



OHIO DEPARTMENT OF TRANSPORTATION

JOHN R. KASICH, GOVERNOR

JERRY WRAY, DIRECTOR

Overview of ODOT-OGE Exploratory Methods

P. Paul Painter

Geologist

Division of Engineering, Office of Geotechnical Engineering



Consultant Workshop



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Geotechnical Tools

Update of Geotechnical Tools being utilized by the Office of Geotechnical Engineering:

CPT

Pressuremeter

Geophysics

Acker Drill Rig



Geotechnical Tools: CPT

- ④ **OGE has been utilizing CPT for both internal and Consultant project:**
 - 2015 Projects (so far....)**
 - ④ **Gannett Fleming: STA-77**
 - ④ **Barr Engineering: CCG3**
 - ④ **D10: WAS-821 & MEG-143**
 - ④ **D8/Resource International: HAM-75**
 - ④ **DLZ: FRA-270-52**
 - ④ **D6: FRA-70-19.31**



Geotechnical Tools: CPT

- ④ **STA-77: Very High Hydrostatic Pressures – Dissipation tests.**
- ④ **CCG3: Over 2000 lft. Of pushing in one week. Pushed with OU for QA/QC check of ODOT's process.**
- ④ **HAM-75: Augmenting program which has LOTS of SPT drilling data, but was short of specification.**



Geotechnical Tools: CPT

- ④ **WAS-821 & MEG-143: Bridge rehab project to confirm pile capacity due to lack of construction records.**
- ④ **FRA-270: Confirm limits of peat removal from beneath embankment construction for widening project.**
- ④ **FRA-70: Noise wall design.**



Geotechnical Tools: Pressuremeter

- ④ **Currently being utilized for peat and soft soil consolidation projects.**
- ④ **Good for hard to very hard soils where correlation charts are very conservative. Especially, spread footing foundations.**
- ④ **Rock foundations, drilled shaft or spread footings.**



Geotechnical Tools: Geophysics

- ④ **OGE stills has Electric Resistivity capabilities.**
- ④ **Recent projects contracted:**
 - ④ **Microgravity**
 - ④ **Seismic Waveform**



Geotechnical Tools: Geophysics

- ④ **Seismic Waveform**
- ④ **New processing method for data collected via the “old way”**
- ④ **Developed by Khiem T. Tran, PhD**



Geotechnical Tools: Acker Drill



Acker Soil –XLS

Track mounted
Low Clearance
Angle Drilling
All Hydraulic, High Torque Drill

DIFFICULT ACCESS RIG



Geotechnical Tools: Acker Drill



GUE-209-7.48



Geotechnical Tools: Acker Drill



HUR-13-2.50



Geotechnical Tools: Acker Drill



WYA-23-9.30



Geotechnical Tools

- ④ **Any ODOT Project where these services are deemed useful contact OGE for availability.**



QUESTIONS?

