

**X-it**<sup>®</sup>

## Reliable sidetracks; first time

Hydraulic & mechanical set single-trip casing exit system

Proven in over 300 successful operations, X-it<sup>®</sup>'s unique multiramp whipstock geometry and fourth generation mill provide a step change in sidetrack drilling performance. With X-it<sup>®</sup> technology, sidetracks are delivered efficiently, reliably and with far greater accuracy.



The X-it<sup>®</sup> system is the result of decades of hard-won experience in deploying and delivering sidetrack technology. In refining X-it<sup>®</sup>, our specialists have maintained a clear focus on efficiency, reliability, and accuracy as fundamental requirements of our sidetrack solutions. The X-it<sup>®</sup> system consists of two main components, each with its own combination of unique features and benefits; each working in harmony with the other.

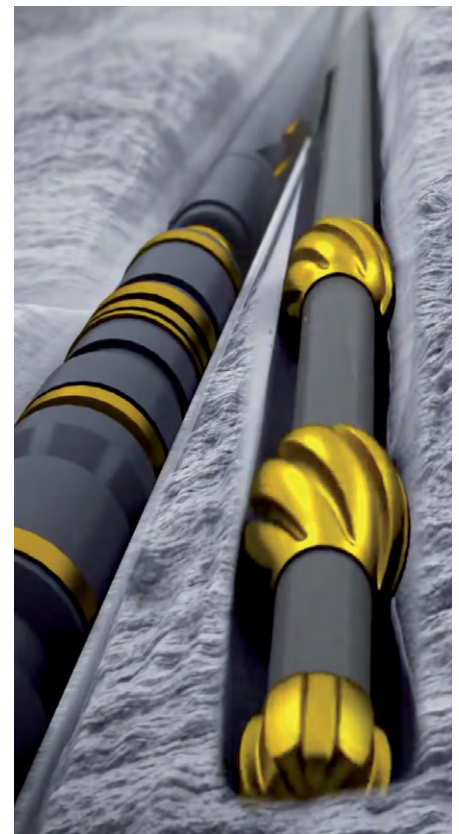
### **Deployment and anchoring**

Once oriented using MWD or Gyro, the X-it<sup>®</sup> whipstock is firmly anchored in place using tri-directional slips, eliminating the risk of rotation and improving exit accuracy. Critically, the fulcrum lug anchor ensures that the top of the whipstock is always held firmly against the casing wall, regardless of orientation or deviation. This improves efficiency because the mill-string will not hang up at the whipstock. And it means that X-it<sup>®</sup> provides full 360 degree exit capability, making it the perfect choice for multilateral drilling and low side exits.

### **Milling and exiting**

The X-it<sup>®</sup> whipstock features a unique 3-step ramp profile leading to the whipstock face. The precision geometry of the carbide coated ramps and the X-it<sup>®</sup> mill work together to maintain a progressive cutting force against the casing wall. This consistently improves mill efficiency; delivers a clean exit window; and ensures low dog-leg severity through the exit.

The fourth generation mill combines high-performance geometry and cutting technology to complement the whipstock design. Custom-blended Predator and Sharktooth inserts are Quicktip welded to spiral cutting blades, maximising strength and penetration rates. The integral pilot bit adds cutting force during casing exit but its main advantage is drilling formation. The pilot bit ensures a straight and true course off the whipstock face, eliminating the need for directional compensation and reducing dog-leg severity at a critical point in the new well. Overall, X-it<sup>®</sup> delivers a smooth transition through and beyond the exit point to help streamline completion of the new wellbore.





Unique Multiramp Whipstock;  
carbide coated ramps



The X-it® Single Trip Mill design includes a Pilot mill, Follow mill and a Dress Mill. All three mills providing advanced window milling capabilities.

## Benefits

- Single-trip reliable, effective and efficient sidetracks
- Pilot bit precision delivers accurate, straight sidetrack with reduced dog-leg and tortuosity
- 360 degree and low side exits improve target accuracy and reduce drilling time
- Positive anchoring in high deviation eliminates hang-up risk on whipstock
- Confidence in system due to 300+ wells track record

## Features

- Fully retrievable; single-trip system
- Unique multiramp whipstock; carbide coated ramps
- Unique geometry combination mill; integrated pilot mill
- Quicktip applied Predator and Sharktooth inserts improve strength and penetration
- Tri-directional anchor slips provide positive anchoring
- Fulcrum lug anchor forces whipstock against casing in all deviations
- 360 degree exit including low side
- Dual string and horizontal well exit capability
- Two-piece whipstock
- Multiple anchor mechanisms

## Applications

- Sidetracks
- Multilaterals
- Controlled casing exit

## Hydraulic set options

- Hydraulic set retrievable anchor
- Low side exit capabilities
- Hydraulic set retrievable packers
- Hydraulic set permanent packers
- SSV valve for MWD orientation
- Fluid reservoir

The X-it® Whipstock incorporates two field proven methods for retrieval - the X-it® retrieval die collar and retrieval hook.

## The X-it® Retrievable Anchor

is a mechanical weight set slip anchor design for full contact with tri-directional wickers. Anti-rotation and high axial load slip-design. Fulcrum Lug allows for low side exits.

**The X-it® Hydraulic Anchor** is a hydraulic set (Mechanical with hydraulic actuation cylinder) Slip anchor design for full contact with tri-directional wickers. Anit-rotation and high axial load slip-design. Fully retrievable.

## The Retrievable Packer Anchor.

Pressure containment to 7500 psi. Fully retrievable with adjustable shear values.

