

RESIDENT WATER WELL TESTING SERVICES

Matrix offers detailed pre- and post-testing services for active water wells to determine baseline conditions before or after a client's drilling or re-completion operations. Services include:

- water well identification and assessment;
- water well performance testing;
- water sample collection and water quality analysis; and
- report preparation with copies provided to both the client and landowner/occupant on baseline findings.



Testing Process

When field testing water wells, Matrix personnel are mobilized from the nearest office location in Alberta, Saskatchewan or British Columbia.

Upon arrival at the property, Matrix completes a water supply questionnaire with the landowner/occupant to document any concerns and gather background information on the water well's condition and use. Subsequently, pumping (drawdown) and recovery testing is conducted to record well performance. During drawdown, water quality parameters including pH, electrical conductivity, dissolved oxygen, and temperature are field-measured prior to sample collection. The samples are submitted to an accredited laboratory for further compositional analyses.

Depending on client requirements, additional analyses can also be conducted to provide information on microbiological water quality that would indicate the possible need for water well maintenance.

Free Gas Determination

When resident well testing is conducted for drilling operations associated with exploration for conventional and unconventional gas, a portion of the water discharged from the well during draw-down may be directed into a flow through cell to monitor, collect and measure any free gas (if present). If the collected gas volume is sufficient, the samples may be submitted for compositional analysis to determine the nature and origin of the gas (biogenic or thermogenic).

Reporting Results

Laboratory results are compared to the Health Canada guidelines for Canadian Drinking Water Quality and the Canadian Council of Ministers of the Environment Water Quality Guidelines for Livestock. If any water quality parameters are found to exceed acceptable concentrations, Matrix will alert the landowner/occupant and client within 24 hours.

A report summarizing the methodology, data and interpretation of the testing results is prepared and submitted to the client and landowner/occupant. The report includes:

- water well drilling report;
- water supply questionnaire;
- pumping test results;
- laboratory data; and
- laboratory report.

Depending on client requirements, the report may also include contact information for the Regional Health Authority, and references to well maintenance and general water well questions.