



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1120022
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: _____



1120022

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
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

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

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> _____ <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	F. G. Holl Company L.L.C.
Well Name	WOLF 3-12
Doc ID	1120022

All Electric Logs Run

DIL
BHCS
CNL/CDL
CPI
Microresistivity log
Fracfinder
Sector Bond log

Form	ACO1 - Well Completion
Operator	F. G. Holl Company L.L.C.
Well Name	WOLF 3-12
Doc ID	1120022

Tops

Name	Top	Datum
Anhydrite	929	+1049
Herrington	1838	+140
Winfield	1895	+83
Towanda	1959	+19
Fort Riley	2001	-23
B/Florence	2103	-125
Kinney Ls	2119	-141
Wrefold	2152	-174
Council Grove	2173	-195
Crouse	2211	-233
Cottonwood	2281	-301
Neva	2349	-371
Red Eagle	2408	-430
Onaga Shale	2555	-575
Wabaunsee	2580	--600
Root Shale	2634	-654
Stotler	2700	-722
Tarkio	2760	-782
Howard	2898	-920
Severy Shale	2951	-971
Topeka	2973	-993
Heebner	3232	-1254
Toronto	3250	-1272
Douglas Shale	3262	-1284

Form	ACO1 - Well Completion
Operator	F. G. Holl Company L.L.C.
Well Name	WOLF 3-12
Doc ID	1120022

Tops

Name	Top	Datum
Brown Lime	3321	-1343
LKC	3330	-1352
Drum	3460	-1482
BKC	3552	-1574
Conglomerate	3565	-1587
Arbuckle	3631	-1653
RTD	3809	-1831

Mud-Co / Service Mud Inc.

Operator FG Holl County Barton State Kansas Pump 6 X 14 X 60 SPM Casing Program 8 5/8 " @ 912 ft.
 Well Wolf #2-12 Location 1971EGL GPM 7.75 BPM " @ _____ ft.
 Contractor Duke #8 Sec 12 TWP 20S RNG 15W D.P. 4.5 in. 191 FT/MIN R.A. " @ _____ ft.
 Stockpoint Pratt, Ks. Date 2/6/2013 Engineer Jason Whiting Collar 6.25 in. 450 ft. 348 FT/MIN R.A. Total Depth 3809 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 %				
2/6	0																			RURT
2/8	1363																			Drig. Displace w/starch ~1750
2/9	1900	8.8	58	14	23	24/32	7.0	6.8	1		17m	Hvy	2.5		97.5				DST #1 DST #1 @ 1900'	
2/10	2330	9.5	37	8	13	18/23	7.0	10.4	2		33m	Hvy	6.2		93.8				Drig. misrun, tool failure	
2/11	3028	9.1	45	12	11	10/42	10.0	7.2	1		5,800	20	5.4		94.6				Drig. DST #2 @ 1900 in behind	
2/12	3367	9.4	59	18	12	15/36	10.0	7.2	1		4,700	40	6.8		93.2				DST #3 DST #1	
2/13	3450	9.2	55	16	15	18/52	10.5	7.2	1		6,000	20	6.1		93.9				Drig. Displaced w/chem @ 2485	
2/14	3496	9.3	55	16	14	18/76	10.0	8.0	1		7,300	40	6.7		93.3				Drig. DST #4 @ 3400	
2/15	3636	9.4	51	16	11	9/45	9.0	9.2	1		6,800	60	7.4		92.6				TI w/DST #8 DST #5 @ 3469	
2/16	3651	9.3	79	21	16	15/75	11.0	8.8	1		6,000	40	6.8		93.2				CCH after DST 9 DST #6 @ 3487	
2/17	3755	9.3	49	11	12	9/77	10.5	10.2	1		7,100	40	6.7		93.3				CCH f/DST 11 DST #7 @ 3510	
2/18	3809	9.3	46	12	8	6/25	10.5	9.2	1		5,900	40	6.8		93.2	1/2			Logging DST #10 @ 3666	
2/18	3809																			Final: 11 DST's. Logs Ok. Run Casing. LTD - 3807'.

Reserve Pit, Chl content ppm: 49,000
 Estimated Volume: 500 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	Amount	Materials	Sacks	Amount	Amount
C/S HULLS	52					
CAUSTIC SODA	23					
DESCO	2					
DRILL PAK	5					
LIME	1					
MIL-GUARD	2					
PREMIUM GEL	366					
SODA ASH	23					
STARCH	48					
SUPER LIG	11					
						Total Mud Cost
						Trucking Cost
						Trucking Surcharge
						Taxes
						TOTAL COST



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

FIELD SERVICE TICKET

1718 07609 A

DATE _____ TICKET NO. _____

DATE OF JOB: 2-7-13		DISTRICT		NEW WELL <input checked="" type="checkbox"/>	OLD WELL <input type="checkbox"/>	PROD <input type="checkbox"/>	INJ <input type="checkbox"/>	WDW <input type="checkbox"/>	CUSTOMER ORDER NO.:	
CUSTOMER: F9 HILL CO. LLC				LEASE: WOLF				WELL NO: 3-10		
ADDRESS				COUNTY: BARTON		STATE: Ks.				
CITY				STATE		SERVICE CREW: LESLEY, MARCOZ, PATES				
AUTHORIZED BY				JOB TYPE: C/W - 8 1/2" S.P.						
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM	PM	TIME
37586	6.5						2-7-13			7:00
11891	6.5									1:00
1180	6.5									1:00
										12:45
										1:30
										60

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	A-COMPLIANT COMMON	SK	200		
CE 100C	COMMON CMT.	SK	175		
CE 102	CELLULOSE	LB	99		
CE 104	CALCIUM CHLORIDE	LB	814		
CE 165	TOT RUBBER CMT. PLUG 2 1/2"	EA	1		
CE 1753	CENTRALIZER, 1 1/2"	EA	3		
E 100	PICKUP MILEAGE	MI	60		
E 101	HEAVY EQUIPMENT MILEAGE	MI	120		
E 113	BULK DELIVERY CHARGE	TRK	1057		
CE 201	DEPTH CHARGE, 50' KID	HR	1.96		
CE 240	BENDING SERVICE CHARGE	BR	575		
CE 504	LOG CONTAINER CHARGE	YB	1		
5003	SERVICE SUPPLIER	EA	1		

CHEMICAL / ACID DATA:			

SERVICE & EQUIPMENT	%TAX
MATERIALS	%TAX

SERVICE REPRESENTATIVE: *[Signature]*

THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: *[Signature]*
(WELL OWNER OPERATOR CONT)

FIELD SERVICE ORDER NO.



TREATMENT REPORT

Customer **FG HOLL CO. LLC** Lease No. _____ Date **2-7-2013**
 Lease **WOLF** Well # **3-12**
 Field Order # **01609** Station **PRATT, KS.** Casing **2 5/8"** Depth _____ County **BARTON** State **Ks.**
 Type Job **CNW - 2 5/8" S.P.** Formation **TD - 912'** Legal Description **12-20-15**

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size 2 5/8" x 20'	Tubing Size	Shots/Ft	CMT -	Acid 200 SKS. A-CON	RATE	PRESS	ISIP	
Depth 912.100'	Depth	From	To	Pre Pad @ 2.47 CU FT³	Max		5 Min.	
Volume 50 BBL	Volume	From	To	Pad 175 SKS. COMMON	Min	55-20'	10 Min.	
Max Press 1000	Max Press	From	To	Frac @ 1.20 CU FT³	Avg		15 Min.	
Well Connection PLC	Annulus Vol.	From	To		HHP Used		Annulus Pressure	
Plug Depth 892.100'	Packer Depth	From	To	Flush 57 BBL	Gas Volume		Total Load	

Customer Representative **R. LONG** Station Manager **D. SCOTT** Treater **K. LESLEY**

Service Units	37586	19839	19843	19900	21010				
Driver Names	LESLEY	MARQUEZ	---	BATES	---				

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
9:30 AM					ON LOCATION - SAFETY MEETING
10:15 AM					RUN 21 ITS. 2 5/8" x 24" CSG.
					TURBO - 900', 450', 40'
11:30 AM					CSG. ON BOTTOM
11:35 AM					HOOK UP TO CSG./BREAK CIRC. W/ RIG
12:00 PM	400		5	6	H ₂ O AHEAD
12:16 PM	300		88	6	MIX 200 SKS. A-CON @ 12 PPG
12:24 PM	100		38	6	MIX 175 SKS. COMMON @ 15.6 PPG
12:30 PM					SHOT DOWN - DROPT. R. PLUG.
12:33 PM	0		0	5	START DISPLACEMENT
12:43 PM	350		50	3	SLOW RATE
12:45 PM	450		57	3	PLUG @ DESIRED DEPTH
					CIRC. THRU JOB
					CIRC. 15 BBL TO PIT
					JOB COMPLETE, THANKS - KEVIN LESLEY

Conservation Division
Finney State Office Building
130 S. Market, Rm. 2078
Wichita, KS 67202-3802



Phone: 316-337-6200
Fax: 316-337-6211
<http://kcc.ks.gov/>

Mark Sievers, Chairman
Thomas E. Wright, Commissioner
Shari Feist Albrecht, Commissioner

Sam Brownback, Governor

April 24, 2013

Franklin R. Greenbaum
F. G. Holl Company L.L.C.
9431 E CENTRAL STE 100
WICHITA, KS 67206-2563

Re: ACO1
API 15-009-25809-00-00
WOLF 3-12
NE/4 Sec.12-20S-15W
Barton County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,
Franklin R. Greenbaum

BASIC

energy services, L.P.

PG. #1 OF #2

TREATMENT REPORT

Customer: FG HOLL CO. LLC	Lease No.	Date: 2-19-2013
Lease: WOLF	Well #: 3-12	
Field Order #: 07617	Station: PRATT, KS.	Casing: 5 1/2"
Type Job: CNW - 5 1/2" TWO STAGE L.S.	Formation: TD-3809'	Legal Description: 12-20-15
	Depth:	County: BARTON State: Ks.

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size: 5 1/2"	Tubing Size: 4 1/2"	Shots/Ft: 1 MT	Acid: 255SK SCAVENGER	Rate	Press	ISIP		
Depth: 5747.71	Depth	From	To	Pre Pad: @ 1.71 CVT³	Max	SI = 13.75'	5 Min.	
Volume: 12.6 BBL	Volume	From	To	Pad: 135SK AA2	Min		10 Min.	
Max Press: 1500	Max Press	From	To	Frac: @ 1.43 CVT³	Avg		15 Min.	
Well Connection: P.C.	Annulus Vol.	From	To		HHP Used		Annulus Pressure	
Plug Depth: 5183.90	Packer Depth	From	To	Flush: 92.3 TOTAL	Gas Volume		Total Load	

Customer Representative: **R. LONG** Station Manager: **D. SCOTT** Treater: **K. LESLEY**

Service Units	375810	19889	19843	19960	21010				
Driver Names	LESLEY	MARQUEZ	---	GIBSON	---				

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
4:00 PM	2-18-13				ON LOCATION - SAFETY MEETING
5:00 PM					RUN 93 JTS. 5 1/2" x 4 1/2" CSG.
					TURBO. - 4, 5, 6, 9, 10, 12, 13, 44, 46, 48, 49, 50
					BASK. - 6, 44
					DV TOOL - #45 @ 2012'
7:00 PM					CSG. ON BOTTOM / BREAK CIRC. W/ RIG
9:30 PM	300		5	6	H2O AHEAD
9:34 PM	300		12	6	SUPERFLUSH
9:37 PM	300		5	6	H2O SPACER
9:38 PM	250		6	6	MIX 255SK. SCAVENGER @ 14 PPG
9:39 PM	150		34	6	MIX 135SK. AA2 @ 15 PPG
9:45 PM					CLEAR PUMP & LINE / DROP L.D. PLUG
9:53 PM	0		0	6	START DISPLACEMENT
10:00 PM	100		43	5	SWITCH TO MUD DISP.
10:05 PM	200		65	4	LIFT PSI
10:08 PM	500		85	3	SLOW RATE
10:10 PM	1500		92.3	2	PLUG DOWN - HELD & PUMPED 49 BBL MUD
					CIRC. THRU JOB
10:45 PM	800		1		DROP D.V. OPENING PLUG / OPEN DV
					CIRC. W/ RIG PUMP
					PLUG R.H. & M.H.

OVER →



ASIC Energy Services, L.P.

PG # 2 OF # 2

TREATMENT REPORT

Customer: PG HOLL CO. LLC Lease No. _____ Date: 2-19-2013
 Lease: WOLF Well #: 3-12
 Field Order #: 01617 Station: PRATT, KS. Casing: 5 1/2" Depth: _____ County: BARTON State: Ks.
 Type Job: CNW - 5 1/2" Tub STAGE Formation: TD = 3809 Legal Description: 12-20-15

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size <u>5 1/2 x 15.8</u>	Tubing Size	Shots/Ft	<u>CNIT -</u>	Acid <u>25 SK SCAVENGER</u>	RATE	PRESS	ISIP	
Depth <u>2012</u>	Depth	From	To	Pre Pad <u>@ 1.71 cuft³</u>	Max	<u>DV TOOL - 2016</u>	5 Min.	
Volume <u>43 BBL</u>	Volume	From	To	Pad <u>65 SK. AA2</u>	Min		10 Min.	
Max Press <u>1500</u>	Max Press	From	To	Frac <u>@ 1.43 cuft³</u>	Avg		15 Min.	
Well Connection <u>P.L.</u>	Annulus Vol.	From	To		HHP Used		Annulus Pressure	
Plug Depth <u>2012</u>	Packer Depth	From	To	Flush <u>43 H₂O</u>	Gas Volume		Total Load	

Customer Representative: R. LONG Station Manager: D. SCOTT Treater: K. LESLEY

Service Units	<u>37586</u>	<u>19889</u>	<u>19843</u>	<u>19960</u>	<u>21010</u>				
Driver Names	<u>LESLEY</u>	<u>MARQUEZ</u>	<u>—</u>	<u>GIBSON</u>	<u>—</u>				

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
<u>12:45 AM</u>					<u>* TOP STAGE *</u>
<u>12:50 AM</u>	<u>300</u>		<u>5</u>	<u>6</u>	<u>H₂O AHEAD</u>
<u>12:53 AM</u>	<u>300</u>		<u>12</u>	<u>6</u>	<u>SUPERFLUSH</u>
<u>12:55 AM</u>	<u>300</u>		<u>5</u>	<u>6</u>	<u>H₂O SPACER</u>
<u>12:56 AM</u>	<u>200</u>		<u>6</u>	<u>6</u>	<u>MIX 25 SK. SCAVENGER @ 14 PPG</u>
<u>12:57 AM</u>	<u>100</u>		<u>16.5</u>	<u>6</u>	<u>MIX 105 SK. AA2 @ 15 PPG</u>
<u>1:00 AM</u>					<u>CLEAR PUMP & LINE / DROP DV CLOSE PLUG</u>
<u>1:04 AM</u>	<u>0</u>		<u>0</u>	<u>5</u>	<u>START DISPLACEMENT</u>
<u>1:08 AM</u>	<u>300</u>		<u>20</u>	<u>4</u>	<u>LIFT PRESSURE</u>
<u>1:11 AM</u>	<u>200</u>		<u>34</u>	<u>3</u>	<u>SLOW RATE</u>
<u>1:15 AM</u>	<u>1200</u>		<u>43</u>	<u>2</u>	<u>PLUG DOWN - CLOSE DV TOOL</u>
					<u>CIRC. THRU JOB</u>

JOB COMPLETE,
THANKS -
KEVIN LESLEY



DRILL STEM TEST REPORT

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

9431 E Central STE 100 Wichita Kansas
67206-2563

ATTN: Frank

Wolf #3-12

12-20s-15w/ Barton

Start Date: 2013.02.09 @ 00:00:00

End Date:

Job Ticket #: 16968

DST #: 1

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

Printed: 2013.02.09 @ 11:33:49



DRILL STEM TEST REPORT

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 16968

DST#: 1

ATTN: Frank

Test Start: 2013.02.09 @ 00:00:00

GENERAL INFORMATION:

Formation: **Herrington**

Deviated: No Whipstock: ft (KB)

Time Tool Opened:

Time Test Ended:

Test Type: Conventional Bottom Hole (Initial)

Tester: Shane Konzem

Unit No: 3330- 20/ Great Bend

Interval: 1813.00 ft (KB) To 1900.00 ft (KB) (TVD)

Reference Elevations: 1980.00 ft (KB)

Total Depth: 1900.00 ft (KB) (TVD)

1972.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8400

Press @ RunDepth: 883.29 psia @ ft (KB)

Capacity: psia

Start Date: 2013.02.09

End Date: 2013.02.09

Last Calib.: 1899.12.30

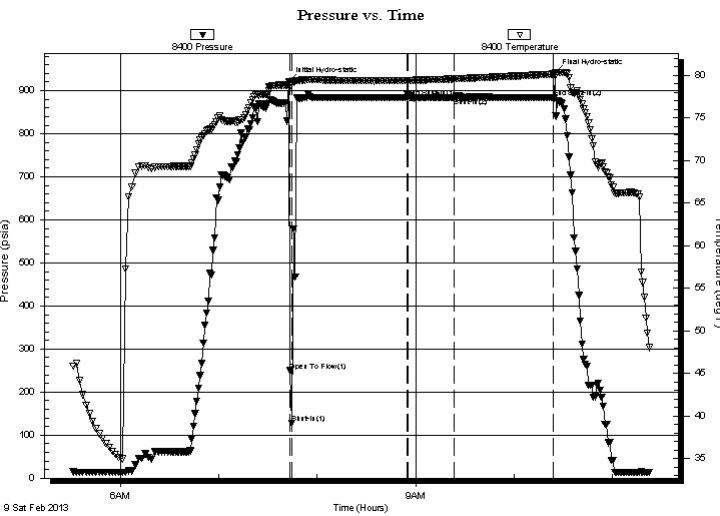
Start Time: 05:30:00

End Time: 11:23:00

Time On Btm: 2013.02.09 @ 07:42:30

Time Off Btm: 2013.02.09 @ 10:25:00

TEST COMMENT: 1st Open/ 10 Minutes. Strong Blow to bottom of 5 gallon bucket in 2 minutes.
 1st Shut In/ 60 Minutes. Slight blow back.
 2nd Open/ 30 Minutes Weak blow built to 2 inchs into the water No Gas to Surface.
 2nd Shut In/ 60 Minutes. slight blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	920.24	78.74	Initial Hydro-static
1	249.69	78.73	Open To Flow (1)
2	127.85	79.01	Shut-In(1)
72	883.96	79.39	End Shut-In(1)
73	891.26	79.40	Open To Flow (2)
101	883.68	79.58	Shut-In(2)
162	883.29	80.14	End Shut-In(2)
163	941.00	80.25	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
200.00	Drilling Mud	2.81

Gas Rates

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



DRILL STEM TEST REPORT

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 16968

DST#: 1

ATTN: Frank

Test Start: 2013.02.09 @ 00:00:00

GENERAL INFORMATION:

Formation: **Herrington**

Deviated: No Whipstock: ft (KB)

Time Tool Opened:

Time Test Ended:

Test Type: Conventional Bottom Hole (Initial)

Tester: Shane Konzem

Unit No: 3330- 20/ Great Bend

Interval: **1813.00 ft (KB) To 1900.00 ft (KB) (TVD)**

Reference Elevations: 1980.00 ft (KB)

Total Depth: 1900.00 ft (KB) (TVD)

1972.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8405

Press @ Run Depth: 881.51 psia @ ft (KB)

Capacity: psia

Start Date: 2013.02.09

End Date: 2013.02.09

Last Calib.: 1899.12.30

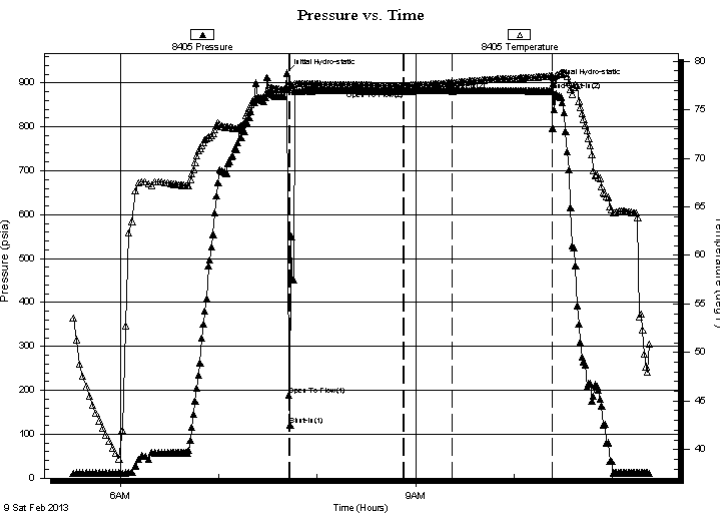
Start Time: 05:30:00

End Time: 11:23:00

Time On Btm: 2013.02.09 @ 07:41:30

Time Off Btm: 2013.02.09 @ 10:24:00

TEST COMMENT: 1st Open/ 10 Minutes. Strong Blow to bottom of 5 gallon bucket in 2 minutes.
 1st Shut In/ 60 Minutes. Slight blow back.
 2nd Open/ 30 Minutes Weak blow built to 2 inchs into the water No Gas to Surface.
 2nd Shut In/ 60 Minutes. slight blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	922.43	77.55	Initial Hydro-static
1	189.59	77.14	Open To Flow (1)
2	120.53	77.34	Shut-In(1)
71	881.85	77.49	End Shut-In(1)
72	881.84	77.50	Open To Flow (2)
101	881.82	77.80	Shut-In(2)
162	881.51	78.48	End Shut-In(2)
163	899.22	78.30	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
200.00	Drilling Mud	2.81

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 16968

DST#: 1

ATTN: Frank

Test Start: 2013.02.09 @ 00:00:00

Tool Information

Drill Pipe:	Length: 1800.00 ft	Diameter: 3.80 inches	Volume: 25.25 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: lb
			Total Volume: 25.25 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 30000.00 lb
Depth to Top Packer:	1813.00 ft			Final lb
Depth to Bottom Packer:	ft			
Interval between Packers:	88.11 ft			
Tool Length:	116.11 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: miss run tool slid after closing it in

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
SHut-InTool	5.00		Inside	1790.00	
Hydraulic Tool	5.00			1795.00	
Jars	6.00			1801.00	
Safety Joint	2.00			1803.00	
Packer	5.00			1808.00	28.00 Bottom Of Top Packer
Packer	5.00			1813.00	
Anchor	4.00			1817.00	
Change Over Sub	0.75			1817.75	
Drill Pipe	62.61		Outside	1880.36	
Change Over Sub	0.75		Outside	1881.11	
Anchor	15.00			1896.11	
Recorder	1.00		Inside	1897.11	
Recorder	1.00		Outside	1898.11	
Bullnose	3.00			1901.11	88.11 Bottom Packers & Anchor

Total Tool Length: 116.11



DRILL STEM TEST REPORT

FLUID SUMMARY

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 16968

DST#: 1

ATTN: Frank

Test Start: 2013.02.09 @ 00:00:00

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: 58.00 sec/qt

Cushion Volume: bbl

Water Loss: 6.80 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psia

Salinity: 17000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
200.00	Drilling Mud	2.805

Total Length: 200.00 ft Total Volume: 2.805 bbl

Num Fluid Samples: 0

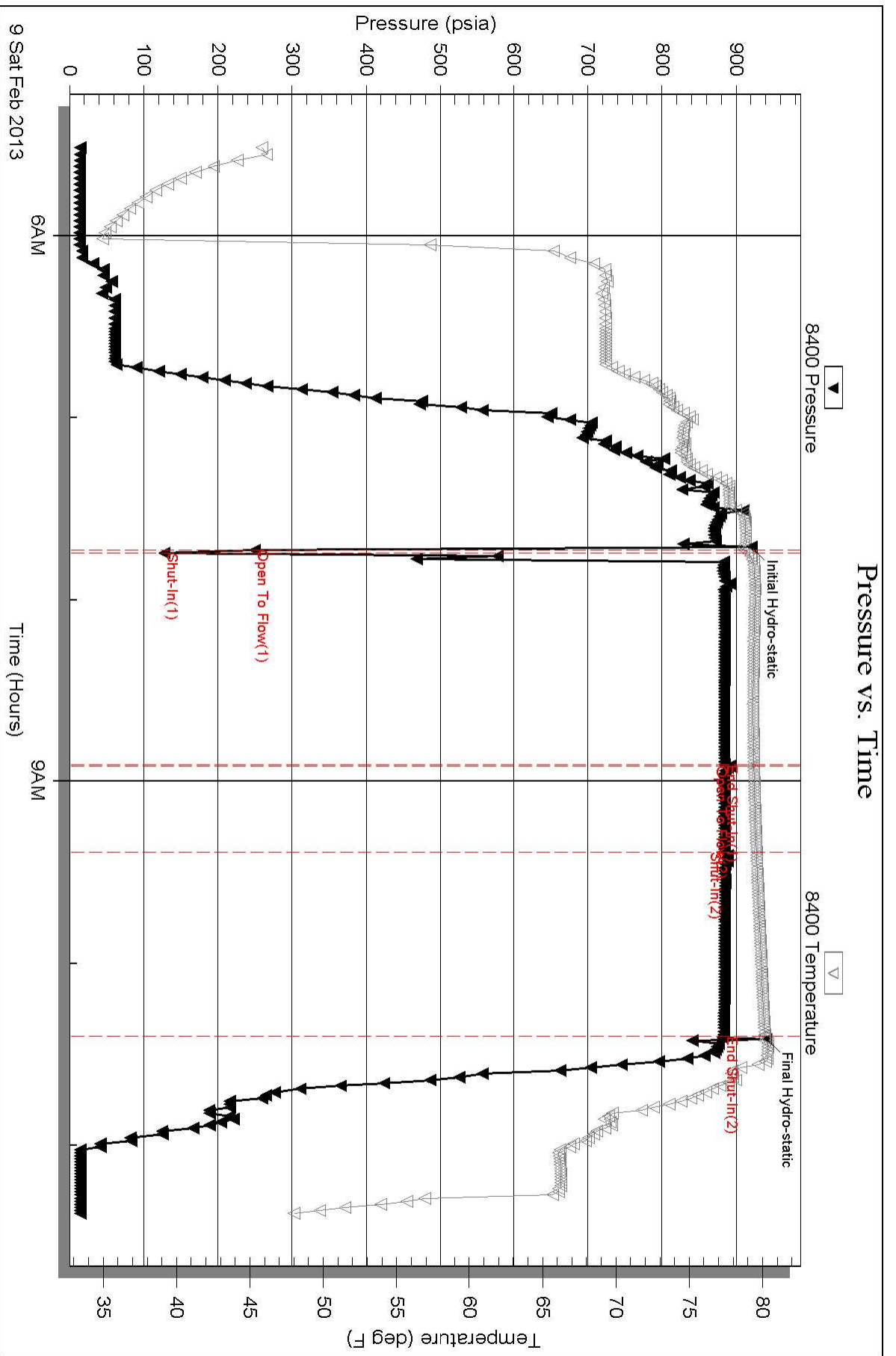
Num Gas Bombs: 0

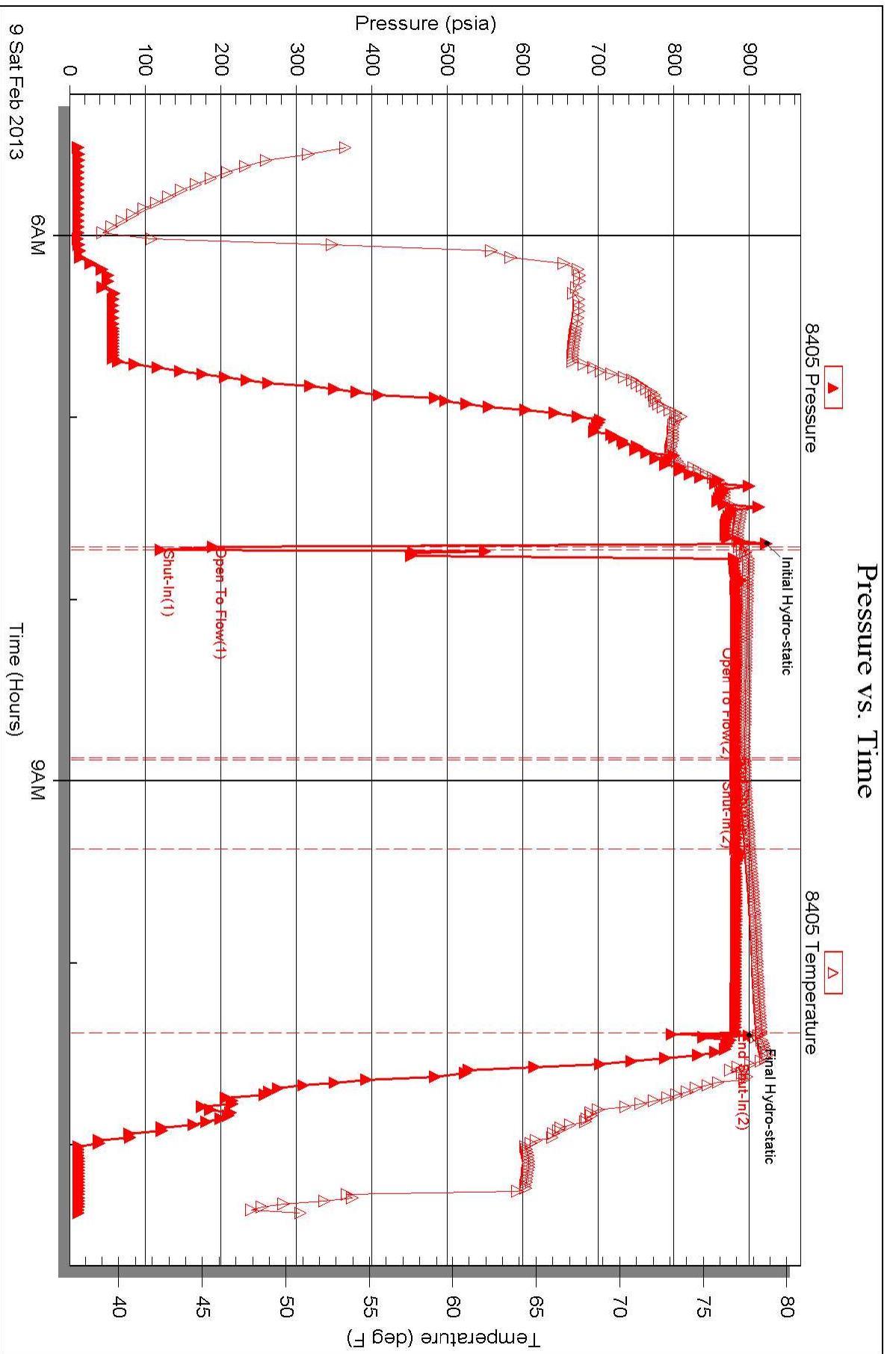
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: miss run tool slid after closing it in







DRILL STEM TEST REPORT

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

9431 E Central STE 100 Wichita Kansas
67206-2563

ATTN: Frank

Wolf #3-12

12-20s-15w/ Barton

Start Date: 2013.02.09 @ 00:00:00

End Date: 2013.02.09 @ 00:00:00

Job Ticket #: 16969 DST #: 2

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

Printed: 2013.02.09 @ 16:20:15



DRILL STEM TEST REPORT

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 16969

DST#: 2

ATTN: Frank

Test Start: 2013.02.09 @ 00:00:00

GENERAL INFORMATION:

Formation: **arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:00:00

Time Test Ended: 00:00:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Gene Budig

Unit No: 3335

Interval: 1813.00 ft (KB) To 1900.00 ft (KB) (TVD)

Reference Elevations: 1980.00 ft (KB)

Total Depth: 1900.00 ft (KB) (TVD)

1972.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8400 Inside

Press @ RunDepth: 544.00 psia @ 1896.11 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.02.09

End Date: 2013.02.09

Last Calib.: 2013.02.09

Start Time: 10:37:00

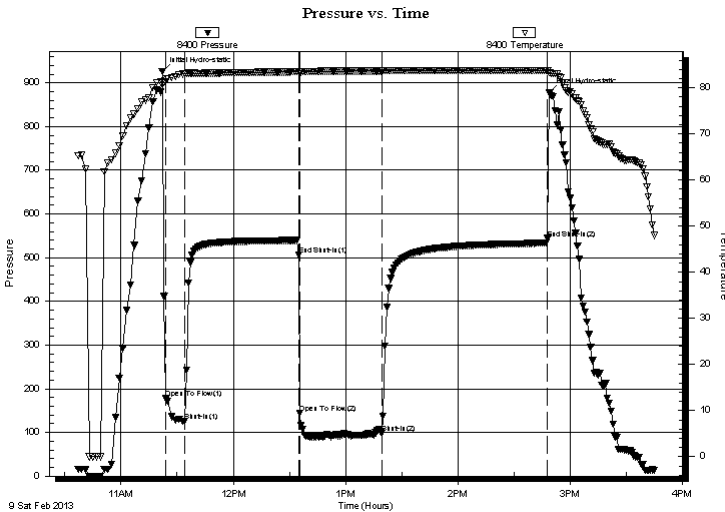
End Time: 15:45:30

Time On Btm: 2013.02.09 @ 11:22:00

Time Off Btm: 2013.02.09 @ 14:49:00

TEST COMMENT: 1st Opening 12 Minutes -Strong blow with gas to surface in 10 minutes
 1st Shut-In 60 Minutes fair blow back
 2nd Opening 45 Minutes -Strong blow see gas rates
 2nd Shut-In 90 Minutes Fair blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	926.38	81.31	Initial Hydro-static
2	178.48	81.91	Open To Flow (1)
12	125.58	83.06	Shut-In(1)
73	506.56	83.44	End Shut-In(1)
74	144.46	83.39	Open To Flow (2)
118	97.65	83.66	Shut-In(2)
207	544.00	83.78	End Shut-In(2)
207	878.21	83.28	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
75.00	Drilling Mud	1.05

Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
First Gas Rate	0.75	4.65	72.63
Last Gas Rate	0.75	5.15	80.44
Max. Gas Rate	0.75	5.15	80.44



DRILL STEM TEST REPORT

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 16969

DST#: 2

ATTN: Frank

Test Start: 2013.02.09 @ 00:00:00

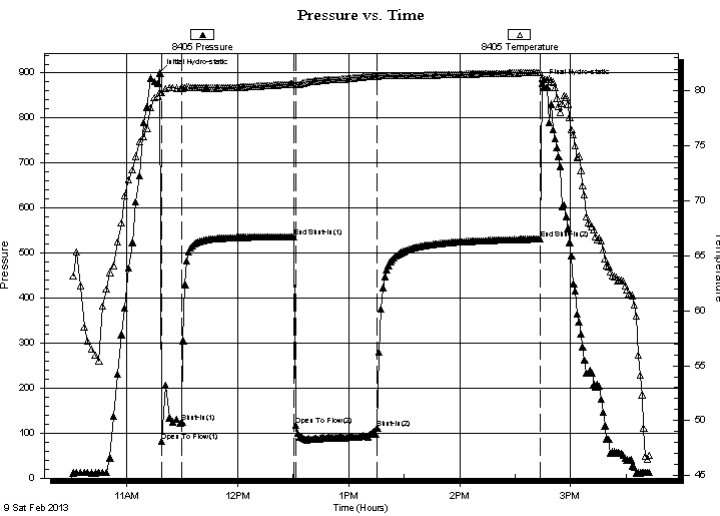
GENERAL INFORMATION:

Formation: **arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 00:00:00
 Time Test Ended: 00:00:00
 Interval: **1813.00 ft (KB) To 1900.00 ft (KB) (TVD)**
 Total Depth: 1900.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Gene Budig
 Unit No: 3335
 Reference Elevations: 1980.00 ft (KB)
 1972.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8405 Outside

Press @ RunDepth: 531.31 psia @ 1897.11 ft (KB) Capacity: 5000.00 psia
 Start Date: 2013.02.09 End Date: 2013.02.09 Last Calib.: 2013.02.09
 Start Time: 10:31:00 End Time: 15:42:30 Time On Btm: 2013.02.09 @ 11:18:00
 Time Off Btm: 2013.02.09 @ 14:44:30

TEST COMMENT: 1st Opening 12 Minutes -Strong blow with gas to surface in 10 minutes
 1st Shut-In 60 Minutes fair blow basck
 2nd Opening 45 Minutes -Strong blow see gas rates
 2nd Shut-In 90 Minutes Fair blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	899.97	79.83	Initial Hydro-static
1	81.92	79.86	Open To Flow (1)
12	123.60	80.23	Shut-In(1)
73	536.66	80.64	End Shut-In(1)
74	117.09	80.58	Open To Flow (2)
118	111.29	81.37	Shut-In(2)
206	531.31	81.70	End Shut-In(2)
207	876.74	81.14	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
75.00	Drilling Mud	1.05

Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
First Gas Rate	0.75	4.65	72.63
Last Gas Rate	0.75	5.15	80.44
Max. Gas Rate	0.75	5.15	80.44



DRILL STEM TEST REPORT

TOOL DIAGRAM

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 16969

DST#: 2

ATTN: Frank

Test Start: 2013.02.09 @ 00:00:00

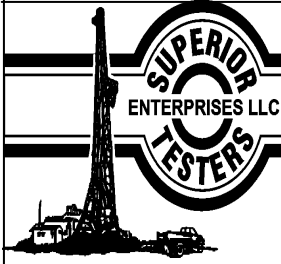
Tool Information

Drill Pipe:	Length: 1794.00 ft	Diameter: 3.80 inches	Volume: 25.17 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: 35000.00 lb
			<u>Total Volume: 25.17 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 30000.00 lb
Depth to Top Packer:	1813.00 ft			Final 30000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	87.11 ft			
Tool Length:	115.11 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
SHut-InTool	5.00		Inside	1790.00	
Hydraulic Tool	5.00			1795.00	
Jars	6.00			1801.00	
Safety Joint	2.00			1803.00	
Packer	5.00			1808.00	28.00 Bottom Of Top Packer
Packer	5.00			1813.00	
Anchor	3.00			1816.00	
Change Over Sub	0.75			1816.75	
Drill Pipe	62.61		Outside	1879.36	
Change Over Sub	0.75		Outside	1880.11	
Anchor	15.00			1895.11	
Recorder	1.00	8400	Inside	1896.11	
Recorder	1.00	8405	Outside	1897.11	
Bullnose	3.00			1900.11	87.11 Bottom Packers & Anchor

Total Tool Length: 115.11



DRILL STEM TEST REPORT

FLUID SUMMARY

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 16969

DST#: 2

ATTN: Frank

Test Start: 2013.02.09 @ 00:00:00

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: 58.00 sec/qt

Cushion Volume: bbl

Water Loss: 6.80 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psia

Salinity: 17000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
75.00	Drilling Mud	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

GAS RATES

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 16969

DST#: 2

ATTN: Frank

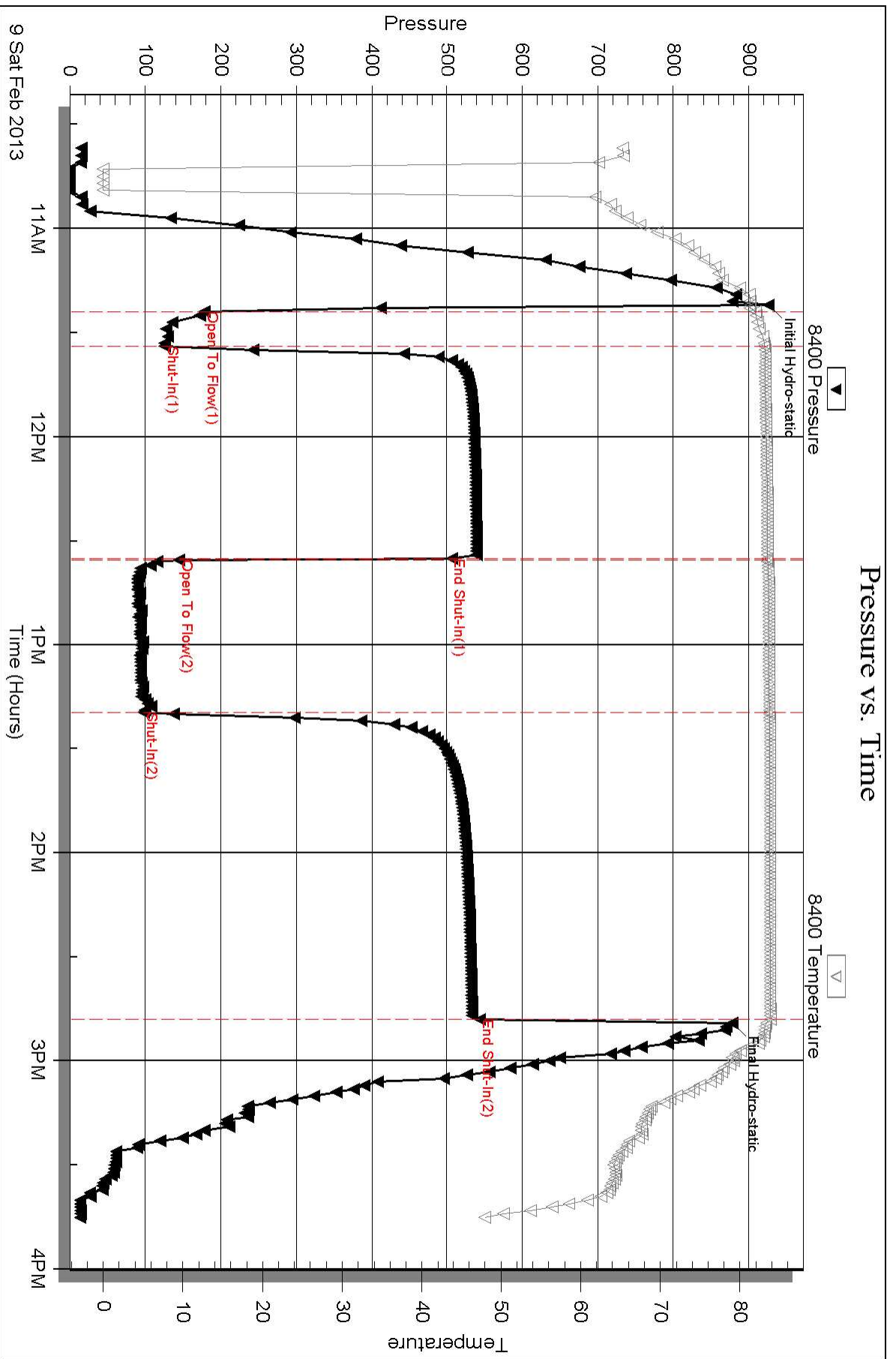
Test Start: 2013.02.09 @ 00:00:00

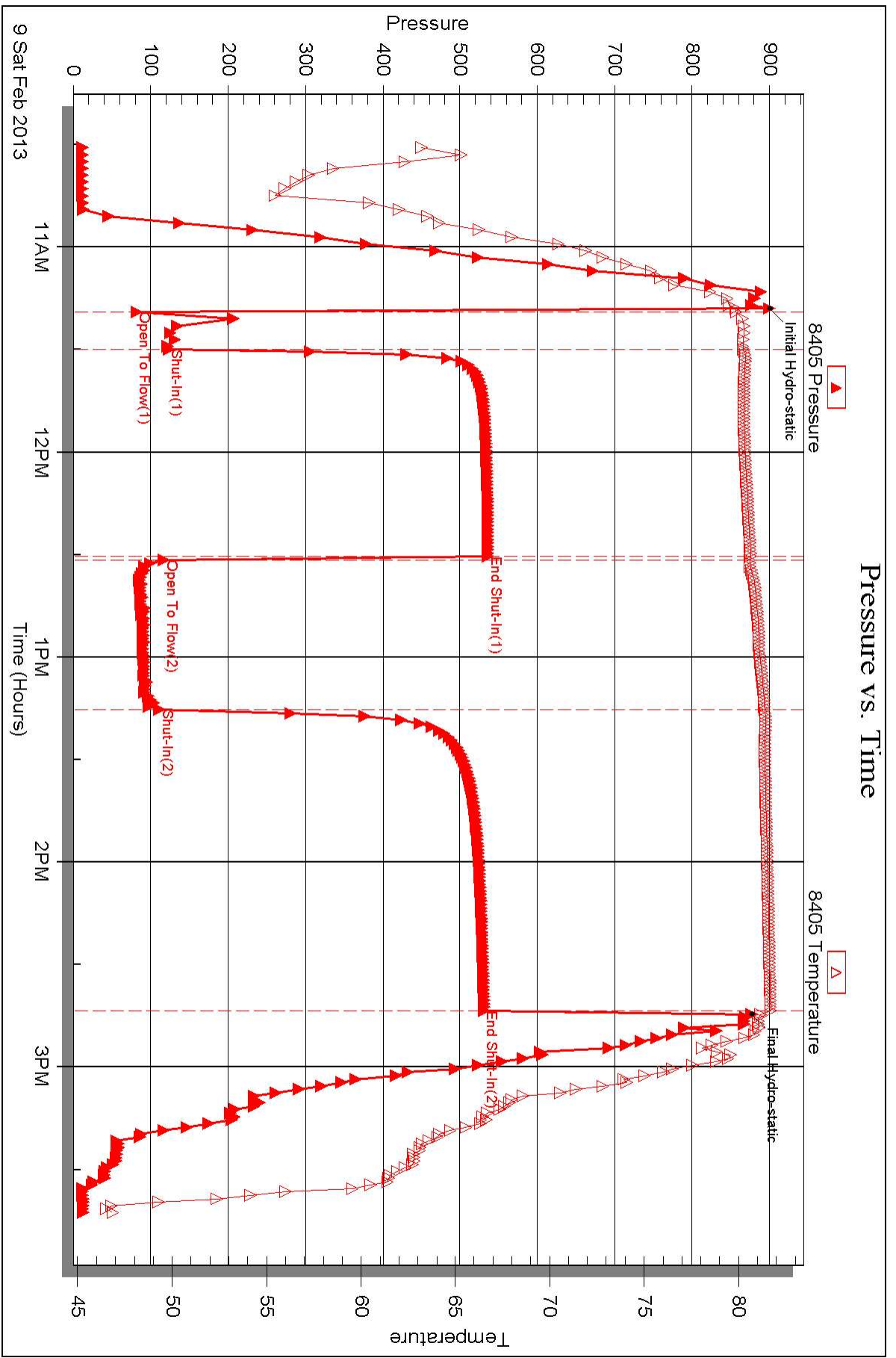
Gas Rates Information

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

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
2	5	0.75	4.65	72.63
2	15	0.75	4.95	77.32
2	25	0.75	5.15	80.44
2	35	0.75	5.15	80.44
2	40	0.75	5.15	80.44







DRILL STEM TEST REPORT

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

9431 E Central STE 100 Wichita Kansas
67206-2563

ATTN: Frank

Wolf #3-12

12-20s-15w/ Barton

Start Date: 2013.02.12 @ 04:40:00

End Date: 2013.02.12 @ 11:41:30

Job Ticket #: 16970 DST #: 3

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

Printed: 2013.02.12 @ 12:01:27



DRILL STEM TEST REPORT

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 16970

DST#: 3

ATTN: Frank

Test Start: 2013.02.12 @ 04:40:00

GENERAL INFORMATION:

Formation: **Lansing A & B**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:37:30

Time Test Ended: 11:41:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Shane Konzem

Unit No: 3330-20/ Great Bend

Interval: 3320.00 ft (KB) To 3367.00 ft (KB) (TVD)

Reference Elevations: 1980.00 ft (KB)

Total Depth: 3367.00 ft (KB) (TVD)

1972.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 8.00 ft

Serial #: 8405 Inside

Press @ RunDepth: 102.48 psia @ 3363.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.02.12

End Date: 2013.02.12

Last Calib.: 2013.02.12

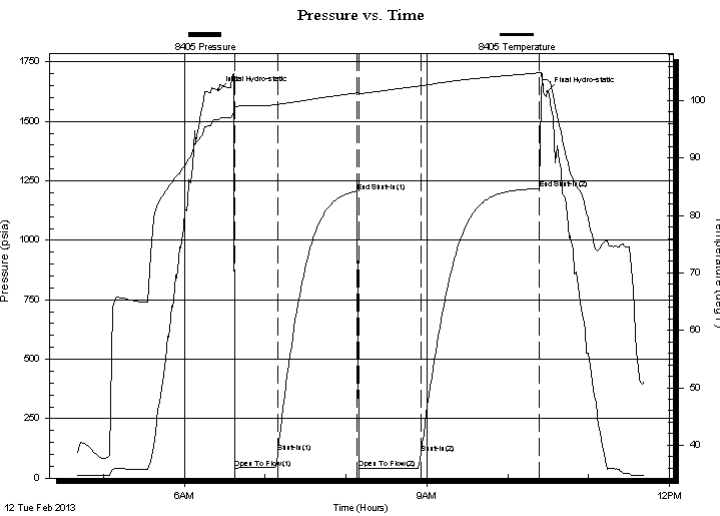
Start Time: 04:40:00

End Time: 11:41:30

Time On Btm: 2013.02.12 @ 06:25:30

Time Off Btm: 2013.02.12 @ 10:29:30

TEST COMMENT: 1st Open/ 30 Minutes. Good blow built to bottom of bucket in 5.5 minutes
 1st Shut In/ 60 Minutes. No blow back
 2nd Open/ 45 Minutes. Strong blow built to bottom of bucket in less than 1 minute.
 2nd Shut In/ 90 Minutes. No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1630.96	96.75	Initial Hydro-static
12	42.13	98.67	Open To Flow (1)
44	109.63	99.33	Shut-In(1)
103	1205.93	101.36	End Shut-In(1)
104	42.39	101.23	Open To Flow (2)
150	102.48	102.58	Shut-In(2)
238	1217.59	104.84	End Shut-In(2)
244	1623.43	103.67	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
40.00	mud	0.56
0.00	100% mud	0.00

Gas Rates

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



DRILL STEM TEST REPORT

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 16970

DST#: 3

ATTN: Frank

Test Start: 2013.02.12 @ 04:40:00

GENERAL INFORMATION:

Formation: **Lansing A & B**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:37:30

Time Test Ended: 11:41:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Shane Konzem

Unit No: 3330-20/ Great Bend

Interval: 3320.00 ft (KB) To 3367.00 ft (KB) (TVD)

Reference Elevations: 1980.00 ft (KB)

Total Depth: 3367.00 ft (KB) (TVD)

1972.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 8.00 ft

Serial #: 8400 Outside

Press @ RunDepth: 1217.94 psia @ 3364.00 ft (KB)

Capacity: psia

Start Date: 2013.02.12

End Date: 2013.02.12

Last Calib.: 1899.12.30

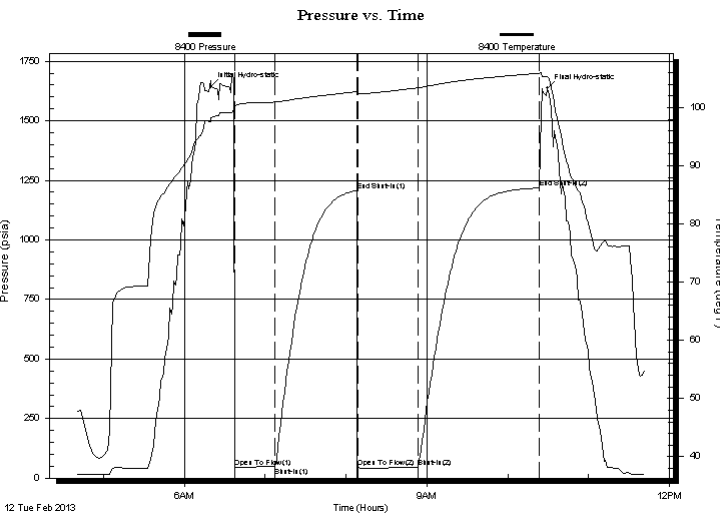
Start Time: 04:40:00

End Time: 11:42:00

Time On Btm: 2013.02.12 @ 06:20:00

Time Off Btm: 2013.02.12 @ 10:29:30

TEST COMMENT: 1st Open/ 30 Minutes. Good blow built to bottom of bucket in 5.5 minutes
 1st Shut In/ 60 Minutes. No blow back
 2nd Open/ 45 Minutes. Strong blow built to bottom of bucket in less than 1 minute.
 2nd Shut In/ 90 Minutes. No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1642.44	98.28	Initial Hydro-static
18	44.89	100.20	Open To Flow (1)
48	47.46	100.97	Shut-In(1)
108	1207.68	102.76	End Shut-In(1)
109	44.96	102.38	Open To Flow (2)
154	43.81	103.40	Shut-In(2)
244	1217.94	105.94	End Shut-In(2)
250	1636.17	105.40	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
40.00	mud	0.56
0.00	100% mud	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 16970

DST#: 3

ATTN: Frank

Test Start: 2013.02.12 @ 04:40:00

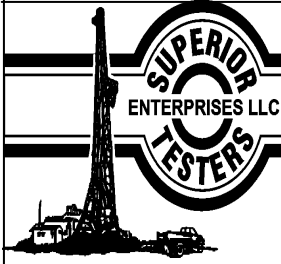
Tool Information

Drill Pipe:	Length: 3298.00 ft	Diameter: 3.80 inches	Volume: 46.26 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: 46.26 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3320.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	47.00 ft			
Tool Length:	75.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
SHut-InTool	5.00		Inside	3297.00	
Hydraulic Tool	5.00			3302.00	
Jars	6.00			3308.00	
Safety Joint	2.00			3310.00	
Packer	5.00			3315.00	28.00 Bottom Of Top Packer
Packer	5.00			3320.00	
Anchor	0.00			3320.00	
Change Over Sub	0.00			3320.00	
Drill Pipe	0.00		Outside	3320.00	
Change Over Sub	0.00		Outside	3320.00	
Anchor	42.00			3362.00	
Recorder	1.00	8405	Inside	3363.00	
Recorder	1.00	8400	Outside	3364.00	
Bullnose	3.00			3367.00	47.00 Bottom Packers & Anchor

Total Tool Length: 75.00



DRILL STEM TEST REPORT

FLUID SUMMARY

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 16970

DST#: 3

ATTN: Frank

Test Start: 2013.02.12 @ 04:40:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 45.00 sec/qt

Water Loss: 7.20 in³

Resistivity: ohm.m

Salinity: 5800.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psia

Oil API:

Water Salinity: deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
40.00	mud	0.561
0.00	100% mud	0.000

Total Length: 40.00 ft Total Volume: 0.561 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

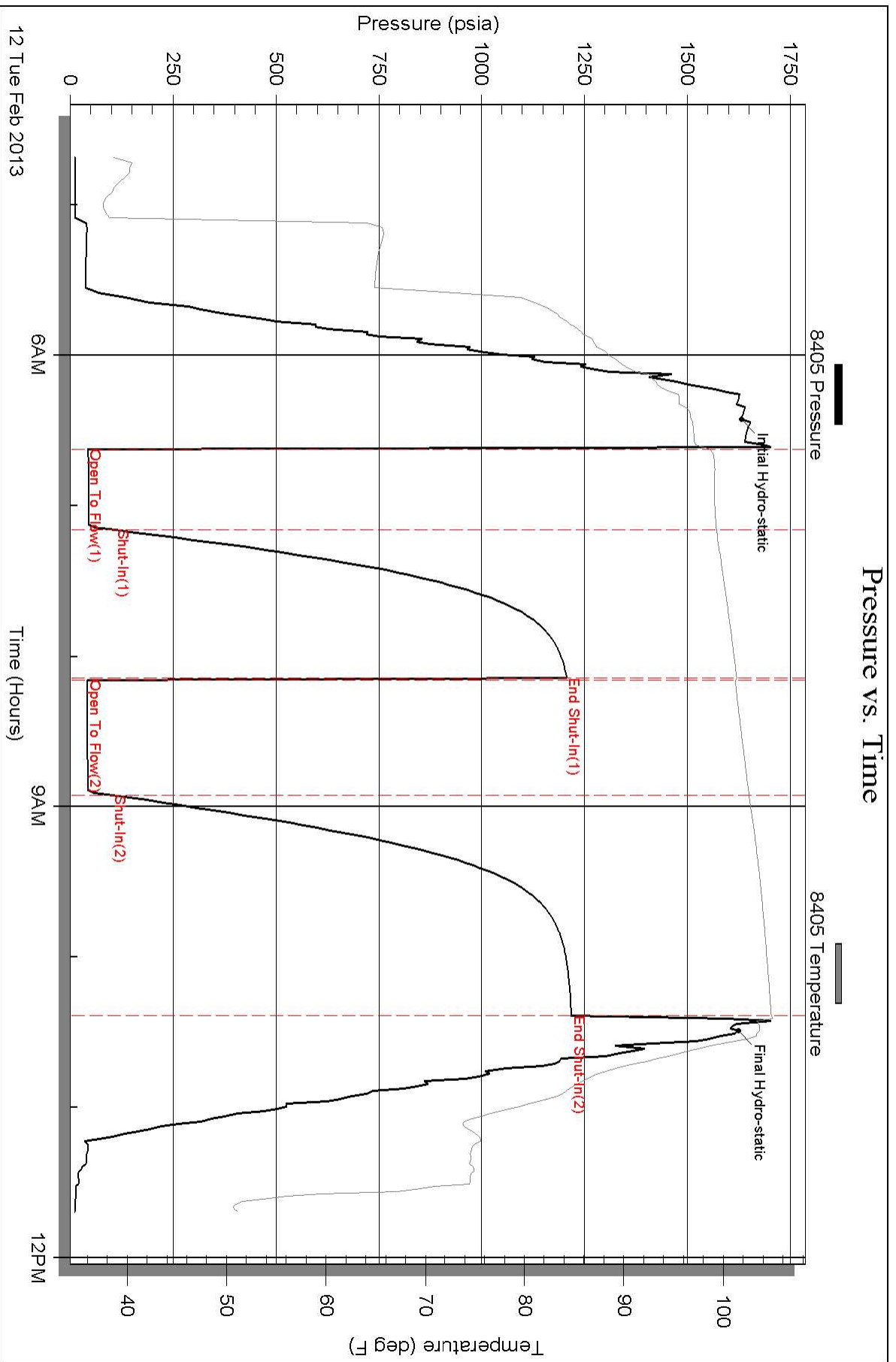
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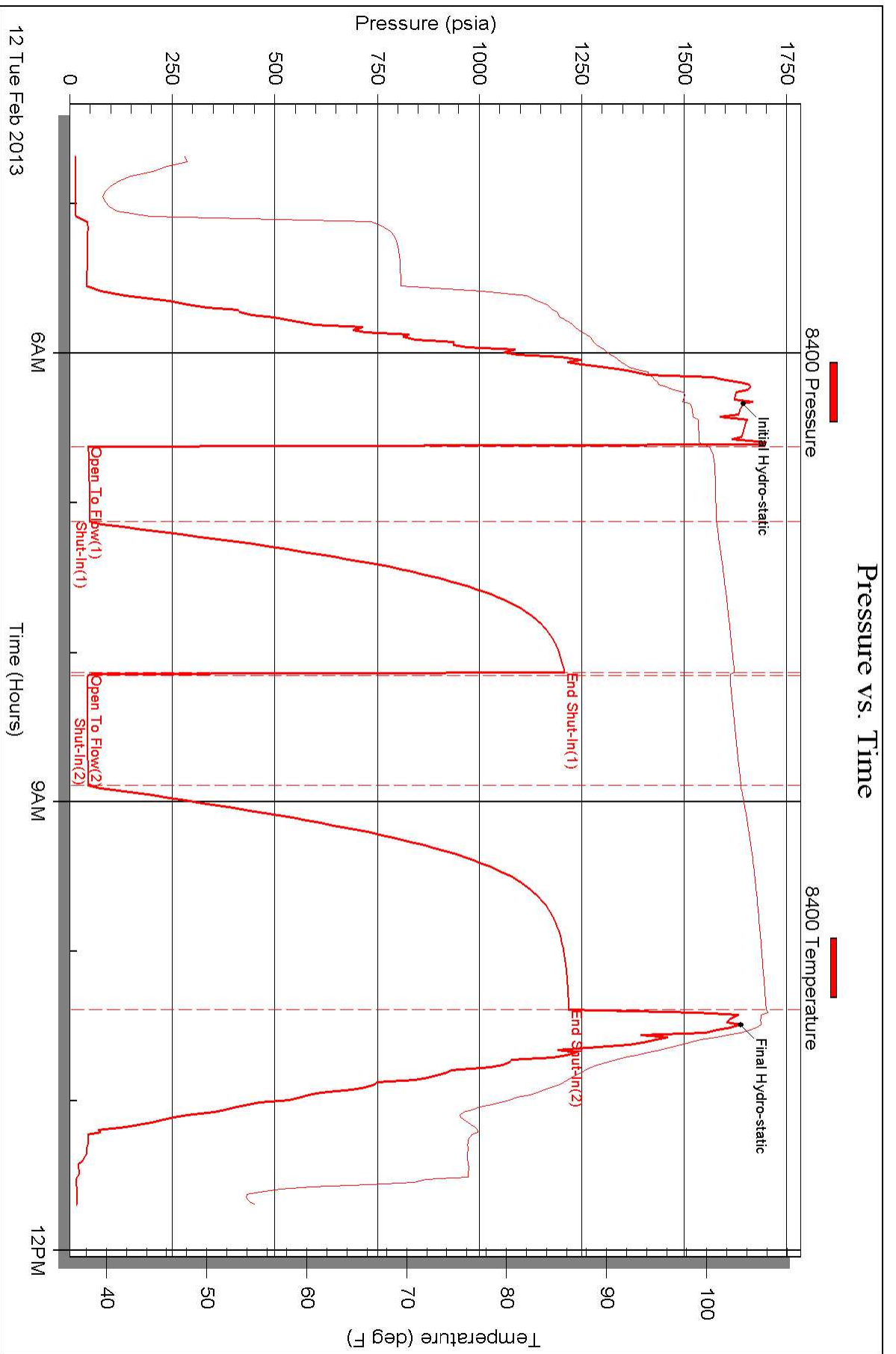
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

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

9431 E Central STE 100 Wichita Kansas
67206-2563

ATTN: Frank

Wolf #3-12

12-20s-15w/ Barton

Start Date: 2013.02.13 @ 18:20:00

End Date: 2013.02.14 @ 01:14:30

Job Ticket #: 16971 DST #: 4

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

Printed: 2013.02.13 @ 01:49:37



DRILL STEM TEST REPORT

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 16971

DST#: 4

ATTN: Frank

Test Start: 2013.02.13 @ 18:20:00

GENERAL INFORMATION:

Formation: **Lansing zone F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:52:30

Time Test Ended: 01:14:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Shane Konzem

Unit No: 3330-20/ Great Bend

Interval: 3386.00 ft (KB) To 3400.00 ft (KB) (TVD)

Reference Elevations: 1980.00 ft (KB)

Total Depth: 3400.00 ft (KB) (TVD)

1972.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 8.00 ft

Serial #: 8405 Inside

Press @ RunDepth: 101.22 psia @ 3396.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.02.13

End Date:

2013.02.14

Last Calib.:

2013.02.13

Start Time:

18:20:00

End Time:

01:14:30

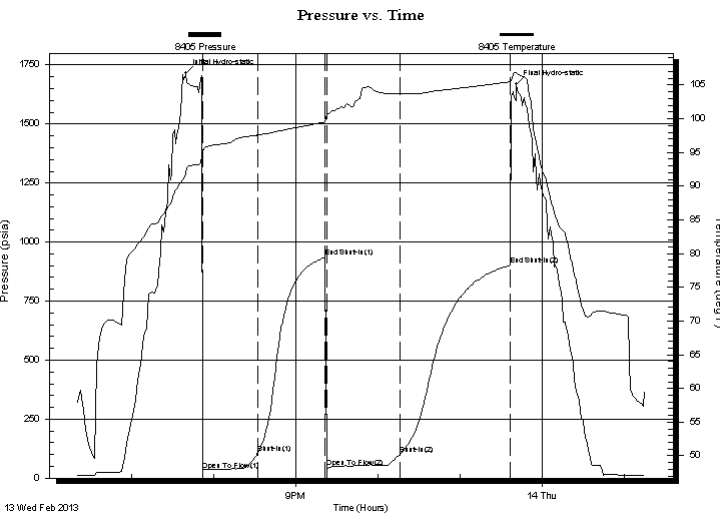
Time On Btm:

2013.02.13 @ 19:40:00

Time Off Btm:

2013.02.13 @ 23:41:00

TEST COMMENT: 1st Open/ 30 Minutes. Weak blow built to 3 inches in 5 gallon bucket of water in 20 minutes..
 1st Shut In/ 60 Minutes. No blow back
 2nd Open/ 45 Minutes. Fair blow to 6 inches in bucket in 35 minutes.
 2nd Shut In/ 90 Minutes. No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1715.33	92.13	Initial Hydro-static
13	35.43	95.29	Open To Flow (1)
52	103.45	97.58	Shut-In(1)
102	935.40	99.51	End Shut-In(1)
103	44.07	100.63	Open To Flow (2)
156	101.22	103.70	Shut-In(2)
237	901.66	105.47	End Shut-In(2)
241	1668.69	106.87	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	120 feet of light gas odor	0.00
60.00	gas, oil and water cut mud	0.84
0.00	2% gas, 28% oil, 20% water, 50% mud	0.00

Gas Rates

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



DRILL STEM TEST REPORT

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 16971

DST#: 4

ATTN: Frank

Test Start: 2013.02.13 @ 18:20:00

GENERAL INFORMATION:

Formation: **Lansing zone F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:52:30

Time Test Ended: 01:14:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Shane Konzem

Unit No: 3330-20/ Great Bend

Interval: 3386.00 ft (KB) To 3400.00 ft (KB) (TVD)

Reference Elevations: 1980.00 ft (KB)

Total Depth: 3400.00 ft (KB) (TVD)

1972.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 8.00 ft

Serial #: 8400 Outside

Press @ RunDepth: 891.42 psia @ 3397.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.02.13

End Date:

2013.02.14

Last Calib.:

2013.02.13

Start Time:

18:20:00

End Time:

01:16:00

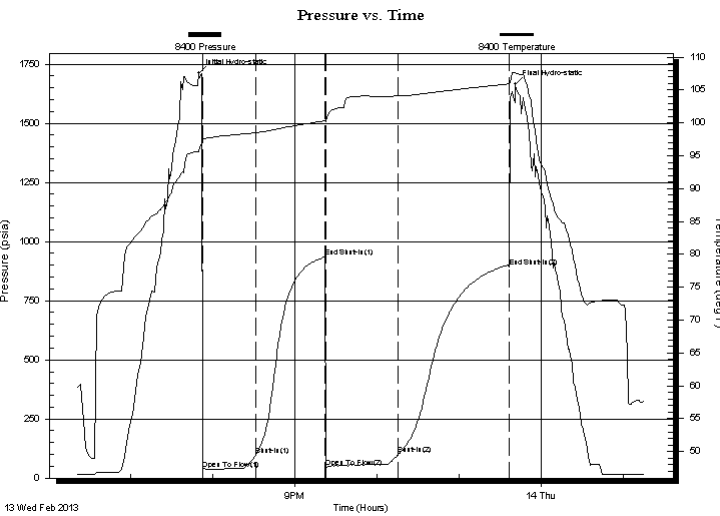
Time On Btm:

2013.02.13 @ 19:49:30

Time Off Btm:

2013.02.13 @ 23:41:00

TEST COMMENT: 1st Open/ 30 Minutes. Weak blow built to 3 inches in 5 gallon bucket of water in 20 minutes..
 1st Shut In/ 60 Minutes. No blow back
 2nd Open/ 45 Minutes. Fair blow to 6 inches in bucket in 35 minutes.
 2nd Shut In/ 90 Minutes. No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1711.61	95.66	Initial Hydro-static
3	38.35	97.61	Open To Flow (1)
42	96.52	98.51	Shut-In(1)
92	935.42	100.33	End Shut-In(1)
93	47.46	100.20	Open To Flow (2)
146	99.84	104.11	Shut-In(2)
227	891.42	105.93	End Shut-In(2)
232	1663.50	107.67	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	120 feet of light gas odor	0.00
60.00	gas, oil and water cut mud	0.84
0.00	2% gas, 28% oil, 20% water, 50% mud	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 16971

DST#: 4

ATTN: Frank

Test Start: 2013.02.13 @ 18:20:00

Tool Information

Drill Pipe:	Length: 3361.00 ft	Diameter: 3.80 inches	Volume: 47.15 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: 61000.00 lb
			<u>Total Volume: 47.15 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	3.00 ft			String Weight: Initial 41000.00 lb
Depth to Top Packer:	3386.00 ft			Final 42000.00 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-InTool	5.00		Inside	3363.00	
Hydraulic Tool	5.00			3368.00	
Jars	6.00			3374.00	
Safety Joint	2.00			3376.00	
Packer	5.00			3381.00	28.00 Bottom Of Top Packer
Packer	5.00			3386.00	
Anchor	9.00			3395.00	
Recorder	1.00	8405	Inside	3396.00	
Recorder	1.00	8400	Outside	3397.00	
Bullnose	3.00			3400.00	14.00 Bottom Packers & Anchor
Total Tool Length:	42.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 16971

DST#: 4

ATTN: Frank

Test Start: 2013.02.13 @ 18:20:00

Mud and Cushion Information

Mud Type: Gel Chem
 Mud Weight: 9.00 lb/gal
 Viscosity: 59.00 sec/qt
 Water Loss: 7.20 in³
 Resistivity: ohm.m
 Salinity: 4700.00 ppm
 Filter Cake: 1.00 inches

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

Oil API: deg API
 Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	120 feet of light gas odor	0.000
60.00	gas, oil and water cut mud	0.842
0.00	2% gas, 28% oil, 20% water, 50% mud	0.000

Total Length: 60.00 ft Total Volume: 0.842 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

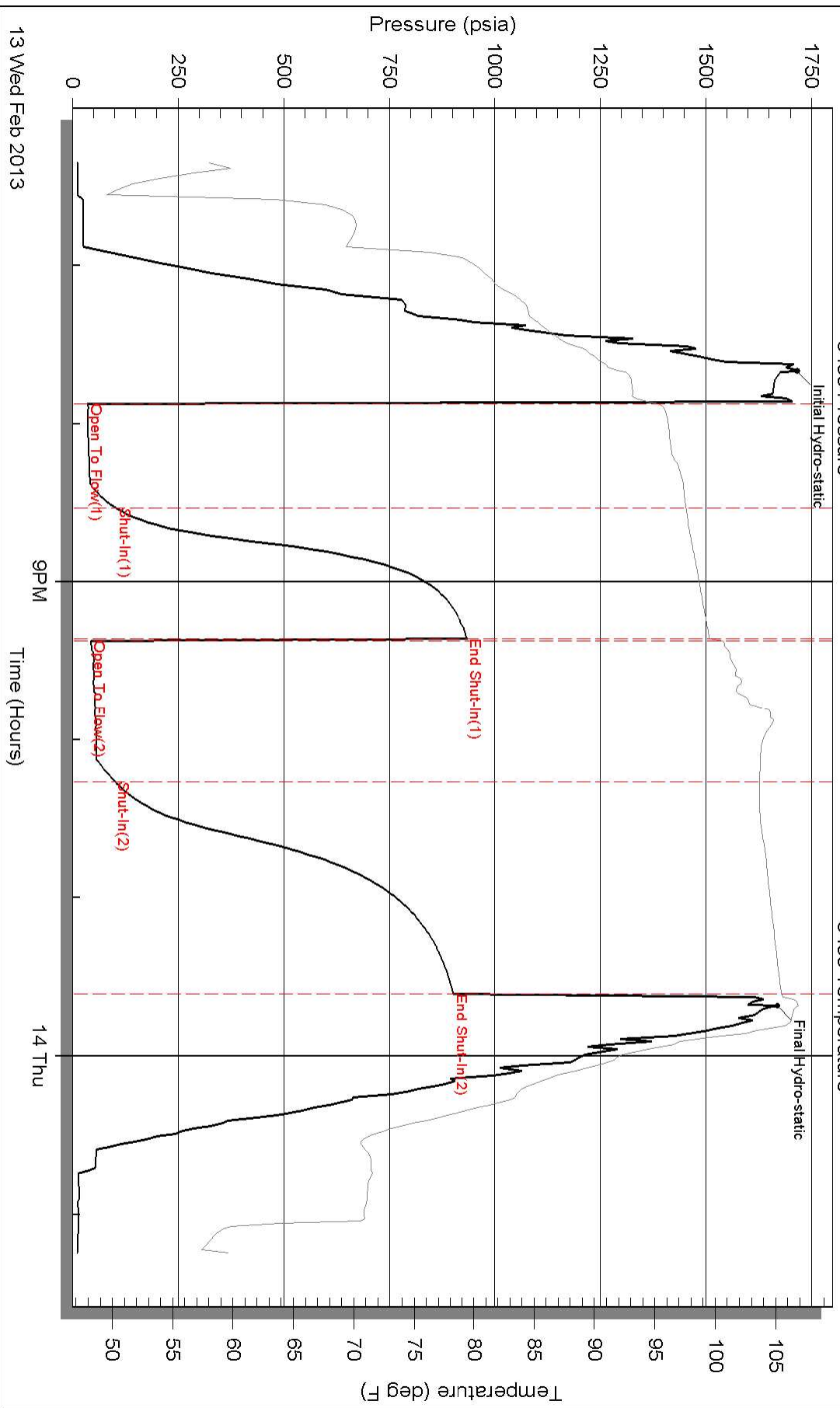
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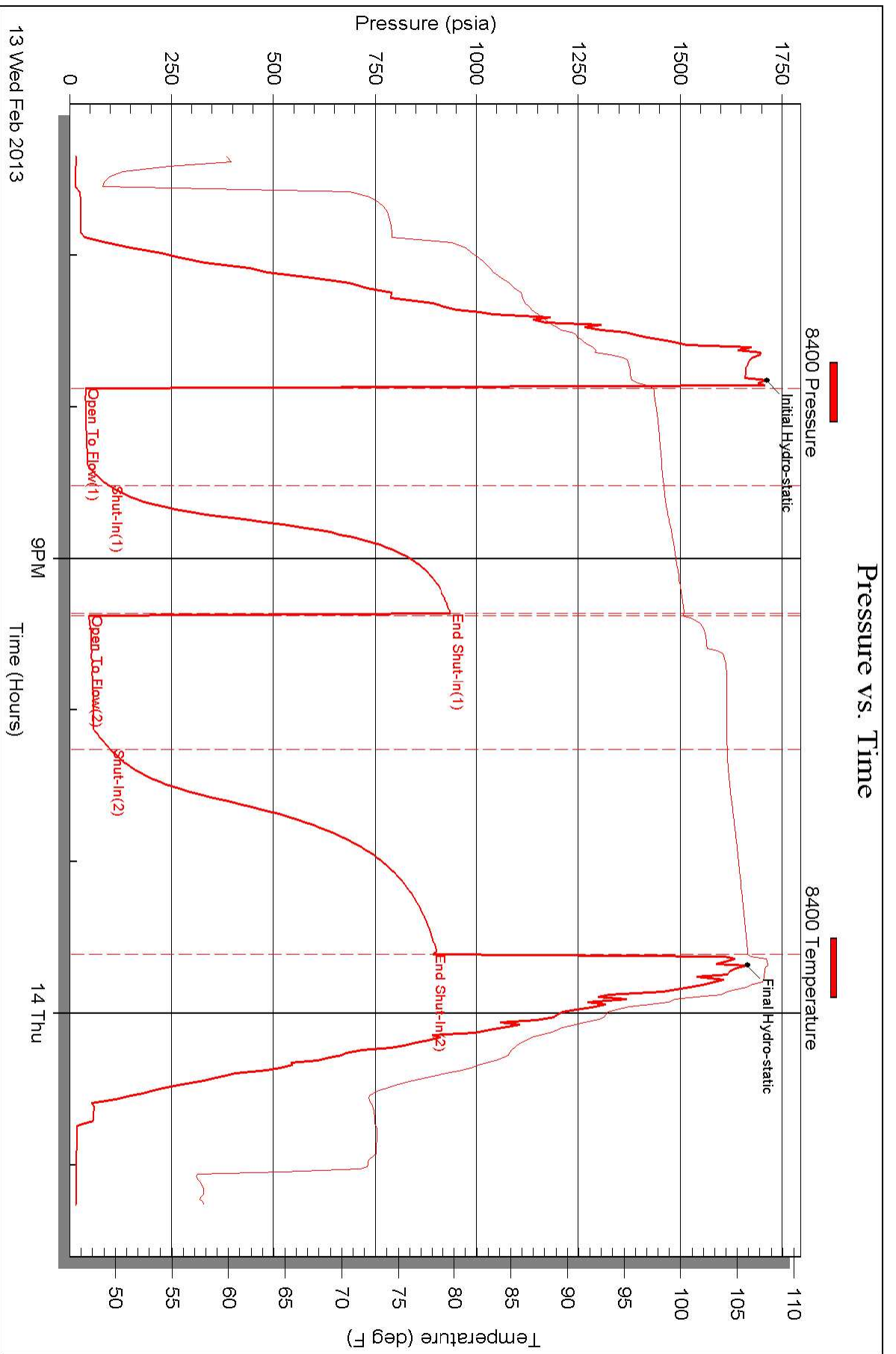
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

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

9431 E Central STE 100 Wichita Kansas
67206-2563

ATTN: Frank Greenbaum

Wolf #3-12

12-20s-15w/ Barton

Start Date: 2013.02.13 @ 10:05:00

End Date: 2013.02.13 @ 15:45:00

Job Ticket #: 16972 DST #: 5

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

Printed: 2013.02.13 @ 16:14:40



DRILL STEM TEST REPORT

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 16972

DST#: 5

ATTN: Frank Greenbaum

Test Start: 2013.02.13 @ 10:05:00

GENERAL INFORMATION:

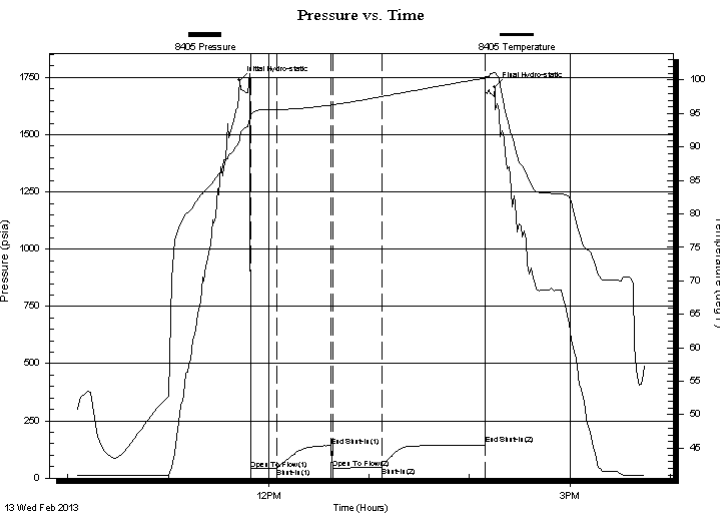
Formation: **Lansing Zone "H"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 11:49:30
 Tester: Shane Konzem
 Time Test Ended: 15:45:00
 Unit No: 3330- 20/ Great Bend
 Interval: **3446.00 ft (KB) To 3469.00 ft (KB) (TVD)**
 Reference Elevations: 1980.00 ft (KB)
 Total Depth: 3469.00 ft (KB) (TVD)
 1972.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Poor
 KB to GR/CF: 8.00 ft

Serial #: 8405

Inside

Press @ RunDepth: 46.87 psia @ 3447.00 ft (KB) Capacity: 5000.00 psia
 Start Date: 2013.02.13 End Date: 2013.02.13 Last Calib.: 2013.02.13
 Start Time: 10:05:00 End Time: 15:45:00 Time On Btm: 2013.02.13 @ 11:42:30
 Time Off Btm: 2013.02.13 @ 14:15:00

TEST COMMENT: 1st Open/ 15 minutes. Weak blow to 2 inches into the water.
 1st Shut In/ 30 minutes. No blow back.
 2nd Open/ 30 Minutes. Good Blow built to bottom of bucket in 15 Minutes.
 2nd Shut In/ 60 minutes. No blow back.



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1737.85	91.01	Initial Hydro-static
7	40.31	94.87	Open To Flow (1)
23	42.53	95.60	Shut-In(1)
56	141.39	96.28	End Shut-In(1)
56	41.95	96.30	Open To Flow (2)
85	46.87	97.52	Shut-In(2)
147	149.34	100.28	End Shut-In(2)
153	1708.75	101.12	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	540 feet of slight gas odor.	0.00
40.00	oil cut mud	0.56
0.00	30% oil 70% mud	0.00

Gas Rates

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



DRILL STEM TEST REPORT

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 16972

DST#: 5

ATTN: Frank Greenbaum

Test Start: 2013.02.13 @ 10:05:00

GENERAL INFORMATION:

Formation: **Lansing Zone "H"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 11:49:30
 Tester: Shane Konzem
 Time Test Ended: 15:45:00
 Unit No: 3330- 20/ Great Bend
 Interval: **3446.00 ft (KB) To 3469.00 ft (KB) (TVD)**
 Reference Elevations: 1980.00 ft (KB)
 Total Depth: 3469.00 ft (KB) (TVD)
 1972.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Poor
 KB to GR/CF: 8.00 ft

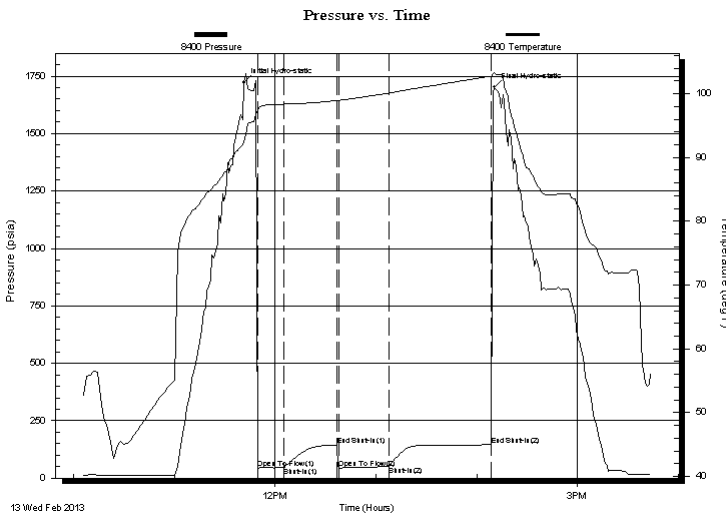
Serial #: 8400

Outside

Press @ RunDepth: 145.11 psia @ 3448.00 ft (KB) Capacity: 5000.00 psia
 Start Date: 2013.02.13 End Date: 2013.02.13 Last Calib.: 2013.02.13
 Start Time: 10:05:00 End Time: 15:43:30 Time On Btm: 2013.02.13 @ 11:41:30
 Time Off Btm: 2013.02.13 @ 14:10:30

TEST COMMENT: 1st Open/ 15 minutes. Weak blow to 2 inches into the water.
 1st Shut In/ 30 minutes. No blow back.
 2nd Open/ 30 Minutes. Good Blow built to bottom of bucket in 15 Minutes.
 2nd Shut In/ 60 minutes. No blow back.

PRESSURE SUMMARY



Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1722.12	92.27	Initial Hydro-static
8	43.89	97.40	Open To Flow (1)
24	45.76	98.35	Shut-In(1)
56	143.84	98.97	End Shut-In(1)
57	43.07	98.96	Open To Flow (2)
86	49.79	100.08	Shut-In(2)
147	145.11	102.73	End Shut-In(2)
149	1702.14	103.34	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	540 feet of slight gas odor.	0.00
40.00	oil cut mud	0.56
0.00	30% oil 70% mud	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 16972

DST#: 5

ATTN: Frank Greenbaum

Test Start: 2013.02.13 @ 10:05:00

Tool Information

Drill Pipe:	Length: 3426.00 ft	Diameter: 3.80 inches	Volume: 48.06 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: 68000.00 lb
			<u>Total Volume: 48.06 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 41000.00 lb
Depth to Top Packer:	3446.00 ft			Final 41500.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	5.00 ft			
Tool Length:	33.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
SHut-InTool	5.00		Inside	3423.00	
Hydraulic Tool	5.00			3428.00	
Jars	6.00			3434.00	
Safety Joint	2.00			3436.00	
Packer	5.00			3441.00	28.00 Bottom Of Top Packer
Packer	5.00			3446.00	
Anchor	0.00			3446.00	
Recorder	1.00	8405	Inside	3447.00	
Recorder	1.00	8400	Outside	3448.00	
Bullnose	3.00			3451.00	5.00 Bottom Packers & Anchor
Total Tool Length:	33.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 16972

DST#: 5

ATTN: Frank Greenbaum

Test Start: 2013.02.13 @ 10:05:00

Mud and Cushion Information

Mud Type: Gel Chem
 Mud Weight: 9.00 lb/gal
 Viscosity: 55.00 sec/qt
 Water Loss: 7.20 in³
 Resistivity: ohm.m
 Salinity: 6000.00 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	540 feet of slight gas odor.	0.000
40.00	oil cut mud	0.561
0.00	30% oil 70% mud	0.000

Total Length: 40.00 ft Total Volume: 0.561 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

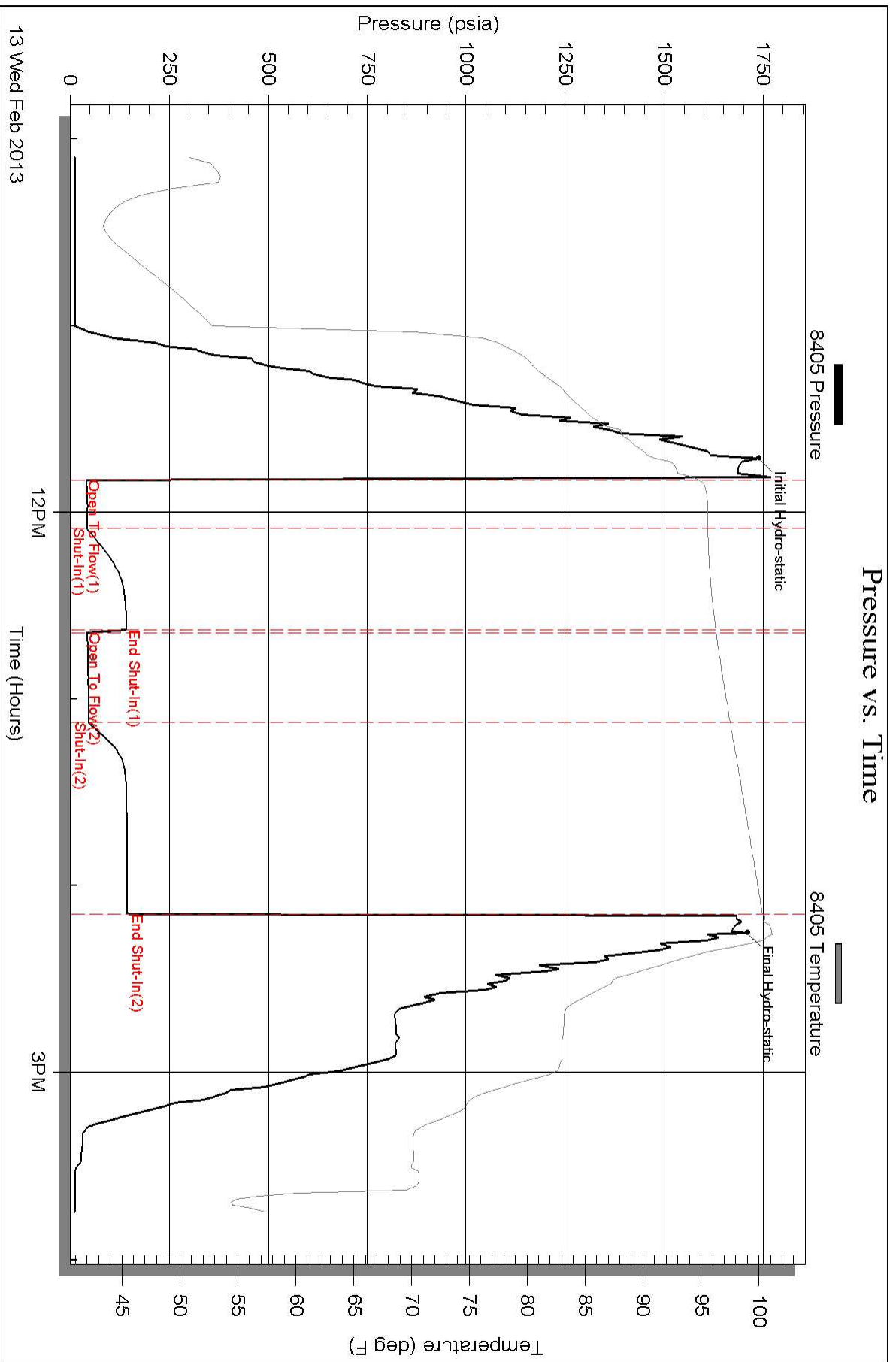
Serial #:

Laboratory Name:

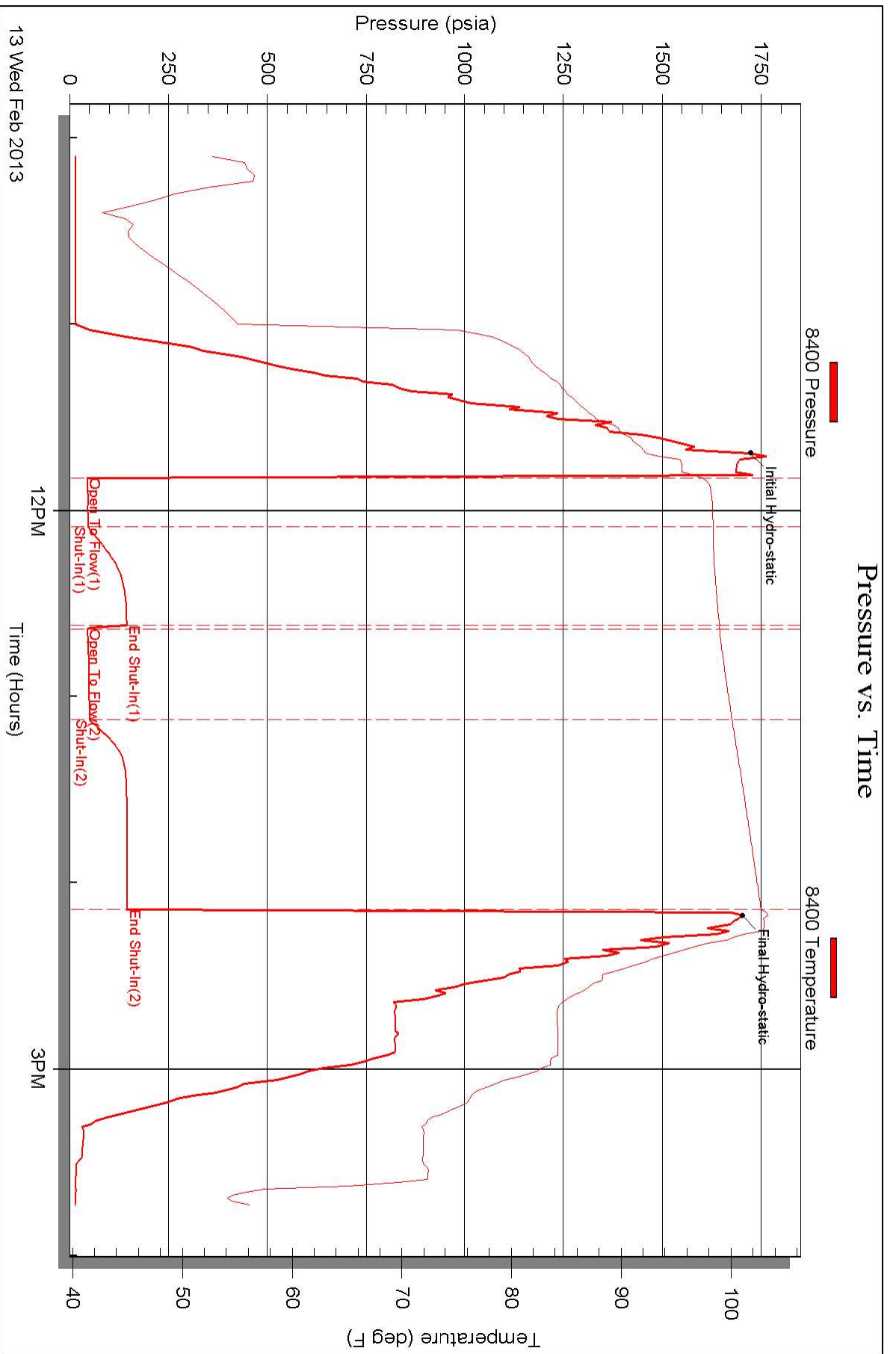
Laboratory Location:

Recovery Comments:

Pressure vs. Time



13 Wed Feb 2013





DRILL STEM TEST REPORT

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

9431 E Central STE 100 Wichita Kansas
67206-2563

ATTN: Frank Greenbaum

Wolf #3-12

12-20s-15w/ Barton

Start Date: 2013.02.14 @ 22:20:00

End Date: 2013.02.15 @ 04:56:00

Job Ticket #: 16973 DST #: 6

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

Printed: 2013.02.14 @ 05:16:57



DRILL STEM TEST REPORT

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 16973

DST#: 6

ATTN: Frank Greenbaum

Test Start: 2013.02.14 @ 22:20:00

GENERAL INFORMATION:

Formation: **Lansing zone "I"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 00:37:30
 Time Test Ended: 04:56:00
 Interval: **3469.00 ft (KB) To 3488.00 ft (KB) (TVD)**
 Total Depth: 3488.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Poor
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Shane Konzem
 Unit No: 3330-20/ Great Bend
 Reference Elevations: 1980.00 ft (KB)
 1972.00 ft (CF)
 KB to GR/CF: 8.00 ft

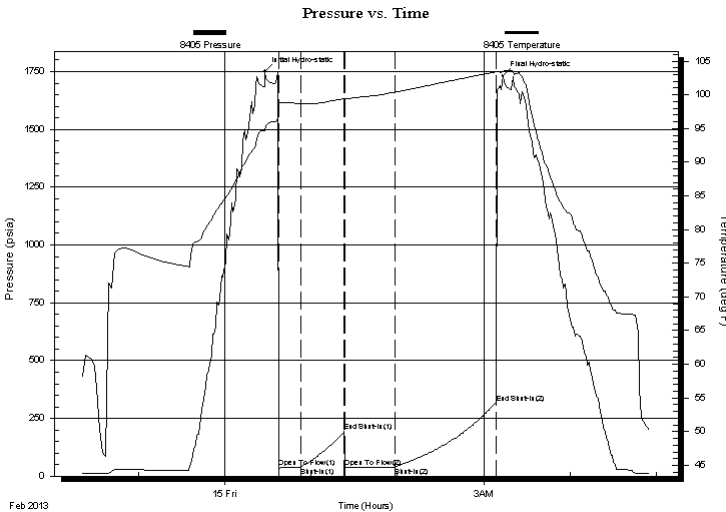
Serial #: 8405

Inside

Press @ RunDepth: 39.96 psia @ 3484.00 ft (KB) Capacity: 5000.00 psia
 Start Date: 2013.02.14 End Date: 2013.02.15 Last Calib.: 2013.02.14
 Start Time: 22:20:00 End Time: 04:56:00 Time On Btm: 2013.02.15 @ 00:28:00
 Time Off Btm: 2013.02.15 @ 03:13:30

TEST COMMENT: 1st Open/ 15 minutes. Weak blow built to 2 inchs into water in 15 minutes.
 1st Shut In/ 30 minutes. No blow back
 2nd Open/ 30 minutes. Weak blow built to 2 inchs into water in 20 minutes.
 2nd Shut In/ 60 minutes. No blow back.

PRESSURE SUMMARY



Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1751.50	94.83	Initial Hydro-static
10	37.13	98.55	Open To Flow (1)
25	38.91	98.75	Shut-In(1)
55	192.25	99.45	End Shut-In(1)
56	36.90	99.47	Open To Flow (2)
91	39.96	100.42	Shut-In(2)
161	316.07	103.39	End Shut-In(2)
166	1731.97	103.49	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
25.00	oil cut mud	0.35
0.00	10% oil, 90% mud	0.00

Gas Rates

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



DRILL STEM TEST REPORT

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 16973

DST#: 6

ATTN: Frank Greenbaum

Test Start: 2013.02.14 @ 22:20:00

GENERAL INFORMATION:

Formation: **Lansing zone "I"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:37:30

Time Test Ended: 04:56:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Shane Konzem

Unit No: 3330-20/ Great Bend

Interval: 3469.00 ft (KB) To 3488.00 ft (KB) (TVD)

Reference Elevations: 1980.00 ft (KB)

Total Depth: 3488.00 ft (KB) (TVD)

1972.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 8.00 ft

Serial #: 8400 Outside

Press @ RunDepth: 316.69 psia @ 3485.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.02.14

End Date:

2013.02.15

Last Calib.:

2013.02.14

Start Time: 22:20:00

End Time:

04:58:00

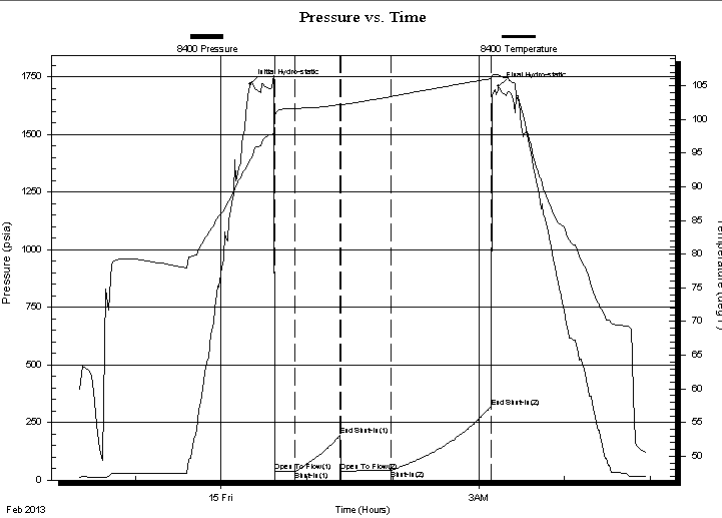
Time On Btm:

2013.02.15 @ 00:20:30

Time Off Btm:

2013.02.15 @ 03:14:00

TEST COMMENT: 1st Open/ 15 minutes. Weak blow built to 2 inchs into water in 15 minutes.
 1st Shut In/ 30 minutes. No blow back
 2nd Open/ 30 minutes. Weak blow built to 2 inchs into water in 20 minutes.
 2nd Shut In/ 60 minutes. No blow back.



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1720.46	94.21	Initial Hydro-static
17	39.02	100.53	Open To Flow (1)
31	39.98	101.65	Shut-In(1)
63	192.90	102.20	End Shut-In(1)
64	38.82	102.16	Open To Flow (2)
99	42.56	103.40	Shut-In(2)
168	316.69	106.05	End Shut-In(2)
174	1709.03	106.59	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
25.00	oil cut mud	0.35
0.00	10% oil, 90% mud	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 16973

DST#: 6

ATTN: Frank Greenbaum

Test Start: 2013.02.14 @ 22:20:00

Tool Information

Drill Pipe:	Length: 3459.00 ft	Diameter: 3.80 inches	Volume: 48.52 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: 58000.00 lb
			<u>Total Volume: 48.52 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 41000.00 lb
Depth to Top Packer:	3469.00 ft			Final 41500.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	19.00 ft			
Tool Length:	47.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
SHut-InTool	5.00		Inside	3446.00	
Hydraulic Tool	5.00			3451.00	
Jars	6.00			3457.00	
Safety Joint	2.00			3459.00	
Packer	5.00			3464.00	28.00 Bottom Of Top Packer
Packer	5.00			3469.00	
Anchor	14.00			3483.00	
Recorder	1.00	8405	Inside	3484.00	
Recorder	1.00	8400	Outside	3485.00	
Bullnose	3.00			3488.00	19.00 Bottom Packers & Anchor
Total Tool Length:	47.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 16973

DST#: 6

ATTN: Frank Greenbaum

Test Start: 2013.02.14 @ 22:20:00

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: 55.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.20 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psia

Salinity: 6000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
25.00	oil cut mud	0.351
0.00	10% oil, 90% mud	0.000

Total Length: 25.00 ft Total Volume: 0.351 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

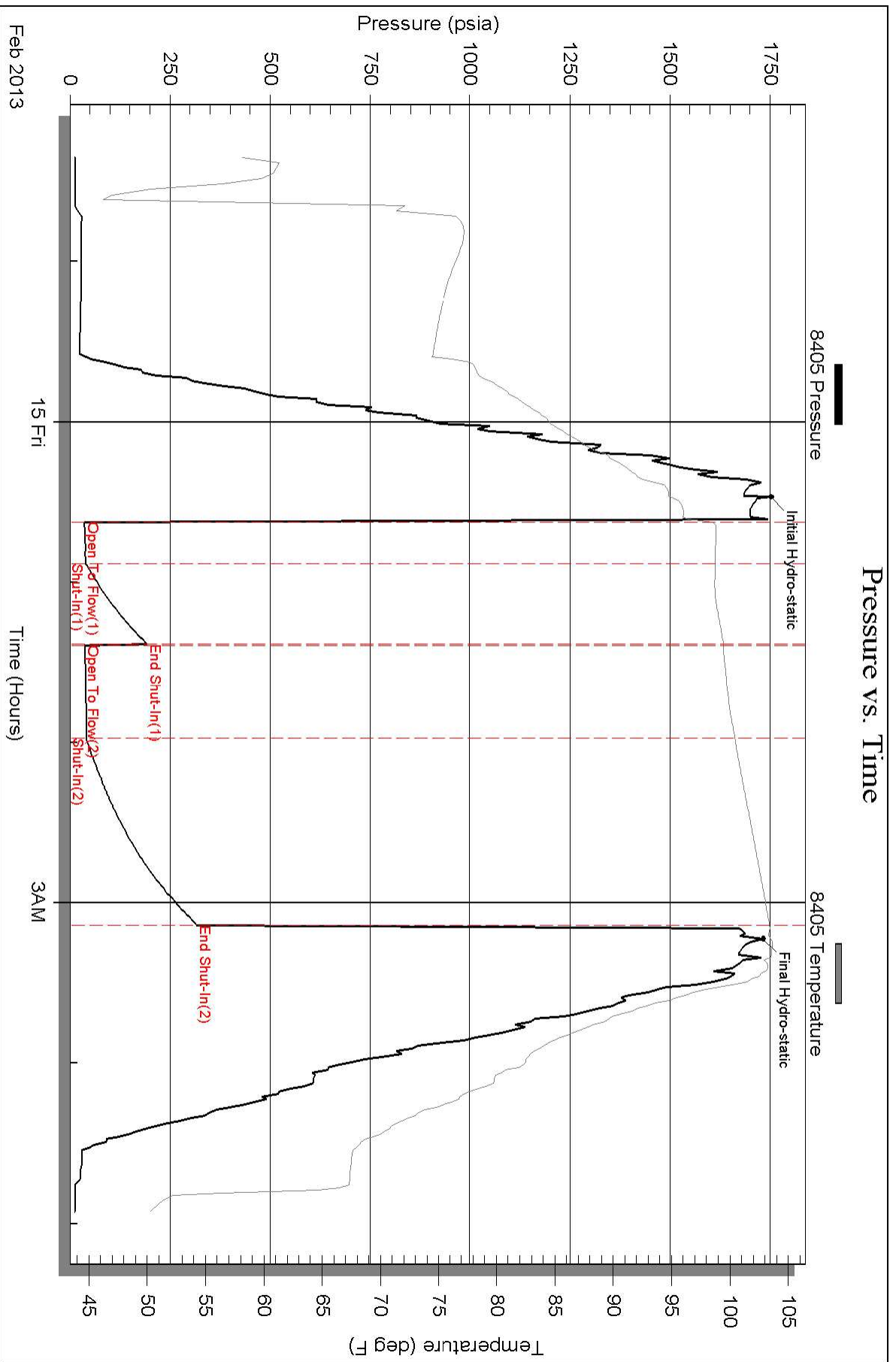
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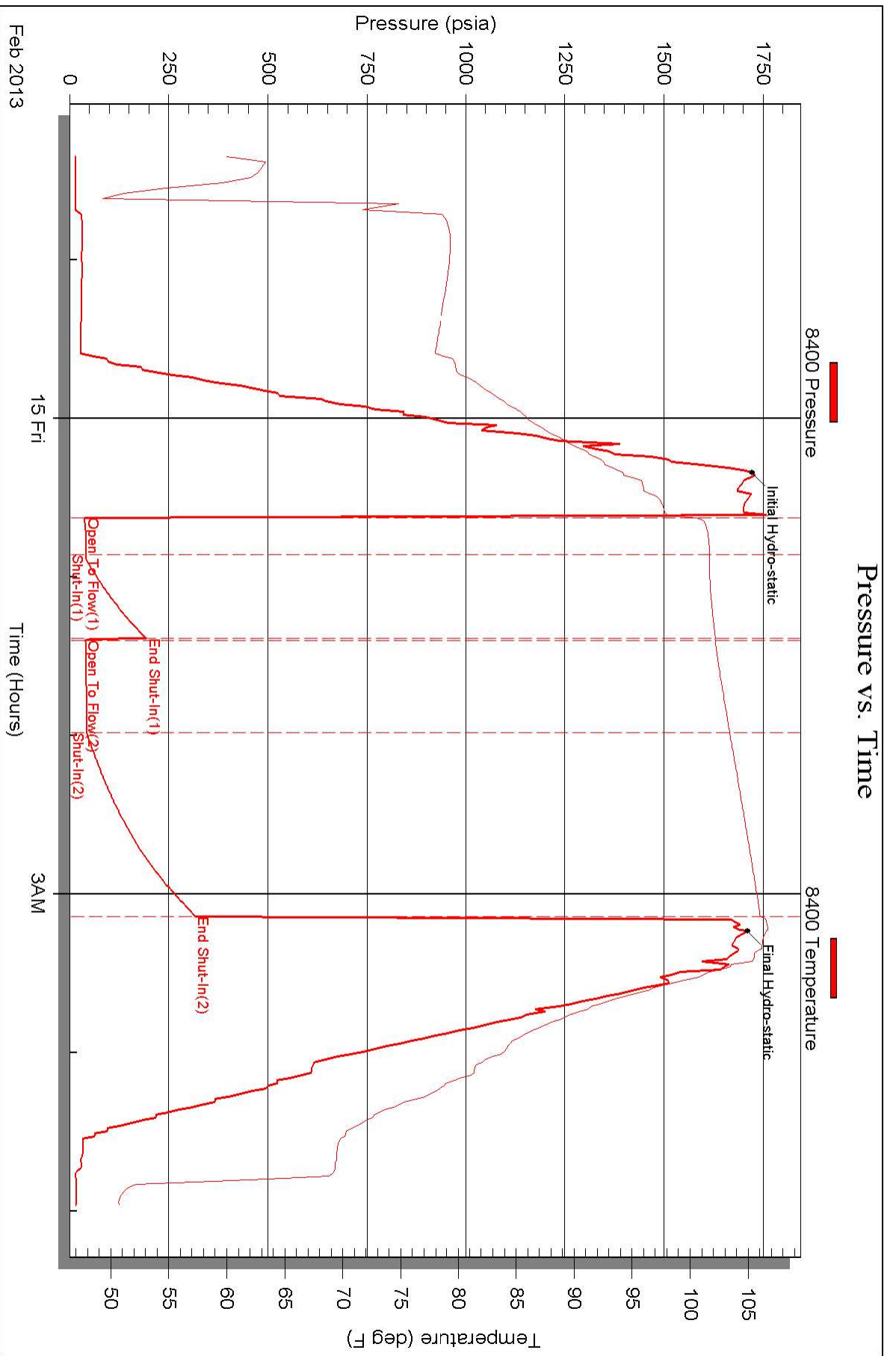
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

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

9431 E Central STE 100 Wichita Kansas
67206-2563

ATTN: Frank Greenbaum

Wolf #3-12

12-20s-15w/ Barton

Start Date: 2013.02.14 @ 12:40:00

End Date: 2013.02.14 @ 17:10:00

Job Ticket #: 16974 DST #: 7

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

Printed: 2013.02.14 @ 17:11:18



DRILL STEM TEST REPORT

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 16974

DST#: 7

ATTN: Frank Greenbaum

Test Start: 2013.02.14 @ 12:40:00

GENERAL INFORMATION:

Formation: **Lansing zone "J"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 14:06:30
 Tester: Shane Konzem
 Time Test Ended: 17:10:00
 Unit No: 3330-20/ Great Bend
 Interval: **3489.00 ft (KB) To 3510.00 ft (KB) (TVD)**
 Reference Elevations: 1980.00 ft (KB)
 Total Depth: 3510.00 ft (KB) (TVD)
 1972.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Poor
 KB to GR/CF: 8.00 ft

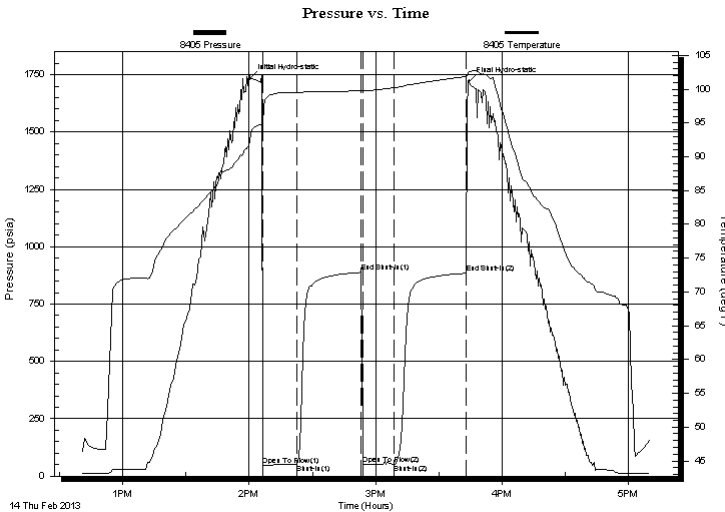
Serial #: 8405

Inside

Press @ Run Depth: 53.26 psia @ 3506.00 ft (KB) Capacity: 5000.00 psia
 Start Date: 2013.02.14 End Date: 2013.02.14 Last Calib.: 2013.02.14
 Start Time: 12:40:00 End Time: 17:10:00 Time On Btm: 2013.02.14 @ 14:00:30
 Time Off Btm: 2013.02.14 @ 15:44:30

TEST COMMENT: 1st open/ 15 minutes. Weak blow built to 1 inch in bucket of water.
 1st shut in/ 30 minutes. No blow back.
 2nd open/ 15 minutes. Weak blow to surface. blow died in 7 minutes.
 2nd shut in/ 30 minutes. No blow.

PRESSURE SUMMARY



Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1732.02	92.45	Initial Hydro-static
6	46.84	94.72	Open To Flow (1)
22	51.09	99.50	Shut-In(1)
53	888.23	99.86	End Shut-In(1)
54	51.68	99.75	Open To Flow (2)
68	53.26	100.21	Shut-In(2)
103	884.51	101.91	End Shut-In(2)
104	1720.18	102.58	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	No gas odor	0.00
30.00	oil cut mud	0.42
0.00	100% mud	0.00

Gas Rates

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



DRILL STEM TEST REPORT

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 16974

DST#: 7

ATTN: Frank Greenbaum

Test Start: 2013.02.14 @ 12:40:00

GENERAL INFORMATION:

Formation: **Lansing zone "J"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 14:06:30
 Tester: Shane Konzem
 Time Test Ended: 17:10:00
 Unit No: 3330-20/ Great Bend
 Interval: **3489.00 ft (KB) To 3510.00 ft (KB) (TVD)**
 Reference Elevations: 1980.00 ft (KB)
 Total Depth: 3510.00 ft (KB) (TVD)
 1972.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Poor
 KB to GR/CF: 8.00 ft

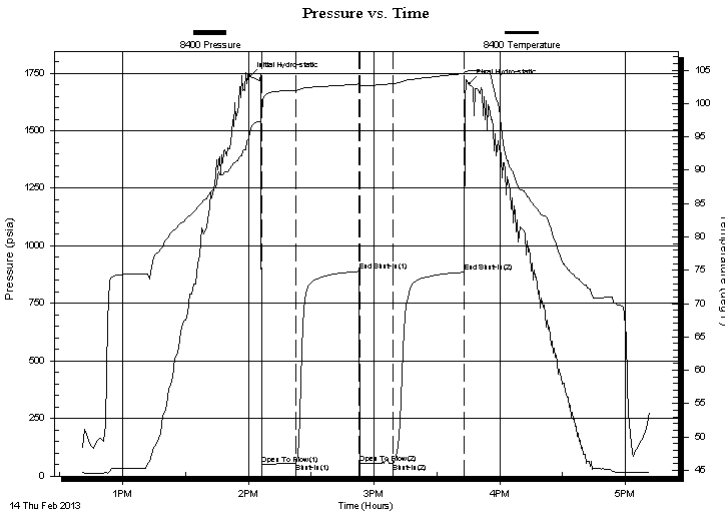
Serial #: 8400

Outside

Press @ Run Depth: 885.59 psia @ 3507.00 ft (KB) Capacity: 5000.00 psia
 Start Date: 2013.02.14 End Date: 2013.02.14 Last Calib.: 2013.02.14
 Start Time: 12:40:00 End Time: 17:11:30 Time On Btm: 2013.02.14 @ 14:00:30
 Time Off Btm: 2013.02.14 @ 15:45:30

TEST COMMENT: 1st open/ 15 minutes. Weak blow built to 1 inch in bucket of water.
 1st shut in/ 30 minutes. No blow back.
 2nd open/ 15 minutes. Weak blow to surface. blow died in 7 minutes.
 2nd shut in/ 30 minutes. No blow.

PRESSURE SUMMARY



Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1736.72	95.80	Initial Hydro-static
6	51.08	98.37	Open To Flow (1)
22	54.66	101.98	Shut-In(1)
53	889.29	102.92	End Shut-In(1)
53	55.15	102.44	Open To Flow (2)
69	56.44	102.98	Shut-In(2)
103	885.59	104.51	End Shut-In(2)
105	1703.30	104.90	Final Hydro-static

Recovery

Gas Rates

Length (ft)	Description	Volume (bbl)
0.00	No gas odor	0.00
30.00	oil cut mud	0.42
0.00	100% mud	0.00

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 16974

DST#: 7

ATTN: Frank Greenbaum

Test Start: 2013.02.14 @ 12:40:00

Tool Information

Drill Pipe:	Length: 3489.00 ft	Diameter: 3.80 inches	Volume: 48.94 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: lb
			<u>Total Volume: 48.94 bbl</u>	Tool Chased 6.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 44000.00 lb
Depth to Top Packer:	3489.00 ft			Final 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
------------------	-------------	------------	----------	------------	----------------

SHut-InTool	5.00		Inside	3466.00	
Hydraulic Tool	5.00			3471.00	
Jars	6.00			3477.00	
Safety Joint	2.00			3479.00	
Packer	5.00			3484.00	28.00 Bottom Of Top Packer
Packer	5.00			3489.00	
Anchor	16.00			3505.00	
Recorder	1.00	8405	Inside	3506.00	
Recorder	1.00	8400	Outside	3507.00	
Bullnose	3.00			3510.00	21.00 Bottom Packers & Anchor
Total Tool Length:	49.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 16974

DST#: 7

ATTN: Frank Greenbaum

Test Start: 2013.02.14 @ 12:40:00

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: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.00 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psia

Salinity: 7300.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	No gas odor	0.000
30.00	oil cut mud	0.421
0.00	100% mud	0.000

Total Length: 30.00 ft Total Volume: 0.421 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

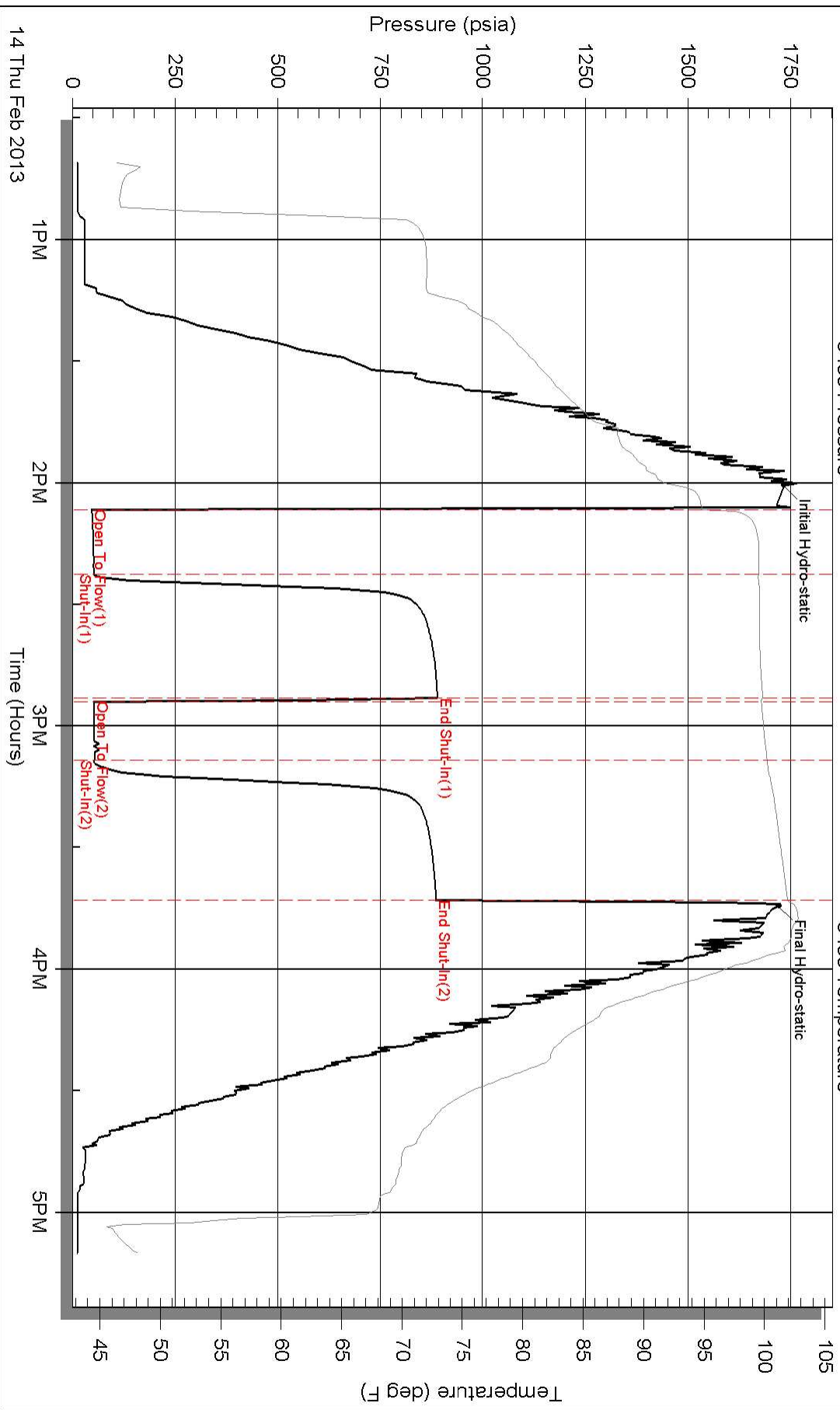
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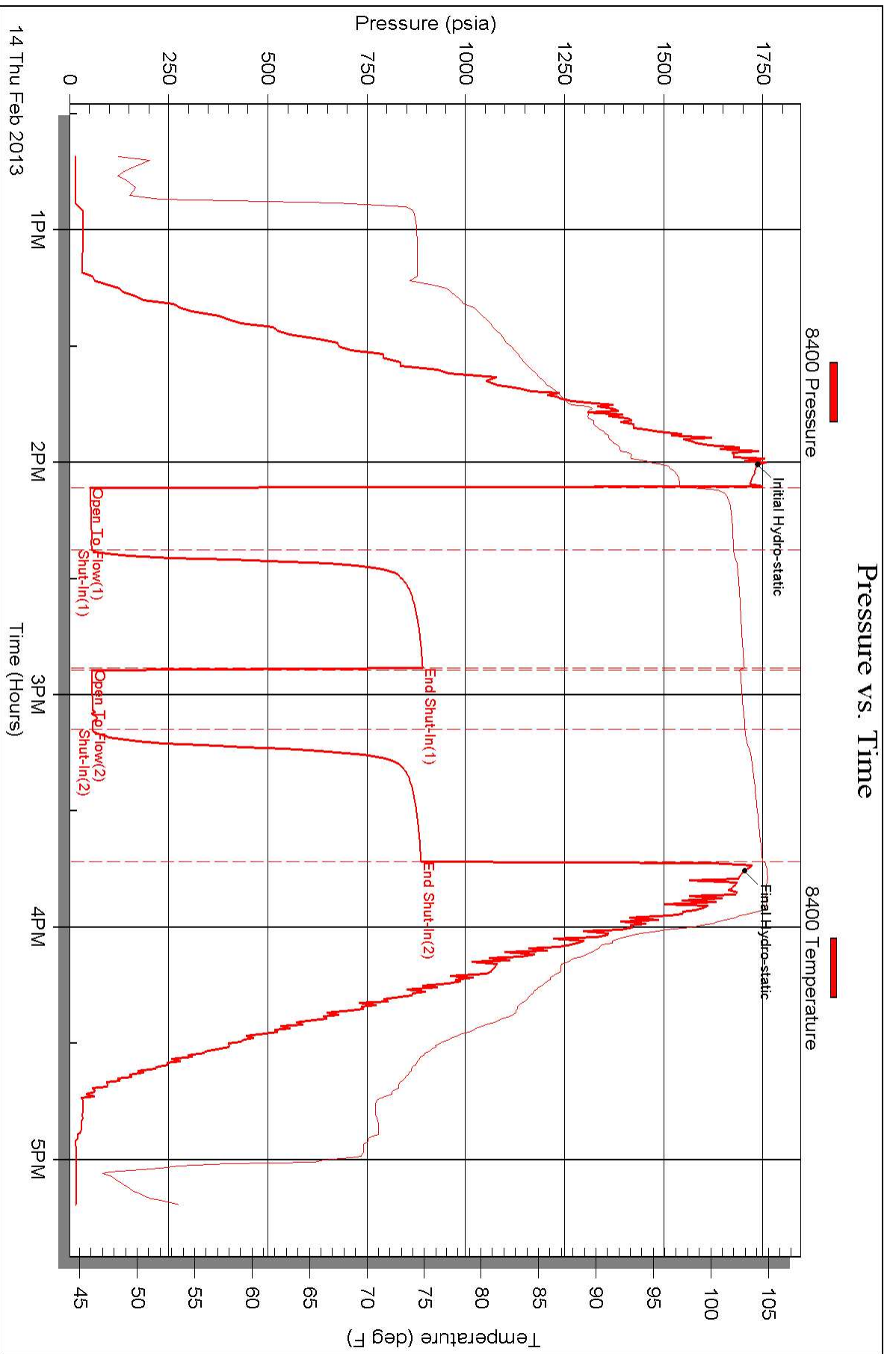
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

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

9431 E Central STE 100 Wichita Kansas
67206-2563

ATTN: Frank Greenbaum

Wolf #3-12

12-20s-15w/ Barton

Start Date: 2013.02.15 @ 06:10:00

End Date: 2013.02.15 @ 14:25:30

Job Ticket #: 16975 DST #: 8

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

Printed: 2013.02.15 @ 14:51:56



DRILL STEM TEST REPORT

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 16975

DST#: 8

ATTN: Frank Greenbaum

Test Start: 2013.02.15 @ 06:10:00

GENERAL INFORMATION:

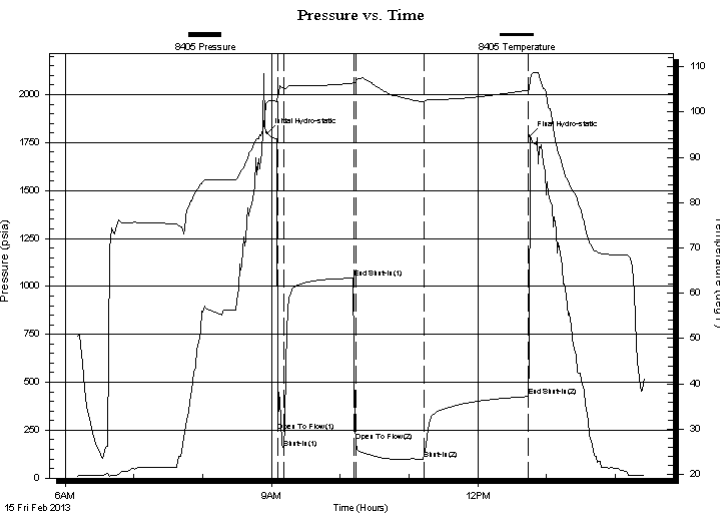
Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 09:05:30 Tester: Shane Konzem
 Time Test Ended: 14:25:30 Unit No: 3330-20/ Great Bend
 Interval: **3564.00 ft (KB) To 3636.00 ft (KB) (TVD)** Reference Elevations: 1980.00 ft (KB)
 Total Depth: 3636.00 ft (KB) (TVD) 1972.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Poor KB to GR/CF: 8.00 ft

Serial #: 8405

Inside

Press @ Run Depth: 100.61 psia @ 3633.20 ft (KB) Capacity: 5000.00 psia
 Start Date: 2013.02.15 End Date: 2013.02.15 Last Calib.: 2013.02.15
 Start Time: 06:10:00 End Time: 14:25:30 Time On Btm: 2013.02.15 @ 08:56:30
 Time Off Btm: 2013.02.15 @ 12:45:30

TEST COMMENT: 1st Open/ 5 Minutes. Strong blow built to bottom of bucket in less than 1 minute. Gas to surface in three minutes.
 1st Shut in/ 60 Minutes. Weak blow back to surface.
 2nd Open/ 60 Minutes. Strong blow built to bottom of bucket in less than 1 minute. gas to surface in 1 minute.



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1799.13	102.41	Initial Hydro-static
9	244.04	103.60	Open To Flow (1)
15	153.07	105.08	Shut-In(1)
75	1043.20	106.40	End Shut-In(1)
77	194.41	106.69	Open To Flow (2)
137	100.61	102.26	Shut-In(2)
228	425.86	104.83	End Shut-In(2)
229	1785.62	107.11	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	840 feet of gas odor	0.00
150.00	mud	2.10
0.00	100% mud	0.00

Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
First Gas Rate	1.00	14.30	411.11
Last Gas Rate	1.00	8.13	233.73
Max. Gas Rate	1.00	14.30	411.11



DRILL STEM TEST REPORT

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 16975

DST#: 8

ATTN: Frank Greenbaum

Test Start: 2013.02.15 @ 06:10:00

GENERAL INFORMATION:

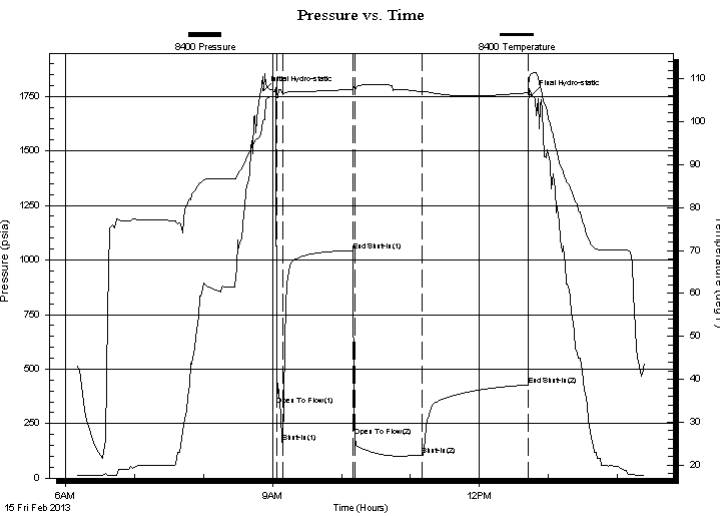
Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 09:05:30
 Tester: Shane Konzem
 Time Test Ended: 14:25:30
 Unit No: 3330-20/ Great Bend
 Interval: **3564.00 ft (KB) To 3636.00 ft (KB) (TVD)**
 Reference Elevations: 1980.00 ft (KB)
 Total Depth: 3636.00 ft (KB) (TVD)
 1972.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Poor
 KB to GR/CF: 8.00 ft

Serial #: 8400

Outside

Press @ Run Depth: 427.83 psia @ 3634.20 ft (KB) Capacity: 5000.00 psia
 Start Date: 2013.02.15 End Date: 2013.02.15 Last Calib.: 2013.02.15
 Start Time: 06:10:00 End Time: 14:24:23 Time On Btm: 2013.02.15 @ 08:52:23
 Time Off Btm: 2013.02.15 @ 12:45:53

TEST COMMENT: 1st Open/ 5 Minutes. Strong blow built to bottom of bucket in less than 1 minute. Gas to surface in three minutes.
 1st Shut in/ 60 Minutes. Weak blow back to surface.
 2nd Open/ 60 Minutes. Strong blow built to bottom of bucket in less than 1 minute. gas to surface in 1 minute.



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1778.06	100.39	Initial Hydro-static
12	336.61	105.62	Open To Flow (1)
17	163.78	106.55	Shut-In(1)
78	1043.54	107.58	End Shut-In(1)
80	189.96	107.52	Open To Flow (2)
138	103.00	106.96	Shut-In(2)
230	427.83	106.75	End Shut-In(2)
234	1757.89	111.29	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	840 feet of gas odor	0.00
150.00	mud	2.10
0.00	100% mud	0.00

Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
First Gas Rate	1.00	14.30	411.11
Last Gas Rate	1.00	8.13	233.73
Max. Gas Rate	1.00	14.30	411.11



DRILL STEM TEST REPORT

TOOL DIAGRAM

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 16975

DST#: 8

ATTN: Frank Greenbaum

Test Start: 2013.02.15 @ 06:10:00

Tool Information

Drill Pipe:	Length: 3554.00 ft	Diameter: 3.80 inches	Volume: 49.85 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: 68000.00 lb
			<u>Total Volume: 49.85 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3564.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	73.20 ft			
Tool Length:	101.20 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

SHut-InTool	5.00		Inside	3541.00	
Hydraulic Tool	5.00			3546.00	
Jars	6.00			3552.00	
Safety Joint	2.00			3554.00	
Packer	5.00			3559.00	28.00 Bottom Of Top Packer
Packer	5.00			3564.00	
Anchor	5.00			3569.00	
Change Over Sub	0.75			3569.75	
Drill Pipe	31.70		Outside	3601.45	
Change Over Sub	0.75		Outside	3602.20	
Anchor	30.00			3632.20	
Recorder	1.00	8405	Inside	3633.20	
Recorder	1.00	8400	Outside	3634.20	
Bullnose	3.00			3637.20	73.20 Bottom Packers & Anchor

Total Tool Length: 101.20



DRILL STEM TEST REPORT

FLUID SUMMARY

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 16975

DST#: 8

ATTN: Frank Greenbaum

Test Start: 2013.02.15 @ 06:10:00

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: 55.00 sec/qt

Cushion Volume: bbl

Water Loss: 8.00 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psia

Salinity: 7300.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	840 feet of gas odor	0.000
150.00	mud	2.104
0.00	100% mud	0.000

Total Length: 150.00 ft Total Volume: 2.104 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 LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 16975

DST#: 8

ATTN: Frank Greenbaum

Test Start: 2013.02.15 @ 06:10:00

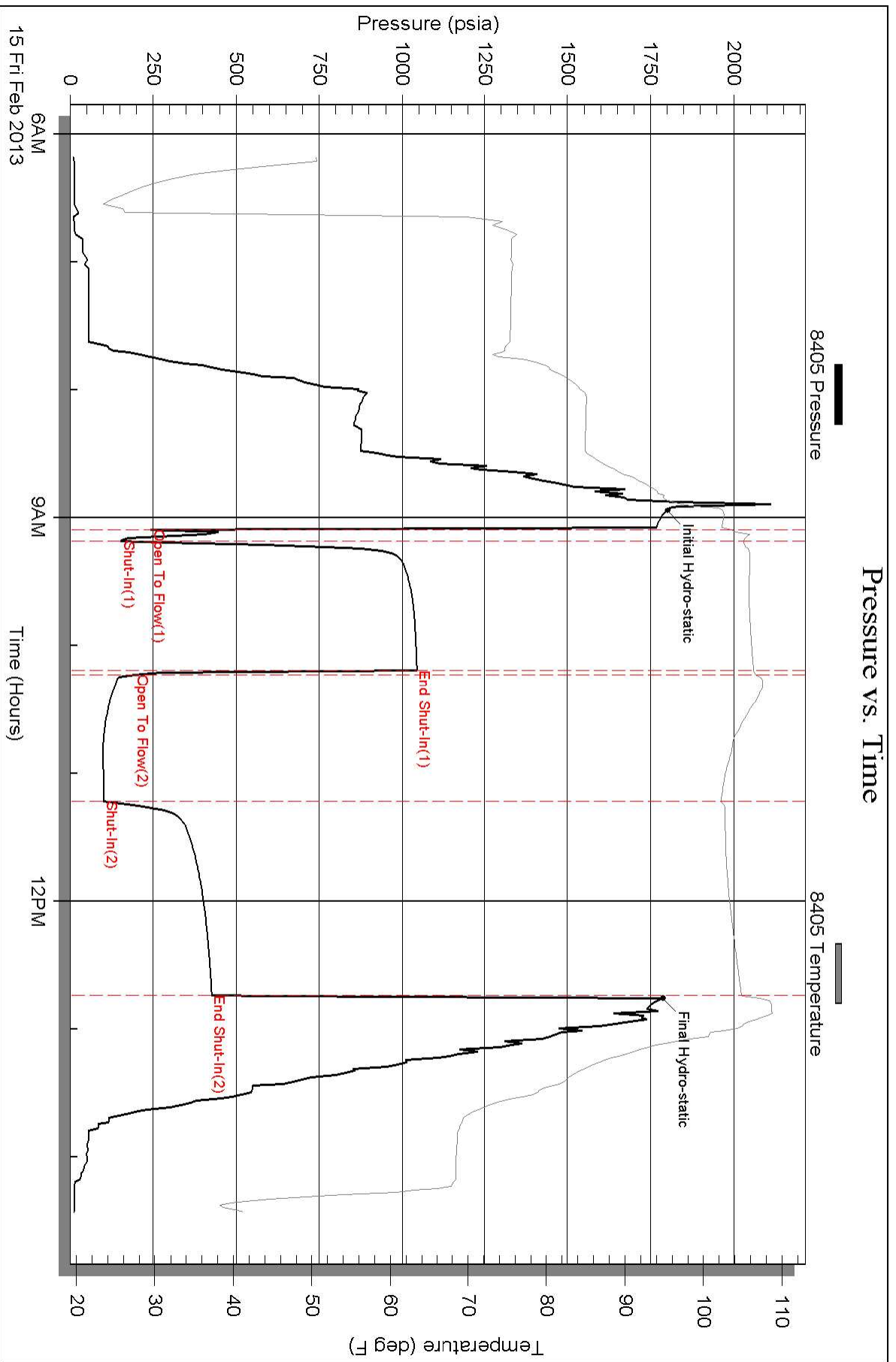
Gas Rates Information

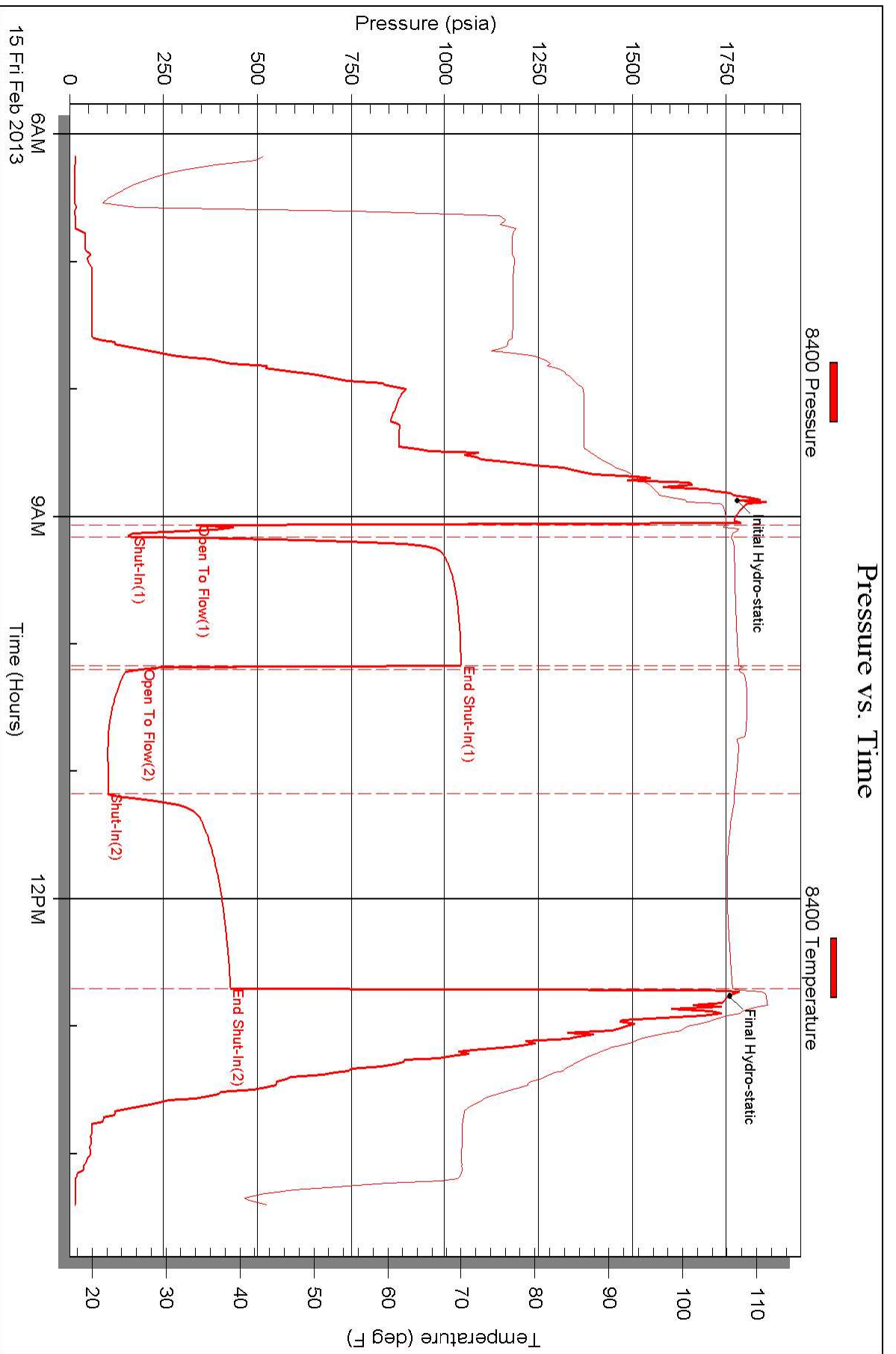
Temperature: 59 (deg F)
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
2	5	1.00	14.30	411.11
2	5	1.00	14.30	411.11
2	10	1.00	13.60	390.98
2	20	1.00	8.64	248.39
2	30	1.00	7.19	206.70
2	40	1.00	8.13	233.73

Pressure vs. Time







DRILL STEM TEST REPORT

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

9431 E Central STE 100 Wichita Kansas
67206-2563

ATTN: Frank Greenbaum

Wolf #3-12

12-20s-15w/ Barton

Start Date: 2013.02.16 @ 22:15:00

End Date: 2013.02.17 @ 08:11:00

Job Ticket #: DST #: 9

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

Printed: 2013.02.16 @ 08:35:34



DRILL STEM TEST REPORT

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: **DST#: 9**

ATTN: Frank Greenbaum

Test Start: 2013.02.16 @ 22:15:00

GENERAL INFORMATION:

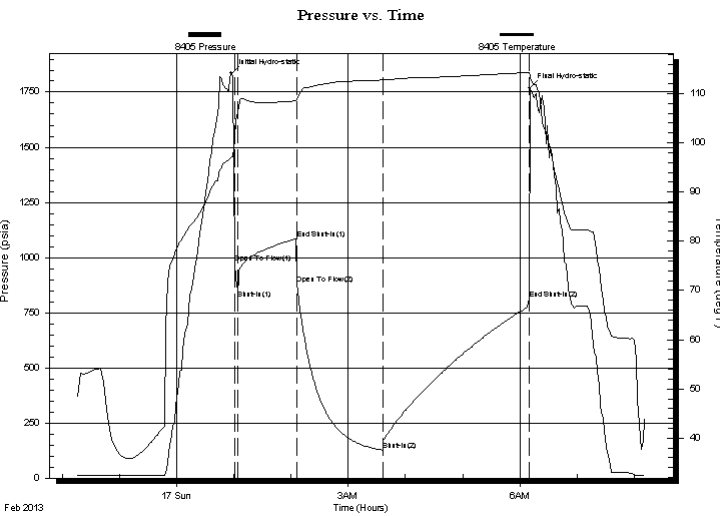
Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 01:00:30
 Time Test Ended: 08:11:00
 Interval: **3637.00 ft (KB) To 3651.00 ft (KB) (TVD)**
 Total Depth: 3651.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Poor
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Shane Konzem
 Unit No: 3330-20/ Great Bend
 Reference Elevations: 1980.00 ft (KB)
 1972.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8405

Inside

Press @ Run Depth: 127.31 psia @ 3647.00 ft (KB) Capacity: 5000.00 psia
 Start Date: 2013.02.16 End Date: 2013.02.17 Last Calib.: 2013.02.16
 Start Time: 22:15:00 End Time: 08:11:00 Time On Btm: 2013.02.17 @ 00:57:30
 Time Off Btm: 2013.02.17 @ 06:10:30

TEST COMMENT: 1st Open/ 5 minutes. Strong blow built to bottom of bucket in less than 1 minutes.
 1st Shut In/ 60 minutes. Weak blow back to surface.
 2nd Open/ 60 minutes Strong blow built to bottom of bucket in less than 1 minute. Gas to surface in less than 1 minute.



PRESSURE SUMMARY

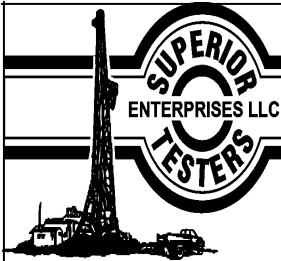
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1835.70	97.15	Initial Hydro-static
3	976.20	100.70	Open To Flow (1)
7	812.66	106.61	Shut-In(1)
68	1085.42	108.54	End Shut-In(1)
69	880.85	108.84	Open To Flow (2)
159	127.31	112.78	Shut-In(2)
312	810.11	114.31	End Shut-In(2)
313	1769.26	113.77	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	100% muddy water	0.14

Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
First Gas Rate	1.00	65.65	1887.36
Last Gas Rate	1.00	9.20	264.49
Max. Gas Rate	1.00	74.45	2140.35



DRILL STEM TEST REPORT

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: **DST#: 9**

ATTN: Frank Greenbaum

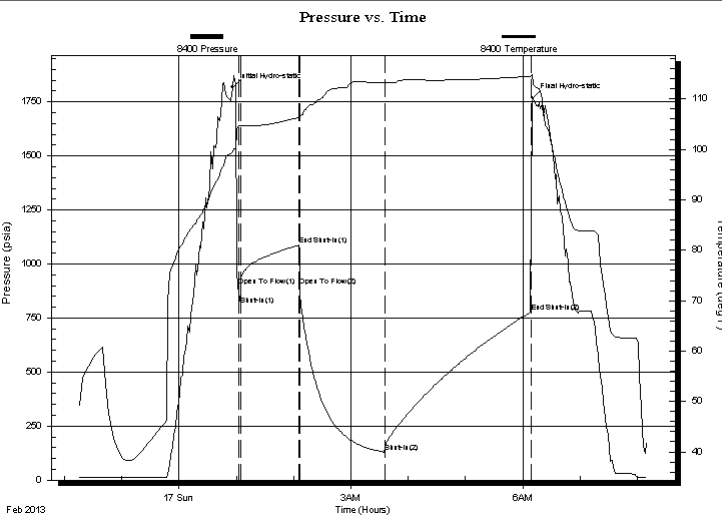
Test Start: 2013.02.16 @ 22:15:00

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 01:00:30 Tester: Shane Konzem
 Time Test Ended: 08:11:00 Unit No: 3330-20/ Great Bend
 Interval: **3637.00 ft (KB) To 3651.00 ft (KB) (TVD)** Reference Elevations: 1980.00 ft (KB)
 Total Depth: 3651.00 ft (KB) (TVD) 1972.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Poor KB to GR/CF: 8.00 ft

Serial #: 8400 Outside
 Press @ Run Depth: 778.36 psia @ 3648.00 ft (KB) Capacity: 5000.00 psia
 Start Date: 2013.02.16 End Date: 2013.02.17 Last Calib.: 2013.02.16
 Start Time: 22:15:00 End Time: 08:10:30 Time On Btm: 2013.02.17 @ 00:56:00
 Time Off Btm: 2013.02.17 @ 06:10:30

TEST COMMENT: 1st Open/ 5 minutes. Strong blow built to bottom of bucket in less than 1 minutes.
 1st Shut In/ 60 minutes. Weak blow back to surface.
 2nd Open/ 60 minutes Strong blow built to bottom of bucket in less than 1 minute. Gas to surface in less than 1 minute.



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1816.92	99.62	Initial Hydro-static
6	897.95	104.56	Open To Flow (1)
9	807.93	104.69	Shut-In(1)
70	1086.29	106.31	End Shut-In(1)
70	898.60	106.34	Open To Flow (2)
160	129.33	113.19	Shut-In(2)
313	778.36	114.51	End Shut-In(2)
315	1768.85	113.22	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	100% muddy water	0.14

Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
First Gas Rate	1.00	65.65	1887.36
Last Gas Rate	1.00	9.20	264.49
Max. Gas Rate	1.00	74.45	2140.35



DRILL STEM TEST REPORT

TOOL DIAGRAM

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket:

DST#: 9

ATTN: Frank Greenbaum

Test Start: 2013.02.16 @ 22:15:00

Tool Information

Drill Pipe:	Length: 3617.00 ft	Diameter: 3.80 inches	Volume: 50.74 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: 58000.00 lb
			<u>Total Volume: 50.74 bbl</u>	Tool Chased 3.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 44000.00 lb
Depth to Top Packer:	3637.00 ft			Final 46000.00 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-InTool	5.00		Inside	3614.00	
Hydraulic Tool	5.00			3619.00	
Jars	6.00			3625.00	
Safety Joint	2.00			3627.00	
Packer	5.00			3632.00	28.00 Bottom Of Top Packer
Packer	5.00			3637.00	
Anchor	9.00			3646.00	
Recorder	1.00	8405	Inside	3647.00	
Recorder	1.00	8400	Outside	3648.00	
Bullnose	3.00			3651.00	14.00 Bottom Packers & Anchor
Total Tool Length:	42.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket:

DST#: 9

ATTN: Frank Greenbaum

Test Start: 2013.02.16 @ 22:15:00

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: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.20 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psia

Salinity: 6800.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	100% muddy water	0.140

Total Length: 10.00 ft Total Volume: 0.140 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 LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket:

DST#: 9

ATTN: Frank Greenbaum

Test Start: 2013.02.16 @ 22:15:00

Gas Rates Information

Temperature: 59 (deg F)

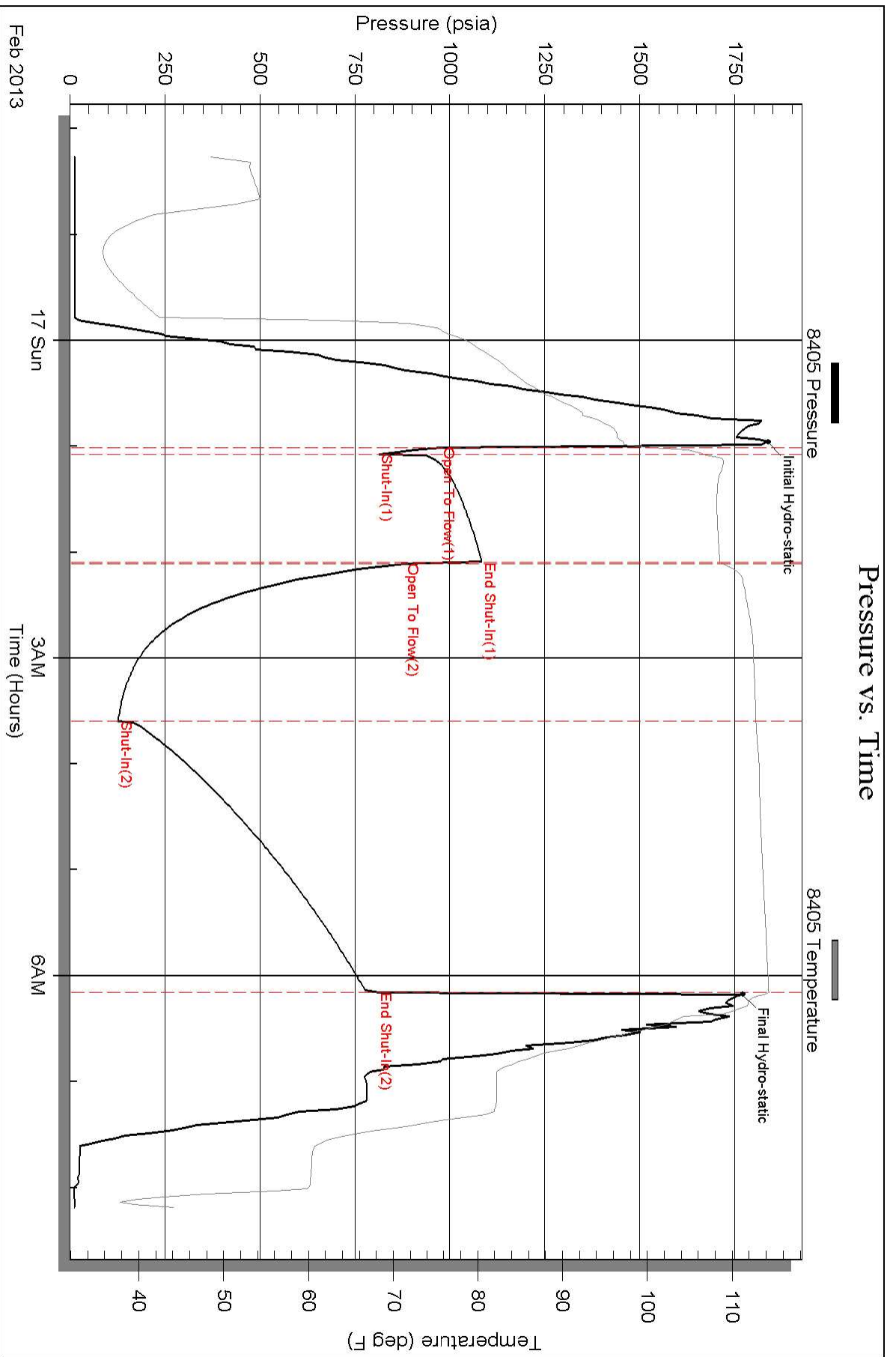
Relative Density: 0.65

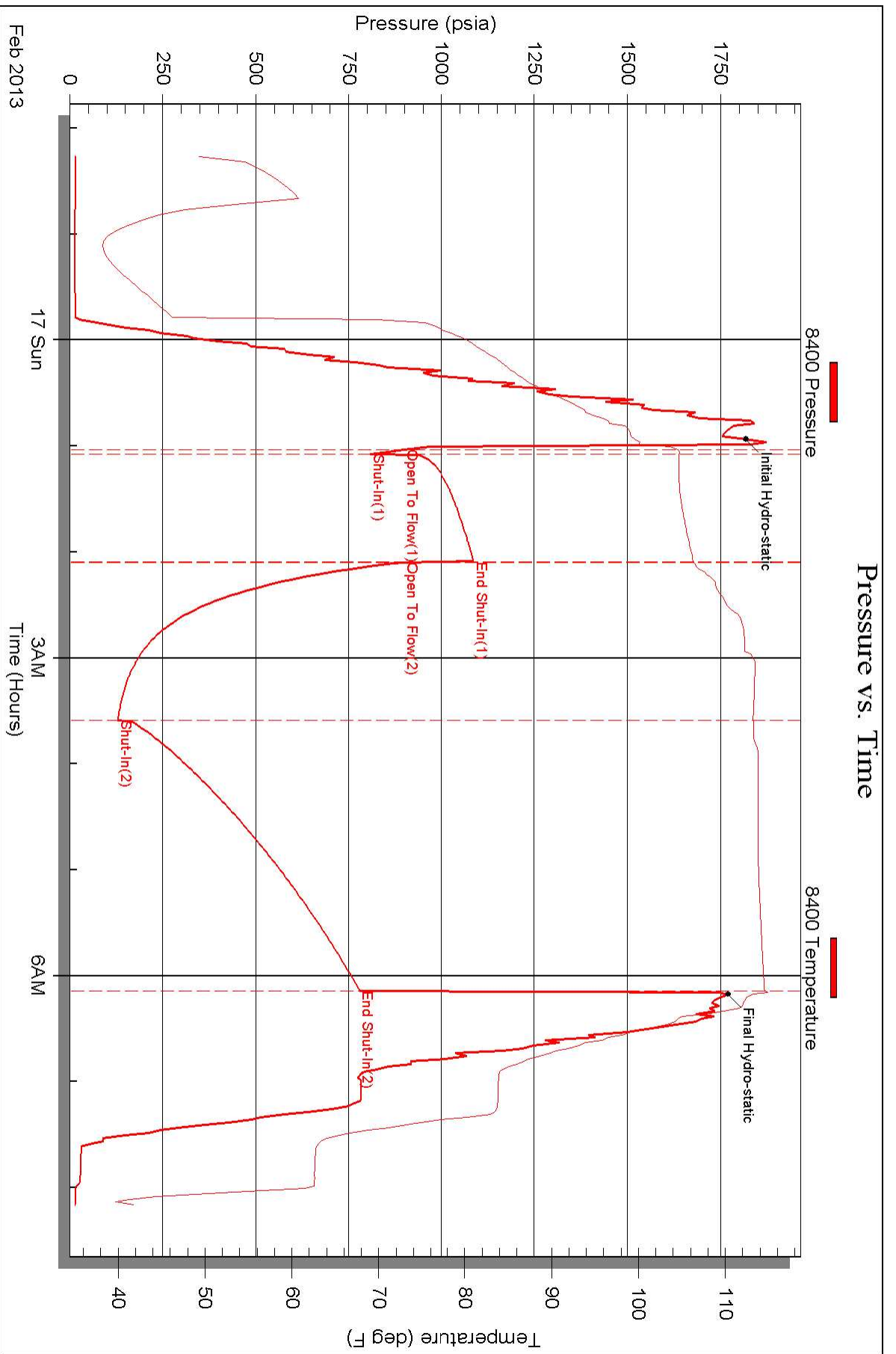
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
2	5	1.00	65.65	1887.36
2	10	1.00	74.45	2140.35
2	20	1.00	56.56	1626.03
2	30	1.00	39.07	1123.22
2	40	1.00	39.07	1123.22
2	50	1.00	26.60	764.72
2	60	1.00	26.60	764.72
2	70	1.00	18.75	539.04
2	80	1.00	17.18	493.91
2	85	1.00	9.20	264.49

Pressure vs. Time







DRILL STEM TEST REPORT

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

9431 E Central STE 100 Wichita Kansas
67206-2563

ATTN: Frank Greenbaum

Wolf #3-12

12-20s-15w/ Barton

Start Date: 2013.02.16 @ 16:09:00

End Date: 2013.02.16 @ 23:01:30

Job Ticket #: 17552 DST #: 10

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

Printed: 2013.02.16 @ 23:20:22



DRILL STEM TEST REPORT

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 17552

DST#: 10

ATTN: Frank Greenbaum

Test Start: 2013.02.16 @ 16:09:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:36:00

Time Test Ended: 23:01:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 3330 Great Bend/20

Interval: 3652.00 ft (KB) To 3666.00 ft (KB) (TVD)

Reference Elevations: 1980.00 ft (KB)

Total Depth: 3666.00 ft (KB) (TVD)

1972.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8405

Inside

Press @ RunDepth: 36.03 psia @ 3662.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.02.16

End Date:

2013.02.16

Last Calib.:

2013.02.16

Start Time: 16:09:00

End Time:

23:01:30

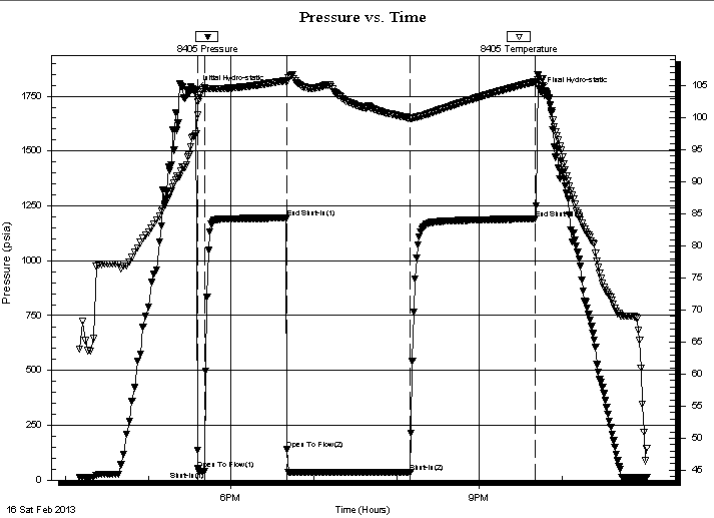
Time On Btm:

2013.02.16 @ 17:34:30

Time Off Btm:

2013.02.16 @ 21:44:30

TEST COMMENT: 1ST Open 5 Minutes/Strong blow/Blow built to bottom of bucket in 20 seconds/Gas to surface in 1 minute
 1ST Shut In 60 Minutes/Slight surface blow back
 2ND Open 90 Minutes/Strong blow/Blow built to bottom of bucket at open
 2ND Shut In 90 Minutes/No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1778.18	97.50	Initial Hydro-static
2	51.27	102.49	Open To Flow (1)
6	40.94	104.67	Shut-In(1)
66	1194.48	105.81	End Shut-In(1)
66	139.06	105.44	Open To Flow (2)
156	36.03	99.86	Shut-In(2)
246	1190.78	105.62	End Shut-In(2)
250	1773.18	106.12	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	Mud 100%	0.42

Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
First Gas Rate	0.50	7.77	52.41
Last Gas Rate	0.75	4.26	66.60
Max. Gas Rate	0.50	7.77	52.41



DRILL STEM TEST REPORT

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 17552

DST#: 10

ATTN: Frank Greenbaum

Test Start: 2013.02.16 @ 16:09:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:36:00

Time Test Ended: 23:01:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 3330 Great Bend/20

Interval: 3652.00 ft (KB) To 3666.00 ft (KB) (TVD)

Reference Elevations: 1980.00 ft (KB)

Total Depth: 3666.00 ft (KB) (TVD)

1972.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8400 Outside

Press @ RunDepth: 1189.52 psia @ 3663.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.02.16

End Date: 2013.02.16

Last Calib.: 2013.02.16

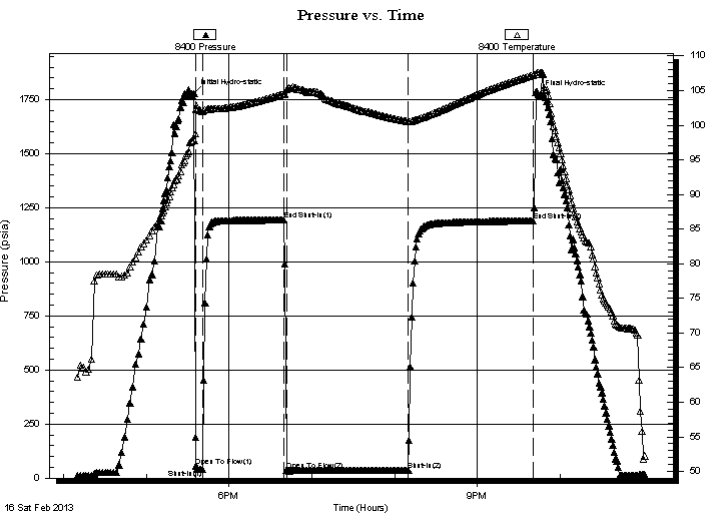
Start Time: 16:09:00

End Time: 23:02:00

Time On Btm: 2013.02.16 @ 17:34:30

Time Off Btm: 2013.02.16 @ 21:44:30

TEST COMMENT: 1ST Open 5 Minutes/Strong blow/Blow built to bottom of bucket in 20 seconds/Gas to surface in 1 minute
 1ST Shut In 60 Minutes/Slight surface blow back
 2ND Open 90 Minutes/Strong blow/Blow built to bottom of bucket at open
 2ND Shut In 90 Minutes/No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1779.16	97.84	Initial Hydro-static
2	56.40	102.30	Open To Flow (1)
6	41.38	101.96	Shut-In(1)
65	1193.01	104.53	End Shut-In(1)
67	37.82	105.13	Open To Flow (2)
156	36.31	100.50	Shut-In(2)
247	1189.52	107.23	End Shut-In(2)
250	1773.78	107.60	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	Mud 100%	0.42

Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
First Gas Rate	0.50	7.77	52.41
Last Gas Rate	0.75	4.26	66.60
Max. Gas Rate	0.50	7.77	52.41



DRILL STEM TEST REPORT

TOOL DIAGRAM

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 17552

DST#: 10

ATTN: Frank Greenbaum

Test Start: 2013.02.16 @ 16:09:00

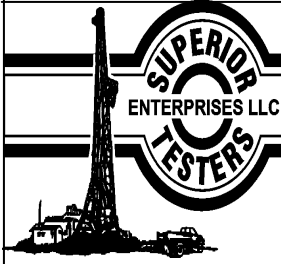
Tool Information

Drill Pipe:	Length: 3649.00 ft	Diameter: 3.80 inches	Volume: 51.19 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: 58000.00 lb
			<u>Total Volume: 51.19 bbl</u>	Tool Chased 5.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3652.00 ft			Final 46000.00 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

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
SHut-InTool	5.00		Inside	3629.00	
Hydraulic Tool	5.00			3634.00	
Jars	6.00			3640.00	
Safety Joint	2.00			3642.00	
Packer	5.00			3647.00	28.00 Bottom Of Top Packer
Packer	5.00			3652.00	
Anchor	9.00			3661.00	
Recorder	1.00	8405	Inside	3662.00	
Recorder	1.00	8400	Outside	3663.00	
Bullnose	3.00			3666.00	14.00 Bottom Packers & Anchor
Total Tool Length:	42.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 17552

DST#: 10

ATTN: Frank Greenbaum

Test Start: 2013.02.16 @ 16:09:00

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: 79.00 sec/qt

Cushion Volume: bbl

Water Loss: 8.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psia

Salinity: 6000.00 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 LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 17552

DST#: 10

ATTN: Frank Greenbaum

Test Start: 2013.02.16 @ 16:09:00

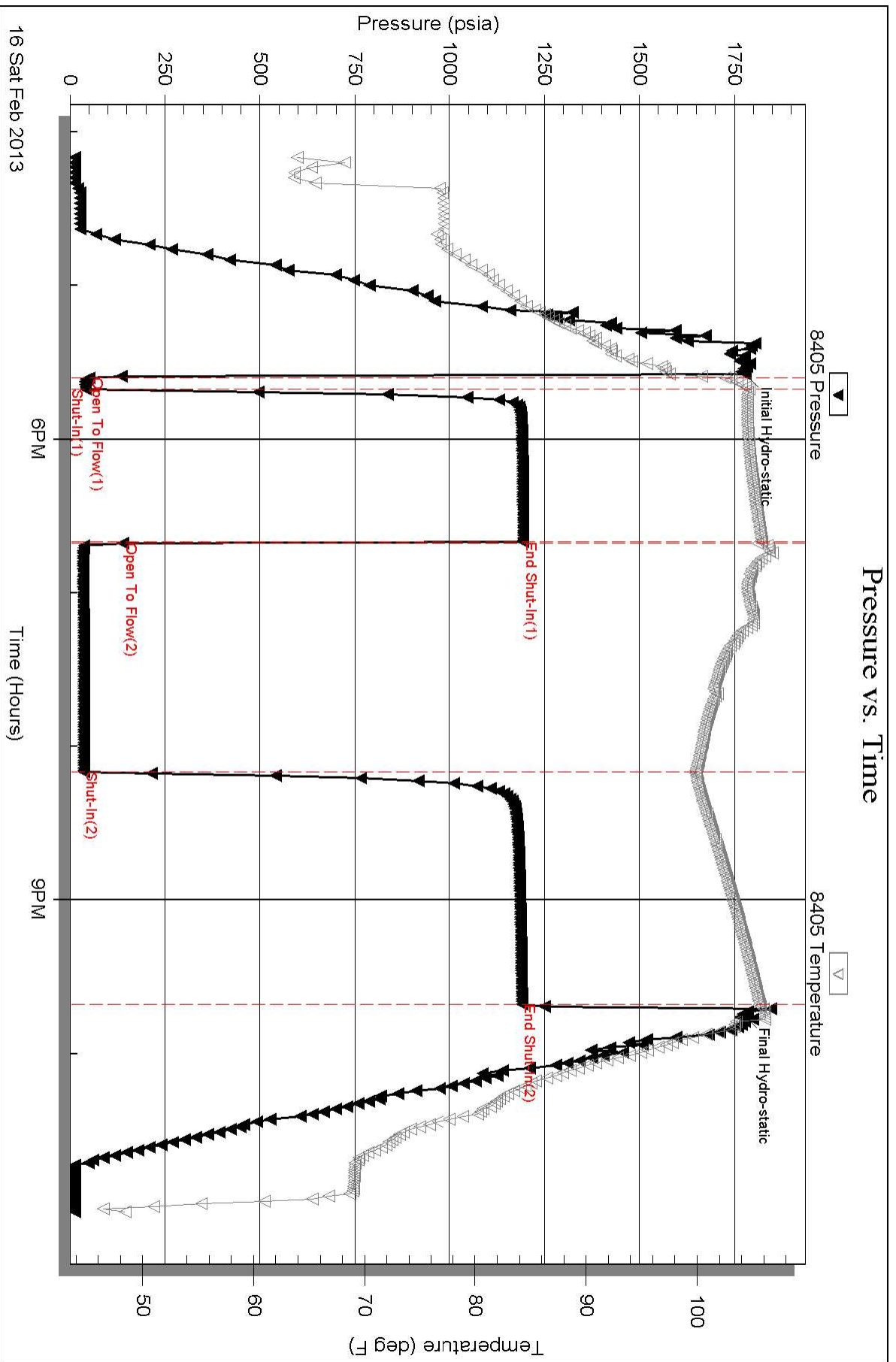
Gas Rates Information

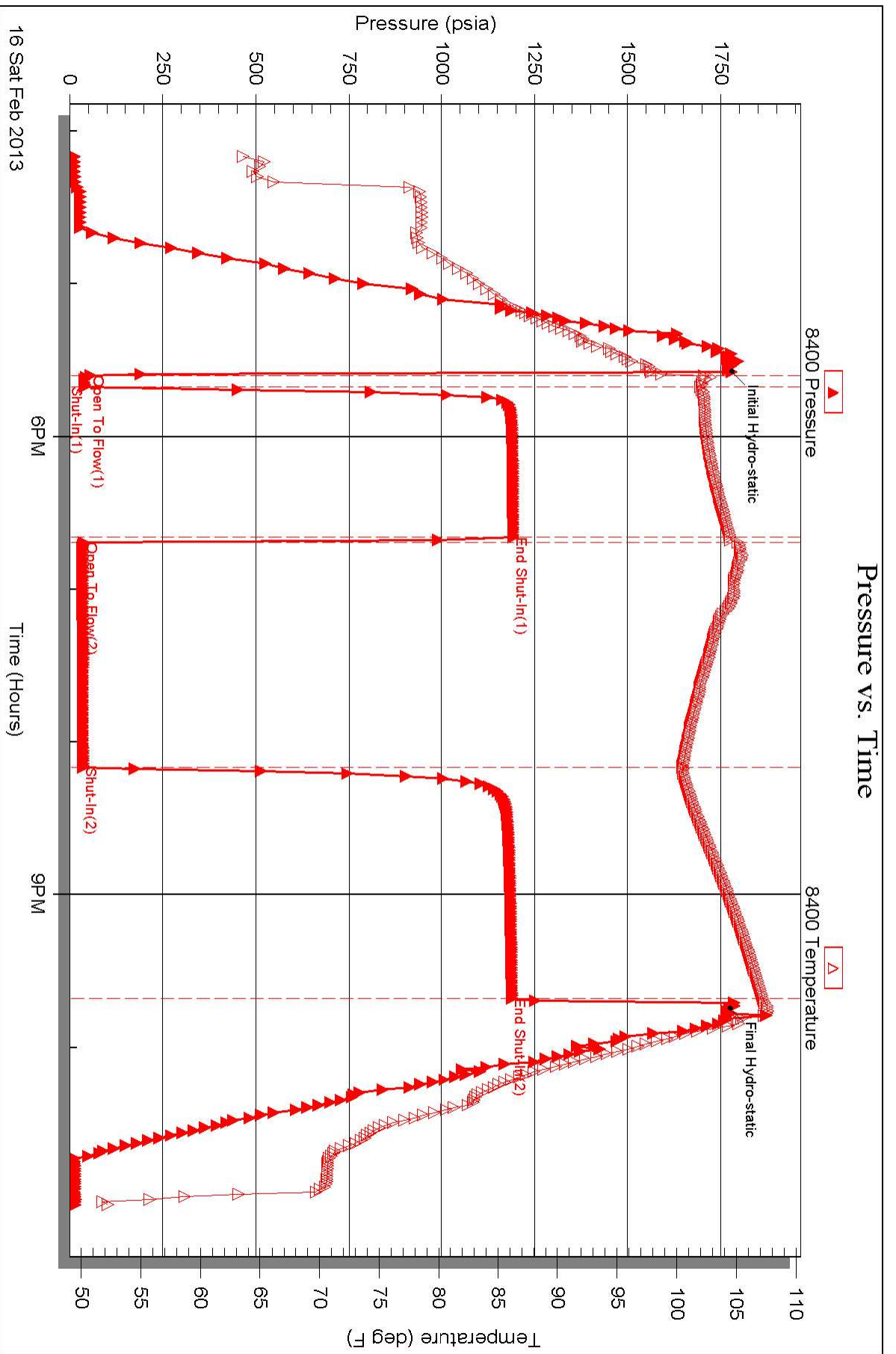
Temperature: 59 (deg F)
Relative Density: 0.65
Z Factor: 0.8

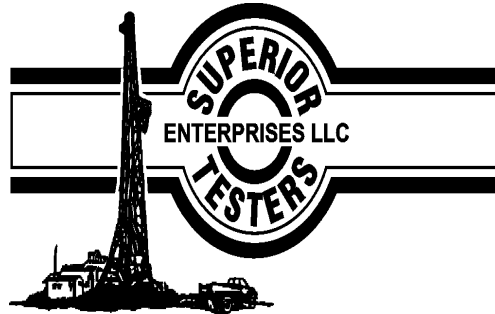
Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
1	3	0.50	7.77	52.41
1	3	0.50	7.77	52.41
2	2	0.75	6.41	100.12
2	5	0.75	4.98	77.80
2	15	0.75	4.26	66.60
2	25	0.75	4.26	66.60
2	35	0.75	4.26	66.60
2	45	0.75	4.26	66.60
2	55	0.75	4.26	66.60
2	65	0.75	4.26	66.60
2	75	0.75	4.26	66.60
2	85	0.75	4.26	66.60

Pressure vs. Time







DRILL STEM TEST REPORT

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

9431 E Central STE 100 Wichita Kansas
67206-2563

ATTN: Frank Greenbaum

Wolf #3-12

12-20s-15w/ Barton

Start Date: 2013.02.17 @ 12:03:00

End Date: 2013.02.17 @ 16:35:00

Job Ticket #: 17509 DST #: 11

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

Printed: 2013.02.17 @ 16:44:13



DRILL STEM TEST REPORT

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 17509

DST#: 11

ATTN: Frank Greenbaum

Test Start: 2013.02.17 @ 12:03:00

GENERAL INFORMATION:

Formation: **Lower Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:41:00

Time Test Ended: 16:35:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 3325 Great Bend/20

Interval: 3715.00 ft (KB) To 3755.00 ft (KB) (TVD)

Reference Elevations: 1980.00 ft (KB)

Total Depth: 3755.00 ft (KB) (TVD)

1972.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6749 Inside

Press @ RunDepth: 49.04 psia @ 3751.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.02.17

End Date: 2013.02.17

Last Calib.: 2013.02.17

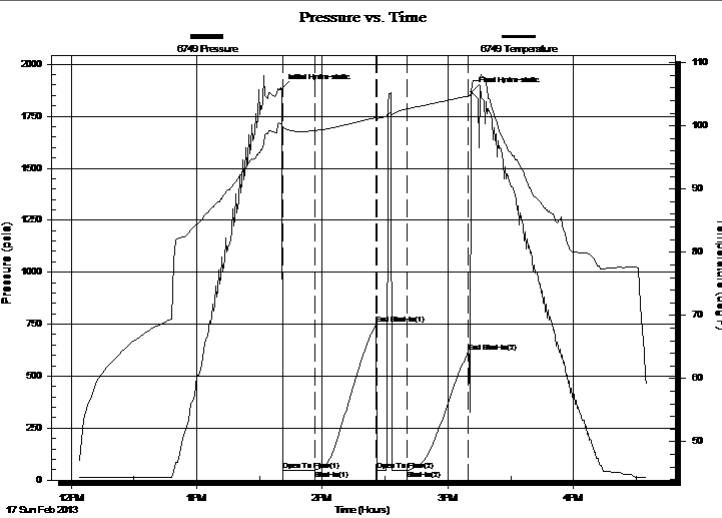
Start Time: 12:03:00

End Time: 16:35:00

Time On Btm: 2013.02.17 @ 13:40:30

Time Off Btm: 2013.02.17 @ 15:11:30

TEST COMMENT: 1ST Open 15 Minutes/No blow /Fitting loose at open on head/
 1ST Shut In 30 Mintues/No blow back
 2ND Open 15 Minutes/No blow /Flush tool didnt help
 2ND Shut In 30 Minutes/No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1881.66	100.18	Initial Hydro-static
1	47.37	99.78	Open To Flow (1)
16	48.46	99.25	Shut-In(1)
45	749.46	101.30	End Shut-In(1)
46	48.22	101.17	Open To Flow (2)
60	49.04	102.68	Shut-In(2)
89	615.81	104.71	End Shut-In(2)
91	1866.45	106.61	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
3.00	Mud 100%	0.04

Gas Rates

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



DRILL STEM TEST REPORT

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 17509

DST#: 11

ATTN: Frank Greenbaum

Test Start: 2013.02.17 @ 12:03:00

GENERAL INFORMATION:

Formation: **Lower Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:41:00

Time Test Ended: 16:35:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 3325 Great Bend/20

Interval: 3715.00 ft (KB) To 3755.00 ft (KB) (TVD)

Reference Elevations: 1980.00 ft (KB)

Total Depth: 3755.00 ft (KB) (TVD)

1972.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6838 Outside

Press @ RunDepth: 618.22 psia @ 3752.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.02.17

End Date: 2013.02.17

Last Calib.: 2013.02.17

Start Time: 12:03:00

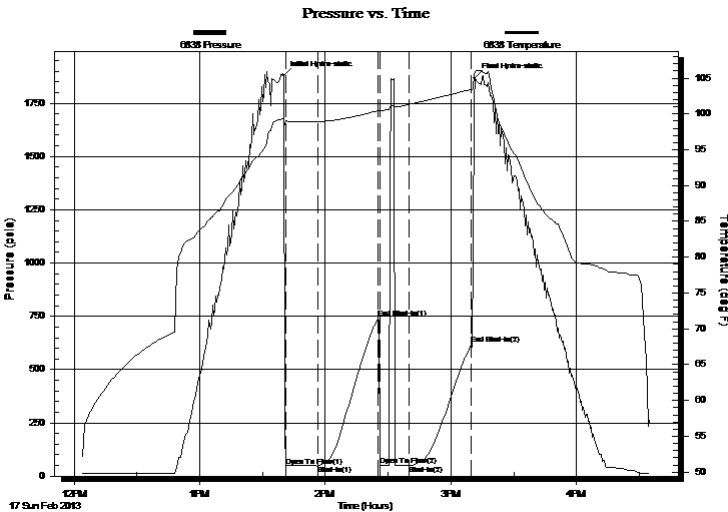
End Time: 16:35:00

Time On Btm: 2013.02.17 @ 13:40:00

Time Off Btm: 2013.02.17 @ 15:11:30

TEST COMMENT: 1ST Open 15 Minutes/No blow /Fitting loose at open on head/
 1ST Shut In 30 Mintues/No blow back
 2ND Open 15 Minutes/No blow /Flush tool didnt help
 2ND Shut In 30 Minutes/No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1880.47	99.32	Initial Hydro-static
1	48.26	99.03	Open To Flow (1)
17	49.49	98.91	Shut-In(1)
45	740.77	100.43	End Shut-In(1)
46	49.17	100.41	Open To Flow (2)
60	50.00	101.33	Shut-In(2)
90	618.22	103.39	End Shut-In(2)
92	1868.85	105.92	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
3.00	Mud 100%	0.04

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 17509

DST#: 11

ATTN: Frank Greenbaum

Test Start: 2013.02.17 @ 12:03:00

Tool Information

Drill Pipe:	Length: 3710.00 ft	Diameter: 3.80 inches	Volume: 52.04 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: 70000.00 lb
			<u>Total Volume: 52.04 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3715.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	40.00 ft			
Tool Length:	67.00 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			3693.00	
Hydraulic Tool	5.00			3698.00	
Jars	5.00			3703.00	
Safety Joint	2.00			3705.00	
Packer	5.00			3710.00	27.00 Bottom Of Top Packer
Packer	5.00			3715.00	
Anchor	35.00			3750.00	
Recorder	1.00	6749	Inside	3751.00	
Recorder	1.00	6838	Outside	3752.00	
Bullnose	3.00			3755.00	40.00 Bottom Packers & Anchor
Total Tool Length:	67.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

F.G. Holl Company LLC

12-20s-15w/ Barton

9431 E Central STE 100 Wichita Kansas 67206-2563

Wolf #3-12

Job Ticket: 17509

DST#: 11

ATTN: Frank Greenbaum

Test Start: 2013.02.17 @ 12:03:00

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: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 10.20 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psia

Salinity: 7100.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
3.00	Mud 100%	0.042

Total Length: 3.00 ft Total Volume: 0.042 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

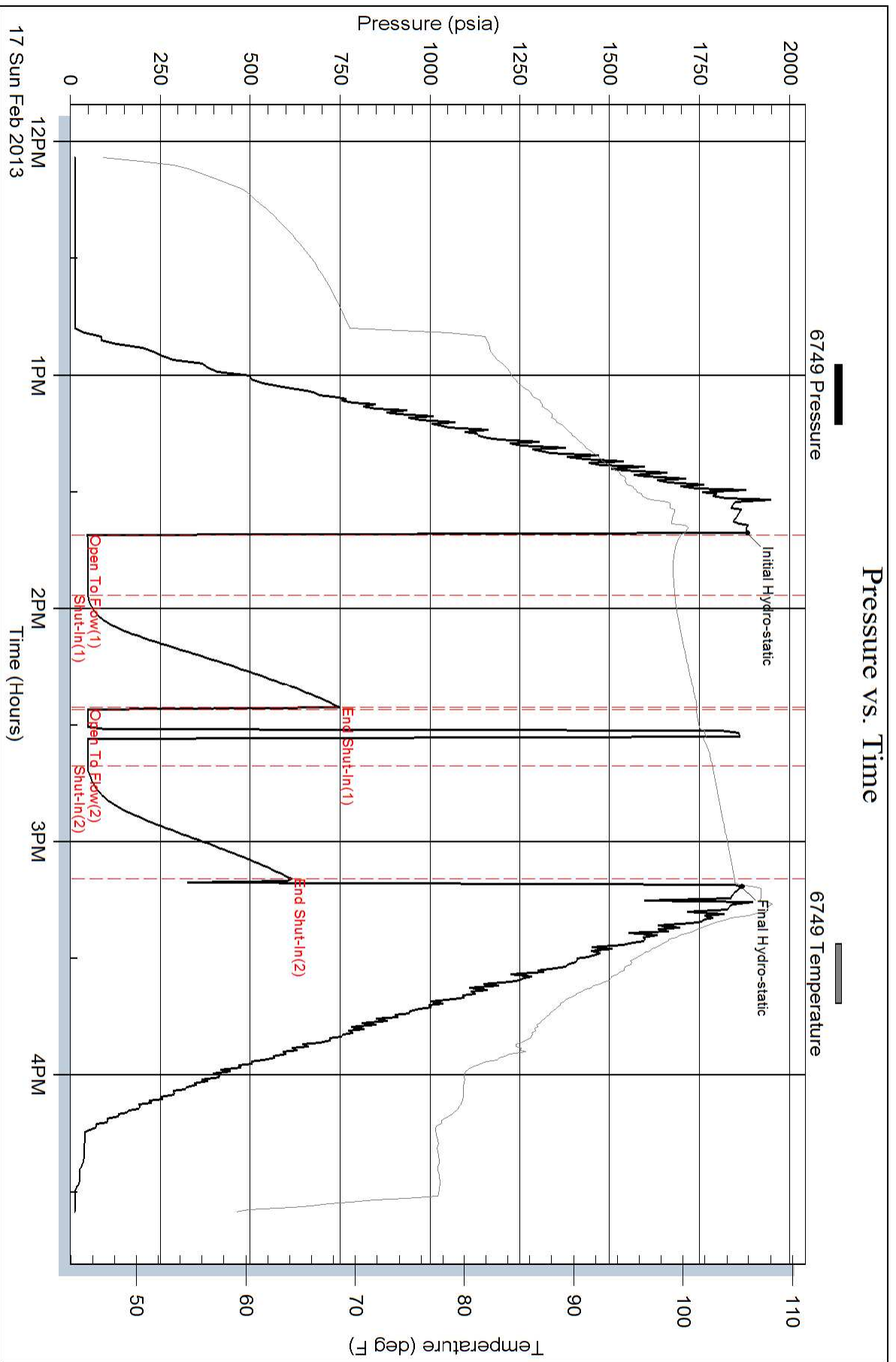
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



Pressure vs. Time

