Copperhead

Drillable bridge and frac plug

Minimize risks of presetting and plug movement, facilitate millout

Applications

- Vertical, deviated, and horizontal wells
- Zone isolation during multistage stimulation

Features

The plug is made of nondegradable aluminum material. When it is configured as a frac plug, the central bore is closed with a ball while the zone above the plug is fractured. The plug can be run with the ball in place, the ball can be dropped from surface when the plug is in position, or a caged-ball configuration can be used. One benefit of using a ball is to enable flowback from below the plug if required (e.g., to mitigate a screenout). The bridge plug configuration has a solid core that enables the plug to hold pressure from both directions.

A proprietary slip design keeps wickers from chipping or cracking in hard steel casing and slipping in softer steel casing, while an element backup system keeps the rubber element locked in place with no extrusion.

How Copperhead plugs improve performance

Isolate zones during multistage plug-and-perf fracture stimulation using the Copperhead™ drillable bridge and frac plug. Alternatively, the plug can be configured as a bridge plug. Engineered antipreset features reduce your risks and costs while running using wireline, coiled tubing, or threaded pipe.

The plug withstands multiple pressure and temperature cycles to reduce rig time and costs.

The rotational lock mechanism prevents slipping or spinning during millout. Plug components can be drilled out into small, consistently sized cuttings, which are easily circulated out of the well; a specialty mill expedites drillout. A positive engagement clutch prevents spinning of the bottom sub on top of the next plug in multiple-plug drillout.

Copperhead Specifications

Specifications	2 7/8-in Casing (Light)	2 7/8-in Casing (Heavy)	3 1/2-in Casing (Light)
Casing size	2.875 in [73 mm]	2.875 in [73 mm]	3.5 in [88.9 mm]
Casing weight	6.5 lbm/ft [9.69 kg/m]	7.9–8.7 lbm/ft [11.76–12.95 kg/m]	9.3–10.3 lbm/ft [13.84–15.33 kg/m]
Max. OD	2.25 in [57.15 mm]	2.125 in [53.98 mm]	2.72 in [69.09 mm]
Pressure rating	10000 psi [69 MPa]	10000 psi [69 MPa]	10000 psi [69 MPa]
Temperature rating	350 degF [175 degC]	350 degF [175 degC]	350 degF [175 degC]

All specifications are subject to change without notice.

Copperhead Specifications

Specifications	3 1/2-in Casing (Heavy)	4 1/2-in Casing	5 1/2-in Casing (Light)
Casing size	3.5 in [88.9 mm]	4.5 in [114.3 mm]	5.5 in [139.7 mm]
Casing weight	12.95 lbm/ft [19.27 kg/m]	11.6–15.1 lbm/ft [17.26–22.47 kg/m]	15.5 lbm/ft [23.07 kg/m]
Max. OD	2.562 in [65.08 mm]	3.625 in [92.08 mm]	4.39 in [111.51 mm]
Pressure rating	10000 psi [69 MPa]	10000 psi [69 MPa]	7000 psi [48 MPa]
Temperature rating	350 degF [175 degC]	350 degF [175 degC]	350 degF [175 degC]

All specifications are subject to change without notice.

24-CPS-1952487

Copperhead

Copperhead Specifications

Specifications	5 1/2-in Casing (Heavy)	7-in Casing (Light)	7-in Casing (Heavy)
Casing size	5.5 in [139.7 mm]	7 in [177.8 mm]	7 in [177.8 mm]
Casing weight	17–23 lbm/ft [25.30–34.23 kg/m]	20–26 lbm/ft [29.76–38.69 kg/m]	26–35 lbm/ft [38.69–52.08 kg/m]
Max. OD	4.39 in [111.51 mm]	6 in [152.4 mm]	5.75 in [146.05 mm]
Pressure rating	10000 psi [69 MPa]	10000 psi [69 MPa]	10000 psi [69 MPa]
Temperature rating	350 degF [175 degC]	350 degF [175 degC]	350 degF [175 degC]

All specifications are subject to change without notice.