A blue Liebherr MALCOLM oscillator/rotator machine is shown on a construction site. The machine is mounted on a trailer and has a large ladder on its side. In the background, there is a large, brown, cylindrical structure, likely a drilled shaft. The sky is clear and blue.

Oscillator/Rotator Method of Drilled Shaft Construction

Jeff Grieder

NW Area - Chief Engineer

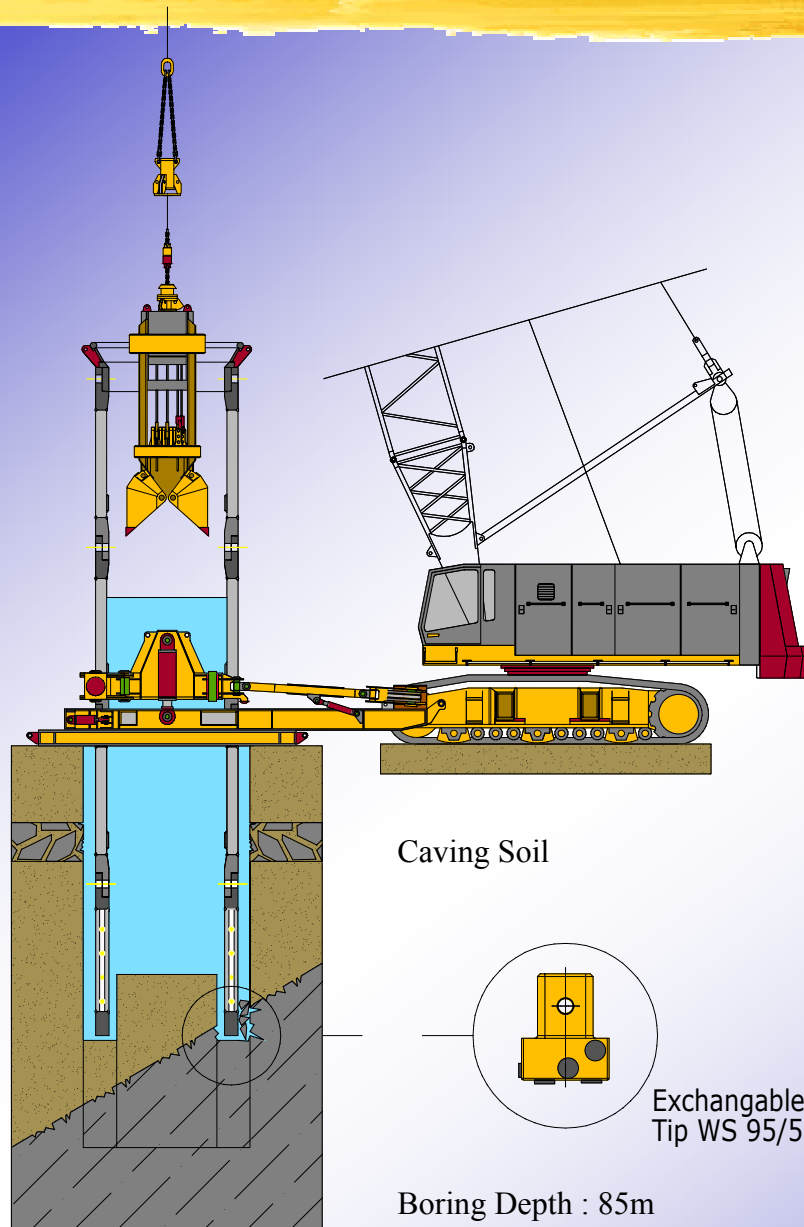
Oscillator and Rotator Drilled Shafts



Diameter Possibility: 1,000-3,000mm

Depth Possibility Proven: 85m

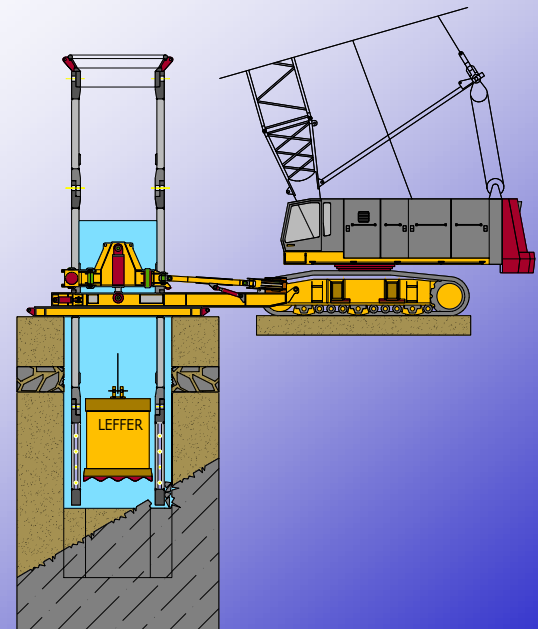
Control Device can achieve verticality of 1/200



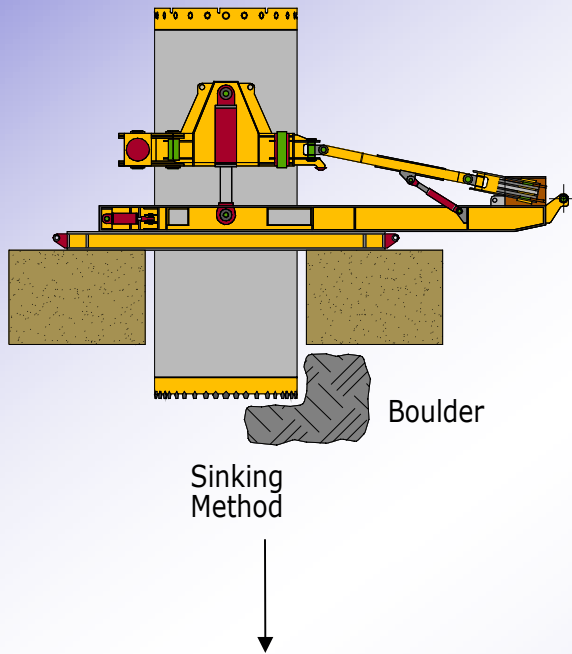
Caving Soil

Exchangable Type
Tip WS 95/56

Boring Depth : 85m

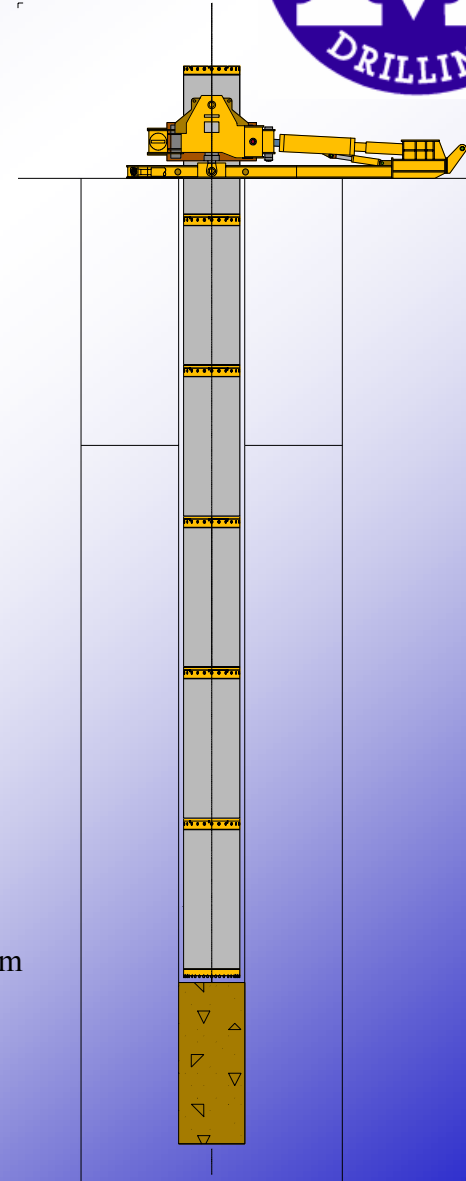


Oscillator and Rotator Drilled Shafts

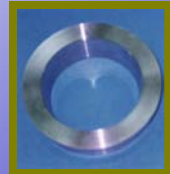


ATS VRM Casing Oscillator
Automatic pressure release to sink down
the casing in order to ensure the verticality.

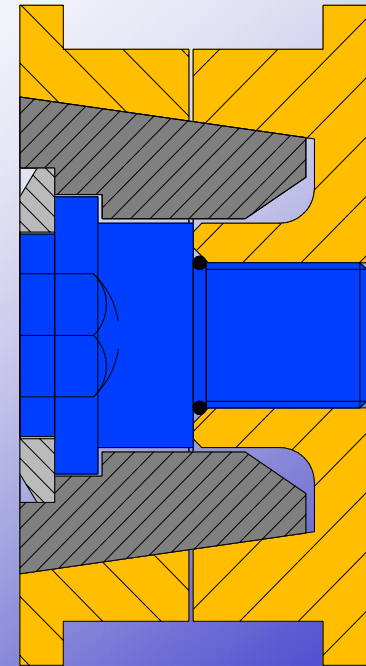
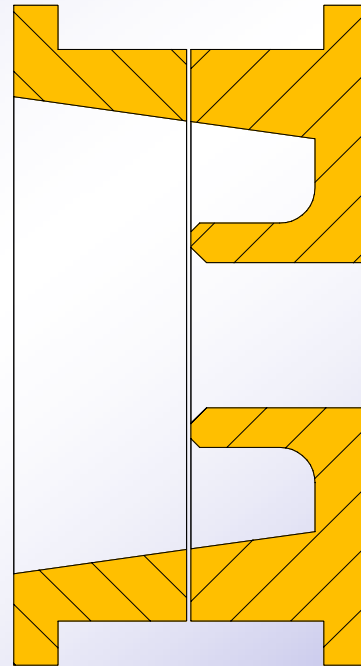
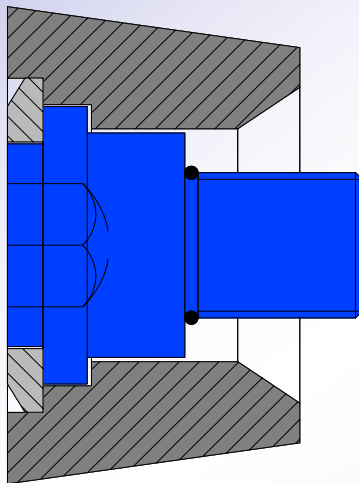
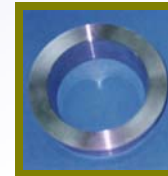
Boring Depth : 85m



Oscillator and Rotator Drilled Shafts



Oscillator and Rotator Drilled Shafts

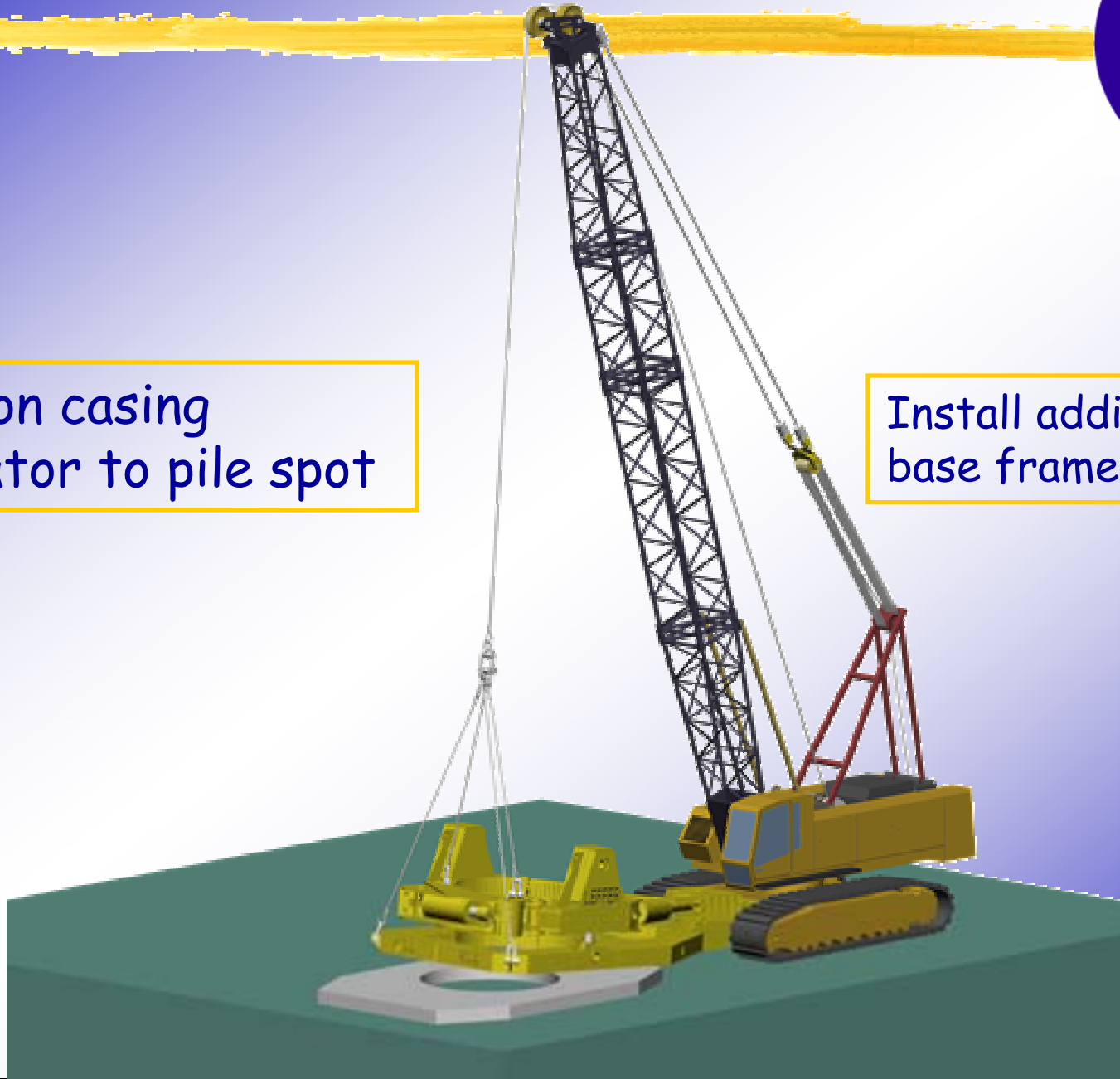


Oscillator and Rotator Drilled Shafts



Position casing oscillator to pile spot

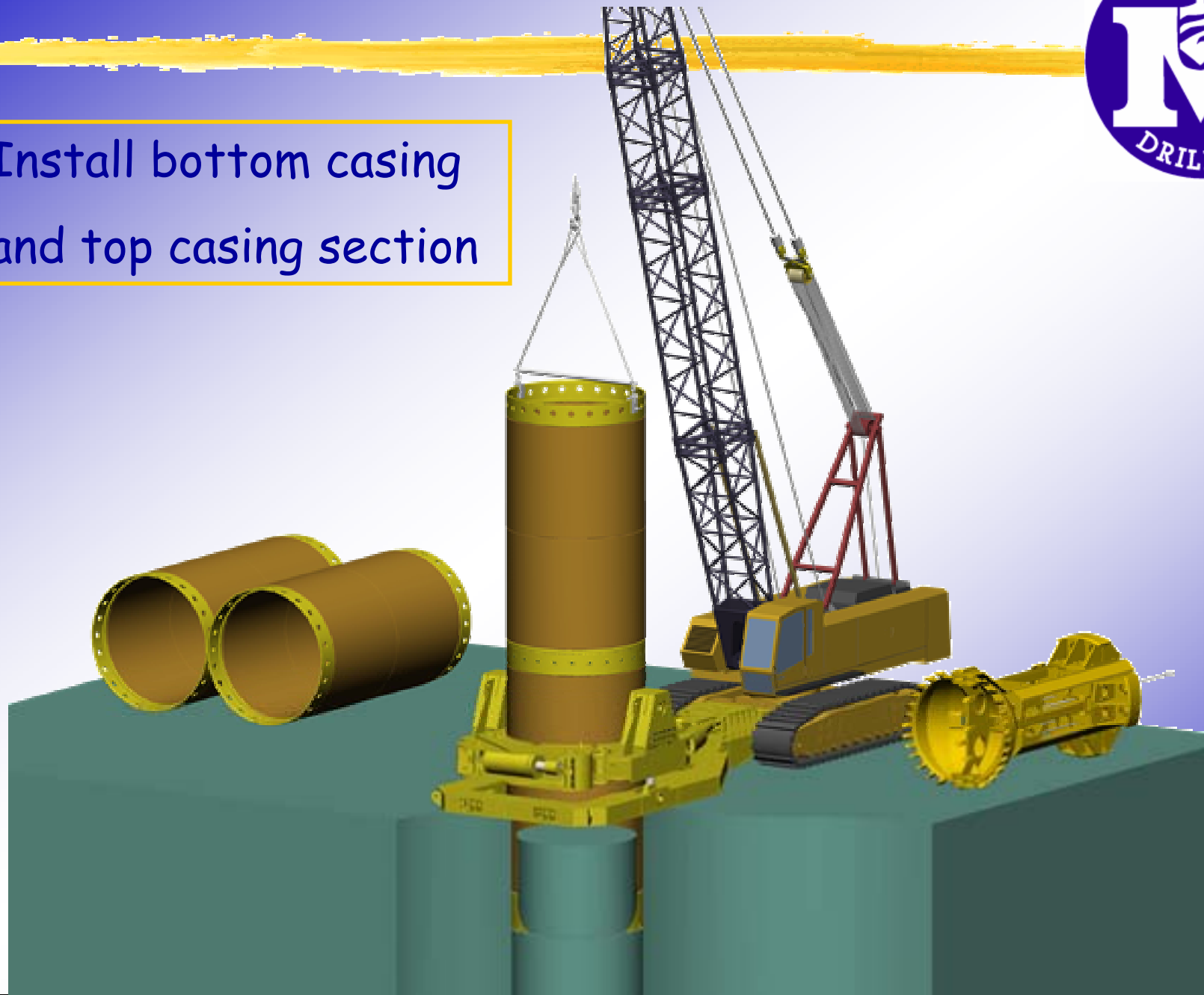
Install additional base frame



Oscillator and Rotator Drilled Shafts



Install bottom casing
and top casing section

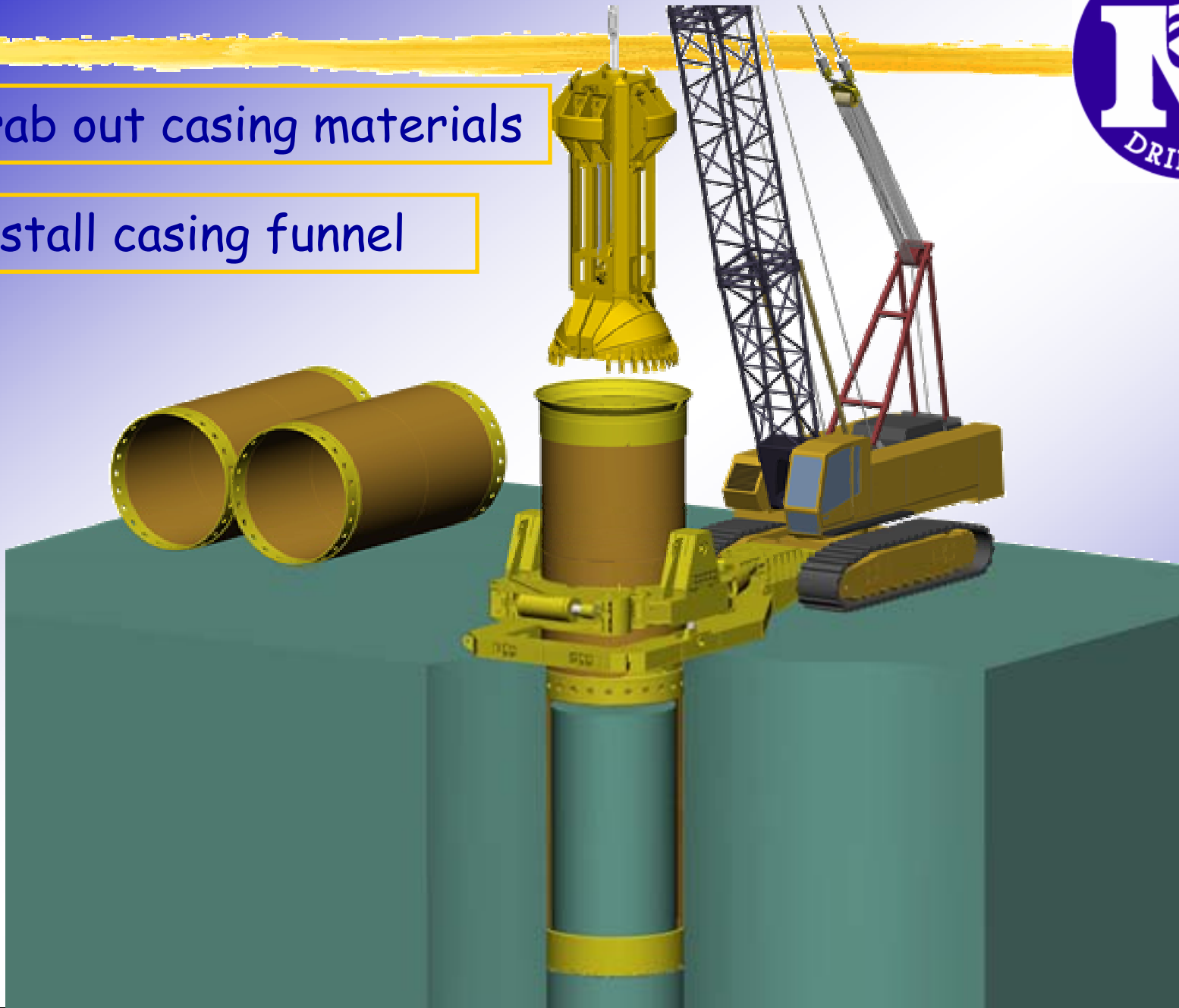


Oscillator and Rotator Drilled Shafts

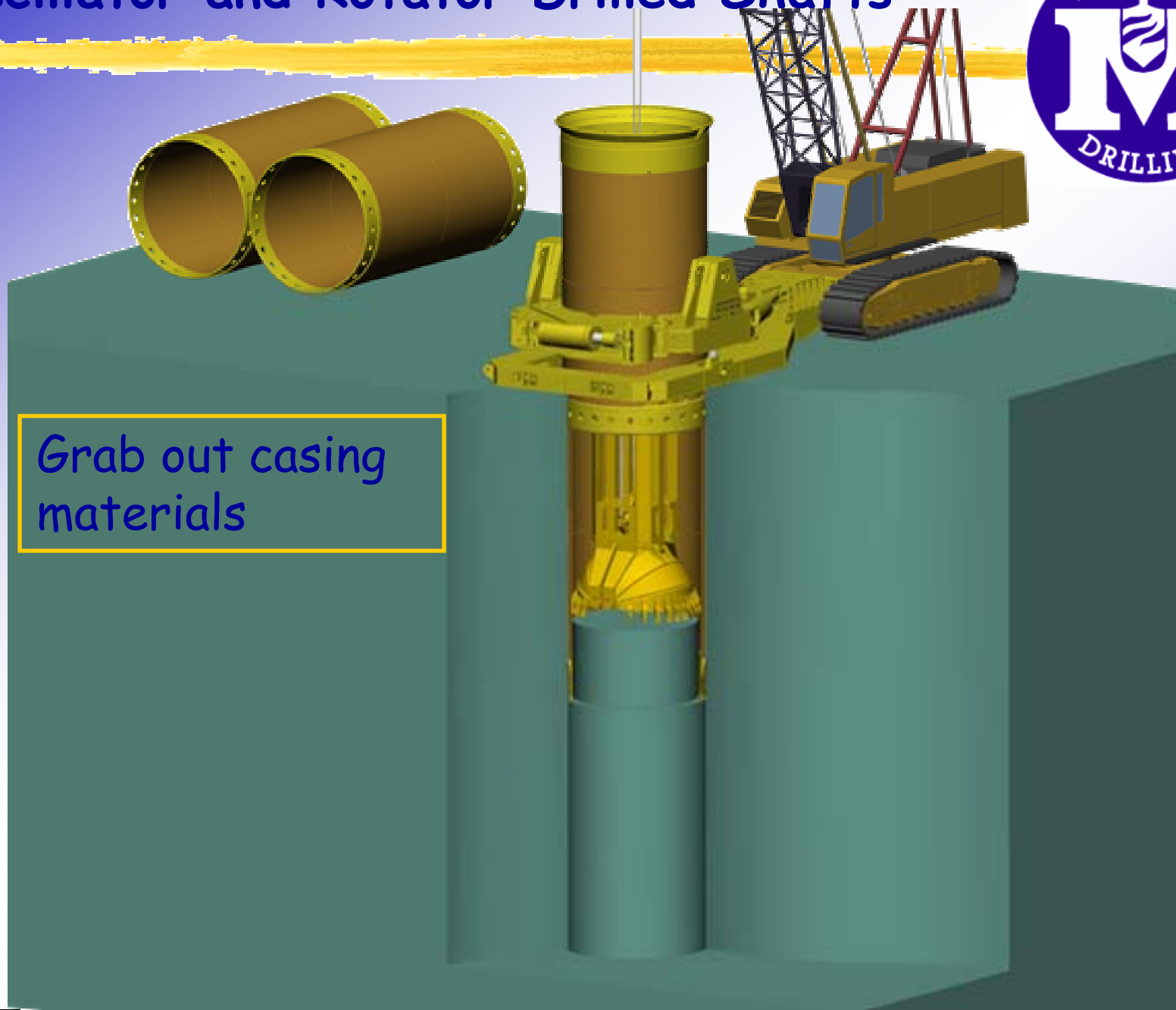


Grab out casing materials

Install casing funnel

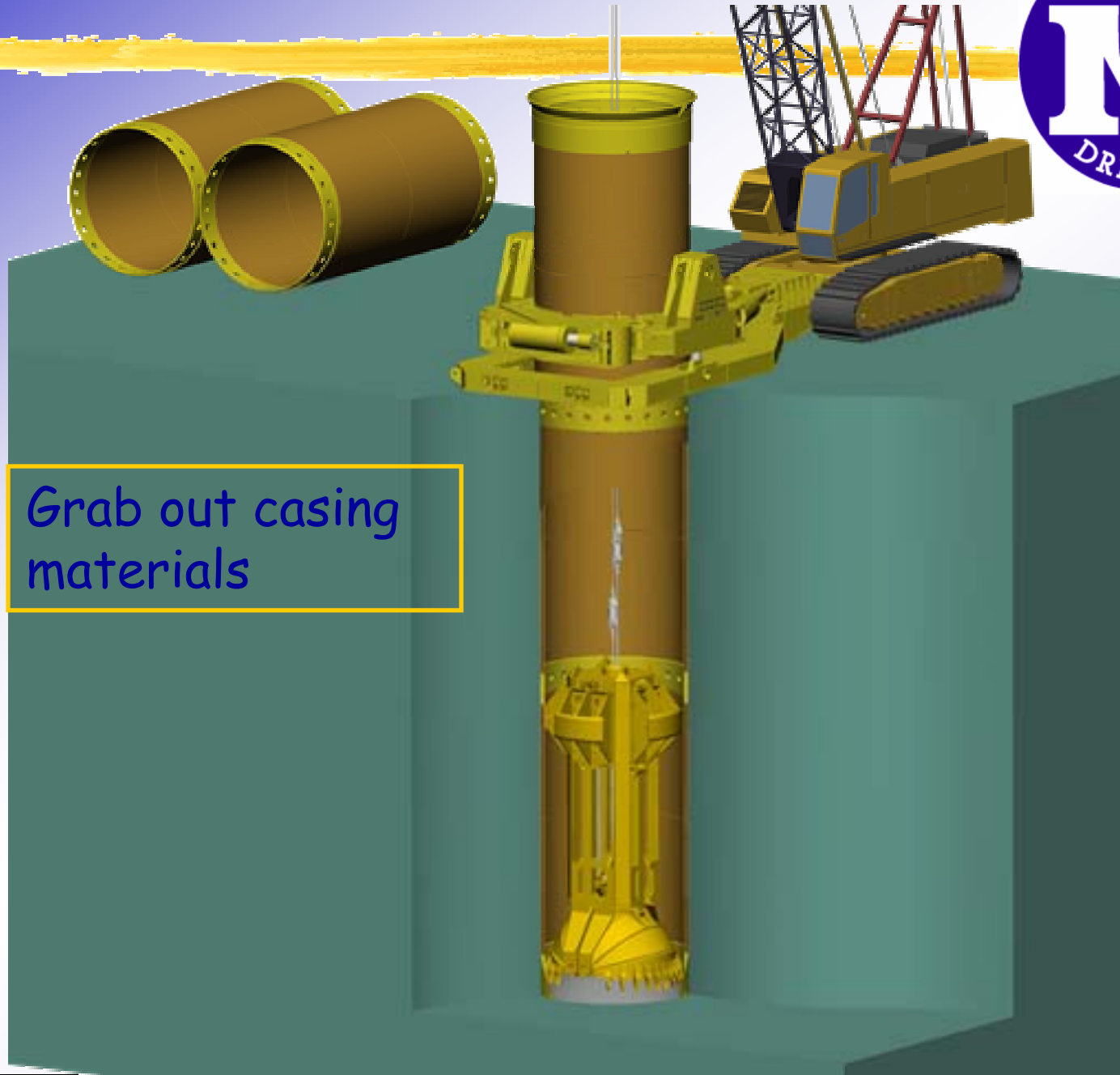


Oscillator and Rotator Drilled Shafts



Grab out casing materials

Oscillator and Rotator Drilled Shafts

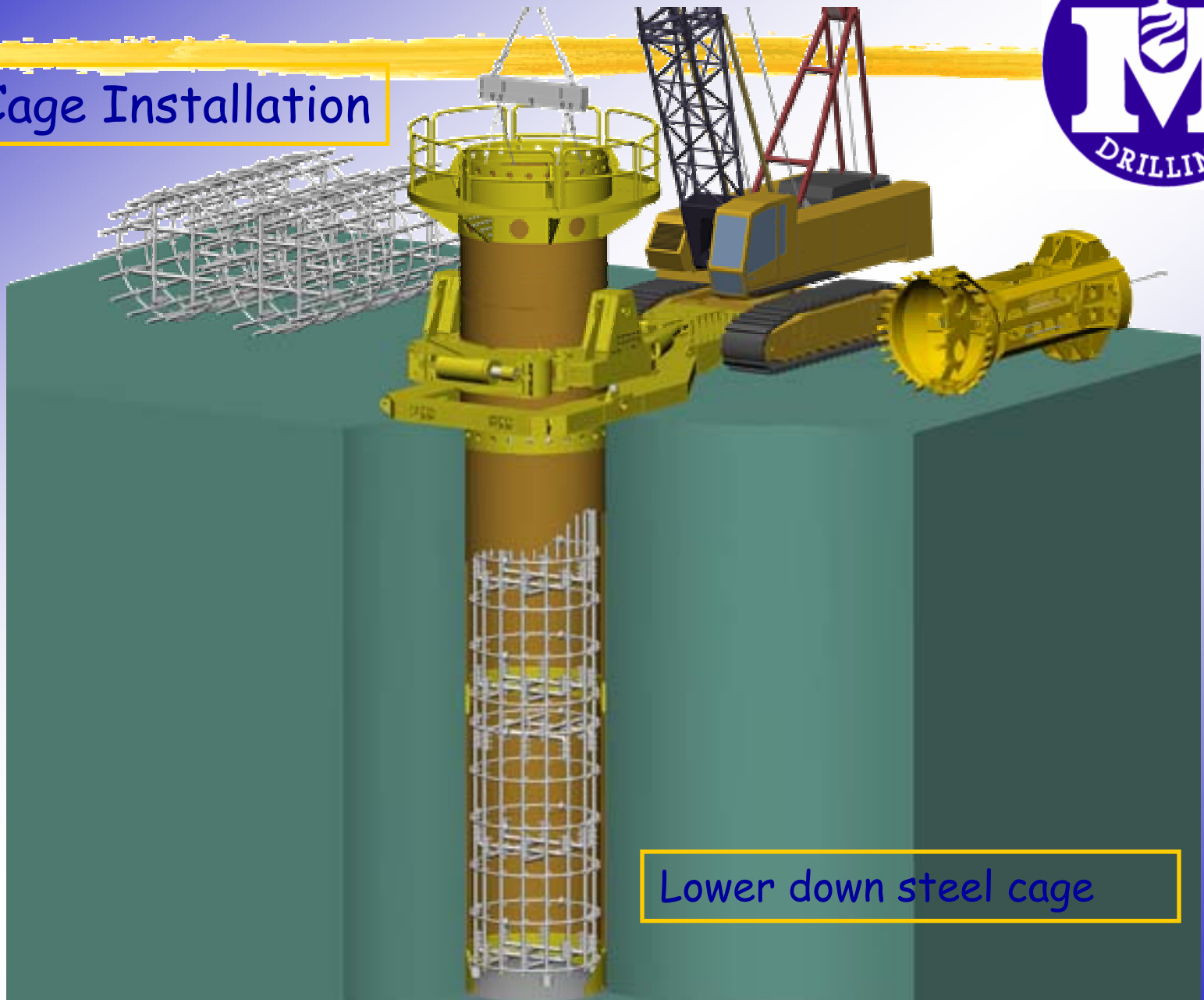


Grab out casing materials

Oscillator and Rotator Drilled Shafts



Steel Cage Installation

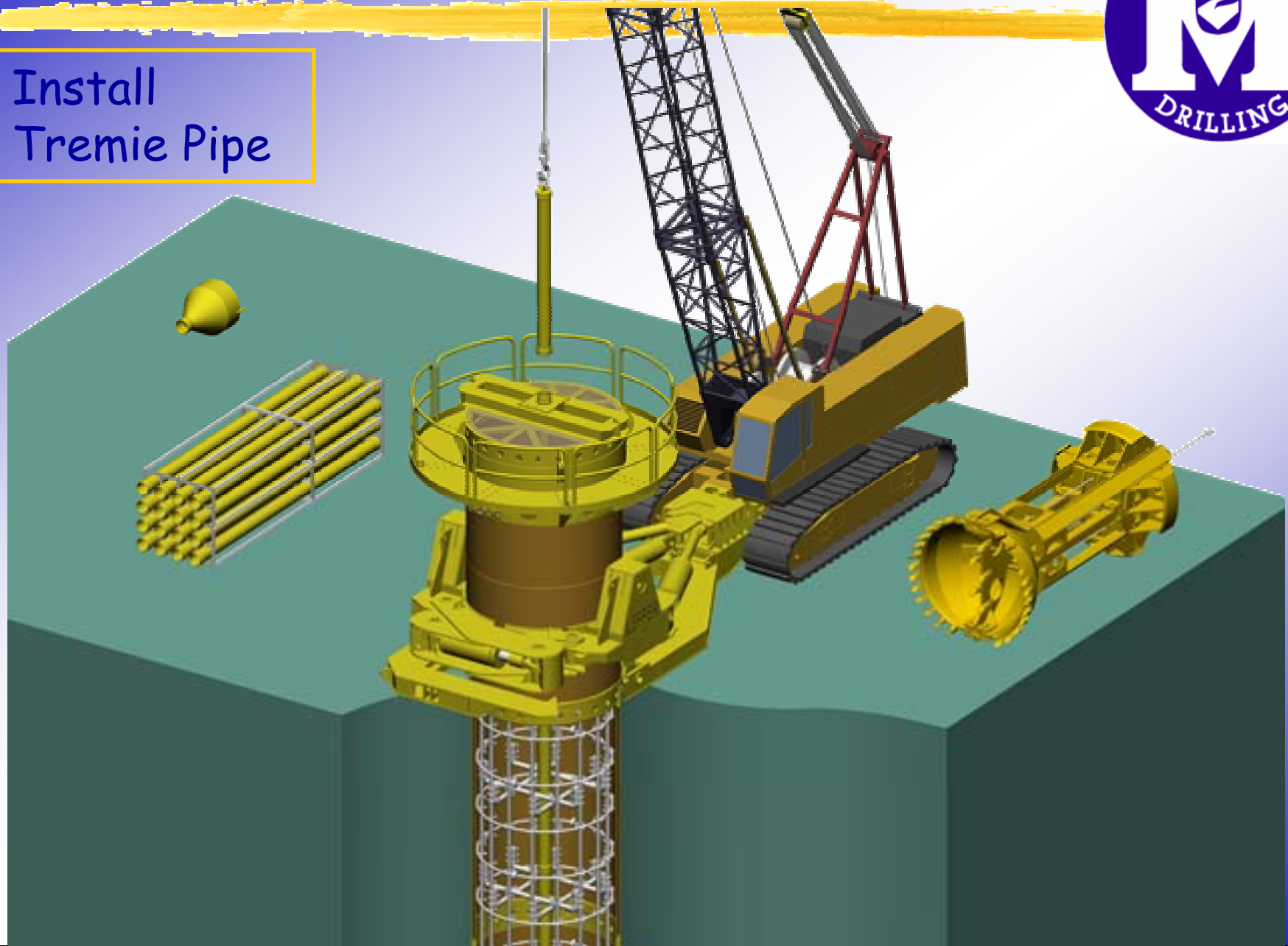


Lower down steel cage

Oscillator and Rotator Drilled Shafts



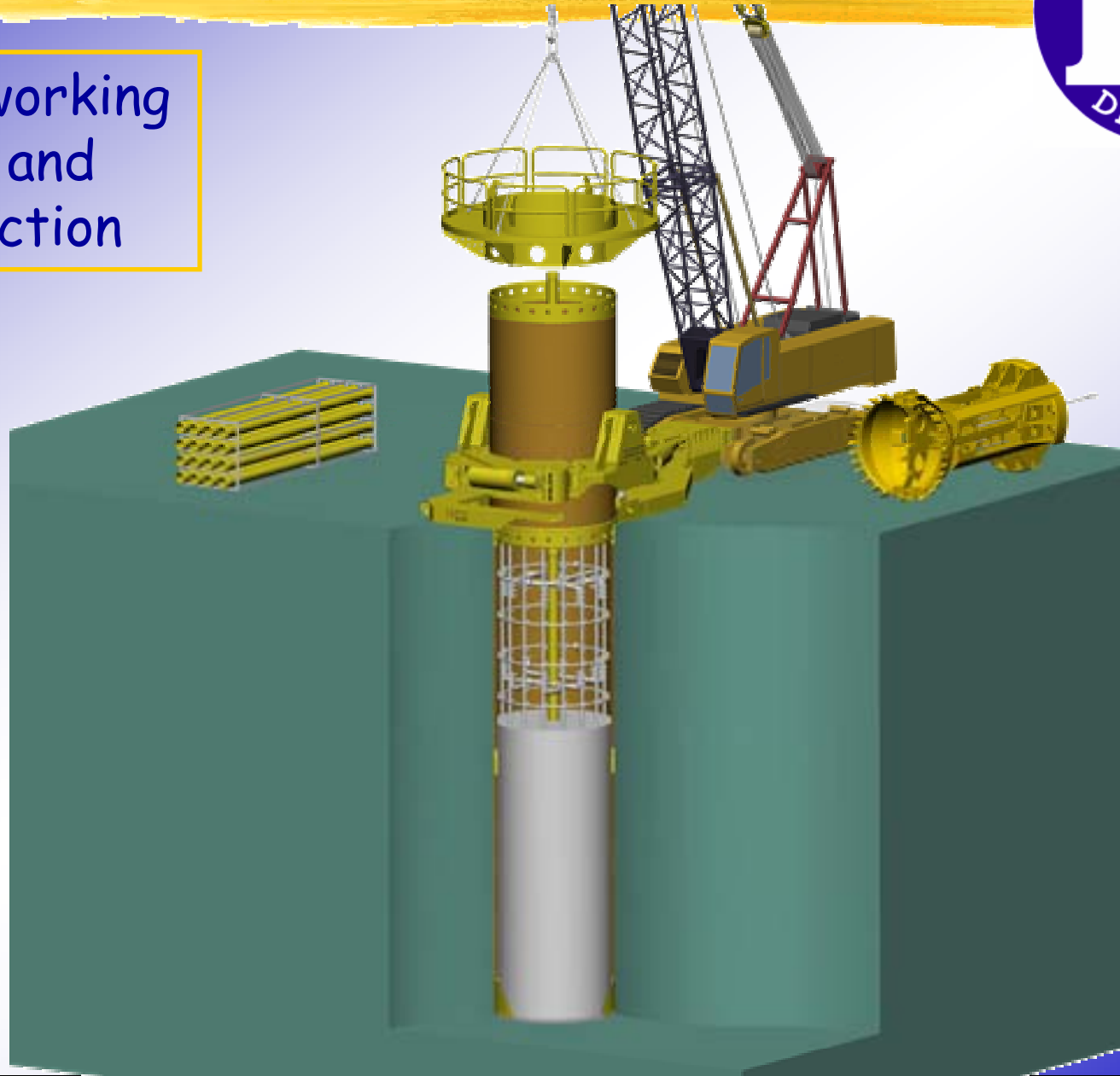
Install
Tremie Pipe



Oscillator and Rotator Drilled Shafts



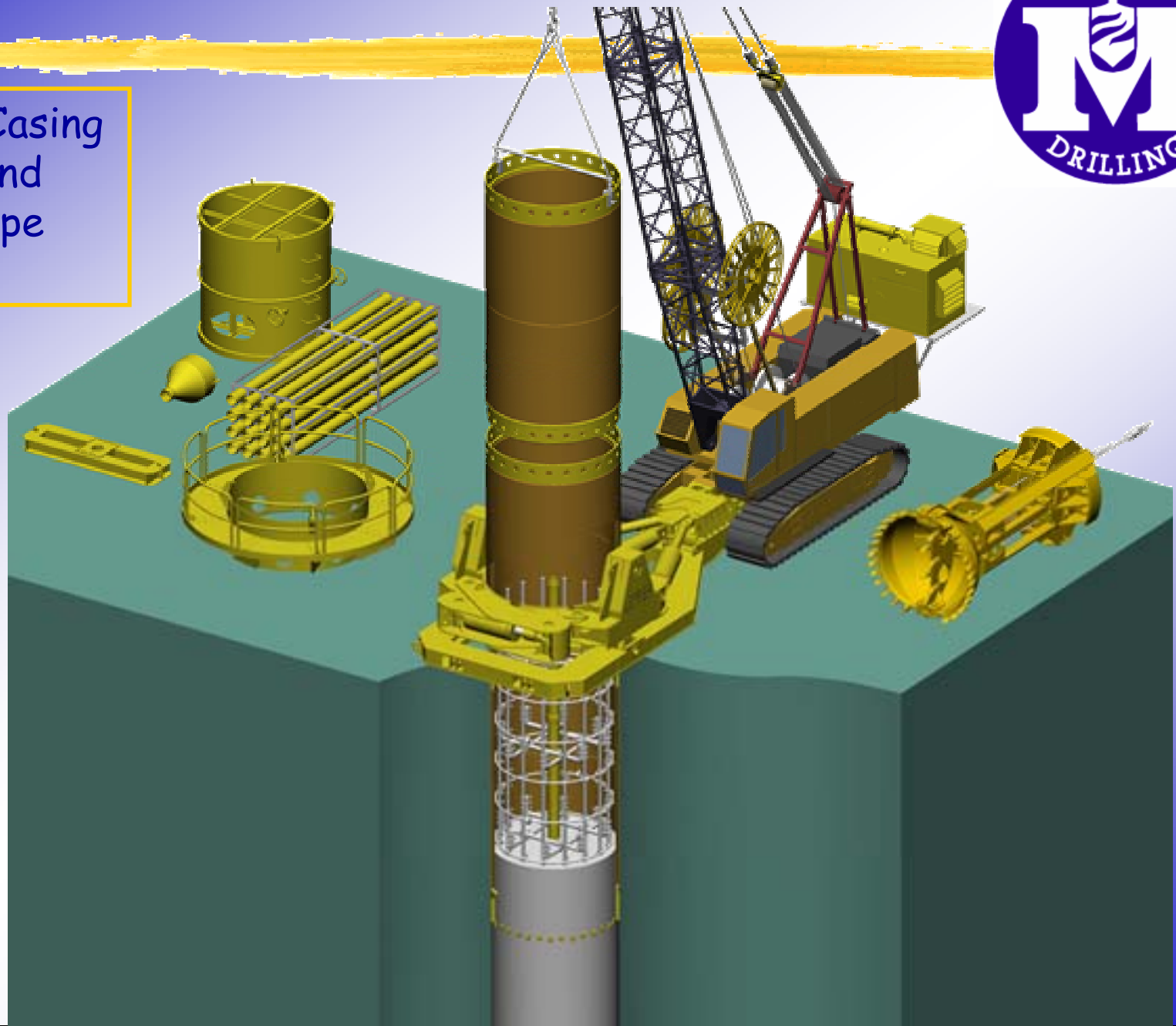
Remove working platform and casing section



Oscillator and Rotator Drilled Shafts



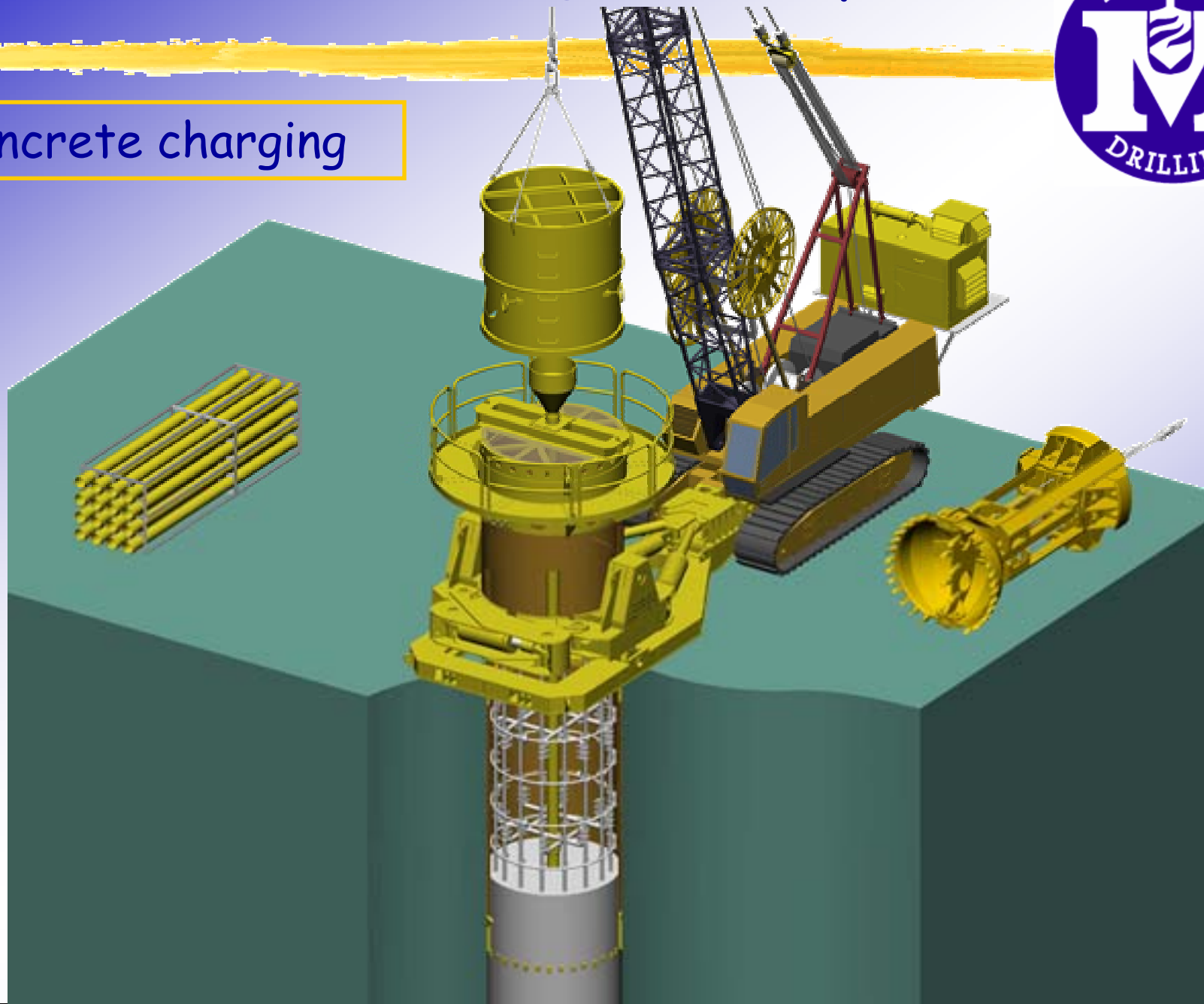
Remove Casing
section and
tremie pipe
section



Oscillator and Rotator Drilled Shafts



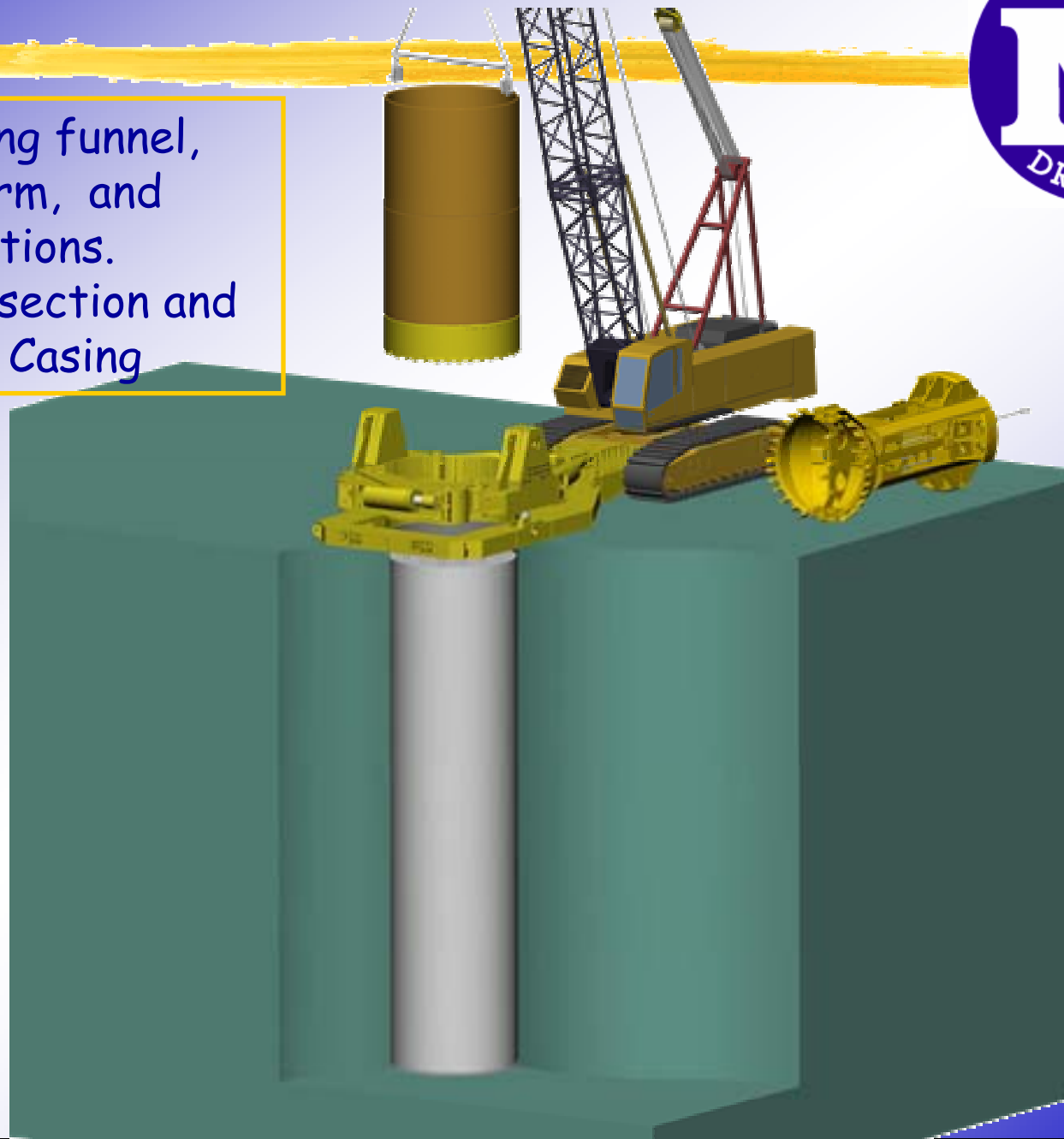
Concrete charging



Oscillator and Rotator Drilled Shafts



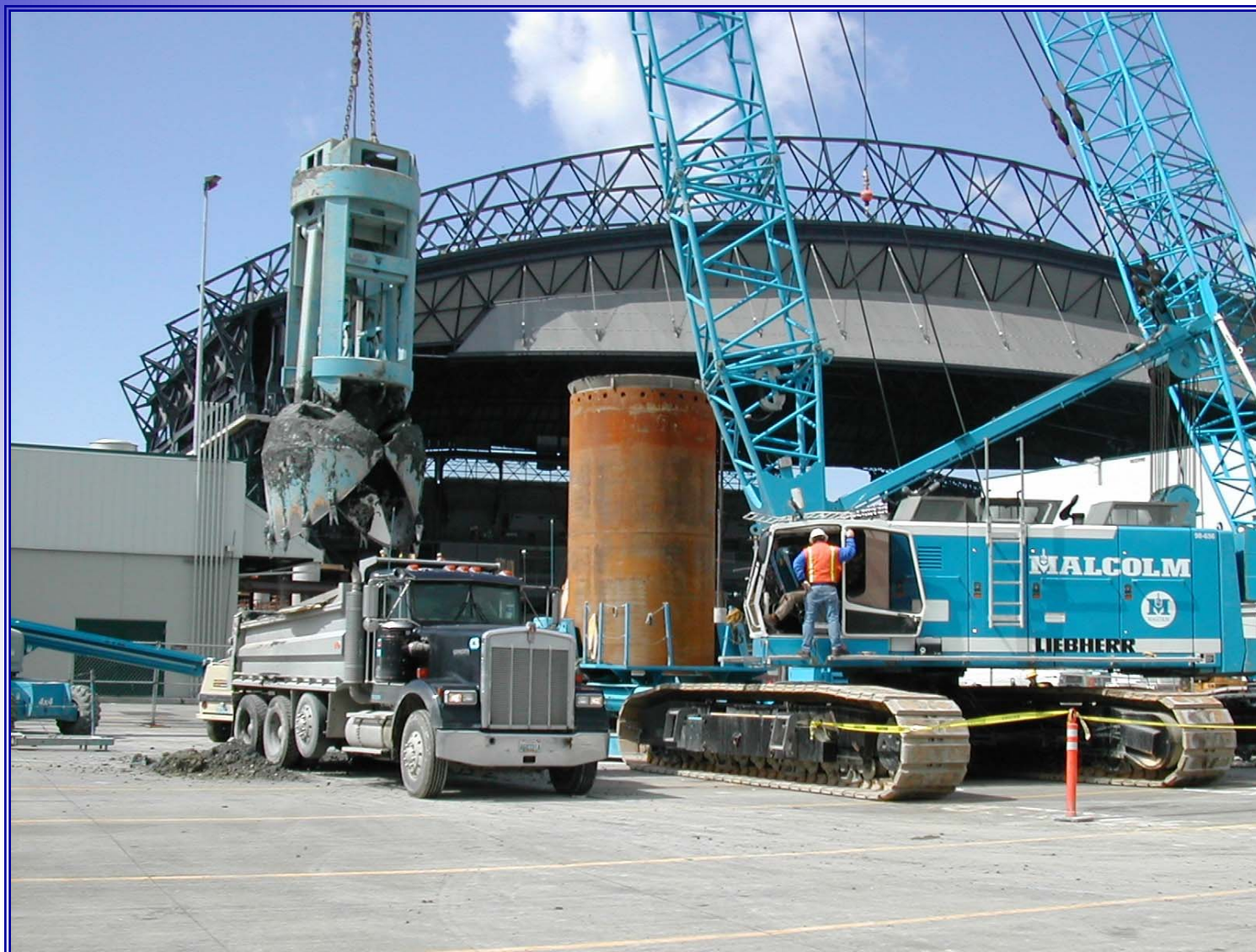
Remove charging funnel,
working platform, and
tremie pipe sections.
Extract casing section and
remove Bottom Casing



Oscillator and Rotator Drilled Shafts



Oscillator and Rotator Drilled Shafts



Oscillator and Rotator Drilled Shafts



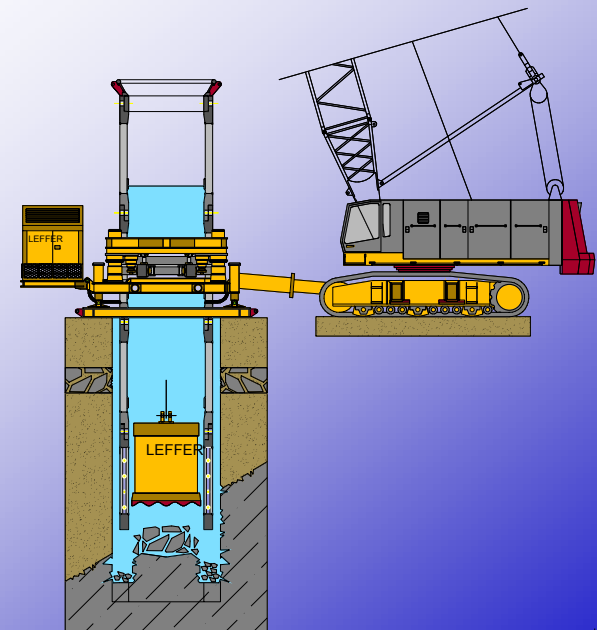
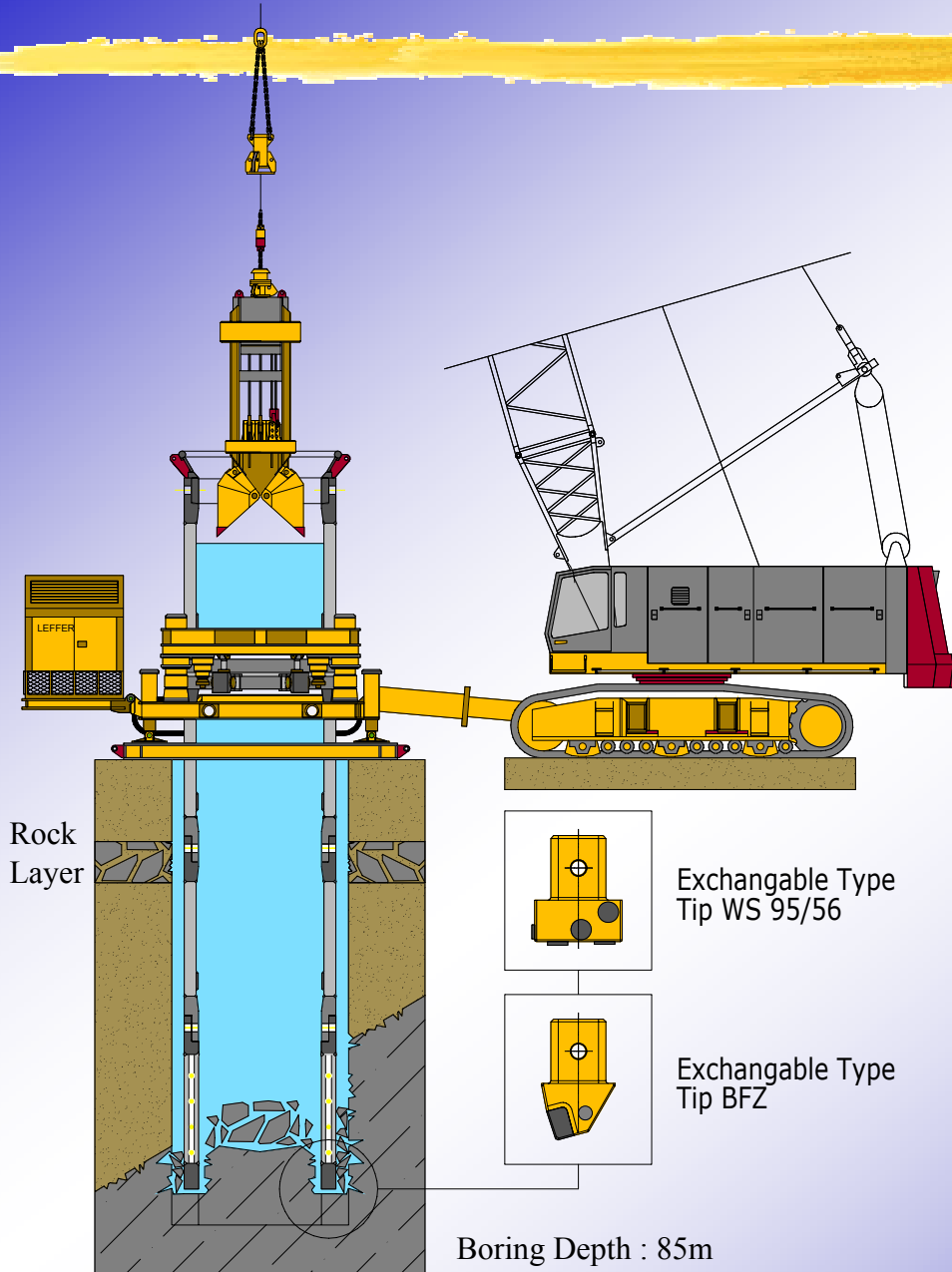
Oscillator and Rotator Drilled Shafts



Diameter Possibility: 1,000-3,000mm

Depth Possibility Proven: 85m

Control Device can achieve verticality of 1/300



Oscillator and Rotator Drilled Shafts



Oscillator and Rotator Drilled Shafts



Oscillator and Rotator Drilled Shafts



Questions?

