



## DRILL STEM TEST REPORT

Prepared For: **IA Operating Inc**

9915 W. 21st st STE B  
Wichita KS 67205

ATTN: Jeff Mowry / Herb Di

**Marie #20-1**

**20-11s-15w Russell,KS**

Start Date: 2014.01.25 @ 12:35:42

End Date: 2014.01.25 @ 18:58:51

Job Ticket #: 56232                      DST #: 1

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
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**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

IA Operating Inc  
 9915 W. 21st st STE B  
 Wichita KS 67205  
 ATTN: Jeff Mow ry / Herb Di

**20-11s-15w Russell,KS**

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Job Ticket: 56232

**DST#: 1**

Test Start: 2014.01.25 @ 12:35:42

## GENERAL INFORMATION:

Formation: **LKC "J"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 14:29:52  
 Time Test Ended: 18:58:51  
 Interval: **3144.00 ft (KB) To 3190.00 ft (KB) (TVD)**  
 Total Depth: 3190.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Ray Schw ager  
 Unit No: 70  
 Reference Elevations: 1826.00 ft (KB)  
 1818.00 ft (CF)  
 KB to GR/CF: 8.00 ft

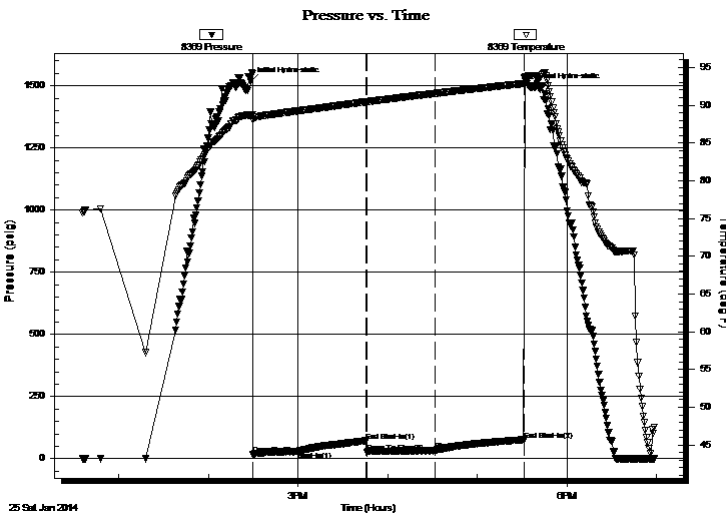
## Serial #: 8369

Inside

Press@RunDepth: 34.51 psig @ 3154.00 ft (KB)  
 Start Date: 2014.01.25 End Date: 2014.01.25  
 Start Time: 12:35:42 End Time: 18:58:51  
 Capacity: 8000.00 psig  
 Last Calib.: 2014.01.25  
 Time On Btm: 2014.01.25 @ 14:28:07  
 Time Off Btm: 2014.01.25 @ 17:36:51

TEST COMMENT: 30-IFP-w k bl thru-out 1/2" to 3/4" bl  
 45-ISIP-no bl  
 45-FFP-w k bl thru-out 1 1/4" to 2 "bl  
 60-FSIP-no bl

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1517.89	88.65	Initial Hydro-static
2	18.13	88.08	Open To Flow (1)
32	29.67	89.23	Shut-In(1)
78	72.50	90.44	End Shut-In(1)
78	24.42	90.44	Open To Flow (2)
124	34.51	91.54	Shut-In(2)
183	76.63	92.84	End Shut-In(2)
189	1492.47	93.90	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	60'GIP	0.00
35.00	SOCM 2%O98%M	0.22

## Gas Rates

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





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TESTING, INC**

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**TOOL DIAGRAM**

IA Operating Inc

**20-11s-15w Russell,KS**

9915 W. 21st st STE B  
Wichita KS 67205

**Marie #20-1**

Job Ticket: 56232

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ATTN: Jeff Mow ry / Herb Di

Test Start: 2014.01.25 @ 12:35:42

## Tool Information

Drill Pipe:	Length: 3098.00 ft	Diameter: 3.80 inches	Volume: 43.46 bbl	Tool Weight:	2200.00 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: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	55000.00 lb
			<u>Total Volume: 43.61 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial	46000.00 lb
Depth to Top Packer:	3144.00 ft			Final	46000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	46.00 ft				
Tool Length:	67.00 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			3124.00	
Shut In Tool	5.00			3129.00	
Hydraulic tool	5.00			3134.00	
Packer	5.00			3139.00	21.00 Bottom Of Top Packer
Packer	5.00			3144.00	
Stubb	1.00			3145.00	
Perforations	9.00			3154.00	
Recorder	0.00	8369	Inside	3154.00	
Recorder	0.00	8700	Outside	3154.00	
Blank Spacing	33.00			3187.00	
Bullnose	3.00			3190.00	46.00 Bottom Packers & Anchor

**Total Tool Length: 67.00**



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**FLUID SUMMARY**

IA Operating Inc

**20-11s-15w Russell,KS**

9915 W. 21st st STE B  
Wichita KS 67205

**Marie #20-1**

Job Ticket: 56232

**DST#: 1**

ATTN: Jeff Mow ry / Herb Di

Test Start: 2014.01.25 @ 12:35:42

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 8.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.59 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1800.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	60'GIP	0.000
35.00	SOCM 2%O98%M	0.218

Total Length: 35.00 ft      Total Volume: 0.218 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

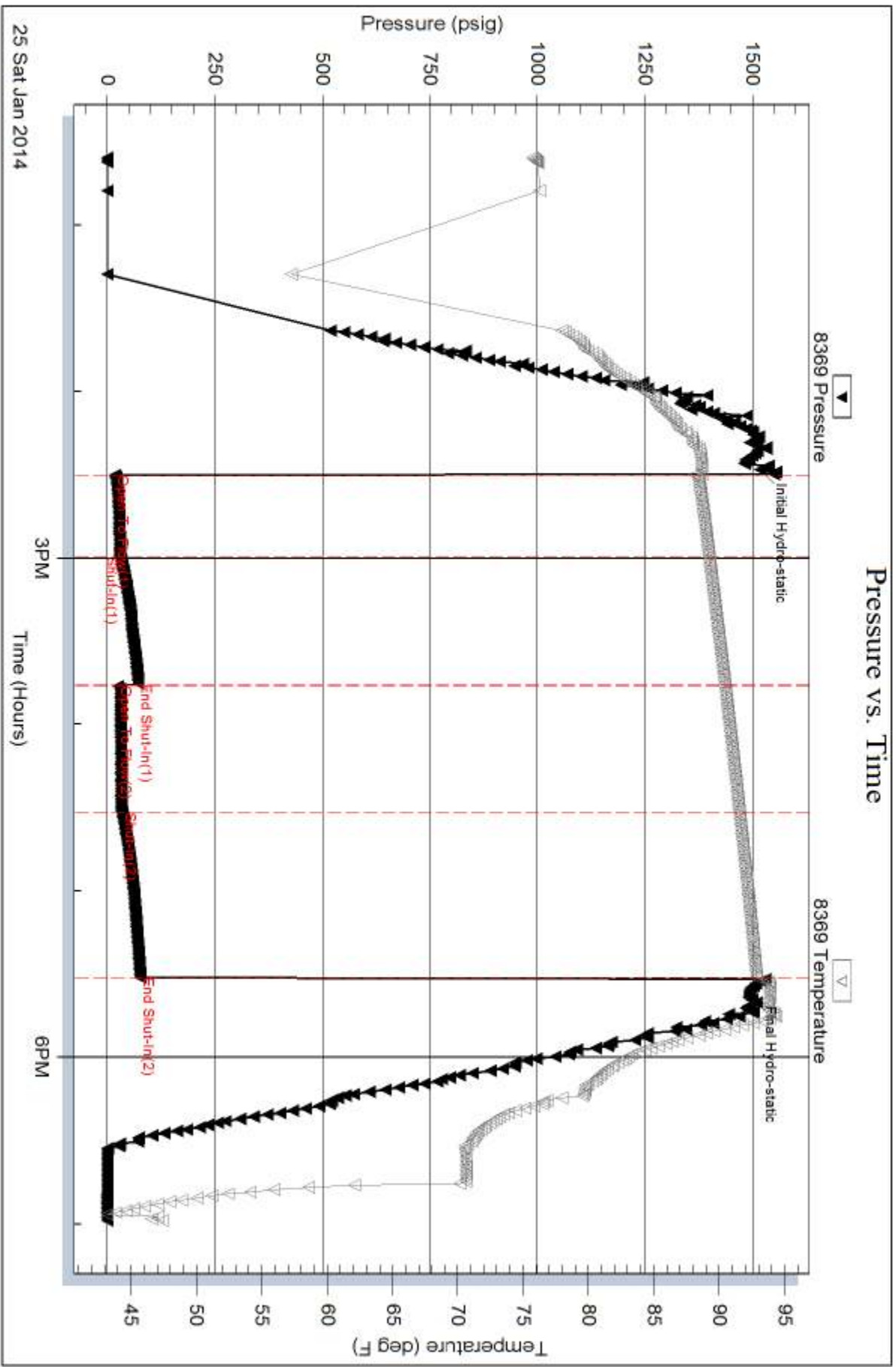
Serial #: 8369

Inside

JA Operating Inc

Marie #20-1

DST Test Number: 1

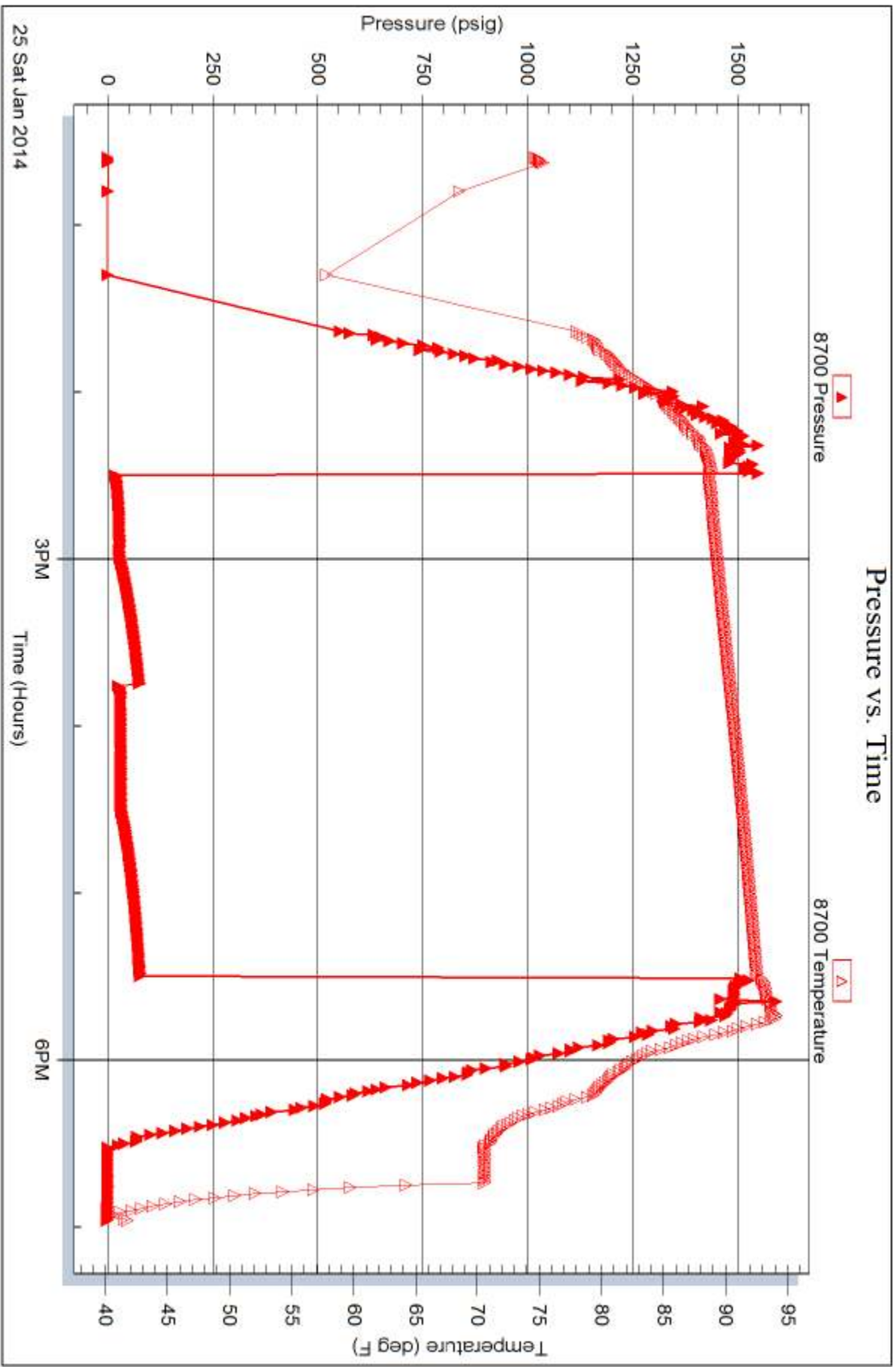


Serial #: 8700

Outside IA Operating Inc

Marie #20-1

DST Test Number: 1

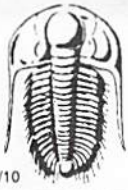


Trilobite Testing, Inc

Ref. No: 56232

Printed: 2014.01.27 @ 15:38:57





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 56232

Well Name & No. MARIE #20-1 Test No. 1 Date 1-25-14  
 Company IA Operating, Inc Elevation 1826 KB 1818 GL  
 Address 9915 W. 21<sup>ST</sup> ST. STE B WICHITA, Ks 67205  
 Co. Rep / Geo. Herb Dienes Rig Discovery rig 2  
 Location: Sec. 20 Twp. 11<sup>S</sup> Rge. 15<sup>W</sup> Co. Russell State Ks

Interval Tested 3144-3190 Zone Tested LKC "J"  
 Anchor Length 46 Drill Pipe Run 3098 Mud Wt. 8.5  
 Top Packer Depth 3139 Drill Collars Run 30 Vis 51  
 Bottom Packer Depth 3144 Wt. Pipe Run - WL 2.6  
 Total Depth 3190 Chlorides 1800 ppm System LCM 2<sup>#</sup>  
 Blow Description IFP - Weak Blow Thru-out 1/2" To 3/4" Blow  
ISIP - NO Blow  
FFP - Weak Blow Thru-out 1 1/4" To 2" Blow  
FSIP - NO Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>60</u>	<u>6IP</u>				
<u>39</u>	<u>50CM</u>		<u>2</u>		<u>98</u>

Rec Total 39 BHT 93 Gravity - API RW - @ - F Chlorides - ppm

(A) Initial Hydrostatic <u>1517</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>0950</u>
(B) First Initial Flow <u>18</u>	<input type="checkbox"/> Jars	T-Started <u>1235</u>
(C) First Final Flow <u>29</u>	<input type="checkbox"/> Safety Joint	T-Open <u>1430</u>
(D) Initial Shut-In <u>72</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>1730</u>
(E) Second Initial Flow <u>24</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>1858</u>
(F) Second Final Flow <u>34</u>	<input checked="" type="checkbox"/> Mileage <u>62 RT</u> 192.20	Comments <u>Tool released 1-26-14</u>
(G) Final Shut-In <u>76</u>	<input type="checkbox"/> Sampler	<u>1645</u>
(H) Final Hydrostatic <u>1492</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Flow <u>45</u>	<input type="checkbox"/> Day Standby	Total <u>1342.20</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1342.20</u>	

Approved By \_\_\_\_\_

Our Representative RAY SCHWAGER *THANK YOU*

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