



DRILL STEM TEST REPORT

Prepared For: **Staab Oil Co.**

1607 Hopewell Rd.
Hays, KS 67601

ATTN: Janel Staab

Hoffman #1

26-12S-17W Ellis,KS

Start Date: 2017.12.14 @ 15:11:00

End Date: 2017.12.14 @ 21:13:30

Job Ticket #: 63409 DST #: 1

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

Printed: 2018.01.08 @ 13:32:22



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Staab Oil Co.
1607 Hopewell Rd.
Hays, KS 67601
ATTN: Janel Staab

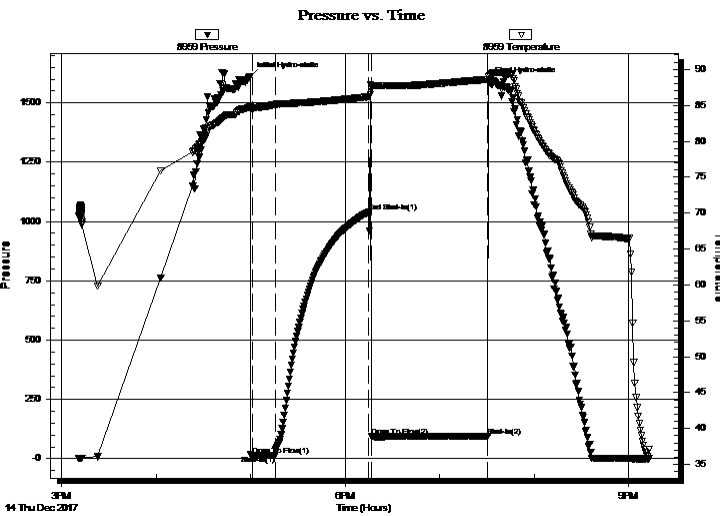
26-12S-17W Ellis, KS
Hoffman #1
Job Ticket: 63409 **DST#: 1**
Test Start: 2017.12.14 @ 15:11:00

GENERAL INFORMATION:

Formation: **Bottom of Topeka**
Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Initial)
Time Tool Opened: 17:01:20 Tester: Martine Salinas
Time Test Ended: 21:13:30 Unit No: 82
Interval: 3294.00 ft (KB) To 3345.00 ft (KB) (TVD) Reference Elevations: 2125.00 ft (KB)
Total Depth: 3345.00 ft (KB) (TVD) 2120.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 5.00 ft

Serial #: 8959 Inside
Press@RunDepth: 14.96 psig @ 3295.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2017.12.14 End Date: 2017.12.14 Last Calib.: 2017.12.14
Start Time: 15:11:01 End Time: 21:13:30 Time On Btm: 2017.12.14 @ 16:59:40
Time Off Btm: 2017.12.14 @ 19:31:09

TEST COMMENT: 15-IF-Surface .blow built to 1/8"
60-ISI-No blow
75-FF-No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1610.27	84.74	Initial Hydro-static
2	15.00	84.59	Open To Flow (1)
17	14.96	85.11	Shut-In(1)
76	1039.83	86.18	End Shut-In(1)
77	94.65	87.17	Open To Flow (2)
151	93.72	88.62	Shut-In(2)
152	1587.90	89.02	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
139.00	Mud 100%	1.02
0.00	Oil spots in tool	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Staab Oil Co.
1607 Hopewell Rd.
Hays, KS 67601
ATTN: Janel Staab

26-12S-17W Ellis,KS
Hoffman #1
Job Ticket: 63409 **DST#: 1**
Test Start: 2017.12.14 @ 15:11:00

Tool Information

Drill Pipe:	Length: 2830.00 ft	Diameter: 3.80 inches	Volume: 39.70 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 466.00 ft	Diameter: 2.75 inches	Volume: 3.42 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 43.12 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 66000.00 lb
Depth to Top Packer:	3294.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	51.00 ft			
Tool Length:	71.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Unseated packer on FF, re-seated and bled off floor manifold, No blow

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
shut In Tool	5.00			3279.00	
hydraulic tool	5.00			3284.00	
Packer	5.00			3289.00	20.00 Bottom Of Top Packer
Packer	5.00			3294.00	
stubb	1.00			3295.00	
Recorder	0.00	8959	Inside	3295.00	
Recorder	0.00	8734	Outside	3295.00	
Perforations	11.00			3306.00	
change Over Sub	1.00			3307.00	
blank spacing	32.00			3339.00	
change Over Sub	1.00			3340.00	
Bullnose	5.00			3345.00	51.00 Bottom Packers & Anchor

Total Tool Length: 71.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Staab Oil Co.

26-12S-17W Ellis,KS

1607 Hopewell Rd.
Hays, KS 67601

Hoffman #1

Job Ticket: 63409

DST#: 1

ATTN: Janel Staab

Test Start: 2017.12.14 @ 15:11:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 9400.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
139.00	Mud 100%	1.021
0.00	Oil spots in tool	0.000

Total Length: 139.00 ft

Total Volume: 1.021 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

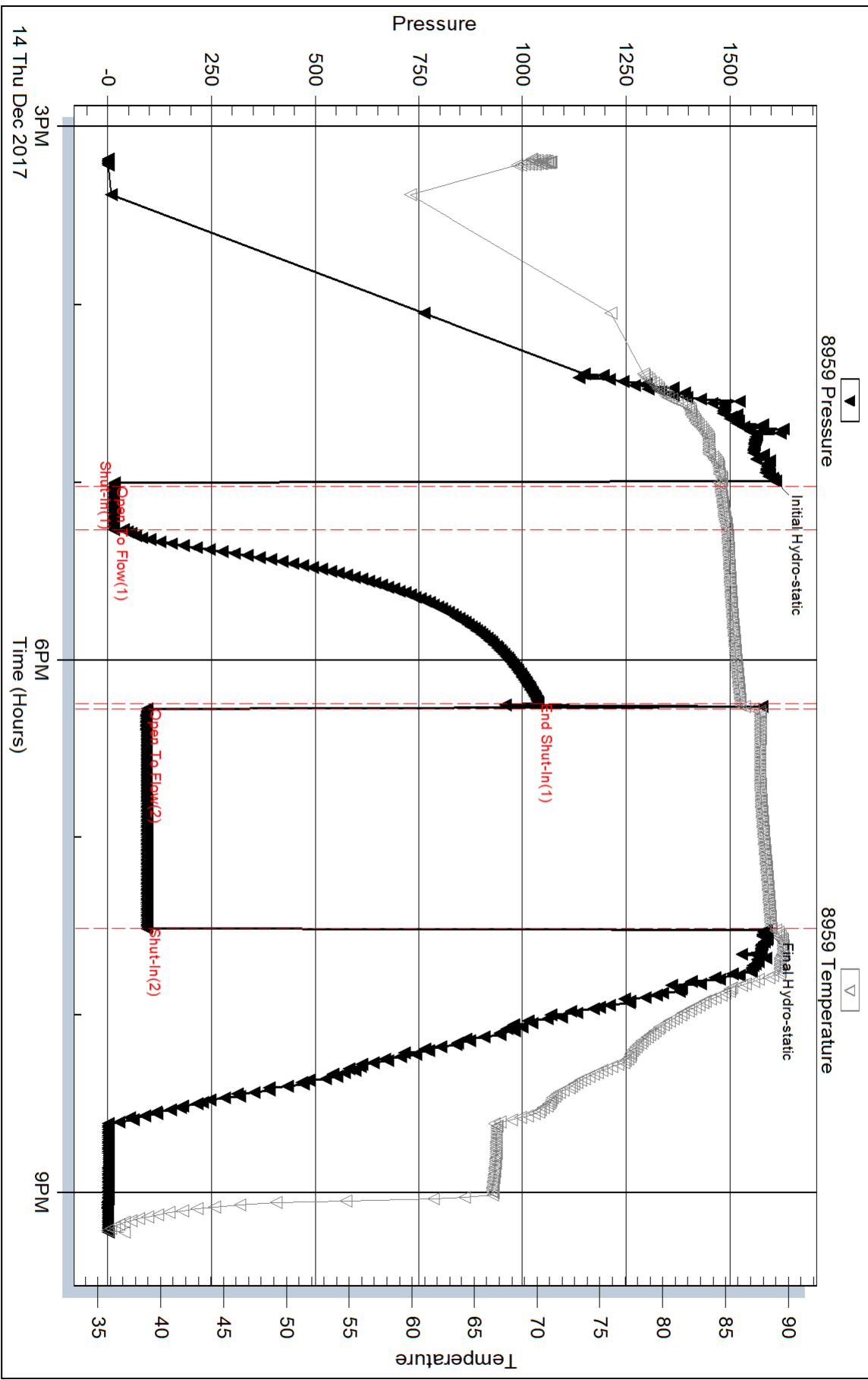
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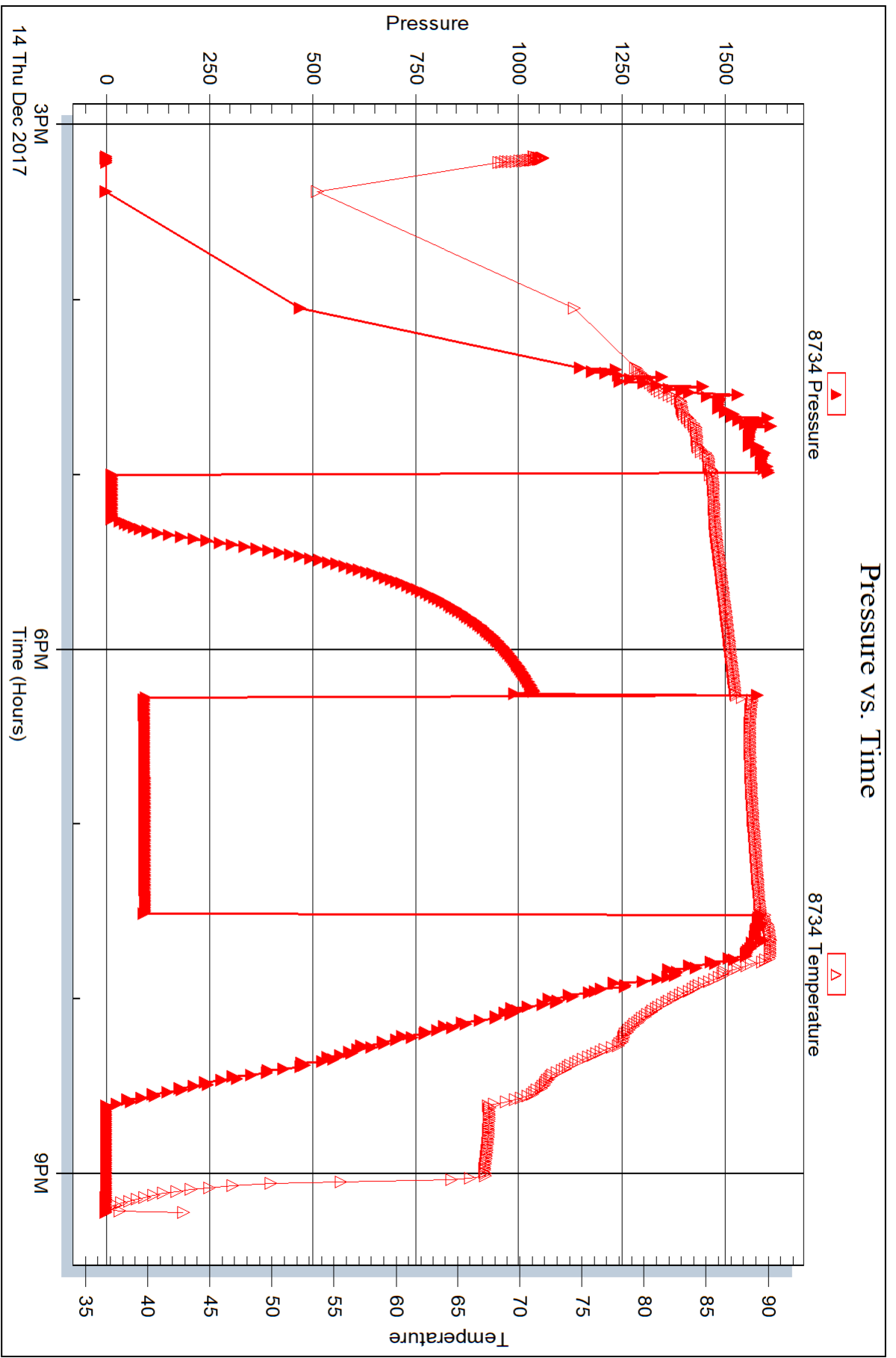
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **Staab Oil Co.**

1607 Hopewell Rd.
Hays, KS 67601

ATTN: Janel Staab

Hoffman #1

26-12S-17W Ellis,KS

Start Date: 2018.01.04 @ 13:46:20

End Date: 2018.01.04 @ 21:05:26

Job Ticket #: 63339 DST #: 2

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

Printed: 2018.01.08 @ 13:31:54

Staab Oil Co. 26-12S-17W Ellis,KS Hoffman #1 DST #2 LKC "D-F" 2018.01.04



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Staab Oil Co.
1607 Hopewell Rd.
Hays, KS 67601
ATTN: Janel Staab

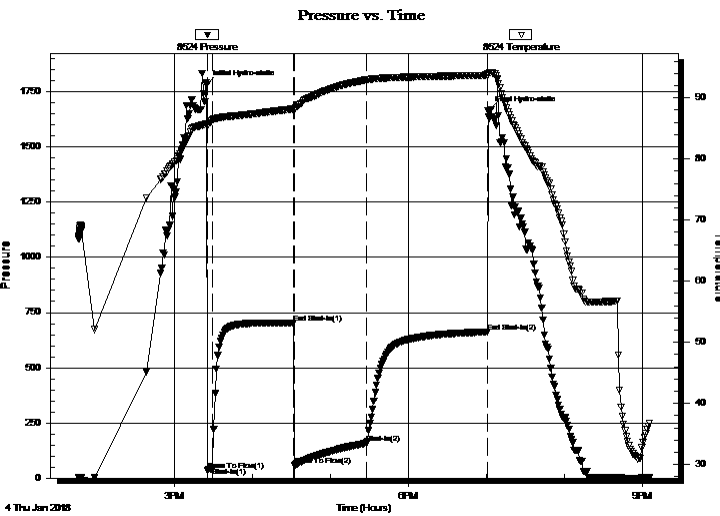
26-12S-17W Ellis, KS
Hoffman #1
Job Ticket: 63339 **DST#: 2**
Test Start: 2018.01.04 @ 13:46:20

GENERAL INFORMATION:

Formation: **LKC "D-F"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 15:25:11
 Time Test Ended: 21:05:26
 Interval: **3406.00 ft (KB) To 3473.00 ft (KB) (TVD)**
 Total Depth: 3473.00 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: 2125.00 ft (KB)
 2120.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8524 Outside
 Press@RunDepth: 159.36 psig @ 3407.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.01.04 End Date: 2018.01.04 Last Calib.: 2018.01.04
 Start Time: 13:46:21 End Time: 21:05:26 Time On Btm: 2018.01.04 @ 15:24:41
 Time Off Btm: 2018.01.04 @ 19:00:56

TEST COMMENT: 05- IF- Built to 4"
 60- IS- No blow
 60- FF- BOB 26 mins
 90- FSI- No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1781.42	85.70	Initial Hydro-static
1	35.97	85.38	Open To Flow (1)
5	47.99	86.42	Shut-In(1)
67	702.93	88.18	End Shut-In(1)
68	56.24	88.21	Open To Flow (2)
123	159.36	92.96	Shut-In(2)
216	662.27	93.70	End Shut-In(2)
217	1662.70	93.99	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
279.00	GOCM, 10%G 10%O 80%M	2.05
0.00	31' GIP	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Staab Oil Co.
1607 Hopewell Rd.
Hays, KS 67601
ATTN: Janel Staab

26-12S-17W Ellis,KS
Hoffman #1
Job Ticket: 63339 **DST#: 2**
Test Start: 2018.01.04 @ 13:46:20

Tool Information

Drill Pipe:	Length: 2925.00 ft	Diameter: 3.82 inches	Volume: 41.46 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 466.00 ft	Diameter: 2.75 inches	Volume: 3.42 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	66000.00 lb
			<u>Total Volume: 44.88 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial	64000.00 lb
Depth to Top Packer:	3406.00 ft			Final	64000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	67.00 ft				
Tool Length:	87.00 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			3387.00	
Shut In Tool	5.00			3392.00	
Hydraulic tool	5.00			3397.00	
Packer	5.00			3402.00	20.00 Bottom Of Top Packer
Packer	4.00			3406.00	
Stubb	1.00			3407.00	
Recorder	0.00	6771	Inside	3407.00	
Recorder	0.00	8524	Outside	3407.00	
Perforations	30.00			3437.00	
Change Over Sub	1.00			3438.00	
Drill Pipe	31.00			3469.00	
Change Over Sub	1.00			3470.00	
Bullnose	3.00			3473.00	67.00 Bottom Packers & Anchor

Total Tool Length: 87.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Staab Oil Co.
1607 Hopewell Rd.
Hays, KS 67601
ATTN: Janel Staab

26-12S-17W Ellis,KS
Hoffman #1
Job Ticket: 63339 **DST#: 2**
Test Start: 2018.01.04 @ 13:46:20

Mud and Cushion Information

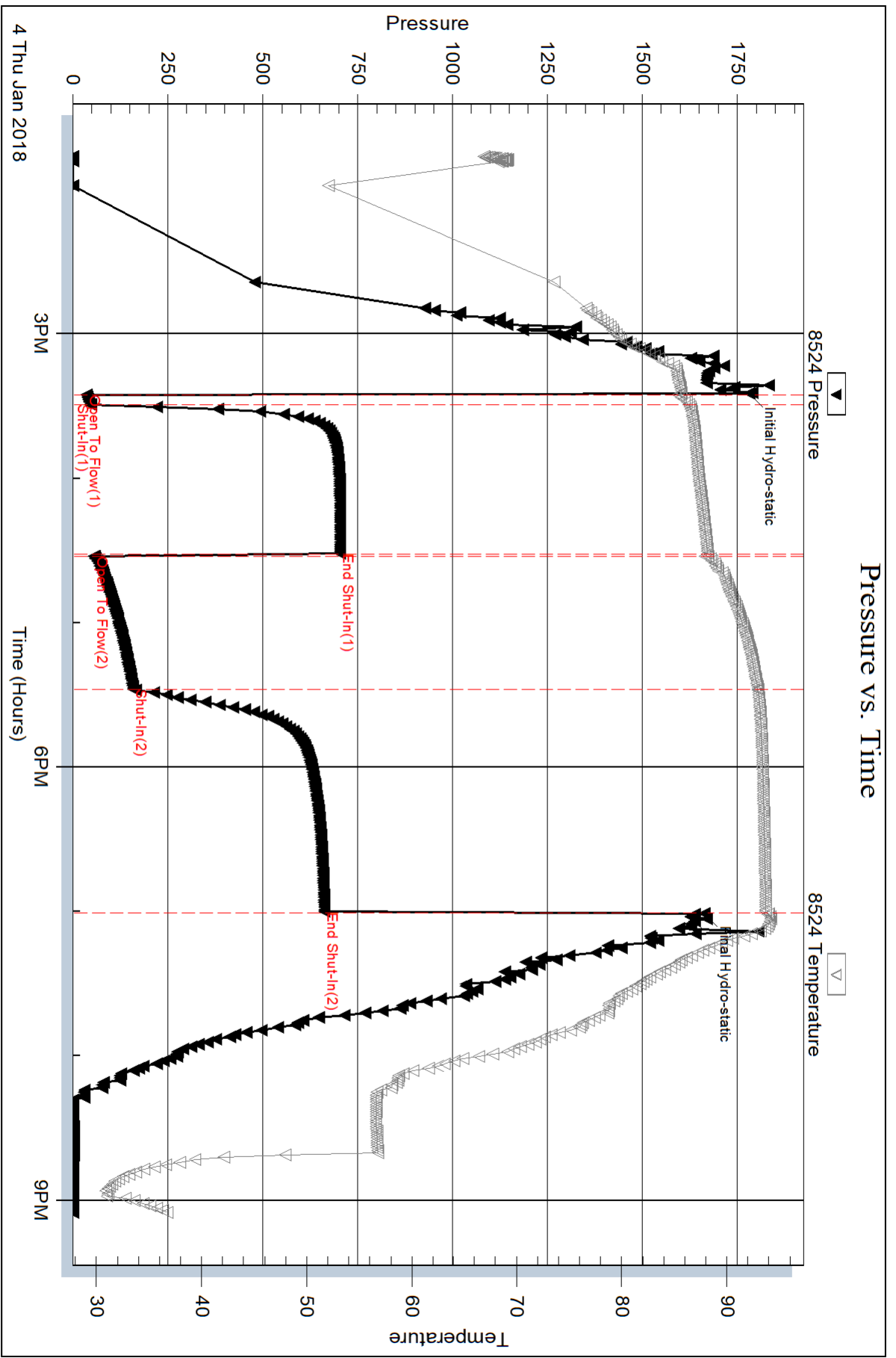
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 60.00 sec/qt	Cushion Volume: bbl		
Water Loss: 10.78 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 10400.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
279.00	GOCM, 10%G 10%O 80%M	2.050
0.00	31' GIP	0.000

Total Length: 279.00 ft Total Volume: 2.050 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:



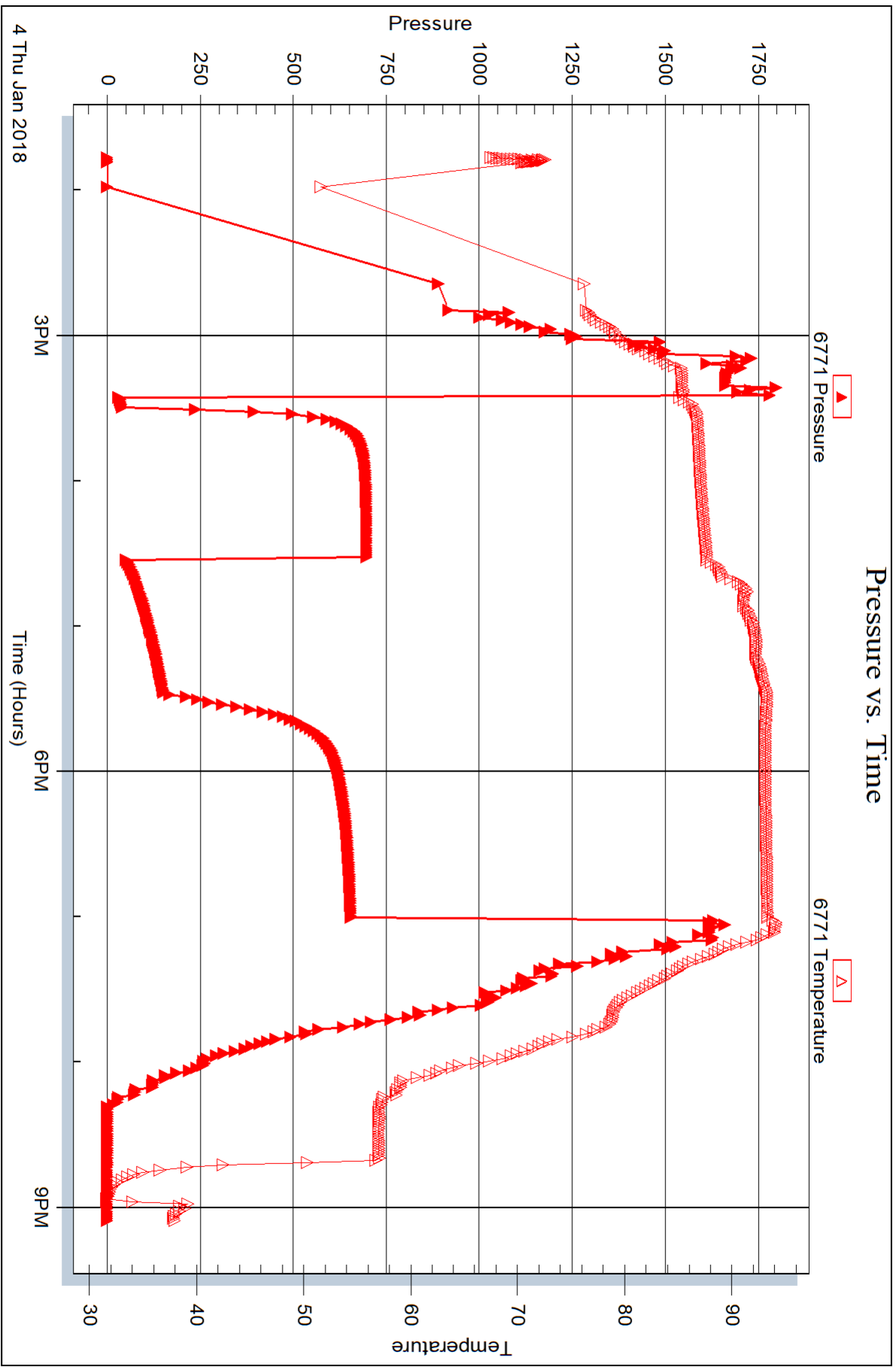
Serial #: 6771

Inside

Staab Oil Co.

Hoffman #1

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Staab Oil Co.**

1607 Hopewell Rd.
Hays, KS 67601

ATTN: Janel Staab

Hoffman #1

26-12S-17W Ellis,KS

Start Date: 2017.12.14 @ 15:11:00

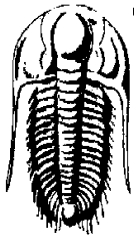
End Date:

Job Ticket #: 63340

DST #: 3

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

Printed: 2018.01.08 @ 13:31:27



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Staab Oil Co.
1607 Hopewell Rd.
Hays, KS 67601
ATTN: Janel Staab

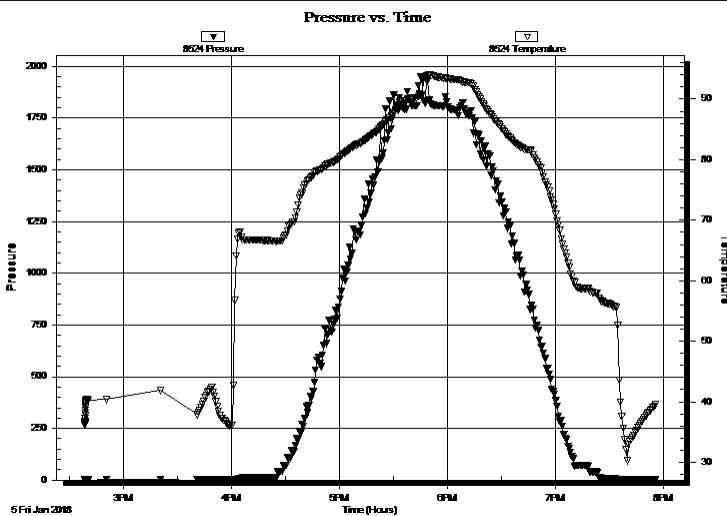
26-12S-17W Ellis, KS
Hoffman #1
Job Ticket: 63340 **DST#: 3**
Test Start: 2017.12.14 @ 15:11:00

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened:
 Tester: Brannan Lonsdale
 Time Test Ended:
 Unit No: 73
 Interval: **3627.00 ft (KB) To 3655.00 ft (KB) (TVD)**
 Reference Elevations: 2125.00 ft (KB)
 Total Depth: 3655.00 ft (KB) (TVD) 2120.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 5.00 ft

Serial #: 8524 Outside
 Press@RunDepth: psig @ 3628.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.01.05 End Date: 2018.01.05 Last Calib.: 2018.01.05
 Start Time: 14:38:35 End Time: 19:56:25 Time On Btm:
 Time Off Btm:

TEST COMMENT: PACKER FAILURE



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
150.00	M	1.10

* Recovery from multiple tests

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Staab Oil Co.
1607 Hopewell Rd.
Hays, KS 67601
ATTN: Janel Staab

26-12S-17W Ellis, KS

Hoffman #1

Job Ticket: 63340

DST#: 3

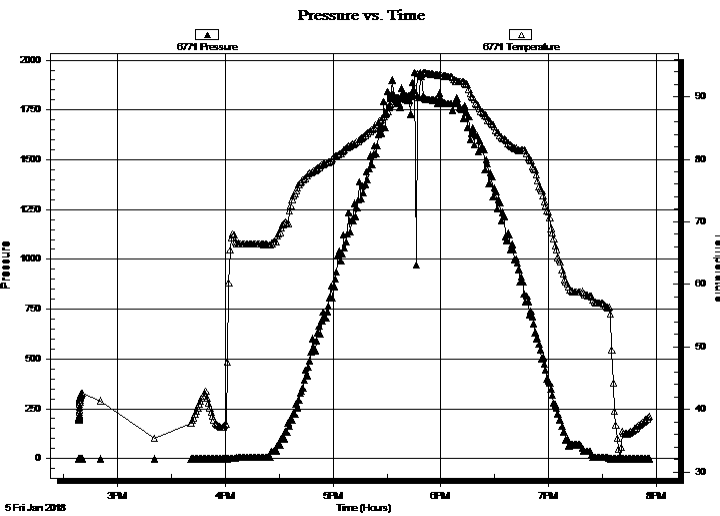
Test Start: 2017.12.14 @ 15:11:00

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: Tester: Brannan Lonsdale
 Time Test Ended: Unit No: 73
 Interval: **3627.00 ft (KB) To 3655.00 ft (KB) (TVD)**
 Reference Elevations: 2125.00 ft (KB)
 Total Depth: 3655.00 ft (KB) (TVD)
 2120.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Fair
 KB to GR/CF: 5.00 ft

Serial #: 6771 Inside
 Press@RunDepth: psig @ 3628.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.01.05 End Date: 2018.01.05 Last Calib.: 2018.01.05
 Start Time: 14:38:43 End Time: 19:56:18 Time On Btm:
 Time Off Btm:

TEST COMMENT: PACKER FAILURE



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
150.00	M	1.10

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Staab Oil Co.
1607 Hopewell Rd.
Hays, KS 67601
ATTN: Janel Staab

26-12S-17W Ellis,KS
Hoffman #1
Job Ticket: 63340 **DST#: 3**
Test Start: 2017.12.14 @ 15:11:00

Tool Information

Drill Pipe:	Length: 3147.00 ft	Diameter: 3.82 inches	Volume: 44.61 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 466.00 ft	Diameter: 2.75 inches	Volume: 3.42 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	lb
			<u>Total Volume: 48.03 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial	lb
Depth to Top Packer:	3627.00 ft			Final	lb
Depth to Bottom Packer:	ft				
Interval between Packers:	28.00 ft				
Tool Length:	48.00 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			3608.00	
Shut In Tool	5.00			3613.00	
Hydraulic tool	5.00			3618.00	
Packer	5.00			3623.00	20.00 Bottom Of Top Packer
Packer	4.00			3627.00	
Stubb	1.00			3628.00	
Recorder	0.00	6771	Inside	3628.00	
Recorder	0.00	8524	Outside	3628.00	
Perforations	24.00			3652.00	
Bullnose	3.00			3655.00	28.00 Bottom Packers & Anchor
Total Tool Length:	48.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Staab Oil Co.
1607 Hopewell Rd.
Hays, KS 67601
ATTN: Janel Staab

26-12S-17W Ellis,KS
Hoffman #1
Job Ticket: 63340 **DST#: 3**
Test Start: 2017.12.14 @ 15:11:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 48.00 sec/qt	Cushion Volume: bbl		
Water Loss: 11.59 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 18000.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
150.00	M	1.102

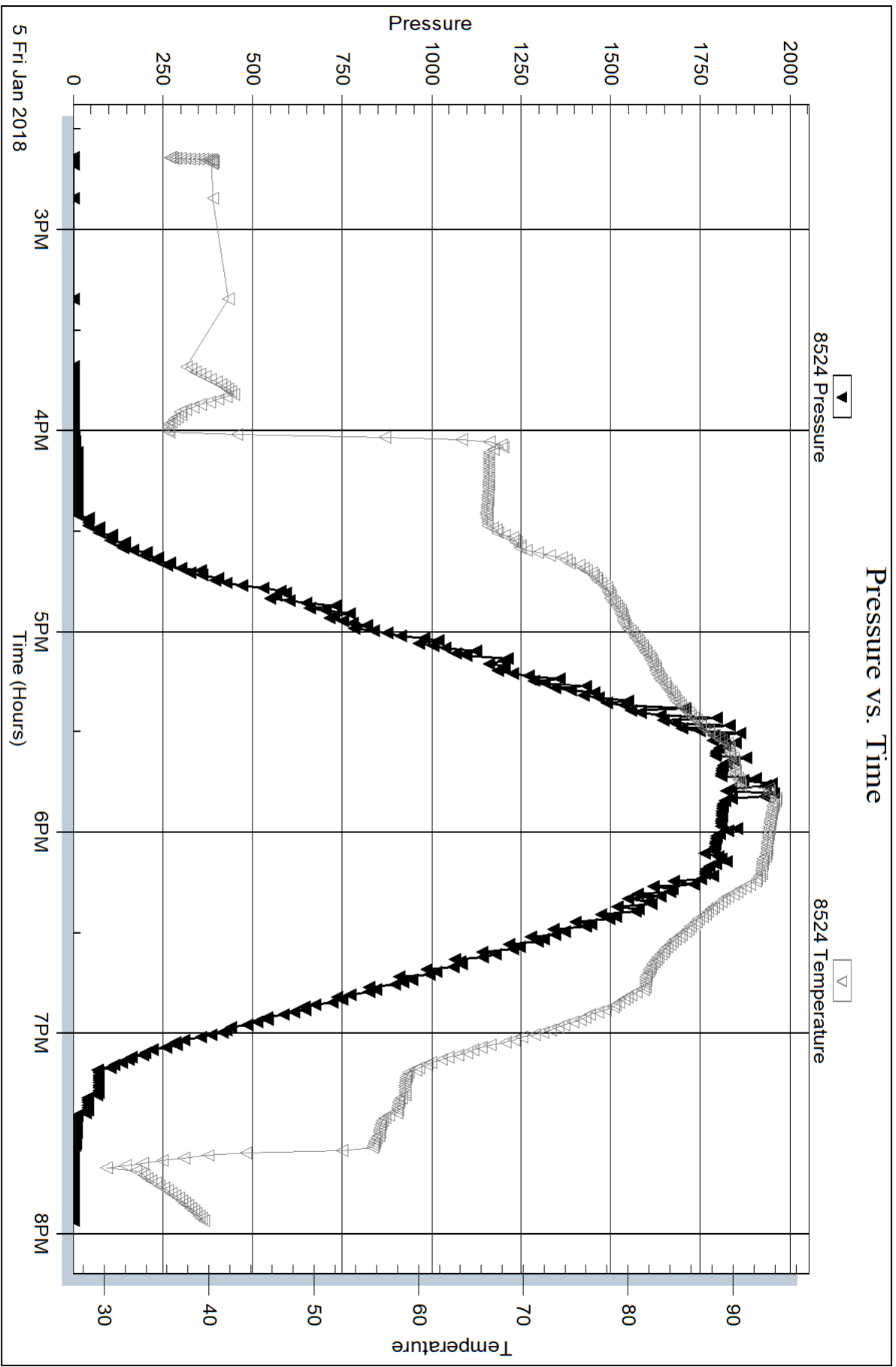
Total Length: 150.00 ft Total Volume: 1.102 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

Serial #: 8524

Outside Staab Oil Co.

Hoffman #1

DST Test Number: 3



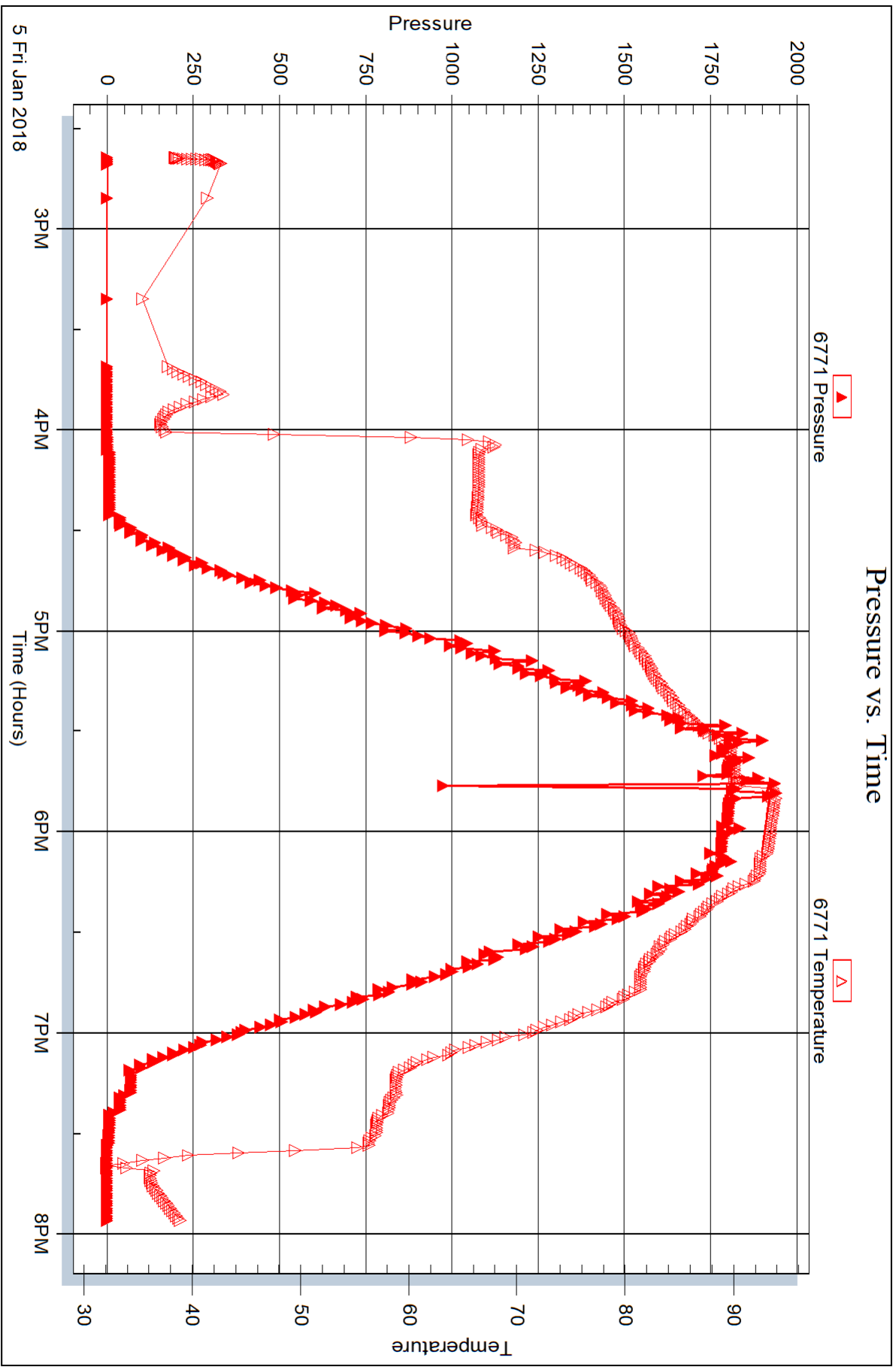
Serial #: 6771

Inside

Staab Oil Co.

Hoffman #1

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Staab Oil Co.**

1607 Hopewell Rd.
Hays, KS 67601

ATTN: Janel Staab

Hoffman #1

26-12S-17W Ellis,KS

Start Date: 2018.01.05 @ 20:07:58

End Date: 2018.01.06 @ 04:16:04

Job Ticket #: 63341 DST #: 4

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

Printed: 2018.01.08 @ 13:30:02

Staab Oil Co. 26-12S-17W Ellis,KS Hoffman #1 DST # 4 Arbuckle 2018.01.05



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Staab Oil Co.
1607 Hopewell Rd.
Hays, KS 67601
ATTN: Janel Staab

26-12S-17W Ellis, KS
Hoffman #1
Job Ticket: 63341 **DST#: 4**
Test Start: 2018.01.05 @ 20:07:58

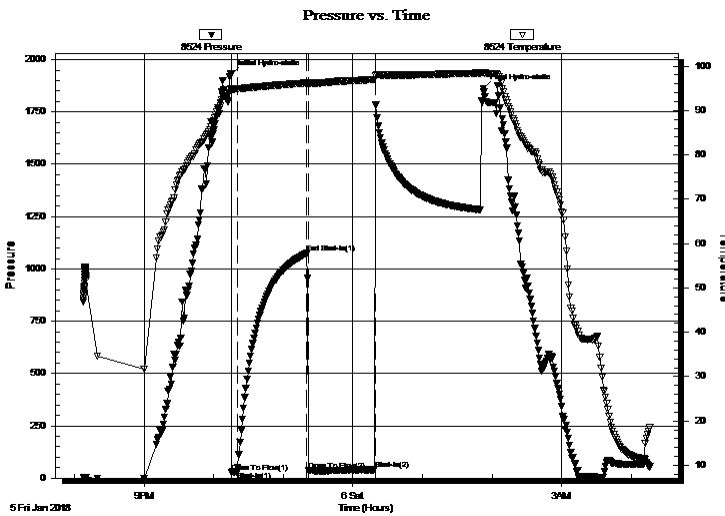
GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 22:15:34
Time Test Ended: 04:16:04
Interval: **3598.00 ft (KB) To 3655.00 ft (KB) (TVD)**
Total Depth: 3655.00 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: 2125.00 ft (KB)
2120.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8524 Outside
Press@RunDepth: 30.58 psig @ 3599.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2018.01.05 End Date: 2018.01.06 Last Calib.: 2018.01.06
Start Time: 20:07:59 End Time: 04:16:04 Time On Btm: 2018.01.05 @ 22:15:04
Time Off Btm: 2018.01.06 @ 01:52:34

TEST COMMENT: 05- IF- Slowly built to 1"
60- IS- No blow
60- FF- 1/2" blow throughout
90- FSI- No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1928.68	94.89	Initial Hydro-static
1	28.90	94.72	Open To Flow (1)
6	30.58	94.93	Shut-In(1)
66	1074.21	96.19	End Shut-In(1)
67	35.57	95.94	Open To Flow (2)
124	41.14	97.02	Shut-In(2)
218	1860.93	98.53	Final Hydro-static

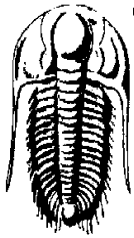
Recovery

Length (ft)	Description	Volume (bbl)
30.00	M	0.22
3.00	CO	0.02

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Staab Oil Co.
1607 Hopewell Rd.
Hays, KS 67601
ATTN: Janel Staab

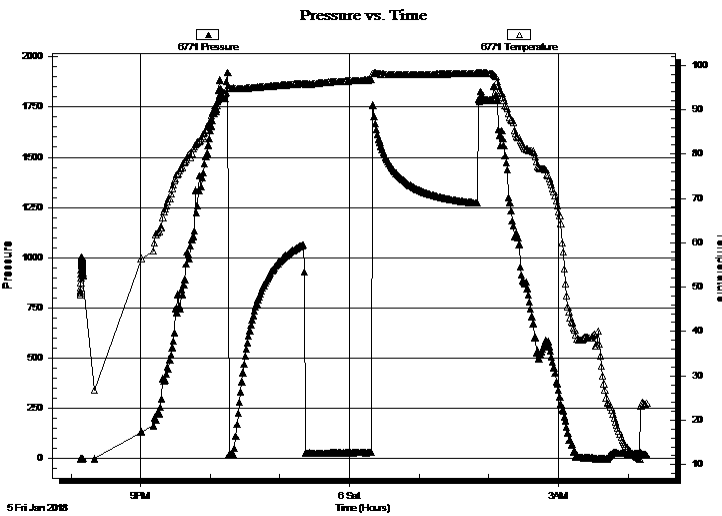
26-12S-17W Ellis, KS
Hoffman #1
Job Ticket: 63341 **DST#: 4**
Test Start: 2018.01.05 @ 20:07:58

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 22:15:34
Time Test Ended: 04:16:04
Interval: **3598.00 ft (KB) To 3655.00 ft (KB) (TVD)**
Total Depth: 3655.00 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: 2125.00 ft (KB)
2120.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 6771 Inside
Press@RunDepth: psig @ 3599.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2018.01.05 End Date: 2018.01.06 Last Calib.: 2018.01.06
Start Time: 20:08:19 End Time: 04:16:24 Time On Btm:
Time Off Btm:

TEST COMMENT: 05- IF- Slowly built to 1"
60- IS- No blow
60- FF- 1/2" blow throughout
90- FS- No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
30.00	M	0.22
3.00	CO	0.02

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Staab Oil Co.
1607 Hopewell Rd.
Hays, KS 67601
ATTN: Janel Staab

26-12S-17W Ellis, KS
Hoffman #1
Job Ticket: 63341 **DST#: 4**
Test Start: 2018.01.05 @ 20:07:58

Tool Information

Drill Pipe:	Length: 3115.00 ft	Diameter: 3.82 inches	Volume: 44.16 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 466.00 ft	Diameter: 2.75 inches	Volume: 3.42 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 47.58 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	3.00 ft			String Weight: Initial 65000.00 lb
Depth to Top Packer:	3598.00 ft			Final 65000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	57.00 ft			
Tool Length:	77.00 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			3579.00	
Shut In Tool	5.00			3584.00	
Hydraulic tool	5.00			3589.00	
Packer	5.00			3594.00	20.00 Bottom Of Top Packer
Packer	4.00			3598.00	
Stubb	1.00			3599.00	
Recorder	0.00	6771	Inside	3599.00	
Recorder	0.00	8524	Outside	3599.00	
Perforations	20.00			3619.00	
Change Over Sub	1.00			3620.00	
Drill Pipe	31.00			3651.00	
Change Over Sub	1.00			3652.00	
Bullnose	3.00			3655.00	57.00 Bottom Packers & Anchor

Total Tool Length: 77.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Staab Oil Co.
1607 Hopewell Rd.
Hays, KS 67601
ATTN: Janel Staab

26-12S-17W Ellis, KS
Hoffman #1
Job Ticket: 63341 **DST#: 4**
Test Start: 2018.01.05 @ 20:07:58

Mud and Cushion Information

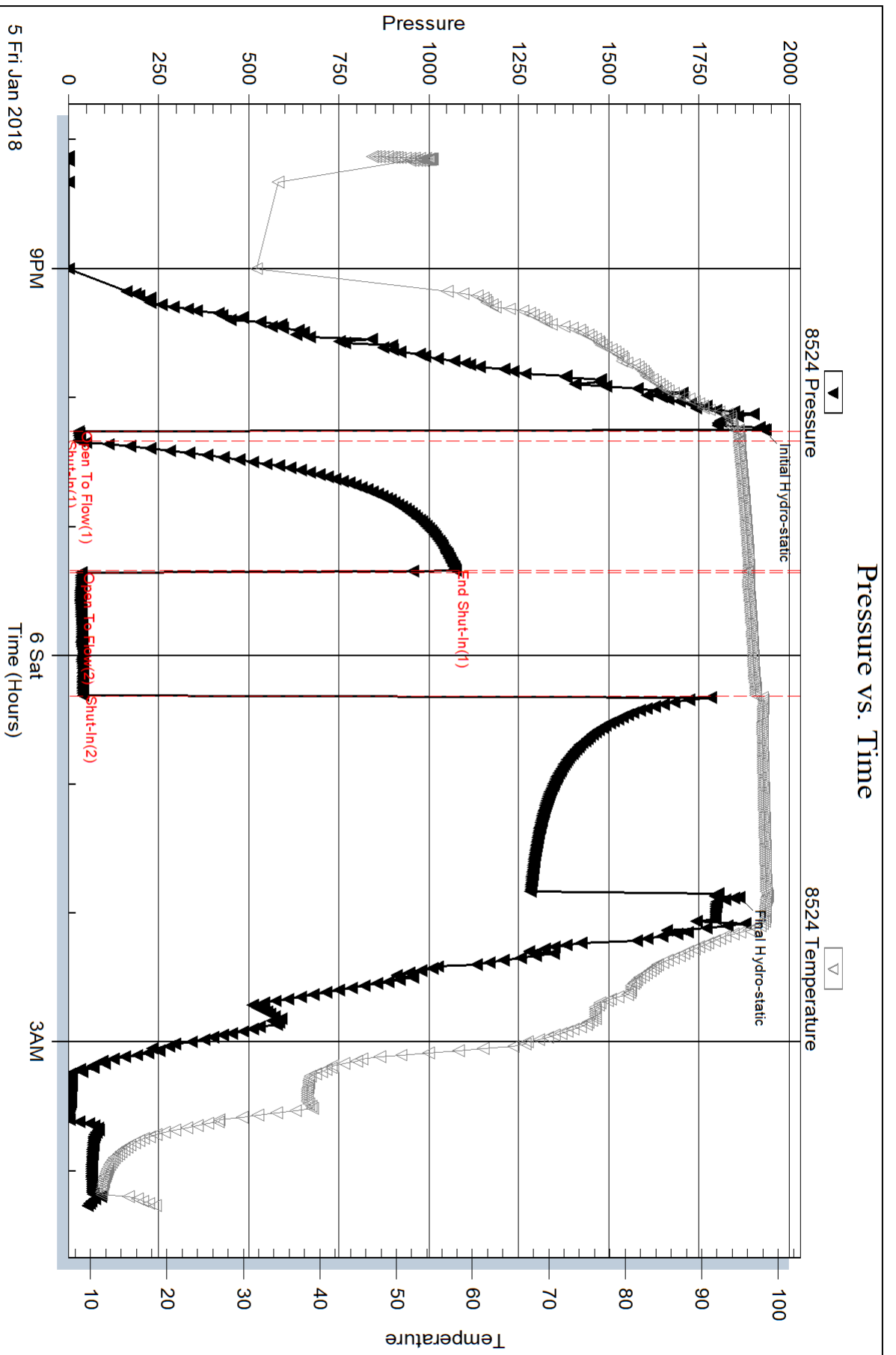
Mud Type: Gel Chem	Cushion Type:	Oil API: 30 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 48.00 sec/qt	Cushion Volume: bbl	
Water Loss: 11.59 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 18000.00 ppm		
Filter Cake: inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	M	0.220
3.00	CO	0.022

Total Length: 33.00 ft Total Volume: 0.242 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:



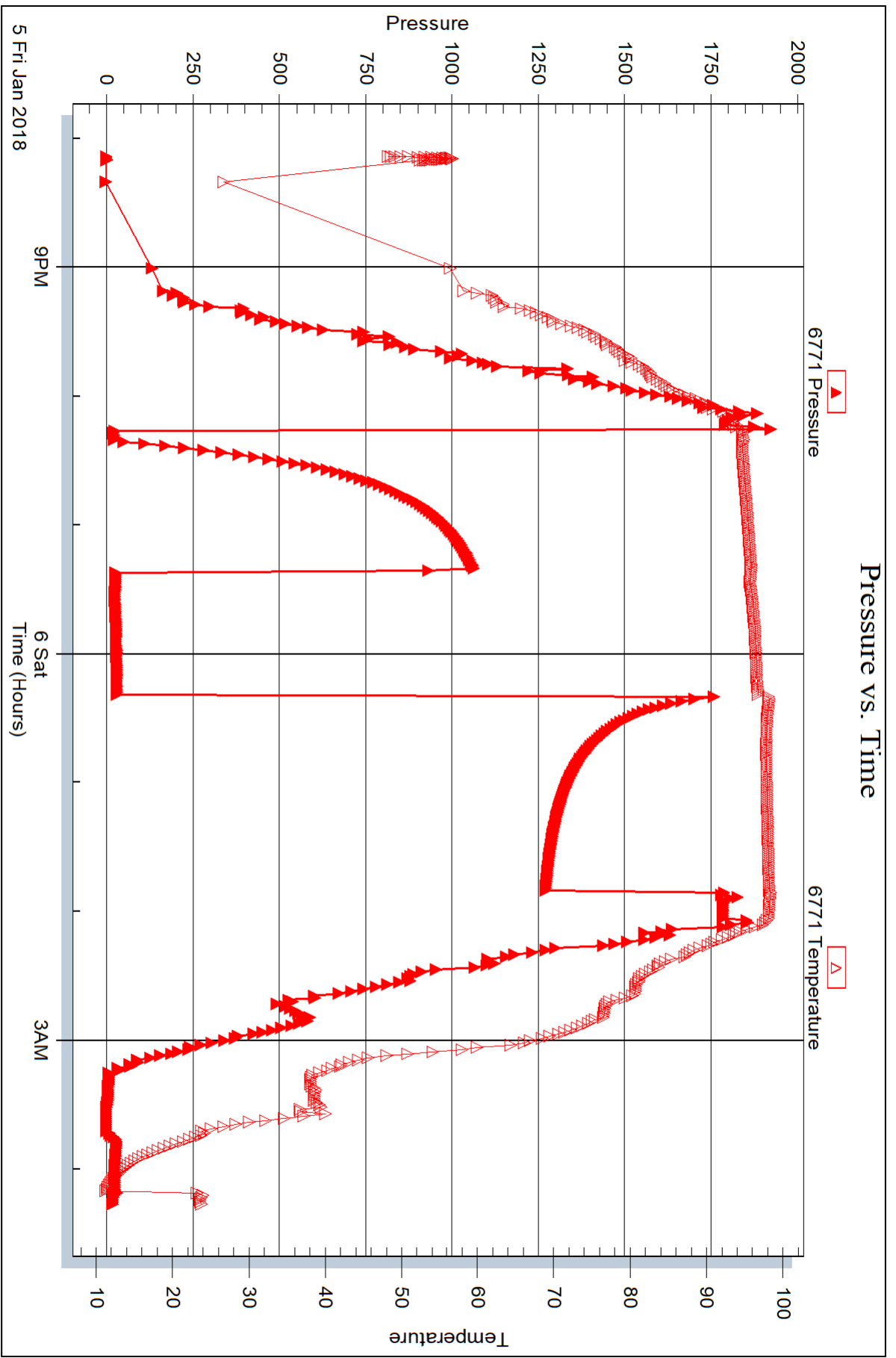
Serial #: 6771

Inside

Staab Oil Co.

Hoffman #1

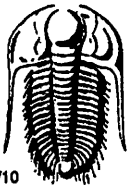
DST Test Number: 4



Trilobite Testing, Inc

Ref. No: 63341

Printed: 2018.01.08 @ 13:30:03



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63409

Well Name & No. Hoffman #1 Test No. 1 Date 12-14-13
 Company Staab Oil Company Elevation 2125 KB 2120 GL
 Address 1607 Hopewell Rd. Hays, KS 67601
 Co. Rep / Geo. Janel Staab Rig Shield
 Location: Sec. 26 Twp. 12S. Rge. 17W. Co. Ellis State KS

Interval Tested 3294-3345 Zone Tested Bottom of Topoka
 Anchor Length 51' Drill Pipe Run 2830 Mud Wt. 9.0
 Top Packer Depth 3289 Drill Collars Run — Vis 48
 Bottom Packer Depth 3294 Wt. Pipe Run 466 WL 7.2
 Total Depth 3345 Chlorides 9400 ppm System LCM 2H
 Blow Description IF. S. blow built to 1/8"
ISI. No blow
FF. No blow
FSE. N

Rec	Feet of	%gas	%oil	%water	%mud
<u>139</u>	<u>Mud</u>			<u>100</u>	
<u>0</u>	<u>Oil spots in tool</u>				
Rec Total	<u>139</u>	BHT	<u>89</u>	Gravity	API RW @

(A) Initial Hydrostatic 1610 Test 1050 T-On Location 13:30
 (B) First Initial Flow 15 Jars _____ T-Started _____
 (C) First Final Flow 15 Safety Joint _____ T-Open 17:00
 (D) Initial Shut-In 1040 Circ Sub _____ T-Pulled 19:30
 (E) Second Initial Flow 95 Hourly Standby _____ T-Out 21:13
 (F) Second Final Flow 94 Mileage 18 RT From Hays Comments Unseated packer on PF
 (G) Final Shut-In _____ Sampler _____ re seated + bled off floor
 (H) Final Hydrostatic 1588 Straddle _____ manifold - No blow
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Initial Open 15
 Initial Shut-In 60
 Final Flow 75
 Final Shut-In _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1068
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1068

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. 63339

Well Name & No. Hoffman #1 Test No. 2 Date 1/4/18
 Company Staab Oil Co. Elevation 2125 KB 2120 GL
 Address 1607 Hopewell Rd Hays, KS 67601
 Co. Rep / Geo. Janel Staab Rig Shields
 Location: Sec. 26 Twp 12 S Rge. 17 W Co. Ellis State KS

Interval Tested 3406-3473 Zone Tested LKC "D-F"
 Anchor Length 67' Drill Pipe Run 2925 Mud Wt. 9.0
 Top Packer Depth 3401 Drill Collars Run — Vis 60+
 Bottom Packer Depth 3406 Wt. Pipe Run 466 WL 10.8
 Total Depth 3473 Chlorides 19400 ppm System LCM 2#

Blow Description IF - Built to 4"
ISI - No Blow
EF - BOB 26mtrs
ISI - No Blow

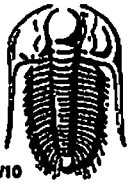
Rec	Feet of	%gas	%oil	%water	%mud
<u>279</u>	<u>60CM</u>	<u>10</u>	<u>10</u>	<u>80</u>	<u>—</u>
Rec	Feet of <u>31' GIP</u>	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 279' BHT 940 Gravity — API RW — @ — °F Chlorides — ppm
 (A) Initial Hydrostatic 1781 Test 1050 T-On Location 1242
 (B) First Initial Flow 36 Jars — T-Started 1346
 (C) First Final Flow 48 Safety Joint — T-Open 1525
 (D) Initial Shut-In 703 Circ Sub — T-Pulled 1900
 (E) Second Initial Flow 56 Hourly Standby — T-Out 2106
 (F) Second Final Flow 159 Mileage 24 RT 18 Comments —
 (G) Final Shut-In 662 Sampler —
 (H) Final Hydrostatic 1663 Straddle — Ruined Shale Packer —
 Shale Packer — Ruined Packer —
 Extra Packer — Extra Copies —
 Extra Recorder —
 Day Standby —
 Accessibility —

Initial Open 05
 Initial Shut-In 60
 Final Flow 60
 Final Shut-In 90
 Sub Total 1068
 Total 1068
 MP/DST Disc't —

Approved By — Our Representative Brennan Lawsdale

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TRIOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63340

Well Name & No. Hoffman #1 Test No. 3 Date 1/5/18
 Company Staab Oil Co. Elevation 2125 KB 2120 GL
 Address 1607 Hopewell RD Hays, KS 67601
 Co. Rep / Geo. Janell Staab Rig Shields
 Location: Sec. 26 Twp R S Rge. 17 W Co. Ellis State KS

Interval Tested 3627-3655 Zone Tested Arbuckle
 Anchor Length 28' Drill Pipe Run 3147 Mud Wt. 9.3
 Top Packer Depth 3622 Drill Collars Run 4665 Vis 48
 Bottom Packer Depth 3627 Wt. Pipe Run ↓ WL 11.6
 Total Depth 3655 Chlorides 18,000 ppm System LCM 2#

Blow Description PACKER FAILURE

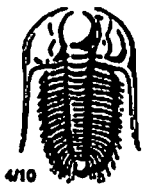
Rec	Feet of	%gas	%oil	%water	%mud
<u>150</u>	<u>M</u>				

Rec Total 150 BHT _____ Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic _____ Test 850 T-On Location 1436
 (B) First Initial Flow _____ Jars _____ T-Started 1438
 (C) First Final Flow _____ Safety Joint _____ T-Open _____
 (D) Initial Shut-In _____ Circ Sub _____ T-Pulled _____
 (E) Second Initial Flow _____ Hourly Standby _____ T-Out 1956
 (F) Second Final Flow _____ Mileage 24 RT 18 Comments _____
 (G) Final Shut-In _____ Sampler _____
 (H) Final Hydrostatic _____ Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open _____ Extra Recorder _____ Sub Total 0
 Initial Shut-In _____ Day Standby _____ Total 868
 Final Flow _____ Accessibility _____ MP/DST Disc't _____
 Final Shut-In _____ Sub Total 868

Approved By _____ Our Representative Brannan Lonsdale

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TRIOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63341

Well Name & No. Hoffman #1 Test No. 4 Date 1/5/18
 Company Tarab Oil Co. Elevation 2125 KB 2120 GL
 Address 1607 Hopewell Rd. Hays, KS 67601
 Co. Rep / Geo. Janel Strub Rig Shields
 Location: Sec. 26 Twp 13 S Rge. 17 W Co. Ellis State KS

Interval Tested 3598-3655 Zone Tested Arbuckle
 Anchor Length 57' Drill Pipe Run 3115 Mud Wt. 9.3
 Top Packer Depth 3593 Drill Collars Run — Vis 48
 Bottom Packer Depth 3598 Wt. Pipe Run 466 WL 11.6
 Total Depth 3655 Chlorides 18,000 ppm System LCM 2#

Blow Description IF - Slowly built to 1"
ISI - No Blow
FF - 1/2" blow through out
F SI - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>M</u>				
<u>3</u>	<u>10</u>				

Rec Total 33' BHT 98° Gravity 30 API RW —@ —° F Chlorides — ppm

(A) Initial Hydrostatic 1929 Test 1050 T-On Location 1956
 (B) First Initial Flow 29 Jars — T-Started 2008
 (C) First Final Flow 31 Safety Joint — T-Open 2215
 (D) Initial Shut-In 1074 Circ Sub — T-Pulled 0150
 (E) Second Initial Flow 36 Hourly Standby — T-Out 0416
 (F) Second Final Flow 41 Mileage — Comments —
 (G) Final Shut-In Trapped hydro pulling slips Sampler —
 (H) Final Hydrostatic 1861 Straddle — Ruined Shale Packer —
 Shale Packer 250 Ruined Packer —
 Extra Packer — Extra Copies —
 Extra Recorder — Sub Total 0
 Day Standby — Total 1300
 Accessibility — MP/DST Disc't —
 Sub Total 1300

Approved By _____ Our Representative Brannan Lonsdale

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