

The Driller's Toolkit *for* Pocket PC

Driller's Toolkit *Calculations for Drilling Engineers*

NOTE: Computer screens within this PDF document may appear slightly distorted. This is due to limitations in the Adobe Acrobat Viewer when displaying graphics. To clearly view details in the graphics, zoom in or print the document.

The logo for PETRIS, featuring a stylized green 'P' with three horizontal lines to its left, followed by the word 'PETRIS' in a bold, green, sans-serif font.

*Slide
1 of 17*

Over 100 Drilling and Operational Equations



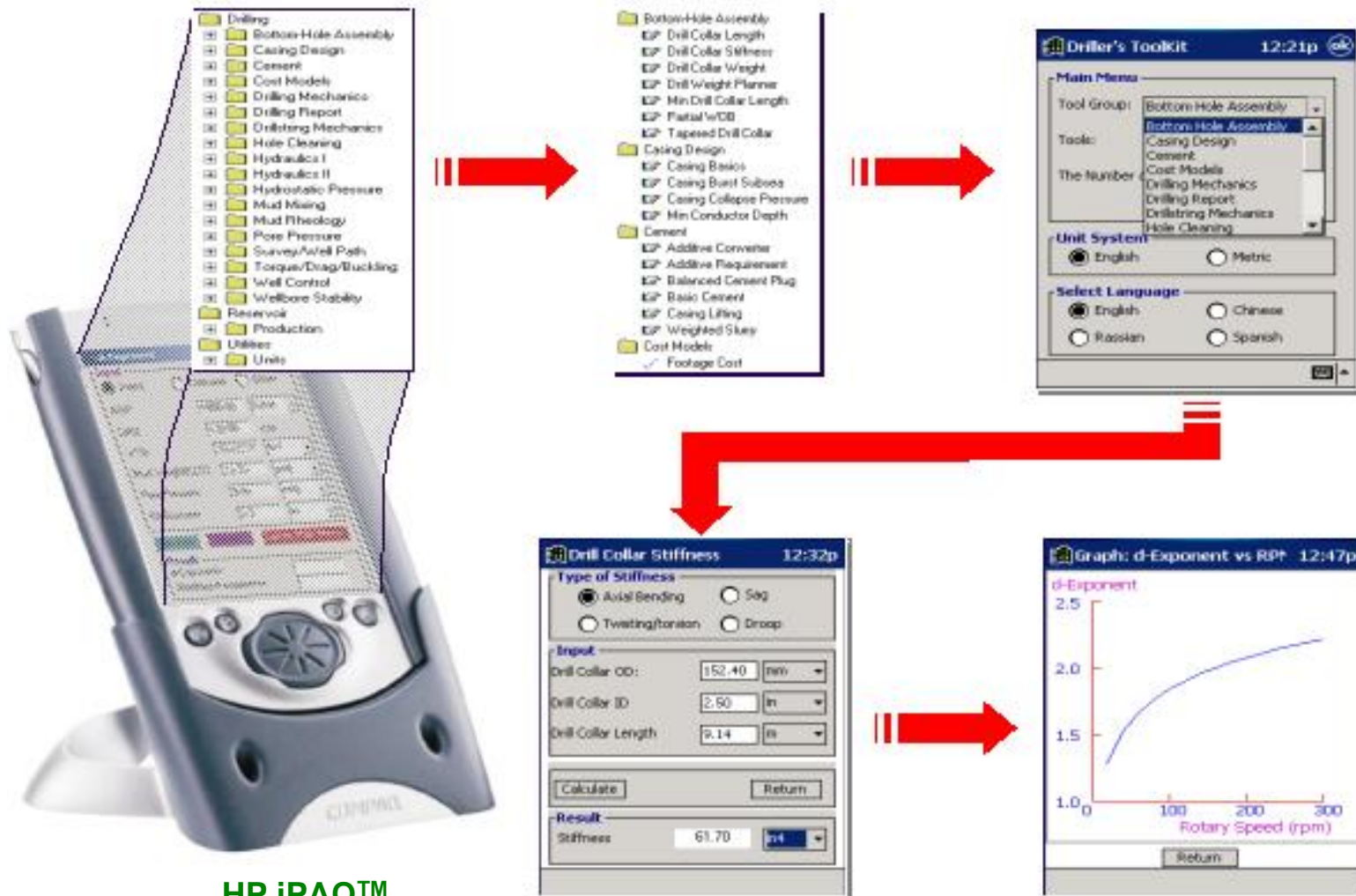
HP iPAQ™



Information When and Where You Need it!

PETRIS Driller's Toolkit

100 Drilling Programs



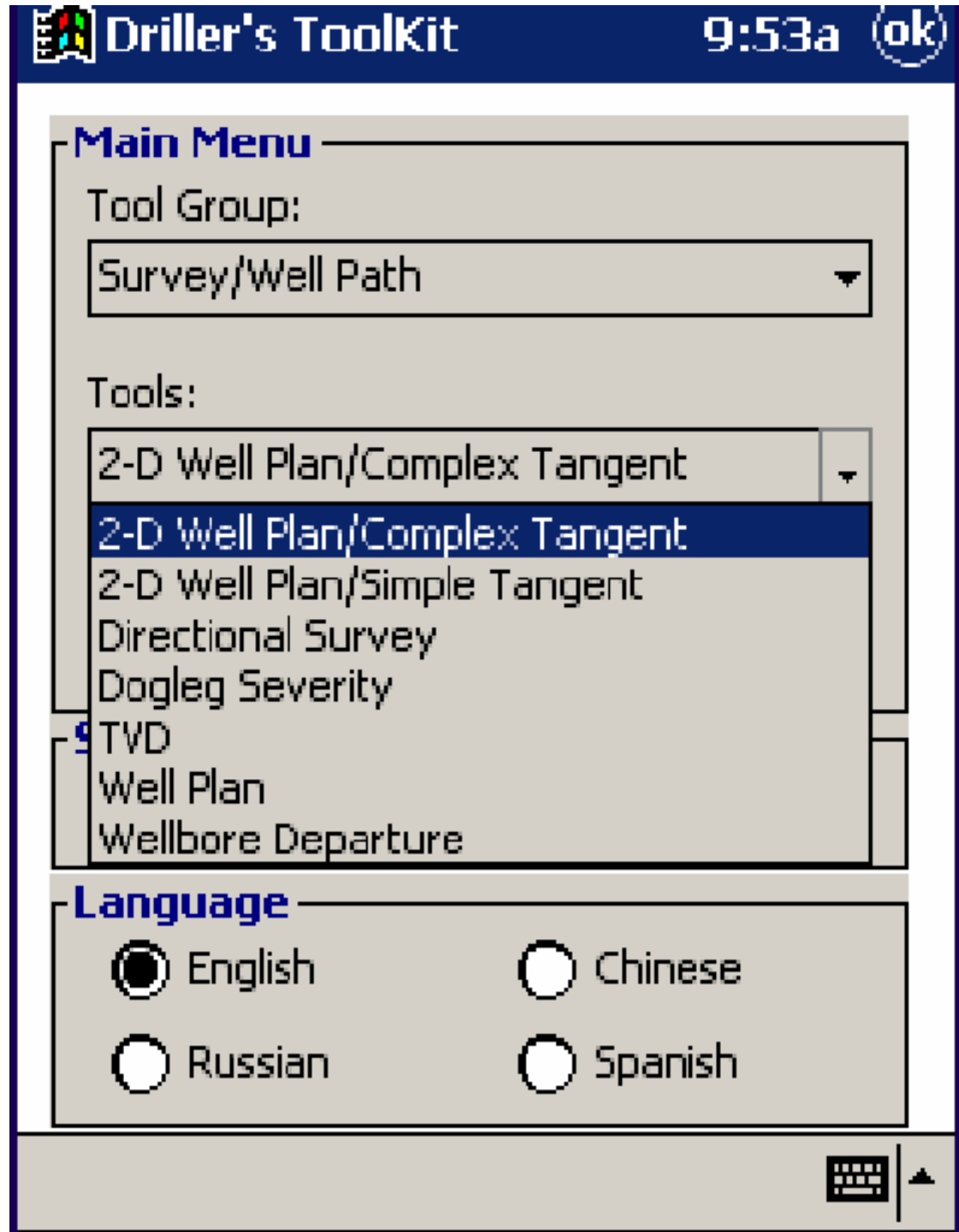
HP iPAQ™

Driller's Toolkit: a reference library in your pocket...



**Examples
from the
100+
Tools:**

**2D Well
Survey**





Results

KOP=	8167.95	ft	▼
MD at Bottom=	9528.33	ft	▼
Toolface in 2nd Build=	35.66	deg	▼
Dogleg in 2nd Build=	49.23	deg	▼
Azi Change in 2nd Build=	31.52	deg	▼

Input

Output

Return



2D Well Survey Output

Dogleg Severity

Dogleg Severity

Input

Course Length:	<input type="text" value="31.00"/>	<input type="text" value="ft"/>
Upper Inclination:	<input type="text" value="13.50"/>	<input type="text" value="deg"/>
Lower Inclination:	<input type="text" value="18"/>	<input type="text" value="deg"/>
Upper Azimuth:	<input type="text" value="10.00"/>	<input type="text" value="deg"/>
Lower Azimuth:	<input type="text" value="10.00"/>	<input type="text" value="deg"/>

Result

Dogleg Severity=	<input type="text" value="14.51"/>	<input type="text" value="deg/100ft"/>
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d-Exponent

d-Exponent 12:39p

Input

Insert Diamond Other

ROP	1800.00	ft/min
RPM	120.00	rpm
WOB	35000.00	lb-f
Mud Weight(ECD)	12.70	ppg
Pore Pressure	9.00	ppg
Bit Diameter	8.5	in

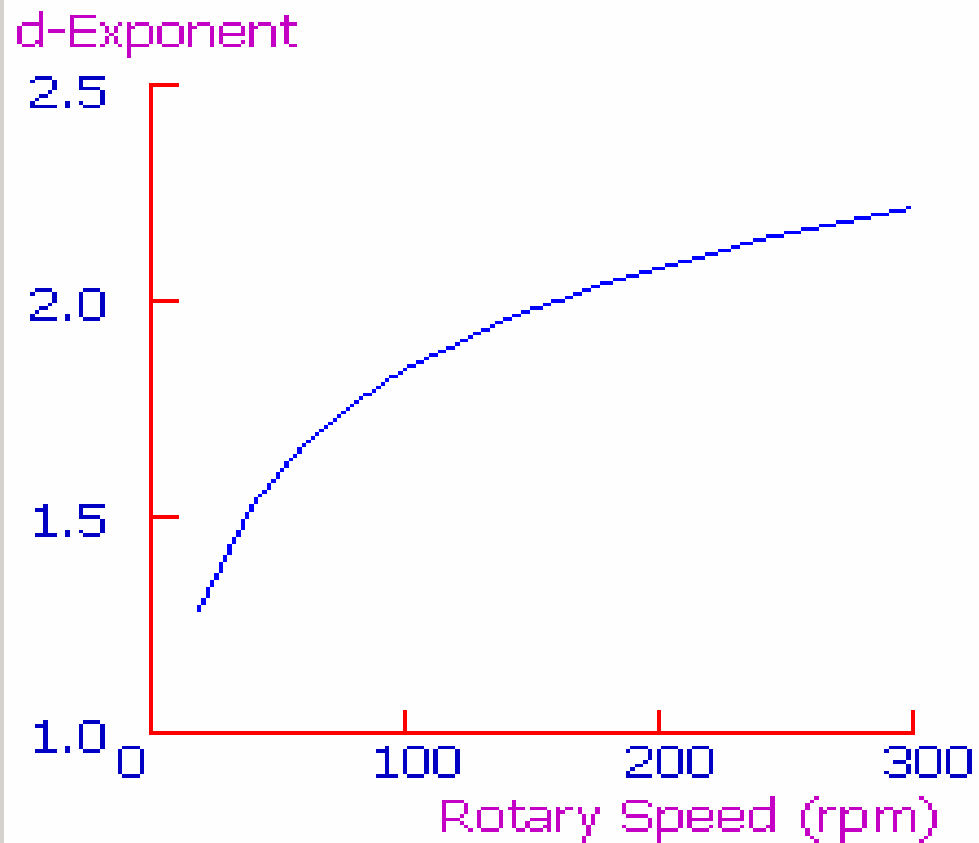
Calculate **Graph** **Return Main Menu**

Result

d-Exponent=	1.901
Modified d-exponent=	1.347

d-Exponent Graph

 Graph: d-Exponent vs RPM 12:47p



Return

Fluid Velocities

Fluid Velocity [X]

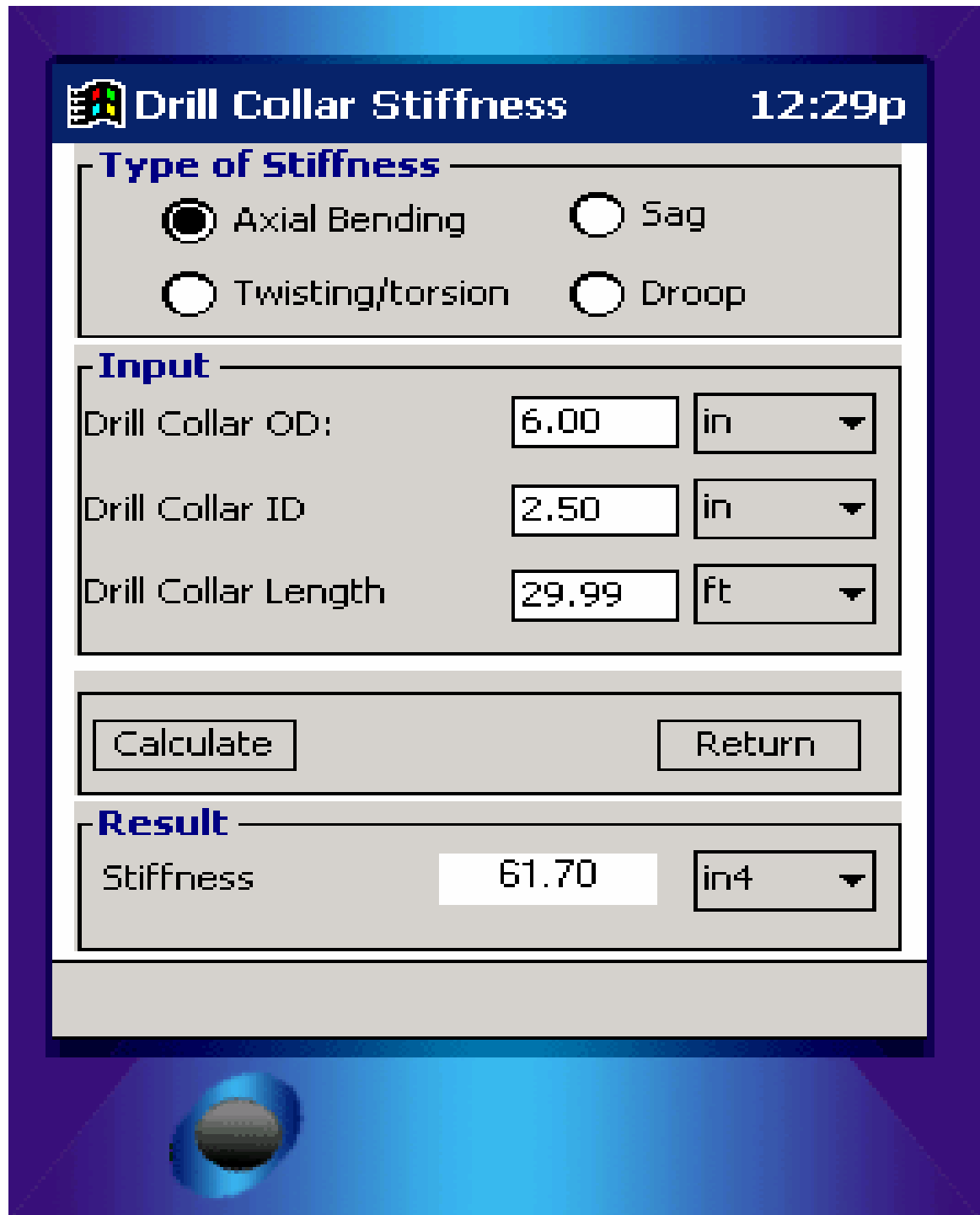
Input

Flow Rate	<input type="text" value="200.00"/>	<input type="text" value="gpm"/>
Hole Diameter	<input type="text" value="12.50"/>	<input type="text" value="in"/>
Pipe ID	<input type="text" value="3.00"/>	<input type="text" value="in"/>
Pipe OD	<input type="text" value="5.00"/>	<input type="text" value="in"/>
Collar ID	<input type="text" value="3.00"/>	<input type="text" value="in"/>
Collar OD	<input type="text" value="8.00"/>	<input type="text" value="in"/>

Result

Velocity in Drill Pipe (ft/mim) =	<input type="text" value="544.46"/>
Velocity in Drill Collar (ft/mim) =	<input type="text" value="544.46"/>
Ann. Vel. outside Pipe (ft/mim) =	<input type="text" value="87.11"/>
Ann. Vel. outside Collar(ft/mim)=	<input type="text" value="241.98"/>

Drill Collar Stiffness

The image shows a software interface for calculating Drill Collar Stiffness. The window title is "Drill Collar Stiffness" and the time is "12:29p". The interface is divided into several sections: "Type of Stiffness" with four radio button options (Axial Bending, Sag, Twisting/torsion, Droop), "Input" with three rows of text boxes and dropdown menus for Drill Collar OD, ID, and Length, a "Calculate" and "Return" button section, and "Result" with a text box and dropdown menu for Stiffness. A 3D rendering of a drill collar is visible at the bottom center of the window.

Drill Collar Stiffness 12:29p

Type of Stiffness

Axial Bending Sag

Twisting/torsion Droop

Input

Drill Collar OD: 6.00 in

Drill Collar ID: 2.50 in


Drill Collar Length: 29.99 ft

Calculate Return

Result

Stiffness: 61.70 in⁴

Well Plan

 Well Plan 8:26a

Type of Well Path

Build - Hold - Build

Build - Hold - Drop

Build - Hold



Target

TVD/NS/EW

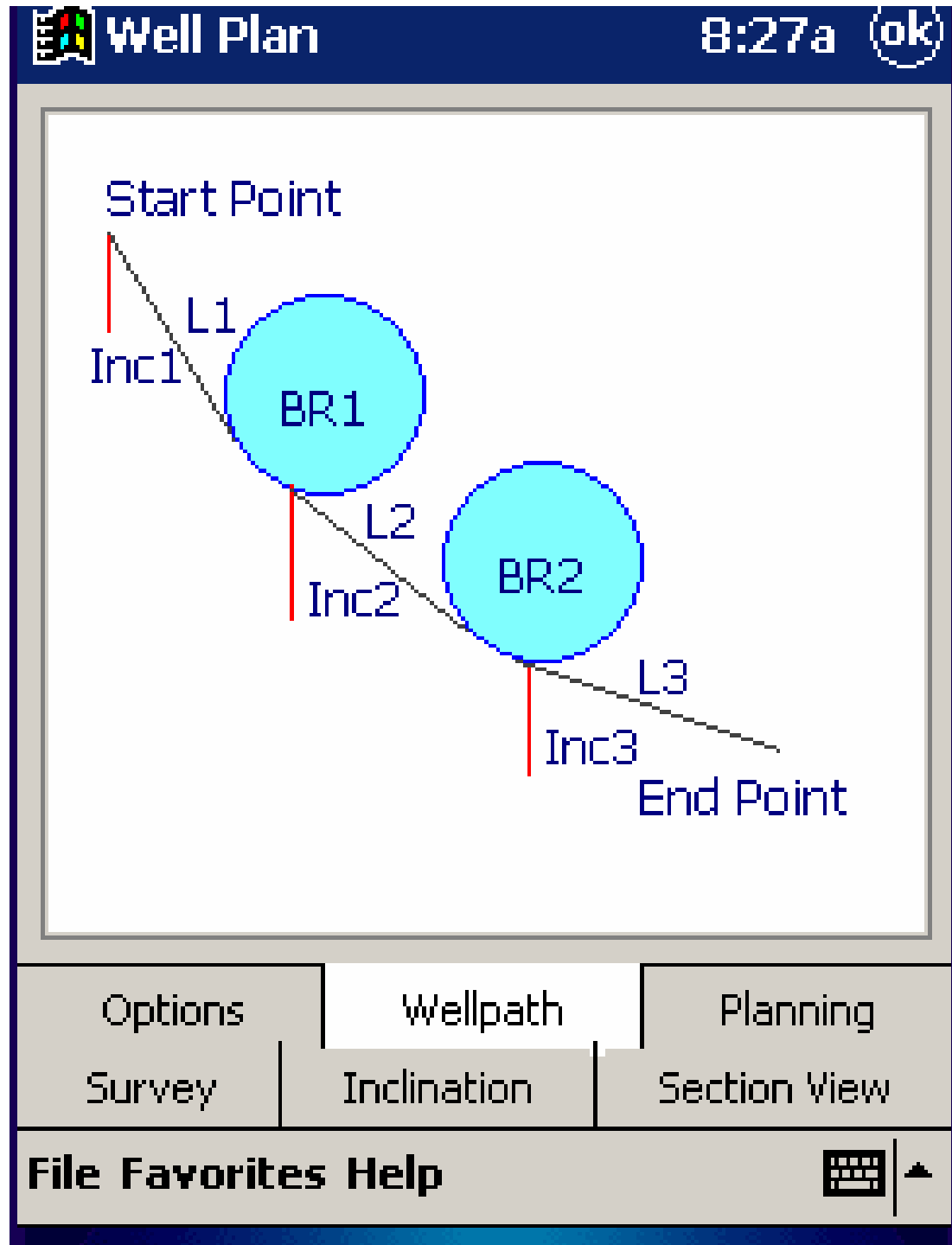
TVD/Horizontal Distance/Azi

TVD (ft)	N/S (ft)	E/W (ft)
<input type="text" value="6000.0"/>	<input type="text" value="2000.0"/>	<input type="text" value="2000.0"/>

Options	Wellpath	Planning
Survey	Inclination	Section View

File Favorites Help  

Well Plan



Well Plan

Well Plan 8:28a (ok)

Survey Data

Inc (deg)	Azi (deg)	TYD (ft)	N/S (ft)	E/W (ft)
0.00	45.01	0.0	0.0	0.0
0.00	45.01	2000.0	0.0	0.0
30.00	45.01	4662.8	504.4	504.4
30.00	45.01	5528.9	857.9	857.9
90.00	45.01	5999.8	1434.3	1434.3
90.00	45.01	6000.0	2000.0	2000.0

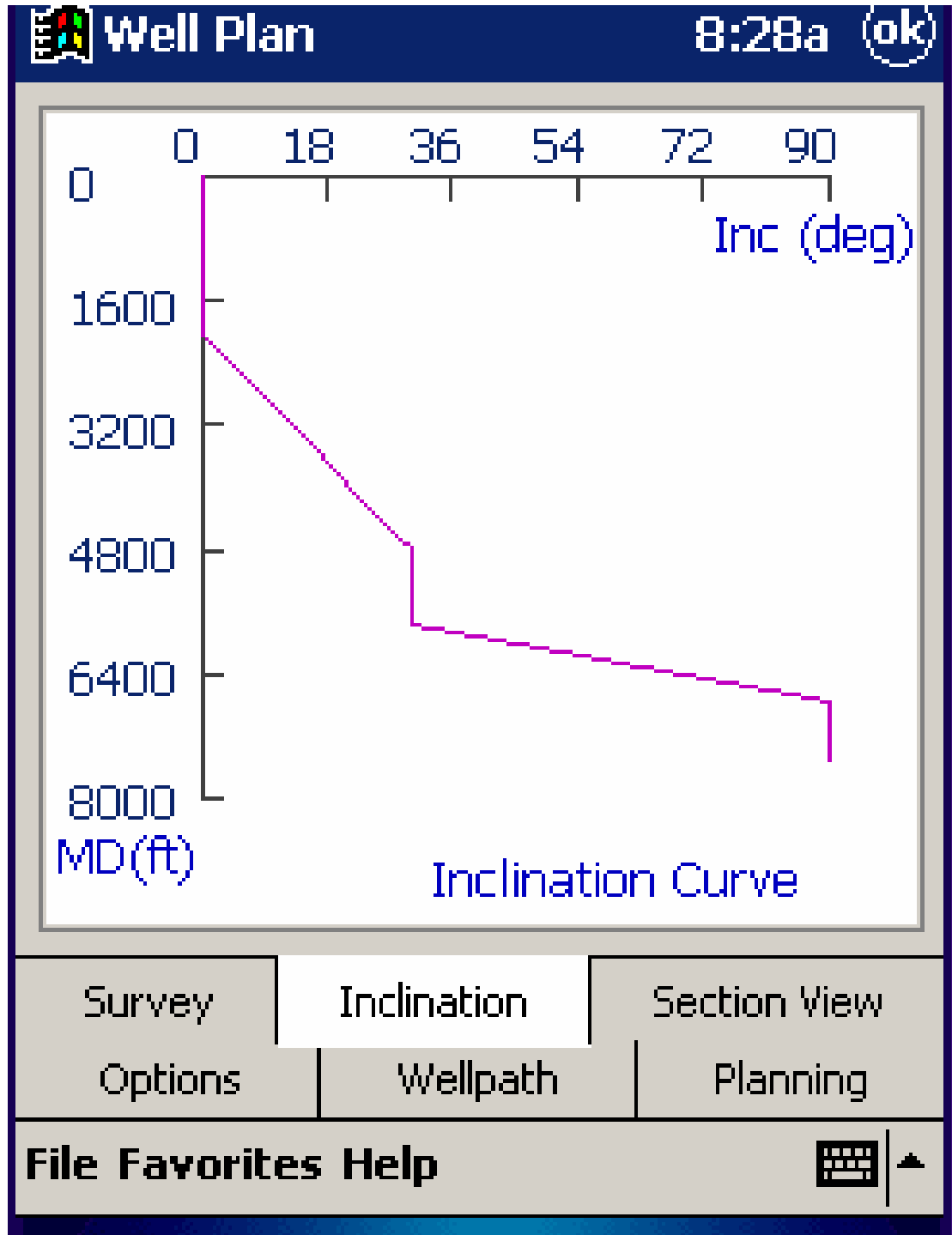
◀ [Slider] ▶

MD	Get	TYD	HD	Inc.
5000.0	Get	4846.1	819.0	30.0

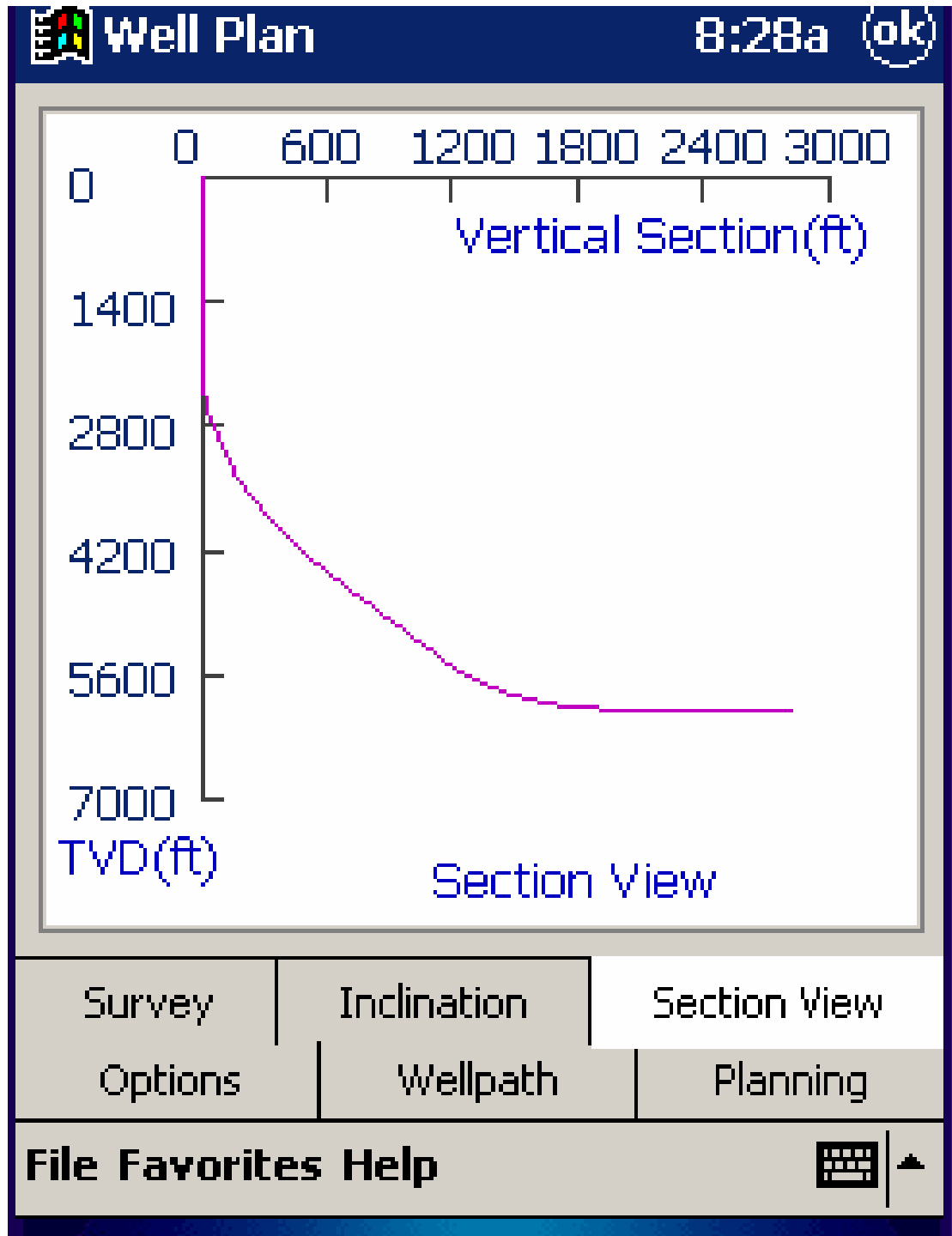
Survey | Inclination | Section View
Options | Wellpath | Planning

File Favorites Help [Keyboard Icon] [Up Arrow]

Well Plan



Well Plan



The Driller's Toolkit *for* Pocket PC

Thanks for your interest in
Driller's Toolkit

*For more information on Maurer Software by Petris,
email:*

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