

ThruBit

Through-the-bit logging services

APPLICATIONS

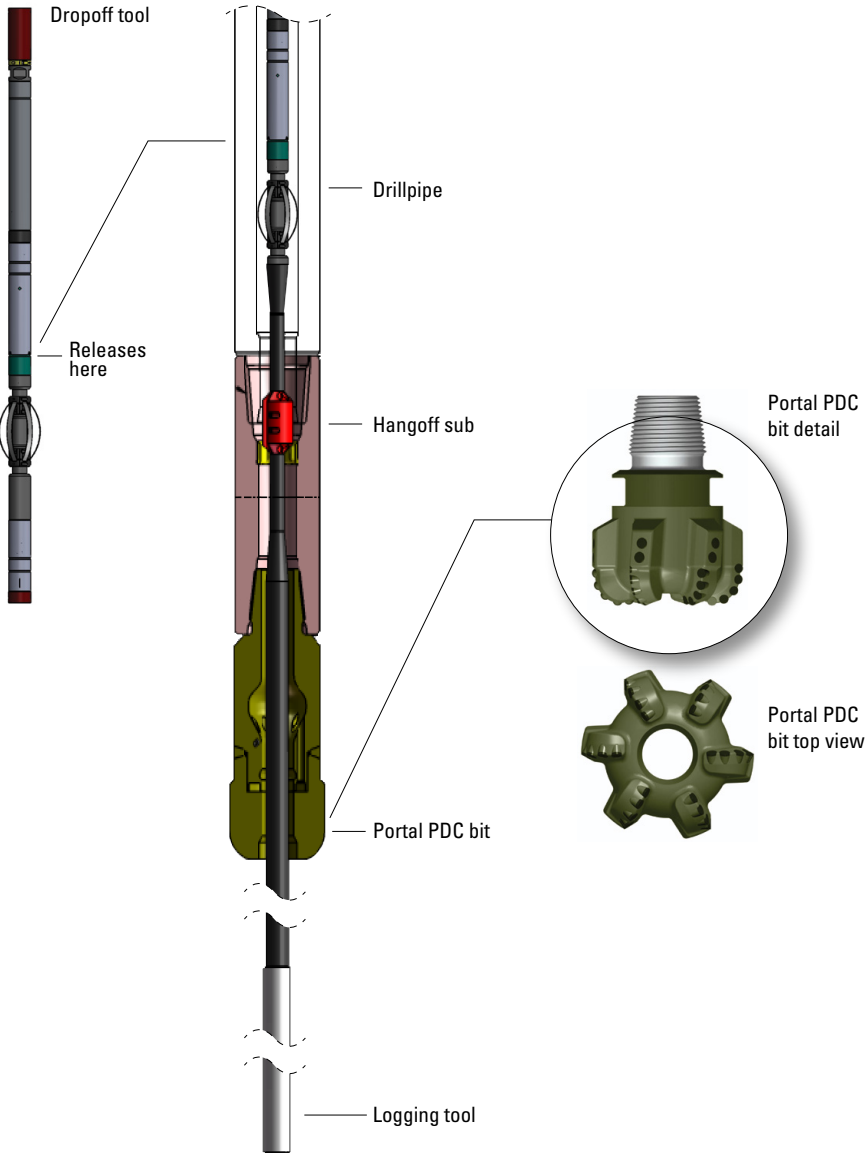
- Conveyance in slimholes
- Conveyance in highly deviated and horizontal wells
- Conveyance in unconventional plays
- Conveyance in complex or unstable boreholes (tortuous, rugose, loss zones, or severe washouts)
- Conveyance through pipe with a minimum drift ID of 2.375 in

BENEFITS

- Optimized drilling AFE from reduced logging times and the elimination of extra conditioning trips associated with other conveyance options
- Minimized risk through tool retrievability and full well control
- Streamlined logistics compared with LWD and drillpipe conveyance
- Efficient data acquisition from the unparalleled flexibility of multiple logging modes and tool combinations

The recent addition of ThruBit* through-the-bit logging services to the Schlumberger conveyance portfolio provides a unique conveyance technique that restrains drilling expenditures while enabling log acquisition in challenging and complex wellbore environments where conducting wireline logging was previously highly problematic, much less even possible.

This conveyance technique is used to deploy the ThruBit services slim multiconveyance formation evaluation tools to acquire open- and cased hole logging data. With a common diameter of only 2½ in, the entire logging suite is sufficiently slim to pass through most drillpipe sizes, jars, and collars and out of the Portal* pass-through bit for logging.



The ThruBit services dropoff tool is used to disconnect the wireline from the logging toolstring positioned on the hangoff sub and extending through the Portal bit. The wireline can then be retrieved before the hole is logged in memory mode while the drillpipe is tripped out.

Operational flexibility

Several logging modes are available with ThruBit services.

Conventional wireline mode

Standard wireline logging operations can be conducted with the 2½-in-diameter ThruBit services tools conveyed on wireline in boreholes as slim as 3 in and up to 16 in to acquire real-time logging data.

Conventional wireline in through-drillpipe mode

Drillpipe can be positioned in the well to isolate problematic zones, such as lost circulation or washouts, behind pipe. The ThruBit services tools are then run on wireline through the drillpipe, which mitigates potential tool sticking and fishing scenarios, and into open hole to acquire the logging data.

Memory mode with pumpdown

Well profiles that cannot be conventionally accessed on wireline using gravity descent, such as horizontal, extended reach, and S- or J-shaped wells, can be logged using ThruBit services conveyance.

Before logging, the hole can be reamed and conditioned using the Portal bit. Then the ThruBit services tools are lowered by gravity or pumped down on wireline through the drillpipe and positioned on the hangoff sub with the logging sensors passed through the Portal bit into the open hole. The wireline is disconnected and retrieved, and logging is conducted in memory mode as the drillpipe is tripped out.

Minimized risk through full well control

At all times during the deployment or operation of the ThruBit services tools, the driller maintains complete control of the drillstring. Circulation and rotation can be conducted as needed.

Regardless of the logging mode conducted with ThruBit services, the logging string can be retrieved out of the hole before the drillpipe is pulled out to surface. This capability is particularly advantageous in case of stuck pipe because the logging tools and any associated sources can easily be retrieved to surface, thereby facilitating and improving the safety of fishing and pipe-freeing operations.

ThruBit Services BHA Mechanical Specifications

Component	OD, in	Top Connection	Top Thread, in	Top Torque, lbf	Bottom Connection	Bottom Thread, in	Bottom Torque, lbf	Length, in	ID, in
Upper sub	5¼	Box	4 FH	11,800	Pin	4 FH	11,800	24	2.5
Flapper sub	5¼	Box	4 FH	11,800	Pin	3½ IF	9,100	62	2.5
Hangoff sub	4¾	Box	3½ IF	9,100	Box	3½ IF	9,100	62	2.5
Portal bit	5⅞	Pin	3½ IF	9,100				6 ¹¹ / ₁₆	2.5
	6	Pin	3½ IF	9,100				6 ¹¹ / ₁₆	2.5
	6½	Pin	3½ IF	9,100				7	2.5
	6¾	Pin	3½ IF	9,100				7⅞	2.5

Component	OD, in	Top Connection	Top Thread, in	Top Torque, lbf	Bottom Connection	Bottom Thread, in	Bottom Torque, lbf	Length, in	ID, in
Upper sub	6¾	Box	4½ IF	18,900	Pin	4½ IF	18,900	24	2.5
Flapper sub	6¾	Box	4½ IF	18,900	Pin	4½ IF	18,900	62	2.5
Hangoff sub	6¾	Box	4½ IF	18,900	Box	4½ Reg	15,000	36	2.5
Portal bit	7⅞	Pin	4½ Reg	15,000				7½	2.5
	8½	Pin	4½ Reg	15,000				7 ¹¹ / ₁₆	2.5
	8¾	Pin	4½ Reg	15,000				7 ¹⁵ / ₁₆	2.5

Component	OD, in	Top Connection	Top Thread, in	Top Torque, lbf	Bottom Connection	Bottom Thread, in	Bottom Torque, lbf	Length, in	ID, in
Upper sub	8	Box	6⅞ Reg	43,000	Pin	6⅞ Reg	43,000	24	2.5
Flapper sub	8	Box	6⅞ Reg	43,000	Pin	6⅞ Reg	43,000	62	2.5
Hangoff sub	8	Box	6⅞ Reg	43,000	Box	6⅞ Reg	43,000	36	2.5
Portal bit	9⅞	Pin	6⅞ Reg	43,000				8⅞	2.5
	10⅞	Pin	6⅞ Reg	43,000				9¾	2.5
	12¼	Pin	6⅞ Reg	43,000				11⅞	2.5

Note: Custom sizes can be made available. Contact your Schlumberger representative and allow for lead time for equipment design and availability.

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