

True Successes

Antifoamers Improve Operational Efficiencies at the Battery

Challenge

In an attempt to produce more oil from the battery, our customer flooded the entire FWKO with fluids in order to reduce the back pressure. This resulted in a dramatic increase in BS&W in the sales oil.

When the gas that was normally released in the FWKO was now being released in the heater treater there was an increased amount of turbulence being seen throughout the fluids. This was compounded by the viscosity of the oil being lower due to the increased temperature of the fluids in the treater which allowed the gas to break out very rapidly. When the gas rose to the top of the oil surface it would disrupt the flow of the water that gravity was trying to drop down to the water phase of the vessel.

Solution

Vessel samples were collected to determine the amount of foam present and field cuts were pulled to determine the BS&W content throughout the entire system.

Testing indicated that AF-920 was able to prevent the gas breakout from causing as much turbulence, especially in the front end of the vessel. This enabled the water present in the oil to drop through the oil and enhance proper dehydration to sales BS&W specifications. With the addition of the AF-920, the amount of fluids being carried over to the gas scrubbers was reduced significantly resulting in a steadier supply of gas for the heater treater burners and less work for operations to drain the scrubbers. The treater recognized an average increase of 4°C in the vessel which was beneficial in dehydrating the oil.

Benefit

By reducing the amount of time operations had to recycle fluids, drain scrubbers, and do cuts on the vessels in order to meet pipeline specifications, they were better able to perform their other daily tasks.

With the FWKO being flooded the field production experienced a marginal increase in production.

Area

Norris

Formation

Ellerslie

PureChem Products

AF-920