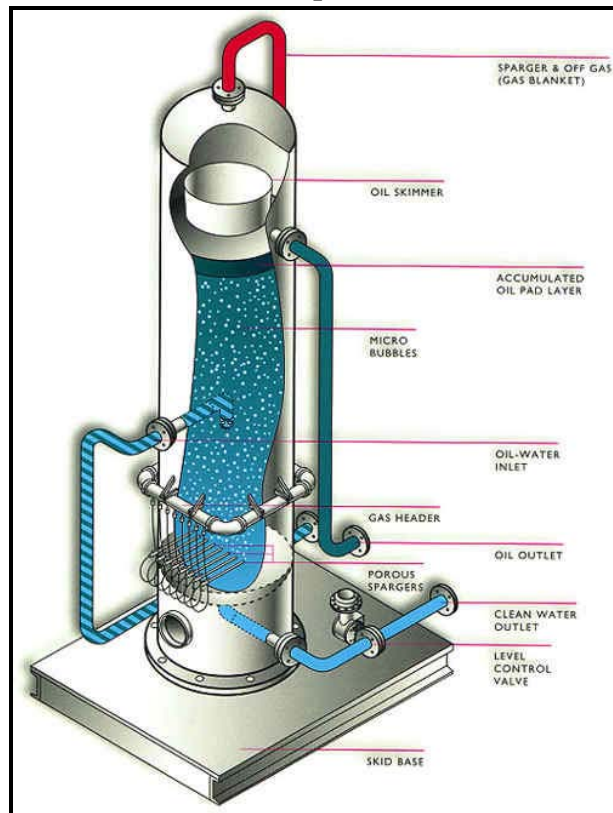




## COLUMN FLOTATION IN OIL/WATER SEPARATION

A co-operative research program conducted by Canadian Process Technologies Inc. (formerly Cominco Engineering) and Chevron Petroleum Technology Company resulted in the development, and patent, of the Vertical Oil Separation Cell (VOSCell<sup>®</sup>). This device proved capable in reducing the oil content of produced water (offshore oil platforms) to less than 20 ppm in a single pass. It has also proven to be very effective at treating skimmings from other oil water separators to produce oil products with less than 10% water content. VOSCell<sup>®</sup>s have been installed at several North American and international locations within the Chevron group of companies. This new technology also lends itself to the refinery and petrochemical industries.

The VOSCell<sup>®</sup> is an intrinsically simple device with very few moving parts. Operating liquid level is sensed by level transmitters, and controlled by means of an automatic valve on the column underflow line. Gas is sparged into the bottom of the vessel using one of CPT's proprietary gas injection systems. The swarm of fine bubbles sweeps the liquid, collecting hydrophobic particles such as oil droplets and transports them to the surface where they accumulate in an oil pad layer.



The VOSCell<sup>®</sup> has a number of significant advantages over other oil/water separation devices, including;

- smaller footprint for installed flotation capacity
- lower capital cost - smaller footprint, simpler electrics
- lower operating cost - no agitator, means that power is required for electronics only
- lower maintenance cost - no agitator, means less turbulence and less wear