7 5/8-in. FlexRite® Multilateral Completion System

ENABLING DEEPER TAML 5 MULTILATERAL JUNCTIONS TO MAXIMIZE RESERVOIR PRODUCTION

OVERVIEW

Mature and marginal reservoirs are becoming the new standard basis for well design. More complex well trajectories and architectures are required to reach these reserves, with stimulation a necessity to achieve economic production. The new 7 5/8-in. FlexRite® system from Halliburton was developed to specifically meet these challenges by allowing a TAML level 5 multilateral (ML) junction to be placed in the reservoir where the overburden geology requires a casing design precluding a 9 5/8-in. ML window exit.

Incorporating the flexible design of larger FlexRite system junctions, the 7 5/8-in. design maintains a mainbore bias for mechanical through-bore access, while the double barrel design of the junction leg results in a robust pressure rating for hydraulic stimulation activities.

Designed for new wells, the 7 5/8-in. FlexRite system uses the all aluminum casing exit joint in conjunction with the latch coupling. In addition to minimizing steel cutting debris for easy well cleanout, the lower joint provides superior torque and pressure capabilities to provide optimal cement placement at the window for successful openhole junction construction. The retrievable whipstock design provides optimum window geometry for ease of running the complex directional drilling bottomhole assemblies (BHA's) and sensor packages needed for maximum reservoir contact in slimhole applications.

Expanding on the Multilateral Technology catalogue, the 7 5/8-in. system builds upon the unrivalled run history and reliability established by the FlexRite system since 2001.

FEATURES

- Designed for new well applications
- Compatible with 6 ½-in. milling BHA
- All aluminum casing exit joint with orientating latch coupling enables full ID, permanent, repeatable depth and orientation reference
- Field adjustable orientation features on drilling whipstock and completion deflector
- Mechanical mainbore junction access corresponding to 3.375 in. drift ID (landed)
- Double barrel lateral leg design resulting in robust junction pressure ratings
- Design compatibility with 5 1/2-in. liner deployment system (LDS)
- Intelligent Completion Interface (ICI) design capability

BENEFITS

- Expands level 5 multilateral applications to 7 5/8-in. casing exits
- Hydraulically isolated TAML level 5 sealed junction
- Reduces field development costs and times
- Mainbore intervention capabilities for pinpoint stimulation or isolation
- 5,000 psi simulation pressure capability

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7 5/8-in. FlexRite® System Specifications

System Casing Size in (mm)	7 5/8 (193.6)
Casing Weight lb/ft (kg/m)	33.7 (49.5)
Minimum window ID – (Latch Coupling) in (mm)	6.675 (169.5)
Landed Mainbore Access ID – Drift in (mm)	3.375 (86.9)
Lateral Hole Size in (mm)	6 1/2 (165.1)
Lateral Liner Type	Screens/ Slotted Liner/ Hydraulic Stimulation Systems
Lateral Liner Size in (mm)	Up to 5 1/2 (139.7)
Lower Mainbore Access in (mm)	3.375 (85.7)
Lateral Flow Area in^2 (mm^2)	4.15 (2677.4)
Mainbore Flow Area in^2 (mm^2)	9.62 (6206.4)
Burst Rating psi (bar)	5,000 (344.8)
Collapse Rating psi (bar)	4,000 (275.8)
Junction Compressive rating – running lbs (mT)	54,990 (24.9)
Junction Compressive Rating – landed lbs (mT)	81,780 (37.1)
Tensile Rating lbs (mT)	54,545 (24.7)

TYPICAL INSTALLATION SEQUENCE

1. Drill the mainbore and install the aluminium casing exit joint as part of the casing string
2. Run latch cleaning tool and confirm latch orientation
3. Install drilling whipstock on hydraulic running tool (HRT)
4. Drill and complete lateral as required
5. Retrieve the drilling whipstock
6. Install the FlexRite system completion deflector assembly
7. Run in with screens and / or openhole stinger assembly on flexible junction assembly
   (LDS use for longer liner lengths or difficult hole conditions)
8. Set the liner hanger packer, release and pull running tool to surface
9. Install upper completion
10. Perform stimulation activities as required

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For more information, contact your local Halliburton representative or visit us on the web at www.halliburton.com