Drill Rigs, Soil Sampling, and Well Installation Methods

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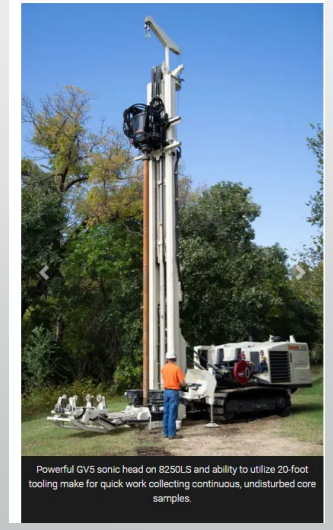
Team 5

Types of Drill Rigs

- Truck Mounted Drill Rigs.
- Direct Push Technology (DPT) Rigs.
- Sonic Drill Rigs.



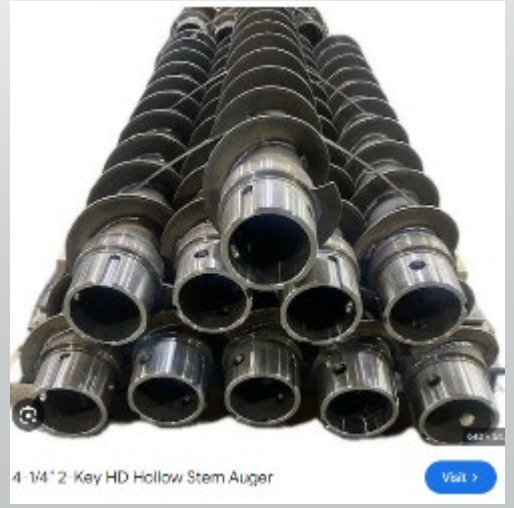
Traditional Truck Mounted Drill Rig

- Utilize Drill Rig Mobilizations.
  - Pay Items 3-9.a. and 3-10.a.

- Collects Soil Samples by Split Spoons.
  - Pay Items 5-1.a.1., 5-1.a.2., and 5-1.a.3.

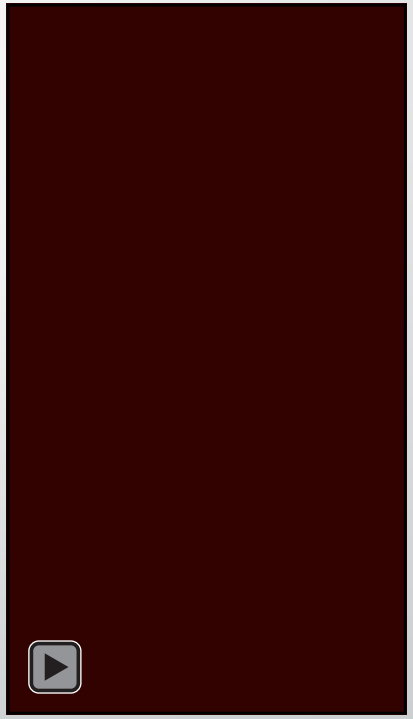
- <u>Standard Penetration Test (SPT) Demonstration</u>

- Drills by Hollow Stem Auger (HSA) or Mud Rotary (MR).
  - Pay Items 5-6 through 5-14.



Direct Push Technology (DPT) Rigs

- Utilize DPT Rig Mobilizations.
  - Pay Items 3-7.a. and 3-8.a.
- Collect Soil Samples via DPT or Split Spoon (if equipped).
  - Pay Items 5-1.a.1., 5-1.a.2., 5-1.a.3. or 5-3.a.
- [Amdrill Geo probe Rig DPT Environmental - YouTube]
- Drills via DPT, HSA, MR.
  - Pay Items 5-3.a., 5-6. through 5-14.



Sonic Rigs

- Utilize Drill Rig and Support Vehicles (HSA, MR, or Sonic).
  - Pay Items 3-9.a. and 3-10.a.
- Collect Soil Samples via Sonic Cores.
  - Pay Items 5-1.b.
- Drills via a Temporary Casing and Sonic Drilling
  - Pay Items 5-15. through 5-23.
- [HRP Explains: Sonic Drill Rigs]

Well Installation Methods

- 1” Prepacked Wells Installed via 3.75” Direct Push Rods
  - Utilize Pay Items 5-3.a., 6-1, and 22-1.
- 2” Through 6” Wells Can Be Installed Via HSA, MR, or Sonic.
  - DPT rigs can spin up to 10.25” OD HSA to Install 6” Surface Casing.
- PVC Surface casing are typically installed via HSA and remaining depth drilled via MR.
- Sonic drilling utilizes a temporary casing to install wells.

Three Rigs in One | Geoprobe Systems® Mud Rotary Drill

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