

Well Testing Case History

HPHT - Temperature Management

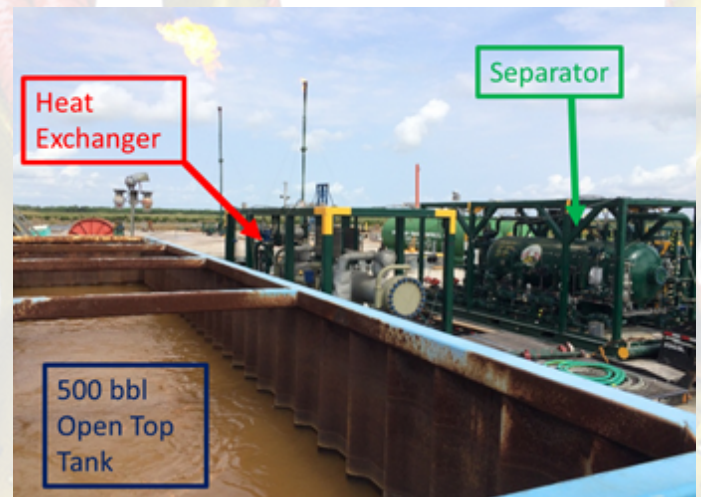
Challenge

A client sought a cost effective, high pressure-high temperature (HPHT) well test package for land operation in Southern Louisiana from CETCO Well Test Division. The objectives were to safely acquire reservoir properties and reduce the temperature of the process fluid with an anticipated surface temperature of 0 to 300°F. After reviewing the entire scope of work as well as location limitations, the largest challenge was the potential for excessive low temperatures as well as excessive high temperatures.

CETCO Solution

A cost effective temperature control method was identified. With a max separator temperature of 173°F, for personnel protection, the process fluid downstream of the choke would enter the CETCO Heat Exchanger before 1st stage of separation. Utility water was circulated at a rate of approximately ten barrels per min from a 500 barrel open top tank. During this time, the heat exchanger would act as either a cooler or a heater. The open top tank allowed for effective heat transfer between utility water and atmosphere.

CETCO's WT-HTX-100 Series Heat Exchanger is a single pass, shell and tube exchanger designed specifically for the maximum amount of heat transfer which: decreases hydrate formation, improves process separation, and prevents downstream mechanical failures.



Outcome

At no point was the operation delayed or restricted due to temperature. CETCO was able to meet test objectives and delivery through experienced project management, technical equipment selection, and vigilant personnel.

