

WILSA Harvests Oil from Tank Bottom Sludge at Disposal Well

ElectroWave™ Technology optimizes onsite processing and reduces costs associated with saltwater disposal operations by breaking waste emulsions and recovering additional oil

Date: May 2015

Industry: Oil & Gas Production

Application: Salt Water Disposal

Success Factors:

- Harvest oil from sludge
- Minimize waste emulsions
- Reduce operating costs (offsite disposal, specialized equipment, man hours)

WILSA® EWC Results:

- Separated waste emulsion into four distinct layers
- 73 barrels of oil recovered
- 75% reduction in expenses for waste disposal
- Minimal electricity/pumping costs



A common experience for saltwater disposal well operators is significant buildup of emulsified oil, solids & gels. An operator in the Eagle Ford processing about 15,000 bpd / day was accumulating approximately 250 barrels of sludge and waste emulsion in storage tanks each month.

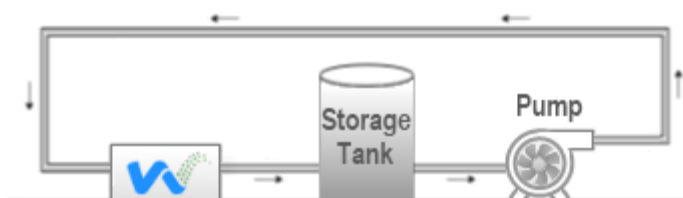
Due to the high variability of fluid sources (95% produced water and 5% flowback) from a 25-mile radius, the operator was unable to cost-effectively separate the components of the sludge and emulsions with chemicals & gravity separation.

As a result, the operator incurred large recurring expenses for removal & offsite disposal that involved specialty equipment (super suckers and vac trucks), transportation, manpower and disposal fees.

With a goal of finding an alternative to current disposal practices, the operator implemented an ancillary process of hydrating the sludge with approximately 100 bbls of saltwater from his operation. The oily sludge-emulsions-water accumulated in a frac tank was then circulated through a WILSA® EWC to yield the full benefits of WILSA® conditioning.

After gravity separation, the process not only reduced the volume of emulsions by 65.2%, but also recovered 73 bbls of marketable oil from the oily sludge, transforming what had been a cost into revenue.

As a result of the effectiveness of WILSA® conditioning, this has now been adopted as an everyday part of operations and processing.



1. CHALLENGE

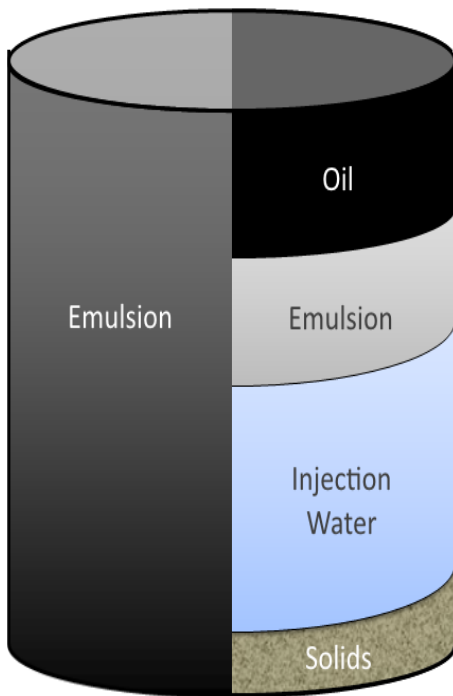
A disposal well operator faced significant recurring expenses associated with the disposal of oily sludge / emulsions accumulating in tanks (~250 bbls/tank)

2. SOLUTION

A unique treatment process was implemented to mix the sludge with saltwater and circulate the sludge and emulsion through a WILSA® EWC

3. OUTCOME

WILSA® conditioning and gravity let the oil/emulsion/water/solids separate into distinct layers of oil, a minimized waste emulsion “pad”, clear water and clean solids



Before  After

4. VALUE

WILSA® conditioning reduced the volume of oily sludge and waste emulsions by 65.2%, lowering the operator's recurring expenses for removal & offsite disposal by ~75%. Further, the harvesting of dry oil from the sludge turned what was once purely a cost item into an additional revenue stream. A summary of treatment results is displayed below*.

"We were very impressed with the efficiency and time-savings of WILSA® fluid conditioning, and have now incorporated it into our everyday operations"

–Operations Manager

	Before WILSA® Process	After WILSA® Process
Waste (Emulsions/BS&W)	250 bbls	87 bbls
Injection Water	100 bbls (added)	190 bbls
Dry Oil	0	73 bbls

* Data collected independently by operator



WILSA® conditioning has now been installed as an everyday part of the operator's SWD operations. WILSA reduced operating expenses associated with the removal and disposal of oily sludge and waste emulsions accumulated in processing tanks, and provided a means for the operator to recover marketable oil. WILSA® conditioning has transformed what was once purely a cost item into additional revenue. WILSA® and ElectroWave™ are trademarks of WILSA HOLDINGS, LLC.