

# The BlueDog

Patented, Controlled Cleaning & Recoverable Jet Pig

All too often flow assurance issues are ignored until there is significant economic impact on production revenues and remediation costs skyrocket.

BlueFin has developed a team of scientists, technicians and equipment specialists that are application focused on pipeline flow assurance, maintenance and remediation. Our technical team has worked diligently to provide the most economical, lowest risk treatments for the restoration of flow from naturally occurring, solids obstructed pipelines.

BlueFin is amassing a comprehensive suite of chemical, mechanical and thermal tools for addressing these issues in lines that are considered unpiggable by conventional means.

BlueFin's latest addition, The BlueDog, utilizes a controlled jetting technique, allowing blasting action to penetrate the entire circumference of the internal pipe wall. This eliminates the bulldozing effect that often results in sticking of mechanical pigs.

## ADVANTAGES

- Requires Less Foot Print than Conventional Mechanical Solutions
- Economical for integrity, Repair & Maintenance Budgets
- Reduces Remediation Costs
- Avoids Damming and Sticking
- Assurance of ILI Success
- Permits Multiple Pig Runs with One Tool

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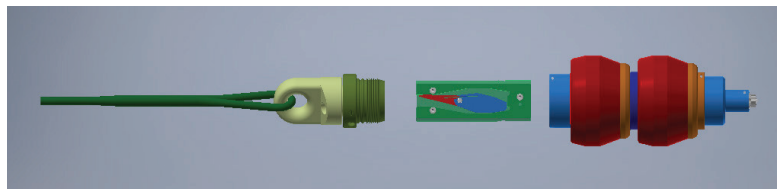
The BlueDog is tethered to the pipe entry location via mechanical means, allowing the recovery of the tool for multiple pig runs while also mitigating the risk of becoming stuck.

The BlueDog is run in conjunction with custom chemical systems, and can be coupled with heated fluids deployed through the BlueDog to greatly improve penetration and removal, as well as assuring that there is no redepositing of wax during the process.

## TOOL OPERATING SPECIFICATIONS

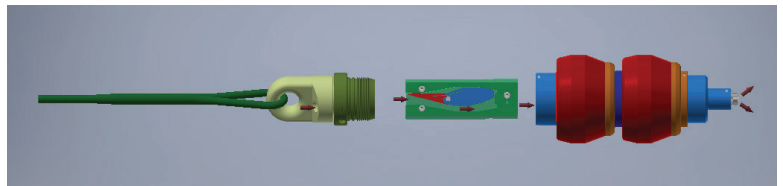
### Starting Position: No Flow

During start-up and deployment, the selector valve (red) and diverter (blue) are positioned so there is no flow through the jet pig.



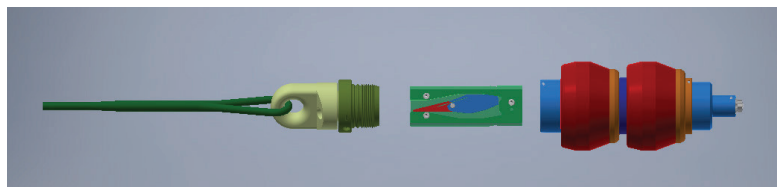
### Jetting Position: Flow through Jets

Once resistance is encountered, flow opens the selector valve and fluid flows through the jets, causing turbulence and scrubbing the interior of the pipe.



### Shifting Position: No Flow

Once jetting is complete, flow stops. This allows the diverter to shift down and prepare for retrieval.



### Retrieving Position: Flow through Bypass

Once the pulling action begins, flow opens the selector valve and fluid bypasses the tool, preventing swabbing. When this flow stops, the tool resets automatically to the starting position.

