Petroleum Drill Bit Force Measurement test Rig

A large horizontal drilling test rig is being designed and fabricated to measure the forces acting on the drill bit during operation. Upon completion, this rig will be used to drill into various rock samples using different sizes and types of drill bits to develop an experimental bit/formation interface law. This information can then be used to predict drillstring vibrations based on the bit being used and the estimated rock formation downhole. Dustin’s research includes the design, fabrication and preliminary testing of the rig.