



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1175192
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

Form must be Typed
Form must be Signed
All blanks must be Filled

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: _____

1175192

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 <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
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:				

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> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Cimarex Energy Co.
Well Name	Hammer 19-6
Doc ID	1175192

Tops

Name	Top	Datum
Top GLorietta	1235	1623
Base Stone Corral	1760	1098
Chase	2635	223
Heebner Shale Base	4170	-1312
KC Drum	4500	-1642
KC Swope LS	4675	-1817
Marmaton	4840	-1982
Cherokee	5015	-2157
Atoka	5155	-2297
Morrow	5290	-2432
Mississippi	5460	-2602



Cement Report

Customer	Cimarex		Lease No.	Date		9-19-13	
Lease	Hammer		Well #	19-6		Service Receipt	
Casing	5 1/2" - 15.5'		County	Haskell		State	
Job Type	242-5 1/2" Production		Formation	19-30-31		Legal Description	
Pipe Data			Perforating Data			Cement Data	
Casing size	5 1/2" 15.5'		Tubing Size	Shots/Ft		Lead	
Depth	5705'		Depth	From	To		
Volume	Disp-135 bbl		Volume	From	To		
Max Press	2500#		Max Press	From	To	Tail in 275 sk AAA2	
Well Connection	TD-5700'		Annulus Vol.	From	To		
Plug Depth	ST-42'		Packer Depth	From	To		
Time	Casing Pressure	Tubing Pressure	Ebbs. Pumped	Rate	Service Log		
8:00					on loc-site assessment		
8:30					spot trucks-rig up		
11:00					CS on bit, break circ		
11:00					Safety meeting / JSA		
11:35					pressure test 2000#		
11:30					torment drilling rig #4 pump 50 bbl		
					Stopless		
11:30					plug rat + mouse w/50 sk AAA2		
11:45	200		74	5	mix + pump 275 sk AAA2		
					14.8 ppz - 1.51 #43bk		
12:00					wash lines		
12:05	0		0	6	drop plug, disp csg		
12:25	1800		125	2	slow rate		
12:30	2000		135	0	land latch down plug, float hold		
					job complete		
Service Units	34726	27462	3811-37517				
Driver Names	H. Olvera	E. Maudon	D. Beck				

K Martin

Customer Representative

J Bennett

Station Manager



BASIC
ENERGY SERVICES
Liberal, Kansas

p rt

Customer <u>Chamney</u>		Lease No.		Date <u>9-11-13</u>	
Lease <u>Mammec</u>		Well # <u>19-6</u>		Service Receipt <u>04267</u>	
Casing <u>8 5/8" 24#</u>		County <u>Haskell</u>		State <u>KS</u>	
Job Type <u>247-8 5/8" Surface</u>		Formation		Legal Description <u>19-30-31</u>	
Pipe Data			Perforating Data		Cement Data
Casing size <u>8 5/8" 24#</u>	Tubing Size	Shots/Ft		Lead <u>430 sk</u>	
Depth <u>1850'</u>	Depth	From	To	A-Cen	
Volume <u>115-115 gal</u>	Volume	From	To		
Max Press <u>2500#</u>	Max Press	From	To		
Well Connection <u>10-1850'</u>	Annulus Vol.	From	To		
Plug Depth <u>51-42'</u>	Packer Depth	From	To		
Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
<u>2:00</u>					<u>On loc site assessment</u>
<u>2:15</u>					<u>spot trucks rig up</u>
<u>3:30</u>					<u>start csg and float camp</u>
<u>7:00</u>					<u>csg on bottom break circ</u>
<u>7:00</u>					<u>safety unplug / CSA</u>
<u>7:00</u>					<u>pressure test @ 3000#</u>
<u>7:00</u>	<u>200</u>		<u>183.8</u>	<u>5</u>	<u>Mix + Pump 430 sk A-Cen w/</u>
					<u>3% CC, 1/4# pf, 1 1/2" w-A-1</u>
					<u>12.1 ppg - 2.40 lb/sk</u>
<u>7:40</u>	<u>200</u>		<u>91.9</u>	<u>5</u>	<u>switch to tail 385 sk Premium</u>
					<u>Common w/ 2% CC, 1/4# pf @</u>
					<u>14.8 ppg 1.34 lb/sk</u>
<u>8:00</u>	<u>0</u>		<u>0</u>	<u>5</u>	<u>drop plug disp csg</u>
<u>8:10</u>	<u>400</u>		<u>40</u>	<u>5</u>	<u>got cut returns to surface</u>
<u>8:25</u>	<u>700</u>		<u>105</u>	<u>2</u>	<u>slow rate</u>
<u>8:30</u>	<u>1200</u>		<u>115</u>	<u>0</u>	<u>land plug float hold</u>
					<u>circ 75' bld to surface</u>
					<u>job complete</u>
Service Units	<u>2472e</u>	<u>2741e2</u>	<u>38119-19-30-31</u>	<u>14354-19-30-31</u>	<u>63-3787</u>
Driver Names	<u>A Owen</u>	<u>E Murrell</u>	<u>D Beck</u>	<u>Wano</u>	<u>R Mott</u>

K. Mott
Customer Representative

S. Bennett
Station Manager

A Owen
Cementer



DRILL STEM TEST REPORT

Prepared For: **Cimarex Energy Co.**

348 Rd. DD
Santana Ks, 67870

ATTN: Kevin Martin

Hammer #19-6

19/30s/31w/Haskell

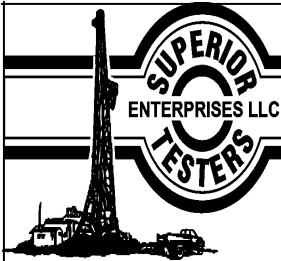
Start Date: 2013.09.16 @ 20:35:00

End Date: 2013.09.17 @ 08:07:00

Job Ticket #: 18494 DST #: 1

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

Printed: 2013.09.16 @ 08:30:18



DRILL STEM TEST REPORT

Cimarex Energy Co.

19/30s/31w/Haskell

348 Rd. DD
Santana Ks, 67870

Hammer #19-6

Job Ticket: 18494

DST#: 1

ATTN: Kevin Martin

Test Start: 2013.09.16 @ 20:35:00

GENERAL INFORMATION:

Formation: **swope limestone**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 00:58:00
 Time Test Ended: 08:07:00
 Interval: **4655.00 ft (KB) To 4698.00 ft (KB) (TVD)**
 Total Depth: 4698.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Poor
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Shane Konem
 Unit No: 3330/388/Great Bend
 Reference Elevations: 2859.00 ft (KB)
 2850.00 ft (CF)
 KB to GR/CF: 9.00 ft

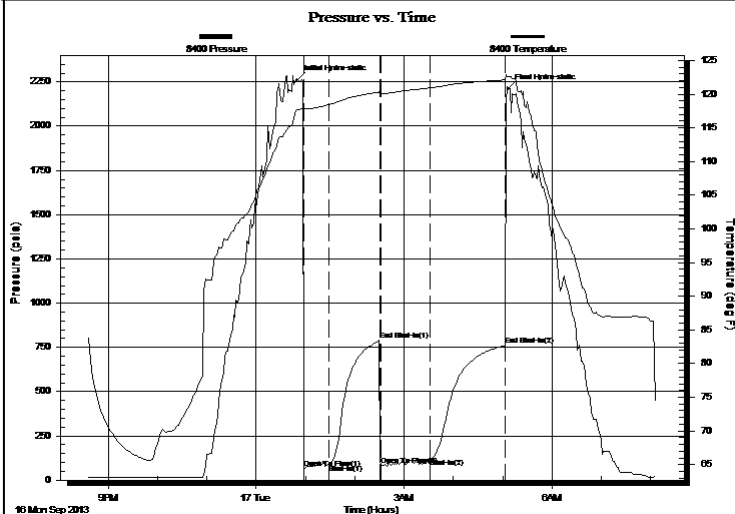
Serial #: 8400

Inside

Press @ RunDepth: 120.74 psia @ 4694.00 ft (KB) Capacity: 5000.00 psia
 Start Date: 2013.09.16 End Date: 2013.09.17 Last Calib.: 2013.09.16
 Start Time: 20:35:00 End Time: 08:07:00 Time On Btm: 2013.09.17 @ 00:50:30
 Time Off Btm: 2013.09.17 @ 05:07:00

TEST COMMENT: 1st Open/ 30 Minutes. Weak blow built to 1/4 inch in bucket of water.
 1st Shut In/ 60 Minutes. No blow back.
 2nd Open/ 60 Minutes. No blow. Did not flush tool per K. Martin.
 2nd Shut In/ 90 Minutes. No blow back.

PRESSURE SUMMARY



Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2261.12	117.71	Initial Hydro-static
8	66.17	117.68	Open To Flow (1)
38	86.77	118.44	Shut-In(1)
100	790.43	120.33	End Shut-In(1)
101	84.92	120.08	Open To Flow (2)
161	120.74	120.94	Shut-In(2)
253	761.50	122.11	End Shut-In(2)
257	2212.12	122.66	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	No gas	0.00
59.00	100% mud	0.29

Gas Rates

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



DRILL STEM TEST REPORT

Cimarex Energy Co.

19/30s/31w/Haskell

348 Rd. DD
Santana Ks, 67870

Hammer #19-6

Job Ticket: 18494

DST#: 1

ATTN: Kevin Martin

Test Start: 2013.09.16 @ 20:35:00

GENERAL INFORMATION:

Formation: **swope limestone**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 00:58:00
 Time Test Ended: 08:07:00
 Interval: **4655.00 ft (KB) To 4698.00 ft (KB) (TVD)**
 Total Depth: 4698.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Poor
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Shane Konem
 Unit No: 3330/388/Great Bend
 Reference Elevations: 2859.00 ft (KB)
 2850.00 ft (CF)
 KB to GR/CF: 9.00 ft

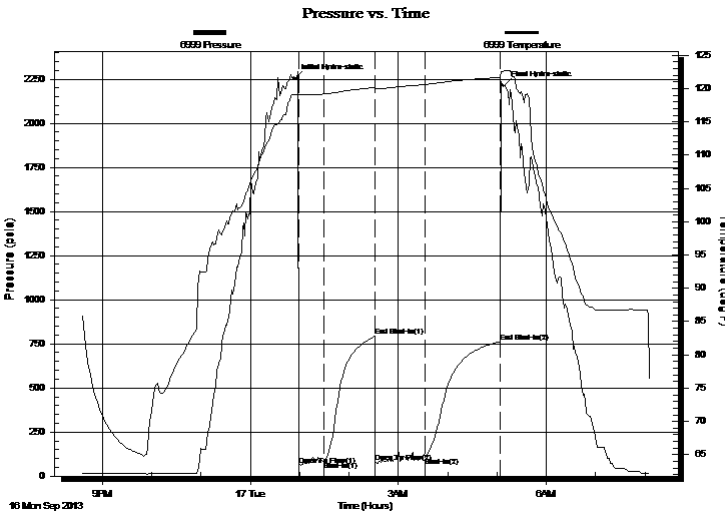
Serial #: 6999

Outside

Press @ Run Depth: 762.46 psia @ 4695.00 ft (KB) Capacity: 5000.00 psia
 Start Date: 2013.09.16 End Date: 2013.09.17 Last Calib.: 2013.09.16
 Start Time: 20:35:00 End Time: 08:06:30 Time On Btm: 2013.09.17 @ 00:53:30
 Time Off Btm: 2013.09.17 @ 05:08:00

TEST COMMENT: 1st Open/ 30 Minutes. Weak blow built to 1/4 inch in bucket of water.
 1st Shut In/ 60 Minutes. No blow back.
 2nd Open/ 60 Minutes. No blow. Did not flush tool per K. Martin.
 2nd Shut In/ 90 Minutes. No blow back.

PRESSURE SUMMARY



Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2253.49	119.10	Initial Hydro-static
6	60.98	119.14	Open To Flow (1)
36	86.33	119.19	Shut-In(1)
98	792.55	120.17	End Shut-In(1)
99	78.81	120.02	Open To Flow (2)
159	108.43	120.63	Shut-In(2)
251	762.46	121.69	End Shut-In(2)
255	2212.67	122.66	Final Hydro-static

Recovery

Gas Rates

Length (ft)	Description	Volume (bbl)
0.00	No gas	0.00
59.00	100% mud	0.29

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Cimarex Energy Co.

19/30s/31w/Haskell

348 Rd. DD
Santana Ks, 67870

Hammer #19-6

Job Ticket: 18494

DST#: 1

ATTN: Kevin Martin

Test Start: 2013.09.16 @ 20:35:00

Tool Information

Drill Pipe:	Length: 4403.00 ft	Diameter: 3.80 inches	Volume: 61.76 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: 244.00 ft	Diameter: 2.25 inches	Volume: 1.20 bbl	Weight to Pull Loose:	76000.00 lb
			<u>Total Volume: 62.96 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial	67000.00 lb
Depth to Top Packer:	4655.00 ft			Final	67000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	43.00 ft				
Tool Length:	72.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		
Tool Comments:					

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4627.00	
Shut-In Tool	5.00			4632.00	
Hydroic Tool	5.00			4637.00	
Jars	6.00			4643.00	
Safety Joint	2.00			4645.00	
Packer	5.00			4650.00	29.00 Bottom Of Top Packer
Packer	5.00			4655.00	
Perforations	38.00			4693.00	
Recorder	1.00	8400	Inside	4694.00	
Recorder	1.00	6999	Outside	4695.00	
Bullnose	3.00			4698.00	43.00 Bottom Packers & Anchor
Total Tool Length:		72.00			



DRILL STEM TEST REPORT

FLUID SUMMARY

Cimarex Energy Co.

19/30s/31w/Haskell

348 Rd. DD
Santana Ks, 67870

Hammer #19-6

Job Ticket: 18494

DST#: 1

ATTN: Kevin Martin

Test Start: 2013.09.16 @ 20:35:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 47.00 sec/qt
Water Loss: 8.00 in³
Resistivity: ohm.m
Salinity: 1500.00 ppm
Filter Cake: 1.00 inches

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

Oil API: deg API
Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	No gas	0.000
59.00	100% mud	0.290

Total Length: 59.00 ft Total Volume: 0.290 bbl

Num Fluid Samples: 0

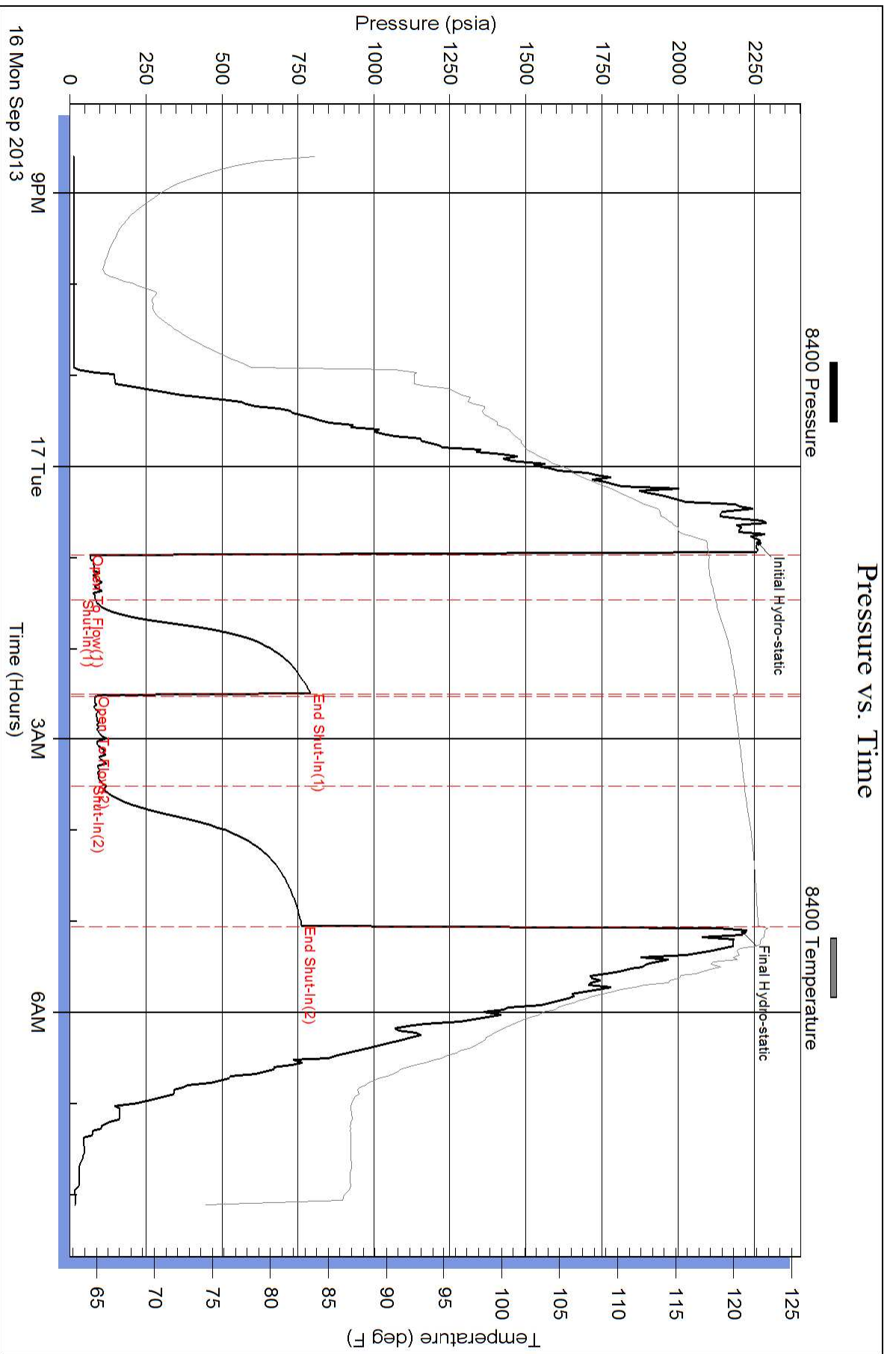
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



Pressure vs. Time

