



NEWS RELEASE

Contact:

Michael Breitsameter, VP Sales & Marketing
407) 838-1427, Ext. 213
MikeB@nanosteelco.com

The NanoSteel Company Pioneers Downhole Solution for Grant Prideco™

Resulting In Revolutionary New Tool Joint Hardbanding Material

June 10, 2005, Maitland, Florida ...The NanoSteel Company ("NanoSteel"), headquartered in Maitland, Florida, announces the execution of a multi-year production and supply contract with Grant Prideco (Houston, Texas). The contract is for a new and unique casing-friendly hardbanding material for tool joints. It has resulted from a two-year engineering development program and collaboration between NanoSteel and Grant Prideco that addressed many of the wear performance issues of concern to both operators and drilling contractors. Grant Prideco recently introduced the proprietary product to the drilling market as Platinum™ HB.

"Referring to Platinum HB™ as 'revolutionary' is appropriate," comments Randall Edwards, VP Sales and Marketing for Grant Prideco Drilling Products and Services, "because it's simply the first casing-friendly material that also protects the tool joint. We were driven to seek out The NanoSteel Company's research capabilities when operators were telling us they needed a product that would prevent tool joints from tearing up their casing downhole. Drilling contractors concurrently were demanding hardbanding that would protect their tool joints. In the past, someone had to decide whether casing wear or tool joint wear was more important. Off-the-shelf products were mutually exclusive; they addressed either one or the other of these needs, but none addressed both."

With these specifications as its charter, NanoSteel developed a material that solved both problems. NanoSteel focused on matching the coefficient of thermal expansion between the tool joint steel and the new hardbanding material over a wide range of temperatures to avoid cracking. In effect, NanoSteel produced a relatively crack-free hardbanding material for tool joints that also avoids spalling and which can be welded over itself, also without cracking. The near nanoscale type microstructure of this new alloy facilitates both low friction and low wear on the casing. "So far, we've documented the high performance of Platinum HB™ in three wells drilled by Grant Prideco customers along the Gulf Coast," continued Edwards, "while a fourth well is in the works. Our historical testing over the past two years has demonstrated a 55% reduction in radial tool joint wear in casing, along with a 31% reduction in casing wear itself, when compared to the nearest competitive hardband."

Looking toward the immediate future of Grant Prideco's R&D partnership with NanoSteel, Edwards explains that "We hope to make hardband a drill pipe product enhancer. We'd like to continue developing Platinum HB™ while investing in its evolution as a solutions-oriented product line, rather than just a drill pipe add-on." Michael Breitsameter, VP of Marketing for The NanoSteel Company, added that "We will continue to work closely with Grant Prideco to design and produce materials that meet its continuously-developing product demands as its customers, in turn, continue to push the performance envelope into what is uncharted territory for 'standard metallurgy'.

The NanoSteel Company is dedicated to evolving its proprietary alloy design technology – either for mass market products (manipulating structure and chemistry), or in direct response to customer inquiries for improved performance properties for specific applications. Dr. Dan Branagan¹, Chief Technology Officer for NanoSteel, heads up all research and product development initiatives. "We are evaluating ways to take nanostructured steel, in bulk or sheet form, and design a microstructure that replaces exotic materials, such as nickel-based super alloys for

¹ Branagan has received wide-spread recognition for his research in nanostructured steels, including the 2005 Professional Progress in Engineering Award from Iowa State University, 2005 Federal Laboratory Consortium Award for Excellence in Technology Transfer, 2004 R&D 100 Award for Development of Revolutionary Nanocomposite coatings for High Performance Industrial Applications From Low Cost Wire Feedstock, 2003 World Technology Award Nominee and delegate to the World Technology Summit, and the 2002 TR100 Award by the Massachusetts Institute of Technology as one of the top 100 "brilliant young innovators".

high corrosion applications that are produced at a higher cost,” says Branagan. “We are also interested in looking to replace weld overlay materials where strategic core elements or commercial instability may provide opportunities for purpose-designed nanostructured solutions.”

Joseph Buffa, NanoSteel CEO and an original founder of the company, concludes that “we have a very unique and proprietary Rapid Alloy Design and Commercialization process. This process allows us to leverage our core competency in developing nanoscale microstructures in bulk materials to quickly address the market needs identified by our large customers. Our R&D team has developed, and NanoSteel is now producing, a number of patent-protected alloys to mitigate the wear, corrosion, erosion and impact damage that constantly challenge industrial customers such as Grant Prideco. We are very proud of the accomplishments of our R&D operations as well as the focused customer support the company provides along with its commercial products.”

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The NanoSteel Company develops advanced, nanostructured materials solutions for industry, including upstream and downstream oil and gas industry applications where durability, anti-corrosion, strength, and toughness are sought-out necessities or enhancements. The Company’s R&D laboratory primarily supports OEMs interested in developing engineered solutions for systems, components and building parts using nanostructured steel technology. Other industries presently served in addition to oil and gas include automotive, mineral extraction, materials process, chrome plate replacement and energy generation. For more information on The NanoSteel Company, please visit our website: www.nanosteeco.com.



Tool joint with Platinum HB™ hardbanding produced as result of R&D collaboration between The NanoSteel Company and Grant Prideco



Dr. Dan Branagan at NanoSteel's Nanomaterials Research Institute.