



## DRILL STEM TEST REPORT

Prepared For: **Hartman Oil Co**

10500 E. Berkeley SQ Pkwy  
Suite 100  
Wichita KS 67206

ATTN: Kitt Noah

### **Williams Trust #2-19**

### **19-5s -22w Norton,KS**

Start Date: 2014.04.24 @ 06:00:00

End Date: 2014.04.24 @ 14:33:30

Job Ticket #: 55991                      DST #: 1

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
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Hartman Oil Co  
19-5s -22w Norton,KS  
Williams Trust #2-19  
DST # 1  
LKC "E-F"  
2014.04.24



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

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Suite 100  
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**19-5s -22w Norton,KS**  
**Williams Trust #2-19**  
Job Ticket: 55991 **DST#: 1**  
Test Start: 2014.04.24 @ 06:00:00

## GENERAL INFORMATION:

Formation: **LKC "E-F"**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 09:06:30  
Time Test Ended: 14:33:30  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Robert Zodrow  
Unit No: 44  
Interval: **3528.00 ft (KB) To 3549.00 ft (KB) (TVD)**  
Reference Elevations: 2284.00 ft (KB)  
Total Depth: 3549.00 ft (KB) (TVD) 2279.00 ft (CF)  
Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 5.00 ft

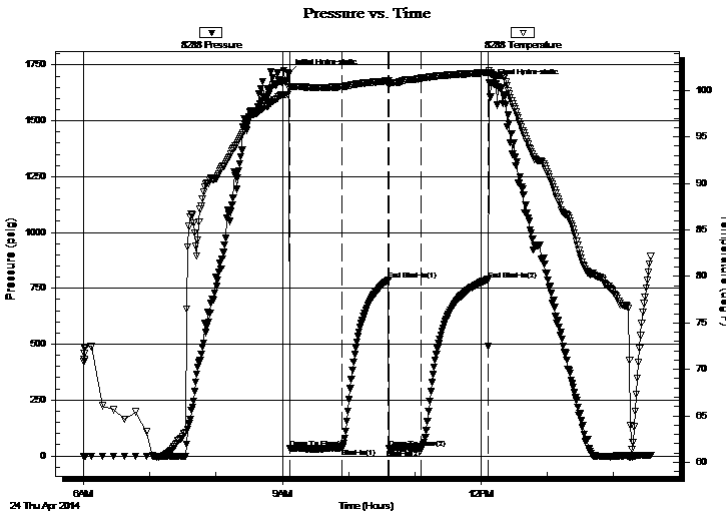
## Serial #: 8288

Inside

Press@RunDepth: 31.63 psig @ 3529.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2014.04.24 End Date: 2014.04.24 Last Calib.: 2014.04.24  
Start Time: 06:00:05 End Time: 14:33:30 Time On Btm: 2014.04.24 @ 09:05:30  
Time Off Btm: 2014.04.24 @ 12:09:00

TEST COMMENT: 45-IF-Blow Built To 1 3/4" Died Back To 1"  
45-ISI-No Return  
30-FF- No Blow  
60-FSI- No Blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1709.30	100.37	Initial Hydro-static
1	33.84	100.36	Open To Flow (1)
48	34.17	100.40	Shut-In(1)
91	787.05	101.03	End Shut-In(1)
91	34.94	100.55	Open To Flow (2)
121	31.63	101.32	Shut-In(2)
181	789.13	101.93	End Shut-In(2)
184	1668.85	101.77	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
15.00	mud 100%m	0.07

## Gas Rates

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





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**TOOL DIAGRAM**

Hartman Oil Co  
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ATTN: Kitt Noah

**19-5s -22w Norton,KS**  
**Williams Trust #2-19**  
Job Ticket: 55991 **DST#: 1**  
Test Start: 2014.04.24 @ 06:00:00

**Tool Information**

Drill Pipe:	Length: 3261.00 ft	Diameter: 3.88 inches	Volume: 47.69 bbl	Tool Weight: 2500.00 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: 249.00 ft	Diameter: 2.25 inches	Volume: 1.22 bbl	Weight to Pull Loose: 82000.00 lb
			<u>Total Volume: 48.91 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3528.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	21.00 ft			
Tool Length:	48.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
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Shut In Tool	5.00			3506.00	
Hydraulic tool	5.00			3511.00	
Jars	5.00			3516.00	
Safety Joint	3.00			3519.00	
Packer	5.00			3524.00	27.00 Bottom Of Top Packer
Packer	4.00			3528.00	
Stubb	1.00			3529.00	
Recorder	0.00	8288	Inside	3529.00	
Recorder	0.00	6769	Outside	3529.00	
Perforations	17.00			3546.00	
Bullnose	3.00			3549.00	21.00 Bottom Packers & Anchor

**Total Tool Length: 48.00**



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**FLUID SUMMARY**

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ATTN: Kitt Noah

**19-5s -22w Norton,KS**  
**Williams Trust #2-19**  
Job Ticket: 55991 **DST#: 1**  
Test Start: 2014.04.24 @ 06:00:00

## 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: 59.00 sec/qt	Cushion Volume: bbl		
Water Loss: 4.79 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1200.00 ppm			
Filter Cake: 1.00 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	mud 100%m	0.074

Total Length: 15.00 ft      Total Volume: 0.074 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:

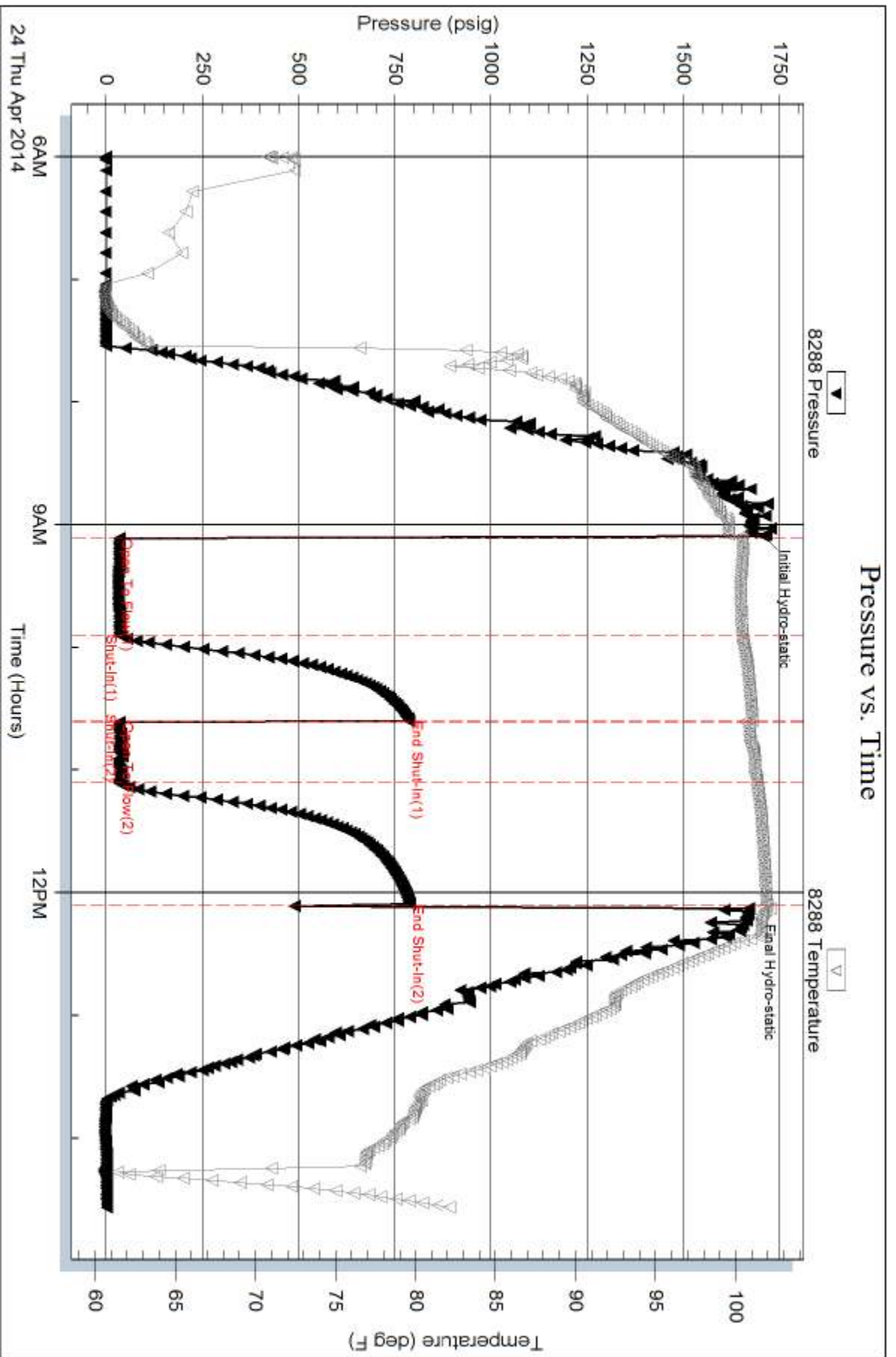
Serial #: 8288

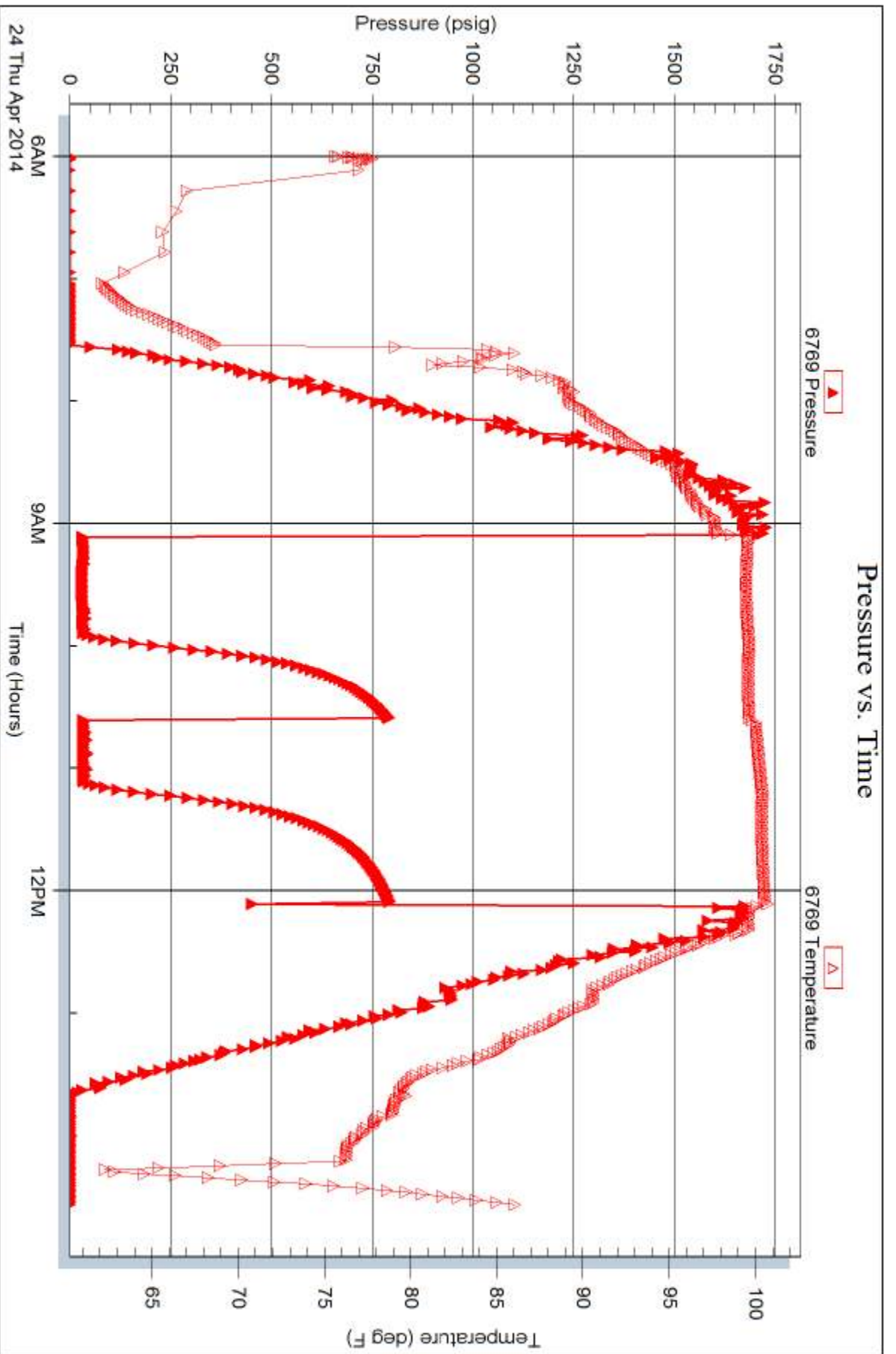
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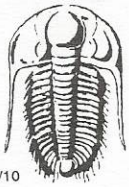
Hartman Oil Co

Williams Trust #2-19

DST Test Number: 1







# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 55991

Well Name & No. Williams Trust #2-19 Test No. 1 Date 4-24-2014  
 Company Hartman Oil Co, Inc. Elevation 2284 KB 2279 GL  
 Address 10500 E. Berkeley Sq Pkwy Ste 100 Wichita, KS, 67206  
 Co. Rep / Geo. Kitt Noah Rig H2 Drilling  
 Location: Sec. 19 Twp. 5S Rge. 22W Co. Norton State KS

Interval Tested 3528 - 3549 Zone Tested LKC "E-F"  
 Anchor Length 21 Drill Pipe Run 3261 Mud Wt. 9.0  
 Top Packer Depth 3524 Drill Collars Run 249 Vis 59  
 Bottom Packer Depth 3528 Wt. Pipe Run 0 WL 4.8  
 Total Depth 3549 Chlorides 1,200 ppm System LCM 1

Blow Description IF - Blow built to 1 1/4" died back to 1"  
ISI - No Return  
PF - No Blow  
PSI - No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 15 BHT 102 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1709  Test 1150 T-On Location 05:00 4-24  
 (B) First Initial Flow 34  Jars 250 T-Started 06:00 4-24  
 (C) First Final Flow 34  Safety Joint 75 T-Open 09:05 4-24  
 (D) Initial Shut-In 787  Circ Sub \_\_\_\_\_ T-Pulled 12:05 4-24  
 (E) Second Initial Flow 35  Hourly Standby \_\_\_\_\_ T-Out 14:33 4-24  
 (F) Second Final Flow 32  Mileage 112 RT 173.60 Comments \_\_\_\_\_  
 (G) Final Shut-In 789  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1669  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1798.60  
 Accessibility 150 MP/DST Disc't \_\_\_\_\_  
 Sub Total 1798.60

Initial Open 45  
 Initial Shut-In 45  
 Final Flow 30  
 Final Shut-In 60

Approved By Kitt Noah Our Representative Robert Zocher

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