



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: _____



1053489

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
---	---

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> _____ <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Samuel Gary Jr. & Associates, Inc.
Well Name	Steinert et al 1-30
Doc ID	1053489

All Electric Logs Run

DIL
DUCP
MICRO
SONIC

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/>

Thomas E. Wright, Chairman
Ward Loyd, Commissioner

Corporation Commission

Sam Brownback, Governor

April 06, 2011

NEIL SHARP
Samuel Gary Jr. & Associates, Inc.
1515 WYNKOOP, STE 700
DENVER, CO 80202

Re: ACO1
API 15-009-25490-00-00
Steinert et al 1-30
SE/4 Sec.30-16S-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 at 303-831-4673.

Respectfully,
NEIL SHARP



QUALITY OILWELL CEMENTING, INC.

PO Box 32 - 740 West Wichita Ave, Russell KS 67665
 Phone: 785-324-1041 fax: 785-483-1087
 Email: cementing@ruraltel.net

Date: 12/13/2010
 Invoice # 4437

P.O.#:
 Due Date: 1/12/2011
 Division: Russell

Invoice

Contact:
 Samuel Gary Jr & Associates Inc
Address/Job Location:
 Samuel Gary Jr & Associates Inc
 3111 W. 10th Street
 Great Bend, KS 67503

Reference:
 STEINERT ET C-1 1-30

Description of Work:
 LONG SURFACE JOB

DRLG COMP W/O LOE GG

Account	8200-138
Well/Prospect	STEINERT ET AL 1-30
Deck	
AFE	
Approval	<i>[Signature]</i>
Description	CEMENT & SERVICES

Services / Items Included:	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 675.95	No	Baffle Plate Aluminum, 8 5/8"	1	\$88.83	Yes
Common-Class A	400	\$ 4,816.62	Yes				
8 5/8" Basket	3	\$ 935.69	Yes				
Bulk Truck Matl-Material Service Charge	422	\$ 833.04	No				
Calcium Chloride	14	\$ 520.39	Yes				
Pump Truck Mileage-Job to Nearest Camp	27	\$ 265.96	No				
Flo Seal	100	\$ 197.40	Yes				
8 5/8" Centralizer	3	\$ 189.51	Yes				
Bulk Truck Mileage-Job to Nearest Bulk Plant	27	\$ 155.63	No				
Premium Gel (Bentonite)	8	\$ 128.55	Yes				
8 5/8" Top Rubber Plug	1	\$ 104.62	Yes				

Invoice Terms:

Net 30

SubTotal: \$ 8,912.19
 Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice: \$ (1,336.83)

SubTotal for Taxable Items: \$ 5,934.37
 SubTotal for Non-Taxable Items: \$ 1,066.44

7.30% Barton County Sales Tax

Total: \$ 7,575.37
 Tax: \$ 433.21

Thank You For Your Business!

Amount Due: \$ 8,008.57
 Applied Payments:
 Balance Due: \$ 8,008.57

Past Due Invoices are subject to a service charge (annual rate of 24%)
 This does not include any applicable taxes unless it is listed.
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RECEIVED

DEC 20 2010

SAMUEL GARY JR.
 & ASSOCIATES, INC.

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 4437

Date	12-10-10	Sec.	30	Twp.	16	Range	15	County	Barton	State	KS	On Location		Finish	9:30 a.m.				
Lease	Stewart et al		Well No.			1-30		Location								Cedaria 3w 3/4s Winro			
Contractor								Discovery								Owner			
Type Job								Surface								To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish center and helper to assist owner or contractor to do work as listed.			
Hole Size				12 1/4				T.D.				1087							
Csg.				8 5/8				Depth				1087							
Tbg. Size								Depth											
Tool								Depth											
Cement Left in Csg.				32				Shoe Joint				32							
Meas Line								Displace				67BC							
Cement Amount Ordered								400 w/m 3% cc 2% bel											

EQUIPMENT

Pumptrk	1	No.	Cementer	Craig	Helper	None	Common	400
Bulktrk		No.	Driver		Driver		Poz. Mix	
Bulktrk	12	No.	Driver	Doug	Driver		Gel.	8

JOB SERVICES & REMARKS

Remarks:		Calcium	14
Rat Hole		Hulls	
Mouse Hole		Salt	
Centralizers		Flowseal	100#
Baskets		Kol-Seal	
D/V or Port Collar		Mud CLR 48	
		CFL-117 or CD110 CAF 38	
		Sand	
		Handling	9/22
		Mileage	

FLOAT EQUIPMENT

Guide Shoe	8 5/8
Centralizer	3
Baskets	3
AFU Inserts	Ball Valve
Float Shoe	Rubber plug
Latch Down	

THANKS

Pumptrk Charge	Long Surface
Mileage	27

X Signature *[Handwritten Signature]*

Tax	
Discount	
Total Charge	



QUALITY OILWELL CEMENTING, INC.

PO Box 32 - 740 West Wichita Ave, Russell KS 67665
 Phone: 785-324-1041 fax: 785-483-1087
 Email: cementing@ruraltel.net

Date: 12/21/2010
 Invoice # 4442

P.O.#:
 Due Date: 1/20/2011
 Division: Russell

Invoice

V1101-AP-97 1/13

Contact:
 Samuel Gary Jr & Associates Inc
Address/Job Location:
 Samuel Gary Jr & Associates Inc
 3111 W. 10th Street
 Great Bend, KS 67503

Reference:
 STEINERT ET AL 1-30

RECEIVED

DEC 30 2010

SAMUEL GARY JR. & ASSOCIATES, INC.

Description of Work:
 PROD. LONG STRING

Services / Items Included:	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 901.26	No	Salt (Fine)	19	\$261.80	Yes
Gilsonite	1125	\$ 1,665.58	Yes	Pump Truck Mileage-Job to Nearest Camp	27	\$265.96	No
Common-Class A	113	\$ 1,360.70	Yes	5 1/2" Basket	1	\$227.01	Yes
CFL 117	176	\$ 1,070.08	Yes	Latch Down Plug & Baffle, 5 1/2"	1	\$221.09	Yes
CD-110	170	\$ 671.17	Yes	Bulk Truck Mileage-Job to Nearest Bulk Plant	27	\$155.63	No
POZ Mix-Standard	112	\$ 508.51	Yes	Flo Seal	56	\$110.55	Yes
Bulk Truck Matl-Material Service Charge	265	\$ 523.12	No	KCL	2	\$58.94	Yes
5 1/2" Turbolizer	8	\$ 457.97	Yes				
Mud Clear	500	\$ 365.19	Yes				
Defoamer A or CAF-38	50	\$ 345.45	Yes				
Auto Fill Float Shoe, 5 1/2"	1	\$ 302.03	Yes				

Invoice Terms:

Net 30

SubTotal: \$ 9,472.05

Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice: \$ (1,420.81)

SubTotal for Taxable Items: \$ 6,482.17

SubTotal for Non-Taxable Items: \$ 803.00

Total: \$ 8,051.24

Tax: \$ 473.20

7.30% Barton County Sales Tax

Amount Due: \$ 8,524.44

Applied Payments:

Balance Due: \$ 8,524.44

Thank You For Your Business!

Past Due Invoices are subject to a service charge (annual rate of 24%)

This does not include any applicable taxes unless it is listed.

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DRLG COMP W/O LOE GG

Account	8300-238
Well/Prospect	STEINERT ET AL 1-30
Deck	
AFE	
Approval	<i>[Signature]</i>
Description	CEMENTING Prod casing

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 4442

Date	12-17-10	Sec.	30	Twp.	16	Range	15	County	Barton	State	KS	On Location		Finish	11:15P m.
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Lease Steiner ETAL Well No. 1-30 Location Calata 3 1/2 W 100

Contractor Discovery #2 Owner

Type Job Production string To Quality Oilwell Cementing, Inc.
You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Hole Size 7 7/8 T.D. 3695 Charge To Sam Gary Jr & Associates

Csg. 5 1/2 Depth 3680 Street

Tbg. Size Depth City State

Tool Depth

Cement Left in Csg. 2167 Shoe Joint 2167 The above was done to satisfaction and supervision of owner agent or contractor.

Meas Line Displace 873L Cement Amount Ordered 225 5/8 QPROC 1477 F10 23% CD110

EQUIPMENT

Pumptrk	9	No.	Cement	<u>Craig</u>	10% Salt	5% Gilsen	10/200 KCL	500 gal mud	edge
			Helper		Common				
Bulktrk		No.	Driver						
Bulktrk	8	No.	Driver						

JOB SERVICES & REMARKS

Remarks:

Rat Hole 30SK Salt 19

Mouse Hole 20SK Flowseal 56#

Centralizers Kol-Seal 1125#

Baskets Mud CLR 48 500 gal

D/V or Port Collar CFL-117 or CD110 CAF 38 170#

5 1/2 size @ 3680 - insert @ 3658. Sand 1000 KCL 2 gal

Pump 500 gal mud clear 48 - Plug Rathole & Handling

Mouse hole - Cement 5/2 with 125SK Mileage

Displace with KCL water

Plug landed @ 1500 ps. Well released

DV

FLOAT EQUIPMENT

Guide Shoe 5 1/2

Centralizer AFV Float shoe

Baskets catch down

AFU Inserts 8 Turbulizers

Float Shoe 1 basket

Latch Down

Pumptrk Charge prod long string

Mileage 27

X Signature 

Tax

Discount

Total Charge



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

Well Name: STEINERT ET AL 1-30
Location: SEC 30, T16S, R15W, BARTON COUNTY, KANSAS
License Number: 15-009-25490-0000
Spud Date: 12/10/2010
Surface Coordinates: 2444' FSI & 769' FEI
Region: Wildcat
Drilling Completed: 12/17/2010

Bottom Hole Coordinates:

Ground Elevation (ft): 1997' K.B. Elevation (ft): 2005'
Logged Interval (ft): 1750' To: 3695' Total Depth (ft): 3695'
Formation: Lansing, Arbuckle
Type of Drilling Fluid:

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

OPERATOR

Company: Samuel Gary Jr, & Assoc.
Address: 1515 Wykoop, Ste. # 700
Denver, Colo. 80202
Geo: Neal Sharp

GEOLOGIST

Name: Jason Marshall
Company: Earth Tech OGL, Inc.
Address: PO Box 683
Hooker, Okla. 73945
Off. 888-543-8378 Cell: 620-655-1298

DST's Report

DST#1 3330' TO 3375' 10 60 60 180/

IF- SLID TOOL 8' TO BUTTOM WEAK BUILDING BLOW.BUILT TO 10"/ FSI NO RETURN, FF- SLID TOOL 2' WEAK TO STRONG BUILDING BLOW, BUILT 45 MIN/ FSI- WEAK SURFACE BLOW- DIED IN 20 MIN, IH- 1588, FH- 1546 FIF 40, FFF- 57/ ISI- 1049, FSI- 1018, SFF- 134, SIF- 77, Recovered 300' TF, Chlorides 70000 PPM, BHT 98

DST#2 3378' TO 3394' 5 60 30 90/

IF- WEAK BUILDING BLOW.BUILT TO 1"/ FSI NO RETURN, FF- WEAK BUILDING BLOW, BUILT 2"/ FSI- NO RETURN, IH- 1633, FH- 1594/ FIF 16, FFF- 32/ ISI- 1086, FSI- 1054, SFF- 57, SIF- 35, Recovered 75' TF WATER, Chlorides 85,000 PPM, BHT 97


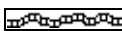
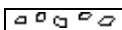
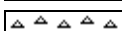
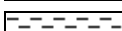







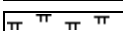
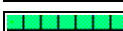
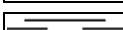
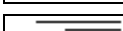
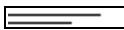


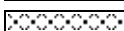




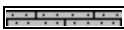





DST#3 3418' TO 3497' 5 60 60 180/

IF- WEAK BUILDING BLOW.BUILT TO 3"/ FSI NO RETURN, FF- STRONG BUILDING BLOW, BUILT IN 30 SEC/ FSI- WEAK BUILDING TO 4"- DIED IN 90 MIN, IH- 1731, FH- 1622/ FIF 21, FFF- 41/ ISI- 1171, FSI- 1102, SFF- 95, SIF- 48, Recovered 215' MC GSXO,30%GAS 60%OIL 10% MUD, Chlorides 6400 PPM, BHT 96























































































DST#4 3488' TO 3511' 5 60 30 90/

IF- WEAK STEADY SURFACE BLOW/ FSI- WEAK DIED IN 8 MIN, IH- 1700, FH- 1676/ FIF 12, FFF- 14/ ISI- 19, FSI- 17, SFF- 14, SIF- 14, Recovered 5' DRLG MUD, Chlorides 5300 PPM, BHT 91

ROCK TYPES

 Anhy  Bent  Brec  Cht  Clyst  Coal  Congl  Dol	 Gyp  Igne  Lmst  Meta  Mrlst  Salt  Shale  Shcol	 Shgy  Sltst  Ss  Till  Carb sh  Dol  Dtd  Gry sh	 Sandylms  Shale  Sltstn  Shlyslts  SltysH  Lms
---	---	---	--

ACCESSORIES

MINERAL  Anhy  Arggrn  Arg  Bent  Bit  Brecfrag  Calc  Carb  Chtdk  Chtlt  Dol  Feldspar  Ferrpel  Ferr  Glau  Gyp  Hvymin  Kaol  Marl  Minxl  Nodule  Phos  Pyr	 Salt  Sandy  Silt  Sil  Sulphur  Tuff  Chlorite  Dol  Sand  SltY FOSSIL  Algae  Amph  Belm  Bioclst  Brach  Bryozoa  Cephal  Coral  Crin  Echin  Fish  Foram	 Fossil  Gastro  Oolite  Ostra  Pelec  Pellet  Pisolite  Plant  Strom  Fuss  Oomold STRINGER  Anhy  Arg  Bent  Coal  Dol  Gyp  Ls  Mrst  Sltstrg  Ssstrg  Carbsh	 Clystn  Dol  Grysh  Gryslt  Lms  Sandylms  Sh  Sltstn TEXTURE  Boundst  Chalky  Cryxln  Earthy  Finexln  Grainst  Lithogr  Microxln  Mudst  Packst  Wackest
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OTHER SYMBOLS

POROSITY TYPE

- E Earthy
- F Fenest
- X Fracture
- I Inter
- M Moldic
- O Organic
- P Pinpoint
- V Vuggy

SORTING

- W Well
- M Moderate
- P Poor

ROUNDING

- R Rounded
- r Subrnd
- a Subang

- A Angular

OIL SHOWS

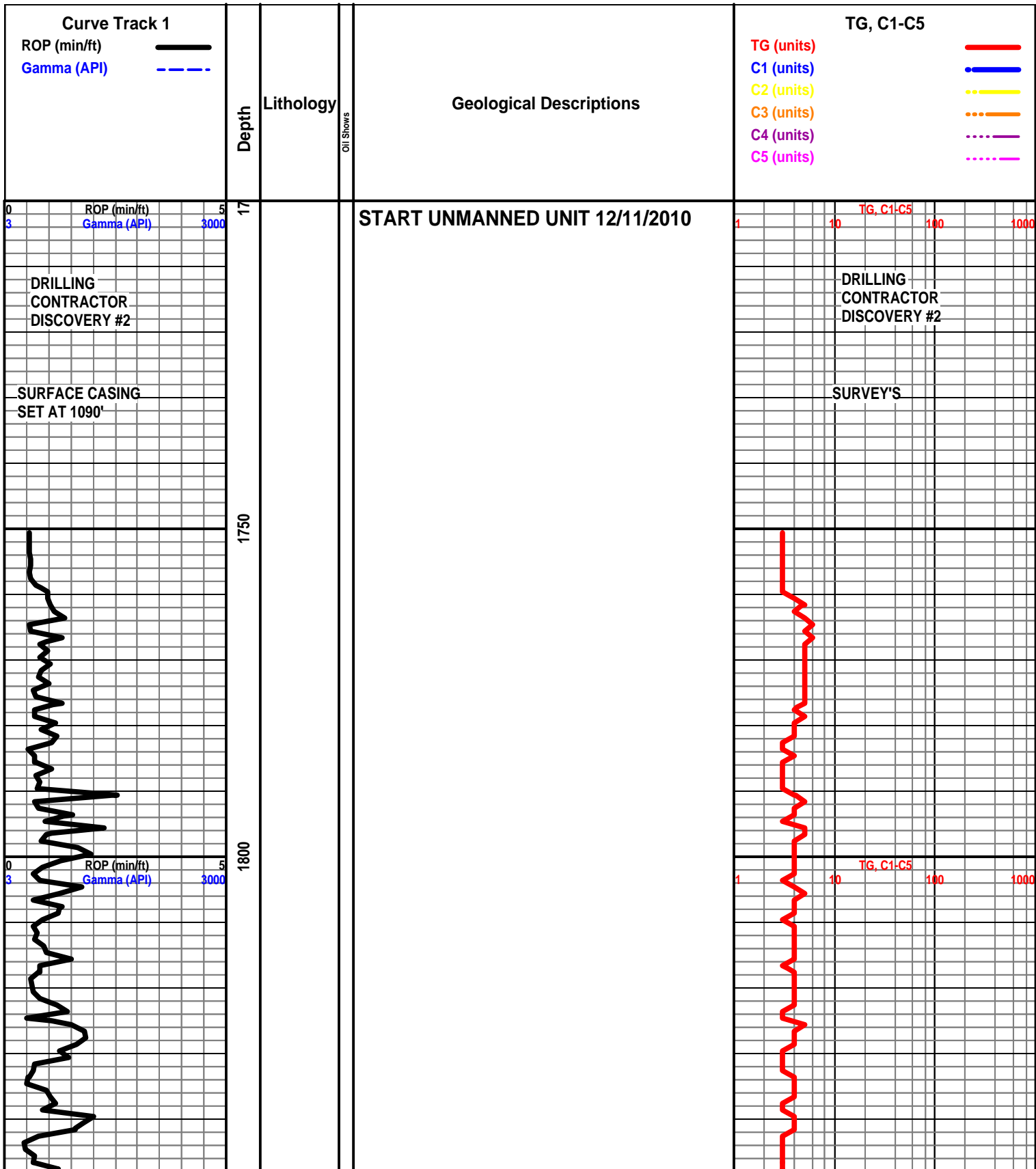
- E Even
- S Spotted
- Q Ques
- D Dead
- G Gas show

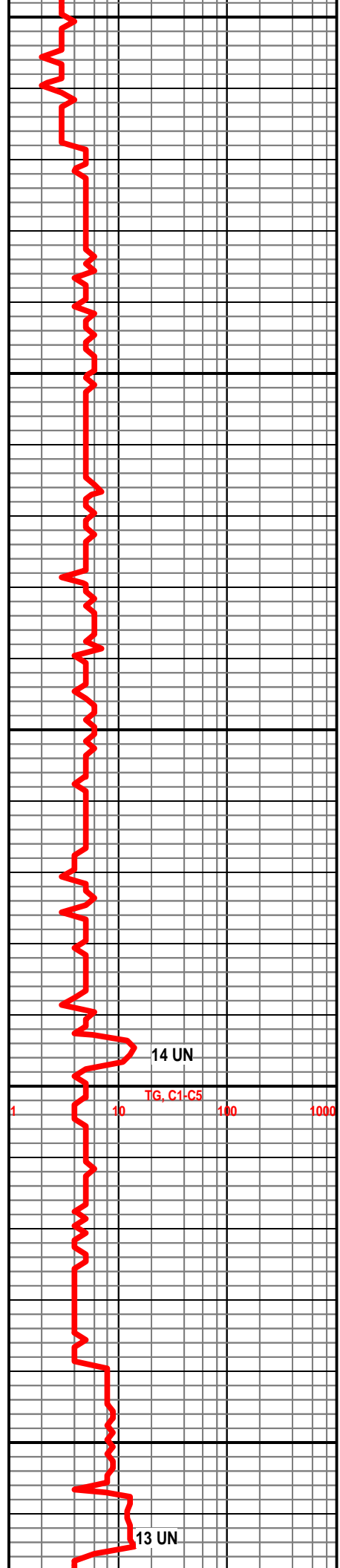
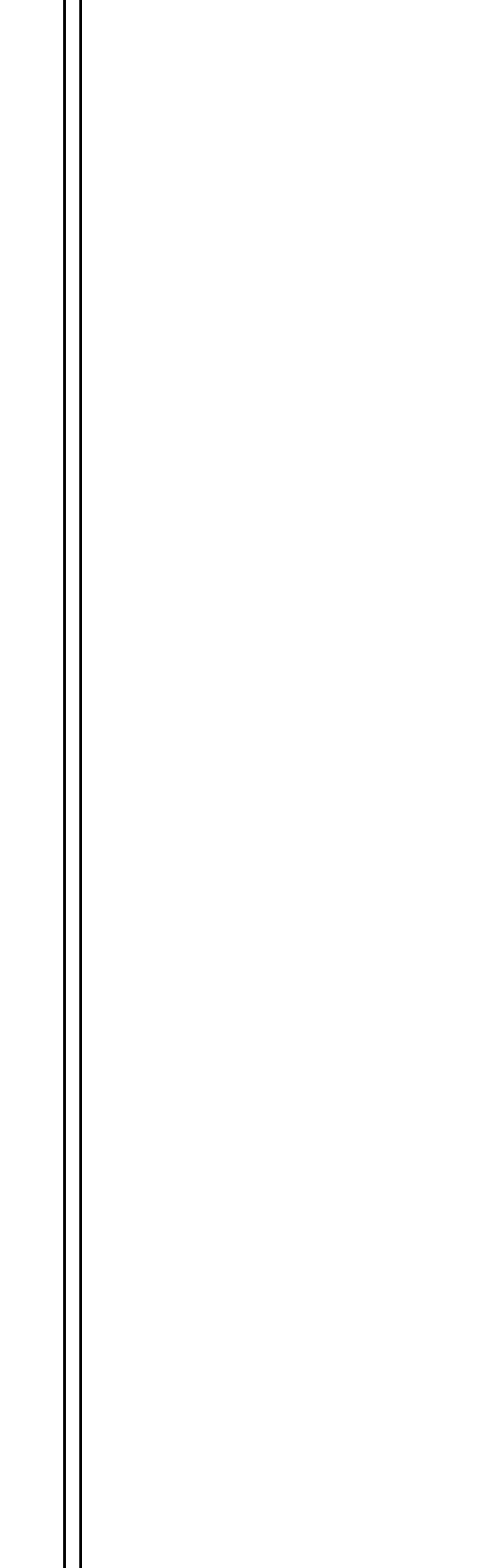
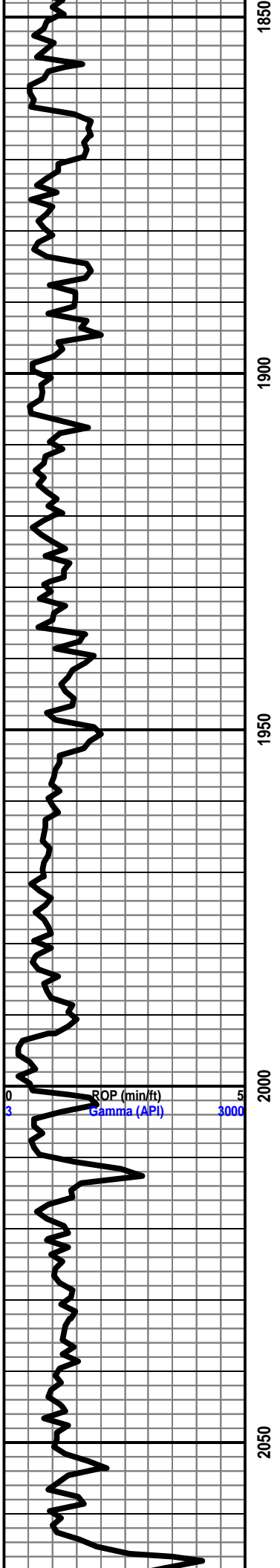
INTERVALS

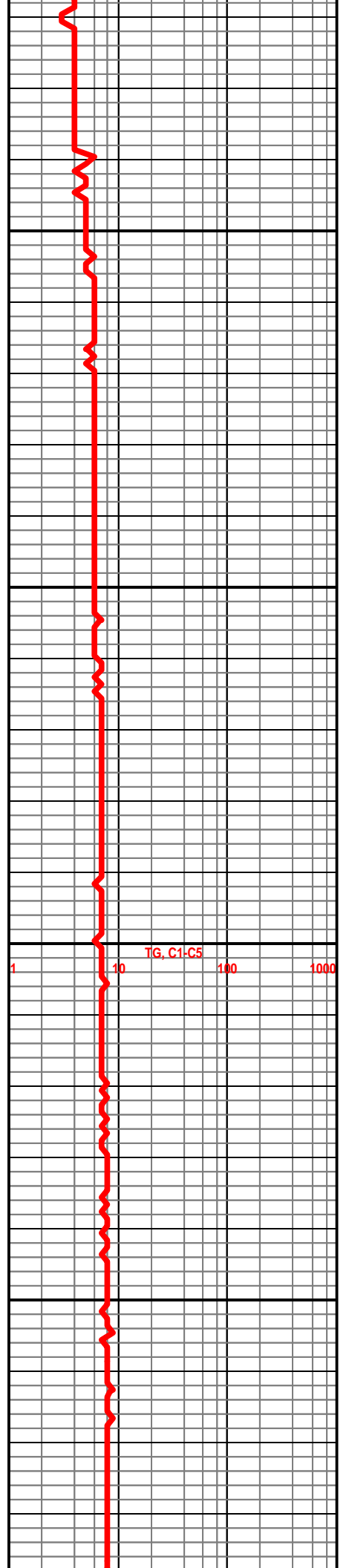
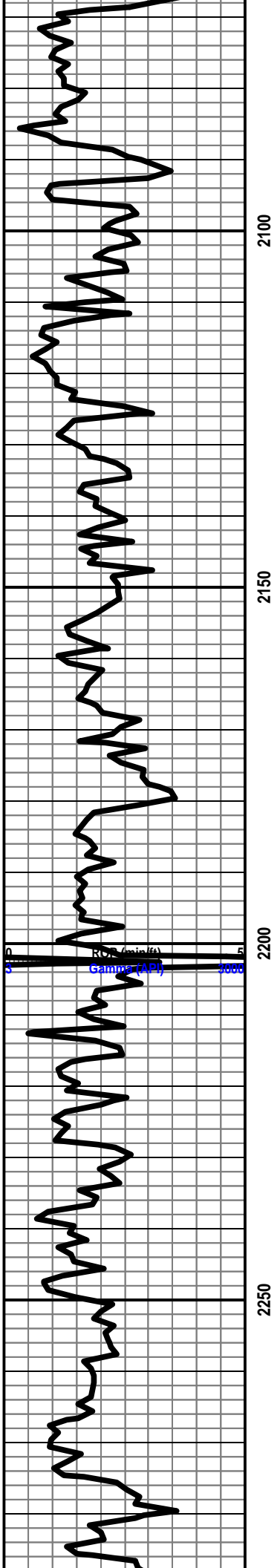
- C Core
- D Dst
- B Dst

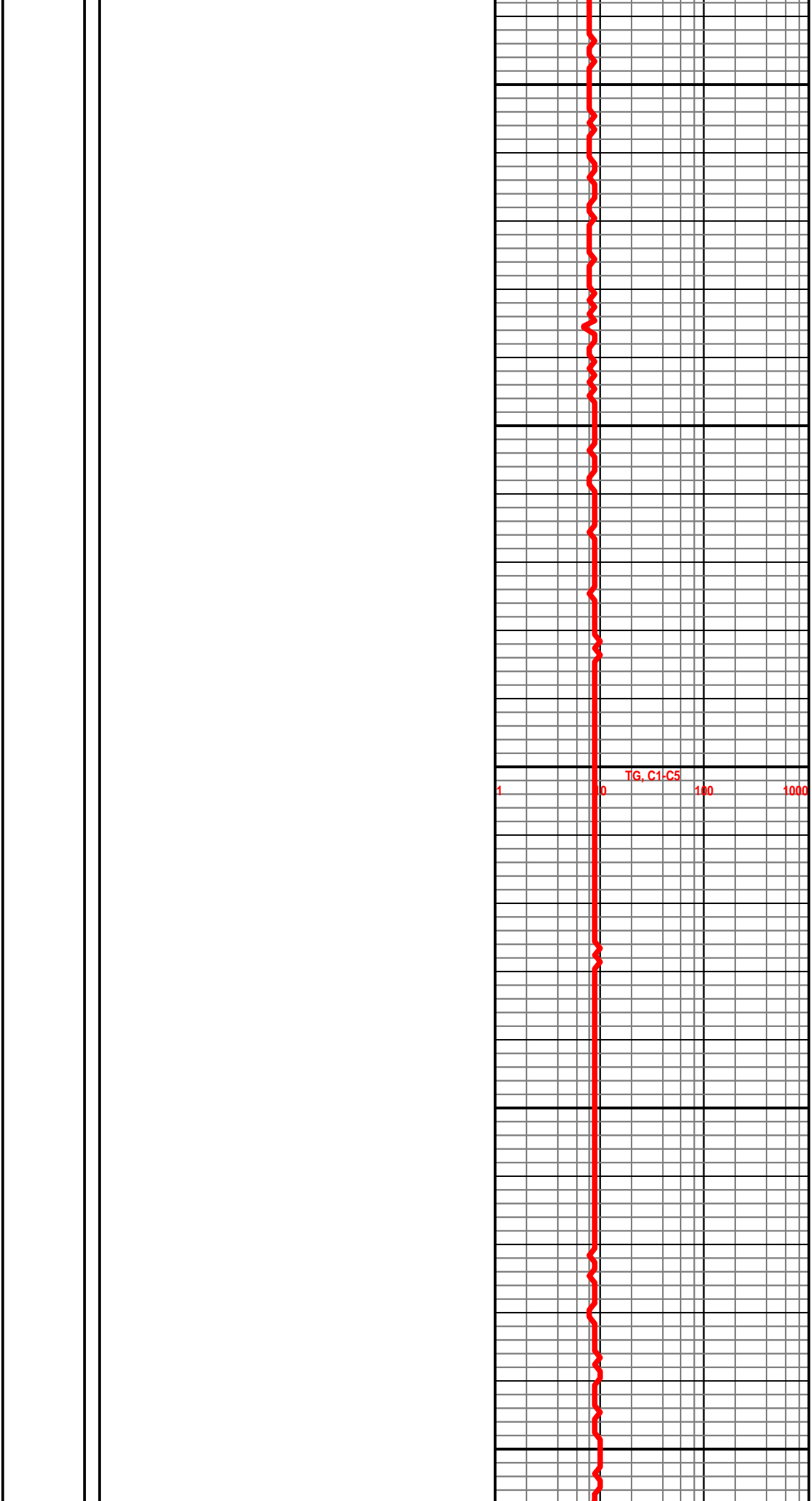
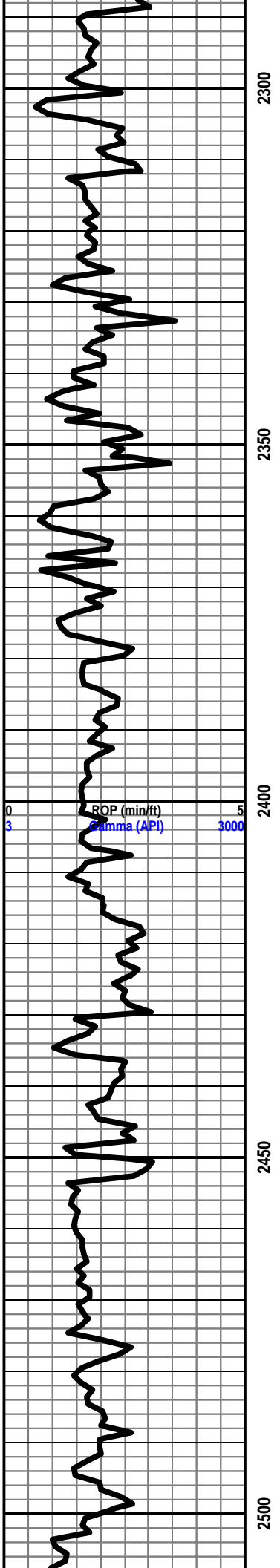
EVENTS

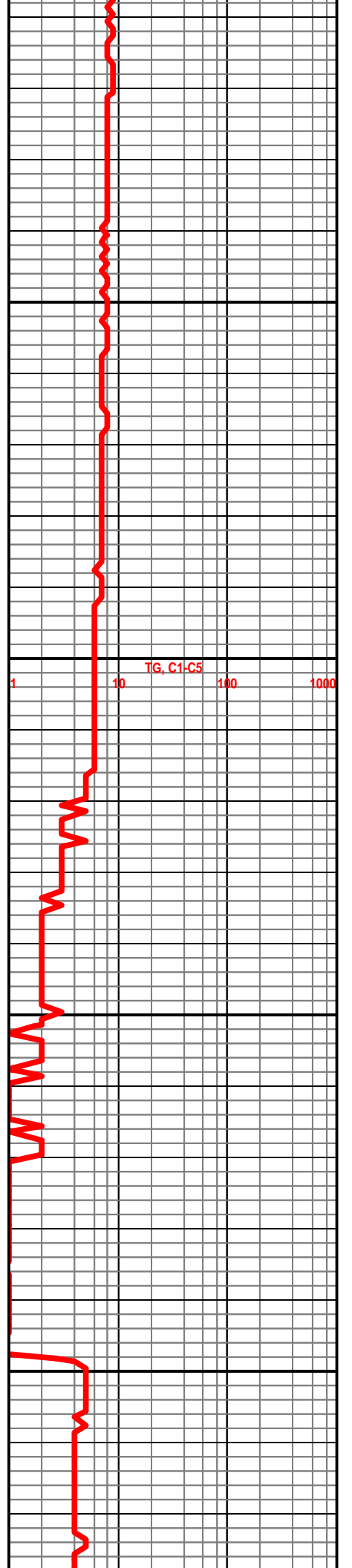
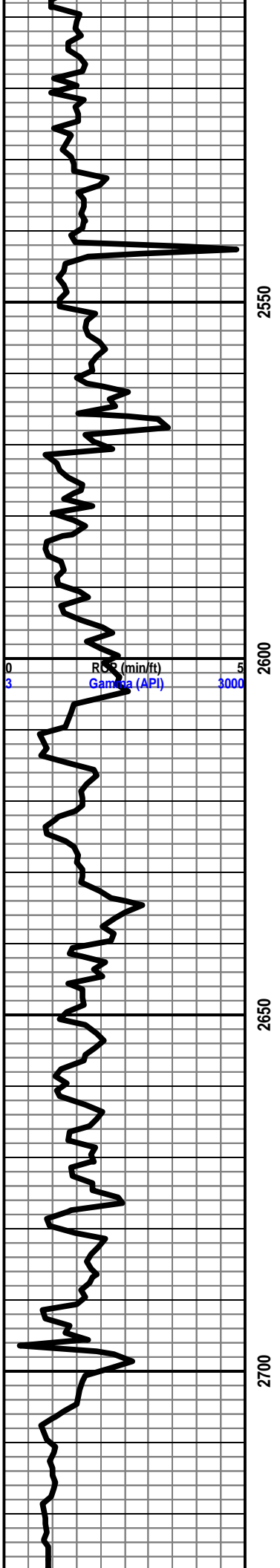
- R Rft
- S Sidewall





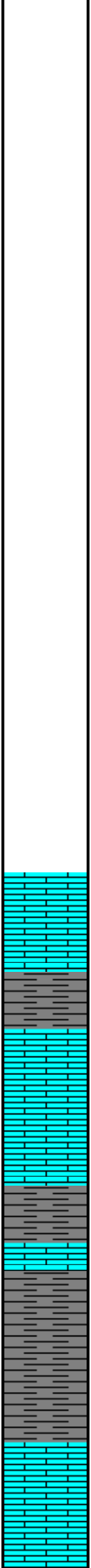
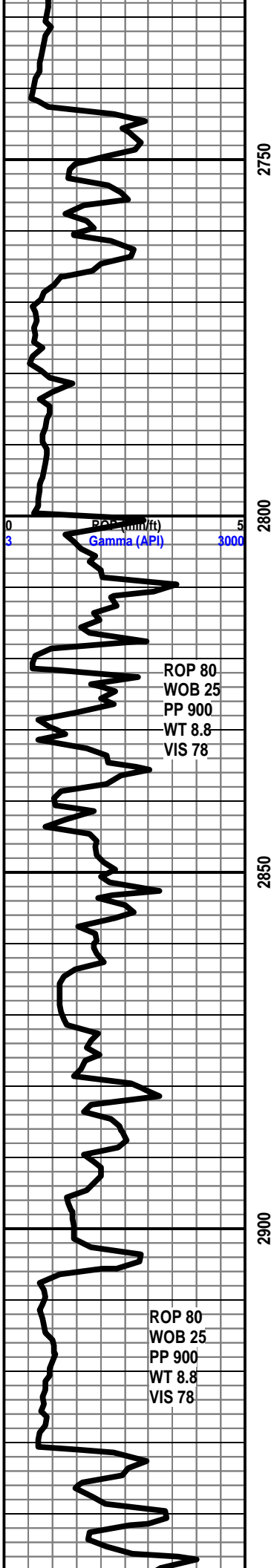






BASE ROOT SHALE 2742' - 737'

STARTED MANNED UNIT 12/12/10



LS- LT GRY TO GRY CRM OFF WHT. HD DNS BRITT, FN TO MD XLN, REXLN MTRX THRU, CHLKY THRU, IMBD CALC XLS, SLI TR OF IMBD FOSS FRAGS, DLL YEL MIN FLO, NO VIS POR, NO VIS SHOW

SH- LT GRY TO GRY, SFT, BLKY

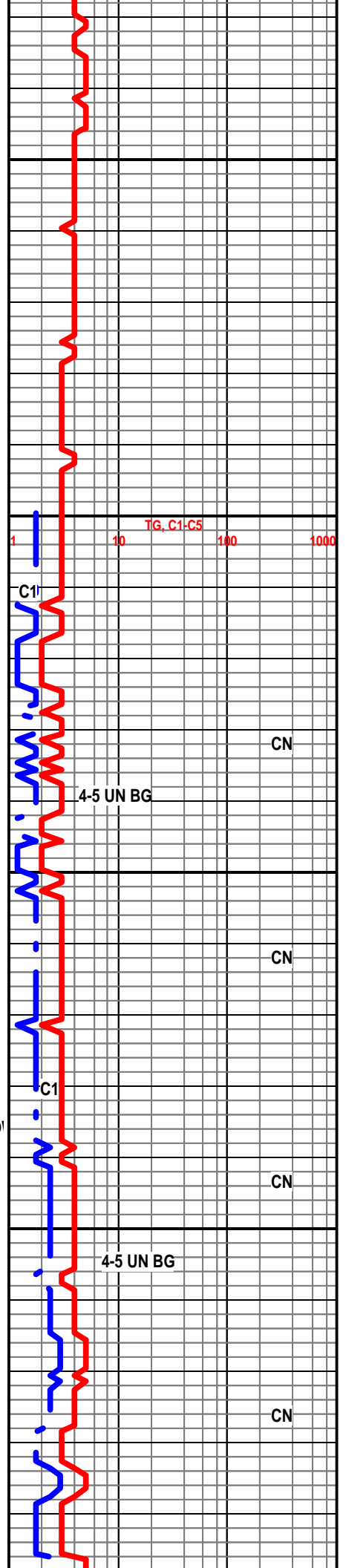
LS- LT GRY TO GRY CRM OFF WHT. HD DNS BRITT, FN TO MD XLN, REXLN MTRX THRU, CHLKY THRU, IMBD CALC XLS, DLL YEL MIN FLO, NO VIS POR, NO VIS SHO

SH- LT GRY TO GRY, SFT, BLKY

SH- LT GRY TO GRY, SFT TO FRM, BLKY SLI CALC

HOWARD 2931' - 926'

LS- LT GRY TO GRY CRM OFF WHT. HD DNS BRITT, FN TO MD XLN, REXLN MTRX THRU, CHLKY THRU, IMBD CALC XLS, IMBD PYR IP, IMBD CALC XLS IP, DLL TO BRIT YEL MIN FLO, NO VIS POR, NO VIS SHOW

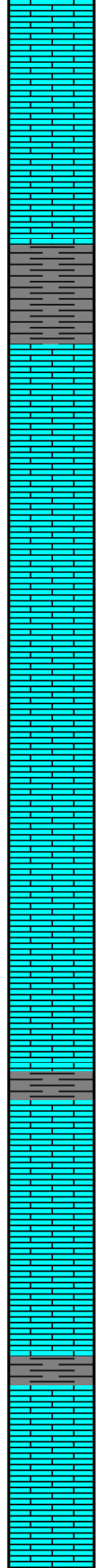
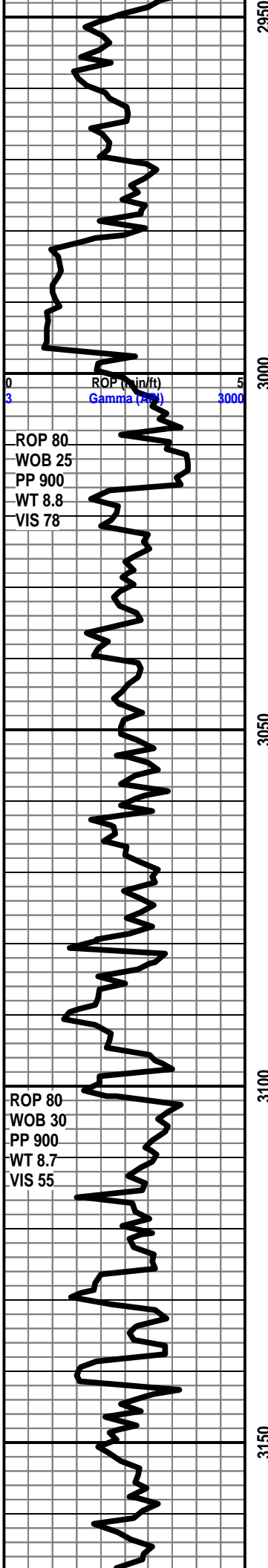


CN

CN

CN

CN



LS- LT GRY TO GRY CRM OFF WHT. HD DNS BRITT, FN TO MD XLN, REXLN MTRX IP, CHLKY IP, IMBD CALC XLS IMBD CALC XLS IP, DLL YEL MIN FLO, NO VIS POR, NO VIS SHOW

SEVERY 2982' - 977'

SH- GRY LT GRY, FRM TO SFT, BLKY

TOPEKA 2927' - 992'

LS- GRY TO LT GRY CRM OFF WHT, HD DNS TO BRITT, FN TO MD XLN, REXLN MTRX, SLI CHLKY, IMBD FOSS FRAGS IP, SLI TR OF IMBD GRY SHALE, DLL TO BRIT YEL MIN FLO, NO VIS POR NO VIS SHOW

12:01 ON 12/13/2010

LS- GRY TO LT GRY OFF WHT, HD DNS TO BRITT, FN TO MD XLN, REXLN MTRX, SLI TR CHLKY, IMBD FOSS FRAGS IP, SLI TR OF PYR, DLL YEL MIN FLO, NO VIS POR, NO VIS SHOW

LS- GRY TO LT GRY OFF WHT, HD DNS TO BRITT, FN TO MD XLN, REXLN MTRX, IMBD FOSS FRAGS IP, SLI TR OF PYR, DLL YEL MIN FLO, V/SLI TR OF VUG POR, NO VIS SHOW

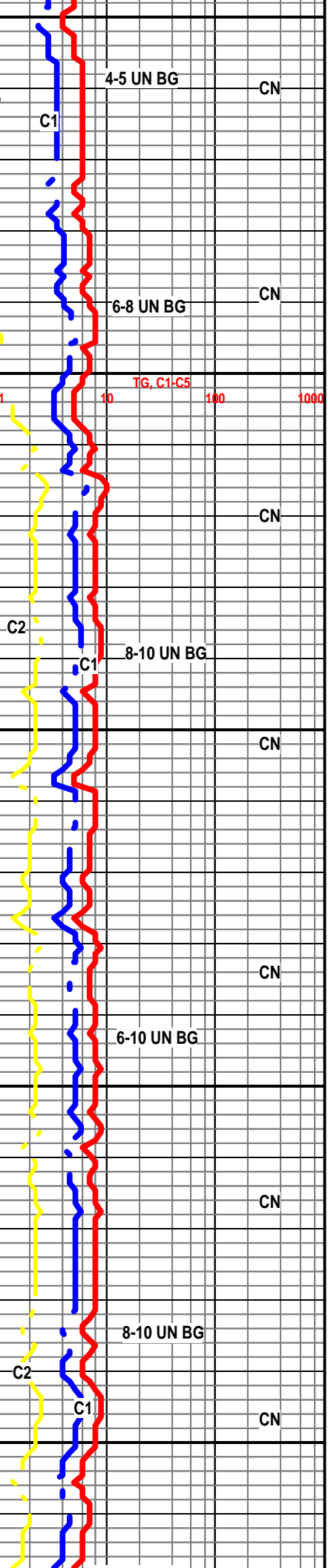
LS- GRY TO LT GRY OFF WHT, HD DNS TO BRITT, V/FN TO FN XLN, REXLN MTRX, IMBD FOSS FRAGS IP, SLI TR OF IMBD CALC XLS, DLL YEL MIN FLO, NO VIS POR, NO VIS SHOW

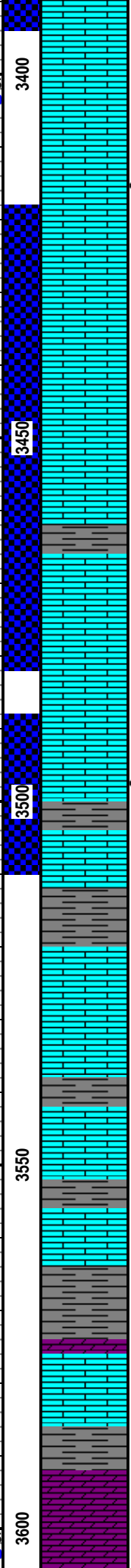
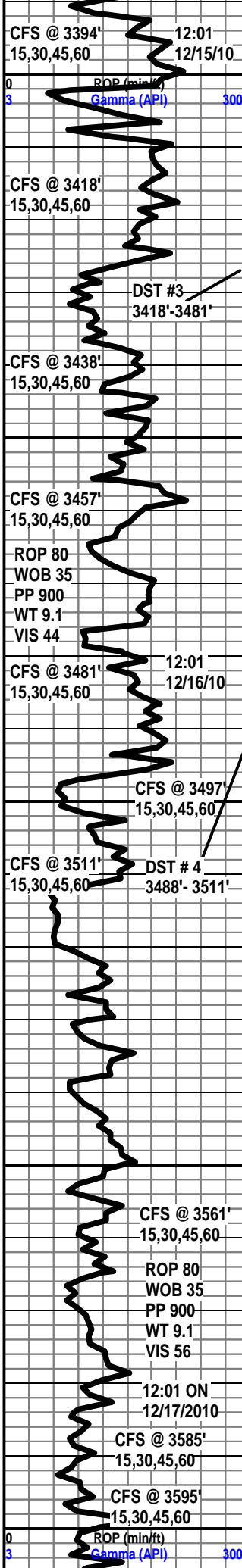
LE COMPTON 3102' - 1097'

LS- GRY TO LT GRY OFF WHT, HD DNS TO BRITT, V/FN TO FN XLN, REXLN MTRX, IMBD FOSS FRAGS IP, SLI TR OF IMBD CALC XLS, DLL YEL MIN FLO, NO VIS POR, NO VIS SHOW

SH- LT GRY TO GRY, FRM, SMTH BLKY

LS- GRY TO LT GRY OFF WHT, HD DNS TO BRITT, V/FN TO FN XLN, REXLN MTRX, SLI TR OF IMBD CALC XLS, DLL YEL MIN FLO, NO VIS POR, NO VIS SHOW





12:01 ON 12/14/2010 @ 3375'

3382' LS- CRM LT TN TO TN DUE TO OIL STAIN, HD DNS TO BRITT, V/F TO FN XLN REXLN MTRX, IMBD FOSS FRAGS THRU, IMBD CALC XLS, V/SLI TR OF CHLKY, GLD YEL FLO, GD MICRO PP POR V/GD VUG POR INST FLUSH CUT TO STRONG MLKY BLUE STREAM CUT, GD OIL ODO LIVE OIL ON 10 ROCKS

3390' LS- CRM LT TN TO TN DUE TO OIL STAIN, HD DNS TO BRITT, V/F TO FN XLN REXLN MTRX, IMBD FOSS FRAGS THRU, IMBD CALC XLS, SLI TR OF CHLKY, GLD YEL FLO, GD MICRO PP POR, EXT VUG POR, INST FLUSH CUT TO STRONG MLKY BLUE STREAM CUT, GD OIL ODO LIVE OIL ABDT ON ROCKS

3394' LS- CRM LT TN TO TN DO TO OIL STAIN, HD DNS TO BRITT, V/FN TO FN XLN REXLN MTRX, IMBD FOSS FRAGS THRU, IMBD CALC XLS, SLI TR OF CHLK, GLD YEL FLO, GD MICRO PP POR EXT VUG POR, INST FLUSH CUT TO STRONG MLKY BLUE STREAM CUT, GD OIL ODOR, LIVE OIL ON 12 ROCKS

3402'-3408' LS- CRM LT TN TO TN DO TO OIL STAIN, HD DNS TO BRITT V/FN TO FN XLN REXLN MTRX, IMBD FOSS FRAGS IP, IMBD CALC XLS SLI TR OF CHLK, GLD YEL FLO, GD MICRO PP POR FR VUG POR, GD FLUSH CUT TO GD MLKY BLUE STREAM CUT, FR TO GD OIL ODOR

3415' LS- CRM LT TN TO TN DO TO OIL STAIN, HD DNS TO BRITT, FN XLN REXLN MTRX, IMBD FOSS FRAGS IP, IMBD CALC XLS, CHLKY, GI YEL FLO, GD MICRO PP POR GD VUG POR, INST FLUSH CUT TO G MLKY BLUE STREAM CUT, GD OIL ODOR

3438' LS- CRM LT TN TO TN DO TO OIL STAIN, HD DNS TO BRITT, V/FN XLN REXLN MTRX, TR IMBD FOSS FRAGS IP, IMBD CALC XLS, SLI CHLKY, GLD YEL FLO, GD MICRO PP POR, INST FLUSH CUT TO GD MLKY BLUE STREAM CUT, GD OIL ODOR, LIVE OIL ON 14 ROCKS

3440'-3457' LS- CRM LT TN TO TN DO TO OIL STAIN, DUE TO 50% DEAD OIL, HD DNS TO BRITT, V/FN XLN REXLN MTRX, IMBD CALC XLS, SLI CHLK, GLD YEL FLO, FR MICRO PP POR, GD FLUSH CUT TO FR MLKY BLUE STREAM CUT, GD OIL ODOR, DEAD OIL STAIN THRU

3460 -3481' LS- CRM LT TN TO TN DO TO OIL STAIN, HD DNS TO BRITT IP, V/FN TO FN XLN, REXLN MTRX THRU, V/SLI TR OF CHLK, IMBD FO FRAGS, IMBD CALC XLS, DEAD ON STAIN ON 20% OF ROCKS, LIVE O ON 10% ROCKS, DLL TO GLD YEL FLO, GD MIRCO PP POR, FR VUG POR, TR OF OOMOLD C POR, POSS FRAC POR, GD FOSS POR, INST FLUSH CUT TO GD STRONG STREAM CUT, GD OIL ODOR, BRN LECH ON DISH

3492' -3497' LS- CRM LT TN TO TN DO TO OIL STAIN, HD DNS TO BRITT IP, V/FN TO FN XLN, REXLN MTRX THRU, IMBD FOSS FRAGS, IMBD CALC XLS, LIVE OIL ON 5% ROCKS, DLL TO GLD YEL FLO, FR MIRCO PP POR, GD INTR-XLN POR, GD FLUSH CUT TO GD STRONG STREAM CUT, GD OIL ODOR, BRN LECH ON DISH

3505'- LS- CRM LT TN TO TN OFF WHT, HD DNS, FN TO MD XLN REXLN MTRX IP, IMBD FOSS FRAGS IP, CHLKY, RED GUMMY SHALE IP, IMBD CALC XLS IP, DLL YEL FLO, FR MICRO PP POR, TR FOSS POR, V/PR FLUSH CUT TO PR STREAM CUT, FR OIL ODOR

LS- TN CRM OFF WHT, HD DNS, V/FN TO FN XLN REXLN MTRX, CHLKY RED GUMMY SHALE, TR OF CURT, IMBD FOSS FRAGS IP, IMBD CALC XLS IP, DLL YELL FLO IP, GD MICRO PP POR, TR VUG POR, SLI TRC OF OOMOLD, GD FLUSH CUT TO GD STRONG STREAM CUT, GD OIL ODOR, LIVE OIL ON 3 ROCKS

3540' SH- GRY TO DK GRY, RED GUMMY, SFT BLKY

SH- GRY TO DK GRY, RED GUMMY, SFT TO BLKY

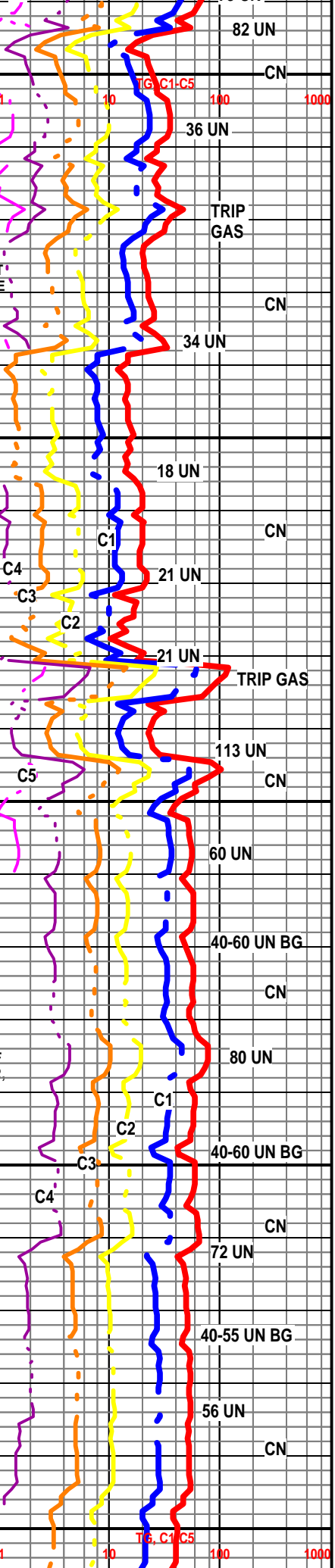
LS- TN CRM OFF WHT, HD DNS, V/FN TO FN XLN REXLN MTRX, CHLKY RED GUMMY SHALE, TR OF CURT, IMBD CALC XLS IP, DLL YELL FLO IP, V/PR MICRO PP POR, FR FLUSH CUT TO PR STRONG STREAM CUT FR OIL ODOR, DEAD OIL ON 7 ROCKS

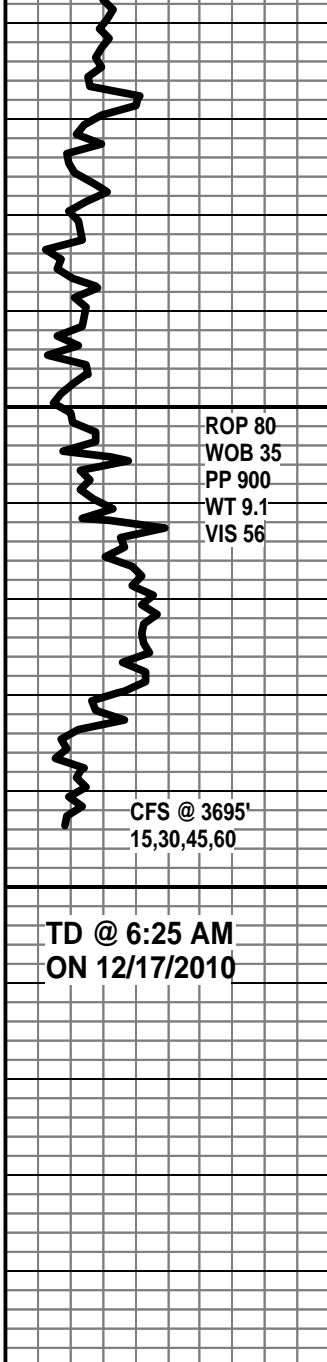
SH- GRY TO DK GRY, RED GUMMY, SFT TO BLKY

LS- TN CRM OFF WHT, HD DNS, V/FN TO FN XLN REXLN MTRX, CHLKY, RED GUMMY SHALE, CURT THRU, IMBD PYR IP, IMBD CALC XLS IP, DLL YELL FLO IP, V/PR MICRO PP POR, FR FLUSH CUT TO V/PR STRONG STREAM CUT, PR OIL ODOR

ARBUCKLE 3590' -1585'

DOL- WHT LT TN DUE TO STAIN CRM IP, HD TO BRITT VFN TO FN XLN MTRX, IMBD SUB-ANG SM TO MD DOL XLS, TR PYR IP, DLL YEL TO GLD FLO, FR MICRO PP POR, PR FLUSH CUT, NO STREAM CUT





3650
3700
50

DOL- WHT LT TN DUE TO STAIN CRM IP, HD TO BRITT V/FN TO FN XLN MTRX, CHLKY THRU, IMBD SUB-ANG S TO MD DOL XLS, IMBD PYR THRU, IMBD FOSS FRAGS IP, DLL YEL TO GLD FLO, TR MICRO PP POR, NO FLUSH CUT, NO STREAM CUT

DOL- WHT LT TN DUE TO STAIN CRM IP, HD TO BRITT V/FN TO FN XLN MTRX, CHLKY, IMBD SUB-ANG SM TO MD DOL XLS, IMBD PYR THRU, DLL YEL TO GLD FLO, V/PR INTR XLN POR, PR FLUSH CUT, NO STREAM CUT, NO OIL ODOR

DOL- WHT LT TN DUE TO STAIN CRM IP, HD TO BRITT V/FN TO FN XLN MTRX, SLI CHLKY, IMBD SUB-ANG SM TO MD DOL XLS, IMBD PYR THRU, IMBD CALC XLS IP, DLL YEL TO GLD FLO, FR INTR XLN POR TO FR MICRO PP POR, PR FLUSH CUT, V/ PR STREAM CUT, NO OIL ODOR

DOL- WHT LT TN CRM IP, HD TO BRITT V/FN TO FN XLN MTRX, IMBD SUB-ANG SM TO MD DOL XLS, TR CALC XLS IP, IMBD PYR IP, DLL YEL TO GLD FLO, PR INTR XLN POR, NO FLUSH CUT, NO STREAM CUT, NO OIL ODOR

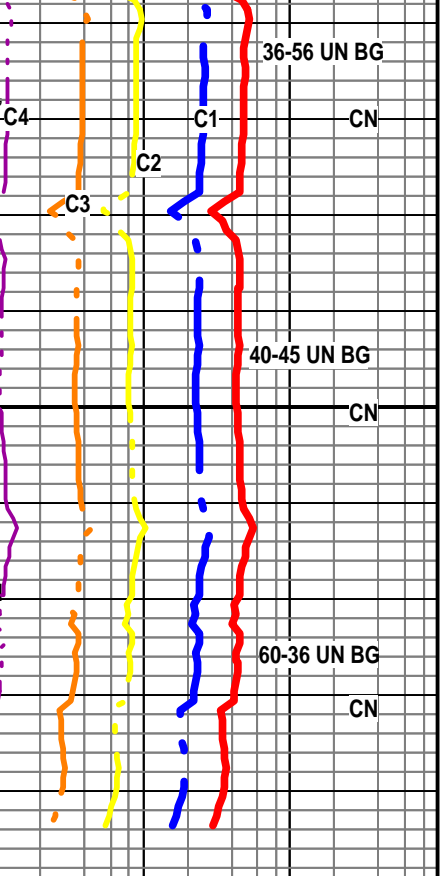
DOL- WHT LT TN CRM IP, HD TO BRITT V/FN TO FN XLN MTRX, IMBD SUB-ANG SM TO MD DOL XLS, TR CALC XLS IP, IMBD FOSS FRAGS IP, IMBD PYR THRU, DLL YEL TO GLD FLO, V/SLI TR VUG POR, PR INTR XLN POR, NO FLUSH CUT, NO STREAM CUT, NO OIL ODOR

RTD @ 6:25 AM 12/17/2010

CTCH 1.5 HRS

TOFL

WEATHERFORD/ LIBERAL



SAMPLES WILL BE DELIVERED TO KGS

THANKS YOU FOR CHOOSING EARTH TECH



DRILL STEM TEST REPORT

Prepared For: **Sam Gary**

1515 Wynkoop Ste 700
Denver Co 80202

ATTN: Neil Sharp

30-16-15-Barton-Ks

Steinert et al # 1-30

Start Date: 2010.12.14 @ 02:05:17

End Date: 2010.12.14 @ 11:13:47

Job Ticket #: 041353 DST #: 1

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Sam Gary
1515 Wynkoop Ste 700
Denver Co 80202
ATTN: Neil Sharp

Steinert et al # 1-30
30-16-15-Barton-Ks
Job Ticket: 041353 **DST#: 1**
Test Start: 2010.12.14 @ 02:05:17

GENERAL INFORMATION:

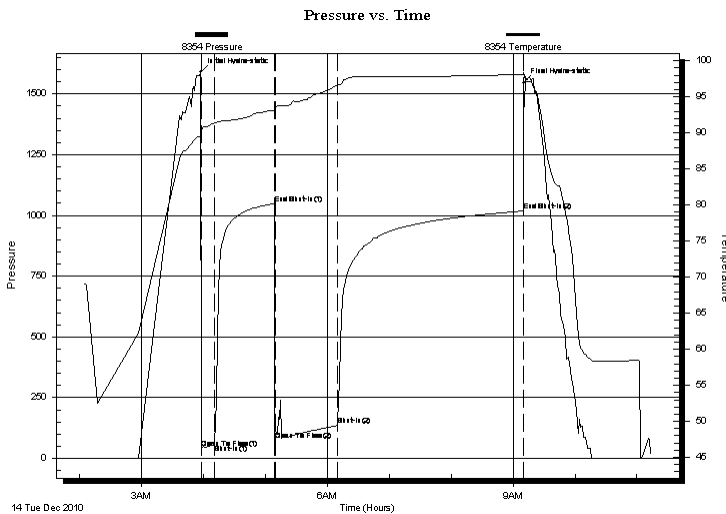
Formation: **KC**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 03:58:17
Time Test Ended: 11:13:47
Interval: **3330.00 ft (KB) To 3375.00 ft (KB) (TVD)**
Total Depth: 3375.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Test Type: Conventional Bottom Hole
Tester: Dan Bangle
Unit No: 38
Reference Elevations: 2005.00 ft (KB)
1997.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8354 Inside
Press @ Run Depth: 134.87 psig @ 3334.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2010.12.14 End Date: 2010.12.14 Last Calib.: 2010.12.14
Start Time: 02:05:18 End Time: 11:13:47 Time On Btm: 2010.12.14 @ 03:57:47
Time Off Btm: 2010.12.14 @ 09:10:17

TEST COMMENT: IF-Slid tool 8' to bottom - Weak building to 10"

FF-Slid tool 2' Weak building to strong B-B in 45 min
FSI-Weak surface blow died in 20 min

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1588.71	89.65	Initial Hydro-static
1	40.52	89.63	Open To Flow (1)
13	57.31	91.34	Shut-In(1)
72	1049.05	93.18	End Shut-In(1)
72	77.07	92.67	Open To Flow (2)
132	134.87	96.60	Shut-In(2)
313	1018.47	98.12	End Shut-In(2)
313	1546.31	98.39	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	OCMdyW 10%o 80%w 10%m	1.41
120.00	HMCgsyO 10%g 70%o 20%m	1.68
60.00	OCGsyM 10%g 20%o 70%m	0.84
0.00	310 GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Sam Gary
1515 Wynkoop Ste 700
Denver Co 80202
ATTN: Neil Sharp

Steinert et al # 1-30
30-16-15-Barton-Ks
Job Ticket: 041353 **DST#: 1**
Test Start: 2010.12.14 @ 02:05:17

Tool Information

Drill Pipe:	Length: 3270.00 ft	Diameter: 3.80 inches	Volume: 45.87 bbl	Tool Weight: 3800.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 46.02 bbl</u>	Tool Chased 10.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3330.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	44.00 ft			
Tool Length:	79.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

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

Change Over Sub	1.00			3296.00	
Recorder	0.00	8653	Inside	3296.00	
Blank Spacing	4.00			3300.00	
Shut In Tool	5.00			3305.00	
Sampler	3.00			3308.00	
Hydraulic tool	5.00			3313.00	
Jars	5.00			3318.00	
Safety Joint	3.00			3321.00	
Packer	5.00			3326.00	35.00 Bottom Of Top Packer
Packer	4.00			3330.00	
Stubb	1.00			3331.00	
Perforations	2.00			3333.00	
Change Over Sub	1.00			3334.00	
Recorder	0.00	8354	Inside	3334.00	
Recorder	0.00	8520	Outside	3334.00	
Drill Pipe	31.00			3365.00	
Change Over Sub	1.00			3366.00	
Perforations	5.00			3371.00	
Bullnose	3.00			3374.00	44.00 Bottom Packers & Anchor

Total Tool Length: 79.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Sam Gary
1515 Wynkoop Ste 700
Denver Co 80202
ATTN: Neil Sharp

Steinert et al # 1-30
30-16-15-Barton-Ks
Job Ticket: 041353 **DST#: 1**
Test Start: 2010.12.14 @ 02:05:17

Mud and Cushion Information

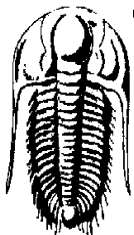
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 70000 ppm	
Viscosity: 50.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.37 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4900.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	OCMdyW 10%o 80%w 10%m	1.410
120.00	HMCGsyO 10%g 70%o 20%m	1.683
60.00	OCGsyM 10%g 20%o 70%m	0.842
0.00	310 GIP	0.000

Total Length: 300.00 ft Total Volume: 3.935 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: Sampler
2000ml oil



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

GAS RATES

Sam Gary
1515 Wynkoop Ste 700
Denver Co 80202
ATTN: Neil Sharp

Steinert et al # 1-30
30-16-15-Barton-Ks
Job Ticket: 041353 **DST#: 1**
Test Start: 2010.12.14 @ 02:05:17

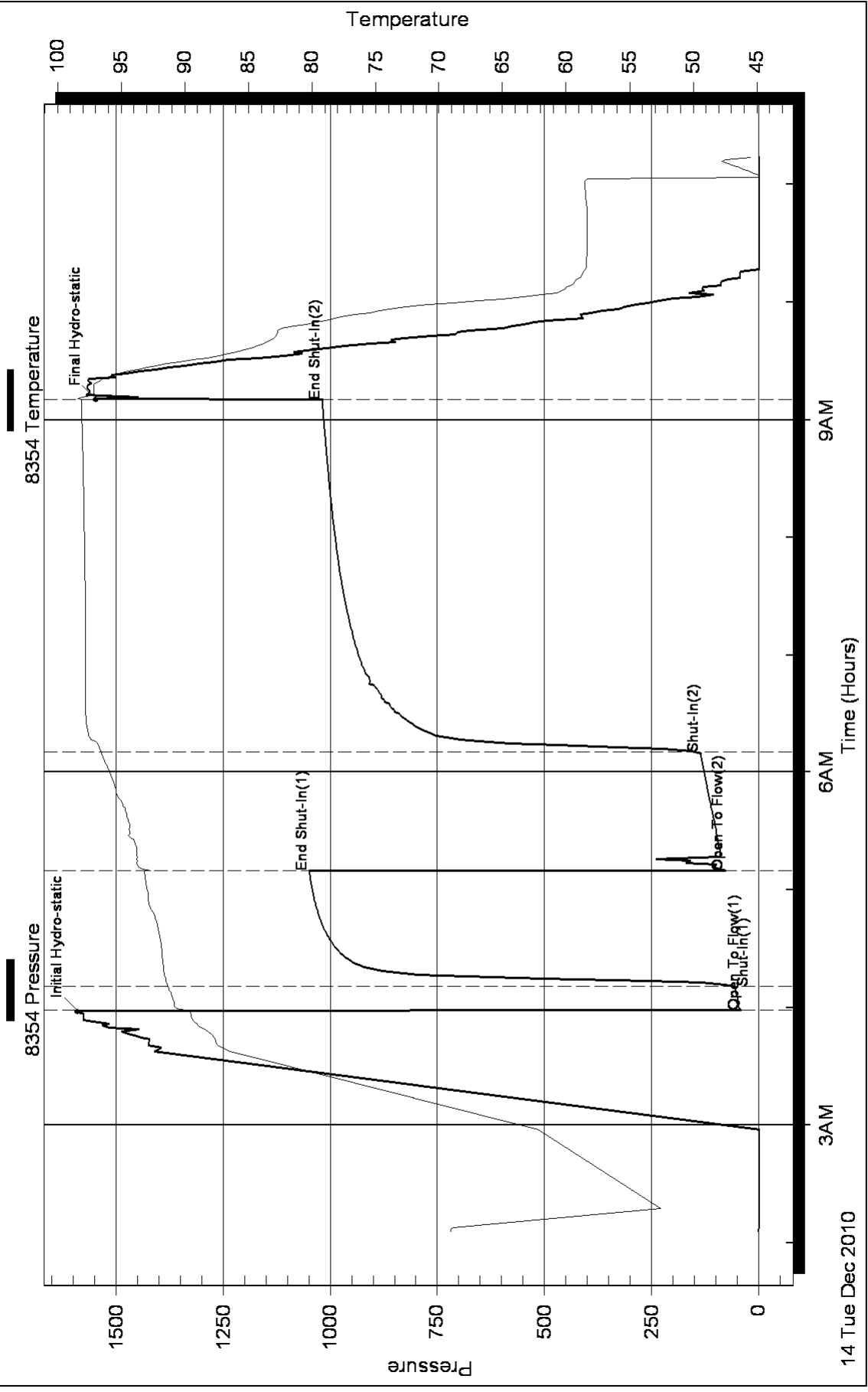
Gas Rates Information

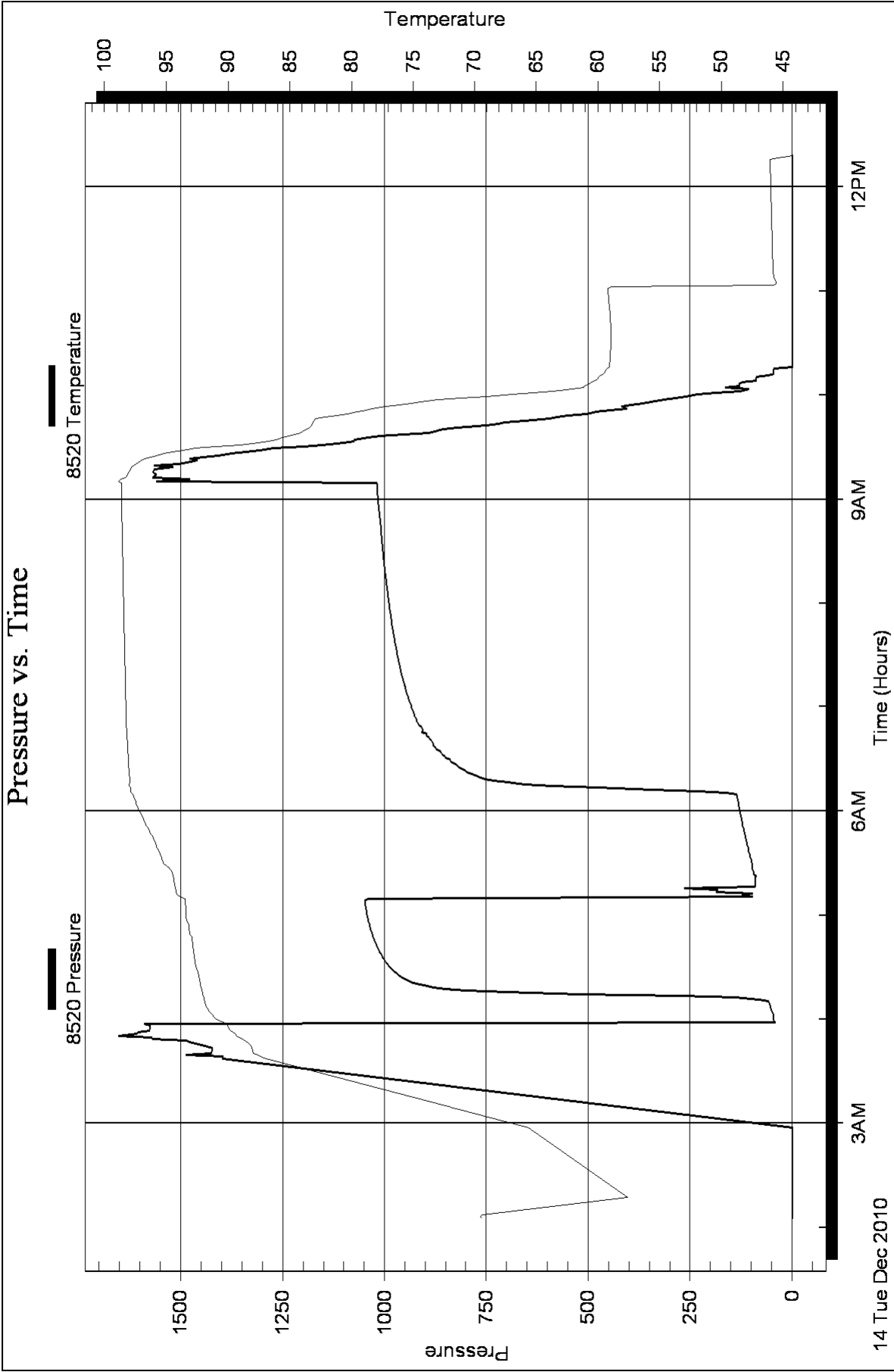
Temperature: 59 deg C
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m ³ /d)
		0.00	0.00	0.00

Pressure vs. Time





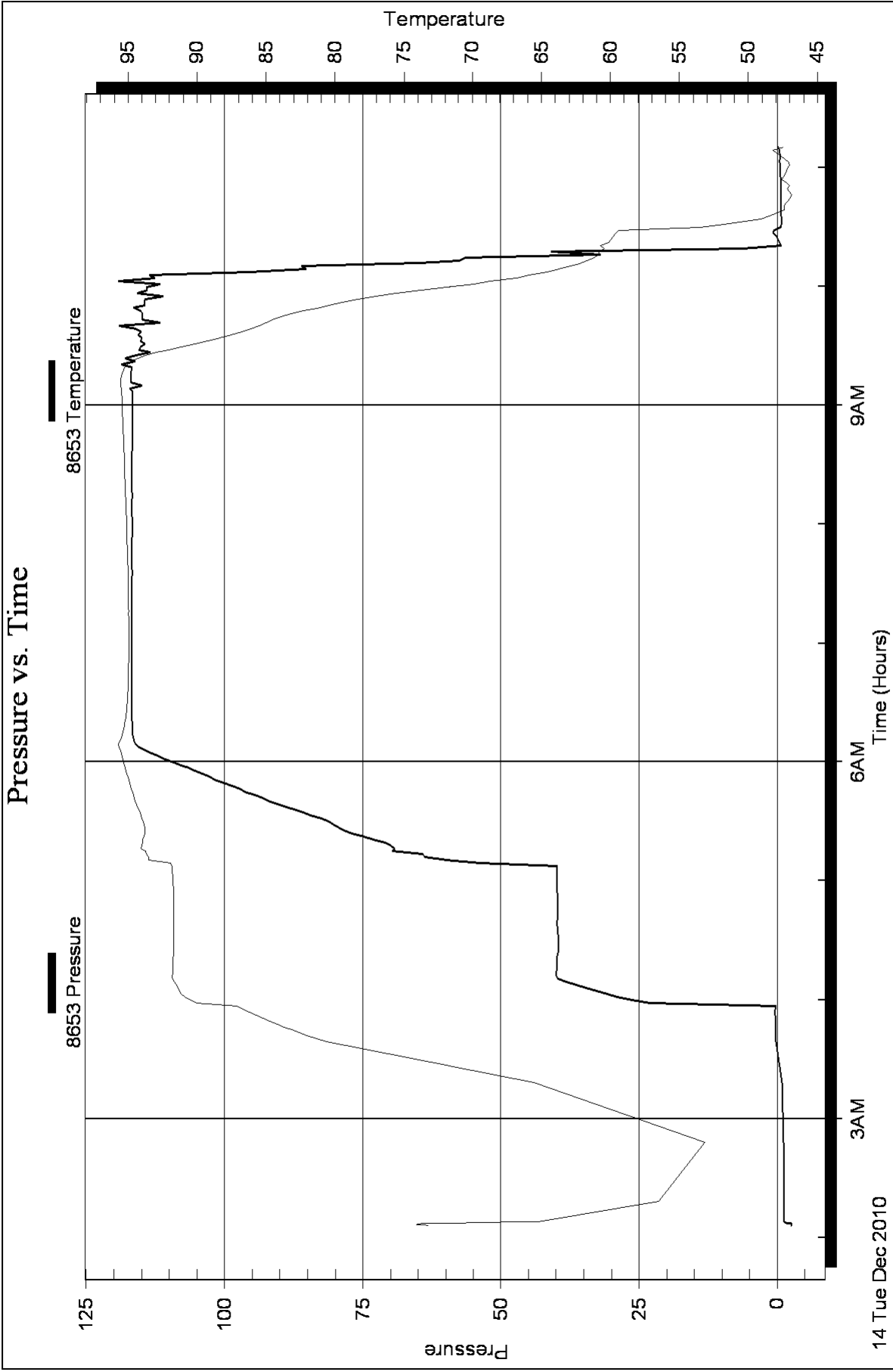
Serial #: 8653

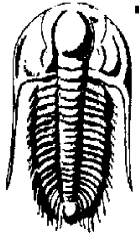
Inside

Sam Gary

30-16-15-Barton-Ks

DST Test Number: 1





**TRILOBITE
TESTING, INC.**

DRILL STEM TESTING - DATA LISTING

Sam Gary
1515 Wynkoop Ste 700
Denver Co 80202
ATTN: Neil Sharp

Steinert et al # 1-30
30-16-15-Barton-Ks
Job Ticket: 041353 **DST#: 1**
Test Start: 2010.12.14 @ 02:05:17

Serial # 8354 Inside				Serial # 8354 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	0.0	-0.88	69.1		109.5	1574.94	89.5
	0.1	-0.89	69.1		111.0	1574.62	89.5
	0.2	-0.89	69.1		112.0	1587.89	89.6
	0.3	-0.91	69.1		112.2	1588.74	89.6
	0.4	-0.91	69.1	Initial Hydro-static	112.5	1588.71	89.6
	0.5	-0.92	69.1		112.7	162.04	89.2
	0.6	-0.94	69.1	Open To Flow (1)	113.0	40.52	89.6
	0.7	-0.93	69.0		113.2	40.46	90.0
	0.8	-0.93	69.0		114.7	43.04	90.8
	0.9	-0.95	69.0		116.2	45.88	90.8
	1.0	-0.94	69.0		117.7	47.17	90.9
	1.1	-0.94	69.0		119.2	48.49	90.9
	1.2	-0.92	69.0		120.7	50.85	91.0
	1.3	-0.91	69.0		122.2	53.16	91.1
	1.4	-0.93	69.0		123.7	55.71	91.3
	1.5	-0.92	69.0		124.7	56.59	91.3
	1.6	-0.90	69.0		125.0	57.32	91.3
	1.7	-0.91	69.0	Shut-In(1)	125.2	57.31	91.3
	1.8	-0.96	68.9		125.5	61.25	91.3
	1.9	-1.04	68.9		125.7	69.10	91.4
	12.0	-1.22	52.6		126.0	78.35	91.4
	72.0	594.83	81.3		127.5	179.21	91.4
	93.0	1399.40	86.8		129.0	503.56	91.5
	94.5	1426.37	87.3		130.5	753.50	91.6
	96.0	1423.58	87.5		132.0	846.83	91.6
	97.5	1422.28	87.6		133.5	892.04	91.6
	99.0	1441.65	87.7		135.0	921.61	91.7
	100.5	1472.08	87.9		136.5	939.60	91.7
	102.0	1487.08	88.2		138.0	952.30	91.7
	103.5	1517.38	88.6		139.5	962.48	91.7
	105.0	1532.26	88.9		141.0	971.25	91.8
	106.5	1562.90	89.2		142.5	978.40	91.8
	108.0	1576.93	89.4		144.0	984.65	91.8

Printing every 6 samples

Serial # 8354 Inside				Serial # 8354 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	145.5	990.17	91.8		199.7	94.60	94.0
	147.0	995.08	91.9		201.2	95.82	94.4
	148.5	999.55	91.9		202.7	97.05	94.3
	150.0	1003.71	91.9		204.2	97.92	94.3
	151.5	1007.61	92.0		205.7	98.99	94.3
	153.0	1011.34	92.0		207.2	100.83	94.3
	154.5	1014.42	92.1		208.7	102.45	94.4
	156.0	1017.76	92.1		210.2	104.18	94.5
	157.5	1020.29	92.2		211.7	105.61	94.5
	159.0	1023.07	92.3		213.2	107.01	94.6
	160.5	1025.62	92.3		214.7	108.74	94.7
	162.0	1027.84	92.4		216.2	110.54	94.7
	163.5	1030.09	92.6		217.7	111.29	94.9
	165.0	1031.96	92.7		219.2	113.11	95.0
	166.5	1033.91	92.8		220.7	114.55	95.1
	168.0	1035.63	92.8		222.2	115.73	95.3
	169.5	1037.33	92.8		223.7	117.15	95.4
	171.0	1038.75	92.9		225.2	118.50	95.4
	172.5	1040.12	92.9		226.7	120.20	95.5
	174.0	1041.52	92.9		228.2	121.39	95.5
	175.5	1042.83	93.0		229.7	122.94	95.6
	177.0	1044.09	93.0		231.2	124.05	95.7
	178.5	1045.34	93.1		232.7	125.37	95.8
	180.0	1046.43	93.1		234.2	126.77	95.9
	181.5	1047.36	93.1		235.7	128.36	96.0
	183.0	1048.39	93.1		237.2	129.59	96.1
	183.5	1048.90	93.2		238.7	130.65	96.2
	183.7	1048.98	93.2		240.2	132.01	96.3
End Shut-In(1)	184.0	1049.05	93.2		241.7	133.31	96.4
Open To Flow (2)	184.2	77.07	92.7		243.2	134.26	96.5
	184.5	199.79	93.0		244.0	134.81	96.6
	184.7	115.58	92.9		244.2	134.92	96.6
	186.2	138.31	93.7	Shut-In(2)	244.5	134.87	96.6
	187.7	140.13	93.8		244.7	143.23	96.6
	189.2	218.25	93.8		245.0	157.04	96.6
	190.7	99.31	93.7		245.2	171.06	96.6
	192.2	89.92	93.8		246.7	299.81	96.7
	193.7	90.00	93.8		248.2	499.68	96.8
	195.2	89.91	93.8		249.7	636.91	97.0
	196.7	90.46	93.8		251.2	702.13	97.4
	198.2	93.27	93.9		252.7	748.76	97.5

Printing every 6 samples

Serial # 8354 Inside				Serial # 8354 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	254.2	764.95	97.6		315.7	959.78	97.8
	255.7	781.78	97.6		317.2	961.21	97.8
	257.2	797.70	97.7		318.7	962.73	97.8
	258.7	807.59	97.7		320.2	963.96	97.8
	260.2	817.75	97.8		321.7	965.50	97.8
	261.7	826.67	97.8		323.2	966.83	97.8
	263.2	835.63	97.8		324.7	968.12	97.8
	264.7	850.81	97.8		326.2	969.25	97.8
	266.2	852.40	97.8		327.7	970.39	97.8
	267.7	859.85	97.8		329.2	971.49	97.8
	269.2	864.12	97.8		330.7	972.89	97.8
	270.7	874.60	97.8		332.2	974.02	97.8
	272.2	880.26	97.8		333.7	975.20	97.8
	273.7	881.55	97.8		335.2	976.28	97.8
	275.2	886.03	97.8		336.7	977.40	97.8
	276.7	890.41	97.8		338.2	978.34	97.8
	278.2	896.59	97.8		339.7	979.45	97.8
	279.7	907.66	97.8		341.2	980.44	97.9
	281.2	906.94	97.8		342.7	981.51	97.9
	282.7	909.00	97.8		344.2	982.40	97.9
	284.2	915.68	97.8		345.7	983.39	97.9
	285.7	919.94	97.8		347.2	984.37	97.9
	287.2	921.77	97.8		348.7	985.22	97.9
	288.7	925.01	97.8		350.2	986.18	97.9
	290.2	927.17	97.8		351.7	986.96	97.9
	291.7	929.57	97.8		353.2	987.84	97.9
	293.2	931.86	97.8		354.7	988.68	97.9
	294.7	934.08	97.8		356.2	989.53	97.9
	296.2	936.46	97.8		357.7	990.36	97.9
	297.7	938.74	97.8		359.2	991.28	97.9
	299.2	940.88	97.8		360.7	992.04	97.9
	300.7	942.85	97.8		362.2	992.80	97.9
	302.2	944.80	97.8		363.7	993.69	97.9
	303.7	946.55	97.8		365.2	994.37	97.9
	305.2	948.18	97.8		366.7	995.14	97.9
	306.7	949.89	97.8		368.2	995.95	97.9
	308.2	951.52	97.8		369.7	996.71	97.9
	309.7	953.28	97.8		371.2	997.38	97.9
	311.2	954.87	97.8		372.7	998.20	97.9
	312.7	956.60	97.8		374.2	998.88	97.9
	314.2	958.04	97.8		375.7	999.48	97.9

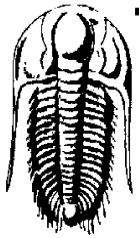
Printing every 6 samples

Serial # 8354 Inside				Serial # 8354 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	377.2	1000.35	97.9		431.5	1565.49	97.2
	378.7	1000.85	98.0		433.0	1556.81	97.1
	380.2	1001.74	98.0		434.5	1561.59	96.5
	381.7	1002.44	98.0		436.0	1499.58	96.1
	383.2	1002.83	98.0		437.5	1561.65	95.5
	384.7	1003.50	98.0		439.0	1443.08	94.5
	386.2	1004.06	98.0		440.5	1356.73	93.3
	387.7	1004.67	98.0		442.0	1340.19	92.3
	389.2	1005.32	98.0		443.5	1244.26	90.9
	390.7	1006.01	98.0		445.0	1236.69	89.4
	392.2	1006.53	98.0		446.5	1163.69	87.7
	393.7	1007.04	98.0		448.0	1066.46	86.6
	395.2	1007.67	98.0		449.5	1042.22	85.6
	396.7	1008.22	98.0		451.0	1010.61	84.8
	398.2	1008.78	98.0		452.5	941.64	84.1
	399.7	1009.38	98.0		454.0	848.49	83.5
	401.2	1009.91	98.0		455.5	804.04	83.1
	402.7	1010.52	98.0		457.0	761.77	82.8
	404.2	1011.37	98.0		458.5	716.88	82.7
	405.7	1011.87	98.0		460.0	675.59	82.7
	407.2	1012.63	98.1		461.5	611.80	82.0
	408.7	1013.25	98.1		463.0	549.05	80.5
	410.2	1013.77	98.1		464.5	485.11	79.3
	411.7	1014.30	98.1		466.0	409.08	78.2
	413.2	1014.84	98.1		467.5	408.09	77.2
	414.7	1015.34	98.1		469.0	391.37	75.5
	416.2	1015.89	98.1		470.5	374.10	74.3
	417.7	1016.46	98.1		472.0	311.92	72.7
	419.2	1016.87	98.1		473.5	262.70	70.0
	420.7	1017.21	98.1		475.0	231.40	66.8
	422.2	1018.24	98.1		476.5	168.22	64.1
	423.7	1018.41	98.1		478.0	105.10	61.9
	424.2	1018.49	98.1		479.5	162.85	60.6
	424.5	1018.50	98.1		481.0	131.21	60.1
End Shut-In(2)	424.7	1018.47	98.1		482.5	87.54	59.8
Final Hydro-static	425.0	1546.31	98.4		484.0	87.51	59.4
	425.2	1602.47	98.3		485.5	87.48	59.2
	425.5	1532.78	98.2		487.0	43.60	58.9
	427.0	1569.40	97.2		488.5	43.59	58.7
	428.5	1561.78	97.1		490.0	43.52	58.7
	430.0	1566.21	97.1		491.5	-1.23	58.4

Printing every 6 samples

Serial # 8354 Inside				Serial # 8520 Outside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	493.0	-1.26	58.4				
	494.5	-1.30	58.4				
	496.0	-1.29	58.4				
	497.5	-1.30	58.4				
	499.0	-1.30	58.4				
	500.5	-1.31	58.3				
	502.0	-1.30	58.3				
	503.5	-1.31	58.3				
	505.0	-1.32	58.3				
	506.5	-1.30	58.3				
	508.0	-1.30	58.3				
	509.5	-1.33	58.3				
	511.0	-1.32	58.3				
	512.5	-1.31	58.3				
	514.0	-1.30	58.3				
	515.5	-1.31	58.3				
	517.0	-1.30	58.3				
	518.5	-1.30	58.3				
	520.0	-1.28	58.3				
	521.5	-1.29	58.4				
	523.0	-1.32	58.4				
	524.5	-1.36	58.4				
	526.0	-1.38	58.4				
	527.5	-1.33	58.5				
	529.0	-1.31	58.5				
	530.5	-1.32	58.5				
	532.0	-1.30	58.5				
	533.5	-1.30	58.5				
	535.0	-1.34	58.5				
	536.5	-1.40	58.4				
	538.0	-1.42	44.8				
	539.5	-1.54	45.0				
	541.0	-1.51	45.6				
	542.5	-1.51	46.2				
	544.0	-1.51	46.8				
	545.5	-1.45	47.5				
	547.0	-1.44	47.5				
	548.5	-1.59	45.8				

Printing every 6 samples



**TRILOBITE
TESTING, INC.**

DRILL STEM TESTING - DATA LISTING

Sam Gary
1515 Wynkoop Ste 700
Denver Co 80202
ATTN: Neil Sharp

Steinert et al # 1-30
30-16-15-Barton-Ks
Job Ticket: 041353 **DST#: 1**
Test Start: 2010.12.14 @ 02:05:17

Serial # 8520 Outside				Serial # 8520 Outside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	0.0	-0.88	69.4		109.5	1575.15	89.9
	0.1	-0.87	69.4		111.0	1574.44	90.0
	0.2	-0.89	69.5		112.5	1611.81	90.2
	0.3	-0.90	69.5		114.0	44.05	90.8
	0.4	-0.92	69.5		115.5	45.38	91.1
	0.5	-0.91	69.5		117.0	45.62	91.3
	0.6	-0.93	69.5		118.5	48.07	91.4
	0.7	-0.94	69.5		120.0	50.21	91.6
	0.8	-0.94	69.5		121.5	52.02	91.7
	0.9	-0.94	69.5		123.0	54.20	91.8
	1.0	-0.95	69.5		124.5	56.18	91.9
	1.1	-0.96	69.5		126.0	81.64	91.9
	1.2	-0.94	69.5		127.5	189.24	92.0
	1.3	-0.95	69.4		129.0	520.98	92.0
	1.4	-0.97	69.4		130.5	761.35	92.1
	1.5	-0.97	69.4		132.0	849.57	92.1
	1.6	-0.97	69.4		133.5	893.76	92.2
	1.7	-0.96	69.4		135.0	922.73	92.2
	1.8	-0.96	69.4		136.5	940.31	92.3
	1.9	-0.97	69.3		138.0	952.84	92.3
	12.0	-1.03	57.6		139.5	962.96	92.4
	72.0	551.80	81.8		141.0	971.51	92.4
	93.0	1395.96	87.4		142.5	978.66	92.5
	94.5	1425.94	87.8		144.0	984.90	92.5
	96.0	1423.55	88.0		145.5	990.42	92.6
	97.5	1422.03	88.0		147.0	995.15	92.6
	99.0	1441.27	88.1		148.5	999.65	92.7
	100.5	1471.56	88.3		150.0	1004.26	92.7
	102.0	1486.75	88.5		151.5	1007.69	92.8
	103.5	1516.98	89.0		153.0	1011.16	92.8
	105.0	1651.45	89.3		154.5	1014.41	92.8
	106.5	1562.62	89.6		156.0	1017.76	92.8
	108.0	1576.90	89.8		157.5	1020.57	92.9

Printing every 6 samples

Serial # 8520 Outside				Serial # 8520 Outside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	159.0	1023.05	92.9		220.5	114.62	96.2
	160.5	1025.58	92.9		222.0	115.82	96.3
	162.0	1027.92	92.9		223.5	117.44	96.4
	163.5	1030.06	93.1		225.0	118.76	96.5
	165.0	1031.98	93.1		226.5	120.33	96.6
	166.5	1033.84	93.2		228.0	121.32	96.7
	168.0	1035.53	93.2		229.5	122.92	96.8
	169.5	1037.31	93.2		231.0	124.20	96.9
	171.0	1038.73	93.3		232.5	125.33	97.0
	172.5	1040.16	93.4		234.0	126.81	97.1
	174.0	1041.55	93.4		235.5	128.58	97.2
	175.5	1042.84	93.4		237.0	129.62	97.3
	177.0	1044.00	93.4		238.5	130.90	97.4
	178.5	1045.21	93.4		240.0	132.24	97.5
	180.0	1046.33	93.4		241.5	133.39	97.5
	181.5	1047.21	93.4		243.0	134.45	97.6
	183.0	1048.54	93.5		244.5	135.82	97.8
	184.5	292.54	93.4		246.0	230.51	97.9
	186.0	122.47	94.1		247.5	409.81	97.9
	187.5	96.78	94.2		249.0	587.10	98.0
	189.0	181.74	94.2		250.5	678.13	98.0
	190.5	136.73	94.2		252.0	730.54	98.0
	192.0	90.03	94.3		253.5	757.01	98.0
	193.5	89.94	94.3		255.0	776.88	98.0
	195.0	89.86	94.4		256.5	796.86	98.0
	196.5	90.86	94.4		258.0	802.57	98.0
	198.0	93.15	94.5		259.5	813.00	98.0
	199.5	94.43	94.6		261.0	822.81	98.0
	201.0	95.95	94.7		262.5	832.91	98.1
	202.5	96.97	94.9		264.0	839.28	98.1
	204.0	97.97	95.2		265.5	851.28	98.1
	205.5	99.07	95.3		267.0	858.47	98.1
	207.0	100.77	95.4		268.5	862.12	98.1
	208.5	102.33	95.4		270.0	872.66	98.1
	210.0	103.96	95.5		271.5	880.10	98.1
	211.5	105.76	95.6		273.0	880.51	98.2
	213.0	106.95	95.8		274.5	883.99	98.2
	214.5	108.52	95.8		276.0	888.62	98.2
	216.0	110.45	95.9		277.5	892.78	98.2
	217.5	111.47	96.0		279.0	897.48	98.2
	219.0	113.27	96.1		280.5	908.55	98.2

Printing every 6 samples

Serial # 8520 Outside				Serial # 8520 Outside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	282.0	907.91	98.2		343.5	981.96	98.4
	283.5	910.90	98.2		345.0	983.02	98.4
	285.0	917.81	98.2		346.5	984.00	98.4
	286.5	920.47	98.2		348.0	984.91	98.4
	288.0	923.44	98.3		349.5	985.66	98.4
	289.5	926.63	98.3		351.0	986.75	98.5
	291.0	928.80	98.3		352.5	987.44	98.5
	292.5	930.90	98.3		354.0	988.33	98.5
	294.0	933.12	98.3		355.5	989.15	98.5
	295.5	935.68	98.3		357.0	990.08	98.5
	297.0	937.88	98.3		358.5	990.83	98.5
	298.5	940.09	98.3		360.0	991.66	98.5
	300.0	942.04	98.3		361.5	992.55	98.5
	301.5	943.98	98.3		363.0	993.43	98.5
	303.0	945.86	98.3		364.5	994.09	98.5
	304.5	947.61	98.3		366.0	994.96	98.5
	306.0	949.19	98.3		367.5	995.61	98.5
	307.5	950.85	98.3		369.0	996.46	98.5
	309.0	952.64	98.3		370.5	997.16	98.5
	310.5	954.23	98.3		372.0	998.00	98.5
	312.0	956.19	98.3		373.5	998.63	98.5
	313.5	957.55	98.3		375.0	999.20	98.5
	315.0	959.25	98.3		376.5	1000.05	98.5
	316.5	960.66	98.3		378.0	1000.60	98.5
	318.0	962.16	98.3		379.5	1001.54	98.5
	319.5	963.54	98.3		381.0	1001.92	98.5
	321.0	964.89	98.3		382.5	1002.52	98.5
	322.5	966.37	98.4		384.0	1003.26	98.5
	324.0	967.60	98.4		385.5	1003.79	98.5
	325.5	968.88	98.4		387.0	1004.55	98.5
	327.0	969.88	98.4		388.5	1005.05	98.5
	328.5	971.25	98.4		390.0	1005.66	98.6
	330.0	972.34	98.4		391.5	1006.32	98.6
	331.5	973.61	98.4		393.0	1006.86	98.6
	333.0	974.65	98.4		394.5	1007.42	98.6
	334.5	975.94	98.4		396.0	1008.01	98.6
	336.0	976.96	98.4		397.5	1008.50	98.6
	337.5	977.96	98.4		399.0	1009.11	98.6
	339.0	978.93	98.4		400.5	1009.66	98.6
	340.5	980.02	98.4		402.0	1010.28	98.6
	342.0	981.06	98.4		403.5	1010.98	98.6

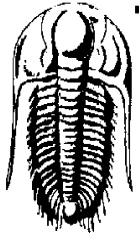
Printing every 6 samples

Serial # 8520 Outside				Serial # 8520 Outside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	405.0	1011.71	98.6		466.5	435.08	78.5
	406.5	1012.09	98.6		468.0	418.02	77.2
	408.0	1012.76	98.6		469.5	401.44	75.6
	409.5	1013.62	98.6		471.0	345.22	74.4
	411.0	1014.03	98.6		472.5	302.36	72.0
	412.5	1014.51	98.6		474.0	259.78	69.0
	414.0	1015.15	98.6		475.5	196.79	66.1
	415.5	1015.62	98.6		477.0	126.92	63.7
	417.0	1016.20	98.6		478.5	122.84	61.4
	418.5	1016.41	98.6		480.0	128.84	61.1
	420.0	1017.24	98.6		481.5	131.39	60.6
	421.5	1017.66	98.6		483.0	87.73	60.2
	423.0	1018.35	98.6		484.5	87.78	60.0
	424.5	1018.47	98.7		486.0	59.81	59.8
	426.0	1477.03	98.7		487.5	44.06	59.5
	427.5	1567.58	98.3		489.0	44.04	59.4
	429.0	1560.03	98.1		490.5	-1.08	59.2
	430.5	1568.21	98.0		492.0	-0.84	59.1
	432.0	1565.08	97.9		493.5	-0.86	59.0
	433.5	1647.73	97.8		495.0	-0.88	59.0
	435.0	1505.53	97.5		496.5	-0.88	59.0
	436.5	1509.80	97.2		498.0	-0.86	59.0
	438.0	1477.77	96.7		499.5	-0.84	59.0
	439.5	1374.70	96.0		501.0	-0.85	59.0
	441.0	1375.12	95.2		502.5	-0.85	59.0
	442.5	1264.63	94.1		504.0	-0.87	59.0
	444.0	1271.77	92.7		505.5	-0.87	58.9
	445.5	1194.73	89.9		507.0	-0.88	58.9
	447.0	1100.70	87.6		508.5	-0.87	58.9
	448.5	1092.05	86.3		510.0	-0.91	58.9
	450.0	1039.57	85.6		511.5	-0.92	58.9
	451.5	982.67	84.9		513.0	-0.91	59.0
	453.0	890.62	84.2		514.5	-0.87	59.0
	454.5	853.69	83.7		516.0	-0.86	59.0
	456.0	820.41	83.4		517.5	-0.85	59.0
	457.5	766.60	83.2		519.0	-0.84	59.0
	459.0	704.33	83.1		520.5	-0.83	59.0
	460.5	640.38	83.0		522.0	-0.81	59.0
	462.0	576.21	82.1		523.5	-0.80	59.0
	463.5	518.00	80.8		525.0	-0.83	59.1
	465.0	481.05	79.5		526.5	-0.86	59.1

Printing every 6 samples

Serial # 8520 Outside				Serial # 8653 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	528.0	-0.89	59.1				
	529.5	-0.87	59.1				
	531.0	-0.86	59.1				
	532.5	-0.89	59.1				
	534.0	-0.91	59.2				
	535.5	-0.91	59.2				
	537.0	-1.00	59.0				
	538.5	-1.00	45.6				
	540.0	-1.06	45.6				
	541.5	-1.04	45.7				
	543.0	-1.03	45.7				
	544.5	-1.02	45.8				
	610.5	-1.12	46.1				
	612.0	-0.94	44.6				
	613.0	-1.15	46.3				

Printing every 3 samples



**TRILOBITE
TESTING, INC.**

DRILL STEM TESTING - DATA LISTING

Sam Gary
1515 Wynkoop Ste 700
Denver Co 80202
ATTN: Neil Sharp

Steinert et al # 1-30
30-16-15-Barton-Ks
Job Ticket: 041353 **DST#: 1**
Test Start: 2010.12.14 @ 02:05:17

Serial # 8653 Inside				Serial # 8653 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	0.0	-2.50	73.3		1.6	-1.26	67.1
	0.1	-2.54	73.5		1.7	-1.24	66.8
	0.1	-2.58	73.7		1.8	-1.22	66.5
	0.2	-2.57	73.9		1.8	-1.21	66.2
	0.2	-2.55	74.0		1.9	-1.23	65.9
	0.3	-2.56	74.1		1.9	-1.21	65.5
	0.3	-2.56	74.1		2.0	-1.21	65.2
	0.3	-2.55	74.1		12.0	-1.23	56.5
	0.4	-2.56	74.1		42.0	-1.17	53.1
	0.4	-2.56	74.1		72.0	-0.85	65.5
	0.5	-2.53	74.1		92.5	0.21	80.6
	0.6	-2.53	74.1		94.0	0.21	81.3
	0.6	-2.55	74.0		95.5	0.21	82.0
	0.6	-2.52	73.9		97.0	0.24	82.6
	0.7	-2.49	73.9		98.5	0.28	83.1
	0.8	-2.45	73.7		100.0	0.29	83.7
	0.8	-2.44	73.5		101.5	0.31	84.2
	0.9	-2.40	73.2		103.0	0.33	84.7
	0.9	-2.41	72.7		104.5	0.34	85.2
	0.9	-2.43	72.4		106.0	0.35	85.7
	1.0	-2.39	72.3		107.5	0.36	86.2
	1.0	-1.75	70.9		109.0	0.36	86.7
	1.1	-1.63	70.6		110.5	0.34	87.1
	1.1	-1.56	70.3		112.0	22.93	90.1
	1.2	-1.50	69.8		113.5	26.25	90.4
	1.3	-1.46	69.5		115.0	28.96	90.9
	1.3	-1.42	69.3		116.5	30.80	91.1
	1.4	-1.40	69.0		118.0	32.61	91.3
	1.4	-1.36	68.7		119.5	34.57	91.4
	1.5	-1.34	68.4		121.0	36.42	91.5
	1.5	-1.32	68.1		122.5	38.16	91.6
	1.5	-1.30	67.8		124.0	39.62	91.8
	1.6	-1.28	67.5		125.5	39.89	91.8

Printing every 3 samples

Serial # 8653 Inside				Serial # 8653 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	127.0	39.89	91.8		188.5	69.67	93.8
	128.5	39.86	91.8		190.0	69.32	94.1
	130.0	39.83	91.8		191.5	69.95	94.0
	131.5	39.80	91.8		193.0	70.87	93.9
	133.0	39.78	91.7		194.5	73.11	93.9
	134.5	39.75	91.7		196.0	74.85	93.8
	136.0	39.71	91.7		197.5	76.95	93.8
	137.5	39.65	91.7		199.0	78.41	93.8
	139.0	39.56	91.7		200.5	79.42	93.8
	140.5	39.51	91.7		202.0	80.32	93.8
	142.0	39.48	91.7		203.5	81.12	93.9
	143.5	39.47	91.7		205.0	82.51	94.0
	145.0	39.54	91.7		206.5	84.49	94.1
	146.5	39.63	91.7		208.0	85.79	94.1
	148.0	39.66	91.7		209.5	87.43	94.2
	149.5	39.69	91.7		211.0	88.77	94.3
	151.0	39.73	91.7		212.5	90.51	94.4
	152.5	39.73	91.7		214.0	92.07	94.5
	154.0	39.71	91.7		215.5	93.13	94.5
	155.5	39.70	91.7		217.0	94.58	94.6
	157.0	39.70	91.7		218.5	96.37	94.7
	158.5	39.67	91.7		220.0	97.19	94.7
	160.0	39.66	91.7		221.5	98.74	94.8
	161.5	39.67	91.7		223.0	100.22	94.9
	163.0	39.68	91.7		224.5	101.76	94.9
	164.5	39.68	91.7		226.0	102.63	95.0
	166.0	39.70	91.7		227.5	103.94	95.1
	167.5	39.72	91.7		229.0	105.41	95.1
	169.0	39.74	91.7		230.5	106.42	95.2
	170.5	39.73	91.7		232.0	107.86	95.3
	172.0	39.76	91.7		233.5	109.18	95.3
	173.5	39.78	91.8		235.0	110.71	95.4
	175.0	39.78	91.8		236.5	111.75	95.4
	176.5	39.79	91.8		238.0	113.14	95.5
	178.0	39.79	91.8		239.5	114.21	95.6
	179.5	39.79	91.8		241.0	115.45	95.6
	181.0	39.79	91.8		242.5	116.10	95.7
	182.5	53.65	91.9		244.0	116.33	95.6
	184.0	59.89	93.5		245.5	116.45	95.5
	185.5	63.82	93.5		247.0	116.51	95.4
	187.0	64.22	93.7		248.5	116.55	95.4

Printing every 3 samples

Serial # 8653 Inside				Serial # 8653 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	250.0	116.57	95.3		311.5	116.68	95.0
	251.5	116.58	95.3		313.0	116.67	95.0
	253.0	116.61	95.2		314.5	116.67	95.0
	254.5	116.63	95.2		316.0	116.68	95.0
	256.0	116.67	95.2		317.5	116.67	95.0
	257.5	116.70	95.1		319.0	116.67	95.0
	259.0	116.71	95.1		320.5	116.68	95.0
	260.5	116.72	95.1		322.0	116.66	95.0
	262.0	116.71	95.1		323.5	116.65	95.0
	263.5	116.71	95.1		325.0	116.65	95.0
	265.0	116.70	95.0		326.5	116.66	95.0
	266.5	116.69	95.0		328.0	116.65	95.0
	268.0	116.68	95.0		329.5	116.63	95.0
	269.5	116.68	95.0		331.0	116.64	95.0
	271.0	116.66	95.0		332.5	116.65	95.0
	272.5	116.66	95.0		334.0	116.65	95.0
	274.0	116.67	95.0		335.5	116.66	95.0
	275.5	116.67	95.0		337.0	116.68	95.0
	277.0	116.67	95.0		338.5	116.68	95.0
	278.5	116.66	95.0		340.0	116.69	95.1
	280.0	116.67	95.0		341.5	116.70	95.1
	281.5	116.66	95.0		343.0	116.70	95.1
	283.0	116.66	95.0		344.5	116.70	95.1
	284.5	116.67	94.9		346.0	116.67	95.1
	286.0	116.67	94.9		347.5	116.65	95.1
	287.5	116.67	94.9		349.0	116.62	95.1
	289.0	116.66	94.9		350.5	116.60	95.1
	290.5	116.66	94.9		352.0	116.59	95.1
	292.0	116.65	94.9		353.5	116.59	95.1
	293.5	116.67	94.9		355.0	116.61	95.1
	295.0	116.66	94.9		356.5	116.63	95.1
	296.5	116.65	94.9		358.0	116.65	95.1
	298.0	116.67	94.9		359.5	116.66	95.1
	299.5	116.67	94.9		361.0	116.68	95.1
	301.0	116.65	94.9		362.5	116.67	95.1
	302.5	116.67	94.9		364.0	116.67	95.1
	304.0	116.68	94.9		365.5	116.65	95.2
	305.5	116.68	94.9		367.0	116.64	95.2
	307.0	116.70	94.9		368.5	116.63	95.2
	308.5	116.68	95.0		370.0	116.64	95.2
	310.0	116.69	94.9		371.5	116.64	95.2

Printing every 3 samples

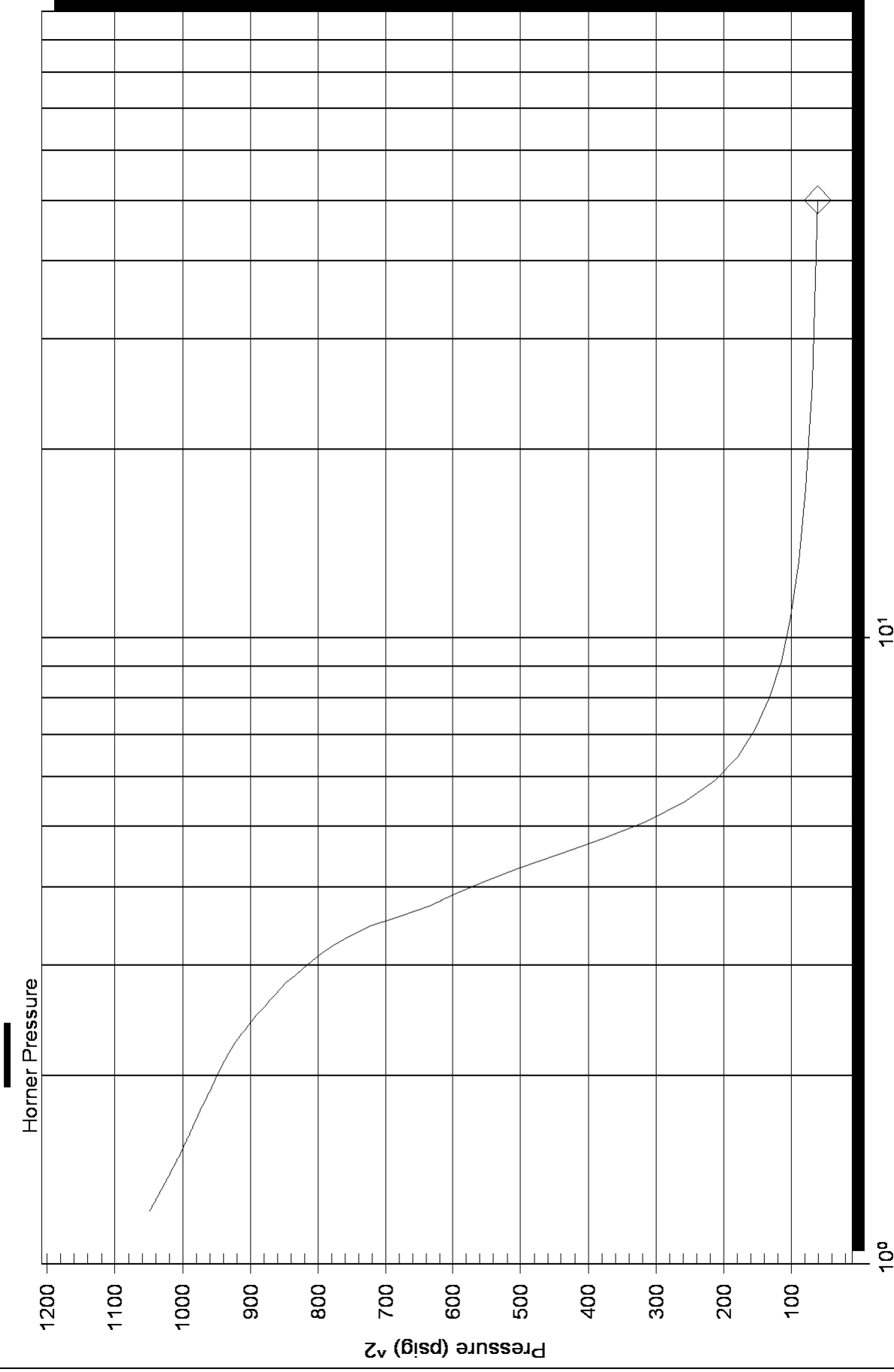
Serial # 8653 Inside				Serial # 8653 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	373.0	116.65	95.2		434.5	118.58	95.1
	374.5	116.67	95.2		436.0	116.22	94.8
	376.0	116.67	95.2		437.5	117.92	94.3
	377.5	116.68	95.2		439.0	115.98	93.7
	379.0	116.70	95.2		440.5	113.38	92.9
	380.5	116.68	95.2		442.0	115.50	92.1
	382.0	116.66	95.2		443.5	115.15	91.2
	383.5	116.66	95.3		445.0	114.45	90.2
	385.0	116.66	95.3		446.5	115.14	89.2
	386.5	116.66	95.3		448.0	114.92	88.4
	388.0	116.67	95.3		449.5	115.65	87.5
	389.5	116.66	95.3		451.0	115.02	86.8
	391.0	116.65	95.3		452.5	116.06	86.1
	392.5	116.62	95.3		454.0	119.02	85.5
	394.0	116.59	95.3		455.5	111.68	85.0
	395.5	116.60	95.3		457.0	114.85	84.5
	397.0	116.61	95.3		458.5	114.97	83.9
	398.5	116.62	95.3		460.0	114.76	83.2
	400.0	116.63	95.3		461.5	115.16	82.3
	401.5	116.62	95.4		463.0	116.42	81.3
	403.0	116.60	95.4		464.5	114.40	80.4
	404.5	116.61	95.4		466.0	114.48	79.5
	406.0	116.59	95.4		467.5	114.45	78.4
	407.5	116.59	95.4		469.0	111.15	77.1
	409.0	116.59	95.4		470.5	115.75	75.6
	410.5	116.59	95.4		472.0	113.91	73.8
	412.0	116.59	95.4		473.5	114.10	71.9
	413.5	116.57	95.4		475.0	111.61	69.9
	415.0	116.57	95.4		476.5	119.14	68.7
	416.5	116.55	95.4		478.0	112.67	66.8
	418.0	116.55	95.4		479.5	113.52	65.9
	419.5	116.53	95.5		481.0	95.56	64.6
	421.0	116.56	95.5		482.5	85.27	63.7
	422.5	117.07	95.5		484.0	86.05	63.1
	424.0	114.96	95.6		485.5	64.95	62.3
	425.5	116.83	95.6		487.0	57.37	61.7
	427.0	116.88	95.5		488.5	56.42	61.2
	428.5	116.89	95.5		490.0	31.94	60.9
	430.0	116.89	95.4		491.5	40.92	60.8
	431.5	116.85	95.3		493.0	6.34	60.5
	433.0	116.71	95.2		494.5	-0.72	60.7

Printing every 3 samples

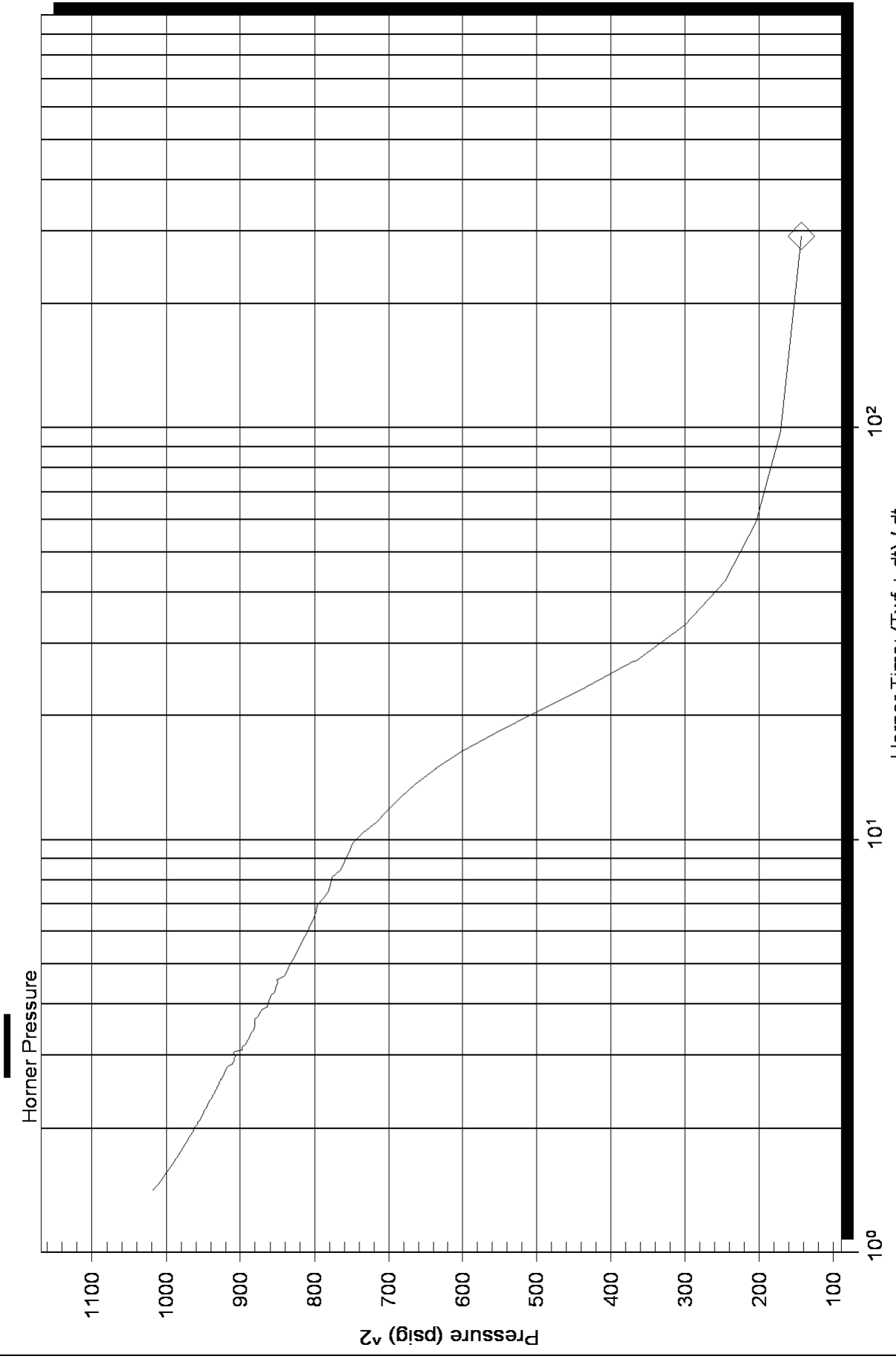
Serial # 8653 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	496.0	-0.44	60.1
	497.5	-0.20	59.9
	499.0	0.07	59.8
	500.5	0.62	59.6
	502.0	0.71	59.4
	503.5	-0.52	53.5
	505.0	-0.75	51.8
	506.5	-0.79	50.2
	508.0	-0.76	49.1
	509.5	-0.71	48.5
	511.0	-0.68	47.9
	512.5	-0.66	47.4
	514.0	-0.66	47.4
	515.5	-0.65	47.3
	517.0	-0.67	47.1
	518.5	-0.68	47.0
	520.0	-0.68	46.9
	521.5	-0.67	47.0
	523.0	-0.68	47.2
	524.5	-0.66	47.0
	526.0	-0.65	47.2
	527.5	-0.64	47.5
	529.0	-0.61	47.5
	530.5	-0.58	47.4
	532.0	-0.56	47.3
	533.5	-0.54	47.2
	535.0	-0.52	47.0
	536.5	-0.49	47.1
	538.0	-0.45	47.3
	539.5	-0.58	47.6
	541.0	-0.43	47.9
	542.5	-0.42	48.2
	544.0	-0.15	47.5
	544.5	0.60	46.6

Printing every 3 samples

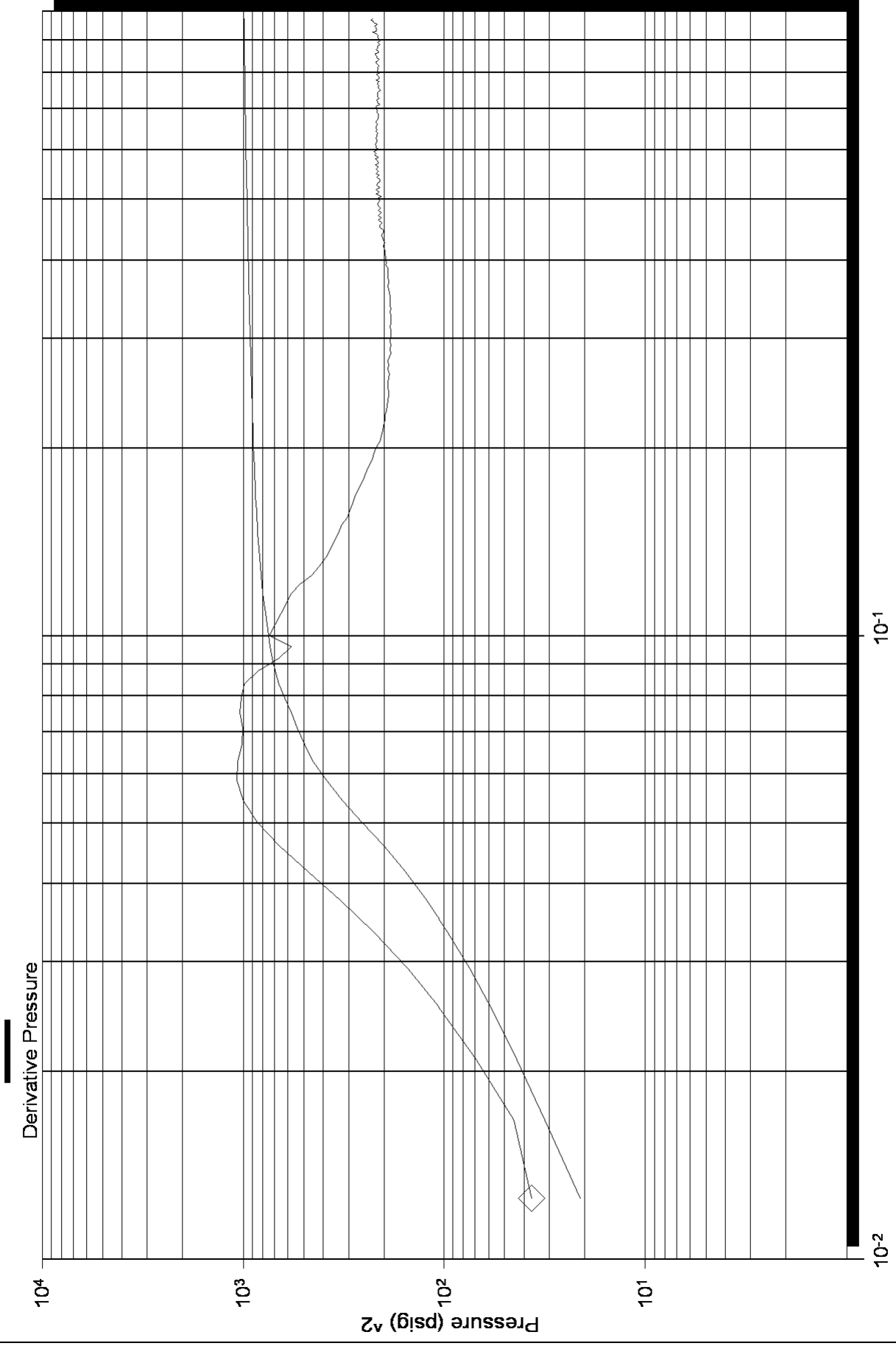
Homer Plot



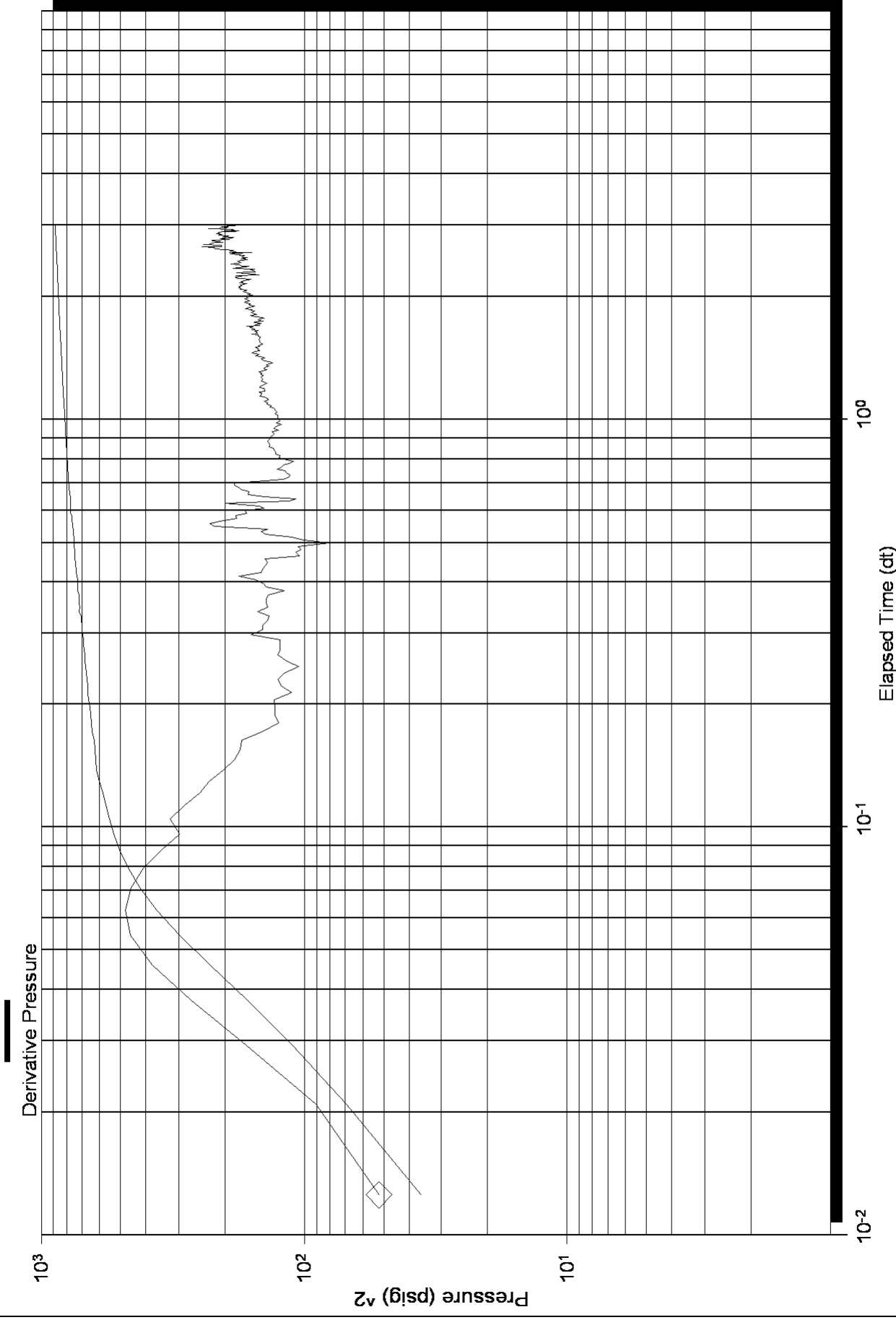
Homer Plot



Log-Log and Pseudo-Derivative



Log-Log and Pseudo-Derivative





DRILL STEM TEST REPORT

Prepared For: **Sam Gary**

1515 Wynkoop Ste 700
Denver Co 80202

ATTN: Neil Sharp

30-16-15-Barton-Ks

Steinert et al # 1-30

Start Date: 2010.12.14 @ 18:15:50

End Date: 2010.12.15 @ 00:43:50

Job Ticket #: 041354 DST #: 2

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Sam Gary
1515 Wynkoop Ste 700
Denver Co 80202
ATTN: Neil Sharp

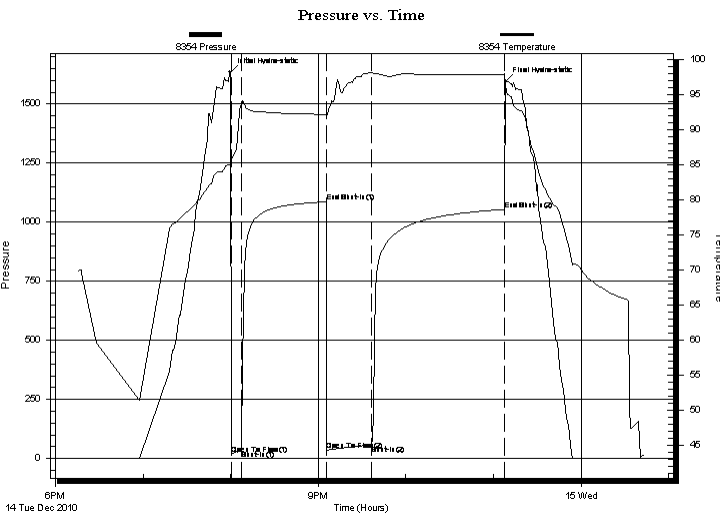
Steinert et al # 1-30
30-16-15-Barton-Ks
Job Ticket: 041354 **DST#: 2**
Test Start: 2010.12.14 @ 18:15:50

GENERAL INFORMATION:

Formation: **G LKC**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:00:50
Time Test Ended: 00:43:50
Interval: **3378.00 ft (KB) To 3394.00 ft (KB) (TVD)**
Total Depth: 3394.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Test Type: Conventional Bottom Hole
Tester: Dan Bangle
Unit No: 38
Reference Elevations: 2005.00 ft (KB)
1997.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8354 Inside
Press @ Run Depth: 57.24 psig @ 3379.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2010.12.14 End Date: 2010.12.15 Last Calib.: 2010.12.15
Start Time: 18:15:51 End Time: 00:43:50 Time On Btm: 2010.12.14 @ 19:59:35
Time Off Btm: 2010.12.14 @ 23:08:20

TEST COMMENT: IF-Weak building to 1"
FF-Weak building to 2"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1633.91	85.13	Initial Hydro-static
2	16.96	85.75	Open To Flow (1)
8	32.82	93.38	Shut-In(1)
66	1086.44	92.09	End Shut-In(1)
67	35.42	91.89	Open To Flow (2)
97	57.24	98.13	Shut-In(2)
188	1054.17	97.90	End Shut-In(2)
189	1594.14	96.35	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
75.00	Wtr	0.78

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Sam Gary
1515 Wynkoop Ste 700
Denver Co 80202
ATTN: Neil Sharp

Steinert et al # 1-30
30-16-15-Barton-Ks
Job Ticket: 041354 **DST#: 2**
Test Start: 2010.12.14 @ 18:15:50

Tool Information

Drill Pipe:	Length: 3331.00 ft	Diameter: 3.80 inches	Volume: 46.73 bbl	Tool Weight: 3800.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 46.88 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3378.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	16.00 ft			
Tool Length:	51.00 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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Change Over Sub	1.00			3344.00	
Recorder	0.00	8653	Inside	3344.00	
Blank Spacing	4.00			3348.00	
Shut In Tool	5.00			3353.00	
Sampler	3.00			3356.00	
Hydraulic tool	5.00			3361.00	
Jars	5.00			3366.00	
Safety Joint	3.00			3369.00	
Packer	5.00			3374.00	35.00 Bottom Of Top Packer
Packer	4.00			3378.00	
Stubb	1.00			3379.00	
Recorder	0.00	8354	Inside	3379.00	
Recorder	0.00	8520	Outside	3379.00	
Perforations	12.00			3391.00	
Bullnose	3.00			3394.00	16.00 Bottom Packers & Anchor

Total Tool Length: 51.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Sam Gary
1515 Wynkoop Ste 700
Denver Co 80202
ATTN: Neil Sharp

Steinert et al # 1-30
30-16-15-Barton-Ks
Job Ticket: 041354 **DST#: 2**
Test Start: 2010.12.14 @ 18:15:50

Mud and Cushion Information

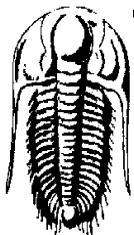
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	85000 ppm
Viscosity: 44.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.18 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5000.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
75.00	Wtr	0.779

Total Length: 75.00 ft Total Volume: 0.779 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: Sampler
 4000ml Wtr



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

GAS RATES

Sam Gary
1515 Wynkoop Ste 700
Denver Co 80202
ATTN: Neil Sharp

Steinert et al # 1-30
30-16-15-Barton-Ks
Job Ticket: 041354 **DST#: 2**
Test Start: 2010.12.14 @ 18:15:50

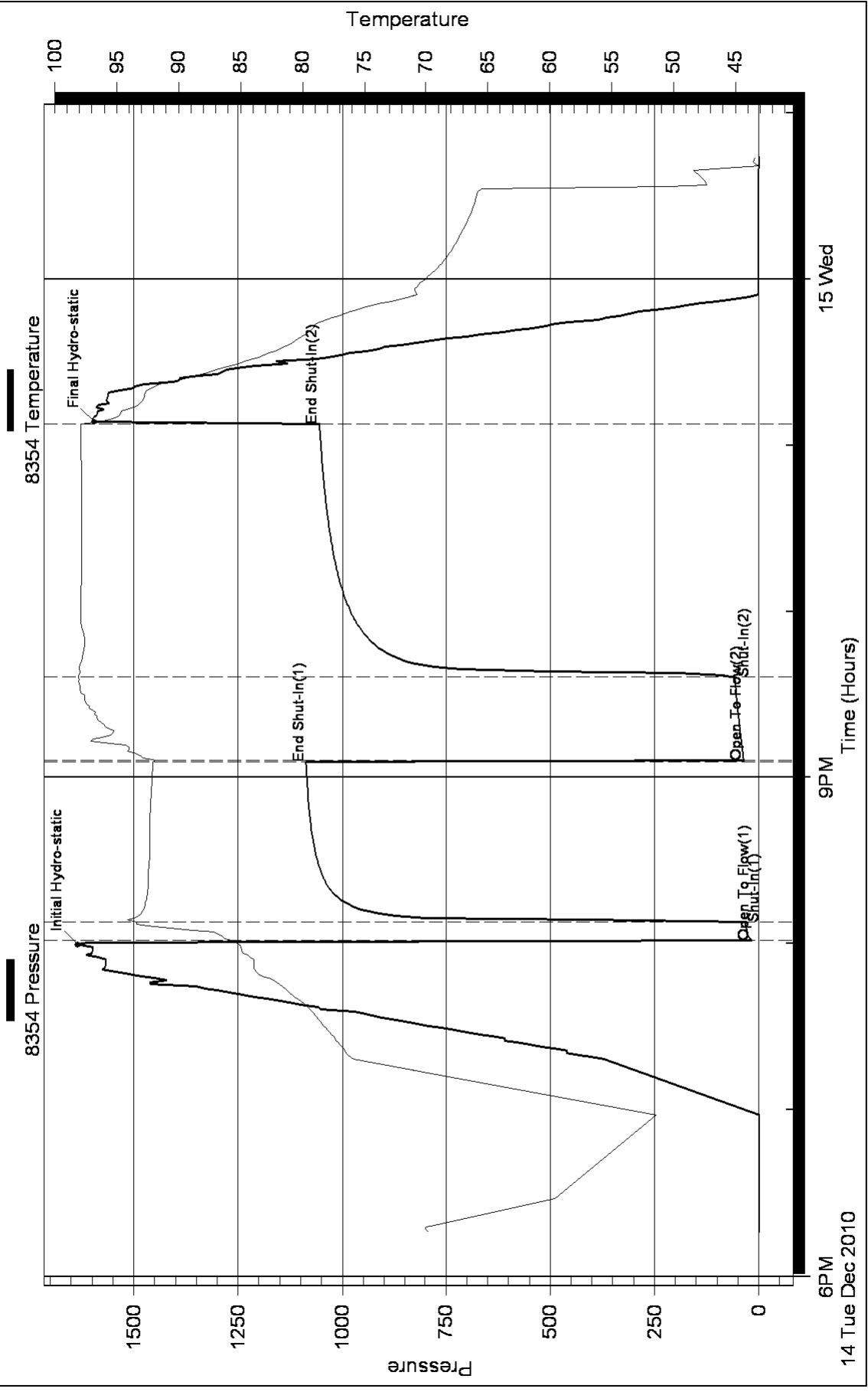
Gas Rates Information

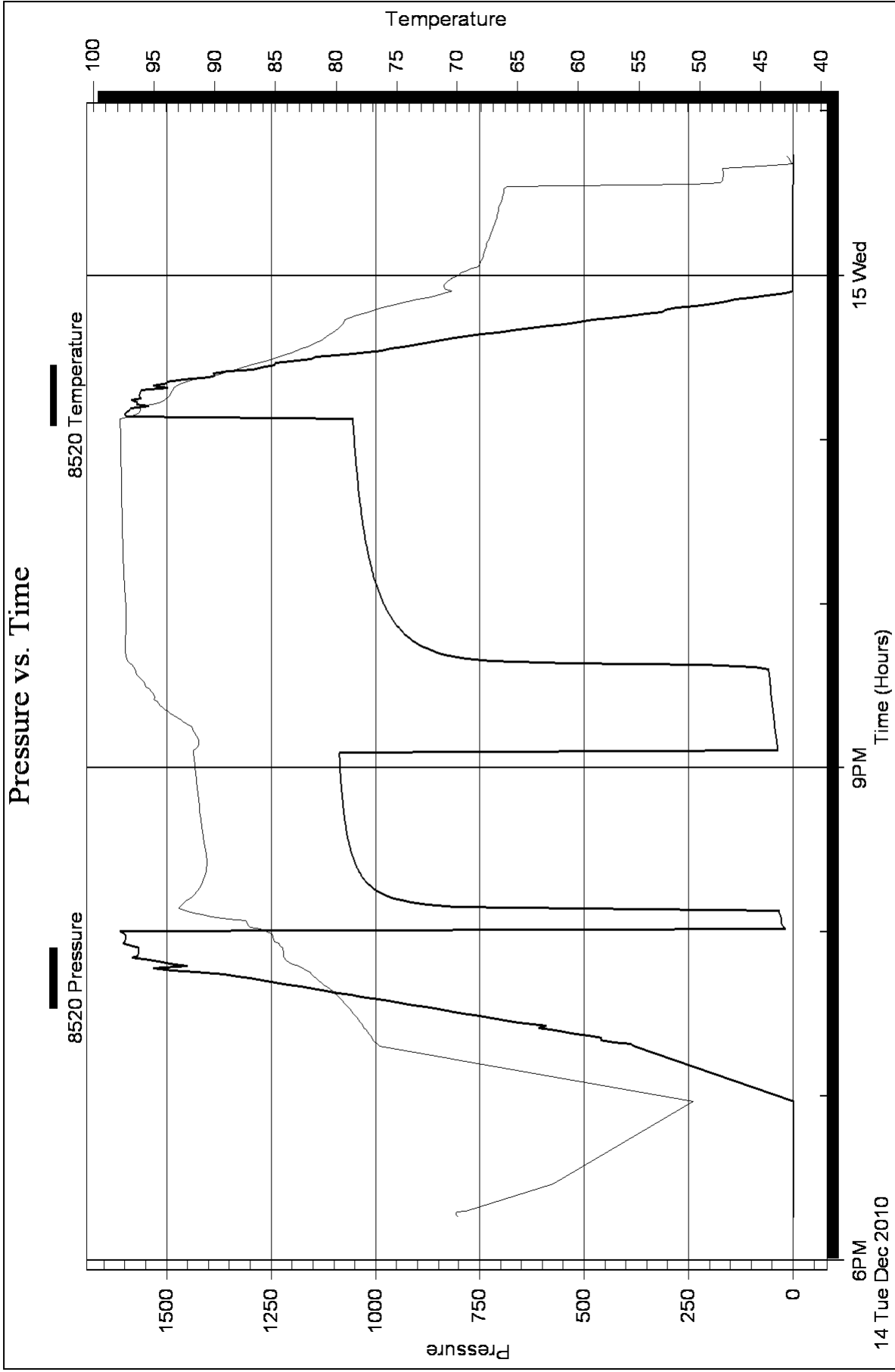
Temperature: 59 deg C
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m ³ /d)
		0.00	0.00	0.00

Pressure vs. Time





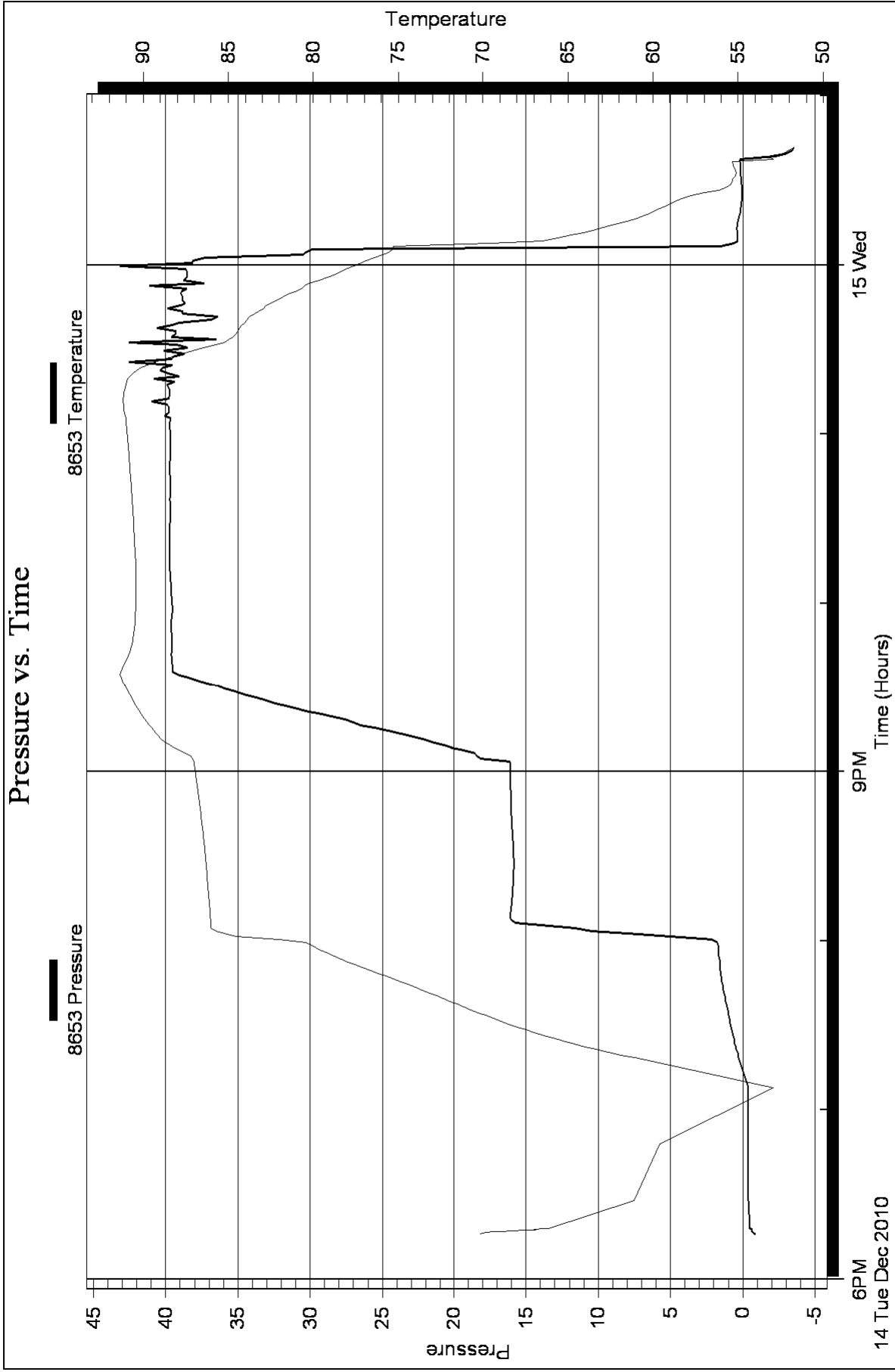
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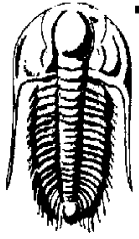
Inside

Sam Gary

30-16-15-Barton-Ks

DST Test Number: 2





**TRILOBITE
TESTING, INC.**

DRILL STEM TESTING - DATA LISTING

Sam Gary
1515 Wynkoop Ste 700
Denver Co 80202
ATTN: Neil Sharp

Steinert et al # 1-30
30-16-15-Barton-Ks
Job Ticket: 041354 **DST#: 2**
Test Start: 2010.12.14 @ 18:15:50

Serial # 8354 Inside				Serial # 8354 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	0.0	-1.10	69.9		72.0	699.15	77.8
	0.1	-1.10	69.9		73.2	756.96	78.0
	0.2	-1.11	69.9		74.5	866.43	78.4
	0.3	-1.10	69.9		75.7	850.20	78.5
	0.3	-1.10	69.9		77.0	955.71	78.8
	0.4	-1.11	69.9		78.2	940.65	79.0
	0.5	-1.12	70.0		79.5	971.65	79.2
	0.6	-1.12	70.0		80.7	1140.19	79.6
	0.7	-1.12	70.0		82.0	1090.37	79.8
	0.8	-1.12	70.0		83.2	1147.50	80.2
	0.8	-1.12	70.0		84.5	1166.51	80.5
	0.9	-1.12	70.0		85.7	1319.89	80.9
	1.0	-1.11	70.0		87.0	1300.29	81.2
	1.1	-1.11	70.0		88.2	1458.16	81.6
	1.2	-1.11	70.0		89.5	1391.55	81.9
	1.3	-1.12	70.1		90.7	1420.80	82.3
	1.3	-1.11	70.0		92.0	1494.64	83.0
	1.4	-1.10	70.0		93.2	1510.92	83.6
	1.5	-1.09	70.0		94.5	1575.42	83.9
	1.6	-1.09	70.0		95.7	1569.48	83.9
	1.7	-1.08	70.0		97.0	1567.05	83.9
	1.8	-1.08	69.9		98.2	1566.29	84.0
	1.8	-1.15	69.8		99.5	1585.25	84.3
	1.9	-1.20	69.6		100.7	1599.92	84.8
	12.0	-1.35	59.5		102.0	1597.43	84.9
	62.0	370.81	75.8		103.2	1596.99	85.0
	63.2	442.64	76.2		103.5	1627.56	85.0
	64.5	460.27	76.5	Initial Hydro-static	103.7	1633.91	85.1
	65.7	489.64	76.6		104.0	1619.77	85.2
	67.0	562.21	76.9		104.2	1612.44	85.4
	68.2	579.51	77.1		104.5	1611.87	85.8
	69.5	608.40	77.4		104.7	1621.78	86.0
	70.7	699.74	77.6	Open To Flow (1)	105.0	16.96	85.7

Printing every 5 samples

Serial # 8354 Inside				Serial # 8354 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	105.2	19.75	86.1		148.7	1076.52	92.3
	105.5	19.88	86.2		150.0	1077.40	92.3
	105.7	20.83	86.3		151.2	1078.13	92.3
	107.0	27.10	86.7		152.5	1079.08	92.3
	108.2	28.57	87.4		153.7	1079.75	92.3
	109.5	29.08	90.7		155.0	1080.45	92.3
	110.7	31.53	93.2		156.2	1081.09	92.2
	111.2	32.10	93.3		157.5	1081.77	92.2
	111.5	32.62	93.1		158.7	1082.37	92.2
Shut-In(1)	111.7	32.82	93.4		160.0	1082.87	92.2
	112.0	51.44	93.7		161.2	1083.42	92.2
	112.2	134.17	94.0		162.5	1083.87	92.2
	112.5	412.32	94.1		163.7	1084.32	92.1
	113.7	853.43	93.4		165.0	1084.87	92.1
	115.0	920.31	93.0		166.2	1085.33	92.1
	116.2	954.87	92.9		167.5	1086.08	92.1
	117.5	977.53	92.7		168.7	1086.30	92.1
	118.7	993.63	92.7		169.0	1086.34	92.1
	120.0	1005.94	92.6		169.2	1086.37	92.1
	121.2	1015.61	92.5	End Shut-In(1)	169.5	1086.44	92.1
	122.5	1023.60	92.5		169.7	39.41	91.5
	123.7	1030.08	92.5	Open To Flow (2)	170.0	35.42	91.9
	125.0	1035.66	92.5		170.2	35.73	92.1
	126.2	1040.43	92.5		171.5	36.50	93.0
	127.5	1044.64	92.5		172.7	37.63	93.5
	128.7	1048.25	92.5		174.0	38.67	94.0
	130.0	1051.59	92.4		175.2	39.78	94.2
	131.2	1054.46	92.4		176.5	40.96	95.9
	132.5	1057.11	92.4		177.7	41.60	96.9
	133.7	1059.61	92.4		179.0	42.52	95.6
	135.0	1061.52	92.3		180.2	43.59	95.2
	136.2	1063.54	92.3		181.5	44.73	95.6
	137.5	1065.31	92.3		182.7	45.55	96.0
	138.7	1066.91	92.3		184.0	46.58	96.4
	140.0	1068.38	92.3		185.2	47.35	96.6
	141.2	1069.82	92.3		186.5	48.39	96.7
	142.5	1071.12	92.3		187.7	49.44	96.8
	143.7	1072.39	92.3		189.0	50.25	97.2
	145.0	1073.58	92.3		190.2	51.11	97.4
	146.2	1074.61	92.3		191.5	51.85	97.5
	147.5	1075.59	92.3		192.7	52.60	97.6

Printing every 5 samples

Serial # 8354 Inside				Serial # 8354 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	194.0	53.40	97.7		240.0	1014.20	97.8
	195.2	54.18	97.9		241.2	1015.99	97.8
	196.5	54.92	98.0		242.5	1017.70	97.8
	197.7	55.70	98.0		243.7	1019.49	97.8
	199.0	56.32	98.1		245.0	1021.09	97.8
	200.0	57.11	98.1		246.2	1022.59	97.8
	200.2	57.19	98.1		247.5	1023.98	97.8
Shut-In(2)	200.5	57.24	98.1		248.7	1025.44	97.8
	200.7	69.76	98.1		250.0	1026.87	97.8
	201.0	86.13	98.1		251.2	1028.11	97.8
	201.2	108.98	98.0		252.5	1029.42	97.8
	202.5	502.84	98.0		253.7	1030.66	97.8
	203.7	761.16	98.0		255.0	1031.85	97.8
	205.0	818.96	97.9		256.2	1032.97	97.8
	206.2	851.16	97.8		257.5	1034.06	97.8
	207.5	873.43	97.8		258.7	1035.08	97.8
	208.7	890.61	97.7		260.0	1036.11	97.8
	210.0	904.48	97.7		261.2	1037.14	97.8
	211.2	916.11	97.6		262.5	1038.07	97.8
	212.5	926.13	97.6		263.7	1039.08	97.8
	213.7	934.79	97.6		265.0	1039.90	97.8
	215.0	942.40	97.6		266.2	1040.76	97.8
	216.2	949.31	97.7		267.5	1041.65	97.8
	217.5	955.50	97.8		268.7	1042.47	97.8
	218.7	961.10	97.8		270.0	1043.26	97.8
	220.0	966.24	97.9		271.2	1044.09	97.8
	221.2	970.88	97.9		272.5	1044.79	97.8
	222.5	975.28	97.9		273.7	1045.56	97.9
	223.7	979.31	97.9		275.0	1046.15	97.9
	225.0	982.98	97.9		276.2	1046.94	97.9
	226.2	986.59	97.9		277.5	1047.60	97.9
	227.5	989.79	97.9		278.7	1048.22	97.9
	228.7	993.22	97.9		280.0	1048.93	97.9
	230.0	995.80	97.9		281.2	1049.65	97.9
	231.2	998.57	97.9		282.5	1050.13	97.9
	232.5	1001.38	97.9		283.7	1050.80	97.9
	233.7	1003.89	97.9		285.0	1051.32	97.9
	235.0	1006.12	97.9		286.2	1051.86	97.9
	236.2	1008.13	97.8		287.5	1052.49	97.9
	237.5	1010.25	97.8		288.7	1053.00	97.9
	238.7	1012.21	97.8		290.0	1053.55	97.9

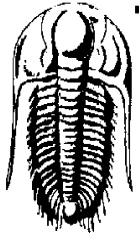
Printing every 5 samples

Serial # 8354 Inside				Serial # 8354 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
End Shut-In(2)	291.2	1054.09	97.9		334.5	174.27	74.4
	291.5	1054.13	97.9		335.7	98.76	73.1
	291.7	1054.17	97.9		337.0	64.16	71.8
	292.0	1499.23	98.2		338.2	0.95	70.7
	292.2	1568.35	97.5		339.5	-0.19	70.9
Final Hydro-static	292.5	1594.14	96.4		340.7	-0.28	70.8
	292.7	1594.15	96.0		342.0	-0.32	70.6
	293.0	1592.96	95.8		343.2	-0.35	70.3
	293.2	1599.12	95.6		344.5	-0.37	69.9
	294.5	1592.23	94.8		345.7	-0.40	69.6
	295.7	1586.35	94.7		347.0	-0.44	69.3
	297.0	1572.44	94.2		348.2	-0.40	69.0
	298.2	1585.24	93.3		349.5	-0.42	68.7
	299.5	1565.75	93.1		350.7	-0.42	68.5
	300.7	1564.62	92.8		352.0	-0.43	68.3
	302.0	1561.92	92.7		353.2	-0.41	68.1
	303.2	1516.08	92.7		354.5	-0.35	67.9
	304.5	1500.20	92.2		355.7	-0.28	67.7
	305.7	1446.79	91.7		357.0	-0.20	67.6
	307.0	1414.43	90.6		358.2	-0.20	67.4
	308.2	1389.44	89.4		359.5	-0.15	67.3
	309.5	1317.04	88.3		360.7	-0.10	67.1
	310.7	1249.68	87.4		362.0	-0.09	67.0
	312.0	1240.32	86.4		363.2	-0.08	66.8
	313.2	1155.61	85.3		364.5	-0.06	66.7
	314.5	1126.46	84.4		365.7	-0.01	66.6
	315.7	1034.58	83.6		367.0	0.04	66.4
	317.0	1011.72	82.8		368.2	0.07	66.3
	318.2	959.52	82.2		369.5	0.09	66.2
	319.5	898.06	81.5		370.7	0.14	66.1
	320.7	823.79	80.9		372.0	0.17	66.0
	322.0	785.41	80.5		373.2	0.22	65.9
	323.2	699.29	80.1		374.5	0.19	65.9
	324.5	644.45	79.6		375.7	-0.09	65.8
	325.7	592.96	79.3		377.0	0.00	59.3
	327.0	510.56	79.1		378.2	-0.68	47.3
	328.2	465.51	78.7		379.5	-0.72	47.5
	329.5	398.19	78.0		380.7	-0.68	47.8
	330.7	333.22	77.1		382.0	-0.68	48.1
	332.0	285.97	76.3		383.2	-0.77	48.4
	333.2	195.89	75.4		384.5	-0.89	44.0

Printing every 5 samples

Serial # 8354 Inside				Serial # 8520 Outside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	385.7	-0.94	43.5				
	387.0	-0.98	43.5				
	388.0	-0.98	43.4				

Printing every 4 samples



**TRILOBITE
TESTING, INC.**

DRILL STEM TESTING - DATA LISTING

Sam Gary
1515 Wynkoop Ste 700
Denver Co 80202
ATTN: Neil Sharp

Steinert et al # 1-30
30-16-15-Barton-Ks
Job Ticket: 041354 **DST#: 2**
Test Start: 2010.12.14 @ 18:15:50

Serial # 8520 Outside				Serial # 8520 Outside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	0.0	-1.07	69.9		63.7	430.31	76.8
	0.1	-1.10	69.9		64.7	459.78	77.0
	0.1	-1.12	70.0		65.7	489.50	77.1
	0.2	-1.14	70.0		66.7	518.89	77.3
	0.3	-1.14	70.0		67.7	548.48	77.4
	0.3	-1.16	70.0		68.7	609.23	77.6
	0.4	-1.16	70.0		69.7	590.17	77.8
	0.5	-1.15	70.0		70.7	652.88	77.9
	0.5	-1.18	70.0		71.7	699.07	78.1
	0.6	-1.18	70.0		72.7	729.16	78.3
	0.7	-1.18	70.0		73.7	872.58	78.5
	0.7	-1.19	70.0		74.7	819.81	78.7
	0.8	-1.18	70.1		75.7	850.17	78.9
	0.9	-1.18	70.1		76.7	880.50	79.1
	0.9	-1.17	70.1		77.7	1013.20	79.3
	1.0	-1.16	70.1		78.7	968.26	79.5
	1.1	-1.18	70.1		79.7	1000.11	79.7
	1.1	-1.19	70.1		80.7	1137.68	80.0
	1.2	-1.16	70.1		81.7	1090.14	80.1
	1.3	-1.15	70.1		82.7	1119.86	80.4
	1.3	-1.14	70.1		83.7	1219.22	80.7
	1.4	-1.15	70.1		84.7	1209.52	81.0
	1.5	-1.16	70.1		85.7	1334.01	81.3
	1.5	-1.16	70.1		86.7	1328.64	81.6
	1.6	-1.18	70.0		87.7	1330.68	81.8
	1.7	-1.21	70.0		88.7	1361.12	82.1
	1.7	-1.23	70.0		89.7	1391.10	82.4
	1.8	-1.25	69.8		90.7	1531.71	82.7
	1.9	-1.24	69.5		91.7	1542.29	83.2
	1.9	-1.22	69.3		92.7	1511.05	83.8
	12.0	-1.24	62.1		93.7	1541.50	84.2
	52.0	132.57	71.0		94.7	1570.97	84.3
	62.7	401.29	76.6		95.7	1569.09	84.3

Printing every 4 samples

Serial # 8520 Outside				Serial # 8520 Outside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	96.7	1567.25	84.4		137.7	1065.56	90.9
	97.7	1566.39	84.4		138.7	1066.96	90.9
	98.7	1585.69	84.6		139.7	1068.02	91.0
	99.7	1605.10	84.7		140.7	1069.32	91.0
	100.7	1599.98	85.1		141.7	1070.37	91.0
	101.7	1597.91	85.2		142.7	1071.33	91.1
	102.7	1597.00	85.2		143.7	1072.29	91.1
	103.7	1612.19	85.4		144.7	1073.27	91.1
	104.7	15.19	85.5		145.7	1074.16	91.2
	105.7	21.79	87.1		146.7	1074.98	91.2
	106.7	27.83	87.3		147.7	1075.74	91.2
	107.7	28.22	87.4		148.7	1076.47	91.2
	108.7	27.92	88.8		149.7	1077.17	91.3
	109.7	29.57	90.6		150.7	1077.82	91.3
	110.7	32.02	91.5		151.7	1078.49	91.3
	111.7	33.47	92.4		152.7	1079.17	91.3
	112.7	691.18	92.9		153.7	1079.80	91.3
	113.7	859.61	92.8		154.7	1080.24	91.4
	114.7	913.70	92.5		155.7	1080.88	91.4
	115.7	945.00	92.2		156.7	1081.35	91.4
	116.7	966.28	91.9		157.7	1081.89	91.5
	117.7	982.12	91.6		158.7	1082.36	91.5
	118.7	994.39	91.4		159.7	1082.81	91.5
	119.7	1004.18	91.3		160.7	1083.13	91.5
	120.7	1012.32	91.1		161.7	1083.59	91.5
	121.7	1019.27	91.0		162.7	1083.88	91.6
	122.7	1025.11	90.9		163.7	1084.41	91.6
	123.7	1030.12	90.8		164.7	1084.80	91.6
	124.7	1034.79	90.8		165.7	1085.20	91.6
	125.7	1038.52	90.7		166.7	1085.49	91.7
	126.7	1042.28	90.7		167.7	1086.12	91.7
	127.7	1045.46	90.7		168.7	1086.25	91.7
	128.7	1048.38	90.6		169.7	36.28	91.4
	129.7	1050.93	90.6		170.7	36.08	91.6
	130.7	1053.30	90.6		171.7	36.95	91.4
	131.7	1055.46	90.7		172.7	37.86	91.3
	132.7	1057.81	90.7		173.7	38.73	91.3
	133.7	1059.65	90.8		174.7	39.75	91.4
	134.7	1061.09	90.8		175.7	40.49	91.5
	135.7	1062.89	90.8		176.7	41.31	91.6
	136.7	1064.26	90.9		177.7	42.25	91.8

Printing every 4 samples

Serial # 8520 Outside				Serial # 8520 Outside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	178.7	42.88	91.8		219.7	965.45	97.3
	179.7	43.78	92.2		220.7	969.26	97.3
	180.7	44.33	92.6		221.7	972.91	97.3
	181.7	45.22	92.8		222.7	976.29	97.3
	182.7	45.98	93.3		223.7	979.46	97.3
	183.7	46.73	93.6		224.7	982.55	97.3
	184.7	47.53	93.9		225.7	985.50	97.3
	185.7	48.17	94.3		226.7	988.07	97.4
	186.7	49.11	94.5		227.7	990.63	97.4
	187.7	49.85	94.6		228.7	992.99	97.4
	188.7	50.55	94.9		229.7	995.71	97.4
	189.7	51.03	94.9		230.7	997.64	97.4
	190.7	51.77	95.0		231.7	999.71	97.4
	191.7	52.38	95.2		232.7	1001.77	97.4
	192.7	53.00	95.3		233.7	1003.70	97.4
	193.7	53.44	95.7		234.7	1005.67	97.5
	194.7	54.20	95.7		235.7	1007.46	97.5
	195.7	54.94	95.9		236.7	1009.08	97.5
	196.7	55.46	96.1		237.7	1010.73	97.5
	197.7	56.09	96.3		238.7	1012.37	97.5
	198.7	56.40	96.5		239.7	1013.90	97.5
	199.7	57.26	96.5		240.7	1015.38	97.5
	200.7	74.37	96.6		241.7	1016.82	97.5
	201.7	213.45	96.8		242.7	1018.09	97.5
	202.7	630.39	97.0		243.7	1019.50	97.5
	203.7	766.42	97.2		244.7	1020.82	97.5
	204.7	813.19	97.3		245.7	1022.14	97.6
	205.7	841.64	97.3		246.7	1023.25	97.6
	206.7	862.10	97.3		247.7	1024.43	97.6
	207.7	878.31	97.4		248.7	1025.53	97.6
	208.7	891.41	97.4		249.7	1026.65	97.6
	209.7	902.73	97.4		250.7	1027.69	97.6
	210.7	912.36	97.3		251.7	1028.73	97.6
	211.7	920.78	97.3		252.7	1029.73	97.6
	212.7	928.48	97.3		253.7	1030.72	97.6
	213.7	935.22	97.3		254.7	1031.65	97.6
	214.7	941.32	97.3		255.7	1032.47	97.6
	215.7	946.99	97.3		256.7	1033.39	97.6
	216.7	952.12	97.3		257.7	1034.34	97.6
	217.7	956.84	97.3		258.7	1034.97	97.6
	218.7	961.36	97.3		259.7	1035.98	97.6

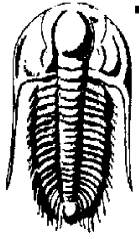
Printing every 4 samples

Serial # 8520 Outside				Serial # 8520 Outside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	260.7	1036.74	97.6		301.7	1562.08	93.5
	261.7	1037.62	97.7		302.7	1561.21	93.4
	262.7	1038.30	97.7		303.7	1532.70	93.1
	263.7	1038.95	97.7		304.7	1472.18	92.6
	264.7	1039.72	97.7		305.7	1439.79	91.9
	265.7	1040.62	97.7		306.7	1398.52	90.9
	266.7	1041.18	97.7		307.7	1370.64	89.8
	267.7	1041.93	97.7		308.7	1328.73	89.0
	268.7	1042.52	97.7		309.7	1292.78	88.2
	269.7	1043.03	97.7		310.7	1338.21	87.5
	270.7	1043.56	97.7		311.7	1243.19	86.7
	271.7	1044.34	97.7		312.7	1203.66	85.8
	272.7	1044.98	97.7		313.7	1165.59	85.0
	273.7	1045.56	97.7		314.7	1084.42	84.3
	274.7	1046.13	97.7		315.7	1037.28	83.7
	275.7	1046.76	97.7		316.7	1011.20	83.1
	276.7	1047.20	97.7		317.7	973.51	82.5
	277.7	1047.87	97.7		318.7	902.95	82.0
	278.7	1048.28	97.7		319.7	851.05	81.5
	279.7	1048.74	97.7		320.7	819.92	81.1
	280.7	1049.28	97.7		321.7	784.52	80.8
	281.7	1049.86	97.7		322.7	747.71	80.4
	282.7	1050.31	97.7		323.7	662.85	80.1
	283.7	1050.65	97.7		324.7	628.29	79.8
	284.7	1051.28	97.7		325.7	593.61	79.5
	285.7	1051.67	97.7		326.7	518.48	79.4
	286.7	1052.21	97.7		327.7	479.50	79.3
	287.7	1052.57	97.7		328.7	439.24	78.7
	288.7	1052.93	97.8		329.7	401.92	78.0
	289.7	1053.48	97.8		330.7	313.77	77.4
	290.7	1054.11	97.8		331.7	279.63	76.6
	291.7	1054.22	97.8		332.7	249.18	75.9
	292.7	1593.89	96.7		333.7	193.47	74.9
	293.7	1597.72	96.3		334.7	137.86	73.9
	294.7	1590.13	96.1		335.7	99.65	72.8
	295.7	1586.35	96.1		336.7	63.26	71.8
	296.7	1515.94	95.5		337.7	23.18	70.8
	297.7	1571.00	94.4		338.7	-0.04	70.8
	298.7	1582.24	94.0		339.7	-0.17	71.1
	299.7	1565.58	93.8		340.7	-0.31	71.1
	300.7	1564.41	93.6		341.7	-0.37	70.9

Printing every 4 samples

Serial # 8520 Outside				Serial # 8520 Outside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	342.7	-0.41	70.5		383.7	-1.30	46.3
	343.7	-0.43	70.2		384.7	-1.35	42.3
	344.7	-0.47	69.7		385.7	-1.33	42.5
	345.7	-0.52	69.1		386.7	-1.34	42.7
	346.7	-0.51	68.7		387.7	-1.33	42.9
	347.7	-0.54	68.1		388.0	-1.32	42.9
	348.7	-0.58	68.0				
	349.7	-0.63	68.0				
	350.7	-0.67	67.9				
	351.7	-0.68	67.8				
	352.7	-0.68	67.7				
	353.7	-0.66	67.7				
	354.7	-0.64	67.6				
	355.7	-0.61	67.5				
	356.7	-0.60	67.4				
	357.7	-0.61	67.3				
	358.7	-0.60	67.2				
	359.7	-0.59	67.2				
	360.7	-0.59	67.1				
	361.7	-0.59	67.0				
	362.7	-0.60	66.9				
	363.7	-0.59	66.8				
	364.7	-0.56	66.7				
	365.7	-0.55	66.7				
	366.7	-0.58	66.6				
	367.7	-0.62	66.6				
	368.7	-0.66	66.6				
	369.7	-0.66	66.5				
	370.7	-0.65	66.4				
	371.7	-0.63	66.3				
	372.7	-0.63	66.2				
	373.7	-0.67	66.2				
	374.7	-0.69	66.1				
	375.7	-0.72	66.1				
	376.7	-0.79	65.8				
	377.7	-1.06	48.5				
	378.7	-1.34	48.1				
	379.7	-1.29	48.1				
	380.7	-1.23	48.1				
	381.7	-1.24	48.0				
	382.7	-1.27	48.2				

Printing every 2 samples



**TRILOBITE
TESTING, INC.**

DRILL STEM TESTING - DATA LISTING

Sam Gary
1515 Wynkoop Ste 700
Denver Co 80202
ATTN: Neil Sharp

Steinert et al # 1-30
30-16-15-Barton-Ks
Job Ticket: 041354 **DST#: 2**
Test Start: 2010.12.14 @ 18:15:50

Serial # 8653 Inside				Serial # 8653 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	0.0	-0.86	70.1		1.1	-0.65	68.3
	0.0	-0.79	70.1		1.1	-0.66	68.2
	0.1	-0.80	70.1		1.2	-0.66	68.1
	0.1	-0.80	70.1		1.2	-0.66	68.0
	0.1	-0.80	70.1		1.2	-0.66	67.8
	0.2	-0.77	70.1		1.3	-0.66	67.7
	0.2	-0.76	70.1		1.3	-0.67	67.5
	0.2	-0.75	70.0		1.3	-0.67	67.4
	0.3	-0.74	70.0		1.4	-0.66	67.2
	0.3	-0.73	70.0		1.4	-0.66	67.1
	0.3	-0.73	70.0		1.4	-0.67	67.0
	0.4	-0.72	70.0		1.5	-0.67	66.9
	0.4	-0.71	70.0		1.5	-0.67	66.9
	0.4	-0.71	69.9		1.5	-0.67	66.9
	0.5	-0.71	69.9		1.6	-0.67	66.9
	0.5	-0.70	69.9		1.6	-0.67	67.0
	0.5	-0.69	69.9		1.6	-0.68	67.0
	0.6	-0.68	69.9		1.7	-0.68	67.0
	0.6	-0.68	69.8		1.7	-0.67	67.0
	0.6	-0.68	69.8		1.7	-0.66	66.9
	0.7	-0.67	69.8		1.8	-0.65	66.8
	0.7	-0.66	69.7		1.8	-0.61	66.8
	0.7	-0.66	69.6		1.8	-0.58	66.7
	0.8	-0.65	69.5		1.9	-0.55	66.5
	0.8	-0.65	69.4		1.9	-0.53	66.4
	0.8	-0.65	69.3		1.9	-0.50	66.3
	0.9	-0.64	69.2		2.0	-0.47	66.2
	0.9	-0.64	69.0		12.0	-0.40	61.1
	0.9	-0.64	68.9		32.0	-0.40	59.6
	1.0	-0.64	68.8		52.0	-0.42	52.9
	1.0	-0.64	68.7		62.5	0.28	61.1
	1.0	-0.65	68.6		63.5	0.32	61.9
	1.1	-0.64	68.5		64.5	0.36	62.6

Printing every 2 samples

Serial # 8653 Inside				Serial # 8653 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	65.5	0.42	63.3		106.5	7.98	85.2
	66.5	0.48	64.0		107.5	10.47	85.7
	67.5	0.53	64.6		108.5	11.64	86.0
	68.5	0.57	65.3		109.5	13.99	86.0
	69.5	0.62	65.9		110.5	15.76	86.0
	70.5	0.67	66.4		111.5	16.03	86.0
	71.5	0.72	67.0		112.5	16.10	86.0
	72.5	0.76	67.5		113.5	16.09	86.1
	73.5	0.81	68.0		114.5	16.05	86.1
	74.5	0.85	68.5		115.5	16.02	86.1
	75.5	0.88	68.9		116.5	15.99	86.1
	76.5	0.93	69.4		117.5	15.96	86.1
	77.5	0.96	69.8		118.5	15.94	86.1
	78.5	0.99	70.3		119.5	15.93	86.1
	79.5	1.03	70.7		120.5	15.93	86.2
	80.5	1.07	71.1		121.5	15.92	86.2
	81.5	1.12	71.5		122.5	15.91	86.2
	82.5	1.16	71.9		123.5	15.89	86.2
	83.5	1.20	72.4		124.5	15.88	86.2
	84.5	1.25	72.8		125.5	15.87	86.2
	85.5	1.28	73.2		126.5	15.86	86.2
	86.5	1.31	73.6		127.5	15.85	86.3
	87.5	1.35	74.0		128.5	15.84	86.3
	88.5	1.39	74.4		129.5	15.84	86.3
	89.5	1.43	74.9		130.5	15.83	86.3
	90.5	1.46	75.3		131.5	15.84	86.3
	91.5	1.49	75.7		132.5	15.83	86.3
	92.5	1.52	76.2		133.5	15.83	86.3
	93.5	1.54	76.7		134.5	15.85	86.3
	94.5	1.55	77.1		135.5	15.86	86.4
	95.5	1.57	77.6		136.5	15.87	86.4
	96.5	1.57	78.0		137.5	15.88	86.4
	97.5	1.58	78.4		138.5	15.88	86.4
	98.5	1.62	78.8		139.5	15.90	86.4
	99.5	1.64	79.1		140.5	15.91	86.4
	100.5	1.65	79.5		141.5	15.92	86.5
	101.5	1.67	79.8		142.5	15.92	86.5
	102.5	1.70	80.1		143.5	15.94	86.5
	103.5	1.77	80.4		144.5	15.95	86.5
	104.5	2.10	82.0		145.5	15.97	86.5
	105.5	5.01	84.5		146.5	15.98	86.6

Printing every 2 samples

Serial # 8653 Inside				Serial # 8653 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	147.5	15.98	86.6		188.5	32.59	90.5
	148.5	15.99	86.6		189.5	33.23	90.6
	149.5	15.99	86.6		190.5	33.91	90.7
	150.5	15.99	86.6		191.5	34.58	90.8
	151.5	15.99	86.7		192.5	35.19	90.9
	152.5	16.00	86.7		193.5	35.96	90.9
	153.5	16.01	86.7		194.5	36.47	91.0
	154.5	16.02	86.7		195.5	37.13	91.1
	155.5	16.03	86.7		196.5	37.82	91.2
	156.5	16.04	86.8		197.5	38.46	91.3
	157.5	16.06	86.8		198.5	39.02	91.3
	158.5	16.08	86.8		199.5	39.48	91.3
	159.5	16.07	86.8		200.5	39.51	91.2
	160.5	16.07	86.9		201.5	39.52	91.2
	161.5	16.07	86.9		202.5	39.53	91.1
	162.5	16.07	86.9		203.5	39.54	91.0
	163.5	16.08	86.9		204.5	39.56	90.9
	164.5	16.07	86.9		205.5	39.58	90.9
	165.5	16.06	87.0		206.5	39.58	90.8
	166.5	16.06	87.0		207.5	39.57	90.7
	167.5	16.10	87.0		208.5	39.58	90.7
	168.5	18.19	87.1		209.5	39.58	90.7
	169.5	18.42	87.2		210.5	39.58	90.6
	170.5	18.54	87.5		211.5	39.57	90.6
	171.5	19.31	87.9		212.5	39.57	90.6
	172.5	20.09	88.2		213.5	39.60	90.5
	173.5	20.73	88.4		214.5	39.62	90.5
	174.5	21.58	88.7		215.5	39.62	90.5
	175.5	22.21	88.9		216.5	39.61	90.5
	176.5	23.01	89.1		217.5	39.60	90.5
	177.5	23.72	89.2		218.5	39.58	90.5
	178.5	24.60	89.4		219.5	39.55	90.5
	179.5	25.54	89.5		220.5	39.52	90.5
	180.5	26.49	89.6		221.5	39.52	90.4
	181.5	27.01	89.8		222.5	39.51	90.4
	182.5	27.60	89.9		223.5	39.52	90.4
	183.5	28.56	90.0		224.5	39.53	90.4
	184.5	29.24	90.1		225.5	39.55	90.4
	185.5	30.31	90.2		226.5	39.58	90.4
	186.5	31.08	90.3		227.5	39.60	90.4
	187.5	31.93	90.4		228.5	39.61	90.4

Printing every 2 samples

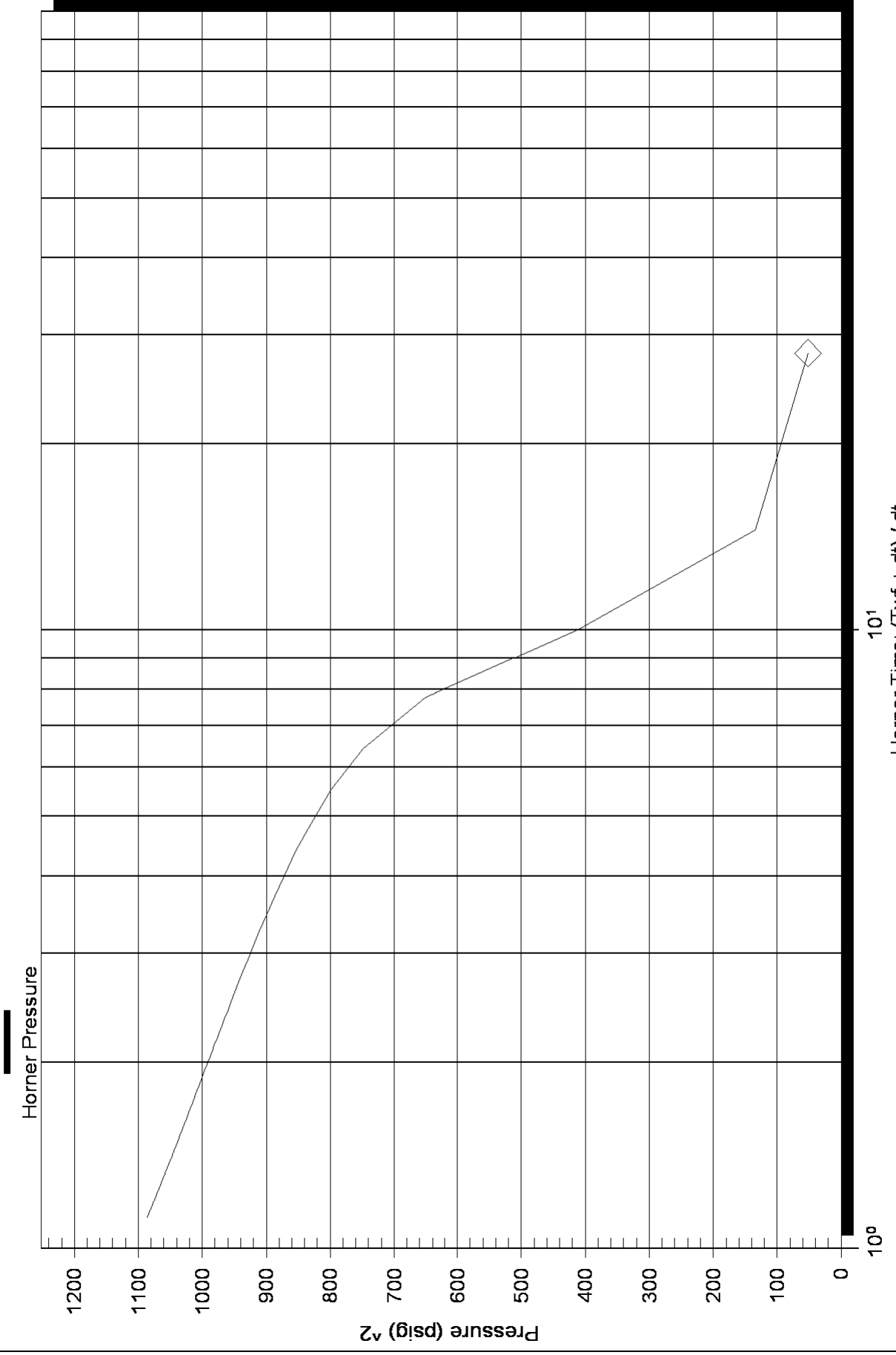
Serial # 8653 Inside				Serial # 8653 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	229.5	39.62	90.4		270.5	39.70	90.8
	230.5	39.62	90.4		271.5	39.70	90.8
	231.5	39.64	90.4		272.5	39.70	90.8
	232.5	39.64	90.4		273.5	39.70	90.8
	233.5	39.65	90.4		274.5	39.69	90.8
	234.5	39.66	90.4		275.5	39.68	90.8
	235.5	39.68	90.4		276.5	39.67	90.8
	236.5	39.69	90.4		277.5	39.67	90.8
	237.5	39.69	90.4		278.5	39.66	90.9
	238.5	39.69	90.4		279.5	39.66	90.9
	239.5	39.69	90.4		280.5	39.66	90.9
	240.5	39.70	90.5		281.5	39.66	90.9
	241.5	39.70	90.5		282.5	39.68	90.9
	242.5	39.70	90.5		283.5	39.67	90.9
	243.5	39.70	90.5		284.5	39.68	90.9
	244.5	39.71	90.5		285.5	39.68	90.9
	245.5	39.71	90.5		286.5	39.69	91.0
	246.5	39.72	90.5		287.5	39.69	91.0
	247.5	39.72	90.5		288.5	39.70	91.0
	248.5	39.70	90.5		289.5	39.65	91.0
	249.5	39.69	90.5		290.5	40.09	91.0
	250.5	39.69	90.5		291.5	39.84	91.1
	251.5	39.70	90.5		292.5	39.76	91.1
	252.5	39.69	90.6		293.5	39.77	91.1
	253.5	39.68	90.6		294.5	39.91	91.1
	254.5	39.67	90.6		295.5	40.96	91.2
	255.5	39.67	90.6		296.5	39.76	91.2
	256.5	39.68	90.6		297.5	39.78	91.1
	257.5	39.68	90.6		298.5	39.71	91.1
	258.5	39.68	90.6		299.5	39.71	91.1
	259.5	39.68	90.6		300.5	39.78	91.1
	260.5	39.68	90.6		301.5	39.89	91.0
	261.5	39.68	90.7		302.5	39.40	91.0
	262.5	39.68	90.7		303.5	40.83	90.9
	263.5	39.67	90.7		304.5	39.08	90.8
	264.5	39.67	90.7		305.5	39.80	90.6
	265.5	39.67	90.7		306.5	40.40	90.4
	266.5	39.67	90.7		307.5	40.17	90.1
	267.5	39.68	90.7		308.5	39.56	89.8
	268.5	39.68	90.7		309.5	42.52	89.3
	269.5	39.69	90.7		310.5	39.59	88.8

Printing every 2 samples

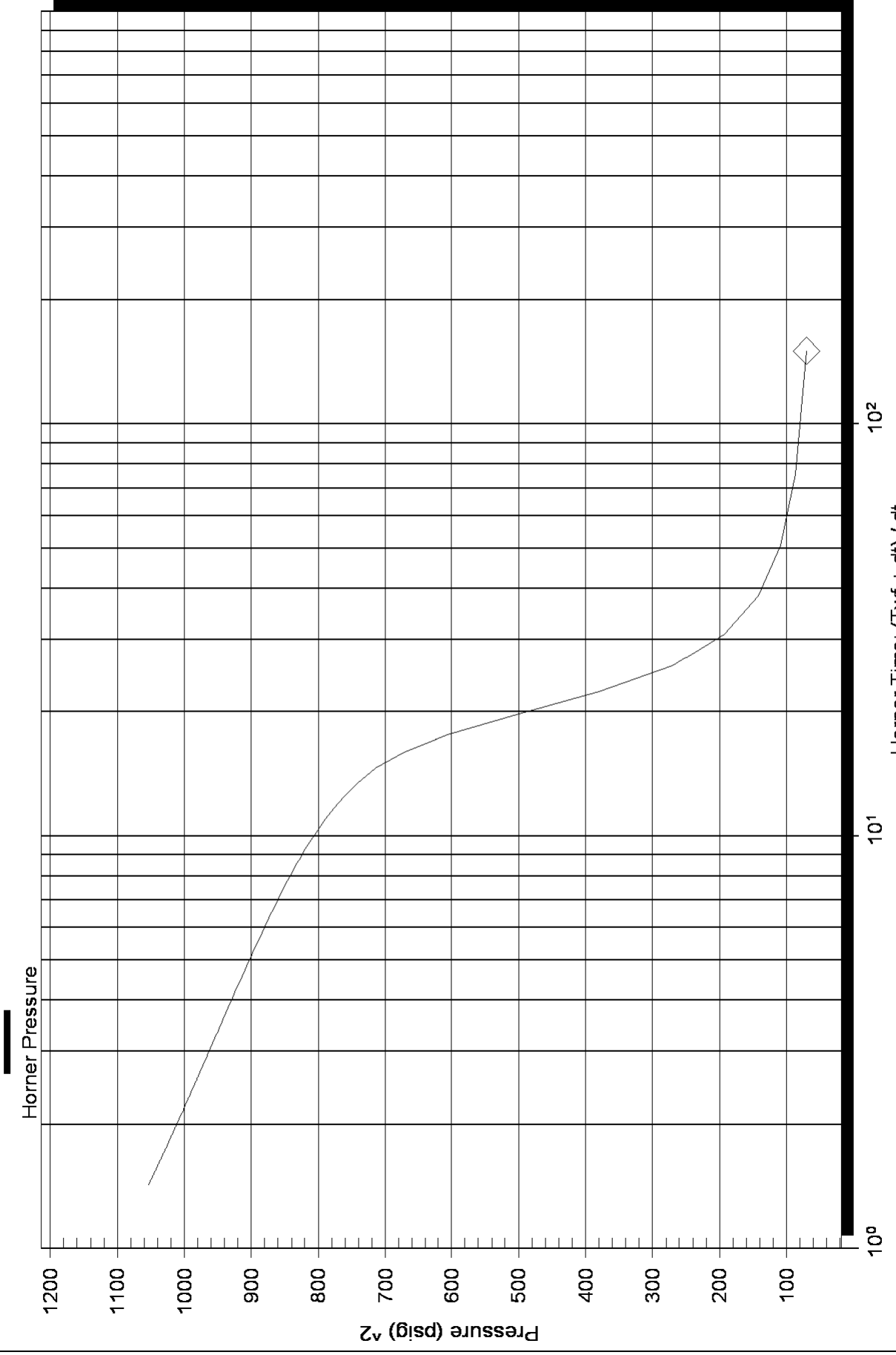
Serial # 8653 Inside				Serial # 8653 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	311.5	39.50	88.3		352.5	0.35	66.5
	312.5	38.71	87.7		353.5	0.38	65.6
	313.5	40.13	87.1		354.5	0.34	64.8
	314.5	38.49	86.4		355.5	0.36	64.1
	315.5	39.25	85.7		356.5	0.38	63.4
	316.5	42.54	85.2		357.5	0.38	62.8
	317.5	36.49	84.9		358.5	0.36	62.1
	318.5	39.61	84.7		359.5	0.33	61.5
	319.5	39.33	84.5		360.5	0.29	60.9
	320.5	39.31	84.4		361.5	0.24	60.5
	321.5	40.59	84.3		362.5	0.19	60.1
	322.5	39.58	84.2		363.5	0.14	59.8
	323.5	39.07	84.0		364.5	0.12	59.4
	324.5	36.90	83.9		365.5	0.10	59.0
	325.5	36.42	83.7		366.5	0.07	58.7
	326.5	38.82	83.5		367.5	0.06	58.3
	327.5	38.79	83.2		368.5	0.05	57.8
	328.5	39.87	82.9		369.5	0.04	57.0
	329.5	38.96	82.8		370.5	0.03	56.1
	330.5	38.68	82.5		371.5	0.04	55.7
	331.5	38.89	82.2		372.5	0.06	55.4
	332.5	38.80	81.8		373.5	0.08	55.3
	333.5	38.93	81.5		374.5	0.10	55.3
	334.5	38.91	81.1		375.5	0.11	55.2
	335.5	38.57	80.7		376.5	0.12	55.1
	336.5	41.13	80.5		377.5	0.14	55.2
	337.5	37.33	80.3		378.5	0.14	55.2
	338.5	38.76	79.7		379.5	0.11	55.3
	339.5	38.58	79.2		380.5	0.20	55.4
	340.5	38.52	78.7		381.5	0.18	52.9
	341.5	38.51	78.5		382.5	-2.21	53.2
	342.5	38.61	78.1		383.5	-3.06	52.3
	343.5	43.15	77.6		384.5	-3.44	52.0
	344.5	38.12	77.3		385.5	-3.53	51.7
	345.5	38.14	76.9				
	346.5	37.30	76.4				
	347.5	30.49	75.9				
	348.5	30.34	75.6				
	349.5	29.84	75.3				
	350.5	1.53	75.3				
	351.5	0.63	69.6				

Printing every 2 samples

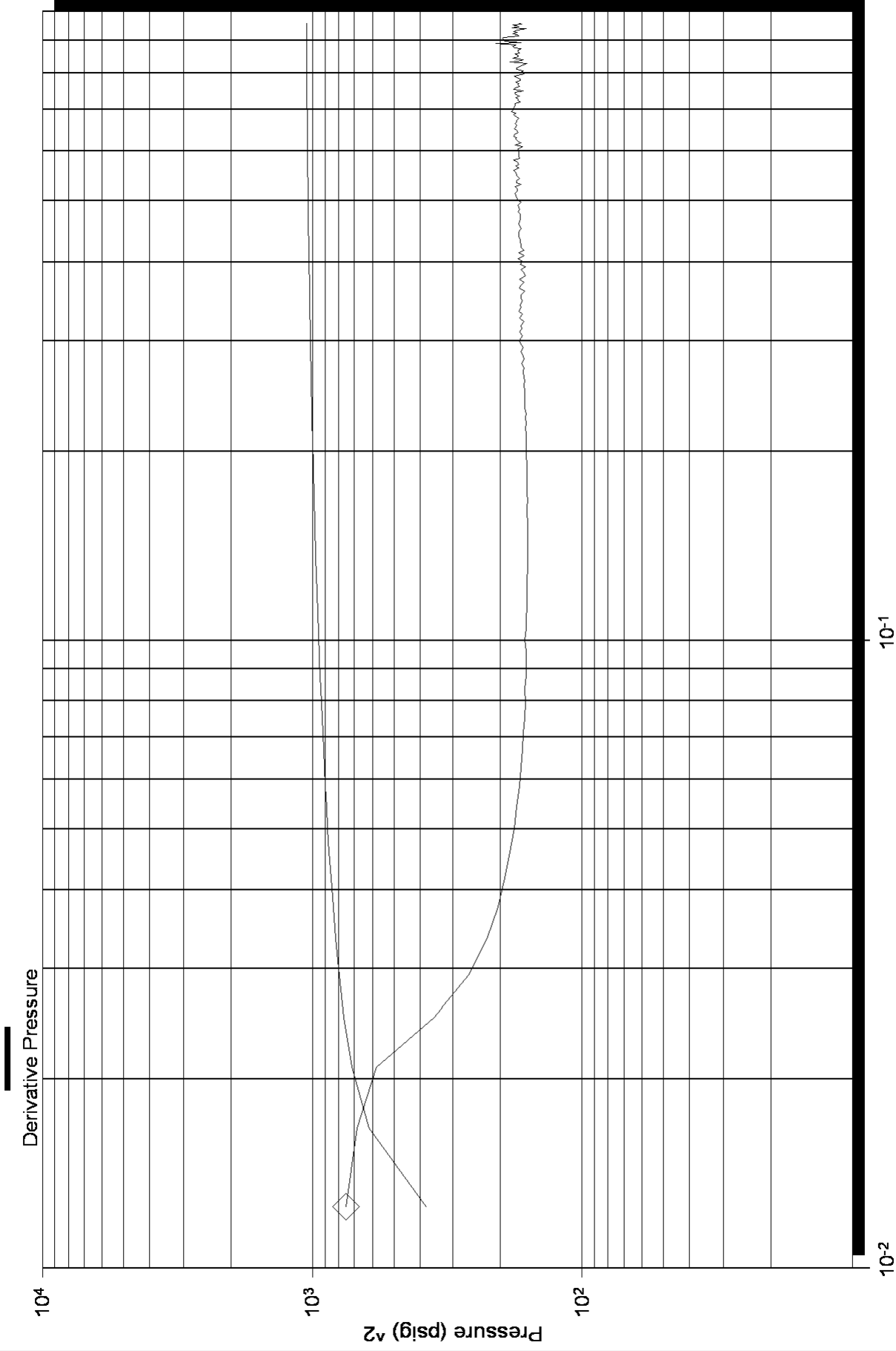
Homer Plot



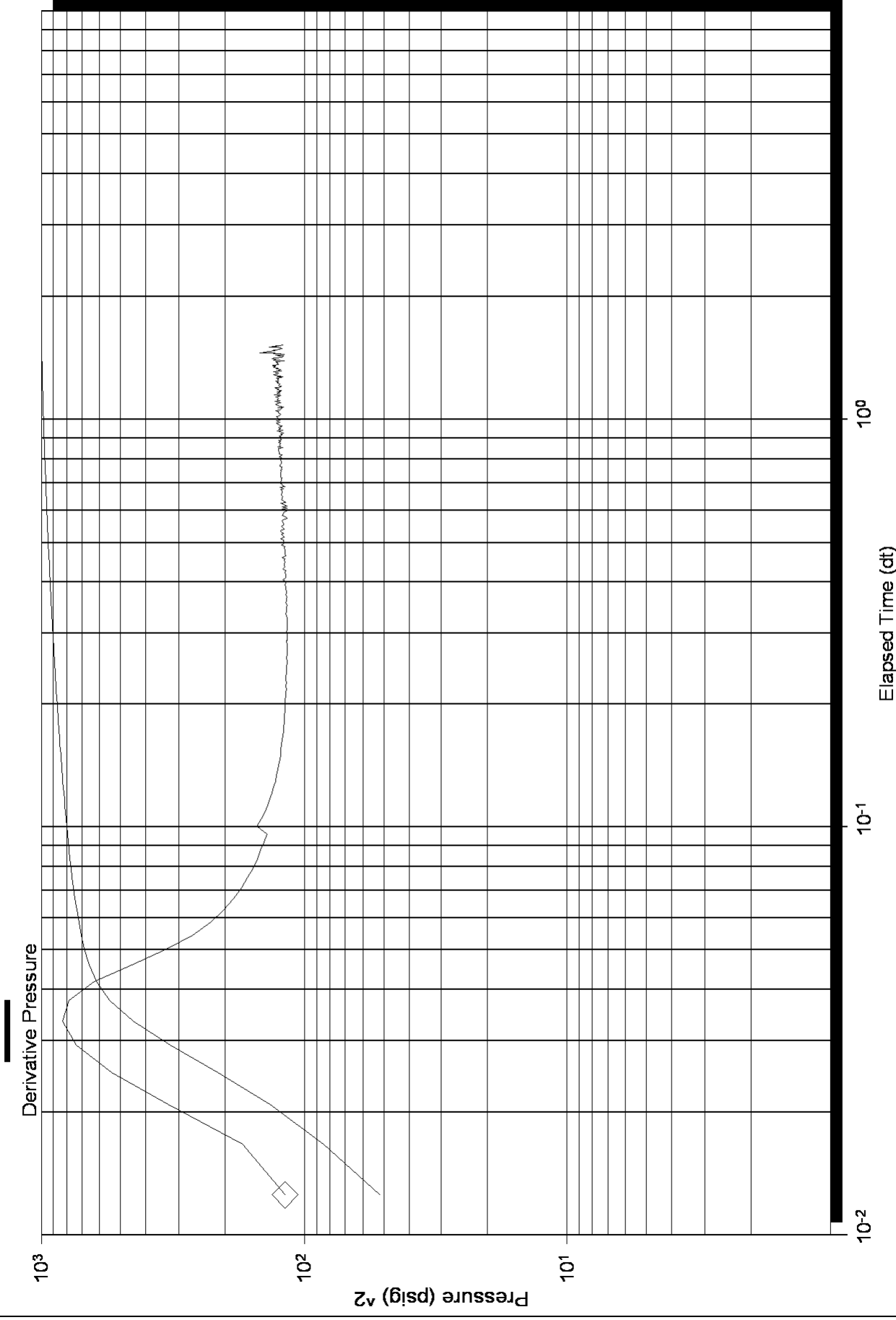
Homer Plot

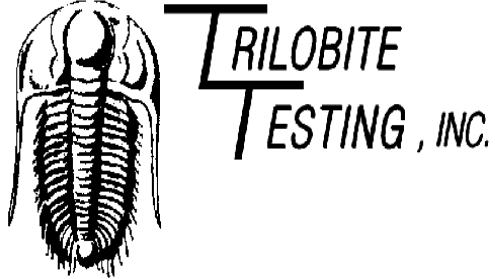


Log-Log and Pseudo-Log-Derivative



Log-Log and Pseudo-Derivative





DRILL STEM TEST REPORT

Prepared For: **Sam Gary**

1515 Wynkoop Ste 700
Denver Co 80202

ATTN: Neil Sharp

30-16-15-Barton-Ks

Steinert et al # 1-30

Start Date: 2010.12.15 @ 04:20:30

End Date: 2010.12.15 @ 13:26:00

Job Ticket #: 041355 DST #: 3

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Sam Gary
 1515 Wynkoop Ste 700
 Denver Co 80202
 ATTN: Neil Sharp

Steinert et al # 1-30
30-16-15-Barton-Ks
 Job Ticket: 041355 **DST#: 3**
 Test Start: 2010.12.15 @ 04:20:30

GENERAL INFORMATION:

Formation: **H-I-J LKC**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 06:13:30
 Time Test Ended: 13:26:00
 Interval: **3418.00 ft (KB) To 3481.00 ft (KB) (TVD)**
 Total Depth: 3481.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole
 Tester: Dan Bangle
 Unit No: 38
 Reference Elevations: 2005.00 ft (KB)
 1997.00 ft (CF)
 KB to GR/CF: 8.00 ft

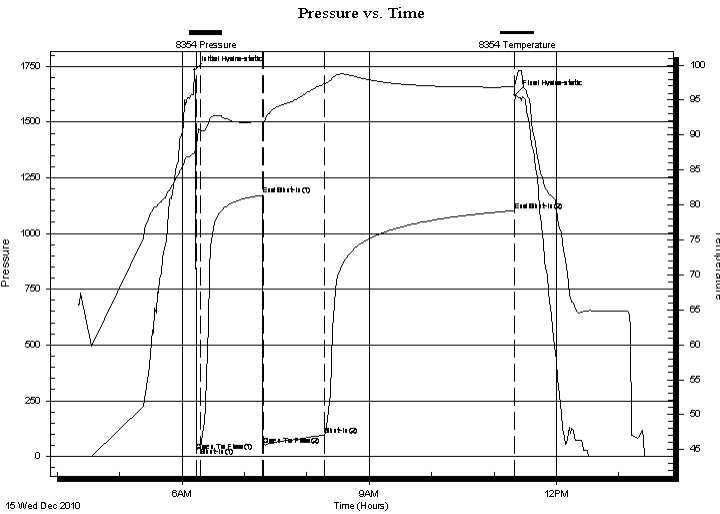
Serial #: 8354

Inside

Press @ Run Depth: 95.76 psig @ 3421.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2010.12.15 End Date: 2010.12.15 Last Calib.: 2010.12.16
 Start Time: 04:20:31 End Time: 13:26:00 Time On Btm: 2010.12.15 @ 06:12:15
 Time Off Btm: 2010.12.15 @ 11:20:15

TEST COMMENT: IF-Weak building to 3"

FF-Strong B-B in 30 sec
 FSI-Weak building to 4" died in 90 min



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1731.44	87.45	Initial Hydro-static
2	21.19	88.12	Open To Flow (1)
6	41.08	90.59	Shut-In(1)
65	1171.51	91.95	End Shut-In(1)
66	48.70	91.09	Open To Flow (2)
125	95.76	97.38	Shut-In(2)
308	1102.83	96.87	End Shut-In(2)
308	1622.67	96.94	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
215.00	MCGsyO 30%g 60%o 10%m	2.74
0.00	1450 GIP	0.00

Gas Rates

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Sam Gary
 1515 Wynkoop Ste 700
 Denver Co 80202
 ATTN: Neil Sharp

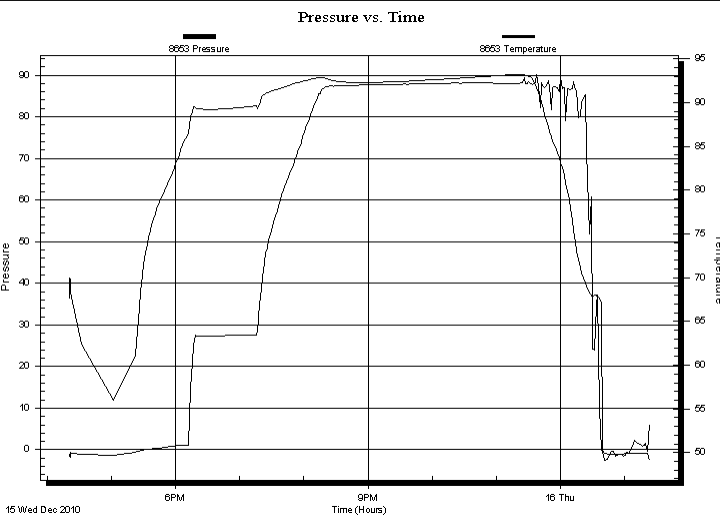
Steinert et al # 1-30
30-16-15-Barton-Ks
 Job Ticket: 041355 **DST#: 3**
 Test Start: 2010.12.15 @ 04:20:30

GENERAL INFORMATION:

Formation: **H-I-J LKC**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 06:13:30
 Time Test Ended: 13:26:00
 Interval: **3418.00 ft (KB) To 3481.00 ft (KB) (TVD)**
 Total Depth: 3481.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole
 Tester: Dan Bangle
 Unit No: 38
 Reference Elevations: 2005.00 ft (KB)
 1997.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8653 Inside
 Press @ Run Depth: psig @ 3384.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2010.12.15 End Date: 2010.12.16 Last Calib.: 2010.12.16
 Start Time: 16:20:21 End Time: 01:23:20 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF-Weak building to 3"
 FF-Strong B-B in 30 sec
 FSI-Weak building to 4" died in 90 min



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

Recovery		
Length (ft)	Description	Volume (bbl)
215.00	MCGsyO 30%g 60%o 10%m	2.74
0.00	1450 GIP	0.00

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Sam Gary
1515 Wynkoop Ste 700
Denver Co 80202
ATTN: Neil Sharp

Steinert et al # 1-30
30-16-15-Barton-Ks
Job Ticket: 041355 **DST#: 3**
Test Start: 2010.12.15 @ 04:20:30

Tool Information

Drill Pipe:	Length: 3364.00 ft	Diameter: 3.80 inches	Volume: 47.19 bbl	Tool Weight: 3800.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 47.34 bbl</u>	Tool Chased 1.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial 49000.00 lb
Depth to Top Packer:	3418.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 ft			
Tool Length:	65.00 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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Change Over Sub	1.00			3384.00	
Recorder	0.00	8653	Inside	3384.00	
Blank Spacing	4.00			3388.00	
Shut In Tool	5.00			3393.00	
Sampler	3.00			3396.00	
Hydraulic tool	5.00			3401.00	
Jars	5.00			3406.00	
Safety Joint	3.00			3409.00	
Packer	5.00			3414.00	35.00 Bottom Of Top Packer
Packer	4.00			3418.00	
Stubb	1.00			3419.00	
Perforations	2.00			3421.00	
Recorder	0.00	8354	Inside	3421.00	
Recorder	0.00	8520	Outside	3421.00	
Perforations	24.00			3445.00	
Bullnose	3.00			3448.00	30.00 Bottom Packers & Anchor
Total Tool Length:	65.00				



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Sam Gary
1515 Wynkoop Ste 700
Denver Co 80202
ATTN: Neil Sharp

Steinert et al # 1-30
30-16-15-Barton-Ks
Job Ticket: 041355 **DST#: 3**
Test Start: 2010.12.15 @ 04:20:30

Mud and Cushion Information

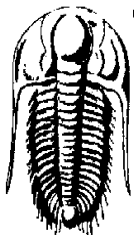
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 44.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.99 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 6400.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
215.00	MCGsyO 30%g 60%o 10%m	2.743
0.00	1450 GIP	0.000

Total Length: 215.00 ft Total Volume: 2.743 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: Sampler
 1.4cu ft gas



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

GAS RATES

Sam Gary
1515 Wynkoop Ste 700
Denver Co 80202
ATTN: Neil Sharp

Steinert et al # 1-30
30-16-15-Barton-Ks
Job Ticket: 041355 **DST#: 3**
Test Start: 2010.12.15 @ 04:20:30

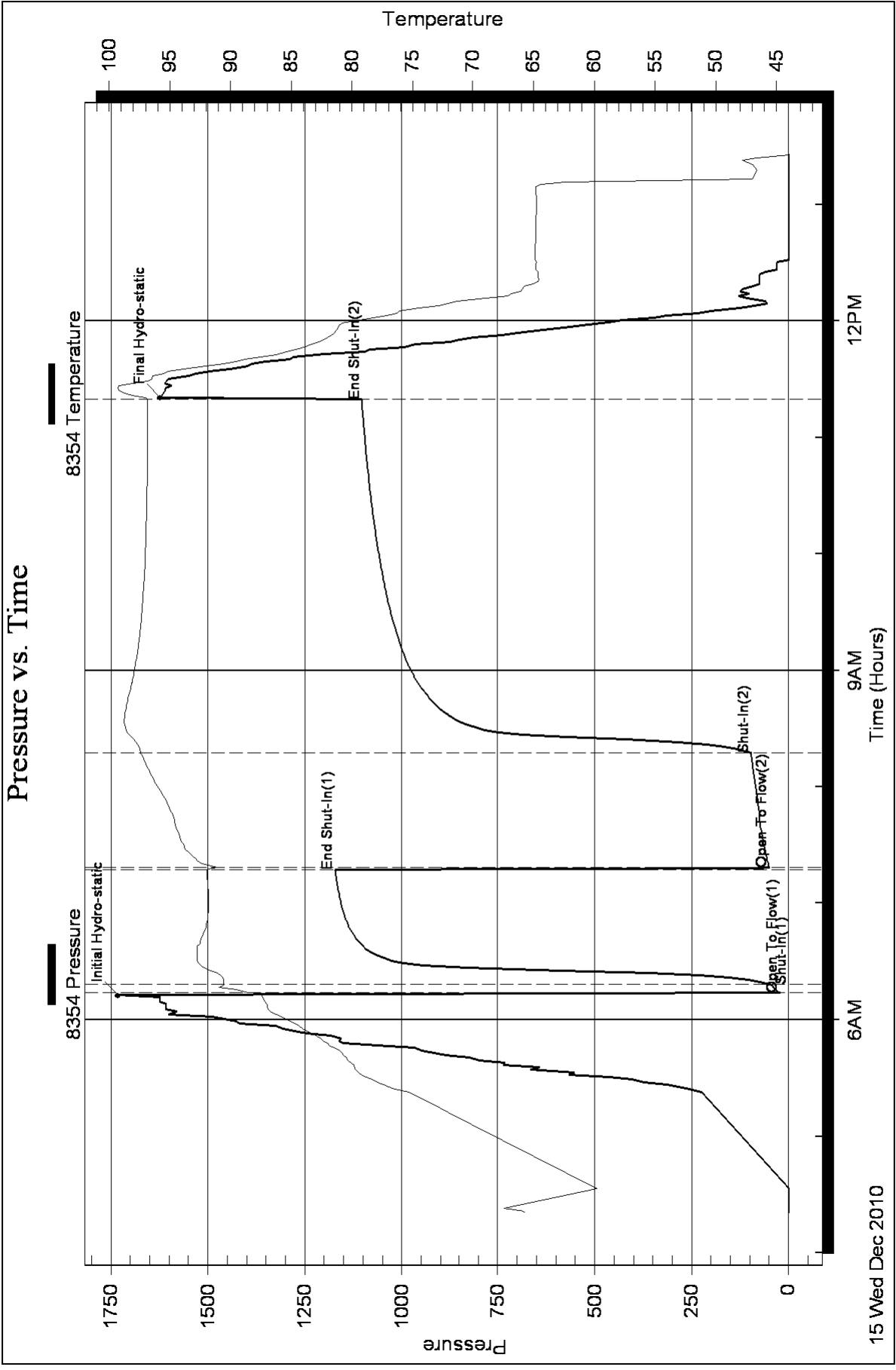
Gas Rates Information

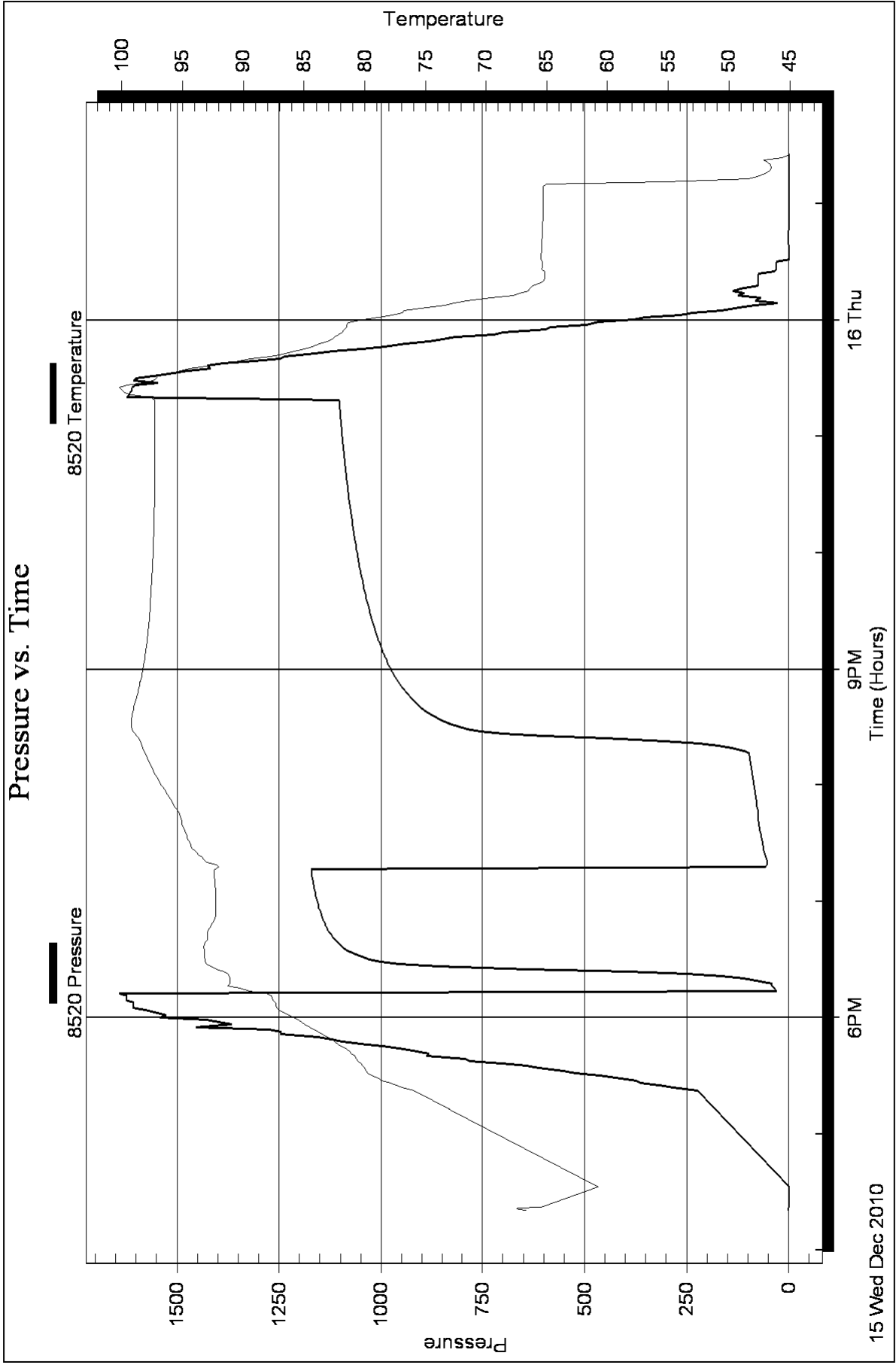
Temperature: 59 deg C
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m ³ /d)
		0.00	0.00	0.00

Pressure vs. Time





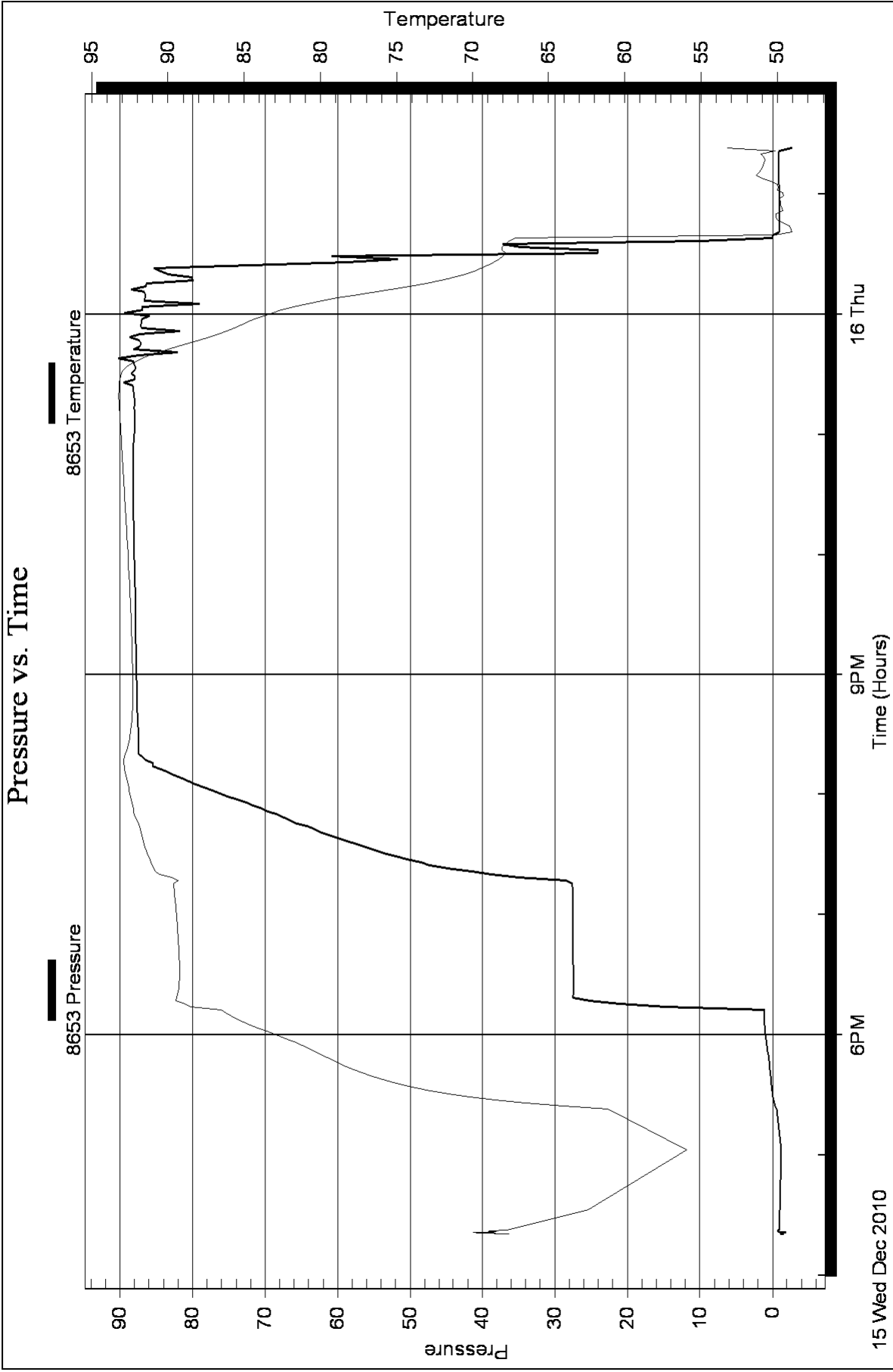
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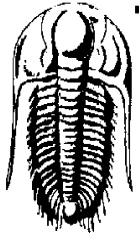
Inside

Sam Gary

30-16-15-Barton-Ks

DST Test Number: 3





**TRILOBITE
TESTING, INC.**

DRILL STEM TESTING - DATA LISTING

Sam Gary
1515 Wynkoop Ste 700
Denver Co 80202
ATTN: Neil Sharp

Steinert et al # 1-30
30-16-15-Barton-Ks
Job Ticket: 041355 **DST#: 3**
Test Start: 2010.12.15 @ 04:20:30

Serial # 8354 Inside				Serial # 8354 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	0.0	-1.16	65.7		88.5	1119.92	82.4
	0.1	-1.15	65.8		90.2	1171.61	82.7
	0.2	-1.16	65.8		92.0	1244.54	83.3
	0.3	-1.17	65.8		93.7	1361.94	83.8
	0.5	-1.18	65.9		95.5	1285.55	84.3
	0.6	-1.17	65.9		97.2	1397.50	84.8
	0.7	-1.14	65.9		99.0	1457.93	85.3
	0.8	-1.17	66.0		100.7	1487.77	85.8
	0.9	-1.20	66.2		102.5	1549.26	86.5
	1.0	-1.21	66.4		104.2	1609.90	86.9
	1.2	-1.25	66.5		106.0	1606.95	87.0
	1.3	-1.28	66.5		107.7	1618.67	87.0
	1.4	-1.25	66.6		109.5	1622.61	87.3
	1.5	-1.19	66.9		111.2	1624.52	87.3
	1.6	-1.15	66.9		111.5	1619.39	87.3
	1.8	-1.12	66.9	Initial Hydro-static	111.7	1731.44	87.5
	1.9	-1.16	67.3		112.0	1656.82	87.5
	2.0	-1.26	67.5		112.2	1651.66	87.7
	62.2	224.41	75.5		112.5	1651.42	88.0
	64.0	284.07	76.9		112.7	1688.35	88.3
	65.7	313.28	77.4	Open To Flow (1)	113.0	21.19	88.1
	67.5	373.68	78.1		113.2	24.94	88.6
	69.2	448.42	78.7		113.5	29.43	88.8
	71.0	522.15	79.2		113.7	32.95	89.1
	72.7	582.12	79.6		115.5	38.56	90.9
	74.5	641.66	79.8		116.7	41.05	90.6
	76.2	702.04	80.0		117.0	41.11	90.6
	78.0	739.45	80.3	Shut-In(1)	117.2	41.08	90.6
	79.7	892.80	80.5		117.5	44.33	90.6
	81.5	883.42	80.8		117.7	50.98	90.6
	83.2	948.69	81.0		118.0	57.56	90.6
	85.0	1004.17	81.6		119.7	111.50	90.6
	86.7	1064.09	82.0		121.5	195.02	90.7

Printing every 7 samples

Serial # 8354 Inside				Serial # 8354 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	123.2	358.65	91.1		180.0	52.07	92.6
	125.0	696.44	91.9		181.7	54.96	92.8
	126.7	928.13	92.4		183.5	57.62	93.2
	128.5	1002.21	92.7		185.2	59.72	93.4
	130.2	1038.12	92.7		187.0	61.03	93.7
	132.0	1061.25	92.8		188.7	63.43	93.8
	133.7	1078.08	92.8		190.5	64.49	94.0
	135.5	1091.08	92.8		192.2	66.08	94.1
	137.2	1101.43	92.7		194.0	67.06	94.2
	139.0	1109.85	92.5		195.7	68.58	94.3
	140.7	1117.28	92.4		197.5	70.36	94.5
	142.5	1123.32	92.3		199.2	72.22	94.5
	144.2	1128.67	92.2		201.0	73.42	94.6
	146.0	1133.44	92.1		202.7	74.20	94.7
	147.7	1137.87	92.0		204.5	74.37	94.8
	149.5	1141.26	91.9		206.2	75.14	94.9
	151.2	1144.55	91.9		208.0	76.30	95.0
	153.0	1147.60	91.8		209.7	77.22	95.1
	154.7	1150.17	91.8		211.5	78.31	95.3
	156.5	1152.68	91.8		213.2	79.44	95.4
	158.2	1155.01	91.8		215.0	80.60	95.6
	160.0	1157.15	91.8		216.7	82.05	95.8
	161.7	1159.12	91.8		218.5	83.39	95.9
	163.5	1161.02	91.8		220.2	84.76	96.1
	165.2	1162.75	91.8		222.0	86.09	96.3
	167.0	1164.34	91.9		223.7	87.56	96.4
	168.7	1165.71	91.9		225.5	89.03	96.6
	170.5	1167.18	91.9		227.2	90.18	96.7
	172.2	1168.61	91.9		229.0	91.24	96.8
	174.0	1169.84	91.9		230.7	92.54	97.0
	175.7	1171.25	91.9		232.5	93.70	97.1
	176.0	1171.34	91.9		234.2	94.94	97.2
	176.2	1171.43	91.9		236.0	95.56	97.3
End Shut-In(1)	176.5	1171.51	91.9		236.2	95.57	97.4
	176.7	1165.37	91.9	Shut-In(2)	236.5	95.76	97.4
	177.0	78.15	91.5		236.7	100.29	97.4
	177.2	57.43	91.3		237.0	105.52	97.4
Open To Flow (2)	177.5	48.70	91.1		237.2	110.68	97.4
	177.7	51.12	91.2		239.0	151.05	97.5
	178.0	52.91	91.4		240.7	209.60	97.7
	178.2	53.26	91.6		242.5	330.80	97.8

Printing every 7 samples

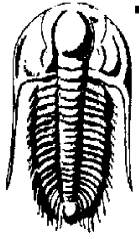
Serial # 8354 Inside				Serial # 8354 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	244.2	544.28	98.1		316.0	1035.99	97.2
	246.0	700.67	98.4		317.7	1038.02	97.2
	247.7	770.83	98.6		319.5	1039.88	97.2
	249.5	808.49	98.7		321.2	1041.76	97.2
	251.2	834.07	98.7		323.0	1043.64	97.1
	253.0	853.84	98.7		324.7	1045.32	97.1
	254.7	869.89	98.7		326.5	1047.13	97.1
	256.5	883.42	98.7		328.2	1048.80	97.1
	258.2	895.19	98.6		330.0	1050.36	97.1
	260.0	905.70	98.6		331.7	1051.94	97.1
	261.7	915.01	98.5		333.5	1053.51	97.0
	263.5	923.44	98.5		335.2	1055.06	97.0
	265.2	931.14	98.4		337.0	1056.59	97.0
	267.0	938.19	98.3		338.7	1057.99	97.0
	268.7	944.57	98.3		340.5	1059.49	97.0
	270.5	950.67	98.2		342.2	1060.82	97.0
	272.2	956.29	98.1		344.0	1062.25	97.0
	274.0	961.64	98.1		345.7	1063.59	97.0
	275.7	966.52	98.0		347.5	1064.93	97.0
	277.5	971.25	98.0		349.2	1066.20	97.0
	279.2	975.63	97.9		351.0	1067.49	97.0
	281.0	979.89	97.9		352.7	1068.71	97.0
	282.7	983.84	97.8		354.5	1069.92	96.9
	284.5	987.92	97.8		356.2	1071.16	96.9
	286.2	991.30	97.7		358.0	1072.32	96.9
	288.0	994.75	97.7		359.7	1073.41	96.9
	289.7	998.15	97.6		361.5	1074.53	96.9
	291.5	1001.53	97.6		363.2	1075.65	96.9
	293.2	1004.39	97.6		365.0	1076.77	96.9
	295.0	1007.36	97.5		366.7	1077.82	96.9
	296.7	1010.15	97.5		368.5	1078.90	96.9
	298.5	1012.91	97.5		370.2	1079.97	96.9
	300.2	1015.63	97.4		372.0	1080.98	96.9
	302.0	1018.19	97.4		373.7	1081.86	96.9
	303.7	1020.66	97.4		375.5	1082.92	96.9
	305.5	1023.02	97.4		377.2	1083.78	96.9
	307.2	1025.38	97.3		379.0	1084.71	96.9
	309.0	1027.68	97.3		380.7	1085.63	96.9
	310.7	1029.86	97.3		382.5	1086.63	96.9
	312.5	1032.00	97.3		384.2	1087.55	96.9
	314.2	1034.02	97.2		386.0	1088.45	96.9

Printing every 7 samples

Serial # 8354 Inside				Serial # 8354 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	387.7	1089.16	96.9		446.7	976.59	83.5
	389.5	1090.08	96.8		448.5	891.02	82.6
	391.2	1090.99	96.8		450.2	852.78	82.2
	393.0	1091.56	96.8		452.0	739.44	81.7
	394.7	1092.58	96.8		453.7	656.24	81.3
	396.5	1093.35	96.8		455.5	582.01	81.1
	398.2	1094.20	96.8		457.2	494.15	81.1
	400.0	1094.86	96.8		459.0	428.56	80.1
	401.7	1095.68	96.8		460.7	346.72	78.2
	403.5	1096.55	96.9		462.5	273.54	76.8
	405.2	1097.19	96.8		464.2	197.72	75.9
	407.0	1097.96	96.9		466.0	123.56	74.1
	408.7	1098.76	96.9		467.7	47.70	72.3
	410.5	1099.41	96.9		469.5	59.06	71.3
	412.2	1100.14	96.9		471.2	84.68	68.2
	414.0	1100.81	96.9		473.0	129.66	66.9
	415.7	1101.41	96.9		474.7	138.49	65.9
	417.5	1102.09	96.9		476.5	117.84	65.7
	418.5	1102.67	96.9		478.2	73.58	65.0
	418.7	1102.72	96.9		480.0	73.52	64.6
End Shut-In(2)	419.0	1102.83	96.9		481.7	73.51	64.6
	419.2	1421.65	97.0		483.5	73.45	64.6
	419.5	1576.64	97.0		485.2	28.53	64.8
Final Hydro-static	419.7	1622.67	96.9		487.0	28.42	64.8
	420.0	1621.85	97.1		488.7	28.34	64.8
	420.2	1621.98	97.5		490.5	-1.31	64.8
	420.5	1620.87	97.8		492.2	-1.27	64.9
	422.2	1613.80	98.8		494.0	-1.32	64.9
	424.0	1609.48	99.2		495.7	-1.35	64.9
	425.7	1594.56	99.2		497.5	-1.37	64.9
	427.5	1607.90	97.8		499.2	-1.28	64.8
	429.2	1603.42	96.5		501.0	-1.19	64.8
	431.0	1544.46	96.3		502.7	-1.16	64.8
	432.7	1535.30	95.3		504.5	-1.24	64.8
	434.5	1443.02	93.9		506.2	-1.34	64.8
	436.2	1425.54	91.3		508.0	-1.39	64.8
	438.0	1343.93	89.9		509.7	-1.38	64.8
	439.7	1238.27	88.7		511.5	-1.32	64.8
	441.5	1172.63	86.7		513.2	-1.29	64.8
	443.2	1096.05	85.4		515.0	-1.29	64.8
	445.0	1018.67	84.4		516.7	-1.28	64.8

Printing every 7 samples

Serial # 8354 Inside				Serial # 8520 Outside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	518.5	-1.26	64.8				
	520.2	-1.25	64.8				
	522.0	-1.24	64.8				
	523.7	-1.20	64.8				
	525.5	-1.21	64.8				
	527.2	-1.23	64.8				
	529.0	-1.31	64.7				
	530.7	-1.50	62.4				
	532.5	-1.59	46.9				
	534.2	-1.55	46.8				
	536.0	-1.54	46.7				
	537.7	-1.48	46.7				
	539.5	-1.40	46.9				
	541.2	-1.35	47.6				
	543.0	-1.48	47.3				
	544.7	-1.27	43.5				
	545.5	-1.55	49.4				



**TRILOBITE
TESTING, INC.**

DRILL STEM TESTING - DATA LISTING

Sam Gary
1515 Wynkoop Ste 700
Denver Co 80202
ATTN: Neil Sharp

Steinert et al # 1-30
30-16-15-Barton-Ks
Job Ticket: 041355 **DST#: 3**
Test Start: 2010.12.15 @ 04:20:30

Serial # 8520 Outside				Serial # 8520 Outside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	0.0	-0.49	66.7		80.2	895.43	81.0
	0.1	-0.55	66.9		81.7	903.13	81.2
	0.2	-0.54	66.9		83.2	944.08	81.5
	0.3	-0.54	67.0		84.7	1003.57	82.0
	0.4	-0.51	67.0		86.2	1063.92	82.3
	0.5	-0.51	67.0		87.7	1092.70	82.6
	0.6	-0.54	67.1		89.2	1155.70	82.9
	0.7	-0.55	67.3		90.7	1245.64	83.4
	0.8	-0.53	67.4		92.2	1245.08	83.9
	0.9	-0.53	67.4		93.7	1308.04	84.3
	1.0	-0.53	67.4		95.2	1335.99	84.7
	1.1	-0.52	67.3		96.7	1413.16	85.1
	1.2	-0.51	67.1		98.2	1426.74	85.5
	1.3	-0.53	66.9		99.7	1488.18	86.0
	1.4	-0.52	66.6		101.2	1518.58	86.4
	1.5	-0.51	66.4		102.7	1624.95	86.9
	1.6	-0.52	66.1		104.2	1608.94	87.2
	1.7	-0.51	65.8		105.7	1606.63	87.3
	1.8	-0.55	65.6		107.2	1606.33	87.3
	1.9	-0.65	65.3		108.7	1623.26	87.6
	12.0	-0.95	60.8		110.2	1622.01	87.7
	62.2	227.95	76.1		111.7	1646.36	87.9
	63.7	283.99	77.2		113.2	30.47	89.5
	65.2	313.38	77.8		114.7	37.30	90.7
	66.7	373.67	78.4		116.2	41.62	91.1
	68.2	424.05	79.0		117.7	56.79	91.1
	69.7	497.01	79.5		119.2	101.52	91.1
	71.2	576.29	79.8		120.7	165.19	91.1
	72.7	581.78	79.9		122.2	271.20	91.3
	74.2	641.59	80.1		123.7	479.54	91.8
	75.7	701.88	80.3		125.2	788.03	92.5
	77.2	768.68	80.6		126.7	942.73	92.9
	78.7	857.36	80.8		128.2	1001.37	93.1

Printing every 6 samples

Serial # 8520 Outside				Serial # 8520 Outside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	129.7	1033.31	93.1		191.2	65.62	94.5
	131.2	1054.76	93.2		192.7	66.77	94.6
	132.7	1070.85	93.2		194.2	67.95	94.7
	134.2	1083.41	93.2		195.7	69.45	94.8
	135.7	1093.84	93.2		197.2	70.82	94.9
	137.2	1102.13	93.2		198.7	72.41	95.0
	138.7	1109.18	93.0		200.2	73.43	95.0
	140.2	1115.62	92.9		201.7	74.44	95.1
	141.7	1121.20	92.9		203.2	74.76	95.2
	143.2	1126.03	92.9		204.7	74.52	95.3
	144.7	1130.38	92.9		206.2	75.62	95.4
	146.2	1134.16	92.7		207.7	76.57	95.6
	147.7	1137.67	92.6		209.2	77.31	95.7
	149.2	1140.97	92.4		210.7	78.06	95.9
	150.7	1143.80	92.3		212.2	79.14	96.0
	152.2	1146.46	92.3		213.7	80.11	96.1
	153.7	1148.76	92.3		215.2	81.32	96.3
	155.2	1150.81	92.3		216.7	82.45	96.5
	156.7	1152.86	92.3		218.2	83.62	96.6
	158.2	1154.92	92.3		219.7	84.90	96.8
	159.7	1156.82	92.3		221.2	85.94	96.9
	161.2	1158.50	92.3		222.7	87.07	97.0
	162.7	1160.08	92.3		224.2	88.48	97.2
	164.2	1161.63	92.3		225.7	89.50	97.3
	165.7	1162.95	92.3		227.2	90.50	97.4
	167.2	1164.41	92.3		228.7	91.48	97.5
	168.7	1165.63	92.3		230.2	92.50	97.6
	170.2	1166.86	92.3		231.7	93.52	97.8
	171.7	1168.07	92.4		233.2	94.62	97.9
	173.2	1169.08	92.4		234.7	95.69	98.0
	174.7	1170.11	92.4		236.2	95.93	98.1
	176.2	1171.14	92.4		237.7	126.18	98.2
	177.7	52.51	92.0		239.2	164.59	98.3
	179.2	51.72	92.9		240.7	220.09	98.4
	180.7	53.68	93.2		242.2	329.31	98.5
	182.2	55.04	93.5		243.7	513.11	98.6
	183.7	58.60	93.7		245.2	666.41	98.8
	185.2	60.46	93.9		246.7	746.18	99.0
	186.7	61.32	94.2		248.2	788.58	99.1
	188.2	63.57	94.3		249.7	815.93	99.2
	189.7	63.49	94.4		251.2	836.54	99.2

Printing every 6 samples

Serial # 8520 Outside				Serial # 8520 Outside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	252.7	853.13	99.2		314.2	1033.84	97.6
	254.2	867.16	99.2		315.7	1035.40	97.6
	255.7	879.12	99.1		317.2	1037.21	97.6
	257.2	889.77	99.1		318.7	1038.86	97.6
	258.7	899.24	99.0		320.2	1040.42	97.6
	260.2	907.88	98.9		321.7	1042.06	97.5
	261.7	915.73	98.9		323.2	1043.57	97.5
	263.2	922.80	98.8		324.7	1045.01	97.5
	264.7	929.58	98.8		326.2	1046.67	97.5
	266.2	935.66	98.7		327.7	1048.08	97.5
	267.7	941.40	98.6		329.2	1049.45	97.5
	269.2	946.80	98.6		330.7	1050.81	97.5
	270.7	951.82	98.5		332.2	1052.11	97.5
	272.2	956.49	98.5		333.7	1053.54	97.5
	273.7	961.03	98.4		335.2	1054.84	97.4
	275.2	965.27	98.4		336.7	1056.10	97.4
	276.7	969.25	98.3		338.2	1057.32	97.4
	278.2	973.25	98.3		339.7	1058.60	97.4
	279.7	976.96	98.2		341.2	1059.96	97.4
	281.2	980.75	98.2		342.7	1061.05	97.4
	282.7	983.72	98.1		344.2	1062.22	97.4
	284.2	987.03	98.1		345.7	1063.39	97.4
	285.7	990.56	98.1		347.2	1064.38	97.4
	287.2	993.20	98.0		348.7	1065.68	97.4
	288.7	996.08	98.0		350.2	1066.70	97.3
	290.2	998.80	98.0		351.7	1067.73	97.3
	291.7	1001.55	97.9		353.2	1068.84	97.3
	293.2	1004.15	97.9		354.7	1069.82	97.3
	294.7	1006.67	97.9		356.2	1070.89	97.3
	296.2	1009.17	97.9		357.7	1071.84	97.3
	297.7	1011.64	97.8		359.2	1072.90	97.3
	299.2	1013.93	97.8		360.7	1073.83	97.3
	300.7	1016.07	97.8		362.2	1074.70	97.3
	302.2	1018.34	97.8		363.7	1075.75	97.3
	303.7	1020.39	97.7		365.2	1076.68	97.3
	305.2	1022.41	97.7		366.7	1077.62	97.3
	306.7	1024.53	97.7		368.2	1078.46	97.3
	308.2	1026.33	97.7		369.7	1079.41	97.3
	309.7	1028.28	97.7		371.2	1080.20	97.3
	311.2	1030.24	97.7		372.7	1081.22	97.3
	312.7	1032.12	97.6		374.2	1082.07	97.3

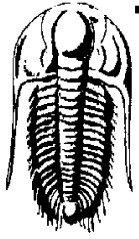
Printing every 6 samples

Serial # 8520 Outside				Serial # 8520 Outside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	375.7	1082.80	97.3		437.2	1355.57	91.3
	377.2	1083.66	97.3		438.7	1313.36	90.0
	378.7	1084.45	97.3		440.2	1216.81	88.4
	380.2	1085.25	97.3		441.7	1198.48	86.9
	381.7	1086.05	97.3		443.2	1119.24	85.8
	383.2	1086.91	97.3		444.7	1018.18	84.9
	384.7	1087.68	97.3		446.2	970.26	84.1
	386.2	1088.42	97.3		447.7	927.54	83.3
	387.7	1089.02	97.3		449.2	849.09	82.7
	389.2	1089.84	97.3		450.7	815.44	82.5
	390.7	1090.50	97.3		452.2	738.40	82.1
	392.2	1091.01	97.3		453.7	653.90	81.8
	393.7	1091.87	97.3		455.2	584.43	81.6
	395.2	1092.65	97.3		456.7	546.58	81.5
	396.7	1093.39	97.3		458.2	467.61	81.4
	398.2	1094.02	97.3		459.7	386.41	79.8
	399.7	1094.79	97.3		461.2	317.87	78.6
	401.2	1095.41	97.3		462.7	247.04	77.3
	402.7	1095.95	97.3		464.2	200.41	76.7
	404.2	1096.75	97.3		465.7	123.13	75.0
	405.7	1097.24	97.3		467.2	48.71	73.3
	407.2	1097.96	97.3		468.7	75.51	72.2
	408.7	1098.45	97.3		470.2	83.40	70.4
	410.2	1099.16	97.3		471.7	128.06	67.9
	411.7	1099.68	97.3		473.2	108.46	67.2
	413.2	1100.45	97.3		474.7	151.48	66.5
	414.7	1100.96	97.3		476.2	118.10	66.4
	416.2	1101.57	97.3		477.7	73.89	65.7
	417.7	1102.38	97.3		479.2	73.80	65.3
	419.2	1576.30	97.5		480.7	73.95	65.1
	420.7	1617.66	99.2		482.2	73.98	65.1
	422.2	1612.98	99.8		483.7	73.99	65.2
	423.7	1610.15	100.0		485.2	29.43	65.3
	425.2	1591.43	100.2		486.7	29.46	65.4
	426.7	1611.84	98.2		488.2	29.35	65.3
	428.2	1606.44	97.4		489.7	29.30	65.3
	429.7	1600.19	97.1		491.2	-0.64	65.5
	431.2	1570.51	96.4		492.7	-0.62	65.4
	432.7	1535.25	95.6		494.2	-0.61	65.4
	434.2	1444.30	94.5		495.7	-0.59	65.4
	435.7	1425.47	92.6		497.2	-0.58	65.4

Printing every 6 samples

Serial # 8520 Outside				Serial # 8653 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	498.7	-0.53	65.4				
	500.2	-0.50	65.4				
	501.7	-0.49	65.4				
	503.2	-0.52	65.4				
	504.7	-0.56	65.4				
	506.2	-0.58	65.3				
	507.7	-0.61	65.3				
	509.2	-0.63	65.3				
	510.7	-0.71	65.3				
	512.2	-0.78	65.3				
	513.7	-0.84	65.3				
	515.2	-0.86	65.3				
	516.7	-0.90	65.3				
	518.2	-0.89	65.3				
	519.7	-0.88	65.3				
	521.2	-0.91	65.3				
	522.7	-0.94	65.3				
	524.2	-0.92	65.3				
	525.7	-0.92	65.3				
	527.2	-0.91	65.3				
	528.7	-0.92	65.3				
	530.2	-0.91	64.7				
	531.7	-0.89	48.6				
	533.2	-1.09	47.7				
	534.7	-1.09	47.1				
	536.2	-1.08	46.8				
	537.7	-1.10	46.5				
	539.2	-1.12	46.6				
	540.7	-1.05	46.8				
	542.2	-1.17	47.2				
	543.7	-0.82	44.7				
	545.2	-1.32	46.2				

Printing every 3 samples



**TRILOBITE
TESTING, INC.**

DRILL STEM TESTING - DATA LISTING

Sam Gary
1515 Wynkoop Ste 700
Denver Co 80202
ATTN: Neil Sharp

Steinert et al # 1-30
30-16-15-Barton-Ks
Job Ticket: 041355 **DST#: 3**
Test Start: 2010.12.15 @ 04:20:30

Serial # 8653 Inside				Serial # 8653 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	0.0	-1.12	67.6		1.6	-0.64	68.5
	0.1	-1.23	67.9		1.7	-0.64	68.3
	0.1	-1.30	68.1		1.8	-0.64	68.2
	0.2	-1.36	68.5		1.8	-0.67	68.1
	0.2	-1.51	68.4		1.9	-0.77	68.0
	0.3	-1.58	68.5		1.9	-0.81	67.9
	0.3	-1.59	68.9		2.0	-0.88	67.7
	0.3	-1.57	69.4		12.0	-1.03	62.4
	0.4	-1.51	69.5		42.0	-1.24	56.0
	0.4	-1.47	69.5		62.5	-0.56	61.1
	0.5	-1.48	69.6		64.0	-0.37	64.0
	0.6	-1.50	69.6		65.5	-0.27	66.5
	0.6	-1.54	69.6		67.0	-0.17	68.5
	0.6	-1.57	69.6		68.5	-0.09	70.2
	0.7	-1.59	69.9		70.0	-0.04	71.6
	0.8	-1.62	69.9		71.5	0.02	72.8
	0.8	-1.67	70.0		73.0	0.06	73.8
	0.9	-1.67	70.0		74.5	0.11	74.6
	0.9	-1.70	69.9		76.0	0.16	75.4
	0.9	-1.78	69.8		77.5	0.20	76.1
	1.0	-1.03	68.6		79.0	0.24	76.7
	1.0	-0.96	68.5		80.5	0.26	77.3
	1.1	-0.87	68.5		82.0	0.30	77.8
	1.1	-0.90	68.5		83.5	0.34	78.3
	1.2	-0.89	68.7		85.0	0.38	78.7
	1.3	-0.85	68.8		86.5	0.44	79.1
	1.3	-0.81	69.0		88.0	0.50	79.5
	1.4	-0.76	69.0		89.5	0.56	79.9
	1.4	-0.73	69.0		91.0	0.62	80.3
	1.5	-0.69	68.9		92.5	0.67	80.7
	1.5	-0.66	68.8		94.0	0.74	81.2
	1.5	-0.65	68.7		95.5	0.79	81.6
	1.6	-0.65	68.6		97.0	0.85	82.0

Printing every 3 samples

Serial # 8653 Inside				Serial # 8653 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	98.5	0.91	82.5		160.0	27.47	89.4
	100.0	0.96	83.0		161.5	27.48	89.5
	101.5	1.00	83.5		163.0	27.48	89.5
	103.0	1.04	84.1		164.5	27.50	89.5
	104.5	1.05	84.6		166.0	27.50	89.5
	106.0	1.05	85.1		167.5	27.49	89.5
	107.5	1.06	85.5		169.0	27.51	89.5
	109.0	1.07	85.8		170.5	27.52	89.6
	110.5	1.07	86.2		172.0	27.51	89.6
	112.0	1.06	86.5		173.5	27.52	89.6
	113.5	14.75	88.5		175.0	27.53	89.6
	115.0	20.97	88.9		176.5	28.47	89.3
	116.5	25.21	89.5		178.0	34.93	89.7
	118.0	27.47	89.4		179.5	38.68	90.6
	119.5	27.41	89.4		181.0	41.46	90.8
	121.0	27.36	89.3		182.5	44.77	90.9
	122.5	27.34	89.3		184.0	47.35	91.0
	124.0	27.33	89.3		185.5	48.50	91.1
	125.5	27.35	89.3		187.0	50.53	91.2
	127.0	27.35	89.2		188.5	51.97	91.3
	128.5	27.37	89.2		190.0	53.65	91.3
	130.0	27.37	89.2		191.5	54.87	91.4
	131.5	27.39	89.2		193.0	56.12	91.5
	133.0	27.39	89.2		194.5	57.39	91.5
	134.5	27.40	89.2		196.0	58.72	91.6
	136.0	27.41	89.3		197.5	59.93	91.6
	137.5	27.41	89.3		199.0	61.25	91.7
	139.0	27.41	89.3		200.5	62.47	91.8
	140.5	27.42	89.3		202.0	63.19	91.8
	142.0	27.41	89.3		203.5	64.29	91.8
	143.5	27.41	89.3		205.0	65.62	91.9
	145.0	27.42	89.3		206.5	66.39	92.0
	146.5	27.43	89.3		208.0	67.40	92.1
	148.0	27.43	89.3		209.5	68.18	92.2
	149.5	27.43	89.3		211.0	69.54	92.2
	151.0	27.44	89.4		212.5	70.39	92.3
	152.5	27.44	89.4		214.0	71.61	92.3
	154.0	27.44	89.4		215.5	72.56	92.3
	155.5	27.46	89.4		217.0	73.84	92.4
	157.0	27.47	89.4		218.5	75.21	92.4
	158.5	27.46	89.4		220.0	76.22	92.5

Printing every 3 samples

Serial # 8653 Inside				Serial # 8653 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	221.5	77.29	92.5		283.0	87.67	92.3
	223.0	78.47	92.6		284.5	87.67	92.3
	224.5	79.55	92.6		286.0	87.70	92.3
	226.0	80.46	92.7		287.5	87.71	92.3
	227.5	81.46	92.7		289.0	87.72	92.3
	229.0	82.53	92.7		290.5	87.73	92.3
	230.5	83.35	92.8		292.0	87.73	92.3
	232.0	84.33	92.8		293.5	87.74	92.3
	233.5	85.56	92.9		295.0	87.75	92.4
	235.0	85.46	92.9		296.5	87.76	92.4
	236.5	86.49	92.9		298.0	87.77	92.4
	238.0	86.87	92.8		299.5	87.77	92.4
	239.5	87.35	92.8		301.0	87.77	92.4
	241.0	87.37	92.7		302.5	87.77	92.4
	242.5	87.37	92.7		304.0	87.76	92.4
	244.0	87.38	92.6		305.5	87.75	92.4
	245.5	87.40	92.6		307.0	87.77	92.4
	247.0	87.38	92.5		308.5	87.78	92.4
	248.5	87.40	92.5		310.0	87.81	92.4
	250.0	87.42	92.4		311.5	87.83	92.4
	251.5	87.44	92.4		313.0	87.85	92.4
	253.0	87.46	92.4		314.5	87.85	92.4
	254.5	87.48	92.4		316.0	87.84	92.5
	256.0	87.49	92.4		317.5	87.85	92.5
	257.5	87.51	92.4		319.0	87.86	92.5
	259.0	87.53	92.3		320.5	87.87	92.5
	260.5	87.56	92.3		322.0	87.87	92.5
	262.0	87.56	92.3		323.5	87.90	92.5
	263.5	87.57	92.3		325.0	87.91	92.5
	265.0	87.58	92.3		326.5	87.91	92.5
	266.5	87.58	92.3		328.0	87.92	92.5
	268.0	87.57	92.3		329.5	87.93	92.5
	269.5	87.59	92.3		331.0	87.92	92.6
	271.0	87.60	92.3		332.5	87.93	92.6
	272.5	87.61	92.3		334.0	87.93	92.6
	274.0	87.62	92.3		335.5	87.95	92.6
	275.5	87.64	92.3		337.0	87.98	92.6
	277.0	87.65	92.3		338.5	87.99	92.6
	278.5	87.66	92.3		340.0	88.01	92.6
	280.0	87.66	92.3		341.5	88.02	92.6
	281.5	87.66	92.3		343.0	88.03	92.6

Printing every 3 samples

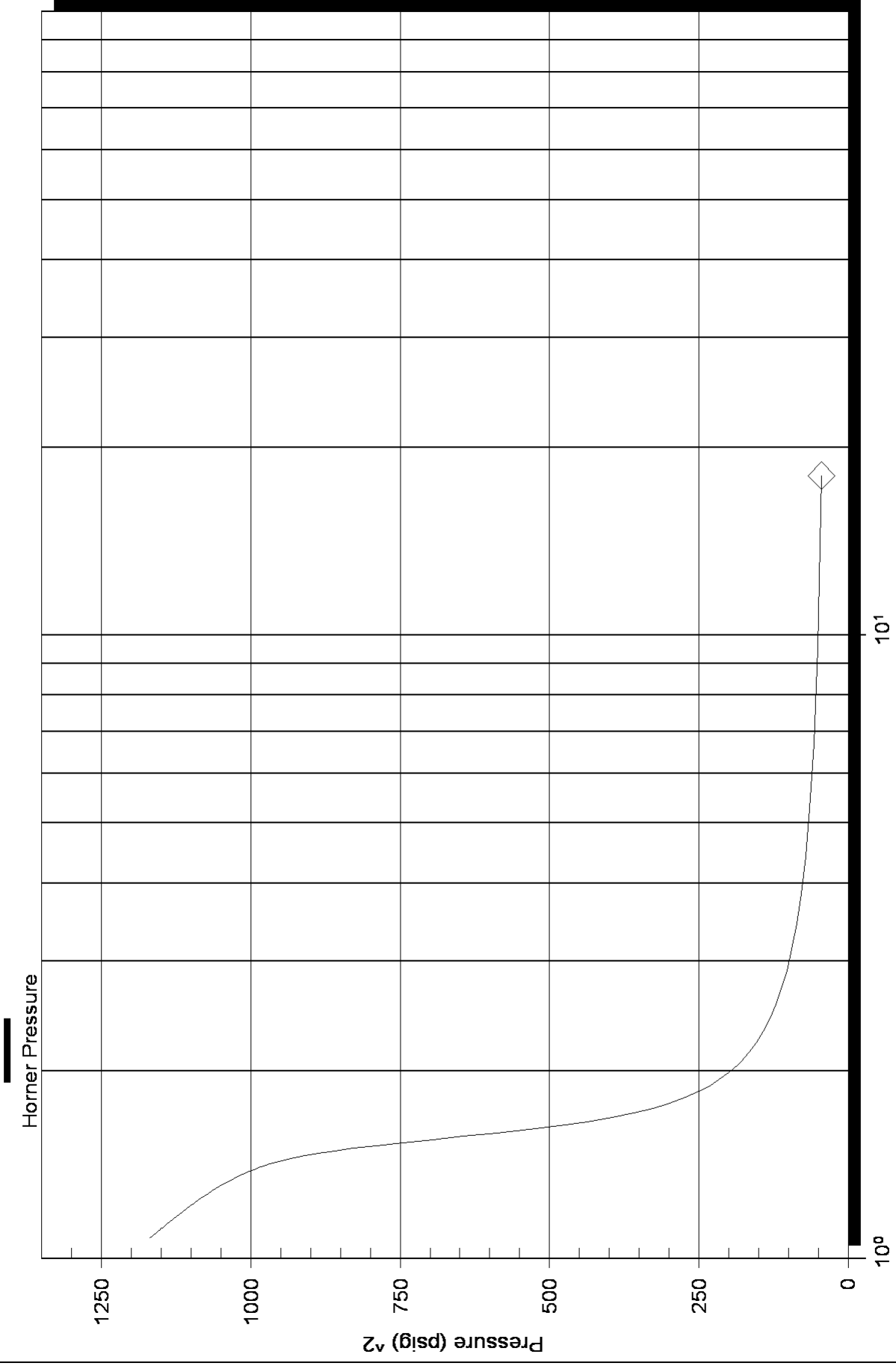
Serial # 8653 Inside				Serial # 8653 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	344.5	88.03	92.6		406.0	87.95	93.1
	346.0	88.03	92.7		407.5	87.95	93.1
	347.5	88.04	92.7		409.0	87.95	93.2
	349.0	88.03	92.7		410.5	87.94	93.2
	350.5	88.03	92.7		412.0	87.98	93.2
	352.0	88.04	92.7		413.5	87.97	93.2
	353.5	88.05	92.7		415.0	87.95	93.2
	355.0	88.06	92.7		416.5	87.95	93.2
	356.5	88.08	92.7		418.0	88.01	93.2
	358.0	88.10	92.7		419.5	88.01	93.2
	359.5	88.11	92.8		421.0	88.08	93.2
	361.0	88.11	92.8		422.5	88.14	93.2
	362.5	88.10	92.8		424.0	88.21	93.2
	364.0	88.09	92.8		425.5	89.50	93.2
	365.5	88.08	92.8		427.0	87.99	93.1
	367.0	88.09	92.8		428.5	87.95	93.1
	368.5	88.10	92.8		430.0	88.39	93.0
	370.0	88.10	92.8		431.5	88.01	92.9
	371.5	88.11	92.8		433.0	87.75	92.7
	373.0	88.11	92.9		434.5	88.01	92.5
	374.5	88.10	92.9		436.0	88.12	92.1
	376.0	88.10	92.9		437.5	90.18	91.7
	377.5	88.10	92.9		439.0	87.39	91.2
	379.0	88.11	92.9		440.5	82.10	90.6
	380.5	88.12	92.9		442.0	88.14	90.0
	382.0	88.12	92.9		443.5	87.23	89.3
	383.5	88.13	92.9		445.0	87.13	88.6
	385.0	88.13	93.0		446.5	87.40	88.0
	386.5	88.12	93.0		448.0	88.67	87.3
	388.0	88.13	93.0		449.5	87.31	86.7
	389.5	88.13	93.0		451.0	81.77	86.1
	391.0	88.12	93.0		452.5	86.94	85.6
	392.5	88.13	93.0		454.0	87.21	85.2
	394.0	88.12	93.0		455.5	87.02	84.8
	395.5	88.10	93.0		457.0	87.00	84.3
	397.0	88.06	93.1		458.5	85.94	83.7
	398.5	88.01	93.1		460.0	89.42	83.1
	400.0	87.98	93.1		461.5	86.87	82.6
	401.5	87.95	93.1		463.0	87.00	81.8
	403.0	87.96	93.1		464.5	79.01	80.8
	404.5	87.96	93.1		466.0	86.65	79.9

Printing every 3 samples

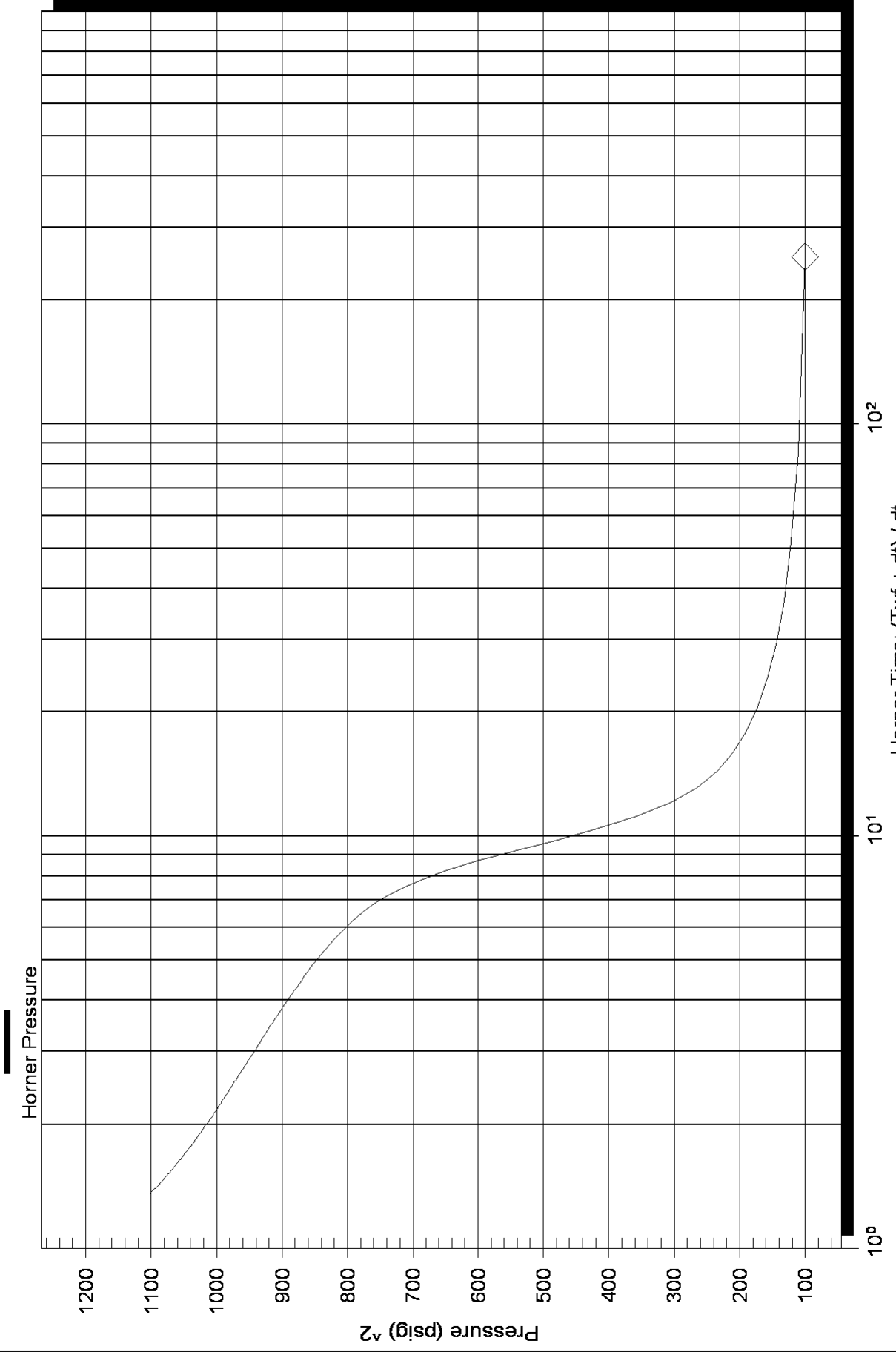
Serial # 8653 Inside				Serial # 8653 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	467.5	86.58	78.9		529.0	-0.88	51.4
	469.0	86.49	77.9		530.5	-0.87	51.2
	470.5	86.70	76.6		532.0	-0.87	51.1
	472.0	88.41	75.4		533.5	-0.88	50.9
	473.5	86.43	74.1		535.0	-0.88	50.9
	475.0	86.30	73.1		536.5	-0.87	50.8
	476.5	79.87	72.1		538.0	-0.84	50.9
	478.0	80.10	71.2		539.5	-0.92	51.1
	479.5	83.29	70.5		541.0	-0.89	50.2
	481.0	84.31	69.9		542.5	-2.65	53.3
	482.5	85.25	69.4		543.0	-2.92	52.7
	484.0	72.10	69.0				
	485.5	58.70	68.6				
	487.0	51.80	68.2				
	488.5	60.84	68.0				
	490.0	24.16	67.8				
	491.5	24.05	68.1				
	493.0	34.75	68.0				
	494.5	37.20	67.8				
	496.0	10.08	67.6				
	497.5	-0.05	67.2				
	499.0	-0.05	50.2				
	500.5	-0.93	49.1				
	502.0	-0.98	49.1				
	503.5	-0.98	49.2				
	505.0	-0.99	49.7				
	506.5	-0.99	50.0				
	508.0	-0.99	50.1				
	509.5	-1.01	50.1				
	511.0	-1.02	49.6				
	512.5	-1.02	49.7				
	514.0	-1.01	49.8				
	515.5	-1.01	49.8				
	517.0	-0.99	49.8				
	518.5	-0.99	49.6				
	520.0	-0.97	49.7				
	521.5	-0.97	50.0				
	523.0	-0.94	50.0				
	524.5	-0.93	50.0				
	526.0	-0.90	50.5				
	527.5	-0.88	51.0				

Printing every 3 samples

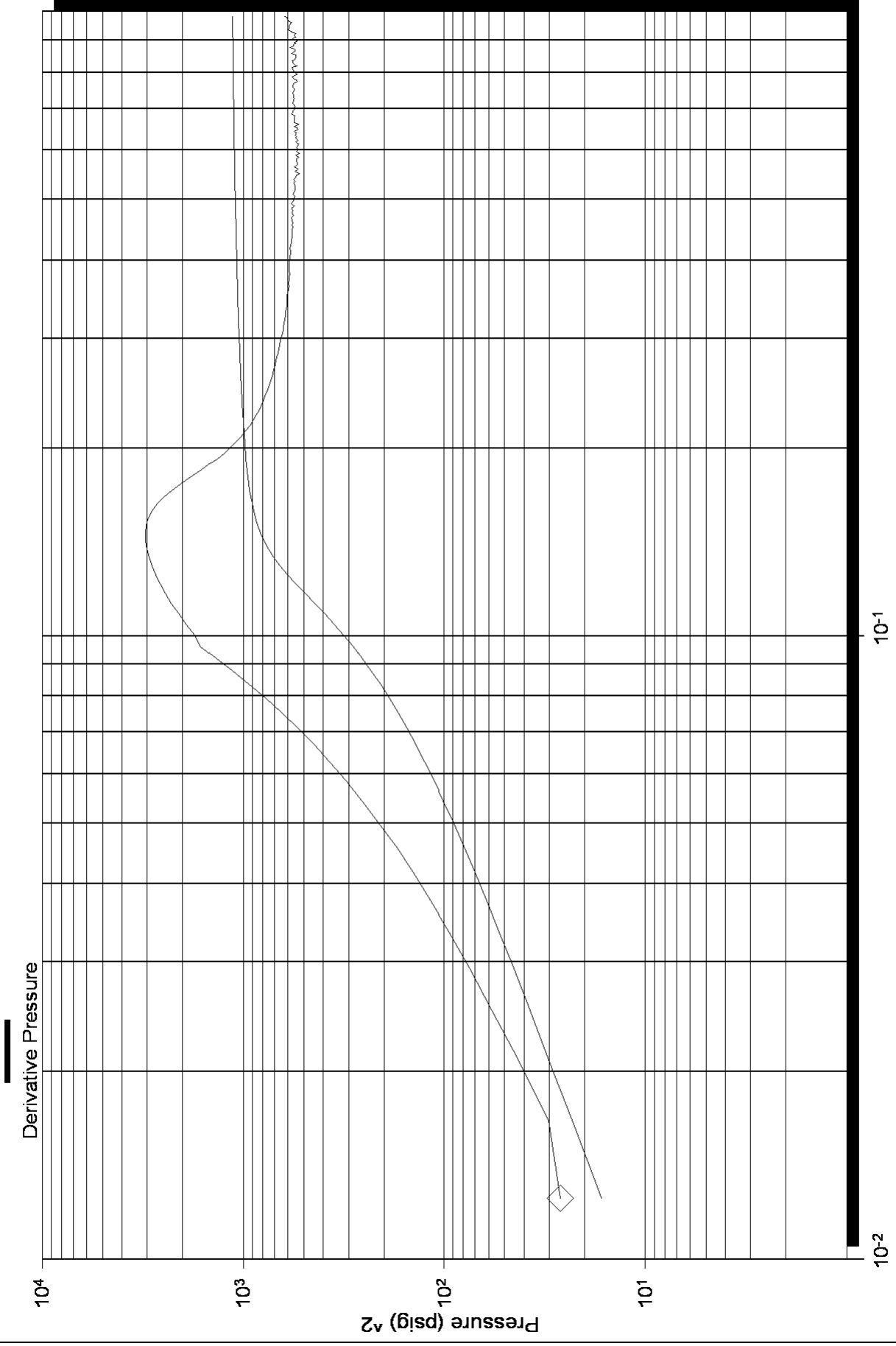
Homer Plot



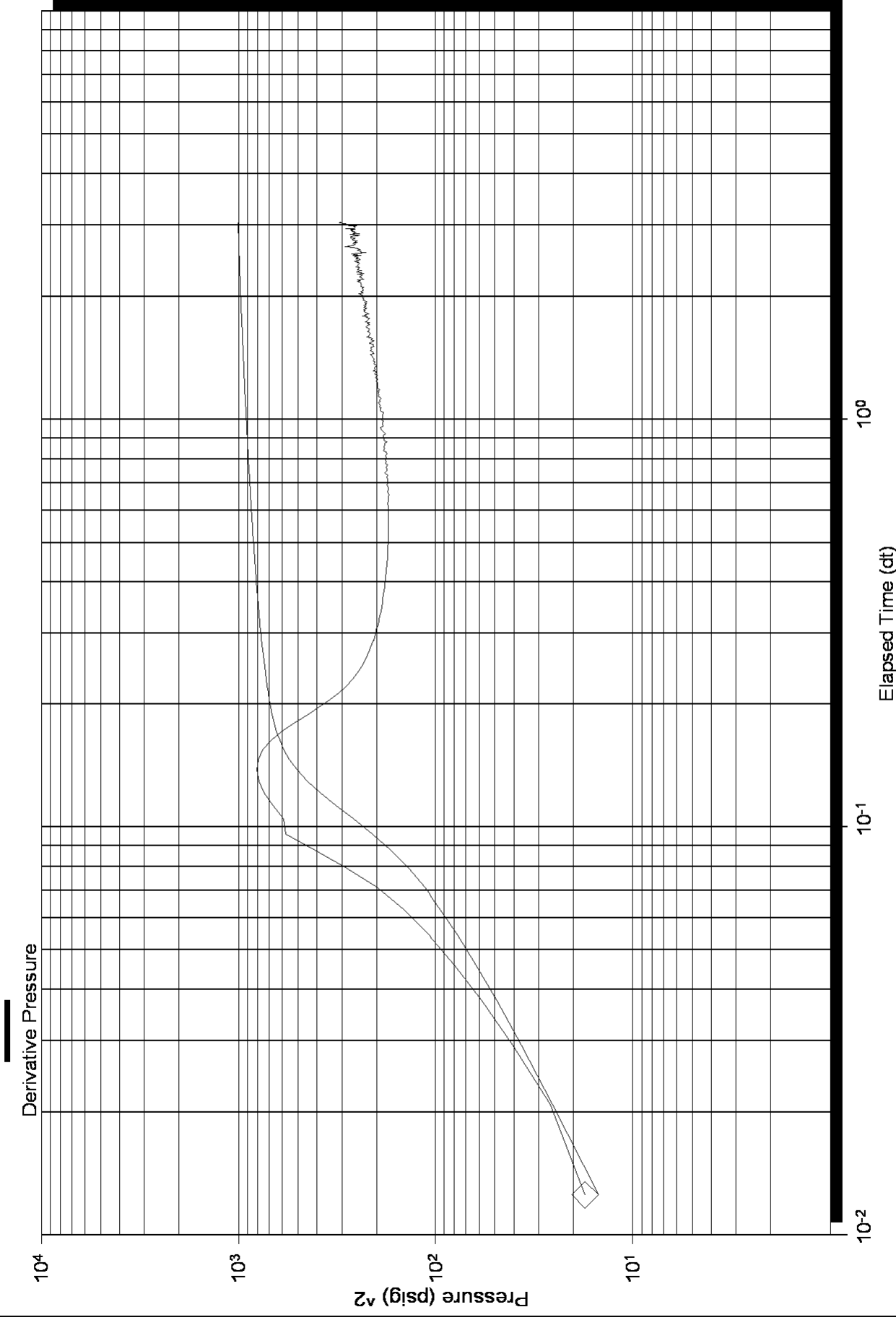
Homer Plot



Log-Log and Pseudo-Derivative



Log-Log and Pseudo-Derivative





DRILL STEM TEST REPORT

Prepared For: **Sam Gary**

1515 Wynkoop Ste 700
Denver Co 80202

ATTN: Neil Sharp

30-16-15-Barton-Ks

Steinert et al # 1-30

Start Date: 2010.12.16 @ 10:45:56

End Date: 2010.12.16 @ 16:56:56

Job Ticket #: 041356 DST #: 4

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Sam Gary
1515 Wynkoop Ste 700
Denver Co 80202
ATTN: Neil Sharp

Steinert et al # 1-30
30-16-15-Barton-Ks
Job Ticket: 041356 **DST#: 4**
Test Start: 2010.12.16 @ 10:45:56

GENERAL INFORMATION:

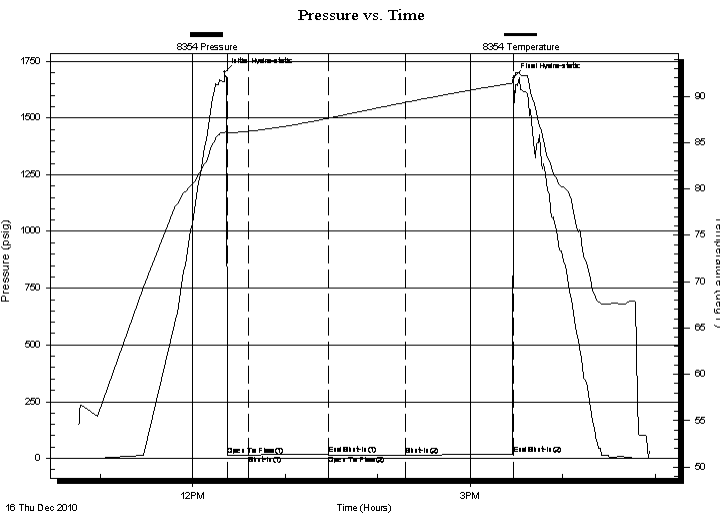
Formation: **K-L LKC**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 12:22:11
Time Test Ended: 16:56:56
Interval: **3488.00 ft (KB) To 3511.00 ft (KB) (TVD)**
Total Depth: 3511.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Test Type: Conventional Bottom Hole
Tester: Dan Bangle
Unit No: 38
Reference Elevations: 2005.00 ft (KB)
1997.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8354 Inside

Press @ Run Depth: 14.99 psig @ 3489.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2010.12.16 End Date: 2010.12.16 Last Calib.: 2010.12.16
Start Time: 10:45:57 End Time: 16:56:56 Time On Btm: 2010.12.16 @ 12:20:41
Time Off Btm: 2010.12.16 @ 15:28:11

TEST COMMENT: IF-Weak steady surface blow

FF-Weak died in 8 min



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1700.38	86.11	Initial Hydro-static
2	12.47	85.19	Open To Flow (1)
16	14.98	86.22	Shut-In(1)
67	19.29	87.61	End Shut-In(1)
68	14.74	87.62	Open To Flow (2)
118	14.99	89.34	Shut-In(2)
187	17.75	91.43	End Shut-In(2)
188	1676.27	91.80	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Drig Mud	0.02

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Sam Gary
1515 Wynkoop Ste 700
Denver Co 80202
ATTN: Neil Sharp

Steinert et al # 1-30
30-16-15-Barton-Ks
Job Ticket: 041356 **DST#: 4**
Test Start: 2010.12.16 @ 10:45:56

Tool Information

Drill Pipe:	Length: 3427.00 ft	Diameter: 3.80 inches	Volume: 48.07 bbl	Tool Weight: 3800.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 50000.00 lb
			Total Volume: 48.22 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	4.00 ft			String Weight: Initial 49000.00 lb
Depth to Top Packer:	3488.00 ft			Final 49000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	23.00 ft			
Tool Length:	58.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

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

Change Over Sub	1.00			3454.00	
Recorder	0.00	8653	Inside	3454.00	
Blank Spacing	4.00			3458.00	
Shut In Tool	5.00			3463.00	
Sampler	3.00			3466.00	
Hydraulic tool	5.00			3471.00	
Jars	5.00			3476.00	
Safety Joint	3.00			3479.00	
Packer	5.00			3484.00	35.00 Bottom Of Top Packer
Packer	4.00			3488.00	
Stubb	1.00			3489.00	
Recorder	0.00	8354	Inside	3489.00	
Recorder	0.00	8520	Outside	3489.00	
Perforations	19.00			3508.00	
Bullnose	3.00			3511.00	23.00 Bottom Packers & Anchor

Total Tool Length: 58.00



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Sam Gary
1515 Wynkoop Ste 700
Denver Co 80202
ATTN: Neil Sharp

Steinert et al # 1-30
30-16-15-Barton-Ks
Job Ticket: 041356 **DST#: 4**
Test Start: 2010.12.16 @ 10:45:56

Mud and Cushion Information

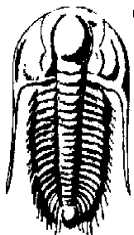
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 53.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.39 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5300.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Drig Mud	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

GAS RATES

Sam Gary
1515 Wynkoop Ste 700
Denver Co 80202
ATTN: Neil Sharp

Steinert et al # 1-30
30-16-15-Barton-Ks
Job Ticket: 041356 **DST#: 4**
Test Start: 2010.12.16 @ 10:45:56

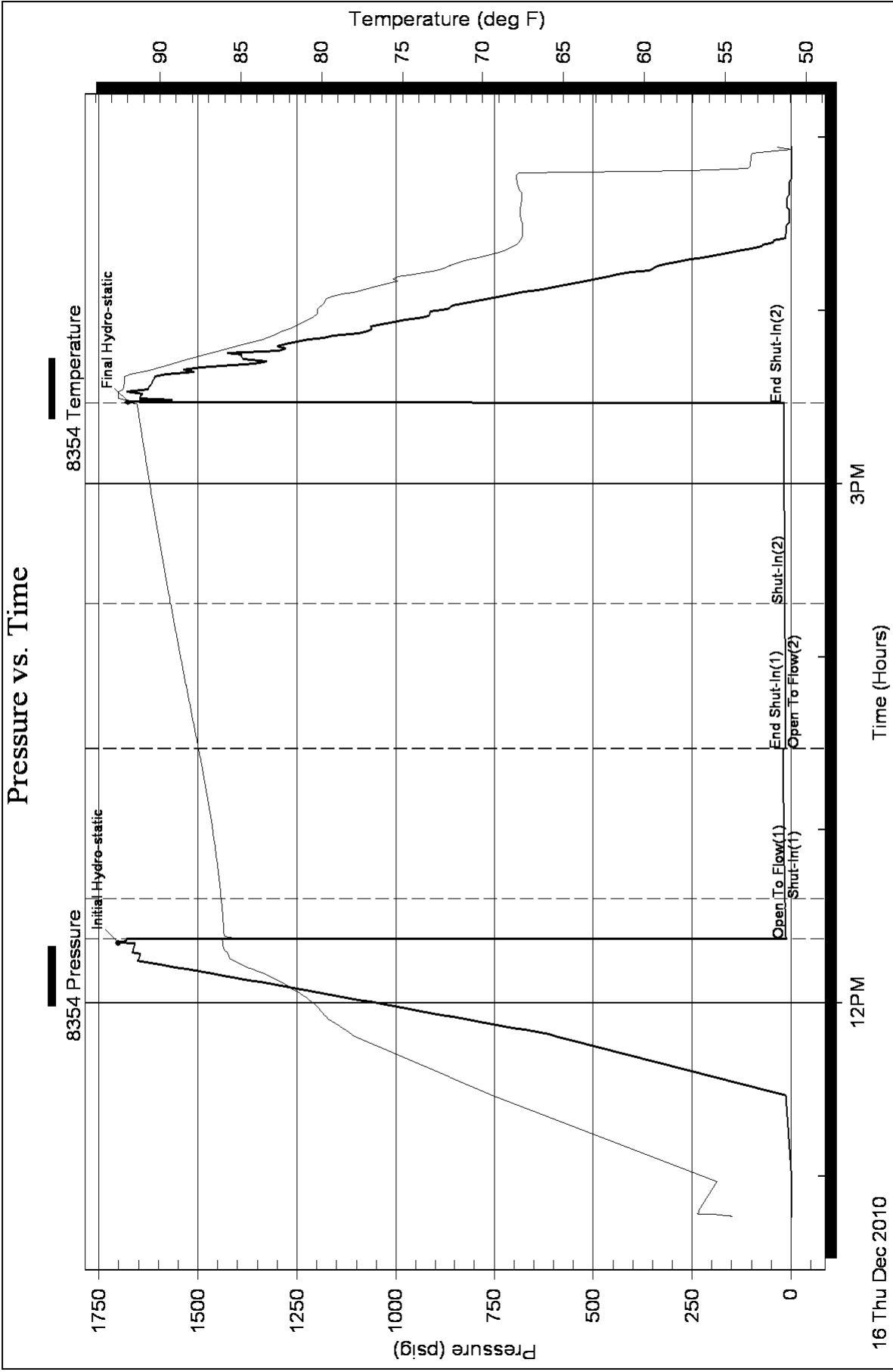
Gas Rates Information

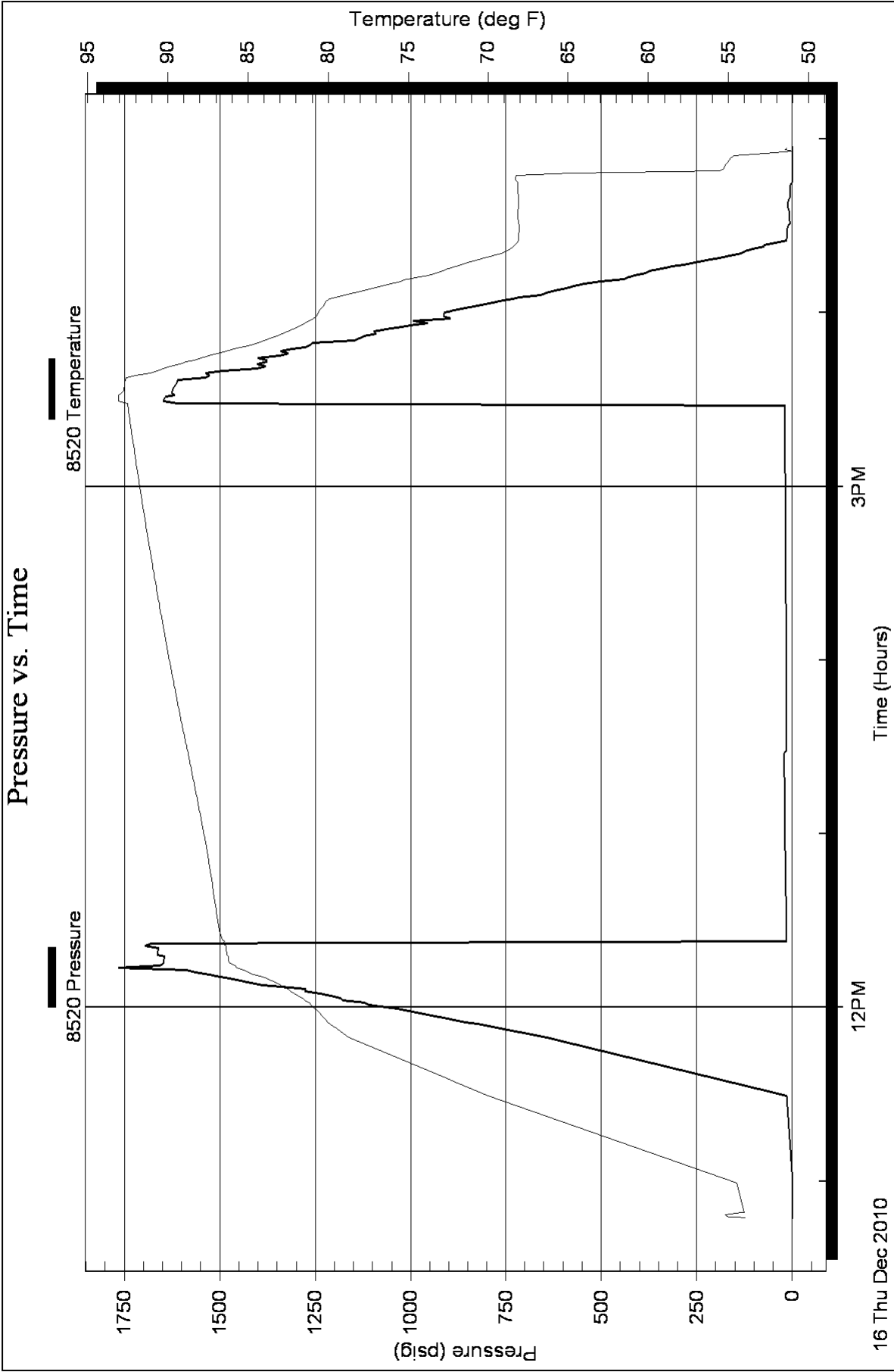
Temperature: 59 deg C
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m ³ /d)
		0.00	0.00	0.00

Pressure vs. Time





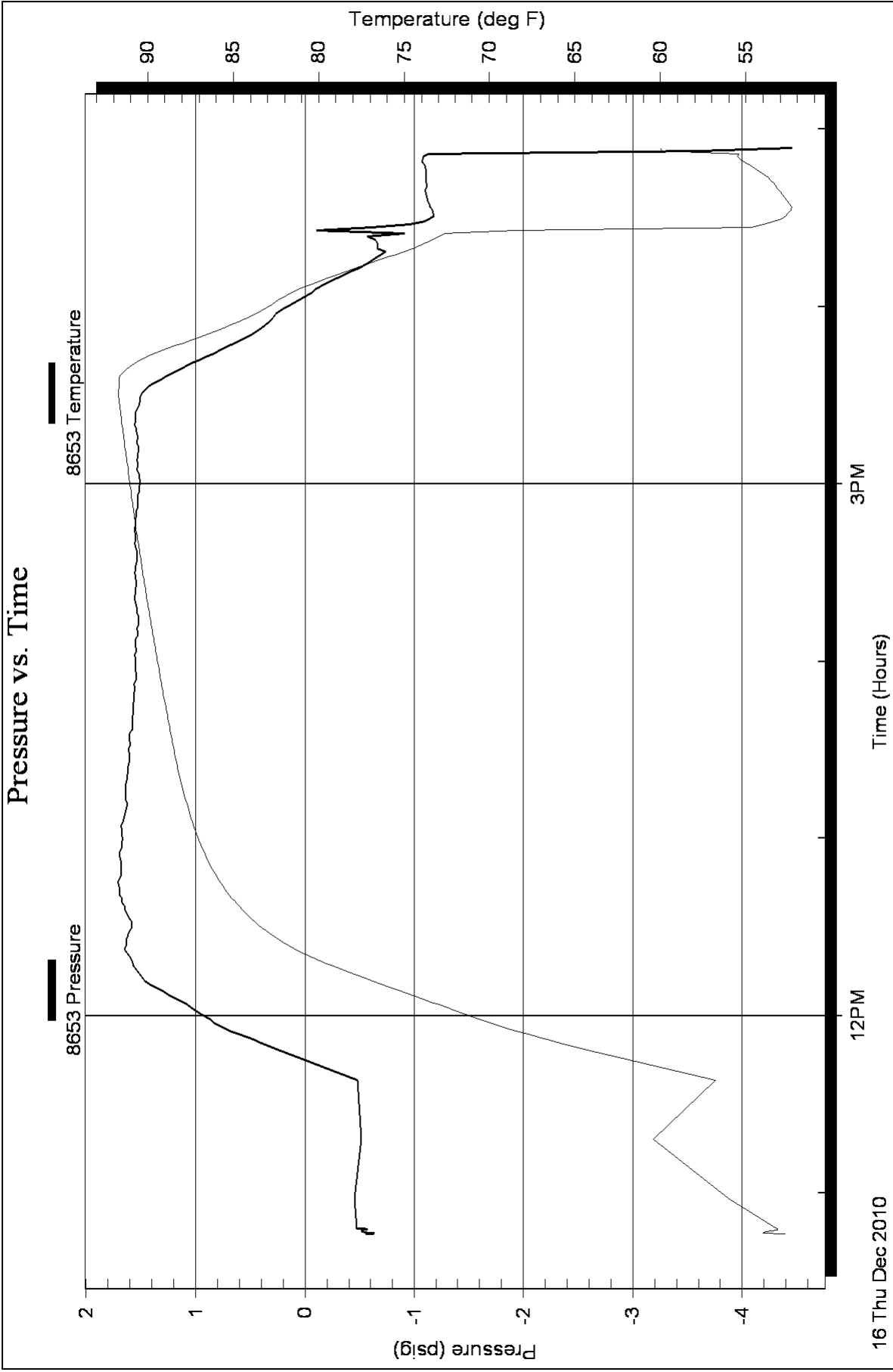
Serial #: 8653

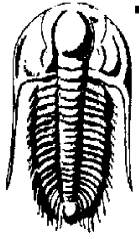
Inside

Sam Gary

30-16-15-Barton-Ks

DST Test Number: 4





**TRILOBITE
TESTING, INC.**

DRILL STEM TESTING - DATA LISTING

Sam Gary
1515 Wynkoop Ste 700
Denver Co 80202
ATTN: Neil Sharp

Steinert et al # 1-30
30-16-15-Barton-Ks
Job Ticket: 041356 **DST#: 4**
Test Start: 2010.12.16 @ 10:45:56

Serial # 8354 Inside				Serial # 8354 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	0.0	-1.35	54.6		63.7	641.97	78.3
	0.1	-1.34	54.7		64.7	673.22	78.6
	0.1	-1.32	54.7		65.7	733.26	78.9
	0.2	-1.33	54.9		66.7	764.03	79.1
	0.3	-1.33	55.1		67.7	772.95	79.4
	0.3	-1.33	55.2		68.7	854.55	79.7
	0.4	-1.34	55.3		69.7	885.03	79.8
	0.5	-1.33	55.4		70.7	1008.49	80.0
	0.5	-1.34	55.5		71.7	975.19	80.2
	0.6	-1.34	55.7		72.7	1005.13	80.3
	0.7	-1.34	56.1		73.7	1079.06	80.5
	0.7	-1.36	56.5		74.7	1118.91	80.7
	0.8	-1.34	56.7		75.7	1126.26	80.9
	0.9	-1.34	56.7		76.7	1200.55	81.2
	0.9	-1.32	56.7		77.7	1240.98	81.5
	1.0	-1.31	56.7		78.7	1249.44	81.8
	1.1	-1.28	56.7		79.7	1279.89	82.1
	1.1	-1.27	56.6		80.7	1369.65	82.4
	1.2	-1.26	56.6		81.7	1372.76	82.7
	1.3	-1.26	56.6		82.7	1393.18	83.1
	1.3	-1.27	56.6		83.7	1518.42	83.4
	1.4	-1.29	56.6		84.7	1495.69	83.9
	1.5	-1.31	56.6		85.7	1521.59	84.3
	1.5	-1.30	56.6		86.7	1763.27	84.9
	1.6	-1.31	56.6		87.7	1618.10	85.1
	1.7	-1.28	56.6		88.7	1648.42	85.5
	1.7	-1.27	56.6		89.7	1647.50	85.7
	1.8	-1.26	56.6		90.7	1645.29	85.8
	1.9	-1.25	56.6		91.7	1663.69	85.9
	1.9	-1.25	56.6		92.7	1662.82	86.1
	12.0	-1.19	55.5		93.7	1660.54	86.1
	52.0	223.13	74.4		94.2	1659.89	86.1
	62.7	612.30	78.1		94.5	1659.68	86.1

Printing every 4 samples

Serial # 8354 Inside				Serial # 8354 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
Initial Hydro-static	94.7	1700.38	86.1		124.7	16.54	86.5
	95.0	1684.59	86.1		125.7	16.65	86.5
	95.2	1682.53	86.1		126.7	16.73	86.6
	95.5	1679.54	86.2		127.7	16.82	86.6
Open To Flow (1)	95.7	1680.48	86.2		128.7	16.89	86.6
	96.0	1680.68	86.2		129.7	16.94	86.6
	96.2	12.47	85.2		130.7	17.02	86.7
	96.5	13.42	85.9		131.7	17.08	86.7
	96.7	13.53	86.0		132.7	17.18	86.7
	97.0	13.59	86.0		133.7	17.29	86.8
	98.0	13.76	86.0		134.7	17.38	86.8
	99.0	13.85	86.1		135.7	17.46	86.8
	100.0	13.88	86.1		136.7	17.55	86.8
	101.0	13.91	86.1		137.7	17.65	86.9
	102.0	13.88	86.1		138.7	17.74	86.9
	103.0	13.49	86.1		139.7	17.82	86.9
	104.0	13.82	86.1		140.7	17.90	86.9
	105.0	14.12	86.1		141.7	17.96	87.0
	106.0	14.37	86.2		142.7	18.04	87.0
	107.0	14.52	86.2		143.7	18.12	87.0
	108.0	14.37	86.2		144.7	18.20	87.1
	109.0	14.83	86.2		145.7	18.29	87.1
	109.5	14.90	86.2		146.7	18.37	87.1
	109.7	14.94	86.2		147.7	18.44	87.2
	110.0	14.98	86.2		148.7	18.51	87.2
Shut-In(1)	110.2	15.01	86.2		149.7	18.57	87.2
	110.5	15.04	86.2		150.7	18.62	87.3
	110.7	15.07	86.2		151.7	18.68	87.3
	111.7	15.21	86.3		152.7	18.75	87.3
	112.7	15.34	86.3		153.7	18.82	87.3
	113.7	15.18	86.3		154.7	18.90	87.4
	114.7	15.61	86.3		155.7	18.96	87.4
	115.7	15.75	86.3		156.7	19.03	87.4
	116.7	15.84	86.3		157.7	19.11	87.5
	117.7	15.93	86.4		158.7	19.18	87.5
	118.7	16.01	86.4		159.7	19.23	87.5
	119.7	16.09	86.4		160.7	19.26	87.6
	120.7	16.17	86.4		161.2	19.28	87.6
	121.7	16.28	86.5		161.5	19.31	87.6
	122.7	16.36	86.5	End Shut-In(1)	161.7	19.29	87.6
	123.7	16.45	86.5	Open To Flow (2)	162.0	14.74	87.6

Printing every 4 samples

Serial # 8354 Inside				Serial # 8354 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	162.2	14.17	87.6		202.5	14.54	89.0
	162.5	14.19	87.6		203.5	14.58	89.1
	163.5	14.16	87.7		204.5	14.61	89.1
	164.5	14.17	87.7		205.5	14.67	89.1
	165.5	14.24	87.8		206.5	14.72	89.2
	166.5	14.18	87.8		207.5	14.77	89.2
	167.5	14.14	87.8		208.5	14.82	89.2
	168.5	14.09	87.9		209.5	14.87	89.3
	169.5	14.12	87.9		210.5	14.91	89.3
	170.5	14.16	87.9		211.5	14.96	89.3
	171.5	14.20	88.0		211.7	14.98	89.3
	172.5	14.23	88.0		212.0	14.98	89.3
	173.5	14.20	88.0	Shut-In(2)	212.2	14.99	89.3
	174.5	14.14	88.1		212.5	15.01	89.4
	175.5	14.09	88.1		212.7	15.02	89.4
	176.5	14.10	88.1		213.0	15.03	89.4
	177.5	14.15	88.2		214.0	15.07	89.4
	178.5	14.20	88.2		215.0	15.11	89.4
	179.5	14.21	88.2		216.0	15.15	89.5
	180.5	14.25	88.3		217.0	15.18	89.5
	181.5	14.26	88.3		218.0	15.23	89.5
	182.5	14.27	88.3		219.0	15.27	89.6
	183.5	14.23	88.4		220.0	15.32	89.6
	184.5	14.22	88.4		221.0	15.37	89.6
	185.5	14.21	88.4		222.0	15.43	89.7
	186.5	14.24	88.5		223.0	15.47	89.7
	187.5	14.27	88.5		224.0	15.51	89.7
	188.5	14.21	88.5		225.0	15.54	89.8
	189.5	14.13	88.6		226.0	15.58	89.8
	190.5	14.08	88.6		227.0	15.61	89.8
	191.5	14.04	88.7		228.0	15.65	89.9
	192.5	14.08	88.7		229.0	15.69	89.9
	193.5	14.10	88.7		230.0	15.73	89.9
	194.5	14.15	88.8		231.0	15.78	89.9
	195.5	14.20	88.8		232.0	15.82	90.0
	196.5	14.25	88.8		233.0	15.86	90.0
	197.5	14.31	88.9		234.0	15.87	90.0
	198.5	14.35	88.9		235.0	15.92	90.1
	199.5	14.39	88.9		236.0	15.96	90.1
	200.5	14.44	89.0		237.0	16.00	90.1
	201.5	14.49	89.0		238.0	16.04	90.2

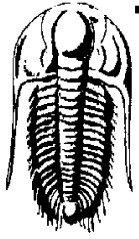
Printing every 4 samples

Serial # 8354 Inside				Serial # 8354 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	239.0	16.07	90.2		280.0	17.72	91.4
	240.0	16.10	90.2		281.0	17.74	91.4
	241.0	16.14	90.3		281.2	17.76	91.4
	242.0	16.17	90.3		281.5	17.75	91.4
	243.0	16.19	90.3	End Shut-In(2)	281.7	17.75	91.4
	244.0	16.22	90.3		282.0	1594.58	92.2
	245.0	16.26	90.4	Final Hydro-static	282.2	1676.27	91.8
	246.0	16.31	90.4		282.5	1632.99	91.7
	247.0	16.36	90.4		283.5	1647.74	92.6
	248.0	16.39	90.5		284.5	1643.23	92.6
	249.0	16.43	90.5		285.5	1601.72	92.6
	250.0	16.47	90.5		286.5	1626.18	92.3
	251.0	16.51	90.6		287.5	1622.76	92.2
	252.0	16.55	90.6		288.5	1618.70	92.2
	253.0	16.60	90.6		289.5	1614.19	92.2
	254.0	16.63	90.6		290.5	1610.41	92.2
	255.0	16.66	90.7		291.5	1531.18	92.1
	256.0	16.71	90.7		292.5	1509.21	91.1
	257.0	16.76	90.7		293.5	1461.20	90.3
	258.0	16.79	90.8		294.5	1408.15	89.9
	259.0	16.84	90.8		295.5	1355.99	89.2
	260.0	16.87	90.8		296.5	1370.26	88.6
	261.0	16.92	90.8		297.5	1384.33	87.9
	262.0	16.95	90.9		298.5	1388.92	87.2
	263.0	17.00	90.9		299.5	1370.91	86.5
	264.0	17.02	90.9		300.5	1340.78	85.9
	265.0	17.06	91.0		301.5	1299.19	85.3
	266.0	17.10	91.0		302.5	1228.80	84.7
	267.0	17.16	91.0		303.5	1184.01	84.0
	268.0	17.20	91.0		304.5	1183.11	83.4
	269.0	17.27	91.1		305.5	1157.19	82.9
	270.0	17.31	91.1		306.5	1125.98	82.5
	271.0	17.36	91.1		307.5	1059.95	82.0
	272.0	17.40	91.2		308.5	1014.56	81.7
	273.0	17.45	91.2		309.5	989.34	81.3
	274.0	17.50	91.2		310.5	976.07	80.9
	275.0	17.55	91.2		311.5	945.19	80.6
	276.0	17.59	91.3		312.5	914.59	80.3
	277.0	17.63	91.3		313.5	912.61	80.3
	278.0	17.67	91.3		314.5	881.40	80.2
	279.0	17.70	91.4		315.5	853.90	80.0

Printing every 4 samples

Serial # 8354 Inside				Serial # 8354 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	316.5	823.60	79.9		357.5	4.54	67.9
	317.5	752.70	79.8		358.5	4.53	67.9
	318.5	728.17	79.5		359.5	-1.31	67.9
	319.5	702.57	78.8		360.5	-1.31	67.9
	320.5	667.88	77.9		361.5	-1.23	67.8
	321.5	592.91	77.2		362.5	-0.92	54.4
	322.5	581.51	76.5		363.5	-1.52	53.5
	323.5	551.12	75.7		364.5	-1.56	53.5
	324.5	477.14	75.0		365.5	-1.56	53.4
	325.5	461.62	75.3		366.5	-1.54	53.4
	326.5	432.53	73.9		367.5	-1.54	53.4
	327.5	402.68	73.0		368.5	-1.49	53.1
	328.5	348.70	72.5		369.5	-1.50	51.2
	329.5	318.05	72.1		370.5	-1.58	51.8
	330.5	283.37	71.5		371.0	-1.55	51.8
	331.5	253.74	70.8				
	332.5	218.44	70.1				
	333.5	160.51	69.4				
	334.5	133.33	68.7				
	335.5	103.23	68.3				
	336.5	73.19	68.0				
	337.5	46.81	67.8				
	338.5	13.93	67.6				
	339.5	13.01	67.6				
	340.5	12.65	67.6				
	341.5	12.54	67.6				
	342.5	12.49	67.5				
	343.5	12.51	67.5				
	344.5	4.54	67.6				
	345.5	4.71	67.6				
	346.5	4.68	67.7				
	347.5	4.67	67.7				
	348.5	4.62	67.7				
	349.5	9.51	67.7				
	350.5	9.70	67.6				
	351.5	9.70	67.6				
	352.5	9.69	67.6				
	353.5	4.82	67.6				
	354.5	4.18	67.6				
	355.5	4.43	67.7				
	356.5	4.54	67.8				

Printing every 4 samples



**TRILOBITE
TESTING, INC.**

DRILL STEM TESTING - DATA LISTING

Sam Gary
1515 Wynkoop Ste 700
Denver Co 80202
ATTN: Neil Sharp

Steinert et al # 1-30
30-16-15-Barton-Ks
Job Ticket: 041356 **DST#: 4**
Test Start: 2010.12.16 @ 10:45:56

Serial # 8520 Outside				Serial # 8520 Outside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	0.0	-0.96	54.0		63.7	702.56	79.1
	0.1	-0.83	54.2		64.7	730.77	79.3
	0.1	-0.86	54.4		65.7	814.00	79.6
	0.2	-0.90	54.7		66.7	823.69	79.9
	0.3	-0.95	54.9		67.7	854.16	80.1
	0.3	-0.98	55.0		68.7	904.30	80.2
	0.4	-0.98	55.1		69.7	945.53	80.4
	0.5	-1.00	55.1		70.7	1023.44	80.6
	0.5	-1.02	55.1		71.7	1011.26	80.7
	0.6	-1.01	55.1		72.7	1065.38	80.9
	0.7	-1.00	55.1		73.7	1095.76	81.1
	0.7	-0.97	55.1		74.7	1255.56	81.4
	0.8	-0.98	55.2		75.7	1183.68	81.6
	0.9	-0.98	55.2		76.7	1217.83	82.0
	0.9	-1.01	55.2		77.7	1427.81	82.3
	1.0	-1.02	55.2		78.7	1275.48	82.5
	1.1	-1.01	55.1		79.7	1341.96	82.9
	1.1	-1.00	55.0		80.7	1573.13	83.2
	1.2	-0.99	54.9		81.7	1445.52	83.5
	1.3	-1.00	54.9		82.7	1464.56	84.0
	1.3	-0.97	54.8		83.7	1688.85	84.6
	1.4	-0.99	54.7		84.7	1564.23	84.9
	1.5	-0.97	54.6		85.7	1587.42	85.4
	1.5	-1.00	54.5		86.7	1617.90	85.7
	1.6	-1.00	54.3		87.7	1648.23	86.1
	1.7	-1.01	54.2		88.7	1646.71	86.2
	1.7	-1.00	54.1		89.7	1645.49	86.2
	1.8	-1.00	54.0		90.7	1663.52	86.3
	1.9	-0.99	54.0		91.7	1661.93	86.3
	1.9	-0.99	54.0		92.7	1659.93	86.3
	12.0	-0.98	54.5		93.7	1695.63	86.4
	52.0	253.47	75.9		94.7	1680.60	86.6
	62.7	659.48	78.8		95.7	13.97	86.6

Printing every 4 samples

Serial # 8520 Outside				Serial # 8520 Outside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	96.7	14.14	86.7		137.7	18.26	87.9
	97.7	14.24	86.7		138.7	18.36	88.0
	98.7	14.27	86.8		139.7	18.44	88.0
	99.7	14.30	86.8		140.7	18.50	88.0
	100.7	14.28	86.8		141.7	18.56	88.1
	101.7	13.25	86.9		142.7	18.62	88.1
	102.7	14.24	86.9		143.7	18.69	88.1
	103.7	14.53	86.9		144.7	18.76	88.2
	104.7	14.80	87.0		145.7	18.82	88.2
	105.7	15.00	87.0		146.7	18.90	88.2
	106.7	15.15	87.0		147.7	18.96	88.3
	107.7	15.31	87.0		148.7	19.03	88.3
	108.7	15.44	87.1		149.7	19.09	88.4
	109.7	15.58	87.1		150.7	19.17	88.4
	110.7	15.73	87.1		151.7	19.24	88.4
	111.7	15.55	87.1		152.7	19.31	88.5
	112.7	15.98	87.2		153.7	19.37	88.5
	113.7	16.11	87.2		154.7	19.43	88.5
	114.7	16.19	87.2		155.7	19.49	88.6
	115.7	16.30	87.2		156.7	19.55	88.6
	116.7	16.40	87.3		157.7	19.59	88.6
	117.7	16.52	87.3		158.7	19.62	88.7
	118.7	16.63	87.3		159.7	19.67	88.7
	119.7	16.71	87.4		160.7	14.62	88.8
	120.7	16.79	87.4		161.7	14.68	88.8
	121.7	16.89	87.4		162.7	14.59	88.8
	122.7	16.99	87.4		163.7	14.70	88.9
	123.7	17.10	87.5		164.7	14.65	88.9
	124.7	17.17	87.5		165.7	14.59	89.0
	125.7	17.28	87.5		166.7	14.54	89.0
	126.7	17.38	87.6		167.7	14.53	89.0
	127.7	17.45	87.6		168.7	14.60	89.1
	128.7	17.55	87.6		169.7	14.64	89.1
	129.7	17.63	87.7		170.7	14.65	89.1
	130.7	17.72	87.7		171.7	14.63	89.2
	131.7	17.81	87.7		172.7	14.57	89.2
	132.7	17.86	87.8		173.7	14.53	89.2
	133.7	17.93	87.8		174.7	14.51	89.3
	134.7	18.02	87.8		175.7	14.57	89.3
	135.7	18.08	87.9		176.7	14.61	89.4
	136.7	18.18	87.9		177.7	14.65	89.4

Printing every 4 samples

Serial # 8520 Outside				Serial # 8520 Outside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	178.7	14.67	89.4		219.7	15.82	90.8
	179.7	14.70	89.5		220.7	15.84	90.8
	180.7	14.72	89.5		221.7	15.89	90.8
	181.7	14.70	89.5		222.7	15.94	90.9
	182.7	14.63	89.6		223.7	15.99	90.9
	183.7	14.60	89.6		224.7	16.03	90.9
	184.7	14.59	89.6		225.7	16.08	91.0
	185.7	14.63	89.7		226.7	16.11	91.0
	186.7	14.63	89.7		227.7	16.15	91.0
	187.7	14.54	89.7		228.7	16.18	91.1
	188.7	14.47	89.8		229.7	16.22	91.1
	189.7	14.40	89.8		230.7	16.24	91.1
	190.7	14.47	89.8		231.7	16.29	91.1
	191.7	14.54	89.9		232.7	16.33	91.2
	192.7	14.63	89.9		233.7	16.38	91.2
	193.7	14.70	89.9		234.7	16.44	91.2
	194.7	14.75	90.0		235.7	16.48	91.3
	195.7	14.81	90.0		236.7	16.54	91.3
	196.7	14.84	90.0		237.7	16.58	91.3
	197.7	14.89	90.1		238.7	16.62	91.3
	198.7	14.94	90.1		239.7	16.64	91.4
	199.7	14.99	90.1		240.7	16.67	91.4
	200.7	15.05	90.2		241.7	16.72	91.4
	201.7	15.08	90.2		242.7	16.77	91.5
	202.7	15.12	90.2		243.7	16.80	91.5
	203.7	15.14	90.3		244.7	16.85	91.5
	204.7	15.18	90.3		245.7	16.89	91.5
	205.7	15.22	90.3		246.7	16.93	91.6
	206.7	15.26	90.4		247.7	16.98	91.6
	207.7	15.29	90.4		248.7	17.02	91.6
	208.7	15.33	90.4		249.7	17.05	91.7
	209.7	15.36	90.5		250.7	17.10	91.7
	210.7	15.42	90.5		251.7	17.14	91.7
	211.7	15.48	90.5		252.7	17.19	91.7
	212.7	15.52	90.6		253.7	17.20	91.8
	213.7	15.56	90.6		254.7	17.24	91.8
	214.7	15.61	90.6		255.7	17.29	91.8
	215.7	15.65	90.7		256.7	17.35	91.9
	216.7	15.68	90.7		257.7	17.39	91.9
	217.7	15.74	90.7		258.7	17.44	91.9
	218.7	15.78	90.7		259.7	17.48	91.9

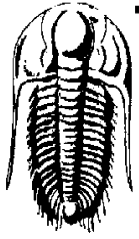
Printing every 4 samples

Serial # 8520 Outside				Serial # 8520 Outside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	260.7	17.52	92.0		301.7	1248.98	84.6
	261.7	17.55	92.0		302.7	1200.24	84.1
	262.7	17.59	92.0		303.7	1135.42	83.6
	263.7	17.61	92.1		304.7	1149.39	83.1
	264.7	17.62	92.1		305.7	1095.65	82.7
	265.7	17.65	92.1		306.7	1065.83	82.2
	266.7	17.69	92.1		307.7	1035.76	81.9
	267.7	17.75	92.2		308.7	968.24	81.5
	268.7	17.82	92.2		309.7	993.02	81.2
	269.7	17.89	92.2		310.7	913.81	80.9
	270.7	17.96	92.2		311.7	913.89	80.7
	271.7	18.01	92.3		312.7	911.74	80.6
	272.7	18.05	92.3		313.7	853.72	80.5
	273.7	18.07	92.3		314.7	812.13	80.3
	274.7	18.08	92.3		315.7	793.69	80.2
	275.7	18.13	92.4		316.7	763.49	80.1
	276.7	18.16	92.4		317.7	694.00	79.7
	277.7	18.20	92.4		318.7	658.10	79.0
	278.7	18.25	92.4		319.7	641.56	78.2
	279.7	18.27	92.5		320.7	587.62	77.3
	280.7	1631.07	93.0		321.7	571.44	76.7
	281.7	1649.73	93.0		322.7	521.94	75.8
	282.7	1645.69	93.0		323.7	491.95	75.4
	283.7	1640.02	93.1		324.7	431.96	74.6
	284.7	1578.60	92.9		325.7	408.19	73.6
	285.7	1624.49	92.8		326.7	372.95	73.0
	286.7	1620.63	92.7		327.7	342.56	72.5
	287.7	1616.11	92.7		328.7	297.53	72.0
	288.7	1612.04	92.7		329.7	256.69	71.5
	289.7	1608.78	92.7		330.7	224.05	70.7
	290.7	1581.27	92.1		331.7	193.92	70.0
	291.7	1536.18	91.1		332.7	153.35	69.3
	292.7	1491.78	90.5		333.7	123.13	68.8
	293.7	1447.29	90.0		334.7	68.46	68.6
	294.7	1402.04	89.2		335.7	73.59	68.3
	295.7	1381.96	88.8		336.7	44.15	68.2
	296.7	1356.90	88.0		337.7	14.20	68.1
	297.7	1344.52	87.4		338.7	13.65	68.1
	298.7	1299.84	86.8		339.7	13.47	68.1
	299.7	1314.42	86.1		340.7	13.44	68.1
	300.7	1277.99	85.5		341.7	13.39	68.1

Printing every 4 samples

Serial # 8520 Outside				Serial # 8653 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	342.7	9.45	68.1				
	343.7	5.60	68.1				
	344.7	5.61	68.1				
	345.7	5.62	68.1				
	346.7	5.60	68.1				
	347.7	8.99	68.1				
	348.7	10.53	68.1				
	349.7	10.61	68.1				
	350.7	10.62	68.1				
	351.7	7.62	68.1				
	352.7	7.25	68.1				
	353.7	5.17	68.1				
	354.7	5.47	68.1				
	355.7	5.45	68.1				
	356.7	5.42	68.1				
	357.7	0.80	68.1				
	358.7	-0.93	68.3				
	359.7	-0.97	68.3				
	360.7	-1.11	64.8				
	361.7	-0.76	55.4				
	362.7	-0.97	55.2				
	363.7	-0.98	55.1				
	364.7	-0.96	55.0				
	365.7	-0.98	54.9				
	366.7	-0.92	54.7				
	367.7	-0.90	52.0				
	368.7	-1.18	51.6				
	369.7	-1.06	51.3				

Printing every 2 samples



**TRILOBITE
TESTING, INC.**

DRILL STEM TESTING - DATA LISTING

Sam Gary
1515 Wynkoop Ste 700
Denver Co 80202
ATTN: Neil Sharp

Steinert et al # 1-30
30-16-15-Barton-Ks
Job Ticket: 041356 **DST#: 4**
Test Start: 2010.12.16 @ 10:45:56

Serial # 8653 Inside				Serial # 8653 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	0.0	-0.55	52.7		1.1	-0.52	53.5
	0.0	-0.59	52.8		1.1	-0.51	53.4
	0.1	-0.58	52.9		1.2	-0.52	53.3
	0.1	-0.59	53.1		1.2	-0.52	53.3
	0.1	-0.62	53.3		1.2	-0.51	53.2
	0.2	-0.63	53.5		1.3	-0.52	53.2
	0.2	-0.62	53.6		1.3	-0.52	53.2
	0.2	-0.61	53.7		1.3	-0.53	53.2
	0.3	-0.60	53.8		1.4	-0.54	53.2
	0.3	-0.58	53.9		1.4	-0.54	53.1
	0.3	-0.58	53.9		1.4	-0.54	53.1
	0.4	-0.57	54.0		1.5	-0.54	53.1
	0.4	-0.56	54.0		1.5	-0.54	53.1
	0.4	-0.57	54.0		1.5	-0.56	53.1
	0.5	-0.57	54.0		1.6	-0.57	53.1
	0.5	-0.56	54.0		1.6	-0.56	53.1
	0.5	-0.56	54.0		1.6	-0.56	53.1
	0.6	-0.56	54.0		1.7	-0.56	53.1
	0.6	-0.56	54.0		1.7	-0.56	53.1
	0.6	-0.56	54.0		1.7	-0.56	53.2
	0.7	-0.55	54.0		1.8	-0.54	53.2
	0.7	-0.54	53.9		1.8	-0.51	53.2
	0.7	-0.54	53.9		1.8	-0.52	53.2
	0.8	-0.53	53.9		1.9	-0.51	53.2
	0.8	-0.53	53.9		1.9	-0.49	53.2
	0.8	-0.53	53.9		1.9	-0.49	53.2
	0.9	-0.52	53.8		2.0	-0.47	53.2
	0.9	-0.52	53.8		12.0	-0.45	56.0
	0.9	-0.52	53.7		32.0	-0.51	60.4
	1.0	-0.53	53.7		52.0	-0.48	56.8
	1.0	-0.53	53.6		62.5	0.26	64.5
	1.0	-0.53	53.6		63.5	0.33	65.2
	1.1	-0.52	53.5		64.5	0.40	65.8

Printing every 2 samples

Serial # 8653 Inside				Serial # 8653 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	65.5	0.45	66.5		106.5	1.60	83.9
	66.5	0.53	67.1		107.5	1.62	84.1
	67.5	0.61	67.7		108.5	1.63	84.3
	68.5	0.67	68.3		109.5	1.64	84.5
	69.5	0.72	68.9		110.5	1.64	84.6
	70.5	0.78	69.4		111.5	1.66	84.8
	71.5	0.83	70.0		112.5	1.67	84.9
	72.5	0.86	70.5		113.5	1.67	85.1
	73.5	0.91	71.0		114.5	1.69	85.2
	74.5	0.96	71.5		115.5	1.69	85.3
	75.5	1.00	72.0		116.5	1.69	85.5
	76.5	1.04	72.5		117.5	1.70	85.6
	77.5	1.08	73.0		118.5	1.70	85.7
	78.5	1.11	73.4		119.5	1.70	85.8
	79.5	1.17	73.9		120.5	1.69	85.9
	80.5	1.23	74.4		121.5	1.68	86.0
	81.5	1.27	74.9		122.5	1.68	86.1
	82.5	1.31	75.4		123.5	1.68	86.2
	83.5	1.37	75.9		124.5	1.68	86.3
	84.5	1.42	76.4		125.5	1.68	86.4
	85.5	1.46	76.9		126.5	1.68	86.5
	86.5	1.49	77.3		127.5	1.69	86.6
	87.5	1.50	77.8		128.5	1.69	86.6
	88.5	1.53	78.3		129.5	1.69	86.7
	89.5	1.55	78.7		130.5	1.68	86.8
	90.5	1.56	79.1		131.5	1.67	86.9
	91.5	1.57	79.6		132.5	1.68	87.0
	92.5	1.58	80.0		133.5	1.67	87.0
	93.5	1.60	80.4		134.5	1.67	87.1
	94.5	1.62	80.7		135.5	1.67	87.2
	95.5	1.63	81.1		136.5	1.67	87.2
	96.5	1.65	81.5		137.5	1.68	87.3
	97.5	1.63	81.8		138.5	1.68	87.3
	98.5	1.63	82.1		139.5	1.66	87.4
	99.5	1.63	82.3		140.5	1.66	87.5
	100.5	1.62	82.6		141.5	1.65	87.5
	101.5	1.61	82.9		142.5	1.65	87.6
	102.5	1.60	83.1		143.5	1.63	87.6
	103.5	1.59	83.3		144.5	1.63	87.7
	104.5	1.58	83.5		145.5	1.62	87.7
	105.5	1.58	83.7		146.5	1.63	87.8

Printing every 2 samples

Serial # 8653 Inside				Serial # 8653 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	147.5	1.64	87.8		188.5	1.54	89.3
	148.5	1.64	87.9		189.5	1.54	89.3
	149.5	1.64	87.9		190.5	1.55	89.3
	150.5	1.64	88.0		191.5	1.55	89.3
	151.5	1.64	88.0		192.5	1.55	89.4
	152.5	1.64	88.0		193.5	1.54	89.4
	153.5	1.63	88.1		194.5	1.55	89.4
	154.5	1.62	88.1		195.5	1.55	89.5
	155.5	1.62	88.2		196.5	1.55	89.5
	156.5	1.61	88.2		197.5	1.54	89.5
	157.5	1.62	88.2		198.5	1.55	89.6
	158.5	1.62	88.3		199.5	1.55	89.6
	159.5	1.61	88.3		200.5	1.55	89.6
	160.5	1.60	88.3		201.5	1.55	89.7
	161.5	1.60	88.4		202.5	1.54	89.7
	162.5	1.60	88.4		203.5	1.53	89.7
	163.5	1.61	88.5		204.5	1.53	89.7
	164.5	1.61	88.5		205.5	1.53	89.8
	165.5	1.60	88.5		206.5	1.52	89.8
	166.5	1.60	88.6		207.5	1.53	89.8
	167.5	1.60	88.6		208.5	1.52	89.9
	168.5	1.60	88.6		209.5	1.52	89.9
	169.5	1.60	88.7		210.5	1.54	89.9
	170.5	1.58	88.7		211.5	1.53	89.9
	171.5	1.57	88.7		212.5	1.54	90.0
	172.5	1.57	88.8		213.5	1.55	90.0
	173.5	1.58	88.8		214.5	1.55	90.0
	174.5	1.58	88.8		215.5	1.56	90.1
	175.5	1.57	88.9		216.5	1.55	90.1
	176.5	1.57	88.9		217.5	1.55	90.1
	177.5	1.57	88.9		218.5	1.56	90.1
	178.5	1.57	89.0		219.5	1.54	90.2
	179.5	1.57	89.0		220.5	1.54	90.2
	180.5	1.56	89.0		221.5	1.55	90.2
	181.5	1.57	89.1		222.5	1.55	90.3
	182.5	1.56	89.1		223.5	1.56	90.3
	183.5	1.56	89.1		224.5	1.55	90.3
	184.5	1.56	89.1		225.5	1.55	90.3
	185.5	1.56	89.2		226.5	1.55	90.4
	186.5	1.56	89.2		227.5	1.54	90.4
	187.5	1.55	89.2		228.5	1.53	90.4

Printing every 2 samples

Serial # 8653 Inside				Serial # 8653 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	229.5	1.54	90.4		270.5	1.53	91.4
	230.5	1.53	90.5		271.5	1.54	91.4
	231.5	1.54	90.5		272.5	1.54	91.5
	232.5	1.55	90.5		273.5	1.55	91.5
	233.5	1.55	90.5		274.5	1.55	91.5
	234.5	1.55	90.6		275.5	1.55	91.5
	235.5	1.55	90.6		276.5	1.55	91.5
	236.5	1.55	90.6		277.5	1.54	91.6
	237.5	1.56	90.7		278.5	1.54	91.6
	238.5	1.56	90.7		279.5	1.53	91.6
	239.5	1.55	90.7		280.5	1.52	91.6
	240.5	1.54	90.7		281.5	1.51	91.7
	241.5	1.54	90.7		282.5	1.51	91.7
	242.5	1.55	90.8		283.5	1.50	91.7
	243.5	1.54	90.8		284.5	1.49	91.7
	244.5	1.54	90.8		285.5	1.46	91.7
	245.5	1.53	90.8		286.5	1.44	91.7
	246.5	1.52	90.9		287.5	1.40	91.7
	247.5	1.53	90.9		288.5	1.36	91.7
	248.5	1.52	90.9		289.5	1.31	91.7
	249.5	1.52	90.9		290.5	1.26	91.6
	250.5	1.52	91.0		291.5	1.20	91.5
	251.5	1.51	91.0		292.5	1.15	91.3
	252.5	1.51	91.0		293.5	1.10	91.1
	253.5	1.51	91.0		294.5	1.05	90.8
	254.5	1.51	91.1		295.5	0.98	90.5
	255.5	1.51	91.1		296.5	0.92	90.2
	256.5	1.51	91.1		297.5	0.86	89.8
	257.5	1.52	91.1		298.5	0.80	89.3
	258.5	1.53	91.2		299.5	0.75	88.9
	259.5	1.53	91.2		300.5	0.69	88.4
	260.5	1.53	91.2		301.5	0.64	87.9
	261.5	1.53	91.2		302.5	0.59	87.5
	262.5	1.53	91.2		303.5	0.54	87.0
	263.5	1.53	91.3		304.5	0.48	86.5
	264.5	1.52	91.3		305.5	0.44	86.0
	265.5	1.52	91.3		306.5	0.40	85.6
	266.5	1.52	91.3		307.5	0.37	85.2
	267.5	1.53	91.3		308.5	0.33	84.7
	268.5	1.54	91.4		309.5	0.30	84.3
	269.5	1.53	91.4		310.5	0.28	84.0

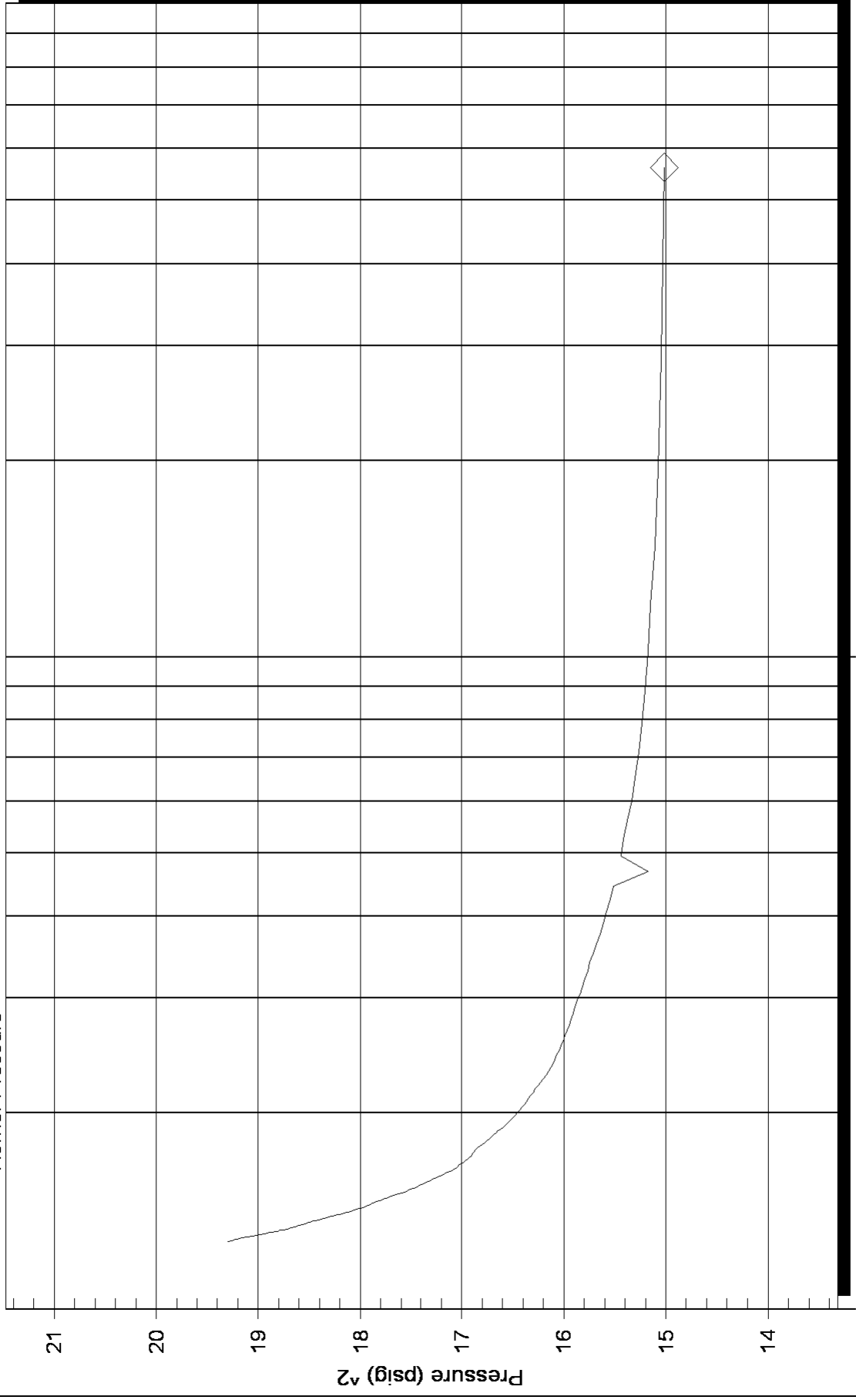
Printing every 2 samples

Serial # 8653 Inside				Serial # 8653 Inside			
Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)	Comments	Time (Min.)	Pressure (psig)	Temp. (deg F)
	311.5	0.27	83.7		352.5	-1.10	53.0
	312.5	0.22	83.3		353.5	-1.10	53.1
	313.5	0.18	83.0		354.5	-1.11	53.3
	314.5	0.13	82.8		355.5	-1.11	53.4
	315.5	0.08	82.5		356.5	-1.11	53.5
	316.5	0.04	82.2		357.5	-1.11	53.7
	317.5	-0.01	81.9		358.5	-1.11	53.9
	318.5	-0.07	81.6		359.5	-1.11	54.2
	319.5	-0.09	81.2		360.5	-1.10	54.5
	320.5	-0.14	80.8		361.5	-1.10	54.8
	321.5	-0.18	80.4		362.5	-1.07	55.1
	322.5	-0.23	80.0		363.5	-1.07	55.3
	323.5	-0.29	79.5		364.5	-1.08	55.5
	324.5	-0.35	79.0		365.5	-1.12	55.4
	325.5	-0.41	78.5		366.5	-3.62	59.9
	326.5	-0.47	78.0		367.5	-4.45	60.0
	327.5	-0.52	77.5		368.0	-4.86	60.6
	328.5	-0.58	77.0				
	329.5	-0.61	76.5				
	330.5	-0.66	76.0				
	331.5	-0.69	75.5				
	332.5	-0.74	75.0				
	333.5	-0.66	74.5				
	334.5	-0.66	74.1				
	335.5	-0.66	73.7				
	336.5	-0.64	73.4				
	337.5	-0.57	73.0				
	338.5	-0.91	72.7				
	339.5	-0.11	68.5				
	340.5	-0.60	54.7				
	341.5	-0.96	54.0				
	342.5	-1.10	53.4				
	343.5	-1.15	52.9				
	344.5	-1.17	52.7				
	345.5	-1.17	52.5				
	346.5	-1.16	52.3				
	347.5	-1.15	52.3				
	348.5	-1.14	52.5				
	349.5	-1.12	52.6				
	350.5	-1.11	52.7				
	351.5	-1.11	52.8				

Printing every 2 samples

Homer Plot

Horner Pressure



10¹

10⁰

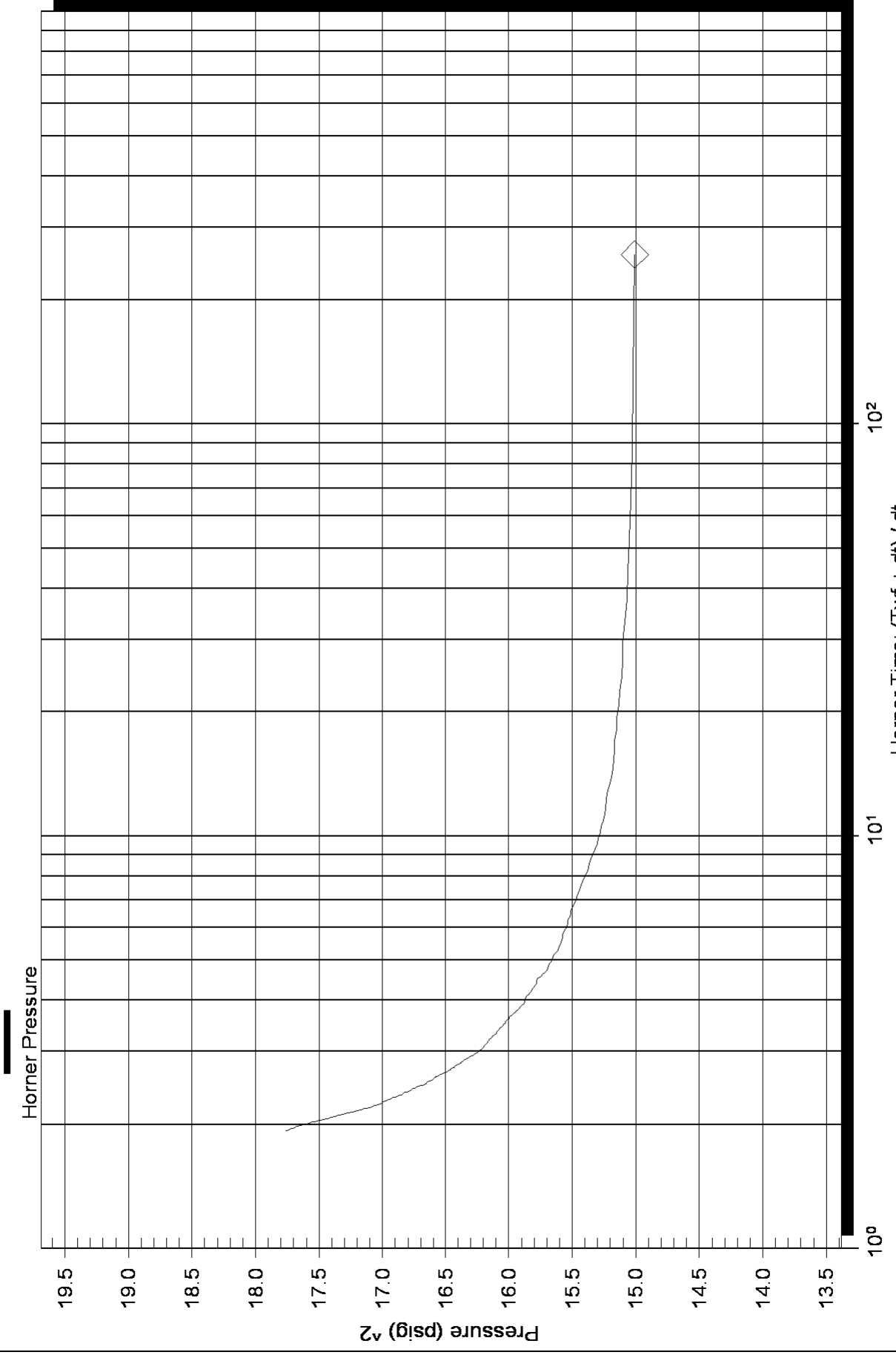
Horner Time: (Twf + dt) / dt

Serial Number: 8354 (Inside)

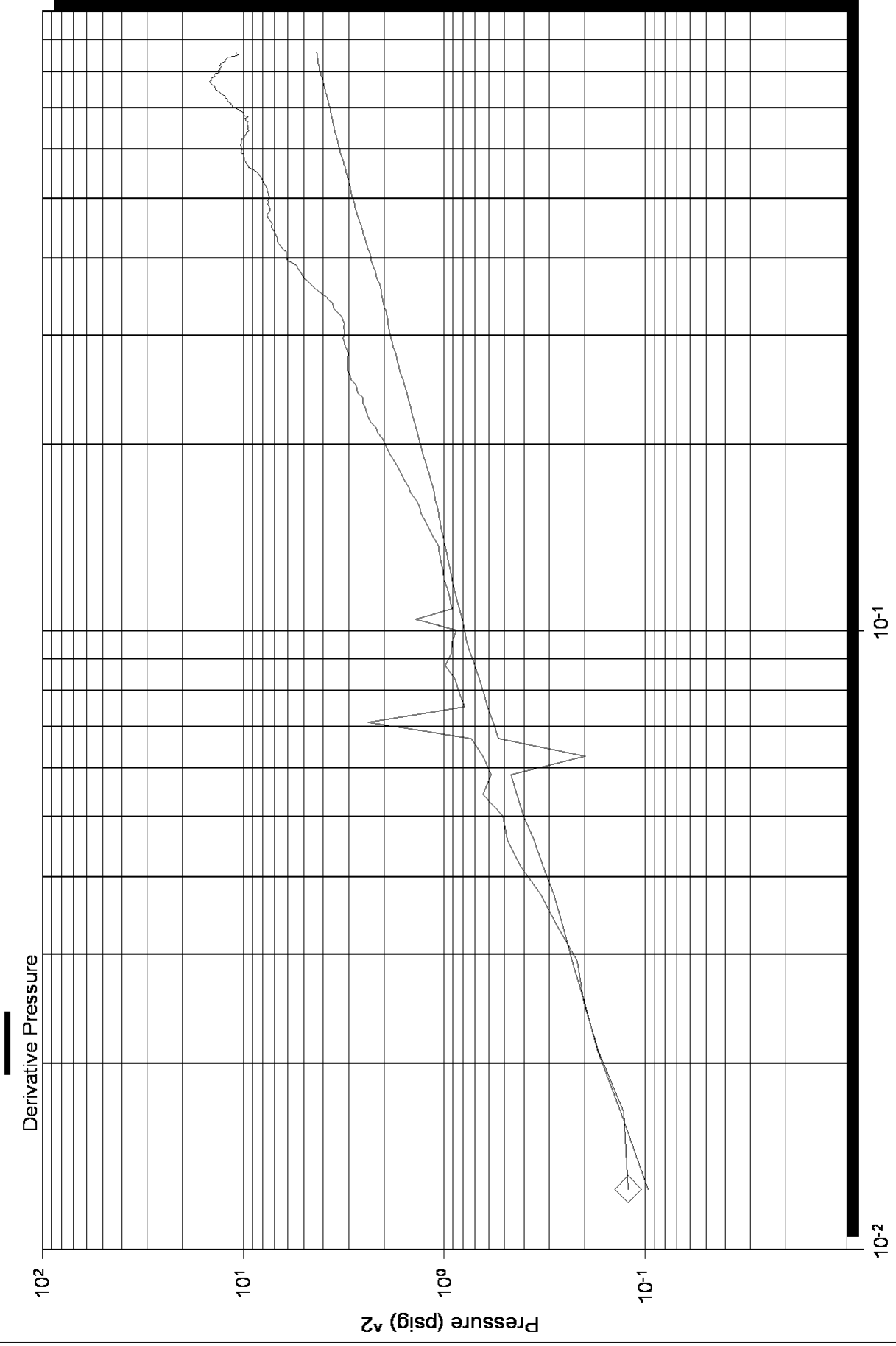
P* : Slope (m) : kpa/log cycle

Flow Cycle: 1

Homer Plot



Log-Log and Pseudo-Log-Derivative



Log-Log and Pseudo-Log-Derivative

