Reducing the risk of cross bores

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Overview

- Cross bores can have dangerous consequences for utility crews and the surrounding neighborhood. Through proper upfront planning and preventive measures taken during an installation, cross bores can be avoided.
- Learn some steps every HDD crew should follow, tools that can assist with bore planning, best practices for potholing, reliable ways to locate sewer lines and how to calibrate the drill head transmitter with the locator.

What is a cross bore?

- Unintended conflict between two underground utility systems
- Associated with trenchless construction methods

Continued

- A cross bore is defined as the intersection of an existing underground utility or underground structure by a second utility installed using trenchless technology. This results in an intersection of the utilities, compromising the integrity of either (or both) utility or underground structure.
- In rare cases, a gas pipeline may cross through a sewer pipe. If a contractor unknowingly strikes a gas line while cutting through a sewer blockage, natural gas could enter the sewer system.

How cross bores can occur

- Lack of planning or documentation
  - -Understanding of existing utilities
- Poor potholing practices
- Poor pre-job bore planning
- Low accuracy drill head locating

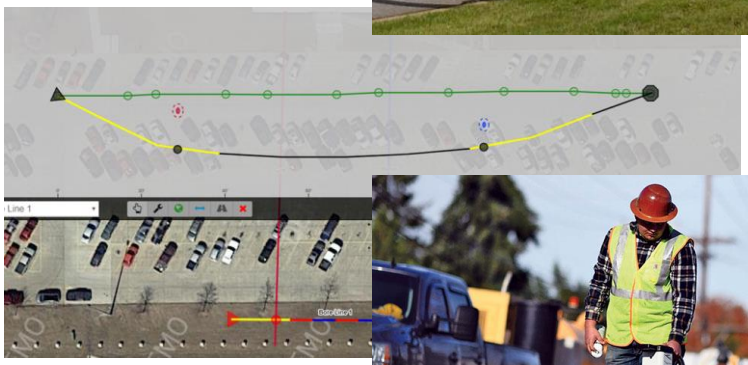
How to help prevent cross bores

1. Understand location of existing utilities in bore path

2. Expose the utility

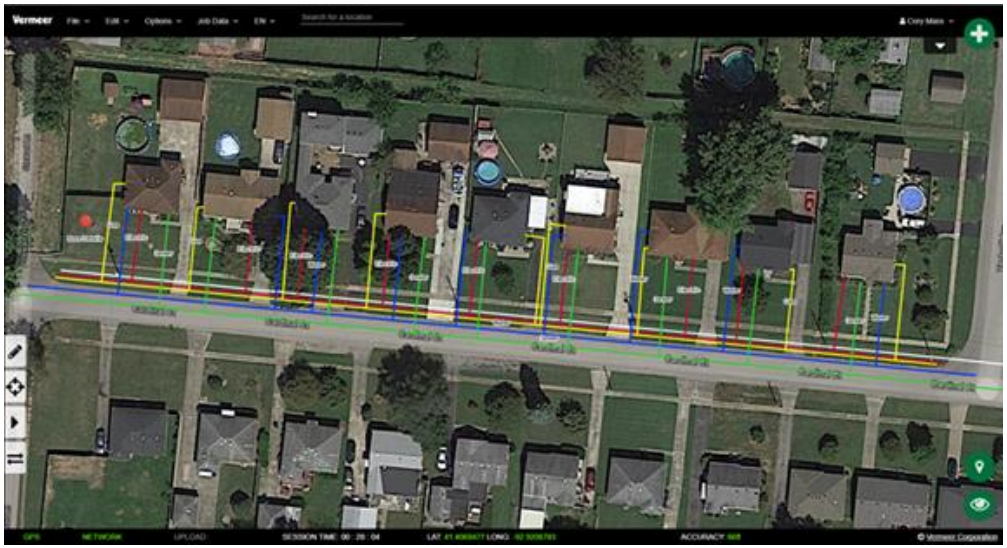
3. PLAN, PLAN, PLAN
   - Then plan some more!

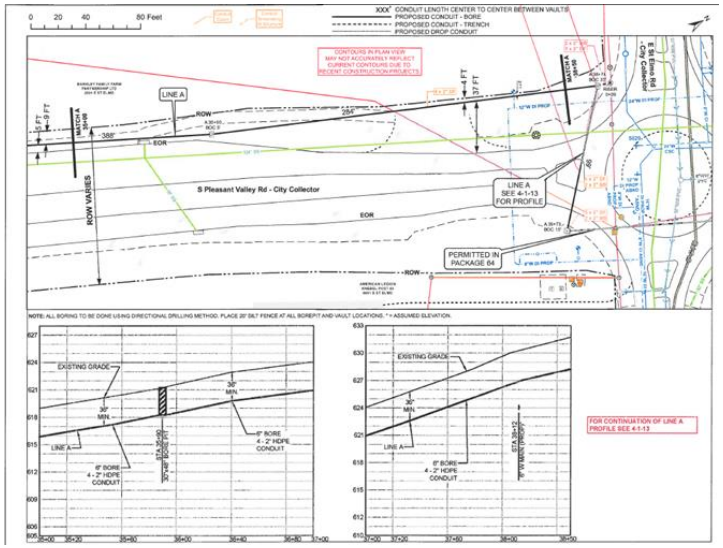
4. Use properly calibrated locating system



Obstacles in the path

- Know what obstacles you will come across in the bore and project



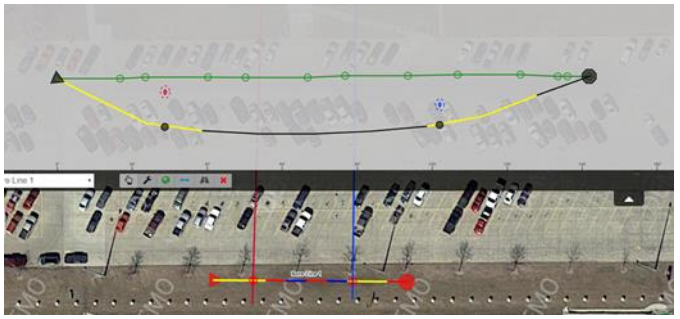


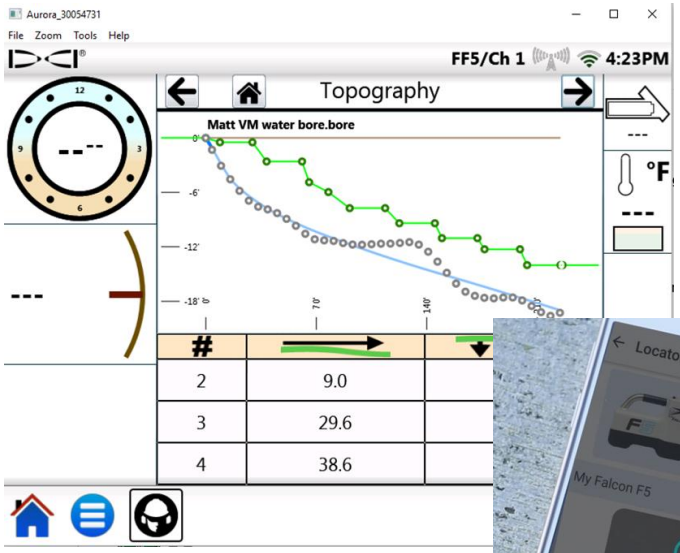
Exposing the utility

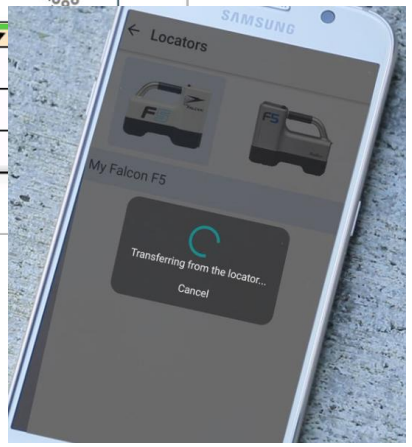
- Expose it! Expose it real good!
- Use a camera
- Document depth, size and clearance

Plan to succeed

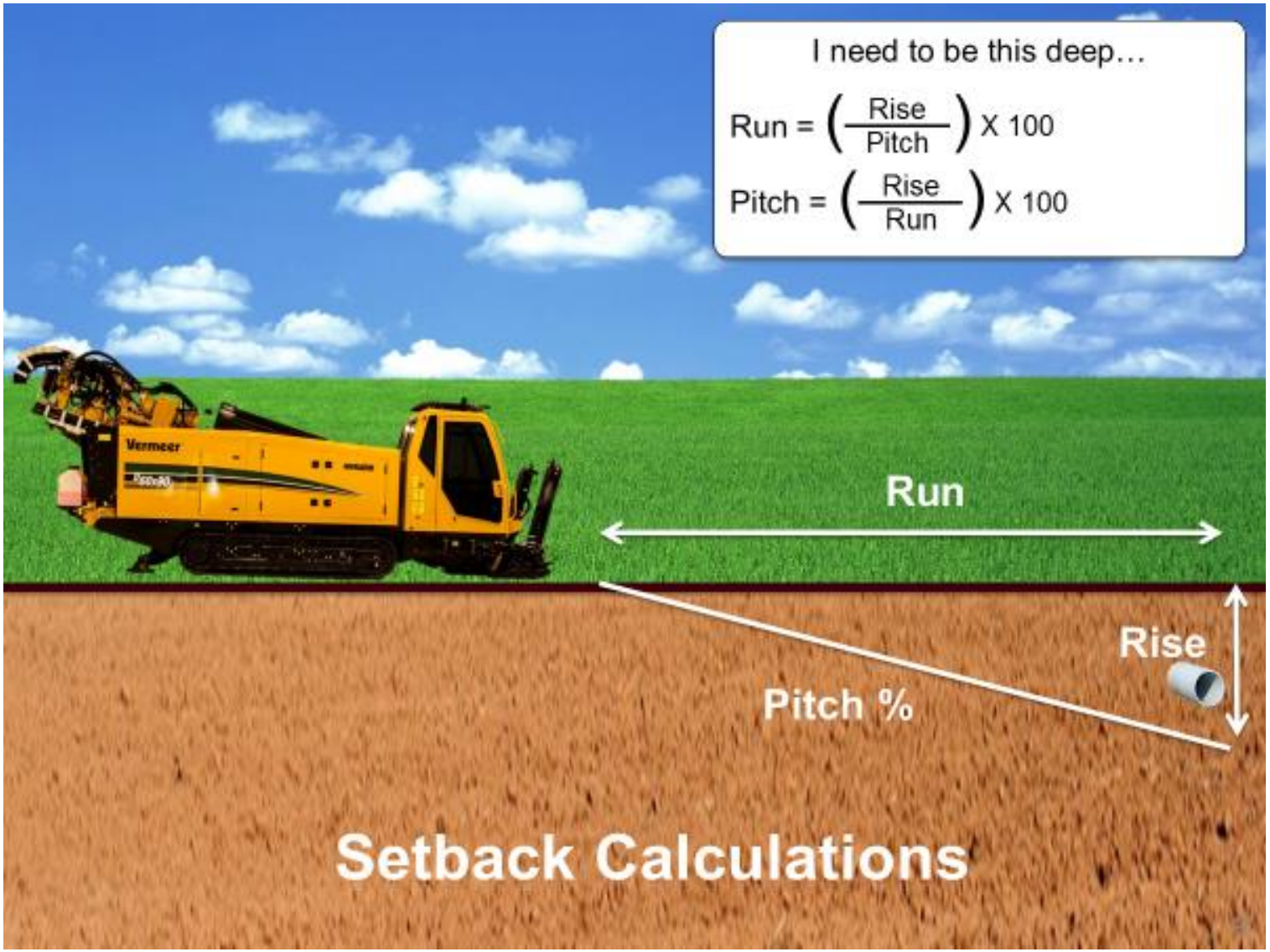
- Use the information collected to make a bore plan
- Plan your bore in the office or on the rig
- Track your work
  - Log books
  - LWD™







Setback calculation



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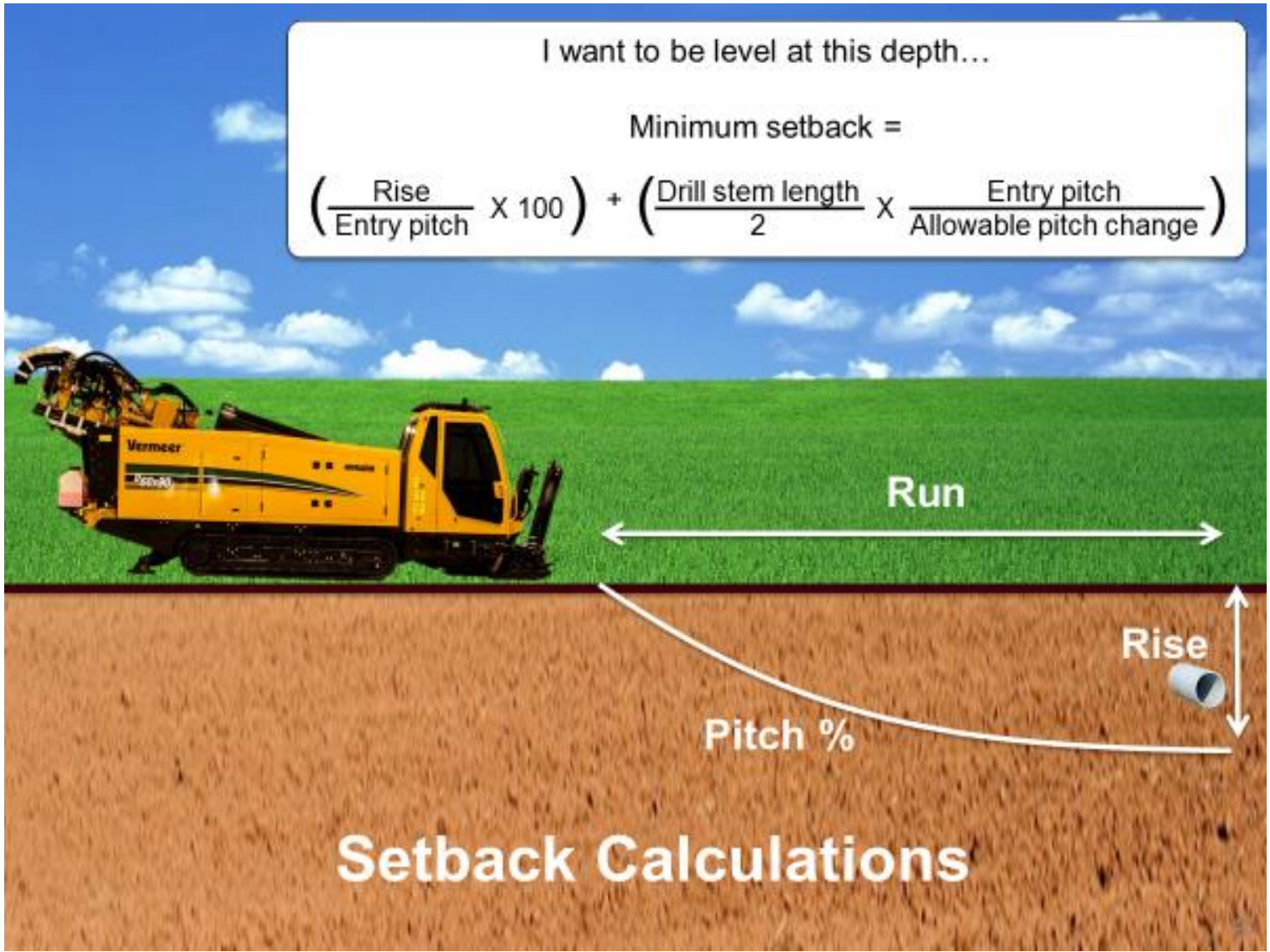
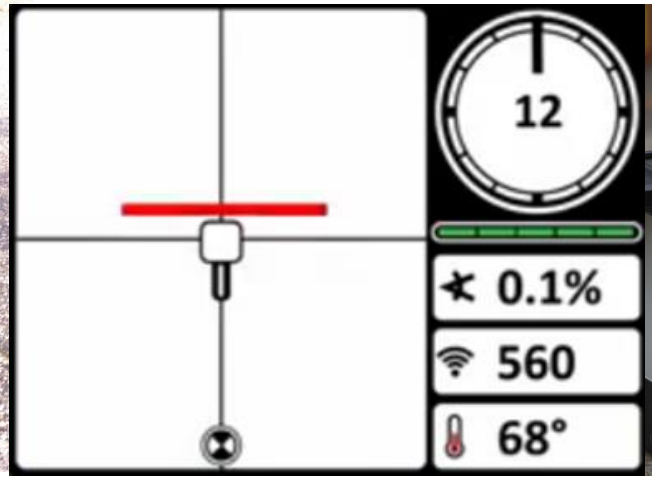


Use the technology

- Select proper frequency on locator
  -Calibrate when necessary
- Double check your depth
- Constant communication
- Use pull back camera when possible



Summary

- Through proper planning, use of resources and technology, risks of cross bores and utility strikes can be mitigated
- Safety should be a top priority on your jobsite, and it starts with a good plan, so plan to succeed

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