



DRILL STEM TEST REPORT

Prepared For: **Bear Petroleum LLC**

PO Box 438
Haysville KS 67060

ATTN: Kurt Talbott

Armstrong B #3

32-20s-20w Pawnee,KS

Start Date: 2013.01.22 @ 02:06:00

End Date: 2013.01.22 @ 10:29:30

Job Ticket #: 51578 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

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TESTING, INC.**

DRILL STEM TEST REPORT

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PO Box 438
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ATTN: Kurt Talbott

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Job Ticket: 51578

DST#: 1

Test Start: 2013.01.22 @ 02:06:00

GENERAL INFORMATION:

Formation: **Mississippi**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 05:09:30
 Time Test Ended: 10:29:30
 Interval: **4299.00 ft (KB) To 4346.00 ft (KB) (TVD)**
 Total Depth: 4346.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Cody Bloedorn
 Unit No: 66
 Reference Elevations: 2189.00 ft (KB)
 2179.00 ft (CF)
 KB to GR/CF: 10.00 ft

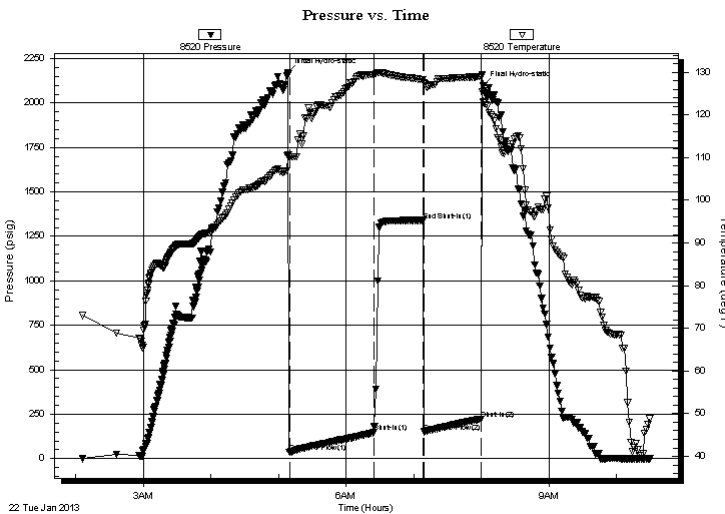
Serial #: 8520

Outside

Press @ Run Depth: 149.04 psig @ 4338.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.01.22 End Date: 2013.01.22 Last Calib.: 2013.01.22
 Start Time: 02:06:00 End Time: 10:29:30 Time On Btm: 2013.01.22 @ 05:08:00
 Time Off Btm: 2013.01.22 @ 08:02:00

TEST COMMENT: 30 - IF- 4" blow
 45 - IS- Surface blow back
 45 - FF- Surface blow
 45 - FS- 3" blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2172.67	110.36	Initial Hydro-static
2	35.37	110.23	Open To Flow (1)
77	149.04	129.44	Shut-In(1)
121	1340.45	128.22	End Shut-In(1)
121	150.67	127.54	Open To Flow (2)
172	223.09	128.93	Shut-In(2)
174	2098.77	122.96	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
102.00	MW, 20%M, 80%W	1.43
186.00	GSOCWM, 10%O, 10%G, 40%W, 40%M	2.61
124.00	OCM, 20%O, 80%M	1.74
20.00	GO, 10%G, 90%O	0.28

Gas Rates

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



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TOOL DIAGRAM

Bear Petroleum LLC

32-20s-20w Pawnee, KS

PO Box 438
Haysville KS 67060

Armstrong B #3

Job Ticket: 51578

DST#: 1

ATTN: Kurt Talbott

Test Start: 2013.01.22 @ 02:06:00

Tool Information

Drill Pipe:	Length: 4285.00 ft	Diameter: 3.80 inches	Volume: 60.11 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: 62000.00 lb
			<u>Total Volume: 60.11 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	4299.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	47.00 ft			
Tool Length:	67.00 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			4280.00	
Shut In Tool	5.00			4285.00	
Hydraulic tool	5.00			4290.00	
Packer	5.00			4295.00	20.00 Bottom Of Top Packer
Packer	4.00			4299.00	
Stubb	1.00			4300.00	
Perforations	5.00			4305.00	
Change Over Sub	1.00			4306.00	
Drill Pipe	31.00			4337.00	
Change Over Sub	1.00			4338.00	
Recorder	0.00	8354	Inside	4338.00	
Recorder	0.00	8520	Outside	4338.00	
Perforations	5.00			4343.00	
Bullnose	3.00			4346.00	47.00 Bottom Packers & Anchor

Total Tool Length: 67.00



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FLUID SUMMARY

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PO Box 438
Haysville KS 67060
ATTN: Kurt Talbott

32-20s-20w Pawnee,KS
Armstrong B #3
Job Ticket: 51578 **DST#: 1**
Test Start: 2013.01.22 @ 02:06:00

Mud and Cushion Information

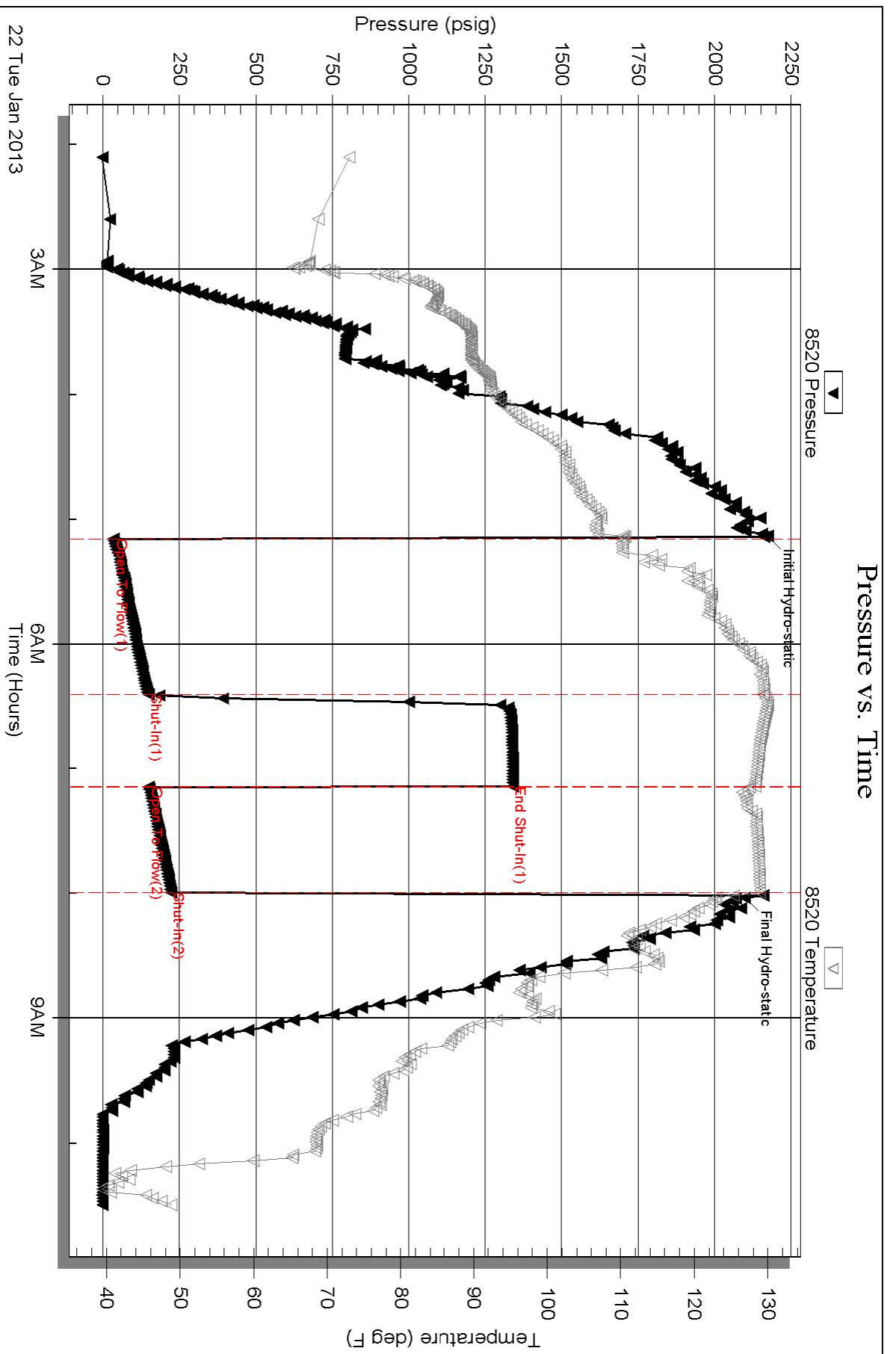
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 48.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.57 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5000.00 ppm			
Filter Cake: inches			

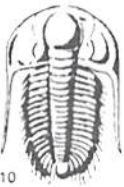
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
102.00	MW, 20%M, 80%W	1.431
186.00	GSOCWM, 10%O,10%G,40%W,40%M	2.609
124.00	OCM, 20%O, 80%M	1.739
20.00	GO, 10%G, 90%O	0.281

Total Length: 432.00 ft Total Volume: 6.060 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. 51578

Well Name & No. Armstrong B #3 Test No. 1 Date 1-21-13
 Company Bear Petroleum LLC Elevation 2189 KB 2179 GL
 Address Po Box 438, Haysville KS, 67060
 Co. Rep / Geo. Kurt Talbot Rig Maverick 108
 Location: Sec. 32 Twp. 20s Rge. 20W Co. Pawnee State KS

Interval Tested 4299-4346 Zone Tested Mississippi
 Anchor Length 47' Drill Pipe Run 4285 Mud Wt. 9.2
 Top Packer Depth 4294 Drill Collars Run — Vis 48
 Bottom Packer Depth 4299 Wt. Pipe Run — WL 9.6
 Total Depth 4346 Chlorides 5,000 ppm System LCM —
 Blow Description IF - 4" blow
IST - Surface blow
FF - Surface blow
FST -

Rec	Feet of	%gas	%oil	%water	%mud
<u>102</u>	<u>MW</u>		<u>80</u>	<u>20</u>	
<u>186</u>	<u>GSOCWM</u>	<u>10</u>	<u>10</u>	<u>40</u>	<u>40</u>
<u>124</u>	<u>CCM</u>		<u>20</u>		<u>80</u>
<u>20</u>	<u>60</u>	<u>10</u>	<u>90</u>		

Rec Total 432 BHT _____ Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2174 Test 1250 T-On Location 11:22pm
 (B) First Initial Flow 35 Jars _____ T-Started 1:57am
 (C) First Final Flow 145 Safety Joint _____ T-Open 5:10am
 (D) Initial Shut-In 1340 Circ Sub _____ T-Pulled 7:55am
 (E) Second Initial Flow 150 Hourly Standby over 9hrs 1h 100 T-Out 10:32am
 (F) Second Final Flow 223 Mileage 118rt 182.90 Comments _____
 (G) Final Shut-In _____ Sampler _____
 (H) Final Hydrostatic 2110 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1532.90
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1532.90

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

Approved By _____ Our Representative Cody Bl...

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