## Sub-Sea Petroleum Manifolds: Opening Drill®

The customer manufactures sub-sea petroleum manifolds using a Giddings & Lewis boring mill with 250 PSI (17.237 bar) water soluble coolant.

Since this operation consumed half the day, the customer asked Allied for a better solution.

The **Opening Drill**<sup>®</sup> drastically reduced the costly machine run time, which ultimately resulted in a decreased cost per hole.



		Measure	Competitor	Opening Drill®
Product:	Opening Drill®			
Objective:	Decrease cycle time	RPM	125	150
Industry:	Oil & gas/petrochemical	Feed Rate	0.003 IPR (0.076 mm/rev)	0.004 IPR (0.102 mm/rev)
Part:	Sub-sea petroleum manifolds			
Material:	625 Inconel	Penetration Rate	0.375 IPM (9.525 mm/min)	0.6 IPM (15.240 mm/min)
Hole Ø:	<b>3.8"</b> (96.52 mm)	Cycle Time	4 hours (20 passes)	15 min
Hole Depth:	<b>9.0"</b> (228.6 mm)			
		The Opening Drill offered 93.75% cost per hole savings over the competitor tooling.		



