INSTALLATION/OPERATING PROCEDURE FOR THE HYDRO-BALANCED STUFFING BOX (HBSB)

Note: The HBSB is designed to be used with a Spray Metal Coated Polished Rod and no Polished Rod Liner.

- 1. Polished Rod: Be sure to remove wrench burrs, excess dirt and lubricate to prevent damage to seals in the HBSB assembly.
- 2. Screw the lower end of the hydraulic hose to the fitting on the HBSB body.
- 3. Slip the white plastic rod guide over the polished rod threads and slide the HBSB assembly over the rod guide and onto the polished rod. The HBSB seals are stiff, so some force will be required. The guide will make the installation much easier, but it is important to keep the HBSB moving until completely installed on the polished rod. Remove the guide from the end of the rod.
- 4. Make-up HBSB assembly onto the pumping tee.
- 5. The HBSB cylinder is shipped full of grease. Add several "shots" of grease to the fitting in the upper cap of the HBSB before operating.
- 6. During the first hours of operation, grease will be "used" as voids are filled and the grease is compressed. As grease is used, the indicator rod on top of the transmitter cylinder will move up. Add grease using the fitting on the cylinder until the indicator rod is back down. There is a needle valve between the cylinder and the grease fitting, which should remain closed when not adding grease. This break-in period could last a few days, depending on well conditions.
- 7. After this initial period, grease usage should decrease greatly.
- 8. As grease is used, the indicator rod on top of the transmitter cylinder will move up to a height of 6 1/2 inches at empty. Add grease as necessary, **to prevent running empty.** At this time also add several "shots" of grease to the fitting in the upper cap of the HBSB.

INSTALLATION OF BACK-UP BRAIDED PACKING

THIS IS ONLY NECESSARY IF, AFTER OPERATING FOR A PERIOD OF TIME, GREASE AND OR PRODUCTION FLUID CONTINUALLY LEAK FROM THE TOP OF THE HBSB

- 1. Remove the three hex head screws from the top of the HBSB and slide the top piece up the polished rod out of the way.
- **2.** Look down on the HBSB and a black elastomeric lip seal set in the lower bore and surrounding the polished rod will be visible.
- **3.** Grease and install the 3 split packing rings into the bore, on top of the existing seal, offsetting the splits.
- **4.** Slide the top piece back into place and install the 3 hex head screws. As the screws are tightened, they will load the packing rings, sealing the polished rod. Do not over tighten.
- **5.** Add several "shots" of grease to the fitting in the upper cap of the HBSB and to the grease cylinder if necessary.
- **6.** This will allow the well to continue to produce until the HBSB can be replaced.

For questions or concerns contact: Barrier Fluid Technologies, LLC (830) 832-6917