



DRILL STEM TEST REPORT

Prepared For: **StrataKan Exploration**

100 S Main
Plainville, KS 67663

ATTN: Marc Downing

Radium East #4-1

4-22S-14W Stafford,KS

Start Date: 2017.09.11 @ 22:45:50

End Date: 2017.09.12 @ 08:10:50

Job Ticket #: 57826 DST #: 1

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.09.13 @ 10:41:06



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

StrataKan Exploration

4-22S-14W Stafford, KS

100 S Main
Plainville, KS 67663

Radium East #4-1

Job Ticket: 57826

DST#: 1

ATTN: Marc Downing

Test Start: 2017.09.11 @ 22:45:50

GENERAL INFORMATION:

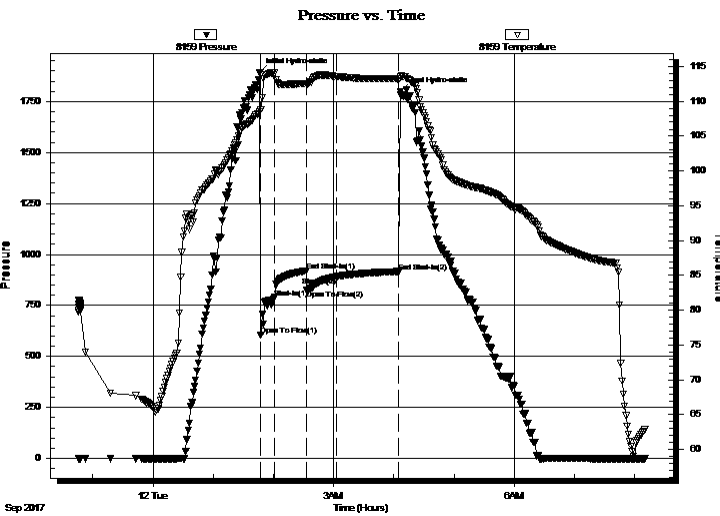
Formation: **Viola**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 01:47:35
 Time Test Ended: 08:10:50
 Interval: **3681.00 ft (KB) To 3787.00 ft (KB) (TVD)**
 Total Depth: 3787.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Leal Cason
 Unit No: 74
 Reference Elevations: 1950.00 ft (KB)
 1943.00 ft (CF)
 KB to GR/CF: 7.00 ft

Serial #: 8159

Inside

Press@RunDepth: 890.81 psig @ 3682.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.09.11 End Date: 2017.09.12 Last Calib.: 2017.09.12
 Start Time: 22:45:51 End Time: 08:10:50 Time On Btm: 2017.09.12 @ 01:46:20
 Time Off Btm: 2017.09.12 @ 04:06:50

TEST COMMENT: IF: Strong Blow , BOB in 30 seconds
 IS: No Blow Back
 FF: Strong Blow , BOB in 30 seconds, Died Off to 8 inches
 FS: No Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1892.70	108.57	Initial Hydro-static
2	606.18	108.78	Open To Flow (1)
15	788.76	114.07	Shut-In(1)
47	919.46	112.51	End Shut-In(1)
47	825.01	112.46	Open To Flow (2)
77	890.81	113.56	Shut-In(2)
139	916.66	113.20	End Shut-In(2)
141	1798.81	113.56	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1116.00	GOMCW 20%G 5%M 5%O 70%W	14.56
310.00	GMWCO 40%G 14%M 16%W 30%O	4.35
372.00	GMWCO 20%G 12%M 12%W 56%O	5.22
226.00	SOCM 5%O 95%M	3.17

Gas Rates

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



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DRILL STEM TEST REPORT

StrataKan Exploration
 100 S Main
 Plainville, KS 67663
 ATTN: Marc Downing

4-22S-14W Stafford, KS

Radium East #4-1

Job Ticket: 57826 **DST#: 1**
 Test Start: 2017.09.11 @ 22:45:50

GENERAL INFORMATION:

Formation: **Viola**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 01:47:35
 Time Test Ended: 08:10:50
Interval: 3681.00 ft (KB) To 3787.00 ft (KB) (TVD)
 Total Depth: 3787.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Leal Cason
 Unit No: 74
 Reference Elevations: 1950.00 ft (KB)
 1943.00 ft (CF)
 KB to GR/CF: 7.00 ft

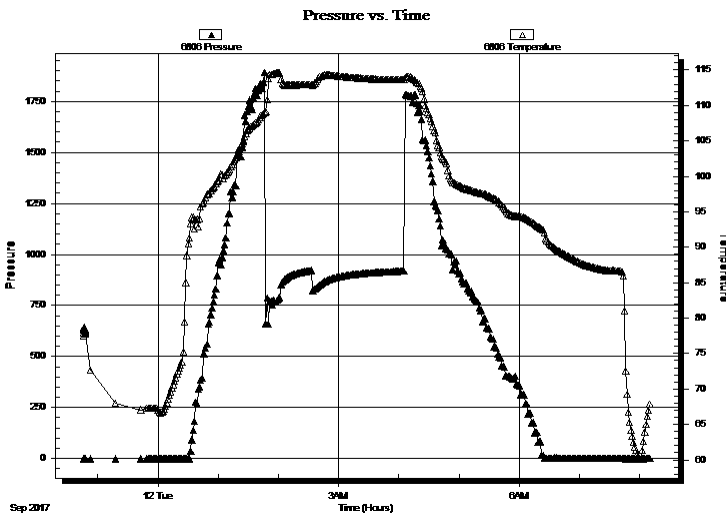
Serial #: 6806

Outside

Press@RunDepth: psig @ 3682.00 ft (KB)
 Start Date: 2017.09.11 End Date: 2017.09.12
 Start Time: 22:45:51 End Time: 08:11:05
 Capacity: 8000.00 psig
 Last Calib.: 2017.09.12
 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF: Strong Blow , BOB in 30 seconds
 IS: No Blow Back
 FF: Strong Blow , BOB in 30 seconds, Died Off to 8 inches
 FS: No Blow Back

PRESSURE SUMMARY



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

Recovery

Gas Rates

Length (ft)	Description	Volume (bbl)
1116.00	GOMCW 20%G 5%M 5%O 70%W	14.56
310.00	GMWCO 40%G 14%M 16%W 30%O	4.35
372.00	GMWCO 20%G 12%M 12%W 56%O	5.22
226.00	SOCM 5%O 95%M	3.17

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

StrataKan Exploration

4-22S-14W Stafford,KS

100 S Main
Plainville, KS 67663

Radium East #4-1

Job Ticket: 57826

DST#: 1

ATTN: Marc Downing

Test Start: 2017.09.11 @ 22:45:50

Tool Information

Drill Pipe:	Length: 3547.00 ft	Diameter: 3.80 inches	Volume: 49.76 bbl	Tool Weight: 2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 50.35 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	3681.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	106.00 ft			
Tool Length:	125.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3667.00	
Hydraulic tool	5.00			3672.00	
Packer	5.00			3677.00	19.00 Bottom Of Top Packer
Packer	4.00			3681.00	
Stubb	1.00			3682.00	
Recorder	0.00	8159	Inside	3682.00	
Recorder	0.00	6806	Outside	3682.00	
Perforations	6.00			3688.00	
Change Over Sub	1.00			3689.00	
Drill Pipe	94.00			3783.00	
Change Over Sub	1.00			3784.00	
Bullnose	3.00			3787.00	106.00 Bottom Packers & Anchor

Total Tool Length: 125.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

StrataKan Exploration

4-22S-14W Stafford,KS

100 S Main
Plainville, KS 67663

Radium East #4-1

Job Ticket: 57826

DST#: 1

ATTN: Marc Downing

Test Start: 2017.09.11 @ 22:45:50

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:

53000 ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 0.02 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1116.00	GOMCW 20%G 5%M 5%O 70%W	14.561
310.00	GMWCO 40%G 14%M 16%W 30%O	4.348
372.00	GMWCO 20%G 12%M 12%W 56%O	5.218
226.00	SOCM 5%O 95%M	3.170

Total Length: 2024.00 ft Total Volume: 27.297 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

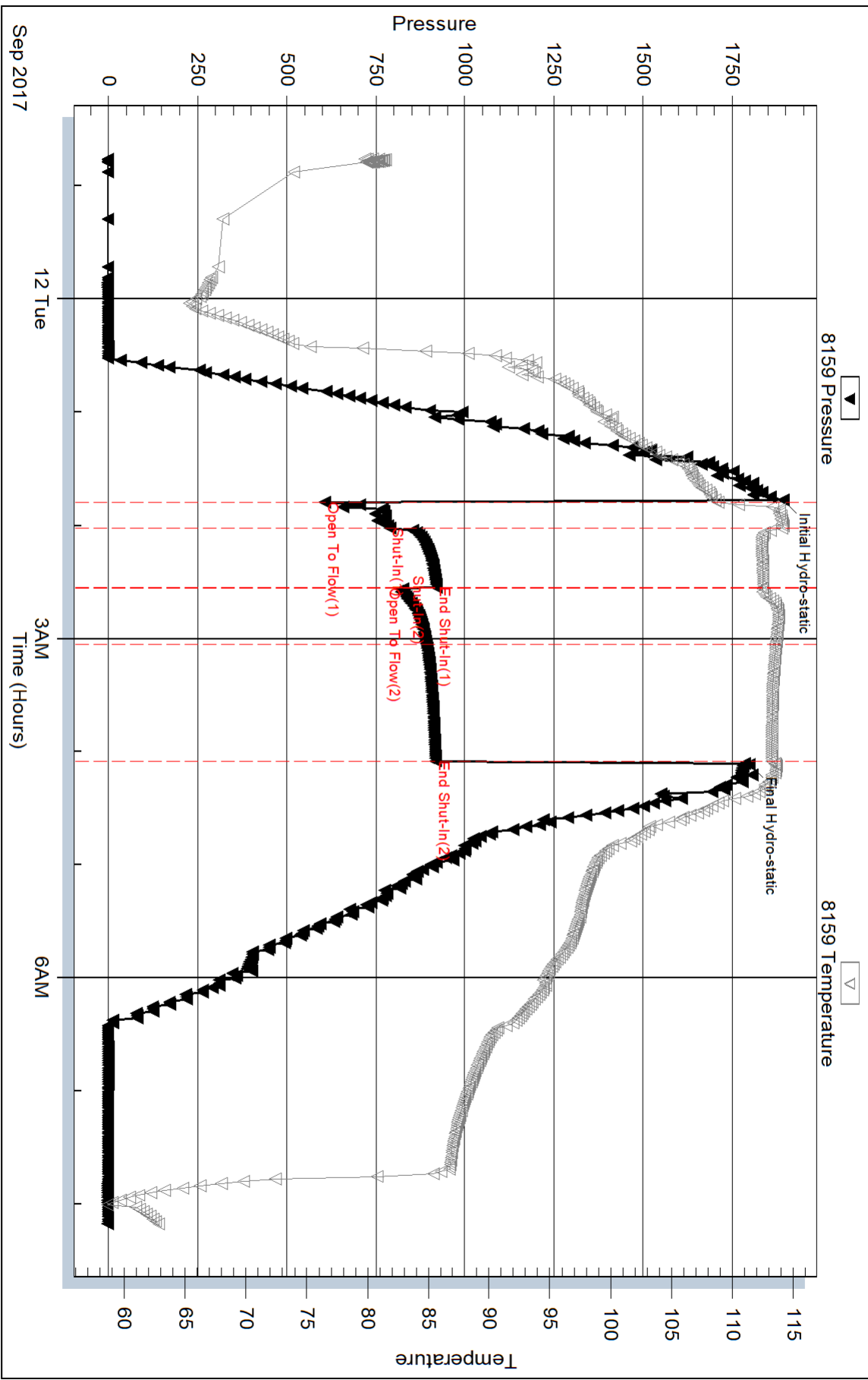
Laboratory Name:

Laboratory Location:

Recovery Comments: H2S Peaked @ 124 ppm

RW was .13 @ 80 degrees

Pressure vs. Time

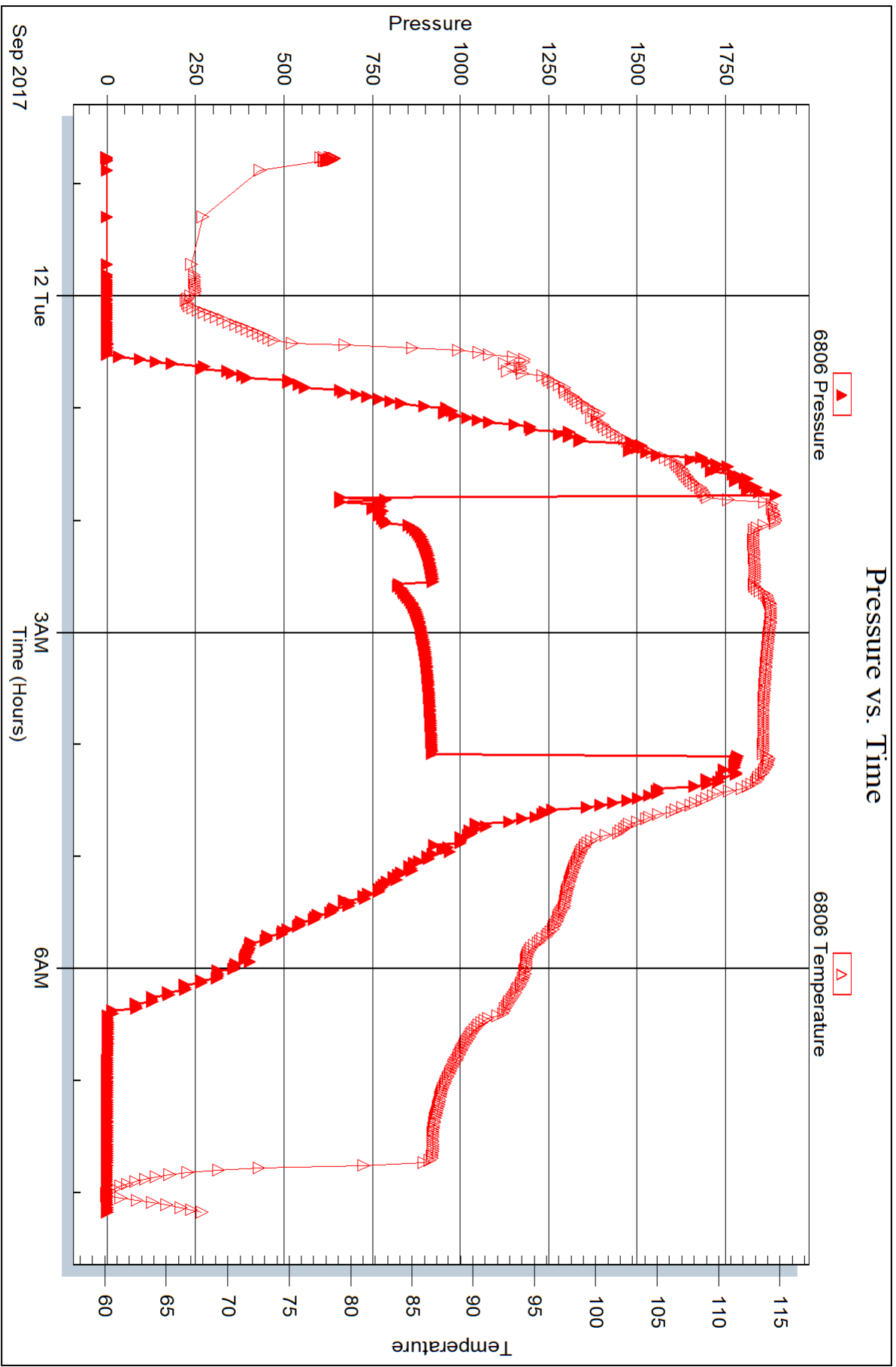


Serial #: 6806

Outside StrataKan Exploration

Radium East #4-1

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **StrataKan Exploration**

100 S Main
Plainville, KS 67663

ATTN: Marc Downing

Radium East #4-1

4-22S-14W Stafford,KS

Start Date: 2017.09.12 @ 14:58:51

End Date: 2017.09.12 @ 19:21:51

Job Ticket #: 57827 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.09.13 @ 10:37:42

StrataKan Exploration

4-22S-14W Stafford,KS

Radium East #4-1

DST # 2

Simpson

2017.09.12



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

StrataKan Exploration

4-22S-14W Stafford, KS

100 S Main
Plainville, KS 67663

Radium East #4-1

Job Ticket: 57827

DST#: 2

ATTN: Marc Downing

Test Start: 2017.09.12 @ 14:58:51

GENERAL INFORMATION:

Formation: **Simpson**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:35:21

Time Test Ended: 19:21:51

Test Type: Conventional Bottom Hole (Reset)

Tester: Leal Cason

Unit No: 74

Interval: 3778.00 ft (KB) To 3810.00 ft (KB) (TVD)

Reference Elevations: 1950.00 ft (KB)

Total Depth: 3810.00 ft (KB) (TVD)

1943.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

Serial #: 8159 Inside

Press@RunDepth: 17.91 psig @ 3779.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.09.12 End Date: 2017.09.12

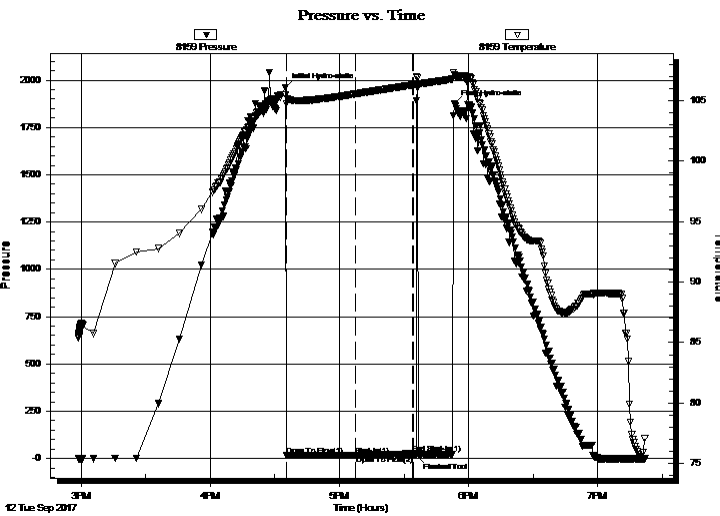
Last Calib.: 2017.09.12

Start Time: 14:58:52 End Time: 19:21:51

Time On Btm: 2017.09.12 @ 16:35:06

Time Off Btm: 2017.09.12 @ 17:53:21

TEST COMMENT: IF: Weak Surface Blow , Dead @ 20 minutes
IS: No Blow Back
FF: No Blow , Flushed Tool, No Blow , Pulled Tool



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1961.87	105.50	Initial Hydro-static
1	16.38	104.71	Open To Flow (1)
33	17.91	105.54	Shut-In(1)
59	24.96	106.27	End Shut-In(1)
60	16.37	106.27	Open To Flow (2)
61	16.89	106.31	Flushed Tool
79	1873.10	107.09	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud	0.02

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

StrataKan Exploration

4-22S-14W Stafford,KS

100 S Main
Plainville, KS 67663

Radium East #4-1

Job Ticket: 57827

DST#: 2

ATTN: Marc Downing

Test Start: 2017.09.12 @ 14:58:51

GENERAL INFORMATION:

Formation: **Simpson**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:35:21

Time Test Ended: 19:21:51

Interval: 3778.00 ft (KB) To 3810.00 ft (KB) (TVD)

Total Depth: 3810.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Test Type: Conventional Bottom Hole (Reset)

Tester: Leal Cason

Unit No: 74

Reference Elevations: 1950.00 ft (KB)

1943.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: 6806 Outside

Press@RunDepth: psig @ 3779.00 ft (KB)

Start Date: 2017.09.12 End Date: 2017.09.12

Start Time: 14:58:52 End Time: 19:21:51

Capacity: 8000.00 psig

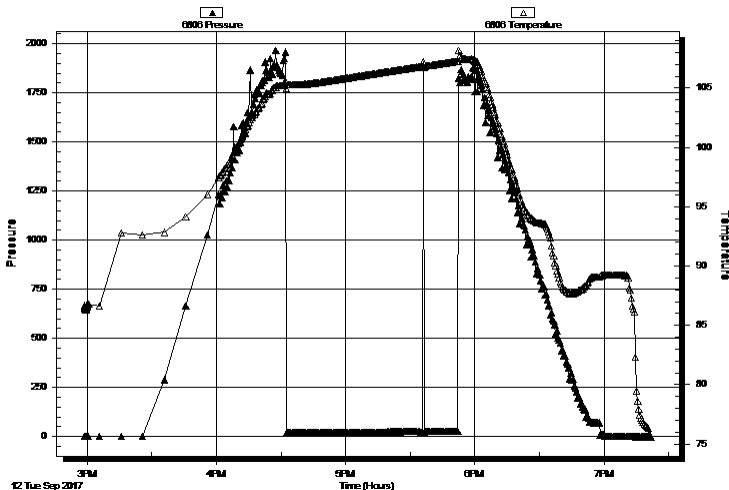
Last Calib.: 2017.09.12

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: Weak Surface Blow , Dead @ 20 minutes
IS: No Blow Back
FF: No Blow , Flushed Tool, No Blow , Pulled Tool

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud	0.02

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

StrataKan Exploration

4-22S-14W Stafford,KS

100 S Main
Plainville, KS 67663

Radium East #4-1

Job Ticket: 57827

DST#: 2

ATTN: Marc Downing

Test Start: 2017.09.12 @ 14:58:51

Tool Information

Drill Pipe:	Length: 3644.00 ft	Diameter: 3.80 inches	Volume: 51.12 bbl	Tool Weight:	2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose:	50000.00 lb
			<u>Total Volume: 51.71 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial	44000.00 lb
Depth to Top Packer:	3778.00 ft			Final	44000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	32.00 ft				
Tool Length:	51.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3764.00	
Hydraulic tool	5.00			3769.00	
Packer	5.00			3774.00	19.00 Bottom Of Top Packer
Packer	4.00			3778.00	
Stubb	1.00			3779.00	
Recorder	0.00	8159	Inside	3779.00	
Recorder	0.00	6806	Outside	3779.00	
Perforations	28.00			3807.00	
Bullnose	3.00			3810.00	32.00 Bottom Packers & Anchor
Total Tool Length:	51.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

StrataKan Exploration

4-22S-14W Stafford,KS

100 S Main
Plainville, KS 67663

Radium East #4-1

Job Ticket: 57827

DST#: 2

ATTN: Marc Downing

Test Start: 2017.09.12 @ 14:58:51

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: 53.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 0.02 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

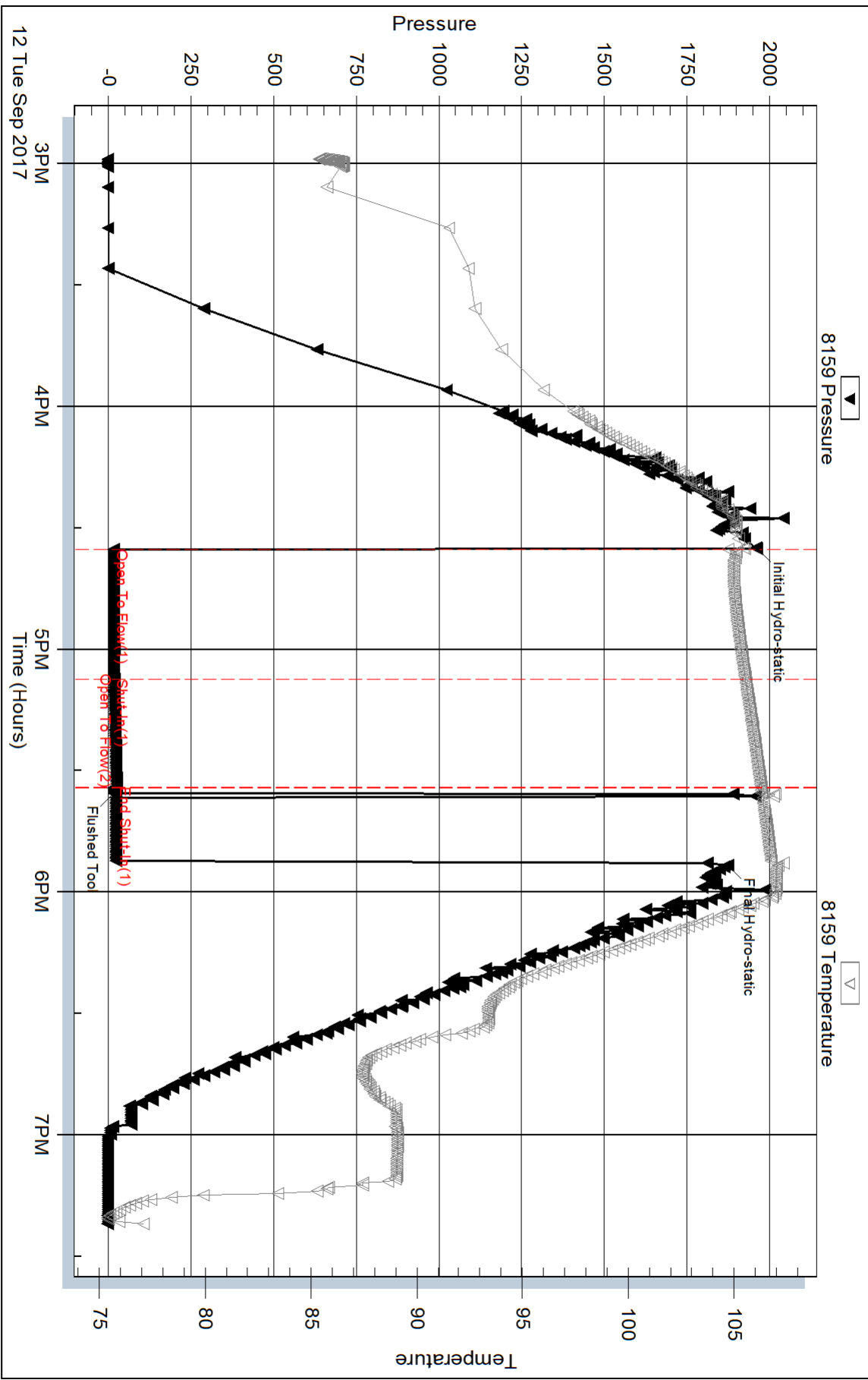
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

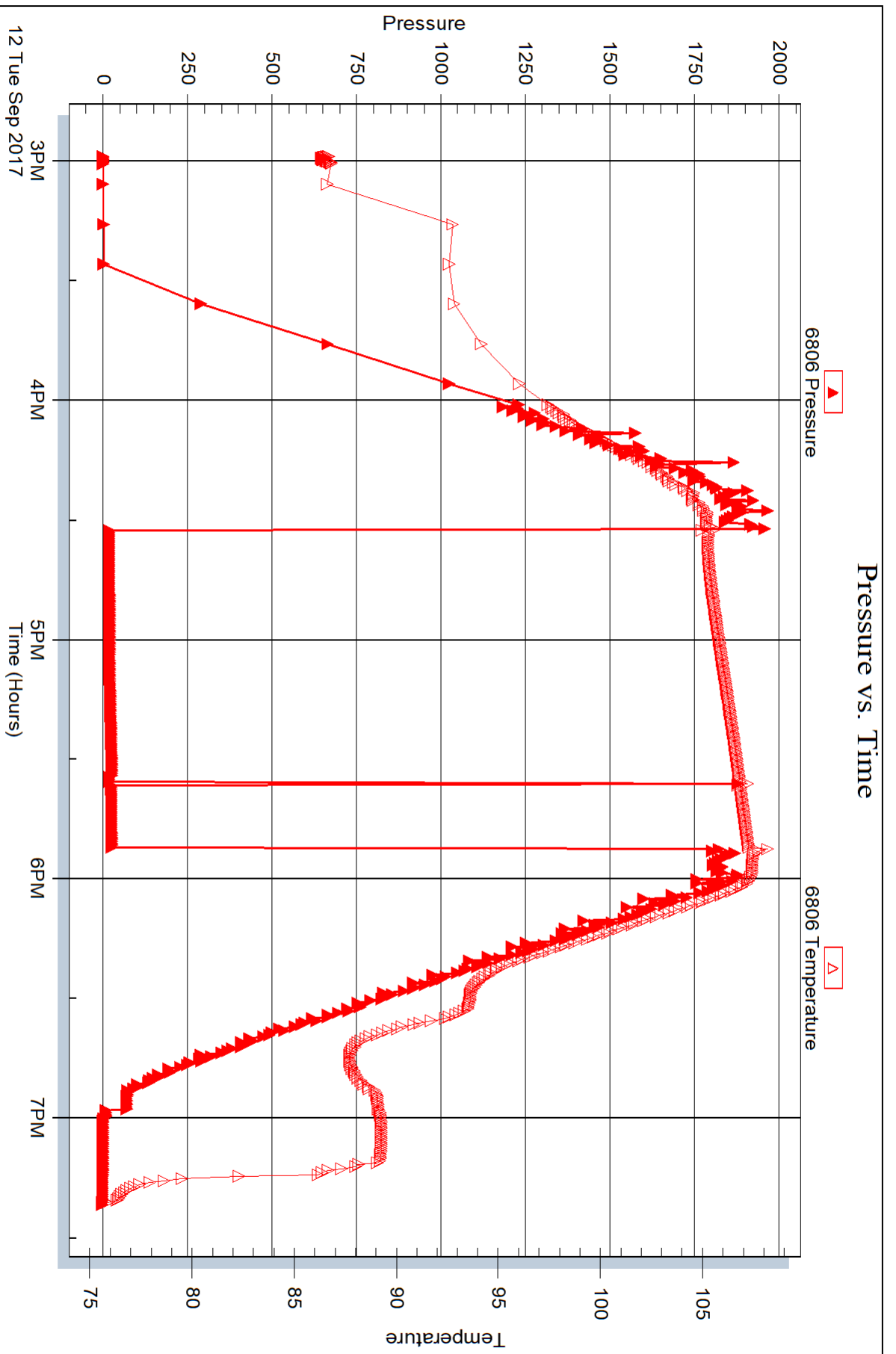


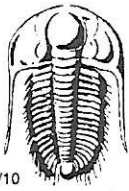
Serial #: 6806

Outside StrataKan Exploration

Radium East #4-1

DST Test Number: 2





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 57826

Well Name & No. Radium East 4-1 Test No. 1 Date 09/11/17
 Company Siratakan Exploration Elevation 1950 KB 1943 GL
 Address 100 S. Main Plainville, KS 67663
 Co. Rep / Geo. Marc Downing Rig WW 4
 Location: Sec. 4 Twp. 22S Rge. 14W Co. Stafford State KS

Interval Tested 3681 - 3787 Zone Tested Viola
 Anchor Length 106 Drill Pipe Run 3547 Mud Wt. 9.4
 Top Packer Depth 3676 Drill Collars Run 120 Vis 53
 Bottom Packer Depth 3681 Wt. Pipe Run 0 WL 8
 Total Depth 3787 Chlorides 5000 ppm System LCM 1'12

Blow Description TF: strong Blow BOB in 30 seconds
ISF: NO Blow Back
FF: strong Blow, BOB in 30 seconds Dried off to 8 inches
FSF: NO Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>226</u>	<u>50CM</u>	<u>5</u>	<u>5</u>	<u>95</u>	<u>5</u>
<u>372</u>	<u>GMWCO</u>	<u>20</u>	<u>56</u>	<u>12</u>	<u>12</u>
<u>310</u>	<u>GMWCO</u>	<u>40</u>	<u>30</u>	<u>16</u>	<u>14</u>
<u>1116</u>	<u>60MCW</u>	<u>20</u>	<u>5</u>	<u>70</u>	<u>5</u>
Rec	Feet of	%gas	%oil	%water	%mud

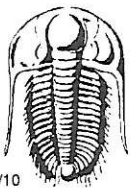
Rec Total 2024 BHT 113 Gravity NIL API RW .13 @ 80 ° F Chlorides 53000 ppm

(A) Initial Hydrostatic 1893 Test 1050 T-On Location 21:15
 (B) First Initial Flow 606 Jars _____ T-Started 22:45
 (C) First Final Flow 789 Safety Joint _____ T-Open 01:47
 (D) Initial Shut-In 919 Circ Sub _____ T-Pulled 04:05
 (E) Second Initial Flow 825 Hourly Standby _____ T-Out 08:10
 (F) Second Final Flow 890 Mileage (90) 67.50 Comments H2S peaked @
 (G) Final Shut-In 917 Sampler _____ 124 ppm
 (H) Final Hydrostatic 1799 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____

Initial Open 15 Extra Packer _____ Extra Copies _____
 Initial Shut-In 30 Extra Recorder _____ Sub Total 0
 Final Flow 30 Day Standby _____ Total 1117.50
 Final Shut-In 60 Accessibility _____ MP/DST Disc't _____
 Sub Total 1117.50

Approved By _____ Our Representative [Signature]

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



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 57827

Well Name & No. Radium East 4-1 Test No. 2 Date 09/12/17
 Company Sirata Kan Exploration Elevation 1950 KB 1943 GL
 Address 100 S. Main Plainville, KS 67663
 Co. Rep / Geo. Marc Downing Rig WW4
 Location: Sec. 4 Twp. 22S Rge. 14W Co. Stafford State KS

Interval Tested 3778 - 3810 Zone Tested Simpson
 Anchor Length ~~32~~ 3773 Drill Pipe Run 3644 Mud Wt. 9.4
 Top Packer Depth 3773 Drill Collars Run 120 Vis 56
 Bottom Packer Depth 3778 Wt. Pipe Run 0 WL 8.8
 Total Depth 3810 Chlorides 4800 ppm System LCM 1

Blow Description IF: weak surface blow, dead @ 20 minutes
ISI: NO Blow Back
FF: NO Blow, Flushed Tool, NO Blow, Pulled Tool

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Mud</u>				

Rec Total 5 BHT 107 Gravity NIC API RW NIC @ NIC °F Chlorides NIC ppm

(A) Initial Hydrostatic 1961 Test 1050 T-On Location 14:30
 (B) First Initial Flow 16 Jars _____ T-Started 14:58
 (C) First Final Flow 18 Safety Joint _____ T-Open 16:35
 (D) Initial Shut-In 25 Circ Sub _____ T-Pulled 17:35
 (E) Second Initial Flow 16 Hourly Standby _____ T-Out 19:21
 (F) Second Final Flow N/A Mileage (90) 67.50 Comments _____
 (G) Final Shut-In N/A Sampler _____
 (H) Final Hydrostatic 1873 Straddle _____

Ruined Shale Packer _____
 Shale Packer _____
 Ruined Packer _____
 Extra Packer _____
 Extra Copies _____
 Extra Recorder _____
 Sub Total 0
 Day Standby _____
 Total 1117.50
 Accessibility _____
 MP/DST Disc't _____
 Sub Total 1117.50

Approved By _____ Our Representative [Signature]

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