Geoprobe® 203898 Test Load for the Pneumatic Slug Test Instrument
Using the test load to verify operation of the acquisition module, computer, and software

The Pneumatic Slug Test Kit (MN214038) utilizes a pressure transducer (MN216870) and acquisition module (MN220971) to automatically record water levels to a laptop computer during the slug test (Fig. 1). Should a problem occur with data collection, it may be difficult to identify which component of the system is at fault. The Test Load for the Pneumatic Slug Test Instrument (MN203898, Fig. 2) enables the user to determine if the acquisition module, computer, and software are operating properly. In this way, the user can conclude whether a problem exists with data collection/storage or if attention should be focused on the pressure transducer assembly.

This document describes connecting the test load to the Slug Test Acquisition Module and running the slug test software to check for proper operation of the data collection/storage portion of the Pneumatic Slug Test Kit.

In this procedure, the test load is connected to the transducer port in place of the transducer assembly as shown in Figure 3. When the slug test software is started and ran, a head reading of 20 feet (±15%) indicates that the acquisition module, laptop computer, and software are operating correctly. If the head reading is outside this range, check all cable connections and rerun the software. Contact Geoprobe Systems® for further instructions if the head reading is still outside of the recommended range.

Testing the Pneumatic Slug Test Instrumentation

Complete instructions on performing a pneumatic slug test are given in the Geoprobe@ Pneumatic Slug Test Kit Standard Operating Procedure (SOP). A copy of the SOP is included with the slug test kit and is also available from Geoprobe Systems® as Instructional Bulletin No. MK3195.

Instructional Bulletin No. MK3195 will be referenced throughout this section of the test load instructions. Refer to this document if you are not familiar with the slug test software or have questions regarding hardware hookups.

1. Connect the Acquisition Module to the laptop computer via the USB cable as instructed in Section 5.0 of Bulletin No. MK3195.

2. Power-up the laptop and initiate the slug test software.

3. Section 6.0 of Bulletin No. MK3195 describes three menus that are encountered while running the slug test software. The first menu allows the user to select sensor style and sampling rate. Select the 10 PSI Sensor option as in Figure 4, and click on the "Next" button when finished.

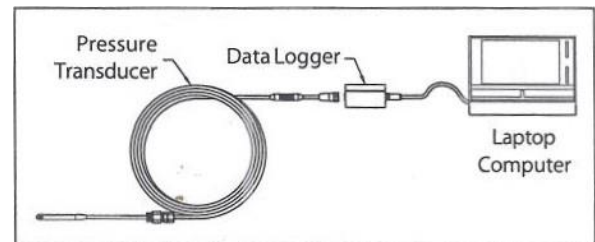Click on the "Next" button when finished with the co.

Figure 1: Instrument and transducer configuration used when performing a pneumatic slug test.

Figure 2: The Test Load (MN203898) is used to check the pneumatic slug test instrumentation.

"Sensor Port"
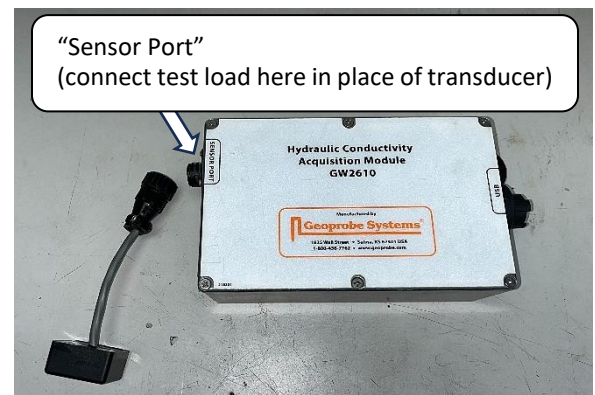(connect test load here in place of transducer)

Figure 3: Connect the test load to the acquisition module at the sensor port.

4.   When the Transducer Zero Menu is reached in the software (Fig.9 of Bulletin No. MK3195), select the "Next" button to skip this function without zeroing the transducer.

5.   In the "File Configuration" window, select "Browse…" & choose a save location and name for the test file. Once a location has been selected, click the "Finish" button.

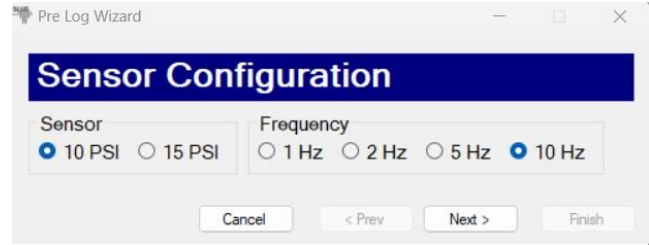**Figure 4:** Sensor Configuration for use with the test load.

6.   Thread the test load to the acquisition module port labeled "Sensor Port" as shown previously in Figure 3. This is also the port to which the pressure transducer is connected when performing a pneumatic slug test.

7.   With the test load connected to the acquisition module and the software running, a head reading of 21 feet (±15%) should be noted on the graph and at the "FT of HEAD" box as shown in Figure 5. If the output is not within this range (18 - 24 ft.), check all cable connections and repeat Steps 3-6 of the test procedure. If the output is still not within the specified range, contact Geoprobe Systems® for further instructions.
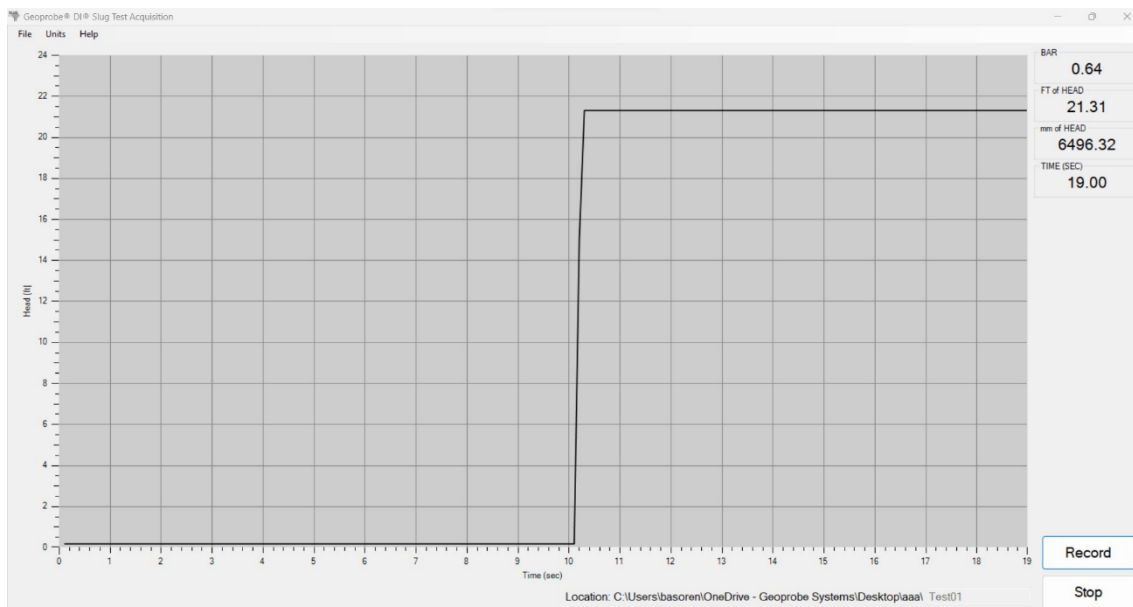

Figure 5: Simulated readout of slug test software with test load installed.