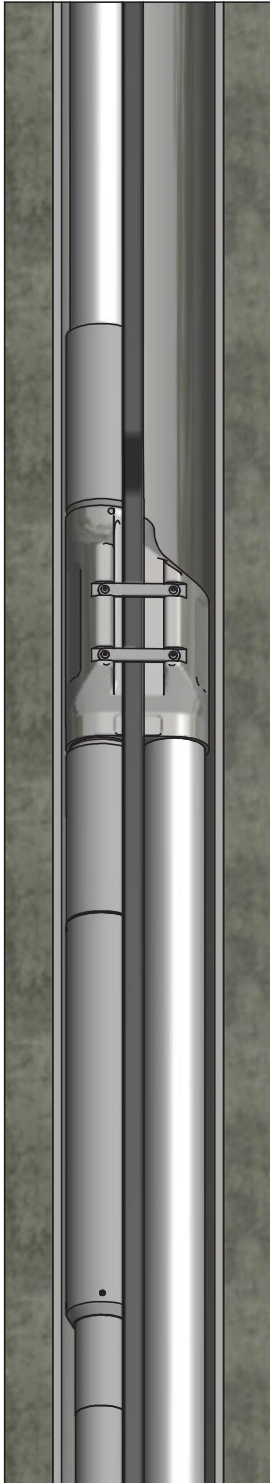




## Black Gator® Logging Bypass System (Y-Tool)



The Black Gator® Logging Bypass System enables access below an Electric Submersible Pump (ESP) and allows for well logging operations and traditional well intervention without pulling the completion.

System includes:

- Y-Tool Sub Assembly – Production Tubing Handling Sub, optional Top Nipple, Y-Tool body, Bypass Nipple, Telescopic Swivel with pin connection for the Bypass Tubing, Pump Sub Tubing Pup Joint for make up to the pump discharge head and Blanking Plug
- Flush Joint Bypass Tubing
- Wireline Entry Guide
- Bypass Tubing Clamps
- Motor Base Plug for clamping the ESP motor or ESP gauge base to the bypass tubing
- Handling equipment comprised of a Work Table, Safety Clamp and Swivel Lift Nubbin for handling the bypass tubing
- Standing Valve for testing the production tubing or setting a hydraulic packer
- Isolation Tool to straddle the Y-Tool and isolate the ESP
- Wireline Logging Plug and Wireline Logging Plug Hammer with inserts for wireline or slickline cable
- Self-seating wireline logging plug (wireline tractor deployed)
- Coiled Tubing Logging Plug
- Optional Pump Support Sub for applications with heavy tail pipe, a seal assembly below the bypass system and dual ESP applications

	Maximum OD of ESP (in.)					
	3.750	3.870	4.000	5.130	5.400	5.625

Casing Size	Maximum Bypass Tubing OD (in.)					
7" 23-26lb/ft	2.375	2.125	2.125	-	-	-
7" 29-35lb/ft	2.125	2.125	-	-	-	-
9-5/8" 40-47lb/ft	2.875	2.875	2.875	2.875	2.875	2.875
9-5/8" 53.5lb/ft	2.875	2.875	2.875	2.875	2.875	2.375

Standard Bypass Tubing Data				
Tubing size & weight		OD (in.)	ID (in.)	Internal Drift (in.)
2-7/8"	6.4#	2.875	2.441	2.347
2-3/8"	4.6#	2.375	1.995	1.901
2-1/8"	2.4#	2.125	1.811	1.717