

KellyDown Tips

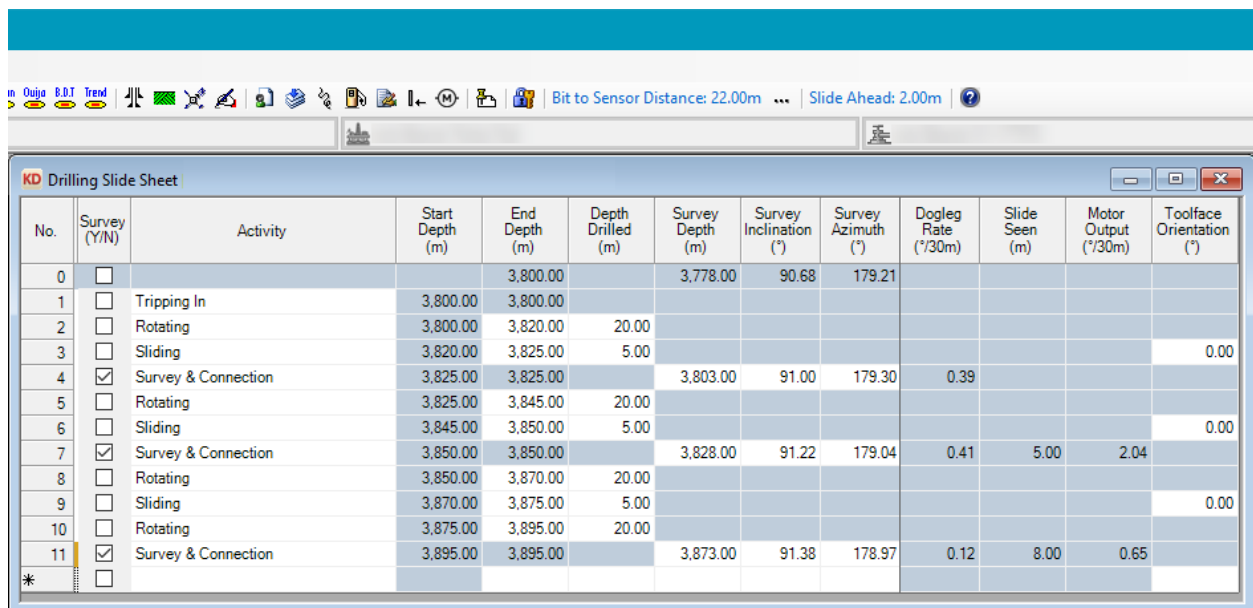
Periodic tips to help you use KellyDown more effectively

Slide Seen and Slide Ahead

Many people ask why the Slide Seen in KellyDown doesn't always match the length of slide sections between the last and previous surveys. This KellyDown Tip attempts to answer this question.

Using the example shown below where the tie-on Bit Depth is 3800m, the tie-on survey depth is 3778m and the bit to sensor distance is 22m. A simple sequence of three slide/rotate sections is shown. The last section however consists of two **Rotate** sections.

At first glance, one might expect the **Slide Seen** to be 5m between the **Last Survey** at 3783m and the **Previous Survey** at 3828m.



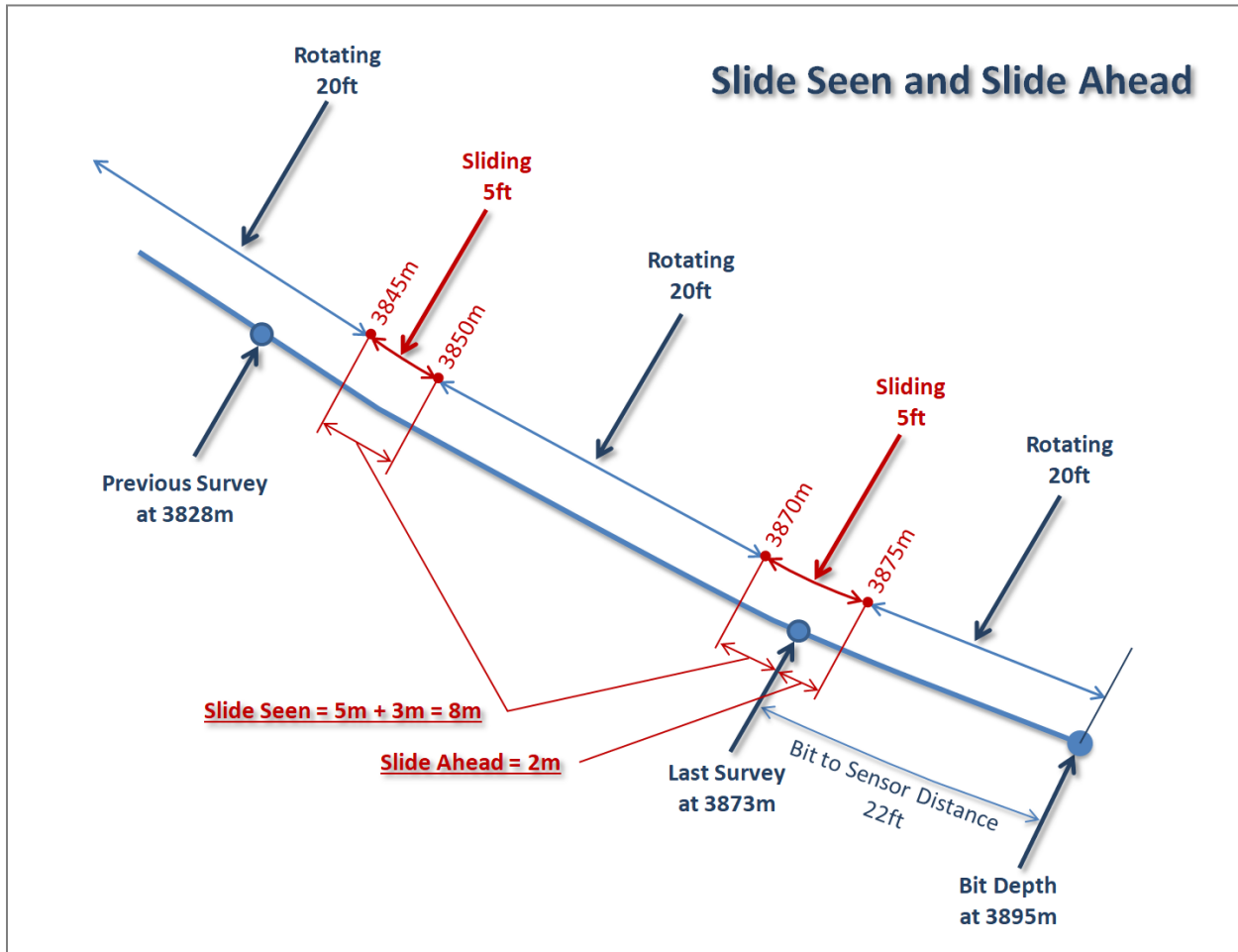
The screenshot shows the 'KD Drilling Slide Sheet' software interface. The table below is a representation of the data shown in the software.

No.	Survey (Y/N)	Activity	Start Depth (m)	End Depth (m)	Depth Drilled (m)	Survey Depth (m)	Survey Inclination (°)	Survey Azimuth (°)	Dogleg Rate (°/30m)	Slide Seen (m)	Motor Output (°/30m)	Toolface Orientation (°)
0	<input type="checkbox"/>			3,800.00		3,778.00	90.68	179.21				
1	<input type="checkbox"/>	Tripping In	3,800.00	3,800.00								
2	<input type="checkbox"/>	Rotating	3,800.00	3,820.00	20.00							
3	<input type="checkbox"/>	Sliding	3,820.00	3,825.00	5.00							0.00
4	<input checked="" type="checkbox"/>	Survey & Connection	3,825.00	3,825.00		3,803.00	91.00	179.30	0.39			
5	<input type="checkbox"/>	Rotating	3,825.00	3,845.00	20.00							
6	<input type="checkbox"/>	Sliding	3,845.00	3,850.00	5.00							0.00
7	<input checked="" type="checkbox"/>	Survey & Connection	3,850.00	3,850.00		3,828.00	91.22	179.04	0.41	5.00	2.04	
8	<input type="checkbox"/>	Rotating	3,850.00	3,870.00	20.00							
9	<input type="checkbox"/>	Sliding	3,870.00	3,875.00	5.00							0.00
10	<input type="checkbox"/>	Rotating	3,875.00	3,895.00	20.00							
11	<input checked="" type="checkbox"/>	Survey & Connection	3,895.00	3,895.00		3,873.00	91.38	178.97	0.12	8.00	0.65	
*	<input type="checkbox"/>											

The **Slide Seen** is calculated as follows.

1. KellyDown loops through each slide record starting up from the bottom **End Depth** (3895m).
2. The first slide section is from 3870m to 3875m.
3. If the **Slide From** depth (3870m) is greater than the previous **Survey Depth** (3828m) and the **Slide To** depth (3875m) is less than the last **Survey Depth** (3873m). It isn't.
4. If the **Slide From** depth (3870m) is greater than the previous **Survey Depth** (3828m) and that the **Slide From** depth (3870m) is less than the last **Survey Depth** (3873m), the residual **Slide** length (3m) is added to the **Slide Seen**. The Residual **Slide** length is the **Survey Depth** – **Slide From** depth = $3873m - 3870m = +3m$ (see diagram below).
5. The next Slide section is from 3845m to 3850m.

6. If the **Slide From** depth (3845m) is greater than the previous **Survey Depth** (3828m) and the **Slide To** depth (3850m) is less than the last **Survey Depth** (3873m), the complete **Slide Length** (5m) is added to the **Slide Seen** = +5m.
7. The next Slide section is from 3820m to 3825m.
8. If the **Slide To** depth (3825m) is less than the previous **Survey Depth** (3828m), there is no more residual slide.
9. Therefore the **Slide Seen** is 8m whereas the recorded slide between the previous Survey Record and the last Survey Record appears to be only 5m.
10. The **Slide Ahead** is the residual slide distance between the last Survey and the Bit.



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