

CHALLENGE

An operator in the Appalachia Basin sought E3's expertise to solve 3 problems:

- Reduce the frequency and severity of overpressure events while drilling extended laterals
- Eliminate environmental spills & cost for cleanup and rupture pin replacement
- Monitor and release stand pipe pressure more accurately to increase working SPP window.

RESULTS:

Based on 142,000' of vertical, curve & lateral on 8 wells

Managed 8 overpressure events and eliminated environmental release of OBM

- Zero Spills: All fluid returned directly to active system
- Reduced OPE remediation time down to 4.9 minutes of NPT
- Reduced frequency and improved response time during motor stall events
- Mitigated impact of OPE and reduced remedial actions allowing drilling operations to resume within 1 minute

Reliability & Accuracy of 99.94%

- RAPTR Valve opened within 5 psi of setpoint during overpressure events

Increased SPP pressure by 300-500 psi

- Eliminated Safety Factor due to rupture pin/nail inaccuracy
- Increased SPP operating window allowing for increased drilling parameters
 - Increased ROP and on bottom drilling times
 - Increase in Diff. Pressure on BHA (more TFA, motor power curve, agitators, telemetry)
 - Increased flow rates for improved hole cleaning capability

Faster standpipe bleed down of +2,900 connections

- Connections time savings of 15-30 sec/connection
- SPP bleed off was 2x faster than manual valve with no human intervention
- Ability to perform backreaming operations

**Operator saved +2.2 days and
eliminated 24 Hours of NPT utilizing
RAPTR™**