

PowerJet Nova

Ultradeep Penetration in Stressed Rock

APPLICATIONS

- Production or injection wells
- Damaged formations
- Formations requiring reservoir stimulation
- Stressed rocks
- All phases (oil, water, gas)

BENEFITS

- Increased well productivity and injectivity
- Increased formation contact for improved stimulation treatments
- Increased drainage contact for improved productivity

FEATURES

- Maintains deep penetration at high shot density
- Intersects more natural fractures
- Compatible with PURE* dynamic underbalance perforating gun systems
- Compatible with current wireline and TCP gun systems
- Conveyable on wireline, slickline, TCP, coiled tubing, tractors, or permanent completions

The newest addition to the PowerJet* deep penetrating shaped charge family, the PowerJet Nova ultradeep penetrating shaped charge improves the efficiency of explosive energy transfer into the perforating jet by using an optimized stressed-rock charge design.

PowerJet Nova charges are optimized for downhole formation penetration. Laboratory testing of this new technology has demonstrated up to a 27% increase in stressed-sandstone penetration and up to a 33% increase in stressed-limestone penetration, resulting in over 50% more formation contact and optimized productivity.

Conventional deep penetrating shaped charge



PowerJet Nova* ultradeep penetrating shaped charge



The PowerJet Nova charge's sandstone performance reveals increased penetration compared with previous-generation deep penetrating charges.

PowerJet Nova Charge	2006 HMX	2906 HMX	3106 HMX	3406 HMX
Sandstone [†]				
Stressed-sandstone penetration, in	11.5	15.4	16.8	17.2
Increased stressed-sandstone penetration, % [‡]	21.1	26.7	25.9	19.9
Limestone [§]				
Stressed-limestone penetration, in	12.4	18.1	20.9	20.2
Increased stressed-limestone penetration, % [‡]	32.9	17.6	29.4	17.2
API RP 19B Section 1				
Penetration, in	18.3	30.7	37.8	42.9
Entrance hole, in	0.23	0.38	0.37	0.40
Explosive load, g	7.3	16.9	19.4	22.5

[†] Penetration in Berea sandstone with 8,200-psi uniaxial compressive strength, 5,000-psi axial and radial confining pressure, and 0-psi pore pressure

[‡] Compared with equivalent deep penetrating charge

[§] Penetration in limestone with 5,600-psi uniaxial compressive strength, 5,000-psi axial and radial confining pressure, and 0-psi pore pressure