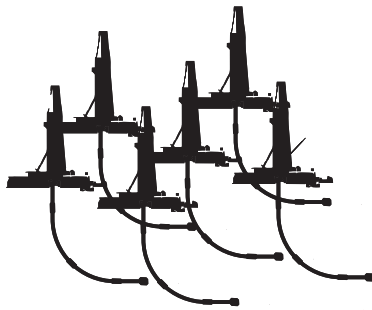


## Duraband® NC Case History - N. Dakota Bakken Shale

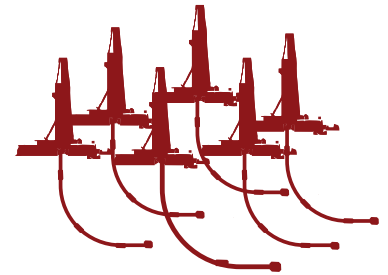
### Duraband® NC Hardbanding to Save Millions in Aggressive Bakken Shale Formation

#### UNBANDED TOOL JOINTS



A recent study of unbanded versus hardbanded tool joints reveals massive projected savings. After drilling a single hole, 10,000 vertical feet, and 10,000 horizontal feet, the unbanded tool joints were completely worn out, while the Duraband® NC hardbanded joints showed minimal wear and went on to drill 6 more additional holes. The hardbanding, after 7 holes was only 50% worn.

#### DURABAND HARDBANDED TOOL JOINTS



**Location and formations  
may alter results.**

**PROJECTED COST TO DRILL 6  
HOLES WITH 10,000 FT. OF  
REPLACEMENT DRILL PIPE PER HOLE**

**\$2,400,000**



**WORN UNBANDED PIN  
AFTER ONE HOLE ~ 10,000 Ft.**

**ACTUAL COST TO DRILL 6 HOLES  
WITH DURABAND**

**\$432,500**



**DURABAND AFTER 6 HOLES  
(~100,000 Ft.)**