

Before Recording Drill Data

1. Ensure the F5[®] receiver and transmitter are calibrated and the receiver is displaying data.
2. Ensure the time and date are set.
3. From the Main menu, toggle down and select Drill or Pressure-Tension DataLog, and ensure DataLog is enabled.

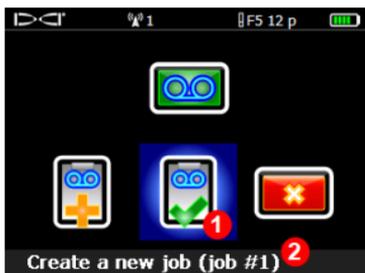


Create New Job

1. At the Locate screen, hold the trigger until the Depth screen appears and toggle right to open the Recording menu.
2. Select **Create a new job**. The F5 receiver can store up to 50 Drill DataLog jobs and 50 Pressure-Tension DataLog jobs.



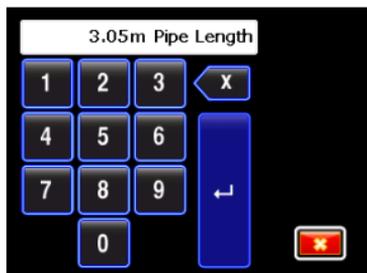
1. Toggle
2. Trigger



1. Create a new job
2. Write down the job number for future reference; every new drill job receives a unique number

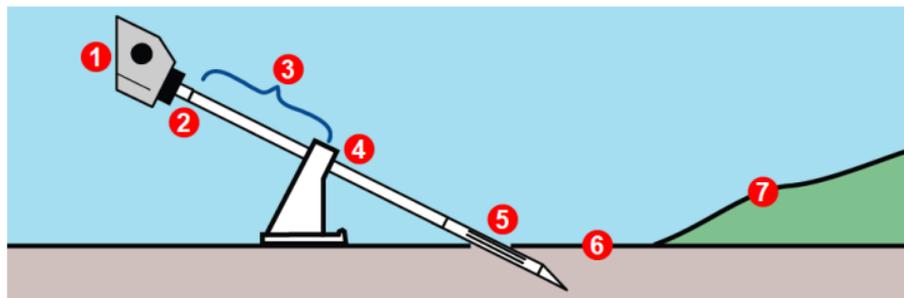
3. Using the keypad that displays, enter the length of the drill pipe, then select **Enter** .

Note: To change units for pipe or rod length, select **Depth Units** on the **Settings** menu.



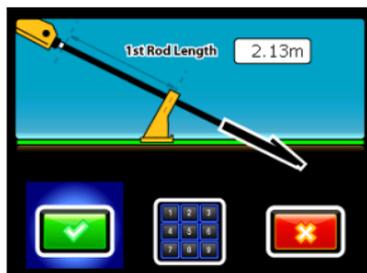
Record First Rod Length

1. Position drill head for first data point with slots in housing halfway in the ground as shown below.
2. Measure from top of rod to make-up/break-out clamps; this is the first rod length.



- | | |
|-------------------|---------------------------------------|
| 1. Drill | 5. Slots in housing halfway in ground |
| 2. Top of rod | 6. Zero elevation reference line |
| 3. 1st rod length | 7. Surface of ground |
| 4. Vice | |

3. The first rod length input screen appears after you input the pipe length, showing a default value of 70% of the pipe length. Input the first rod length value using the keypad or select the check mark to accept the default value.



Record Data Points

1. After you set the first rod length, the Recording Options menu opens with only **Record Pitch** enabled.
2. Click trigger to record this first data point (rod #0) and entry angle pitch.

LWD v3.0 users: For information on using Flags, Pins, Deviation, and Offset, see the [DataLog/LWD Operator's Manual](#) for v3.0.



1. Record pitch

3. Advance drill head to the end of the first rod, position the receiver at the FLP or at the LL over the transmitter, then hold the trigger and toggle right to open the Recording Options menu again.
4. Toggle down if needed to select one of the following recording options:



1. "Toggle down for more options"



Depth and Pitch – Use when depth and pitch are available at LL or FLP.



Pitch – Use when reliable depth information is not available; for instance, due to interference.



Blank Rod – Use to keep profile length accurate when a data point reading has been missed, when no data is present, or when the receiver is out of range due to road or waterway.



Partial Rod – Use $\frac{1}{4}$, $\frac{1}{2}$, or $\frac{3}{4}$ rod to log unique recordings such as last rod measurement, top of hill, bottom of ditch, roadside edge, surveyor station point, and so on. This is useful when logging rods with larger pitch or depth changes, and also creates a more detailed profile graph.

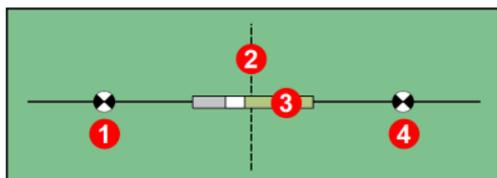
5. Click the trigger to record the second data point (rod #1) at the end of the first rod.
6. At the end of each subsequent rod, open the Recording Options menu and select the appropriate recording option.

Remember: when recording depth, the data point must be taken at the Locate Line (LL) or Front Locate Point (FLP). See next section for help on finding these points.

Find Locate Line (LL) and Front Locate Point (FLP)

- 4 -

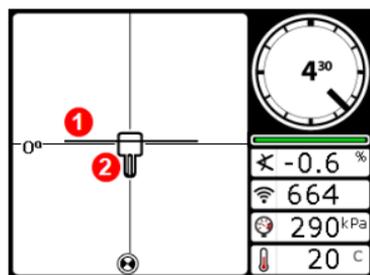
The F5 receiver must be positioned at the FLP or at the LL over the transmitter when recording depth.



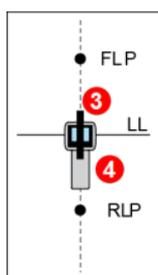
1. RLP (Rear Locate Point)
2. LL (Locate Line)
3. Transmitter (underground)
4. FLP (Front Locate Point)

Geometry of Locate Points and Transmitter

With increased transmitter pitch, the FLP and RLP will not be equidistant from the LL.

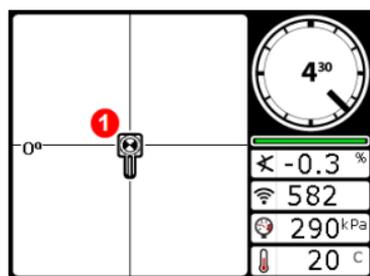


Receiver Locate Screen, *Line-in-the-Box* at LL

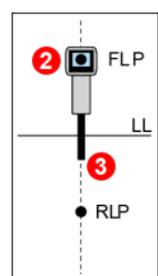


Actual Position of Receiver and Transmitter

1. LL (transmitter)
2. Box (receiver)
3. Transmitter (underground)
4. Receiver



Receiver Locate Screen, *Ball-in-the-Box™* at FLP



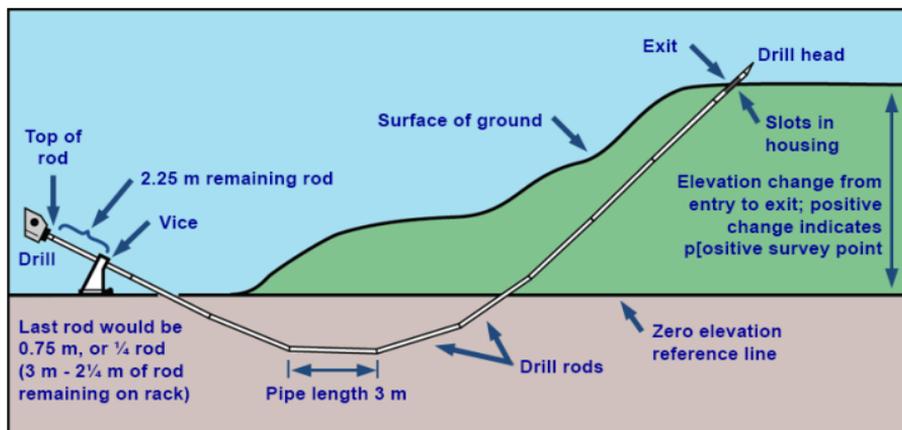
Actual Position of Receiver and Transmitter

1. *Ball-in-the-Box™* at FLP
2. Receiver
3. Transmitter (underground)

Measure and Document Last Rod

At the end of the bore, subtract the length of any remaining rod on the rack from the full rod length to determine the last rod measurement. Either enter the last rod data as a partial rod at the receiver or write it down and enter it in the Log-While-Drilling program after data upload.

Alternatively, if the last rod exits at ground level (instead of exiting below ground, such as in a pit), a common practice is to record the last rod as a partial with pitch only.



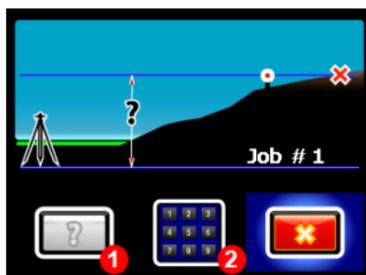
Last rod would be 0.75 m or $\frac{1}{4}$ rod (3 m – 2.25 m of rod remaining on rack).

Add a Survey Point

The LWD program uses pitch data to calculate the positive or negative elevation change between the entry and exit point.



Optionally, enter a survey point to correct for any accumulated pitch variance that may affect the profile graph. From the Main menu, select **Drill DataLog**, then **Add survey point**. The survey point can also be entered in the Log-While-Drilling program after data upload.



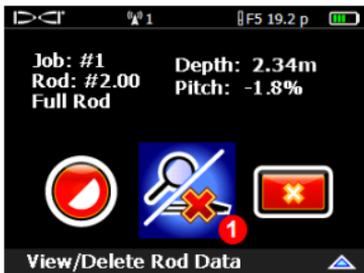
1. Set survey point back to unknown (LWD software will calculate)
2. Input survey point value using keypad

View/Delete Rod Data (Pulling Back Rods)

View drill data at any time during or after the bore.

If you pull back rods, you must also delete the corresponding data points. Only one data point can be deleted at a time. Be careful to only delete data points for rods that have been pulled back.

1. Open the recording options menu, toggle down and select **View/Delete Rod Data**.



1. **View/Delete Rod Data**

2. You can only delete the last rod (highlighted). Click to select.

Rod ID	Position	Depth	Rel Depth	Pitch
10	58.22m	.12m	10.30m	17.7%
9	52.21m	.12m	9.24m	17.7%
8	46.21m	.12m	8.17m	17.7%
7	40.23m	.15m	7.10m	17.7%
6	34.23m	.15m	6.04m	17.7%
5	28.22m	.15m	5.00m	17.7%
4	22.22m	.12m	3.93m	17.7%

Run #40 Rod: 6.0 m SP: --

1. **Data for most recent rod**

To exit without deleting a rod, simply toggle left or right to return to the Locate Mode screen.

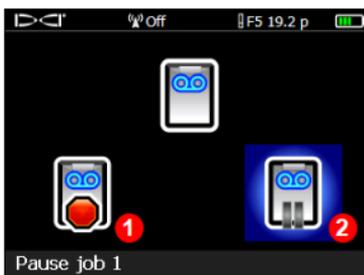
3. Click the green check mark to delete the rod data.



1. **Delete selected rod data**

Close or Pause DataLog Recording

To close your DataLog job after recording the last data point, toggle down at the Locate Mode screen and select **Close job**.



1. Close job
2. Pause job

To keep the job open for additional recording, select **Pause job**. When you record another data point at the Locate Mode screen, data will resume recording on this job.

All DataLog jobs close automatically when the receiver powers off.

Delete DataLog Jobs

Note: Confirm job data to be saved has been uploaded to a computer before deleting it from the receiver.

From the Main menu, select Drill or P-T DataLog, then **Delete DataLog Job**.



You can delete one job at a time or all jobs at once, which also resets the job counter to zero.



1. Delete one job
2. Delete all jobs

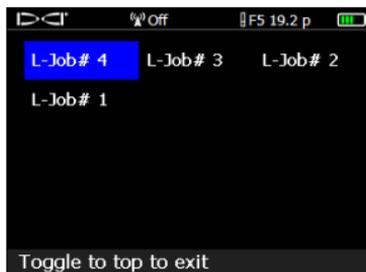
Append to an Existing Job

1. Select **Append** to add data to an existing DataLog job.



1. **Append to an existing job**

2. The receiver displays a list of stored jobs. Select the appropriate job to begin appending data.



This is the same screen used to delete a single job.

Watch our DigiTrak® training videos at
www.youtube.com/dcikent

For detailed information, see the F5 DataLog Log-While-Drilling (LWD™) Operator's Manual, available at www.DigiTrak.com. If you have questions, contact your regional DCI office at 61.7.5531.4283 or U.S. Customer Service at 1.425.251.0559.



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