



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
- Conv. to GSW
- Plug Back: _____ Plug Back Total Depth _____
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

Spud Date or Recompletion Date Date Reached TD Completion Date or Recompletion Date

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

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total 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

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



1135776

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

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

INSTRUCTIONS: Show important tops and base 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. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

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 Electric Log Submitted Electronically <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i> 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
_____ Perforate _____ Protect Casing _____ Plug Back TD _____ Plug Off Zone				

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
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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	Cimarex Energy Co.
Well Name	Hamker 20-2
Doc ID	1135776

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
4	5629-5638 St. Louis D	1000gals 15% HCL NEFE w/5900gals 2% KCL water	5629-5638
	CIPB @ 5620		
4	5593-5602 St. Louis C	1000gals 15% HCL NEFE w/1462gals 2% KCL water	5593-5602
	CIPB @ 5550		
4	4873-4888 Marmaton Lenapah	1500gals 15% HCL NEFE w/1314gals 2% KCL water	4873-4888
	4850 RBP		
4	4682-4698 KC Swope	1088gals 15% HCL NEFE w/1146gals 2% KCL water	4682-4698

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 22, 2013

Melissa Imler
Cimarex Energy Co.
348 Rd. DD
Satanta, KS 67870

Re: ACO1
API 15-081-22004-00-00
Hamker 20-2
SW/4 Sec.20-30S-31W
Haskell 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,
Melissa Imler

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



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

Sam Brownback, Governor

April 23, 2013

Melissa Imler
Cimarex Energy Co.
348 Rd. DD
Satanta, KS 67870

Re: ACO-1
API 15-081-22004-00-00
Hamker 20-2
SW/4 Sec.20-30S-31W
Haskell County, Kansas

Dear Melissa Imler:

K.A.R. 82-3-107 provides for all completion information to be filed within 120 days of the spud date. Subsection(e)(2) of that regulation states "All rights to confidentiality shall be lost if the filings are not timely."

The above referenced well was spudded on 11/24/2012 and the ACO-1 was received on April 22, 2013 (not within the 120 days timely requirement).

Therefore, your request for confidential treatment of data contained within the ACO-1 filing cannot be granted at this time.

If you should have any questions, please do not hesitate to contact me at (316)337-6200.

Sincerely,

Production Department



DRILL STEM TEST REPORT

Prepared For: **Cimarex Energy CO**

348 Rd DD
Santanta, Kansas 67807

ATTN:

Hamker#20-2

20-30-31 Haskell

Start Date: 2012.11.29 @ 10:30:00

End Date: 2012.11.30 @ 05:35:00

Job Ticket #: 16981 DST #: 1

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

Printed: 2012.11.30 @ 12:14:29



DRILL STEM TEST REPORT

Cimarex Energy CO
 348 Rd DD
 Santanta, Kansas 67807
 ATTN:

20-30-31 Haskell
Hamker#20-2
 Job Ticket: 16981 **DST#: 1**
 Test Start: 2012.11.29 @ 10:30:00

GENERAL INFORMATION:

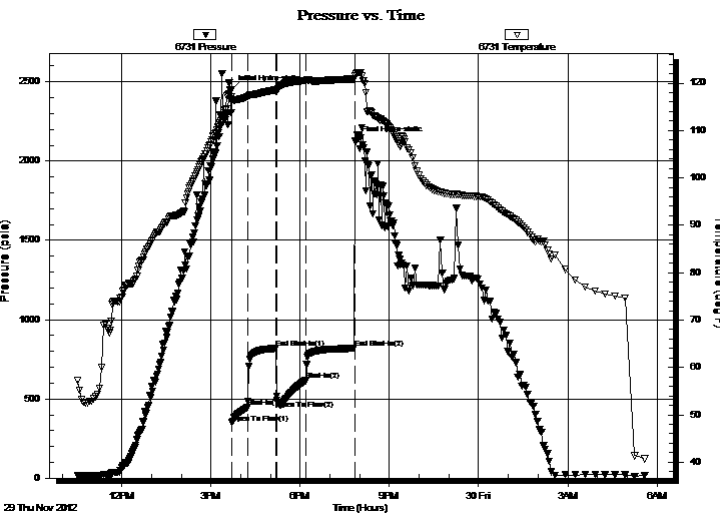
Formation: **Kansas City Swope**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 15:42:00
 Time Test Ended: 05:35:00
 Interval: **4665.00 ft (KB) To 4700.00 ft (KB) (TVD)**
 Total Depth: 4700.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Jared Scheck
 Unit No: 3320-Great Bend -325
 Reference Elevations: 2856.00 ft (KB)
 2844.00 ft (CF)
 KB to GR/CF: 12.00 ft

Serial #: 6731

Inside

Press @ RunDepth: 614.98 psia @ 4696.00 ft (KB) Capacity: 5000.00 psia
 Start Date: 2012.11.29 End Date: 2012.11.30 Last Calib.: 2012.11.30
 Start Time: 10:31:00 End Time: 05:35:00 Time On Btm: 2012.11.29 @ 15:41:00
 Time Off Btm: 2012.11.29 @ 19:50:30

TEST COMMENT: 1st Opening 30 Minutes-Strong blow built bottom of bucket in 1 minute gas to surface 10 minutes see gas report
 1st Shut-in 60 Minutes-Yes blow back
 2nd Opening 60 Minutes-Strong blow built bottom of bucket in 1 minute
 2nd Shut-in 90 Minutes-Yes blow back



PRESSURE SUMMARY

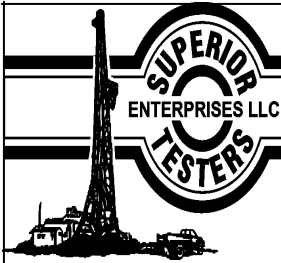
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2449.70	117.17	Initial Hydro-static
1	348.48	116.57	Open To Flow (1)
33	448.99	117.15	Shut-In(1)
91	818.57	118.59	End Shut-In(1)
92	492.78	118.57	Open To Flow (2)
151	614.98	120.57	Shut-In(2)
249	818.57	120.86	End Shut-In(2)
250	2129.10	121.49	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	Oil and Gas cut Muddy Water	0.44
0.00	10%Gas 40%Oil 20%Mud 30%Water	0.00
1960.00	Clean Gassy Oil 20%Gas 80%Oil	23.54
0.00	Gravity 44 Corrected	0.00
0.00	Chlorides 40,000 Resisitivity .25@75 Deg	0.00
0.00	Bottom Hole sampler Pressure: 490 P.S.I.	0.00

Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
First Gas Rate	0.13	20.00	7.49
Last Gas Rate	0.13	28.50	10.67
Max. Gas Rate	0.13	28.50	10.67



DRILL STEM TEST REPORT

Cimarex Energy CO
 348 Rd DD
 Santanta, Kansas 67807
 ATTN:

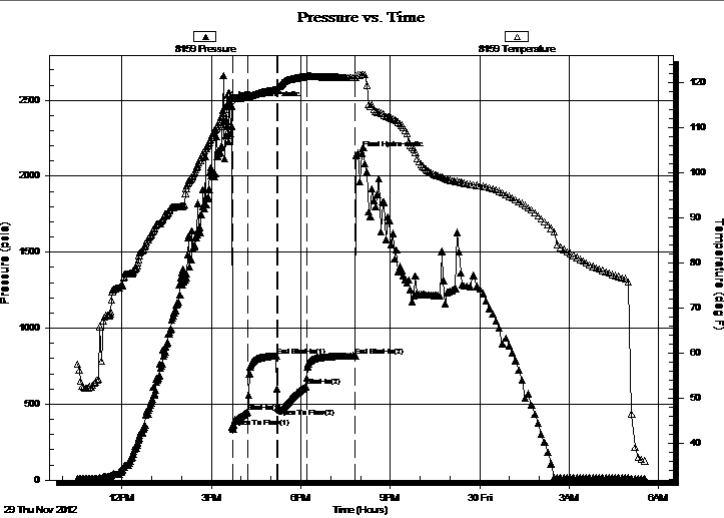
20-30-31 Haskell
Hamker#20-2
 Job Ticket: 16981 **DST#: 1**
 Test Start: 2012.11.29 @ 10:30:00

GENERAL INFORMATION:

Formation: **Kansas City Swope**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 15:42:00
 Time Test Ended: 05:35:00
 Interval: **4665.00 ft (KB) To 4700.00 ft (KB) (TVD)**
 Total Depth: 4700.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Jared Scheck
 Unit No: 3320-Great Bend -325
 Reference Elevations: 2856.00 ft (KB)
 2844.00 ft (CF)
 KB to GR/CF: 12.00 ft

Serial #: 8159 Outside
 Press @ Run Depth: 819.11 psia @ 4697.00 ft (KB) Capacity: 5000.00 psia
 Start Date: 2012.11.29 End Date: 2012.11.30 Last Calib.: 2012.11.30
 Start Time: 10:31:00 End Time: 05:34:00 Time On Btm: 2012.11.29 @ 15:41:00
 Time Off Btm: 2012.11.29 @ 19:51:50

TEST COMMENT: 1st Opening 30 Minutes-Strong blow built bottom of bucket in 1 minute gas to surface 10 minutes see gas report
 1st Shut-in 60 Minutes-Yes blow back
 2nd Opening 60 Minutes-Strong blow built bottom of bucket in 1 minute
 2nd Shut-in 90 Minutes-Yes blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2462.10	117.34	Initial Hydro-static
2	346.58	116.83	Open To Flow (1)
33	449.82	116.92	Shut-In(1)
91	818.12	118.47	End Shut-In(1)
93	475.81	118.79	Open To Flow (2)
151	619.13	121.41	Shut-In(2)
249	819.11	121.18	End Shut-In(2)
251	2136.84	121.59	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	Oil and Gas cut Muddy Water	0.44
0.00	10%Gas 40%Oil 20%Mud 30%Water	0.00
1960.00	Clean Gassy Oil 20%Gas 80%Oil	23.54
0.00	Gravity 44 Corrected	0.00
0.00	Chlorides 40,000 Resitivity .25@75 Deg	0.00
0.00	Bottom Hole sampler Pressure: 490 P.S.I.	0.00

Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
First Gas Rate	0.13	20.00	7.49
Last Gas Rate	0.13	28.50	10.67
Max. Gas Rate	0.13	28.50	10.67



DRILL STEM TEST REPORT

TOOL DIAGRAM

Cimarex Energy CO
 348 Rd DD
 Santanta, Kansas 67807
 ATTN:

20-30-31 Haskell
Hamker#20-2
 Job Ticket: 16981 **DST#: 1**
 Test Start: 2012.11.29 @ 10:30:00

Tool Information

Drill Pipe:	Length: 4140.00 ft	Diameter: 3.80 inches	Volume: 58.07 bbl	Tool Weight:	1000.00 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: 524.00 ft	Diameter: 2.25 inches	Volume: 2.58 bbl	Weight to Pull Loose:	130000.0 lb
			<u>Total Volume: 60.65 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	29.00 ft			String Weight: Initial	106000.0 lb
Depth to Top Packer:	4665.00 ft			Final	114000.0 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	35.00 ft				
Tool Length:	65.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments: No catwalk stairs/On location 6:10am/Dropped bar

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			4640.00	
Sampler	2.00			4642.00	
HYD S.I. Tool	5.00			4647.00	
Jars	6.00			4653.00	
Safety Joint	2.00			4655.00	
Packer	5.00			4660.00	30.00 Bottom Of Top Packer
Packer	5.00			4665.00	
Anchor	30.00			4695.00	
Recorder	1.00	6731	Inside	4696.00	
Recorder	1.00	8159	Outside	4697.00	
Bullnose	3.00			4700.00	35.00 Bottom Packers & Anchor

Total Tool Length: 65.00



DRILL STEM TEST REPORT

FLUID SUMMARY

Cimarex Energy CO
 348 Rd DD
 Santanta, Kansas 67807
 ATTN:

20-30-31 Haskell
Hamker#20-2
 Job Ticket: 16981 **DST#: 1**
 Test Start: 2012.11.29 @ 10:30:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 44 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 40000 ppm
Viscosity: 50.00 sec/qt	Cushion Volume: bbl	
Water Loss: 10.77 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psia	
Salinity: 2200.00 ppm		
Filter Cake: 1.00 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
90.00	Oil and Gas cut Muddy Water	0.443
0.00	10%Gas 40%Oil 20%Mud 30%Water	0.000
1960.00	Clean Gassy Oil 20%Gas 80%Oil	23.540
0.00	Gravity 44 Corrected	0.000
0.00	Chlorides 40,000 Resisitivy .25@75 Degr	0.000
0.00	Bottom Hole sampler Pressure: 490 P.S.I.	0.000
0.00	%Gas:Sample #1-85% Sample #2-80%	0.000
0.00	%Oil Sample #1-15 % Sample #2 20%	0.000
0.00	%Mud None	0.000
0.00	% Water: None	0.000
0.00	Chlorides:	0.000
0.00	Resisitivy:	0.000
0.00	Gravity 44 1/2 Corrected	0.000

Total Length: 2050.00 ft Total Volume: 23.983 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #: company
 Laboratory Name: Laboratory Location:
 Recovery Comments:



DRILL STEM TEST REPORT

GAS RATES

Cimarex Energy CO
348 Rd DD
Santanta, Kansas 67807

ATTN:

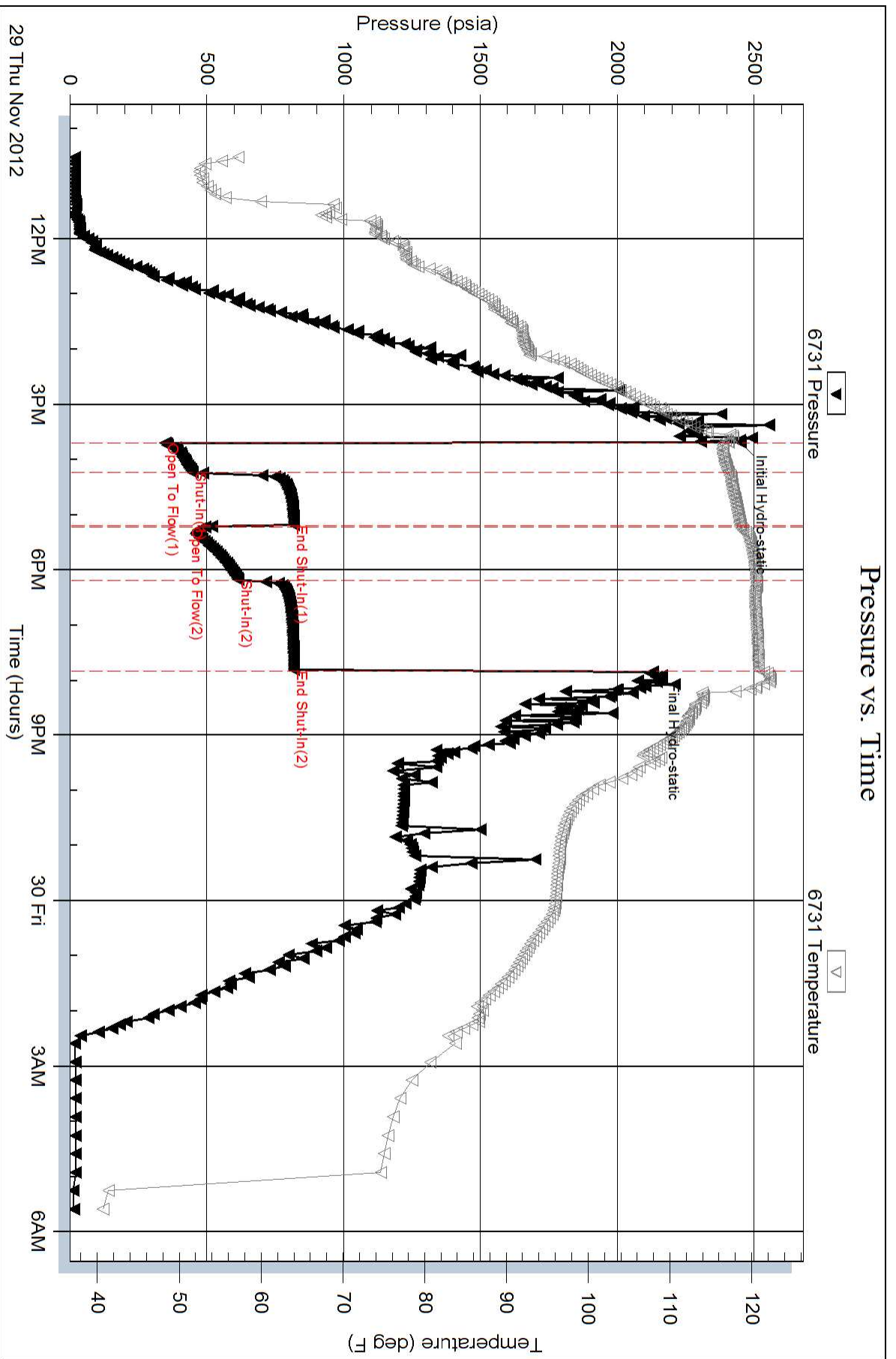
20-30-31 Haskell
Hamker#20-2
Job Ticket: 16981 **DST#: 1**
Test Start: 2012.11.29 @ 10:30:00

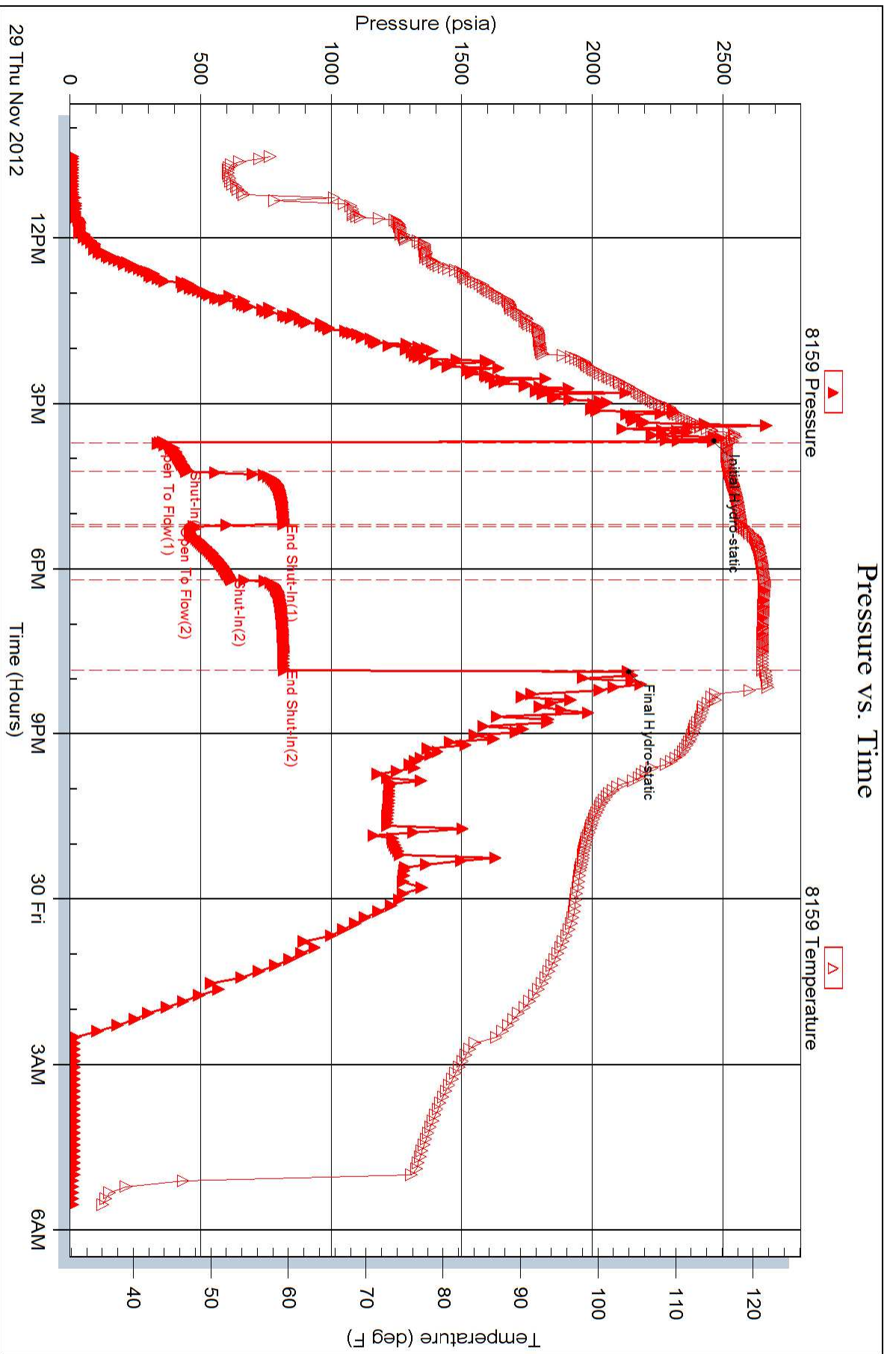
Gas Rates Information

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

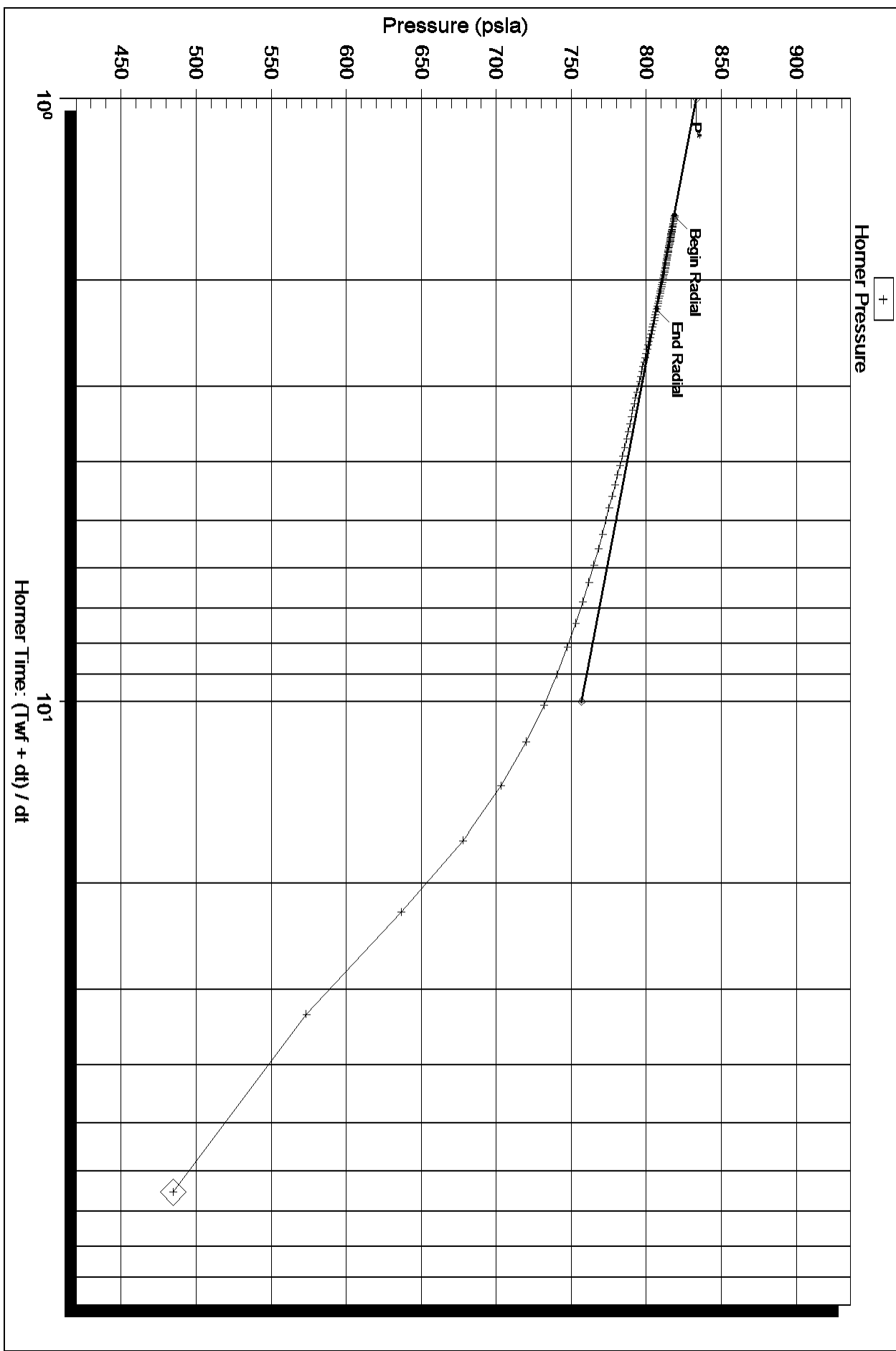
Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
2	10	0.13	20.00	7.49
2	10	0.13	20.00	7.49
2	10	0.13	20.00	7.49
2	20	0.13	22.00	8.23
2	30	0.13	28.50	10.67





Horner Plot



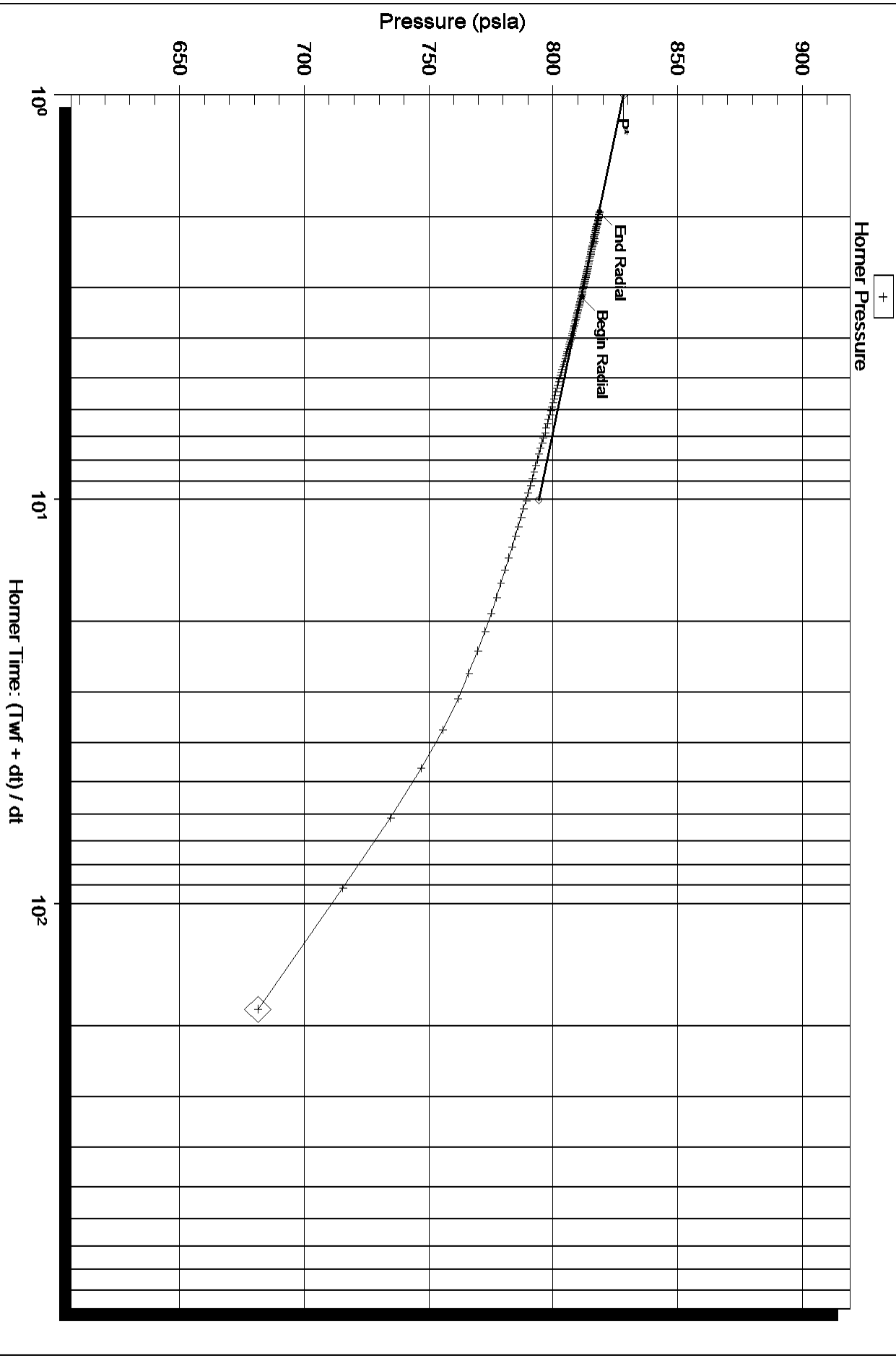
Serial Number: 6731 (Inside)

P* : 833.36

Slope (m) : 76.51 kpa/log cycle

Flow Cycle: 1

Horner Plot



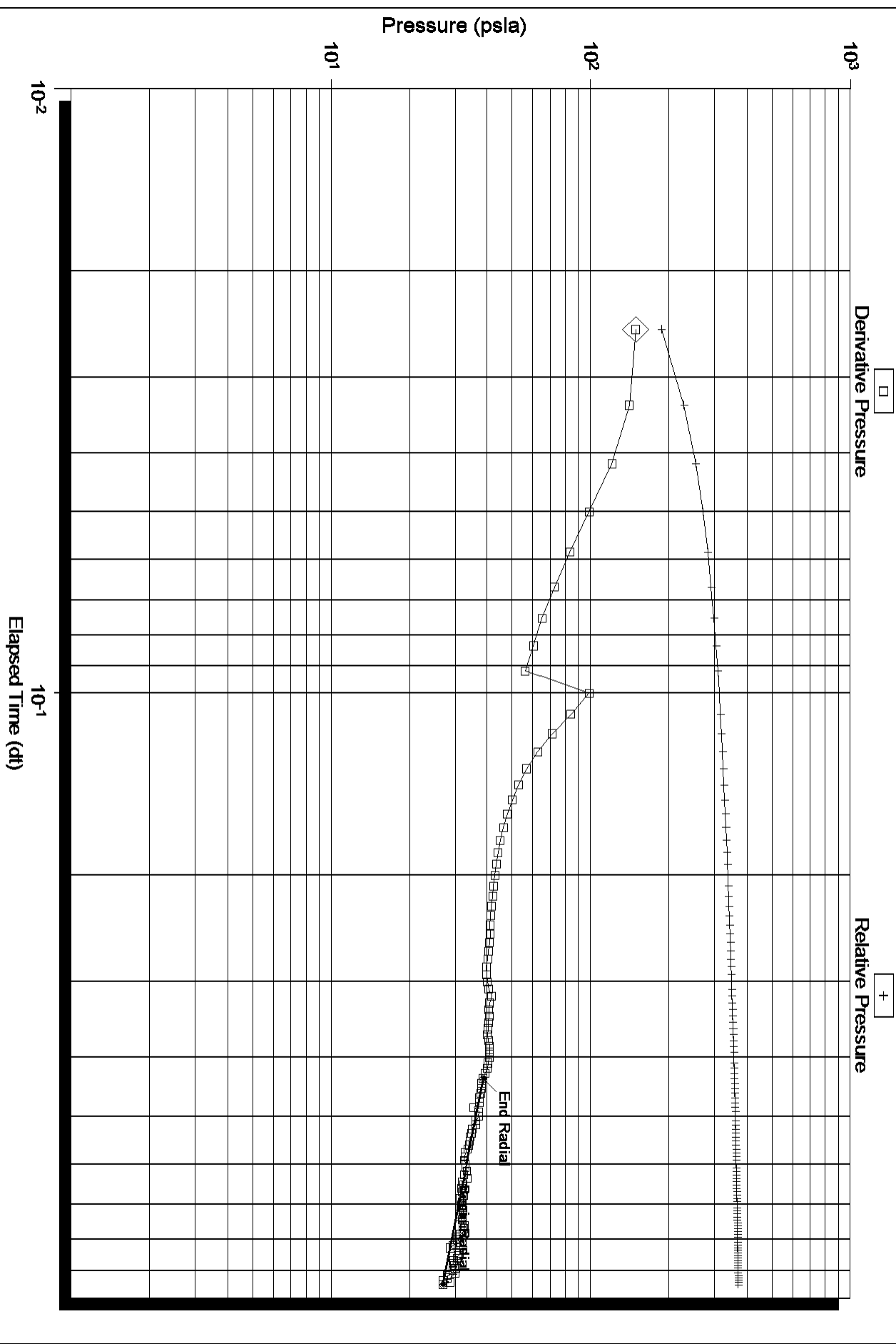
Serial Number: 6731 (Inside)

P* : 828.28

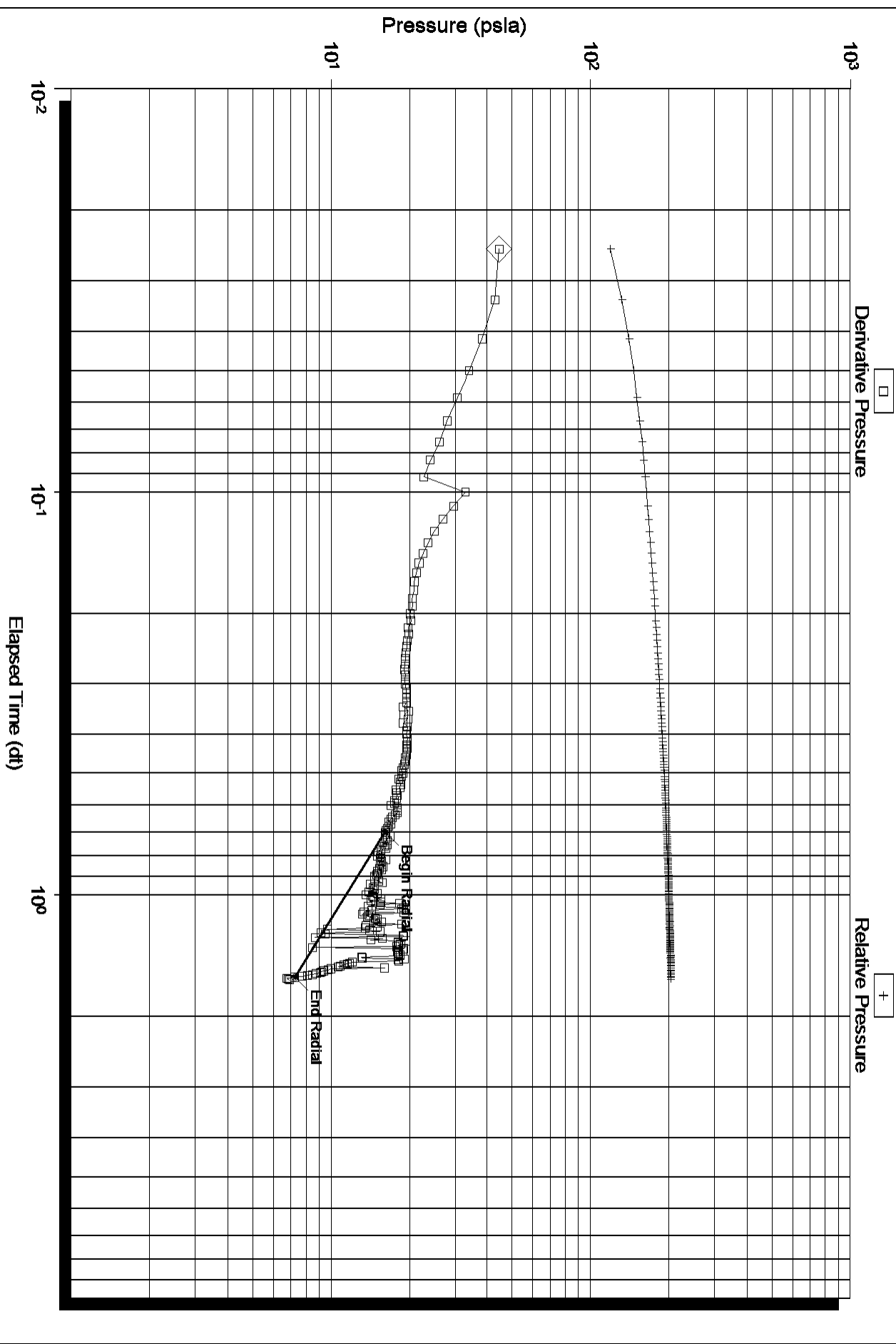
Slope (m) : 33.96 kpa/log cycle

Flow Cycle: 2

Log-Log and Pseudo-Derivative



Log-Log and Pseudo-Derivative



Cement Report

Cimarex		Lease No.		Date 11-24-12	
Hamker		Well # 20-2		Service Receipt	
Casing 8 5/8		Depth		County Haskell	
Job Type 2-42		Formation		Legal Description Sec 20-Top 30 R-31	
State KS					

Pipe Data		Perforating Data		Cement Data	
Casing size 8 5/8	Tubing Size	Shots/Ft		Lead yield 2.40	
Depth 1819	Depth	From	To	415 sks galst 14.00	
Volume 115.69	Volume	From	To	Density 12.1	
Max Press 1000	Max Press	From	To	Tail in yield 1.34	
Well Connection 8 5/8	Annulus Vol.	From	To	385 sks galst 6.33	
Plug Depth	Packer Depth	From	To	Density 14.8	

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
9:00					On location
9:30					Rig up
					Safety Meeting
3:20					Drop Ball
4:28	2000				Prime up Pressure Test
4:32	50		178	4.5	Start Lead Cement
5:18	200		92	4.5	Start Tail Cement
5:40					shut down Wash up
5:45					Drop Plug
5:47	400			4.0	Start Displacement
6:08	500		100	3.0	Slow Down Rate
6:13	500		110	2.0	Slow Down Rate
6:16	850		116		Plug landed
6:20	850		1		Released back insert Held
6:25					Rig down

Service Units	39878	19827/19566	14555/19808	38750/3725	38119/19842
Driver Names	JUAN O	Santiago	BD-B	Hector E.	Ever

Wade

Customer Representative

Serry Bennett

Station Manager

JUAN Ortiz

Cementer

Cement Report

Cimarex		Lease No.	Date 12-2-12
Hamker		Well # 20-2	Service Receipt 3420
Casing 5 1/2"	Depth 5,784'	County Haskell	State KS

Job Type 242 Production	Formation	Legal Description
Pipe Data		Perforating Data
Casing size 5 1/2"	Tubing Size	Shots/Ft
Depth 5,784'	Depth	From
Volume 140	Volume	To
Max Press 3000'	Max Press	From
Well Connection 5.5"	Annulus Vol.	To
Plug Depth 5741.2	Packer Depth	From
		To
		Tail in 2755x14.889
		1.51ycild 6.6499/sak

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
12:00pm					Arrived on Location
12:30					Rig Up Iron
0:00					JSA meeting
0:10					Stabbed Head
0:25	3000		1.2	1.2	Test lines
0:30	4150		50	5.0	Water Spacer
0:40	500		10	5.0	Super Flush
0:45	900/150		74	5.0	Started Cmt Slurry
1:08	0		20	4.5	Shutdown Wash Pump & Lines
1:20	0				Shut down drop plug
1:25	50		13/0	5.1	Started displacement
1:44	650		94	5.1	@ 94bbls Caught PSI
1:48	675		Last 20	2.0	Slowed Rate to Land Plug
2:00	1250			2.0	Landed plug
2:01	0				CK Floats / floats held
	0				3/4 BB/S Back
2:15	0				Rig down
					Shut down after 10 bbls of displacement to check plug
					did in fact leave the head

Service Units	34726	35113/19842	10274/19883
Driver Names	Roger	Rubea	Ed. B.

 Customer Representative
  Station Manager
  Cementer