

CASE STUDY

Virginia Department of Transportation (VDOT)

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The Virginia Department of Transportation (VDOT) has an approximately \$3 billion operating budget. It is the third largest state DOT in the country. The department is subdivided into 9 districts and Central Office.

In the past, geotechnical borehole logs were prepared using customized macros running inside the MicroStation program. The output was fairly rudimentary and there was no provision for storing and retrieving data for future use. In addition, various consultant-based projects included geotechnical logs prepared in different formats. Clearly, there was a need for standardization.

VDOT began experimenting with gINT around 1998. It quickly became software of choice for geotechnical applications. A lot of work was devoted initially to involve all potential VDOT users in developing various report templates. This collective effort was done to assure widespread acceptance of the customized library. Currently VDOT has 12 offices operating gINT. The library file is maintained by Central Office personnel and disseminated to all districts and outside consultants through a website. All VDOT consultants are required to submit geotechnical data in gINT format.

VDOT has been using gINT on construction projects ranging from a small bridge on a secondary road to a multi-million dollar Woodrow Wilson Bridge project in Washington, D.C. One of the main attractions of gINT has been its tremendous flexibility to integrate with other software through various import/export functions and the use of correspondence files. VDOT has managed to effectively mesh gINT with MicroStation and GEOPAK in order to include geotechnical logs with a set of project plans. These efforts have been facilitated by a superb technical assistance provided by gINT Software.

See the Cone Penetrometer Test Log created for VDOT using gINT on the following page.

CONE PENETROMETER TEST LOG



PROJECT #: U000-134-132-C501

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LOCATION: Lynnhaven Pkwy

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STATE NORTHING:
STATE EASTING:
SURFACE ELEVATION: 6.6 ft
BENCHMARK LOCATION:

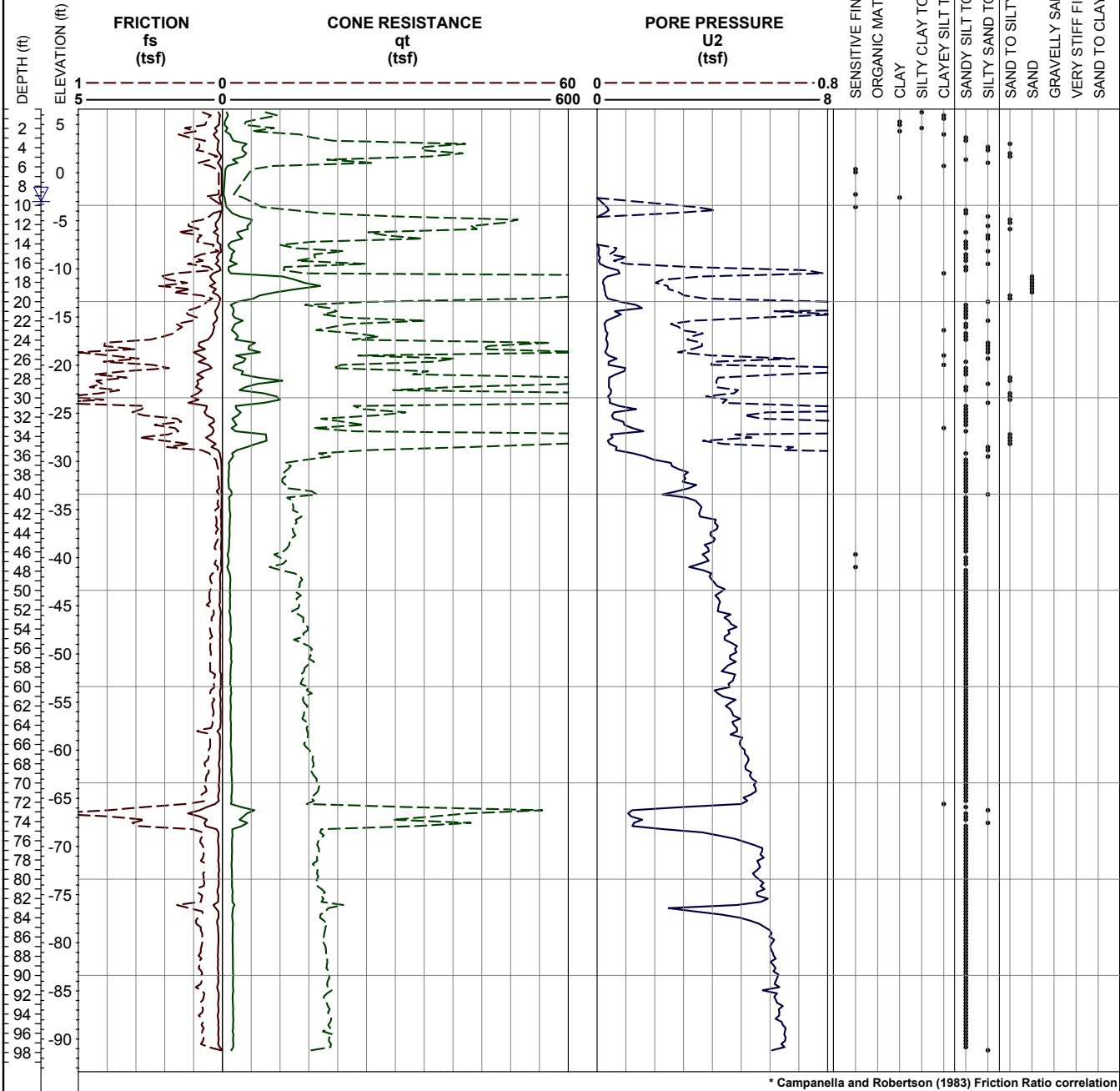
NORTHING:
EASTING:

DRILLER: A. Monds
CONE TYPE: 776tc
CONE SIZE:
CONE ID No.: 776

DATE(S) DRILLED:
03/25/04
GROUNDWATER: 9.6 ft depth
LOGGER: DHW

SOIL BEHAVIOR TYPE*

- SENSITIVE FINE GRAINED
- ORGANIC MATERIAL
- CLAY
- SILTY CLAY TO CLAY
- CLAYEY SILT TO SILTY CLAY
- SANDY SILT TO CLAYEY SILT
- SILTY SAND TO SANDY SILT
- SAND TO SILTY SAND
- SAND
- GRAVELLY SAND TO SAND
- VERY STIFF FINE GRAINED
- SAND TO CLAYEY SAND



* Campanella and Robertson (1983) Friction Ratio correlation

REMARKS:
At Sta 111 + 62 Rt 12.5 m

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