



DRILL STEM TEST REPORT

Prepared For: **K3 Oil**

211 Highland Cross
Houston, TX 77073

ATTN: Tom Williams

Black #4-7

4-17s-32w Scott,KS

Start Date: 2015.08.20 @ 12:03:03

End Date: 2015.08.20 @ 18:12:03

Job Ticket #: 61745 DST #: 1

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

Printed: 2015.08.25 @ 08:45:50

K3 Oil
4-17s-32w Scott,KS
Black #4-7
DST # 1
LKC E Lime
2015.08.20



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

K3 Oil
211 Highland Cross
Houston, TX 77073
ATTN: Tom Williams

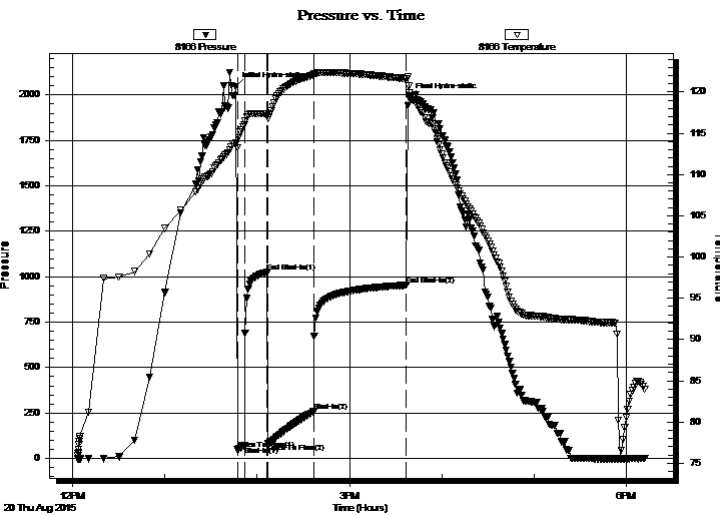
4-17s-32w Scott,KS
Black #4-7
Job Ticket: 61745 **DST#: 1**
Test Start: 2015.08.20 @ 12:03:03

GENERAL INFORMATION:

Formation: **LKC E Lime**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 13:47:03
Time Test Ended: 18:12:03
Interval: **4072.00 ft (KB) To 4091.00 ft (KB) (TVD)**
Total Depth: 4091.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Test Type: Conventional Bottom Hole (Initial)
Tester: Brandon Turley
Unit No: 79
Reference Elevations: 3000.00 ft (KB)
2991.00 ft (CF)
KB to GR/CF: 9.00 ft

Serial #: 8166 Outside
Press@RunDepth: 257.24 psig @ 4073.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2015.08.20 End Date: 2015.08.20 Last Calib.: 2015.08.20
Start Time: 12:03:08 End Time: 18:12:02 Time On Btm: 2015.08.20 @ 13:46:03
Time Off Btm: 2015.08.20 @ 15:38:33

TEST COMMENT: IF: BOB in 3 min.
IS: Surface blow built to 1 1/2"
FF: BOB in 4 min.
FS: Surface blow built to 2 1/2"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2046.22	113.81	Initial Hydro-static
1	47.83	113.23	Open To Flow (1)
6	69.10	116.02	Shut-In(1)
21	1023.78	117.36	End Shut-In(1)
21	84.17	116.85	Open To Flow (2)
51	257.24	122.05	Shut-In(2)
111	952.89	121.61	End Shut-In(2)
113	1983.97	120.70	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	mcgo 20%g 60%o 20%m	1.74
516.00	go 20%g 80%o	7.24
0.00	166 GIP	0.00

Gas Rates

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



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

K3 Oil

211 Highland Cross
Houston, TX 77073

ATTN: Tom Williams

4-17s-32w Scott,KS

Black #4-7

Job Ticket: 61745

DST#: 1

Test Start: 2015.08.20 @ 12:03:03

GENERAL INFORMATION:

Formation: **LKC E Lime**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:47:03

Time Test Ended: 18:12:03

Test Type: Conventional Bottom Hole (Initial)

Tester: Brandon Turley

Unit No: 79

Interval: 4072.00 ft (KB) To 4091.00 ft (KB) (TVD)

Total Depth: 4091.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3000.00 ft (KB)

2991.00 ft (CF)

KB to GR/CF: 9.00 ft

Serial #: 8373

Inside

Press@RunDepth: psig @ 4073.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.08.20

End Date: 2015.08.20

Last Calib.: 2015.08.20

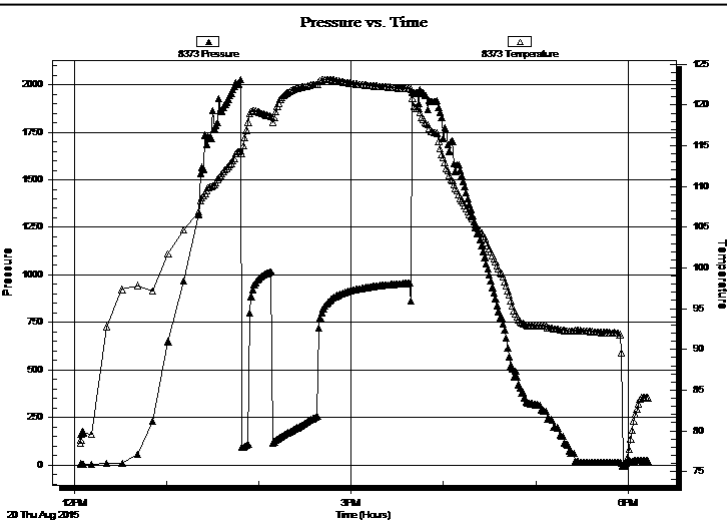
Start Time: 12:03:54

End Time: 18:12:48

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: BOB in 3 min.
IS: Surface blow built to 1 1/2"
FF: BOB in 4 min.
FS: Surface blow built to 2 1/2"



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
124.00	mco 20%g 60%o 20%m	1.74
516.00	go 20%g 80%o	7.24
0.00	166 GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

K3 Oil
211 Highland Cross
Houston, TX 77073
ATTN: Tom Williams

4-17s-32w Scott,KS
Black #4-7
Job Ticket: 61745 **DST#: 1**
Test Start: 2015.08.20 @ 12:03:03

Tool Information

Drill Pipe:	Length: 4065.00 ft	Diameter: 3.80 inches	Volume: 57.02 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:	25000.00 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: 57.02 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial	50000.00 lb
Depth to Top Packer:	4072.00 ft			Final	50000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	19.00 ft				
Tool Length:	46.00 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			4046.00	
Shut In Tool	5.00			4051.00	
Hydraulic tool	5.00			4056.00	
Jars	5.00			4061.00	
Safety Joint	2.00			4063.00	
Packer	5.00			4068.00	27.00 Bottom Of Top Packer
Packer	4.00			4072.00	
Stubb	1.00			4073.00	
Recorder	0.00	8373	Inside	4073.00	
Recorder	0.00	8166	Outside	4073.00	
Perforations	13.00			4086.00	
Bullnose	5.00			4091.00	19.00 Bottom Packers & Anchor

Total Tool Length: 46.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

K3 Oil

4-17s-32w Scott,KS

211 Highland Cross
Houston, TX 77073

Black #4-7

Job Ticket: 61745

DST#: 1

ATTN: Tom Williams

Test Start: 2015.08.20 @ 12:03:03

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

28 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1600.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
124.00	mcgo 20%g 60%o 20%m	1.739
516.00	go 20%g 80%o	7.238
0.00	166 GIP	0.000

Total Length: 640.00 ft Total Volume: 8.977 bbl

Num Fluid Samples: 0

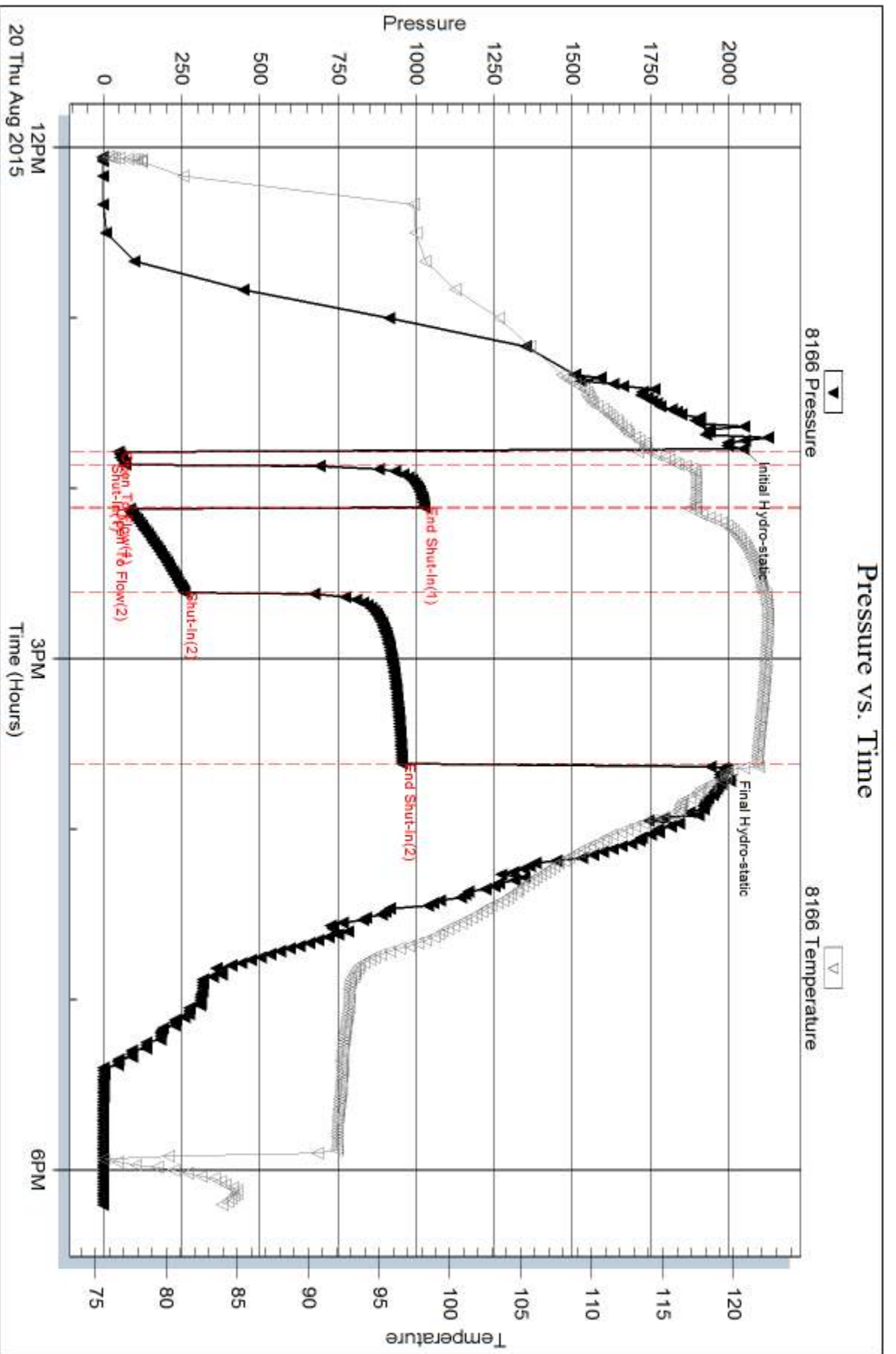
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 31@90=28

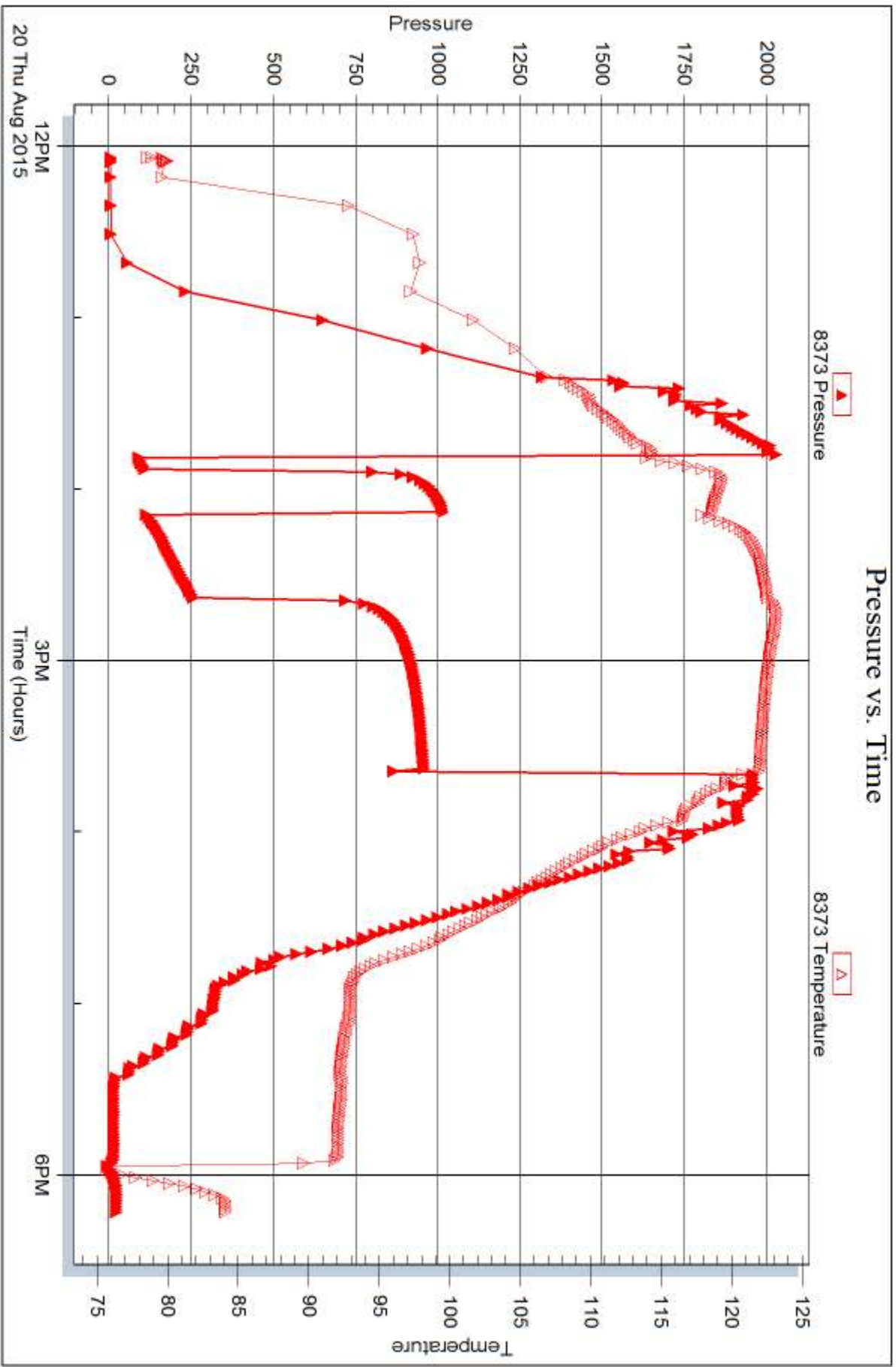


Serial #: 8373

Inside K3 Oil

Block #4-7

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 61745

Printed: 2015.08.25 @ 08:45:52



DRILL STEM TEST REPORT

Prepared For: **K3 Oil**

211 Highland Cross
Houston, TX 77073

ATTN: Tom Williams

Black #4-7

4-17s-32w Scott,KS

Start Date: 2015.08.21 @ 16:45:36

End Date: 2015.08.21 @ 23:37:36

Job Ticket #: 61746 DST #: 2

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

Printed: 2015.08.25 @ 08:45:16

K3 Oil
4-17s-32w Scott,KS
Black #4-7
DST # 2
LKC K Lime
2015.08.21



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

K3 Oil
211 Highland Cross
Houston, TX 77073
ATTN: Tom Williams

4-17s-32w Scott,KS
Black #4-7
Job Ticket: 61746 **DST#: 2**
Test Start: 2015.08.21 @ 16:45:36

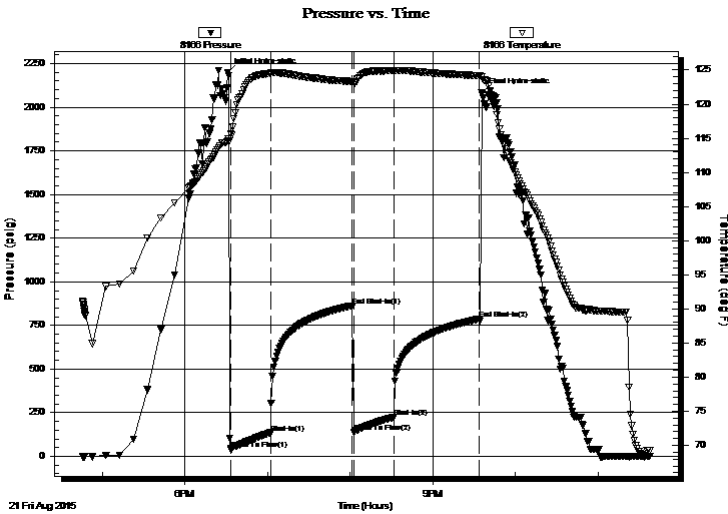
GENERAL INFORMATION:

Formation: **LKC K Lime**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 18:33:06
Time Test Ended: 23:37:36
Interval: **4267.00 ft (KB) To 4294.00 ft (KB) (TVD)**
Total Depth: 4294.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Test Type: Conventional Bottom Hole (Reset)
Tester: Brandon Turley
Unit No: 79
Reference Elevations: 3000.00 ft (KB)
2991.00 ft (CF)
KB to GR/CF: 9.00 ft

Serial #: 8166 Outside
Press@RunDepth: 223.11 psig @ 4268.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2015.08.21 End Date: 2015.08.21 Last Calib.: 2015.08.21
Start Time: 16:45:41 End Time: 23:37:35 Time On Btm: 2015.08.21 @ 18:31:06
Time Off Btm: 2015.08.21 @ 21:35:36

TEST COMMENT: IF: 1/4" blow BOB in 10 min.
IS: No return.
FF: Surface blow BOB in 17 min.
FS: No return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2199.53	114.62	Initial Hydro-static
2	41.77	115.61	Open To Flow (1)
31	135.33	124.52	Shut-In(1)
91	863.15	123.32	End Shut-In(1)
92	140.28	123.07	Open To Flow (2)
121	223.11	124.87	Shut-In(2)
183	788.44	124.18	End Shut-In(2)
185	2081.79	123.99	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
217.00	w cm 30%w 70%m	3.04
124.00	mcw 75%w 25%m	1.74
124.00	mcw 95%w 5%m	1.74

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

K3 Oil
211 Highland Cross
Houston, TX 77073
ATTN: Tom Williams

4-17s-32w Scott,KS
Black #4-7
Job Ticket: 61746 **DST#: 2**
Test Start: 2015.08.21 @ 16:45:36

Tool Information

Drill Pipe:	Length: 4250.00 ft	Diameter: 3.80 inches	Volume: 59.62 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:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	55000.00 lb
			<u>Total Volume: 59.62 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial	45000.00 lb
Depth to Top Packer:	4267.00 ft			Final	48000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	27.00 ft				
Tool Length:	54.00 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			4241.00	
Shut In Tool	5.00			4246.00	
Hydraulic tool	5.00			4251.00	
Jars	5.00			4256.00	
Safety Joint	2.00			4258.00	
Packer	5.00			4263.00	27.00 Bottom Of Top Packer
Packer	4.00			4267.00	
Stubb	1.00			4268.00	
Recorder	0.00	8373	Inside	4268.00	
Recorder	0.00	8166	Outside	4268.00	
Perforations	21.00			4289.00	
Bullnose	5.00			4294.00	27.00 Bottom Packers & Anchor

Total Tool Length: 54.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

K3 Oil

4-17s-32w Scott,KS

211 Highland Cross
Houston, TX 77073

Black #4-7

Job Ticket: 61746

DST#: 2

ATTN: Tom Williams

Test Start: 2015.08.21 @ 16:45:36

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:

23500 ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1800.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
217.00	w cm 30%w 70%m	3.044
124.00	mcw 75%w 25%m	1.739
124.00	mcw 95%w 5%m	1.739

Total Length: 465.00 ft Total Volume: 6.522 bbl

Num Fluid Samples: 0

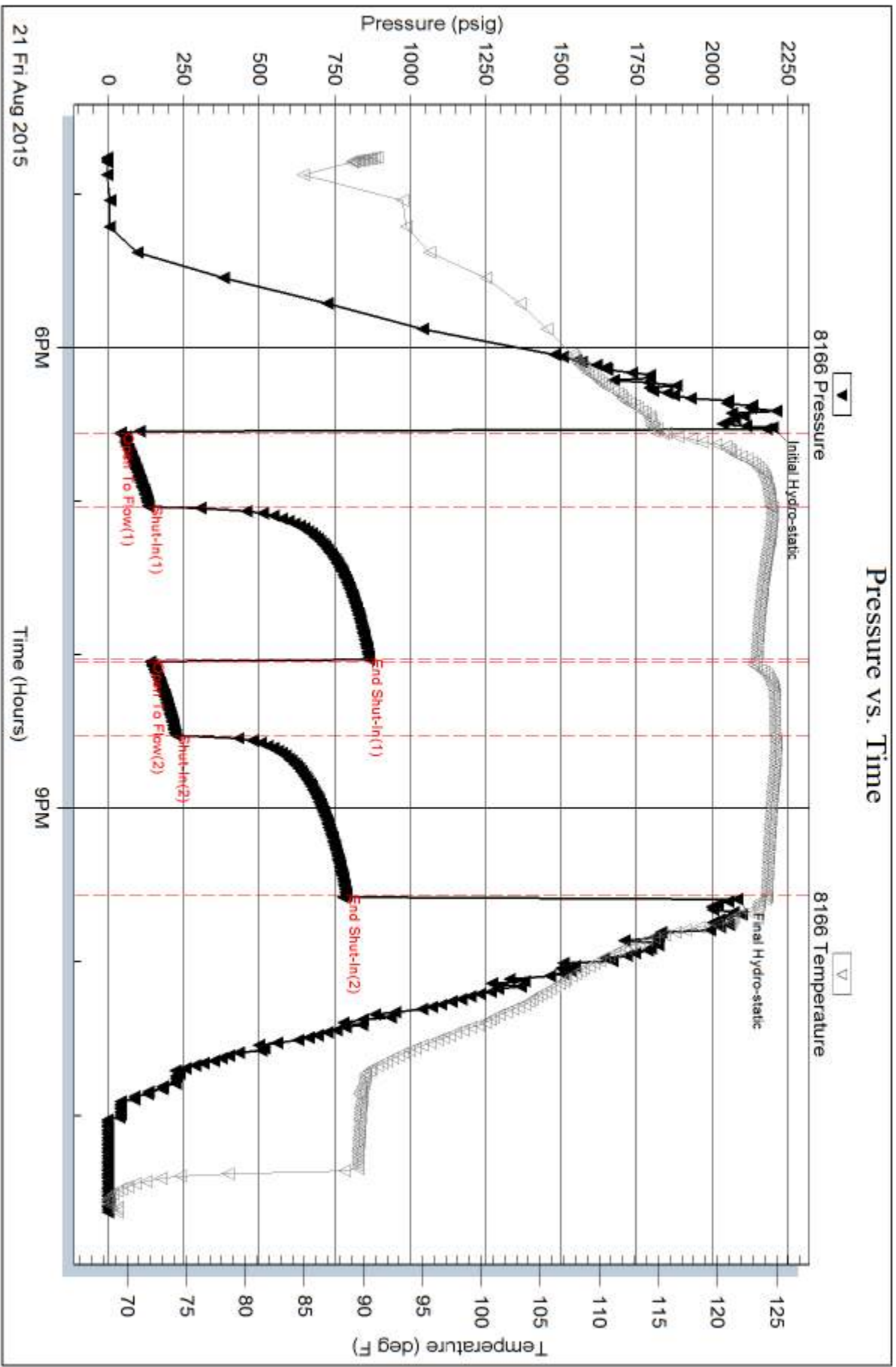
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: .29@72=23500



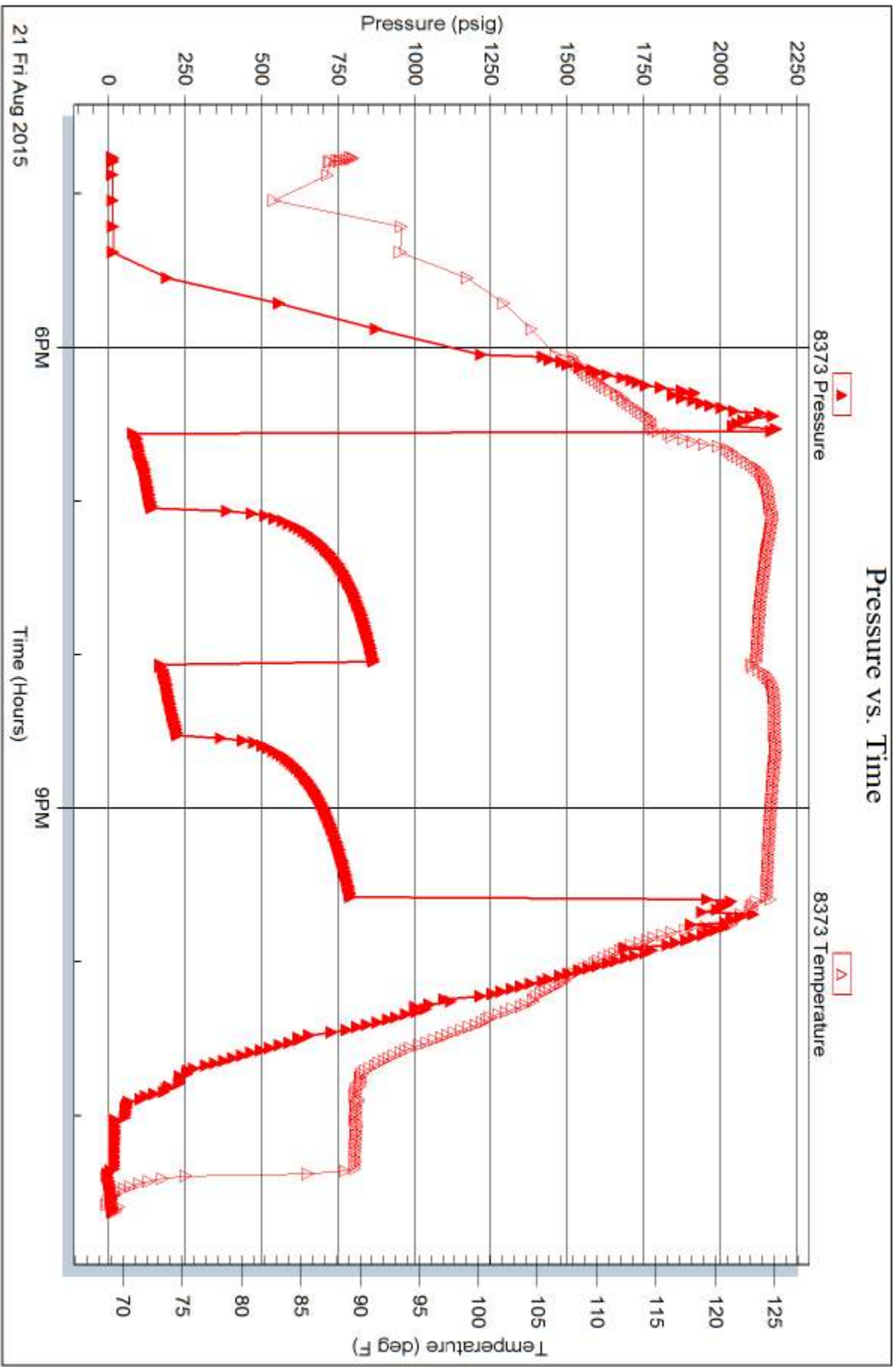
Serial #: 8373

Inside

K3 Oil

Black #4-7

DST Test Number: 2



21 Fri Aug 2015

6PM

Time (Hours)

9PM

Pressure (psig)

Temperature (deg F)

8373 Pressure

8373 Temperature



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 61745

Well Name & No. Black 4-7 Test No. 1 Date 8-20-15
 Company K3 Oil Elevation 3000 KB 2991 GL
 Address 211 Highland cross Houston, TX 77073
 Co. Rep / Geo. Tom Williams Rig Duke 4
 Location: Sec. 4 Twp. 17 Rge. 32W Co. Scott State KS

Interval Tested 4072 4091 Zone Tested Lansing E Lime
 Anchor Length 19 Drill Pipe Run 4065 Mud Wt. 9.2
 Top Packer Depth 4067 Drill Collars Run — Vis 52
 Bottom Packer Depth 4072 Wt. Pipe Run — WL 7.2
 Total Depth 4091 Chlorides 1600 ppm System LCM 2

Blow Description IF: BoB in 3 min.
IS: surface blow built to 1 1/2.
FB: BoB in 4 min.
FS: surface blow built to 2 1/2.

Rec	Feet of	%gas	%oil	%water	%mud
<u>516</u>	<u>90</u>	<u>20</u>	<u>80</u>		
<u>124</u>	<u>Mcgo</u>	<u>20</u>	<u>60</u>		<u>20</u>
	<u>166 GIP</u>				

Rec Total 640 BHT 121 Gravity 28 API RW — @ — °F Chlorides — ppm

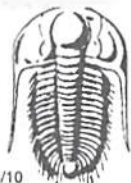
(A) Initial Hydrostatic 2046 Test 1150 T-On Location 11:10
 (B) First Initial Flow 47 Jars 250 T-Started 12:03
 (C) First Final Flow 69 Safety Joint 75 T-Open 13:47
 (D) Initial Shut-In 1023 Circ Sub NIC T-Pulled 15:37
 (E) Second Initial Flow 84 Hourly Standby _____ T-Out 18:15
 (F) Second Final Flow 257 Mileage 32- Comments _____
 (G) Final Shut-In 952 Sampler _____
 (H) Final Hydrostatic 1983 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

Initial Open 5
 Initial Shut-In 15
 Final Flow 30
 Final Shut-In 60

Sub Total 1507
 Total 1507
 MP/DST Disc't _____

Approved By Tom Williams 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. 61746

Well Name & No. Block 4-7 Test No. 2 Date 8-21-15
 Company K3 oil Elevation 3000 KB 2991 GL
 Address _____
 Co. Rep / Geo. Tom Williams Rig Duke 4
 Location: Sec. 4 Twp. 17 Rge. 32W Co. Scott State KS

Interval Tested 4267 4294 Zone Tested LKC-K Lime
 Anchor Length 27 Drill Pipe Run 4250 Mud Wt. 9.3
 Top Packer Depth 4262 Drill Collars Run — Vis 55
 Bottom Packer Depth 4267 Wt. Pipe Run — WL 8.0
 Total Depth 4294 Chlorides 1800 ppm System LCM 1

Blow Description IF: 1/4 blow BoB in 10 min.
FS! No return,
IF! Surface blow BoB in 17 min.
FS! No return,

Rec	Feet of	%gas	%oil	%water	%mud
<u>217</u>	<u>wcm</u>		<u>30</u>	<u>70</u>	
<u>124</u>	<u>mcw</u>		<u>75</u>	<u>25</u>	
<u>124</u>	<u>mcw</u>		<u>95</u>	<u>5</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 465 BHT 124 Gravity — API RW 129 @ 72° F Chlorides 23500 ppm

(A) Initial Hydrostatic 2199 Test 1150 T-On Location 16:30
 (B) First Initial Flow 41 Jars 250 T-Started 16:45
 (C) First Final Flow 135 Safety Joint 75 T-Open 18:32
 (D) Initial Shut-In 863 Circ Sub NIL T-Pulled 21:32
 (E) Second Initial Flow 140 Hourly Standby T-Out 23:40
 (F) Second Final Flow 223 Mileage 32x2 +32 Comments logged 4:20 PM
 (G) Final Shut-In 788 Sampler on 8-23-15
 (H) Final Hydrostatic 2081 Straddle Ruined Shale Packer
 Shale Packer Ruined Packer
 Extra Packer Extra Copies
 Initial Open 30 Extra Recorder Sub Total 800
 Initial Shut-In 60 Day Standby 1.5d 4.75h Total 2339
 Final Flow 30 Accessibility MP/DST Disc't
 Final Shut-In 60 Sub Total 1539

Approved By Tom Williams 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.