

RockSolid™ Thermite-based barrier



Description

RockSolid™ reinstates caprock integrity across the entire cross section of the well, for eternity. It's the optimal P&A solution for wells with integrity issues. Through the pioneering use of THERMIT®, RockSolid™ melts casing and cement, removing all wellbore elements that then solidifies 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.
- Shale caprock / tight siliclastic.
- Surface Casing Vent Flow (SCVF/ SCP).
- Up to 25 degrees inclination at setting depth.
- Set in 60 - 200 bar.

Benefits

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

RockSolid™ Barrier System

Technical Specifications

	RS 90	RS 110	
Tool	Maximum Tool OD, in (mm)	3,86" (98 mm)	4,65" (118 mm)
	Barrier setting depth(2), ft (m)	1804-6562 (550-2000)	1804-6562 (550-2000)
	Temperature range, F° (C°)	-40-+125 (-40-+257)	-40-+125 (-40-+257)
	ΔT Minimum surface to setting depth, °C (°F)	68 (20)	68 (20)
	Tool length, ft (mm)	23 (7010)	23 ³ / ₈ (7020)
	Tool weight, lb. (kg)	300 (136)	406 (184)
	Maximum tool body pressure rating, psi (bar)	1600 (110)	1600 (110)
	E-line compatability	Mono/multi conductor	Mono/multi conductor
	Thermite ADR classification	Not classified as dangerous goods	Not classified as dangerous goods
Casing	Casing outer diameter, in (mm)	4,5 (114,3)	5,5 (139,7)
	Casing weight ³ , (lb./ft) kg/m	9,5-11,6 (14,14-17,28)	14-20 (20,83-25,32*)
	Minimum distance the nearest collar ⁴ , ft (m)	Down: 1,64 (0,5) Up: 6,5 (2)	Down: 1,64 (0,5) Up: 6,5 (2)
	Number of strings	Single string	Single string
	Casing centralisation	Not required	Not required
	Casing alloy	All grades	All grades
Well	Pressure at setting depth ¹ , psi (bar)	870-2900 (60-200)	870-2900 (60-200)
	Maximum applied surface pressure, psi (bar)	72 (5)	72 (5)
	Wellbore nominal bore bit size ⁵ , in (m)	6 ¹ / ₄ (158,75)	7 ⁷ / ₈ (220,03)
	Maximum actual borehole diameter at setting depth ⁴ , in (m)	174,63* (6 ⁷ / ₈)	8 ¹¹ / ₁₆ (220,03*)
	Maximum wellbore inclination at setting depth, °	25*	25*
	Maximum pass-through inclination, °	30	30
	Maximum pass-through dogleg, ° / 100ft (°/30m)	6	6
	Formation type at setting depth	Shale/Tight Siliclastic	Shale/Tight Siliclastic
	Annular cement fill	Annular filled*	Annular filled*
	Well fluid	Fresh Water	Fresh Water
	Bridge plug interface	Any bridge plug	Any bridge plug

(1) With current tool setup.

(2) Dependent on temperature and pressure, ref.tool pressure calculation in FDP.

(3) Re-configure needed for new casing weights.

(4) From tool nose.

(5) Borehole enlargement not exceeding 10%.

(*) Parameter increase or decrease depending on combinaton of system - evaluation required.



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Serving Every Well