



Drillingsoftware

Ton Miles Calculator User Manual

1. Introduction

This Ton Miles Calculator program uses a completely new approach to Ton Miles calculations for onshore rigs and offshore rigs. It has a reporting system capable of storing and displaying the Ton Miles calculations for 1000 drilling days

2. Operation

A. Main Menu

The Main Menu (Ref. Figure 1) is the entry point to all functions of the program.

Selecting , in the Main Menu, shows the Input dialog box (Ref Figure 3). In this dialog box, all data for the ton miles calculations are entered and the units to be used (API or Metric) are selected.



Figure 1. Main Menu

B. Set-up

Before the Ton Miles are calculated it is necessary to:

- Edit the Report Header
- Select the units to be used
- Insert the Constant Data.

(1) Report Header

NOTE: The Report Header requires editing when a new spool of drilling line is installed or on initial use of the program.

On the Main Menu, select **Setup Report Header**. The Report Header Input dialog box is shown (Ref .Figure 2).

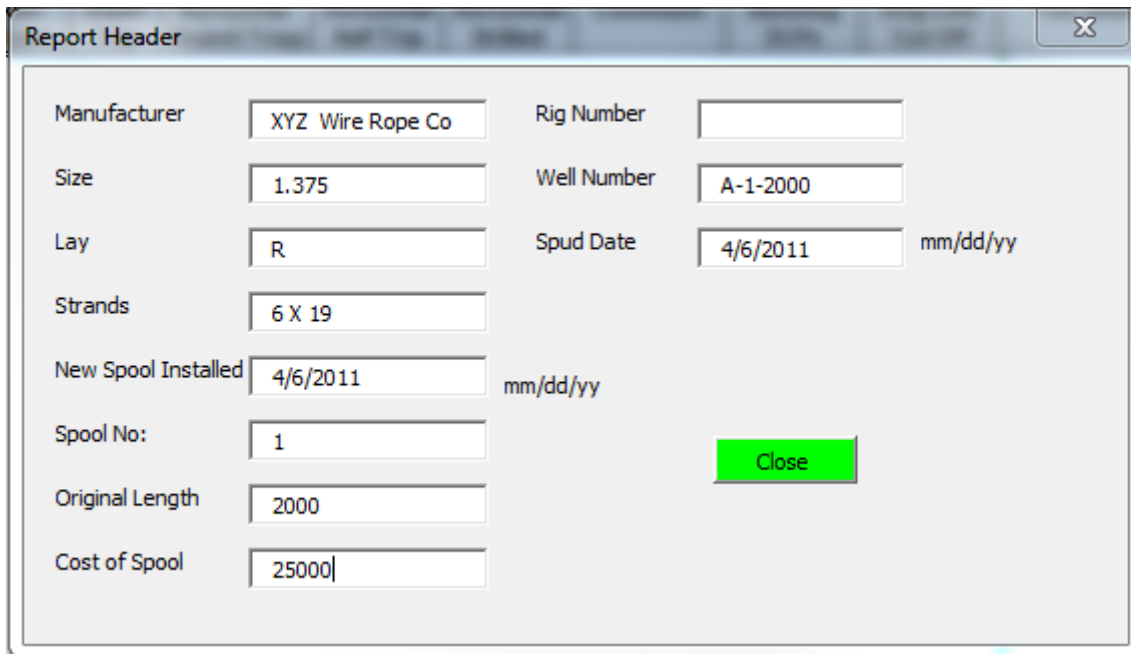


Figure 2. Report Header Input

On the Report Header Input dialog box, the following data is entered manually:

- Spool Manufacturer
- Spool Size
- Lay
- Strands
- Spool Installation Date
- Spool Number
- Original Length
- Spool Cost
- Rig Number
- Well Number
- Spud Date.

The Report Date is entered automatically in the Report Header.

After entering the data, select **Close**. The Report header is updated and the program returns to the Main Menu.

(2) Select Units

On the Main Menu, select **Input** . The Input dialog box is shown (Ref. Figure 3).

TON MILES INPUT DATA (Select Units)

Cored/Drilled Ton Miles (enter MTD at end of Drld/Cored Section) ft

Measured Depth at End of Section ft

Trip Ton Miles

New Measured TD at start of trip ft

MUD WT ppg

Drill String Data

	Weight	Length	
DC ppf	<input type="text"/>	<input type="text"/>	ft
DC ppf	<input type="text"/>	<input type="text"/>	ft
DC ppf	<input type="text"/>	<input type="text"/>	ft
Hvy Wt ppf	<input type="text"/>	<input type="text"/>	ft
Hvy Wt ppf	<input type="text"/>	<input type="text"/>	ft
Hvy Wt ppf	<input type="text"/>	<input type="text"/>	ft
DP ppf	<input type="text"/>	<input type="text"/>	ft
DP ppf	<input type="text"/>	<input type="text"/>	ft
DP ppf	<input type="text"/>	<input type="text"/>	ft

Average Length of 1 Stand of Drill Pipe ft

Ton Miles for Running Casing to Surface

Average Casing Joint Length ft

Casing Weight ppg

Casing Shoe Depth MTD ft

Ton Miles for Running a Liner

- ppf

- ft

- ft

Weight Length

- ft

- ft

- ft

Constant Data

lbs

WT OF BLOCKS-ELEVATOR-TOP DRIVE ASSY

Ton Miles for Horizontal Holes

Measured Depth at Start of Drld Section ft

Measured Depth at End of Drld Section ft

Total Length of Horizontal Section ft

Average Overpull through section lbs

Ton Miles for Short Trip / Wiper Trip

Length of Wiper Trip

Select Units Ton Miles for Drill String Ton Miles for Running Liner Ton Miles for running BOP on Marine Riser Results Menu View Report Help Save Input

Figure 3. Input

On the Input dialog box, select **Select Units** . The Select Units dialog box is shown (Ref. Figure 4).

The program uses either API or metric units. The selected units are used throughout the program. In the Select Units dialog box these units are selected:

- Length/Depth
 - Feet**
 - Meters.
- Pipe Weight
 - Lb/Ft**
 - Kg/Mtr.
- Mud Weight
 - ppg**
 - S.G
 - Kg/M3).

- Unit Weight of Blocks/Top Drive/ Bops

- Lbs**
- 1000 Lbs
- Kg
- Knewtons
- Tonne
- DaN.

NOTE: The starred (**) items are the items used throughout this user manual.

Selecting **OK Done** saves the selected units. The program returns to the Input dialog box (Ref. Figure 3).

Figure 4. Select Units

(3) Constant Data

In the Constant Data dialog box (Ref. Figure 5) of the Input dialog box enter the total weight of the Blocks/Elevator/Top Drive Assembly.

Figure 5. Constant Data

NOTE: All the data used throughout this user manual is hypothetical, and is for ease of explanation only. The Ton Miles calculations can now begin.

C. Ton Miles Calculations

(1) Trip Ton Miles

The Trip Ton Miles data is entered in the Trip Ton Miles dialog box (Ref Figure 6) of the Input dialog box.

On the Input dialog box, select **Ton Miles for Drill String**.

TON MILES INPUT DATA (Select Units)			
Cored/Drilled Ton Miles (enter MTD at end of Drld/Cored Section)			
Measured Depth at End of Section			ft
Trip Ton Miles			
New Measured TD at start of trip		5000	ft
MUD WT		8.5	ppg
Drill String Data			
	Weight	Length	
DC ppf	120	600	ft
DC ppf			ft
DC ppf			ft
Hvy Wt ppf	29	500	ft
Hvy Wt ppf			ft
Hvy Wt ppf			ft
DP ppf	19.5	3900	ft
DP ppf			ft
DP ppf			ft
Average Length of 1 Stand of Drill Pipe		90	ft

Figure 6. Trip Ton Miles

Enter this data:

- New Measured TD at start of trip
- Mud Wt
- Drill String Data:
 - Drill Collar (DC) - Weight and Length
 - Heavy Weight (Hvy Wt) - Weight and Length
 - Drill Pipe (DP) - Weight and Length.
- Average Length of 1 Stand of Drill Pipe.

} Up to three sections

After entering the data, select **Results** on the Input dialog box (Ref. Figure 3).
A Select Units message box is shown, indicating that the units to be used should be selected.

In the message box, select **OK**. The Results dialog box is shown (Ref. Figure 7)

The units to be used are selected using **Select API or Metric** drop-down menu.

These units can be selected:

- Ton Miles**
- Ton Kilometers
- daN Kilometers.

The default unit is Ton Miles. The selected units will be the units used for all subsequent calculations.

The Actual Calculated Ton Miles are shown in the Results dialog box, with the Ton Miles Safety factors of **+10%**, **+15%** and **+20%** for a Round Trip or a Half Trip.

Select the safety factor % required, and select the required trip calculation (either **Round Trip** or **Half Trip**) (**)

Select API or Metric		Calculated		Choose a Safety Factor		
? Ton Miles	Actual	+10%	+15%	+20%		
Round Trip	297.65	327.41	342.29	357.18		
Half Trip	148.82	163.71	171.15	178.59		
Drilled						
Cored						
Running Casing						
Running Liner						
Wiper Trip						
Horizontal Round Trip						
Horizontal Half Trip						
Horizontal Dr'd						
Running BOP's						
Ton Miles Operation	Ton Miles	% Safety Factor	Add Report Comment	Drlg Line Cut Off		
Half Trip	163.71	10				
Add Ton Miles to the report			View Report			

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Figure 7. Results (Trip Ton Miles)

The lower panel of the Results dialog box shows:

- The selected Ton Miles Operation (Round Trip or Half Trip**)
- The Ton Miles for the selected Ton Miles Operation and the selected Safety Factor %
- The Safety Factor %
- The Report Comment
- The Drilling Line Cut Off (If required).

Selecting **Add Report Comment** shows the Ton Miles Comments dialog box. (Ref. Figure 8).

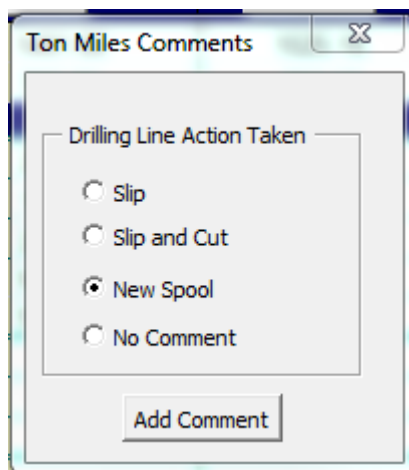


Figure 7. Ton Miles Comments

NOTE. In this user manual, **New Spool** is selected.

After selecting the appropriate Ton Mile comment, select **Add Ton Miles to the report**. The data is now added to the report. Select **View Report** to view the Ton Miles Report (Ref. Figure 9).

Menu	Ton Miles	Input	Help	Printout	Email Report	Export Report	Delete Report
Manufacturer	XYZ Wire Rope Co	Cumulative Cut Off	0	Rig			
Size	1.375	Estimated Line left	2000			Single Derrick	
Lay	R	Cumulative Ton Miles	164	Well No:	A-1-2000		
Strands	6 X 19	Cost per Ton Miles	152.71	Spud Date	6-Apr-11		
New Spool installed	6-Apr-11						
Spool No:	1			Report Date	18-Apr-11		
Original Length	2000	Cost of Spool	25000				

Date	TD	Round Trip	Half Trip	Drilled	Cored	Run Casing	Run Liner	Wiper Trip	Horizontal Round Triup	Horizontal Half Trip	Horizontal Drilled	Comment	Running BOPs	Drig Line Cut Off	Ton Miles
18-Apr-11	5000		163.71									New Spool			163.71

Figure 9. Ton Miles Report

The Ton Miles Report with the selected (Half Trip or Round Trip) Ton Miles shown (↔). The Cumulative Ton Miles (→) and the Cost per Ton Miles (→) have been calculated. Select **Input** to return to the Input dialog box.

(2) Ton Miles For Drilled/Cored Section

The Ton Miles for Drilled/Cored data is entered Measured Depth at End of Section dialog box (Ref. Figure 10) in the Trip Ton Miles dialog box (Ref Figure 6) of the Input dialog box.

Measured Depth at End of Section	5030	ft
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Figure 10. Drilled/Cored Section

Enter the Measured Depth at End of Section.

After entering the data, select **Results** on the Input dialog box (Ref. Figure 3).

The Select Units message box is shown. In the message box, select **OK**. Check that the correct units are selected. Select **Drilled** ** or **Cored**. The updated Results dialog box is shown (Ref. Figure 11).

Select API or Metric	Calculated	Choose a Safety Factor			
? Ton Miles	Actual	+10%	+15%	+20%	
Round Trip	297.65	327.41	342.29	357.18	
Half Trip	148.82	163.71	171.15	178.59	
Drilled	6.01	6.61	6.91	7.21	
Cored	4.00	4.41	4.61	4.81	
Running Casing					
Running Liner					
Wiper Trip					
Horizontal Round Trip					
Horizontal Half Trip					
Horizontal Dr'd					
Running BOP's					
Ton Miles Operation	Ton Miles	% Safety Factor	Add Report Comment	Drig Line Cut Off	
Drilled	6.61	10			
Add Ton Miles to the report		View Report			

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Figure 11. Results (Drilled/Cored Ton Miles)

The lower panel of the Results dialog box shows:

- The selected Ton Miles Operation (Drilled)
- The Ton Miles for the selected Ton Miles Operation and the selected Safety Factor %
- The Safety Factor %
- The Report Comment
- The Drilling Line Cut Off (If required).

Select **Add Ton Miles to the report**. The data is now added to the report. Select **View Report** to view the Ton Miles Report (Ref. Figure 12).

Menu	Ton Miles	Input	Help	Printout	Email Report	Export Report	Delete Report
Manufacturer	XYZ Wire Rope Co	Cumulative Cut Off	0	Rig			
Size	1.375	Estimated Line left	2000	Single Derrick			
Lay	R	Cumulative Ton Miles	170	Well No:	A-1-2000		
Strands	6 X 19	Cost per Ton Miles	146.79	Spud Date	6-Apr-11		
New Spool installed	6-Apr-11						
Spool No:	1	Report Date	18-Apr-11				
Original Length	2000	Cost of Spool	25000				

Date	TD	Round Trip	Half Trip	Drilled	Cored	Run Casing	Run Liner	Wiper Trip	Horizontal Round Triup	Horizontal Half Trip	Horizontal Drilled	Comment	Running BOPs	Drig Line Cut Off	Ton Miles
18-Apr-11	5000											New Spool			163.71
18-Apr-11	5000			6.61											6.61

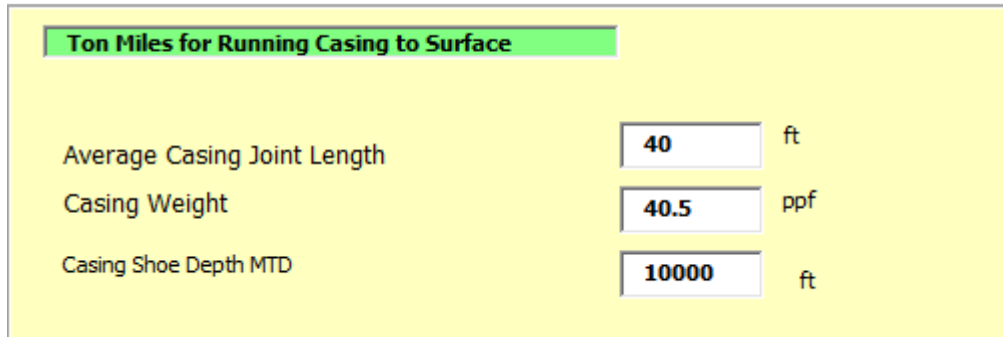
Figure 12 Ton Miles Report

The Ton Miles Report is shown with the Drilled/Cored Ton Miles shown(→). The new Cumulative Ton Miles (→) and the new Cost per Ton Miles (→) have been calculated.

Select **Input** to return to the Input dialog box.

(3) Ton Miles for Running Casing

The Ton Miles for Running Casing data is entered in the Ton Miles for Running Casing to Surface dialog box (Ref. Figure 13) of the Input dialog box.



Ton Miles for Running Casing to Surface		
Average Casing Joint Length	40	ft
Casing Weight	40.5	ppf
Casing Shoe Depth MTD	10000	ft

Figure 13. Ton Miles for Running Casing

Enter this data:

- Average Casing Joint Length
- Casing Weight
- Casing Shoe Depth MTD.

After entering the data, select **Results** on the Input dialog box (Ref. Figure 3).

The Select Units message box is shown. In the message box, select **OK**. Check that the correct units are selected. Select **Runing Casing**. The updated results dialog box is shown (Ref. Figure 14).

Select API or Metric	Calculated	Choose a Safety Factor			
? Ton Miles	Actual	+10%	+15%	+20%	
Round Trip	297.65	327.41	342.29	357.18	
Half Trip	148.82	163.71	171.15	178.59	
Drilled	6.01	6.61	6.91	7.21	
Cored	4.00	4.41	4.61	4.81	
Running Casing	404.25	444.67	464.89	485.10	
Running Liner					
Wiper Trip					
Horizontal Round Trip					
Horizontal Half Trip					
Horizontal Drld					
Running BOP's					
Ton Miles Operation	Ton Miles	% Safety Factor	Add Report Comment	Drig Line Cut Off	
Run Casing	444.67	10			
Add Ton Miles to the report		View Report			

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Figure 14. Results (Ton Miles for Running Casing)

The lower panel of the Results dialog box shows:

- The selected Ton Miles Operation (Run Casing)
- The Ton Miles for the selected Ton Miles Operation and the selected Safety Factor %
- The Safety Factor %
- The Report Comment
- The Drilling Line Cut Off (If required).

Select **Add Ton Miles to the report**. The data is now added to the report. Select **View Report** to view the Ton Miles Report (Ref. Figure 15).

Menu	Ton Miles	Input	Help	Printout	Email Report	Export Report	Delete Report
Manufacturer	XYZ Wire Rope Co	Cumulative Cut Off	0	Rig			
Size	1.375	Estimated Line left	2000		Single Derrick		
Lay	R	Cumulative Ton Miles	615	Well No:	A-1-2000		
Strands	6 X 19	Cost per Ton Miles	40.65	Spud Date	6-Apr-11		
New Spool installed	6-Apr-11						
Spool No:	1	Report Date	18-Apr-11				
Original Length	2000	Cost of Spool	25000				

Date	TD	Round Trip	Half Trip	Drilled	Cored	Run Casing	Run Liner	Wiper Trip	Horizontal Round Triup	Horizontal Half Trip	Horizontal Drilled	Comment	Running BOPs	Drig Line Cut Off	Ton Miles
18-Apr-11	5000		163.71									New Spool			163.71
18-Apr-11	5000			6.61											6.61
18-Apr-11	5000					444.67									444.67

Figure 15. Ton Miles Report

The Ton Miles Report is shown with the Run Casing Ton Miles shown (→). The new Cumulative Ton Miles (→) and the new Cost per Ton Miles(→) have been calculated. Select **Input** to return to the Input dialog box.

(4) Ton Miles for Running a Liner

On the Input dialog box, select **Ton Miles for Running Liner**. The data is entered in The Ton Miles for Running a Liner dialog box (Ref. Figure 16) of the Input dialog box.

Ton Miles For Running a Liner

Liner weight	26	ppf
Liner Length	3000	ft
MTD	5000	ft

	Weight	Length	
DC ppf	120	600	ft
Hvy Wt ppf	29	500	ft
DP ppf	19.5	3900	ft

Figure 16. Ton Miles for Running a Liner

Enter this data:

- Liner Weight
- Liner Length.

After entering the data, select **Results** on the Input dialog box (Ref. Figure 3).

The Select Units message box is shown. In the message box, select **OK**. Check that the correct units are selected. Select **Runing Liner**. The updated results dialog box is shown (Ref. Figure 17).

Select API or Metric	Calculated	Choose a Safety Factor		
? Ton Miles	Actual	+10%	+15%	+20%
Round Trip	297.65	327.41	342.29	357.18
Half Trip	148.82	163.71	171.15	178.59
Drilled	6.01	6.61	6.91	7.21
Cored	4.00	4.41	4.61	4.81
Running Casing	404.25	444.67	464.89	485.10
Running Liner	378.44	416.28	435.20	454.13
Wiper Trip				
Horizontal Round Trip				
Horizontal Half Trip				
Horizontal Dr'd				
Running BOP's				
Ton Miles Operation	Ton Miles	% Safety Factor	Add Report Comment	Drlg Line Cut Off
Run Liner	416.28	10		
Add Ton Miles to the report		View Report		

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Figure 17 Results (Ton Miles for Running a Liner)

The lower panel of the Results dialog box shows:

- The selected Ton Miles Operation (Run Liner)
- The Ton Miles for the selected Ton Miles Operation and the selected Safety Factor %
- The Safety Factor %
- The Report Comment
- The Drilling Line Cut Off (If required).

Select [Add Ton Miles to the report](#). The data is now added to the report. Select [View Report](#) to view the Ton Miles Report (Ref. Figure 18).

Menu Ton Miles Input Help Printout Email Report Export Report Delete Report															
Manufacturer	XYZ Wire Rope Co		Cumulative Cut Off		0		Rig								
Size	1.375		Estimated Line left		2000				Single Derrick						
Lay	R		Cumulative Ton Miles		1031		Well No:		A-1-2000						
Strands	6 X 19		Cost per Ton Miles		24.24		Spud Date		6-Apr-11						
New Spool installed	6-Apr-11														
Spool No:	1						Report Date		18-Apr-11						
Original Length	2000		Cost of Spool		25000										
Date	TD	Round Trip	Half Trip	Drilled	Cored	Run Casing	Run Liner	Wiper Trip	Horizontal Round Triup	Horizontal Half Trip	Horizontal Drilled	Comment	Running BOPs	Drig Line Cut Off	Ton Miles
18-Apr-11	5000		163.71									New Spool			163.71
18-Apr-11	5000			6.61											6.61
18-Apr-11	5000					444.67									444.67
18-Apr-11	5000						416.28								416.28

Figure 18. Ton Miles Report

The Ton Miles Report is shown with the Running a Liner Ton Miles shown (→). The new Cumulative Ton Miles (→) and the new Cost per Ton Miles (→) have been calculated. Select [Input](#) to return to the Input dialog box.

(5) Ton Miles for Short Trip/Wiper Trip

The Ton Miles for a Short Trip/Wiper Trip data is entered in the Ton Miles for Short Trip/Wiper Trip dialog box (Ref. Figure 19) of the Input dialog box.

Ton Miles for Short Trip / Wiper Trip

Length of Wiper Trip

Figure 19. Ton Miles for Short Trip/Wiper Trip

Enter the length of the Short Trip/Wiper Trip

After entering the data, select [Results](#) on the Input dialog box (Ref. Figure 3).

The Select Units message box is shown. In the message box, select [OK](#). Check that the correct units are selected. Select [Wiper Trip](#). The updated results dialog box is shown (Ref. Figure 20).

Select API or Metric	Calculated	Choose a Safety Factor			
? Ton Miles	Actual	+10%	+15%	+20%	
Round Trip	297.65	327.41	342.29	357.18	
Half Trip	148.82	163.71	171.15	178.59	
Drilled	6.01	6.61	6.91	7.21	
Cored	4.00	4.41	4.61	4.81	
Running Casing	404.25	444.67	464.89	485.10	
Running Liner	378.44	416.28	435.20	454.13	
Wiper Trip	191.96	211.15	220.75	230.35	
Horizontal Round Trip					
Horizontal Half Trip					
Horizontal Dr'd					
Running BOP's					
Ton Miles Operation	Ton Miles	% Safety Factor	Add Report Comment	Drig Line Cut Off	
Wiper Trip	211.15	10			
Add Ton Miles to the report		View Report			

Figure 20. Results (Ton Miles for Short Trip/Wiper Trip)

The lower panel of the Results dialog box shows:

- The selected Ton Miles Operation (Wiper Trip)
- The Ton Miles for the selected Ton Miles Operation and the selected Safety Factor %
- The Safety Factor %
- The Report Comment
- The Drilling Line Cut Off (If required).

Select **Add Ton Miles to the report**. The data is now added to the report. Select **View Report** to view the Ton Miles Report (Ref. Figure 21).

Menu		Ton Miles	Input	Help	Printout	Email Report	Export Report	Delete Report							
Manufacturer	XYZ Wire Rope Co	Cumulative Cut Off			0	Rig									
Size	1.375	Estimated Line left			2000		Single Derrick								
Lay	R	Cumulative Ton Miles			1242	Well No:	A-1-2000								
Strands	6 X 19	Cost per Ton Miles			20.12	Spud Date	6-Apr-11								
New Spool installed	6-Apr-11														
Spool No:	1	Report Date					18-Apr-11								
Original Length	2000	Cost of Spool			25000										
Date	TD	Round Trip	Half Trip	Drilled	Cored	Run Casing	Run Liner	Wiper Trip	Horizontal Round Triup	Horizontal Half Trip	Horizontal Drilled	Comment	Running BOPs	Drig Line Cut Off	Ton Miles
18-Apr-11	5000	163.71										New Spool			163.71
18-Apr-11	5000			6.61											6.61
18-Apr-11	5000				444.67										444.67
18-Apr-11	5000						416.28								416.28
18-Apr-11	5000						211.15								211.15

Figure 21. Ton Miles Report

The Ton Miles Report is shown with the Short Trip/Wiper Trip Ton Miles shown (→). The new Cumulative Ton Miles (→) and the new Cost per Ton Miles (→) have been calculated. Select **Input** to return to the Input dialog box.

(6) Ton Miles for Horizontal Holes

The Ton Miles for Horizontal Holes data is entered in the Ton Miles Horizontal Holes dialog box (Ref. Figure 22) of the Input dialog box.

Ton Miles for Horizontal Holes

Measured Depth at Start of Dr'l'd Section	<input type="text" value="10000"/>	ft
Measured Depth at End of Dr'l'd Section	<input type="text" value="10500"/>	ft
Total Length of Horizontal Section	<input type="text" value="500"/>	ft
Average Overpull through section	<input type="text" value="12000"/>	lbs

Figure 22. Ton Miles for Horizontal Holes

Enter This Data:

- Measured Depth at Start of Drilled Section
- Measured Depth at End of Drilled Section
- Total Length of Horizontal Section
- Average Overpull Through Section.

After entering the data, select **Results** on the Input dialog box (Ref. Figure 3).

The Select Units message box is shown. In the message box, select **OK**. Check that the correct units are selected. Select either **Horizontal Round Trip**, **Horizontal Half Trip** or **Horizontal Dr'l'd** **. The Results dialog box is shown (Ref. Figure 23).

Select API or Metric	Calculated	Choose a Safety Factor			
? Ton Miles	Actual	+10%	+15%	+20%	
Round Trip	297.65	327.41	342.29	357.18	
Half Trip	148.82	163.71	171.15	178.59	
Drilled	6.01	6.61	6.91	7.21	
Cored	4.00	4.41	4.61	4.81	
Running Casing	404.25	444.67	464.89	485.10	
Running Liner	378.44	416.28	435.20	454.13	
Wiper Trip	191.96	211.15	220.75	230.35	
Horizontal Round Trip	297.67	327.43	342.32	357.20	
Horizontal Half Trip	148.83	163.72	171.16	178.60	
Horizontal Dr'l'd	1538.60	1692.46	1769.39	1846.32	
Running BOP's					
Ton Miles Operation	Ton Miles	% Safety Factor	Add Report Comment	Drig Line Cut Off	
Horizontal Dr'l'd TM	1692.46	10			
<div> Add Ton Miles to the report View Report </div>					

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Figure 23. Results (Ton Miles for Horizontal Holes)

The lower panel of the Results dialog box shows:

- The selected Ton Miles Operation (Horizontal Round Trip, Horizontal Half Trip or Horizontal Drilled**)
- The Ton Miles for the selected Ton Miles Operation and the selected Safety Factor %
- The Safety Factor %
- The Report Comment
- The Drilling Line Cut Off (If required).

Select [Add Ton Miles to the report](#). The data is now added to the report. Select [View Report](#) to view the Ton Miles Report (Ref. Figure 24).

Menu Ton Miles Input Help Printout Email Report Export Report Delete Report															
Manufacturer		XYZ Wire Rope Co		Cumulative Cut Off				0		Rig					
Size		1.375		Estimated Line left				2000				Single Derrick			
Lay		R		Cumulative Ton Miles				2935		Well No:		A-1-2000			
Strands		6 X 19		Cost per Ton Miles				8.52		Spud Date		6-Apr-11			
New Spool installed		6-Apr-11													
Spool No:		1		Report Date								18-Apr-11			
Original Length		2000		Cost of Spool				25000							

Date	TD	Round Trip	Half Trip	Drilled	Cored	Run Casing	Run Liner	Wiper Trip	Horizontal Round Triup	Horizontal Half Trip	Horizontal Drilled	Comment	Running BOPs	Drig Line Cut Off	Ton Miles
18-Apr-11	5000		163.71									New Spool			163.71
18-Apr-11	5000			6.61											6.61
18-Apr-11	5000					444.67									444.67
18-Apr-11	5000						416.28								416.28
18-Apr-11	5000							211.15							211.15
18-Apr-11	5000														1692.46

Figure 24. Ton Miles Report

The Ton Miles Report is shown with the selected Horizontal Ton Miles shown (→). The new Cumulative Ton Miles (→) and the new Cost per Ton Miles (→) have been calculated. Select [Input](#) to return to the Input dialog box.

(7) Ton Miles for Running BOP on Marine Riser

Ton Miles for running BOP on Marine Riser

On the Input dialog box, select [Ton Miles for running BOP on Marine Riser](#). The data is entered in Input for Running BOPs on Marine Riser dialog box (Ref. Figure 25) of the Input dialog box.

Input for running BOPS on Marine Riser

Enter the distance Rig Floor to Sea bed

4000

ft

Enter the fluid weight of Sea Water

8.5

ppg

Enter the combined weight of Travelling Blocks, Bails,Links DSC,Top Drive and BOPs

125000

lbs

Select or change units in main input

Continue

Figure 25. Input for Running Bops on Marine Riser

Enter this data:

- Distance From Rig Floor to Sea Bed
- Fluid Weight of Sea Water
- Combined Weight of Travelling Blocks, Bails, Links DSC, Top Drive and BOPs.

After entering the data, select [Continue](#). The input dialog box is shown.

On the Input Dialog box, select [Results](#). The Select Units message box is shown. In the message box, select [OK](#). Check that the correct units are selected. Select [Running BOP's](#). The Results dialog box is shown (Ref. Figure 26).

Select API or Metric	Calculated	Choose a Safety Factor		
? Ton Miles	Actual	+10%	+15%	+20%
Round Trip				
Half Trip				
Drilled				
Cored				
Running Casing				
Running Liner				
Wiper Trip				
Horizontal Round Trip				
Horizontal Half Trip				
Horizontal Drl'd				
Running BOP's	73.66	81.03	84.71	88.39
Ton Miles Operation	Ton Miles	% Safety Factor	Add Report Comment	Drig Line Cut Off
Run BOP's	81.03	10		
Add Ton Miles to the report		View Report		

[Menu](#)
[Input](#)
[Results Explanation](#)
[Help on these buttons](#)

Figure 26. Results (Ton Miles for Running BOPs)

The lower panel of the Results dialog box shows:

- The selected Ton Miles Operation (Run BOPs)
- The Ton Miles for the selected Ton Miles Operation and the selected Safety Factor %
- The Safety Factor %
- The Report Comment
- The Drilling Line Cut Off (If required).

Select [Add Ton Miles to the report](#). The data is now added to the report. Select [View Report](#) to view the Ton Miles Report (Ref. Figure 27).

Menu		Ton Miles		Input		Help		Printout		Email Report		Export Report		Delete Report								
Manufacturer	XYZ Wire Rope Co		Cumulative Cut Off			0		Rig														
Size	1.375		Estimated Line left			2000				Single Derrick												
Lay	R		Cumulative Ton Miles			→ 3016		Well No:		A-1-2000												
Strands	6 X 19		Cost per Ton Miles			→ 8.29		Spud Date		6-Apr-11												
New Spool installed	6-Apr-11																					
Spool No:	1		Report Date													18-Apr-11						
Original Length	2000		Cost of Spool			25000																
Date	TD	Round Trip	Half Trip	Drilled	Cored	Run Casing	Run Liner	Wiper Trip	Horizontal Round Triup	Horizontal Half Trip	Horizontal Drilled	Comment	Running BOPs	Drig Line Cut Off	Ton Miles							
18-Apr-11	5000	163.71		New Spool												163.71						
18-Apr-11	5000			6.61														6.61				
18-Apr-11	5000					444.67														444.67		
18-Apr-11	5000							416.28														416.28
18-Apr-11	5000							211.15														211.15
18-Apr-11	5000											1692.46				1692.46						
18-Apr-11	4000											→ 81.03		→ 81.03								

Figure 27 Ton Miles Report

The Ton Miles Report is shown with the Running BOPs Ton Miles shown (→). The new Cumulative Ton Miles (→) and the new Cost per Ton Miles (→) have been calculated.

D. Cut Off Practice

The Cut Off Practice section of the program is accessed through the **Cut Off Practice** button on the Main Menu (Ref. Figure 1). Selecting this button shows a message box (Ref. Figure 28).

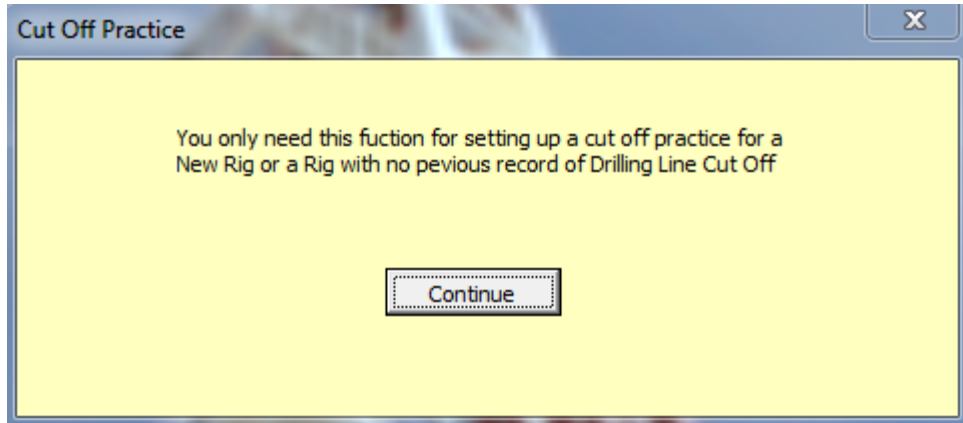


Figure 28. Cut Off Practice Message

In The message box, select  . The Ton Mile Goal dialog box is shown (Ref. Figure 29).

From the chart below select your Ton Miles/Foot goal. For example read across from the Drawworks Drum Diameter to the Wire Line Size.
Example: A Drum Diameter of 27 inches using 1 3/8 inch drilling line gives you a Ton Mile Goal of 18 Ton Miles per foot. Enter the selected the Ton Mile Goal in the input cell below

Drum Diameter	Rope Diameter					
	1"	1-1/8"	1-1/4"	1-3/8"	1-1/2"	1-5/8"
18	6.00	9.00				
19	6.00	9.00				
20	7.00	9.00				
21	7.00	10.00				
22	7.00	10.00				
23	8.00	10.00	13.00			
24	8.00	11.00	13.00	17.00		
25	8.00	11.00	14.00	17.00		
26	9.00	11.00	14.00	17.00		
27	9.00	12.00	15.00	18.00		
28		12.00	15.00	18.00		
29		12.00	15.00	18.00		
30		13.00	16.00	19.00		
31			16.00	19.00		
32			17.00	20.00		
33			17.00	20.00		
34			18.00	21.00	24.00	
35				21.00	25.00	
36				22.00	25.00	28.00

Diameter of Drawworks

Diameter of Block Sheaves

Number of lines

Diameter of Crown Sheaves

Height of Derrick

Enter your Ton Mile Goal

Ton Miles Since Last Cut Off

Line to Cut Off

Important Read Me Next

— Cut off guide —


A Guide to minimum and maximum line cut offs for various string ups and Derrick Heights

Minimum and Maximum Line Length to cut off	97' Mast Pulling 60' Stands	126' Mast Pulling 90' Stands	136' Mast Pulling 90' Stands	142' Mast Pulling 90' Stands	154' Mast Pulling 90' Stands	189' Mast Pulling 120' Stands
6 Lines	36' - 65'	54' - 86'	54' - 93'	54' - 96'	54' - 103'	72' - 131'
8 Lines		72' - 114'	72' - 124'	72' - 127'	72' - 139'	96' - 174'
10 Lines		90' - 147'	90' - 154'	90' - 136'	90' - 173'	120' - 217'
12 Lines			108' - 184'	108' - 189'	106' - 207'	144' - 260'

OK


Figure 29. Ton Mile Goal

Selecting **Important Read Me Next** shows a message box. This message box gives a detailed explanation of the Cut-Off Practices protocol.

Selecting  in this message box returns the program to the Ton Miles Goal dialog box.
Enter this data:

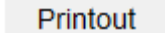
- Diameter of Draw Works
- Diameter of Block Sheaves
- Number of Lines
- Diameter of Crown Sheaves
- Height of Derrick
- Ton Mile Goal
- Ton Miles Since Last Cut Off.


The Line to Cut Off is calculated automatically.

Select  . The program returns to the Main Menu (Ref. Figure 1).

E. Ton Miles Report

(1) Print Ton Miles Report

To print the Ton Miles report, highlight the section of the report to be printed. select  on the Ton Miles Report.


A message box is shown. Select  in the message box. Another message box is shown with the prompt to enable the selection.


In this message box select . The print dialog box is shown. Enable the selection.

NOTE. Failure to enable the selection will result in the complete worksheet being printed.

Select the printer and select . The Ton Miles report will now be printed.

(2) Email Ton Miles Report

To email the Ton Miles report, select  on either the Main Menu or the Ton Miles Report. A message box is shown with instructions on how to email the report.


In the message box, select . Use the normal procedure for emailing.

(3) Export Ton Miles Report

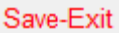
To export the Ton Miles report, select either  on the Main Menu or  on the Ton Miles report. A message box is shown.

In this message box, select . Use the normal procedure for saving files.

(4) Delete Ton Miles Report

To delete the Ton Miles contents of the Ton Miles Report, select  on the Ton Miles report. The Ton Miles report header is not deleted.

(5) Save Ton Miles Report

To Save the Ton Miles report, select  on the Main Menu. The report is saved and the program is shut down.