

Advanced ICD Management System Sleeve

Provides uniform inflow/outflow distribution, reducing water or gas production, and providing efficient reservoir drainage and improved sand control

Applications

- Advanced ICD Management System (AIMS) sleeves are used to regulate and manage inflow or outflow profiles across the horizontal reservoir.
- Install a tailored completion for reservoirs with unknown flow characteristics.
- AIMS sleeves with differing flow profiles as required are installed in sequence.
- Fully interventionless and staged reservoir commissioning.

Features and Benefits

- Remote intervention-less operation eliminates the need for wash pipe, intervention services and crew, improving health, safety, and environment concerns whilst saving operating costs.
- Facilitates the ability to run the reservoir completion closed. The lower completion becomes the reservoir barrier and fluid loss device omitting the need for an intermediate completion.
- Facilitates ability to test individual compartments and select optimized well flow profile.
- Increase the percentage of the total hydrocarbon produced.
- Provides sand control via the Weatherford FloReg™ inflow control device (ICD) available with various screen options.
- Unlimited number of zones in a monobore completion with no restrictive ball seats or milling requirements.
- Selective remote opening and closing via radio frequency identification (RFID), pressure modulation, and/or timer.
- Facilitates staged start-up and well clean up from toe to heel.
- Promotes even distribution across reservoir section.
- Sleeves can be cycled open and closed remotely, multiple times.
- Onboard clean hydraulic reservoir built in as standard, is debris tolerant, providing operational reliability.
- Set up in the factory to customer requirements minimizing non-productive time.
- Simple, user friendly, transferable operation provides operational efficiency.
- Mechanical contingency built in as standard.
- Reverts to a standard mechanical sliding sleeve at the end of battery life.



The Weatherford AIMS sleeve Provides uniform inflow/outflow distribution, reducing water or gas production, and providing efficient reservoir drainage and improved sand control



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Tool Description

The Weatherford AIMS sleeve is an RFID operated Inflow/Outflow Control Device (ICD) combining the Weatherford FloReg ICD with multi-cycle RFID technology to provide an intervention-less well management device. The tool represents a revolutionary method for providing uniform inflow/outflow distribution, reducing water or gas production, providing efficient reservoir drainage and improved sand control. The AIMS sleeves are installed closed, eliminating the need for wash pipe, intervention, wires, or control lines thereby delivering value in terms of reduced completion time and risk.

The AIMS sleeve, or a series of AIMS sleeves, are pre-programmed to client specific applications. The AIMS sleeves are opened and closed as per the operator’s preferred logic by either circulating RFID tags, frequency modulated pressure signatures, timers, or a combination of the actuation options. Remote open/close operations can be repeated for the duration of battery life.

A series of AIMS sleeves provide a controlled pressure drop along the horizontal reservoir section via the pre-arranged flow area management of the Weatherford FloReg ICD. The AIMS sleeves equalize the wells inflow/outflow profile. The correct application of AIMS sleeve technology can delay or minimize the onset of early water and gas coning optimizing reservoir management and improving hydrocarbon recovery.

Primarily designed for lower completion applications, the AIMS sleeve has been designed with debris, mud solids and cement in mind. The internal operating mechanism is contained out with the flow path. The tool does not rely on any debris sensitive springs, check valves or complex piston arrangements during operation. The reliability is not compromised by the need for any pre-charged or well-sensitive piston chambers.

Specifications

Size in. (mm)	Max. OD in. (mm)	Min. ID in. (mm)	Pressure Rating psi (MPa)	Absolute Pressure Rating psi (MPa)	Temperature °F (°C)
4.50 (114.3)	5.85 (148.6)	2.81 (71.4)	7,500 (51.7)	15,000 (103.4)	39 to 302 (4 to 150)
5.50 (139.7)	8.00 (203.2)	4.56 (115.8)	7,500 (51.7)	15,000 (103.4)	39 to 302 (4 to 150)

Client specific specification variants are available on request.

