Oil and Gas Water Separation

CUSTOMER

Energy OEM
Fort Worth, TX

TRICOR products supplied:

- ***TCM-28K Coriolis Flow Meter***

"Finding a balance between expenditures on instrumentation and cost savings realized is sometimes hard to do. Tricor offered the value we needed to feel comfortable with our decision to move ahead with this automation project."

APPLICATION

In the oil field, the fluid that comes from a well is typically a mix of oil, water, sand, and other materials. After filtration of larger solid materials, the oil is typically fed into a water separator that allows the oil to rise to the surface and be drawn off. The water is then dumped into into a tanker truck to be hauled away for treatment and disposal.The well operator is charged for the amount of water hauled away, so careful measurement of the water is necessary.

CHALLENGE

Although the water/oil mix is filtered and separated, there will always be some residual solids and oil in the water. Because of this, flow technologies using moving parts have a short life cycle and need frequent maintenance. The measurement is usually done in sporadic "dumps" that lead to flows with very high velocities. Unreliable technologies have lead to early wear in the bearings or sensitivity to the amount of oil contained in the water as percentages change.

SOLUTION

The Tricor Coriolis meters were recommended for this application because of the "no moving parts" design.The entrained sand was able to pass through the tubes of the meter without causing damage to the instrument. Coriolis meters monitor changes in the density of the fluid as part of the measurement. Therefore, the user could track the efficiency of the separator to ensure as much oil as possible was removed. By running the output from the TCM-28K to a local SCADA system, the customer is able to accurately track and total the amount of water being hauled away for disposal.

RESULT

Incorrect reporting of produced water by the disposal company can quickly add up to hundreds of thousands of dollars lost. The customer estimates a savings of $250K for his field in the first year.





AW-LAKE COMPANY