



**FORDIA®**

*Helping drillers improve  
their performance*

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CASE STUDY

**THE HERO 5 ABRASIVE: MORE FEET DRILLED  
AND MORE CONSISTENT CUTTING**

ROCK ABRASIVENESS IS ONE OF THE MOST COMMON CHALLENGES ENCOUNTERED BY DIAMOND DRILLERS IN THE MINERAL EXPLORATION INDUSTRY.

## THE CHALLENGE

Abrasiveness can make it difficult to drill through in any hardness of ground because abrasive grounds can wear down drill bits prematurely, regardless of the type of bit chosen. Drilling equipment manufacturers, such as Fordia, are focusing their efforts on developing customized core bits and equipment that suit particular rock types. The goal is to save customers money through longer product life and improved performance of tools.

## THE PRODUCT

The HERO™ Abrasive series was developed for exactly this reason. The line addresses the challenges of drilling in abrasive rock types. The newest addition to the line is the Hero 5 Abrasive, a harder matrix that is ideal for soft to medium hard ground rated 4 to 6 on Mohs scale. This new line arises from the very popular HERO™ series known for its excellent penetration/lifetime ratio. The Abrasive version gives you the same benefits in a new variety of grounds.

To make sure the new Hero 5 Abrasive delivered superior performance, Fordia decided to test the bit with several customers in Nevada, an area with some of the toughest abrasive conditions in the world. The results did not disappoint.



## RESULTS CUSTOMER 1

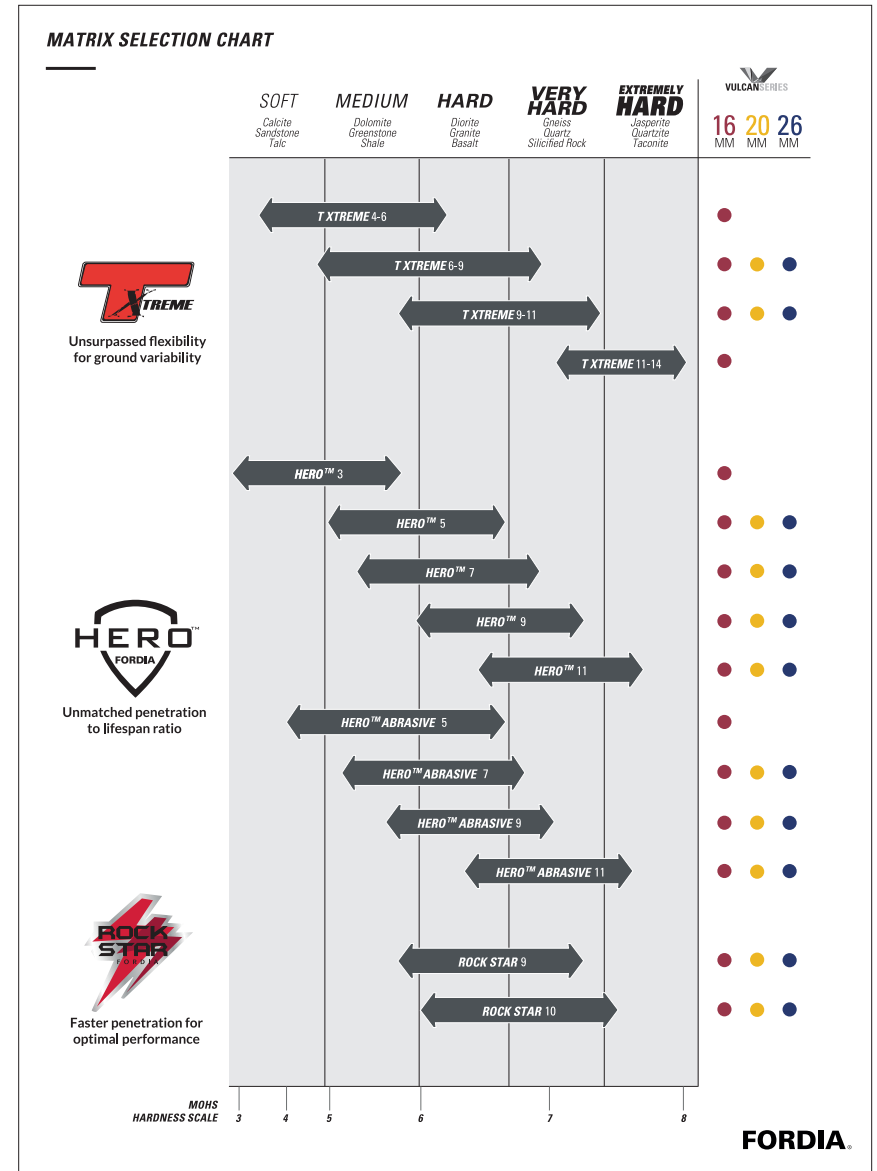
The Hero 5 Abrasive was tested in extremely abrasive conditions, ranging from 1 to 6 on Mohs hardness chart. The ground transitioned regularly from clay to hard rock, which is typical for Nevada, but with unusually heavy mineralization.

In an ideal situation for comparing core bits, the holes drilled were separated by 100 feet of distance. The objective in testing was core bit life. All the core bits, including the competitors' bits had similar penetration rates. Where the bits differed dramatically was in the number of feet drilled per bit.

Four different competitors' bits were tested and they averaged from 35 feet to 79 feet. Fordia's own Hero 5 averaged 75 feet and the Hero 7 Abrasive averaged 80 feet. So the team was very pleased to see the new Hero 5 Abrasive core bit drilled between 107 feet and 112 feet.

## RESULTS CUSTOMER 2

Following the success above, the team tested the Hero 5 Abrasive several different times with another customer. At this drilling project, the changing ground conditions were causing problems. All the core bits from the competition, as well as the Hero 3 and 5, needed to have a lot of pressure placed on them in order to cut. Despite the pushing, the bits would not penetrate and stay in the bore hole. Even in these tough conditions, the Hero 5 Abrasive managed to cut and stay in the hole. The team recorded 125 feet with the Hero 5 Abrasive.



IN SOME CASES, THE NUMBER OF FEET PER BIT WAS DOUBLED. IN LESS HARSH CONDITIONS, SOME DRILLERS OBTAINED FROM 220 FEET TO 430 FEET PER BIT.

## CONCLUSION

As Fordia's Nevada team continued testing, they found similar results with other customers. In some cases, the number of feet per bit was doubled. In less harsh conditions, some drillers obtained from 220 feet to 430 feet per bit. Many drillers told the Fordia team that they liked how the Hero 5 Abrasive bits cut and that they provided more consistent cutting than other bits they had tried.

The Hero 5 Abrasive is now available for drillers who want superior cutting ability and enhanced performance in soft to medium hard, abrasive ground rated 4 to 6 on Mohs scale, and where there is a great deal of ground variability. Fordia's goal is to improve drilling performance and the company believes this new core bit does exactly that. To learn more about the Hero 5 Abrasive and other drilling equipment, visit [www.Fordia.com](http://www.Fordia.com).

