



**Directed Technologies Drilling
Incorporated**

WATER RESOURCES AND DIRECTIONAL DRILLING



Maximizing Well Performance Through Directional Drilling

Directed Technologies Drilling can apply horizontal directional drilling to your water resources project. In many applications, directional drilling can increase productivity, decrease filtration costs, replace recharge basins or create passive water supplies.

WHY DIRECTIONAL DRILLING?

Horizontal directional drilling (HDD) can be used for water supply and or groundwater recharge applications. Groundwater often flows preferentially along laterally extensive conductive zones, i.e. a widespread horizontal gravel or sand layers, or through near vertical fracture sets in low permeability bedrock.

Directed Technologies Drilling uses HDD techniques to maximize well performance in these and many other settings. The following are some example applications that demonstrate the advantages of directional drilling.



1) SOURCE WATER FOR FILTRATION/DESALINIZATION

Many public water supplies rely on surface water or saltwater as a starting point for their finished water. A directionally drilled horizontal well aligned near a river or beach can provide a consistent quality

Lateral Thinking Yields Better Solutions

Directed Technologies Drilling, Inc. (DTD) is a leader in horizontal directional drilling (HDD) technology. Our objective is complete client satisfaction. We apply experience and innovative thinking to provide quality service that is unrivaled in the industry.

DTD has the most experienced team of professionals in the business. James Doesburg, President, is a recognized authority on HDD and pioneered many of its innovations and environmental applications. Principals and project managers have academic degrees in geology or hydrogeology and are recognized authorities in the field by groups including the Colorado Center for Environmental Management, the University of Wisconsin and the National Ground Water Association.

DTD has offices in Washington state and Pennsylvania and has completed projects in 29 U.S. states, Mexico, Europe and Japan.

Coupling technical experience with an unblemished safety record and a team of HAZWOPER trained employees, DTD is the clear choice for your directional environmental drilling needs.



Directed Technologies Drilling, Inc.
8626 South 228th Street
Kent, WA 98031

800.239.5950
info@horizontaldrill.com
horizontaldrill.com



WATER RESOURCES AND DIRECTIONAL DRILLING

(low solids, perhaps lower salinity) high volume water source for filtration, thereby decreasing long term operation and filtration costs. These wells would be similar in principle and design to a Rainey well.

2) GROUNDWATER RECHARGE

In some regions horizontal wells can replace recharge basins. This can have two benefits: no loss of water to evapotranspiration and directing recharge below or between aquitards.

3) TAPPING THIN SANDS AND GRAVELS

Many aquifers are of limited thickness but extend laterally for significant distance. One directionally drilled well having hundreds of feet of screen can be drilled in the producing zone, even if the producing zone is as thin as one foot. Many tens of vertical wells would be needed to equal the productivity of one directionally drilled well in this setting.



4) PASSIVE WATER SUPPLIES

Directionally drilled wells have been installed on hill or mountain sides to passively provide water, essentially creating a spring-type supply. This type of well can be used for public water supply, water bottling, or even something as simple as creating groundwater sourced wetlands.

CONTACT US TO LEARN MORE

The above applications highlight the many ways that directionally drilled wells can be used for water resource applications. Please contact us to discuss your water resources challenges. At **Directed Technologies Drilling** we have Professional Geologists who can help you apply directional drilling to your needs. Contact us at 800.239.5950 or info@horizontaldrill.com.

DTD's Advantage: Surface-to-Surface and Blind Wells



Directed Technologies Drilling, Inc. horizontal installations enable the versatility of choosing surface-to-surface (double-entry completion) or blind (single-entry completion) holes.

Surface-to-surface completions are our most common installation. With both an entry and exit pit, surface-to-surface wells are frequently easier to maintain, less expensive to install and can hold multiple pumps.

Blind completions are most frequently used in cases of limited access locations or in situations that require less surface disruption. Disadvantages of blind completions include limited length, more difficult development and greater expense.