



## DRILL STEM TEST REPORT

Prepared For: **Shakespeare Oil Co**

202 West Main St  
Salem , IL 62881-1519

ATTN: Tim Priest

### **Nightengale #1-15**

#### **15-17s-34w Scott, KS**

Start Date: 2016.01.13 @ 11:05:20

End Date: 2016.01.13 @ 17:25:35

Job Ticket #: 48274                      DST #: 1

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
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Shakespeare Oil Co  
15-17s-34w Scott, KS  
Nightengale #1-15  
DST # 1  
Marmaton A  
2016.01.13



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Shakespeare Oil Co  
202 West Main St  
Salem, IL 62881-1519  
ATTN: Tim Priest

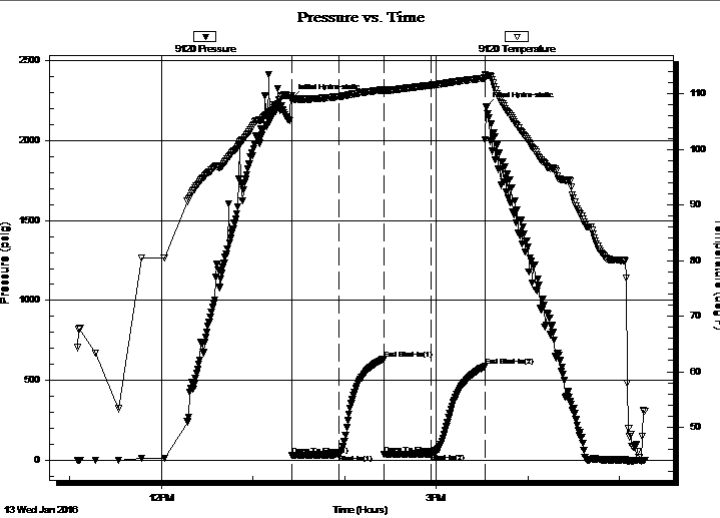
**15-17s-34w Scott, KS**  
**Nightengale #1-15**  
Job Ticket: 48274      **DST#: 1**  
Test Start: 2016.01.13 @ 11:05:20

## GENERAL INFORMATION:

Formation: **Marmaton A**  
Deviated: No    Whipstock:                      ft (KB)                      Test Type: Conventional Bottom Hole (Initial)  
Time Tool Opened: 13:25:35                      Tester: Shane McBride  
Time Test Ended: 17:25:35                      Unit No: 84  
**Interval: 4448.00 ft (KB) To 4500.00 ft (KB) (TVD)**                      Reference Elevations: 3092.00 ft (KB)  
Total Depth: 4500.00 ft (KB) (TVD)                      3083.00 ft (CF)  
Hole Diameter: 7.88 inches    Hole Condition: Fair                      KB to GR/CF: 9.00 ft

**Serial #: 9120      Outside**  
Press@RunDepth: 40.68 psig @ 4449.00 ft (KB)                      Capacity: 8000.00 psig  
Start Date: 2016.01.13      End Date: 2016.01.13                      Last Calib.: 2016.01.13  
Start Time: 11:05:20      End Time: 17:16:35                      Time On Btm: 2016.01.13 @ 13:25:20  
Time Off Btm: 2016.01.13 @ 15:32:50

TEST COMMENT: 1/4 " @ open died back to weak surface blow  
No return  
No blow  
No return



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2261.04	109.72	Initial Hydro-static
1	28.83	108.88	Open To Flow (1)
31	36.28	109.52	Shut-In(1)
61	635.02	110.77	End Shut-In(1)
61	36.70	110.47	Open To Flow (2)
92	40.68	111.57	Shut-In(2)
127	587.12	112.84	End Shut-In(2)
128	2211.39	113.23	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
5.00	mud w/oil spots 100%m	0.02
0.00	show of free oil on top 2"	0.00

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





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# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Shakespeare Oil Co

**15-17s-34w Scott, KS**

202 West Main St  
Salem, IL 62881-1519

**Nightengale #1-15**

Job Ticket: 48274

**DST#: 1**

ATTN: Tim Priest

Test Start: 2016.01.13 @ 11:05:20

## Tool Information

Drill Pipe:	Length: 4328.00 ft	Diameter: 3.80 inches	Volume: 60.71 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: 25000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 78000.00 lb
			<u>Total Volume: 61.32 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4448.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	52.00 ft			
Tool Length:	80.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

**Length (ft) Serial No. Position Depth (ft) Accum. Lengths**

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4421.00	
Shut In Tool	5.00			4426.00	
Hydraulic tool	5.00			4431.00	
Jars	5.00			4436.00	
Safety Joint	3.00			4439.00	
Packer	5.00			4444.00	28.00 Bottom Of Top Packer
Packer	4.00			4448.00	
Stubb	1.00			4449.00	
Recorder	0.00	9120	Outside	4449.00	
Recorder	0.00	8938	Inside	4449.00	
Perforations	13.00			4462.00	
Change Over Sub	1.00			4463.00	
Drill Pipe	31.00			4494.00	
Change Over Sub	1.00			4495.00	
Bullnose	5.00			4500.00	52.00 Bottom Packers & Anchor

**Total Tool Length: 80.00**



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**FLUID SUMMARY**

Shakespeare Oil Co

**15-17s-34w Scott, KS**

202 West Main St  
Salem, IL 62881-1519

**Nightengale #1-15**

Job Ticket: 48274

**DST#: 1**

ATTN: Tim Priest

Test Start: 2016.01.13 @ 11:05:20

## 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: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	mud w /oil spots 100%m	0.025
0.00	show of free oil on top 2"	0.000

Total Length: 5.00 ft      Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

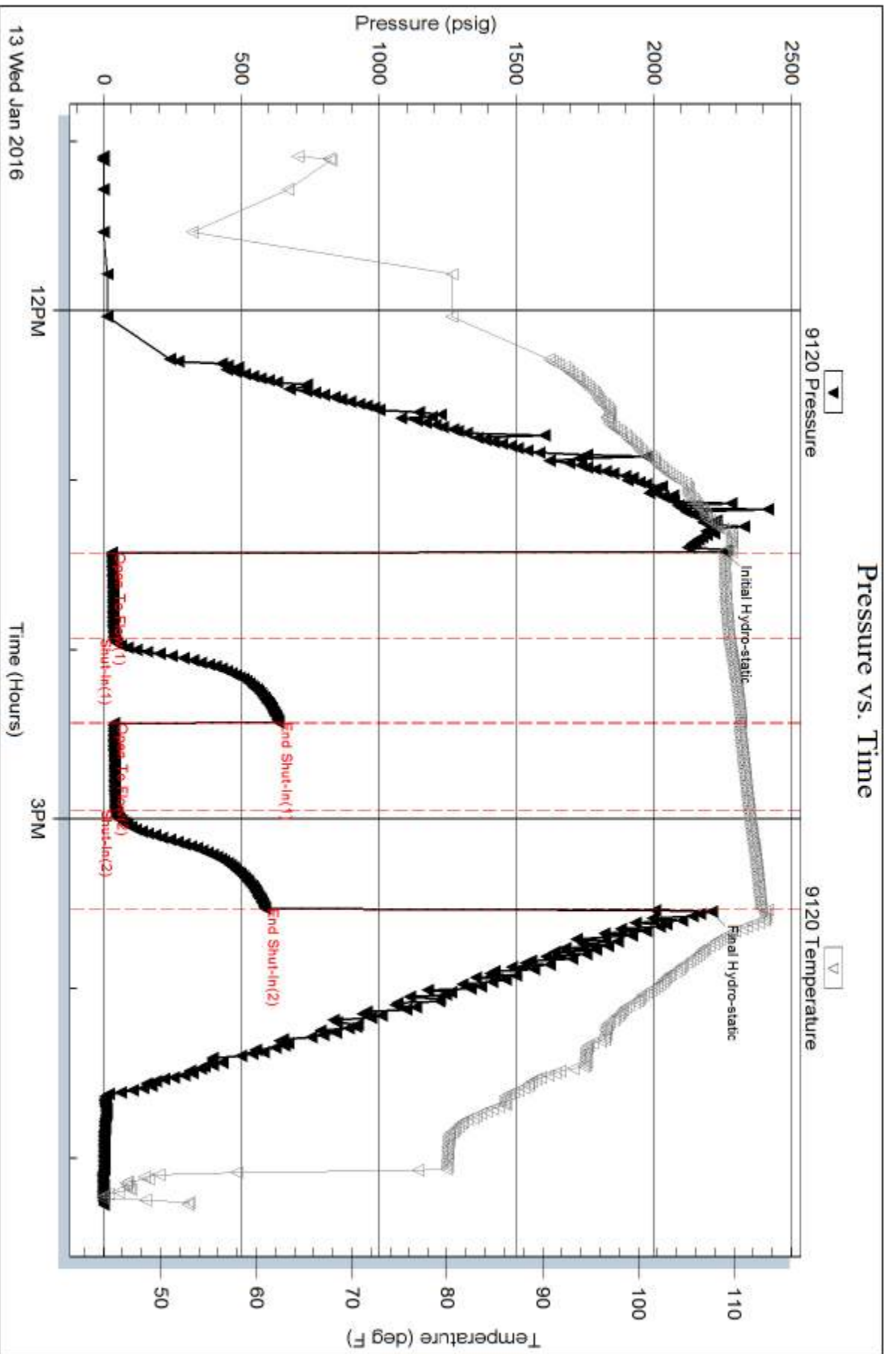
Recovery Comments:

Serial #: 9120

Outside Shakespeare Oil Co

Nightengale #1-15

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 48274

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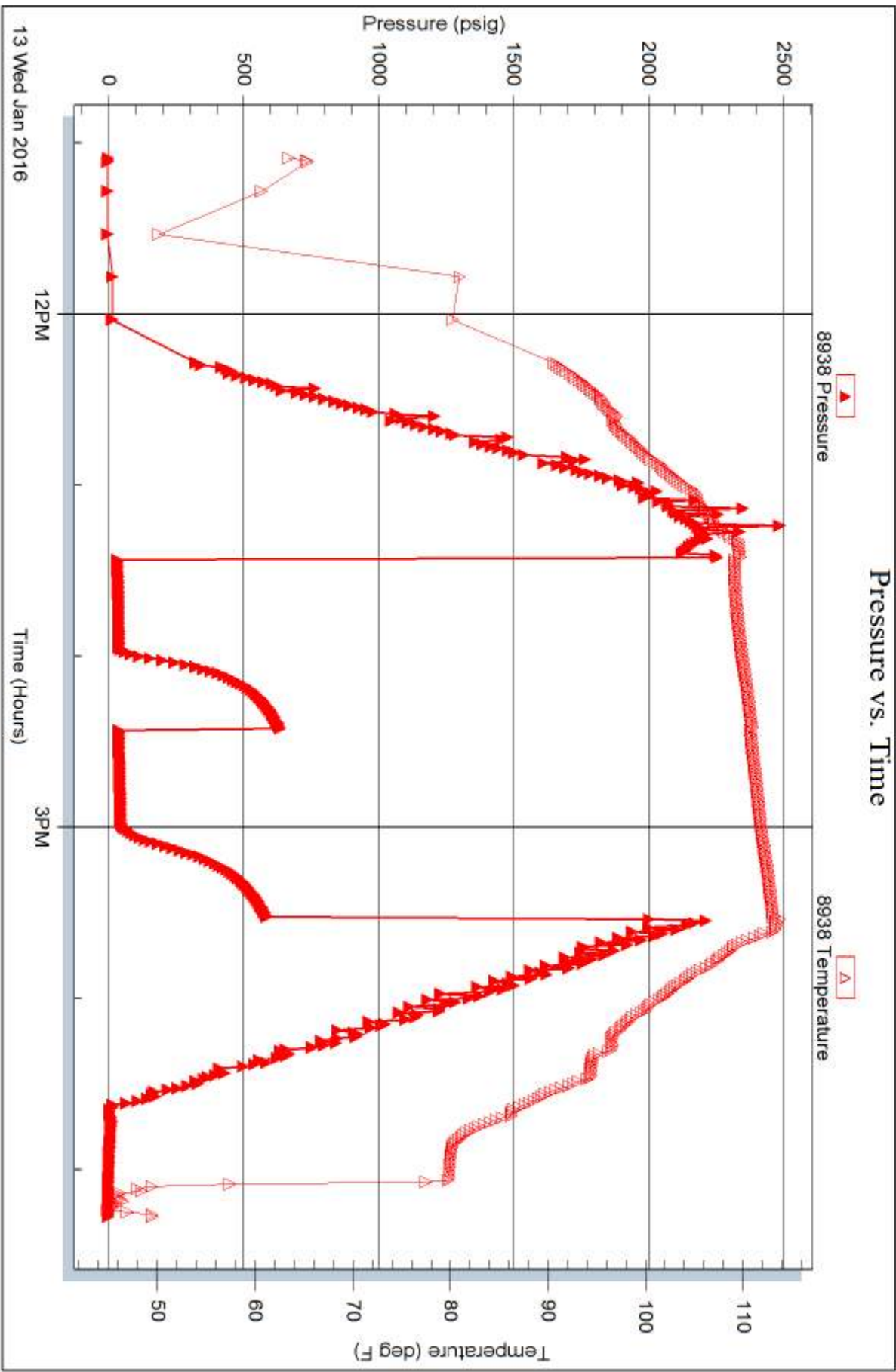
Serial #: 8938

Inside

Shakespeare Oil Co

Nightengale #1-15

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 48274

Printed: 2016.01.18 @ 09:32:49





# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 48274

Well Name & No. Nightengale # 1-15 Test No. #1 Date 1/13/16  
 Company Shakespeare O. I Elevation 3092 KB 3083 GL  
 Address 202 West Main St. Salem, IL 62881-1519  
 Co. Rep / Geo. Tom Priest Rig H.D. #3  
 Location: Sec. 15 Twp. 17 Rge. 34 Co. Scott State KS

Interval Tested 4448 4500 Zone Tested main water A  
 Anchor Length 32 Drill Pipe Run 4328 Mud Wt. 7.3  
 Top Packer Depth 4443 Drill Collars Run 124 Vis 56  
 Bottom Packer Depth 4448 Wt. Pipe Run          WL 8.0  
 Total Depth 4500 Chlorides 6000 ppm System LCM #2

Blow Description 1/4" @ open Dtd back to a weak surface blow  
No return  
No blow  
No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>5'</u>	<u>Mud w/oil spots</u>	<u>Spots</u>		<u>100</u>	
	<u>show of free oil on top</u>				
	<u>2" in.</u>				

Rec Total 5' BHT 113° Gravity          API RW          @          ° F Chlorides          ppm

(A) Initial Hydrostatic <u>2261</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>09:58</u>
(B) First Initial Flow <u>28</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>11:05</u>
(C) First Final Flow <u>36</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>13:26</u>
(D) Initial Shut-In <u>6:35</u>	<input checked="" type="checkbox"/> Circ Sub <u>n/c</u>	T-Pulled <u>15:26</u>
(E) Second Initial Flow <u>36</u>	<input type="checkbox"/> Hourly Standby <u>        </u>	T-Out <u>17:25</u>
(F) Second Final Flow <u>40</u>	<input checked="" type="checkbox"/> Mileage <u>32rt</u>	Comments <u>Released &amp; bonded</u>
(G) Final Shut-In <u>587</u>	<input type="checkbox"/> Sampler <u>        </u>	<u>on 1/15/2016 @ 19:00</u>
(H) Final Hydrostatic <u>2211</u>	<input type="checkbox"/> Straddle <u>        </u>	<input type="checkbox"/> Ruined Shale Packer <u>        </u>
	<input checked="" type="checkbox"/> Shale Packer <u>250</u>	<input type="checkbox"/> Ruined Packer <u>        </u>
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer <u>        </u>	<input type="checkbox"/> Extra Copies <u>        </u>
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Recorder <u>        </u>	Sub Total <u>800</u>
Final Flow <u>30</u>	<input type="checkbox"/> Day Standby <u>2d 1.5h</u>	Total <u>2557</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Accessibility <u>        </u>	MP/DST Disc't <u>        </u>
	Sub Total <u>1757</u>	

Approved By          Our Representative [Signature]

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