



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1230785
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

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

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

- New Well Re-Entry Workover
- Oil WSW SWD SIOW
- Gas D&A ENHR SIGW
- OG GSW Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

- Deepening Re-perf. Conv. to ENHR Conv. to SWD
- Plug Back Conv. to GSW Conv. to Producer
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - _____

Spot Description: _____

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

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

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

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

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

County: _____ Permit #: _____

AFFIDAVIT

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

Submitted Electronically

KCC Office Use ONLY

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



1230785

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

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

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

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

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
--	---

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

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

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD:	Size:	Set At:	Packer At:	Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No
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Date of First, Resumed Production, SWD or ENHR.	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> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Production Drilling, Inc.
Well Name	East Elrick 3-1
Doc ID	1230785

All Electric Logs Run

DIL
MICRO
Compensated Density Neutron
Cement Bond Log

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. 645

Date	9-25-14	Sec.	11	Twp.	10	Range	25	County	Graham	State	Ks	On Location		Finish	5:45 PM
Lease								Location		Saint Peter, Ks - 1N, 14E, 5 into					
Contractor								Well No.		Owner					
Discovery								3-1		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.					
Type Job										Charge To					
Surface										Production Drilling					
Hole Size				T.D.				Charge To							
12 1/4"				221'				Production Drilling							
Csg.				Depth				Street							
8 5/8"				221'											
Tbg. Size				Depth				City				State			
Tool				Depth				The above was done to satisfaction and supervision of owner agent or contractor.							
Cement Left in Csg.				Shoe Joint				Cement Amount Ordered							
15'				15'				150 Com 3% CC 2 1/2 gal							
Meas Line				Displace											
				13 BLS											
EQUIPMENT															
Pumptrk		5 No.		Cementer		David		Common		150					
				Helper				Poz. Mix							
Bulktrk		15 No.		Driver		Lonnie M.		Gel.		3					
				Driver				Calcium		85					
Bulktrk		p.u. No.		Driver		Rick		Hulls							
				Driver				Salt							
JOB SERVICES & REMARKS															
Remarks:				Cement did Circulate											
Rat Hole				Flowseal											
Mouse Hole				Kol-Seal											
Centralizers				Mud CLR 48											
Baskets				CFL-117 or CD110 CAF 38											
D/V or Port Collar				Sand											
				Handling								158			
				Mileage											
FLOAT EQUIPMENT															
				Guide Shoe											
				Centralizer											
				Baskets											
				AFI Inserts											
				Float Shoe											
				Latch Down											
				Pumptrk Charge								Surface			
				Mileage								31			
Quality Oilwell Cementing															
X Signature <i>[Signature]</i>												Tax			
												Discount			
												Total Charge			

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. 662

Date	10-1-14	Sec.	11	Twp.	10	Range	25	County	Graham	State	KS	On Location		Finish	5:45 PM
Location								St. Peter, 1N, 1/4 E, S22							
Lease	East Elvick			Well No.	3-1			Owner	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.						
Contractor	Discovery #1			Type Job	bottom stage			Charge To	Production drilling						
Hole Size	7 7/8			T.D.	4040			Street							
Csg.	5 1/2 15 1/2 #			Depth	4037			City	State						
Tbg. Size				Depth				The above was done to satisfaction of owner owner agent or contractor.							
Tool	DV			Depth	2152			Cement Amount Ordered	175 sx COM, 10% salt, 5% gilsonite						
Cement Left in Csg.				Shoe Joint	15.70										
Meas Line				Displace	95.7661										
EQUIPMENT								Common	175 sp						
Pumptrk	17	No.	Cementer	Helper			Lonniew.			Poz. Mix					
Bulktrk	9	No.	Driver	Driver			Cody Tylor			Gel.					
Bulktrk	Pu	No.	Driver	Driver			Travis			Calcium					
JOB SERVICES & REMARKS								Hulls							
Remarks:								Salt	15						
Rat Hole								Flowseal							
Mouse Hole								Kol-Seal	825 #						
Centralizers								Mud CLR 48	500 gal						
Baskets								CFL-117 or CD110 CAF 38							
DV or Port Collar	at 2152							Sand							
Pipe on bottom broke circulation								Handling	188						
Pumped 500 gal 500 gal Mud CLR 48								Mileage							
with 10 bbl fw behind it. Mixed 175 sx								FLOAT EQUIPMENT							
shut down washed pump and lines.								Guide Shoe							
Released plug and displaced with 95.7661								Centralizer	A						
fw. Plug landed and held.								Baskets	10 Turbos, 2 Baskets						
Lift pressure 900 psi								AFU Inserts							
Plug landed at 1500 psi								Float Shoe	1						
								Latch Down	1						
								1 DV tool							
								Pumptrk Charge	prod string						
								Mileage	31						
								Tax							
								Discount							
								Total Charge							
Signature <i>[Signature]</i>															

Bottom Stage

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. 663

Date	10-1-14	Sec.	11	Twp.	10	Range	25	County	Graham	State	KS	On Location		Finish	7:15pm
Location <i>St. Peter, 1N, 1/4E, S12</i>															

Lease	<i>East Elwick</i>		Well No.	<i>3-1</i>		Owner	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.								
Contractor	<i>Discovery #1</i>					Charge To	<i>Production drilling</i>								
Type Job	<i>Top stage</i>					Street									
Hole Size	<i>7 7/8</i>		T.D.	<i>4040</i>		City	State								
Csg.	<i>5 1/2 15 1/2 #</i>		Depth			The above was done to satisfaction and supervision of owner agent or contractor.									
Tbg. Size			Depth			Cement Amount Ordered <i>350sx QMDC 1/4 flt.</i>									
Tool	<i>DV</i>		Depth	<i>2152</i>											
Cement Left in Csg.			Shoe Joint												
Meas Line			Displace	<i>51.2661</i>											

EQUIPMENT

Pumptrk	<i>17</i>	No.	Cementer		Common	<i>350</i>									
			Helper	<i>Lonn Ew.</i>	Poz. Mix										
Bulktrk	<i>19</i>	No.	Driver		Gel.										
			Driver	<i>Tyler</i>	Calcium										
Bulktrk	<i>P4</i>	No.	Driver		Hulls										
			Driver	<i>Travis</i>	Salt										

JOB SERVICES & REMARKS

Remarks:															
Rat Hole	<i>30sx</i>		Flowseal <i>87 #</i>												
Mouse Hole	<i>15sx</i>		Kol-Seal												
Centralizers	Mud CLR 48														
Baskets	CFL-117 or CD110 CAF 38														
DV or Port Collar	Sand														

*Open tool at 1700psi. Broke circulation
Plugged Rat hole with 30sx and Mouse hole
with 15sx. Hooked to 5 1/2 Mixed 305sx
shut down. Released plug and displaced
with 51.2661 fw. Plug landed and held.*

Handling	<i>350</i>														
Mileage															

FLOAT EQUIPMENT

Guide Shoe															
Centralizer															
Baskets															
AFU Inserts															
Float Shoe															
Latch Down															

lift pressure 700 psi

Plug landed at 1500 psi

cement did circulate

Pumptrk Charge	<i>prod string</i>														
Mileage	<i>31</i>														

X Signature *[Signature]*

Tax	
Discount	
Total Charge	

Top stage



DRILL STEM TEST REPORT

Prepared For: **Production Drilling Inc**

1023 Reservation Rd
Hays KS 67601-3982

ATTN: Marc Downing

East Elrick #3-1

11-10s-25w Graham,KS

Start Date: 2014.09.29 @ 14:03:00

End Date: 2014.09.29 @ 21:15:00

Job Ticket #: 56146 DST #: 1

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.10.03 @ 10:09:02



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Production Drilling Inc
1023 Reservation Rd
Hays KS 67601-3982
ATTN: Marc Downing

11-10s-25w Graham,KS
East Elrick #3-1
Job Ticket: 56146 **DST#: 1**
Test Start: 2014.09.29 @ 14:03:00

GENERAL INFORMATION:

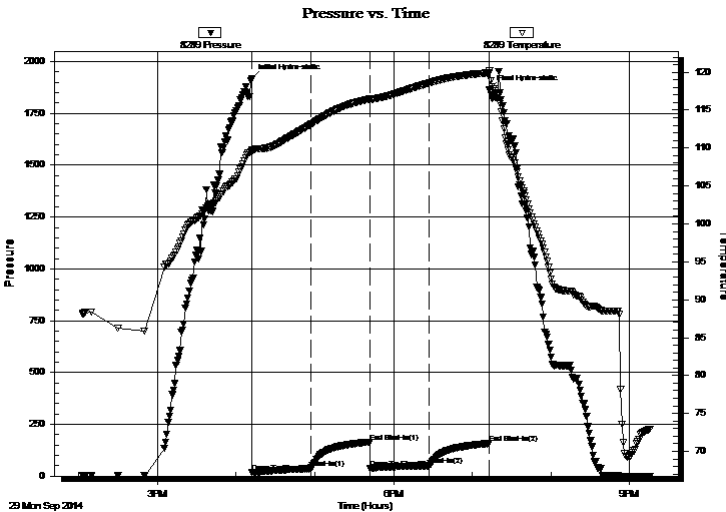
Formation: **LKC " D "**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 16:12:15
Time Test Ended: 21:15:00
Interval: **3795.00 ft (KB) To 3815.00 ft (KB) (TVD)**
Total Depth: 3815.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Initial)
Tester: Jim Svaty
Unit No: 76
Reference Elevations: 2480.00 ft (KB)
2473.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8289 Outside

Press@RunDepth: 50.38 psig @ 3797.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2014.09.29 End Date: 2014.09.29 Last Calib.: 2014.09.29
Start Time: 14:03:02 End Time: 21:15:15 Time On Btm: 2014.09.29 @ 16:11:45
Time Off Btm: 2014.09.29 @ 19:13:15

TEST COMMENT: 45-IFP- Surface Blow Building to 9" in 35 min.
45-ISIP- No Blow
45-FFP- Surface Blow Building to 4 1/2"
45-FSIP- No Blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1916.22	109.74	Initial Hydro-static
1	17.49	109.57	Open To Flow (1)
45	36.54	113.08	Shut-In(1)
90	164.63	116.44	End Shut-In(1)
91	38.86	116.36	Open To Flow (2)
136	50.38	118.57	Shut-In(2)
181	157.52	119.89	End Shut-In(2)
182	1865.38	120.24	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
63.00	MCW 5% m 95% w	0.88
9.00	OMCW 5% o 40% m 55% w	0.13
6.00	CO 100%	0.08
0.00	108 GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Production Drilling Inc

11-10s-25w Graham,KS

1023 Reservation Rd
Hays KS 67601-3982

East Elrick #3-1

Job Ticket: 56146

DST#: 1

ATTN: Marc Downing

Test Start: 2014.09.29 @ 14:03:00

Tool Information

Drill Pipe:	Length: 3791.00 ft	Diameter: 3.80 inches	Volume: 53.18 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	50000.00 lb
			<u>Total Volume: 53.18 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial	48000.00 lb
Depth to Top Packer:	3795.00 ft			Final	48000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	20.00 ft				
Tool Length:	41.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3775.00	
Shut In Tool	5.00			3780.00	
Hydraulic tool	5.00			3785.00	
Packer	5.00			3790.00	21.00 Bottom Of Top Packer
Packer	5.00			3795.00	
Stubb	1.00			3796.00	
Perforations	1.00			3797.00	
Recorder	0.00	8789	Inside	3797.00	
Recorder	0.00	8289	Outside	3797.00	
Blank Spacing	15.00			3812.00	
Bullnose	3.00			3815.00	20.00 Bottom Packers & Anchor

Total Tool Length: 41.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Production Drilling Inc

11-10s-25w Graham,KS

1023 Reservation Rd
Hays KS 67601-3982

East Elrick #3-1

Job Ticket: 56146

DST#: 1

ATTN: Marc Downing

Test Start: 2014.09.29 @ 14:03:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

39 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

35000 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 1.50 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
63.00	MCW 5%m 95%w	0.884
9.00	OMCW 5%o 40%m 55%w	0.126
6.00	CO 100%	0.084
0.00	108 GIP	0.000

Total Length: 78.00 ft

Total Volume: 1.094 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

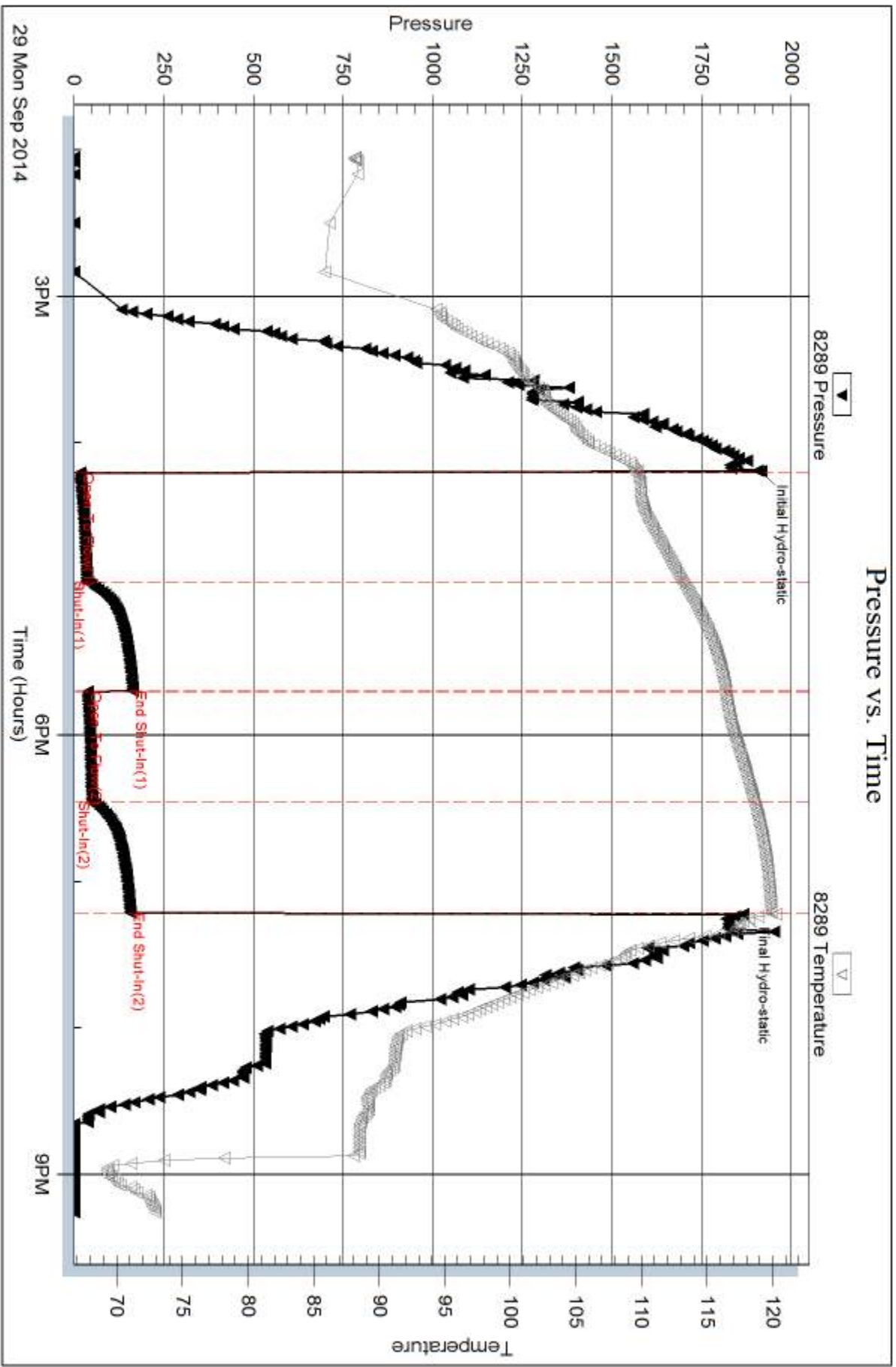
Recovery Comments: .195 @ 74

Serial #: 8289

Outside Production Drilling Inc

East Erick #3-1

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 56146

Printed: 2014, 10:03 @ 10:09:04

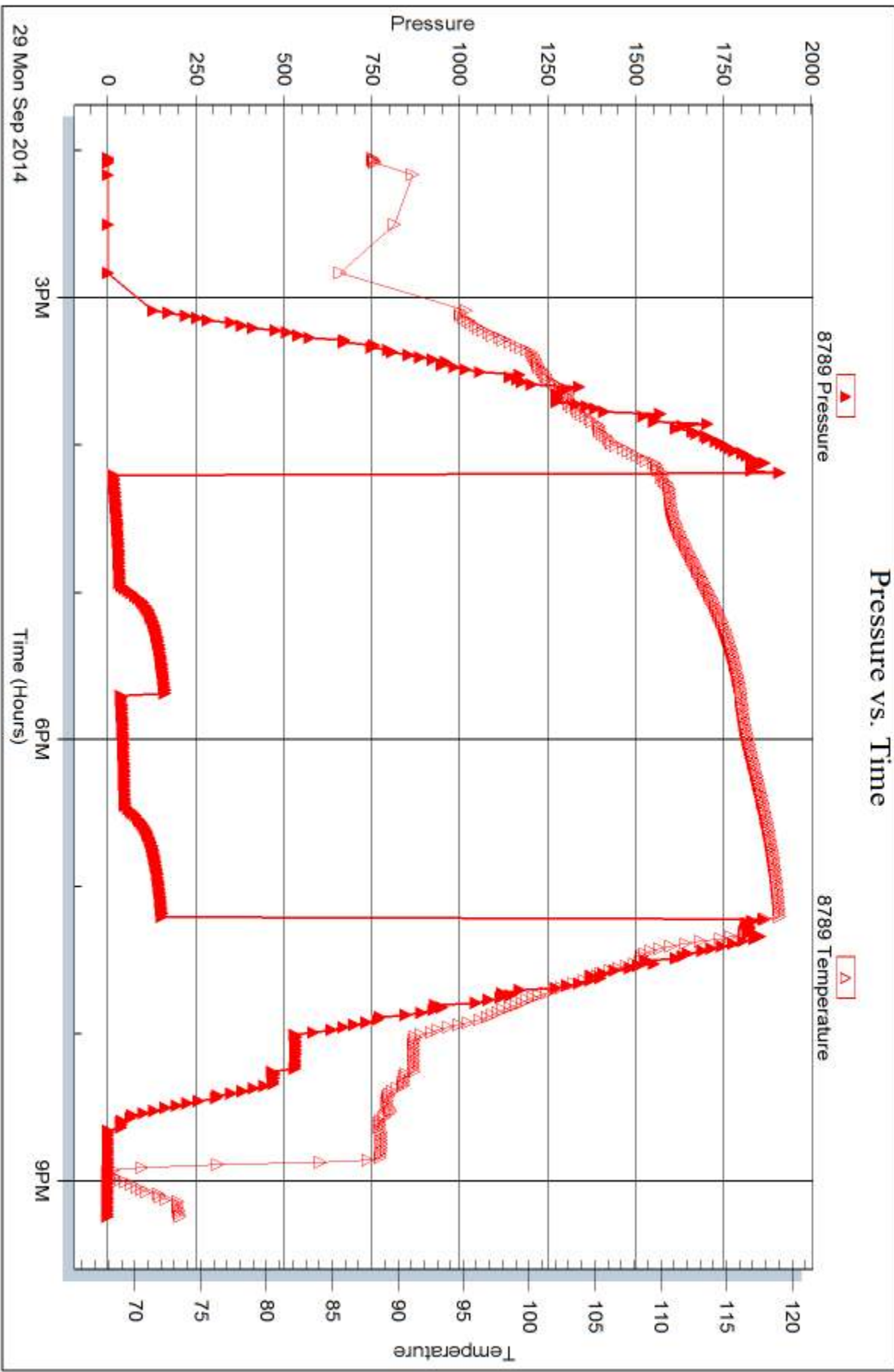
Serial #: 8789

Inside

Production Drilling Inc

East Erick #3-1

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Production Drilling Inc**

1023 Reservation Rd
Hays KS 67601-3982

ATTN: Marc Downing

East Elrick #3-1

11-10s-25w Graham,KS

Start Date: 2014.09.30 @ 11:21:00

End Date: 2014.09.30 @ 18:04:00

Job Ticket #: 56147 DST #: 2

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.10.03 @ 10:08:32

Production Drilling Inc

11-10s-25w Graham,KS

East Elrick #3-1

DST # 2

LKC " H - J "

2014.09.30



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Production Drilling Inc
1023 Reservation Rd
Hays KS 67601-3982
ATTN: Marc Downing

11-10s-25w Graham,KS
East Elrick #3-1
Job Ticket: 56147 **DST#: 2**
Test Start: 2014.09.30 @ 11:21:00

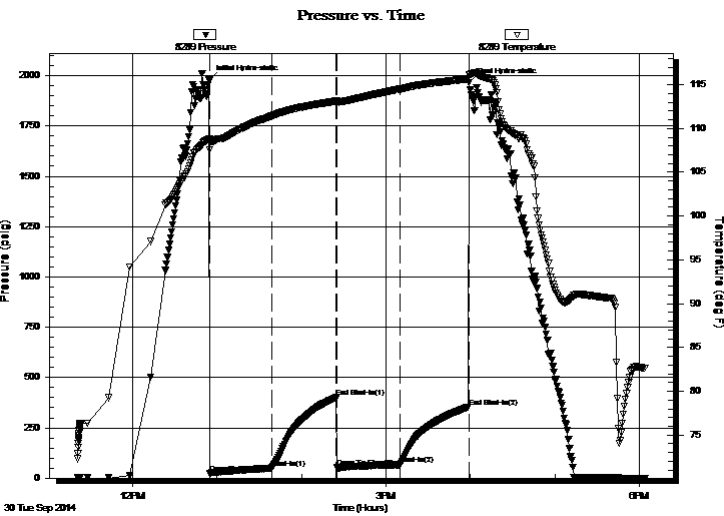
GENERAL INFORMATION:

Formation: **LKC "H - J"**
Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Reset)
Time Tool Opened: 12:54:45 Tester: Jim Svaty
Time Test Ended: 18:04:00 Unit No: 76
Interval: 3874.00 ft (KB) To 3950.00 ft (KB) (TVD) Reference Elevations: 2480.00 ft (KB)
Total Depth: 3950.00 ft (KB) (TVD) 2473.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 7.00 ft

Serial #: 8289 Outside

Press@RunDepth: 67.19 psig @ 3883.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2014.09.30 End Date: 2014.09.30 Last Calib.: 2014.09.30
Start Time: 11:21:02 End Time: 18:04:15 Time On Btm: 2014.09.30 @ 12:54:30
Time Off Btm: 2014.09.30 @ 15:59:15

TEST COMMENT: 45-IFP- BOB in 15 min.
45-ISIP- No Blow
45-FFP- BOB in 28 min.
45-FSIP- Weak Surface Blow in 4 min. Died Back 10 min.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1978.84	108.78	Initial Hydro-static
1	21.38	107.57	Open To Flow (1)
45	50.52	111.41	Shut-In(1)
91	400.35	113.11	End Shut-In(1)
91	52.47	112.97	Open To Flow (2)
136	67.19	114.47	Shut-In(2)
185	354.35	115.65	End Shut-In(2)
185	1967.21	116.13	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
116.00	GOCM 10%g 35%o 55%m	1.63
0.00	450 GIP	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Production Drilling Inc

11-10s-25w Graham,KS

1023 Reservation Rd
Hays KS 67601-3982

East Elrick #3-1

Job Ticket: 56147

DST#: 2

ATTN: Marc Downing

Test Start: 2014.09.30 @ 11:21:00

Tool Information

Drill Pipe:	Length: 3885.00 ft	Diameter: 3.80 inches	Volume: 54.50 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 54.50 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3874.00 ft			Final 49000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	76.00 ft			
Tool Length:	97.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3854.00	
Shut In Tool	5.00			3859.00	
Hydraulic tool	5.00			3864.00	
Packer	5.00			3869.00	21.00 Bottom Of Top Packer
Packer	5.00			3874.00	
Stubb	1.00			3875.00	
Perforations	7.00			3882.00	
Change Over Sub	1.00			3883.00	
Recorder	0.00	8789	Inside	3883.00	
Recorder	0.00	8289	Outside	3883.00	
Blank Spacing	63.00			3946.00	
Change Over Sub	1.00			3947.00	
Bullnose	3.00			3950.00	76.00 Bottom Packers & Anchor

Total Tool Length: 97.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Production Drilling Inc

11-10s-25w Graham,KS

1023 Reservation Rd
Hays KS 67601-3982

East Elrick #3-1

Job Ticket: 56147

DST#: 2

ATTN: Marc Downing

Test Start: 2014.09.30 @ 11:21:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

38 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbf

Water Loss: 8.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
116.00	GOCM 10%g 35%o 55%m	1.627
0.00	450 GIP	0.000

Total Length: 116.00 ft

Total Volume: 1.627 bbf

Num Fluid Samples: 0

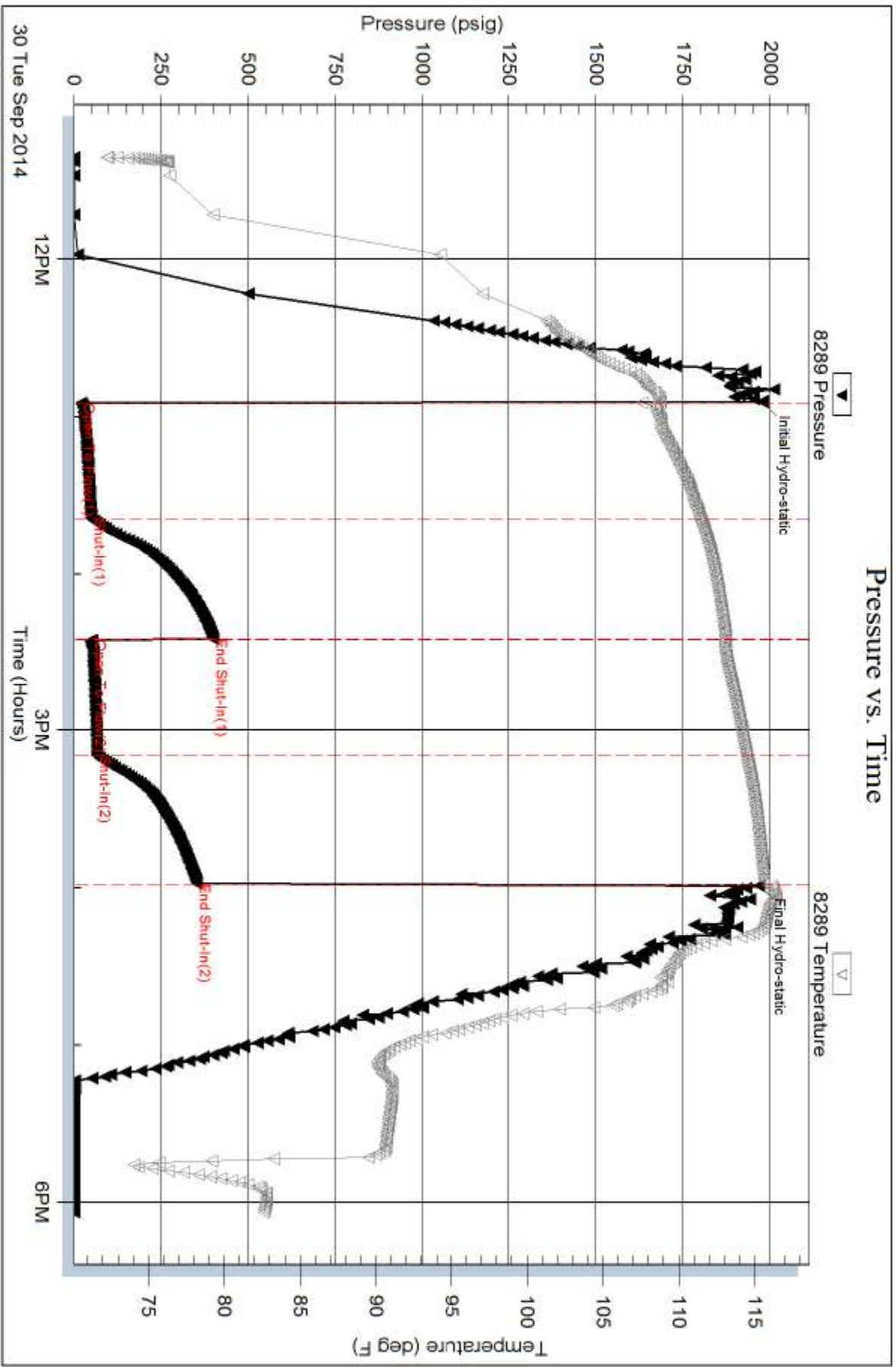
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



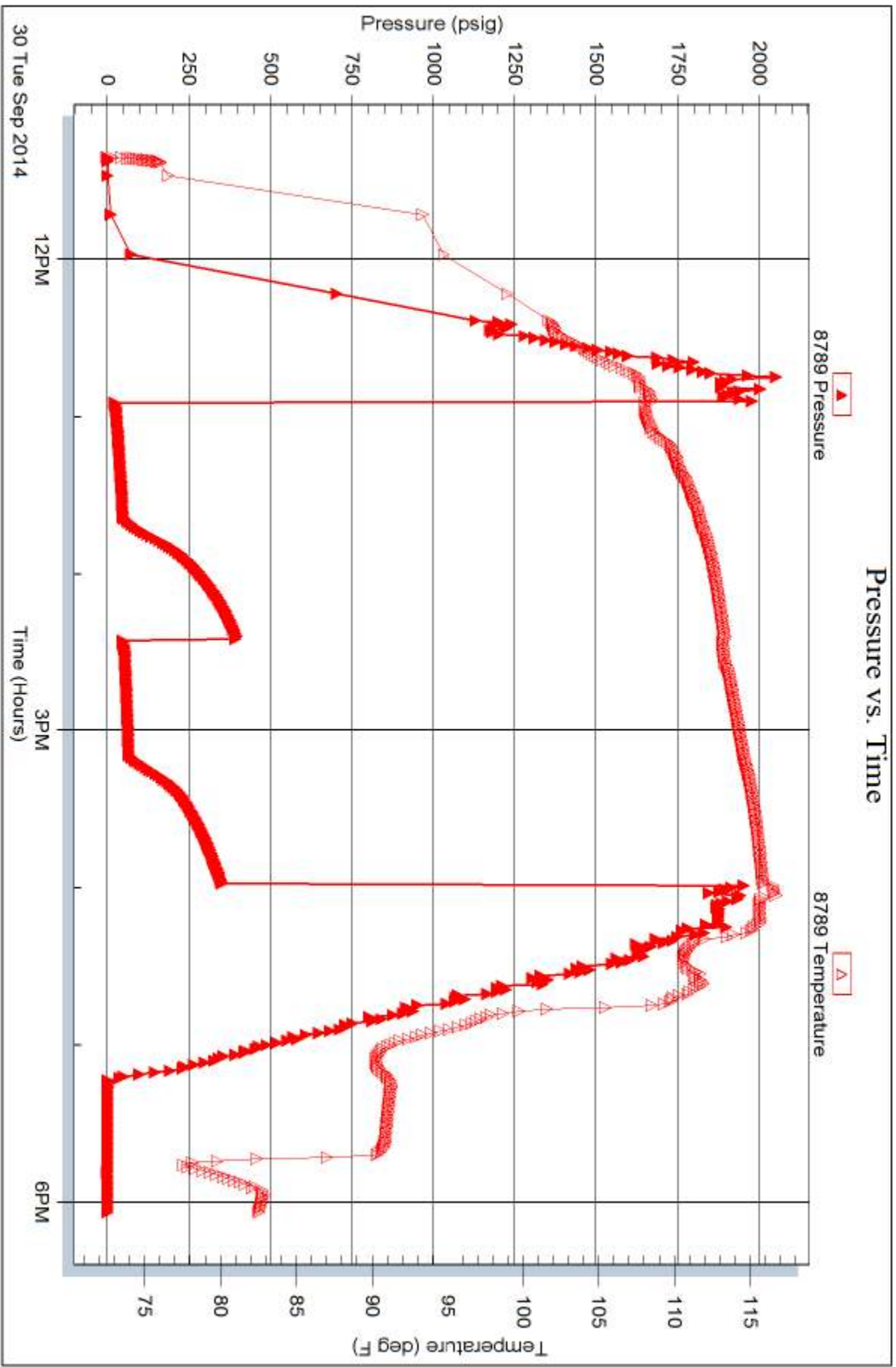
Serial #: 8789

Inside

Production Drilling Inc

East Erick #3-1

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 56147

Printed: 2014, 10:03 @ 10:08:33



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 56146

Well Name & No. EAST Elrick # 3-1 Test No. 1 Date 9-29-14
 Company Production Drilling, Inc. Elevation 2480 KB 2473 GL
 Address 1023 Reservation Rd Hays KS 67601-3982
 Co. Rep / Geo. Marc Downing Rig Discovery #1
 Location: Sec. 11 Twp. 10 S Rge. 25 W Co. Graham State KS

Interval Tested 3795-3815 Zone Tested LKC "D"
 Anchor Length 20 Drill Pipe Run 3781 Mud Wt. 9.1
 Top Packer Depth 3790 Drill Collars Run 0 Vis 54
 Bottom Packer Depth 3795 Wt. Pipe Run 0 WL 7.2
 Total Depth 3815 Chlorides 1000 ppm System LCM 1.5

Blow Description IFP - Surface Blow Building to 9" in 35 min.
ISIP - No Blow
FFP - Surface Blow Building to 4 1/2 in.
FSIP - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>63</u>	<u>mcw</u>		<u>95</u>	<u>5</u>	
<u>9</u>	<u>0 mcw</u>	<u>5</u>	<u>55</u>	<u>40</u>	
<u>6</u>	<u>CO</u>	<u>100</u>			
	<u>108 SIP</u>				

Rec Total 78 BHT 120 Gravity 39 API RW 195 @ 74 °F Chlorides 35000 ppm

(A) Initial Hydrostatic 1916 Test 1150 T-On Location 11:33
 (B) First Initial Flow 17 Jars _____ T-Started 14:03
 (C) First Final Flow 36 Safety Joint _____ T-Open 16:12
 (D) Initial Shut-In 164 Circ Sub _____ T-Pulled 19:12
 (E) Second Initial Flow 38 Hourly Standby _____ T-Out 21:13
 (F) Second Final Flow 50 Mileage 120 RT 186
 (G) Final Shut-In 157 Sampler _____
 (H) Final Hydrostatic 186.5 Straddle _____ Ruined Shale Packer _____

Initial Open 45 Shale Packer _____ Ruined Packer _____
 Initial Shut-In 45 Extra Packer _____ Extra Copies _____
 Final Flow 45 Extra Recorder _____ Sub Total 0
 Final Shut-In 45 Day Standby _____ Total 1336
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1336

Approved By _____

Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 56147

Well Name & No. East Elrick #3-1 Test No. 2 Date 9-30-14
 Company Production Drilling, Inc Elevation 2480 KB 2473 GL
 Address 1023 Reservation Rd Hays KS 67601-3982
 Co. Rep / Geo. Marc Downing Rig Discovery #1
 Location: Sec. 11 Twp. 105 Rge. 25W Co. Graham State KS

Interval Tested 3874 - 3950 Zone Tested LKC "H-J"
 Anchor Length 76 Drill Pipe Run 3885 Mud Wt. 9.1
 Top Packer Depth 3869 Drill Collars Run 0 Vis 56
 Bottom Packer Depth 3874 Wt. Pipe Run 0 WL 8.8
 Total Depth 3950 Chlorides 2000 ppm System LCM 1

Blow Description IFP - BOB in 15min
ISIP - No Blow
FFP - BOB in 28min.
FSIP - Weak Surface Blow in 4min. Died Back in 10min.

Rec	Feet of	%gas	%oil	%water	%mud
<u>116</u>	<u>20CM</u>	<u>10</u>	<u>35</u>	<u>55</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 116 BHT 116 Gravity 38 API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1978 Test 1150 T-On Location 10:40
 (B) First Initial Flow 21 Jars _____ T-Started 11:21
 (C) First Final Flow 50 Safety Joint _____ T-Open 12:55
 (D) Initial Shut-In 400 Circ Sub _____ T-Pulled 15:55
 (E) Second Initial Flow 52 Hourly Standby _____ T-Out 18:04
 (F) Second Final Flow 67 Mileage 186 Comments _____
 (G) Final Shut-In 354 Sampler _____
 (H) Final Hydrostatic 1967 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 45 Extra Recorder _____ Sub Total 0
 Initial Shut-In 45 Day Standby _____ Total 1336
 Final Flow 45 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 45 Sub Total 1336

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 60704

Well Name & No. East Elrick #3-1 Test No. _____ Date 10-1-14
 Company Production Drilling, Inc Elevation 2480 KB 2473 GL _____
 Address 1023 Reservation Rd Hays, KS 67601
 Co. Rep / Geo. Marc Downhey Rig Discovery #1
 Location: Sec. 11 Twp. 90s Rge. 25w Co. Crawford State KY

Interval Tested _____ Zone Tested _____
 Anchor Length _____ Drill Pipe Run _____ Mud Wt. _____
 Top Packer Depth _____ Drill Collars Run _____ Vis _____
 Bottom Packer Depth _____ Wt. Pipe Run _____ WL _____
 Total Depth _____ Chlorides _____ ppm System _____ LCM _____
 Blow Description _____

Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total _____ BHT _____ Gravity _____ API RW _____ @ _____ ° F Chlorides _____ ppm

(A) Initial Hydrostatic _____ Test _____ T-On Location 08100
 (B) First Initial Flow _____ Jars _____ T-Started _____
 (C) First Final Flow _____ Safety Joint _____ T-Open _____
 (D) Initial Shut-In _____ Circ Sub _____ T-Pulled _____
 (E) Second Initial Flow _____ Hourly Standby _____ T-Out _____
 (F) Second Final Flow _____ Mileage 120 RT Comments Loaded Tools at 08:00 a.m.
 (G) Final Shut-In _____ Sampler _____
 (H) Final Hydrostatic _____ Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Initial Open _____ Extra Packer _____ Extra Copies _____
 Initial Shut-In _____ Extra Recorder _____ Sub Total _____
 Final Flow _____ Day Standby _____ Total _____
 Final Shut-In _____ Accessibility _____ MP/DST Disc't _____
 Sub Total _____

Approved By _____ Our Representative Philp Goy

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