



# Tank Cleaning / Emulsion Breaking

## Project

A pilot study was conducted at a petroleum refinery in Europe to evaluate bacterial treatment for emulsion breaking and oil recovery. The objective was to recover the maximum volume possible of water free oil from oil/water emulsion.

## Treatment

Approximately 22,800 barrels of oil/water were transferred into a 31,000-barrel tank. The emulsion was reported to contain 60% oil, 32% water, and 8% solids. Laboratory testing determined that a combined treatment with Custim-S and M-1000H\* bacterial products would provide the best results. A total of 466 gallons of bacteria; 2,300 gallons of fresh water; and 8,900 barrels of crude oil were added to the tank.

The tanks were circulated for 24 hours, then allowed to settle for 48 hours. This process continued for 24 days.

## Results

Following 24 days of treatment, 19,536 barrels of oil were removed from the tank. After the carrier oil was subtracted, 10,645 barrels of oil were recovered from the emulsion. The remaining water and solids were removed.

## Conclusions

The process recovered over 68% of the original emulsion. The water content of the recovered oil was less than 1%. The estimated bacterial cost of treatment was \$0.68 per barrel, while the volume of the net recovered oil was estimated at \$11.00 per barrel or \$117,088.



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