



DRILL STEM TEST REPORT

Prepared For: **StrataKan Exploration, LLC**

100 S. Main
Plainville, KS 67663

ATTN: Marc Downing

Titus #21-1

21-21S-14W Stafford, KS

Start Date: 2017.09.19 @ 16:35:43

End Date: 2017.09.20 @ 03:04:18

Job Ticket #: 55385 DST #: 1

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

Printed: 2017.09.22 @ 15:58:44



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

StrataKan Exploration, LLC

21-21S-14W Stafford, KS

100 S. Main
Plainville, KS 67663

Titus #21-1

Job Ticket: 55385

DST#: 1

ATTN: Marc Downing

Test Start: 2017.09.19 @ 16:35:43

GENERAL INFORMATION:

Formation: **LKC "H"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:07:34

Time Test Ended: 03:04:18

Test Type: Conventional Bottom Hole (Initial)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3510.00 ft (KB) To 3535.00 ft (KB) (TVD)

Reference Elevations: 1943.00 ft (KB)

Total Depth: 3535.00 ft (KB) (TVD)

1936.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 8524 Outside

Press@RunDepth: 259.20 psig @ 3511.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.09.19 End Date: 2017.09.20

Last Calib.: 2017.09.20

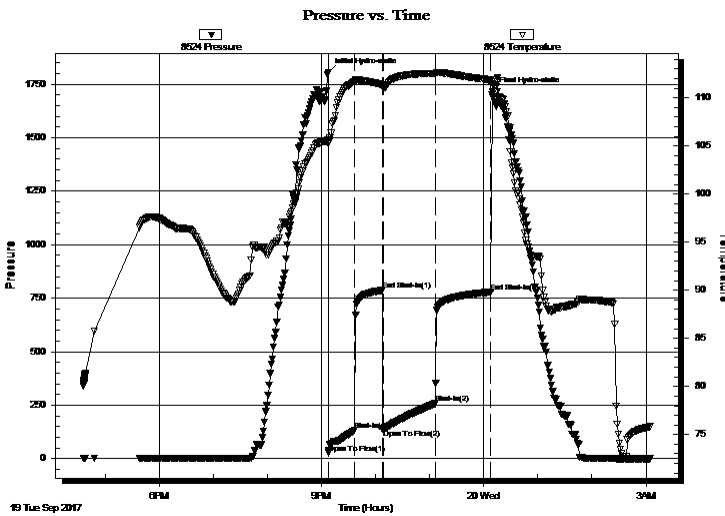
Start Time: 16:35:44 End Time: 03:04:18

Time On Btm: 2017.09.19 @ 21:07:19

Time Off Btm: 2017.09.20 @ 00:09:49

TEST COMMENT: 30- IF- BOB 7 mins
30- IS- Slow ly built to 1 1/4"
60- FF- BOB 10 mins
60- FS- Slow ly built to 1"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1804.59	105.63	Initial Hydro-static
1	27.83	105.26	Open To Flow (1)
30	134.74	111.72	Shut-In(1)
60	787.13	111.36	End Shut-In(1)
61	138.49	111.05	Open To Flow (2)
119	259.20	112.53	Shut-In(2)
181	779.46	111.83	End Shut-In(2)
183	1713.50	111.43	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
183.00	SMW, 95%W 5%M	1.48
188.00	OCMW, 80%W 10%M 10%W	2.66
125.00	GWMCO, 30%G 50%O 10%M 10%W	1.77
31.00	CGO, 30%G 70%O	0.44
0.00	595' GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

StrataKan Exploration, LLC

21-21S-14W Stafford, KS

100 S. Main
Plainville, KS 67663

Titus #21-1

Job Ticket: 55385

DST#: 1

ATTN: Marc Downing

Test Start: 2017.09.19 @ 16:35:43

Tool Information

Drill Pipe:	Length: 3386.00 ft	Diameter: 3.82 inches	Volume: 48.00 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - 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: 56000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3510.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	25.00 ft			
Tool Length:	45.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3491.00	
Shut In Tool	5.00			3496.00	
Hydraulic tool	5.00			3501.00	
Packer	5.00			3506.00	20.00 Bottom Of Top Packer
Packer	4.00			3510.00	
Stubb	1.00			3511.00	
Recorder	0.00	6771	Inside	3511.00	
Recorder	0.00	8524	Outside	3511.00	
Perforations	21.00			3532.00	
Bullnose	3.00			3535.00	25.00 Bottom Packers & Anchor
Total Tool Length:	45.00				



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

StrataKan Exploration, LLC

21-21S-14W Stafford, KS

100 S. Main
Plainville, KS 67663

Titus #21-1

Job Ticket: 55385

DST#: 1

ATTN: Marc Downing

Test Start: 2017.09.19 @ 16:35:43

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

34 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

100000 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.58 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7800.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
183.00	SMW, 95%W 5%M	1.483
188.00	OCMW, 80%W 10%M 10%W	2.665
125.00	GWMCO, 30%G 50%O 10%M 10%W	1.772
31.00	CGO, 30%G 70%O	0.439
0.00	595' GIP	0.000

Total Length: 527.00 ft Total Volume: 6.359 bbl

Num Fluid Samples: 0

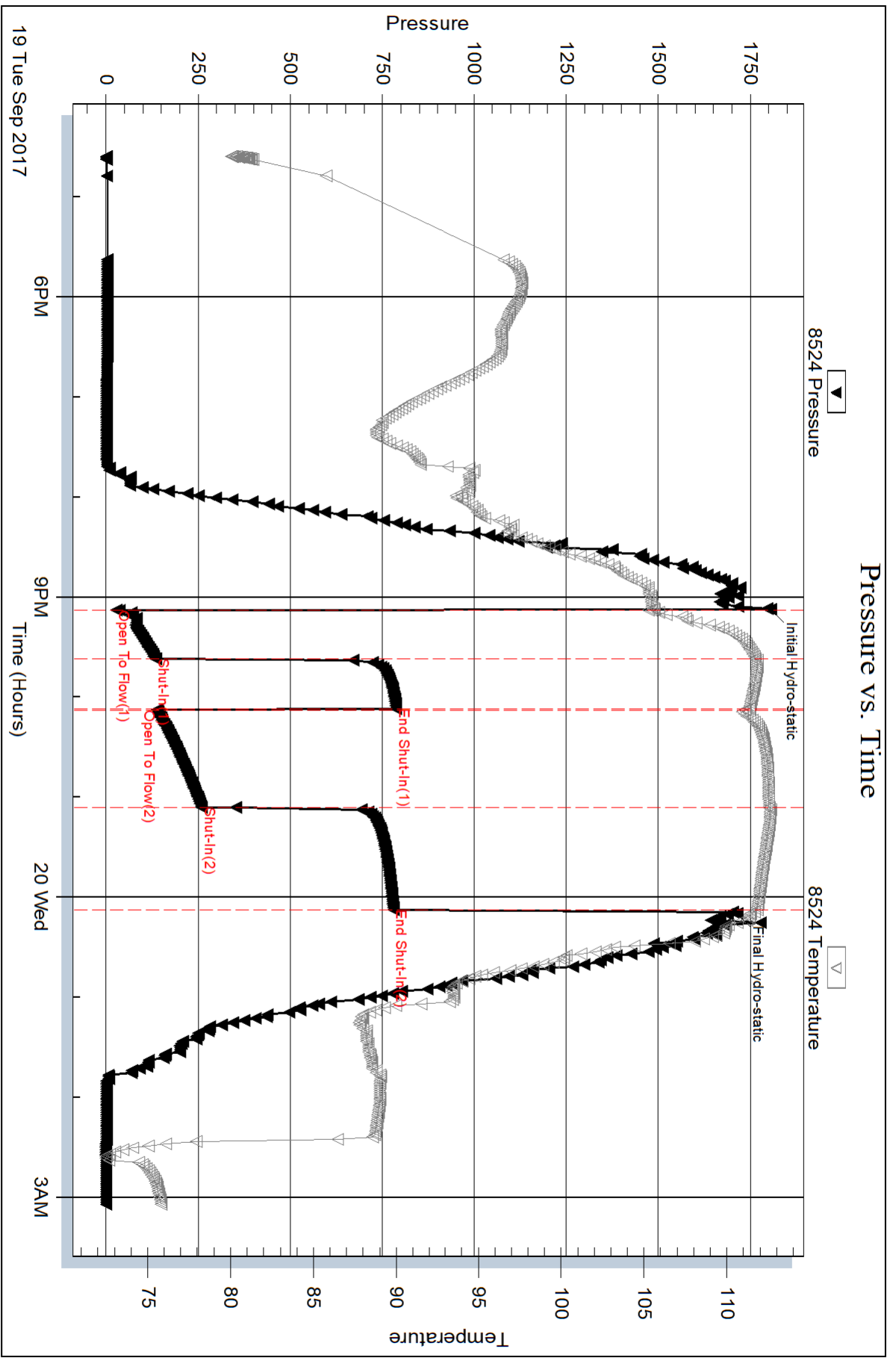
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW: .06@74deg



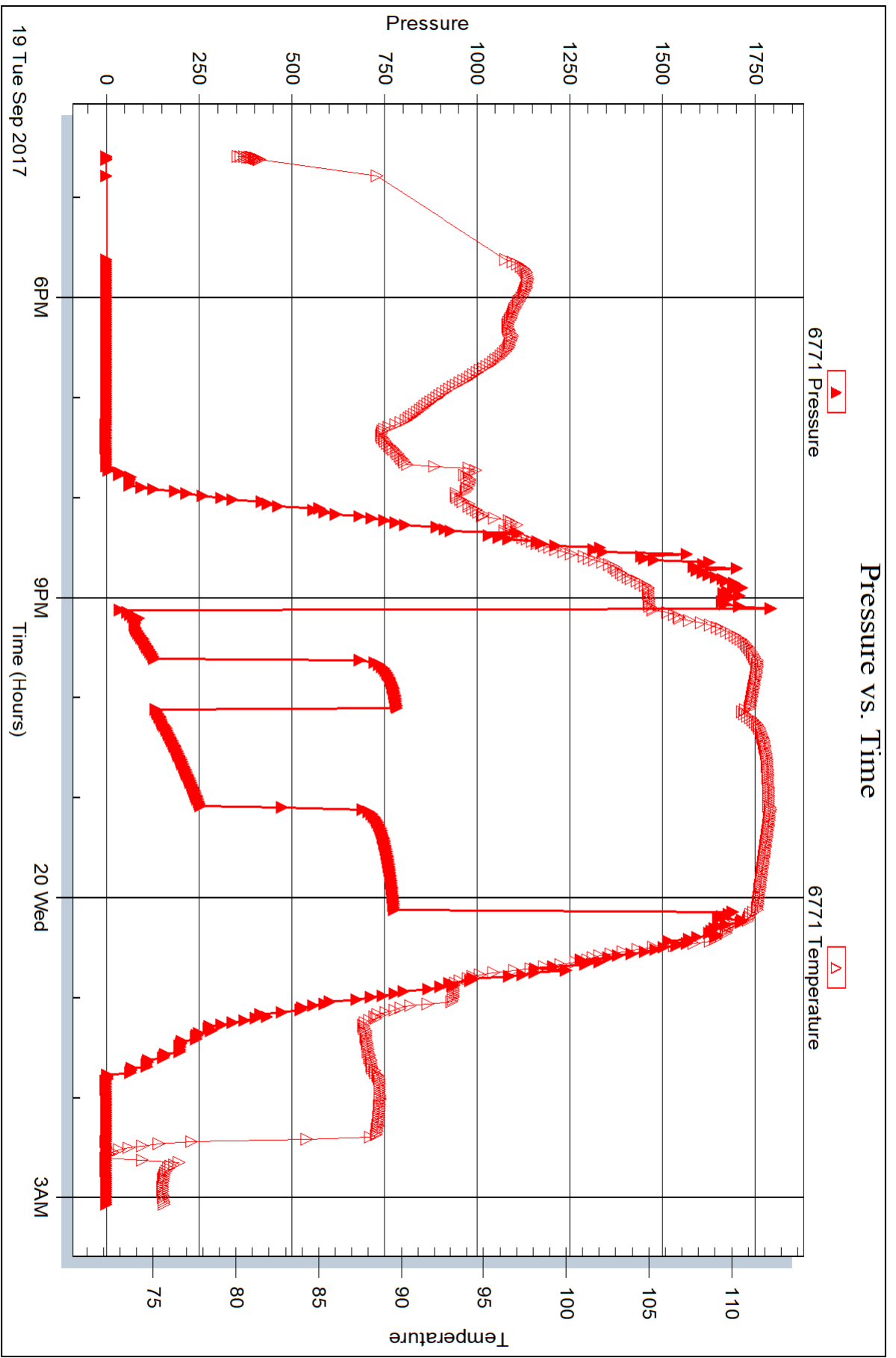
Serial #: 6771

Inside

StrataKan Exploration, LLC

Titus #21-1

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 55385

Printed: 2017.09.22 @ 15:58:45



DRILL STEM TEST REPORT

Prepared For: **StrataKan Exploration, LLC**

100 S. Main
Plainville, KS 67663

ATTN: Marc Downing

Titus #21-1

21-21S-14W Stafford, KS

Start Date: 2017.09.20 @ 09:19:11

End Date: 2017.09.20 @ 16:20:47

Job Ticket #: 55386 DST #: 2

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

Printed: 2017.09.22 @ 15:58:14



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

StrataKan Exploration, LLC

21-21S-14W Stafford, KS

100 S. Main
Plainville, KS 67663

Titus #21-1

Job Ticket: 55386

DST#: 2

ATTN: Marc Downing

Test Start: 2017.09.20 @ 09:19:11

GENERAL INFORMATION:

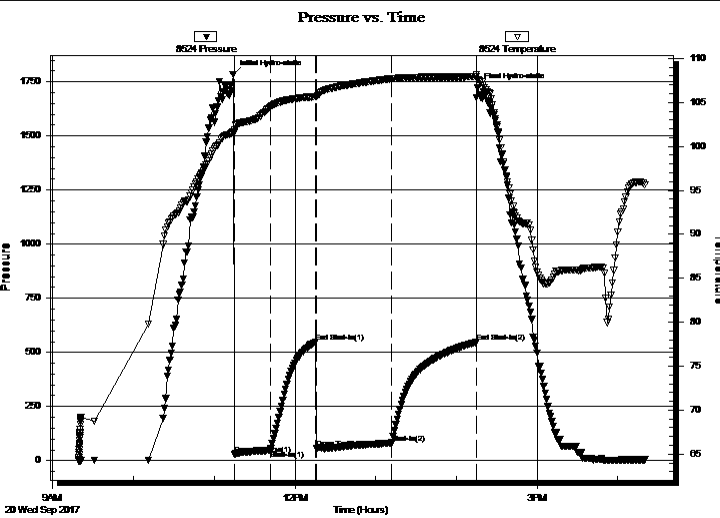
Formation: **LKC "I"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 11:15:17
 Time Test Ended: 16:20:47
 Interval: **3531.00 ft (KB) To 3556.00 ft (KB) (TVD)**
 Total Depth: 3556.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Brannan Lonsdale
 Unit No: 73
 Reference Elevations: 1943.00 ft (KB)
 1936.00 ft (CF)
 KB to GR/CF: 7.00 ft

Serial #: 8524

Outside

Press@RunDepth: 82.00 psig @ 3532.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.09.20 End Date: 2017.09.20 Last Calib.: 2017.09.20
 Start Time: 09:19:12 End Time: 16:20:47 Time On Btm: 2017.09.20 @ 11:14:17
 Time Off Btm: 2017.09.20 @ 14:16:02

TEST COMMENT: 30- IF- BOB 3 mins
 30- IS- Slow ly built to 3 1/2"
 60- FF- BOB 1 min
 60- FS- Slow ly built to 4"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1784.35	101.66	Initial Hydro-static
1	29.99	101.88	Open To Flow (1)
28	48.00	104.44	Shut-In(1)
61	548.06	105.67	End Shut-In(1)
62	56.42	105.69	Open To Flow (2)
118	82.00	107.70	Shut-In(2)
181	547.25	107.92	End Shut-In(2)
182	1723.79	107.59	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	GWMCO, 20%G 15%W 10%M 55%O	0.59
94.00	GMCO, 15%G 20%M 65%O	1.33
0.00	1097' GIP	0.00

* Recovery from multiple tests

Gas Rates

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



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TESTING, INC.**

DRILL STEM TEST REPORT

StrataKan Exploration, LLC

21-21S-14W Stafford, KS

100 S. Main
Plainville, KS 67663

Titus #21-1

Job Ticket: 55386

DST#: 2

ATTN: Marc Downing

Test Start: 2017.09.20 @ 09:19:11

GENERAL INFORMATION:

Formation: **LKC "I"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:15:17

Time Test Ended: 16:20:47

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3531.00 ft (KB) To 3556.00 ft (KB) (TVD)

Reference Elevations: 1943.00 ft (KB)

Total Depth: 3556.00 ft (KB) (TVD)

1936.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 6771 **Inside**

Press@RunDepth: psig @ 3532.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.09.20 End Date: 2017.09.20

Last Calib.: 2017.09.20

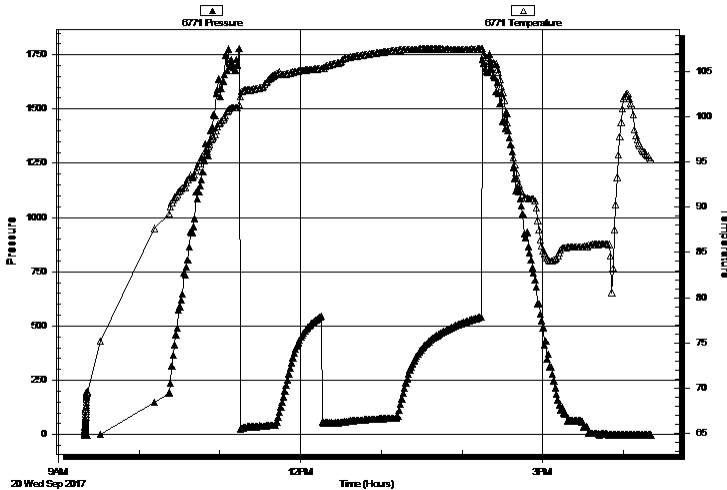
Start Time: 09:19:30 End Time: 16:20:50

Time On Btm:

Time Off Btm:

TEST COMMENT: 30- IF- BOB 3 mins
30- IS- Slowly built to 3 1/2"
60- FF- BOB 1 min
60- FS- Slowly built to 4"

Pressure vs. Time



PRESSURE SUMMARY

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

Length (ft)	Description	Volume (bbl)
120.00	GWMCO, 20%G 15%W 10%M 55%O	0.59
94.00	GMCO, 15%G 20%M 65%O	1.33
0.00	1097' GIP	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

StrataKan Exploration, LLC

21-21S-14W Stafford, KS

100 S. Main
Plainville, KS 67663

Titus #21-1

Job Ticket: 55386

DST#: 2

ATTN: Marc Downing

Test Start: 2017.09.20 @ 09:19:11

Tool Information

Drill Pipe:	Length: 3417.00 ft	Diameter: 3.82 inches	Volume: 48.44 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - 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: 70000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 51000.00 lb
Depth to Top Packer:	3531.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	25.00 ft			
Tool Length:	45.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3512.00	
Shut In Tool	5.00			3517.00	
Hydraulic tool	5.00			3522.00	
Packer	5.00			3527.00	20.00 Bottom Of Top Packer
Packer	4.00			3531.00	
Stubb	1.00			3532.00	
Recorder	0.00	6771	Inside	3532.00	
Recorder	0.00	8524	Outside	3532.00	
Perforations	21.00			3553.00	
Bullnose	3.00			3556.00	25.00 Bottom Packers & Anchor
Total Tool Length:	45.00				



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DRILL STEM TEST REPORT

FLUID SUMMARY

StrataKan Exploration, LLC

21-21S-14W Stafford, KS

100 S. Main
Plainville, KS 67663

Titus #21-1

Job Ticket: 55386

DST#: 2

ATTN: Marc Downing

Test Start: 2017.09.20 @ 09:19:11

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

29 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

75000 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.57 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7800.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
120.00	GWMCO, 20%G 15%W 10%M 55%O	0.590
94.00	GMCO, 15%G 20%M 65%O	1.332
0.00	1097' GIP	0.000

Total Length: 214.00 ft Total Volume: 1.922 bbl

Num Fluid Samples: 0

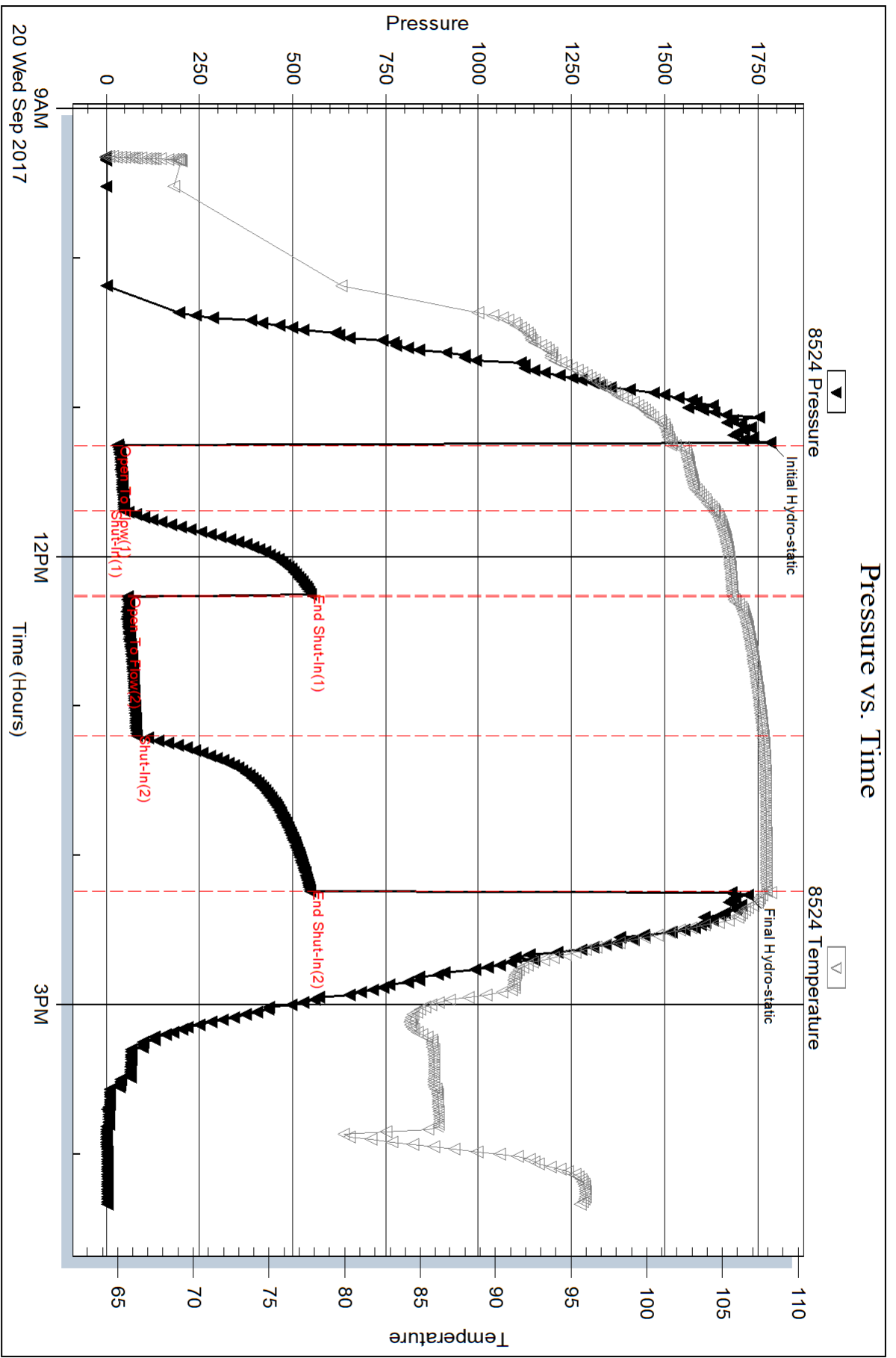
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW: .07@85deg



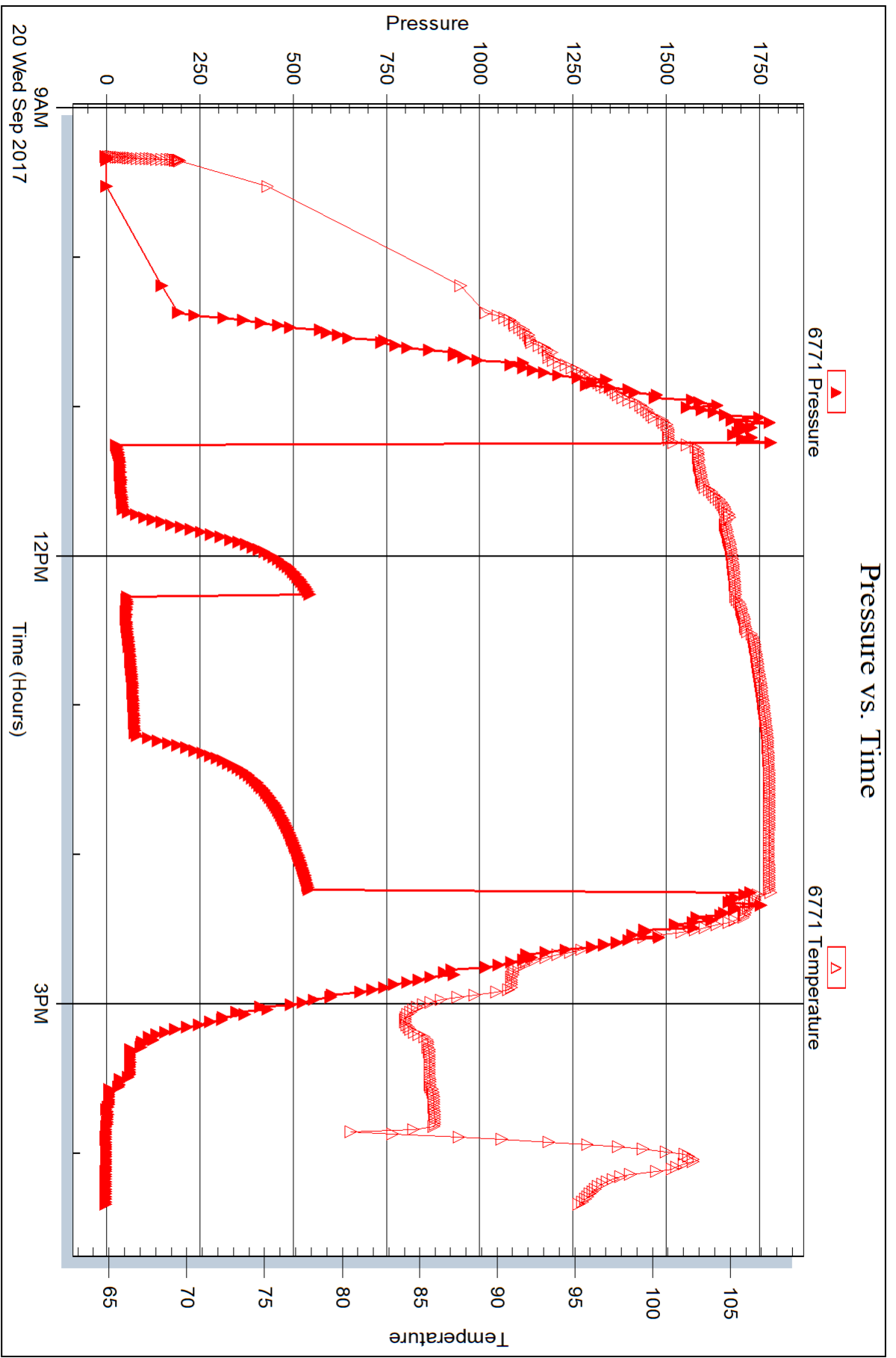
Serial #: 6771

Inside

StrataKan Exploration, LLC

Titus #21-1

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **StrataKan Exploration, LLC**

100 S. Main
Plainville, KS 67663

ATTN: Marc Downing

Titus #21-1

21-21S-14W Stafford, KS

Start Date: 2017.09.20 @ 22:00:54

End Date: 2017.09.21 @ 03:42:00

Job Ticket #: 55387 DST #: 3

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

Printed: 2017.09.22 @ 15:57:36



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

StrataKan Exploration, LLC

21-21S-14W Stafford, KS

100 S. Main
Plainville, KS 67663

Titus #21-1

Job Ticket: 55387

DST#: 3

ATTN: Marc Downing

Test Start: 2017.09.20 @ 22:00:54

GENERAL INFORMATION:

Formation: **LKC "J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:46:30

Time Test Ended: 03:42:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3551.00 ft (KB) To 3578.00 ft (KB) (TVD)

Reference Elevations: 1943.00 ft (KB)

Total Depth: 3578.00 ft (KB) (TVD)

1936.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 8524 Outside

Press@RunDepth: 25.52 psig @ 3552.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.09.20 End Date: 2017.09.21

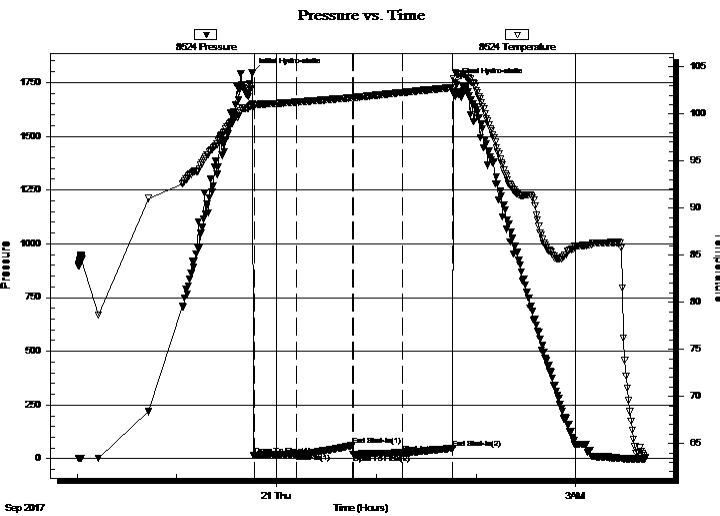
Last Calib.: 2017.09.21

Start Time: 22:00:55 End Time: 03:42:00

Time On Btm: 2017.09.20 @ 23:45:30

Time Off Btm: 2017.09.21 @ 01:47:45

TEST COMMENT: 30- IF- 3/4" blow
30- IS- No blow
30- FF- 1/4" blow
30- FS- No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1796.95	101.08	Initial Hydro-static
1	16.32	100.94	Open To Flow (1)
27	22.86	101.26	Shut-In(1)
60	61.56	101.73	End Shut-In(1)
61	19.91	101.73	Open To Flow (2)
91	25.52	102.28	Shut-In(2)
121	49.10	102.81	End Shut-In(2)
123	1750.92	104.41	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	OCM, 10%O 90%M	0.15

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
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DRILL STEM TEST REPORT

StrataKan Exploration, LLC

21-21S-14W Stafford, KS

100 S. Main
Plainville, KS 67663

Titus #21-1

Job Ticket: 55387

DST#: 3

ATTN: Marc Downing

Test Start: 2017.09.20 @ 22:00:54

GENERAL INFORMATION:

Formation: **LKC "J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:46:30

Time Test Ended: 03:42:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3551.00 ft (KB) To 3578.00 ft (KB) (TVD)

Reference Elevations: 1943.00 ft (KB)

Total Depth: 3578.00 ft (KB) (TVD)

1936.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 6771

Inside

Press@RunDepth: psig @ 3552.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.09.20

End Date:

2017.09.21

Last Calib.:

2017.09.21

Start Time: 22:00:54

End Time:

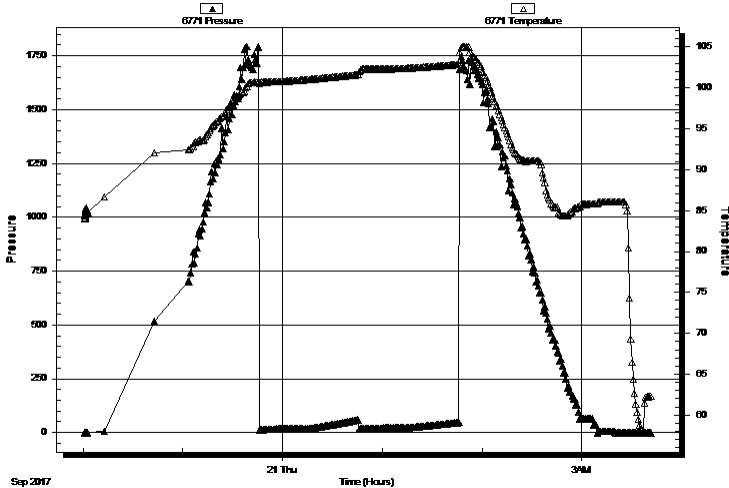
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Time On Btm:

Time Off Btm:

TEST COMMENT: 30- IF- 3/4" blow
30- IS- No blow
30- FF- 1/4" blow
30- FS- No blow

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
30.00	OCM, 10%O 90%M	0.15

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, LLC

21-21S-14W Stafford, KS

100 S. Main
Plainville, KS 67663

Titus #21-1

Job Ticket: 55387

DST#: 3

ATTN: Marc Downing

Test Start: 2017.09.20 @ 22:00:54

Tool Information

Drill Pipe:	Length: 3417.00 ft	Diameter: 3.82 inches	Volume: 48.44 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - 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: 58000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3551.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	27.00 ft			
Tool Length:	47.00 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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Change Over Sub	1.00			3532.00	
Shut In Tool	5.00			3537.00	
Hydraulic tool	5.00			3542.00	
Packer	5.00			3547.00	20.00 Bottom Of Top Packer
Packer	4.00			3551.00	
Stubb	1.00			3552.00	
Recorder	0.00	6771	Inside	3552.00	
Recorder	0.00	8524	Outside	3552.00	
Perforations	23.00			3575.00	
Bullnose	3.00			3578.00	27.00 Bottom Packers & Anchor
Total Tool Length:	47.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

StrataKan Exploration, LLC

21-21S-14W Stafford, KS

100 S. Main
Plainville, KS 67663

Titus #21-1

Job Ticket: 55387

DST#: 3

ATTN: Marc Downing

Test Start: 2017.09.20 @ 22:00:54

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

29 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.58 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
30.00	OCM, 10%O 90%M	0.148

Total Length: 30.00 ft Total Volume: 0.148 bbl

Num Fluid Samples: 0

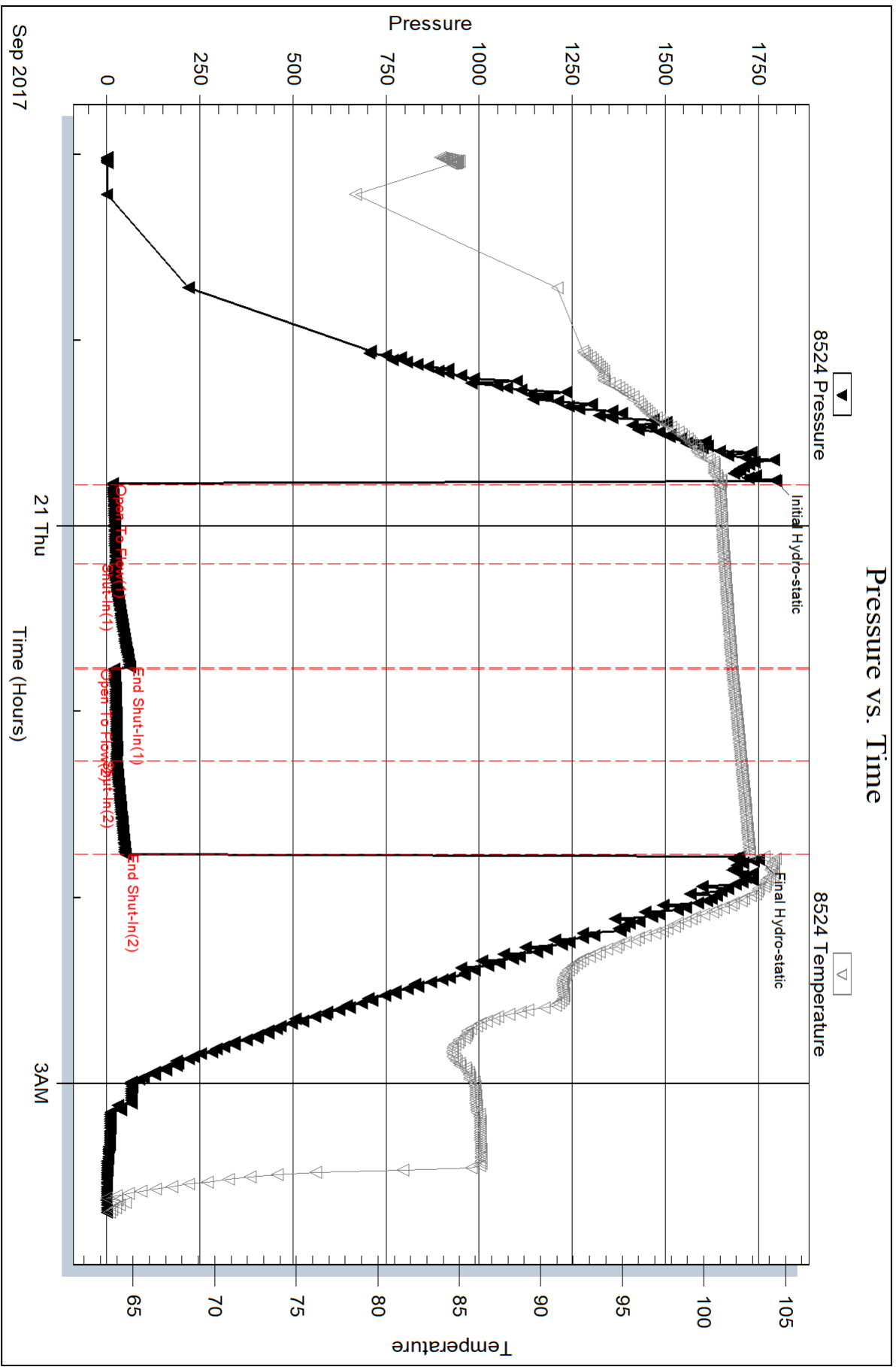
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



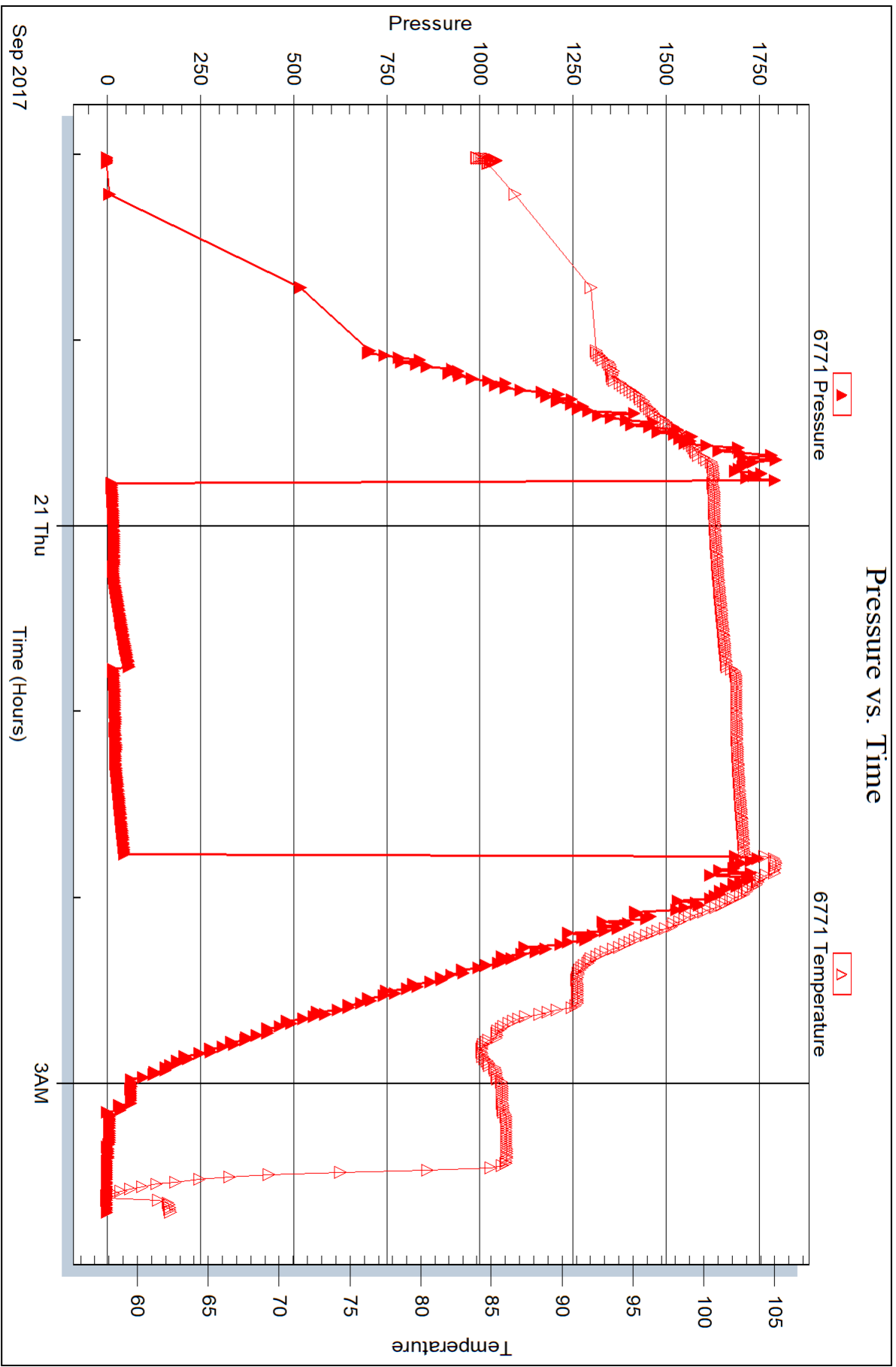
Serial #: 6771

Inside

StrataKan Exploration, LLC

Titus #21-1

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 55387

Printed: 2017.09.22 @ 15:57:38



DRILL STEM TEST REPORT

Prepared For: **StrataKan Exploration, LLC**

100 S. Main
Plainville, KS 67663

ATTN: Marc Downing

Titus #21-1

21-21S-14W Stafford, KS

Start Date: 2017.09.21 @ 12:35:45

End Date: 2017.09.21 @ 18:16:21

Job Ticket #: 55388 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2017.09.22 @ 15:57:00



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

StrataKan Exploration, LLC

21-21S-14W Stafford, KS

100 S. Main
Plainville, KS 67663

Titus #21-1

Job Ticket: 55388

DST#: 4

ATTN: Marc Downing

Test Start: 2017.09.21 @ 12:35:45

GENERAL INFORMATION:

Formation: **LKC "L"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:22:36

Time Test Ended: 18:16:21

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3603.00 ft (KB) To 3626.00 ft (KB) (TVD)

Reference Elevations: 1943.00 ft (KB)

Total Depth: 3626.00 ft (KB) (TVD)

1936.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 8524 Outside

Press@RunDepth: 19.10 psig @ 3604.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.09.21

End Date:

2017.09.21

Last Calib.:

2017.09.21

Start Time: 12:35:46

End Time:

18:16:21

Time On Btm:

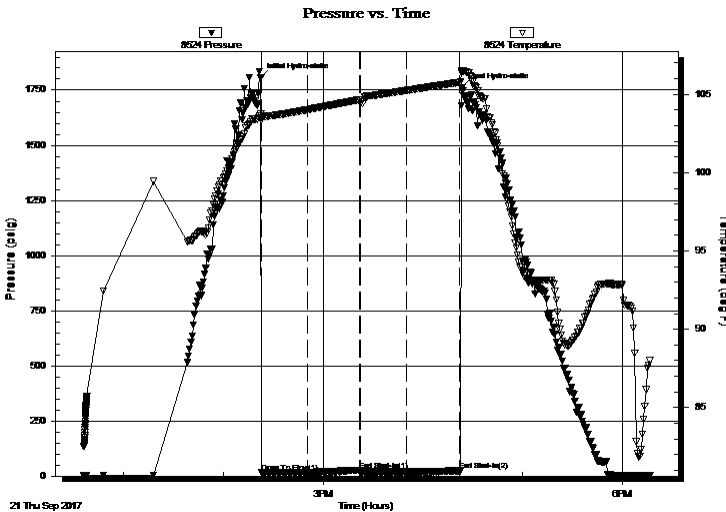
2017.09.21 @ 14:22:21

Time Off Btm:

2017.09.21 @ 16:23:21

TEST COMMENT: 30- IF- Weak surge w hen tool opened
30- IS- No blow
30- FF- No blow Flushed tool No blow
30- FSI- No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1806.02	103.77	Initial Hydro-static
1	16.79	103.33	Open To Flow (1)
29	17.43	104.03	Shut-In(1)
60	26.59	104.66	End Shut-In(1)
60	16.84	104.66	Open To Flow (2)
88	19.10	105.25	Shut-In(2)
120	24.50	105.77	End Shut-In(2)
121	1761.70	106.53	Final Hydro-static

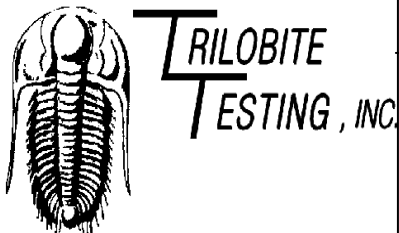
Recovery

Length (ft)	Description	Volume (bbl)
4.00	M	0.02

Gas Rates

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

* Recovery from multiple tests



DRILL STEM TEST REPORT

StrataKan Exploration, LLC

21-21S-14W Stafford, KS

100 S. Main
Plainville, KS 67663

Titus #21-1

Job Ticket: 55388

DST#: 4

ATTN: Marc Downing

Test Start: 2017.09.21 @ 12:35:45

GENERAL INFORMATION:

Formation: **LKC "L"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:22:36

Time Test Ended: 18:16:21

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3603.00 ft (KB) To 3626.00 ft (KB) (TVD)

Reference Elevations: 1943.00 ft (KB)

Total Depth: 3626.00 ft (KB) (TVD)

1936.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 6771

Inside

Press@RunDepth: psig @ 3604.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.09.21

End Date: 2017.09.21

Last Calib.: 2017.09.21

Start Time: 12:35:28

End Time: 18:15:48

Time On Btm:

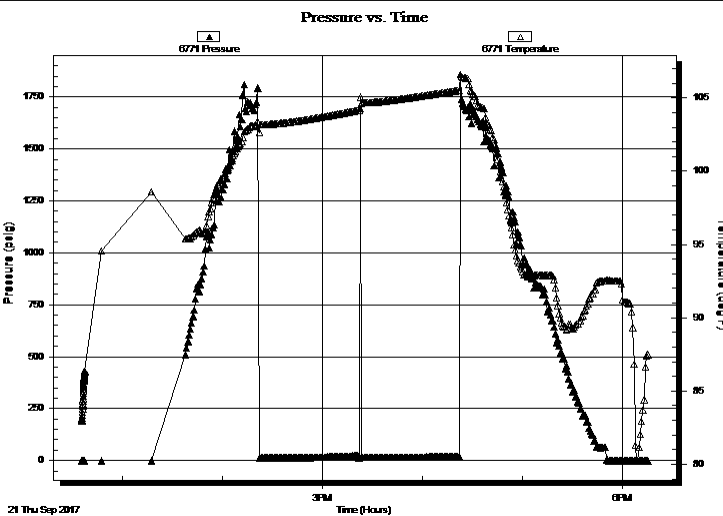
Time Off Btm:

TEST COMMENT: 30- IF- Weak surge w hen tool opened

30- IS- No blow

30- FF- No blow Flushed tool No blow

30- FSI- No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
4.00	M	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, LLC

21-21S-14W Stafford, KS

100 S. Main
Plainville, KS 67663

Titus #21-1

Job Ticket: 55388

DST#: 4

ATTN: Marc Downing

Test Start: 2017.09.21 @ 12:35:45

Tool Information

Drill Pipe:	Length: 3480.00 ft	Diameter: 3.82 inches	Volume: 49.33 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - 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: 56000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3603.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	23.00 ft			
Tool Length:	43.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3584.00	
Shut In Tool	5.00			3589.00	
Hydraulic tool	5.00			3594.00	
Packer	5.00			3599.00	20.00 Bottom Of Top Packer
Packer	4.00			3603.00	
Stubb	1.00			3604.00	
Recorder	0.00	6771	Inside	3604.00	
Recorder	0.00	8524	Outside	3604.00	
Perforations	19.00			3623.00	
Bullnose	3.00			3626.00	23.00 Bottom Packers & Anchor
Total Tool Length:	43.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

StrataKan Exploration, LLC

21-21S-14W Stafford, KS

100 S. Main
Plainville, KS 67663

Titus #21-1

Job Ticket: 55388

DST#: 4

ATTN: Marc Downing

Test Start: 2017.09.21 @ 12:35:45

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: 43.00 sec/qt

Cushion Volume:

bbl

Water Loss: 10.39 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 9000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
4.00	M	0.020

Total Length: 4.00 ft Total Volume: 0.020 bbl

Num Fluid Samples: 0

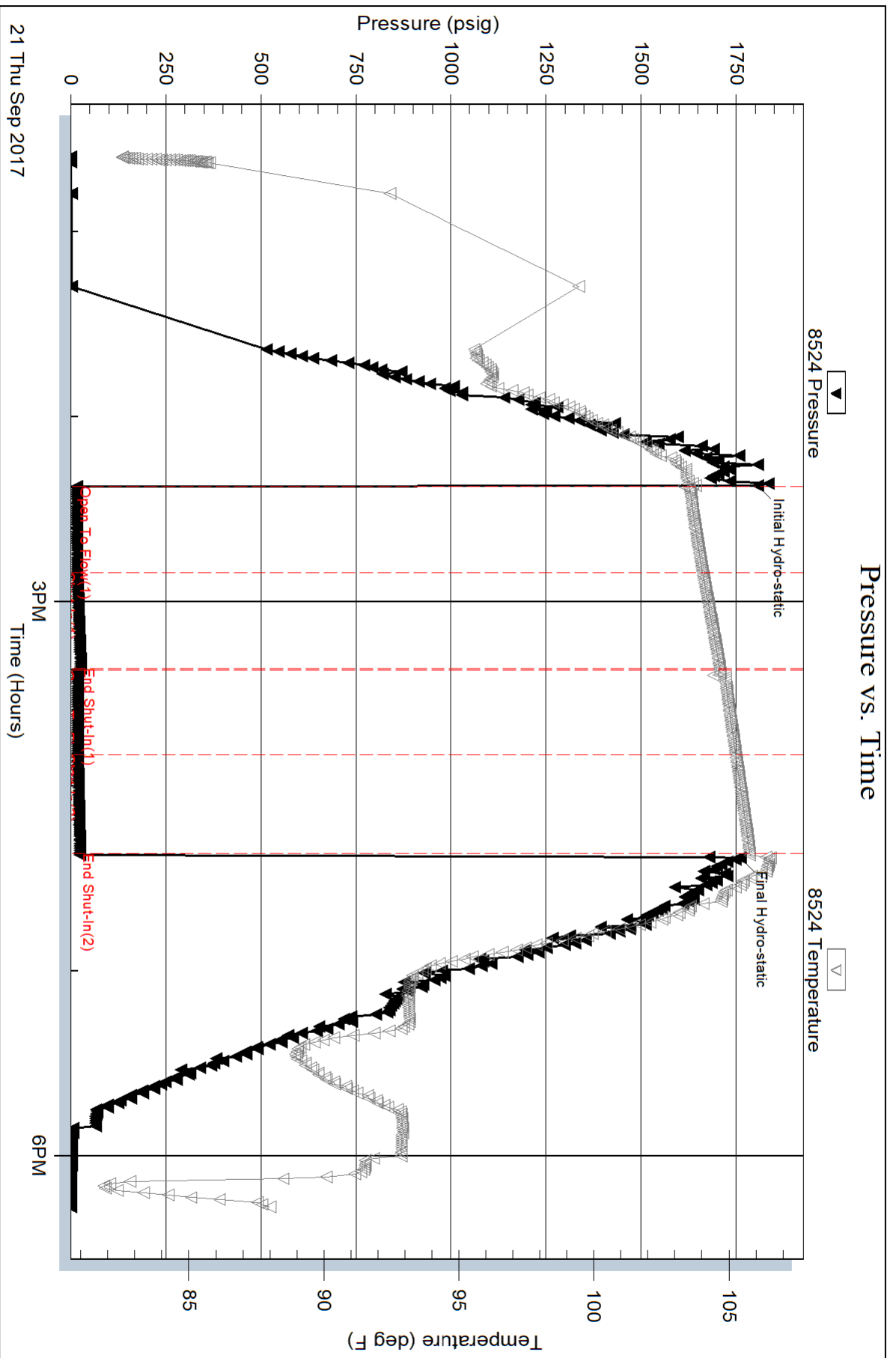
Num Gas Bombs: 0

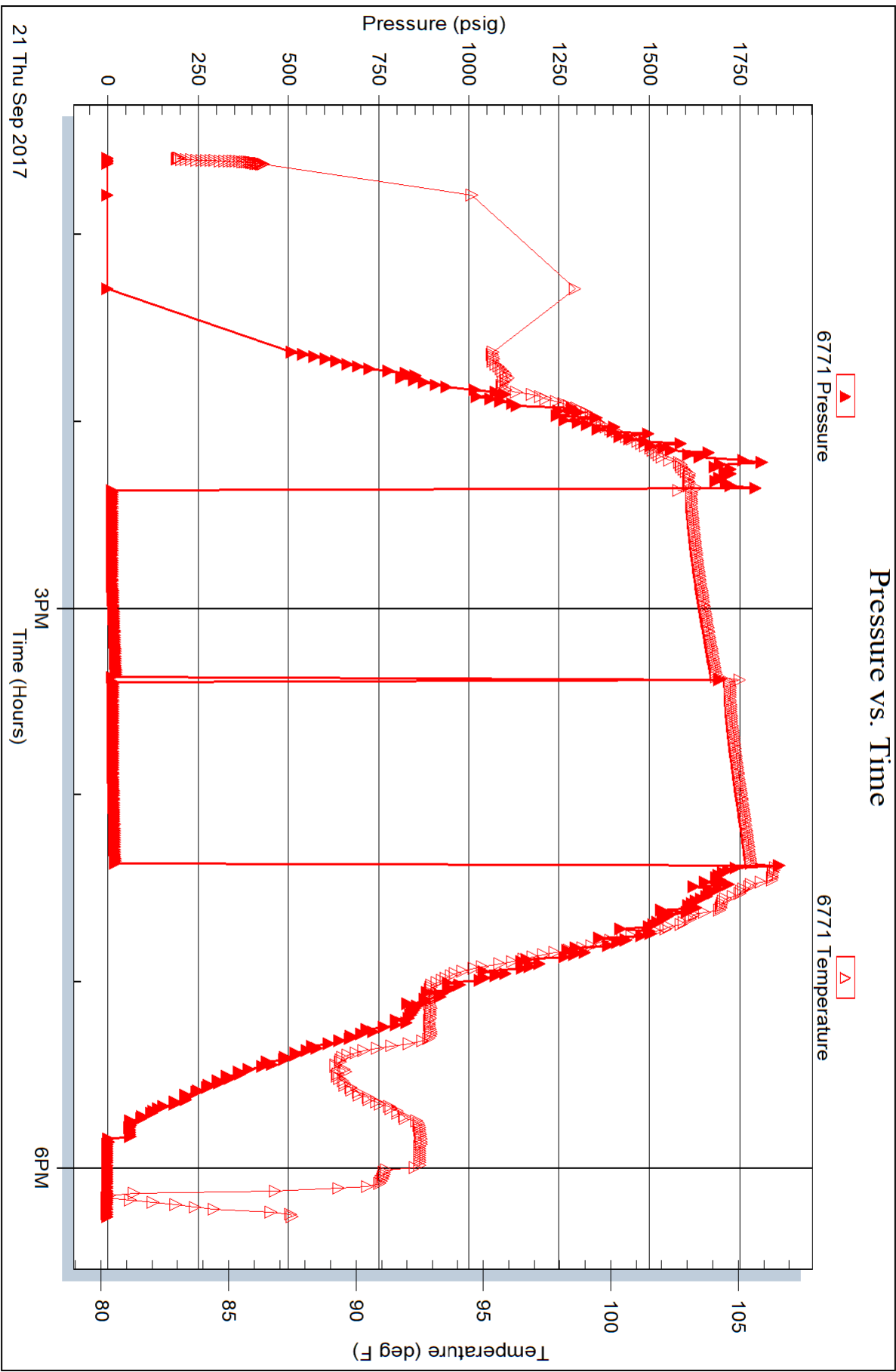
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 55385

Well Name & No. Titus #21-1 Test No. 1 Date 9/19/17
 Company Stratacan Exploration, LLC Elevation 1943 KB 1936 GL
 Address 100 S. Main Plainville, KS 67663
 Co. Rep / Geo. Marc Downing Rig WW #4
 Location: Sec. 21 Twp. 21 S Rge. 14 W Co. Stafford State KS

Interval Tested 3510-3535 Zone Tested LKC "H"
 Anchor Length 25' Drill Pipe Run 3386 Mud Wt. 9.3
 Top Packer Depth 3505 Drill Collars Run 120 Vis 50
 Bottom Packer Depth 3510 Wt. Pipe Run --- WL 9.6
 Total Depth 3535 Chlorides 7800 ppm System LCM 1 1/2

Blow Description IF-BOB 7mins
ISI- Built slowly to 1 1/4"
PF-BOB 10mins
FST- Slowly built to 1"

Rec	Feet of	%gas	%oil	%water	%mud
<u>183'</u>	<u>SMW</u>			<u>95%</u>	<u>5%</u>
<u>188'</u>	<u>OCMW</u>		<u>10%</u>	<u>80%</u>	<u>10%</u>
<u>125'</u>	<u>GWMC0</u>	<u>30%</u>	<u>50%</u>	<u>10%</u>	<u>10%</u>
<u>31'</u>	<u>CAO</u>	<u>30%</u>	<u>70%</u>		
<u>---</u>	<u>595' CIP</u>				

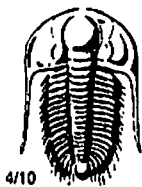
Rec Total 527' BHT 112° Gravity 34 API RW .06 @ 74 °F Chlorides 100000 ppm
 Test 1050 T-On Location 1633
 Jars _____ T-Started 1635
 Safety Joint _____ T-Open 2106
 Circ Sub _____ T-Pulled 9:20 0006
 Hourly Standby _____ T-Out 0303
 Mileage 172 RT 32rt 24
 Sampler _____
 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1074

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

MP/DST Disc't _____

Approved By _____ Our Representative Brennan Lonsdale

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 55386

Well Name & No. Titus #21-1 Test No. 2 Date 9/20/17
 Company Stratakan Exploration, LLC Elevation 1943 KB 1936 GL
 Address 100 S. Main Plainville, KS 67663
 Co. Rep / Geo. Marc Downing Rig WW #4
 Location: Sec. 21 Twp. 21 S Rge. 14 W Co. Stafford State KS

Interval Tested 3531-3556 Zone Tested LKC "I"
 Anchor Length 25' Drill Pipe Run 3417 Mud Wt. 9.3
 Top Packer Depth 3526 Drill Collars Run 120 Vis 50
 Bottom Packer Depth 3531 Wt. Pipe Run --- WL 9.6
 Total Depth 3556 Chlorides 7,800 ppm System LCM 1 1/2 #

Blow Description IF- BOB 3 mins
ISI- Built slowly to 3 1/2"
FF- BOB 1 min
FST- Slowly built to 4"

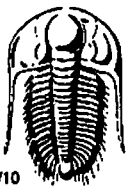
Rec	Feet of	%gas	%oil	%water	%mud
<u>120</u>	<u>GWACO</u>	<u>20</u>	<u>55</u>	<u>15</u>	<u>10</u>
<u>94</u>	<u>GWACO</u>	<u>15</u>	<u>65</u>	<u>---</u>	<u>20</u>
<u>---</u>	<u>1097' GTP</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>
<u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>
<u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>

Rec Total 214' BHT 108° Gravity 29 API RW 0.07@ 85° F Chlorides 72,000 ppm

(A) Initial Hydrostatic 1784 Test 1050 T-On Location 0907
 (B) First Initial Flow 30 Jars --- T-Started 0919
 (C) First Final Flow 48 Safety Joint --- T-Open 1114
 (D) Initial Shut-In 548 Circ Sub --- T-Pulled 1414
 (E) Second Initial Flow 56 Hourly Standby --- T-Out 1620
 (F) Second Final Flow 82 Mileage 172 RT 24 Comments ---
 (G) Final Shut-In 547 Sampler ---
 (H) Final Hydrostatic 1724 Straddle ---
 Shale Packer ---
 Ruined Shale Packer ---
 Ruined Packer ---
 Extra Packer ---
 Extra Copies ---
 Initial Open 30 Extra Recorder --- Sub Total 0
 Initial Shut-In 30 Day Standby --- Total 1074
 Final Flow 60 Accessibility --- MP/DST Disc't ---
 Final Shut-In 60 Sub Total 1074

Approved By _____ Our Representative Brannan Lonsdale

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 55387

Well Name & No. Titus #21-1 Test No. 3 Date 9/20/17
 Company StrataKan Exploration, LLC Elevation 1941 KB 1936 GL
 Address 100 S. Main Plainville, KS 67663
 Co. Rep / Geo. Marc Downing Rig WW #4
 Location: Sec. 21 Twp. 21 S Rge. 14 Wco. Stafford State KS

Interval Tested 3551-3578 Zone Tested LKC "J"
 Anchor Length 27' Drill Pipe Run 3417 Mud Wt. 9.8
 Top Packer Depth 3546 Drill Collars Run 120 Vis 49
 Bottom Packer Depth 3551 Wt. Pipe Run — WL 9.6
 Total Depth 3578 Chlorides 6,000 ppm System LCM 1 1/2"

Blow Description IF - 3/4" blow
ISI - No Blow
FF - 1/4" blow
FSI - No Blow

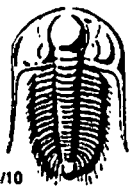
Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>OCM</u>	<u>10</u>	<u>—</u>	<u>90</u>	<u>—</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 30' BHT 103° Gravity 2.9 API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>1797</u>	<input checked="" type="checkbox"/> Test <u>1050</u>	T-On Location <u>0958</u>
(B) First Initial Flow <u>16</u>	<input type="checkbox"/> Jars <u>—</u>	T-Started <u>2201</u>
(C) First Final Flow <u>23</u>	<input type="checkbox"/> Safety Joint <u>—</u>	T-Open <u>2345</u>
(D) Initial Shut-In <u>62</u>	<input type="checkbox"/> Circ Sub <u>—</u>	T-Pulled <u>9/21 0145</u>
(E) Second Initial Flow <u>30</u>	<input type="checkbox"/> Hourly Standby <u>—</u>	T-Out <u>0342</u>
(F) Second Final Flow <u>26</u>	<input checked="" type="checkbox"/> Mileage <u>172 RT 24</u>	Comments <u>—</u>
(G) Final Shut-In <u>49</u>	<input type="checkbox"/> Sampler <u>—</u>	<input type="checkbox"/> Ruined Shale Packer <u>—</u>
(H) Final Hydrostatic <u>1751</u>	<input type="checkbox"/> Straddle <u>—</u>	<input type="checkbox"/> Ruined Packer <u>—</u>
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer <u>—</u>	<input type="checkbox"/> Extra Copies <u>—</u>
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer <u>—</u>	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder <u>—</u>	Total <u>1074</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby <u>—</u>	MP/DST Disc't <u>—</u>
	<input type="checkbox"/> Accessibility <u>—</u>	
	Sub Total <u>1074</u>	

Approved By _____ Our Representative Brennan Lonsdale

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 55388

Well Name & No. Titus #21-1 Test No. 4 Date 9/21/17
 Company Stratakan Explorations, LLC Elevation 1941 KB 1936GL
 Address 100 S Main Plainville, KS 67663
 Co. Rep / Geo. Marc Downing Rig WW #4
 Location: Sec. 21 Twp. 2N S Rge. 14 W Co. Stafford State KS

Interval Tested 3603-3626 Zone Tested LKC "L"
 Anchor Length 23' Drill Pipe Run 3480 Mud Wt. 9.3
 Top Packer Depth 3598 Drill Collars Run 120 Vis 43
 Bottom Packer Depth 3603 Wt. Pipe Run — WL 10.4
 Total Depth 3626 Chlorides 9,000 ppm System LCM 1 1/2 #

Blow Description IF - weak surge when tool opened
ISI - No blow
FF - No blow Flushed tool No blow
FSI - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>4</u>	<u>M</u>				

Rec Total 4' BHT 106° Gravity — API RW — @ — ° F Chlorides — ppm

(A) Initial Hydrostatic <u>1806</u>	<input checked="" type="checkbox"/> Test <u>1050</u>	T-On Location <u>1230</u>
(B) First Initial Flow <u>17</u>	<input type="checkbox"/> Jars <u>—</u>	T-Started <u>1235</u>
(C) First Final Flow <u>17</u>	<input type="checkbox"/> Safety Joint <u>—</u>	T-Open <u>1422</u>
(D) Initial Shut-In <u>27</u>	<input type="checkbox"/> Circ Sub <u>—</u>	T-Pulled <u>1622</u>
(E) Second Initial Flow <u>17</u>	<input type="checkbox"/> Hourly Standby <u>—</u>	T-Out <u>1816</u>
(F) Second Final Flow <u>19</u>	<input checked="" type="checkbox"/> Mileage <u>172 RT x 2</u>	Comments <u>Tools loaded 9/22</u>
(G) Final Shut-In <u>25</u>	<input type="checkbox"/> Sampler <u>48</u>	<u>@ 12.45 Stayed 3</u>
(H) Final Hydrostatic <u>1762</u>	<input type="checkbox"/> Straddle <u>—</u>	<u>nights in Larned, KS</u>
	<input type="checkbox"/> Shale Packer <u>—</u>	<input type="checkbox"/> Ruined Shale Packer <u>—</u>
	<input type="checkbox"/> Shale Packer <u>—</u>	<input type="checkbox"/> Ruined Packer <u>—</u>
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer <u>—</u>	<input type="checkbox"/> Extra Copies <u>—</u>
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Recorder <u>—</u>	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Day Standby <u>—</u>	Total <u>1098</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Accessibility <u>—</u>	MP/DST Disc't <u>—</u>
	Sub Total <u>1098</u>	

Approved By _____ Our Representative Brannan Lonsdale

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