

## 12" Random Rock 5 Cone Hole Opener Performance Update

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<b><u>Location:</u></b>	Atlanta
<b><u>Operator:</u></b>	US HDD contractor
<b><u>Drill:</u></b>	Vermeer 80X100
<b><u>Challenge:</u></b>	2 - 400 foot rock bores 360 – 380 hard rock per job
<b><u>Geology:</u></b>	Granite, Quartz 15 to 25K psi comp strength



### **Result:**

- *Each ream was completed in less than 20 hours (20+ ft/hr) with no problems on the hole opening section.*
- *To date, the hole opener has successfully reamed 800 feet of hard granite and will be used on the next rock job.*
- *Cutting structure is virtually untouched and the bearings are in excellent condition!*

### **Features/Benefits:**

1. *Patented Random<sup>TM</sup> cutting structure provides more effective use of applied weight.*
2. *Specifically designed for the toughest drilling conditions. One cone style for any position.*
3. *Compensated Lubrication System*
4. *Unique locating system provides truer cutter positioning*
5. *Improved wall clearance for reduced shirrtail wear*
6. *Improved shirrtail protection – Hardfacing and TCI Inserts*
7. *5 cone reamer ensures SMOOTH running in difficult drilling conditions*