

# Secondary Produced Water Deoiling

Designed to cater to the shale play market, the Revolift® SP is a reduced cost version of its sister product, the Revolift VS®. Utilizing Exterran's patented microbubble flotation technology (MBF®), the Revolift SP floats out contaminants separately from oil allowing for efficient oil recovery. The entire solution is trailer mounted for quick shipping, installation and commissioning with minimal engineering and site preparation. A single mobile unit can handle flow rates from 0 to 25,000 BWPD. This system operates hydraulically with no internal moving parts resulting in a wide turndown range, high tolerance for upsets and nonstop performance.

#### How It Works

The Revolift SP uses fluid hydraulics coupled with MBF and strategic chemical injection ports to optimize oil–in–water and contaminate separation. The multi–chambered design has no internal moving parts and requires no mechanical adjustments. Produced water enters the chambers sequentially as microbubbles and chemicals are introduced. The first chamber lifts and removes oil while the following chambers remove iron precipitates. Oil and Fe+ are lifted up on the bubble layer and skimmed off by overflowing a weir. The weir is segregated into two chambers to separate the clean oil skimmings from the solid sludge. This process drives itself hydraulically through all chambers and water exits the system at targets as low as <10 ppm OIW, <5 ppm Fe+, and >250 mV ORP.

## **Key Benefits**

#### **Cost Saving**

- Pre-engineered design
- Fleet inventory allows for quick turnaround and simple deployment logistics leading to lower capital costs
- Substantially lower tie-in costs compared to high-spec systems
- Lower chemical consumption resulting in reduced chemical costs
- Open tank design eliminating the need for a blanketing system
- No moving parts within the tank, reducing costly failures and delays

#### **Better Performance**

- Enerflex separates oil, then floats the suspended and precipitated solids, while others wait for solids to settle
- 5 chamber flotation tank eliminates short circuiting and handles slugs
- High tolerance for process changes due to multi-chamber design with no short-circuit paths







#### **Flexibility**

- Compact, self-contained design is easy to ship, install and commission
- Ability to treat difficult fluids such as frac flow back applications
- Modular designed to quickly connect to our desanding and filtration products if the process requires
- Remote monitoring and operation
- Autonomous operations and shutdowns through built-in PLC offering various control philosophies
- Quick delivery to move operations forward and achieve goals sooner

### Standard Features

- Hydraulic skimming
- Microbubble technology via Onyx® pump
- Dedicated clean oil collection chamber and transfer pump for oil recovery
- Separate sludge collection and transfer pump
- Instrumentation and PLC for full automation with various control options including remote monitoring and data acquisition

## Materials of Construction

- · Tank: internally coated carbon steel
- Piping: FRP
- Instruments: 316 SS wetted parts
- Onyx microbubble pump: Duplex SS

# Standard Options

- Water characterization services
- Chemical selection and supply
- Ancillary equipment such as transfer pumps and chemical injection

# Contracting Models

- Lease
- Purchase
- Contract Operations
- Purchase + O&M

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