



## Separation Stages



### STAGE 1 - PARTICLE SEPARATION

To remove particles from the stream  
Separation up to 0.5 microns  
99.98% separation efficiency



### STAGE 2 - HYDROCARBON RECOVERY

Separation of Hydrocarbon from water by:

- Agglomerating free oil
- Emulsifying submicron droplets

Trapped Hydrocarbon bled off as sellable product

## ABOUT US

Potentia with over 25 year of experience employing advanced and high-performance particle separation along with advanced coalescing technology can remove free & emulsified hydrocarbons as well as suspended solids trapped hydrocarbons from wellhead produced water



Before      After

The HRT effluent water is much cleaner than it would be using conventional treatment technologies with particles removed at 99.98% efficiency and free/emulsified hydrocarbons reduced to less than 5 parts per million.



- Operational flexibility
- Elimination of energy requirement
- Elimination of the need for chemicals
- Minimal operational intervention
- Improved process control
- Improved effluent discharge quality
- Maximized product recovery
- Compact footprint and Modular Design
- Infinite Turndown
- Increased Reliability

# How much oil you through away?

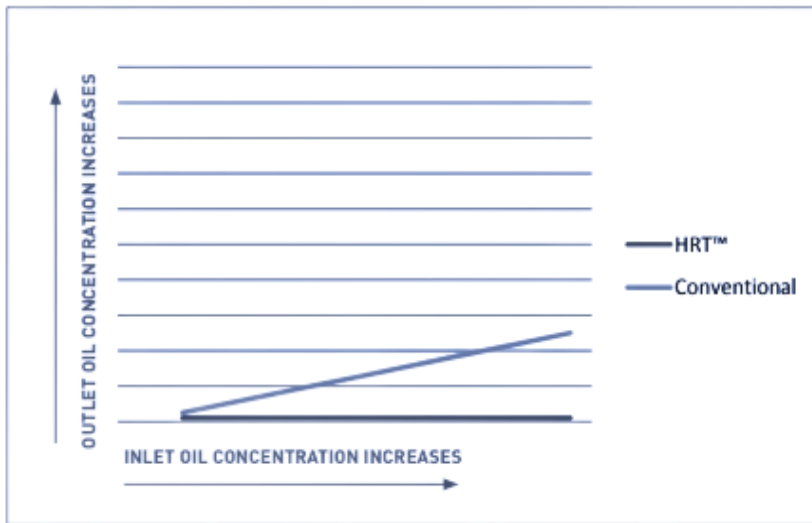
Oil is a valuable commodity. Even low levels of oil can add up to significant dollars. Treatment systems that allow oil to pass, even at low levels are costing you money. The chart below is based upon 10,000 barrels per day of produced water containing residual oil. A small amount of oil un-captured can add up to hundreds of thousands of dollars per year. HRT<sup>®</sup> system ensures the highest recovery of oil and the maximum profit against your operation.

| Residual Oil in Produced water Stream (PPm) | *Barrels per Year | *Dollars per Year |
|---|-------------------|-------------------|
| 50  | 164               | \$13,940          |
| 100   | 347               | \$29,495          |
| 250   | 894               | \$75,990          |
| 500   | 1,807             | \$153,595         |
| 750   | 2,719             | \$231,115         |
| 1,000                                       | 3,632             | \$308,720         |

\*Based on 10,000 barrels per day and Oil at \$85 per barrel

TSS or Total Suspended Solids, is the amount of solids present in a produced water stream. These solids can damage well formation, pumps and valves, can cause significant maintenance outages, and even lower the value of the recovered oil. HRT<sup>®</sup> removes the TSS to minimum limit ensuring a low maintenance, highly efficient operation with maximum uptime.

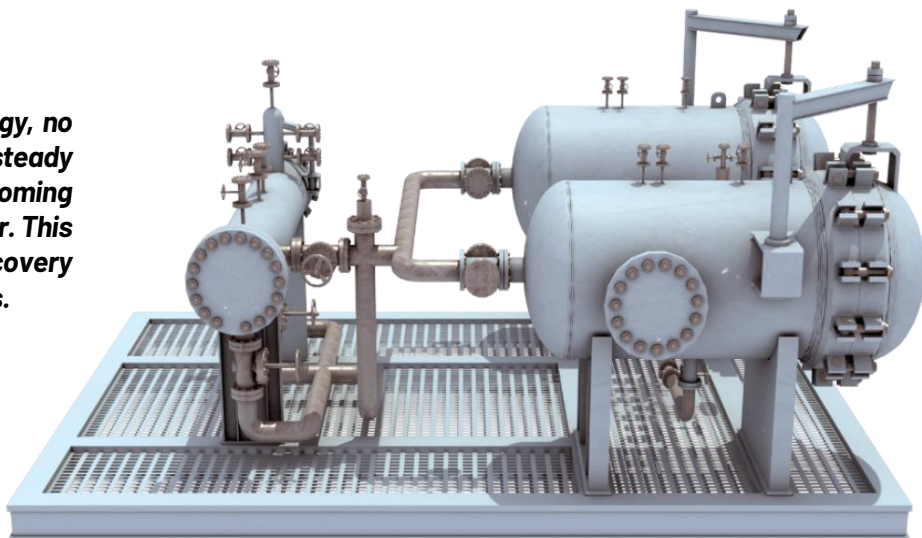
| Treatment cost Based on TSS |        |
|-----------------------------|--------|
| TSS                         | \$/Bbl |
| 100                         | \$0.04 |
| 200                         | \$0.06 |
| 300                         | \$0.07 |
| 400                         | \$0.08 |
| 500                         | \$0.09 |



Conventional Treatment relies on energy, chemicals, steady flow rates, and retention time to achieve its results. The following events cause the conventional systems to operate less efficiently, allowing more oil to bypass the system.

- Loss of gas infusion or chemicals
- Changes to the incoming flow rate
- Upsets in the upstream process

**HRT<sup>®</sup> system operates with no energy, no chemicals, and can operate at a steady state even when changes to the incoming flow rate or incoming oil levels occur. This ensures the highest level of oil recovery under changing operating conditions.**



+92 423 5708271

inquiry@PotentiaME.com

285-Q D.H.A Phase-II Lahore-Pakistan