

**TETRALE Group**

#380, 1500-14<sup>th</sup> Street SW,  
Calgary, Alberta, Canada T3C 1C9  
Tel: +1 403 457-0555  
Email: [info@tetrale.com](mailto:info@tetrale.com)  
[www.tesseractal-geo.com](http://www.tesseractal-geo.com)  
[www.tetraseis.com](http://www.tetraseis.com)  
[www.tetrale.com](http://www.tetrale.com)



**Tetrale Group Inc.** is a managing company which presently brings together two distinct geophysical software products and services capabilities that are based on proprietary, patented technology. The two Product & Service lines have tight business and technological synergies and market development opportunities.

**TetraSeis** - advanced processing technologies for imaging subtle vertical boundaries invisible to conventional seismic processing (Duplex Wave Migration - Patented).

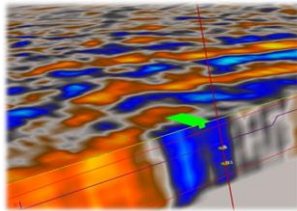
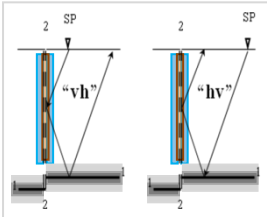
**Tesseractal** - full-wave Forward Modeling for any recording geometry and geological conditions. Model building utilizing a wide variety of well and seismic information.

Our major market niche is development and upgrading to the Oil & Gas industry standards of advanced technologies of advanced processing for imaging of sub-vertical geologic boundaries (TetraSeis Inc.) and Seismic (numerical) Modeling (Tesseractal Inc.).

Both companies have their major *products and relating services in a stage of their wide-scale introduction and upgrading to the industry-scale implementations.*

We have *long-term experience in providing our products, relating M&S, upgrades and consulting* to some major and mid-scale players in this market domain.

*Advanced Technologies for  
Sub-vertical Seismic Imaging  
Worldwide*



**TetraSeis Inc.** - is developing of **leading edge commercial technology** for seismic data processing allowing to **directly image near-vertical discontinuities**. Technique of **Duplex Wave Migration (DWM)** is patented in USA (2005). Duplex Wave Migration technique **since 2004 has been applied in different seismic processing and interpretation projects**.

- ✓ **Consulting** for our Clients is provided at place or via the internet conferencing capabilities. Important feedback from our regular and new Clients since 2004 was instructed in the **continuing development of our technologies and relating services**.

**TetraSeis** was founded **in Canada (Calgary) in 2004** and from **2009 is a division of TETRALE Group** –TetraSeis and Tesseral Technologies Managing Co.

**The main office is located in Calgary, Canada** – where we develop technologies, provide DWM processing services, support and consulting, and are marketing and selling our products and services.

#### **Company branches and affiliates:**

- **In Ukraine** (Kiev) – we develop technologies and software, provide DWM processing services, support and consulting, and are marketing our products and services.
- **In China** (Beijing) – we provide software support and distribution.

The majority of work was conducted in Calgary Canada and in Kiev Ukraine, under the guidance of the intergovernmental organization - Scientific and Technical Center of Ukraine. Company was allocated some governmental grants by the National Research Advice of Canada and the Canadian Agency of the International Development for its engagement in the development of leading edge technology.



Presently TetraSeis employs more than 25 highly qualified geophysicists, programmers and marketing professionals.

- ✓ Our main objective is to provide leading technologies setting industry standards in direct seismic imaging of sub-vertical discontinuities.
- ✓ We deliver cost effective and continuing Maintenance & Support of our products.
- ✓ We have long-term experience in services of seismic data processing using DWM and following geologic interpretation, Training and Consulting.

The **imaging of sub-vertical boundaries** has become extremely important **for solving a whole host of exploration and production challenges** as follows:

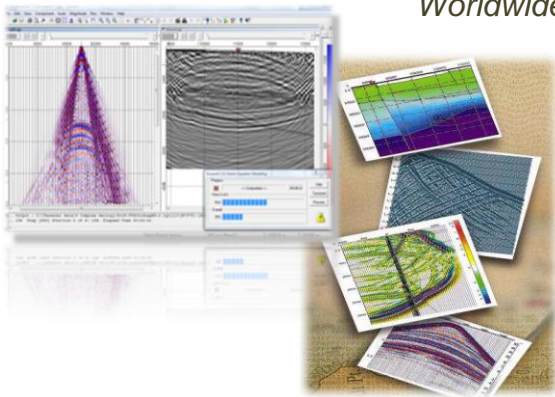
- Salt wall topography imaging;
- Zero or near zero throw faults;
- Delineation of fault compartmentalization within the reservoir;
- Fracture system delineation;
- Identification of bypassed reserves - enhanced oil recovery (EOR);
- Delineation of the edge boundaries of oil (or gas) to water interfaces;
- Delineate complex faulting patterns in coal bed methane plays;
- Check reservoir seals for unknown faults – critical for top seal analysis in CO2 sequestration;
- and many more...

**Duplex Wave** (double reflection: from the sub-horizontal and sub-vertical boundaries and vice versa) **Migration** is a tool for **seismic imaging of sub-vertical discontinuities of different nature** and is designed to **image the Duplex Wave Energy** that is much weaker and will arrive at a time greater than that of the primary base boundary .

**3D DWM application** can run parallel computations on Linux or Windows cluster for virtually any **conventional 3D survey layout and reasonable apertures**, and by its intensity and hardware requirements approximately corresponds to conventional PSDM.

Presently among our clients are different oil companies. The biggest are Aramco, LukOil and Rosneft.

*Multiparameter Numerical Medium  
for Seismic Modeling, Planning,  
Imaging & Interpretation QC  
Worldwide*



**Tesseral Technologies Inc.** is developing **commercial software packages for highly accurate wave field modeling**. Based on a digital model of a complex solid body, the supplementing blocks provide **various modeling solutions for seismic survey planning, processing and interpretation**.

- ✓ Software is suitable for **various kinds of geological-geophysical works, ranging from academic researches up to exploration geophysics**. It also can be used as a **learning tool** as well as for **presentation and estimation for geophysical projects**.
- ✓ We are **marketing, selling, supporting and releasing new versions of the software products**. **Training and consulting** for software's users is provided at place or via the internet conferencing capabilities. Important feedback from our regular and new users since 2001 was instructed in the continuing development of our software. **Modeling Services** are available.

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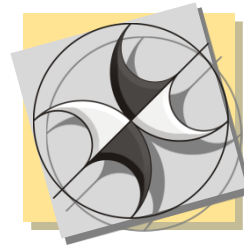
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*TESSERAL means isometric, regular, related to - or similar to, tessera - four, to have four corners, to consist of four parts, a part of mosaic or puzzle.*

- ✓ Our main objective is to provide software setting industry standards in using advanced algorithms and intuitive interface for commercially available Seismic Modeling Suite.
- ✓ We deliver cost effective and continuing Maintenance & Support of our products.
- ✓ We have long-term experience in Seismic Modeling Services, Training and Consulting.

We have clients in 19 countries in different regions of the world. Mostly they are Oil and Geophysical companies. Many universities are using our software for educational and training purposes.