THRUSTER ENERGY CORP.

TENAX HYDRASHOCK™

NEXT GENERATION MILLING TECHNOLOGY

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The HydraShock represents an evolution in conventional jarring technology. The HydraShock uses the entire string as a jar, to find and remove a stuck point.

During a mill out, sand and plug debris can settle and can cause the tubing to become stuck. Due to the limitations of Coiled Tubing's cycling fatigue, few attempts can be made to free the stuck pipe. This is the reason the HydraShock system was invented. Without moving the tubing at surface we can create a dynamic event in the wellbore to free the tubing. This eliminates excessive costs and risks due to cycling fatigue. The 2.88" HydraShock is capable of firing up to 50 jarring events. How does it work?

Ideally, the "Run in Place Tool" should be ran as part of every Milling BHA. This is what will allow the Delta 'N' balls to seat against, pressure up and then pressure release. The Run in Place Tool also houses the spent Delta 'N' balls. Conversely, if the Run in Place Tool was not ran initially as part of the Milling BHA, the TENAX Rescue Tool can be deployed from surface, and land on top of the internal coil connector. Once seated on top of the internal connector, Delta 'N' balls can be deployed and landed there.

info@thrusterenergy.com **www.thrusterenergy.com** **1.877.698.3570**

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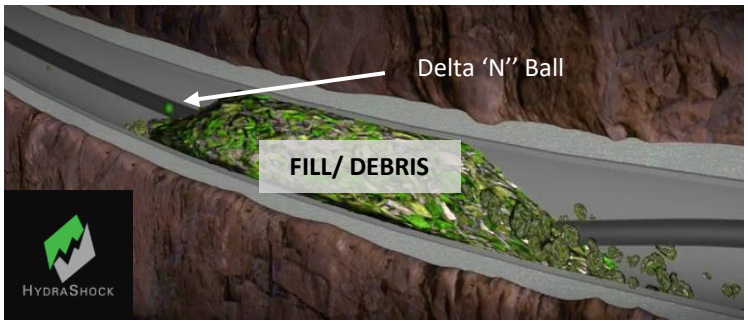

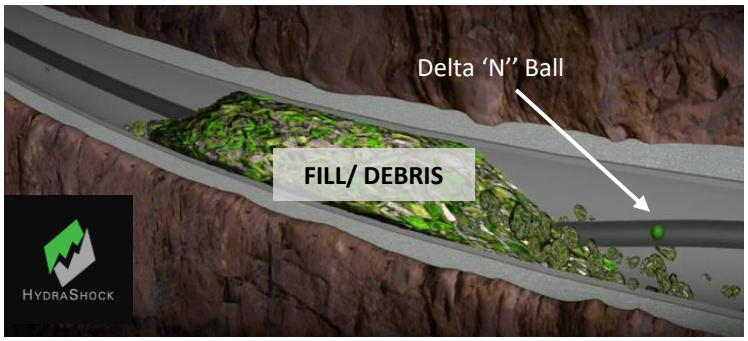

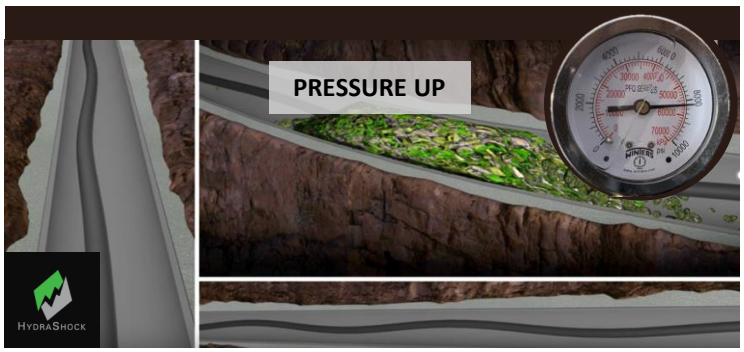

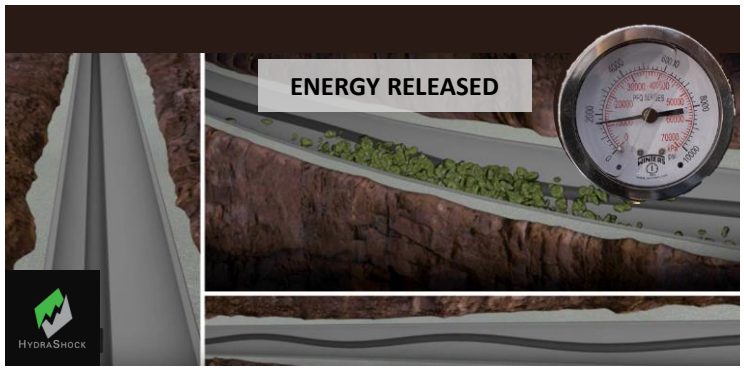

Excellent Option for Low Bottom Hole Pressure Wells!

A pre-determined PSI Value Delta 'N' ball is deployed through the Coiled Tubing…

…and makes its way down passed the stuck point above the BHA onto the Run-in-Place Tool or conversely the TENAX Rescue Tool.

The Delta 'N' Ball lands on the seat in the Run in Place Tool, creating differential pressure. Depending on the value of the Delta 'N' Ball selected, the pressure will increase until the value of the Delta 'N' Ball is exceeded. During this process, the tubing above the stuck point transitions from being in tension…

…to compression, straightening out the Coiled Tubing. The tubing below the stuck point goes from being in a natural helix to a state of charged elongation.

Once the HydraShock™ fires, a dynamic event occurs that utilizes the energy stored in both the fluid and the tubing. The mix of fluid propulsion and spring force acts on both sides of the stuck point, breaking free at the weakest part of the fill.

This process can be repeated up to 50 times, or until tubing is free.

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15,000+ HydraShock™ Runs

407 Jarring Events 83% Success!

"Run-in-Place Sub only 14.25"/ 0.36m in Length!

All dimensions are inches

Size	1.69	2.13	2.88	3.13
ØA	1.69	2.13	2.88	3.13
Øa	0.35	0.35	0.50	0.50
L-A	14.88	15.96	16.5	16.5
L-B	13.38	13.96	14.25	13.5
Box	1 MT	1.5 MT	2.375 PAC	2.375 Regular
Pin	1 MT	1.5 MT	2.375 PAC	2.375 Regular
Make-upTorque lb-ft	500	950	3000	3700
Tensile Strength Lbs	68,100	127,100	269,400	375,500
Ball Capacity	50	50	50	30

Minimum Material Properties	120KPSI Tensile Strength
Operating Temperature and Pressure	350F at 15KPSI
Material Options	Tools for super corrosive environment available upon request

Call Thruster Energy Corp. Today!

1.877.698-3570

To see the HydraShock™ in Action, Click on the Link Below:

http://tenaxenergy.com/tenax-hydra-shock