Reservoir digital control (RDC)
The Manara system is unique in its enablement of a truly digital completion that simplifies and expedites reservoir management in real time, bringing you one step closer to the ultimate goal of a fully digital oil field.

- One electric line replaces multiple wellhead and packer feedthroughs, reducing installation complexity, time, and risk.
- A monitoring and control station in each zone measures water cut, fluid flow rate, pressure, and temperature in effect, 24/7 real-time logging and testing while producing.
- Inductive couplers eliminate control lines across junctions by transmitting power and data wirelessly. As a result, the lower completion can be run on drillpipe.

Manara
Candidate well selection criteria

Infinitely variable electric flow control valves respond instantly to commands from surface.

Multizonal Monitoring and Control
Manara* production and reservoir management system is a game-changing intelligent completion system for permanent monitoring and flow control of multiple zones—continuously, simultaneously, and in real time.
Is the Manara system right for your well type?

Manara system’s unprecedented flexibility and capabilities make it the optimal choice for a wide range of well types.

Are you maximizing your recovery?

Reservoir and production management decisions that took months—even years—are now possible in days or minutes. Continuous feedback and digital control enables optimized production and maximum recovery.

**Conventional Workflow**

Waiting (Months or Years) → Validation → Logging and testing → Problem or optimization → Execution → Decision making

**Manara System Workflow**

Waiting (Days or Minutes) → Real-time validation → Real-time execution → Real-time interpretation and decision making

**Fast-Loop Production Optimization**

Manara system optimizes reservoir drainage with

- continuous real-time monitoring
- instantaneous control
- zero interventions
- lower NPT and opex
- increased production.

Is the Manara system right for your reservoir type?

Manage and produce complex reservoirs with fewer wells.

- Sand pockets
- Compartmentalized channel sands
- Multilayered sands
- Differing permeabilities
- Differing pressures
- Differing fluid properties
- Faults or natural fractures

Can the Manara system help you meet your operational goals?

Optimize well cleanup by monitoring cumulative fluid volumes and percentages of recovered fluids per zone.

Achieve high-frequency production optimization by using zonal in situ direct productivity index calculation together with reservoir pressure. Manage your drawdown strategy, plan remedial work, and improve recovery.

Prevent sanding or liquid banking by optimizing drawdown pressures, minimizing production deferment and loss.

Delay or prevent water or gas breakthrough in any zone with infinitely adjustable valves, without affecting other zones.

Determine flow rates for zonal back allocation, without production logging interventions. Identify and mitigate crossflow, refine reservoir models, and periodically estimate reservoir permeability with quick pressure transient analysis on the fly.