

# WESTERN

— TEXAS COLLEGE —

## PETROLEUM TECHNOLOGY

### February 2014 Newsletter

Even though February is the shortest month of the year, the students in the Petroleum Technology program stayed busy with multiple projects. Students utilized the trencher attachment to the Vermeer S800TX tractor to prepare a row of four trenches for the Impressed Cathodic Protection (ICP) lab array installation.



(Above) Students took turns using the Vermeer with trenching attachment to dig trenches.



(Left) Students observing the trench.

(Right) The four trenches to be used for ICP.



While many projects were carried out in the field, there was also fabrication of the ICP components being done in the class room. The Polaris Hands on Trainer requires a water source (since the working fluid is a water solution). The system uses water for safety and cost effective purposes.



(Above) Students working on the plumbing at the Polaris Hands on Trainer.



(Above) Students assembled around and working on the plumbing at the 1500 gallon field water tank.

In addition to the trips taken by students including the October 2012 (PBIOS), October 2013 (Shale Show), and visits to other company sites, there are on occasion companies that come to Western Texas College, Snyder, Texas to teach our students.

One of these mini courses was the “Well Kill”, or “Well Control Class” taught by Occidental Permian. When drilling a well, hundreds or even thousands of pounds of pressure (over ambient air pressure) exist in the well. During the early days of the Petroleum Industry when a well was drilled and oil discovered, an uncontrolled reaction occurred, and a “blow-out” followed. Think of it like shaking up a soda drink, and popping the top; it makes a mess. However, Petroleum products spilling out on the ground and seeping into the water supply causes environmental harm to both plant and animal life. So, the key is to control this pressure to prevent an environmental disaster, and a loss of life and property. “Well Control Class” teaches formulas, procedures and insight into the elements needed to keep the “down hole” pressure under control so that the well can be put in production safely and the products harvested properly.



(Above) Students and faculty performing calculations in the Occidental-Permian “Well Control Class”.