

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

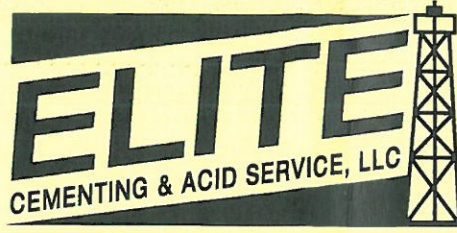
DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> 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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10857

810 E 7TH
PO Box 92
EUREKA, KS 67045
(620) 583-5561



Cement or Acid Field Report

Ticket No. **4445**

Foreman David Gardner

Camp Eureka

API # 15-191-22912

Date	Cust. ID #	Lease & Well Number	Section	Township	Range	County	State
4-17-19		Van Zant #1	23	34S	1W	Sumner	KS
Customer			Unit #	Driver	Unit #	Driver	
Energy Partners, LLC			105	Jason			
Mailing Address			112	200			
8918 West 21 st Street North #200-304							
City	State	Zip Code					
Wichita	KS	67205					

Job Type Longstring Hole Depth 4451' KB. Slurry Vol. 59 Bbl Tubing _____
 Casing Depth 4415.11' G.L. Hole Size 7 7/8" Slurry Wt. 13.6" Drill Pipe _____
 Casing Size & Wt. 5 1/2" Cement Left in Casing 4 Water Gal/SK 9.0 Other _____
 Displacement 110.5 Bbl Displacement PSI 1750 Bump Plug to 1750 BPM 5

Remarks: Safety Meeting. Rig up to 5 1/2" casing. Break circulation w/ 20 Bbl fresh water. Mixed 185 sacks Thick Set Cement w/ 5" KelSeal /SK, 1" Phone Seal /SK @ 13.6"/gal, yield 1.80 = 59 Bbl Slurry. Wash out pump & lines. Shut down. Released 5 1/2" Latch Down Plug. Displaces plug to seat w/ 110.5 Bbl fresh water. (KCL is 1st 40 Bbl displacement water). Final pumping pressure of 1250 PSI. Pump plug to 1750 PSI. Release pressure. Float & Plug hold grid. Good circulation @ all times while cementing. Job complete. Rig dump.

Note: New & Used Casing. Plug Blocks w/ 15 sacks & Roth hole w/ 20 sacks
 Basket on #120 Centralizers on #120, 122, 124, 126, 128, 132, 134, 136.

Code	Qty or Units	Description of Product or Services	Unit Price	Total
C102	1	Pump Charge	1100.00	1100.00
C107	100	Mileage	4.20	420.00
C201	185 sacks	Thick Set Cement	20.50	3792.50
C207	925'	KelSeal @ 5"/SK	.47	434.75
C208	185'	Phone Seal @ 1"/SK	1.30	240.50
C661	1	5 1/2" NFU Float Shoe	309.00	309.00
C609	1	5 1/2" Cement Basket	236.00	236.00
C504	8	5 1/2" Centralizers	50.00	400.00
C481	1	5 1/2" Latch Down Plug	242.00	242.00
C222	10 gals	KCL - In 1 st 40 Bbl Displacement water.	30.00	300.00
C108B	10.175 Tons	Ton Mileage - Bulk Truck	140	1424.50
		Thank You	Sub Total	8899.25
			Less 5%	467.29
		75%	Sales Tax	446.61
			Total	8878.57

Authorization _____ Title _____

I agree to the payment terms and conditions of services provided on the back of this job ticket. Any amendments to payment terms must be in writing on the front of this job ticket or in the Customer's records at ELITE's office.



DRILL STEM TEST REPORT

Prepared For: **Energy Partners LLC**

8918 W 21st St N #200-304
Wichita, KS 67205

ATTN: Brad Rine

VanZant #1

23-34S-01W Sumner,KS

Start Date: 2019.04.10 @ 00:18:00

End Date: 2019.04.10 @ 10:21:47

Job Ticket #: 64961 DST #: 1

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

Printed: 2019.04.15 @ 15:25:30



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Energy Partners LLC
8918 W 21st St N #200-304
Wichita, KS 67205
ATTN: Brad Rine

23-34S-01W Sumner,KS

VanZant #1

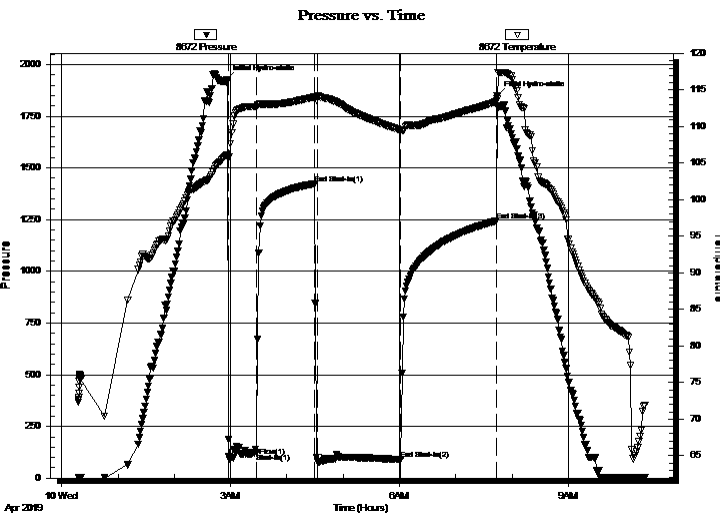
Job Ticket: 64961 **DST#: 1**
Test Start: 2019.04.10 @ 00:18:00

GENERAL INFORMATION:

Formation: **Mississippi**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 02:58:02
Time Test Ended: 10:21:47
Test Type: Conventional Bottom Hole (Initial)
Tester: Leal Cason
Unit No: 74
Interval: **3865.00 ft (KB) To 3907.00 ft (KB) (TVD)**
Reference Elevations: 1161.00 ft (KB)
Total Depth: 3907.00 ft (KB) (TVD) 1152.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 9.00 ft

Serial #: 8672 **Inside**
Press@RunDepth: 121.79 psig @ 3866.00 ft (KB) Capacity: psig
Start Date: 2019.04.10 End Date: 2019.04.10 Last Calib.: 2019.04.10
Start Time: 00:18:01 End Time: 10:21:47 Time On Btm: 2019.04.10 @ 02:55:17
Time Off Btm: 2019.04.10 @ 07:43:47

TEST COMMENT: IF: Strong Blow , BOB in 45 seconds, GTS in 10 minutes, Gauged Gas
IS: No Blow Back
FF: Strong Blow , BOB & GTS Immediate, Gauged Gas
FS: No Blow Back



PRESSURE SUMMARY

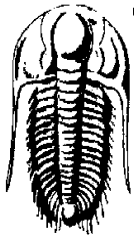
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1924.83	106.03	Initial Hydro-static
3	104.30	105.83	Open To Flow (1)
33	121.79	112.77	Shut-In(1)
95	1423.51	114.02	End Shut-In(1)
97	79.74	114.00	Open To Flow (2)
187	91.43	109.50	End Shut-In(2)
289	1243.89	113.48	End Shut-In(3)
289	1847.15	113.73	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	GTS	0.00
63.00	SGCM 2%G 98%M	0.31

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	31.00	72.00
Last Gas Rate	0.38	44.00	161.18
Max. Gas Rate	0.38	52.00	190.49



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Energy Partners LLC
 8918 W 21st St N #200-304
 Wichita, KS 67205
 ATTN: Brad Rine

23-34S-01W Sumner,KS

VanZant #1

Job Ticket: 64961

DST#: 1

Test Start: 2019.04.10 @ 00:18:00

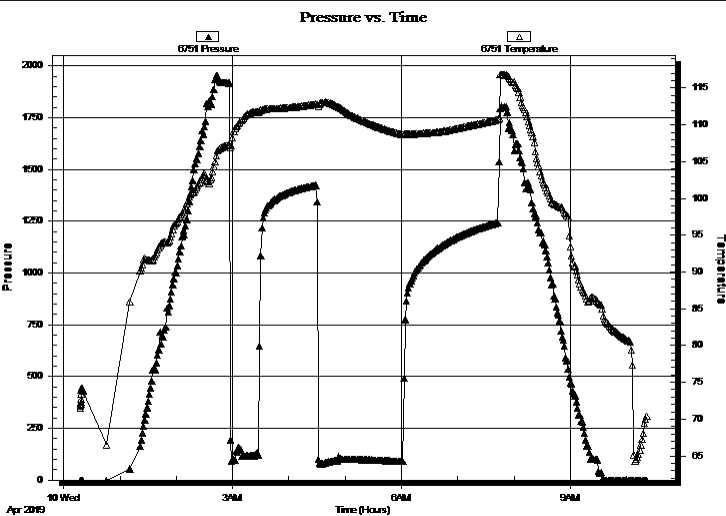
GENERAL INFORMATION:

Formation: **Mississippi**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 02:58:02
 Time Test Ended: 10:21:47
 Interval: **3865.00 ft (KB) To 3907.00 ft (KB) (TVD)**
 Total Depth: 3907.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Leal Cason
 Unit No: 74
 Reference Elevations: 1161.00 ft (KB)
 1152.00 ft (CF)
 KB to GR/CF: 9.00 ft

Serial #: 6751 Outside

Press@RunDepth: psig @ 3866.00 ft (KB) Capacity: psig
 Start Date: 2019.04.10 End Date: 2019.04.10 Last Calib.: 2019.04.10
 Start Time: 00:18:01 End Time: 10:21:47 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF: Strong Blow, BOB in 45 seconds, GTS in 10 minutes, Gauged Gas
 IS: No Blow Back
 FF: Strong Blow, BOB & GTS Immediate, Gauged Gas
 FS: No Blow Back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
0.00	GTS	0.00
63.00	SGCM 2%G 98%M	0.31

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	31.00	72.00
Last Gas Rate	0.38	44.00	161.18
Max. Gas Rate	0.38	52.00	190.49



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Energy Partners LLC
8918 W 21st St N #200-304
Wichita, KS 67205
ATTN: Brad Rine

23-34S-01W Sumner,KS
VanZant #1
Job Ticket: 64961 **DST#: 1**
Test Start: 2019.04.10 @ 00:18:00

Tool Information

Drill Pipe:	Length: 3685.00 ft	Diameter: 3.80 inches	Volume: 51.69 bbl	Tool Weight: 2100.00 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: 183.00 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 52.59 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	29.00 ft			String Weight: Initial 74000.00 lb
Depth to Top Packer:	3865.00 ft			Final lb
Depth to Bottom Packer:	ft			
Interval between Packers:	42.00 ft			
Tool Length:	68.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3844.00	
Hydraulic tool	5.00			3849.00	
Jars	5.00			3854.00	
Safety Joint	2.00			3856.00	
Packer	5.00			3861.00	26.00 Bottom Of Top Packer
Packer	4.00			3865.00	
Stubb	1.00			3866.00	
Recorder	0.00	8672	Inside	3866.00	
Recorder	0.00	6751	Outside	3866.00	
Perforations	5.00			3871.00	
Change Over Sub	1.00			3872.00	
Drill Pipe	31.00			3903.00	
Change Over Sub	1.00			3904.00	
Bullnose	3.00			3907.00	42.00 Bottom Packers & Anchor

Total Tool Length: 68.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Energy Partners LLC

23-34S-01W Sumner,KS

8918 W 21st St N #200-304
Wichita, KS 67205

VanZant #1

Job Ticket: 64961

DST#: 1

ATTN: Brad Rine

Test Start: 2019.04.10 @ 00:18:00

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: 40.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 12.95 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2400.00 ppm

Filter Cake: 0.02 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	GTS	0.000
63.00	SGCM 2%G 98%M	0.310

Total Length: 63.00 ft Total Volume: 0.310 bbl

Num Fluid Samples: 0

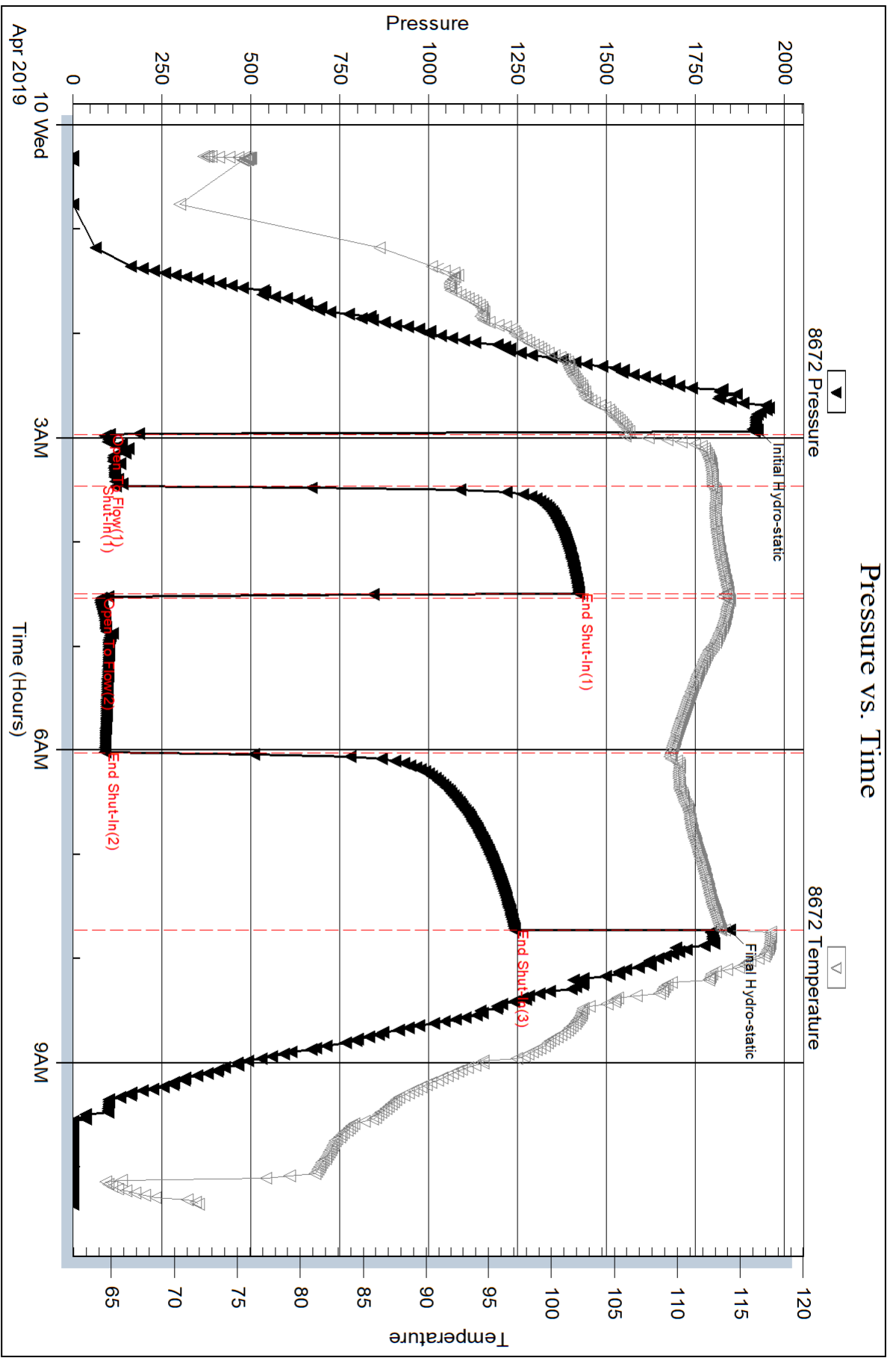
Num Gas Bombs: 0

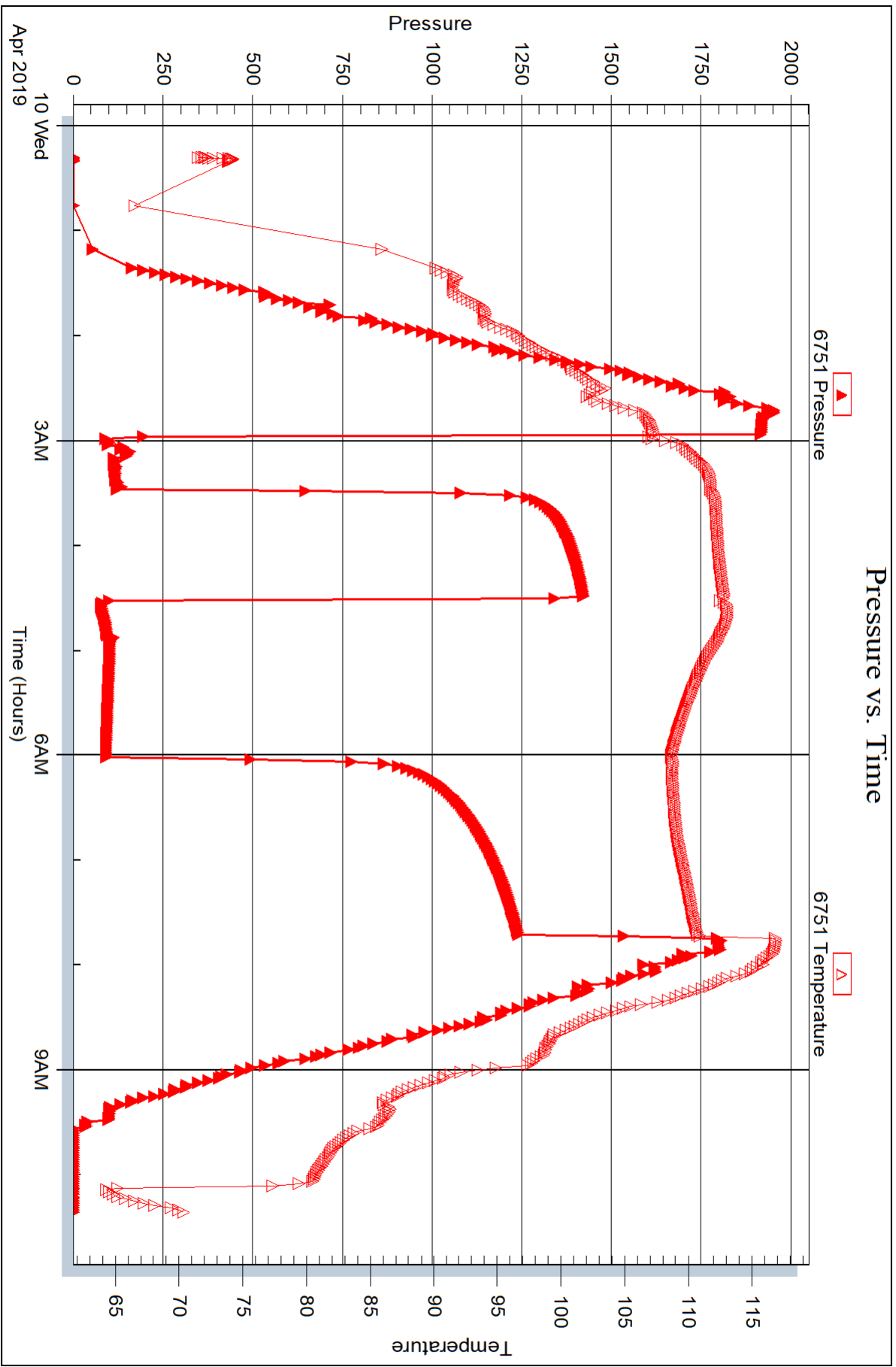
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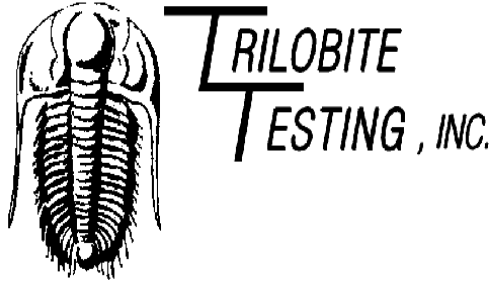
Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Energy Partners LLC**

8918 W 21st St N #200-304
Wichita, KS 67205

ATTN: Brad Rine

VanZant #1

23-34S-01W Sumner,KS

Start Date: 2019.04.10 @ 23:42:00

End Date: 2019.04.11 @ 08:26:02

Job Ticket #: 64962 DST #: 2

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

Printed: 2019.04.15 @ 15:22:38



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Energy Partners LLC
 8918 W 21st St N #200-304
 Wichita, KS 67205
 ATTN: Brad Rine

23-34S-01W Sumner,KS
VanZant #1
 Job Ticket: 64962 **DST#: 2**
 Test Start: 2019.04.10 @ 23:42:00

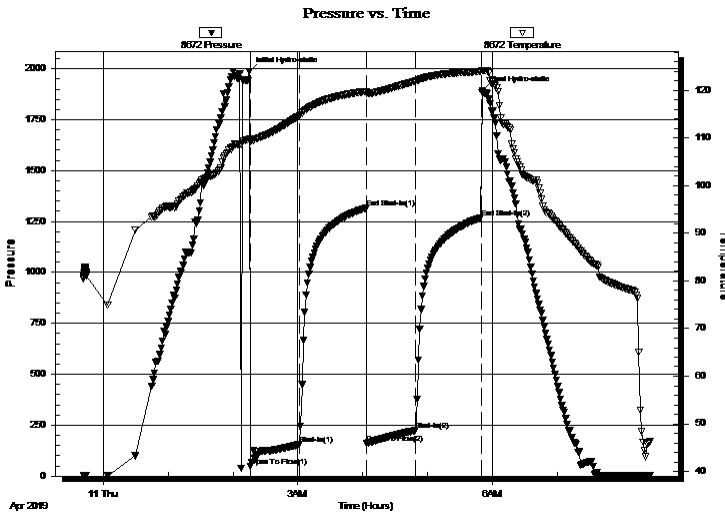
GENERAL INFORMATION:

Formation: **Mississippi**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 02:16:02 Tester: Leal Cason
 Time Test Ended: 08:26:02 Unit No: 74
 Interval: **3928.00 ft (KB) To 3970.00 ft (KB) (TVD)** Reference Elevations: 1161.00 ft (KB)
 Total Depth: 3970.00 ft (KB) (TVD) 1152.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 9.00 ft

Serial #: 8672 Inside
 Press@RunDepth: 224.56 psig @ 3929.00 ft (KB) Capacity: psig
 Start Date: 2019.04.10 End Date: 2019.04.11 Last Calib.: 2019.04.11
 Start Time: 23:42:01 End Time: 08:26:02 Time On Btm: 2019.04.11 @ 02:15:02
 Time Off Btm: 2019.04.11 @ 05:50:32

TEST COMMENT: IF: Fair Blow , BOB in 31 minutes, Built to 16"
 IS: No Blow Back
 FF: Fair Blow , BOB in 18 minutes, Built to 28"
 FS: No Blow Back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1985.20	109.75	Initial Hydro-static
1	48.83	109.28	Open To Flow (1)
47	156.28	114.75	Shut-In(1)
108	1315.79	119.76	End Shut-In(1)
109	161.68	119.43	Open To Flow (2)
154	224.56	121.93	Shut-In(2)
215	1269.30	123.97	End Shut-In(2)
216	1890.90	124.10	Final Hydro-static

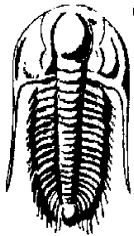
Recovery

Length (ft)	Description	Volume (bbl)
0.00	62 GIP	0.00
183.00	Water	0.90
127.00	MCW 24%M 76%W	1.78
186.00	SOCM 2%O 98%M	2.61

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Energy Partners LLC
 8918 W 21st St N #200-304
 Wichita, KS 67205
 ATTN: Brad Rine

23-34S-01W Sumner, KS
VanZant #1
 Job Ticket: 64962 **DST#: 2**
 Test Start: 2019.04.10 @ 23:42:00

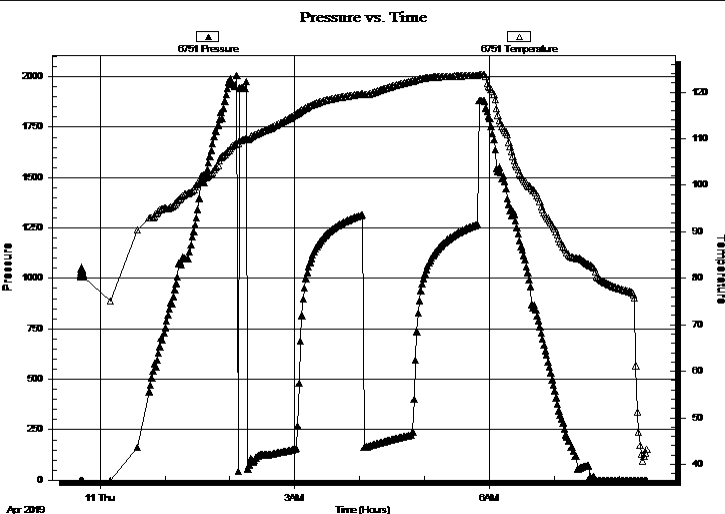
GENERAL INFORMATION:

Formation: **Mississippi**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 02:16:02
 Time Test Ended: 08:26:02
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Leal Cason
 Unit No: 74
Interval: 3928.00 ft (KB) To 3970.00 ft (KB) (TVD)
 Total Depth: 3970.00 ft (KB) (TVD)
 Reference Elevations: 1161.00 ft (KB)
 1152.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good
 KB to GR/CF: 9.00 ft

Serial #: 6751 Outside

Press@RunDepth: psig @ 3929.00 ft (KB) Capacity: psig
 Start Date: 2019.04.10 End Date: 2019.04.11 Last Calib.: 2019.04.11
 Start Time: 23:42:01 End Time: 08:26:02 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF: Fair Blow , BOB in 31 minutes, Built to 16"
 IS: No Blow Back
 FF: Fair Blow , BOB in 18 minutes, Built to 28"
 FS: No Blow Back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
0.00	62 GIP	0.00
183.00	Water	0.90
127.00	MCW 24%M 76%W	1.78
186.00	SOCM 2%O 98%M	2.61

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Energy Partners LLC
8918 W 21st St N #200-304
Wichita, KS 67205
ATTN: Brad Rine

23-34S-01W Sumner,KS
VanZant #1
Job Ticket: 64962 **DST#: 2**
Test Start: 2019.04.10 @ 23:42:00

Tool Information

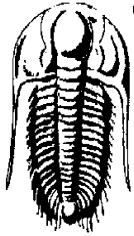
Drill Pipe:	Length: 3749.00 ft	Diameter: 3.80 inches	Volume: 52.59 bbl	Tool Weight: 2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 183.00 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 53.49 bbl</u>	Tool Chased 3.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	3928.00 ft			Final 74000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	42.00 ft			
Tool Length:	68.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3907.00	
Hydraulic tool	5.00			3912.00	
Jars	5.00			3917.00	
Safety Joint	2.00			3919.00	
Packer	5.00			3924.00	26.00 Bottom Of Top Packer
Packer	4.00			3928.00	
Stubb	1.00			3929.00	
Recorder	0.00	8672	Inside	3929.00	
Recorder	0.00	6751	Outside	3929.00	
Perforations	5.00			3934.00	
Change Over Sub	1.00			3935.00	
Drill Pipe	31.00			3966.00	
Change Over Sub	1.00			3967.00	
Bullnose	3.00			3970.00	42.00 Bottom Packers & Anchor

Total Tool Length: 68.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Energy Partners LLC

23-34S-01W Sumner,KS

8918 W 21st St N #200-304
Wichita, KS 67205

VanZant #1

Job Ticket: 64962

DST#: 2

ATTN: Brad Rine

Test Start: 2019.04.10 @ 23:42:00

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:

78000 ppm

Viscosity: 40.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 11.97 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2600.00 ppm

Filter Cake: 0.02 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
0.00	62 GIP	0.000
183.00	Water	0.900
127.00	MCW 24%M 76%W	1.781
186.00	SOCM 2%O 98%M	2.609

Total Length: 496.00 ft

Total Volume: 5.290 bbl

Num Fluid Samples: 0

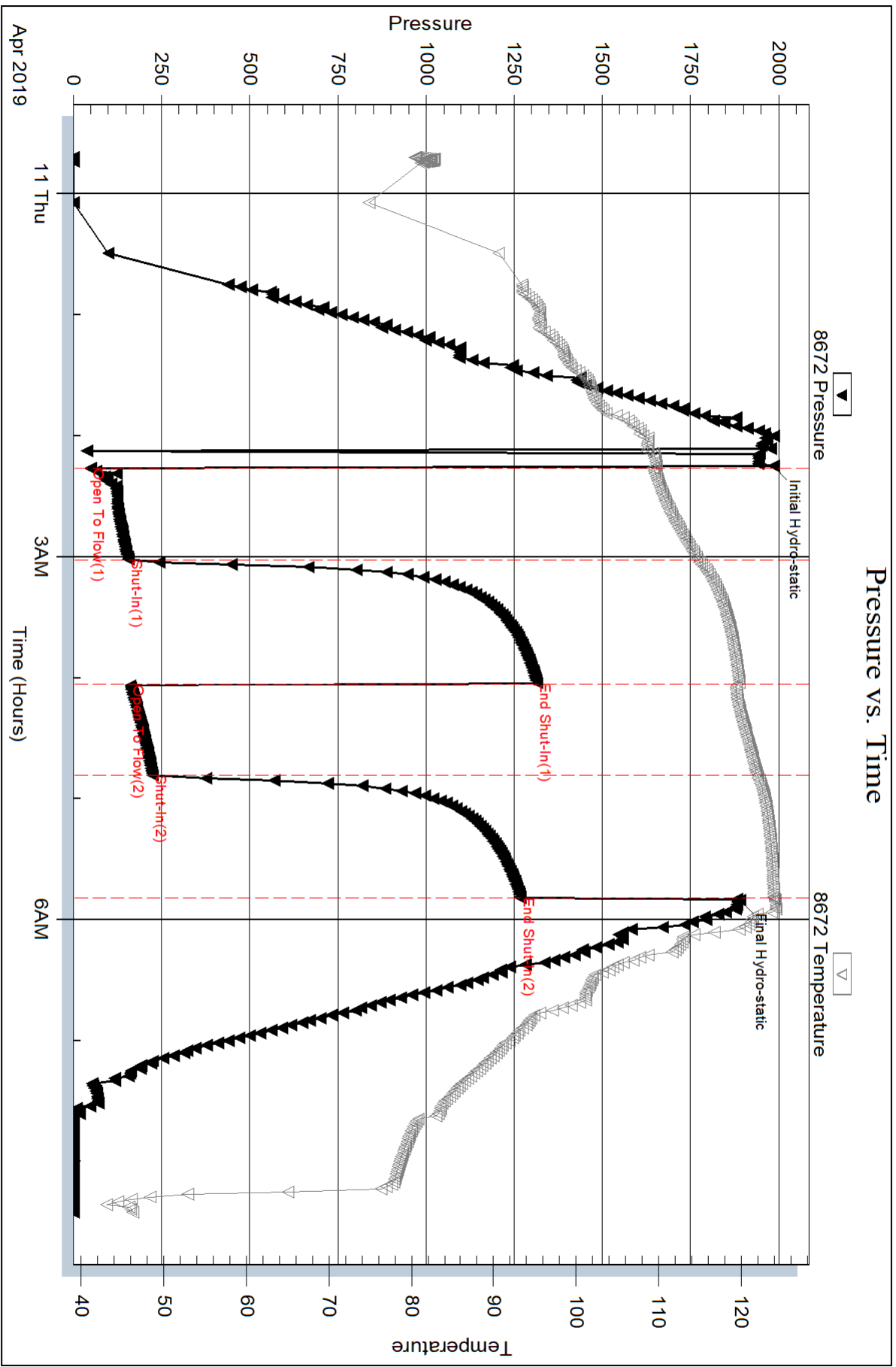
Num Gas Bombs: 0

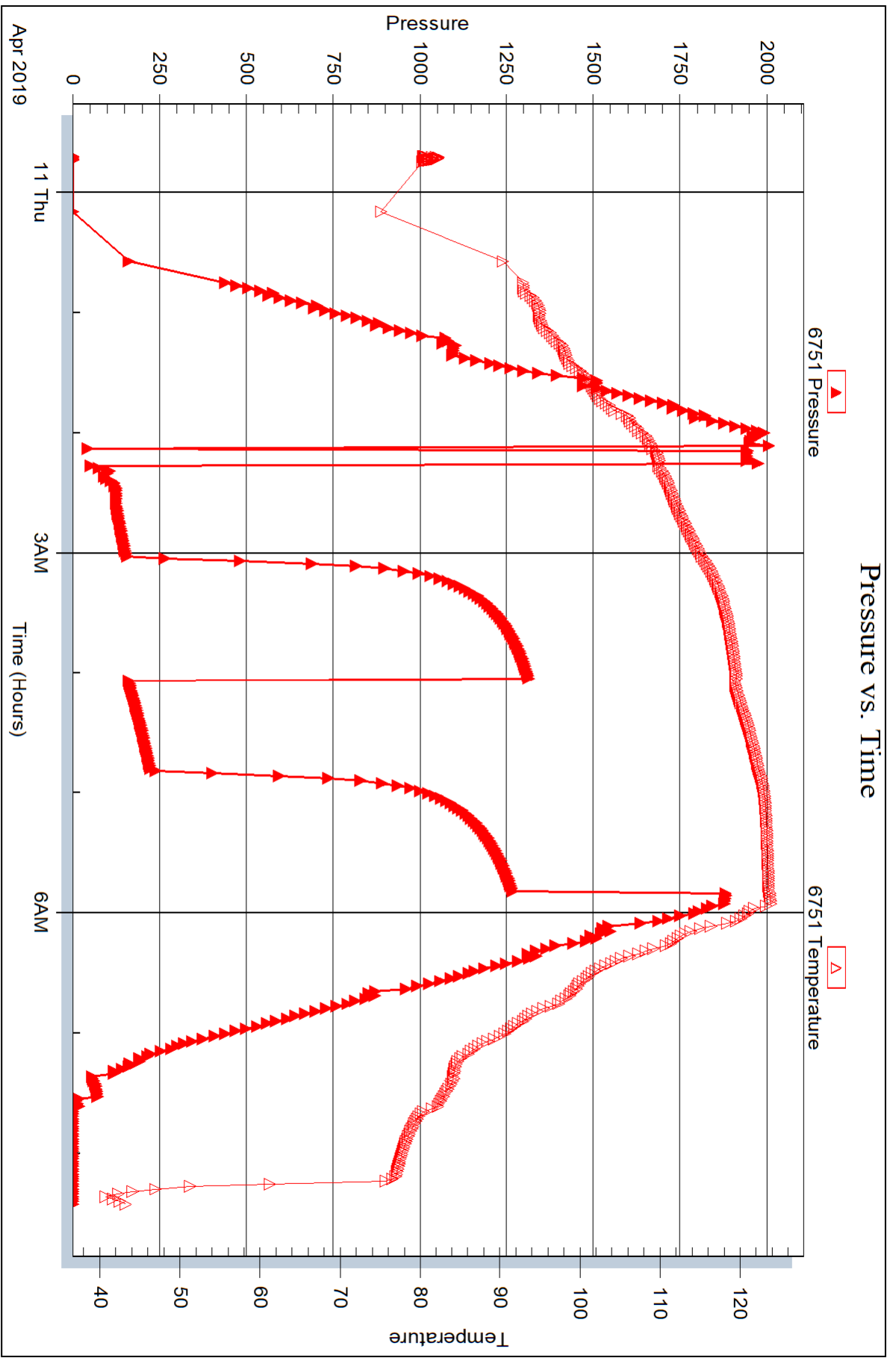
Serial #:

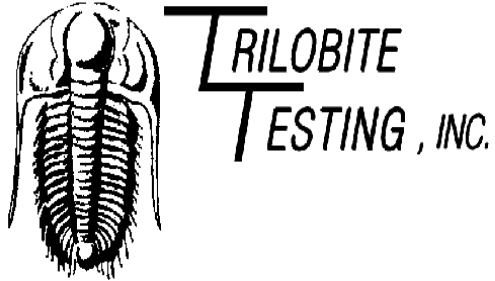
Laboratory Name:

Laboratory Location:

Recovery Comments: RW w as .15 @ 47 degrees







DRILL STEM TEST REPORT

Prepared For: **Energy Partners LLC**

8918 W 21st St N #200-304
Wichita, KS 67205

ATTN: Brad Rine

VanZant #1

23-34S-01W Sumner,KS

Start Date: 2019.04.12 @ 19:55:00

End Date: 2019.04.13 @ 03:33:02

Job Ticket #: 64963 DST #: 3

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

Printed: 2019.04.15 @ 15:22:08



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Energy Partners LLC
8918 W 21st St N #200-304
Wichita, KS 67205
ATTN: Brad Rine

23-34S-01W Sumner,KS

VanZant #1

Job Ticket: 64963

DST#: 3

Test Start: 2019.04.12 @ 19:55:00

GENERAL INFORMATION:

Formation: **Simpson**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 22:22:02
 Tester: Leal Cason
 Time Test Ended: 03:33:02
 Unit No: 74
 Interval: **4238.00 ft (KB) To 4282.00 ft (KB) (TVD)**
 Reference Elevations: 1161.00 ft (KB)
 Total Depth: 4282.00 ft (KB) (TVD)
 1152.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Good
 KB to GR/CF: 9.00 ft

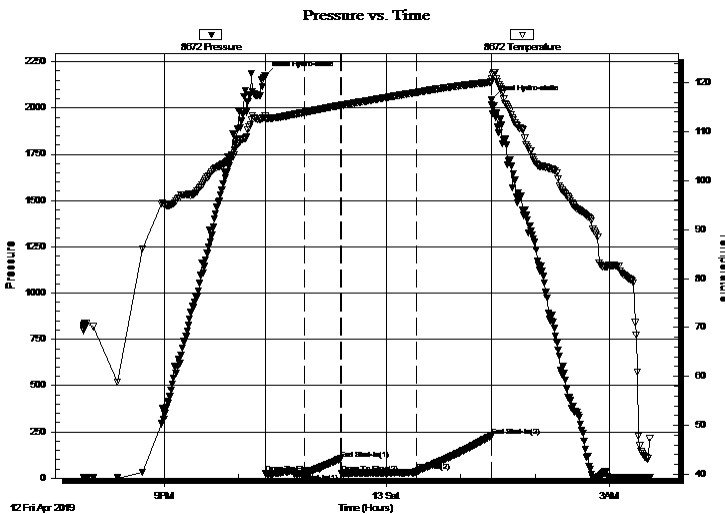
Serial #: 8672

Inside

Press@RunDepth: 35.91 psig @ 4239.00 ft (KB) Capacity: psig
 Start Date: 2019.04.12 End Date: 2019.04.13 Last Calib.: 2019.04.13
 Start Time: 19:55:01 End Time: 03:33:02 Time On Btm: 2019.04.12 @ 22:21:47
 Time Off Btm: 2019.04.13 @ 01:25:02

TEST COMMENT: IF: Weak Blow , Built to 1 1/2"
 IS: No Blow Back
 FF: Weak Blow , Built to 5 1/2"
 FS: No Blow Back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2172.72	113.16	Initial Hydro-static
1	23.90	112.57	Open To Flow (1)
32	24.86	113.93	Shut-In(1)
61	103.87	115.37	End Shut-In(1)
62	23.72	115.39	Open To Flow (2)
123	35.91	118.03	Shut-In(2)
183	229.06	120.14	End Shut-In(2)
184	2043.27	120.92	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud	0.05

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Energy Partners LLC
8918 W 21st St N #200-304
Wichita, KS 67205
ATTN: Brad Rine

23-34S-01W Sumner,KS

VanZant #1

Job Ticket: 64963

DST#: 3

Test Start: 2019.04.12 @ 19:55:00

GENERAL INFORMATION:

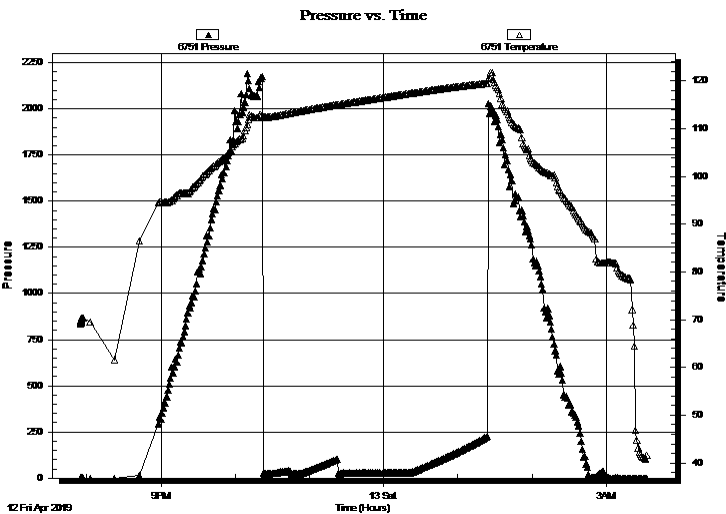
Formation: **Simpson**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 22:22:02
 Tester: Leal Cason
 Time Test Ended: 03:33:02
 Unit No: 74
 Interval: **4238.00 ft (KB) To 4282.00 ft (KB) (TVD)**
 Reference Elevations: 1161.00 ft (KB)
 Total Depth: 4282.00 ft (KB) (TVD)
 1152.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Good
 KB to GR/CF: 9.00 ft

Serial #: 6751

Outside

Press@RunDepth: psig @ 4239.00 ft (KB) Capacity: psig
 Start Date: 2019.04.12 End Date: 2019.04.13 Last Calib.: 2019.04.13
 Start Time: 19:55:01 End Time: 03:33:02 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF: Weak Blow , Built to 1 1/2"
 IS: No Blow Back
 FF: Weak Blow , Built to 5 1/2"
 FS: No Blow Back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud	0.05

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Energy Partners LLC
8918 W 21st St N #200-304
Wichita, KS 67205
ATTN: Brad Rine

23-34S-01W Sumner,KS
VanZant #1
Job Ticket: 64963 **DST#: 3**
Test Start: 2019.04.12 @ 19:55:00

Tool Information

Drill Pipe:	Length: 4033.00 ft	Diameter: 3.80 inches	Volume: 56.57 bbl	Tool Weight: 2100.00 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: 183.00 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 57.47 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	4.00 ft			String Weight: Initial 76000.00 lb
Depth to Top Packer:	4238.00 ft			Final 76000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	44.00 ft			
Tool Length:	70.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Shale Packer on top

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

Shut In Tool	5.00			4217.00	
Hydraulic tool	5.00			4222.00	
Jars	5.00			4227.00	
Safety Joint	2.00			4229.00	
Packer - Shale	5.00			4234.00	
Packer	4.00			4238.00	26.00 Bottom Of Top Packer
Stubb	1.00			4239.00	
Recorder	0.00	8672	Inside	4239.00	
Recorder	0.00	6751	Outside	4239.00	
Perforations	7.00			4246.00	
Change Over Sub	1.00			4247.00	
Drill Pipe	31.00			4278.00	
Change Over Sub	1.00			4279.00	
Bullnose	3.00			4282.00	44.00 Anchor Tool

Total Tool Length: 70.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Energy Partners LLC

23-34S-01W Sumner,KS

8918 W 21st St N #200-304
Wichita, KS 67205

VanZant #1

Job Ticket: 64963

DST#: 3

ATTN: Brad Rine

Test Start: 2019.04.12 @ 19:55:00

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: 41.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 10.97 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2500.00 ppm

Filter Cake: 0.02 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	Mud	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl

Num Fluid Samples: 0

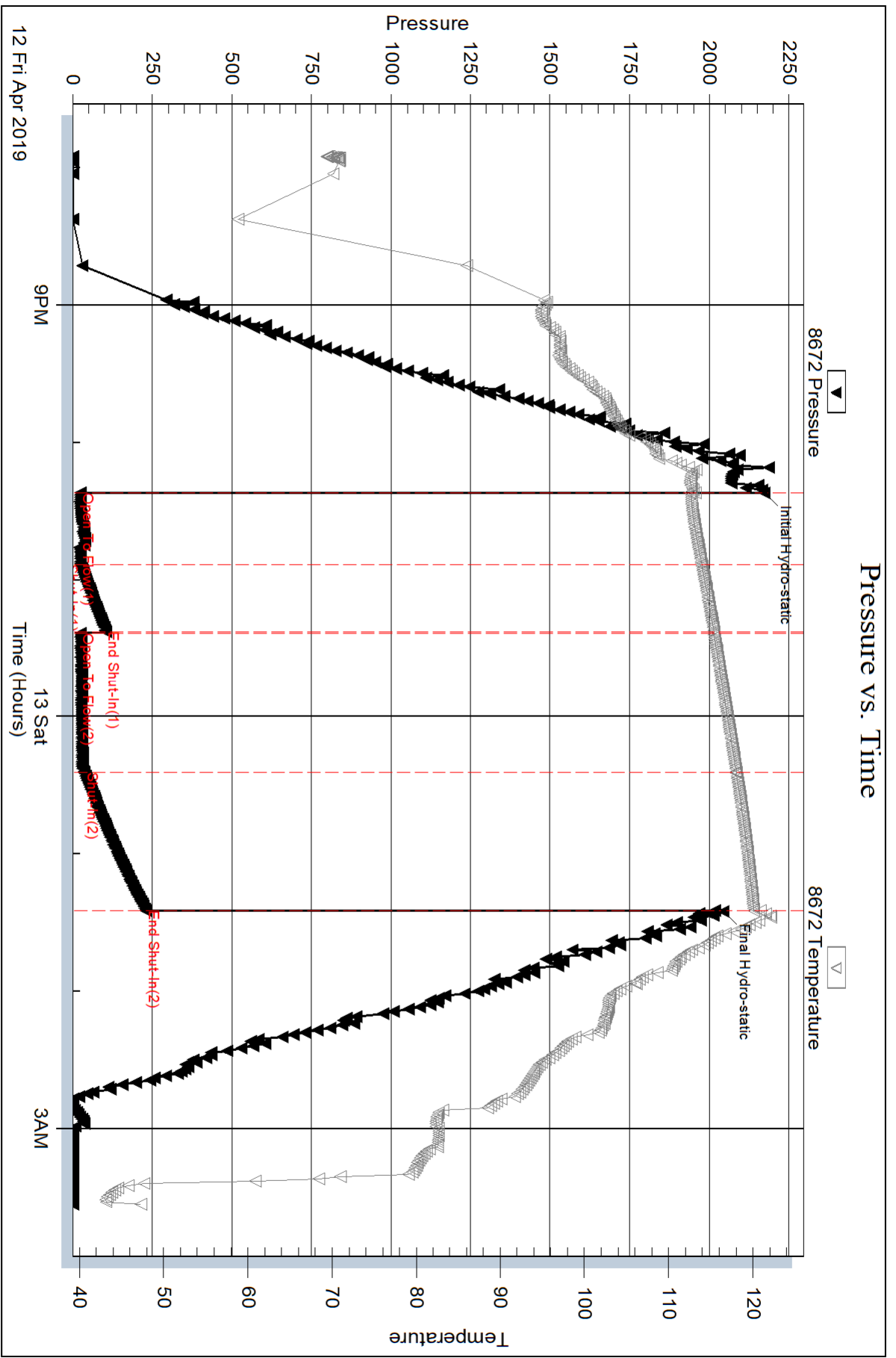
Num Gas Bombs: 0

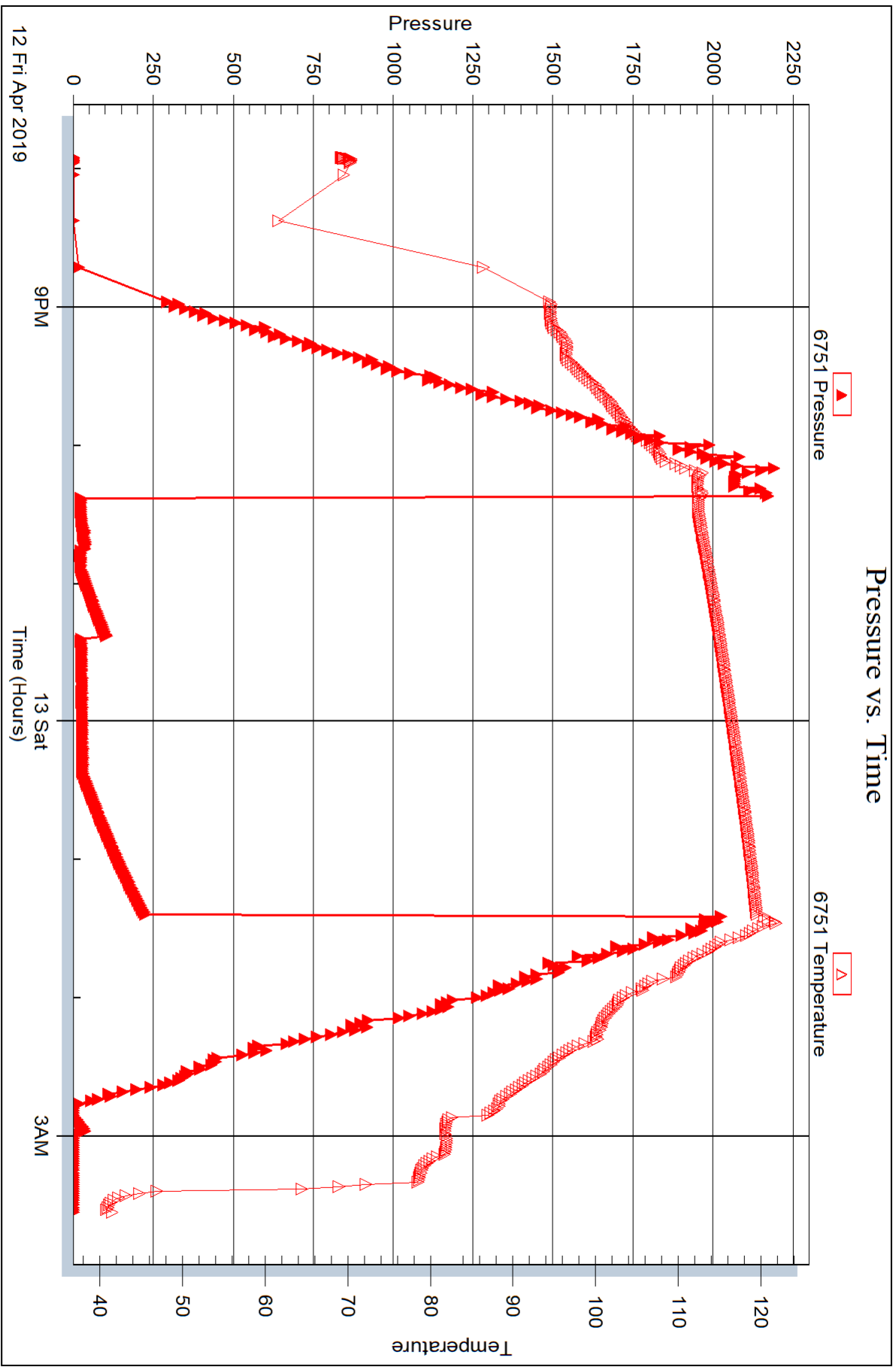
Serial #:

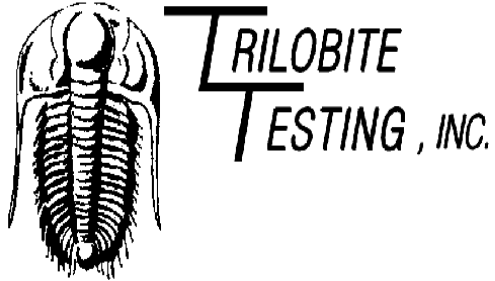
Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Energy Partners LLC**

8918 W 21st St N #200-304
Wichita, KS 67205

ATTN: Brad Rine

VanZant #1

23-34S-01W Sumner,KS

Start Date: 2019.04.13 @ 13:25:00

End Date: 2019.04.13 @ 21:27:02

Job Ticket #: 64964 DST #: 4

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

Printed: 2019.04.15 @ 15:16:12



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Energy Partners LLC
8918 W 21st St N #200-304
Wichita, KS 67205
ATTN: Brad Rine

23-34S-01W Sumner,KS

VanZant #1

Job Ticket: 64964

DST#: 4

Test Start: 2019.04.13 @ 13:25:00

GENERAL INFORMATION:

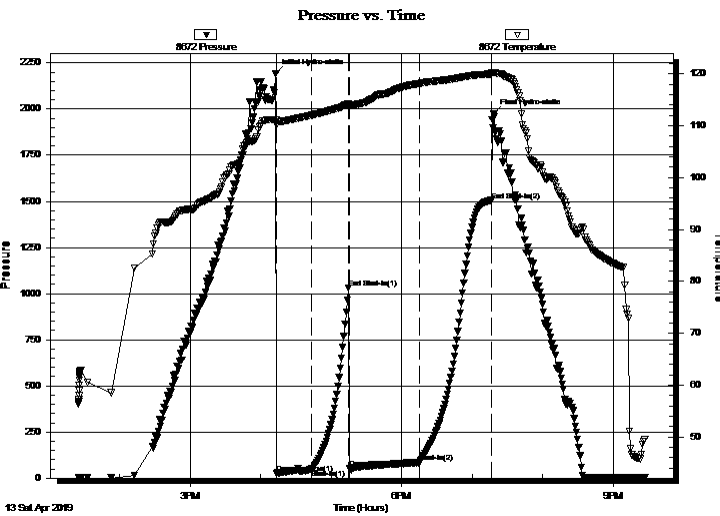
Formation: **Simpson**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 16:13:47
 Time Test Ended: 21:27:02
 Interval: **4238.00 ft (KB) To 4289.00 ft (KB) (TVD)**
 Total Depth: 4289.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Leal Cason
 Unit No: 74
 Reference Elevations: 1161.00 ft (KB)
 1152.00 ft (CF)
 KB to GR/CF: 9.00 ft

Serial #: 8672

Inside

Press@RunDepth: 86.71 psig @ 4239.00 ft (KB) Capacity: psig
 Start Date: 2019.04.13 End Date: 2019.04.13 Last Calib.: 2019.04.13
 Start Time: 13:25:01 End Time: 21:27:02 Time On Btm: 2019.04.13 @ 16:12:47
 Time Off Btm: 2019.04.13 @ 19:18:17

TEST COMMENT: IF: Weak Blow , Built to 6"
 IS: No Blow Back
 FF: Fair Blow , BOB in 8 minutes, Built to 45"
 FS: No Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2193.49	111.18	Initial Hydro-static
1	26.65	110.17	Open To Flow (1)
31	46.80	112.02	Shut-In(1)
62	1029.19	114.17	End Shut-In(1)
63	54.45	113.96	Open To Flow (2)
123	86.71	118.11	Shut-In(2)
184	1505.66	120.00	End Shut-In(2)
186	1975.31	120.27	Final Hydro-static

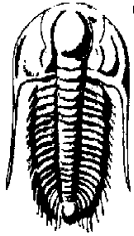
Recovery

Length (ft)	Description	Volume (bbl)
0.00	868 GIP	0.00
126.00	SGOCM 2%G 2%O 96%M	0.62

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Energy Partners LLC
 8918 W 21st St N #200-304
 Wichita, KS 67205
 ATTN: Brad Rine

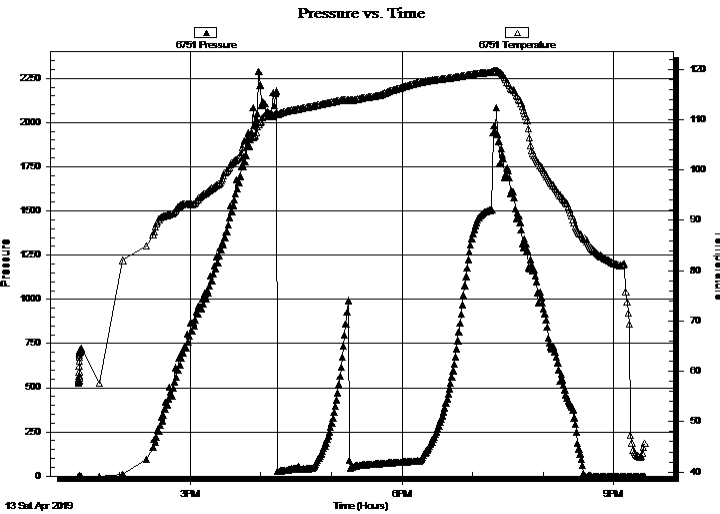
23-34S-01W Sumner,KS
VanZant #1
 Job Ticket: 64964 **DST#: 4**
 Test Start: 2019.04.13 @ 13:25:00

GENERAL INFORMATION:

Formation: **Simpson**
 Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 16:13:47 Tester: Leal Cason
 Time Test Ended: 21:27:02 Unit No: 74
 Interval: **4238.00 ft (KB) To 4289.00 ft (KB) (TVD)** Reference Elevations: 1161.00 ft (KB)
 Total Depth: 4289.00 ft (KB) (TVD) 1152.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 9.00 ft

Serial #: 6751 Outside
 Press@RunDepth: psig @ 4239.00 ft (KB) Capacity: psig
 Start Date: 2019.04.13 End Date: 2019.04.13 Last Calib.: 2019.04.13
 Start Time: 13:25:01 End Time: 21:27:02 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF: Weak Blow , Built to 6"
 IS: No Blow Back
 FF: Fair Blow , BOB in 8 minutes, Built to 45"
 FS: No Blow Back



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

Recovery		
Length (ft)	Description	Volume (bbl)
0.00	868 GIP	0.00
126.00	SGOCM 2%G 2%O 96%M	0.62

* Recovery from multiple tests

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Energy Partners LLC
8918 W 21st St N #200-304
Wichita, KS 67205
ATTN: Brad Rine

23-34S-01W Sumner,KS
VanZant #1
Job Ticket: 64964 **DST#: 4**
Test Start: 2019.04.13 @ 13:25:00

Tool Information

Drill Pipe:	Length: 4034.00 ft	Diameter: 3.80 inches	Volume: 56.59 bbl	Tool Weight: 2100.00 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: 183.00 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 57.49 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 75000.00 lb
Depth to Top Packer:	4238.00 ft			Final 76000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	51.00 ft			
Tool Length:	77.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Shale Packer on Top

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

Shut In Tool	5.00			4217.00	
Hydraulic tool	5.00			4222.00	
Jars	5.00			4227.00	
Safety Joint	2.00			4229.00	
Packer - Shale	5.00			4234.00	
Packer	4.00			4238.00	26.00 Bottom Of Top Packer
Stubb	1.00			4239.00	
Recorder	0.00	8672	Inside	4239.00	
Recorder	0.00	6751	Outside	4239.00	
Perforations	5.00			4244.00	
Change Over Sub	1.00			4245.00	
Drill Pipe	31.00			4276.00	
Change Over Sub	1.00			4277.00	
perforations	9.00			4286.00	
Bullnose	3.00			4289.00	51.00 Anchor Tool

Total Tool Length: 77.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Energy Partners LLC

23-34S-01W Sumner,KS

8918 W 21st St N #200-304
Wichita, KS 67205

VanZant #1

Job Ticket: 64964

DST#: 4

ATTN: Brad Rine

Test Start: 2019.04.13 @ 13:25:00

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: 46.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 14.97 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2400.00 ppm

Filter Cake: 0.02 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
0.00	868 GIP	0.000
126.00	SGOCM 2%G 2%O 96%M	0.620

Total Length: 126.00 ft Total Volume: 0.620 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

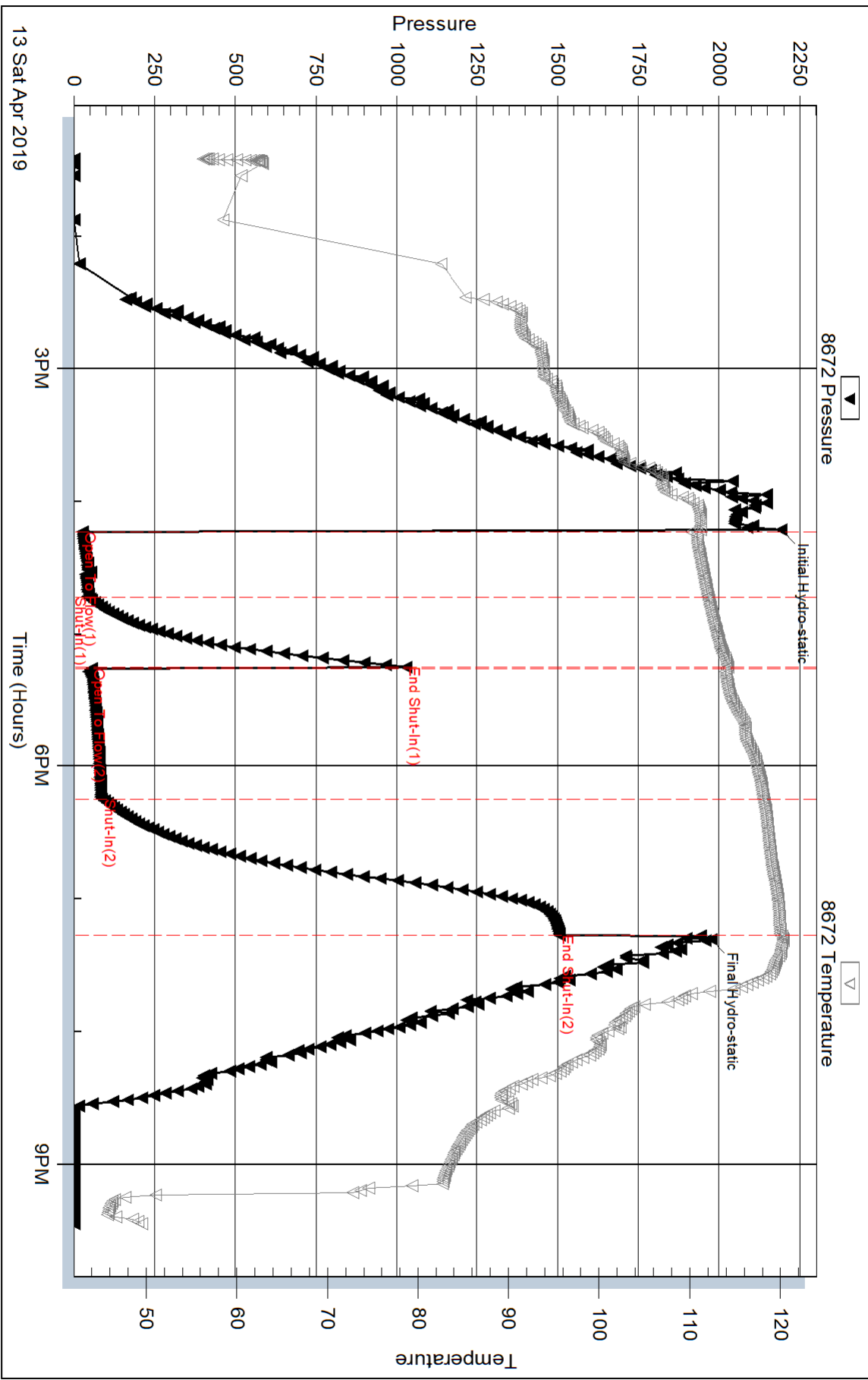
Serial #:

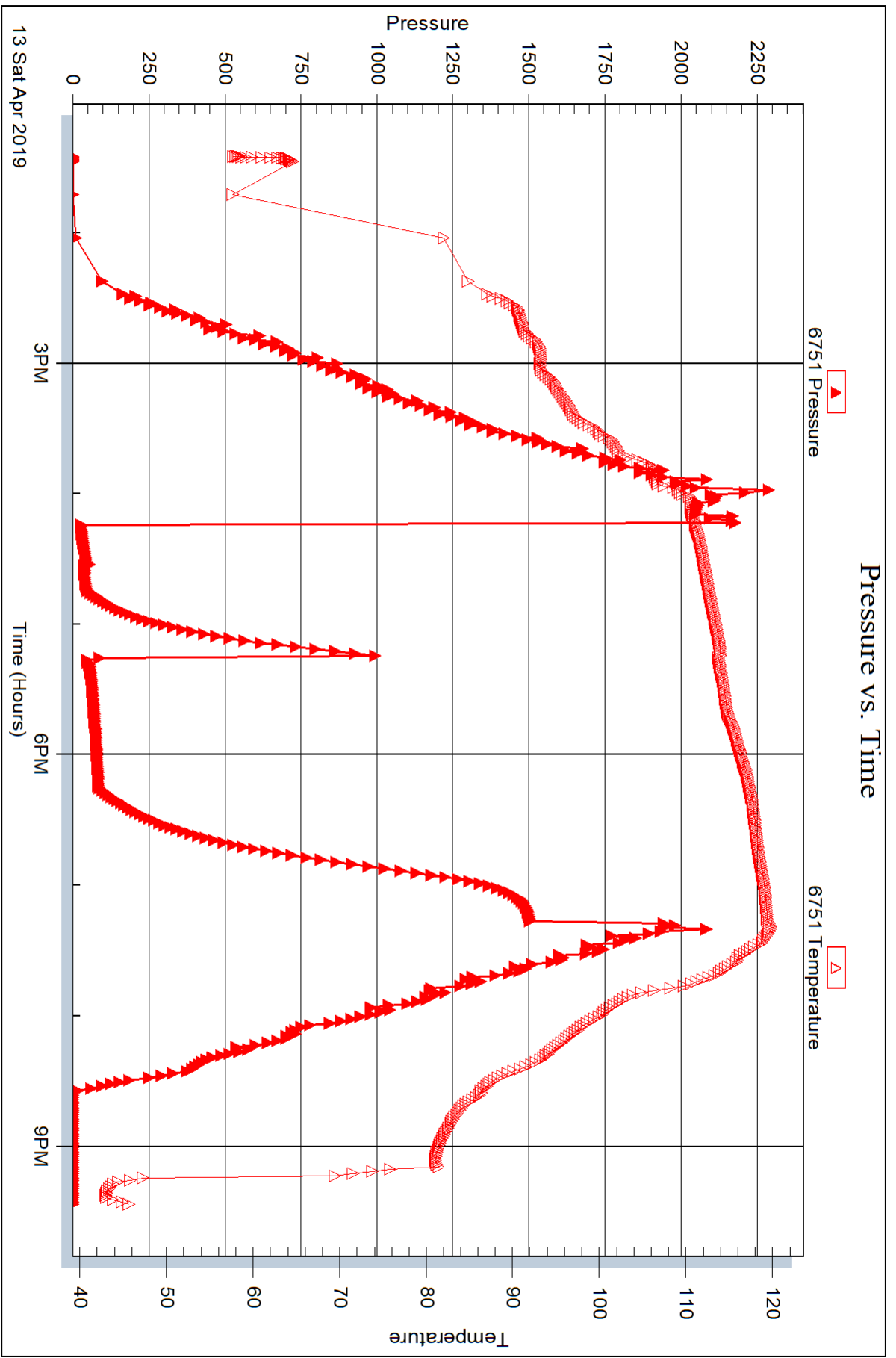
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **Energy Partners LLC**

8918 W 21st St N #200-304
Wichita, KS 67205

ATTN: Brad Rine

VanZant #1

23-34S-01W Sumner,KS

Start Date: 2019.04.14 @ 05:15:00

End Date: 2019.04.14 @ 14:36:47

Job Ticket #: 64965 DST #: 5

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

Printed: 2019.04.15 @ 15:13:04



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Energy Partners LLC
8918 W 21st St N #200-304
Wichita, KS 67205
ATTN: Brad Rine

23-34S-01W Sumner,KS

VanZant #1

Job Ticket: 64965

DST#: 5

Test Start: 2019.04.14 @ 05:15:00

GENERAL INFORMATION:

Formation: **Simpson**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 07:17:47
 Tester: Leal Cason
 Time Test Ended: 14:36:47
 Unit No: 74
 Interval: **4289.00 ft (KB) To 4294.00 ft (KB) (TVD)**
 Reference Elevations: 1161.00 ft (KB)
 Total Depth: 4294.00 ft (KB) (TVD)
 1152.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Good
 KB to GR/CF: 9.00 ft

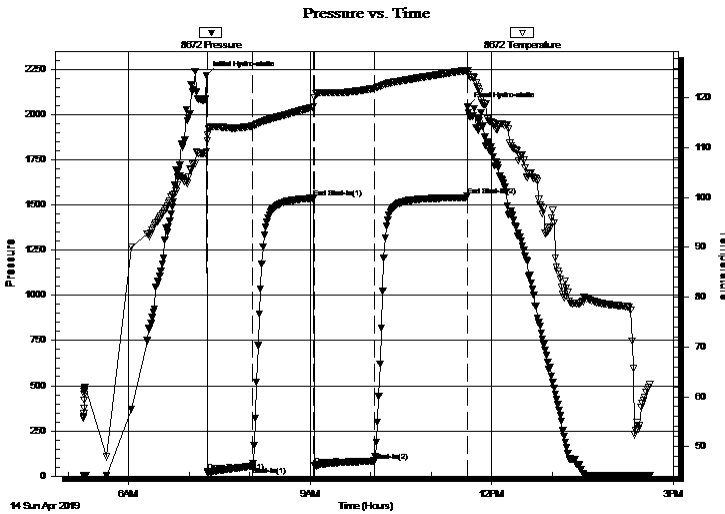
Serial #: 8672

Inside

Press@RunDepth: 84.05 psig @ 4290.00 ft (KB) Capacity: psig
 Start Date: 2019.04.14 End Date: 2019.04.14 Last Calib.: 2019.04.14
 Start Time: 05:15:01 End Time: 14:36:47 Time On Btm: 2019.04.14 @ 07:16:47
 Time Off Btm: 2019.04.14 @ 11:36:17

TEST COMMENT: IF: Fair Blow , BOB in 20 minutes, Built to 39"
 IS: No Blow Back
 FF: Fair Blow , BOB in 8 minutes, Built to 65"
 FS: 1/2" Blow Back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2214.28	109.22	Initial Hydro-static
1	25.04	111.44	Open To Flow (1)
46	56.39	114.41	Shut-In(1)
107	1536.87	118.23	End Shut-In(1)
108	58.16	120.08	Open To Flow (2)
167	84.05	121.95	Shut-In(2)
259	1549.82	125.54	End Shut-In(2)
260	2043.01	125.48	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	993 GIP	0.00
61.00	SOMCW 2%O 20%M 78%W	0.30
61.00	WMCO 20%W 30%M 50%O	0.30
63.00	WMCO 14%W 32%M 54%O	0.33

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Energy Partners LLC
 8918 W 21st St N #200-304
 Wichita, KS 67205
 ATTN: Brad Rine

23-34S-01W Sumner,KS
VanZant #1
 Job Ticket: 64965 **DST#: 5**
 Test Start: 2019.04.14 @ 05:15:00

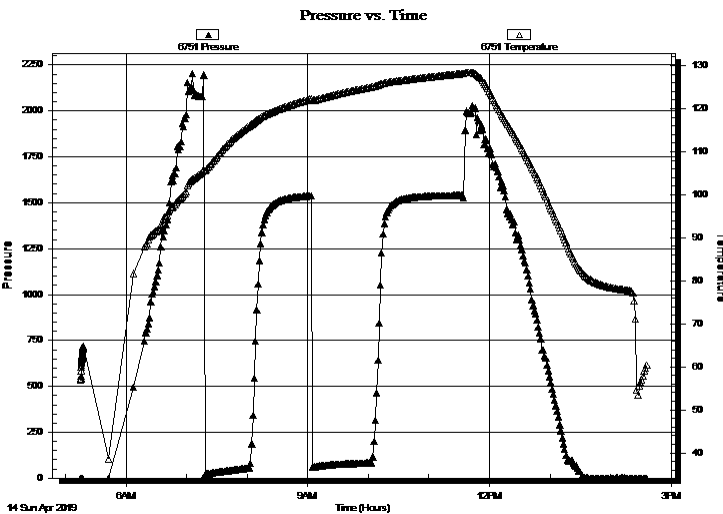
GENERAL INFORMATION:

Formation: Simpson		Test Type: Conventional Bottom Hole (Reset)
Deviated: No Whipstock:	ft (KB)	Tester: Leal Cason
Time Tool Opened: 07:17:47		Unit No: 74
Time Test Ended: 14:36:47		Reference Elevations: 1161.00 ft (KB)
Interval: 4289.00 ft (KB) To 4294.00 ft (KB) (TVD)		1152.00 ft (CF)
Total Depth: 4294.00 ft (KB) (TVD)		KB to GR/CF: 9.00 ft
Hole Diameter: 7.88 inches	Hole Condition: Good	

Serial #: 6751 Outside

Press@RunDepth: psig @ 4290.00 ft (KB)	Capacity: psig
Start Date: 2019.04.14 End Date: 2019.04.14	Last Calib.: 2019.04.14
Start Time: 05:15:01 End Time: 14:36:47	Time On Btm:
	Time Off Btm:

TEST COMMENT: IF: Fair Blow , BOB in 20 minutes, Built to 39"
 IS: No Blow Back
 FF: Fair Blow , BOB in 8 minutes, Built to 65"
 FS: 1/2" Blow Back



PRESSURE SUMMARY

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

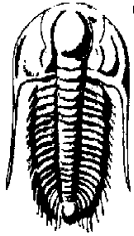
Recovery

Length (ft)	Description	Volume (bbl)
0.00	993 GIP	0.00
61.00	SOMCW 2%O 20%M 78%W	0.30
61.00	WMCO 20%W 30%M 50%O	0.30
63.00	WMCO 14%W 32%M 54%O	0.33

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Energy Partners LLC
8918 W 21st St N #200-304
Wichita, KS 67205
ATTN: Brad Rine

23-34S-01W Sumner,KS
VanZant #1
Job Ticket: 64965 **DST#: 5**
Test Start: 2019.04.14 @ 05:15:00

Tool Information

Drill Pipe:	Length: 4095.00 ft	Diameter: 3.80 inches	Volume: 57.44 bbl	Tool Weight: 2100.00 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: 183.00 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 58.34 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 75000.00 lb
Depth to Top Packer:	4289.00 ft			Final 76000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	5.00 ft			
Tool Length:	31.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Shut In Tool	5.00			4268.00	
Hydraulic tool	5.00			4273.00	
Jars	5.00			4278.00	
Safety Joint	2.00			4280.00	
Packer - Shale	5.00			4285.00	
Packer	4.00			4289.00	26.00 Bottom Of Top Packer
Stubb	1.00			4290.00	
Recorder	0.00	8672	Inside	4290.00	
Recorder	0.00	6751	Outside	4290.00	
Perforations	1.00			4291.00	
Bullnose	3.00			4294.00	5.00 Anchor Tool

Total Tool Length: 31.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Energy Partners LLC

23-34S-01W Sumner,KS

8918 W 21st St N #200-304
Wichita, KS 67205

VanZant #1

Job Ticket: 64965

DST#: 5

ATTN: Brad Rine

Test Start: 2019.04.14 @ 05:15:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

96000 ppm

Viscosity: 46.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 14.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2400.00 ppm

Filter Cake: 0.02 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
0.00	993 GIP	0.000
61.00	SOMCW 2%O 20%M 78%W	0.300
61.00	WMCO 20%W 30%M 50%O	0.300
63.00	WMCO 14%W 32%M 54%O	0.328

Total Length: 185.00 ft Total Volume: 0.928 bbl

Num Fluid Samples: 0

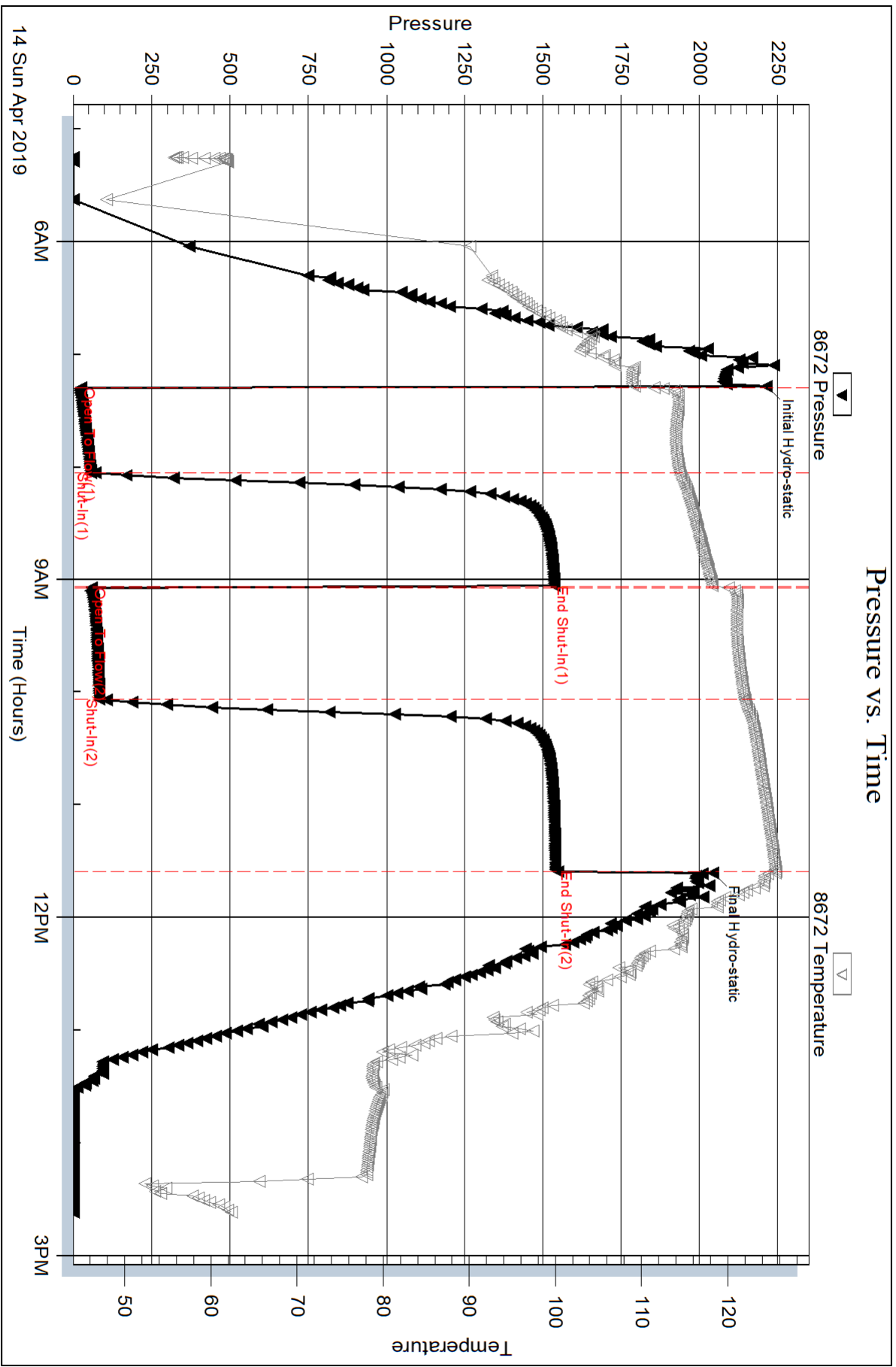
Num Gas Bombs: 0

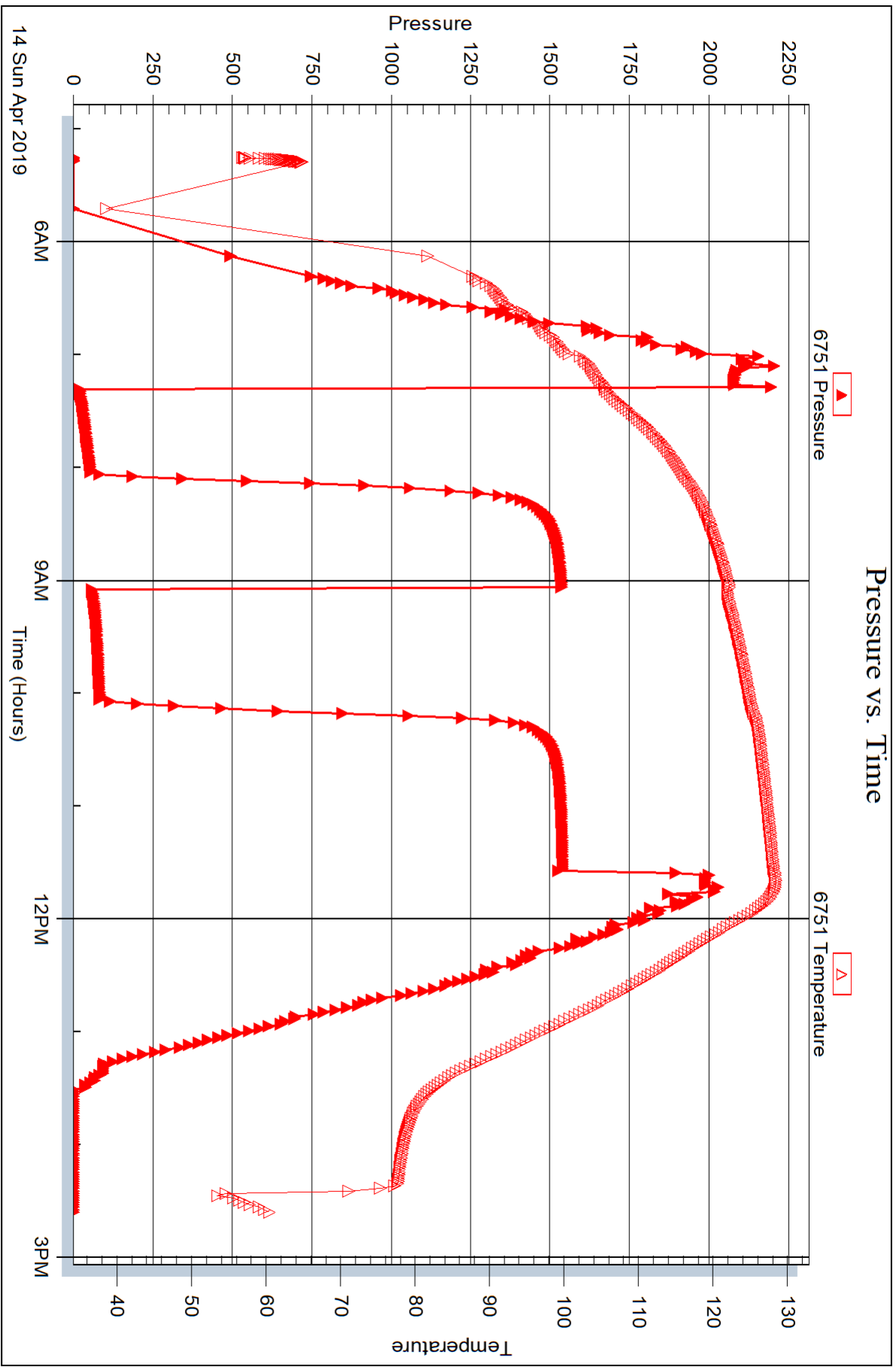
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW w as .095 @ 60 degrees







DRILL STEM TEST REPORT

Prepared For: **Energy Partners LLC**

8918 W 21st St N #200-304
Wichita, KS 67205

ATTN: Brad Rine

VanZant #1

23-34S-01W Sumner,KS

Start Date: 2019.04.14 @ 23:20:00

End Date: 2019.04.15 @ 07:16:02

Job Ticket #: 64966 DST #: 6

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

Printed: 2019.04.15 @ 15:05:37



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Energy Partners LLC
8918 W 21st St N #200-304
Wichita, KS 67205
ATTN: Brad Rine

23-34S-01W Sumner,KS

VanZant #1

Job Ticket: 64966

DST#: 6

Test Start: 2019.04.14 @ 23:20:00

GENERAL INFORMATION:

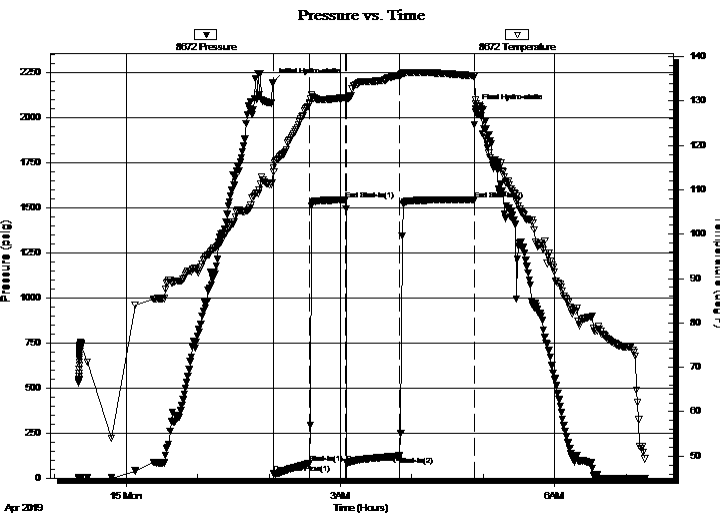
Formation: **Simpson**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 02:04:02
 Time Test Ended: 07:16:02
 Interval: **4295.00 ft (KB) To 4302.00 ft (KB) (TVD)**
 Total Depth: 4302.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Leal Cason
 Unit No: 74
 Reference Elevations: 1161.00 ft (KB)
 1152.00 ft (CF)
 KB to GR/CF: 9.00 ft

Serial #: 8672

Inside

Press@RunDepth: 123.93 psig @ 4296.00 ft (KB) Capacity: psig
 Start Date: 2019.04.14 End Date: 2019.04.15 Last Calib.: 2019.04.15
 Start Time: 23:20:01 End Time: 07:16:02 Time On Btm: 2019.04.15 @ 02:02:47
 Time Off Btm: 2019.04.15 @ 04:53:32

TEST COMMENT: IF: Weak Blow , Built to 4"
 IS: No Blow Back
 FF: Weak Blow , Built to 4 1/2"
 FS: No Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2193.88	111.55	Initial Hydro-static
2	23.95	114.07	Open To Flow (1)
32	81.91	129.52	Shut-In(1)
62	1543.63	130.72	End Shut-In(1)
63	84.04	130.10	Open To Flow (2)
108	123.93	135.78	Shut-In(2)
170	1544.67	135.62	End Shut-In(2)
171	2050.81	130.17	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
183.00	Water	0.90
10.00	MCW 50%M 50%W	0.14

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Energy Partners LLC
 8918 W 21st St N #200-304
 Wichita, KS 67205
 ATTN: Brad Rine

23-34S-01W Sumner,KS

VanZant #1

Job Ticket: 64966 **DST#: 6**
 Test Start: 2019.04.14 @ 23:20:00

GENERAL INFORMATION:

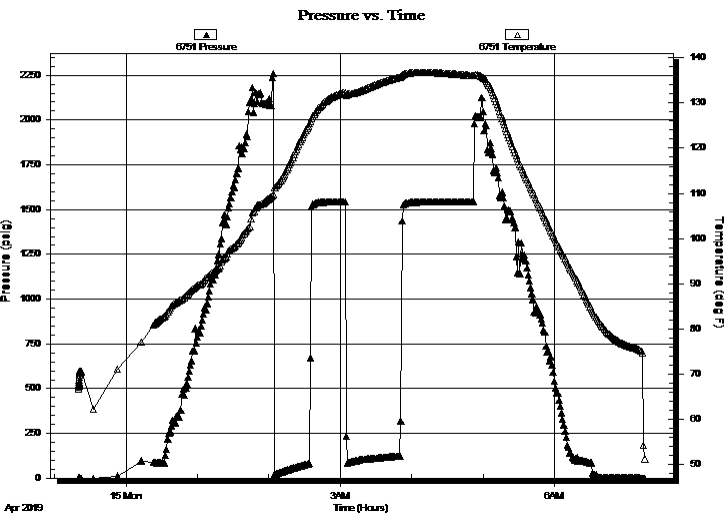
Formation: **Simpson**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 02:04:02 Tester: Leal Cason
 Time Test Ended: 07:16:02 Unit No: 74
 Interval: **4295.00 ft (KB) To 4302.00 ft (KB) (TVD)** Reference Elevations: 1161.00 ft (KB)
 Total Depth: 4302.00 ft (KB) (TVD) 1152.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 9.00 ft

Serial #: 6751

Outside

Press@RunDepth: psig @ 4296.00 ft (KB) Capacity: psig
 Start Date: 2019.04.14 End Date: 2019.04.15 Last Calib.: 2019.04.15
 Start Time: 23:20:01 End Time: 07:16:02 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF: Weak Blow , Built to 4"
 IS: No Blow Back
 FF: Weak Blow , Built to 4 1/2"
 FS: No Blow Back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
183.00	Water	0.90
10.00	MCW 50%M 50%W	0.14

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Energy Partners LLC
8918 W 21st St N #200-304
Wichita, KS 67205
ATTN: Brad Rine

23-34S-01W Sumner,KS
VanZant #1
Job Ticket: 64966 **DST#: 6**
Test Start: 2019.04.14 @ 23:20:00

Tool Information

Drill Pipe:	Length: 4095.00 ft	Diameter: 3.80 inches	Volume: 57.44 bbl	Tool Weight: 2100.00 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: 183.00 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 58.34 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 75000.00 lb
Depth to Top Packer:	4295.00 ft			Final 75000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	7.00 ft			
Tool Length:	33.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Shale Packer on Top

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4274.00	
Hydraulic tool	5.00			4279.00	
Jars	5.00			4284.00	
Safety Joint	2.00			4286.00	
Packer - Shale	5.00			4291.00	
Packer	4.00			4295.00	26.00 Bottom Of Top Packer
Stubb	1.00			4296.00	
Recorder	0.00	8672	Inside	4296.00	
Recorder	0.00	6751	Outside	4296.00	
Perforations	3.00			4299.00	
Bullnose	3.00			4302.00	7.00 Anchor Tool

Total Tool Length: 33.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Energy Partners LLC
8918 W 21st St N #200-304
Wichita, KS 67205
ATTN: Brad Rine

23-34S-01W Sumner,KS
VanZant #1
Job Ticket: 64966 **DST#: 6**
Test Start: 2019.04.14 @ 23:20:00

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:	94000 ppm
Viscosity: 47.00 sec/qt	Cushion Volume: bbl		
Water Loss: 14.98 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2400.00 ppm			
Filter Cake: 0.02 inches			

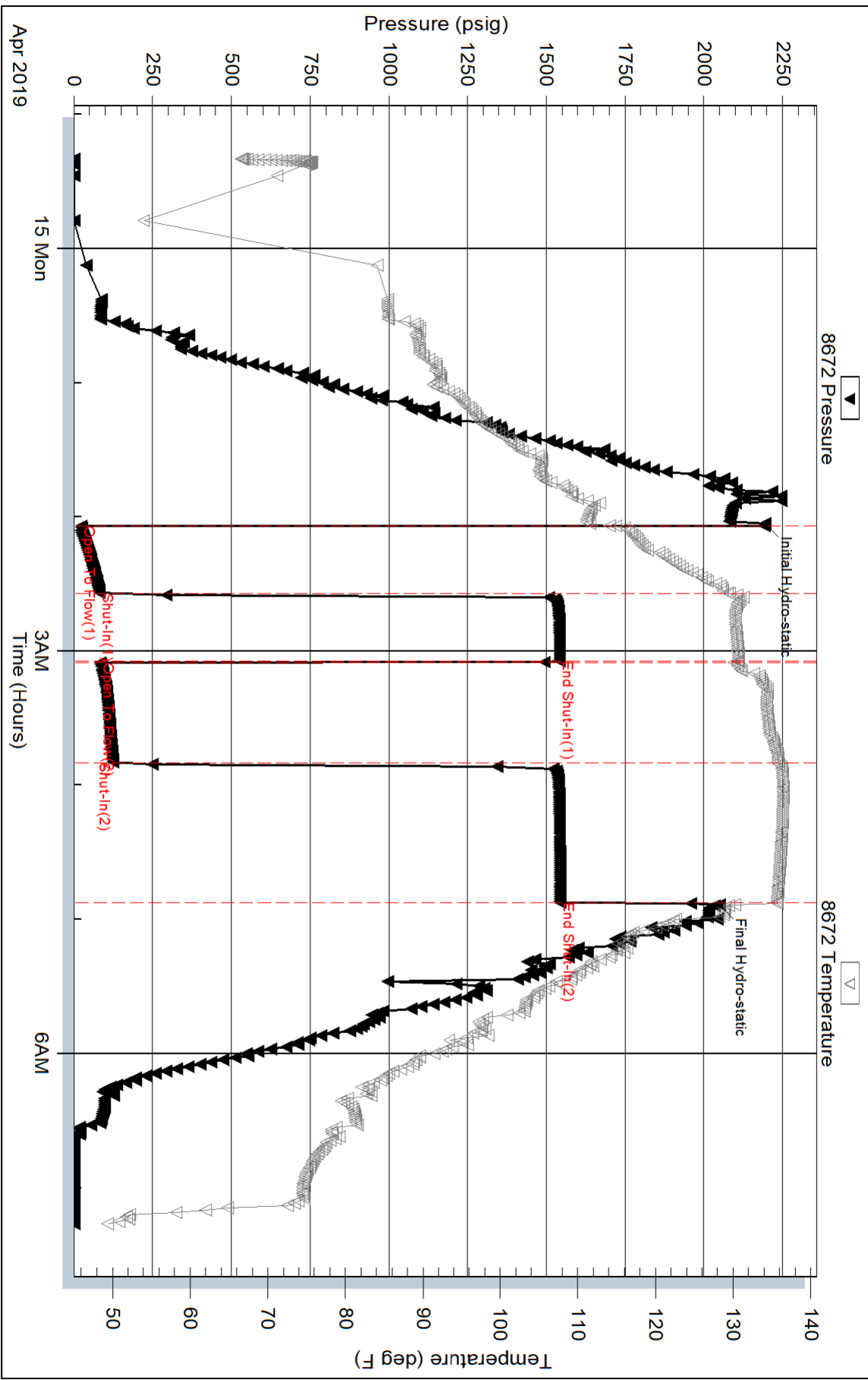
Recovery Information

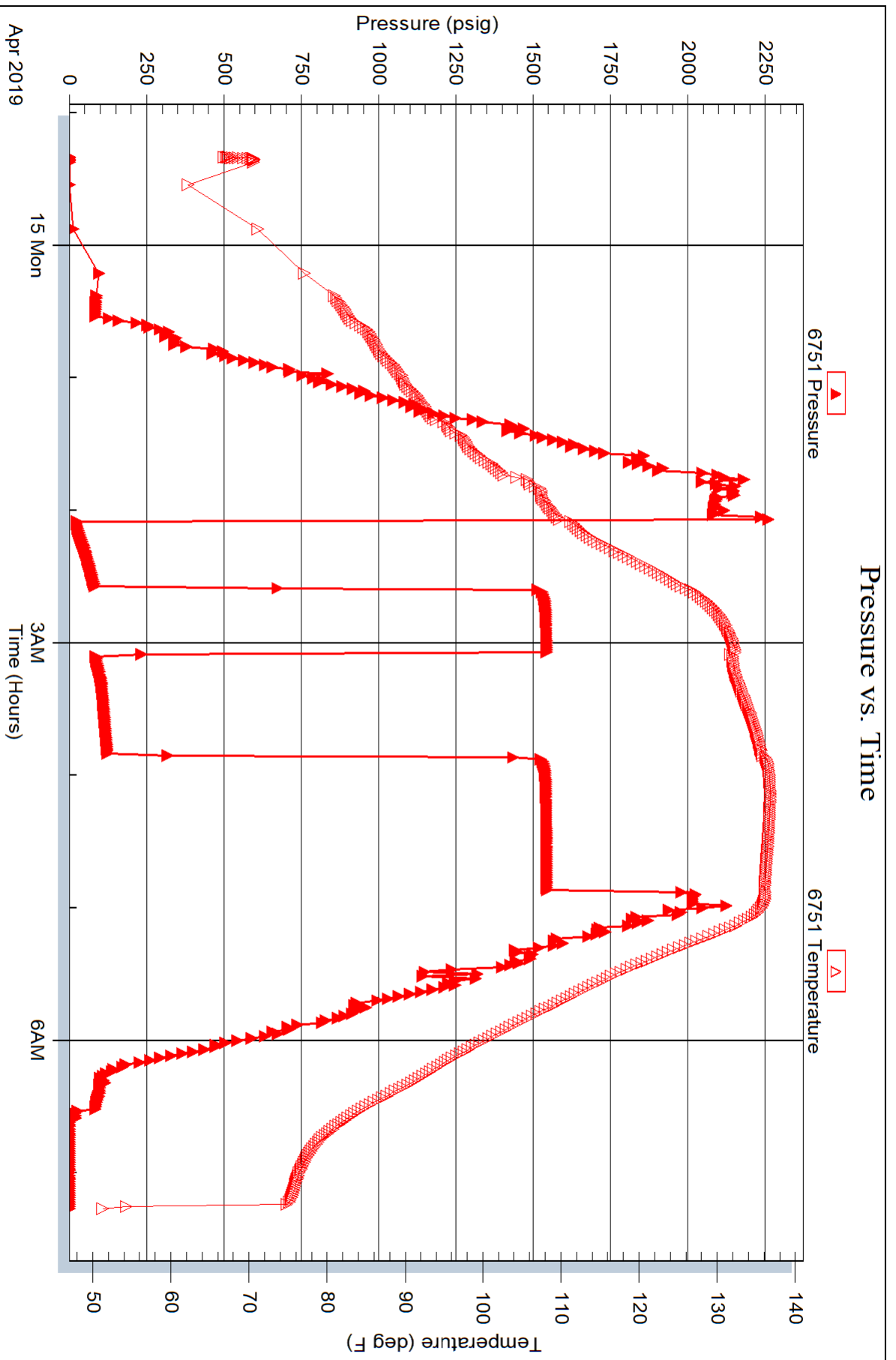
Recovery Table

Length ft	Description	Volume bbl
183.00	Water	0.900
10.00	MCW 50%M 50%W	0.140

Total Length: 193.00 ft Total Volume: 1.040 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: RW was .13 @ 46 degrees

Pressure vs. Time







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 64961

Well Name & No. Van Zant 1 Test No. 1 Date 04/09/19
 Company Energy Partners LLC Elevation 1161 KB 1152 GL
 Address 8918 W. 21st St N #200-304 Wichita, KS 67205
 Co. Rep / Geo. Brad Rine Rig C+G 2
 Location: Sec. 23 Twp 34S Rge. 01W Co. Sumner State KS

Interval Tested 3865 - 3907 Zone Tested Mississippi
 Anchor Length 42 Drill Pipe Run 3685 Mud Wt. 9.4
 Top Packer Depth 3860 Drill Collars Run 183 Vis 40
 Bottom Packer Depth 3865 Wt. Pipe Run 0 WL 13.0
 Total Depth 3907 Chlorides 2400 ppm System LCM 2

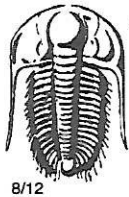
Blow Description IF: Strong Blow, BOB in 45 seconds, GTS in 10, Gauged Gas
ISI: NO ~~BOB~~ Blow Back
FF: Strong Blow, BOB & GTS Immediate, Gauged Gas
FSI: NO Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>3805</u>	<u>GIP</u>				
<u>63</u>	<u>SGCM</u>	<u>2</u>			<u>98</u>
Rec Total	<u>63</u>	BHT <u>113</u>	Gravity <u>NIC</u>	API RW <u>NIC</u>	@ <u>NIC</u> F Chlorides <u>NIC</u> ppm

(A) Initial Hydrostatic 1925 Test 1200 T-On Location 22:15
 (B) First Initial Flow 104 Jars 250 T-Started 00:18
 (C) First Final Flow 122 Safety Joint 75 T-Open 02:58
 (D) Initial Shut-In 1423 Circ Sub _____ T-Pulled 07:43
 (E) Second Initial Flow 80 Hourly Standby _____ T-Out 10:21
 (F) Second Final Flow 91 Mileage (230) 230 Comments Motel
 (G) Final Shut-In 1244 Sampler _____
 (H) Final Hydrostatic 1847 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1755 MP/DST Disc't _____
 EM Tool _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 0
 Total 1755

Approved By Brad Rine Our Representative _____

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8/12

Energy Partners LLC

Vanzant 1

1

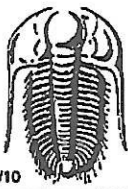
Operator GTS 10 minutes

Well Name and No.

DST No.

Min.	In. of Water PSIG	Orifice Size	MCF/D	Min.	In. of Water PSIG	Orifice Size	MCF/D
10	31	1/4	419.178	10	44	3/8	161.182
20	42	3/8	153.856	20	50	3/8	183.162
30	42	3/8	153.856	30	52	3/8	190.488
				40	51	3/8	186.825
				50	50	3/8	183.162
				60	49	3/8	179.498
				70	47	5/8	172.177
				80	46	3/8	168.509
				90	44	3/8	161.182

Remarks:



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 64962

Well Name & No. Van Zant 1 Test No. 2 Date 04/10/19
 Company Energy Partners LLC Elevation 1161 KB 1152 GL
 Address 8918 W. 21st St N #200-304 Wichita, KS 67205
 Co. Rep / Geo. Brad Pine Rig C+G 2
 Location: Sec. 23 Twp 34S Rge. 01 W Co. Sumner State KS

Interval Tested 3928 - 3970 Zone Tested Mississippi
 Anchor Length 42 Drill Pipe Run 3749 Mud Wt. 9.4
 Top Packer Depth 3923 Drill Collars Run 183 Vis 40
 Bottom Packer Depth 3928 Wt. Pipe Run 0 WL 12.0
 Total Depth 3970 Chlorides 2600 ppm System LCM 2

Blow Description FF: Fair Blow, BOB in 31 minutes, Built to 16 inches
ISI: NO BLOW BACK

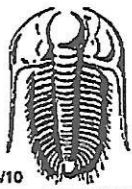
EF: Fair Blow, BOB in 18 minutes, Built to 28 inches
FSI: NO BLOW BACK

Rec	Feet of	%gas	%oil	%water	%mud
<u>62</u>	<u>GIP</u>				
<u>186</u>	<u>SOCM</u>		<u>2</u>		<u>98</u>
<u>127</u>	<u>MCW</u>			<u>76</u>	<u>24</u>
<u>183</u>	<u>water</u>				
Rec Total	<u>496</u>	BHT <u>124</u>	Gravity <u>NIC</u>	API RW <u>.15</u>	@ <u>47</u> °F Chlorides <u>78000</u> ppm

(A) Initial Hydrostatic	<u>1985</u>	<input checked="" type="checkbox"/> Test	<u>1200</u>	T-On Location	<u>22:30</u>
(B) First Initial Flow	<u>49</u>	<input checked="" type="checkbox"/> Jars	<u>250</u>	T-Started	<u>23:42</u>
(C) First Final Flow	<u>156</u>	<input checked="" type="checkbox"/> Safety Joint	<u>75</u>	T-Open	<u>02:16</u>
(D) Initial Shut-In	<u>1316</u>	<input type="checkbox"/> Circ Sub		T-Pulled	<u>05:49</u>
(E) Second Initial Flow	<u>162</u>	<input type="checkbox"/> Hourly Standby		T-Out	<u>08:26</u>
(F) Second Final Flow	<u>225</u>	<input checked="" type="checkbox"/> Mileage	<u>230</u> 230	Comments	<u>MOTEL</u>
(G) Final Shut-In	<u>1269</u>	<input type="checkbox"/> Sampler			
(H) Final Hydrostatic	<u>1891</u>	<input type="checkbox"/> Straddle		<input type="checkbox"/> EM Tool	
Initial Open	<u>45</u>	<input type="checkbox"/> Shale Packer		<input type="checkbox"/> Ruined Shale Packer	
Initial Shut-In	<u>60</u>	<input type="checkbox"/> Extra Packer		<input type="checkbox"/> Ruined Packer	
Final Flow	<u>45</u>	<input type="checkbox"/> Extra Recorder		<input type="checkbox"/> Extra Copies	
Final Shut-In	<u>60</u>	<input type="checkbox"/> Day Standby		Sub Total	<u>0</u>
		<input type="checkbox"/> Accessibility		Total	<u>1755</u>
		Sub Total	<u>1755</u>	MP/DST Disc't	

Approved By Brad Pine 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.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 64963

Well Name & No. Van Zant 1 Test No. 3 Date 04/12/19
 Company Energy Partners LLC Elevation 1161 KB 1152 GL
 Address 8918 W. 21st St N #200-304 Wichita, KS 67205
 Co. Rep / Geo. Brad Rine Rig C+G 2
 Location: Sec. 23 Twp 34S Rge. 01W Co. Sumner State KS

Interval Tested 4238 - 4282 Zone Tested Simpson
 Anchor Length 44 Drill Pipe Run 4033 Mud Wt. 9.2
 Top Packer Depth 4233 Drill Collars Run 183 Vis 41
 Bottom Packer Depth 4238 Wt. Pipe Run 0 WL 11.0
 Total Depth 4282 Chlorides 2500 ppm System LCM 2

Blow Description IF: weak Blow, Built to 1 1/2 inch
ISI: NO BLOW BACK
FF: WEAK BLOW, Built to 5 1/2 inches
FSI: NO BLOW BACK

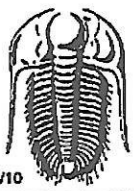
Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>Mud</u>				
<u>Ø</u>					

Rec Total 10 BHT 122 Gravity NIC API RW NIC @ NIC F Chlorides NIC ppm
 (A) Initial Hydrostatic 2173 Test 1300 T-On Location 18:30
 (B) First Initial Flow 24 Jars 250 T-Started 19:55
 (C) First Final Flow 25 Safety Joint 75 T-Open 22:22
 (D) Initial Shut-In 104 Circ Sub _____ T-Pulled 01:24
 (E) Second Initial Flow 24 Hourly Standby _____ T-Out 03:33
 (F) Second Final Flow 36 Mileage 230 230 Comments note
 (G) Final Shut-In 229 Sampler _____
 (H) Final Hydrostatic 2043 Straddle _____
 Shale Packer 250 EM Tool _____
 Extra Packer _____ Ruined Shale Packer _____
 Extra Recorder _____ Ruined Packer _____
 Day Standby _____
 Accessibility _____

Initial Open 30
 Initial Shut-In 30
 Final Flow 60
 Final Shut-In 60
 Sub Total 2005 MP/DST Disc't _____

Approved By Brad Rine Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 64964

Well Name & No. VanZant 1 Test No. 4 Date 04/13/19
 Company Energy Partners LLC Elevation 1161 KB 1152 GL
 Address 8918 W. 21st ST N #200-304 Wichita, KS 67205
 Co. Rep / Geo. Brad Rine Rig C+G 2
 Location: Sec. 23 Twp 34S Rge. 01 W Co. Sumner State KS

Interval Tested 4238 - 4289 Zone Tested Simpson
 Anchor Length 51 Drill Pipe Run 4034 Mud Wt. 9.2
 Top Packer Depth 4235 Drill Collars Run 183 Vis 46
 Bottom Packer Depth 4238 Wt. Pipe Run 0 WL 15.0
 Total Depth 4289 Chlorides 2400 ppm System LCM 2

Blow Description IF: Weak Blow, Built to 6 inches

ISI: NO Blow Back

FF: Fair Blow, ~~Bob~~ Bob in 8 minutes, Built to 45 inches

Rec	Feet of	%gas	%oil	%water	%mud
<u>968</u>	<u>GIP</u>				
<u>126</u>	<u>SGOCM</u>	<u>2</u>	<u>2</u>	<u>96</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 126 BHT 120 Gravity NIC API RW NIC @ NIC °F Chlorides NIC ppm

- (A) Initial Hydrostatic 2193
- (B) First Initial Flow 27
- (C) First Final Flow 47
- (D) Initial Shut-In 1029
- (E) Second Initial Flow 54
- (F) Second Final Flow 86
- (G) Final Shut-In 1506
- (H) Final Hydrostatic 1975

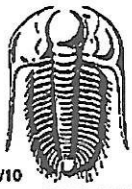
- Test 1300
- Jars 250
- Safety Joint 75
- Circ Sub
- Hourly Standby
- Mileage (230) 230
- Sampler
- Straddle
- Shale Packer 250
- Extra Packer
- Extra Recorder
- Day Standby
- Accessibility
- Sub Total 2105

- T-On Location 12:00
- T-Started 13:25
- T-Open 16:13
- T-Pulled 19:16
- T-Out 21:27
- Comments noted
- EM Tool
- Ruined Shale Packer
- Ruined Packer
- Extra Copies
- Sub Total 0
- Total 2105
- MP/DST Disc't

Initial Open 30
 Initial Shut-In 30
 Final Flow 60
 Final Shut-In 60

Approved By Brad Rine 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.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 64965

Well Name & No. Van Zant 1 Test No. 5 Date 04/14/19
 Company Energy Partners LLC Elevation 1161 KB 1152 GL
 Address 8918 W. 21st STN #200-304 Wichita, KS 67205
 Co. Rep/Geo. Brad Rine Rig C+G 2
 Location: Sec. 25 Twp 34S Rge. 01W Co. Sumner State KS

Interval Tested 4289 - 4294 Zone Tested Simpson
 Anchor Length 5 Drill Pipe Run 4095 Mud Wt. 9.2
 Top Packer Depth 4284 Drill Collars Run 183 Vis 46
 Bottom Packer Depth 4289 Wt. Pipe Run 0 WL 15.0
 Total Depth 4294 Chlorides 2400 ppm System LCM 2

Blow Description IF: Fair Blow, BOB in 20 minutes, Built to 39 inches
ISI: NO Blow Back
FF: Fair Blow, BOB in 8 minutes, Built to 65 inches
FSD: 1/2 inch Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>993</u>	<u>GIP</u>				
<u>63</u>	<u>WMCO</u>		<u>54</u>	<u>14</u>	<u>32</u>
<u>61</u>	<u>WMCO</u>		<u>50</u>	<u>20</u>	<u>30</u>
<u>61</u>	<u>SOMCW</u>		<u>2</u>	<u>78</u>	<u>20</u>

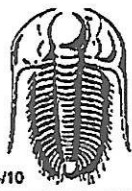
Rec Total 185 BHT 125 Gravity NIC API RW 095 @ 60 °F Chlorides 96000 ppm

(A) Initial Hydrostatic 2214 Test 1300 T-On Location 04:30
 (B) First Initial Flow 25 Jars 250 T-Started 05:15
 (C) First Final Flow 56 Safety Joint 75 T-Open 07:17
 (D) Initial Shut-In 1537 Circ Sub _____ T-Pulled 11:35
 (E) Second Initial Flow 58 Hourly Standby _____ T-Out 14:36
 (F) Second Final Flow 84 Mileage 230 230 Comments MOTPI
 (G) Final Shut-In 1550 Sampler _____
 (H) Final Hydrostatic 2043 Straddle _____

Shale Packer 250 EM Tool _____
 Extra Packer _____ Ruined Shale Packer _____
 Extra Recorder _____ Ruined Packer _____
 Day Standby _____ Sub Total 0
 Accessibility _____ Total 2105
 Sub Total 2105 MP/DST Disc't _____

Approved By Brad Rine Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 64966

Well Name & No. Van Zant 1 Test No. 6 Date 04/14/19
 Company Energy Partners LLC Elevation 1161 KB 1152 GL
 Address 8918 W. 21st St N #200-304 Wichita, KS 67205
 Co. Rep / Geo. Brad Rine Rig C+G 2
 Location: Sec. 23 Twp 34S Rge. 01W Co. Sumner State KS

Interval Tested 4295 - 4302 Zone Tested Simpson
 Anchor Length 7 Drill Pipe Run 4095 Mud Wt. 9.2
 Top Packer Depth 4290 Drill Collars Run 183 Vis 47
 Bottom Packer Depth 4295 Wt. Pipe Run 0 WL 15.0
 Total Depth 4302 Chlorides 2400 ppm System LCM 2

Blow Description IF: weak blow, Built to 4 inches
ISI: NO Blow Back
FF: weak blow, Built to 4 1/2 inches
FSD: NO Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>MCW</u>		<u>50</u>	<u>50</u>	
<u>183</u>	<u>water</u>				
Rec Total	<u>193</u>	BHT <u>2136</u>	Gravity <u>NIC</u>	API RW <u>13</u>	<u>46</u> °F Chlorides <u>94000</u> ppm

(A) Initial Hydrostatic 2194 Test 1300 T-On Location 22:15
 (B) First Initial Flow 24 Jars 250 T-Started 23:20
 (C) First Final Flow 82 Safety Joint 75 T-Open 02:04
 (D) Initial Shut-In 1544 Circ Sub _____ T-Pulled 04:52
 (E) Second Initial Flow 84 Hourly Standby _____ T-Out 07:16
 (F) Second Final Flow 124 Mileage 230 230 Comments MOTEL
 (G) Final Shut-In 1545 Sampler _____
 (H) Final Hydrostatic 2051 Straddle _____
 Shale Packer 250 EM Tool _____
 Extra Packer _____ Ruined Shale Packer _____
 Extra Recorder _____ Ruined Packer _____
 Day Standby _____ Sub Total 0
 Accessibility _____ Total 2105
 Sub Total 2105 MP/DST Disc't _____

Approved By Brad Rine Our Representative _____

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August 08, 2019

JAY ABLAH
Energy Partners, LLC
8918 W. 21ST STREET NORTH #200-304
WICHITA, KS 67205-1885

Re: ACO-1
API 15-191-22812-00-00
VANZANT 1
NW/4 Sec.23-34S-01W
Sumner County, Kansas

Dear JAY ABLAH:

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

The above referenced well was spudded on 04/05/2019 and the ACO-1 was received on August 08, 2019 (not within the 120 days timely requirement).

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

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

Sincerely,

Production Department



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

Well Name: VanZant #1 - Energy Partners, LLC
API: 15-191-22812-00-00
Location: NE-NE-NW, Section 23-34S-01W
License Number: KCC # 35584
Spud Date: April 04, 2019
Surface Coordinates: 330' FNL & 2348' FWL,
of Section
Bottom Hole Coordinates: Vertical Wellbore
Ground Elevation (ft): 1152 Ft.
Logged Interval (ft): 3000 Ft. **To:** 4450 Ft. **Total Depth (ft):** RTD 4450 Ft. LTD
Formation: Arbuckle at Total Depth
Type of Drilling Fluid: Chemical

Region: Sumner County, Kansas
Drilling Completed: April 16, 2019
Results:
Field: Mirt East
K.B. Elevation (ft): 1161 Ft.

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

Operator

Company: Energy Partners, LLC
Address: 8918 West 21st Street North, #200-304
Wichita, Kansas 67205

Geologist

Name: M. Bradford Rine
Company: Consulting Geologist, Kansas Lic. #204, Wyo #189, AAPG Cert. #2647
Address: 100 South Main, Suite #320A
Wichita, Kansas 67202

Remarks

Based on sample observations, drill stem test results, and electric log evaluation, it was the decision of the Operator, to

Drilling Information

Rig: C & G Drilling, Rig#2
Pump: Emsco D375 6-1/2 x14
Drawworks: Bethlehem S45
Collars: 230' 2-1/4 x 6-1/4
*(2 collars removed after DST 1 @ 3907')
Drillpipe: 4-1/2" 16.6# XH
Toolpusher: Judd Gulick

Mud: Fud Mud (Aaron Rush)
Gas Detector: None
Drill Stem Tests: Trilobite (Leal Cason)
Logs: ELI (
Water: Stream on Mason Farm 1/2 mi West (C&G Tank)
Company Representatives:
Office: Jay Ablah and Jerry Honas
Field: Jay Ablah

Daily Drilling Status

Date:	Operations/Depth/Comments
04-04-19	MIRT, RU @ 0'
04-05-19	Prepare to Spud @ 0'
04-06-19	Waiting on Cement @ 239', Prepare to Drill Out
04-06-19	Drilling @ 1356'
04-07-19	Drilling @ 2111'
04-08-19	Drilling @ 3216'
04-09-19	Drilling @ 3875'
04-10-19	On Bottom with DST #1 @ 3907'
04-11-19	Trip Out of Hole with DST #2 @ 3970'
04-12-19	Drilling @ 4191'
04-13-19	Circulating to Condition Hole @ 4282'
04-14-19	Trip in Hole with DST #5 @ 4294'
04-15-19	Prepare To Trip in Hole With Bit @ 4302'
04-16-19	Circulating to Condition Hole for Logs @ 4450'

Casing Record, Bit Record, Deviation Surveys, Pipe Straps

CASING:

Conductor: None

Surface: Set 8-5/8" 23# new, set @ 223'. (Copeland) Cement with 200 sx 60/40 POZ, 2% gel, 3% CC. Cement did circulate.

Production:

BITS:

No.	Size	Make	Model	Depth In	Depth Out	Hours
1	12-1/4	Rr	PDC	0	239	2.00
2	7-7/8	Atlas	PDC 6-bl	239	3970	57.25
3	7-7/8	Security	PDC 7-bl	3970	4289	17.50
4	7-7/8	HTC	537 TC	4289	4450	16.25

Deviation:	Depth:	Deviation:	Depth:
1.00*	3907'	4450'
1.75*	4282'		

PIPE STRAPS:

Difference:	depth:
+ 0.71'	3907'

DST #1: 3865-3907 (Mississippi)

Times: 30-60-90-90

Initial Open: Stg Blow, b.o.b. 45 sec.,

GTS 10 minutes

Final Open: Stg Blow, GTS instant

Rec: See gas readings below!

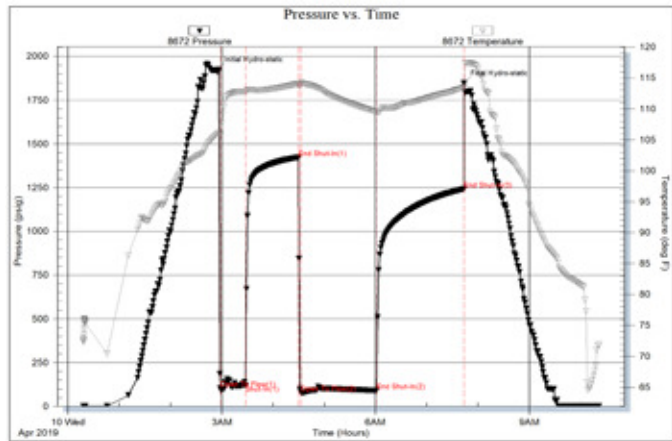
Total Fluid, 63' SGCM: 02%g 98%mm

IHP: 1925 FHP: 1847

IFP: 104-122 FFP: 80-91

ISIP: 1423 FSIP: 1244

BHT: 113°F



DST #1: Gas Readings

Min	Orifice	Pr.	CFGPD
10	1/4	31	49,178
20	3/8	42	153,856
30	3/8	42	153,856
10	3/8	44	161,182
20	3/8	50	183,162
30	3/8	52	190,488
40	3/8	51	186,825
50	3/8	50	183,162
60	3/8	49	179,498
70	3/8	47	172,172
80	3/8	46	168,509
90	3/8	44	161,182

DST #2: 3928-3970 (Mississippi)

Times: 45-60-45-60

Initial Open: Stg Blow, b.o.b. 31 min,

built to 16 inches, No return blow

Final Open: Stg Blow, b.o.b. 18 min,

Built to 28 inches

Rec: 496' Total Fluid, 62' gas in pipe

186' SOCM: 02%o 98%m

127' MCW: 76%w 24%m

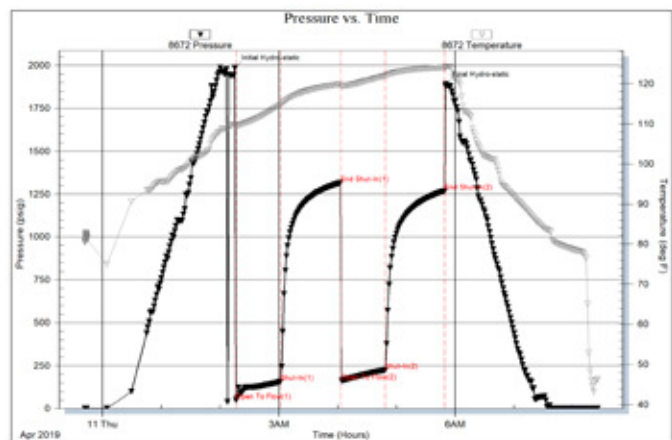
183' Wtr: 100%w (Chl/wtr 78000 ppm)

IHP: 1985 FHP: 1891

IFP: 49-156 FFP: 162-225

ISIP: 1316 FSIP: 1269

BHT: 124°F



DST #3: 4238-4282 (Simpson)

Times: 30-30-60-60

Initial Open: Wk Blow, built to 1-1/2" i.b.

Final Open: Wk Blow, built to 5-1/2" i.b.

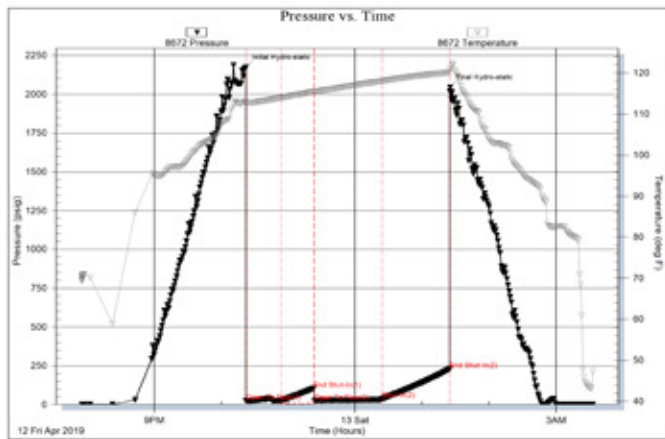
Rec: 10' mud

IHP: 2173 FHP: 2043

IFP: 24-25 FFP: 24-36

ISIP: 104 FSIP: 229

BHT: 122°F



DST #4: 4238-4289 (Simpson)

Times: 30-30-60-60

Initial Open: Fr Blow, built to 6" i.b., No return blow

Final Open: Stg Blow, b.o.b. 8 min, Blow built to 45 inches, no return blow

Rec: 868' gas in pipe

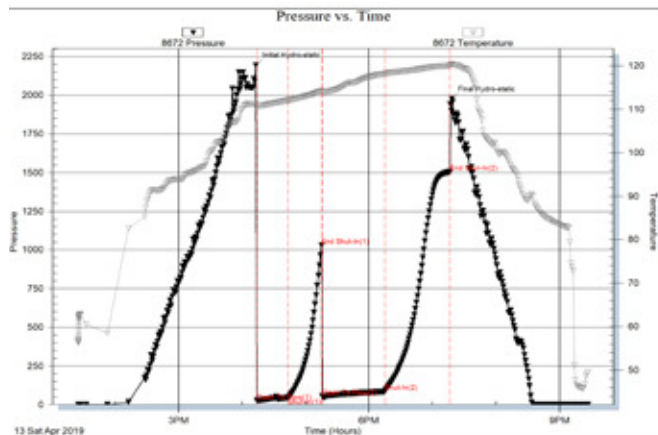
126' SOGCM: 2%g 2%o 96%m

IHP: 2193 FHP: 1975

IFP: 27-47 FFP: 54-86

ISIP: 1029 FSIP: 1506

BHT: 120°F



DST #5: 4289-4294 (Simpson)

Times: 45-60-60-90

Initial Open: Stg Blow, b.o.b. 20 min, built to 39", No return blow

Final Open: Stg Blow, b.o.b. 8 min, built to 65", Return blow built to 1/2"

Rec: 993' gas in pipe

185' Total Fluid:

63' WMCO: 54%o 14%w 32%m

61' WMCO: 50%o 20%w 32%m

61' SOMCW: 2%o 78%w 20%m

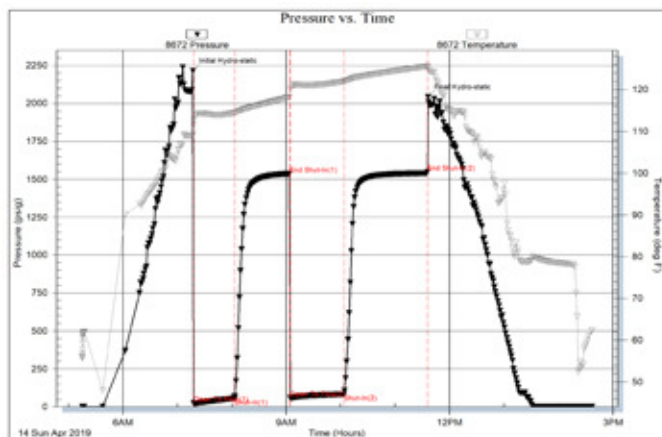
(Chl/Wtr: 96,000 ppm)

IHP: 2214 FHP: 2043

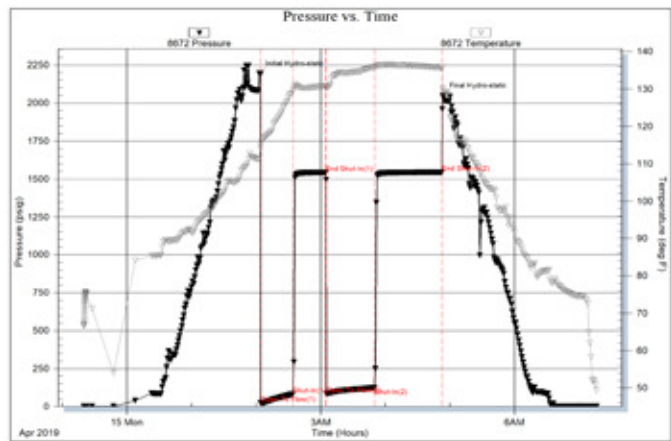
IFP: 25-56 FFP: 58-84

ISIP: 1537 FSIP: 1550

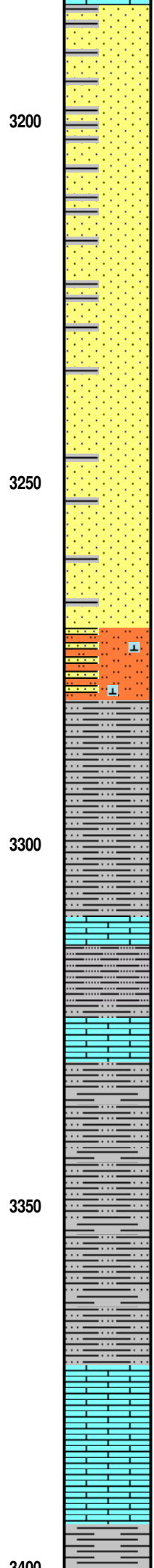
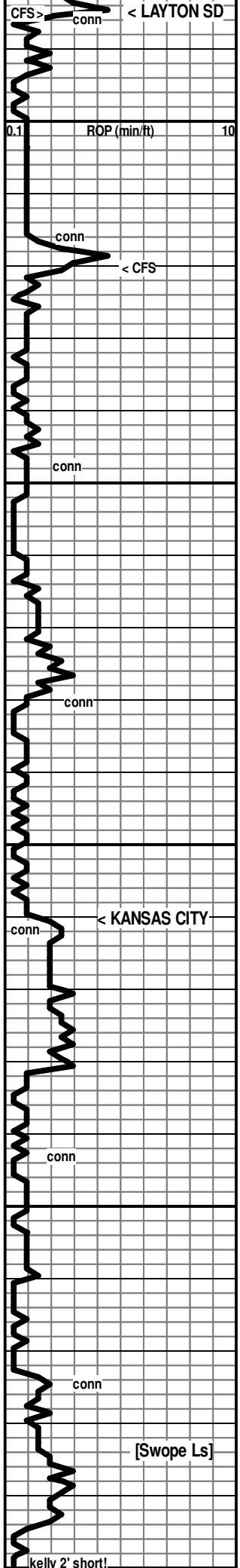
BHT: 125°F



DST #6: 4295-4302 (Simpson)
Times: 30-30-45-60
Initial Open: Wk Blow, built to 4"
Final Open: Wk Blow, built to 4-1/2"
Rec: 193' Total Fluid
10' MCW: 50%m 50%w
183' Water (Chl 94,000 ppm)
IHP: 2194 FHP: 2051
IFP: 24-82 FFP: 84-124
ISIP: 1544 FSIP: 1554
BHT: 136°F



ROP (min/ft) ROP (min/ft) ———	MD	Lithology	Geological Descriptions	Remarks
	<p>3000</p> <p>3050</p> <p>3100</p> <p>3150</p> <p>WOB 10K RPM 100 PP 720 SPM 57</p>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Shows</p>	<p>Sh gy, silty/ic text in great abund</p> <p>Sh mostly gy-dk gy, some brownish to reddish & grn pcs, silty/ic text in great abund,</p> <p>Sh mostly gy-dk gy, some brownish to reddish & grn pcs, silty/ic text in great abund,</p> <p>Sh mostly gy-dk gy, some brownish to reddish & grn pcs, silty/ic text in great abund, few white siltst clusters</p> <p>Sh mostly gy-dk gy, some brownish to reddish & grn pcs, silty/ic text in great abund,</p> <p>Sh mostly gy-dk gy, some brownish to reddish & grn pcs, silty/ic text in great abund,</p> <p>Sh pl gy-gy-dk gy, silty to mic in pt</p> <p>Sh pl gy-gy-dk gy, few grn pcs, silty to mic in pt</p> <p>Sh pl gy-gy-dk gy, silty to mic in pt</p> <p>3175' cfs: 99% Sh pl gy-gy-dk gy, some black carb, soft-hard, silty to mic in pt; 01% Sd, white, fn grn, gd sort, subrd, pr-fr fri, scatt dk sh/min specks [NS]</p> <p>3185' cfs: 90% Sh gy-dk gy-blk, silty in pt; 10% Siltstone & Sd, wh-gy, vfn-fn grn, cem in pt, pr-gd fri, subrd, fr-gd sort; Trace of hard calc fn grn sd [NS]</p>	<p>* Displace and Mudup @ 2785 ft!</p>



← 3385 (2024)

Sh & Silty Sh, gy-dk gy-black-gmish, argil to silty text, some siltstone pcs

60% Shales and silty shales as above; 40% Siltstone & Sd, vfn-fn grn, sh-gy, clean to cem, gd sort, subrd, pr-gd fri, some ls frag inclusions

[No Odor, Low % clusters with brt speckled fluor, widely scatt trace show of micro-spots brn stn, ? trace show of micro NVL FO]

50% Shales mostly gy-dk gy-blk, silty in pt; 50% Sd & siltstone, white-gy-clear, vfn-fn grn, subrd, gd sort, cem in pt, mic in pt, pr-gd fri

40% Shales mostly gy-dk gy-blk, silty in pt; 60% Sd & siltstone, white-gy-clear, vfn-fn grn (sli crsr with depth) subrd, gd sort, cem in pt, mic in pt, pr-gd fri

10% Shales mostly gy-dk gy-blk, silty in pt; 90% Sd & siltstone, white-gy-clear, vfn-fn grn (sli crsr with depth) subrd, gd sort, cem in pt, mic in pt, pr-gd fri

10% Shales mostly gy-dk gy-blk, silty in pt; 90% Sd & siltstone, white-gy-clear, vfn-fn grn (becoming more silt textured) subrd, gd sort, calc cem in pt, mic in pt, pr-gd fri

Sh pl gy-gy, abund silty mic text, some highly pyritic shale

← 3310 (-2149)

Ls cr-tan, fn xln, dns, foss in pt

Shaley Siltstone to silty shale, wh-gr, cem in pt, vfn grn, fr-gd fri

Ls wh-cr, fn xln, subchalky in pt, dns & firm in pt

Sh & silty Sh pl gy-gy-gmish, subsilty-silty text, mic

Sh & silty Sh pl gy-gy-gmish, a few reddish brn pcs, subsilty-silty text, mic

Ls cr-tan, mostly dns and hard, some softer and subchalky, foss

Sh gy, subsilty in pt

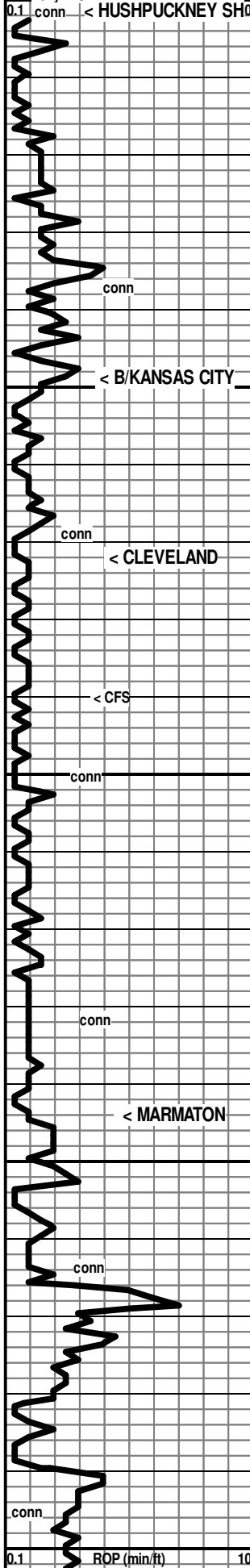
Mud Check Drlg @ 3185':

Vis	Wt	WL	PV	YP
37	9.6	15.0	5	12
Chl	Hd	pH	LCM	Solids
2400	80	9.5	0	9.2

7:00 AM, April 08, 2019

* Lost returns at 3351-52 ft. (150 bbls) Add premix with hulls. (at low pp maintaining partial returns)!

* Drill ahead with full returns!



3400

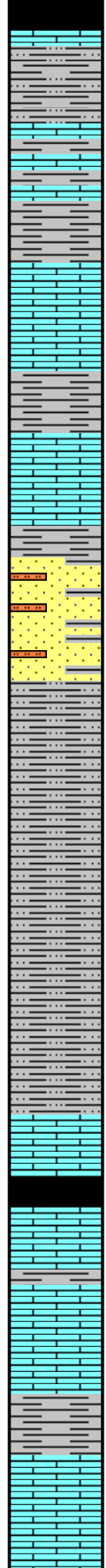
3450

3500

3550

3600

WOB 8k
RPM 100
PP 950
SPM 48
LCM 4#



< 3401 (-2240)

Sh black, carb

Sh gy-dk gy, subsilty/mic to silty with some shaley siltstone, scatt pyrite marbling; some dns cr-tan Ls

Sh gy, silty in pt

Ls wh-cr-tan-gy, fn xln, chalky in pt, dns in pt, foss in pt

< 3449 (-2288)

Sh gy-grn, siltstone gy-grn, glauc in pt

Ls wh-cr-tan, fn xln, chalky to dns, foss in pt, scatt glauc stained patches

Sh gy

< 3472 (-2311)

Sd wh-gy-grnish, fn grn, silty in pt, fr-gd sort, subrd, pr-fr-gd sort, mostly cem, foss in pt, abund glauc, shaley in pt to abund shale in spls, apparent lack of "clean" sand [NS]

Siltstone & Sd, shaley in pt, vfn-fn grn, mic text in pt, calc cem in abundance, gd sort, subrd, fr-gd fri, glauc in pt

Siltstone & Sd, shaley in pt, vfn-fn grn, mic text in pt, calc cem in abundance, gd sort, subrd, fr-gd fri, glauc in pt

< 3544 (-2383)

Ls wh-cr-tan, fn xln, chalky & soft in patches and pcs, dns in abund. silty text in pt [NS]

Abund shales in spls gy-grn-black, silty to mic to carb

Ls wh-cr-tan-brn, fn xln, chalky & soft in patches and pcs, dns in abund. silty text in pt

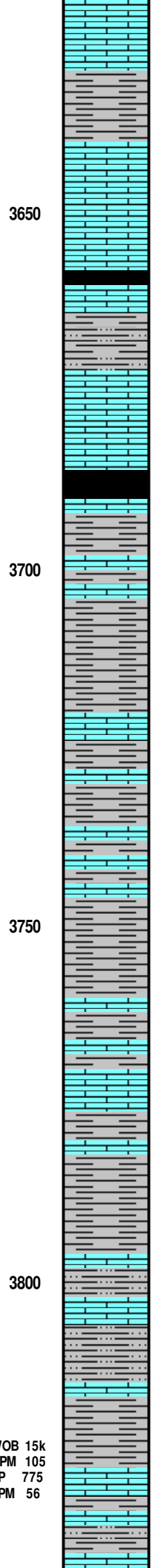
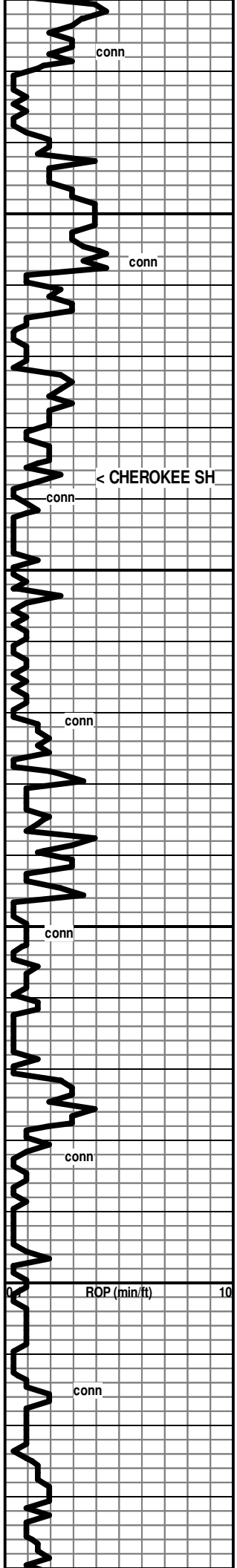
Abund shales in spls gy-grn-black, silty to mic to carb

Sh gy, silty in pt

Ls cr-tan, fnxln, mostly pr xln to dns, some pcs with pp foss pores, scatt chalky patches and edges, foss

Sh dk gy-black, carb in pt

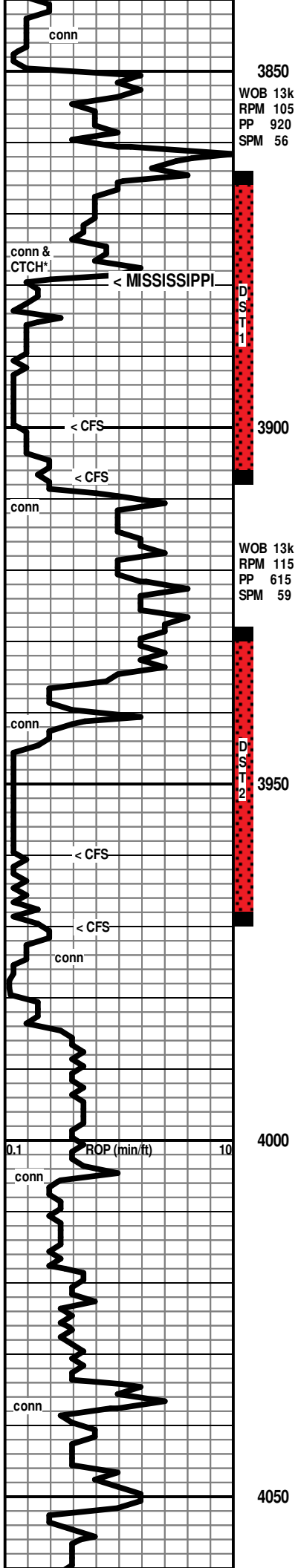
*Drilling with jet plugged in bit!



Ls cr-tan, fn xln, pr xln por to dns, foss in pt
 Sh gy-dk gy-pl grnsh, subsilty in pt, scatt pyritic
 Ls cr, fn xln, dns to pr xln por, foss in pt
 Sh black, carb
 Sh gy-dk gy, sub carb to subsilty
 Ls cr-tan, fn xln, pr sln por to dns
 ← 3687 (-2526)
 Sh black carb
 Sh gy-dk gy
 Ls cr-tan, with some white chalky patches, fn xln, dns
 Sh gy-dk gy-black, subcarb-carb in pt
 Ls cr-tan-brn, fn xln, dns; mixed with abund Shale gy-dk gy-black
 Sh pl gy-gy-dk gy, subsilty text in pt
 Ls cr, fn xln, some white chalky patches & pcs
 Sh gy-dk gy-black, carb in pt, subsilty/mic text in pt
 Shaley siltstone to silty shale, gy-dk gy, some white-gy siltstone clusters, some ls in spls
 Sh gy-reddish-lavendar, silty in pt, some whit-gy siltstone, some dns cr ls
 Ls wh-cr, fn xln, mostly dns, some chalky, some shaley; siltstone wh-gy-gm, pyritic in pt; Shales gy-gm-red, earthy to silty, pyr in pt

DST #1: 3865-3907 (Mississippi)
 Times: 30-60-90-90
 Initial Open: Stg Blow, b.o.b. 45 sec. GTS 10 minutes
 Final Open: Stg Blow, GTS instant
 Rec: See gas readings below!
 Total Fluid, 63' SGCM: 02%g 98%mm
 IHP: 1925 FHP: 1847
 IFP: 104-122 FFP: 80-91
 ISIP: 1423 FSIP: 1244
 BHT: 113°F

DST #1:		Gas Readings	
Min	Orifice	Pr.	CFGPD
10	1/4	31	49,178
20	3/8	42	153,856
30	3/8	42	153,856
10	3/8	44	161,182
20	3/8	50	183,162
30	3/8	52	190,488
40	3/8	51	186,825
50	3/8	50	183,162



3850
WOB 13k
RPM 105
PP 920
SPM 56

conn

< MISSISSIPPI

DST 1

3900

< CFS

< CFS

conn

WOB 13k
RPM 115
PP 615
SPM 59

DST 2

3950

< CFS

< CFS

conn

0.1 ROP (min/ft) 10

4000

conn

4050

Ls cr, fn xln, dns; Abund silty-sdy shale and shaley silty to sdy clusters, vfn gm, cem in pt, gy-wh-grn; abund pyritic shale and siltstone, abund loose pyrite in spls

Ls cr-gy, vfn-fnxln, silty in pt, dns; abund gy shales, silty shale and siltstone

Sh gy-grn-red-brn-lav, silty in pt, pyritic in pt, foss in pt

Ls & siltst as above

← 3879 (-2718)
Possible congl shale of various colors and chert

Chert Mostly white, some cr-tan, mostly opaq, some subtransl, mostly sli weath'd to weath'd, lower % subtrip-trip in patches & pcs with depth, trace of pp pores and v sm vugs, mostly pr-fr crush with good crush

Show Descr. →

Chert white opaq to wh-cr-tan transl, more fresh and less weathering and trip than above, scatt pp pores & sm vugs

10% Ls wh-cr-gy, vfn-fn xln, dns, subsilty text in pt; 90% Shales mostly gy-dk gy, gmish, some reddish, argil to silty text

30% Ls cr-pl gy-gy, fn xln, dns, silty text in pt; 70% Shales as above

25% Ls cr-pl gy-gy, fn xln, dns, silty text in pt, pyritic in pt.; 75% Shales as above

Chert mostly wh, some cr, mostly fresh, some sli weath'd, Low % more weath'd

Show Descr. →

Chert mostly wh, some cr, mostly opaq-some subop, fresh to sli weath'd to weath'd,

Chert: Abund fresh, abund sli weath'd to weath'd, scatt pp pores & sm vugs

Show Descr. →

samples 99% shales, trace of fresh to sli weath'd chert, white, opaq in spls

4010' spl still 99% shales; trace of Ls cr-tan-brn, vfn-fn xln,dns, grainy text in pt, scatt chalky patches

Ls cr-tan-gy, vfn-fn xln, dns, sli foss in pt

* 4000'-4100' mod % of shales, gy-dk gy

Ls cr-tan-gy, vfn-fn xln,dns with scatt white chalky patches

Ls tan-brn-gy, vfn-fnxln, dns, grainy text in pt

60	3/8	49	179,498
70	3/8	47	172,172
80	3/8	46	168,509
90	3/8	44	161,182

Mud Check CTCH& Mud @ 3879':
Vis Wt WL PV YP
40 9.4 13.0 5 5
Chl Hd pH LCM Solids
2400 80 9.5 2 9.5

7:00 AM, April 09, 2019
* 3879': CTCH, Add Premix to improve mud to dst specifications and to condition hole!

Mud Check @ 3900' had 49 Vis
[Mild Odor, Mod-brt patchy-even Fluor, abund tan marbled to some even tan Stn, sli gassy at rest in tray, Mod gassy when crushed, abund micro-drops FO visible under black light on crush, gassing and str'g decreasing with depth]

7:00 AM, April 10, 2019
Mud Check TOOH/DST1@ 3907':
Vis Wt WL PV YP
40 9.4 12.0 6 6
Chl Hd pH LCM Solids
2600 80 9.7 2 9.5

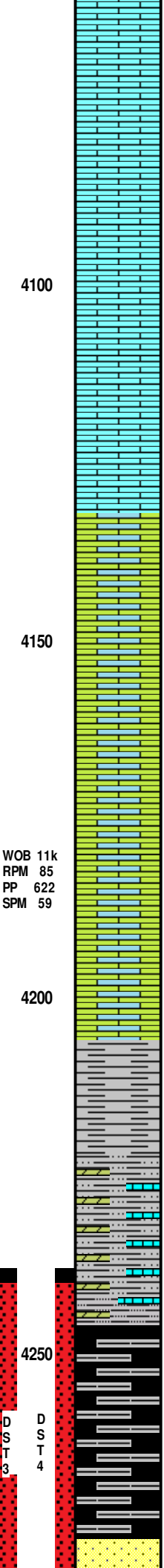
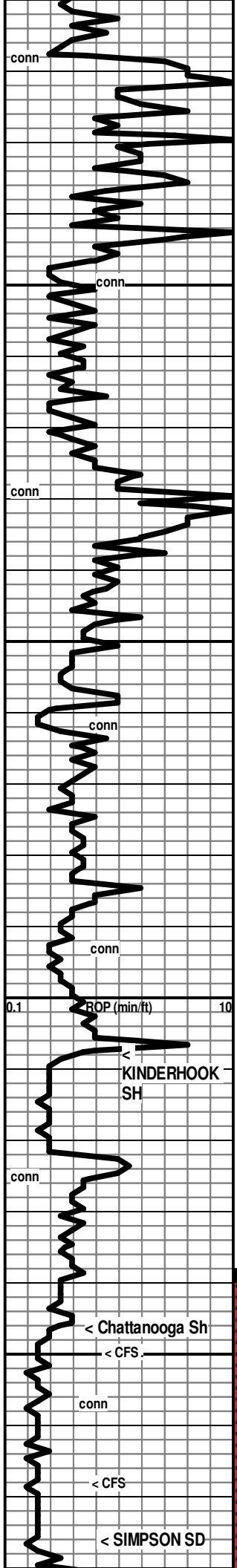
Mud Check @ 3932': Vis 47 Wt 9.3 LCM 2.5

[3934-3960: Fnt Odor on agitation, Abund Brt Flour, low % of patchy tan stn, Rr pcs of sm blk Res patches, v sli gassy in pt, under blk light-fair spattering of micro-drops of fluor hydrocarbon on crush]

[3960-3970: V Fnt Odor on agitation, Mod amount of brt Flour, mod am't of pcs with patchy tan stn, some pcs more gassy than above, under black light fair spatter of micro-drops of fluor hydrocarbon on crush]

7:00 AM, April 11, 2019

DST #2: 3928-3970 (Mississippi)
Times: 45-60-45-60
Initial Open: Stg Blow, b.o.b. 31 min, built to 16 inches, No return blow
Final Open: Stg Blow, b.o.b. 18 min, Built to 28 inches
Rec: 496' Total Fluid, 62' gas in pipe
186' SOCM: 02%o 98%m
127' MCW: 76%w 24%m
183' Wtr: 100%w (Chl/wtr 78000 ppm)
IHP: 1985 FHP: 1891
IFP: 49-156 FFP: 162-225
ISIP: 1316 FSIP: 1269
BHT: 124°F



Ls tan-brn-gy, vfn-fnxln, dns, grainy text in pt

Ls tan-brn-gy, vfn-fnxln, dns, grainy text in pt

Ls tan-brn-gy, vfn-fnxln, dns, grainy text in pt, Rr scatt chalky patches & edges, Rr scatt foss

* continued mod shale % in spls, gy-dk gy-blk

Ls tan-brn-gy, vfn-fnxln, dns, grainy text in pt, Rr scatt vhalky patches & edges, Rr scatt foss

Ls Dol Ls wh-cr-tan-brn, fn xln, grainy to subsucrosic text, scatt white chalky patches & edges, scatt grn glauc specks

Dol Dol Ls cr-tan-brn, fn xln, subsucrosic-sucr text, dns to pr vis xln por, Rr wh chalky patches

Dol cr-tan-brn, fn xln, subsucrosic-sucr-grainy, dns to pr vis xln por, scatt glauc specks, scatt white spicules

Dol Sdy Dol Dol Sd, cr-tan-brnsh, withscatt white calc cem, fn xln/fn grn, sucr to grainy, pr vis xln por in pt, abund pl grn-dk grn glauc; some shale pl gy-pl grn, silty/sdy in pt, talc text in pt, scatt pyritic & loose pyr

← 4207 (-3046)

4225' & 4230' spls: much as above, with incr in Shale %: as above plus gy-dk gy-blk shales, abund pyritic & loose pyrite

4240' spl: 75% Shale & silty/mic shale, gy, abund scatt copper-colored specks/spores, some wh calc cem in silty pcs, glauc in pt; 25% Ls & dol ls as above

4250' spl: 90% shale & silt/mic shale, mostly as above with add several pcs per tray of dk gy shale, scratch gy

← 4246 (-3085)

4240' 20" spl: as above with sli incr in dk brn to dk gy shale, scratches brn

4240' 40" spl: Abund dk brn-black shale, subfiss to subsilty to carb, some pcs scratch brn on ceramic plate

4268' 20" spl: 80% dk gy-dk brn-black shales, carb to subsilty text, much scratches brown, some Ls pl gy-cr, fn xln, dns with scat white patches (slough?)

← 4276 (-3115)

< 4276-4282: Sd mostly glassy, some calc & glauc stn'd clusters,

WOB 11k
RPM 85
PP 622
SPM 59

ROP (min/ft)

D
S
T
3

D
S
T
4

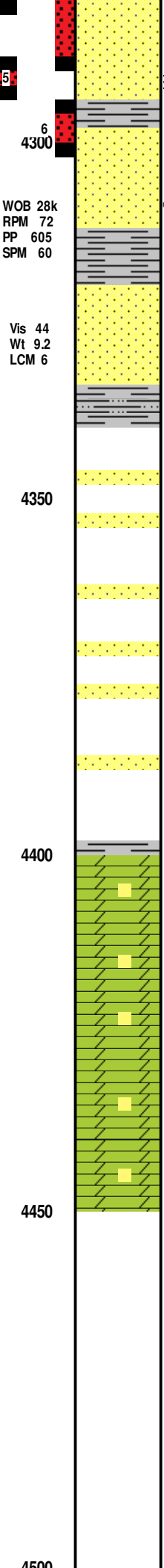
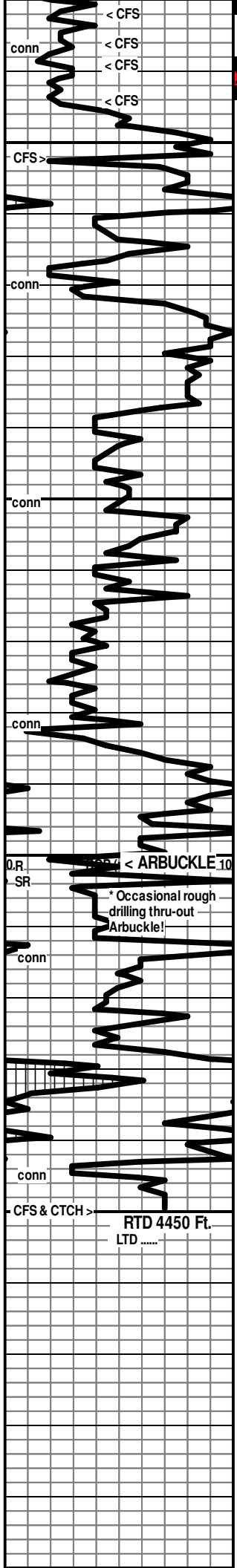
7:00 AM, April 12, 2019

Mud Check Drlg @ 4215':

Vis	Wt	WL	PV	YP
41	9.2	11.0	18	15
Chl	Hd	pH	LCM	Solids
2500	80	9.7	2	9.7

DST #3: 4238-4282 (Simpson)
Times: 30-30-60-60
Initial Open: Wk Blow, built to 1-1/2" i.b.
Final Open: Wk Blow, built to 5-1/2" i.b.
Rec: 10' mud
IHP: 2173 FHP: 2043
IFP: 24-25 FFP: 24-36
ISIP: 104 FSIP: 229
BHT: 122°F

[4276-4282: Fnt Odor, Abund spotty-even mod-brt fluor, under black light abund fluor-coated grns after crush, found a pc with lt tan stn, Rr fluor micro-drops on crush, some oily film on crush, some pcs barren of fluor, some pcs float, some



rd'd clusters, gd-exc tri, fn gm (125u-225u gm sz), rr-gd sort, subrd grms, low % clusters "dirty", some calc cem, some sharp clusters with pr fri, mix pr-fr-gd por

<4283-4289: Sd poorly represented, observed clusters-mixed and as above

<4289-4294: Some pl gm waxy shale; Sd Mix as above, fn grn-sli more crs than above in pt, gd sort, subrd-subang, cem in pt, pr-fr-gd-exc fri, clusters rd-subsharp, pr-fr-gd intergrmlr por

<4295-4302: Abund gr-grmish gy-pl grm-grmish waxy Sh.; Abund Sd, white, wh cem in pt, some pcs clean glassy, fn gm (100-125u gm sz), subrd, gd sort, rd'd clusters, much gd-exc fri, apparent fr-gd por, last cfs some subsharp to near sharp clusters with vpr-pr fri

<4303-4310: spls 50% Sd as above; 50% Shale, gy-grmish gy-grm, waxy text

<4330' spl: 40% Sh gy-dk gy-blk-gm, subfiss to waxy; 60% Sd (appears much as above) white-offwhite, fn gm, subrd, gd sort, rd clusters to subang-anlgr clusters, pr-gd fri, pr to gd intergrmlr por

<4340' spl: 80% Sh gy-grmish, subwaxy to subargil; 20% Sd as above

<4350' & 4360' spls: 60% Sh gy-dk gy-grm, silty in pt; 40% Sd & silt, wh-gy, vfn-fn gm, gd sort, rd'd, pr-fr-gd fri, rd'd-subrd clusters, cem in pt, shaley in pt, glauc in pt, scatt shale specks/flecks, pr-frintergrmlr por, 60' had some pr sorted fn-md gm sd subrd-subanglr, dirty in pt

<4370' spl: 80% Sd gy, dirty in pt, fn-md gm, subrd-subang, pr-fr-gd sort, pr-gd fri, scatt blk sh specks/flecks, scatt pyr patches, some cem, scatt dk glauc specks; 20% Sh gy-dk gy, subsilty in pt [NS]

<4380' spl: 10% shale gy-grm, waxy; 90% Sd gy, vfn-fn gm, gd sort, subrd-subang, some rd clusters, abund subang-ang clusters, mostly pr fri, some fr-gd fri, scatt dk sh/min specks, scatt pl gm patches [NS]

<4390' spl: 05% shale as above; 95% Sd as above

<4400' spl: 05% shale gy-grm, waxy; 95% Sd pl gy-gy, vfn-fn gm, gd sort, subrd-subang, some rd clusters, abund subang-ang clusters, mostly pr fri, some fr-gd fri, scatt dk sh/min specks, scatt pl gm patches [NS]

<4410' spl: 20% Sh gy-dk gy-brt bold gm, gm shale is waxy; 80% Sd wh-gy-grm-cr, mostly fn gm-some md gm, fr-gd sort, subrd-subang, cem in pt, clusters rd'd to subang-anlgr, pr-gd fri

<----- 4401 (-3240)

<4420' spl: 90% Dol & limey Dol, cr, vfn-fn xln, subsucrosic, pr vis xln por to mostly dns [NS]; 10% Sd as above; Tr of Sh as above

Dol cr-tan-gy, vfn-fn xln, dns to pr vis xln por, sdy/ grainy text in pt, rr foss

*(When drilling gets rough, driller backs off a bit to smooth out!)

Dol cr-tan-gy, vfn-fn xln, dns to pr vis xln por, subsucrosic, sdy/ grainy text in pt, rr foss

Dol cr-tan-gy, vfn-fn xln, dns to pr vis xln por, subsucrosic-sucr, sdy/ grainy text in pt to very grainy, rr foss

Mud Check CTCH @ 4450':
 Vis Wt WL PV YP
 46 9.2 15.0 7 38
 Chl Hd pH LCM Solids
 15500 90 9.0 12 9.2

float momentarily then sink]

7:00 AM, April 13, 2019

[4283-4289: V Fnt Odor, clusters have brt speckled to even fluor, few pcs per tray with fr show of gas, sli show of colorless FO on brk, few patches of v lt tan stn, scatt black specks/flecks of black sticky DO]

[4289-4294: Mild Odor, Abund Brt speckled even fluor, tr scatt blk DO specks/flecks, Abund oily film & colorless drops on brk, Rr show lt tan FO on brk, tr of patchy lt tan stn]

[4295-4302: V Fnt Odor on crush, abund moderate even mineral fluor?, Lower % clusters with Brt hydrocarbon fluor, with trace-v sli shows of colorless micro-drops on crush vis under blk light, few clusters v sli gassy on crush, v low % clusters with lt tan stn, Sd appears mostly barren]

[4303-4330: No Odor in cup-v fnt odor when crushed, Abund dull-mod mineral fluor, Mod am't of brt hydrocarbon fluor with fluor specks & micro-drops under blk lt, appears barren in white lite]

[4350' spl: NS, No Odor, No fluor]

DST #4: 4238-4289 (Simpson)
 Times: 30-30-60-60
 Initial Open: Fr Blow, built to 6" i.b.,
 No return blow
 Final Open: Stg Blow, b.o.b. 8 min,
 Blow built to 45 inches, no return blow
 Rec: 868' gas in pipe
 126' SOGCM: 2%g 2%o 96%w
 IHP: 2193 FHP: 1975
 IFP: 27-47 FFP: 54-86
 ISIP: 1029 FSIP: 1506
 BHT: 120°F

DST #5: 4289-4294 (Simpson)
 Times: 45-60-60-90
 Initial Open: Stg Blow, b.o.b. 20 min,
 built to 39", No return blow
 Final Open: Stg Blow, b.o.b. 8 min,
 built to 65", Return blow built to 1/2"
 Rec: 993' gas in pipe
 185' Total Fluid:
 63' WMCO: 54%o 14%w 32%w
 61' WMCO: 50%o 20%w 32%w
 61' SOMCW: 2%o 78%w 20%w
 (Chl/Wtr: 96,000 ppm)
 IHP: 2214 FHP: 2043
 IFP: 25-56 FFP: 58-84
 ISIP: 1537 FSIP: 1550
 BHT: 125°F

RTD 4450 Ft. reached at
 5:00 AM, April 16, 2019!

DST #6: 4295-4302 (Simpson)
 Times: 30-30-45-60
 Initial Open: Wk Blow, built to 4"
 Final Open: Wk Blow, built to 4-1/2"
 Rec: 193' Total Fluid
 10' MCW: 50%w 50%w
 183' Water (Chl 94,000 ppm)
 IHP: 2194 FHP: 2051
 IFP: 24-82 FFP: 84-124
 ISIP: 1544 FSIP: 1554
 BHT: 136°F

Mud Check Drlg @ 4285':
 Vis Wt WL PV YP
 46 9.2 15.0 20 18
 Chl Hd pH LCM Solids



Acid & Cement

NEW WELL

FIELD ORDER N°

BOX 438 • HAYSVILLE, KANSAS 67060
316-524-1225

DATE 4/15/19

IS AUTHORIZED BY: Energy Partners LLC (NAME OF CUSTOMER)
 Address 8918 West 21st Street North City Wichita State K
 To Treat Well VanZant #200-304 Well No. 1 Customer Order No. _____
 As Follows: Lease VanZant
 Sec. Twp. Range S23-T34S-RIW County Sumner State K

CONDITIONS: As a part of the consideration hereof it is agreed that Copeland Acid Service is to service or treat at owners risk, the hereinbefore not to be held liable for any damage that may accrue in connection with said service or treatment. Copeland Acid Service has made no representation, implied, and no representations have been relied on, as to what may be the results or effect of the servicing or treating said well. The consideration is payable. There will be no discount allowed subsequent to such date. 6% interest will be charged after 60 days. Total charges are our invoicing department in accordance with latest published price schedules.

The undersigned represents himself to be duly authorized to sign this order for well owner or operator.

THIS ORDER MUST BE SIGNED BEFORE WORK IS COMMENCED _____ By _____
 Well Owner or Operator Agent

CODE	QUANTITY	DESCRIPTION	UNIT COST
2	50	mileage pump truck	4. ⁰⁰ / ₁
2	50	mileage pickup	2. ⁰⁰ / ₁
2	1	Pump Charge - surface	
2	200	69/40 ppr. 2% sol.	11. ²⁵ / ₁
2	11	Calcium Chloride	30. ⁰⁰ / ₁
2	211	Bulk Charge	1. ²⁵ / ₁
2		Bulk Truck Miles $9.07 T \times 50 = 453.5 Tm \times 1.10/1$	1. ¹⁰ / ₁
		Process License Fee on _____ Gallons	
		TOTAL BILLING	10²

I certify that the above material has been accepted and used; that the above service was performed in a good manner under the direction, supervision and control of the owner, operator or his agent, whose signature appears below.

Copeland Representative Nathan W.

Station G. 5

CIG Drilling
Well Owner, Operator or Agent

Remarks _____