

# Major Permian Operator Successfully Executes 3-Well Sidetracking Program with 7 inch TrackMaster Select Whipstocks in Challenging Formations

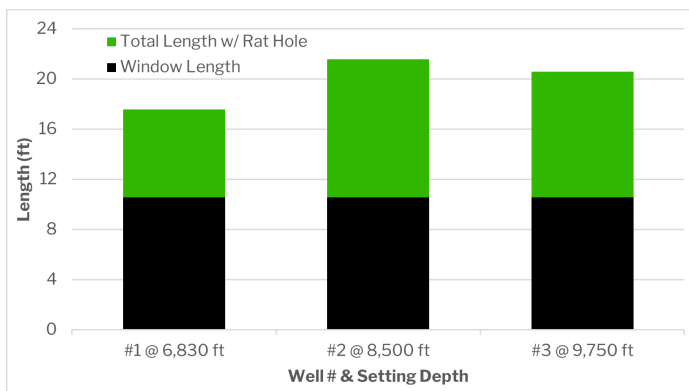
Unrivalled experience and engineering support from the Wellbore Integrity Solutions (WIS) team results in a successful one-trip sidetracking operation.



## Challenging Sidetrack Successfully Completed Into Hard Formation.

On a 3-well program for a Major Permian Basin Operator, WIS expertly planned and executed a sidetracking exit point from 7 inch 29# TN 110S grade casing into a competent formation with a high compressive strength in excess of 38,000 psi. Our skillfully trained team recommended dressing the lead mill with full field proven diamond inserts on the 6½ inch Bi-Mill assembly for this application to optimize milling performance and achieve rat hole objectives. This mill configuration of high performance PDC cutters is designed to provide superior durability and enables one trip runs when hard to extreme-hard formations are encountered. Furthermore, a robust integral Bi-Mill was employed to ensure precise window geometry, enhancing drilling and production accessibility in subsequent operations.

The 7 inch TrackMaster sidetracking systems were tripped in hole, oriented to the desired direction and hydraulically set. The Bi-Mill was sheared off and successfully milled the windows plus required rat hole length. The subsequent directional BHAs freely passed through the windows and operations continued forward as planned. Window and rat hole length for each sidetrack are summarized in the plot below.



**Location:** Permian Basin  
**Whip System Size:** 7 inch TrackMaster CH  
**CH Exit Size:** 7 inch 29# TN 110S  
**Formation UCS at Exit:** 30-38 ksi  
**Mill Type:** 6½ inch FT Diamond Bi-Mill  
**DLS @ Whipstock:** ~1° /100 ft

### CHALLENGE

- Plan and execute a sidetrack out of 7 inch TN 110S grade casing and deliver a usable window exiting into hard formation with unconfined compressive strength of ~38 ksi.

### SOLUTION

- 7 inch TrackMaster Select CH Whipstock system with hydraulic anchor.
- Optimized milling assembly with full PDC cutting structure to mill the window and match OH formation characteristics.
- Superior integral mill mandrel design was deployed for this challenging application.
- Road map developed for the applications.

### RESULTS

- Successfully completed window in a single-trip with 6½ inch Bi-Mill for all 3 wells in this sidetracking program through TN 110S grade casing.
- Bi-Mill was within acceptable gauge criteria, despite the open hole formation characteristics with high compressive strength.
- Provided a high-quality window for pass through of subsequent directional BHA and production string.



TrackMaster Select CH with 6½ inch Diamond Bi-Mill

**TrackMaster Select™**

- A HISTORY OF INNOVATION
- UNRIVALED EXPERIENCE
- GLOBAL PRESENCE

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