

## *Introduction to GIS Spatial Processing*

### *Course Overview*

Managing oil and gas assets requires extensive knowledge of the location and characteristics of facilities currently in use. The GIS technology is permeating all divisions of asset management and risk assessment. As such, knowledge of the technology is critical to a wide range of personnel and must be well understood.

This GIS training program is intended to provide introductory and intermediate knowledge of the technology by guiding participants through hands-on experiences in the use of the GIS to build and manage databases. Both classroom lectures and laboratory exercises will be used along with industry data sets to provide a working knowledge of the technology as well as its uses for asset management in the oil and gas industry.

### *Prerequisites*

None

### *Objectives*

The course provides an introduction to GIS and the use of the ESRI GIS software Arc Map. The course will focus on the following:

1. The use of GIS in the oil and gas industry
2. The sources and types of data necessary to build GIS databases
3. GIS processing to produce maps and data sets that are needed for oil and gas resource management
4. Use case scenarios and applications of the technology and data for day-to-day operations

After completing the course, students will be capable of:

- ▶ *Browsing GIS data sets*
- ▶ *Operating the industry standard GIS software product – ArcMap*
- ▶ *Importing GIS data sets*
- ▶ *Creating map layers from field data*
- ▶ *Basic uses of aerial imagery*
- ▶ *An understanding of map projections*
- ▶ *Creation of map projects*
- ▶ *Basics of geo-processing – buffering, clipping, merging*
- ▶ *Map creation using templates*

### *Course Format*

- ▶ *All training will be conducted in ArcMap 9.x*
- ▶ *Course notes, lecture materials, and training exercises will be provided*
- ▶ *The course will consist of both lecture and hands-on exercises*
- ▶ *The course will be conducted by a Petris instructor*

### *Duration*

The course is taught in a three (3) or five (5) day format depending on the needs of the group. The course may be taught at the Petris training facility in Houston, TX or may be taught at a client's site if appropriate computing facilities are provided.

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