

PETROLEUM TECHNOLOGY

February 2013 Newsletter

A lot has happened, in the last few months: the field site now has power, and a parking lot. The core lab where the Polaris H.O.T. unit will be has a large concrete slab on which the 6 ton unit will be placed. Students did not set the forms for this slab, nor were they responsible for trenching, plumbing, and utility runs, or reinforcing steel. The students did make an addition to the basic form by adding a “thru-bolt” assembly to the inside edge of forms.

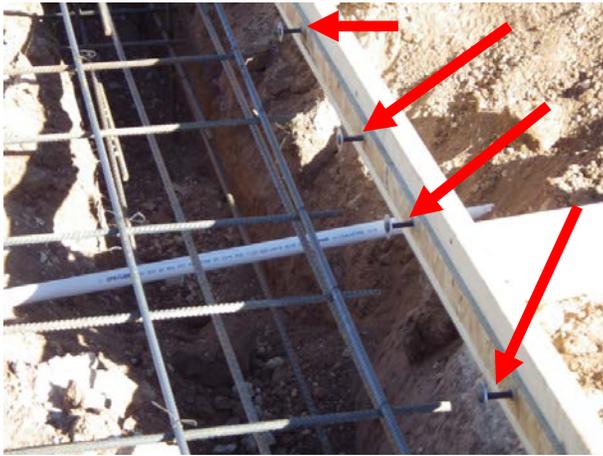
(Right) In the Foreground 3 students are in the early phases of form setting for Control Room. In the Background 2 students are placing the “thru-bolt” assembly around the slab for the Polaris H.O.T. unit.



(Above) Completed form for Control Room waiting for morning concrete pour.

Students did the layout, excavation by hand, set and leveled the forms and cut and tied reinforcing steel for the base of the metal Control Room. The control room preparation has been their project throughout this 2012-2013 school year.

(Below) Concrete pour of both slabs. Control Room base slab (near). Polaris H.O.T. unit (far)



(Left) Student addition is illustrated along outside edge of forms. When the slab is poured the bolts will allow a wind screen to be fastened to the slab for work during inclement weather.

(Right) Concrete slab with bolts (thru-bolts) along the edge of the slab.



The concrete pour and preparations occurred early in the month. Lab activities throughout the month included, a lab where a web-cam was turned into an spectrophotometer in order to allow for analysis of crude oil; and a lab with precision drilling and use of a pop rivet tool in order to fabricate a combined structure which was utilized for non-destructive weight/deflection studies.



(Above) Colton Cannon and Caleb Jetter work on their project using a drill press and clamps. After drilling was completed they used a pop rivet tool to attach the two drilled rulers together.

In addition to having the concrete base in the field lab completed, the Control Room building was also finished. Each of the projects performed through the month required teamwork, following directions, and at times some creative thinking about how best to accomplish the task. Throughout, safe work practices were followed: hard hats, under what is considered the “blue sky” rule. Blue Sky means that when working outside, a hard hat is worn. Safety glasses were worn during cutting and drilling operations. All of the projects in addition to the class coursework meant a busy month for students.