



# Understanding IHS AccuMap SEG P1 Import Files

For IHS Applications

IHS AccuMap®

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# Understanding SEG P1 Import Files

## IHS AccuMap

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#### **About SEG P1 Files**

SEG P1 is a standard format supported by most seismic databases -both in-house proprietary databases and databases at seismic data brokerages and data managers.

A SEG P1 file is used to exchange or distribute seismic shotpoint location data. It doesn't contain any seismic trace data.

Are SEG P1 files Y2K-safe? According to the Positional Data Exchange Formats Standard document, each data record contains a field for a two-digit year. However, we have yet to see any SEG P1 files from any local sources that actually contain time data.

Therefore, AccuMap considers time data to be optional information and will only process it if it's detected. The year is resolved by applying a simple windowing algorithm: years 20 to 99 are assumed to be 1920 to 1999 and years 0 to 19 are assumed to be 2000 to 2019. This window is consistent with other century-windowing algorithms in AccuMap.

AccuMap only displays this time data, but doesn't use it for any operations.

For more details, see [How\\_AccuMap\\_Interprets\\_SEG\\_P1\\_Files.pdf](#).

#### **How AccuMap Copes with Problems in SEG P1 Files**

AccuMap checks each record for unusual or out-of-range field values as it imports a SEG P1 file; for example, it's unusual for a reshoot code to be a number. With few exceptions, any such conditions (as well as how AccuMap resolves them) are logged.

AccuMap must be able to read the latitude and longitude from a SEG P1 data record in order to create a shotpoint or line vertex from that record. If there's a problem with either of these fields the record is skipped.

The time fields are optional. If there are problems with any of them, it's assumed they're being used for something else. These conditions aren't really considered problems and therefore aren't logged.



Values in the other fields are attached to shotpoints and lines in Open Layers files as user data, which can be displayed in the inspect bar and in data cards in Detail Maps. If there are problems with these fields, default values (usually blanks or zeros) are attached instead.

AccuMap is able to attach information in the "spare" fields to shotpoints in Open Layers point files. If no time information is detected in a data record, the time fields are considered part of the "spare" field as well.

### **Displaying SEG P1 Data in AccuMap**

AccuMap doesn't read SEG P1 files directly, but imports them as either open layers or proprietary seismic data. Both import methods enable you to inspect the seismic data and view information cards. This document focuses on importing seismic data as open layers, which doesn't enable you to create posted maps. To create posted maps of proprietary seismic data, refer to the AccuMap application help topic, "*Importing SEG-P1 Seismic Data for Use in the Proprietary Seismic Module.*"

SEG P1 files are imported with AccuMap's *Import Manager* to create either a points file (for showing each individual shotpoint) or a lines file (for showing ends-and-bends). Short but detailed instructions on how to do this can be found in the AccuMap Help menu."

AccuMap detects Open Layers files at start-up. The shotpoints or ends-and-bends can then be displayed on the *Index Map* or on *Detail Maps* by toggling the appropriate layers in the *Map Features* dialog box.

### **Importing SEG P1 Files with More than One Seismic Line**

There is a field in each data record for a line name. All consecutive data records that have the same line name are used to form a single line in an Open Layers lines file.

This means that if your SEG P1 file contains records for 20 different and uniquely named seismic lines, there will be 20 line entities in the resulting Open Layers file.

### **Importing a Group of SEG P1 Files to Create a Single Open Layers File**

The *Import Manager* can only handle one input (SEG P1) file and one output (Open Layers) file at a time.

However, SEG P1 files can be concatenated by cutting and pasting them into a new SEG P1 file with a text editor that saves in text-only format. This new file can then be imported to form a single Open Layers file.



Another easy way to concatenate all your SEG P1 files is to use the *copy* command in a DOS command window. The '+' operator can be used with the *copy* command to concatenate files. For example, this command:

```
copy file1.seg+file2.seg file3.seg
```

will put the contents of *file1.seg* and *file2.seg* into a new file called *file3.seg*.

It's a little trickier to concatenate all \*.seg files in a directory into one file. If a destination file (*file3.seg* in the previous example) is not specified, the *copy* command appends all files in the list to the first file. Therefore, here is the procedure for concatenating all \*.seg files in a directory:

1. Create a blank text file entitled *all.seg* in the directory where your SEG P1 files are.
2. Open a DOS command window (*Start > Run*, then type *command* or from the *Start* menu, select *Programs > Accessories > MS DOS Prompt*), move to the directory where your SEG P1 files are (*CD XXX* where *XXX* is the directory name) and type *copy all.seg+\*.seg*.

All \*.seg files concatenated in the file *all.seg*.

**Warning:** If the last record in a SEG P1 file doesn't end with a carriage return and linefeed (*CR/LF*) the first record in the next file will be appended to it without a *CR/LF* to separate the two and AccuMap will consider these two records a single record. You must edit the file with a text editor to manually separate these records with line breaks.

### **Verifying an Import was Successful**

The import process generates a log file each time a SEG P1 file is imported. This log file appears in the same directory and has the same name as the Open Layers file, except the extension is *.log* instead of *.pts* or *.lms*.

For example, if you import *C:\TEMP\SHOTPOINTS.SEG* into *C:\TEMP\MYSEISMIC.LMS* the log file will be *C:\TEMP\MYSEISMIC.LOG*.

If the log file exists at the start of the import process, it's emptied so any previously logged problems aren't mistakenly associated with the current import.

If a problem with the SEG P1 file is encountered, the problem, record number, and remedial action are recorded in the log file. If there are any entries in the log file at the end of the import process you are notified.



Entries in the log file may indicate a major problem with the data source and should always be reviewed. You can then decide whether the Open Layers file is suitable or whether the database that produced the SEG P1 file needs maintenance.

### **Additional Information**

The SEG P1 file format is defined in, "Positional Data Exchange Formats Standard" by Morgan, Spradley, Worthington and McClelland (1983) -- ISBN 0-931830-68-0, SEG catalog no. 348A.

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