PathTracker

S-CURVE WELLS

Well Planning Information & Worksheet

Creating a Two-Dimensional S-Curve Well Plan has never been easier. Follow the steps below to create the curve for an S-Curve well profile using the PathPlanner Well Planning Program from Onscreen Software Solutions

Step 1: Describe The Ending Point of the Curve
Enter the required data below to describe the ending point of your curve:

Horizontal Displacement: _____

Azimuth Bearing: _____

Maximum Allowable: _____

Vertical Displacement: _____
(this is the maximum Vertical Depth allowed to complete the curve only)

We can ignore the target TVD for now. First we will design the curve, and later we will adjust it to fit our required target depth. But since we are in the process of entering data:

Target TVD:

Step 2: Start the Program
From PathTracker's "*Tools*" Menu, select "*PathPlanner Well Planning Program*". Enter data for the well description and click "OK".

Step 3: Design The Curve

From the "*Calculators*" menu, select "*Curve Displacement*". Click on the "Add 2nd Curve" button to open a second curve. Click on the "Add Tangent" button to open the tangent section inputs. Adjust the starting angle (inclination) to be the same as the angle of the last segment of your current plan (the "Apply" feature will not work if these angles do not match). Enter the End Angle for your curve and adjust the first and second build rates, and the tangent angle and length until you have achieved your desired horizontal section. Verify that the TVD required does not exceed the maximum TVD you have allotted for the curve. If it does, try increasing the build rates or tangent angle to readjust your curve.

Record your information and click "Apply" to add these curves to your plan.

Starting Angle: _____

1st Build Rate: _____

Tangent Angle: _____

Tangent Length: _____

Ending Angle: _____

2nd Build Rate: _____

Step 4: Adjust the TVD for Our Target
From the "*Edit*" menu, select "*Adjust All TVD's for New Final TVD*". Enter the true vertical depth for our target.

Step 5: Complete the Plan to TD
From the "*Add Segment*" menu, select other segments to finish planning the well. Enter the depth at which you wish to terminate the well.

Total Depth (TD): _____

Step 6: Add Interpolation Points for Formation Tops, Casing Points, etc.
If you want your plan to clearly identify formation tops or other points in the well, we need to add interpolation points to mark them. From the "*Edit*" menu, select "*Add Interpolation Point*" and select either "*Measured Depth* " or "*True Vertical Depth*". Enter the depth and the point will be added. Repeat this step as often as necessary.

Point 1 :_____ MD/TVD   Point 4 :_____ MD/TVD   Point 7:_____ MD/TVD

Point 2 :_____ MD/TVD   Point 5 :_____ MD/TVD   Point 8:_____ MD/TVD

Point 3 :_____ MD/TVD   Point 6:_____ MD/TVD   Point 9:_____ MD/TVD

Step 7: Create a Survey File
Now we need to interpolate the points in between our segment starting and end points so that we can obtain an accurate picture of our plan. From the "*File*" menu, select "*Create Survey File*". The default interval is 30 meters or 100 feet. You can change this to any interval you want. A zero (0) value will create a file with the points in the segment plan only.

Step 8: Add Text Annotations to the Planned Survey
If you created interpolation points in Step 10, you may want to add lines of text to your printouts to identify these points. From the "*Edit*" menu, select "*Edit Text Annotations*", or just click on the "*Text*" button. You can now enter the depths from Step 10, and type in any associated text to display at that point. Note: Text only displays on print outs when "*Show Annotations*" on the Print Window is checked.

THAT'S IT! YOU'VE CREATED AN S-CURVE. You can now print your plan or view it with any of PathTracker's graph features.

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