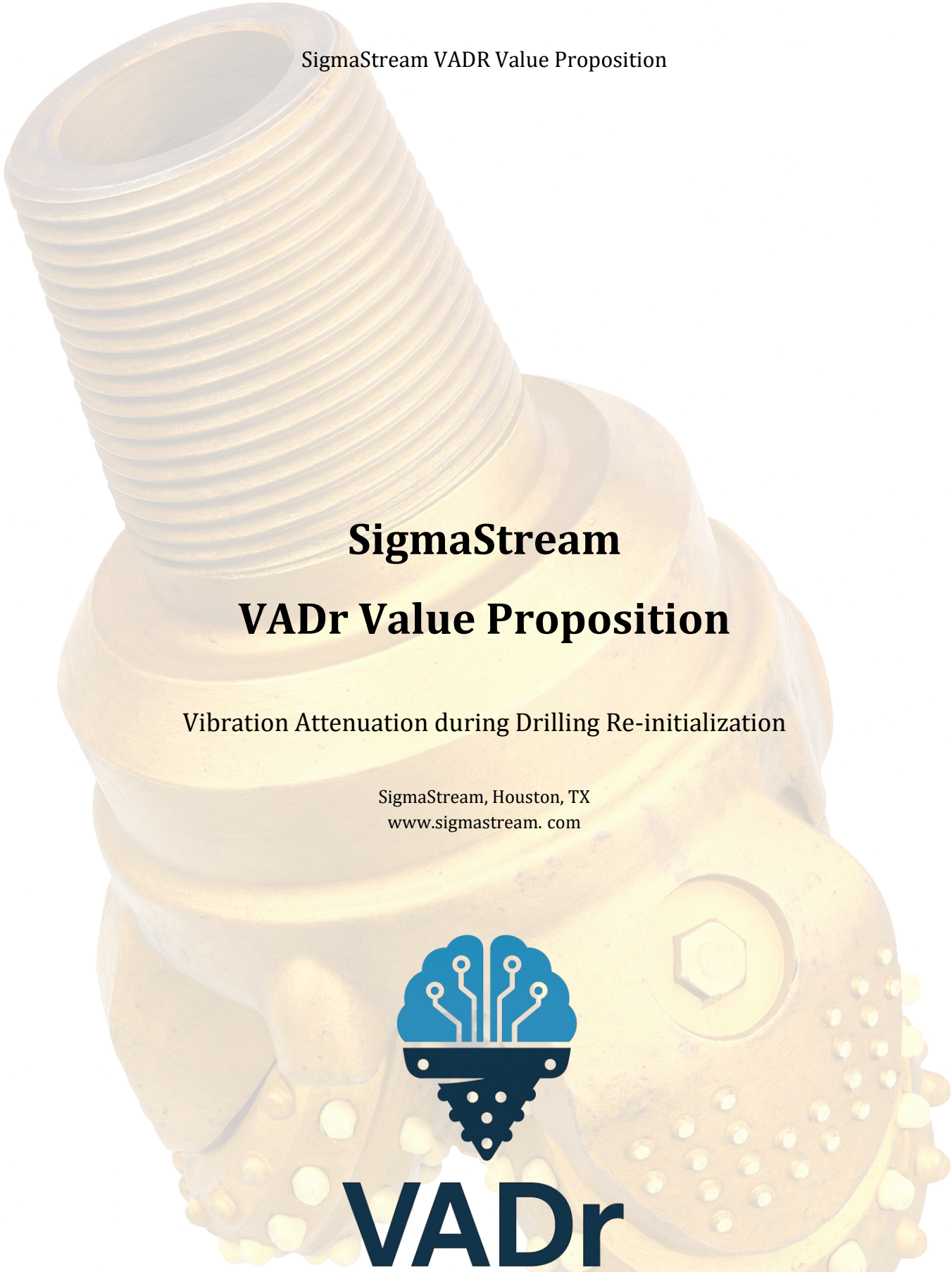


SigmaStream

VADr Value Proposition

Vibration Attenuation during Drilling Re-initialization

SigmaStream, Houston, TX
www.sigmastream. com

VADr

© 2025 SigmaStream. All rights reserved.

Core Value Proposition

VADr uses AI-driven automation to mitigate drill string vibrations during re-engagement. This ensures smoother bit re-engagement, longer bit/BHA life, improved ROP, and fewer unnecessary trips.

Why VADr

VADr continuously reacts in real time to how changes in surface parameters impact downhole vibrations. By automatically adjusting setpoints, it minimizes vibration-induced inefficiencies and safeguards the bit, BHA, and drill string. This dynamic response reduces risk, protects equipment, and ensures re-engagement occurs under optimal conditions—delivering faster, safer, and more cost-effective wells.

Key Benefits

VADr delivers measurable drilling performance gains by improving efficiency, extending equipment life, and reducing downtime. Its adaptable design allows operators to deploy it in either an advisory role or as a fully closed-loop system, maximizing value across different operational contexts.

- 5–10% improvement in ROP
- 10–30% extension of bit/BHA life
- Reduced non-productive time and fewer trips
- Deployment flexibility: advisory or closed-loop system

ROI Scenarios

- Land Rig Scenario: $37K savings (rig rate $50K/day, 1 avoided trip)
- Offshore Scenario – Standard: $1.05M savings (rig rate $700K/day, 2 avoided trips)
- Offshore Scenario – Extended: $1.8M savings (rig rate $800K/day, 3 avoided trips)
- Average Trip Duration: ~18 hours (0.75 rig days)

Note: Savings reflect avoided rig time only and do not include secondary benefits such as reduced equipment wear, improved safety, or extended bit/BHA life.

Conclusion

VADr's automation of vibration attenuation during re-engagement delivers measurable cost savings and performance gains. By preventing even one unnecessary trip, operators can realize savings ranging from $40K–$75K per onshore well to $0.9M–$1.8M per offshore well. Sensitivity analysis and scenario planning show that VADr has the potential to consistently deliver strong ROI across operational contexts.

© 2025 SigmaStream. All rights reserved.