

Confidentiality Requested:

Yes No

**KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION**

Form ACO-1

January 2018

Form must be Typed

Form must be Signed

All blanks must be Filled

**WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE**

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

New Well Re-Entry Workover

Oil WSW SWD

Gas DH EOR

OG GSW

CM (Coal Bed Methane)

Cathodic Other (Core, Expl., etc.): _____

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

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

Deepening Re-perf. Conv. to EOR Conv. to SWD

Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: _____

Spot Description: _____

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

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE NW SE SW

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

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

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

County: _____ Permit #: _____

AFFIDAVIT

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

Submitted Electronically

KCC Office Use ONLY

Confidentiality Requested

Date: _____

Confidential Release Date: _____

Wireline Log Received Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

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

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

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

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

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

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

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

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

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

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	Daystar Petroleum, Inc.
Well Name	GRAVES-EUWER B UNIT 5
Doc ID	1424459

All Electric Logs Run

Dual Induction
Dual Compensated Porosity
Sonic Porosity
Microresistivity

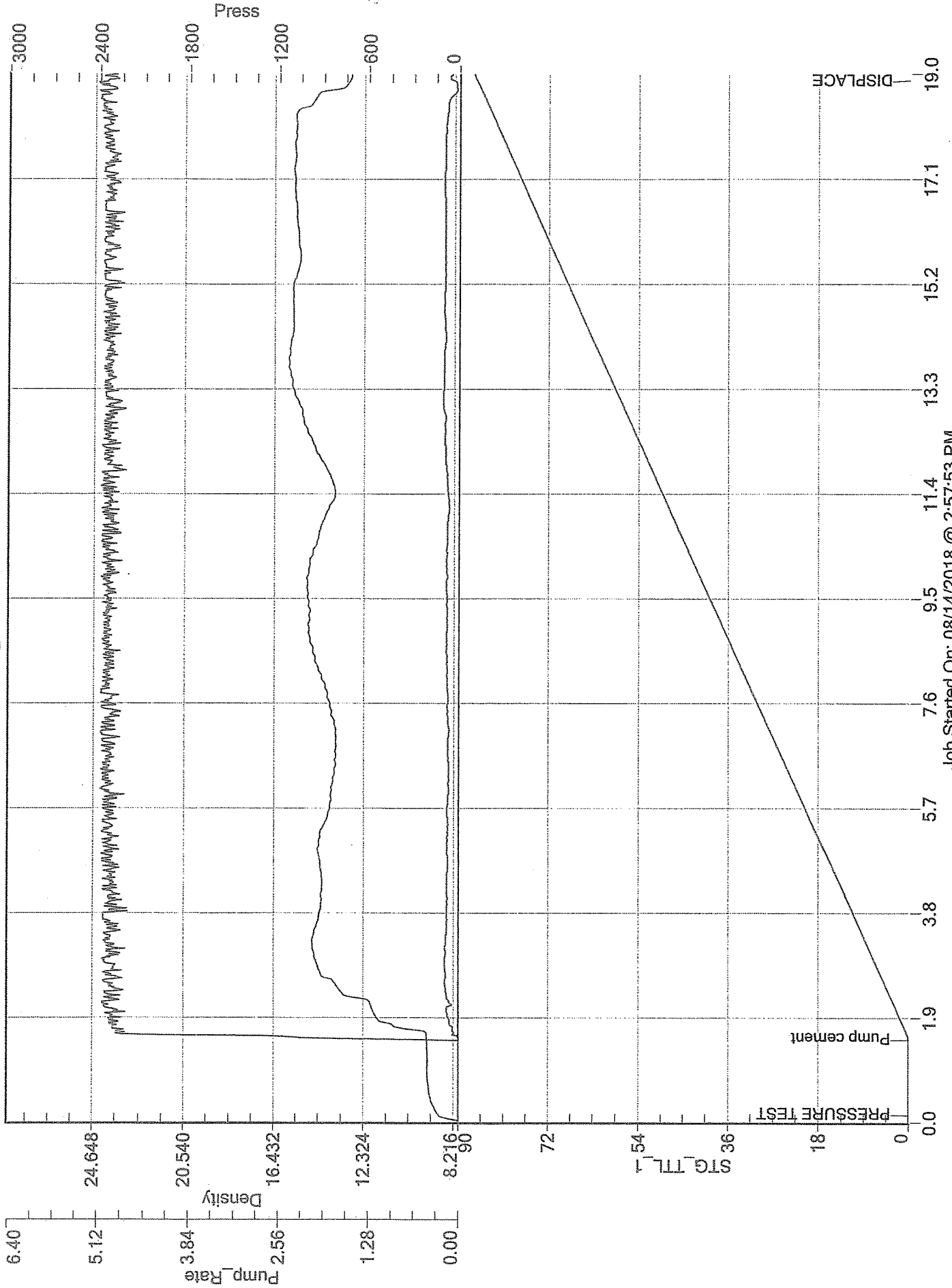
Form	ACO1 - Well Completion
Operator	Daystar Petroleum, Inc.
Well Name	GRAVES-EUWER B UNIT 5
Doc ID	1424459

Tops

Name	Top	Datum
Heebner	3759	-877
Toronto	3776	-894
Lansing	3803	-921
Stark Sh	4131	-1249
BKC	4268	-1386
Marmaton	4294	-1412
Altamont	4328	-1446
Pawnee	4372	-1490
Ft. Scott	4398	-1516
Cher Sh	4410	-1528
Morrow Sh	4591	-1709
Morrow Sd	4612	-1730
Miss	4619	-1737
St. Louis B	4660	-1778

Graves Euwer "B" Unit #5

WELL_NAME



Job Started On: 08/14/2018 @ 2:57:53 PM



Liberal Yard #1717 - Phone 620-624-2277 - 1700 S. Country Estates Road, Liberal KS 67901

PRESSURE PUMPING Job Log

Customer:	Daystar Petroleum Inc.	Cement Pump No.:	38117, 19919 Hrs.	Operator TRK No.:	96816
Address:	Po Box 560	Ticket #:	1718 15824 L	Bulk TRK No.:	14354, 19578 Jesse 70897, 37725 Noel
City, State, Zip:	Eureka Ks 67045	Job Type:	Z42 - Cement Production Casing		
Service District:	1718 - Liberal Ks	Well Type:	OIL		
Well Name and No.:	Graves Euwer "B" Unit #5	Well Location:	16,22,33	County:	Finney State: Ks

Type of Cmt	Sacks	Additives	Truck Loaded On		
AA2 Cement	170	10% Gypsum, 10% Salt, 5# Gilsomite, .8% C-17, 1/4# Defoamer	14354, 19578 Jesse	Front	Back
A-Serv Lite	50	1/4# Polyflake	70897, 37725 Noel	Front	Back
A-Serv Lite	350	1/4# Polyflake	70897, 37725 Noel	Front	Back
AA2 Cement	100	10% Gypsum, 10% Salt, 5# Gilsomite, .8% C-17, 1/4# Defoamer	14354, 19578 Jesse	Front	Back

Lead/Tail:	Weight #1 Gal.	Cu/Ft/sk	Water Requirements	CU. FT.	Man Hours / Personnel	
Tail 1:	14.8	1.51	6.63	256.7	TT Man Hours:	62
Rat & Mouse:				50		
Lead:	12.3	2.03	11.35	710.5		
Tail 2:	14.8	1.51	6.63	151	# of Men on Job:	4

Time (am/pm)	BPM	Volume (BBLs)	Pumps		Pressure (PSI)		Description of Operation and Materials
			T	C	Tubing	Casing	
10:54 AM	6.2	100				600	SLOW RATE TO 2.1BPM @ 370PSI
	2.1	110				500	
11:00	2.1	113				510	LAND PLUG / PRESSURE UP TO 2000PSI
11:02							RELEASE BACK — FLOAT HELD / DROP OPENING TOOL
11:20							PUMP OPENING TOOL W/ 800PSI
11:28							SHUTDOWN / RIG TO CIRCULATE
15:28		18.0 slurry					PLUG RAT & MOUSE W/ 50SX
15:39	6.8	126.5 slurry				240	PUMP 350SX LEAD @ 12.3#
16:03	7	26.8 slurry				300	PUMP 100SX TAIL @ 14.8#
16:08							SHUTDOWN / DROP CLOSING TOOL
16:11	6.9	10				210	DISPLACE
	6.9	20				270	
	6.9	30				320	
	6.9	40				500	
	7	50				660	
16:24	6.7	54				720	SLOW RATE TO BPM @ 550PSI
	2	60				610	
16:29	2	64.4				680	LAND PLUG / PRESSURE UP TO 2040PSI
16:31							RELEASE BACK — FLOAT HELD
							JOB COMPLETE

Size Hole	7 7/8"	Depth	4802'		TYPE	Plug Container		
Size & Wt. Csg.	5 1/2" 15.5#	Depth	4793'	New / Used	DV Tool	2709'	Depth	
Landing Press. 1	484.1psi	Landing Press. 2	671.0psi		Retainer		Depth	
Shoe Jt.	42.52'	Type			Perfs		CIBP	

Customer Signature:	Basic Representative:	Daniel Beck
	Basic Signature:	<i>Daniel Beck</i>
	Date of Service:	8/24/2018



Liberal Yard #1717 - Phone 620-624-2277 - 1700 S. Country Estates Road, Liberal KS 67901

PRESSURE PUMPING

Job Log

Customer:	Daystar Petroleum Inc.	Cement Pump No.:	38117, 19919 Hrs.	Operator TRK No.:	96816
Address:	Po Box 560	Ticket #:	1718 15824 L	Bulk TRK No.:	14354, 19578 Jesse 70897, 37725 Noel
City, State, Zip:	Eureka Ks 67045	Job Type:	Z42 - Cement Production Casing		
Service District:	1718 - Liberal, Ks.	Well Type:	OIL		
Well Name and No.:	Graves Euwer "B" Unit #5	Well Location:	16,22,33	County:	Finney State: Ks

Type of Cmt	Sacks	Additives	Truck Loaded On		
AA2 Cement	170	10% Gypsum, 10% Salt, 5# Gilsomite, .8% C-17, 1/4# Defoamer	14354, 19578 Jesse	Front	Back
A-Serv Lite	50	1/4# Polyflake	70897, 37725 Noel	Front	Back
A-Serv Lite	350	1/4# Polyflake	70897, 37725 Noel	Front	Back
AA2 Cement	100	10% Gypsum, 10% Salt, 5# Gilsomite, .8% C-17, 1/4# Defoamer	14354, 19578 Jesse	Front	Back

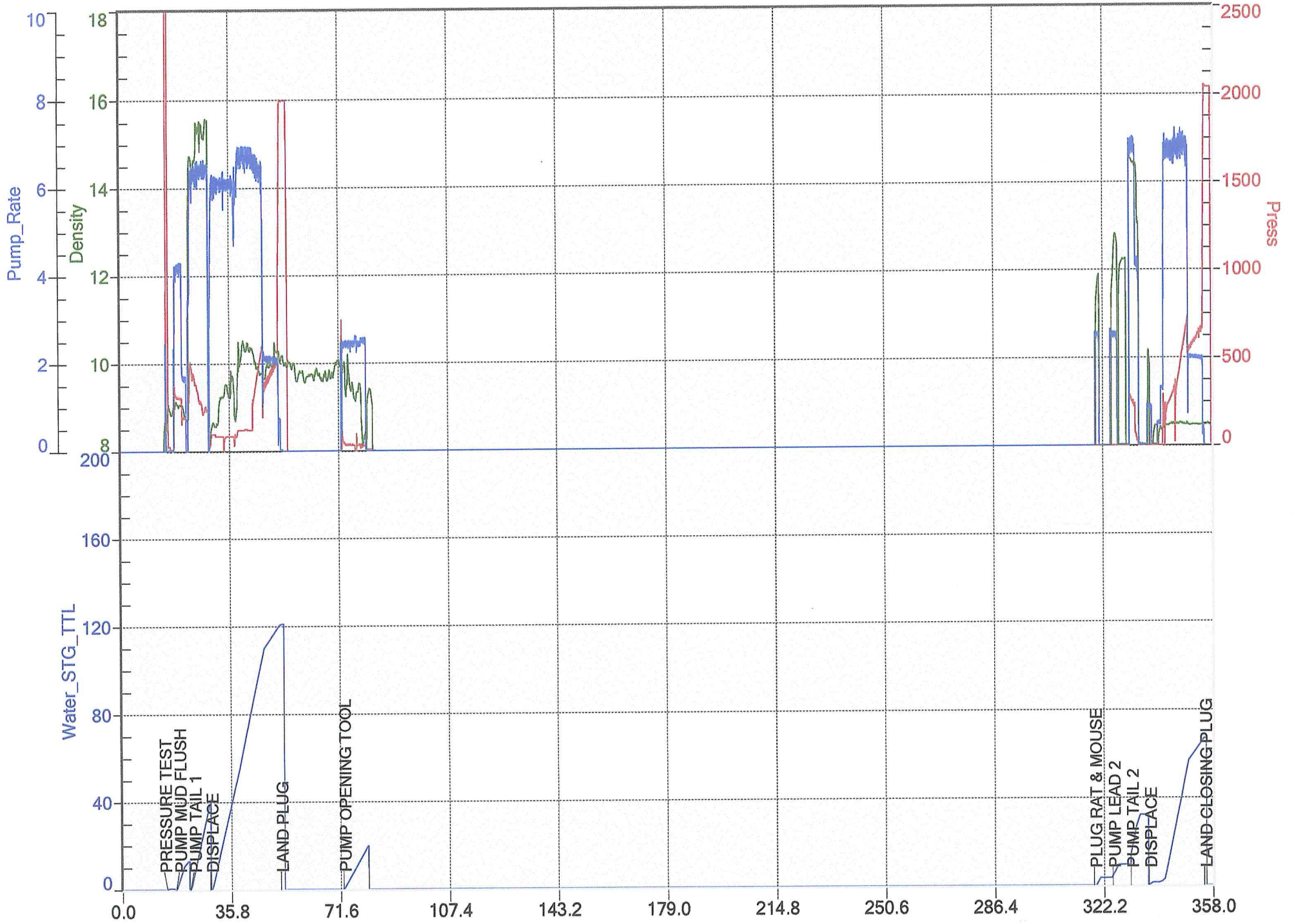
Lead/Tail:	Weight #1 Gal.	Cu/Ft/sk	Water Requirements	CU. FT.	Man Hours / Personnel	
Tail 1:	14.8	1.51	6.63	256.7	TT Man Hours:	62
Rat & Mouse:				50		
Lead:	12.3	2.03	11.35	710.5		
Tail 2:	14.8	1.51	6.63	151	# of Men on Job:	4

Time (am/pm)	(BPM)	Volume (BBLs)	Pumps		Pressure(PSI)		Description of Operation and Materials
			T	C	Tubing	Casing	
4:05 AM							ON LOCATION
5:28 AM							RUN FLOAT EQUIPMENT
7:00							SAFETY MEETING
7:20							RIG UP
8:15 AM							RIG TO CIRCULATE
10:00							RIG TO P.T.
10:13							PRESSURE TEST TO 3100PSI
10:14	4.1	11.9				350	PUMP 500GALLONS MUD FLUSH
10:21	6.2	45.7 slurry				500	PUMP TAIL #1 @ 14.8#
10:30							SHUTDOWN / DROP PLUG / W.P.
10:36	6.2	10				100	DISPLACE W/ H2O 48.4BBL
	6.1	20				80	
	6	30				80	
	6.2	40				80	
	6.1	48.4				80	SWITCH TO MUD 64.4BBL
	6.1	50				80	
	6.9	60				120	
	6.8	70				120	
	6.5	80				290	
	6.7	90				460	

Size Hole	7 7/8"	Depth	4802'		TYPE	Plug Container	
Size & Wt. Csg.	5 1/2" 15.5#	Depth	4793'	New / Used	DV Tool	2709'	Depth
Landing Press. 1	484.1psi	Landing Press. 2	671.0psi		Retainer		Depth
Shoe Jt.	42.52'	Type			Perfs		CIBP

Customer Signature:	Basic Representative:	Daniel Beck
	Basic Signature:	<i>Daniel Beck</i>
	Date of Service:	8/24/2018

Daystar Petroleum Inc.
Graves Euwer





Liberal Yard #1717 - Phone 620-634-3277 - 1700 S. Country Estates Road, Liberal KS 67901

PRESSURE PUMPING

Job Log

Customer	Daystar Petroleum Inc.	Cement Pump No.	28117, 19979 Hrs.	Operator TRK No.	98918	
Address	Po Box 560	Truck #	1718 15624 L	Truck TRK No.	14354, 19578 Jesse	70897, 37725 Noel
City, State, Zip	Eureka Ks 67045	Job Type	Z42 - Cement Production Casing			
Service District	1718 - Liberal Ks	Well Type	OIL			
Well Name and No.	Graves Ewer "B" Unit #5	Well Location	18.22.33	County	Finney	State
						Ks

Type of Cmt	Sacks	Additives	Truck Loaded On		
A-2 Cement	170	10% Gypsum, 10% Salt, 5% Calcium, 8% C-17, 148 Cellulose	14354, 19578 Jesse	Front	Back
A-Serv Life	50	148 Polyfina	70897, 37725 Noel	Front	Back
A-Serv Life	200	148 Polyfina	70897, 37725 Noel	Front	Back
A-2 Cement	100	10% Gypsum, 10% Salt, 5% Calcium, 8% C-17, 148 Cellulose	14354, 19578 Jesse	Front	Back

Lead/Tail:	Weight #1 Gal.	Gal/Ft/sk	Water Requirements	CU. FT.	Man Hours / Personnel	
Tail 1:	14.8	1.51	6.63	256.7	11 Man Hours	52
Rat & Mouse:				50		
Lead:	12.3	2.03	11.35	710.5		
Tail 2:	14.8	1.51	6.63	151	4 of 100 gal	4

Time (m/d/y)	GPM	Volume (GAL)	Pumps		Pressure (PSI)		Description of Operation and Materials
			T	C	Tubing	Casing	
10:54 AM	6.2	100				600	SLOW RATE TO 2.1BPM @ 370PSI
	2.1	110				500	LAND PLUG / PRESSURE UP TO 2000PSI
11:00	2.1	113				510	RELEASE BACK --- FLOAT HOLD / DROP OPENING TOOL
11:02							PUMP OPENING TOOL W/ 500PSI
11:20							SHUTDOWN / RG TO CIRCULATE
11:26							PLUG RAT & MOUSE W/ 505X
15:28		18.0 slurry					PUMP 3505X LEAD @ 12.3M
15:39	6.8	126.5 slurry				240	PUMP 1005X TAIL @ 14.8M
16:03	7	26.8 slurry				300	SHUTDOWN / DROP CLOSING TOOL
16:08							DISPLACE
16:11	6.9	18				210	
	6.9	20				270	
	6.9	30				320	
	6.9	40				500	
	7	50				660	
16:24	6.7	54				720	SLOW RATE TO 8PM @ 550PSI
	2	60				810	LAND PLUG / PRESSURE UP TO 2040PSI
16:29	2	64.4				680	RELEASE BACK --- FLOAT HELD
16:31							JOB COMPLETE

Size Hole	7 7/8"	Depth	4802'		TYPE	Plug Container	
Size & Wt. Csg.	5 1/2" 13.5#	Depth	4792'	New / Used	DV Tool	2700'	Depth
Landing Press. 1	484.1 psi	Landing Press. 2	571.0 psi		Retainer		Depth
Size A	42.52'	Type			Parts		CBP

Customer Signature: _____ Basic Representative: Daniel Beck
 Basic Signature: *Daniel Beck*
 Date of Service: 8/24/2018



Liberal Yard #1717 - Phone 620-624-2277 - 1700 S. Country Estates Road, Liberal KS 67901

PRESSURE PUMPING Job Log

Customer:	Daystar Petroleum Inc.	Contract Pump No.:	38117, 19578 PHS	Operator TRK No.:	90018		
Address:	Po Box 560	Tricket #:	1718 15828 L	Roll TRK No.:	14354, 19578 Jesse	70897, 37725 Noel	
City, State, Zip:	Eureka Ks 67045	Job Type:	Z42 - Cement Production Casing				
Service District:	1718 - Liberal, Ks.	Mud Type:	OIL				
Well Name and No.:	Graves Ewater "B" Unit #5	Well Location:	18.22.33	County:	Finney	State:	Ks

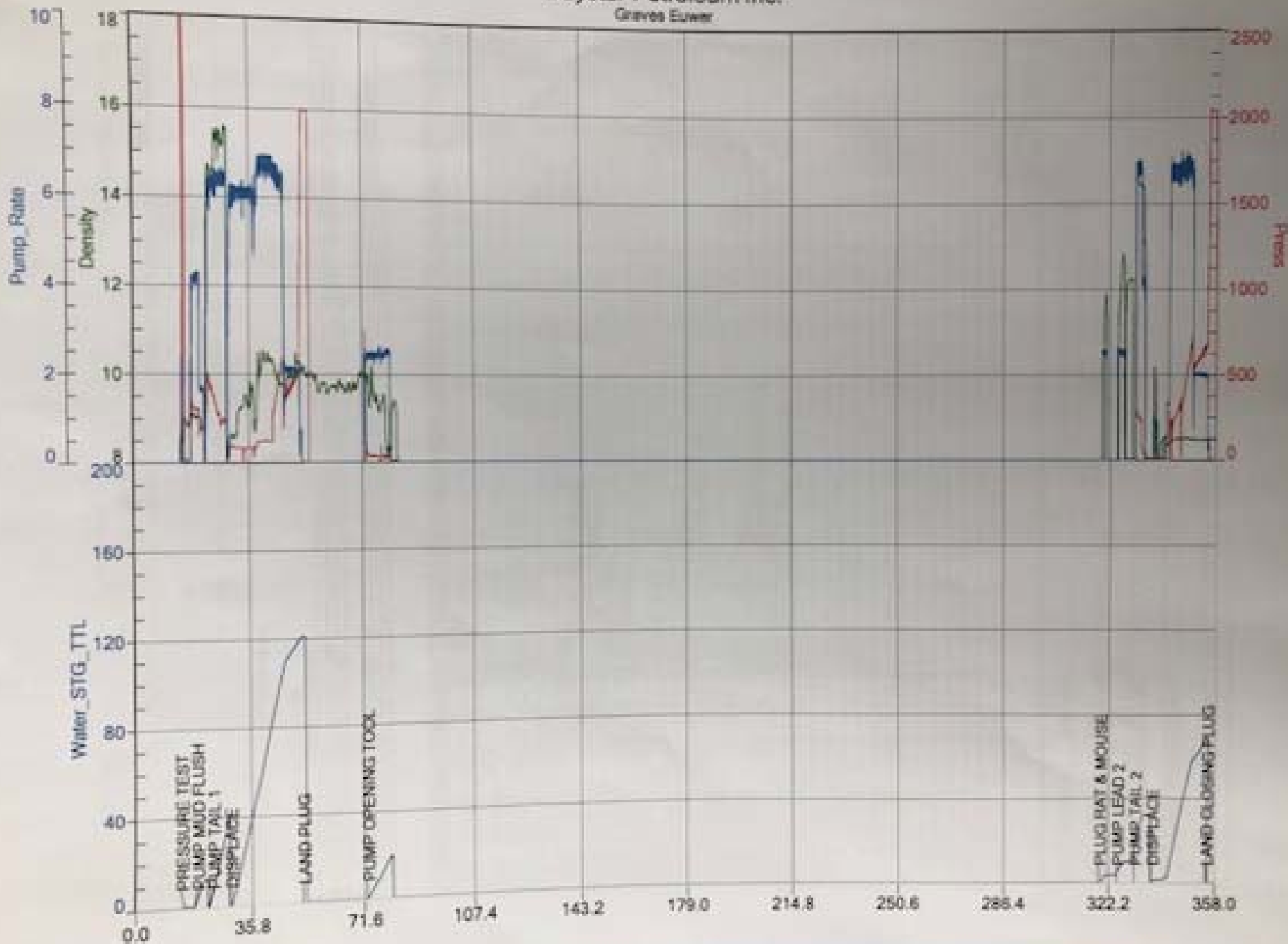
Type of Cmt	Sacks	Additives	Truck Loaded On	Front	Back
A-2 Cement	170	10% Gypsum, 10% Salt, 1% Calcium, 8% C-17, 1% Defoamer	14354, 19578 Jesse	Front	Back
A-Sand Lite	50	1% Polyfak	70897, 37725 Noel	Front	Back
A-Sand Lite	350	1% Polyfak	70897, 37725 Noel	Front	Back
A-2 Cement	100	10% Gypsum, 10% Salt, 1% Calcium, 8% C-17, 1% Defoamer	14354, 19578 Jesse	Front	Back
Lead/Tail:	Weight #1 Gal.	CuF2/ok	Water Requirements	CUL FT.	Man Hours / Personnel
Tail 1:	14.8	1.51	6.63	256.7	TT Man Hours: 62
Rat & Mouse:				50	
Lead:	12.3	2.03	11.35	710.5	
Tail 2:	14.8	1.51	6.63	151	# of men on job: 4

Time (am/pm)	SPM	Volume (BBL/S)	Pumps		Pressure (PSI)		Description of Operation and Materials
			T	C	Tubing	Casing	
4:05 AM							ON LOCATION
5:28 AM							RUN FLOAT EQUIPMENT
7:00							SAFETY MEETING
7:20							RIG UP
8:15 AM							RIG TO CIRCULATE
10:00							RIG TO P.T.
10:13							PRESSURE TEST TO 3100PSI
10:14	4.1	11.9				350	PUMP 500GALLONS MUD FLUSH
10:21	6.2	45.7 slurry				500	PUMP TAIL #1 @ 14.5M
10:30						100	SHUTDOWN / DROP PLUG / W.P.
10:36	6.2	10				80	DISPLACE W/ H2O 48 48BBL
	6.1	20				80	
	6	30				80	
	6.2	40				80	
	6.1	48.4				80	SWITCH TO MUD 64 48BBL
	6.1	50				80	
	6.9	60				120	
	6.8	70				120	
	6.5	80				200	
	6.7	90				460	

Size Hole	7 7/8"	Depth	4802'		TYPE	Plug Container	
Size & Wt. Cap	5 1/2" 15.5#	Depth	4793'	New / Used	OV Tool	2709'	Depth
Landing Press. 1	484.1psi	Landing Press. 2	671.0psi		Retainer		Depth
Shot A	42-52"	Type			Perfs		C&P

Customer Signature: _____ Basic Representative: Daniel Beck
 Basic Signature: *Daniel Beck*
 Date of Service: 5/24/2018

Daystar Petroleum Inc.
Graves Euwer





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Daystar Petroleum Inc.
 522 N Main St.
 P.O. Box 560
 Eureka KS 67045
 ATTN: Jon Christensen

16-22s-33w Finney Co KS

Graves Euwer BUnit 5

Job Ticket: 64341 **DST#: 1**
 Test Start: 2018.08.17 @ 00:27:15

GENERAL INFORMATION:

Formation: **E**
 Deviated: **No** Whipstock: **ft (KB)** Test Type: **Conventional Bottom Hole (Initial)**
 Time Tool Opened: **02:37:00** Tester: **Mike Roberts**
 Time Test Ended: **09:07:45** Unit No: **81**
Interval: 3902.00 ft (KB) To 3918.00 ft (KB) (TVD) Reference Elevations: **2882.00 ft (KB)**
 Total Depth: **3918.00 ft (KB) (TVD)** **2872.00 ft (CF)**
 Hole Diameter: **7.88 inches** Hole Condition: **Fair** KB to GR/CF: **10.00 ft**

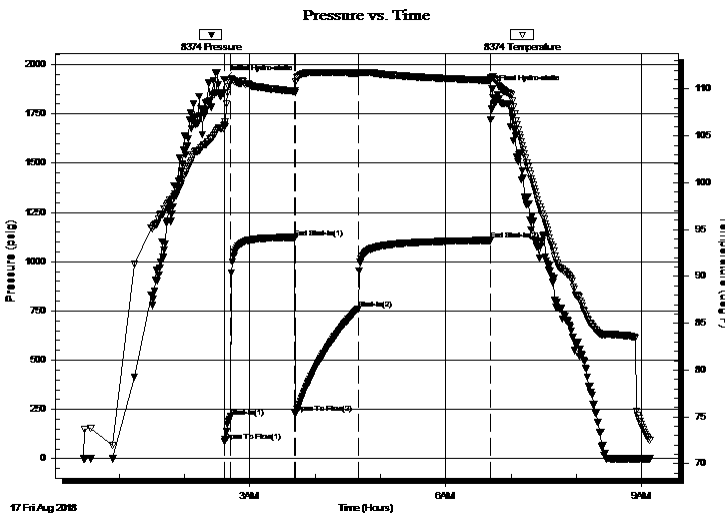
Serial #: 8374

Outside

Press@RunDepth: **760.22 psig @ 3903.00 ft (KB)** Capacity: **8000.00 psig**
 Start Date: **2018.08.17** End Date: **2018.08.17** Last Calib.: **2018.08.18**
 Start Time: **00:27:15** End Time: **09:07:45** Time On Btm: **2018.08.17 @ 02:36:30**
 Time Off Btm: **2018.08.17 @ 06:42:30**

TEST COMMENT: IF:BOB in 2 min Built to 18"
 IS:No return blow
 FF:BOB in 2 min. Built to 160"
 FS:No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1925.06	106.16	Initial Hydro-static
1	87.81	105.99	Open To Flow (1)
6	212.62	110.88	Shut-In(1)
65	1121.86	109.78	End Shut-In(1)
65	229.16	109.61	Open To Flow (2)
124	760.22	111.70	Shut-In(2)
245	1108.66	110.93	End Shut-In(2)
246	1875.25	111.21	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
492.00	sw 100%sw	4.11
1054.00	mcw with trace of oil 3&m 97%w	14.78
62.00	mcw with trace of oil 50%m 50%w	0.87

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Daystar Petroleum Inc.

16-22s-33w Finney Co KS

522 N Main St.
P.O. Box 560
Eureka KS 67045
ATTN: Jon Christensen

Graves Euwer BUnit 5

Job Ticket: 64341 **DST#: 1**
Test Start: 2018.08.17 @ 00:27:15

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 51.00 sec/qt
Water Loss: 10.57 in³
Resistivity: 0.00 ohm.m
Salinity: 8800.00 ppm
Filter Cake: 1.00 inches

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

Oil API: 0 deg API
Water Salinity: 25000 ppm

Recovery Information

Recovery Table

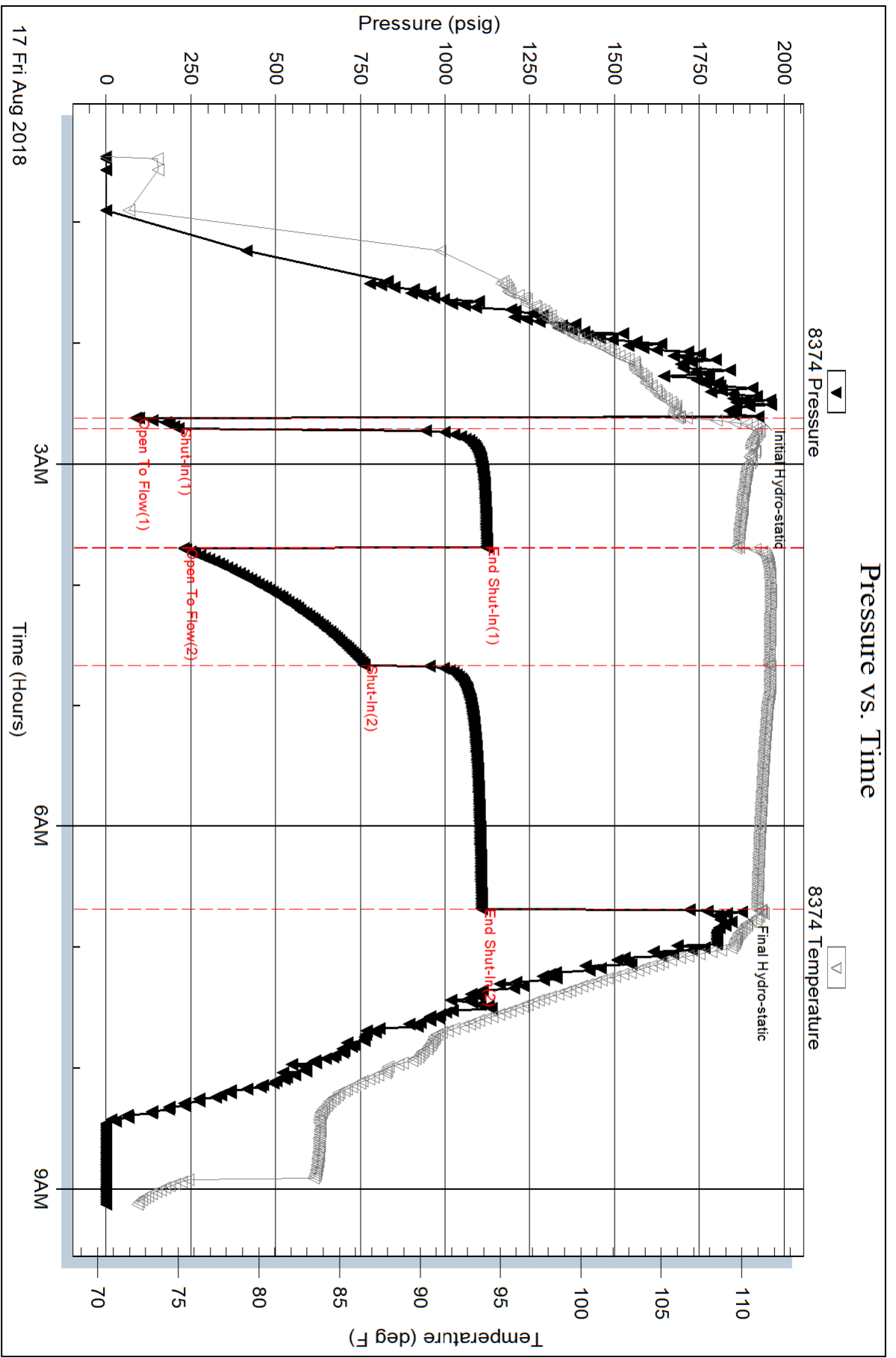
Length ft	Description	Volume bbl
492.00	sw 100%sw	4.114
1054.00	mcw with trace of oil 3&m 97%w	14.785
62.00	mcw with trace of oil 50%m 50%w	0.870

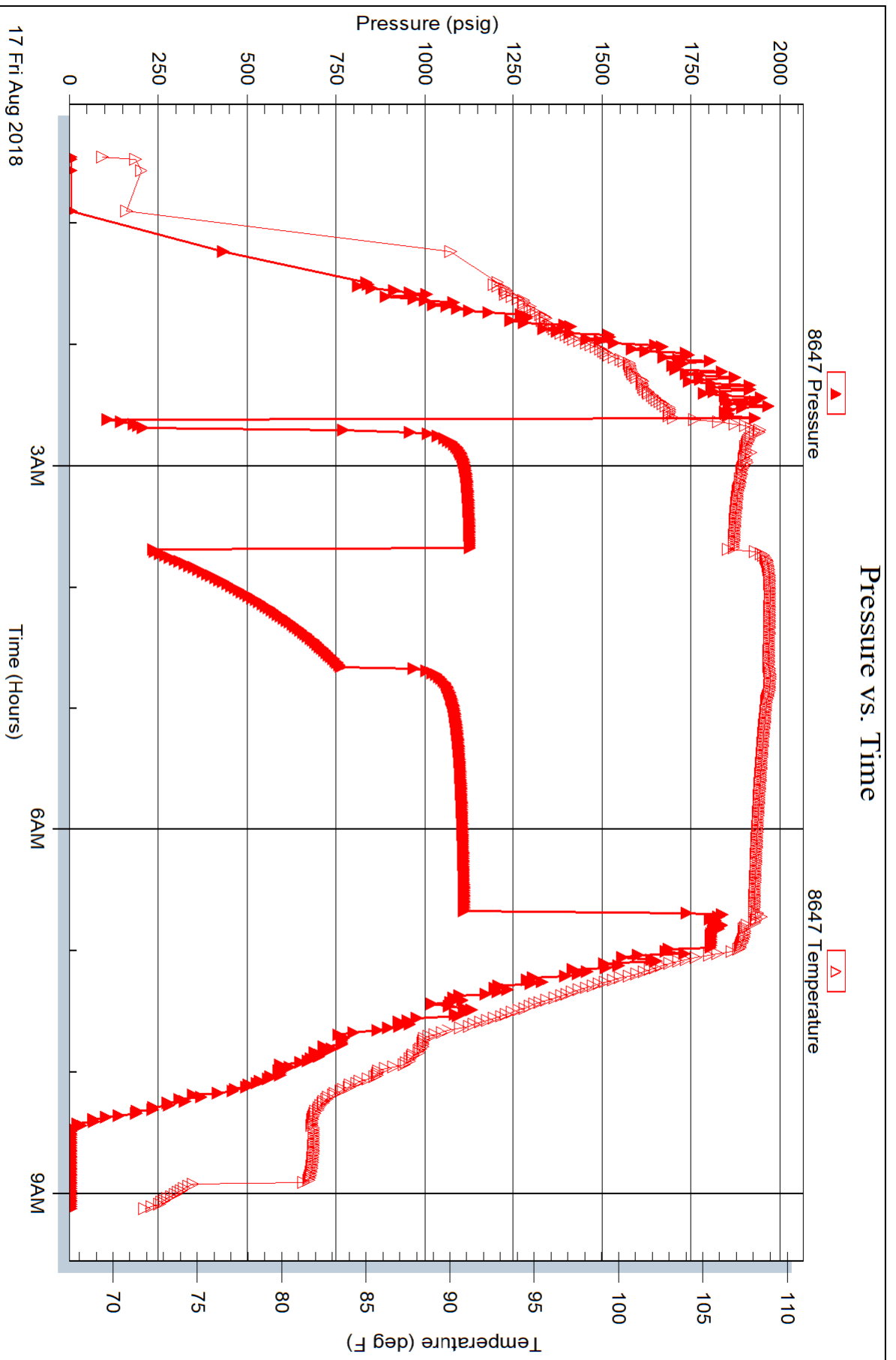
Total Length: 1608.00 ft Total Volume: 19.769 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: RW= .293 @ 69.7*= 25,000 ppm







TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Daystar Petroleum Inc.
 522 N Main St.
 P.O. Box 560
 Eureka KS 67045
 ATTN: Jon Christensen

16-22s-33w Finney Co KS

Graves Euwer BUnit 5

Job Ticket: 64342 **DST#: 2**
 Test Start: 2018.08.18 @ 20:03:15

GENERAL INFORMATION:

Formation: **H**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 21:52:15
 Time Test Ended: 00:56:15
 Interval: **4000.00 ft (KB) To 4025.00 ft (KB) (TVD)**
 Total Depth: 4025.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Mike Roberts
 Unit No: 81
 Reference Elevations: 2882.00 ft (KB)
 2872.00 ft (CF)
 KB to GR/CF: 10.00 ft

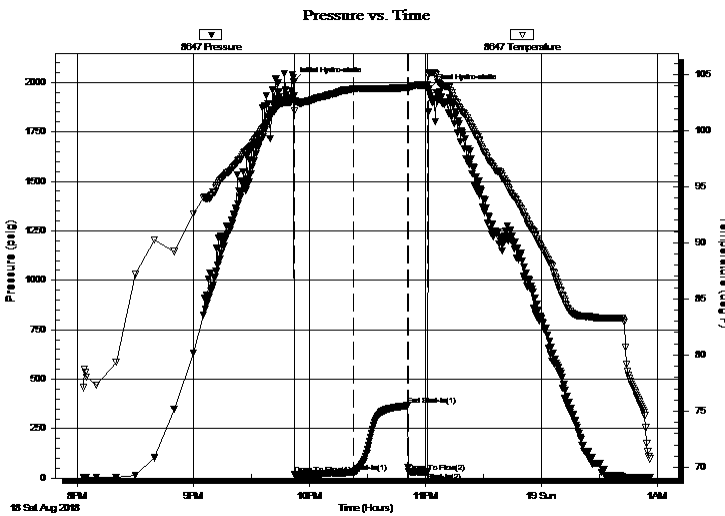
Serial #: 8647

Inside

Press@RunDepth: 28.48 psig @ 4001.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.08.18 End Date: 2018.08.19 Last Calib.: 2018.08.19
 Start Time: 20:03:15 End Time: 00:56:15 Time On Btm: 2018.08.18 @ 21:52:00
 Time Off Btm: 2018.08.18 @ 23:02:00

TEST COMMENT: IF: Built to weak surface blow and died in 5 min.
 IS: No return blow
 FF: No blow -----pulled test
 FS:

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2004.71	103.06	Initial Hydro-static
1	18.98	101.75	Open To Flow (1)
31	28.48	103.76	Shut-In(1)
59	366.28	103.83	End Shut-In(1)
60	31.06	103.79	Open To Flow (2)
70	31.90	104.05	Shut-In(2)
70	1967.01	105.10	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud with show of oil (1")	0.02

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Daystar Petroleum Inc.

16-22s-33w Finney Co KS

522 N Main St.
P.O. Box 560
Eureka KS 67045
ATTN: Jon Christensen

Graves Euwer BUnit 5

Job Ticket: 64342 **DST#: 2**
Test Start: 2018.08.18 @ 20:03:15

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: 71.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.58 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 6900.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

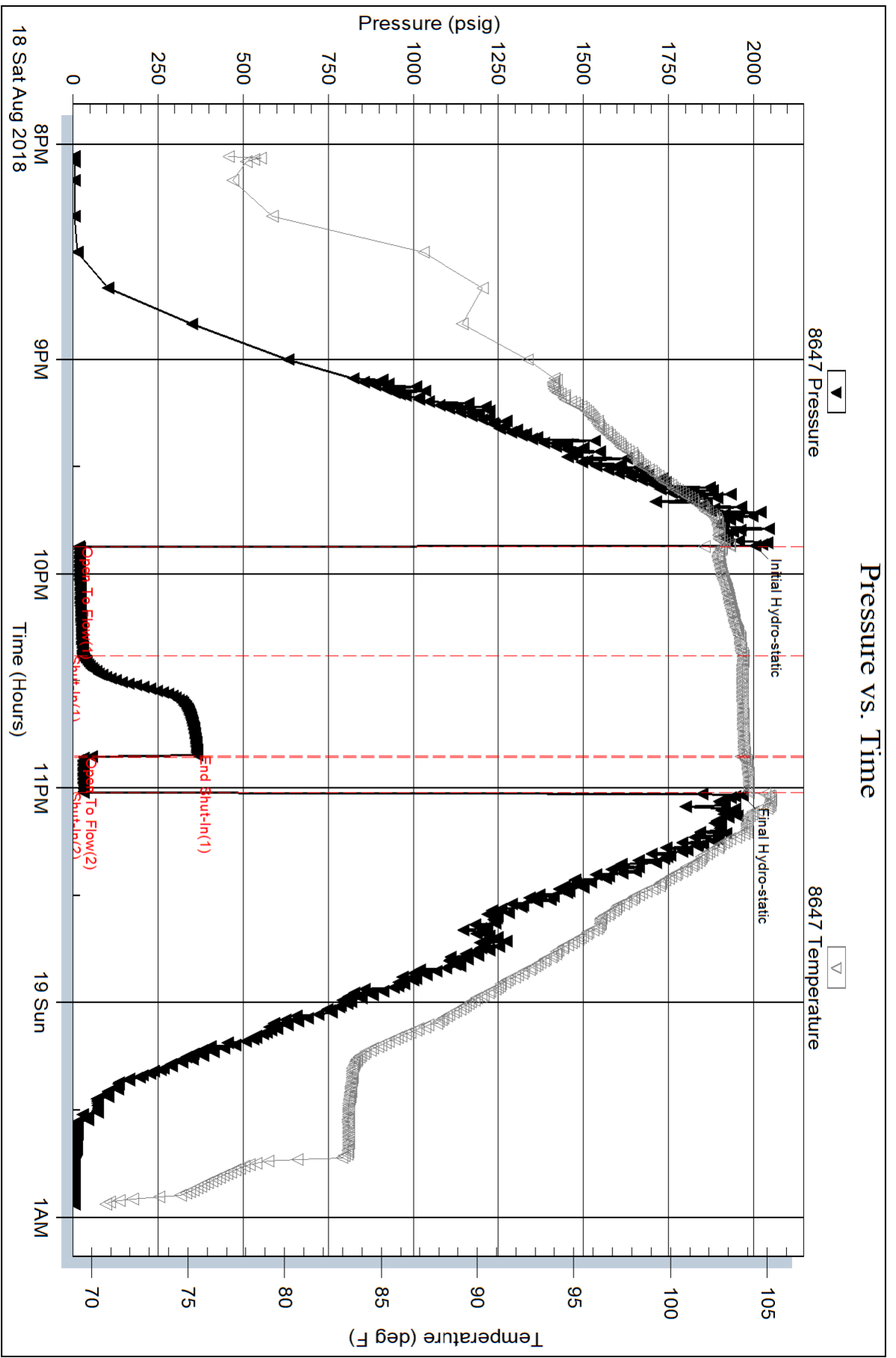
Length ft	Description	Volume bbl
5.00	mud with show of oil (1")	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:

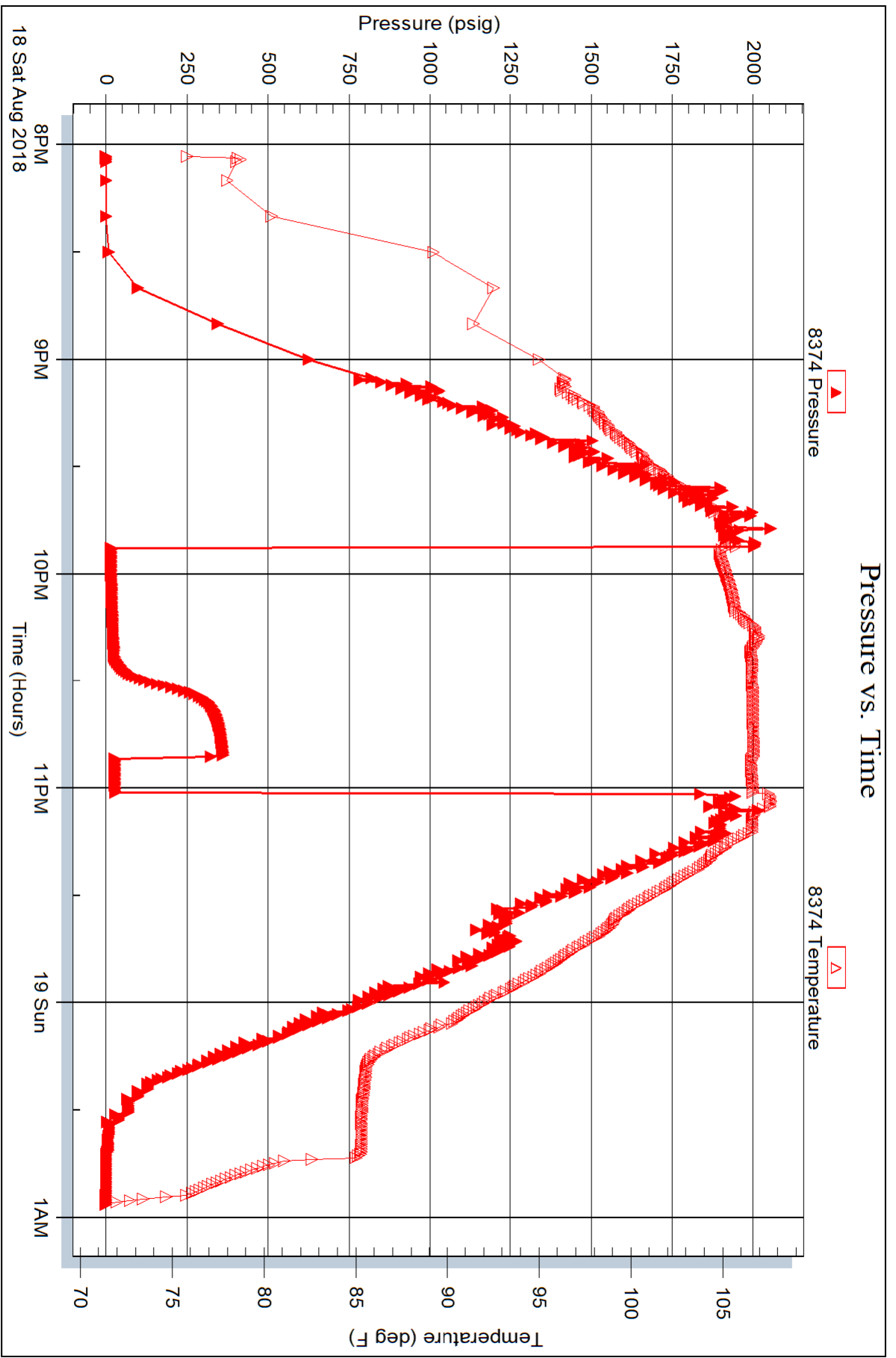


Serial #: 8374

Outside Daystar Petroleum Inc.

Graves Eiu er BUnit 5

DST Test Number: 2





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Daystar Petroleum Inc.
 522 N Main St.
 P.O. Box 560
 Eureka KS 67045
 ATTN: Jon Christensen

16-22s-33w Finney Co KS

Graves Euwer BUnit 5

Job Ticket: 64343 **DST#: 3**
 Test Start: 2018.08.19 @ 09:12:15

GENERAL INFORMATION:

Formation: **J**
 Deviated: **No** Whipstock: ft (KB)
 Time Tool Opened: 11:09:30
 Time Test Ended: 16:44:30
 Interval: **4049.00 ft (KB) To 4068.00 ft (KB) (TVD)**
 Total Depth: 4068.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Mike Roberts
 Unit No: 81
 Reference Elevations: 2882.00 ft (KB)
 2872.00 ft (CF)
 KB to GR/CF: 10.00 ft

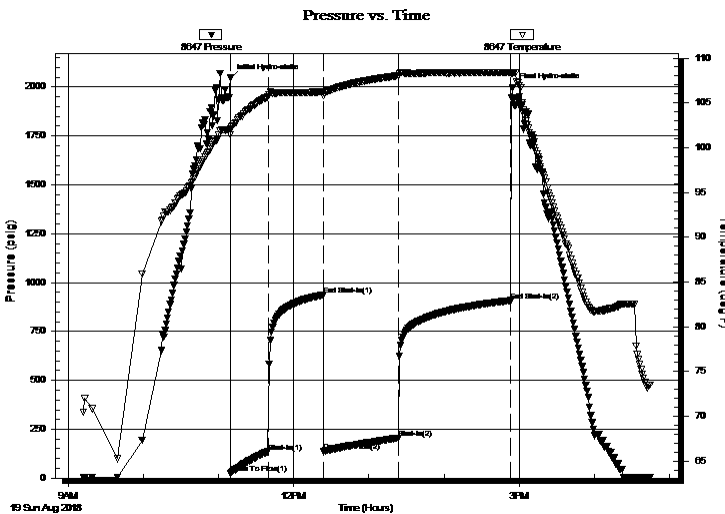
Serial #: 8647

Inside

Press@RunDepth: 204.95 psig @ 4050.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.08.19 End Date: 2018.08.19 Last Calib.: 2018.08.19
 Start Time: 09:12:15 End Time: 16:44:30 Time On Btm: 2018.08.19 @ 11:09:15
 Time Off Btm: 2018.08.19 @ 14:54:30

TEST COMMENT: IF: Built to 11" blow
 IS: Weak surface blow that died
 FF: Built to 12 1/2" blow
 FS: Weak surface blow that died

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2045.08	102.07	Initial Hydro-static
1	22.68	101.46	Open To Flow (1)
31	134.01	105.66	Shut-In(1)
75	936.91	106.26	End Shut-In(1)
75	137.77	105.82	Open To Flow (2)
134	204.95	108.04	Shut-In(2)
224	908.14	108.41	End Shut-In(2)
226	1994.72	108.27	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
186.00	gcomw 2%g 3%o 10%m 85%w	0.91
123.00	gcw om 5%g 10%w 15%o 70%m	0.63
125.00	gco 5%g 95%o	1.75

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Daystar Petroleum Inc.
522 N Main St.
P.O. Box 560
Eureka KS 67045
ATTN: Jon Christensen

16-22s-33w Finney Co KS
Graves Euwer BUnit 5
Job Ticket: 64343 **DST#: 3**
Test Start: 2018.08.19 @ 09:12:15

Mud and Cushion Information

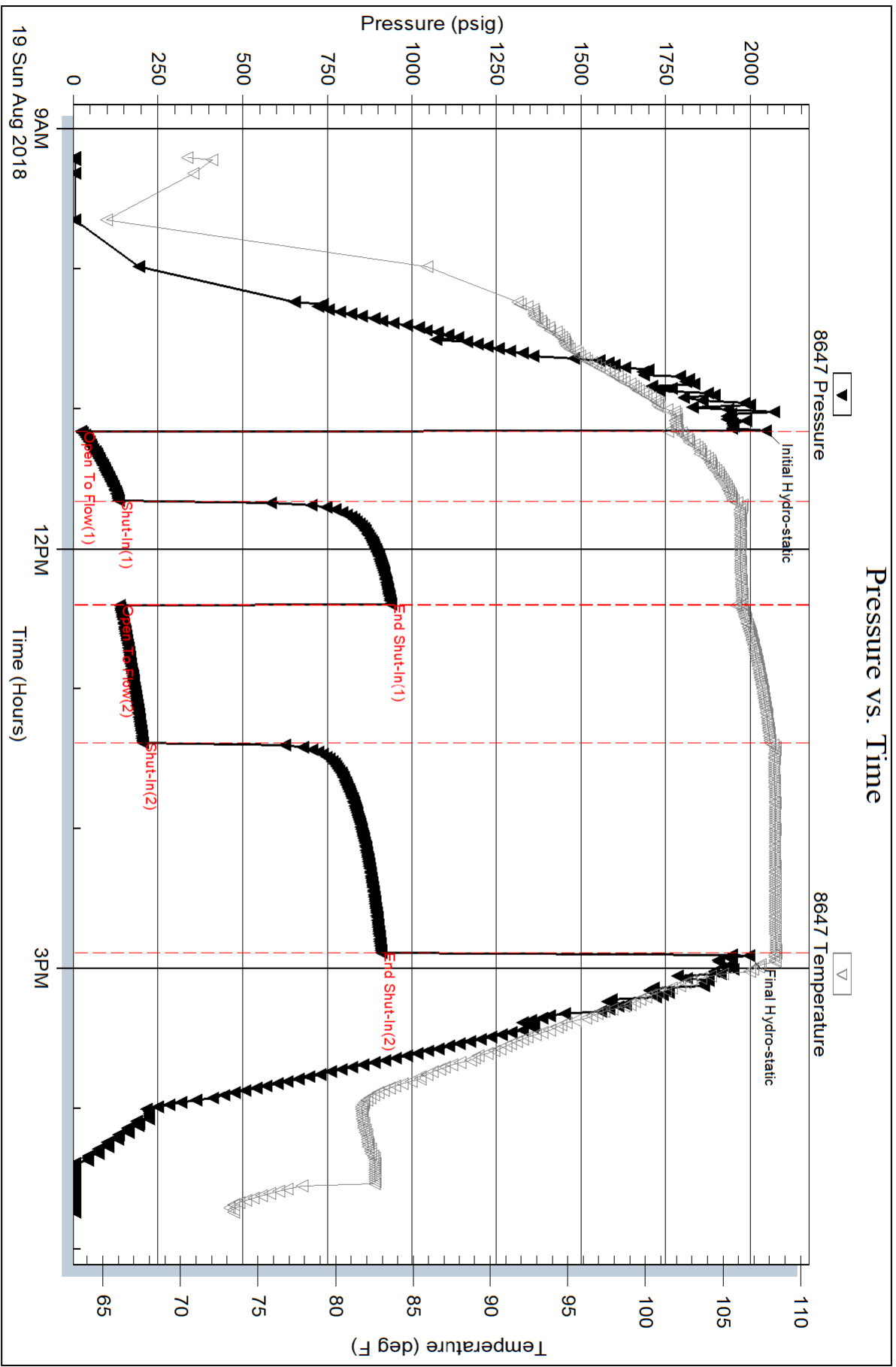
Mud Type: Gel Chem	Cushion Type:	Oil API: 27 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 30000 ppm
Viscosity: 71.00 sec/qt	Cushion Volume: bbl	
Water Loss: 9.57 in ³	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 6900.00 ppm		
Filter Cake: 1.00 inches		

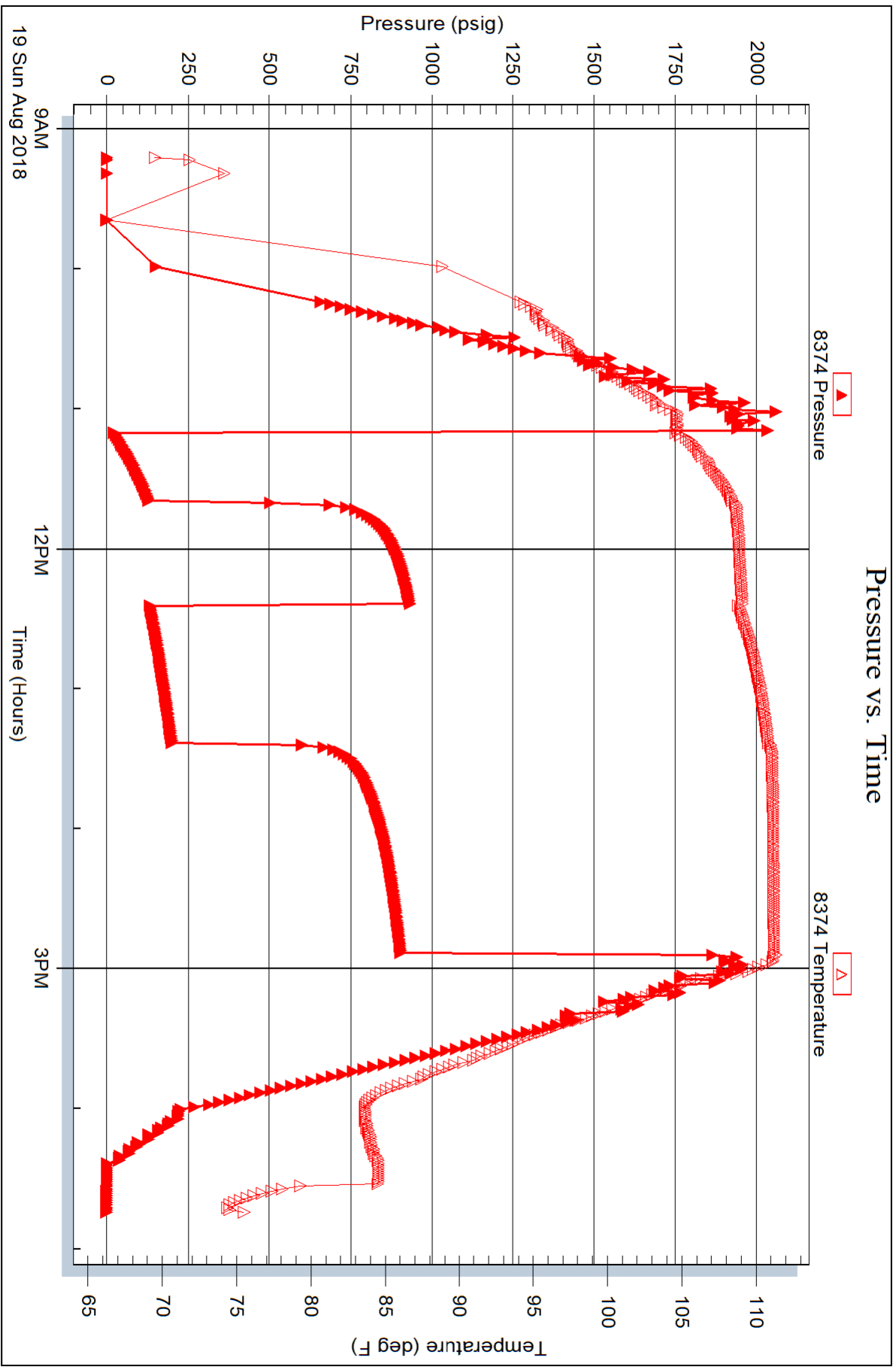
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
186.00	gcomw 2%g 3%o 10%m 85%w	0.915
123.00	gcw om 5%g 10%w 15%o 70%m	0.632
125.00	gco 5%g 95%o	1.753

Total Length: 434.00 ft Total Volume: 3.300 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: API= 29 @ 80 corrected to 27 @ 60
 RW= .238@ 79.4 = 30,000 ppm







**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Daystar Petroleum Inc.
522 N Main St.
P.O. Box 560
Eureka KS 67045
ATTN: Jon Christensen

16-22s-33w Finney Co KS

Graves Euwer BUnit 5

Job Ticket: 64344 **DST#: 4**
Test Start: 2018.08.20 @ 02:45:15

GENERAL INFORMATION:

Formation: **K**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 04:49:30
Time Test Ended: 10:48:00
Test Type: Conventional Bottom Hole (Reset)
Tester: Mike Roberts
Unit No: 81
Interval: **4128.00 ft (KB) To 4152.00 ft (KB) (TVD)**
Reference Elevations: 2882.00 ft (KB)
Total Depth: 4152.00 ft (KB) (TVD) 2872.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 10.00 ft

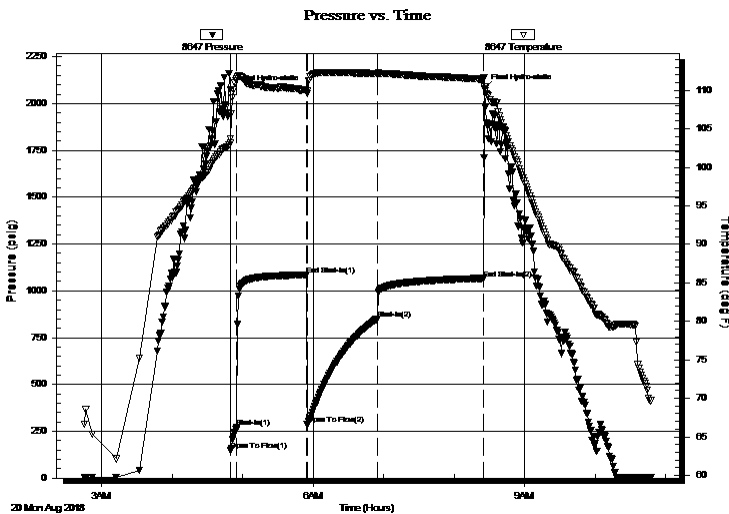
Serial #: 8647

Inside

Press@RunDepth: 850.33 psig @ 4129.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2018.08.20 End Date: 2018.08.20 Last Calib.: 2018.08.20
Start Time: 02:45:15 End Time: 10:48:00 Time On Btm: 2018.08.20 @ 04:49:15
Time Off Btm: 2018.08.20 @ 08:26:00

TEST COMMENT: IF:BOB in 2 min. Built to 30"
IS:No return blow
FF:BOB in 2 min. Built to 202 3/4 "
FS:No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2074.95	103.75	Initial Hydro-static
1	146.77	103.13	Open To Flow (1)
6	269.33	111.46	Shut-In(1)
66	1085.05	109.91	End Shut-In(1)
66	285.38	109.59	Open To Flow (2)
125	850.33	112.18	Shut-In(2)
216	1065.45	111.46	End Shut-In(2)
217	2080.24	110.44	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1298.00	sw 100%sw	15.42
186.00	mcw 6%m 94%w	2.61
310.00	w cm 30%w 70%m	4.35
62.00	w cm 40%w 60%m	0.87

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Daystar Petroleum Inc.

16-22s-33w Finney Co KS

522 N Main St.
P.O. Box 560
Eureka KS 67045
ATTN: Jon Christensen

Graves Euwer BUnit 5

Job Ticket: 64344 **DST#: 4**
Test Start: 2018.08.20 @ 02:45:15

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 54.00 sec/qt
Water Loss: 9.58 in³
Resistivity: 0.00 ohm.m
Salinity: 8800.00 ppm
Filter Cake: 1.00 inches

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

Oil API: 0 deg API
Water Salinity: 28000 ppm

Recovery Information

Recovery Table

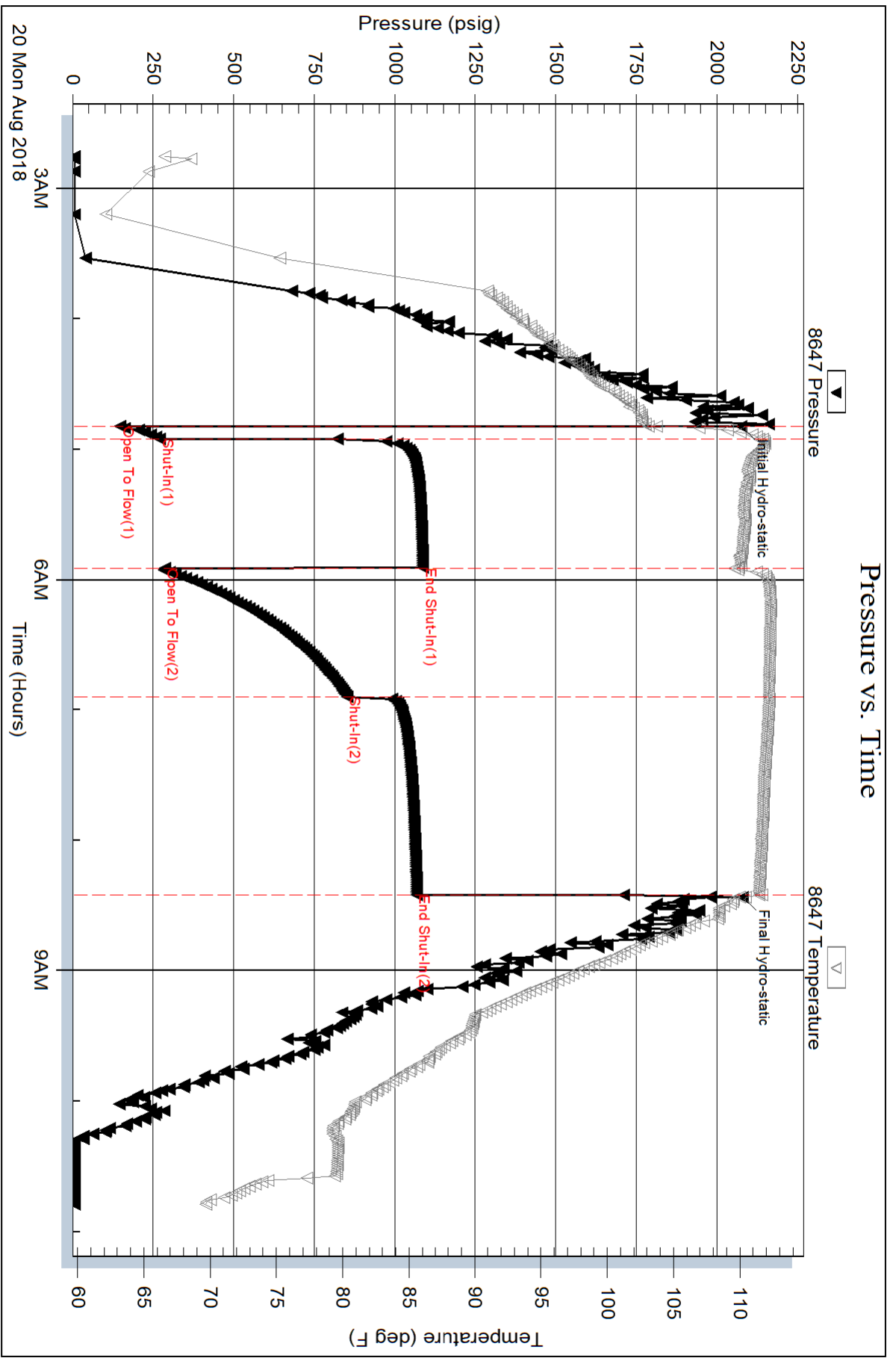
Length ft	Description	Volume bbl
1298.00	sw 100%sw	15.420
186.00	mcw 6%m 94%w	2.609
310.00	w cm 30%w 70%m	4.348
62.00	w cm 40%w 60%m	0.870

Total Length: 1856.00 ft Total Volume: 23.247 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: RW= .286 @ 72.4= 28,000 ppm

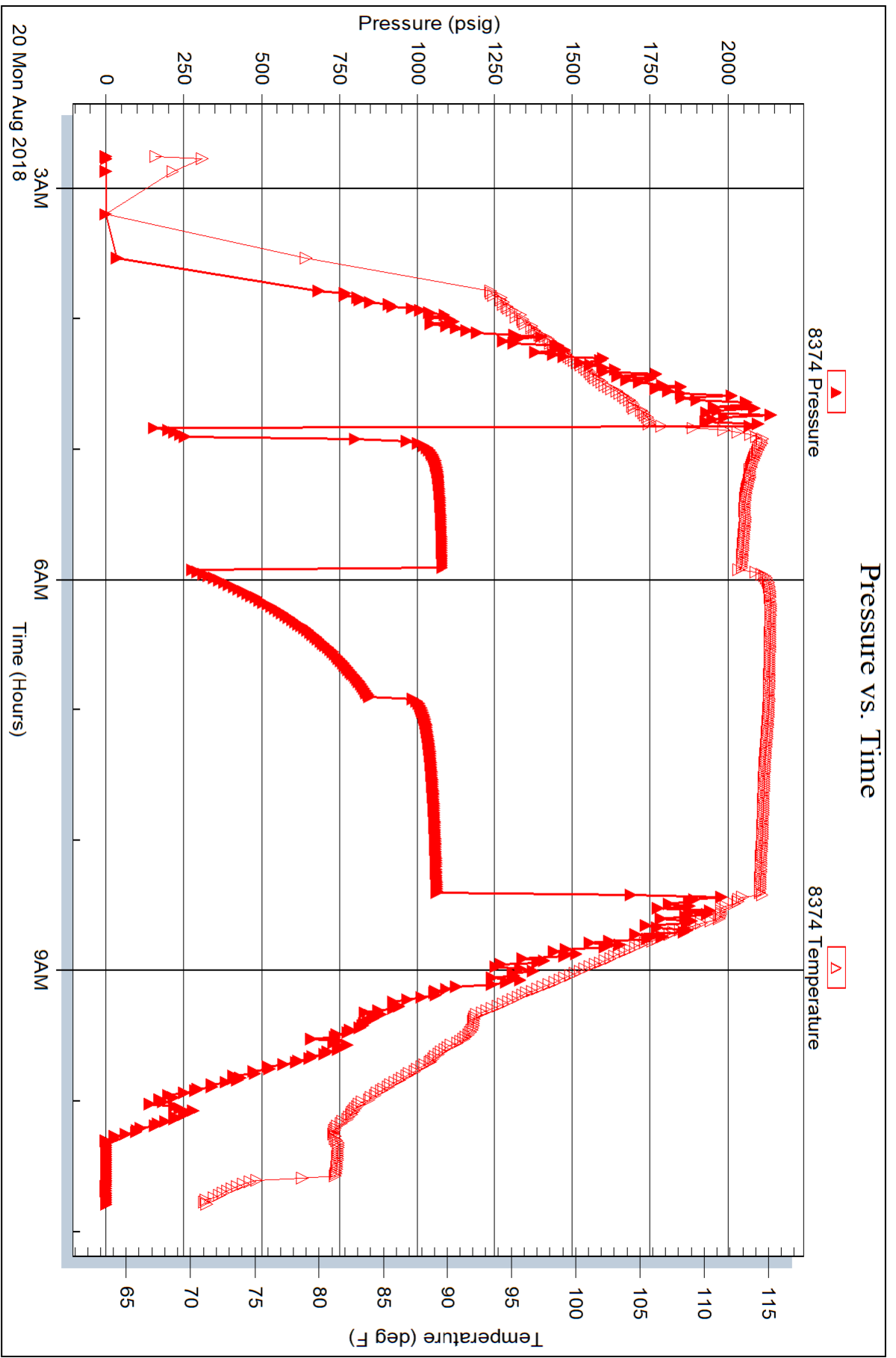


Serial #: 8374

Outside Daystar Petroleum Inc.

Graves Eiuwer Blunit 5

DST Test Number: 4



Trilobite Testing, Inc

Ref. No: 64344

Printed: 2018.08.20 @ 11:28:19



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Daystar Petroleum Inc.
 522 N Main St.
 P.O. Box 560
 Eureka KS 67045
 ATTN: Jon Christensen

16-22s-33w Finney Co KS

Graves Euwer BUnit 5

Job Ticket: 64345 **DST#: 5**
 Test Start: 2018.08.21 @ 12:14:15

GENERAL INFORMATION:

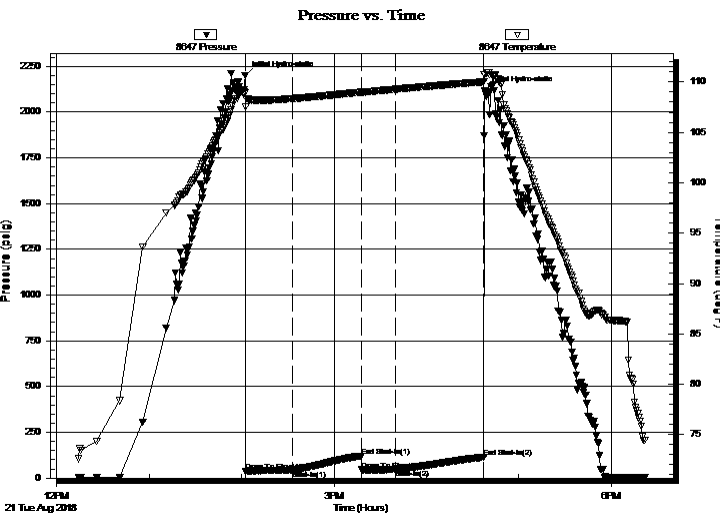
Formation: **Pawnee-Ft Scott**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 14:02:45
 Time Test Ended: 18:22:00
 Interval: **4368.00 ft (KB) To 4416.00 ft (KB) (TVD)**
 Total Depth: 4416.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Mike Roberts
 Unit No: 81
 Reference Elevations: 2882.00 ft (KB)
 2872.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 8647

Inside

Press@RunDepth: 46.52 psig @ 4406.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.08.21 End Date: 2018.08.21 Last Calib.: 2018.08.21
 Start Time: 12:14:15 End Time: 18:22:00 Time On Btm: 2018.08.21 @ 14:02:30
 Time Off Btm: 2018.08.21 @ 16:38:00

TEST COMMENT: IF: Built to weak surface blow and died in 20 min.
 IS: No return blow
 FF: No blow
 FS: No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2200.01	108.92	Initial Hydro-static
1	37.11	107.59	Open To Flow (1)
31	43.51	108.35	Shut-In(1)
76	117.62	108.99	End Shut-In(1)
76	45.32	108.97	Open To Flow (2)
98	46.52	109.29	Shut-In(2)
155	113.53	110.02	End Shut-In(2)
156	2116.12	110.76	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	ocm 3% o 97 % m w Skim of oil on tool	0.02

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Daystar Petroleum Inc.

16-22s-33w Finney Co KS

522 N Main St.
P.O. Box 560
Eureka KS 67045
ATTN: Jon Christensen

Graves Euwer BUnit 5

Job Ticket: 64345 **DST#: 5**
Test Start: 2018.08.21 @ 12:14:15

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	0 ppm
Viscosity: 72.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.59 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 5500.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

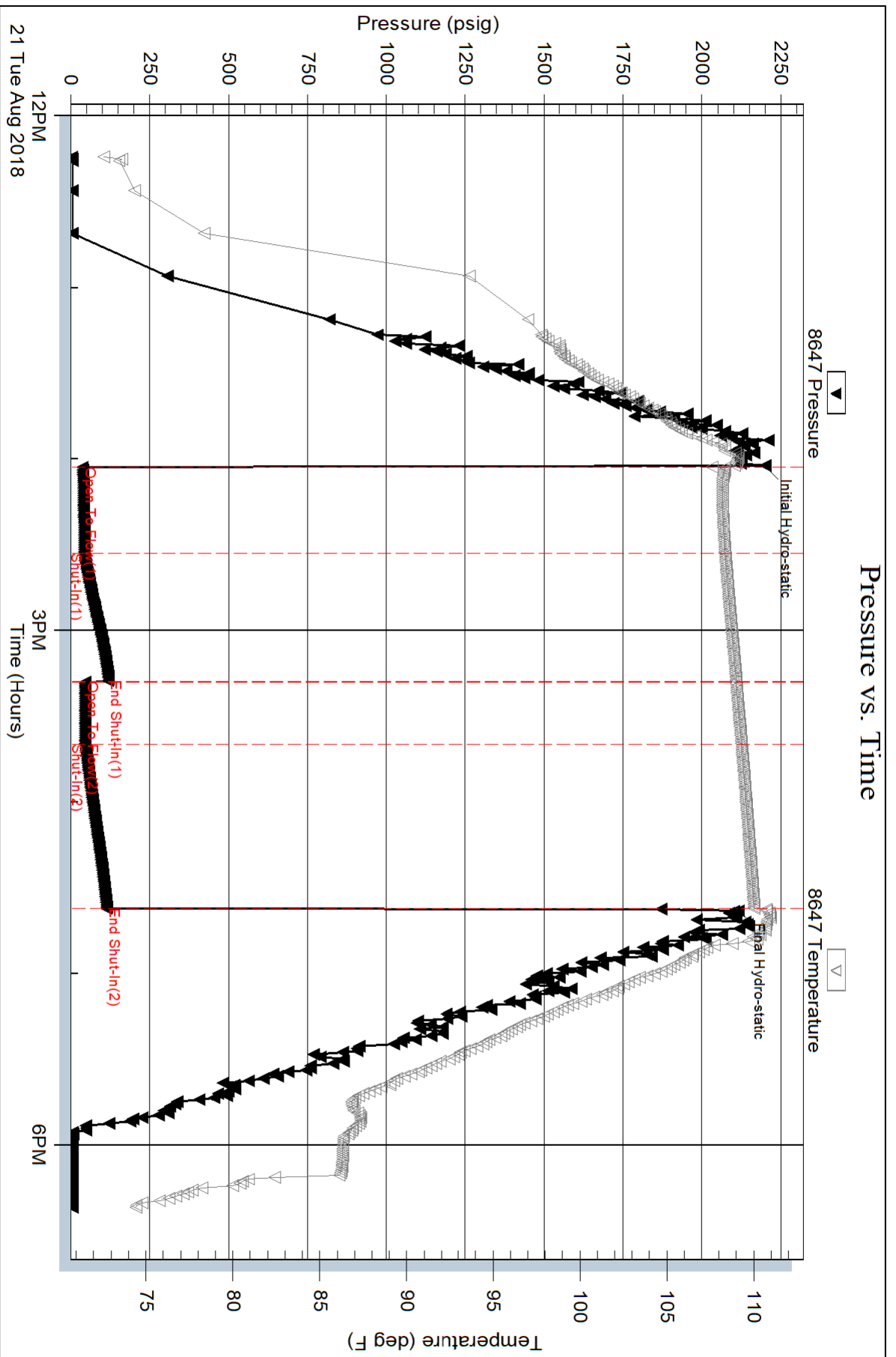
Length ft	Description	Volume bbl
5.00	ocm 3% o 97 % m w Skim of oil on tool	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:

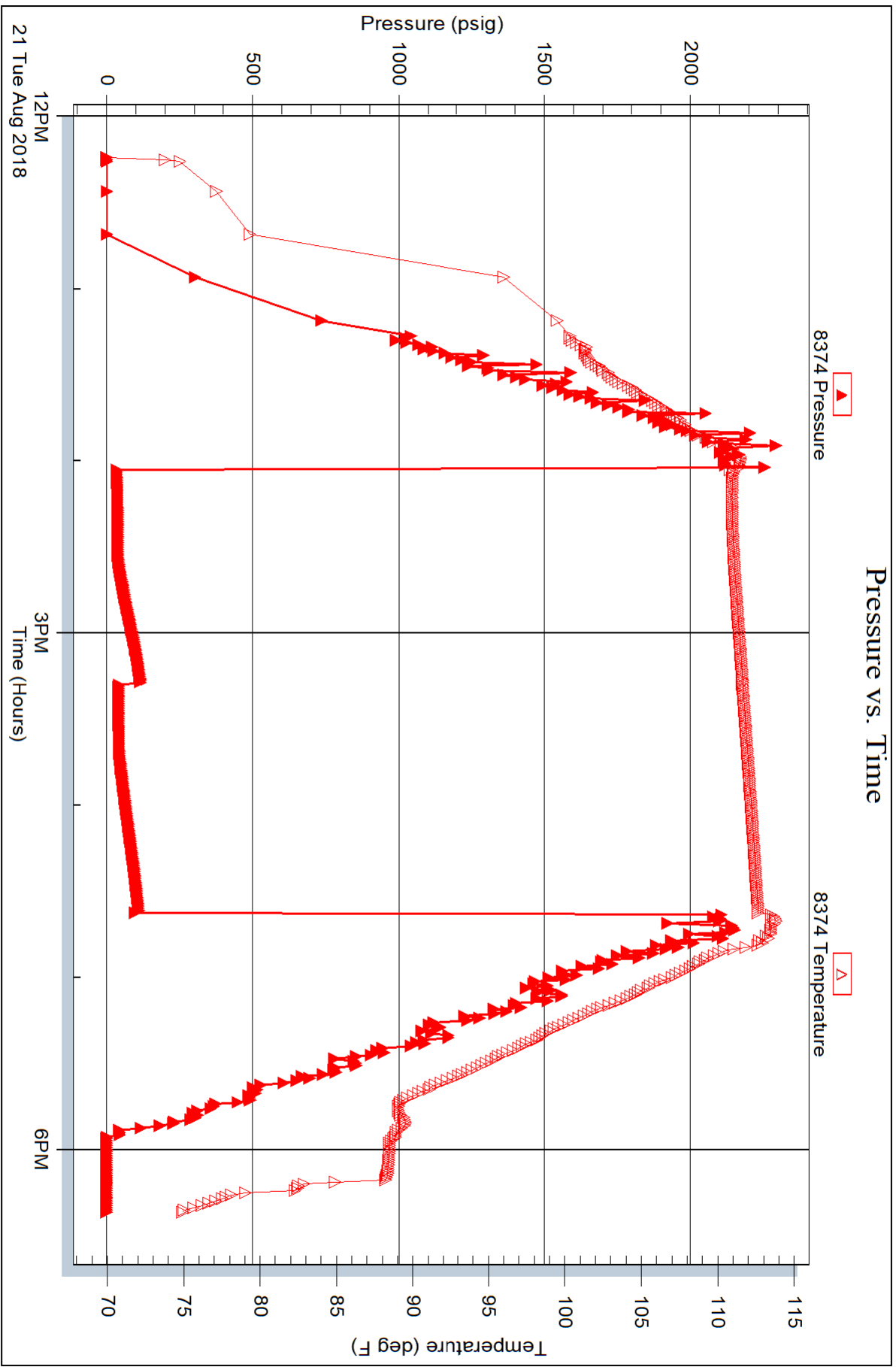


Serial #: 8374

Outside Daystar Petroleum Inc.

Graves Eiler Blunit 5

DST Test Number: 5



Trilobite Testing, Inc

Ref. No: 64345

Printed: 2018.08.21 @ 21:11:15



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Daystar Petroleum Inc.
 522 N Main St.
 P.O. Box 560
 Eureka KS 67045
 ATTN: Jon Christensen

16-22s-33w Finney Co KS

Graves Euwer BUnit 5

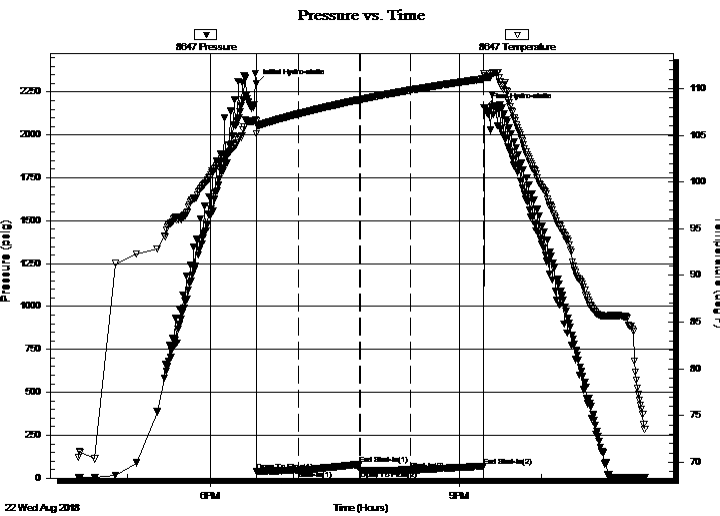
Job Ticket: 64346 **DST#: 6**
 Test Start: 2018.08.22 @ 16:24:15

GENERAL INFORMATION:

Formation: **Morrow Sand -Miss**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 18:33:15
 Time Test Ended: 23:14:45
 Interval: **4585.00 ft (KB) To 4638.00 ft (KB) (TVD)**
 Total Depth: 4638.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Mike Roberts
 Unit No: 81
 Reference Elevations: 2882.00 ft (KB)
 2872.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 8647 Inside
 Press@RunDepth: 46.87 psig @ 4623.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.08.22 End Date: 2018.08.22 Last Calib.: 2018.08.22
 Start Time: 16:24:15 End Time: 23:14:45 Time On Btm: 2018.08.22 @ 18:33:00
 Time Off Btm: 2018.08.22 @ 21:18:00

TEST COMMENT: IF: Built to 1/2" and died
 IS: No return blow
 FF: No blow
 FS: No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2299.46	106.50	Initial Hydro-static
1	39.35	105.14	Open To Flow (1)
31	44.86	107.28	Shut-In(1)
75	80.12	108.81	End Shut-In(1)
76	44.19	108.82	Open To Flow (2)
112	46.87	109.84	Shut-In(2)
165	69.27	111.03	End Shut-In(2)
165	2158.85	111.61	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	ocm 3%o 97%m	0.05

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Daystar Petroleum Inc.

16-22s-33w Finney Co KS

522 N Main St.
P.O. Box 560
Eureka KS 67045
ATTN: Jon Christensen

Graves Euwer BUnit 5

Job Ticket: 64346 **DST#: 6**
Test Start: 2018.08.22 @ 16:24:15

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	0 ppm
Viscosity: 75.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.37 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 4500.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

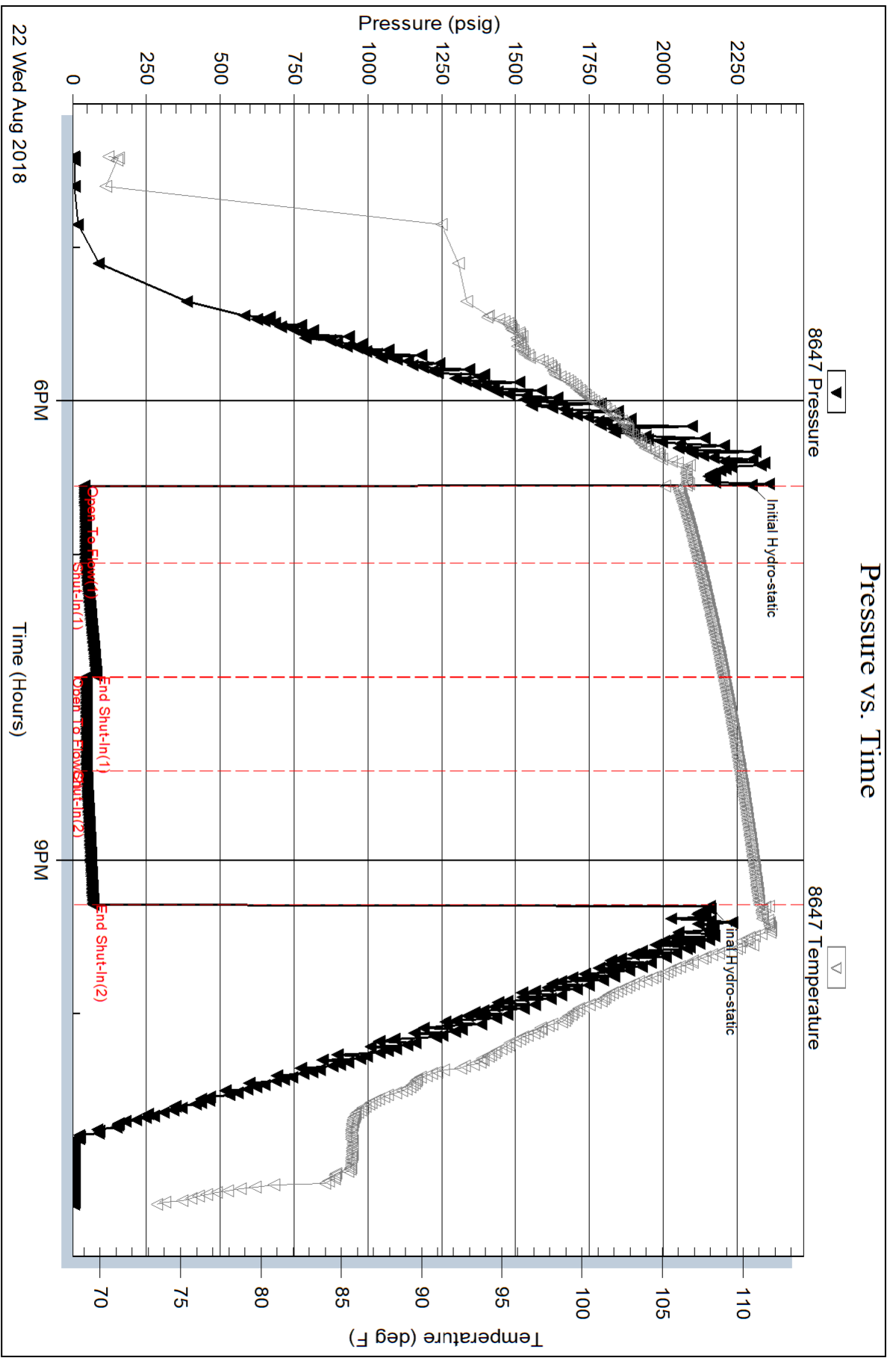
Length ft	Description	Volume bbl
10.00	ocm 3%o 97%m	0.049

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:

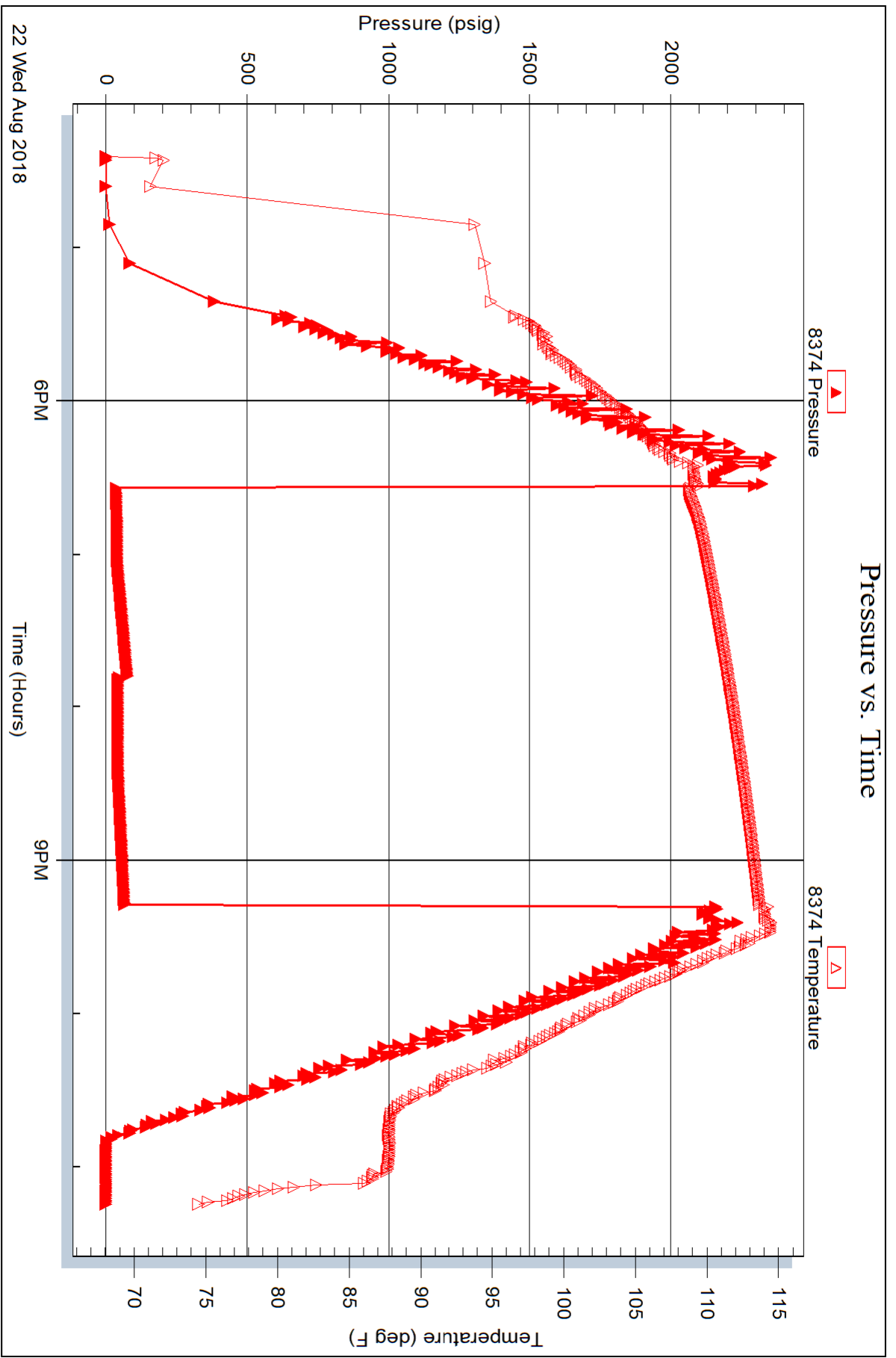


Serial #: 8374

Outside Daystar Petroleum Inc.

Graves Eiuwer BUnit 5

DST Test Number: 6



Trilobite Testing, Inc

Ref. No: 64346

Printed: 2018.08.23 @ 07:55:31

LITHOLOGY STRIP LOG

WellSight Systems

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

Well Name: Graves - Euwer B Unit #5
Location: 1149' FNL & 1733' FEL, Sec. 16-T22S-R33W, Finney Co., KS.
Licence Number: 15-055-22491-00-00
Spud Date: 8/14/2018
Surface Coordinates: 1149' FNL & 1733' FEL, Sec. 16-T22S-R33W
Region: Damme Field
Drilling Completed: 8/23/2018

Bottom Hole Same as Above
Coordinates:
Ground Elevation (ft): 2871' K.B. Elevation (ft): 2882'
Logged Interval (ft): 3600' To: 4800' Total Depth (ft): 4800'
Formation: Mississippian at Total Depth
Type of Drilling Fluid: Freshwater/Gel to 3500'; Chemical Gel 3500' to TD.4800'

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

OPERATOR

Company: Daystar Petroleum, Inc.
Address: P. O. Box 560
Eureka, KS. 67045-0560

GEOLOGIST

Name: Jon D. Christensen
Company: Consulting Petroleum Geologist
Address: 277 S. Maple Dunes Ct.
Wichita, KS. 67235-7500

Cores

None Taken

DSTs

DST #1(Lansing 'E' Zone) 3902' - 3918' Test Times 5"-60"-60"-120" IFP Strong Blow BOB/2", FFP Strong Blow BOB/2", no Blowback on SI's; REC: 62' MW w/SO(50%M, 50%W), 1054' MW w/SO(3% M, 97%W), 492' SW(CI 33,500 MudCo); IFP 87-212#, ISIP 1121#, FFP 229-760#, FSIP 1108#, IHP 1925#, FHP 1875#, BHT 111 Deg. F.

DST #2(L/KC 'H') 4000' - 4025' Test Times 30"-30"-5"- Pulled tool; IFP Weak Blow died in 5", FFP No Blow, no Blowback on SI's; REC: 5' Drlg. Mud with 1" FO on top of tool; IFP 18-28#, ISIP 366#, FFP 31-31#, FSIP None, IHP 2004#, FHP 1967#, BHT 104 Deg. F.

DST #3(KC. 'I' + 'J' Zones) 4049' -4068' Test Times 30"-45"-60"-90" IFP Weak Blow Built to 11", FFP Fair Blow Built to 12.5", Weak surface Blowback on SI's; REC: 125' CGO(5%G, 95%O - API 27 Deg.), 123' GOCWM(5%G, 15%O, 10%W, 70%M), 186' GOCMW(2%G, 3%O, 85%W, 10%M)(CI 25,000 MudCo); IFP 22-134#, ISIP 936#, FFP 137-204#, FSIP 908#, IHP 2045#, FHP 1994#, BHT 108 Deg. F.

DST #4(KC. 'K' Swope Zone) 4128' -4152' Test Times 5"-60"-60"-90" IFP Strong Blow BOB/2 Min., FFP Strong Blow BOB/2", No Blowback on SI's; REC: 62' WM(40%W, 60%M), 310' WM(30%W, 70%M), 186' MW(94%W, 6%M), 1298' SW(CI 20,000 MudCo.); IFP 146-269#, ISIP 1085#, FFP 285-850#, FSIP 1065#, IHP 2074#, FHP 2080#, BHT 112 Deg. F.

DST #5(Pawnee/Ft. Scott) 4368' - 4416' Test Times 30"-45"-20"-60" IFP Weak Blow Died in 20", FFP No Blow, no Blowback on SI's; REC: 5' OCM(3%O, 97%M), Skim of oil on top of test tool; IFP 37-43#, ISIP 117#, FFP 45-46#, FSIP 113#, IHP 2200#, FHP 2116#, BHT 114 Deg. F.

DST #6(Morrow Sand/Miss.) 4585' - 4638' Test Times 30"-45"-30"-60" IFP Weak 0.5" Blow; FFP No Blow, no Blowback on SI's; REC: 10' OCM(3%O, 97%M); IFP 39-44#, ISIP 80#, FFP 44-46#, FSIP 69#, IHP 2299#, FHP 2158#, BHT 112 Deg. F.

Other Data

8/12 - 8/13/18 MIRU Murfin Drilling Rig #21; 8/14/18 Spud well at 7:30 AM.; 8/15/18 Drilling at 747'; 8/16/18 Drilling at 2405'; 8/17/18 Drilling at 3668'; 8/18/18 TD. 3918' - DST #1; 8/19/18 TD. 4068' - CFS; 8/20/18 TD. 4152' - DST #4; 8/21/18 Drilling at 4415'; 8/22/18 Drilling at 4553'; 8/23/18 Drilling at 4752' - RTD. 4800' at 10:10 AM., 8/24/18 RTD. 4800', LTD. 4800' - Production Casing.

Set new 8 5/8"(23#) Surface Casing at 394' with 250 Sacks of Cement(Basic Energy Services). Cement did circulate. PD. at 3:30 PM. on 8/14/18.

Set new 5 1/2"(15.5#) Production Casing at 4793' with 170 sacks of cement(Basic Energy Services). PD. at 11:00 AM. on 8/24/18. DV tool set at 2709' with 450 sacks of cement. Cement circulated. PD. at 4:00 PM. on 8/24/18.

Surveys: 0.40 Deg. at 395'(Surface Casing); 0.20 Deg. 1021'; 0.20 Deg. at 1730'; 0.40 Deg. at 2270'; 0.70 Deg. at 3601'(Bit Trip); 0.70 Deg. at 3918'(DST #1); 0.30 Deg. at 4152'(DST # 4); 0.40 Deg. at 4416'(DST #5); 0.40 Deg. at 4800' RTD.


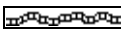
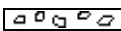
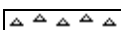
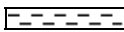







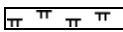

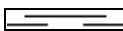
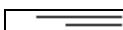
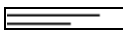



Pipe Strap at 3601'(Bit Trip): Strap 0.64' Long to the Board, no correction made to the Board.

After review of the Pioneer Energy Services Logs, DST data and samples shows, the operator elected to set new 5 1/2" Production Casing to test the Mississippian, Morrow, Marmaton and Lansing/Kansas City zones.








































































LOG TOPS: Base Anhydrite 1998(+884), Heebner Shale 3759(-877), Lansing 3802(-920), Lansing 'E' 3903(-1021), Lans/KC 'H' 4008(-1126), KC. 'J' 4050(-1168), Stark Shale 4131(-1249), KC. 'K' 4136(-1254), KC. 'L' 4178(-1296), BKC 4268(-1386), Marmaton 4295(-1413), Altamont 4320(-1438), Pawnee 4371(-1489), Ft. Scott 4398(-1516), Cherokee Shale 4410(-1528), Morrow Shale 4591(-1709), Morrow Sand 4612(-1730), Mississippi 4619(-1737), St. Louis 'B' 4660(-1778).

NOTE: This log was shifted upward in places by 1' to 2' for correlation purposes to correspond to the Pioneer Energy Services log.

ROCK TYPES

 Anhy  Bent  Brec  Cht	 Clyst  Coal  Congl  Dol	 Gyp  Igne  Lmst  Meta	 Mrlst  Salt  Shale  Shcol	 Shgy  Sltst  Ss  Till
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ACCESSORIES

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

- POROSITY**
 [E] Earthy
 [F] Fenest
 [X] Fracture
 [M] Moldic
 [O] Organic
 [P] Pinpoint

[V] Vuggy

- SORTING**
 [W] Well
 [M] Moderate
 [P] Poor

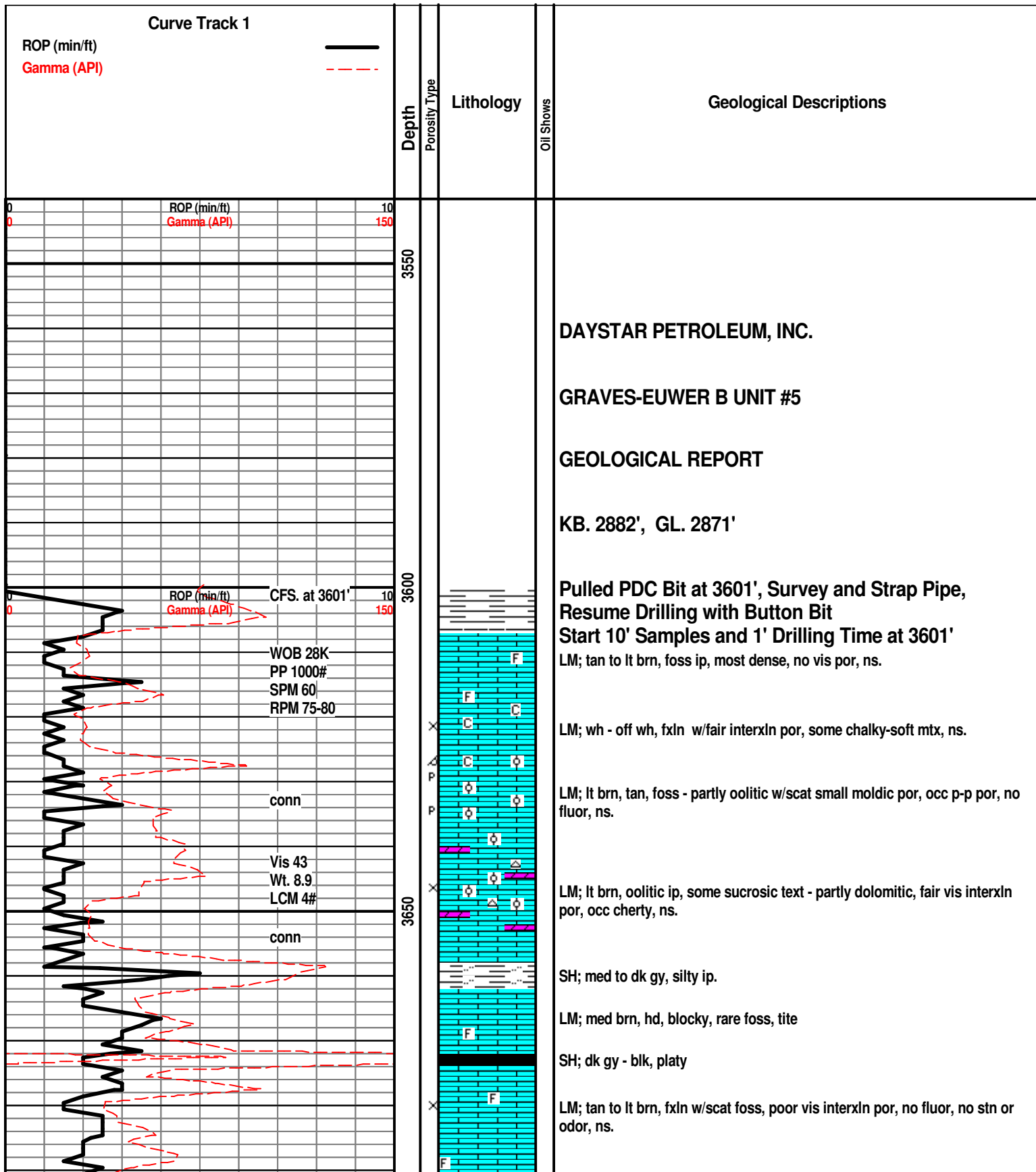
- ROUNDING**
 [R] Rounded
 [r] Subrnd
 [a] Subang
 [A] Angular

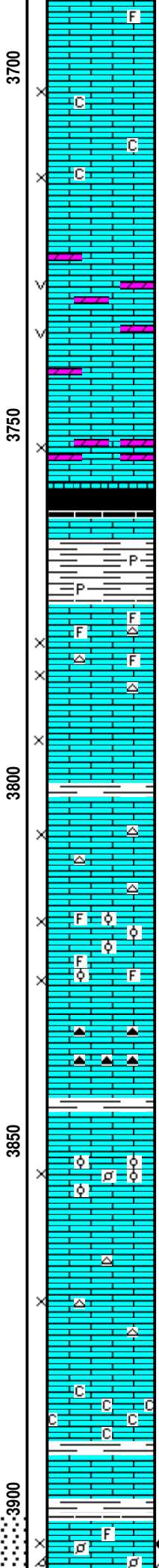
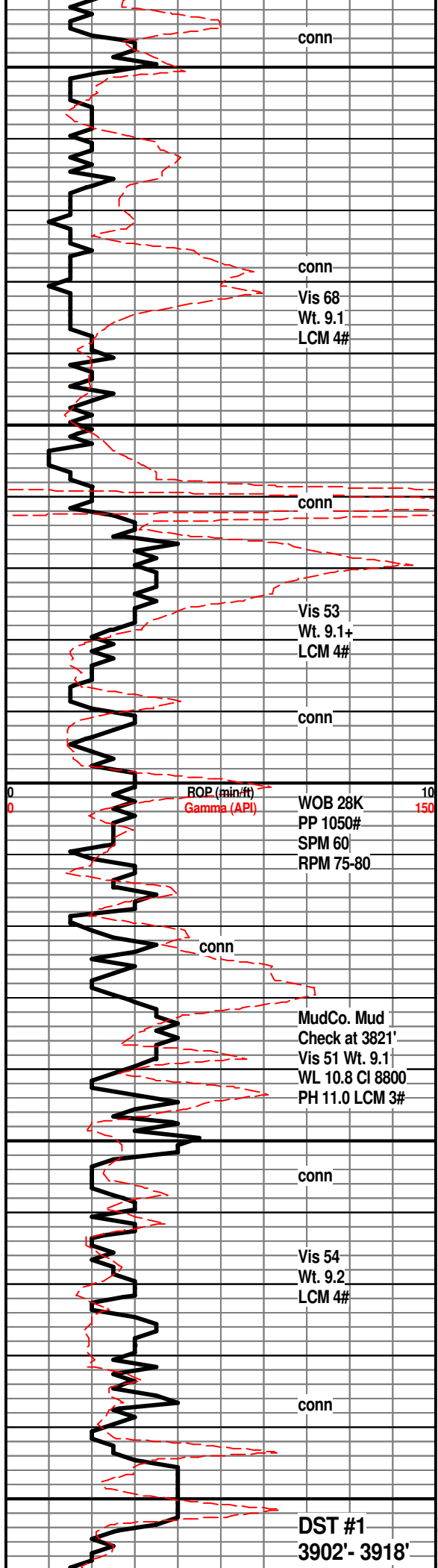
OIL SHOW
 [●] Even

- [●] Spotted
 [○] Ques
 [D] Dead

- INTERVAL**
 [■] Core
 [□] Dst

- EVENT**
 [▽] Rft
 [▶] Sidewall





LM; tan to lt brn, med to cse xln, abnt spar calc xtals, fair interxln por, occ chalky, scat lt yel min fluor, ns.

LM; lt brn, tan, med to occ cse xln, partly dolomitic w/occ rhombic dolo lmst, scat lt yel min fluor, occ vug por, ns.

LM; lt brn, dolomitic, sucrosic text, fair interxln por, lt yel min fluor, no stn or odor, ns.

HEEBNER SHALE 3759(-877) Log

SH; blk, carb ip, platy
LM; med brn, dense - micritic, tite

SH; grn, gy grn, lmy ip, occ pyr

TORONTO 3775(-893) Log

LM; lt brn, foss to occ med xln, poor to fair interxln por, scat med yel min fluor, interbdd wh to gy cht, no stn or odor, ns.

LM; tan to cream, f to med xln, poor interxln por, dull to lt yel min fluor, ns.

LANSING 3802(-920) Log

LM; tan to buff, fxln with poor interxln and occ p-p por, most dense, scat wh cht, lt yel min fluor, no stn or odor, ns.

LM; tan to off wh, foss w/scat ooids and foss mat, fair to gd interpart por, chalky ip, med yel min fluor, no stn or odor, ns.

LM; lt brn to med brn, v. cherty w/dk gy to dk brn hd fresh cht, no vis por, ns.

SH; med grn, gy grn, fiss

LM; tan to lt brn, foss w/scat small ooids and occ small pellets, loosely cem - fair interpart por, no fluor, no stn or odor, ns.

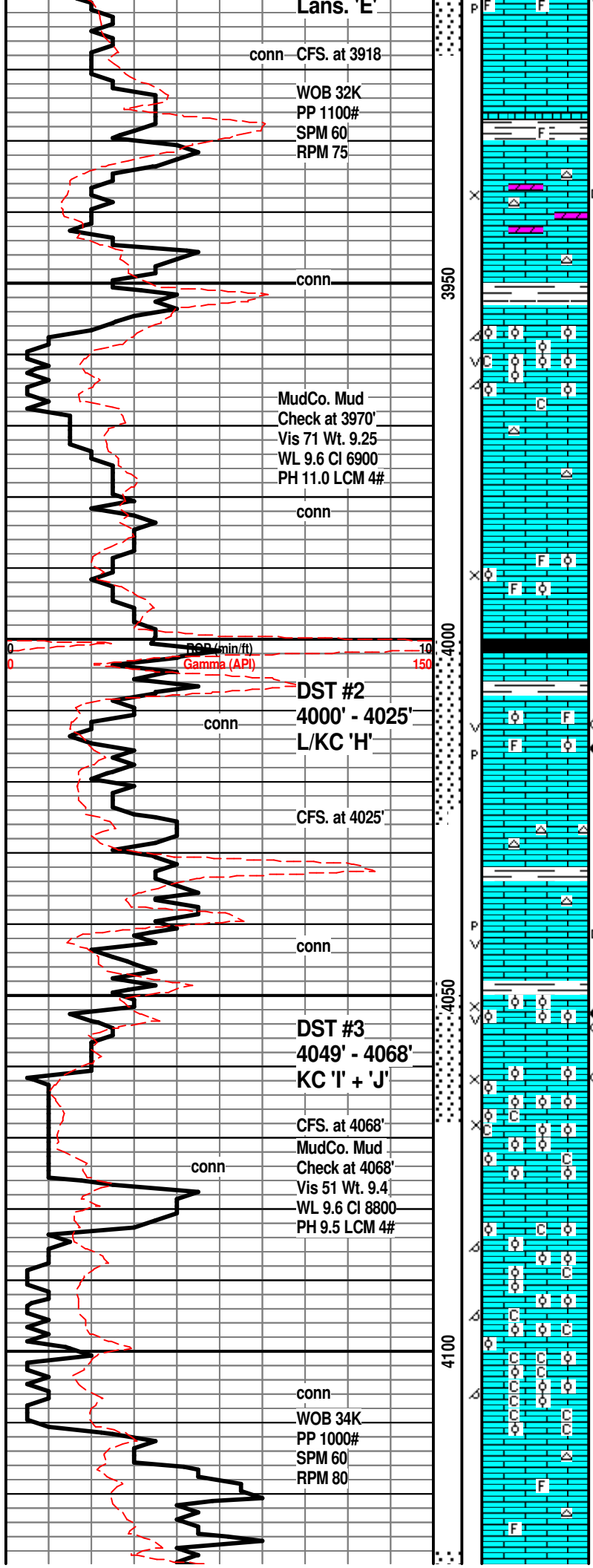
LM; tan to lt brn, fxln, scat wh to lt gy cht, rare poor interxln por, no fluor, ns.

LM; off wh, tan, med xln, v. soft ip, very chalky mtz, lt yel min fluor, ns.

LM; med brn, hd, dense, tite

LANSING 'E' ZONE 3903(-1021) Log

LM; lt to med brn, oolitic, foss, fair to gd interpart w/scat moldic por, dull yel fluor, gd oil odor, SFO - med brn droplets, gd cut, some tighter pcs bldg oil



in occ p-p por, med brn spotty to occ even oil stn

DST #1: Lansing 'E' 3902' - 3918'

SH; med gy, foss ip.

LM; tan to buff, fxln w/occ sucrosic text, partly dolomitic, fair interxn por, few pcs w/dead oil stn, dull yel to no fluor, no odor, much barren por, occ wh to blue/gy cht, no live oil shows

LANSING 'G' ZONE 3953(-1071) Log

LM; tan to buff, lt brn, oolitic, well dev. oomoldic por, scat vug por, brittle ip, rare chalky mtx, no fluor, barren, no stn or odor, ns.

LM; tan to cream, buff, partly oolitic, bcm dense - micritic, occ chalky, rare wh to lt gy cht

LM; tan to cream, foss to oolitic, poor to fair interpart por, no stn or odor, ns,

SH; dk gy - blk, platy

LANSING/KC 'H' ZONE 4008(-1126) Log

LM; off wh, gran to med xln, occ foss w/small oolites, fair p-p w/occ vug por, med to occ brite yel fluor, SFO, spotted to occ even lt brn oil stn, fair odor, streaming cut in some, some tighter, lt oily film on wet sample water

DST #2: Lansing/KC. 'H' 4000' - 4025'

LM; lt to med brn, dense, scat gy to off wh cht, tite

LM; med brn, hd, micritic - blocky, rare poor p-p and small vug por, no fluor, trc dk brn dead oil stn, looks tite

KC. 'J' ZONE 4050(-1168) Log

LM; off wh, oolitic, small to med size oolites, scat gd interpart w/occ vug por, much lt brn oil stn, SFO - lt brn droplets, gd odor, v. gd cut - some streaming, most w/brite yel fluor, even lt brn stn

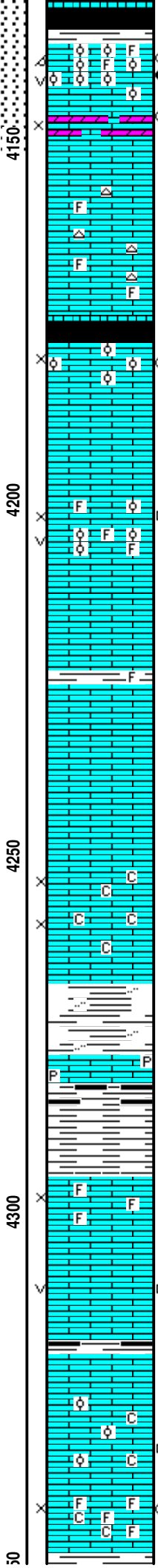
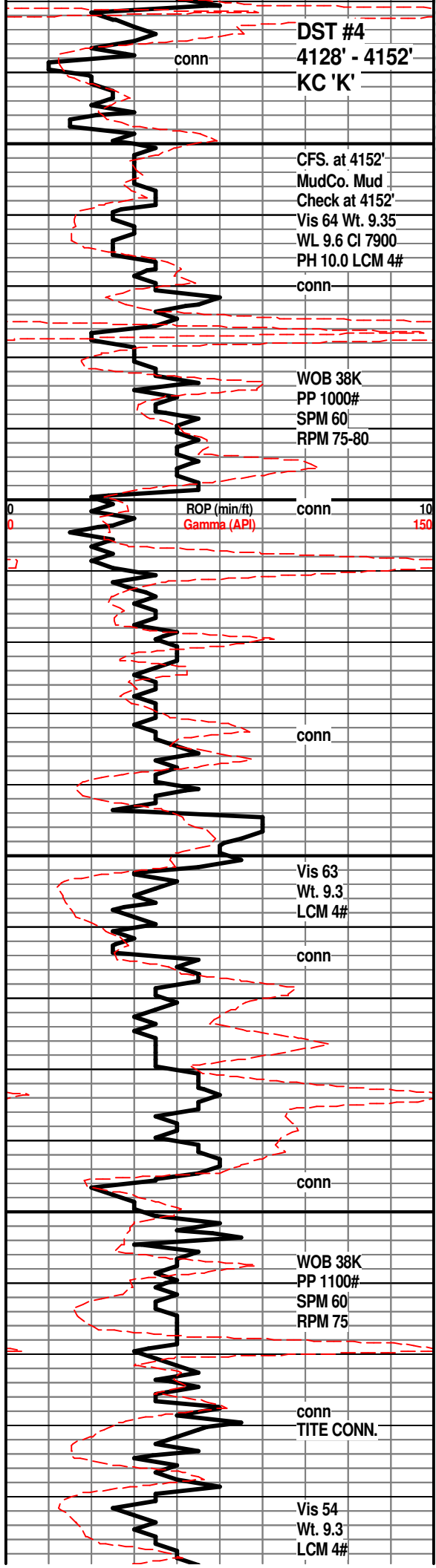
LM; tan to off wh, oolitic, med size oolites, fair to gd interpart por, spotted lt brn oil stn, gd odor, some barren por, occ chalky

DST #3: KC. 'I' + 'J' 4049' - 4068'

LM; lt to med brn, hd, micritic

LM; off wh, lt brn, tan, oolitic, v. gd oomoldic por in some, most with chalky mtx, v. dull yel min fluor, no stn or odor, increasing amt of chalk at base of porous zone, no stn or odor, ns.

LM; med brn, v. hd, blocky, rarely foss, scat lt gy cht, ns.



STARK SHALE 4131(-1249) Log

SH; blk, carb ip, platy

KC. 'K' SWOPE ZONE 4136(-1254) Log

LM; lt brn, foss - oolitic, gd oomoldic w/occ vug por, SFO, much spotted to even lt brn stn, lt to dull yel fluor, v. gd to strong odor, gd cut, partly dolomitic w/gd interxn por

DST #4: KC 'K' Swope 4128' - 4152'

LM; med brn, foss ip, most well cem, no vis por, scat gy cht, ns.

SH; dk gy - blk, platy

KC. 'L' HERTHA ZONE 4178(-1296) Log

LM; lt brn, oolitic ip, most well cem, rare pcs w/v. spotted med brn oil stn, poor interpart por, most tite, no odor, no fluor

LM; lt brn, foss - partly oolitic, scat rare pcs w/dk brn to blk dead oil stn, v. faint to no odor, poor interpart and rare vug por, most barren with ns.

SH; med gy, gy grn, foss ip, platy

LM; tan to lt brn, fxln, most dense - blocky, no vis por, ns.

LM; tan to off wh, buff, f to occ med xln, fair interxn por, soft ip, scat soft chalk and chalky mtx, dull yel min fluor, no stn or odor, ns.

BASE OF KC. 4268(-1386) Log

SH; med gy, gy grn, some varic sh w/rust red and red shales, occ silty

LM; med gy, gy brn, some cse xln, occ pyr, no vis por, tite

SH; med to dk gy, trc blk, platy, firm

MARMATON 4295(-1413) Log

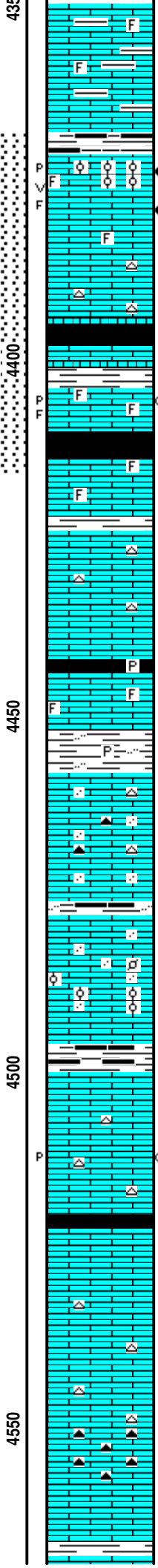
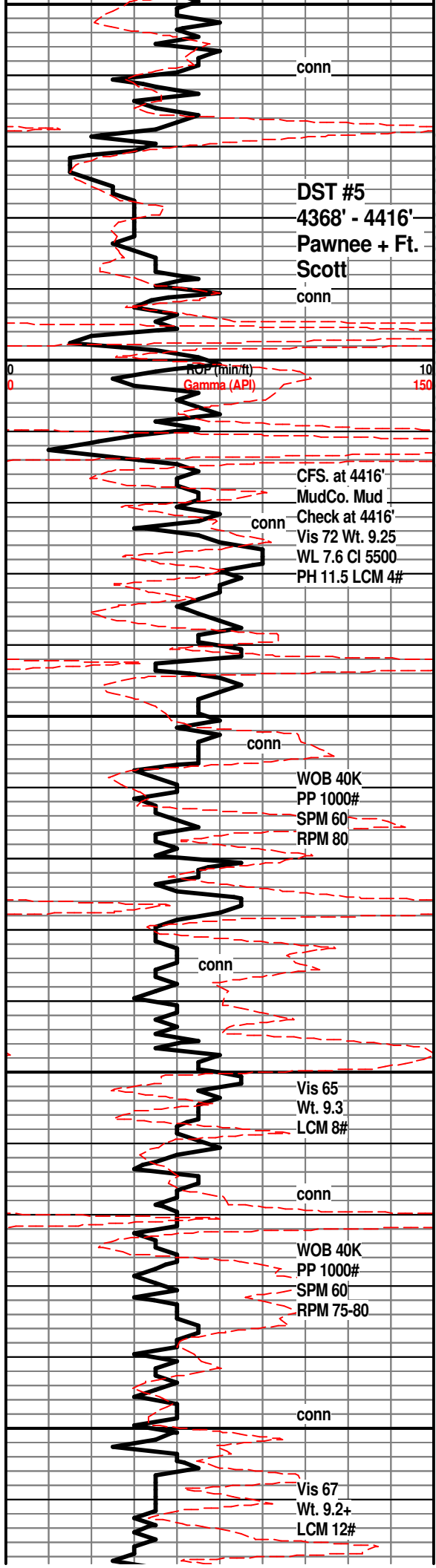
LM; off wh to tan, fxln, w/scat foss mat, occ cse foss frags - most well cem, poor to no vis interpart por, no fluor, ns.

LM; tan to lt brn, some cream, rare vug por, most dense, rare med brn oil stn around vugs, dull yel fluor, no odor, most looks tite

ALTAMONT 4326(-1438) Log

LM; tan to med brn, partly oolitic, most well cem, rare soft w/chalky mtx, trc dk brn dead oil stn, poor to no vis por, dull yel fluor, no odor, looks tite

LM; off wh, tan/buff, cse xln w/lrg foss frags, chalky ip, poor to fair interpart por, rare spotted dk brn oil stn, no odor, dull yel fluor



LM; med to dk gy, gy brn, foss ip, some argil with interbdd lmy sh

SH; dk gy - blk, platy
PAWNEE 4371(-1489) Log
LM; off wh, cream, foss w/scat oolitic lmst, abnt cse spar calc xtals, fair to gd p-p and vug por, most w/even lt to med brn oil stn, sweet oil odor, med to brite yel fluor, SFO, gd cut, trc fracs with edge stn

LM: lt to med brn, dense, scat lt gy cht, tite

SH; blk, carb ip, faint gas odor
FORT SCOTT 4398(-1516) Log
LM; tan to lt brn, foss ip, scat pcs w/med brn oil stn, poor p-p por, trc fracs bleeding oil, faint odor, fair to gd cut, dull yel fluor

CHEROKEE SHALE 4410(-1528) Log
DST #5: Pawnee/Ft. Scott 4368' - 4416'
LM; lt to med brn, fxln, occ foss, most dense w/no vis por, ns.
SH; gy grn, fiss - platy

LM; lt brn, fxln, most dense - micritic, no vis por, scat gy cht, ns.

SH; blk, platy, occ pyr
LM; off wh, tan, scat foss mat, occ cse spar calc xtals, med yel min fluor, no stn or odor, ns.

SH; dk gy, silty, occ pyr

LM; med to dk brn, some gritty to sandy text, hd, scat gy to amber cht, tite

SH; med to dk gy, gritty - silty ip.

LM; med brn, foss w/scat small ooids and pellets, occ f to med gr qtz in lmst mtx, no vis por, ns.

SH; dk gy, blk, platy

LM; lt to med brn, f to med xln, scat fair p-p por, v. spotted med brn oil stn, lt golden yel fluor, fair odor, cherty ip, fair to gd cut

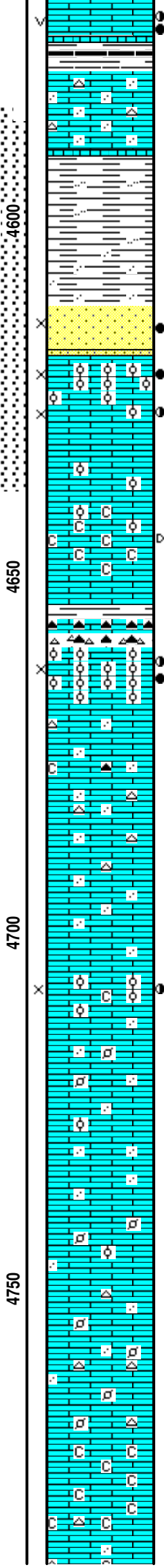
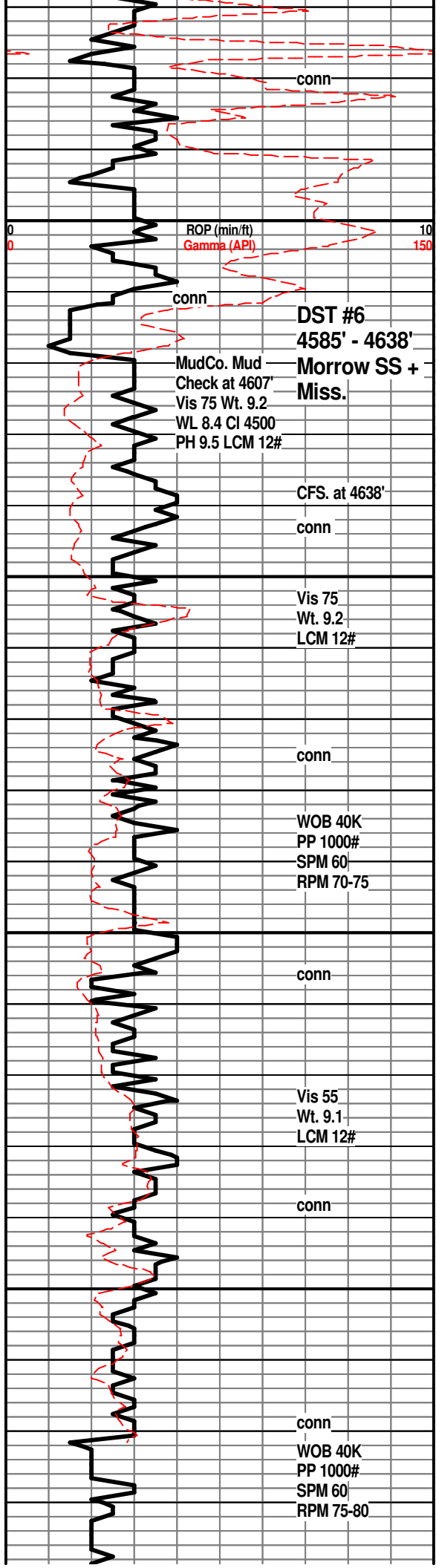
SH; blk, carb ip, thinly bdd

LM; tan to lt gy, fxln, most dense - micritic, rare lt yel min fluor, scat spar calc xtals, poor to no vis por, ns.

LM; lt to med brn, hd, micritic, occ gy cht, tite

LM; med brn, f to med xln, v. cherty w/abnt dk gy spicular cht, no vis por, no fluor, ns.

SH; med to dk gy, platy



LM; tan to buff, med xln, sev. pcs w/med to lrg vug por, spotted to occ even med brn oil stn, med yel fluor, no FO, gd cut, faint odor

LM; med to dk gy, gy brn, hd, occ cherty w/rare sandy to gritty text, no vis por, tite

MORROW SHALE 4591(-1709) Log

SH; med gy, platy, scat pyr, occ silty

SH; sea grn, bands of dk gy sh, sandy ip.

MORROW SAND 4612(-1730) Log

SS; clr/lt gy, most f gr qtz, clusters, fri, some wh unstained ss, most w/lt brn even oil stn, fair odor, SFO, gd cut, fair intergran por

MISSISSIPPI 4619(-1737) Log

LM; wh, off wh, oolitic, small to occ med size oolites, poor to occ fair interpart por, much well cem, med yel fluor, VSSFO, spotted to occ even lt brn oil stn, faint odor, fair to occ gd cut, several tite oolite clusters bldg oil

DST #6: 4585' - 4638' Morrow Sand + Miss.

LM; off wh, wh, finely oolitic, very chalky - soft, most dense, rare dk brn to blk dead oil stn, dull yel fluor, poor to no vis interpart por, most tite

LM; tan to off wh, scat org cht, dense, trc grn shale

ST. LOUIS 'B' ZONE 4660(-1778) Log

LM; off wh, wh, oolitic, most small/rare med size oolites, poor to fair interpart por, med yel fluor, fair odor, spotty to occ even lt brn live oil stn, VSSFO, fair to gd cut, some tite

LM; off wh, wh, sandy ip, rarely chalky mtx, scat gy/brn/org cht

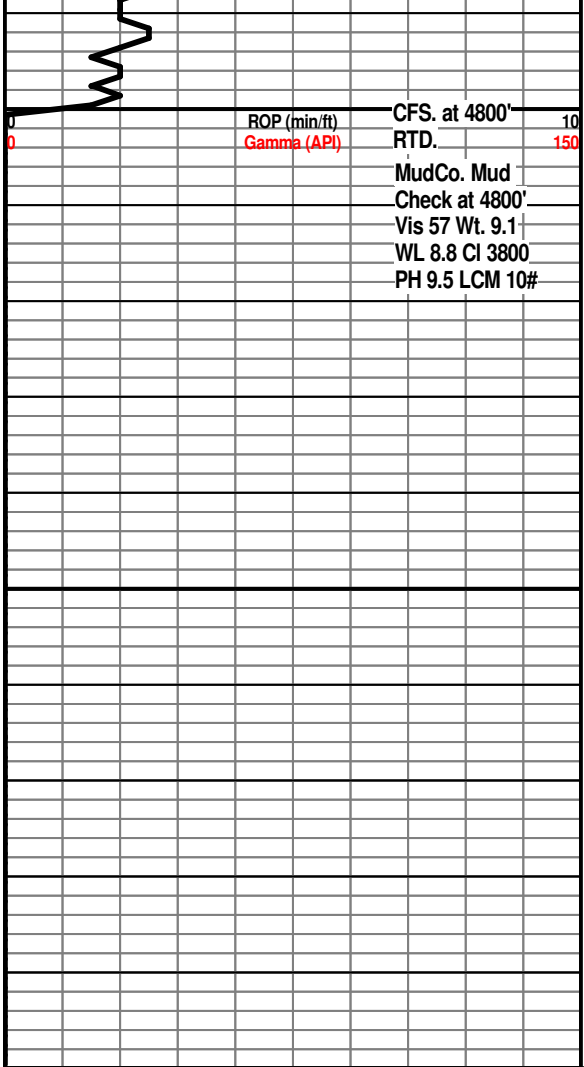
LM; tan to lt brn, sandy ip, some med xln lmst, no vis por, ns.

LM; tan to lt brn, med to cse xln, rare oolites, fair interxln por in some, spotty lt brn oil stn, fair to faint odor, chalky mtx ip, dull to lt yel fluor, no FO, fair to gd cut in few pcs.

LM; tan to lt brn, sandy w/f gr qtz in dense lmst mtx, scat rnd carb pellets and small oolites, well cem, rarely chalky, no fluor, no stn or odor, ns.

LM; tan to lt brn, sandy w/occ rnd carb pellets and small ooids, mostly dense mtx, scat lrg free calc xtals, minor amt. of blue/gy cht, no fluor, ns.

LM; off wh, med xln w/abnt chalk and soft chalky mtx, scat gy and tan cht, no vis por, no fluor, ns.



ROP (min/ft) CFS. at 4800' 10
 Gamma (API) RTD. 150
 MudCo. Mud
 Check at 4800'
 Vis 57 Wt. 9.1
 WL 8.8 Cl 3800
 PH 9.5 LCM 10#

4800
4850
00



LM; off wh, tan, fxln, occ sandy w/chalky mtx, no fluor, no stn or odor, ns.

RTD. 4800' at 10:10 AM. 8/23/18

LTD. 4800'

Pioneer Energy Services DIL, Dual Comp. Porosity,
 Microresistivity, BH Comp. Sonic