



## DRILL STEM TEST REPORT

Prepared For: **American Warrior Inc**

PO Box 399  
Garden City, KS 67846

ATTN: Kurt Talbott

### **Grubb #1-5**

#### **5-16s-10w Ellsworth KS**

Start Date: 2013.12.07 @ 14:05:00

End Date: 2013.12.08 @ 07:59:30

Job Ticket #: 55364                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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Printed: 2013.12.11 @ 08:57:39



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

American Warrior Inc  
 PO Box 399  
 Garden City, KS 67846  
 ATTN: Kurt Talbott

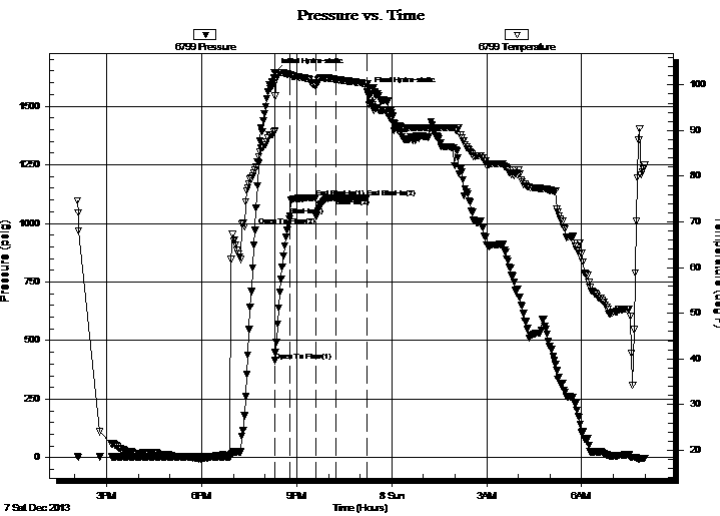
**5-16s-10w Ellsworth KS**  
**Grubb #1-5**  
 Job Ticket: 55364 **DST#: 1**  
 Test Start: 2013.12.07 @ 14:05:00

## GENERAL INFORMATION:

Formation: **Arbuckle**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 20:18:30  
 Time Test Ended: 07:59:30  
 Interval: **3236.00 ft (KB) To 3290.00 ft (KB) (TVD)**  
 Total Depth: 3290.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Cody Bloedorn  
 Unit No: 73  
 Reference Elevations: 1828.00 ft (KB)  
 1820.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 6799 Inside**  
 Press@RunDepth: 1108.97 psig @ 3275.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.12.07 End Date: 2013.12.08 Last Calib.: 2013.12.08  
 Start Time: 14:05:05 End Time: 07:59:29 Time On Btm: 2013.12.07 @ 20:18:00  
 Time Off Btm: 2013.12.07 @ 23:13:45

**TEST COMMENT:** 30 - IF- B.O.B. in 1 minute  
 45 - IS- 1/2" return  
 FF- B.O.B. in 1 minute, died back to a 1/2" blow after 22 minutes  
 FS- No return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1644.12	89.61	Initial Hydro-static
1	413.62	89.84	Open To Flow (1)
30	1031.00	102.21	Shut-In(1)
79	1108.11	99.90	End Shut-In(1)
79	1029.58	99.86	Open To Flow (2)
117	1108.97	101.17	Shut-In(2)
176	1110.99	100.23	End Shut-In(2)
176	1562.51	100.26	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
186.00	GHOCM, 20%G, 30%M, 50%O	2.61
2622.00	GO, 40%G, 60%O	36.78
372.00	GO, 20%G, 80%O	5.22

## Gas Rates

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





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**TOOL DIAGRAM**

American Warrior Inc  
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**5-16s-10w Ellsworth KS**  
**Grubb #1-5**  
Job Ticket: 55364      **DST#: 1**  
Test Start: 2013.12.07 @ 14:05:00

**Tool Information**

Drill Pipe:	Length: 3222.00 ft	Diameter: 3.80 inches	Volume: 45.20 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:	30000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	39000.00 lb
			<u>Total Volume: 45.20 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial	25000.00 lb
Depth to Top Packer:	3236.00 ft			Final	26000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	54.00 ft				
Tool Length:	75.00 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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Change Over Sub	1.00			3216.00	
Shut In Tool	5.00			3221.00	
Hydraulic tool	5.00			3226.00	
Packer	5.00			3231.00	21.00      Bottom Of Top Packer
Packer	5.00			3236.00	
Stubb	1.00			3237.00	
Perforations	5.00			3242.00	
Change Over Sub	1.00			3243.00	
Drill Pipe	31.00			3274.00	
Change Over Sub	1.00			3275.00	
Recorder	0.00	6799	Inside	3275.00	
Recorder	0.00	8648	Outside	3275.00	
Perforations	12.00			3287.00	
Bullnose	3.00			3290.00	54.00      Bottom Packers & Anchor

**Total Tool Length: 75.00**



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**FLUID SUMMARY**

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**5-16s-10w Ellsworth KS**  
**Grubb #1-5**  
Job Ticket: 55364      **DST#: 1**  
Test Start: 2013.12.07 @ 14:05:00

## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 10.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 65.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.99 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 11.00 ppm			
Filter Cake: inches			

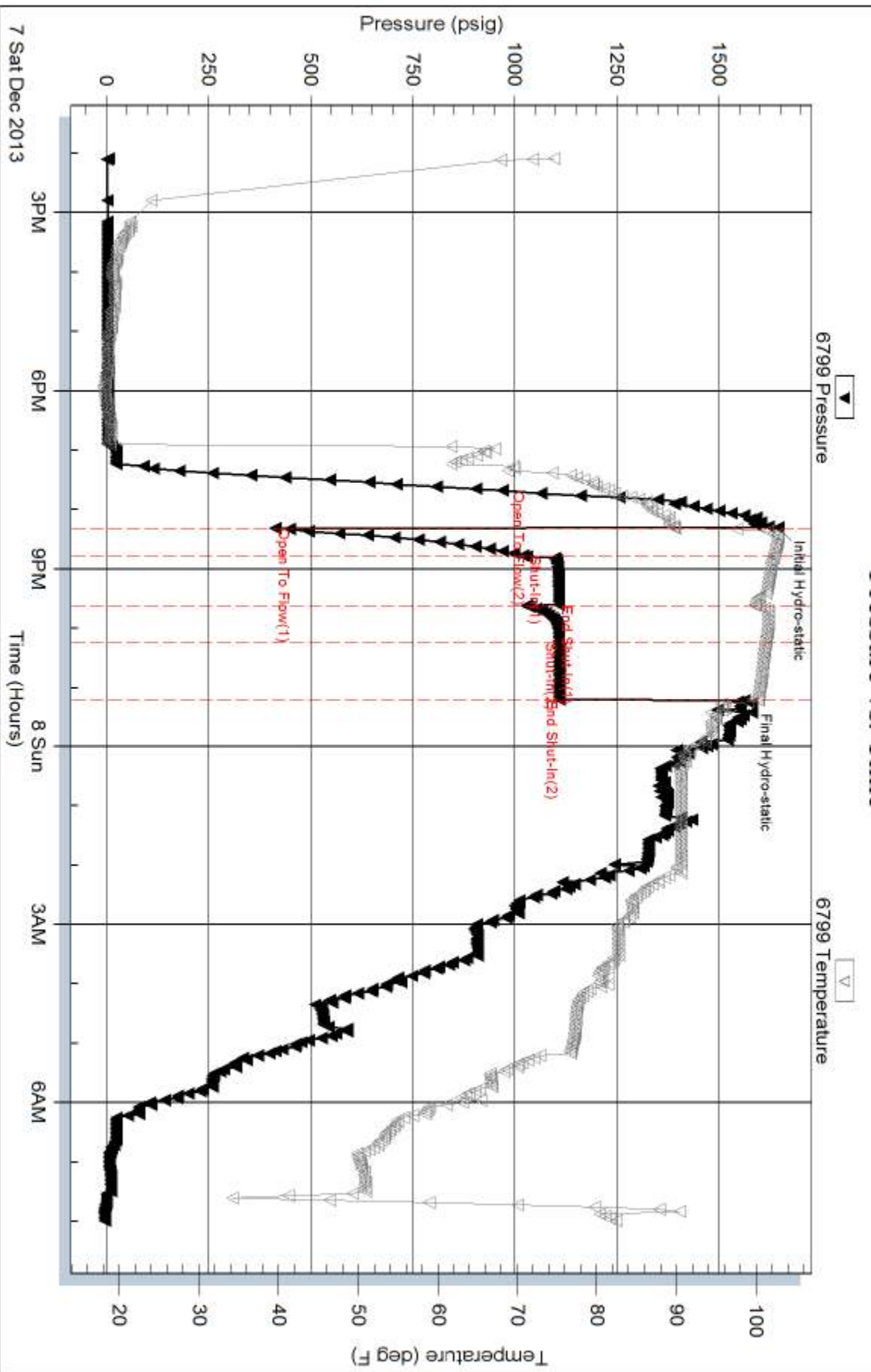
## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
186.00	GHOCM, 20%G, 30%M, 50%O	2.609
2622.00	GO, 40%G, 60%O	36.780
372.00	GO, 20%G, 80%O	5.218

Total Length: 3180.00 ft      Total Volume: 44.607 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:

### Pressure vs. Time

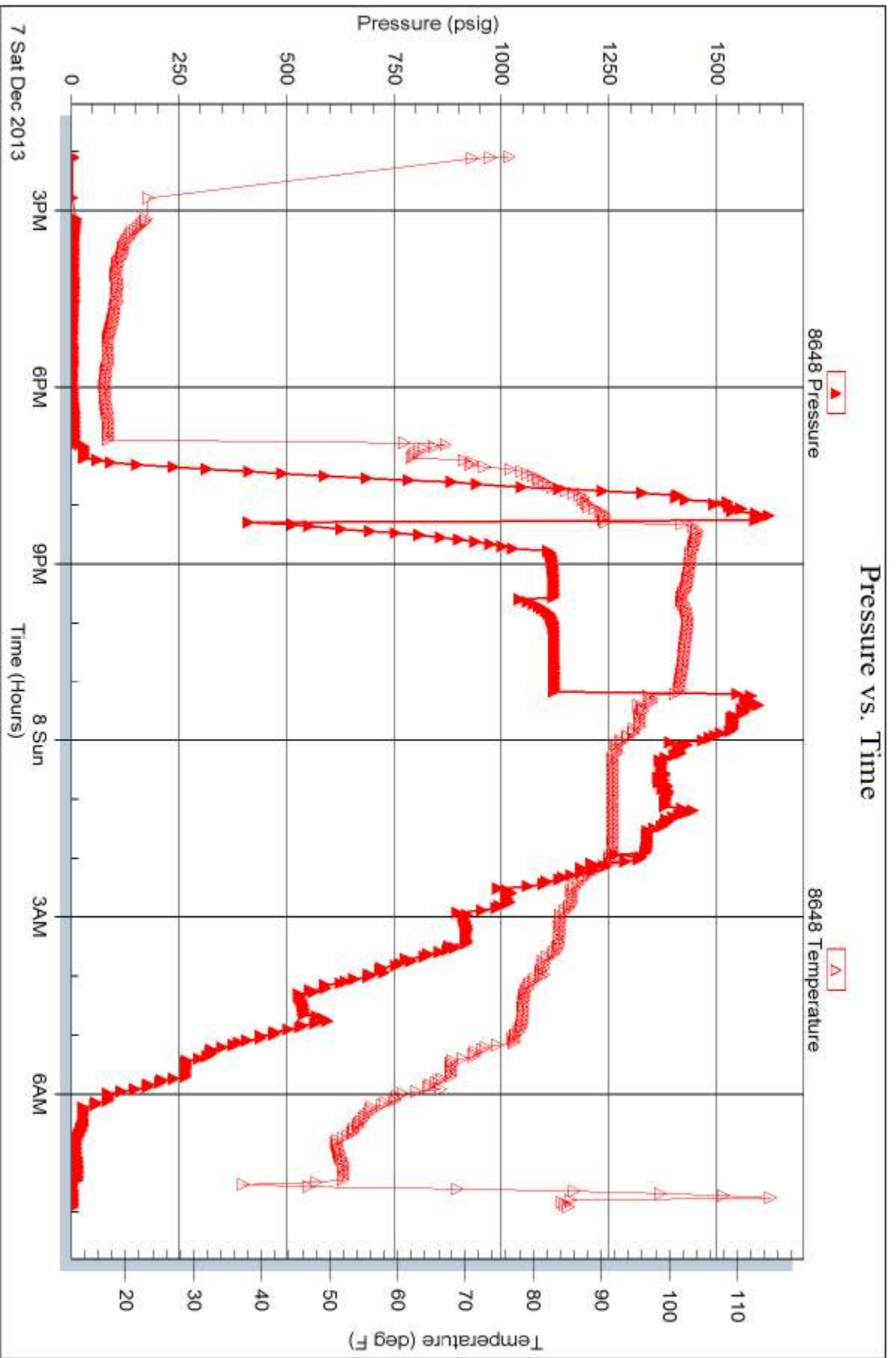


Serial #: 8648

Outside American Warrior Inc

Grubb #1-5

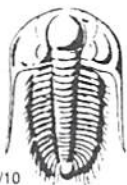
DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 55364

Printed: 2013.12.11 @ 08:57:41



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **55364**

4/10

Well Name & No. Grab # 1-5 Test No. 1 Date 12-7-13  
 Company American Warrior Inc Elevation 1828 KB 1820 GL  
 Address Po Box 399 Garden City KS, 67846  
 Co. Rep / Geo. Kurt Rig Duke 8  
 Location: Sec. 5 Twp. 16s Rge. 10W Co. Ellsworth State KS

Interval Tested 3236 - 3290 Zone Tested Ar buckle  
 Anchor Length 54' Drill Pipe Run 3222 Mud Wt. 9.6  
 Top Packer Depth 3231 Drill Collars Run — Vis 65  
 Bottom Packer Depth 3236 Wt. Pipe Run — WL 8.0  
 Total Depth 3290 Chlorides 11 ppm System LCM —

Blow Description IF - B.O.B. in 1 minute  
ISI - 1/2" blow  
FF - B.O.B. in 1 minute, died back to 1/2" blow after 20 minutes  
FSI - No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>186</u>	<u>GHOCM</u>	<u>20</u>	<u>50</u>	<u>30</u>	
<u>2622</u>	<u>60</u>	<u>40</u>	<u>60</u>		
<u>372</u>	<u>60</u>	<u>20</u>	<u>80</u>		

Rec Total 3180' BHT 100° Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 1544  Test 1150 T-On Location 1339  
 (B) First Initial Flow 413  Jars \_\_\_\_\_ T-Started 14:05 2105pm  
 (C) First Final Flow 1031  Safety Joint \_\_\_\_\_ T-Open 2020  
 (D) Initial Shut-In 1108  Circ Sub 50 T-Pulled 2305  
 (E) Second Initial Flow 1029  Hourly Standby 8.5h 850 T-Out 0800  
 (F) Second Final Flow 1108  Mileage 124RT 192.20 Comments \_\_\_\_\_  
 (G) Final Shut-In 1110  Sampler \_\_\_\_\_ Suppose to be on bank  
 (H) Final Hydrostatic 1562  Straddle \_\_\_\_\_ @ 2:30pm Dropped bar  
 Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Open 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 45  Day Standby \_\_\_\_\_ Total 2242.20  
 Final Flow 30  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 60 Sub Total 2242.20

Approved By \_\_\_\_\_ Our Representative Co dy Bpl

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