



## DRILL STEM TEST REPORT

Prepared For: **Bear Petroleum**

PO Box 438  
Haysville KS 67060

ATTN: Rod Anderson / Dick

### **Eberhardt #2-24**

#### **24-17s -17w Rush,KS**

Start Date: 2014.09.28 @ 02:49:00

End Date: 2014.09.28 @ 14:46:00

Job Ticket #: 60537                      DST #: 1

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

Printed: 2014.10.02 @ 10:17:40



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Bear Petroleum  
 PO Box 438  
 Haysville KS 67060  
 ATTN: Rod Anderson / Dick

**24-17s -17w Rush,KS**  
**Eberhardt #2-24**  
 Job Ticket: 60537 **DST#: 1**  
 Test Start: 2014.09.28 @ 02:49:00

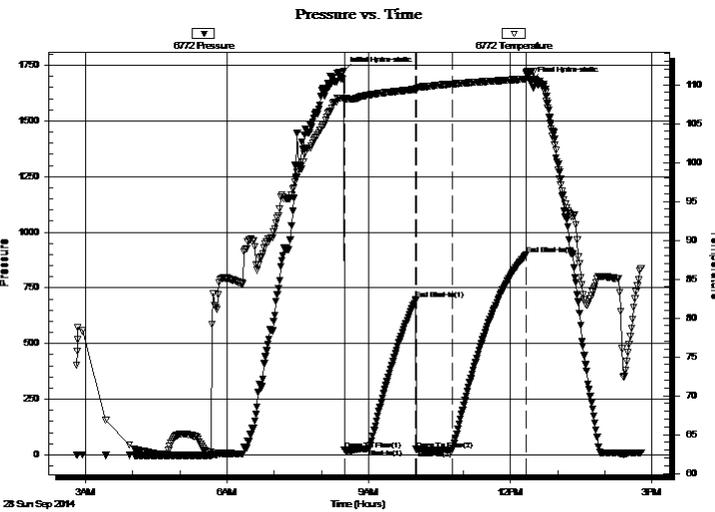
## GENERAL INFORMATION:

Formation: **LKC "I"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 08:29:00  
 Time Test Ended: 14:46:00  
 Interval: **3464.00 ft (KB) To 3500.00 ft (KB) (TVD)**  
 Total Depth: 3500.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Bob Hamel  
 Unit No: 72  
 Reference Elevations: 2062.00 ft (KB)  
 2049.00 ft (CF)  
 KB to GR/CF: 13.00 ft

## Serial #: 6772 Outside

Press@RunDepth: 22.05 psig @ 3467.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.09.28 End Date: 2014.09.28 Last Calib.: 2014.09.28  
 Start Time: 02:49:05 End Time: 14:46:00 Time On Btm: 2014.09.28 @ 08:28:00  
 Time Off Btm: 2014.09.28 @ 12:26:00

TEST COMMENT: I.F. - 30 - BOB in 8 1/2 min  
 I.S.I. - 60 - No blow back  
 F.F. - 45 - BOB in 7 min  
 F.S.I. - 90 - No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1723.87	108.31	Initial Hydro-static
1	21.18	107.96	Open To Flow (1)
32	28.03	108.69	Shut-In(1)
92	696.95	109.41	End Shut-In(1)
93	23.98	109.37	Open To Flow (2)
138	22.05	110.09	Shut-In(2)
232	898.34	110.74	End Shut-In(2)
238	1679.79	111.74	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
15.00	M, 100%	0.21
0.00	234' G.I.P.	0.00

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Bear Petroleum

**24-17s -17w Rush,KS**

PO Box 438  
Haysville KS 67060

**Eberhardt #2-24**

Job Ticket: 60537

**DST#: 1**

ATTN: Rod Anderson / Dick

Test Start: 2014.09.28 @ 02:49:00

## Tool Information

Drill Pipe:	Length: 3469.00 ft	Diameter: 3.80 inches	Volume: 48.66 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:	30000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	52000.00 lb
			<u>Total Volume: 48.66 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	33.00 ft			String Weight: Initial	46000.00 lb
Depth to Top Packer:	3464.00 ft			Final	47000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	36.00 ft				
Tool Length:	64.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3437.00	
Shut In Tool	5.00			3442.00	
Hydraulic tool	5.00			3447.00	
Jars	5.00			3452.00	
Safety Joint	3.00			3455.00	
Packer	5.00			3460.00	28.00 Bottom Of Top Packer
Packer	4.00			3464.00	
Stubb	1.00			3465.00	
Perforations	2.00			3467.00	
Recorder	0.00	6772	Outside	3467.00	
Recorder	0.00	8167	Outside	3467.00	
Perforations	30.00			3497.00	
Bullnose	3.00			3500.00	36.00 Bottom Packers & Anchor

**Total Tool Length: 64.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Bear Petroleum

**24-17s -17w Rush,KS**

PO Box 438  
Haysville KS 67060

**Eberhardt #2-24**

Job Ticket: 60537

**DST#: 1**

ATTN: Rod Anderson / Dick

Test Start: 2014.09.28 @ 02:49:00

### 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: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 11.17 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	M, 100%	0.210
0.00	234' G.I.P.	0.000

Total Length: 15.00 ft      Total Volume: 0.210 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

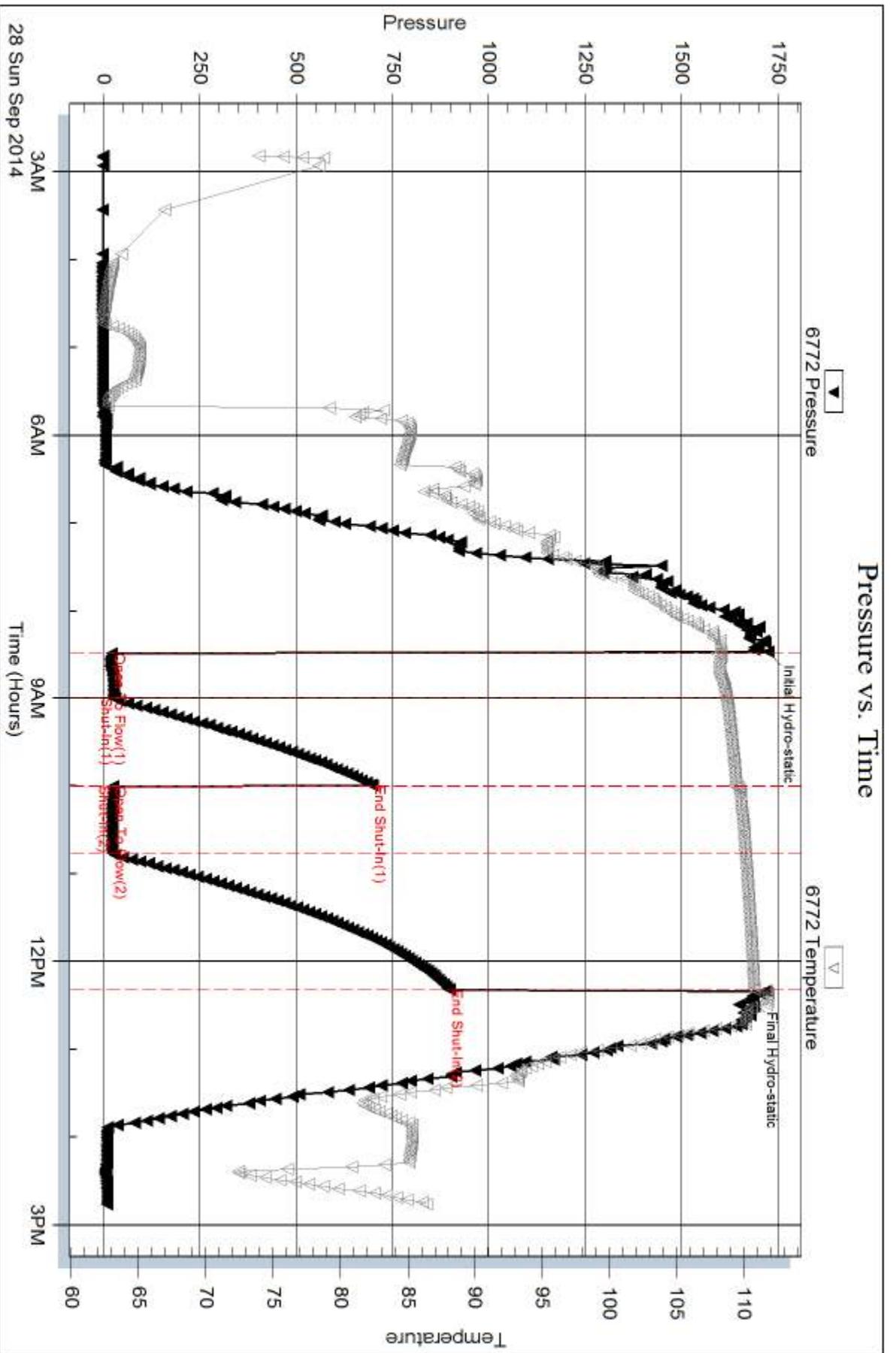
Recovery Comments:

Serial #: 6772

Outside Bear Petroleum

Eberhardt #2-24

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 60537

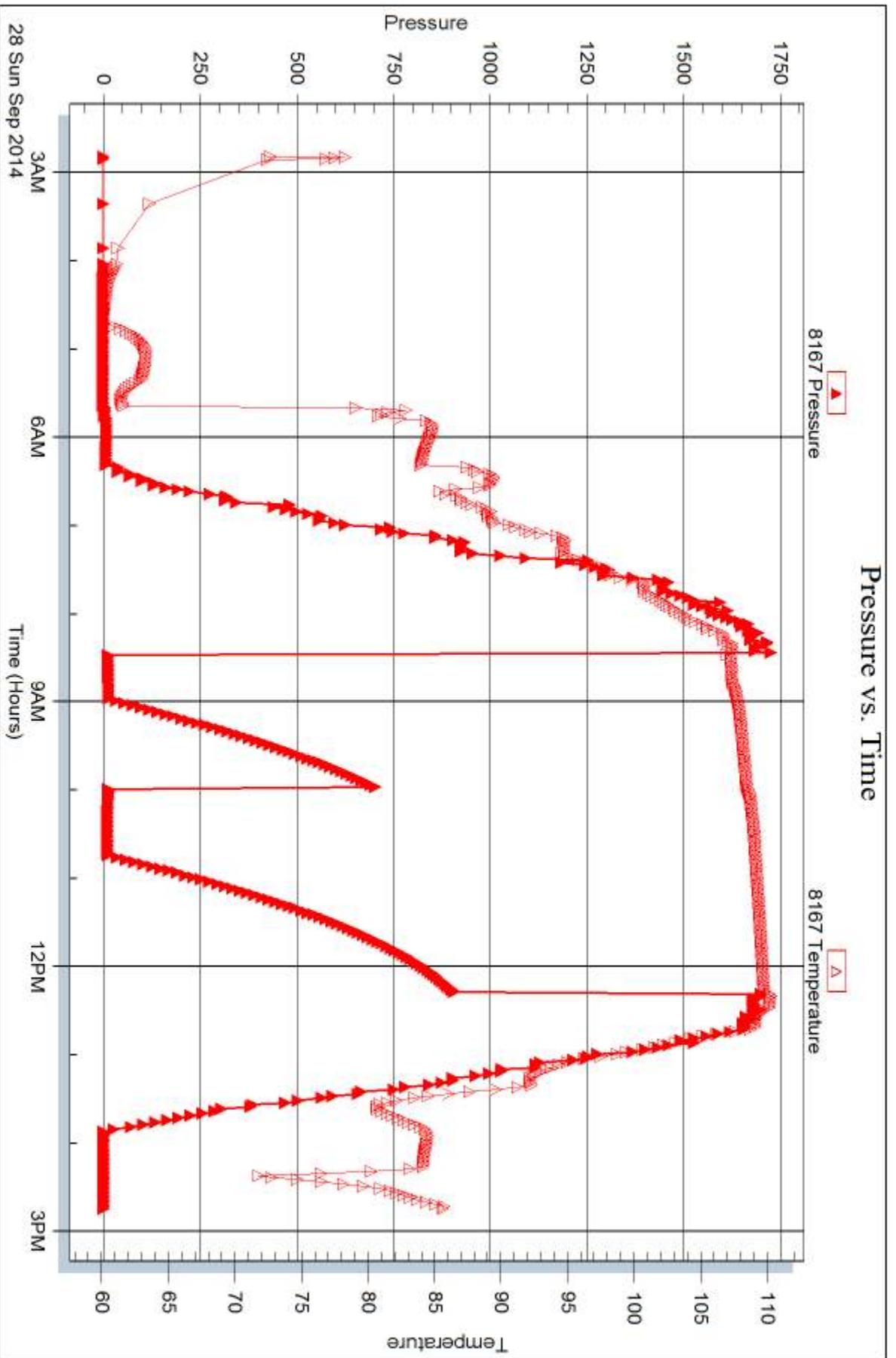
Printed: 2014, 10:02 @ 10:17:41

Serial #: 8167

Outside Bear Petroleum

Eberhardt #2-24

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 60537

Printed: 2014, 10:02 @ 10:17:41



## DRILL STEM TEST REPORT

Prepared For: **Bear Petroleum**

PO Box 438  
Haysville KS 67060

ATTN: Rod Anderson / Dick

**Eberhardt #2-24**

**24-17s -17w Rush,KS**

Start Date: 2014.09.29 @ 02:27:05

End Date: 2014.09.29 @ 14:33:30

Job Ticket #: 60538                      DST #: 2

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

Printed: 2014.10.02 @ 10:17:01

Bear Petroleum  
24-17s -17w Rush,KS  
Eberhardt #2-24  
DST # 2  
Lower Penn. Sand  
2014.09.29



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Bear Petroleum

**24-17s -17w Rush,KS**

PO Box 438  
Haysville KS 67060

**Eberhardt #2-24**

Job Ticket: 60538

**DST#: 2**

ATTN: Rod Anderson / Dick

Test Start: 2014.09.29 @ 02:27:05

## GENERAL INFORMATION:

Formation: **Lower Penn. Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:39:30

Time Test Ended: 14:33:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Bob Hamel

Unit No: 72

**Interval: 3530.00 ft (KB) To 3560.00 ft (KB) (TVD)**

Reference Elevations: 2062.00 ft (KB)

Total Depth: 3560.00 ft (KB) (TVD)

2049.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 13.00 ft

**Serial #: 8167 Outside**

Press@RunDepth: 10.18 psig @ 3532.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.09.29 End Date: 2014.09.29

Last Calib.: 2014.09.29

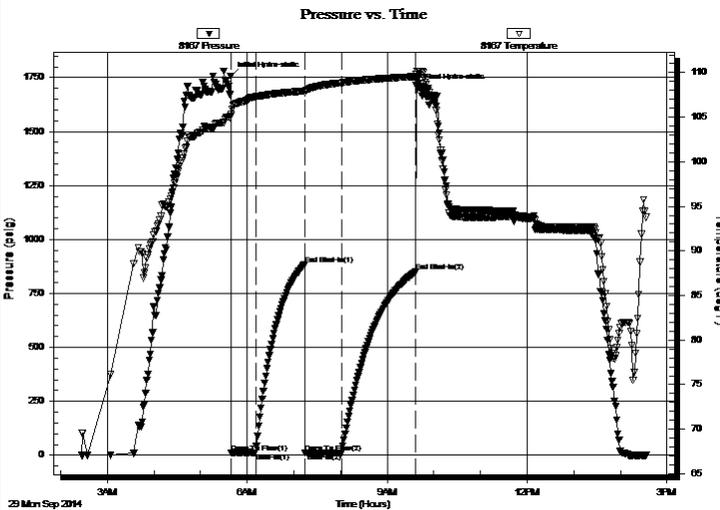
Start Time: 02:27:05 End Time: 14:33:30

Time On Btm: 2014.09.29 @ 05:38:30

Time Off Btm: 2014.09.29 @ 09:38:29

**TEST COMMENT:** I.F. - 30 - BOB in 6 1/2 min  
I.S.I. - 60 - No blow back  
F.F. - 45 - BOB in 1 min  
F.S.I. - 90 - No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1756.76	105.11	Initial Hydro-static
1	10.88	105.30	Open To Flow (1)
33	12.20	107.29	Shut-In(1)
96	884.57	107.93	End Shut-In(1)
96	10.82	107.75	Open To Flow (2)
143	10.18	108.85	Shut-In(2)
238	849.61	109.56	End Shut-In(2)
240	1699.42	110.13	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
20.00	MUD 100%	0.28
0.00	504 G.I.P.	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**

Bear Petroleum

**24-17s -17w Rush,KS**

PO Box 438  
Haysville KS 67060

**Eberhardt #2-24**

Job Ticket: 60538

**DST#: 2**

ATTN: Rod Anderson / Dick

Test Start: 2014.09.29 @ 02:27:05

## Tool Information

Drill Pipe:	Length: 3513.00 ft	Diameter: 3.80 inches	Volume: 49.28 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: 30000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 49.28 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	3530.00 ft			Final 47000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 ft			
Tool Length:	58.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3503.00	
Shut In Tool	5.00			3508.00	
Hydraulic tool	5.00			3513.00	
Jars	5.00			3518.00	
Safety Joint	3.00			3521.00	
Packer	5.00			3526.00	28.00 Bottom Of Top Packer
Packer	4.00			3530.00	
Stubb	1.00			3531.00	
Perforations	1.00			3532.00	
Recorder	0.00	6772	Outside	3532.00	
Recorder	0.00	8167	Outside	3532.00	
Perforations	25.00			3557.00	
Bullnose	3.00			3560.00	30.00 Bottom Packers & Anchor

**Total Tool Length: 58.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Bear Petroleum

**24-17s -17w Rush,KS**

PO Box 438  
Haysville KS 67060

**Eberhardt #2-24**

Job Ticket: 60538

**DST#: 2**

ATTN: Rod Anderson / Dick

Test Start: 2014.09.29 @ 02:27:05

### 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: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 10.37 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	MUD 100%	0.281
0.00	504 G.I.P.	0.000

Total Length: 20.00 ft      Total Volume: 0.281 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

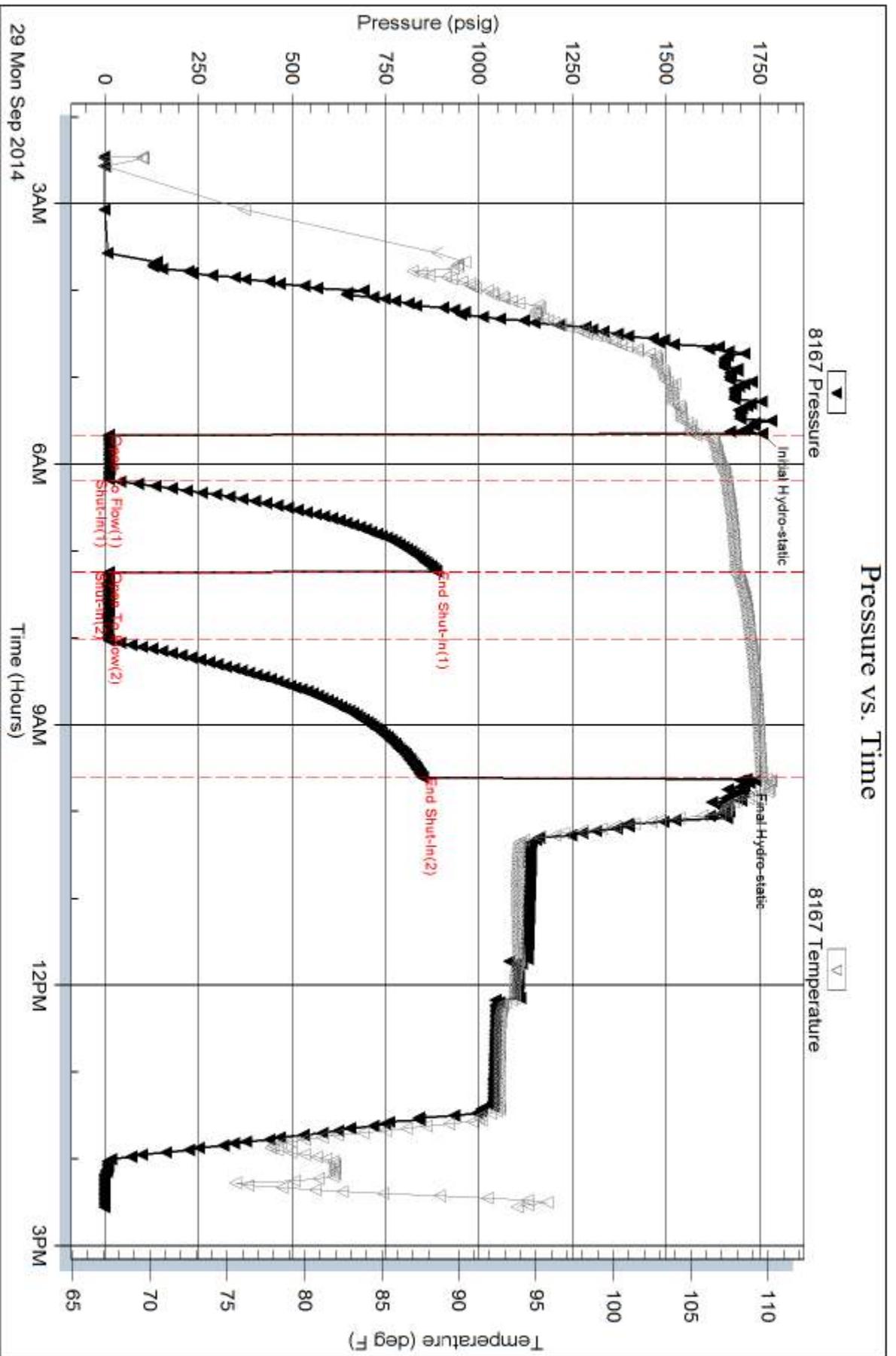
Recovery Comments:

Serial #: 8167

Outside Bear Petroleum

Eberhardt #2-24

DST Test Number: 2

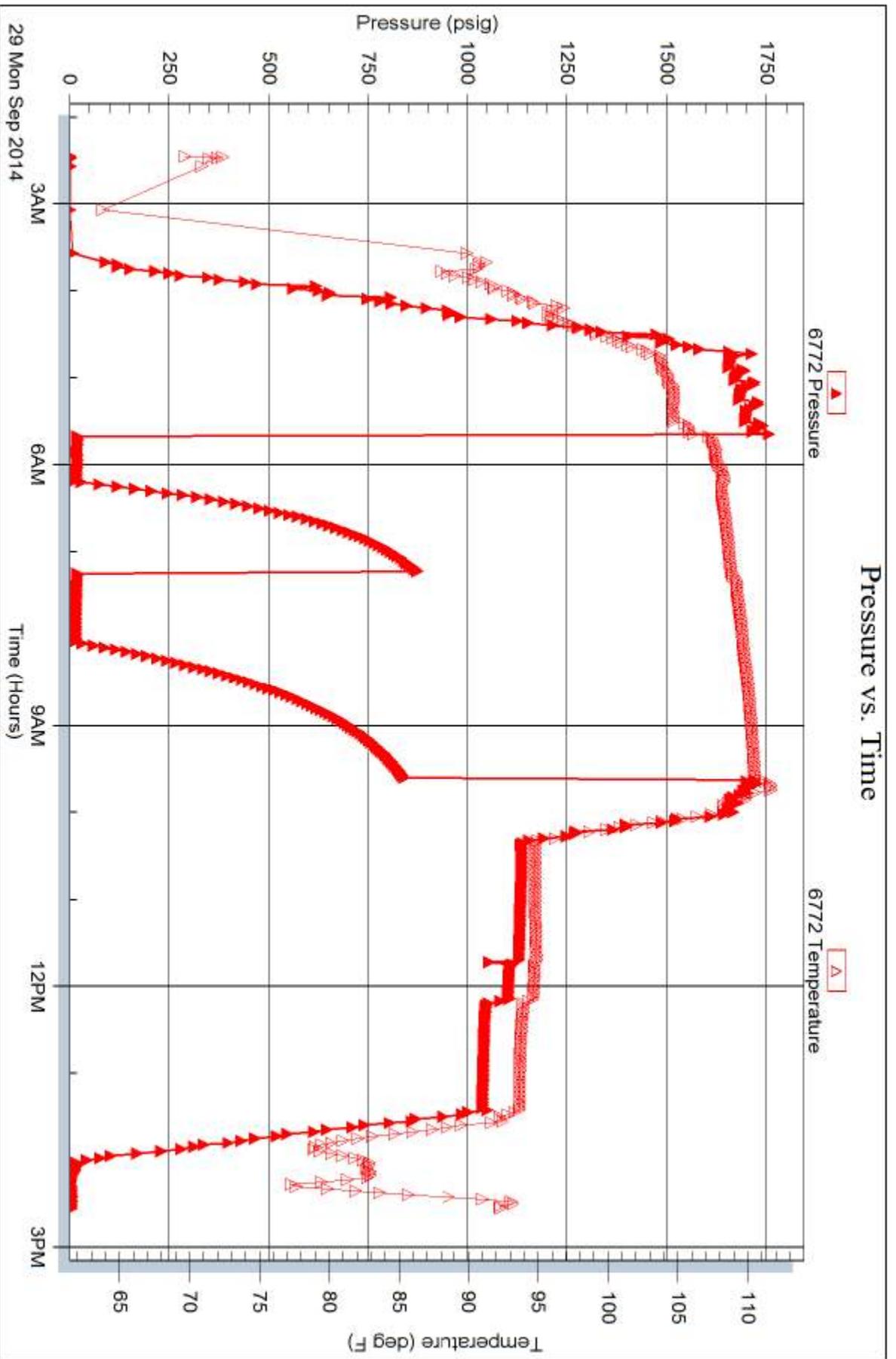


Serial #: 6772

Outside Bear Petroleum

Eberhardt #2-24

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 60538

Printed: 2014, 10:02 @ 10:17:02



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 60537

4/10

Well Name & No. Eberhardt #2-24 Test No. 1 Date 9-28-14  
 Company Bear Petroleum Elevation 2062 KB 2049 GL  
 Address P.O. Box 438 Haysville KS. 67060  
 Co. Rep / Geo. Dick Schremmer / Ron Anderson Rig Maverick #112  
 Location: Sec. 24 Twp. 17 S. Rge. 17 W. Co. Rush State KS

Interval Tested 3464 - 3500 Zone Tested Lans. 'J'  
 Anchor Length 36' Drill Pipe Run 3469 Mud Wt. 9.1  
 Top Packer Depth 3459 Drill Collars Run \_\_\_\_\_ Vis 50  
 Bottom Packer Depth 3464 Wt. Pipe Run \_\_\_\_\_ WL 11.2  
 Total Depth 3500 Chlorides 4,000 ppm System LCM 1/2

Blow Description I.F-30-1/2" INT. Blow B.U.T to B.U.B. in (8 1/2 min.)  
I.S.I-60- No B.B.  
E.F-45-1/2" INT. Blow B.U.T to B.U.B. in (7 min.)  
E.S.I-90- No B.B.

Rec	Feet of	%gas	%oil	%water	%mud
<u>0</u>	<u>234'</u>	<u>100</u>			
<u>15</u>	<u>M</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 Total 15 BHT 110 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>1724</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>02:00:00</u>
(B) First Initial Flow <u>21</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>02:49:00</u>
(C) First Final Flow <u>28</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>08:19:00</u>
(D) Initial Shut-In <u>697</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>12:04:00</u>
(E) Second Initial Flow <u>24</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>14:46:00</u>
(F) Second Final Flow <u>22</u>	<input checked="" type="checkbox"/> Mileage <u>62 RT</u> 96.10	Comments _____
(G) Final Shut-In <u>898</u>	<input type="checkbox"/> Sampler _____	<u>"Thank-You"</u>
(H) Final Hydrostatic <u>1680</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____

Initial Open 30  
 Initial Shut-In 60  
 Final Flow 4590  
 Final Shut-In \_\_\_\_\_

Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility 150

Sub Total 1721.10

Total 1721.10  
 MP/DST Disc't \_\_\_\_\_

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. 60538

4/10

Well Name & No. Eberhardt #2-24 Test No. 2 Date 9-29-14  
 Company Bear Petroleum Elevation 2062 KB 2049 GL  
 Address P.O. Box 438 Haysville KS 67060  
 Co. Rep / Geo. Dick Schremmer/Ron Anderson Rig Maverick #112  
 Location: Sec. 24 Twp. 17 S. Rge. 17 W. Co. Bush State KS.

Interval Tested 3530 - 3560 Zone Tested Lower Penn. Sand.  
 Anchor Length 30' Drill Pipe Run 3513 Mud Wt. 9.4  
 Top Packer Depth 3525 Drill Collars Run — Vis 52  
 Bottom Packer Depth 3530 Wt. Pipe Run — WL 10.4  
 Total Depth 3560 Chlorides 5,000 ppm System LCM 1

Blow Description I, F-30 = 1/2" INT. Blow Built to B.O.B. in 6 1/2 min  
I, S, I - 60 - No B.B.  
F, F - 45 - B.O.B. 1 min,  
F, S, I - 90 - No B.B.

Rec	Feet of	%gas	%oil	%water	%mud
<u>0</u>	<u>504 G.I.P.</u>				
<u>20</u>	<u>Mud</u>				

Rec Total 20 BHT 110 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1,757  Test 1150 T-On Location 02:05:00  
 (B) First Initial Flow 11  Jars 250 T-Started 02:27:00  
 (C) First Final Flow 12  Safety Joint 75 T-Open 05:46:00  
 (D) Initial Shut-In 885  Circ Sub \_\_\_\_\_ T-Pulled 09:31:00  
 (E) Second Initial Flow 11  Hourly Standby 3h 300 T-Out 14:33:00  
 (F) Second Final Flow 10  Mileage 62 RT 96.10 Comments \_\_\_\_\_  
 (G) Final Shut-In 850  Sampler \_\_\_\_\_ "Thank you"  
 (H) Final Hydrostatic 1,699  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_

Initial Open 30  
 Initial Shut-In 60  
 Final Flow 45  
 Final Shut-In 90

Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 2021.10  
 Accessibility 150 MP/DST Disc't \_\_\_\_\_  
 Sub Total 2021.10

Approved By \_\_\_\_\_ Our Representative Bob Hamer

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.