form must be Signed

All blanks must be Filled

CONFIDENTIAL WELL COMPLETION FORM

WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

- New Well Re-Entry Workover
- Oil WSW SWD SIOW
- Gas D&A ENHR SIGW
- OG GSW Temp. Abd.
- 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 ENHR Conv. to SWD
- Plug Back Conv. to GSW Conv. to Producer
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ 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: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

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: _____
- Confidential Release Date: _____
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____

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
--	---

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	F. G. Holl Company L.L.C.
Well Name	CALCARA UNIT 1-19
Doc ID	1216580

All Electric Logs Run

CDL/CNL
BHCS
DIL
CPI
Microresistivity
Sonic Cement Bond log

Form	ACO1 - Well Completion
Operator	F. G. Holl Company L.L.C.
Well Name	CALCARA UNIT 1-19
Doc ID	1216580

Tops

Name	Top	Datum
Herrington	1748	+156
Winfield	1800	+104
Towanda	1866	+38
Fort Riley	1895	+9
B/Florence	2002	-98
Kinney LS	2017	-113
Wrefold	2049	-145
Council Grove	2073	-169
Crouse	2108	-204
Neva	2246	-342
Red Eagle	2304	-400
Onaga Shale	2450	-546
Wabaunsee	2472	-568
Root Shale	2532	-628
Stotler	2587	-683
Willard Shale	2612	-708
Tarkio	2650	-746
Howard	2726	-822
Severy Shale	2763	-859
Topeka	2789	-889
Heebner	3118	-1214
Toronto	3136	-1232
Douglas Sh.	3149	-1245
Brown Shale	3204	-1300

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Name	Top	Datum
LKC	3221	-1317
Drum	3355	-1451
BKC	3448	-1544
Arbuckle	3526	-1622
RTD	3729	-1825

Form	ACO1 - Well Completion
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Well Name	CALCARA UNIT 1-19
Doc ID	1216580

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
4	3544' - 3550' Arbuckle	500 gal Acetic Acid	
		250 gal 15% nefe acid	
		500 gal 15% nefe acid	



DRILL STEM TEST REPORT

Prepared For: **F.G. Holl Company**

9431 East Central STE 100
Wichita Kansas 67206

ATTN: Rene Husted

Calcara unit 1-19

19-19s-14-Barton

Start Date: 2014.06.01 @ 01:53:00

End Date: 2014.06.01 @ 06:35:00

Job Ticket #: 18327 DST #: 1

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

Printed: 2014.06.01 @ 19:51:38



DRILL STEM TEST REPORT

TOOL DIAGRAM

F.G. Holl Company
 9431 East Central STE 100
 Wichita Kansas 67206
 ATTN: Rene Husted

19-19s-14-Barton
Calcara unit 1-19
 Job Ticket: 18327 **DST#: 1**
 Test Start: 2014.06.01 @ 01:53:00

Tool Information

Drill Pipe:	Length: 1677.00 ft	Diameter: 3.80 inches	Volume: 23.52 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 34000.00 lb
			<u>Total Volume: 23.52 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 30000.00 lb
Depth to Top Packer:	1687.00 ft			Final 30000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	50.51 ft			
Tool Length:	78.51 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			1664.00	
Hydraulic tool	5.00			1669.00	
Jars	6.00			1675.00	
Safety Joint	2.00			1677.00	
Top Packer	5.00			1682.00	
Packer	5.00			1687.00	28.00 Bottom Of Top Packer
Anchor	7.00			1694.00	
Change Over Sub	0.00			1694.00	
Drill Pipe	31.51			1725.51	
Change Over Sub	0.00			1725.51	
Anchor	7.00			1732.51	
Recorder	0.00	8931	Inside	1732.51	
Recorder	0.00	6838	Outside	1732.51	
Bull Plug	5.00			1737.51	50.51 Anchor Tool

Total Tool Length: 78.51



DRILL STEM TEST REPORT

FLUID SUMMARY

F.G. Holl Company

19-19s-14-Barton

9431 East Central STE 100
Wichita Kansas 67206

Calcara unit 1-19

Job Ticket: 18327

DST#: 1

ATTN: Rene Husted

Test Start: 2014.06.01 @ 01:53:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length: ft

Water Salinity: ppm

Viscosity: 42.00 sec/qt

Cushion Volume: bbl

Water Loss: 13.60 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 15000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
7.00	Mud 100%	0.098
0.00	10ft. gas in pipe	0.000

Total Length: 7.00 ft Total Volume: 0.098 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

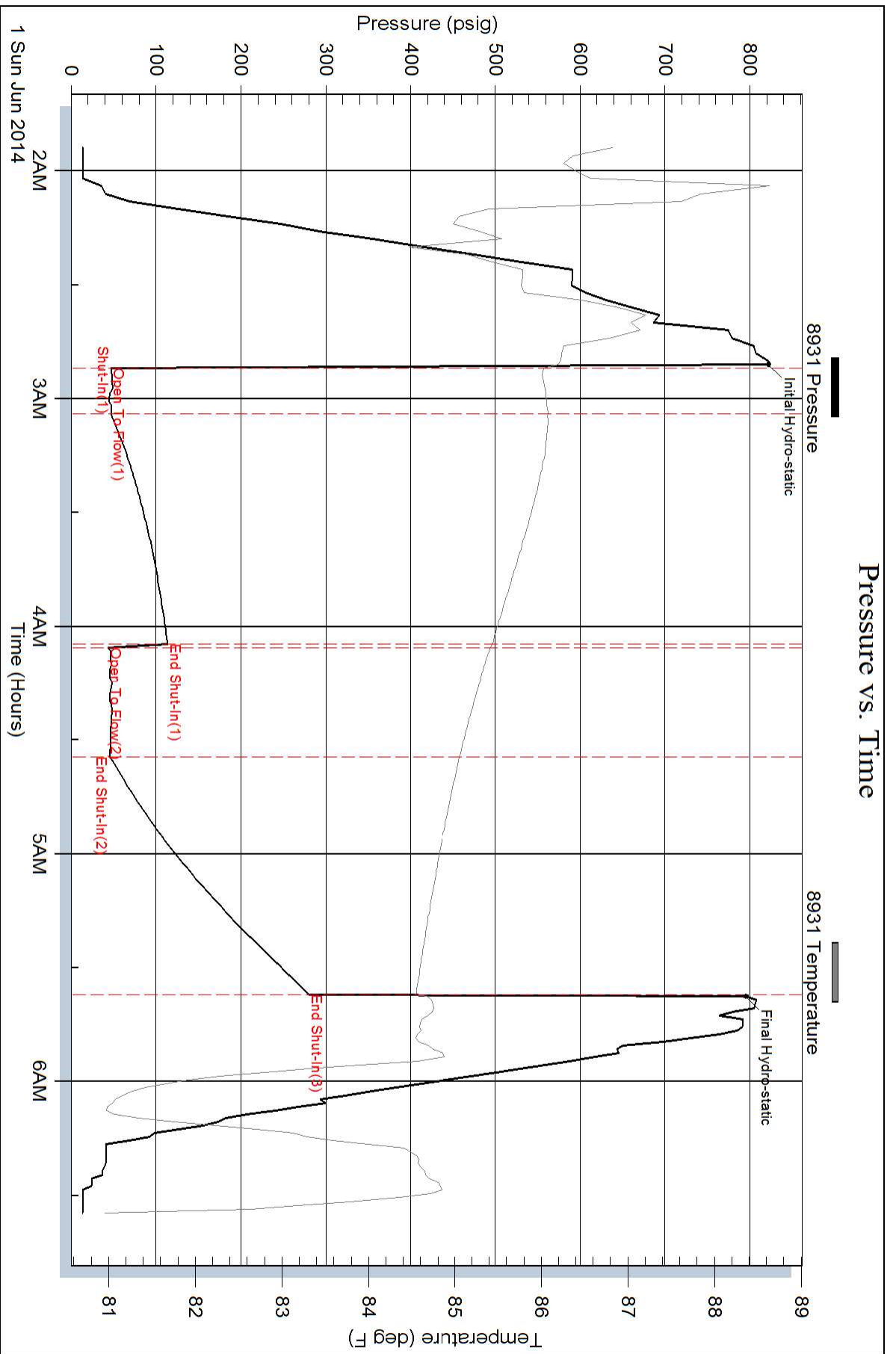
Serial #:

Laboratory Name:

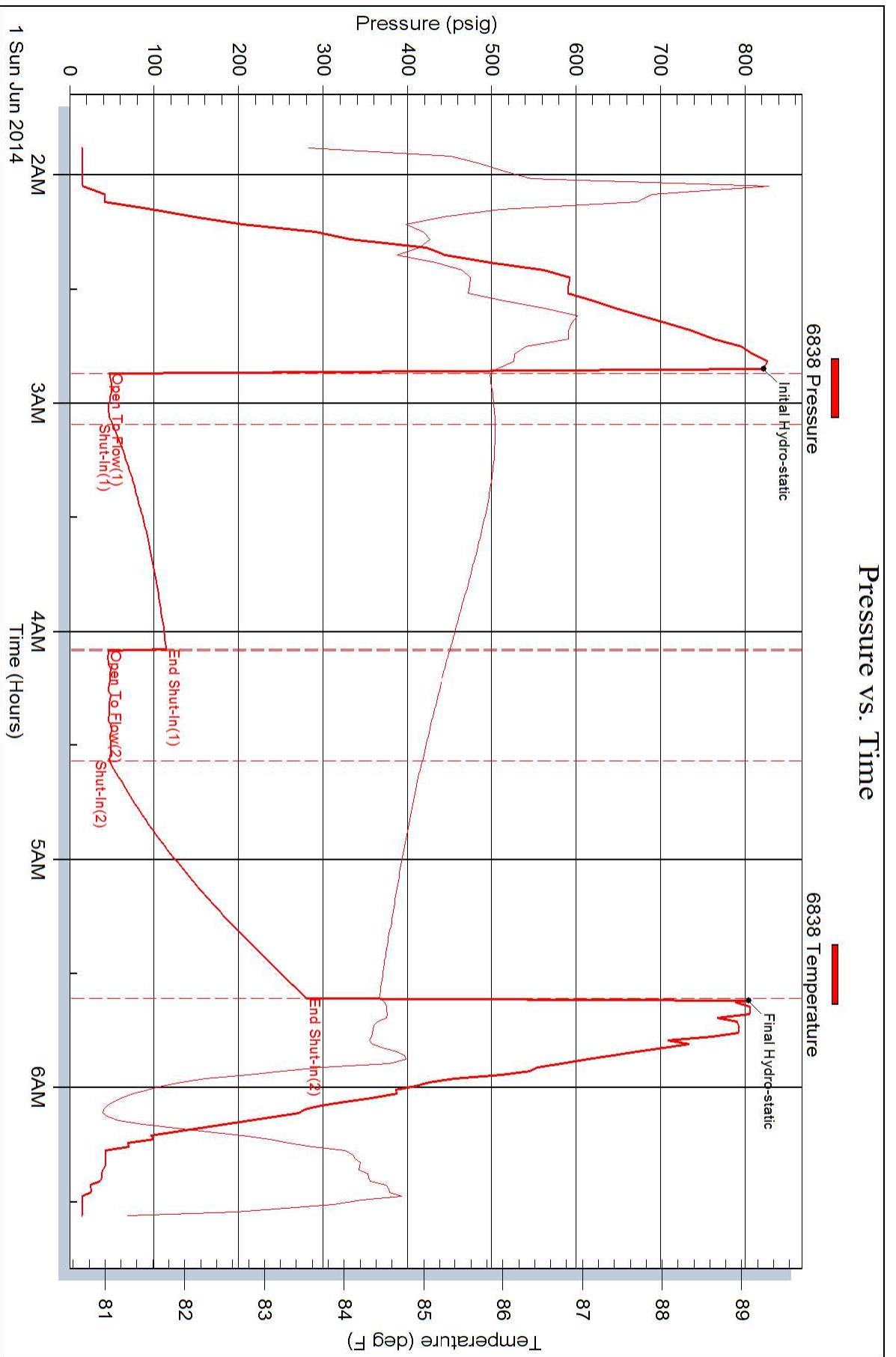
Laboratory Location:

Recovery Comments:

Pressure vs. Time



Pressure vs. Time



Mud-Co / Service Mud Inc.

Operator **FG Holl** County **Barton** State **Kansas** Pump **6** X **14** X **60** SPM Casing Program **8 5/8** " @ **834** ft.
 Well **Calcara #1** Location _____ GPM **8.22** BPM _____ " @ _____ ft.
 Contractor **Duke Drilling #2** Sec **19** TWP **19S** RNG **14W** D.P. **4.5** in. **203** FT/MIN R.A. _____ " @ _____ ft.
 Stockpoint **Hays, Kansa** Date **5/29/2014** Engineer **Jason Whiting** Collar **6.25** in. **450** ft. **369** FT/MIN R.A. Total Depth **3729** ft.

DATE	DEPTH feet	WEIGHT lb/gal	VISCOSITY			GELS 10 sec / 10 min.	pH Strip _ Meter _	FILTRATION/FILTRATION ANALYSIS					SAND %	RETORT			L.C.M.	Pump Press. PSI	CUMULATIVE COST	REMARKS AND TREATMENT
			Sec API @_F	PV @_F	Yp			ml API	Cake 32nds	Pres. #/BBL	Cl ppm	Ca ppm		Solids %	Oil %	Water %				
5/28	0																	0	Rig up.	
5/31	834																		WOC	
6/1	1704	8.7	42	12	13	8/33	8.0	13.6	1			15m	600	2.0		98.0			Drig. Displaced Starch @ 1695'	
6/2	1795	8.8	42	10	12	8/26	7.5	15.2	1			15.7m	1,080	2.6		97.4	Tr		TOH w/ DST 2 DST# 1 @ 1737'	
6/3	2216	9.0	41	10	13	9/29	7.0	15.2	2			21m	1,600	3.7		96.3			TOH w/ bit DST #2 @ 1795'	
6/4	2307	9.2	41	10	13	11/34	7.0	18.0	3			26.6m	1,880	4.9		95.1			Drig. DST #3 @ 2216'	
6/5	2855	9.0	49	14	11	9/39	10.5	8.4	1			7,500	40	4.6		95.4			Drig. DST #4 @ 2268'	
6/6	3203	9.3	54	17	14	9/40	9.0	8.0	1			7,300	20	6.7		93.3			CTCH Displaced Chemical @ 2525'	
6/7	3287	9.2	64	15	22	14/51	8.5	11.2	1			7,100	80	6.0		94.0			TIH w/ DST 6 DST #5 @ 3270'	
6/8	3377	9.1	46	12	13	13/41	7.5	14.4	2			7,500	140	5.3		94.7			CFS DST #6 @ 3287'	
6/9	3395	9.1	50	15	12	12/41	8.5	11.6	1			8,100	40	5.3		94.7			CTCH DST #7 @ 3356'	
6/10	3520	8.9	49	13	13	12/40	10.5	8.0	1			7,300	20	3.8		96.2			CFS DST #8 @ 3377'	
6/11	3545	9.0	45	12	10	9/33	10.0	9.2	1			7,200	20	4.6		95.4			TOH w/ DST 12 DST #9 @ 3395'	
6/12	3565	8.9	55	14	11	12/38	9.5	9.6	1			9,400	40	3.7		96.3			TOH f/ DST 14 DST #10 @ 3412'	
6/13	3677	9.3	66	17	21	31/91	11.0	8.8	2			9,500	40	6.5		93.5			Drig. DST #11 @ 3535'	
6/14	3729																		Final: DST #12 @ 3545'	
																			LTD - 3729' DST #13 @ 3555'	
																			14 DST's. DST #14 @ 3565'	
																			Run Casing.	
																			Reserve Pit, Chl content ppm: 8000	
																			Estimated Volume: 1200 bbls	

MUD-CO / SERVICE MUD INC.

100 S. Main Suite #310
 Wichita, Ks. 67202
 316/264-2814 Fax: 316/264-5024

DRILLING MUD RECAP

Materials	Sacks	Materials	Sacks	Amount	Amount
C/S HULLS	27	X-CIDE 102W	1	335.00	
CAUSTIC SODA	18				
DESCO	2				
DRILL PAK	5				
LIME	3				
PREMIUM GEL	420				
SALT CLAY	43				
SODA ASH	38				
STARCH	90				
SUPER LIG	13				
					Total Mud Cost
					Trucking Cost
					Trucking Surcharge
					Taxes
					TOTAL COST

Bottom Stage



Energy services, L.P.

TREATMENT REPORT

Customer FG HOLL	Lease No.	Date 6-14-14
Lease Calcare	Well # 1-19	
Field Order # 10625	Station Pratt	Casing 5/2
		Depth 3718
Type Job CNW 2 Stage	Formation	County Barton
		State KS
		Legal Description 19-19-14

PIPE DATA		PERFORATING DATA		FLUID USED	TREATMENT RESUME		
Casing Size	Tubing Size	Shots/Ft		Acid	RATE	PRESS	ISIP
5/2							
Depth 3718	Depth	From	To	Pre Pad	Max		5 Min.
Volume 90	Volume	From	To	Pad	Min		10 Min.
Max Press	Max Press	From	To	Frac	Avg		15 Min.
Well Connection	Annulus Vol.	From	To		HHP Used		Annulus Pressure
Plug Depth 3714	Packer Depth	From	To	Flush	Gas Volume		Total Load

Customer Representative Rob	Station Manager Kevin	Treater Joe
Service Units 77686 19905 19831 19862	28443	
Driver Names MIKE	JOSH	JOE

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
0500					ON LOC / safety meeting
					cen on 2-3-4-5-6-7-8-9-11-12
					33-34-35-36-37-38
					Basisset on JT 6-32
					DV TOOL on 33' JT 2346'
0530					START Running CSG
730					CSG on BOTTOM / circ with Rig
930					Hook up TO PUMP TRK TO START JOB
930	100		5	6	H2O SPacer
			12	6	Upper flush
			5	6	H2O SPacer
	150		31	6	MIX 125 SF AA2 cement @ 15#
					Shut Down < Clear Pump & Lines
950	150		0	6	Release Plug Start H2O DISP.
			60	6	START mud DISP.
	300		76	6	LIST PST
	500		80	4.5	Slow Rate
1010	1500		90	0	Plug Down
					shut Down DRAP opening TOOL
	800				OPEN TOOL
					BOTTOM STAGE COMPLETE Thank you
					JOE

Customer **F.G. HOLL** Lease No. _____ Date **6-14-14**
 Lease **Calcare** Well # **1-19**
 Field Order # **10625** Station _____ Casing **5 1/2** Depth **2346** County **Barton** State **MO**
 Type Job **CNW 2 Stage TOP Stage** Formation _____ Legal Description **19-19-14**

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size	Tubing Size	Shots/Ft		Acid	RATE	PRESS	ISIP	
5 1/2								
Depth 2946	Depth	From	To	Pre Pad	Max		5 Min.	
Volume 57	Volume	From	To	Pad	Min		10 Min.	
Max Press	Max Press	From	To	Frac	Avg		15 Min.	
Well Connection	Annulus Vol.	From	To		HHP Used		Annulus Pressure	
Plug Depth 2346	Packer Depth	From	To	Flush	Gas Volume		Total Load	

Customer Representative **Rob** Station Manager **Kevin** Treater **Joe**

Service Units	77686	19905	12083	19862	28443				
Driver Names	MIKE		JOHN		JOE				

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
0500					ONLOC / safety meeting
					CIRC. WITH RIG
1070 1270					HOOK UP TO PUMP TRKS START JOB
1130 1230	0		5	5	H2O SPACER
			12	5	SUPER FLUSH
			5	5	H2O SPACER
	100		31	5	MIX 125 SK AA2 CEMENT @ 15#
			0	0	SHUT DOWN CLEAR PUMP LINES
			0	6	RELEASE PLUG START H2O DISP.
	300		44	6	LIFT PSI
	300		47	5	SLOW RATE
1300	2000		57	0	PLUG DOWN CLOSE DV TOOL
					PLUG BH + MH
					JOB COMPLETE
					Thank you
					JOE



BASICSM
ENERGY SERVICES
PRESSURE PUMPING & WIRELINE

10244 NE Hwy. 61
P.O. Box 8613
Pratt, Kansas 67124
Phone 620-672-1201

FIELD SERVICE TICKET

1718 10428 A

DATE _____ TICKET NO. _____

DATE OF JOB: 5-31-14		DISTRICT: P-1001		NEW WELL <input type="checkbox"/>		OLD WELL <input type="checkbox"/>		PROD <input type="checkbox"/>		INJ <input type="checkbox"/>		WDW <input type="checkbox"/>		CUSTOMER ORDER NO.:	
CUSTOMER: H. C. Hall				LEASE: H. C. Hall				WELL NO.:							
ADDRESS:				COUNTY: Barton				STATE: MO							
CITY:				STATE:				SERVICE CREW: M. J. ...							
AUTHORIZED BY:				JOB TYPE: ...											
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM	PM	TIME					
						ARRIVED AT JOB									
						START OPERATION									
						FINISH OPERATION									
						RELEASED									
						MILES FROM STATION TO WELL					7				

CONTRACT CONDITIONS: (This contract must be signed before the job is commenced or merchandise is delivered).

The undersigned is authorized to execute this contract as an agent of the customer. As such, the undersigned agrees and acknowledges that this contract for services, materials, products, and/or supplies includes all of and only those terms and conditions appearing on the front and back of this document. No additional or substitute terms and/or conditions shall become a part of this contract without the written consent of an officer of Basic Energy Services LP.

SIGNED: _____
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
CE 101	Acid	20	20		
CE 102	...	20	20		
CE 103	...	10	10		
CE 104	...	20	20		
CE 105	...	1	1		
CE 106	...	2	2		
CE 107	...	10	10		
CE 108	...	10	10		
CE 109	...	1	1		
CE 110	...	40	40		
CE 111	...	1	1		
CE 112	...	40	40		
CE 113	...	1	1		
CE 114	...	1	1		
CE 115	...	1	1		
CE 116	...	1	1		
CE 117	...	1	1		
CE 118	...	1	1		
CE 119	...	1	1		
CE 120	...	1	1		
CE 121	...	1	1		
CE 122	...	1	1		
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CE 124	...	1	1		
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CE 136	...	1	1		
CE 137	...	1	1		
CE 138	...	1	1		
CE 139	...	1	1		
CE 140	...	1	1		
CE 141	...	1	1		
CE 142	...	1	1		
CE 143	...	1	1		
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CE 192	...	1	1		
CE 193	...	1	1		
CE 194	...	1	1		
CE 195	...	1	1		
CE 196	...	1	1		
CE 197	...	1	1		
CE 198	...	1	1		
CE 199	...	1	1		
CE 200	...	1	1		

SUB TOTAL

CHEMICAL / ACID DATA:			

SERVICE & EQUIPMENT	%TAX ON \$		
MATERIALS	%TAX ON \$		
TOTAL			

SERVICE REPRESENTATIVE: _____	THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: _____
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FIELD SERVICE ORDER NO. _____ (WELL OWNER OPERATOR CONTRACTOR OR AGENT)

Lithology Strip Log

Rock Types

Accessories

WELLSITE GEOLOGIST'S REPORT

WellSight Systems

Scale 1:240 (5"=100') Imperial
Measured Depth Log

Well Name: CALCARA NO 1-19
 Location: SEC 19-T19S-R14W
 License Number: 15-009-25, Region: Barton Co
 Spud Date: MAY-29-2014 Drilling Completed: JUNE 2014
 Surface Coordinates: C E/2 E/2 E/2
 2600' FNL,330' FEL,40'N
 Bottom Hole Coordinates: VERTICAL
 Ground Elevation (ft): 1896' K.B. Elevation (ft): 1904'
 Logged Interval (ft): 1700' To: 3750' Total Depth (ft): 3750'
 Formation: LANSING/KC AND ARBUCKLE
 Type of Drilling Fluid: STARCH/CHEMICAL

Printed by WellSight Log Viewer from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR:

Company: F.G. Holl Company LLC
 Address: 9431 E. Central, Suite 100
 Wichita, Kansas 67206

DRILLING CONTRACTOR:

DUKE RIG #2
 Double derrick; drill pipe 4.5' X H (16.6#); collars 6.25 x2.25 x 357.68'; Bit; 7 7/8, Reed HP52, 3-14's; Reference datum 8 ft above ground level. Poor Boy's (Martin- Decker) mechanical geologist.

SURFACE CASING:

CIRCULATION SYSTEM:

Pump Make: EWCO,Pump model: 14W400, liner size 6 ,stroke 14. Starch mud @ 1850' to 2590', Chemical mud @ 2590' to TD
 Mud/Co/Service Mud, Inc.-Jason Whiting-Great Bend, Ks-620-282-0556

GAS DETECTION SYSTEM:

MBC Well Logging and Leasing -Analog Gas Detection.

OPEN HOLE LOGS:

DN (PE), DI (SP), ML: 5" detail RTD-3600'; 2" DI to surface casing; No Sonic; Log-Tech, Inc., Hays, KS, Mike Garrison; Log total depth (4660) was even to rotary total depth (46??).

COMPLETION:

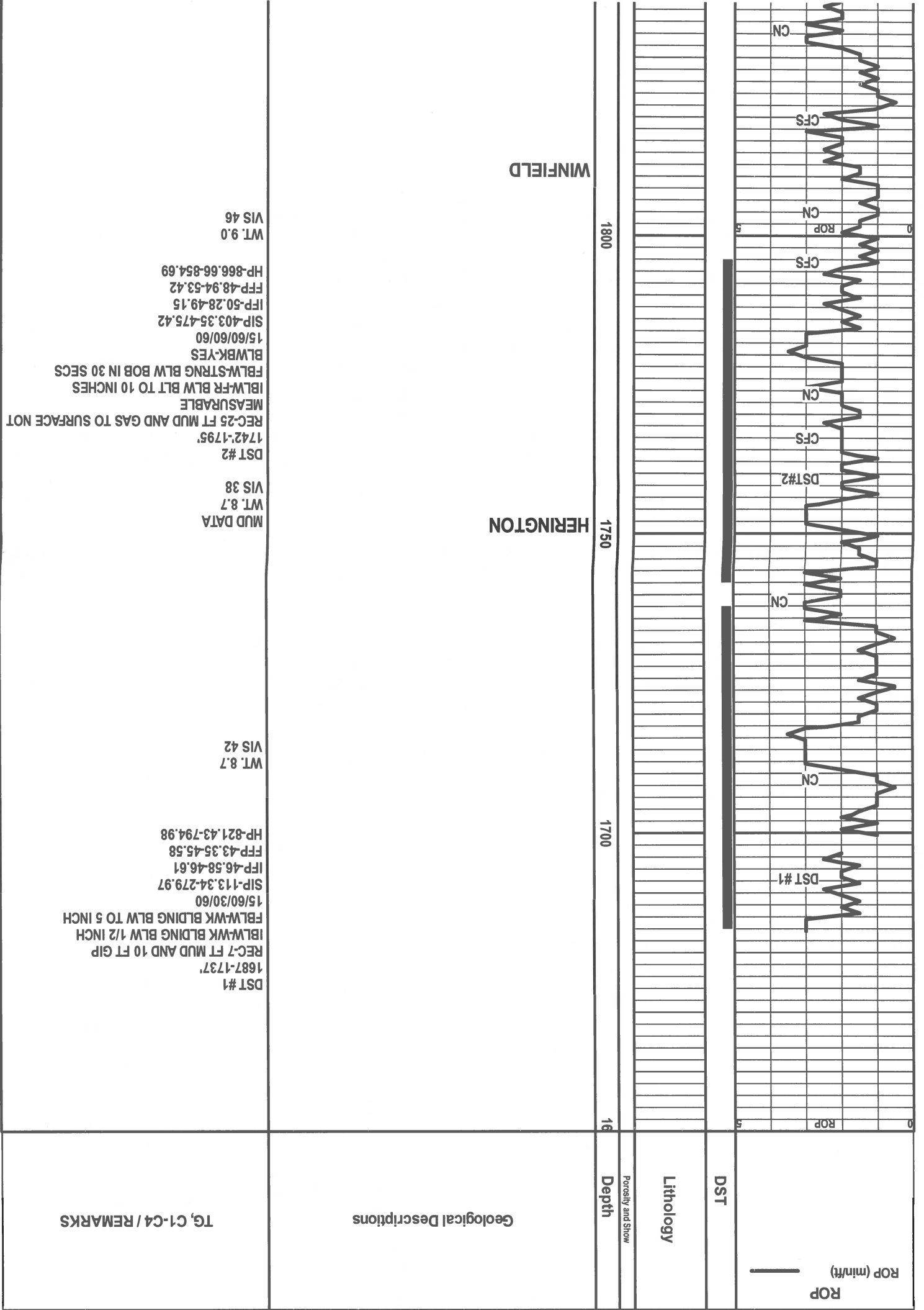
Dry and Abandoned.

WELLSITE GEOLOGIST:

RENE HUSTEAD
 600 N. WINWOOD ST.
 GARDNER, KANSAS 66030
 PHONE (913) 208-3390

Geologist Contact Info:

Name: Rene Hustead
Company: Consultant
Address: 600 N. Winwood St.
 Gardner, Kansas 66030
Phone- (913) 908-3390



TG, C1-C4 / REMARKS

Geological Descriptions

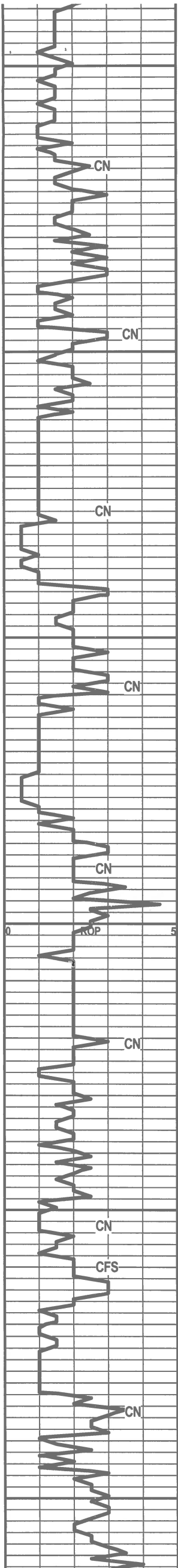
Depth

Poreosity and Show

Lithology

DST

ROP (min/ft)



1850
1900
1950
2000
2050
2100

TOWANDA

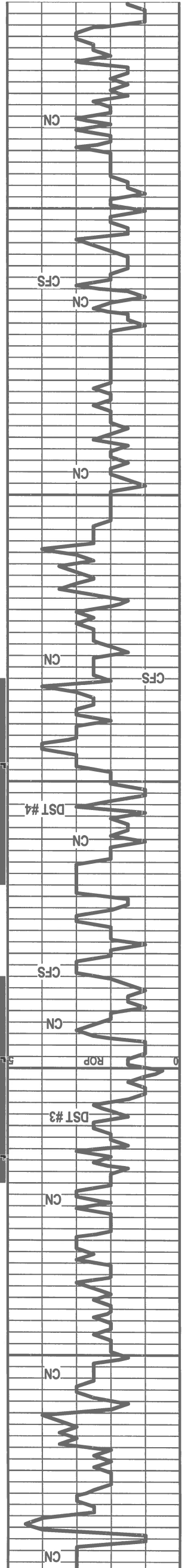
FT RILEY

B/FLORENCE

WREFORD

COUNCIL GROVE

CROUSE



2350

2300

2250

2200

2150

RED EAGLE

NEVA

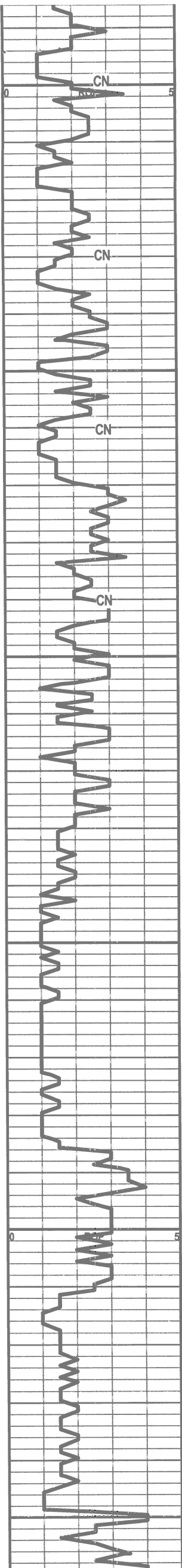
COTTONWOOD

DST #4
 2232-2268'
 REC-30 FT MUD AND 17.74 MCF/D
 IBW-STRNG BLDNG BLW BLT TO BOB
 IMMED/BLWBK-NO
 FBLW-STRNG BLW BLT TO BOB
 IMMED/BLWBK-YES
 15/60/60/90
 SIP-781.24-754.9
 IFP-71.67-47.49
 FFP-52.86-48.01
 HP-1149.12-1081.4

WT. 9.1
 VIS 40

DST #3
 2180-2216'
 REC-75 FT MUD
 IBW-STRNG BLW BOB IN 1 AND 1/2 INCHES
 FBLW-STRNG BLW BOB IMMED
 BLWBK-NO
 15/60/45/90
 SIP-736.84-734.30
 IFP-39.19-50.72
 FFP-55.9-78.53
 HP-1119.65-1097.38

WT. 9.0
 VIS 40



2400
2450
2500
2550
2600
2650

SH-RED-GRY-FRM-BLKY

LS-TN-F-XLN-OOL-TR FOSS-TR GLAU-HD-DNS -RARE
FRAC POR

SH-LT GRY-GUMMY

SH-GRY-SILTY AND LS-GRY-F-XLN-SILTY

SLTSS-FRSTY GRY-F-GRN-SHLY-MICA-TR HEM

SH-LT GRY-V-SFT-GUMMY

SS-FRSTY WHT-F-GRN-TT-WELL SRTE-D-CALC
CMT-MICA-TR HEM-PR INTER-GRN POR

SH-LT GRY-SFT-SILTY

SH-GRY-GRN-SPLNTY

SH-LT GRY/DK GRY-SPLNTY-SILTY

STOTLER 2586' (-682')

LS-CRM/GRY-F-XLN-FOSS FRAGS-HD-DNS LG PYR
XLS IN TRAY

LS-TN-F-XLN-FOSS-HD-DNS

LS-GRY-F-XLN-V-SHLY-FOSS/SH-GRY-FRM-BLKY-LMY

SH-GRY-BLKY-SILTY PYR XLS IN TRAY

SLTSS-FRSTY GRY-F-GRN-V-SHLY-MICA-HEM

SH-GRY-SFT-SILTY W/ SLTSS

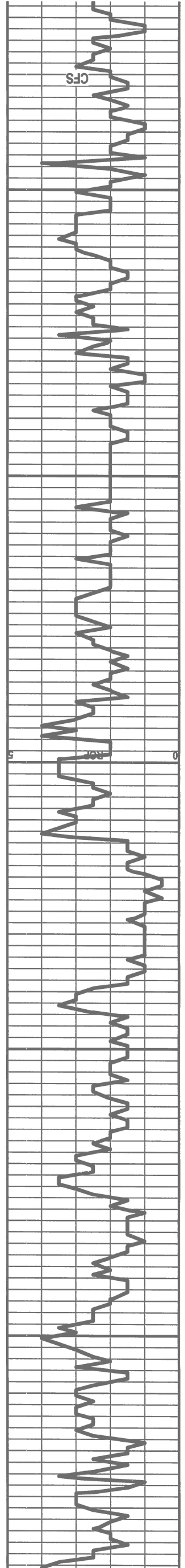
TARKIO 2649' (-745')

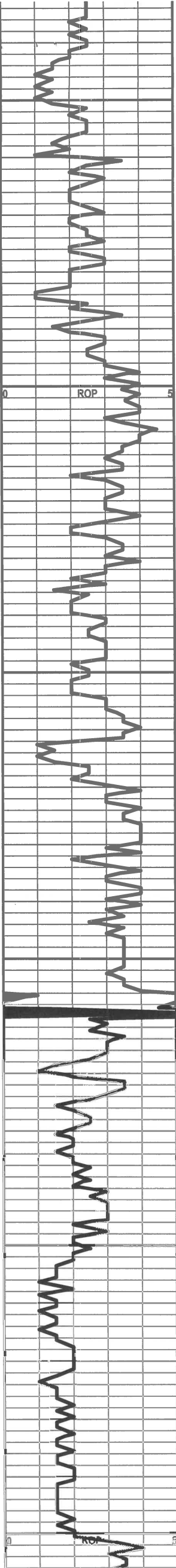
LS-DK CRM-V-F-XLN-HD-DNS

LS-CRM-F-XLN-HD-DNS TR FOSS IMBD

LS A.A
 LS-CRM-F-XLN-FOSS-TR SH IMBD-HD-DNS W/ SH-DK
 GRY-FRM-BLKY-LMY
 LS-TN-F-XLN-FOSS-HS-DNS
 LS-OFF WHT-V-F-XLN-V-BRIT-SLI CHLKY-DNS
 LS-TN-F-XLN-FOSS-OOL-BRIT-TR SM VUG POR-NO VIS
 SHOW
 SH-GRY-BLKY AND SLTSS
 LS-GRY-F-XLN-V-FOSS-HD-DNS
 SH-GRY AND WHT-V-FRM-BLKY-FOSS-LMY
 LS-GRY-F-XLN-FOSS-HD-DNS
 LS-GRY-F-XLN-FOSS-HD-DNS
 SH-GRY-BLKY
 LS-TN-F-XLN-FOSS-HD-DNS
 SLTSS-FRSTY GRY-M-GRN-V-SHLY-MICA
 SH-GRY-BLKY-SILTY
 SLTSS-FRSTY GRY-F-GRN-V-SHLY-MICAHEM
HOWARD 2787' (-883')
 LS-OFF WHT-F-XLN-HD-DNS
 SH-DK BLK-SPLNTY
 LS-CRM-F-XLN-CHLKY-TR FOSS-BRIT-FR PP POR-NO
 VIS SHOW
 SH-GRN-GRY-SPLNTY
 LS-TN/GRY-F-GRN-V-FOSS-BRIT-DNS
 LS-CRM-F-GRN-FOSS-SHLY IP-MSTLY DNS TR
 INTER-GRN POR-NO SHOW
 LS A.A
 LS-GRY-F-XLN-HD-DNS
 LS-GRY-F-XLN-FOSS-OOL-SHLY-TR SM VUG POR-NO
 VIS SHOW
 LS-CRM-F-XLN-SUCRO-SM PYR XLS IMBD-DNS
 LS-CRM-F-GRN-CHLKY-BRIT-TR FOSS-DNS TR
 INTER-GRN POR-NO SHOW
 LS-CRM-F-XLN-FOSS-HD-DNS TR PYR IMBD
 LS-CRM/GRY-M-GRN-FOSS-BRIT-FR INTER-GRN
 POR-FREE SMALL SHELLS IN TRAY-NO VIS SHOW
 LS A.A W/ CHRT-GRY-OPQ-FOSS-FRSH
 LS-TN/GRY-F-XLN-FOSS-HD-DNS
 LS-TN-M-GRN-FOSS-PR TO FR INTER-GRN POR-NO VIS
 SHOW

2900
 2850
 2800
 2750
 2700





2950
3000
3050
3100
3150
3200

LS-TN-F-XLN-FOSS-HD-DNS

LS-TN/GRY-F-GRN-FOSS-FUS-BRIT-FR PP POR-NO VIS SHOW

SH-BLK-CARB

SH-GRY-BLKY-FOSS

LS-TN/GRY-M-GRN-FOSS-FR INTER-GRN/PP POR-NO VIS SHOW

SH-DK GRY-SPLNTY

LS-TN/GRY-F-M-GRN-FOSS-BRIT-FR INTER-GRN/PP POR-NO VIS SHOW

SH-GRY-BLKY

LS-TN/GRY-M-GRN-FOSS-SHLY-BRIT TO DNS-TR INTER-GRN POR-NO VIS FLOR-NO VIS CUT

SH-BLK-CARB

LS-CRM-M-GRN-FOSS-OOL-FR INTER-GRN POR-NO VIS FLOR-NO VIS CUT

LS-TN/GRY-F-M-GRN FOSS-FR INTER-GRN POR-NO VIS FLOR-NO VIS CUT

LS-TN-F-XLN-OOL-FR OOL-MOLDIC POR-NO VIS FLOR-NO VIS CUT

LS-GRY/OFF WHT-F-XLN-HD-DNS W/ TR DK BLK STN-NO VIS FLOR-NO VIS CUT —CHRT-DK BRN-OPQ-FRSH

LS-TN-F-XLN-HD-DNS

LS-GRY/TN-F-XLN-BLOCKY-HD-DNS

HEEBNER

SH-BLK-CARB

TORONTO

LS-TN-F-XLN-FOSS-BRIT-SM PYR XLS IMBD-TR FRAC POR-SCATT DULL WHT MIN FLOR-NO VIS SHOW

DOUGLAS SH

SH-GRN-RED-BLKY

SH-GRY-FRM-BLKY-FOSS

SH-GRY-SFT-SILTY-FOSS

SLTSS-FRSTY GRY-F-GRN-V-SHLY-MICA-HEM

SH-LT GRY-BLKY-SILTY

BROWN LS

LS-DK TN-F-XLN-HD-DNS

REC-252 F1 CLEAN GASSEY OIL
123 FT -10% GAS/80% OIL/10% MUD

LS-TN-F-XLN-FR PP POR-DK BLK STN-SCATT YEL
FLOR-V-FNT FLSH CUT -FNT ODOR

LS-TN-F-XLN-FR PP POR-DK BLK STN-SCATT YEL

LS-CRM-F-XLN-F-OSS-HD-DNS W/ CHRT-TN-OPQ-FRSH

LS-TN-F-M-XLN-TR FOSS-BRIT-TR INTER-GRN POR-TR
DULL WHT FLOR-NO VIS CUT-NO ODOR

LS-TN-F-XLN-OOL-PR TO FR INTER-PRT POR-TR
OOL-MOLDIC-TR LT BRN STN-NO VIS FLOR-PR STRM
CUT-GD ODOR

LS-TN-F-XLN-OOL-FR INTER-PRT/INTER-GRN POR AND
SOME OOL-MOLDIC POR-LT BRN STN-YEL GLD
FLOR-FR STRM CUT-STRNG ODOR

LS-TN-F-XLN-BRIT-OOL-FR TO GD
OOL-MOLDIC/INTER-GRN POR-LT BRN STN-GD STRM
CUT-GD ODOR

LS-TN-F-XLN-OOL-FR-OOL-MOLDIC POR-NO VIS
FLOR-LT BRN STN-FR STRM CUT-GD ODOR

LS-TN-F-XLN-V-OOL-EX-OOL-MOLDIC POR-DULL WHT
MIN FLOR-NO VIS SHOW

LS-DK TN-F-XLN-SLI CHLKY-OOL-FR OOL-MOLDIC
POR-NO VIS FLOR-NO VIS CUT

LS-OFF WHT-F-XLN-TR FOSS FRAGS-HD-DNS

LS-TN-F-XLN-F-GRN-SUCRO-OOL-PR TO FR
INTER-GRN/SM VUG POR-LT BRN STN IP-SCATT YEL
FLOR-FR STRM CUT-STRNG ODOR-SM PYR XLS IMBD

LS-OFF WHT-F-XLN-SUCRO IP-OOL-PR TO FR
INTER-PRT POR-SOME INTER-XLN/OOL-MOLDIC
POR-TR LT BRN STN-NO VIS FLOR-FR STRM
CUT-STRNG ODOR

LS-TN-F-XLN-SUCRO-OOL-FR OOL-MOLDIC/INTER-GRN
POR-LT BRN STN-NO VIS FLOR-FR STRM CUT-GD
ODOR

LS-TN-F-XLN-PR TO FR PP POR-LT BRN STN-NO VIS
FLOR-FR FLSH CUT-GD ODOR

SH-GRY-SPLNTY-SILTY

LS-OFF WHT-F-XLN-CHLKY IP-BRIT TO HD-NO VIS
POR-DULL WHT FLOR-NO VIS CUT

LS-TN-F-XLN-TR FOSS-NO VIS POR-DULL WHT MIN
FLOR-NO VIS CUT OR SHOW WITH SHLT
GRY-BLKY-SILTY

SHALES-RED-GRY W/ CHRT AND LS
LS-OFF WHT-V-FXLN-SLI CHLKY-BRIT-DULL WHT
FLOR-NO VIS CUT

B/KC 3464
SHALES-GRY-GRN-RED-BLKY W/ CHRT-TN-OPQ-FRSH

SH-GRY-SPLNTY TR SH-RED-SFT-SILTY
SS-FRSTY GRY-F-GRN-V-SHLY-RNDED-WELL
SRTED-CALC CMT-DK BLK STN-NO VIS FLOR-GD STRM
CUT-NO ODOR

DST #6
3271-3285
REC-195 FT MUDDY WATER -60% MUD AND
40% WATER

DST #7
3330-3356
REC-1 FT MUD

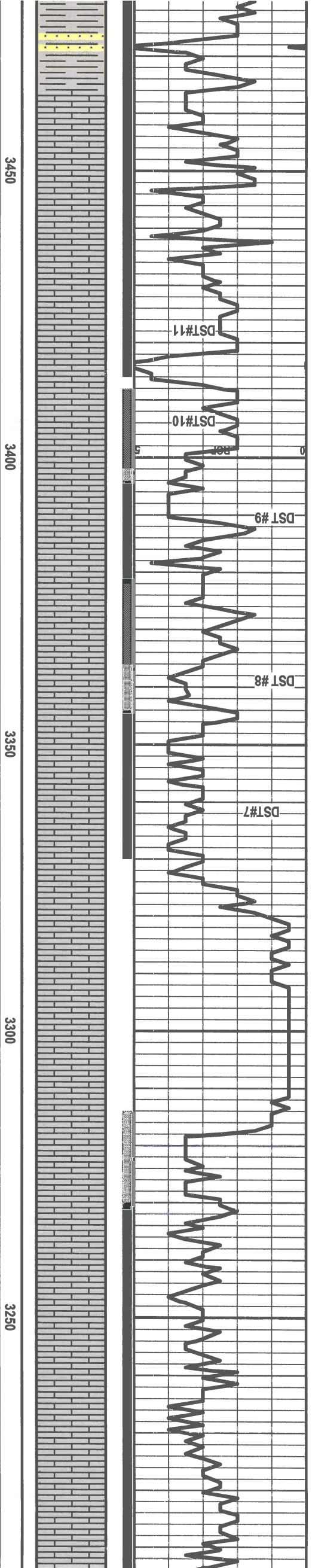
DST #8
3356-3377
REC-80 FT OIL CUT MUD -4% OIL 96% MUD

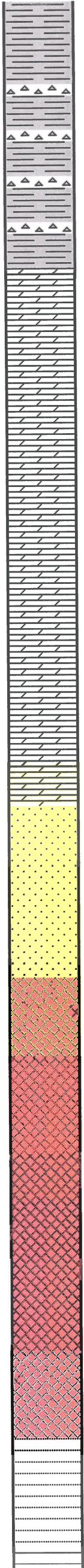
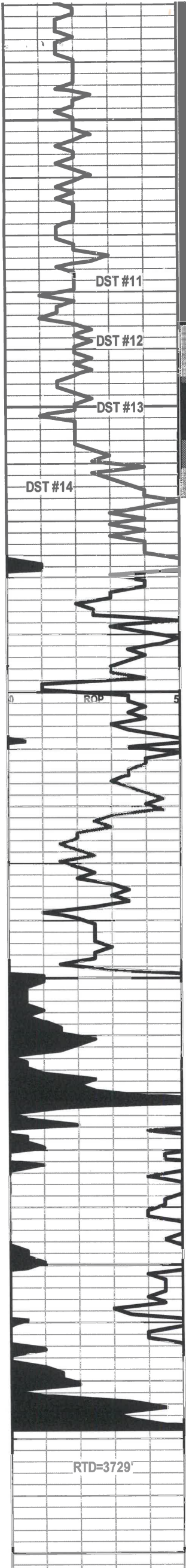
DST #9
3377-3395
REC-161 FT GASSEY OIL
63 FT 20% GAS/40% OIL/40% MUD

DST #10
3396-3412
REC-31 FT MUD

DST #11
3450
B/KC 3464

LANSING/KC





SH-BRITE RED-BLKY-SNDY

SH-RED-SFT-SILTY WITH TR SH-GRY-SPLNTY

3500 SH-RED-SFT-SILTY W/
CHRT-TRANS-OOL-FRS-H/CHRT-VARIG-OPQ-FRSH/CHR'
WHT-TRIP-NO VIS POR-1 PC-SANDSTONE

SH-RED-SFT-SILTY WITH CHRT-YEL-RED-OPQ-FRSH

SH-RED-GRY-SFT-SPLNTY—CHRT-VARIG-OPQ-FRSH

ARBUCKLE

DOLO-OFF WHT-CRS-GRN-SCATT WHT FLOR-FR TO
GD INTER-GRN POR-LT BRN STN-GD STRM CUT-GD
ODOR

DOLO-OFF WHT-CRS-GRN-SCATT WHT FLOR-FR
INTER-GRN POR-LT BRN STN-GD STRM CUT-GD ODOR

3550 DOLO-OFF WHT-M-GRN-WHT FLOR-FR INTER-GRN
POR-FR STRM CUT-GD ODOR

DOLO-OFF WHT-F-GRN-SNDY TEX -HD-DNS-BRITE
WHT FLOR-NO VIS CUT

DOLO A.A.

DOLO-OFF WHT-F-GRN-SNDY TEX-FR INTER-GRN
POR-BRITE WHT FLOR-NO VIS CUT

DOLO-OFF WHT-V-SNDY-FR INTER-GRN POR-W/ SND
GRNS IN TRAY-BRITE WHT FLOR-NO VIS CUT

3600 DOLO/SS A.A.

SS-TRANS-F-M-GRN-FRI TO TT-RNDED-PR SRTEG-TR
DOLO CMT-FR INTER-GRN POR-NO VIS FLOR-NO VIS
CUT

SS A.A.

SS-TRANS-M-GRN-FRI-RNDED-PR SRTEG-DOLO
CMT-FR INTER-GRN POR-W/ LG SND GRNS IN
TRAY-NO VIS FLOR-NO VIS CUT OR SHOW OF OIL

3650 GRANITE-PINK-W/ GRN AND BLK MINERALS-PYR
XLS-NO VIS FLOR-NO VIS SHOW

QUARTZITE-TRANS-W/ BLK MIN-NO VIS FLOR-NO VIS
SHOW

QUARIZITE A.A. SLI PINKISH

POOR SAMPLES

POOR SAMPLES

3700 QUARTZITE-TRANS W BLK MIN (LOTS OF SHALE IN
SAMPLE)

POOR SAMPLES

3750

DST #11
3414-3535
REC -161 GASSEY MUD CUT OIL
15% GAS/20% OIL/65% MUD
GAS TO SURF-2,916,000 MCF/D

DST #12
3536-3545
REC- 471 FT GASSEY OIL

DST #13
3546-3555 FT
REC- 2674 CLEAN GASSEY OIL
126 FT MUDDY WATER 20% MUD/80%
WATER

DST #14
3556-3565
REC 52 FT OIL CUT MUD —10% OIL/90%
MUD



DRILL STEM TEST REPORT

Prepared For: **F.G. Holl Company**

9431 East Central STE 100
Wichita Kansas 67206

ATTN: Rene Husted

Calcara unit 1-19

19-19s-14-Barton

Start Date: 2014.06.02 @ 03:38:00

End Date: 2014.06.02 @ 08:42:30

Job Ticket #: 18328 DST #: 2

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

Printed: 2014.06.02 @ 09:53:13



DRILL STEM TEST REPORT

TOOL DIAGRAM

F.G. Holl Company
 9431 East Central STE 100
 Wichita Kansas 67206
 ATTN: Rene Husted

19-19s-14-Barton
Calcara unit 1-19
 Job Ticket: 18328 **DST#: 2**
 Test Start: 2014.06.02 @ 03:38:00

Tool Information

Drill Pipe:	Length: 1737.00 ft	Diameter: 3.80 inches	Volume: 24.37 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 34000.00 lb
			<u>Total Volume: 24.37 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 30000.00 lb
Depth to Top Packer:	1742.00 ft			Final 30000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	53.51 ft			
Tool Length:	81.51 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			1719.00	
Hydraulic tool	5.00			1724.00	
Jars	6.00			1730.00	
Safety Joint	2.00			1732.00	
Top Packer	5.00			1737.00	
Packer	5.00			1742.00	28.00 Bottom Of Top Packer
Anchor	7.00			1749.00	
Change Over Sub	0.00			1749.00	
Drill Pipe	31.51			1780.51	
Change Over Sub	0.00			1780.51	
Anchor	10.00			1790.51	
Recorder	0.00	8931	Inside	1790.51	
Recorder	0.00	6838	Outside	1790.51	
Bull Plug	5.00			1795.51	53.51 Anchor Tool

Total Tool Length: 81.51



DRILL STEM TEST REPORT

FLUID SUMMARY

F.G. Holl Company

19-19s-14-Barton

9431 East Central STE 100
Wichita Kansas 67206

Calcara unit 1-19

Job Ticket: 18328

DST#: 2

ATTN: Rene Husted

Test Start: 2014.06.02 @ 03:38:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length: ft

Water Salinity: ppm

Viscosity: 42.00 sec/qt

Cushion Volume: bbl

Water Loss: 13.60 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 15000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
25.00	Mud 100%	0.351

Total Length: 25.00 ft Total Volume: 0.351 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

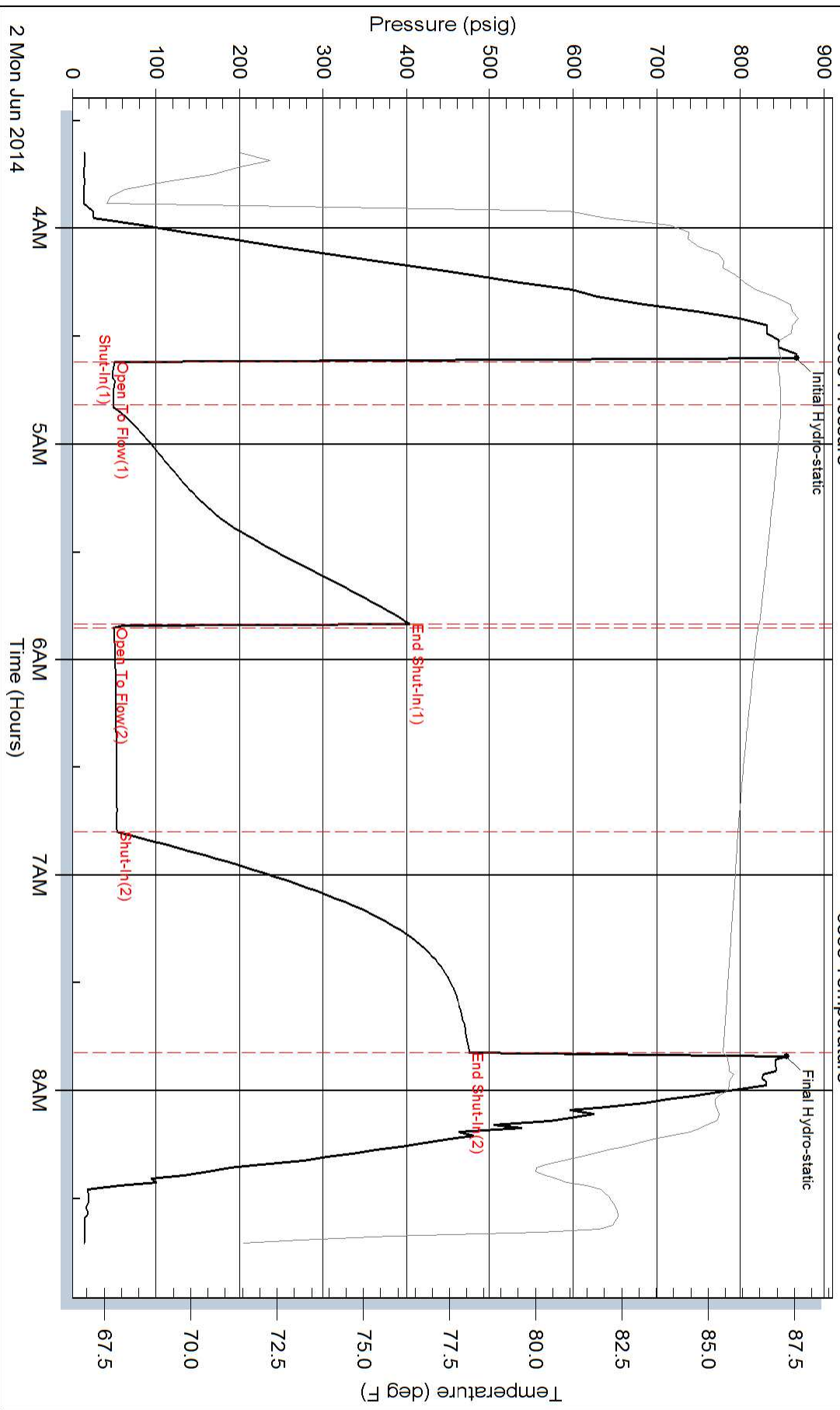
Serial #:

Laboratory Name:

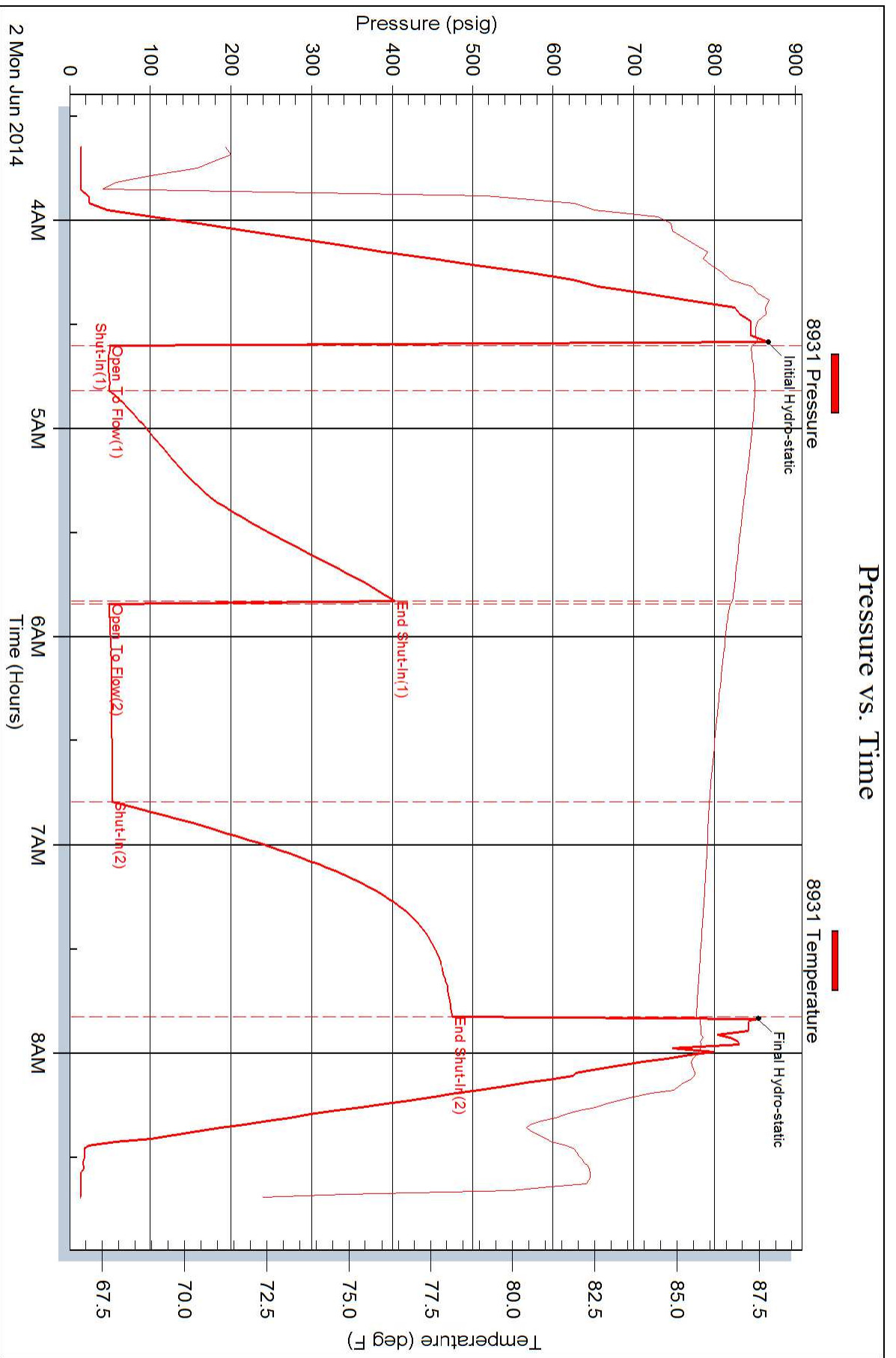
Laboratory Location:

Recovery Comments:

Pressure vs. Time



Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **F.G. Holl Company**

9431 East Central STE 100
Wichita Kansas 67206

ATTN: Rene Husted

Calcara unit 1-19

19-19s-14-Barton

Start Date: 2014.06.03 @ 08:11:00

End Date: 2014.06.03 @ 13:46:00

Job Ticket #: 18329 DST #: 3

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

Printed: 2014.06.03 @ 15:03:30



DRILL STEM TEST REPORT

TOOL DIAGRAM

F.G. Holl Company
 9431 East Central STE 100
 Wichita Kansas 67206
 ATTN: Rene Husted

19-19s-14-Barton
Calcara unit 1-19
 Job Ticket: 18329 **DST#: 3**
 Test Start: 2014.06.03 @ 08:11:00

Tool Information

Drill Pipe:	Length: 2175.00 ft	Diameter: 3.80 inches	Volume: 30.51 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 36000.00 lb
			<u>Total Volume: 30.51 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 35000.00 lb
Depth to Top Packer:	2180.00 ft			Final 35000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	36.00 ft			
Tool Length:	64.00 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			2157.00	
Hydraulic tool	5.00			2162.00	
Jars	6.00			2168.00	
Safety Joint	2.00			2170.00	
Top Packer	5.00			2175.00	
Packer	5.00			2180.00	28.00 Bottom Of Top Packer
Perforations	31.00			2211.00	
Recorder	0.00	8931	Inside	2211.00	
Recorder	0.00	6838	Outside	2211.00	
Bull Plug	5.00			2216.00	36.00 Anchor Tool
Total Tool Length:	64.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

F.G. Holl Company

19-19s-14-Barton

9431 East Central STE 100
Wichita Kansas 67206

Calcara unit 1-19

Job Ticket: 18329

DST#: 3

ATTN: Rene Husted

Test Start: 2014.06.03 @ 08:11:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length: ft

Water Salinity: ppm

Viscosity: 41.00 sec/qt

Cushion Volume: bbl

Water Loss: 15.20 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 21000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
75.00	Mud 100%	1.052

Total Length: 75.00 ft Total Volume: 1.052 bbl

Num Fluid Samples: 0

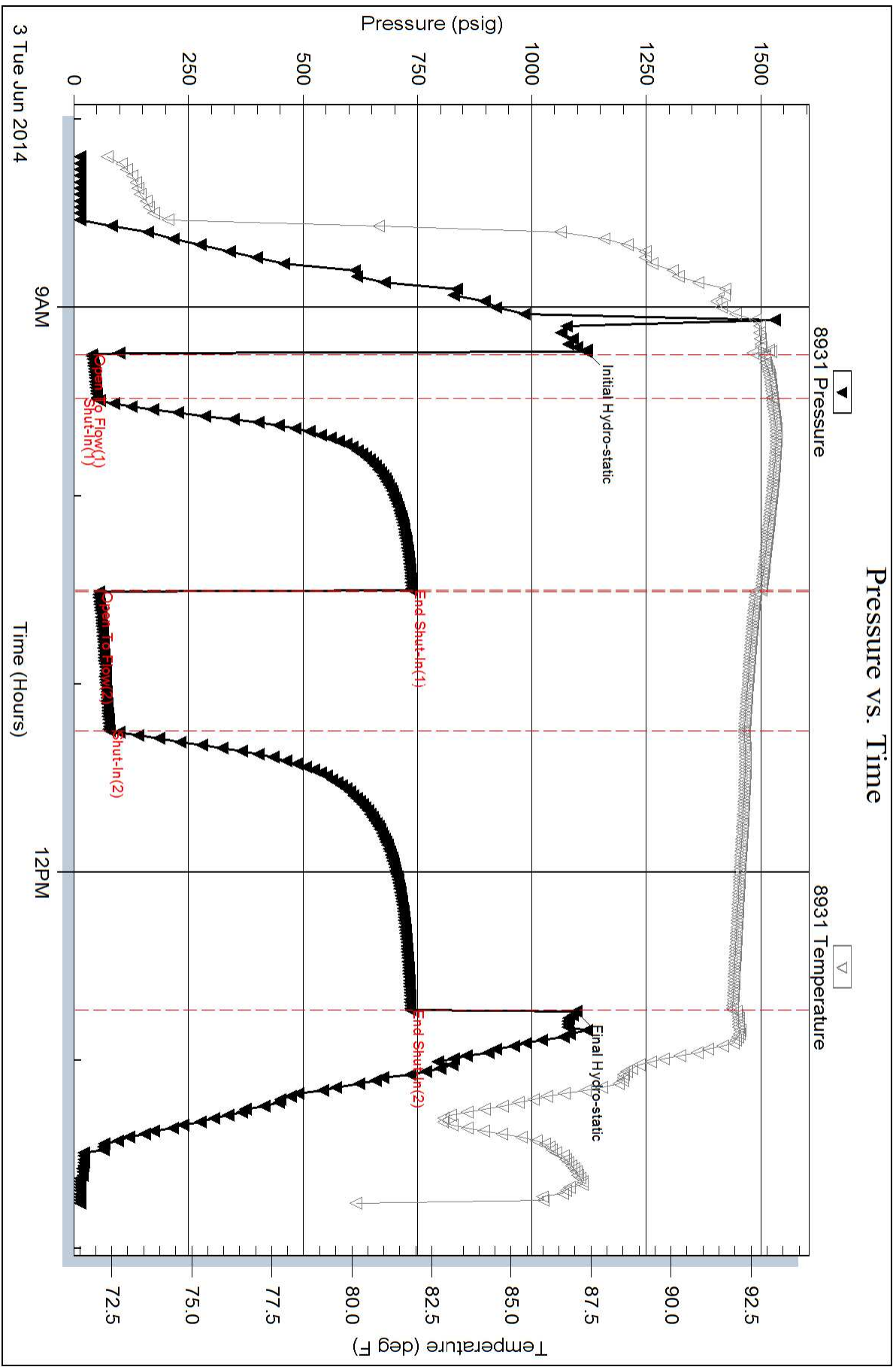
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





DRILL STEM TEST REPORT

Prepared For: **F.G. Holl Company**

9431 East Central STE 100
Wichita Kansas 67206

ATTN: Rene Husted

Calcara unit 1-19

19-19s-14-Barton

Start Date: 2014.06.03 @ 09:00:00

End Date: 2014.06.03 @ 14:57:30

Job Ticket #: 18330 DST #: 4

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

Printed: 2014.06.04 @ 04:10:44



DRILL STEM TEST REPORT

TOOL DIAGRAM

F.G. Holl Company
 9431 East Central STE 100
 Wichita Kansas 67206
 ATTN: Rene Husted

19-19s-14-Barton
Calcara unit 1-19
 Job Ticket: 18330 **DST#: 4**
 Test Start: 2014.06.03 @ 09:00:00

Tool Information

Drill Pipe:	Length: 2233.00 ft	Diameter: 3.80 inches	Volume: 31.32 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 43000.00 lb
			<u>Total Volume: 31.32 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	29.00 ft			String Weight: Initial 39000.00 lb
Depth to Top Packer:	2232.00 ft			Final 39000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	36.00 ft			
Tool Length:	64.00 ft			
Number of Packers:	2	Diameter: 675.00 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			2209.00	
Hydraulic tool	5.00			2214.00	
Jars	6.00			2220.00	
Safety Joint	2.00			2222.00	
Top Packer	5.00			2227.00	
Packer	5.00			2232.00	28.00 Bottom Of Top Packer
Perforations	31.00			2263.00	
Recorder	0.00	8931	Inside	2263.00	
Recorder	0.00	6838	Outside	2263.00	
Bull Plug	5.00			2268.00	36.00 Anchor Tool
Total Tool Length:	64.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

F.G. Holl Company

19-19s-14-Barton

9431 East Central STE 100
Wichita Kansas 67206

Calcara unit 1-19

Job Ticket: 18330

DST#: 4

ATTN: Rene Husted

Test Start: 2014.06.03 @ 09:00:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length: ft

Water Salinity: ppm

Viscosity: 41.00 sec/qt

Cushion Volume: bbl

Water Loss: 15.20 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 21000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	Mud 100%	0.421

Total Length: 30.00 ft Total Volume: 0.421 bbl

Num Fluid Samples: 0

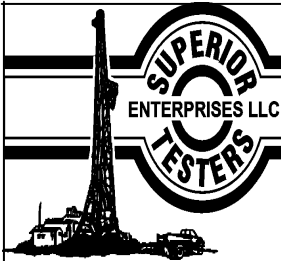
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



DRILL STEM TEST REPORT

GAS RATES

F.G. Holl Company

19-19s-14-Barton

9431 East Central STE 100
Wichita Kansas 67206

Calcara unit 1-19

Job Ticket: 18330

DST#: 4

ATTN: Rene Husted

Test Start: 2014.06.03 @ 09:00:00

Gas Rates Information

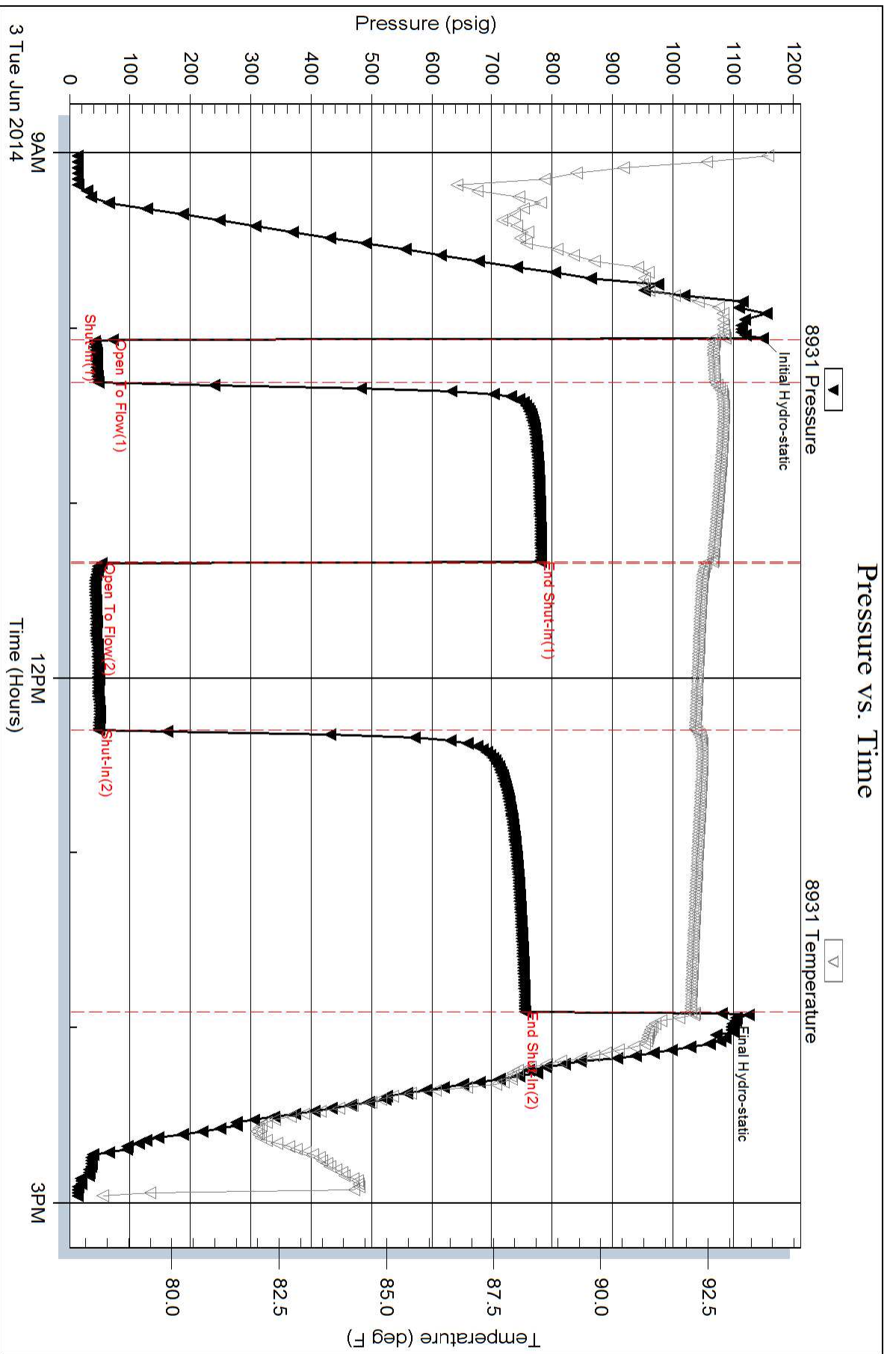
Temperature: 59 (deg F)

Relative Density: 0.65

Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
2	20	0.13	5.00	7.26
2	20	0.13	5.00	7.26
2	30	0.13	15.00	11.00
2	40	0.13	26.00	15.12
2	50	0.13	33.00	17.74





DRILL STEM TEST REPORT

Prepared For: **F.G. Holl Company**

9431 East Central STE 100
Wichita Kansas 67206

ATTN: Rene Husted

Calcara unit 1-19

19-19s-14-Barton

Start Date: 2014.06.06 @ 05:38:00

End Date: 2014.06.06 @ 11:35:30

Job Ticket #: 18331 DST #: 5

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

Printed: 2014.06.07 @ 02:01:29



DRILL STEM TEST REPORT

TOOL DIAGRAM

F.G. Holl Company
 9431 East Central STE 100
 Wichita Kansas 67206
 ATTN: Rene Husted

19-19s-14-Barton
Calcara unit 1-19
 Job Ticket: 18331 **DST#: 5**
 Test Start: 2014.06.06 @ 05:38:00

Tool Information

Drill Pipe:	Length: 3199.00 ft	Diameter: 3.80 inches	Volume: 44.87 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 44.87 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3204.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	66.18 ft			
Tool Length:	94.18 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3181.00	
Hydraulic tool	5.00			3186.00	
Jars	6.00			3192.00	
Safety Joint	2.00			3194.00	
Top Packer	5.00			3199.00	
Packer	5.00			3204.00	28.00 Bottom Of Top Packer
Anchor	6.00			3210.00	
Change Over Sub	0.00			3210.00	
Drill Pipe	31.18			3241.18	
Change Over Sub	0.00			3241.18	
Anchor	24.00			3265.18	
Recorder	0.00	6999	Inside	3265.18	
Recorder	0.00	8931	Outside	3265.18	
Bull Plug	5.00			3270.18	66.18 Anchor Tool

Total Tool Length: 94.18



DRILL STEM TEST REPORT

FLUID SUMMARY

F.G. Holl Company
9431 East Central STE 100
Wichita Kansas 67206
ATTN: Rene Husted

19-19s-14-Barton
Calcara unit 1-19
Job Ticket: 18331 **DST#: 5**
Test Start: 2014.06.06 @ 05:38:00

Mud and Cushion Information

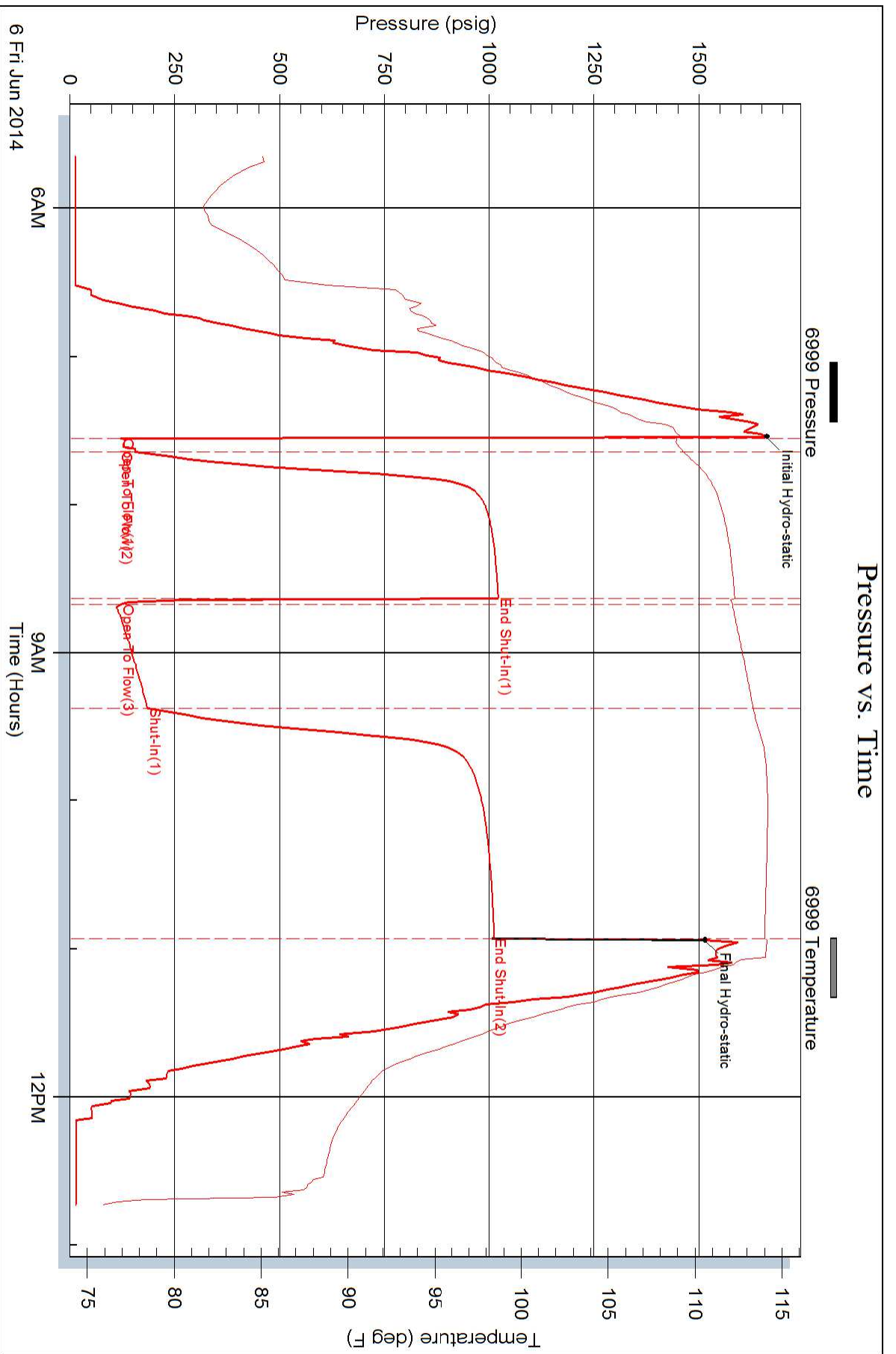
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 54.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.00 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 7300.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
252.00	Clean gassy oil 100%	3.535
123.00	Gassy oil cut mud	1.725
0.00	Oil 80% Gas 10% Mud 10%	0.000
0.00	Gravity of oil 39 corrected	0.000

Total Length: 375.00 ft Total Volume: 5.260 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:





DRILL STEM TEST REPORT

Prepared For: **F.G. Holl Company**

9431 East Central STE 100
Wichita Kansas 67206

ATTN: Rene Hustead

Calcara unit 1-19

19-19s-14-Barton

Start Date: 2014.06.07 @ 07:41:00

End Date: 2014.06.07 @ 13:53:23

Job Ticket #: 18332 DST #: 6

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

Printed: 2014.06.07 @ 15:11:45



DRILL STEM TEST REPORT

TOOL DIAGRAM

F.G. Holl Company

19-19s-14-Barton

9431 East Central STE 100
Wichita Kansas 67206

Calcara unit 1-19

Job Ticket: 18332

DST#: 6

ATTN: Rene Husted

Test Start: 2014.06.07 @ 07:41:00

Tool Information

Drill Pipe:	Length: 3263.00 ft	Diameter: 3.80 inches	Volume: 45.77 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 62000.00 lb
			<u>Total Volume: 45.77 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3271.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	14.00 ft			
Tool Length:	42.00 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			3248.00	
Hydraulic tool	5.00			3253.00	
Jars	6.00			3259.00	
Safety Joint	2.00			3261.00	
Top Packer	5.00			3266.00	
Packer	5.00			3271.00	28.00 Bottom Of Top Packer
Perforations	9.00			3280.00	
Recorder	0.00	6731	Inside	3280.00	
Recorder	0.00	6999	Outside	3280.00	
Bull Plug	5.00			3285.00	14.00 Anchor Tool
Total Tool Length:	42.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

F.G. Holl Company

19-19s-14-Barton

9431 East Central STE 100
Wichita Kansas 67206

Calcara unit 1-19

Job Ticket: 18332

DST#: 6

ATTN: Rene Husted

Test Start: 2014.06.07 @ 07:41:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 54.00 sec/qt
Water Loss: 8.00 in³
Resistivity: ohm.m
Salinity: 7300.00 ppm
Filter Cake: 1.00 inches

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

Oil API: deg API
Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
195.00	Very lightly oil spotted muddy w ater	2.735
0.00	Water 40% Mud 60%	0.000
0.00	Chlorides	0.000

Total Length: 195.00 ft Total Volume: 2.735 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

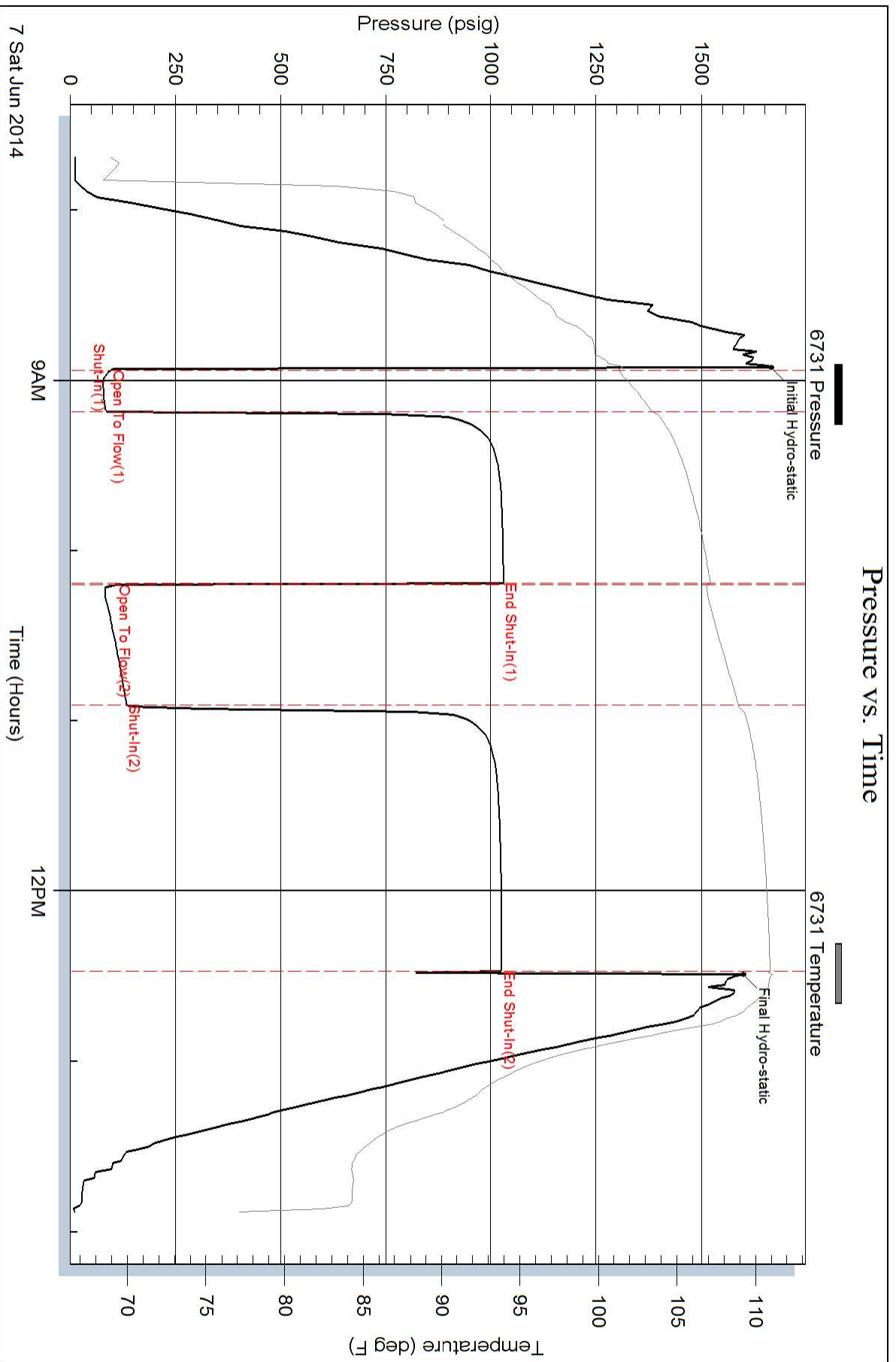
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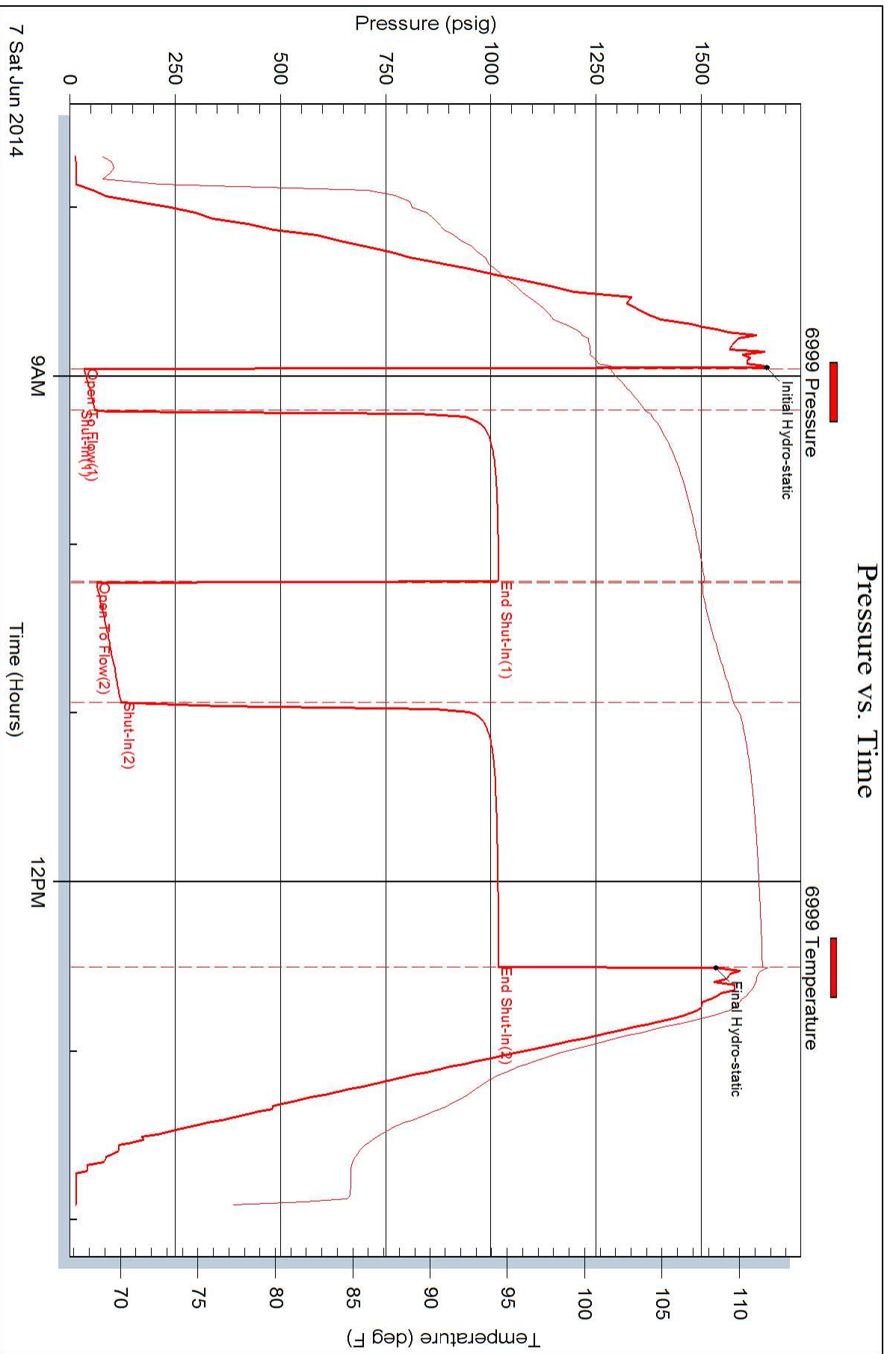
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **F.G. Holl Company**

9431 East Central STE 100
Wichita Kansas 67206

ATTN: Rene Husted

Calcara unit 1-19

19-19s-14-Barton

Start Date: 2014.06.07 @ 10:07:00

End Date: 2014.06.07 @ 14:42:30

Job Ticket #: 18333 DST #: 7

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

Printed: 2014.06.08 @ 03:54:36



DRILL STEM TEST REPORT

TOOL DIAGRAM

F.G. Holl Company
 9431 East Central STE 100
 Wichita Kansas 67206
 ATTN: Rene Husted

19-19s-14-Barton
Calcara unit 1-19
 Job Ticket: 18333 **DST#: 7**
 Test Start: 2014.06.07 @ 10:07:00

Tool Information

Drill Pipe:	Length: 3323.00 ft	Diameter: 3.80 inches	Volume: 46.61 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 55000.00 lb
			<u>Total Volume: 46.61 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3330.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	26.00 ft			
Tool Length:	54.00 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			3307.00	
Hydraulic tool	5.00			3312.00	
Jars	6.00			3318.00	
Safety Joint	2.00			3320.00	
Top Packer	5.00			3325.00	
Packer	5.00			3330.00	28.00 Bottom Of Top Packer
Perforations	21.00			3351.00	
Recorder	0.00	6731	Inside	3351.00	
Recorder	0.00	6999	Outside	3351.00	
Bull Plug	5.00			3356.00	26.00 Anchor Tool
Total Tool Length:	54.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

F.G. Holl Company

19-19s-14-Barton

9431 East Central STE 100
Wichita Kansas 67206

Calcara unit 1-19

Job Ticket: 18333

DST#: 7

ATTN: Rene Husted

Test Start: 2014.06.07 @ 10:07:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 54.00 sec/qt
Water Loss: 8.00 in³
Resistivity: ohm.m
Salinity: 7300.00 ppm
Filter Cake: 1.00 inches

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

Oil API: deg API
Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	Mud 100%	0.014

Total Length: 1.00 ft Total Volume: 0.014 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

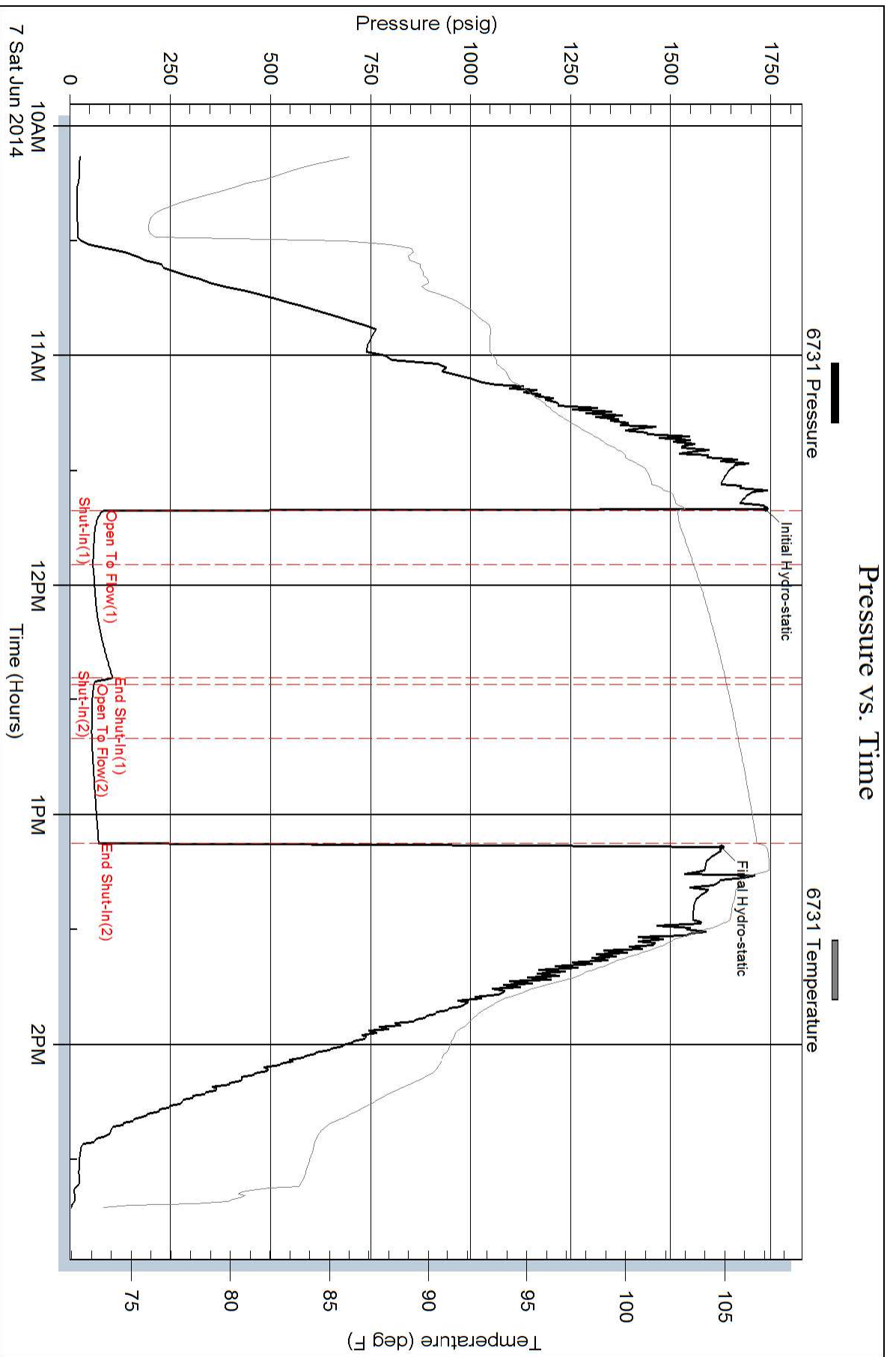
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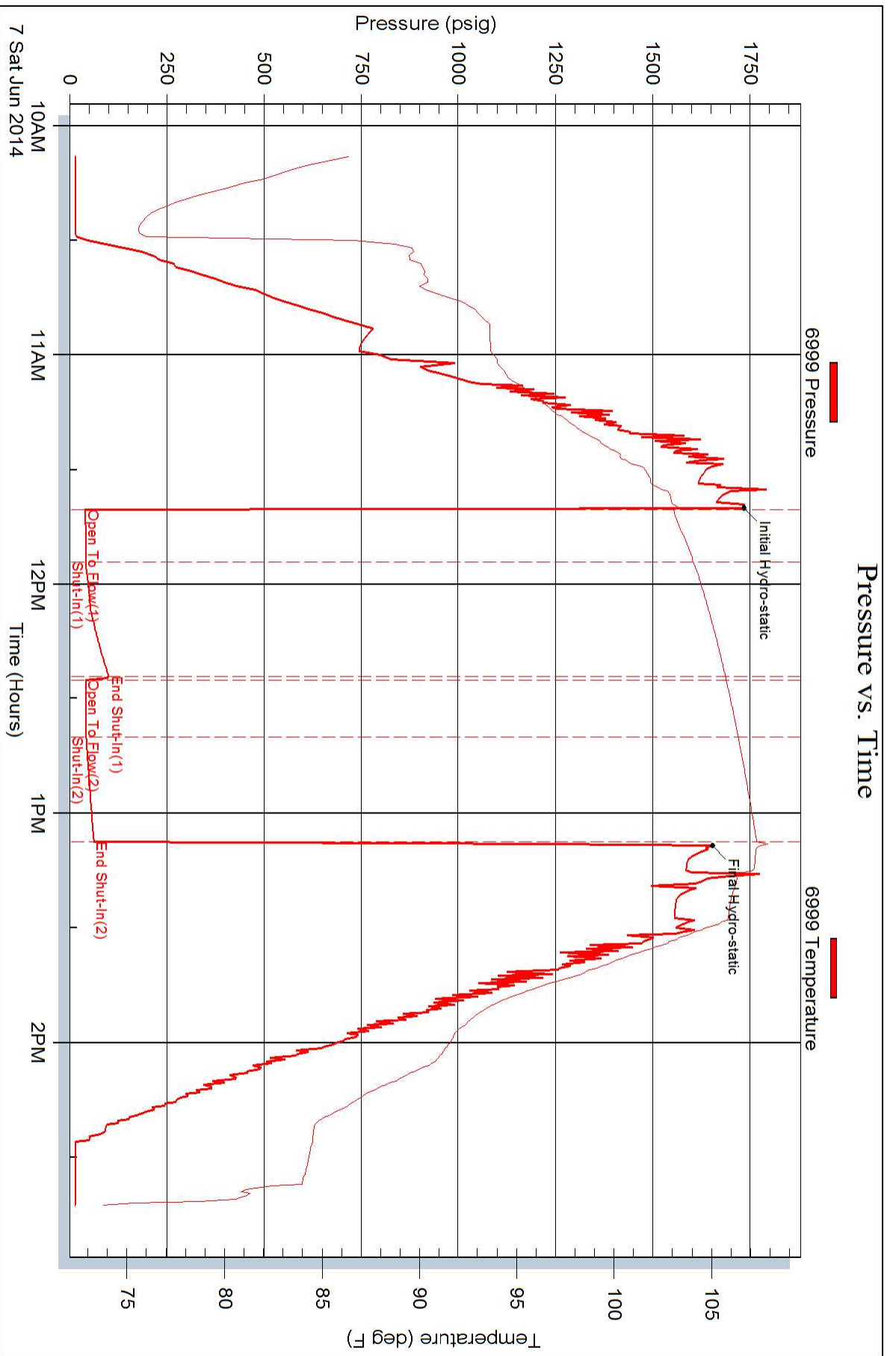
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **F.G. Holl Company**

9431 East Central STE 100
Wichita Kansas 67206

ATTN: Rene Husted

Calcara unit 1-19

19-19s-14-Barton

Start Date: 2014.06.08 @ 10:22:00

End Date: 2014.06.08 @ 16:20:30

Job Ticket #: 18334 DST #: 8

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

Printed: 2014.06.08 @ 17:39:16



DRILL STEM TEST REPORT

TOOL DIAGRAM

F.G. Holl Company
 9431 East Central STE 100
 Wichita Kansas 67206
 ATTN: Rene Husted

19-19s-14-Barton
Calcara unit 1-19
 Job Ticket: 18334 **DST#: 8**
 Test Start: 2014.06.08 @ 10:22:00

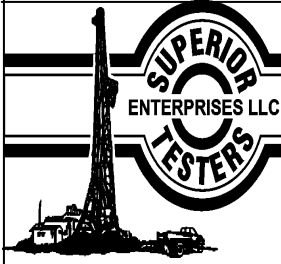
Tool Information

Drill Pipe:	Length: 3333.00 ft	Diameter: 3.80 inches	Volume: 46.75 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 56000.00 lb
			<u>Total Volume: 46.75 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3356.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	21.00 ft			
Tool Length:	49.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3333.00	
Hydraulic tool	5.00			3338.00	
Jars	6.00			3344.00	
Safety Joint	2.00			3346.00	
Top Packer	5.00			3351.00	
Packer	5.00			3356.00	28.00 Bottom Of Top Packer
Perforations	16.00			3372.00	
Recorder	0.00	6731	Inside	3372.00	
Recorder	0.00	6999	Outside	3372.00	
Bull Plug	5.00			3377.00	21.00 Anchor Tool
Total Tool Length:	49.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

F.G. Holl Company

19-19s-14-Barton

9431 East Central STE 100
Wichita Kansas 67206

Calcara unit 1-19

Job Ticket: 18334

DST#: 8

ATTN: Rene Husted

Test Start: 2014.06.08 @ 10:22:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 46.00 sec/qt
Water Loss: 14.40 in³
Resistivity: ohm.m
Salinity: 7500.00 ppm
Filter Cake: 1.00 inches

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

Oil API: deg API
Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
80.00	Oil cut mud 4% Oil Mud 96%	1.122

Total Length: 80.00 ft Total Volume: 1.122 bbl

Num Fluid Samples: 0

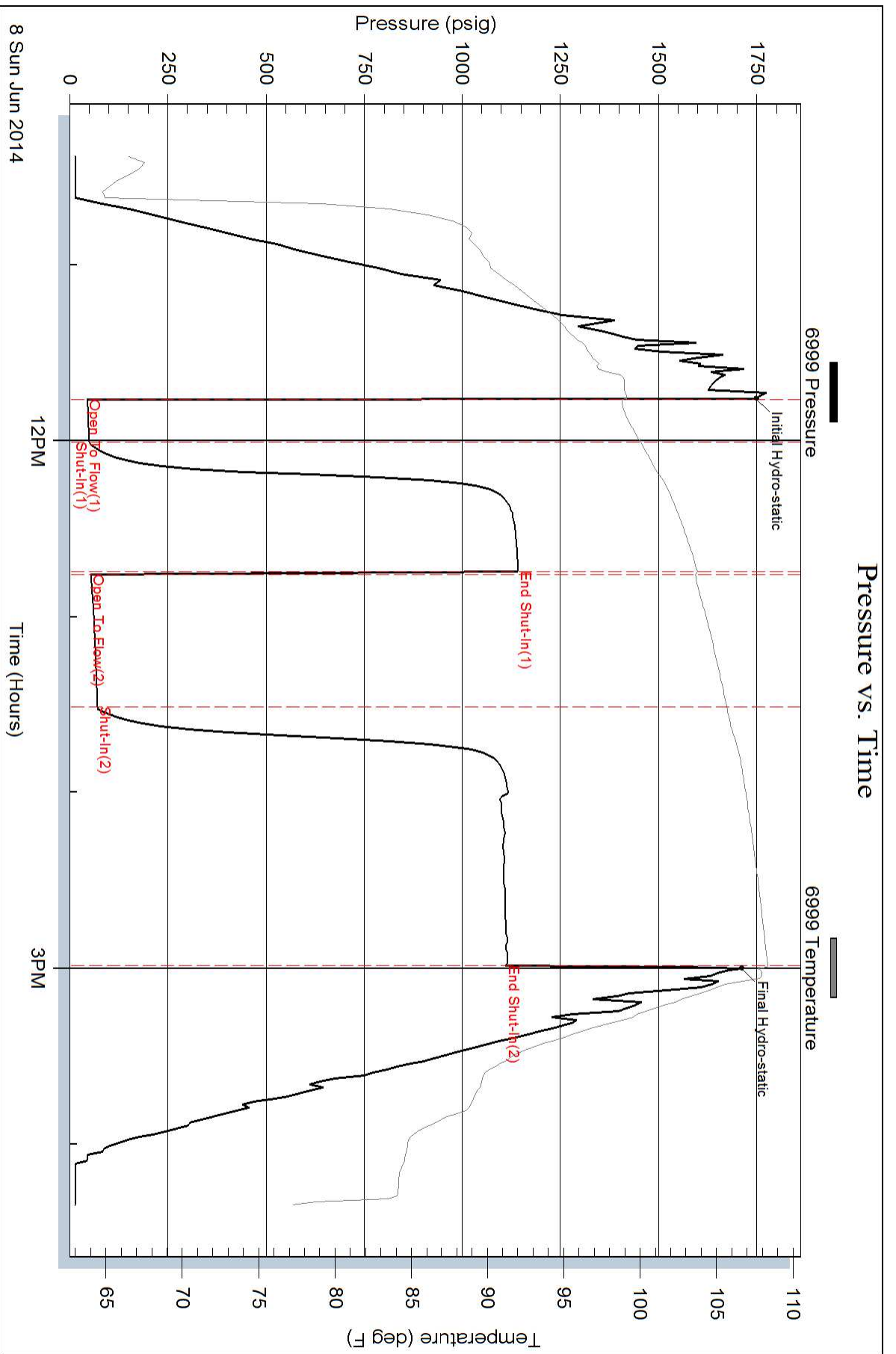
Num Gas Bombs: 0

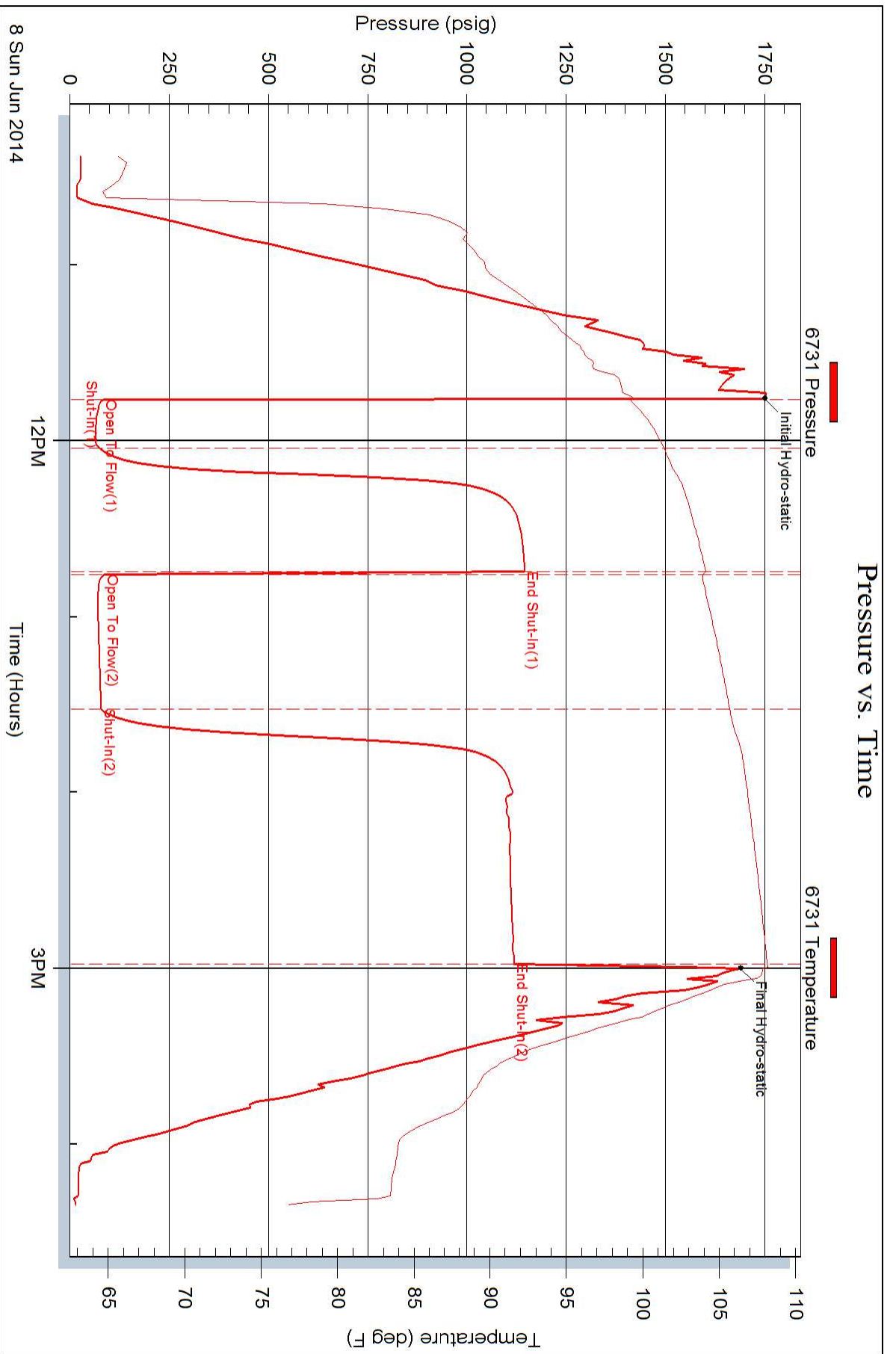
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **F.G. Holl Company**

9431 East Central STE 100
Wichita Kansas 67206

ATTN: Rene Husted

Calcara unit 1-19

19-19s-14-Barton

Start Date: 2014.06.08 @ 11:20:00

End Date: 2014.06.08 @ 17:50:00

Job Ticket #: 18335 DST #: 9

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

Printed: 2014.06.09 @ 07:09:12



DRILL STEM TEST REPORT

F.G. Holl Company
 9431 East Central STE 100
 Wichita Kansas 67206
 ATTN: Rene Husted

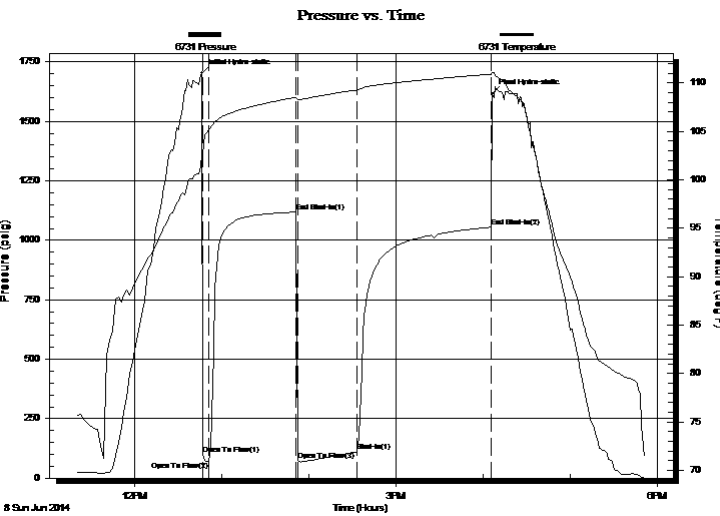
19-19s-14-Barton
Calcara unit 1-19
 Job Ticket: 18335 **DST#: 9**
 Test Start: 2014.06.08 @ 11:20:00

GENERAL INFORMATION:

Formation: **Lansing J**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 12:47:00
 Time Test Ended: 17:50:00
 Interval: **3377.00 ft (KB) To 3395.00 ft (KB) (TVD)**
 Total Depth: 3395.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Dustin Ellis
 Unit No: 3315-Great Bend-15
 Reference Elevations: 1904.00 ft (KB)
 1896.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 6731 Inside
 Press@RunDepth: 1055.66 psig @ 3390.00 ft (KB) Capacity: 5000.00 psig
 Start Date: 2014.06.08 End Date: 2014.06.08 Last Calib.: 2014.06.09
 Start Time: 11:20:00 End Time: 17:51:30 Time On Btm: 2014.06.08 @ 12:46:30
 Time Off Btm: 2014.06.08 @ 16:06:30

TEST COMMENT: 1st Open 5 minutes Strong building blow built to the bootm of a 5 gallon bucket of water in 1.5 minutes.
 1st Shut in 60 minutes No blow back
 2nd Open 45 minutes Strong building blow built to the bottom of a 5 gallon bucket of water instantly.
 2nd Shut in 90 minutes Yes blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1702.45	102.72	Initial Hydro-static
1	101.74	102.50	Open To Flow (1)
5	70.08	105.19	Open To Flow (2)
65	1119.23	108.51	End Shut-In(1)
66	77.23	108.27	Open To Flow (3)
107	112.62	109.28	Shut-In(1)
199	1055.66	110.89	End Shut-In(2)
200	1616.78	111.06	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
161.00	Clean gassy oil Oil 100%	2.26
63.00	Gassy oil cut mud	0.88
0.00	Oil 40% Mud 40% Gas 20%	0.00
0.00	Gravity of oil 39 corrected	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

F.G. Holl Company
 9431 East Central STE 100
 Wichita Kansas 67206
 ATTN: Rene Husted

19-19s-14-Barton
Calcara unit 1-19
 Job Ticket: 18335 **DST#: 9**
 Test Start: 2014.06.08 @ 11:20:00

Tool Information

Drill Pipe:	Length: 3365.00 ft	Diameter: 3.80 inches	Volume: 47.20 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 62000.00 lb
			<u>Total Volume: 47.20 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3377.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	18.00 ft			
Tool Length:	46.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3354.00	
Hydraulic tool	5.00			3359.00	
Jars	6.00			3365.00	
Safety Joint	2.00			3367.00	
Top Packer	5.00			3372.00	
Packer	5.00			3377.00	28.00 Bottom Of Top Packer
Perforations	13.00			3390.00	
Recorder	0.00	6731	Inside	3390.00	
Recorder	0.00	6999	Outside	3390.00	
Bull Plug	5.00			3395.00	18.00 Anchor Tool
Total Tool Length:	46.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

F.G. Holl Company

19-19s-14-Barton

9431 East Central STE 100
Wichita Kansas 67206

Calcara unit 1-19

Job Ticket: 18335

DST#: 9

ATTN: Rene Husted

Test Start: 2014.06.08 @ 11:20:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 46.00 sec/qt
Water Loss: 14.40 in³
Resistivity: ohm.m
Salinity: 7500.00 ppm
Filter Cake: 1.00 inches

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

Oil API: deg API
Water Salinity: ppm

Recovery Information

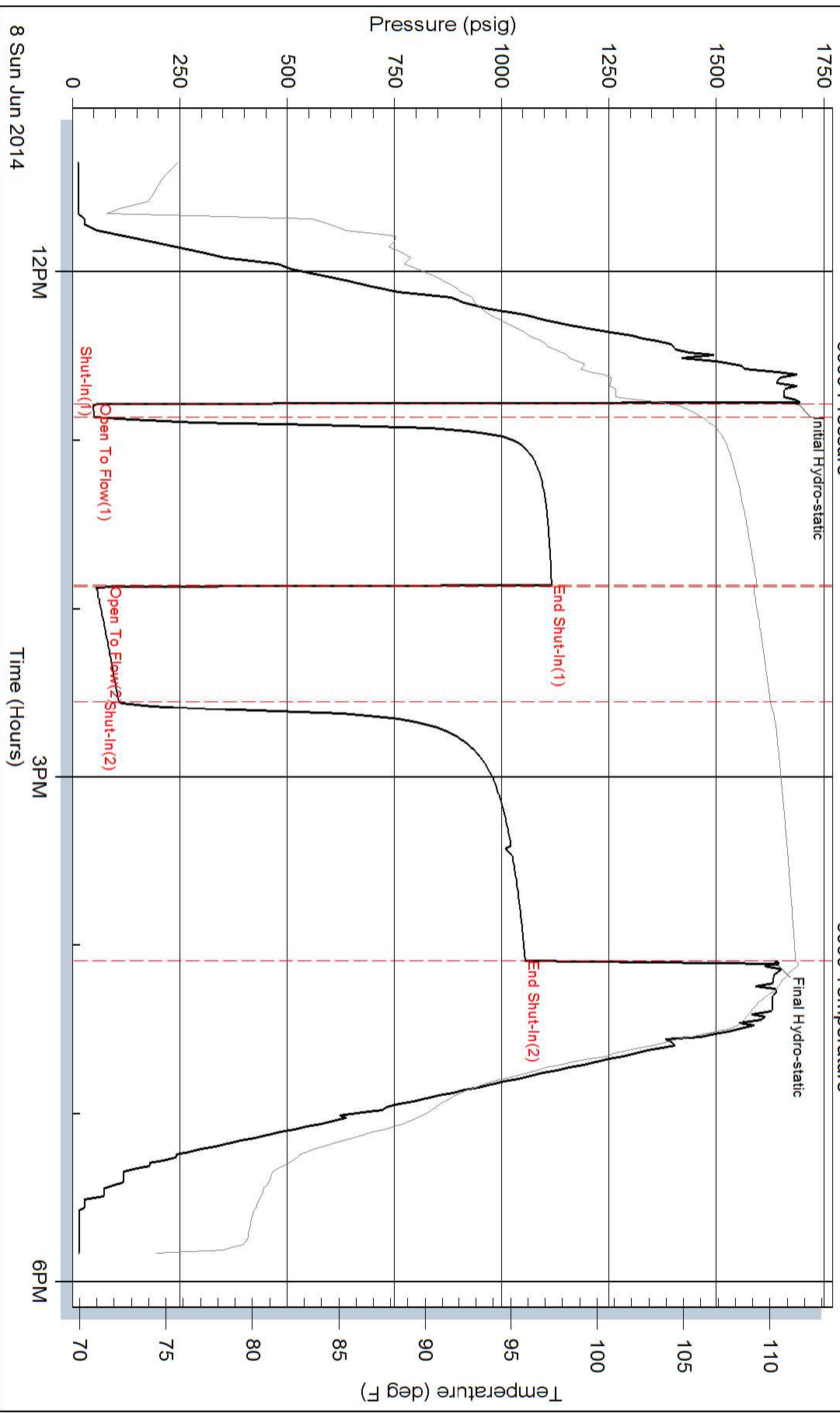
Recovery Table

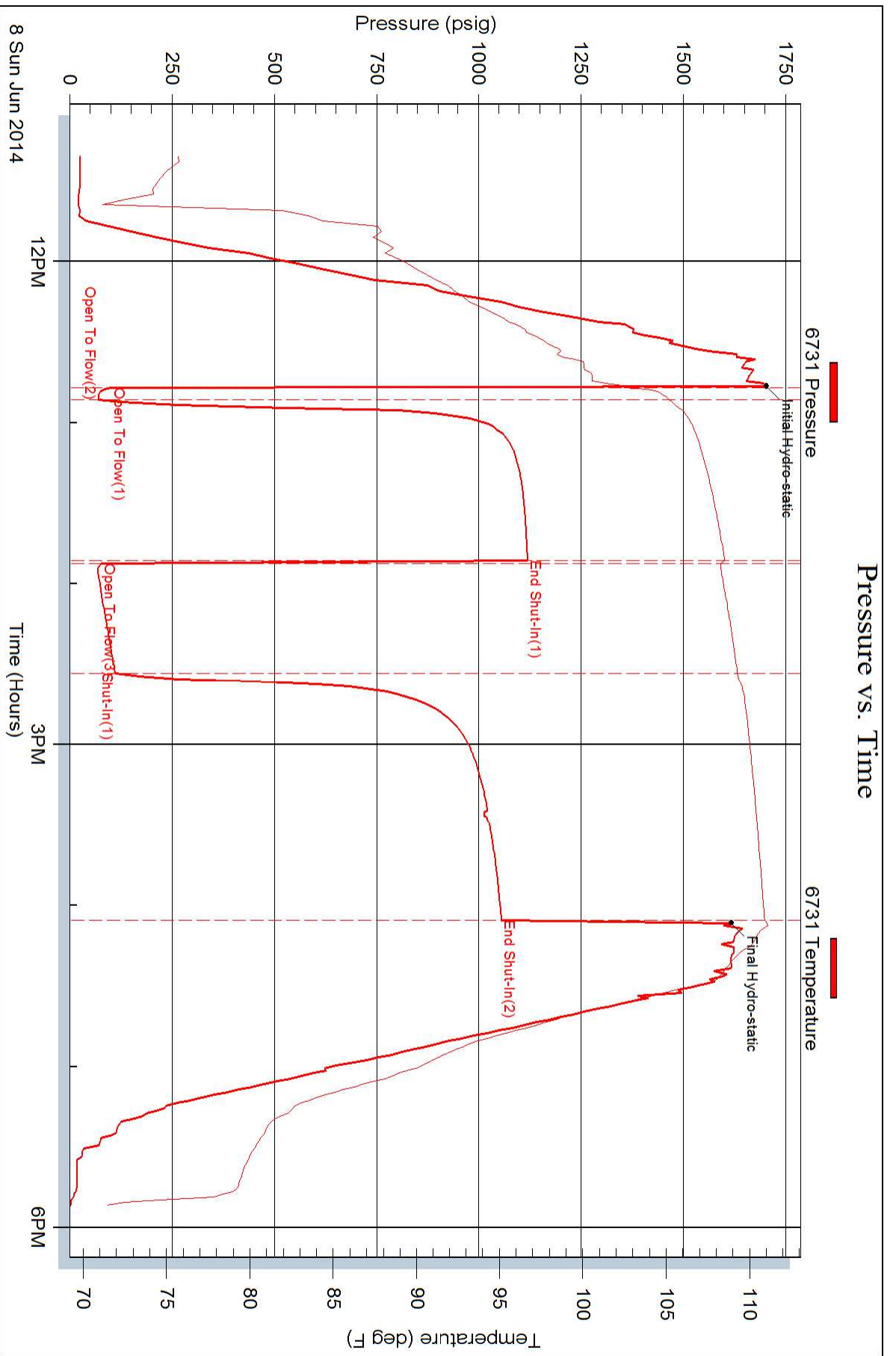
Length ft	Description	Volume bbl
161.00	Clean gassy oil Oil 100%	2.258
63.00	Gassy oil cut mud	0.884
0.00	Oil 40% Mud 40% Gas 20%	0.000
0.00	Gravity of oil 39 corrected	0.000

Total Length: 224.00 ft Total Volume: 3.142 bbl

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

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **F.G. Holl Company**

9431 East Central STE 100
Wichita Kansas 67206

ATTN: Rene Husted

Calcara unit 1-19

19-19s-14-Barton

Start Date: 2014.06.09 @ 12:28:00

End Date: 2014.06.09 @ 17:59:30

Job Ticket #: 18336 DST #: 10

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

Printed: 2014.06.09 @ 19:11:45



DRILL STEM TEST REPORT

F.G. Holl Company
 9431 East Central STE 100
 Wichita Kansas 67206
 ATTN: Rene Husted

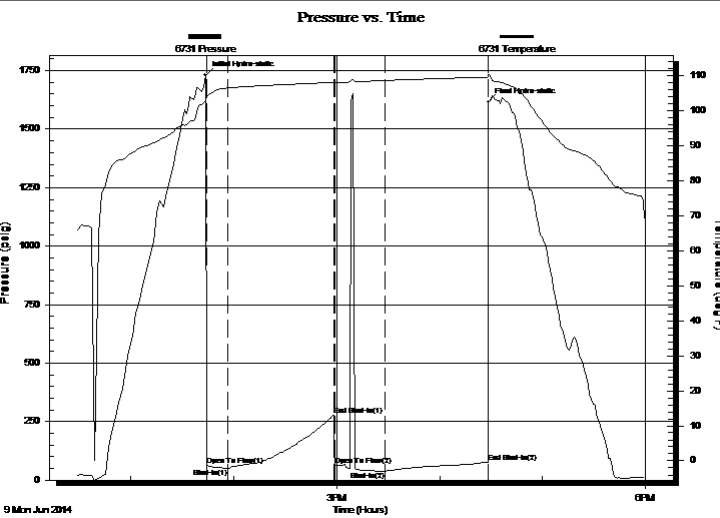
19-19s-14-Barton
Calcara unit 1-19
 Job Ticket: 18336 **DST#: 10**
 Test Start: 2014.06.09 @ 12:28:00

GENERAL INFORMATION:

Formation: **Lansing K**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 13:44:30
 Time Test Ended: 17:59:30
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Dustin Ellis
 Unit No: 3315-Great Bend-15
 Interval: **3396.00 ft (KB) To 3412.00 ft (KB) (TVD)**
 Total Depth: 3412.00 ft (KB) (TVD)
 Reference Elevations: 1904.00 ft (KB)
 1896.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 KB to GR/CF: 8.00 ft

Serial #: 6731 Inside
 Press@RunDepth: 38.77 psig @ 3407.00 ft (KB) Capacity: 5000.00 psig
 Start Date: 2014.06.09 End Date: 2014.06.09 Last Calib.: 2014.06.09
 Start Time: 12:28:00 End Time: 17:59:30 Time On Btm: 2014.06.09 @ 13:43:30
 Time Off Btm: 2014.06.09 @ 16:28:30

TEST COMMENT: 1st Open 15 minutes Weak building blow built to 2.5 inches into a 5 gallon bucket of water.
 1st Shut in 60 minutes No blow back.
 2nd Open 30 minutes Dead Flushed tool no help.
 2nd Shut in 60 minutes No blow back.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1730.00	102.72	Initial Hydro-static
1	64.58	103.96	Open To Flow (1)
13	50.50	106.43	Shut-In(1)
75	275.70	108.03	End Shut-In(1)
76	62.59	107.99	Open To Flow (2)
105	38.77	108.58	Shut-In(2)
165	77.56	109.57	End Shut-In(2)
165	1615.44	110.32	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
31.00	Mud 100%	0.43

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

F.G. Holl Company
 9431 East Central STE 100
 Wichita Kansas 67206
 ATTN: Rene Husted

19-19s-14-Barton
Calcara unit 1-19
 Job Ticket: 18336 **DST#: 10**
 Test Start: 2014.06.09 @ 12:28:00

Tool Information

Drill Pipe:	Length: 3396.00 ft	Diameter: 3.80 inches	Volume: 47.64 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	80000.00 lb
			<u>Total Volume: 47.64 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial	55000.00 lb
Depth to Top Packer:	3396.00 ft			Final	55000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	16.00 ft				
Tool Length:	44.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3373.00	
Hydraulic tool	5.00			3378.00	
Jars	6.00			3384.00	
Safety Joint	2.00			3386.00	
Top Packer	5.00			3391.00	
Packer	5.00			3396.00	28.00 Bottom Of Top Packer
Perforations	11.00			3407.00	
Recorder	0.00	6731	Inside	3407.00	
Recorder	0.00	6999	Outside	3407.00	
Bull Plug	5.00			3412.00	16.00 Anchor Tool
Total Tool Length:	44.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

F.G. Holl Company

19-19s-14-Barton

9431 East Central STE 100
Wichita Kansas 67206

Calcara unit 1-19

Job Ticket: 18336

DST#: 10

ATTN: Rene Husted

Test Start: 2014.06.09 @ 12:28:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 11.60 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8100.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
31.00	Mud 100%	0.435

Total Length: 31.00 ft Total Volume: 0.435 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

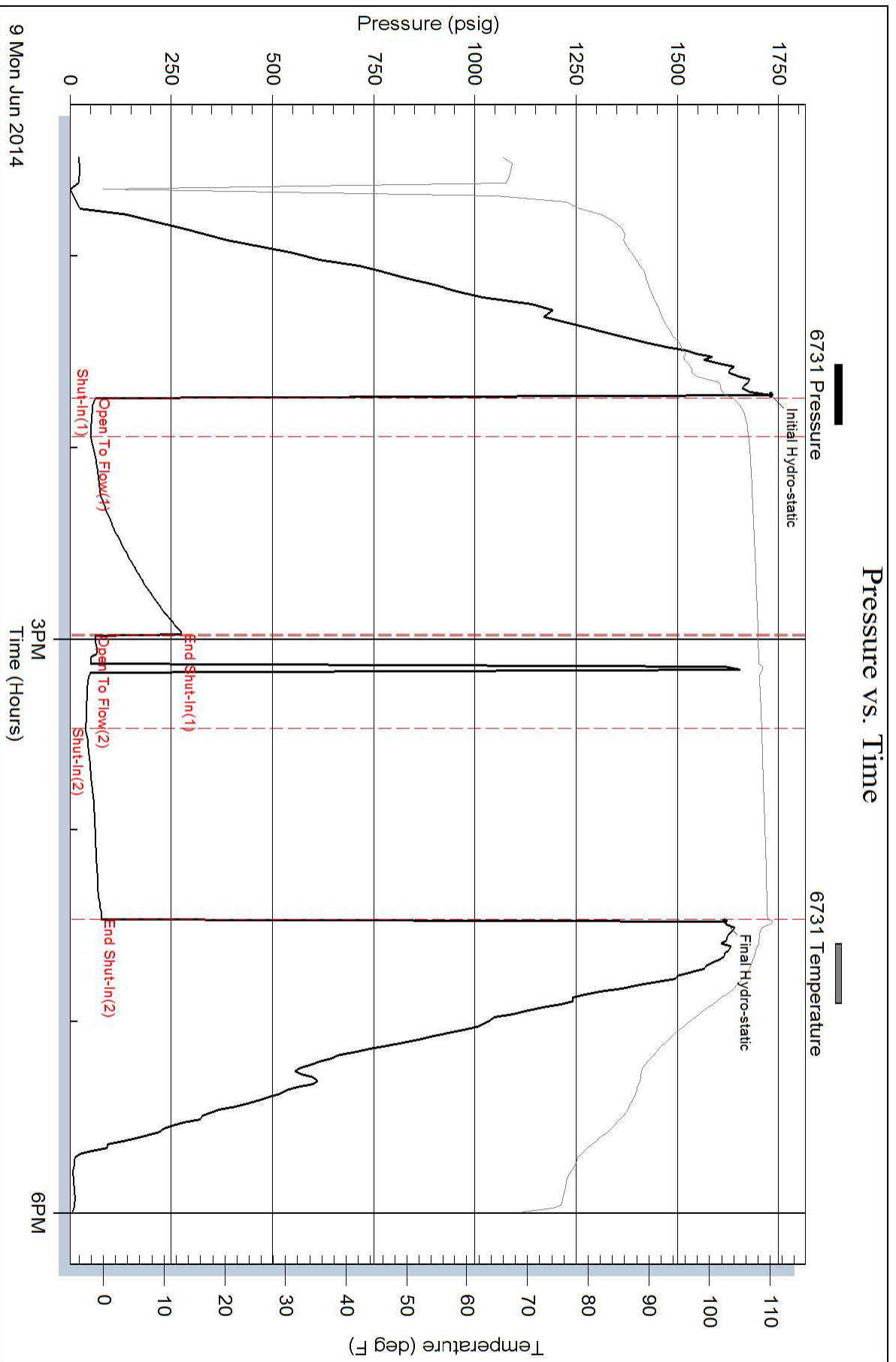
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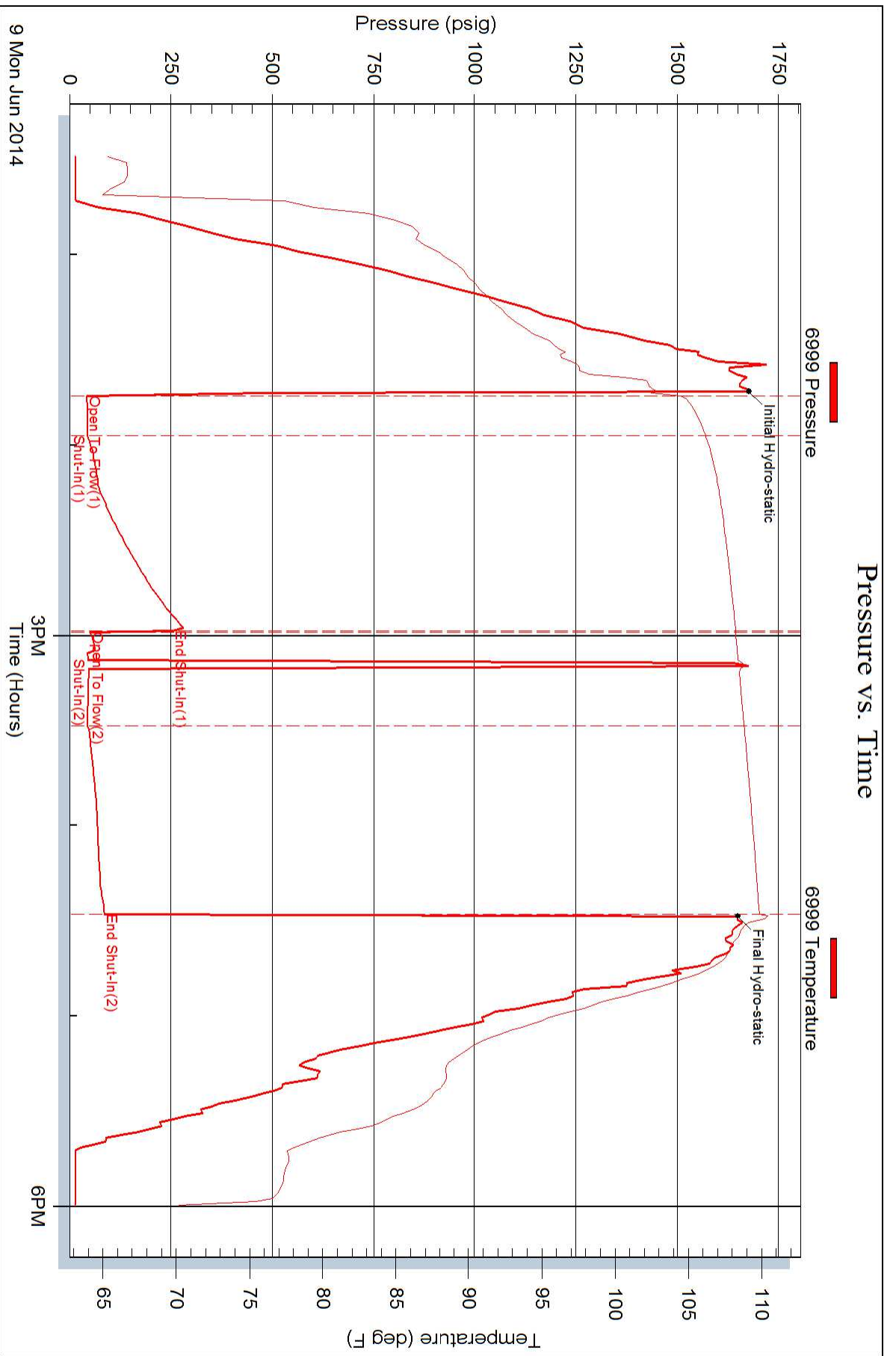
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **F.G. Holl Company**

9431 East Central STE 100
Wichita Kansas 67206

ATTN: Rene Husted

Calcara unit 1-19

19-19s-14-Barton

Start Date: 2014.06.10 @ 01:14:00

End Date: 2014.06.10 @ 08:42:30

Job Ticket #: 18337 DST #: 11

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

Printed: 2014.06.10 @ 21:59:27



DRILL STEM TEST REPORT

TOOL DIAGRAM

F.G. Holl Company
 9431 East Central STE 100
 Wichita Kansas 67206
 ATTN: Rene Husted

19-19s-14-Barton
Calcara unit 1-19
 Job Ticket: 18337 **DST#: 11**
 Test Start: 2014.06.10 @ 01:14:00

Tool Information

Drill Pipe:	Length: 3396.00 ft	Diameter: 3.80 inches	Volume: 47.64 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 47.64 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3414.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	121.14 ft			
Tool Length:	149.14 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			3391.00	
Hydraulic tool	5.00			3396.00	
Jars	6.00			3402.00	
Safety Joint	2.00			3404.00	
Top Packer	5.00			3409.00	
Packer	5.00			3414.00	28.00 Bottom Of Top Packer
Anchor	6.00			3420.00	
Change Over Sub	0.00			3420.00	
Drill Pipe	95.14			3515.14	
Change Over Sub	0.00			3515.14	
Anchor	15.00			3530.14	
Recorder	0.00	6731	Inside	3530.14	
Recorder	0.00	6999	Outside	3530.14	
Bull Plug	5.00			3535.14	121.14 Anchor Tool

Total Tool Length: 149.14



DRILL STEM TEST REPORT

FLUID SUMMARY

F.G. Holl Company

19-19s-14-Barton

9431 East Central STE 100
Wichita Kansas 67206

Calcara unit 1-19

Job Ticket: 18337

DST#: 11

ATTN: Rene Husted

Test Start: 2014.06.10 @ 01:14:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 49.00 sec/qt
Water Loss: 8.00 in³
Resistivity: ohm.m
Salinity: 7300.00 ppm
Filter Cake: 1.00 inches

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

Oil API: deg API
Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
116.00	Gassy mud cut oil	1.627
0.00	Mud 65% Oil 20% Gas 15%	0.000
0.00	Gas to surface 3 minutes into pipe.	0.000

Total Length: 116.00 ft Total Volume: 1.627 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



DRILL STEM TEST REPORT

GAS RATES

F.G. Holl Company

19-19s-14-Barton

9431 East Central STE 100
Wichita Kansas 67206

Calcara unit 1-19

Job Ticket: 18337

DST#: 11

ATTN: Rene Husted

Test Start: 2014.06.10 @ 01:14:00

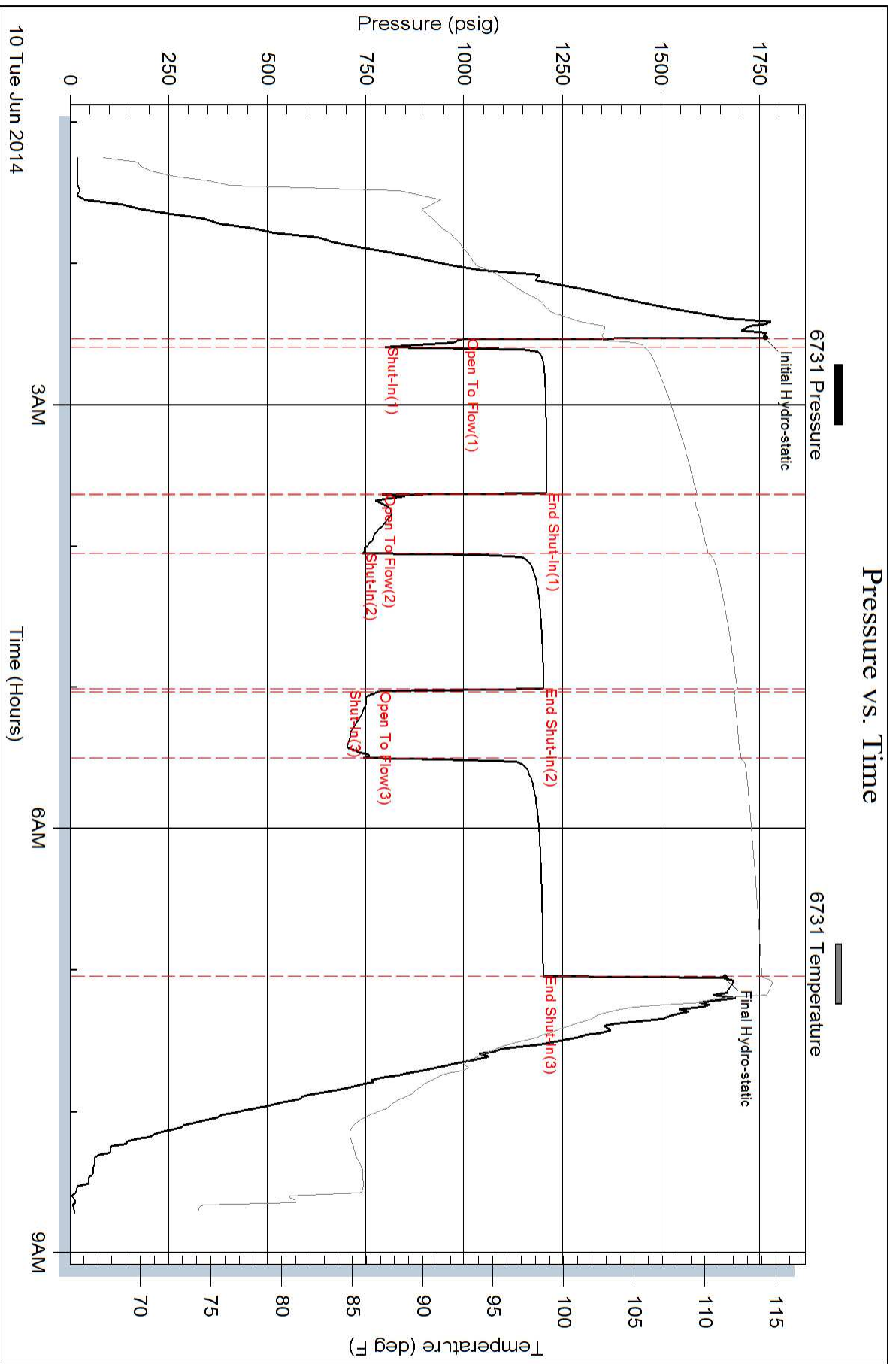
Gas Rates Information

Temperature: 59 (deg F)
Relative Density: 0.65
Z Factor: 0.8

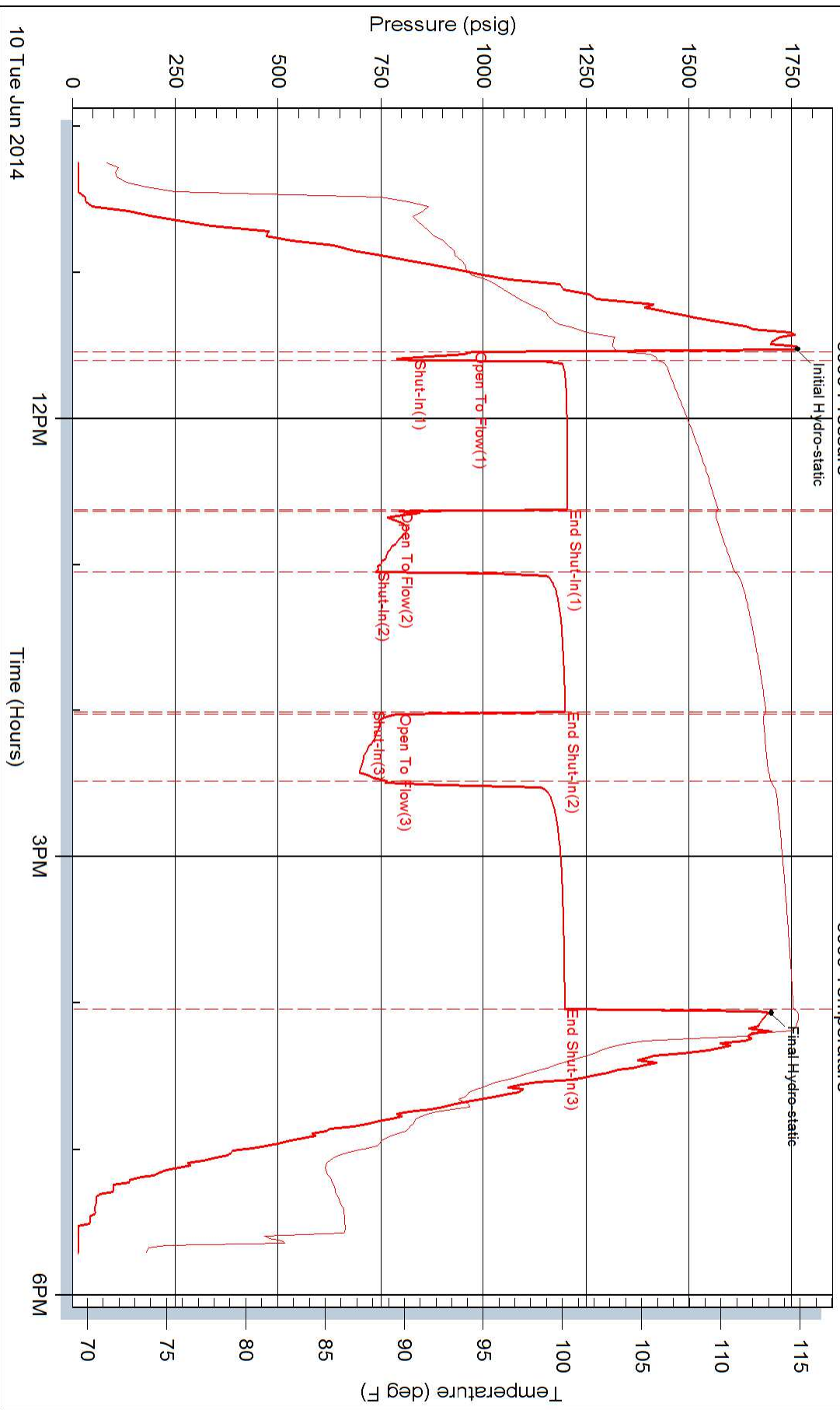
Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
2	10	1.00	69.00	2397.65
2	20	1.00	77.00	2627.64
2	30	1.00	87.00	2915.13

Pressure vs. Time



Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **F.G. Holl Company**

9431 East Central STE 100
Wichita Kansas 67206

ATTN: Rene Husted

Calcara unit 1-19

19-19s-14-Barton

Start Date: 2014.06.11 @ 03:43:00

End Date: 2014.06.11 @ 09:34:30

Job Ticket #: 18338 DST #: 12

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

Printed: 2014.06.11 @ 10:45:31



DRILL STEM TEST REPORT

TOOL DIAGRAM

F.G. Holl Company
 9431 East Central STE 100
 Wichita Kansas 67206
 ATTN: Rene Husted

19-19s-14-Barton
Calcara unit 1-19
 Job Ticket: 18338 **DST#: 12**
 Test Start: 2014.06.11 @ 03:43:00

Tool Information

Drill Pipe:	Length: 3522.00 ft	Diameter: 3.80 inches	Volume: 49.40 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 62000.00 lb
			<u>Total Volume: 49.40 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3536.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	9.00 ft			
Tool Length:	37.00 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			3513.00	
Hydraulic tool	5.00			3518.00	
Jars	6.00			3524.00	
Safety Joint	2.00			3526.00	
Top Packer	5.00			3531.00	
Packer	5.00			3536.00	28.00 Bottom Of Top Packer
Perforations	4.00			3540.00	
Recorder	0.00	6731	Inside	3540.00	
Recorder	0.00	6999	Outside	3540.00	
Bull Plug	5.00			3545.00	9.00 Anchor Tool
Total Tool Length:	37.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

F.G. Holl Company

19-19s-14-Barton

9431 East Central STE 100
Wichita Kansas 67206

Calcara unit 1-19

Job Ticket: 18338

DST#: 12

ATTN: Rene Husted

Test Start: 2014.06.11 @ 03:43:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 49.00 sec/qt
Water Loss: 89.94 in³
Resistivity: ohm.m
Salinity: 7300.00 ppm
Filter Cake: 1.00 inches

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

Oil API: deg API
Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
471.00	Clean gassy oil 100%	6.607
0.00	Gravity of oil 41 corrected	0.000
0.00	Gas to surface in 3 minutes into pipe.	0.000

Total Length: 471.00 ft Total Volume: 6.607 bbl

Num Fluid Samples: 0

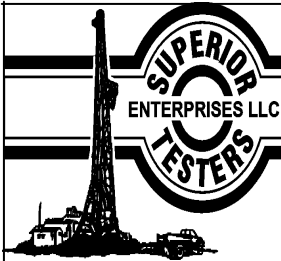
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: See gas charts!



DRILL STEM TEST REPORT

GAS RATES

F.G. Holl Company

19-19s-14-Barton

9431 East Central STE 100
Wichita Kansas 67206

Calcara unit 1-19

Job Ticket: 18338

DST#: 12

ATTN: Rene Hustedad

Test Start: 2014.06.11 @ 03:43:00

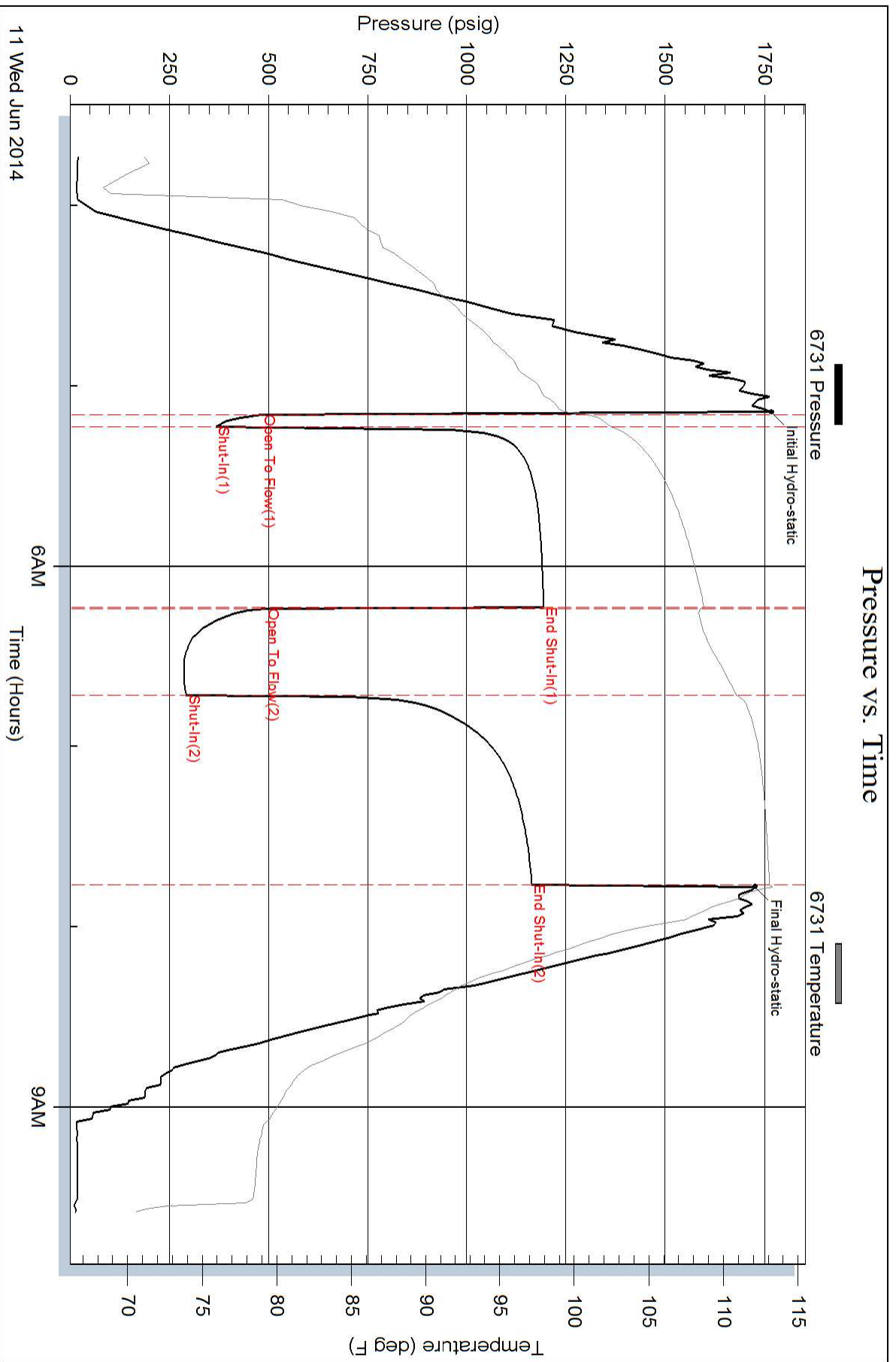
Gas Rates Information

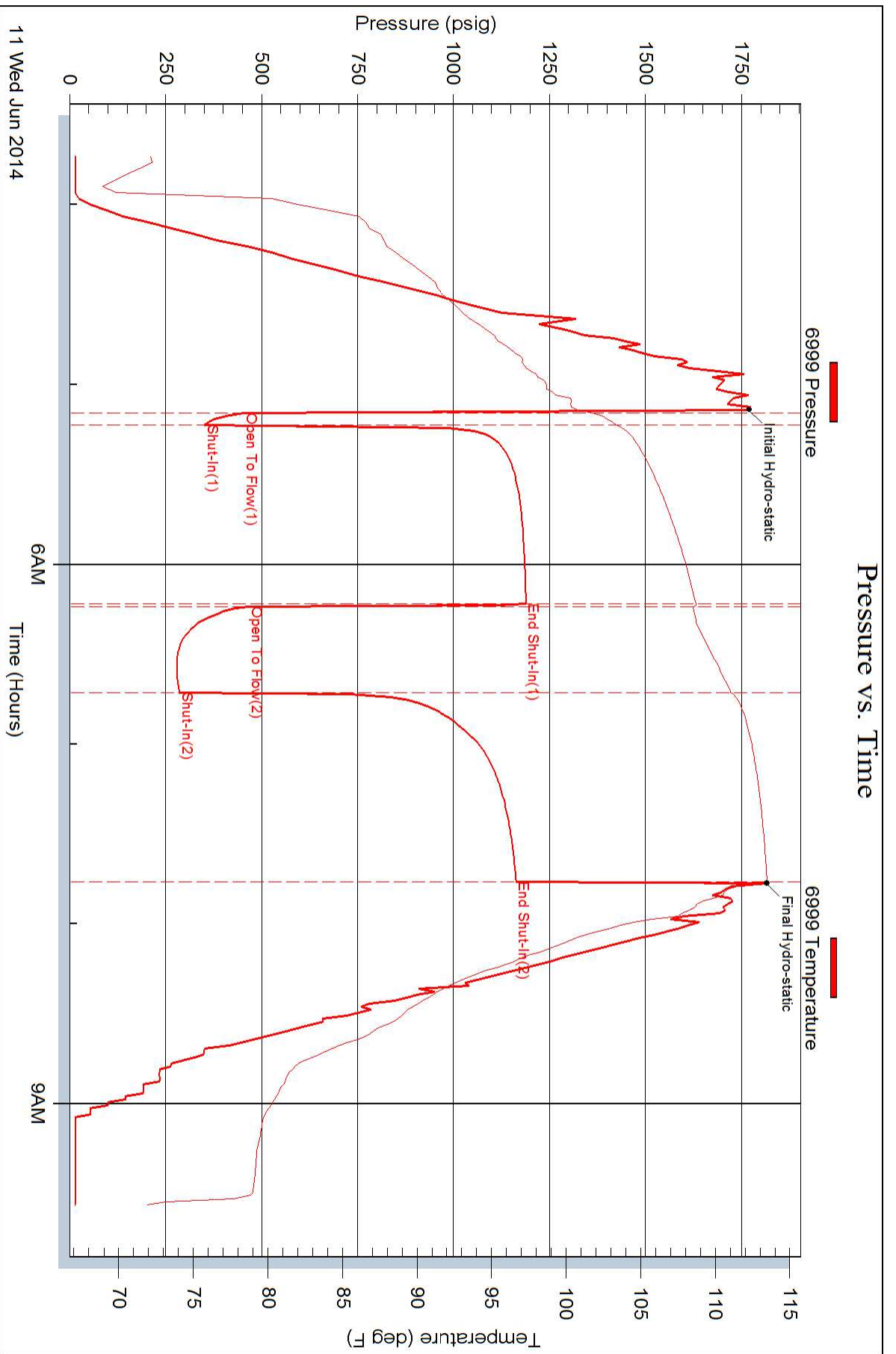
Temperature: 59 (deg F)
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
2	10	0.75	15.10	460.79
2	10	0.75	15.10	460.79
2	20	0.75	11.10	398.31

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **F.G. Holl Company**

9431 East Central STE 100
Wichita Kansas 67206

ATTN: Rene Husted

Calcara unit 1-19

19-19s-14-Barton

Start Date: 2014.06.11 @ 03:38:00

End Date: 2014.06.11 @ 13:11:30

Job Ticket #: 18339 DST #: 13

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

Printed: 2014.06.12 @ 02:29:55



DRILL STEM TEST REPORT

TOOL DIAGRAM

F.G. Holl Company
 9431 East Central STE 100
 Wichita Kansas 67206
 ATTN: Rene Husted

19-19s-14-Barton
Calcara unit 1-19
 Job Ticket: 18339 **DST#: 13**
 Test Start: 2014.06.11 @ 03:38:00

Tool Information

Drill Pipe:	Length: 3533.00 ft	Diameter: 3.80 inches	Volume: 49.56 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 66000.00 lb
			<u>Total Volume: 49.56 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3546.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	9.00 ft			
Tool Length:	37.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3523.00	
Hydraulic tool	5.00			3528.00	
Jars	6.00			3534.00	
Safety Joint	2.00			3536.00	
Top Packer	5.00			3541.00	
Packer	5.00			3546.00	28.00 Bottom Of Top Packer
Perforations	4.00			3550.00	
Recorder	0.00	6731	Inside	3550.00	
Recorder	0.00	6999	Outside	3550.00	
Bull Plug	5.00			3555.00	9.00 Anchor Tool
Total Tool Length:	37.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

F.G. Holl Company

19-19s-14-Barton

9431 East Central STE 100
Wichita Kansas 67206

Calcara unit 1-19

Job Ticket: 18339

DST#: 13

ATTN: Rene Husted

Test Start: 2014.06.11 @ 03:38:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 46.00 sec/qt
Water Loss: 9.20 in³
Resistivity: ohm.m
Salinity: 7200.00 ppm
Filter Cake: 1.00 inches

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

Oil API: deg API
Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2674.00	Clean gassy oil 100%	37.509
126.00	Muddy water Water 80%Mud 20%	1.767
0.00	Chlorides 23,000 @.2ohms	0.000

Total Length: 2800.00 ft Total Volume: 39.276 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

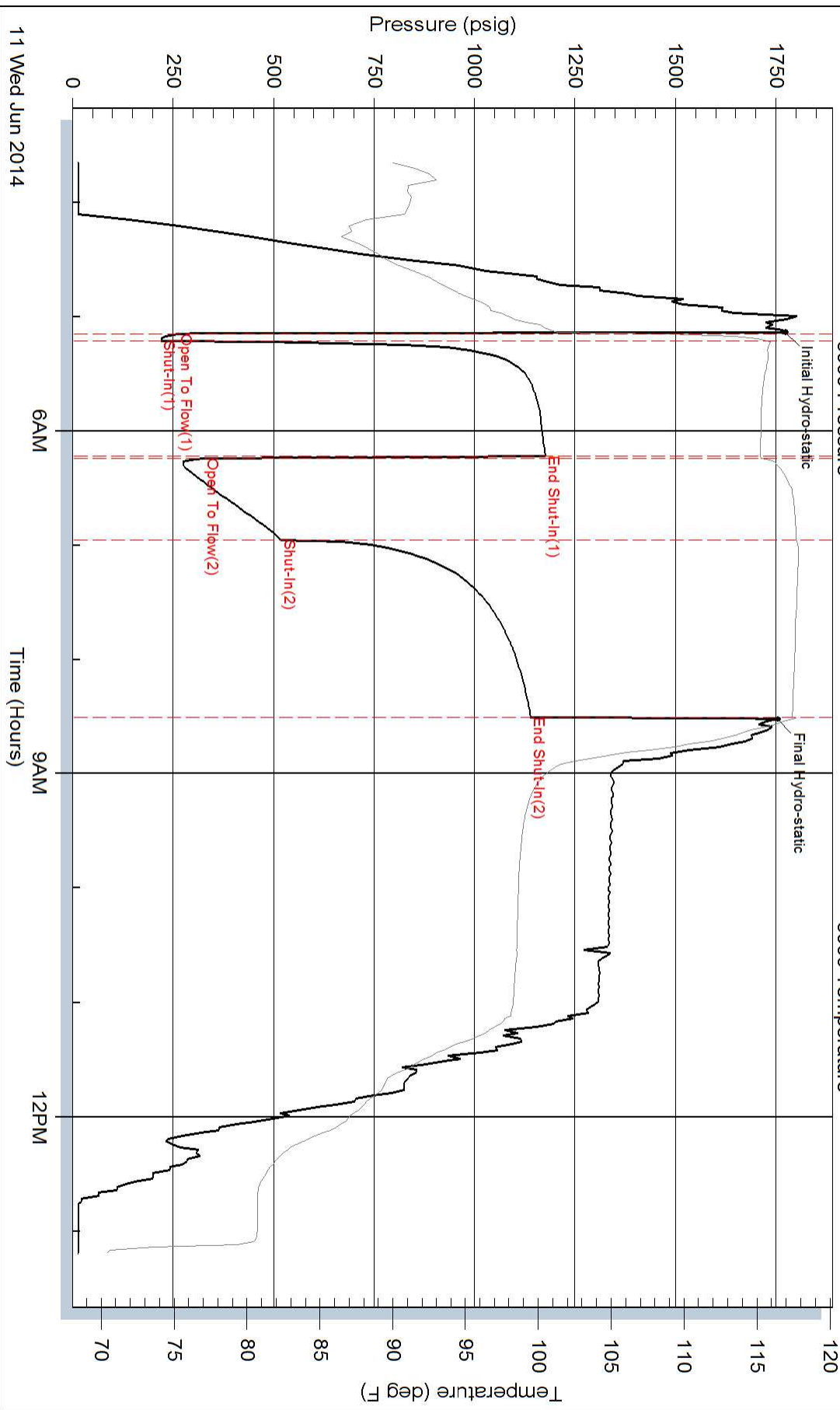
Serial #:

Laboratory Name:

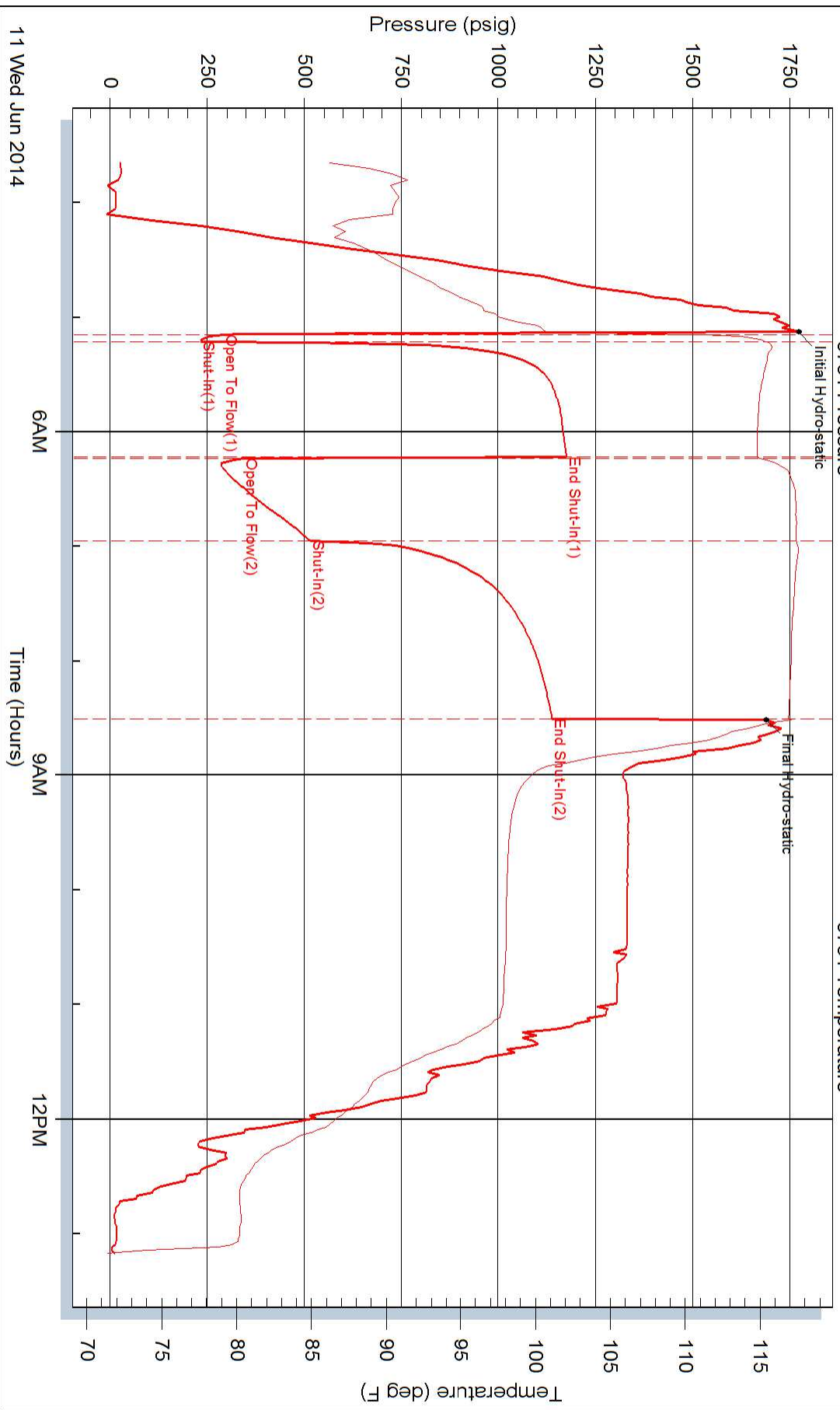
Laboratory Location:

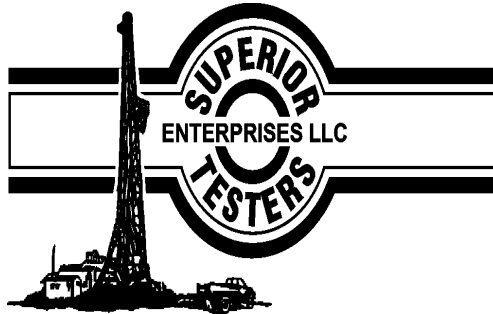
Recovery Comments:

Pressure vs. Time



Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **F.G. Holl Company**

9431 East Central STE 100
Wichita Kansas 67206

ATTN: Rene Husted

Calcara unit 1-19

19-19s-14-Barton

Start Date: 2014.06.12 @ 08:49:00

End Date: 2014.06.12 @ 14:25:30

Job Ticket #: 18340 DST #: 14

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

Printed: 2014.06.12 @ 15:39:32



DRILL STEM TEST REPORT

TOOL DIAGRAM

F.G. Holl Company
 9431 East Central STE 100
 Wichita Kansas 67206
 ATTN: Rene Husted

19-19s-14-Barton
Calcara unit 1-19
 Job Ticket: 18340 **DST#: 14**
 Test Start: 2014.06.12 @ 08:49:00

Tool Information

Drill Pipe:	Length: 3543.00 ft	Diameter: 3.80 inches	Volume: 49.70 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 62000.00 lb
			<u>Total Volume: 49.70 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3556.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	9.00 ft			
Tool Length:	37.00 ft			
Number of Packers:	1	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3533.00	
Hydraulic tool	5.00			3538.00	
Jars	6.00			3544.00	
Safety Joint	2.00			3546.00	
Top Packer	5.00			3551.00	
Packer	5.00			3556.00	28.00 Bottom Of Top Packer
Perforations	4.00			3560.00	
Recorder	0.00	6731	Inside	3560.00	
Recorder	0.00	6999	Outside	3560.00	
Bull Plug	5.00			3565.00	9.00 Anchor Tool
Total Tool Length:	37.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

F.G. Holl Company

19-19s-14-Barton

9431 East Central STE 100
Wichita Kansas 67206

Calcara unit 1-19

Job Ticket: 18340

DST#: 14

ATTN: Rene Husted

Test Start: 2014.06.12 @ 08:49:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 56.00 sec/qt
Water Loss: 9.60 in³
Resistivity: ohm.m
Salinity: 9400.00 ppm
Filter Cake: 1.00 inches

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

Oil API: deg API
Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
52.00	Oil cut mud Mud90%Oil10%	0.729

Total Length: 52.00 ft Total Volume: 0.729 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

