

Tubing Analysis System

Simulation Software

Recent

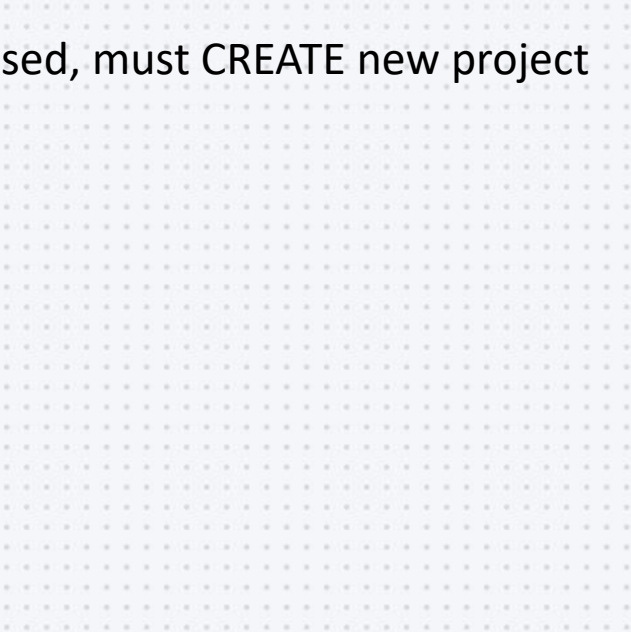
+

NEW JOB

Create

Import Job

First time TAS is used, must CREATE new project



Recent

+

NEW JOB

Create

Import Job



Name

Demo Job

Select Simulations



3D WELL ANALYSIS



TORQUE AND
DRAG

OFF ☒ ON



FLOW ANALYSIS

OFF ☒ ON



UNLOADING
KILL FLUIDS

OFF ☐ ON



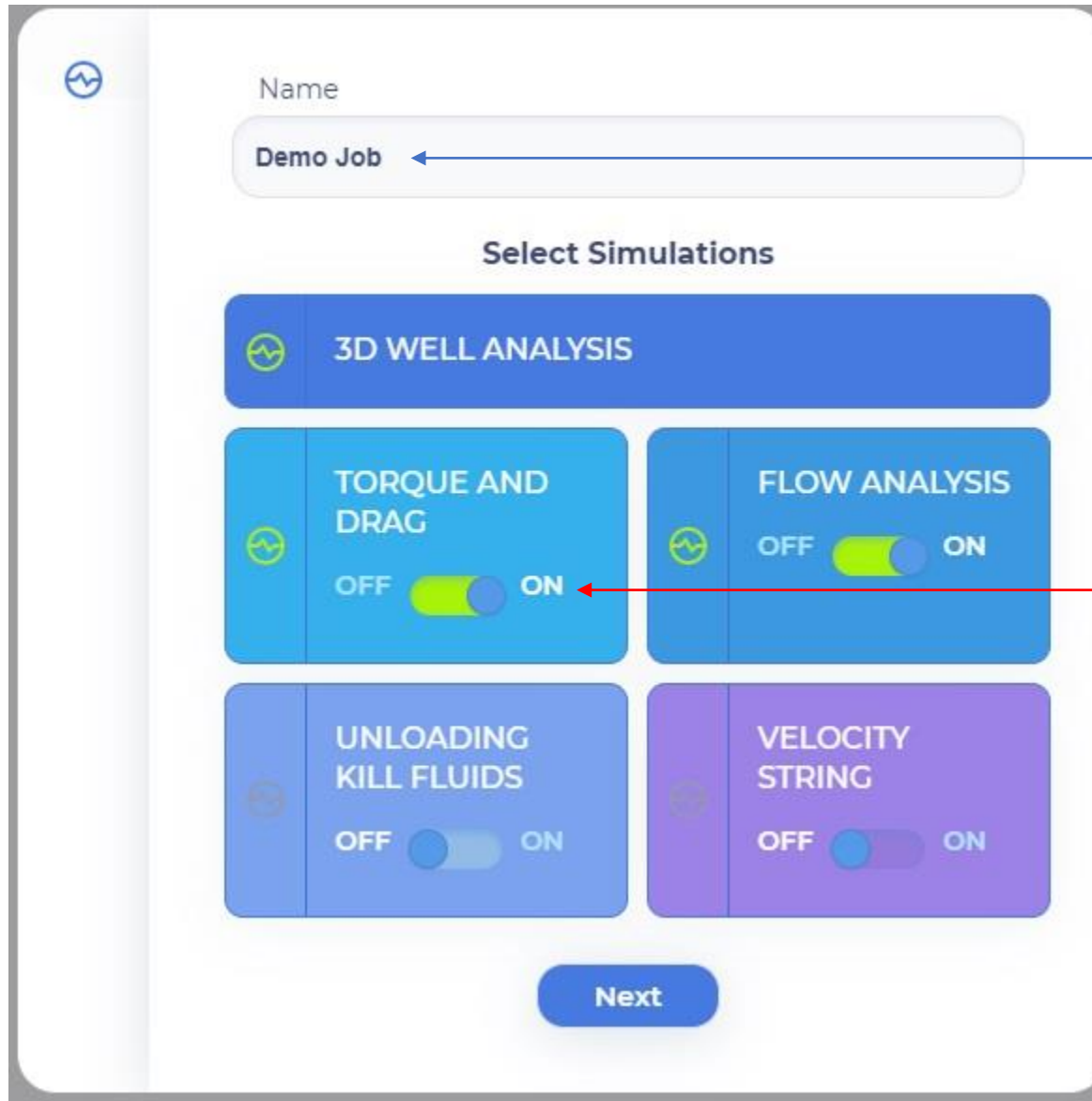
VELOCITY
STRING

OFF ☐ ON

Next

Enter a job name

Turn on the toggle switches
for the type of simulation to
be included in the project



The screenshot shows a configuration interface for a simulation project. At the top left is a circular icon with a waveform. Below it is a 'Name' label and a text input field containing 'Demo Job'. A blue arrow points from the text 'This project name is "Demo Job"' to the input field. Below the name field is the section header 'Select Simulations'. This section contains five simulation options, each with a toggle switch. The first option is '3D WELL ANALYSIS' in a dark blue bar. The second is 'TORQUE AND DRAG' in a light blue bar, with its toggle switch turned 'ON' (yellow); a red arrow points from the text 'Type of simulations included in this project/job is Torque & Drag and Flow Analysis (Fluid Circulation)' to this toggle. The third is 'FLOW ANALYSIS' in a light blue bar, also with its toggle switch turned 'ON' (yellow). The fourth is 'UNLOADING KILL FLUIDS' in a medium blue bar, with its toggle switch turned 'OFF' (blue). The fifth is 'VELOCITY STRING' in a purple bar, also with its toggle switch turned 'OFF' (blue). At the bottom center is a blue 'Next' button.

Name

Demo Job

Select Simulations

3D WELL ANALYSIS

TORQUE AND DRAG

OFF ON

FLOW ANALYSIS

OFF ON

UNLOADING KILL FLUIDS

OFF ON

VELOCITY STRING

OFF ON

Next

This project name is "Demo Job"

Type of simulations included in this project/job is Torque & Drag and Flow Analysis (Fluid Circulation)


Go Back

Job Name
Demo Job

 **3D WELL ANALYSIS**

Include Simulations:

 **TORQUE AND DRAG**
OFF ☒ ON

 **FLOW ANALYSIS**
OFF ☐ ON

 **UNLOADING KILL FLUIDS**
OFF ☐ ON

 **VELOCITY STRING**
OFF ☐ ON

If location/well exists, select it from the list, otherwise click Create New

Well Data

Select Well Location Profile

 well

JOB PARAMETERS

Configure Job Parameters →

If BHA exists, select it from the list, otherwise click Create New

BHA Config

Select BHA Profile

Select BHA

NO CIRCULATION

Select Well Type

RESERVOIR DATA

+

KILL FLUID DATA

Kill Fluid Data →

CT Geometry

Select String

Select String

Test string --- Test reel

str1 in FT --- reel1

inft2 --- reel2ft

str in meters --- reel mtr

Create new

GAS LIFT VALVES

If CT String exists, select it from the list, otherwise select Create New

VELOCITY STRING DATA

Velocity String Data →

Run Simulation

In this example, well already exists, hence “well1” is selected. Also CT string exists, select “str1 in FT --- reel1”. No BHA exists, hence select Create New

Go Back

Job Name

Demo Job



3D WELL ANALYSIS

Include Simulations:



TORQUE AND DRAG

OFF ☒ ON



FLOW ANALYSIS

OFF ☐ ON



UNLOADING KILL FLUIDS

OFF ☐ ON



VELOCITY STRING

OFF ☐ ON

Well Data

Select Well Location Profile



well1

BHA Config

Select BHA Profile

Create new

Create new

CT Geometry

Select String

str1 in FT --- reel1

JOB PARAMETERS

Configure Job Parameters →

NO CIRCULATION

Select Well Type

No Circulation ☒ With Circulation

WITH CIRCULATION

Configure Circulation Fluid Data →

RESERVOIR DATA



GAS LIFT VALVES



KILL FLUID DATA

Kill Fluid Data →

VELOCITY STRING DATA

Velocity String Data →

Run Simulation



Go Back

Job Name

Demo Job



3D WELL ANALYSIS

Include Simulations:



TORQUE AND DRAG

OFF ON



FLOW ANALYSIS

OFF ON



UNLOADING KILL FLUIDS

OFF ON



VELOCITY STRING

OFF ON



Create Bottom Hole Assembly

Available Tools



EXAMPLE - Check Valve



EXAMPLE - Back Pressure Valve



EXAMPLE - Back Pressure Valve



EXAMPLE - Drill Bit or Nozzles Tool



EXAMPLE - Drill Motor



EXAMPLE - Agitator



Create Tool +

Insert a name for the BHA

Demo BHA

Assembly

1.



EXAMPLE - Check Valve

Constant Pressure Drop



To include an existing Tool from the Available Tools list in the BHA, simply drag and drop

Cancel

Save and Continue

If the required tool is not available, click Create Tool



Go Back

Job Name
Demo Job

3D WELL ANALYSIS

Include Simulations:

TORQUE AND DRAG
OFF ☒ ON

FLOW ANALYSIS
OFF ☐ ON

UNLOADING KILL FLUIDS
OFF ☐ ON

VELOCITY STRING
OFF ☐ ON



Create Bottom Hole Assembly

Available Tools

- EXAMPLE - Check Valve
- EXAMPLE - Back Pressure Valve
- EXAMPLE - Drill Bit or Nozzles Tool
- EXAMPLE - Drill Motor
- EXAMPLE - Agitator

Create Tool +

Demo BHA

Assembly

- EXAMPLE - Check Valve Constant Pressure Drop
- EXAMPLE - Back Pressure Valve Constant Pressure Drop
- EXAMPLE - Drill Bit or Nozzles Tool Nozzles

Details of tool can be seen here

Weight 14.96854821
Length 0.6096
Inner Diameter 73.66
Outer Diameter 88.9

Cancel Save and Continue

Creating New Tool



Go Back

Job Name

Demo Job



3D WELL ANALYSIS

Include Simulations:



TORQUE AND DRAG

OFF ON



FLOW ANALYSIS

OFF ON



UNLOADING KILL FLUIDS

OFF ON



VELOCITY STRING

OFF ON



Create Bottom Hole Assembly

Demo BHA

Constant Pressure Drop ×

Constant Pressure Drop ×

Nozzles ×

presets

Cancel

Save and Continue



Add bottom hole tool

Name

Nozzle

Type

Agitator

Agitator

Constant Pressure Drop

Nozzles

Table of Pressure Drops

Weight

kgs

Outer Diameter

mm

Length

m

Modulus of Elasticity

30000000

Bar



Upload Photo

Friction Reduction Factor

Cancel

Save

Give the tool a name

Select the type of tool

Downhole Tools Types

1. **Constant Pressure Drop:** Regardless of flow rates, this tool will produce a constant pressure drop. Examples include Check Valve and Back Pressure Valve.
2. **Table of Pressure Drops:** A 3-point table of pressure drops vs flow rates is required here. TAS will then interpolate or extrapolate to calculate the appropriate pressure drop based on the fluid flow through the tool. Example, drill motor.
3. **Compute through Nozzles:** For this type of tool, number of nozzles and nozzle's diameter are required. TAS will compute pressure drop for flow through the nozzles. Example, jetting tool or drill bit.
4. **Agitator:** A special type of tool that produces axial oscillations, thus reducing friction between the coiled tubing and the wellbore.



Go Back

Job Name
Demo

3D WELL ANALYSIS

Include Simulations:

TORQUE AND DRAG

OFF ON

FLOW ANALYSIS

OFF ON

UNLOADING KILL FLUIDS

OFF ON

VELOCITY STRING

OFF ON



Create Bottom Hole Assembly

BHA name



Add bottom hole tool

Name

Nozzle

Type

Nozzles

Weight

3

lbs

Outer Diameter

1.5

in

Inner Diameter

1.3

in

Length

0.8

ft

Modulus of Elasticity

30000000

psi



Upload Photo

Number of Nozzles

5

Nozzles Diameter

0.125

in

Cancel

Save

After selecting tool type, fill in relevant information including name, weight, length, outer diameter, and inner diameter. Modulus of elasticity is automatically assumed to be 30,000,000 psi but can be changed by user.

Must also fill in information specific to the type of tool.

When finished, click SAVE

[Go Back](#)

Job Name

ZK370 **3D WELL ANALYSIS**

Include Simulations:













 **TORQUE AND DRAG**
OFF ☒ ON **FLOW ANALYSIS**
OFF ☒ ON **UNLOADING KILL FLUIDS**
OFF ☐ ON **VELOCITY STRING**
OFF ☐ ON

Simulation Results





Create Bottom Hole Assembly

Demo BHA

Available Tools

-  EXAMPLE - Check Valve
-  EXAMPLE - Back Pressure Valve
-  EXAMPLE - Drill Bit or Nozzles Tool
-  EXAMPLE - Drill Motor
-  EXAMPLE - Agitator
-  my nozzle
-  Convencional
-  Connector
-  X-over
-  MHA
-  Straight Bar
-  Straight Bar 2
-  Nozzle

Assembly

-  Connector Constant Pressure Drop 
-  Check Valve Constant Pressure Drop 
-  X-over Constant Pressure Drop 
-  Straight Bar Constant Pressure Drop 
-  Nozzles 6 port Nozzles 

BHA can be assembled by drag and drop of the tools

Go Back

Job Name
Demo Job

 **3D WELL ANALYSIS**

Well Data

Select Well Location Profile

 well1

BHA Config

Select BHA Profile


Demo BHA


CT Geometry

Select String

str1 in FT --- reel1

Include Simulations:

 **TORQUE AND DRAG**
OFF ☒ ON

 **FLOW ANALYSIS**
OFF ☐ ON

 **UNLOADING KILL FLUIDS**
OFF ☐ ON

 **VELOCITY STRING**
OFF ☐ ON

JOB PARAMETERS

Configure Job Parameters →

NO CIRCULATION

Select Well Type

No Circulation ☒ With Circulation

WITH CIRCULATION

Configure Circulation Fluid Data →

RESERVOIR DATA

+ Click here to enter Job Data

GAS LIFT VALVES

+

KILL FLUID DATA

Kill Fluid Data →

VELOCITY STRING DATA

Velocity String Data →

Run Simulation



Fill the relevant Job Data.

Go Back

Job Name
Demo

3D WELL ANALYSIS

Well Data

Select Well Location Profile

well

Include Simulations:

TORQUE AND DRAG

OFF ☒ ON

FLOW ANALYSIS

OFF ☐ ON

UNLOADING KILL FLUIDS

OFF ☐ ON

VELOCITY STRING

OFF ☐ ON

JOB PARAMETERS

Configure Job Parameters

RESERVOIR DATA

+

KILL FLUID DATA

Kill Fluid Data

There are some options for the
Torque & Drag simulations
which will be discussed later.

Configure Job Parameters

TD

Surface Temperature

80

deg.F

Bottom Hole Temperature

180

deg.F

Stuffing Box Drag - RIH

350

lbs

Stuffing Box Drag - POOH

350

lbs

Reel Back Tension - RIH

300

lbs

Reel Back Tension - POOH

300

lbs

Speed - RIH

80

ft/min

Speed - POOH

80

ft/min

Bottom Hole Torque

150

lbs.ft

Gooseneck Radius

72

in

Unsupported Length

10

in

Wellhead Pressure

200

psi

Safety Margin

80

%

Average ovality

%

Torque & Drag Options

RIH Weight at Fixed WOB

lbs

POOH Weight at Fixed BH Pull

lbs

☒ WOB at Fixed Surface Weight

☐ BHPull at Fixed Surface Weight

Cancel

Save and Continue

Go Back


Job Name
Demo

 **3D WELL ANALYSIS**

Include Simulations:

 **TORQUE AND DRAG**
OFF ☒ ON

 **FLOW ANALYSIS**
OFF ☐ ON

 **UNLOADING KILL FLUIDS**
OFF ☐ ON

 **VELOCITY STRING**
OFF ☐ ON

Well Data

Select Well Location Profile

 well

BHA Config

Select BHA Profile

Demo BHA

CT Geometry

Select String

str1 in FT --- reel1

No Circulation ☐ **With Circulation** ☒

 **JOB PARAMETERS**

Configure Job Parameters →

 **NO CIRCULATION**

Select Well Type

Well Producing

Well is Dead

 **WITH CIRCULATION**

Configure Circulation Fluid Data →

 **RESERVOIR DATA**

+

+

 **GAS LIFT VALVES**

 **KILL FLUID DATA**


Kill Fluid Data →

 **VELOCITY STRING DATA**

Velocity String Data →

Run Simulation

When fluid circulation is not included, user has to enter the fluids in the well and inside the CT.
The well can either be producing or dead

 MEDCOTAS

Go Back

Job Name
Demo

3D WELL ANALYSIS

Include Simulations:

TORQUE AND DRAG
OFF ☒ ON

FLOW ANALYSIS
OFF ☐ ON

UNLOADING KILL FLUIDS
OFF ☐ ON

VELOCITY STRING
OFF ☐ ON

After selecting Well is Dead,
this form will appear

Fluids

Well is Dead

Fluid in well

Fluid
Water

Fluid Type
Newtonian

Density
8.33 ppg

Viscosity
0.88 cps

Surface Tension
72 dynes/cm

Fluid bottom depth
8277.001 ft

For fluids in the well, the first fluid entered is assumed to be to the bottom of the well. If “Fluid bottom depth” is less than total depth of the well, the user will be able to enter a second fluid. Up to 3 fluids can be entered in the well. Gases can be entered here, but no gas will be allowed below other types of fluids

Fluid in CT

Fluid
Water

Fluid Type
Newtonian

Density
8.33 ppg

Viscosity
0.88 cps

Surface Tension
72 dynes/cm

Cancel Save and Continue

Only one fluid is permitted in the CT



Go Back

Job Name
Demo

3D WELL ANALYSIS

Well Data
Select Well Location Profile
well

BHA Config
Select BHA Profile
Demo BHA

CT Geometry
Select String
str1 in FT --- reel1

Include Simulations:

TORQUE AND DRAG
OFF ON

FLOW ANALYSIS
OFF ON

UNLOADING KILL FLUIDS
OFF ON

VELOCITY STRING
OFF ON

No Circulation ☒ With Circulation

JOB PARAMETERS

Configure Job Parameters →

NO CIRCULATION

Well is Dead

WITH CIRCULATION

Configure Circulation Fluid Data →

RESERVOIR DATA

+

GAS LIFT VALVES

+

KILL FLUID DATA

Kill Fluid Data →

VELOCITY STRING DATA

Velocity String Data →

Run Simulation

Toggle the “with circulation” switch to the ON position to include Fluid Circulation



Go Back

Job Name
Demo

3D WELL ANALYSIS

Include Simulations:

TORQUE AND DRAG

OFF ON

FLOW ANALYSIS

OFF ON

UNLOADING KILL FLUIDS

OFF ON

VELOCITY STRING

OFF ON

Well Data

Select Well Location Profile

well

JOB PARAMETERS

Configure Job Parameters

RESE

+

KILL

Kill Fluid Data

Fluid Circulation Data

Liquid

Fixed Pump Pressure

Pressure known at

Wellhead Pressure

Wellhead

100

psi

Circulation Depth

7200

ft

Fluid

Fluid Type

Water

Newtonian

Density

Surface Tension

8.33

ppg

72

dynes/cm

Viscosity

Flow Rate

0.88

cps

0.800

bpm

Include Sand

Specific Gravity

2.65

Concentration by Volume

5

%

Min mesh size

45

Fill in the Pumped
fluids data

TD FA

Select the flow type; Liquid,
Gas, Multi-phase, or Foam

By selecting the fluid, the fluid
properties will be automatically
gathered from the database.
They may be manually changed
here


If sand or cuttings are to be lifted
then switch the "Include Sand"
to ON


Cancel


Save and Continue


MedcoTas v0.9.50 TAS


File Edit View Window Help

MEDCOTAS

MEDCO


ahmad abbas
USB key Active


▼





Go Back

Simulations:

TORQUE AND DRAG
OFF ☒ ON

FLOW ANALYSIS
OFF ☒ ON

UNLOADING KILL FLUIDS
OFF ☐ ON

VELOCITY STRING
OFF ☐ ON

JOB PARAMETERS

Configure Job Parameters →

NO CIRCULATION

Well is Dead ▼

WITH CIRCULATION

Configure Circulation Fluid Data →

RESERVOIR DATA

+

GAS LIFT VALVES

+

KILL FLUID DATA

Kill Fluid Data →

VELOCITY STRING DATA

Velocity String Data →

Start the simulation by clicking
"Run Simulation"

Run Simulation

Create Report ▼

Workspaces



Go Back OFF ☒ ON

FLOW
ANALYSIS

OFF ☒ ON

UNLOADING
KILL FLUIDS

OFF ☐ ON

VELOCITY
STRING

OFF ☐ ON

Configure
Parameters

RESERVOIR DATA

+

+

GAS LIFT VALVES

VELOCITY STRING DATA

data

→



TAS Job Results Name

Using Ff 0.25 in cased hole 0.4 in open hole

Run

Run Simulation

Create Report


Workspaces

Simulation Results

As users may wish to do several scenarios, it is a good idea to save the results in different meaningful names, this will make it easier to identify the scenarios.

MedcoTas v0.9.50 TAS

File Edit View Window Help

 MEDCOTAS

Go Back

Simulations:

TORQUE AND DRAG
OFF ☒ ON

FLOW ANALYSIS
OFF ☒ ON

UNLOADING KILL FLUIDS
OFF ☐ ON

VELOCITY STRING
OFF ☐ ON

JOB PARAMETERS

Configure Job Parameters →

NO CIRCULATION

Well is Dead

WITH CIRCULATION

Configure Circulation Fluid Data →

RESERVOIR DATA

+

GAS LIFT VALVES

+

KILL FLUID DATA

Kill Fluid Data →

VELOCITY STRING DATA

Velocity String Data →

Run Simulation

Simulation Results

N

TAS will report back to confirm when simulations are completed. If “lockup” is predicted then a warning message will appear

Warning!

Lockup has occurred at depth 13507.000 ft

Reports can now be generated

Create Report

Generating Reports

When generating reports, the user is free to customise the report to their own requirements. It is also possible to create some report templates and these will be available at a touch of a button.

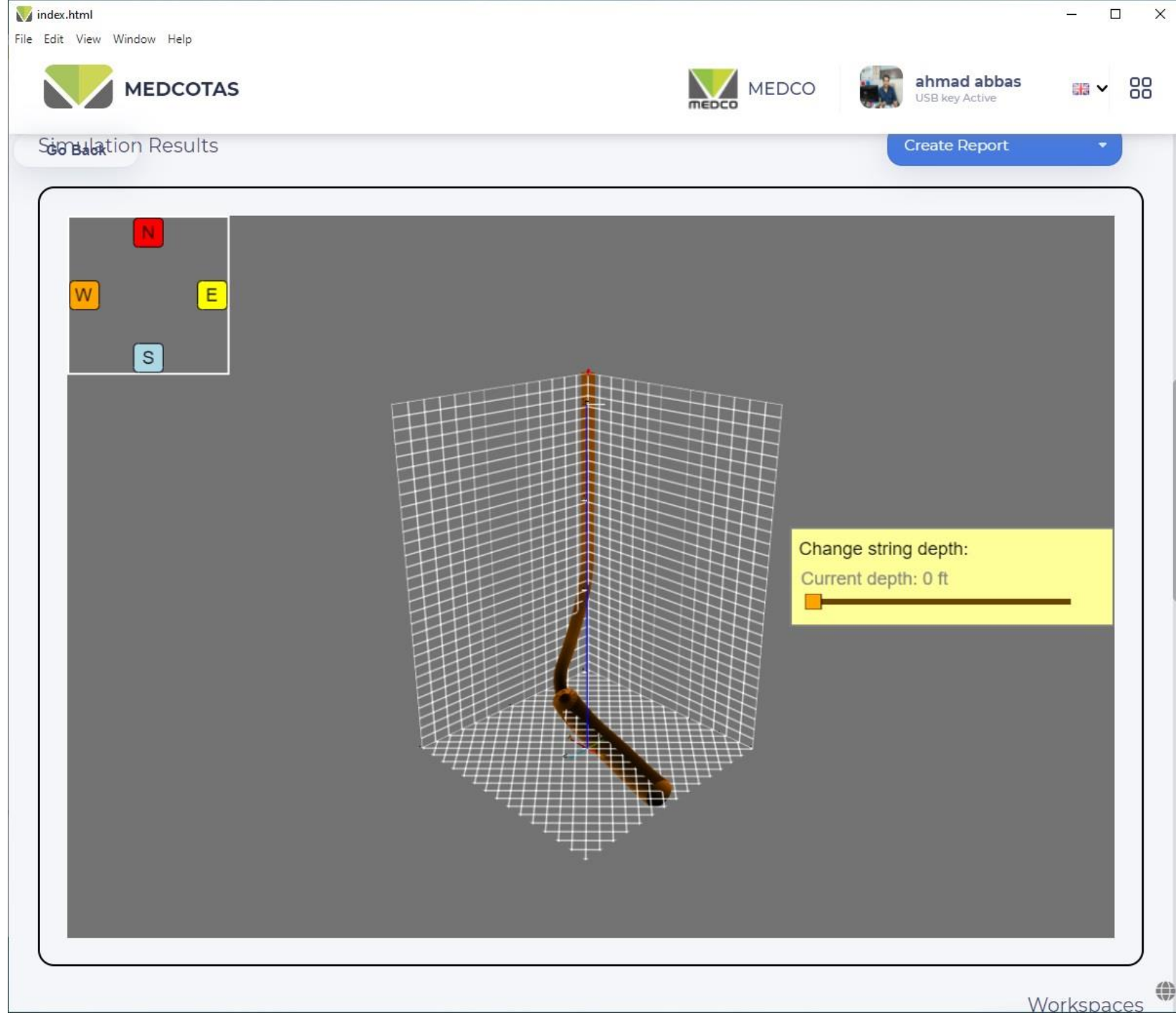
The reports can include system and/or user defined (custom) data & graphs. There is also a number of general information data that is available to add as comments.

First, the user will need to create a “Workspace” and create some “Custom Charts and Tables”. Once these have been created, they will become available for inclusion in the report.

3-D Well Schematic is immediately available after successfully running simulation.

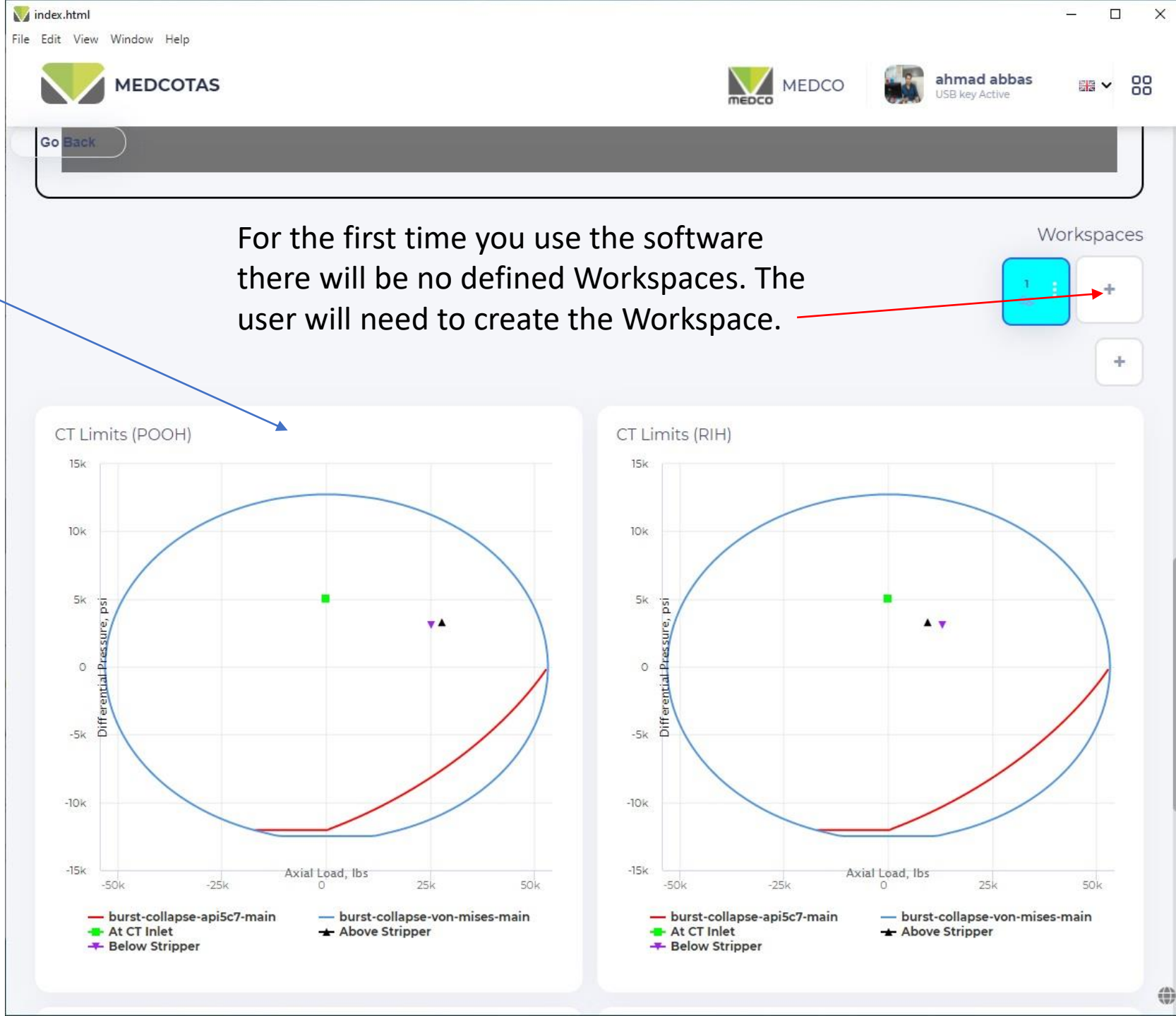
To adjust the view, use the mouse left button to tilt, rotate or yaw and right button to move the schematic in any direction. To zoom in and out, hold the CTRL key and use the scroll on the mouse.

The view that you see here will be the one included in the report.



If the simulations include Torque & Drag, the CT Limits charts (Burst/Collapse) for Run-In-Hole (RIH) and Pull-Out-Of-Hole (POOH) are automatically included.

Note that objects, such as charts or tables, included in a workspace will be retentive, i.e. they will automatically appear when you select the particular workspace next time the program is used. The user will be able to add/remove objects.



index.html

File Edit View Window Help

MEDCOTAS MEDCO ahmad abbas USB key Active

Go Back

Workspaces

1

+

+

When a new Workspace is being created, the user can give it a name to help identify the workspace. In this example, the name is TD & FA (implying Torque and Drag & Flow Analysis)

CT Limits (POOH)

CT Limits (DIU)

15k

10k

5k

0

-5k

-10k

-15k

Differential Pressure, psi

-50k

-25k

0

25k

50k

Axial Load, lbs

burst-collapse-api5c7-main

At CT Inlet

Below Stripper

burst-collapse-von-mises-main

Above Stripper

Name

TD & FA

Create

burst-collapse-api5c7-main

At CT Inlet

Below Stripper

burst-collapse-von-mises-main

Above Stripper

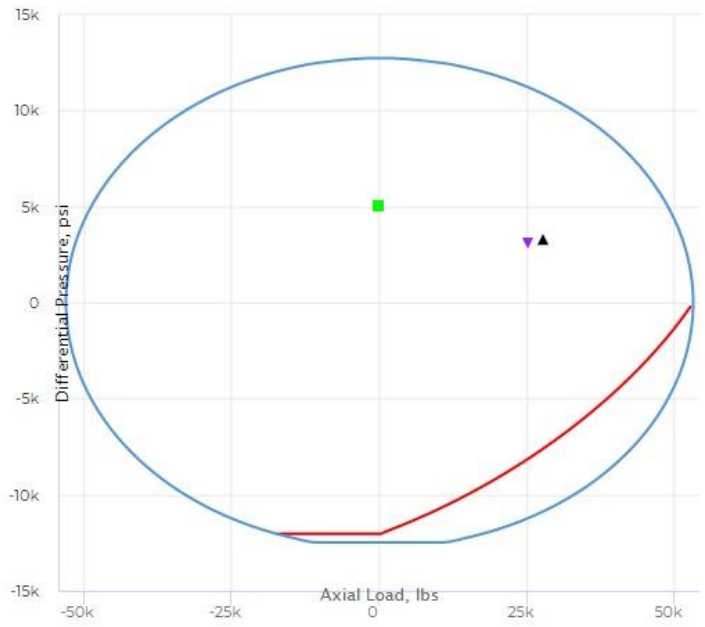
Workspaces



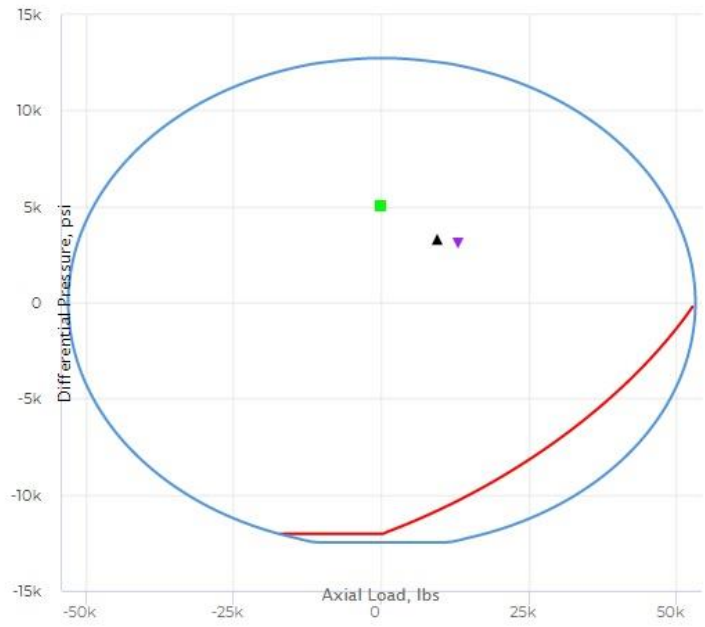
The selected workspace will be identified by a bright color

To start adding charts to the current workspace, click the “+” button

CT Limits (POOH)



CT Limits (RIH)



Go Back

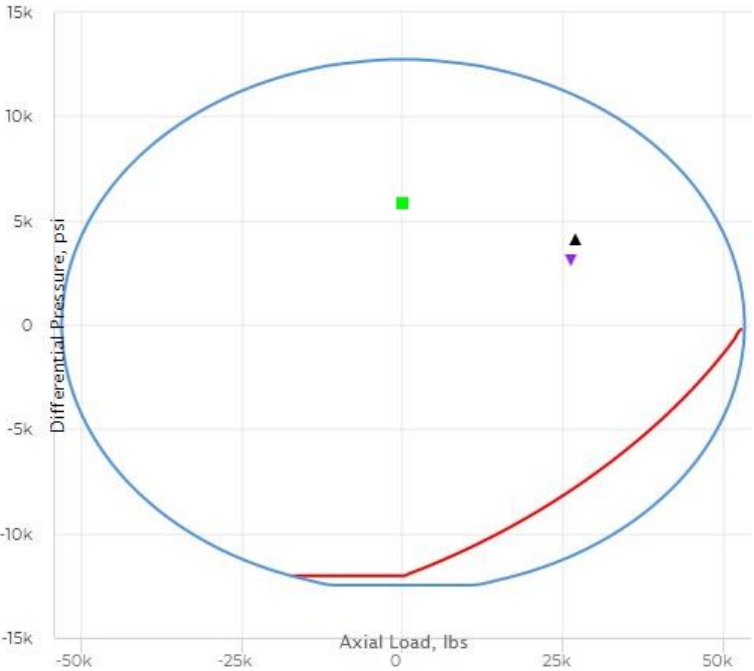
Workspaces





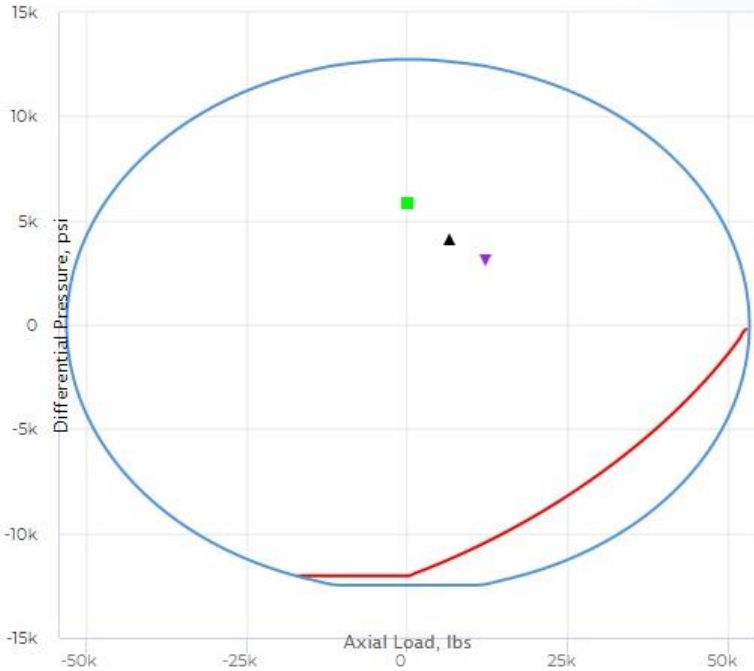

Add Chart
Add Table

CT Limits (POOH)



— burst-collapse-api5c7-main — burst-collapse-von-mises-main
■ At CT Inlet ▲ Above Stripper
▼ Below Stripper

CT Limits (RIH)



— burst-collapse-api5c7-main — burst-collapse-von-mises-main
■ At CT Inlet ▲ Above Stripper
▼ Below Stripper

Click the “+” button and then select the object type, i.e. chart or table

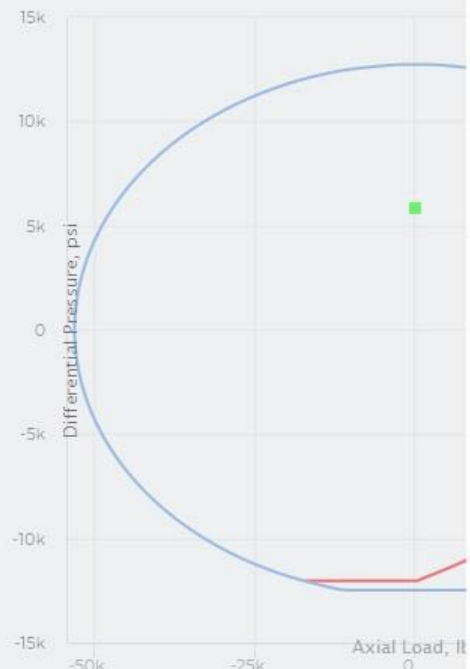
First we will create a chart



Go Back

Change the Y-Axis title if necessary

CT Limits (POOH)



— burst-collapse-api5c7-main
■ At CT Inlet
✱ Below Stripper



Select from template

Create new chart ▾

Landscape

Portrait

X-Axis

Depth

Y-Axis

Weight RIH

Curves

✓ Weight RIH

lbs

✓ Weight POOH

lbs

Click here to edit the properties of the parameter

Chart name

Weights in Portrait

Available parameters

^ WELL PROFILE OUTPUTS

✓ FORCE ANALYSIS OUTPUTS

✓ Maximum Push while RIH

✓ Maximum Pull while POOH

✓ Maximum Weight-on-Bit

✓ Maximum Bottom Hole Pull at Maximum Pull

✓ Catastrophic Buckling Limit

✓ Stretch while RIH

✓ Stretch while POOH

✓ RIH Tension/Compression RIH

✓ POOH Tension/Compression POOH

✓ RIH Torque

✓ POOH Torque

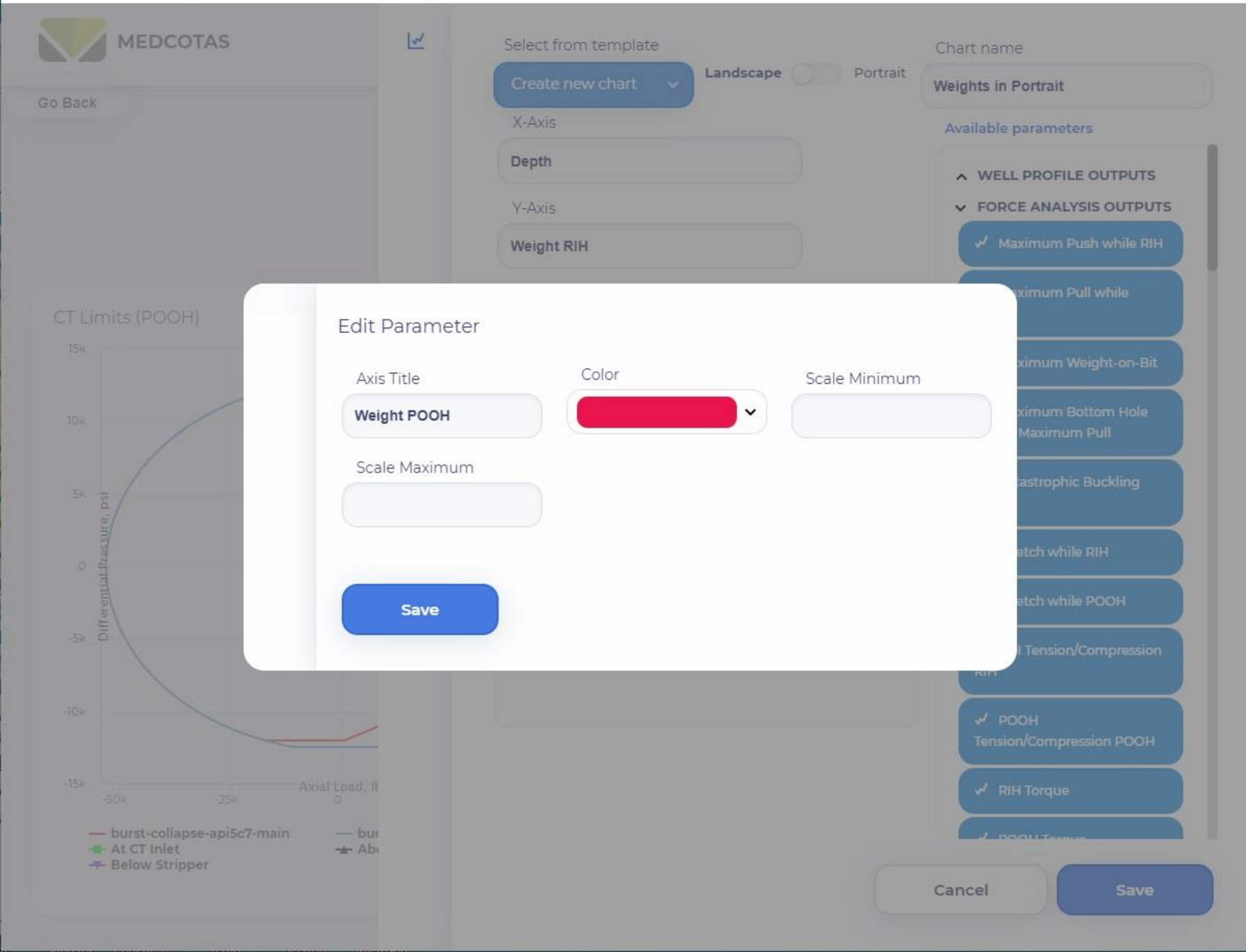
Cancel

Save

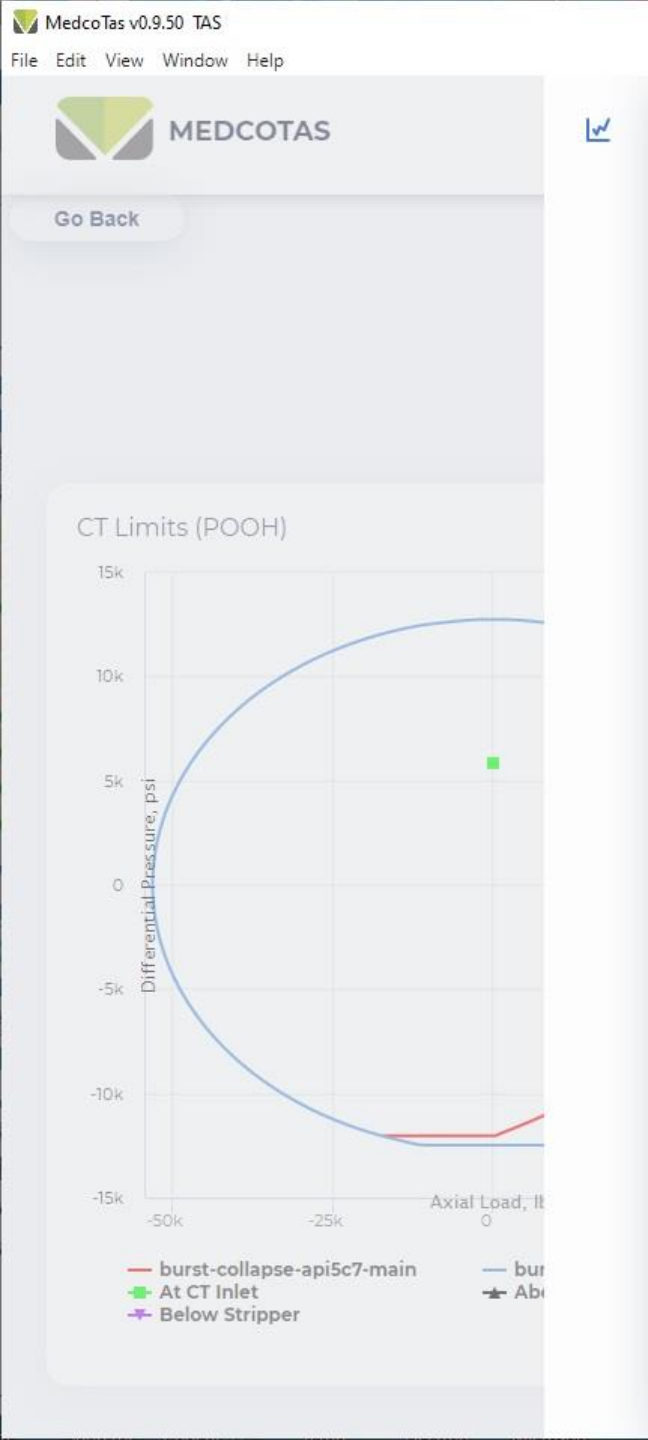
Give the chart a name

Use the dropdown to minimise a group of outputs

Drag & drop the parameters you wish to include in the chart



Edit properties of the curve if required



Select from template

Create new chart ▾

Landscape ☐ Portrait ☒

Chart name

Weights in Portrait

Available parameters

WELL PROFILE OUTPUTS

FORCE ANALYSIS OUTPUTS

✓ Maximum Push while RIH

✓ Maximum Pull while POOH

✓ Maximum Weight-on-Bit

✓ Maximum Bottom Hole Pull at Maximum Pull

✓ Catastrophic Buckling Limit

✓ Stretch while RIH

✓ Stretch while POOH

✓ RIH Tension/Compression RIH

✓ POOH Tension/Compression POOH

✓ RIH Torque

✓ POOH Torque

Curves

✓ Weight RIH lbs

✓ Weight POOH lbs

Cancel Save

Toggle the switch to plot the chart in portrait

Change Y-Axis title if required

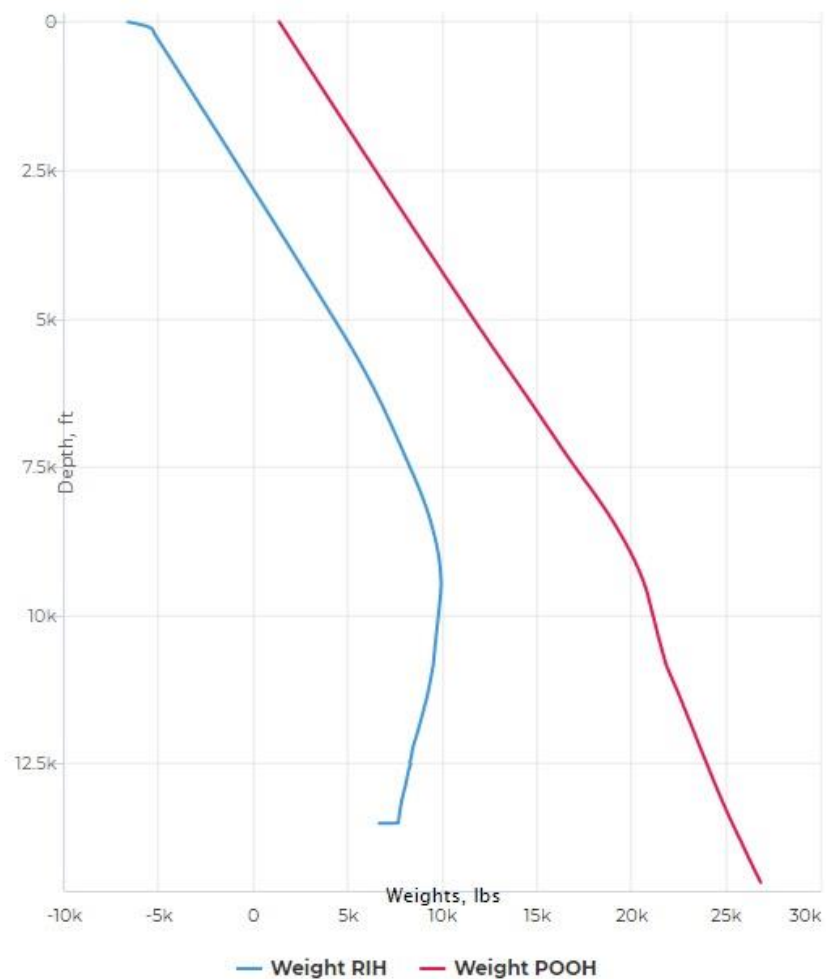
Click SAVE



ahmad abbas
USB key Active

[Go Back](#)

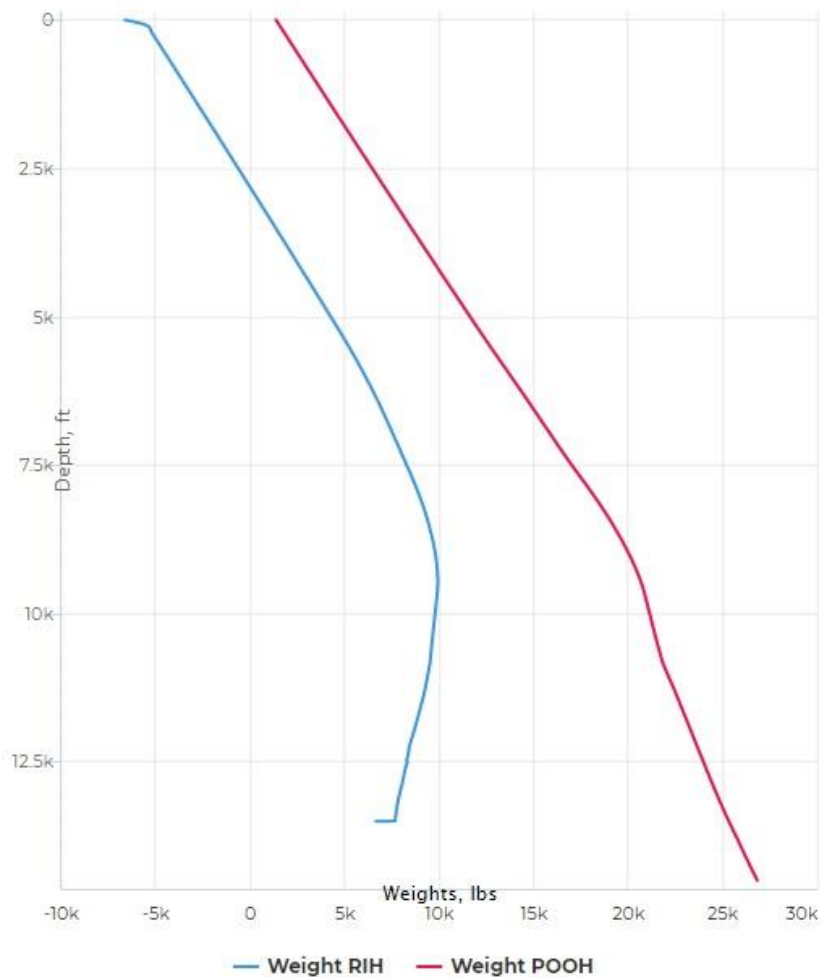
Weights in Portrait



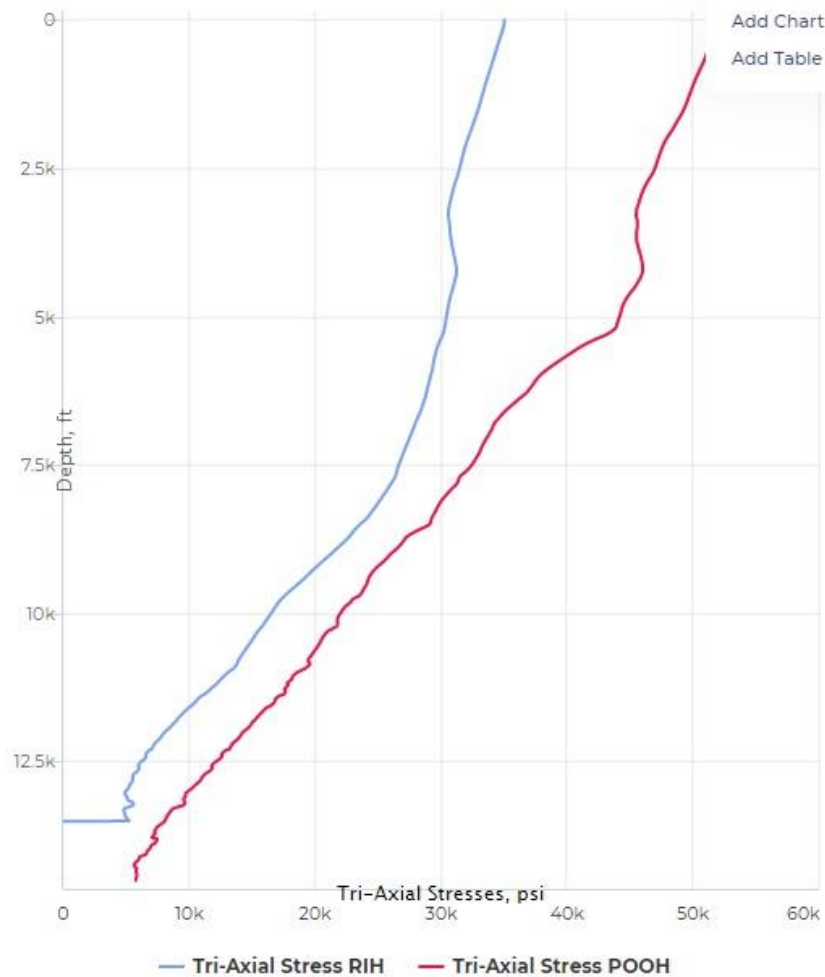
Click here to add
another chart

[Go Back](#)

Weights in Portrait



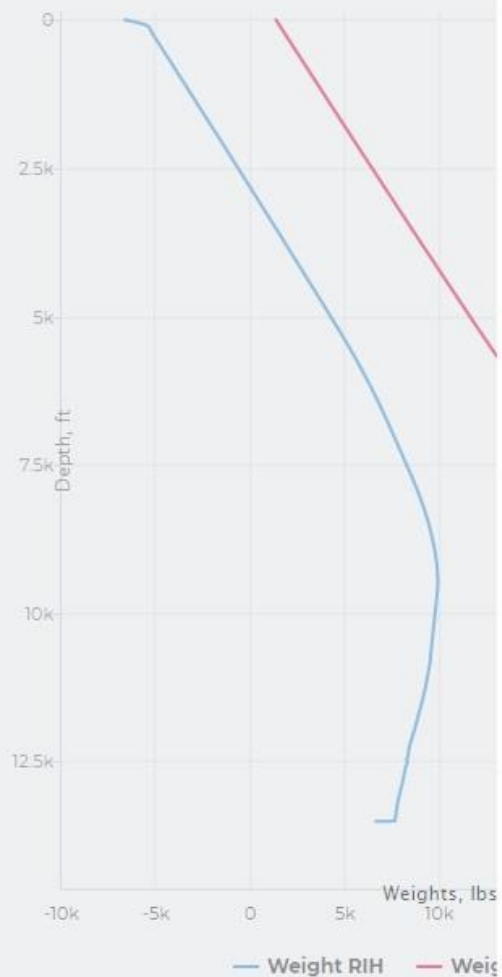
Stresses in Portrait

[Add Chart](#)[Add Table](#)

This time will add a table

[Go Back](#)

Weights in Portrait



Select from template

Create new table

First Column

Depth

Columns

- ☒ Inclination
- ☒ Azimuth
- ☒ True Vertical Depth ft
- ☒ True Horizontal Distance North ft
- ☒ True Horizontal Distance East ft
- ☒ Dogleg Severity deg/100ft

Table name

Well Profile

Available parameters

▼ WELL PROFILE OUTPUTS

☒ Temperature☒ Surface Vector☒ Radius Of Curvature☒ Casing Size☒ Friction Factor RIH☒ Friction Factor POOH☒ Relative Roughness

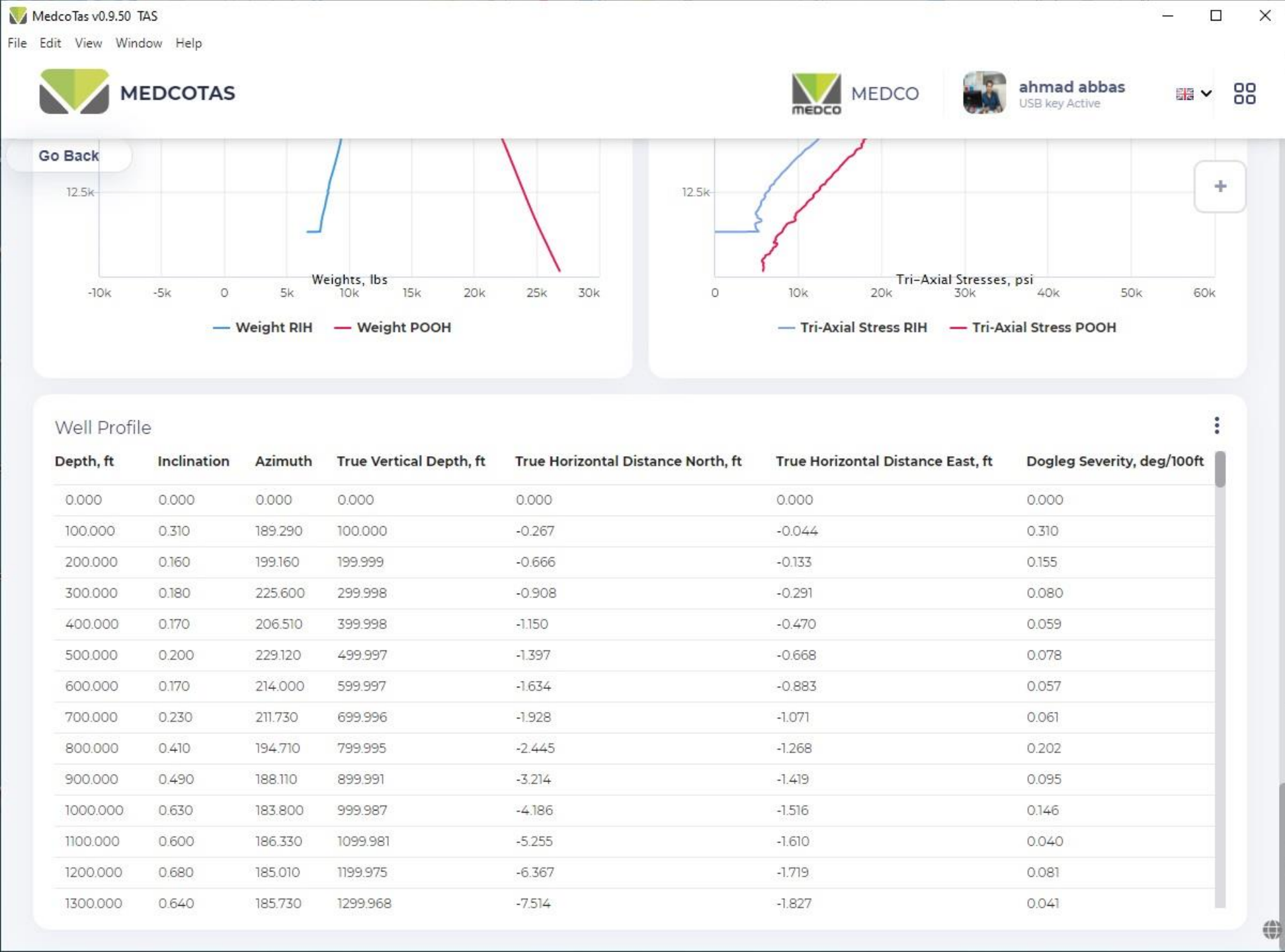
▼ FORCE ANALYSIS OUTPUTS

☒ Weight RIH☒ Weight POOH☒ Maximum Push while RIH☒ Maximum Pull while POOH

Cancel

Save

Creating a Table



The charts and tables will be available for next time the program is used, there will be no need to re-create them.

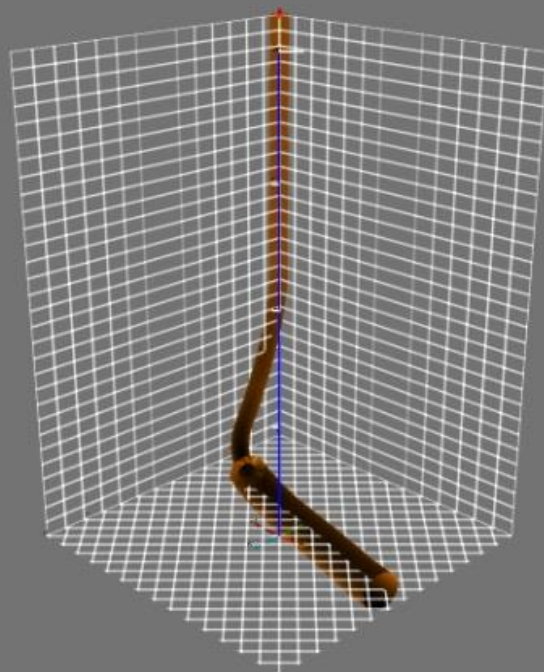
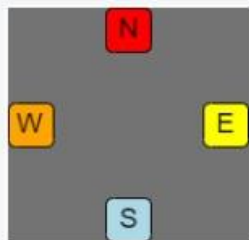
Also, all charts and tables created will be available for the reports.



Go Back STRING
OFF ON

Simulation Results

Create Report



Change string depth:

Current depth: 0 ft



Scroll up till the “Create Report” button is visible.

Click here and select “Create New Report”

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File Edit View Window Help

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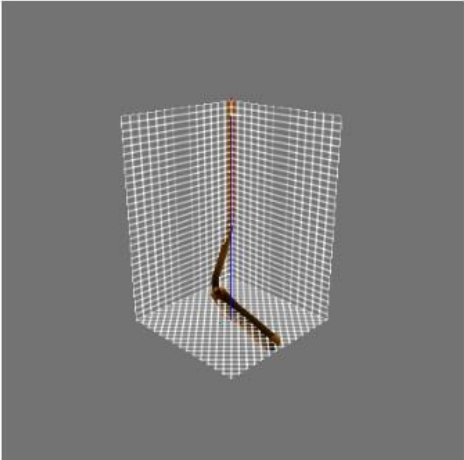
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Simulation Results for Well ZK370



Simulation made using
Tubing Analysis System (TAS) software
by
Modelling Engineering & Development Company
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Client MEDCO

Company Medco

Job ZK370

Well Location ZK370

Equipment GT12354-C -- CTR306-C

SYSTEM CHARTS

- ☒ 3D Well Chart
- ☒ Well Completion
- ☒ CT Limits (POOH)
- ☒ CT Limits (RIH)

CUSTOM CHARTS

- ☒ Weights
- ☒ Maximum Pull
- ☒ Min Weight (Lock up)
- ☒ Tri-Axial Stress
- ☒ Fluid Velocities
- ☒ Fluid Pressures
- ☒ RIH Limits
- ☒ Weight Portrait
- ☒ Weight Limits
- ☒ Tri-Axial Stress
- ☒ Well Profile
- ☒ Well Profile

The user is able to design the report. When doing so, the user can decide which charts, tables, and information to be included in the report. A template can also be saved and will become available next time the program is used.

The report can include;

1. One or more system charts. These would normally include Set-Down Weight Analysis if no lockup was predicted. In our example, lockup was predicted, so we don't see this system chart.
2. One or more Custom Charts.
3. One or more Custom Tables.
4. Input Data.
5. General information, like comments.

Scroll down to the bottom, then drag and drop items into the report.

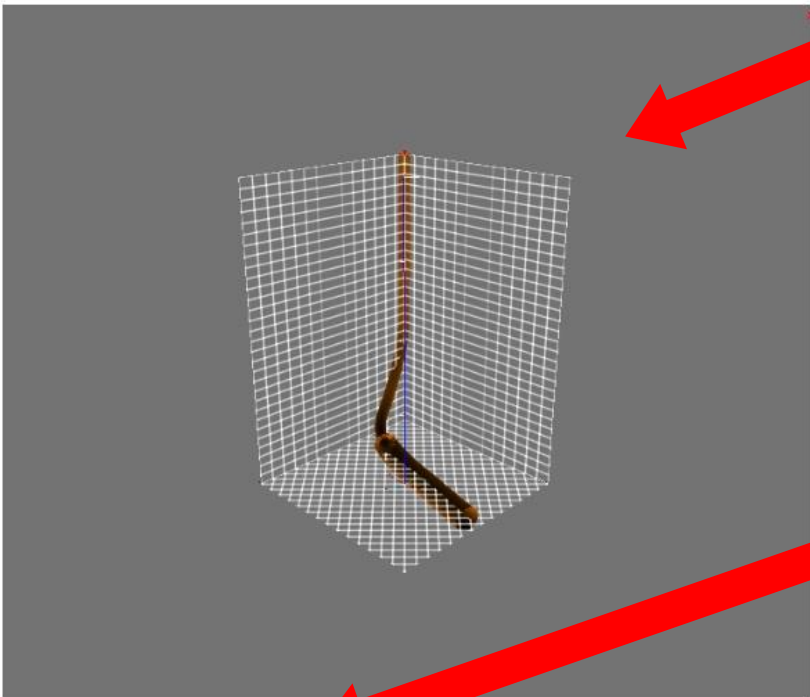
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General Information

Total Depth	14500 ft	x	True Vertical Depth	8795.2267 ft	x
Horizontal Distance - North	-3349.5686 ft	x	Horizontal Distance - East	5740.4089 ft	x
Maximum Inclination	91.31 degrees	x	Maximum Inclination at Depth	12670 ft	x
Maximum DLS	6.0787 deg/100ft	x	Maximum DLS at Depth	8500 ft	x
Minimum Restriction	2.992 in	x	Minimum Restriction at Depth	0 ft	x

SYSTEM CHARTS

- 3D Well Chart
- Well Completion
- CT Limits (POOH)
- CT Limits (RIH)

CUSTOM CHARTS

TABLES

SIMULATION INPUTS

GENERAL TAS INFORMATION

WELL PROFILE

- Total Depth
- True Vertical Depth
- Horizontal Distance - North
- Horizontal Distance - East
- Maximum Inclination
- Maximum Inclination at Depth
- Maximum DLS
- Maximum DLS at Depth
- Minimum Restriction
- Minimum Restriction at Depth

REACHING DEPTH

- RIH Between from

Drag & Drop the item required, in this example, the 3D Well Chart

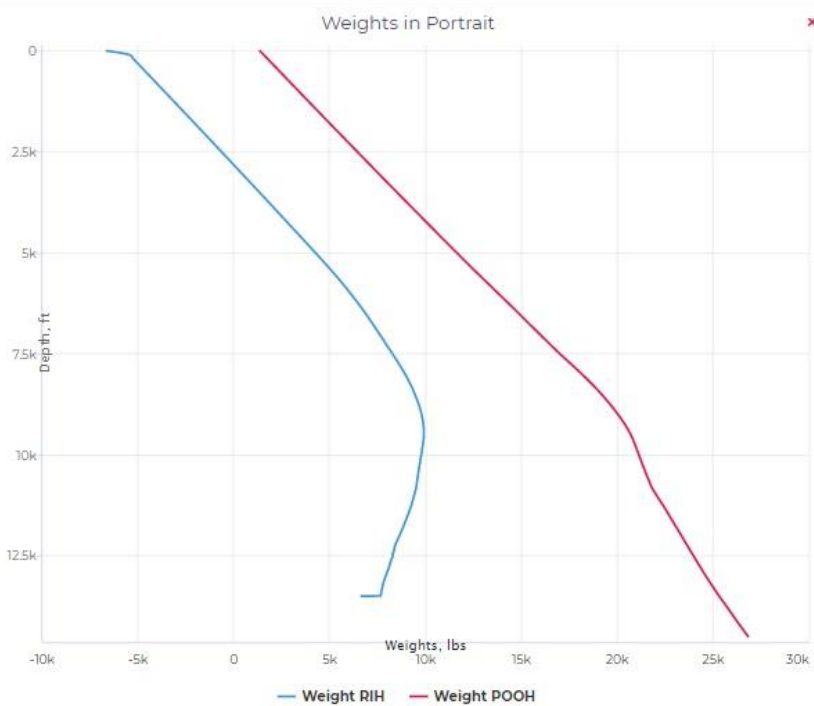
From General TAS Information, select the information (comments) and again Drag & Drop

Report Name Tas Report for ZK370

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General Information

RIH Lockup at	13507 ft	x
Catastrophic buckling	Not Detected	x
POOH Pipe yield limit	Not Exceeded	x

Keep on adding charts, tables,
and comments as required

Maximum Inclination

Maximum Inclination at Depth

Maximum DLS

Maximum DLS at Depth

Minimum Restriction

Minimum Restriction at Depth

REACHING DEPTH

RIH Between from

RIH Between to

RIH Lockup

RIH Pipe yield limit

RIH Pipe collapse limit

Catastrophic buckling

RIH Stress at Max. DLS

POOH from Depth

POOH to Depth

POOH Pipe yield limit

POOH Pipe collapse limit

POOH Stress at Max. DLS

WORKING AT DEPTH

Calculations at

Based on

of yield strength is

Report Name Tas Report for ZK370

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General Information

RIH Lockup at	13507 ft	x
Catastrophic buckling	Not Detected	x
POOH Pipe yield limit	Not Exceeded	x

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Depth, ft	Inclination	Azimuth	True Vertical Depth, ft	True Horizontal Distance North, ft	True Horizontal Distance East, ft	Dogleg Severity, deg/100ft
0.000	0.000	0.000	0.000	0.000	0.000	0.000
100.000	0.310	189.290	100.000	-0.267	-0.044	0.310
200.000	0.160	199.160	199.999	-0.666	-0.133	0.155
300.000	0.180	225.600	299.998	-0.908	-0.291	0.080
400.000	0.170	206.510	399.998	-1.150	-0.470	0.059
500.000	0.200	229.120	499.997	-1.397	-0.668	0.078
600.000	0.170	214.000	599.997	-1.634	-0.883	0.057
700.000	0.730	211.730	699.996	-1.928	-1.071	0.061

 Fluid Pressure - Portrait

 Weight Limits

 RIH Limits

 POOH Limits

 Weights in Portrait

 Stresses in Portrait

TABLES

 Weights Table

 Flow Analysis

 Well Profile

 Weights Table

 Well Profile

^ SIMULATION INPUTS

^ GENERAL TAS INFORMATION

^ WELL PROFILE

^ REACHING DEPTH

^ WORKING AT DEPTH

^ WORKING STRING

^ FLUID CIRCULATION



Create
Report

☐ Save As
Template

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1.750 * 0.134 * 0.134	2350	10210	0.134	0.134	0.8
1.750 * 0.145 * 0.134	985	11195	0.134	0.145	0.8
1.750 * 0.145 * 0.145	2220	13415	0.145	0.145	0.8
1.750 * 0.145 * 0.145	940	14355	0.145	0.145	

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Prepared on: 27-12-2022

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Name	Length ft	Cumulative Length	Free End Wall - in	Top End Wall - in	Weld Factor
1.750 * 0.156 * 0.145	845	15200	0.145	0.156	0.8
1.750 * 0.156 * 0.156	1925	17125	0.156	0.156	0.8
1.750 * 0.156 * 0.156	1920	19045	0.156	0.156	0.8
1.750 * 0.175 * 0.156	945	19990	0.156	0.175	0.8
1.750 * 0.175 * 0.175	1720	21710	0.175	0.175	0.8
1.750 * 0.175 * 0.175	730	22440	0.175	0.175	

Well Profile

SIMULATION INPUTS

- ☒ Parameters
- ☐ Kill Fluid Data
- ☐ Fluids in Well & in CT
- ☒ BHA
- ☒ Fluid Circulation Data
- ☐ Velocity String
- ☐ Gas Lift Valves
- ☐ Reservoirs
- ☐ Well
- ☒ CT String

GENERAL TAS INFORMATION

WELL PROFILE

REACHING DEPTH

WORKING AT DEPTH

WORKING STRING

FLUID CIRCULATION

Create Report

Save As Template

Template name

TD & FA Report Template

Save Template

When ready to finalise the report, it is a good idea to save a template. This will save time next time the program is used, as the template will be automatically available.

It is also a good idea to save templates for different types of simulations.

Give the template a meaningful name which will make it easier to remember