

Case Study: TSN-23 Solves Sustained Casing Pressure To Enable Abandonment

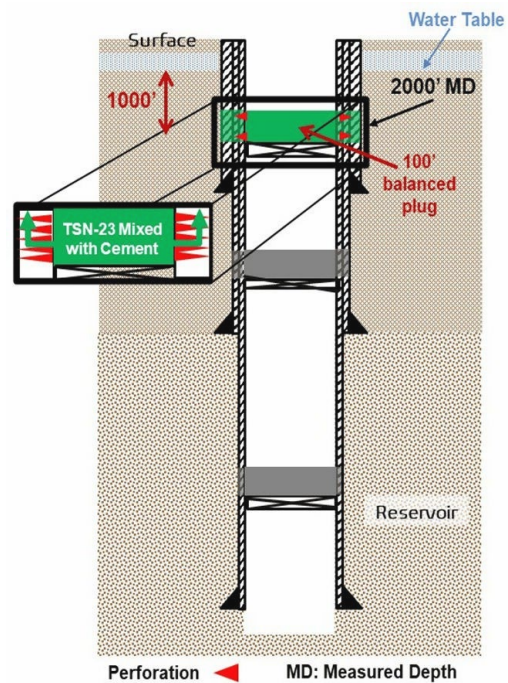


TS-Nano's patented nano-modified polymers are engineered at the nanoscale to deliver solutions beyond the reach of conventional resins.

- **A gas well in the Permian Basin with 7-inch casing** had sustained casing pressure that prevented its abandonment. Previous attempts to mitigate the casing pressure with other products were unsuccessful.
- **Class C cement modified with TSN-23** was used for a balanced plug below the water table to stop gas migration in the annulus and provide a durable, ductile plug with high bond strength that does not shrink. 40 gal (160 Liter) of TSN-23 was mixed with Class C cement slurry and pumped downhole @2000 ft MD.
- **The sustained casing pressure was eliminated**, allowing the well to be plugged and abandoned in compliance with regulatory requirements.

TSN-23 is a patented nano-modified polymer that is added to cement to:

- *prevent gas migration; eliminate shrinkage*
- *develop superior bond strength, elasticity, and ductility*
- *achieve long-term durability for severe downhole conditions from 10-120 °C (50-250°F)*



TSN-23 can be used with Class C, G, H, A, and L cements as well as cement blends with fly ash and silica flour.



TSN-23 is mixed on-site and added as a liquid to the cement slurry. Its use is compatible with standard cement mixing and pumping operations. No rig required.



Contact Us

To learn more about TSN-23's technical specifications, field performance, or to request a case study, contact TS-Nano's technical team at:

📧 info@ts-nano.com | 🌐 www.ts-nano.com | 📞 +1 (505) 385-8930 US | 📞 +1 (587) 707-9384 Canada