

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

Form must be Typed

Form must be Signed

All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

New Well Re-Entry Workover

Oil WSW SWD

Gas DH EOR

OG GSW

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 EOR Conv. to SWD

Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: _____

Spot Description: _____

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

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE NW SE SW

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

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

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

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

Confidentiality Requested

Date: _____

Confidential Release Date: _____

Wireline Log Received Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

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

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

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

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

1. Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____				
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	Val Energy, Inc.
Well Name	ENGELHARDT 1-11
Doc ID	1431849

All Electric Logs Run

Sonic
Neutron
Micro
Induction



REMIT TO
 QES Pressure Pumping LLC
 Dept:970
 P.O.Box 4346
 Houston,TX 77210-4346

MAIN OFFICE
 P.O.Box884
 Chanute,KS 66720
 620/431-9210,1-800/467-8676
 Fax 620/431-0012

Invoice

Invoice#

814687

Invoice Date: 12/07/18

Terms: Net 30

Page 1

VAL ENERGY

125 N. Market, Ste. 1110
 WICHITA KS 67202
 USA
 316-263-6688

ENGELHARDT 1-11

Part No	Description	Quantity	Unit Price	Discount(%)	Total
CE0453	Cement Pump Charge 4001' - 5000'	1.000	2,800.0000	25.000	2,100.00
CE0002	Equipment Mileage Charge - Heavy Equipment	40.000	7.1500	25.000	214.50
CE0710	Cement Delivery Charge	1.000	2,001.3000	25.000	1,500.98
CC5862	ThixoBlend III	150.000	26.0000	25.000	2,925.00
CC6077	Kolseal	750.000	0.5000	25.000	281.25
CC5831	Lite-Weight Blend VII (60:40:8)	500.000	17.5000	25.000	6,562.50
CC6125	Mud Flush, Viscous	500.000	0.6500	25.000	243.75
CC5326	Sodium Chloride, Salt	100.000	0.0000	0.000	0.00
CP8485	5 1/2" Float Shoe, AFU	1.000	585.0000	25.000	438.75
CP8254	5 1/2" Latch Down Plug & Assembly	1.000	400.0000	25.000	300.00
CP8554	5 1/2" Centralizer	7.000	81.0000	25.000	425.25
CP8629	5 1/2" Basket	2.000	385.0000	25.000	577.50
CP8801	5 1/2" DV Tool	1.000	5,970.0000	25.000	4,477.50
CC6075	Celloflake	125.000	3.0000	25.000	281.25

Subtotal 27,104.30

Discounted Amount 6,776.08

SubTotal After Discount 20,328.22

Amount Due 29,030.79 If paid after 01/06/19

Tax: 1,444.87

Total: 21,773.10



PRÉSSURE PUMPING LLC
PO Box 884, Chanute, KS 66720
620-431-9210 or 800-467-8676

12132
12015

TICKET NUMBER 55954
LOCATION Oakley KS
FOREMAN Jerry Y

FIELD TICKET & TREATMENT REPORT

CEMENT

Invoice # 814687 KS

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
12-4-18	8576	Engelhardt 1-11	11	8 ^s	37 ^w	Sherman
CUSTOMER			TRUCK #	DRIVER	TRUCK #	DRIVER
1/2 Energy			753	Cory W		
125 N. Market, Ste. 1110			70	Neil W		
CITY			272-T-12	Cory D		
Wichita			697	Walt		
STATE		ZIP CODE				
KS		67202				

JOB TYPE 2-Stage HOLE SIZE 7 7/8 HOLE DEPTH 5005 CASING SIZE & WEIGHT 5 1/2 2970/14
 CASING DEPTH 5001 DRILL PIPE _____ TUBING _____ OTHER DV set @ 2970
 SLURRY WEIGHT 14.2/125 SLURRY VOL. 1.42/1.89 WATER gal/sk _____ CEMENT LEFT in CASING 42'
 DISPLACEMENT 121/70 DISPLACEMENT PSI _____ MIX PSI _____ RATE _____

REMARKS: Safety meeting + rig up on WL 10 run flat casing ends on 2, 4, 6, 8, 10, 12, 49 basket on 3, 2 48 DV tool on 48 set @ 2970 run casing to bottom pump ball thru pipe the pump 500 gal mud flush with 5 bbl water spacer mix 150 sks of hi rob blend III 5 # 6 / set release plug overship displacer with 121 bbl (50 H 07 / mud) from lift 800 # plug back @ 1400 # release back of both to open tool / 200 # + circulate the pump 5 bbl water spacer mix 300 sks 60 / 40 8 # 1/4 # F6 released plug clean pump lines displace with 7 1/2 bbl from lift 900 # plug back + seal closed @ 2300 # released back of flat hold

30 sks RH

Thank you
Jerry & crew

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
CE0453	1	PUMP CHARGE	2800.00	2800.00
CP0002	40	MILEAGE	7.15	286.00
CE0710	28.59	ten miles delivery	1.75	2001.30
CP5862	150 sks	hi rob blend III	26.00	3900.00
CC6077	750 #	Kol Seal	.50	375.00
CC5831	500 sks	life blend VII	17.50	8750.00
CC6075	125 #	Flo Seal	3.00	375.00
CC6025	500 gal	mud flush	.65	325.00
CC5326	100 #	salt	NC	NC
CP8485	1	5 1/2 AFU Flat shoe	585.00	585.00
CP8254	1	5 1/2 latch down assy	400.00	400.00
CP8554	7	5 1/2 centralizers	81.00	567.00
CP8629	2	5 1/2 baskets	385.00	770.00
CP8801	1	5 1/2 DV tool	5970.00	5970.00
		Subtotal		27104.30
		-25%		6776.08
		Subtotal		20328.22
		SALES TAX		1444.87
		ESTIMATED TOTAL		21,773.10

Ravin 3737

AUTHORIZATION Rick Smith TITLE _____ DATE _____

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.



REMIT TO
 QES Pressure Pumping LLC
 Dept:970
 P.O.Box 4346
 Houston, TX 77210-4346

MAIN OFFICE
 P.O.Box884
 Chanute,KS 66720
 620/431-9210,1-800/467-8676
 Fax 620/431-0012

Invoice

Invoice#

814639

Invoice Date: 11/29/18

Terms: Net 30

Page 1

VAL ENERGY

125 N. Market, Ste. 1110
 WICHITA KS 67202
 USA
 316-263-6688

ENSLEHARDT 1-11

Part No	Description	Quantity	Unit Price	Discount(%)	Total
CE0471	Cement Pump Charge 301' - 500' (Coalbed/Methane)	1.000	1,150.0000	25.000	862.50
CE0002	Equipment Mileage Charge - Heavy Equipment	40.000	7.1500	25.000	214.50
CE0710	Cement Delivery Charge	1.000	987.0000	25.000	740.25
CC5871	Surface Blend II, 2% Gel/3% CaCl	300.000	24.0000	25.000	5,400.00

Subtotal 9,623.00

Discounted Amount 2,405.75

SubTotal After Discount 7,217.25

Amount Due 10,253.00 If paid after 12/29/18

Tax: 472.50

Total: 7,689.75



PRESSURE PUMPING LLC

PO Box 884, Chanute, KS 66720
620-431-9210 or 800-467-8676

12083
11969

TICKET NUMBER 55932

LOCATION Oakley, KS

FOREMAN Miles Shaw

FIELD TICKET & TREATMENT REPORT
CEMENT

INVOICE # 814639 KS

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
11-23-18	8570	Enshehardt 1-11	11	8 S	37 W	Sherman

CUSTOMER	MILING ADDRESS	CITY	STATE	ZIP CODE	TRUCK #	DRIVER	TRUCK #	DRIVER
Val Energy	125 N. Market, Ste. 1110	Wichita	KS	67202	753	Loce, W		
					776/F127	Wet W		

JOB TYPE Surface HOLE SIZE 12.25" HOLE DEPTH 896' CASING SIZE & WEIGHT 8 5/8" 23#
 CASING DEPTH 346' DRILL PIPE _____ TUBING _____ OTHER _____
 SLURRY WEIGHT 14.8 SLURRY VOL 1.36 WATER gal/sk _____ CEMENT LEFT in CASING 20'
 DISPLACEMENT 20.5 bbls DISPLACEMENT PSI _____ MIX PSI _____ RATE _____

REMARKS: Safety meeting and discussion with drilling log #10 circulate casing
M.2 Sx Surface blend II displace 20.5 bbls water shut in cement did
circulate 3 bbls report

Thanks Miles Shaw

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
CE0471	1	PUMP CHARGE	1157.00	1157.00
CE0007	40	MILEAGE	7.15	286.00
CE071	14.1	Pen Mileage delivery	1.75	247.75
CE5871	300	Sx Surface blend II	24.00	7200.00
		Subtotal		9623.00
		less 25% discount		2405.75
		Subtotal		7217.25
		SALES TAX		472.50
		ESTIMATED TOTAL		7689.75

Flavin 3737

AUTHORIZATION [Signature] TITLE _____ DATE _____

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Val Energy Inc.
125 N Market St STE 1110
Wichita, KS 67202
ATTN: Tim Priest

11/8s/37w Sherman KS
Engelhardt #1-11
Job Ticket: 64645 **DST#: 1**
Test Start: 2018.11.28 @ 05:20:00

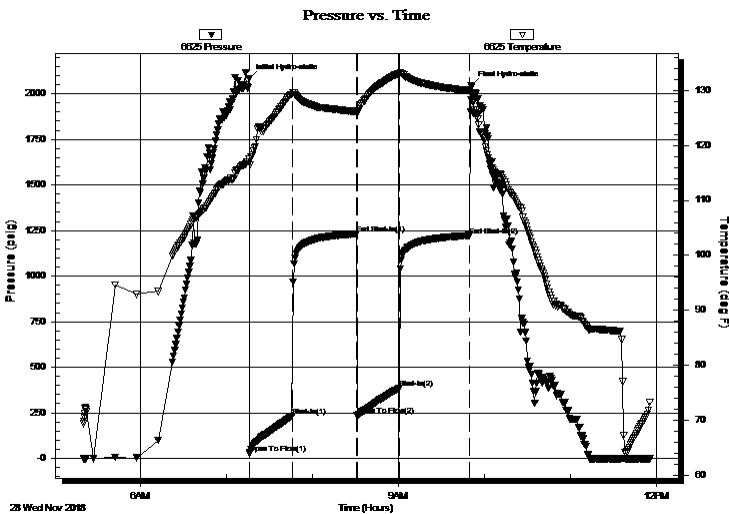
GENERAL INFORMATION:

Formation: **Toronto - Lans. "A -**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 07:15:45
Time Test Ended: 11:55:15
Interval: **4160.00 ft (KB) To 4243.00 ft (KB) (TVD)**
Total Depth: 4243.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Reference Elevations: 3430.00 ft (KB)
3425.00 ft (CF)
KB to GR/CF: 5.00 ft
Test Type: Conventional Bottom Hole (Initial)
Tester: James Winder
Unit No: 83

Serial #: 6625 Inside
Press@RunDepth: 385.91 psig @ 4161.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2018.11.28 End Date: 2018.11.28 Last Calib.: 2018.11.28
Start Time: 05:20:05 End Time: 11:55:14 Time On Btm: 2018.11.28 @ 07:15:30
Time Off Btm: 2018.11.28 @ 09:50:30

TEST COMMENT: 30 - IF: Blow built to BOB (11") at 8 min., built to 37"
45 - IS: No blow back
30 - FF: Blow built to BOB at 10 min., built to 32 3/4"
45 - FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2082.83	117.58	Initial Hydro-static
1	25.18	116.97	Open To Flow (1)
31	232.28	129.32	Shut-In(1)
75	1232.06	126.11	End Shut-In(1)
76	234.76	125.88	Open To Flow (2)
105	385.91	133.08	Shut-In(2)
154	1222.87	129.91	End Shut-In(2)
155	2043.58	128.23	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
440.00	SMCW w/trace oil 95%w, 5%m	5.07
250.00	MCW w/oil spots 63%w, 34%m, 2%o, 1%g	3.51
90.00	SW/OCM 72%m, 23%o, 5%w	1.26
5.00	SWMCO 91%o, 5%m, 2%w, 2%g	0.07

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Val Energy Inc.

11/8s/37w Sherman KS

125 N Market St STE 1110
Wichita, KS 67202

Engelhardt #1-11

Job Ticket: 64645

DST#: 1

ATTN: Tim Priest

Test Start: 2018.11.28 @ 05:20:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

75000 ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.20 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
440.00	SMCW w/trace oil 95%w, 5%m	5.070
250.00	MCW w/oil spots 63%w, 34%m, 2%o, 1%g	3.507
90.00	SW/OCM 72%m, 23%o, 5%w	1.262
5.00	SWMCO 91%o, 5%m, 2%w, 2%g	0.070

Total Length: 785.00 ft

Total Volume: 9.909 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

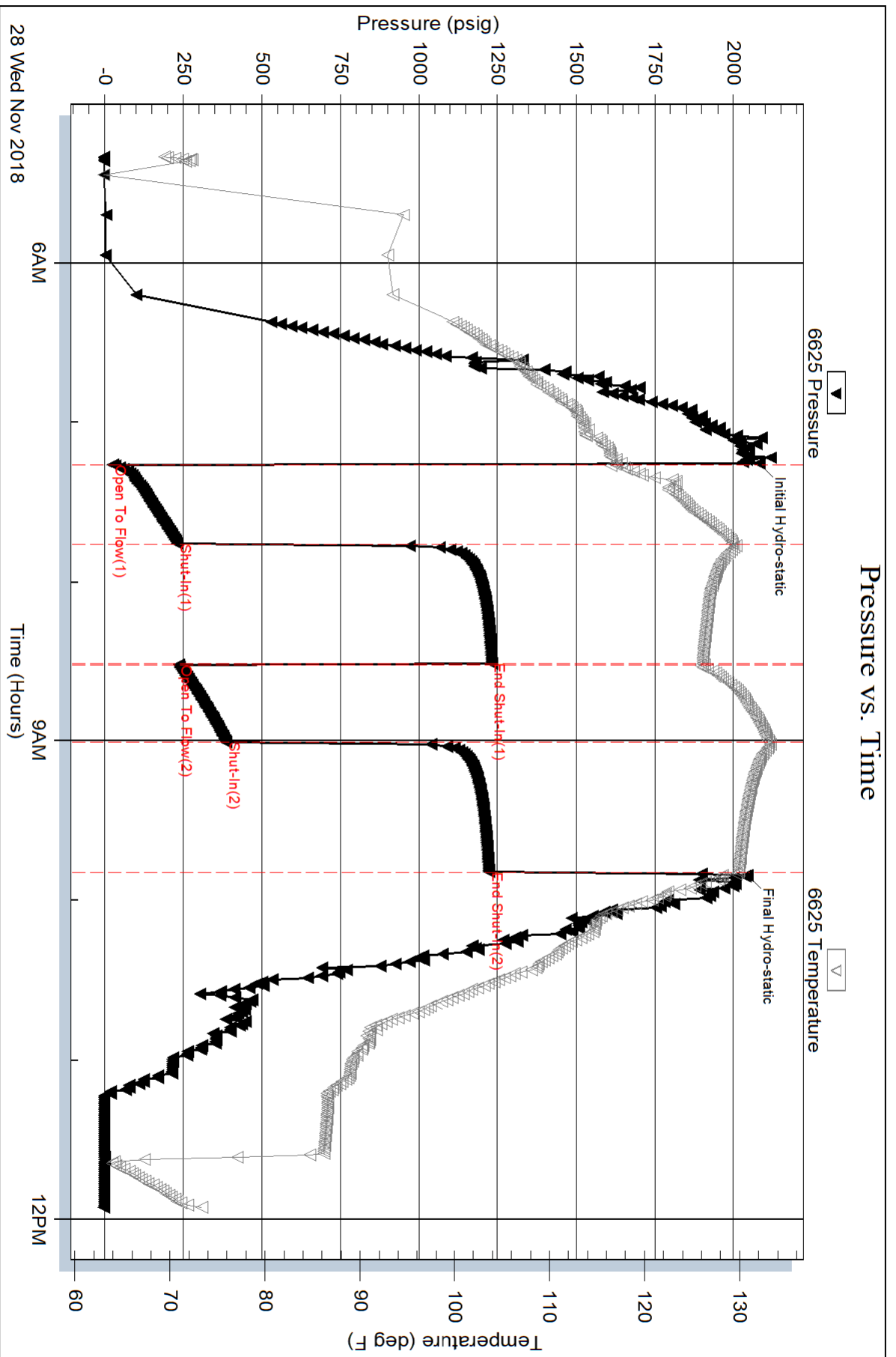
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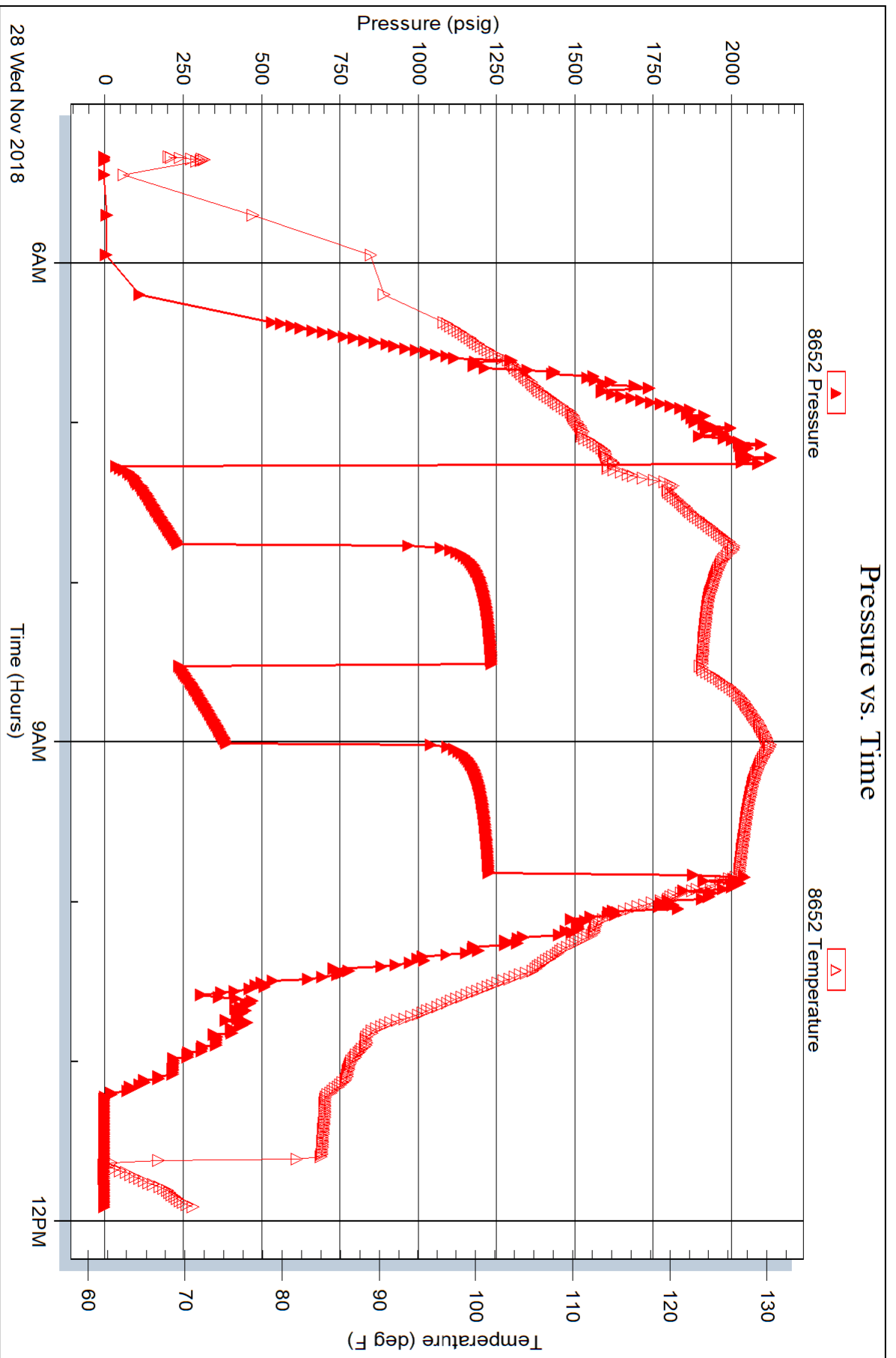
Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity Too Low To Measure

RW = .116 ohms @ 63 deg F Chlorides = 75,000 ppm







TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Val Energy Inc.
 125 N Market St STE 1110
 Wichita, KS 67202
 ATTN: Tim Priest

11/8s/37w Sherman KS
Engelhardt #1-11
 Job Ticket: 64646 **DST#: 2**
 Test Start: 2018.11.29 @ 06:57:00

GENERAL INFORMATION:

Formation: **LKC "H - J"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 10:25:15
 Time Test Ended: 14:01:15
 Interval: **4350.00 ft (KB) To 4417.00 ft (KB) (TVD)**
 Total Depth: 4417.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Winder
 Unit No: 83
 Reference Elevations: 3430.00 ft (KB)
 3425.00 ft (CF)
 KB to GR/CF: 5.00 ft

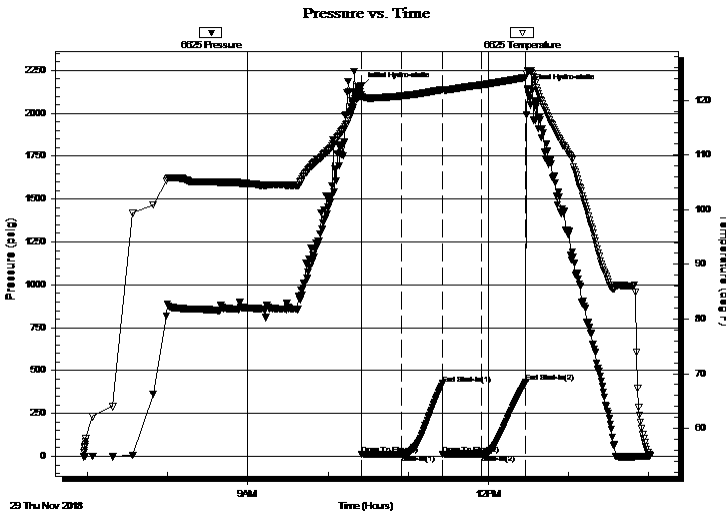
Serial #: 6625

Inside

Press@RunDepth: 14.37 psig @ 4351.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.11.29 End Date: 2018.11.29 Last Calib.: 2018.11.29
 Start Time: 06:57:05 End Time: 14:01:14 Time On Btm: 2018.11.29 @ 10:25:00
 Time Off Btm: 2018.11.29 @ 12:29:00

TEST COMMENT: 30 - IF: 1/4" Blow at open, built to 3/4"
 30 - IS: No blow back
 30 - FF: No blow
 30 - FS: No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2158.39	121.08	Initial Hydro-static
1	10.92	120.54	Open To Flow (1)
30	12.91	120.80	Shut-In(1)
61	422.81	121.96	End Shut-In(1)
61	13.10	121.91	Open To Flow (2)
90	14.37	122.83	Shut-In(2)
123	432.19	124.20	End Shut-In(2)
124	2143.92	125.33	Final Hydro-static

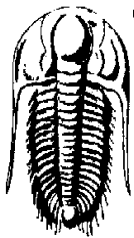
Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud w /Oil spots 98%m, 2%o	0.02

* Recovery from multiple tests

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Val Energy Inc.
125 N Market St STE 1110
Wichita, KS 67202
ATTN: Tim Priest

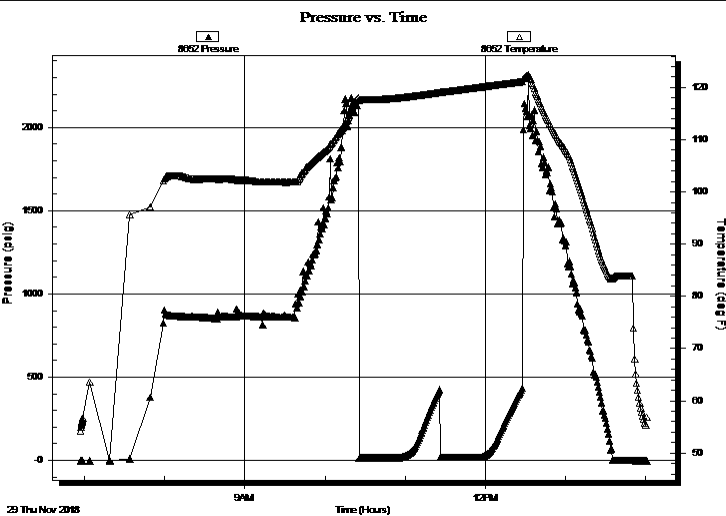
11/8s/37w Sherman KS
Engelhardt #1-11
Job Ticket: 64646 **DST#: 2**
Test Start: 2018.11.29 @ 06:57:00

GENERAL INFORMATION:

Formation: **LKC "H - J"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 10:25:15
 Time Test Ended: 14:01:15
Interval: 4350.00 ft (KB) To 4417.00 ft (KB) (TVD)
 Total Depth: 4417.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Winder
 Unit No: 83
 Reference Elevations: 3430.00 ft (KB)
 3425.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8652 Outside
 Press@RunDepth: psig @ 4351.00 ft (KB)
 Start Date: 2018.11.29 End Date: 2018.11.29 Capacity: 8000.00 psig
 Start Time: 06:57:05 End Time: 14:00:59 Last Calib.: 2018.11.29
 Time On Btm:
 Time Off Btm:

TEST COMMENT: 30 - IF: 1/4" Blow at open, built to 3/4"
 30 - IS: No blow back
 30 - FF: No blow
 30 - FS: No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud w /Oil spots 98%m, 2%o	0.02

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Val Energy Inc.

11/8s/37w Sherman KS

125 N Market St STE 1110
Wichita, KS 67202

Engelhardt #1-11

Job Ticket: 64646

DST#: 2

ATTN: Tim Priest

Test Start: 2018.11.29 @ 06:57:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4800.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud w /Oil spots 98%m, 2%o	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

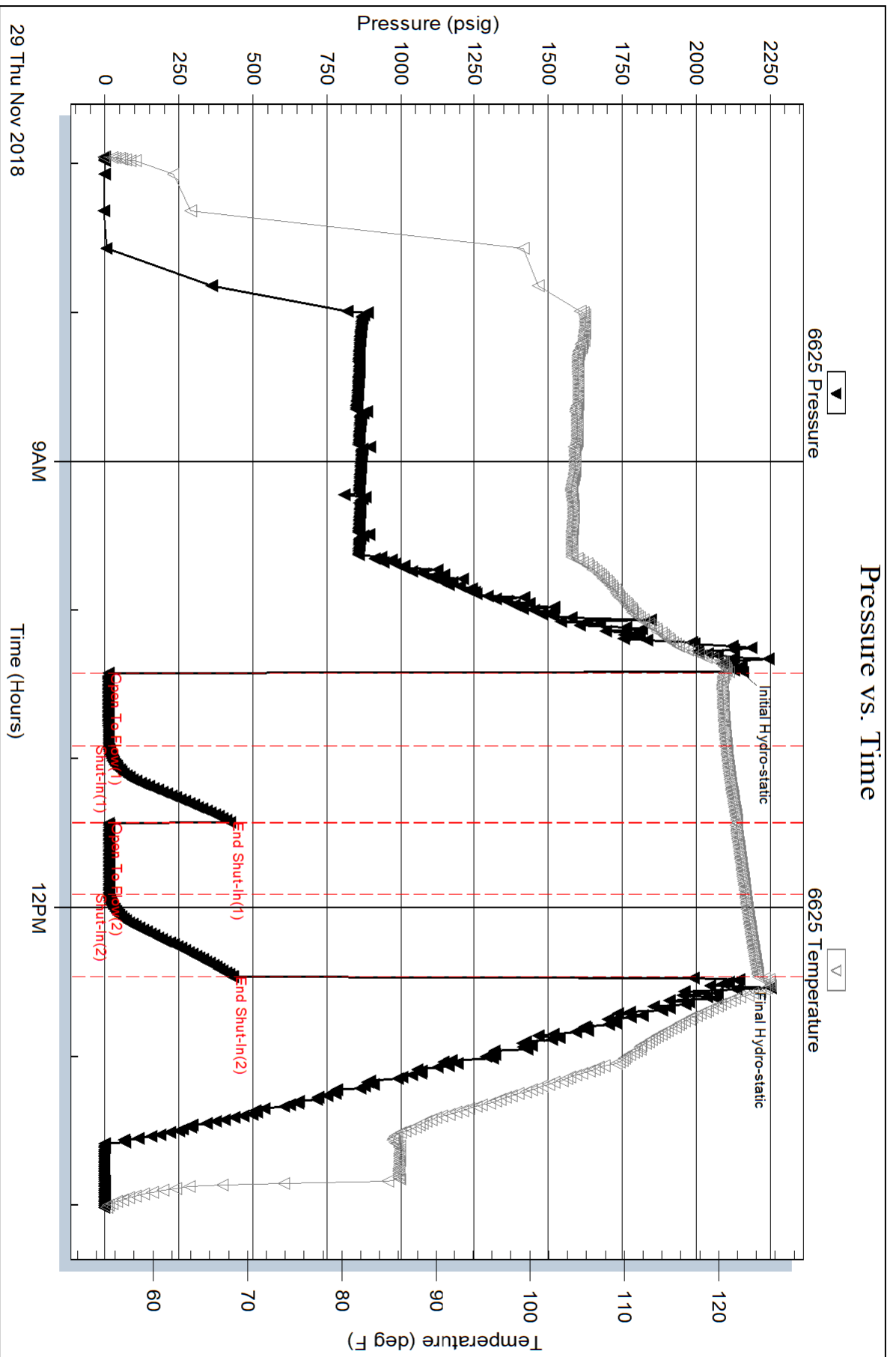
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

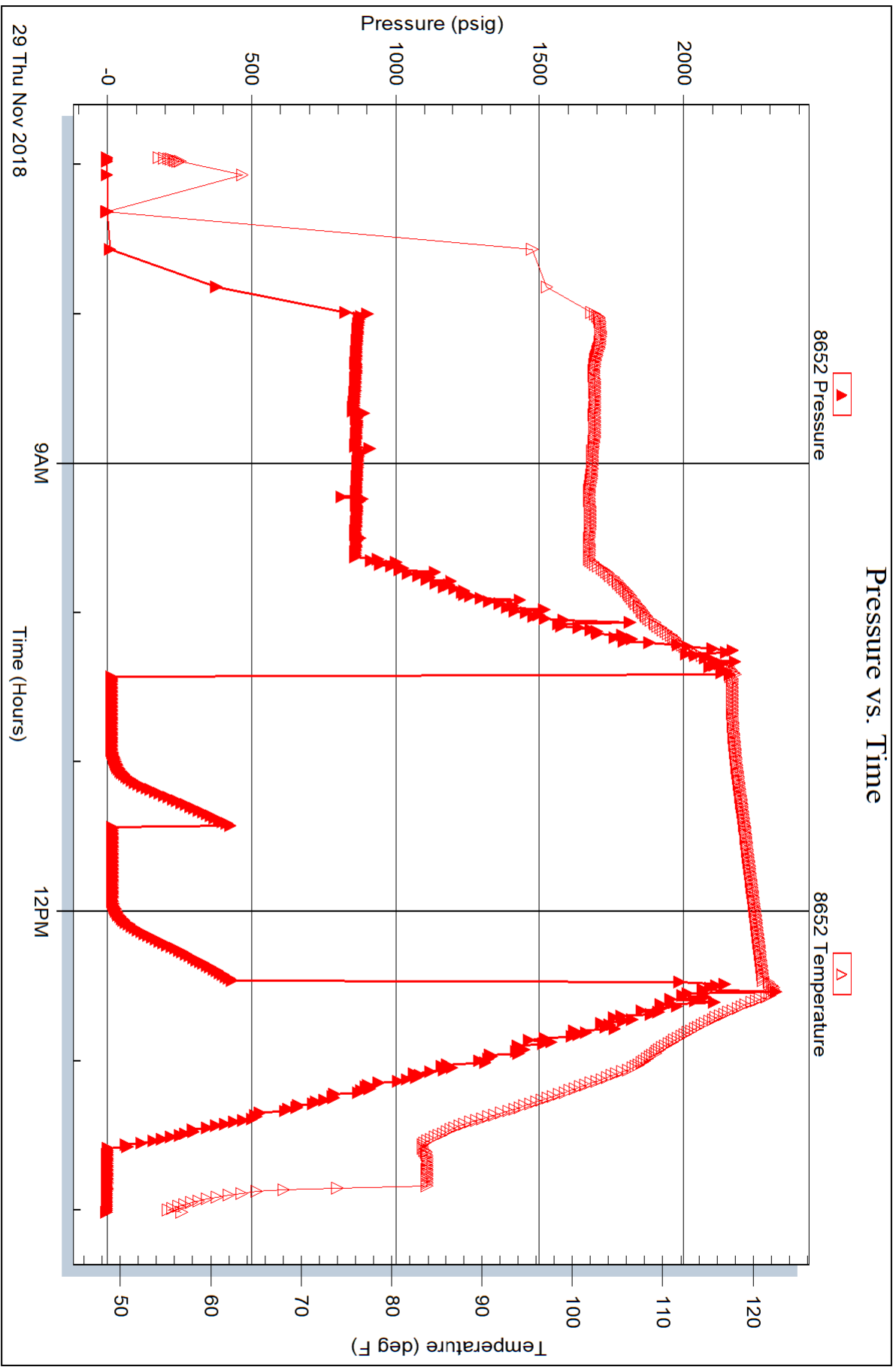


Serial #: 8652

Outside Val Energy Inc.

Engelhardt #1-11

DST Test Number: 2





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Val Energy Inc.
 125 N Market St STE 1110
 Wichita, KS 67202
 ATTN: Tim Priest

11/8s/37w Sherman KS
Engelhardt #1-11
 Job Ticket: 64647 **DST#: 3**
 Test Start: 2018.11.29 @ 21:06:00

GENERAL INFORMATION:

Formation: **LKC "K"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 22:53:15
 Time Test Ended: 03:18:00
 Interval: **4423.00 ft (KB) To 4450.00 ft (KB) (TVD)**
 Total Depth: 4450.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Winder
 Unit No: 83
 Reference Elevations: 3430.00 ft (KB)
 3425.00 ft (CF)
 KB to GR/CF: 5.00 ft

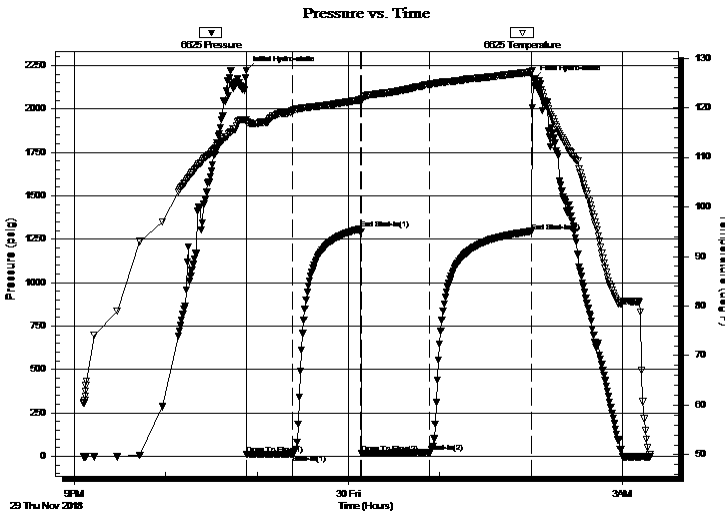
Serial #: 6625

Inside

Press@RunDepth: 23.50 psig @ 4424.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.11.29 End Date: 2018.11.30 Last Calib.: 2018.11.30
 Start Time: 21:06:05 End Time: 03:17:59 Time On Btm: 2018.11.29 @ 22:53:00
 Time Off Btm: 2018.11.30 @ 02:01:30

TEST COMMENT: 30 - IF: Blow built to 1 1/2"
 45 - IS: No blow back
 45 - FF: Blow built to 1/4"
 60 - FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2222.06	117.57	Initial Hydro-static
1	10.28	117.11	Open To Flow (1)
31	14.83	119.45	Shut-In(1)
75	1308.47	121.56	End Shut-In(1)
76	16.35	121.18	Open To Flow (2)
121	23.50	124.73	Shut-In(2)
188	1295.27	127.22	End Shut-In(2)
189	2171.50	125.76	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	SWCM w/trace oil 92%w, 8%w	0.10

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Val Energy Inc.
125 N Market St STE 1110
Wichita, KS 67202
ATTN: Tim Priest

11/8s/37w Sherman KS
Engelhardt #1-11
Job Ticket: 64647 **DST#: 3**
Test Start: 2018.11.29 @ 21:06:00

GENERAL INFORMATION:

Formation: **LKC "K"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 22:53:15
Time Test Ended: 03:18:00

Test Type: Conventional Bottom Hole (Reset)
Tester: James Winder
Unit No: 83

Interval: 4423.00 ft (KB) To 4450.00 ft (KB) (TVD)
Total Depth: 4450.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3430.00 ft (KB)
3425.00 ft (CF)
KB to GR/CF: 5.00 ft

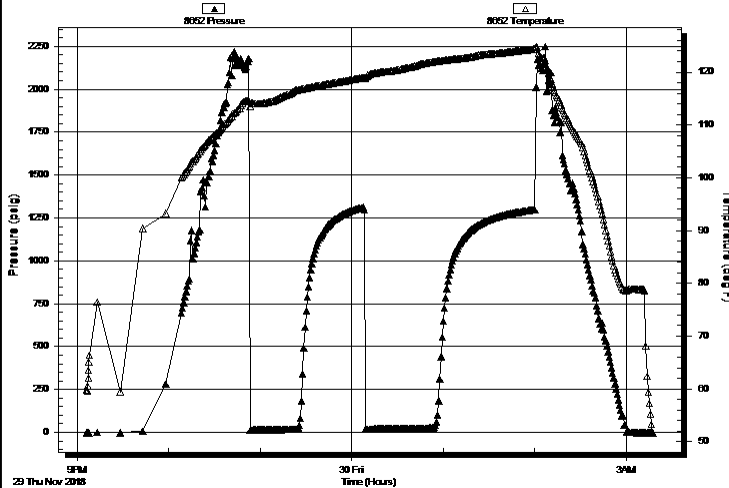
Serial #: 8652 Outside

Press@RunDepth: psig @ 4424.00 ft (KB)
Start Date: 2018.11.29 End Date: 2018.11.30
Start Time: 21:06:05 End Time: 03:17:29

Capacity: 8000.00 psig
Last Calib.: 2018.11.30
Time On Btm:
Time Off Btm:

TEST COMMENT: 30 - IF: Blow built to 1 1/2"
45 - IS: No blow back
45 - FF: Blow built to 1/4"
60 - FS: No blow back

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
20.00	SWCM w /trace oil 92%m, 8%w	0.10

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Val Energy Inc.

11/8s/37w Sherman KS

125 N Market St STE 1110
Wichita, KS 67202

Engelhardt #1-11

Job Ticket: 64647

DST#: 3

ATTN: Tim Priest

Test Start: 2018.11.29 @ 21:06:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

19000 ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4800.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
20.00	SWCM w /trace oil 92%m, 8%w	0.098

Total Length: 20.00 ft Total Volume: 0.098 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

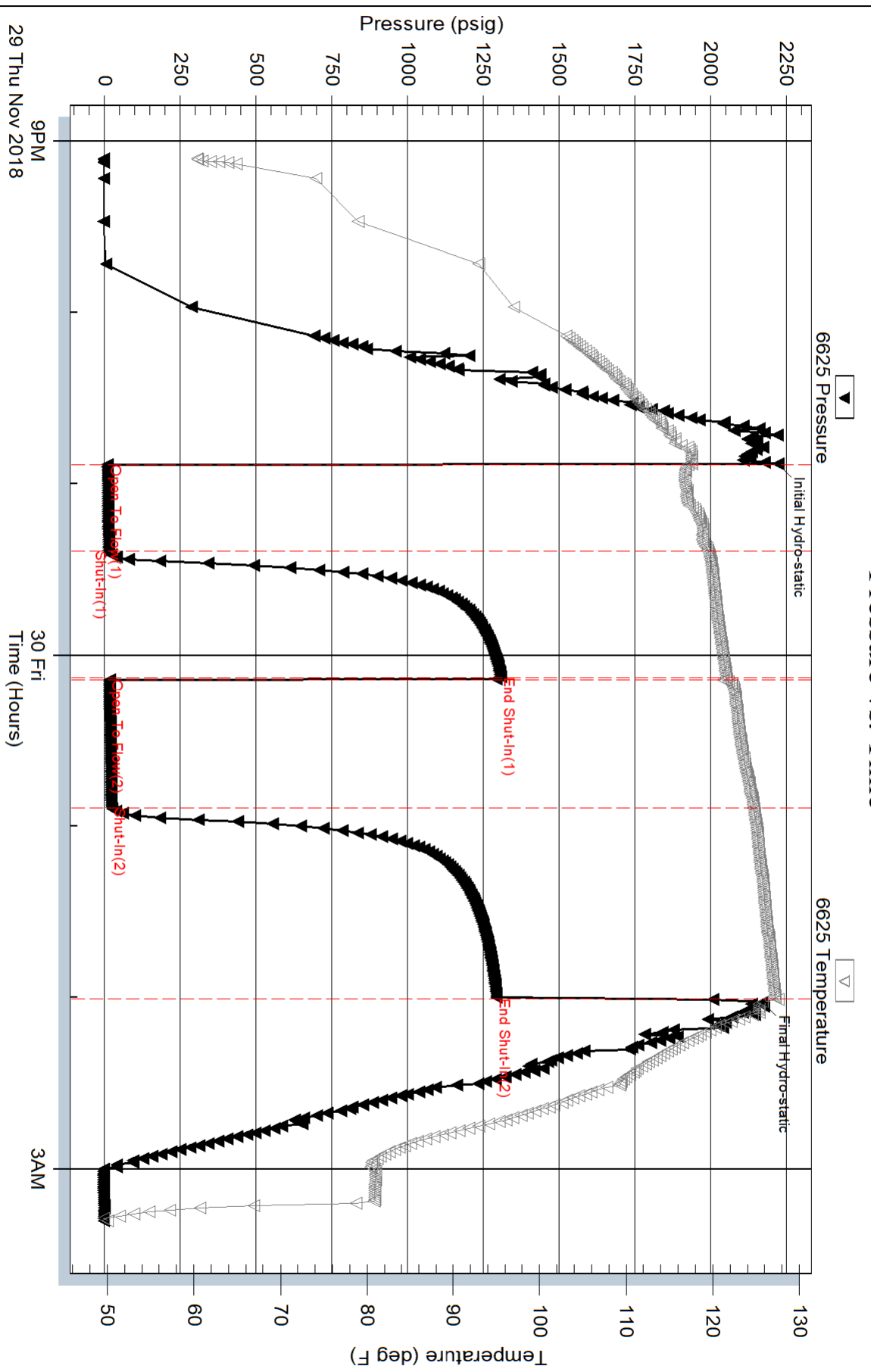
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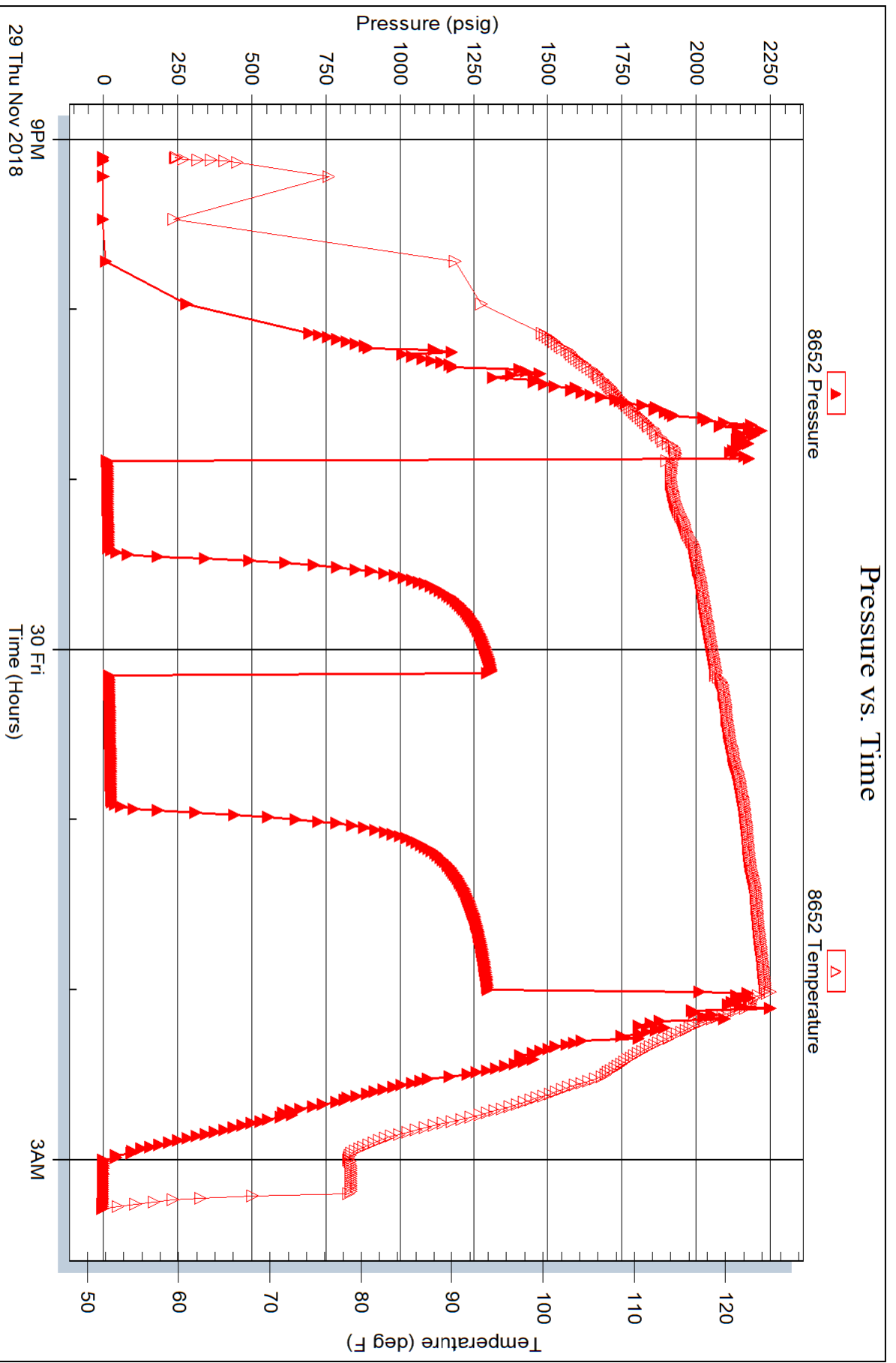
Laboratory Name:

Laboratory Location:

Recovery Comments: RW = .674 ohms @ 36.4 deg F Chlorides = 19,000 ppm

Pressure vs. Time







TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Val Energy Inc.
 125 N Market St STE 1110
 Wichita, KS 67202
 ATTN: Tim Priest

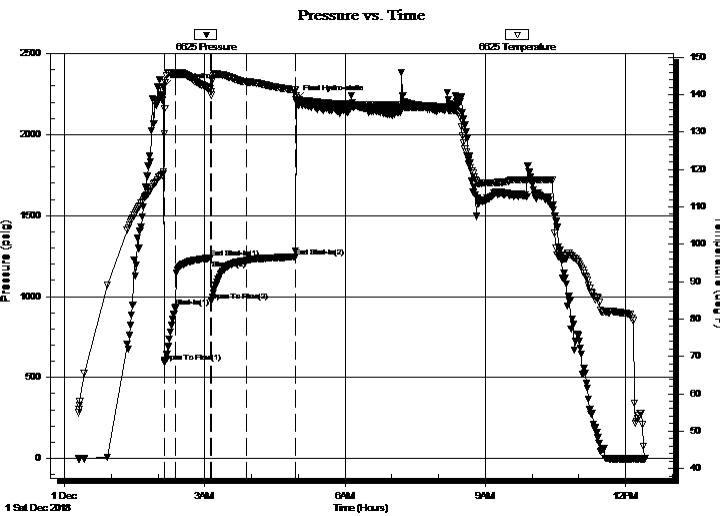
11/8s/37w Sherman KS
Engelhardt #1-11
 Job Ticket: 64648 **DST#: 4**
 Test Start: 2018.12.01 @ 00:18:00

GENERAL INFORMATION:

Formation: **Pawnee**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 02:08:45
 Time Test Ended: 12:25:00
 Interval: **4579.00 ft (KB) To 4628.00 ft (KB) (TVD)**
 Total Depth: 4628.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Winder
 Unit No: 83
 Reference Elevations: 3430.00 ft (KB)
 3425.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 6625 Inside
 Press@RunDepth: 1223.21 psig @ 4580.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.12.01 End Date: 2018.12.01 Last Calib.: 2018.12.01
 Start Time: 00:18:05 End Time: 12:25:00 Time On Btm: 2018.12.01 @ 02:07:15
 Time Off Btm: 2018.12.01 @ 04:57:15

TEST COMMENT: 15 - IF: Blow built to BOB (11") in 30 sec., built to 584"
 45 - IS: Bled off for 8 min., Blow back built to BOB in 2 min., built to 110"+
 45 - FF: Blow built to BOB in 35 sec., built to 413", GTS at beginning of flow
 60 - FS: Blow back built to BOB at 2 3/4 min., built to 40 1/2"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2291.10	119.32	Initial Hydro-static
2	596.39	136.25	Open To Flow (1)
15	937.07	145.62	Shut-In(1)
61	1237.77	141.61	End Shut-In(1)
61	975.01	140.91	Open To Flow (2)
107	1223.21	143.43	Shut-In(2)
169	1243.76	141.25	End Shut-In(2)
170	2216.53	139.75	Final Hydro-static

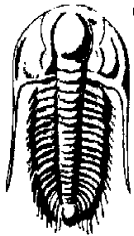
Recovery

Length (ft)	Description	Volume (bbl)
184.00	Below sub GMCO 52%o, 36%m, 12%g	1.48
3229.00	Rev Out CGO 90%o, 10%g	45.29
0.00	GIP = 1150'	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Val Energy Inc.
125 N Market St STE 1110
Wichita, KS 67202
ATTN: Tim Priest

11/8s/37w Sherman KS

Engelhardt #1-11

Job Ticket: 64648

DST#: 4

Test Start: 2018.12.01 @ 00:18:00

GENERAL INFORMATION:

Formation: **Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:08:45

Time Test Ended: 12:25:00

Interval: 4579.00 ft (KB) To 4628.00 ft (KB) (TVD)

Total Depth: 4628.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 83

Reference Elevations: 3430.00 ft (KB)

3425.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8652 Outside

Press@RunDepth: psig @ 4580.00 ft (KB)

Start Date: 2018.12.01

End Date:

2018.12.01

Capacity: 8000.00 psig

Last Calib.:

2018.12.01

Start Time: 00:18:05

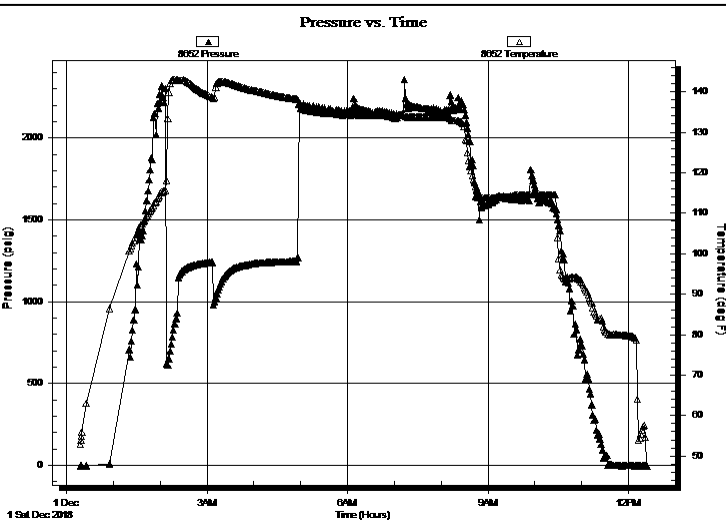
End Time:

12:24:15

Time On Btm:

Time Off Btm:

TEST COMMENT: 15 - IF: Blow built to BOB (11") in 30 sec., built to 584"
45 - IS: Bled off for 8 min., Blow back built to BOB in 2 min., built to 110"+
45 - FF: Blow built to BOB in 35 sec., built to 413", GTS at beginning of flow
60 - FS: Blow back built to BOB at 2 3/4 min., built to 40 1/2"



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
184.00	Below sub GMCO 52%o, 36%m, 12%g	1.48
3229.00	Rev Out CGO 90%o, 10%g	45.29
0.00	GIP = 1150'	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Val Energy Inc.

11/8s/37w Sherman KS

125 N Market St STE 1110
Wichita, KS 67202

Engelhardt #1-11

Job Ticket: 64648

DST#: 4

ATTN: Tim Priest

Test Start: 2018.12.01 @ 00:18:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

38.4 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 66.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
184.00	Below sub GMCO 52%o, 36%m, 12%g	1.479
3229.00	Rev Out CGO 90%o, 10%g	45.294
0.00	GIP = 1150'	0.000

Total Length: 3413.00 ft Total Volume: 46.773 bbl

Num Fluid Samples: 0

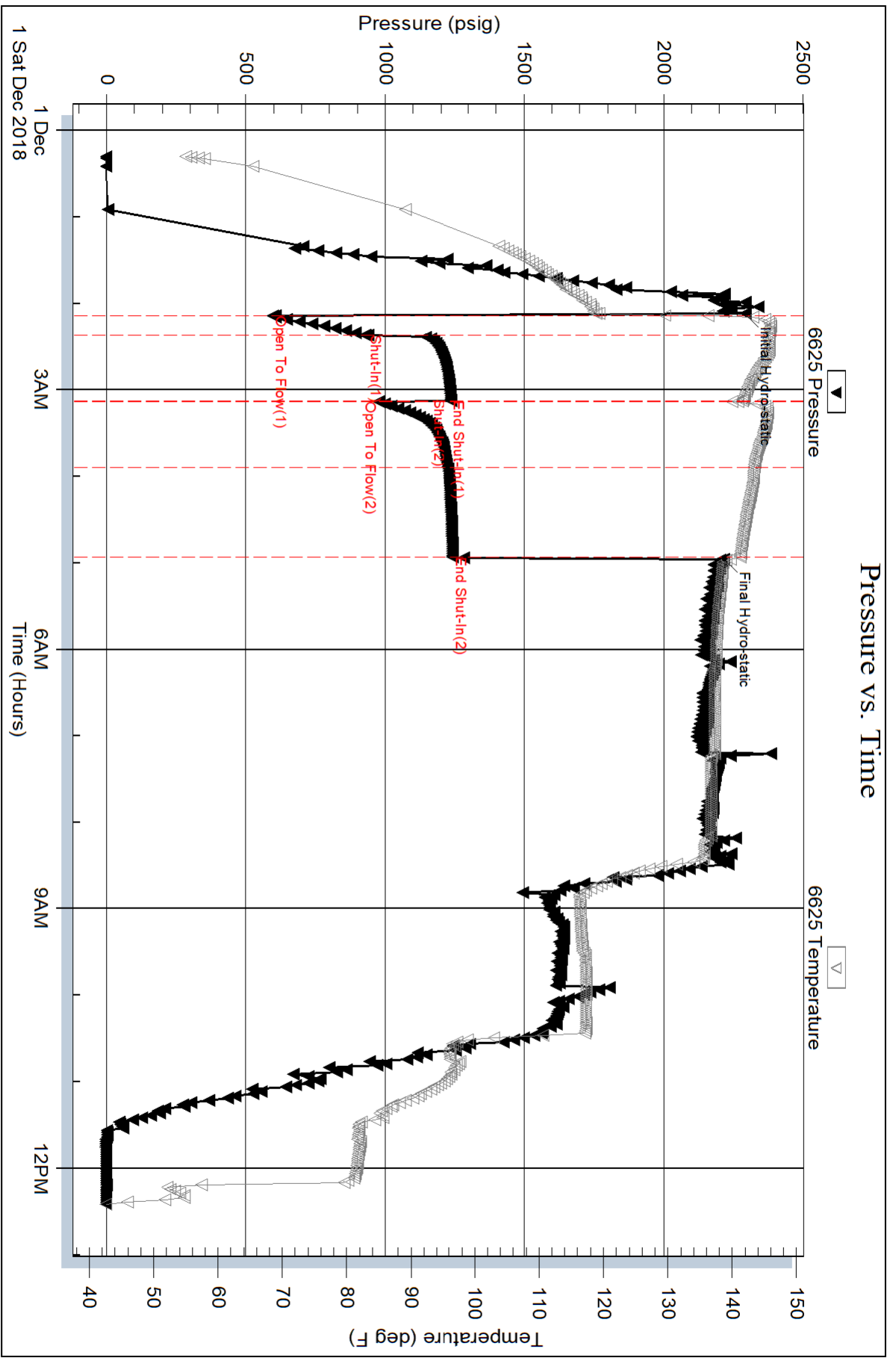
Num Gas Bombs: 0

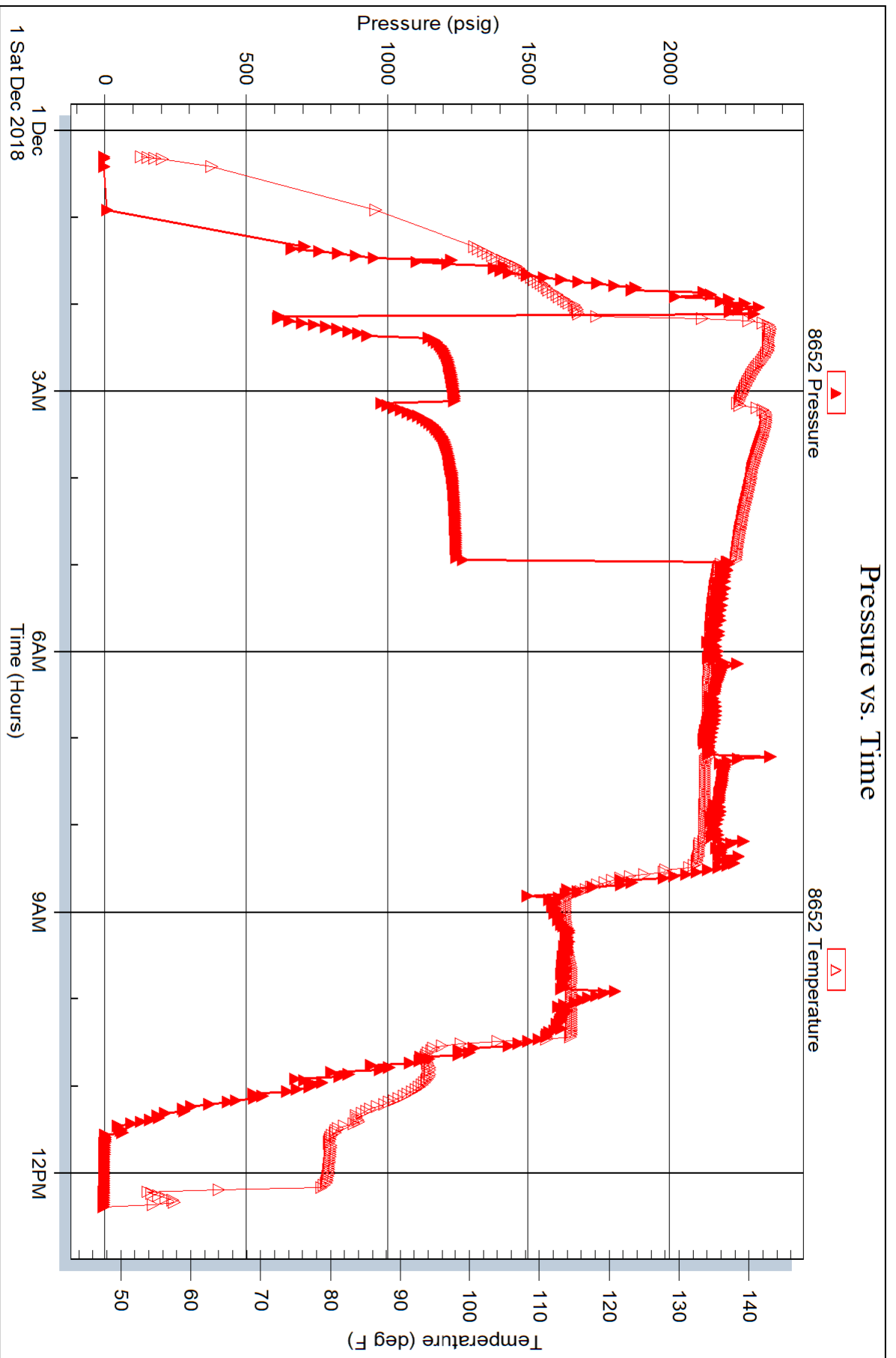
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity = 36.4 api @ 40 deg F Corrected Gravity = 38.4 api







TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Val Energy Inc.
 125 N Market St STE 1110
 Wichita, KS 67202
 ATTN: Tim Priest

11/8s/37w Sherman KS
Engelhardt #1-11
 Job Ticket: 64649 **DST#: 5**
 Test Start: 2018.12.02 @ 03:07:00

GENERAL INFORMATION:

Formation: **Ft. Scott - Cherokee**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 04:48:45
 Time Test Ended: 09:13:30
 Interval: **4647.00 ft (KB) To 4719.00 ft (KB) (TVD)**
 Total Depth: 4719.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Winder
 Unit No: 83
 Reference Elevations: 3430.00 ft (KB)
 3425.00 ft (CF)
 KB to GR/CF: 5.00 ft

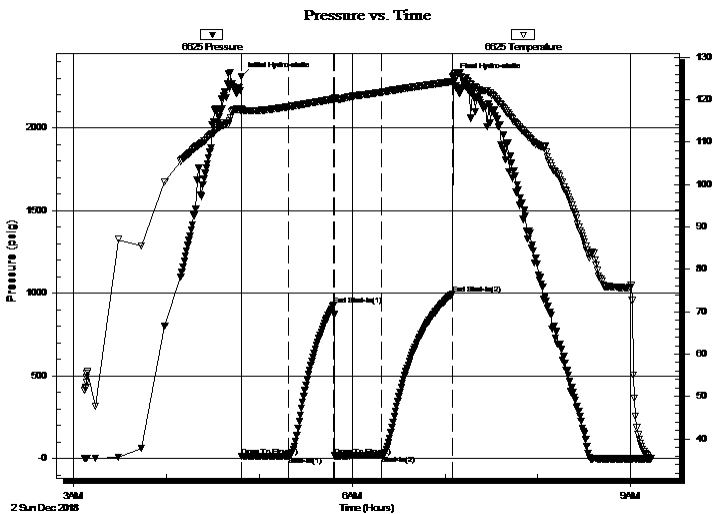
Serial #: 6625

Inside

Press@RunDepth: 18.46 psig @ 4648.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.12.02 End Date: 2018.12.02 Last Calib.: 2018.12.02
 Start Time: 03:07:05 End Time: 09:13:29 Time On Btm: 2018.12.02 @ 04:48:15
 Time Off Btm: 2018.12.02 @ 07:05:15

TEST COMMENT: 30 - IF: Blow built to 1 1/2"
 30 - IS: No blow back
 30 - FF: Blow built to 1/8"
 45 - FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2310.45	117.82	Initial Hydro-static
1	11.43	117.48	Open To Flow (1)
31	14.98	118.31	Shut-In(1)
60	927.39	120.12	End Shut-In(1)
61	16.14	120.25	Open To Flow (2)
91	18.46	121.71	Shut-In(2)
137	995.55	124.24	End Shut-In(2)
137	2303.02	125.35	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud w /trace oil 100%m	0.02

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Val Energy Inc.
125 N Market St STE 1110
Wichita, KS 67202
ATTN: Tim Priest

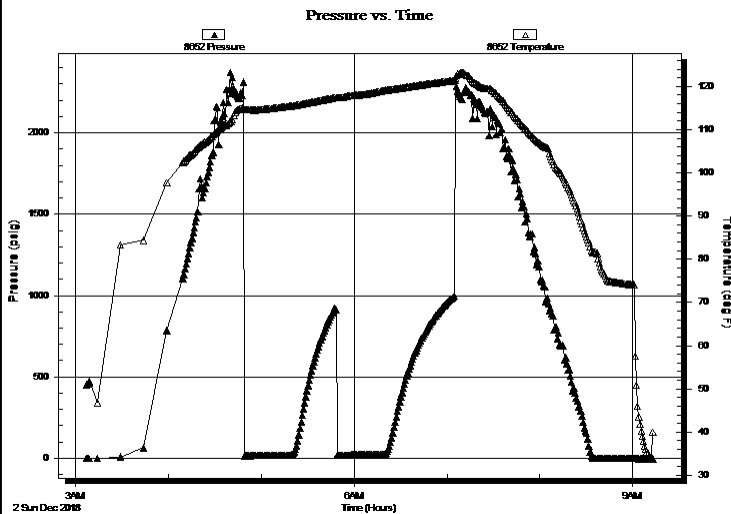
11/8s/37w Sherman KS
Engelhardt #1-11
Job Ticket: 64649 **DST#: 5**
Test Start: 2018.12.02 @ 03:07:00

GENERAL INFORMATION:

Formation:	Ft. Scott - Cherokee		
Deviated:	No Whipstock:	ft (KB)	Test Type: Conventional Bottom Hole (Reset)
Time Tool Opened:	04:48:45		Tester: James Winder
Time Test Ended:	09:13:30		Unit No: 83
Interval:	4647.00 ft (KB) To 4719.00 ft (KB) (TVD)		Reference Elevations: 3430.00 ft (KB)
Total Depth:	4719.00 ft (KB) (TVD)		3425.00 ft (CF)
Hole Diameter:	7.88 inches	Hole Condition: Fair	KB to GR/CF: 5.00 ft

Serial #: 8652	Outside			
Press@RunDepth:	psig @ 4648.00 ft (KB)	Capacity:	8000.00 psig	
Start Date:	2018.12.02	End Date:	2018.12.02	Last Calib.: 2018.12.02
Start Time:	03:07:05	End Time:	09:12:59	Time On Btm:
				Time Off Btm:

TEST COMMENT: 30 - IF: Blow built to 1 1/2"
30 - IS: No blow back
30 - FF: Blow built to 1/8"
45 - FS: No blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud w /trace oil 100%m	0.02

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Val Energy Inc.

11/8s/37w Sherman KS

125 N Market St STE 1110
Wichita, KS 67202

Engelhardt #1-11

Job Ticket: 64649

DST#: 5

ATTN: Tim Priest

Test Start: 2018.12.02 @ 03:07:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 68.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud w /trace oil 100%m	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

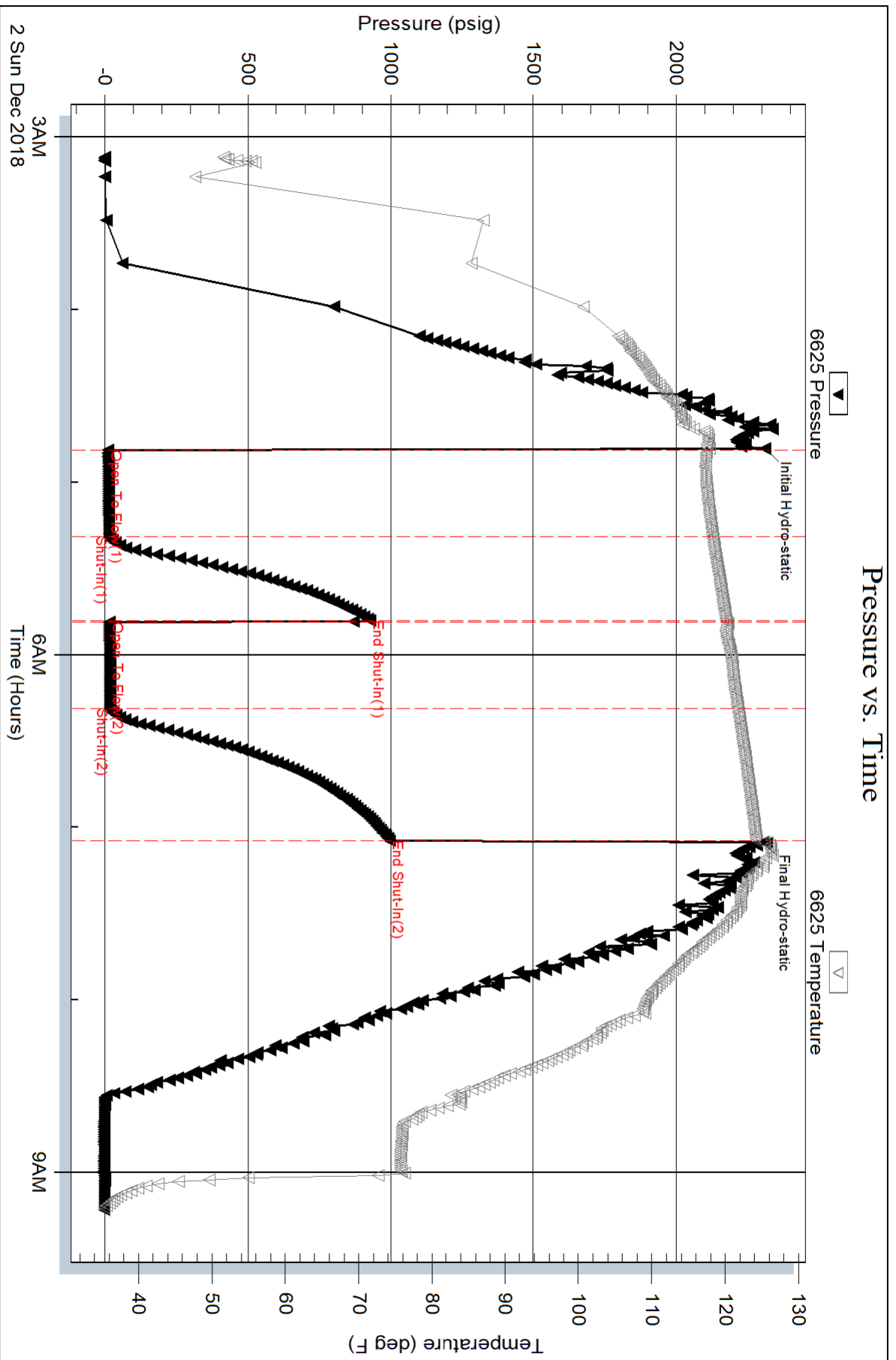
Serial #:

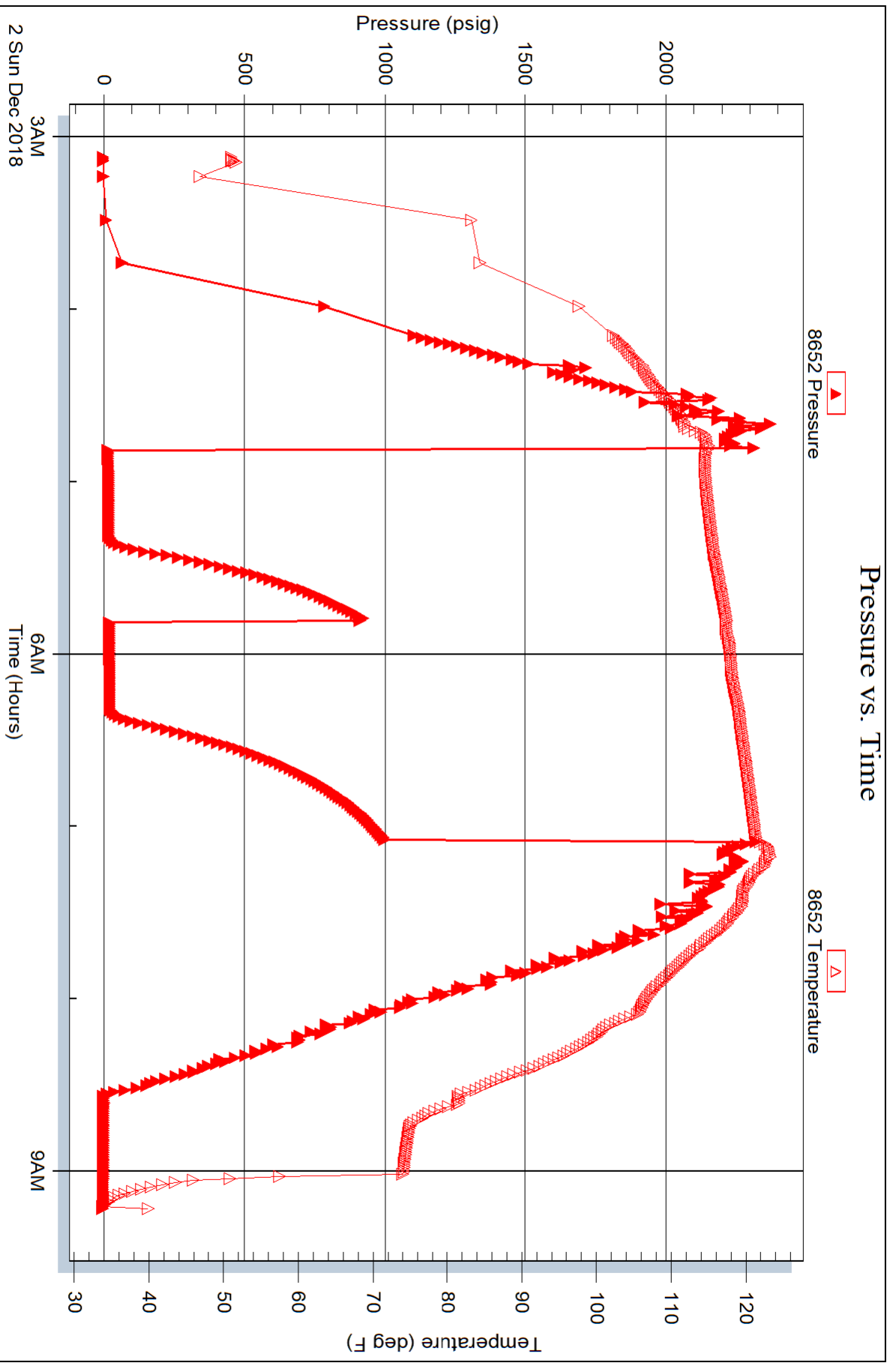
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Val Energy Inc.
125 N Market St STE 1110
Wichita, KS 67202
ATTN: Tim Priest

11/8s/37w Sherman KS
Engelhardt #1-11
Job Ticket: 64650 **DST#: 6**
Test Start: 2018.12.02 @ 18:15:00

GENERAL INFORMATION:

Formation: **Cherokee - Johnson**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:18:45
Time Test Ended: 01:32:30
Interval: **4694.00 ft (KB) To 4748.00 ft (KB) (TVD)**
Total Depth: 4748.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: James Winder
Unit No: 83
Reference Elevations: 3430.00 ft (KB)
3425.00 ft (CF)
KB to GR/CF: 5.00 ft

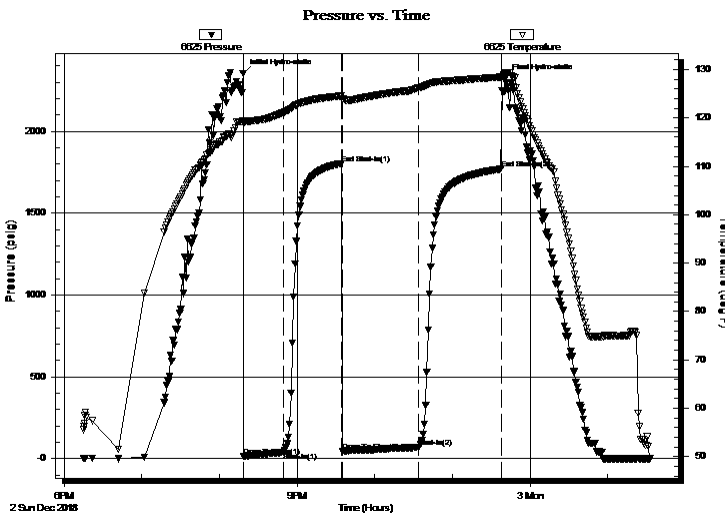
Serial #: 6625

Inside

Press@RunDepth: 68.97 psig @ 4695.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2018.12.02 End Date: 2018.12.03 Last Calib.: 2018.12.03
Start Time: 18:15:05 End Time: 01:32:29 Time On Btm: 2018.12.02 @ 20:18:15
Time Off Btm: 2018.12.02 @ 23:40:45

TEST COMMENT: 30 - IF: 1/4" Blow at open, built to 7"
45 - IS: Blow back built to 1/8"
60 - FF: Blow built to 10"
60 - FS: Blow back built to 1"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2352.46	119.31	Initial Hydro-static
1	12.99	118.96	Open To Flow (1)
32	37.54	121.12	Shut-In(1)
76	1803.96	124.52	End Shut-In(1)
77	45.46	124.03	Open To Flow (2)
136	68.97	126.20	Shut-In(2)
200	1770.32	128.42	End Shut-In(2)
203	2323.39	129.29	Final Hydro-static

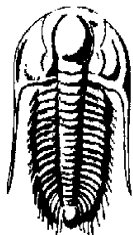
Recovery

Length (ft)	Description	Volume (bbl)
60.00	GOM 45% m, 37% o, 18% g	0.30
125.00	CGO 90% o, 8% g, 2% m	1.20
0.00	GIP = 65'	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Val Energy Inc.
125 N Market St STE 1110
Wichita, KS 67202
ATTN: Tim Priest

11/8s/37w Sherman KS
Engelhardt #1-11
Job Ticket: 64650 **DST#: 6**
Test Start: 2018.12.02 @ 18:15:00

GENERAL INFORMATION:

Formation: **Cherokee - Johnson**
Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Reset)
Time Tool Opened: 20:18:45 Tester: James Winder
Time Test Ended: 01:32:30 Unit No: 83

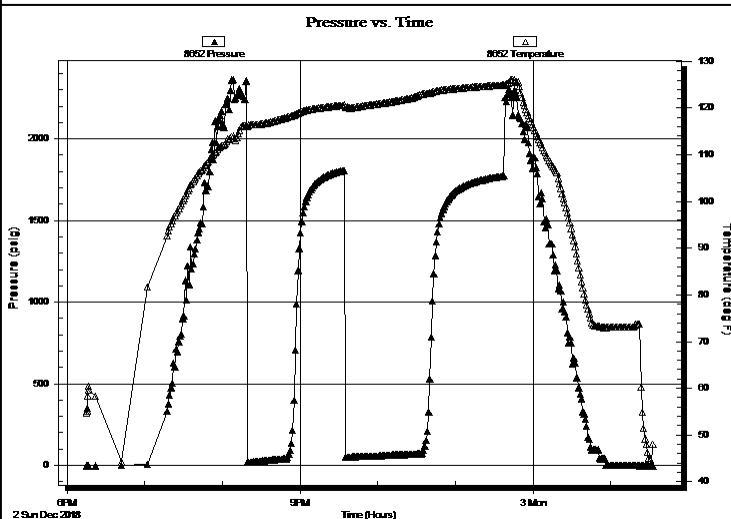
Interval: **4694.00 ft (KB) To 4748.00 ft (KB) (TVD)** Reference Elevations: 3430.00 ft (KB)
Total Depth: 4748.00 ft (KB) (TVD) 3425.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 5.00 ft

Serial #: 8652

Outside

Press@RunDepth: psig @ 4695.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2018.12.02 End Date: 2018.12.03 Last Calib.: 2018.12.03
Start Time: 18:15:05 End Time: 01:32:14 Time On Btm:
Time Off Btm:

TEST COMMENT: 30 - IF: 1/4" Blow at open, built to 7"
45 - IS: Blow back built to 1/8"
60 - FF: Blow built to 10"
60 - FS: Blow back built to 1"



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
60.00	GOM 45% m, 37% o, 18% g	0.30
125.00	CGO 90% o, 8% g, 2% m	1.20
0.00	GIP = 65'	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Val Energy Inc.

11/8s/37w Sherman KS

125 N Market St STE 1110
Wichita, KS 67202

Engelhardt #1-11

Job Ticket: 64650

DST#: 6

ATTN: Tim Priest

Test Start: 2018.12.02 @ 18:15:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 57.00 sec/qt
Water Loss: 7.20 in³
Resistivity: ohm.m
Salinity: 50000.00 ppm
Filter Cake: 1.00 inches

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

Oil API: 25 deg API
Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	GOM 45% <i>m</i> , 37% <i>o</i> , 18% <i>g</i>	0.295
125.00	CGO 90% <i>o</i> , 8% <i>g</i> , 2% <i>m</i>	1.198
0.00	GIP = 65'	0.000

Total Length: 185.00 ft Total Volume: 1.493 bbl

Num Fluid Samples: 0

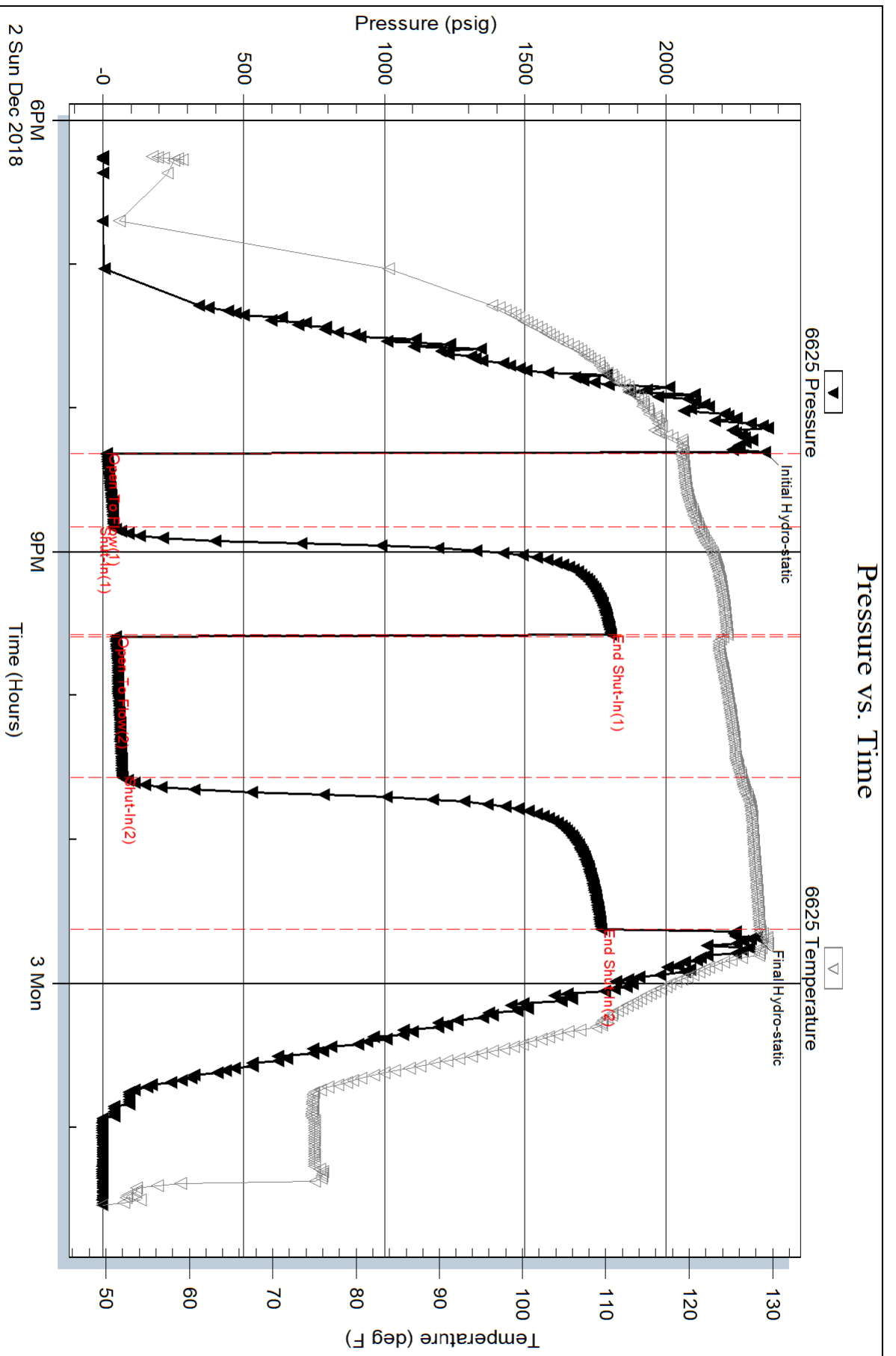
Num Gas Bombs: 0

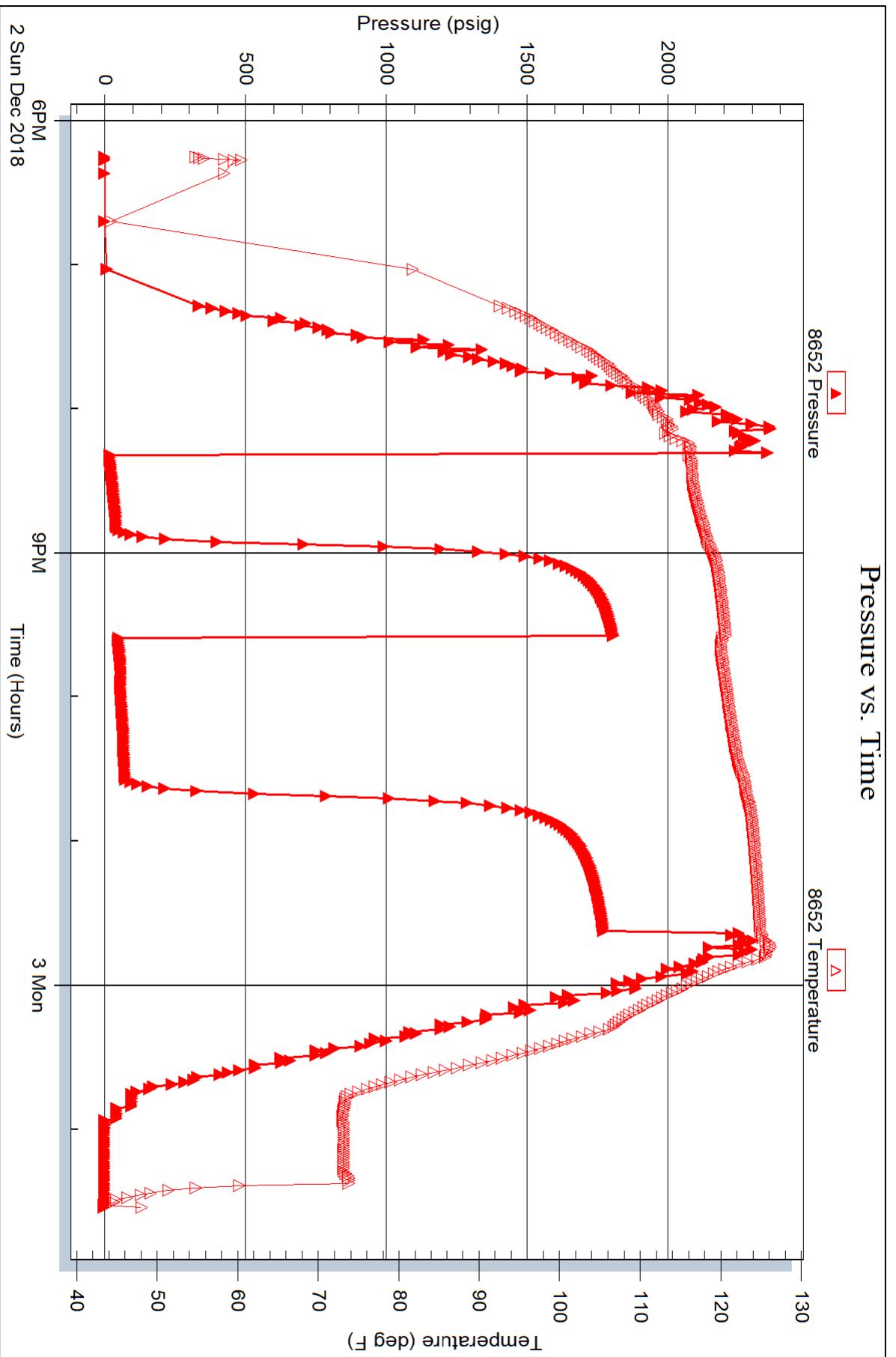
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity = 25 api @ 60 deg F





GEOLOGIST'S REPORT
DRILLING TIME AND SAMPLE LOG

COMPANY	ENCOR ENERGY INC	ELEVATIONS	KG 3430'
LEASE	WALDEBARDT #1-11	DF	
FIELD	Wildcat	GL	3425'
LOCATION	983 FMSL, 2586' FEEL		
SEC	11 TMSW 8S	ROE	37W
COUNTY	Sherman STATE Kansas	Measurements Are All	From KB
CONTRACTOR	WW Drilling, Rig #10		
SPUD	11-23-18	COMP	
RTD	5005'	LTD	5005'
MUD UP	3600'	TYPE MUD	Chemical
SAMPLES SAVED FROM	3950' to RTD	CONDUCTOR	N/A
DRILLING TIME KEPT FROM	3950' to RTD	SURFACE	8.5-8" @ 346'
SAMPLES EXAMINED FROM	3950' to RTD	PRODUCTION	5.1-2" @ 5005'
GEOLOGICAL SUPERVISION FROM	3950' to RTD		
GEOLOGIST ON WELL	Tim Priest		

FORMATION TOPS	ELECTRIC LOG	SAMPLE
Anyvrite	2950 (+480)	2950 (+480)
Heebner	4188 (-718)	4151 (-721)
Austin	4197 (-767)	4196 (-766)
Stark	4420 (-990)	4417 (-987)
Marmaton	4531 (-1101)	4529 (-1099)
Fort Scott	4661 (-1231)	4660 (-1230)
Cherokee Shale	4697 (-1267)	4696 (-1266)
Mississippian	4906 (-1476)	4906 (-1476)

REMARKS Due to the results of DSTs, it was decided to set production casing to further test the well.

Respectfully Submitted,
 Tim Priest
 Petroleum Geologist

API #15-181-20616-00-00

