



PDHonline Course C330 (3 PDH)

Sampling Frozen Soils

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Sampling Frozen Soils

John Poullain, P.E.

Term

Auger Flights	Sections of augers which are added to top of coring auger to reduce jamming in the borehole during retraction from deep drives
Ball Check Valve	Located in the sampler head. They help to retain the sample in a sampling tube during the recovery
Casing	Section of pipe used to line and stabilize the borehole
CRREL	US Army Cold Regions Research and Engineering Laboratory. Developed an early drilling bit for frozen soils
Dip	Angle of fractures, slip planes made with the horizon, measured on rock cores with protractors
Drag Bit	Step and chevron type bits, designed for soft to medium and medium to hard formations, may be used for pilot holes because cuttings are easily logged
Drill Cuttings	Waste generated during drilling which consists of soil and rock pieces
Drill Strings	Sections of drill pipe connected together with collars
Fluid Slush Pit	Devises used in drilling frozen soils which is placed over the borehole
Kelly	Thick-walled pipe which runs through the drive head with telescoping sections
Mud Pits	Stores drilling fluid until needed and allow cuttings suspended in the drilling fluid to settle before being reused for drilling. Dug pit or prefabricated portable with baffles
Packers	Packers are expandable cylindrical rubber sleeves used to seal sample tubes
Rod Stabilizers	Integral spiral ribbed blades on drills control borehole straightness and prevent sticking in hole
Shale Shakers	Shaker/sieve used to separate coarse material from drilling mud
Slake	Some rocks that crumble when freshly exposed to air, water slaking also occurs
Sludge Barrel	Attached above the core barrel to catch cuttings as they drop from suspension