

Case Study - 10

Upgrading existing screen inventory to AICV® joints for improved reservoir management

Managing the utilization of inventory is critical for oil companies. Maintaining substantial quantities of equipment is a suboptimal use of capital. When shifts to well construction strategies occur, it often leads to certain equipment becoming redundant or obsolete.

Upgrading existing screen inventory to Autonomous Inflow Control Valve (AICV®) technology by repurposing equipment that is already manufactured and procured is an efficient utilization of stock. This expedites the sourcing of well completion equipment which better fits revised reservoir management strategies and also saves time and reduces demand of internal resources from engineering to supply chain.

The objective of applying AICV® technology is to increase oil production and recovery while reducing unwanted water and gas production. This concurrently reduces energy demands and lowers associated CO₂ emissions which delivers both economic and environmental benefits.

Optimizing Efficiency

An operator expressed interest in InflowControl's AICV® technology, however they held a significant inventory of ICD sand screen joints. These ICD joints were not the ideal solution for their specific reservoir management needs. With rig operations approaching and the extensive lead time associated with raw materials and procurement processes, placing a new order for equipment was not feasible.

InflowControl collaborated with the operator and proposed repurposing and upgrading their existing ICD screen inventory by replacing the passive ICDs with AICVs. InflowControl's engineering team assessed the drawings of the existing screens and were able to quickly determine the minor enhancements required for the upgrade.

Upon physically inspecting the condition of the existing screens and ensuring suitability, the operator approved the plan and the inventory was upgraded in a matter of weeks for a relatively low cost and with ample time for deployment.

In this process the operator observed significant savings on completion equipment costs as they didn't need to order new equipment nor undergo a lengthy procurement process. This led to substantial reductions in wastage and carbon emissions associated with manufacturing and logistics thus lowering their carbon footprint.

LOCATION
Global

DEPLOYMENT
Onshore & Offshore

RESERVOIR
Sandstone & Carbonate

COMPLETION
Upgrade existing screen inventory to AICV® joints

Results



Reduced

cost by minimizing new equipment orders



Reduced

delivery time by utilizing existing inventory and fast manufacturing process to upgrade to AICVs



Reduced

material wastage, shipping, and need for additional manufacturing work and associated emissions



Four simple steps to upgrade your existing screen inventory to AICV® joints



Existing inventory - ICD joint

Step
1

Review

Review existing inventory (engineering drawings and the physical condition)

Step
2

Prepare

Prepare new drawing and any parts required for upgrade

Step
3

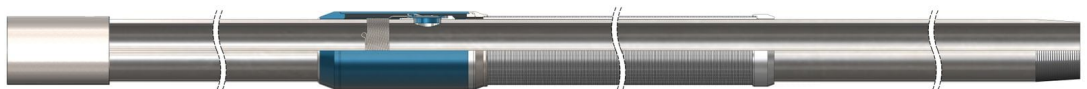
Install

Replace existing devices with AICV®

Step
4

Test

FAT, label, pack, and deliver to location



Upgraded AICV® joint