

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	Norstar Petroleum, Inc.
Well Name	4-D FARMS 1-14
Doc ID	1476579

All Electric Logs Run

CDNL
DIL
MEL
SONIC

Form	ACO1 - Well Completion
Operator	Norstar Petroleum, Inc.
Well Name	4-D FARMS 1-14
Doc ID	1476579

Tops

Name	Top	Datum
Anhydrite	2594	+324
Heebner	3892	-974
Toronto	3922	-1004
Lansing	3940	-1022
Stark Shale	4114	-1196
Pawnee	4280	-1362
Ft. Scott	4346	-1428
Cherokee Shale	4366	-1448
Mississippi	4476	-1558



CEMENT TREATMENT REPORT

Customer: Norstar petroleum	Well: 4-D Farm #1-14	Ticket: ICT2420
City, State: Oakley Ks	County: Thomas	Date: 9/17/2019
Field Rep:	S-T-R: 14-6S-31W	Service: Cement

Downhole Information	
Hole Size:	12 1/4
Hole Depth:	155
Casing Size:	8 5/8
Casing Depth:	155
Tubing / Liner:	in
Depth:	ft
Tool / Packer:	
Depth:	ft
Displacement:	bbls

Slurry		
Weight:	14,8	# / sx
Water / Sx:	6 8/9 gal / sx	
Yield:	1 2/5 ft ³ / sx	
Bbls / Ft.:		
Depth:		ft
Volume:		bbls
Excess:		%
Total Slurry:		bbls
Total Sacks:		sx

Cement Blend		
Product	%	#
Class A	100.0	14570
Gel	2.0	291
CaCl	3.0	437

										Total	15,298
--	--	--	--	--	--	--	--	--	--	--------------	---------------

TIME	RATE	PSI	BBLs	REMARKS	TIME	RATE	PSI	BBLs	REMARKS
7:30 PM				arrive					
7:32 PM				safety meeting					
7:40 PM				rig up pump truck					
8:00 PM	5.0	100.0	31.0	mix 155 sks					
8:30 PM	4.0		12.5	displace 12.5 bbls of water					
8:32 PM				shut in					
8:35 PM			10.0	wash up pump and lines					
8:45 PM				rig down					

CREW		UNIT		SUMMARY		
Cementer:	Cory Davis		85.0	Average Rate	Average Pressure	Total Fluid
Pump Operator:	Kaleb Compton		209.0	4.5 bpm	100.00 psi	53.50 bbls
Bulk #1:	John Polley		294.0			
Bulk #2:						



CEMENT TREATMENT REPORT

Customer:	Norstar Petroleum	Well:	4-D Farm #1-14	Ticket:	ICT2467
City, State:	Rexford Ks	County:	Thomas	Date:	9/25/2019
Field Rep:		S-T-R:	14-6S-31W	Service:	Cement

Downhole Information	
Hole Size:	in
Hole Depth:	ft
Casing Size:	in
Casing Depth:	ft
Tubing / Liner:	in
Depth:	ft
Tool / Packer:	
Depth:	ft
Displacement:	bbls

Slurry	
Weight:	13.8 # / sx
Water / Sx:	6 8/9 gal / sx
Yield:	1 3/7 ft³ / sx
Bbls / Ft.:	
Depth:	ft
Volume:	bbls
Excess:	%
Total Slurry:	49 bbls
Total Sacks:	240 sx

Cement Blend		
Product	%	#
Class A	60.0	13536
Poz	40.0	7104
Gel	4.0	826

Total **21,466**

TIME	RATE	PSI	BBLs	REMARKS	TIME	RATE	PSI	BBLs	REMARKS
12:05 PM				Arriveal					
12:10 PM				Safety meeting					
12:20 PM				Rig up equip.					
1:15 PM	5.0	50.0	18.0	1st plug at 2,625' mix 50 sks					
1:50 PM	5.0	50.0	24.0	2nd plug at 1,750' mix 100 sks					
2:20 PM	5.0	50.0	9.5	3rd plug at 275' mix 50 sks					
2:45 PM	3.0	-	2.0	4th plug mix 10 sks					
2:50 PM	3.0	-	5.0	Rathole mix 30 sks					
3:00 PM	5.0	-	13.0	wash up pump and lines					
3:20 PM				Rig down equip.					
3:30 PM				Depart					

CREW	UNIT	SUMMARY		
Cementer:	Cory Davis	85.0	Average Rate	Average Pressure
Pump Operator:	Kaleb Compton	209.0	4.33333 bpm	25.00 psi
Bulk #1:	John Polley	190 T235		Total Fluid
Bulk #2:				71.50 bbls



DRILL STEM TEST REPORT

Prepared For: **Norstar Petroleum Inc**

88 Inverness Cir E. Unit F104
Englewood, CO 80112

ATTN: Ryan Davis

4-D Farms #1-14

14-6s-31w Thomas,KS

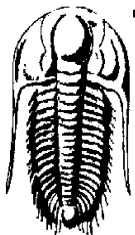
Start Date: 2019.09.21 @ 11:46:52

End Date: 2019.09.21 @ 16:23:52

Job Ticket #: 66053 DST #: 1

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

Printed: 2019.09.26 @ 08:23:16



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Norstar Petroleum Inc
 88 Inverness Cir E. Unit F104
 Englewood, CO 80112
 ATTN: Ryan Davis

14-6s-31w Thomas,KS

4-D Farms #1-14

Job Ticket: 66053

DST#: 1

Test Start: 2019.09.21 @ 11:46:52

GENERAL INFORMATION:

Formation: **Toronto**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:04:22

Time Test Ended: 16:23:52

Interval: **3892.00 ft (KB) To 3933.00 ft (KB) (TVD)**

Total Depth: 3933.00 ft (KB) (TVD)

Hole Diameter: 3.88 inches Hole Condition: Good

Test Type: Conventional Bottom Hole (Initial)

Tester: Brandon Turley

Unit No: 79

Reference Elevations: 2918.00 ft (KB)

2911.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: 8166

Outside

Press@RunDepth: 30.71 psig @ 3893.00 ft (KB)

Start Date: 2019.09.21

End Date: 2019.09.21

Start Time: 11:46:57

End Time: 16:23:51

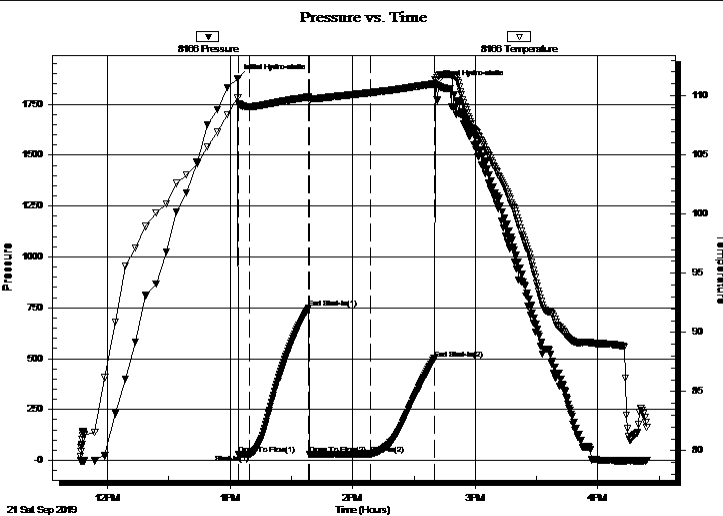
Capacity: 8000.00 psig

Last Calib.: 2019.09.21

Time On Btm: 2019.09.21 @ 13:03:52

Time Off Btm: 2019.09.21 @ 14:40:52

TEST COMMENT: IF: 1.3" blow built to 1.44"
 IS: No return.
 FF: No blow.
 FS: No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1877.28	109.86	Initial Hydro-static
1	29.73	109.33	Open To Flow (1)
6	29.56	109.06	Shut-In(1)
35	749.06	109.88	Open Shut-In(1)
35	30.25	109.61	Open To Flow (2)
65	30.71	110.25	Shut-In(2)
96	499.89	110.99	End Shut-In(2)
97	1845.65	111.28	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	mud 100% _m	0.10

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Norstar Petroleum Inc
88 Inverness Cir E. Unit F104
Englewood, CO 80112
ATTN: Ryan Davis

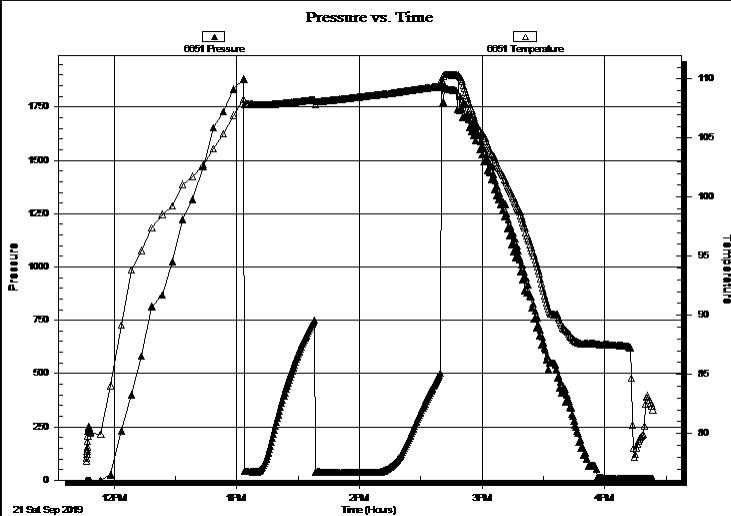
14-6s-31w Thomas, KS
4-D Farms #1-14
Job Ticket: 66053 **DST#: 1**
Test Start: 2019.09.21 @ 11:46:52

GENERAL INFORMATION:

Formation: Toronto			
Deviated: No Whipstock:	ft (KB)	Test Type: Conventional Bottom Hole (Initial)	
Time Tool Opened: 13:04:22		Tester: Brandon Turley	
Time Test Ended: 16:23:52		Unit No: 79	
Interval: 3892.00 ft (KB) To 3933.00 ft (KB) (TVD)		Reference Elevations: 2918.00 ft (KB)	
Total Depth: 3933.00 ft (KB) (TVD)		2911.00 ft (CF)	
Hole Diameter: 3.88 inches	Hole Condition: Good	KB to GR/CF: 7.00 ft	

Serial #: 6651	Inside				
Press@RunDepth:	psig @	3893.00 ft (KB)	Capacity:	8000.00 psig	
Start Date:	2019.09.21	End Date:	2019.09.21	Last Calib.:	2019.09.21
Start Time:	11:46:31	End Time:	16:23:25	Time On Btm:	
				Time Off Btm:	

TEST COMMENT: IF: 1.3" blow built to 1.44"
IS: No return.
FF: No blow.
FS: No return.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
20.00	mud 100% m	0.10

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Norstar Petroleum Inc
88 Inverness Cir E. Unit F104
Englewood, CO 80112
ATTN: Ryan Davis

14-6s-31w Thomas,KS
4-D Farms #1-14
Job Ticket: 66053 **DST#: 1**
Test Start: 2019.09.21 @ 11:46:52

Tool Information

Drill Pipe:	Length: 3759.00 ft	Diameter: 3.80 inches	Volume: 52.73 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 122.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 53.33 bbl</u>	Tool Chased 7.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	3892.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	41.00 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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Stubb	1.00			3866.00	
Shut In Tool	5.00			3871.00	
Hydraulic tool	5.00			3876.00	
Jars	5.00			3881.00	
Safety Joint	2.00			3883.00	
Packer	5.00			3888.00	27.00 Bottom Of Top Packer
Packer	4.00			3892.00	
Stubb	1.00			3893.00	
Recorder	0.00	6651	Inside	3893.00	
Recorder	0.00	8166	Outside	3893.00	
Perforations	1.00			3894.00	
Change Over Sub	1.00			3895.00	
Drill Pipe	32.00			3927.00	
Change Over Sub	1.00			3928.00	
Bullnose	5.00			3933.00	41.00 Bottom Packers & Anchor

Total Tool Length: 68.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Norstar Petroleum Inc
88 Inverness Cir E. Unit F104
Englewood, CO 80112
ATTN: Ryan Davis

14-6s-31w Thomas,KS
4-D Farms #1-14
Job Ticket: 66053 **DST#: 1**
Test Start: 2019.09.21 @ 11:46:52

Mud and Cushion Information

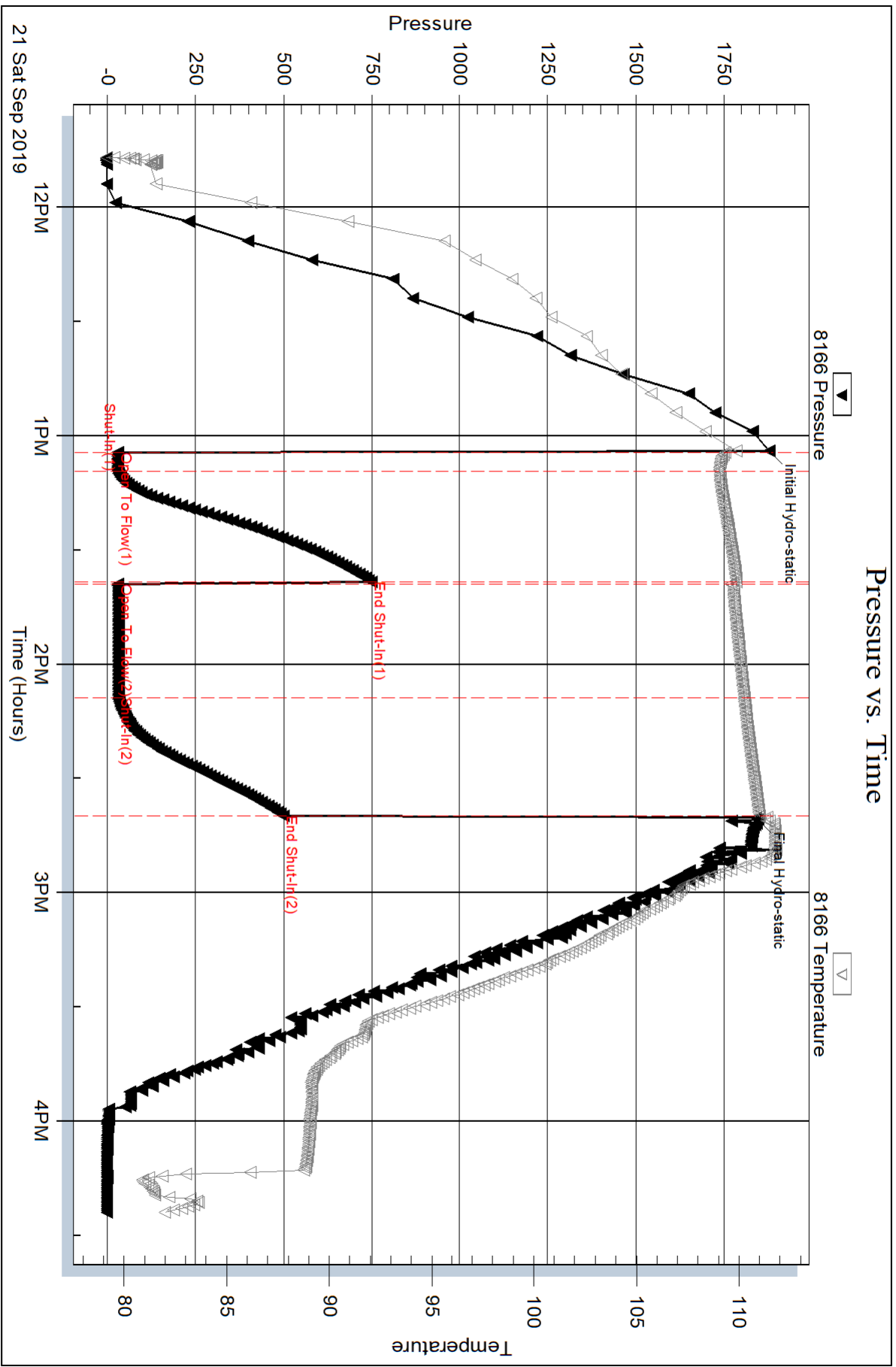
Mud Type: Gel Chem	Cushion Type:	Oil API: 0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 0 ppm
Viscosity: 56.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.18 in ³	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 2000.00 ppm		
Filter Cake: 1.00 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	mud 100%m	0.098

Total Length: 20.00 ft Total Volume: 0.098 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:



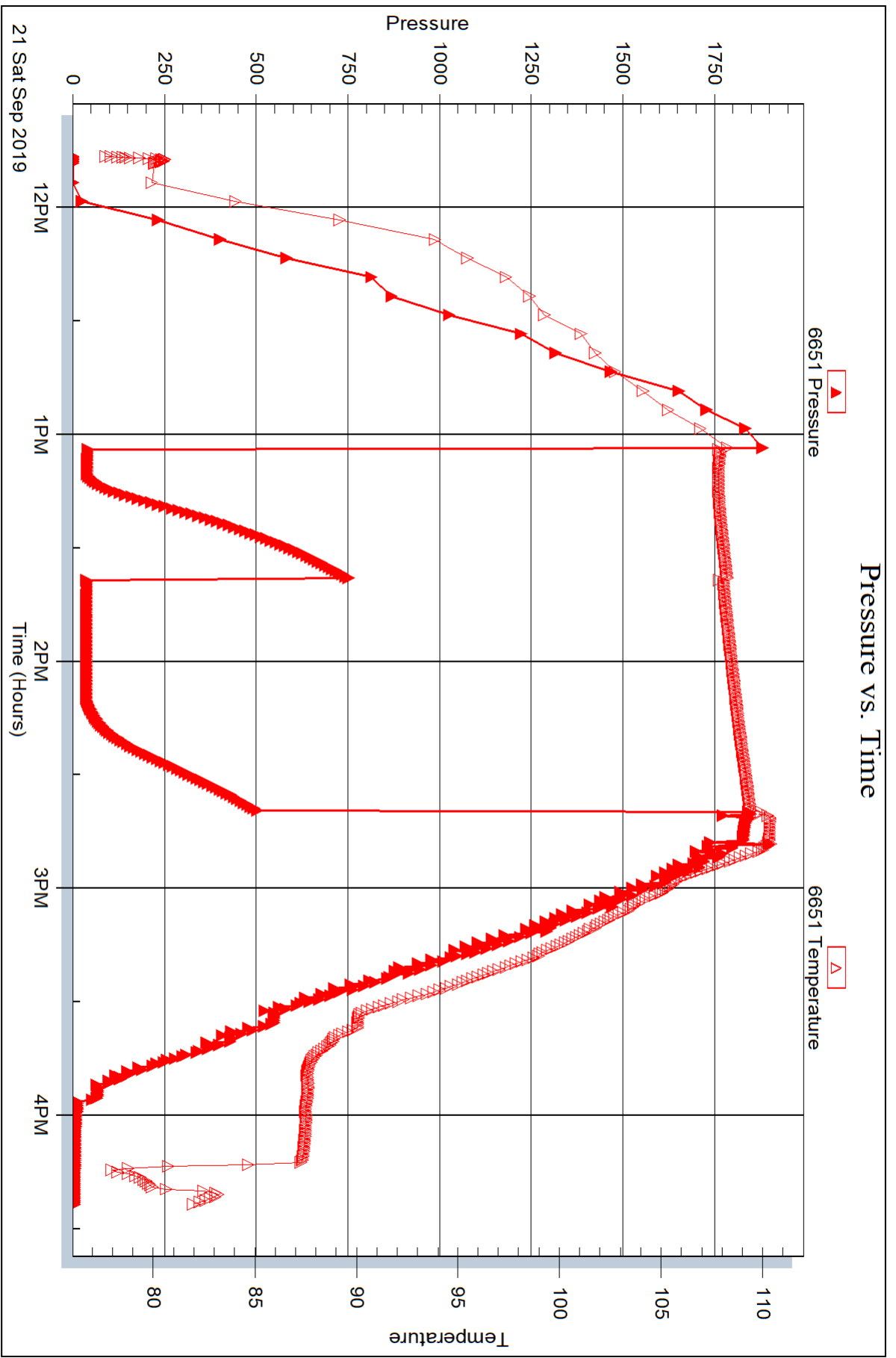
Serial #: 6651

Inside

Norstar Petroleum Inc

4-D Farms #1-14

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 66053

Printed: 2019.09.26 @ 08:23:17



DRILL STEM TEST REPORT

Prepared For: **Norstar Petroleum Inc**

88 Inverness Cir E. Unit F104
Englewood, CO 80112

ATTN: Ryan Davis

4-D Farms #1-14

14-6s-31w Thomas,KS

Start Date: 2019.09.22 @ 01:02:26

End Date: 2019.09.22 @ 06:41:26

Job Ticket #: 66054 DST #: 2

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

Printed: 2019.09.26 @ 08:21:36



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Norstar Petroleum Inc
 88 Inverness Cir E. Unit F104
 Englewood, CO 80112
 ATTN: Ryan Davis

14-6s-31w Thomas, KS
4-D Farms #1-14
 Job Ticket: 66054 **DST#: 2**
 Test Start: 2019.09.22 @ 01:02:26

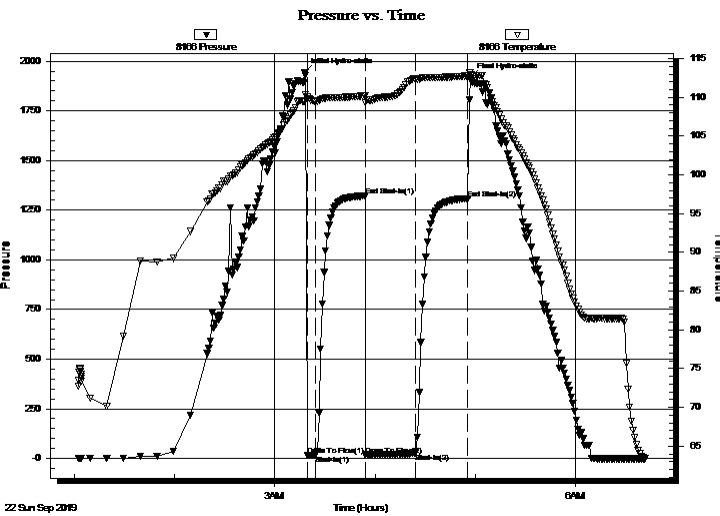
GENERAL INFORMATION:

Formation: **LKC B-C**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 03:19:26
 Time Test Ended: 06:41:26
 Interval: **3946.00 ft (KB) To 3978.00 ft (KB) (TVD)**
 Total Depth: 3978.00 ft (KB) (TVD)
 Hole Diameter: 3.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Brandon Turley
 Unit No: 79
 Reference Elevations: 2918.00 ft (KB)
 2911.00 ft (CF)
 KB to GR/CF: 7.00 ft

Serial #: 8166 Outside

Press@RunDepth: 25.01 psig @ 3947.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2019.09.22 End Date: 2019.09.22 Last Calib.: 2019.09.22
 Start Time: 01:02:31 End Time: 06:41:25 Time On Btm: 2019.09.22 @ 03:17:56
 Time Off Btm: 2019.09.22 @ 04:56:56

TEST COMMENT: IF: Surface blow .
 IS: No return.
 FF: Surface blow built to 1/4"
 FS: No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1943.33	109.43	Initial Hydro-static
2	15.94	110.01	Open To Flow (1)
7	16.81	109.44	Shut-In(1)
36	1321.09	110.21	End Shut-In(1)
37	17.62	109.34	Open To Flow (2)
66	25.01	112.33	Shut-In(2)
98	1308.84	112.78	End Shut-In(2)
99	1915.21	113.21	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	mud 100% _m	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

Norstar Petroleum Inc
88 Inverness Cir E. Unit F104
Englewood, CO 80112
ATTN: Ryan Davis

14-6s-31w Thomas,KS
4-D Farms #1-14
Job Ticket: 66054 **DST#: 2**
Test Start: 2019.09.22 @ 01:02:26

Tool Information

Drill Pipe:	Length: 3822.00 ft	Diameter: 3.80 inches	Volume: 53.61 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	30000.00 lb
Drill Collar:	Length: 122.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose:	75000.00 lb
			<u>Total Volume: 54.21 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial	58000.00 lb
Depth to Top Packer:	3946.00 ft			Final	58000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	32.00 ft				
Tool Length:	59.00 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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Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Stubb	1.00			3920.00	
Shut In Tool	5.00			3925.00	
Hydraulic tool	5.00			3930.00	
Jars	5.00			3935.00	
Safety Joint	2.00			3937.00	
Packer	5.00			3942.00	27.00 Bottom Of Top Packer
Packer	4.00			3946.00	
Stubb	1.00			3947.00	
Recorder	0.00	6651	Inside	3947.00	
Recorder	0.00	8166	Outside	3947.00	
Perforations	26.00			3973.00	
Bullnose	5.00			3978.00	32.00 Bottom Packers & Anchor

Total Tool Length: 59.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Norstar Petroleum Inc
88 Inverness Cir E. Unit F104
Englewood, CO 80112
ATTN: Ryan Davis

14-6s-31w Thomas,KS
4-D Farms #1-14
Job Ticket: 66054 **DST#: 2**
Test Start: 2019.09.22 @ 01:02:26

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: 56.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.19 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 2000.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

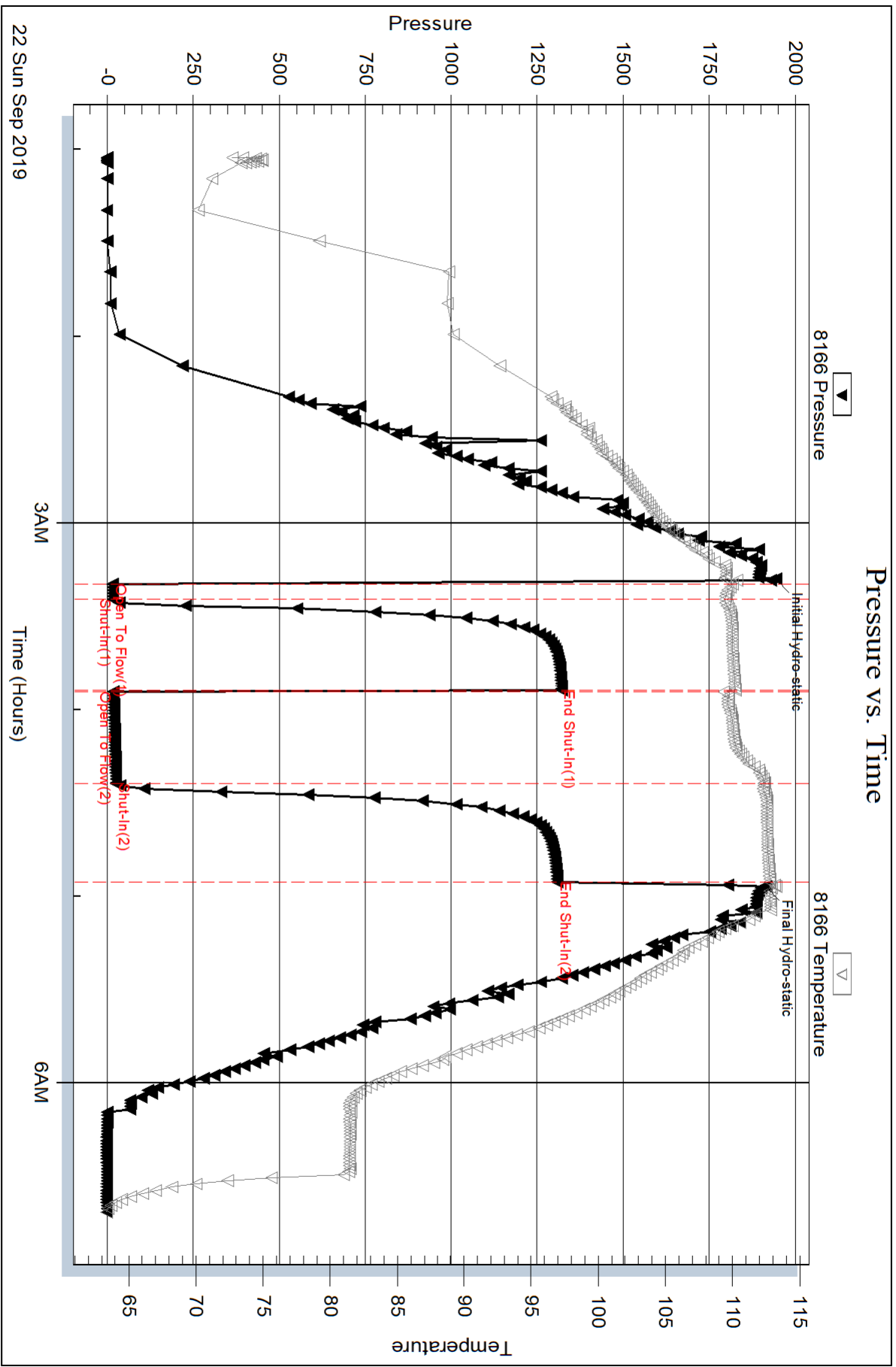
Length ft	Description	Volume bbl
10.00	mud 100%m	0.049

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:



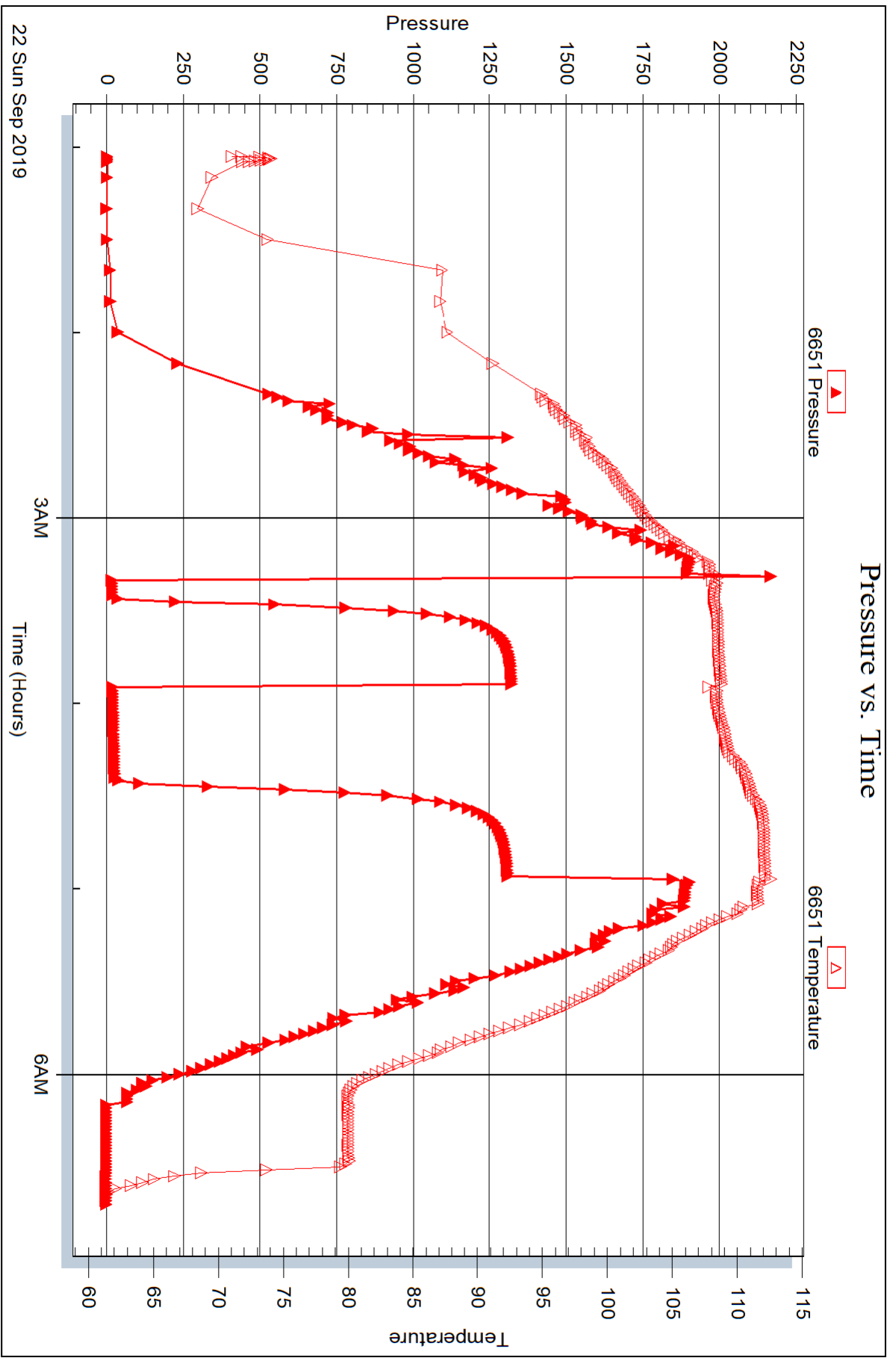
Serial #: 6651

Inside

Norstar Petroleum Inc

4-D Farms #1-14

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 66054

Printed: 2019.09.26 @ 08:21:37



DRILL STEM TEST REPORT

Prepared For: **Norstar Petroleum Inc**

88 Inverness Cir E. Unit F104
Englewood, CO 80112

ATTN: Ryan Davis

4-D Farms #1-14

14-6s-31w Thomas,KS

Start Date: 2019.09.22 @ 21:53:38

End Date: 2019.09.23 @ 04:03:08

Job Ticket #: 66055 DST #: 3

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

Printed: 2019.09.26 @ 08:20:50



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Norstar Petroleum Inc
 88 Inverness Cir E. Unit F104
 Englewood, CO 80112
 ATTN: Ryan Davis

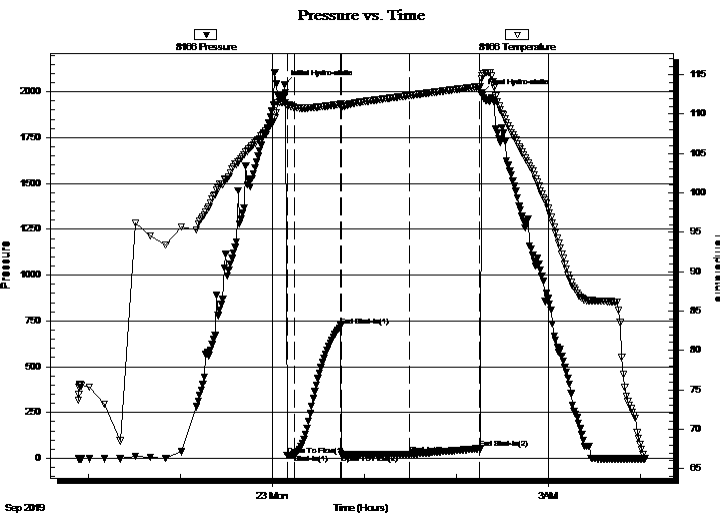
14-6s-31w Thomas,KS
4-D Farms #1-14
 Job Ticket: 66055 **DST#: 3**
 Test Start: 2019.09.22 @ 21:53:38

GENERAL INFORMATION:

Formation: **LKC I-J**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 00:09:38
 Time Test Ended: 04:03:08
 Interval: **4069.00 ft (KB) To 4123.00 ft (KB) (TVD)**
 Total Depth: 4123.00 ft (KB) (TVD)
 Hole Diameter: 3.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Brandon Turley
 Unit No: 79
 Reference Elevations: 2918.00 ft (KB)
 2911.00 ft (CF)
 KB to GR/CF: 7.00 ft

Serial #: 8166 Outside
 Press@RunDepth: 22.78 psig @ 4070.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2019.09.22 End Date: 2019.09.23 Last Calib.: 2019.09.23
 Start Time: 21:53:43 End Time: 04:03:07 Time On Btm: 2019.09.23 @ 00:08:08
 Time Off Btm: 2019.09.23 @ 02:16:08

TEST COMMENT: IF: 1/2" blow built to 1"
 IS: No return.
 FF: Surface blow built to 1/2"
 FS: No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2038.53	111.46	Initial Hydro-static
2	16.88	111.11	Open To Flow (1)
7	19.53	110.85	Shut-In(1)
37	723.54	111.25	End Shut-In(1)
37	21.35	111.01	Open To Flow (2)
82	22.78	112.37	Shut-In(2)
127	53.83	113.50	End Shut-In(2)
128	1992.14	114.44	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	free oil 100%o	0.00
15.00	ocm 20%o 80%m	0.07

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Norstar Petroleum Inc
 88 Inverness Cir E. Unit F104
 Englewood, CO 80112
 ATTN: Ryan Davis

14-6s-31w Thomas,KS

4-D Farms #1-14

Job Ticket: 66055

DST#: 3

Test Start: 2019.09.22 @ 21:53:38

GENERAL INFORMATION:

Formation: **LKC I-J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:09:38

Time Test Ended: 04:03:08

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 79

Interval: 4069.00 ft (KB) To 4123.00 ft (KB) (TVD)

Reference Elevations: 2918.00 ft (KB)

Total Depth: 4123.00 ft (KB) (TVD)

2911.00 ft (CF)

Hole Diameter: 3.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

Serial #: 6651 Inside

Press@RunDepth: psig @ 4070.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.09.22

End Date:

2019.09.23

Last Calib.:

2019.09.23

Start Time: 21:53:43

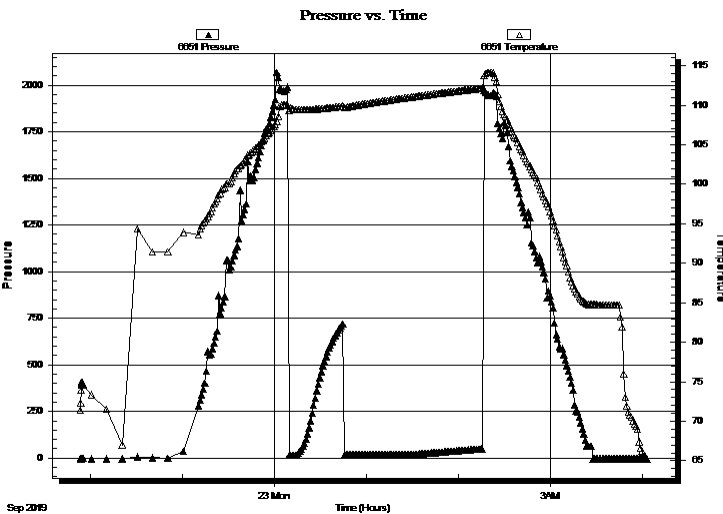
End Time:

04:03:07

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: 1/2" blow built to 1"
 IS: No return.
 FF: Surface blow built to 1/2"
 FS: No return.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
1.00	free oil 100%o	0.00
15.00	ocm 20%o 80%m	0.07

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Norstar Petroleum Inc
88 Inverness Cir E. Unit F104
Englewood, CO 80112
ATTN: Ryan Davis

14-6s-31w Thomas,KS
4-D Farms #1-14
Job Ticket: 66055 **DST#: 3**
Test Start: 2019.09.22 @ 21:53:38

Tool Information

Drill Pipe:	Length: 3948.00 ft	Diameter: 3.80 inches	Volume: 55.38 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 122.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 55.98 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4069.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	54.00 ft			
Tool Length:	81.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Stubb	1.00			4043.00	
Shut In Tool	5.00			4048.00	
Hydraulic tool	5.00			4053.00	
Jars	5.00			4058.00	
Safety Joint	2.00			4060.00	
Packer	5.00			4065.00	27.00 Bottom Of Top Packer
Packer	4.00			4069.00	
Stubb	1.00			4070.00	
Recorder	0.00	6651	Inside	4070.00	
Recorder	0.00	8166	Outside	4070.00	
Perforations	15.00			4085.00	
Change Over Sub	1.00			4086.00	
Drill Pipe	31.00			4117.00	
Change Over Sub	1.00			4118.00	
Bullnose	5.00			4123.00	54.00 Bottom Packers & Anchor

Total Tool Length: 81.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Norstar Petroleum Inc
88 Inverness Cir E. Unit F104
Englewood, CO 80112
ATTN: Ryan Davis

14-6s-31w Thomas,KS
4-D Farms #1-14
Job Ticket: 66055 **DST#: 3**
Test Start: 2019.09.22 @ 21:53:38

Mud and Cushion Information

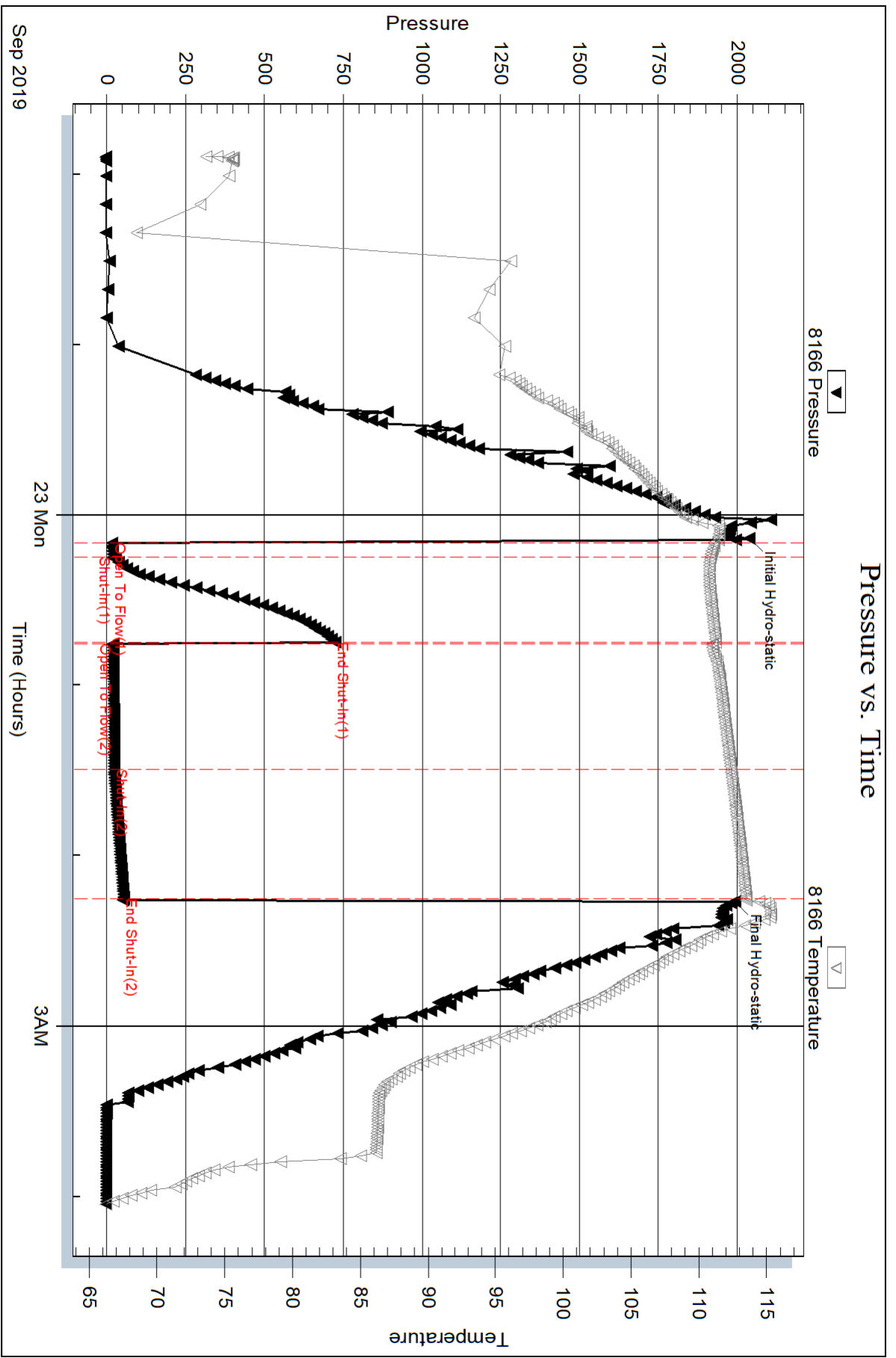
Mud Type: Gel Chem	Cushion Type:	Oil API:	0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	0 ppm
Viscosity: 56.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.19 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 2300.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	free oil 100%o	0.005
15.00	ocm 20%o 80%m	0.074

Total Length: 16.00 ft Total Volume: 0.079 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:



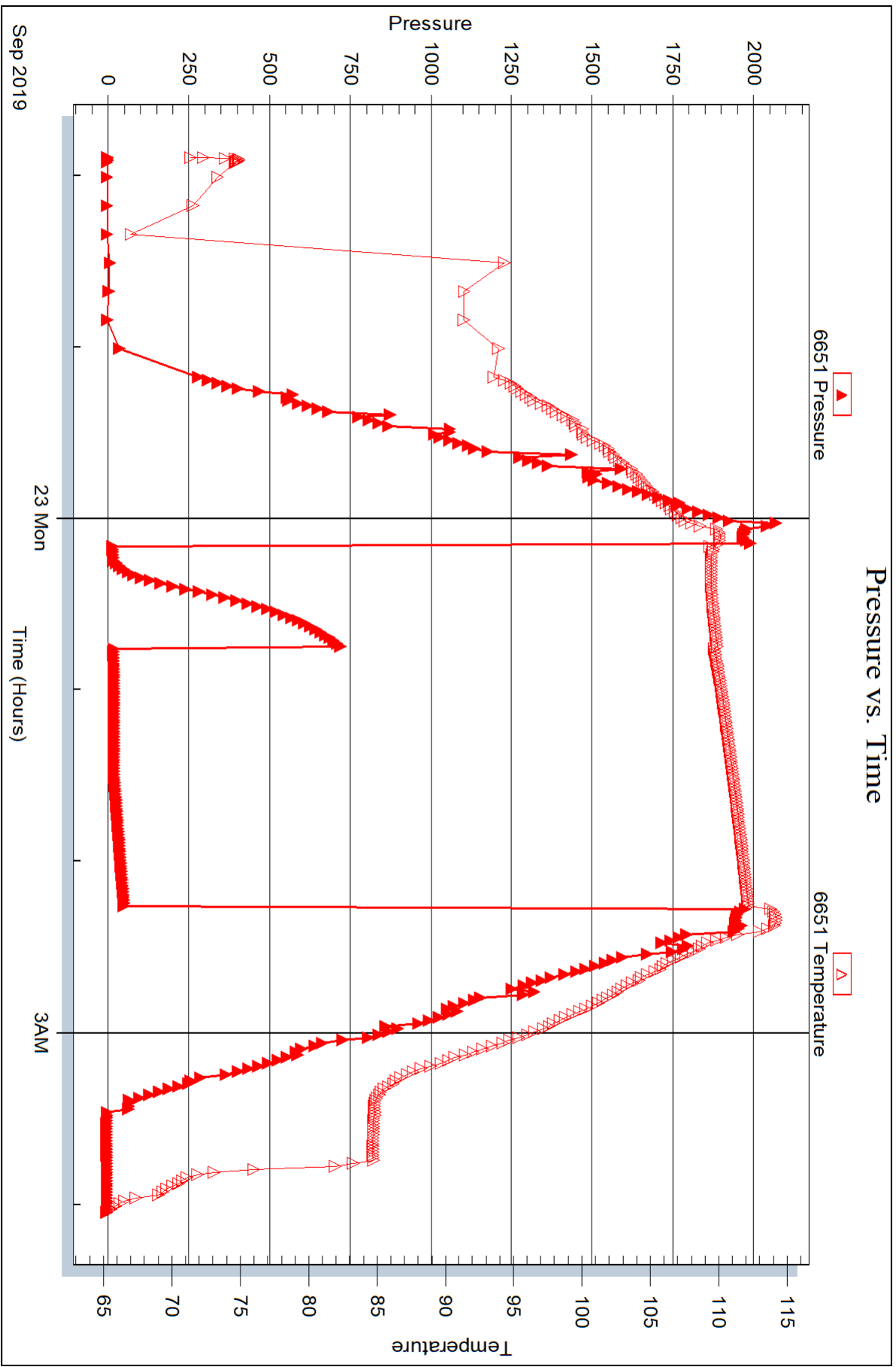
Serial #: 6651

Inside

Norstar Petroleum Inc

4-D Farms #1-14

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 66055

Printed: 2019.09.26 @ 08:20:51



DRILL STEM TEST REPORT

Prepared For: **Norstar Petroleum Inc**

88 Inverness Cir E. Unit F104
Englewood, CO 80112

ATTN: Ryan Davis

4-D Farms #1-14

14-6s-31w Thomas,KS

Start Date: 2019.09.24 @ 23:43:50

End Date: 2019.09.25 @ 06:45:50

Job Ticket #: 66056 DST #: 4

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

Printed: 2019.09.26 @ 08:19:53



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Norstar Petroleum Inc
 88 Inverness Cir E. Unit F104
 Englewood, CO 80112
 ATTN: Ryan Davis

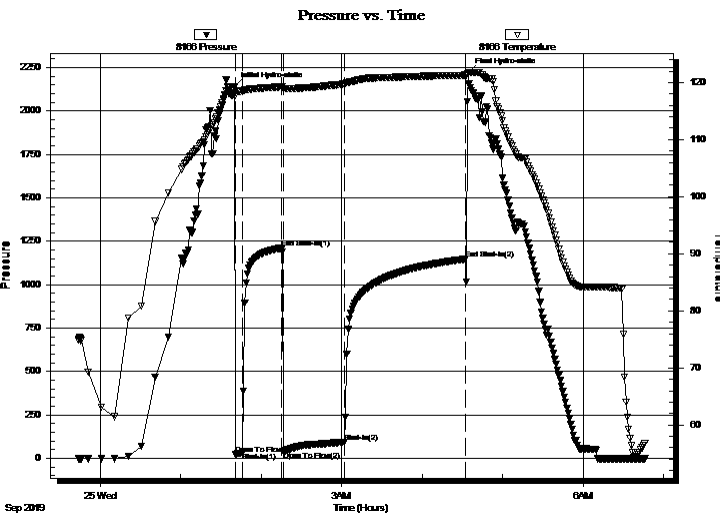
14-6s-31w Thomas, KS
4-D Farms #1-14
 Job Ticket: 66056 **DST#: 4**
 Test Start: 2019.09.24 @ 23:43:50

GENERAL INFORMATION:

Formation: **Pawnee**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 01:40:50
 Time Test Ended: 06:45:50
 Interval: **4255.00 ft (KB) To 4318.00 ft (KB) (TVD)**
 Total Depth: 4572.00 ft (KB) (TVD)
 Hole Diameter: 3.88 inches Hole Condition: Good
 Test Type: Conventional Straddle (Reset)
 Tester: Brandon Turley
 Unit No: 79
 Reference Elevations: 2918.00 ft (KB)
 2911.00 ft (CF)
 KB to GR/CF: 7.00 ft

Serial #: 8166 Outside
 Press@RunDepth: 93.95 psig @ 4261.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2019.09.24 End Date: 2019.09.25 Last Calib.: 2019.09.25
 Start Time: 23:43:55 End Time: 06:45:49 Time On Btm: 2019.09.25 @ 01:39:50
 Time Off Btm: 2019.09.25 @ 04:34:20

TEST COMMENT: IF: 1/4" blow built to 1 1/2"
 IS: No return.
 FF: Surface blow built to 6"
 FS: No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2139.86	119.21	Initial Hydro-static
1	21.54	117.74	Open To Flow (1)
7	34.99	118.41	Shut-In(1)
36	1211.74	119.25	End Shut-In(1)
37	39.70	118.95	Open To Flow (2)
82	93.95	119.74	Shut-In(2)
173	1147.79	121.27	End Shut-In(2)
175	2221.92	121.74	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
61.00	mcw 80%w 20%m	0.30
111.00	w cm 30%w 70%m	1.00

* Recovery from multiple tests

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Norstar Petroleum Inc
88 Inverness Cir E. Unit F104
Englewood, CO 80112
ATTN: Ryan Davis

14-6s-31w Thomas, KS

4-D Farms #1-14

Job Ticket: 66056

DST#: 4

Test Start: 2019.09.24 @ 23:43:50

GENERAL INFORMATION:

Formation: **Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:40:50

Time Test Ended: 06:45:50

Interval: 4255.00 ft (KB) To 4318.00 ft (KB) (TVD)

Total Depth: 4572.00 ft (KB) (TVD)

Hole Diameter: 3.88 inches Hole Condition: Good

Test Type: Conventional Straddle (Reset)

Tester: Brandon Turley

Unit No: 79

Reference Elevations: 2918.00 ft (KB)

2911.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: 6651

Inside

Press@RunDepth: psig @ 4261.00 ft (KB)

Start Date: 2019.09.24

End Date:

2019.09.25

Start Time: 23:43:59

End Time:

06:45:53

Capacity: 8000.00 psig

Last Calib.:

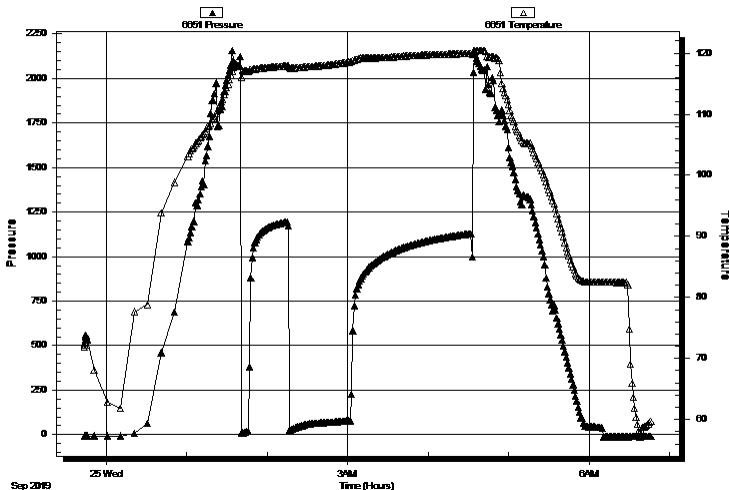
2019.09.25

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: 1/4" blow built to 1 1/2"
IS: No return.
FF: Surface blow built to 6"
FS: No return.

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
61.00	mcw 80%w 20%m	0.30
111.00	w cm 30%w 70%m	1.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Norstar Petroleum Inc
88 Inverness Cir E. Unit F104
Englewood, CO 80112
ATTN: Ryan Davis

14-6s-31w Thomas, KS

4-D Farms #1-14

Job Ticket: 66056

DST#: 4

Test Start: 2019.09.24 @ 23:43:50

GENERAL INFORMATION:

Formation: **Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:40:50

Time Test Ended: 06:45:50

Test Type: Conventional Straddle (Reset)

Tester: Brandon Turley

Unit No: 79

Interval: 4255.00 ft (KB) To 4318.00 ft (KB) (TVD)

Total Depth: 4572.00 ft (KB) (TVD)

Hole Diameter: 3.88 inches Hole Condition: Good

Reference Elevations: 2918.00 ft (KB)

2911.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: 6748 Below (Straddle)

Press@RunDepth: psig @ 4320.00 ft (KB)

Start Date: 2019.09.24

End Date:

2019.09.25

Start Time: 23:43:48

End Time:

06:51:42

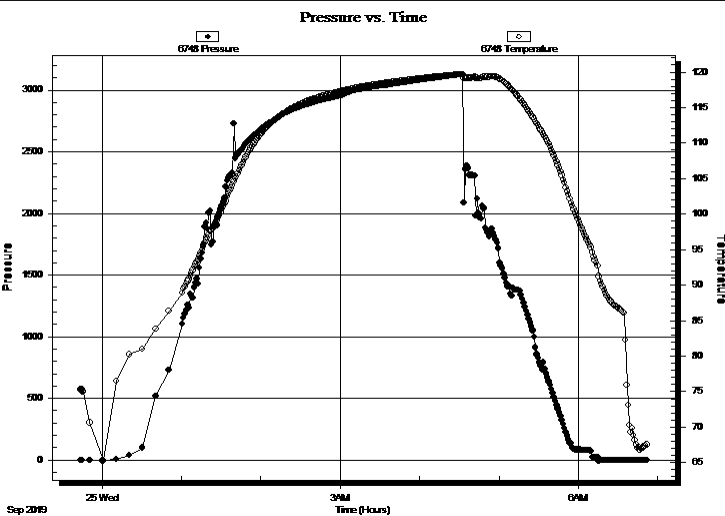
Capacity: 8000.00 psig

Last Calib.: 2019.09.25

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: 1/4" blow built to 1 1/2"
IS: No return.
FF: Surface blow built to 6"
FS: No return.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
61.00	mcw 80%w 20%m	0.30
111.00	w cm 30%w 70%m	1.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Norstar Petroleum Inc
88 Inverness Cir E. Unit F104
Englewood, CO 80112
ATTN: Ryan Davis

14-6s-31w Thomas,KS
4-D Farms #1-14
Job Ticket: 66056 **DST#: 4**
Test Start: 2019.09.24 @ 23:43:50

Tool Information

Drill Pipe:	Length: 4136.00 ft	Diameter: 3.80 inches	Volume: 58.02 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 122.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 58.62 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4255.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	4318.00 ft			
Interval between Packers:	63.00 ft			
Tool Length:	346.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Stubb	1.00			4227.00	
Shut In Tool	5.00			4232.00	
Sampler	2.00			4234.00	
Hydraulic tool	5.00			4239.00	
Jars	5.00			4244.00	
Safety Joint	2.00			4246.00	
Packer	5.00			4251.00	29.00 Bottom Of Top Packer
Packer	4.00			4255.00	
Stubb	1.00			4256.00	
Perforations	5.00			4261.00	
Recorder	0.00	6651	Inside	4261.00	
Recorder	0.00	8166	Outside	4261.00	
Change Over Sub	1.00			4262.00	
Drill Pipe	31.00			4293.00	
Change Over Sub	1.00			4294.00	
Perforations	19.00			4313.00	
Blank Off Sub	1.00			4314.00	
Packer - Shale	4.00			4318.00	63.00 Tool Interval
Packer	0.00			4318.00	
Stubb	1.00			4319.00	
Change Over Sub	1.00			4320.00	
Recorder	0.00	6748	Below	4320.00	
Drill Pipe	252.00			4572.00	254.00 Bottom Packers & Anchor
Total Tool Length:	346.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Norstar Petroleum Inc
88 Inverness Cir E. Unit F104
Englewood, CO 80112
ATTN: Ryan Davis

14-6s-31w Thomas,KS
4-D Farms #1-14
Job Ticket: 66056 **DST#: 4**
Test Start: 2019.09.24 @ 23:43:50

Mud and Cushion Information

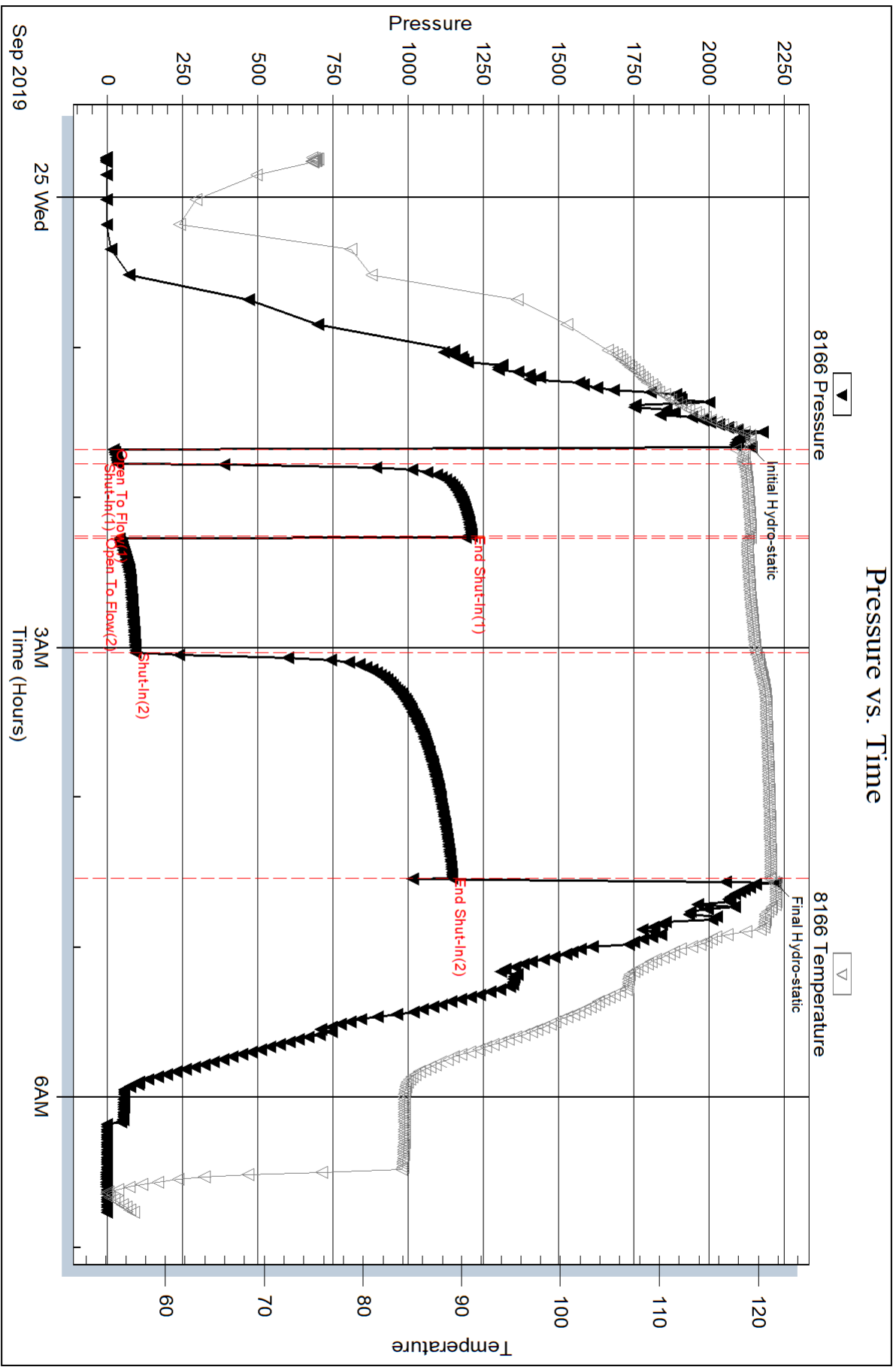
Mud Type: Gel Chem	Cushion Type:	Oil API: 0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 18000 ppm
Viscosity: 56.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.18 in ³	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 2000.00 ppm		
Filter Cake: 1.00 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
61.00	mcw 80%w 20%m	0.300
111.00	wcm 30%w 70%m	1.001

Total Length: 172.00 ft Total Volume: 1.301 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: .54@56=18000



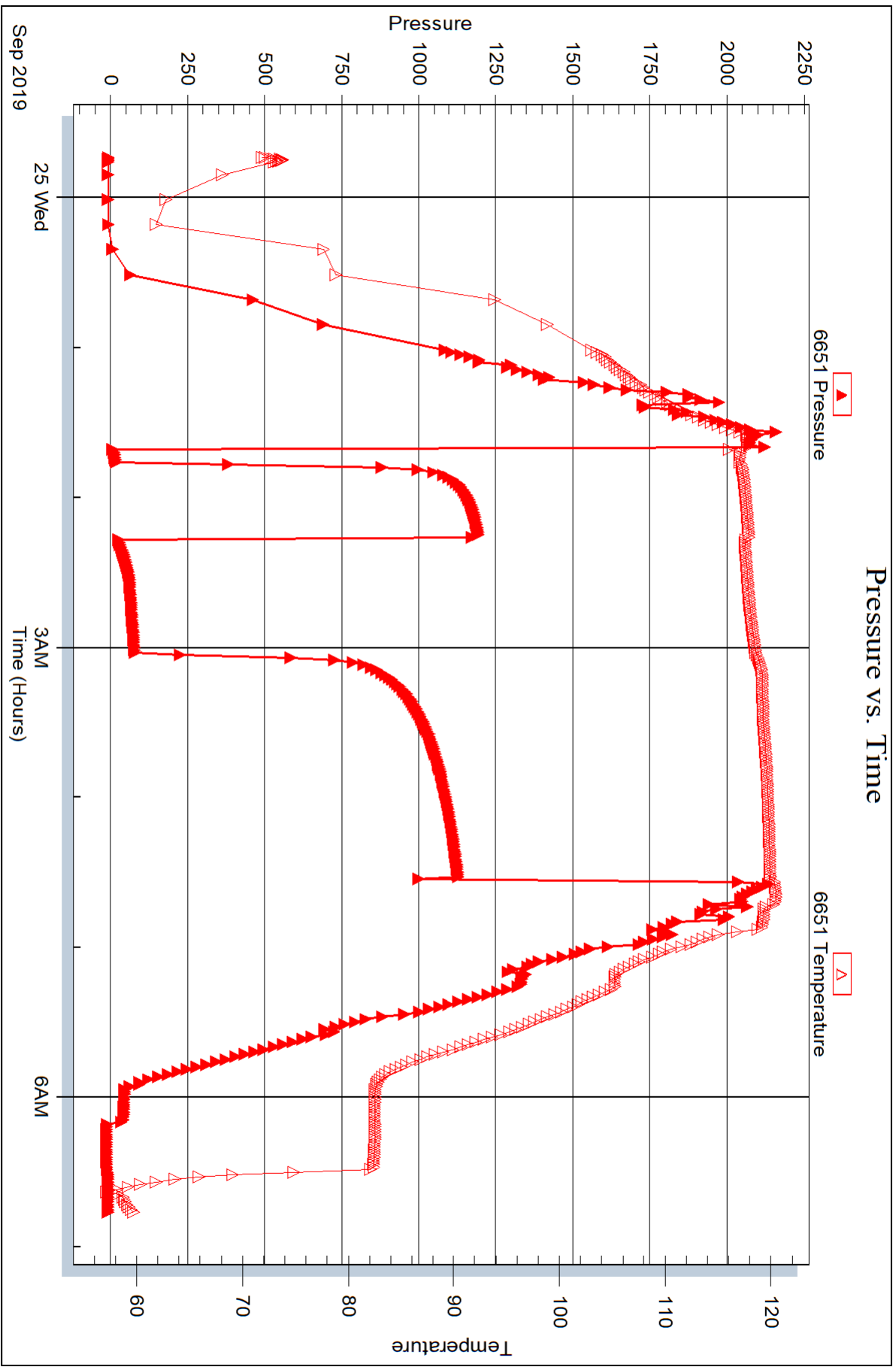
Serial #: 6651

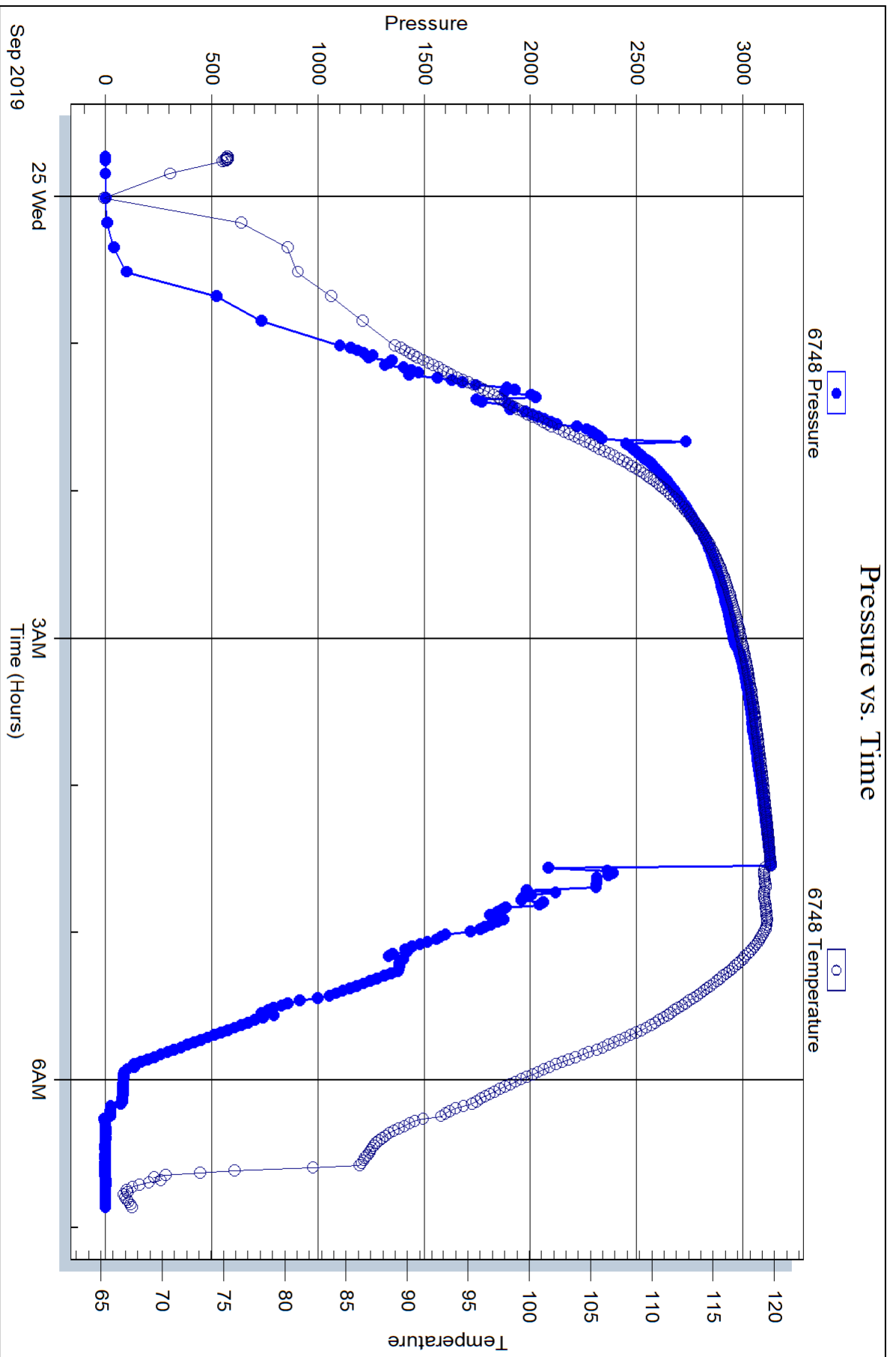
Inside

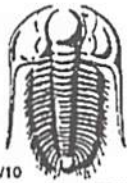
Norstar Petroleum Inc

4-D Farms #1-14

DST Test Number: 4







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket 66053

NO.

Well Name & No. 4D Farms 1-14 Test No. 1 Date 9-21-19
 Company Norstar Petroleum Inc Elevation 2918 KB 2911 GL
 Address 88 Inverness Cir E, unit F104 Englewood, CO 80112
 Co. Rep / Geo. Ryan Davis Rig STP #1
 Location: Sec. 14 Twp 6 Rge. 31 Co. Thomas State KS

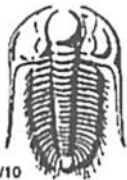
Interval Tested 3892 3933 Zone Tested Toronto
 Anchor Length 41 Drill Pipe Run 3759 Mud Wt. 9.0
 Top Packer Depth 3887 Drill Collars Run 122 Vis 56
 Bottom Packer Depth 3892 Wt. Pipe Run — WL 7.2
 Total Depth 3933 Chlorides 2000 ppm System LCM 1
 Blow Description IF: 1.3" blow built to 1.44.
IS: No return.
FF: No blow.
FS: No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 20 BHT 111 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>1877</u>	<input checked="" type="checkbox"/> Test <u>1200</u>	T-On Location <u>11:15</u>
(B) First Initial Flow <u>29</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>11:46</u>
(C) First Final Flow <u>29</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>13:03</u>
(D) Initial Shut-In <u>749</u>	<input checked="" type="checkbox"/> Circ Sub <u>NIL</u>	T-Pulled <u>14:38</u>
(E) Second Initial Flow <u>30</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>16:25</u>
(F) Second Final Flow <u>30</u>	<input checked="" type="checkbox"/> Mileage <u>164-</u> 164	Comments <u>out of town</u>
(G) Final Shut-In <u>499</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1845</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> EM Tool
Initial Open <u>5</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Shale Packer
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Extra Copies
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby	Sub Total <u>0</u>
	<input type="checkbox"/> Accessibility	Total <u>1689</u>
	Sub Total <u>1689</u>	MP/DST Disc't

Approved By [Signature] 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 66054

NO.

Well Name & No. 4D Farms 1-14 Test No. 2 Date 9-22-19
 Company Norstar Petroleum Elevation 2918 KB 2911 GL
 Address _____
 Co. Rep / Geo. Ryan Davis Rig STP #1
 Location: Sec. 14 Twp 6 Rge. 31 Co. Thomas State KS

Interval Tested 3946 3978 Zone Tested Leasing B & C
 Anchor Length _____ Drill Pipe Run 3822 Mud Wt. 9.0
 Top Packer Depth _____ Drill Collars Run 122 Vis 56
 Bottom Packer Depth _____ Wt. Pipe Run _____ WL 7.2
 Total Depth 3978 Chlorides 2000 ppm System LCM 1

Blow Description IF: Surface blow.
IS: No return.
FF: Surface blow built to 1/4.
FS: No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

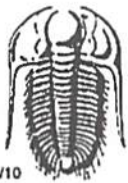
Rec Total 10 BHT 112 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1943 Test 1200 T-On Location 00:15
 (B) First Initial Flow 15 Jars 250 T-Started 1:02
 (C) First Final Flow 16 Safety Joint 75 T-Open 3:18
 (D) Initial Shut-In 1321 Circ Sub NIL T-Pulled 4:53
 (E) Second Initial Flow 17 Hourly Standby T-Out 6:45
 (F) Second Final Flow 25 Mileage 164 - 164 Comments out of town
 (G) Final Shut-In 1308 Sampler _____
 (H) Final Hydrostatic 1915 Straddle _____

Initial Open 5 Shale Packer _____
 Initial Shut-In 30 Extra Packer _____
 Final Flow 30 Extra Recorder _____
 Final Shut-In 30 Day Standby _____
 Sub Total 1689 Accessibility _____
 Sub Total 1689 MP/DST Disc't _____

Approved By _____ Our Representative _____

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket 66055

NO.

Well Name & No. 4-D Farms 1-14 Test No. 3 Date 9-22-19
 Company Norstar Petroleum Elevation 2918 KB 2911 GL
 Address _____
 Co. Rep / Geo. Rym Davis Rig STP #1
 Location: Sec. 14 Twp 6 Rge. 31 Co. Thomas State KS

Interval Tested 4069 4123 Zone Tested Lensing I-J
 Anchor Length 54 Drill Pipe Run 3948 Mud Wt. 9.1
 Top Packer Depth 4064 Drill Collars Run 122 Vis 56
 Bottom Packer Depth 4069 Wt. Pipe Run _____ WL 7.2
 Total Depth 4123 Chlorides 2300 ppm System LCM 1
 Blow Description IF: 1/2 blow built to 1".
IS: No return.
FF: Surface blow built to 1/2.
FS: No return.

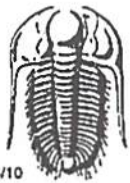
Rec	Feet of	%gas	%oil	%water	%mud
<u>1</u>	<u>Free oil</u>	<u>100</u>			
<u>15</u>	<u>ocm</u>	<u>20</u>		<u>80</u>	
____	____	____	____	____	____
____	____	____	____	____	____
____	____	____	____	____	____

Rec Total 16 BHT 113 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2038</u>	<input checked="" type="checkbox"/> Test <u>1300</u>	T-On Location <u>21:15</u>
(B) First Initial Flow <u>16</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>21:53</u>
(C) First Final Flow <u>19</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>00:08</u>
(D) Initial Shut-In <u>723</u>	<input checked="" type="checkbox"/> Circ Sub <u>NIL</u>	T-Pulled <u>2:13</u>
(E) Second Initial Flow <u>21</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>4:06</u>
(F) Second Final Flow <u>22</u>	<input checked="" type="checkbox"/> Mileage <u>164-164</u>	Comments <u>out of town</u>
(G) Final Shut-In <u>53</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>1992</u>	<input type="checkbox"/> Straddle _____	
	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> EM Tool _____
Initial Open <u>5</u>	<input type="checkbox"/> Extra Packer _____	<input checked="" type="checkbox"/> Ruined Packer <u>320</u>
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Recorder _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>45</u>	<input type="checkbox"/> Day Standby _____	Sub Total <u>320</u>
Final Shut-In <u>45</u>	<input type="checkbox"/> Accessibility _____	Total <u>2109</u>
	Sub Total <u>1789</u>	MP/DST Disc't _____

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket 66056

NO.

Well Name & No. 4-D Farms 1-14 Test No. 4 Date 9-24-19
 Company Norstar Petroleum Elevation 2918 KB 2911 GL
 Address _____
 Co. Rep / Geo. Ryan Davis Rig STP #1
 Location: Sec. 14 Twp 6 Rge. 31 Co. Thomas State KS

Interval Tested 4255 4318 Zone Tested Pawnee
 Anchor Length 63 Drill Pipe Run 4136 Mud Wt. 9.0
 Top Packer Depth 4250 Drill Collars Run 122 Vis 56
 Bottom Packer Depth 4318 Wt. Pipe Run — WL 7.2
 Total Depth 4572 Chlorides 2000 ppm System LCM 3000/
 Blow Description ±F: 1/4 blow built to 1 1/2.
IS: No return.
FF: surface blow built to 6.
FS: No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>111</u>	<u>wcm</u>		<u>30</u>	<u>70</u>	
<u>61</u>	<u>mcw</u>		<u>80</u>	<u>20</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 172 BHT 121 Gravity — API RW .54 @ 56 °F Chlorides 18.000 ppm

(A) Initial Hydrostatic <u>2139</u>	<input checked="" type="checkbox"/> Test <u>1300</u>	T-On Location <u>22:15</u>
(B) First Initial Flow <u>21</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>23:43</u>
(C) First Final Flow <u>34</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>1:43</u>
(D) Initial Shut-In <u>1211</u>	<input checked="" type="checkbox"/> Circ Sub <u>NCL</u>	T-Pulled <u>4:33</u>
(E) Second Initial Flow <u>39</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>6:52</u>
(F) Second Final Flow <u>93</u>	<input checked="" type="checkbox"/> Mileage <u>164-</u> 164	Comments <u>out of town</u>
(G) Final Shut-In <u>1147</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2221</u>	<input checked="" type="checkbox"/> Straddle <u>600</u>	<input type="checkbox"/> EM Tool
Initial Open <u>5</u>	<input checked="" type="checkbox"/> Shale Packer <u>250</u>	<input type="checkbox"/> Ruined Shale Packer
Initial Shut-In <u>30</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>90</u>	<input checked="" type="checkbox"/> Day Standby <u>1.5d 6.25h</u>	Sub Total <u>208.33</u>
	<input type="checkbox"/> Accessibility	Total <u>2847.33</u>
	Sub Total <u>2639</u>	MP/DST Disc't

Approved By _____ Our Representative [Signature]

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MUD LOG

WellSight Systems

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

Well Name: 4-D Farms
 API: 15-193-21053
 Location: 2259' FSL & 859' FEL
 License Number:
 Spud Date: 9/17/2019
 Surface Coordinates:

Region:
 Drilling Completed: 9/25/2019

Bottom Hole Coordinates:
 Ground Elevation (ft): 2911 K.B. Elevation (ft): 2918
 Logged Interval (ft): 3650 To: 4570 Total Depth (ft): 4570
 Formation: Mississippi
 Type of Drilling Fluid: Chemical

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

OPERATOR

Company: Norstar Petroleum, Inc.
 Address:

GEOLOGIST

Name: Ryan Davis
 Company:
 Address:

Cores

No Cores

DSTs

See Below

Comments

Due to DST results and E-Log analysis, the decision was made to plug and abandon well.

Respectfully submitted,
 Ryan Davis

ROCK TYPES

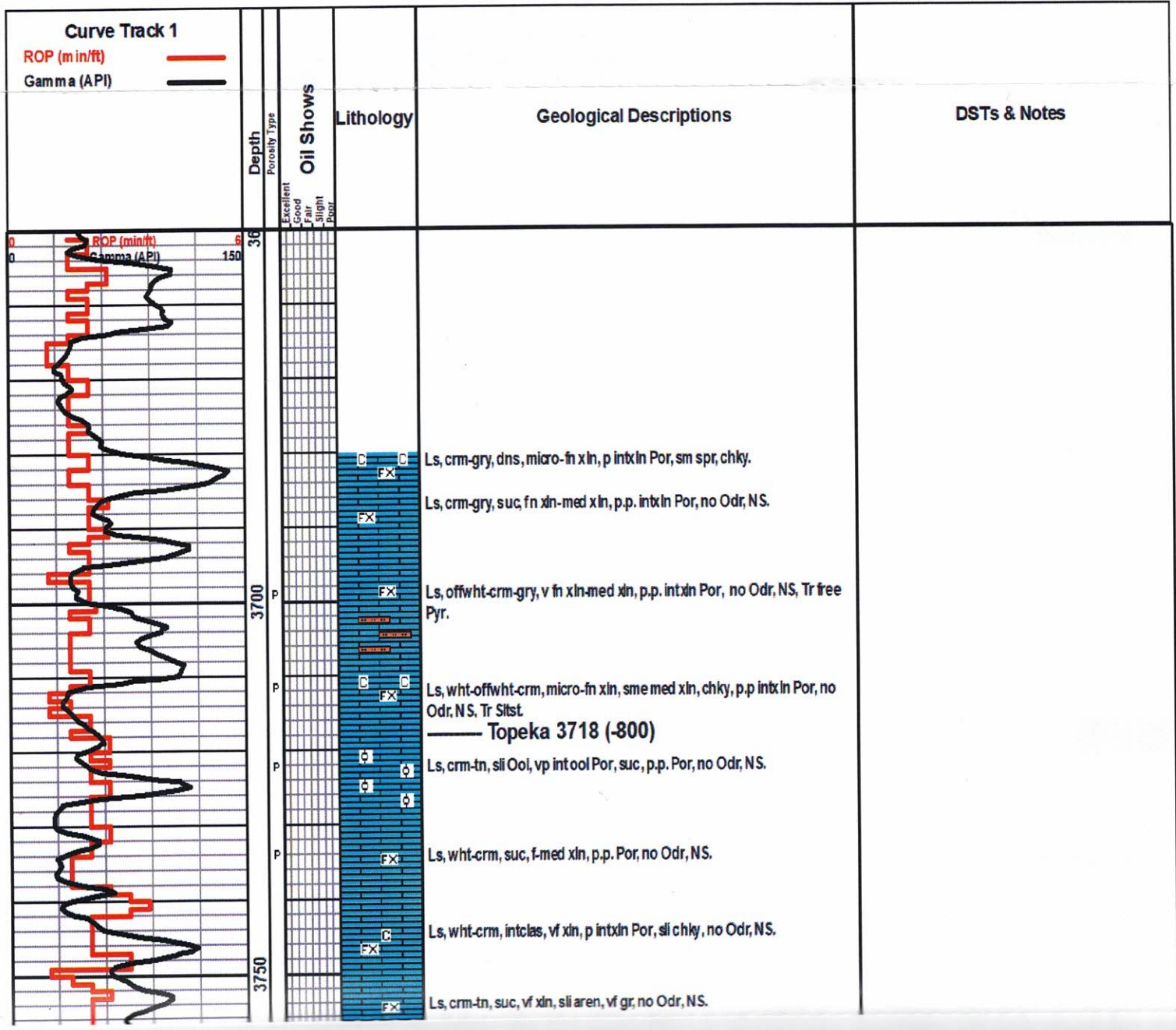
	Anhy		Clyst		Gyp		Mrst		Shgy
	Bent		Coal		Igne		Salt		Sltst
	Brec		Congl		Lmst		Shale		Ss
	Cht		Dol		Meta		Shcol		Till

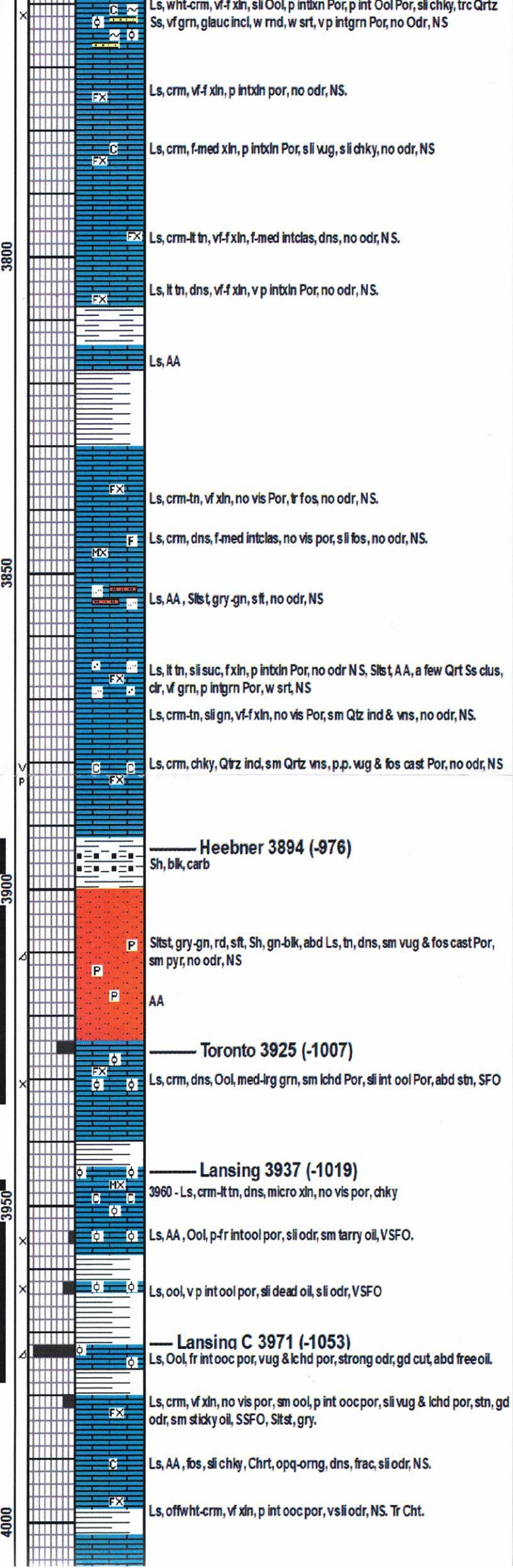
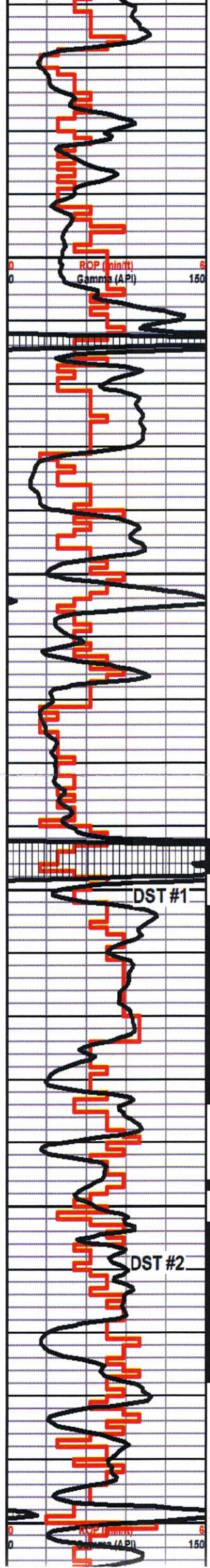
ACCESSORIES

MINERAL		Gyp		Ostra		Sltstrg
		Hvymn		Pelec		Ssstrg
		Kaol		Pellet		
		Marl		Pisolite		
		Minxl		Plant		
		Nodule		Strom		
		Phos				
		Pyr				
		Salt				
			FOSSIL			
				Algae		
				Amph		
				Belm		
				Bioclst		
				Brach		
				Bryozoa		
				Cephal		
				Coral		
					STRINGER	
						Anhy
						TEXTURE
						Boundst
						Chalky
						Cryxln
						Earthy
						Finexln

Chlck	Sandy	Chn	Arg	L
Chttt	Silt	Echin	Bent	Lithogr
Dol	Sil	Fish	Coal	Microxln
Feldspar	Sulphur	Foram	Dol	Mudst
Ferrpel	Tuff	Fossil	Gyp	Packst
Ferr		Gastro	Ls	Wackest
Glau		Oolite	Mrst	

OTHER SYMBOLS				
POROSITY	☑ Vuggy	ROUNDING	⊖ Spotted	EVENT
☐ Earthy		☐ Rounded	⊙ Ques	☑ Rft
☐ Fenest	SORTING	☐ Subrnd	☐ Dead	☑ Sidewall
☐ Fracture	☑ Well	☐ Subang		
☐ Inter	☐ Moderate	☐ Angular	INTERVAL	
☐ Moldic	☐ Poor		☐ Core	
☐ Organic		OIL SHOW	☐ Dst	
☐ Pinpoint		☐ Even		





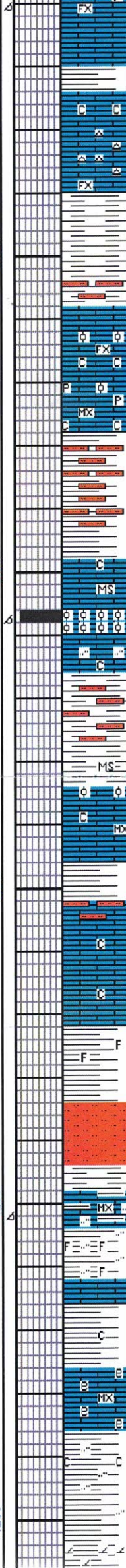
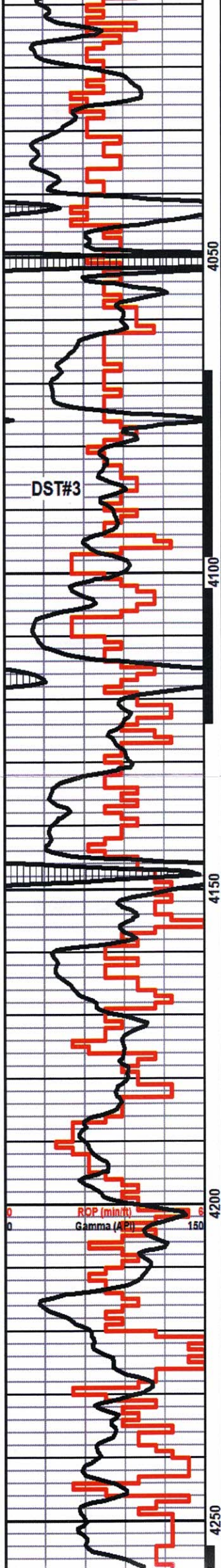
DST #1
 Toronto
 3892'-3933'
 5-30-30-30
 IF: 1.44" blow
 IS: No Return
 FF: No blow
 FSI: No Return
 REC: 20' M
 SIPs: 749-500#
 FPs: 29-29#/30-31#

CFS@3933 20/40/60

DST #2
 Lansing B-C
 3946-3978
 5-30-30-30
 IF: Surface blow
 IS: no return
 FF: surface blow built to 0.25"
 FS: no return
 Rec: 10' M
 FPs: 16-17#/18-25#

CFS@3963 20/40

CFS@3994 20/40/60



Ls, wht-crm, fos vug por, fxln, tr cht, no odr, chky, dns.

Ls, crm-lt gry, dns, vf-fxln, no vis por, tr chrt, wht-pnk, frac, no odr, NS

Muncie Creek Sh 4040 (-1122)

Sh, blk, carb, gn-gry

Sh, A A, Ls, wht-tn, dns,

Ls, wht-crm, micro-vf xln, vp intxn por, chky, sli ool, vf grn, p-f intgrn por, sli stn, NSFO

Ls, crm-lt tan, micro-f xln, no vis por, fos, sli chky, tr imbd pry, Sltst, gr-lt gry.

Slt Sh, gry-gn, rd-brn, sft, calc, Ls, wht-lt brn, dns, micro-vf xln, sli chky, micrite, brn, no vis por

Ool, tn, fn xln mfx, fr intxn Por, sat stn, gd odr, abd free oil.

Ls, crm-dk gry, vf xln, no vispor, sli odr, sli chky, occ sity.

Stark Sh 4116 (-1198)

Sh, blk, lt gry-dk gry, red.

Sh, brnsh rd, gry, blk w grn strks, sty grn/gry. Ls, tn-brn, dns, micr, micro xln.

Ls, tn-lt gry, micro-fxln, no vis por, dns, tr chky, scat vp ool por, no odr, NS.

Ls, wht-crm, lt gry, dns, micro xln, occ spar, abnt fos, no vis por, no odr, NS.

Ls, AA, sli chky, intb red sity sh. NS.

Ls, AA, incr red sity sh. NS.

Base Kansas City 4170 (-1252)

Sh, red, gm, gry, fos. NS.

Sltst, brn, ark. NS.

Ls, offwht-lt gry, micro-fxln, intclst, fos casts, no vispor; scat ltgrn sity Sh, v sft, tr red sity Sh. NS.

Sh, red, an. abnt. sltv. sme Ls - AA. fos. no por. NS.

Marmaton 4212 (-1294)

Sh, red, gry, elo, spllt; scatchlk NS.

Ls, tn-gry, v dns, micro xln, no vispor, int clst; Sh, red, gry, abnt. NS.

Sh, red, dk gry, sft, Chk, wht; Ls, lt gry, sity.

Sh, A A; Ls, lt gn, gry, sft.

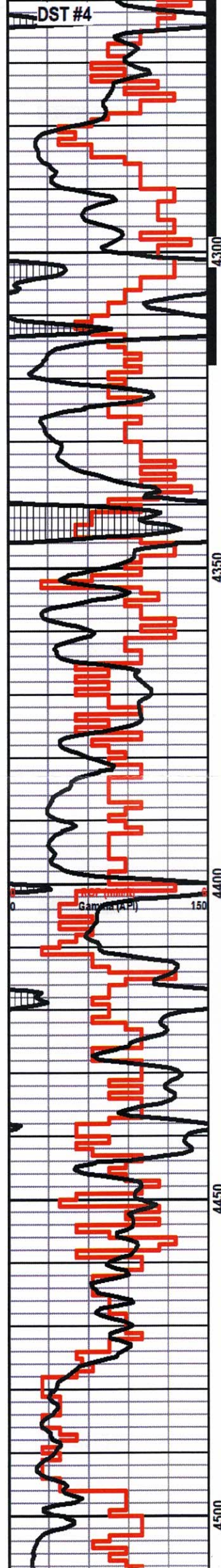
DST #3
 Lansing I-J
 4069-4123
 5-30-45-45
 IF: 0.5" blow built to 1"
 IS: no return
 FF: surface blow built to 0.5"
 FS: no return
 Rec: 1' O
 15' OCM (20% o, 80% m)
 SIPs: 723-54#
 FPs: 17-19#/21-23

CFS @ 4123
 30/60 min

59 Vis
 9.2 Wt

DST #4
 Pawnee

DST #4



Dol, drk gry, dns, micro-f xln, v p int ln por, Sh, AA

Pawnee 4280 (-1362)
Ls, crm-tn, dns, Ool, tn, tgt, vp int ool por, sli odr, tr VSFO upn crsh

Sh, blk, carb.

Ls, tn-lt gry, dns, int dst, no vis por, Sh, gry

Ls, crm-tn, lt gry, dns, tr chky, f xln, sme fos; tr Sh, red, gry, no odr, NS.

Sh, blk, red, gry, sft Ls, wht, crm, lt gry, dns, sme chky, fos, no odr, NS.

Ls, offwht, crm, tn, lt gry, dns, micro-f xln, sme chky, tr imbd pyr; Sh, blk, red, gn, sft.

Ft Scott 4356 (-1438)
Ls, crm-tn, lt gry, dns, micro-f xln, fos, scat chky, tr pyr, no odr, NS.

Ls, AA; tr Sh, red, gry.

Cherokee 4373 (-1455)

Ls, crm, tn brn, dns, chrt, sli chky

Ls, crm-buff, dns, Uncnsl Qrtz, trns, rd, prp, Sh, rd-gy, no odr, NS

Cgl, rd-brn, cnsl, sm Qrtz, vp srt, Sh, rd-gry, no odr, NS

Sh, rd, gn, gry, Qrtz Sscist, trnsl-pnk, v-f grn, vp-p intgrn por, tgt, sm fri, sub ang, w srt, no odr, NS

Sh, rd-gn, sft, sm Ls, crm, dns

Sh, rd, mrrn, brn, blk, uncns Qrtz, opq-rd, no odr, no odr, NS

Sh, A A,

Chrt, buff, frsh, Sh, buff-rd, Qrtz, uncns, lrg grn, var colored, no odr, NS

Mississippi 4476 (-1558)
Sh, pred red, marn, gry, grn, lt grn, yel, imbd chrt, strks thru; Chrt, op, yel, lt gn, wthrd offwht-crm.

Ls, tn, dns, micro-f xln, no vis por; Chrt, wht-crm, op, buff, sli wthrd, sme frac.

Chrt, bone wht-crm, buff, frac, wthrd.

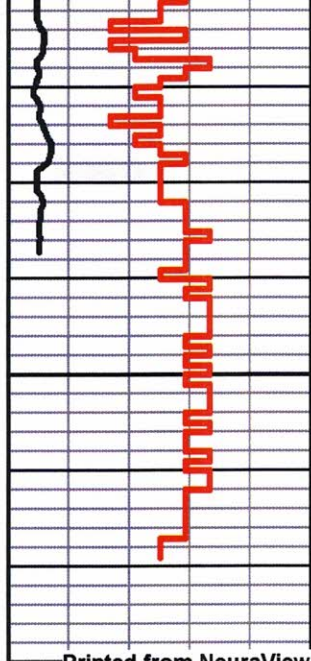
Chrt, op-buff, frac, sli wthrd, vp por. Ls, tn, sli chky.

4280-4590
5-30-45-90
IF: 1/4" blow built to 1 1/2"
IS: no blow back
FF: surface blow built to 6"
FS: no blow back
REC: 61; MCW (80%w 20%m)
111 WCM (30%w 70%m)
SIPs: 1212-1148#
FPs: 21-35#/39-94#

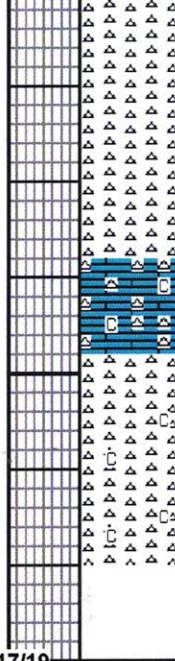
CFS @ 4297
30/60

CFS @ 4330
20/40/60

CFS @ 4169
20/40/60



4550



Chrt, off wht-lt gry, wthrd por.

Chrt, crm, pred sli wthrd, tr frac; Sh, pred red, grn, blk gry.

Chrt, crm-buff, sli wthrd, scat frac; Chk, wht, sft; Sh, pred red, grn, gry, blk, elo split, frm.

Ls, wht-off wht, chrty, dns, no vis por; Chrt, wht-buff, frac; Chk, wht, sft; Sh, pred red, gn, gry, blk, elo, split, mod frm, brit.

Chrt, wht, sli wthrd, v p por; Sh, pred red, grn, blk, sft

Chrt, wht-buff, sli wthrd, scat frac; tr Ls, wht, chky.

Chrt, wht-buff, wthrd, scat frac; sme Ls, scat chky.

RTD 4570