



**Directed Technologies Drilling  
Incorporated**

**WELL REHABILITATION**



# Improving The Efficiency of Underperforming Wells

**Directed Technologies Drilling can help you identify the causes of decreased well performance and provide the development tools necessary to rehabilitate and maintain efficient wells.**

**MAINTAINING WELL PERFORMANCE**

The performance of wells (vertical or horizontal) generally degrades with time. Even the efficiency of a properly developed well will decrease through time. In order to maintain the highest well efficiency it is important to be able to identify the cause of the decreased performance and equally important—the remedy. **Directed Technologies Drilling** has the tools and the expertise to help you with underperforming wells.



DTD investigation video showing sand flowing into a groundwater recovery well.

**IDENTIFYING CAUSES OF WELL INEFFICIENCY**

The first challenge is to understand the problem with the well: is it siltation, bio-fouling, mineralization? Using water quality analysis, review of pumping records and if necessary, in-well video, we can help you understand why your well performance is decreasing. Well videos in horizontal wells are complicated by fine sediment on the bottom of the well and frictional forces preventing

**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.



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## WELL REHABILITATION

the camera moving deep into the well. Adaptations must be made to the typical vertical well or sewer video camera to allow it to proceed without stirring up well sediment. However, a visual record of the well screen can be very valuable in determining the cause of well inefficiencies.



### IMPLEMENTING WELL REHABILITATION OR MAINTENANCE

The second challenge can be implementing the necessary rehabilitation or regular well maintenance. Traditional vertical well development techniques (i.e., air lift) fail or do not provide the necessary flow velocities to restore the well function. DTD has designed unique development tools that

are specially adapted to horizontal wells and allow simultaneous pumping and jetting of the well throughout the well screen.



### CONTACT US TO LEARN MORE

Improving the efficiency of your underperforming wells is one of our primary services. With our innovative technologies and vast field experience, **Directed Technologies Drilling** is expert at both identifying the causes of well inefficiencies and helping you restore well performance. Contact us at 800.239.5950 or [info@horizontaldrill.com](mailto:info@horizontaldrill.com).

### The Right Tools for Your Job

Directed Technologies Drilling has the tooling necessary to rework wells up to 4,00 feet in length. We have developed specialized jetting, injection, pumping and video equipment specifically for horizontal well work. Our staff are trained in all aspects of well inspection and expert at analyzing problems. We often find site conditions much different than expected and have built our reputation on our ability to adapt and innovate on site to complete the job regardless of conditions.

