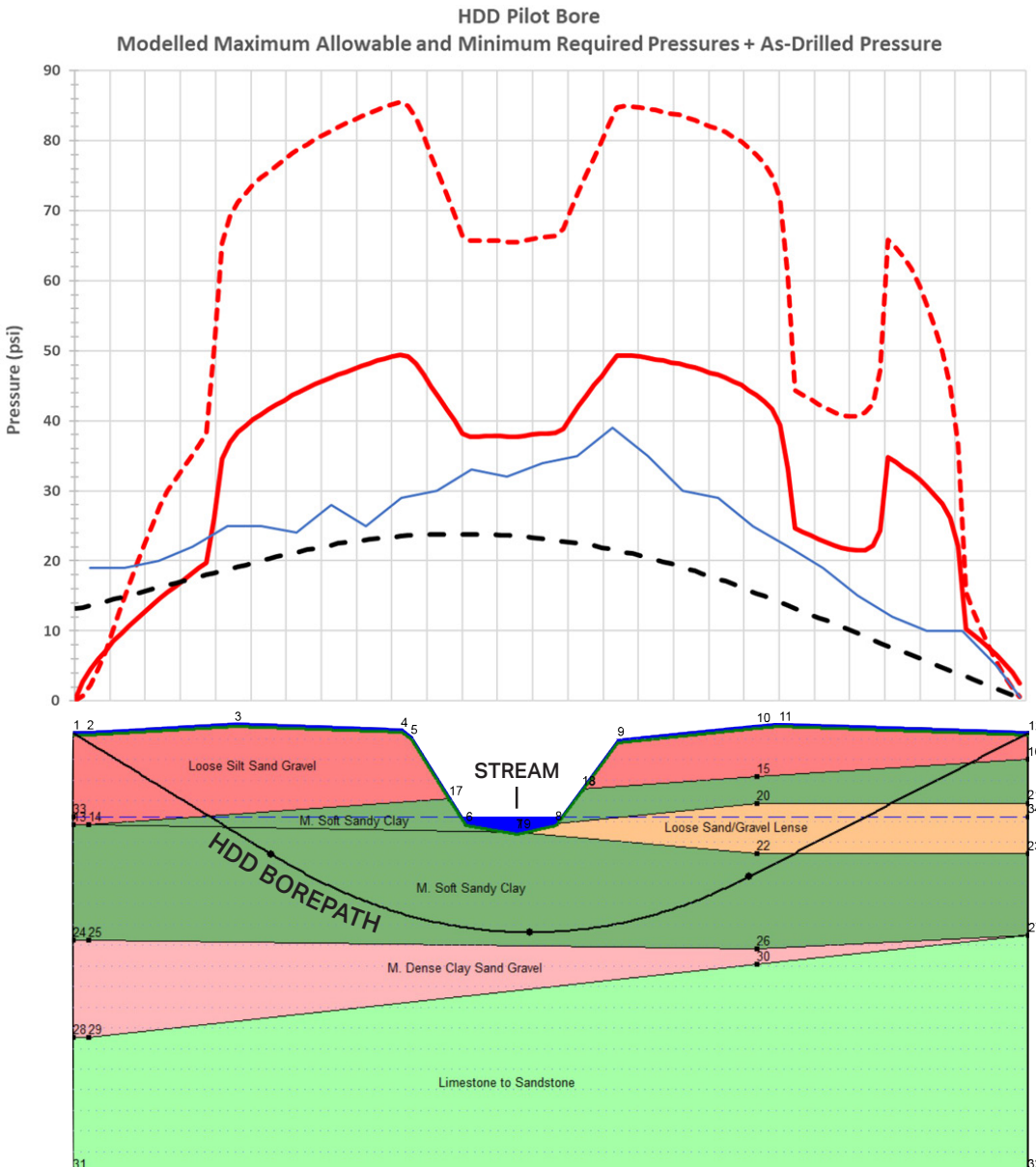
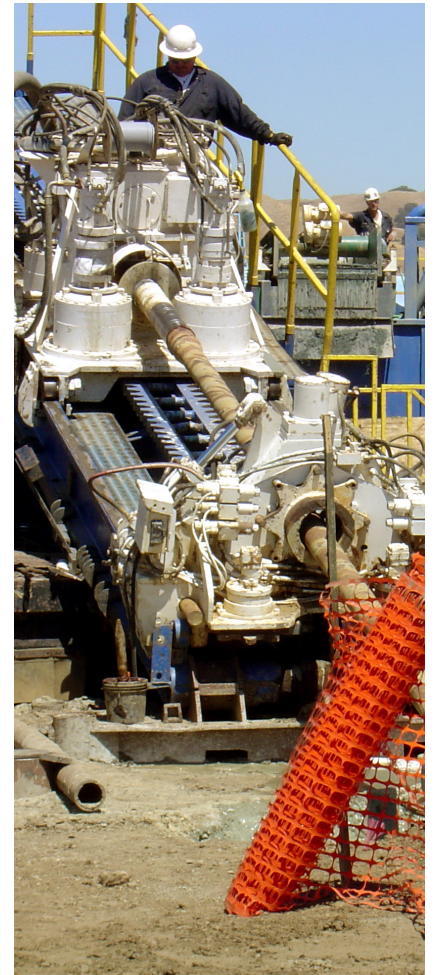


HYDROFRACTURE AND PIPE STRESS ANALYSIS FOR HORIZONTAL DIRECTIONAL DRILLING (HDD)

DiGioia Gray provides engineering services to underground utilities to reduce the potential for Inadvertent Return (IR) of drilling fluid, borehole instability, and equipment and product pipe damage during HDD boring operations.

- IRs are harmful to the environment, damaging to public relations, and adverse to project schedules. Reduce your risk by increasing your subsurface knowledge.
- Geotechnical investigation and site characterization using state-of-the-art techniques and software.
- In addition to a geologic profile, we generate a minimum/maximum annular pressure profile; ideal for implementation and reference in the field.
- For more information, contact Erich Zorn at ezorn@digioiagray.com



- - - Maximum Allowable Annular Pressure Prior to Overburden Failure (psi)
- Maximum Allowable Annular Pressure Prior to Borehole Deformation (psi)
- As-Drilled Pressures
- - - Minimum Required Annular Pressure (psi) - Drilling Direction: Right to Left

HYDROFRACTURE AND PIPE STRESS ANALYSIS FOR HORIZONTAL DIRECTIONAL DRILLING (HDD)

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