

Drilling Engineering Applications

Technical Information Sheet

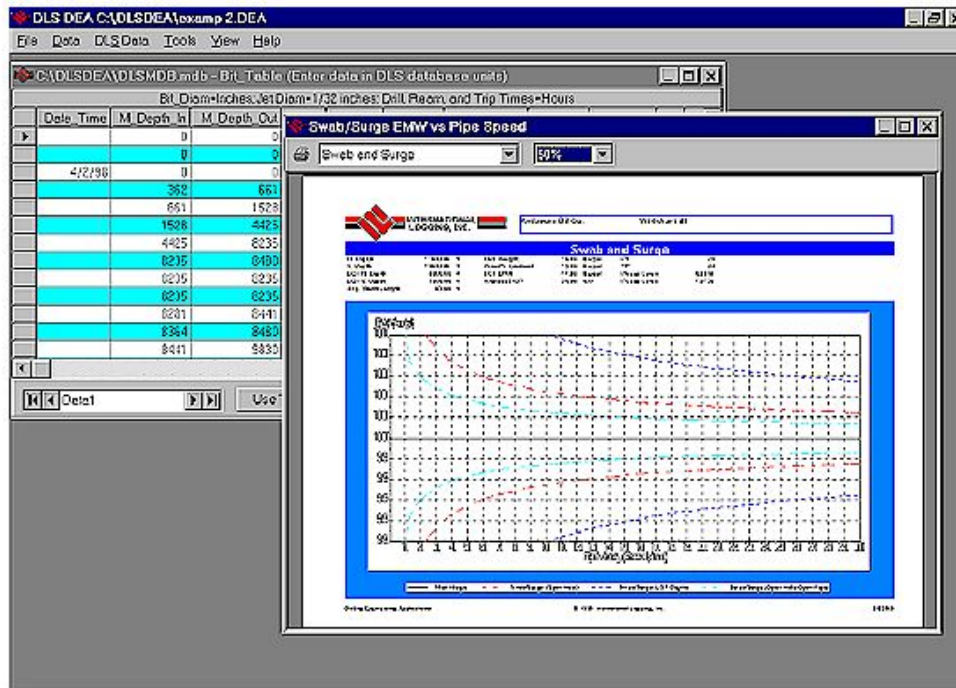
SPECS-SOF-102

Revision 0

OVERVIEW

The Drill Logic System Drilling Engineering Applications (DLS DEA) is a suite of engineering programs used during drilling operations and for post well analysis. The software may be used either as a stand alone application (offline) or linked to the DLS database (On-line). On-line, the software connects to DLS via a TCP/IP network.

DLS DEA runs on Microsoft Windows 95/98/NT/2000/XP and is fully integrated with the Drill Logic System. The following pages contain example printer output from DLS DEA.

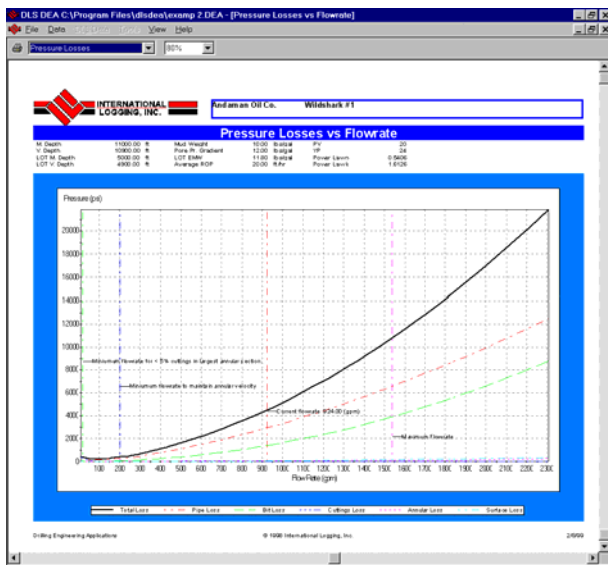


DLS Drilling Engineering Applications may be used offline where the user enters the necessary parameters in the fields (shown right) or it may be used online and automatically update the parameters from the DLS online database.



Drilling Engineering Applications

When online, DLS DEA connects to the DLS Database in the logging unit over a local or wide area network. This ensures your working with the latest data no matter where you are



Tabular Results

- Drilling Hydraulics
- Bit Hydraulics Optimization
- Swab and Surge
- Bit Record
- Bit Cost Record
- Kick and Kill Analysis
- Casing and Cementing Analysis
- Pressure Gradient Analysis

Type	O.D. (in)	I.D. (in)	lbs_ft	Length (ft)
Riser	20	15	1	1000.00
Casing	13.375	12.415	68	4000.00
Liner				
Liner				
Hole			12.25	6000.00
Total:				11000.00 ft

Type	O.D. (in)	I.D. (in)	lbs_ft	Length (ft)
DP	5	4.276	19.5	9820.01
DP				
HW	6.5	2.812	60	979.99
DC	8	2.875	149	200.00
Total:				11000.00 ft

Once the parameters are entered you can save the data to a file for easy recall of multiple scenarios or compare data from previous wells.

You have a choice of tabular and graphical views like the Pressure Losses Vs. Flow rate graph to the left.

Graphic Results

- Equivalent Circulating Density
- Pressure Losses
- Bit Cost
- Kick and Kill
- Casing Hookload
- Casing Displacement

FUNCTIONS

- Change engineering units
- Import DLS data
- Maintain DLS data tables
- Recalculate survey table
- Recalculate true vertical depth
- Recalculate pressure table TVD

