





**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Mak -J  
1600 N.Broadway STE 1740  
Denver CO. 8020  
ATTN: Steve Murphy

**Dirks #3-28**  
**28-15-35 Logan KS**  
Job Ticket: 37094      **DST#: 1**  
Test Start: 2010.03.21 @ 22:43:05

**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:	0 ppm
Viscosity: 54.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.76 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 3800.00 ppm			
Filter Cake: 1.00 inches			

**Recovery Information**

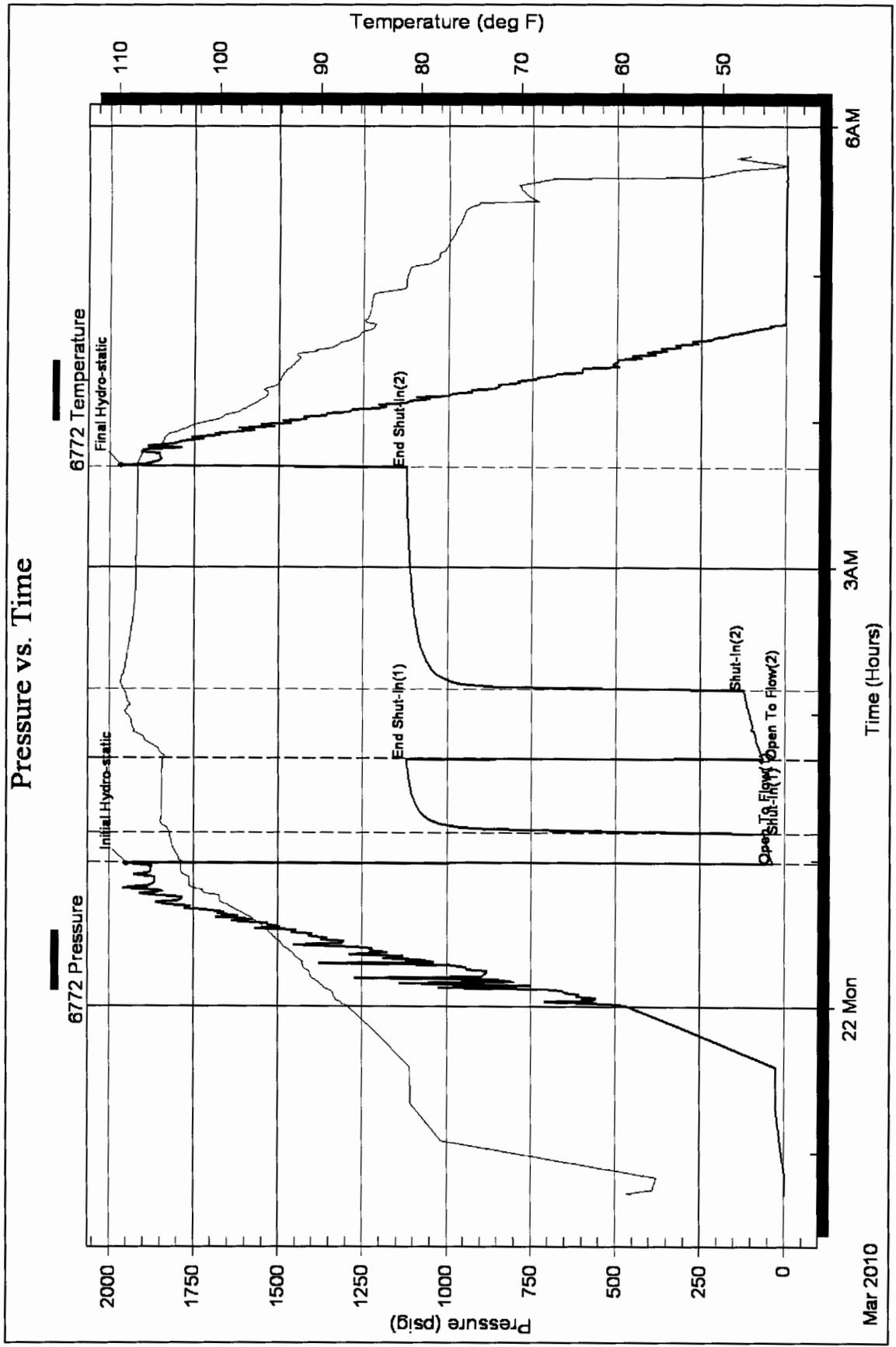
Recovery Table

Length ft	Description	Volume bbl
180.00	100% m	0.885

Total Length: 180.00 ft      Total Volume: 0.885 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:

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### Pressure vs. Time



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**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**FLUID SUMMARY**

Mak -J Energy

**Dirks #3-28**

1600 N.Broadway STE 1740  
Denver CO. 8020

**28-15-35 Logan KS**

Job Ticket: 37062

**DST#: 2**

ATTN: Steve Murphy

Test Start: 2010.03.22 @ 17:00:10

### 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:

30000 ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.20 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3400.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
184.00	w cm 30%w 70%m	0.905
30.00	mud 100%m	0.148

Total Length: 214.00 ft

Total Volume: 1.053 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

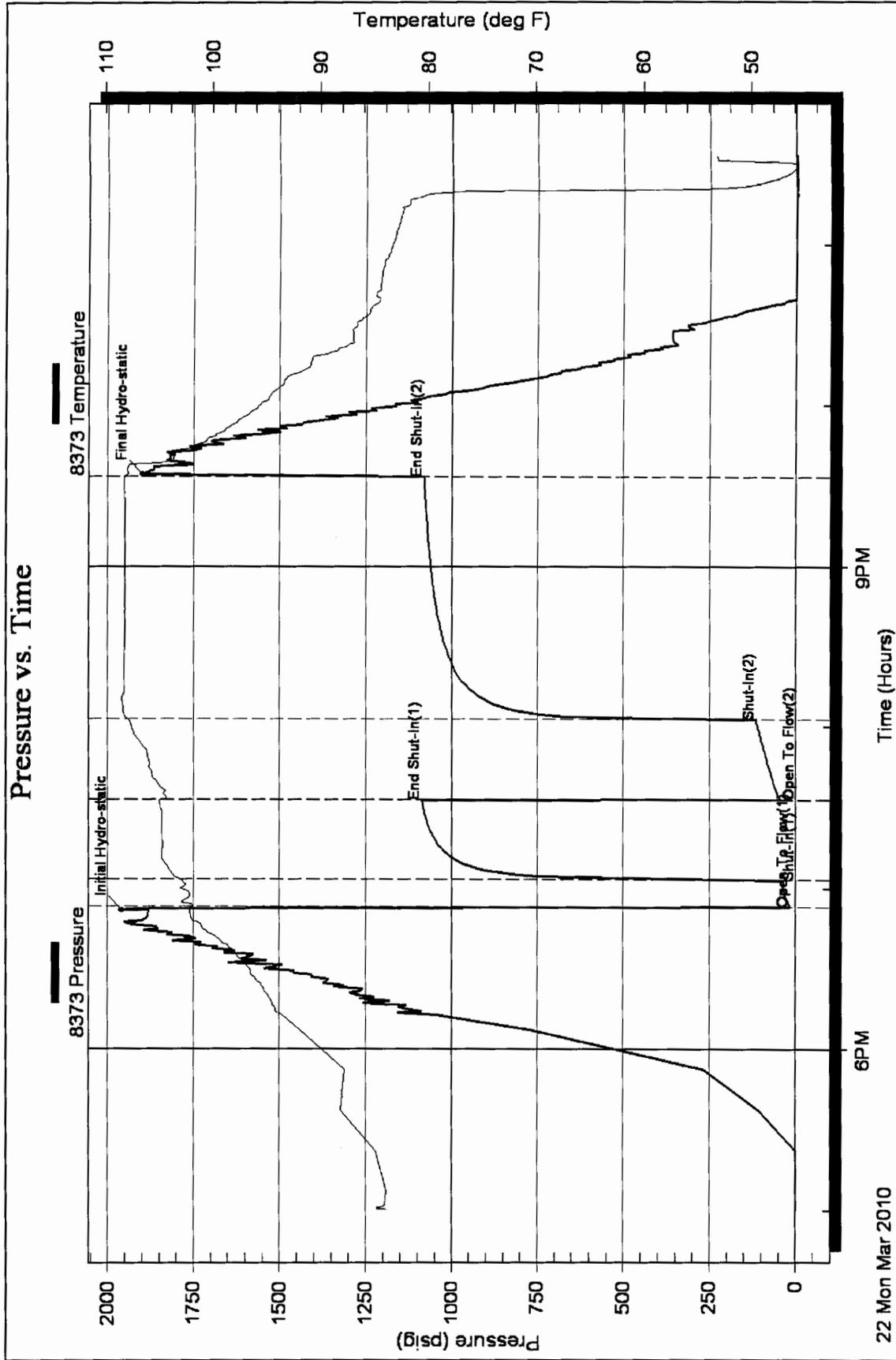
Laboratory Name:

Laboratory Location:

Recovery Comments: .24@68=30000

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# Pressure vs. Time



22 Mon Mar 2010

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Trillium Testing, Inc

Ref. No: 37062

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**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

FLUID SUMMARY

Mak -J Energy  
1600 N.Broadway STE 1740  
Denver CO. 8020  
ATTN: Steve Murphy

Dirks #3-28  
28-15-35 Logan KS  
Job Ticket: 37063      DST#: 3  
Test Start: 2010.03.23 @ 08:30:12

### 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: 39000 ppm
Viscosity: 51.00 sec/qt	Cushion Volume: bbl	
Water Loss: 6.40 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 3000.00 ppm		
Filter Cake: 1.00 inches		

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
372.00	mcw 90%w 10%m	1.829
465.00	mcw 70%w 30%m	4.364
310.00	mcw oil spots 70%w 30%m	4.348

Total Length: 1147.00 ft      Total Volume: 10.541 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments: .19@69=39000

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Serial #: 8373

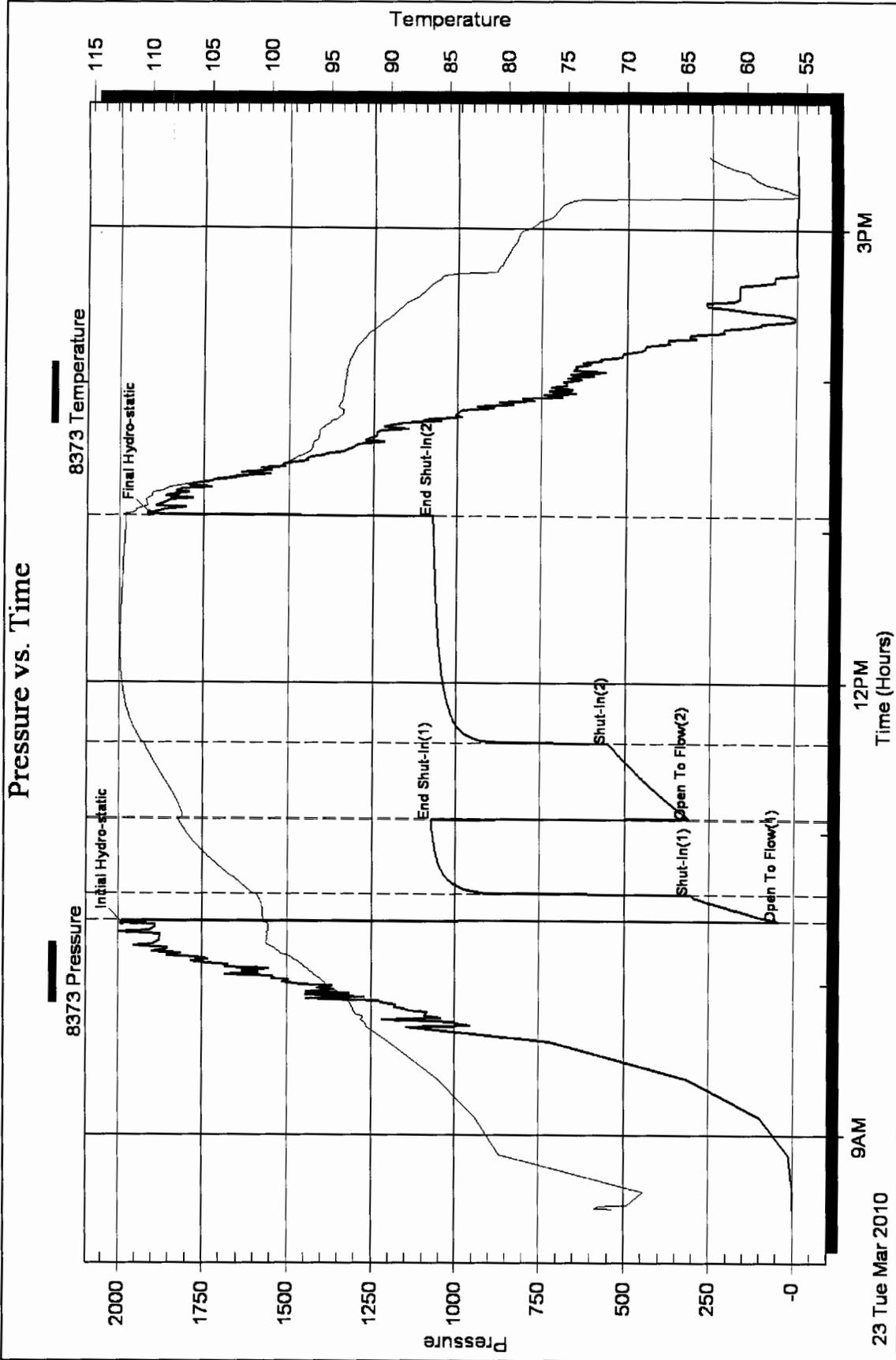
Inside

Mak-J Energy

28-15-35 Logan KS

DST Test Number: 3

### Pressure vs. Time



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**TRILOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

Mak -J Energy  
 1600 N. Broadw ay STE 1740  
 Denver CO. 8020  
 ATTN: Steve Murphy

**Dirks #3-28**  
**28-15-35 Logan KS**  
 Job Ticket: 37064 DST#: 4  
 Test Start: 2010.03.24 @ 20:33:49

**GENERAL INFORMATION:**

Formation: **Marmaton**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 22:31:44  
 Time Test Ended: 03:12:28  
 Interval: **4444.00 ft (KB) To 4480.00 ft (KB) (TVD)**  
 Total Depth: **4480.00 ft (KB) (TVD)**  
 Hole Diameter: **7.88 inches** Hole Condition: Fair

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**CONFIDENTIAL**

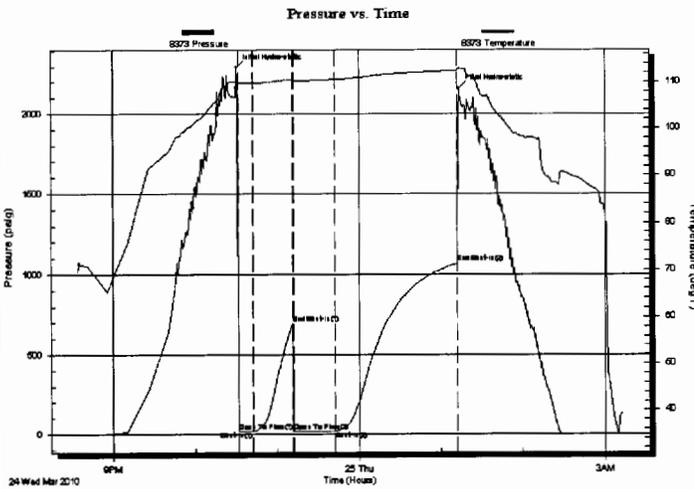
Test Type: Conventional Bottom Hole  
 Tester: Brandon Turley  
 Unit No: 35  
 Reference Elevations: 3230.00 ft (KB)  
 3220.00 ft (CF)  
 KB to GR/CF: 10.00 ft

**Serial #: 8373**

**Inside**

Press@RunDepth: 16.68 psig @ 4445.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2010.03.24 End Date: 2010.03.25 Last Calib.: 2010.03.25  
 Start Time: 20:33:49 End Time: 03:12:28 Time On Btm: 2010.03.24 @ 22:30:44  
 Time Off Btm: 2010.03.25 @ 01:12:58

TEST COMMENT: IF: 1/4 blow died in 6 min.  
 IS: No return.  
 FF: No blow.  
 FS: No return.



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2292.74	110.17	Initial Hydro-static
1	14.99	109.08	Open To Flow (1)
12	15.23	109.78	Shut-In(1)
41	693.94	110.49	End Shut-In(1)
42	15.49	110.16	Open To Flow (2)
72	16.68	110.57	Shut-In(2)
162	1068.88	112.49	End Shut-In(2)
163	2160.93	113.06	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (bbl)
5.00	muds heavy oil spots 100%m	0.02

**Gas Rates**

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

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# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Mak -J Energy  
1600 N.Broadway STE 1740  
Denver CO. 8020  
ATTN: Steve Murphy

Dirks #3-28  
28-15-35 Logan KS  
Job Ticket: 37064      **DST#: 4**  
Test Start: 2010.03.24 @ 20:33:49

## 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:	0 ppm
Viscosity: 57.00 sec/qt	Cushion Volume: bbl		
Water Loss: 5.60 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 2900.00 ppm			
Filter Cake: 1.00 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	muds heavy oil spots 100% <sub>m</sub>	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:

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Serial #: 8373

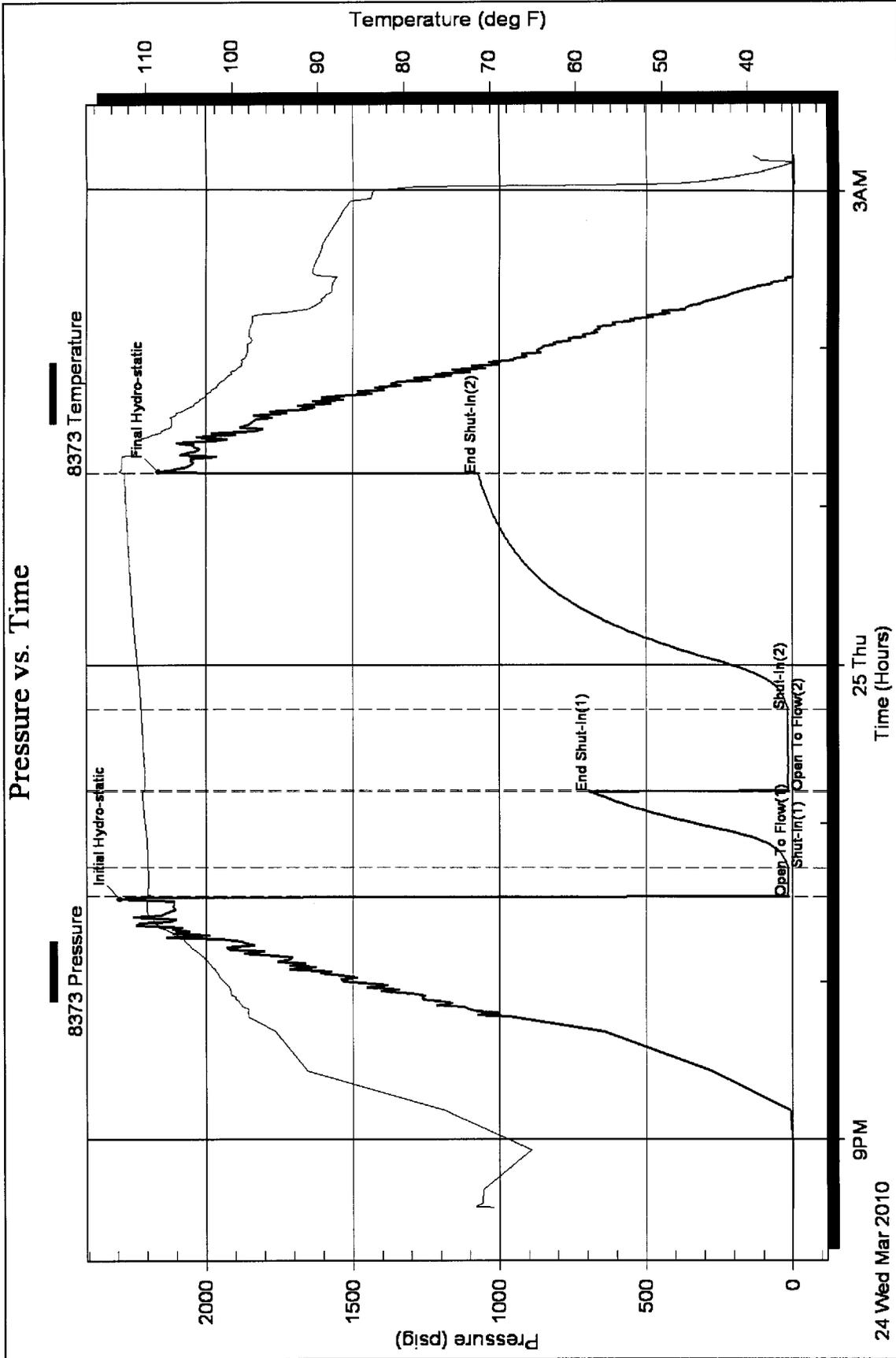
Inside

Mak-J Energy

28-15-35 Logan KS

DST Test Number: 4

### Pressure vs. Time

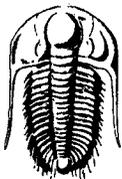


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# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Brandon Turley

## Test Ticket

785-650-8399

MAR 24 2010

NO. 37094 / 14045

10/08

Well Name & No. Dirks # 3-28 BY: 1 Test No. 1 Date 3-21-10  
 Company MAK - J Energy Kansas LLC Elevation 3233 KB 3223 GL  
 Address 1600 N Broadway Denver CO 80202  
 Co. Rep / Geo. Steve Murphy Rig H 2 Rig # 1  
 Location: Sec. 28 Twp. 15 Rge. 35 Co. \_\_\_\_\_ State KS

Interval Tested 3916 - 3963 Zone Tested Toronto  
 Anchor Length 47 Drill Pipe Run 3309 Mud Wt. 8.9  
 Top Packer Depth 3912 Drill Collars Run 609 Vis 54  
 Bottom Packer Depth 3916 Wt. Pipe Run Ø WL 8.8  
 Total Depth 3963 Chlorides 3800 ppm System LCM 2  
 Blow Description IF! Built to 3" Blow  
FS! No Return  
FF! Built to 1 1/2" Blow  
FS! No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>180</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	Feet of	%gas	%oil	%water	%mud

Rec Total 180 BHT 108 Gravity - API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic <u>1949</u>	<input checked="" type="checkbox"/> Test <u>1050-</u>	T-On Location <u>21:45</u>
(B) First Initial Flow <u>35</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>22:43</u>
(C) First Final Flow <u>61</u>	<input checked="" type="checkbox"/> Safety Joint <u>75-</u>	T-Open <u>02:00</u>
(D) Initial Shut-In <u>1120</u>	<input checked="" type="checkbox"/> Circ Sub <u>NL</u>	T-Pulled <u>04:40</u>
(E) Second Initial Flow <u>63</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>05:47</u>
(F) Second Final Flow <u>122</u>	<input checked="" type="checkbox"/> Mileage <u>80 RT</u>	Comments _____
(G) Final Shut-In <u>1121</u>	<input type="checkbox"/> Sampler	_____
(H) Final Hydrostatic <u>1900</u>	<input type="checkbox"/> Straddle	_____
Initial Open <u>10</u>	<input checked="" type="checkbox"/> Shale Packer <u>250.00</u>	<input type="checkbox"/> Ruined Shale Packer _____
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer _____
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Extra Copies _____
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby	Sub Total <u>Ø</u>
	<input checked="" type="checkbox"/> Accessibility <u>\$ 150.00</u>	Total <u>1855-</u>
	Sub Total <u>1855-</u>	

Approved By

*Steve Murphy*

Our Representative

*Mark Robich*

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.

P.O. Box 1733 • Hays, Kansas 67601

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MAR 26 2010

## Test Ticket

No. 37062

10/08

BY: \_\_\_\_\_

Well Name & No. Dirks # 3-28 Test No. 2 Date 3-22-10  
 Company MJK-J Energy Elevation 3230 KB 3246 GL  
 Address 1600 N Broadway Ste 1740 Denver, CO 80202  
 Co. Rep / Geo. Steve Murphy Rig H2 #1  
 Location: Sec. 28 Twp. 15S Rge. 35W Co. Logan State KS

Interval Tested 3994 4025 Zone Tested LANSING A  
 Anchor Length 31 Drill Pipe Run 3381 Mud Wt. 9.1  
 Top Packer Depth 3989 Drill Collars Run 609 Vis 51  
 Bottom Packer Depth 3994 Wt. Pipe Run \_\_\_\_\_ WL 7.2  
 Total Depth 4025 Chlorides 3400 ppm System LCM 2  
 Blow Description IF: 1/4 blow built to 2 in 10 min.  
IS: No return.  
FK: 1/4 blow built to 4 in 30 min.  
FS: No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>mud</u>			<u>100</u>	
<u>184</u>	<u>wcm</u>		<u>30</u>	<u>50</u>	
_____	_____				
_____	_____				
_____	_____				

Rec Total 214 BHT 108 Gravity \_\_\_\_\_ API RW .24 @ 68 °F Chlorides 30,000 ppm

(A) Initial Hydrostatic <u>1958</u>	<input checked="" type="checkbox"/> Test <u>1150.00</u>	T-On Location <u>16:40</u>
(B) First Initial Flow <u>15</u>	<input checked="" type="checkbox"/> Jars <u>250.00</u>	T-Started <u>17:00</u>
(C) First Final Flow <u>44</u>	<input checked="" type="checkbox"/> Safety Joint <u>75.00</u>	T-Open <u>18:52</u>
(D) Initial Shut-In <u>1086</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>21:32</u>
(E) Second Initial Flow <u>46</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>23:40</u>
(F) Second Final Flow <u>114</u>	<input checked="" type="checkbox"/> Mileage <u>80-80.00</u>	Comments _____
(G) Final Shut-In <u>1080</u>	<input type="checkbox"/> Sampler _____	_____
(H) Final Hydrostatic <u>1898</u>	<input type="checkbox"/> Straddle _____	_____
	<input checked="" type="checkbox"/> Shale Packer <u>250.00</u>	<input type="checkbox"/> Ruined Shale Packer _____
Initial Open <u>10</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Recorder _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>30</u>	<input type="checkbox"/> Day Standby _____	Sub Total <u>0</u>
Final Shut-In <u>90</u>	<input checked="" type="checkbox"/> Accessibility <u>150.00</u>	Total <u>1955</u>
	Sub Total <u>1955</u>	

Approved By \_\_\_\_\_ Our Representative \_\_\_\_\_  
 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 to the hole shall be paid for at cost by the party for whom the test is made.



# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED  
MAR 26 2010

## Test Ticket

NO. 37063

Well Name & No. Dirks #3-28 BY: \_\_\_\_\_ Test No. 3 Date 3-23-10  
 Company Myk-J Energy Elevation 3230 KB 3240 GL \_\_\_\_\_  
 Address 1600 N. Broadway Ste 1740 Denver, CO 80202  
 Co. Rep / Geo. Steve Murphy Rig H2 #1  
 Location: Sec. 28 Twp. 15<sup>S</sup> Rge. 35<sup>W</sup> Co. Logan State KS

Interval Tested 4030 4075 Zone Tested Lansing C  
 Anchor Length \_\_\_\_\_ 45 Drill Pipe Run 3468 Mud Wt. 9.0  
 Top Packer Depth \_\_\_\_\_ 4025 Drill Collars Run 609 Vis 51  
 Bottom Packer Depth \_\_\_\_\_ 4030 Wt. Pipe Run \_\_\_\_\_ WL 6.4  
 Total Depth \_\_\_\_\_ 4075 Chlorides 3000 ppm System LCM 2

Blow Description IF: BoB in 3 min.  
IS: No return.  
FF: BoB in 5 min.  
FS: No return.

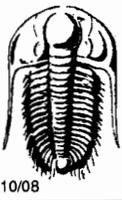
Rec	Feet of	oil spots	%gas	%oil	%water	%mud
<u>310</u>	<u>MLW</u>	<u>oil spots</u>		<u>70</u>	<u>30</u>	
<u>465</u>	<u>MLW</u>			<u>70</u>	<u>30</u>	
<u>372</u>	<u>MLW</u>			<u>90</u>	<u>10</u>	
_____	_____			_____	_____	
_____	_____			_____	_____	

Rec Total 1147 BHT 112 Gravity ← API RW .19 @ 69 °F Chlorides 39,000 ppm

(A) Initial Hydrostatic <u>1986</u>	<input checked="" type="checkbox"/> Test <u>1150.00</u>	T-On Location <u>8:00</u>
(B) First Initial Flow <u>45</u>	<input checked="" type="checkbox"/> Jars <u>250.00</u>	T-Started <u>8:30</u>
(C) First Final Flow <u>305</u>	<input checked="" type="checkbox"/> Safety Joint <u>75.00</u>	T-Open <u>10:25</u>
(D) Initial Shut-In <u>1074</u>	<input checked="" type="checkbox"/> Circ Sub _____	T-Pulled <u>13:05</u>
(E) Second Initial Flow <u>311</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>15:35</u>
(F) Second Final Flow <u>549</u>	<input checked="" type="checkbox"/> Mileage <u>80-80.00</u>	Comments _____
(G) Final Shut-In <u>1071</u>	<input type="checkbox"/> Sampler _____	_____
(H) Final Hydrostatic <u>1910</u>	<input type="checkbox"/> Straddle _____	_____
Initial Open <u>10</u>	<input checked="" type="checkbox"/> Shale Packer <u>250.00</u>	<input type="checkbox"/> Ruined Shale Packer _____
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Ruined Packer _____
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder _____	<input type="checkbox"/> Extra Copies _____
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby _____	Sub Total <u>0</u>
	<input checked="" type="checkbox"/> Accessibility <u>150.00</u>	Total <u>1952</u>
	Sub Total <u>1952</u>	

Approved By Steve Murphy Our Representative [Signature]

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# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED  
MAR 26 2010  
BY: \_\_\_\_\_

## Test Ticket

No. 37064

Well Name & No. Dirks #3-28 Test No. 4 Date 2-24-10  
 Company MAK-J Energy Elevation 3230 KB 3240 GL \_\_\_\_\_  
 Address 1600 N. Broadway ste 1740 DENVER, CO 80202  
 Co. Rep / Geo. Steve Murphy Rig H2 #1  
 Location: Sec. 28 Twp. 15S Rge. 35W Co. L094A State KS

Interval Tested 4444 4480 Zone Tested Marmaton  
 Anchor Length 36 Drill Pipe Run 3818 Mud Wt. 9.2  
 Top Packer Depth 4439 Drill Collars Run 609 Vis 57  
 Bottom Packer Depth 4444 Wt. Pipe Run \_\_\_\_\_ WL 5.6  
 Total Depth 4480 Chlorides 2900 ppm System LCM 2  
 Blow Description IF: 1/4 blow died in 6 min.  
IS: No return.  
FF: No blow.  
FS: No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Mud heavy oil spots</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 5 BHT 112 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>2292</u>	<input checked="" type="checkbox"/> Test <u>1150.00</u>	T-On Location <u>19:30</u>
(B) First Initial Flow <u>14</u>	<input checked="" type="checkbox"/> Jars <u>250.00</u>	T-Started <u>20:33</u>
(C) First Final Flow <u>15</u>	<input checked="" type="checkbox"/> Safety Joint <u>75.00</u>	T-Open <u>22:31</u>
(D) Initial Shut-In <u>693</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/L</u>	T-Pulled <u>1:11</u>
(E) Second Initial Flow <u>15</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>3:20</u>
(F) Second Final Flow <u>16</u>	<input checked="" type="checkbox"/> Mileage <u>80-80, 00</u>	Comments _____
(G) Final Shut-In <u>1068</u>	<input type="checkbox"/> Sampler _____	_____
(H) Final Hydrostatic <u>2160</u>	<input type="checkbox"/> Straddle _____	_____
	<input checked="" type="checkbox"/> Shale Packer <u>250.00</u>	<input type="checkbox"/> Ruined Shale Packer _____
	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Ruined Packer _____
	<input type="checkbox"/> Extra Recorder _____	<input type="checkbox"/> Extra Copies _____
	<input type="checkbox"/> Day Standby _____	Sub Total <u>0</u>
	<input checked="" type="checkbox"/> Accessibility <u>150.00</u>	Total <u>1955-</u>
	Sub Total <u>1955-</u>	

Approved By [Signature] Our Representative [Signature]  
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