

## County of Vermilion River No. 24

Part of the North Saskatchewan and Battle River Basins  
Parts of Tp 045 to 056, R 01 to 07, W4M  
Regional Groundwater Assessment

Prepared for



In conjunction with



Agriculture and  
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Administration

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Canada 

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### PERMIT TO PRACTICE

HYDROGEOLOGICAL CONSULTANTS LTD.

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Date \_\_\_\_\_

**PERMIT NUMBER: P 385**

The Association of Professional Engineers,  
Geologists and Geophysicists of Alberta

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## **APPENDICES**

- A HYDROGEOLOGICAL MAPS AND FIGURES**
- B MAPS AND FIGURES ON CD-ROM**
- C GENERAL WATER WELL INFORMATION**
- D MAPS AND FIGURES INCLUDED AS LARGE PLOTS**
- E WATER WELLS RECOMMENDED FOR FIELD VERIFICATION**

## 1 PROJECT OVERVIEW

### “Water is the lifeblood of the earth.” - Anonymous

How a County takes care of one of its most precious resources - groundwater - reflects the future wealth and health of its people. Good environmental practices are not an accident. They must include genuine foresight with knowledgeable planning. Implementation of strong practices not only commits to a better quality of life for future generations, but also creates a solid base for increased economic activity. **This report, even though it is regional in nature, is the first step in fulfilling a commitment by the County of Vermilion River No. 24 toward the management of the groundwater resource, which is a key component toward the well-being of the County, and is a guide for future groundwater-related projects.**

#### 1.1 About This Report

This report provides an overview of (a) the groundwater resources of the County of Vermilion River No. 24, (b) the processes used for the present project and (c) the groundwater characteristics in the County.

Additional technical details are available from files on the CD-ROM to be provided with the final version of this report. The files include the geo-referenced electronic groundwater database, maps showing distribution of various hydrogeological parameters, the groundwater query, and ArcView files. Likewise, all of the illustrations and maps from the present report, plus additional maps, figures and cross-sections, are available on the CD-ROM. For convenience, poster-size maps and cross-sections have been prepared as a visual summary of the results presented in this report. Copies of these poster-size drawings have been forwarded with this report, and are included as page-size drawings in Appendix D.

Appendix A features page-size copies of the figures within the report plus additional maps and cross-sections. An index of the page-size maps and figures is given at the beginning of Appendix A.

Appendix B provides a complete list of maps and figures included on the CD-ROM.

Appendix C includes the following:

- 1) a procedure for conducting aquifer tests with water wells;
- 2) a table of contents for the Water (Ministerial) Regulation under the new Water Act;
- 3) a flow chart showing the licensing of a groundwater diversion under the new Water Act; and
- 4) additional information.

The Water (Ministerial) Regulation deals with the wellhead completion requirement (no more water-well pits), the proper procedure for abandoning unused water wells and the correct procedure for installing a pump in a water well. The new Water Act was proclaimed 10 Jan 1999.

Appendix E provides a list of water wells recommended for field verification.