**Soil Study**

**OUR CUSTOMERS:**

* Venezuelan Petroleum Corporation (CVP) and Mixed Enterprises.
* PDVSA subsidiaries: Engineering and Construction, PDVSA Gas, PDVSA Industrial.
* PDVSA Business: Refining, EyP, INTEVEP, Comenrcio and Supply.
* PDVSA International Business: PDVSA CUBA and YPFB-Petroandina SAM.
* Bolivarian Government of Venezuela: Simón Bolivar Geographical Institute, Funvisis, CORPOELEC, Bolivarian Mayor of San Francisco and Bolivarian Governorate of Zulia.

**AVAILABLE SERVICES:**

SISMICA Servicios Petroleros has a modified Sedidrill 110 drill for soil sampling and three laboratories for testing (INTEVEP, El Chaure, Lagunillas) with which we can perform services of:

* Percussion and/or washing 64 mm in diameter with sample recovery each meter and normal penetration test (S.P.T.) from 0 to 50 m deep.
* Drilling to rock rotation, with continuous recovery of bx and Nx diameter cores: From 0 to 60 meters deep.
* Opening and filling of Calicatas without disturbing the monolith type.
* Undisturbed samples with 3" and 4" diameter Shelby tube.
* Physical-chemical capture and analysis of solid samples.
* Electrical Resistivity and Vertical Electrical Probe Test.
* Metal detection and rethinking.
* Density test on site with nuclear density meter.
* Visual examination of the sample (soil or rock).
* Test for the determination of natural humidity (%).
* Test for consistency limits (liquid and plastic limit) and shrinkage.
* Sifting granulometry or hydrometer test with maximum particle size 76 mm.
* Test for unit weight determination.
* Test for the determination of the specific weight by means of the picnometer.
* Inconfided compression test with maximum diameter of 50 mm.
* Consolidated undrained direct cutting test of 3 points maximum sample area 40 cm2, with sample preparation to be used in consolidation, colpaso, cutting resistance and expansion tests.
* Free expansion test in consolidator in samples with maximum area of 40 cm².
* Unbound and undrained triaxial test, with chamber pressures up to 10 kg/cm² and sample diameter from 36 mm up to 100mm.
* Soil permeability test in constant or variable load permeameter.
* Compaction test with modified stress in 150 mm diameter mold.
* Three points penetration test (C.B.R.).
* Test to determine pH values.
* Test to determine the concentration of Chlorides.
* Test to determine the concentration of Sulphates.
* Preparation, settlement intake, cylinders and compression test of cylinders 15 x 30 cm.
* Removing and testing of hardened concrete core compression.
* Test for sclerometric hardness determination on hardened concrete surface.
* Removing 4-inch diameter cores.
* Laboratory analysis for asphalt cores.
* Sampling and marshall trials.