



P&A RockSolid™

Shaping the Future of Well Abandonment

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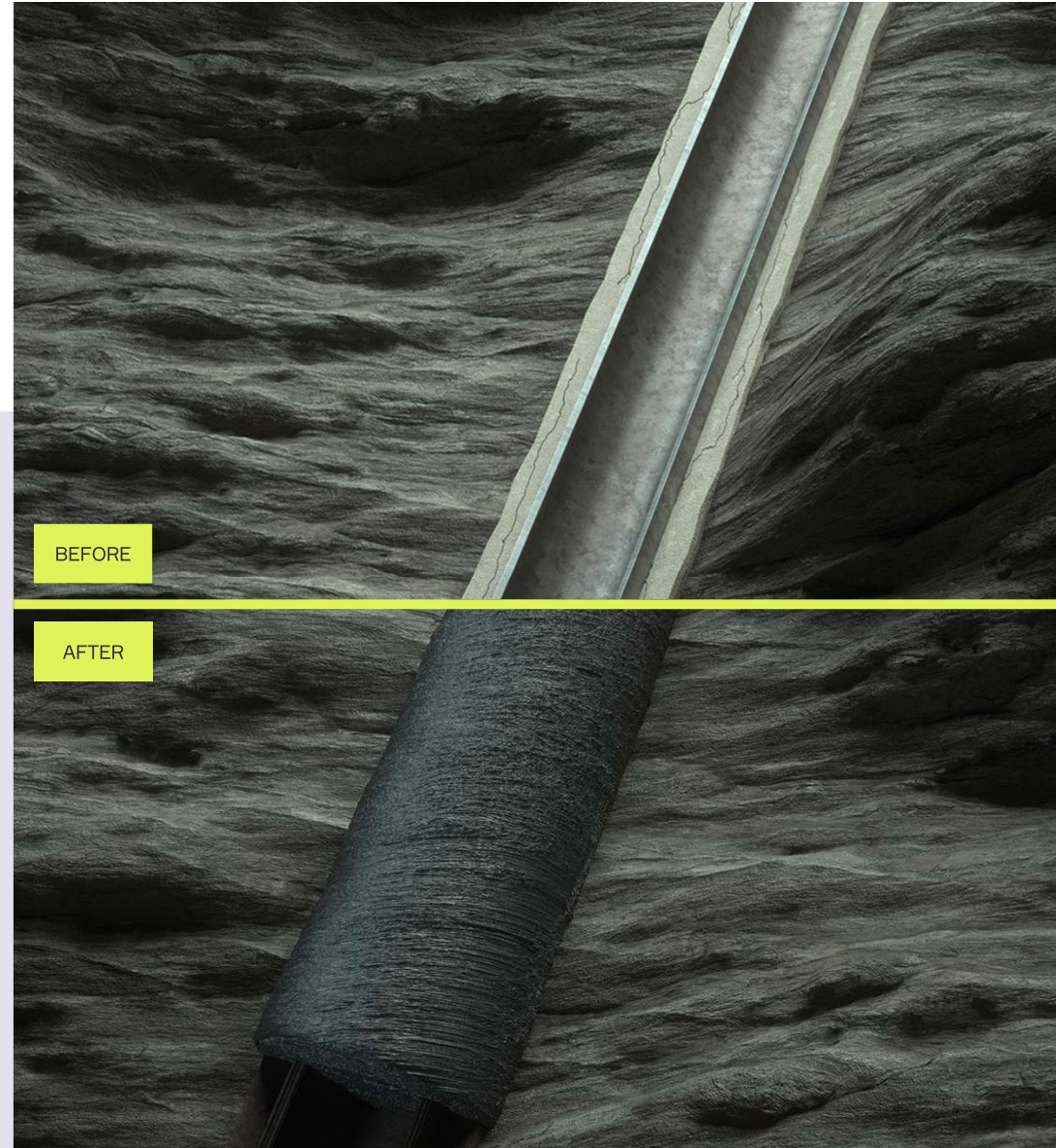
Interwell 

What is RockSolid™?

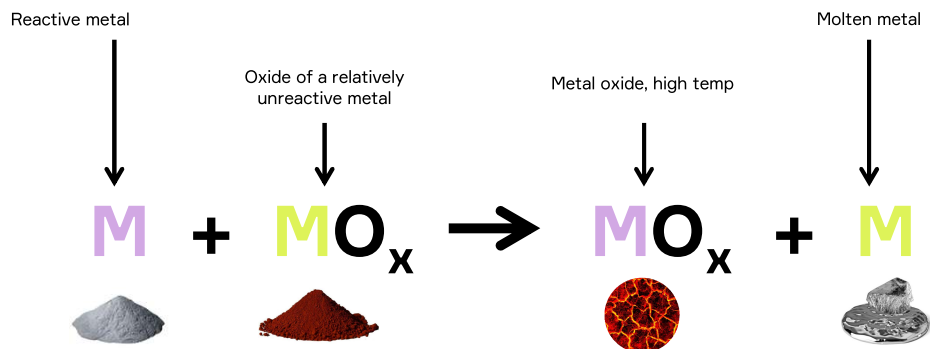
Single-run, rigless wireline solution that:

- ▶ **Removes** man-made materials up to borehole face
- ▶ **Replaces** with uninterrupted bismuth-based barrier

It is powered by **thermite**.



RockSolid™ Barrier



Bismuth-alloy Barrier

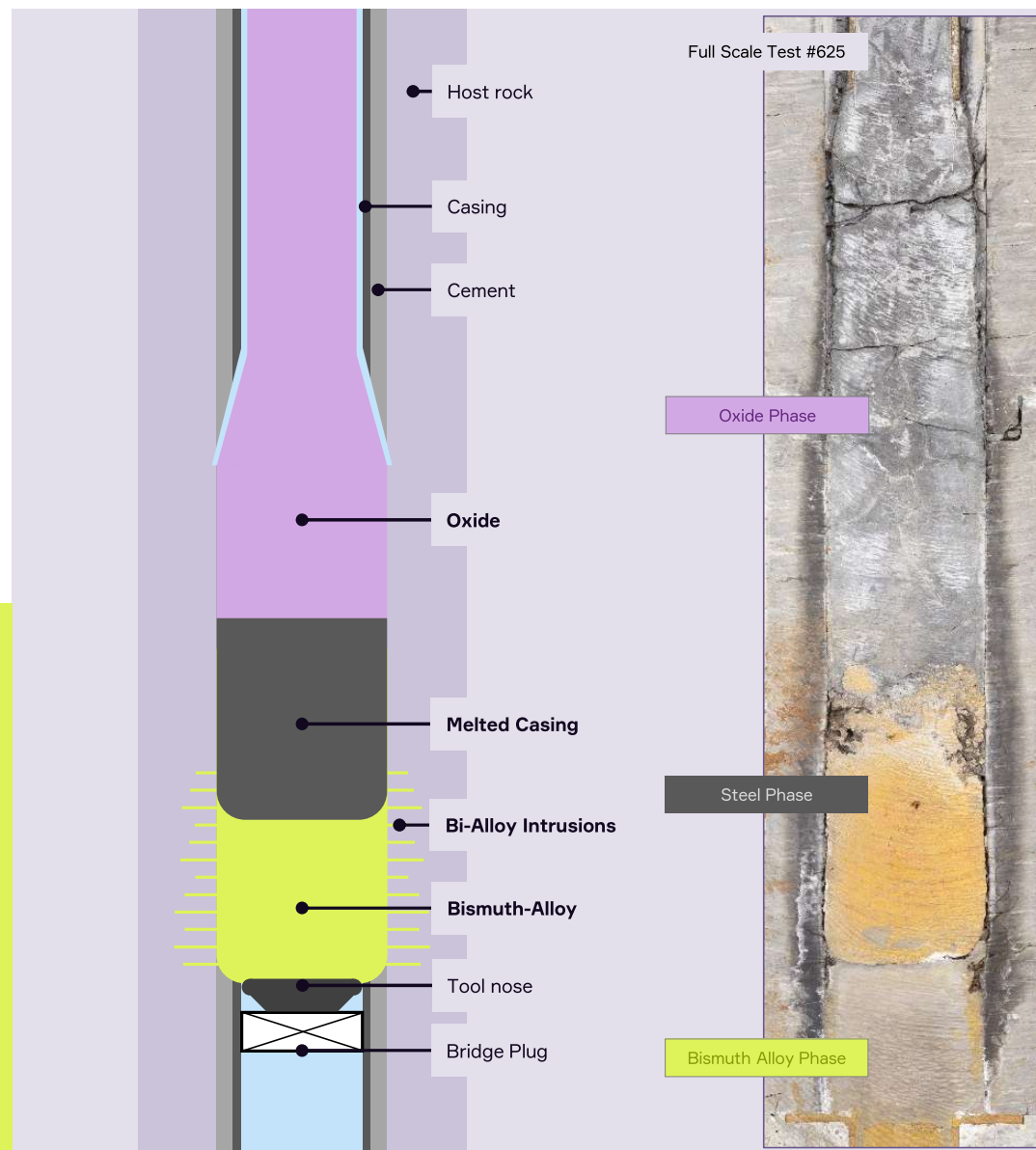
- Barrier length ~2.5m.
- Three phase barrier.
- Eternal gas sealing barrier.
- DQ Process RP-A203.

Interwell

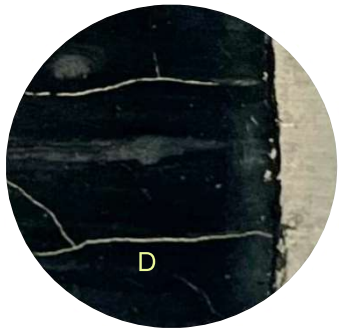
Bismuth Alloy Phase

Steel Phase

Oxide Phase

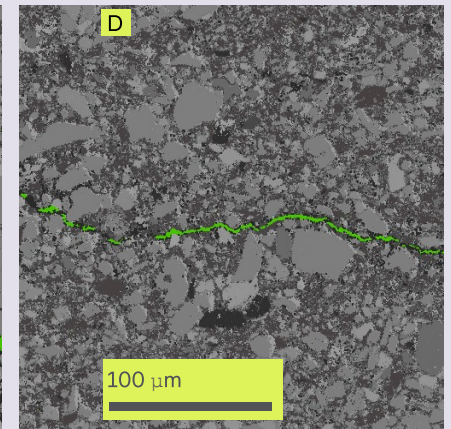
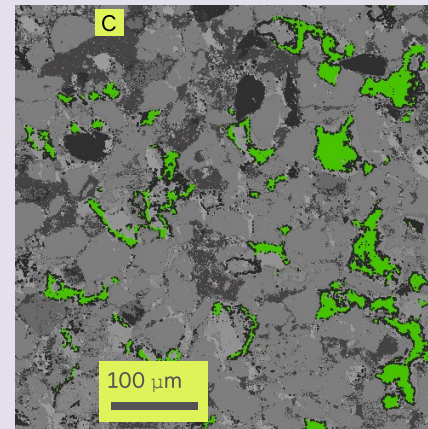
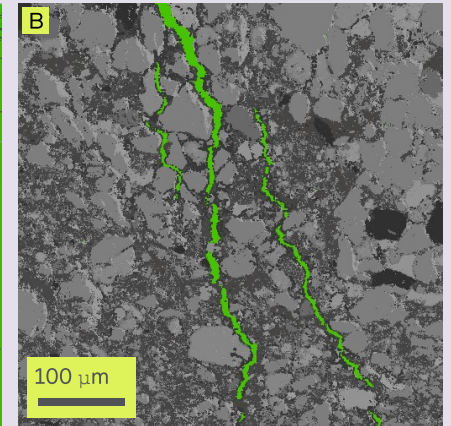
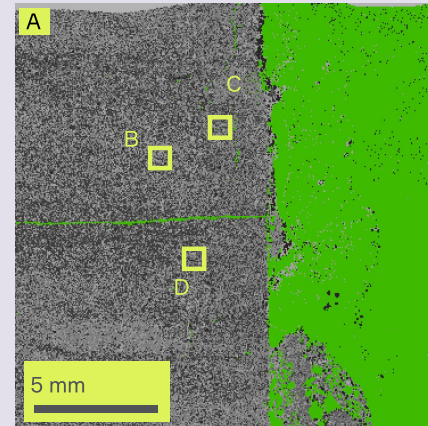


Sealing Ability



Observations

- All casing & cement removed
- Barrier fills 360° rock-to-rock
- Alloy is pervasive into rock
- Fills voids at least ≥ 1 micron



Operational steps

Ca 5 hours

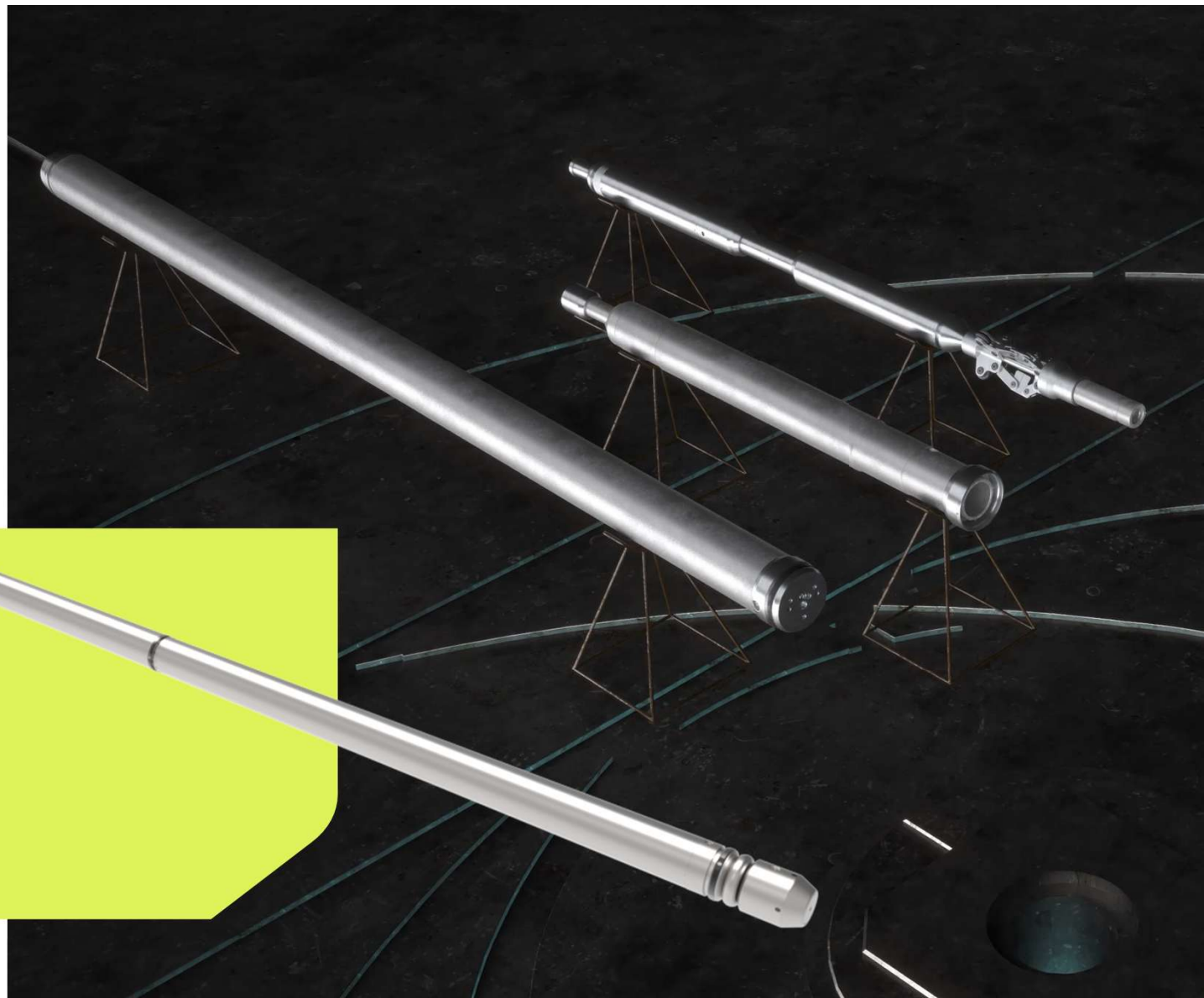
On-site rig-up

Modular design

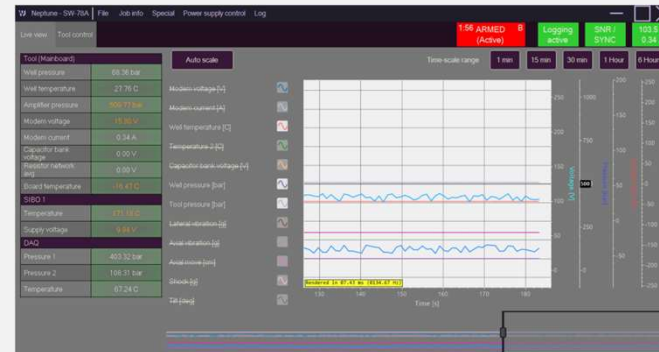
Stackable

Flexible

Interwell 



Operational steps



Ca 2 hours

Deployment

Surface pressure control equipment

Landing base required

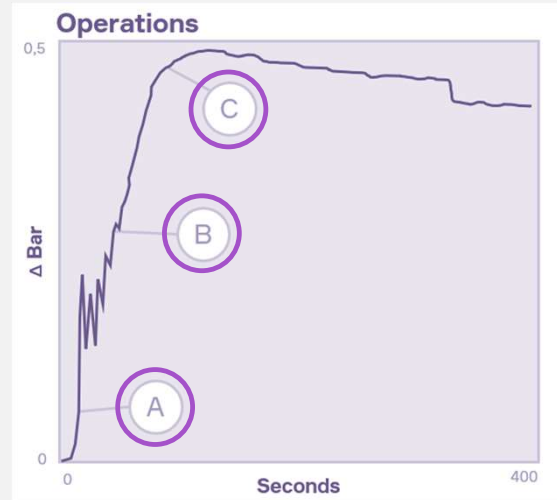
Mechanical anchoring and melt retention system

Live communication before, during and after activation

Interwell 



Operational steps



Ca 2 hours (including cool-down period)

Activation

Known pressure signature for successful combustion

Cross-sectional melting of all man-made well elements

New barrier creates eternal bonds with formation



Applications

Rock to Rock PP&A

- 4.5 / 5.5" Commercial
- For 7" Single String application - TRL 6 – TRL 7 Q4 2025
- For 9-5/8" Single String application - TRL 6 2027

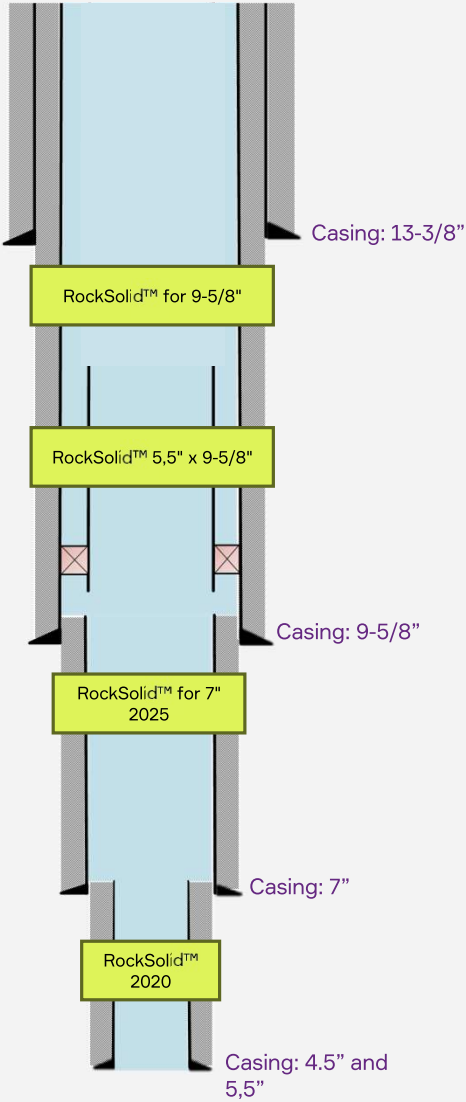
Other Application areas

- Water shut off
- Metal-to-Metal Barrier and NCS bismuth qualification
- CCS
- Zonal isolation

Key Focus Areas

- Technology Development & Qualification
- Standards and regulations - Approval
- Monitoring/verification

Product Name: RockSolid™ Thermite-based barrier



RockSolid™ for 9-5/8"

RockSolid™ 5,5" x 9-5/8"

RockSolid™ for 7" 2025

RockSolid™ 2020

Casing: 13-3/8"

Casing: 9-5/8"

Casing: 7"

Casing: 4.5" and 5,5"

Rev: 1.0

Date: 01.10.2024

Description

RockSolid™ maintains casing integrity across the entire cross section of the well. It's the optimal PSA solution for wells with integrity issues. Through the pioneering use of THERMITE, RockSolid™ melts casing and cement, removing all wellbore elements that then solidify into an impermeable rock-to-rock, gas-tight barrier.

Application

RockSolid™ is suitable for well integrity remediation as an alternative to punch & squeeze, perf wash cement & section milling. The application envelope is:

- Available for 4.5" and 5.5" Single String.
- Surface Casing Vent Flow (SCVF/ SCVF).
- Set in 60 - 200 bar.
- Shale caprock / tight siliclastic.
- Up to 25 degrees inclination at setting depth.

Benefits

- Wireline deployment (e-line) ideal for rig-less applications.
- Restores casing integrity with formation-to-formation gas tight seal.
- The only PSA solution run rigless in a single trip, sealing the well cross sectionally and permanently, with fewer
- resources and with unprecedented material quality.



Rev: 1.0

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Technical Specifications (Tool)

	4.5"	5.5"	7" (2025)
Tool Name	RS 90	RS 110	RS 7
Maximum tool OOD, mm (in)	98 (3.86)	118 (4.65)	145 (5.71)
Temperature range, °C (°F)	-40 to +125 (-40 to +257)	-40 to +125 (-40 to +257)	-40 to +125 (-40 to +257)
Minimum surface to setting depth, °C (°F)	20 (68)	20 (68)	20 (68)
Tool length, mm (ft)	7020 (23)	7020 (23.38)	Max 9000
Tool weight, kg (lb)	136 (300)	184 (406)	Max 1300
Maximum tool body pressure rating, bar (psi)	120 (1800)	110 (1600)	
E-line compatibility	Monomulti conductor	Monomulti conductor	Monomulti conductor
Thermite ADR classification	Not class 1 (i.e. not explosive)	Not class 1 (i.e. not explosive)	

Technical Specifications (Casing)

	4.5"	5.5"	7" (2025)
Tool Name	RS 90	RS 110	RS 7
Casing outer diameter, mm (in)	114.3 (4.5)	140 (5.5)	177.8 (7)
Casing weight (kg/m (lb/ft))	14.14 (10.35-11.6)	20.83 (15.31-17.5)	38.69 (28.28-30.5)
Minimum distance to nearest collar, m (ft)	Down: 0.5 (1.64) Up: 2 (6.5)	Down: 0.5 (1.64) Up: 2 (6.5)	Single string
Number of strings	Single string	Single string	Single string
Casing centralization	Not required	Not required	Not required
Casing alloy	All grades	All grades	All grades

(1) With current tool setup.
(2) Dependent on temperature and pressure, refer tool pressure calculation in F&P.
(3) No configuration needed for new casing weights.
(4) From tool nose.
(5) Burnditch engagement not exceeding 10%.

Verification options

→ Operational methods

- High Fidelity Flow Data & Pressure Analysis
- Isotope verification / tracers
- Spectral Noise Logging (SNL)
- Inflow test / xLOT

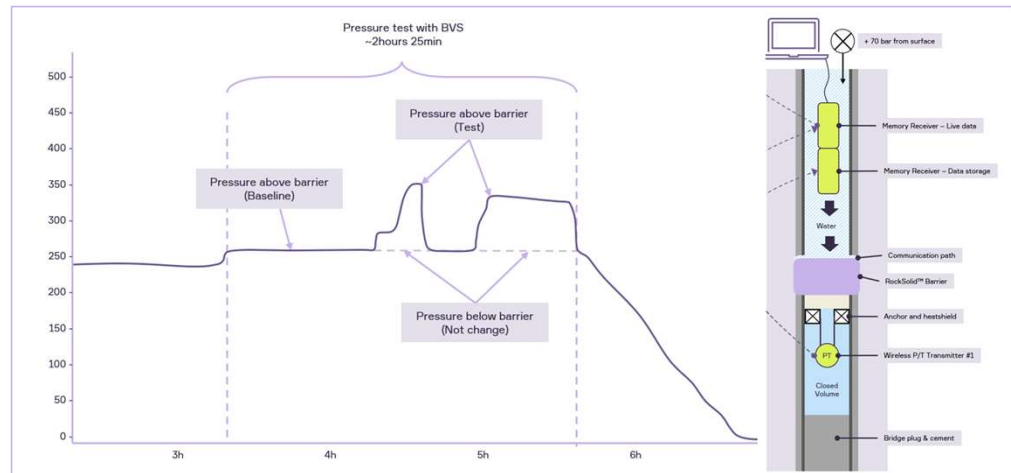
→ Process verification

- Predictable pressure signature
- Live logging data from tool electronics

→ Barrier Verification Systems (BVS)

- Acoustic (~1000m)
- Electromagnetic (~20m)

Over 300 comparable tests:



Canada Run Record and Key Numbers

October 2025

38

Installed barriers – Gen2

Generation 2 Thermite:

20 barriers installed to restore well integrity, fully sealing cross-section and annular leak paths, SCVF issues.

87%

Tool Performance

23 attempted setting operations

10

Operators

Interwell 

95%

Barrier Performance

Barriers verified by:

- Process KPI, Noise Log, flow rate, Shut-in pressure.

CANADA



Alberta Energy Regulator (AER)
Technology Qualification Plan RP-A203

Since 2015, Interwell and AER have worked closely together to ensure the acceptance of the RockSolid™ technology onshore Canada. Piloting and field trials has been critical parts of the Qualification Plan. 38 barriers set.

The road to NCS

- NCS
 - Dialogue with multiple operators
 - Collaborative approach with Equinor and AkerBP
 - Havtil involved as regulator
 - Working according to qualification plan DNV RP A-203
- First RockSolid™ application pilot on NCS planned for Q1 2027
- Requirements
 - 9 5/8in development – 2 years
 - JIP partners for developing 9 5/8in RS technology

