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(54) **Title:** DIRECTIONAL SOIL CORING AND SAMPLING APPARATUS AND METHOD

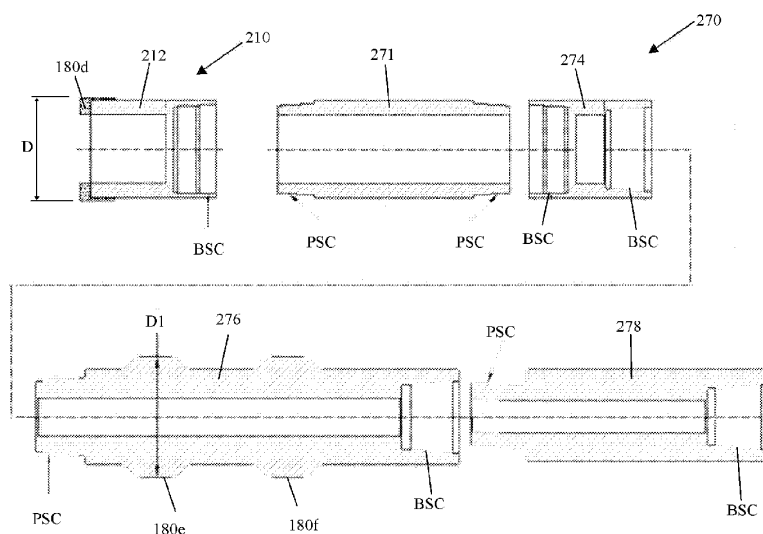


FIG. 5

(57) **Abstract:** The present invention describes a horizontal directional soil coring and sampling apparatus and method. With this invention, a location of a desired soil sample (201, 301) is determined and a drill profile is plotted from an entrance pit (30). A drill head is driven along the drill profile by drill pipes (136) to create a pilot drill-path (140); the pilot drill-path (140) is then enlarged to a bored path (150) with a forward reamer (160). In one embodiment, a coring head (210) and a soil extractor (270) are driven into the bored path (150) to obtain an undisturbed soil sample (201). In another embodiment, outer tubes (336) are driven along the bored path (150) with a coring head (310), and a wireline soil extractor (370) is sent down an interior bore of the outer tubes to obtain an undisturbed soil sample (301).

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